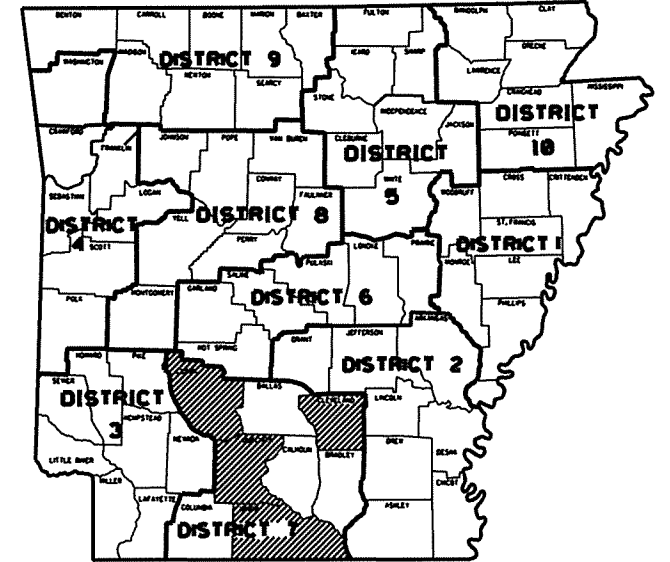


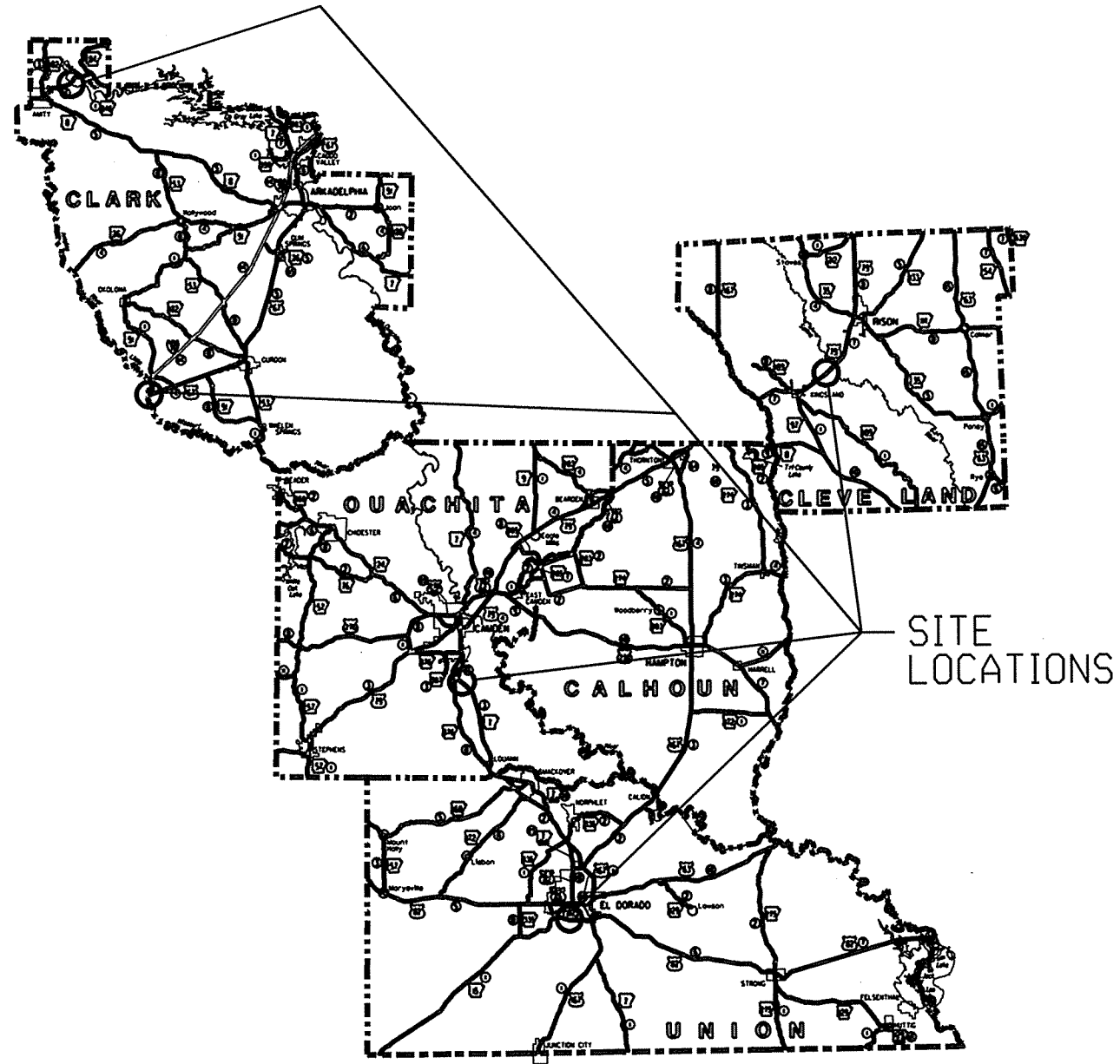
ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 MAINTENANCE PLANS

DATE REVISED	DATE PLANNED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	070406	1 37
						② District Seven Bridge Painting (S)		

District Seven Bridge Painting (S)
 CLARK, CLEVELAND, OUACHITA
 & UNION
 FEDERAL AID PROJ. STPF-0076(93)
JOB 070406
 Various Routes



ARKANSAS HIGHWAY DIST. 7



SITE
 LOCATIONS



MID-POINT OF PROJECT
 LAT. 33°31'55"
 LONG. 92°49'10"

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						070406	2	37
② INDEX & GOVERNING SPECS.								

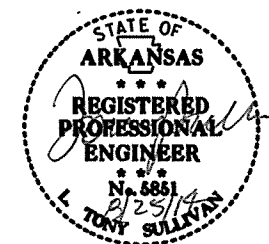
INDEX OF SHEETS

SHEET NO.	TITLE	DRAWING NO.	DATE
1.	TITLE SHEET		
2.	INDEX OF SHEETS AND GOVERNING SPECIFICATIONS		
3.	QUANTITIES AND GENERAL NOTES		
4.	SUMMARY OF QUANTITIES AND REVISIONS		
5.	ROUTE AND SECTION MAP - CLARK COUNTY		
6.	ROUTE AND SECTION MAP - CLEVELAND COUNTY		
7.	ROUTE AND SECTION MAP -OUACHITA COUNTY		
8.	ROUTE AND SECTION MAP - UNION COUNTY		
9.	BRIDGE PICTURES (1 OF 2)		
10.	BRIDGE PICTURES (2 OF 2)		
11.	LAYOUT OF BRIDGE NO. 01381 - FOR INFORMATION ONLY		
12.	TRUSS DETAILS OF BRIDGE NO. 1381 - FOR INFORMATION ONLY		
13.	TRUSS DETAILS OF BRIDGE NO. 1381 - FOR INFORMATION ONLY		
14.	LAYOUT OF BRIDGE NO. 03854 - FOR INFORMATION ONLY		
15.	SPAN DETAILS OF BRIDGE NO. 03854 - FOR INFORMATION ONLY		
16.	SPAN DETAILS OF BRIDGE NO. 03854 - FOR INFORMATION ONLY		
17.	LAYOUT OF BRIDGE NO. 03010 - FOR INFORMATION ONLY		
18.	SPAN DETAILS OF BRIDGE NO. 03010 - FOR INFORMATION ONLY		
19.	LAYOUT OF BRIDGE NO. A5901 - FOR INFORMATION ONLY		
20.	LAYOUT OF BRIDGE NO. B5901 - FOR INFORMATION ONLY		
21.	SPAN DETAILS OF BRIDGES NO. A&B5901 - FOR INFORMATION ONLY		
22.	SPAN DETAILS OF BRIDGES NO. A&B5901 - FOR INFORMATION ONLY		
23.	LAYOUT OF BRIDGE NO. A5789 - FOR INFORMATION ONLY		
24.	SPAN DETAILS OF BRIDGE NO. A5789 - FOR INFORMATION ONLY		
25.	SPAN DETAILS OF BRIDGE NO. A5789 - FOR INFORMATION ONLY		
26.	LAYOUT OF BRIDGE NO. B5789 - FOR INFORMATION ONLY		
27.	SPAN DETAILS OF BRIDGE NO. B5789 - FOR INFORMATION ONLY		
28.	SPAN DETAILS OF BRIDGE NO. B5789 - FOR INFORMATION ONLY		
29.	LAYOUT OF BRIDGE NO. A5791 - FOR INFORMATION ONLY		
30.	SPAN DETAILS OF BRIDGE NO. A5791 - FOR INFORMATION ONLY		
31.	LAYOUT OF BRIDGE NO. B5791 - FOR INFORMATION ONLY		
32.	SPAN DETAILS OF BRIDGE NO. B5791 - FOR INFORMATION ONLY		
33.	SPAN DETAILS OF BRIDGE NOS. A&B5791 - FOR INFORMATION ONLY		
34.	SPAN DETAILS OF BRIDGE NOS. A&B5791 - FOR INFORMATION ONLY		
35.	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-1	12-15-11
36.	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-2	9-12-13
37.	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-3	10-15-09

GOVERNING SPECIFICATIONS

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

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
108-1	LIQUIDATED DAMAGES
JOB 070406	CLEANING AND PAINTING EXISTING STRUCTURAL TRUSS STEEL
JOB 070406	CONTAINMENT SYSTEM
JOB 070406	CONTRACTOR CERTIFICATION
JOB 070406	INSPECTOR'S PERSONAL PROTECTION CLOTHING
JOB 070406	DOCUMENTATION OF PAYMENTS MADE TO DISADVANTAGED BUSINESS ENTERPRISES
JOB 070406	INSURANCE, CONSTRUCTION AND FLAGGING REQUIREMENTS ON RAILROAD PROPERTY
JOB 070406	INSURANCE, CONSTRUCTION AND FLAGGING REQUIREMENTS ON RAILROAD PROPERTY (UPRR)
JOB 070406	MANDATORY USE OF INTERNET BIDDING
JOB 070406	NESTING SITES OF MIGRATORY BIRDS
JOB 070406	PAINT CONTRACTOR LABEL
JOB 070406	PARTNERING REQUIREMENTS
JOB 070406	VALUE ENGINEERING



JOB NO. 070406
DISTRICT SEVEN
BRIDGE PAINTING (S)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	070406	3	37	
② QUANTITIES & GENERAL NOTES								

CLEANING AND PAINTING EXISTING STRUCTURAL STEEL (TYPE II)

DESCRIPTION	QUANTITY	UNIT
BRIDGE NO. 03854	160	TON
BRIDGE NO. 03010	133	TON
BRIDGE NO. A5901	131	TON
BRIDGE NO. B5901	131	TON
BRIDGE NO. A5789	194	TON
BRIDGE NO. B5789	170	TON
BRIDGE NO. A5791	424	TON
BRIDGE NO. B5791	418	TON
TOTAL JOB	1761	TON

****DISPOSAL OF HAZARDOUS WASTE**

DESCRIPTION	QUANTITY	UNIT
BRIDGE NO. 01381	1.00	LUMP SUM
BRIDGE NO. 03854	1.00	LUMP SUM
BRIDGE NO. 03010	1.00	LUMP SUM
BRIDGE NO. A5901	1.00	LUMP SUM
BRIDGE NO. B5901	1.00	LUMP SUM
BRIDGE NO. A5789	1.00	LUMP SUM
BRIDGE NO. B5789	1.00	LUMP SUM
BRIDGE NO. A5791	1.00	LUMP SUM
BRIDGE NO. B5791	1.00	LUMP SUM

** Potential hazardous waste in the form of lead paint debris will be removed from this structure and sent to an appropriate treatment facility as per Code of Federal Regulations 40 CFR Part 260.

CLEANING AND PAINTING EXISTING STRUCTURAL TRUSS STEEL (TYPE II)

DESCRIPTION	QUANTITY	UNIT
BRIDGE NO. 01381	149	TON
TOTAL JOB	149	TON

GENERAL NOTES

- TOTAL ALLOWABLE WORKING DAYS: 140 days
- PAINT SYSTEM: SEE SECTION 807 AND 820 OF THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
PRIME COAT: ONE COAT OF INORGANIC ZINC, 3 MIL DFT MINIMUM UNLESS NOTED.
INTERMEDIATE EPOXY TIE COAT: 2 MIL DFT MINIMUM
FINISH COAT: ONE COAT URETHANE, 3 MIL DFT MINIMUM, GRAY - FEDERAL STANDARD 595B COLOR CHIP 36270
MAXIMUM DFT FOR EACH COAT AS RECOMMENDED BY COATING MANUFACTURER.
- ALL SURFACES TO BE PAINTED SHALL BE CLEAN AND FREE OF DUST OR OTHER OBJECTIONABLE MATTER.
- CONTRACTOR IS RESPONSIBLE FOR BEING FAMILIAR WITH THE LOCATION OF ALL UTILITIES ON THE BRIDGES BEFORE BIDDING.
- UTILITIES ON BRIDGES SHOULD BE PROTECTED DURING THE CLEANING AND PAINTING OPERATION.
- CONTAINMENT REQUIRED :

BRIDGE NUMBER	CLASS OF CONTAINMENT	MIGRATORY BIRDS
01381	4	Yes
03854	4	No
03010	4	Yes
A5901	4	No
B5901	4	No
A5789	4	No
B5789	4	No
A5791	4	No
B5791	4	No

MOBILIZATION

DESCRIPTION	QUANTITY	UNIT
ENTIRE PROJECT	1.00	LUMP SUM
TOTAL JOB	1.00	LUMP SUM

*****MAINTENANCE OF TRAFFIC**

DESCRIPTION	QUANTITY	UNIT
ENTIRE PROJECT	1.00	LUMP SUM
TOTAL JOB	1.00	LUMP SUM

*** All traffic control devices and/or pavement markings will be placed if and where approved by the Engineer. All items necessary for traffic control is subsidiary to the item of "Maintenance of Traffic".



JOB NO. 070406
DISTRICT SEVEN
BRIDGE PAINTING (S)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	070406

② SUMMARY OF QUANTITIES & REVISIONS

SUMMARY OF QUANTITIES

LOCATION			BRIDGE DATA		ITEM NO.	SP & 820	SP & 820	601	603	820	
BRIDGE NUMBER	RT/SEC/LOG MILE	COUNTY	ROADWAY WIDTH (FT)	ROADWAY LENGTH (FT)	BRIDGE NAME	PAY ITEM	CLEANING AND PAINTING EXISTING STRUCTURAL STEEL (TYPE II)	CLEANING AND PAINTING EXISTING STRUCTURAL TRUSS STEEL (TYPE II)	MOBILIZATION	MAINTENANCE OF TRAFFIC	DISPOSAL OF HAZARDOUS WASTE (SITE NO.)
						UNIT	TON	TON	LUMP SUM	LUMP SUM	LUMP SUM
01381	67/04/01	CLARK	24	296	Little Missouri River			149			SITE NO. 1
03854	84/04/3.14	CLARK	34	638	Caddo River		160				SITE NO. 2
03010	79/07/6.92	CLEVELAND	26	496	Saline River Relief		133				SITE NO. 3
A5901	7/03/9.72	OUACHITA	40	330	Mill Creek & R.R.		131				SITE NO. 4
B5901	7/03/9.72	OUACHITA	40	330	Mill Creek & R.R.		131				SITE NO. 5
A5789	82/05/19.45	UNION	Varies	328	Hwy. 82 over R.R.		194				SITE NO. 6
B5789	82/05/19.45	UNION	28	328	Hwy. 82 over R.R.		170				SITE NO. 7
A5791	82/05/18.55	UNION	28	1150	Hwy. 82 over R.R.		424				SITE NO. 8
B5791	82/05/18.55	UNION	28	1137	Hwy. 82 over R.R.		418				SITE NO. 9
TOTAL JOB NO. 070406							1761	149	1.00	1.00	

REVISIONS

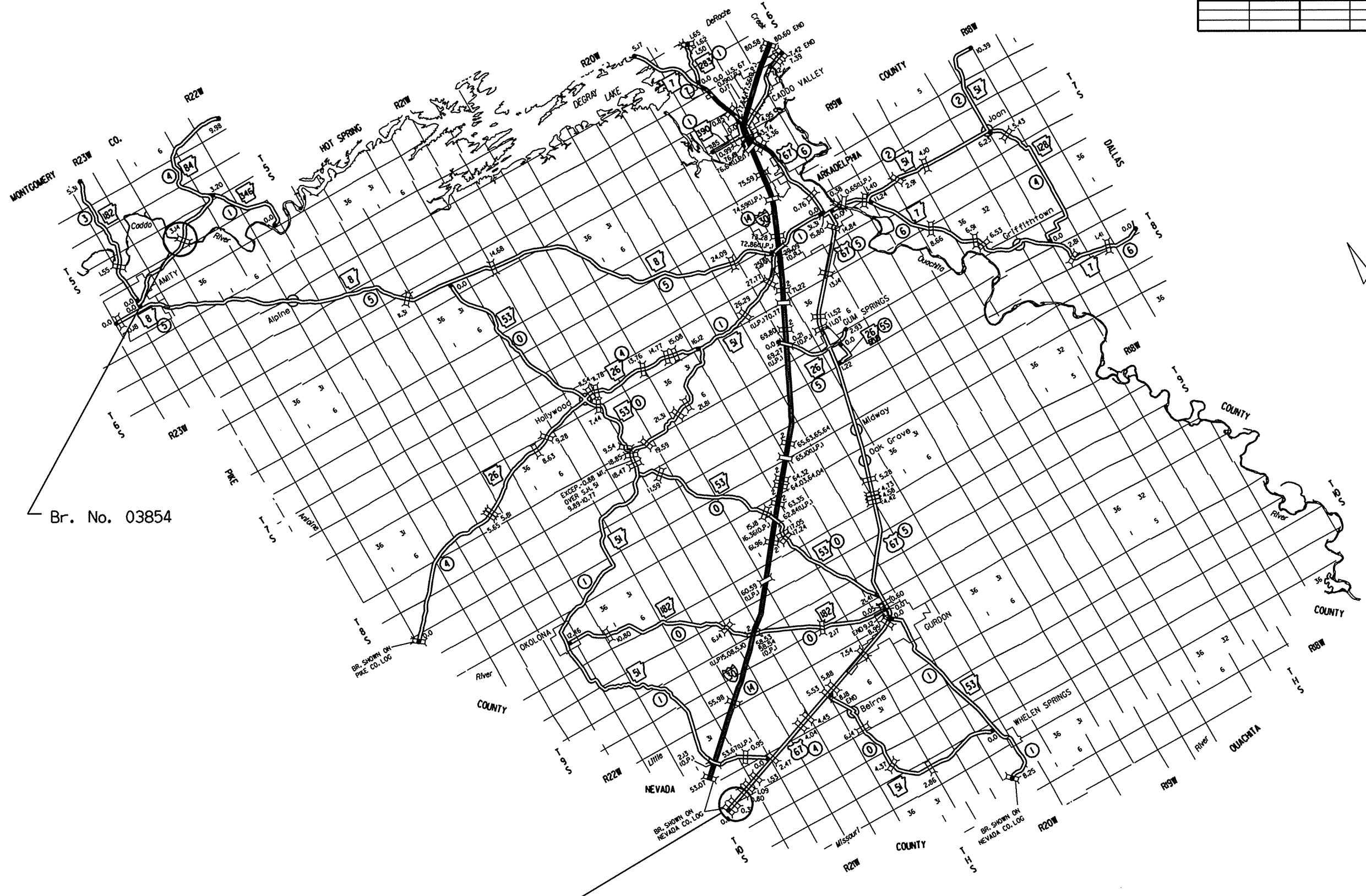
DATE	REVISION	SHEET NO.



JOB NO. 070406
DISTRICT SEVEN
BRIDGE PAINTING (S)

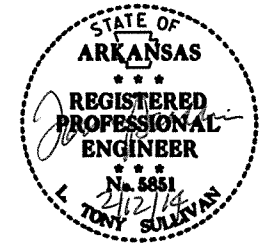
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				6	ARK.			
				JOB NO.		070406	5	37

② ROUTE & SECTION MAP-CLARK COUNTY



Br. No. 03854

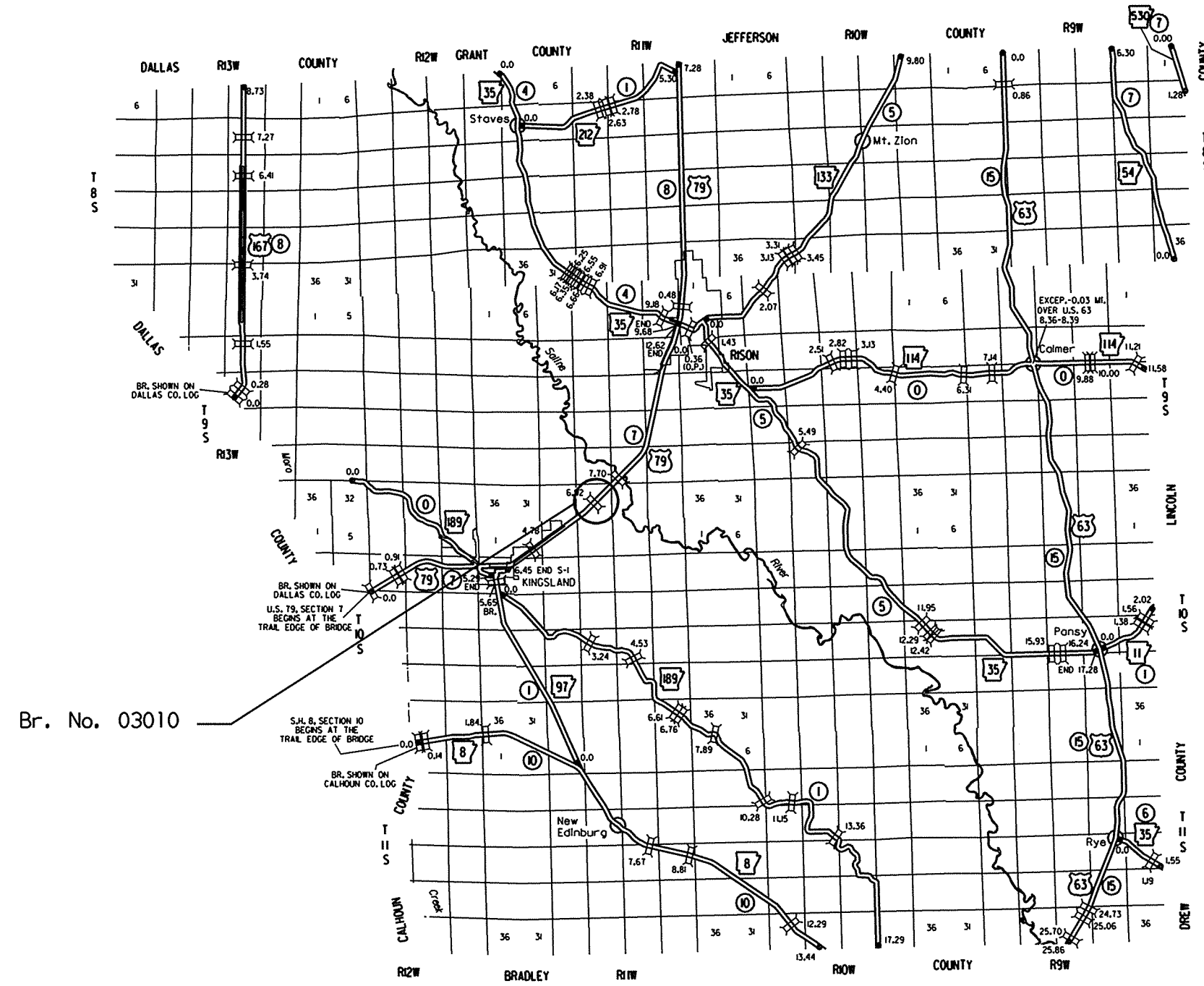
Br. No. 01381



JOB NO. 070406
 CLARK COUNTY
 DISTRICT SEVEN BRIDGE PAINTING (S)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						070406	6	37

RT. & SECTION MAP-CLEVELAND COUNTY



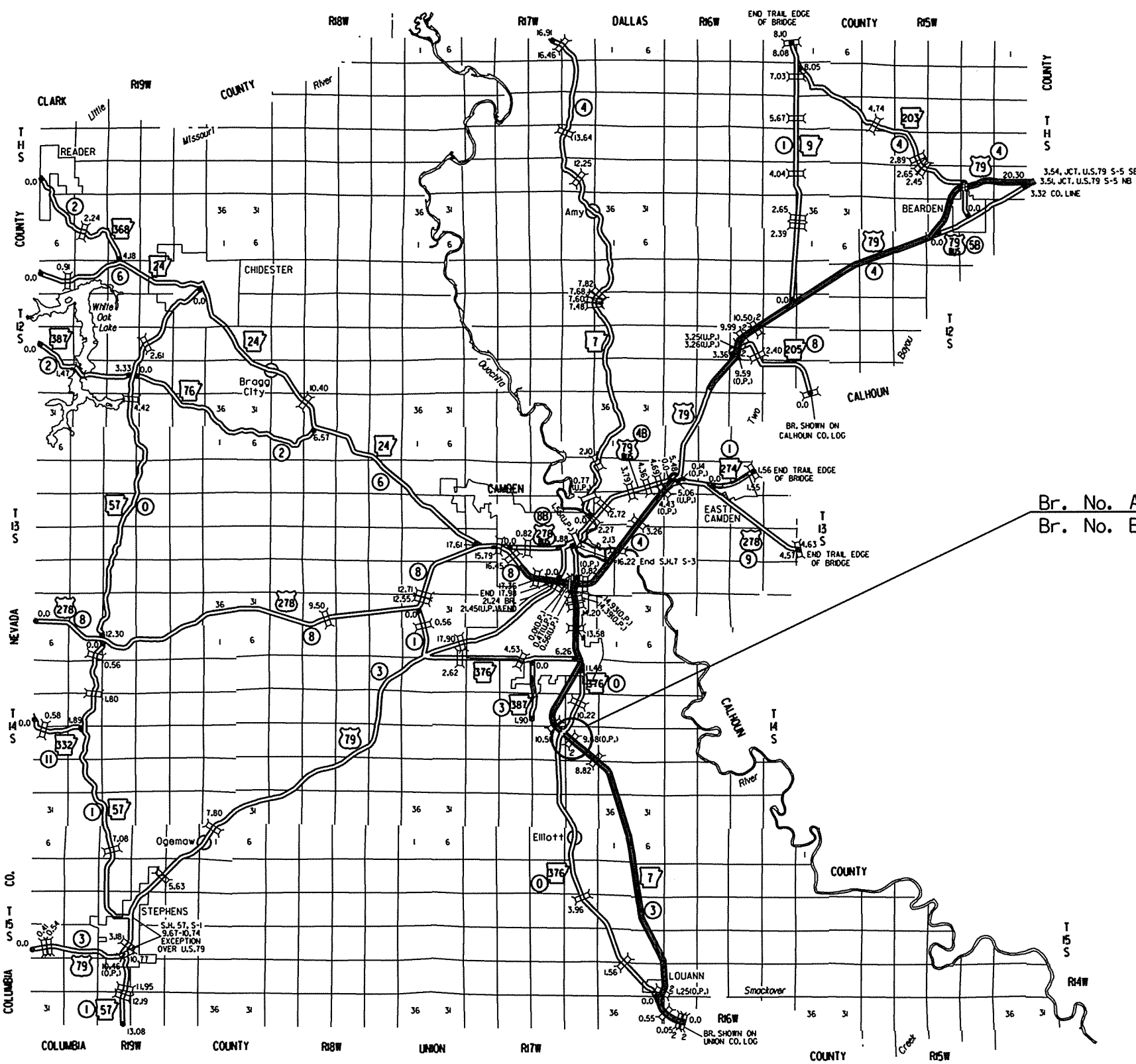
Br. No. 03010



JOB NO. 070406
 CLEVELAND COUNTY
 DISTRICT SEVEN BRIDGE PAINTING (S)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						070406	7	37

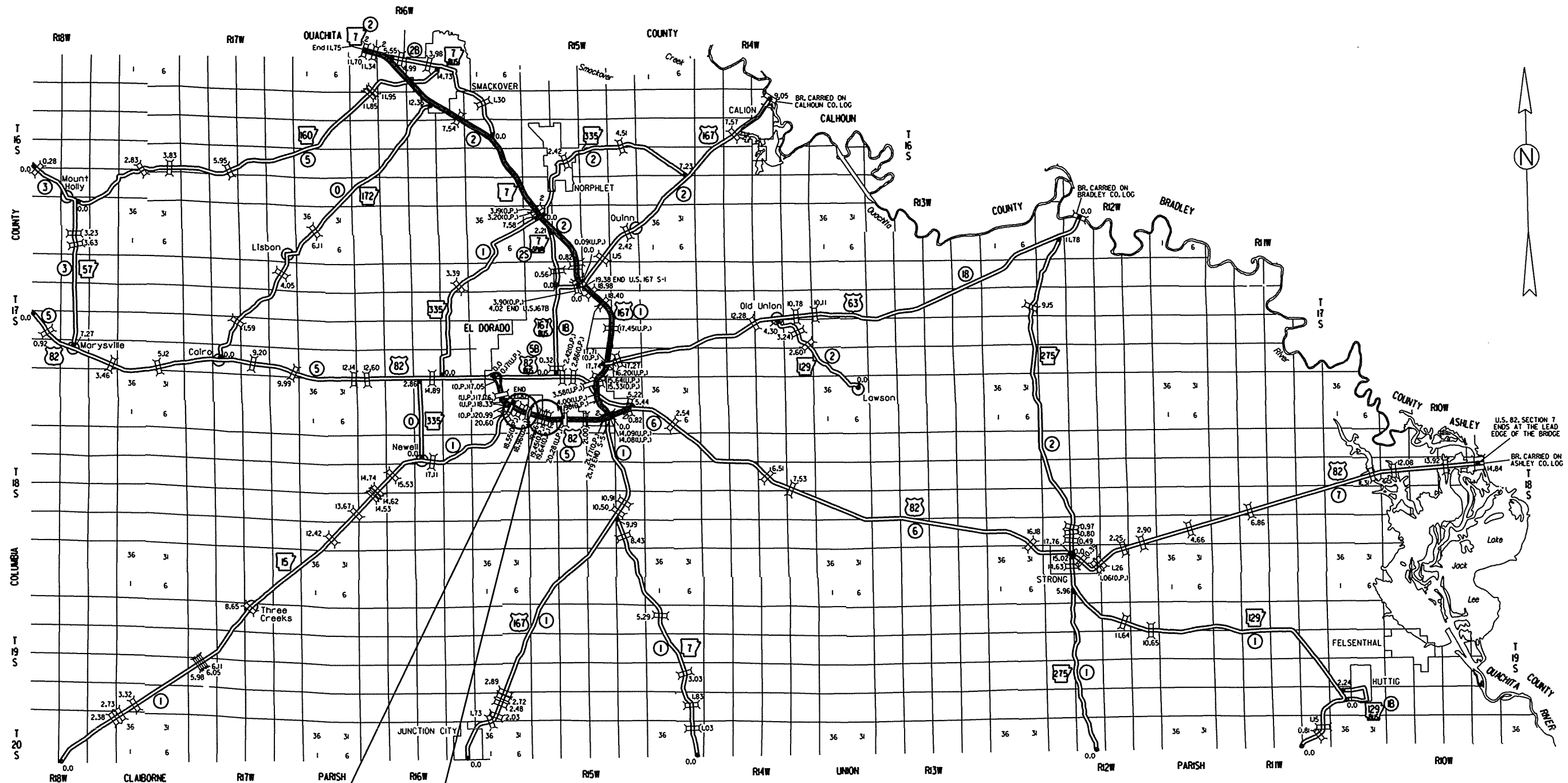
② RT. & SECTION MAP-OUACHITA COUNTY



JOB NO. 070406
 OUACHITA COUNTY
 DISTRICT SEVEN BRIDGE PAINTING (S)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	070406		8	37

② RT. & SECTION MAP-UNION COUNTY



Br. No. A5791
Br. No. B5791

Br. No. A5789
Br. No. B5789



JOB NO. 070406
UNION COUNTY
DISTRICT SEVEN BRIDGE PAINTING (S)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 070406	9	37
② BRIDGE PICTURES (1 OF 2)								



Br. 01381 - See SP NESTING SITES OF MIGRATORY BIRDS



Br. 03854 - South side of bridge



Br. 03010 - See SP NESTING SITES OF MIGRATORY BIRDS



Br. A5901 - See Railroad SP

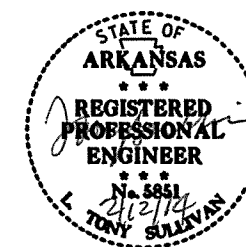


Br. B5901 - See Railroad SP



Br. A&B5901- Median access road

Filename 050290.dgn



JOB NO. 070406
 BRIDGE PICTURES (1 OF 2)
 DISTRICT SEVEN BRIDGE PAINTING (S)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 070406	10	37
② BRIDGE PICTURES (2 OF 2)								



Br. A5789 - See Railroad SP



Br. B5789 - See Railroad SP



Br. A&B5789 - TOP SIDE OF BRIDGES



Br. A5791 - See Railroad SP

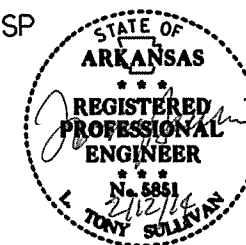


Br. B5791 - See Railroad SP

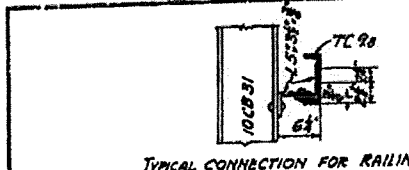
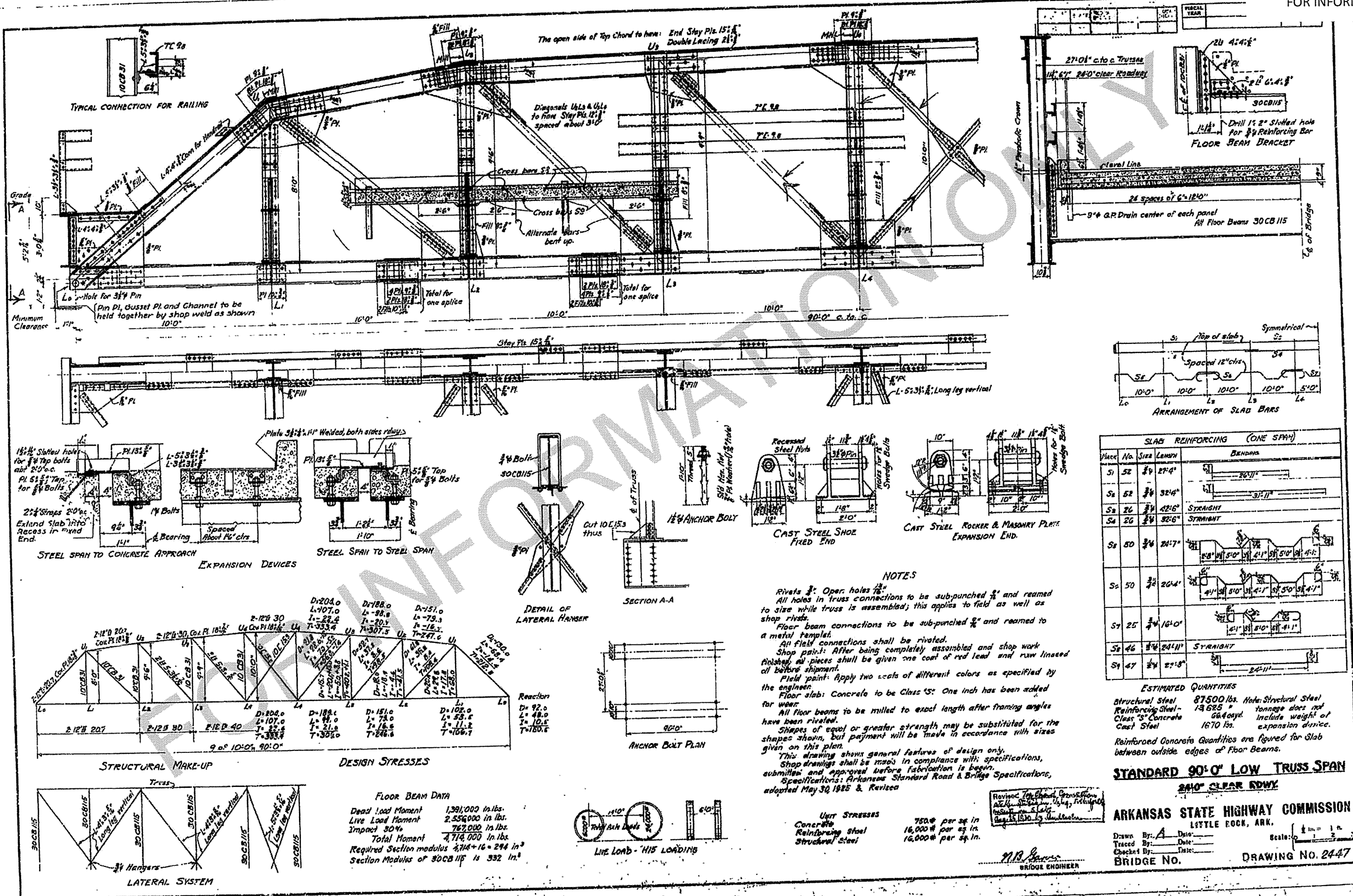


Br. A&B5791 - TOP SIDE OF BRIDGES

Filename 050290.dgn



JOB NO. 070406
 BRIDGE PICTURES (2 OF 2)
 DISTRICT SEVEN BRIDGE PAINTING (S)



Grade
5 1/2'±
3.0'±
1.2'±
Minimum Clearance 10'

10'±

10'±

10'±

10'±

10'±

10'±

10'±

10'±

10'±

10'±

10'±

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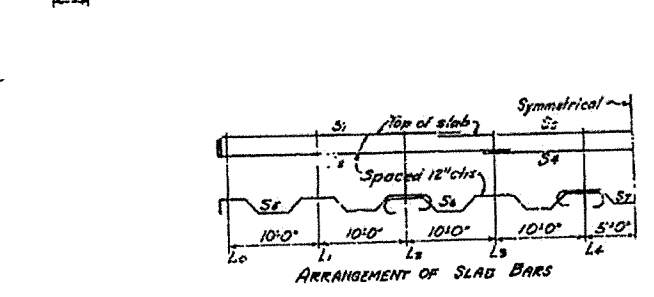
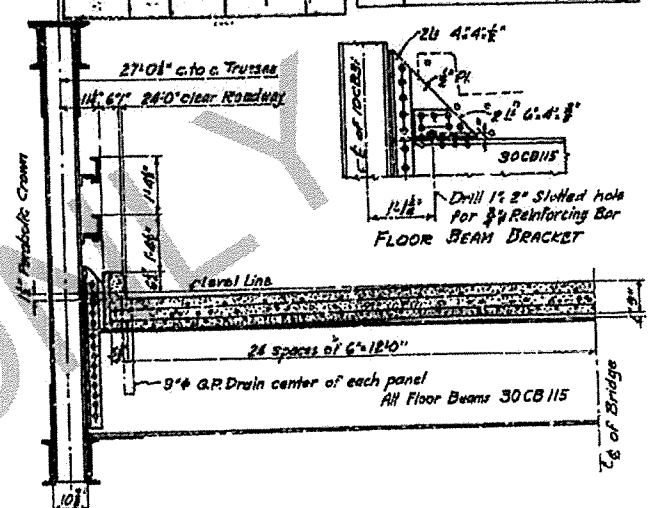
10'±

10'±

10'±

10'±

10'±



SLAB REINFORCING (ONE SPAN)	
Place	No. Size Length
S1	52 #4 27'-4"
S2	52 #4 32'-4"
S3	26 #4 42'-6" STRAIGHT
S4	26 #4 32'-6" STRAIGHT
S5	50 #4 24'-7"
S6	50 #4 20'-4"
S7	25 #4 16'-0"
S8	46 #4 24'-11" STRAIGHT
S9	47 #4 27'-5"

ESTIMATED QUANTITIES
 Structural Steel 87500 lbs. Note: Structural Steel
 Reinforcing Steel- 13685 # tonnage does not
 Class 3 Concrete 66450 yd. include weight of
 Cast Steel 1670 lbs. expansion device.
 Reinforced Concrete Quantities are figured for Slab
 between outside edges of Floor Beams.

STANDARD 90'-0" LOW TRUSS SPAN
24'-0" CLEAR RDWY

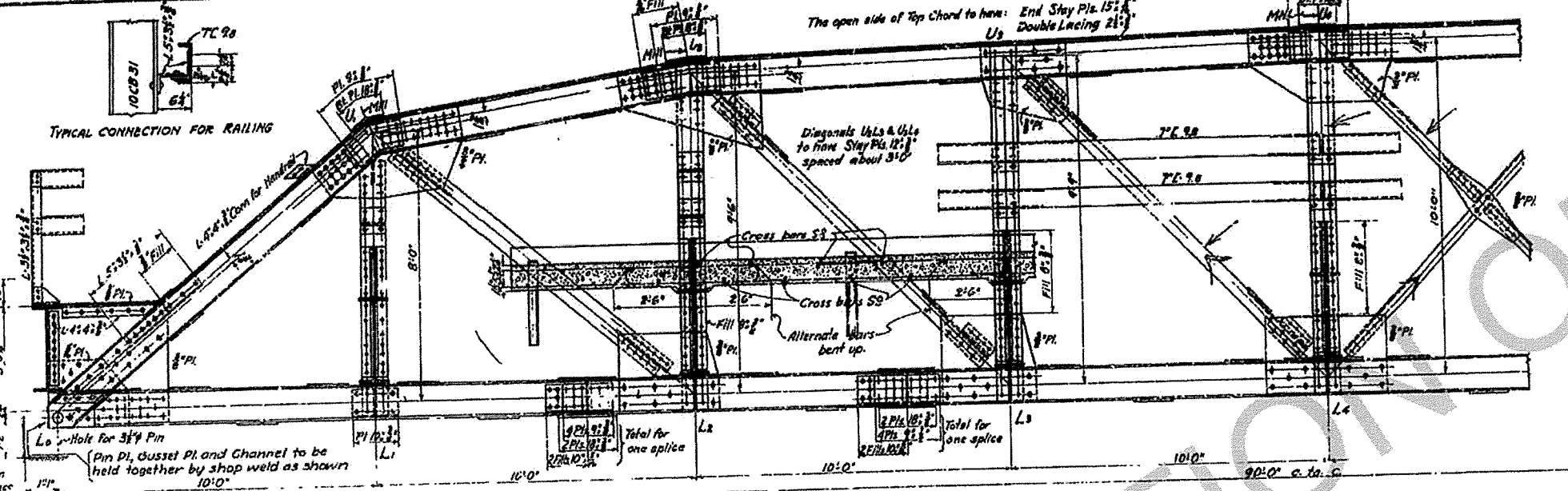
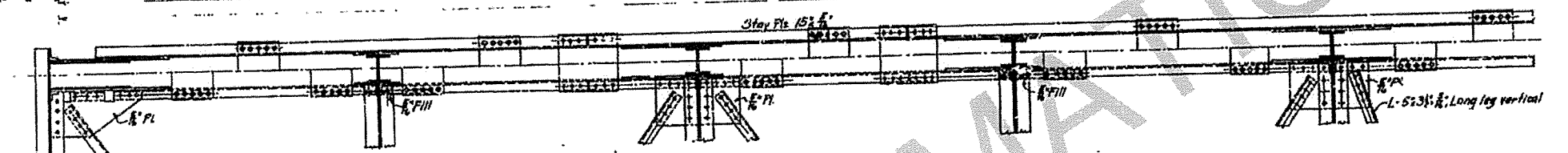
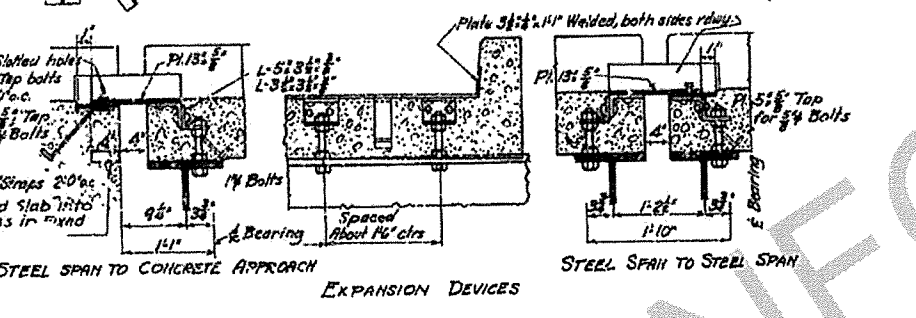
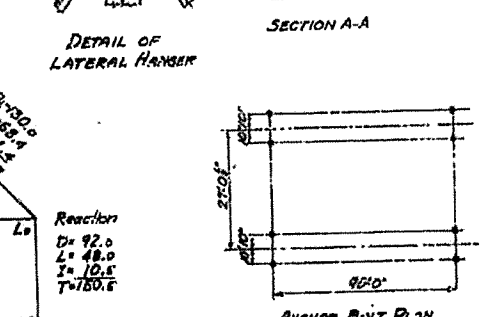
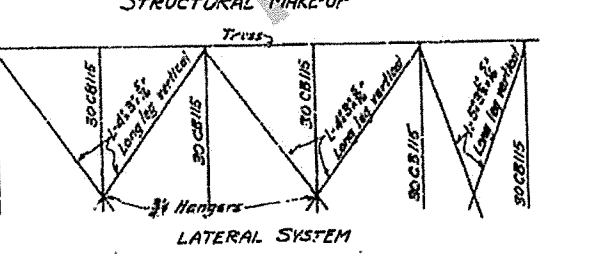
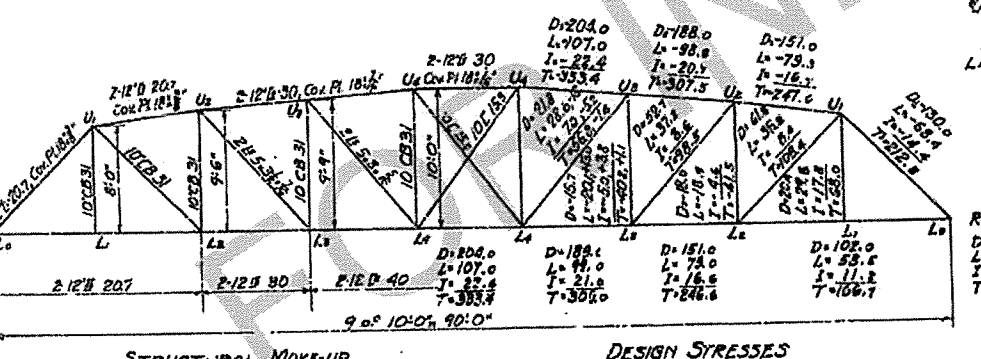
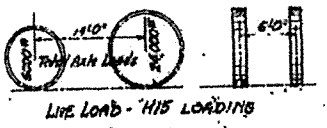
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: A Date: _____ Scale: 1" = 10'
 Traced By: _____ Date: _____
 Checked By: _____ Date: _____
 BRIDGE NO. _____ DRAWING NO. 2447

UNIT STRESSES
 Concrete 750# per sq in
 Reinforcing Steel 16,000# per sq in
 Structural Steel 16,000# per sq in

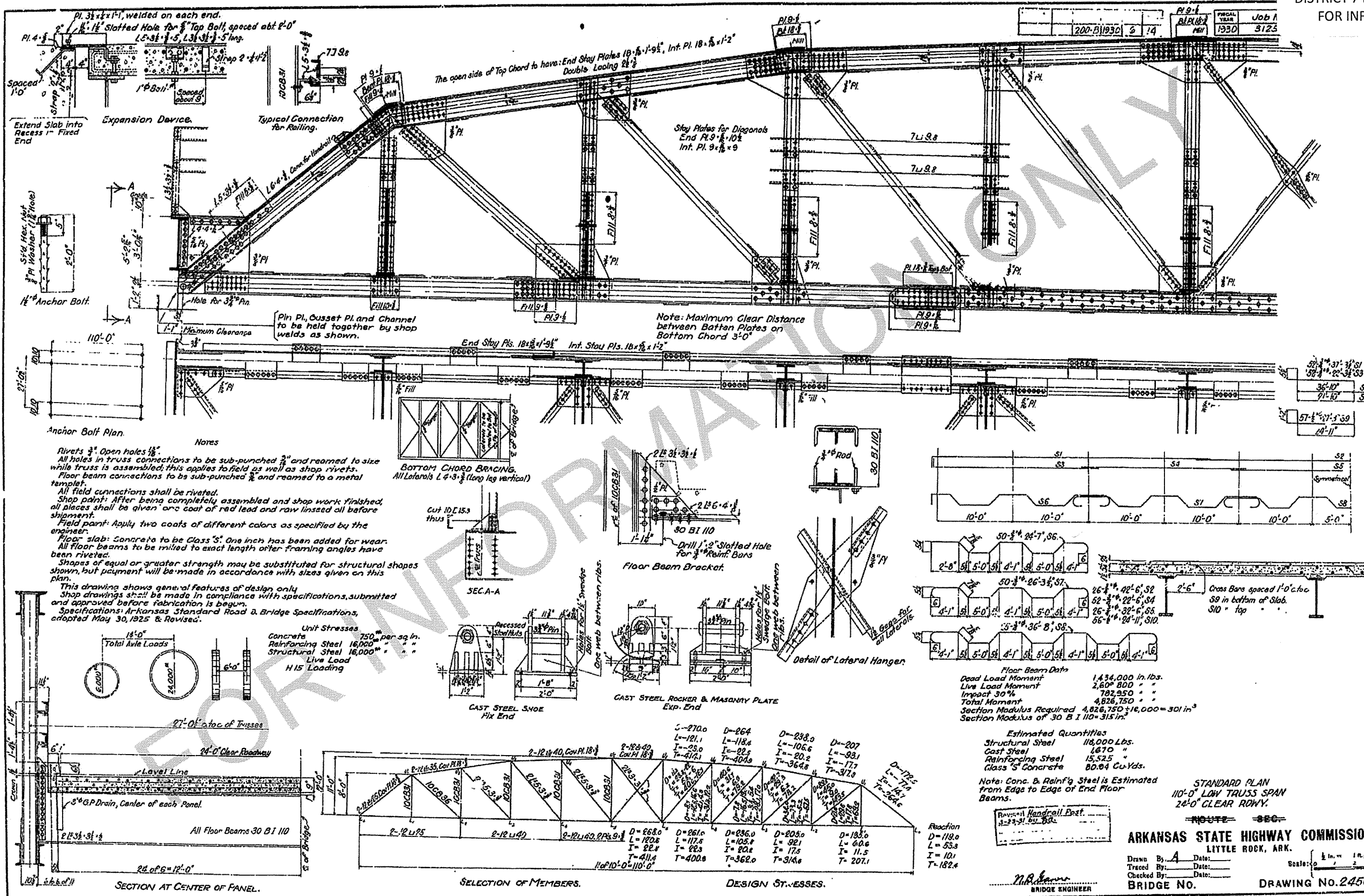
Revised for...
 Bridge Engineer

NOTES
 Rivets 3/4" Oper. holes 1 1/2"
 All holes in truss connections to be sub-punched 3/8" and reamed
 to size while truss is assembled; this applies to field as well as
 shop rivets.
 Floor beam connections to be sub-punched 3/8" and reamed to
 a metal template.
 All field connections shall be riveted.
 Shop paint: After being completely assembled and shop work
 finished, all pieces shall be given one coat of red lead and raw lined
 oil before shipment.
 Field paint: Apply two coats of different colors as specified by
 the engineer.
 Floor slab: Concrete to be Class 35; One inch has been added
 for wear.
 All floor beams to be milled to exact length after framing angles
 have been riveted.
 Shapes of equal or greater strength may be substituted for the
 shapes shown, but payment will be made in accordance with sizes
 given on this plan.
 This drawing shows general features of design only.
 Shop drawings shall be made in compliance with specifications,
 submitted and approved before fabrication is begun.
 Specifications: Arkansas Standard Road & Bridge Specifications,
 adopted May 30, 1925 & Revised

FLOOR BEAM DATA
 Dead Load Moment 1,391,000 in. lbs.
 Live Load Moment 2,557,000 in. lbs.
 Impact 30% 767,000 in. lbs.
 Total Moment 4,714,000 in. lbs.
 Required Section modulus 4,714 + 16 = 294 in.³
 Section Modulus of 30CB115 is 332 in.³



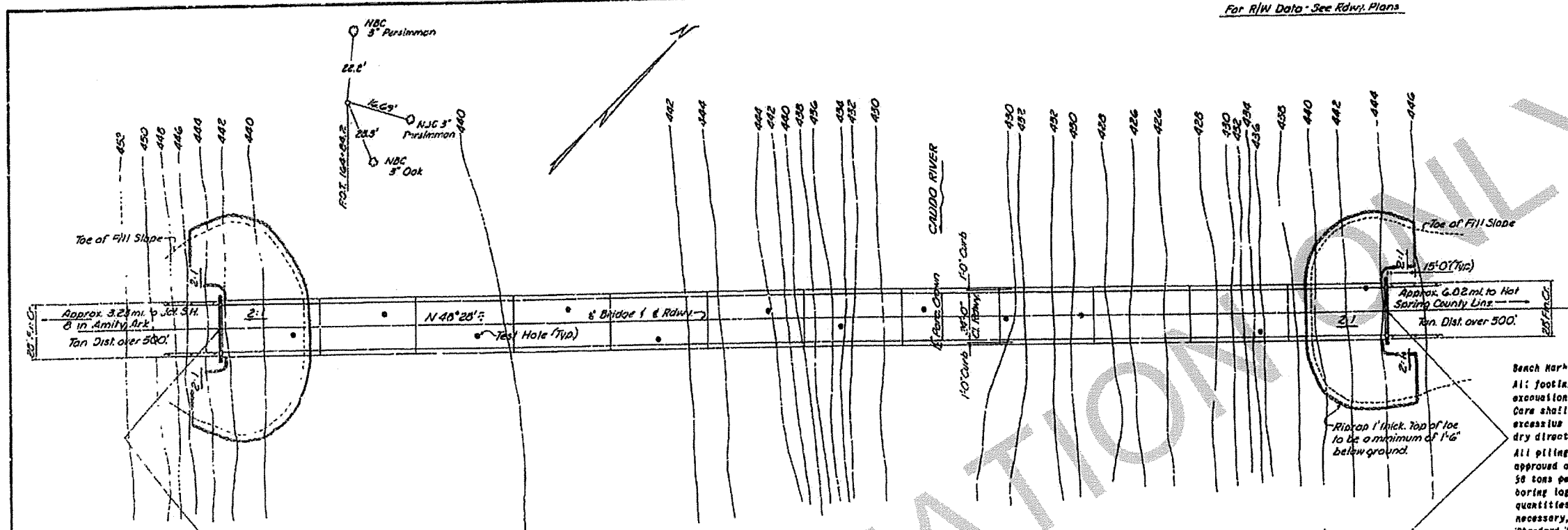
DISTRICT 7 BRIDGE PAINTING (S)
FOR INFORMATION ONLY



DISTRICT 7 BRIDGE PAINTING (S)
FOR INFORMATION ONLY

For R/W Data - See R/Wy. Plans

NO. ROAD STATE	NO.	DATE
6	ARK 5-24(10)	9 32
NO.	DATE	
7617	9 32	



PLAN

GENERAL NOTES

Bench Mark - Nail in Rock, 12" Oak, 10" R.I. Sta. 169+71, Elev. 440.88

All footings shall be set a minimum of 1' 6" into rock. Rock excavations shall be made to neat lines of concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured in the dry directly against excavated surfaces of rock.

All piling shall be 12-8P-53 Steel Bearing Piles driven with an approved air, steam or diesel hammer to a minimum capacity of 50 tons per pile and into the material designated as rock on the boring logs. Lengths of piling shown are for estimating quantities only. Order lengths shown; cut-off or build-up, if necessary, to be paid for in accordance with Section 804 of the Standard Specifications.

Piles in End Bents shall be driven after embankment is in place.

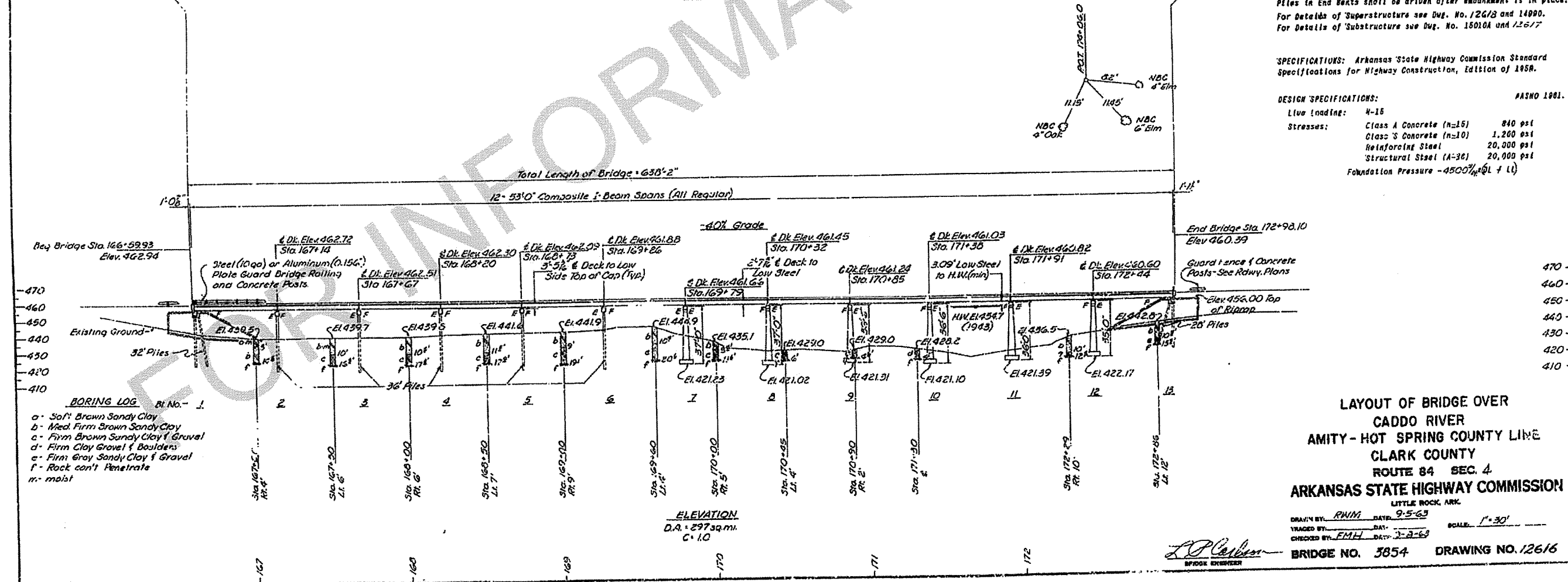
For details of Superstructure see Div. No. 126/3 and 14990.

For details of Substructure see Div. No. 15010A and 126/7

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1958.

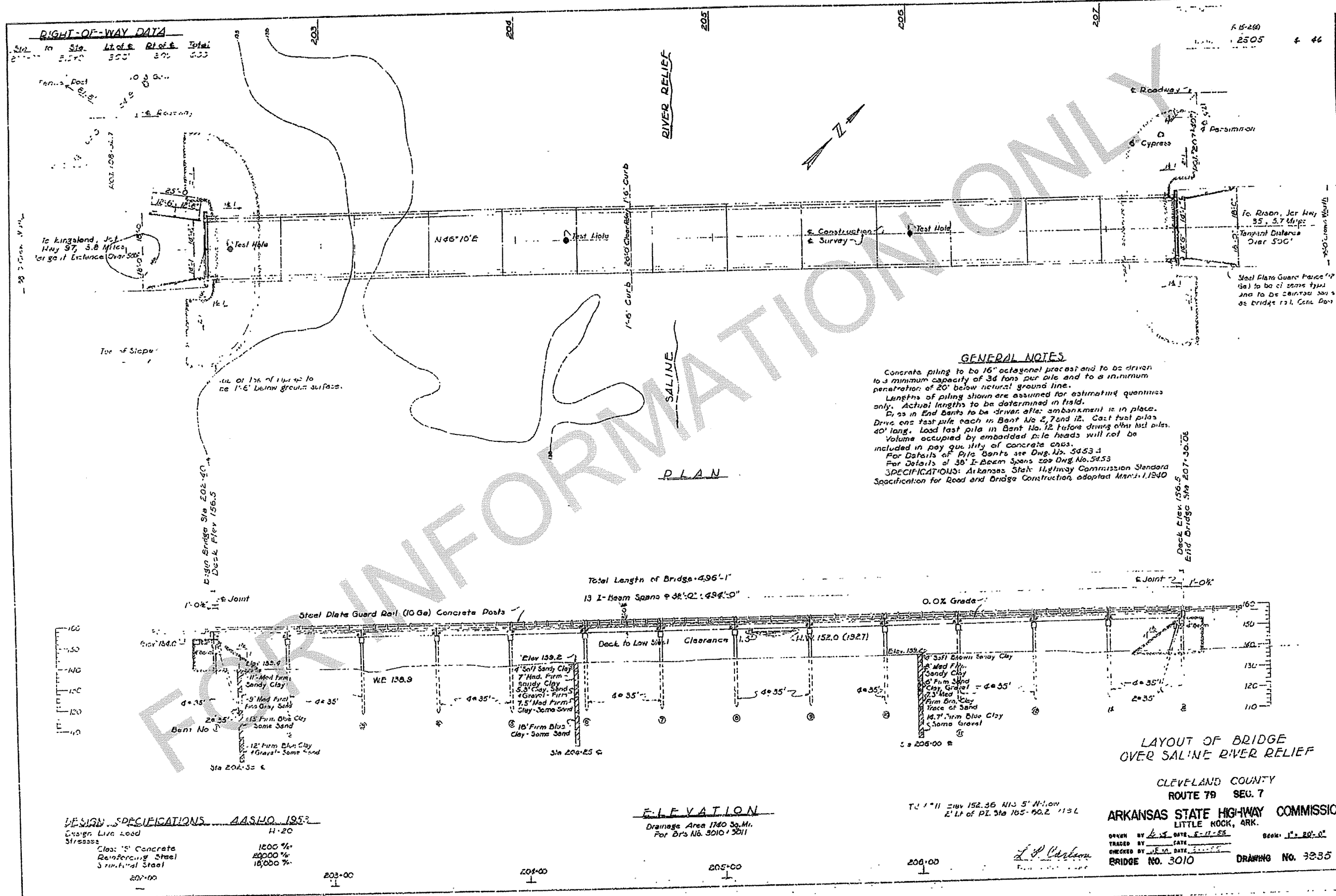
DESIGN SPECIFICATIONS: AASHTO 1981.

Live Loading:	H-15
Stresses:	Class A Concrete (n=15) 840 psi
	Class B Concrete (n=10) 1,260 psi
	Reinforcing Steel 20,000 psi
	Structural Steel (A-36) 20,000 psi
	Foundation Pressure - 4500 $\frac{1}{2}$ (1.1)



LAYOUT OF BRIDGE OVER
CADDO RIVER
AMITY - HOT SPRING COUNTY LINE
CLARK COUNTY
ROUTE 84 SEC. 4
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: RWM DATE: 9-5-63
TRACED BY: FMH DATE: 3-3-63
CHECKED BY: FMH DATE: 3-3-63
SCALE: 1" = 30'
BRIDGE NO. 3854 DRAWING NO. 12616



RIGHT-OF-WAY DATA

Sta. to Sta.	Width	Area	Profile	Total
202+00 to 202+50	35.0'	375.0'	375.0'	375.0'

GENERAL NOTES

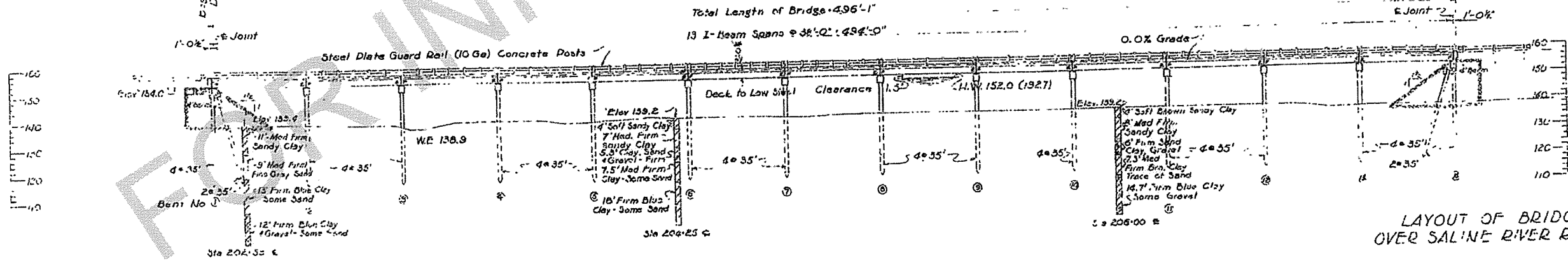
Concrete piling to be 16" octagonal precast and to be driven to a minimum capacity of 36 tons per pile and to a minimum penetration of 20' below natural ground line.

Lengths of piling shown are assumed for estimating quantities only. Actual lengths to be determined in field.

Piles in End Bents to be driven after embankment is in place. Drive one test pile each in Bent No. 2, 7 and 12. Cast test piles 40' long. Load test pile in Bent No. 12 before driving other test piles. Volume occupied by embedded pile heads will not be included in pay quantity of concrete caps.

For Details of Pile Bents see Dwg. No. 54.53.1
For Details of 36" I-Beam Spans see Dwg. No. 54.53.2

SPECIFICATIONS: Arkansas State Highway Commission Standard Specification for Road and Bridge Construction, adopted March 1, 1940



DESIGN SPECIFICATIONS AASHO 1957

Design Live Load	H-20
Stresses	
Concrete	1200 %
Reinforcing Steel	20000 %
Structural Steel	18,000 %

ELEVATION

Drainage Area 1740 Sq. Mi.
For Dfs No. 3010 & 3011

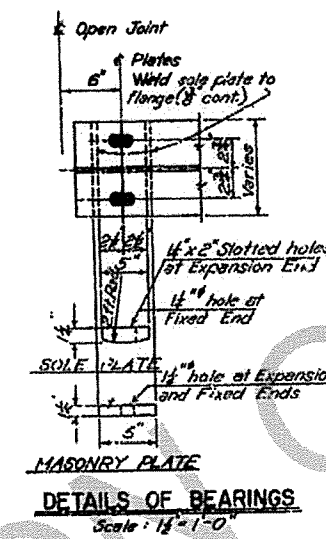
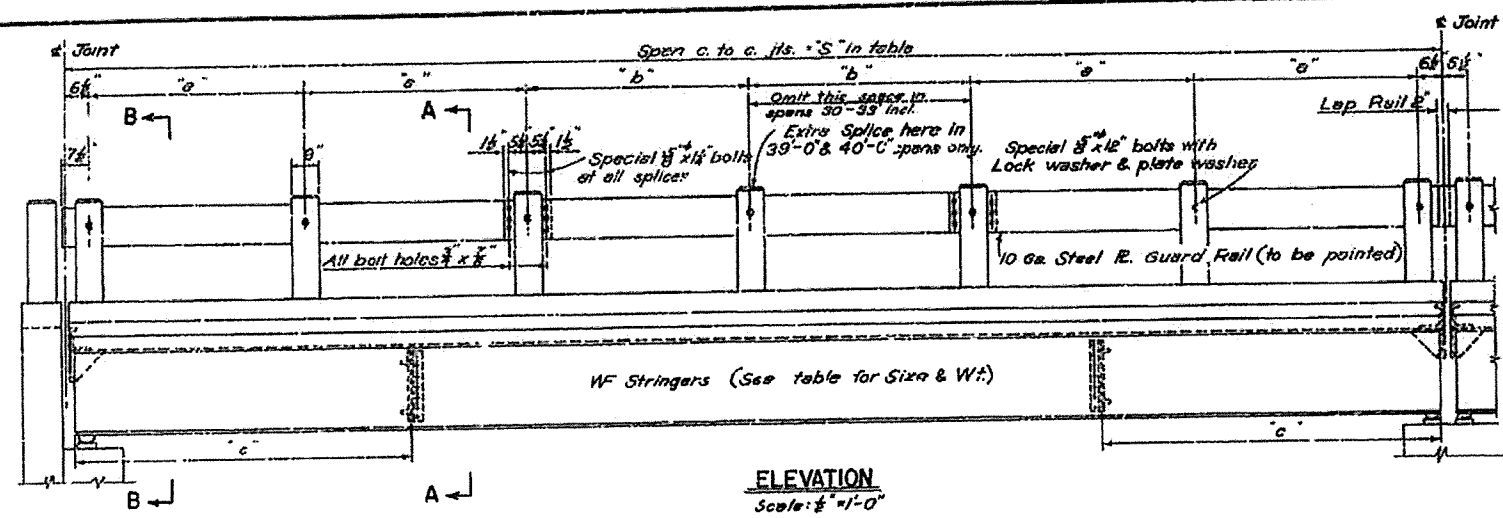
LAYOUT OF BRIDGE OVER SALINE RIVER RELIEF

CLEVELAND COUNTY
ROUTE 79 SEC. 7

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY *L.P. Carlson* DATE 5-11-55 Scale: 1" = 20'-0"
CHECKED BY *J.E.D.* DATE 5-11-55
BRIDGE NO. 3010 DRAWING NO. 3235

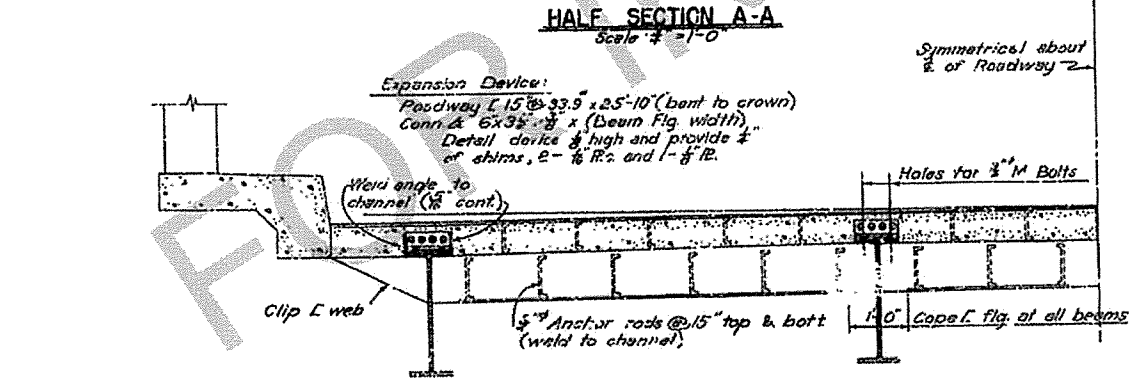
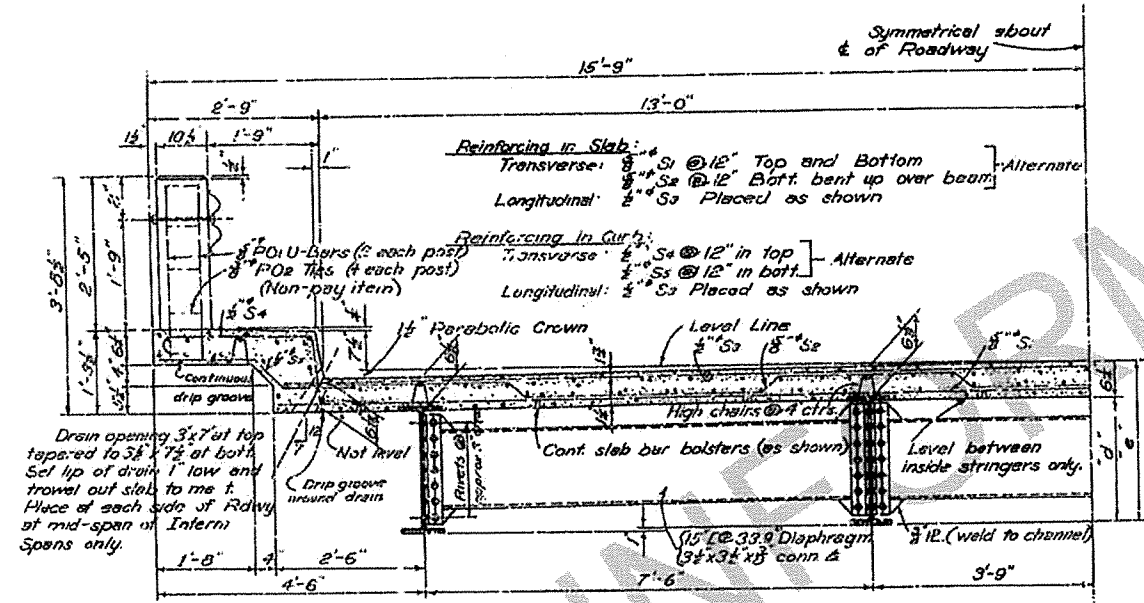
DESIGN NO.	DATE	PRO.
1	ARK.	
STATE JOB NO.		



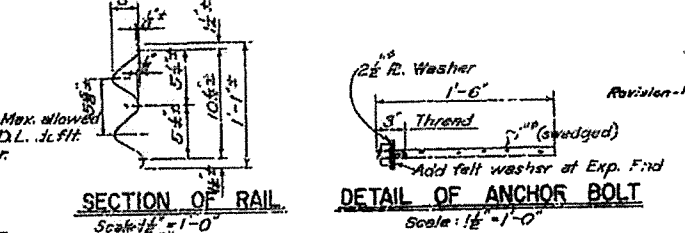
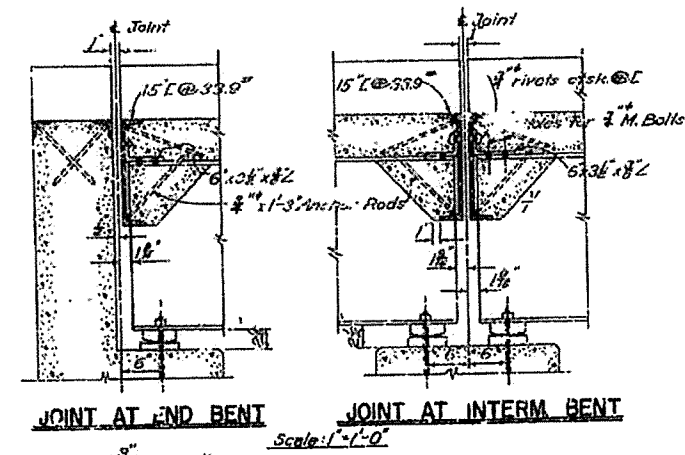
LIST OF REINFORCING STEEL

Span	30'	31'	32'	33'	34'	35'	36'	37'	38'	39'	40'	Length	Bending Diagram
S1	62	64	66	68	70	72	74	76	78	80	82	27'-0"	Symm abt. C-2 3'-0" 4'-0" 3'-0" 3'-0" 2'-0"
S2	30	31	32	33	34	35	36	37	38	39	40	27'-0"	
S3	57											Dimension "S"-6"	
S4	62	64	66	68	70	72	74	76	78	80	82	4'-11"	
S5	60	62	64	66	68	70	72	74	76	78	80	3'-6"	
PO1	24											28	5'-11"
PO2	48											56	2'-9"

Dimensions are to ctrs. of bars.



Span S	Reqd Stringers	Fast Spacing	Strut	Vert Dims	D.L. Def'n	
		"a"	"b"	"c"	"d"	"e"
30'	2TW34	5'-9"	5'-11"	7'-6"	2'-2 1/2"	2'-0"
31'	"	5'-11"	6'-3"	7'-9"	"	"
32'	"	6'-2"	6'-3"	8'-0"	"	"
33'	"	6'-2"	7'-1"	8'-3"	"	"
34'	30WF10	5'-5"	5'-7 1/2"	8'-6"	2'-5 1/2"	2'-1 1/2"
35'	"	5'-7"	5'-8 1/2"	8'-9"	"	"
36'	"	5'-9"	5'-10"	9'-0"	"	"
37'	"	5'-11"	6'-1 1/2"	9'-3"	"	"
38'	"	6'-2"	6'-1 1/2"	9'-6"	"	"
39'	30WF16	6'-2"	6'-2"	9'-9"	"	"
40'	"	6'-2"	7'-0"	10'-0"	"	"



GENERAL NOTES

All concrete to be Class "S". All exposed corners to have 3/4" chamfer unless otherwise noted.

Field connections for diaphragms to be riveted or bolted with high strength bolts.

Rivets: - 3/4" Open holes 1/2" except where noted otherwise.

Structural shapes of equal or greater strength may be substituted for shapes shown but payment will be made on basis of shapes shown or those actually used, whichever is the lesser.

All welded connections to be 3/8" fillet shop welds except as noted.

All welding shall conform to the American Welding Society Standard Specifications for Welded Highway & Railway Bridges, 4th Edition 1947

Shop Paint: - All structural steel except surfaces in contact with concrete shall be given one coat of red lead and raw linseed oil before shipment.

Field Paint - 1st Coat - White lead tinted with lamp black
End Coat - Aluminum Paint

All bearing plates and roadway expansion devices to be paid for as Structural Steel in Beam Spans.

Bearings shall be finally seated on three layers of burlap saturated with red lead. This work and material are to be considered as subsidiary to the item Structural Steel in Beam Spans and will not be paid for directly.

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

In order to secure a good riding surface it will be required that the floor slab be struck off from curb to curb with a full span length longitudinal strike-off. The strike-off shall be sufficiently stiff so as to have no appreciable vertical deflection.

Reinforcing steel to be deformed bars of intermediate or hard grade. see Special Provisions. Steel to be accurately located in the forms and firmly held in place by means of 1/4" wire supports, sufficient in number and size to prevent displacement during the course of construction and to keep the steel a proper distance from the forms. The wire supports will not be paid for directly but will be considered subsidiary to the item of Reinforcing Steel.

Shop lists and bending diagrams of reinforcing steel, including wire supports, shall be submitted and approval secured before fabrication is begun.

Handrail to be steel plate guard rail of the type shown or an equivalent rigid type as approved by the Engineer. The rail including posts and fastenings shall be paid for at the unit price bid per linear foot for Steel Plate Guard Rail.

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Road and Bridge Construction, adopted March 1, 1940.

LOADING H20 (A.A.S.H.O. 1953)

Dead Load = 698" (wt. per ft. of WF used) - Inside Stringers
Truck Live Load = 1.50 wheels
Dead Load = 1023" (wt. per ft. of WF used) - Outside Stringers
Truck Live Load = 1.11 wheels

UNIT SPECIFICATIONS:

Structural Steel 18,000 psi
Reinforcing Steel 20,000 psi
Class "S" Concrete (r=10) 1500 psi

DETAILS OF STANDARD
30' TO 40' L-BEAM SPANS
26'-0" CLEAR RDWY. 1'-5" CURBS

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: M.W.M. Date: 10-13-37
Traced By: L.W.L. Date: 6-23-55 WSK G-1289
Checked By: F.R.B. Date: 2-1-54

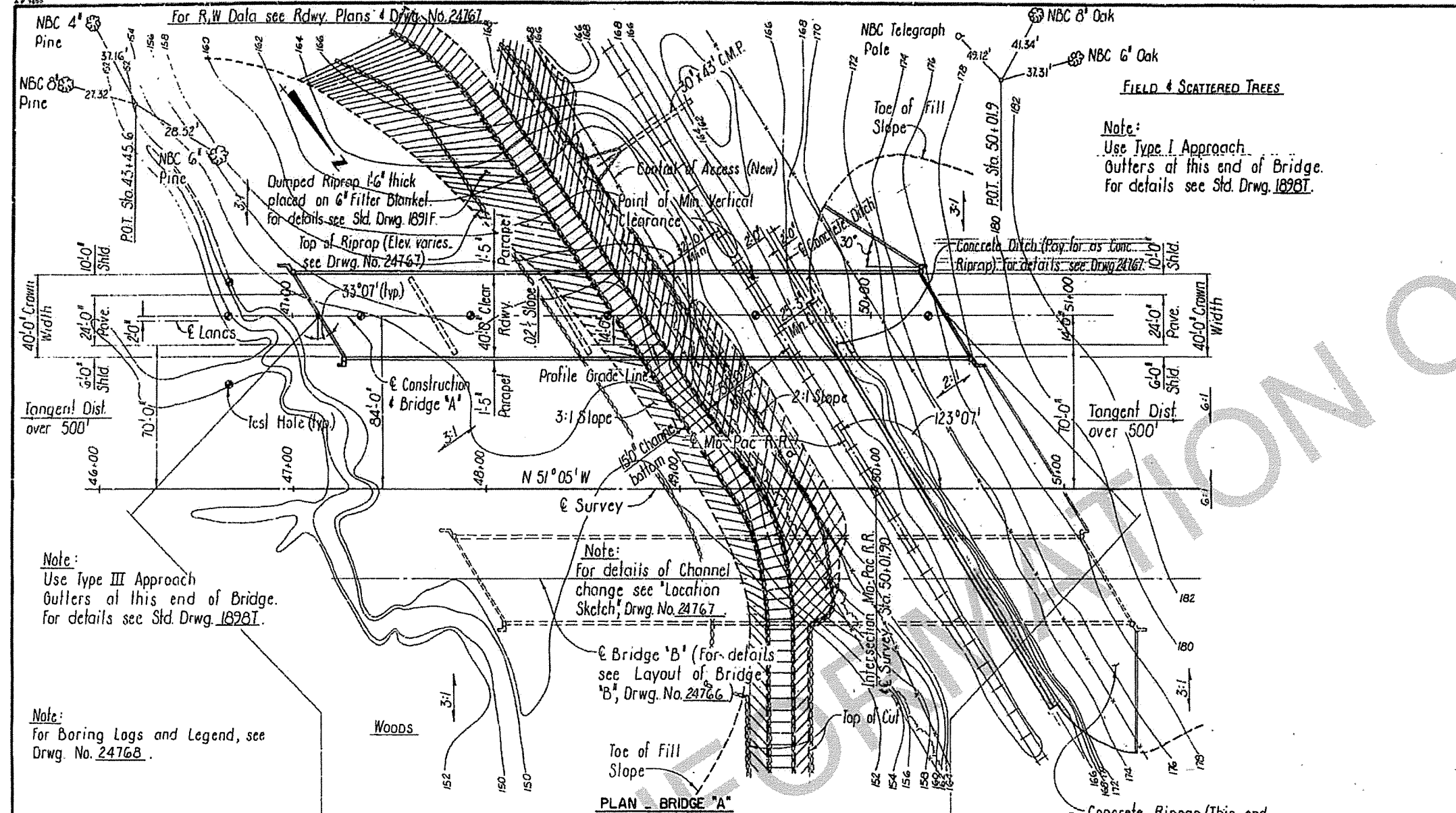
BRIDGE NO. 5453

DRAWING No. 5453

DATE	BY	DATE	BY	NO.	STATE
12-31-81				6	ARK
1-8-82	SM-FM-3				

DISTRICT 7 BRIDGE PAINTING (S)
FOR INFORMATION ONLY

5901A - LAYOUT - 24765



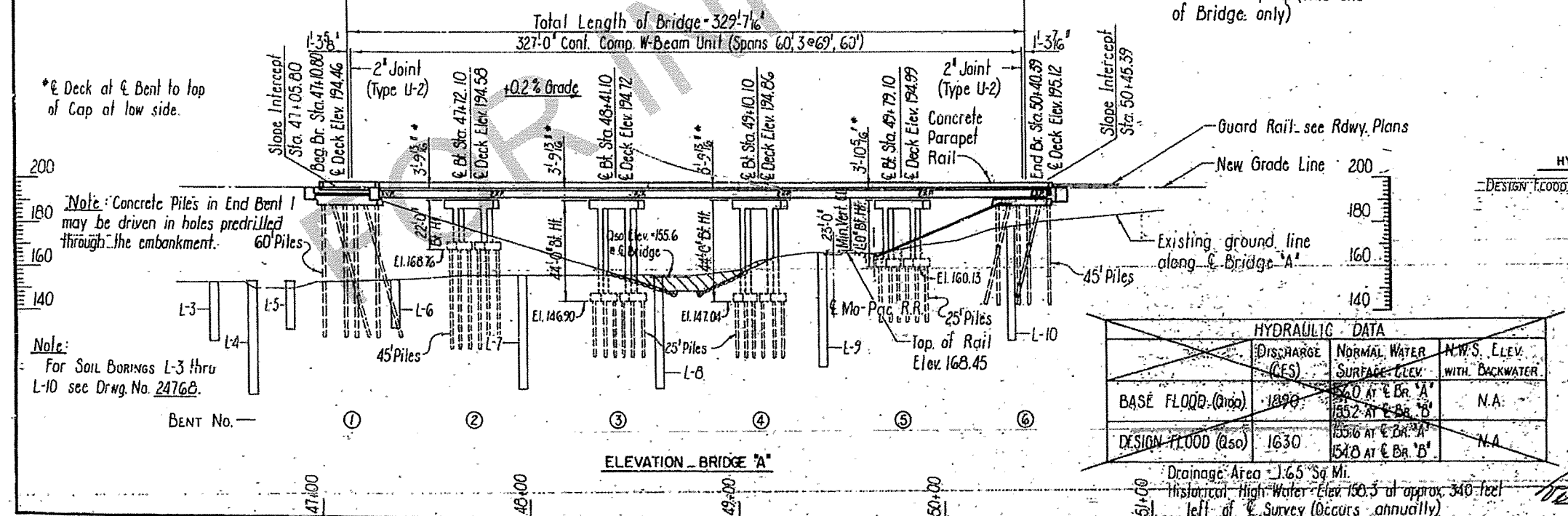
GENERAL NOTES

BENCH MARK: N.I.S. POWER POLE 81 FT., RT. STA. 40+43.0. ELEV. 205.31;
 DESIGN SPECIFICATIONS: AASHTO 1977 WITH CURRENT INTERIMS.
 CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 1978 AND APPLICABLE SPECIAL PROVISIONS.
 LIVE LOADING: HS20-44
 ALL CONCRETE SHALL BE CLASS "S" OR "S(A)" WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH, $f'_c = 3500$ PSI. ALL CONCRETE SHALL BE POURED IN THE DRY, AND ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4 INCH.
 REINFORCING STEEL SHALL CONFORM TO ASTM A615 OR A617, GRADE 60 (YIELD STRENGTH = 60,000 PSI).
 ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A572, GRADE 50, OR ASTM A36.
 TOPS OF FOOTINGS SHALL BE A MINIMUM OF 1'-6" BELOW THE GROUND LINE.
 PILING IN END BENTS SHALL BE 18" OCTAGONAL OR 16" SQUARE PRECAST CONCRETE PILING DRIVEN TO A MINIMUM BEARING CAPACITY OF 55 TONS PER PILE. PILES IN END BENTS TO BE DRIVEN AFTER EMBANKMENT TO BOTTOM OF CAP IS IN PLACE.
 PILING IN INT. BENTS 2 THRU 5 SHALL BE 16" OCTAGONAL OR 14" SQUARE PRECAST CONCRETE PILING DRIVEN TO A MINIMUM BEARING CAPACITY OF 44 TONS PER PILE.
 ALL PILING TO BE DRIVEN WITH AN APPROVED AIR, STEAM, OR DIESEL HAMMER AND SHALL HAVE A MINIMUM PENETRATION OF 20 FEET BELOW THE GROUND LINE. PILING LENGTHS SHOWN ARE FOR ESTIMATING AND BID COMPARISON PURPOSES ONLY. ACTUAL LENGTHS TO BE DETERMINED IN THE FIELD.
 TEST PILES: DRIVE THE FOLLOWING TEST PILES:

BRIDGE	BENT NO.	LENGTH
5901A	1	65 FT.
5901A	3	30 FT.
5901A	5	30 FT.
5901B	2	45 FT.
5901B	4	30 FT.
5901B	6	50 FT.

THE CONCRETE DECK SHALL BE GIVEN A TINE FINISH AS SPECIFIED FOR FINAL FINISHING IN SUBSECTION 802.23 FOR CLASS 6, ROADWAY SURFACE FINISH.
 FOR DETAILS OF END BENTS, SEE DWG. NO. 24769 & 24770
 FOR DETAILS OF INTERMEDIATE BENTS, SEE DWG. NO. 24771 - 24774
 FOR DETAILS OF CONTINUOUS COMPOSITE W-BEAM UNITS, SEE DWG. NO. 24775 - 24779
 FOR DETAILS OF CONCRETE PILING, SEE DWG. NO. 2383
 FOR DETAILS OF APPROACH GUTTERS, SEE DWG. NO. 1898T
 NOTE: FILTER BLANKET AND DUMPED RIPRAP FOR MILL CREEK IS INCLUDED IN THIS CONTRACT, HOWEVER, ROADWAY EMBANKMENT, BRIDGE END SLOPES AND CHANNEL WORK FOR MILL CREEK TO BE A PART OF CHANGE ORDER NO. 2, JOB NO. 7822.

Revised Hydraulic Data - 8 Jan. 82. KMG



HYDRAULIC DATA

Design Flood (Q50) = 494 cfs

	DISCHARGE (CFS)	NORMAL WATER SURFACE ELEV.	N.W.S. ELEV. WITH BACKWATER
BASE FLOOD (Q100)	1890	155.0 AT & BR. "A"	N.A.
DESIGN FLOOD (Q50)	1630	155.6 AT & BR. "A"	N.A.
		154.8 AT & BR. "B"	

LAYOUT OF BRIDGE "A" (SH. 1 OF 2)
OVER MILL CREEK & MO. PAC. R.R.
OUACHITA COUNTY

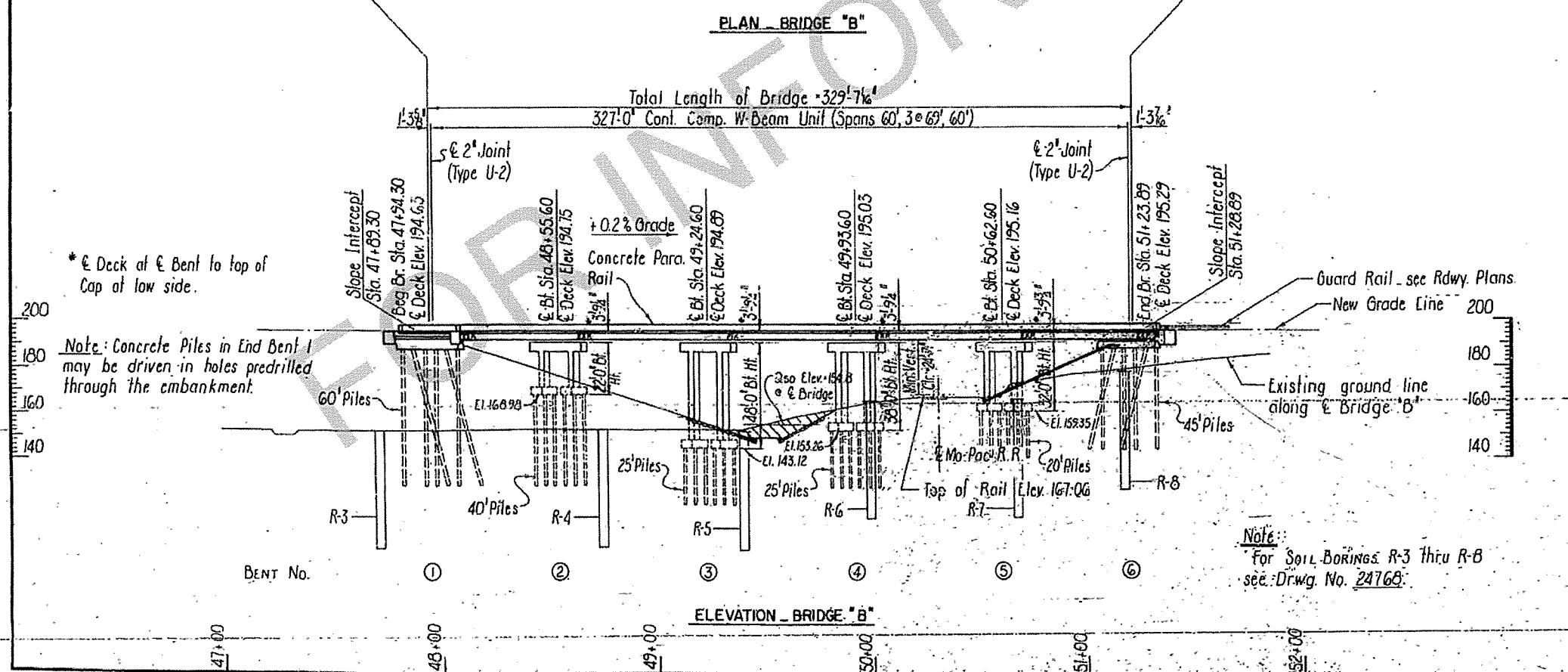
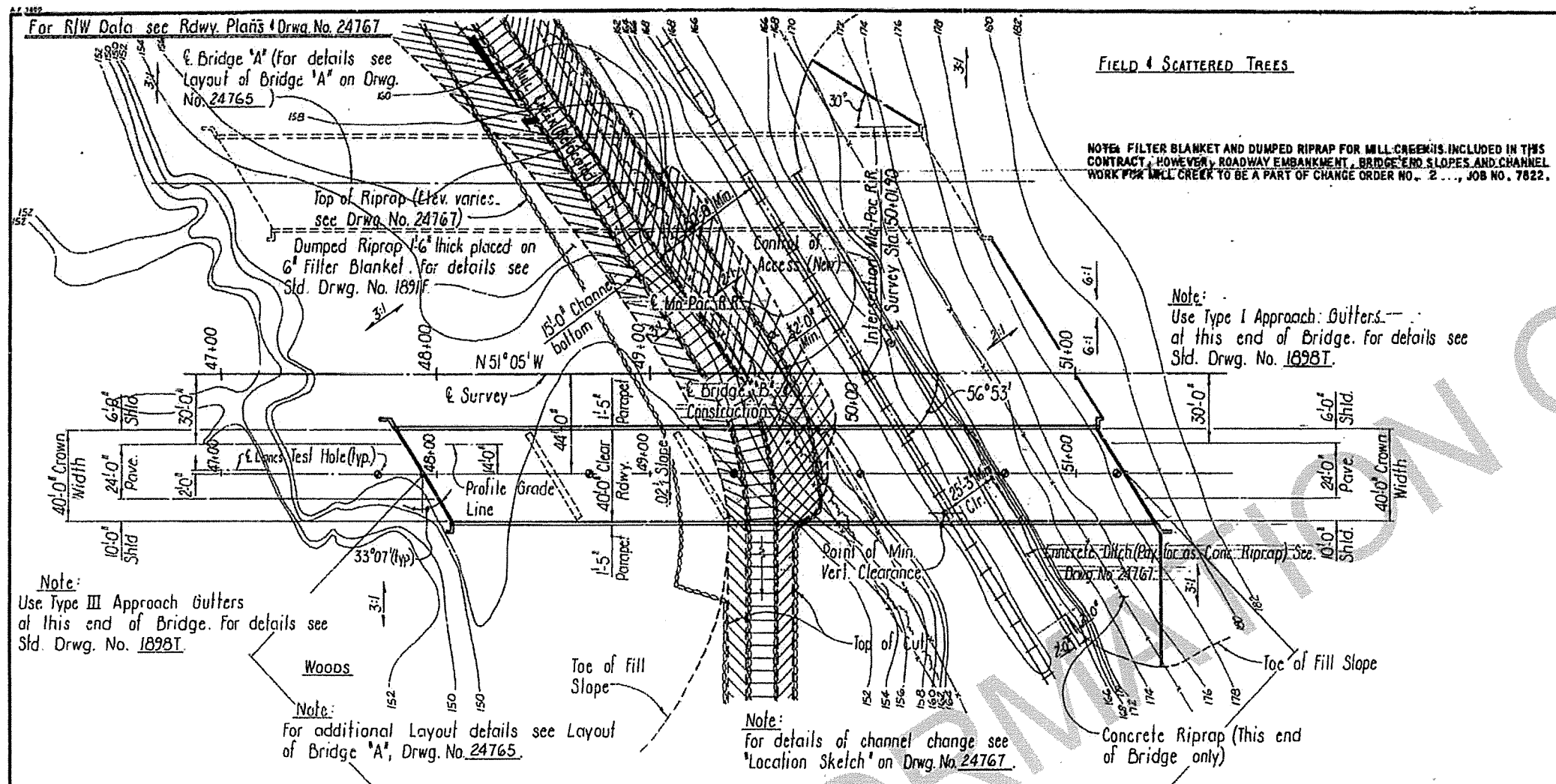
ROUTE 7 SEC. 2
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 DRAWN BY: KMG DATE: 14 APR. 81
 CHECKED BY: JES DATE: 3-2-81
 DESIGNED BY: USB DATE: APR. 81
 SCALE: 1" = 30'
 BRIDGE NO. 5901A DRAWING NO. 24765

Drainage Area = 1.65 Sq. Mi.
 Historical High Water Elev. 150.3 at approx. 340 feet left of Survey (Occurs annually)

DISTRICT 7 BRIDGE PAINTING (S)
FOR INFORMATION ONLY

DATE	BY	REVISION	PER. ROAD
12-21-71
7-8-88

5901B - LAYOUT - 24766



LAYOUT OF BRIDGE "B" (SH. 2 OF 2)
OVER MILL CREEK & MO. PAC. R.R.
OUACHITA COUNTY

ROUTE 7 SEC. 2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

BRIDGE NO. 5901B DRAWING NO. 24766

Vertical
Preston

DISTRICT 7 BRIDGE PAINTING (S)
FOR INFORMATION ONLY

DATE	BY	DATE	BY	NO.	DESCRIPTION
12-21-97	B. JONES			6	AI

5901 A & B - SPAN DETAILS - 24775

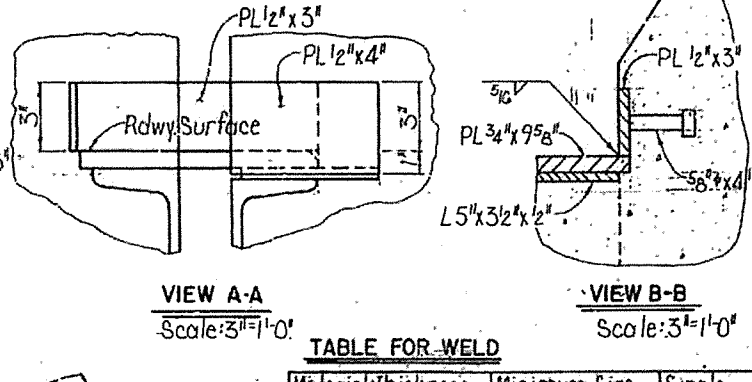
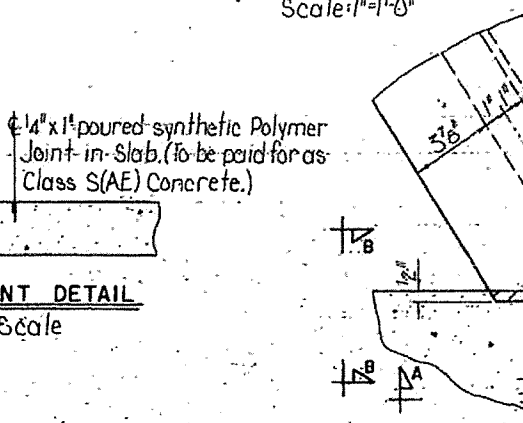
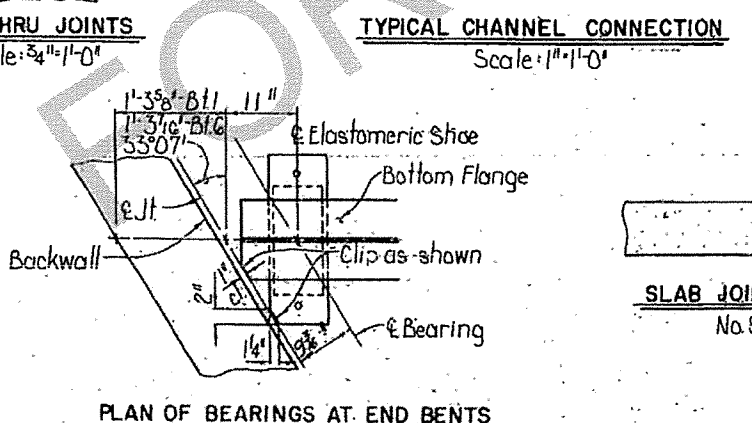
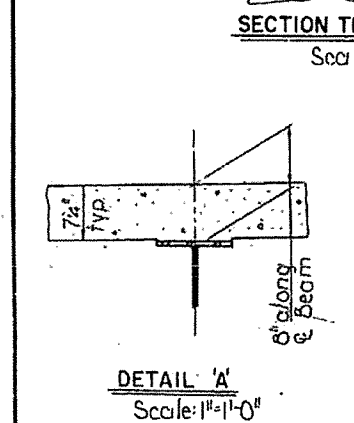
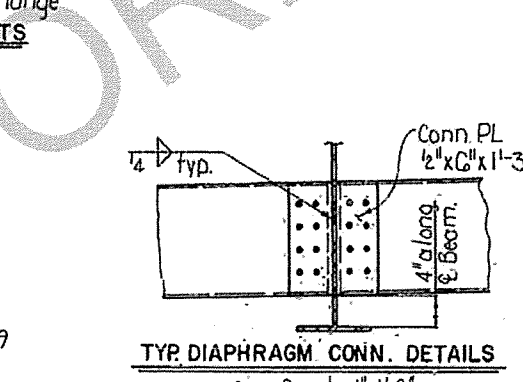
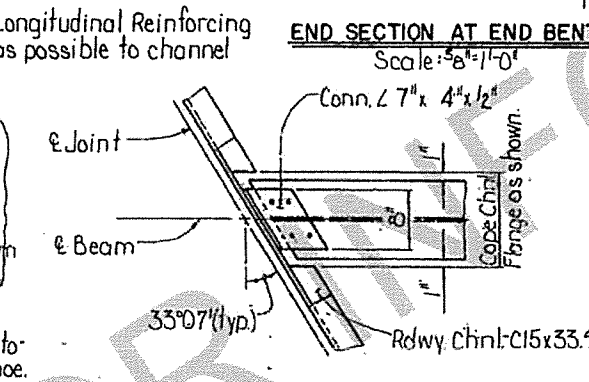
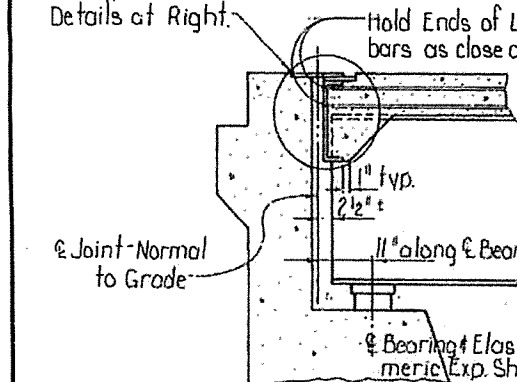
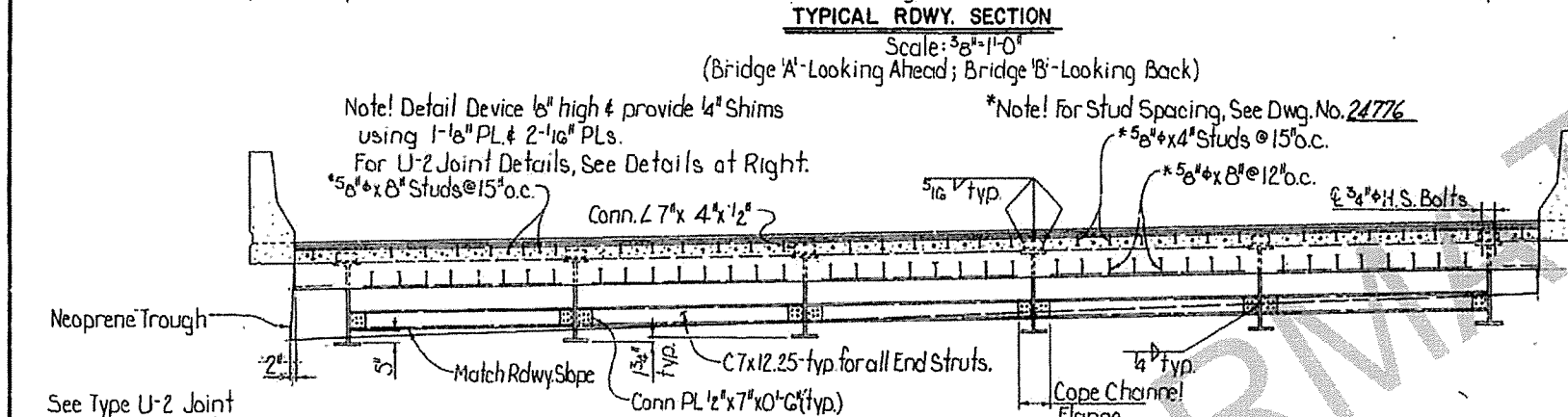
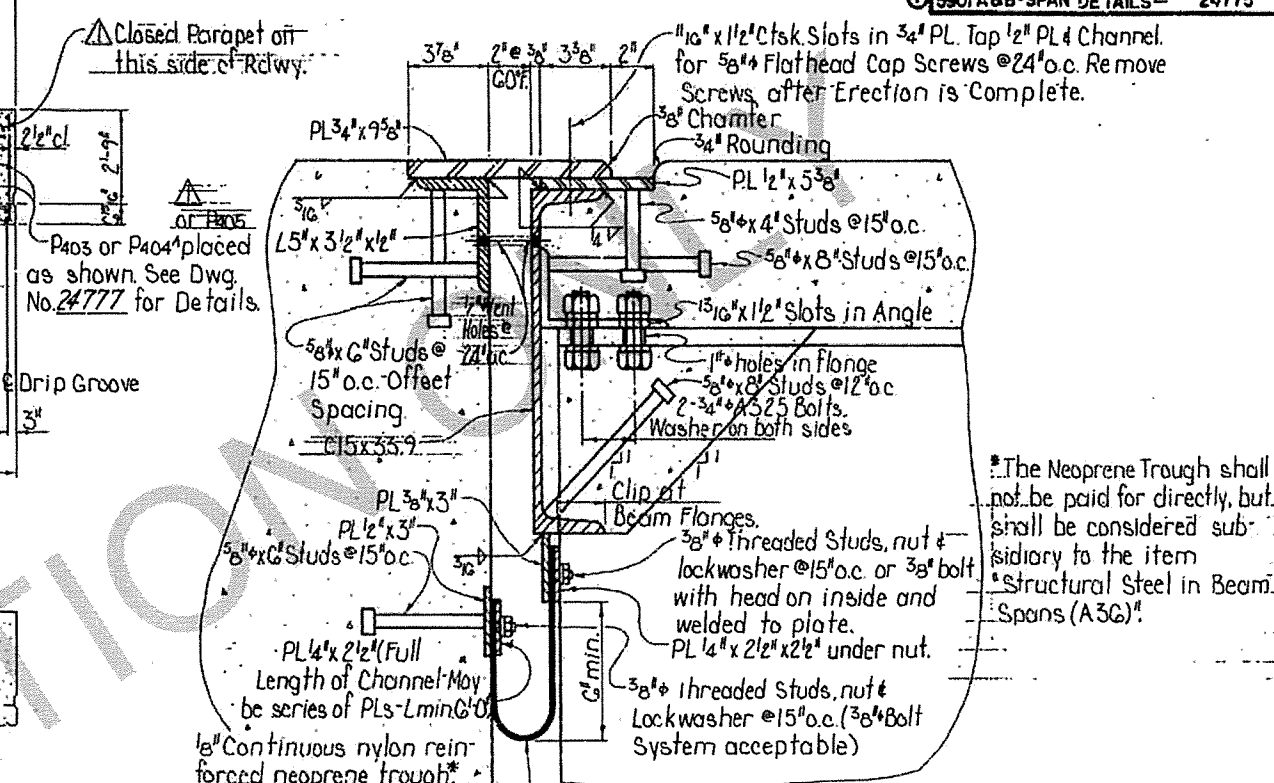
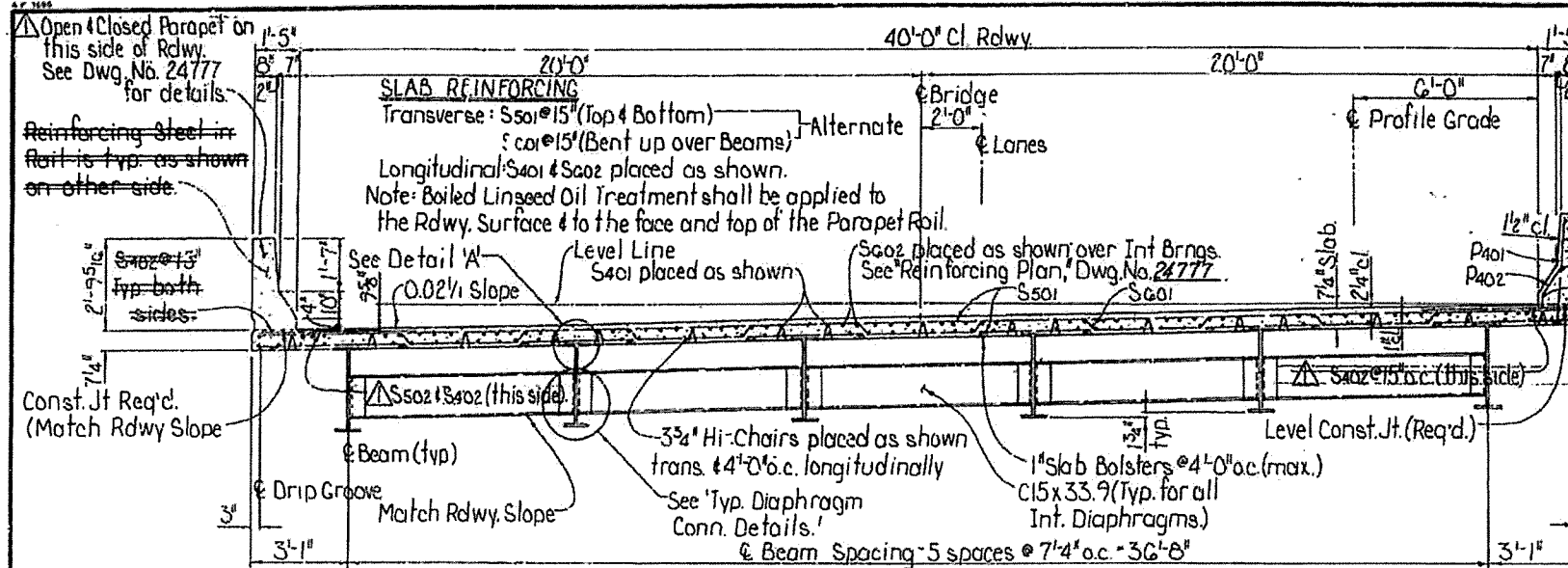
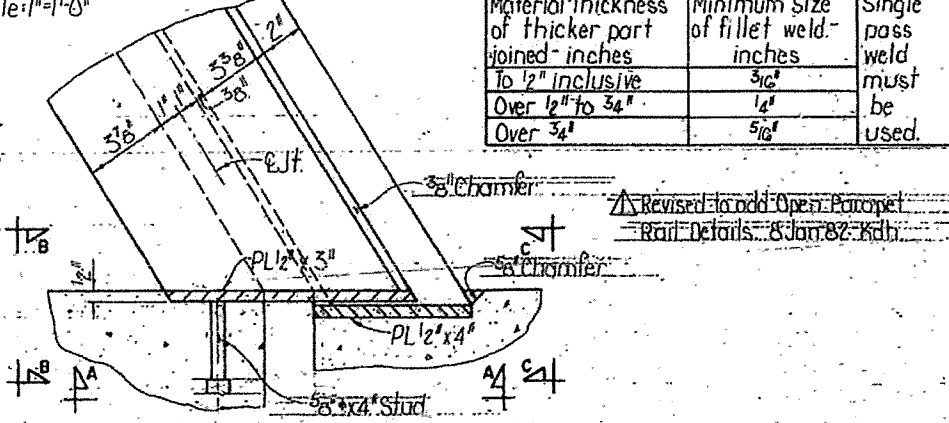


TABLE FOR WELD

Material Thickness of thicker part joined - inches	Minimum Size of fillet weld - inches	Single pass weld must be used
To 1/2" inclusive	3/16"	
Over 1/2" to 3/4"	1/4"	
Over 3/4"	5/16"	

When a fillet weld size, as shown on plans, is larger than the minimum, the first pass shall be at least as large as that specified for Minimum Size of fillet weld.



SHEET 1 OF 3
DETAILS OF 327'-0" CONTINUOUS COMPOSITE W-BEAM UNIT
OUACHITA COUNTY
ROUTE 7 SEC. 2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DESIGNED BY: KDH DATE: 29 JUNE 81
CHECKED BY: CES DATE: 8-22-81 SCALE: AS SHOWN
DRAWN BY: USA DATE: JULY 81
BRIDGE NO. 5901 A & B - DRAWING NO. 24775

DISTRICT 7 BRIDGE PAINTING (S)
FOR INFORMATION ONLY

REV.	DATE	BY	CHKD.	APP.
12-21-91				
5901A				

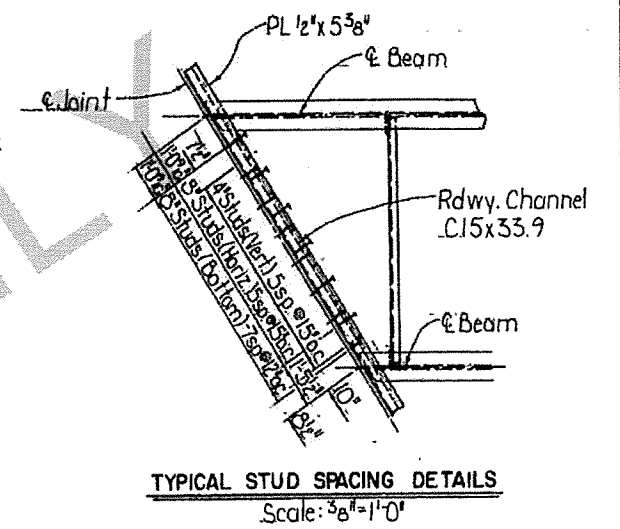
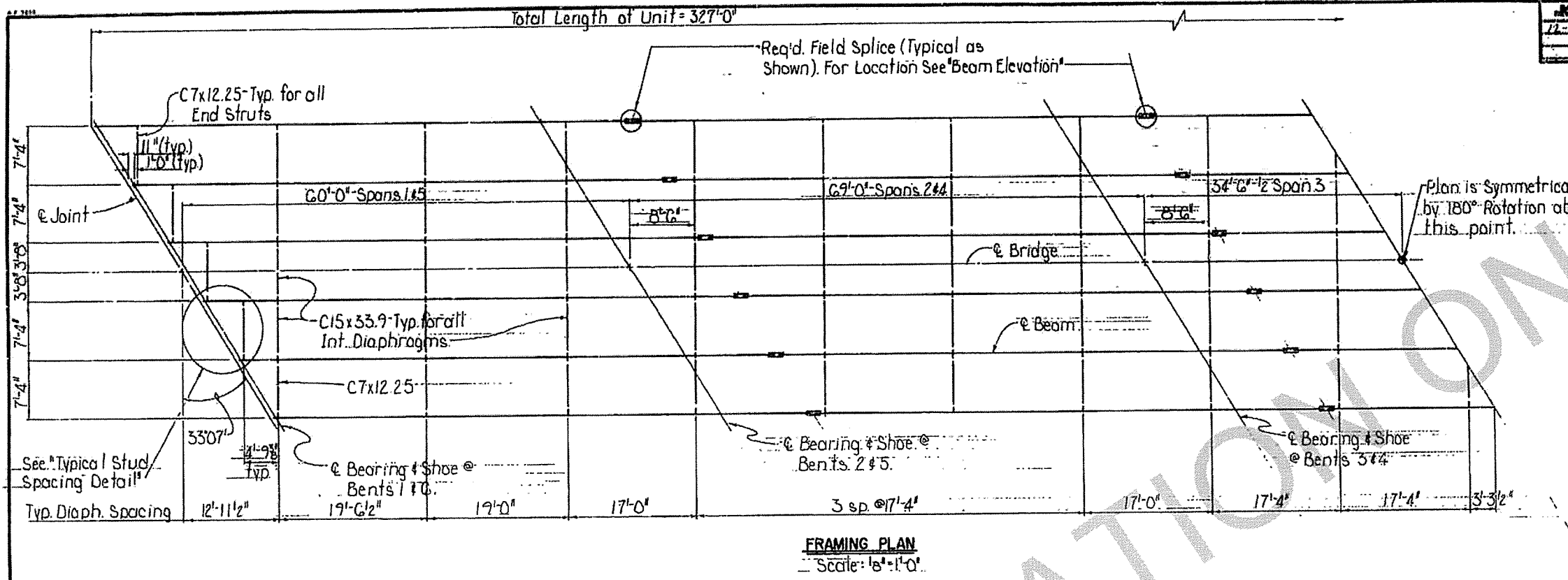
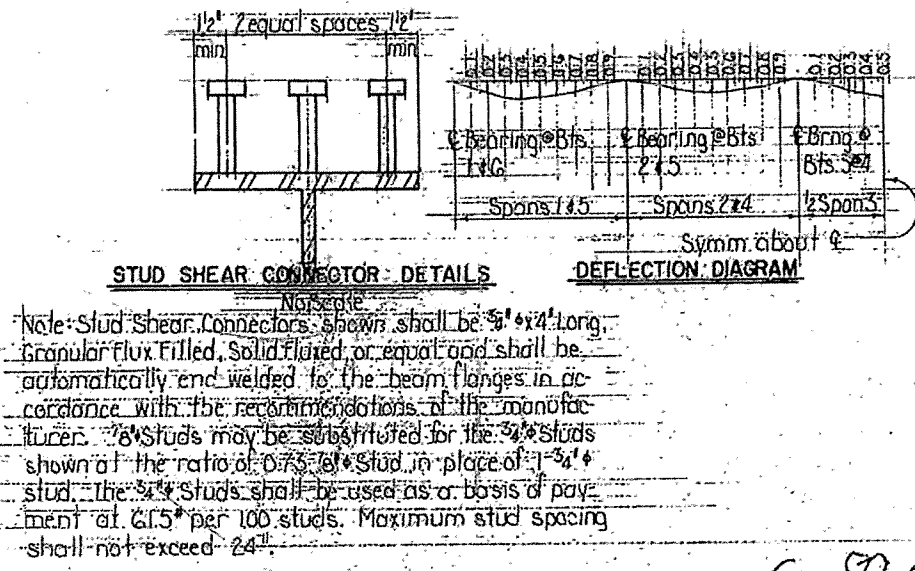
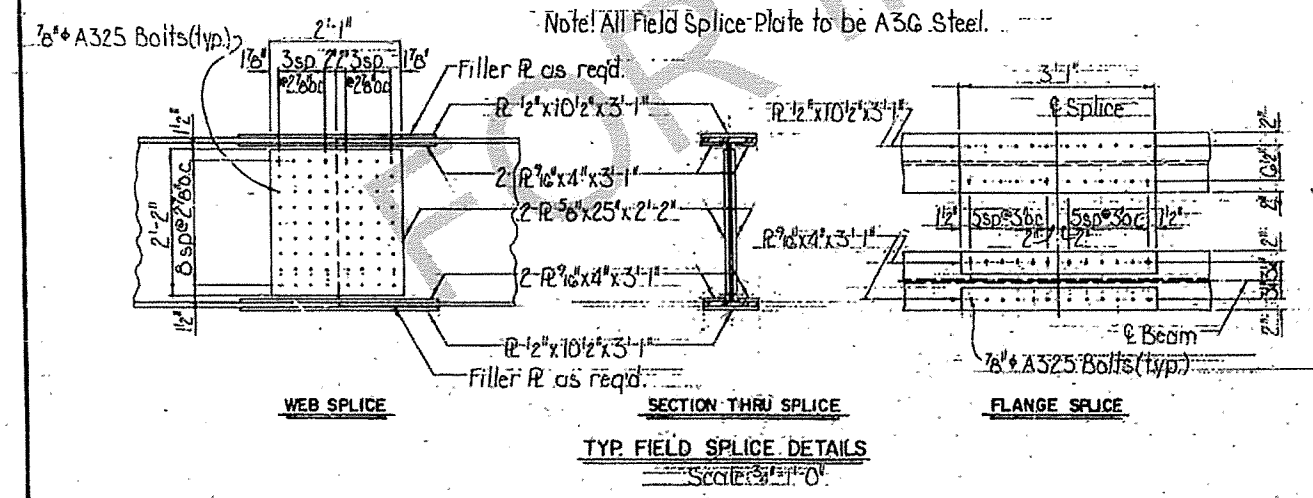
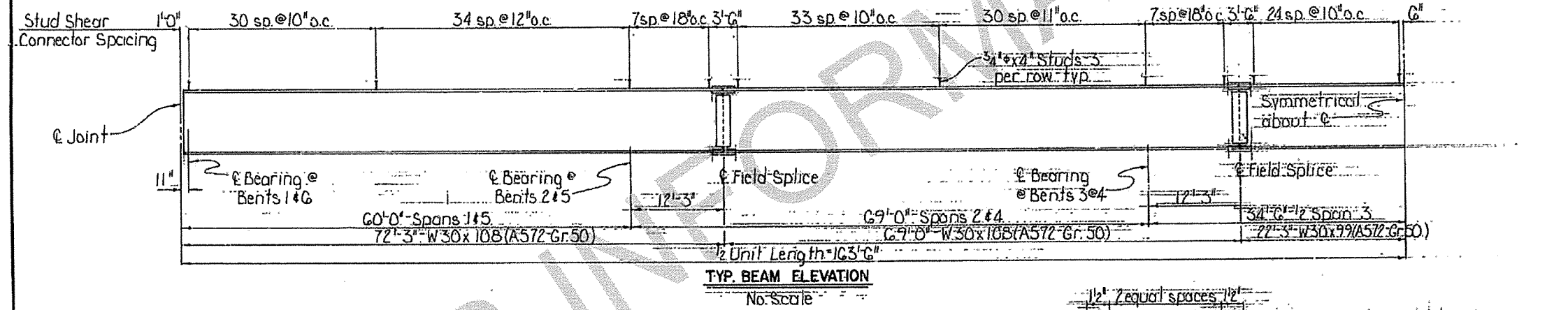


TABLE OF DEFLECTIONS (INCHES)

SPRAY POINT	STRUCTURAL STEEL		STRUCTURAL STEEL + SLAB		STRUCTURAL STEEL + SLAB + PARAPET	
	EXT. BEAM	INT. BEAM	EXT. BEAM	INT. BEAM	EXT. BEAM	INT. BEAM
0	0	0	0	0	0	0
0.1	.042	.045	.258	.280	.293	.298
0.2	.077	.083	.476	.517	.541	.551
0.3	.101	.109	.627	.681	.713	.726
0.4	.112	.120	.695	.756	.791	.805
0.5	.109	.117	.677	.736	.772	.785
0.6	.093	.100	.582	.631	.664	.674
0.7	.068	.073	.427	.464	.488	.496
0.8	.039	.041	.247	.268	.283	.287
0.9	.013	.013	.086	.093	.098	.099
1.0	0	0	0	0	0	0
1.1	.010	.011	.047	.052	.057	.057
1.2	.035	.039	.189	.207	.222	.224
1.3	.063	.070	.347	.379	.406	.409
1.4	.082	.091	.465	.509	.541	.548
1.5	.091	.100	.512	.559	.595	.602
1.6	.084	.092	.474	.516	.550	.555
1.7	.065	.071	.361	.392	.420	.423
1.8	.038	.041	.204	.221	.239	.239
1.9	.012	.012	.058	.063	.069	.068
2.0	0	0	0	0	0	0
2.1	.012	.014	.088	.097	.102	.104
2.2	.038	.043	.263	.288	.304	.309
2.3	.065	.074	.446	.489	.514	.524
2.4	.086	.097	.581	.635	.668	.680
2.5	.092	.104	.629	.688	.723	.737



SHEET 2 OF 3
DETAILS OF 327'-0" CONTINUOUS
COMPOSITE W-BEAM UNIT
OUACHITA COUNTY
ROUTE 7 SEC. 2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DESIGNED BY: KDH DATE: 1 JULY 81
CHECKED BY: C.E.S. DATE: 7-10-81
DRAWN BY: J.E.P. DATE: 7-10-81
SCALE: AS NOTED
BRIDGE NO. 5901A8.8 DRAWING NO. 24776

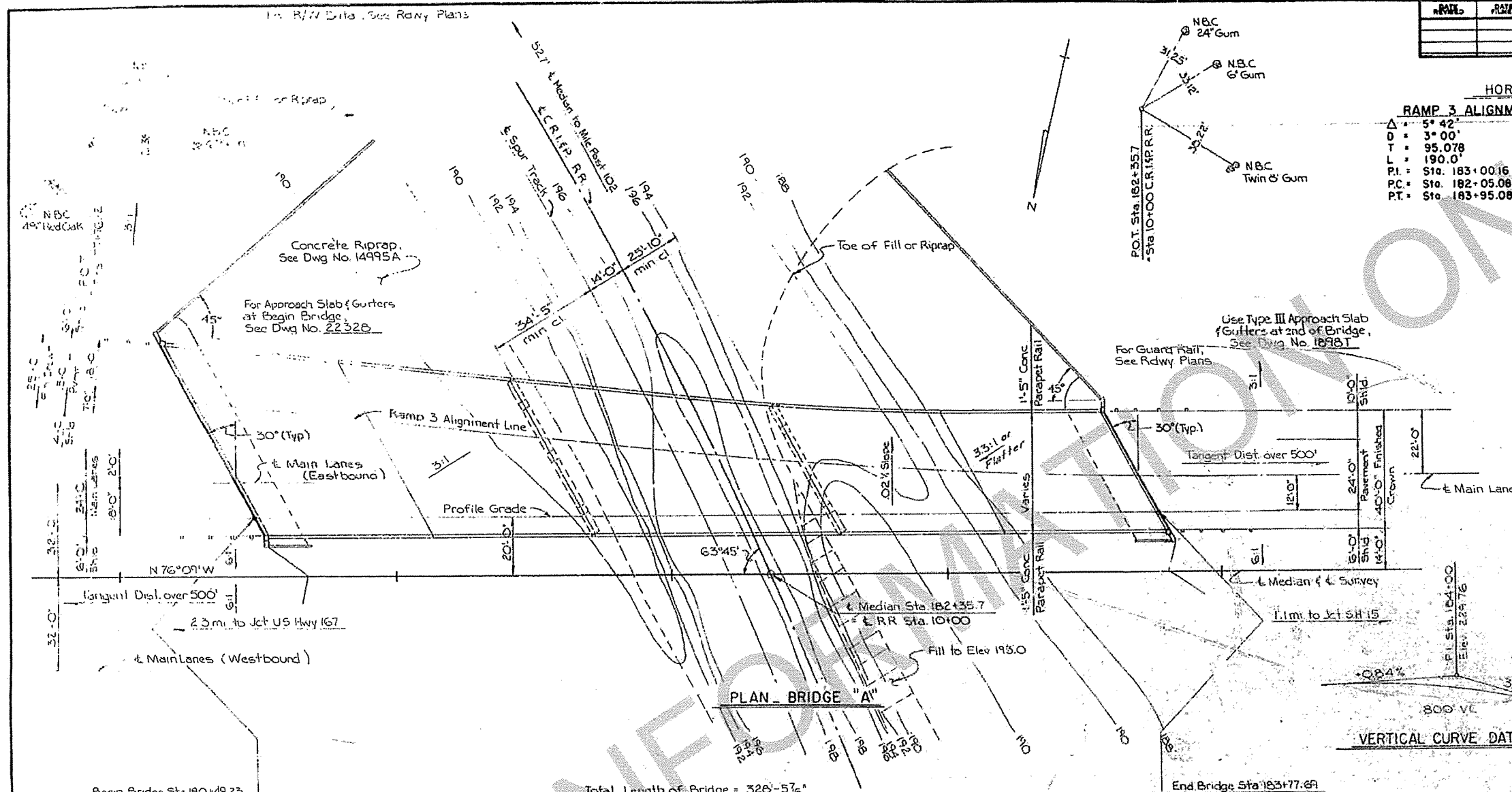
Forest Park

DISTRICT 7 BRIDGE PAINTING (S)
FOR INFORMATION ONLY

ROUTE	FILE NO.	FILE NO.	FILE NO.	FILE NO.	FED. ROAD NO.	STATE	FED. AID PROJ. NO.
6	ARK.						
JOB NO. 7706							
5789 A - LAICUT -							22307

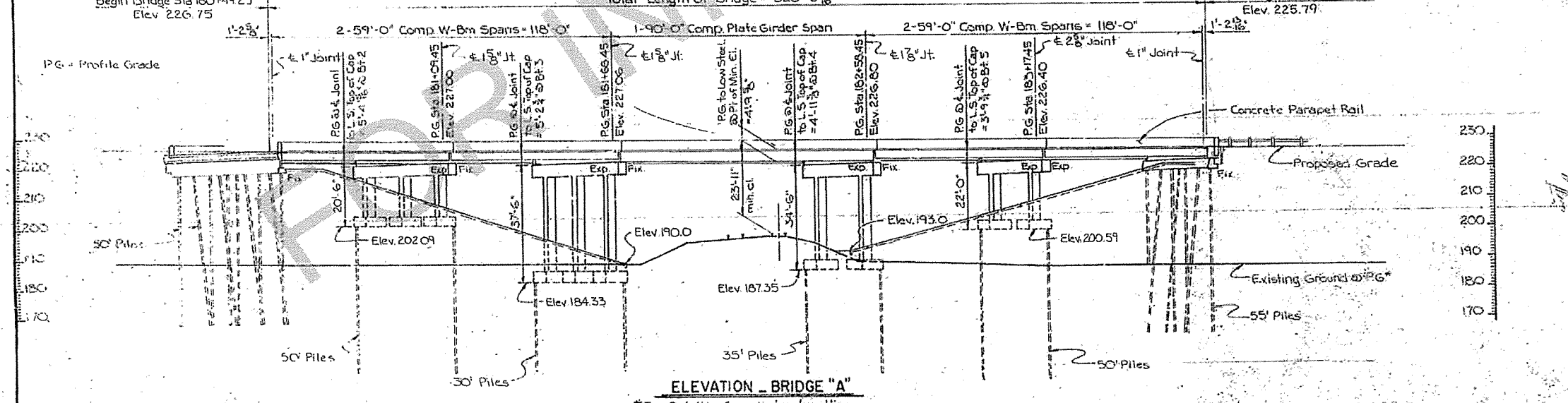
HORIZONTAL CURVE DATA

RAMP 3 ALIGNMENT		GUTTER ALIGNMENT	
Δ	5° 42'	Δ	5° 42'
D	3° 00'	D	5° 17' 28.14"
T	95.078	T	53.908'
L	190.0'	L	107.727'
P.I.	Sta. 183+00.16	P.I.	Sta. 182+60.91
P.C.	Sta. 182+05.08	P.C.	Sta. 182+07.00
P.T.	Sta. 183+95.08	P.T.	Sta. 183+14.73



VERTICAL CURVE DATA

Station	Elevation
P.I. Sta. 184+00	Elev. 225.76
Station 180+00	Elev. 226.75
Station 183+77.69	Elev. 225.79



For General Notes, see Dwg No. 22307
For Location of Soil Borings and Boring Legend, see Dwg. No. 22308

EXHIBIT "A"
SHEET 1 OF 3
LAYOUT OF BRIDGES OVER C.R.I. & P.R.R.
S. WEST AVE. - GARLAND AVE. GR. & STRS.
UNION COUNTY

ROUTE 82 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

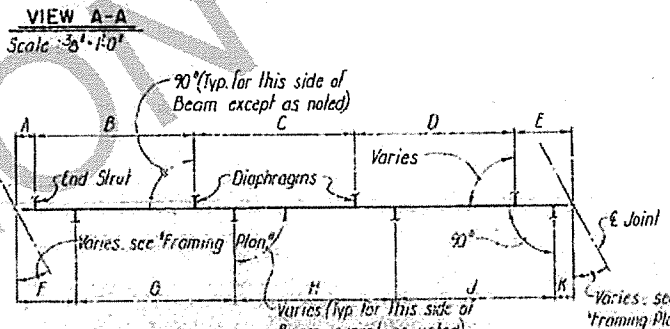
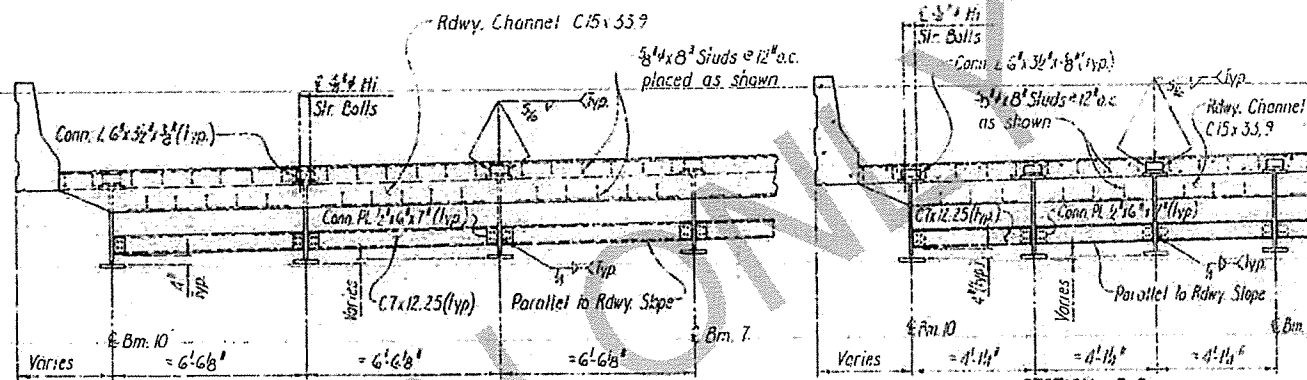
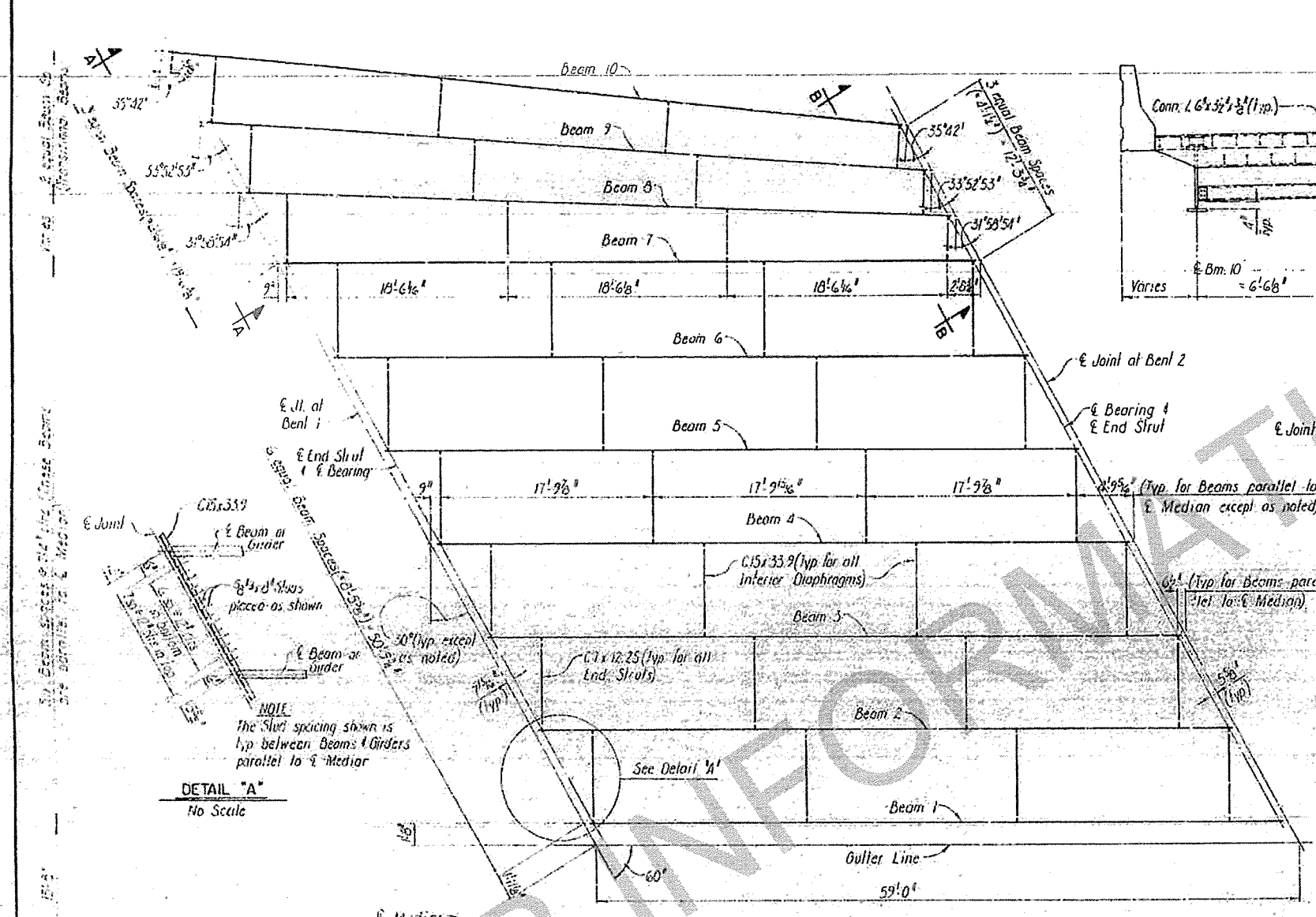
DRAWN BY: J.G.T. DATE: 9-11-78
CHECKED BY: C.E.P. DATE: 1-30-79
DESIGNED BY: J.A.S. DATE: _____
BRIDGE NO. 5789 A DRAWING NO. 22307

Visual Products
ENGINEERS

**For Details of required undercutting, see Roadway Plans.

RAIL	STATE	FED. AID PROJ. %
	ARK.	77.00
JOB NO. 7706		

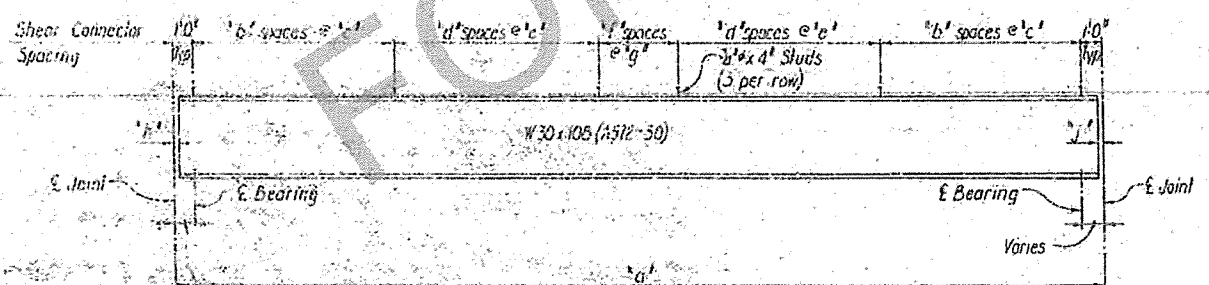
5789A-SPAN I DET'LS.-22318



	BEAM 8	BEAM 9	BEAM 10
A	9 3/4"	9 3/8"	-
B	18' 10 1/2"	19' 3 3/8"	-
C	18' 10 1/2"	19' 3 3/8"	-
D	18' 10 1/2"	19' 3 3/8"	-
E	2' 10 1/8"	2' 11 1/8"	-
F	4' 0 1/8"	4' 2 3/8"	4' 5"
G	18' 6 1/2"	18' 10 1/2"	19' 3 3/8"
H	18' 6 1/2"	18' 10 1/2"	19' 3 3/8"
J	18' 7 1/2"	19' 0"	19' 3 3/8"
K	6 3/4"	6 3/4"	6 3/4"

Beam No.	Structural Steel		Structural Steel / Skid		Structural Steel, Slab & Rail	
	1/4 Span	1/2 Span	1/4 Span	1/2 Span	1/4 Span	1/2 Span
1	3/16"	1/4"	7/16"	1/2"	11/16"	1 1/8"
2 thru 6	3/16"	1/4"	11/16"	1 1/2"	1 1/2"	1 5/8"
7	5/16"	1/4"	7/8"	1 1/2"	1 1/2"	1 3/4"
8	3/8"	1/4"	1 1/8"	1 1/2"	1 1/2"	1 3/4"
9	3/8"	1/4"	1 1/8"	1 1/2"	1 1/2"	1 3/4"
10	3/8"	1/4"	1 1/8"	1 1/2"	1 1/2"	1 3/4"

	BEAM 1-7	BEAM 8	BEAM 9	BEAM 10
a'	59' 0"	60' 2 1/2"	61' 6 1/2"	62' 11"
b'	15"	10"	10"	10"
c'	11"	16"	16"	17"
d'	14"	10"	10"	10"
e'	12"	18"	18"	18"
f'	2"	1"	2"	2"
g'	9"	18 1/2"	17 1/2"	18 1/2"
h'	2"	2 1/2"	2 1/2"	2 1/2"
i'	2 1/2"	2 1/2"	2 1/2"	2 1/2"

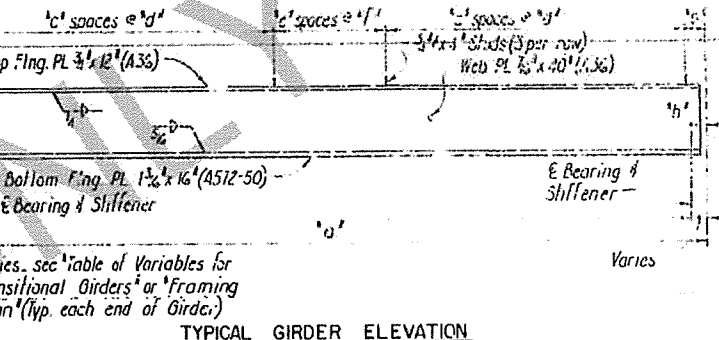
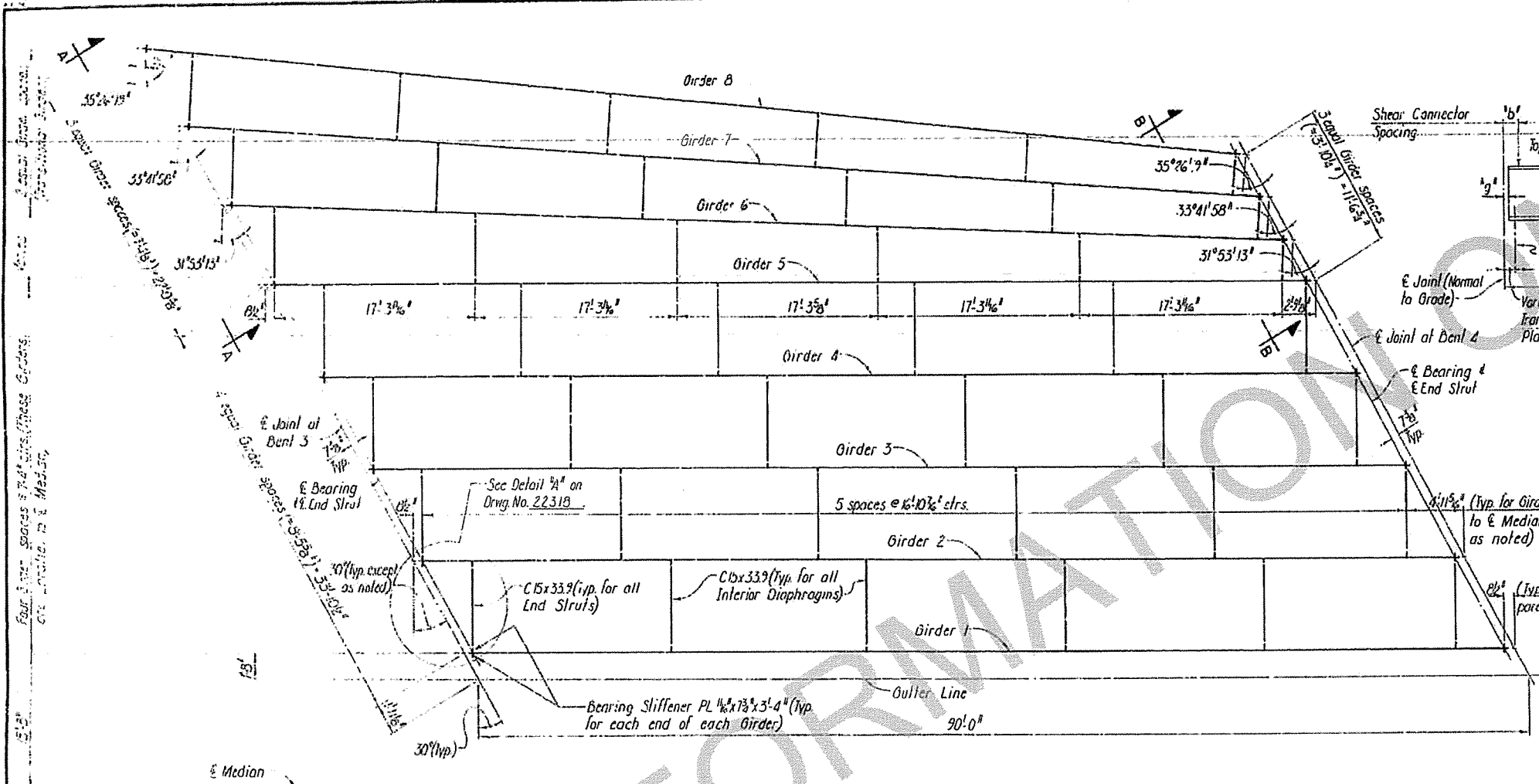


SHEET 1 OF 2
DETAILS OF SPAN NO. 1 (BR. "A")
S. WEST AVE. - GARLAND AVE GR. & STRS.
UNION COUNTY
ROUTE 82 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: K.M.G. DATE: 9 JAN 79
CHECKED BY: C.S.S. DATE: 2-2-79 SCALE: AS SHOWN
DESIGNED BY: J.B.F. DATE: -
BRIDGE NO. 5789 A DRAWING NO. 22318

W. J. Pinkerton
BRIDGE ENGINEER

DISTRICT 7 BRIDGE PAINTING (S)
FOR INFORMATION ONLY

DATE	BY	REVISION	REASON
6	ARK.		
JOB NO. 7706			
① 5789A - SPAN OTLS. - 22322			



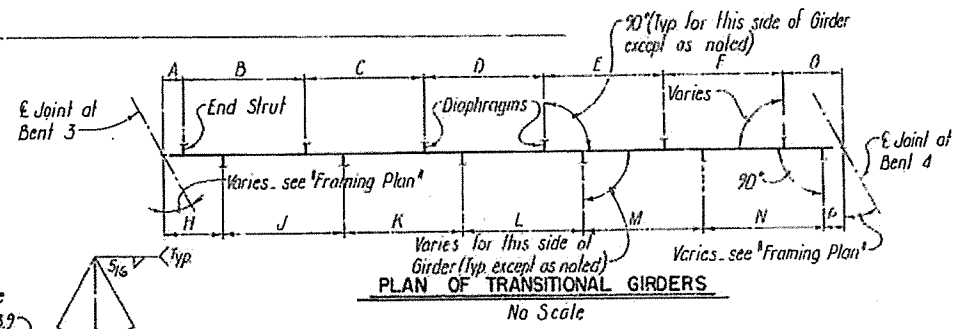
TYPICAL GIRDER ELEVATION
No Scale
TABLE OF VARIABLES FOR
TYPICAL GIRDER ELEVATION

	GIRDER 1-5	GIRDER 6	GIRDER 7	GIRDER 8
a'	90'-0"	91'-9 1/2"	93'-8 1/4"	95'-8"
b'	1'-3"	1'-6"	1'-6"	1'-6"
c'	27"	27"	30"	30"
d'	15"	18"	18"	18"
e'	15"	1"	1"	2"
f'	16"	21 1/2"	18"	16"
g'	23 1/2"	2 1/2"	2 1/2"	2 1/2"
h'	2 1/2"	2 1/2"	2 1/2"	2 1/2"

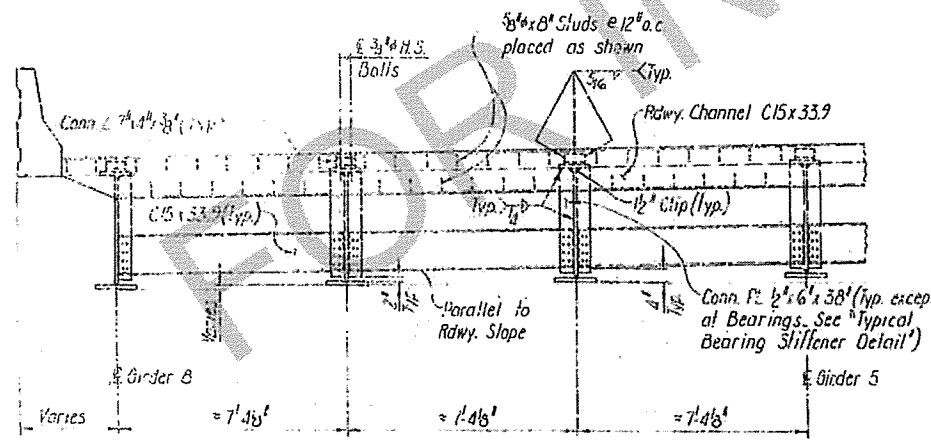
TABLE OF VARIABLES FOR
PLAN OF TRANSITIONAL GIRDERS

	GIRDER 6	GIRDER 7	GIRDER 8
A	8 1/2"	8 1/2"	
B	17'-7 1/8"	17'-11 1/8"	
C	17'-7 1/8"	17'-11 1/8"	
D	17'-7 1/8"	17'-11 1/8"	
E	17'-7 1/8"	17'-11 1/8"	
F	17'-7 1/8"	17'-11 1/8"	
G	2'-0 1/2"	2'-11 1/8"	
H	4'-0 1/2"	4'-7 1/8"	4'-9 1/8"
J	17'-3 1/2"	17'-7 1/8"	18'-0"
K	17'-3 1/2"	17'-7 1/8"	18'-0"
L	17'-3 1/2"	17'-7 1/8"	18'-0"
M	17'-3 1/2"	17'-7 1/8"	18'-0"
N	17'-5 1/2"	17'-9"	18'-1 1/2"
P	8 1/2"	8 1/2"	9 1/2"

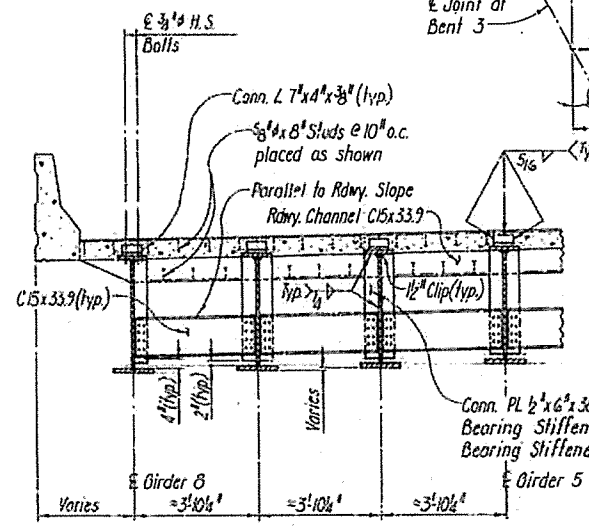
FRAMING PLAN FOR SPAN 3
Scale: 3/8" = 1'-0"



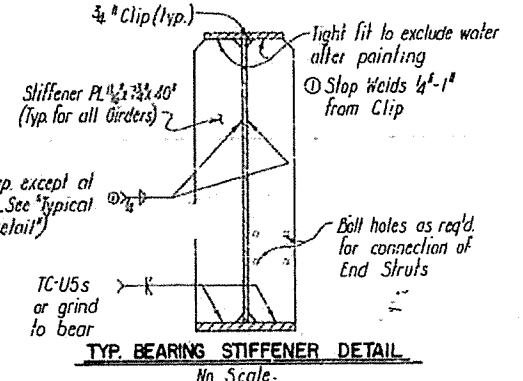
PLAN OF TRANSITIONAL GIRDERS
No Scale



VIEW A-A
Scale: 3/8" = 1'-0"



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



TYP. BEARING STIFFENER DETAIL
No Scale

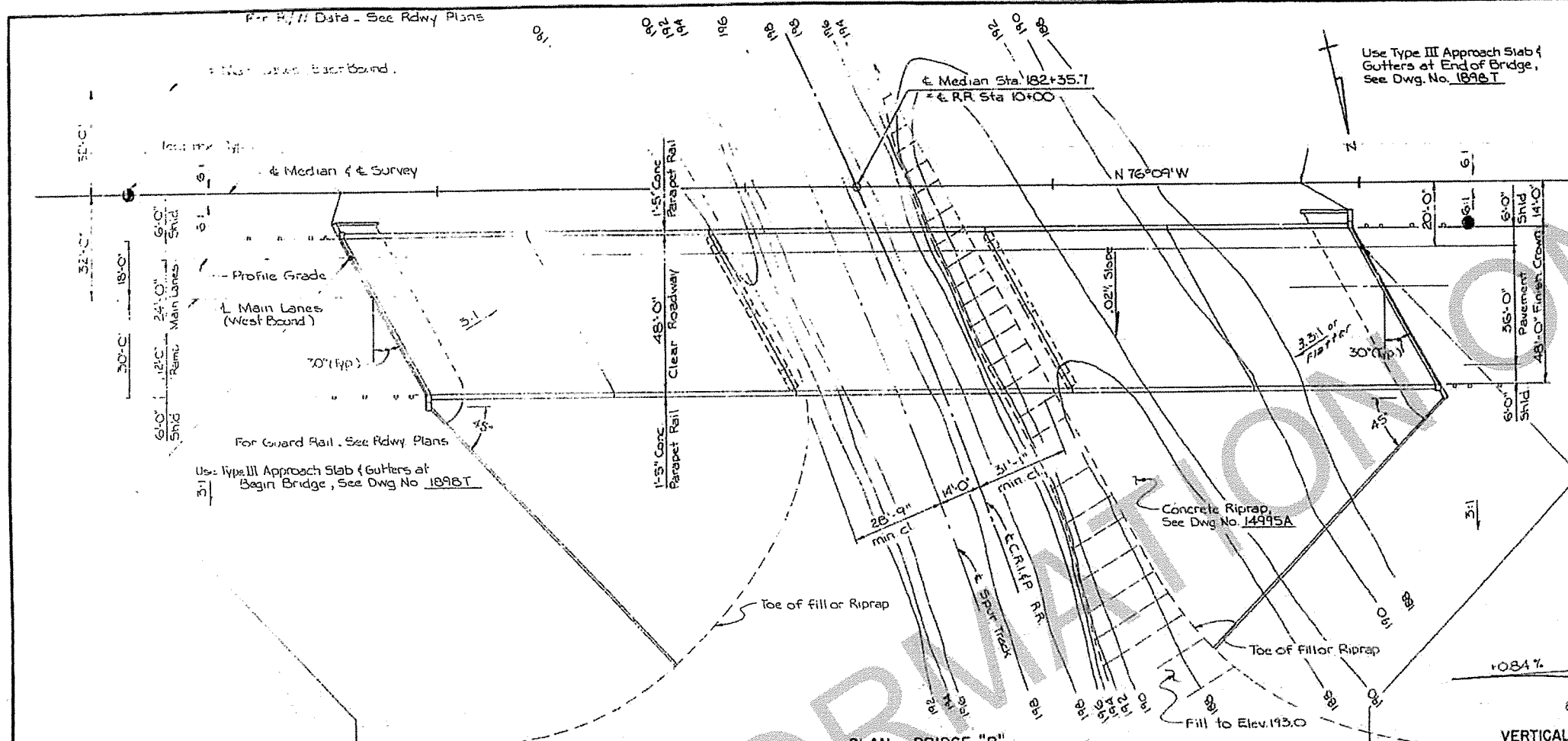
SHEET 1 OF 2
DETAILS OF SPAN NO. 3 (BR. "A")
S. WEST AVE. - GARLAND AVE GR. & STRS.
UNION COUNTY

ROUTE 82 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: K.M.G. DATE: 12 JAN 79
CHECKED BY: C.E.E. DATE: 2-9-79 SCALE: AS SHOWN
BRIDGE NO. 5789.A DRAWING NO. 22322

Wesley Pinkerton
BRIDGE ENGINEER

DISTRICT 7 BRIDGE PAINTING (S)
FOR INFORMATION ONLY

DATE REVISED	BY	REASON	DATE	FILE NO.	DATE
				6	ARK.
			JOB NO.	7706	
			①	5789 B - LAYOUT - 22308	



- BORING LEGEND**
- A. WET, VERY SOFT, BROWN CLAYEY SILT WITH ORGANIC MATTER.
 - B. MOIST TO WET, LOOSE, BROWNISH GRAY SAND.
 - C. WET, VERY SOFT, GRAY SILTY SAND.
 - D. WET, SOFT, BROWN AND GRAY SANDY CLAY.
 - E. WET, MEDIUM STIFF, GRAY SANDY CLAY.
 - F. WET, MEDIUM DENSE TO DENSE, LIGHT GRAY SAND WITH CLAY SEAMS.
 - G. WET, MEDIUM DENSE, GRAY TO LIGHT GRAY SAND.
 - H. WET, MEDIUM DENSE, GRAY SAND WITH SEAMS OF ORGANIC MATTER.
 - I. WET, STIFF, GRAY AND BROWN LAMINATED SILTY CLAY WITH SEAMS OF SAND.
 - J. WET, VERY STIFF, GRAY AND BROWN LAMINATED SILTY CLAY WITH SEAMS OF SAND.
 - K. MOIST, STIFF, BROWNISH GRAY SANDY CLAY WITH ORGANIC MATTER.
 - L. WET, LOOSE, REDDISH BROWN SILTY SAND.
 - M. WET, MEDIUM DENSE, REDDISH BROWN TO GRAY SILTY SAND.
 - N. WET, MEDIUM DENSE, DARK GRAY SILTY SAND.
 - O. WET, MEDIUM DENSE TO DENSE, GRAY SAND WITH A SMALL AMOUNT OF GRAVEL.
 - P. WET, DENSE TO MEDIUM DENSE, GRAY SAND.
 - Q. WET, MEDIUM DENSE TO DENSE, GRAY AND BROWN SAND WITH SEAMS OF LIGNITE.
 - R. WET, DENSE, GRAY AND BROWN SAND WITH SEAMS OF LIGNITE.
 - S. MOIST, HARD, BROWN LAMINATED SILTY CLAY WITH LIGNITE.

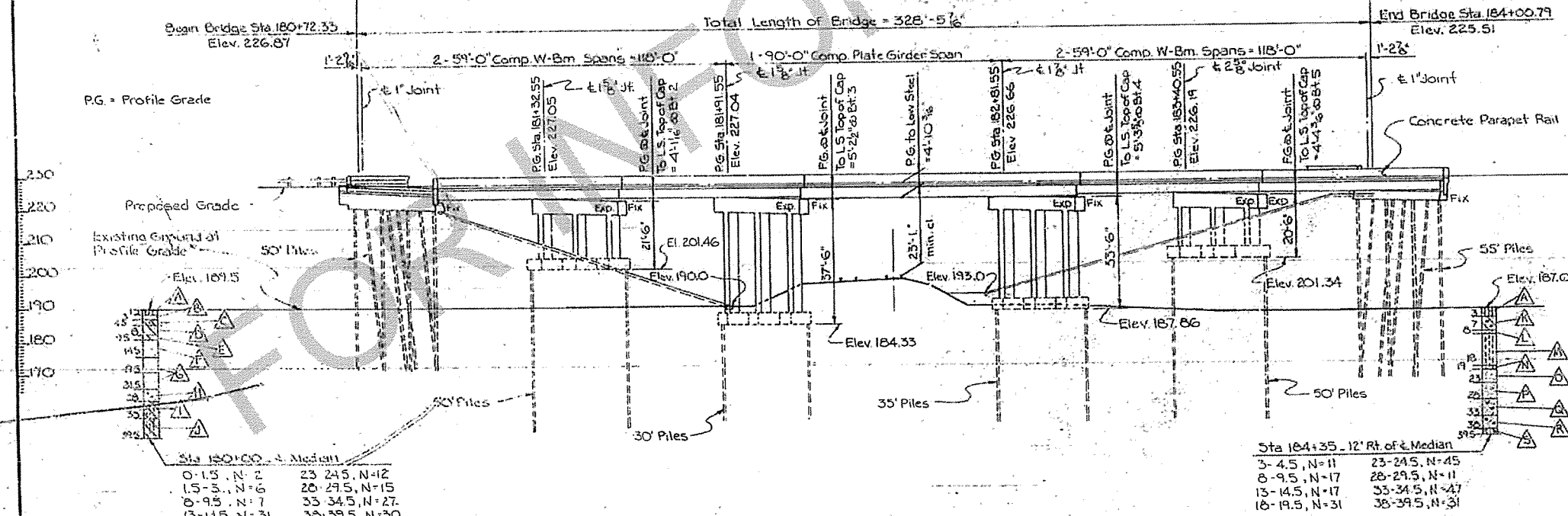


EXHIBIT "A"
SHEET 2 OF 3
LAYOUT OF BRIDGES OVER C.R.I. & P. R.R.
S. WEST AVE. - GARLAND AVE. GR. & STRS.
UNION COUNTY

ROUTE 82 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DEATH BY: J.G.T. DATE: 8-31-78
CHECKED BY: G.S. DATE: 1-30-79
DESIGNED BY: J.A.Z. DATE: 1-30-79

BRIDGE NO. 5789 B DRAWING NO. 22308

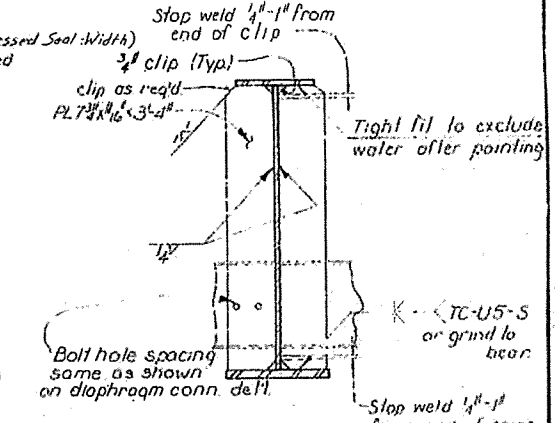
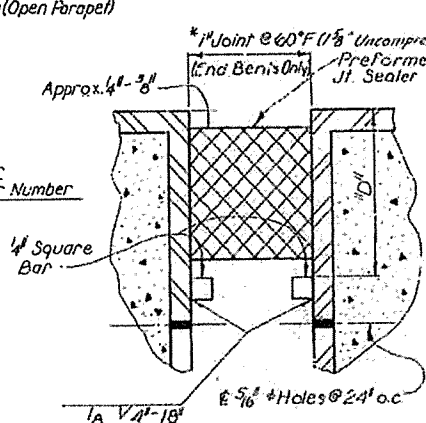
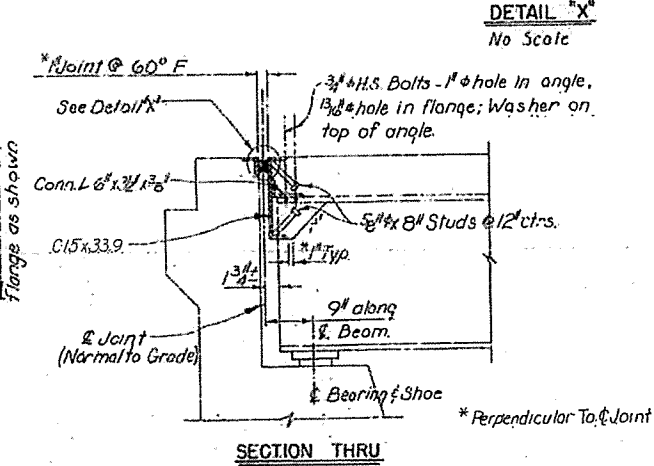
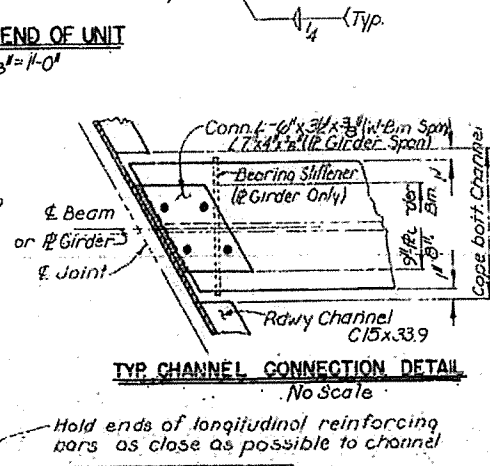
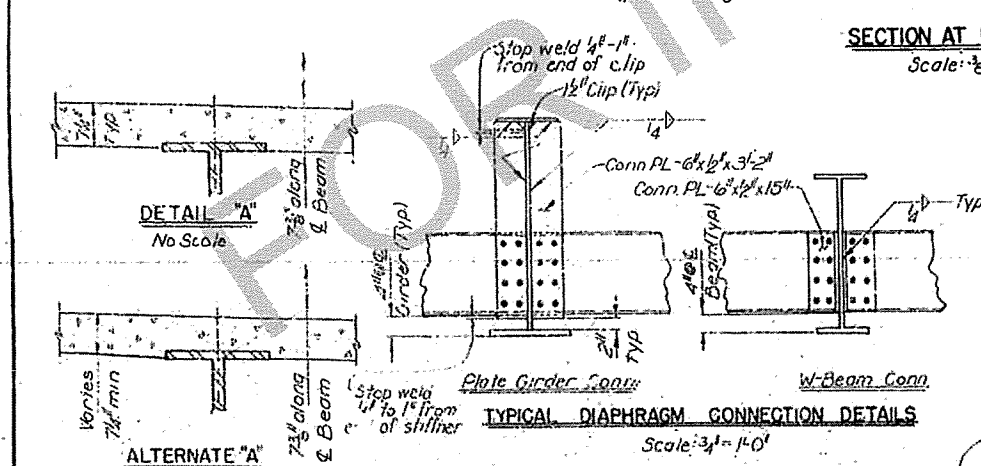
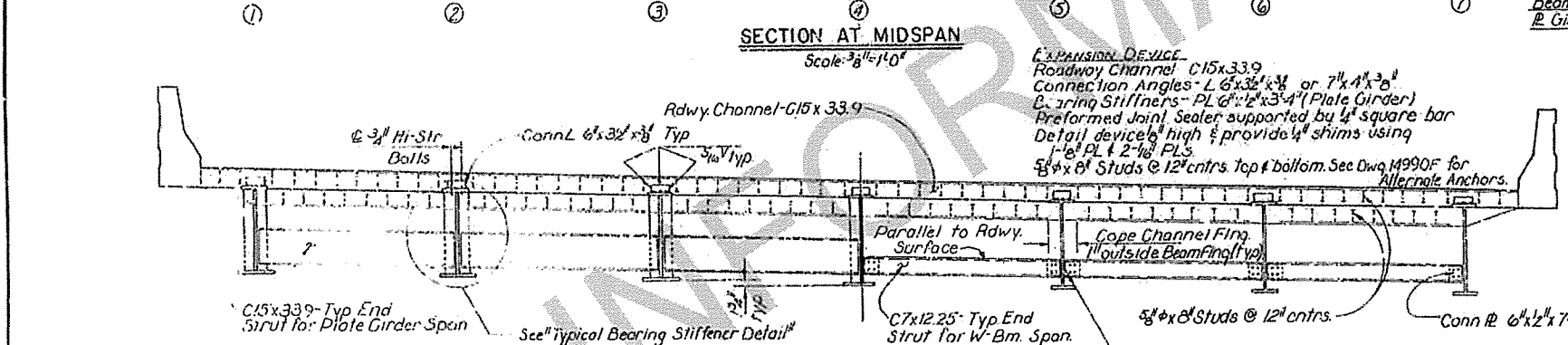
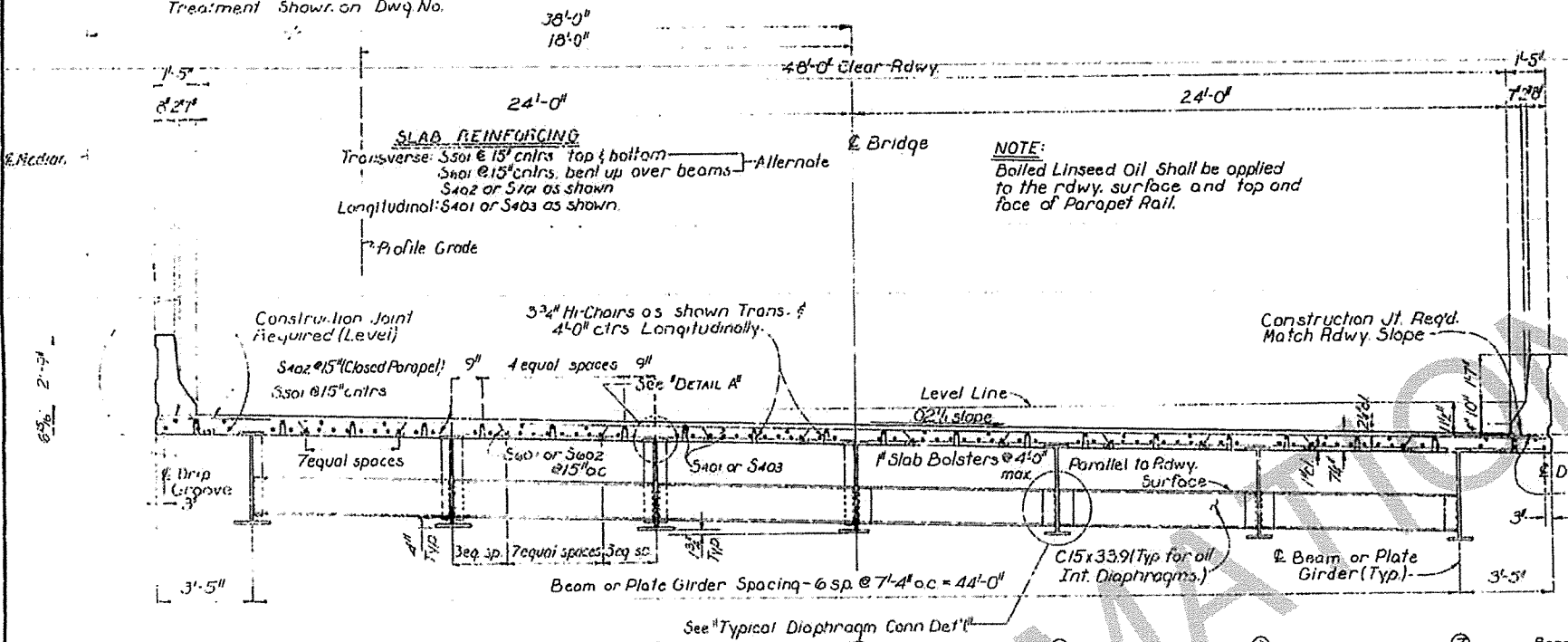
SCALE: 1" = 20'

* For Details of required underpinning, see Roadway Plans.

DATE	BY	DATE	BY	REV.
				6

6 APR. 1978
JOB NO. 7706
57898-SPAN DETAILS-22333

Parapet Reinforcing for Open and Closed Parapets & Details of Parapet Treatment Shown on Dwg No.



DETAILS OF 48'-0" CLEAR RDWY.
BRIDGE OVER C.R.I. & P. R.R.
S. WEST AVE. - GARLAND AVE. GR.&STRS
UNION COUNTY

ROUTE 82 - SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

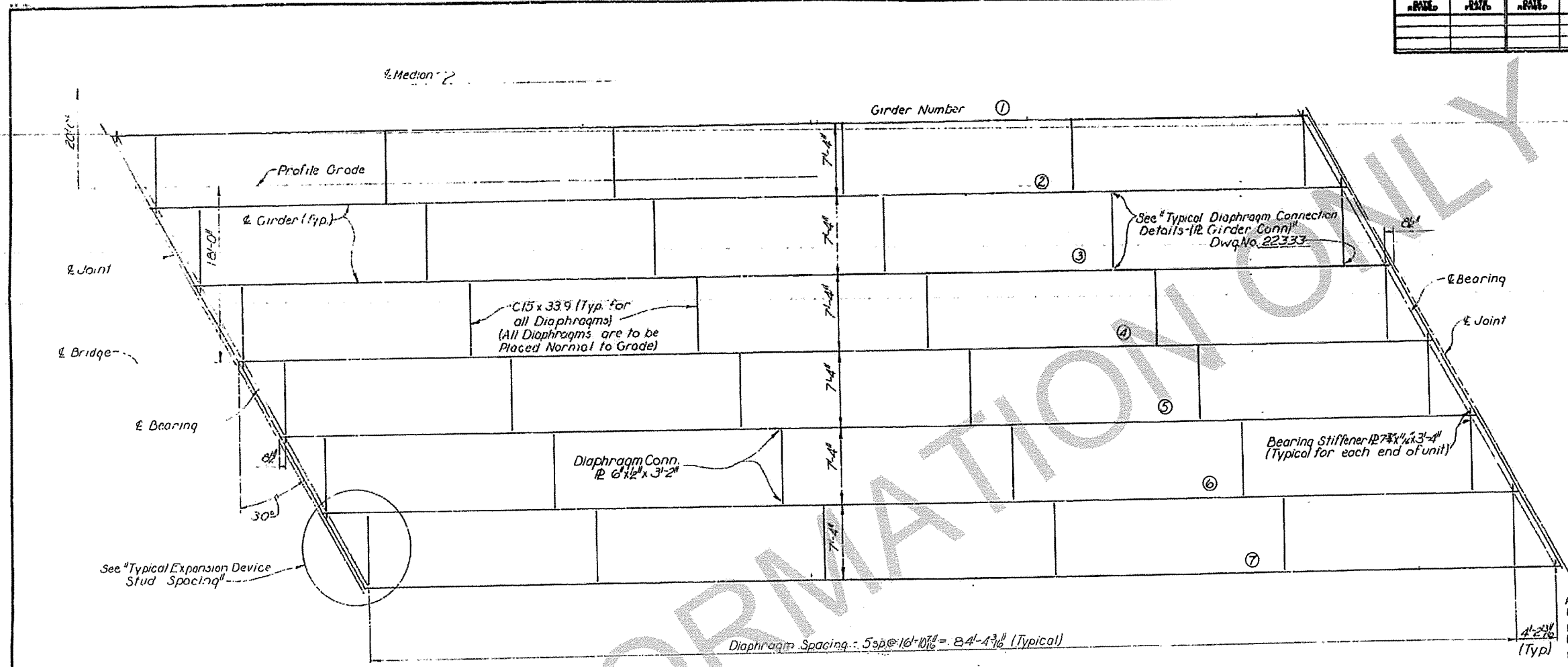
DRAWN BY: K.D.H. DATE: Nov. 21, 1978
CHECKED BY: C.S.B. DATE: 12-28-78 SCALE: As Shown
DESIGNED BY: U.G.F. DATE: -

BRIDGE NO. 57898 DRAWING NO. 22333

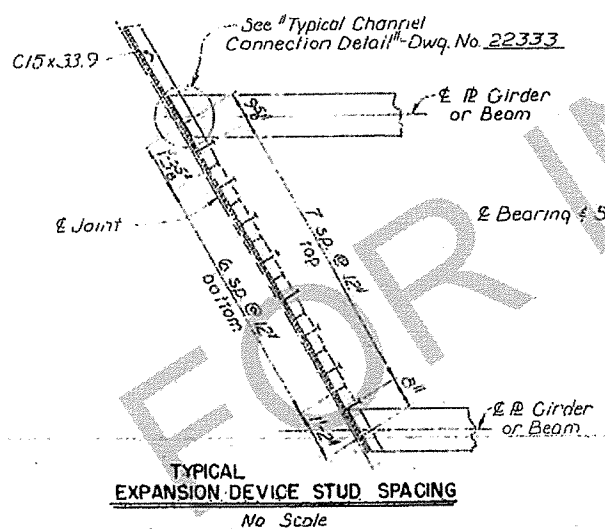
FOR INFORMATION ONLY

DISTRICT 7 BRIDGE PAINTING (S)
FOR INFORMATION ONLY

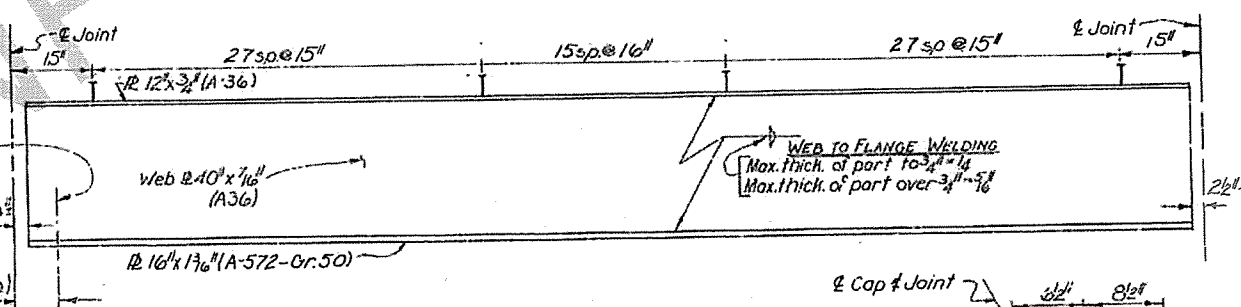
REV.	DATE	BY	CHK.	APP.
6	ARK. 11-20-79			
JOB NO. 7706				
5789B-90' COMP. PLATE GIRDER SPAN DT'LS-22336				



FRAMING PLAN
No Scale



TYPICAL EXPANSION DEVICE STUD SPACING
No Scale



TYPICAL GIRDER ELEVATION
No Scale

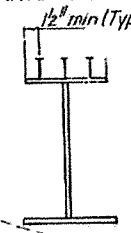
DEAD LOAD DEFLECTION

Ext. Girder = 3/8"
Int. Girder = 3/4"

NOTE: 7/8" STUDS MAY BE USED IN PLACE OF THE 3/4" STUDS THAT ARE SHOWN, AT THE RATIO OF 0.735 - 7/8" STUD IN PLACE OF ONE 3/4" STUD. THE STUD CONNECTIONS SHALL BE 4" LONG AND MAY BE GRANULAR FLUX FILLED, SOLID FLUXED, OR EQUAL, AND AUTOMATICALLY END WELDED TO THE BEAM FLANGES IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER. 3/4" STUDS WILL BE USED AS BASIS FOR MEASUREMENT OF STRUCTURAL STEEL IN SHEAR CONNECTORS.

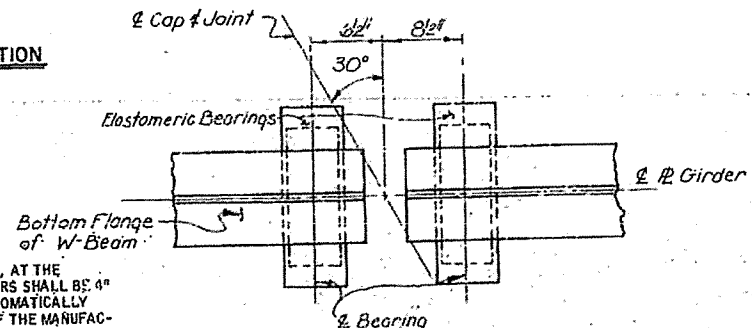
DEAD LOAD:
TO GIRDER
TO COMPOSITE BEAM
LIVE LOAD TO EACH COMPOSITE BEAM
*INCLUDES 171 PLF FUTURE WEARING SURFACE.

METHOD OF DESIGN:	LOAD FACTOR
INTERIOR BEAM	EXTERIOR BEAM
657 PLF + 1.3(WT/FT OF GIRDER)	634 PLF + 1.3 (WT/FT OF GIRDER)
283 PLF*	283 PLF*
1,333 WHEELS + IMPACT	1,257 WHEELS + IMPACT



LOWER GIRDER FLANGES SHALL BE A572, GRADE 50. ALL OTHER STRUCTURAL STEEL SHALL BE A36. THIS DRAWING TO BE USED WITH DRAWING NO. 14990F. DESIGN SPECIFICATIONS: AASHTO 1977 WITH CURRENT INTERIMS.

For "GENERAL NOTES", See Dwg. No. 22306



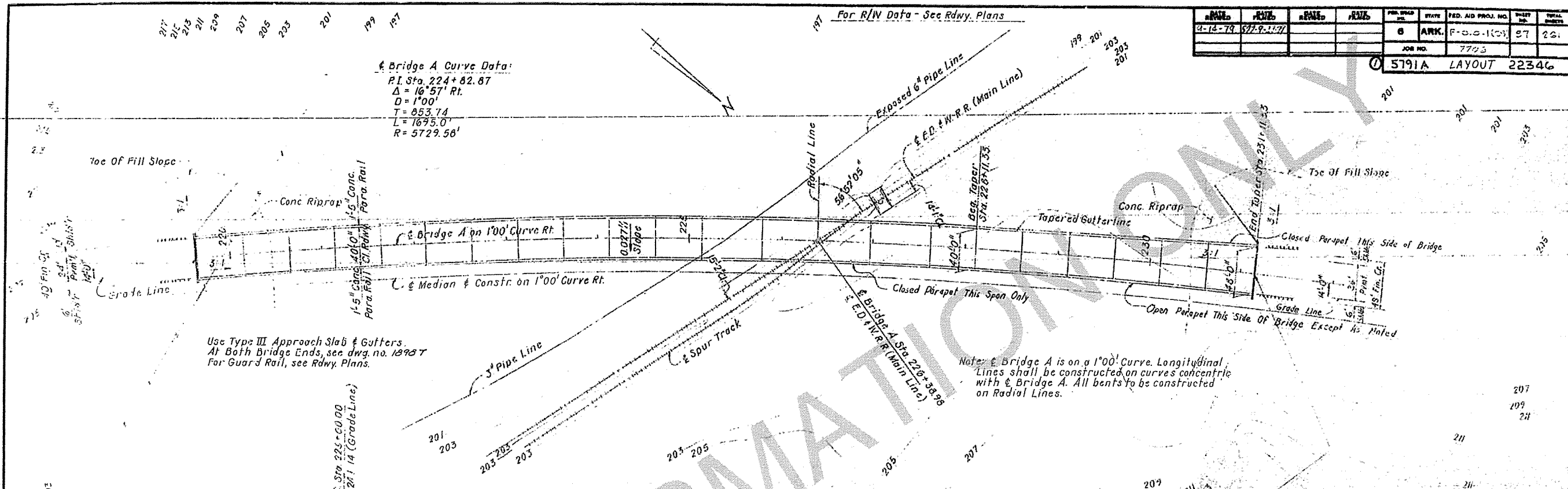
PLAN OF BEARINGS AT INT BENTS 3 & 4

SHEET 1 OF 2
SUPPLEMENTAL DETAILS OF
90'-0" COMP. PLATE GIRDER SPAN
BRIDGE OVER C.R.I. & RR.
S. WEST AVE. GARLAND AVE. GR. & STRS.
UNION COUNTY

ROUTE 82 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: K.D.H. DATE: Nov. 27, 1978
CHECKED BY: J.F.S. DATE: 12-28-79
DESIGNED BY: J.C.F. DATE: SCALE: As Shown
BRIDGE NO. 5789B DRAWING NO. 22336

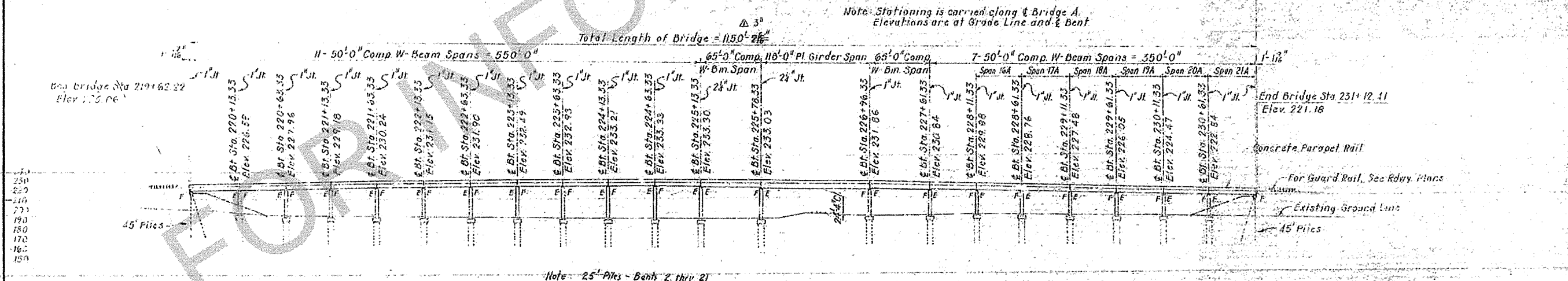
Paul Pinkerton
BRIDGE ENGINEER

DATE	BY	REVISION	NO.	PER. BRIDGE	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
4-13-79	5779-137			6	ARK.	F-0-0-1003	27	28
				JOB NO. 7723				
				5791A LAYOUT		22346		



PLAN - BR A

VC DATA - BRIDGE A



ELEVATION - BR A

SHEET 1 OF 3
LAYOUT OF OVERPASSES
EL DORADO & WESSON R.R.
S. WEST AVE. - GARLAND AVE.
UNION COUNTY
ROUTE 82C
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: H. A. J. DATE: 9-18-78
CHECKED BY: J. H. G. DATE: 10-2-78
DESIGNED BY: J. H. G. DATE: 7-2-78
BRIDGE NO. 5791 A DRAWING NO. 22346

Revised Bridge Length: L.M. 4-14-79

Wiese Products
ENGINEERS

DISTRICT 7 BRIDGE PAINTING (S)
FOR INFORMATION ONLY

DATE	BY	CHECKED	APPROVED	REV. NO.	REV. DATE
9-16-79	LM				
JOB NO. 7706			5791A SPAN DTLS. 22372		

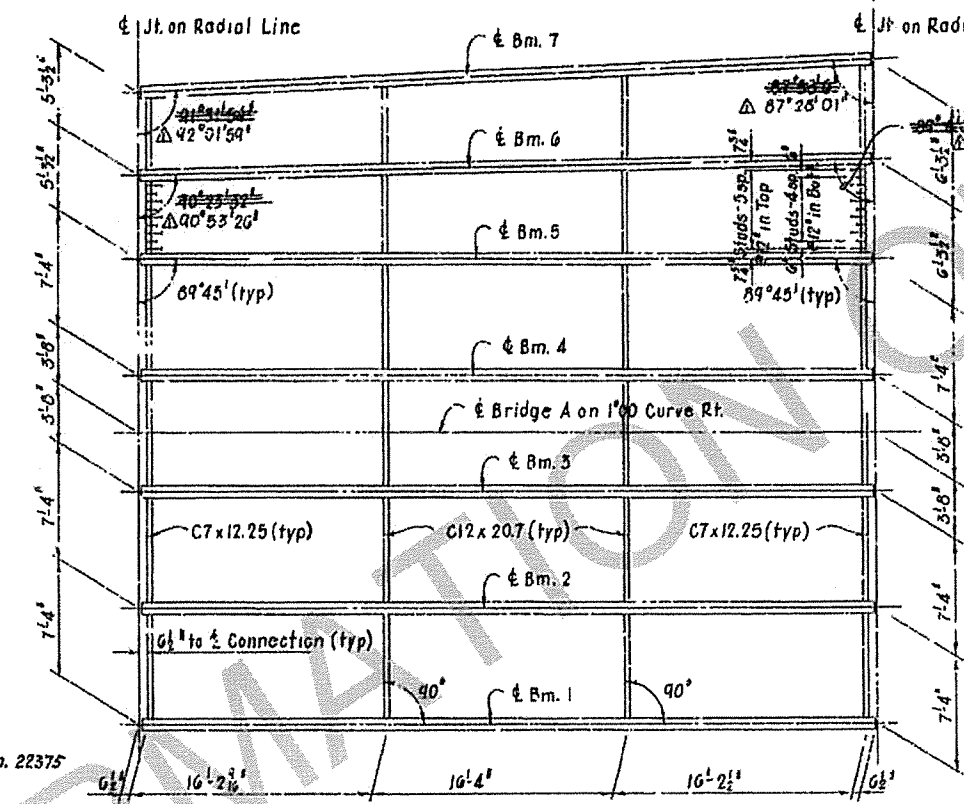
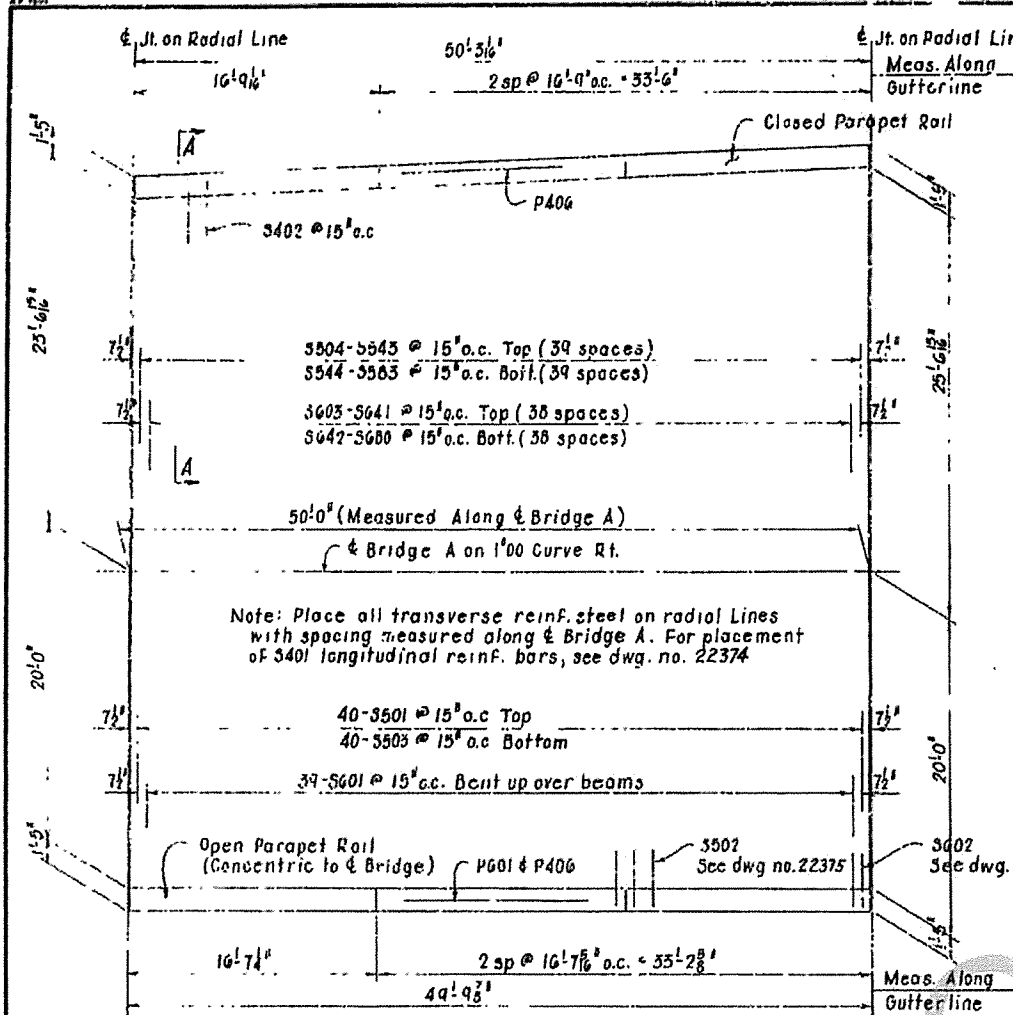


TABLE OF DEFLECTIONS

Beam No.	Structural Steel		Structural Steel & Slab		Structural Steel & Slab & Rail	
	Span 1	Span 2	Span 1	Span 2	Span 1	Span 2
7	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"
6	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"
5	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"
4	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"
3	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"
2	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"
1	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"

VARIABLES FOR BEAM

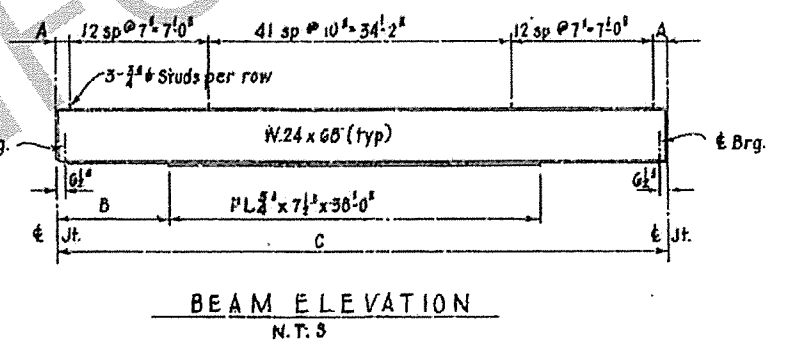
Beam No.	A	B	C
7	10'-0"	5'-0"	50'-2 1/2"
6	11'-0"	6'-0"	50'-11"
5	11'-0"	6'-0"	50'-11"
4	11'-0"	6'-0"	50'-0"
3	10'-0"	5'-11"	49'-11 1/2"
2	10'-0"	5'-11"	49'-10 1/2"
1	10'-0"	5'-11"	49'-10 1/2"

BAR LIST

Mark	No. Req'd	Length	Pin Dia.	Bending Diagram
3401	220	25'-7"	3/8"	[Bending Diagram for 3401]
3402	40	3'-11"	3/8"	
5501	40	36'-9"	3/8"	[Bending Diagram for 5501]
5502	30	4'-2"	3/8"	
5503	40	33'-4"	3/8"	
3504 to 3543	1 ea.	11'-5 1/2"	3/8"	[Bending Diagram for 3504-3543]
5544 to 5583	1 ea.	14'-10"	3/8"	
3601	34	37'-7"	3/8"	[Bending Diagram for 3601]
3602	16	4'-5"	3/8"	
3603 to 3641	1 ea.	11'-10"	3/8"	[Bending Diagram for 3603-3641]
3642 to 3680	1 ea.	14'-10"	3/8"	
P401	75	6'-1"	2"	[Bending Diagram for P401-P406]
P402	24	6'-10"	2"	
P403	91	5'-6"	2"	
P404	36	5'-2"	2"	
P405	26	6'-4"	2"	
P406	30	16'-2"	5/8"	
P601	15	16'-2"	3/8"	

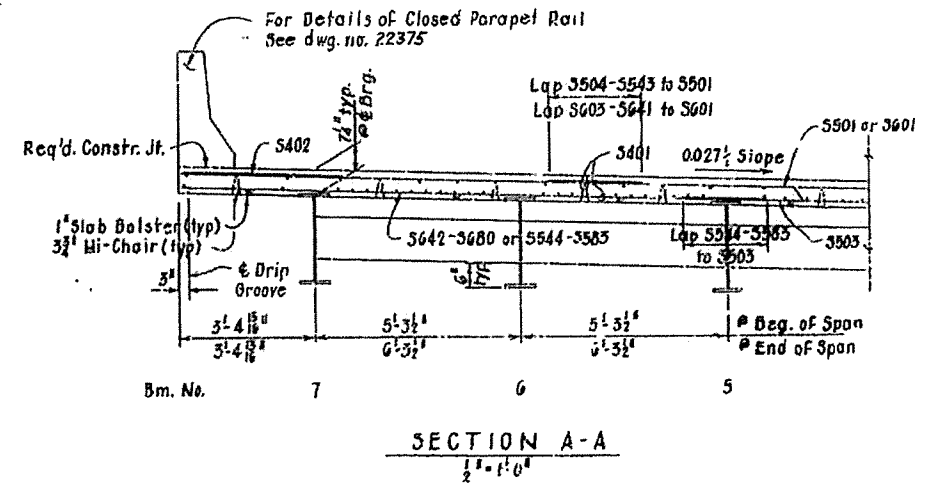
For Bending Diagrams not shown see dwg. no. 22375

Dimens. are out to out of bars.



VARIABLES FOR PARAPET RAIL

F	Open Parapet					Closed Parapet	
	a	b	c	k	m	g	n
16'-7 1/2"	2'-3 1/2"	12'-0"	7'-0"	2'-0"	11"		
16'-7 1/2"	2'-5 1/2"	12'-0"	7'-0"	2'-0"	11"		
16'-0"						4'-0"	16'-0"
16'-9 1/2"						4'-0"	16'-0"



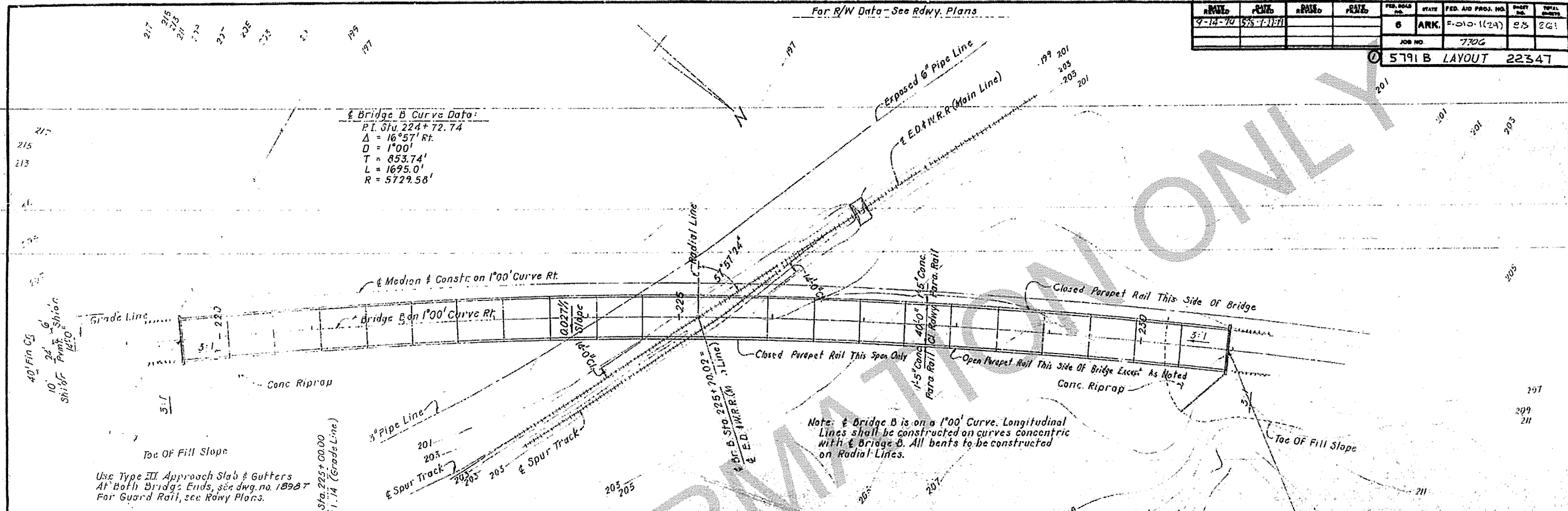
DETAILS OF 50'-0" W-BEAM SPAN 20A
ELDORADO & WESSON R.R.
S. WEST AVENUE - GARLAND AVE.
UNION CO.
ROUTE 82 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
BRIDGE NO. 5791A DRAWING NO. 22372

For General Notes, See dwg. no. 22363
For Typical Cross-Section Details, See dwg. no. 22374
For Open & Closed Parapet Railing Details, See dwg. no. 22375

Δ Revised Beam Angle. L.M. 9-16-79

Frank Pinkerton
ENGINEER

DATE	SCALE	DATE	SCALE	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
9-18-70	1/2" = 1'-0"			6	ARK.	F-010-1(24)	23	26
				JOB NO.	7706			
				5791 B LAYOUT		22347		



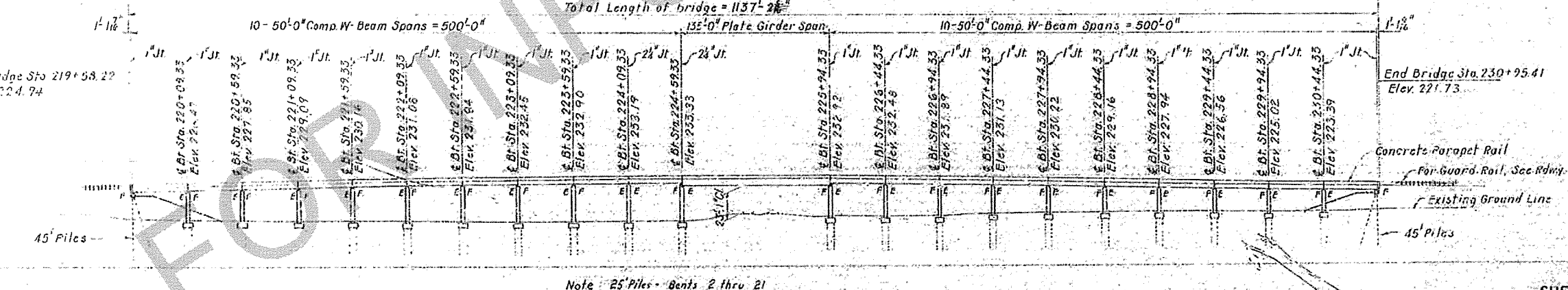
Bridge B Curve Data:
 P.I. Sta. 224+72.74
 $\Delta = 16^{\circ}57'$ Rt.
 $D = 1^{\circ}00'$
 $T = 853.74'$
 $L = 1695.0'$
 $R = 5729.58'$

Note: Bridge B is on a $1^{\circ}00'$ Curve. Longitudinal Lines shall be constructed on curves concentric with the Bridge B. All bents to be constructed on Radial Lines.

PLAN - BR B

Note: Stationing is carried along the Bridge B. Elevations are of Grade Line and the Bent.

1000' V.C.
 VC DATA - BRIDGE B
 $+2.49\%$
 -3.26%



Note: 25 Piles - Bents 2 thru 21

Bt. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
Elev.	220.47	221.85	221.09	221.59	222.08	222.57	223.06	223.55	224.04	224.53	225.02	225.51	226.00	226.49	226.98	227.47	227.96	228.45	228.94	229.43	229.92	230.41	230.90

ELEVATION - BR B

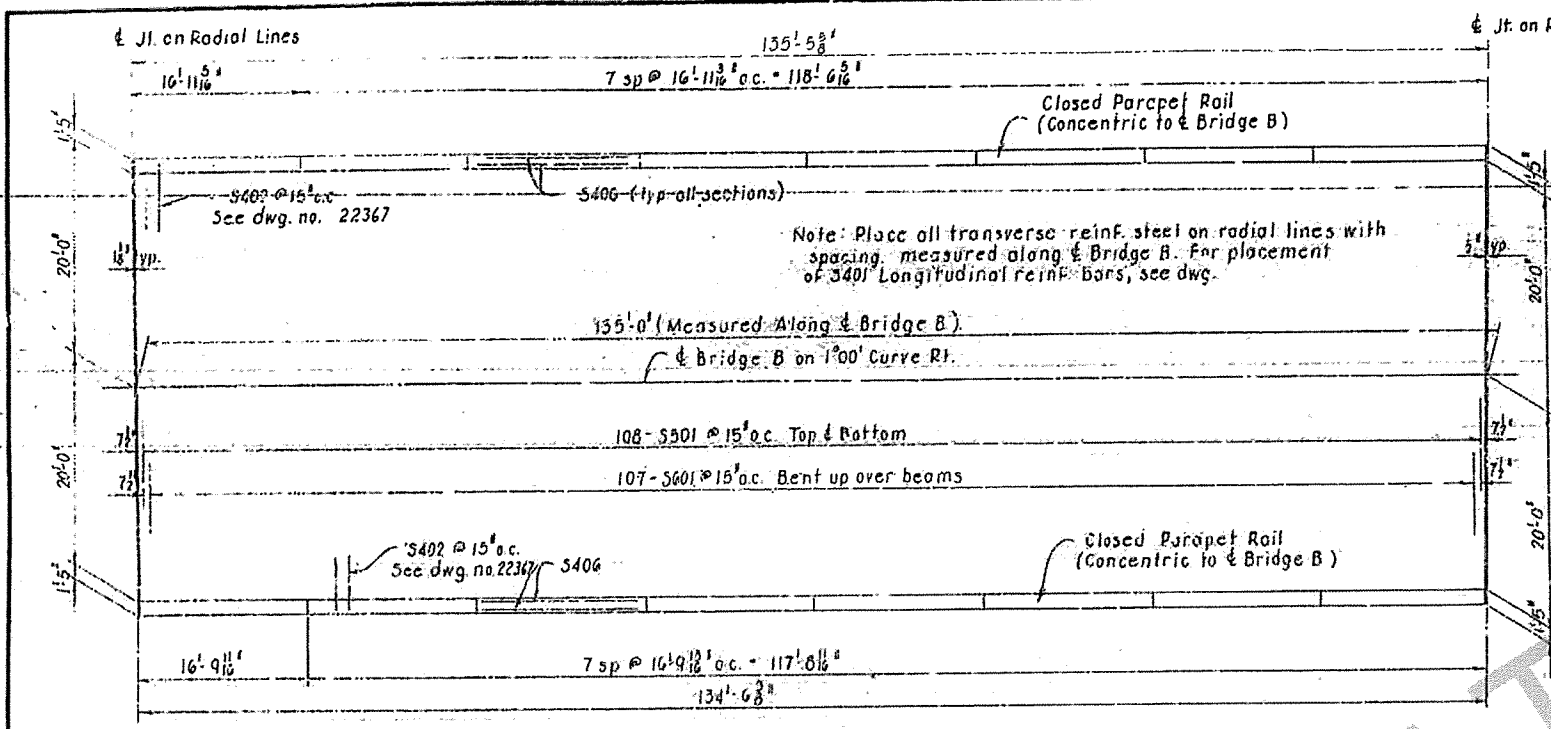
SHEET 2 OF 3
 LAYOUT OF OVERPASSES
 EL DORADO & WESSON R.R.
 S. WEST AVE - GARLAND AVE.
 UNION COUNTY
 ROUTE 82 SEC. 5
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 DRAWN BY: K. M. ... DATE: 9-18-70
 CHECKED BY: ... DATE: 10-2-70
 DESIGNED BY: ... DATE: 7-12-70
 BRIDGE NO. 5791 B DRAWING NO. 22347

Revised Bridge Length: L.B. 9-14-74

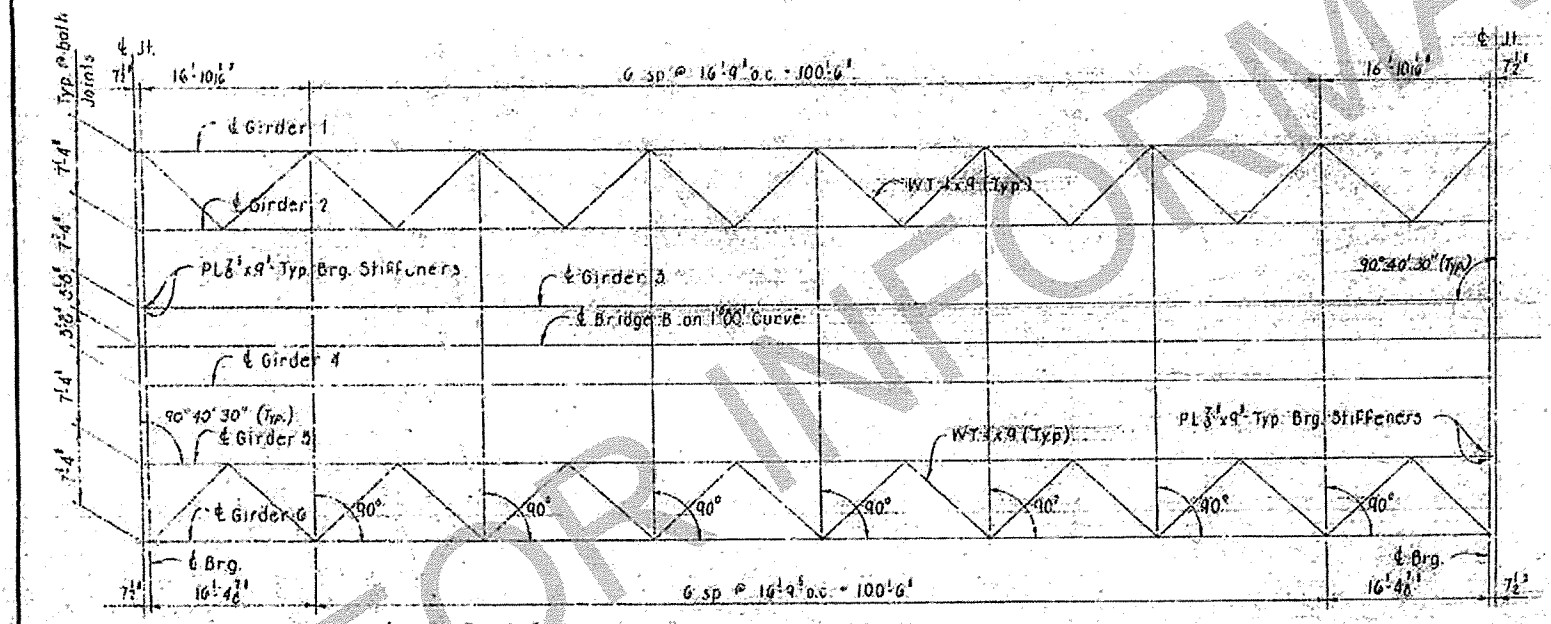
Handwritten signature and date: 9-18-70

DISTRICT 7 BRIDGE PAINTING (S)
FOR INFORMATION ONLY

DATE	BY	APP'D.	REV.	REV. NO.	REV. DATE	REV. BY
JOB NO. 7706						
① 5791B SPAN DTIS. 2236C						



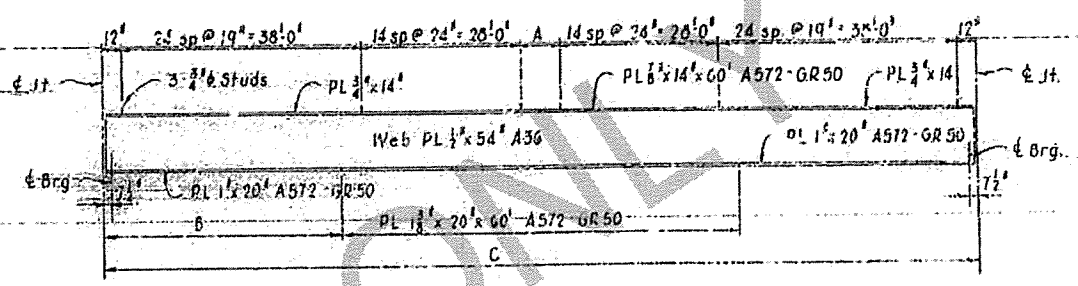
PLAN
1/8" = 1'-0"



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

TABLE OF DEFLECTIONS

Girder No.	Structural Steel		Structural Steel Slop & Part	
	Span	Span	Span	Span
1				
2				
3				
4				
5				
6				



GIRDER ELEVATION
N.T.S.

VARIABLES FOR PARAPET RAIL

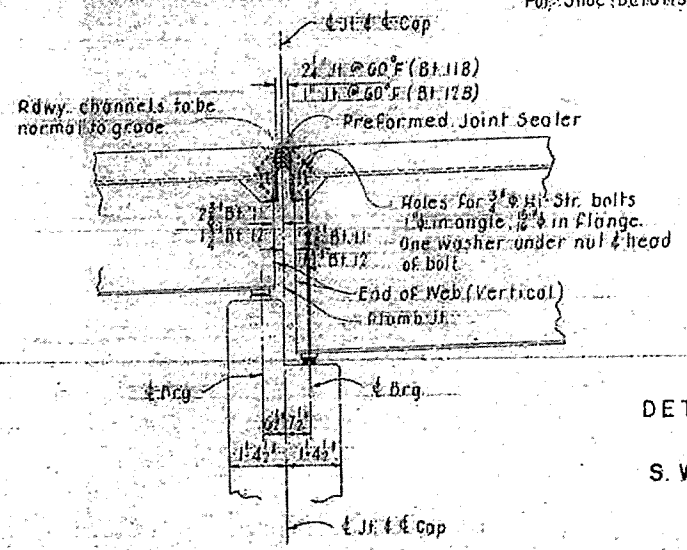
F	g	n
70'-0"	4	16
18'-0"	4	16
18'-0"	5	16
16'-0"	5	16

BAR LIST

Mark	No. Req'd	Length	Pin Dia.	Bending Diagram
3401	388	34'-8"	Str.	
3402	216	3'-11"	Str.	
5501	216	47'-6"	Str.	
5601	107	44'-7"	3/4"	
2201	272	6'-1"	2"	Sym. obt. & 1/2 Over tolerance; No Under tolerance For bending diagram not shown, see dwg. 22375 Dimen. are out to out of bars.
2403	272	5'-6"	2"	
2406	96	16'-4"	Str.	

VARIABLES FOR GIRDER

Girder No.	A	B	C
1			
2			
3			
4			
5			
6			



JOINT DETAIL - BENTS 118 & 12B
1/8" = 1'-0"

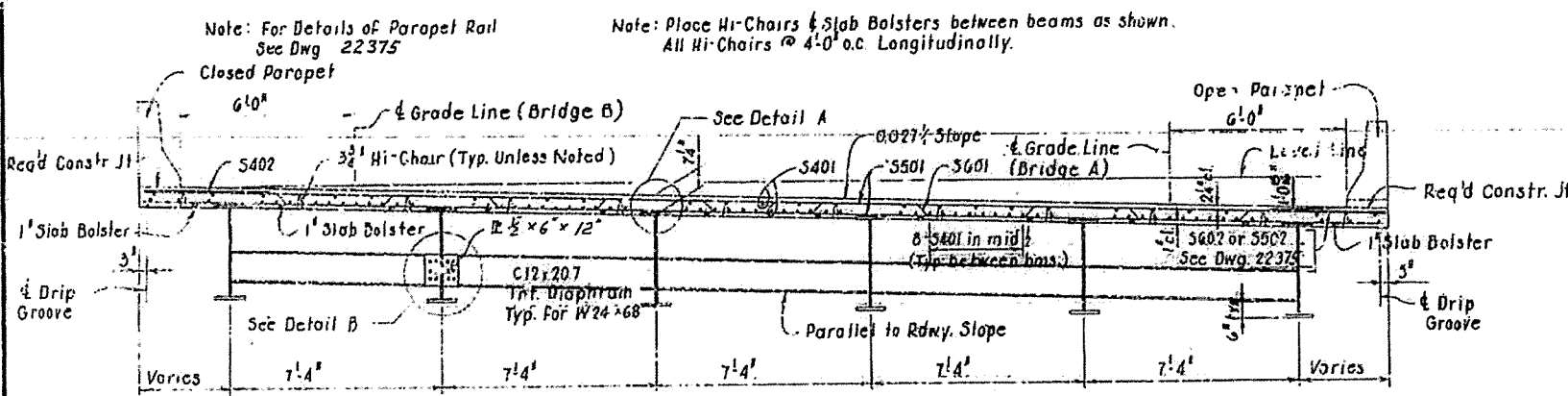
DETAILS OF 135' PL GIRDER SPAN
EL DORADO & WESSON R.R.
S. WEST AVENUE - GARLAND AVE.
UNION CO.

ROUTE 82 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION

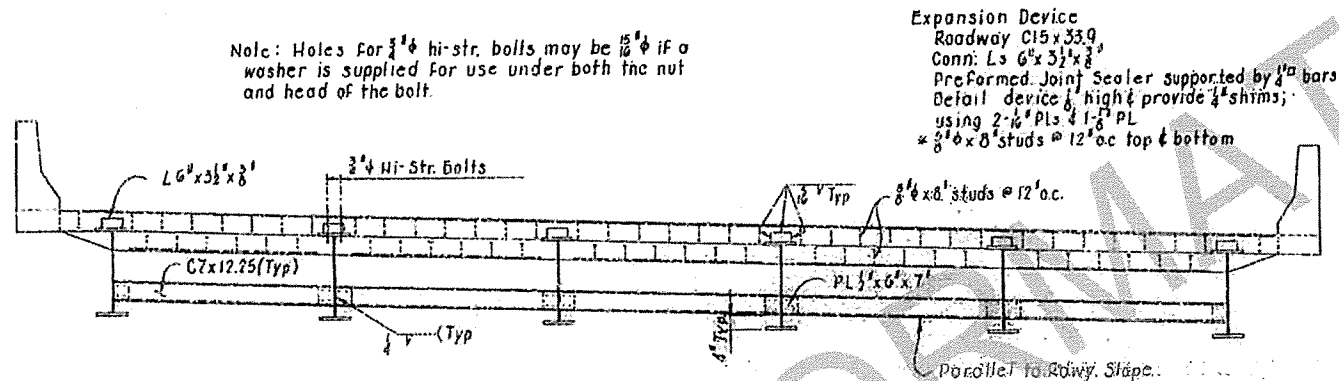
L.M. 11-8-78
CHECKED BY: T.M.C. DATE: 12-7-78
DESIGNED BY: C.V.B. DATE: 11-8-78
BRIDGE NO. 5791B DRAWING NO. 2236B

DISTRICT 7 BRIDGE PAINTING (S)
FOR INFORMATION ONLY

ARK.	F-010-(25)	111	261
JOB NO.	7706		
5791A+B SPAN DTL: 22363			



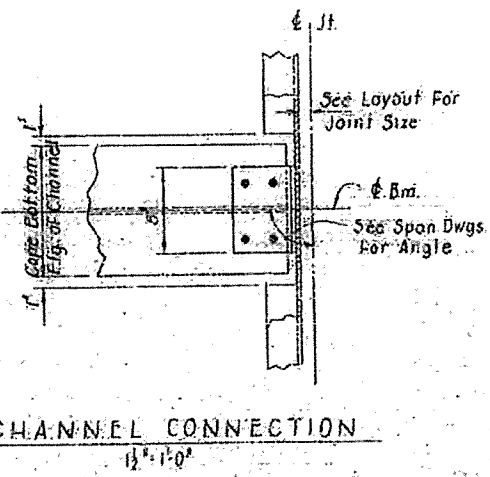
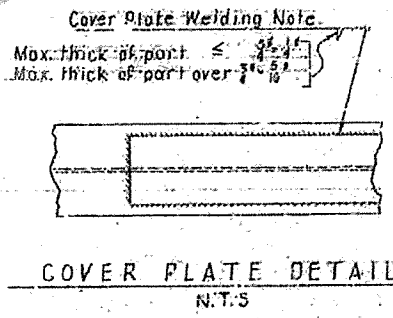
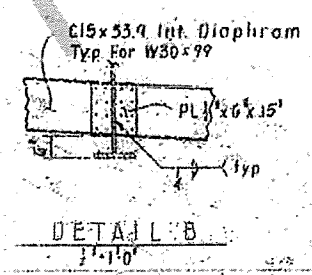
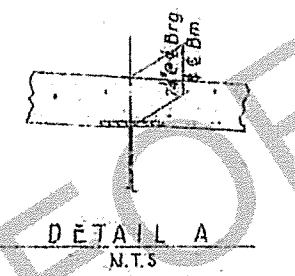
TYPICAL CROSS-SECTION
3/8" x 1'-0"



TYPICAL CROSS-SECTION AT JOINT
3/8" x 1'-0"

Stud Shear Connectors shown shall be 4" long, granular flux filled, solid fluxed or equal and automatically end-welded to beam flange in accordance with recommendations of the Manufacturer. 3/8" studs may be substituted for the 3/4" studs shown at the ratio of 73 3/8" studs in place of 1 1/2" studs. The 3/8" studs shall be used as basis of payment of 61.5 lbs. per 100 studs.

SHEAR CONNECTOR DETAIL



GENERAL NOTES

ALL STRUCTURAL STEEL SHALL BE PAID FOR AT THE PRICE BID PER POUND FOR "STRUCTURAL STEEL IN BEAM SPANS (A572-GR. 50),"

THIS DRAWING TO BE USED WITH DRAWING NO. 14990F.

LOADING: HS20

DESIGN SPECIFICATIONS: AASHTO 1977 WITH 1978 INTERIM

DEAD LOAD: INTERIOR BEAM EXTERIOR BEAM
a. TO WF BEAM 672#/ft 1.30 (FT/FT OF W) 619#/ft 1.30 (FT/FT OF WF)
b. TO COMPOSITE BEAM* 226#/ft 319#/ft

LIVE LOAD: TO EACH COMPOSITE BEAM 1,3333 WHEELS + IMPACT 1,2571 WHEELS + IMPACT

CLASS (A) CONCRETE (N=9) f'c = 3500 PSI
STRUCTURAL STEEL (A572) fy = 50,000 PSI
REINFORCING STEEL (A615 OR A617, GRADE 60) fy = 60,000 PSI

BEAM AND COVER PLATES SHALL BE A572-GR. 50, ALL OTHER STRUCTURAL STEEL SHALL BE A36. ALL REINFORCING STEEL SHALL BE A615 OR A617, GRADE 60.

*INCLUDES 133#/FT. FUTURE SURFACE

ALL W-BEAMS AND COVER PLATES ARE CONSIDERED MAIN LOAD CARRYING MEMBERS AND SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SECTION 807.05 OF THE STANDARD SPECIFICATIONS.

METHOD OF DESIGN: LOAD FACTOR


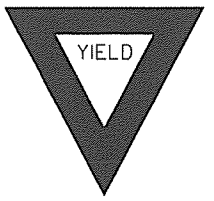
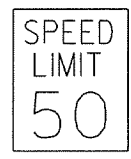
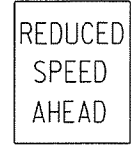





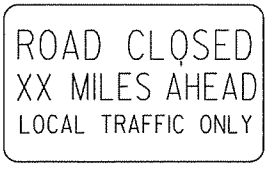
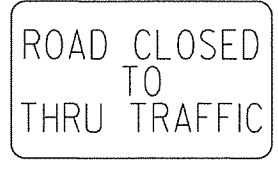

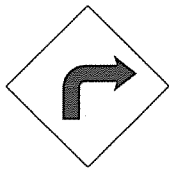
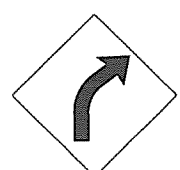
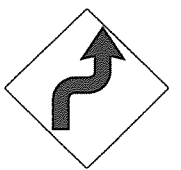

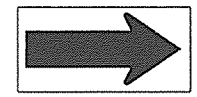
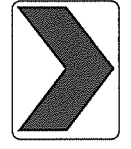
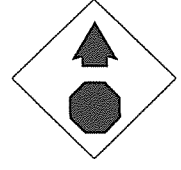
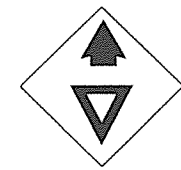
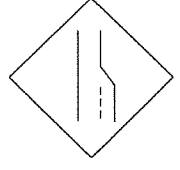



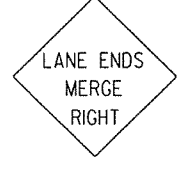
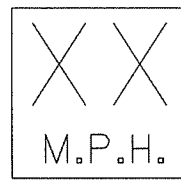







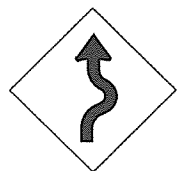

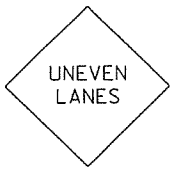
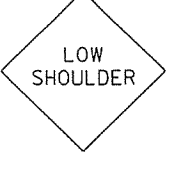
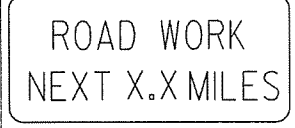
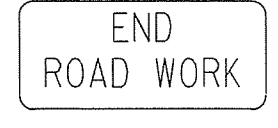
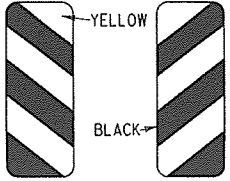
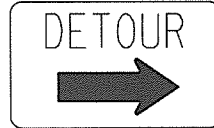

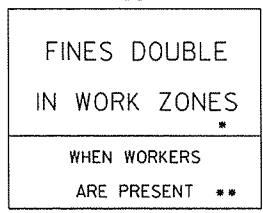
FIELD PAINT: SECOND FIELD COAT TO BE BLUE IN ACCORDANCE WITH SECTION 807-59 OF THE STANDARD SPECIFICATIONS. FIRST FIELD COAT - SEE SP 807-10 "PAINTING STEEL STRUCTURES."

COVER PLATES SHALL BE CUT AND FABRICATED SO THAT THE PRIMARY DIRECTION OF ROLLING IS PARALLEL TO THE DIRECTION OF THE MAIN TENSILE STRESSES.

SHOE TYPE: SEE NOTE BELOW.

For Additional Details, see dwg. nos. 22361, 22362, 22375
Use B2 Shims on 50' Spans and B3 Shims on 65' Spans. See dwg. no. 14990F

DETAILS OF 50' & 65' W-BEAM SPANS
EL DORADO & WESSON R.R.
S. WEST AVENUE - GARLAND AVE.
UNION CO.
ROUTE 82 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: L.M. DATE: 10-24-78
CHECKED BY: J.M.C. DATE: 12-7-78
DESIGNED BY: G.V. DATE: 10-24-78
BRIDGE NO. 5791 A & B DRAWING NO. 22363

<p>RI-1</p>  <p>STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"</p>	<p>RI-2</p>  <p>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</p>	<p>R2-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R2-5A</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R2-5C</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-2</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>
<p>R5-1</p>  <p>STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>R11-2</p>  <p>48"x30"</p>	<p>R11-3A</p>  <p>60"x30"</p>	<p>R11-4</p>  <p>60"x30"</p>	<p>RSP-1</p>  <p>48"x30"</p>	<p>WI-1</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>WI-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>
<p>WI-3</p>  <p>STD. 48"x48"</p>	<p>WI-4</p>  <p>STD. 48"x48"</p>	<p>WI-6</p>  <p>STD. 48"x24" SPECIAL 60"x30"</p>	<p>WI-8</p>  <p>STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"</p>	<p>W3-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W3-2</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W4-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>
<p>W5-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W6-3</p>  <p>EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>W8-7</p>  <p>EXPWY. 36"x36" FWY. 48"x48"</p>	<p>W9-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W13-1</p>  <p>STD. 24"x24"</p>	<p>W20-1</p>  <p>STD. 48"x48"</p>	<p>W20-2</p>  <p>STD. 48"x48"</p>
<p>W20-4</p>  <p>STD. 48"x48"</p>	<p>W20-5</p>  <p>STD. 48"x48"</p>	<p>W20-7a</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W21-2</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W21-5</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W24-1</p>  <p>STD. 36"x36"</p>	<p>W1-4b</p>  <p>STD. 48"x48"</p>
<p>W8-11</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W8-9</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>G20-1</p>  <p>60"x24"</p>	<p>G20-2</p>  <p>48"x24"</p>	<p>OM-3L OM-3R</p>  <p>12"x36"</p>	<p>M4-9</p>  <p>STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"</p>	<p>M4-10</p>  <p>48"x18"</p>
						<p>R55-1</p>  <p>36"x60" * USE 6" C LETTERS ** USE 4" D LETTERS</p>

ADVANCE DISTANCES (XXXX)

500 FT	1/2 MILE
1000 FT	3/4 MILE
1500 FT	1 MILE AHEAD

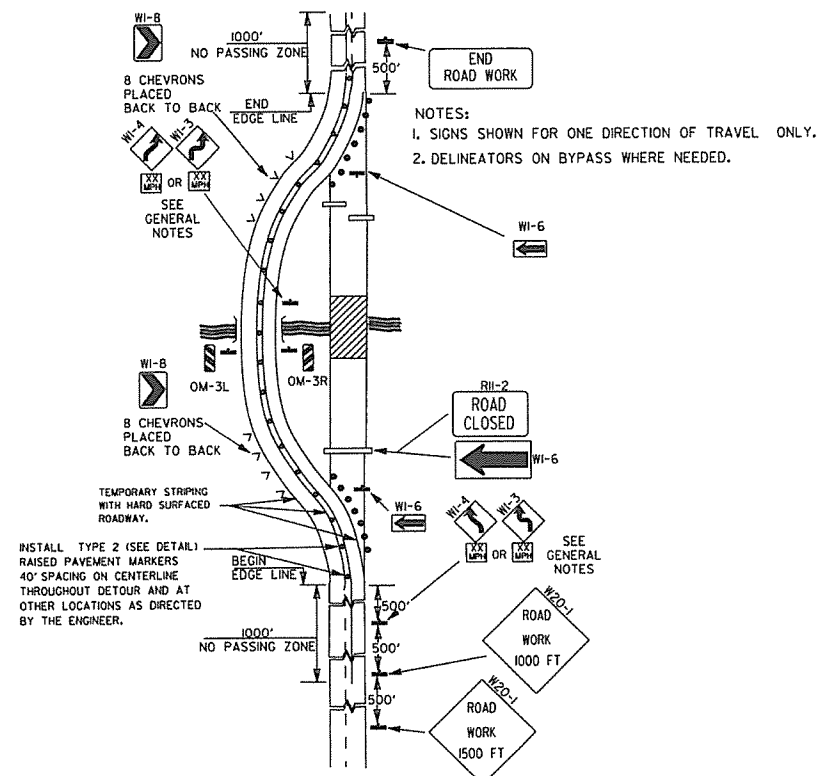
GENERAL NOTES:

- ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.
- TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.
- EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED.
- SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SO. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.
- SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.
- POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.
- ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.
- FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
- MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.
- R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

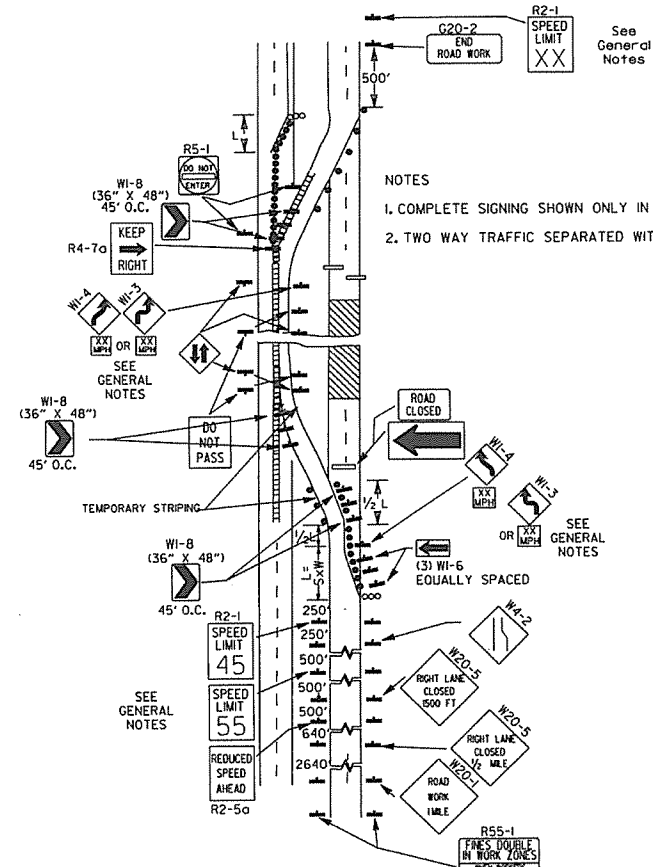
* NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.

DATE	REVISION	FILMED
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

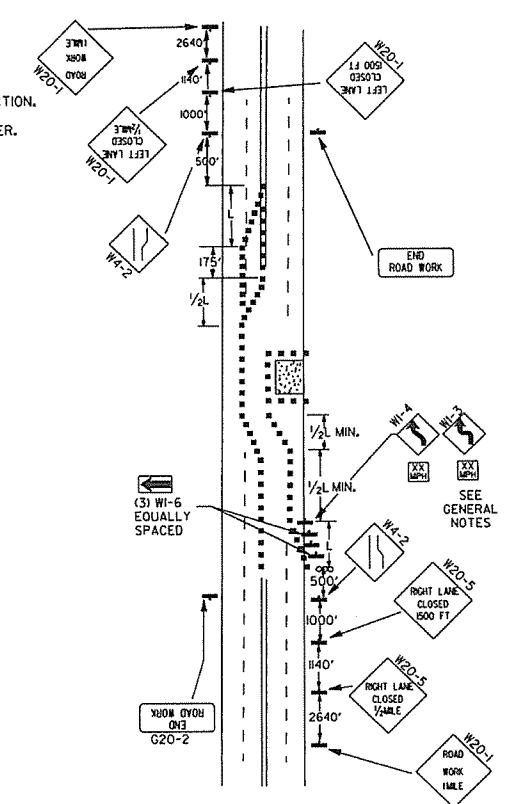
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-1



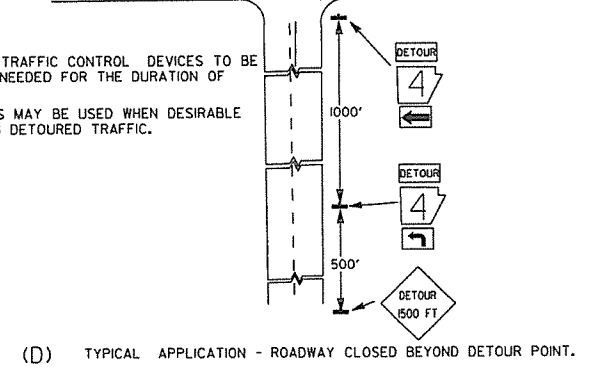
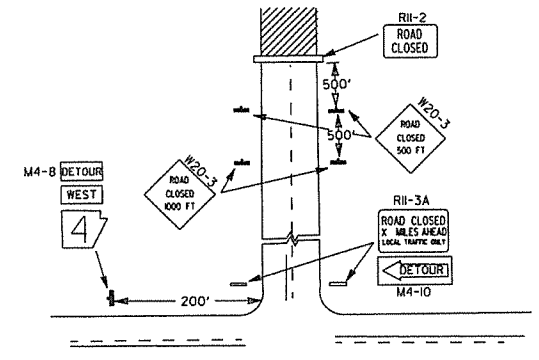
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



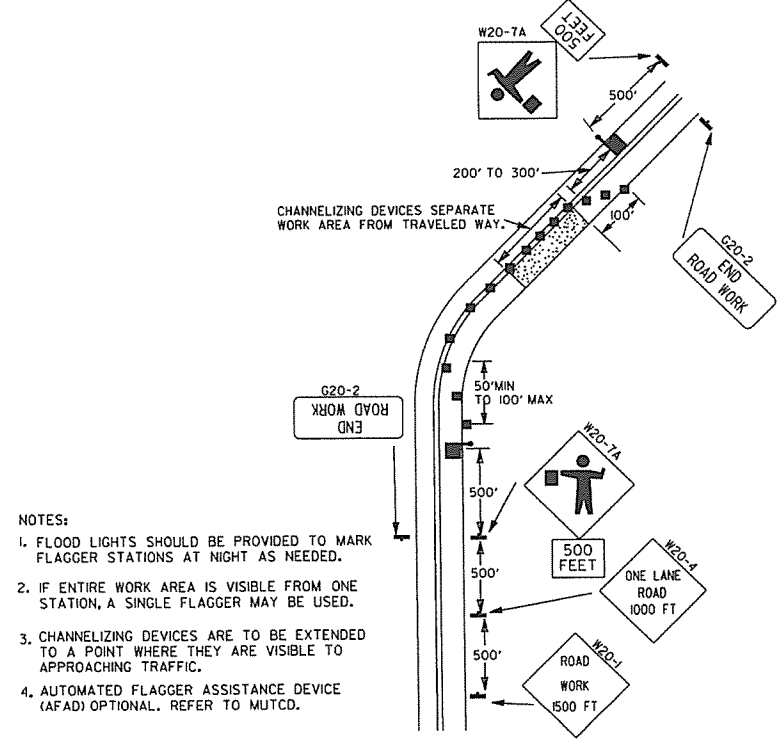
(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



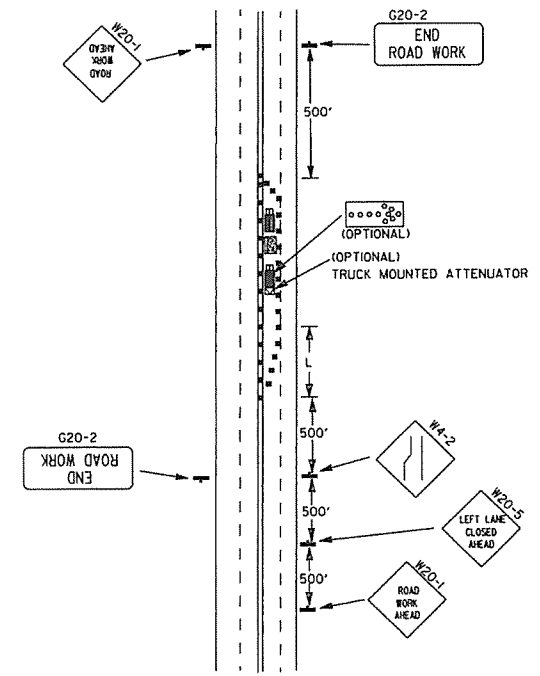
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



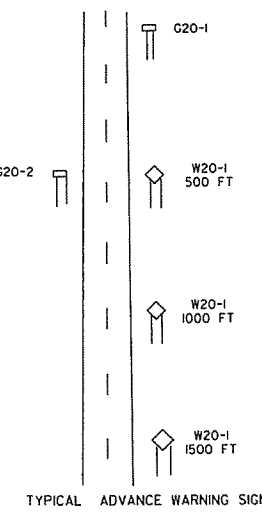
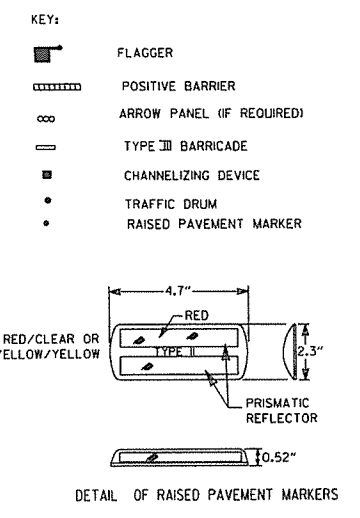
(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.



(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

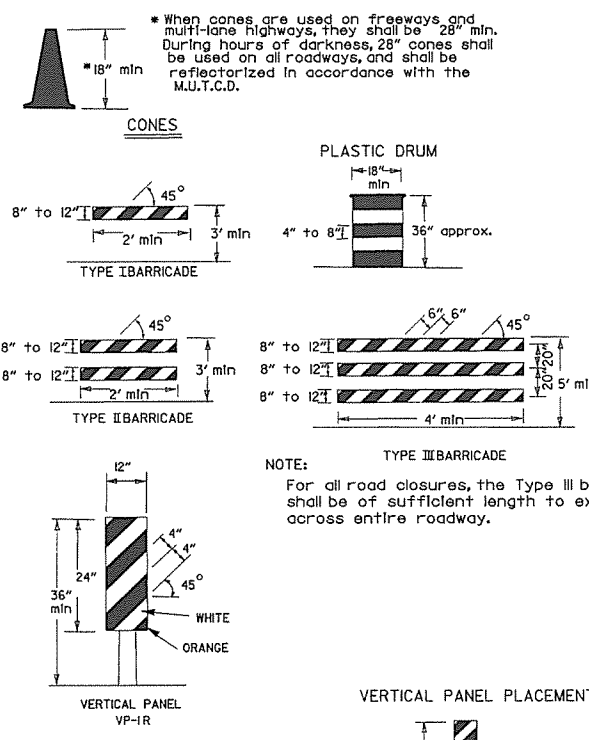


TAPER FORMULAE:
 $L = SXW$ FOR SPEEDS OF 45MPH OR MORE.
 $L = \frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.
 WHERE:
 L = MINIMUM LENGTH OF TAPER.
 S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.
 W = WIDTH OF OFFSET.

- GENERAL NOTES:
 1. ADVISORY SPEED POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
 2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-(155) SHALL BE OMITTED AND THE R2-5A SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(1XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-(145) SHALL BE OMITTED. ADDITIONAL R2-155MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(1XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
 5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
 6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
 7. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.

DATE	REVISION	FILED
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-95	CORRECTED (G) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

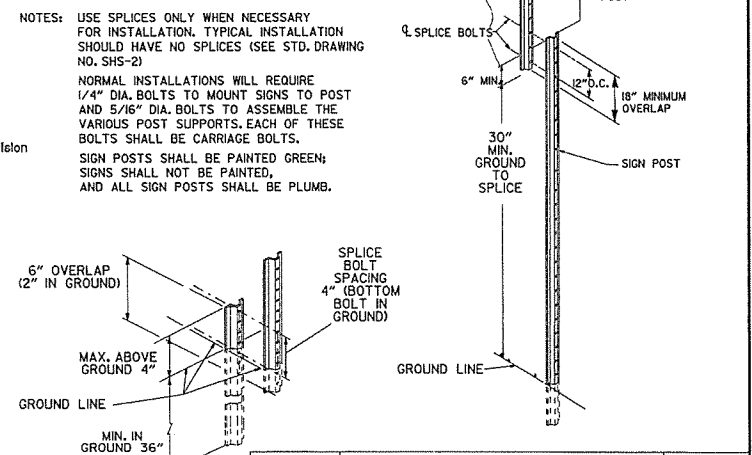
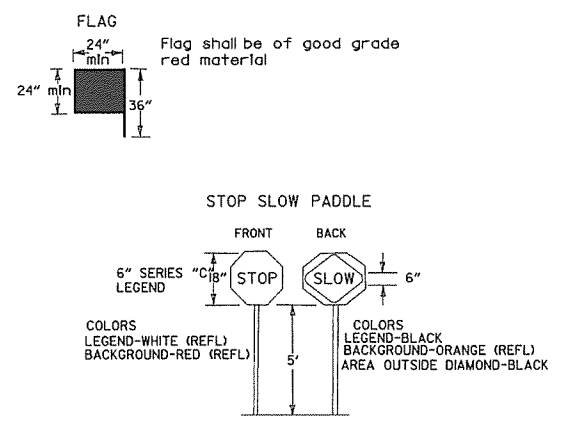
Channelizing devices



TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

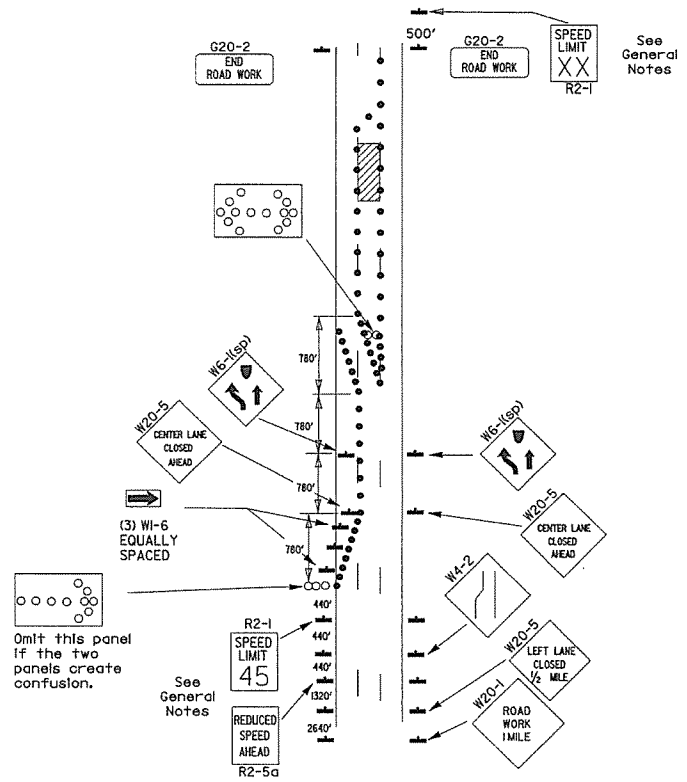
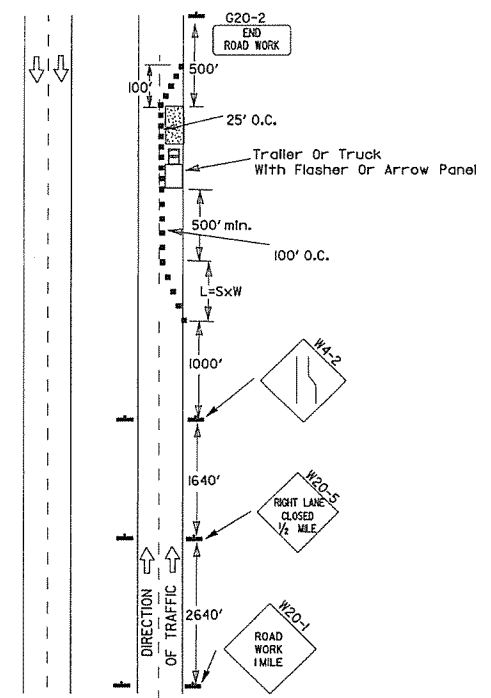
VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	W8-II
1" to 3"	Edge of shoulder	W8-9
Greater than 3"	Lane lines	Standard lane closure required
Greater than 3"	Edge of traveled lane	*RSP-l and vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

• When shown on the plans concrete barrier will be used.
 When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1 & REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION
 STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION
 STANDARD DRAWING TC-3

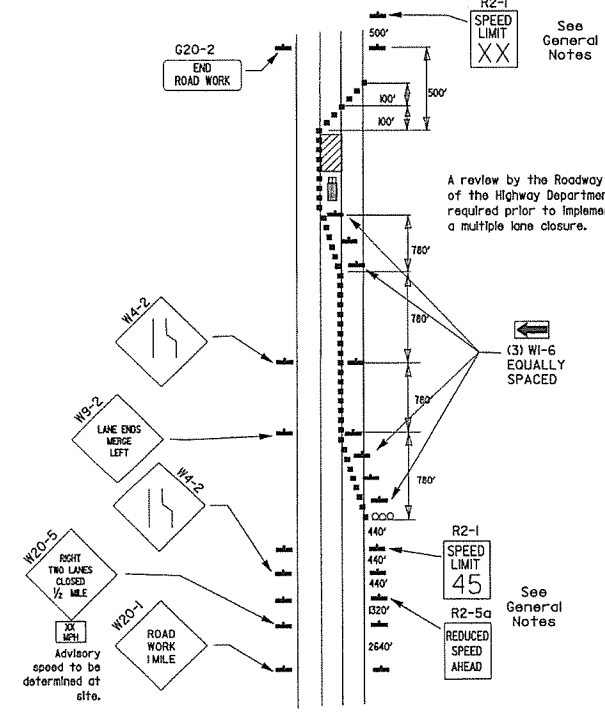


(B) Typical application - 3-lane oneway roadway where center lane is closed.

- KEY:
- Arrow Panel (if Required)
 - Channelizing Device
 - Traffic drum

GENERAL NOTES:

- A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
- When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5a shall be installed at that location. Additional R2-1(45) speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
- When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(65) shall be omitted. Additional R2-1(55) speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
- The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit or as directed by the Engineer.
- Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
- Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
- The G20-1 sign will be required on jobs of over two miles in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 125' in advance of the job limit. Additional W20-1 (1 MILE) signs are not required in advance of lane closures that begin inside the project limits.
- Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
- All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual for Assessing Safety Hardware (MASH).
- Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.



(D) Typical application - closing multiple lanes of a multi-lane highway.

(A) Typical application - daytime maintenance operations of short duration on a 4-lane divided roadway where half of the roadway is closed.

(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.