FED. ROAD NO.	STATE	PROJECT	FISCAL YEAR	SHEET NO.	SHEETS
6	ARK.	S-50(31)			
JOB No.		10325	5	104	

SUMMARY OF BRIDGE QUANTITIES JOB NO. 10325 (CODE No. X031)

ITEM NO.	ITEM	UNIT	BRIDGE NO. 2905			BRIDGE NO. 2906				BRIDGE NO. 2907				BRIDGE NO. 2908			TOTAL JOB NO. 10325
			BENTS 1 & 2	SPAN 1	TOTAL	BENTS 1 & 6	BENTS 2-5	SPANS 1-5	TOTAL	BENTS 1 & 4	BENTS 2 & 3	SPANS 1-3	TOTAL	BENTS 1 & 2	SPAN 1	TOTAL	
103	Dry Excavation For Structures	Yd.	66		66	116			116	84			84	93		93	359
SP & 802	Class 'S' Concrete For Bridges	Cu. Yd.	25.00	31.82	56.82	23.84	23.52	117.15	164.51	20.54	10.34	61.65	92.53	22.07	31.78	53.85	367.71
SP & 803	Reinforcing Steel	Lb.	3039	5660	8699	2880	3380	20,325	26,585	2730	1690	10,905	15,325	2623	5736	8359	58,968
SP & 804	Concrete Piling (16" Octagonal)	Lin. Ft.	355		355	448	712		1160	348	237		585	313		313	2413
SP-805-3	Steel Plate Guard Rail (10 ga.)	Lin. Ft.	18.33	110.00	128.33	18.13		400	418.13	15.67		210	225.67	15.83	110	125.83	897.96
807	Structural Steel in Beam Spans	Lb.	1368	38,828	40,196	884		109,360	110,244	778		48,156	48,934	1186	38,546	39,732	239,106
929	Bridge Name Plates (Type 'C')	Each	1		1	1			1	1			1	1		1	4
* SP-1052-7	Removal of Existing Bridge Structures	Complete Item			27%				0				46%			27%	100%

* This work shall include the maintaining of traffic during construction. The Contractor shall assume full responsibility for uninterrupted movement of traffic and shall construct and maintain a detour at Bridges 2905, 2907 & 2908, consisting of a temporary bridge and connecting gravelled ramps. The temporary structure shall have a minimum roadway width of 14 feet and a minimum design capacity of H 15 loading. Details of construction, kind and condition of materials shall be submitted for approval prior to construction. Materials from existing bridges may be used for this purpose provided they be not cut or otherwise damaged.

BRIDGE DESIGN ENGINEER

SUMMARY OF BRIDGE QUANTITIES
LEPANTO – NORTH
POINSETT & CRAIGHEAD COUNTIES
ROUTE 143 SECS. 1 & 2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

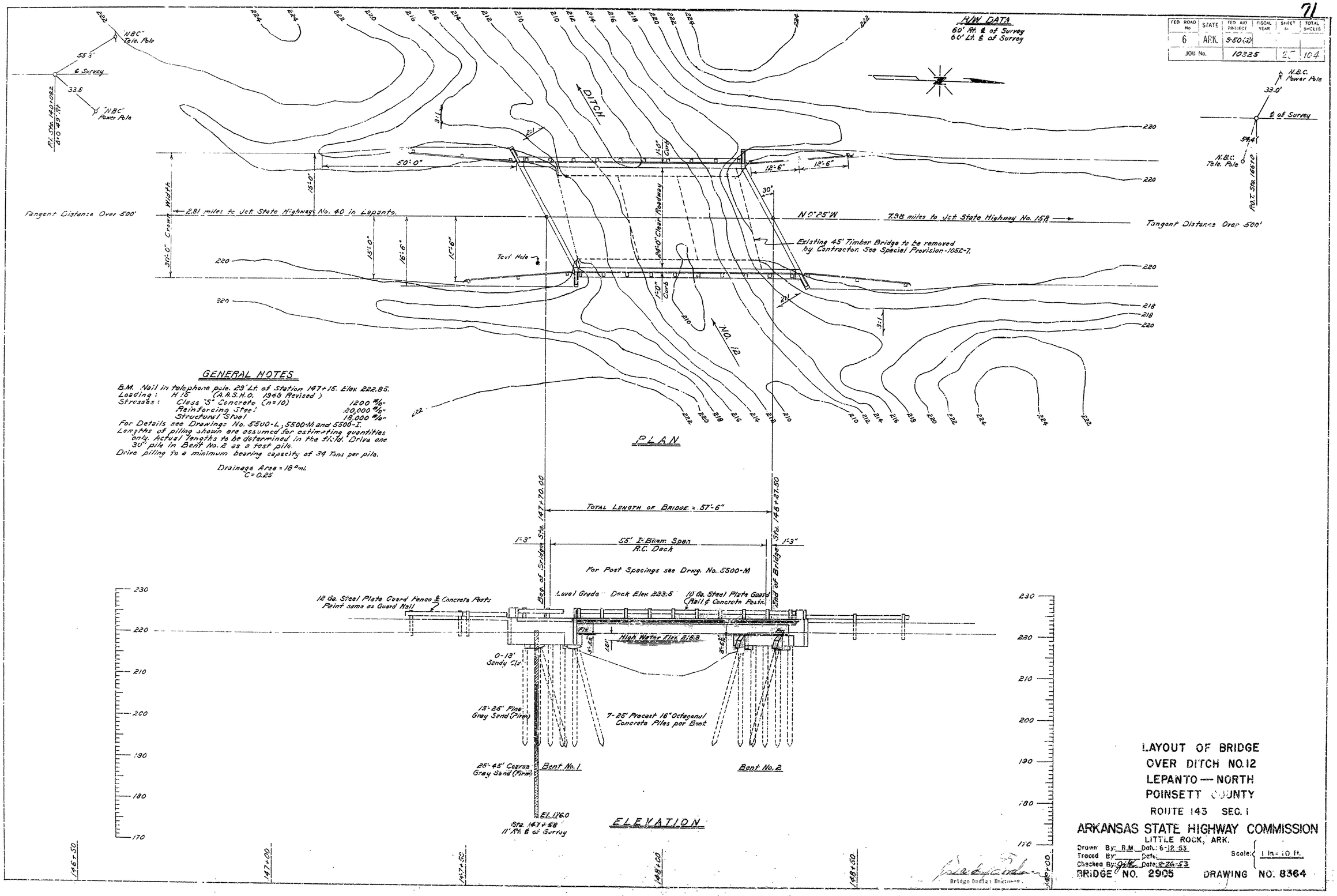
Drawn By WWJ Date 8-26-53
Traced By ___ Date ___
Checked By [illegible] Date 8-26-53

BRIDGES NO. 2905–2908 INCL. DWG. NO. 8363

FED ROAD No.	STATE	FED AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.	S-50(3)			
JOB No.	10325			2	104

R/W DATA

60' Rt. ℄ of Survey
60' Lt. ℄ of Survey



PLAN

GENERAL NOTES

B.M. Nail in telephone pole. 29' Lt. of Station 147+15. Elev. 222.85.
Loading: H 15 (A.A.S.H.O. 1949 Revised)
Stresses: Class "S" Concrete (n=10) 1200 #/in²
Reinforcing Steel: 20,000 #/in²
Structural Steel 18,000 #/in²
For Details see Drawings No. 5500-L, 5500-M and 5500-I.
Lengths of piling shown are assumed for estimating quantities only. Actual lengths to be determined in the field. Drive one 30" pile in Bent No. 2 as a test pile.
Drive piling to a minimum bearing capacity of 34 Tons per pile.

Drainage Area = 16 sq. mi.
C = 0.25

ELEVATION

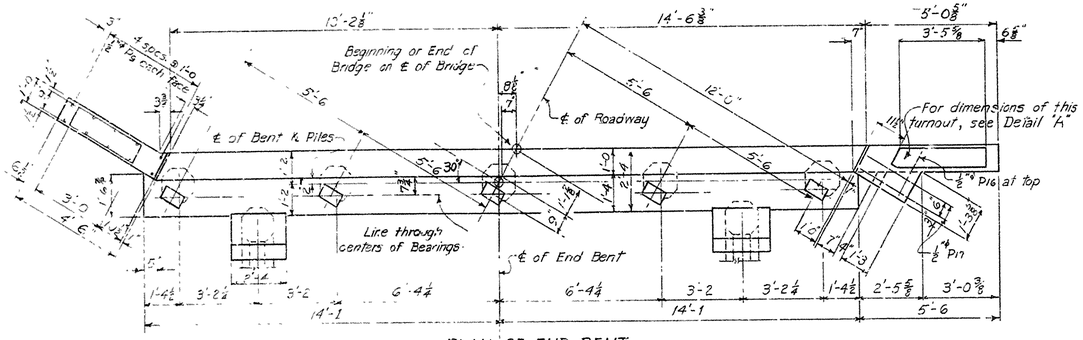
Bridge Design Engineer

LAYOUT OF BRIDGE OVER DITCH NO. 12 LEPANTO — NORTH POINSETT COUNTY ROUTE 145 SEC. 1

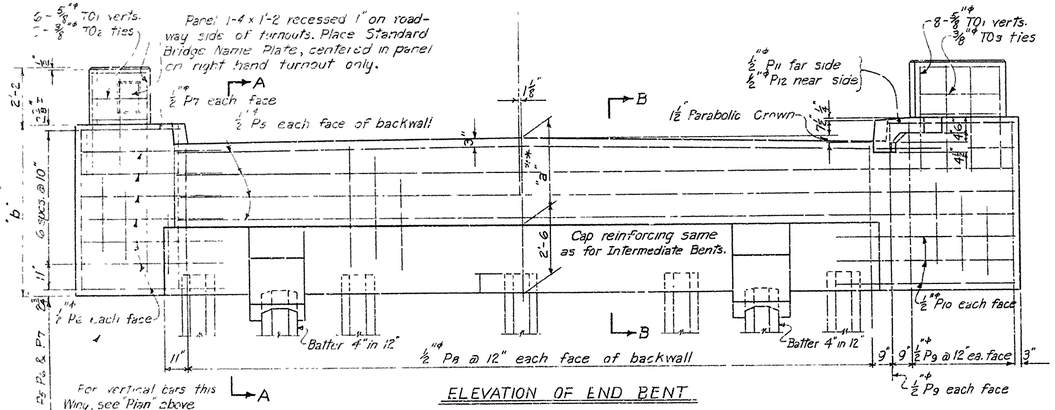
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: R.M. Date: 6-12-53
Traced By: Date:
Checked By: Date: 6-26-53
Scale: 1 in. = 10 ft.

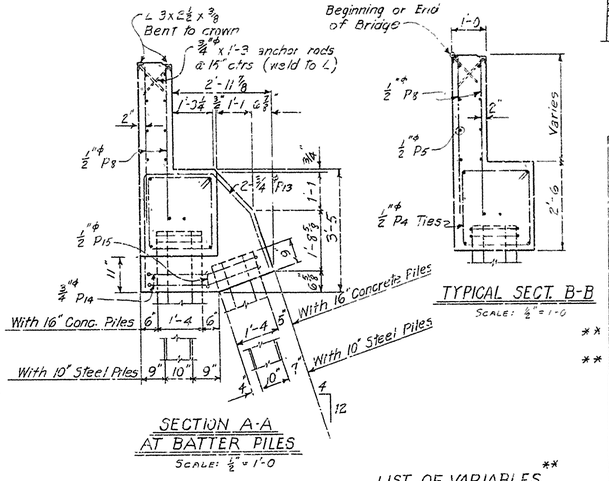
BRIDGE NO. 2905 DRAWING NO. 8364



PLAN OF END BENT



ELEVATION OF END BENT

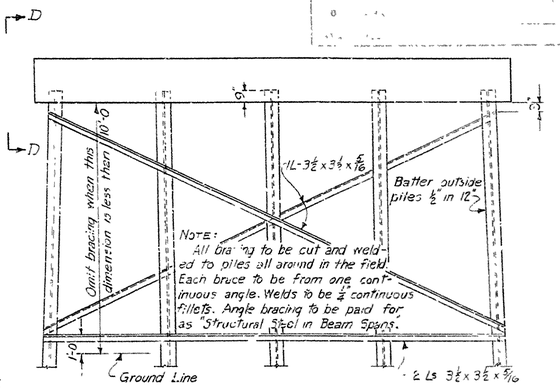


SECTION A-A AT BATTER PILES

Scale: ½" = 1'-0

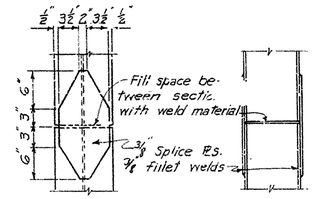
TYPICAL SECT. B-B

Scale: ½" = 1'-0



TYPICAL BRACING INTERMEDIATE BENT

Scale: ½" = 1'-0



PILE SPLICE DETAILS

Scale: 1" = 1'-0

Generally all piles shall be driven full length and shall not be spliced except by permission of the Engineer.

END VIEW D-D

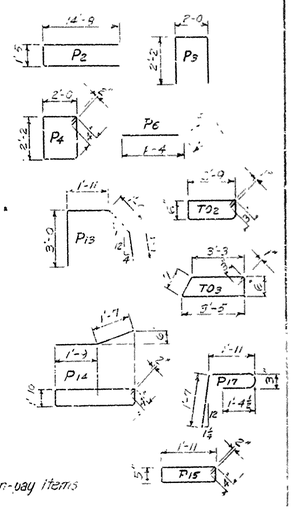
LIST OF REINFORCING STEEL

Mk	Size	No. In Bents End	No. In Bents Int.	Length	
P1	¾"ϕ	6	6	27'-10	Str.
P2	"	4	4	30'-9	
P3	"	15	15	6'-4	
P4	½"ϕ	44*	44*	9'-1	
P5	"	8		33'-0	Str.
P6	"	14		6'-0	
P7	"	2		4'-2	
P8	"	56		4'-8	
P9	"	22		6'-0	
P10	"	6		7'-0	Straight
P11	"	1		4'-9	
P12	"	1		5'-0	
P13	¾"ϕ	4		8'-0	
P14	"	4		11'-1	
P15	½"ϕ	2		5'-5	
P16	"	1		2'-0	Str.
P17	"	2		5'-0	
T01	⅝"ϕ	14		4'-0	Str.
T02	⅝"ϕ	3		7'-0	
T03	⅜"ϕ	3		3'-3	

Non-way items

Dimensions are to ctrs. of bars.

Bending Diagrams:



* 54 Ties if steel piles are used.

LIST OF VARIABLES **

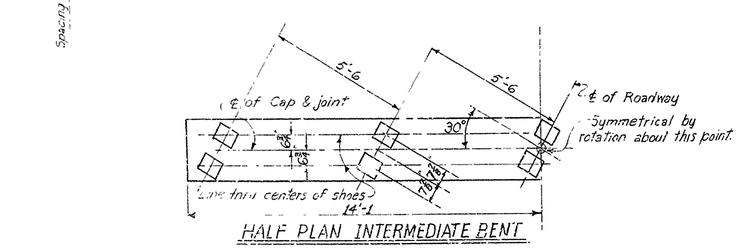
Span	Vertical Dimensions "a"	"b"	"c"
46'	3'-2⅜	6'-4⅛	3'-6⅜
47'	"	"	"
48'	"	"	"
49'	"	"	"
50'	"	"	"
51'	"	"	"
52'	"	"	"
53'	"	"	"
54'	3'-2 2/16	6'-4 3/16	3'-6 2/16
55'	"	"	"

** When a single span bridge is used, dimensions 'a' and 'b' end lengths of Pa and P5 bars must be increased 4" to compensate for deeper wall required by use of expansion shoes. This is for one End Bent only.

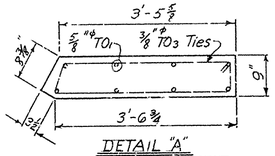
Revised Roadway & Curb Widths, 4-28-58 F DN

NOTES

Steel Piles are to be driven to refusal. Concrete Piles to be driven to a minimum capacity of 54 Tons.
For details of Superstructure and for General Notes, see Drawing No. 5500 M and 5500 I.
Use type of Pile called for on Bridge Layout.

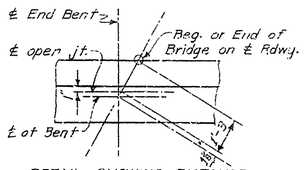


HALF PLAN INTERMEDIATE BENT

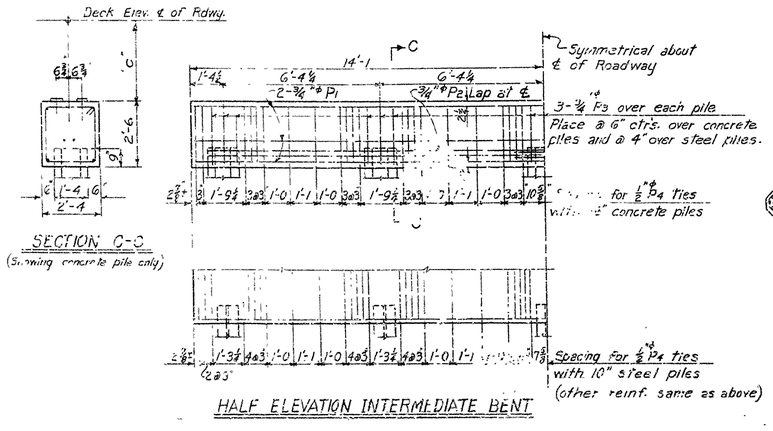


DETAIL "A" LEFT HAND TURNOUT

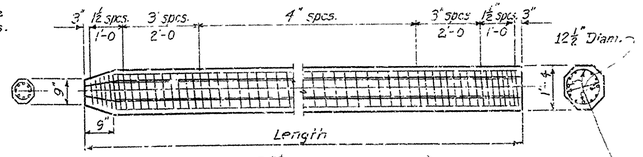
Scale: ¾" = 1'-0



DETAIL SHOWING DISTANCE FROM BEG. OF BRIDGE TO ℄ OPEN JT. ALONG ℄ OF RDWY



HALF ELEVATION INTERMEDIATE BENT



DETAILS OF 16" PRECAST CONCRETE PILE

No Scale

DRIDGE DESIGN ENGINEER

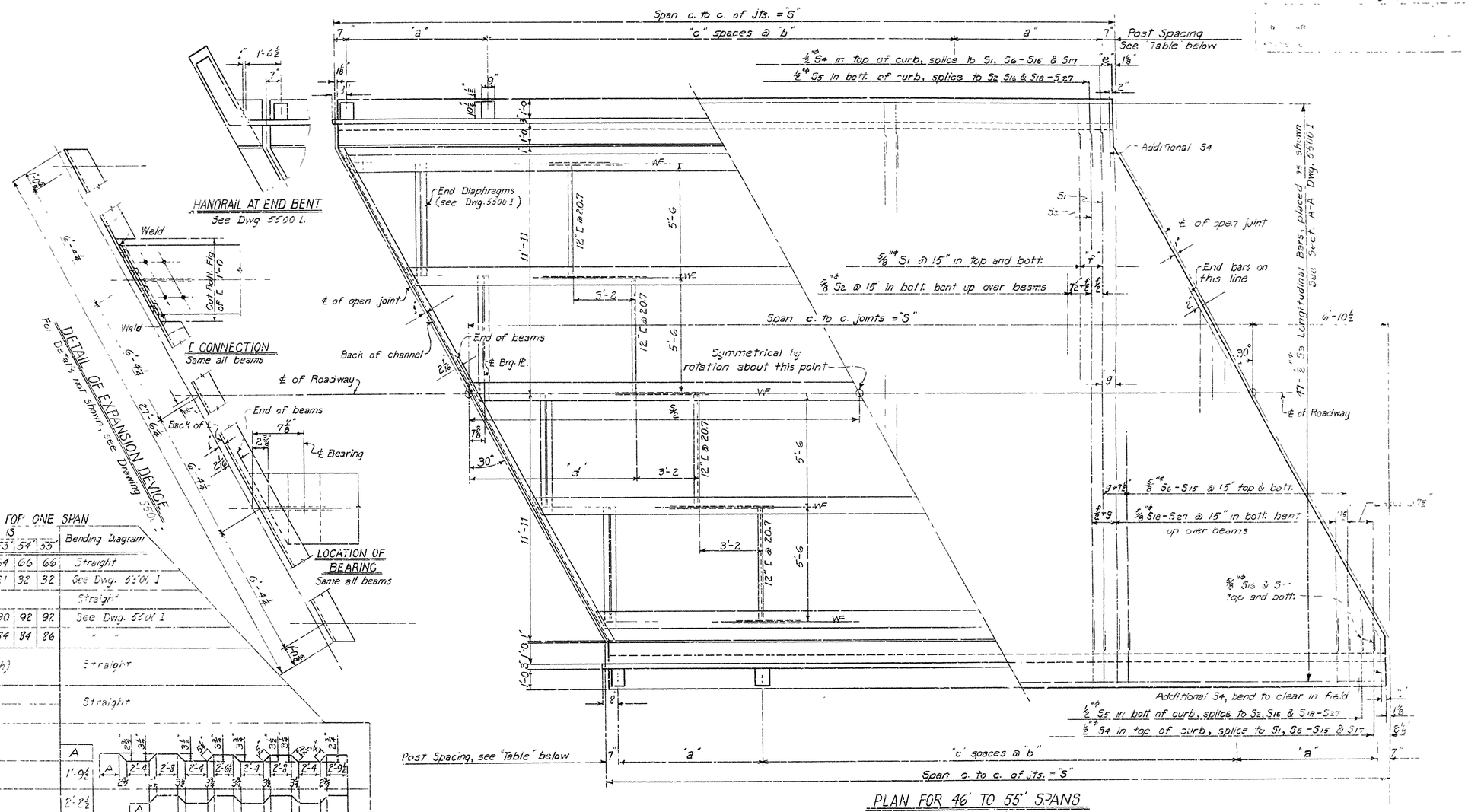
DETAILS OF
STANDARD PILE BENTS
46' TO 55' I-BEAM SPANS
24'-0 CLEAR RDWY. 1'-0 CURBS
30° SKEW RT. FORWARD

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: WWM Date: 3-30-53
Traced By: Date:
Checked By: Date: 4-24-53

Scale: ⅜" = 1'-0 except as noted

DRAWING NO. 5500L



PLAN FOR 46' TO 55' SPANS

Scale ⅜" = 1'-0

LIST OF REINFORCING STEEL FOR ONE SPAN

Mark	Size	Length	No. Required When "S" is 46'	47'	48'	49'	50'	51'	52'	53'	54'	55'	Bending Diagram
S1	⅝"#	25'-0	52	54	56	58	58	60	62	64	66	66	Straight
S2	"	25'-11	25	26	27	28	28	29	30	31	32	32	See Dwg. 5500 I
S3	½"#	℄ of 7	94										Straight
S4	"	4'-4	78	80	82	84	84	86	88	90	92	92	See Dwg. 5500 I
S5	"	3'-0	72	74	76	78	78	80	82	84	84	86	" "
S6 to S15	⅝"#	22 1/2 to 3'-5	40 (4 each length) (varies by 2-2)										Straight
S16	"	2'-4	4										Straight
S17	"	1'-8	4										
S18	⅝"#	24'-11	2										
S19	"	22'-8	2										
S20	"	20'-4	2										
S21	"	18'-2	2										
S22	"	15'-11	2										
S23	"	13'-7	2										
S24	"	11'-4	2										
S25	"	9'-2	2										
S26	"	6'-10	2										
S27	"	4'-7	2										

			46' to 51' spans	52' to 55' spans
PO1	⅝"#	5'-5"	38	40
PO2	¾"#	2'-9	54	60

See Dwg. 5500 I (not a pay item)

Dimensions are to ctr's. of bars

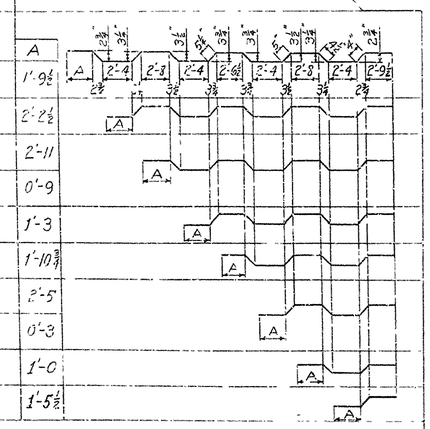


TABLE OF VARIABLE DIMENSIONS

Span c. to c. jts "S"	Reqd WF	Post Spacing a	b	c	Strut Spacing d	Reinforcing Spacing e	f	g	Camber "x"
46'	30 WF 108	5'-6½	5'-7⅞	6	13'-9	6"	1'-2	6½"	3/8"
47'	"	5'-8	5'-9	6	14'-1	5½"	1'-1	6"	11/16"
48'	"	5'-9½	5'-10½	6	14'-5	5"	1'-0	5½"	3/4"
49'	"	5'-11	6'-0	6	14'-9	4½"	11"	5"	13/16"
50'	"	6'-0⅝	6'-1½	6	15'-1	6½"	1'-3	7"	7/8"
51'	30 WF 116	6'-2	6'-3	6	15'-5	6"	1'-2	6½"	7/8"
52'	"	5'-7	5'-8	7	15'-9	5½"	1'-1	6"	15/16"
53'	"	5'-9⅜	5'-9	7	16'-1	5"	1'-0	5½"	1"
54'	30 WF 124	5'-10¾	5'-10½	7	16'-5	4½"	11"	5"	1"
55'	"	5'-11	6'-0	7	16'-9	6½"	1'-3	7"	1 1/8"

NOTES

For details not shown and General Notes, see Drawing No. 5500 I

For details of bents, see Drawing No. 5500 L

BRIDGE DESIGN ENGINEER

DETAILS OF STANDARD
46' TO 55' I-BEAM SPANS
24'-0 CLEAR RDWY. 1'-0 CURBS
30° SKEW RT. FORWARD

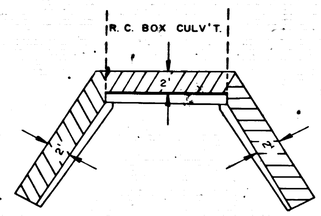
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: WWM Date: 3-24-53
Traced By: Date:
Checked By: Date: 4-24-53

Scale: As Noted

DRAWING NO. 5500M

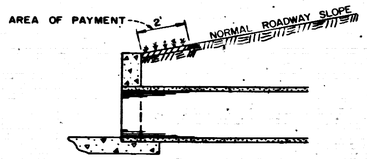
SOLID SODDING



PLAN

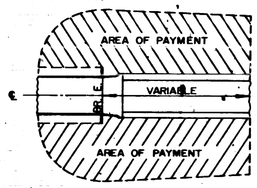
PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.



SECTION SHOWING SOLID SODDING AT PIPE CULVERT HEADWALLS

NOTE: 2' STRIP TO BE PLACED ALONG ENTIRE LENGTH OF THE HEADWALL.

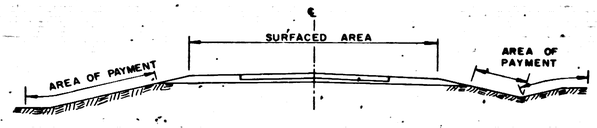


PLAN

SECTION SHOWING SOLID SODDING AT BRIDGE END

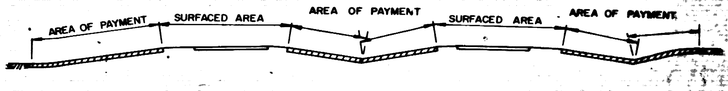
NOTE: HATCHED AREA DENOTES SLOPES RECEIVING SOLID SODDING

SEEDING



TYPICAL SECTION OF AREA TO BE SEEDED

SOD MULCH



TYPICAL SECTION OF AREA TO BE SOD MULCHED

NOTE : SOD MULCH TO BE APPLIED AT THE RATE OF 85 SQ. FT. FOR ONE CUBIC YARD.

DATE	REVISIONS	BY
10-6-72	REVISED & REDRAWN	

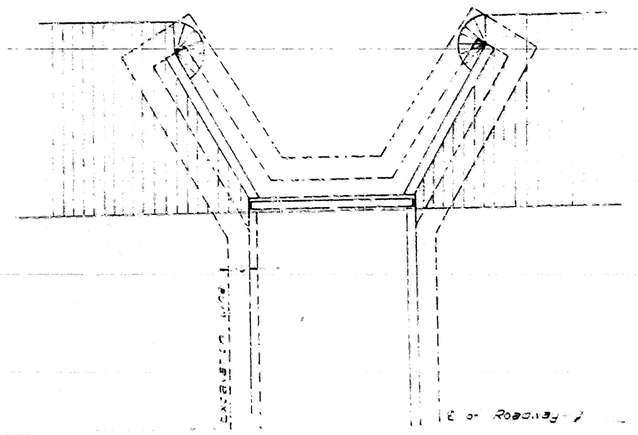
ARKANSAS STATE HIGHWAY COMMISSION

MISCELLANEOUS

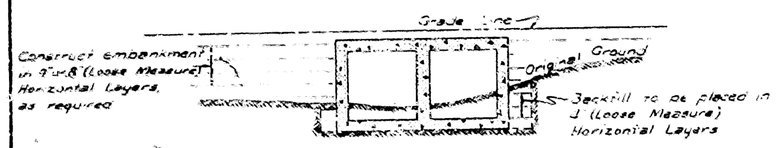
EROSION CONTROL DETAILS

STANDARD 886

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

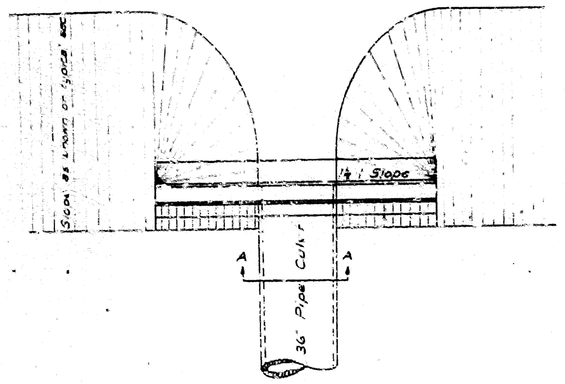


PLAN

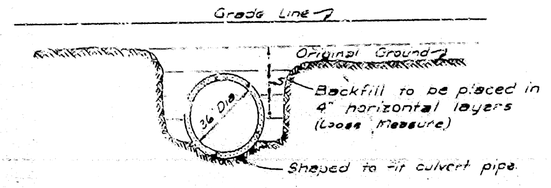


LONGITUDINAL SECTION

BOX CULVERT

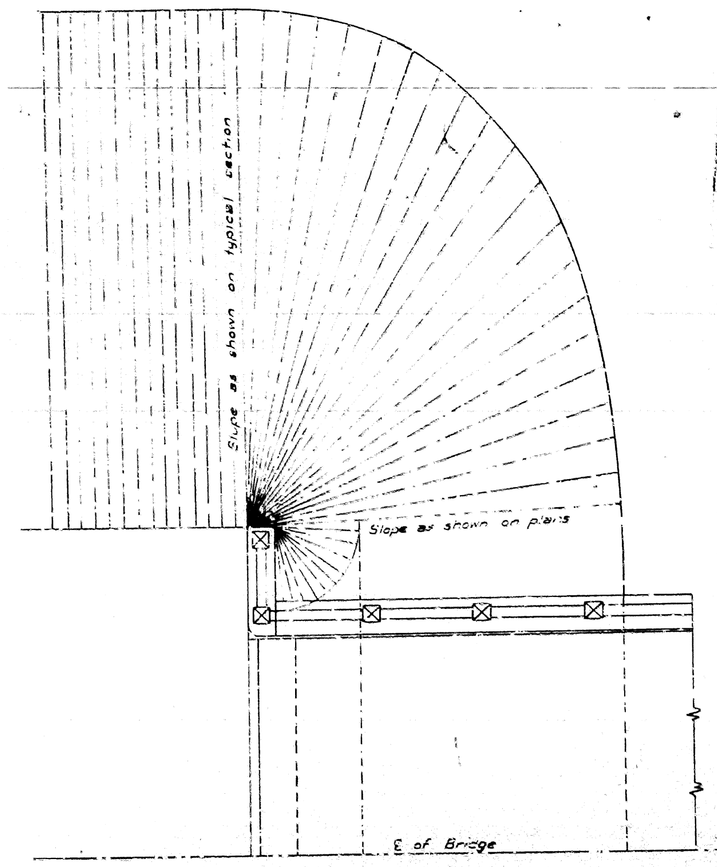


PLAN

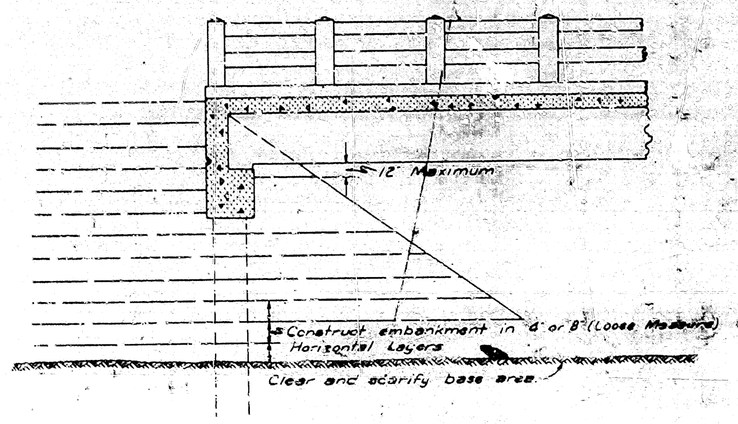


SECTION A-A

PIPE CULVERT

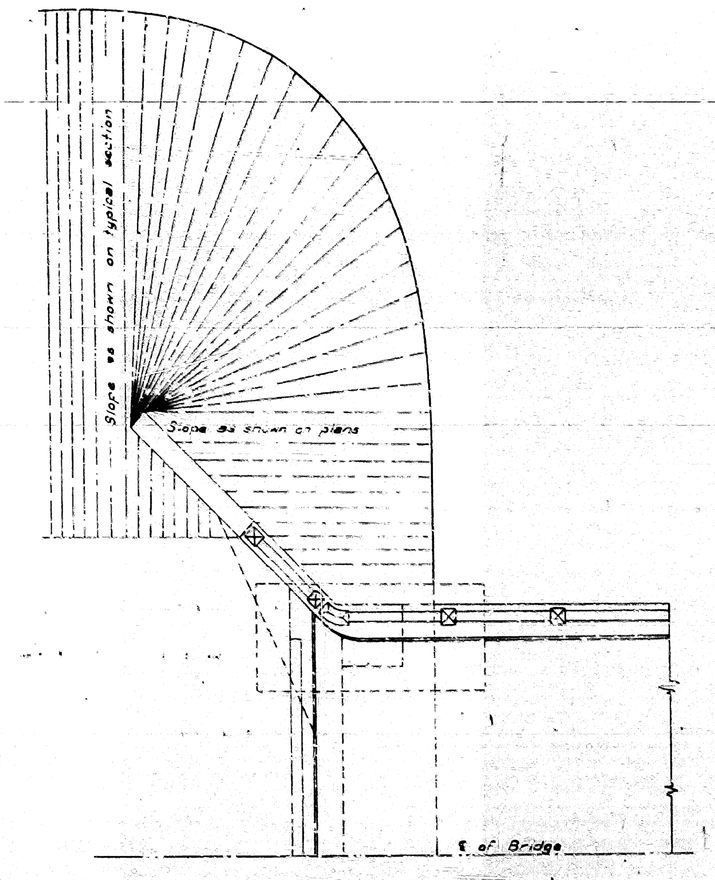


HALF PLAN

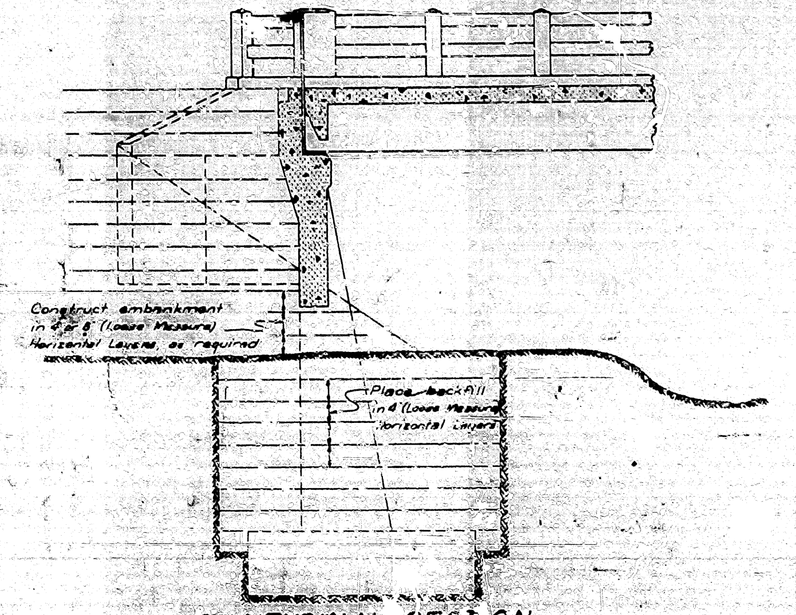


LONGITUDINAL SECTION

OPEN END ABUTMENT

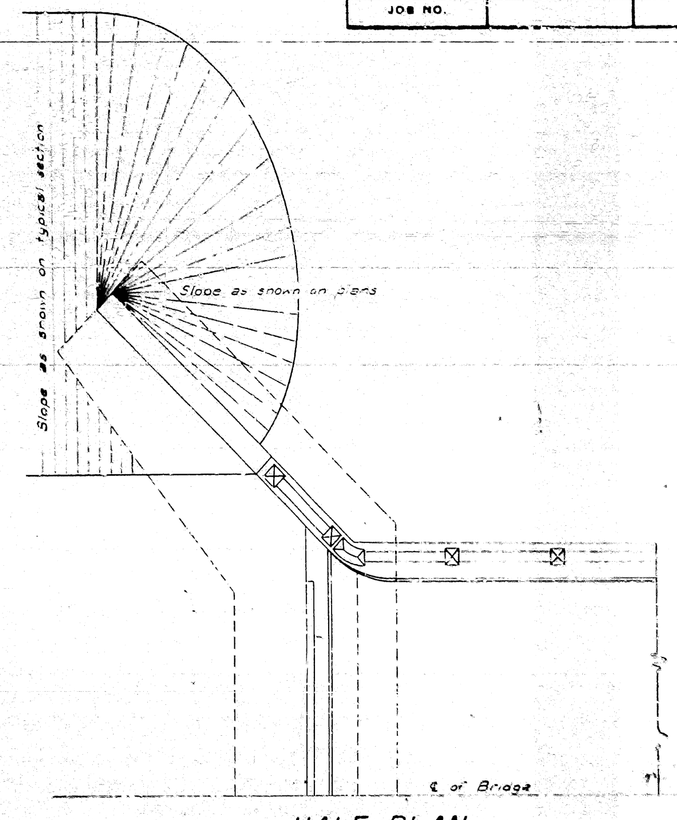


HALF PLAN

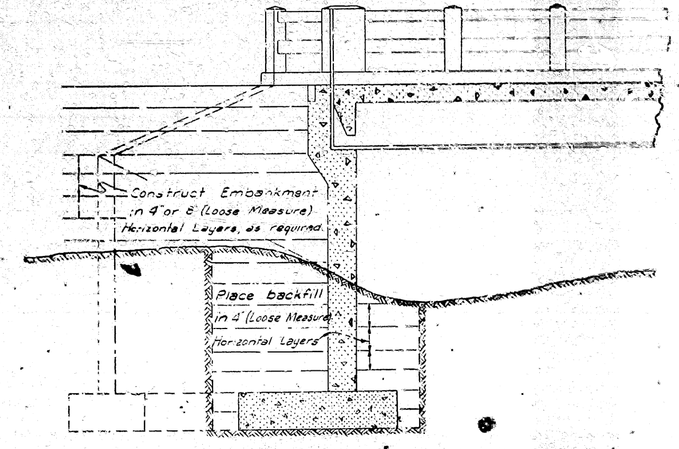


LONGITUDINAL SECTION

SEMI-OPEN ABUTMENT



HALF PLAN



LONGITUDINAL SECTION

WINGWALL ABUTMENT

Notes relative to construction of bridge-end embankments and backfilling excavations shall be applicable to backfilling culvert excavations and the construction of embankments over and adjacent to culverts.

CONSTRUCTION OF THE BRIDGE-END EMBANKMENT

The bridge-end embankment shall be understood to mean not less than 20 feet of embankment adjacent to the end of the bridge together with the side slopes and slopes underneath the bridge end and around the end of wingwalls.

The surface area to be occupied by this embankment shall first be cleared of all debris and vegetable matter, and then scarified so as to completely expose the raw earth. The foregoing shall be done before any of the base surface is covered by material taken from the structure excavations.

Embankment material shall be of approved quality, free from light and porous or perishable matter.

The fill shall be constructed in horizontal layers to the thickness required as specified in the specifications for Embankment Material, Section 106, and shall be compacted in accordance with the specifications for Special Compaction of Earthwork, Section 107.

BACKFILLING EXCAVATION

In so far as is practicable, abutment excavations shall be cut to the size shown by the plans with allowance of 18" on all sides as permitted by the specifications. Greatly oversize and flared cuts, sometimes made to avoid the use of sheeting, will not be permitted.

When the abutment excavation is ready for backfill it shall be cleared of all coffer-dam material, unless otherwise directed by the engineer, and of all debris and unsuitable fill material.

The space around the wall or columns shall then be carefully filled to the original ground line in horizontal layers to the thickness specified in the specifications for Embankment Material, Section 106 and shall be compacted in accordance with the specifications for Special Compaction of Earthwork, Section 107.

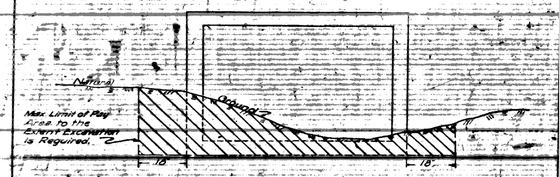
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF

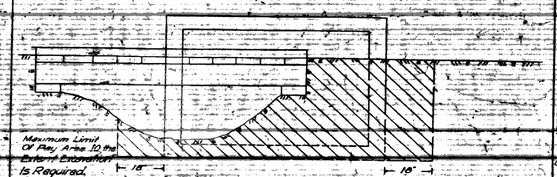
EMBANKMENT CONSTRUCTION AT BRIDGE ENDS AND BACKFILL FOR STRUCTURES

DRWG. NO. 1888 (REV)

Feb. 5, 1957

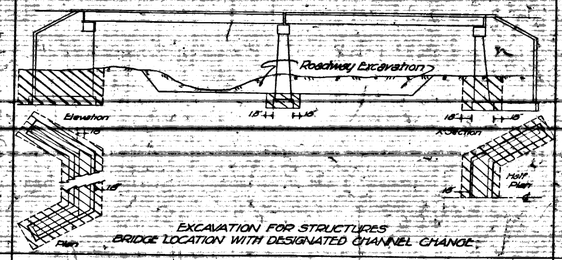


EXCAVATION FOR STRUCTURES

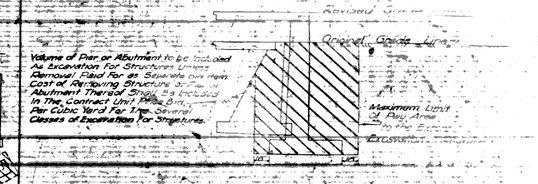


Cost of Removing the Existing Structure to be Included in the Contract Unit Price Bid Per Cubic Yard For the Several Classes of Excavation for Structures.

EXCAVATION FOR STRUCTURES
AT LOCATION OF EXISTING PLANK BRIDGE

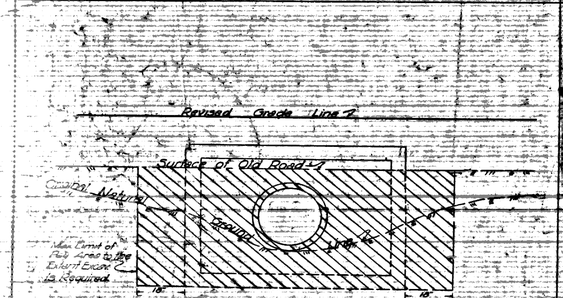


EXCAVATION FOR STRUCTURES
BRIDGE LOCATION WITH DESIGNATED CHANNEL CHANGE



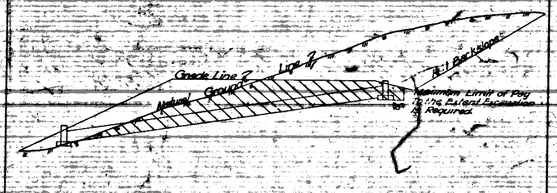
Volume of Pier or Abutment to be Included As Excavation for Structures Unless Removal Paid For as Separate Item. Cost of Removing Structure or Pier or Abutment Thereof Shall be Included In The Contract Unit Price Bid Per Cubic Yard For The Several Classes of Excavation for Structures.

EXCAVATION FOR STRUCTURES
INVOLVING THE REMOVAL OF EXISTING SUBSTRUCTURES

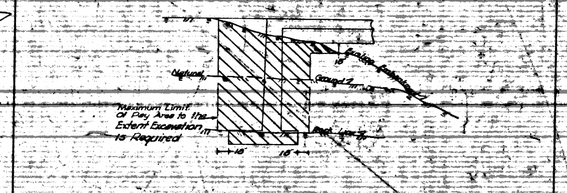


Cost of Removing the Existing Structure to be Included in the Contract Unit Price Bid Per Cubic Yard for the Several Classes of Excavation for Structures

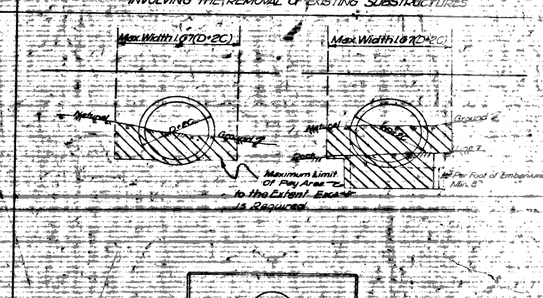
EXCAVATION FOR STRUCTURES
AT LOCATION OF EXISTING PIPE CULVERT



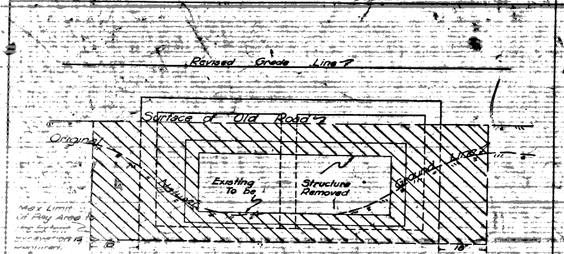
EXCAVATION FOR STRUCTURES
ROADWAY SECTION IN EXCAVATION



EXCAVATION FOR STRUCTURES
SECTION THROUGH BRIDGE ABUTMENT

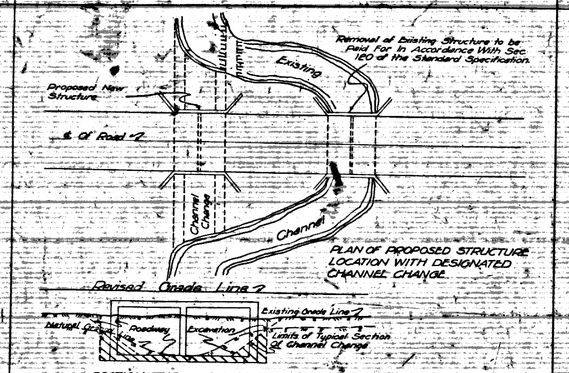


EXCAVATION FOR STRUCTURES
PIPE CULVERTS AND HEADWALLS



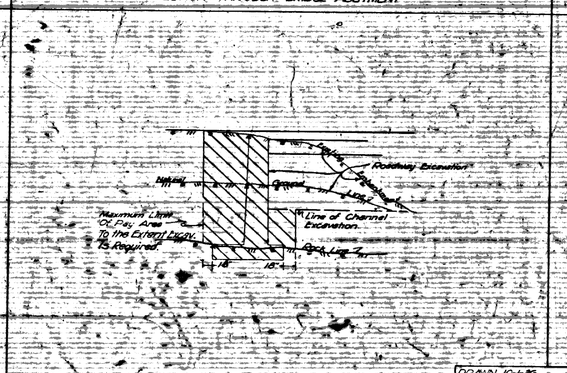
Cost of Removing the Existing Structure to be Included in the Contract Unit Price Bid Per Cubic Yard for the Several Classes Of Excavation For Structures.

EXCAVATION FOR STRUCTURES
AT LOCATION OF EXISTING BOX CULVERT



PLAN OF PROPOSED STRUCTURE
LOCATION WITH DESIGNATED
CHANNEL CHANGE

SECTION THROUGH PROPOSED STRUCTURE
ALONG CENTER LINE OF ROAD
(Enlarged Scale)



EXCAVATION FOR STRUCTURES
SECTION THROUGH BRIDGE ABUTMENT
WHERE CHANNEL CHANGE IS DESIGNATED

NOTE: AREA OF MATERIAL TO BE CLASSIFIED AS EXCAVATION FOR STRUCTURES SHOWN IN HATCHED LINES

DRAWN 10-1-32
DIV.

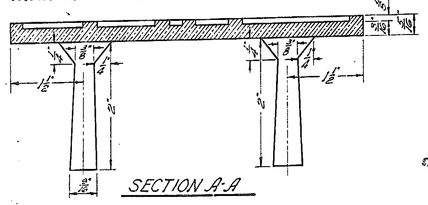
ARKANSAS HIGHWAY COMMISSION
STANDARD
BASIS FOR COMPUTING EXCAVATION
FOR STRUCTURES
Standard Dwng. No. 201

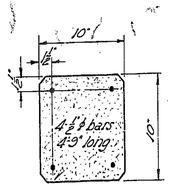
AMERAN

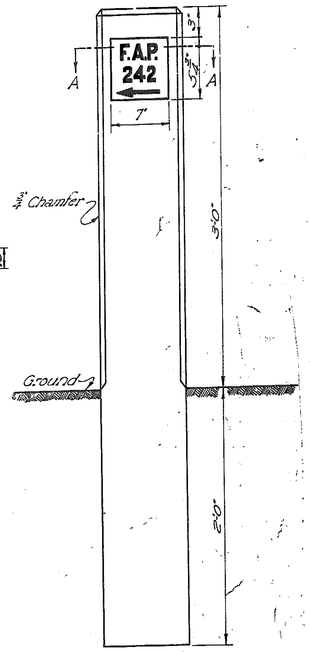
FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.				
STATE JOB NO.					

DETAIL OF MARKER PLATE TYPE AL-1
FOR FEDERAL AID PROJECTS - PRIMARY

Type AP-1 plate to conform in every respect to type AL-1 except that directional arrow shall be reversed.
For Federal Aid Secondary Projects, change letters F.A.P. to F.S.







Note:
Concrete to be Class "A" (1:2:4 Mix)
Numerals shown are to be the number of the project on which the marker is placed.

QUANTITIES PER MARKER	
Class "A" Concrete	Reinforcing Steel
0.13 Cu. Yds.	13 Lbs.

DETAIL OF MARKER PLATE - TYPE AL-2
FOR FOREST HIGHWAY PROJECTS

Type AP-2 plate to conform in every respect to type AL-2 except that directional arrow shall be reversed.
Note: Dimensions to be same as for Federal Aid Marker Plates.

SPECIFICATIONS FOR MARKER PLATES

Plates to be either Bronze or Aluminum.
Body ⅛" thick. Two tapering cone lugs ⅜" to ⅝", 2" long.
Weight One Bronze Plate = 3.5 Lbs. approx.
Weight One Aluminum Plate = 1.1 Lbs. approx.
Bronze: U.S. Government Specifications for Statuary Bronze.
Aluminum: A.S.T.M. Specifications, Serial designation B26-47 T.

INSTRUCTIONS FOR PLACING MARKERS
ON FEDERAL AID & FOREST HIGHWAY PROJECTS

One marker shall be placed at each end of each Federal Aid or Forest Highway Project or section thereof, except bridge projects without graded approaches. Markers will be placed on the right hand side of the road with respect to the direction of travel and with the arrow on the marker plate indicating in which direction the project or section lies. Where two projects adjoin, the marker plates for both may be placed on the same post.

For projects ending with an excavation section, the marker shall be placed between the top of the back slope and the R/W line.

For projects ending with an embankment section, the marker shall be placed between the toe of the embankment slope and the R/W line.

On municipal projects, place marker plate in the face of curb, when and where specified on the plans.

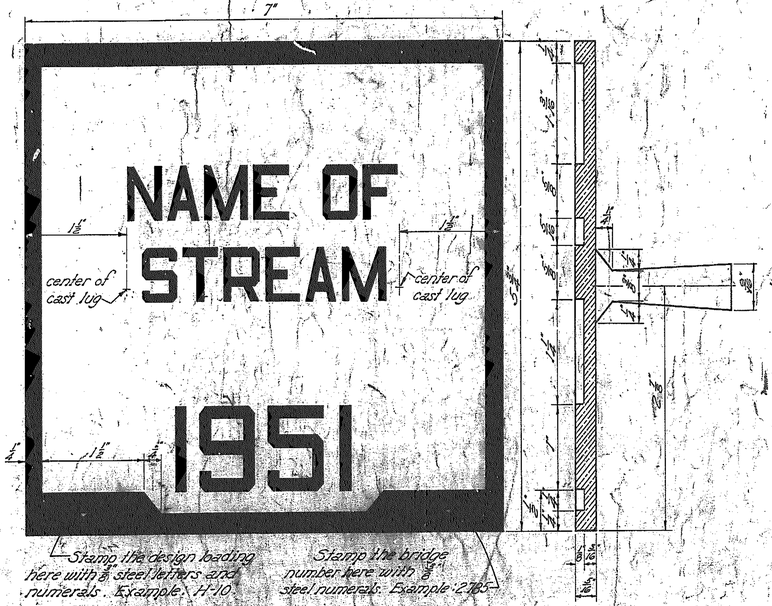
Where a bridge or several bridges, without graded approaches, form a project or section, one marker plate shall be placed on either end of each bridge as follows:

In the end rail post on bridges having concrete railing.

In the face of the abutment near the shoe on bridges not having concrete railing.

Where the continuity of a project or section is broken thru the introduction of an exception, other than a bridge without graded approaches, a marker shall be placed at each point where the project or section is stopped and where resumed.

FEDERAL AID AND FOREST HIGHWAY PROJECT MARKERS

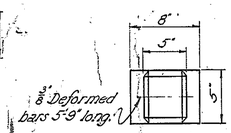


TYPE "C" BRIDGE NAME PLATE STYLE 1 - FULL SIZE

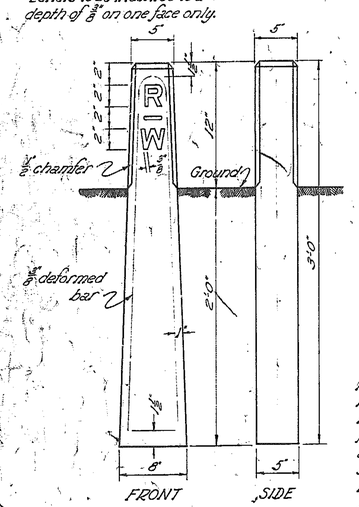
TYPE "C" BRIDGE NAME PLATE STYLE 2 - FULL SIZE

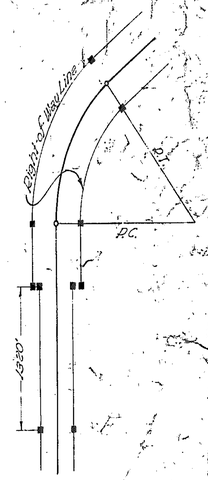
SPECIFICATIONS FOR NAME PLATES

Plates to be either Bronze or Aluminum.
Body ⅛" thick. Two tapering cone lugs ⅜" to ⅝", 2" long.
BRONZE: U.S. Government Specifications for Statuary Bronze.
ALUMINUM: A.S.T.M. Specifications, Serial designation B26-47 T.
The border and all lettering to be raised ⅛" above face of plate. Top surface of raised border and lettering to be polished.
All lettering to be plain Gothic, square cut and not tapered.
The number of plates required, type, and location are to be as shown on Plans.
Name of Stream to be varied to suit each bridge.
Shop drawing of Bridge Name Plates shall be submitted for approval before casting is begun.



QUANTITIES PER MARKER	
Class "A" Concrete	Reinf. Steel
0.025 C.Y.	2.2 Lbs.





Note: Markers shall be placed at 1000 or 1320 foot intervals along the Right-of-Way line where no changes in width or direction occur; at such points as changes in width occur and at the P.C. and P.T. of all curves, as shown on the plans or as directed by the Engineer. Posts to be set so letters face roadway.
Concrete to be Class "A" (1:2:4 Mix).

RIGHT OF WAY MARKERS
Do not scale

FEDERAL AID AND FOREST HIGHWAY
PROJECT MARKERS
RIGHT OF WAY MARKERS
BRIDGE NAME PLATES

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: A.J.J. Date: 10-51
Traced By: K.K. Date: 10-51
Checked By: Date:
Scale: in. = ft.

BRIDGE NO. DRAWING NO. 2389

Wal Ford
BRIDGE DESIGN ENGINEER

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