

FED. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	E180A	1933	1	46

State Job No. 10-176

STATE OF ARKANSAS
STATE HIGHWAY COMMISSION

PLAN OF PROPOSED BRIDGES
ST. FRANCIS RIVER FLOODWAY
NEAR MARKED TREE
POINSETT COUNTY

ROUTE 63 SEC. 7

JOB No 10-176

FEDERAL AID PROJECT NO. E-180 A

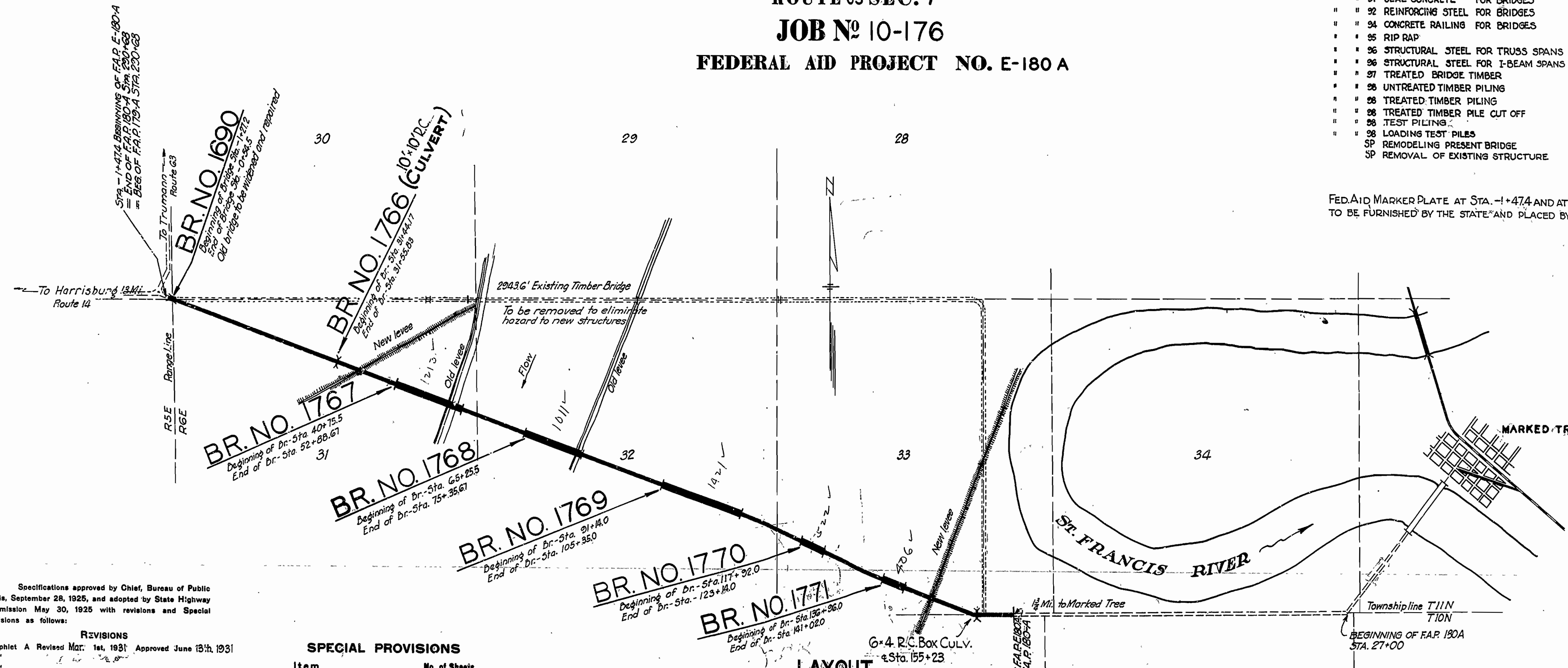
INDEX OF SHEETS

Sh.No.	Drwg.No.	Title	Sh.No.	Drwg.No.	Title
1.	3344	Title Sheet	15.	3358	Layout Br.No. 1690
2.	3345	General Layout	16.	3359	Layout & Details Br.No. 1766, 10'x10' Culvert
3.	3346	Summary Sheet	17.	3360	Layout Br.No. 1767
4.	3347	Superelevation Details and Typical Embankment Sections	18.	3361	Layout Br.No. 1768
5.	3348	Gravel Surface	19.	3362	Layout Br.No. 1769
6.	3349	Gravel Haul Diagram	20.	3363	Layout Brs.No. 1770-1771
7.	3350	Plan & Profile Sta. 1+474 to Sta. 26+00	21.	3364	Details of Widening Substr. Br.No. 1690
8.	3351	Plan & Profile Sta. 26+00 to Sta. 58+00	22.	3365	Details of Widening Superstr. Br.No. 1690
9.	3352	Plan & Profile Sta. 58+00 to Sta. 86+00	23.	3366	Details of Piers Br.No. 1767
10.	3353	Plan & Profile Sta. 86+00 to Sta. 114+00	24.	3367	Details of Piers Br.No. 1768
11.	3354	Plan & Profile Sta. 114+00 to Sta. 132+00	25.	3543	Details of 80' Low Truss Span, 24' Cl. Rdg.
12.	3355	Plan & Profile Sta. 132+00 to Sta. 161+00	26.	2150	Details of 22x40' I-Beam, 24' Cl. Rdg. Timber Bents
13.	3356	Fill Adjustment at bridge ends Br.Nos. 1767-68-69	27.	3368	Details of Standard Guard Rail
14.	3357	Fill Adjustment at bridge ends Br.Nos. 1770-71	28.	FPM2	Details of Standard F.A.P. Markers & R/W Markers.
			29.	142	Details of Standard 6x4' R.C. Box Culvert
			30-46		Cross Sections

QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY
11	CLEARING	2076 ACRES
11	GRUBBING	451 ACRES
12	COMMON EXCAVATION	27742 CU.YDS.
13	DRY EXCAVATION FOR STRUCTURES	472 CU.YDS.
13	WET EXCAVATION FOR STRUCTURES	1165 CU.YDS.
18	STRIPPING MATERIAL PITS	800 CU.YDS.
19	OVERHAUL	134 STAYDS.
37	GRAVEL SURFACE COURSE	7864 CU.YDS.
37	SURFACE COURSE MATERIAL HAULED, EACH ADD'L. MILE	107631 CU.YDS.
54	CLASS 'A' CONCRETE	18055 CU.YDS.
55	REINFORCING STEEL	18554 LBS.
65	SODDING	1157 SQUARES
73	WIRE CABLE GUARD RAIL	16064 LIN. FT.
91	CLASS 'A' CONCRETE FOR BRIDGES	35738 CU.YDS.
91	CLASS 'S' CONCRETE FOR BRIDGES	281350 CU.YDS.
91	SEAL CONCRETE FOR BRIDGES	22306 CU.YDS.
92	REINFORCING STEEL FOR BRIDGES	645425 LBS.
94	CONCRETE RAILING FOR BRIDGES	8856 LIN. FT.
95	RIP RAP	1459 CU.YDS.
96	STRUCTURAL STEEL FOR TRUSS SPANS	171222 LBS.
96	STRUCTURAL STEEL FOR I-BEAM SPANS	1912827 LBS.
97	TREATED BRIDGE TIMBER	79610 M.F.E.M.
98	UNTREATED TIMBER PILING	3400 LIN. FT.
98	TREATED TIMBER PILING	27577 LIN. FT.
98	TREATED TIMBER PILE CUT OFF	1590 LIN. FT.
98	TEST PILING	23 NUMBER
98	LOADING TEST PILES	3 NUMBER
98	REMODELING PRESENT BRIDGE	LUMP SUM
98	REMOVAL OF EXISTING STRUCTURE	LUMP SUM

FED. AID MARKER PLATE AT STA. 1+474 AND AT STA. 27+00 BEGINNING OF F.A.P. 180A TO BE FURNISHED BY THE STATE AND PLACED BY THE CONTRACTOR.



Specifications approved by Chief, Bureau of Public Roads, September 28, 1925, and adopted by State Highway Commission May 30, 1925 with revisions and Special Provisions as follows:

REVISIONS	APPROVED
Pamphlet A Revised Mar. 1st, 1931	Approved June 15th, 1931
D Revised July 1st, 1928	Approved Nov. 24th, 1928
J Revised NOV. 1st, 1931	
K REVISED DEC. 1st, 1931	
L Revised NOV. 1st, 1931	
M REVISED MAR. 1st, 1931	APPROVED JUNE 15th, 1931
N REVISED SEPT. 1st, 1932	
O REVISED SEPT. 1st, 1932	
P REVISED NOV. 1st, 1932	

SPECIAL PROVISIONS	Item	No. of Sheets	Approved
LABOR		10	Approved Nov. 1, 1932.
PARTIAL PAYMENTS			Approved Nov. 1, 1932.
ENGINEER'S FIELD OFFICE			
REVISIONS TO PARAGRAPHS 151, 341, 375 & 28.32			Sept. 7th, 1932
PLACING GRAVEL SURF & CONSTRUCTION OF EMBANKMENT			Oct. 26th, 1932
REMODELING PRESENT BRIDGE			Nov. 15th, 1932
REMOVAL OF EXISTING STRUCTURE			Oct. 26th, 1932

LAYOUT	Scale: 1" = 943'
LENGTH OF PROJECT	= 16,247.40 FT. = 3.076 MI.
LENGTH OF BRIDGES	= 4,645.04 FT. = 0.879 MI.
LENGTH OF EMBANKMENT	= 11,602.36 FT. = 2.197 MI.
LENGTH OF JOB	= 16,247.40 FT. = 3.076 MI.

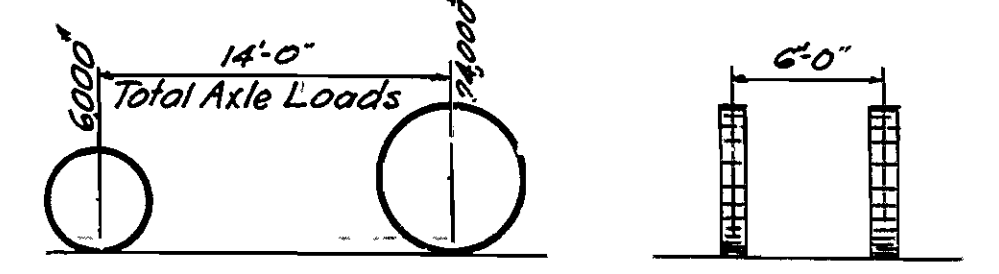
APPROVED [Signature]
CHIEF ENGINEER - U. S. BUREAU OF PUBLIC ROADS
APPROVED [Signature]
DISTRICT ENGINEER - U. S. BUREAU OF PUBLIC ROADS
APPROVED [Signature]
CHIEF - U. S. BUREAU OF PUBLIC ROADS
APPROVED [Signature]
CHAIRMAN - STATE HIGHWAY COMMISSION
APPROVED [Signature]
STATE HIGHWAY ENGINEER

N.B. Barry
BRIDGE ENGINEER
1690, 1766, 1767, 1768,
BRIDGES NO. 1769, 1770, 1771
DRAWING NO. 3344

FISCAL YEAR	Job No.	SHEET NO.	TOTAL SHEETS
1934	5162	15	17

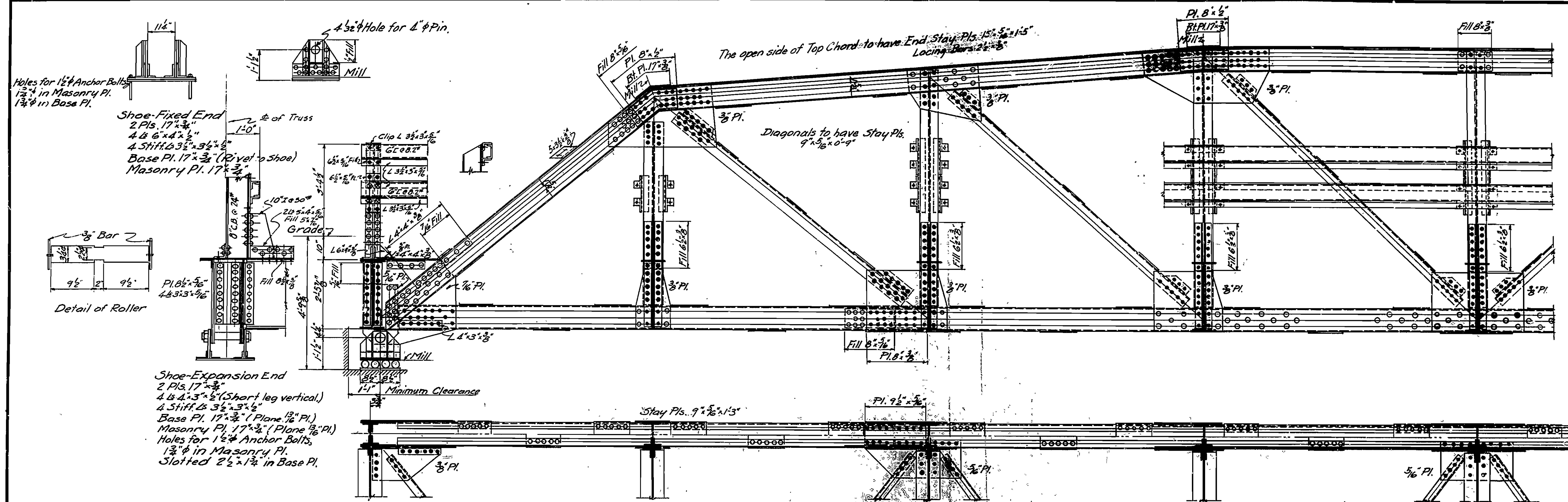
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	1187	1934	32	33

Unit Stresses
 Concrete 750 per sq. in.
 Reinforcing Steel 16,000 " "
 Structural Steel 16,000 " "
 Live Load H 15 Loading



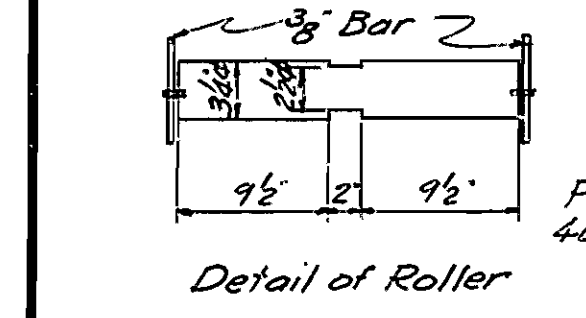
General Notes
 Rivets 3/4" φ, Open Holes 1 1/2".
 All holes in truss connections to be sub-punched 1/8" and reamed to size while truss is assembled, this applies to field as well as shop rivets.
 Floor beam connections to be sub-punched 1/8" and reamed to a metal template.
 All field connections shall be riveted.
 Shop paint: After being completely assembled and shop work finished, all pieces shall be given one coat of red lead and raw linseed oil before shipment.
 Field paint: 1st Coat White Lead, tinted with Lamp Black. 2nd Coat Aluminum Paint (See Specifications).
 Floor slab concrete to be Class S. One inch has been added for wear.
 All floor beams to be milled to exact length after framing angles have been riveted.
 Shapes of equal or greater strength may be substituted for shapes shown but payment will be made in accordance with sizes given on this plan.
 This drawing shows general features of design. Shop drawings shall be made in compliance with specifications, submitted and approved before fabrication is begun.

Specifications: Ark. Standard Road & Bridge Specifications adopted May 30, 1925 & Revised.
 All dimensions relating to reinforcing steel are center to center of bars.

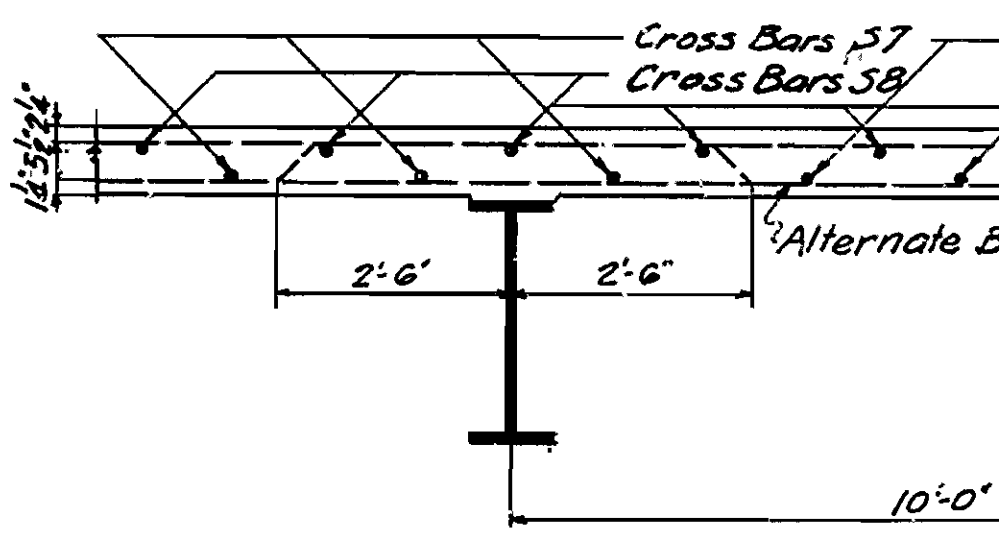
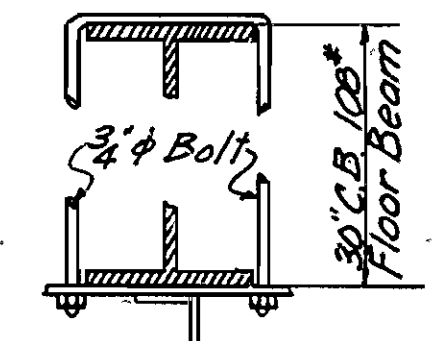
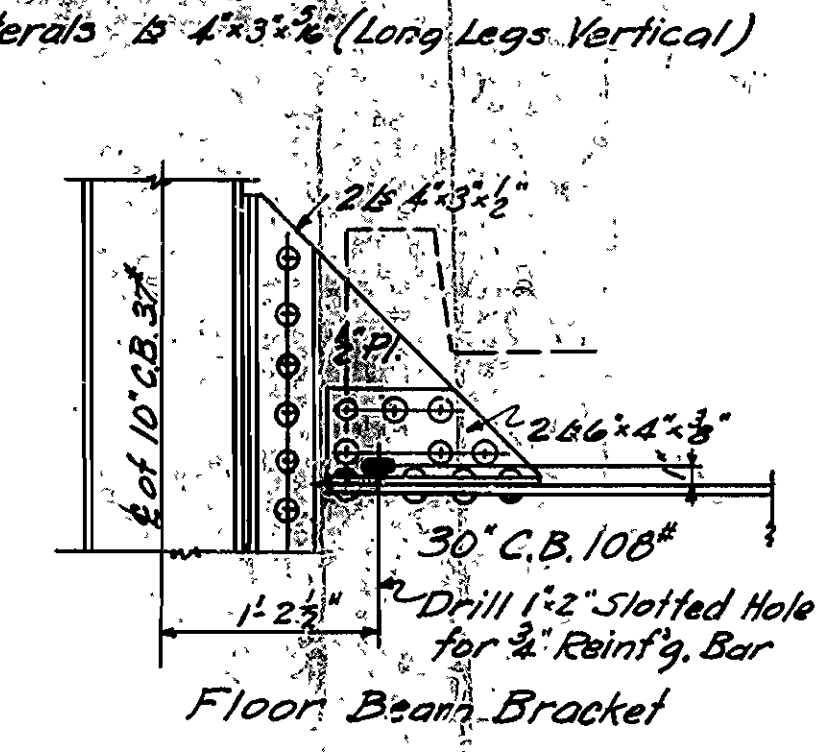
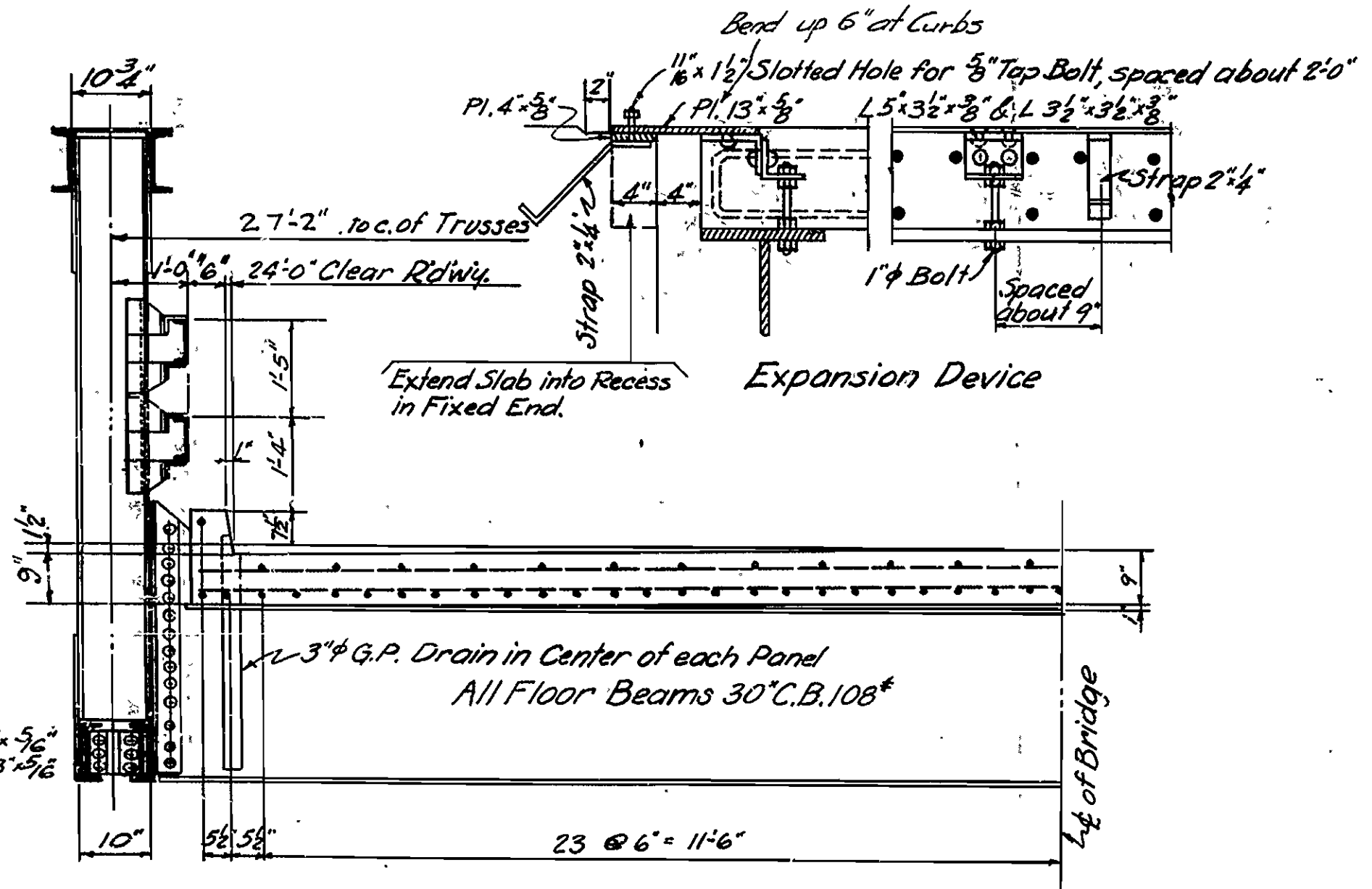


Holes for 1 1/2" Anchor Bolts 1 1/2" in Masonry Pl. 1 3/4" in Base Pl.

Shoe-Fixed End
 2 Pls. 17 x 3/8
 4 Ls. 6 x 4 x 1/4
 4 Stiff. Ls. 3 x 3 x 3/4
 Base Pl. 17 x 3/8 (Rivet to Shoe)
 Masonry Pl. 17 x 3/8

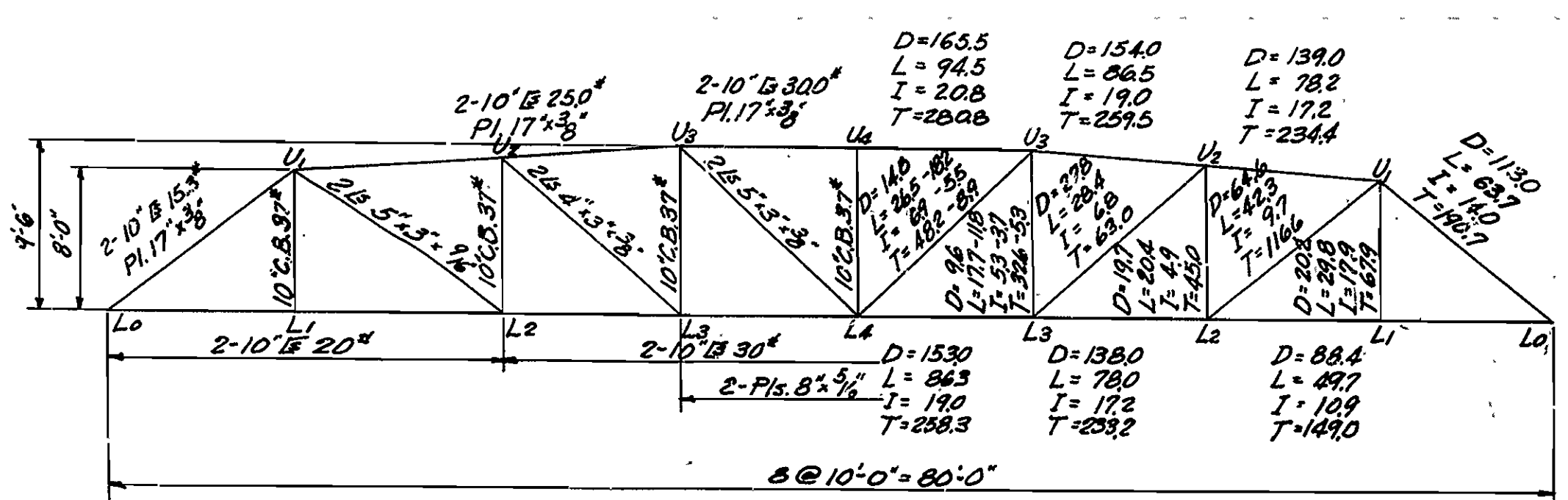


Shoe-Expansion End
 2 Pls. 17 x 3/8
 4 Ls. 4 x 3 x 1/2 (Short leg vertical)
 4 Stiff. Ls. 3 x 3 x 3/4
 Base Pl. 17 x 3/8 (Plane 1/2" Pl.)
 Masonry Pl. 17 x 3/8 (Plane 1/2" Pl.)
 Holes for 1 1/2" Anchor Bolts 1 1/2" in Masonry Pl. 1 3/4" in Base Pl.
 Slotted 2 x 1 1/2" in Base Pl.

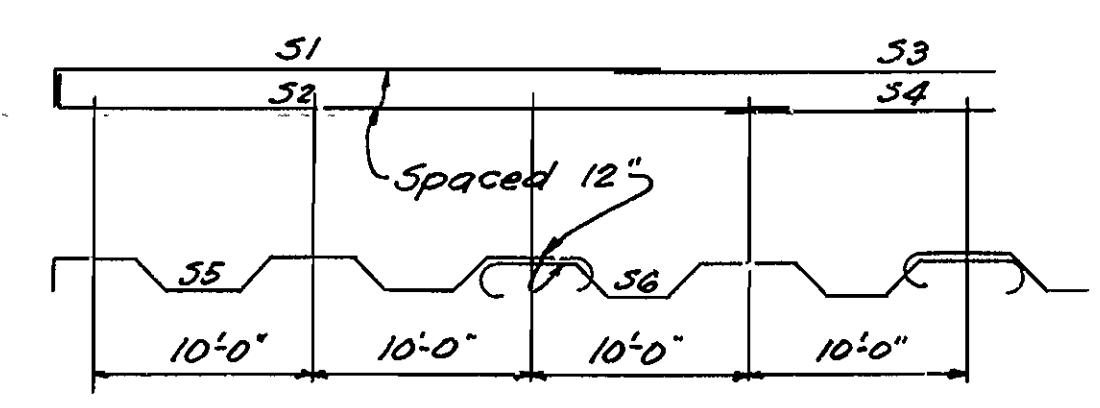
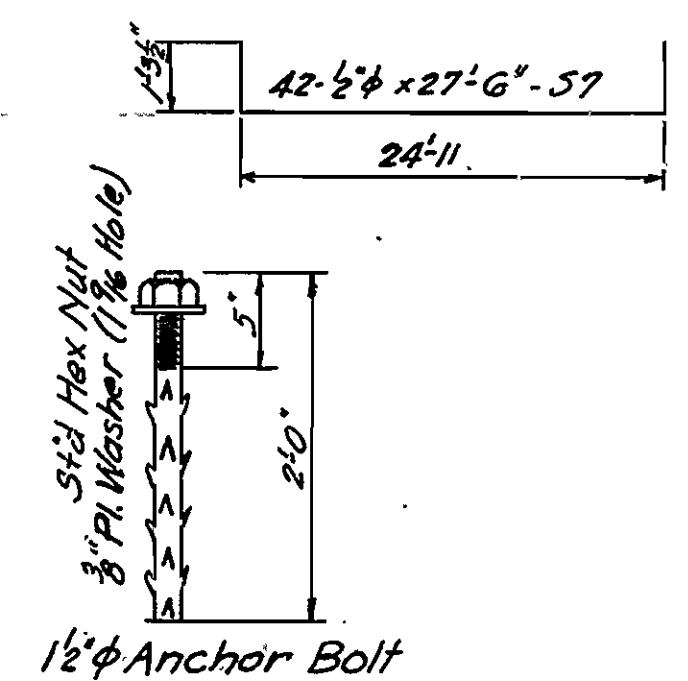
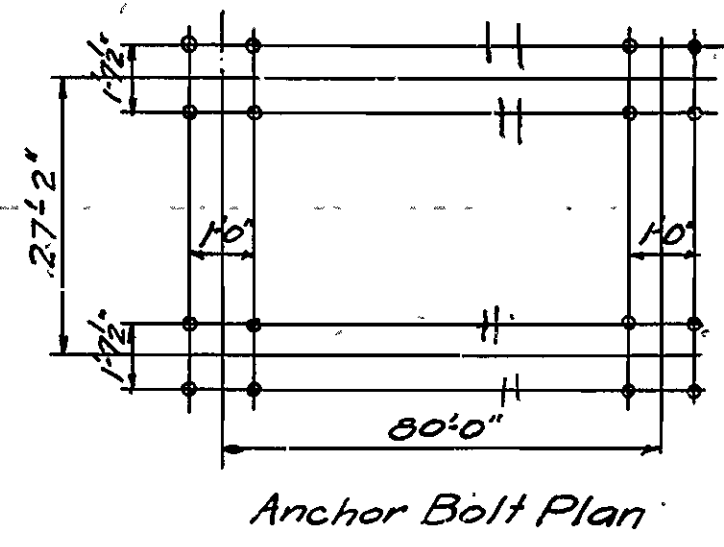
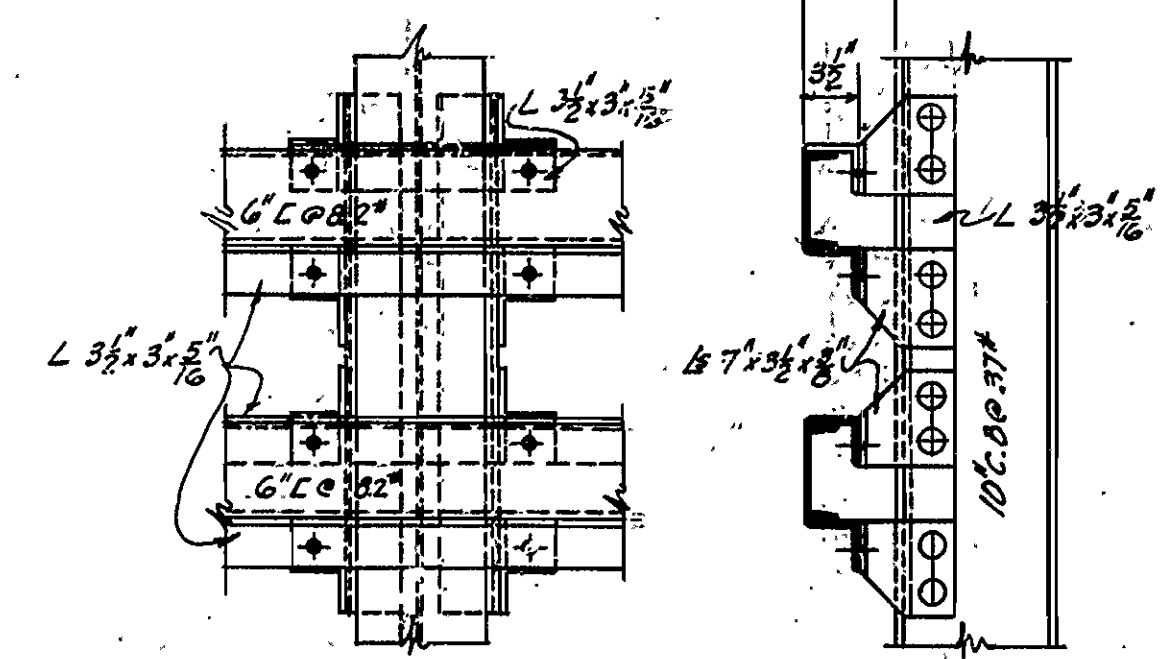


FLOOR BEAM DATA
 Dead Load Moment 1,350,000 in. lbs.
 Live Load Moment 2,650,000 " "
 Impact 30% 795,000 " "
 Total Moment 4,795,000 " "
 Required Section Modulus 4,795/16 = 300 in.³
 Section Modulus of 30" C.B. 108" is 299.2 in.³

ESTIMATED QUANTITIES
 Structural Steel 83117#
 Reinforcing Steel 12420#
 Class S Concrete 59.59 cu. yds.
 Note: Structural Steel tonnage does not include weight of Expansion Device.



Reaction	D	L	T
D=1530	D=1380	D=884	
L=780	L=780	L=497	
T=288.3	T=192	T=109	
		T=1490	

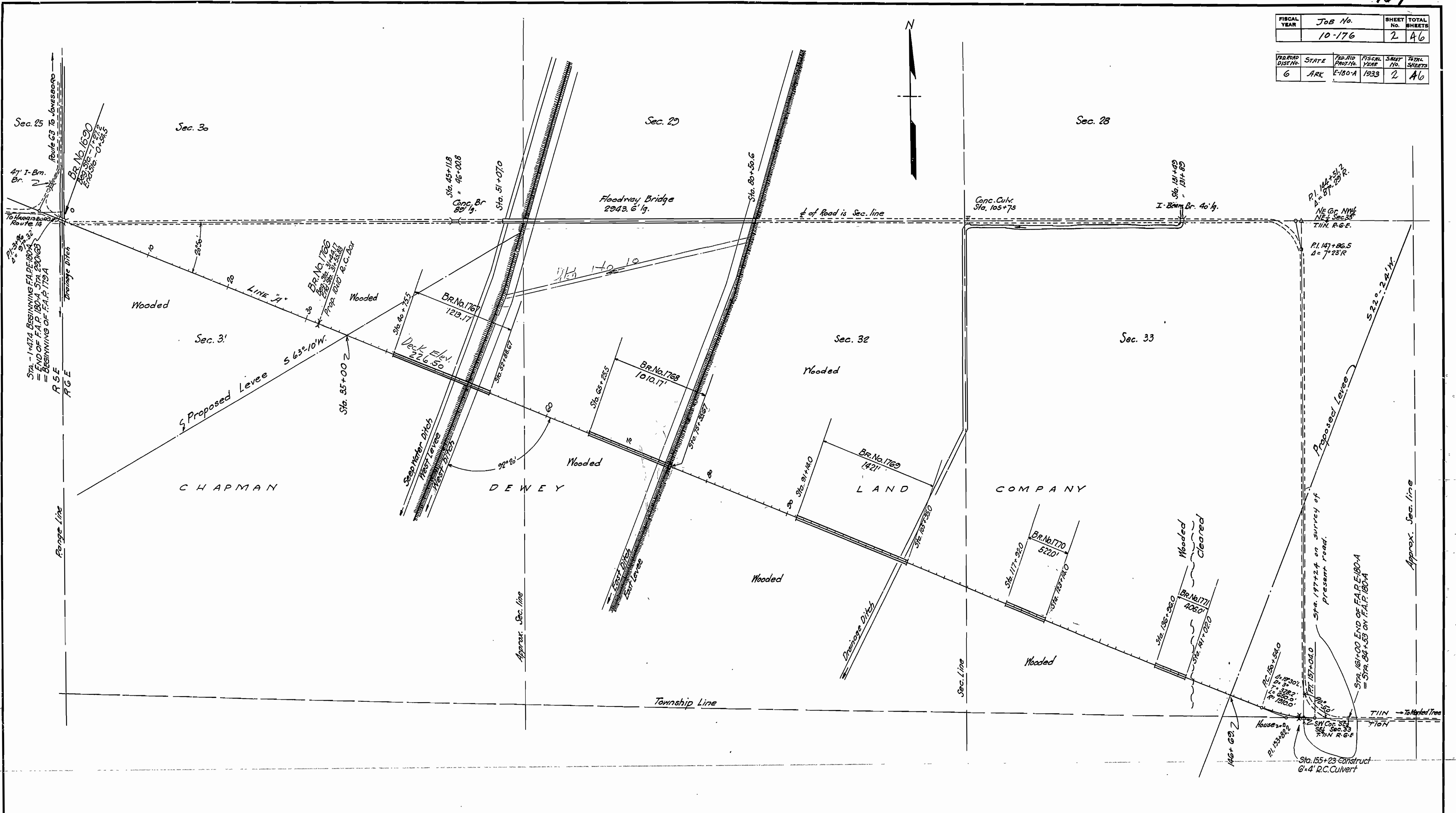


STANDARD PLAN
 80'-0" LOW TRUSS SPAN
 24'-0" CLEAR ROADWAY
 ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: M. Date: 2-2-22
 Traced By: M. Date: 2-8-22
 Checked By: Date: _____
 Scale: 1/2 in. = 1 ft.
 BRIDGE NO. DRAWING NO. 3543

N.B. Sawyer
 BRIDGE ENGINEER

FISCAL YEAR	JOB No.	SHEET No.	TOTAL SHEETS
	10-176	2	46

FED. ROAD DIST. No.	STATE	FED. AID PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.	E-180-A	1933	2	46



LAYOUT OF
MARKED TREE FLOODWAY
POINSETT COUNTY
ROUTE 63 SEC. 7

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: *FAN* Date: _____
Traced By: *FAN* Date: *3-15-32*
Checked By: _____ Date: _____

Scale: 1 in. = 500 ft.

N.B. Sawyer
BRIDGE ENGINEER

BRIDGE NO.

DRAWING NO. 3345

FISCAL YEAR	Job No.	SHEET No.	TOTAL SHEETS
1933	10-176	3	46

FEDERAL DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.	E-180A	1933	3	46

SUMMARY OF QUANTITIES - "ROADWAY"

Item No.	Item	Unit	Amount
11	Clearing	Acres	20.76
11	Grubbing	Acres	4.51
12	Common Excavation	Cu.Yds.	27142
13	Dry Excavation for Structures	Cu.Yds.	130
13	Wet Excavation for Structures	Cu.Yds.	176
18	Stripping Material Pits	Cu.Yds.	800
19	Overhaul	Sta.Yds.	134
37	Gravel Surface Course	Cu.Yds.	7864
37	Gravel Surface Material Hauled Each Additional Mile	Cu.Yds.	107631
54	Class "A" Concrete	Cu.Yds.	181.27
55	Reinforcing Steel	Pounds	18554
65	Sodding	Squares	1157
73	Wire Cable Guard Rail	Lin. Ft.	16064

Item No. 11 Clearing		
Station to	Station	Acres
0+00	27+00	8.135
42+00	50+50	2.926
66+50	74+00	2.583
92+00	104+00	4.132
119+00	122+00	1.377
138+00	140+00	1.607
Total		20.760

Item No. 11 Grubbing		
Station to	Station	Acres
0+00	28+42	4.51

Item No. 12 Common Excavation		
Station to	Station	Cu. Yds.
-1+47.4	-0+54.5	145 Clearing Channel
-0+54.5	3+00	1988
3+00	26+00	14916
26+00	28+42	2003
31+14	31+85	1335
Bridge No. 1767		998 Fill Adjustment
Bridge No. 1768		590 " "
Bridge No. 1769		980 " "
Bridge No. 1770		941 " "
Bridge No. 1771		491 " "
152+00	161+00	3355
Total		27142 Cu.Yds.

Item No. 13 Excavation for Structures	
Sta. 31+50 - 10x10 Conc. Box Culvert	
Dry Excavation	25 Cu.Yds.
Wet Excavation	176 Cu.Yds.
Sta. 155+23 - 6x4 Conc. Box Culvert	
Dry Excavation	70.5 Cu.Yds.

Item No. 18 Stripping Material Pits	
Sta. 152+00 to 161+00	800 Cu.Yds.

Item No. 19 - Overhaul	
Sta. 152+00 to 161+00	134 Sta. Yds.

Item No. 37 Gravel Surface Course	
By Haul Diagram	7864 Cu.Yds.

Item No. 37 Gravel Surface Course	
By Haul Diagram	107631 Cu.Yds.

Item No. 54 - Class "A" Concrete	
10x10 Conc. Box Culvert Sta. 31+50	146.07 Cu.Yds.
6x4 Conc. Box Culvert Sta. 155+23	33.75 " "
44 Right of Way Markers	1.19 " "
2 Federal Aid Markers	0.26 " "
Total 181.27 Cu.Yds.	

Item No. 55 Reinforcing Steel	
10x10 Conc. Box Culvert Sta. 31+50	1444.6 Pounds
6x4 Conc. Box Culvert Sta. 155+23	381.8 " "
44 Right of Way Markers	260 " "
2 Federal Aid Markers	30 " "
Total 1855.4 Pounds	

Item No. 65 Sodding		
Station to	Station	Squares
-0+54.5	28+42	845
31+14	31+85	93
152+00	161+00	219
Total		1157

Item No. 73 Wire Cable Guard Rail		
Station to	Station	Lin. Ft.
26+28.75	40+74.75	2752.00
52+89.42	65+24.67	2470.90
75+36.42	91+13.17	3153.50
105+35.75	117+91.25	2511.00
123+14.75	136+95.25	2761.00
141+02.75	153+10.25	2416.00
Total		16064.00

SUMMARY OF QUANTITIES - "BRIDGES"

ITEM No.	ITEM	UNIT	BRIDGE No. 1767	BRIDGE No. 1768	BRIDGE No. 1769	BRIDGE No. 1770	BRIDGE No. 1771	BRIDGE No. 1650	TOTAL
13	Dry Excavation for Structures	Cu. Yds.	81	93	56	56	56		342
13	Wet Excavation for Structures	Cu. Yds.	580	399				10	989
91	Class "A" Concrete for Bridges	Cu. Yds.	187.79	151.12				18.47	357.38
91	Class "S" Concrete for Bridges	Cu. Yds.	745.20	622.93	859.80	318.35	248.49	18.73	2813.50
91	Seal Concrete for Bridges	Cu. Yds.	127.46	95.60					223.06
92	Reinforcing Steel for Bridges	Pounds	178365	148278	189221	69484	54034	6113	645495
94	Concrete Railing for Bridges	Lin. Ft.	2270	1864	2850	1052	820		8856
95	Rip Rap	Cu. Yds.	355	266	315	276	247		1459
96	Structural Steel for Truss Spans	Pounds	85611	85611					171222
96	Structural Steel for I-Beam Spans	Pounds	481536	394956	605331	221909	172435	36660	1912827
97	Treated Bridge Timber	M.F.B.M.	12772	16272	25622	9352	7992		79610
98	Untreated Timber Piling	Lin. Ft.	1600	1600				200	3400
98	Treated Timber Piling	Lin. Ft.	7110	5790	8783	3366	2528		27577
98	Treated Timber Pile Cut Off	Lin. Ft.	398	328	508	198	158		1590
98	Test Piling	Number	6	5	7	3	2		23
98	Loading Test Piles	Number	1	1	1				3
S.P.	Remodeling Present Bridge	Number						One	One
S.P.	Removal of Existing Structure	Number							One

STATE FURNISHED MATERIAL

Gravel Surfacing 7864 Cu. Yds. ✓
 Bronze Fed. Aid Marker Plates 2 Plates ✓
 State Bronze Bridge Marker Plates 12 Plates ✓

SUMMARY SHEET
 MARKED TREE FLOODWAY
 ROUTE 63 SEC. 7

ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

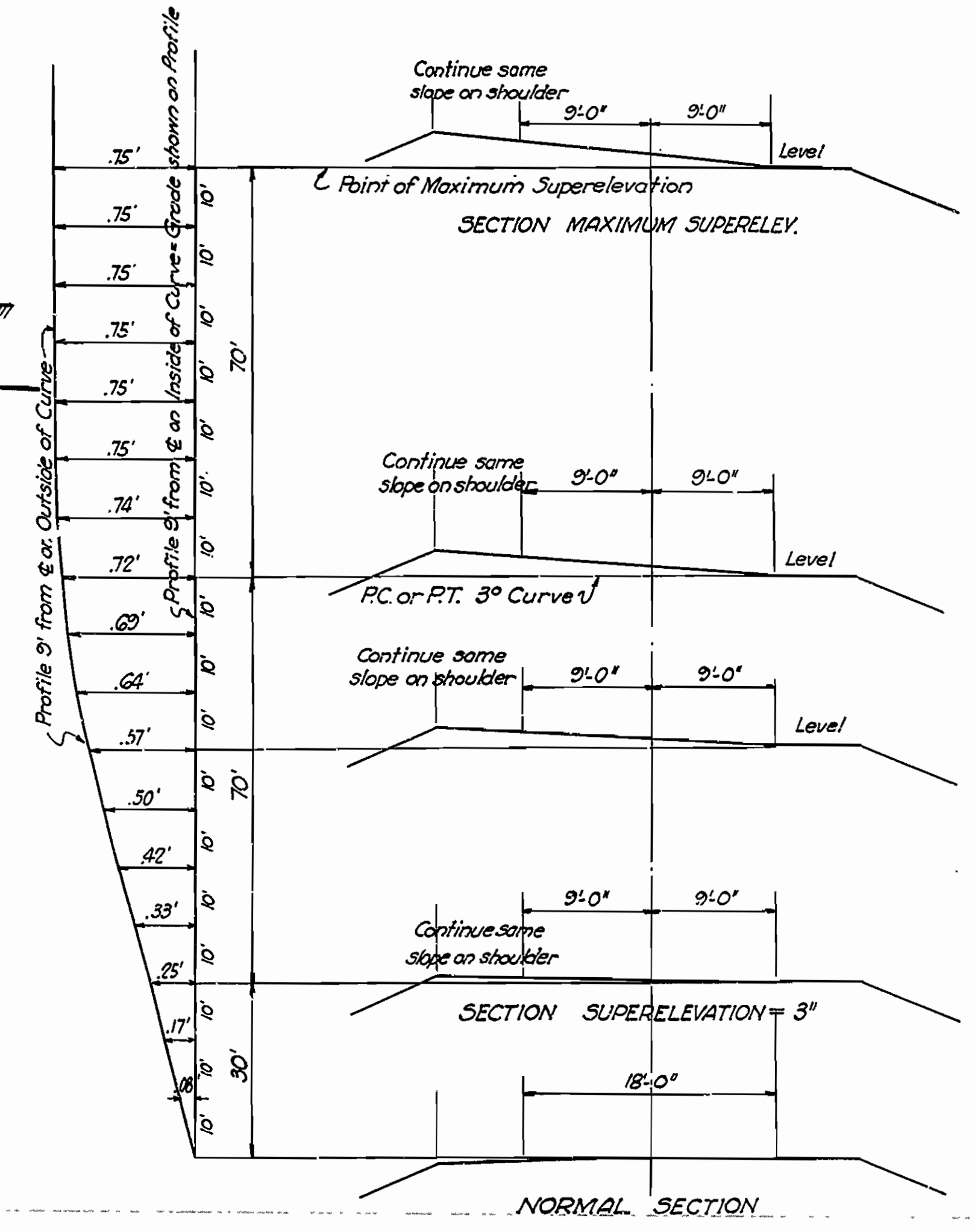
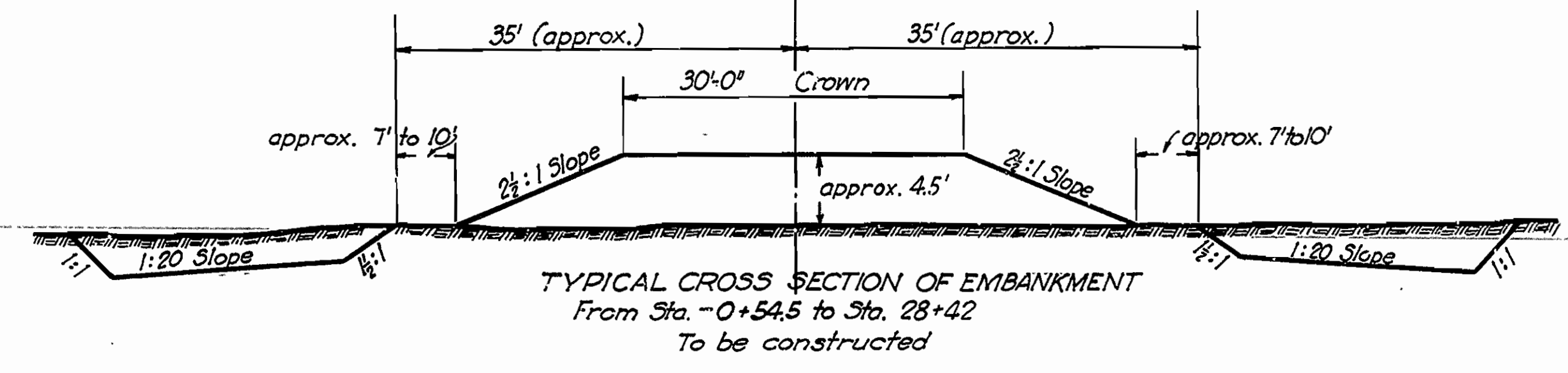
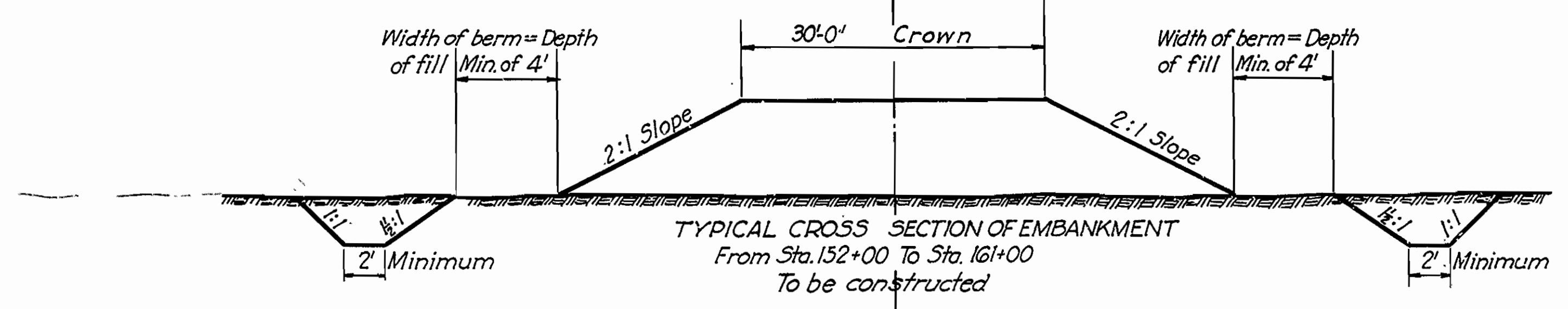
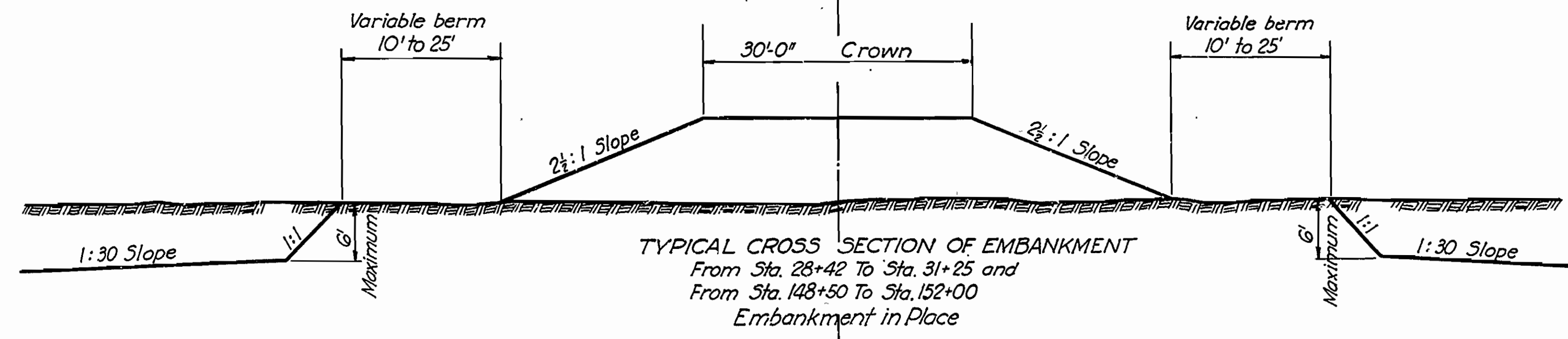
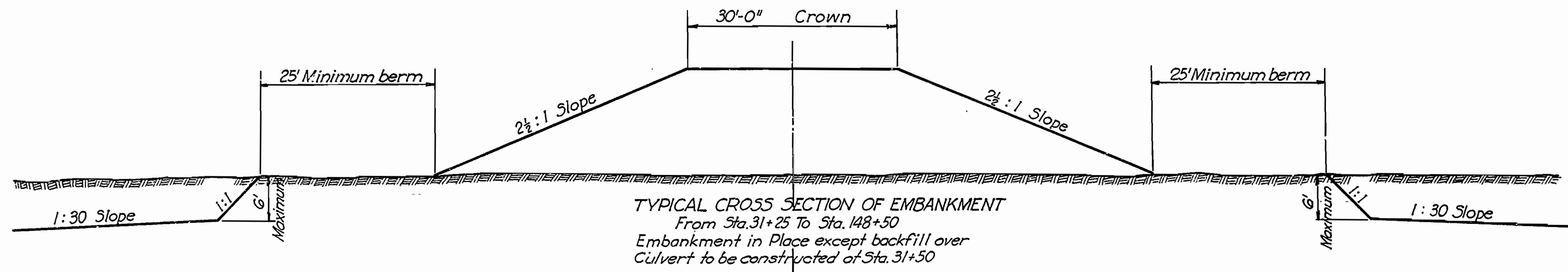
Drawn By: LCB Date: 10-26-32
 Traced By: LCB Date: 10-26-32
 Checked By: _____ Date: _____

Scale: 1" = 40'

BRIDGE NO. _____ DRAWING NO. 3346

M.B. Lewis
 BRIDGE ENGINEER

FISCAL YEAR	State Job No.	SHEET NO.	TOTAL SHEETS
1933	10-176	4	46
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
6	ARK.	1804	1933
		SHEET NO.	TOTAL SHEETS
		4	46



**SUPERELEVATION DETAILS
AND
TYPICAL EMBANKMENT SECTIONS
MARKED TREE FLOODWAY
POINSETT COUNTY
ROUTE 63 SEC. 7**

**ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.**

Drawn By: *E.A.W.* Date: 10-18-32
Traced By: *E.A.W.* Date: 10-18-32
Checked By: _____ Date: _____

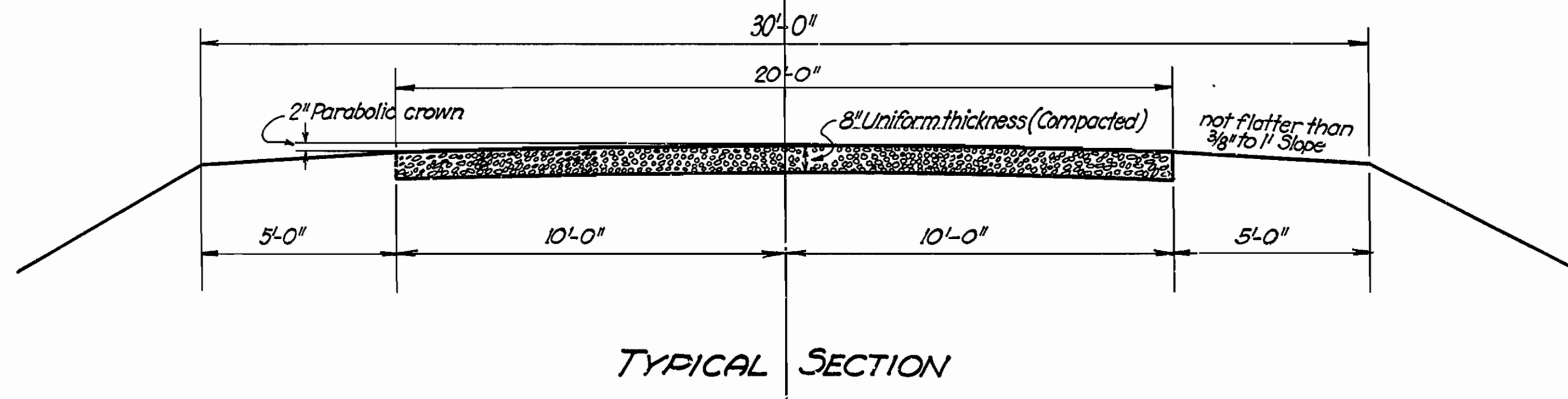
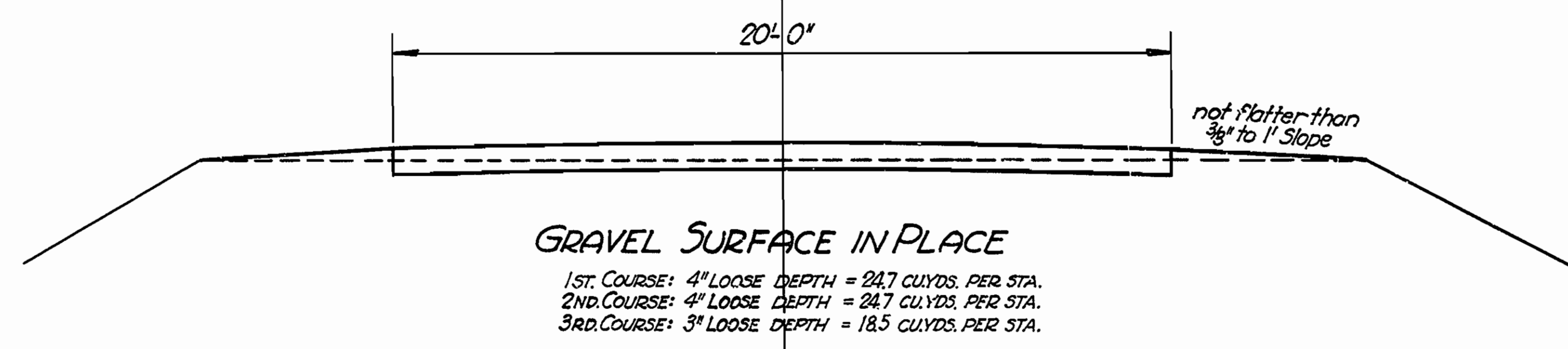
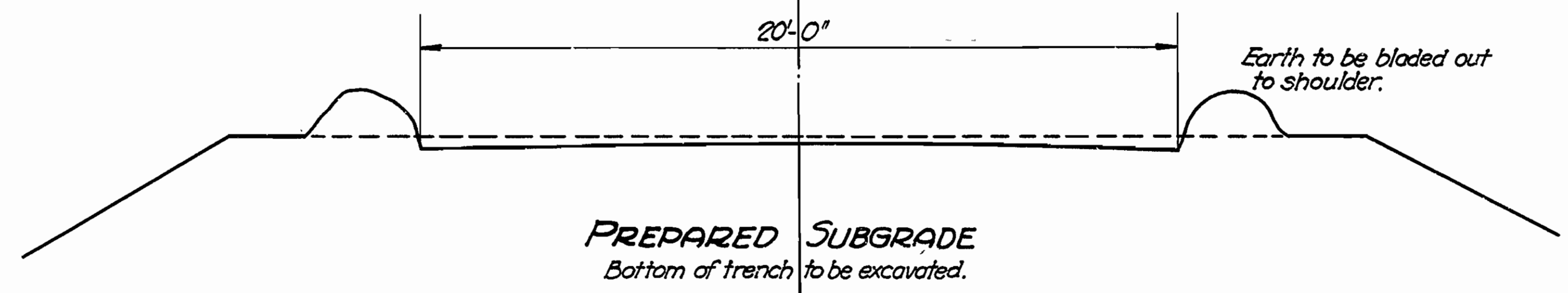
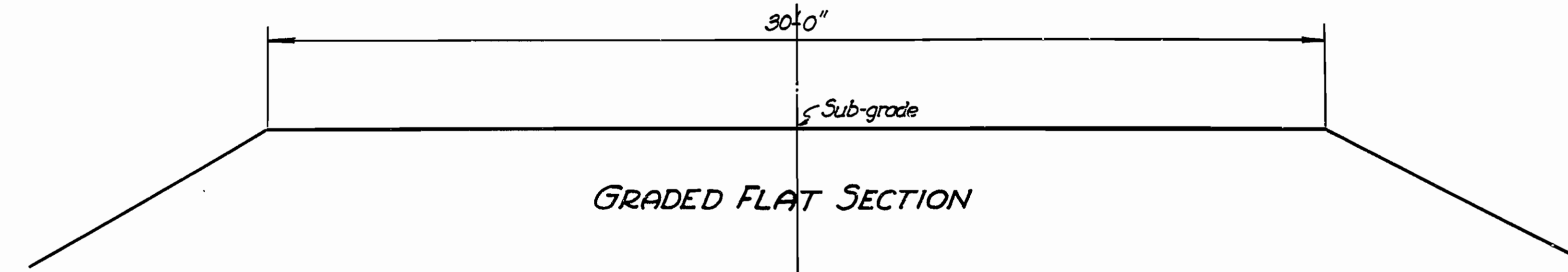
Scale: $\frac{1}{2}$ " = 10' $\frac{1}{4}$ " = 5'

BRIDGE NO. _____ DRAWING NO. 3347

W.B. Lewis
BRIDGE ENGINEER

FISCAL YEAR	State Job No.	SHEET No.	TOTAL SHEETS
1933	10-176	5	46

FEDERAL DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	E-180A	1933	5	46



**TYPICAL SECTIONS
20'x8" GRAVEL SURFACE COURSE**

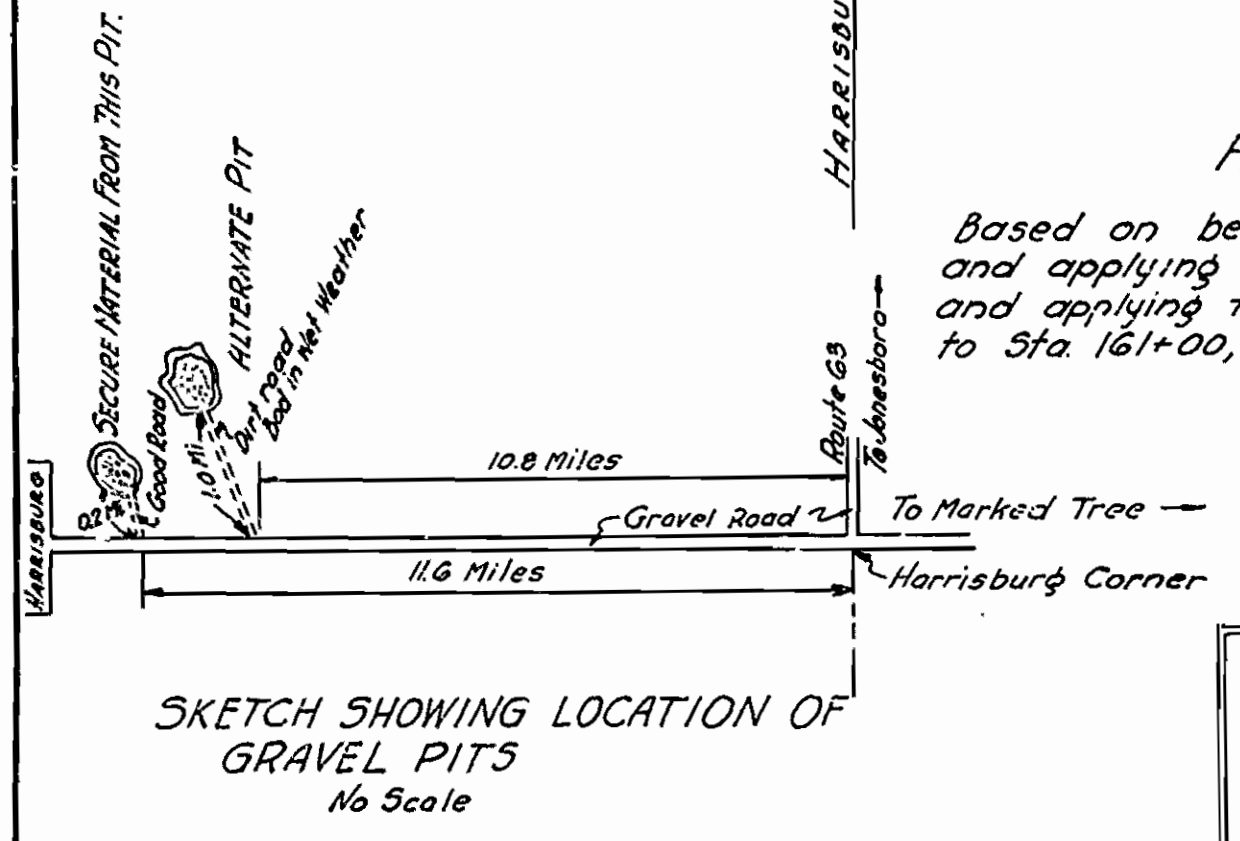
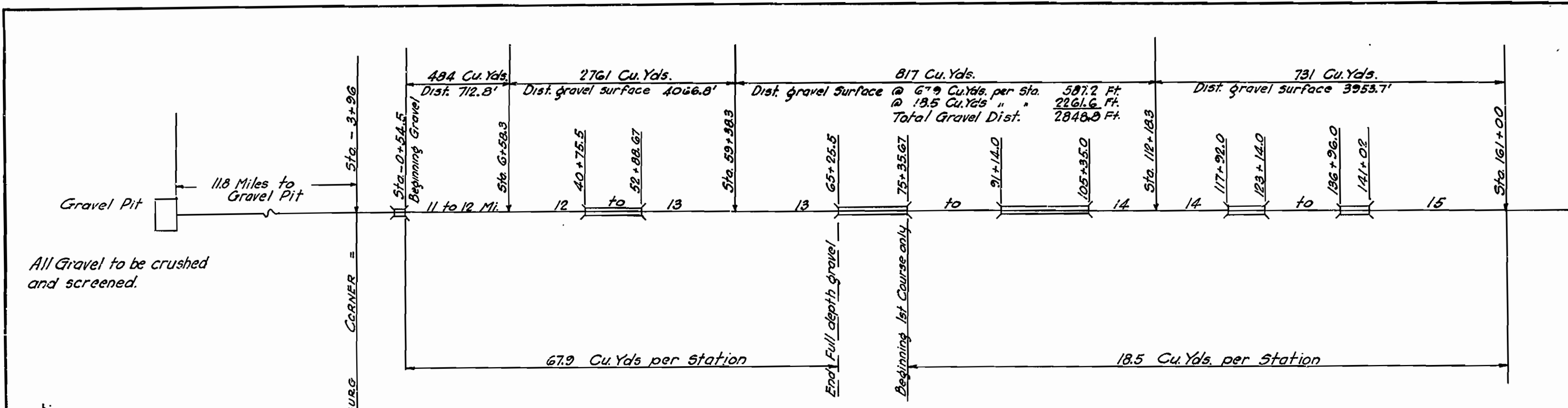
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: E.A.W. Date: 11-15-32
Traced By: E.A.W. Date: 11-16-32
Checked By: _____ Date: _____
Scale: _____ in. = ft.
BRIDGE NO. _____ DRAWING NO. 3348

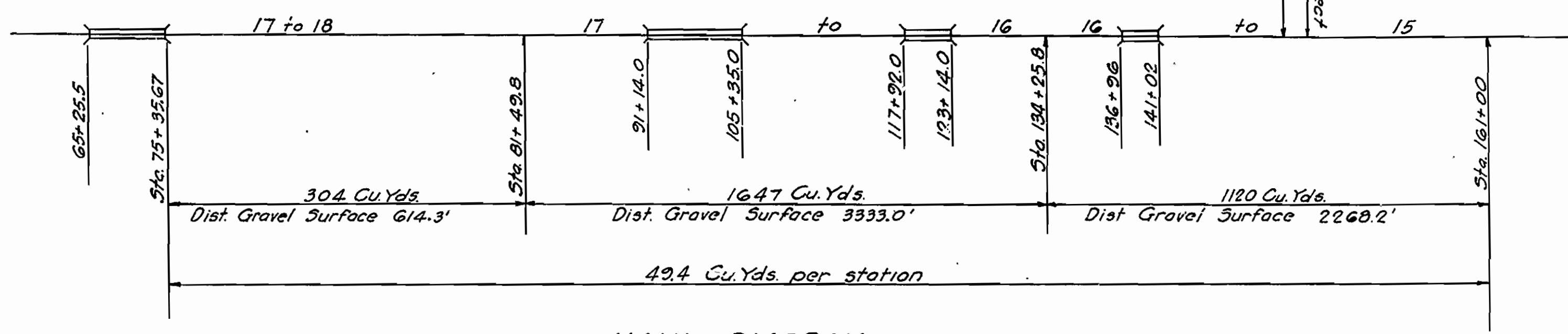
N.B. Jones
BRIDGE ENGINEER

FISCAL YEAR	Job No	SHEET NO	TOTAL SHEETS
1933	10-176	6	45
FEDERAL DIST NO	STATE	FED AID PROJ CO.	FISCAL YEAR
G	Ark.	E 180A	1933
			SHEET NO
			6
			TOTAL SHEETS
			45

DATE	BY
DATE	BY
DATE	BY



NOTE:- Two haul diagrams occasioned by applying bottom course from east end of project to Sta. 75+35.67 before new fill on west end settles enough to receive surface gravel. This provides gravel surface for bridge material haul and thereby facilitates that work.



DATE	BY
DATE	BY
DATE	BY

GRAVEL IN PLACE	
Mile Haul	Gravel Cu.Yds
11 to 12	494
12 to 13	2761
13 to 14	817
14 to 15	731
15 to 16	120
16 to 17	1647
17 to 18	304
Totals	7864

GRAVEL IN PLACE	
Miles Hauled	Gravel Cu.Yds
11 to 12	5324
12 to 13	3332
13 to 14	10621
14 to 15	10234
15 to 16	16800
16 to 17	26352
17 to 18	5168
Totals	107531

Beginning of Gravel	Sta. 0+54.5
End of Gravel	Sta. 161+00
Gross Length	16155.5 Ft
Less Bridge Structures	4573.3 Ft
Net Length of Gravel	11582.2 Ft
Gravel @ 67.9 Cu.Yds per Sta	11582.2 x 67.9 = 7864 Cu.Yds.
All gravel to be crushed and screened	

Stripping Material Pits	800 Cu.Yds.
All Gravel to be crushed and screened	

HAUL DIAGRAM FOR GRAVEL SURFACE COURSE MARKED TREE FLOODWAY ROUTE 63 SECTION 7 POINSELL CO.

DRWG. NO 3349

RIGHT OF WAY DATA

From Sta.	To Sta.	Rt. of C.	Lt. of C.	Total Width
32+00	148+00	175'	175'	350'

TANGENT DISTANCE DATA

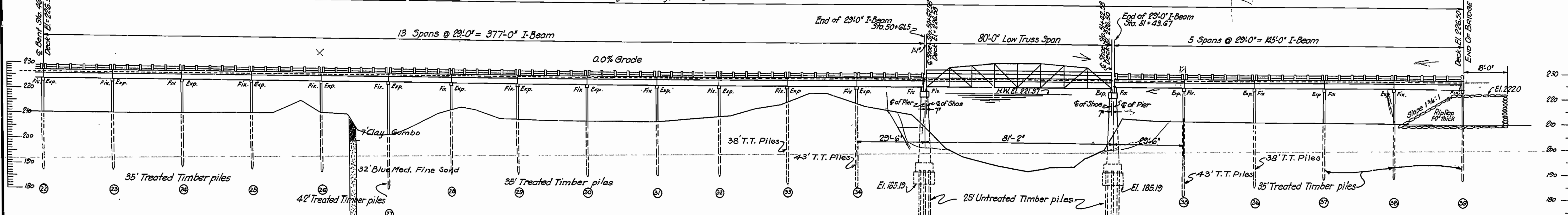
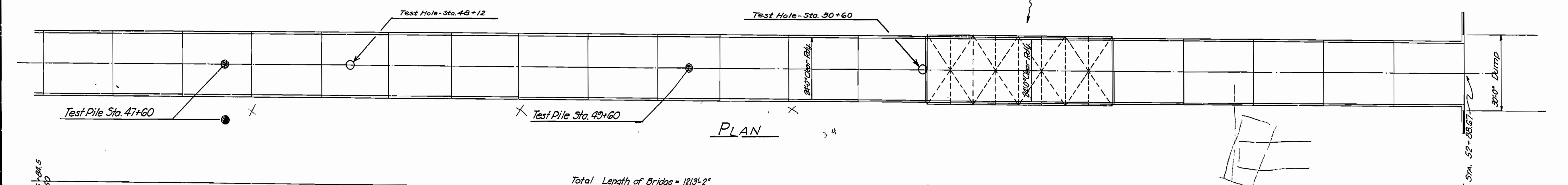
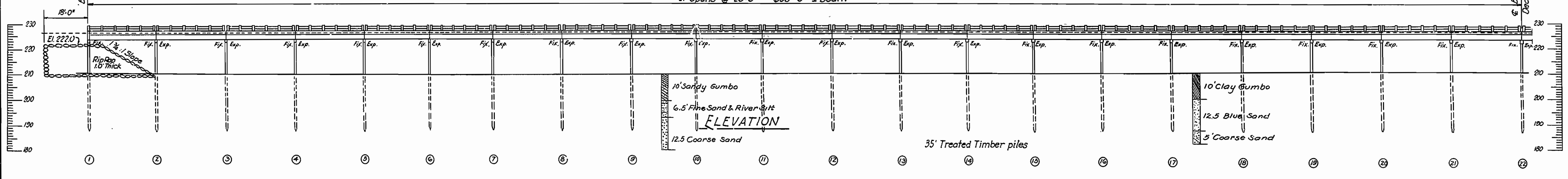
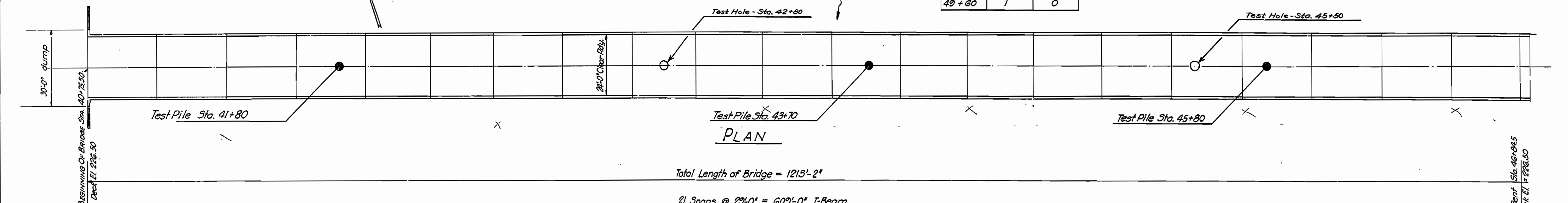
From Beg. of Bridge	From End of Bridge
4330.6	9765.35

TEST PILES (Untreated Timber)

Station	No. of Piles	No. to Load
41+80	1	0
43+70	1	0
45+80	1	0
47+60	2	1
49+60	1	0

FISCAL YEAR	JOB NO.	SHEET NO.	TOTAL SHEETS
	10-176	17	46

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	Ark.	E-180A	1933	17	46



QUANTITIES

Item No. 12	Common Excavation (Completion of Br. Ends)	998	Cu. Yds.
" 13	Dry Excavation for Bridges	81	Cu. Yds.
" 13	Wet Excavation for Bridges	580	Cu. Yds.
" 91	Class A Concrete for Bridges	187.79	Cu. Yds.
" 91	Class S Concrete for Bridges	745.20	Cu. Yds.
" 91	Seal Concrete for Bridges	127.42	Cu. Yds.
" 92	Reinforcing Steel for Bridges	178365	Pounds
" 94	Concrete Railing for Bridges	2270	Lin. Ft.
" 95	Rip Rap	855	Cu. Yds.
" 96	Structural Steel for Truss Bridges	85611	Pounds
" 96	Structural Steel for I-Beam Bridges	481536	Pounds
" 97	Treated Timber Piling	19772	M.F.B.M.
" 98	Treated Timber Pile Cut Off	1110	Lin. Ft.
" 98	Untreated Timber Piling	398	Lin. Ft.
" 98	Test Piles	6	Number
" 98	Loading Test Piles	1	Number
" 98	Untreated Timber Piling	1600	Lin. Ft.

GENERAL NOTES

All concrete except seal to be placed in the dry. Lengths of piling shown are for estimating quantities only. Actual lengths to be determined in the field.

Volume occupied by embedded pile heads in seal and footing concrete will not be included in pay quantities of concrete.

For details of approach spans see dwg. No. 2150

" " " 80'-0" steel span " " No. 3543

" " " conc. piers " " No. 3366

Field Paint: First coat, white lead, tinted with lamp black, and second coat, aluminum paint (see specifications).

Specifications: Arkansas Standard Road and Bridge Specifications, adopted May 30, 1925 and revised.

ELEVATION

B.M. No. 4 El. 210.24
Nail in Roof of 20' Ash
60' Lt. of Sta. 29+10

SWAY BRACING

Bent No.	Length of Sways
	Short Sways Long Sways
2 to 26	18'-0" 20'-0"
27	24'-0" 26'-0"
28 to 32	18'-0" 20'-0"
33 to 34	16'-0" 18'-0"
35 to 38	18'-0" 20'-0"

LAYOUT OF BRIDGE OVER MARKED TREE FLOODWAY AT STA. 40+75 POINSETT CO. ROUTE 63 SEC. 7

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: E.A.W. Date: 10-5-32
Traced By: E.A.W. Date: 10-6-32
Checked By: _____ Date: _____
BRIDGE NO. 1767
Scale: 1 in. = 20 ft.
DRAWING NO. 3360

M.B. JAMES
BRIDGE ENGINEER

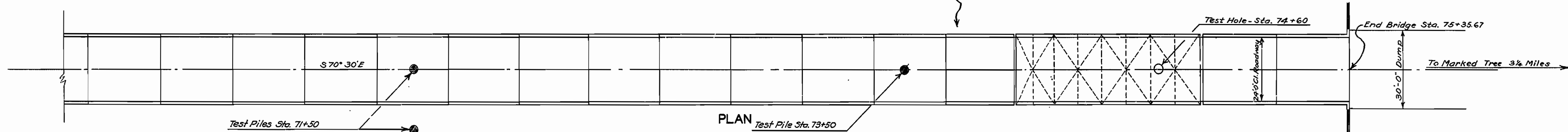
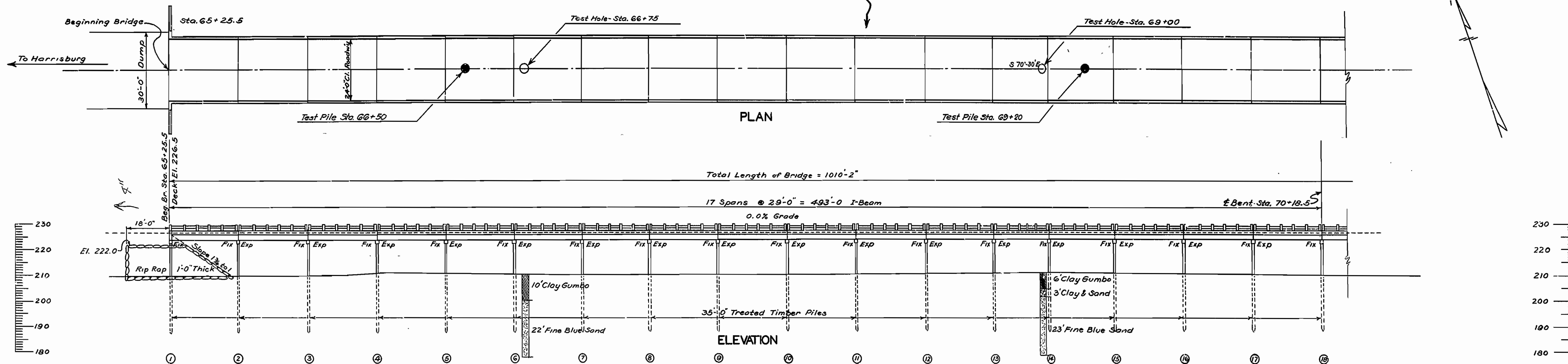
RIGHT OF WAY DATA

From Sta.	To Sta.	Rt. of E.	Lt. of E.	Total Width
32+00	148+00	175'	175'	350'

TANGENT DISTANCE DATA

From Beg. of Bridge	From End of Bridge
6780.6'	7518.33'

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	FISCAL YEAR	JOB NO.	SHEET NO.	TOTAL SHEETS
6	Ark	E-180-A	1933	18	46	1933	10-176	18	46



QUANTITIES

Item No. 12	Common Excavation (Completion of Bridge Ends)	500	Cu. Yds.
" 13	Dry Excavation for Bridges	93	Cu. Yds.
" 13	Wet Excavation for Bridges	390	Cu. Yds.
" 91	Class A Concrete for Bridges	15112	Cu. Yds.
" 91	Class S Concrete for Bridges	62293	Cu. Yds.
" 91	Seal Concrete for Bridges	9560	Cu. Yds.
" 92	Reinforcing Steel for Bridges	148218	Pounds
" 94	Concrete Railing for Bridges	1864'	Lin. Ft.
" 95	Rip Rap	269	Cu. Yds.
" 96	Structural Steel for Truss Bridges	85611	Pounds
" 96	Structural Steel for I-Beam Bridges	394956	Pounds
" 97	Treated Bridge Timber	16272	M.F.B.M.
" 98	Untreated Timber Piling	1800	Lin. Ft.
" 98	Treated Timber Piling	5790	Lin. Ft.
" 98	Treated Timber Pile Cutoff	328	Lin. Ft.
" 98	Test Piles	5	Number
" 98	Loading Test Piles	1	Number

GENERAL NOTES

All concrete except seal to be placed in the dry. Lengths of piling shown are for estimating quantities only. Actual lengths to be determined in the field. Volume occupied by embedded pile heads in seal concrete and footing concrete will not be included in pay quantities of concrete.

For details of approach spans see drawing No. 2150
For details of 60'-0" Steel Span see drawing No. 3343
For details of concrete piers see drawing No. 3367
Field Paint: First coat, white lead, tinted with lamp black and second coat, aluminum paint (see specifications).
Specifications: Arkansas Standard Road and Bridge Specifications adopted May 30, 1925 and revised.

TEST PILES (Untreated Timber)

Station	No. of Piles	No. to Load
66+50	1	0
69+20	1	0
71+50	2	1
73+50	1	0

SWAY BRACING

Bent No.	Length of Sways	
	Short Sways	Long Sways
2 to 21	18'-0"	20'-0"
22 to 28	20'-0"	22'-0"
29 to 30	18'-0"	20'-0"

**LAYOUT OF BRIDGE
AT STA. 65+25
OVER MARKED TREE FLOODWAY
POINSETT CO.
ROUTE 63 SEC. 7
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.**

Drawn By: J.H.K. Date: 10-6-32
Traced By: J.H.K. Date: 10-6-32
Checked By: _____ Date: _____

Scale: 1 in. = 20 ft.

BRIDGE NO. 1768 DRAWING NO. 3381

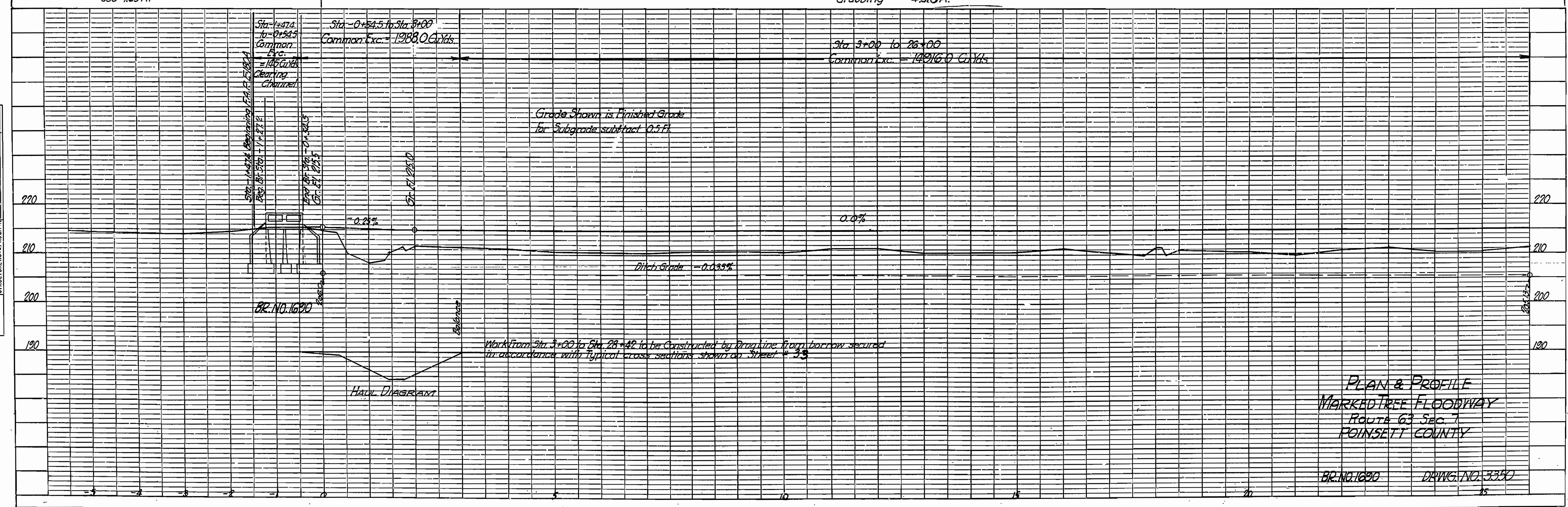
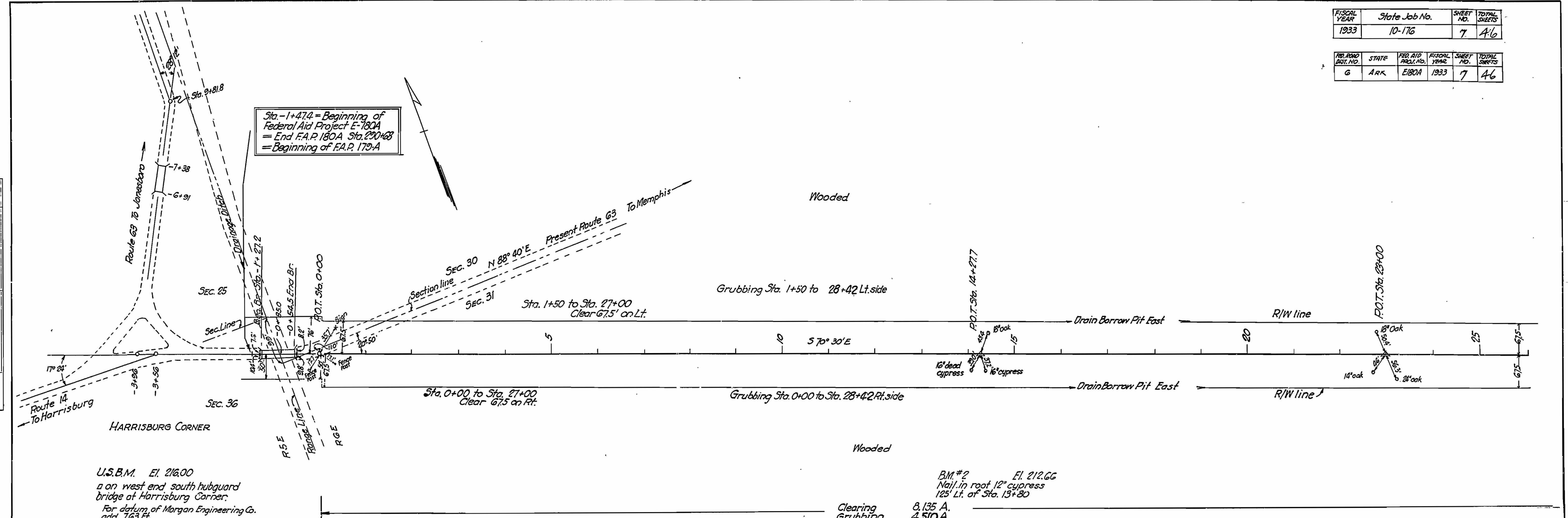
N.B. Sawyer
BRIDGE ENGINEER

FISCAL YEAR	State Job No.	SHEET NO.	TOTAL SHEETS
1933	10-176	7	46

NO. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
G	ARK.	E80A	1933	7	46

DATE	BY

DATE	BY

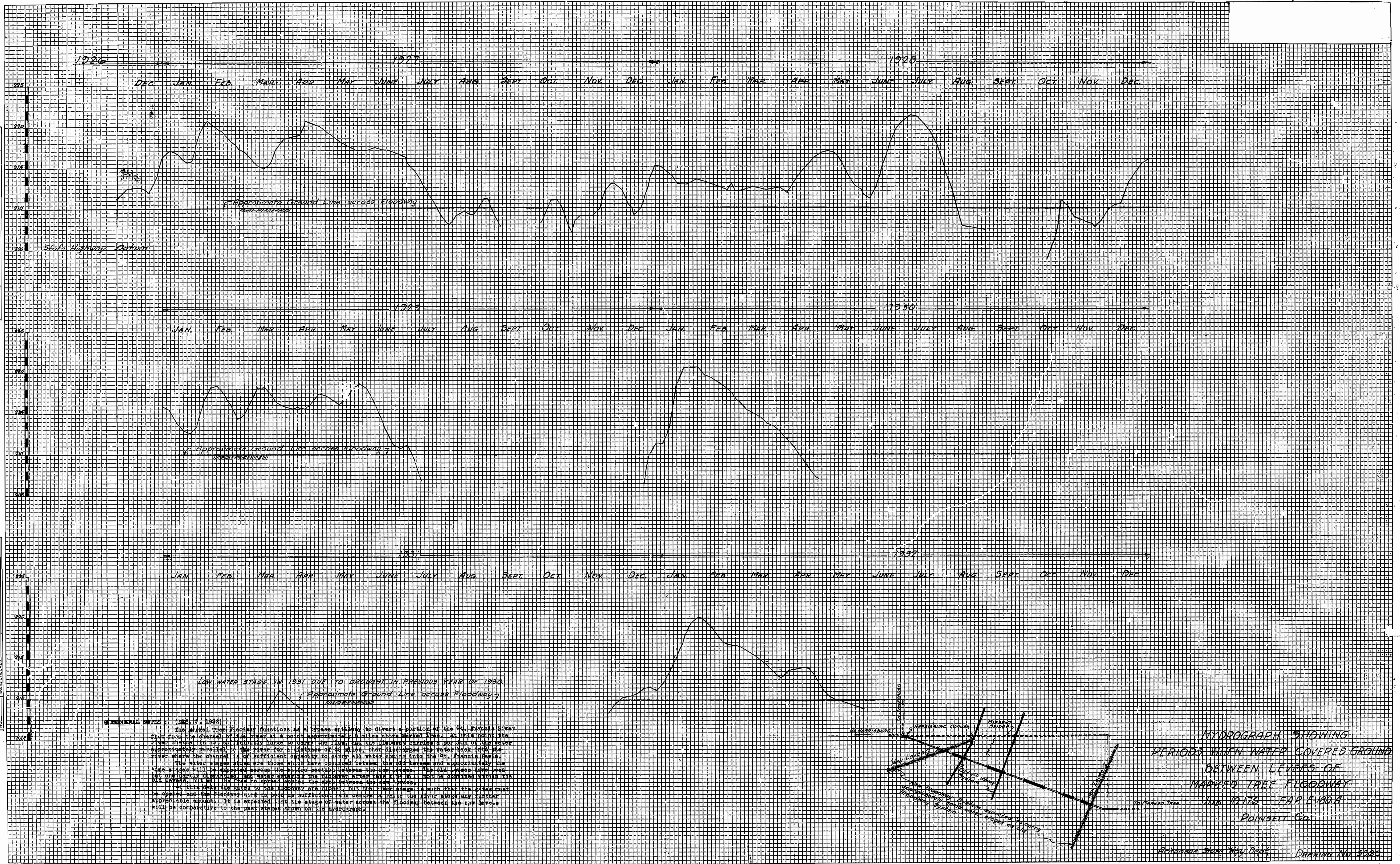


PLAN & PROFILE
 MARKED TREE FLOODWAY
 ROUTE 63 SEC. 7
 FOINSETT COUNTY

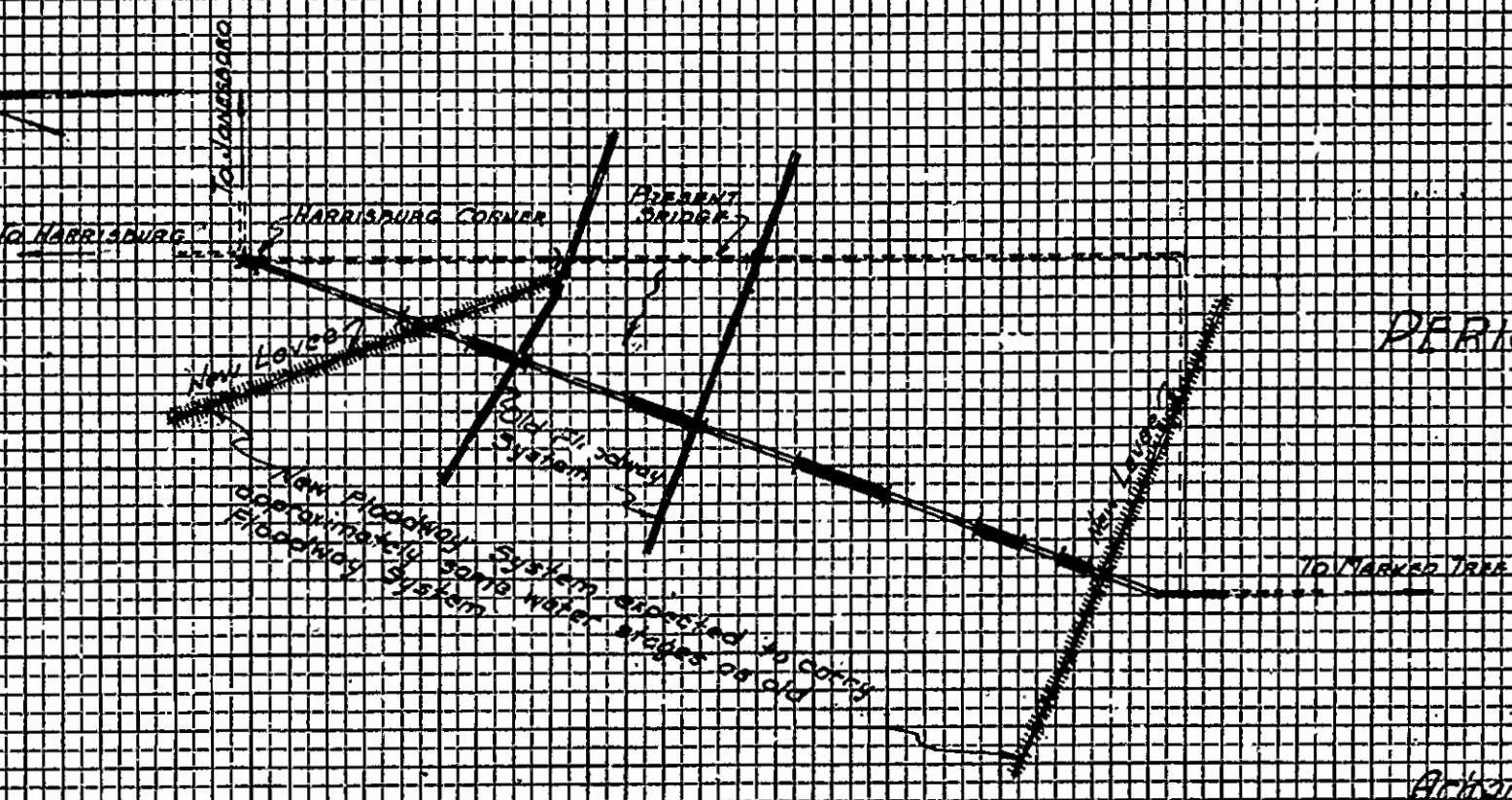
BR. NO. 16200 DRAWING NO. 3330

ORIGINAL SURVEY PLOTTED
 SURVEY PLOTTED
 NOTE BOOK NO. _____
 AREAS CHECKED: _____

ORIGINAL SURVEY PLOTTED
 SURVEY PLOTTED
 NOTE BOOK NO. _____
 AREAS CHECKED: _____



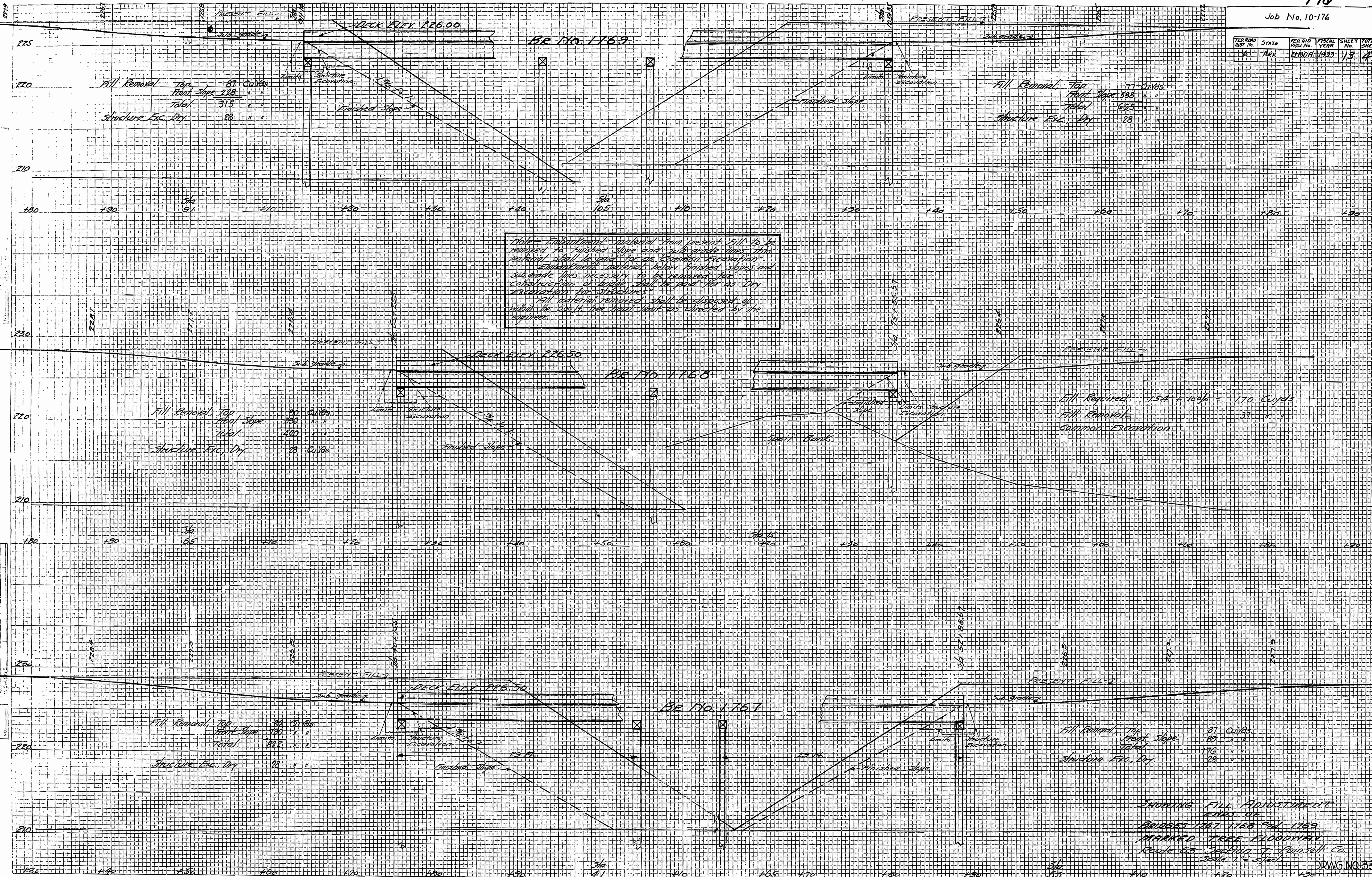
GENERAL NOTES: (200.7, 1936)
 The marked tree floodway functions as a waste highway to divert a portion of the St. Joseph River flow from the channel of the river at a point approximately 1/2 mile above Marked Area. At this point the river channel is not sufficiently large to carry the flow, and the highway carries a portion of the water approximately parallel to the river for a distance of 3/4 mile, then discharges the water back into the river where the channel is of sufficient capacity to carry it. Water coming into the St. Joseph River from the Marked Area flows into the floodway which has a concrete wall on the left side and a concrete wall on the right side. The water will be expelled back to the river through the old levee. The old levee has been built on the sandy embankment and water entering the floodway from this side will be contained within the old levee, but will be free to spread across the area between the new levee. It is suggested that the gates to the floodway be closed, but the river stage is such that the water must be opened and the floodway kept as long as sufficient flow exists to raise the river stage any further appreciable amount. It is suggested that the gate on either side of the floodway between the new levees will be comparative to the gate stages shown on the hydrograph.



HYDROGRAPH SHOWING PERIODS WHEN WATER COVERED GROUND BETWEEN LEVELS OF MARKED TREE FLOODWAY 100 TO 175 F.P. 180 A PAINBETT CO.

Drawn by _____
 Dec. 5, 1932

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	Ark.	11809	1933	13	26



Note - Embankment material from present fill to be removed to finished slope and sub grade lines. This material shall be paid for as Common Excavation. Embankment material below finished slopes and sub grade lines necessary to be removed for construction of bridge, shall be paid for as Dry Excavation for structures. All material removed shall be disposed of within the 500 ft free haul limit and directed by the engineer.

Fill Removal, Top Front Slope 90 Cuyds.
 Total 350
 Structure Exc., Dry 78 Cuyds.

Fill Required 154 x 10 1/2 = 170 Cuyds.
 Fill Removed 37
 Common Excavation

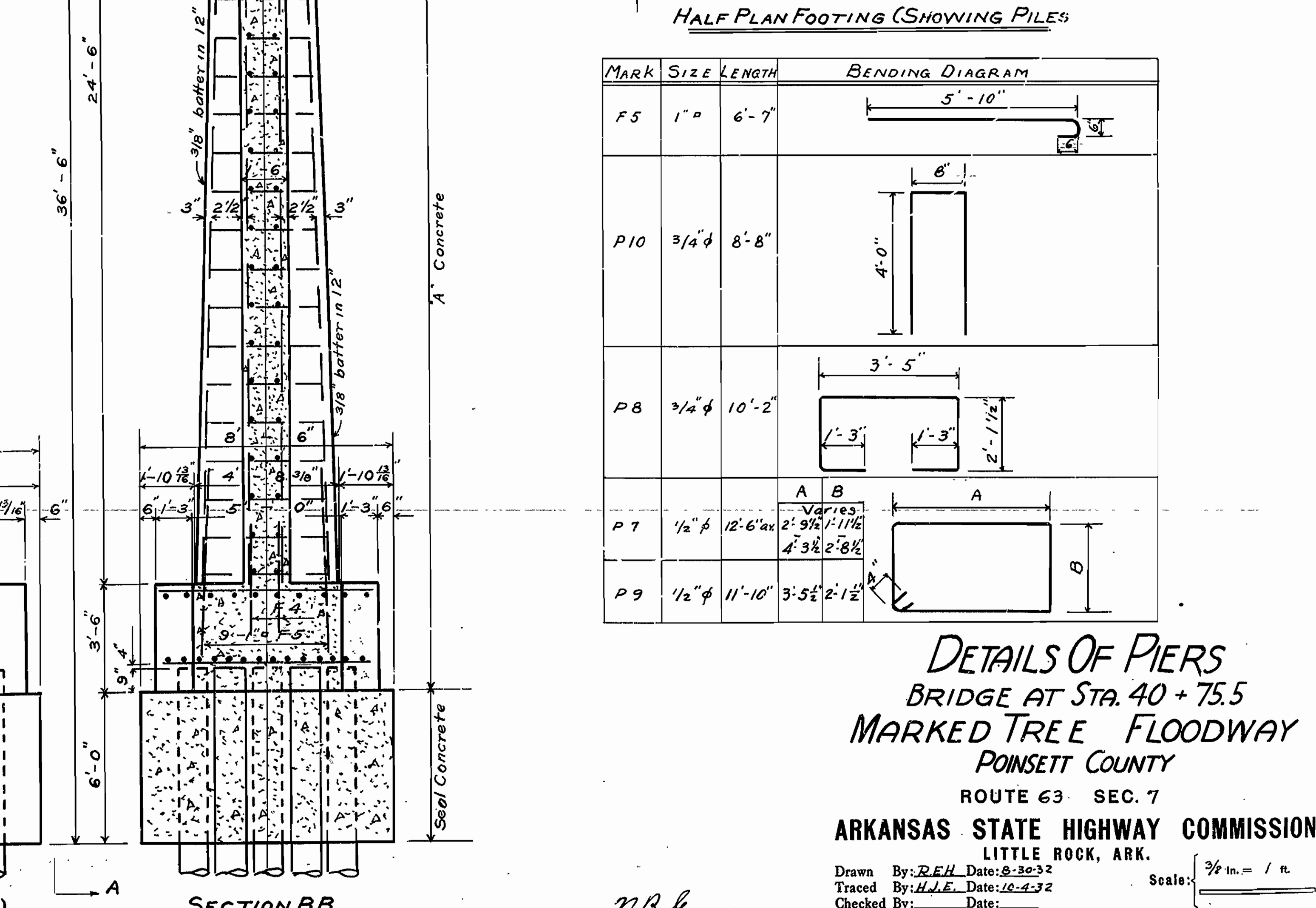
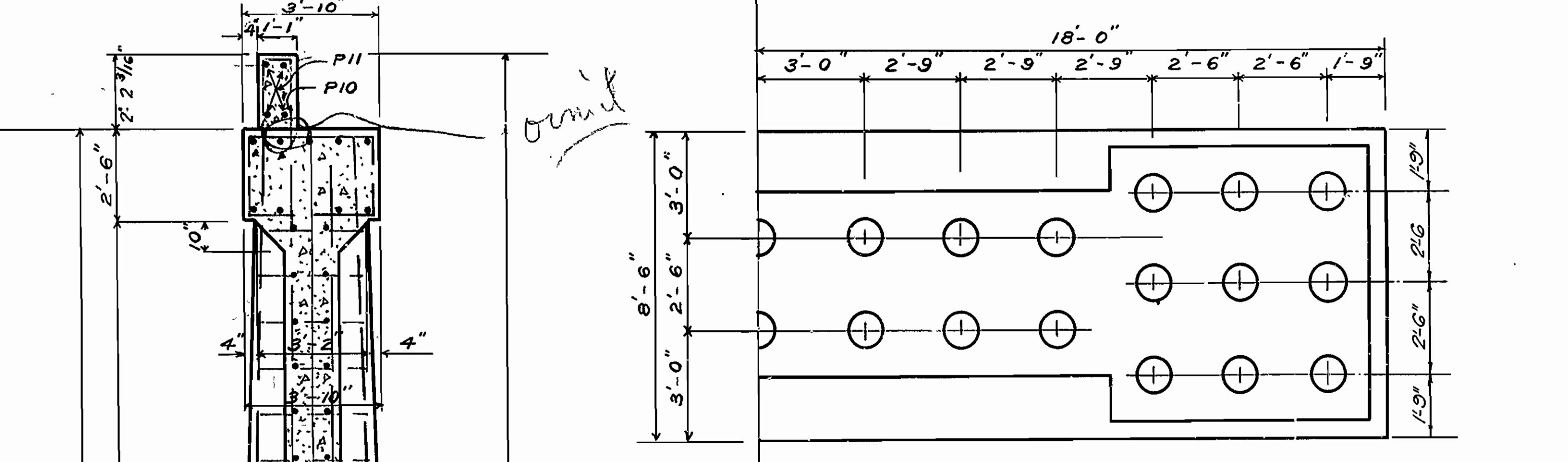
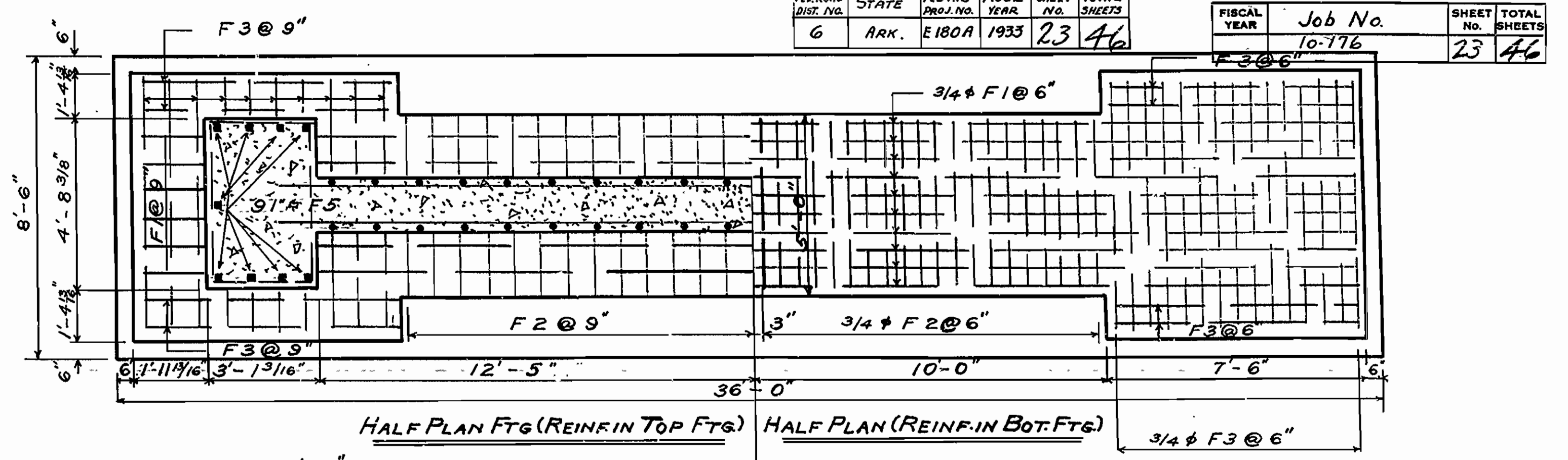
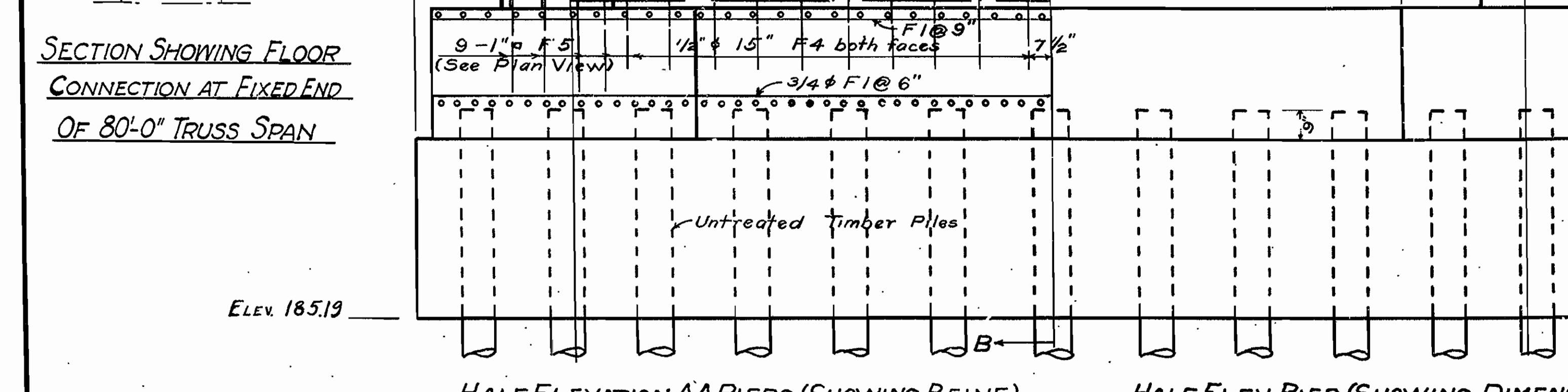
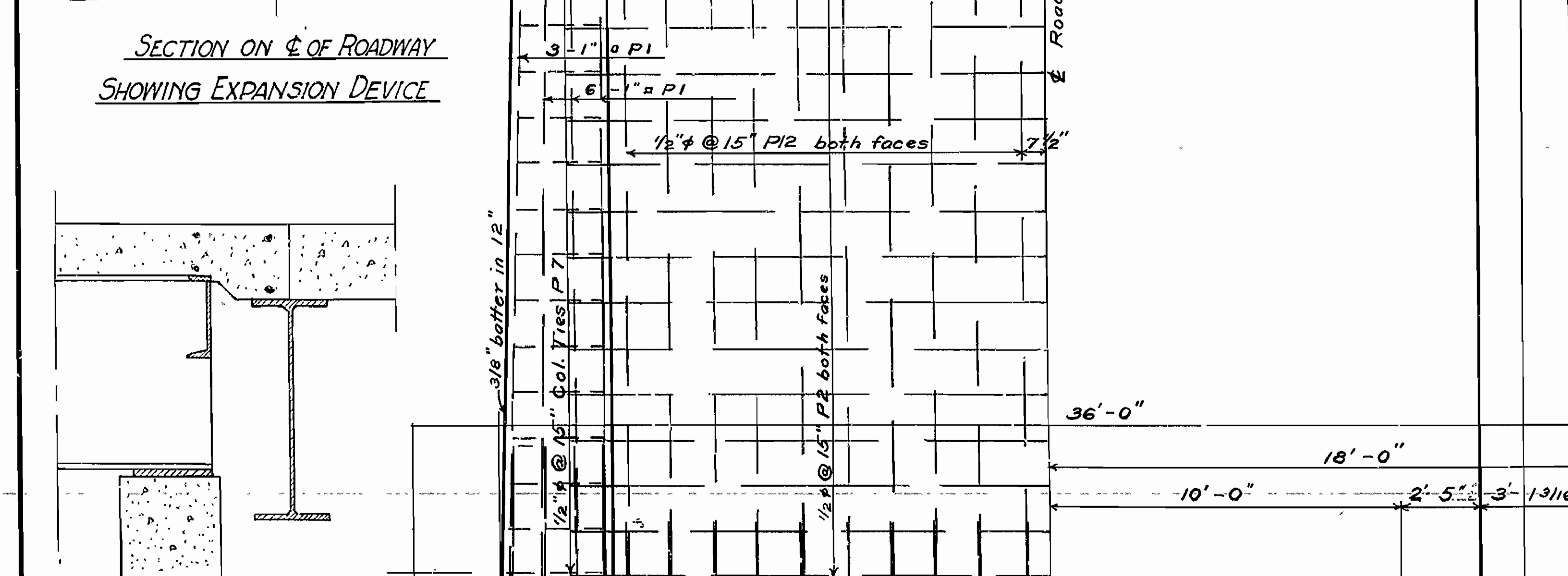
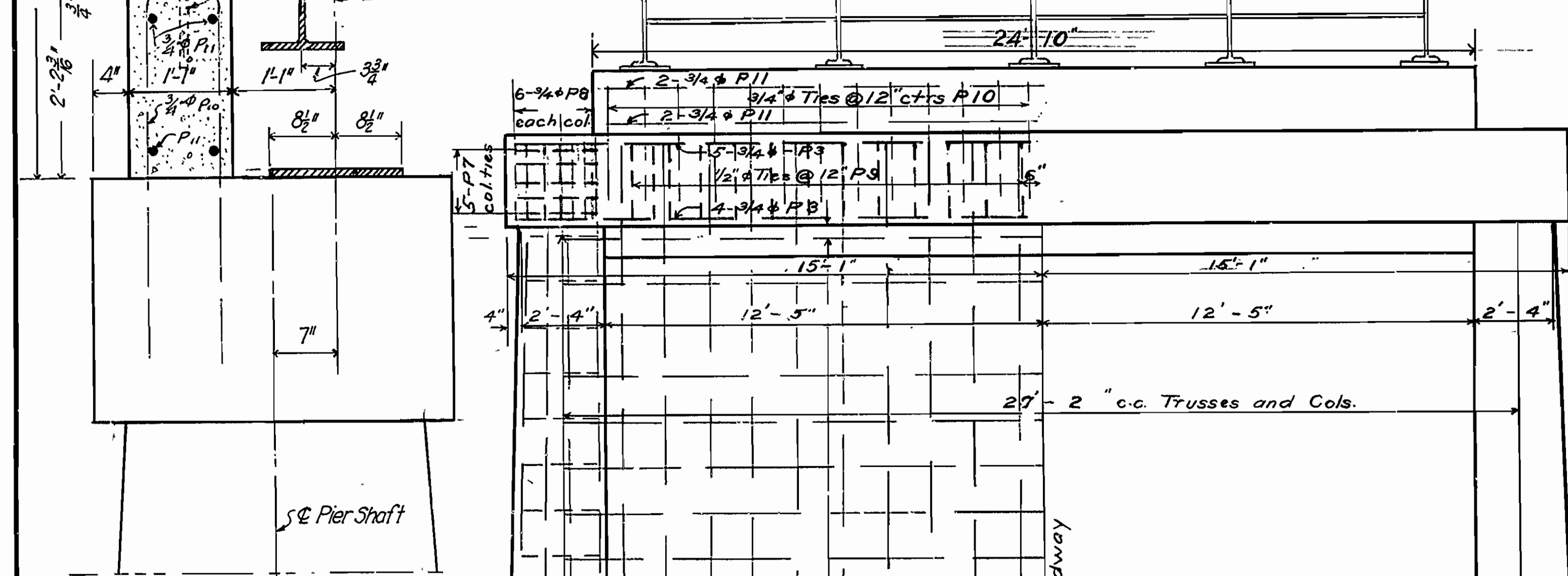
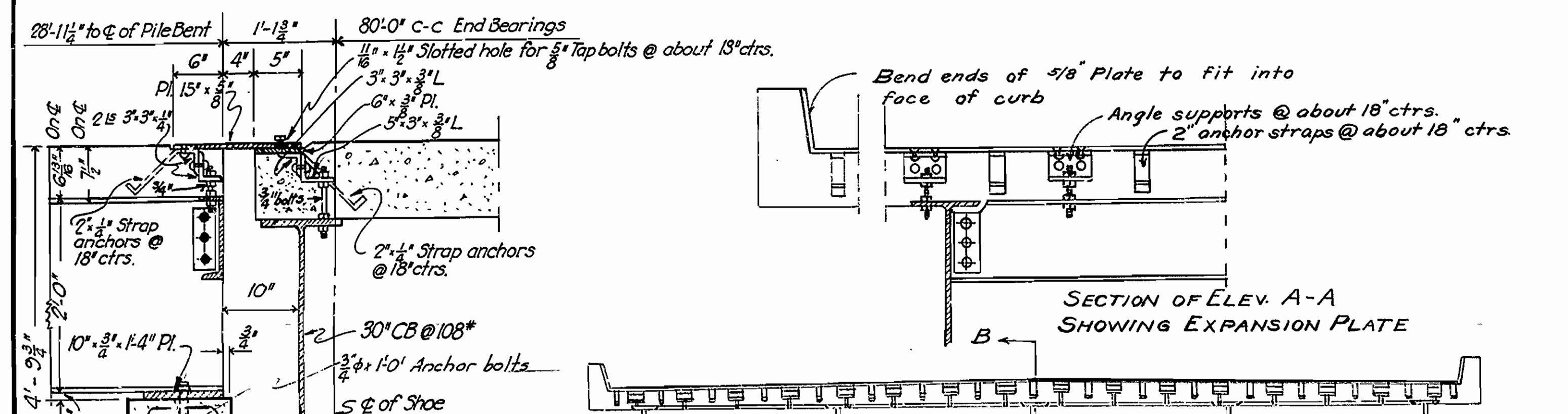
Fill Removal, Top Front Slope 92 Cuyds.
 Total 330
 Structure Exc., Dry 78

Fill Removal, Top Front Slope 87 Cuyds.
 Total 176
 Structure Exc., Dry 78

SHOWING FILL ADJUSTMENT
 ENDS OF
 BRIDGES 1767, 1768 & 1769
 MARKED TREE FLOODWAY
 Route 68, Section 7, Poinsett Co.
 Scale 1" = 5 feet

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	E 180A	1933	23	46

FISCAL YEAR	Job No.	SHEET NO.	TOTAL SHEETS
10-176	10-176	23	46

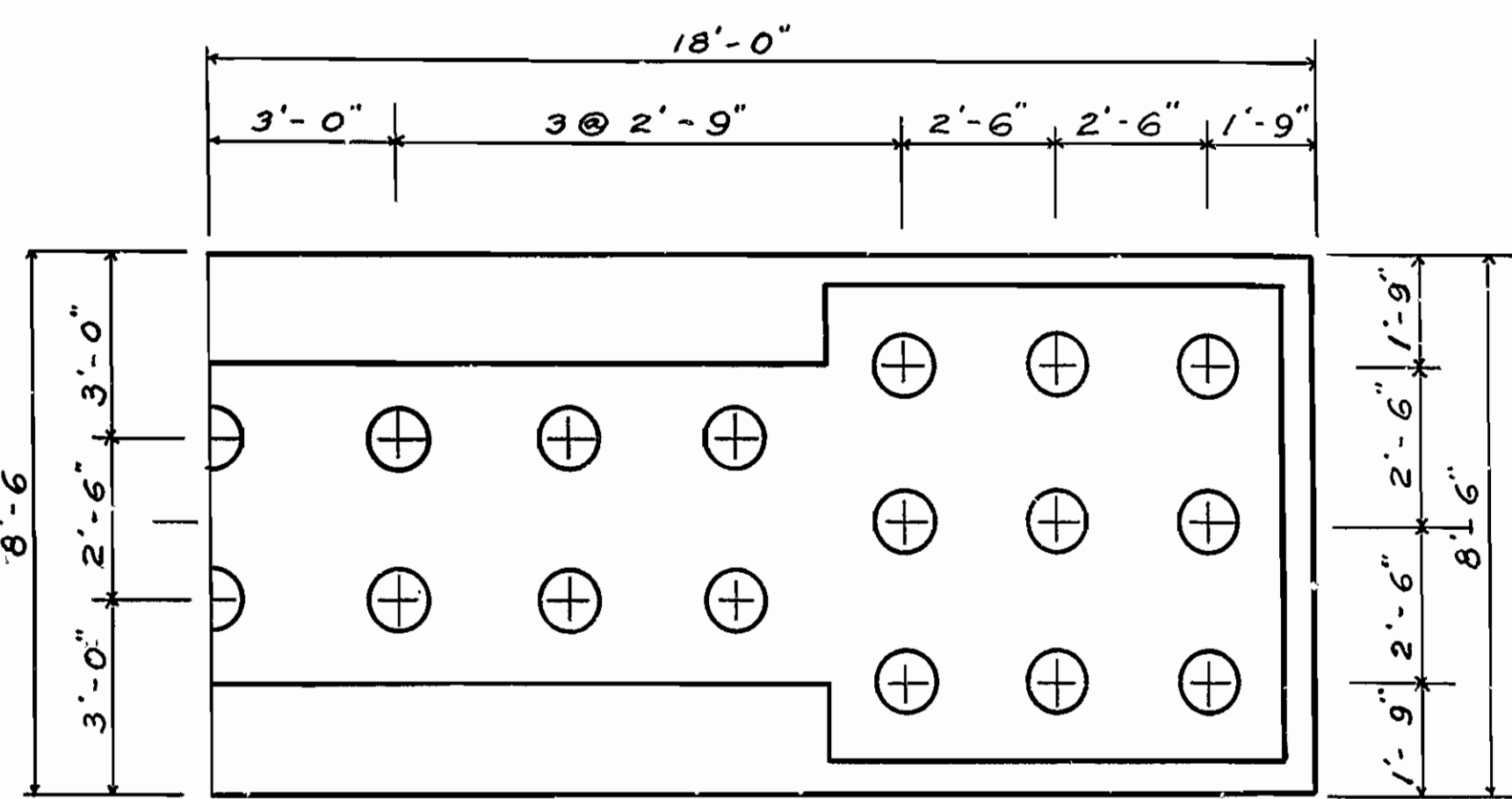
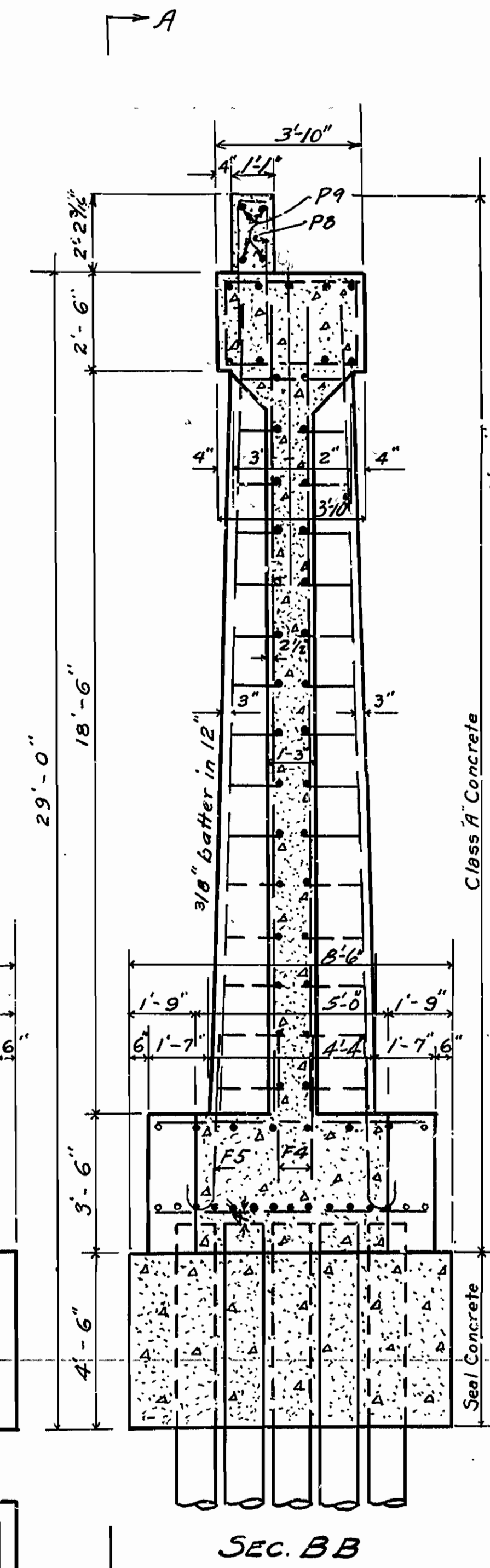
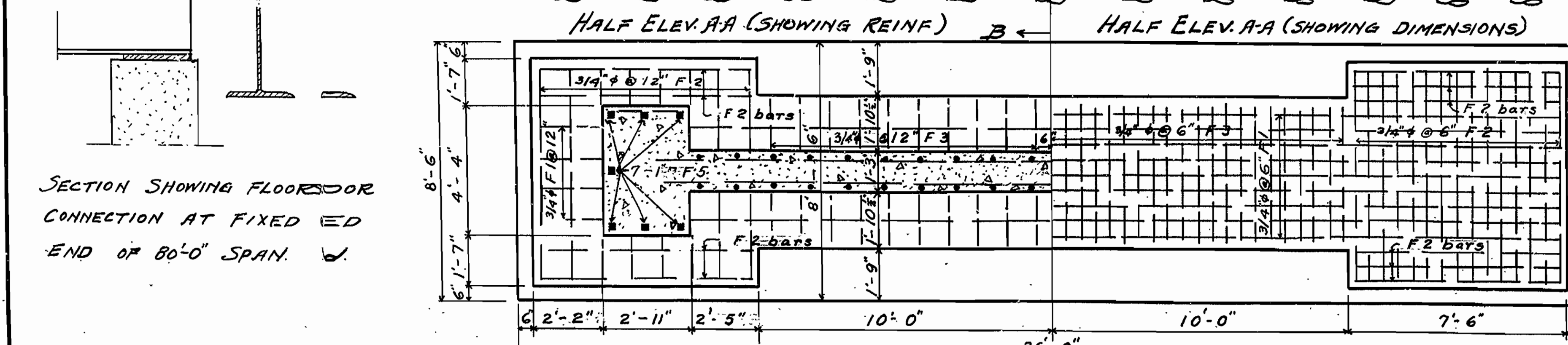
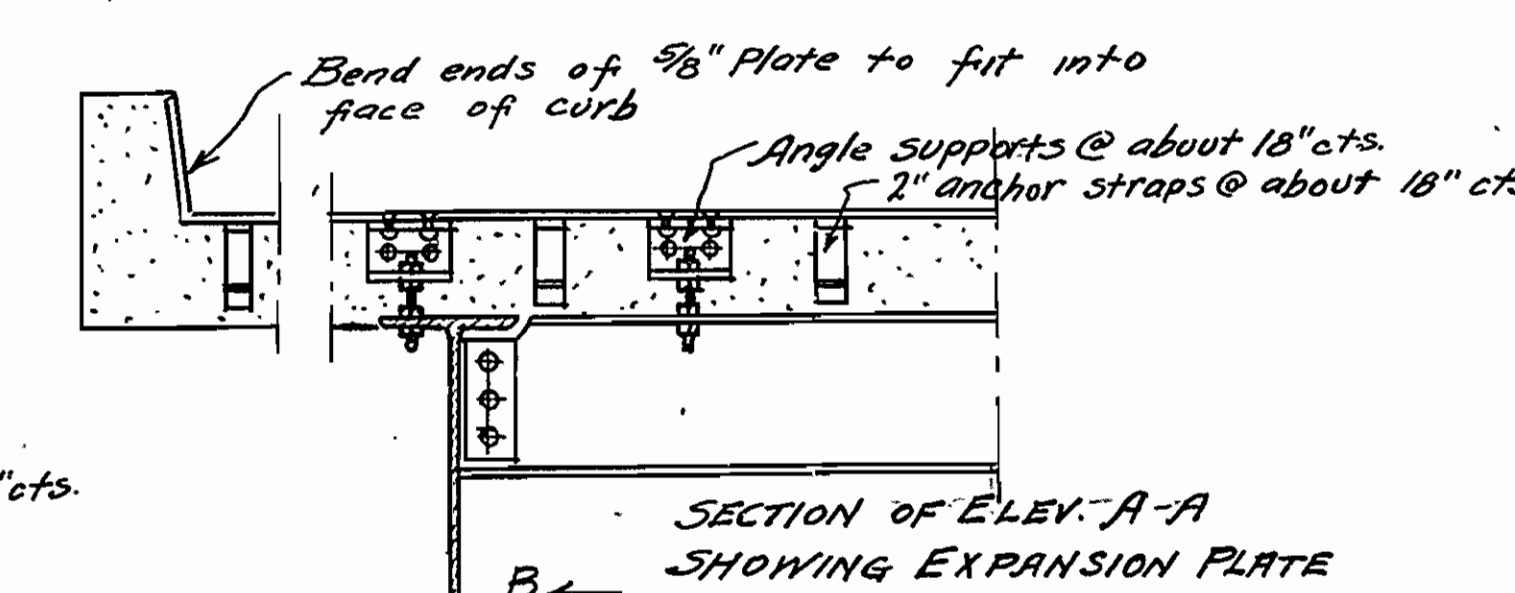
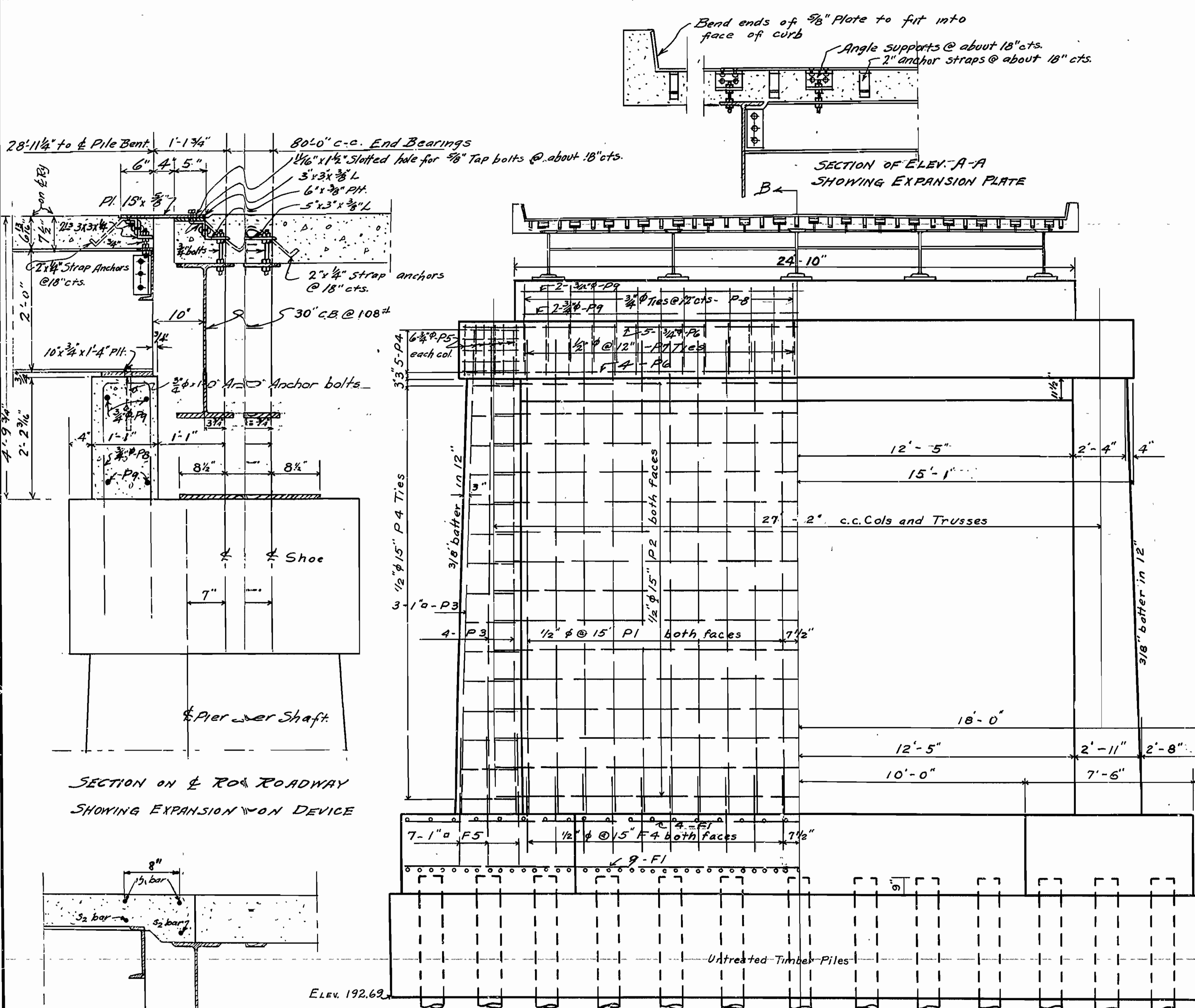


MARK	SIZE	LENGTH	BENDING DIAGRAM
F5	1" φ	6'-7"	
P10	3/4" φ	8'-8"	
P8	3/4" φ	10'-2"	
P7	1/2" φ	12'-6" max	
P9	1/2" φ	11'-10"	

DETAILS OF PIERS
 BRIDGE AT STA. 40 + 75.5
 MARKED TREE FLOODWAY
 POINSETT COUNTY
 ROUTE 63 SEC. 7
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: *REH* Date: 8-30-32
 Traced By: *H.J.E.* Date: 12-4-32
 Checked By: _____ Date: _____
 Scale: 3/4" = 1' - 0"
BRIDGE NO. 1767 DRAWING NO. 3366

M.B. Sawyer
 BRIDGE ENGINEER

FISCAL YEAR	Job No	SHEET NO.	TOTAL SHEETS
1933	10-176	24	46
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
6	ARK	E180A	1933
		SHEET NO.	TOTAL SHEETS
		24	46



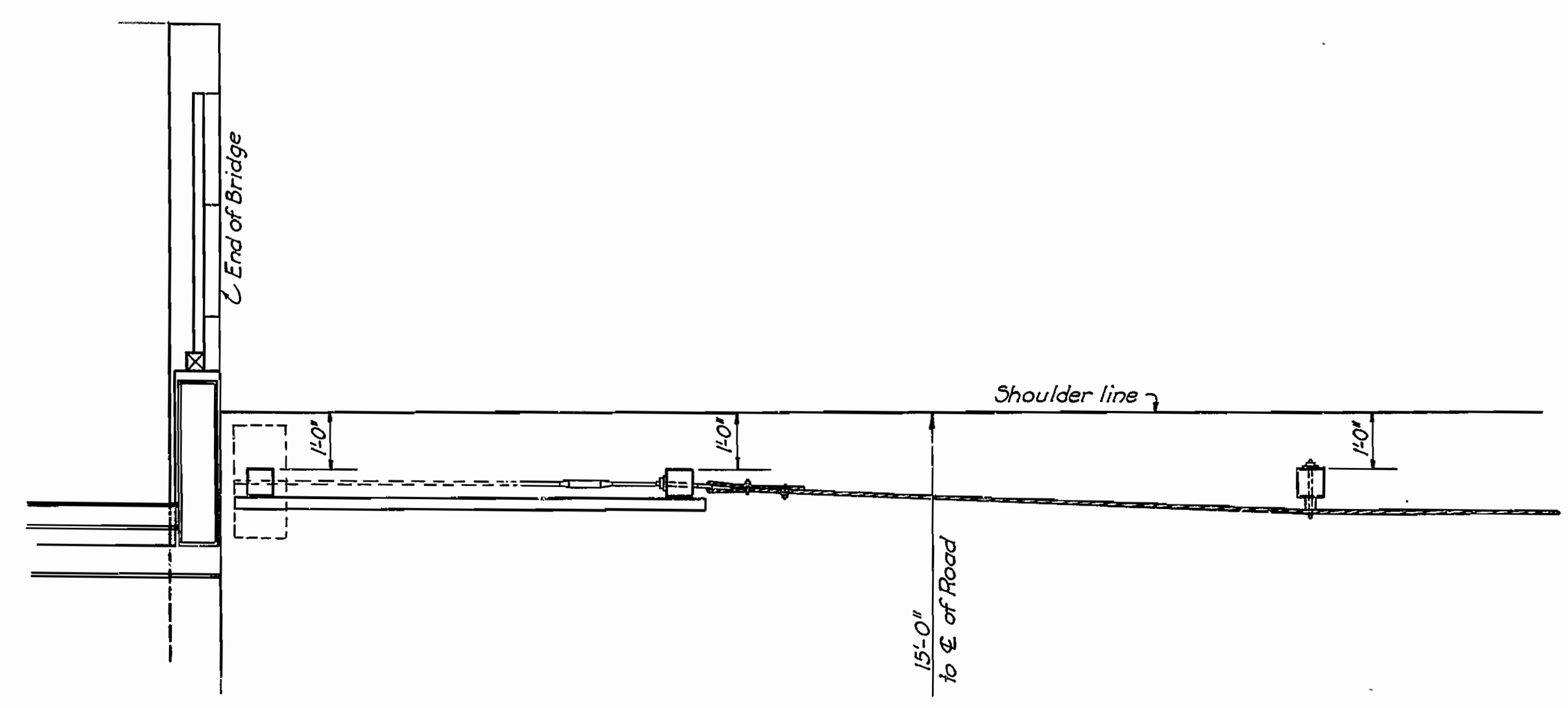
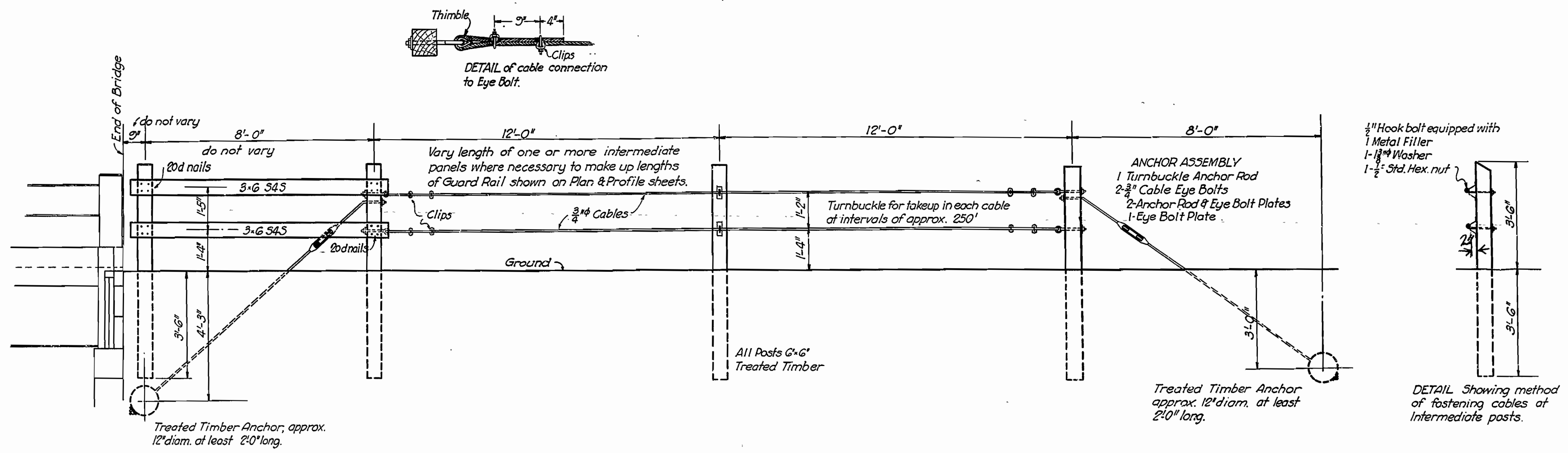
MARK	SIZE	LENGTH	BENDING DIAGRAM
F5	1" #	6'-7"	5'-10"
P8	3/4" #	8'-8"	4'-0"
P5	3/4" #	10'-2"	3'-5"
P4	1/2" #	11'-10"	2'-9 1/2" / 1'-11 1/2" / 3'-10 3/4" / 2'-6 1/2"
P7	1/2" #	11'-10"	3'-5 1/2" / 2'-1 1/2"

DETAILS OF PIERS
BRIDGE AT STA 65+25.5
ST. FRANCIS RIVER FLOODWAY NEAR MARKED TREE
POINSETT COUNTY

ROUTE 63 SEC. 7
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
Drawn By: R.F.H. Date: 9-1-32
Traced By: P.J.S. Date: 10-2-32
Checked By: _____ Date: _____
BRIDGE NO. 1768 DRAWING NO. 3367
Scale: 3/8" = 1' ft. (except as noted)

FISCAL YEAR	State Job No.	SHEET No.	TOTAL SHEETS
1933	10-176	27	46

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	E180A	1933	27	46



**STANDARD
CABLE GUARD RAIL**
WITH TIMBER PANEL ADJOINING BRIDGE ENDS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

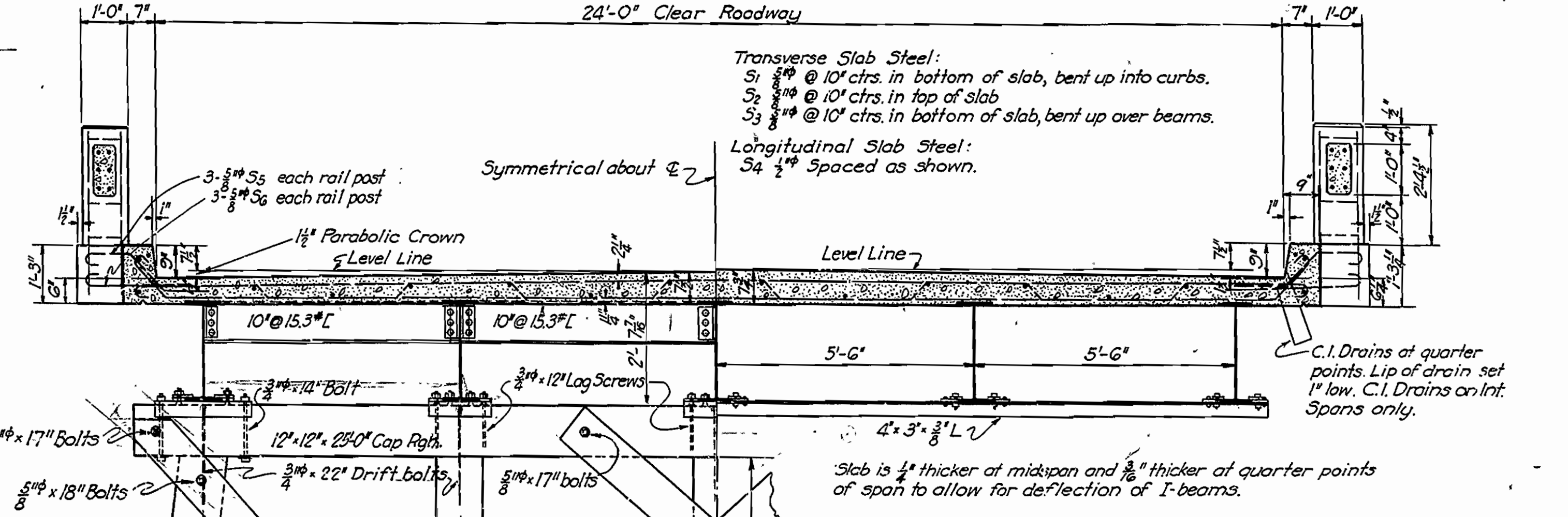
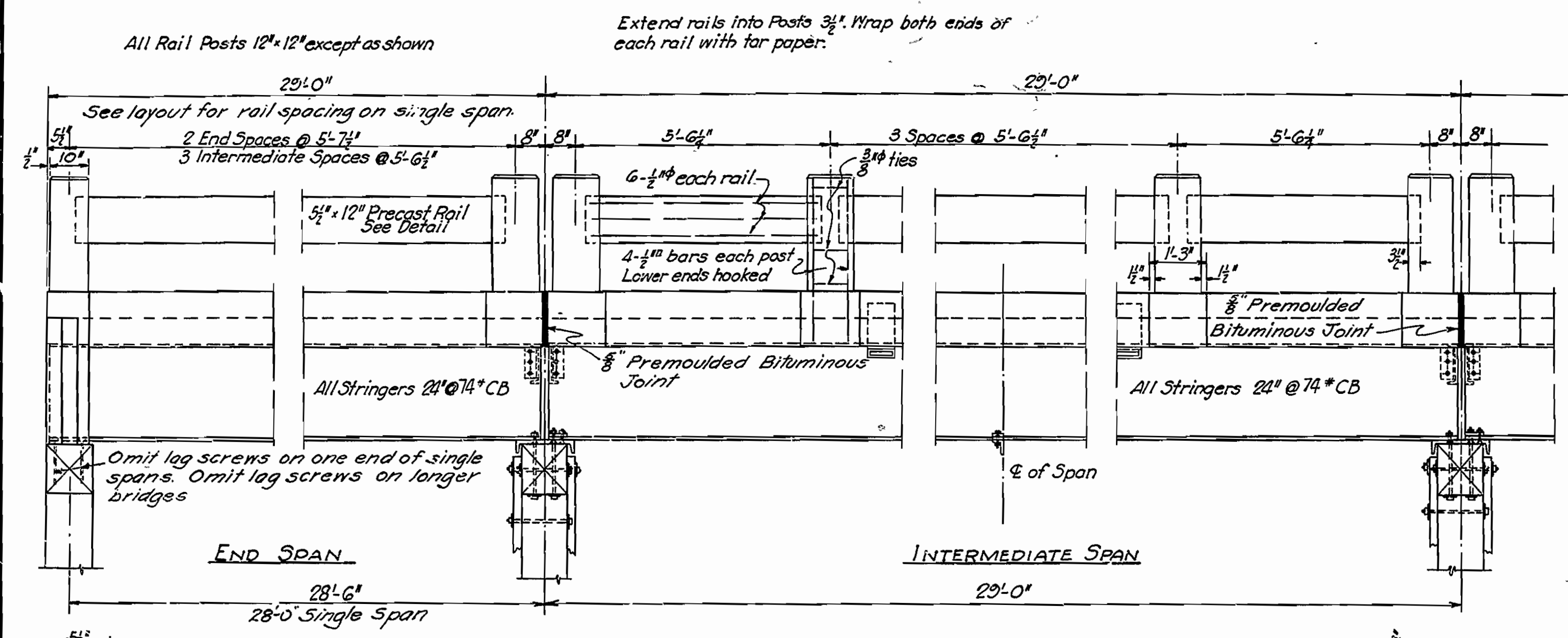
Drawn By: EAW Date: 10-26-32
 Traced By: EAW Date: 10-26-32
 Checked By: _____ Date: _____

Scale: $\frac{1}{2}$ in. = 1 ft.

BRIDGE NO. DRAWING NO. 3368

N.B. Jones
BRIDGE ENGINEER

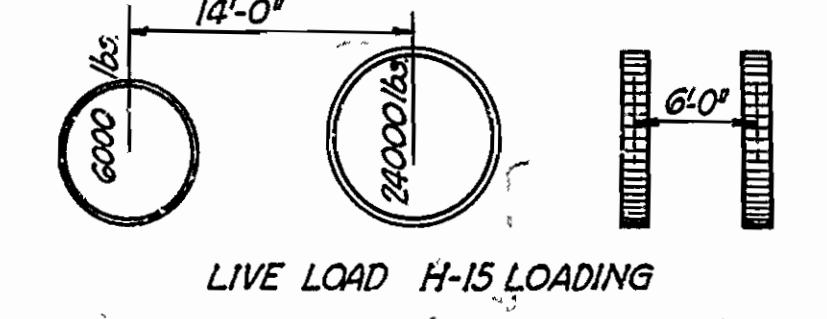
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	FISCAL YEAR	Job No.	SHEET NO.	TOTAL SHEETS
6	ARK.		1934	12	12	1934	1672	12	12



HALF SECTION AT MID-SPAN

UNIT STRESSES

Structural Steel	16000 lbs. per Sq. Inch
Reinforcing Steel	16000 lbs. per Sq. Inch
Concrete	750 lbs. per Sq. Inch



GENERAL NOTES:

All concrete to be Class 'S'. All exposed corners in concrete work to have $\frac{3}{4}"$ chamfer unless otherwise shown or noted.

Shop list and bending diagrams of reinforcing steel must be submitted and approved before fabrication is begun.

Roadway drains, copper water stops and expansion felt are to be paid for at the unit price bid for reinforcing steel.

All timber and piling shall be Southern Yellow Pine or Pacific Coast Douglas Fir.

The preservative used for the treatment of timber and piling shall be Grade 1 of Creosote Oil for Structural Timber.

All timber and piling shall be treated with twelve (12) pound treatment of Creosote Oil by the empty cell process.

Malleable or Cast Iron washers to be used under all heads and nuts of bolts when in contact with wood.

All bolts and hardware in contact with wood to be painted with red lead prior to construction and all exposed portions of bolts and hardware to be painted with a black asphaltic paint after construction is completed.

$3\frac{1}{2}"$ rivets, $3\frac{1}{2}"$ open holes. Use $3\frac{1}{2}"$ bolts for structural steel field connections.

Shop Paint: All structural steel shall be given one coat of Red Lead and Raw Linseed oil before shipment.

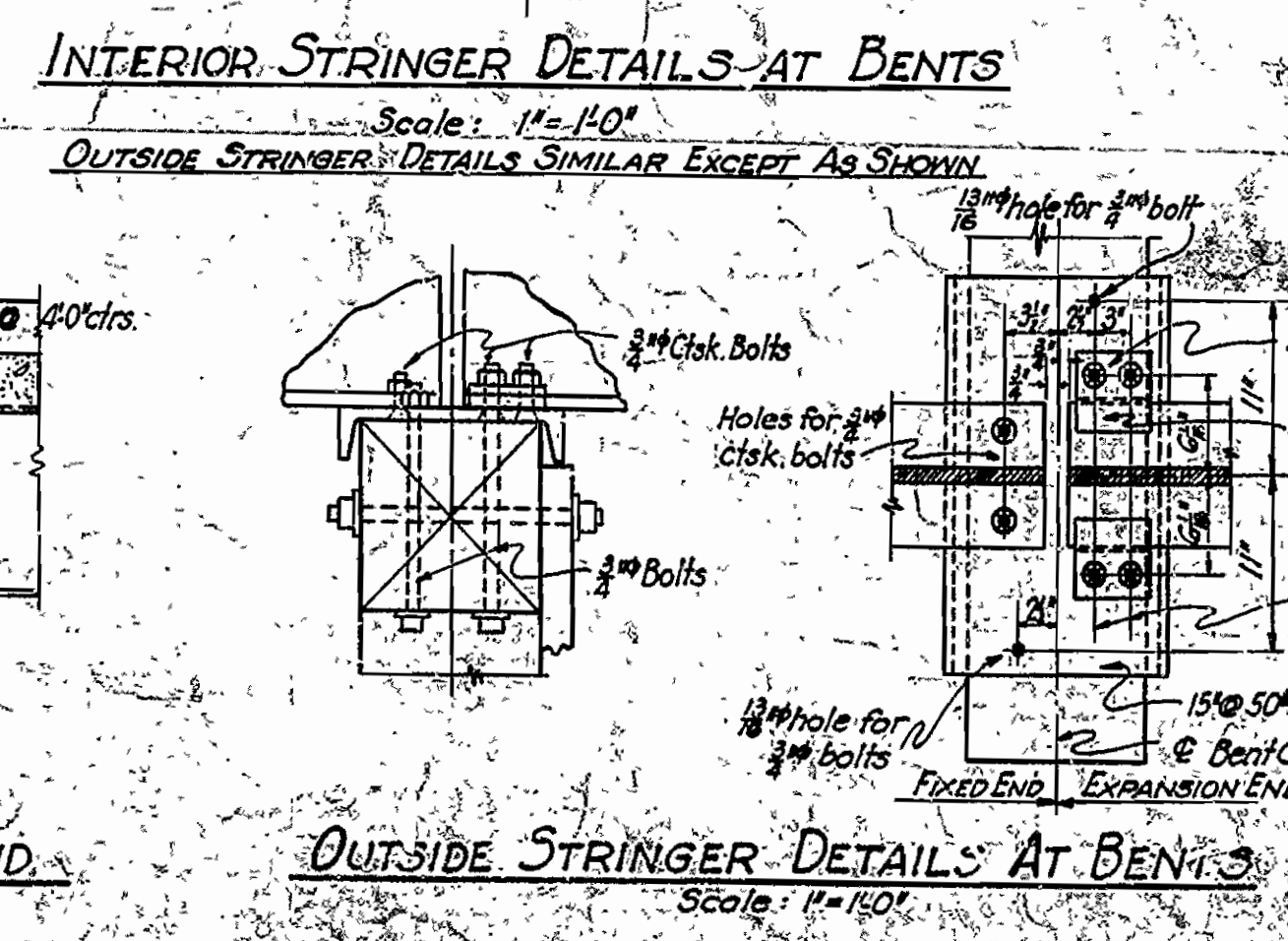
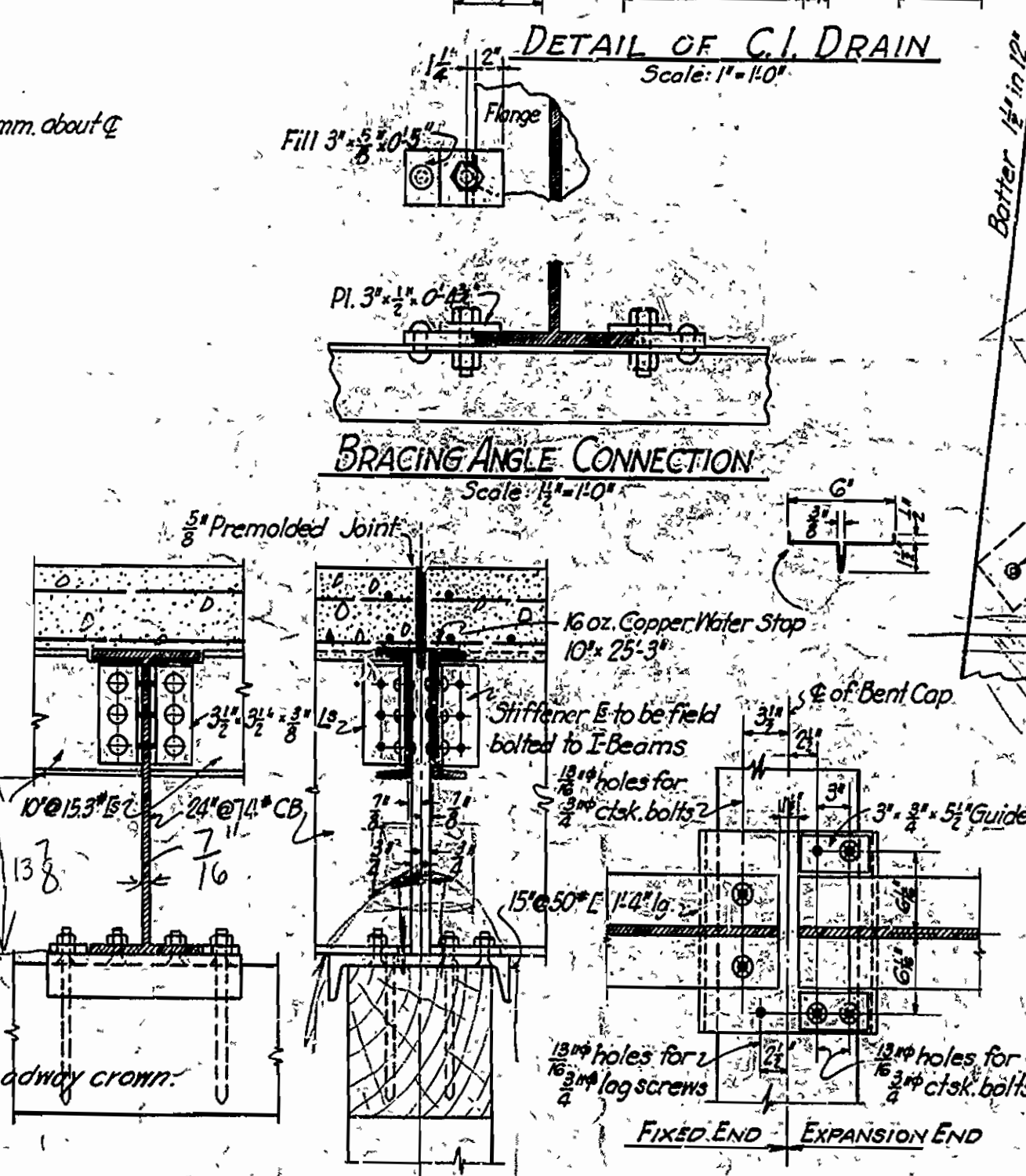
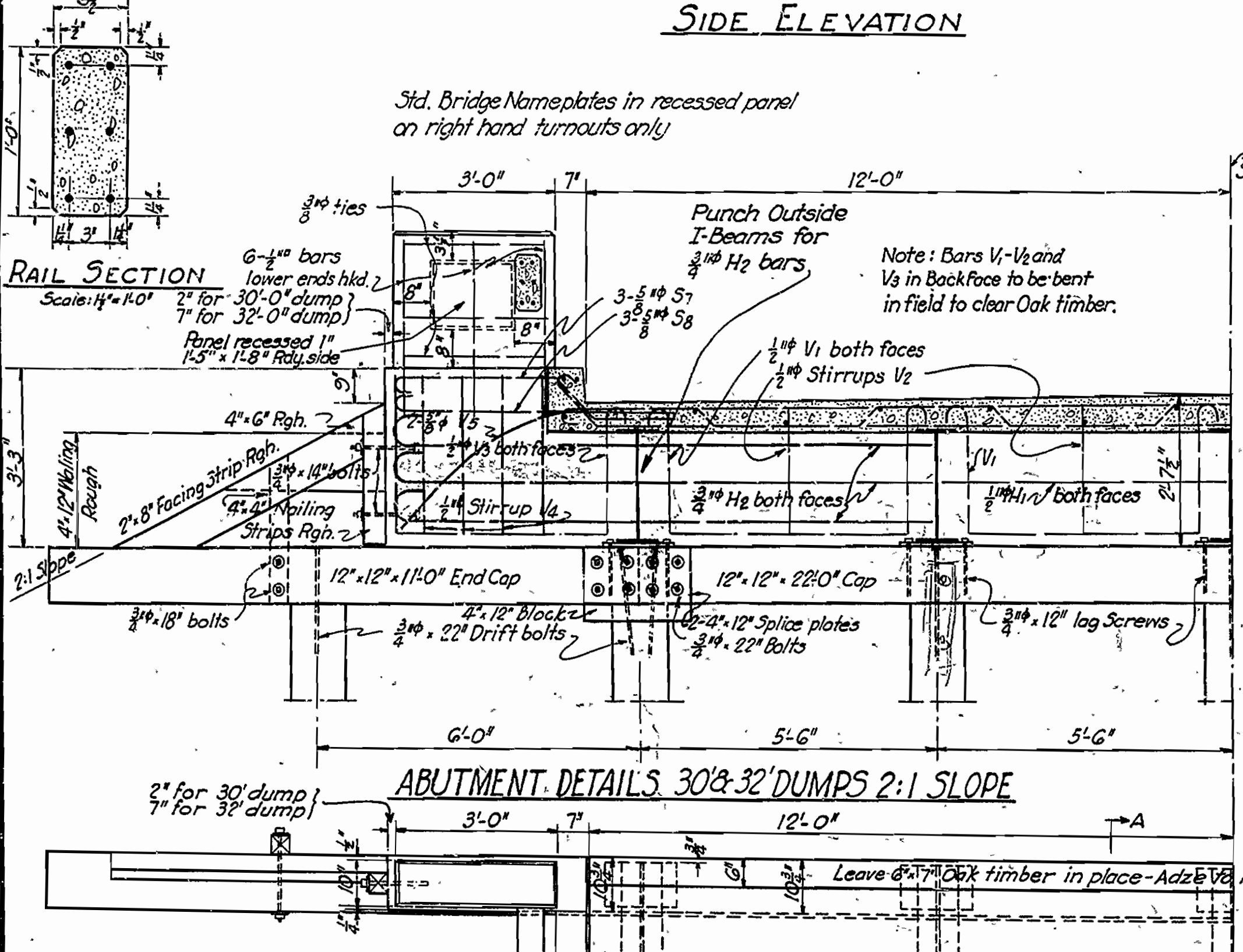
Field Paint: 1st Coat - White Lead tinted with Lamp Black.
2nd Coat - Aluminum Paint

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

Specifications: Arkansas Standard Road and Bridge Specifications, adopted May 30th, 1925 and revised.

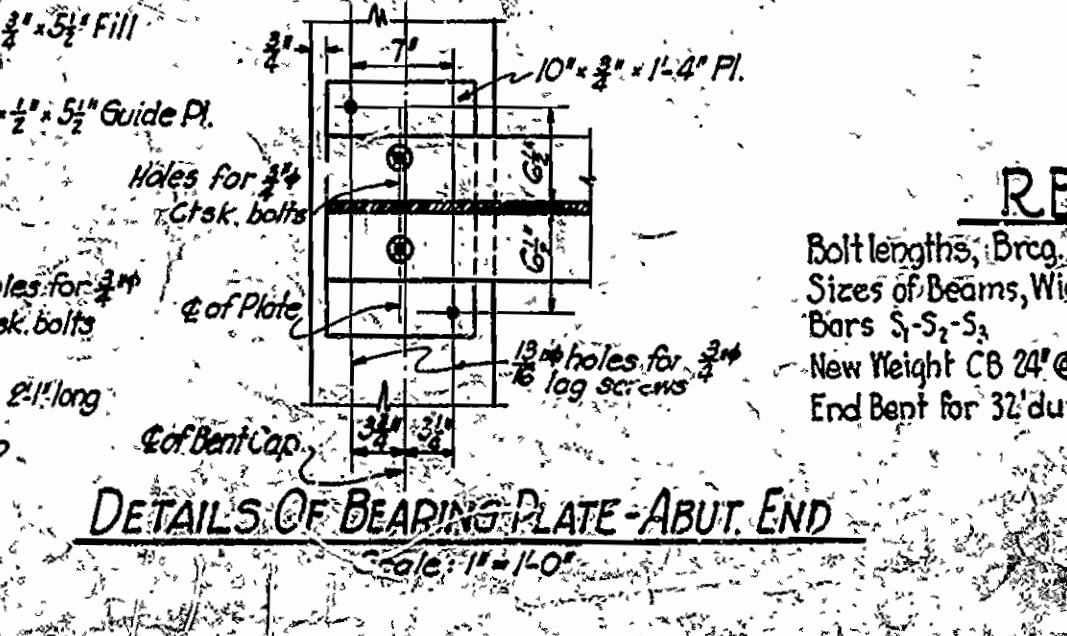
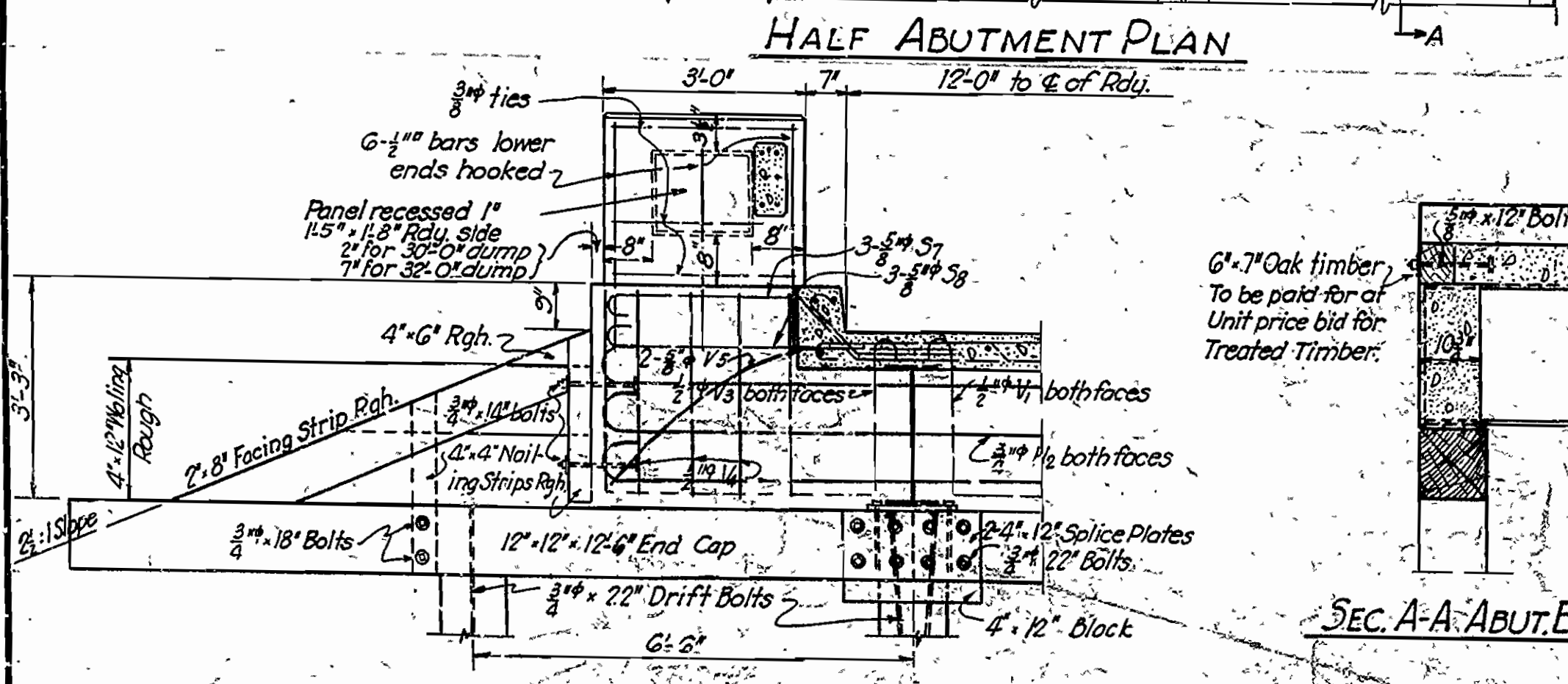
Hardware for timber construction shall be paid for at the unit price bid for Structural Steel for I-Beams.

Max. Pile Design Load 15 tons
Piles to be driven to a minimum capacity of 16 tons.



HALF SECTION AT INT. BENT

Mark	Size	Length	BENDING DIAGRAM
S ₁	$3\frac{1}{2}"$	25'-9"	
S ₂	$3\frac{1}{2}"$	25'-9"	
S ₃	$3\frac{1}{2}"$	25'-9"	
S ₄	$3\frac{1}{2}"$	4'-11"	
S ₅	$3\frac{1}{2}"$	3'-6"	
S ₆	$3\frac{1}{2}"$	6'-1"	
S ₇	$3\frac{1}{2}"$	5'-9"	
S ₈	$3\frac{1}{2}"$	5'-9"	
V ₁	$4"$	9'-8"	
V ₂	$4"$	5'-7"	
V ₃	$4"$	9'-4"	
V ₄	$4"$	6'-9"	
H ₁	$3\frac{1}{2}"$	10'-5"	



REVISED

Bolt lengths, Broc. Angle Conn. Sizes of Beams, Width of Curbs Bars S-S-S New Weight CB $24" \times 74"$ End Bent for 32' dump

E.A.W. 1-30-33
E.A.W. 11-4-33
E.A.W. 11-4-33
E.A.W. 3-19-34
E.A.W. 3-19-34

DETAILS OF 29'-0" STANDARD I-BEAM SPAN CONCRETE FLOOR, TIMBER SUBSTRUCTURE 24'-0" CLEAR ROADWAY

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: H.B. Date: 10-2-32
Traced By: F.A.W. Date: 10-11-32
Checked By: Date:

Scale: $\frac{1}{2}" = 1'$ except as shown

BRIDGE NO. DRAWING No. 2150