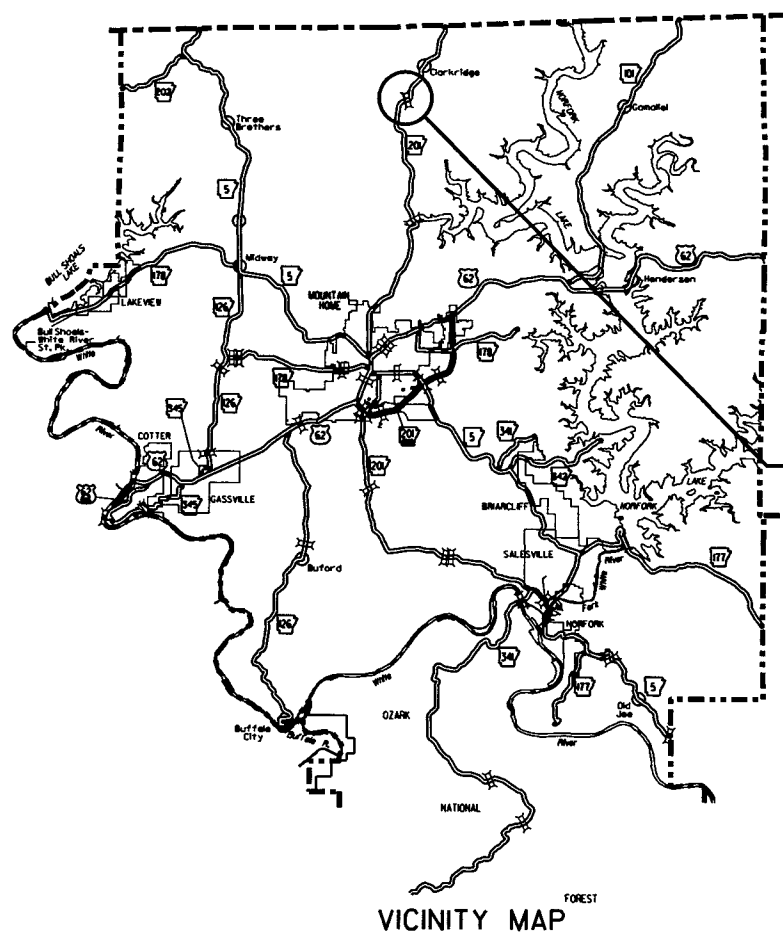


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	009814

② E. PIGEON CREEK STR. & APPRS. (S)



VICINITY MAP

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
CONSTRUCTION PLANS FOR STATE HIGHWAY

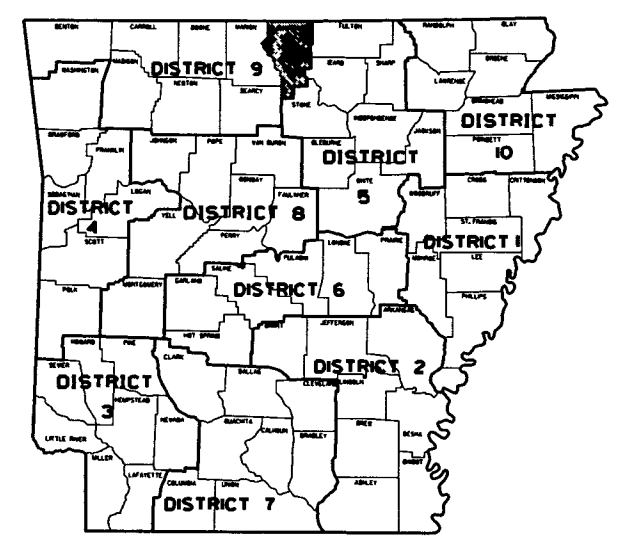
**E. PIGEON CREEK  
STR. & APPRS. (S)**

BAXTER COUNTY

ROUTE 201 SECTION 1

**JOB 009814**

FED. AID PROJ. NHPP-0003(50)



ARK. HWY. DIST. NO. 9

NOT TO SCALE

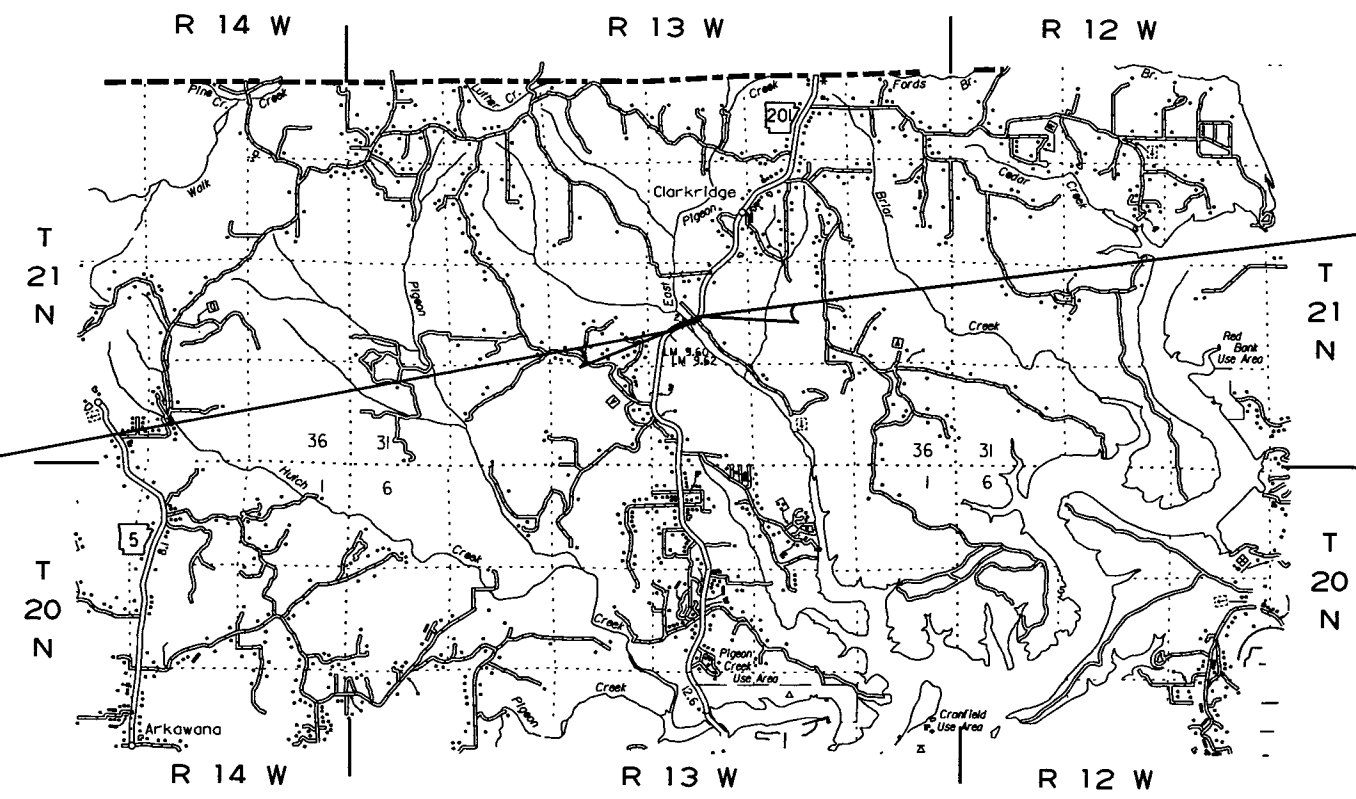
• DESIGN TRAFFIC DATA •

DESIGN YEAR	-----	2036
2016 ADT	-----	2100
2036 ADT	-----	2800
2036 DHV	-----	308
DIRECTIONAL DISTRIBUTION	-----	60%
TRUCKS	-----	7%
DESIGN SPEED	-----	40 MPH

BRIDGE DATA

- ① BR. END STA. 107+21.87
- BRIDGE NO. 07397
- 40' - 0" CLEAR ROADWAY
- 132' - 3 1/8" TOTAL LENGTH
- 130' - 0" CONT. COMP. W-BEAM UNIT
- (40', 50', 40')
- BR. END STA. 108+54.13

STA. 96+73.54  
BEGIN JOB 009814  
LOG MILE 9.45



STA. 120+66.86  
END JOB 009814



APPROVED



8-18-16  
DEPUTY DIRECTOR  
AND CHIEF ENGINEER

BEGINNING OF PROJECT	MID POINT OF PROJECT	END OF PROJECT
LATITUDE = N 36°27'42"	LATITUDE = N 36°27'46"	LATITUDE = N 36°27'54"
LONGITUDE = W 92°21'47"	LONGITUDE = W 92°21'38"	LONGITUDE = W 92°21'30"

GROSS LENGTH OF PROJECT	2393.32	FEET	OR	0.453	MILES
NET " " ROADWAY	2261.06	"	"	0.428	"
NET " " BRIDGES	132.26	"	"	0.025	"
NET " " PROJECT	2393.32	"	"	0.453	"

7/21/2016

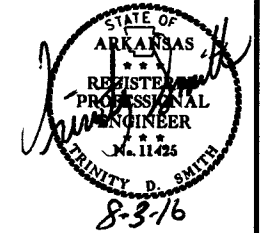
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						009814	2	94

2 INDEX, GOV. SPECS., AND GEN. NOTES

GOVERNING SPECIFICATIONS

ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:



INDEX OF SHEETS

SHEET NO.	TITLE	BRIDGE NO.	DRWG. NO.	DATE
1	TITLE SHEET			
2	INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES			
3 - 4	TYPICAL SECTIONS OF IMPROVEMENT			
5 - 6	SPECIAL DETAILS			
7 - 12	TEMPORARY EROSION CONTROL DETAILS			
13 - 18	MAINTENANCE OF TRAFFIC DETAILS			
19	PERMANENT PAVEMENT MARKING DETAILS			
20 - 23	QUANTITIES			
24	SCHEDULE OF BRIDGE QUANTITIES	07397	58837	
25	SUMMARY OF QUANTITIES AND REVISIONS			
26 - 28	SURVEY CONTROL DETAILS			
29 - 30	PLAN AND PROFILE SHEETS			
31	LAYOUT OF BRIDGE OVER EAST PIGEON CREEK (SHEET 1 OF 2)	07397	58838	
32	LAYOUT OF BRIDGE OVER EAST PIGEON CREEK (SHEET 2 OF 2)	07397	58839	
33	DETAILS OF END BENTS (SHEET 1 OF 3)	07397	58840	
34	DETAILS OF END BENTS (SHEET 2 OF 3)	07397	58841	
35	DETAILS OF END BENTS (SHEET 3 OF 3)	07397	58842	
36	DETAILS OF INTERMEDIATE BENTS	07397	58843	
37	DETAILS OF 130'-0" CONTINUOUS COMPOSITE W-BEAM UNIT (SHEET 1 OF 5)	07397	58844	
38	DETAILS OF 130'-0" CONTINUOUS COMPOSITE W-BEAM UNIT (SHEET 2 OF 5)	07397	58845	
39	DETAILS OF 130'-0" CONTINUOUS COMPOSITE W-BEAM UNIT (SHEET 3 OF 5)	07397	58846	
40	DETAILS OF 130'-0" CONTINUOUS COMPOSITE W-BEAM UNIT (SHEET 4 OF 5)	07397	58847	
41	DETAILS OF 130'-0" CONTINUOUS COMPOSITE W-BEAM UNIT (SHEET 5 OF 5)	07397	58848	
42	DETAILS OF ELASTOMERIC BEARINGS	07397	58849	
43	STANDARD DETAILS FOR EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS		55000	2-27-14
44	STANDARD DETAILS FOR DUMPED RIPRAP AND FILTER BLANKET AND COMPUTING EXCAVATION FOR STRUCTURES		55001	2-27-14
45	STANDARD DETAILS FOR PERMANENT STEEL BRIDGE DECK FORMS FOR STEEL & CONCRETE GIRDER SPANS		55005	3-24-16
46	STANDARD GENERAL NOTES FOR STEEL BRIDGE STRUCTURES		55006	9-02-15
47	STANDARD DETAILS FOR TYPE D BRIDGE NAME PLATE		55010	1-14-15
48	STANDARD DETAILS FOR STEEL H-PILES AND PILE ENCASEMENTS		55020	3-24-16
49	STANDARD DETAILS FOR TYPE A APPROACH GUTTERS		55030A	9-02-15
50	CONCRETE DITCH PAVING		CDP-1	11-17-10
51	FLARED END SECTION		FES-1	10-18-96
52	FLARED END SECTION		FES-2	10-18-96
53	GUARD RAIL DETAILS		GR-8	7-14-10
54	GUARD RAIL DETAILS		GR-8A	7-14-10
55	GUARD RAIL DETAILS		GR-9	4-17-08
56	GUARD RAIL DETAILS		GR-9A	4-17-08
57	GUARD RAIL DETAILS		GR-10	7-14-10
58	GUARD RAIL DETAILS		GR-10A	7-14-10
59	GUARD RAIL DETAILS		GRT-1	7-14-10
60	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING		PCC-1	2-27-14
61	METAL PIPE CULVERT FILL HEIGHTS & BEDDING		PCM-1	2-27-14
62	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)		PCP-1	2-27-14
63	PLASTIC PIPE CULVERT (PVC F949)		PCP-2	2-27-14
64	PAVEMENT MARKING DETAILS		PM-1	5-12-16
65	DETAILS OF PIPE UNDERDRAIN		PU-1	4-10-03
66	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC		SE-2	10-18-96
67	DETAILS OF SPECIAL ITEMS		SI-1	9-12-13
68	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-1	9-02-15
69	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-2	9-02-15
70	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-3	9-02-15
71	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER		TC-4	2-27-14
72	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER		TC-5	10-15-09
73	TEMPORARY EROSION CONTROL DEVICES		TEC-1	12-15-11
74	TEMPORARY EROSION CONTROL DEVICES		TEC-2	6-02-94
75	TEMPORARY EROSION CONTROL DEVICES		TEC-3	11-03-94
76	WIRE FENCE WATER GAPS		WF-2	4-20-79
77	WIRE FENCE TYPE C AND D		WF-4	8-22-02
78 - 94	CROSS SECTIONS			

NOTE. CROSS SECTIONS NOT NORMALLY INCLUDED IN PLANS SOLD TO PROSPECTIVE BIDDERS, BUT MAY BE HAD UPON REQUEST.

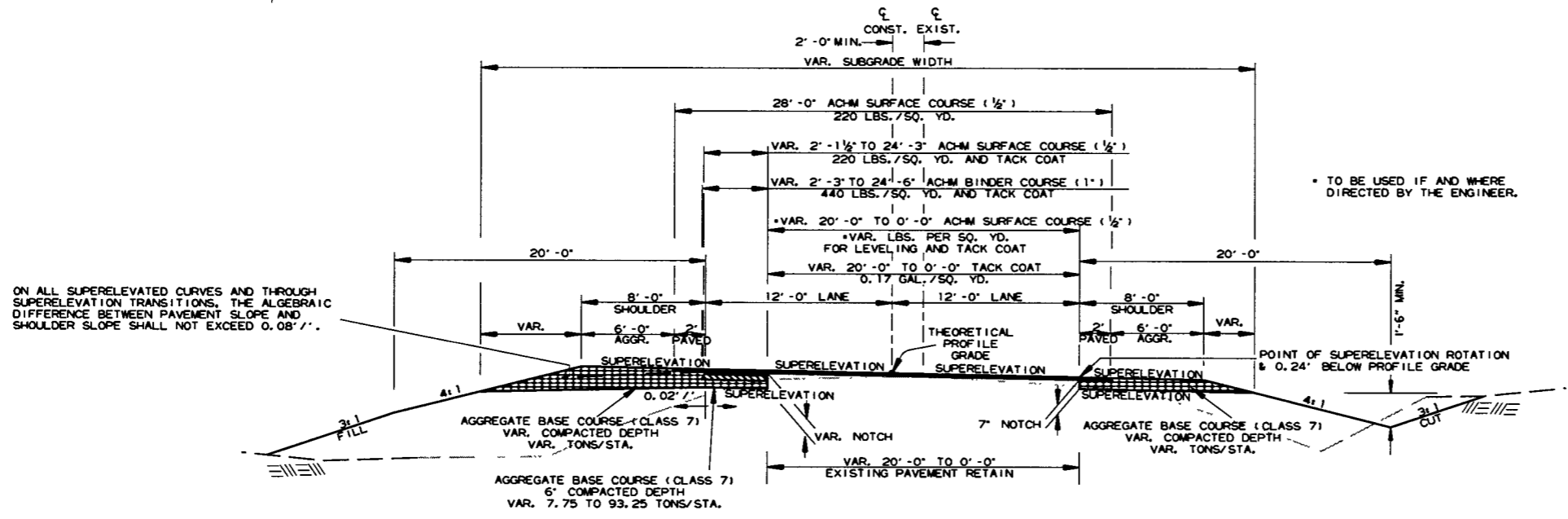
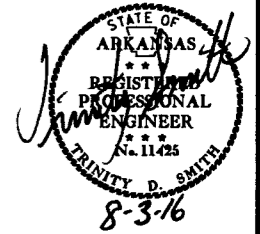
NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-3	CONTRACTOR'S LICENSE
108-1	LIQUIDATED DAMAGES
108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
303-1	AGGREGATE BASE COURSE
400-1	TACK COATS
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1	PIPE CULVERTS FOR SIDE DRAINS
620-1	MULCH COVER
JOB 009814	ARCHEOLOGICAL MONITORING
JOB 009814	BIDDING REQUIREMENTS AND CONDITIONS
JOB 009814	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 009814	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 009814	CARGO PREFERENCE ACT REQUIREMENTS
JOB 009814	COMPACTED EMBANKMENT
JOB 009814	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 009814	COORDINATION OF LIDAR BRIDGE SCAN
JOB 009814	DIRECT TENSION INDICATORS FOR HIGH STRENGTH BOLT ASSEMBLIES
JOB 009814	DISADVANTAGED BUSINESS ENTERPRISE BIDDERS RESPONSIBILITIES
JOB 009814	EXTENSION FOR PIPE CULVERTS
JOB 009814	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 009814	HIGH PERFORMANCE PAVEMENT MARKING
JOB 009814	ISSUANCE OF PROPOSALS
JOB 009814	MANDATORY ELECTRONIC CONTRACT
JOB 009814	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 009814	NESTING SITES OF MIGRATORY BIRDS
JOB 009814	OFF-SITE RESTRAINING CONDITIONS FOR INDIANA AND NORTHERN LONG-EARED BATS
JOB 009814	PARTNERING REQUIREMENTS
JOB 009814	PLASTIC PIPE
JOB 009814	SECTION 404 NATIONWIDE 14 PERMIT REQUIREMENTS
JOB 009814	SHORING FOR CULVERTS
JOB 009814	SOIL STABILIZATION
JOB 009814	SPECIAL CLEARING REQUIREMENTS
JOB 009814	STORM WATER POLLUTION PREVENTION PLAN
JOB 009814	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 009814	UTILITY ADJUSTMENTS
JOB 009814	VALUE ENGINEERING
JOB 009814	WARM MIX ASPHALT

GENERAL NOTES

- GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS
- ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
- ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U.S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS
- ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS
- ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
- ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO 210 - UNCLASSIFIED EXCAVATION
- THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

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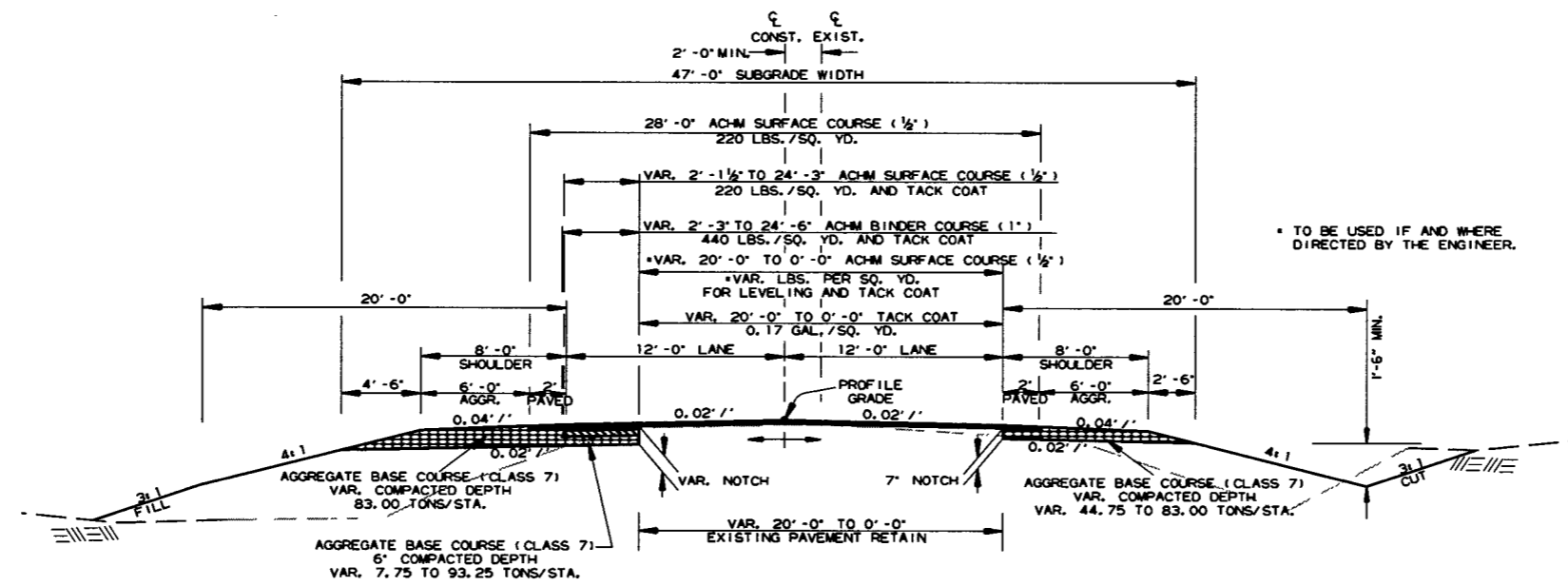
2 TYPICAL SECTIONS OF IMPROVEMENT



NOTCH AND WIDENING SECTION - SUPERELEVATION

STA. 96+73.54 - STA. 98+23.54  
 STA. 99+36.89 - STA. 100+02.08  
 STA. 115+84.32 - STA. 120+66.86

NOTES:  
 REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.  
 THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.  
 ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.  
 THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

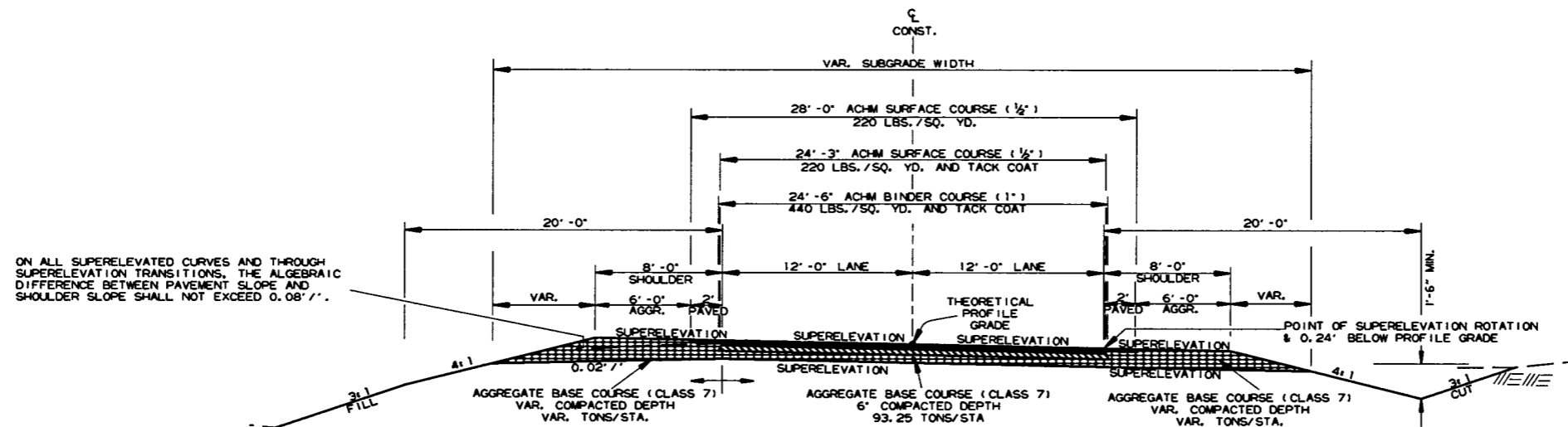
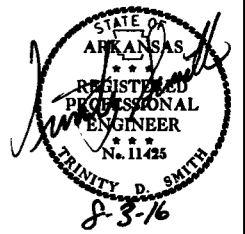


NOTCH AND WIDENING SECTION - TANGENT

STA. 98+23.54 - STA. 99+36.89

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				JOB NO.	009814		4	94

2 TYPICAL SECTIONS OF IMPROVEMENT



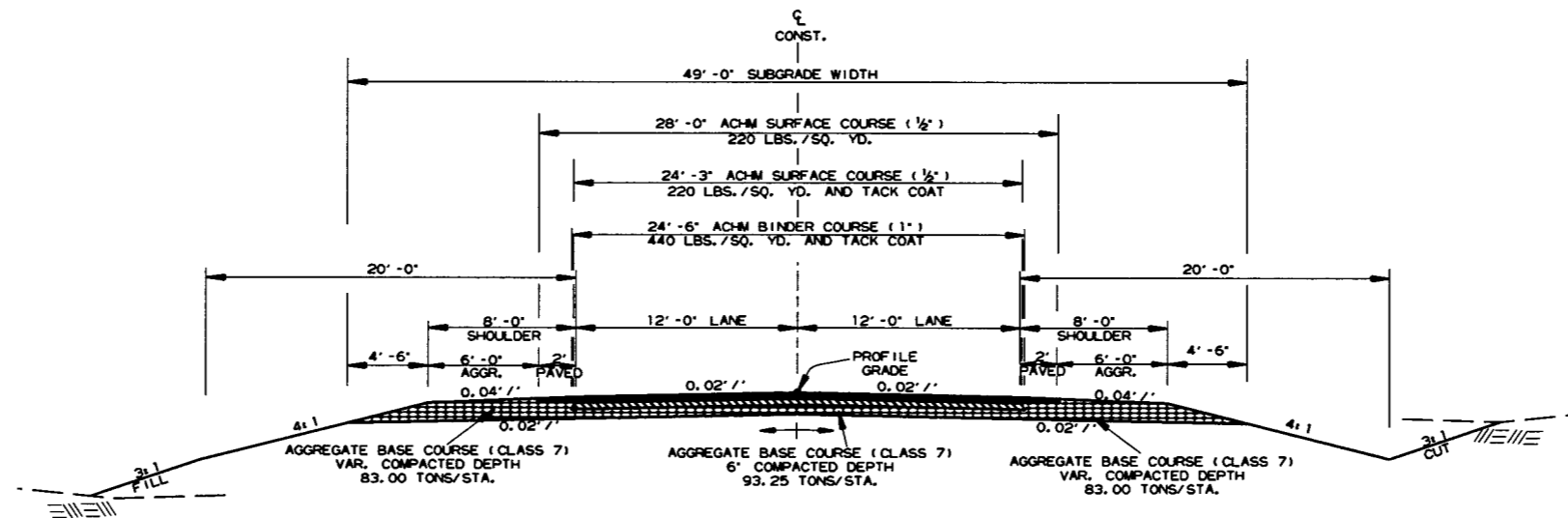
**FULL DEPTH SECTION - SUPERELEVATION**  
 STA. 100+02.08 - STA. 106+92.39  
 STA. 108+61.43 - STA. 115+84.32

NOTES:

REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

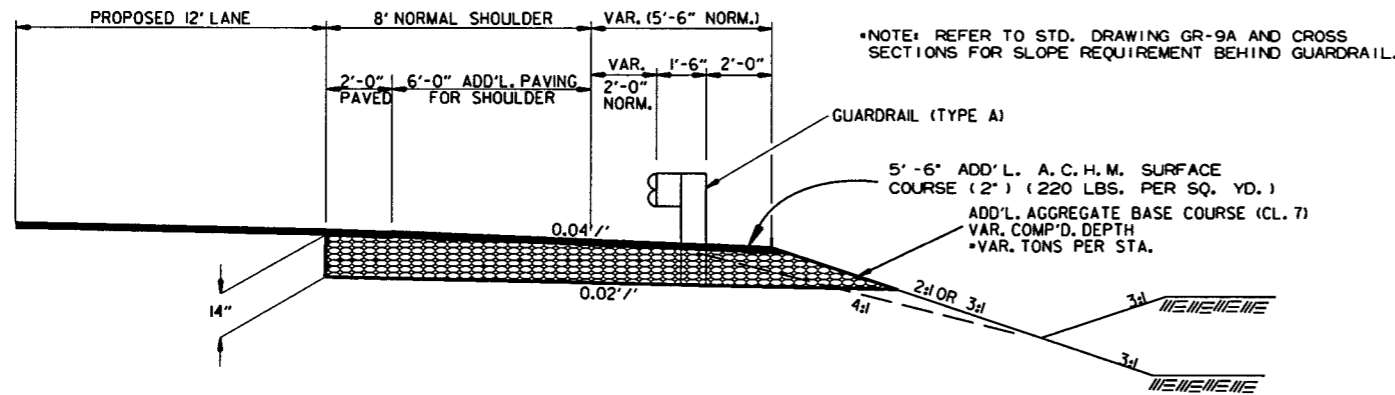
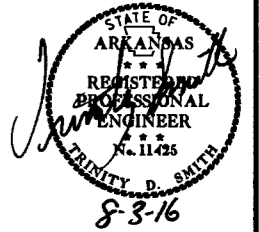
THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.



**FULL DEPTH SECTION - TANGENT**  
 STA. 106+92.39 - STA. 107+21.85  
 STA. 108+54.13 - STA. 108+61.43

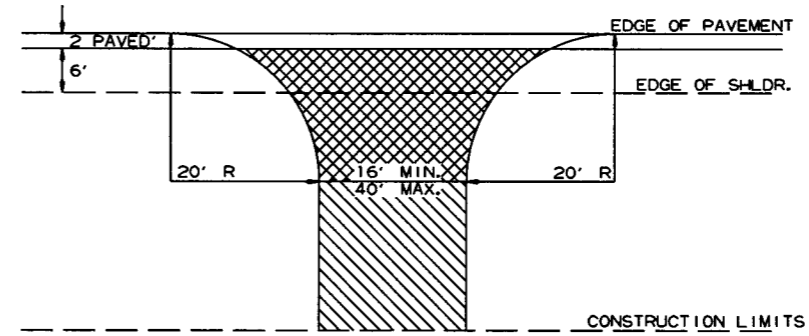
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		5	94
				JOB NO.	009814			

2 SPECIAL DETAILS



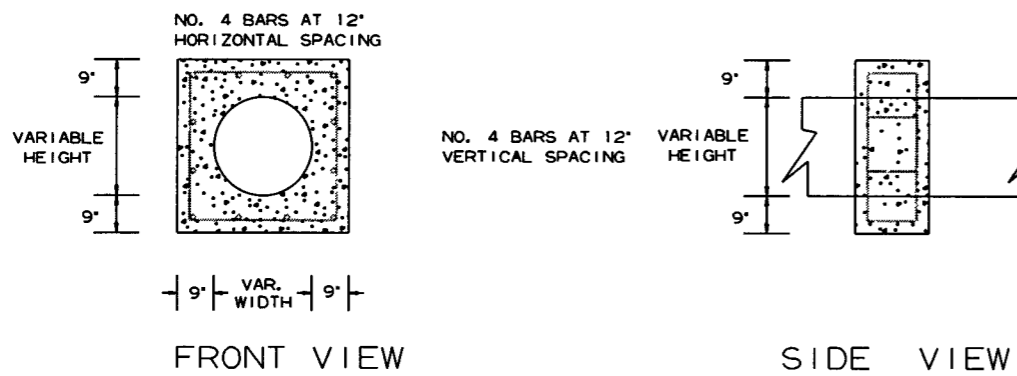
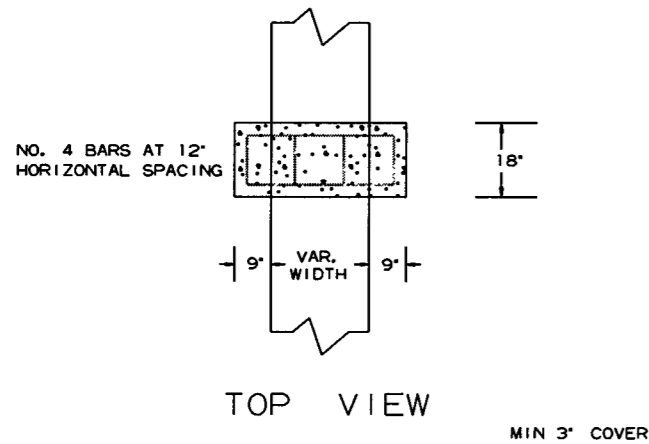
### WIDENING FOR GUARDRAIL

NOTE: REFER TO STANDARD DRAWINGS GR-8, GR-9, GR-9A, GR-10, & GR-10A FOR ADDITIONAL INFORMATION.

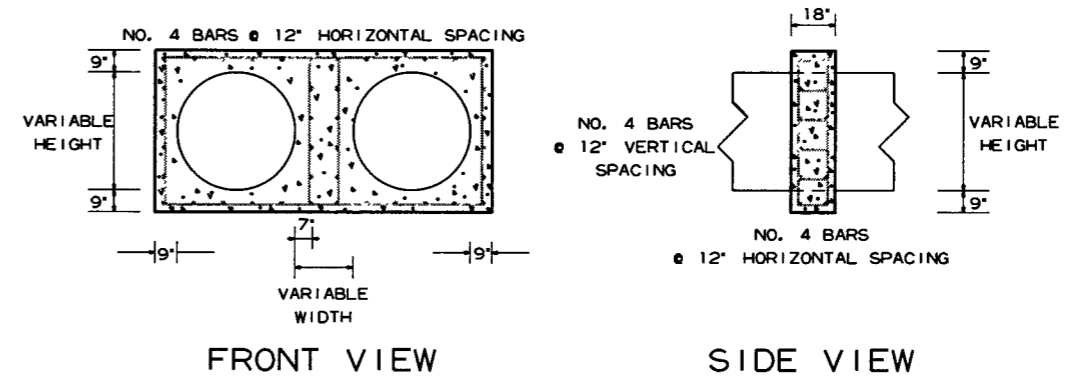
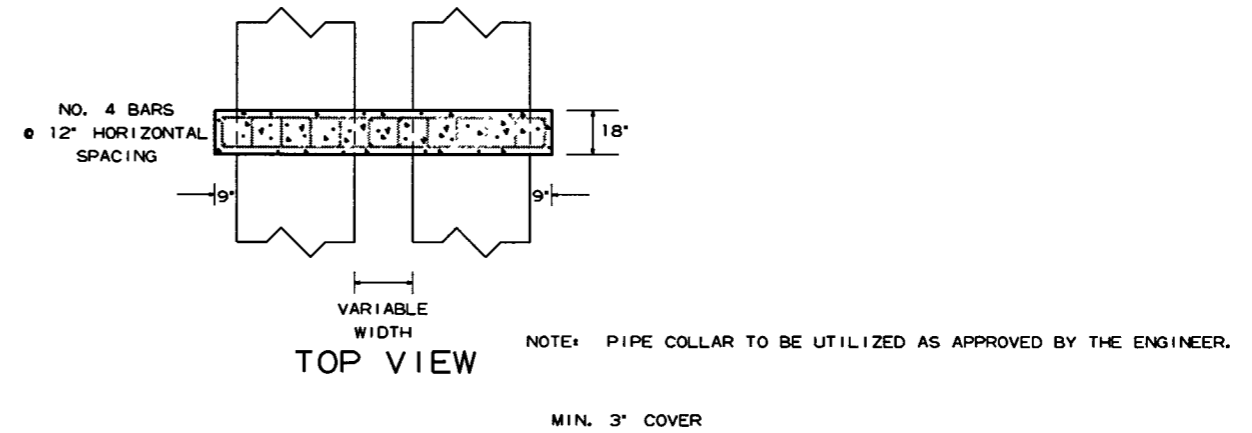


- ASPHALT CONCRETE HOT MIX SURFACE COURSE (220 LBS. PER SQ. YD.)
- AGGREGATE BASE COURSE (CLASS 7)
- 7' COMP. DEPTH IF ASPHALT DRIVE EXISTS OR 6' CONCRETE IF CONCRETE DRIVE EXISTS.
- AGGREGATE BASE COURSE (CLASS 7)
- 9' COMP. DEPTH OR CONFORM TO EXISTING DRIVEWAY

### DETAIL FOR DRIVEWAY TURNOUTS (COLLECTORS)



PIPE EXTENSION REINFORCED CONCRETE COLLAR DETAIL

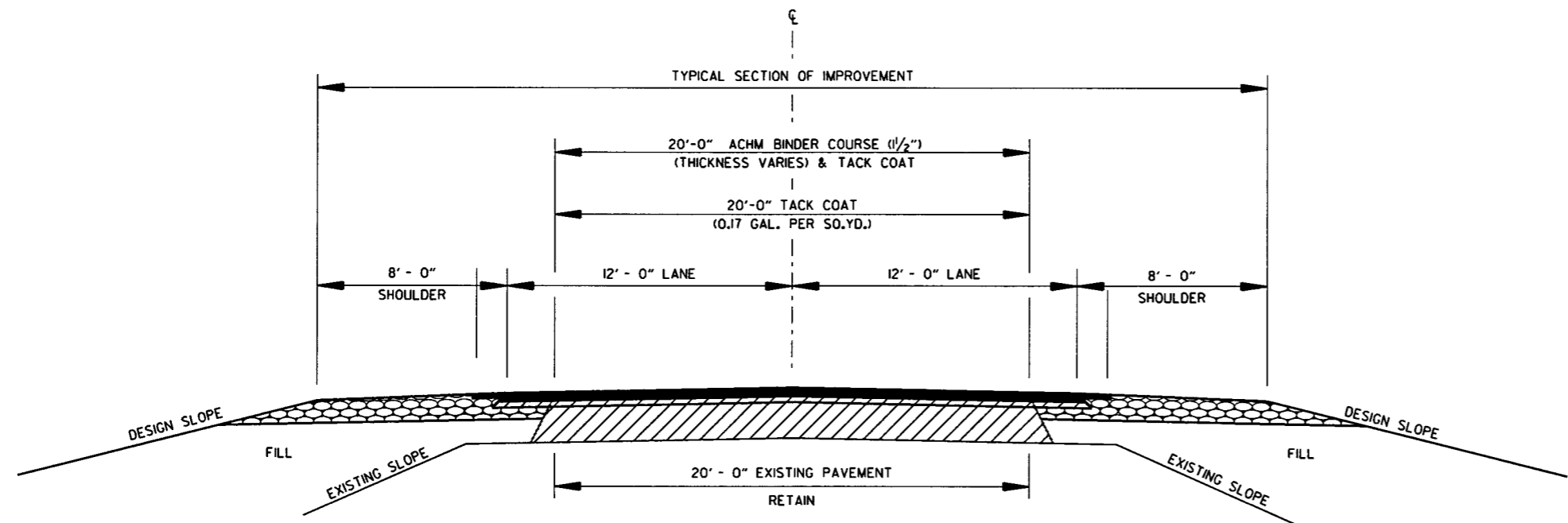


PIPE EXTENSION REINFORCED CONCRETE COLLAR DETAIL

SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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JOB NO. 009814							6	94

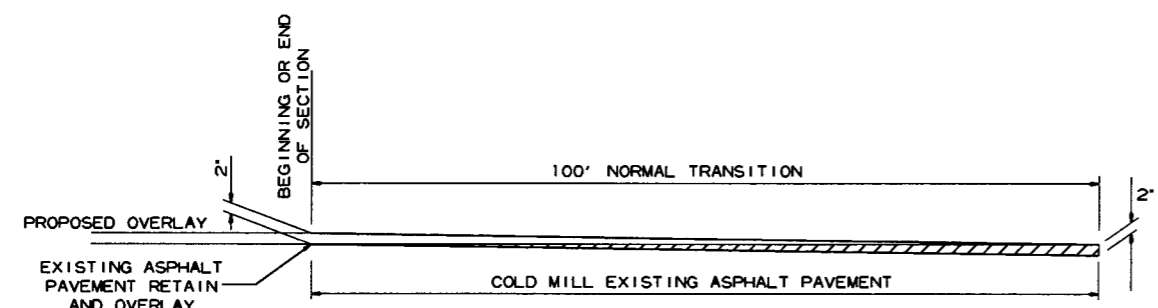
② SPECIAL DETAILS



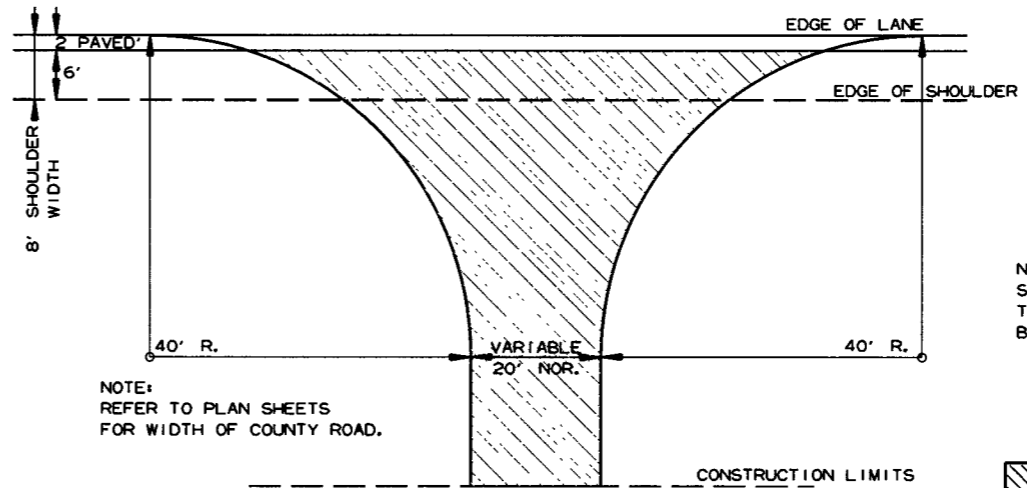
**METHOD OF RAISING GRADE**

NOTES:

- (1) THIS DETAIL TO BE USED ONLY IF AND WHERE DIRECTED BY THE ENGINEER.
- (2) QUANTITIES FOR METHOD OF GRADE RAISE USING ASPHALT WERE CALCULATED ON THIS PROJECT AT LOCATIONS WHERE THE DISTANCE BETWEEN THE EXISTING ASPHALT ROADWAY AND THE PROPOSED SUBGRADE WAS ONE FOOT OR LESS.
- (3) IN LOCATIONS WHERE THE DISTANCE BETWEEN THE PROPOSED SUBGRADE AND THE EXISTING ASPHALT ROADWAY IS MORE THAN ONE FOOT, SCARIFICATION OF THE EXISTING ASPHALT ROADWAY WILL BE REQUIRED AS STATED IN SECTION 210, SUBSECTION 210.09, OF THE STANDARD SPECIFICATIONS, EDITION OF 2014.



DETAIL FOR TRANSITIONS



NOTE: REFER TO PLAN SHEETS FOR WIDTH OF COUNTY ROAD.

NOTE: TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

ACHM SURFACE COURSE (1/2") (220 LBS. PER SQ. YD.) AND AGGREGATE BASE COURSE (CLASS 7) 7" COMP. DEPTH.

NOTE: REFER TO PLAN SHEETS FOR WIDTHS OF COUNTY ROADS.

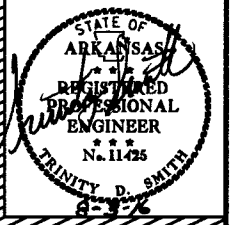
DETAIL FOR COUNTY ROAD TURNOUTS OPEN SHOULDER SECTION

7/20/2016

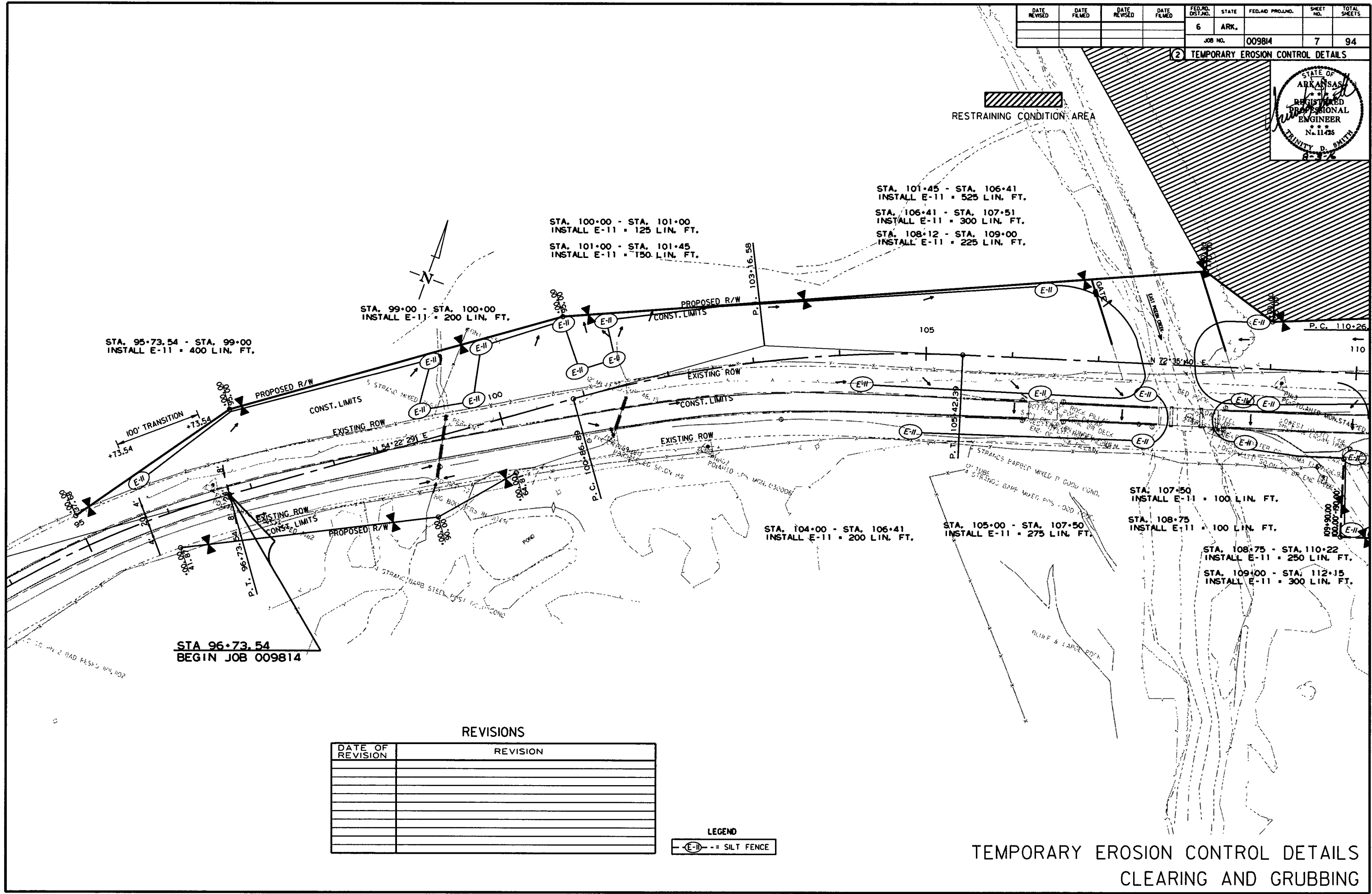
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2) TEMPORARY EROSION CONTROL DETAILS



RESTRAINING CONDITION AREA



STA. 95+73.54 - STA. 99+00  
INSTALL E-11 = 400 LIN. FT.

STA. 99+00 - STA. 100+00  
INSTALL E-11 = 200 LIN. FT.

STA. 100+00 - STA. 101+00  
INSTALL E-11 = 125 LIN. FT.  
STA. 101+00 - STA. 101+45  
INSTALL E-11 = 150 LIN. FT.

STA. 101+45 - STA. 106+41  
INSTALL E-11 = 525 LIN. FT.  
STA. 106+41 - STA. 107+51  
INSTALL E-11 = 300 LIN. FT.  
STA. 108+12 - STA. 109+00  
INSTALL E-11 = 225 LIN. FT.

STA. 107+50 - STA. 108+75  
INSTALL E-11 = 100 LIN. FT.

STA. 108+75 - STA. 110+22  
INSTALL E-11 = 250 LIN. FT.

STA. 109+00 - STA. 112+15  
INSTALL E-11 = 300 LIN. FT.

STA 96+73.54  
BEGIN JOB 009814

REVISIONS

DATE OF REVISION	REVISION

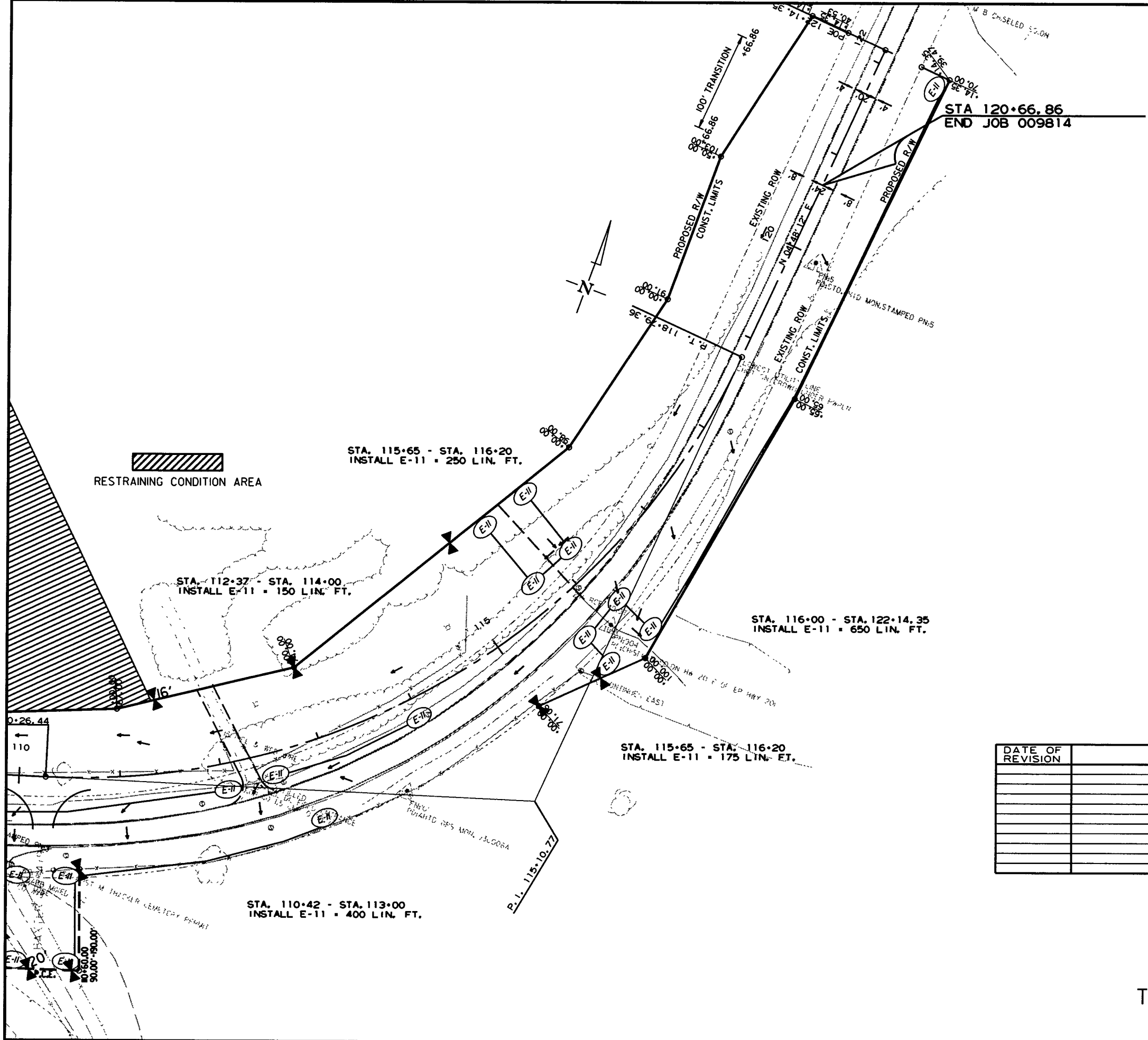
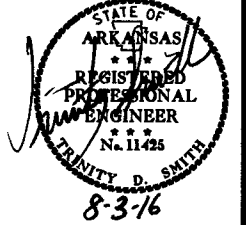
LEGEND  

 == SILT FENCE

TEMPORARY EROSION CONTROL DETAILS  
 CLEARING AND GRUBBING

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	009814		8	94

② TEMPORARY EROSION CONTROL DETAILS



**REVISIONS**

DATE OF REVISION	REVISION

**LEGEND**  
 (E-11) = SILT FENCE

TEMPORARY EROSION CONTROL DETAILS  
 CLEARING AND GRUBBING

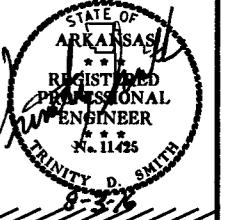
2/9/2016  
R009814.DCN



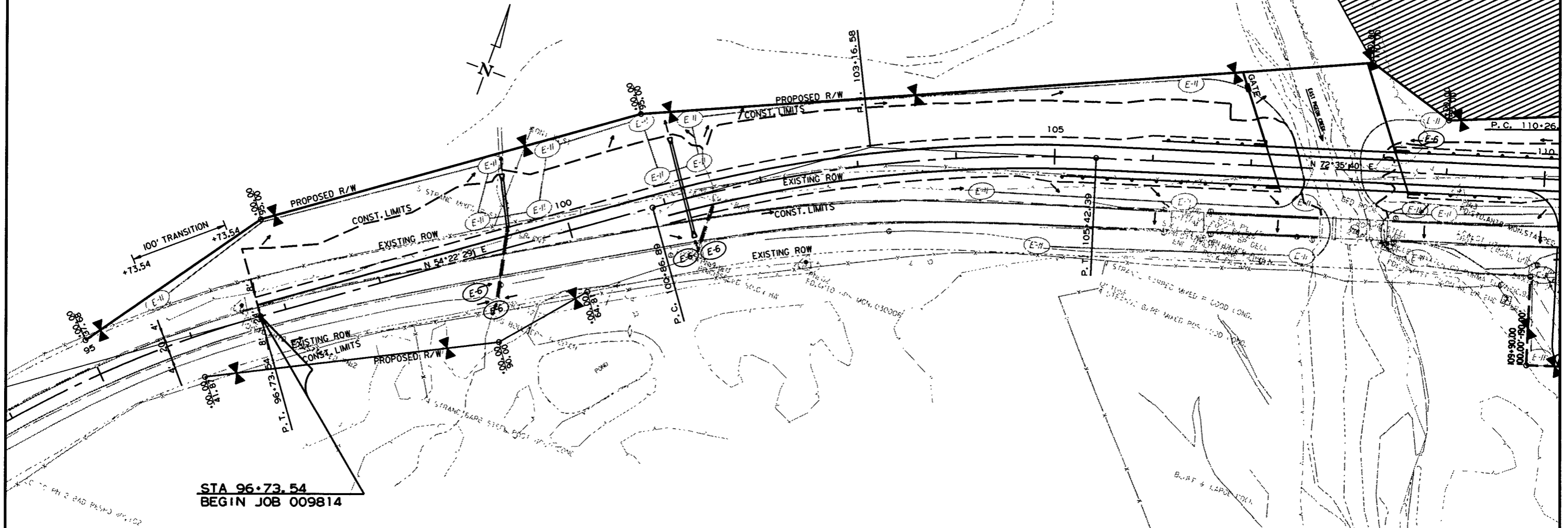
• MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		9	94
				JOB NO.		009814		

2 TEMPORARY EROSION CONTROL DETAILS



RESTRAINING CONDITION AREA



STA 96+73.54  
BEGIN JOB 009814

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAGS DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

TEMPORARY EROSION CONTROL DETAILS  
STAGE I

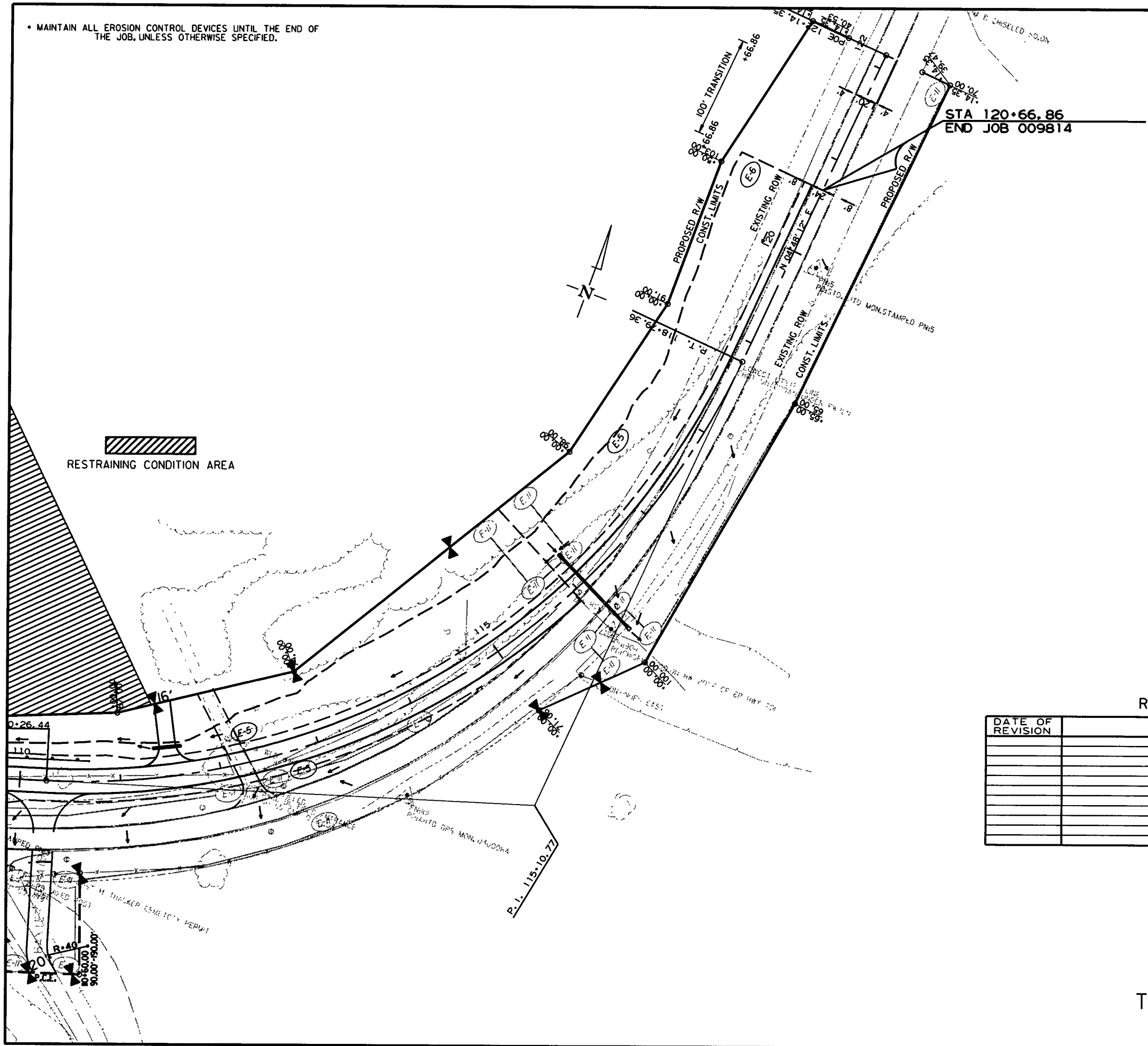
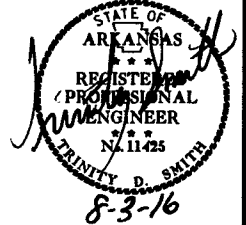
2/9/2016

009814.DGN

• MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 009814	10 94

② TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-5)	= SAND BAGS DITCH CHECKS
(E-6)	= ROCK DITCH CHECKS
(E-11)	= SILT FENCE

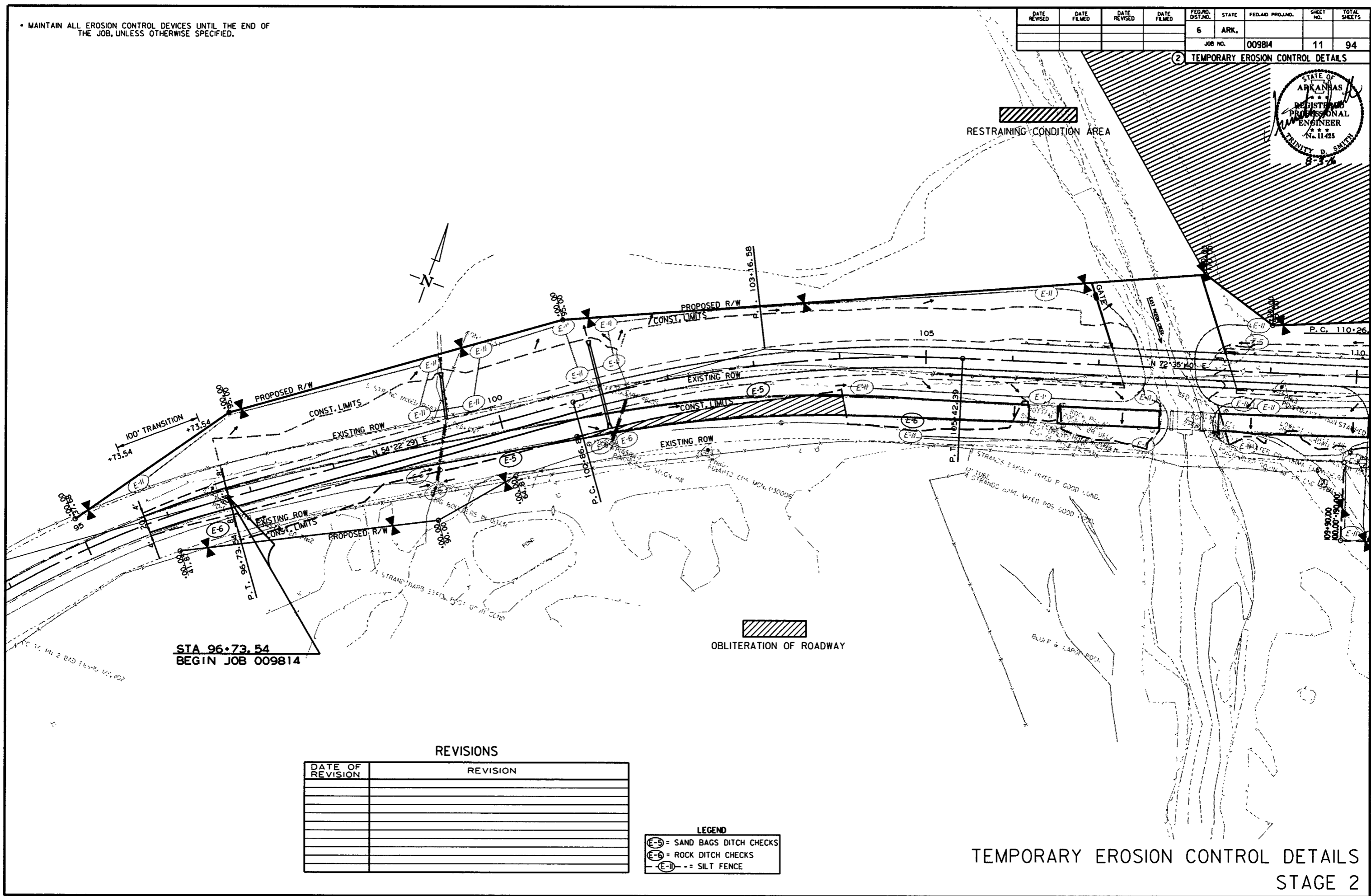
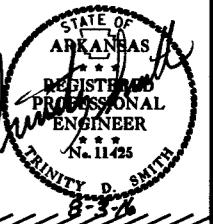
TEMPORARY EROSION CONTROL DETAILS  
STAGE I

2/9/2016  
R009814.DGN

• MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. PROJ. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		11	94
				JOB NO.		009814		

2 TEMPORARY EROSION CONTROL DETAILS



STA 96+73.54  
BEGIN JOB 009814

REVISIONS

DATE OF REVISION	REVISION

OBLITERATION OF ROADWAY

LEGEND

E-5	= SAND BAGS DITCH CHECKS
E-6	= ROCK DITCH CHECKS
E-11	= SILT FENCE

TEMPORARY EROSION CONTROL DETAILS  
STAGE 2

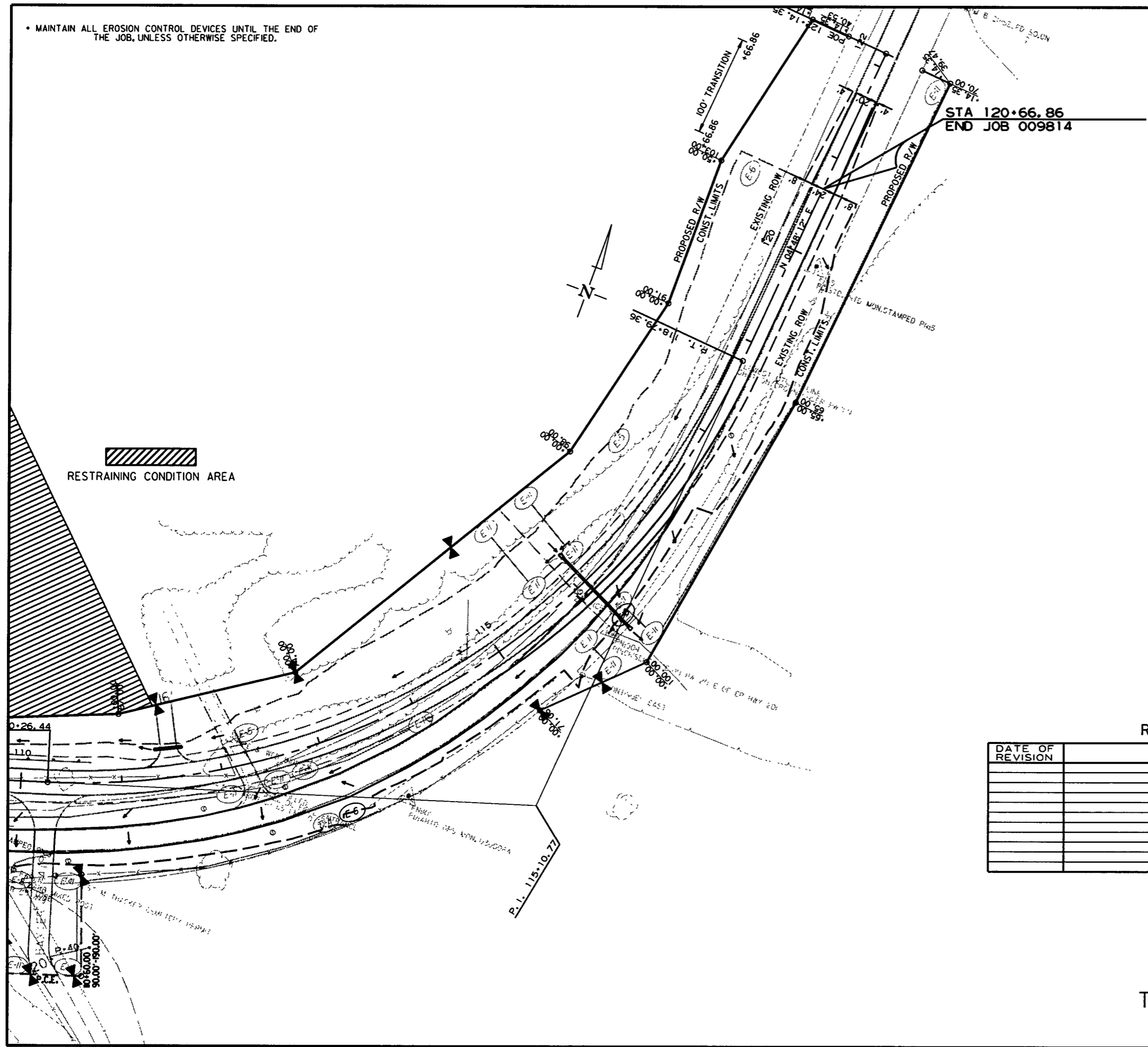
2/9/2016

009814.DGN

• MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		12	94
				JOB NO.		009814		

② TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

**LEGEND**

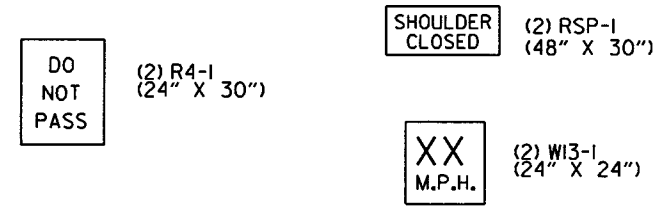
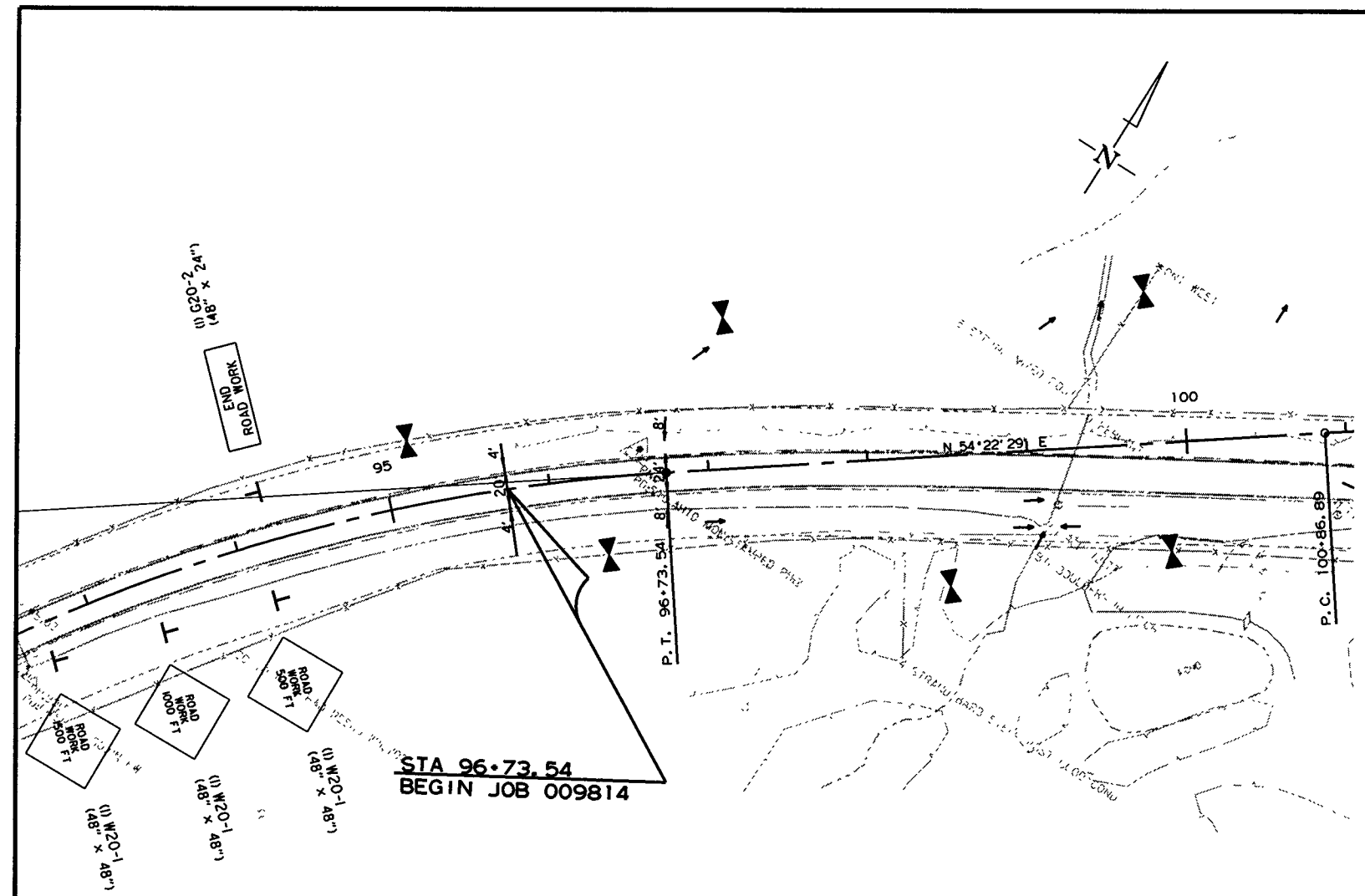
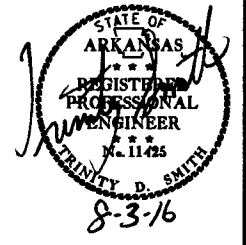
- (E-5) = SAND BAGS DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

TEMPORARY EROSION CONTROL DETAILS  
STAGE 2

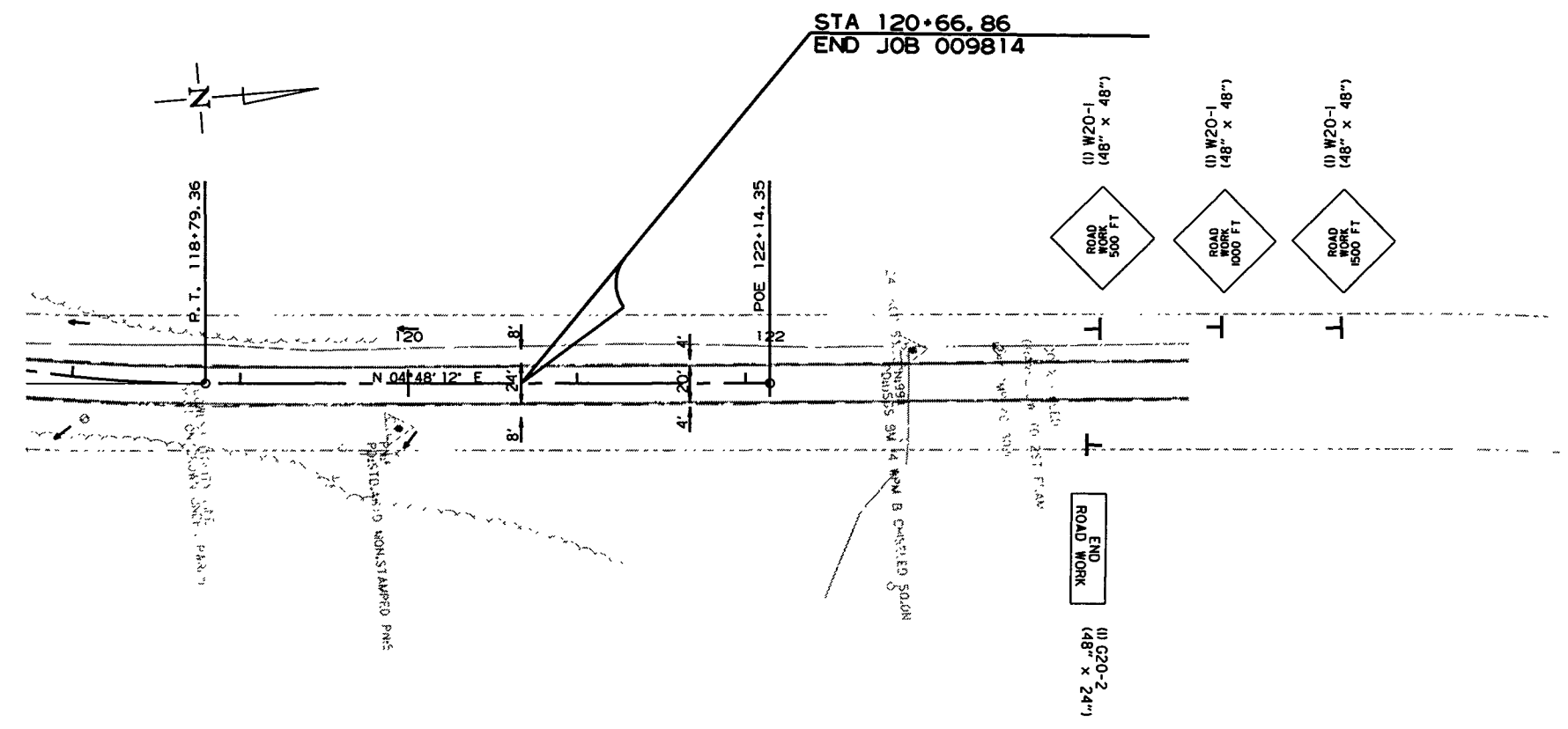
2/9/2016  
R009814.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	009814		13	94

② MAINTENANCE OF TRAFFIC DETAILS



ADDITIONAL SIGNS NEEDED PLACED AS DIRECTED BY ENGINEER



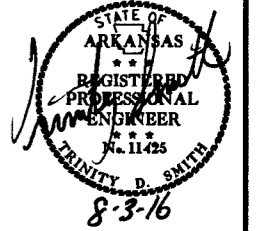
SEQUENCING:  
 STAGE 1: CONSTRUCT NEW BRIDGE AND HIGHWAY FULL DEPTH SECTION OF PROPOSED ROADWAY, CONSTRUCT TEMPORARY DRIVEWAYS, AND PERFORM NOTCH AND WIDEN LT. SIDE OF EXISTING PAVEMENT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 40' O.C. SPACING.  
 STAGE 2: MAINTAIN TRAFFIC ON EXISTING ROADWAY AND PERFORM LEVELING OPERATIONS. SHIFT TRAFFIC ONTO NEW CONSTRUCTED LOCATION. REMOVE EXISTING BRIDGE STRUCTURE. UTILIZE TRAFFIC DRUMS AT 40' O.C. SPACING AT PROPOSED LANE EDGE ON RT. PERFORM NOTCH AND WIDEN RT. SIDE OF EXISTING PAVEMENT AND OBLITERATE EXISTING PAVEMENT THROUGHOUT FULL DEPTH SECTION. UTILIZE VERTICAL PANELS AT THE NOTCH AT 40' O.C. SPACING. COLD MILL TRANSITIONS AT JOB ENDS. PLACE FINAL 2" LIFT OF SURFACE AND FINAL STRIPING.

11/8/2011  
 ZBOROER.CEL

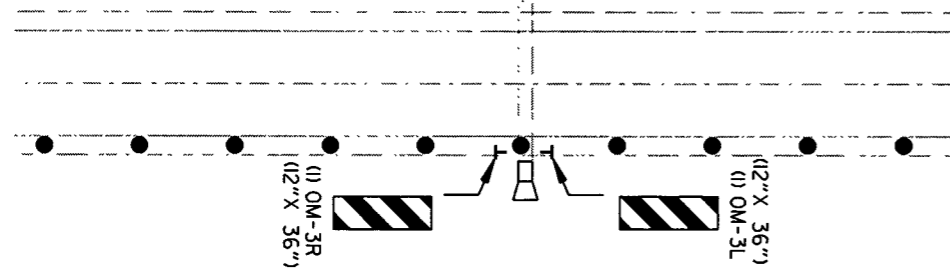
MAINTENANCE OF TRAFFIC DETAILS ADVANCE WARNING SIGNS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	009814		14	94

2 MAINTENANCE OF TRAFFIC DETAILS



10 TRAFFIC DRUMS @ 20' O.C.  
 TRAFFIC DRUMS = 10 EACH  
 OM-3R = 1 EACH  
 OM-3L = 1 EACH



TRAFFIC DRUMS AND SIGNS ON EXISTING SHOULDER FOR EXTENDING/CONSTRUCTING PIPE CULVERTS LT. AND RT.

STA. 101+21      STA. 115+95

SEQUENCING:

STAGE 1: CONSTRUCT NEW BRIDGE AND HIGHWAY FULL DEPTH SECTION OF PROPOSED ROADWAY, CONSTRUCT TEMPORARY DRIVEWAYS, AND PERFORM NOTCH AND WIDEN LT. SIDE OF EXISTING PAVEMENT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 40' O.C. SPACING.

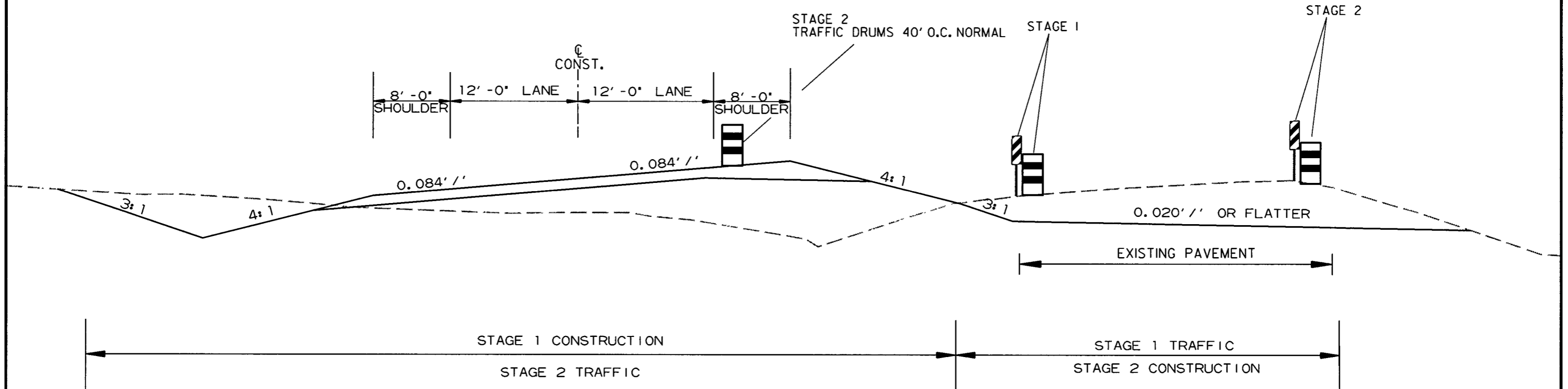
STAGE 2: MAINTAIN TRAFFIC ON EXISTING ROADWAY AND PERFORM LEVELING OPERATIONS. SHIFT TRAFFIC ONTO NEW CONSTRUCTED LOCATION. REMOVE EXISTING BRIDGE STRUCTURE. UTILIZE TRAFFIC DRUMS AT 40' O.C. SPACING AT PROPOSED LANE EDGE ON RT. PERFORM NOTCH AND WIDEN RT. SIDE OF EXISTING PAVEMENT AND OBLITERATE EXISTING PAVEMENT THROUGHOUT FULL DEPTH SECTION. UTILIZE VERTICAL PANELS AT THE NOTCH AT 40' O.C. SPACING. COLD MILL TRANSITIONS AT JOB ENDS. PLACE FINAL 2" LIFT OF SURFACE AND FINAL STRIPING.

STAGE 1 & 2 NOTCHING  
 VERTICAL PANELS 40' O.C. NORMAL

NOTE:  
 THE TOTAL LENGTH OF THE WORK AREA ON THE ENTIRE PROJECT HAVING VERTICAL DIFFERENCES GREATER THAN 4" SHALL BE LIMITED TO ONE MILE.

STAGE 1 & 2 NOTCHING  
 TRAFFIC DRUMS 40' O.C. NORMAL

REPLACE VERTICAL PANELS WITH TRAFFIC DRUMS WHEN PAVEMENT CONSTRUCTION REDUCES NOTCH DEPTH TO LESS THAN 4 INCHES.



STAGE CONSTRUCTION DETAIL

MAINTENANCE OF TRAFFIC DETAILS ADVANCE WARNING SIGNS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		15	94
							JOB NO. 009814	

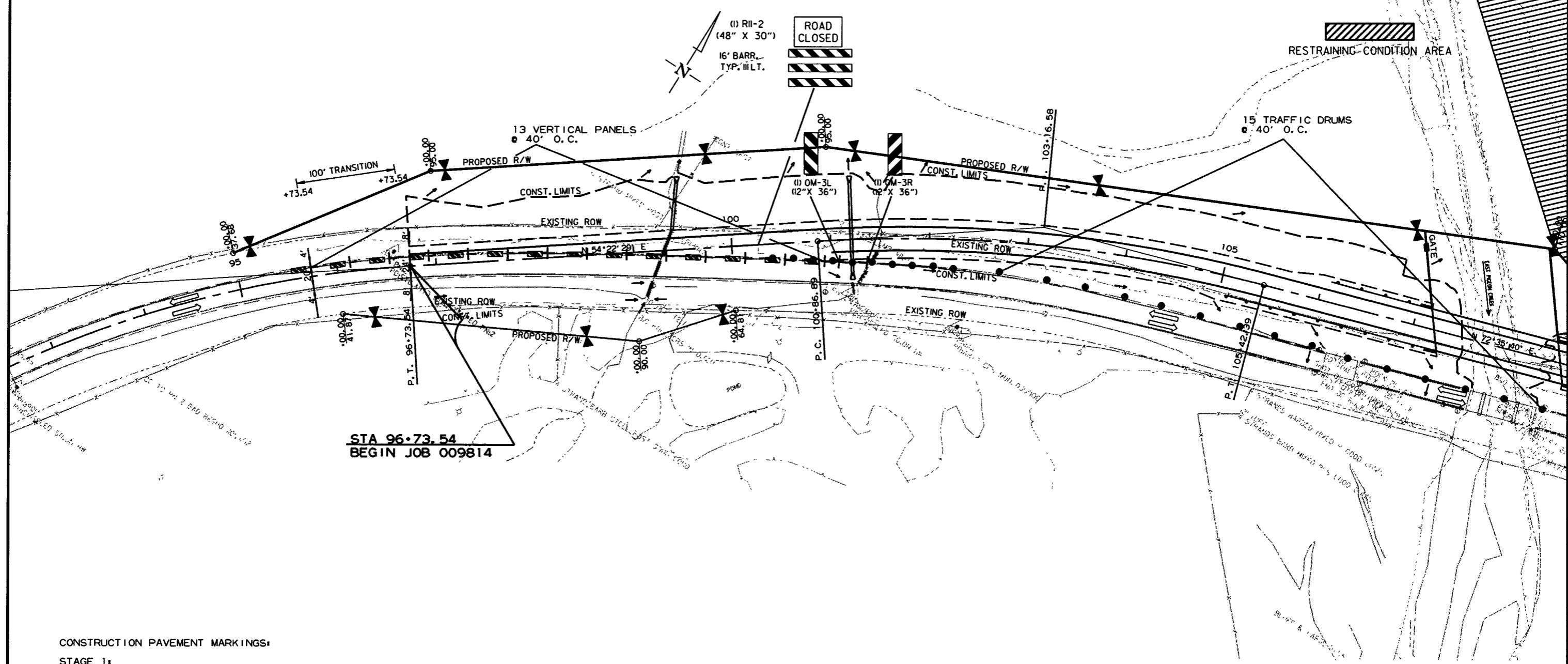
② MAINTENANCE OF TRAFFIC DETAILS



SEQUENCING:

STAGE 1: CONSTRUCT NEW BRIDGE AND HIGHWAY FULL DEPTH SECTION OF PROPOSED ROADWAY, CONSTRUCT TEMPORARY DRIVEWAYS, AND PERFORM NOTCH AND WIDEN LT. SIDE OF EXISTING PAVEMENT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 40' O.C. SPACING.

STAGE 2: MAINTAIN TRAFFIC ON EXISTING ROADWAY AND PERFORM LEVELING OPERATIONS. SHIFT TRAFFIC ONTO NEW CONSTRUCTED LOCATION. REMOVE EXISTING BRIDGE STRUCTURE. UTILIZE TRAFFIC DRUMS AT 40' O.C. SPACING AT PROPOSED LANE EDGE ON RT. PERFORM NOTCH AND WIDEN RT. SIDE OF EXISTING PAVEMENT AND OBLITERATE EXISTING PAVEMENT THROUGHOUT FULL DEPTH SECTION. UTILIZE VERTICAL PANELS AT THE NOTCH AT 40' O.C. SPACING. COLD MILL TRANSITIONS AT JOB ENDS. PLACE FINAL 2" LIFT OF SURFACE AND FINAL STRIPING.



CONSTRUCTION PAVEMENT MARKINGS:

STAGE 1:  
AS DIRECTED BY THE ENGINEER:  
RT. AND LT. EDGE LINES = 5188 LIN. FT.  
DBL. CENTERLINE = 5188 LIN. FT.

MAINTENANCE OF TRAFFIC DETAILS  
STAGE 1

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 009814							16	94

② MAINTENANCE OF TRAFFIC DETAILS



SEQUENCING:

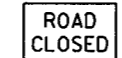

STAGE 1: CONSTRUCT NEW BRIDGE AND HIGHWAY FULL DEPTH SECTION OF PROPOSED ROADWAY, CONSTRUCT TEMPORARY DRIVEWAYS, AND PERFORM NOTCH AND WIDEN LT. SIDE OF EXISTING PAVEMENT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 40' O.C. SPACING.

STAGE 2: MAINTAIN TRAFFIC ON EXISTING ROADWAY AND PERFORM LEVELING OPERATIONS. SHIFT TRAFFIC ONTO NEW CONSTRUCTED LOCATION. REMOVE EXISTING BRIDGE STRUCTURE. UTILIZE TRAFFIC DRUMS AT 40' O.C. SPACING AT PROPOSED LANE EDGE ON RT. PERFORM NOTCH AND WIDEN RT. SIDE OF EXISTING PAVEMENT AND OBLITERATE EXISTING PAVEMENT THROUGHOUT FULL DEPTH SECTION. UTILIZE VERTICAL PANELS AT THE NOTCH AT 40' O.C. SPACING. COLD MILL TRANSITIONS AT JOB ENDS. PLACE FINAL 2" LIFT OF SURFACE AND FINAL STRIPING.

STA 120+66.86  
END JOB 009814

 RESTRAINING CONDITION AREA

17 VERTICAL PANELS  
@ 40' O.C.

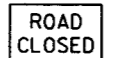

 ROAD CLOSED  
(1) R11-2  
(48" X 30")  
 16' BARR.  
TYP. III RT.

 (1) OM-3R  
(12" X 36")

 (1) OM-3L  
(12" X 36")

 (1) OM-3L  
(12" X 36")

 (1) OM-3R  
(12" X 36")

 ROAD CLOSED  
(1) R11-2  
(48" X 30")  
 16' BARR.  
TYP. III LT.

CONSTRUCTION PAVEMENT MARKINGS:

STAGE 1:  
AS DIRECTED BY THE ENGINEER:  
RT. AND LT. EDGE LINES = 5188 LIN. FT.  
DBL. CENTERLINE = 5188 LIN. FT.

MAINTENANCE OF TRAFFIC DETAILS  
STAGE I

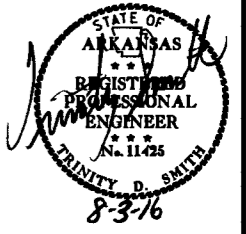
11/8/2011

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DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	009814		17	94

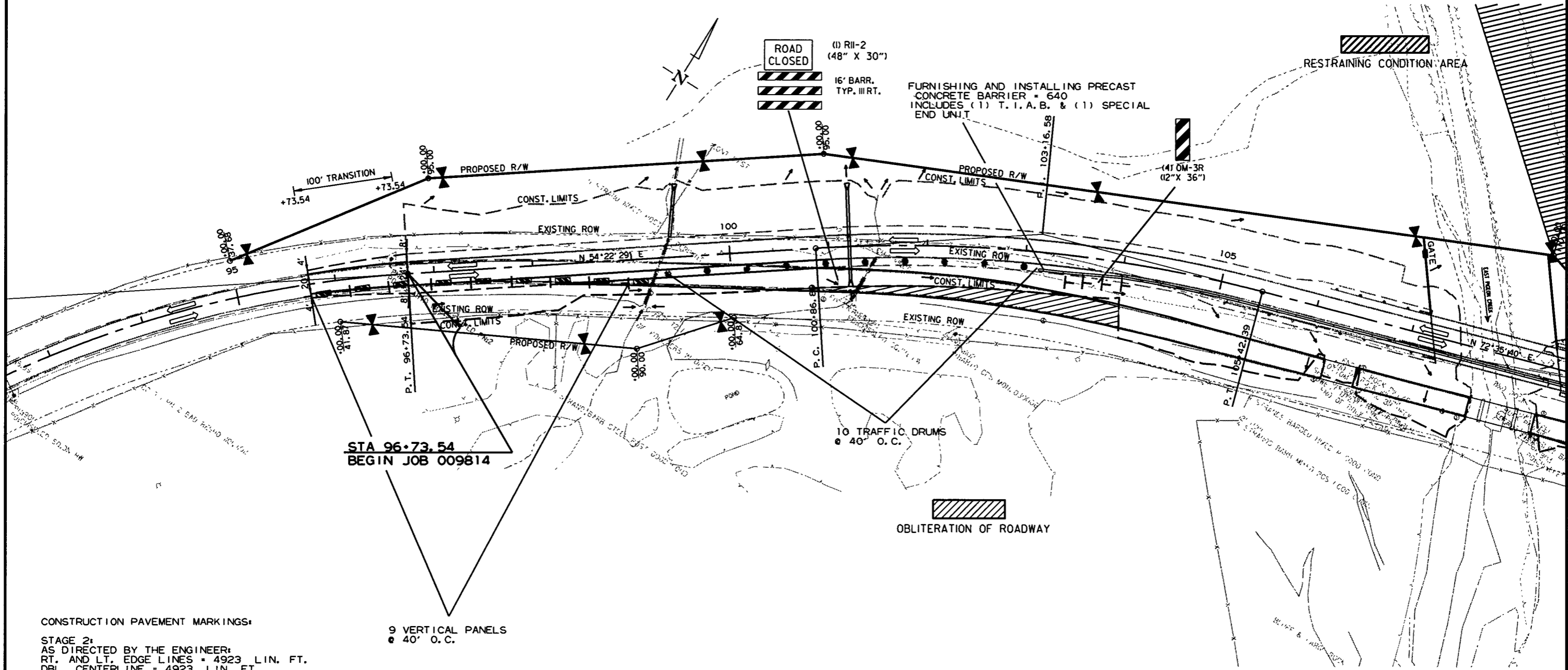
② MAINTENANCE OF TRAFFIC DETAILS



SEQUENCING:

STAGE 1: CONSTRUCT NEW BRIDGE AND HIGHWAY FULL DEPTH SECTION OF PROPOSED ROADWAY, CONSTRUCT TEMPORARY DRIVEWAYS, AND PERFORM NOTCH AND WIDEN LT. SIDE OF EXISTING PAVEMENT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 40' O.C. SPACING.

STAGE 2: MAINTAIN TRAFFIC ON EXISTING ROADWAY AND PERFORM LEVELING OPERATIONS. SHIFT TRAFFIC ONTO NEW CONSTRUCTED LOCATION. REMOVE EXISTING BRIDGE STRUCTURE. UTILIZE TRAFFIC DRUMS AT 40' O.C. SPACING AT PROPOSED LANE EDGE ON RT. PERFORM NOTCH AND WIDEN RT. SIDE OF EXISTING PAVEMENT AND OBLITERATE EXISTING PAVEMENT THROUGHOUT FULL DEPTH SECTION. UTILIZE VERTICAL PANELS AT THE NOTCH AT 40' O.C. SPACING. COLD MILL TRANSITIONS AT JOB ENDS. PLACE FINAL 2" LIFT OF SURFACE AND FINAL STRIPING.



CONSTRUCTION PAVEMENT MARKINGS:

STAGE 2:  
AS DIRECTED BY THE ENGINEER:  
RT. AND LT. EDGE LINES = 4923 LIN. FT.  
DBL. CENTERLINE = 4923 LIN. FT.

PERMANENT PAVEMENT MARKINGS:

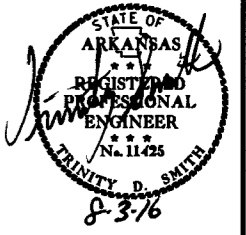
ACROSS BRIDGE  
THERMOPLASTIC PAVEMENT MARKINGS  
LT. & RT. EDGE LINES = 265 LIN. FT. 4" WHITE  
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING  
DBL. CENTERLINE = 265 LIN. FT. 4" YELLOW

MAINTENANCE OF TRAFFIC DETAILS  
STAGE 2

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		18	94

② MAINTENANCE OF TRAFFIC DETAILS



**SEQUENCING:**

STAGE 1: CONSTRUCT NEW BRIDGE AND HIGHWAY FULL DEPTH SECTION OF PROPOSED ROADWAY, CONSTRUCT TEMPORARY DRIVEWAYS, AND PERFORM NOTCH AND WIDEN LT. SIDE OF EXISTING PAVEMENT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 40' O.C. SPACING.

STAGE 2: MAINTAIN TRAFFIC ON EXISTING ROADWAY AND PERFORM LEVELING OPERATIONS. SHIFT TRAFFIC ONTO NEW CONSTRUCTED LOCATION. REMOVE EXISTING BRIDGE STRUCTURE. UTILIZE TRAFFIC DRUMS AT 40' O.C. SPACING AT PROPOSED LANE EDGE ON RT. PERFORM NOTCH AND WIDEN RT. SIDE OF EXISTING PAVEMENT AND OBLITERATE EXISTING PAVEMENT THROUGHOUT FULL DEPTH SECTION. UTILIZE VERTICAL PANELS AT THE NOTCH AT 40' O.C. SPACING. COLD MILL TRANSITIONS AT JOB ENDS. PLACE FINAL 2" LIFT OF SURFACE AND FINAL STRIPING.

 RESTRAINING CONDITION AREA

(1) R11-2  
(48" X 30")  
16' BARR.  
TYP. III L.T.

**ROAD CLOSED**  


19 TRAFFIC DRUMS  
@ 40' O.C.

STA 120+66.86  
END JOB 009814

**CONSTRUCTION PAVEMENT MARKINGS:**

STAGE 2:  
AS DIRECTED BY THE ENGINEER:  
RT. AND LT. EDGE LINES = 4923 LIN. FT.  
DBL. CENTERLINE = 4923 LIN. FT.

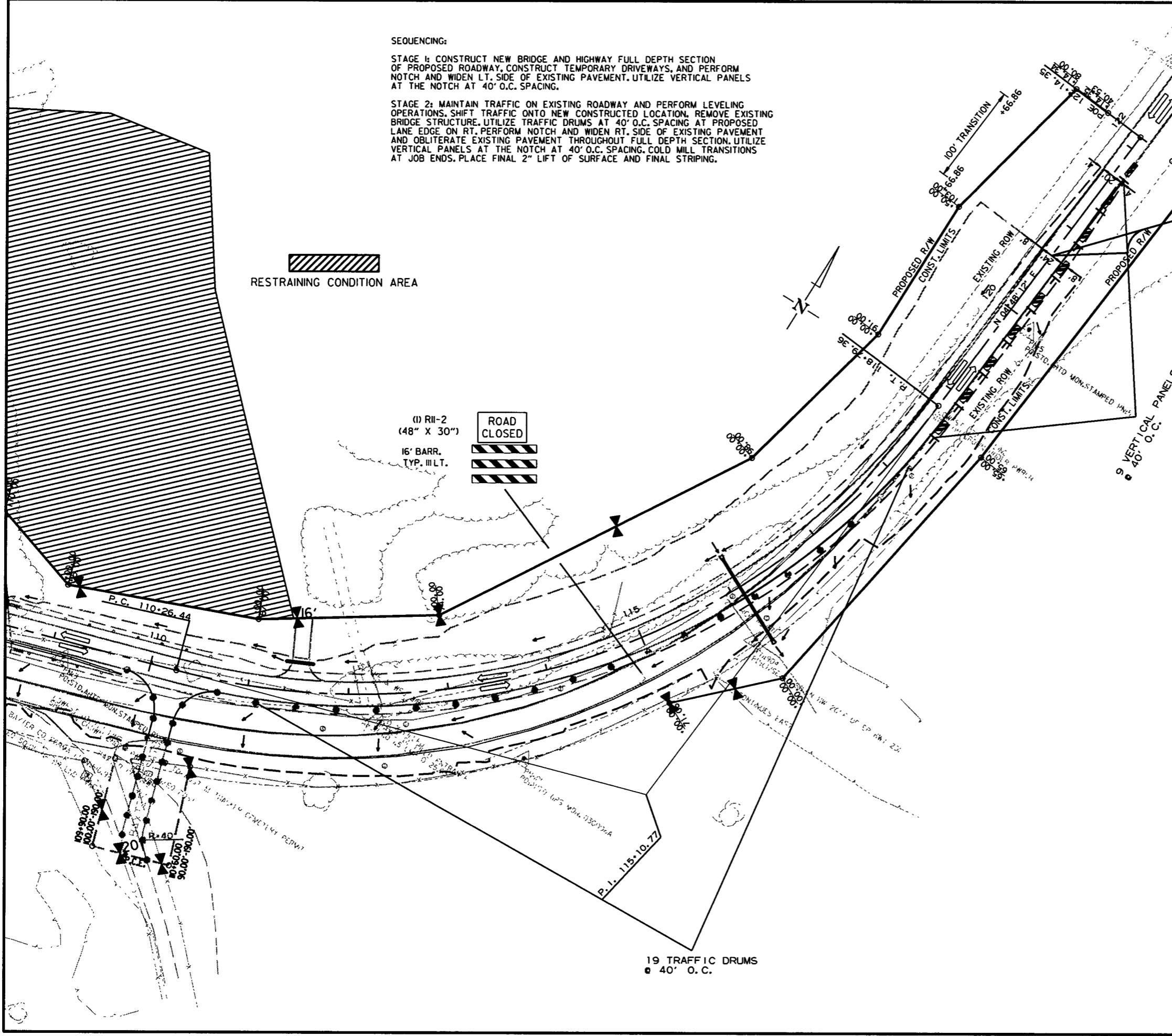
**PERMANENT PAVEMENT MARKINGS:**

ACROSS BRIDGE  
THERMOPLASTIC PAVEMENT MARKINGS  
LT. & RT. EDGE LINES = 265 LIN. FT. 4" WHITE  
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING  
\* DBL. CENTERLINE = 265 LIN. FT. 4" YELLOW

MAINTENANCE OF TRAFFIC DETAILS  
STAGE 2

11/8/2011

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		19	94
				JOB NO. 009814				

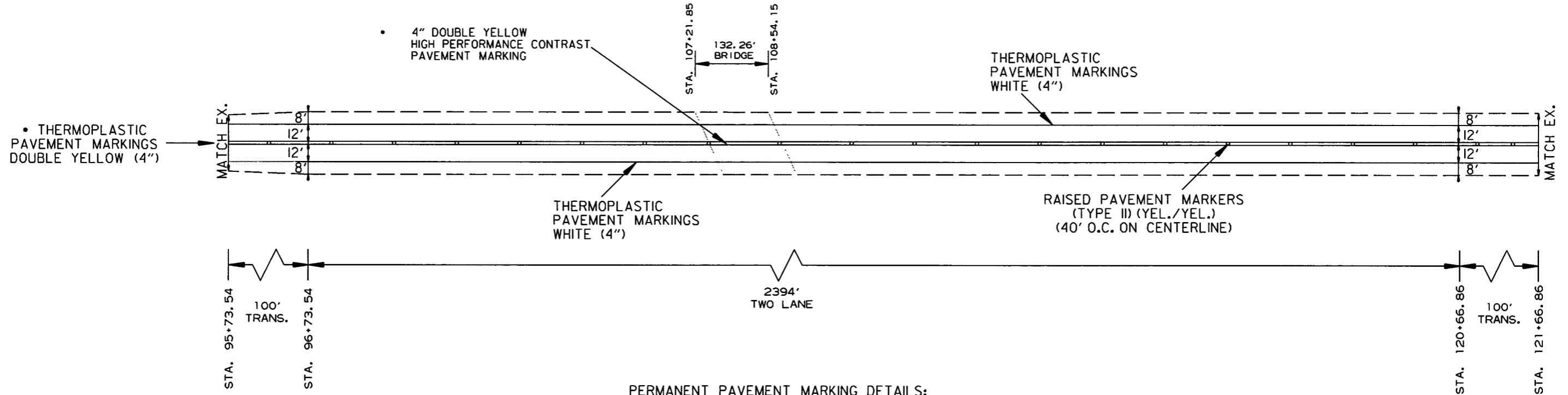
② PERMANENT PAVEMENT MARKING DETAILS



SEQUENCING:

STAGE 1: CONSTRUCT NEW BRIDGE AND HIGHWAY FULL DEPTH SECTION OF PROPOSED ROADWAY, CONSTRUCT TEMPORARY DRIVEWAYS, AND PERFORM NOTCH AND WIDEN LT. SIDE OF EXISTING PAVEMENT, UTILIZE VERTICAL PANELS AT THE NOTCH AT 40' O.C. SPACING.

STAGE 2: MAINTAIN TRAFFIC ON EXISTING ROADWAY AND PERFORM LEVELING OPERATIONS. SHIFT TRAFFIC ONTO NEW CONSTRUCTED LOCATION, REMOVE EXISTING BRIDGE STRUCTURE, UTILIZE TRAFFIC DRUMS AT 40' O.C. SPACING AT PROPOSED LANE EDGE ON RT. PERFORM NOTCH AND WIDEN RT. SIDE OF EXISTING PAVEMENT AND OBLITERATE EXISTING PAVEMENT THROUGHOUT FULL DEPTH SECTION, UTILIZE VERTICAL PANELS AT THE NOTCH AT 40' O.C. SPACING, COLD MILL TRANSITIONS AT JOB ENDS, PLACE FINAL 2" LIFT OF SURFACE AND FINAL STRIPING.



PERMANENT PAVEMENT MARKING DETAILS:

THERMOPLASTIC PAVEMENT MARKINGS  
 LT. & RT. EDGE LINES = 5188 LIN. FT. 4" WHITE  
 • DBL. CENTERLINE = 4923 LIN. FT. 4" YELLOW

HIGH PERFORMANCE CONTRAST PAVEMENT MARKING  
 • DBL. CENTERLINE = 265 LIN. FT. 4" YELLOW

RAISED PAVEMENT MARKERS:  
 TYPE II (YEL./YEL.) 40' O.C. ON CENTERLINE = 65 EACH

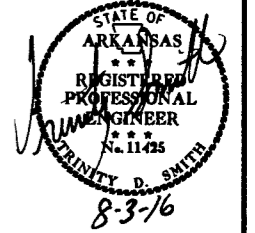
• NOTE  
 THE 4" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT. THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING. CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.

11/8/2011

ZBORER.CEL

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	009814		20	94

② QUANTITIES



**CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS**

DESCRIPTION	STAGE 1	STAGE 2	END OF JOB	CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS	THERMOPLASTIC PAVEMENT MARKING		HIGH PERFORMANCE CONTRAST PAVEMENT MARKING
					TYPE II (YEL/YEL)	4"		4"
						WHITE	YELLOW	YELLOW
				LIN. FT.	LIN. FT.		LIN. FT.	
CONSTRUCTION PAVEMENT MARKINGS	10376	9846		20222				
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)		3	62		65			
THERMOPLASTIC PAVEMENT MARKING WHITE (4")		265	4923			5188		
THERMOPLASTIC PAVEMENT MARKING YELLOW (4")			4923				4923	
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")		265						265
<b>TOTALS:</b>				<b>20222</b>	<b>65</b>	<b>5188</b>	<b>4923</b>	<b>265</b>

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

NOTE: THE 4" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT. THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING. CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.

**ADVANCE WARNING SIGNS AND DEVICES**

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	END OF JOB	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	BARRICADES (TYPE III)		FURNISHING & INSTALLING PRECAST CONC. BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMP. IMPACT ATTEN.BARR. (REPAIR)	
							NO.	SQ. FT.			EACH	RIGHT				LEFT
												LIN. FT.				EACH
W20-1	ROAD WORK 1500 FT	48"x48"	2	2	2	2	2	32.0								
W20-1	ROAD WORK 1000 FT	48"x48"	2	2	2	2	2	32.0								
W20-1	ROAD WORK 500 FT.	48"x48"	2	2	2	2	2	32.0								
W20-1	ROAD WORK AHEAD	48"x48"	2	2	2	2	2	32.0								
G20-2	END ROAD WORK	48"x24"	2	2	2	2	2	16.0								
W13-1	SPEED LIMIT (ADVISORY)	24"x24"	2	2	2	2	2	8.0								
R11-2	ROAD CLOSED	48"x30"	3	2		3	3	30.0								
OM-3L	OBJECT MARKER	12"x36"	3			3	3	9.0								
OM-3R	OBJECT MARKER	12"x36"	3	4		4	4	12.0								
R4-1	DO NOT PASS	24"x30"	2	2	2	2	2	10.0								
RSP-1	SHOULDER CLOSED	48"x30"	2	2	2	2	2	20.0								
	VERTICAL PANELS		30	18		30			30							
	TRAFFIC DRUMS		103	67		103				103						
	TYPE III BARRICADE-RT. (16')		1	1		1					16					
	TYPE III BARRICADE-LT. (16')		2	1		2						32				
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER			640		640						640				
	TEMPORARY IMPACT ATTENUATION BARRIER			1		1							1			
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)			1		1								1		
<b>TOTALS:</b>								<b>233.0</b>	<b>30</b>	<b>103</b>	<b>16</b>	<b>32</b>	<b>640</b>	<b>1</b>	<b>1</b>	

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE JOB THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4" OR LESS, AND THEN NOTCH ANOTHER ONE-MILE SECTION THIS IS THE MAXIMUM NUMBER OF VERTICAL PANELS THAT WILL BE PAID FOR. REFER TO SECTION 603.02 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.

7/20/2016

009814.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		21	94
				JOB NO.	009814			

**SOIL LOG**

STATION	LATITUDE			LONGITUDE			LOCATION	DEPTH FEET	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
	DEG	MIN	SEC	DEG	MIN	SEC						
103+00	36	27	43.10	92	21	44.70	5' RT.	0-5	35	22	A-6(17)	BR/GR
103+00	36	27	43.00	92	21	44.70	17' RT.	0-5	34	21	A-6(8)	BR/GR
112+00	36	27	46.20	92	21	34.50	5' LT.	0-5	37	24	A-6(10)	BR/GR
112+00	36	27	46.30	92	21	34.60	17' LT.	0-5	40	27	A-6(11)	BR/GR
112+00	36	27	46.30	92	21	34.60	17' LT.	0-5	36	25	A-6(13)	BR/GR

SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE, AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS  
 Z- AUGER REFUSAL  
 NP - NON-PLASTIC  
 ND - NOT DETERMINABLE

**REMOVAL AND DISPOSAL OF FENCE**

STATION	STATION	LOCATION	FENCE LIN. FT.
95+17	112+10	LT. SIDE OF MAIN LANES	1830
112+30	115+00	LT. SIDE OF MAIN LANES	408
96+25	100+00	RT. SIDE OF MAIN LANES	382
109+90	110+60	RT. SIDE OF MAIN LANES	202
115+00	115+59	RT. SIDE OF MAIN LANES	77
119+75	120+10	RT. SIDE OF MAIN LANES	35
<b>TOTALS:</b>			<b>2934</b>

**REMOVAL AND DISPOSAL OF CULVERTS**

STATION	DESCRIPTION	PIPE CULVERTS
		EACH
101+40	30" X 48' R.C. PIPE CULVERT	1
112+06	18" x 12" x 26' ARCH C.M. PIPE CULVERT	1
115+95	24' x 50' R.C. PIPE CULVERT	1
<b>TOTALS:</b>		<b>3</b>

NOTE: QUANTITIES SHOWN ABOVE SHALL INCLUDE REMOVAL & DISPOSAL OF ALL HEADWALLS AND FLARED END SECTIONS IF APPLICABLE

**EARTHWORK**

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	* SOIL STABILIZATION
			CU. YD.	CU. YD.	TON
ENTIRE	PROJECT	STAGE 1-MAIN LANES	11541	25098	
ENTIRE	PROJECT	STAGE 2-MAIN LANES	3281	1357	
ENTIRE	PROJECT	APPROACHES		1080	
ENTIRE	PROJECT	OBLITERATION OF ROADWAY	121		
ENTIRE	PROJECT	BRIDGE NO. M2312	415		
ENTIRE	PROJECT	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			100
<b>TOTALS:</b>			<b>15358</b>	<b>27535</b>	<b>100</b>

\* QUANTITY ESTIMATED.  
 SEE SECTION 104.03 OF THE STD. SPECS.

BASIS OF ESTIMATE: OBLITERATION = 9" DEPTH

**SELECTED PIPE BEDDING**

LOCATION	SELECTED PIPE BEDDING CU.YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	30
<b>TOTAL:</b>	<b>30</b>

NOTE: QUANTITY ESTIMATED.  
 SEE SECTION 104.03 OF THE STD. SPECS.

**CLEARING AND GRUBBING**

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	STATION
95+73	106+65	MAIN LANES	11	11
108+00	109+00	MAIN LANES	1	1
110+00	111+00	MAIN LANES	1	1
111+50	120+00	MAIN LANES	9	9
<b>TOTALS:</b>			<b>22</b>	<b>22</b>

**PAVEMENT REPAIR OVER CULVERTS (ASPHALT)**

STATION	LOCATION	WIDTH	LENGTH	TON
		FEET		
116+10	MAIN LANES	8.50	22	10
<b>TOTAL:</b>				<b>10</b>

AVG. DEPTH = 9"

**COLD MILLING ASPHALT PAVEMENT**

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
95+73.54	96+73.54	MAIN LANES	20.00	222.22
120+66.86	121+66.86	MAIN LANES	20.00	222.22
<b>TOTAL:</b>				<b>444.44</b>

NOTE: AVERAGE MILLING DEPTH 1"

**DRIVEWAYS & TURNOUTS**

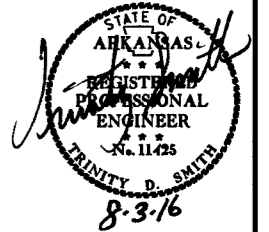
STATION	SIDE	LOCATION	WIDTH	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS 24" LIN. FT.	STANDARD DRAWINGS
			FEET	SQ. YD.	TON			
			TON	TON	TON			
110+29	RT.	HWY. 201	20	456.98	50.27	186.60		
111+50	LT.	HWY. 201	16	117.96	12.98	48.17	34	PCC-1, PCM-1, PCP-1, PCP-2
* ENTIRE PROJECT TEMPORARY DRIVES						60.00		
<b>TOTALS:</b>				<b>574.94</b>	<b>63.25</b>	<b>294.77</b>	<b>34</b>	

BASIS OF ESTIMATE:  
 ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR ..... 5.3% ASPHALT BINDER  
 MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

\* QUANTITY ESTIMATED.  
 SEE SECTION 104.03 OF THE STD. SPECS.  
 TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.  
 NOTE: FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

**QUANTITIES**



7/20/2016

009814.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		22	94
				JOB NO. 009814				

**DUMPED RIPRAP AND FILTER BLANKET**

STATION	LOCATION	DUMPED RIPRAP	FILTER BLANKET
		CU. YD.	SQ. YD.
99+26	OUTLET OF PIPE CULVERT	40	80
101+40	OUTLET OF PIPE CULVERT	44	88
115+95	OUTLET OF PIPE CULVERT	22	44
	*TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	18	36
<b>TOTALS:</b>		<b>124</b>	<b>248</b>

\*NOTE: QUANTITIES ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

NOTE: FILTER BLANKET SHALL BE GEOTEXTILE FABRIC (TYPE 5).

**FENCING**

STATION	STATION	LOCATION	WIRE FENCE	*16'-0" GATES
			(TYPE D-1) LIN. FT.	EACH
95+16	112+04	LT. OF MAIN LANES	1914	1
112+04	112+20	LT. OF MAIN LANES		1
112+20	115+00	LT. OF MAIN LANES	282	
96+32	99+88	RT. OF MAIN LANES	365	
109+00	110+19	RT. OF MAIN LANES	50	
110+54	110+60	RT. OF MAIN LANES	100	1
115+00	115+57	RT. OF MAIN LANES	86	
<b>TOTALS:</b>			<b>2797</b>	<b>3</b>

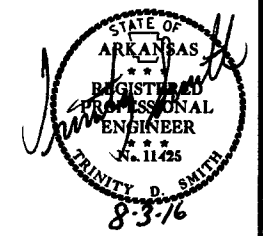
\* DENOTES ALTERNATE BID ITEM

**ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC**

LOCATION	TON	TACK COAT GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	10	20
<b>TOTALS:</b>	<b>10</b>	<b>20</b>

BASIS OF ESTIMATE:  
ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC...25 TON/MILE  
TACK COAT FOR MAINTENANCE OF TRAFFIC.....50 GAL./MILE

**QUANTITIES**



**EROSION CONTROL**

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL									
			SEEDING ACRE	LIME TON	MULCH COVER ACRE	WATER M.GAL.	SECOND SEEDING APPLICATION ACRE	TEMPORARY SEEDING ACRE	MULCH COVER ACRE	WATER M.GAL.	WATTLE (20") DITCH CHECKS	SAND BAG DITCH CHECKS	ROCK DITCH CHECKS	SILT FENCE	SEDIMENT BASIN	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
											(E-1) LIN. FT.	(E-5) BAG	(E-6) CU.YD.	(E-11) LIN. FT.	(E-14) CU.YD.	CU.YD.	CU. YD.
ENTIRE PROJECT		CLEARING AND GRUBBING															
ENTIRE PROJECT		STAGE 1															120
ENTIRE PROJECT		STAGE 2	2.85	5.70	2.85	290.7	2.85	5.25	5.25	107.1		44	12	1775			72
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			0.71	1.42	0.71	72.4	0.71	5.26	5.26	107.3	99	44	15		230	230	248
<b>TOTALS:</b>			<b>3.56</b>	<b>7.12</b>	<b>3.56</b>	<b>363.1</b>	<b>3.56</b>	<b>26.30</b>	<b>26.30</b>	<b>536.5</b>	<b>99</b>	<b>154</b>	<b>45</b>	<b>4775</b>	<b>230</b>	<b>230</b>	<b>440</b>

BASIS OF ESTIMATE:  
LIME .....2 TONS / ACRE OF SEEDING  
WATER.....102.0 M.G. / ACRE OF SEEDING  
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING  
WATTLE DITCH CHECKS.....9 LIN. FT. / LOCATION  
SAND BAG DITCH CHECKS.....22 BAGS / LOCATION  
ROCK DITCH CHECKS.....3 CU.YD./LOCATION

NOTE: THE TEMPORARY EROSION CONTROL DEVICES SHOWN ABOVE AND ON THE PLANS SHALL BE INSTALLED IN SUCH A SEQUENCE AS TO DETER EROSION AND SEDIMENTATION ON U.S. WATERWAYS AS EXPLAINED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT.

\*QUANTITIES ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.

**CONCRETE DITCH PAVING**

STATION	STATION	LOCATION	LENGTH	"W"	CONC. DITCH PAVING (TYPE B)	SOLID SODDING	WATER
			LIN. FT.	FEET	SQ. YD.	SQ. YD.	M. GAL.
98+00	100+75	RT. OF MAIN LANES	275.00	7	213.89	122.22	1.54
104+00	105+00	RT. OF MAIN LANES	100.00	7	77.78	44.44	0.56
108+50	115+70	LT. OF MAIN LANES	720.00	7	560.00	320.00	4.03
116+20	120+67	LT. OF MAIN LANES	447.00	7	347.67	198.67	2.50
99+26		SLOPE OF PIPE OUTLET	33.00	7	25.67	14.67	0.18
101+21		SLOPE OF PIPE OUTLET	40.00	7	31.11	17.78	0.22
115+95		SLOPE OF PIPE OUTLET	10.00	7	7.78	4.44	0.06
<b>TOTALS:</b>					<b>1263.90</b>	<b>722.22</b>	<b>9.09</b>

BASIS OF ESTIMATE:  
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.

**EROSION CONTROL MATTING**

STATION	STATION	LOCATION	LENGTH	CLASS 3
			LIN. FT.	SQ. YD.
100+75	101+75	RT. OF MAIN LANES	100.0	88.9
105+00	106+00	RT. OF MAIN LANES	100.0	88.9
115+70	116+20	LT. OF MAIN LANES	50.0	44.4
<b>TOTAL:</b>				<b>222.2</b>

NOTE: AVERAGE WIDTH = 8'-0"

**BENCH MARKS**

STATION	LOCATION	BENCH MARKS
		EACH
108+54.15	BRIDGE END	1
<b>TOTAL:</b>		<b>1</b>

NOTE: SHOWN FOR INFORMATION ONLY. BENCH MARKS SHALL BE FURNISHED AND PLACED BY STATE FORCES

**GUARDRAIL**

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)	TERMINAL ANCHOR POSTS (TYPE 1)
			LIN. FT.	EACH	EACH	EACH
106+21.42	107+15.17	LT. SIDE	75	1		1
105+10.98	107+29.73	RT. SIDE	150	1	1	
108+46.27	110+65.02	LT. SIDE	150	1	1	
108+60.83	109+54.58	RT. SIDE	75	1		1
<b>TOTALS:</b>			<b>450</b>	<b>4</b>	<b>2</b>	<b>2</b>

**4" PIPE UNDERDRAIN**

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			1000	4
<b>TOTALS:</b>			<b>1000</b>	<b>4</b>

\*NOTE: QUANTITIES ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.

**ACHM PATCHING OF EXISTING ROADWAY**

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	10
<b>TOTAL:</b>	<b>10</b>

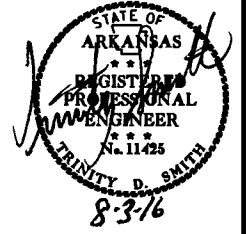
NOTE: QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS

**QUANTITIES**

7/20/2016  
R009814.DGN

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
						JOB NO.	009814	23	94

2 QUANTITIES



**STRUCTURES**

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE (CLASS III)		FLARED END SECTIONS FOR R.C. PIPE CULVERTS		SOLID SODDING	WATER	STD. DWG. NOS.
		24"	30"	24"	30"			
		LIN. FT.		EACH		SQ. YD.	M. GAL.	
99+26	IN PLACE-RETAIN AND EXTEND 30" R.C. PIPE CULVERT		52		1	8	0.10	FES-1, FES-2, PCC-1
101+21	CONSTRUCT 30" R.C. PIPE CULVERT		96		2	26	0.33	FES-1, FES-2, PCC-1
116+10	CONSTRUCT 24" R.C. PIPE CULVERT	90		2		16	0.20	FES-1, FES-2, PCC-1
<b>TOTALS:</b>		<b>90</b>	<b>148</b>	<b>2</b>	<b>3</b>	<b>50</b>	<b>0.63</b>	

BASIS OF ESTIMATE  
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING

NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.

**APPROACH GUTTERS**

STATION	STATION	LOCATION	APPROACH GUTTER (TYPE A)	REINFORCING STEEL-RDWY. (GR. 60)
			CU. YD.	POUND
106+84.57	107+14.57	LT. SIDE	7.55	665
106+99.13	107+29.13	RT. SIDE	7.55	665
108+46.87	108+76.87	LT. SIDE	7.55	665
108+61.43	108+91.43	RT. SIDE	7.55	665
<b>TOTALS:</b>			<b>30.20</b>	<b>2660</b>

NOTE: USE T=14" FOR 6' SHOULDER.

**BASE AND SURFACING**

STATION	STATION	LOCATION	LENGTH FEET	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BINDER COURSE (1")			ACHM SURFACE COURSE (1/2")										
				TON / STATION	TON	AVG. WID. FEET	SQ. YD.	GALLONS / SQ. YD.	GALLON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 64-22 TON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 64-22 TON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 64-22 TON	TOTAL PG 64-22 TON	
				<b>MAIN LANES</b>																			
95+73.54	96+73.54	TRANSITION	100.00															22.00	244.44	220.00	26.89	26.89	
96+73.54	98+23.54	NOTCH AND WIDEN- SUPERELEVATION	150.00	197.38	296.07	26.56	442.67	0.05	22.13	13.38	223.00	440.00	49.06	13.19	219.83	220.00	24.18	28.00	466.67	220.00	51.33	75.51	
98+23.54	99+36.89	NOTCH AND WIDEN	113.35	197.38	223.73	26.56	334.51	0.05	16.73	13.38	168.51	440.00	37.07	13.19	166.12	220.00	18.27	28.00	352.64	220.00	38.79	57.06	
99+36.89	100+02.08	NOTCH AND WIDEN- SUPERELEVATION	65.19	197.38	128.67	26.56	192.38	0.05	9.62	13.38	96.92	440.00	21.32	13.19	95.54	220.00	10.51	28.00	202.81	220.00	22.31	32.82	
100+02.08	106+92.39	FULL DEPTH - SUPERELEVATION	690.31	259.25	1789.63	48.75	3739.18	0.05	186.96	24.50	1879.18	440.00	413.42	24.25	1860.00	220.00	204.60	28.00	2147.63	220.00	236.24	440.84	
106+92.39	107+21.87	FULL DEPTH	29.48	259.25	76.43	48.75	159.68	0.05	7.98	24.50	80.25	440.00	17.66	24.25	79.43	220.00	8.74	28.00	91.72	220.00	10.09	18.83	
108+54.13	108+61.43	FULL DEPTH	7.30	259.25	18.93	48.75	39.54	0.05	1.98	24.50	19.87	440.00	4.37	24.25	19.67	220.00	2.16	28.00	22.71	220.00	2.50	4.66	
108+61.43	115+84.32	FULL DEPTH - SUPERELEVATION	722.89	259.25	1874.09	48.75	3915.65	0.05	195.78	24.50	1967.87	440.00	432.93	24.25	1947.79	220.00	214.26	28.00	2248.99	220.00	247.39	461.65	
115+84.32	120+66.86	NOTCH AND WIDEN- SUPERELEVATION	482.54	197.38	952.44	26.56	1424.03	0.05	71.20	13.38	717.38	440.00	157.82	13.19	707.19	220.00	77.79	28.00	1501.24	220.00	165.14	242.93	
120+66.86	121+66.86	TRANSITION	100.00															22.00	244.44	220.00	26.89	26.89	
<b>ADDITIONAL FOR LEVELING</b>																							
96+73.54	100+02.08	MAIN LANES	328.54			20.00	730.09	0.17	124.12									VAR.	VAR.	VAR.	61.38	61.38	
115+84.32	116+00.00	MAIN LANES	15.68			20.00	34.84	0.17	5.92									VAR.	VAR.	VAR.	11.88	11.88	
120+00.00	120+66.86	MAIN LANES	66.86			20.00	148.58	0.17	25.26									VAR.	VAR.	VAR.	15.84	15.84	
<b>ADDITIONAL FOR METHOD OF RAISING GRADE</b>																							
116+00.00	120+00.00	MAIN LANES	400.00			20.00	888.89	0.17	151.11	VAR.	VAR.	VAR.	465.30										
<b>ADDITIONAL FOR WIDENING FOR GUARDRAIL</b>																							
104+67.98	107+29.73	RT. SIDE OF MAIN LANES	261.75	VAR.	98.94													VAR.	328.75	220.00	36.16	36.16	
105+78.42	107+15.17	LT. SIDE OF MAIN LANES	136.75	VAR.	56.87													VAR.	179.28	220.00	19.72	19.72	
108+60.83	109+97.58	RT. SIDE OF MAIN LANES	136.75	VAR.	67.82													VAR.	169.96	220.00	18.70	18.70	
108+46.27	111+08.02	LT. SIDE OF MAIN LANES	261.75	VAR.	99.72													VAR.	335.87	220.00	36.95	36.95	
<b>ADDITIONAL FOR SUPERELEVATION</b>																							
95+73.54	98+23.54	TRANSITION (NOTCH AND WIDEN)	250.00	37.56	93.90																		
99+36.89	100+02.08	TRANSITION (NOTCH AND WIDEN)	65.19	24.38	15.89																		
100+02.08	101+36.89	TRANSITION (FULL DEPTH)	134.81	35.00	47.18																		
101+36.89	104+92.39	FULL SUPERELEVATION (FULL DEPTH)	356.00	70.00	249.20																		
104+92.39	106+92.39	TRANSITION (FULL DEPTH)	200.00	35.00	70.00																		
108+61.43	111+11.43	TRANSITION (FULL DEPTH)	250.00	50.25	125.63																		
111+11.43	115+84.32	FULL SUPERELEVATION (FULL DEPTH)	472.89	100.50	475.25																		
115+84.32	118+16.86	FULL SUPERELEVATION (NOTCH AND WIDEN)	232.54	97.13	225.87																		
118+16.86	120+66.86	TRANSITION (NOTCH AND WIDEN)	250.00	48.56	121.40																		
<b>TOTALS:</b>						<b>7107.66</b>		<b>12050.04</b>		<b>818.79</b>		<b>5152.98</b>		<b>1598.95</b>		<b>5095.57</b>		<b>560.51</b>		<b>8537.15</b>		<b>1028.20</b>	<b>1588.71</b>

BASIS OF ESTIMATE:  
ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% ASPHALT BINDER  
ACHM BINDER COURSE (1").....95.7% MIN. AGGR.....4.3% ASPHALT BINDER  
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22  
MAXIMUM NUMBER OF GYRATIONS = 160 FOR PG 70-22  
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22

7/20/2016

009814.DGN

QUANTITIES

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.	009814			
				07397 - QUANTITIES - 58837				

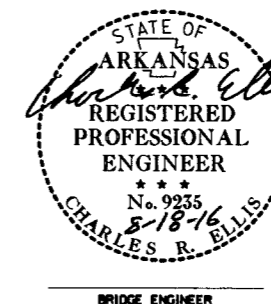
**SCHEDULE OF BRIDGE QUANTITIES-JOB 009814**

BRIDGE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	205	801	802	802	803	804	804	805	SP & 807	808	809	812	816	816	
			ITEM	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. .)	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	CLASS S CONCRETE-BRIDGE	CLASS S(AE) CONCRETE-BRIDGE	CLASS 2 PROTECTIVE SURFACE TREATMENT	EPOXY COATED REINFORCING STEEL (GRADE 60)	REINFORCING STEEL-BRIDGE (GRADE 60)	① STEEL PILING (HP 12X53)	STRUCTURAL STEEL IN BEAM SPANS (M 270, GRADE 50W)	ELASTOMERIC BEARINGS	SILICONE JOINT SEALANT	BRIDGE NAME PLATE (TYPE D)	FILTER BLANKET	DUMPED RIPRAP	
			UNIT	LUMP SUM	CU. YD.	CU. YD.	CU. YD.	SO. YD.	LB.	LB.	LIN. FT.	LB.	CU. IN.	LIN. FT.	EACH	SO. YD.	CU. YD.	
07397	EAST PIGEON CREEK	BENT 1				27.10		13.1		3,315	85	880	1,365.0			246	144	
		BENT 2			36	45.90				7,035			1,522.5					
		BENT 3			58	46.50				7,105			1,522.5					
		BENT 4			9	27.90			13.1	3,455	70	880	1,365.0			200	115	
		130'-0" W-BEAM UNIT						168.00	681.4	37,980			90,700	91	1			
		SITE NO. 2 (BRIDGE NO. M2312)	1															
		TOTALS FOR BRIDGE NO. 07397			② 103		147.40	168.00	707.6	37,980	20,910	155	92,460	5,775.0	91	1	446	259
		SITE NO. 1 (BRIDGE NO. M2311)	1															
		TOTALS FOR JOB NO. 009814			② 103		147.40	168.00	707.6	37,980	20,910	155	92,460	5,775.0	91	1	446	259

① All steel piling shall be Grade 50 and are required to have approved driving points which will not be paid for directly, but will be considered subsidiary to the item "Steel Piling (HP 12X53)". All piles shall conform to Std. Dwg. No. 55020.

② Includes approx. 53 cu. yds. of rock excavation.

KYLE YEARY  
DESIGN SECTION SUPERVISOR



SCHEDULE OF BRIDGE QUANTITIES  
E. PIGEON CREEK STR. & APPRS. (S)  
BAXTER COUNTY  
ROUTE 201 SEC. 1  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: COR DATE: 12/16/2015 FILENAME: b009814-ql.dgn  
 CHECKED BY: DHP DATE: 2/18/16 SCALE: ---  
 DESIGNED BY: DATE: ---  
 BRIDGE NO. 07397 DRAWING NO. 58837



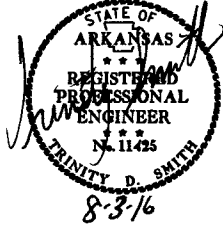
SUMMARY OF QUANTITIES

Table with columns: ITEM NUMBER, ITEM, QUANTITY, UNIT. Contains 112 rows of construction items and quantities such as CLEARING, REMOVAL AND DISPOSAL OF FENCE, ASPHALT BINDER, CONCRETE DITCH PAVING, etc.

\* DENOTES ALTERNATE BID ITEMS.

SUMMARY OF QUANTITIES AND REVISIONS

Summary header table with fields: DATE REVISED, DATE FILED, FED. PROJ. NO., STATE, JOB NO., SHEET NO., TOTAL SHEETS.



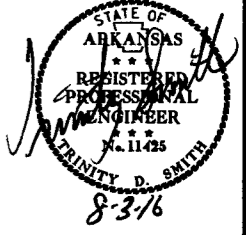
REVISIONS

Table with columns: DATE, REVISION, SHEET NUMBER. Contains 11 empty rows for recording revisions.

SUMMARY OF QUANTITIES AND REVISIONS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						009814	26	94

2 SURVEY CONTROL DETAILS



SURVEY CONTROL COORDINATES

Project Name: s009814  
 Date: 6/5/2013  
 Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL,  
 PROJECTED TO GROUND.  
 Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	774139.3884	1204753.0726	721.702	CTL	STD. AHTD MON. STAMPED PN: 1
2	774710.7800	1205167.1800	673.281	CTL	STD. AHTD MON. STAMPED PN: 2
3	775246.5824	1206290.0874	625.435	CTL	STD. AHTD MON. STAMPED PN: 3
4	774770.4412	1206823.7878	624.107	CTL	STD. AHTD MON. STAMPED PN: 4
5	776035.2619	1206931.5962	699.121	CTL	STD. AHTD MON. STAMPED PN: 5
6	776921.3009	1206963.9041	763.942	CTL	STD. AHTD MON. STAMPED PN: 6
100	785725.2960	1217742.9598	861.225	GPS	NGS MON. CRAWFORD
101	775405.7904	1206732.7543	667.630	GPS	AHTD GPS MON. 030006A
102	774949.3420	1205690.4743	643.036	GPS	AHTD GPS MON. 030006
900	773208.9620	1204630.3507	778.764	TBM	CHISELED SQ. ON HW
901	774391.1545	1204916.2446	693.397	TBM	CHISELED SQ. ON HW
902	774923.8405	1205582.8650	638.134	TBM	CHISELED SQ. ON HW
903	775170.9532	1206239.1356	621.678	TBM	CHISELED SQ. ON NE BR END OVER
904	775629.1914	1206865.3585	681.100	TBM	CHISELED SQ. ON HW 20' E OF EP HWY 201
998	776343.1211	1206911.4116	714.847	BM	USGS BM 14 WPM B CHISELED SQ. ON
999	770451.0050	1204321.8280	869.524	BM	USGS REF MARK 140' N OF BM

HWY. 201	POINT NO.	TYPE	STATION	NORTHING	EASTING
	8006	POB	80+25.03	773222.1864	1204613.8389
	8007	PC	87+58.08	773946.9920	1204723.4794
	8009	PT	96+73.54	774707.0512	1205189.0308
	8010	PC	100+86.89	774947.8219	1205525.0228
	8012	PT	105+42.39	775150.3159	1205930.8901
	8003	PC	110+26.44	775295.1128	1206392.7821
	8004	PT	118+79.36	775922.6124	1206895.4852
	8005	POE	122+14.35	776256.4212	1206923.5359

\*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped  
 \*(standard markings common to all caps), or as indicated  
 (other markings indicated in the point description of the individual point).  
 ALL DISTANCES ARE GROUND.  
 USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.  
 A PROJECT CAF OF 1.0000198630 HAS BEEN USED TO COMPUTE THE ABOVE LISTED GROUND COORDINATES.  
 THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.  
 GRID DISTANCE = GROUND DISTANCE X CAF.  
 GROUND COORDINATES ARE PROJECTED FROM AR. STATE PLANE GRID COORDINATES BY SCALING ALL X, Y  
 COORDINATE VALUES WITH THE INVERSE (1/X) OF THE COMBINED ADJUSTMENT FACTOR (CAF) ABOUT X=0, Y=0.

GRID COORDINATES ARE STORED UNDER FILE NAME. s009814gi.cti  
 HORIZONTAL DATUM: NAD 83 (1997)  
 VERTICAL DATUM: NAVD 88 ELEVATIONS FOR POINTS 1-6, 100-102, AND 900-904 & 998-999 WERE ESTABLISHED BY 3-WIRE LEVEL TECHNIQUES  
 FROM NGS BENCHMARKS.

POSITIONAL ACCURACY:

HORIZONTAL-GPS (POINTS 100-102): 1.0 CM 10 PPM, PRIMARY CONTROL (POINTS 1-6): 2.0 CM 20 PPM  
 VERTICAL-POSITIONAL ACCURACY IS THIRD ORDER, UNLESS SPECIFIED OTHERWISE AT A SPECIFIC POINT

BASIS OF BEARING:

ARKANSAS STATE PLANE GRID BEARINGS - 0301-NORTH ZONE  
 DETERMINED FROM GPS CONTROL POINTS:  
 CONVERGENCE ANGLE: 00-12-35 LEFT AT PN: 3  
 GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

LT: 36-27-45.48 LG: 092-21-37.80

GRID NORTHING: 775261.9811 GRID EASTING: 1206314.0479

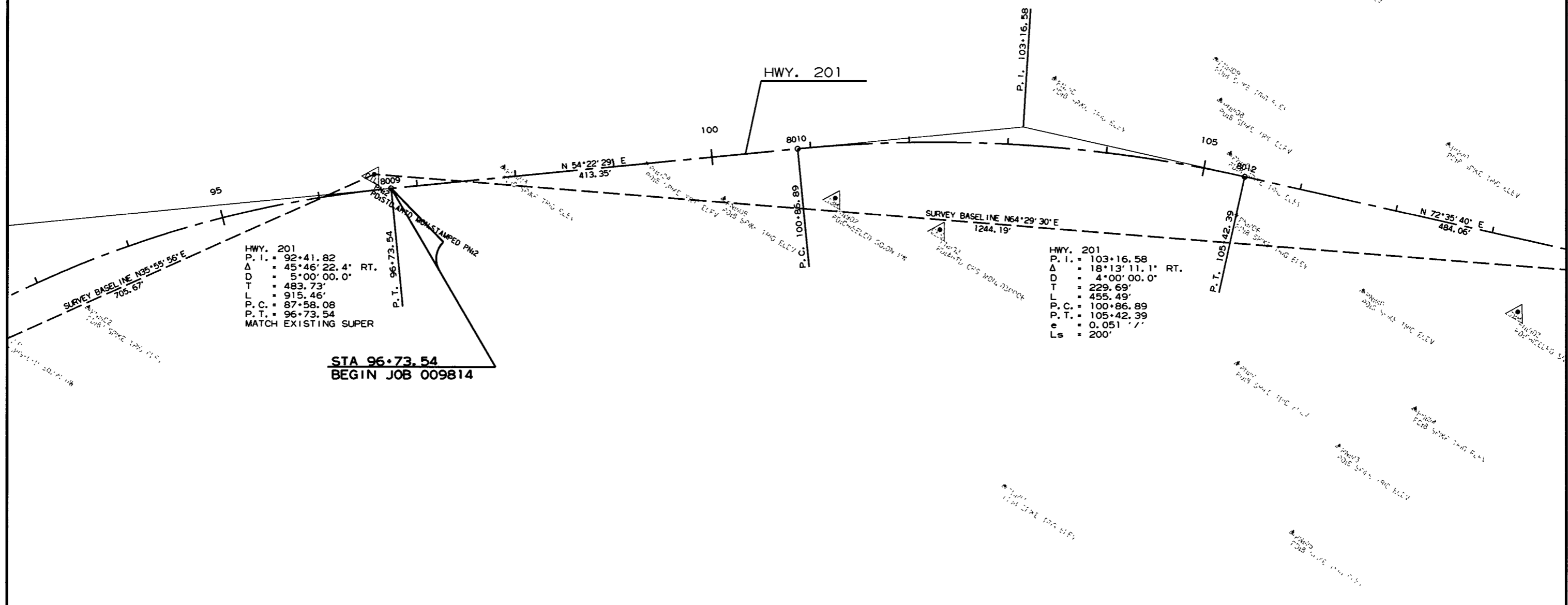
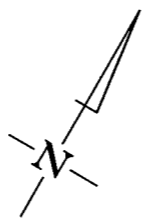
GROUND NORTHING: 775246.5824 GROUND EASTING: 1206290.0874

12/23/2015

R009814.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. DIST. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		27	94
				JOB NO.		009814	27	94

2 SURVEY CONTROL DETAILS



HWY. 201  
P. I. = 92+41.82  
Δ = 45°46'22.4" RT.  
D = 5°00'00.0"  
T = 483.73'  
L = 915.46'  
P. C. = 87+58.08  
P. T. = 96+73.54  
MATCH EXISTING SUPER

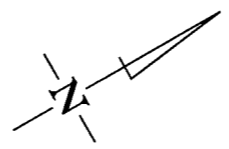
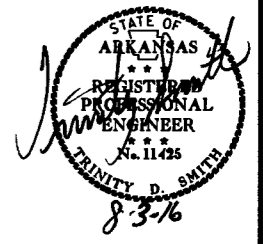
**STA 96+73.54**  
**BEGIN JOB 009814**

HWY. 201  
P. I. = 103+16.58  
Δ = 18°13'11.1" RT.  
D = 4°00'00.0"  
T = 229.69'  
L = 455.49'  
P. C. = 100+86.89  
P. T. = 105+42.39  
e = 0.051' /'  
Ls = 200'

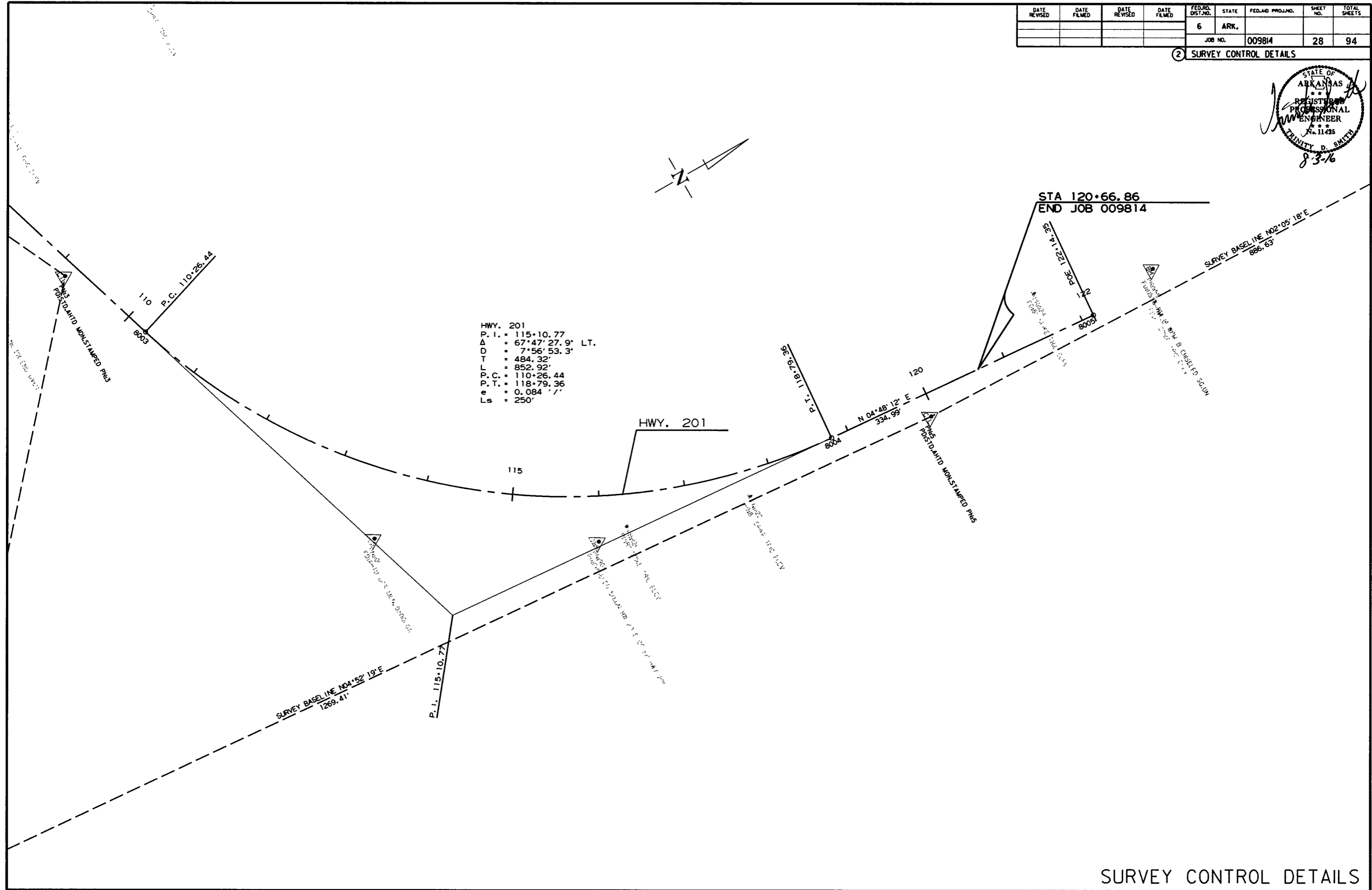
12/23/2015  
R009814.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	009814		28	94

2 SURVEY CONTROL DETAILS



HWY. 201  
 P. I. = 115+10.77  
 $\Delta$  = 67°47'27.9" LT.  
 D = 7°56'53.3"  
 T = 484.32'  
 L = 852.92'  
 P. C. = 110+26.44  
 P. T. = 118+79.36  
 e = 0.084 1/1  
 Ls = 250'



STA 120+66.86  
 END JOB 009814

SURVEY BASELINE N02°09'18"E  
 886.63'

HWY. 201

115

120

N 04°48'12" E  
 334.99'

P.O.E. 122°14'36"  
 8003

P.T. 118°19'36"

SURVEY BASELINE N04°52'19"E  
 1269.41'

P. I. 115+10.77

12/23/2015  
 R009814.DGN

SURVEY CONTROL DETAILS

P. I. = 92+41.82  
 Δ = 45°46'22.4" RT.  
 D = 5°00'00.0"  
 T = 483.73'  
 L = 915.46'  
 P. C. = 87+58.08  
 P. T. = 96+73.54  
 MATCH EXISTING SUPER

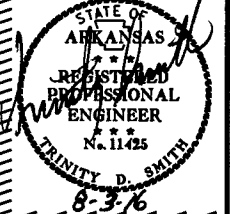
STA. 99+26 IN PLACE  
 30" X 72' R.C. PIPE CULVERT  
 30° LT. FORWARD SKEW  
 WITH HDWLS. LT. & RT.  
 REMOVE LT. HDWL.  
 EXTEND 48' LT. ON 15° LT. FORWARD SKEW  
 (CLASS III) (TYPE 2 BEDDING)  
 WITH FES LT.  
 Q25 = 1.69 CFS D.A. = 0.1 ACRES  
 30" R.C. PIPE = 52 LIN. FT.  
 30" FES = 1 EACH

STA. 106+21.71 TO STA. 106+55.79 IN PLACE  
 24' X 36' CONCRETE SLAB SPAN DECK WITH GROUTED  
 MASONRY ABUTMENTS AND INTERMEDIATE BENTS.  
 BRIDGE NO. M2311  
 REMOVE AS EXISTING BRIDGE STRUCTURE  
 (SITE NO. 1) = 1.00 LUMP SUM

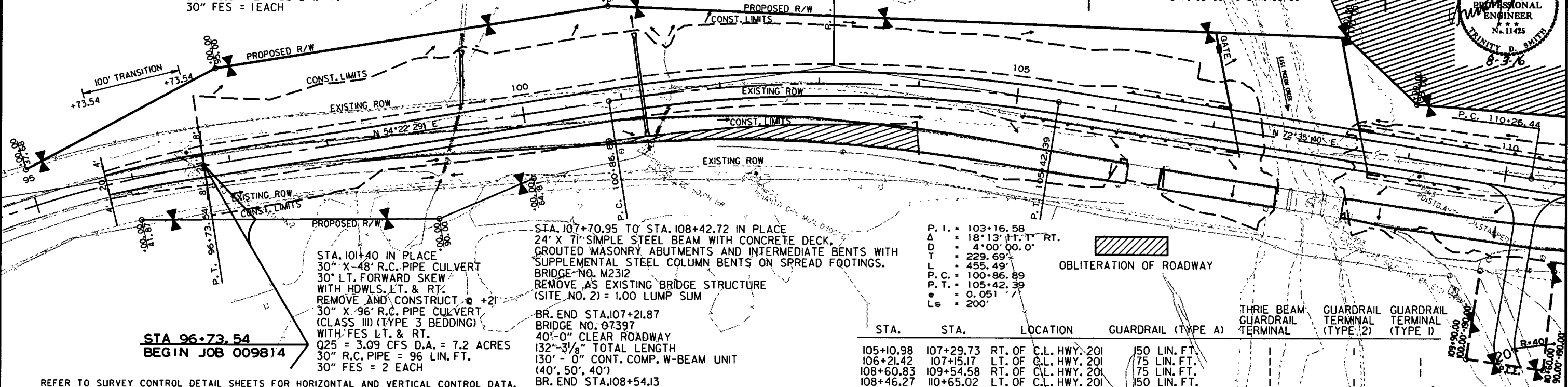
P. I. = 115+10.77  
 Δ = 67°47'27.9" LT.  
 D = 7°56'53.3"  
 T = 484.32'  
 L = 852.92'  
 P. C. = 110+26.44  
 P. T. = 118+79.36  
 e = 0.084  
 Ls = 250'

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		29	94

JOB NO. 009814



RESTRAINING CONDITION AREA  
 SPECIAL FLOOD HAZARD AREA  
 STA. 105+60 TO STA. 108+60



STA 96+73.54  
 BEGIN JOB 009814

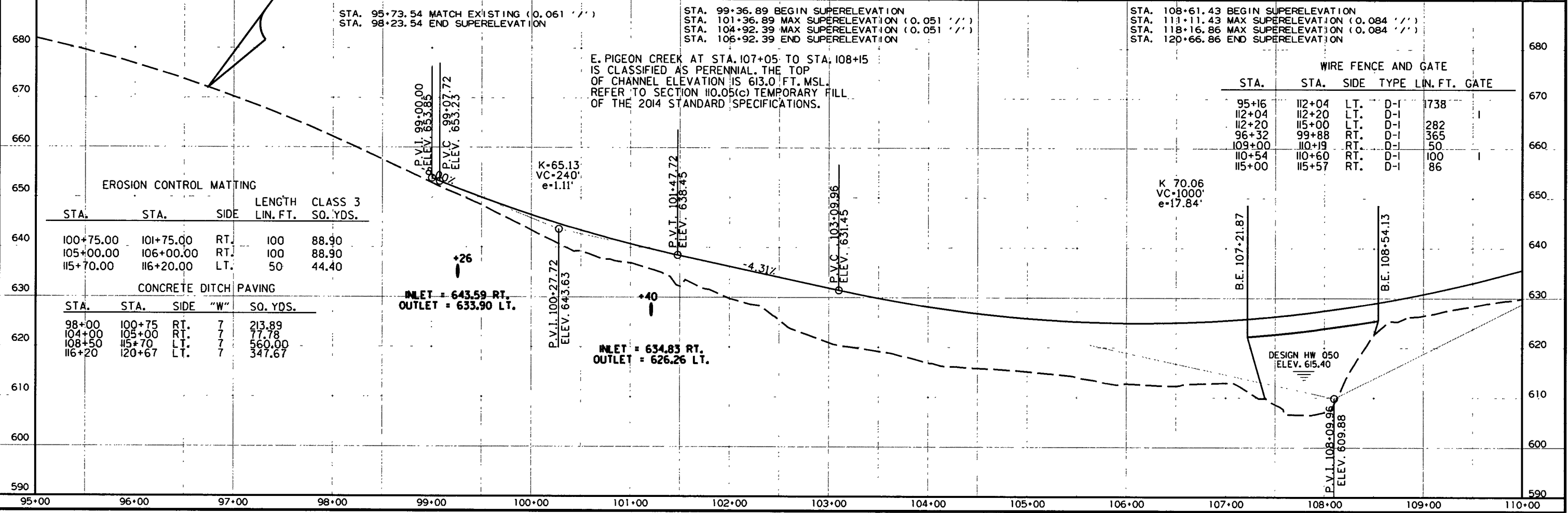
STA. 101+40 IN PLACE  
 30" X 48' R.C. PIPE CULVERT  
 30° LT. FORWARD SKEW  
 WITH HDWLS. LT. & RT.  
 REMOVE AND CONSTRUCT +21'  
 30" X 96' R.C. PIPE CULVERT  
 (CLASS III) (TYPE 3 BEDDING)  
 WITH FES LT. & RT.  
 Q25 = 3.09 CFS D.A. = 7.2 ACRES  
 30" R.C. PIPE = 96 LIN. FT.  
 30" FES = 2 EACH

STA. 107+70.95 TO STA. 108+42.72 IN PLACE  
 24' X 71' SIMPLE STEEL BEAM WITH CONCRETE DECK,  
 GROUTED MASONRY ABUTMENTS AND INTERMEDIATE BENTS WITH  
 SUPPLEMENTAL STEEL COLUMN BENTS ON SPREAD FOOTINGS.  
 BRIDGE NO. M2312  
 REMOVE AS EXISTING BRIDGE STRUCTURE  
 (SITE NO. 2) = 1.00 LUMP SUM  
 BR. END STA. 107+21.87  
 BRIDGE NO. 07397  
 40'-0" CLEAR ROADWAY  
 132'-3/8" TOTAL LENGTH  
 130'-0" CONT. COMP. W-BEAM UNIT  
 (40', 50', 40')  
 BR. END STA. 108+54.13

P. I. = 103+16.58  
 Δ = 18°13'11.1" RT.  
 D = 4°00'00.0"  
 T = 229.69'  
 L = 455.49'  
 P. C. = 100+86.89  
 P. T. = 105+42.39  
 e = 0.051  
 Ls = 200'

STA.	STA.	LOCATION	GUARDRAIL (TYPE A)	THREE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)	GUARDRAIL TERMINAL (TYPE 1)
105+10.98	107+29.73	RT. OF C.L. HWY. 201	150 LIN. FT.			
106+21.42	107+15.17	LT. OF C.L. HWY. 201	75 LIN. FT.			
108+60.83	109+54.58	RT. OF C.L. HWY. 201	75 LIN. FT.			
108+46.27	110+65.02	LT. OF C.L. HWY. 201	150 LIN. FT.			

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



STA. 95+73.54 MATCH EXISTING (0.061' /')  
 STA. 98+23.54 END SUPERELEVATION

STA. 99+36.89 BEGIN SUPERELEVATION  
 STA. 101+36.89 MAX SUPERELEVATION (0.051' /')  
 STA. 104+92.39 MAX SUPERELEVATION (0.051' /')  
 STA. 106+92.39 END SUPERELEVATION

STA. 108+61.43 BEGIN SUPERELEVATION  
 STA. 111+11.43 MAX SUPERELEVATION (0.084' /')  
 STA. 118+16.86 MAX SUPERELEVATION (0.084' /')  
 STA. 120+66.86 END SUPERELEVATION

E. PIGEON CREEK AT STA. 107+05 TO STA. 108+15  
 IS CLASSIFIED AS PERENNIAL. THE TOP  
 OF CHANNEL ELEVATION IS 613.0' MSL.  
 REFER TO SECTION 10.05(c) TEMPORARY FILL  
 OF THE 2014 STANDARD SPECIFICATIONS.

WIRE FENCE AND GATE					
STA.	STA.	SIDE	TYPE	LIN. FT.	GATE
95+16	112+04	LT.	D-1	1738	
112+04	112+20	LT.	D-1		
112+20	115+00	LT.	D-1	282	
96+32	99+88	RT.	D-1	365	
109+00	110+19	RT.	D-1	50	
110+54	110+60	RT.	D-1	100	
115+00	115+57	RT.	D-1	86	

EROSION CONTROL MATTING				
STA.	STA.	SIDE	LENGTH LIN. FT.	CLASS 3 SO. YDS.
100+75.00	101+75.00	RT.	100	88.90
105+00.00	106+00.00	RT.	100	88.90
115+70.00	116+20.00	LT.	50	44.40

CONCRETE DITCH PAVING				
STA.	STA.	SIDE	"W"	SO. YDS.
98+00	100+75	RT.	7	213.89
104+00	105+00	RT.	7	77.78
108+50	115+70	LT.	7	560.00
116+20	120+67	LT.	7	347.67

INLET = 643.59 RT.  
 OUTLET = 633.90 LT.

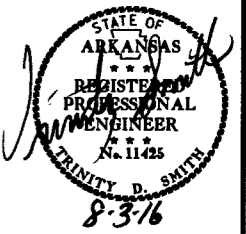
INLET = 634.83 RT.  
 OUTLET = 626.26 LT.

DESIGN HW 050  
 ELEV. 615.40

8/1/2016  
 R009814.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 009814							30	94

2 PLAN AND PROFILE SHEETS



P. I. = 115+10.77  
 $\Delta$  = 67°47'27.9" LT.  
 $D$  = 7°56'53.3"  
 $T$  = 484.32'  
 $L$  = 852.92'  
 $P.C.$  = 110+26.44  
 $P.T.$  = 118+79.36  
 $e$  = 0.084' / '  
 $L_s$  = 250'

CONCRETE DITCH PAVING

STA.	STA.	SIDE	"W"	SO. YDS.
98+00	100+75	RT.	7	213.89
104+00	105+00	RT.	7	77.78
108+50	115+70	LT.	7	560.00
116+20	120+67	LT.	7	347.67

EROSION CONTROL MATTING

STA.	STA.	SIDE	LENGTH LIN. FT.	CLASS 3 SO. YDS.
100+75.00	101+75.00	RT.	100	88.90
105+00.00	106+00.00	RT.	100	88.90
115+70.00	116+20.00	LT.	50	44.40

RESTRAINING CONDITION AREA

STA. 112+06 IN PLACE  
 18" x 12" x 26' ARCH C.M. PIPE CULVERT  
 LT. SIDE DRAIN  
 REMOVE AND INSTALL @ STA. 111+50  
 24" x 34' PIPE CULV'T.  
 LT. SIDE DRAIN  
 CONST. APPR. = 103 CU. YD.

STA. 116+10 CONSTRUCT  
 24" x 90' R.C. PIPE CULVERT  
 WITH HDWLS. LT. & RT.  
 (CLASS III) (TYPE 3 BEDDING)  
 WITH FES LT. & RT.  
 $Q_{25}$  = 1.87 CFS D.A. = 4 ACRES  
 24" R.C. PIPE = 90 LIN. FT.  
 24" FES = 2 EACH

STA. 115+95 IN PLACE  
 24" x 50' R.C. PIPE CULVERT  
 REMOVE

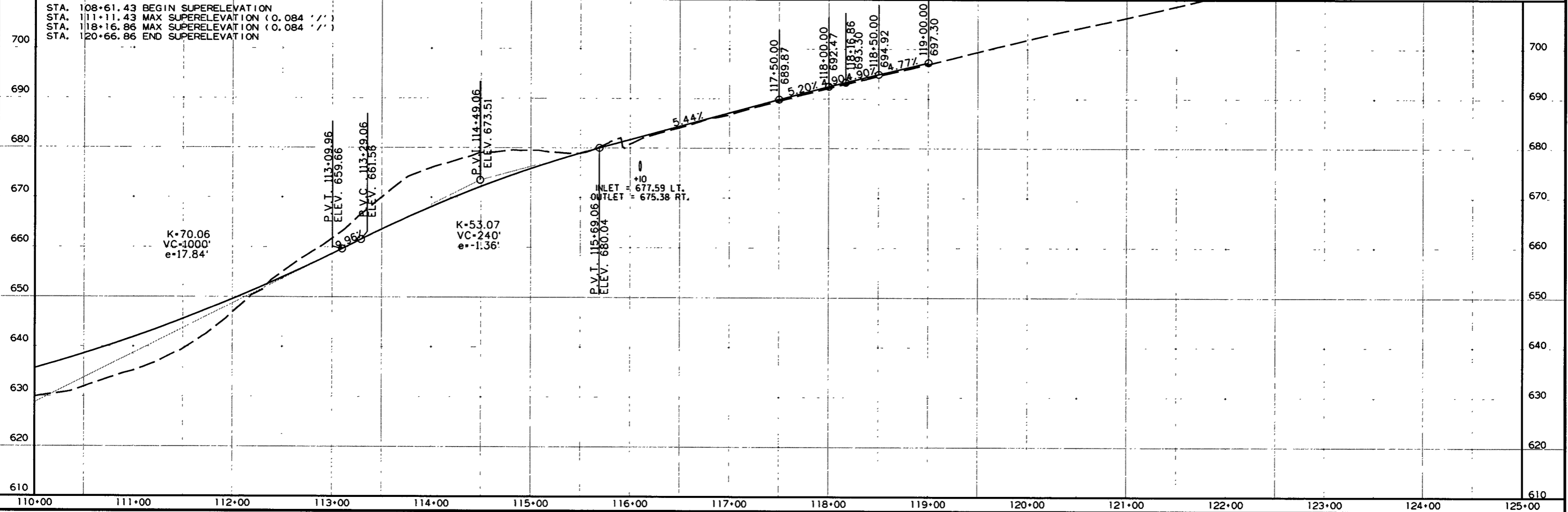
STA 120+66.86  
 END JOB 009814

STA. 110+29 - COUNTY RD. 479 TURNOUT  
 CONSTRUCT APPR. = 975 CU. YD.

WIRE FENCE AND GATE

STA.	STA.	SIDE	TYPE	LIN. FT.	GATE
95+16	112+04	LT.	D-1	1738	
112+04	112+20	LT.	D-1		1
112+20	115+00	LT.	D-1	282	
96+32	99+88	RT.	D-1	365	
109+00	110+19	RT.	D-1	50	
110+54	110+60	RT.	D-1	100	1
115+00	115+57	RT.	D-1	86	

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



For R/W Data, see Rdwy. plans.

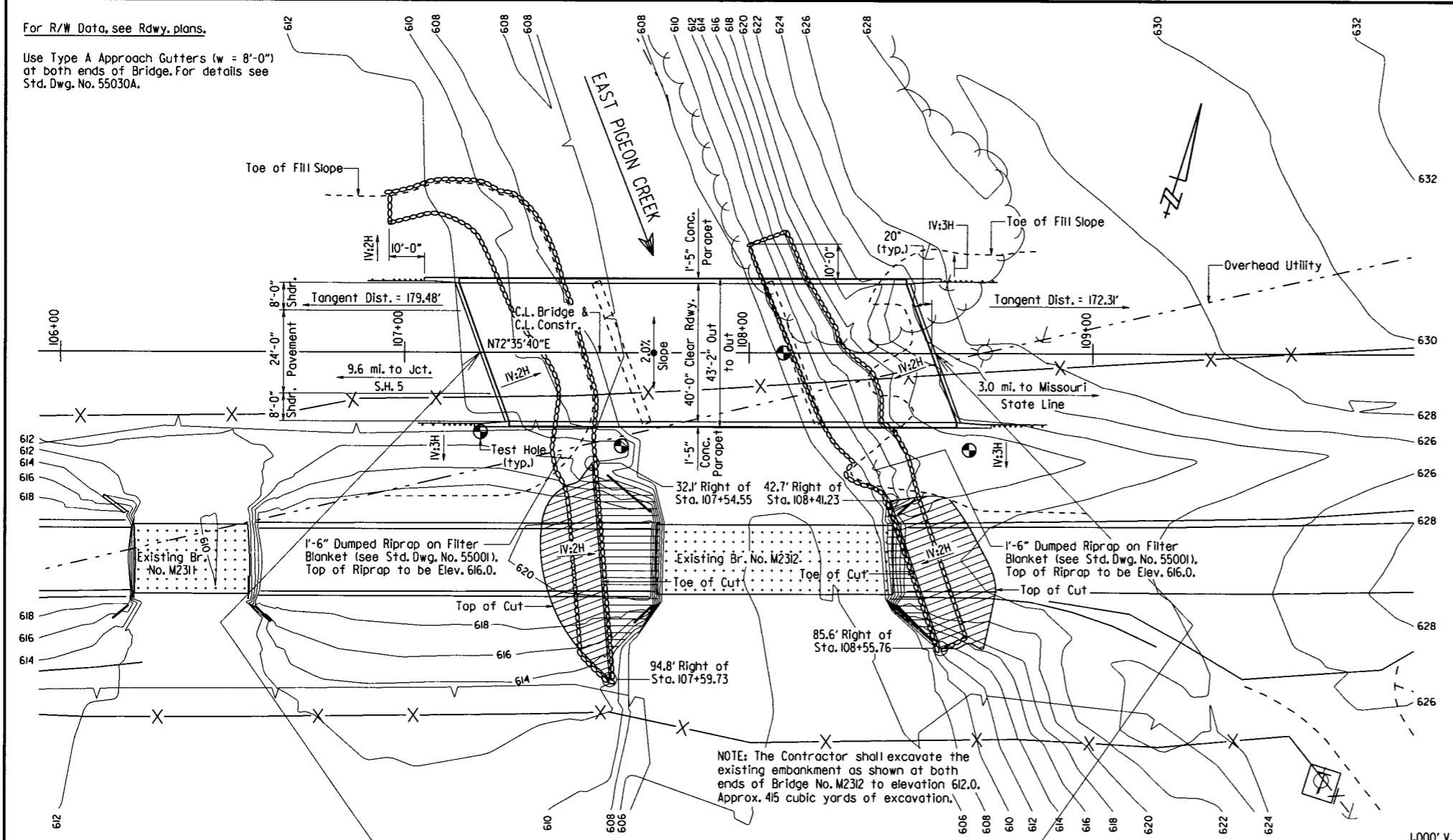
Use Type A Approach Gutters (w = 8'-0") at both ends of Bridge. For details see Std. Dwg. No. 55030A.

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.		009814		
				①		07397 - LAYOUT - 58838		

**HYDRAULIC DATA**

FLOOD DESCRIPTION	FREQUENCY YEARS	DISCHARGE CFS	NATURAL WATER SURFACE ELEVATION	WATER SURFACE ELEV. WITH BACKWATER
			FEET	FEET
Design	50	4,710	613.0	615.4
Base	100	5,440	613.4	616.0
Extreme	500	7,290	614.5	617.5
Overtopping	>500	-	-	-

① Unconstricted water surface without structures or roadway approaches.  
 Drainage area = 9.7 square miles.  
 Historical H.W. Elev. = 616.9 ft.  
 0100 Backwater Elev. for existing structure = 615.6 ft.  
 ② Proposed Low Bridge Chord Elev. = 622.16 feet and occurs @ Sta. 107+17.27.

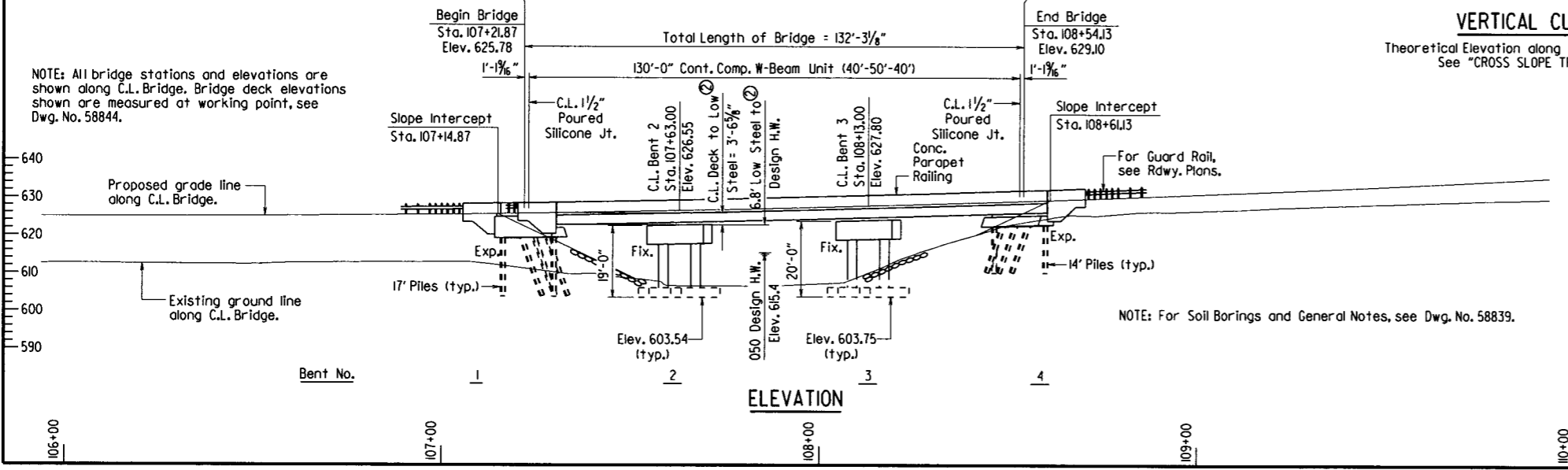


**PLAN**

Bent No.	C.L. Deck @ C.L. Bent to Low Seat of Cap
2	4'-0 1/8"
3	4'-0 1/8"

③ Measured at working point.

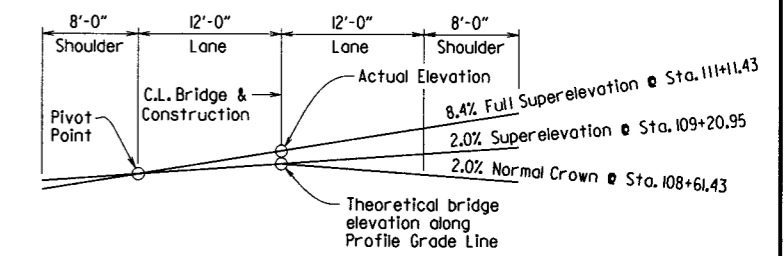
NOTE: All bridge stations and elevations are shown along C.L. Bridge. Bridge deck elevations shown are measured at working point, see Dwg. No. 58844.



**ELEVATION**

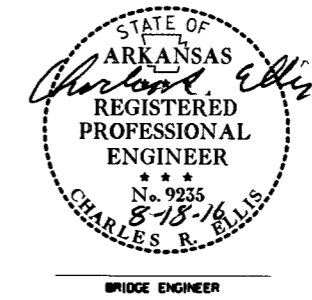
**VERTICAL CURVE DATA**

Theoretical Elevation along C.L. Bridge & C.L. Constr. See "CROSS SLOPE TRANSITION SKETCH"



**CROSS SLOPE TRANSITION SKETCH**

Looking Ahead



SHEET 1 OF 2  
 LAYOUT OF BRIDGE  
 OVER EAST PIGEON CREEK  
 E. PIGEON CREEK STR. & APPRS. (S)  
 BAXTER COUNTY

ROUTE 201 SEC. 1  
 ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.

DRAWN BY: K.W.Y. DATE: 11/5/2014 FILENAME: b009814\_ll.dgn  
 CHECKED BY: C.W. DATE: 3/19/16 SCALE: 1" = 20'  
 DESIGNED BY: K.W.Y. DATE: 11/4  
 BRIDGE NO. 07397 DRAWING NO. 58838

PRINT DATE: 8/18/2016

**GENERAL NOTES**

**BENCH MARK:** Refer to Survey Control detail sheets for horizontal and vertical control data.

**CONSTRUCTION SPECIFICATIONS:** Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 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, Sixth Edition (2012) with 2013 Interim Revisions.

**LIVE LOADING:** HL93

**SEISMIC PERFORMANCE ZONE:** I  $S_{D1} = 0.084$  **SITE CLASS = B**

**MATERIALS AND STRENGTHS:**  
 Class (SAE) Concrete (superstructure)  $f'c = 4,000$  psi  
 Class 5 Concrete (substructure)  $f'c = 3,500$  psi  
 Reinforcing Steel (AASHTO M 31 or M 322, Type A)  $f_y = 60,000$  psi  
 Structural Steel (AASHTO M 270, Gr. 50W)  $F_y = 50,000$  psi  
 Structural Steel (AASHTO M 270, Gr. 36)  $F_y = 36,000$  psi

**BORING LOGS:** Boring logs may be obtained from the Construction Contract Procurement Section of the Program Management Division.

**STEEL PILING:** All piling shall be HP 12x53 (Grade 50) and shall be driven with an approved air, steam or diesel hammer to a minimum safe bearing capacity of 95 tons per pile and into the material designated as Dolostone on the boring legend. Piling in end bents shall be driven after embankment to bottom of cap is in place. 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. Actual pile lengths are to be determined in the field. The Contractor shall use approved steel H-Pile driving points on all piles.

**FOOTINGS:** Footings shall be set a minimum of 2' into material designated as Dolostone on the boring legend. The top of the footings at Bents 2 and 3 shall be set at or below natural ground as determined by the lowest natural ground elevation within the footprint of the footing or the elevations shown on the plans, whichever is lower. Foundations for footings shall be prepared in accordance with Subsection 801.04. Rock excavations shall be made to neat lines of the concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock. Excavations shall be backfilled and compacted to the level of the existing ground in accordance with Subsection 801.08.

**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.

**PROTECTIVE SURFACE TREATMENT:** Class 2 Protective Surface Treatment shall be applied to the roadway surface and to the roadway face and top of the concrete parapet rail.

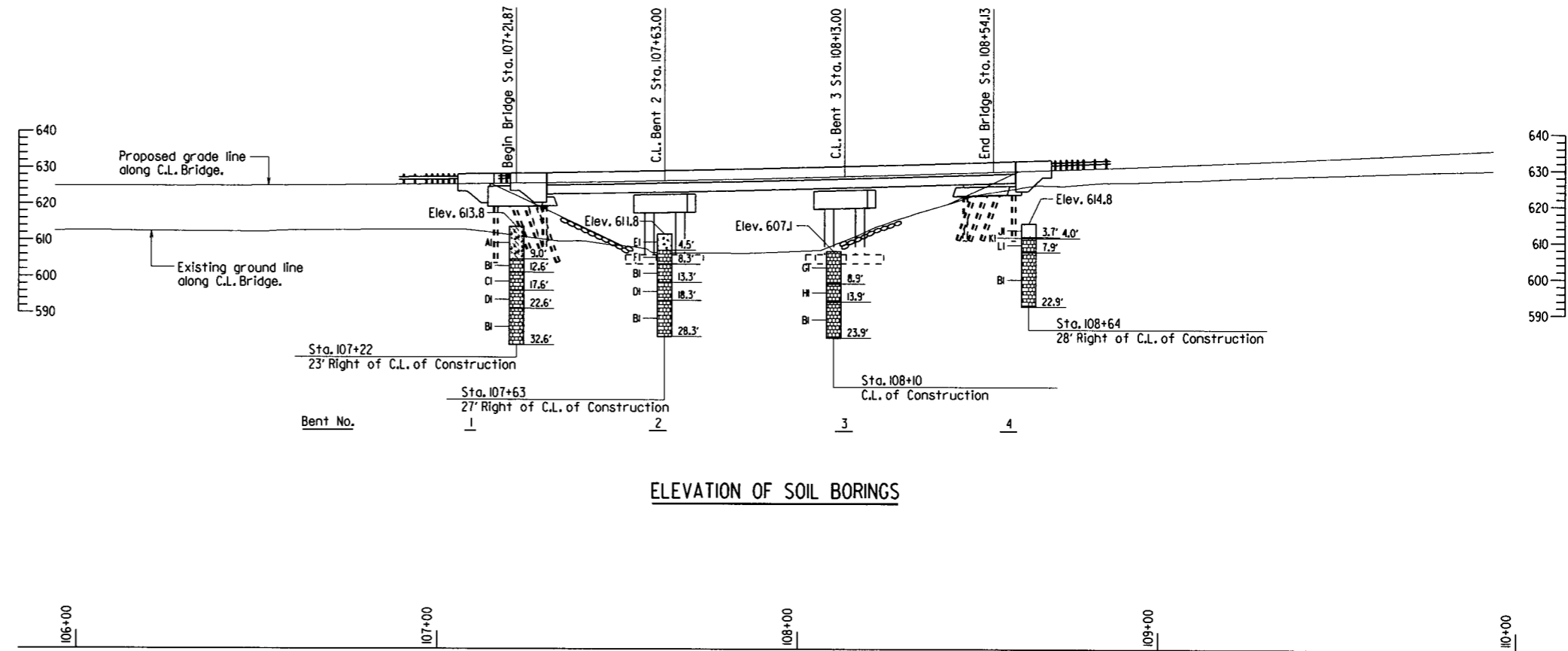
DETAIL DRAWINGS	DRAWING NOS.
End Bents	58840-58842
Intermediate Bents	58843
130'-0" Cont. Comp. W-Beam Unit	58844-58848
Elastomeric Bearings	58849
General Notes	55006
Steel Piling	55020
Type A Approach Gutters	55030A

**EXISTING BRIDGES:** Existing Bridge No. M2311 (Log Mile 9.60) is approximately 23.3' wide and 36.0' long and consists of reinforced concrete slab spans supported by masonry abutments and intermediate bents. Existing Bridge No. M2312 (Log Mile 9.62) is approximately 23.7' wide and 71.0' long and consists of a concrete deck on steel beams supported by masonry abutments and intermediate bent. Existing Bridge No. M2312 has been modified with two assisting bents made of steel columns, steel cap and concrete footings.

**REMOVAL AND SALVAGE:** After the new bridge is open to traffic, existing Bridge Nos. M2311 and M2312 shall be removed in accordance with Section 205. All material from the existing bridges shall become the property of the Contractor.

**MAINTENANCE OF TRAFFIC:** See Roadway Plans.

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.	009814			
				07397 - LAYOUT - 58839				



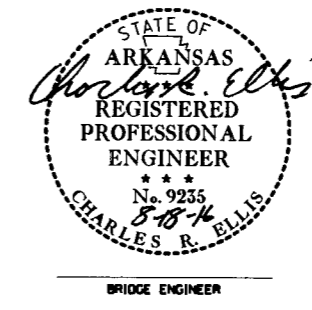
**ELEVATION OF SOIL BORINGS**

**BORING LEGEND**

- AI-Dry, Very Dense, Brown Sand with Clay, Gravel (Dolostone Fragments) and some Organic Matter
- BI-DOLOSTONE - Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip
- CI-DOLOSTONE WITH DARK GRAY SHALE PARTINGS - Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip
- DI-DOLOSTONE - Gray and Brown, Medium Bedded, Slightly Weathered, Vuggy, Hard, with Slight Dip
- EI-Dry, Very Dense, Brown Sand with Gravel (Dolostone Fragments) and some Organic Matter
- FI-DOLOSTONE - Gray and Brown, Medium Bedded, Slightly Weathered, Hard, with Slight Dip and some Fractured Layers
- GI-DOLOSTONE - Brown and Gray, Medium Bedded, Slightly Weathered, Hard, with Slight Dip
- HI-DOLOSTONE - Brown and Gray, Medium Bedded, Slightly Weathered, Vuggy, Hard, with Slight Dip and some Fractured Layers
- JI-Moist, Medium Dense, Brown Sand
- KI-DOLOSTONE - Gray, Weathered, Moderately Hard
- LI-DOLOSTONE - Gray and Brown, Medium Bedded, Slightly Weathered, Hard, with Slight Dip and Fractured Layers

**"N" VALUES**

Sta. 107+22 - 23' Right of Center Line of Construction	4.5 - 5.5, N=62 9.0 - 9.1, N=60(1')
Sta. 107+63 - 18' Right of Center Line of Construction	4.5 - 4.6, N=60(1')
Sta. 108+10 - Center Line of Construction	
Sta. 108+64 - 20' Right of Center Line of Construction	3.7 - 4.0, N=60(3')



SHEET 2 OF 2  
 LAYOUT OF BRIDGE  
 OVER EAST PIGEON CREEK  
 E. PIGEON CREEK STR. & APPRS. (S)  
 BAXTER COUNTY

ROUTE 201 SEC. 1  
 ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.

DRAWN BY: Kwy DATE: 11/5/2014 FILENAME: b009814\_ll.dgn  
 CHECKED BY: CMH DATE: 9/10/14 SCALE: 1" = 20'  
 DESIGNED BY: Ewy DATE: 10/14  
 BRIDGE NO. 07397 DRAWING NO. 58839

PRINT DATE: 8/18/2016

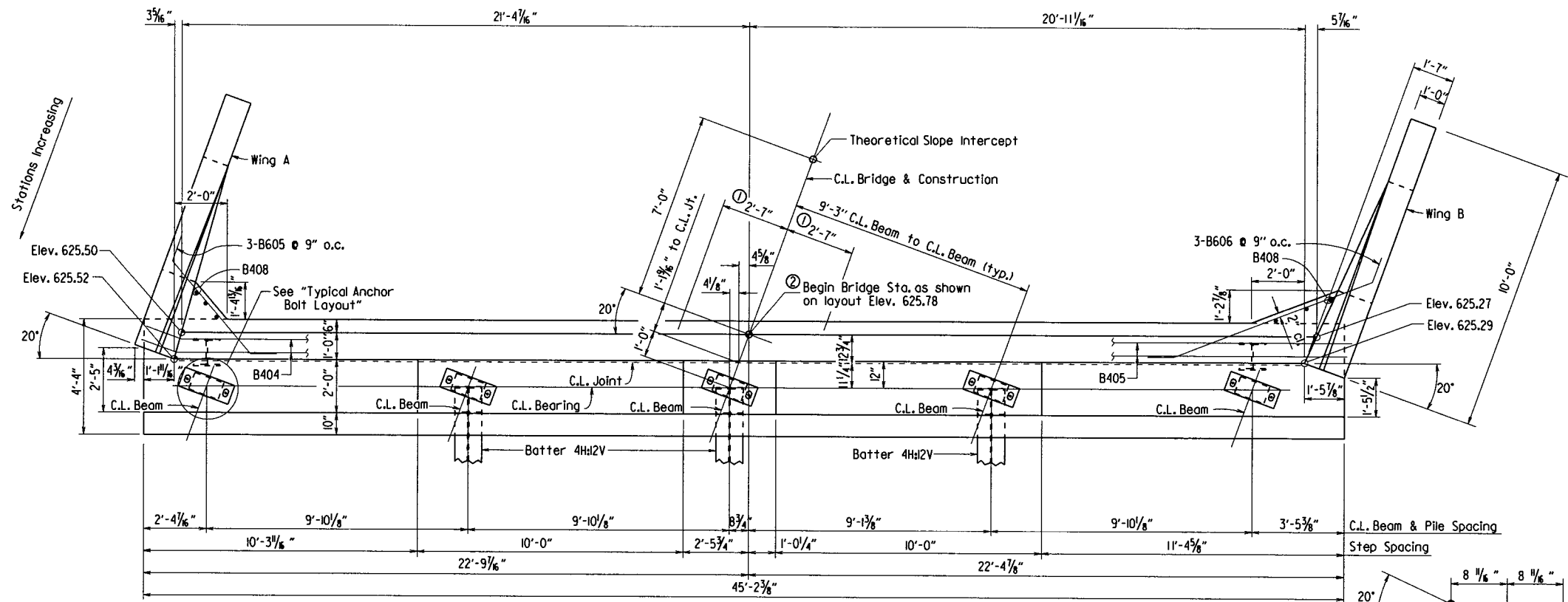


Class 2 Protective Surface Treatment shall be applied to the top of the backwall and to the roadway face and top of the transition rail. For details of wings, see Dwg. No. 58842.

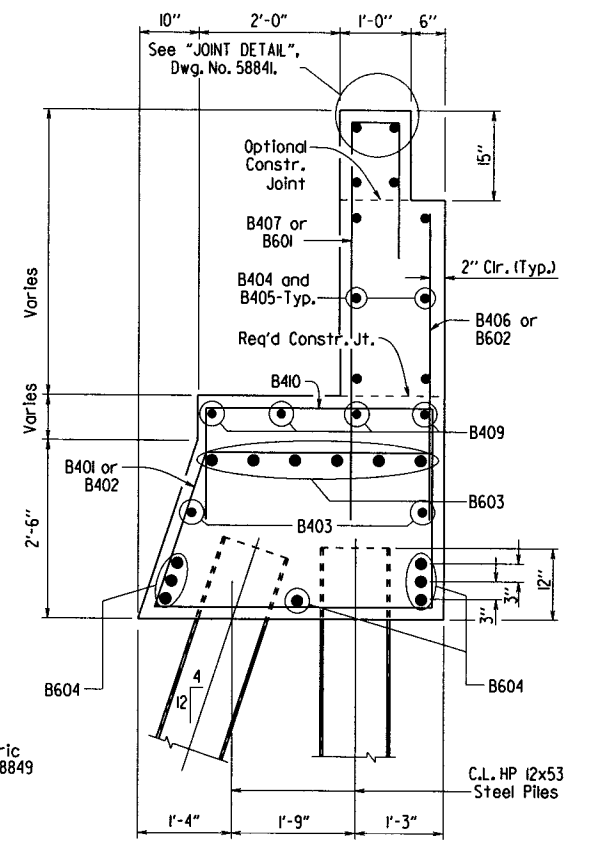
- ① See "ROUNDING DETAIL" Dwg. No. 58844
- ② Elevation at Working Point

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.		009814	33	94

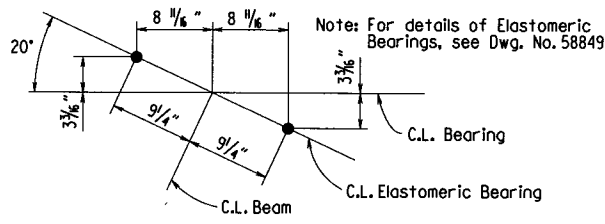
① 07397 - DETAILS OF END BENTS - 58840



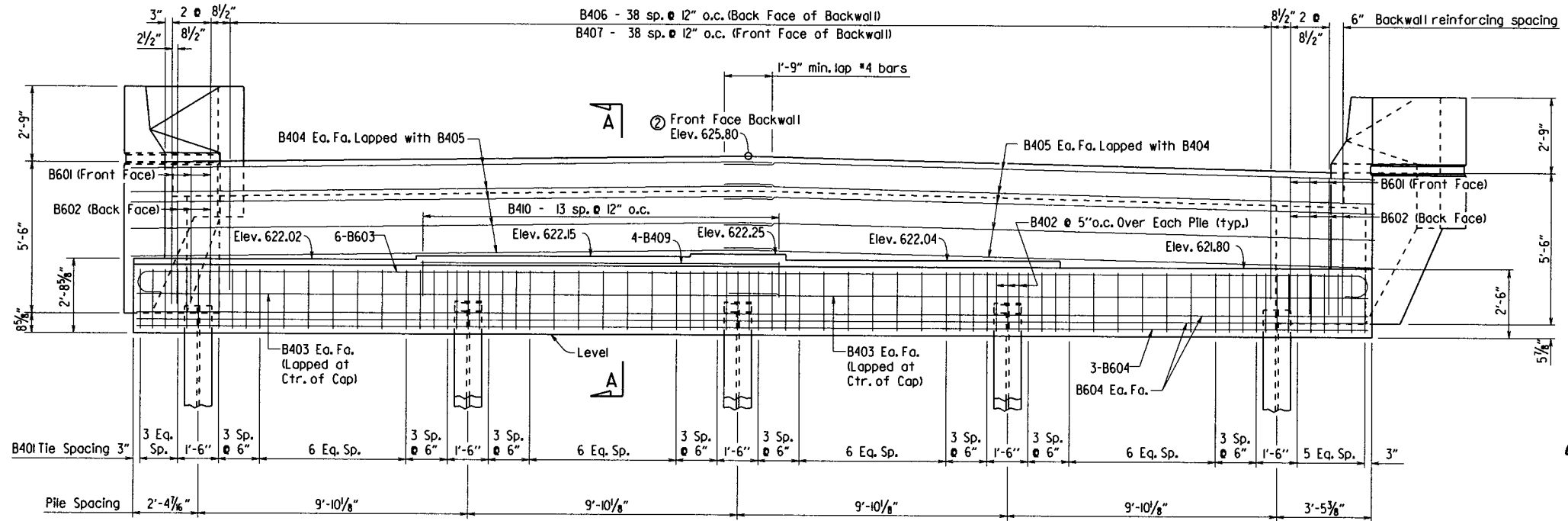
**PLAN OF BENT I**  
3/8"=1'-0"



**SECTION A-A**  
No Scale

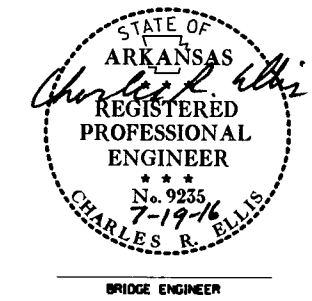


**TYPICAL ANCHOR BOLT LAYOUT**  
NTS



**ELEVATION OF BENT I**  
Looking Back  
3/8"=1'-0"

**NOTES:**  
For Standard General Notes, See Std. Dwg. No. 55006.  
No portion of the backwall shall be poured before 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. Refer to "Expansion Device Installation at End Bents" note on Dwg. No. 58848.  
All piling shall be Grade 50.  
For additional information, see Layout.



**SHEET 1 OF 3**  
**DETAILS OF END BENTS**  
**EAST PIGEON CREEK**  
ROUTE 201 SEC. 1  
**ARKANSAS STATE HIGHWAY COMMISSION**  
LITTLE ROCK, ARK.

DRAWN BY: dhp DATE: 9-27-15 FILENAME: b009814\_bi.dgn  
CHECKED BY: KMY DATE: 7/18/16 SCALE: AS SHOWN  
DESIGNED BY: DHP DATE: 7-15  
BRIDGE NO. 07397 DRAWING NO. 58840

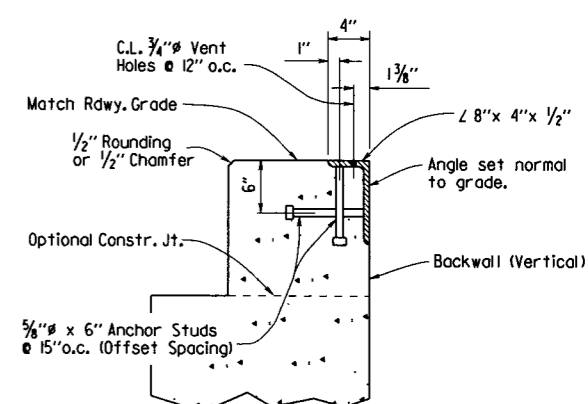
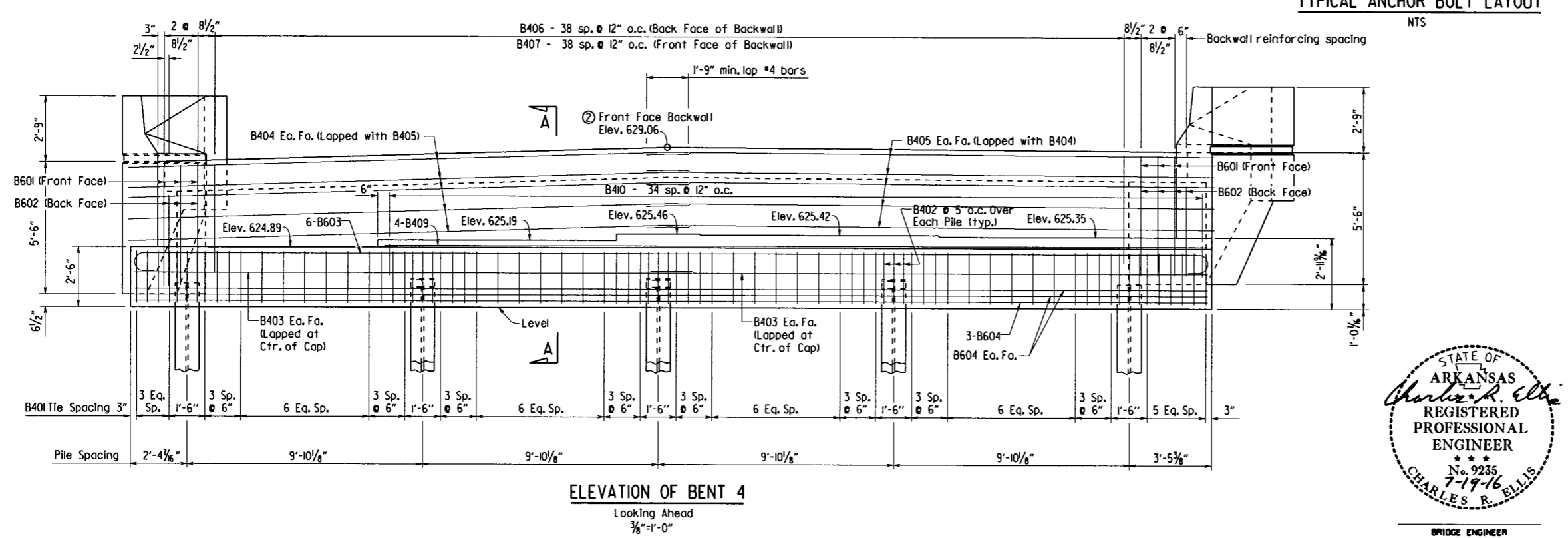
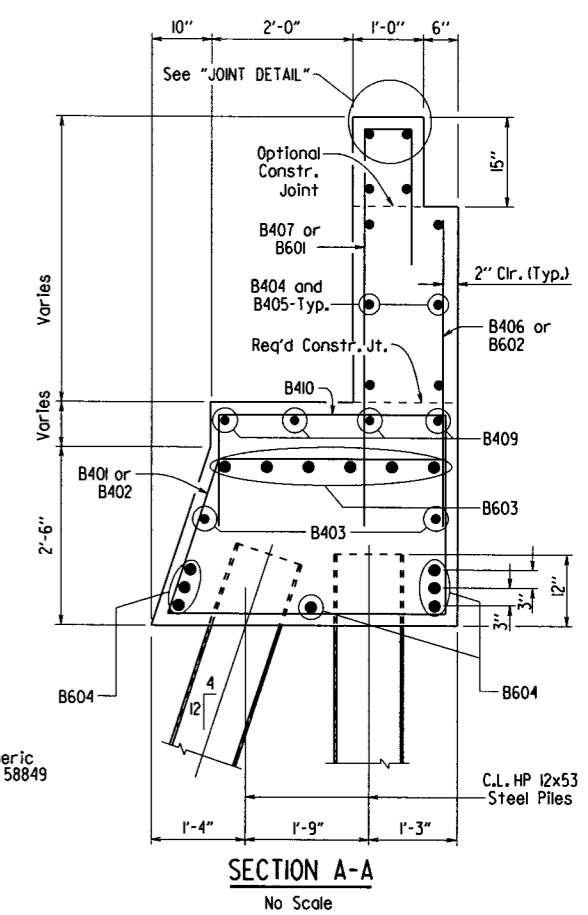
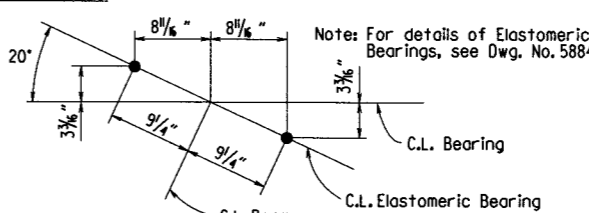
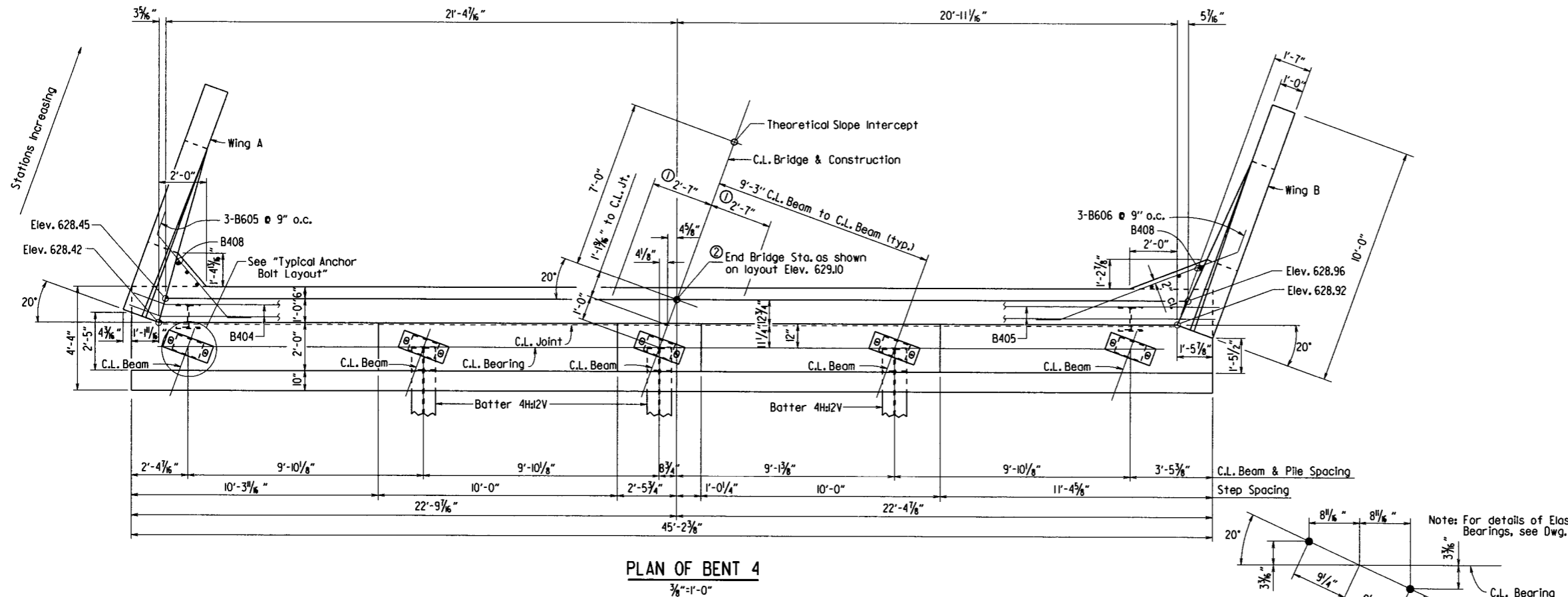
PRINT DATE: 7/18/2016

Class 2 Protective Surface Treatment shall be applied to the top of the backwall and to the roadway face and top of the transition rail. For details of wings, See Dwg. No. 58842

- ① See "ROUNDING DETAIL" Dwg. No. 58844
- ② Elevation at Working Point

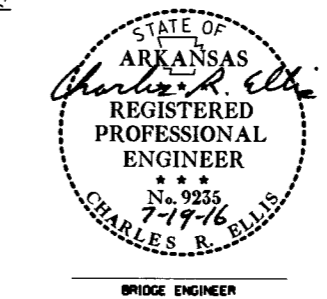
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				6	ARK.			
				JOB NO.		009814	34	94

① 07397 - DETAILS OF END BENTS - 58841



For additional Joint Details See Dwg. No. 58848

Concrete shall be hand packed under joint armor in the backwall.



SHEET 2 OF 3  
DETAILS OF END BENTS  
EAST PIGEON CREEK

ROUTE 201 SEC. 1  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: dhp DATE: 9-27-15 FILENAME: b009814.bl.dgn  
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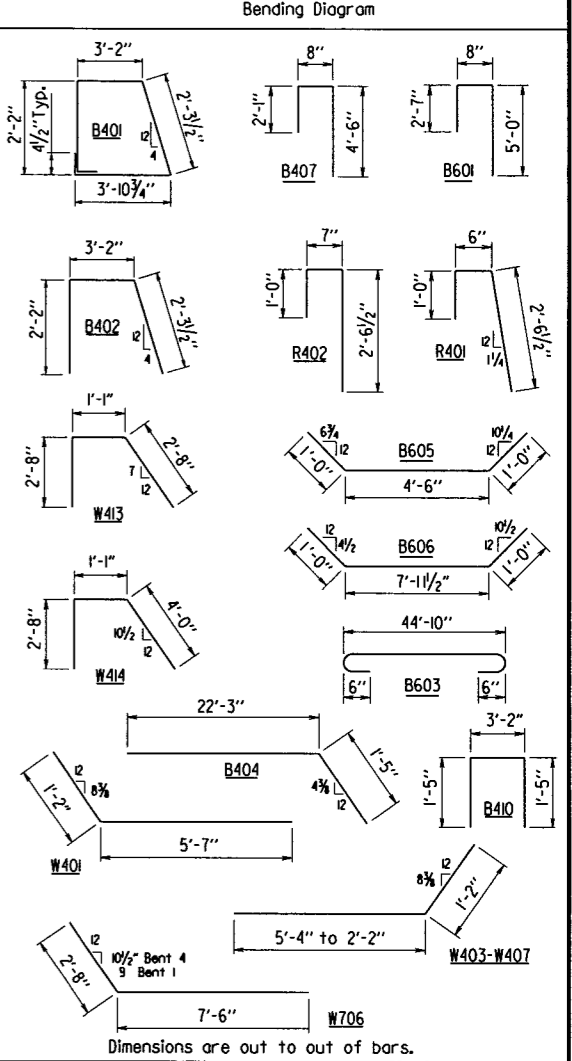
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JOB NO.						009814	35	94

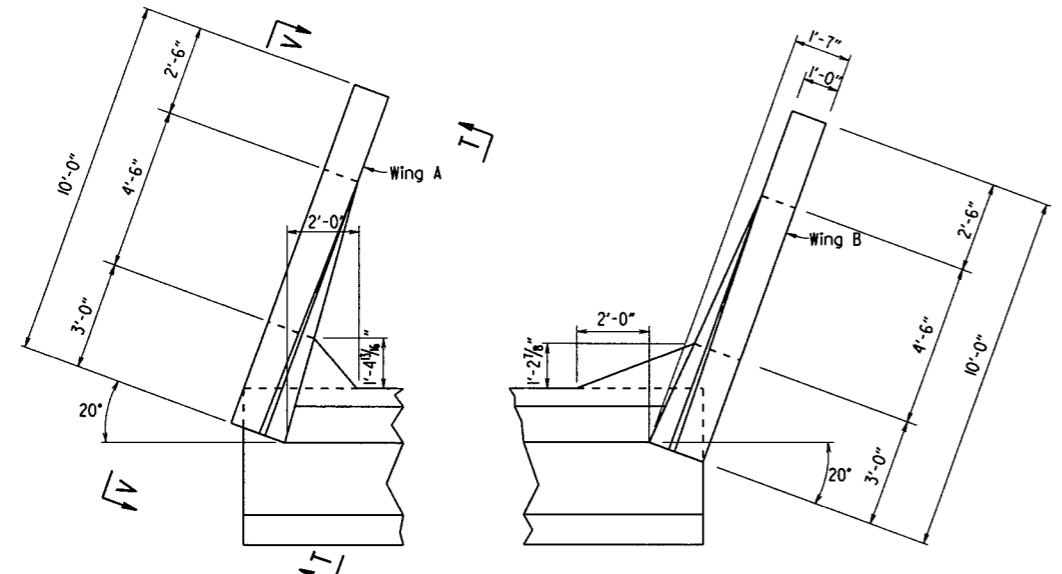
1 07397 - DETAILS OF END BENTS - 58842

BAR LIST-PER BENT

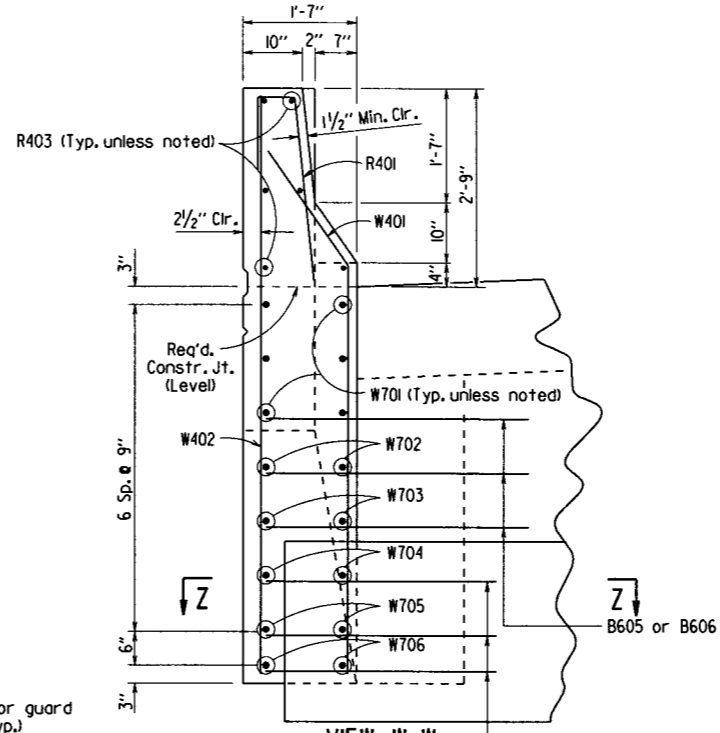
Mark	No. Req'd.	Length	Pin Dia.
B401	62	11'-11"	2"
B402	15	7'-6"	2"
B403	4	23'-4"	Str.
B404	10	23'-8"	2"
B405	10	23'-8"	Str.
B406	39	3'-3"	Str.
B407	39	7'-1"	2"
B408	6	3'-11"	Str.
B409	4	"X"	Str.
B410	"Y"	5'-10"	2"
B601	6	8'-0"	4 1/2"
B602	7	3'-9"	Str.
B603	6	46'-2"	4 1/2"
B604	7	44'-10"	Str.
B605	3	7'-6"	4 1/2"
B606	3	10'-0"	4 1/2"
R401	8	3'-11"	2"
R402	8	4'-0"	2"
R403	12	9'-8"	Str.
R601	16	4'-4"	Str.
R602	6	5'-0"	Str.
W401	6	6'-9"	2"
W402	6	7'-11"	Str.
W403	2 ea.	6'-6" to 3'-4"	2"
W407	2 ea.	7'-8" to 4'-6"	Str.
W412	3	6'-4"	2"
W413	3	7'-8"	2"
W701	12	9'-8"	Str.
W702	4	6'-5"	Str.
W703	4	5'-6"	Str.
W704	4	4'-6"	Str.
W705	4	3'-6"	Str.
W706	4	10'-2"	5 1/4"



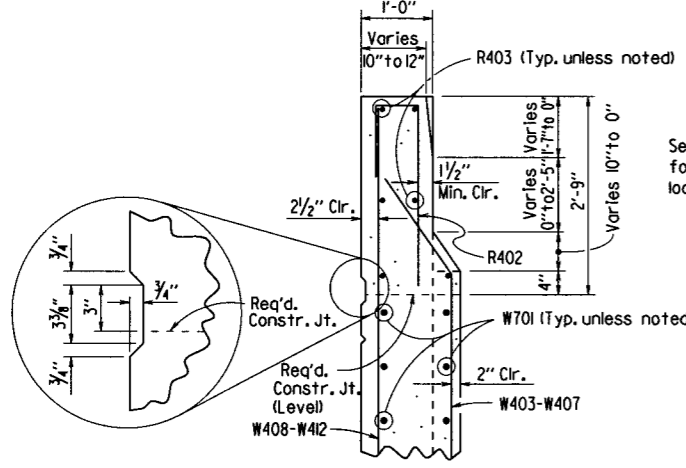
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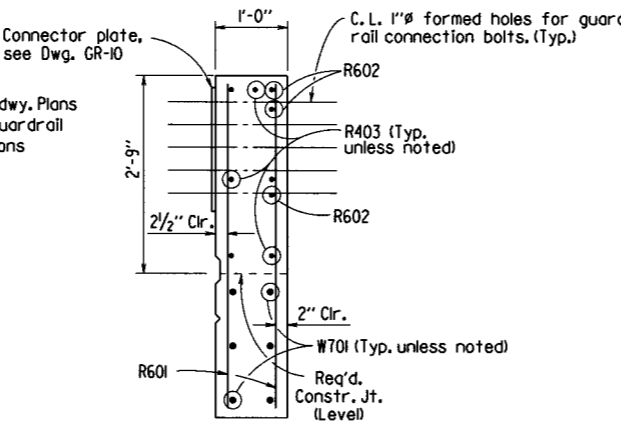
PLAN OF RAIL  
No Scale



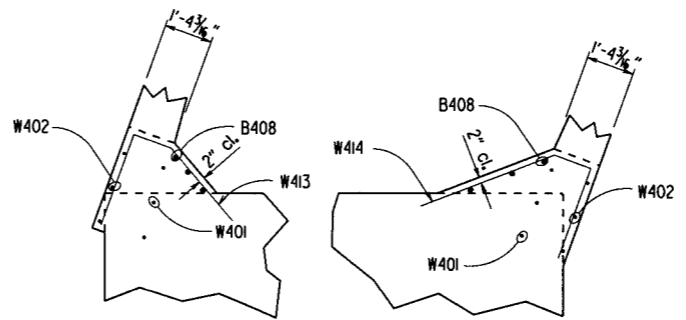
VIEW W-W  
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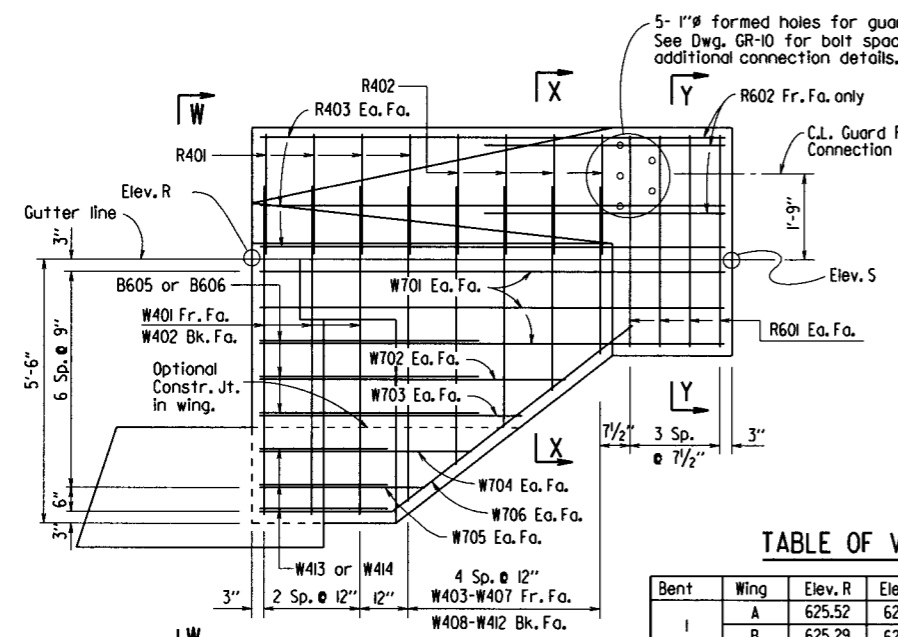
SECTION X-X  
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SECTION Y-Y  
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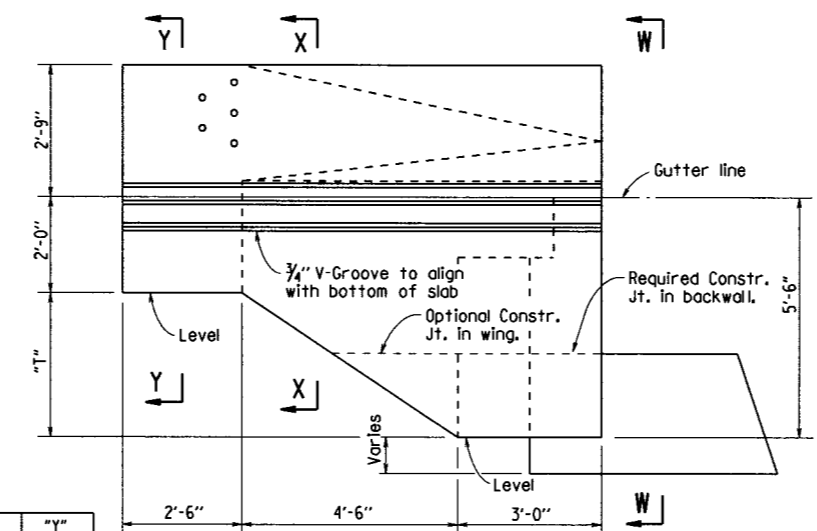
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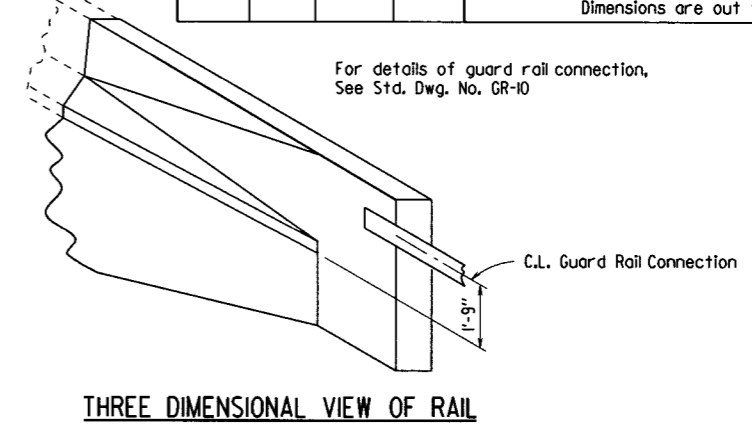
VIEW T-T  
No Scale

TABLE OF VARIABLES

Bent	Wing	Elev. R	Elev. S	"T"	"X"	"Y"
1	A	625.52	625.36	3'-4 1/2"	13'-2"	14
	B	625.29	625.15	3'-4 1/2"		
4	A	628.42	628.76	3'-10 1/2"	34'-4"	35
	B	628.92	629.40	3'-11 1/4"		

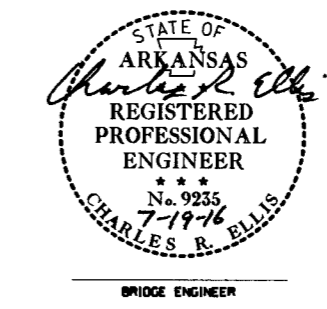


VIEW V-V  
No Scale



THREE DIMENSIONAL VIEW OF RAIL  
No Scale

For details of guard rail connection, See Std. Dwg. No. GR-10



SHEET 3 OF 3  
DETAILS OF END BENTS  
EAST PIGEON CREEK  
ROUTE 201 SEC. 1  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.  
DRAWN BY: dhd DATE: 9-27-15 FILENAME: b020542.blgdn  
CHECKED BY: Vwy DATE: 7/19/16 SCALE: AS SHOWN  
DESIGNED BY: DHP DATE: 7-15  
BRIDGE NO. 07397 DRAWING NO. 58842

PRINT DATE: 7/19/2016

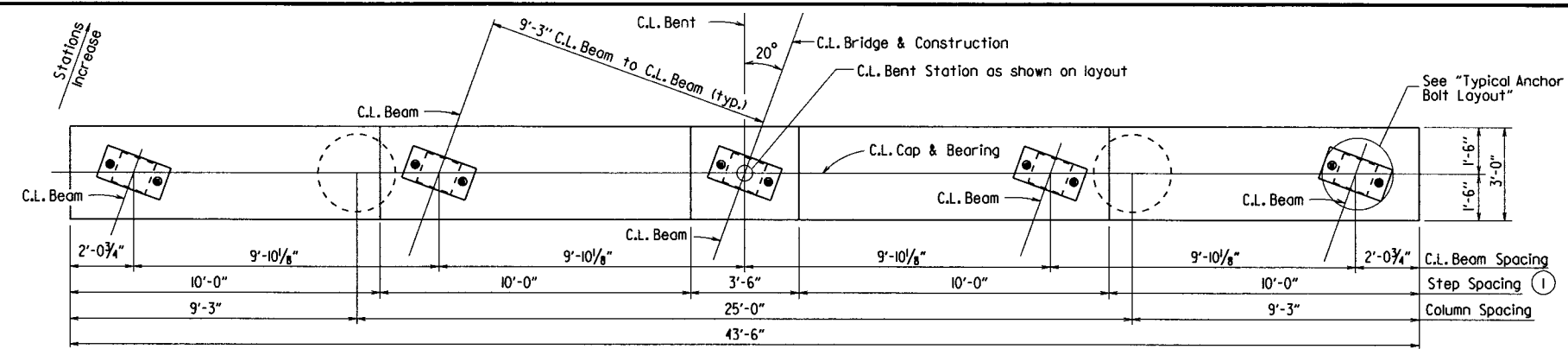
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				6	ARK.			
						JOB NO.	009814	36 94

07397 - DETAILS OF INT. BENTS - 58843

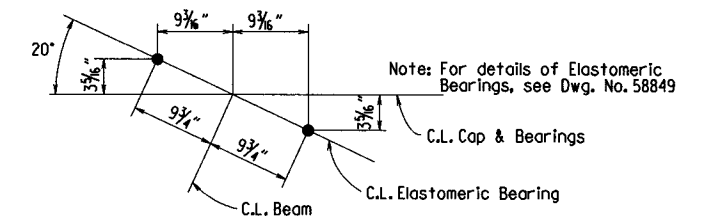
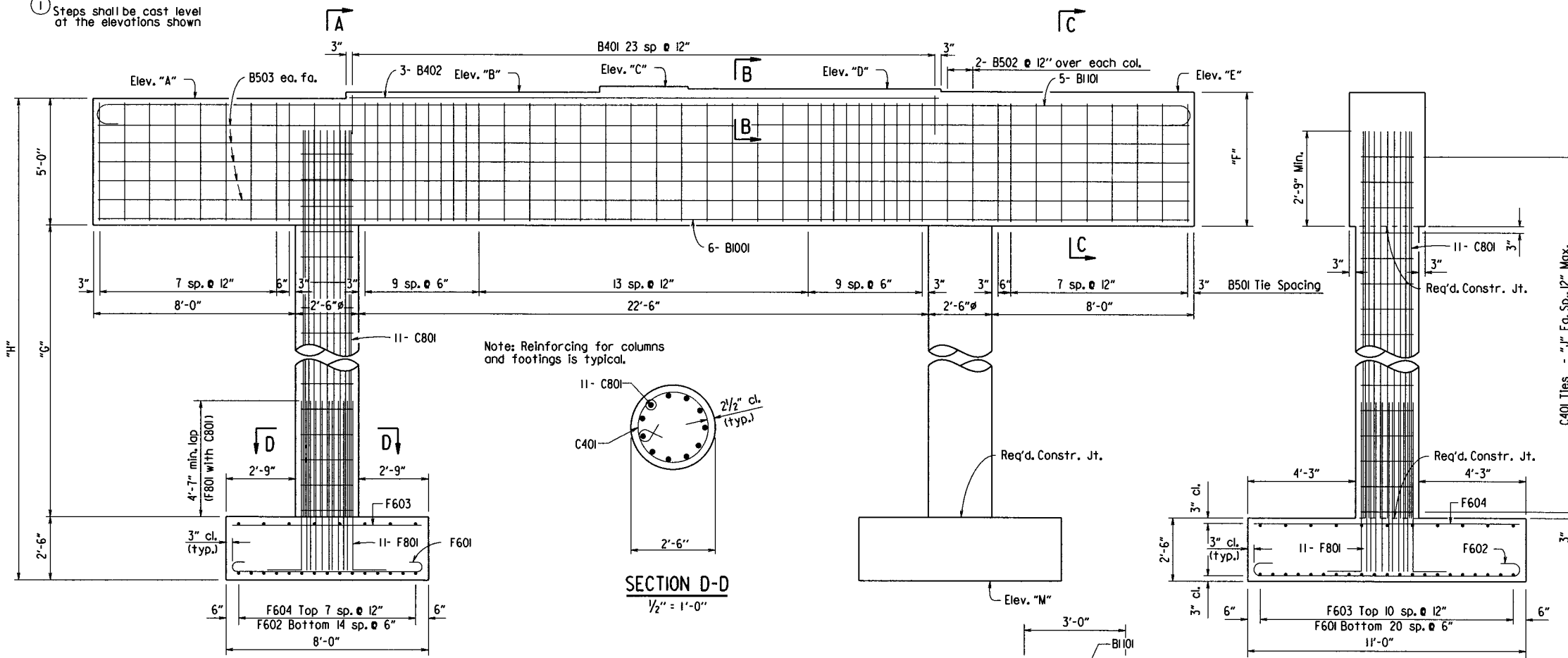
**BAR LIST (PER BENT)**

Mark	No. Req'd.	Length	Pin Dia.	Bending Diagram
B401	24	4'-8"	2"	
B402	3	23'-2"	Str.	
B501	50	15'-2"	2 1/2"	
B502	4	11'-10"	2 1/2"	
B503	10	43'-2"	Str.	
B1001	6	43'-2"	Str.	
B101	5	46'-2"	1 1/4"	
C401	"K"	7'-8"	3"	
C801	22	"L"	Str.	
F601	42	8'-10"	4 1/2"	
F602	30	11'-10"	4 1/2"	
F603	22	7'-6"	Str.	
F604	16	10'-6"	Str.	
F801	22	9'-1"	6"	

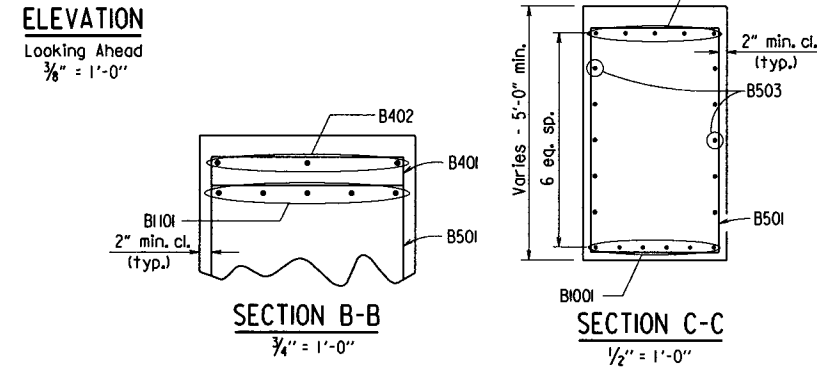
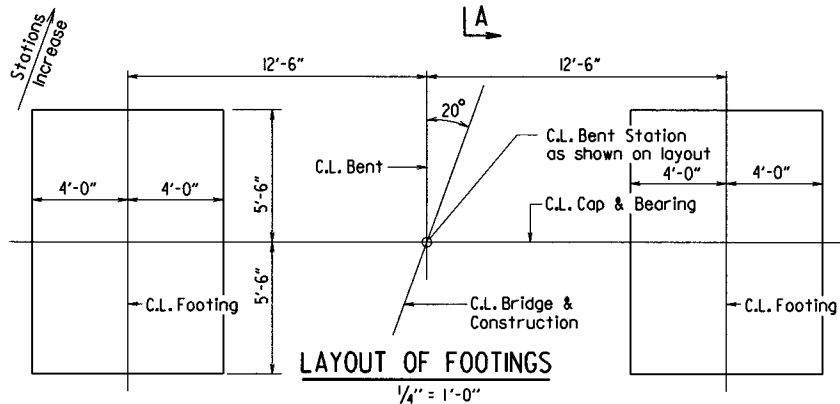
Dimensions are out to out of bars.



Steps shall be cast level at the elevations shown

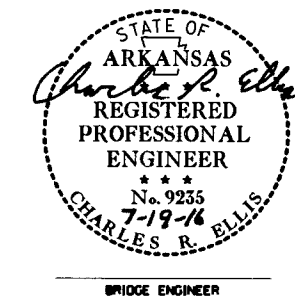


NOTES:  
For Standard General Notes, See Std. Dwg. No. 55006.  
For additional information, see Layout.



**TABLE OF VARIABLES**

Bent	Elev. "A"	Elev. "B"	Elev. "C"	Elev. "D"	Elev. "E"	"F"	"G"	"H"	"J"	"K"	"L"	Elev. "M"
2	622.54	622.80	623.03	622.94	622.83	5'-3 1/2"	11'-6"	19'-0"	14	30	16'-3"	603.54
3	623.75	624.03	624.28	624.22	624.13	5'-4 3/8"	12'-6"	20'-0"	15	32	17'-3"	603.75



DETAILS OF INTERMEDIATE BENTS  
EAST PIGEON CREEK  
ROUTE 201 SEC. 1  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: dhp DATE: 9-27-15 FILENAME: b009814\_b2.dgn  
CHECKED BY: Kwy DATE: 7/19/16 SCALE: as shown  
DESIGNED BY: JHP DATE: 7-15  
BRIDGE NO. 07397 DRAWING NO. 58843

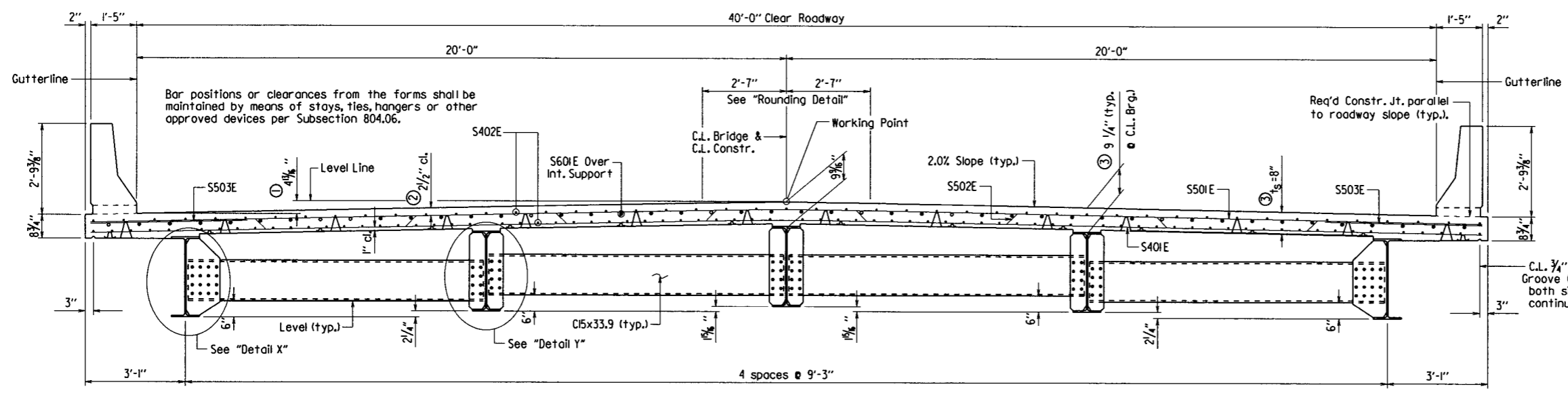
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	009814	37	94	

07397 - SPAN DETAILS - 58844

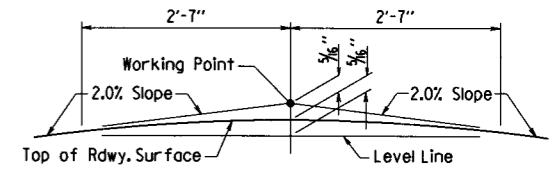
**Slab Reinforcing:**  
 Longitudinal: S402E as shown  
 S601E as shown over int. supports, see "Reinforcing Plan & Deck Pouring Sequence", Dwg. No. 58846.  
 Transverse: S502E @ 12" o.c. bent up over beams  
 S501E @ 12" o.c. in top, S401E @ 12" o.c. in bottom  
 S503E @ 6" in top of overhangs (bundled with #5 bars)

NOTE: At the Contractor's option, two straight epoxy coated #5 bars may be substituted for bar S502E. Payment for reinforcing will be based on the weight of bar S502E.  
 NOTE: Class 2 Protective Surface Treatment shall be applied to the Roadway Surface and the Roadway Face and top of the Concrete Parapet Rail.

- Working point to gutterline.
- Tolerance; Minus = 1/4"; Plus equal to the amount of slab thickening used to meet slab thickness tolerance. See "Adjustment for Slab Thickness Tolerance".
- See "Adjustment for Slab Thickness Tolerance".

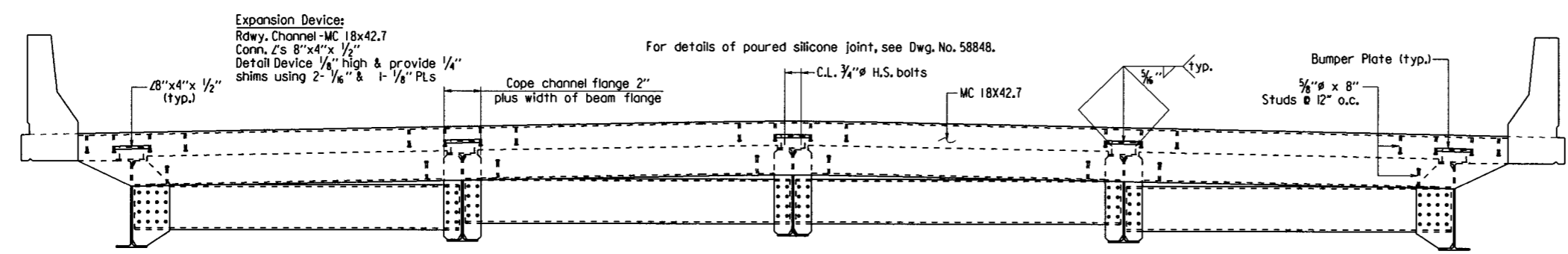


**TYPICAL ROADWAY SECTION**  
 1/2" = 1'-0"

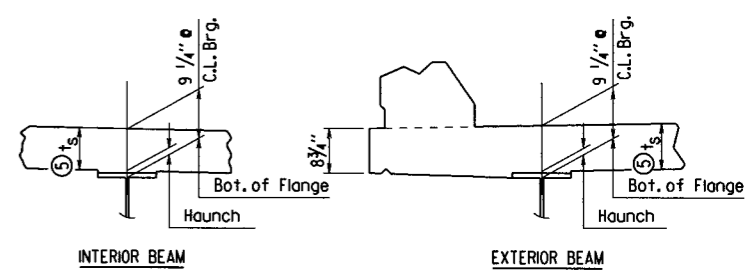


**ROUNDING DETAIL**  
 NO SCALE

NOTE: Working Point matches Theoretical Roadway Grade.



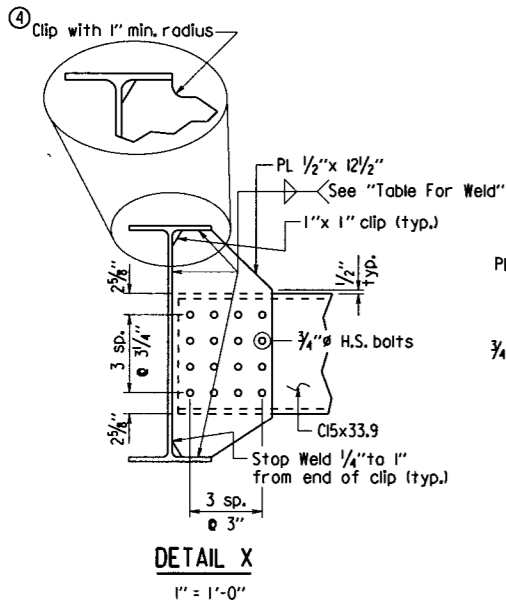
**TYPICAL ROADWAY SECTION NEAR JOINT**  
 Looking Ahead Bent 1  
 Looking Back Bent 4  
 1/2" = 1'-0"



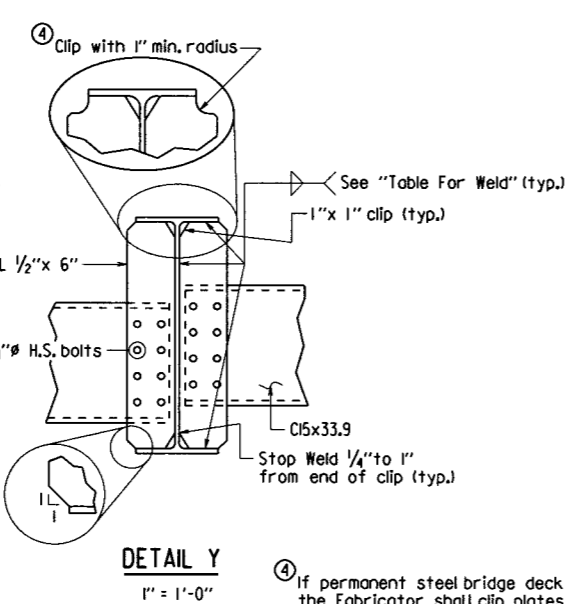
5 Tolerance when removable deck forming is used is + 1/2" - 1/4". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

**ADJUSTMENT FOR SLAB THICKNESS TOLERANCE**  
 NO SCALE

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 3/4". No increase in concrete and structural steel quantities will be made to maintain tolerances.  
 Tolerances shown are applicable only when removable deck forming is used. See Std. Dwg. No. 55005 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.



**DETAIL X**  
 1" = 1'-0"



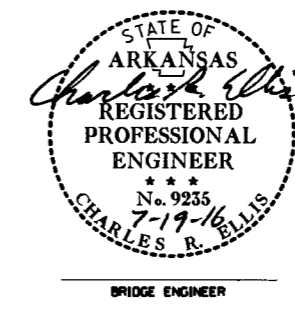
**DETAIL Y**  
 1" = 1'-0"

4 If permanent steel bridge deck forms are used, the Fabricator shall clip plates as necessary to accommodate the deck form supports.

**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"	Used
Over 3/4"	5/16"	

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.

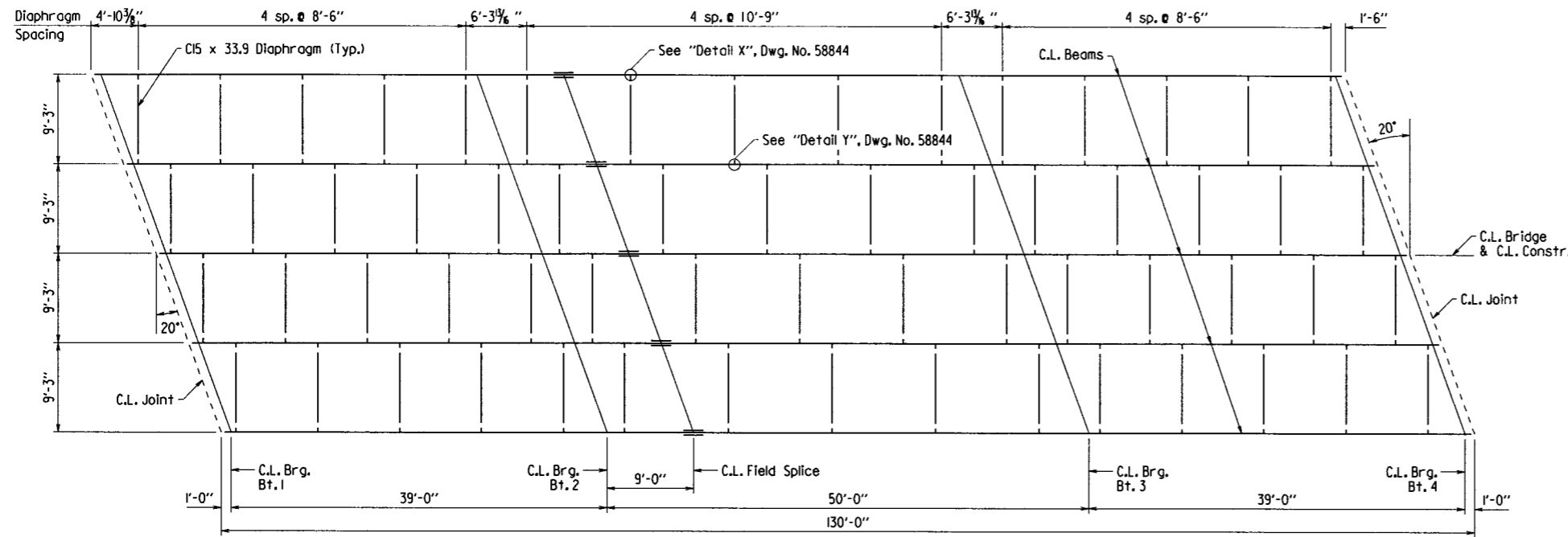


SHEET 1 OF 5  
 DETAILS OF  
 130'-0" CONTINUOUS  
 COMPOSITE W-BEAM UNIT  
 EAST PIGEON CREEK  
 ROUTE 201 SEC. 1  
 ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.  
 DRAWN BY: EOR DATE: 6/11/2015 FILENAME: b009814\_sl.dgn  
 CHECKED BY: LWY DATE: 7/19/16 SCALE: AS SHOWN  
 DESIGNED BY: CMW DATE: 4/15  
 BRIDGE NO. 07397 DRAWING NO. 58844

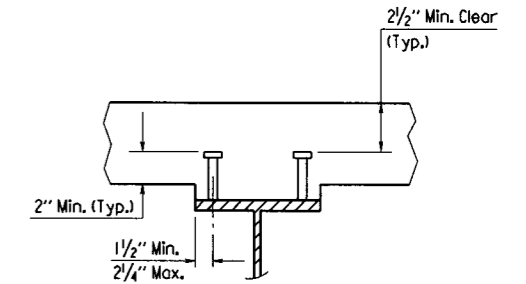
PRINT DATE: 7/19/2016

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.		009814	38	94

07397 - SPAN DETAILS - 58845

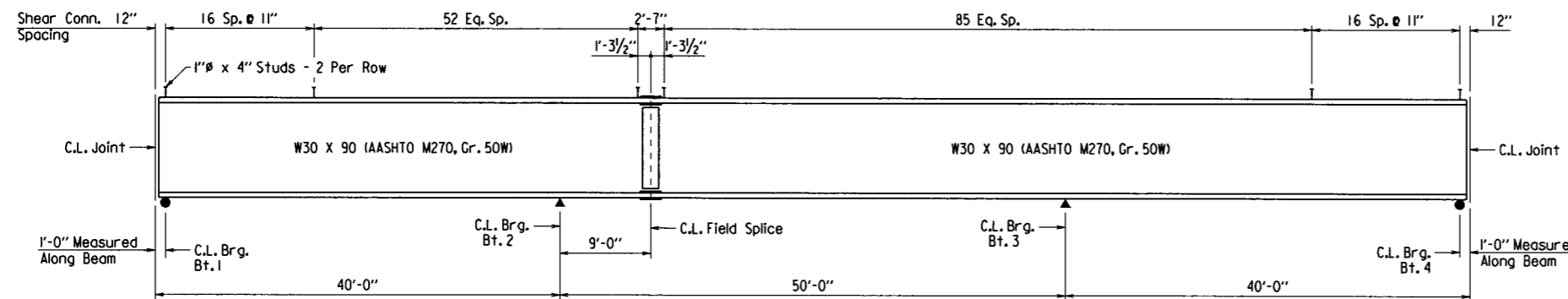


**FRAMING PLAN**  
1/8" = 1'-0"

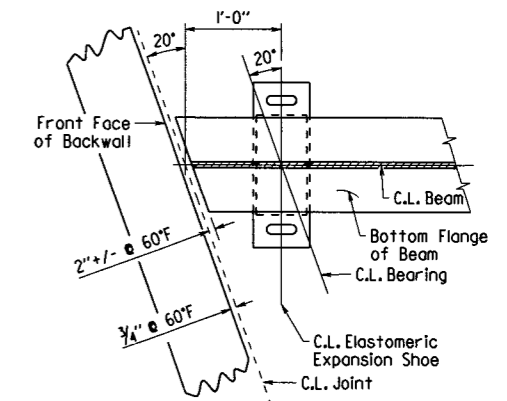


Stud Shear Connectors shown shall be 1" x 4" long, granular flux filled, solid fluxed or equal, and automatically end welded to the beam flange in accordance with the recommendations of the Manufacturer.

**SHEAR CONNECTOR DETAIL**  
NO SCALE



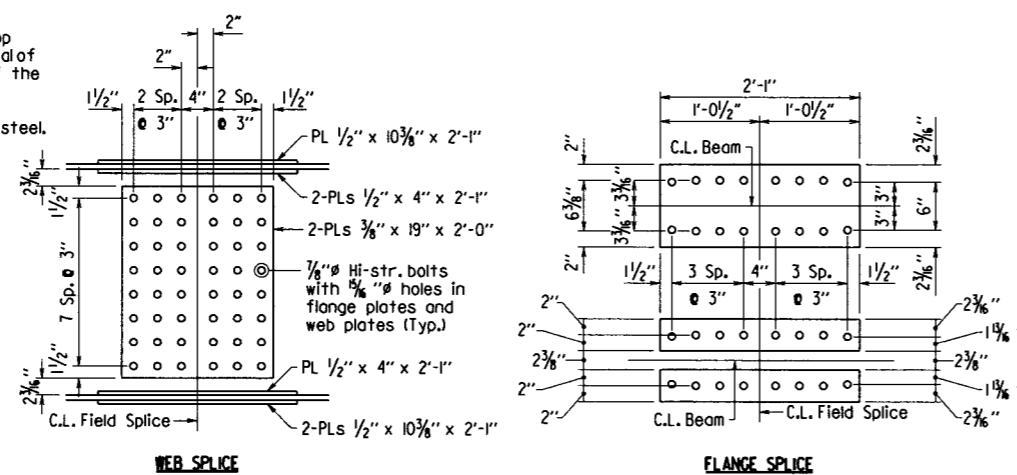
**TYPICAL BEAM ELEVATION**  
NO SCALE



**PLAN OF BEARING AT END BENTS**  
NO SCALE

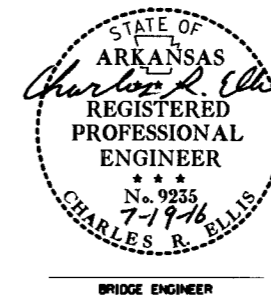
NOTES:  
Bolted field splices shown may be eliminated or shop welded splices may be substituted with the approval of the Engineer. Payment will be made on the basis of the Plan Quantities.

All Field Splice Plates shall be AASHTO M270, Gr. 50W steel.  
All Field Splice Bolts shall be 7/8" H.S. Bolts.  
All Field Splice Bolt Holes shall be 7/8" diameter.



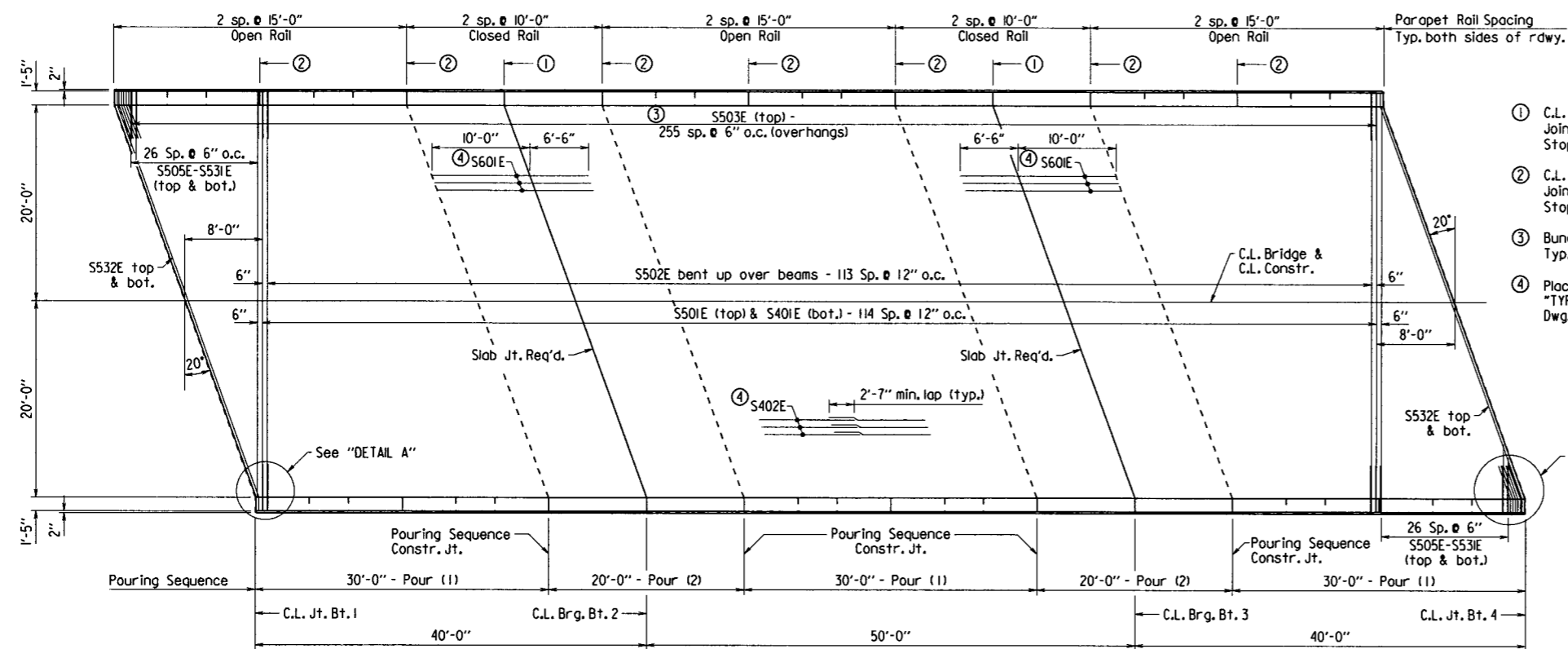
**FIELD SPLICE - DETAILS**  
1" = 1'-0"

All structural steel shall be AASHTO M 270, Grade 50W unless otherwise noted and shall be paid for as "Structural Steel in Beam Spans (M 270, Gr. 50W)". See Std. Dwg. No. 55006 for additional notes.



SHEET 2 OF 5  
DETAILS OF  
130'-0" CONTINUOUS  
COMPOSITE W-BEAM UNIT  
EAST PIGEON CREEK  
ROUTE 201 SEC. 1  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: EOR DATE: 6/11/2015 FILENAME: b009814.sl.dgn  
CHECKED BY: KMY DATE: 7/10/15 SCALE: AS SHOWN  
DESIGNED BY: CMW DATE: 4/15  
BRIDGE NO. 07397 DRAWING NO. 58845



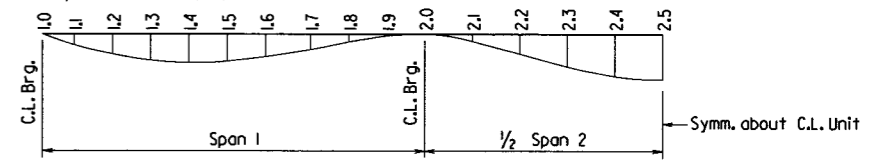
- ① C.L. Full Depth Parapet Joint (1/4" - 1" max.) Stop 4" from top of slab.
- ② C.L. Partial Depth Parapet Joint (1/4" - 1" max.) Stop 1'-2" from top of slab.
- ③ Bundled with S50E and S502E Typ. both sides of rdwy.
- ④ Placed as shown in "TYPICAL ROADWAY SECTION", Dwg. No. 58844.

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

Span	Point of Deflection	Structural Steel		Structural Steel + Slab		Structural Steel + Slab + Parapet	
		Int. Beam	Ext. Beam	Int. Beam	Ext. Beam	Int. Beam	Ext. Beam
1	0	0.000	0.000	0.000	0.000	0.000	0.000
	0.1	0.010	0.008	0.087	0.071	0.091	0.077
	0.2	0.018	0.015	0.160	0.130	0.167	0.140
	0.3	0.023	0.020	0.209	0.170	0.218	0.184
	0.4	0.025	0.021	0.228	0.186	0.237	0.201
	0.5	0.024	0.020	0.217	0.176	0.226	0.190
	0.6	0.020	0.017	0.179	0.146	0.186	0.158
	0.7	0.014	0.012	0.123	0.100	0.128	0.108
	0.8	0.007	0.006	0.062	0.051	0.065	0.055
	0.9	0.002	0.001	0.014	0.011	0.015	0.012
2	0	0.000	0.000	0.000	0.000	0.000	0.000
	0.1	0.006	0.005	0.056	0.045	0.058	0.049
	0.2	0.017	0.015	0.157	0.128	0.164	0.138
	0.3	0.029	0.024	0.260	0.212	0.271	0.229
	0.4	0.037	0.031	0.335	0.272	0.349	0.294
	0.5	0.040	0.034	0.362	0.294	0.377	0.318

This table is symmetrical about C.L. Unit

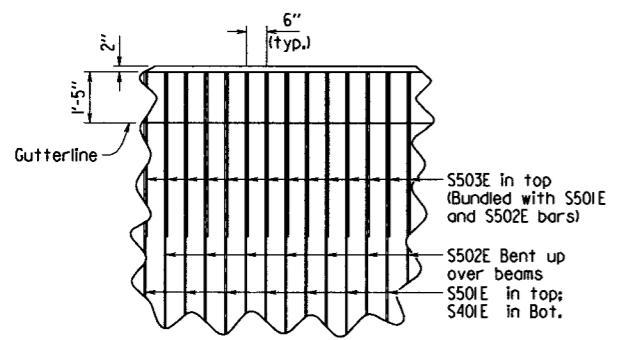
Camber for Dead Load Deflection plus Vertical curve ± 1/4" tolerance. Deflections shown are from a chord from C.L. Bearing to C.L. Bearing. Vertical curve corrections not included. Negative sign (-) indicates point above chord.



DEAD LOAD DEFLECTION DIAGRAM

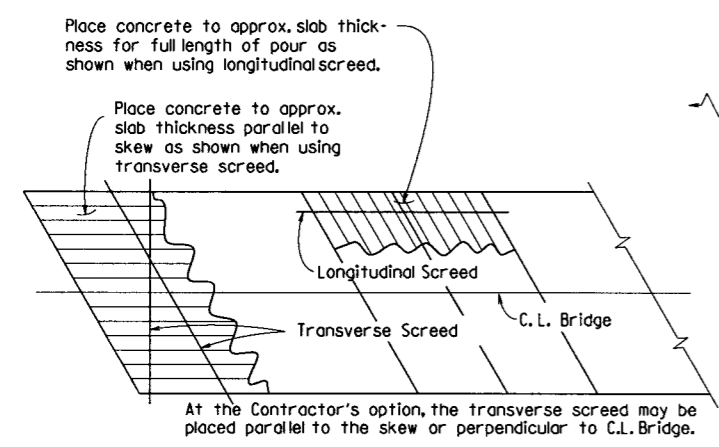
REINFORCING PLAN & DECK POURING SEQUENCE

NOTE: For bar list and parapet details, see Dwg. No. 58847.

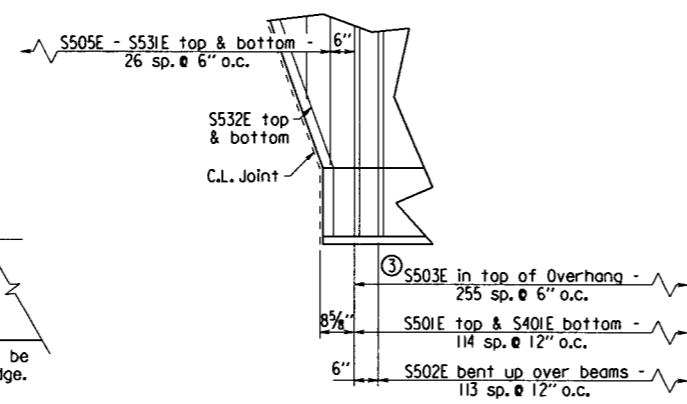


REINFORCING DETAIL  
NO SCALE

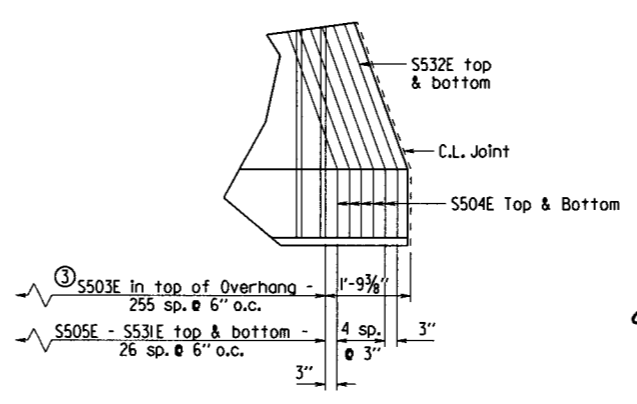
Pours with the same number may be placed simultaneously or separately. All Pours (1) must be placed before Pours (2) can be placed. A minimum 48 hours shall elapse between the end of a pour and the start of the next pour. A minimum of 72 hours shall elapse between the end of a pour and the start of an adjacent pour. A minimum of 72 hours shall elapse between completion of the slab and the pouring of the parapet railing. 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. Any railing 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 sequence shown.



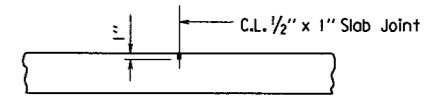
CONCRETE PLACEMENT PROCEDURE  
NO SCALE



DETAIL A  
NO SCALE

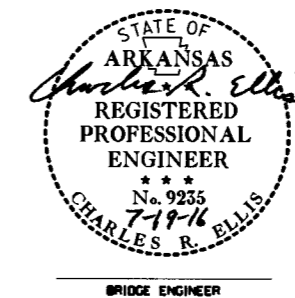


DETAIL B  
NO SCALE



SLAB JOINT DETAIL  
NO SCALE

Use Type 3 or 4 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 3(AE) Concrete-Bridge. Slab joints shall extend to the outside edge of the deck slab. Slab joints shall be installed before parapet railing is 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. The joint sealer shall extend across the deck from gutterline to gutterline. Slab joints and pouring sequence joints shall align with parapet open joints at the gutterline.



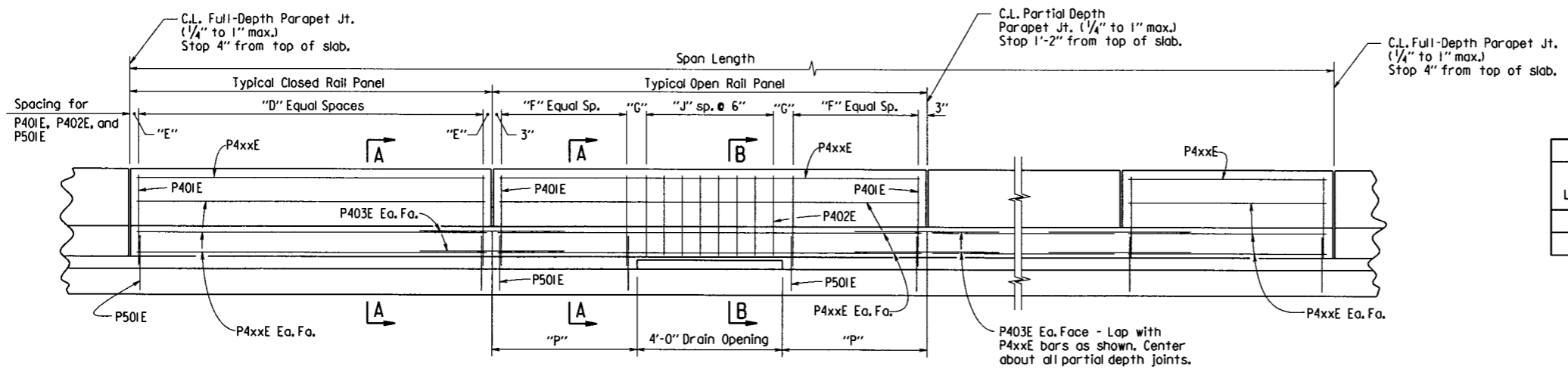
SHEET 3 OF 5  
DETAILS OF  
130'-0" CONTINUOUS  
COMPOSITE W-BEAM UNIT  
EAST PIGEON CREEK

ROUTE 201 SEC. 1  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: EOR DATE: 6/11/2015 FILENAME: b009814.sldgn  
CHECKED BY: KMY DATE: 7/19/14 SCALE: AS SHOWN  
DESIGNED BY: CMW DATE: 4/15

BRIDGE NO. 07397 DRAWING NO. 58846

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. 009814							40	94
07397 - SPAN DETAILS - 58847								



**ELEVATION - CONCRETE PARAPET RAIL**  
1/2" = 1'-0"

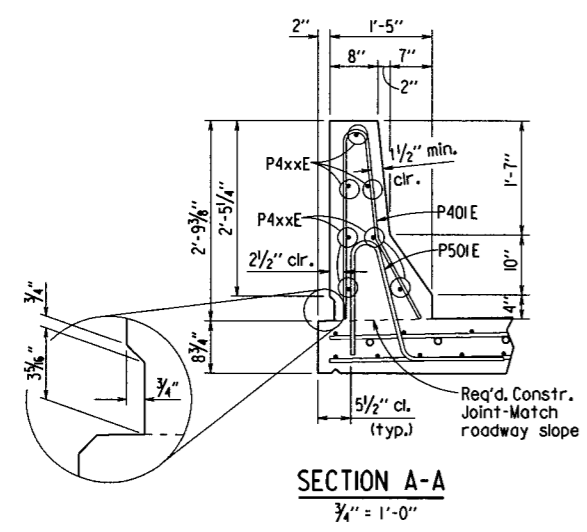
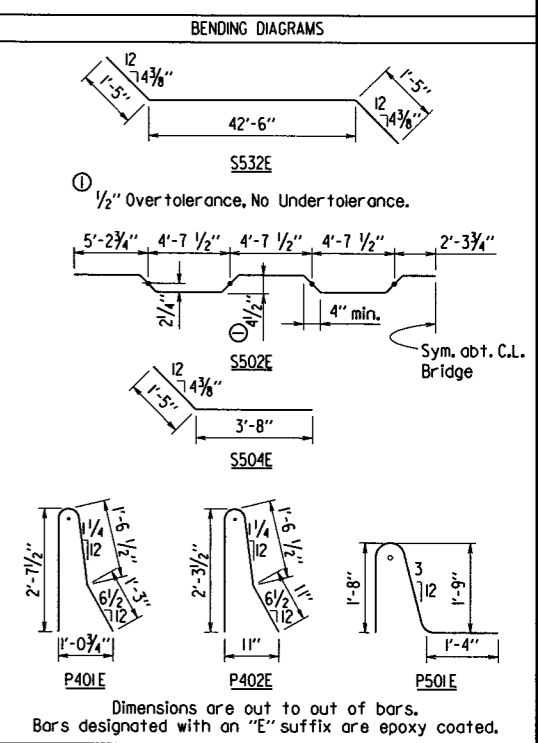
NOTE:  
For location of full and partial depth parapet joints, see Dwg. No. 58846.

**TABLE OF VARIABLES**

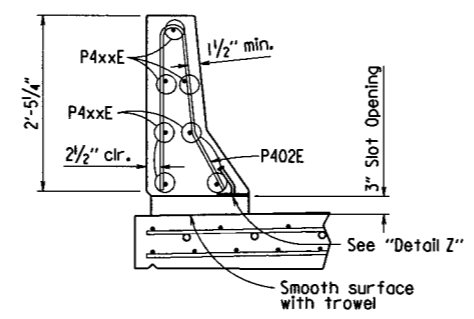
Closed Rail Panels				Open Rail Panels					
Panel Length	"D"	"E"	P4xxE Bar	Panel Length	"F"	"G"	"J"	"P"	P4xxE Bar
10'-0"	19	3"	P404E	15'-0"	10	6"	7	5'-6"	P405E

**BAR LIST**

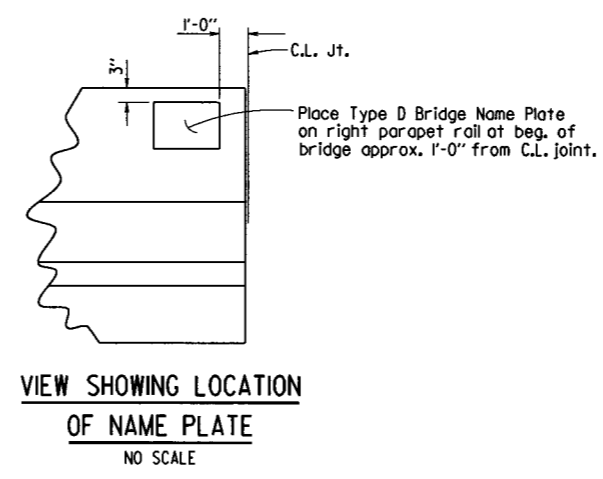
MARK	NO. REQ'D.	LENGTH	P.D.
S401E	115	42'-10"	Str.
S402E	484	34'-6"	Str.
S501E	115	42'-10"	Str.
S502E	114	43'-8"	3"
S503E	512	4'-10"	Str.
S504E	20	5'-1"	2 1/2"
S505E-S531E	4 ea.	5'-8" to 4'-4"	Str.
S532E	4	45'-4"	2 1/2"
S601E	92	16'-6"	Str.
P401E	424	5'-6"	3"
P402E	96	4'-10"	3"
P403E	56	5'-6"	Str.
P404E	56	9'-8"	Str.
P405E	84	14'-8"	Str.
P501E	424	4'-10"	3 3/4"



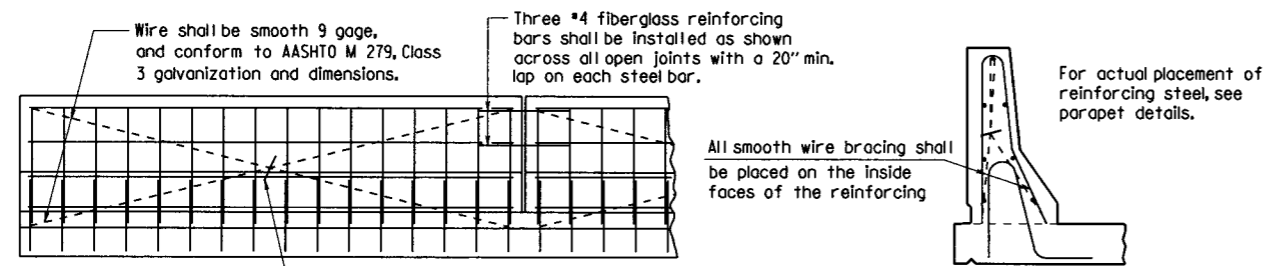
**SECTION A-A**  
3/4" = 1'-0"



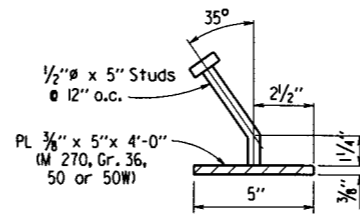
**SECTION B-B**  
3/4" = 1'-0"



**VIEW SHOWING LOCATION OF NAME PLATE**  
NO SCALE

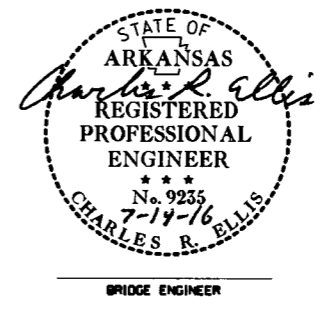


**DETAILS OF OPTIONAL SLIPFORMING OF CONCRETE PARAPET RAIL**  
NO SCALE



**DETAIL Z**  
NO SCALE

NOTE:  
Parapet Studs shall be 5' long, granular flux filled, solid fluxed, or equal, and automatically end welded to the plate. Studs and plate shall meet the requirements of Section 807. Studs and plate shall be measured and paid for as Structural Steel in Beam Spans (M 270, Gr. 50W).  
The surfaces of the 3/8" Plates which will not be in contact with concrete shall be painted in accordance with Section 638, or as approved by the Engineer. Only one coat is required and shall be applied in the Fabricator's shop. Painting will not be paid for directly, but will be considered subsidiary to Structural Steel in Beam Spans (M 270, Gr. 50W).



**SHEET 4 OF 5**  
**DETAILS OF**  
**130'-0" CONTINUOUS**  
**COMPOSITE W-BEAM UNIT**  
**EAST PIGEON CREEK**

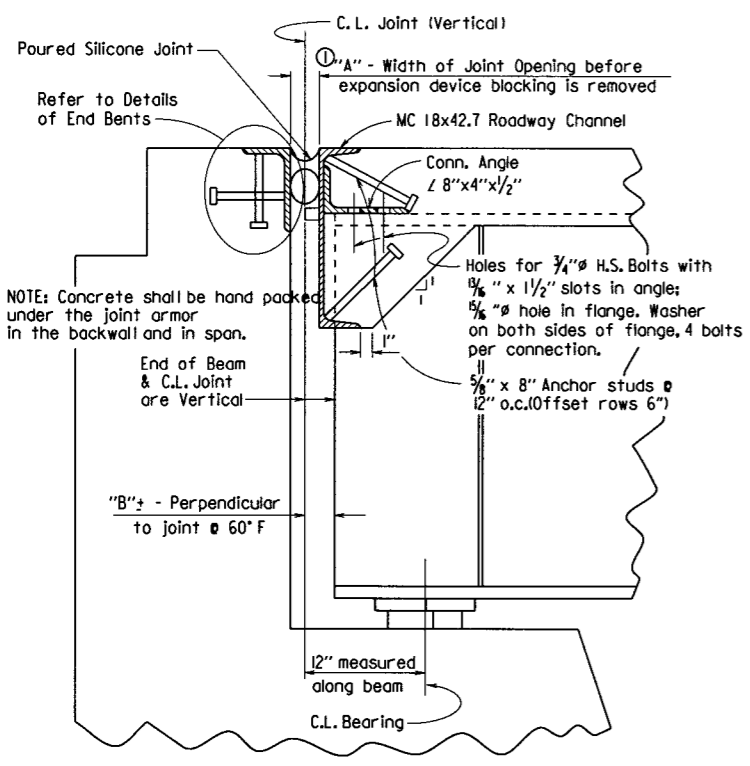
ROUTE 201 SEC. 1  
**ARKANSAS STATE HIGHWAY COMMISSION**  
LITTLE ROCK, ARK.

DRAWN BY: EOR DATE: 6/15/2015 FILENAME: b009814\_sl.dgn  
CHECKED BY: KMY DATE: 7/19/16 SCALE: AS SHOWN  
DESIGNED BY: CMW DATE: 4/13  
BRIDGE NO. 07397 DRAWING NO. 58847

PRINT DATE: 7/19/2016

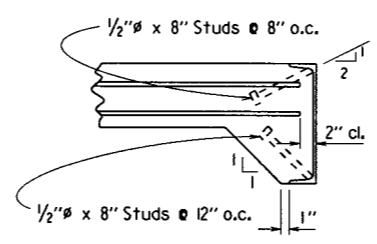


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		41	94
				JOB NO.	009814			
				07397 - SPAN DETAILS - 58848				



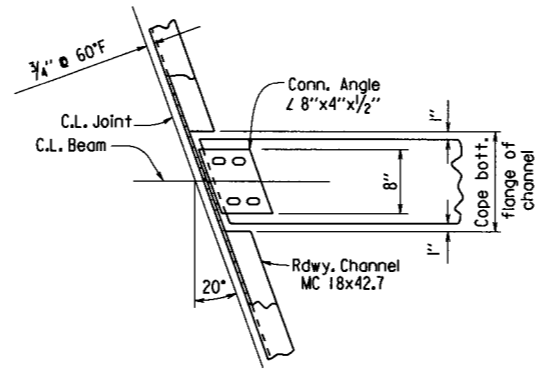
NOTE: Section taken perpendicular to C.L. Joint, except as noted.

**SECTION THRU JOINT AT END BENTS**

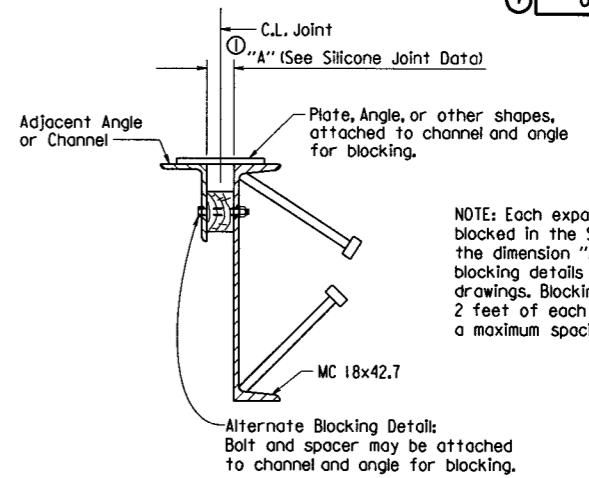


NOTE: As an alternate to 5/8" studs, 1/2" x 8" studs spaced as shown may be used. Use weight of 5/8" stud as basis of measurement of structural steel in anchors.

**DETAILS OF ALTERNATE ANCHORS AND PLACEMENT OF LONGITUDINAL REINFORCEMENT**



**CHANNEL CONNECTION DETAIL**



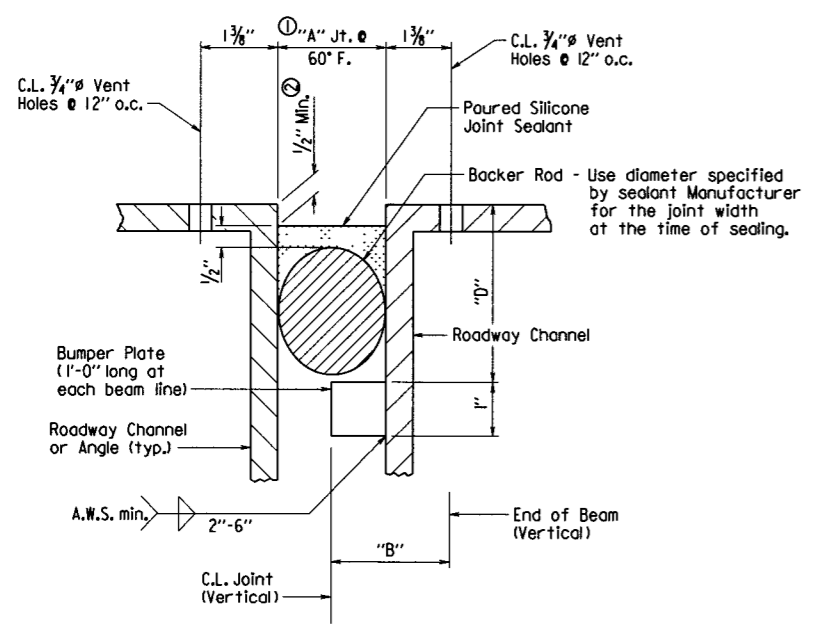
**DETAILS FOR BLOCKING EXPANSION JOINT DEVICE**

**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 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, and the opening adjusted for temperature and grade.
- 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 and grade.

② Recess depth as recommended by the sealant Manufacturer



**DETAIL OF POURED SILICONE JOINT**

**SILICONE JOINT DATA**

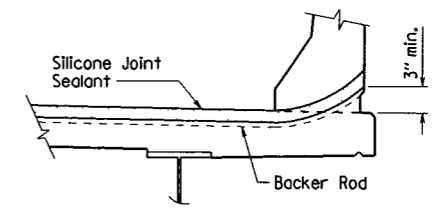
Bent No.	"A" Width Perpendicular to Joint at 24 Hour Average Temperature ① of:			"B" Perpendicular to Joint at 60°F	"D"	Bumper Plate Size
	40°F	60°F	80°F			
1 & 4	1 3/8"	1 1/2"	1 3/8"	2" ±	4"	1" x 3/4"

① 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.

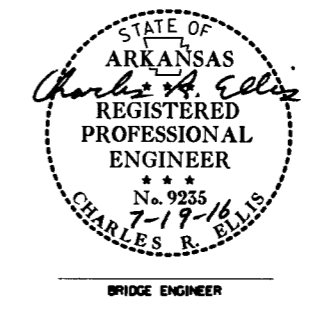
Notes:  
The temperature limitations recommended by the sealant Manufacturer shall be observed. The sealant shall be installed only when the average 24 hour air temperature is between 40° and 80° F.

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. Unless otherwise noted, do not install more backer rod than can be sealed in the same day.

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



**JOINT SEAL PLACEMENT AT CURB**



SHEET 5 OF 5  
DETAILS OF  
130'-0" CONTINUOUS  
COMPOSITE W-BEAM UNIT  
EAST PIGEON CREEK

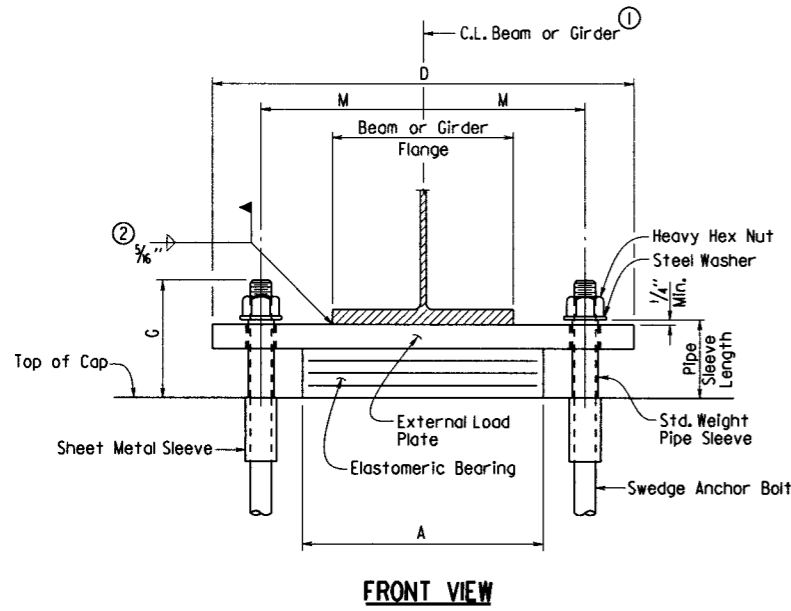
ROUTE 201 SEC. 1  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

BRIDGE NO. 07397      DRAWING NO. 58848

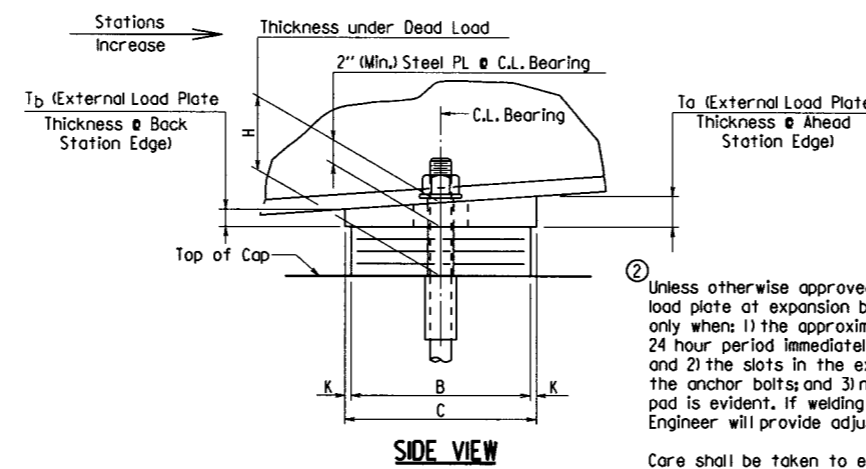
DRAWN BY: EOR      DATE: 6/16/2015      FILENAME: b009814\_sl.dgn  
CHECKED BY: EWM      DATE: 7/19/16      SCALE: no scale  
DESIGNED BY: CMW      DATE: 4/15

PRINT DATE: 7/19/2016

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.	009814	42	94	
				07397 - ELASTO. BRGS. - 58849				



**FRONT VIEW**

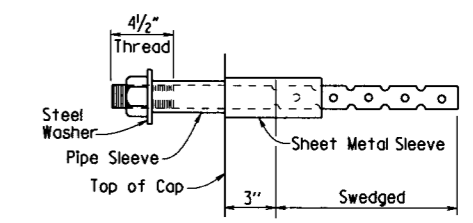


**SIDE VIEW**

The direction of bevel of the external load plate may not be accurately depicted with respect to T<sub>a</sub> and T<sub>b</sub> values shown in the "Table of Fabricator Variables".

Unless otherwise approved by the Engineer, welding of the external load plate at expansion bearings to the beam or 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.

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.

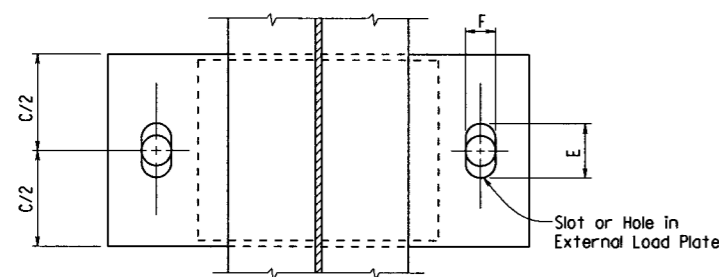


**ANCHOR BOLT DETAIL**

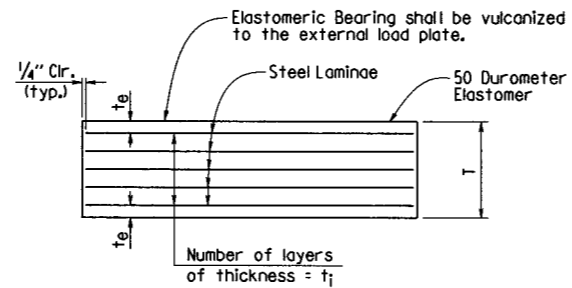
Anchor Bolts may be cast in place or drilled and grouted into place. If Anchor Bolts are to be cast in place, the Galvanized Sheet Metal Sleeves will not be required.

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 concrete. Bolts placed in drilled holes shall be accurately set and fixed using a OPL 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)".

① C.L. Elastomeric Pad shall be aligned with C.L. Beam or Girder.



**PLAN VIEW**



**ELASTOMERIC BEARING**

t<sub>e</sub> = Thickness of elastomer cover on top and bottom of pad  
t<sub>i</sub> = Thickness of elastomer between steel laminae  
N = Number of elastomer layers of thickness t<sub>i</sub>

Prior to erection of the beams or girders, the Contractor shall verify the orientation of the bearings with respect to T<sub>a</sub> and T<sub>b</sub>.

**GENERAL NOTES**

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

External load plates shall conform to AASHTO M 270, Grade 50W. Pipe sleeves shall be ASTM A500, Grade B, and shall be galvanized to conform to AASHTO M 232, Class C or ASTM B695, Class 50.

External load plates shall be completely fabricated (including bevel and bolt holes) 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(e) for unpainted Grade 50W 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.

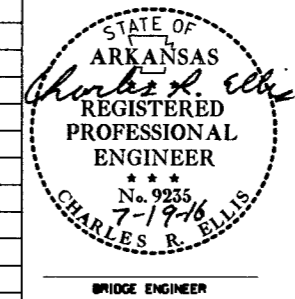
Pipe Sleeves, Anchor Bolts, Washers and Nuts shall be paid for at the unit price bid for "Structural Steel in Beam Spans (M 270, Gr. 50W)". External load plates will not be measured and paid for separately, but will be considered incidental to the unit price bid for "Elastomeric Bearings".

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

**TABLE OF FABRICATOR VARIABLES**

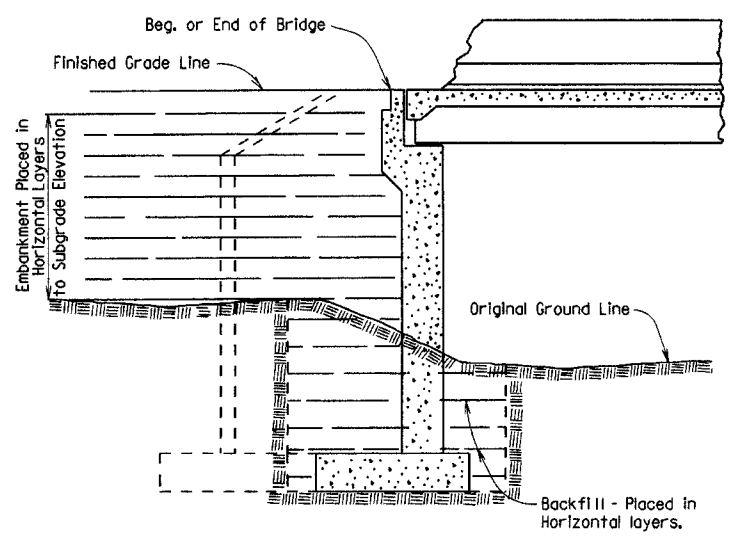
③ Maximum Design Load = Service I Limit State

BRIDGE NO.	LOCATION		BEARING TYPE	NO. of BEARINGS EACH BENT	③ MAXIMUM DESIGN LOAD (KIPS)	G	H	ELASTOMERIC PAD					EXTERNAL LOAD PLATE						ANCHOR BOLT								
	BENT NO(S).	BEAM OR GIRDER NO.						A	B	N	t <sub>i</sub>	t <sub>e</sub>	NO. & THICKNESS OF STEEL LAMINAE	T	C	D	E	F	K	M	T <sub>a</sub>	T <sub>b</sub>	ANCHOR BOLT (Ø x L)	PIPE SLEEVE SIZE (Ø x L)	SHEET METAL SLEEVE SIZE (Ø x L)	STEEL WASHER SIZE (O.D.)	
07397	1	ALL	EXP	5	81.00	7 1/4"	4 3/8"	14"	8"	3	1/2"	1/4"	4 @ 12 Ga.	2 3/8"	9"	24"	3 3/8"	2 1/4"	1/2"	9 1/4"	2.07"	1.93"	1 1/2"Ø x 24"	55	1 1/2"Ø x 4 5/8"	3"Ø x 10"	3"
	2	ALL	FIX	5	166.00	7 1/4"	3 3/8"	14"	12"	2	1/2"	1/4"	3 @ 12 Ga.	1 1/4"	13"	26"	3 1/8"	3 1/8"	1/2"	9 3/4"	2.14"	1.86"	2"Ø x 29"	55	2 1/2"Ø x 4 1/8"	4"Ø x 10"	3 3/4"
	3	ALL	FIX	5	166.00	7 1/4"	3 3/8"	14"	12"	2	1/2"	1/4"	3 @ 12 Ga.	1 1/4"	13"	26"	3 1/8"	3 1/8"	1/2"	9 3/4"	2.19"	1.81"	2"Ø x 29"	55	2 1/2"Ø x 4 1/8"	4"Ø x 10"	3 3/4"
	4	ALL	EXP	5	81.00	7 1/4"	4 3/8"	14"	8"	3	1/2"	1/4"	4 @ 12 Ga.	2 3/8"	9"	24"	3 3/8"	2 1/4"	1/2"	9 1/4"	2.15"	1.85"	1 1/2"Ø x 24"	55	1 1/2"Ø x 4 5/8"	3"Ø x 10"	3"

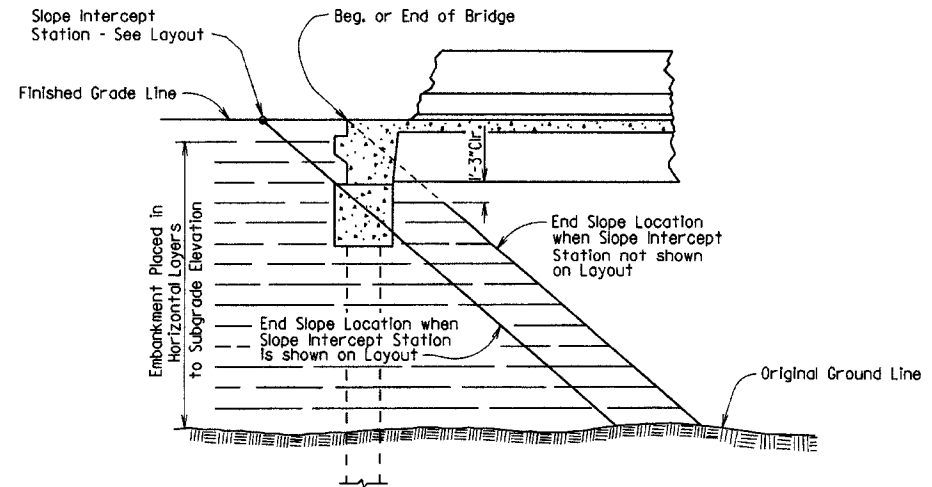


**DETAILS OF ELASTOMERIC BEARINGS EAST PIGEON CREEK**  
ROUTE 201 SEC. 1  
**ARKANSAS STATE HIGHWAY COMMISSION**  
LITTLE ROCK, ARK.  
DRAWN BY: EOR DATE: 6/18/2015 FILENAME: b009814\_el.dgn  
CHECKED BY: KWH DATE: 7/19/16 SCALE: no scale  
DESIGNED BY: CMW DATE: 4/15  
BRIDGE NO. 07397 DRAWING NO. 58849

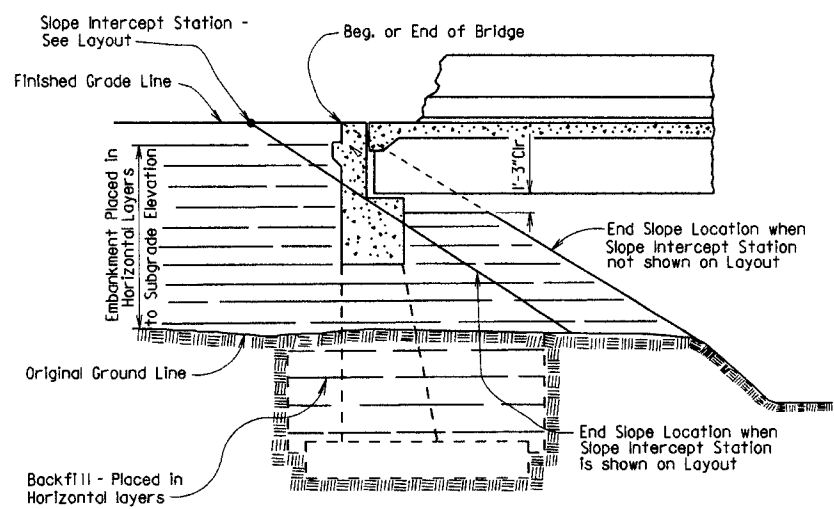
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		43	
							JOB NO.	
							① EMBANKMENT & BACKFILL	55000



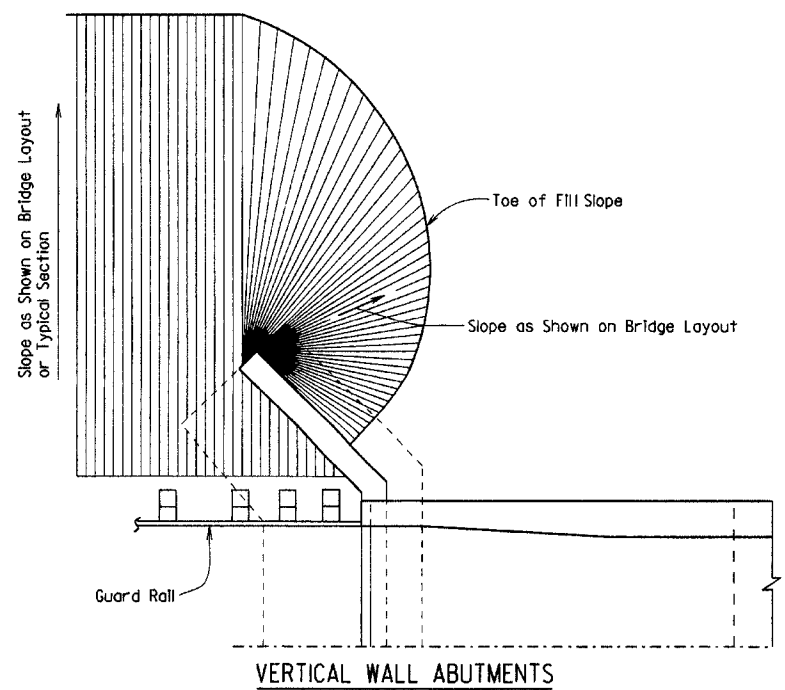
**EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT VERTICAL WALL ABUTMENTS**



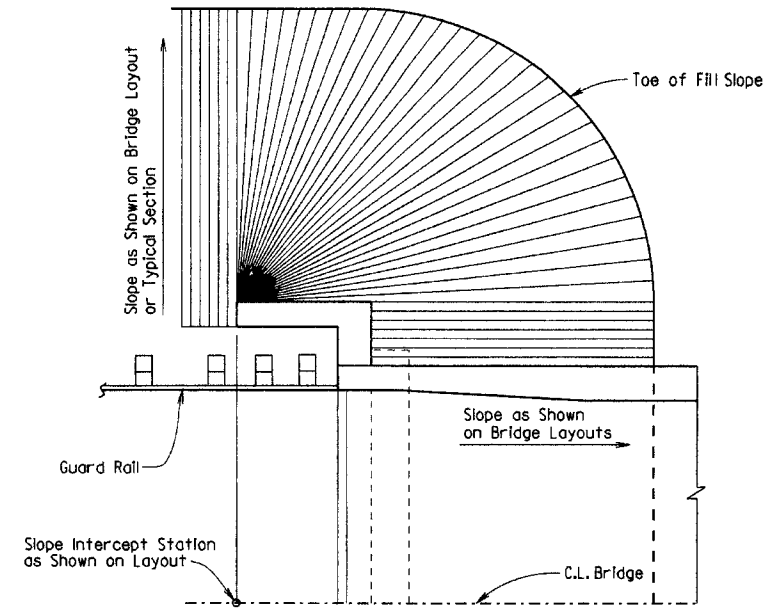
**EMBANKMENT CONSTRUCTION AT SPILL-THROUGH PILE END BENTS**



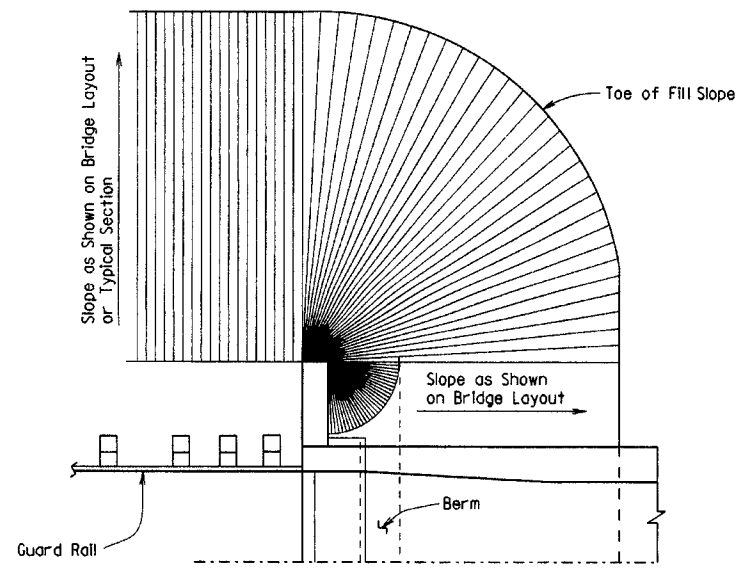
**EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT SPILL-THROUGH END BENTS**



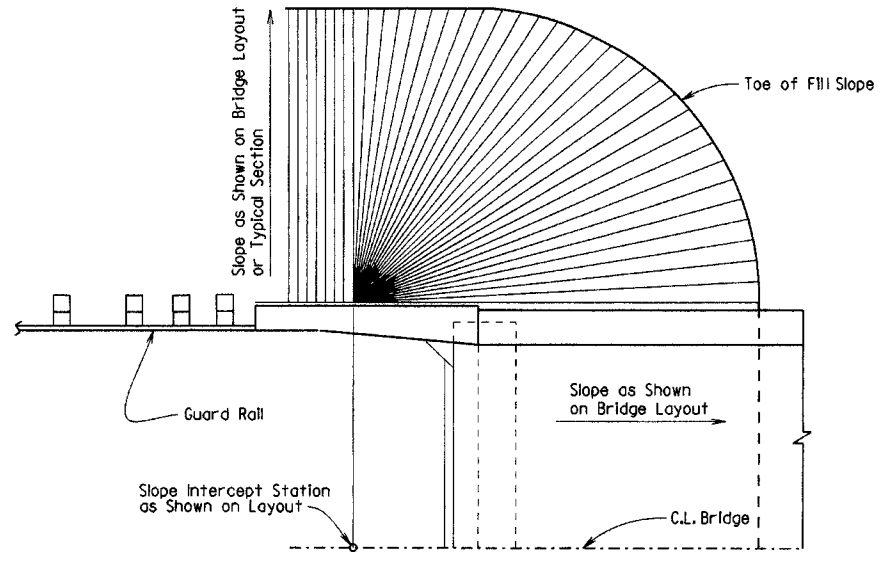
**VERTICAL WALL ABUTMENTS**



**SPILL-THROUGH END BENTS WITH TURNBACK WING**



**SPILL-THROUGH END BENTS WITH STUB WING**



**SPILL-THROUGH END BENTS WITH TRANSITION WING**

**METHOD OF DETERMINING FILL SLOPE LOCATION AT BRIDGE ENDS**

**GENERAL NOTES**

The Bridge End Embankment shall be defined as a section of embankment, not less than 20 feet long adjacent to the bridge end, together with the side slopes and slopes under the bridge end including around the end of wingwalls. Embankment adjacent to structures shall be constructed in 6 inch horizontal layers (loose measure) and compacted by the use of mechanical equipment to the satisfaction of the Engineer. Refer to Subsections 210.09, 210.10 and 801.08 for construction requirements.

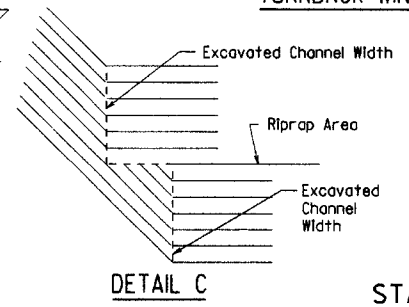
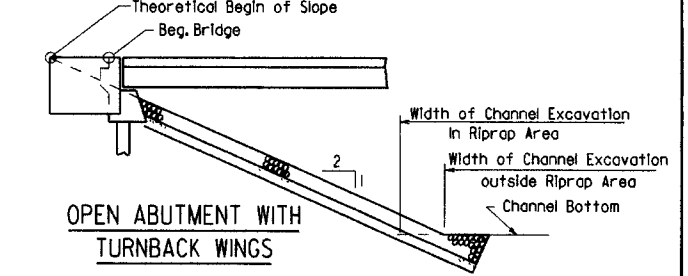
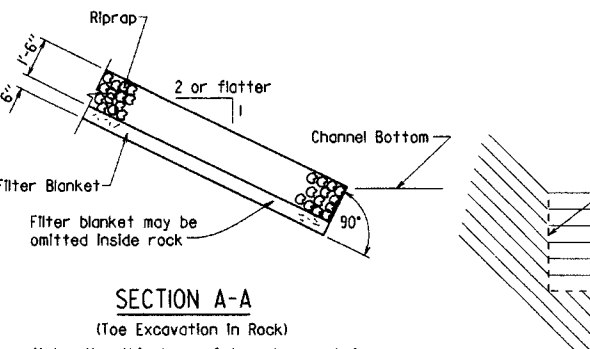
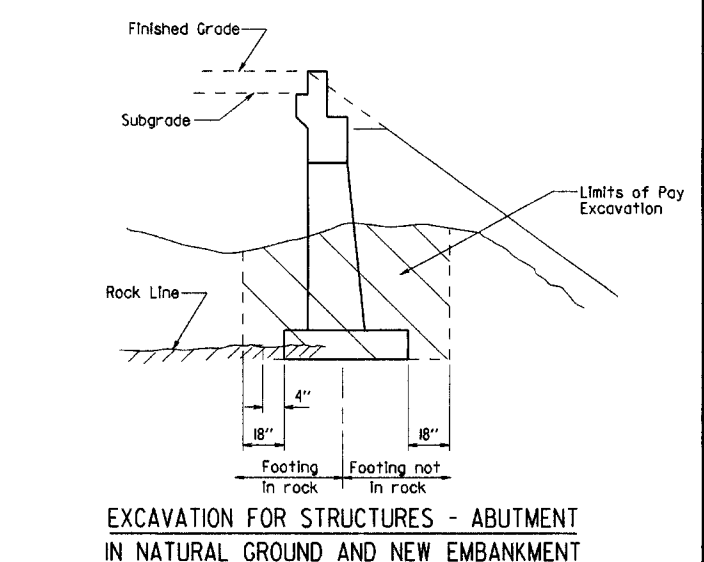
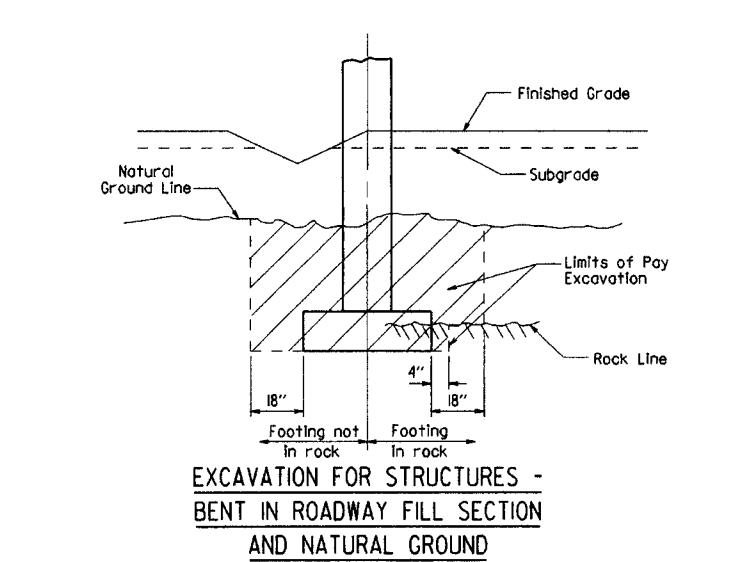
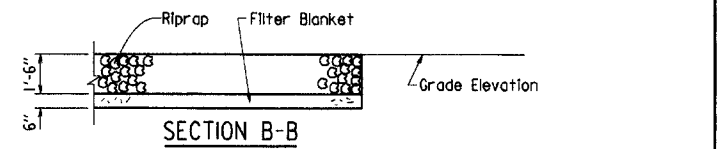
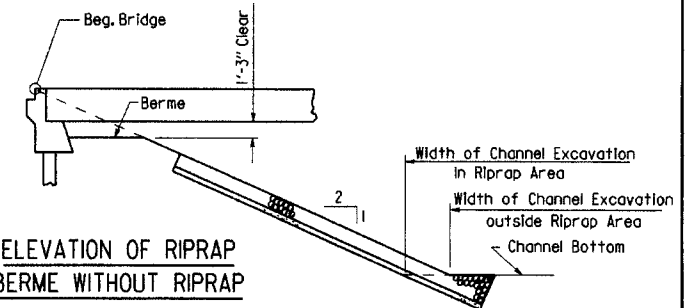
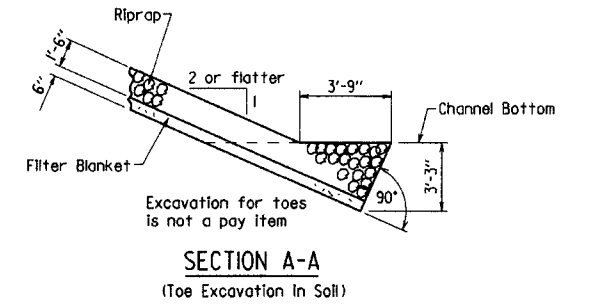
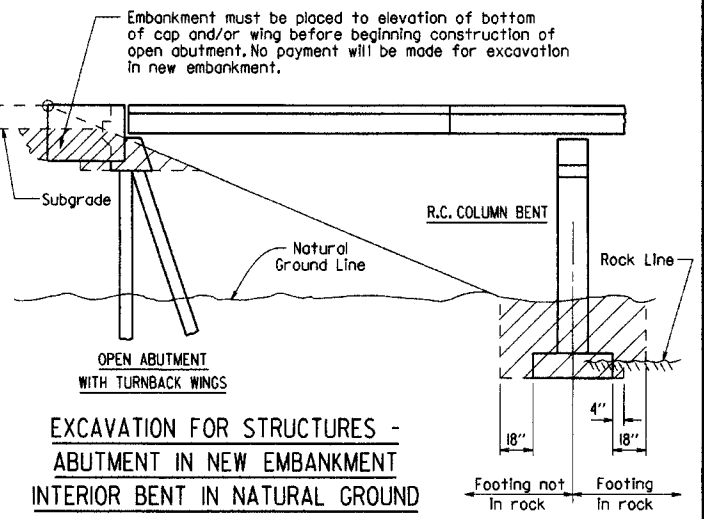
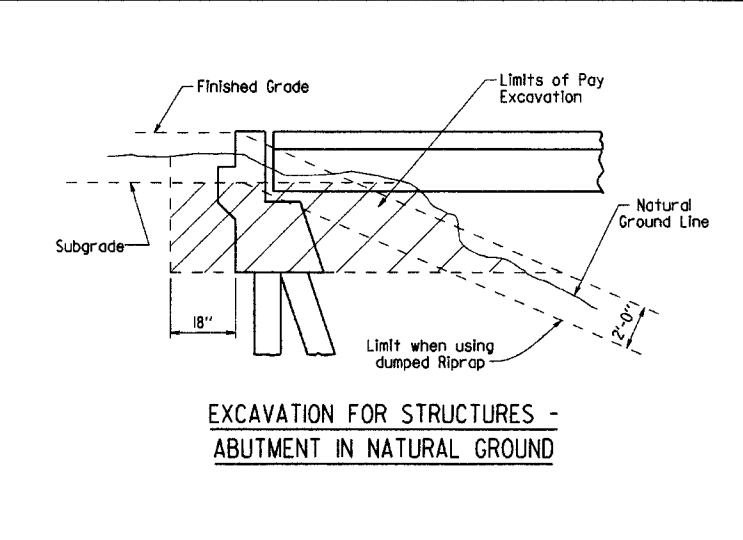
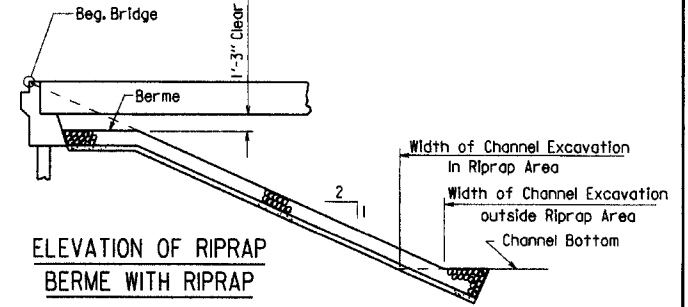
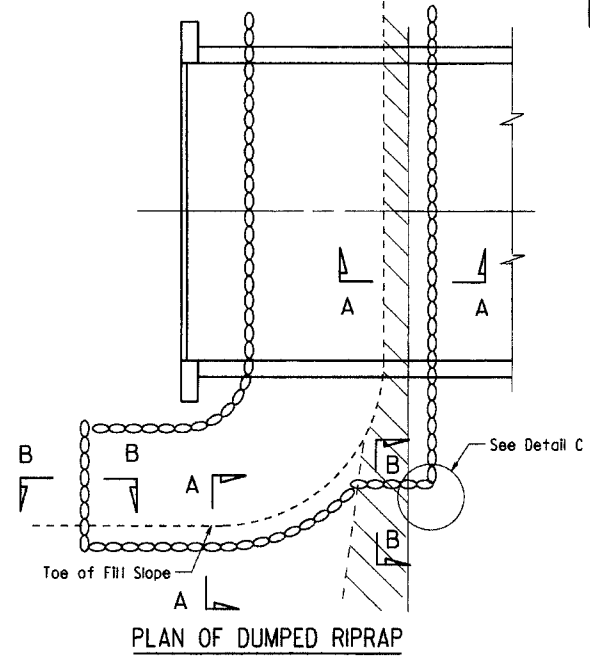
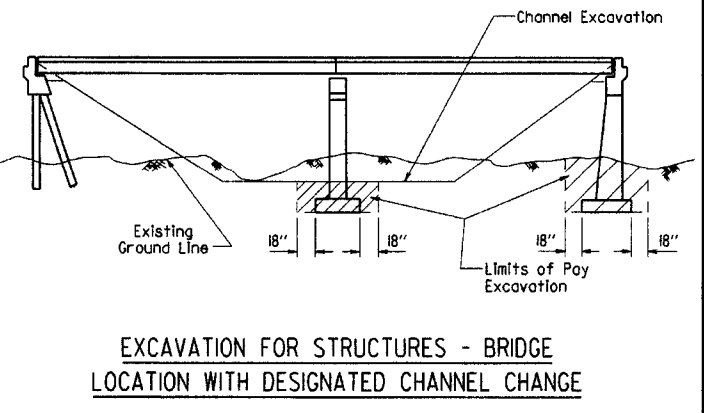
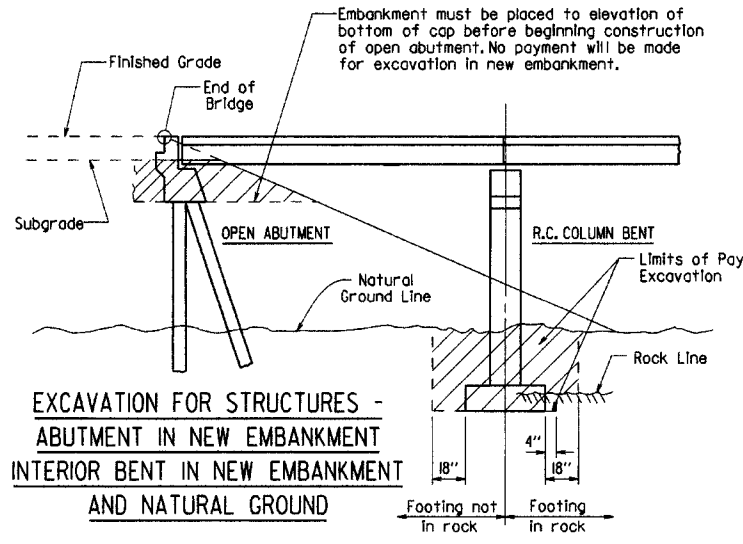
**STANDARD DETAILS FOR EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS**

ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55000.dgn  
CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE  
DESIGNED BY: STD. DATE: -

DRAWING NO. 55000

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		44	
				JOB NO.		RIPRAP & EXCAV. 55001		



Note: Use this type of toe when rock is encountered which is in a stable condition.

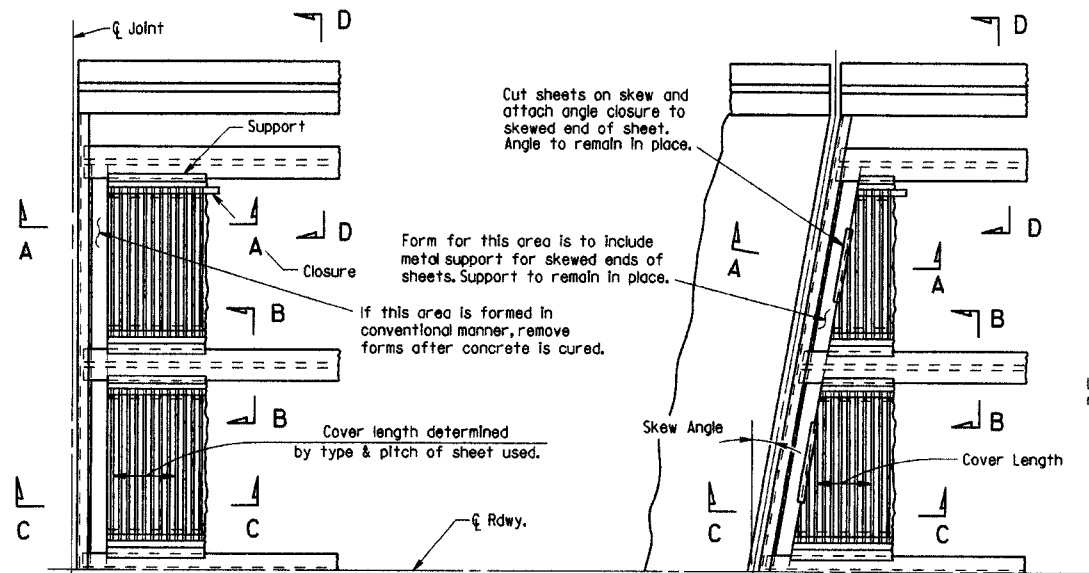
Note: In lieu of an aggregate filter blanket, a synthetic fiber geotextile fabric complying with the requirements of Subsection 816.02(e) may be used.

Note: Details for computing excavation for structures are included for information as to how plan quantities were calculated and for use when adjusting quantities when changing footing elevation.

**STANDARD DETAILS FOR  
DUMPED RIPRAP AND FILTER BLANKET  
AND COMPUTING  
EXCAVATION FOR STRUCTURES  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.**

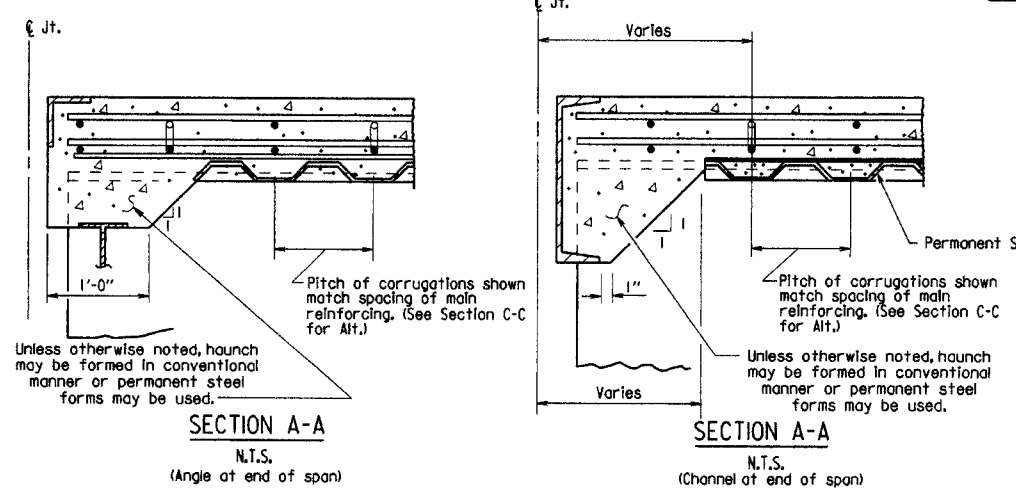
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 DESIGNED BY: STD. DATE: DRAWING NO. 55001

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3/24/16				6	ARK.		45	
							BRIDGE DECK FORMS	55005



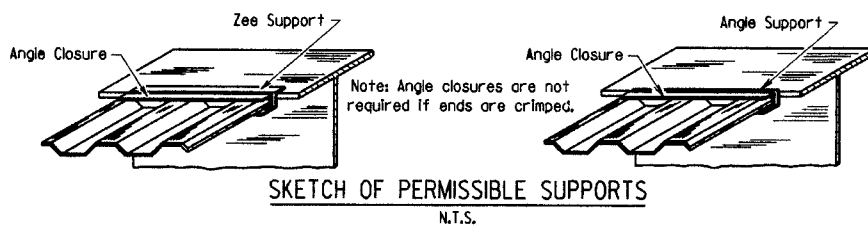
**PART PLAN - SQUARE SPAN**  
3/8" = 1'-0"

**PART PLAN - SKEWED SPAN**  
3/8" = 1'-0"

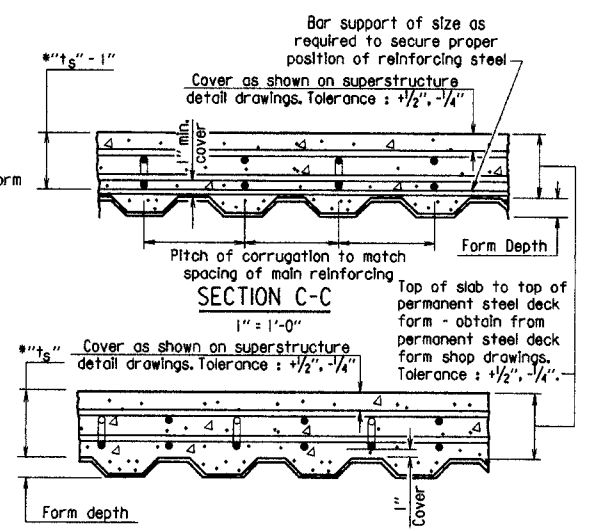


**SECTION A-A**  
N.T.S.  
(Angle at end of span)

**SECTION A-A**  
N.T.S.  
(Channel at end of span)



**SKETCH OF PERMISSIBLE SUPPORTS**  
N.T.S.



**SECTION C-C**  
1" = 1'-0"

**SECTION C-C - ALTERNATE**  
1" = 1'-0"

\*t<sub>s</sub> = slab thickness as shown on superstructure detail drawings.  
GENERAL NOTES

Permanent steel deck forms may be used at the Contractor's option and shall be at no additional cost to the Department. Such use may result in changes to the dead load deflection of the girder. Any cost for adjustments due to a change in the dead load deflection will be borne by the Contractor. Payment for deck concrete and structural steel will not be increased due to use of permanent steel deck forms.

Permanent steel deck forms shall conform to Subsection 802.4(b). Detailed plans, including detailed calculations and manufacturer's technical brochure, shall be submitted to and approved by the Engineer before work of forming the bridge deck is started.

Welding of form supports to the tension flange of steel girders will be permitted only in areas where shear connectors are used. When welding is not allowed, the method of fastening Z or L supports to the flange must be approved by the Engineer.

Form sheets shall be fastened to supporting members and to each other with galvanized metal screws sufficient in size and number to provide a secure attachment. Alternate methods of attachment must be approved by the Engineer.

When the pitch of form corrugations match the reinforcing spacing, transversely align form sheets across the bridge to maintain the correct orientation of continuous reinforcing bars in the corrugations.

Bar support rods, when used, shall be sized and spaced to adequately support the bottom reinforcing mat at the required position.

High chairs shall be sized to support the top mat of reinforcing at the proper position. High chairs shall be placed at locations shown on the detail drawings.

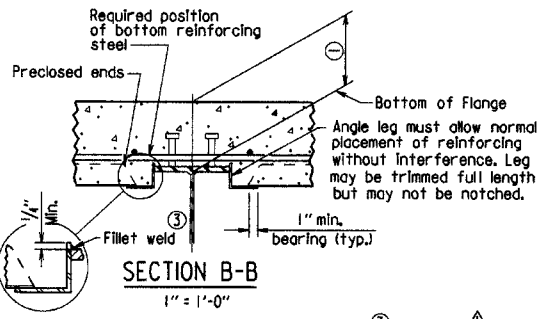
Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 Edition), with applicable Supplemental Specifications and Special Provisions.

**STANDARD DETAILS FOR PERMANENT STEEL BRIDGE DECK FORMS FOR STEEL & CONCRETE GIRDER SPANS**

ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

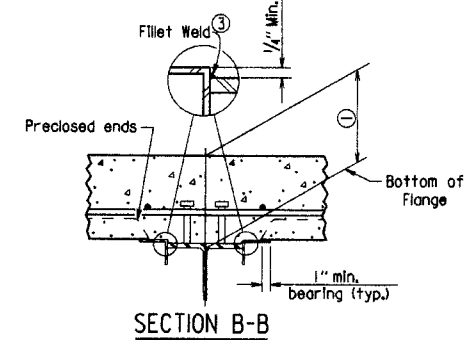
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CHECKED BY: BEF DATE: 2-27-2014 SCALE: NONE  
DESIGNED BY: STD. DATE: —

DRAWING NO. 55005



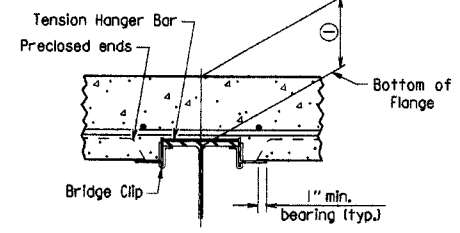
**SECTION B-B**  
1" = 1'-0"

(Showing permissible support for tension flange where shear connectors are used, and for all compression flanges)



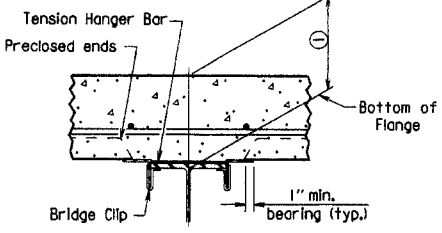
**SECTION B-B**  
1" = 1'-0"

(Showing permissible support for tension flange where shear connectors are used and for all compression flanges)



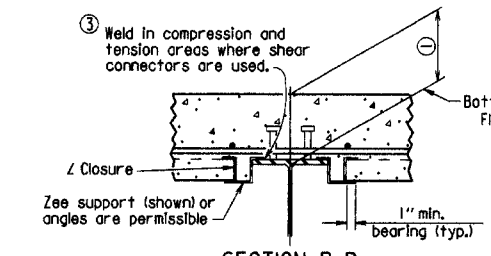
**SECTION B-B**  
1" = 1'-0"

(Showing permissible support for tension flange where shear connectors are not used)



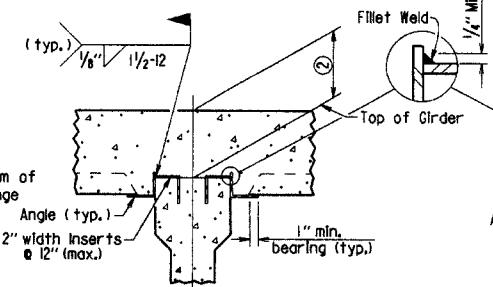
**SECTION B-B**  
1" = 1'-0"

(Showing permissible support for tension flange where shear connectors are not used)



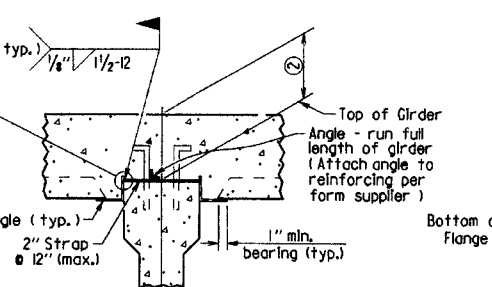
**SECTION B-B**  
1" = 1'-0"

(Showing Z Closure)



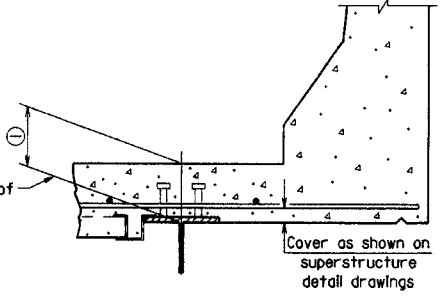
**SECTION B-B**  
(FOR CONCRETE GIRDERS)

(Showing support by insert cast in girder)



**SECTION B-B**  
(FOR CONCRETE GIRDERS)

(Showing support by Strap)



**SECTION D-D**  
1" = 1'-0"

Note: Only Bottom Reinforcing is shown.

① Distance from top of slab to bottom of top flange as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances: Minimum - occurs when either the top flange or the support angle leg contacts the bottom reinforcing steel; Maximum = t<sub>s</sub> + 1/4" + flange thickness. See Section C-C for slab thickness tolerance between adjacent girder flanges.

② Distance from top of slab to top of girder as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances: Minimum - occurs when either the top of girder or the support angle leg contacts the bottom reinforcing steel; Maximum - value shown on the superstructure detail drawings when removable forms are used. See Section C-C for slab thickness tolerance between adjacent girder flanges.

△ Revised weld dimension by KWH, Ck'd. by BEF, 3/24/16.

## GENERAL NOTES

These GENERAL NOTES are applicable unless otherwise shown in the Plan Details, Special Provisions, or Supplemental Specifications.

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 Specifications.

DESIGN SPECIFICATIONS: See Bridge Layouts.

### SUPERSTRUCTURE NOTES:

#### MATERIALS AND STRENGTHS:

Class (S/AE) Concrete	$f'c = 4,000$ psi
Reinforcing Steel (Gr. 60, AASHTO M 31 or M 322, Type A)	$f_y = 60,000$ psi
Structural Steel (AASHTO M 270, Gr. 36)	$F_y = 36,000$ psi
Structural Steel (AASHTO M 270, Gr. 50)	$F_y = 50,000$ psi
Structural Steel (AASHTO M 270, Gr. 50W)	$F_y = 50,000$ psi
Structural Steel (AASHTO M 270, Gr. HPS70W)	$F_y = 70,000$ psi

See Plan Details for Grades of Structural Steel required.

#### CONCRETE:

All concrete shall be Class (S/AE) with a minimum 28 day compressive strength  $f'c = 4,000$  psi. Concrete shall be poured in the dry and all exposed corners shall be chamfered  $\frac{3}{4}$ " unless otherwise noted.

The superstructure details shown are for use when removable deck forming is used and are the basis for measurement of Class (S/AE) Concrete. See Standard Drawing No. 55005 for allowable modifications and for tolerances when Permanent Steel Bridge Deck Forms are used.

Use of a longitudinal screed is not permitted on any span of a bridge deck with horizontal curvature.

The concrete deck (roadway surface) shall be given a fine finish in accordance with Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish. Sidewalks 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 or girder. When permitted, the use of a longitudinal strike-off will require that a vertical camber adjustment be made in the strike-off to account for the future dead load deflection due to any railings, median barrier, and sidewalks.

#### REINFORCING STEEL:

All reinforcing steel shall be Grade 60 conforming to AASHTO M 31 or M 322, Type A, with mill test reports and shall be epoxy coated. The reinforcing steel is to be accurately located in the forms and firmly held in place by steel wire supports, sufficient in number and size 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 (Grade 60)".

#### STRUCTURAL STEEL (COMMON TO W-BEAMS AND PLATE GIRDERS):

Structural steel shall be AASHTO M 270 with grade and payment as specified in the plans. Grade 50W steel shall not be painted and all exposed surfaces shall be cleaned in accordance with Subsection 807.84(e). Grade 36 and Grade 50 steel shall be painted unless otherwise noted and all exposed surfaces shall be cleaned in accordance with Subsection 807.84. Structural steel completely embedded in concrete may be AASHTO M 270, Gr. 36, Gr. 50 or Gr. 50W unless otherwise noted.

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

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.

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 additional welds are required, whether permanent or temporary, a formal request with detailed drawings shall be submitted to the Engineer for approval; however, additional welds used for attaching falsework support devices or screed rail supports to the structural steel that do not exceed the limitations of Subsection 802.13 will not require approval prior to construction. All welding shall conform to Subsection 807.26.

Unless otherwise noted, field connections shall be bolted with  $\frac{3}{4}$ "  $\phi$  high-strength bolts using  $\frac{3}{16}$ "  $\phi$  open holes. Holes for  $\frac{3}{4}$ "  $\phi$  high-strength bolts may be  $\frac{5}{16}$ "  $\phi$  if a washer is supplied for use under both the nut and head of the bolt. The use of oversized holes will not be allowed on main members unless otherwise noted. Bolts shall be placed with heads on the outside face of the exterior beam or girder webs and on the bottom of the beam or girder flanges.

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

When painting is required, all structural steel except galvanized steel and steel completely encased in concrete shall be painted in accordance with Subsection 807.75. The color of paint shall be as specified in the plans.

#### STRUCTURAL STEEL (W-BEAMS):

All beams and field splice plates, and all diaphragms and connection plates attached to horizontally curved beams 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 (M 270, Gr. ....)".

All beams in continuous units and simple spans with field splices shall be blocked in their true position in the shop in groups as specified in Subsection 807.54(b)(2) with the webs horizontal. The camber, length of sections, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records. The component parts shall be match marked in this assembly and these marks shall be shown on the erection diagram.

All beams in simple spans without field splices shall be blocked in their true position with webs horizontal. The camber, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records.

Flange field splice plates 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.

All beam dimensions are based on a temperature of 60 degrees F. A tolerance of  $\frac{1}{4}$ " +/- is allowed for camber.

Bent plate diaphragms for horizontally curved beams 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. Bent plate diaphragms for straight beams may be cut and fabricated in accordance with Subsection 807.35 or as required for horizontally curved beams.

Unless otherwise noted, 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 concrete deck.

#### STRUCTURAL STEEL (PLATE GIRDERS):

All references to cross-frames shall include "X" or "K" types.

All girder web and flange plates, all field splice plates, and all diaphragms, cross-frames and connection plates attached to horizontally curved girders 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 Plate Girder Spans (M 270, Gr. ....)".

All girders in continuous units and simple spans with field splices shall be assembled in the shop as specified in Subsection 807.54(b)(2) and blocked in their true position with webs horizontal. The camber, length of sections, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records. The component parts shall be match marked in this assembly and these marks shall be shown on the erection diagram.

All girders in simple spans without field splices shall be blocked in their true position with webs horizontal. The camber, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records.

Web and flange plates for main members and 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.

Girder webs may be made by shop splicing with minimum lengths of 25 feet for sections. Flange plates longer than 50 feet may be made by shop splicing with minimum lengths of 25 feet for sections. No additional payment will be made for shop welded splices.

All girder dimensions are based on a temperature of 60 degrees F. A tolerance of  $\frac{1}{4}$ " +/- is allowed for camber.

Groove welds in web and flange plates shall be Quality Control (Q.C.) tested by nondestructive testing, as required in Subsection 807.23(b). Fillet welds at flange to web plate connections shall be Q.C. tested by the magnetic particle method. All Q.C. testing shall be considered subsidiary to the item "Structural Steel in Plate Girder Spans (M 270, Gr. ....)".

Bent plate diaphragms for horizontally curved girders 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. Bent plate diaphragms for straight girders may be cut and fabricated in accordance with Subsection 807.35 or as required for horizontally curved girders.

Unless otherwise noted, cross-frames and diaphragms shall be installed as girders are erected. All bolts in cross-frames, diaphragms, and field splices shall be installed and tightened in accordance with Subsection 807.71 prior to pouring the concrete deck.

### SUBSTRUCTURE NOTES:

#### CONCRETE:

Unless otherwise noted, concrete in caps, columns and footings (except seal footings) shall be Class "S" with a minimum 28 day compressive strength  $f'c = 3,500$  psi and shall be poured in the dry. Seal Concrete for footings shall have a minimum 28 day compressive strength  $f'c = 2,000$  psi.

Concrete in drilled shafts shall be Class "S" as modified by Job SP "Drilled Shaft Foundations".

All exposed corners shall be chamfered  $\frac{3}{4}$ " unless otherwise noted.

#### REINFORCING STEEL:

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.

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

#### STRUCTURAL STEEL:

Structural steel in end bents shall be AASHTO M 270 with grade and payment as specified in the plans.

FOR ADDITIONAL INFORMATION AND NOTES, SEE LAYOUT(S) AND PLAN DETAILS.

## STANDARD GENERAL NOTES FOR STEEL BRIDGE STRUCTURES

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: A.M.S.	DATE: 9-2-2015	FILENAME: b55006.dgn
CHECKED BY: B.E.F.	DATE: 9-2-2015	SCALE: NO SCALE
DESIGNED BY: STD.	DATE:	

DRAWING NO. 55006

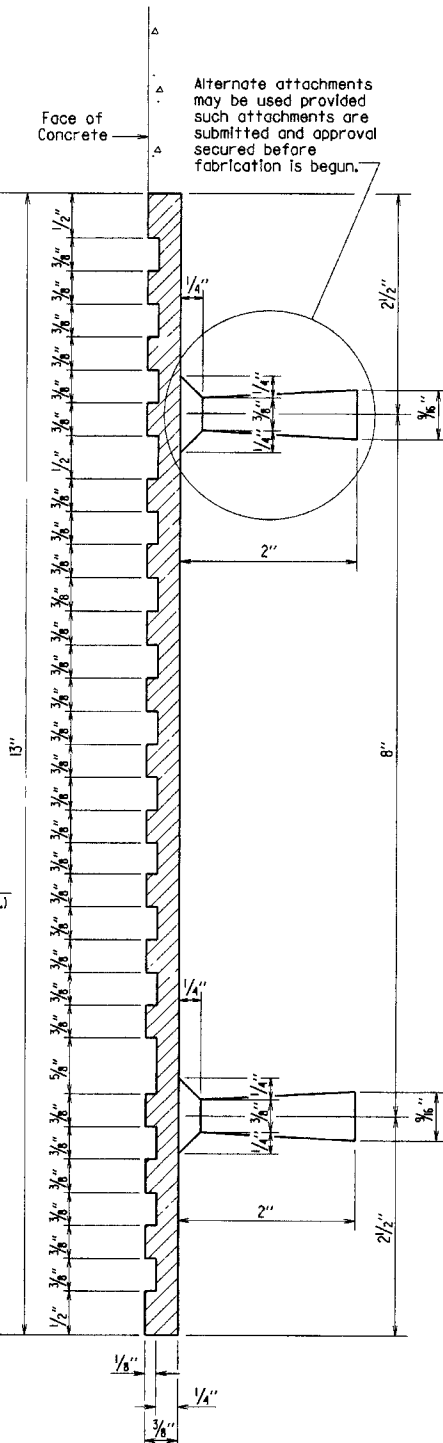
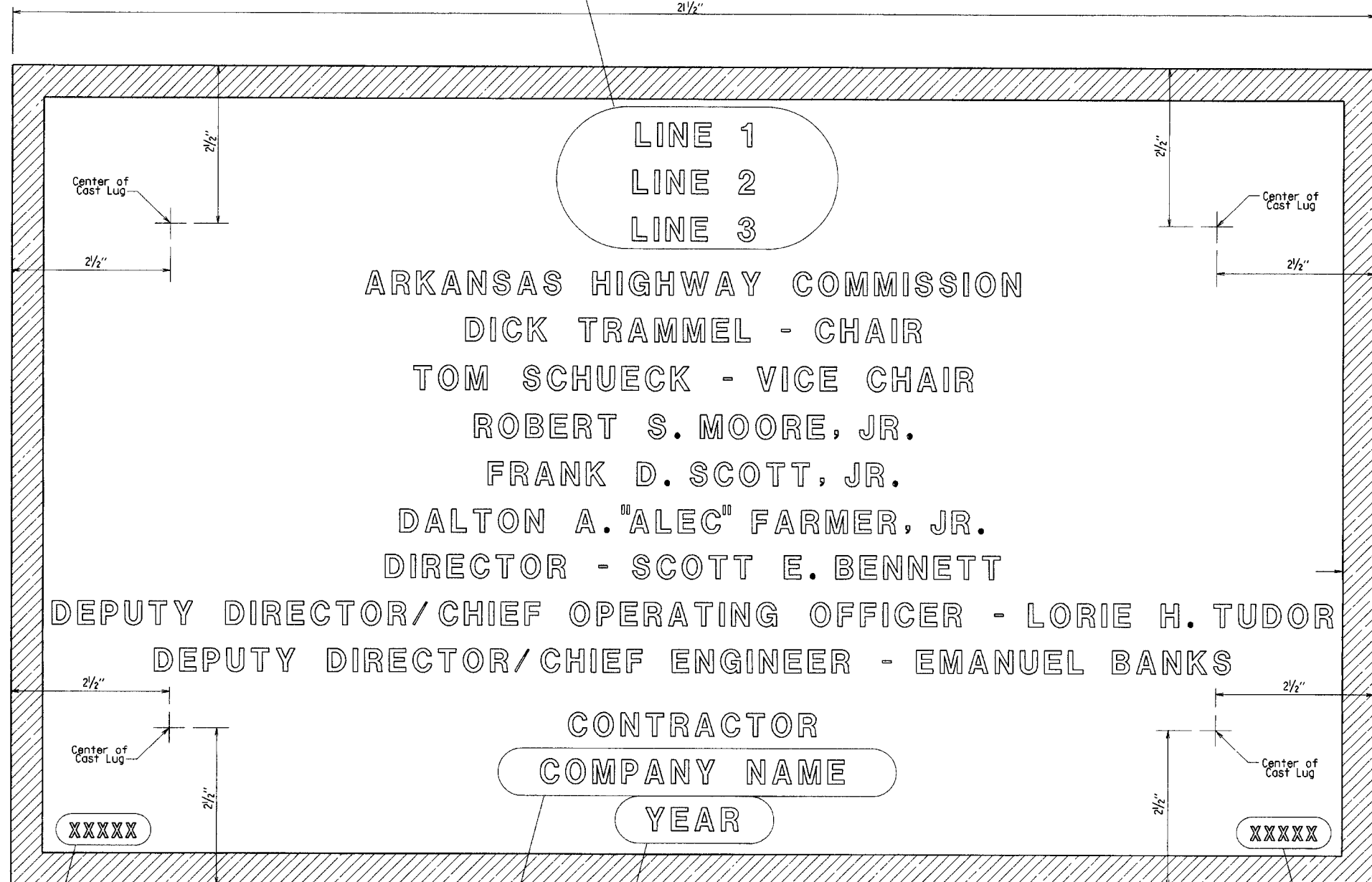
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		46	
JOB NO.								
GENERAL NOTES								55006

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
12-1-14				6	ARK.		47	
1-14-15								

① TYPE D NAME PLATE 55010

The name of the bridge as shown on the plans shall be placed on Lines 1 - 3 using 1/8" raised letters and numerals 3/8" high.

Line	Example 1	Example 2	Example 3	Example 4
Line 1	Red River	Southern Railroad	Saline River	Highway 5
Line 2	Relief			
Line 3		Overpass	Relief	



**GENERAL NOTES**

Specifications Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, (2014 Edition) with applicable Supplemental Specifications and Special Provisions.

Name plates shall be cast bronze and shall meet the material requirements as specified in Section 812.

Body of plate shall be 1/4" thick and shall include four tapering cone lugs 3/8" to 1/4" x 2" long. The border and all lettering shall be raised 1/8" above the face of plate and shall be polished.

All lettering shall be plain gothic, square cut and not tapered.

The number of plates required and the location and name on the plate for each bridge shall be as designated on the plans.

- ▲ Revised Chair and Vice Chair  
Added New Commissioner  
1-14-15 KDH Checked By: CRE
- ▲ Revised Deputy Director/  
Chief Engineer  
Added Deputy Director/  
Chief Operating Officer  
12-1-14 KDH Checked By: CRE

Place the design live loading here using 1/8" raised letters and numerals 1/4" high. Examples: HS 20 HL-93

Place the Year in which Contract was awarded here using 1/8" raised numerals 3/8" high. Example: 2001

Place the name of the company awarded the construction contract here using 1/8" raised letters and numerals 3/8" high. Example: ABCD CONSTRUCTION, INC.

Place the Bridge number here using 1/8" raised letters and numerals 1/4" high. Examples: A1234 05432

**STANDARD DETAILS FOR  
TYPE D BRIDGE NAME PLATE**

ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55010.dgn  
 CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE  
 DESIGNED BY: STD. DATE: \_\_\_\_\_

DRAWING NO. 55010

**TYPICAL BRIDGE NAME PLATE**

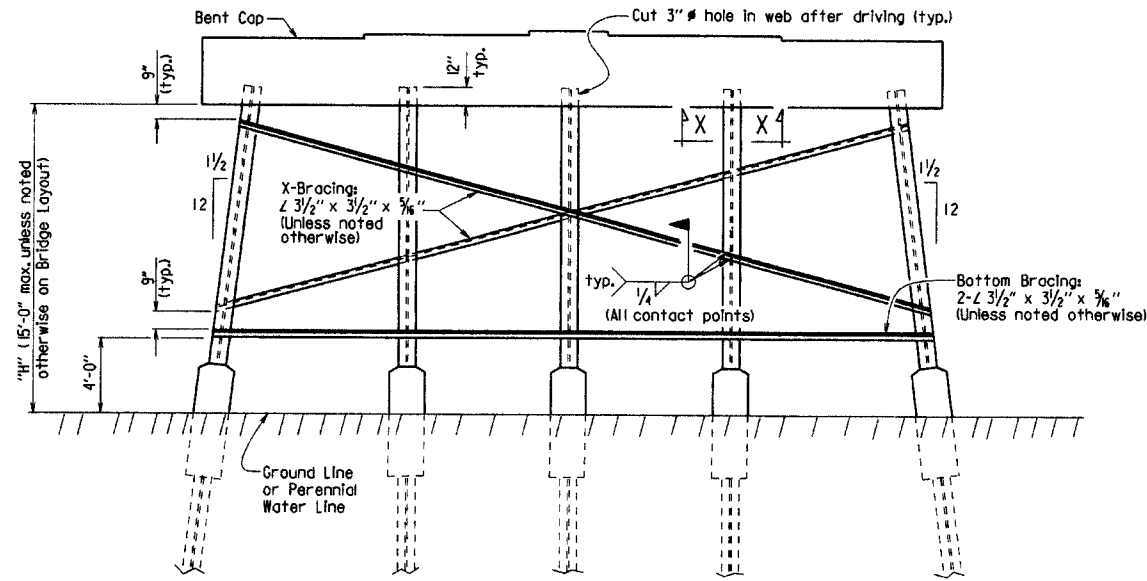
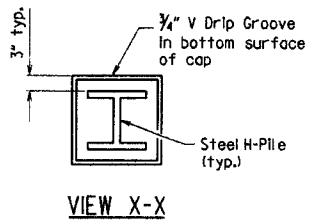
**GENERAL NOTES FOR STEEL H-PILES:**

Steel H-Piles shall conform to AASHTO M 270, Grade 36 or greater.

See Bridge Layout and Bent Details for pile size, estimated length, spacing, pile anchorage (if required) and for driving information.

Steel H-Piles that extend above the ground and are not protected by pile encasement shall be painted in accordance with Subsection 805.02.

Brackets, lugs, cap plates, pile tips, driving points, pile painting, splicing and welding shall not be paid for directly, but shall be considered subsidiary to the item "Steel Piling".



**Notes:**

All bracing shall be cut and welded in the field. Each brace shall be furnished in one piece. Payment shall be made under Item 807.

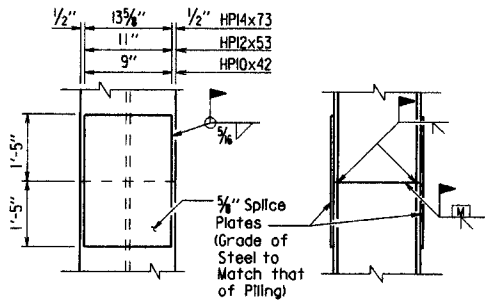
Unless noted otherwise, omit X-Bracing when "H" is less than 8 feet.

Omit X-Bracing and Bottom Bracing when "H" is 5 feet or less.

When required on the Bridge Layout sheet, pile encasements shall be constructed. See Notes and Details for H-Pile Encasements.

Omit all bracing (and V-groove in cap) when pile encasement is extended to bottom of bent cap.

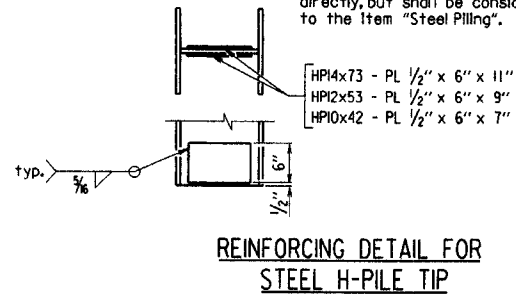
**TYPICAL DETAILS OF H-PILE TRESTLE INTERMEDIATE BENT**  
(Shown with Partial Height Encasement)



The Contractor may for his own convenience and at his own expense provide as many as three splices per pile. Minimum spacing between splices shall be 5 feet.

**TYPICAL SPLICE DETAILS**

H-pile splicers manufactured by Associated Pile and Fitting Corporation, LB Foster Piling, Skyline Steel or equivalent may be used in lieu of the "Typical Splice Details" shown. H-pile splicers shall match the same grade of steel specified for the piling and shall be welded to the pile with a 3/8 inch fillet weld around the entire perimeter of the splice. Flanges shall be welded with a complete penetration groove weld complying with AASHTO/AWS Joint Designation B-U4a or B-U4b. All welding shall conform to Subsection 807.26 of the AHTD Standard Specifications for Highway Construction (2014 Edition).



**REINFORCING DETAIL FOR STEEL H-PILE TIP**

**GENERAL NOTES FOR H-PILE ENCASEMENTS:**

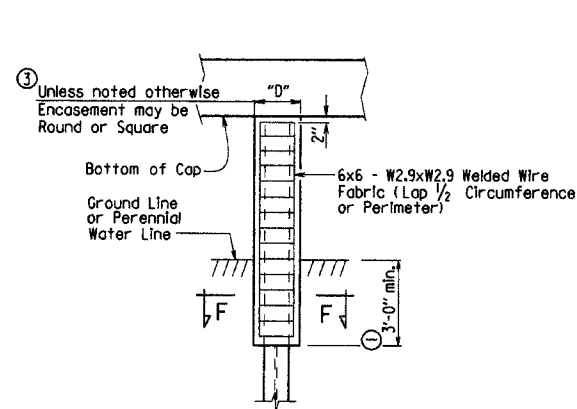
See Bridge Layout for additional notes, any pile encasement restrictions and required location of pile encasements.

All concrete shall be Class S with a minimum 28-day compressive strength,  $f'_c = 3,500$  psi. If concrete cannot be placed in the dry, Seal Concrete may be used from top to bottom of encasement.

Reinforcing steel shall be Grade 60 conforming to AASHTO M 31 or M 322, Type A.

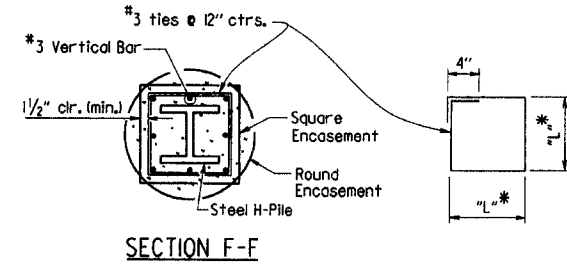
Welded Wire Fabric shall conform to AASHTO M 55 or M 221. Galvanized Corrugated Steel Pipe shall conform to AASHTO M 36 and M 218.

Concrete, welded wire fabric or reinforcing steel and galvanized pipe shall not be paid for directly, but shall be considered subsidiary to the item "Pile Encasement".



**PILE ENCASEMENT DETAIL FOR STEEL H-PILES**

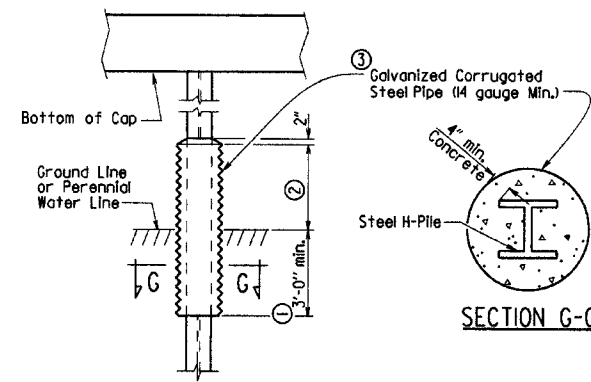
(Shown with Encasement to Bottom of Cap)



**TABLE OF VARIABLES FOR PILE ENCASEMENT**

Pile Size	"D"		"L"*
	Square Encmt.	Round Encmt.	
HPI0x42	1'-7"	2'-0"	1'-4"
HPI2x53	1'-8"	2'-2"	1'-5"
HPI4x73	1'-11"	2'-6"	1'-8"

\* Measured out-to-out of bar.

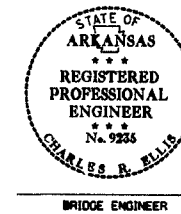


**ALTERNATE PILE ENCASEMENT DETAIL FOR STEEL H-PILES**

(Shown with Partial Height Encasement)

Added alternate method of splicing H-piles and revised pile encasement note. 3/24/2016 AMS

- ① Unless otherwise noted on Bridge Layout.
- ② 3'-0" minimum or as shown on Bridge Layout.
- ③ Encasement dimensions shall be sized to maintain a minimum concrete cover of 4" from the H-Pile. Reinforcement shall be sized to provide a minimum concrete cover of 1 1/2" and a minimum clearance of 1/4" from the pile.
- ④ Alternate pile encasement, when not extended to bottom of cap, shall have 2" concrete taper for water runoff as shown in the Partial Height Encasement detail.



This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on March 24, 2016. This copy is not a signed and sealed document.

**STANDARD DETAILS FOR STEEL H-PILES AND PILE ENCASEMENTS**

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

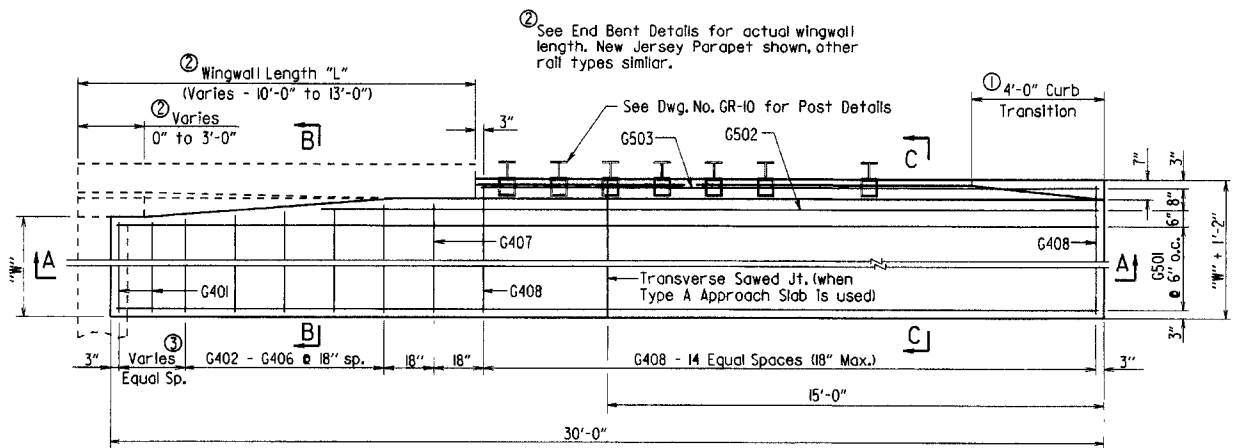
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 CHECKED BY: B.E.F. DATE: 2/27/2014 SCALE: NO SCALE  
 DESIGNED BY: STD. DATE: —

DRAWING NO. 55020

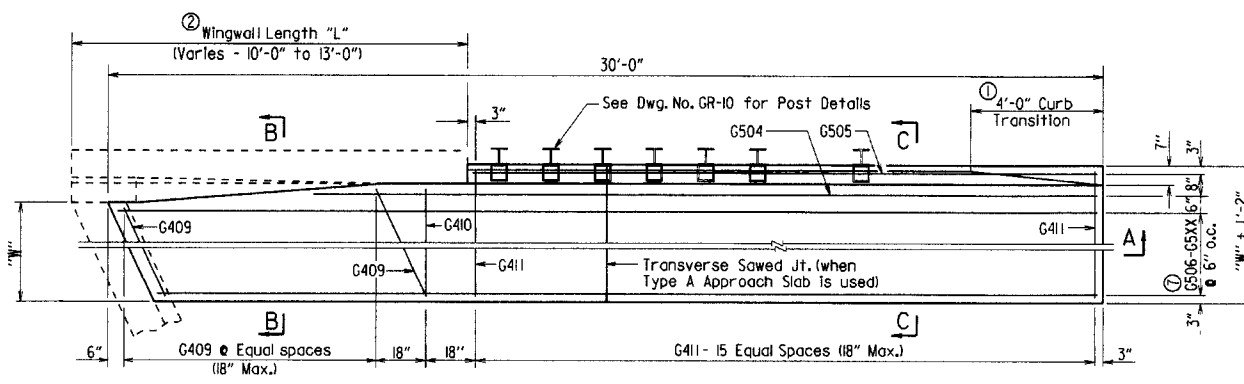


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
9/2/75				6	ARK.		49	

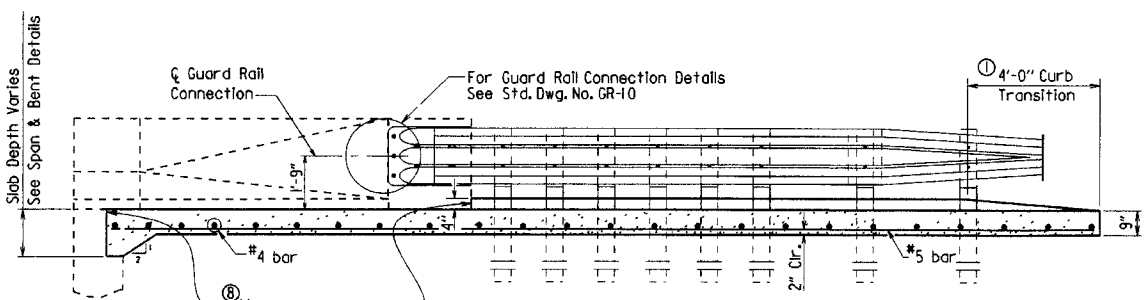
TYPE A GUTTERS 55030A



HALF PLAN OF APPROACH GUTTERS FOR SQUARE BRIDGE



PLAN OF APPROACH GUTTERS FOR SKEWED BRIDGE

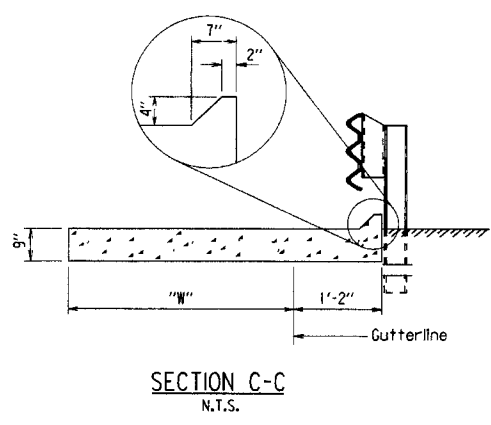
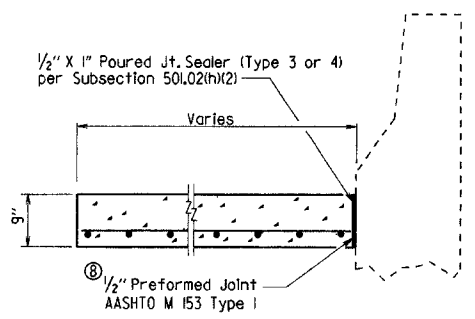


SECTION A-A

Note:  
 All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

③ Eliminate Type I Preformed Joint at end bent backwall and at face of wingwalls when gutters used with Type A Approach Slabs. Poured joint sealer is required, however backer rod shall be eliminated.

① Construct gutter curb with height-transition as shown if drop inlet is not placed at end of gutter.  
 Construct gutter curb full height (no height-transition) if drop inlet is placed at end of gutter. Curb height transition placed on drop inlet. See drop inlet details.



BAR LIST FOR ONE TYPE A GUTTER

Mark	No. Req'd. for Width "W"					Length
	2'-0"	3'-0"	4'-0"	6'-0"	8'-0"	
G401	④	④	④	④	④	"W" - 4"
G402-G406	1 each	1 each	1 each	1 each	1 each	"W" - 3" to "W" + 2"
G407	1	1	1	1	1	"W" + 3"
G408	15	15	15	15	15	"W" + 10"
G501	4	6	8	12	16	29'-8"
G502	1	1	1	1	1	(35'-5") - "L"
G503	1	1	1	1	1	30'-8" - "L"
G409	⑥	⑥	⑥	⑥	⑥	⑤
G410	1	1	1	1	1	"W" + 3"
G411	16	16	16	16	16	"W" + 10"
G504	1	1	1	1	1	⑤
G505	1	1	1	1	1	⑤
G506 - G5XX	1 each	1 each	1 each	1 each	1 each	⑤

④ for "L" = 10'  
 1 for "L" = 11'  
 2 for "L" = 12'  
 2 for "L" = 13'

⑤ Bar Lengths vary with Skew and Wingwall Length.  
 ⑥ No. Req'd. varies with Skew and Wingwall length.

⑦ G509 for "W" = 2'  
 G511 for "W" = 3'  
 G513 for "W" = 4'  
 G517 for "W" = 6'  
 G521 for "W" = 8'

QUANTITIES FOR ONE SQUARE APPROACH GUTTER (FOR INFORMATION ONLY)

"W" Width (ft.)	Reinforcing Steel (Lbs.)	Concrete (Cu. Yds.)
2	210	2.55
3	285	3.40
4	360	4.25
6	515	5.90
8	665	7.55

Quantities are based on "L" = 10'-0".

GENERAL NOTES

All concrete shall be Class S or Class S(AE) or mixture used for Portland Cement Concrete Pavement and shall be poured in the dry.  
 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.  
 Approach Gutters will be measured and paid for in accordance with Section 504.

STANDARD DETAILS FOR TYPE A APPROACH GUTTERS

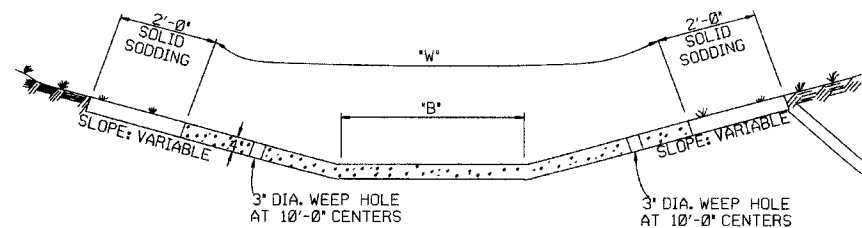
ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 2/27/2014 FILENAME: b55030a.dgn  
 CHECKED BY: K.W.Y. DATE: 2/27/2014 SCALE: 3/8" = 1'-0"  
 DESIGNED BY: STD. DATE: or As Shown

DRAWING NO. 55030A

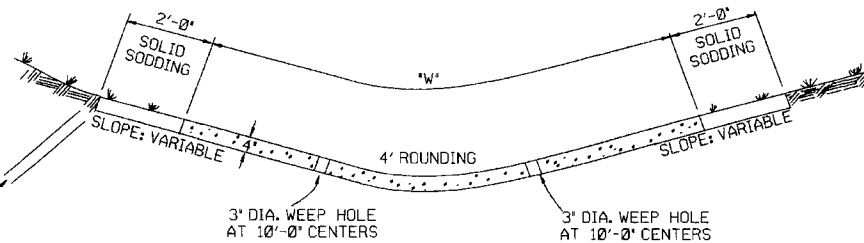
△ Revised to add "W" = 2'-0"; By LJB  
 Checked By: K.W.Y. 9/2/15

REFER TO TABULATION OF QUANTITIES FOR 'W' & 'B' DIMENSIONS



TYPE A

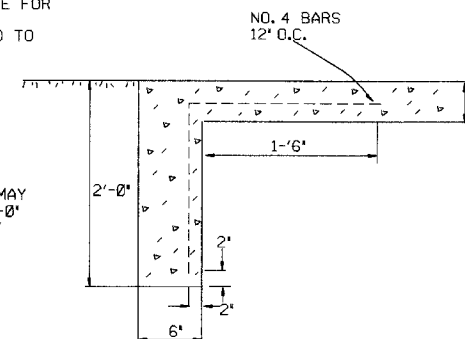
REFER TO TABULATION OF QUANTITIES FOR 'W' DIMENSIONS



TYPE B

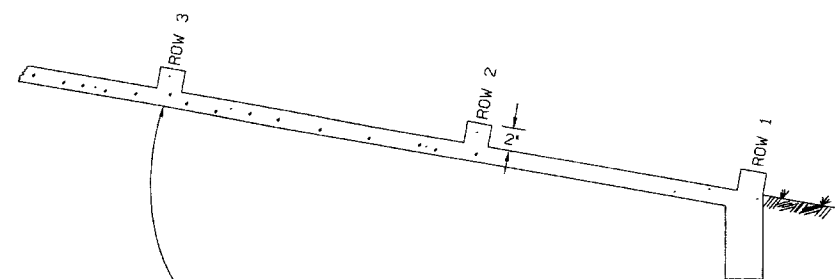
EXCAVATE TO NEAT LINES TO CONSTRUCT DITCH PAVING AND SOLID SODDING.

THE STEEL AND ADDITIONAL CONCRETE FOR THE WALLS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR 'CONCRETE DITCH PAVING.'



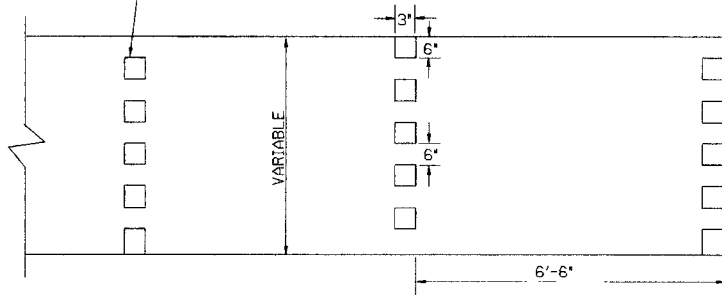
TOE WALL DEPTH MAY BE ALTERED TO 1'-0" WHEN DIRECTED BY THE ENGINEER IN ROCK EXCAVATION

TOE WALL DETAIL FOR CONCRETE DITCH PAVING



NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED

ENERGY DISSIPATORS TO BE USED FOR THE ENTIRE LENGTH OF DITCH WHEN SLOPE OF DITCH PAVING EXCEEDS 7%. THE DISSIPATORS WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE UNINCLUDED IN THE PRICE BID FOR CONCRETE DITCH PAVING.



ENERGY DISSIPATORS (NO SCALE)

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.

TOE WALLS TO BE CONSTRUCTED FULL WIDTH AT EACH END OF DITCH PAVING, AND POURED MONOLITHICALLY.

SOLID SOD ALONG DITCH PAVING TO BE PLACED WITHIN 14 DAYS OF DITCH PAVING CONSTRUCTION.

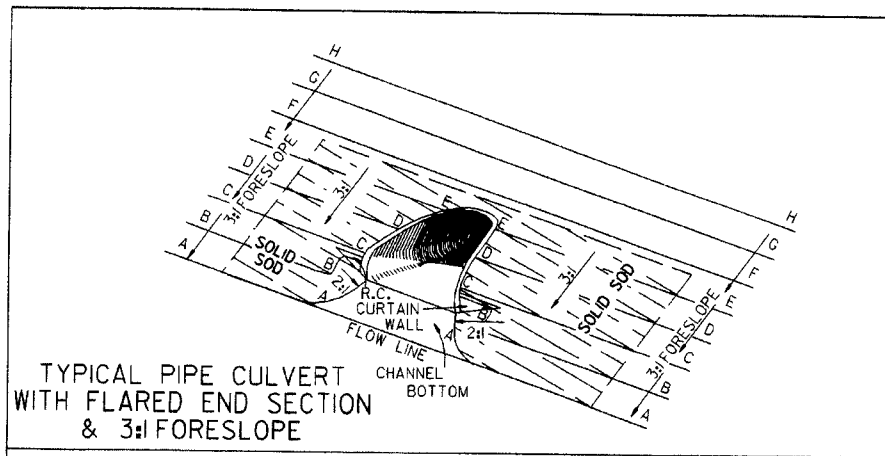
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

DATE	REVISION	DATE FILLED
11-17-10	ADDED GENERAL NOTE	
6-2-94	ADDED GENERAL NOTE ABOUT SOLID SODDING	
11-30-8	ELIMINATED MIN. ROWS OF ELEMENTS	11-30-89
7-15-88	REVISED DISSIPATOR NOTE	653-7-15-88
4-3-87	REVISED ENERGY DISSIPATOR	671-4-3-87
1-9-87	MODIFIED NOTE ON ENERGY DISS.	532-1-9-87
11-3-86	ADDED NOTE TO ENERGY DISS.	599-12-1-86
11-1-84	ENERGY DISSIPATOR DETAILS	508-11-1-84
11-1-84	ADDED EXCAVATION DETAILS ADDED	
	TYPED A & B	
10-2-72	REVISED AND REDRAWN	508-10-2-72

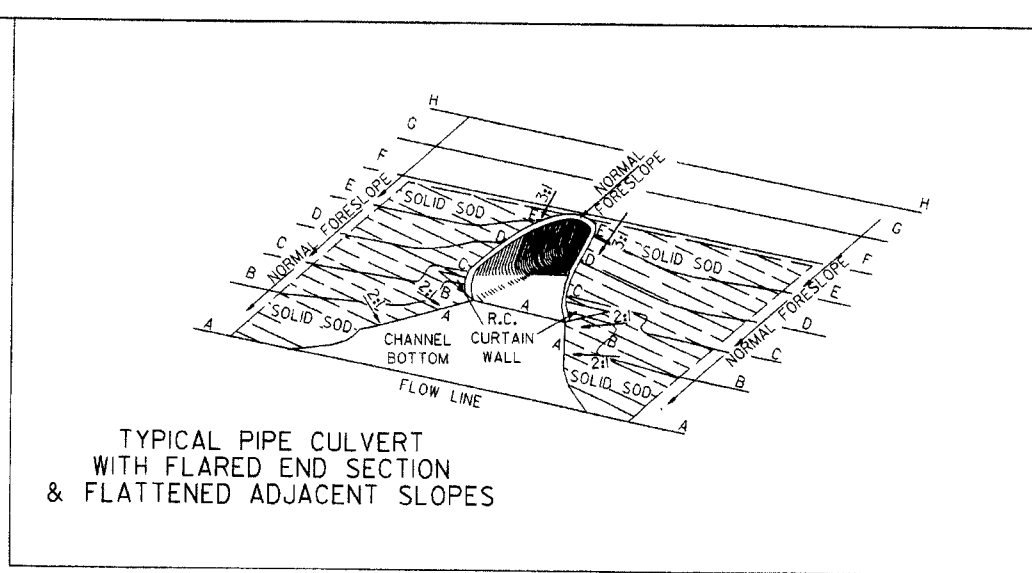
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

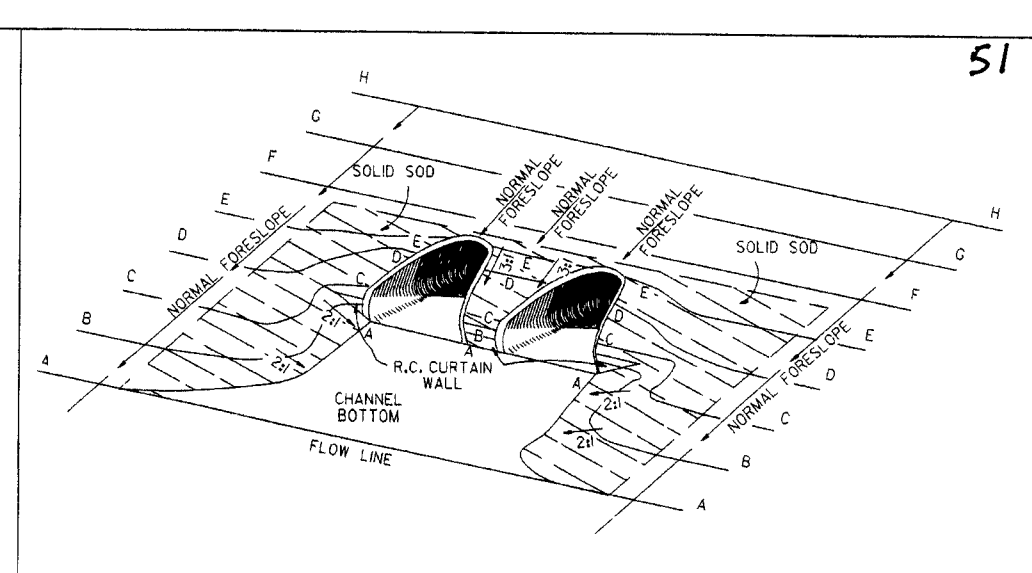
STANDARD DRAWING CDP-1



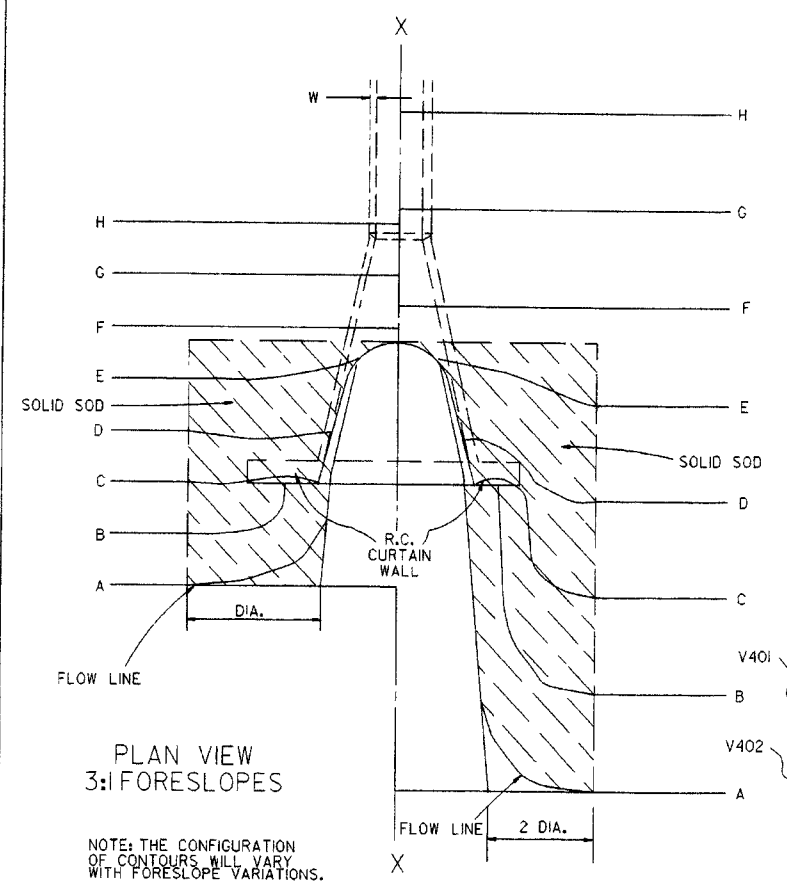
TYPICAL PIPE CULVERT WITH FLARED END SECTION & 3:1 FORESLOPE



TYPICAL PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES



TYPICAL MULTIPLE PIPE CULVERT WITH FLARED END SECTIONS & FLATTENED ADJACENT SLOPES



PLAN VIEW 3:1 FORESLOPES

PLAN VIEW FLATTENED FORESLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

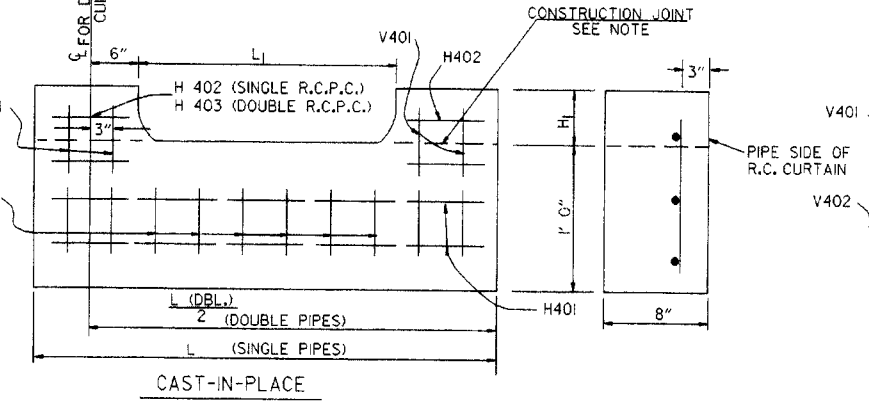
PIPE DIA.	H <sub>1</sub>	L <sub>1</sub>	L	L (DBL.) / 2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC. CU. YDS.	REINF. STEEL LBS.	CONC. CU. YDS.	REINF. STEEL LBS.
18"	11 1/2"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0 1/2"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3 1/2"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"	13'-0"	10'-6"	0.58	52.6	0.83	73.9
42"	2'-1 1/2"	7'-3"	15'-6"	12'-0"	0.82	77.1	1.10	100.7
48"	2'-5"	7'-10"	17'-0"	13'-0"	0.98	94.9	1.27	120.4
54"	2'-9 1/2"	8'-5"	18'-6"	14'-0"	1.16	115.8	1.47	143.7
60"	3'-4"	9'-0"	20'-6"	15'-6"	1.47	149.7	1.84	180.3
72"	4'-5"	10'-2"	25'-6"	18'-6"	2.31	232.6	2.73	271.0

NOTE: QUANTITIES SHOWN ARE FOR ONE (1) CURTAIN WALL.

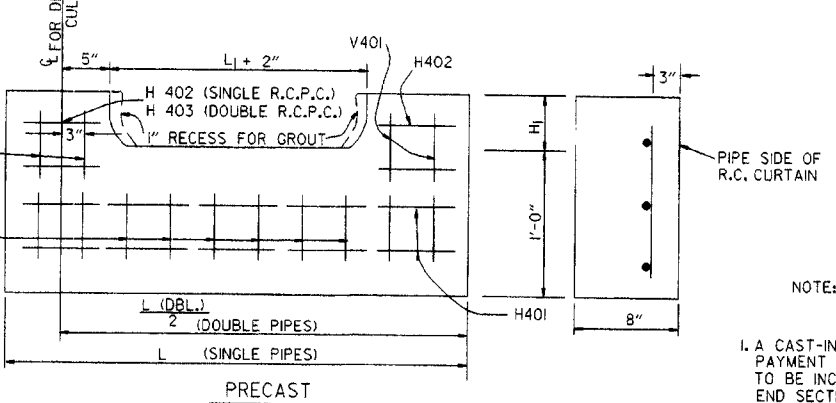
REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT								DOUBLE R.C. PIPE CULVERT									
	H401		H402		V401		V402		H401		H402		H403		V401		V402	
	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.
18"	7'-8"	2	1'-11 1/2"	4	1'-7 1/2"	8	8"	8	12'-2"	2	1'-11 1/2"	4	8"	2	1'-7 1/2"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8 1/2"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8 1/2"	12	8"	18
30"	10'-8"	2	2'-4 1/2"	4	1'-11 1/2"	10	8"	12	17'-8"	2	2'-4 1/2"	4	8"	2	1'-11 1/2"	14	8"	22
36"	12'-8"	2	2'-10"	6	2'-3"	12	8"	14	20'-8"	2	2'-10"	6	8"	3	2'-3"	14	8"	28
42"	15'-2"	2	3'-9 1/2"	8	2'-9 1/2"	16	8"	15	23'-8"	2	3'-9 1/2"	8	8"	4	2'-9 1/2"	18	8"	30
48"	16'-8"	2	4'-3"	10	3'-1"	18	8"	16	25'-8"	2	4'-3"	10	8"	5	3'-1"	20	8"	32
54"	18'-2"	2	4'-8 1/2"	12	3'-5 1/2"	20	8"	17	27'-8"	2	4'-8 1/2"	12	8"	6	3'-5 1/2"	22	8"	34
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26	8"	36
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33	8"	40

ALL REINFORCING STEEL #4 BARS @ 6" O.C.



NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.



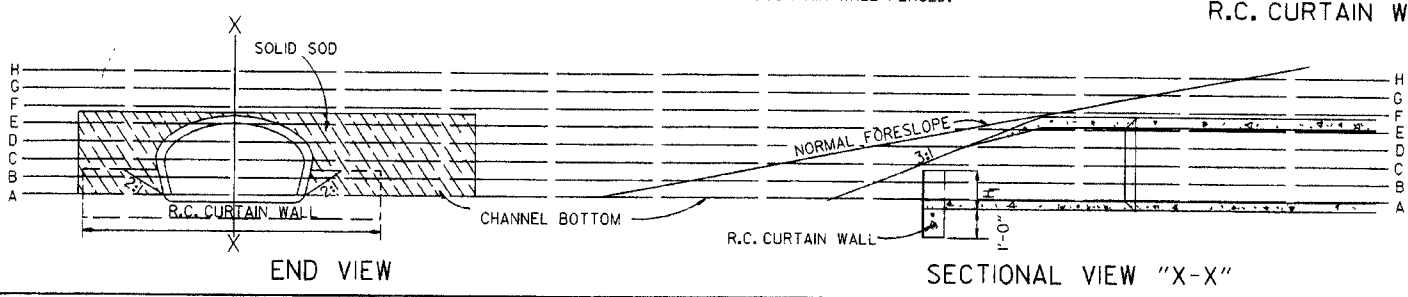
NOTE: THE PRECAST CURTAIN WALL WILL BE SET AND BACKFILLED WITH COMPACTED MATERIAL. THE FLARED END SECTION SHALL THEN BE SET IN PLACE AND THE 1" RECESS FILLED WITH GROUT. WHERE "L" EXCEEDS 11' THE CURTAIN WALL MAY BE CAST IN TWO (2) OR MORE SECTIONS. THE METHOD OF JOINING THE SECTIONS FOR INSTALLATION SHALL BE APPROVED BY THE ENGINEER.

SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C.						DOUBLE R.C.P.C.					
	3:1	4:1	6:1	3:1	4:1	6:1	SO. YDS.	SO. YDS.	SO. YDS.	SO. YDS.	SO. YDS.	SO. YDS.
18"	5	8	12	6	8	13	13	13	20	30	43	57
24"	8	12	19	9	13	20	20	20	30	43	57	70
30"	13	18	29	14	19	30	30	30	43	57	70	87
36"	17	26	41	18	28	43	43	43	57	70	87	107
42"	23	35	55	25	37	57	57	57	70	87	107	133
48"	29	46	68	31	48	70	70	70	87	107	133	165
54"	35	57	85	37	59	87	87	87	107	133	165	203
60"	45	62	104	48	65	107	107	107	133	165	203	251
72"	64	92	156	67	95	159	159	159	203	251	313	391

NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.

- GENERAL NOTES
1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE; FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
  2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
  3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
  4. WELDED WIRE MESH 3 x 3 W/10 x W/10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

SECTIONAL VIEW "X-X"

10-18-96 ADDED NOTE TO SOLID SODDING	10-18-96	ARKANSAS STATE HIGHWAY COMMISSION
10-12-95 CORRECTED SPELLING		
11-3-94 ADDED GENERAL NOTE NO. 4		
8-15-91 REV. CURTAIN WALL QUANT., STEEL SCH. & SOLID SOD QUANT.		
3-2-81 ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES		
5-15-80 ADDED PRECAST WALL & GENERAL NOTES		
10-2-72 REVISED AND REDRAWN		
DATE	REVISION	FILMED
		STANDARD DRAWING FES-1