

SCHEDULE OF BRIDGE QUANTITIES

ITEM NO	ITEM	QUANTITY						Totals	UNIT
		BR.No. 2282	BR.No. 2283	BR.No. 2284	BR.No. 2285	BR.No. 2286	BR.No. 2287		
103	Dry Excavation for Structures	65	63	99	68	75	103	473	Cu. Yd.
103	Wet Excavation for Structures	78	73	60	42	38	105	396	Cu. Yd.
103	Solid Rock Excavation for Structures	4	18	6	1	-	22	48	Cu. Yd.
SP&B02	Class "A" Concrete for Bridges	37.4	23.9	34.6	18.5	23.2	69.2	206.8	Cu. Yd.
SP&B02	Class "S" Concrete for Bridges	19.1	21.9	15.0	12.3	22.3	15.0	105.6	Cu. Yd.
803	Reinforcing Steel	5840	5700	5180	3360	5190	6890	32160	Lb.
SP&B5-3	Steel Plate Guard Rail (1092)	107.7	66.7	86.2	70.4	62.3	80.4	477.7	Lin. Ft.
807	Structural Steel in Beam Spans	13150	-	9150	7240	-	9370	38910	Lb.
SP	Remodeling Existing Bridges and Maintaining Traffic.	22%	12%	19%	15%	13%	19%	100%	Complete Item

SUMMARY OF QUANTITIES

BRIDGES ON ALMA-NOLBERRY ROAD

CRAWFORD COUNTY

ROUTE 64 SEC 2

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK

Drawn By

DR

Date

4-1-51

Traced By

Date

Checked By

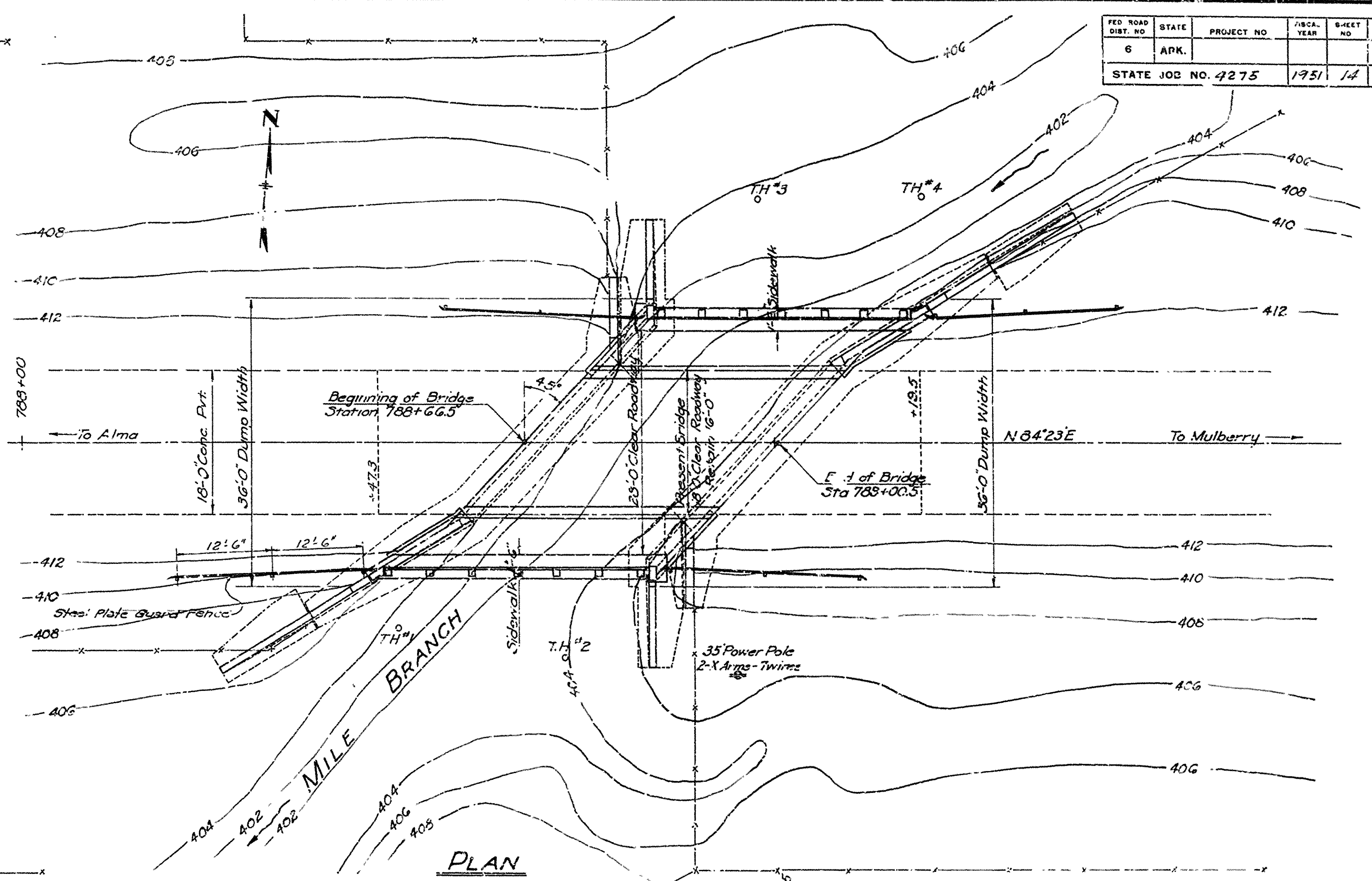
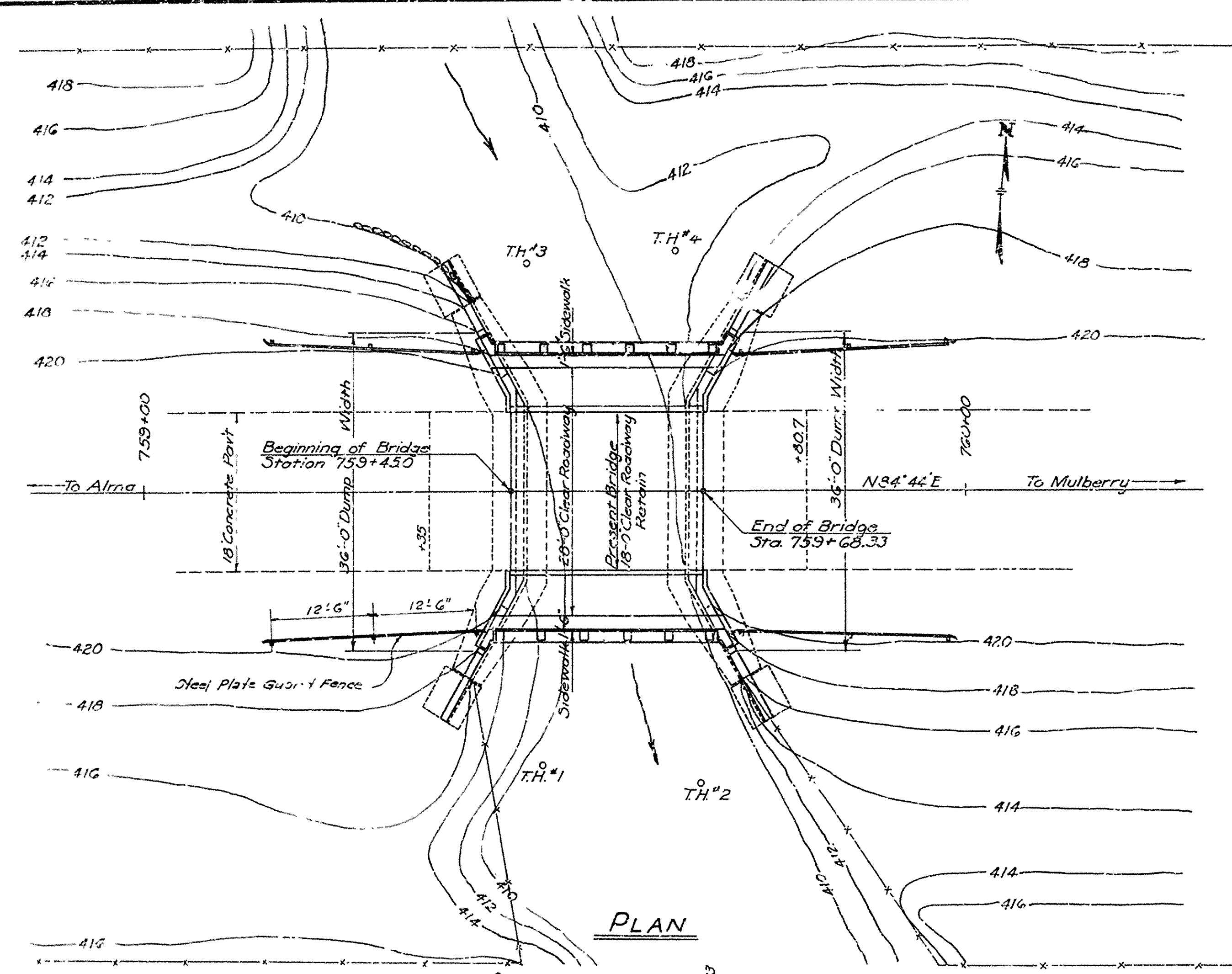
LLS

Date

5-15-51

BRIDGE NO. 2282-2287 DRAWING NO. 7530

BRIDGE DESIGN ENGINEER



PLAN

PLAN

GENERAL NOTES

Dimensions relative to present structure are general only. Detailed dimensions are to be secured and verified in field before construction is begun and before shop drawings for reinforcing and structural steel are made.

All concrete to be poured in the dry. All exposed corners are to be chamfered $\frac{3}{4}$ ".

Rock excavation shall be made to neat lines of concrete footings. Care shall be taken to avoid shattering of rock faces by excessive blasting.

In general all construction joints in new work of abutments shall be horizontal and shall be provided with keys not less than 2' deep and covering the middle 3rd of both dimensions.

Reinforcing steel to be deformed bars of structural or intermediate grade. Shop lists and bending diagrams must be submitted and approved before fabrication is begun.

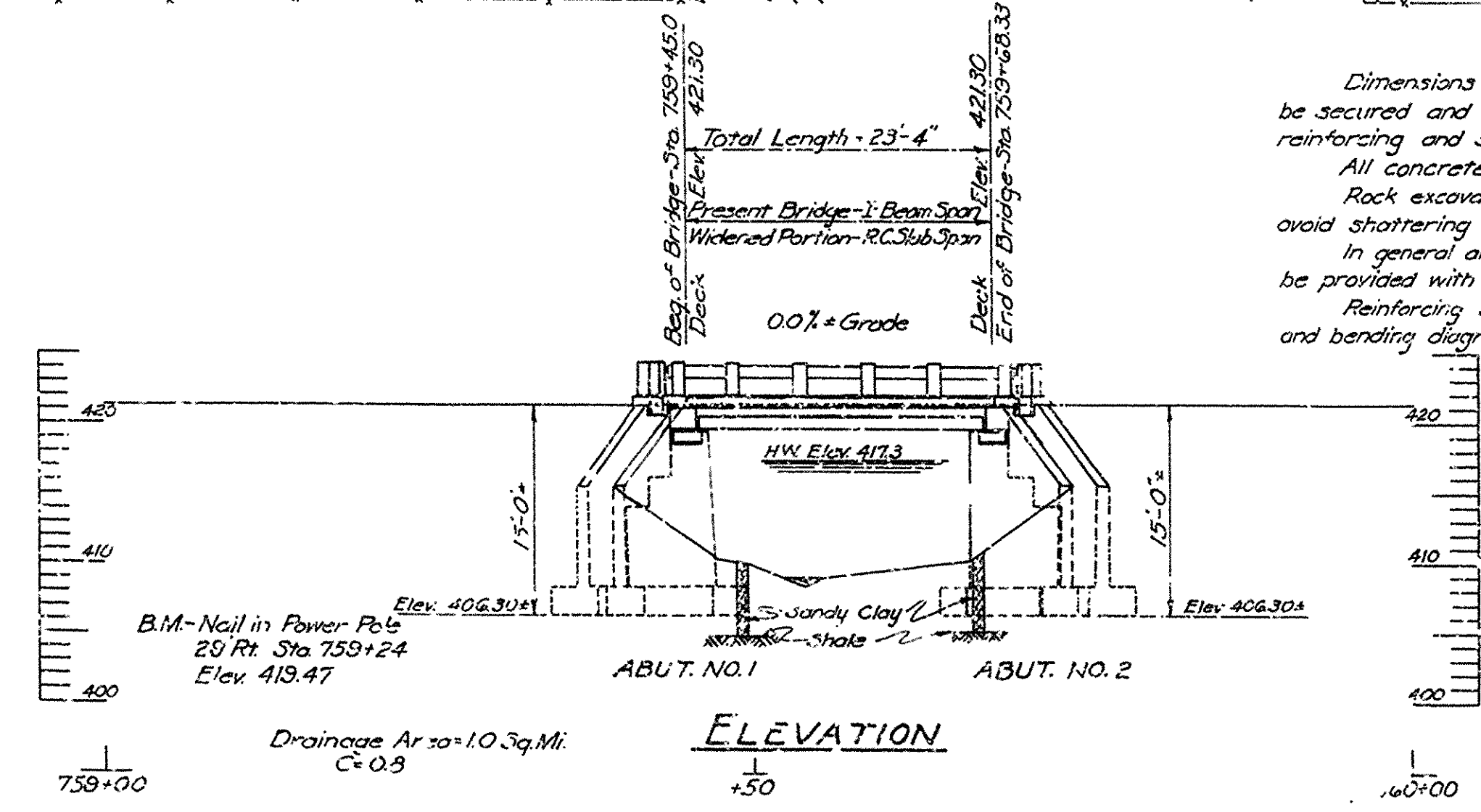
For details of Abutments No. 1 & 2 of Bridge No. 2286, see Drawing No. 7949.

For details of Superstructure of Bridge No. 2286, see Drawing No. 7950.

For details of Abutments No. 1 & 2 of Bridge No. 2287, see Drawing No. 7951.

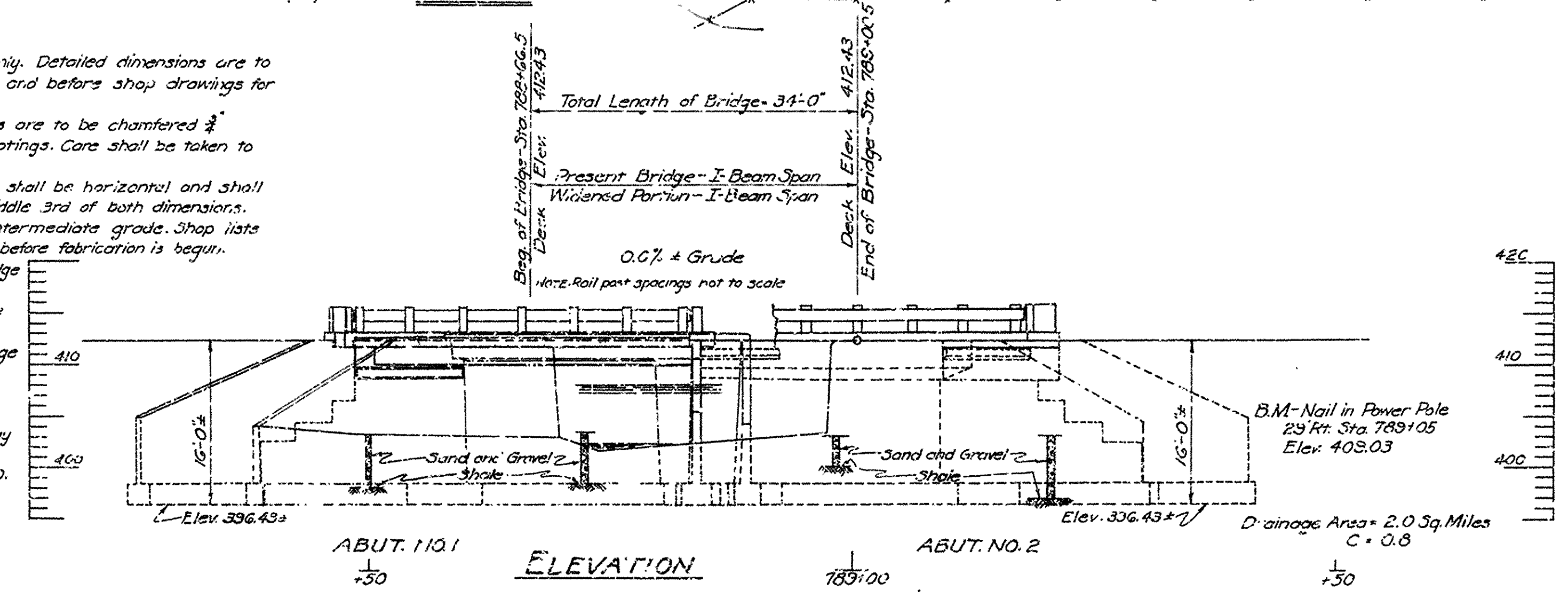
For details of Superstructure of Bridge No. 2287, see Drawing No. 7952.

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



ELEVATION

BRIDGE No. 2286



ELEVATION

BRIDGE No. 2287

QUANTITIES FOR BRIDGE No. 2286

ITEM NO.	ITEM	ABUT. NO. 1	SPAN	ABUT. NO. 2	TOTALS	UNIT
103	Dry Excavation for Structures	35	—	40	75	Cu.Yd.
103	Wet Excavation for Structures	19	—	19	38	Cu.Yd.
103	Solid Rock Excav. for Structures	—	—	—	—	Cu.Yd.
SP&B01	Class A Concrete for Bridges	11.6	—	11.6	23.2	Cu.Yd.
SP&B02	Class B Concrete for Bridges	—	22.3	—	22.3	Cu.Yd.
803	Reinforcing Steel	770	3650	770	5190	Lb.
805-B	Steel Plate Guard Rail	—	66.3	—	66.3	Lin.Ft.
SP	Remodeling Existing Bridges and Maintaining Traffic	—	—	—	13%	Complete

QUANTITIES FOR BRIDGE No. 2287

ITEM NO.	ITEM	ABUT. NO. 1	SPAN	ABUT. NO. 2	TOTALS	UNIT
103	Dry Excavation for Structures	39	—	64	103	Cu.Yd.
103	Wet Excavation for Structures	50	—	15	65	Cu.Yd.
103	Solid Rock Excav. for Structures	12	—	10	22	Cu.Yd.
SP&B02	Class A Concrete for Bridges	34.6	—	34.6	69.2	Cu.Yd.
SP&B02	Class B Concrete for Bridges	—	15.0	—	15.0	Cu.Yd.
803	Reinforcing Steel	2235	2420	2235	6890	Lb.
805-B	Steel Plate Guard Rail	—	80.4	—	80.4	Lin.Ft.
SP&B07	Structural Steel in Beam Spans	—	9370	—	9370	Lb.
SP	Remodeling Existing Bridges and Maintaining Traffic	—	—	—	13%	Complete

Revisions: Paving Quantities, H.B. 4-3-51

LAYOUT OF BRIDGES NO. 2286 & 2287
ALMA-MULBERRY ROAD
CRAWFORD COUNTY
ROUTE 64 SEC. 2

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

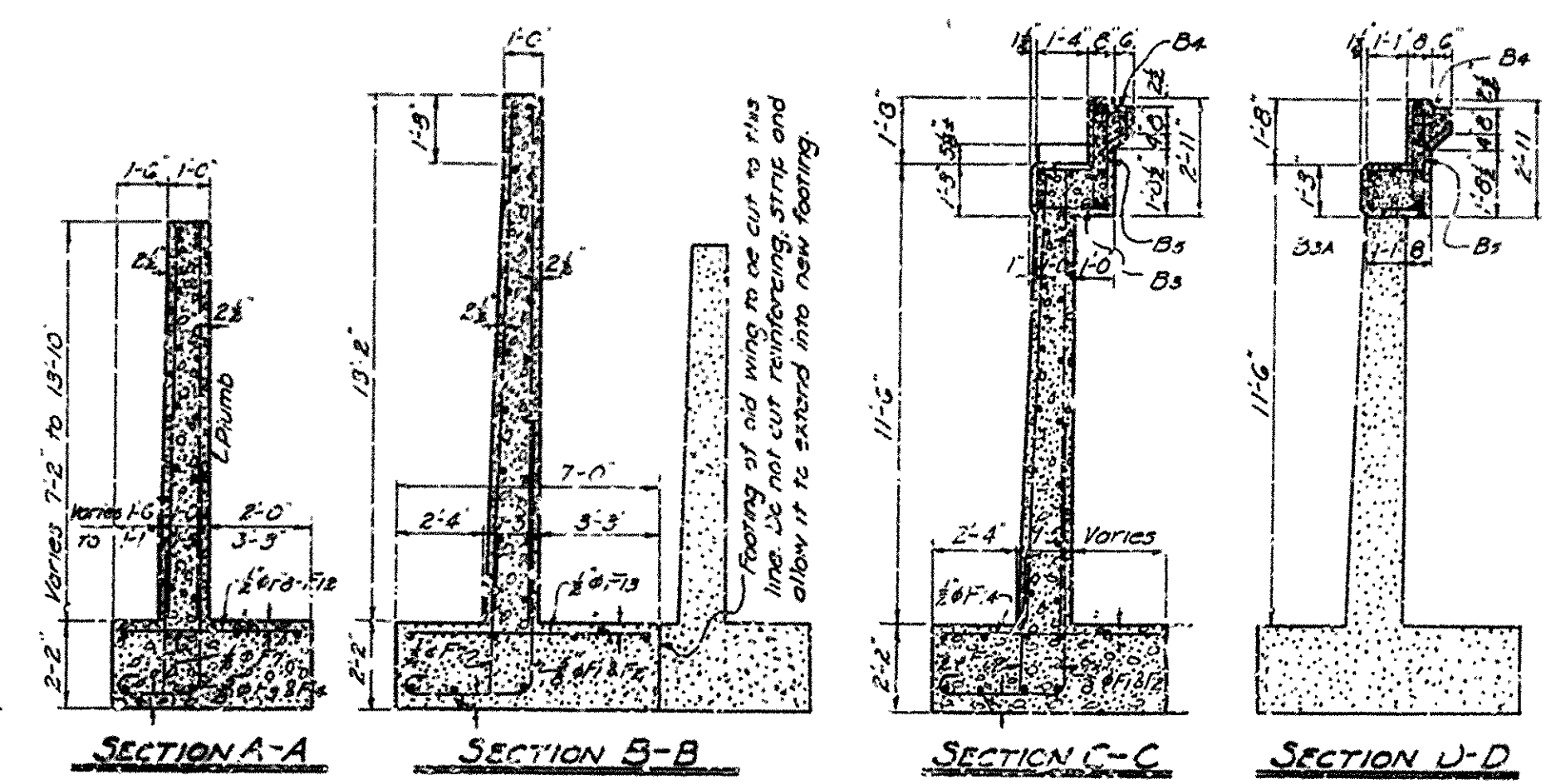
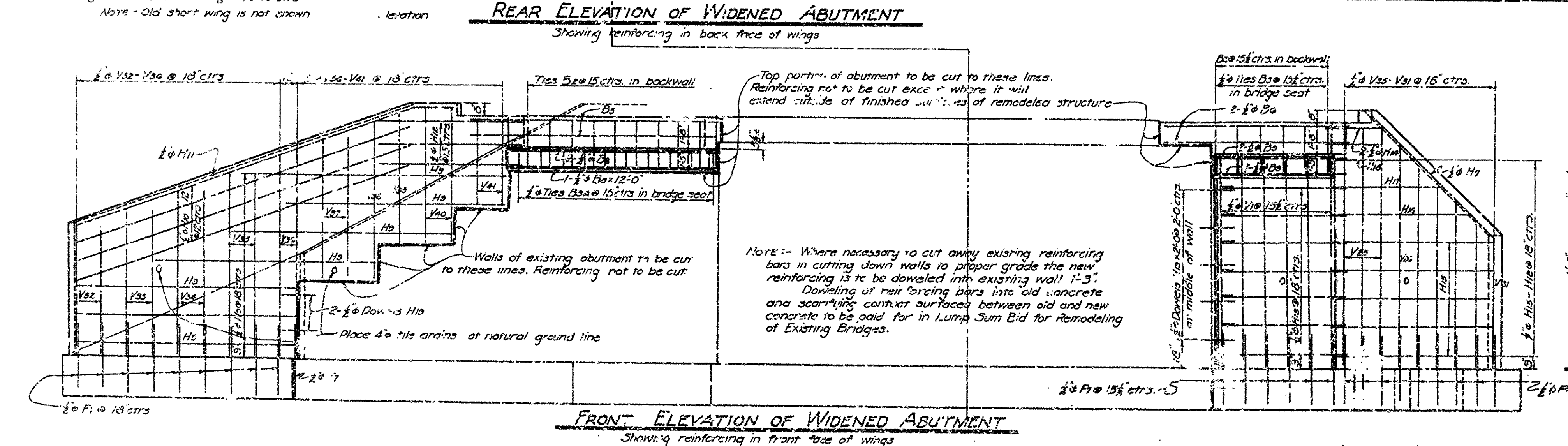
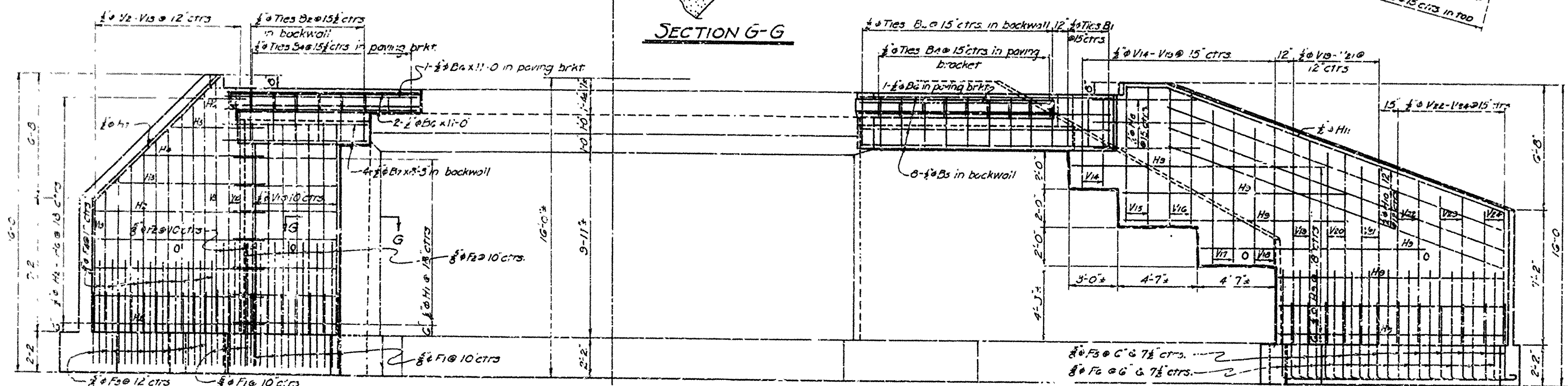
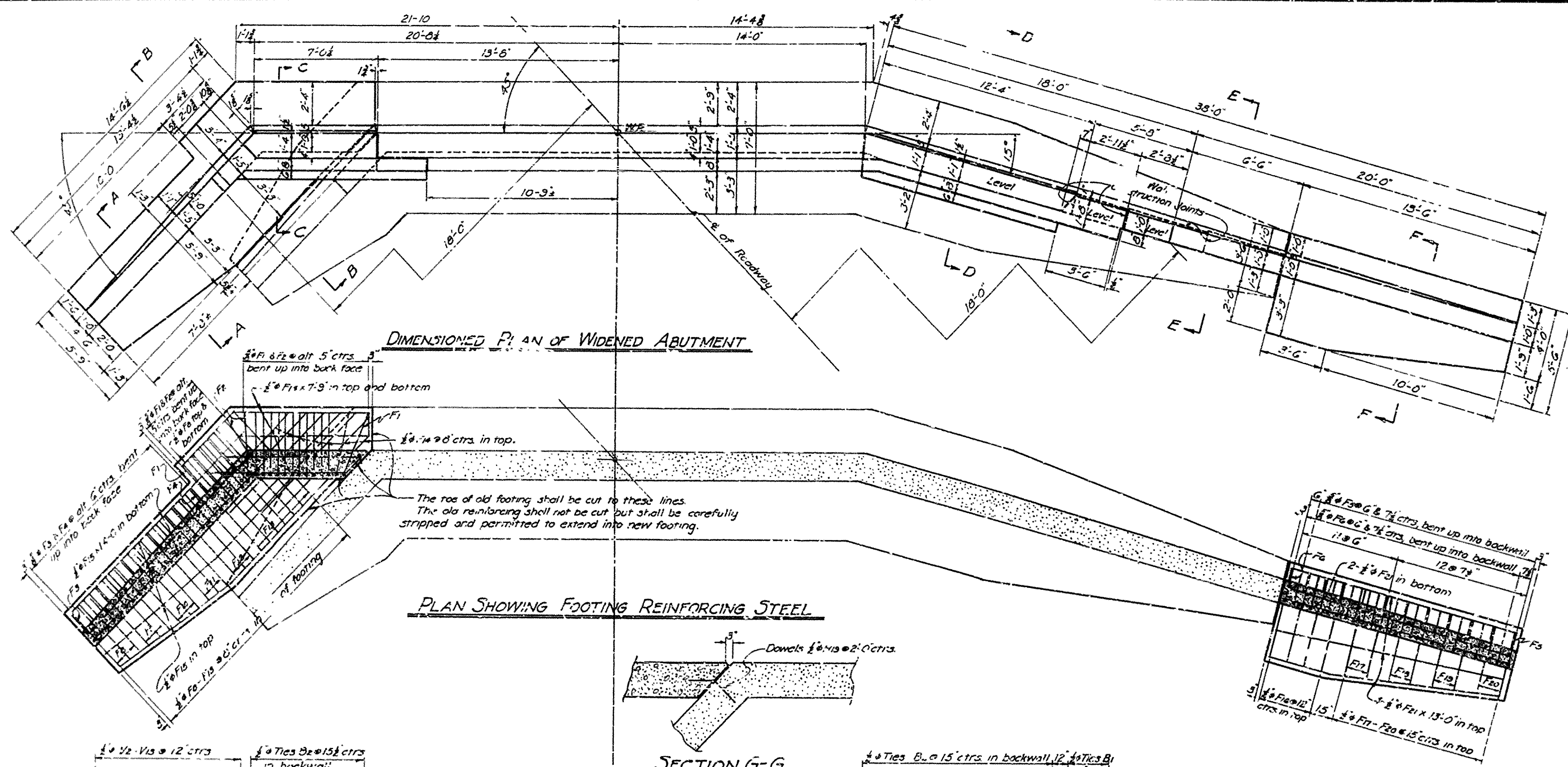
Drawn By: MCH Date: 2-19-42
Traced By: MWH Date: 2-21-42
Checked By: Date: _____
BRIDGE NO. 2286 & 2287 DRAWING NO. 7948

FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YR.	SHEET NO.	TOTAL SHEETS
6	ARK.				
STATE JOB NO. 4275 1951 17 21					

BAR LIST FOR EACH ABUTMENT

BENT BARS							STRAIGHT BARS							
MARK	SIZE	No.	LENGTH	A	B	BENDING DIAGRAM	MARK	SIZE	No.	LENGTH	MARK	SIZE	No.	LENGTH
F1	#6	11	10'-10"	4'-0"	5'-4"		F7	#6	25	5'-8"	V1	#6	13	11'-5"
F2	#6	11	10'-7"	6'-3"	5'-4"		F8	#6	5	4'-2"	V2	#6	2	Varies 7'-0" to 11'-0"
F3	#6	10	6'-7"	4'-0"	2'-1"		F9	#6	3	4'-6"	V3	#6	1	13'-8"
F4	#6	10	8'-4"	5'-9"	2'-1"		F10	#6	3	4'-10"	V4	#6	1	Varies 13'-0" to 7'-0"
F5	#6	12	6'-4"	4'-0"	1'-10"		F11	#6	3	5'-2"	V5	#6	1	Varies 13'-0" to 7'-0"
F6	#6	12	8'-1"	5'-3"	1'-10"		F12	#6	3	5'-5"	V16	#6	2	4'-9"
B1	#6	3	8'-5"	2'-7"	1'-4"		F13	#6	7	6'-8"	V15	#6	2	7'-4"
B2	#6	16	6'-6"	2'-7"	0'-4"		F14	#6	15	7'-9"	V16	#6	2	6'-11"
B3	#6	6	6'-1"	1'-10"	0'-11"		F15	#6	6	12'-0"	V17	#6	2	8'-1"
B4	#6	10	5'-7"	1'-7"	0'-11"		F16	#6	4	5'-2"	V18	#6	2	7'-5"
							F17	#6	2	4'-9"	V19	#6	2	10'-10"
B5	#6	17	2'-7"	—	—		F18	#6	2	4'-5"	V20	#6	2	10'-2"
B6	#6	13	14'-9"	—	—		F19	#6	2	4'-0"	V21	#6	2	9'-6"
B7	#6	3	8'-3"	—	—		F20	#6	2	3'-5"	V22	#6	2	6'-8"
H11	#6	2	20'-0"	—	—		F21	#6	6	13'-5"	V23	#6	2	7'-10"
H12	#6	3	8'-6"	—	—		B6	#6	4	11'-0"	V24	#6	2	7'-0"
H13	#6	7	3'-0"	—	—		B7	#6	4	8'-3"	V25	#6	3	13'-0"
H14	#6	2	4'-6"	—	—		B8	#6	3	12'-0"	V26	#6	1	Varies 12'-0" to 7'-0"
											V27	#6	1	Each 11'-5" to 10'-6"
											V28	#6	5	2'-0"

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



GENERAL NOTES

All concrete to be Class A. All exposed corners to have 1/2" chamfers unless otherwise noted.
 Dimensions relative to present structure are general only. Detailed dimensions are to be secured and verified in field before construction is begun and before shop drawings for reinforcing and structural steel are made.
 For detail of superstructure see Drawing No. 7952.
 Payment for tie drains to be included in price bid for Class A concrete.

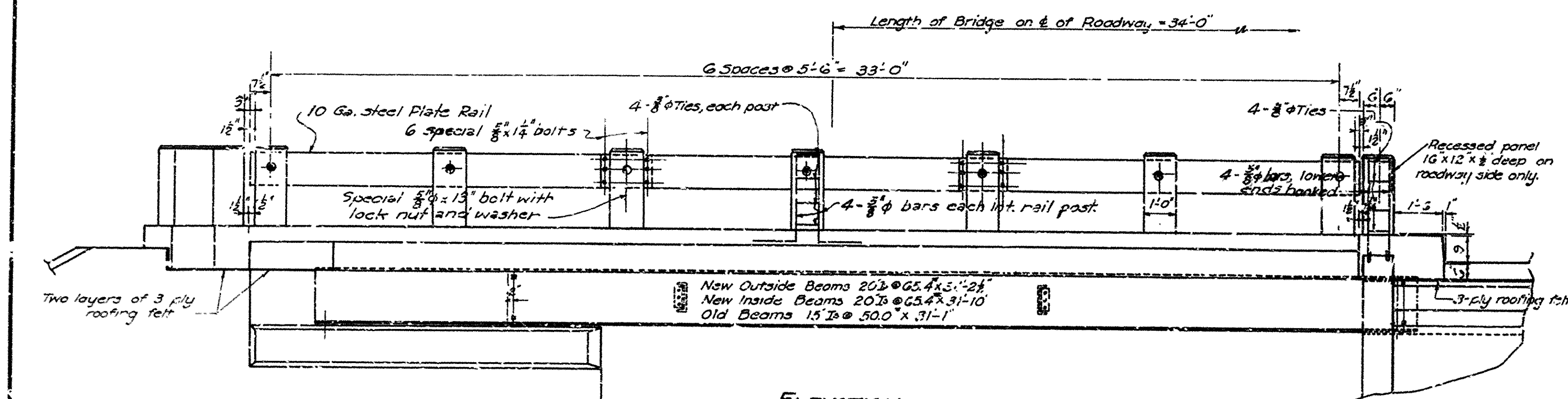
DETAILS OF WIDENING OF ABUTMENTS No. 132

BRIDGE No. 2287
 ALMA-MULBERRY ROAD
 CRAWFORD COUNTY
 ROUTE 64 SEC. 2

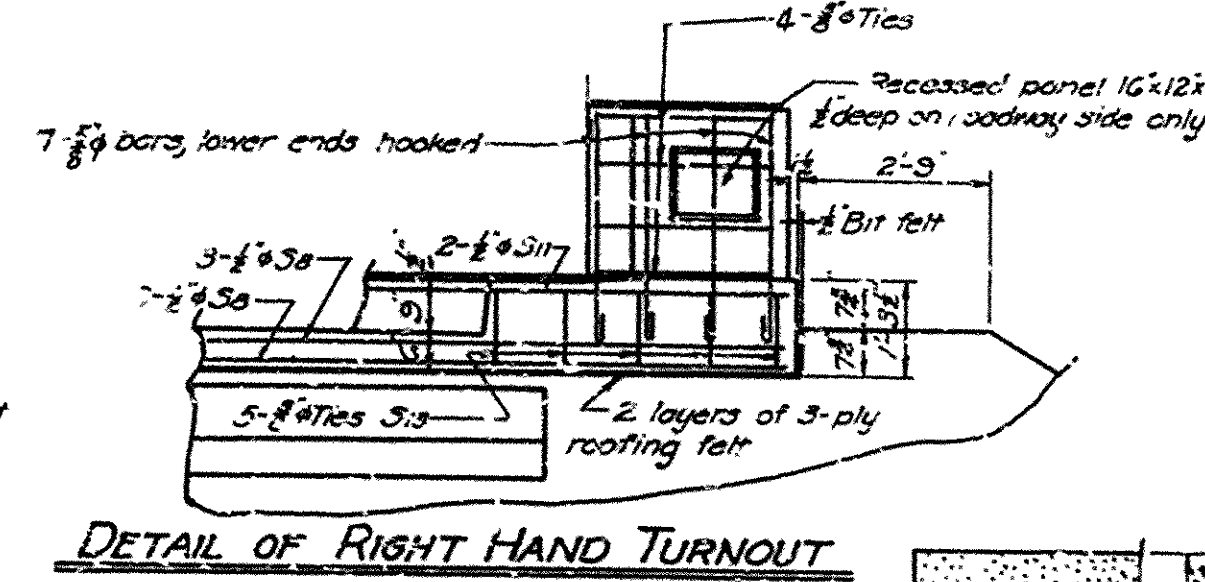
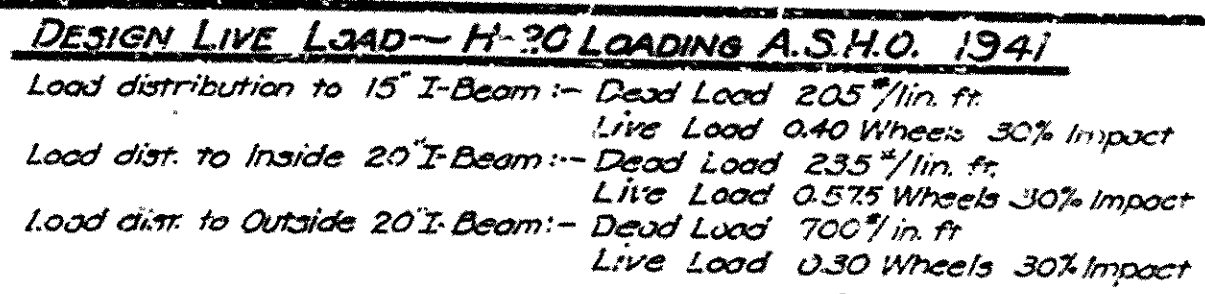
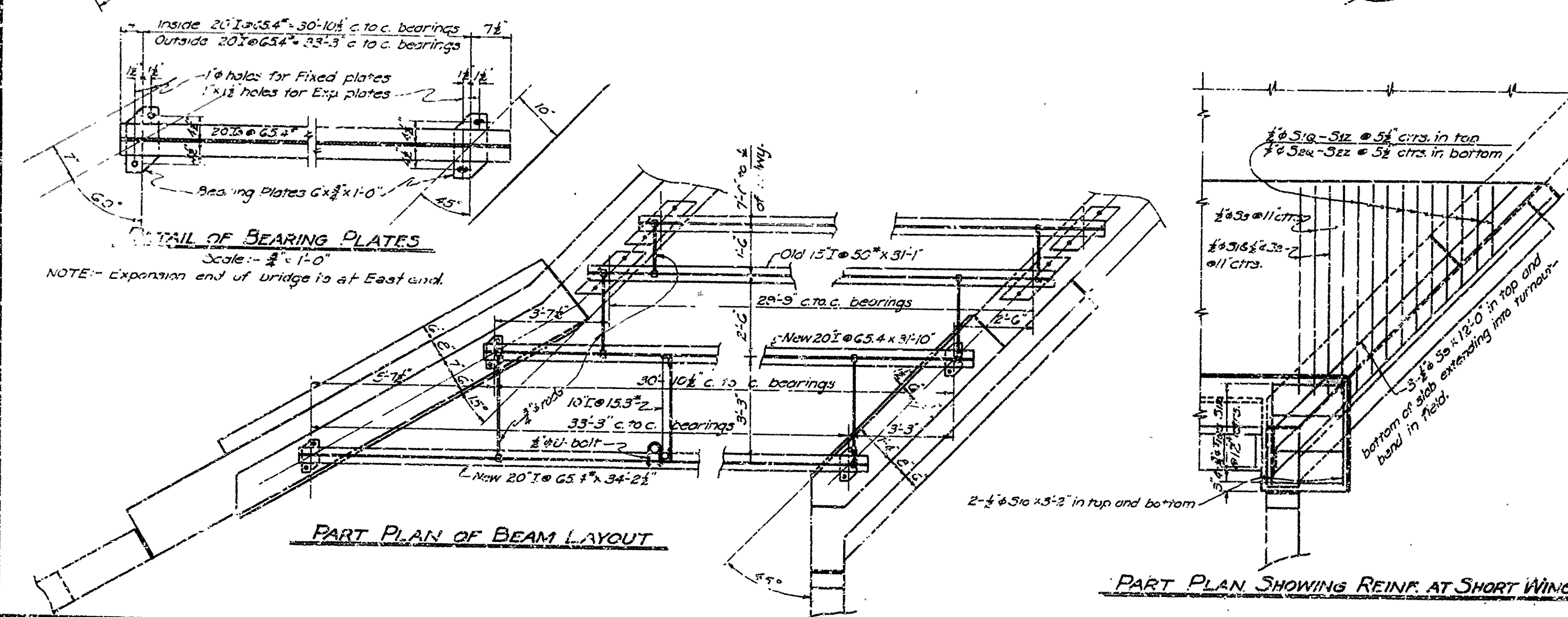
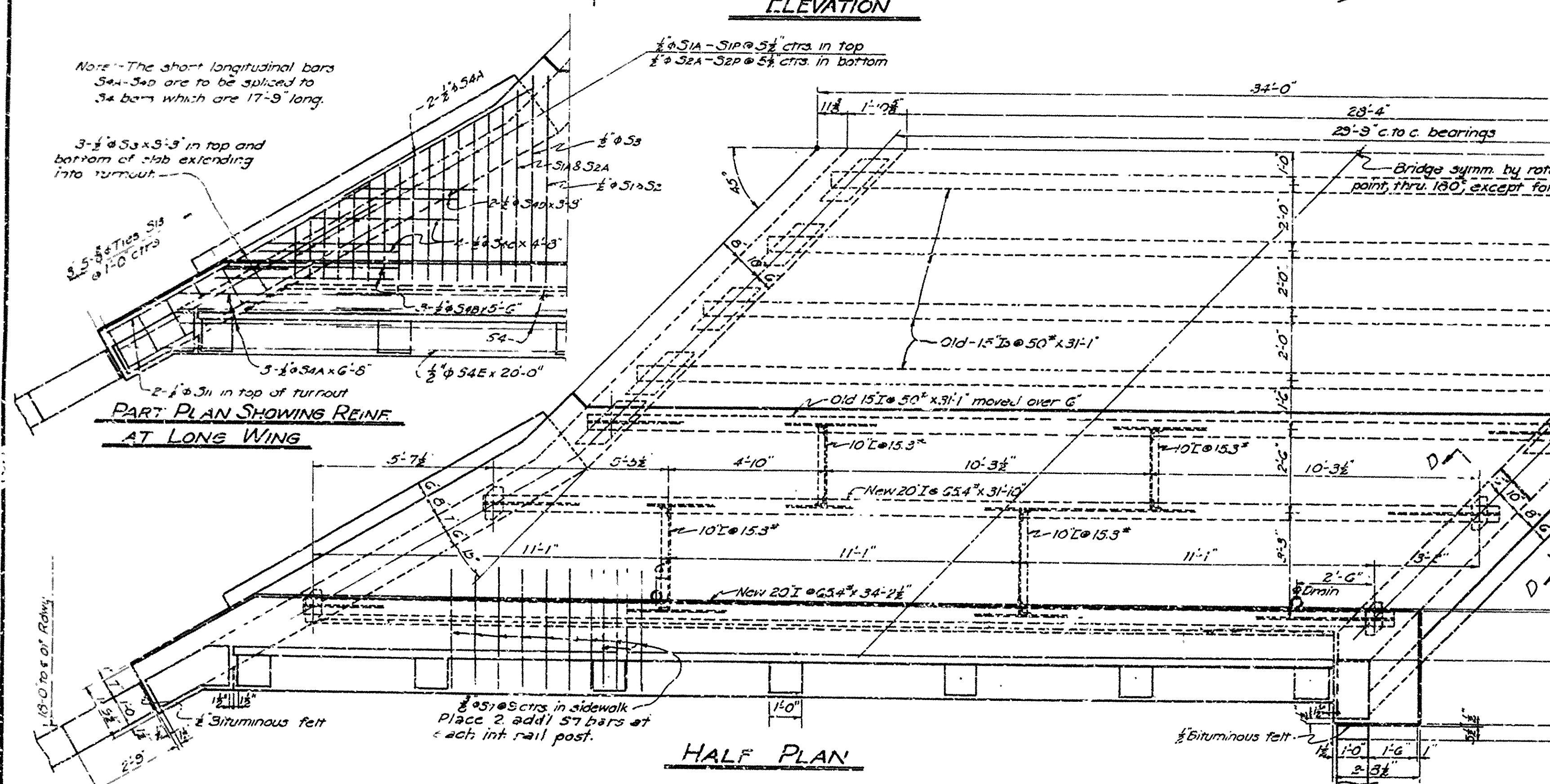
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

Drawn By: M.C.L. Date: 5-21-48
 Traced By: M.C.L. Date: 4-6-48
 Checked By: Date:
 BRIDGE NO. 2287 DRAWING NO. 7951

M.C.L.
 PRINCIPAL CIVIL ENGINEER (LICENSED)



Note: The short longitudinal bars
54-59 are to be spliced to
34 bars which are 17'-9" long.

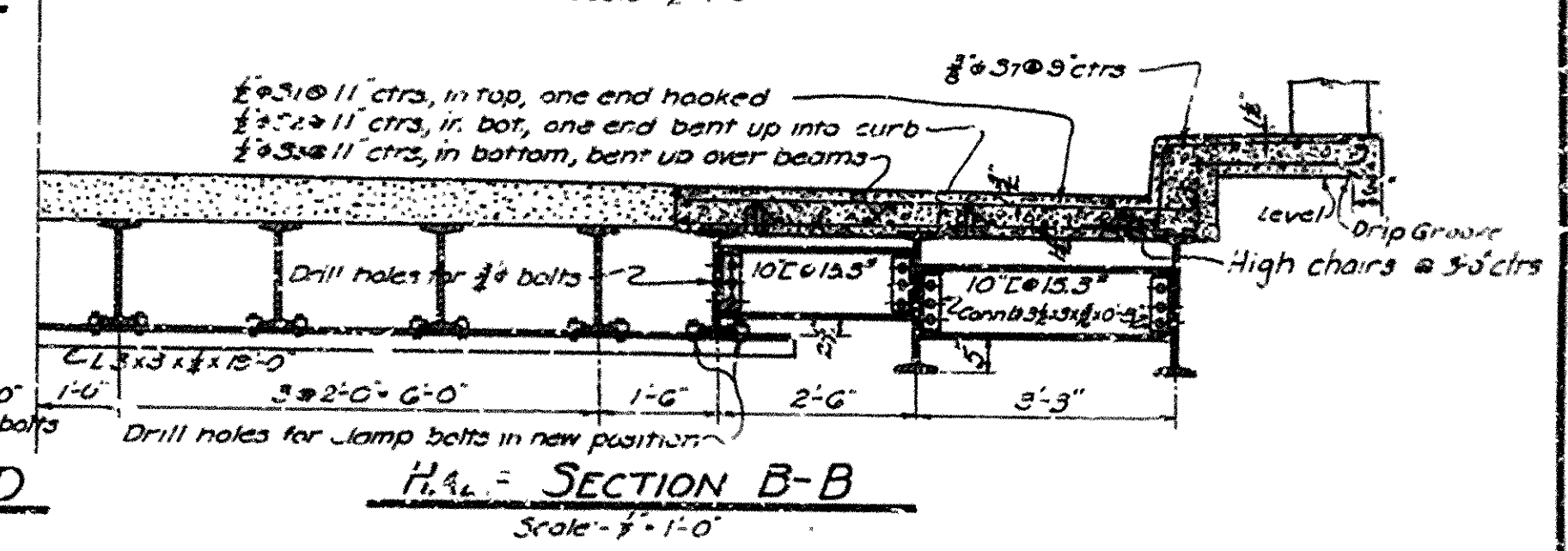
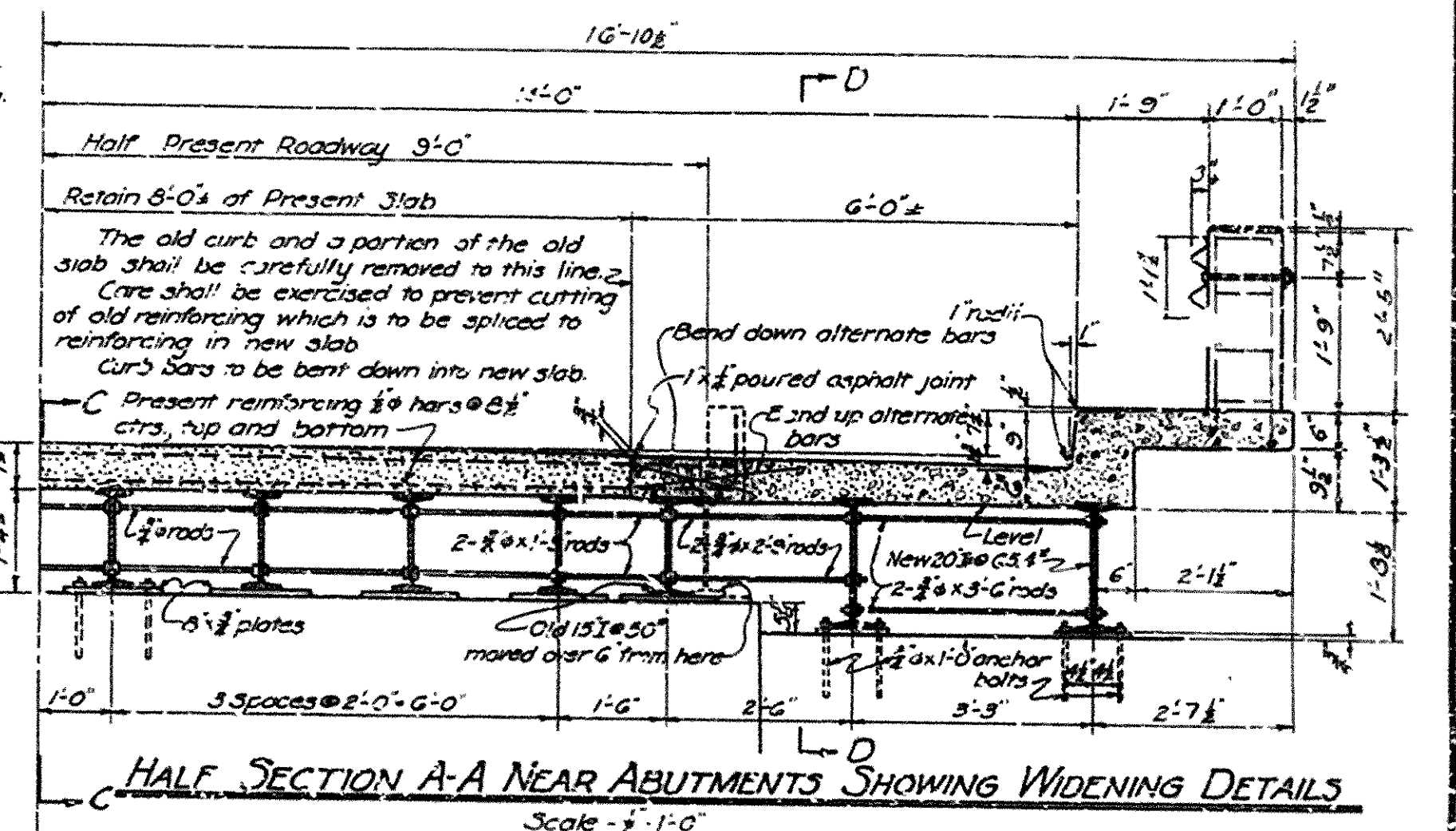


UNIT STRESSES

Class 3 Concrete ($n=10$)	1,000 $\frac{\text{lb}}{\text{ft}^3}$
Reinforcing Steel	18,000 $\frac{\text{lb}}{\text{ft}^3}$
Structural Steel	18,000 $\frac{\text{lb}}{\text{ft}^3}$

16-10

FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	ARK.				
STATE JOB NO. 4275			1951	16	21



GENERAL NOTES

All concrete to be Class 35. All exposed corners to have 2" chamfers unless otherwise noted.

Reinforcing steel to be deformed bars of structural or intermediate grade. Shop lists and bending diagrams must be submitted and approval secured before fabrication is begun.

Rivets 3/8". Open holes 3/8". All field connections to be bolted using 3/4" Machine bolts.

All shop weld connections shall be made by the electric arc process. Use 3/16" fillet welds.

Masonry piers to be finally sealed on 3 layers of burlap saturated with red lead.

Payment for poured asphalt joint, roofing felt, and bituminous felt to be included in unit price bid for Class 35 Concrete.

Dimensions relative to present structure are general only. Detailed dimensions are to be secured and verified in the field before shop drawings for structural steel are made and before construction is begun.

Shop work: All structural steel and wrought iron details shall be given an coat of red lead and raw linseed oil before shipment except parts in contact with concrete.

Shop paint: All steel coat white lead tinted with lamp black; 220 coat aluminum paint.

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

Payment for cutting off old concrete curbs and portion of slab; cutting off present steel handrail; removing and resetting old outside beams, drilling holes of anchor bolts; drilling new holes in present structural steel where necessary to connect new structural steel; cleaning and painting old structural steel; shall be included in Lump Sum Bid for Remodeling of Existing Bridges.

Payment for slab bar bolsters and high chairs shall be considered subsidiary to reinforcing steel.

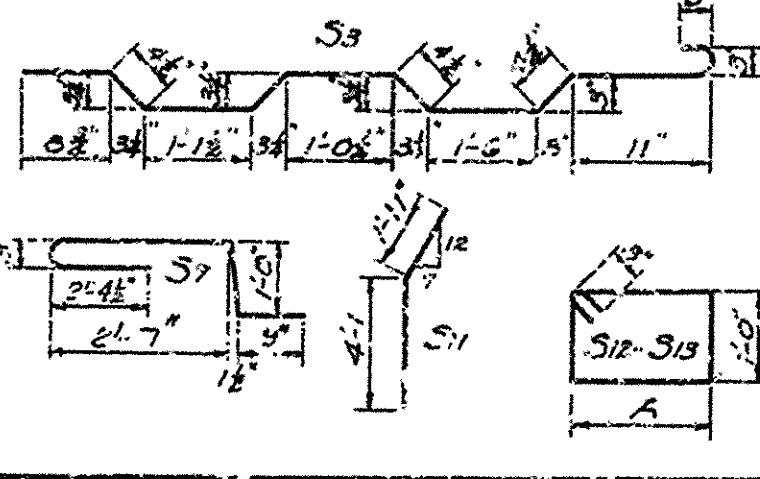
SPECIFICATIONS FOR MISSOURI STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED MARCH 1, 1940

The steel plate guard rail shall be of the type of heavy, self-aligning rigid type as approved by the Engineering and shall be painted the same as structural steel. The steel plate guard rail, including concrete posts, all post reinforcing steel and all fastenings, shall be paid for at the unit price per linear foot bid for "Steel Plate Guard Rail."

SLAB BAR LIST

BENT BARS					
MARK	SIZE	No. READ	LENGTH	A	BENDING DIAG.
31	1/2"	23	6'-9"	5'-4 1/2"	
31A	1/2"	2	6'-9"	5'-11 1/2"	
31B	1/2"	2	5'-10 1/2"	5'-6"	
31C	1/2"	2	Varies 5'-6"	5'-1 1/2"	
31D	1/2"	Each	2'-0"	10'-6"	
31E	1/2"		Varies 6'-1 1/2"	6'-3 to 2'-1 1/2"	
31F	1/2"		6'-1 1/2"	6'-3 to 2'-1 1/2"	
31G	1/2"		6'-1 1/2"	6'-3 to 2'-1 1/2"	
32	1/2"	23	7'-5"	6'-5"	
32A	1/2"	2	7'-0"	6'-0"	
32B	1/2"	2	6'-6"	5'-6"	
32C	1/2"	2	Varies 6'-2"	Varies 5'-2"	
32D	1/2"	Each	10'-8"	10'-1'-3"	
33	1/2"	30	7'-2"	6'-2"	
33A	1/2"	2	6'-5"	5'-5"	
33B	1/2"	2	6'-5"	5'-5"	
33C	1/2"	2	6'-5"	5'-5"	
33D	1/2"	2	6'-5"	5'-5"	
33E	1/2"	2	6'-5"	5'-5"	
33F	1/2"	2	6'-5"	5'-5"	
34	1/2"	126	6'-10"	—	
34A	1/2"	4	6'-0"	—	
34B	1/2"	3	7'-1"	2'-3"	
34C	1/2"	10	5'-3"	1'-4"	
35	1/2"	30	7'-2"	6'-2"	
35A	1/2"	2	6'-5"	5'-5"	
35B	1/2"	2	6'-5"	5'-5"	
35C	1/2"	2			

STRAIGHT BARS				
MARK	SIZE	No. READ	LENGTH	
32a	1/2"	2	Varies 6'-5"	
32b	1/2"	Each	10 to 2'-1 1/2"	
32c	1/2"	76	17'-9"	
34A	1/2"	10	6'-9"	
31D	1/2"	4	5'-6"	
32c	1/2"	8	4'-8"	
32D	1/2"	4	3'-8"	
32e	1/2"	12	9'-3"	
33	1/2"	12	12'-0"	
31D	1/2"	6	3'-2"	
34E	1/2"	4	20'-0"	

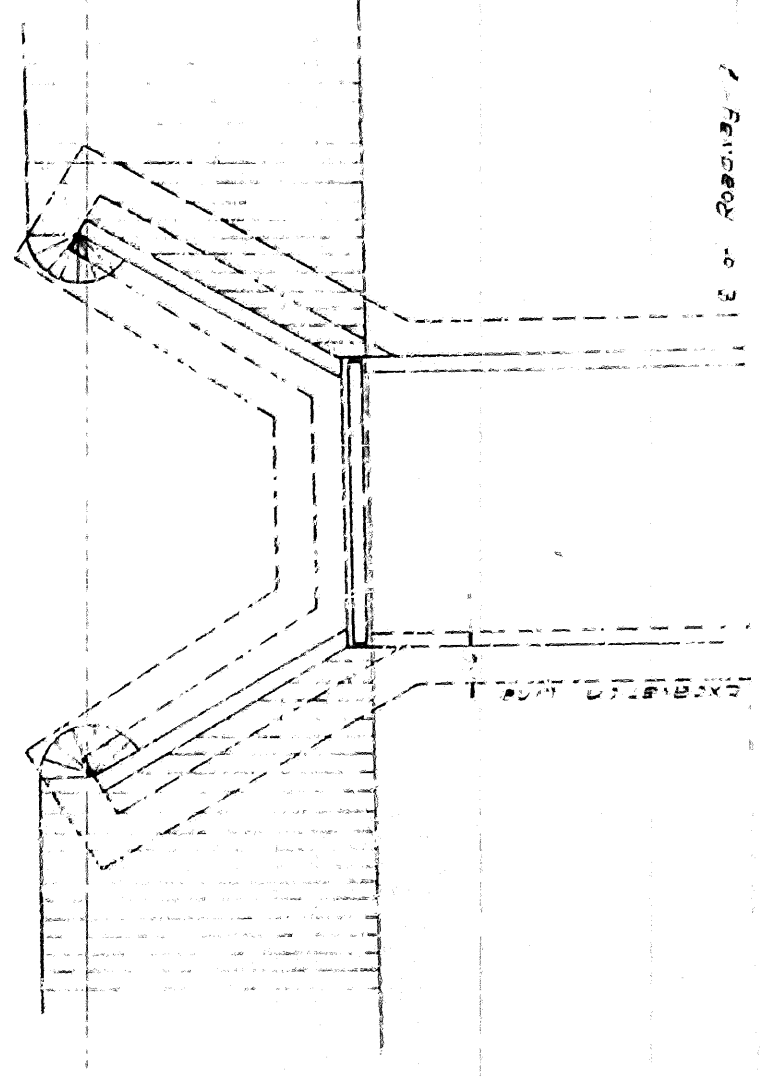


DETAILS OF WIDENING SUPERSTRUCTURE
BRIDGE No 2267
ALMA-MULBERRY ROAD
CRAWFORD COUNTY
ROUTE 64 SEC. 2

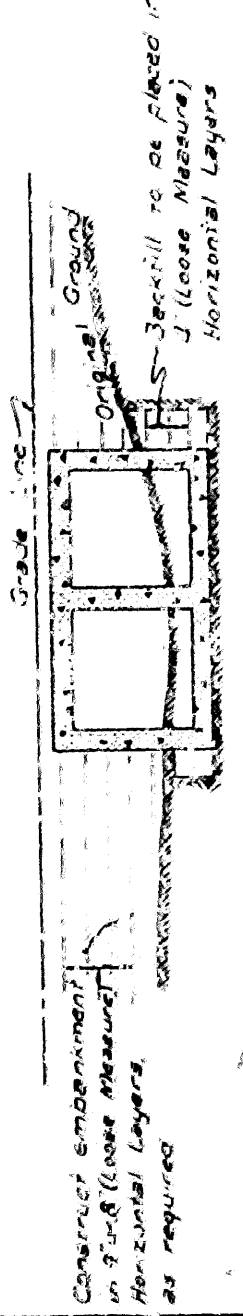
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: W.C.H. Date: 3-18-42 Scale: 1/4" = 1-0 ft.
Traced By: M.W.H. Date: 3-27-42 Except as noted
Checked By: _____ Date: _____
BRIDGE NO. 2287 **DRAWING NO. 7952**

STATE	PLATE	SCALE	DATE	BY	CHKD.	APP'D.	REV.
6	ARK.						
JOB NO.							

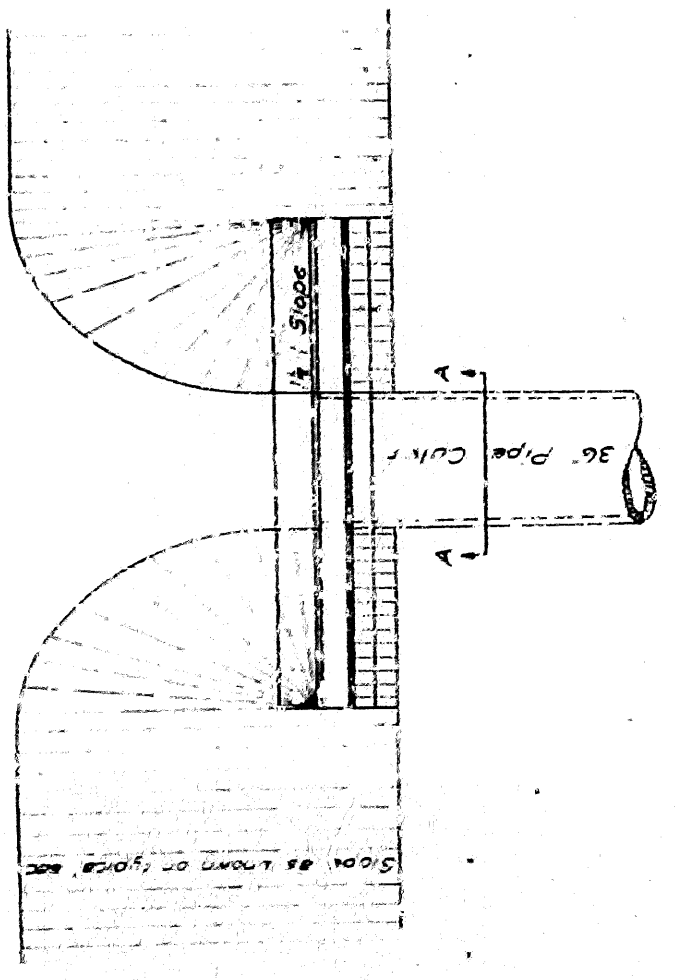


PLAN

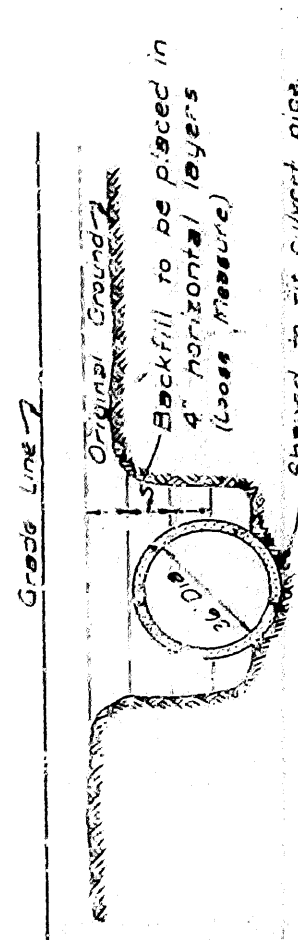


LONGITUDINAL SECTION

BOX CULVERT



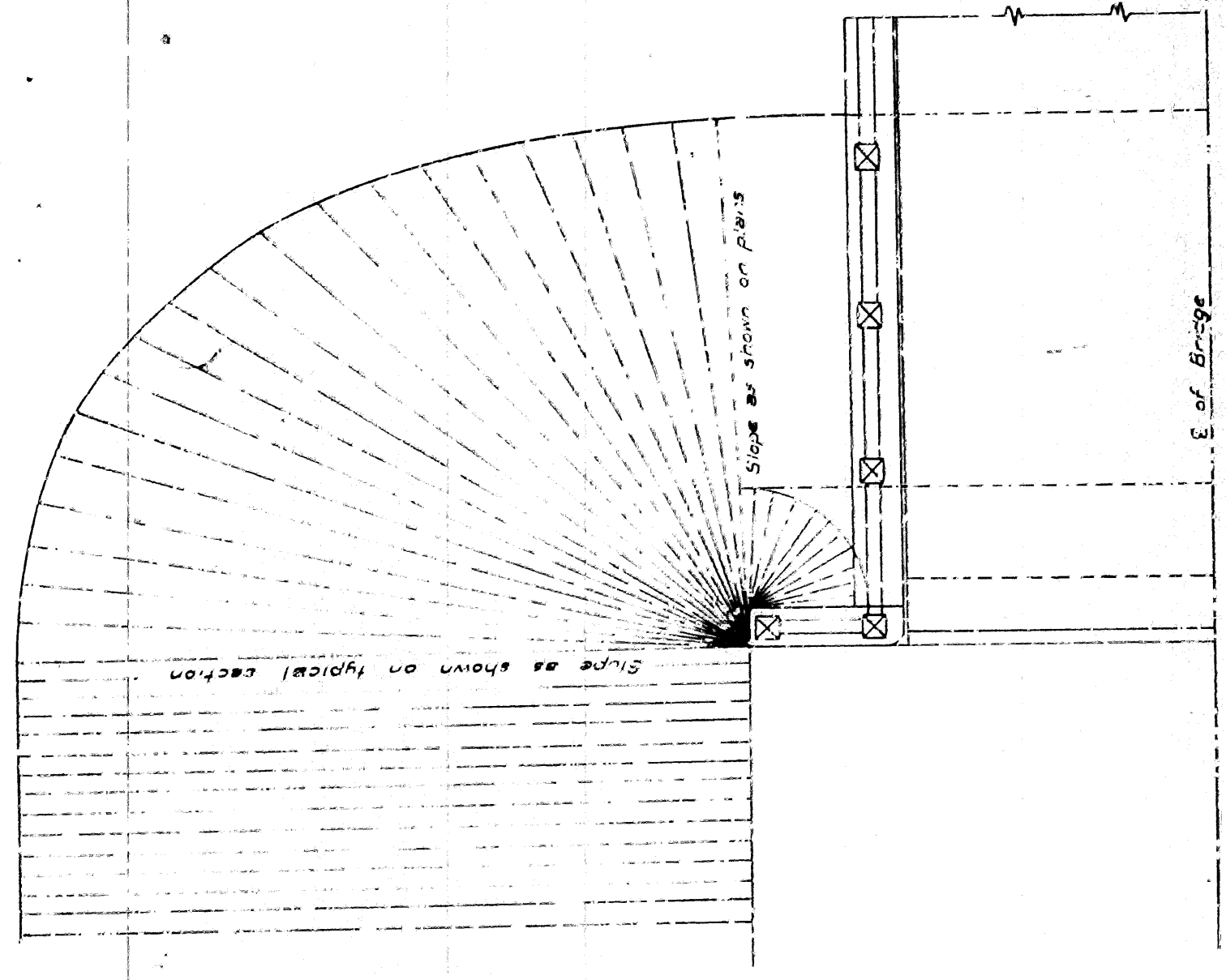
PLAN



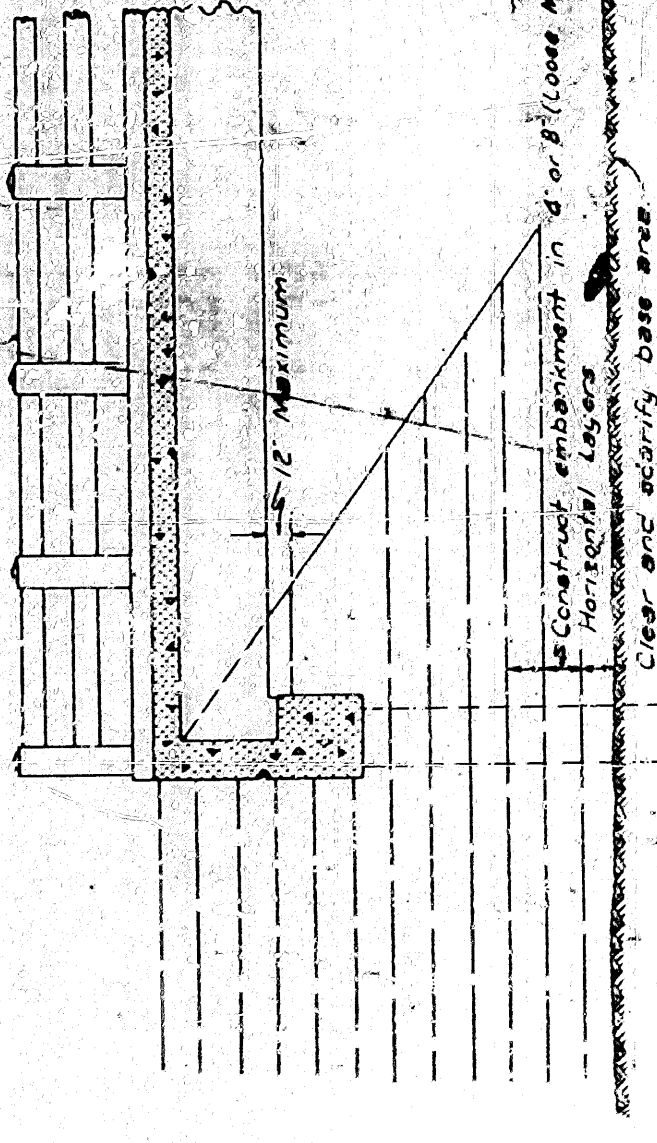
SECTION A-A

PIPE CULVERT

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



HALF PLAN



LONGITUDINAL SECTION

OPEN END ABUTMENT

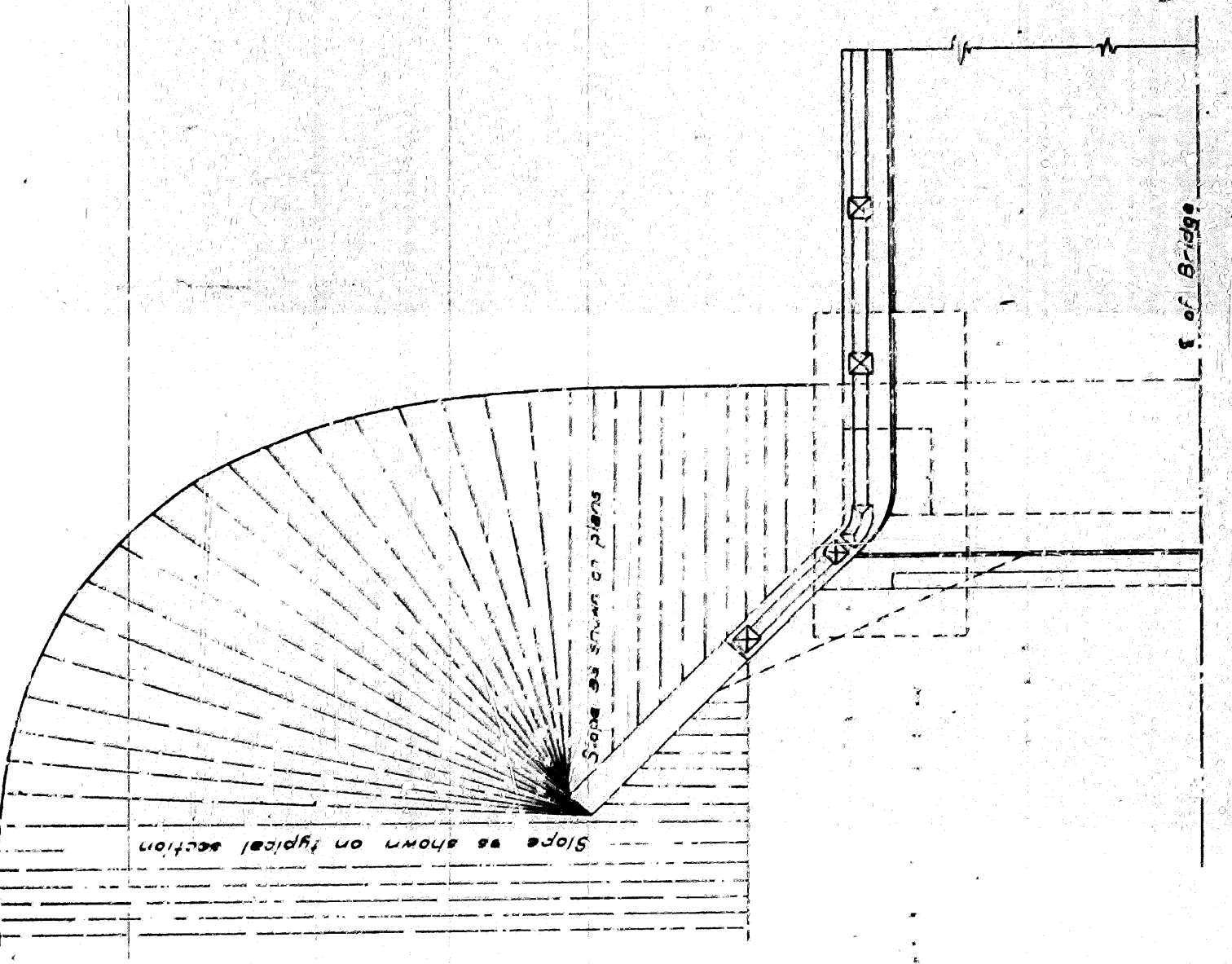
CONSTRUCTION OF THE BRIDGE-END EMBANKMENT

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

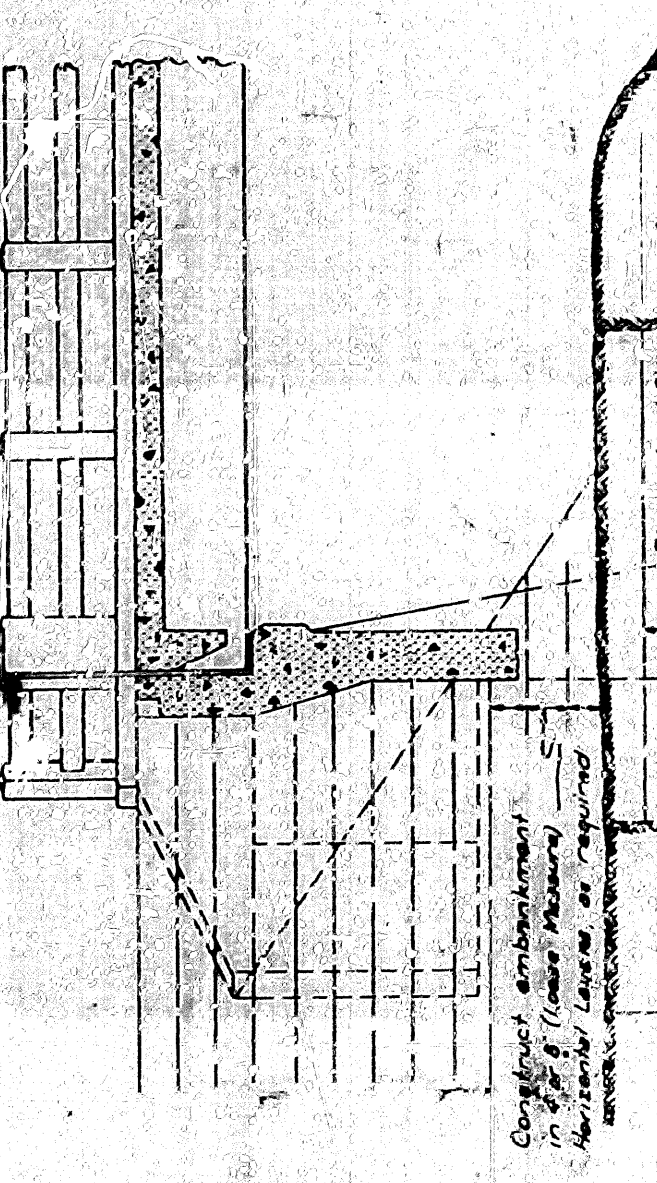
The surface area to be occupied by this embankment shall first be cleared of all debris and movable matter and then certified so as to completely expose the raw earth. The grading shall be done before any of the base surface is covered by material taken from the structure excavations.

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 be specified in the specifications for Embankment material. Section 106 and shall be completed in accordance with the specifications for Special Compaction of Embankment Section 107.



HALF PLAN



LONGITUDINAL SECTION

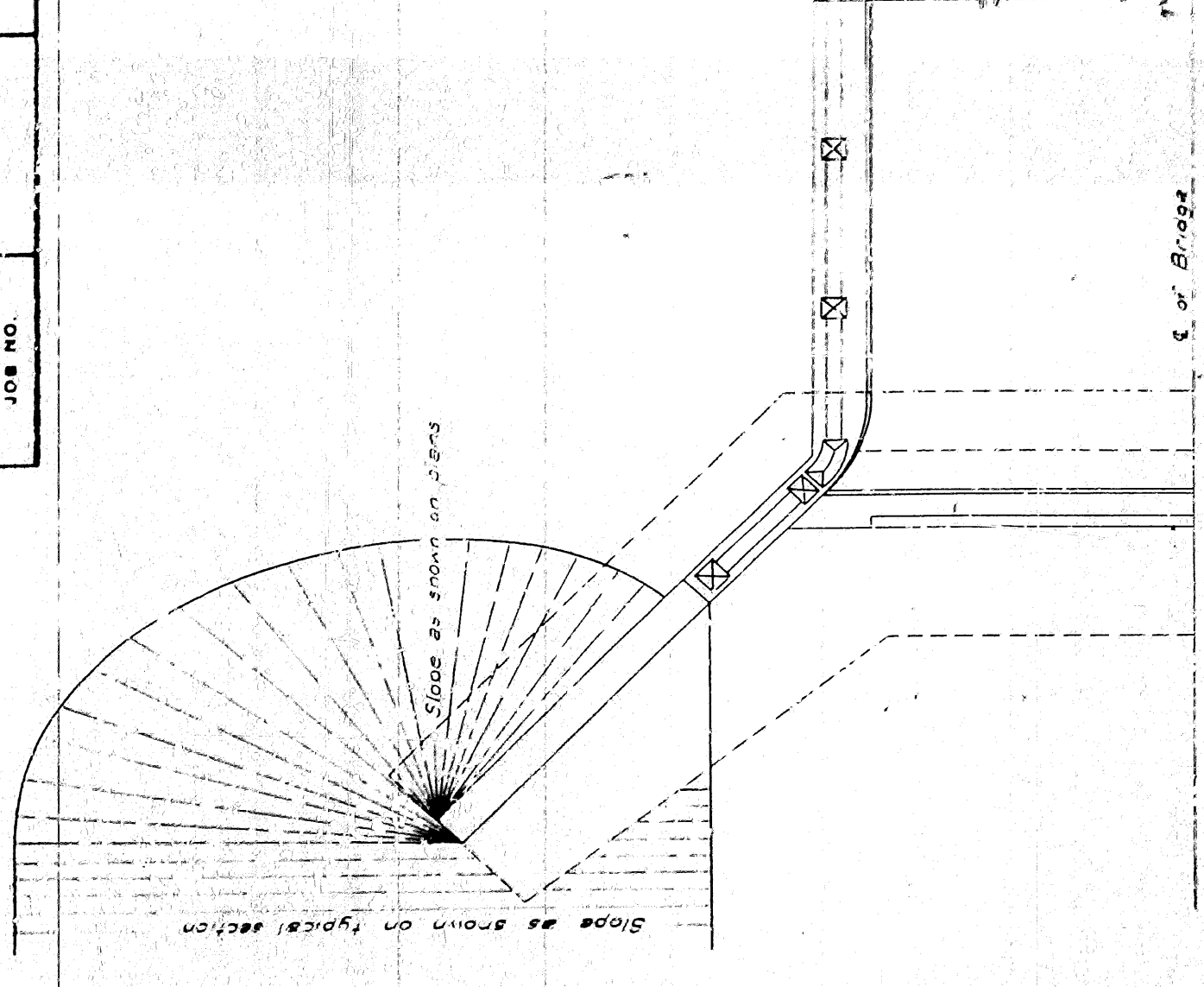
SEMI-OPEN ABUTMENT

BACKFILLING EXCAVATION

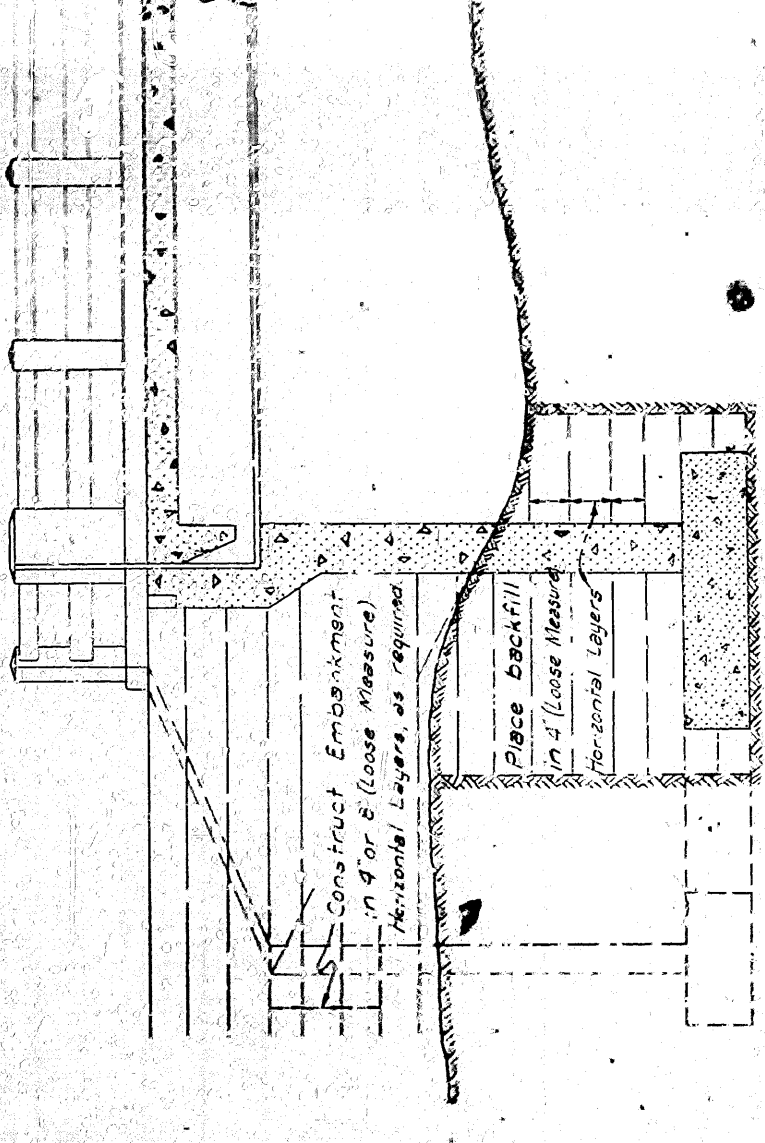
In so far as a practicable abutment excavations shall be cut to the size shown by the plans with allowance of 18 in. on all sides as permitted by the specifications. Gravelly oversize and flared cuts sometimes made to avoid the use of shoring will not be permitted.

When the abutment excavation is ready for backfilling, it shall be cleared of all collecting materials. Unless otherwise directed by the engineer and of all debris and undesirable fill materials.

The space around the wall or column 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 completed in accordance with the specifications for Special Compaction of Embankment Section 107.



HALF PLAN



LONGITUDINAL SECTION

WINGWALL ABUTMENT

ARIZONA STATE HIGHWAY COMMISSION
DETAILS OF
EMBANKMENT CONSTRUCTION AT
BRIDGE ENDS AND
BACKFILL FOR STRUCTURES

