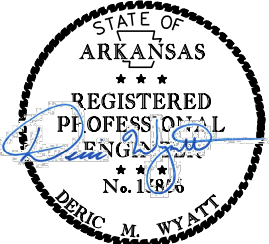


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040926	2	47
① INDEX OF SHEETS								

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① STD. DWGS. & GOV. SPECS.								

GOVERNING SPECIFICATIONS

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

ROADWAY STANDARD DRAWINGS

DRWG.
NO.

TITLE

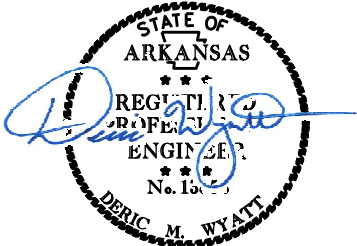
DATE

NUMBER

TITLE

TC-1____ STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION____ 11-07-19
TC-2____ STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION____ 05-20-21
TC-3____ STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION____ 08-12-21

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
100-4____ DEPARTMENT NAME CHANGE
102-2____ ISSUANCE OF PROPOSALS
105-4____ MAINTENANCE DURING CONSTRUCTION
107-2____ RESTRAINING CONDITIONS
108-1____ LIQUIDATED DAMAGES
108-2____ WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
306-1____ QUALITY CONTROL AND ACCEPTANCE
603-1____ LANE CLOSURE NOTIFICATION
604-1____ RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-3____ TRAFFIC CONCTROL DEVICES IN CONSRUCTION ZONES (MASH)
JOB 040926_ ASSESSMENT OF WORKING DAYS – MAINTENANCE OF TRAFFIC
JOB 040926_ BIDDING REQUIREMENTS AND CONDITIONS
JOB 040926_ BUY AMERICA - CONSTRUCTION MATERIALS
JOB 040926_ CARGO PREFERENCE ACT REQUIREMENTS
JOB 040926_ CONTAINMENT SYSTEM
JOB 040926_ CONTRACTOR CERTIFICATION
JOB 040926_ COORDINATION OF WORK
JOB 040926_ DOCUMENTATION OF PAYMENTS MADE TO DISADVANTAGED BUSINESS ENTERPRISES
JOB 040926_ ESTABLISHING CONTRACT TIME - WORKING DAY CONTRACT
JOB 040926_ INSPECTOR'S PERSONAL PROTECTION CLOTHING
JOB 040926_ LIQUIDATED DAMAGES PROCEDURE FOR BID LETTINGS
JOB 040926_ MAINTENANCE OF TRAFFIC
JOB 040926_ MANDATORY ELECTRONIC CONTRACT
JOB 040926_ MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 040926_ NESTING SITES OF MIGRATORY BIRDS
JOB 040926_ PAINT CONTRACTOR LABEL
JOB 040926_ PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT
JOB 040926_ TOTAL SOLAR ECLIPSE



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STANDARD DRAWINGS AND
GOVERNING SPECIFICATIONS

CLEANING AND PAINTING EXISTING
STRUCTURAL STEEL (TYPE II)

DESCRIPTION	QUANTITY		UNIT
	NHPP-0076(315)	STPB-0076(315)	
BRIDGE NO. A5109	294.8		TON
BRIDGE NO. B5109	294.8		TON
BRIDGE NO. A5110	79.3		TON
BRIDGE NO. B5110	79.3		TON
BRIDGE NO. 02224	22.5		TON
BRIDGE NO. 03337	65.4		TON
BRIDGE NO. 03801		81.3	TON
BRIDGE NO. 03885	66.4		TON
BRIDGE NO. 03909	68.6		TON
BRIDGE NO. 03945	47.8		TON
BRIDGE NO. 05079	80.9		TON
BRIDGE NO. 05108	137.2		TON
TOTAL:	1318.3		TON

**DISPOSAL OF HAZARDOUS WASTE

DESCRIPTION	QUANTITY		UNIT
	NHPP-0076(315)	STPB-0076(315)	
BRIDGE NO. A5109	1.00		LUMP SUM
BRIDGE NO. B5109	1.00		LUMP SUM
BRIDGE NO. A5110	1.00		LUMP SUM
BRIDGE NO. B5110	1.00		LUMP SUM
BRIDGE NO. 02224	1.00		LUMP SUM
BRIDGE NO. 03337	1.00		LUMP SUM
BRIDGE NO. 03801		1.00	LUMP SUM
BRIDGE NO. 03885	1.00		LUMP SUM
BRIDGE NO. 03909	1.00		LUMP SUM
BRIDGE NO. 03945	1.00		LUMP SUM
BRIDGE NO. 05079	1.00		LUMP SUM
BRIDGE NO. 05108	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.

GENERAL NOTES

- 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 26270
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
A5109	3	YES
B5109	3	YES
A5110	3	YES
B5110	3	YES
02224	3	YES
03337	3	YES
03801	4	YES
03885	3	YES
03909	3	YES
03945	3	YES
05079	4	YES
05108	3	YES

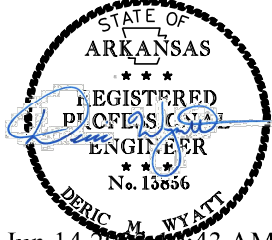
MOBILIZATION

DESCRIPTION	QUANTITY	UNIT
NHPP-0076(315)	0.92	LUMP SUM
STPB-0076(315)	0.08	LUMP SUM
TOTAL:	1.00	LUMP SUM

***MAINTENANCE OF TRAFFIC

DESCRIPTION	QUANTITY	UNIT
NHPP-0076(315)	0.92	LUMP SUM
STPB-0076(315)	0.08	LUMP SUM
TOTAL:	1.00	LUMP SUM

*** ALL TRAFFIC CONTROL DEVICES AND/OR PAVEMENT MARKINGS WILL BE PLACED
IF AND WHERE DIRECTED BY THE ENGINEER. ALL ITEMS NECESSARY FOR TRAFFIC
CONTROL IS SUBSIDIARY TO THE ITEM OF "MAINTENANCE OF TRAFFIC".



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QUANTITIES & GENERAL NOTES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. RD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
9/8/2023				6	ARK.			
				JOB NO.		040926	5	47
① SUMMARY OF QUANTITIES & REVISIONS								

SUMMARY OF QUANTITIES

LOCATION			BRIDGE DATA		ITEM NO.		SP & 820		601		SP, SS, & 603		820		
BRIDGE NUMBER	RT/SEC/ LOG MILE	COUNTY	ROADWAY WIDTH (FT)	BRIDGE LENGTH (FT)	<div><div></div><div>PAY ITEM</div></div>		CLEANING AND PAINTING EXISTING STRUCTURAL STEEL (TYPE II)		MOBILIZATION		MAINTENANCE OF TRAFFIC		DISPOSAL OF HAZARDOUS WASTE (SITE NO.)		
							NHPP-0076(315)	STPB-0076(315)							
					BRIDGE NAME	UNIT	TON	TON	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	
A5109	40/11/259.980	Crawford	39	483	I-40 WB LM 259.980		294.8		0.92	0.08	0.92	0.08	1.00 (SITE NO. 1)		
B5109	40/11/24.467	Crawford	39	483	I-40 EB LM 24.467		294.8						1.00 (SITE NO. 2)		
A5110	40/12/258.770	Franklin	39	170	I-40 WB LM 258.770		79.3						1.00 (SITE NO. 3)		
B5110	40/12/25.663	Franklin	39	170	I-40 EB LM 25.663		79.3						1.00 (SITE NO. 4)		
02224	45/01/13.956	Sebastian	26	96	SH 45 LM 13.956		22.5						1.00 (SITE NO. 5)		
03337	28/02/12.485	Scott	24	220	SH 28 LM 12.485		65.4						1.00 (SITE NO. 6)		
03801	Lost Beach Crossing/01/0.211	Crawford	24	242	Lost Beach Crossing Over I-40			81.3						1.00 (SITE NO. 7)	
03885	71/09/5.791	Polk	28	200	US 71 LM 5.791		66.4						1.00 (SITE NO. 8)		
03909	22/04/6.282	Logan	28	225	SH 22 LM 6.282		68.6						1.00 (SITE NO. 9)		
03945	23/06/6.975	Franklin	28	150	SH 23 LM 6.975		47.8						1.00 (SITE NO. 10)		
05079	Old Graphic St/01/1.060	Crawford	24	236	Old Graphic St. Over I-40		80.9						1.00 (SITE NO. 11)		
05108	246/00/2.012	Polk	24	370	SH 246 LM 2.012		137.2						1.00 (SITE NO. 12)		
					TOTAL JOB NO. 040926		1318.3		1.00		1.00				

REVISIONS

DATE	REVISION	SHEET NO.
9/8/2023	Added SS 604-1 and 604-3	3 and 5



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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.		040926	6	47
				BRIDGE PICTURES				

①



SITE NO. 1 - BRIDGE NO. A5109



SITE NO. 2 - BRIDGE NO. B5109



SITE NO. 3 - BRIDGE NO. A5110



SITE NO. 4 - BRIDGE NO. B5110



SITE NO. 5 - BRIDGE NO. 02224



SITE NO. 6 - BRIDGE NO. 03337



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BRIDGE PICTURES

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.		040926	7	47
				BRIDGE PICTURES				

①



SITE NO. 7 - BRIDGE NO. 03801



SITE NO. 8 - BRIDGE NO. 03885



SITE NO. 9 - BRIDGE NO. 03909



SITE NO. 10 - BRIDGE NO. 03945



SITE NO. 11 - BRIDGE NO. 05079

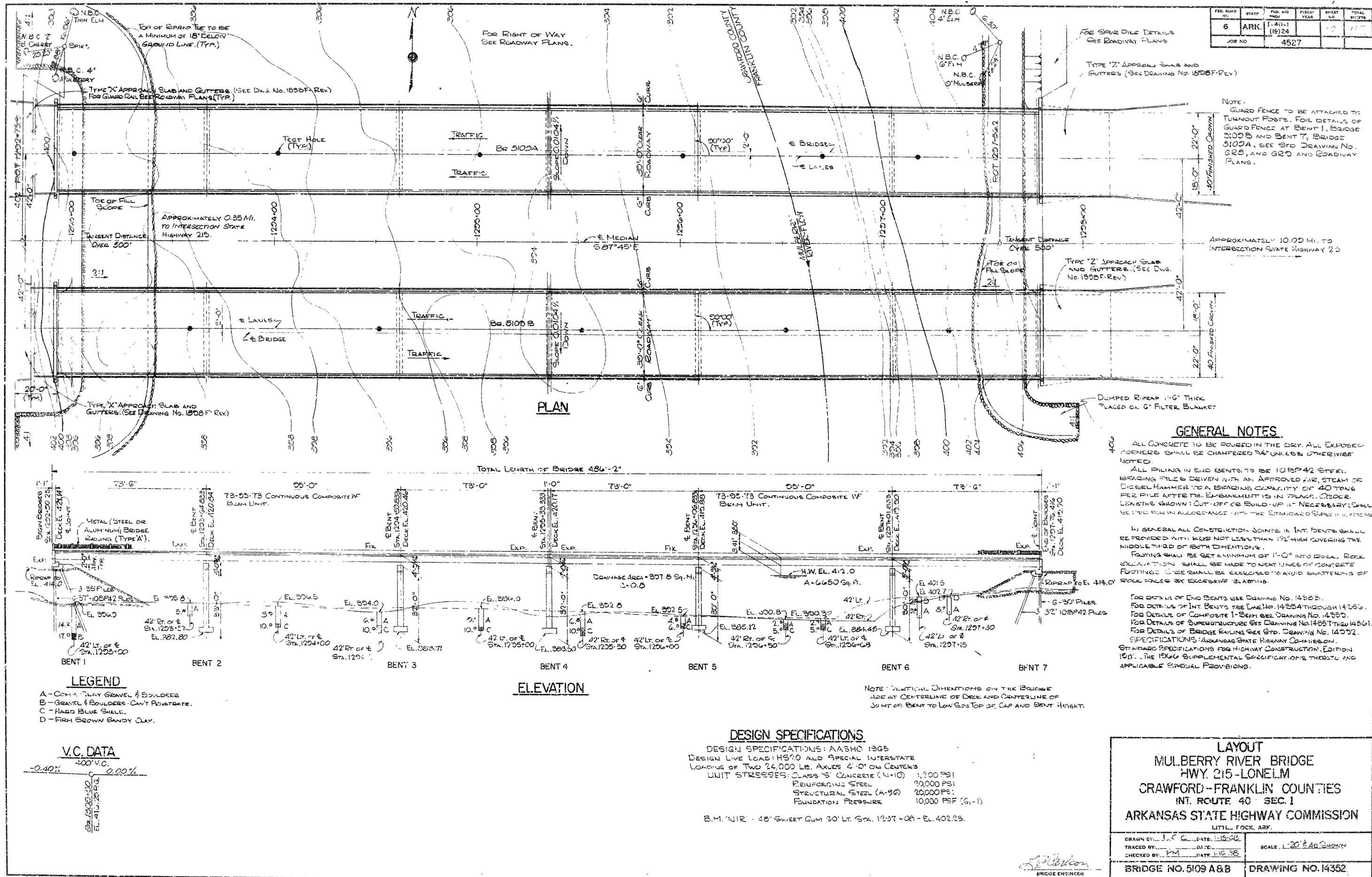


SITE NO. 12 - BRIDGE NO. 05108



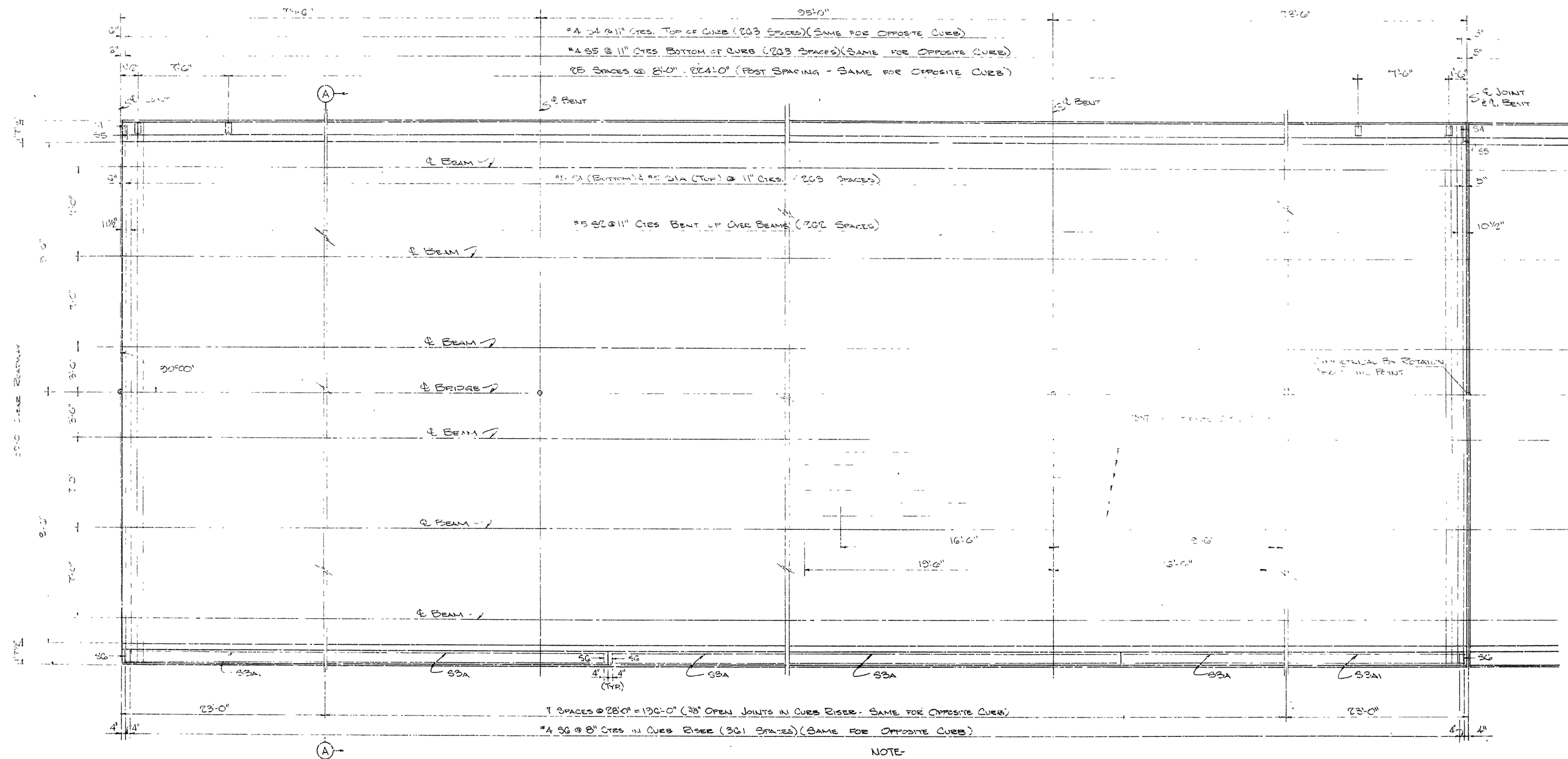
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BRIDGE PICTURES



FOR INFORMATION ONLY

FED. ROAD NO.	STATE	FED. AID PROJ. YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	1-40-1 (19)24		
JOB NO.		4527		

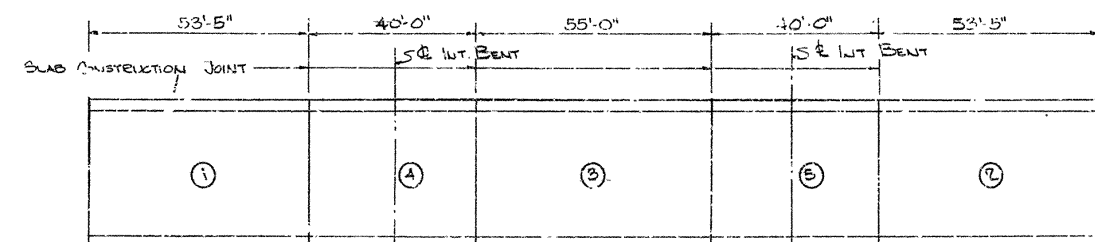


POURING NOTE - SLAB IS TO BE POURED IN THE ORDER SHOWN OR IN ONE CONTINUOUS POUR FROM END TO END IN LESS THAN 10 HOURS. CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND CAREFULLY CLEANED BEFORE ADJACENT SECTION IS POURED. AFTER THE FIRST SECTION IS POURED NOT LESS THAN 18 HOURS SHALL ELAPSE BEFORE THE SECOND SECTION IS POURED AND NOT LESS THAN 72 HOURS SHALL ELAPSE BETWEEN ADJACENT POURS.
 A MINIMUM OF 72 HOURS SHALL ELAPSE BETWEEN COMPLETION OF THE SLAB POUR AND THE POURING OF THE CURB SECTION, IF POURED SEPARATELY, AND CURB POURS SHALL BE IN THE SAME SEQUENCE AS SLAB POURS. CURB POURS INCLUDE OUTSIDE CURB AND RISERS.

NOTE: THE CONCRETE DECK SHALL BE FINISHED IN ACCORDANCE WITH ARK. STATE HWY DEPT. SPECIAL PROV. FINISHING CONCRETE BRIDGE FLOORS JOB NO. 4527. MOVEMENT OF THE FINISHING MACHINE ACROSS NEW CONCRETE WHEN PROTECTED BY MEANS OF PLANKING PLACED ON THE SURFACE SHALL BE PROHIBITED FOR 72 HOURS AFTER FINISHING THE POUR.

HALF PLAN

NOTE - FOR ADDITIONAL DETAILS, SECTION A-A AND BLUE LIST SEE DWG. 14355B



SLAB POURING DIAGRAM

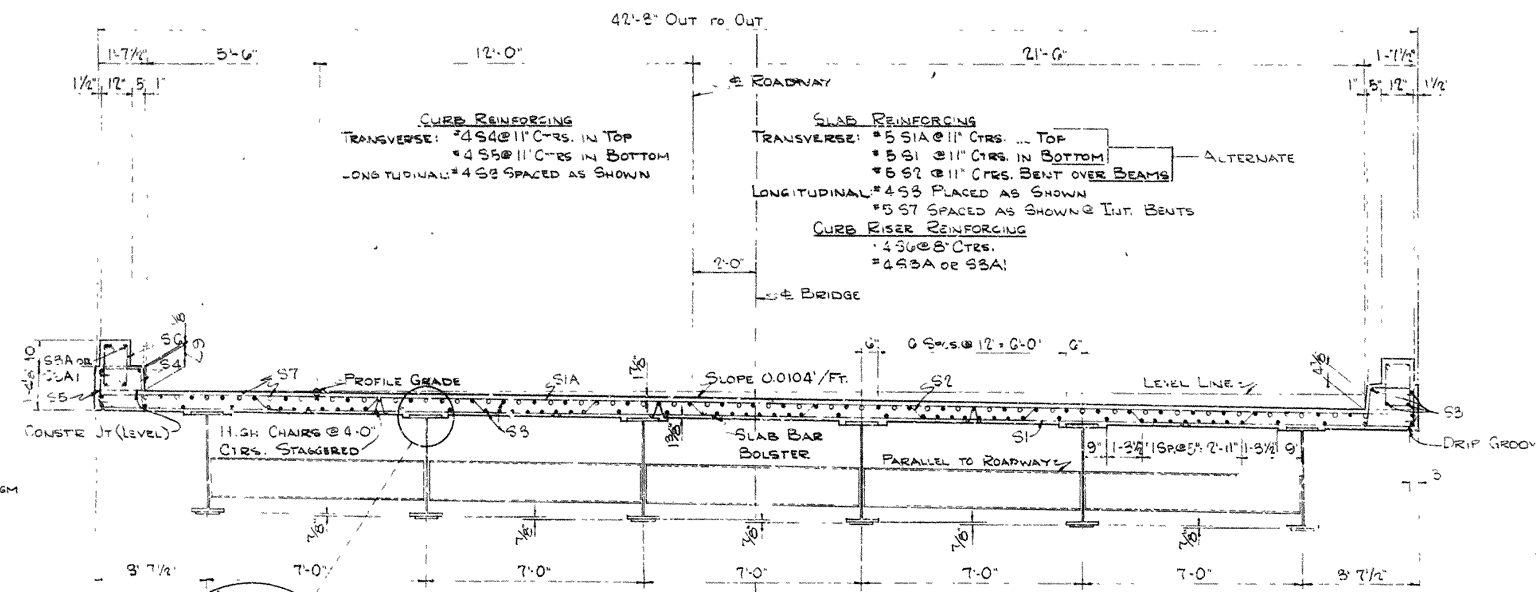
NOTE: - SEE DWG. NO. 14360 FOR SLAB JOINT DETAIL

DETAILS OF SUPERSTRUCTURE
 CRAWFORD-FRANKLIN COUNTIES
 INT. ROUTE 40 SEC. 1
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: D.G.S. DATE: 12-12-67
 TRACED BY: DATE: 1-14-68
 CHECKED BY: P.M. DATE: 1-14-68
 BRIDGE NO. 5109 A & B DRAWING NO. 14357

SCALE: 1/4" = 1'-0"

FED. ROAD NO.	STATE	FED. AID PROJ. YEAR	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	1-40-11	19124		
JOB NO.	4527				

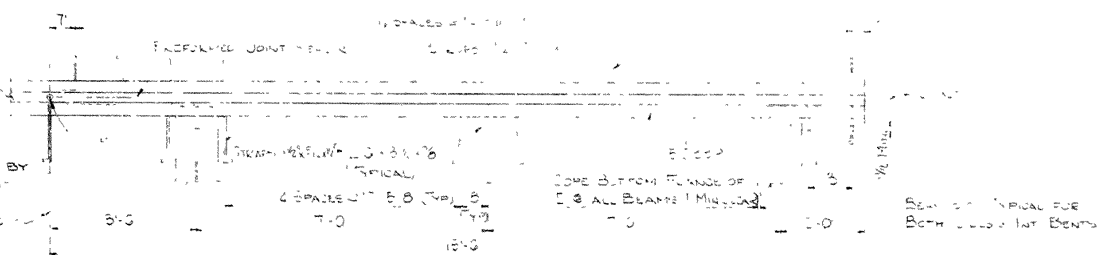


SECTION A-A

Scale: 3/8"=1'-0"
BR 5109A - Looking Back at Stations
BR 5109B - Looking Forward at Stations

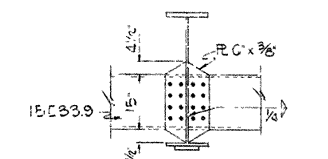
BAR LIST - ONE CONT. UNIT

MARK	SIZE	LENGTH	NO. REQ'D	NO. ON HAND
S1	#5	41'	200	200
S2	#5	43'	200	200
S3	#5	43'	200	200
S4	#4	50'	200	200
S5	#4	27'	200	200
S6	#4	27'	200	200
S7	#4	27'	200	200
S8	#4	27'	200	200
S9	#4	27'	200	200
S10	#4	27'	200	200
S11	#4	27'	200	200
S12	#4	27'	200	200
S13	#4	27'	200	200
S14	#4	27'	200	200
S15	#4	27'	200	200
S16	#4	27'	200	200
S17	#4	27'	200	200
S18	#4	27'	200	200
S19	#4	27'	200	200
S20	#4	27'	200	200
S21	#4	27'	200	200
S22	#4	27'	200	200
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S26	#4	27'	200	200
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S28	#4	27'	200	200
S29	#4	27'	200	200
S30	#4	27'	200	200
S31	#4	27'	200	200
S32	#4	27'	200	200
S33	#4	27'	200	200
S34	#4	27'	200	200
S35	#4	27'	200	200
S36	#4	27'	200	200
S37	#4	27'	200	200
S38	#4	27'	200	200
S39	#4	27'	200	200
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S42	#4	27'	200	200
S43	#4	27'	200	200
S44	#4	27'	200	200
S45	#4	27'	200	200
S46	#4	27'	200	200
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S64	#4	27'	200	200
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S66	#4	27'	200	200
S67	#4	27'	200	200
S68	#4	27'	200	200
S69	#4	27'	200	200
S70	#4	27'	200	200
S71	#4	27'	200	200
S72	#4	27'	200	200
S73	#4	27'	200	200
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S76	#4	27'	200	200
S77	#4	27'	200	200
S78	#4	27'	200	200
S79	#4	27'	200	200
S80	#4	27'	200	200
S81	#4	27'	200	200
S82	#4	27'	200	200
S83	#4	27'	200	200
S84	#4	27'	200	200
S85	#4	27'	200	200
S86	#4	27'	200	200
S87	#4	27'	200	200
S88	#4	27'	200	200
S89	#4	27'	200	200
S90	#4	27'	200	200
S91	#4	27'	200	200
S92	#4	27'	200	200
S93	#4	27'	200	200
S94	#4	27'	200	200
S95	#4	27'	200	200
S96	#4	27'	200	200
S97	#4	27'	200	200
S98	#4	27'	200	200
S99	#4	27'	200	200
S100	#4	27'	200	200



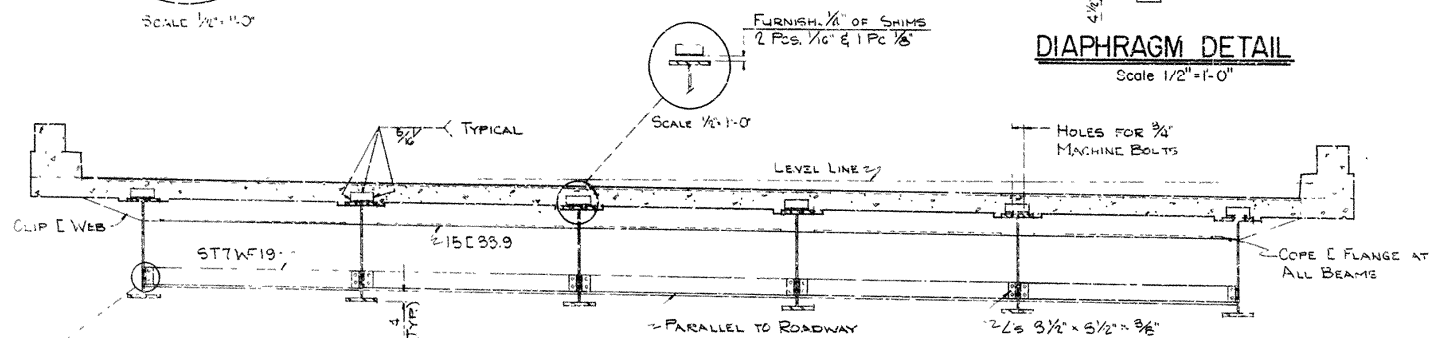
EXPANSION DEVICE DETAIL

Scale 1/2"=1'-0"



DIAPHRAGM DETAIL

Scale 1/2"=1'-0"

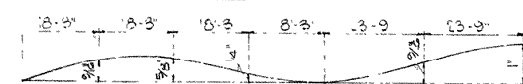


SECTION B-B

Scale 3/8"=1'-0"

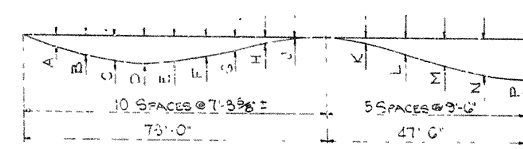


OPTIONAL WELDS



CAMBER DIAGRAM

ALL GIRDERS SHALL BE CAMBERED SUCH THAT UNDER TOTAL DEAD LOAD THE TOP OF GIRDER WEBS WILL PARALLEL THE FINISHED ROADWAY GRADE EXCEPT ALLOWABLE TOLERANCE FOR CAMBER IS 1/8". ALL GIRDERS SHALL BE SHOP ASSEMBLED IN THEIR TRUE POSITION; FIELD CONNECTION HOLES REARIED, AND ALL PARTS MATCH MARKED. THE SHOP ASSEMBLY SHALL HAVE MINIMUM ASSEMBLED SEQUENCE OF 2 SECTIONS



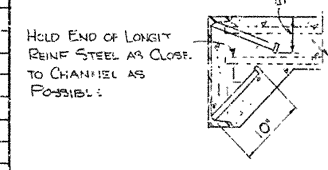
D.L. DEFLECTION DIAGRAM

(See Table)

TABLE OF DEFLECTION

POINT	STEEL	CONC.	STEEL	CONC.
A	1/16	3/16	1/16	3/16
B	1/8	3/8	1/8	3/8
C	1/8	1/2	1/8	1/2
D	1/8	1/2	1/8	1/2
E	1/8	1/2	1/8	1/2
F	1/8	1/2	1/8	1/2
G	1/8	1/4	1/8	1/4
H	1/8	1/8	1/8	1/8
J	0	0	0	0
K	0	1/8	0	1/8
L	1/8	3/8	1/8	3/8
M	1/8	3/8	1/8	3/8
N	3/8	3/4	3/8	3/4
P	1/4	1/2	1/4	1/2

NOTE: ALL DIMENSIONS GIVEN ARE IN INCHES.



ALTERNATE ANCHOR DETAIL

Scale 1"=1'-0"

JOINT AT END BENT

Scale: 3/4"=1'-0"

NOTE: "D" THE DIMENSION "D" SHALL CONFORM TO THE RECOMMENDATIONS OF THE SEAL MANUFACTURER AS APPROVED BY THE BRIDGE ENGINEER. THE DEPTH OF THE SEAL SHALL BE APPROX. EQUAL TO THE UNCOMPRESSED WIDTH OF THE SEAL.

JOINT SEAL SUPPORT DETAIL

Scale 1"=1'-0"

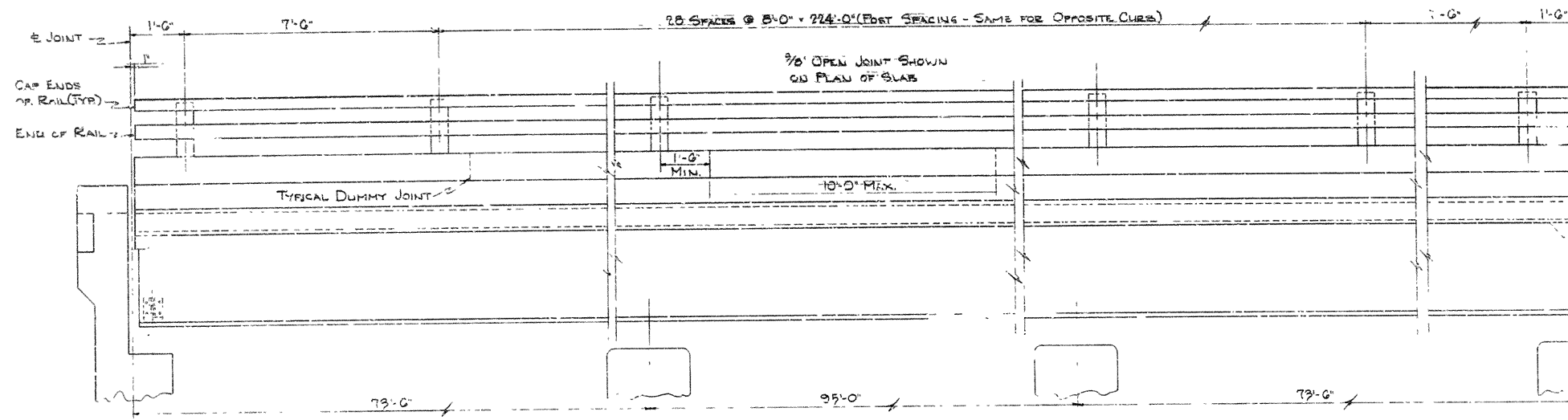
JOINT AT INT. BENT

Scale 3/4"=1'-0"

DETAILS OF SUPERSTRUCTURE
MULBERRY RIVER BRIDGE
HWY. 215-LONELM
CRAWFORD-FRANKLIN COUNTIES
INT. ROUTE 40 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: *DES* DATE: 5-98
TRACED BY: *DES* DATE: 5-98
CHECKED BY: *DES* DATE: 5-98
BRIDGE NO. 5109 A & B DRAWING NO. 14358

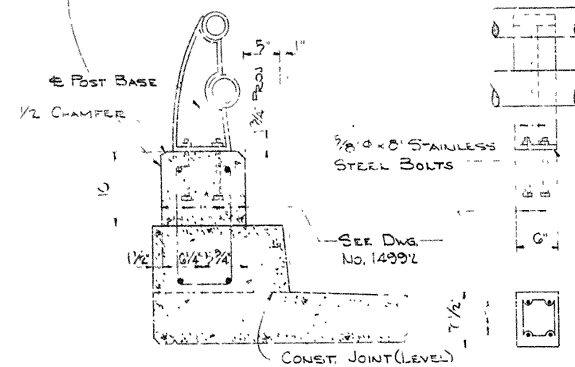
FED. ROAD NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	1-40-1 (1924)		27	
JOB NO.		4527			



ELEVATION TYPE 'A' RAILING

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

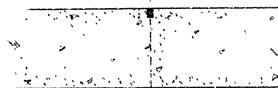
CURB RISER MEASURED AND PAID FOR AS CLASS 5 CONCRETE FOR REIN. STEEL; SEE SPAN DETAILS.



DETAILS OF TYPE 'A' RAILING

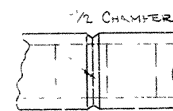
Scale: 1" = 1'-0"

1/4" x 1" POURED ASPHALT JOINT IN SLAB AND CURB. TO BE PAID FOR AS CLASS '5' CONCRETE.



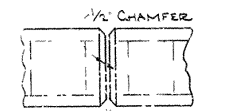
TRANSVERSE SLAB JOINT 'A'

Scale: None



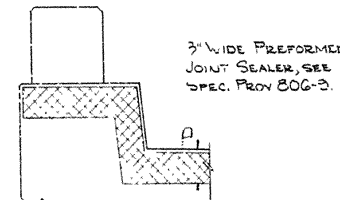
PLAN OF DUMMY JOINT

Scale: 1" = 1'-0"



PLAN OF OPEN JOINT

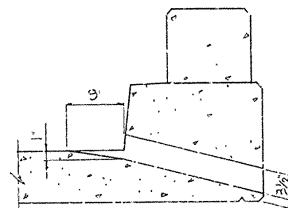
Scale: 1" = 1'-0"



PREFORMED JOINT SEALER DETAIL

Scale: 1" = 1'-0"

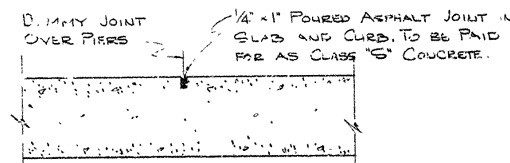
NOTE: SET LIP OF DRAIN 1" LOW AND TROWEL OUT SLAB TO MEET



DRAIN OPENING 9" x 7" TAPERED TO 3/4" x 7/8". PLACE AT APPROX. 20' CTS. ON LOW SIDE OF SLOPED ROADWAY. DO NOT PLACE DRAINS OVER DUMPED RIFRAP.

SECTION THRU DRAIN

Scale: 1" = 1'-0"



TRANSVERSE SLAB JOINT 'B'

Scale: None

SYMMETRICAL BY ROTATION ABOUT THIS LINE

GENERAL NOTES

SPECIFICATIONS:

1. SPECIFICATIONS-ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION EDITION OF 1950, THE 1951 SUPPLEMENTAL SPECIFICATIONS THERETO AND APPLICABLE SPECIAL PROVISIONS.

GENERAL:

1. THESE 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.

CONCRETE:

1. ALL CONCRETE TO BE CLASS '5'. ALL EXPOSED CORNERS TO BE CHAMFERED 1/4", UNLESS OTHERWISE NOTED.
2. ALL CHAMFERS ON CONCRETE RISER FOR RAIL ARE TO BE 1/2"

REINFORCING:

1. REINFORCING STEEL TO BE DEFORMED BARS OF INTERMEDIATE OR HARD GRADE. 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 OF "REINFORCING STEEL".
2. SHOP LISTS AND BENDING DIAGRAM OF REINFORCING STEEL, INCLUDING WIRE SUPPORTS, SHALL BE SUBMITTED AND APPROVAL SECURED BEFORE FABRICATION IS BEGUN.

RAILING:

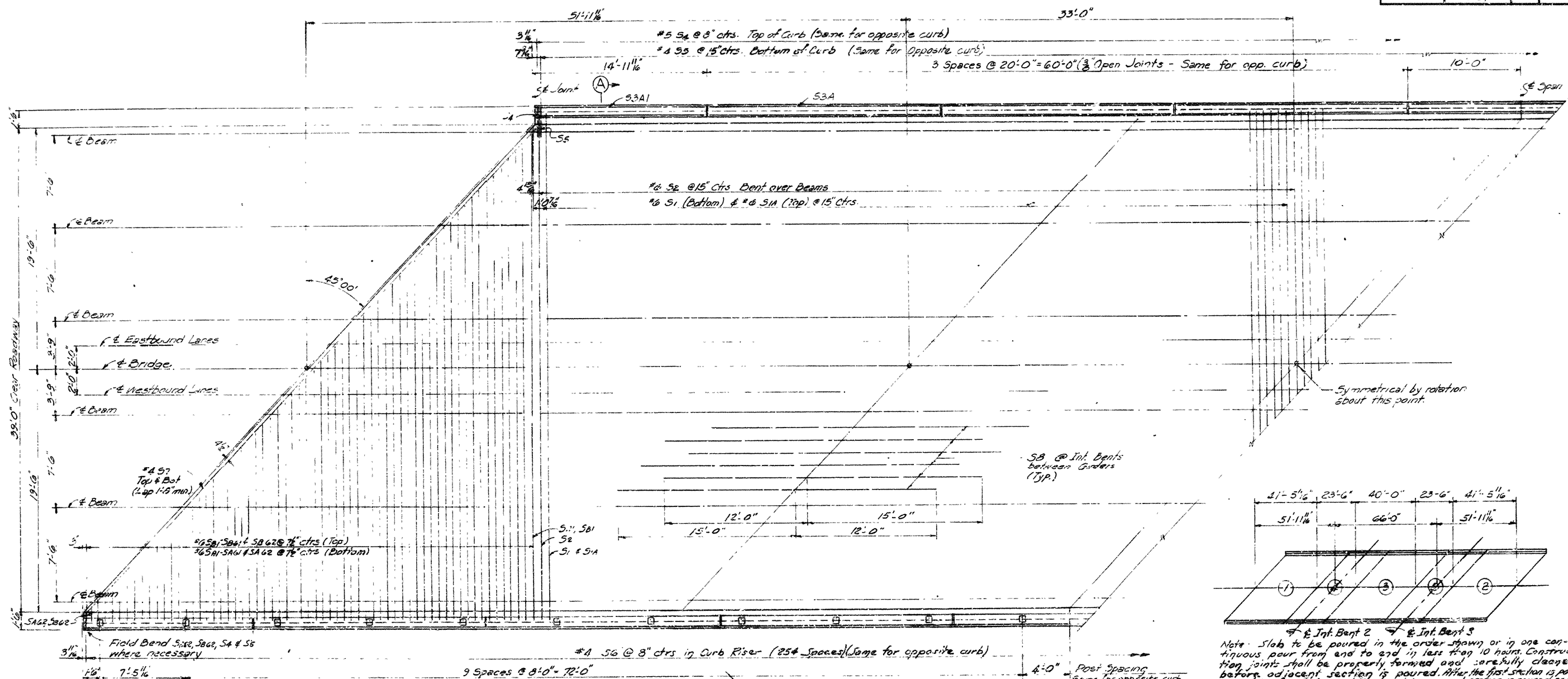
1. SHOP DRAWINGS SHOWING DETAILS OF RAILING SHALL BE SUBMITTED AND APPROVAL SECURED BEFORE FABRICATION IS BEGUN.
2. FOR DETAILS OF BRIDGE RAILING, SEE DWG. NO. 14932 AS SHOWN ON BRIDGE LAYOUT.

STRUCTURAL STEEL:

1. ALL STEEL SHALL BE ASTM A-36, UNLESS OTHERWISE NOTED.
2. ANCHOR BOLTS SHALL BE GALVANIZED TO CONFORM TO THE ASTM SPECIFICATION, DESIGNATION A193.
3. ALL METAL BEARING AND ROADWAY EXPANSION DEVICES TO BE PAID FOR AS "STRUCTURAL STEEL IN BEAM SPANS". BEARINGS SHALL BE FINALLY SEATED IN ACCORDANCE WITH SEC 806.54, INCLUDING ALTERNATE OF THE STD. SPEC. THIS WORK AND MATERIALS ARE TO BE CONSIDERED SUBSIDIARY TO THE ITEM "STRUCTURAL STEEL IN BEAM SPANS" AND WILL NOT BE PAID FOR DIRECTLY.
4. FIELD CONNECTIONS TO BE RIVETED OR BOLTED WITH HIGH STRENGTH BOLTS.
5. RIVETS - 3/4" Ø, OPEN HOLES 1 1/8" Ø, EXCEPT AT BEAM SPLICES. AT BEAM SPLICES USE 1/2" Ø RIVETS, OPEN HOLES 3/8" Ø.
6. ALL WELDED CONNECTIONS TO BE 3/16" FILLET SHOP WELDS EXCEPT AS NOTED. ALL WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY "STANDARD SPECIFICATIONS FOR WELDED HIGHWAY AND RAILWAY BRIDGES", CURRENT EDITION. CURRENT SUPPLEMENTAL SPECIFICATIONS SHALL ALSO APPLY. STRUCTURAL SHAPES OF EQUAL OR GREATER STRENGTH MAY BE SUBSTITUTED FOR SHAPES SHOWN, BUT PAYMENT WILL BE MADE ON THE BASIS OF THE SHAPES SHOWN OR THOSE ACTUALLY USED, WHICHEVER IS LESS.
7. 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.
8. FIELD PAINT: FIRST COAT- RED LEAD TINTED WITH LAMPBLACK. SECOND COAT- ALUMINUM PAINT. A THIRD COAT, ALUMINUM PAINT, SHALL BE APPLIED TO ALL SPLICE AND CONNECTION AREAS.
9. NO SHOP PAINT SHALL BE APPLIED TO TOP FLANGES OR EDGES OF TOP FLANGE OF BEAMS AND SHEAR CONNECTORS OR AT JOINTS OF WELDED OR BOLTED SPLICES, INCLUDING SPLICE PLATES.
10. FINISH SURFACES TO RECEIVE ONE SHOP COAT OF WHITE LEAD AND TALLOW.

DETAILS OF SUPERSTRUCTURE
MULBERRY RIVER BRIDGE
HWY. 215-LONELM
CRAWFORD-FRANKLIN COUNTIES
INT. ROUTE 40 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

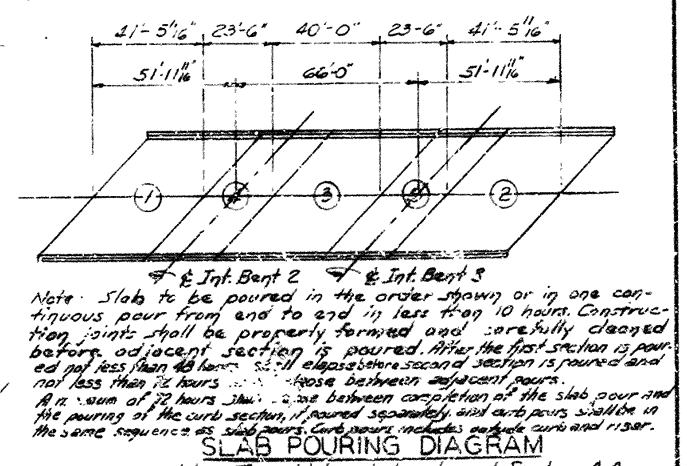
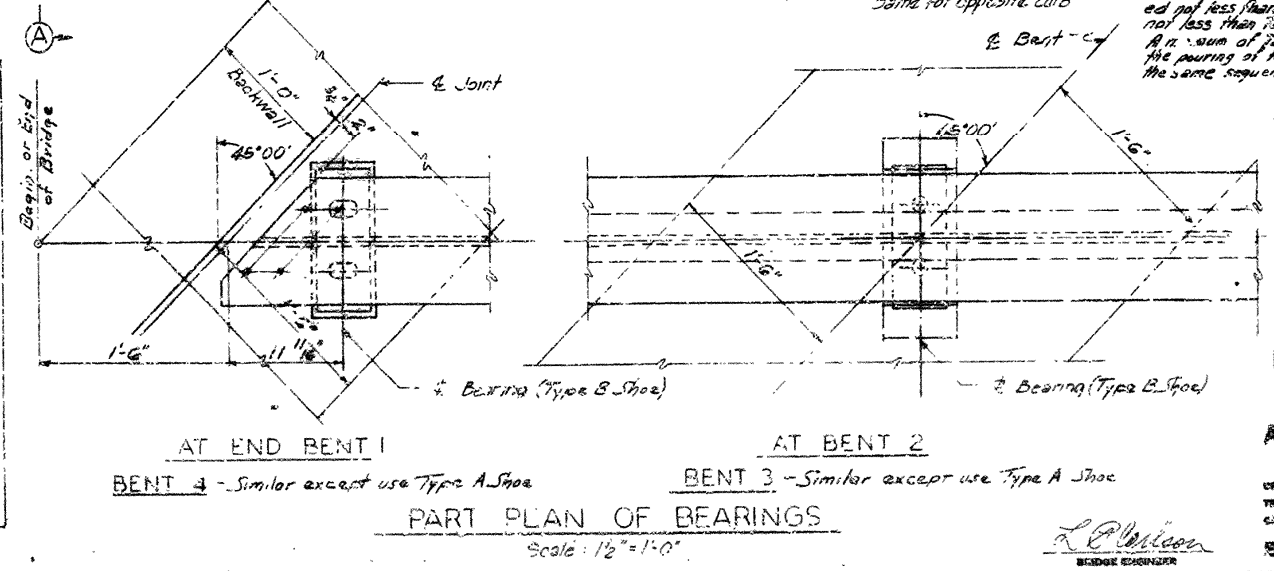
DRAWN BY: <i>[Signature]</i> DATE: 2-22-58	SCALE: 1/2" = 1'-0"
CHECKED BY: <i>[Signature]</i> DATE: 2-22-58	
BRIDGE NO. 5109 A & B	DRAWING NO. 14360



BAR LIST - ONE SUPERSTRUCTURE

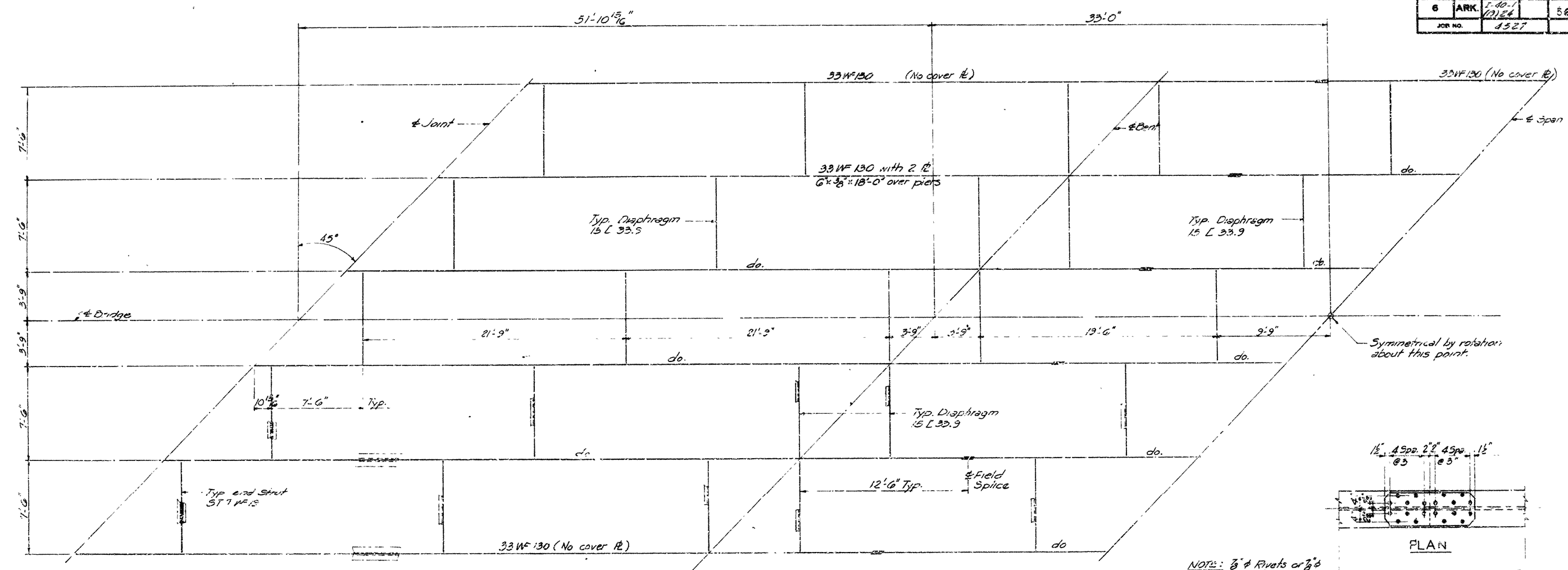
MARK	SIZE	LENGTH	NUMBER	FIN DIA
S1	6	40'-3"	104	5/8"
S1A10	6	Varies	2	5/8"
S1A11	6	33'-6"	Each	5/8"
S1A12	6	2'-0"	4	5/8"
S1A13	6	2'-8"	4	5/8"
S1A14	6	42'-0"	104	5/8"
S1A15	6	41'-4"	100	5/8"
S2	5	33'-6"	150	5/8"
S3	5	3'-10"	510	1/2"
S4	4	1'-0"	272	1/2"
S5	4	4'-1"	510	5/8"
S6	4	23'-5"	0	5/8"
S7	4	19'-9"	28	5/8"
S8	4	17'-0"	20	5/8"
S8A1	4	17'-0"	20	5/8"
S8A2	4	17'-0"	20	5/8"
S8A3	4	17'-0"	20	5/8"
S8A4	4	17'-0"	20	5/8"
S8A5	4	17'-0"	20	5/8"
S8A6	4	17'-0"	20	5/8"
S8A7	4	17'-0"	20	5/8"
S8A8	4	17'-0"	20	5/8"
S8A9	4	17'-0"	20	5/8"
S8A10	4	17'-0"	20	5/8"
S8A11	4	17'-0"	20	5/8"
S8A12	4	17'-0"	20	5/8"
S8A13	4	17'-0"	20	5/8"
S8A14	4	17'-0"	20	5/8"
S8A15	4	17'-0"	20	5/8"
S8A16	4	17'-0"	20	5/8"
S8A17	4	17'-0"	20	5/8"
S8A18	4	17'-0"	20	5/8"
S8A19	4	17'-0"	20	5/8"
S8A20	4	17'-0"	20	5/8"

Dimensions are to centers of bars.



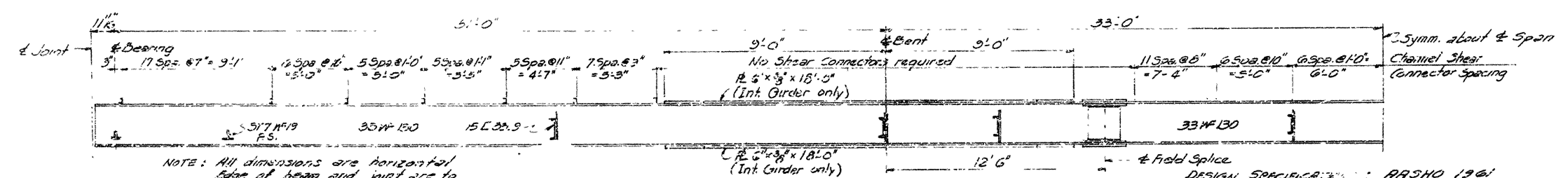
DETAILS OF
SUPERSTRUCTURE
HWY 215 - LONELIM
OVER MAXEY CREEK
FRANKLIN COUNTY
SHEET 1
PREPARED BY
BRIGHTON ENGINEERING COMPANY
INT. ROUTE 40 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: CEB DATE: 7-7-66
CHECKED BY: DATE: 10-66
BRIDGE NO. 5110 A & B DRAWING NO. 14367

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FED. AID FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	7-30-1	1964	56	197
JOB NO.		4527			

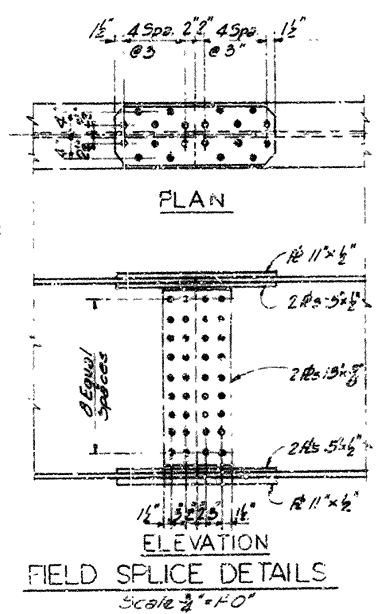


FRAMING PLAN 51' SPAN

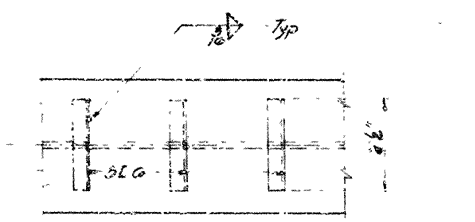
HALF FRAMING PLAN 66' SPAN



HALF BEAM ELEVATION

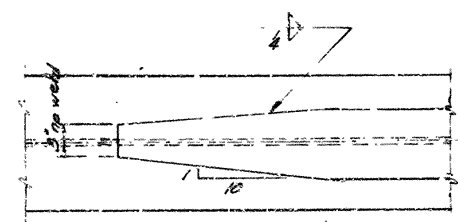


FIELD SPLICE DETAILS
Scale: 3/4\"/>



DETAILS OF SHEAR CONNECTORS
Scale: 1 1/2\"/>

NOTE: Stud shear connectors, granular flux filled, solid filled or equal may be used in place of the channels shown at the following ratios: 3/4\"/>



DETAILS OF COVER PLATES
Scale: 1 1/2\"/>

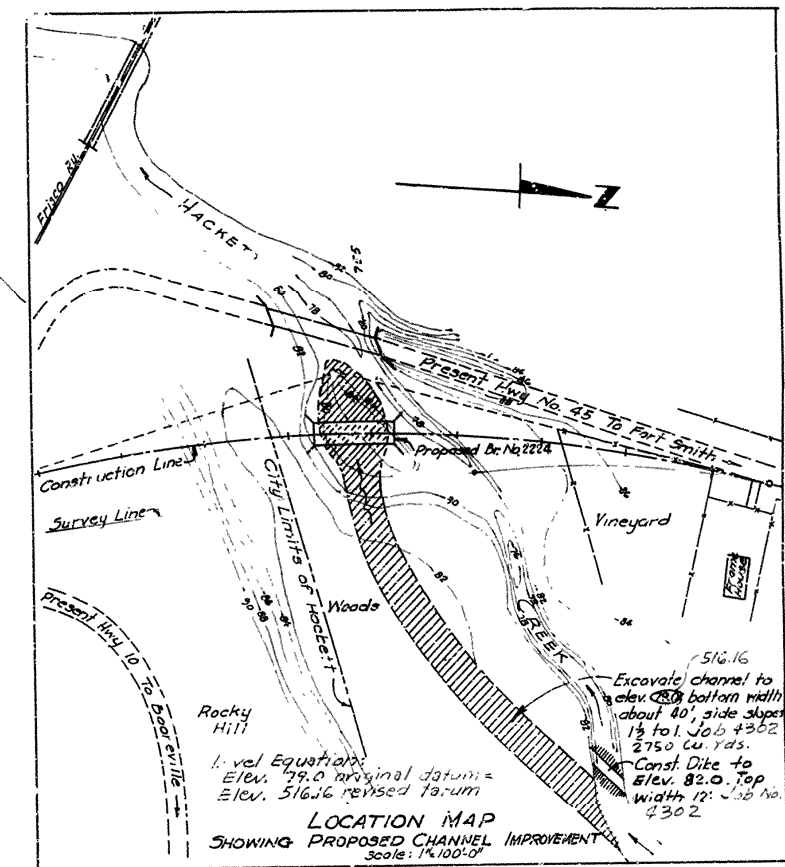
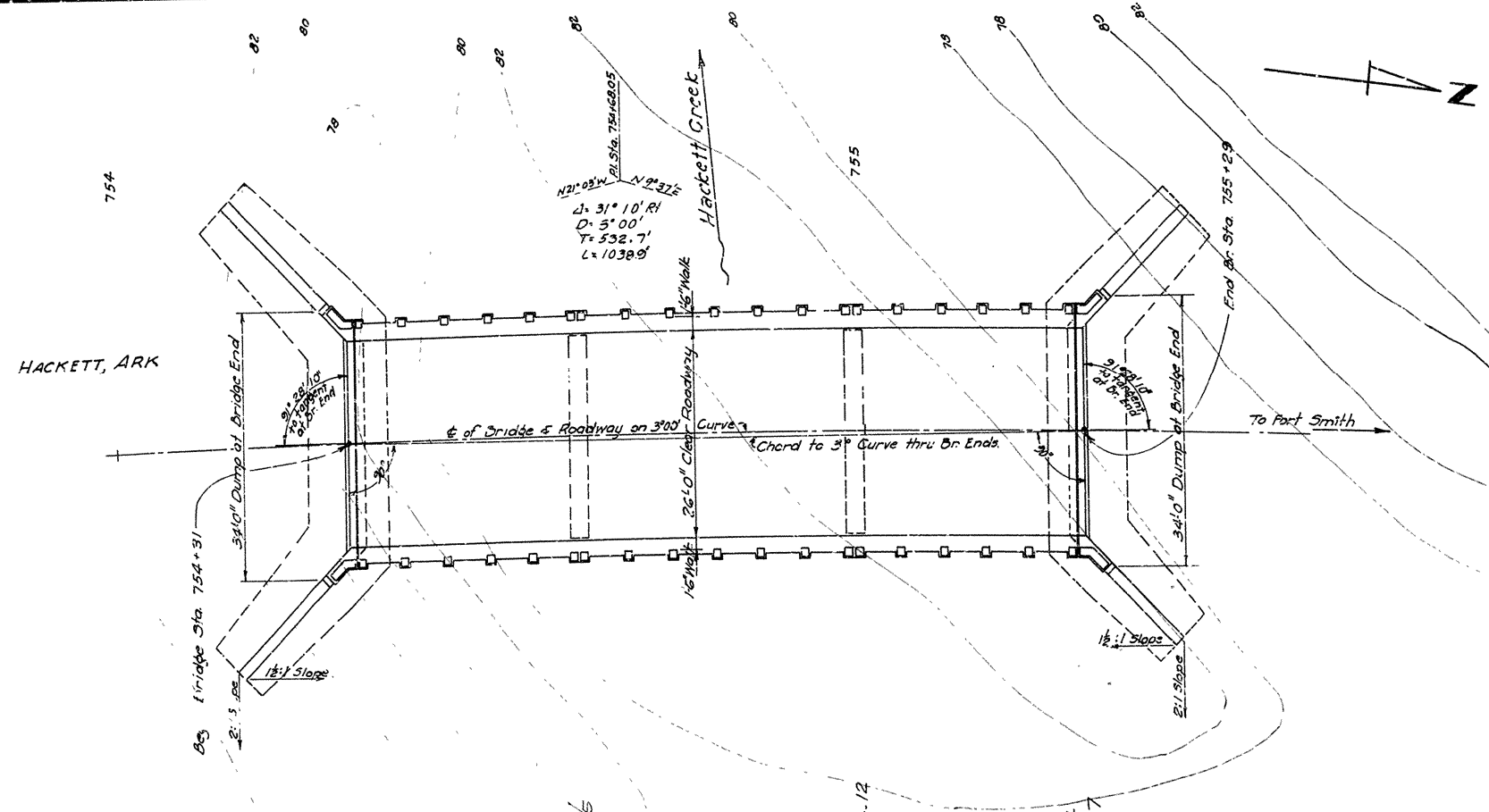
- DESIGN SPECIFICATIONS: AASHTO 1961
LIVE LOADING: HS20 (AASHTO 1961) and Special Interstate Loading of 2-24,000 Lb. axles spaced 4'-0\"/>
- Dead Load (Type "A" Rail)
 - a. To W^f: 306 #/ft
 - b. To composite: 190 #/ft
 - Live Load to each composite Beam: 1,366 #/ft. Imp. 1,276 #/ft. Imp.

All beams shall be shop assembled in their true position and connection holes reamed, all joints match marked. The shop assembly shall have an assembly sequence of two sections.

DETAILS OF SUPERSTRUCTURE
HWY. 215 - LONELM
OVER MAXEY CREEK
FRANKLIN COUNTY
SHEET 3
PREPARED BY
BRIGHTON ENGINEERING COMPANY
INT. ROUTE 40 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: CEB DATE: 7-6-66
CHECKED BY: PCW DATE: 10-66
BRIDGE NO. 5110 A & B DRAWING NO. 14369

FED. ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	S-3136J	1946	22	32
STATE JOB NO. 4295					
1946 22 32					

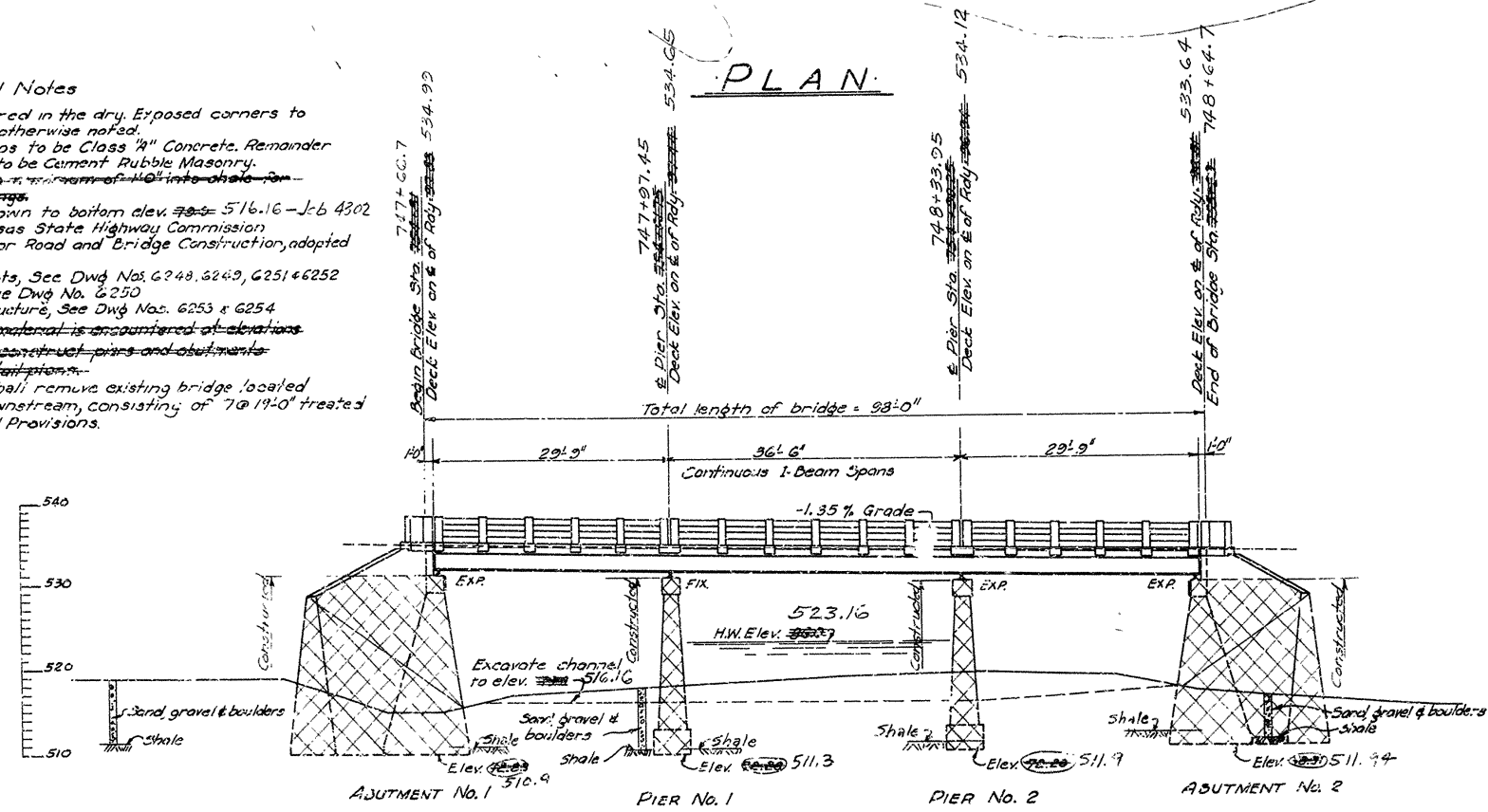
7266



General Notes

All concrete to be poured in the dry. Exposed corners to be chamfered $\frac{3}{8}$ " unless otherwise noted.
 Abutment and Pier Caps to be Class "A" Concrete. Remainder of Abutments and Piers to be Cement Rubble Masonry.
 Excavate to meet into a stream of 10' into shale for Pier and Abutment Foundations.
 Excavate channel as shown to bottom elev. 516.16 - Job 4302
 Specifications: Arkansas State Highway Commission Standard Specifications for Road and Bridge Construction, adopted March 1, 1940.
 For Details of Abutments, See Dwg. Nos. G248, G249, G251 & G252
 For Details of Piers, See Dwg. No. G250
 For Details of Superstructure, See Dwg. Nos. G253 & G254
 If suitable foundation material is encountered at elevations other than that shown, construct piers and abutments to center shown on detail plan.
 Bridge Contractor shall remove existing bridge, located approximately 120 feet downstream, consisting of 7 @ 19'0" treated timber spans. See Special Provisions.

PLAN



ELEVATION

QUANTITIES

Item No.	Item	Quantity	Unit
SPK 802	Class "A" Concrete for Bridges	15.0	Cu Yds
SPK 802	Class "B" Concrete for Bridge	73.0	Cu Yds
SPK 803	Reinforcing Steel	13830	Lbs
805	Concrete Railing	212	Lin. Ft.
807	Structural Steel in Deck Spans (At Highway Shops)	76,760	Lbs
807	Structural Steel in Deck Spans (At Bridge)	8,520	Lbs
904	Cement Rubble Masonry	8.2	Cu Yds
SPK 907	Conditioning & Erecting Structural Steel on Piers	44,860	Lbs
	Bridge Name Plates - Type "B"	2	Each
	Conditioning Substructure Units in Place	100%	Complete
	Removal of Existing Bridge Structures Since	25%	Complete
	Maintaining Traffic		

LAYOUT OF BRIDGE
 OVER HACKETT CREEK
 AT HACKETT, ARK.
 SEBASTIAN COUNTY
 ROUTE 45 SEC. 1

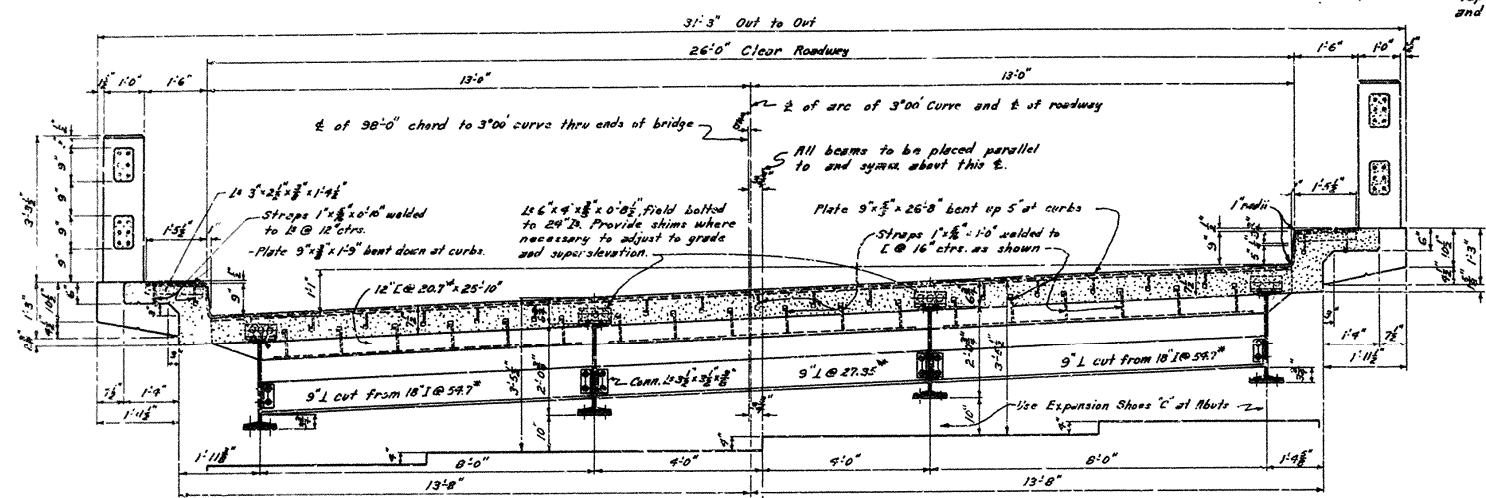
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: H.B. Date: 10-3-41
 Traced By: H.B. Date: 10-6-41
 Checked By: Date:
 BRIDGE NO. 2224 DRAWING NO. G247

Revisions: Portions constructed indicated; quantities; level datum; 1-16-46. H.B.

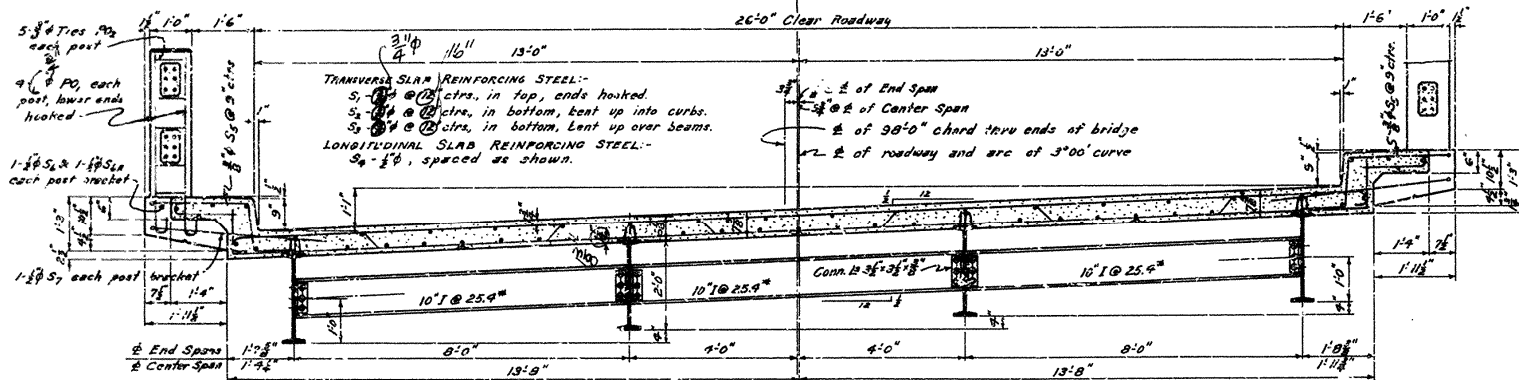
DRAINAGE AREA
 7.59 miles² @ 10
 B.M. Elev. 521.70
 Top of bottom wall of
 S.E. wing of timber bridge
 10' of Sta. 7471.00.

FED. ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	S-313 (5)	1946	29	32
STATE JOB NO. 4295					
1946 29 32					

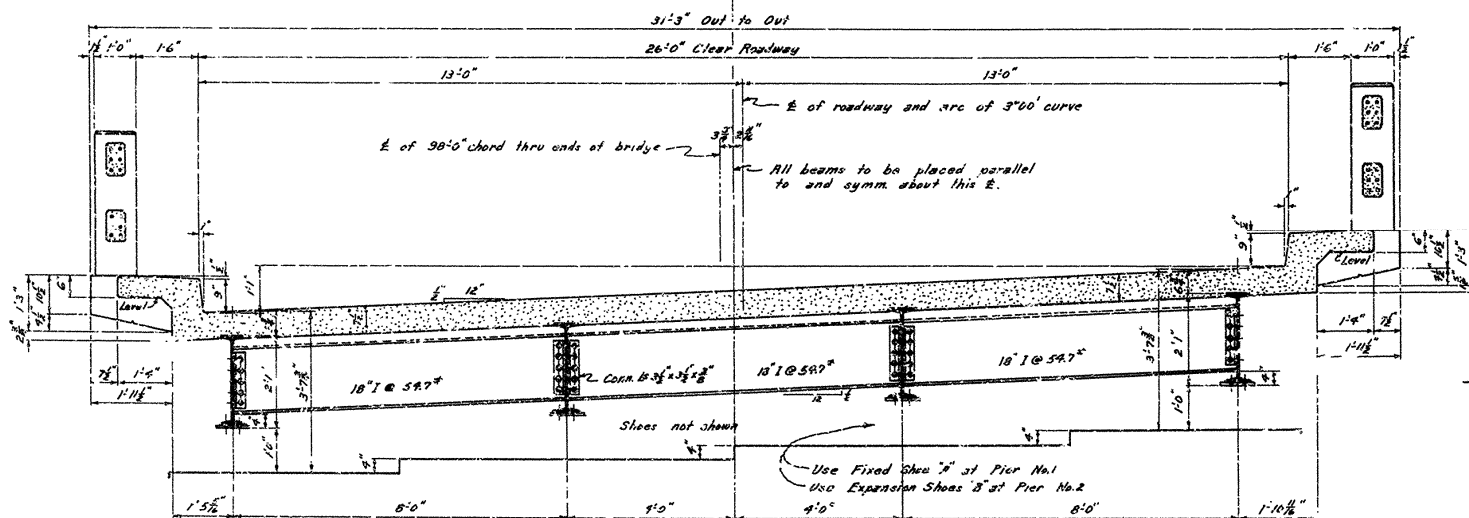
426p



SECTION A-A AT ABUTMENT NO. 1 - SECTION AT ABUTMENT NO. 2 SIMILAR EXCEPT DIRECTION OF SUPERELEVATION. Dimensions shown are at 1/2\"/>

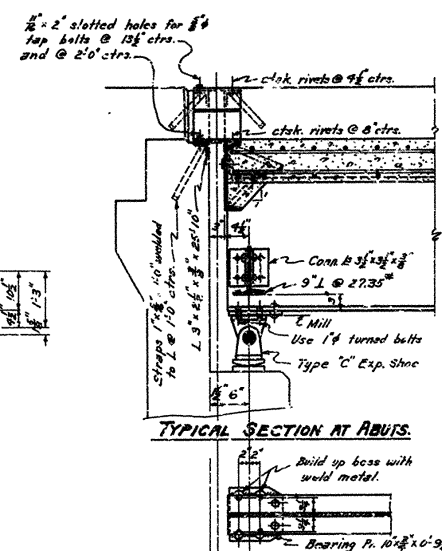


SECTION B-B AT 1/2 OF END SPANS SECTION D-D AT 1/2 OF CENTER SPAN. Scale: 1/2\"/>

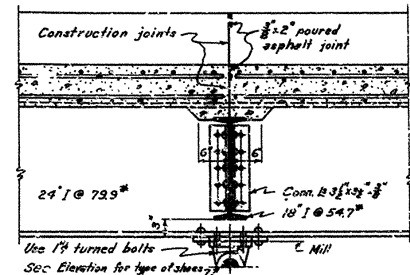


SECTION C-C AT PIERS. Dimensions shown are at 1/2\"/>

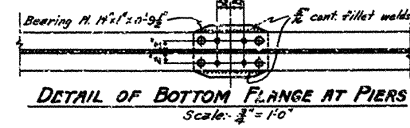
Revisions:
Reinforcing Steel, 6-18-46 NB



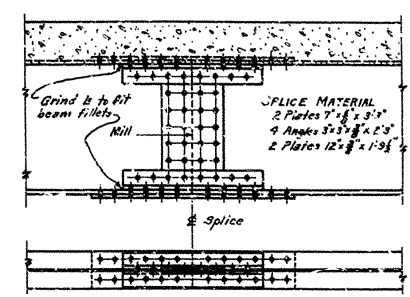
TYPICAL SECTION AT ABUTS. Scale: 1/2\"/>



TYPICAL SECTION AT PIERS. Scale: 1/2\"/>



DETAIL OF BOTTOM FLANGE AT PIERS. Scale: 1/2\"/>

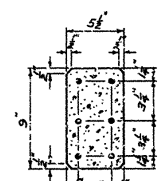


DETAIL OF BEAM SPLICE. Scale: 1/2\"/>

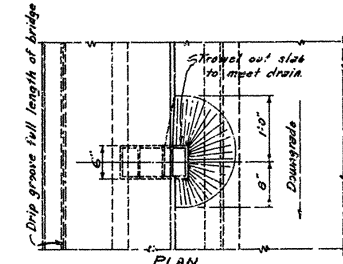
BAR LIST

MARK	SIZE	NO. REQ'D	LENGTH	A	BENDING DIAGRAM
S ₁	2 1/2"	70	29'-0"		
S ₂	3"	70	29'-3"		
S ₃	3 1/2"	71	28'-10 1/2"		
S ₄	1 1/2"	94	29'-9"	Straight End spans	
S ₅	1 1/2"	94	19'-0"	Straight Center span	
S ₆	3"	256	5'-6"		
S ₇	3"	30	9'-10"	0'-11"	
S ₈	3"	30	9'-6"	0'-7"	
S ₉	3"	30	9'-5"		
RM ₁	1 1/2"	240	5'-2"	Straight End spans	
RM ₂	1 1/2"	144	5'-4"	Straight Center span	
PO ₁	3"	152	4'-6"		
PO ₂	3"	150	3'-7"		

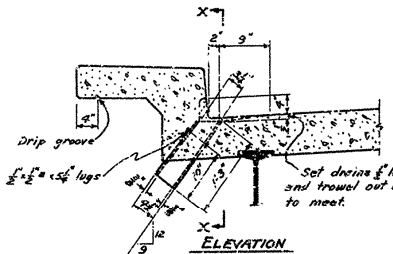
NOTE: Dimensions relating to reinforcing steel are to center of bars.



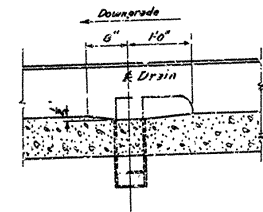
RAIL SECTION. Scale: 1/2\"/>



PLAN. Scale: 1/2\"/>



ELEVATION. Scale: 1/2\"/>



SECTION X-X. Scale: 1/2\"/>



SLAB BAR BOLSTER. Scale: 1/2"

High Chair

All reinforcing steel shall be accurately located in the forms and firmly held in place by means of steel wire chair supports, as shown to prevent displacement during the course of construction and to keep the steel at proper distance from the forms. Bar supports are to be sufficient in number and sufficiently heavy to properly carry the steel they support. Wire sizes shall not be less than shown.

Wire supports will not be paid for directly but will be considered subsidiary to the item of reinforcing steel. Shop lists and diagrams must be submitted for approval.

SPECIAL NOTE:

The structural steel required is now stock piled at the Arkansas State Highway District Shop at Fort Smith, Arkansas.

Revisions:
Reinforcing Steel, 6-18-46 NB

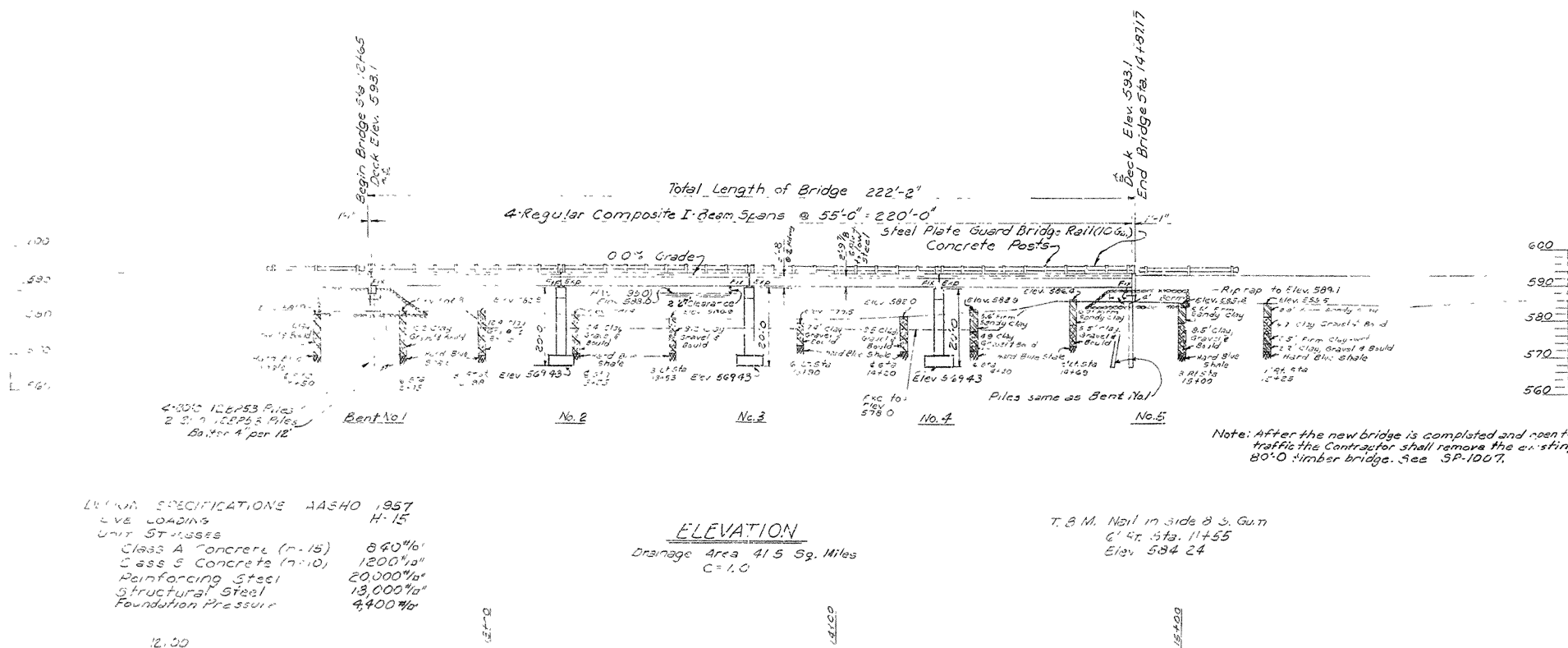
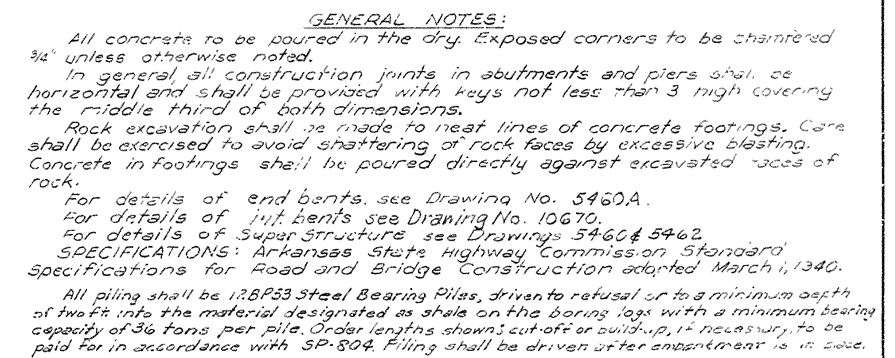
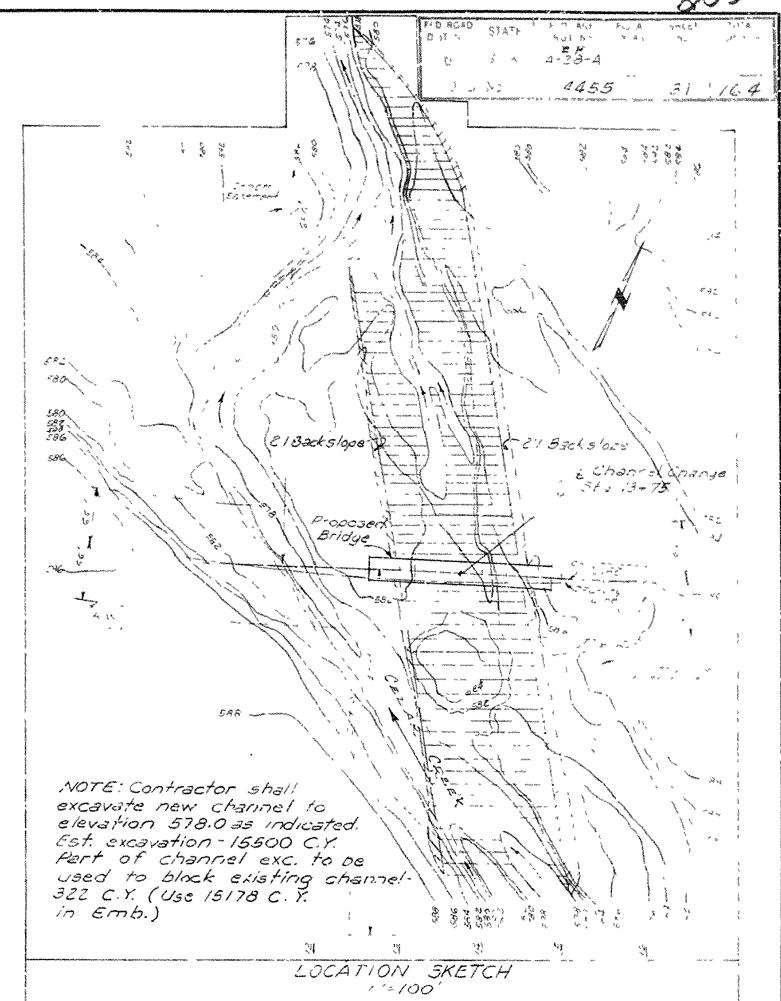
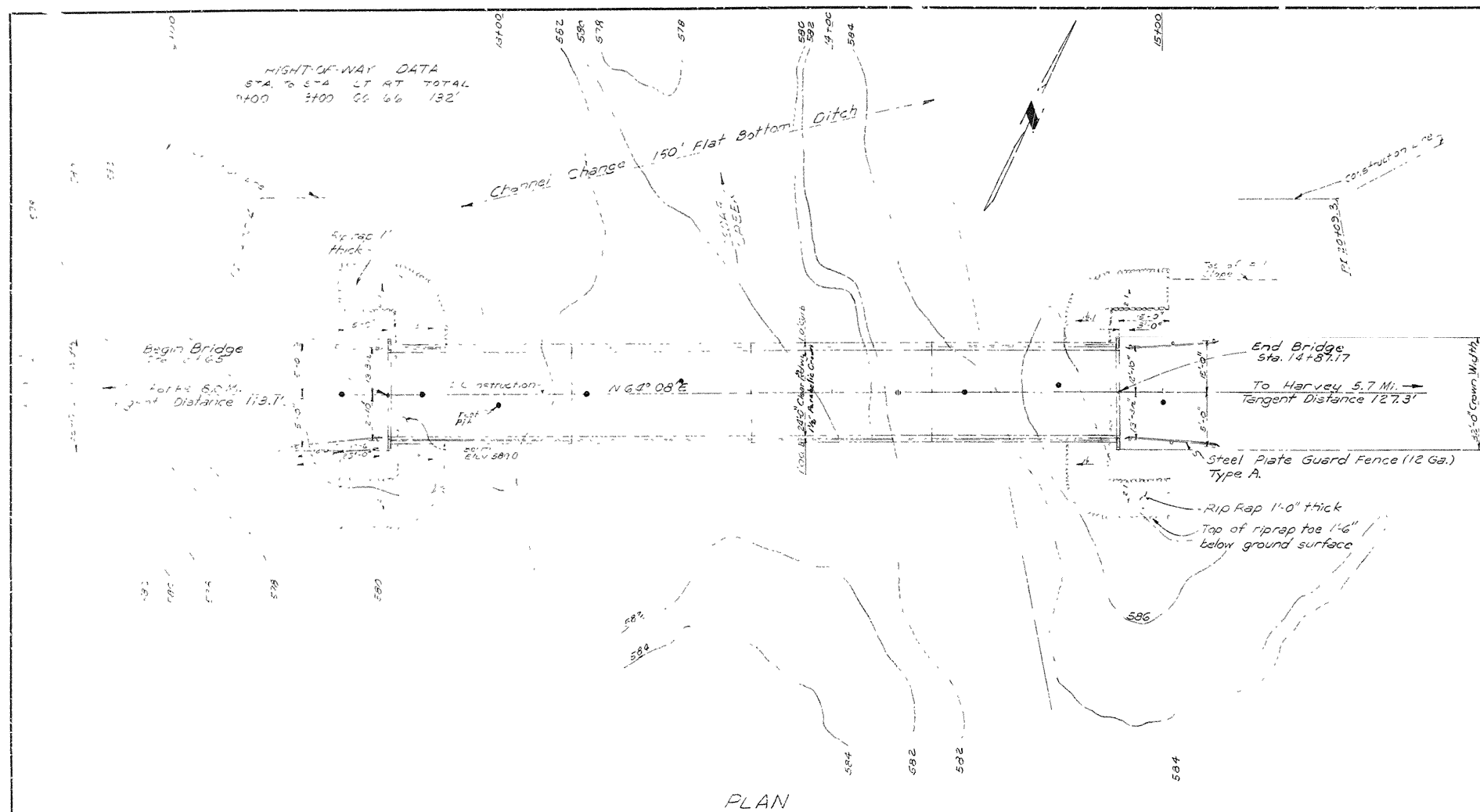
fabrication of structural steel has been completed. Work to be done under Job No. 4295 includes conditioning and erection of structural steel. See Special Provisions.

W.C.H. Date: 10-9-41
Traced By: W.C.H. Date: 10-16-41
Checked By: Date:
BRIDGE NO. 2224 DRAWING NO. 254

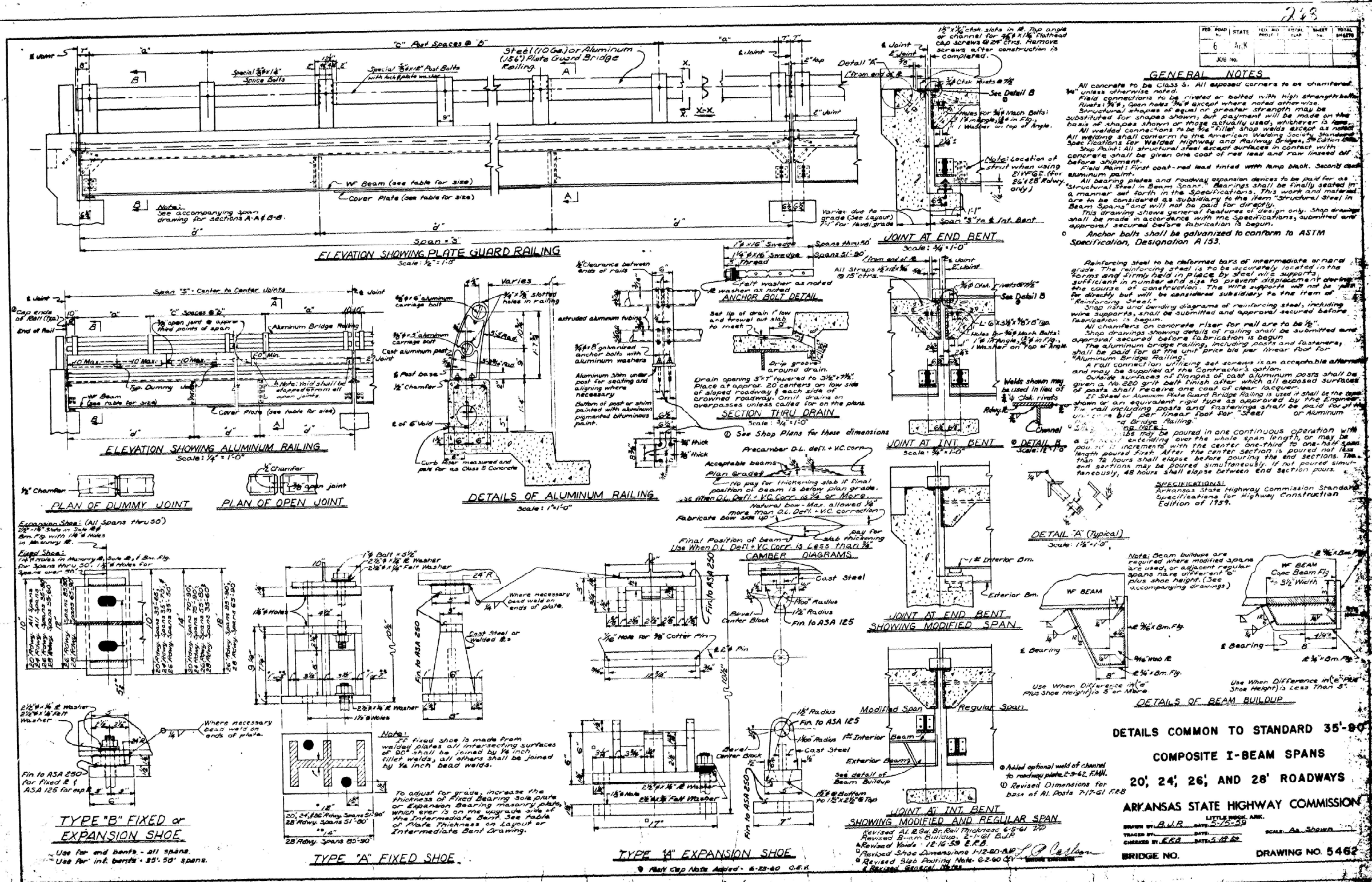
SHEET NO. 2
DETAILS OF CONTINUOUS I-BEAM SPANS
29'-9" — 36'-6" — 29'-9"
ON 3'00" CURVE, RIGHT
26'-0" CLEAR ROADWAY 2 SIDEWALKS @ 1'-6"
4 GRADER TYPE
ROUTE 45 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: W.C.H. Date: 10-9-41
Traced By: W.C.H. Date: 10-16-41
Checked By: Date:
BRIDGE NO. 2224 DRAWING NO. 254



FOR INFORMATION ONLY

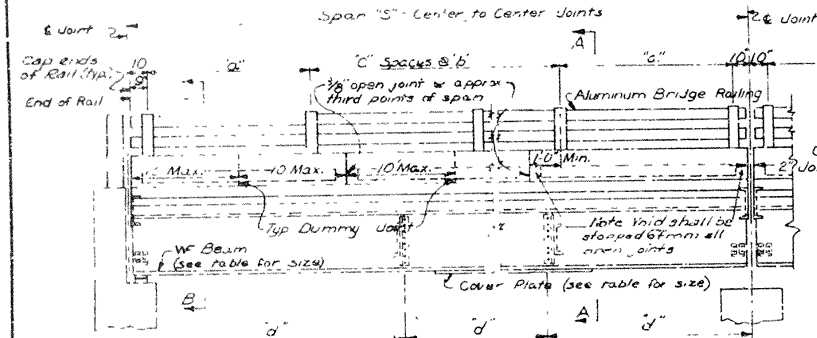
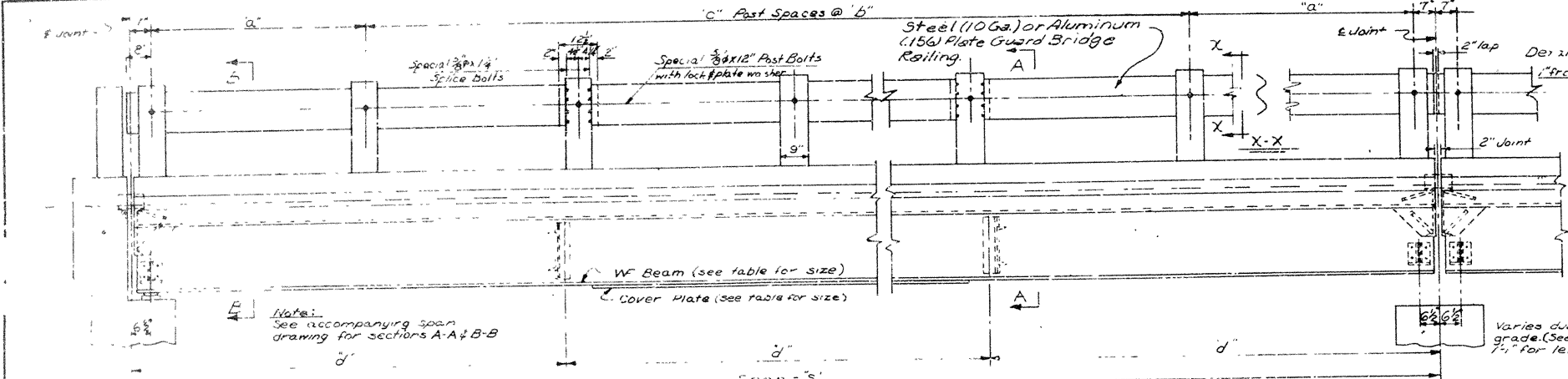


GENERAL NOTES

All concrete to be Class S. All exposed corners to be chamfered 3/4" unless otherwise noted.
Field connections to be riveted or bolted with high strength bolts. Rivets: 3/4", open holes 5/8" except where noted otherwise.
Structural shapes of equal or greater strength may be substituted for shapes shown, but payment will be made on the basis of shapes shown or those actually used, whichever is less.
All welded connections to be the Miller Shop welds except as noted.
All welding shall conform to the American Welding Society Standard Specifications for Welded Highway and Railway Bridges, current edition.
Shop Paint: All structural steel except surfaces in contact with concrete shall be given a coat of red lead and raw linseed oil before shipment.
Field Paint: First coat as above and tinted with lamp black. Second coat aluminum paint.
All metal bearing and roadway expansion devices to be paid for as "Structural Steel in Beam Spans." Bearings shall be finally seated in accordance with Sec. 806.03, including attention to the 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 or design only. Shop drawings shall be made in accordance with the specifications, submitted and approved before fabrication is begun.
All steel shall be ASTM A-36 unless otherwise noted.
Anchor bolts shall be galvanized to conform to ASTM Specification, Designation A 153.
Reinforcing steel to be deformed bars of intermediate or hard grade. 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 of "Reinforcing Steel."
Shop lists and bending diagrams of reinforcing steel, including wire supports, shall be submitted and approved before fabrication is begun.
All chamfers on concrete riser for rail are to be 3/4".
Shop drawings showing details of railing shall be submitted and approved before fabrication is begun.
The aluminum bridge railing, including posts and fasteners, shall be paid for at the unit price bid per linear foot for "Metal Aluminum Bridge Railing."
A rail connection utilizing self screws is an acceptable alternate and may be supplied at the Contractor's option.
Outside surfaces of flanges of cast aluminum posts shall be given a No. 220 grit buff finish after which all exposed surfaces of posts shall receive one coat of clear lacquer.
If steel or aluminum plate guard bridge railing is used it shall be the same shown or an equivalent rigid type as approved by the Engineer. The rail including posts and fasteners shall be paid for at the unit price bid per linear foot for "Steel or Aluminum Plate Guard Bridge Railing."
Slab Pouring Note: Floor slabs may be poured in one continuous operation with a strikeoff extending over the whole span length, or they may be poured in increments with the center one third concrete placed first, 12 hours shall elapse before pouring the end sections. End sections may be poured simultaneously. If not poured simultaneously, 48 hours shall elapse between end section pours.
SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction Edition of 1959.

ELEVATION SHOWING PLATE GUARD RAILING

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



ELEVATION SHOWING ALUMINUM RAILING

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



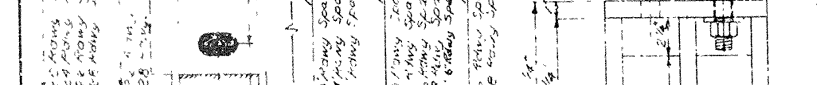
PLAN OF OPEN JOINT

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



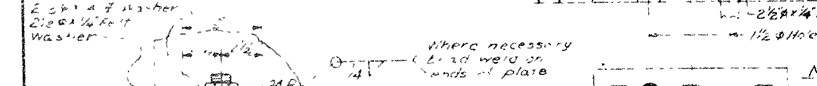
DETAILS OF ALUMINUM RAILING

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



TYPE "B" FIXED OR EXPANSION SHOE

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



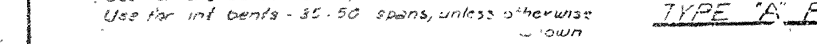
TYPE "A" FIXED SHOE

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



TYPE "B" EXPANSION SHOE

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

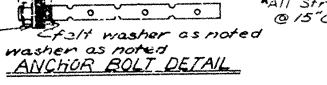


TYPE "A" EXPANSION SHOE

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

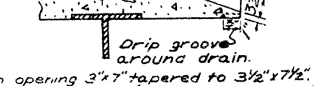
ANCHOR BOLT DETAIL

Scale: 3/4" = 1'-0"



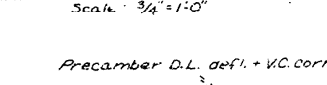
SECTION THRU DRAIN

Scale: 3/4" = 1'-0"



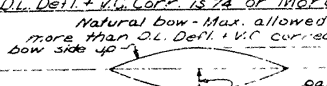
DETAIL A (Typical)

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



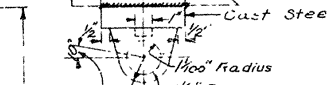
DETAIL B

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



DETAIL C

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



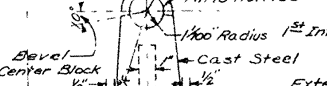
DETAIL D

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



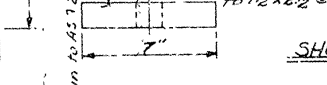
DETAIL E

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



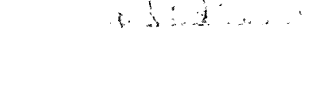
DETAIL F

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



DETAIL G

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



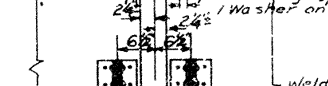
JOINT AT END BENT

Scale: 3/4" = 1'-0"



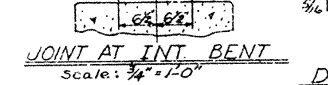
JOINT AT INT. BENT

Scale: 3/4" = 1'-0"



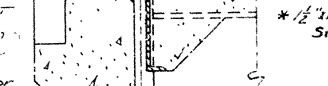
JOINT AT END BENT

Scale: 3/4" = 1'-0"



JOINT AT INT. BENT

Scale: 3/4" = 1'-0"



JOINT AT END BENT

Scale: 3/4" = 1'-0"



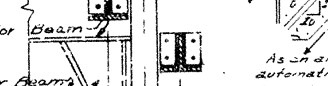
JOINT AT INT. BENT

Scale: 3/4" = 1'-0"



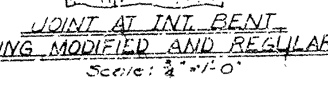
JOINT AT END BENT

Scale: 3/4" = 1'-0"



JOINT AT INT. BENT

Scale: 3/4" = 1'-0"



JOINT AT END BENT

Scale: 3/4" = 1'-0"



This Drawing is a modification of Dwg No. 14-390

Notes: Beam builds are required where modified spans are used or adjacent regular spans have different plus shoe height (See accompanying drawings.)

8" thick stiffener on side of web tapered from edge of Coped Flg to edge of bottom plate.

WF BEAM Copied Flg to 32" width

8" thick stiffener on side of web to Flg edge

WF BEAM

8" thick stiffener on side of web to Flg edge

WF BEAM

8" thick stiffener on side of web to Flg edge

WF BEAM

8" thick stiffener on side of web to Flg edge

WF BEAM

8" thick stiffener on side of web to Flg edge

WF BEAM

8" thick stiffener on side of web to Flg edge

WF BEAM

8" thick stiffener on side of web to Flg edge

DETAILS COMMON TO STANDARD 35'-90'

COMPOSITE I-BEAM SPANS

ALL ROADWAY WIDTHS

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

RE-DRAWN BY: F.E. DATE: 9-27-65

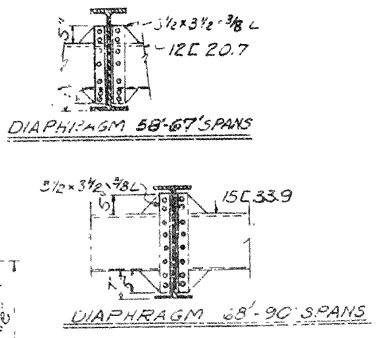
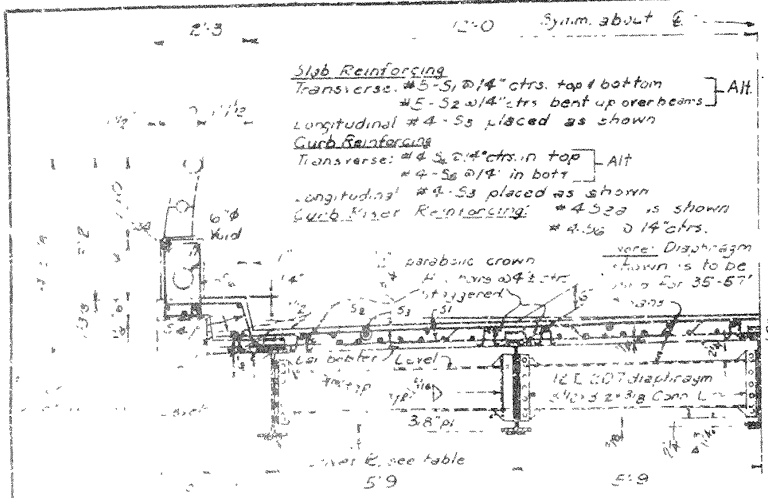
TRACED BY: J.M.H. DATE: 9-30-65

BRIDGE NO. 332-29-1-1

DRAWING NO. 12-1-1

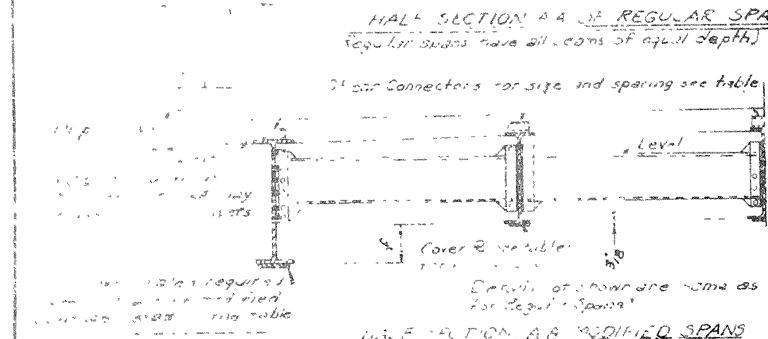
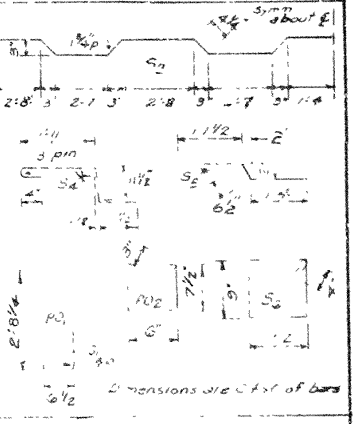
FOR INFORMATION ONLY

6 ARK 10-28-63
JOB NO. 4483 10-28-63
BENDING DIAGRAM

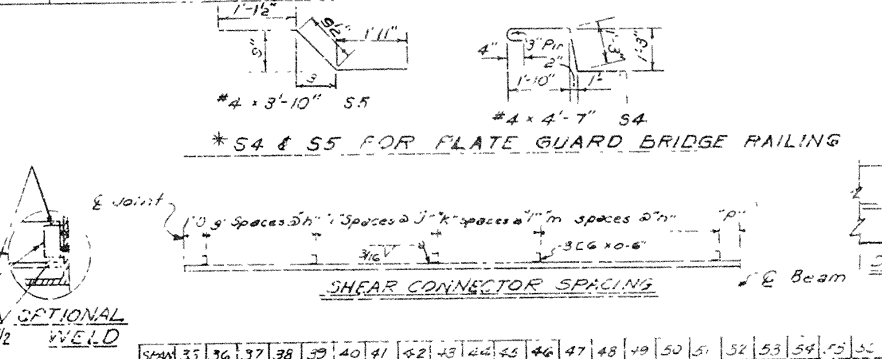
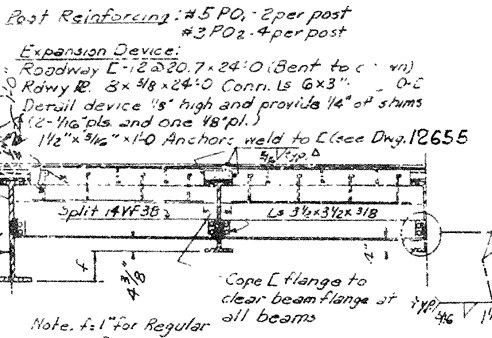


BAR LIST - ONE SPAN

			Number Required Each Span																																			
PK	SIZE	LENGTH PIV DIA.	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	65	70	75	80	85	90				
S ₁	5	25'-8" Str	32	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	98	100	102	104	106	108	110	120	126	138	146	154					
S ₂	5	26'-4" Str	30	30	31	32	33	34	35	36	36	37	38	39	40	41	42	42	43	44	45	46	47	48	48	49	50	51	55	59	62	68	72	76				
S ₃	4	5'-6" Str				60																																
S ₄	4	5'-2+7" Str																120																				
S ₅	4	5'-10" Str																																				
* S ₆	4	4'-6" Str	112	62	62	64	66	68	70	72	74	74	76	78	80	82	84	86	86	88	90	92	94	96	98	98	100	102	104	112	120	126	138	146	154			
* S ₇	4	3'-0" Str	112	60	60	62	64	66	68	70	72	72	74	76	78	80	82	84	86	88	90	92	94	96	98	98	100	102	110	118	124	136	144	152				
S ₈	4	5'-4" Str	112	62	62	64	66	68	70	72	74	74	76	78	80	82	84	86	86	88	90	92	94	96	98	98	100	102	104	112	120	126	138	146	154			
S ₉	4	5'-11+8" Str																																				
		3																																				
P0 ₁	5	5'-10" Str		23						32								36										44		48	52	56	60	64				
P0 ₂	3	2'-8" Str		56						64								72										88		96	104	112	120	128				



Parapet Type Railing
Note: Guard Br. Railing Non pay items



Interior beams are same as in Regular Spans. Exterior beams are the same section as the nominal depth as beams for longest span shown on Bridge layout.

Table with 10 columns: SPAN, COVER PLATE, MODIFIED SPAN, REINFORCING STEEL, DEAD LOAD DEFLECTION, LIVE LOAD DEFLECTION, TOTAL DEFLECTION, STRESS, UNIT STRESS, and REMARKS. The table lists various span lengths and their corresponding reinforcement and deflection values.

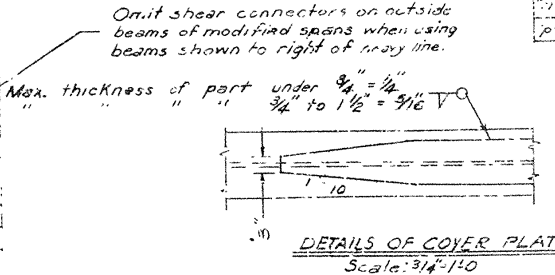


Table with 3 columns: DEAD LOAD, LIVE LOAD, and UNIT STRESS. The table lists various load and stress values.

Note: Stud shear connectors, granular fill, solid fill, or equal may be used in place of the channels shown at the following ratios: 3/4" diameter stud in place of 1/2" diameter of channel, 1/2" diameter stud in place of 3/4" diameter of channel. The studs shall be 4" long and automatically end welded to the beam flanges in accordance with recommendations of the manufacturer. Channel sections will be used as basis for measurement of structural steel in shear connectors.

Table with 3 columns: DEAD LOAD, LIVE LOAD, and UNIT STRESS. The table lists various load and stress values.

Notes: This drawing to be used with Dwg. No. 12655. Revised: Added Optional Const. Joint in Curb (10'-10'-63) JAS (1-28-63).
Revision: Added 73' Span for Job No. 4483 10-28-63 T.L.L.
DETAILS OF STANDARD 35'-90' COMPOSITE I-BEAM SPANS 24'-0" CLEAR ROWY. 1'-0" & 1'-1/2" CURBS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: JAS DATE: 10-28-63
CHECKED BY: EMH DATE: 10-28-63
BRIDGE NO. 380A 13801 DRAWING NO. 12656

1/2" #4 Ss @ 14" ctrs in bottom of curb
Varies #4 Ss @ 14" ctrs in bottom of curb
7" #4 Ss @ 14" ctrs in top of curb

Mark	Size	R ₁	Length	No. Required	per Span-S	73'
S1	5	Str	25' 8"	60	66	106
S1a	5	Str	Varies 1' 4" to 2' 10"	460	460	460
S2	5	1 1/2"	26' 5"	29	32	52
S3	4	Str	3' 7"	120	120	120
S4	4	Str	3' 12"	-	-	180
S5	4	1 1/2"	4' 6"	80	86	126
S6	4	1 1/2"	3' 5"	80	86	126
S7	4	Str	28' 7"	4	4	4
S8a	1	Str	3' 4" to 6"	12	12	12
S6	4	1 1/2"	5' 4"	80	86	126

Mark	Size	A	No. Req'd	Length	73'
S2a	5	1' 0"	2	24' 9"	S2
S2b	5	1' 5"	2	22' 3"	S2
S2c	5	1' 11"	2	19' 3"	S2
S2d	5	1' 5"	2	17' 4"	S2b
S2e	5	2' 11"	2	14' 10"	S2c
S2f	5	0' 7"	2	12' 5"	S2c
S2g	5	1' 0"	2	9' 11"	S2c
S2h	5	1' 6"	2	7' 6"	S2c
S2i	5	2' 0"	2	5' 0"	S2c
S2j	5	-	2	2' 6"	S2c

Note: For bending diagram for Ss and Ss bars not shown see Eng No. 12656. Ss and Ss bars are for aluminum railing.

Note: Dimensions are c/c to c/c of beam

STRUT SPACING

Span	No. of Spacing	73'
46'	5 @ 15' 6"	
73'	7 @ 15' 6"	

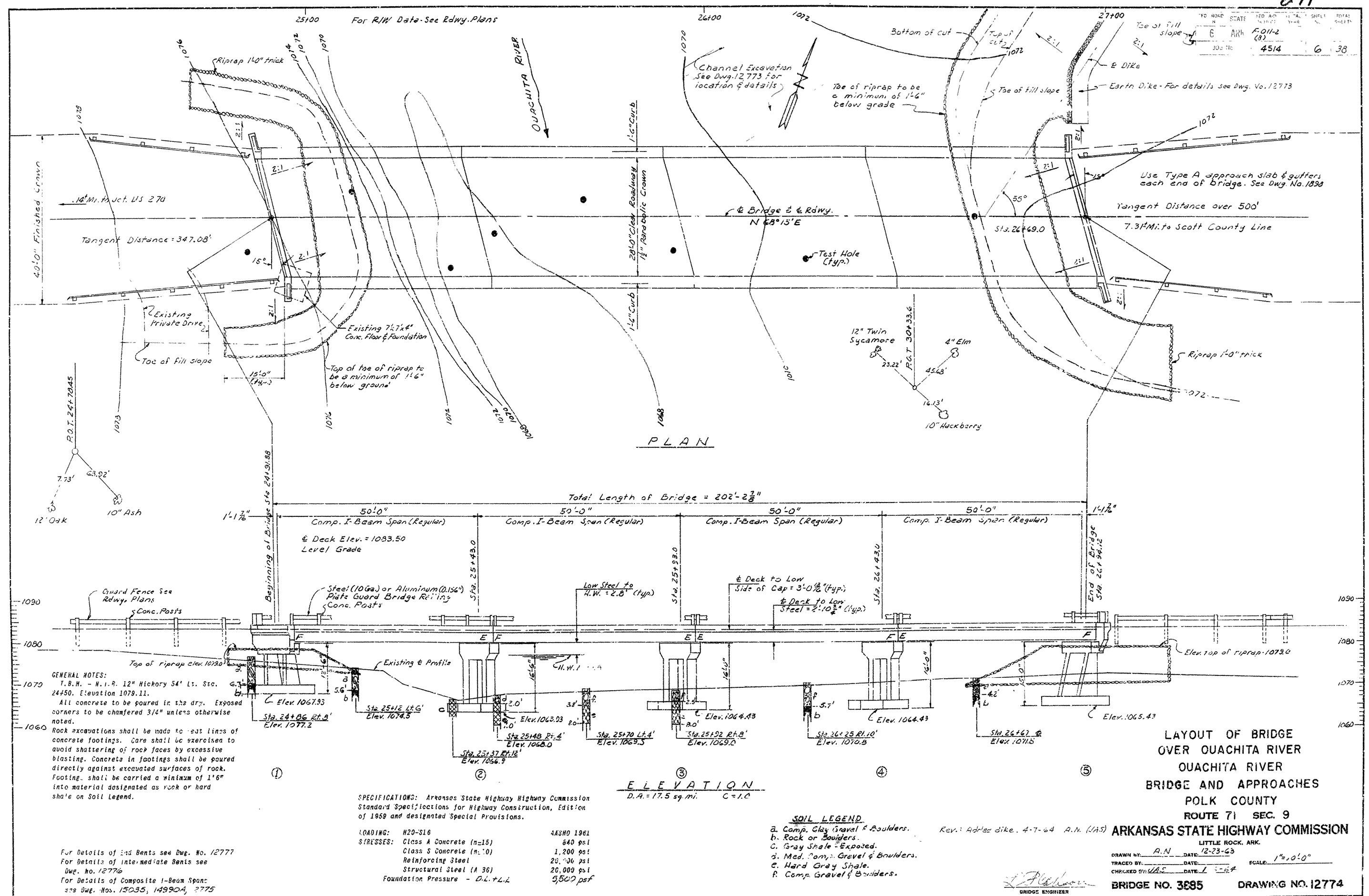
DETAILS OF CHANNEL
Scale 1/2"=1'

NOTE:
For details not shown and general notes see
Dwgs. No. 12655 & 12656.

SUPPLEMENTAL DETAILS
FOR 46' 50' & 73'
COMPOSITE I-BM SPANS
24' CLEAR ROADWAY 1'-1 1/2" CURBS
26° 05' 00" SKEW RIGHT FORWARD
INT ROUTE 40 SEC 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TIL DATE: 7-10-63
TRACED BY: DATE: 6-27-69
CHECKED BY: DATE: 6-27-69
BRIDGE NO. 3800 & 3801 DRAWING NO. 12657



FED. ROAD DIST. NO.	STATE	CONTRACT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	25-63	1963	55	55
JOB NO.					

GENERAL NOTES

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

Field connections to be riveted or bolted with high strength bolts. Rivets: 3/4", Open ends 3/8" except where noted otherwise.

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

All welded connections to be 3/16" fillet shop welds except as noted.

All welding shall conform to the American Welding Society Standard Specifications for Welded Highway and Railway Bridges, current edition.

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: First coat - red lead tinted with lamp black. Second coat - aluminum paint.

All metal bearing and roadway expansion devices to be paid for as "Structural Steel in Beam Spans." Bearings shall be finally seated in accordance with Sec. 805.4, including alternate details. 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 approved before fabrication is begun.

All steel shall be ASTM A-36 unless otherwise noted.

Anchor bolts shall be galvanized to conform to ASTM Specification, Designation A153.

Reinforcing steel to be determined bars of intermediate or hard grade. 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 of "Reinforcing Steel."

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

All chamfers on concrete riser for rail are to be 1/2".

Shop drawings showing details of railing shall be submitted and approved before fabrication is begun.

The aluminum bridge railing, including posts and fasteners, shall be paid for at the unit price bid per linear foot for Metal (Aluminum) Bridge Railing.

A rail connection utilizing set screws is an acceptable alternate and may be supplied at the Contractor's option.

Outside surfaces of flanges of cast aluminum posts shall be given a No. 220 grit belt finish after which all exposed surfaces of posts shall receive one coat of clear lacquer.

If steel or aluminum plate guard bridge railing is used it shall be the contractor's responsibility to provide adequate fasteners. The rail including posts and fasteners shall be paid for at the unit price bid per linear foot for "Steel or Aluminum Plate Guard Bridge Railing."

Slab Pouring Note: Floor slabs may be poured in one continuous operation with a strikeoff extending over the whole span length, or may be poured in increments with the center one-third to one-half span length poured first. After the center sections are poured not less than 12 hours shall elapse before pouring the end sections and sections may be poured simultaneously. If not poured simultaneously, 48 hours shall elapse between end section pours.

SPECIFICATIONS:
Arkansas State Highway Commission Standard Specifications for Highway Construction Edition of 1959.

This Drawing is a modification of Dwg No. 14990.

5" thick stiffener on side of web tapered from edge of Coped Flg. to edge of bottom plate.

Note: Beam builds are required where modified spans are used or adjacent regular spans have different 5" plus shoe height. (See accompanying drawings.)

5" thick stiffener on side of web to Fig. edge.

2 1/2" x 3m Flg.

2 1/2" x 3m Flg.

DETAILS OF BEAM BUILDUP
No 5ca

DETAILS COMMON TO STANDARD 35'-90'

COMPOSITE I-BEAM SPANS

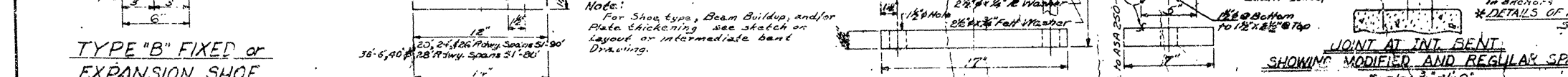
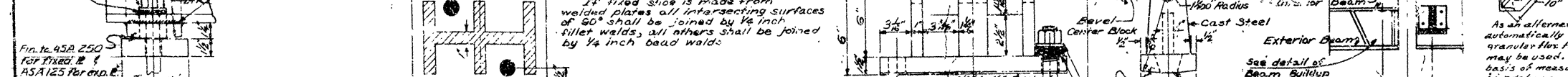
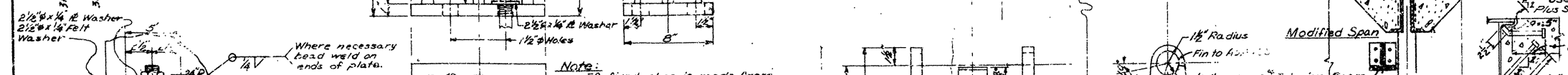
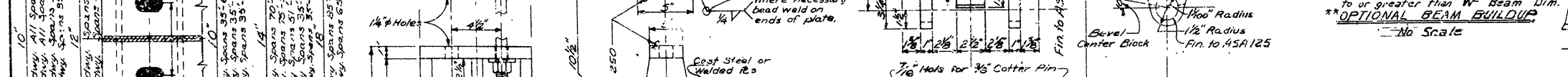
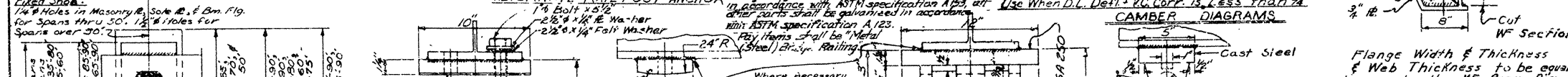
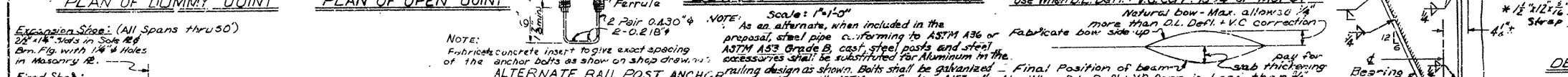
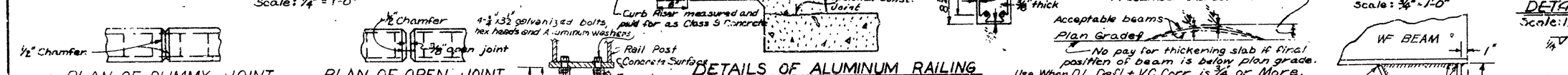
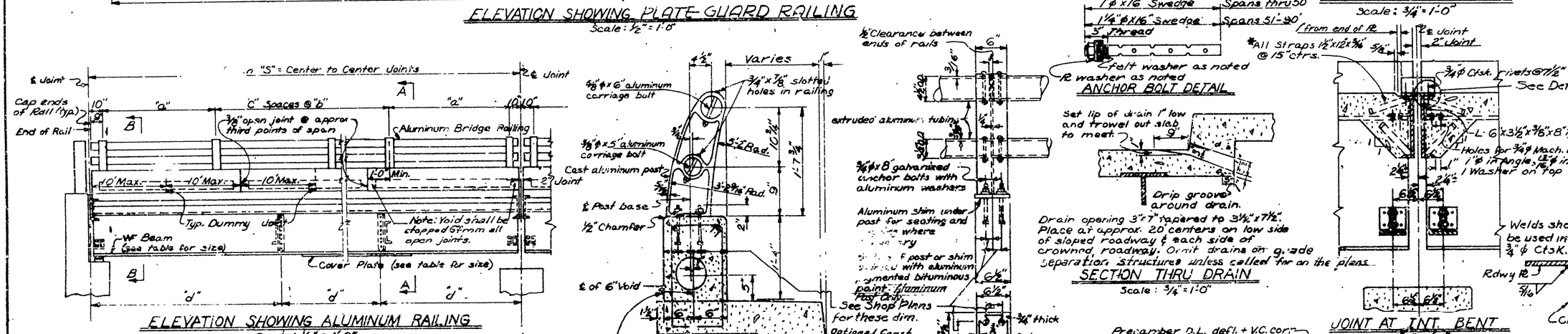
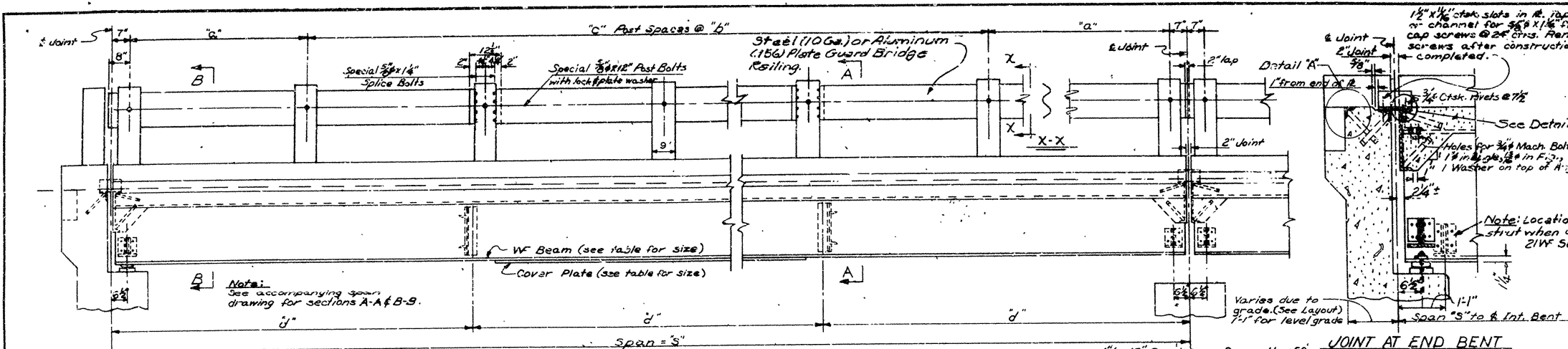
ALL ROADWAY WIDTHS

ARKANSAS STATE HIGHWAY COMMISSION

RE-DRAWN BY: E.E. 9-27-63
CHECKED BY: E.M.H. 9-30-63
BRIDGE NO. 2565 DRAWING NO. 14990A

REMOVED DETAIL OF JOINT AT END BENT SHOWING MODIFIED SPAN & ADDED DETAIL OF OPTIONAL BEAM BUILDUP (1-22-64) (AS)

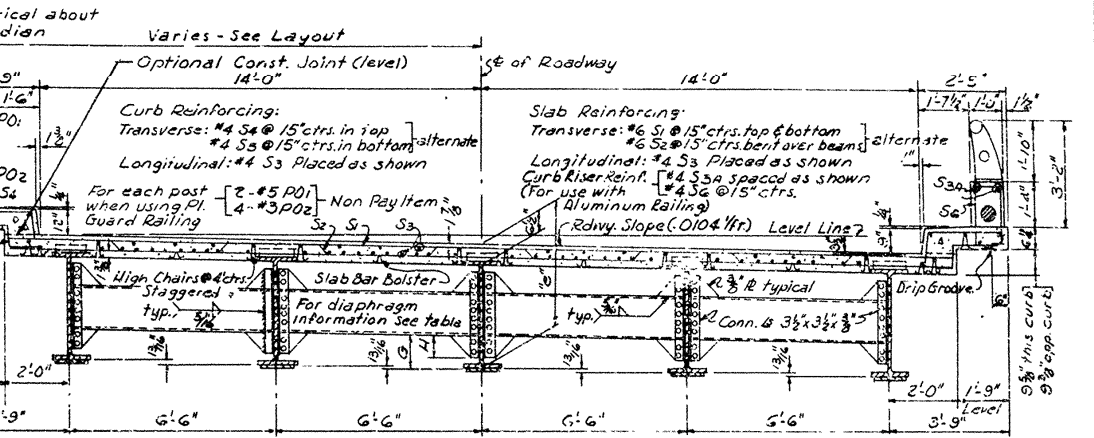
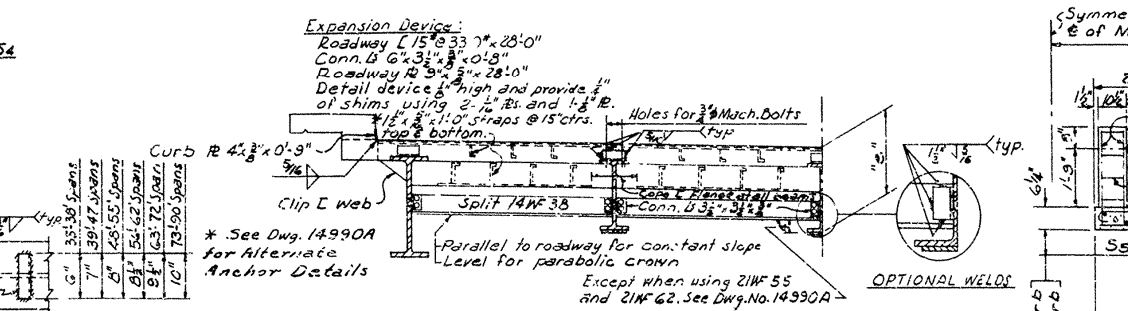
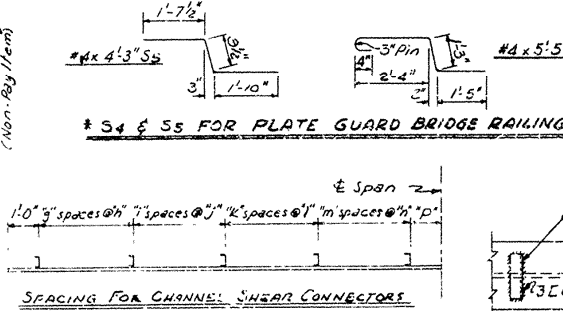
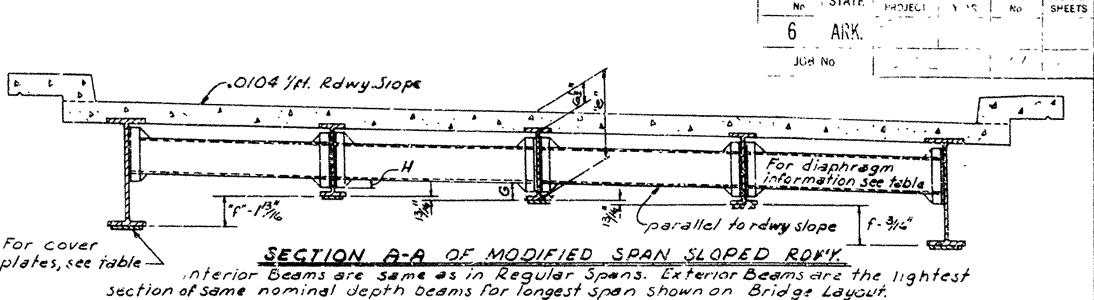
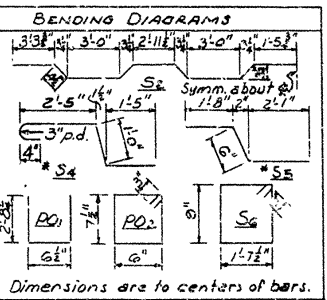
Added Details of Alternate Anchors E.E. 3-23-63



FOR INFORMATION ONLY

BAR LIST - ONE SPAN

MARK	SIZE	LENGTH	P.N. D/A	NUMBER REQUIRED EACH SPAN																																													
				35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	80	85	90		
Railing	S1	6	29'-8"	Str.	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114	116	118	120	122	124	126	136	144							
	S2	6	30'-4"	Str.	28	28	29	30	31	32	33	34	35	36	37	38	39	39	40	41	42	43	43	44	45	46	47	47	48	49	50	51	52	53	54	55	56	57	58	59	63	67	71						
	S3	4	5'-6"	Str.	72																																												
	S3	4	5'-6"	Str.	144																																												
	S3	4	5'-10"	Str.	216																																												
	S3	4	5'-10"	Str.	216																																												
	S3*	4	5'-3"	1/2"	56	58	60	62	64	66	68	70	72	72	74	76	78	80	80	82	84	86	88	90	92	94	96	96	98	100	102	104	104	106	108	110	112	112	114	116	118	120	120	122	124	126	136	144	
S5*	4	4'-3"	1/2"	54	56	58	60	62	62	64	66	68	70	70	72	74	76	78	80	82	84	86	88	90	92	94	94	96	98	100	102	102	104	104	106	108	110	110	112	114	116	118	118	120	122	124	126	136	142
S6	4	5'-4"	1 1/2"	56	58	60	62	64	66	68	70	72	72	74	76	78	80	80	82	84	86	88	90	92	94	96	96	98	100	102	104	104	106	108	110	112	112	114	116	118	118	120	122	124	126	136	144		
S3a	4	5'-6 1/2"	Str.	12																																													
JOIST	PO1	5	5'-10"	1 1/2"	28				32				36				40				44				48				52				56				60	64											
	JO2	5	2'-8"	1 1/2"	56				64				72				80				88				96				104				112				120	128											



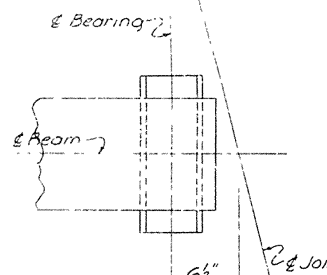
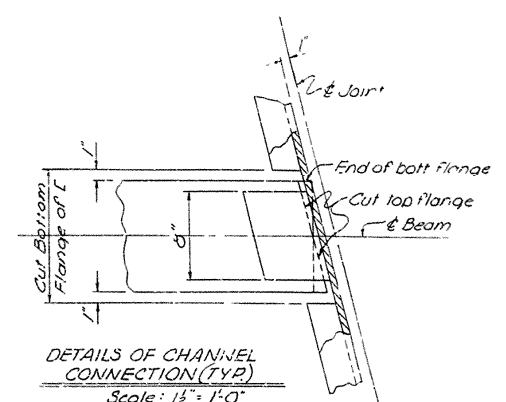
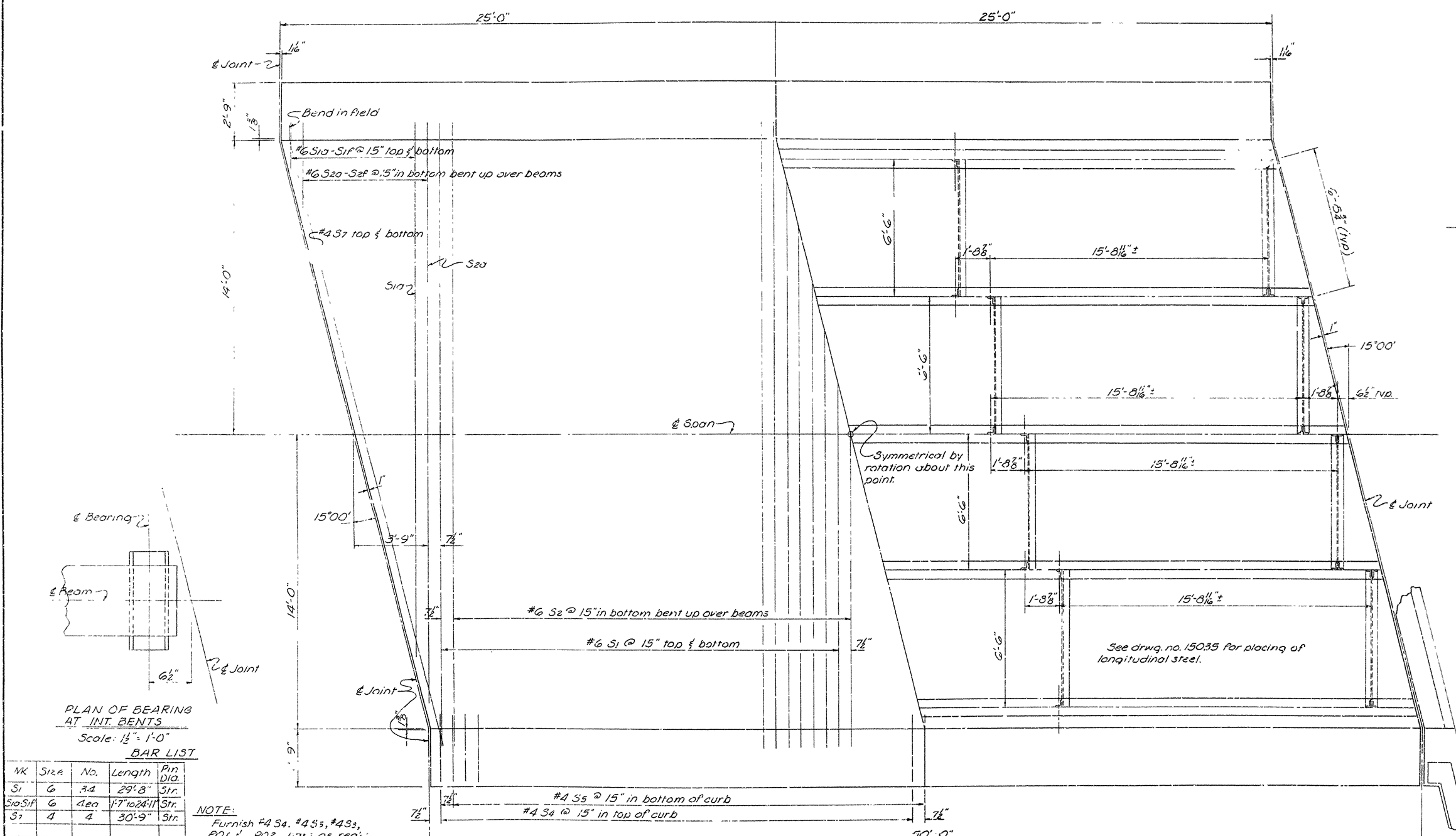
NOTE: Stud shear connectors, granular flux filled, solid fluxed, or equal may be used in place of the channels shown at the following ratios: 3/4" diameter stud in place of 1.82 inches of channel, 7/8" diameter stud in place of 2.52 inches of channel. The studs shall be 4" long and automatically end welded to the beam flanges in accordance with the recommendations of the manufacturer. Channel sections will be used as basis for measurement of structural steel in shear connectors.

DEFLECTION OF EXTERIOR BEAM IS FOR REGULAR SPANS ONLY.

NOTE: Typical welds shown for Conn. B may be used in lieu of rivets. Regular Spans Have All Beams of Equal Depth (See Dwg. No. 14990A)

SPAN	BEAM	REGULAR SPAN		POST SPACING			VARIABLES OF													STRAUT SPACINGS NO. @ 8"	"C"	DEAD LOAD DEFLECTION	MODIFIED SPAN EXTERIOR BEAMS REQUIRING COVER PL	Values of "F" and Dead Load Defl. for Exterior Beams of Modified Spans											
		COVER PLATE		ALUM. RAILING		REIN. RAILING	SHEAR CONNECTOR SPACING																	21WF55 21WF60 21WF63 21WF68 21WF74 21WF76 21WF84 21WF88 21WF90 21WF93 21WF96 21WF99 30WF99 30WF108 30WF118 30WF135 30WF1											

ED	ROAD	STA	100' A.D.	SCALE	SHEET	TOTAL
1	Ark.	F-011	2(3)	45.4	7	38



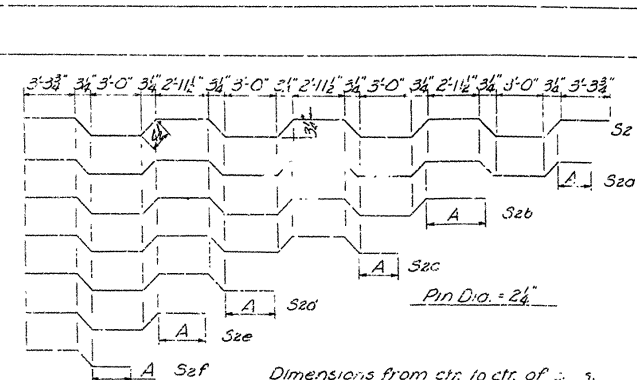
PLAN OF BEARING
AT INT. BENTS
Scale: 1/2" = 1'-0"

BAR LIST

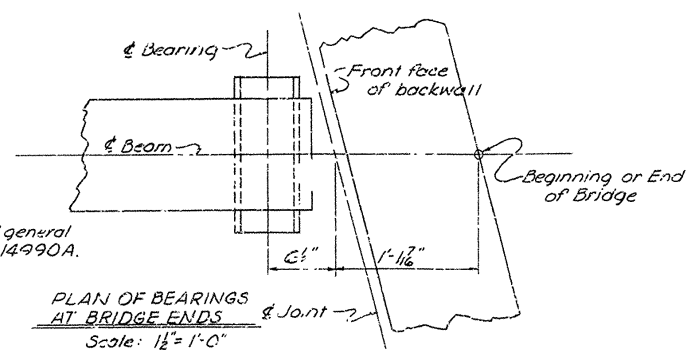
NK	Size	No.	Length	Pin Dia.
S1	6	34	29'-8"	Str.
S2a	6	4en	1'-7" to 2'-11"	Str.
S7	4	4	30'-9"	Str.

NOTE:
Furnish #4 S4, #4 S3, #4 S3,
P01 & P02 bars as req'd.
See drwg. no. 15035.

NK	Size	No. Bars	Req'd.	A	Length
S2	6	33	-	30'-4"	
S2a	6	2	10"	27'-10"	
S2b	6	2	2'-9"	23'-1"	
S2c	6	2	1'-4"	18'-5"	
S2d	6	2	3'-2"	13'-6"	
S2e	6	2	1'-8"	8'-8"	
S2f	6	2	4"	4'-0"	



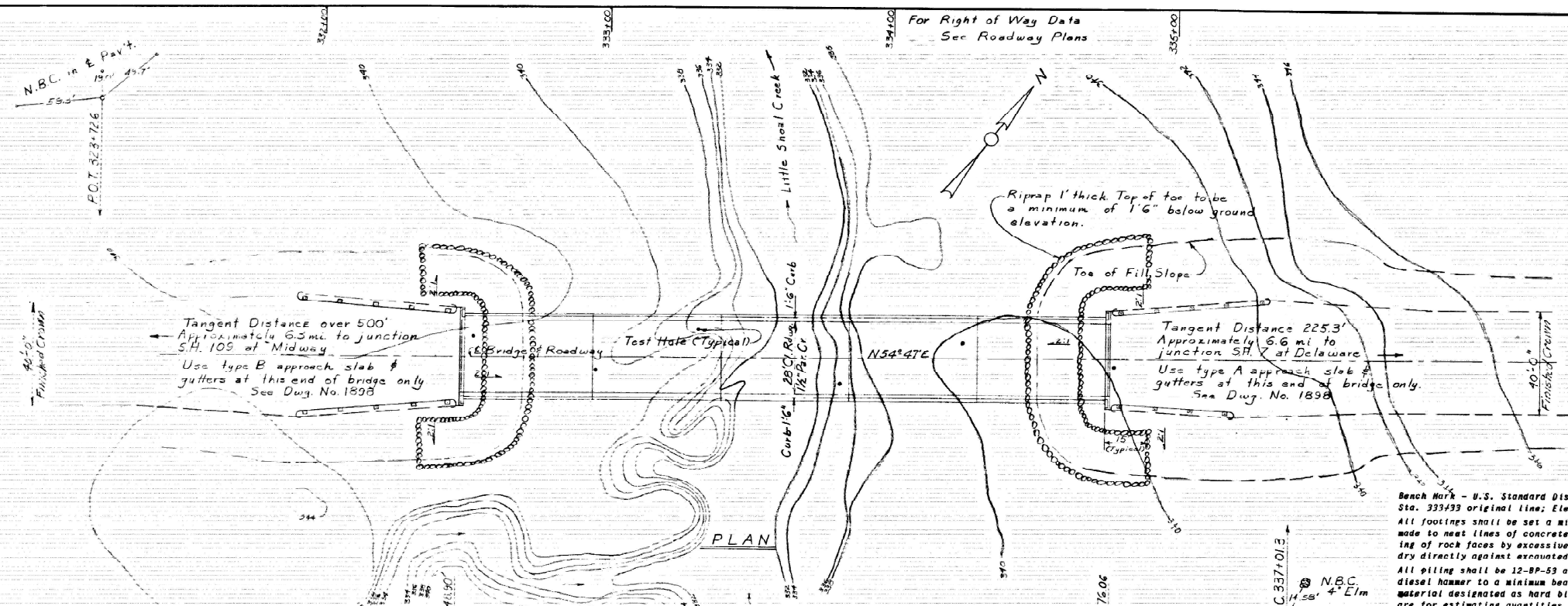
NOTES:
For details not shown and general
notes, see drwg. no. 15035 & 14990A.



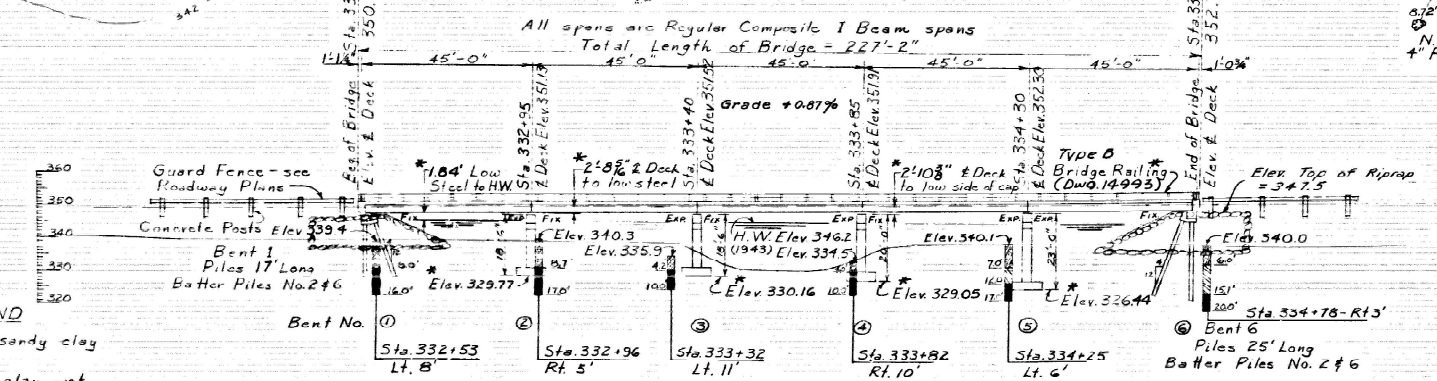
PLAN OF BEARINGS
AT BRIDGE ENDS
Scale: 1/2" = 1'-0"

DETAILS OF SPANS FOR
BRIDGE OVER OUACHITA RIVER
OUACHITA RIVER
BRIDGE & APPROACHES
POLK COUNTY
ROUTE 71 SEC. 9
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: RWM DATE: 2-15-64
TRACED BY: DATE: 2-15-64
CHECKED BY: JBS DATE: 6-17-64
BRIDGE NO. 3885 DRAWING NO. 12775

FED. ROAD DIST. NO.	STATE	FED. AID FUND NO.	PROJECT NO.	SECTION	TOTAL SHEETS
	AR	F-022	1117		
JOB NO.	4498		17	160	



- BORING LEGEND**
- Med. firm brown sandy clay
 - Soft brown sandy clay wet
 - Hard blue shale or slate



GENERAL NOTES

Bench Mark - U.S. Standard Disc No. 253, North Wingwall, existing bridge, 16' Left Sta. 333+93 original line; Elevation 349.64.

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-HP-53 and shall be driven with an approved air, steam or diesel hammer to a minimum bearing capacity of 38 tons per pile and into the material designated as hard blue shale on the boring logs. Lengths of pile shown are for estimating quantities only. Order lengths shown; cut-off or build-up, if necessary, to be paid for in accordance with the Standard Specifications. Piles in end bents to be driven after embankment is in place.

For Details of End Bents see Dwg. No. 15035A.

For Details of Intermediate Bents see Dwg. No. 12884.

For Details of Composite I-Beam Spans see Dwg. Nos. 15110 and 14990B.

For Details of Bridge Rail see Dwg. No. 14897.

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1950, and designated Special Provisions.

DESIGN SPECIFICATIONS: AASHTO 1961

Live Loading: H20-S16

Unit Stresses:

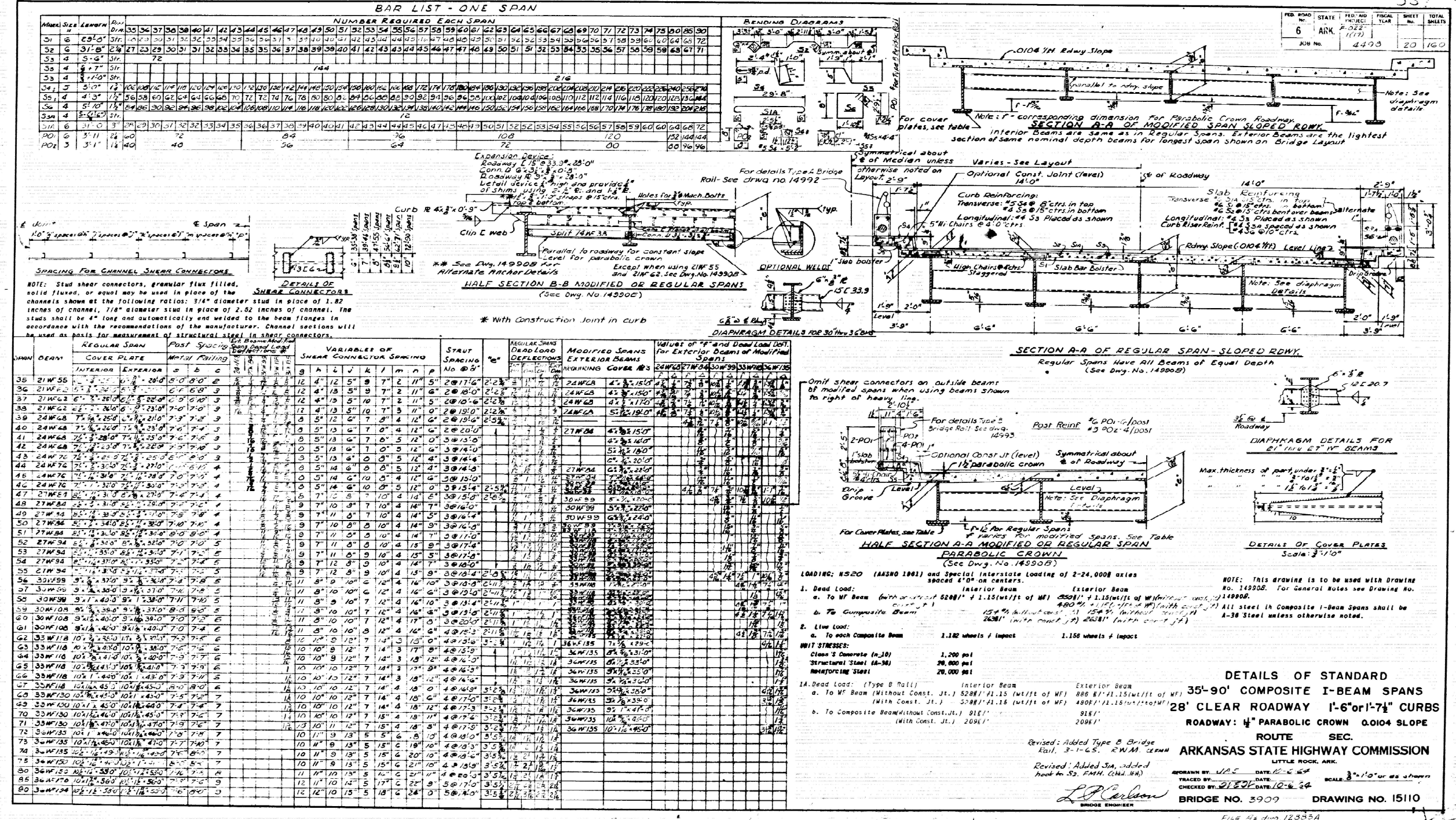
Class A Concrete (n=15)	840 psi
Class S Concrete (n=10)	1,200 psi
Reinforcing Steel	20,000 psi
Structural Steel (A-36)	20,000 psi

Foundation Pressure = 3500 p.s.f. (Group III)

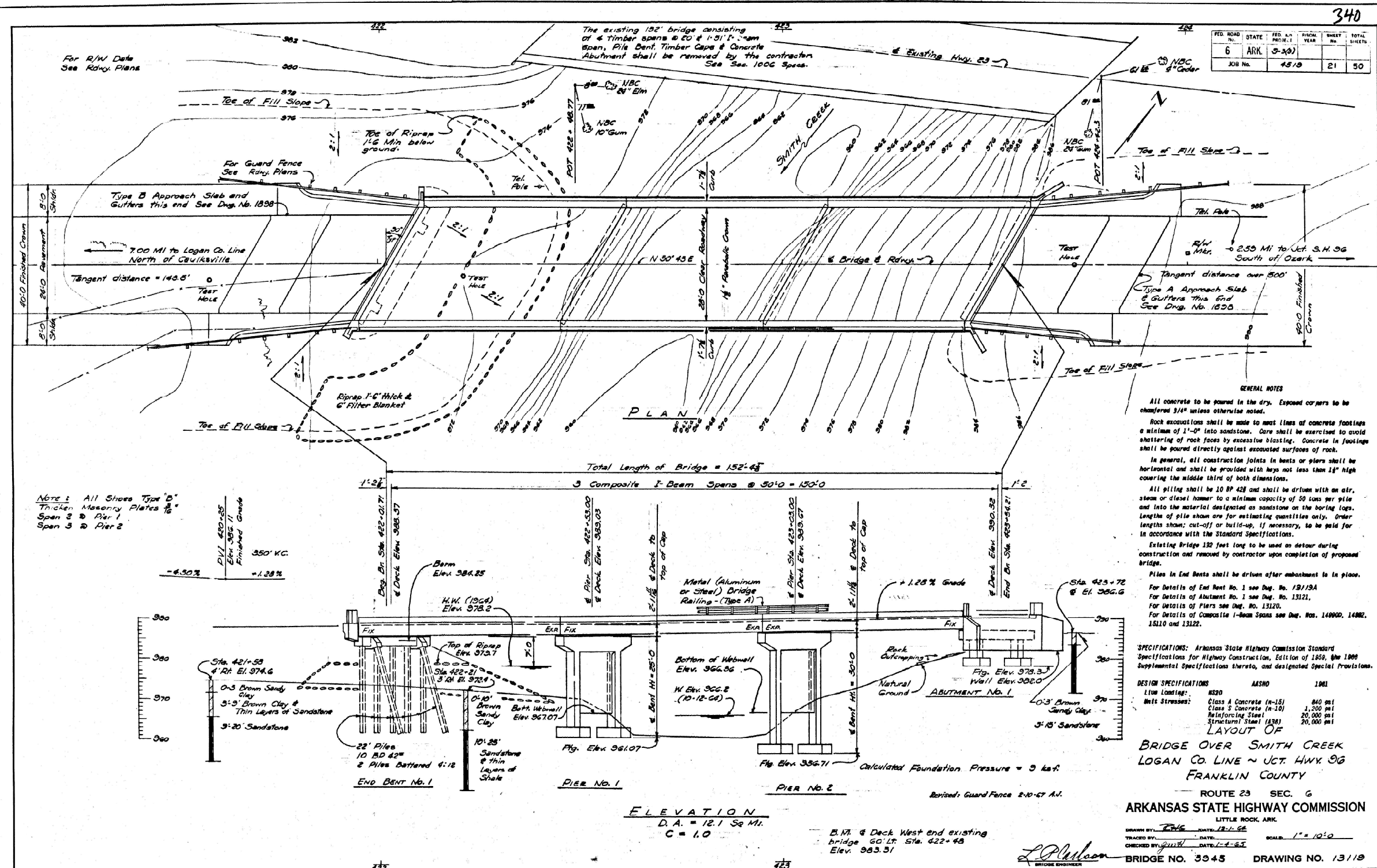
**LAYOUT OF BRIDGE
OVER LITTLE SHOAL CREEK
MIDWAY - DELAWARE RECONSTRUCTION
LOGAN COUNTY
ROUTE 22 SEC. 4
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.**

Drawn by: R.H.G. DATE: 2-11-64
Traced by: J.W.E. DATE: 2-17-64
Checked by: J.W.E. DATE: 2-17-64
BRIDGE NO. 3909 DRAWING NO. 12883

Revised: Bridge Rail & vertical dimensions 5-5-65 RWM







FED. ROAD NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.			67	76
JOB NO.					

GENERAL NOTES

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

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

Rivets: 3/4" ϕ open holes 13/16" ϕ except where noted otherwise.

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

All welded connections to be 5/16" fillet shop welds except as noted. All welding shall conform to the American Welding Society Standard Specifications for Welded Highway and Railway Bridges, current edition.

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: First coat-red lead tinted with lamp black. Second coat-aluminum paint.

All metal bearing and roadway expansion devices to be paid for as "Structural Steel in Beam Spans." Bearings shall be finally seated in accordance with Sec. 806.54, including alternate, of the Standard Specifications. 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 approved secured before fabrication is begun.

All steel shall be ASTM A-36 unless otherwise noted.

Anchor bolts shall be galvanized to conform to ASTM Specification, Designation A153.

Reinforcing steel to be deformed bars of intermediate or hard grade. 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 of "Reinforcing Steel."

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

Slab Pouring Note:

Floor slabs may be poured in one continuous operation with a strikeoff extending over the whole span length, or may be poured in increments with the center one-third to one-half span length poured first. After the center section is poured, not less than 72 hours shall elapse before pouring the end sections. End sections may be poured simultaneously. If not poured simultaneously, 48 hours shall elapse between end section pours. A minimum of 72 hours shall elapse (1) between completion of the slab and the pouring of the curb section if poured separately, and (2) between the completion of the curb and the pouring of the type A rail parapet. Posts for type B or C rail may be poured 24 hours after completion of the curb.

For details of Bridge railing see Dep. No. 14992 or 14993 as shown on Bridge Layout.

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction Edition of 1959, the 1966 Supplemental Specifications thereto and applicable Special Provisions.

EXPANSION JOINT DATA

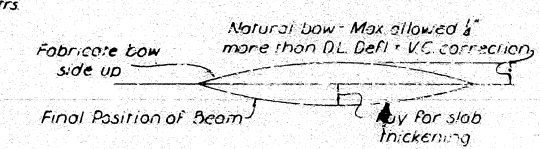
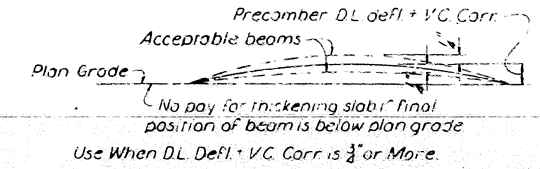
Total Length of Spans Expanding at (F-E 1 Span) or (E-E 2 Spans)	Joint Width Perpendicular to Webs @ 60°F	Seal Width	Seal Depth	Seal Material	Notes
To 80'	1"	1 1/2"	2"	1/2" ϕ ϕ Seal	
Over 80' to 100'	1 1/2"	2"	2"	1/2" ϕ ϕ Seal	
Over 100' to 140'	1 1/2"	2 1/2"	2"	1/2" ϕ ϕ Seal	
Over 140' to 180'	2"	3"	2"	1/2" ϕ ϕ Seal	

Note: All joints at Abutments and/or Fix-Fix joints shall be 1".

The Dimension "D" shall conform to the recommendations of the seal manufacturer as approved by the Bridge Engineer. The depth of the seal shall be approximately equal to the uncompressed width of the seal.

DETAILS COMMON TO STANDARD 35'-90' COMPOSITE I-BEAM SPANS 24, 26, 28, 39 ROADWAYS ARKANSAS STATE HIGHWAY COMMISSION LITTLE ROCK, ARK.

DRAWN BY: RWM DATE: 1-4-67
TRACED BY: DATE: 1-5-67
CHECKED BY: DFL DATE: 1-5-67
BRIDGE NO. DRAWING NO. 14990D



CAMBER DIAGRAMS No Scale

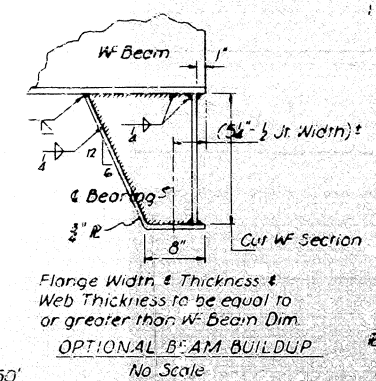
DETAIL OF JOINT SEAL SUPPORT Scale: 1/2" = 1'-0"

JOINT AT INT BENT Scale: 3/4" = 1'-0"

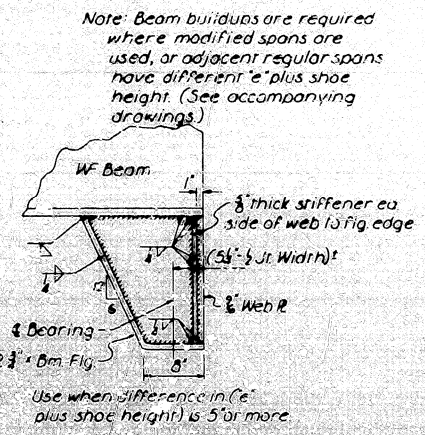
DETAILS OF ALTERNATE ANCHORS Scale: 1" = 1'-0"

DETAIL A (Typical) Scale: 1 1/2" = 1'-0"

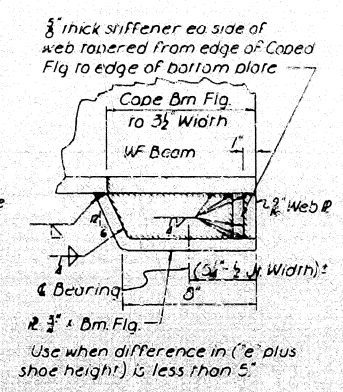
As an alternate for straps, 3/8" \times 10" automatically welded stud anchors, granular flux filled, solid fluxed, or equal, may be used. Use weight of straps as basis of measurement of structural steel in anchors.



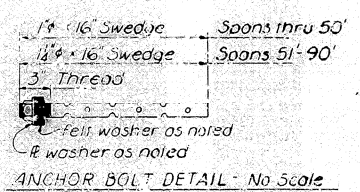
OPTIONAL B* AM BUILDUP No Scale



DETAILS OF BEAM BUILDUP No Scale

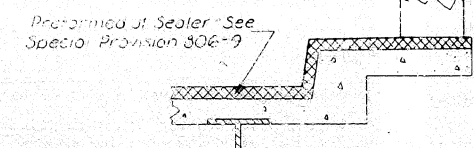


DETAILS OF BEAM BUILDUP No Scale



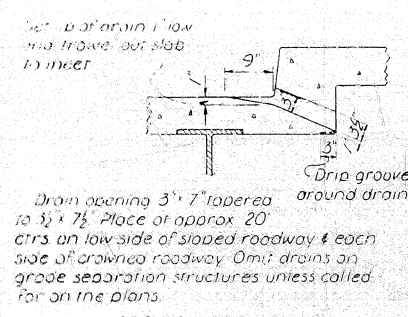
ANCHOR BOLT DETAIL No Scale

SEAL PLACEMENT IN CURB Scale: 3/4" = 1'-0"



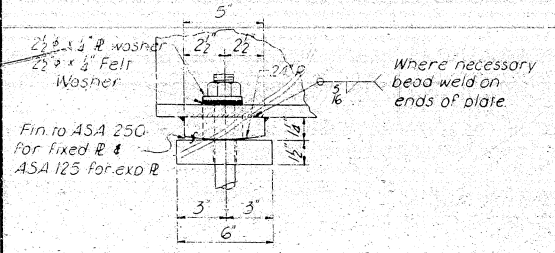
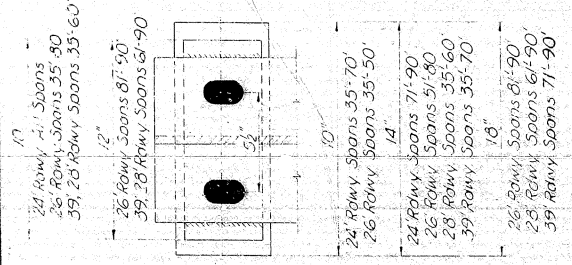
SEAL PLACEMENT IN CURB Scale: 3/4" = 1'-0"

SECTION THRU DRAIN Scale: 3/4" = 1'-0"



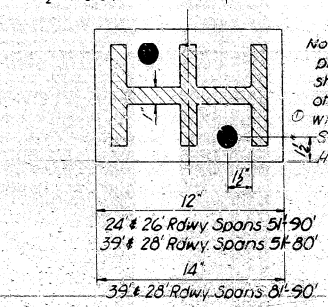
Expansion Shoe (All spans thru 50') 2 1/2" \times 1/4" slots in Sole R & Bm Flg with 1/4" ϕ holes in Masonry R

Fixed Shoe 1/4" ϕ Holes in Masonry R, Sole R, & Bm Flg for spans thru 50' 1/2" ϕ holes for spans over 50'

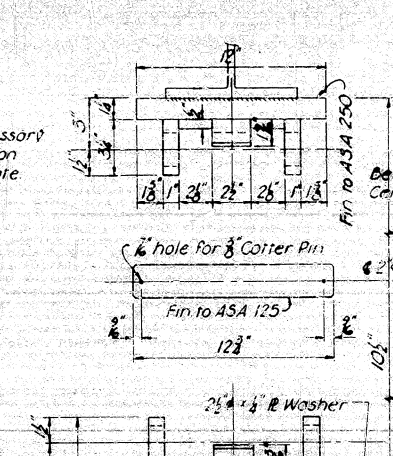


TYPE B FIXED OR EXPANSION SHOE Scale: 3/4" = 1'

Use for end bents - all spans
Use for int. bents - 35' - 50' spans, unless otherwise shown.



TYPE A FIXED SHOE Scale: 3/4" = 1'



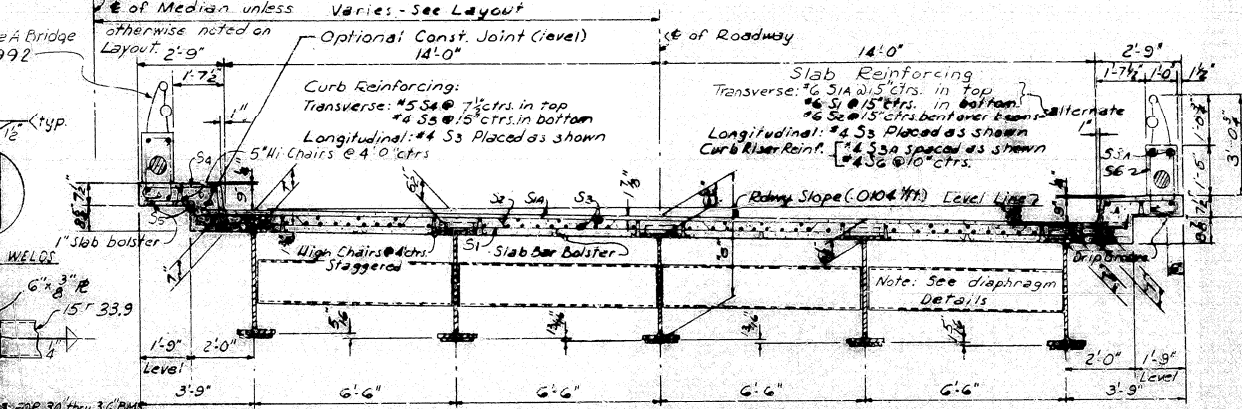
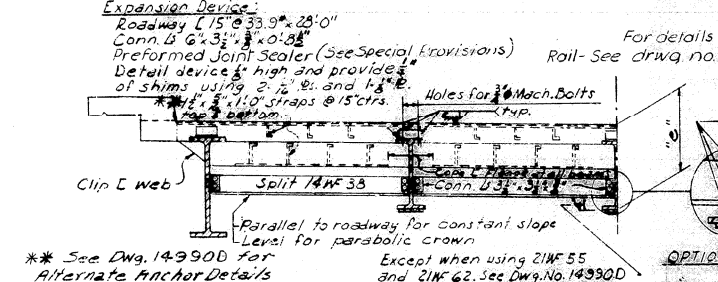
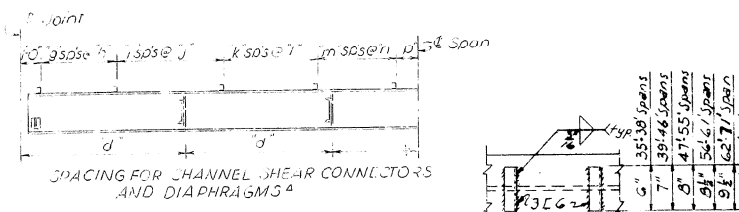
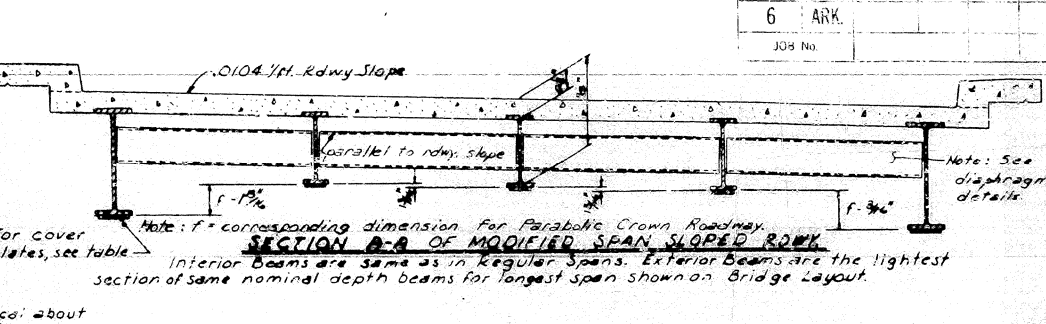
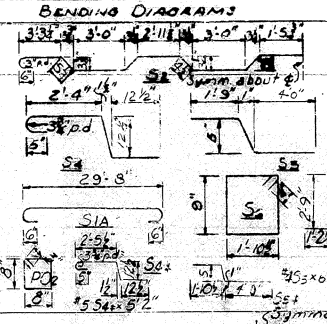
TYPE A EXPANSION SHOE Scale: 1/2" = 1'

Note: This drawing adapted from drwg 14990C.

L. Carlson
BRIDGE ENGINEER

BAR LIST - ONE SPAN

Model	Span	Length	Pin	Number Required Each Span
S1	6	29'-8"	Str.	35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90
S2	6	31'-8"	Str.	28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90
S3	4	5'-6"	Str.	72
S4	4	5'-7"	Str.	144
S5	4	5'-8"	Str.	216
S6	4	5'-9"	Str.	288
S7	4	5'-10"	Str.	360
S8	4	5'-11"	Str.	432
S9	4	5'-12"	Str.	504
S10	4	6'-0"	Str.	576
S11	4	6'-1"	Str.	648
S12	4	6'-2"	Str.	720
S13	4	6'-3"	Str.	792
S14	4	6'-4"	Str.	864
S15	4	6'-5"	Str.	936
S16	4	6'-6"	Str.	1008
S17	4	6'-7"	Str.	1080
S18	4	6'-8"	Str.	1152
S19	4	6'-9"	Str.	1224
S20	4	6'-10"	Str.	1296
S21	4	6'-11"	Str.	1368
S22	4	6'-12"	Str.	1440
S23	4	7'-0"	Str.	1512
S24	4	7'-1"	Str.	1584
S25	4	7'-2"	Str.	1656
S26	4	7'-3"	Str.	1728
S27	4	7'-4"	Str.	1800
S28	4	7'-5"	Str.	1872
S29	4	7'-6"	Str.	1944
S30	4	7'-7"	Str.	2016
S31	4	7'-8"	Str.	2088
S32	4	7'-9"	Str.	2160
S33	4	7'-10"	Str.	2232
S34	4	7'-11"	Str.	2304
S35	4	7'-12"	Str.	2376
S36	4	8'-0"	Str.	2448
S37	4	8'-1"	Str.	2520
S38	4	8'-2"	Str.	2592
S39	4	8'-3"	Str.	2664
S40	4	8'-4"	Str.	2736
S41	4	8'-5"	Str.	2808
S42	4	8'-6"	Str.	2880
S43	4	8'-7"	Str.	2952
S44	4	8'-8"	Str.	3024
S45	4	8'-9"	Str.	3096
S46	4	8'-10"	Str.	3168
S47	4	8'-11"	Str.	3240
S48	4	8'-12"	Str.	3312
S49	4	9'-0"	Str.	3384
S50	4	9'-1"	Str.	3456
S51	4	9'-2"	Str.	3528
S52	4	9'-3"	Str.	3600
S53	4	9'-4"	Str.	3672
S54	4	9'-5"	Str.	3744
S55	4	9'-6"	Str.	3816
S56	4	9'-7"	Str.	3888
S57	4	9'-8"	Str.	3960
S58	4	9'-9"	Str.	4032
S59	4	9'-10"	Str.	4104
S60	4	9'-11"	Str.	4176
S61	4	9'-12"	Str.	4248
S62	4	10'-0"	Str.	4320
S63	4	10'-1"	Str.	4392
S64	4	10'-2"	Str.	4464
S65	4	10'-3"	Str.	4536
S66	4	10'-4"	Str.	4608
S67	4	10'-5"	Str.	4680
S68	4	10'-6"	Str.	4752
S69	4	10'-7"	Str.	4824
S70	4	10'-8"	Str.	4896
S71	4	10'-9"	Str.	4968
S72	4	10'-10"	Str.	5040
S73	4	10'-11"	Str.	5112
S74	4	10'-12"	Str.	5184
S75	4	11'-0"	Str.	5256
S76	4	11'-1"	Str.	5328
S77	4	11'-2"	Str.	5400
S78	4	11'-3"	Str.	5472
S79	4	11'-4"	Str.	5544
S80	4	11'-5"	Str.	5616
S81	4	11'-6"	Str.	5688
S82	4	11'-7"	Str.	5760
S83	4	11'-8"	Str.	5832
S84	4	11'-9"	Str.	5904
S85	4	11'-10"	Str.	5976
S86	4	11'-11"	Str.	6048
S87	4	12'-0"	Str.	6120
S88	4	12'-1"	Str.	6192
S89	4	12'-2"	Str.	6264
S90	4	12'-3"	Str.	6336



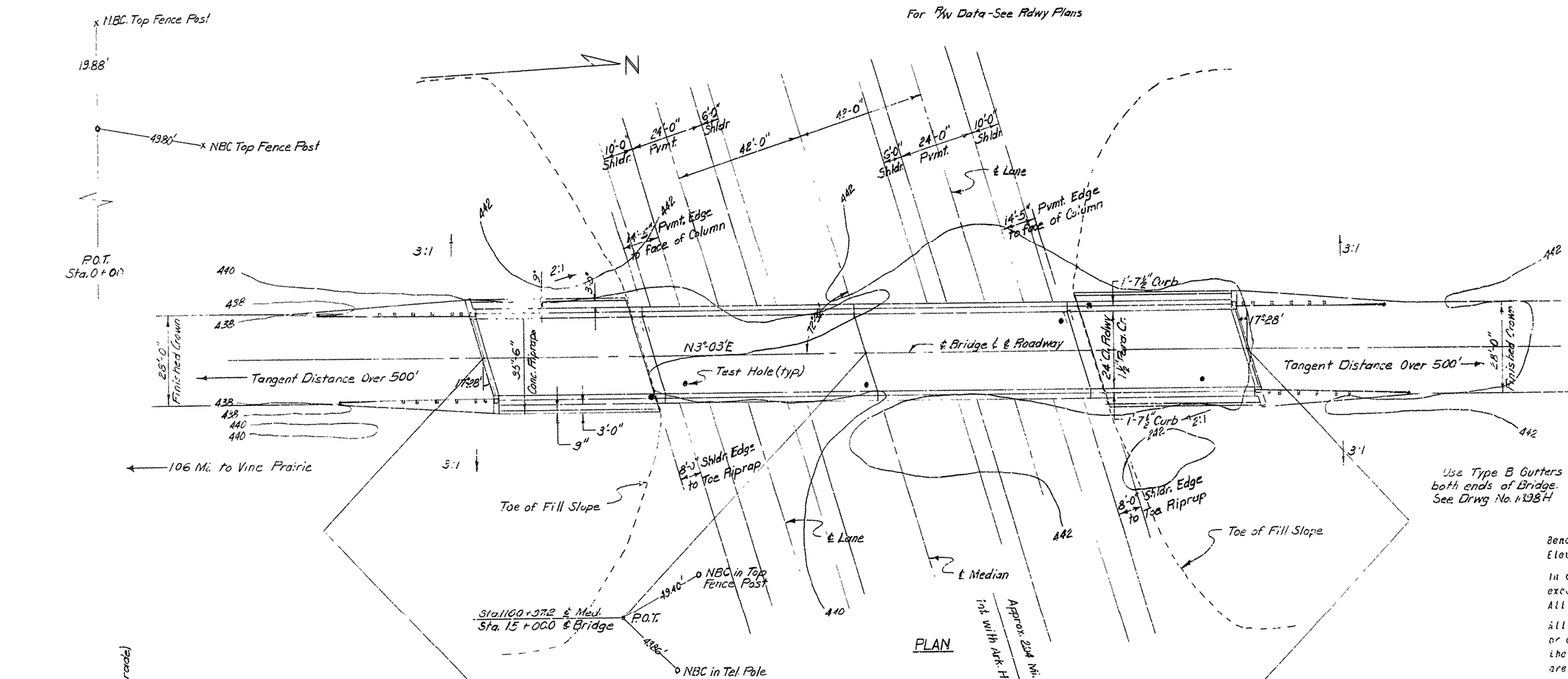
NOTE: Stud shear connectors, granular flux filled, solid fluxed, or equal may be used in place of the channels shown at the following ratios: 3/4" diameter stud in place of 1.82 inches of channel, 7/8" diameter stud in place of 2.52 inches of channel. The studs shall be 4" long and automatically welded to the beam flanges in accordance with the recommendations of the manufacturer. Channel sections will be used as basis for measurement of structural steel in shear connectors.

Expansion Device: Roadway 15' x 33' x 28' 0" Conn. B 6' x 3' x 0' 8" Preformed Joint Sealer (See Special Provisions) Detail device to high and provide of shims using 2" x 2" and 1 1/2" x 1 1/2" straps @ 15 ctrs. Holes for 3/4" Mech. Bolts 1" typ. For details Type A Bridge Rail - See drawing no. 14992

Regular Spans Have All Beams of Equal Depth (See Dwg. No. 14990D)

CONNECTIONS TO BE USED AS POSTS FOR REINFORCEMENT OF STRUCTURAL STEEL IN SHEET CONNECTORS.															REGULAR SPANS															MODIFIED SPANS															VALUES OF "Y" AND "Z" FOR EXTERIOR BEAMS OF MODIFIED SPANS														
N	BEAM	REGULAR SPAN		POST SPACING		SHEAR DEAD LOAD DEFLECTIONS		VARIABLES OF SHEAR CONNECTOR SPACING												STRUT SPACING		"C"	REGULAR SPANS DEAD LOAD DEFLECTIONS		MODIFIED SPANS EXTERIOR BEAMS REQUIRING COVER		VALUES OF "Y" AND "Z" FOR EXTERIOR BEAMS OF MODIFIED SPANS																																
		COVER PLATE	INTERIOR	EXTERIOR	S	D	C	S	H	U	J	K	L	M	N	P	NO. @ 3'	INT. EXT. INT.																																									

FED. ROAD NO.	STATE	FED. AID PROJ.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	1-40-1234	52	132	
JOB NO.	4465			32	132



GENERAL NOTES

Bench Mark - N.I.P. 18" Maple 190' Rt. Station 1156+42 (Centerline Median) Elev. 443.52.

In order not to disturb the founding material, the final one foot of footing excavation shall be done carefully by hand methods to neat lines of footing. All pits shall be poured in the dry.

All piling shall be 12"BF53F and shall be driven with an approved air, steam or diesel hammer to a minimum bearing capacity of 36 tons per pile and into the material designated as shale on the boring logs. Lengths of pile shown are for estimating quantities only. Order lengths shown; cut-off or build-up, if necessary, to be paid for in accordance with the Standard Specifications. Piles in End Bents shall be driven after embankment is in place.

For Details of End Bents, see Dwg. No. 12588.

For Details of Intermediate Bents, see Dwg. No. 12589.

For Details of Composite I-Beam Spans see Dwg. No. 14990, 12590 & 12591.

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959, The 1966 Supplement; Specifications thereto, and designated Special Provisions.

DESIGN SPECIFICATIONS:	AASHTO	1961
Live Loading:	H-15	
Unit Stresses:		
Class A Concrete (n-15)		840 psi
Class S Concrete (n-10)		1,200 psi
Structural Steel (A-36)		20,000 psi
Reinforcing Steel		20,000 psi
Foundation Pressure		7380 psf Gp.ii

LAYOUT OF VINE PRAIRIE UNDERPASS DYER - HWY. 215 CRAWFORD COUNTY

ROUTE 40 SEC. I
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: FCH DATE: 10/13/65
TRACED BY: DATE: 10/20/65
CHECKED BY: DEL DATE: 10/20/65
BRIDGE NO. 5079 DRAWING NO. 13585

L.P. Carlson
BRIDGE ENGINEER

VERTICAL CURVE DATA

550' V.C.

+5.00

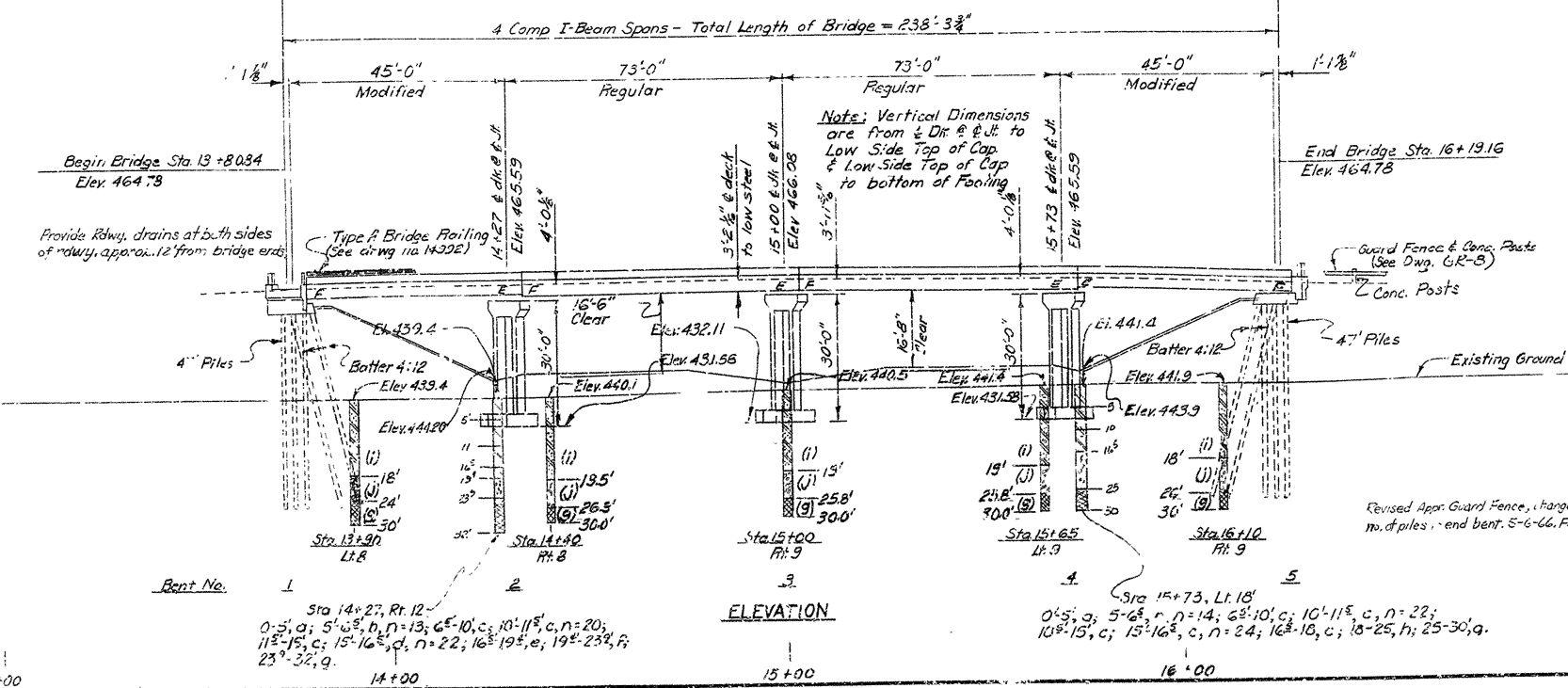
-5.00%

P.M.C. 15+00 Elev. 412.95 (Fin. Grade)

BORING LOG

a - Med Firm Brown Sandy Clay
b - Brown & Gray Clay
c - Brown Sandy Clay
d - Brown & Gray Silty Clay
e - Brown Clay
f - Comp. Clay, Gravel & Boulders
g - Hard Blue Shale
h - Comp. Clay & Boulders
i - Firm Brown Sandy Clay (Moist)
j - Layers of Rock or Boulders

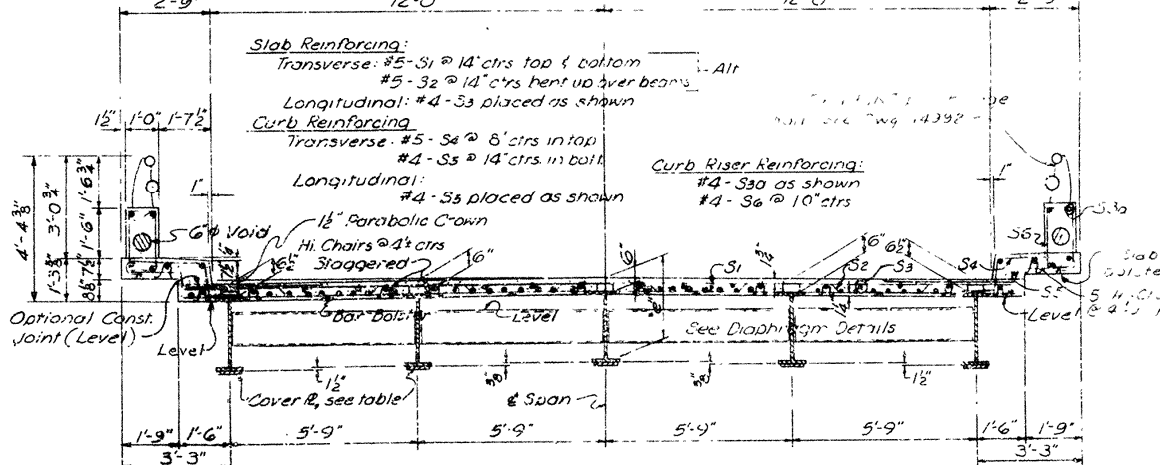
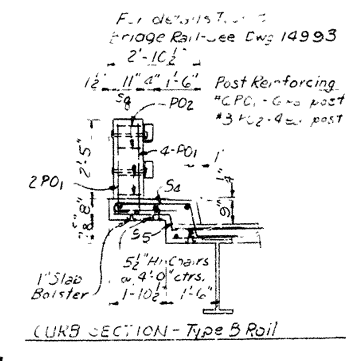
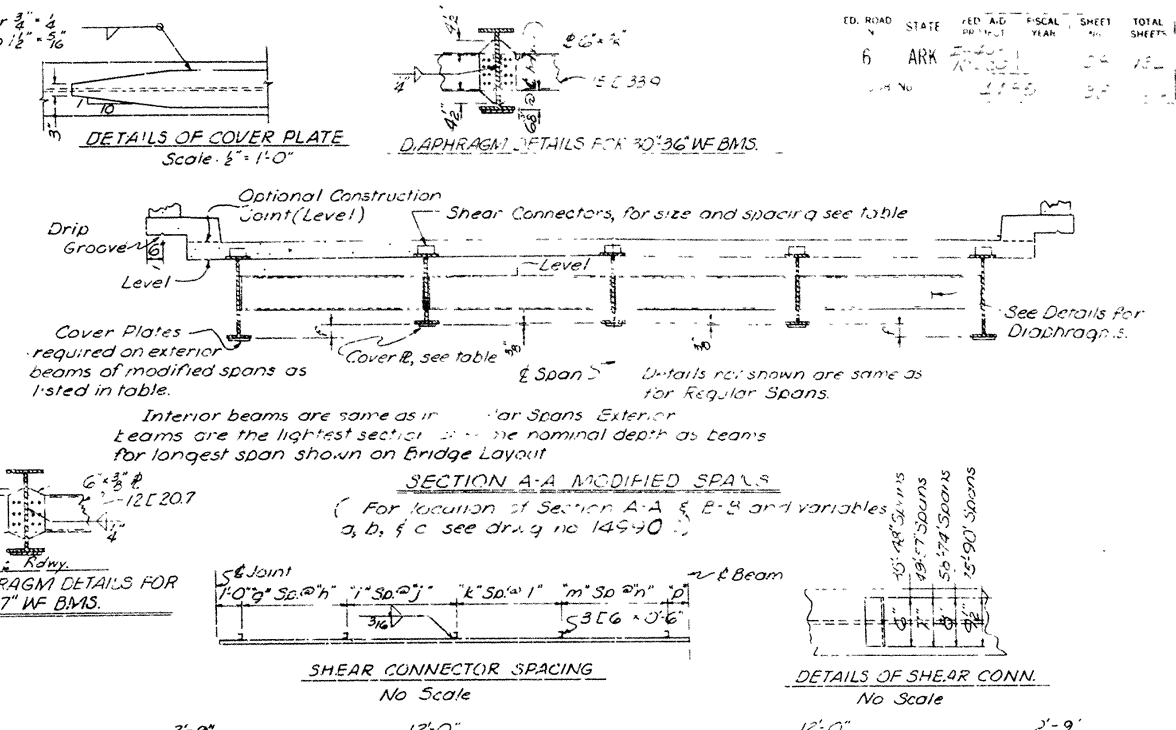
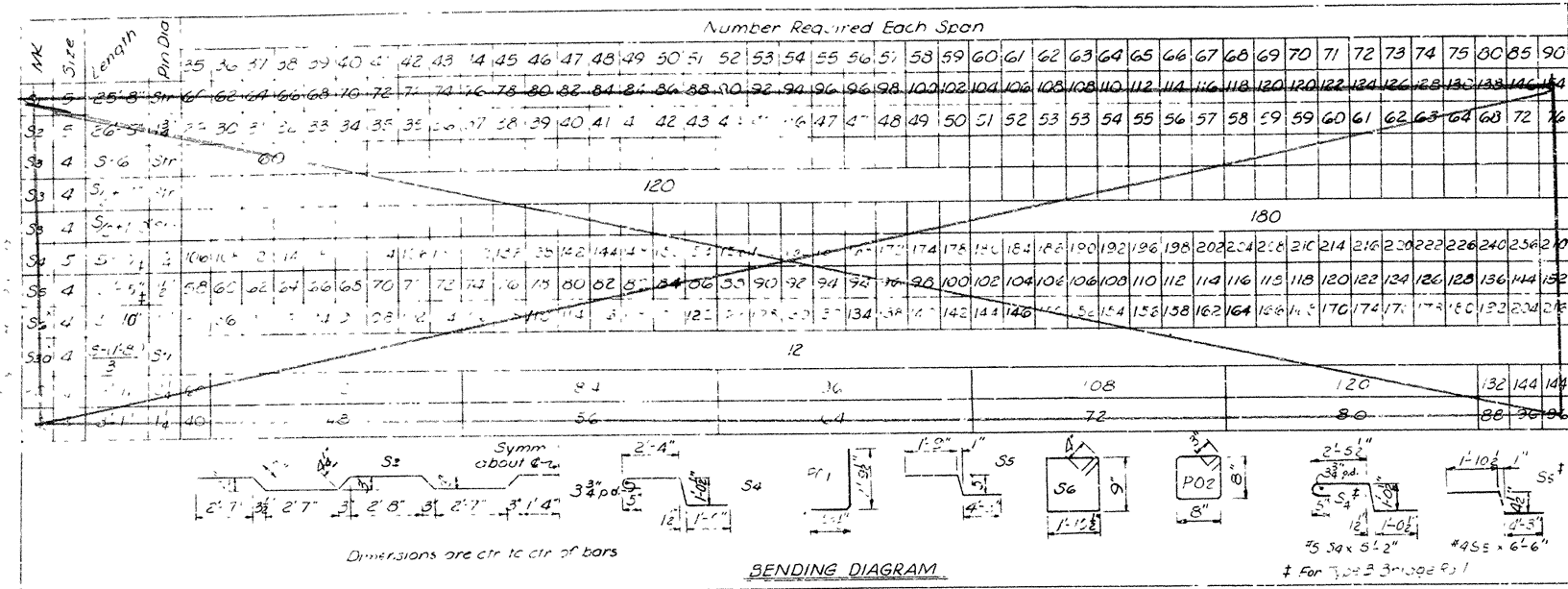
Station 13+00 14+00 15+00 16+00



Revised Appr. Guard Fence, changed no. of piles, end bent. S-6-C6, FMH.

FOR INFORMATION ONLY

BAR LIST - ONE SPAN



Beam	Span	Clearance	Cover	Reinforcement	Notes	VARIABLES OF SHEAR CONNECTOR SPACING													
						a	b	c	d	e	f	g	h	i	j	k	l	m	n
1	120	10'0"	1'0"	1'0"	See Supp. Details	7'0"	7'0"	4'	10'0"	8'	7'	7'	10'	5'	12'	4'	16'	8'	
2	130	11'0"	1'0"	1'0"	See Supp. Details	7'10"	7'10"	7'	12'	9'	11'	7'	14'	6'	18'	5'	22'	11'	
3	140	12'0"	1'0"	1'0"	See Supp. Details	7'10"	7'10"	7'	12'	9'	11'	7'	14'	6'	18'	5'	22'	11'	

NOTE: Stud shear connectors, granular flux filled, solid fluxed, or equal may be used in place of the channels shown at the following ratios: 3/4" diameter stud in place of 1.82 inches of channel, 7/8" diameter stud in place of 2.52 inches of channel. The studs shall be 1" long and automatically end welded to the beam flanges in accordance with recommendations of the manufacturer.

Channel sections will be used as basis for measurement of structural steel in shear connectors.

This drawing to be used with Drawing 14990 C.

All steel shall be A-36 steel unless otherwise noted.

DESIGN SPECIFICATIONS: AASHTO 18.1 Live Loading H-15

1. Dead Load (Type A Rail) Interior Beam
a. 30 W Beam (without const. jt) 143 #/ft of W 72 #/ft of W
(with const. jt) 143 #/ft + 11 #/ft of W 72 #/ft + 11 #/ft of W
b. To Composite Beam (with const. jt) 253 #/ft
(without const. jt) 144 #/ft

2. Live Load a. To Composite Beam 1.045 wheels + impact 1.045 wheels + impact

NOTE: Stud shear connectors, granular flux filled, solid fluxed, or equal may be used in place of the channels shown at the following ratios: 3/4" diameter stud in place of 1.82 inches of channel, 7/8" diameter stud in place of 2.52 inches of channel. The studs shall be 1" long and automatically end welded to the beam flanges in accordance with recommendations of the manufacturer.

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b. To Composite Beam (with const. jt) 253 #/ft
(without const. jt) 144 #/ft

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Channel sections will be used as basis for measurement of structural steel in shear connectors.

This drawing to be used with Drawing 14990 C.

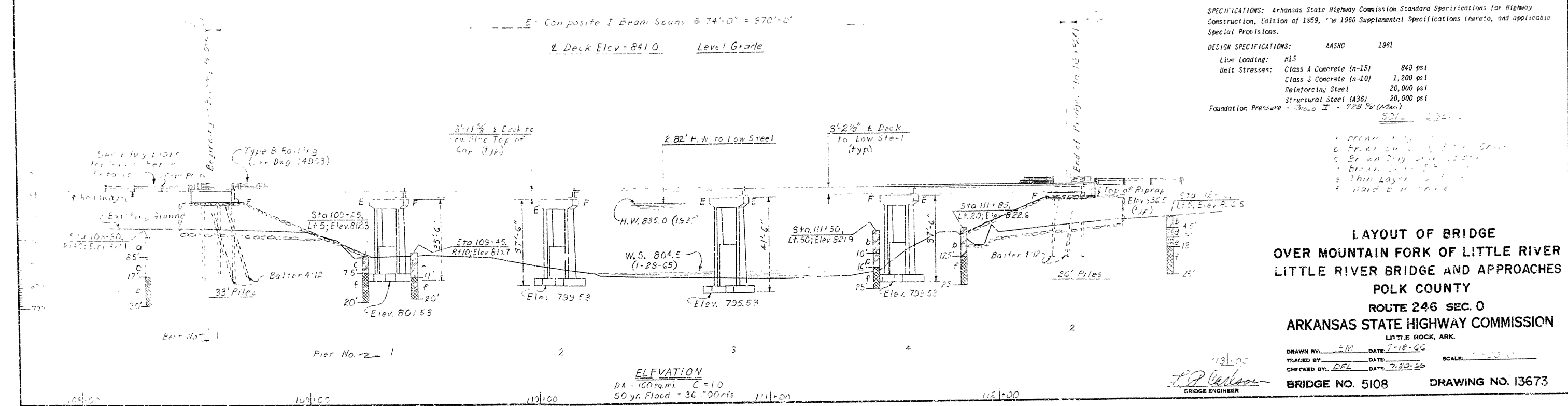
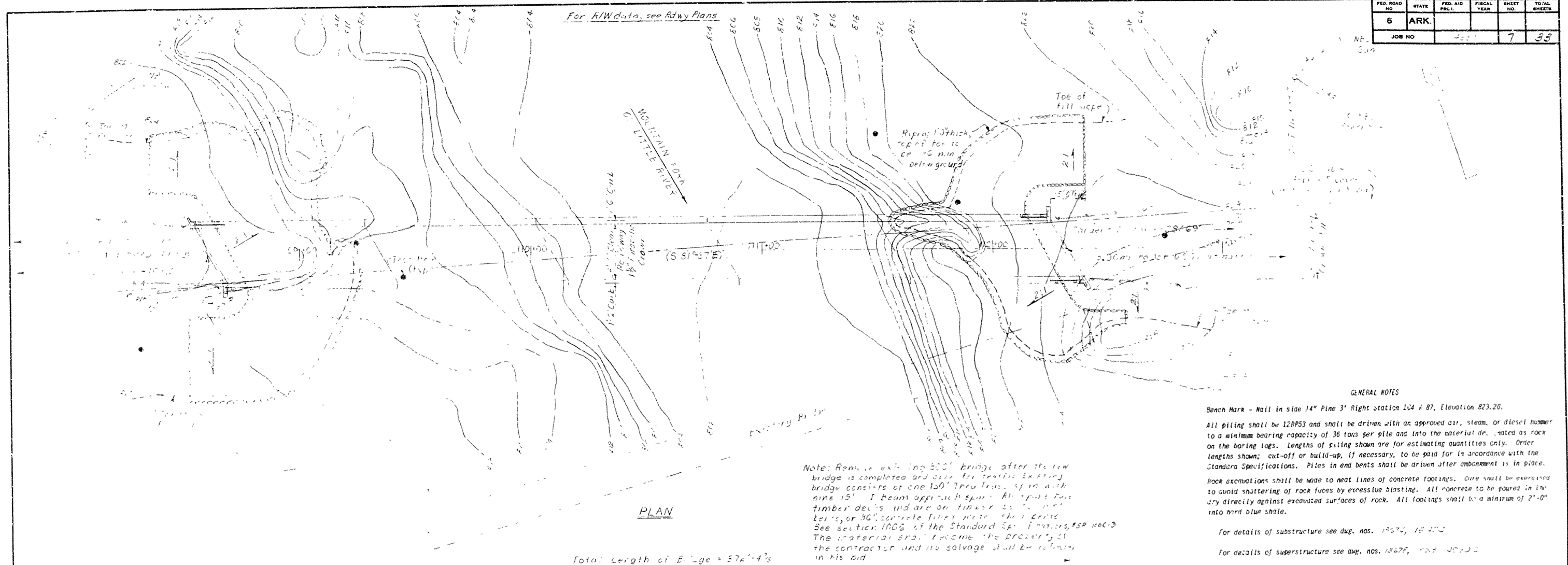
All steel shall be A-36 steel unless otherwise noted.

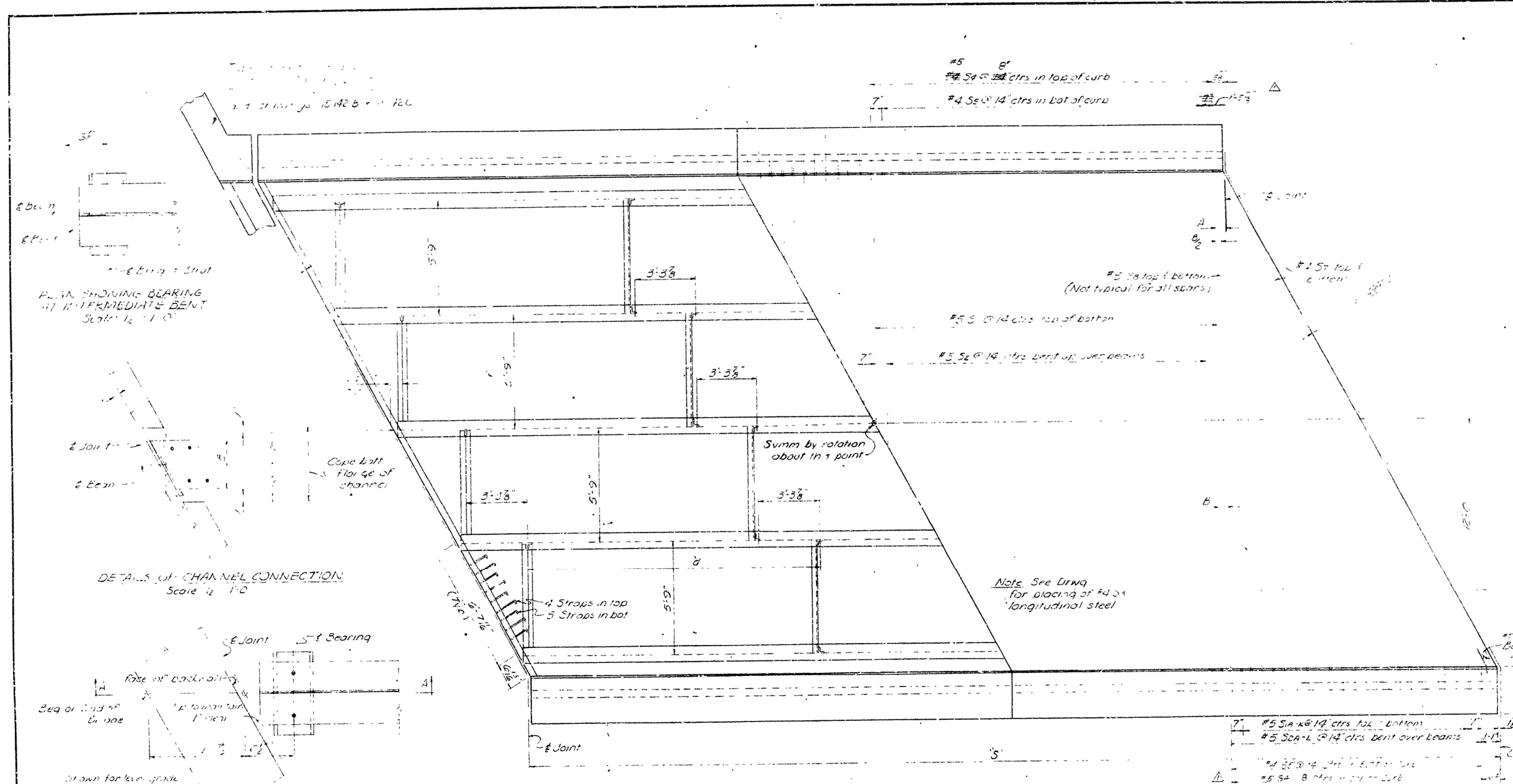
DESIGN SPECIFICATIONS: AASHTO 18.1 Live Loading H-15

1. Dead Load (Type A Rail) Interior Beam
a. 30 W Beam (without const. jt) 143 #/ft of W 72 #/ft of W
(with const. jt) 143 #/ft + 11 #/ft of W 72 #/ft + 11 #/ft of W
b. To Composite Beam (with const. jt) 253 #/ft
(without const. jt) 144 #/ft

2. Live Load a. To Composite Beam 1.045 wheels + impact 1.045 wheels + impact

FED. ROAD NO	STATE	FED. AID PRG.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.				
JOB NO		2001		7	33

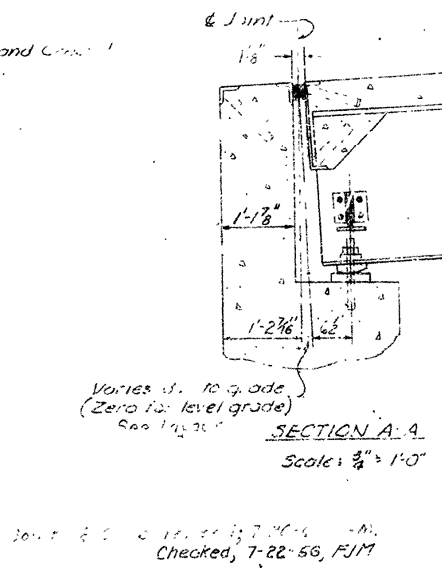




VARIABLES

S	Span	A	B	S ₁	S ₂	S ₃
35	21.15	1.23	1.24	34	16	4
36	21.15	1.23	1.24	35	17	-
37	21.15	1.23	1.24	36	18	5
38	21.15	1.23	1.24	37	19	-
39	21.15	1.23	1.24	38	20	4
40	21.15	1.23	1.24	39	21	-
41	21.15	1.23	1.24	40	22	-
42	21.15	1.23	1.24	41	23	4
43	21.15	1.23	1.24	42	24	-
44	21.15	1.23	1.24	43	25	4
45	21.15	1.23	1.24	44	26	-
46	21.15	1.23	1.24	45	27	4
47	21.15	1.23	1.24	46	28	-
48	21.15	1.23	1.24	47	29	4
49	21.15	1.23	1.24	48	30	-
50	21.15	1.23	1.24	49	31	4
51	21.15	1.23	1.24	50	32	-
52	21.15	1.23	1.24	51	33	4
53	21.15	1.23	1.24	52	34	-
54	21.15	1.23	1.24	53	35	4
55	21.15	1.23	1.24	54	36	-
56	21.15	1.23	1.24	55	37	4
57	21.15	1.23	1.24	56	38	-
58	21.15	1.23	1.24	57	39	4
59	21.15	1.23	1.24	58	40	-
60	21.15	1.23	1.24	59	41	4
61	21.15	1.23	1.24	60	42	-
62	21.15	1.23	1.24	61	43	4
63	21.15	1.23	1.24	62	44	-
64	21.15	1.23	1.24	63	45	4
65	21.15	1.23	1.24	64	46	-
66	21.15	1.23	1.24	65	47	4
67	21.15	1.23	1.24	66	48	-
68	21.15	1.23	1.24	67	49	4
69	21.15	1.23	1.24	68	50	-
70	21.15	1.23	1.24	69	51	4
71	21.15	1.23	1.24	70	52	-
72	21.15	1.23	1.24	71	53	4
73	21.15	1.23	1.24	72	54	-
74	21.15	1.23	1.24	73	55	4
75	21.15	1.23	1.24	74	56	-
76	21.15	1.23	1.24	75	57	4
77	21.15	1.23	1.24	76	58	-
78	21.15	1.23	1.24	77	59	4
79	21.15	1.23	1.24	78	60	-
80	21.15	1.23	1.24	79	61	4
81	21.15	1.23	1.24	80	62	-
82	21.15	1.23	1.24	81	63	4
83	21.15	1.23	1.24	82	64	-
84	21.15	1.23	1.24	83	65	4
85	21.15	1.23	1.24	84	66	-
86	21.15	1.23	1.24	85	67	4
87	21.15	1.23	1.24	86	68	-
88	21.15	1.23	1.24	87	69	4
89	21.15	1.23	1.24	88	70	-
90	21.15	1.23	1.24	89	71	4
91	21.15	1.23	1.24	90	72	-
92	21.15	1.23	1.24	91	73	4
93	21.15	1.23	1.24	92	74	-
94	21.15	1.23	1.24	93	75	4
95	21.15	1.23	1.24	94	76	-
96	21.15	1.23	1.24	95	77	4
97	21.15	1.23	1.24	96	78	-
98	21.15	1.23	1.24	97	79	4
99	21.15	1.23	1.24	98	80	-
100	21.15	1.23	1.24	99	81	4

* Int. span spacing



BAR LIST

MARK	QTY	LENGTH	NUMBER
S1	5	25'-0"	See Table
S1A-K	5	20'-0"	4 each
S2	5	25'-0"	See Table
S7	4	25'-0"	4
S2A	5	25'-0"	2402
S2B	5	25'-0"	1
S2C	5	25'-0"	1
S2D	5	25'-0"	1
S2E	5	25'-0"	1
S2F	5	25'-0"	1
S2G	5	25'-0"	1
S2H	5	25'-0"	1
S2I	5	25'-0"	1
S2J	5	25'-0"	1
S2K	5	25'-0"	1
S2L	5	25'-0"	1
S2M	5	25'-0"	1
S2N	5	25'-0"	1
S2O	5	25'-0"	1
S2P	5	25'-0"	1
S2Q	5	25'-0"	1
S2R	5	25'-0"	1
S2S	5	25'-0"	1
S2T	5	25'-0"	1
S2U	5	25'-0"	1
S2V	5	25'-0"	1
S2W	5	25'-0"	1
S2X	5	25'-0"	1
S2Y	5	25'-0"	1
S2Z	5	25'-0"	1
S2AA	5	25'-0"	1
S2AB	5	25'-0"	1
S2AC	5	25'-0"	1
S2AD	5	25'-0"	1
S2AE	5	25'-0"	1
S2AF	5	25'-0"	1
S2AG	5	25'-0"	1
S2AH	5	25'-0"	1
S2AI	5	25'-0"	1
S2AJ	5	25'-0"	1
S2AK	5	25'-0"	1
S2AL	5	25'-0"	1
S2AM	5	25'-0"	1
S2AN	5	25'-0"	1
S2AO	5	25'-0"	1
S2AP	5	25'-0"	1
S2AQ	5	25'-0"	1
S2AR	5	25'-0"	1
S2AS	5	25'-0"	1
S2AT	5	25'-0"	1
S2AU	5	25'-0"	1
S2AV	5	25'-0"	1
S2AW	5	25'-0"	1
S2AX	5	25'-0"	1
S2AY	5	25'-0"	1
S2AZ	5	25'-0"	1
S2BA	5	25'-0"	1
S2BB	5	25'-0"	1
S2BC	5	25'-0"	1
S2BD	5	25'-0"	1
S2BE	5	25'-0"	1
S2BF	5	25'-0"	1
S2BG	5	25'-0"	1
S2BH	5	25'-0"	1
S2BI	5	25'-0"	1
S2BJ	5	25'-0"	1
S2BK	5	25'-0"	1
S2BL	5	25'-0"	1
S2BM	5	25'-0"	1
S2BN	5	25'-0"	1
S2BO	5	25'-0"	1
S2BP	5	25'-0"	1
S2BQ	5	25'-0"	1
S2BR	5	25'-0"	1
S2BS	5	25'-0"	1
S2BT	5	25'-0"	1
S2BU	5	25'-0"	1
S2BV	5	25'-0"	1
S2BW	5	25'-0"	1
S2BX	5	25'-0"	1
S2BY	5	25'-0"	1
S2BZ	5	25'-0"	1
S2CA	5	25'-0"	1
S2CB	5	25'-0"	1
S2CC	5	25'-0"	1
S2CD	5	25'-0"	1
S2CE	5	25'-0"	1
S2CF	5	25'-0"	1
S2CG	5	25'-0"	1
S2CH	5	25'-0"	1
S2CI	5	25'-0"	1
S2CJ	5	25'-0"	1
S2CK	5	25'-0"	1
S2CL	5	25'-0"	1
S2CM	5	25'-0"	1
S2CN	5	25'-0"	1
S2CO	5	25'-0"	1
S2CP	5	25'-0"	1
S2CQ	5	25'-0"	1
S2CR	5	25'-0"	1
S2CS	5	25'-0"	1
S2CT	5	25'-0"	1
S2CU	5	25'-0"	1
S2CV	5	25'-0"	1
S2CW	5	25'-0"	1
S2CX	5	25'-0"	1
S2CY	5	25'-0"	1
S2CZ	5	25'-0"	1
S2DA	5	25'-0"	1
S2DB	5	25'-0"	1
S2DC	5	25'-0"	1
S2DD	5	25'-0"	1
S2DE	5	25'-0"	1
S2DF	5	25'-0"	1
S2DG	5	25'-0"	1
S2DH	5	25'-0"	1
S2DI	5	25'-0"	1
S2DJ	5	25'-0"	1
S2DK	5	25'-0"	1
S2DL	5	25'-0"	1
S2DM	5	25'-0"	1
S2DN	5	25'-0"	1
S2DO	5	25'-0"	1
S2DP	5	25'-0"	1
S2DQ	5	25'-0"	1
S2DR	5	25'-0"	1
S2DS	5	25'-0"	1
S2DT	5	25'-0"	1
S2DU	5	25'-0"	1
S2DV	5	25'-0"	1
S2DW	5	25'-0"	1
S2DX	5	25'-0"	1
S2DY	5	25'-0"	1
S2DZ	5	25'-0"	1
S2EA	5	25'-0"	1
S2EB	5	25'-0"	1
S2EC	5	25'-0"	1
S2ED	5	25'-0"	1
S2EE	5	25'-0"	1
S2EF	5	25'-0"	1
S2EG	5	25'-0"	1
S2EH	5	25'-0"	1
S2EI	5	25'-0"	1
S2EJ	5	25'-0"	1
S2EK	5	25'-0"	1
S2EL	5	25'-0"	1
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S2EN	5	25'-0"	1
S2EO	5	25'-0"	1
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S2EV	5	25'-0"	1
S2EW	5	25'-0"	1
S2EX	5	25'-0"	1
S2EY	5	25'-0"	1
S2EZ	5	25'-0"	1
S2FA	5	25'-0"	1
S2FB	5	25'-0"	1
S2FC	5	25'-0"	1
S2FD	5	25'-0"	1
S2FE	5	25'-0"	1
S2FF	5	25'-0"	1
S2FG	5	25'-0"	1
S2FH	5	25'-0"	1
S2FI	5	25'-0"	1
S2FJ	5	25'-0"	1
S2FK	5	25'-0"	1
S2FL	5	25'-0"	1
S2FM	5	25'-0"	1
S2FN	5	25'-0"	1
S2FO	5	25'-0"	1
S2FP	5	25'-0"	1
S2FQ	5	25'-0"	1
S2FR	5	25'-0"	1
S2FS	5	25'-0"	1
S2FT	5	25'-0"	1
S2FU	5	25'-0"	1
S2FV	5	25'-0"	1
S2FW	5	25'-0"	1
S2FX	5	25'-0"	1
S2FY	5	25'-0"	1
S2FZ	5	25'-0"	1
S2GA	5	25'-0"	1
S2GB	5	25'-0"	1
S2GC	5	25'-0"	1
S2GD	5	25'-0"	1
S2GE	5	25'-0"	1
S2GF	5	25'-0"	1
S2GG	5	25'-0"	1
S2GH	5	25'-0"	1
S2GI	5	25'-0"	1
S2GJ	5	25'-0"	1
S2GK	5	25'-0"	1
S2GL	5	25'-0"	1
S2GM	5	25'-0"	1
S2GN	5	25'-0"	1
S2GO	5	25'-0"	1
S2GP	5	25'-0"	1
S2GQ	5	25'-0"	1
S2GR	5	25'-0"	1
S2GS	5	25'-0"	1
S2GT	5	25'-0"	1
S2GU	5	25'-0"	1
S2GV	5	25'-0"	1
S2GW	5	25'-0"	1
S2GX	5	25'-0"	1
S2GY	5	25'-0"	1
S2GZ	5	25'-0"	1
S2HA	5	25'-0"	1
S2HB	5	25'-0"	1
S2HC	5	25'-0"	1
S2HD	5	25'-0"	1
S2HE	5	25'-0"	1
S2HF	5	25'-0"	1
S2HG	5	25'-0"	1
S2HH	5	25'-0"	1
S2HI	5	25'-0"	1
S2HJ	5	25'-0"	1
S2HK	5	25'-0"	1
S2HL	5	25'-0"	1
S2HM	5	25'-0"	1
S2HN	5	25'-0"	1
S2HO	5	25'-0"	1
S2HP	5	25'-0"	1
S2HQ	5	25'-0"	1
S2HR	5	25'-0"	1
S2HS	5	25'-0"	1
S2HT	5	25'-0"	1
S2HU	5	25'-0"	1

PRO. NO.	STATE	PROJECT	SHEET	TOTAL SHEETS
6	ARK		11	33
JOB NO.				

GENERAL NOTES

All concrete to be Class 3000. All exposed corners to be chamfered 3/4" unless otherwise noted.

Field connections to be riveted or bolted with high strength bolts. Rivets: 3/4" except where noted otherwise.

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

All welded connections to be 5/16" fillet shop welds except as noted.

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

All steel shall be ASTM A-36 unless otherwise noted.

Anchor bolts shall be galvanized to conform to ASTM Specification, Designation A153.

Reinforcing steel to be deformed bars of intermediate or hard grade. 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 of "Reinforcing Steel."

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

All chambers on concrete riser for rail are to be 1/2" deep.

Shop drawings showing details of railing shall be submitted and approved before fabrication is begun.

Slab Pouring Note:

Floor slabs may be poured in one continuous operation with a strikeoff extending over the whole span length, or may be poured in increments with the center one-third to one-half span length poured first. After the center section is poured, not less than 72 hours shall elapse before pouring the end sections. End sections may be poured simultaneously. If not poured simultaneously, 48 hours shall elapse between end section pours. A minimum of 72 hours shall elapse between completion of the slab and the pouring of the curb section, if poured separately.

For details of Bridge Railing see Dwg. No. 14992 or 14993 as shown on Bridge Layout.

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959, the 1966 Supplemental Specifications thereto and applicable Special Provisions.

EXPANSION JOINT DATA

SPAN LENGTH (AGGREGATE FOR MOVEMENT AT JOINT)	A JOINT WIDTH (INCHES)	D SEAL SIZE	A JOINT B
Up to 30'	1"	2 1/2" x 2"	18"
Over 30' to 100'	1 1/2"	3" x 2 1/2"	18"
Over 100' to 140'	1 1/2"	3" x 2 1/2"	24"
Over 140' to 180'	2"	3" x 3 1/2"	24"

This Drawing is a modification of Dwg. No. 14990

8" thick stiffener on side of web tapered from edge of Caped Flg. to edge of bottom plate.

Notes: Beam builds are required where modified spans are used, or adjacent regular spans have different shoe height. (See accompanying drawings.)

8" thick stiffener on side of web to flg edge.

Use When Difference in (e) Shoe Height is 5" or More.

Use When Difference in (e) Shoe Height is Less Than 5".

DETAILS COMMON TO STANDARD 35'-90'

COMPOSITE I-BEAM SPANS

20', 24', 26', 28', 30', 40' ROADWAYS

DETAILS OF ALTERNATE ANCHORS

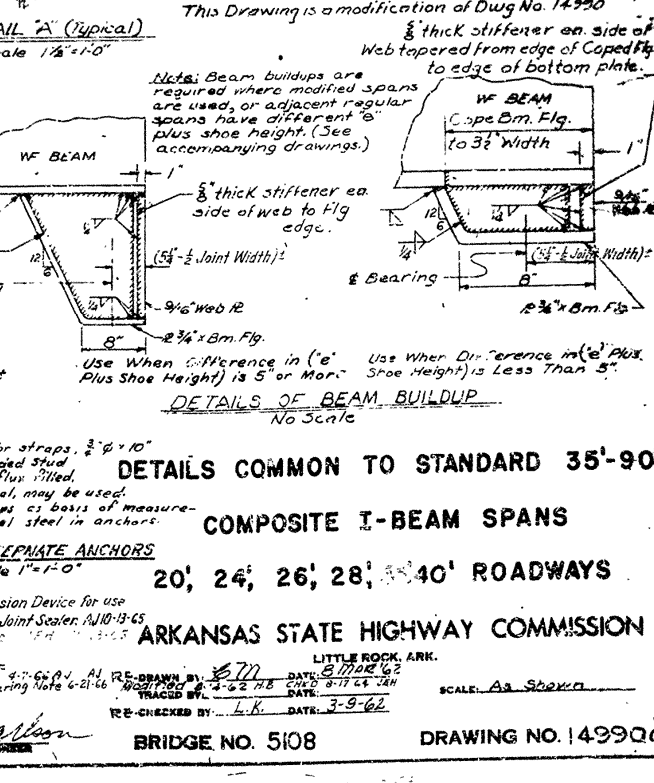
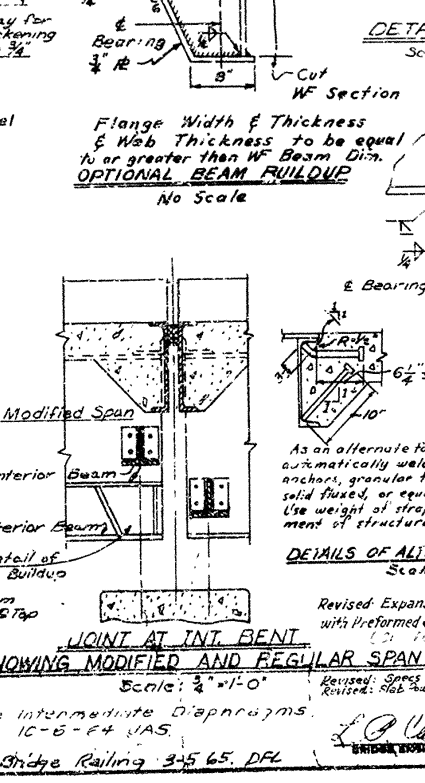
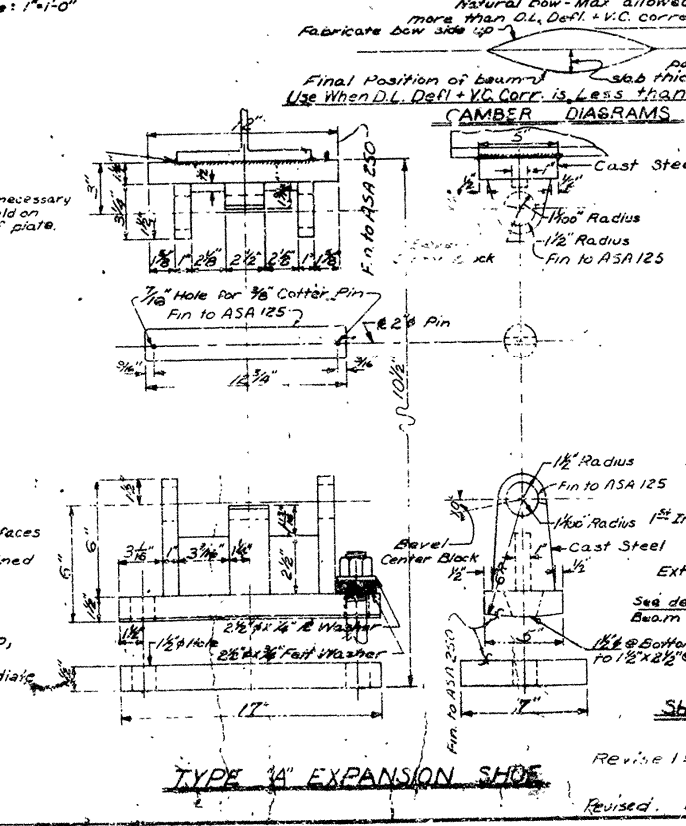
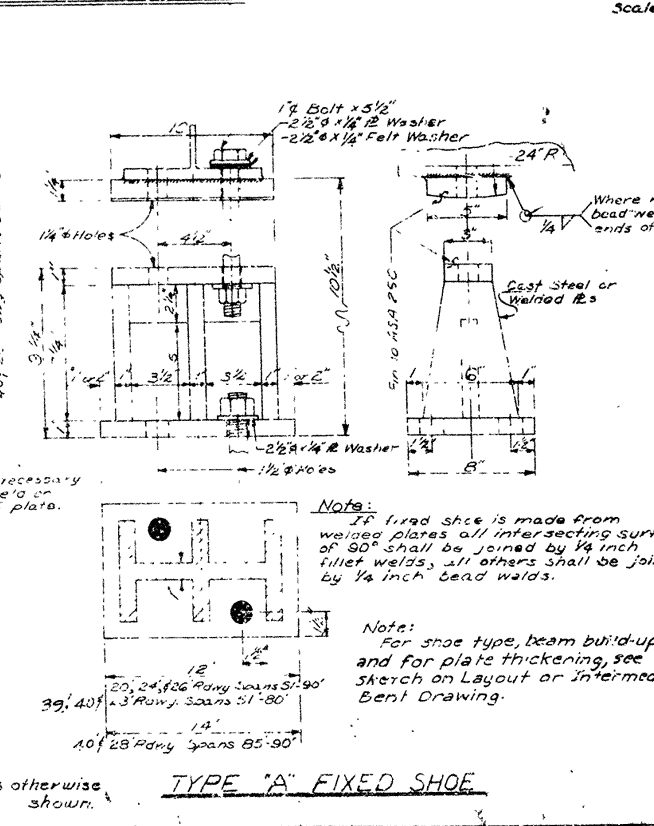
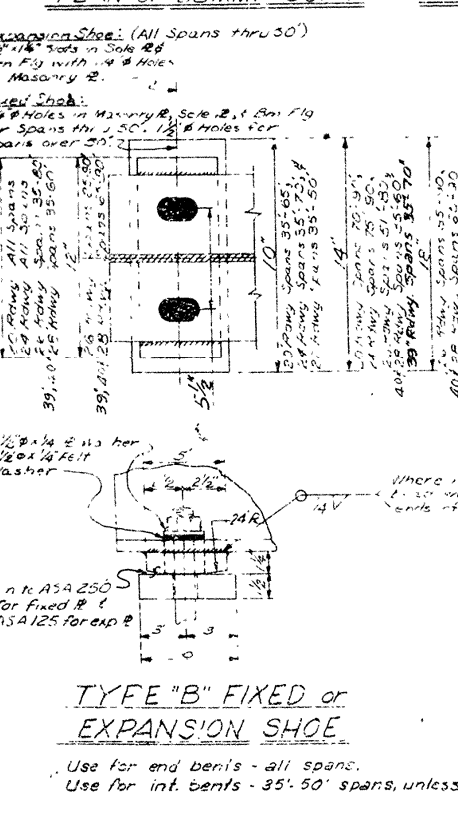
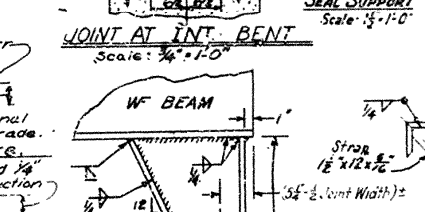
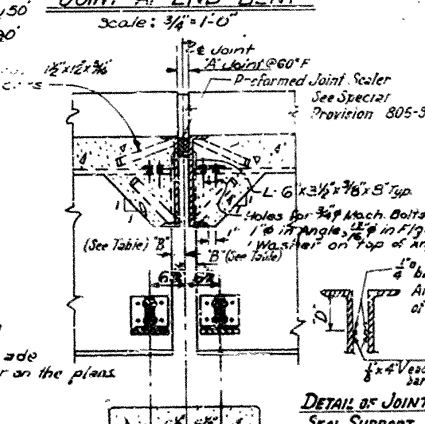
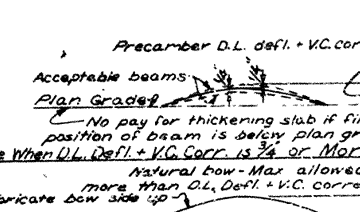
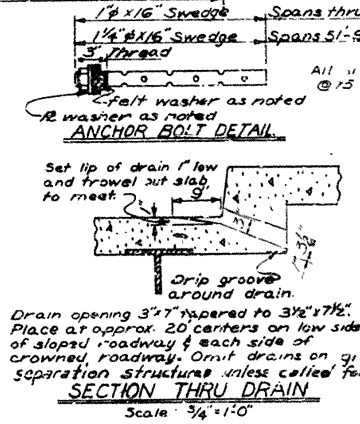
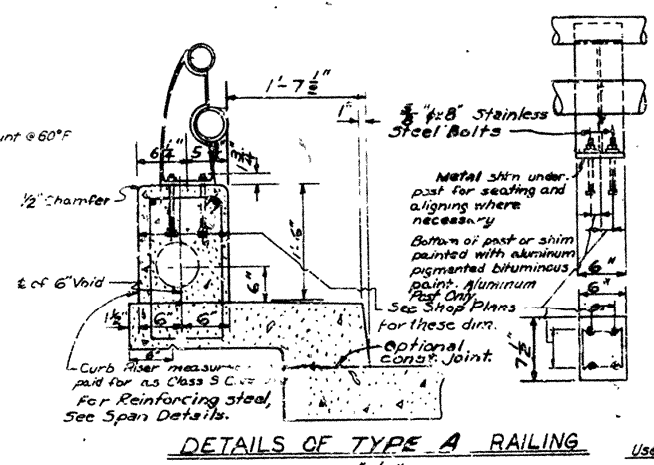
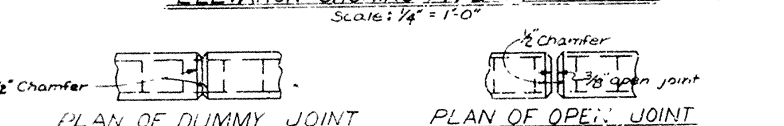
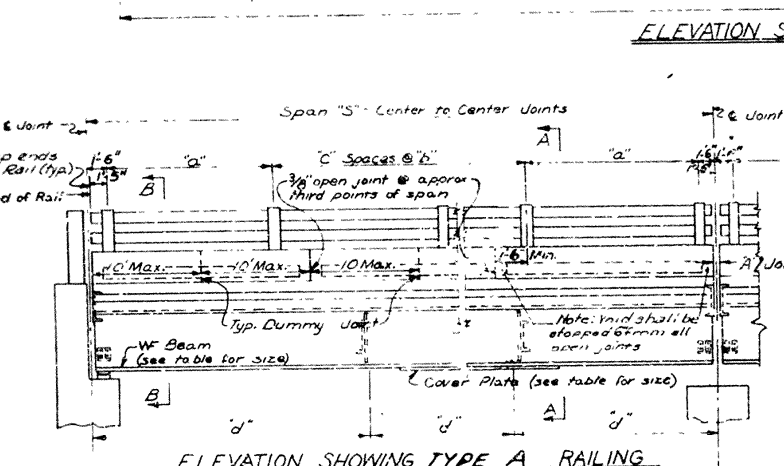
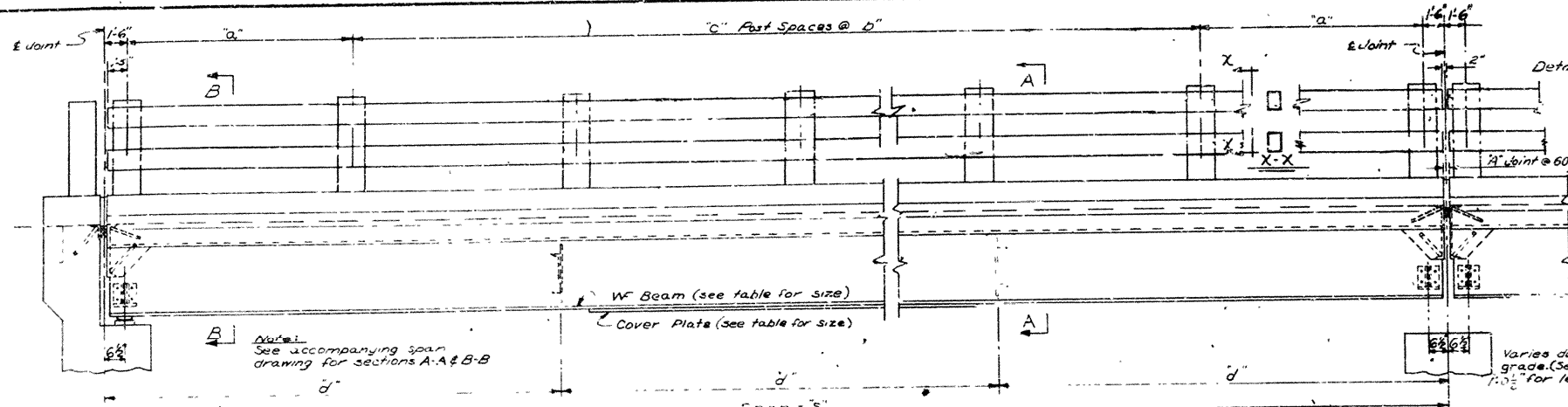
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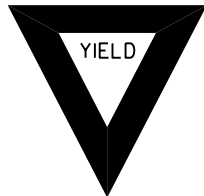

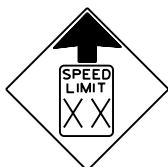

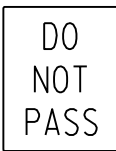



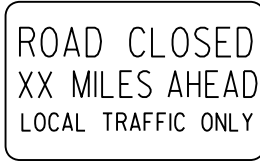


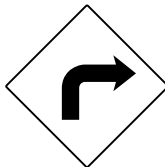




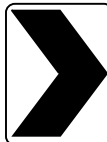
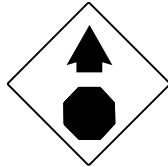
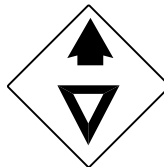
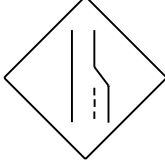



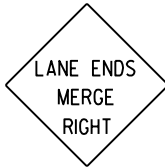


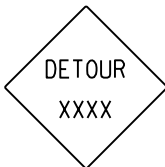










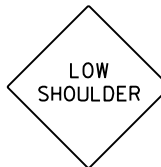

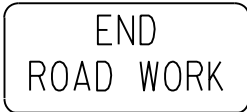
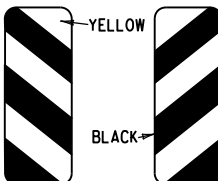


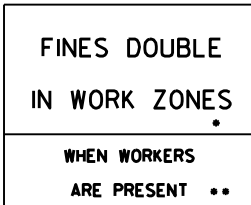
JOINT AT INT. BENT

Revised: Spacing 4" x 6" x 4" 1/2" R.E. DRAWN BY: J.M. DATE: 3-7-62

Revised: Slab Railing Note 6-21-60

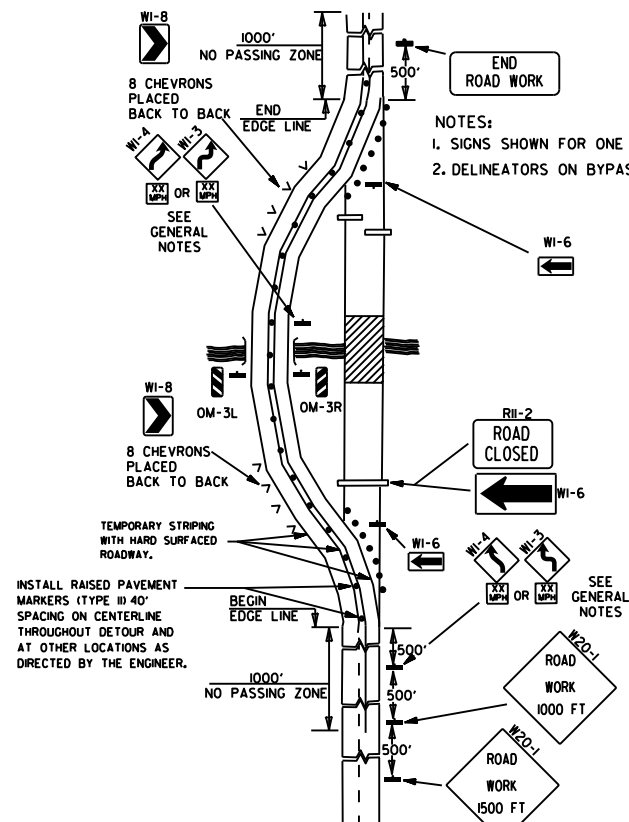
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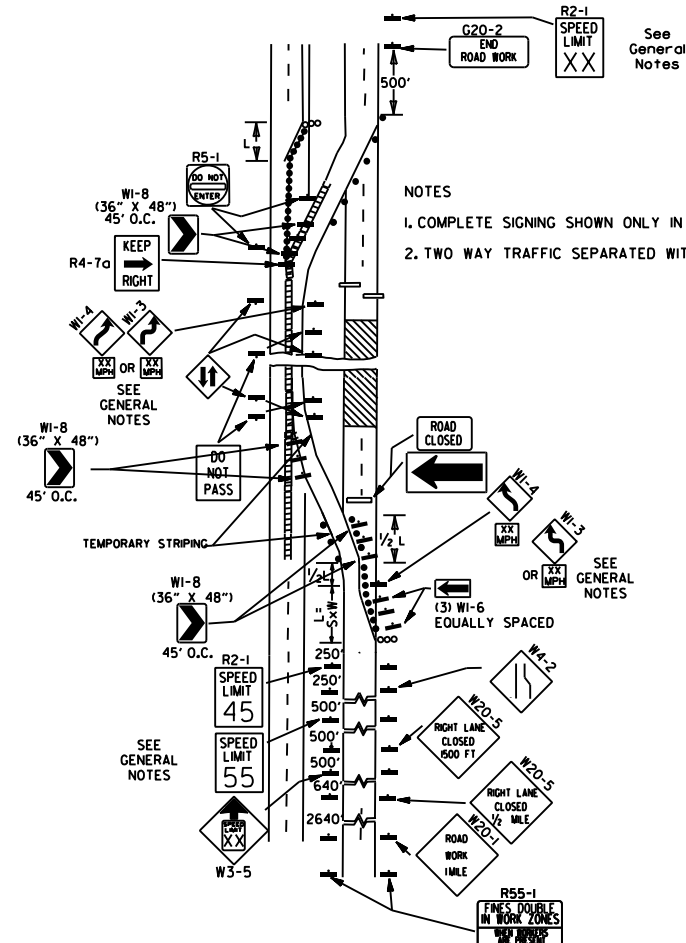
<div>RI-I</div> <div></div> <div>STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"</div>	<div>RI-2</div> <div></div> <div>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</div>	<div>R2-I</div> <div></div> <div>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</div>	<div>W3-5</div> <div></div> <div>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</div>	<div>W3-5a</div> <div></div> <div>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</div>	<div>R4-I</div> <div></div> <div>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</div>	<div>R4-2</div> <div></div> <div>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</div>	<div>ADVANCE DISTANCES (XXXX)</div> <div>500 FT 1/2 MILE 1000 FT 3/4 MILE 1500 FT 1 MILE AHEAD</div> <div>GENERAL NOTES: 1. 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. 2. 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. 3. 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. 4. SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE. 5. 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. 6. 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. 7. 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. 8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS. 9. 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. 10. 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 MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.</div>
<div>R5-I</div> <div></div> <div>STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"</div>	<div>R1I-2</div> <div></div> <div>48"x30"</div>	<div>R1I-3A</div> <div></div> <div>60"x30"</div>	<div>R1I-4</div> <div></div> <div>60"x30"</div>	<div>W2I-5a</div> <div></div> <div>STD. 36"x36" FWY. 48"x48"</div>	<div>WI-I</div> <div></div> <div>STD. 36"x36" FWY. 48"x48"</div>	<div>WI-2</div> <div></div> <div>STD. 36"x36" FWY. 48"x48"</div>	
<div>WI-3</div> <div></div> <div>STD. 48"x48"</div>	<div>WI-4</div> <div></div> <div>STD. 48"x48"</div>	<div>WI-6</div> <div></div> <div>STD. 48"x24" SPECIAL 60"x30"</div>	<div>WI-8</div> <div></div> <div>STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"</div>	<div>W3-I</div> <div></div> <div>STD. 36"x36" SPECIAL 48"x48"</div>	<div>W3-2</div> <div></div> <div>STD. 36"x36" SPECIAL 48"x48"</div>	<div>W4-2</div> <div></div> <div>STD. 36"x36" FWY. 48"x48"</div>	
<div>W5-I</div> <div></div> <div>STD. 36"x36" SPECIAL 48"x48"</div>	<div>W6-3</div> <div></div> <div>EXPWY. 36"x36" SPECIAL 48"x48"</div>	<div>W8-7</div> <div></div> <div>EXPWY. 36"x36" FWY. 48"x48"</div>	<div>W9-2</div> <div></div> <div>STD. 36"x36" FWY. 48"x48"</div>	<div>W13-I</div> <div></div> <div>STD. 24"x24"</div>	<div>W20-I</div> <div></div> <div>STD. 48"x48"</div>	<div>W20-2</div> <div></div> <div>STD. 48"x48"</div>	<div>W20-3</div> <div></div> <div>STD. 48"x48"</div>
<div>W20-4</div> <div></div> <div>STD. 48"x48"</div>	<div>W20-5</div> <div></div> <div>STD. 48"x48"</div>	<div>W20-7a</div> <div><div>18" 500 FEET 24" W16-2</div></div> <div>STD. 36"x36" FWY. 48"x48"</div>	<div>W2I-2</div> <div></div> <div>STD. 30"x30" SPECIAL 36"x36"</div>	<div>W2I-5</div> <div></div> <div>STD. 30"x30" SPECIAL 36"x36"</div>	<div>W24-I</div> <div></div> <div>STD. 36"x36"</div>	<div>WI-4b</div> <div></div> <div>STD. 48"x48"</div>	<div>R56-I</div> <div></div> <div>STD. 18"x18"</div>
<div>W8-II</div> <div></div> <div>STD. 36"x36" FWY. 48"x48"</div>	<div>W8-9</div> <div></div> <div>STD. 36"x36" FWY. 48"x48"</div>	<div>G20-I</div> <div></div> <div>60"x24"</div>	<div>G20-2</div> <div></div> <div>48"x24"</div>	<div>OM-3L OM-3R</div> <div></div> <div>12"x36"</div>	<div>M4-9</div> <div></div> <div>STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"</div>	<div>M4-10</div> <div></div> <div>48"x18"</div>	<div>R55-I</div> <div></div> <div>36"x60" • USE 6" C LETTERS •• USE 4" D LETTERS</div>

11-07-19	REVISED FOR MASH	
4-13-17	DELETED RSP-1 & ADDED W2I-5a	
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
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	
DATE	REVISION	FILMED

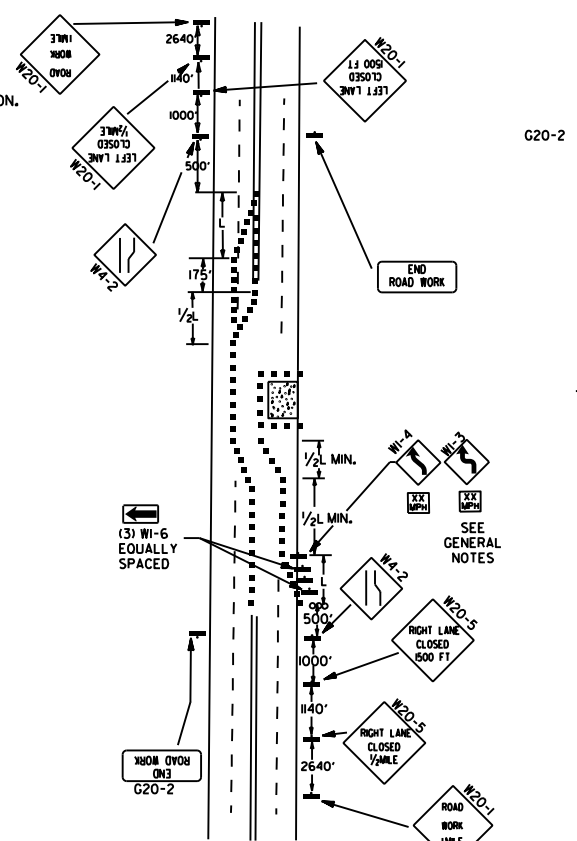
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-1



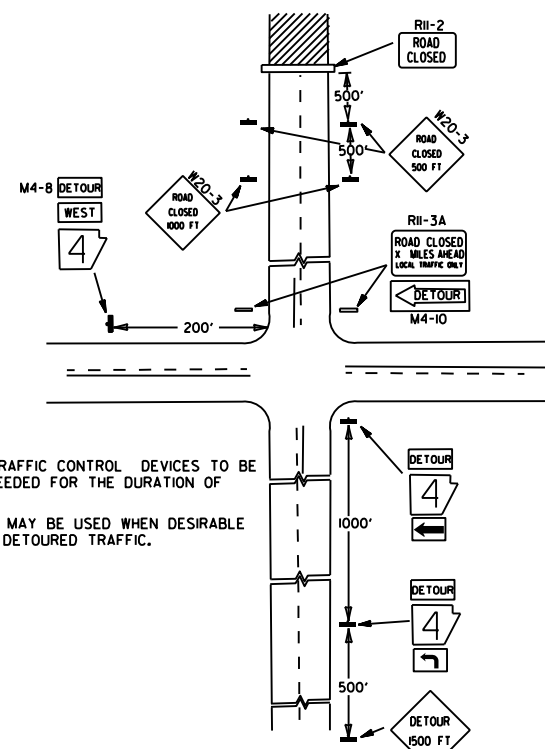
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



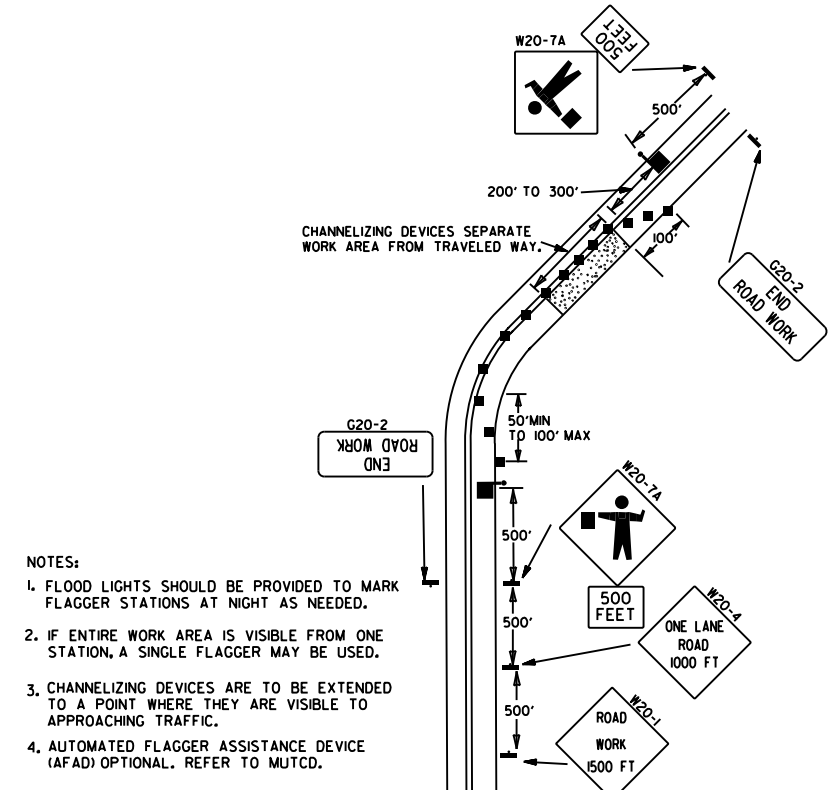
(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



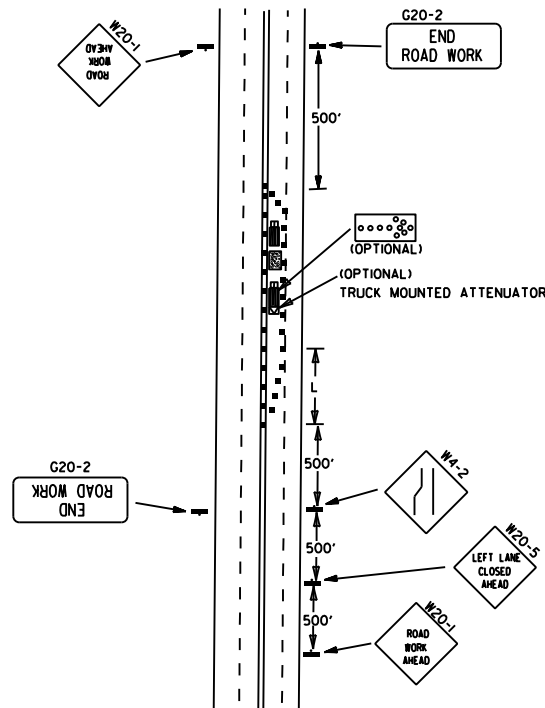
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



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

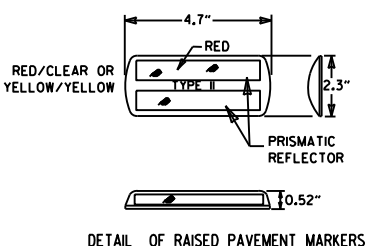


(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



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

- KEY:
- FLAGGER
 - POSITIVE BARRIER
 - ARROW PANEL (IF REQUIRED)
 - TYPE III BARRICADE
 - CHANNELIZING DEVICE
 - TRAFFIC DRUM
 - RAISED PAVEMENT MARKER



TYPICAL ADVANCE WARNING SIGN PLACEMENT

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. THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS. 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 R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1(45)MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) 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 R2-1(65) SHALL BE OMITTED. ADDITIONAL R2-1(55)MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) 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. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
 8. DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE ARDOT QUALIFIED PRODUCTS LIST.
 9. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

05-20-21	REVISED NOTE 7	
11-07-19	REVISED NOTE 1, ADDED NOTE 9	
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
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	
4-26-96	CORRECTED (a) 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	
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-2

(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.

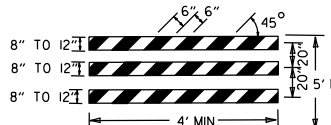
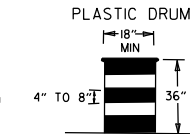
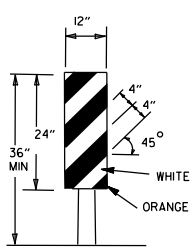
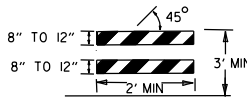
(B) TYPICAL APPLICATION - 3-LANE ONEWAY ROADWAY WHERE CENTER LANE IS CLOSED.

CHANNELIZING DEVICES



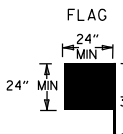
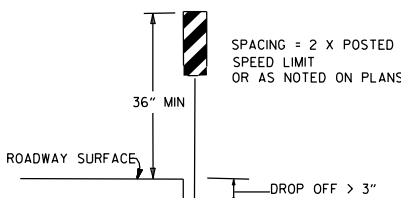
• WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.

CONES



NOTE:
FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.

VERTICAL PANEL PLACEMENT



FLAG SHALL BE OF GOOD GRADE RED MATERIAL

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-(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/2 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(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-(65) SHALL BE OMITTED. ADDITIONAL R2-1 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/2 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(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 (1/2 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 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. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
- ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

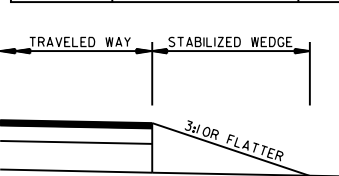
(D) TYPICAL APPLICATION - CLOSING MULTIPLE LANES OF A MULTILANE HIGHWAY.

TRAFFIC CONTROL DEVICES

VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL	
		≤ 45 MPH	> 45 MPH
≤ 1"	CENTERLINE	W8-11	W8-11
> 1"	CENTERLINE	W8-11 AND CENTERLINE LANE STRIPING	W8-11 AND CENTERLINE LANE STRIPING
≤ 3"	CENTERLINE	STANDARD LANE CLOSURE ⁽⁶⁾	STANDARD LANE CLOSURE ⁽⁶⁾
> 3"	CENTERLINE	STANDARD LANE CLOSURE ⁽⁶⁾	STANDARD LANE CLOSURE ⁽⁶⁾
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9 AND TRAFFIC DRUMS ⁽¹⁾	W8-9 AND TRAFFIC DRUMS ⁽¹⁾
> 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾
> 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽²⁾
> 18"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾	A STABILIZED WEDGE, W8-17, EDGE LINE STRIPING AND TRAFFIC DRUMS ⁽³⁾
> 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER ⁽⁴⁾ & EDGE LINES	PRECAST CONCRETE BARRIER ⁽⁴⁾ & EDGE LINES

INTERSTATE		
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL
≤ 3"	CENTERLINE	W8-11 AND LANE STRIPING
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽²⁾
> 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽²⁾
> 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER & EDGE LINES

INTERSTATE AND NON-INTERSTATE		
FORESLOPE	HEIGHT	TRAFFIC CONTROL
1:1	> 2 FT	PRECAST CONCRETE BARRIER
2:1	≤ 5 FT	TRAFFIC DRUMS
2:1	> 5 FT	PRECAST CONCRETE BARRIER
Flatter than 2:1	N/A	TRAFFIC DRUMS



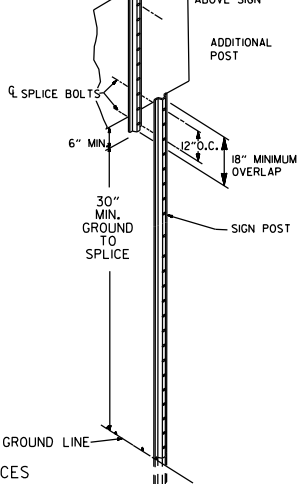
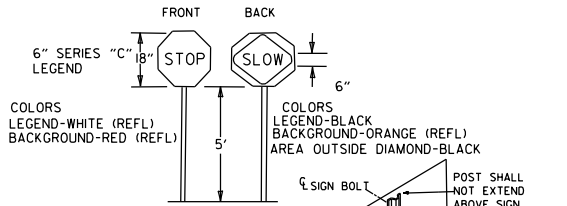
STABILIZED WEDGE

NOTE:
MATERIALS FOR THE STABILIZED WEDGE SHALL MEET THE REQUIREMENTS PROVIDED IN SECTION 603.02 OF THE STANDARD SPECIFICATIONS.

GENERAL NOTES:

- WHEN THE SHOULDER AREA IS USED AS PART OF THE TRAVELED LANE AND THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, THEN VERTICAL PANELS SHALL BE USED.
- WHEN THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, A STABILIZED WEDGE SHALL BE USED.
- PRECAST CONCRETE BARRIER WALL CAN BE USED IN LIEU OF A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS, IF AND WHERE DIRECTED BY THE ENGINEER.
- A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS CAN BE USED IN LIEU OF PRECAST CONCRETE BARRIER WALL, IF AND WHERE DIRECTED BY THE ENGINEER.
- W21-5, W21-5a, AND/OR W21-5b SIGNS SHALL BE USED WHERE THE ROADWAY IS UNOBSTRUCTED IF AND WHERE DIRECTED BY THE ENGINEER.
- TIME LIMITATIONS MUST CONFORM TO SECTION 603 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).

STOP SLOW PADDLE



DETAIL OF SPLICES

DATE	REVISION	FILED
08-12-21	REVISED TRAFFIC CONTROL DEVICES AND NOTES	
05-20-21	REVISED NOTE 10	
2-27-20	REVISED TRAFFIC CONTROL DEVICES DETAILS	
11-07-19	REVISED NOTE 9, ADDED NOTE 11	
7-25-19	REVISED TRAFFIC CONTROL DEVICES DETAILS	
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
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 W6-18 & 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	

ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-3