



FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO	WRS 713-A	1933

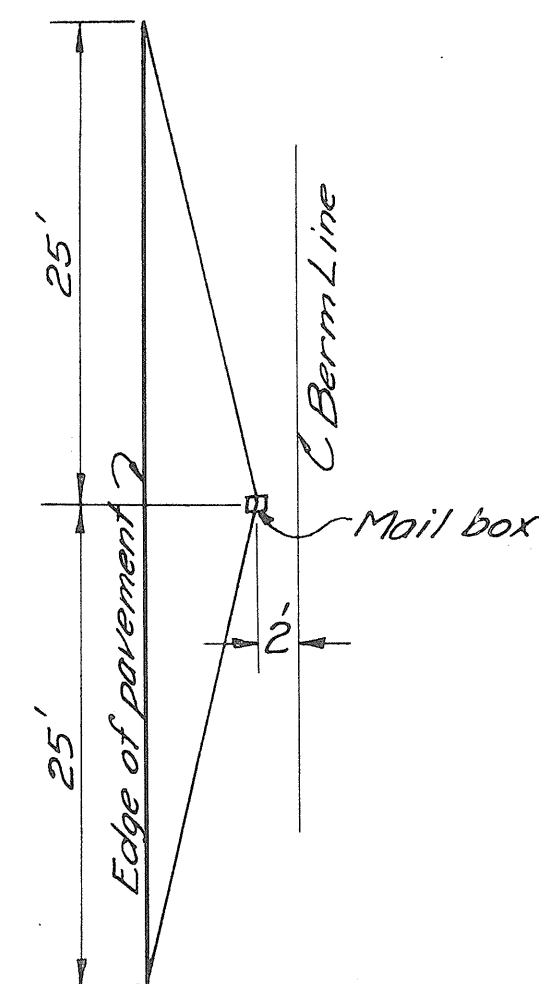
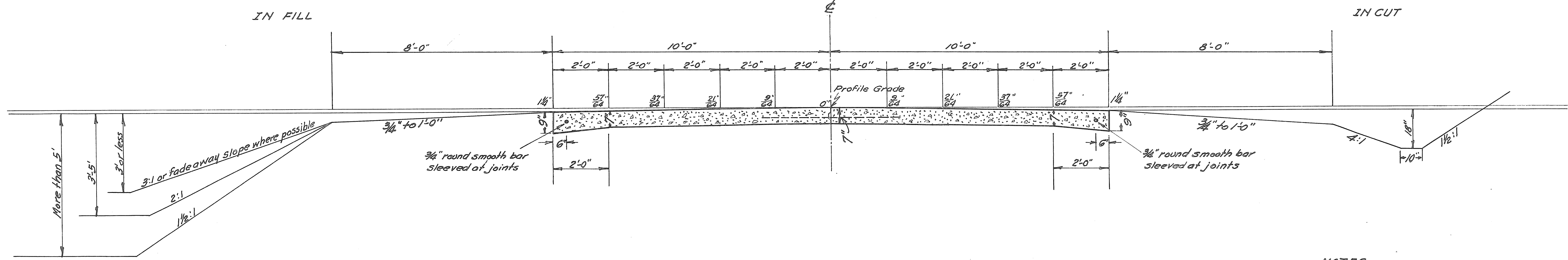
2  
24

PUTNAM COUNTY  
S.H. 134 SECS. F-I Pt.

# TYPICAL SECTION FOR 9-7-7-9 CONCRETE PAVEMENT.

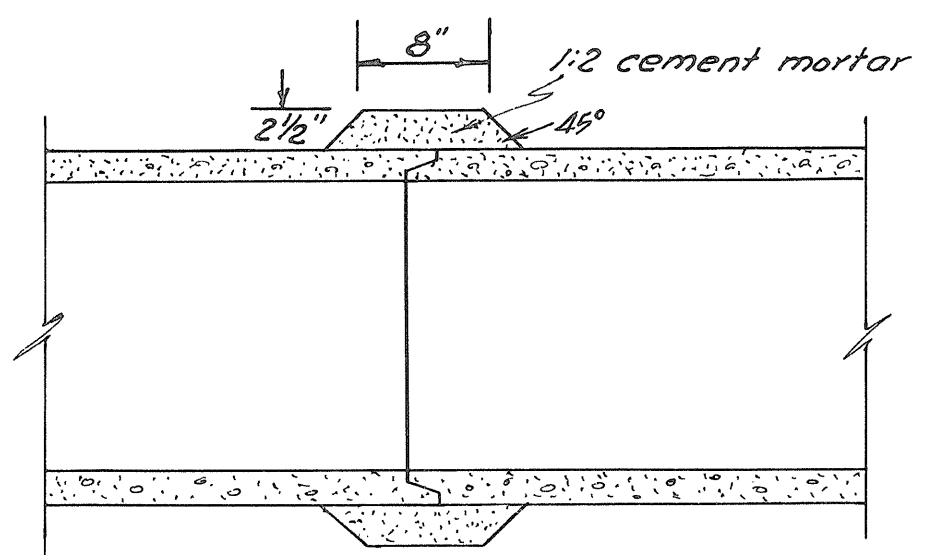
T-70

STD. DRWG. T-70-J

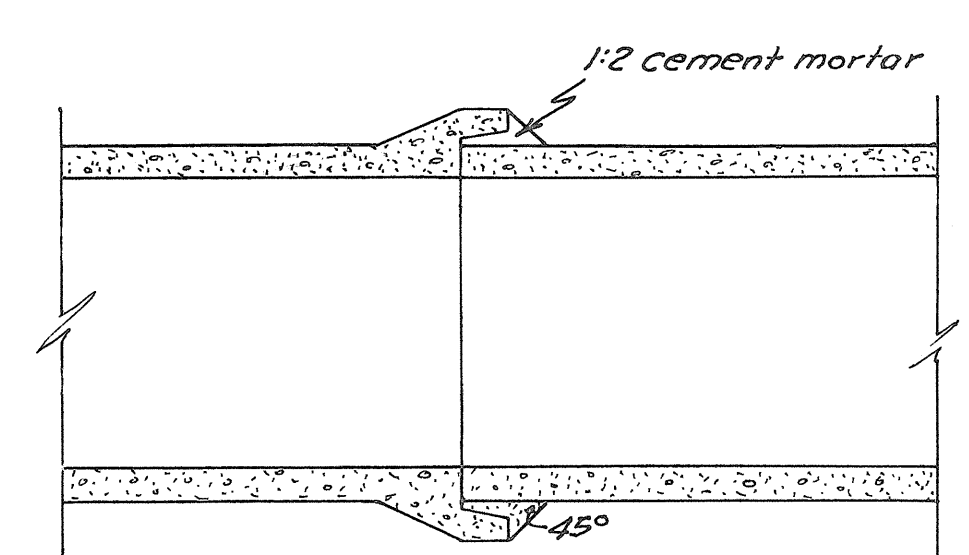


**NOTES**  
 All berms, slopes and ditches to be finished in accordance with these drawings except where shown otherwise on cross-section sheets.  
 All pipes shall have cemented joints where same are within 26 feet of trees or as directed by the Engineer.  
 All drives shall be surfaced with approximately 4 cu. yds. of 4x aggregate and all mail box approaches with approximately 3 cu. yds. of 4x aggregate. Side road approaches shall be surfaced with the amount of 4x aggregate called for on the profile sheets.

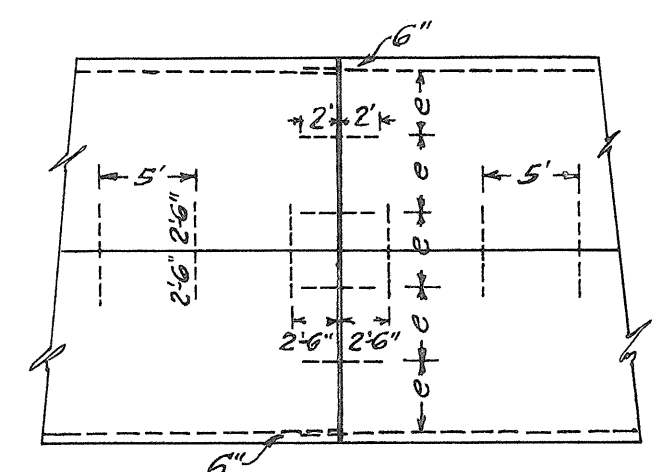
Contractor to so handle grading operations that existing road metal (consisting of traffic bound material) shall be placed on berms in a uniform manner. This is necessary to be done only at such points that proposed grade line makes it necessary to cut existing road surface.



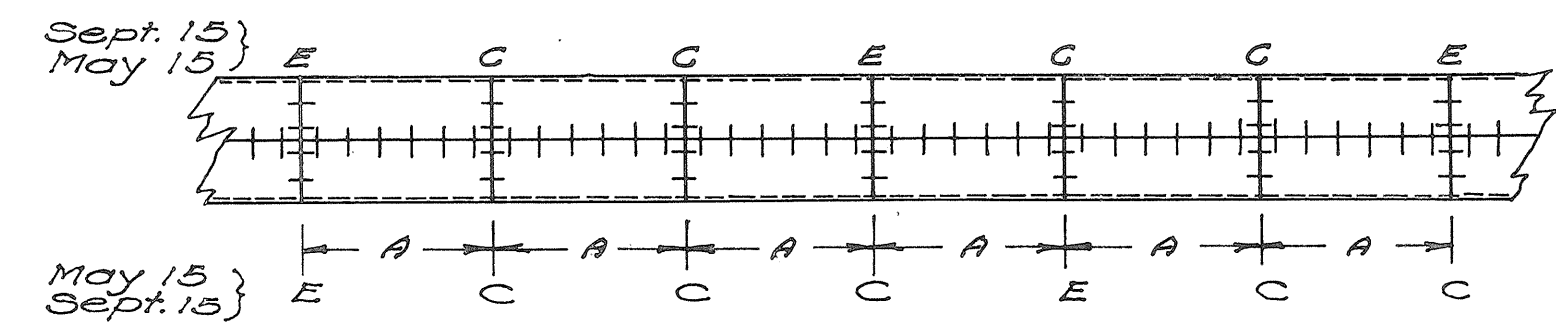
COLLAR JOINT



BELL & SPIGOT JOINT



DETAIL OF TRANSVERSE JOINT



**DETAIL SHOWING CENTER JOINT AND FREQUENCY OF TRANSVERSE JOINTS T-70-J**  
 "A" = 40' for crushed stone or slag  
 "B" = 30' for gravel as per specifications  
 "C" = Contraction Joint  
 "E" = Expansion Joint.

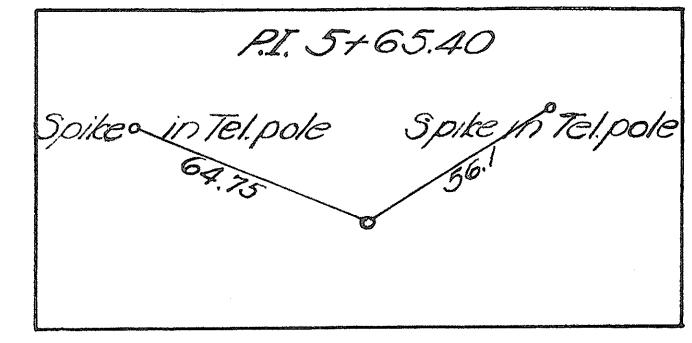
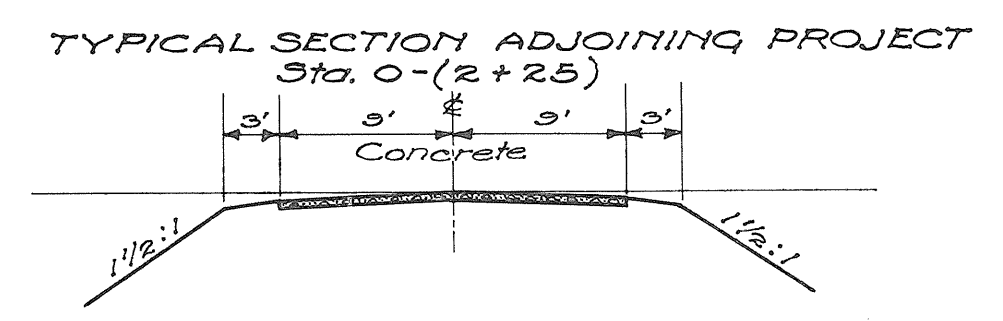
Note: - Reinf. Conc. Pipe where used as an alternate for VSR encased shall be joined as shown in the pertinent accompanying sketch. Where VSR (not encased) and RCR are used as alternates, they may have either open or closed joints as specified.

### GRADE DIFFERENTIAL

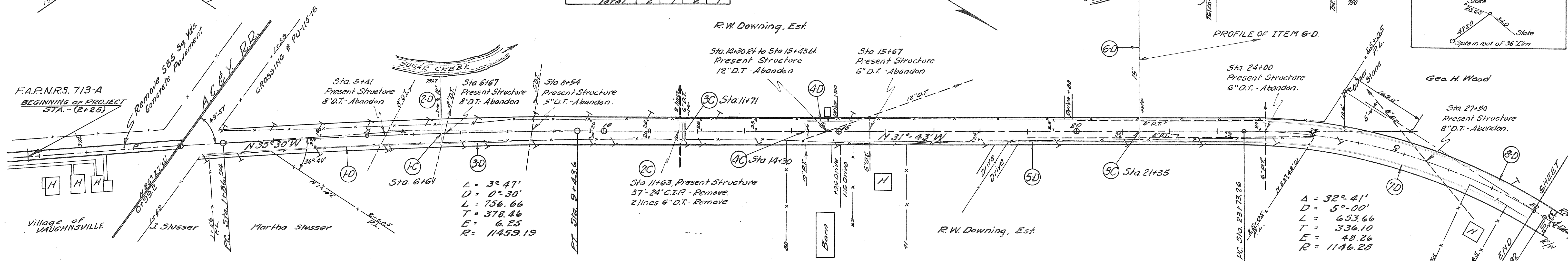
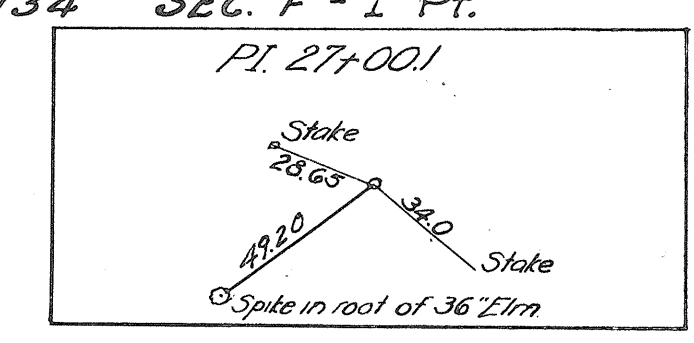
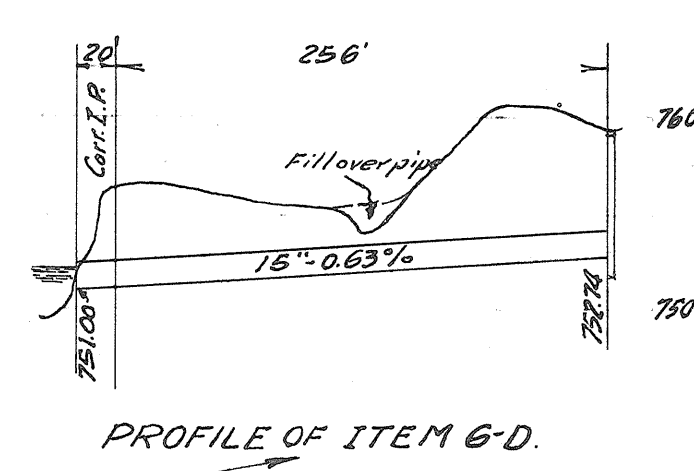
The yardage quantities for this project are calculated using a theoretical typical section 20 ft. wide, 8" thick, 2" crown, 8' berms. To maintain the same yardage and substitute a 9-7-7-9 concrete pavement 20 ft. wide, 1 1/4" crown, 8 ft. berms, the center line grade should be lowered the difference in the edge of pavement grade (.1967" or .0164') plus the difference in crown height (.75" or .0625') or a total of .0789' or .08' = 1"

APPROVED	
17-16-33	

PUTNAM COUNTY  
S.H. 134 SEC. F - I Pt.



Station	TREES			
	8-12	12-18	18-24	24-36
26+00 - 27+00				
27+00 - 28+00	1		1	1
28+00 - 29+00	1		1	
29+00 - 30+00				
Total	2	1	2	1



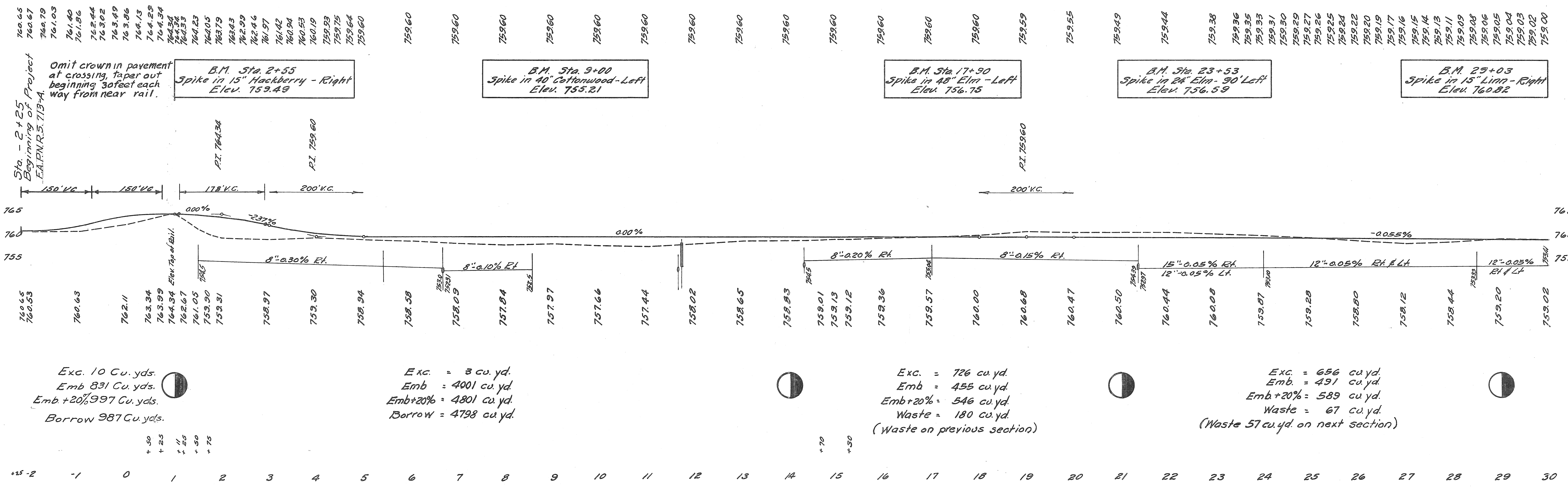
Δ = 3° 47'  
D = 0° 30'  
L = 756.66  
T = 378.46  
E = 6.25  
R = 11459.19

Δ = 32° 41'  
D = 5° 00'  
L = 653.66  
T = 336.10  
E = 48.26  
R = 1146.28

Item No.	Station	Rt.	ROADWAY DRAINAGE				C.B. Sta.	Remarks	
			Pipe - Lin. Ft.	Corr. I.P.	12"	15"			
1-D	1+50	6+61	RT	507			2	C.B. Sta. 1+50, 5+26	
2-D	6+61	8+51	LT		74		20		
3-D	6+61	8+51	RT	188			1	C.B. Sta. 8+51	
4-D	14+30	15+61	LT		130				
5-D	14+30	21+35	RT	701			1	C.B. Sta. 17+00	
6-D	21+35	30+00	LT			254	20		
7-D	21+35	30+00	RT		597	263	2	C.B. Sta. 24+00, 28+50	
8-D	21+35	30+00	LT		860		2	C.B. Sta. 24+00, 28+50	
Totals				1396	1661	519	20	20	8

Item No.	Station	Removals		Type	Size	Exc. Cu. Yds.	Generate Cu. Yds.	Rein. Steel Lbs.	Culvert Pipe No. 12	Culvert Pipe No. 15	Culvert Pipe No. 18	Remarks	
		Type	Size										
1-C	6+61	6"	37'	Culvert Pipe	12" x 50'	2.5			50		2	Std. Pipe Culvert	
2-C	11+63	6"	122'	Culvert Pipe	12" x 56'	2.3			56		2	Std. Pipe Culvert	
3-C	11+71	8"	38'	Slab Top Culvert	8' x 5' x 38'	8.0	29.6	10.2	1727			Std. Conc. Slab Top Culvert	
4-C	14+30			Culvert Pipe	12" x 54'	2.6			54		2	Std. Pipe Culvert	
5-C	21+35			Culvert Pipe	15" x 44'	3.3				44	2	Std. Pipe Culvert	
Totals						187	29.6	10.2	1727	160	44	8	

Deduct 11.8 lin. ft. for RR  
Sta. 0+90.2 to Sta. 1+02



B.M. Sta. 2+55  
Spike in 15" Hackberry - Right  
Elev. 759.49

B.M. Sta. 9+00  
Spike in 40" Cottonwood - Left  
Elev. 755.21

B.M. Sta. 17+90  
Spike in 48" Elm - Left  
Elev. 756.75

B.M. Sta. 23+53  
Spike in 24" Elm - 90' Left  
Elev. 756.59

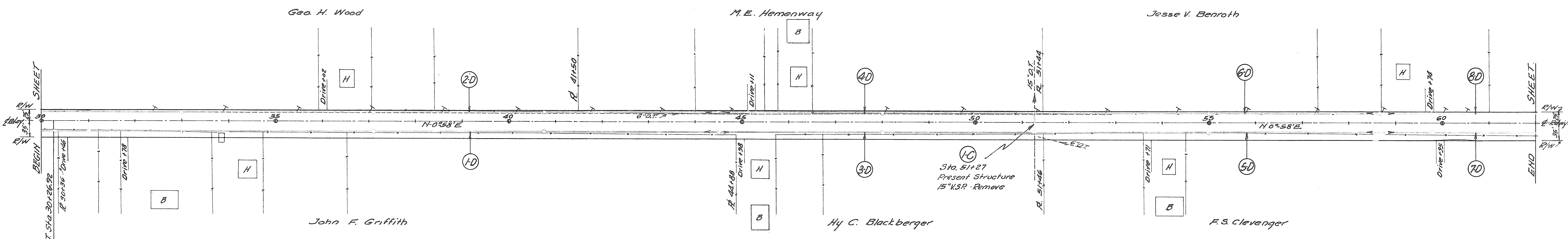
B.M. Sta. 29+03  
Spike in 15" Linn - Right  
Elev. 760.82

Exc. 10 Cu. yds.  
Emb 831 Cu. yds.  
Emb +20% 997 Cu. yds.  
Borrow 987 Cu. yds.

Exc. = 3 cu. yd.  
Emb = 4001 cu. yd.  
Emb +20% = 4801 cu. yd.  
Borrow = 4798 cu. yd.

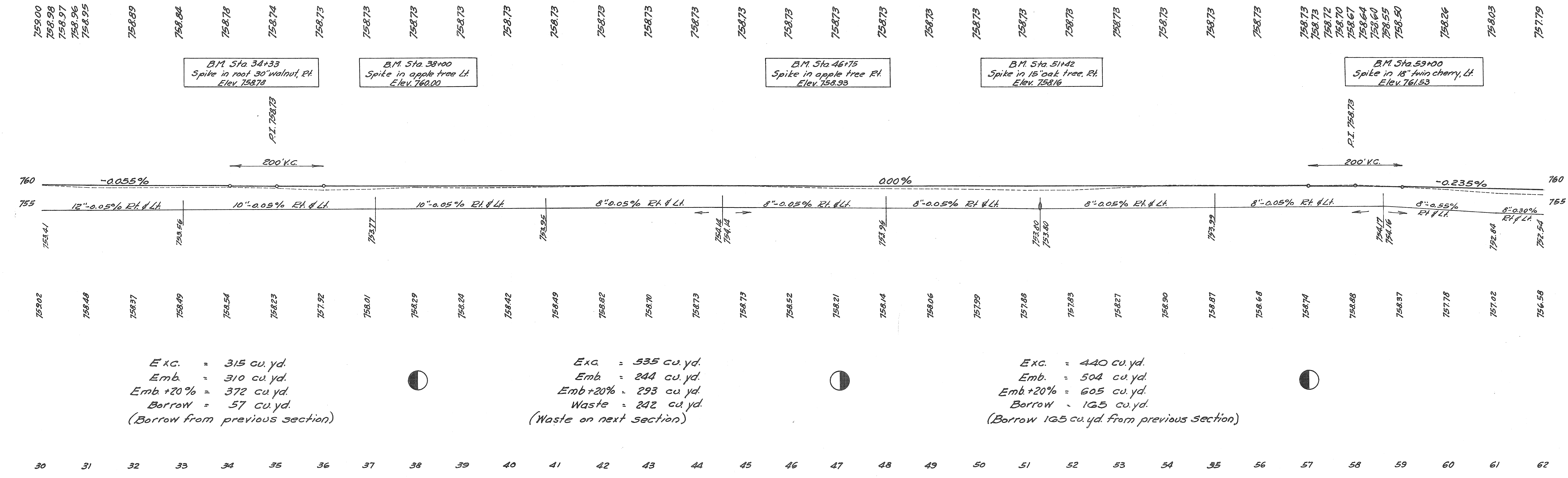
Exc. = 726 cu. yd.  
Emb = 455 cu. yd.  
Emb +20% = 546 cu. yd.  
Waste = 180 cu. yd.  
(Waste on previous section)

Exc. = 656 cu. yd.  
Emb = 491 cu. yd.  
Emb +20% = 589 cu. yd.  
Waste = 67 cu. yd.  
(Waste 57 cu. yd. on next section)



Item No.	Station From To	Rt. of Lt.	Pipe - Lin. Ft.	2" Stand. Head	Std. No. 1-2	Remarks
1-D	30+00 44+50	Rt.	373 771 297	1	4	C.B. Sta. 30+30, 33+00, 37+10, 40+75. Stand. Hd. Sta. 51+00
2-D	30+00 44+50	Lt.	373 771 297	3	3	C.B. Sta. 33+00, 37+10, 40+75
3-D	44+50 51+27	Rt.	673		2	C.B. Sta. 44+50, 48+00
4-D	44+50 51+27	Lt.	673		2	C.B. Sta. 44+50, 48+00
5-D	51+27 58+60	Rt.	730		1	C.B. Sta. 55+00
6-D	51+27 58+60	Lt.	729		1	C.B. Sta. 55+00
7-D	58+60 62+00	Rt.	339		1	C.B. Sta. 59+80
8-D	58+60 62+00	Lt.	339		1	C.B. Sta. 59+80
Totals			4228 1642 594	1	15	

Item No.	Station	Removals		Type	Size	Exc. Cu. Yds.	Culvert Pipe Lin. Ft.	Std. No. 1-2	Remarks
		Type	Size Lin. Ft.						
1-C	51+27	NSR	15" 52	Culvert Pipe	18" x 48"	21	48	2	Std. Pipe Culvert
Totals						21	48	2	



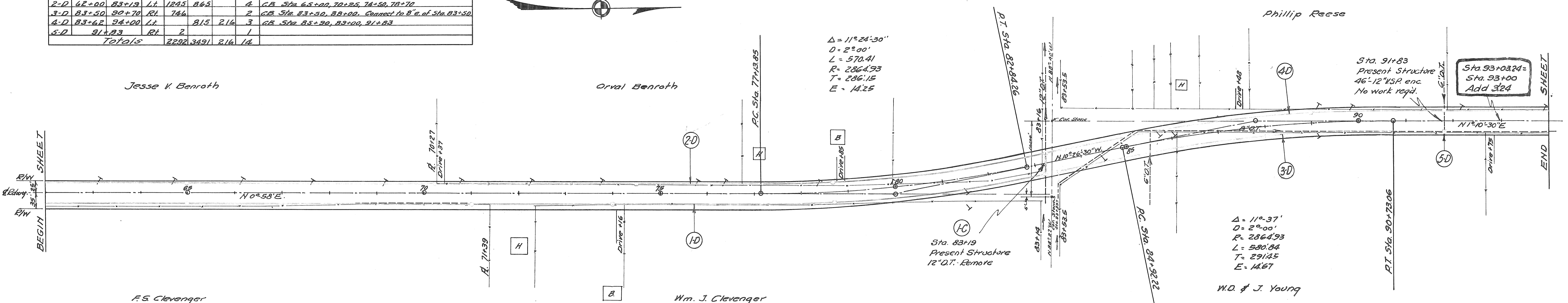
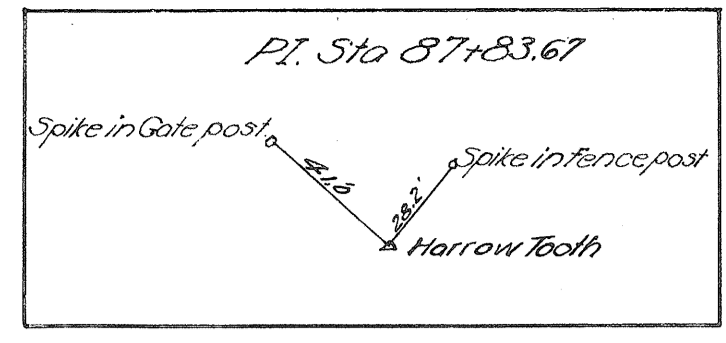
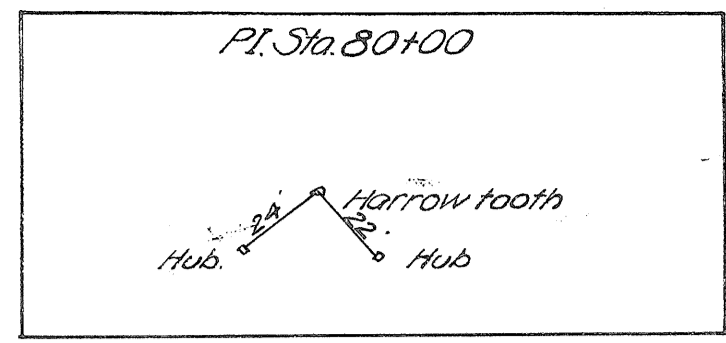
Exc. = 315 cu. yd.  
Emb. = 310 cu. yd.  
Emb + 20% = 372 cu. yd.  
Borrow = 57 cu. yd.  
(Borrow from previous section)

Exc. = 535 cu. yd.  
Emb. = 244 cu. yd.  
Emb + 20% = 293 cu. yd.  
Waste = 242 cu. yd.  
(Waste on next section)

Exc. = 440 cu. yd.  
Emb. = 504 cu. yd.  
Emb + 20% = 605 cu. yd.  
Borrow = 165 cu. yd.  
(Borrow 165 cu. yd. from previous section)

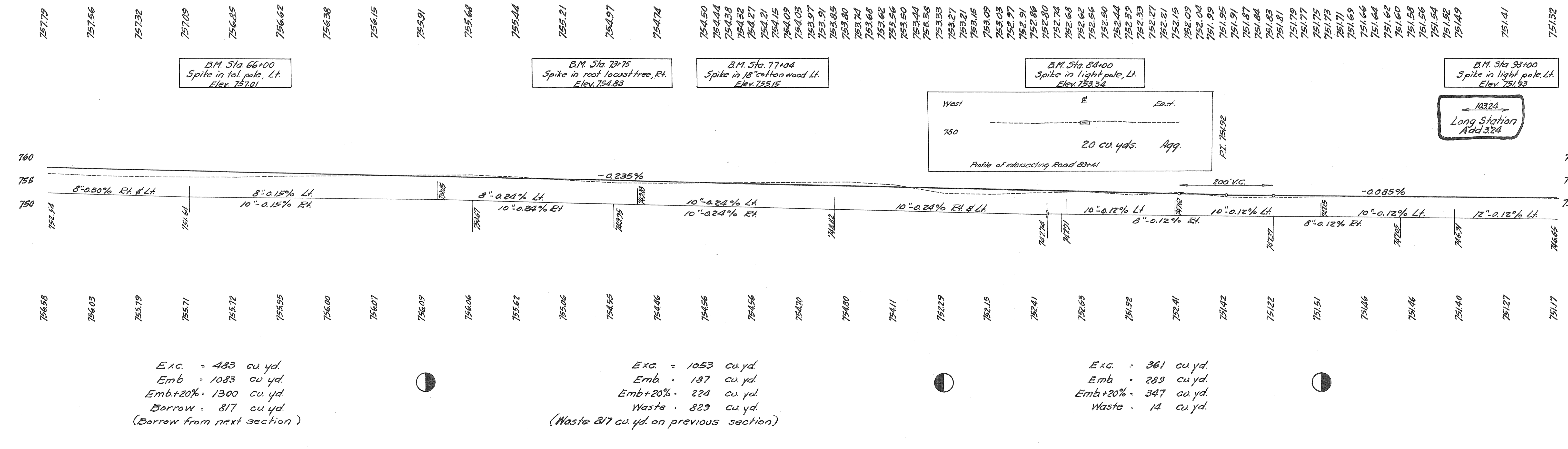
PUTNAM COUNTY  
S.H. 134 SEC. F-1 Pt.

Item No.	Station From	Station To	Rt. or Lt.	Pipe - Lin. Ft.	Sta. No. 12"	Remarks
1-D	62+00	83+19	Rt.	299	1811	C.B. Sta. 65+00, 71+00, 74+00, 78+70
2-D	62+00	83+19	Lt.	1245	865	C.B. Sta. 65+00, 70+25, 74+50, 78+70
3-D	83+50	90+70	Rt.	746		C.B. Sta. 83+50, 88+00, Connect to 8" of Sta. 83+50
4-D	83+62	94+00	Lt.	815	216	C.B. Sta. 83+20, 83+00, 91+83
5-D	91+83		Rt.	2		
<b>Totals</b>				<b>2292</b>	<b>3491</b>	<b>216</b> <b>14</b>



Station	Trucks
85+00 to 86+00	1
86+00 to 87+00	1
<b>Total</b>	<b>1</b>

Item No.	Station	Removals Type	Size Lin. Ft.	Type	Size	Exc. Cu. Yds.	Culvert Pipe Lin. Ft.	Std. No. 1-2	Remarks
1-C	83+19	DT	12" - 52	Culvert Pipe	18" x 33"	4.3	36	4.8	Std. Pipe Culvert
<b>Totals</b>						<b>4.3</b>	<b>36</b>	<b>4.8</b>	<b>3</b>

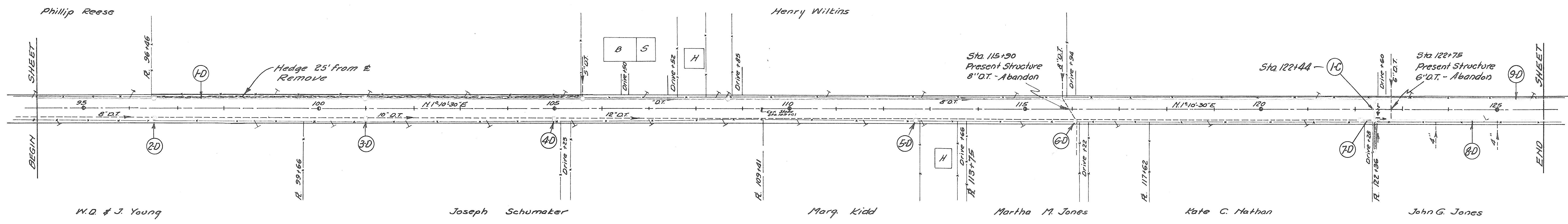
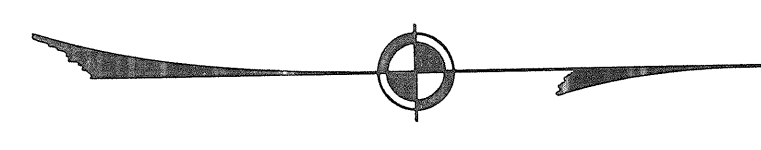


Exc. = 483 cu. yd.  
Emb. = 1083 cu. yd.  
Emb.+20% = 1300 cu. yd.  
Borrow = 817 cu. yd.  
(Borrow from next section)

Exc. = 1053 cu. yd.  
Emb. = 187 cu. yd.  
Emb.+20% = 224 cu. yd.  
Waste = 829 cu. yd.  
(Waste 817 cu. yd. on previous section)

Exc. = 361 cu. yd.  
Emb. = 289 cu. yd.  
Emb.+20% = 347 cu. yd.  
Waste = 14 cu. yd.

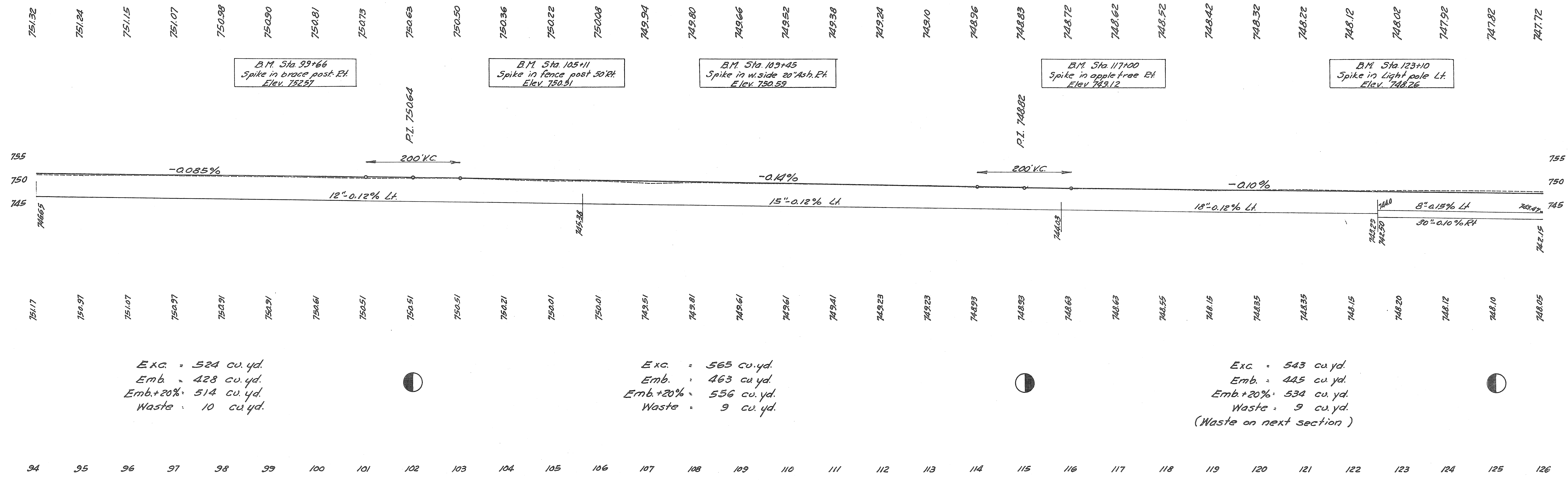
PUTNAM COUNTY  
S.H. 134 SEC. F-I Pt.



Item No.	Station From To	Rt.	Pipe - Lin. Ft.					Sta. No. 2 G.B.	Remarks
			8"	10"	12"	15"	30"		
1-D	94+00	RT			1155	1013	665	5	C.B. Sta. 94+50, 101+00, 105+60, 108+70, 115+77
2-D	96+50	RT						1	
3-D	101+00	RT						1	
4-D	105+00	RT						1	
5-D	115+70	RT						1	
6-D	116+03	RT			6			1	Remove existing C.B.
7-D	122+13	RT				30		1	C.B. Sta. 122+13
8-D	122+44	LT					355		
Total					1155	1049	665	11	

STORM SEWERS				
Item No.	Station From To	Rt.	30" Pipe Lin. Ft.	30" G.B.
8-D	122+50	RT	350	
Total				

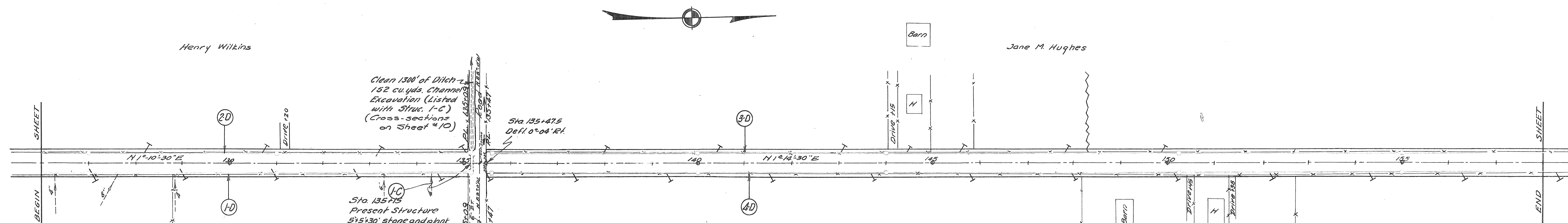
STRUCTURES 20' SPAN AND UNDER						
Item No.	Station	Type	Size	Exc. Cu. Yd.	Std. Pipe No. 2 G.B.	Remarks
1-C	122+44	Culvert Pipe	18"x18"	32	44	Std. Pipe Culvert
Total				32	44	



Exc. = 524 cu. yd.  
Emb. = 428 cu. yd.  
Emb.+20% = 514 cu. yd.  
Waste = 10 cu. yd.

Exc. = 565 cu. yd.  
Emb. = 463 cu. yd.  
Emb.+20% = 556 cu. yd.  
Waste = 9 cu. yd.

Exc. = 543 cu. yd.  
Emb. = 445 cu. yd.  
Emb.+20% = 534 cu. yd.  
Waste = 9 cu. yd.  
(Waste on next section)



Clean 1300' of Ditch -  
152 cu. yds. Channel  
Excavation (Listed  
with Struc. I-C)  
(Cross-sections  
on Sheet #10)

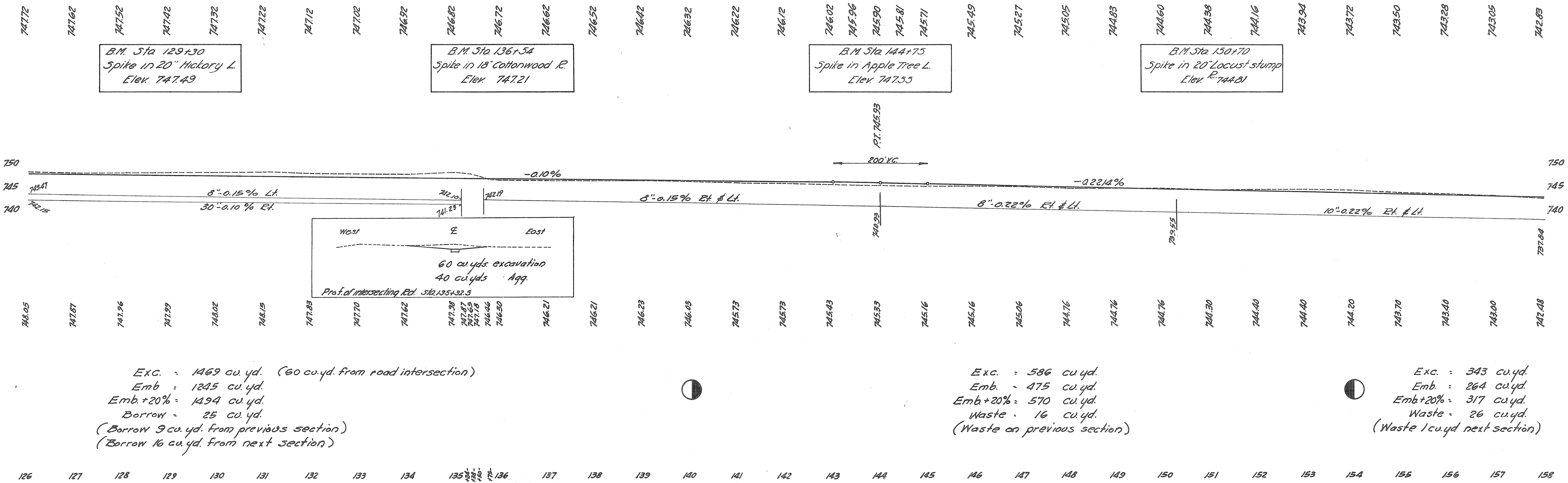
Sta. 135+75  
Present Structure  
5'5\"/>

STORM SEWERS				
Item No.	Station From To	Rt. of Lt.	30\"/>	
I-D	126+00 to 135+11	Rt.	907	2 C.B. Sta. 127+00, 131+00
Total			907	2

Roadway Drainage							
Item No.	Station From To	Rt. of Lt.	Pipe - Lin. Ft.	Exc. Cu. Yds.	Stk. No. 12	Stk. No. 12	Remarks
2-D	126+00 to 135+15	Lt.	901		10	2	C.B. Sta. 127+00, 131+00
3-D	135+60 to 152+00	Lt.	1459	772	5		C.B. Sta. 135+60, 140+00
4-D	135+60 to 152+00	Rt.	1459	772	5		144+00, 150+25, 155+00
Total			3819	1544	10	12	

STRUCTURES 20' SPAN AND UNDER											
Item No.	Station	Type	Removals Size Lin. Ft.	Type	Size	Exc. Cu. Yds.	Channel Exc. Cu. Yds.	Culvert Lin. Ft.	Corr. IP Lin. Ft.	Stk. No. 2-4 C.B.	Remarks
I-C	135+15	Stone Wall - Plank Top	5'5\"/>								
Total			30			152	52	12	1		

Station	Trees			Stumps		
	8\"/>					
126+00 to 127+00						1
127+00 to 128+00						1
128+00 to 129+00		1				1
129+00					1	
132+00					1	
126+00 to 127+00	1					3
Total	1	1	1	1	3	3



B.M. Sta. 129+30  
Spike in 20\"/>

B.M. Sta. 136+54  
Spike in 18\"/>

B.M. Sta. 144+75  
Spike in Apple Tree L.  
Elev. 747.55

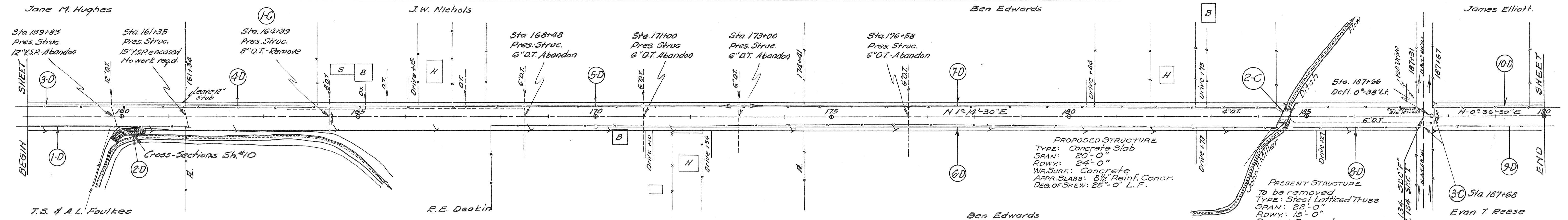
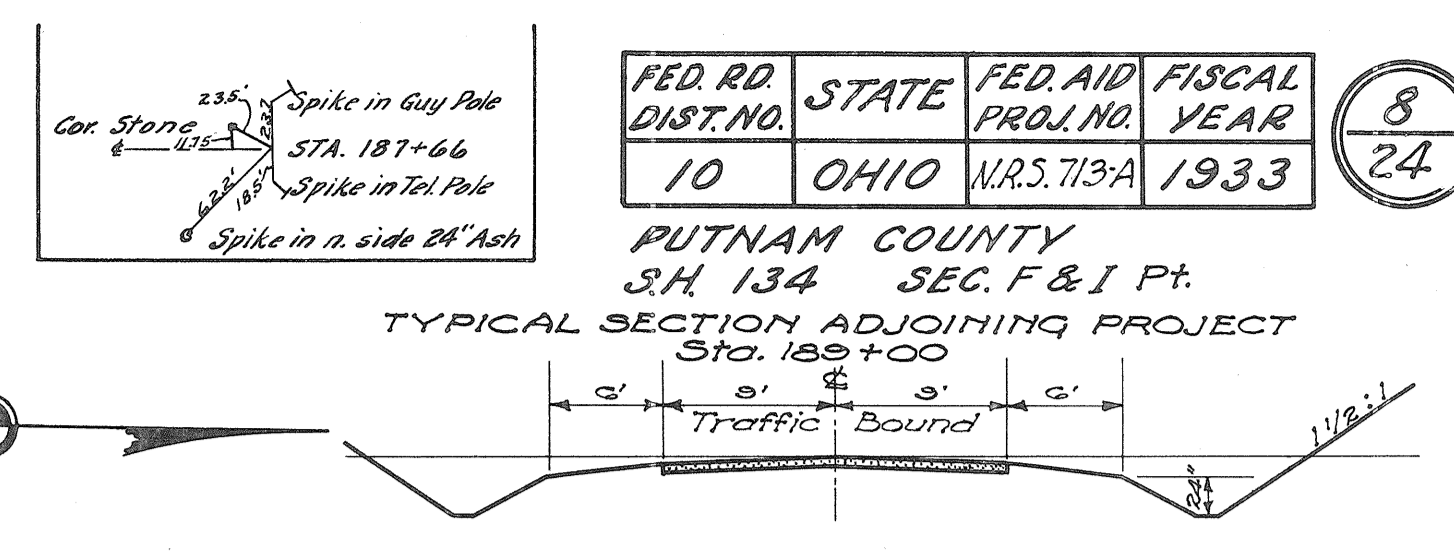
B.M. Sta. 150+70  
Spike in 20\"/>

Exc. = 1469 cu. yd. (60 cu. yd. from road intersection)  
Emb. = 1245 cu. yd.  
Emb.+20% = 1494 cu. yd.  
Borrow = 25 cu. yd.  
(Borrow 9 cu. yd. from previous section)  
(Borrow 16 cu. yd. from next section)

Exc. = 586 cu. yd.  
Emb. = 475 cu. yd.  
Emb.+20% = 570 cu. yd.  
Waste = 16 cu. yd.  
(Waste on previous section)

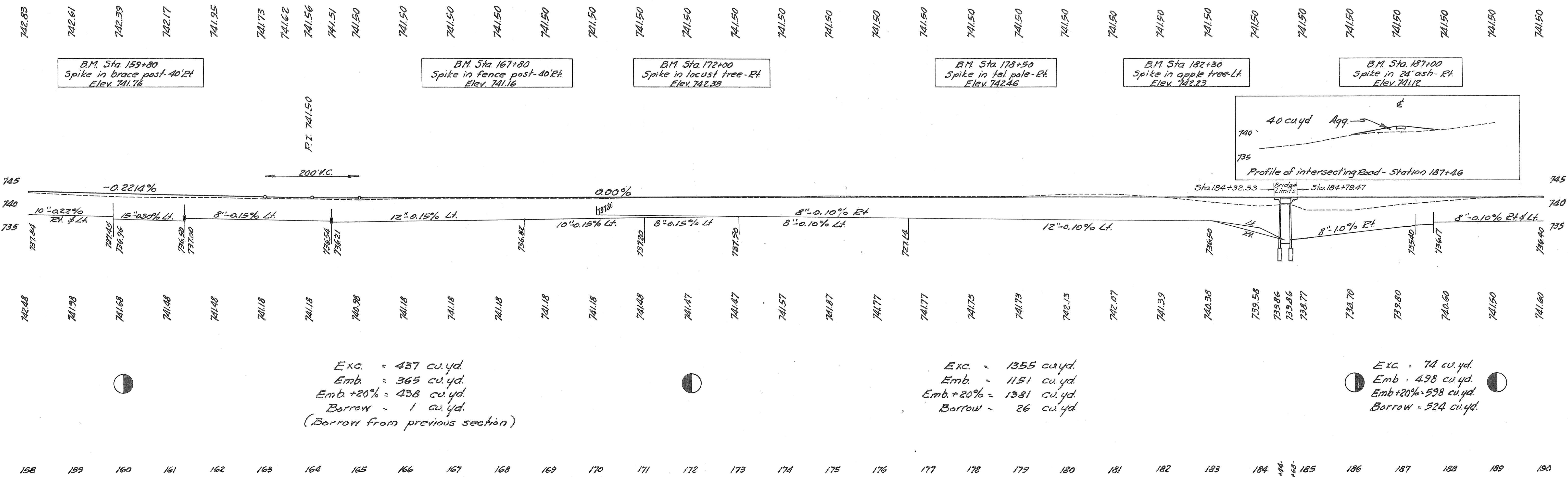
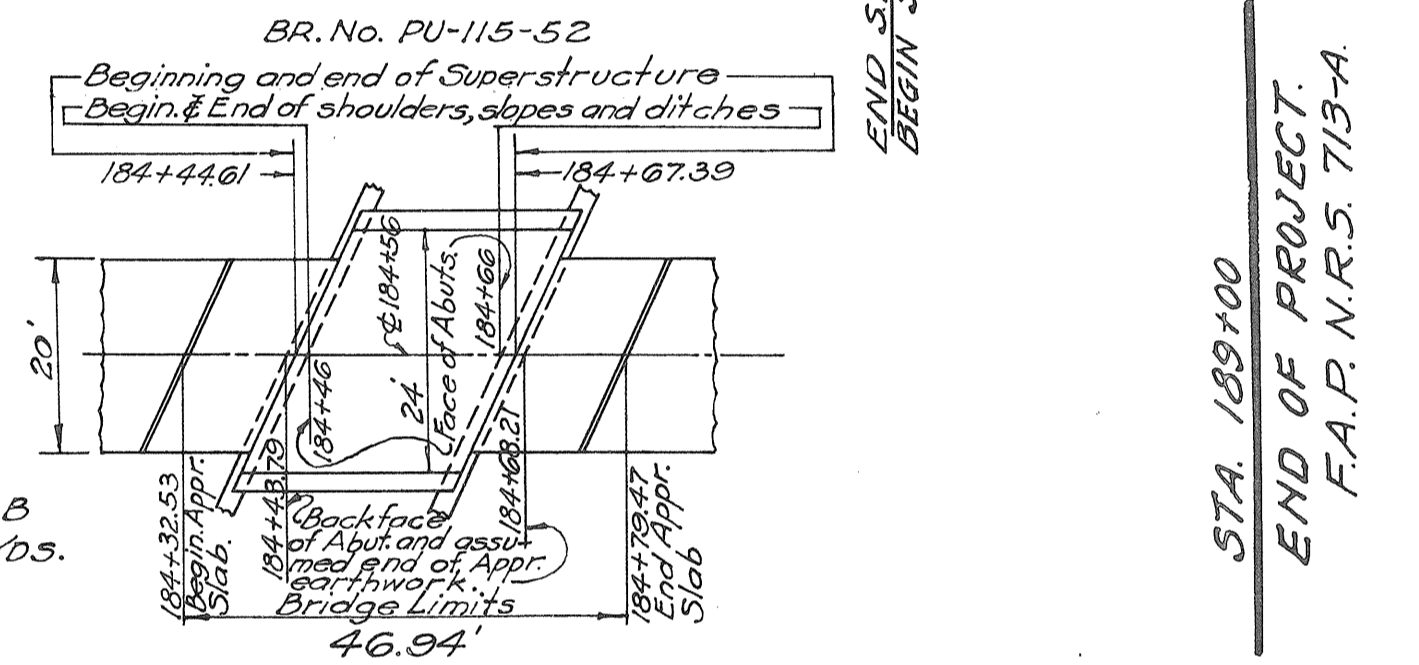
Exc. = 343 cu. yd.  
Emb. = 264 cu. yd.  
Emb.+20% = 317 cu. yd.  
Waste = 26 cu. yd.  
(Waste 1 cu. yd. next section)

ITEM No.	Station	Removals			Type	Size	Excavation					Reinf. Steel Lbs.	Culvert Pipe Lin. Ft.	Corr. L.P. Lin. Ft.	Catch. Basins No.	Cofferdams Sheet Piling	1/2" Prem. Jt. Sq. Ft.	Conc. Rail Type RR-12 Lin. Ft.	Conc. Wear Surf. 4" Sq. Yds.	Reinf. Conc. Appr. Slabs Sq. Yds.	Type "B" Waterproof Sq. Yds.	Rip Rap Stone Lined Grout Filled Sq. Yds.	Removal of Existing Superstructure		
		Type	Size	Lin. Ft.			Wet Cu Yds.	Dry Cu Yds.	Chann. Cu Yds.	Spillways Cu Yds.	Wall Cu Yds.													Footings Cu Yds.	
1-C	164+39	D.T.	8"	50	Culvert Pipe	15x44																			
2-C	184+56	Slab Bridge			20 Span Slab Bridge	24x24	110	35	88	33.1	80.9	41.6	6628												
3-C	187+68				Culvert Pipe	12x82																			
TOTALS							110	97	88	33.1	80.9	41.6	6628	82	44	14	5	Lump Sum	40	46	60.4	48.9	24	25	Lump Sum



Item No.	Station From To	Rt. or Lt.	Pipe - Lin. Ft.	Corr. L.P. - Lin. Ft.	Stk. No. 1-2	Sq. Yds. Conc. Riprap in Bags	Cu Yds. Channel Excavation	Remarks					
1-D	159+00 - 160+20	Rt.	200										
2-D	159+50 - 161+30	Rt.				120	240						
3-D	159+00 - 161+30	Lt.	177	2	150			C.B. 159+78 - 161+30					
4-D	161+30 - 164+39	Lt.	307										
5-D	164+39 - 173+00	Lt.	198	250	407			C.B. 168+48 - 171+00 - 173+00					
6-D	170+00 - 184+38	Rt.	1411					C.B. 170+00 - 174+30 - 178+00 - 182+60					
7-D	173+00 - 184+38	Lt.	356										
8-D	184+54 - 187+30	Rt.	255		20			C.B. 176+58 - 181+65					
9-D	187+68 - 190+00	Rt.	231										
10-D	187+68 - 190+00	Lt.	231										
Totals			2388	627	1183	150	40	20	20	11	120	240	

Station	Trees	Stumps
188+00 - 189+00	1	1
189+00 - 190+00	1	2
Totals	2	3



Exc. = 437 cu. yd.  
 Emb. = 365 cu. yd.  
 Emb + 20% = 438 cu. yd.  
 Borrow = 1 cu. yd.  
 (Borrow from previous section)

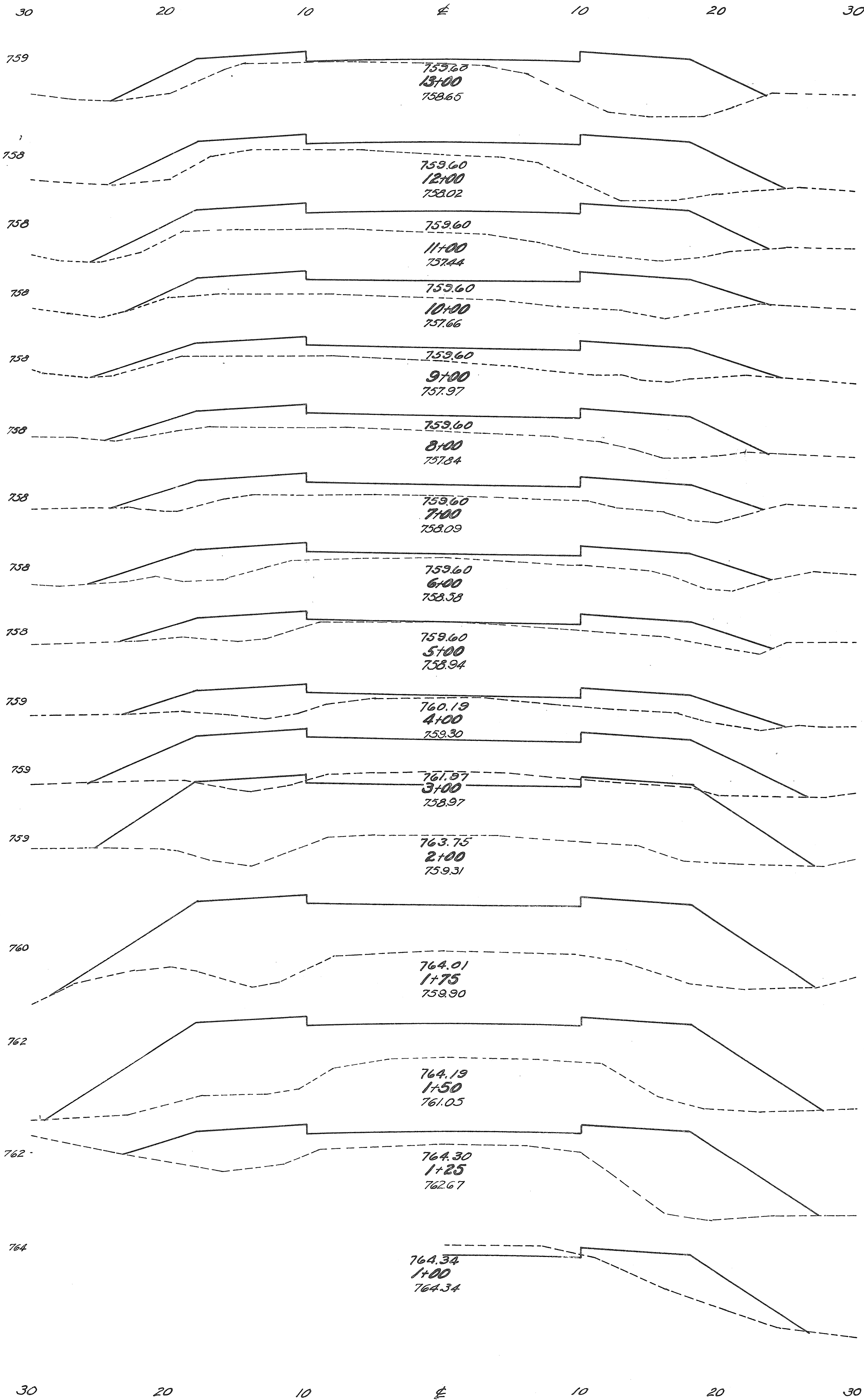
Exc. = 1355 cu. yd.  
 Emb. = 1151 cu. yd.  
 Emb + 20% = 1381 cu. yd.  
 Borrow = 26 cu. yd.

Exc. = 74 cu. yd.  
 Emb. = 498 cu. yd.  
 Emb + 20% = 598 cu. yd.  
 Borrow = 524 cu. yd.

RC. 1+86.94 D=0°30'R PT. 9+43.60

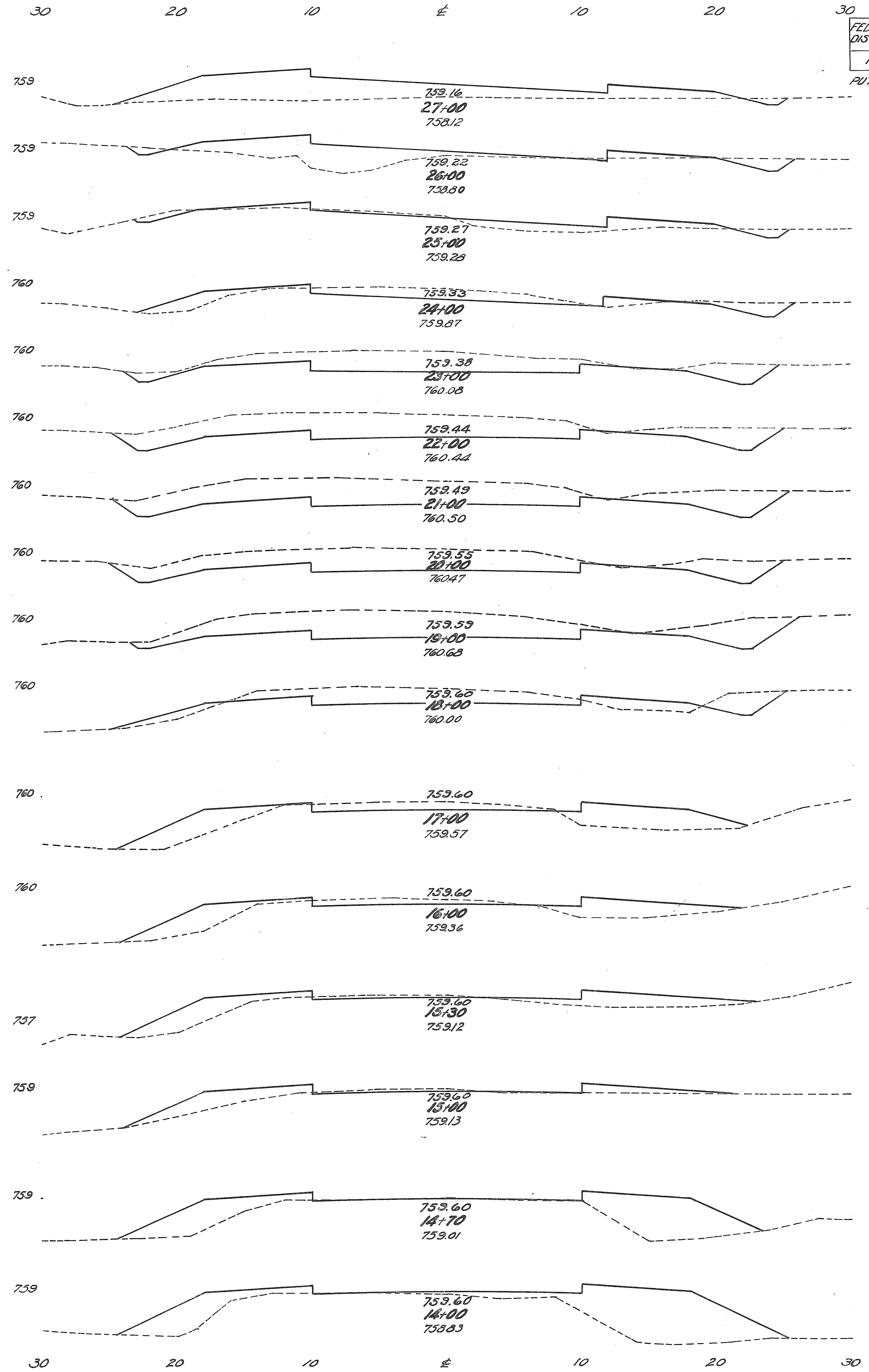
LEFT			RIGHT		
Add to R. Edge of Gr. Elev.	Width	Station	Grade Elev.	Width	Edge of Pavt. Add to L. Edge Gr.
0.00	76.00	1+36.94	76.426	10.00	76.403 0.17
0.04	76.00	+50.00	76.419		76.402
0.12	76.390	+75.00	76.401		76.394
0.16	76.389	+86.94	76.390		76.379
0.19	76.377	2+00.00	76.375		76.359
0.26	76.350	+25.00	76.341		76.324
0.30	76.336	+36.94	76.323		76.306
		+50.00	76.300		76.293
		+75.00	76.252		76.235
		3+00.00	76.197		76.180
		+25.00	76.142		76.125
		+50.00	76.094		76.077
		+75.00	76.033		76.016
		4+00.00	76.019		76.002
		+25.00	75.973		75.976
		+50.00	75.925		75.928
		+75.00	75.874		75.871
		5+00.00	75.860		75.843
		+25.00			
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		+75.00			
		81+00.00			
		+25.00			
		+50.00			
		+75.00			
		82+00.00			





End Area		Cu. Yds.	
Exc.	Emb.	Exc.	Emb.
0	70		
		0	283
0	83		
		0	325
0	92.5		
		0	305
0	72		
		0	250
0	63		
		0	235
0	64		
		0	232
0	61		
		0	211
0	53		
		0	169
0	38		
		0	157
0	47		
		0	346
0	140		
		0	645
0	208		
		0	194
0	210		
		0	191
0	2015		
		0	148
0	119		
		3	64
6	30		

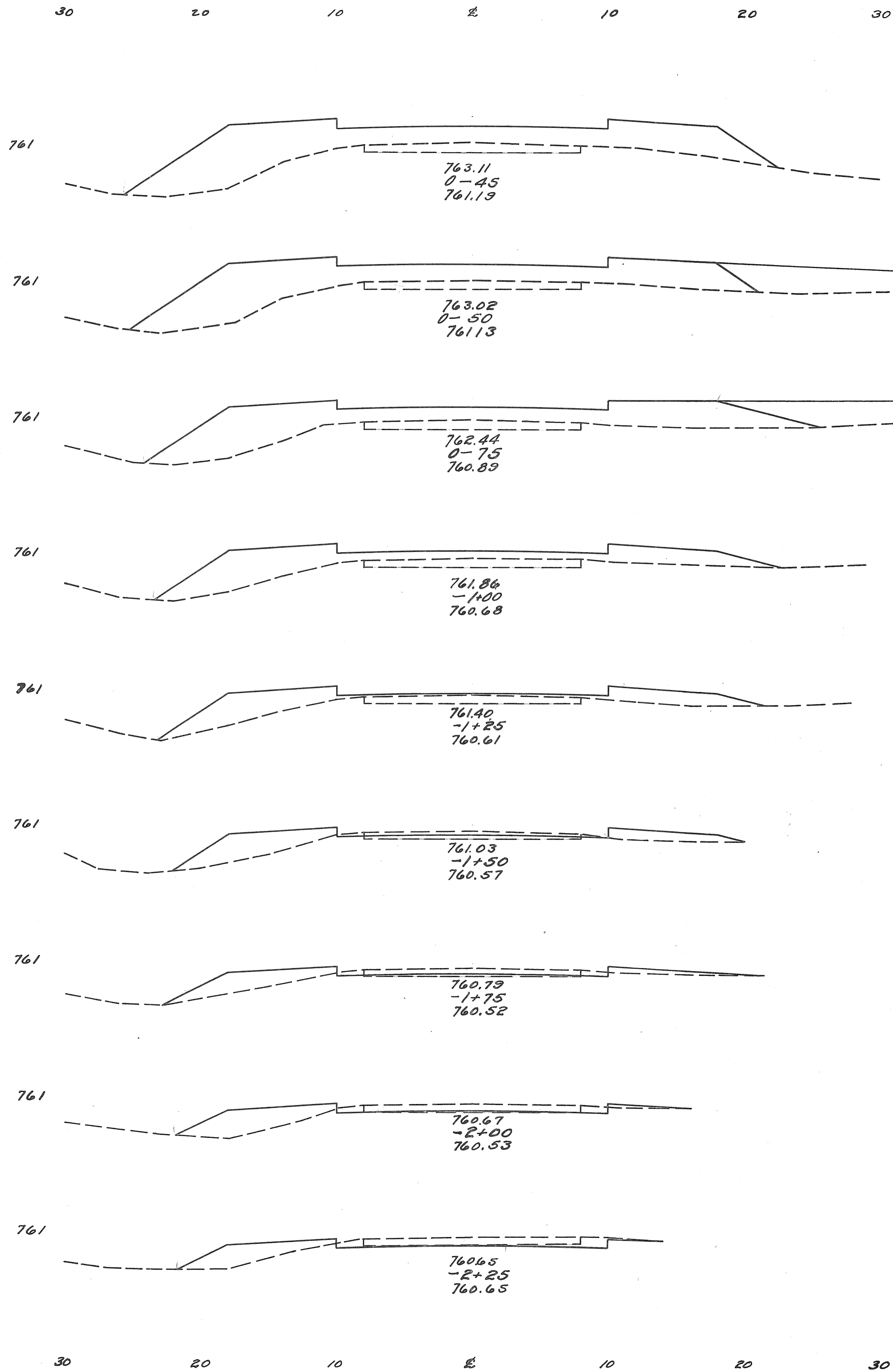
Exc. = 20% = 4801 Cu. Yds.  
 Borrow = 4799  
 Exc. = 3 Cu. Yds.  
 Emb. = 4001  
 From Sta. 1+00 To Sta. 14+00



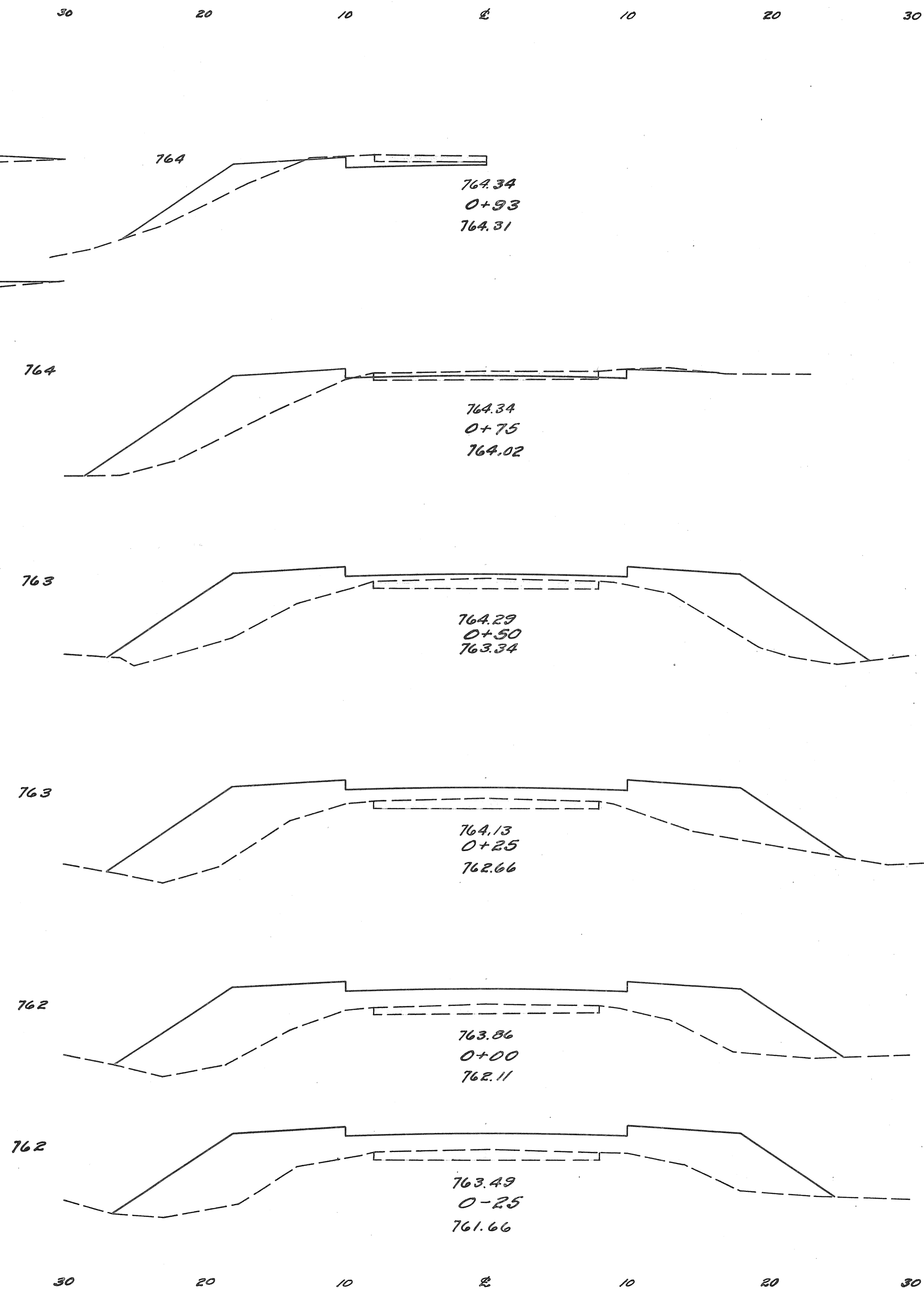
End Area		Cu. Yds.	
Exc.	Emb.	Exc.	Emb.
1	53	9	150
4	28	15	75
4	12.5	39	38
17	8	109	15
42	0	191	0
61	0	235	0
66	0	224	1
55	0.5	218	1
62.5	0	170	17
29.5	9	72	75
9.5	31.5	29	103
6	24	10	63
2	24.5	2	21
1.5	14	1	33
0	45.5	0	141
0	63	0	246

Exc. = 656 Cu. Yds.  
 Emb. = 491  
 From Sta. 21+00 To Sta. 29+00  
 Exc. = 20% = 546 Cu. Yds.  
 Emb. = 180  
 Exc. = 726 Cu. Yds.  
 Emb. = 455  
 From Sta. 14+00 To Sta. 21+00

FED. RD. DIST. NO. 10  
 STATE OHIO  
 FED. AID FISCAL YEAR 1933  
 PROJECT NO. 713-A  
 COUNTY PUTNAM, OHIO  
 SECTION F-1  
 SHEET NO. 24



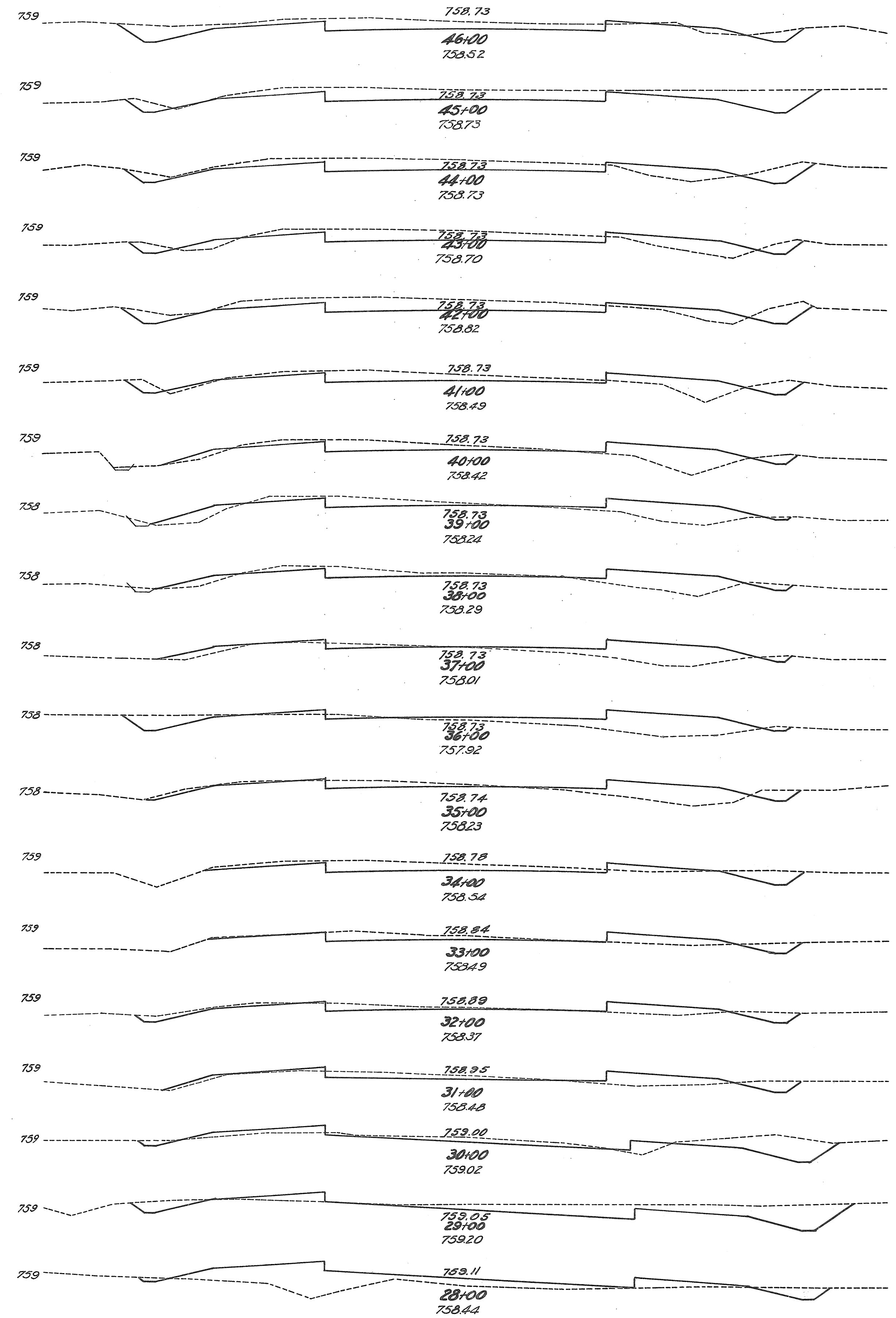
End Area		Cu. Yds.	
Exc.	Emb.	Exc.	Emb.
0	104	0	19
0	101	0	118
0	135	0	88
0	88	0	68
0	60	0	47
0	41	1	29
1	22	1	17
2	15	2	14
2	16	3	12
4	11		



End Area		Cu. Yds.	
Exc.	Emb.	Exc.	Emb.
4	13		
		2	19
1	44		
		1	72
0	111		
		0	106
0	118		
		0	113
0	126		
		0	114
0	120		
0	83		

From Sta. -2+25 To Sta. 0+33  
Exc. 10 Cu. Yds. Emb. 831 Cu. Yds.  
Emb. +20% Borrow 387 Cu. Yds.

30 20 10 4 10 20 30



30 20 10 4 10 20 30

End Area		Cu. Yds.		Exc.	Emb.	Cu. Yds.	Exc.	Emb.
Exc.	Emb.	Exc.	Emb.					
20	1.5	48	12					
29.5	0	92	3					
21	6	75	11					
17.5	9	71	28					
24	4.5	77	25					
14	8	70	23					
10	12.5	44	38					
7	15.5	31	52					
7.5	12.5	27	52					
2	17.5	18	56					
5	20.5	13	70					
7.5	13	23	62					
16	2.5	43	29					
7	5	43	14					
7.5	5	27	18					
7	8	27	24					
16	4.5	43	23					
26	3	78	14					
2	29.5	52	60					
6		6	153					

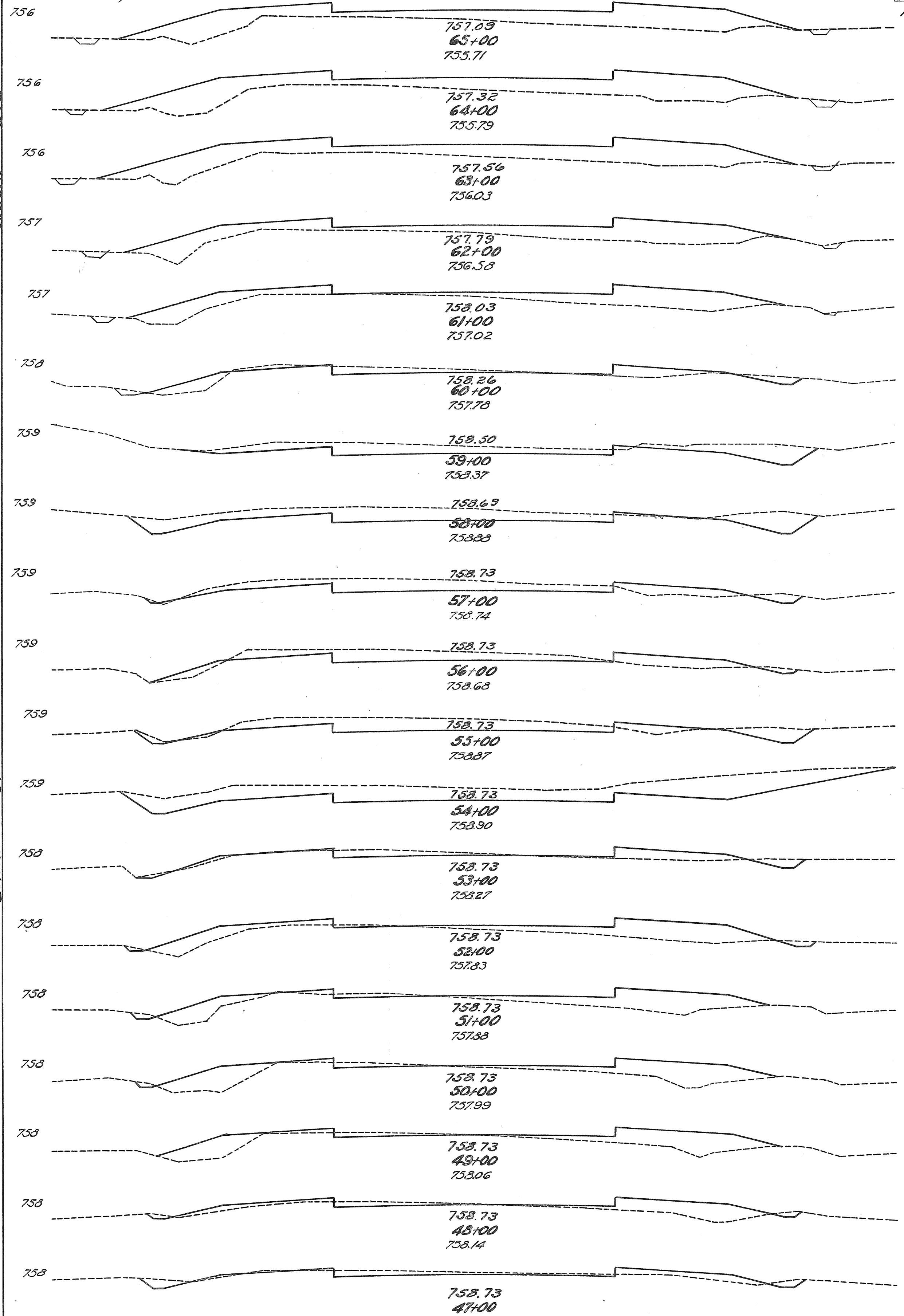
Exc. = 535 Cu. Yds.  
Emb. = 504 " "  
Exc. + 20% = 642 " "  
Emb. = 842 " "

From Sta. 38+00 To Sta. 47+00

Exc. = 315 Cu. Yds.  
Emb. = 310 " "  
Exc. + 20% = 378 " "  
Emb. = 51 " "

From Sta. 28+00 To Sta. 38+00

30 20 10 4 10 20 30



30 20 10 4 10 20 30

FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO	W.R.S. 713A	1933

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PUTNAMCO SH. 134 SEC. 1-1 Pt.

End Area		Cu. Yds.		Exc.	Emb.	Cu. Yds.	Exc.	Emb.
Exc.	Emb.	Exc.	Emb.					
0	45	0	178					
0	51	0	193					
0	53	0	170					
0	39	0	130					
0	31	12	71					
6.5	7.5	57	15					
24	0.5	101	2					
30.5	0.5	91	10					
18.5	5	64	25					
16	8.5	75	21					
24.5	3	141	6					
51	0	104	13					
5	7	11	59					
1	25	5	91					
1.5	24	6	91					
1.5	25	6	90					
2	23.5	10	71					
3.5	15	18	37					
6	5							

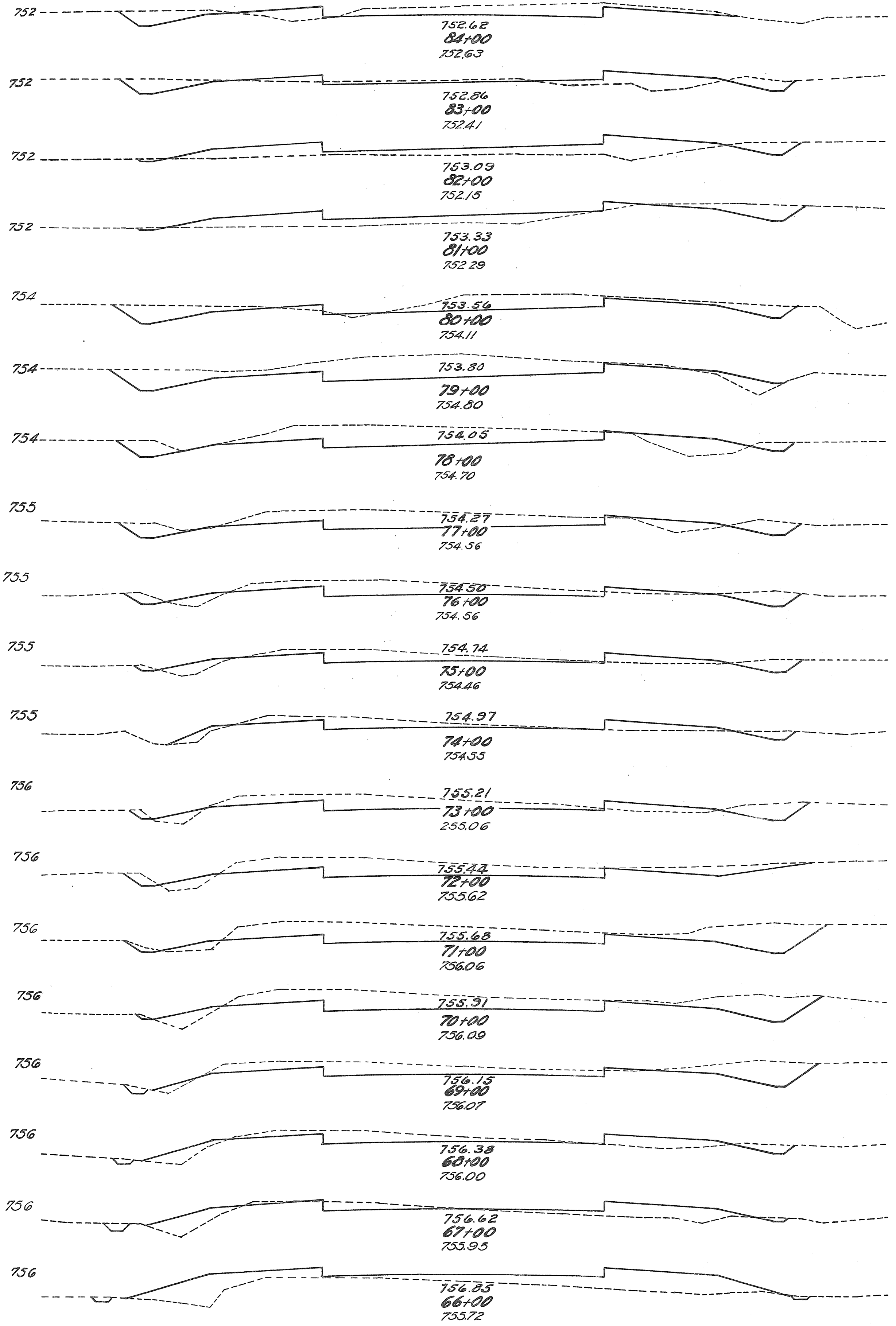
Exc. = 483 Cu. Yds.  
Emb. = 193 " "  
Exc. + 20% = 580 " "  
Emb. = 81 " "

From Sta. 57+00 To Sta. 70+00

Exc. = 440 Cu. Yds.  
Emb. = 504 " "  
Exc. + 20% = 528 " "  
Emb. = 165 " "

From Sta. 47+00 To Sta. 57+00

30 20 10 0 10 20 30



End Area		Cubic Yds		
Exc.	Emb.	Exc.	Emb.	
18.5	3.5			
		50	24	
8.5	9.5			
		21	64	
3	25			
		16	82	
5.5	19			
		56	37	
24.5	1			
		118	8	
39	3			
		130	19	
31	7.5			
		115	19	
31	3			
		93	12	
19.5	3.5			
		60	19	
13	6.5			
		43	22	
10	5.5			
		58	21	
21.5	6			
		96	15	
30.5	2			
		137	7	
43.5	1.5			
		147	8	
36	3			
		116	8	
26.5	1.5			
		70	18	
11.5	8			
		29	44	
4	16			
		7	95	
0	35.5			
		0	149	

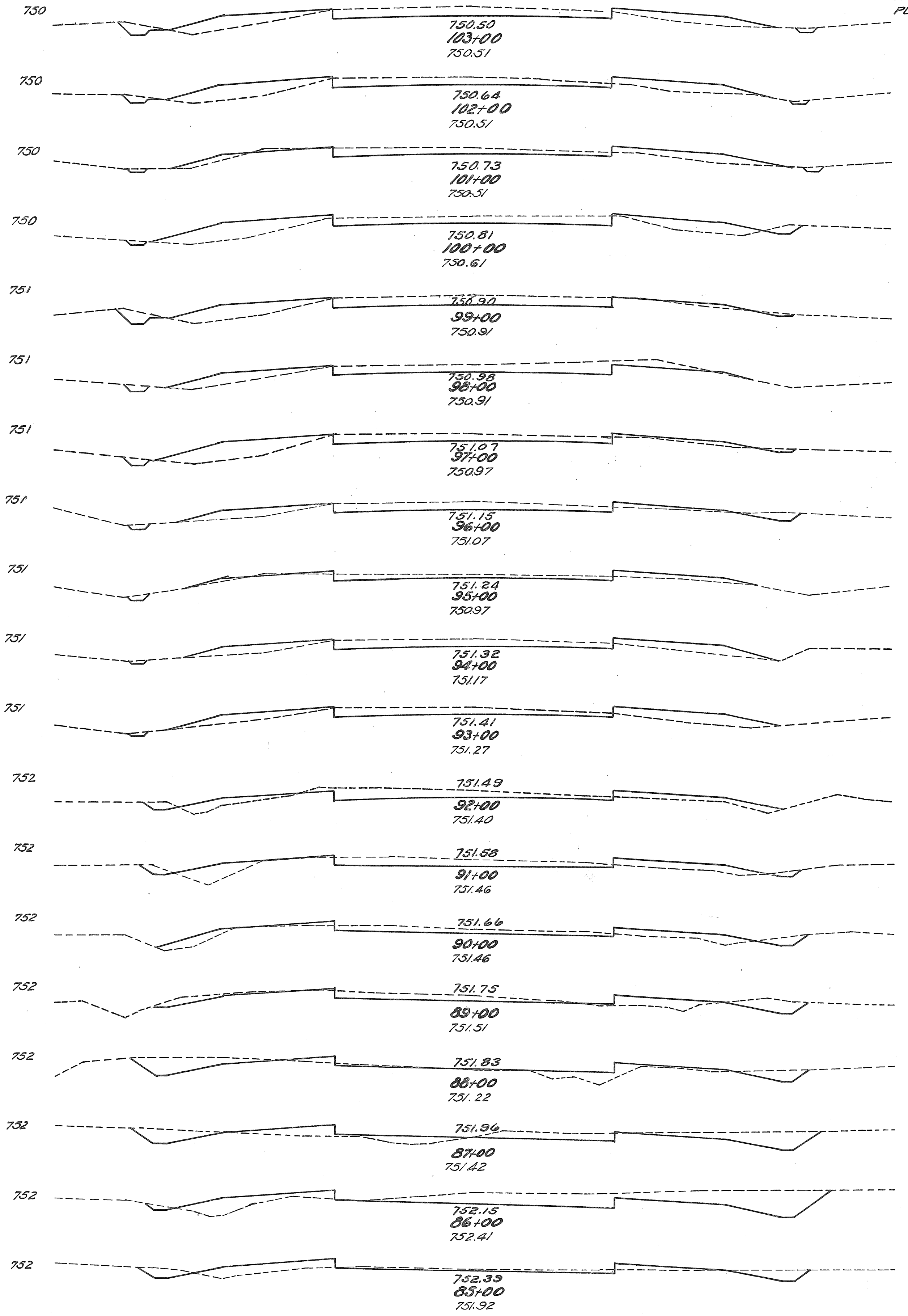
From Sta 81+00 To Sta 89+00

Exc = 1053 Cu. Yds. Emb = 187 " "

Waste = 829 " "

From Sta 70+00 To Sta 81+00

30 20 10 0 10 20 30



FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO	NR. 5, 715-A	1939

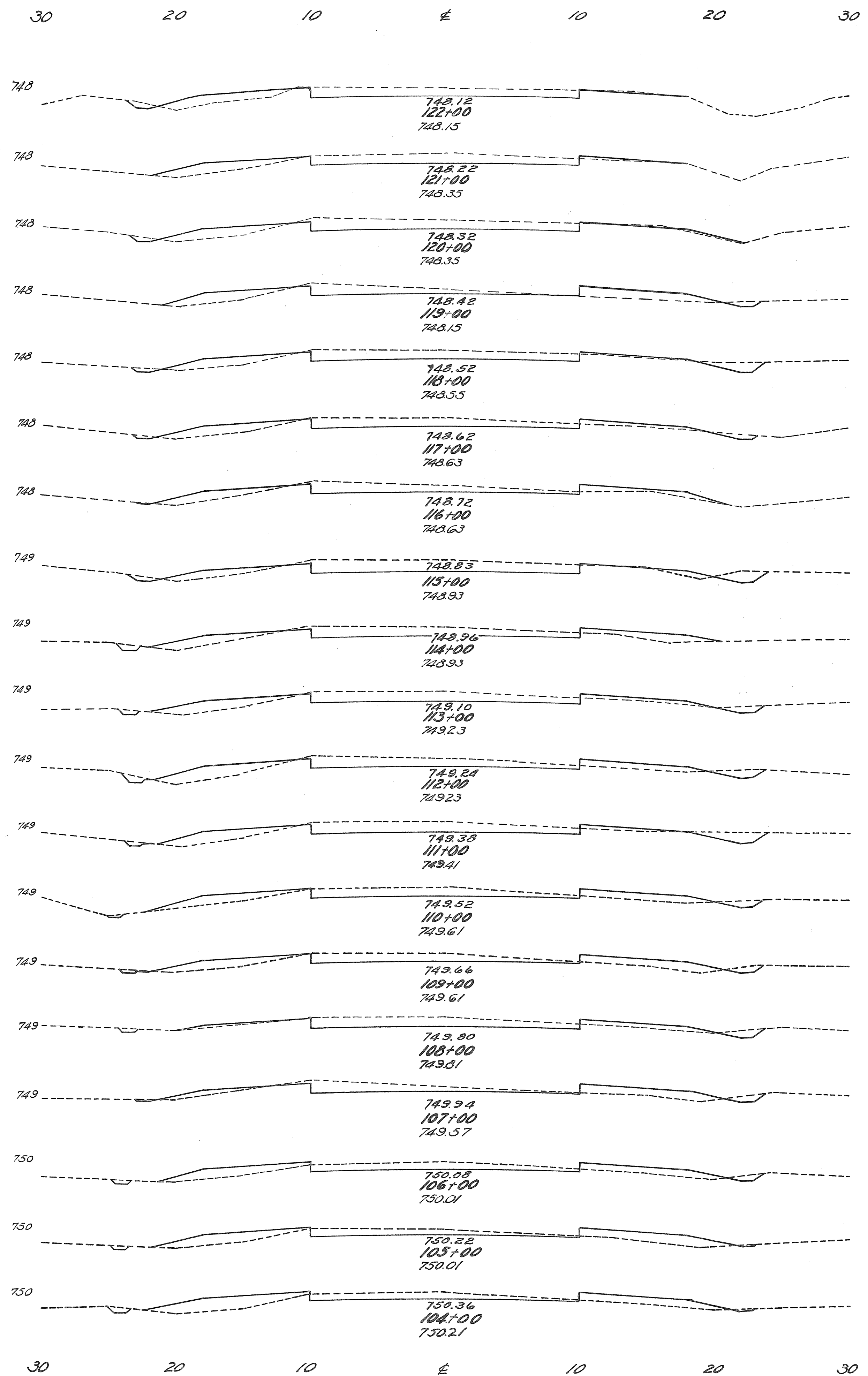
End Area		Cubic Yds		
Exc.	Emb.	Exc.	Emb.	
12.5	12.5			
		42	47	
10	13			
		36	37	
9.5	7			
		38	43	
11	16			
		44	45	
13	8.5			
		54	27	
16	6			
		50	34	
11	12.5			
		44	34	
12.5	6			
		36	20	
7	4.5			
		32	26	
10.5	9.5			
		36	40	
9	12			
		39	36	
12	7.5			
		44	31	
11.5	9			
		36	32	
8	8.5			
		35	23	
11	4			
		36	19	
10	6.5			
		48	25	
16	7			
		81	26	
27.5	7			
		63	28	
6.5	8			
		46	21	

Exc = 366 Cu. Yds. Emb = 527 " "

Waste = 572 " "

From Sta 89+00 To Sta 102+00

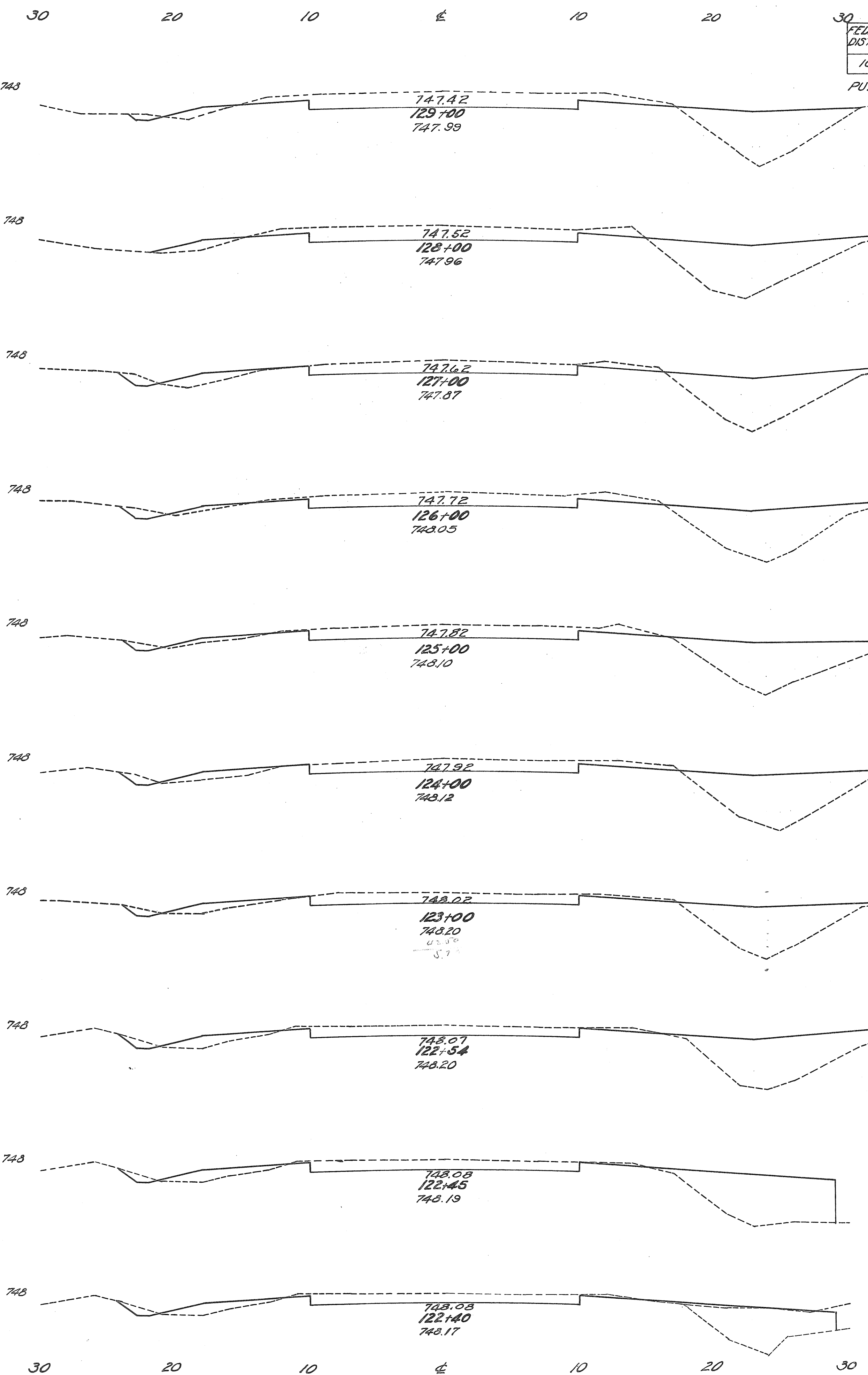
30 20 10 0 10 20 30



End Area	Cubic Yards	
	Exc.	Emb.
13	4.5	
14	7	50 21
16	5.5	56 23
8	10.5	44 30
14	4.5	41 28
12	7	48 21
10	8	41 28
18	4	52 22
11	7.5	54 21
14.5	11	47 34
12	11	49 41
16.5	6.5	53 32
12	9.5	53 30
11.5	10.5	43 37
13	4.5	45 28
9	6.5	41 20
10	10.5	35 32
7.5	13	32 44
9	13.5	31 49
		40 48

Exc. = 565 Cu. Yds.  
Emb. = 463 " "  
Exc. + Emb. = 1028 " "  
To Sta. 115+00

From Sta. 102+00  
To Sta. 115+00



End Area	Cubic Yards	
	Exc.	Emb.
29.5	21	
24	31.5	99 97
20.5	27	82 108
23	27.5	81 101
21	27	81 101
21	28	78 103
18	24.5	72 97
18	31.5	31 48
16	31.5	6 11
16	29.5	
16	5.5	
21		3 6
		7

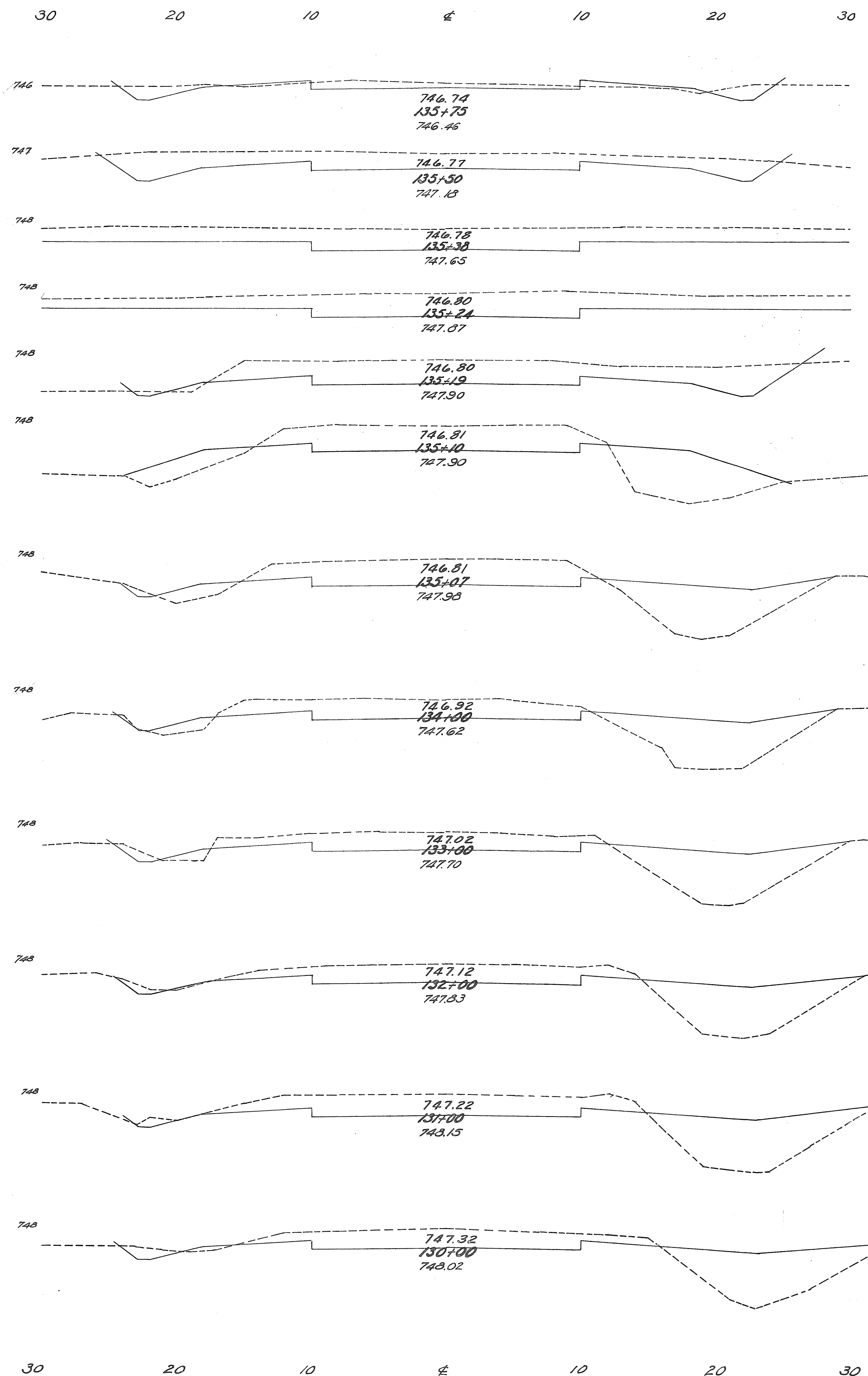
Exc. = 543 Cu. Yds.  
Emb. = 445 " "  
Exc. + Emb. = 988 " "  
To Sta. 125+00

From Sta. 115+00  
To Sta. 125+00

FED. DIST. NO. 10 STATE OHIO FED. AID PROJ. NO. N.R.S. 713A FISCAL YEAR 1933

PUTNAM CO. SH. 134 SEC. 7 E. T. Pt.

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End Area		Cubic Yards	
Exc.	Emb.	Exc.	Emb.
16	3.5		
		33	2
56	0	29	0
75	0	38	0
73.5	0	13	0
63.5	0.5		
		Culvert	
43	41.5		
		5	4
41.5	31		
		150	125
33.5	32		
		124	118
33.5	31.5		
		127	113
35	29.5		
		143	118
42	34		
		141	119
34	30.5		
		118	95

Exc. includes 60 Cu. Yds. from road intersection.

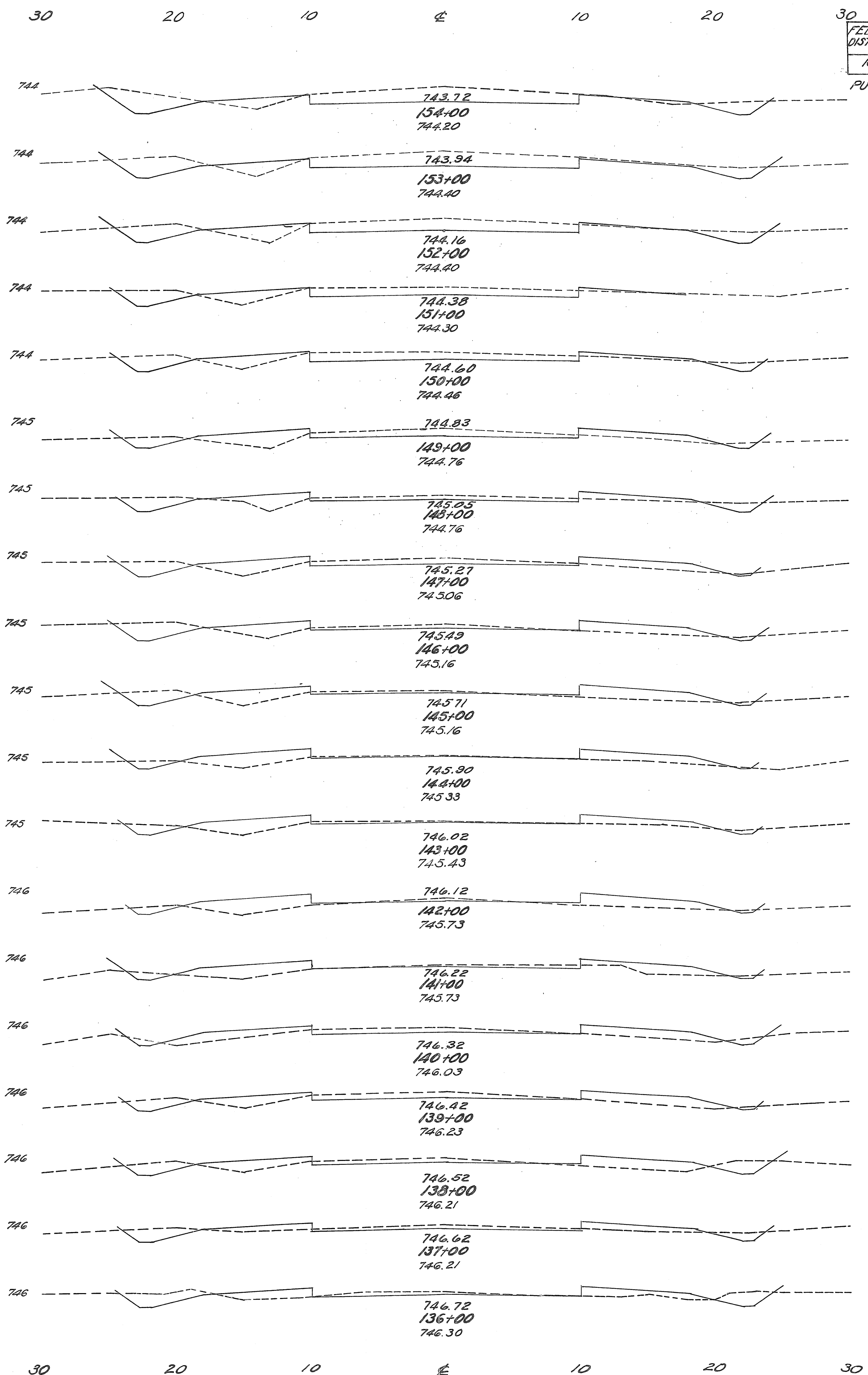
Exc. = 146.9 Cu. Yds.

Emb. = 15.6 "

Exc. + 20% = 144.2 "

Emb. = 14.2 "

From Sta. 125+00 To Sta. 140+00



End Area		Cubic Yards	
Exc.	Emb.	Exc.	Emb.
29.5	3	111	12
30.5	3.5	100	15
23.5	4.5	71	16
15	4	57	18
15.5	5.5	50	29
11.5	10	40	31
10	6.5	37	31
10	10	35	39
9	11	27	45
5.5	13.5	6	50
2.5	13.5	11	45
3.5	11	10	4.9
2	15.5	11	52
4	12.5	20	43
7	10.5	31	39
9.5	10.5	34	42
9	12	34	33
9.5	6	34	25
9	7.5	12	5

Exc. = 586 Cu. Yds.

Emb. = 475 "

Exc. + 20% = 570 "

Emb. = 16 "

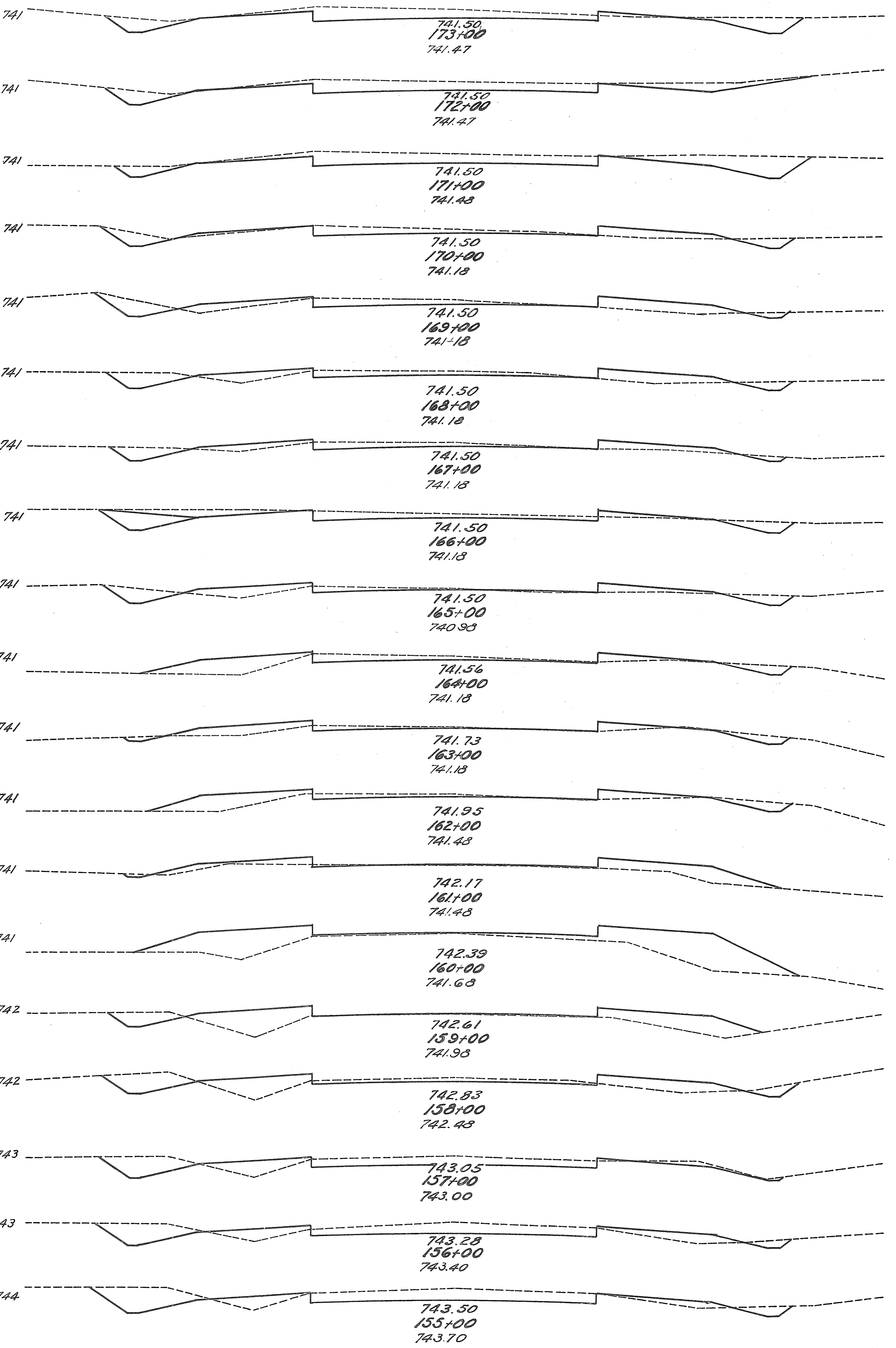
From Sta. 140+00 To Sta. 154+00

FED. RD. DIST. NO.	STATE	FED. AID PERCENTAGE	FISCAL YEAR
10	OHIO	NR. 5.713A	1933

PUTNAM CO. SH. 134 SEC. 17-1 PL.

15  
24

30 20 10 0 10 20 30

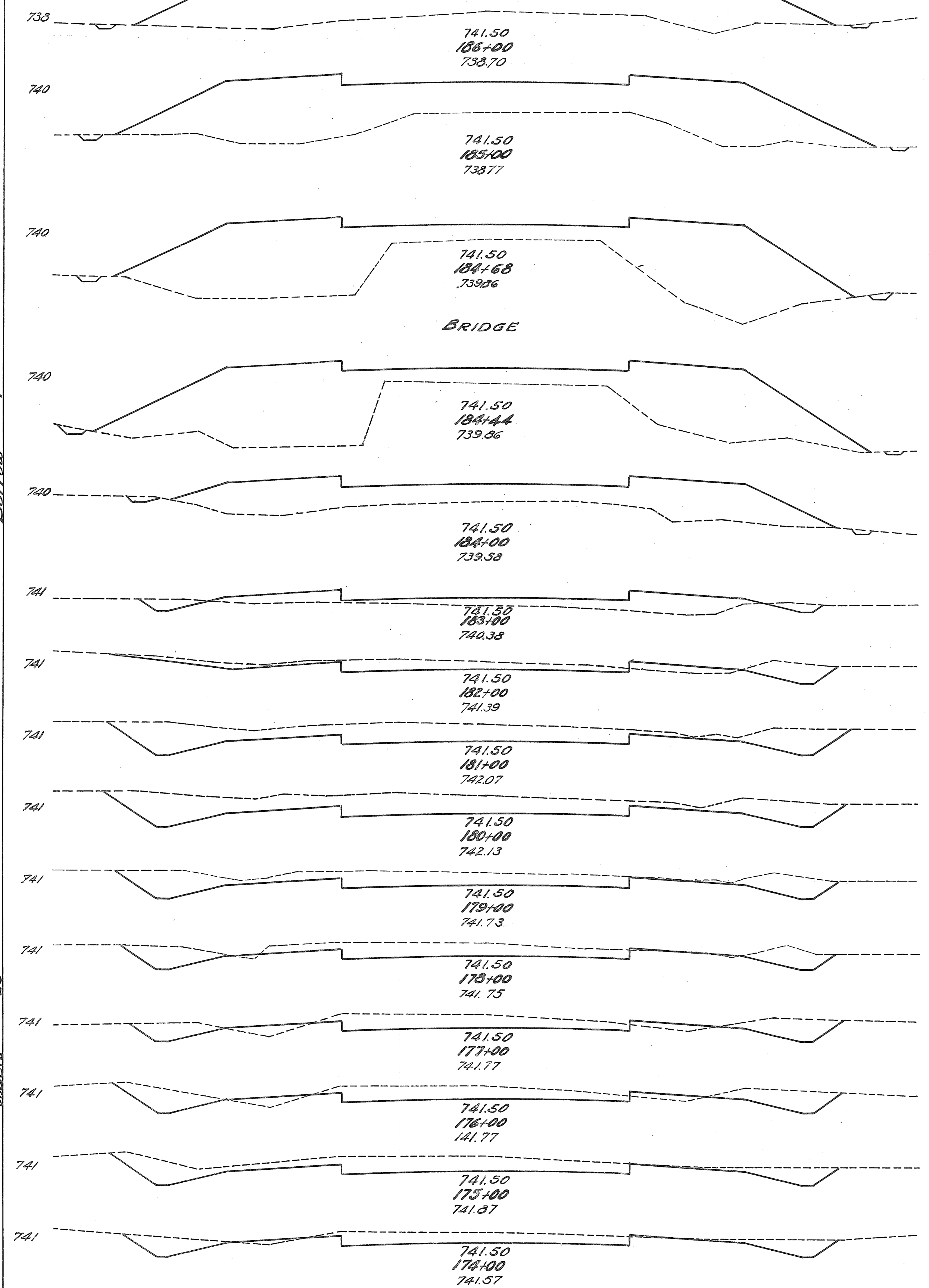


End Area		Cubic Yards	
Exc.	Emb.	Exc.	Emb.
22	1	83	2
23	0	93	0
27	0	69	9
105	5	36	26
9	9	38	33
115	9	38	28
9	6.5	37	14
135	17.5	47	17
8	7.5	29	34
7.5	11	23	32
5	6.5	18	31
5	10	9	42
0	13	0	99
0	40.5	6	112
3	20	27	59
11.5	12	56	31
19	4.5	71	23
19.5	8	82	24
25	5	101	15

Exc. = 437 Cu. Yds.  
 Emb. = 506 " "  
 Exc. + 20% = 439 " "  
 Emb. + 20% = 439 " "  
 Borrow = 1 " "

From Sta. 160+00 To Sta. 172+00  
 From Sta. 154+00 To Sta. 160+00

30 20 10 0 10 20 30



End Area		Cubic Yards	
Exc.	Emb.	Exc.	Emb.
0	120	0	326
0	146	0	493
0	183	0	183
0	163	0	163
0	155	0	191
0	79	6	193
3.5	25	44	52
20.5	3	136	6
53	0	206	0
58	0	181	0
40	0	132	0
31	0	112	7
29.5	4	116	14
33	3.5	132	6
38	0	118	1
26	0.5	89	3

Exc. = 1355 Cu. Yds.  
 Emb. = 1151 " "  
 Exc. + 20% = 1391 " "  
 Emb. + 20% = 1391 " "  
 Borrow = 26 " "

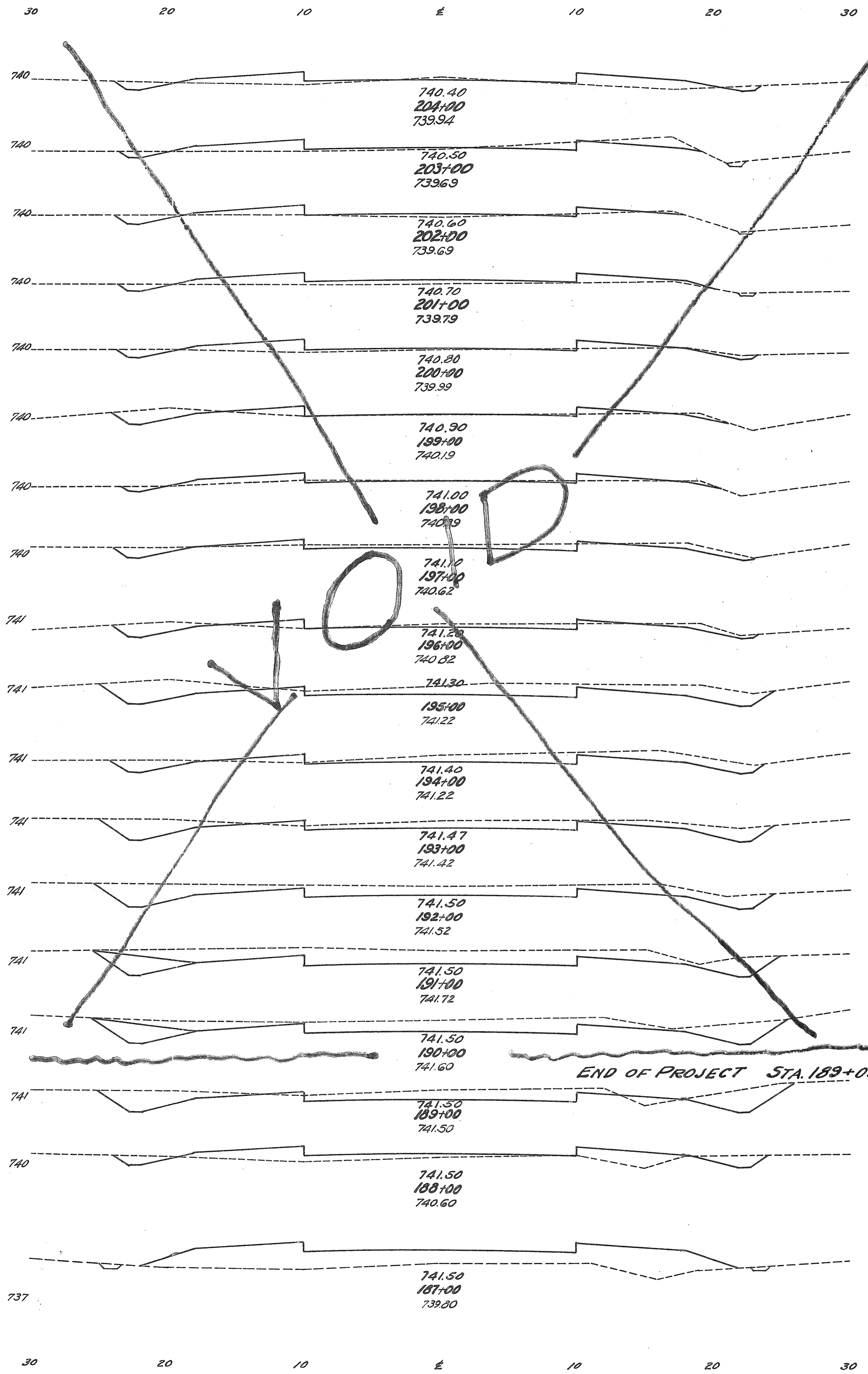
From Sta. 172+00 To Sta. 186+00

FED. RD. DIST. NO.	STATE	FED. RD. PROJ. NO.	FISCAL YEAR
10	OHIO	W.R.S. 7134	1933

PUTNAM CO. SH. 134. SEC. 11 - I. Pt.

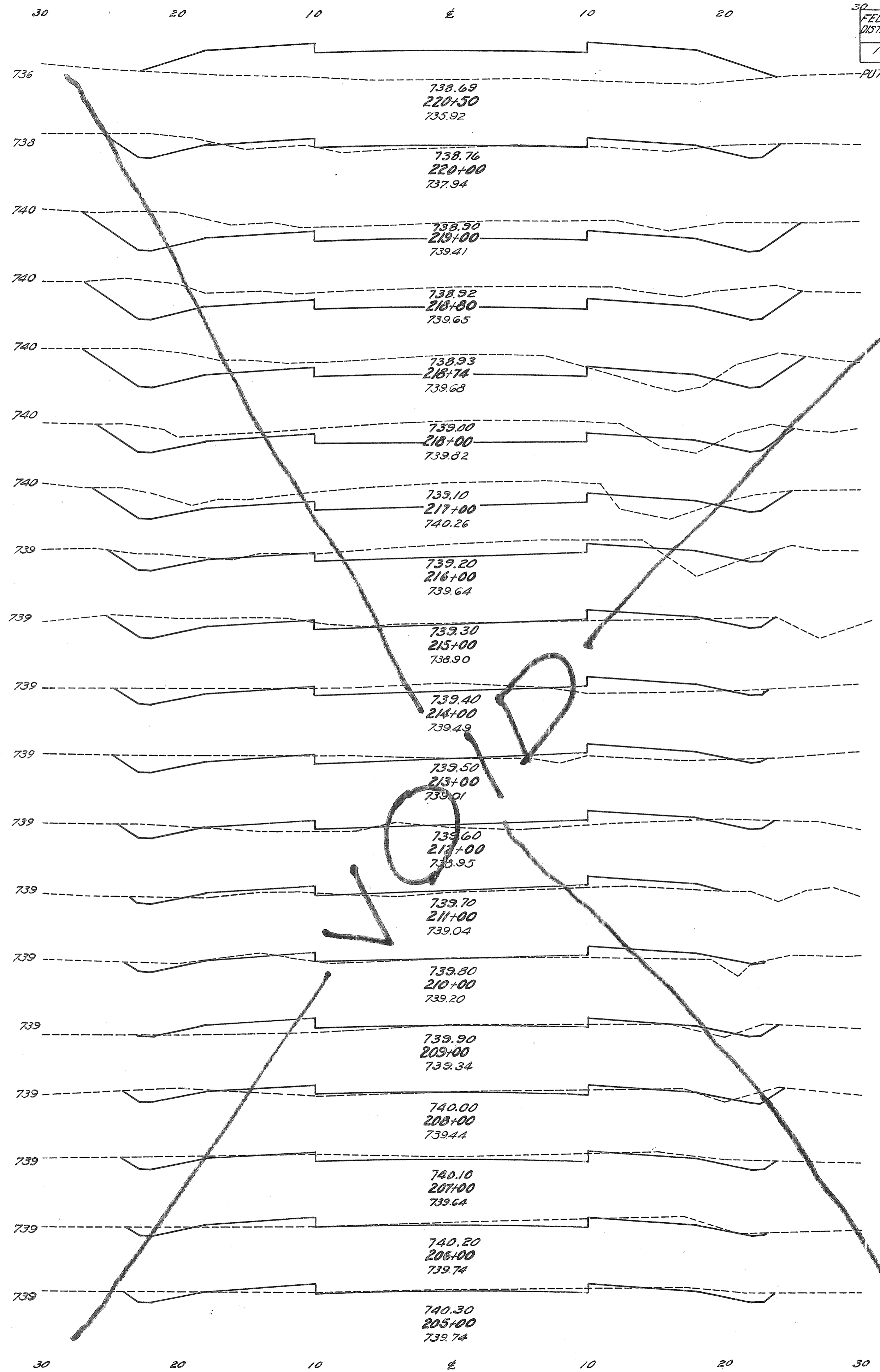
16  
24

30 20 10 0 10 20 30



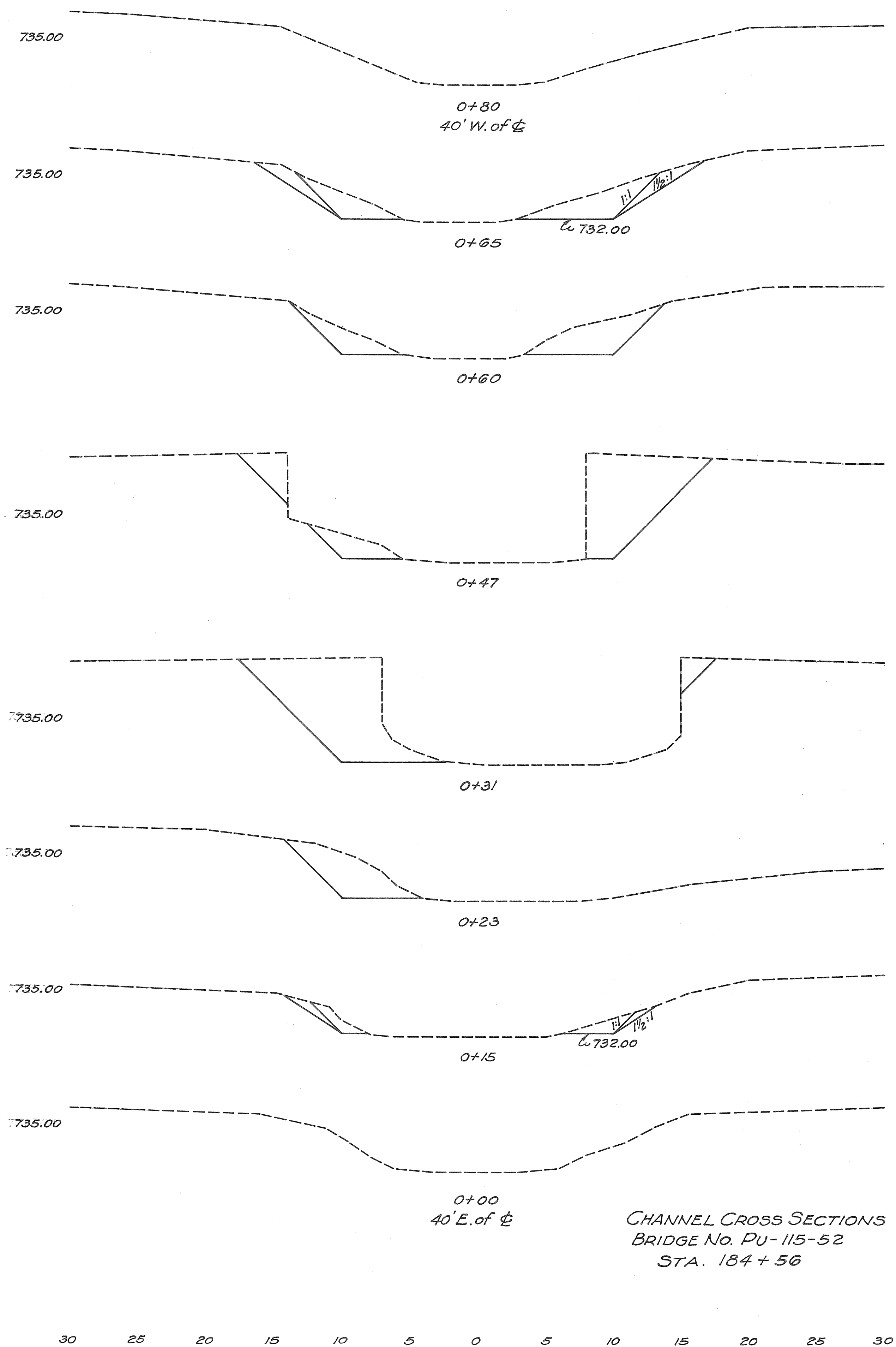
End Area		Cubic Yards	
Exc.	Emb.	Exc.	Emb.
4.0	136		
		21	39
7.1	7.3	18	26
		8	37
2.9	6.6		
		8	44
1.3	13.2		
		17	27
2.9	10.4		
		6.0	4.3
		17	20
3.2	6.3		
		25	15
10.4	1.8		
		38	9
10.2	2.9		
		80	6
33.1	0.3		
		99	5
20.2	2.3		
		85	5
26	0.5		
		115	1
36	0		
		153	0
40.5	0		
4.1		139	0
34	0		
39.5		131	2
31	1		
		66	35
4.5	18		
		8	137
0	56		

Etc. = 554 Cu. Yds.  
 Emb. = 560  
 Etc. = 51.5  
 Emb. = 46.6  
 Etc. = 623 Cu. Yds.  
 Emb. = 10  
 Etc. = 6.13  
 Emb. = 10  
 Etc. = 74 Cu. Yds.  
 Emb. = 658  
 Etc. = 524  
 Emb. = 524  
 From Sta. 189+00 To Sta. 205+00  
 From Sta. 189+00 To Sta. 216+00  
 From Sta. 205+00 To Sta. 216+00



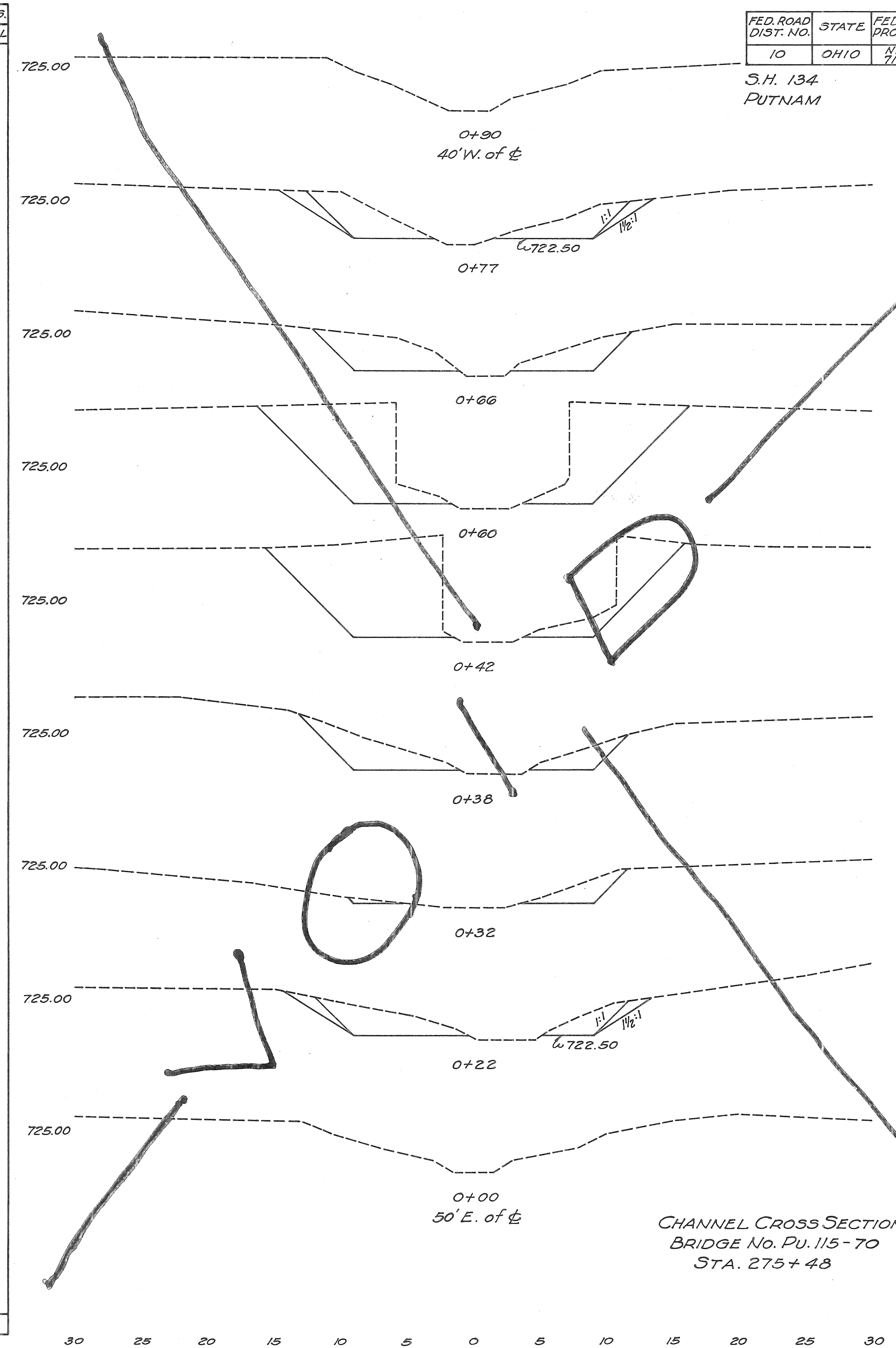
End Area		Cubic Yards	
Exc.	Emb.	Exc.	Emb.
0	92		
		5	94
10.5	9.5		
		136	9
63	0		
		47	0
63	0		
		13	1
54.5	7		
		145	14
51.3	3.2		
		191	21
51.8	8		
		149	27
29.5	6.6		
		80	21
138	4.5		
		54	25
15.6	9.1		
		49	36
10.9	10.4		
		33	46
6.9	4.2		
		16	48
1.6	11.5		
		9	39
3.0	9.6		
		11	43
3.1	13.6		
		21	35
8.3	5.2		
		42	11
14.5	0.6		
		46	7
10.3	3.3		
		35	12
8.4	3.4		
		23	32

Etc. = 356 Cu. Yds.  
 Emb. = 323  
 Etc. = 358  
 Emb. = 358  
 From Sta. 205+00 To Sta. 216+00



CHANNEL CROSS SECTIONS  
BRIDGE No. PU-115-52  
STA. 184+50

END AREA	CU. YDS.	
	CUT	FILL
0		9
30.9	21.3	4
24.8		20
59.9		3.6
62.3		12
18.8		4
6.3	9.3	3
0		
<b>TOTAL</b>	<b>88</b>	



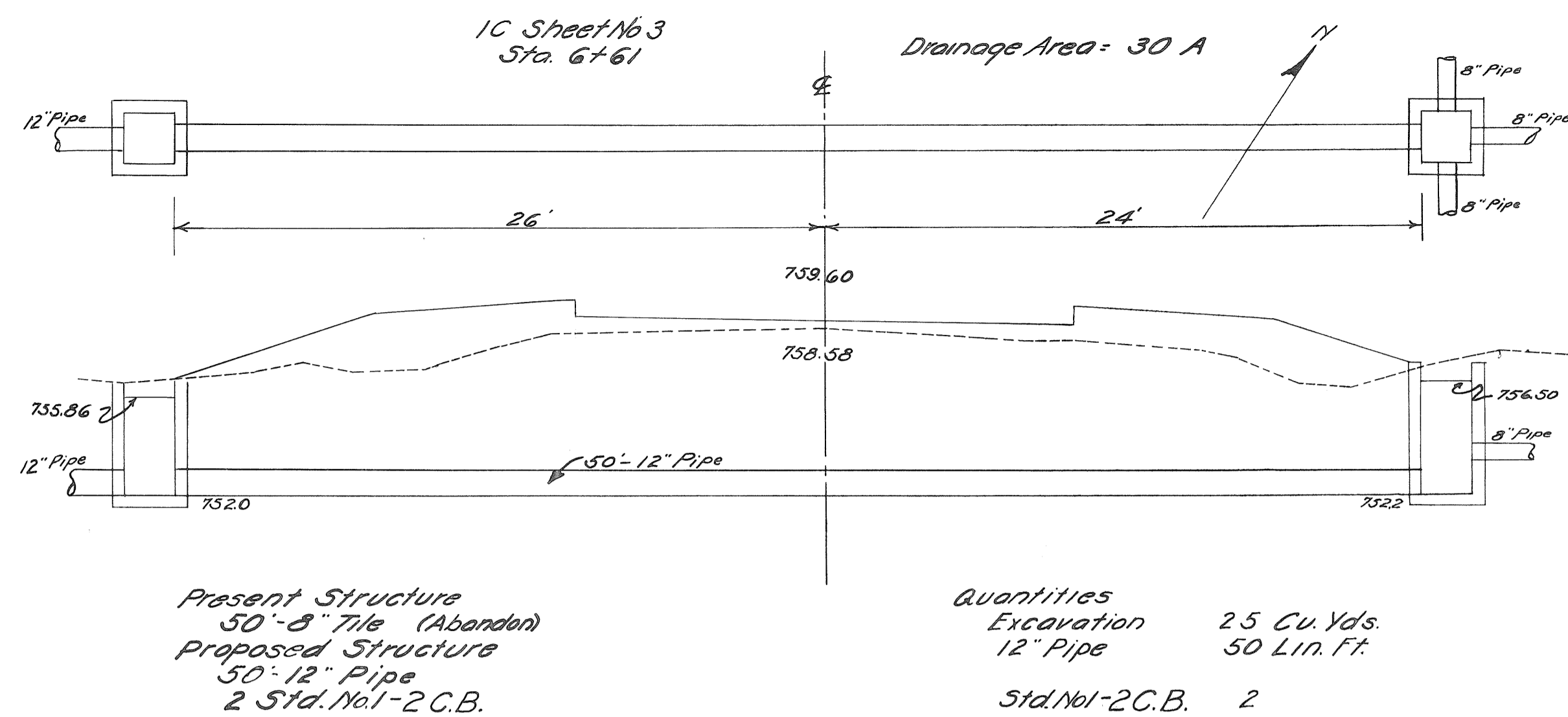
CHANNEL CROSS SECTIONS  
BRIDGE No. PU-115-70  
STA. 275+48

END AREA	CU. YDS.	
	CUT	FILL
0		8
33.3	26.8	12
32		15
102		66
96.3		9
25.3		4
8.4		6
22.8	28.8	12
0		
<b>TOTAL</b>	<b>132</b>	

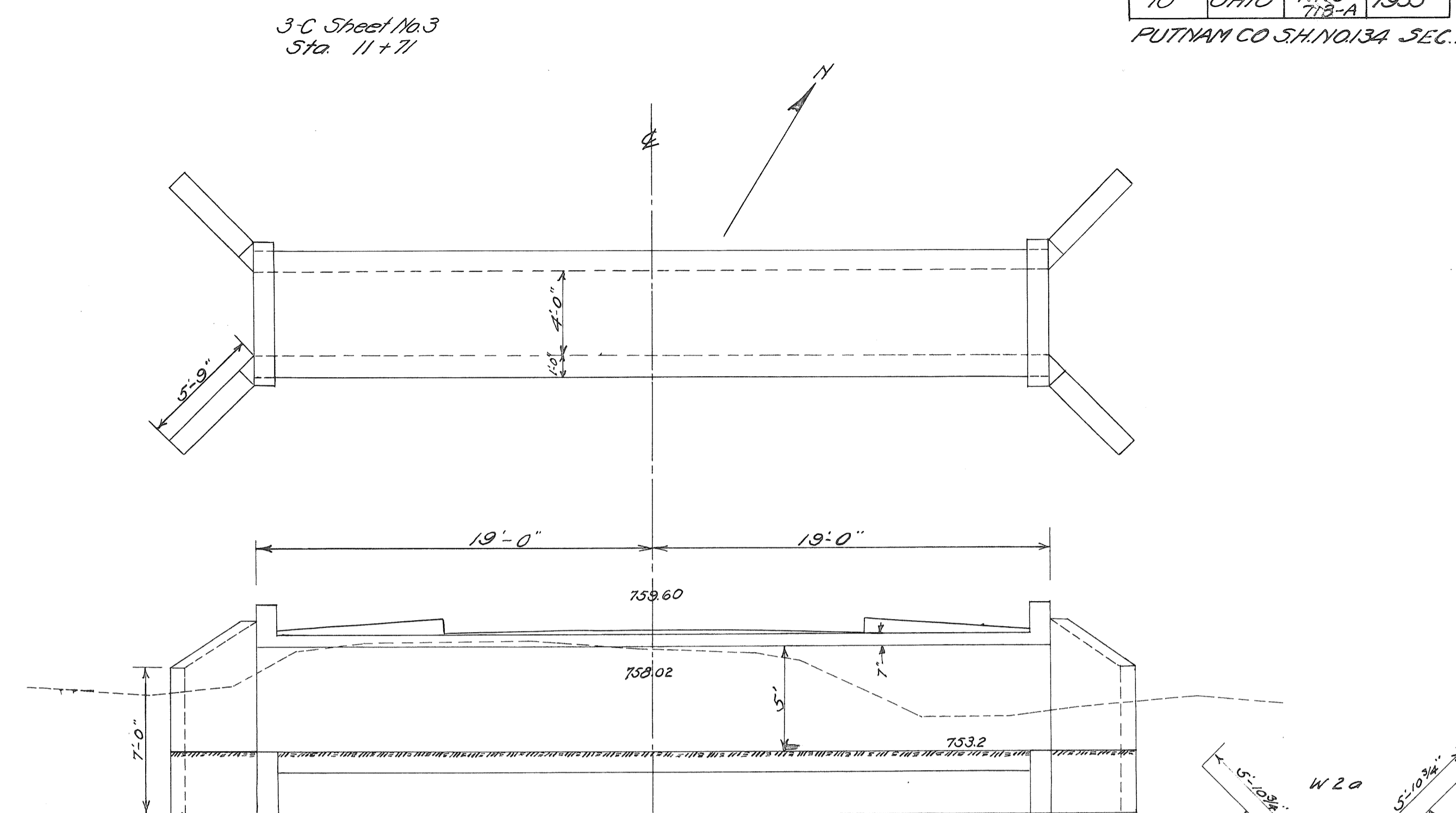
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO	NRS 713-A	1933

S.H. 134 PUTNAM COUNTY. SEC. F&I Pt. COUNTY.

18  
24

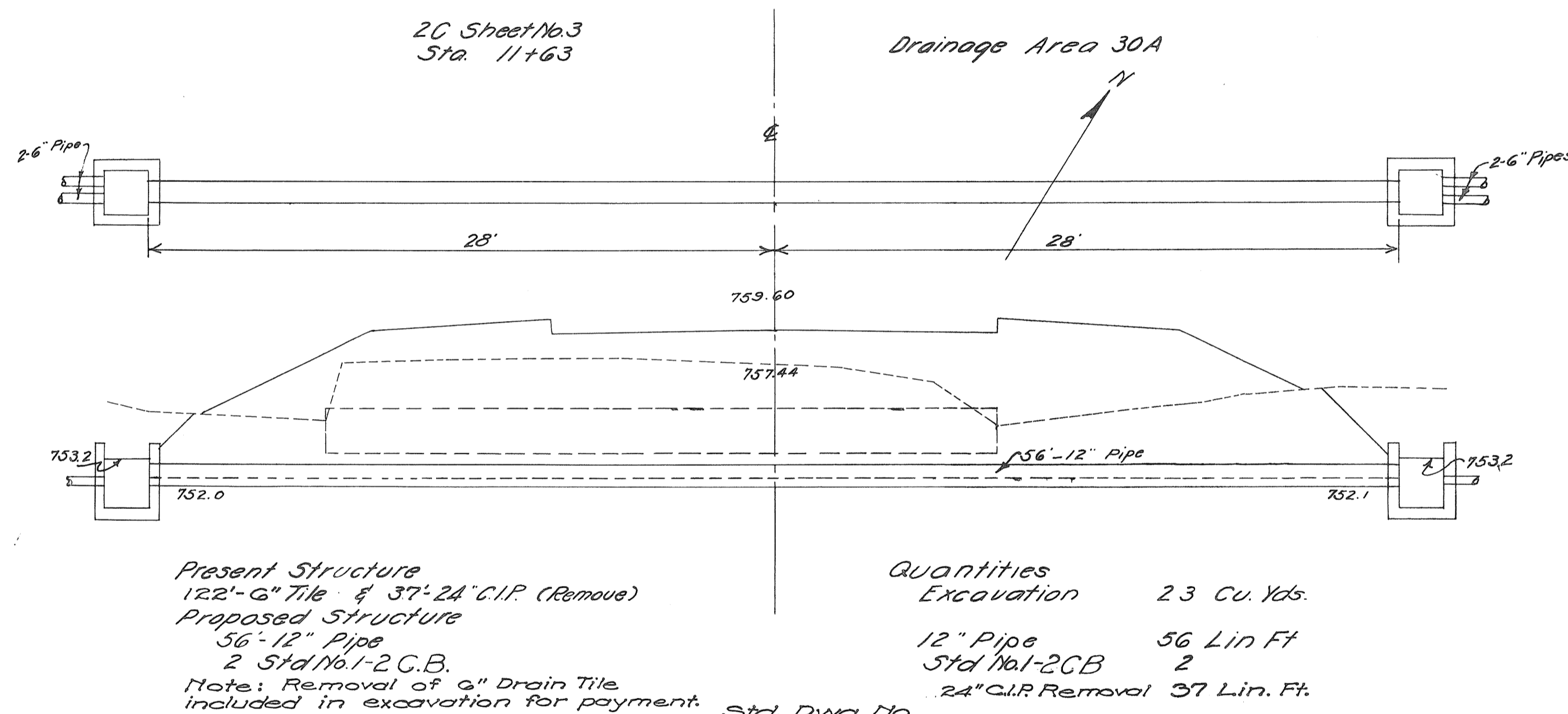


Std. Dwg. No.  
S-27 PC 1-2  
I-8 C.B. 1-2

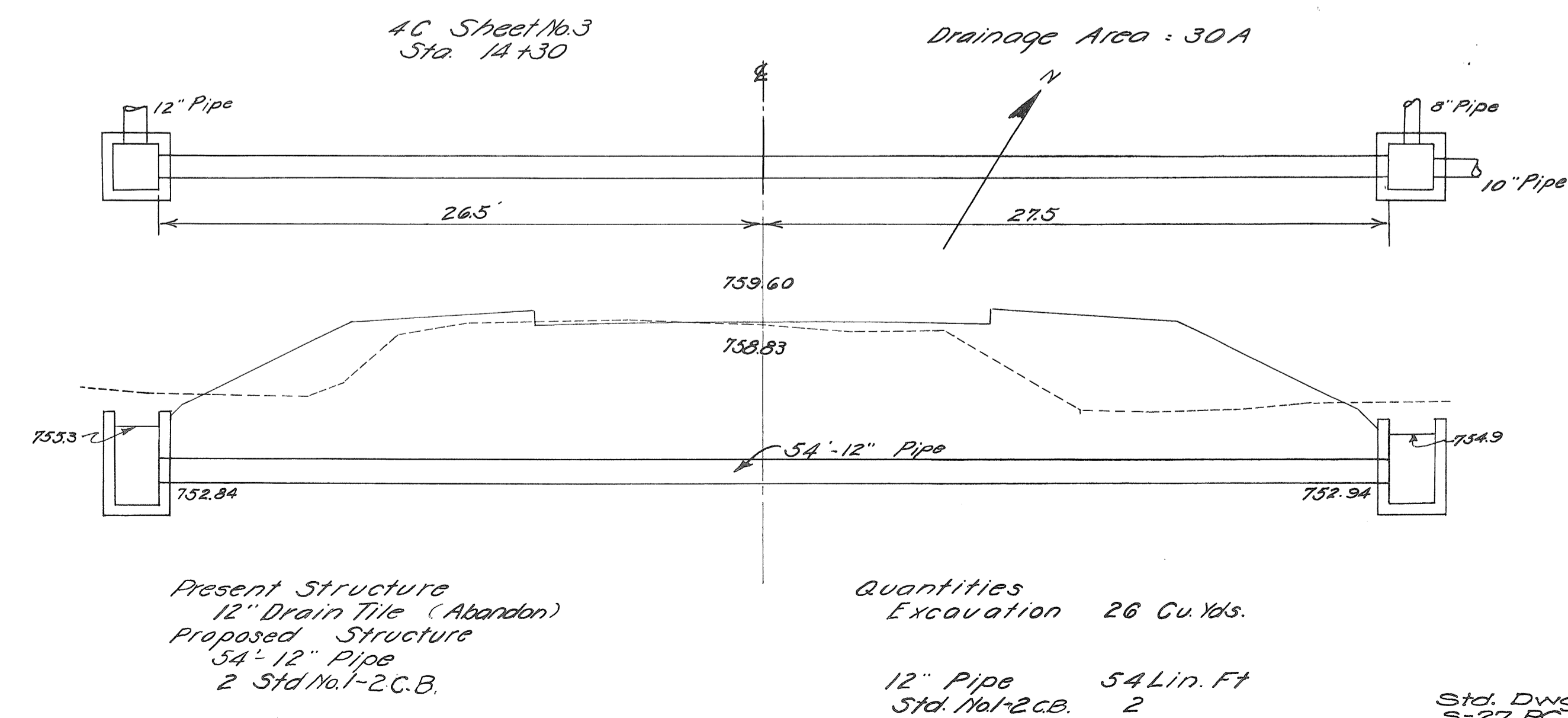


MARK	SIZE	NO.	LENGTH	WEIGHT
W2a	1/2"	20	9'-3"	123
W2b	1/2"	20	8'-0"	107
W2c	1/2"	12	7'-0"	56
W2d	1/2"	4	9'-6"	25
W2e	1/2"	20	5'-0"	67
S4a	3/8"	91	5'-6"	522
V2a	1/2"	80	8'-0"	427
T2a	1/2"	16	37'-6"	400
Total				1727

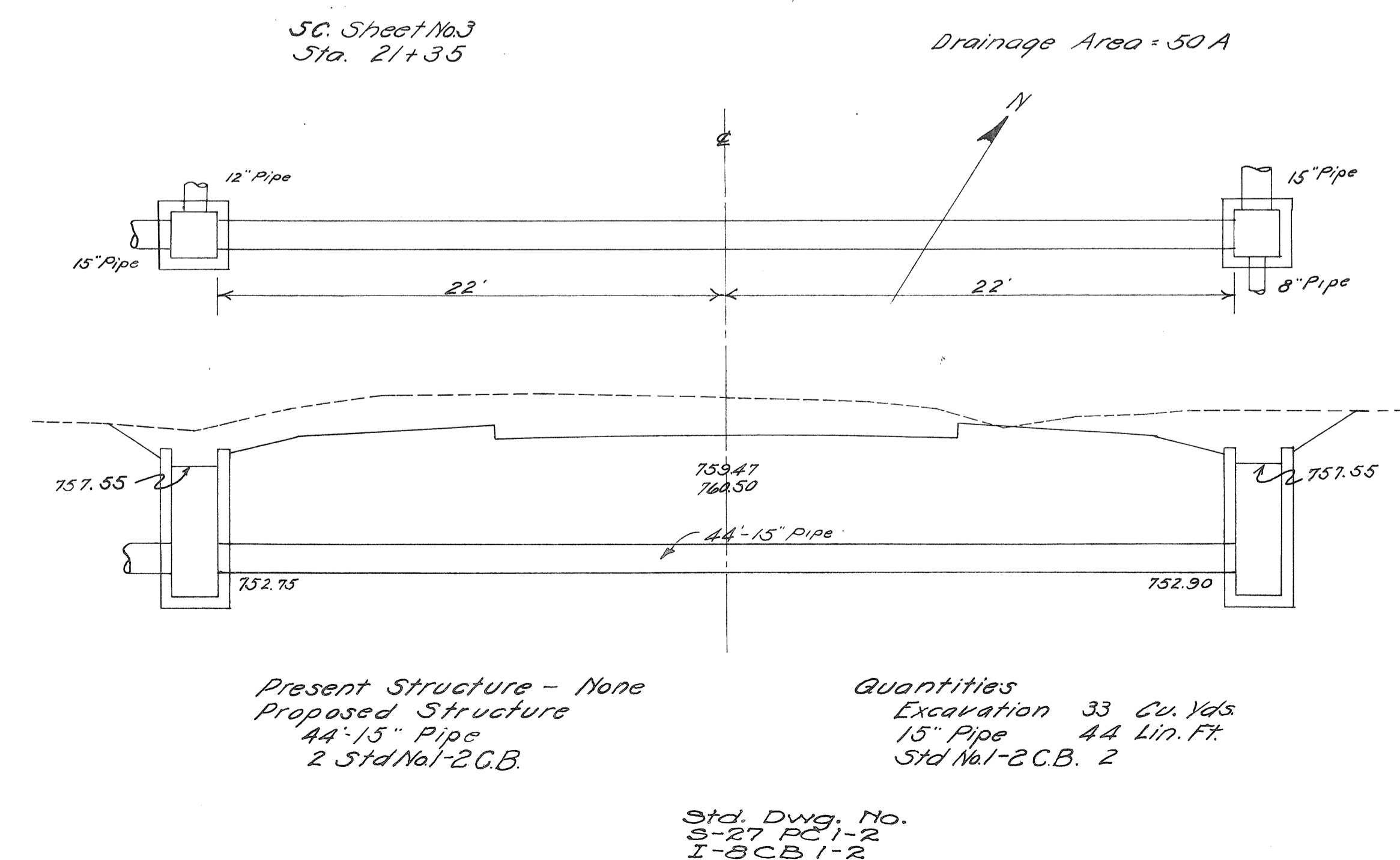
NOTE: See Standard Drawing SC-A  
for placing Steel



Std. Dwg. No.  
S-27 PC 1-2  
I-8 C.B. 1-2

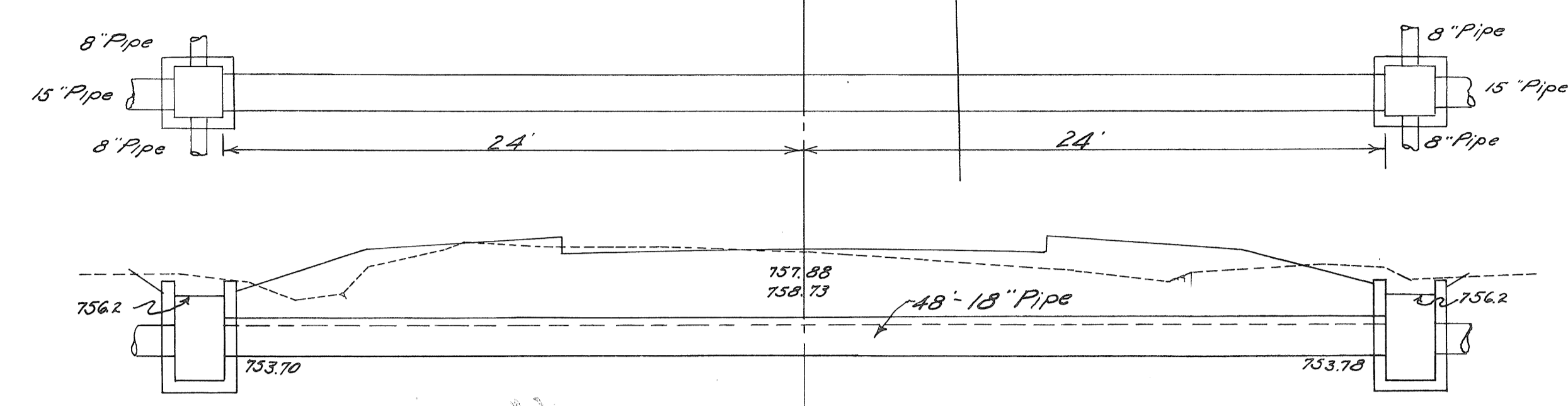


Std. Dwg. No.  
S-27 PC 1-2  
I-8 C.B. 1-2



Std. Dwg. No.  
S-27 PC 1-2  
I-8 C.B. 1-2

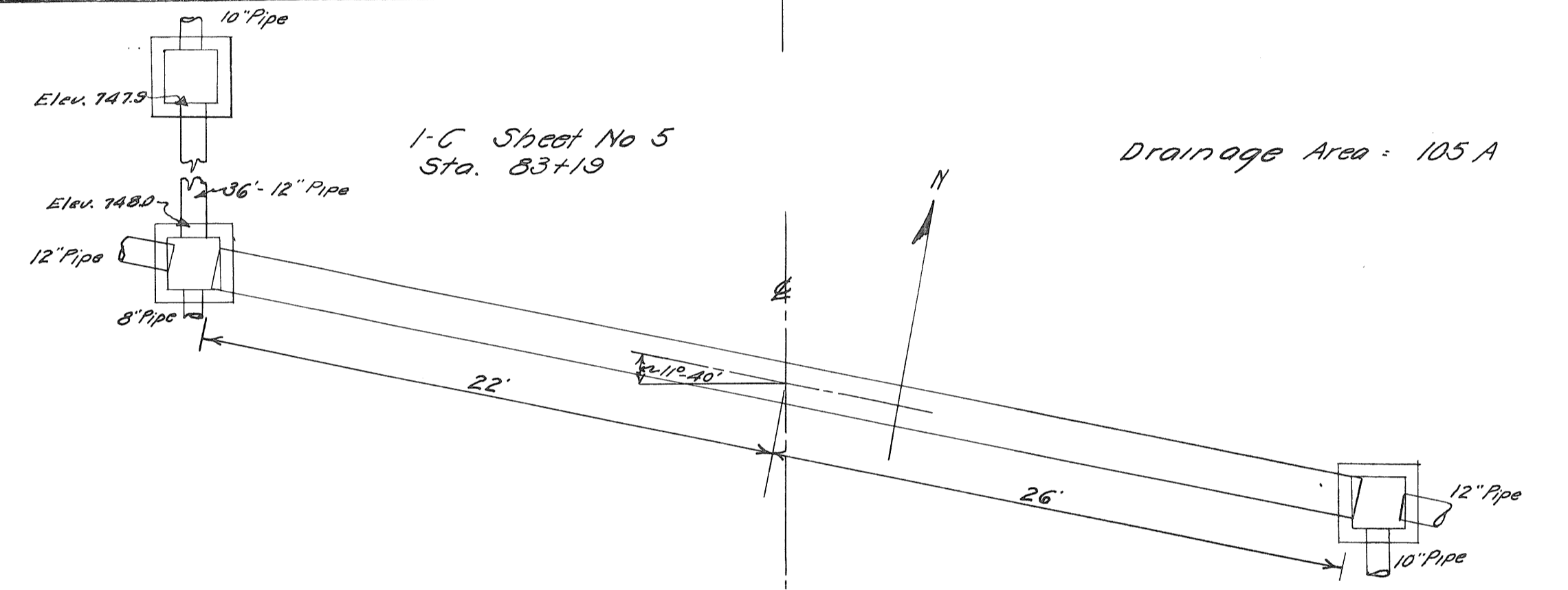
1-C Sheet No 4  
Sta. 51+27  
Drainage Area: 80 A.



Present Structure  
52"-15" Tile (Remove)  
Proposed Structure  
48"-18" Pipe  
2 Std. No. 1-2 C.B.

Quantities  
Excavation 21 Cu. Yds.  
18" Pipe 48 Lin. Ft.  
Std. No. 1-2 C.B. 2  
15" V.S.R. Removal 52 Lin. Ft.

Std. Dwg. No.  
S-27 PC 1-2  
I-B CB 1-2



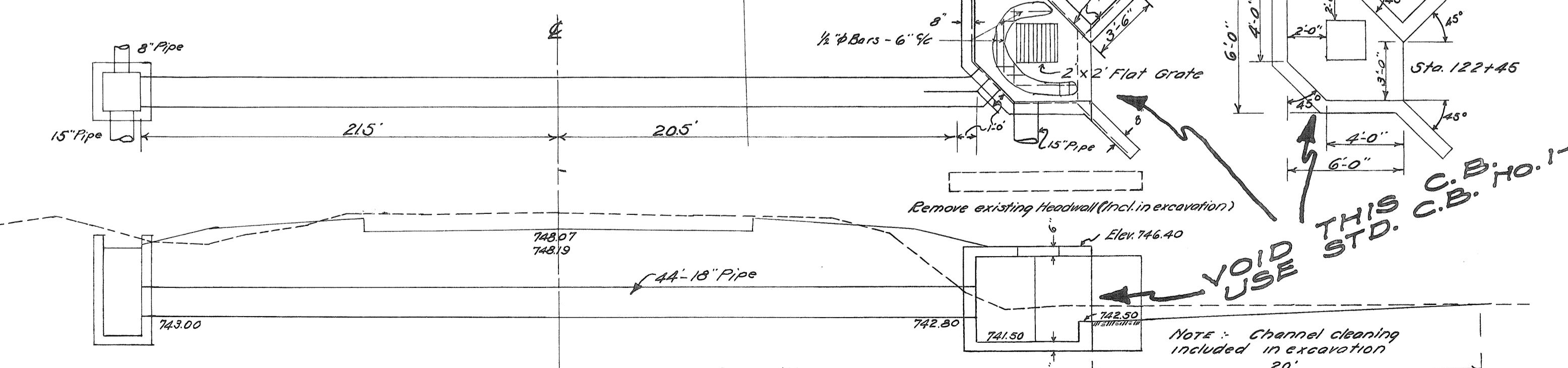
1-C Sheet No 5  
Sta. 83+19  
Drainage Area: 105 A.

Present Structure  
52"-12" Land Tile (Remove)  
Proposed Structure  
48"-18" Pipe  
3 Std. No. 1-2 C.B.  
Note: Removal of 12" Drain Tile included in excavation for payment.

Quantities  
Excavation 43 Cu. Yds.  
18" Pipe 48 Lin. Ft.  
Std. No. 1-2 C.B. 3  
12" Pipe 36 Lin. Ft.

Std. Dwg. No.  
S-27 PC 1-2  
I-B CB 1-2

1-C Sheet No 6  
Sta. 122+44  
Drainage Area: 65 A.



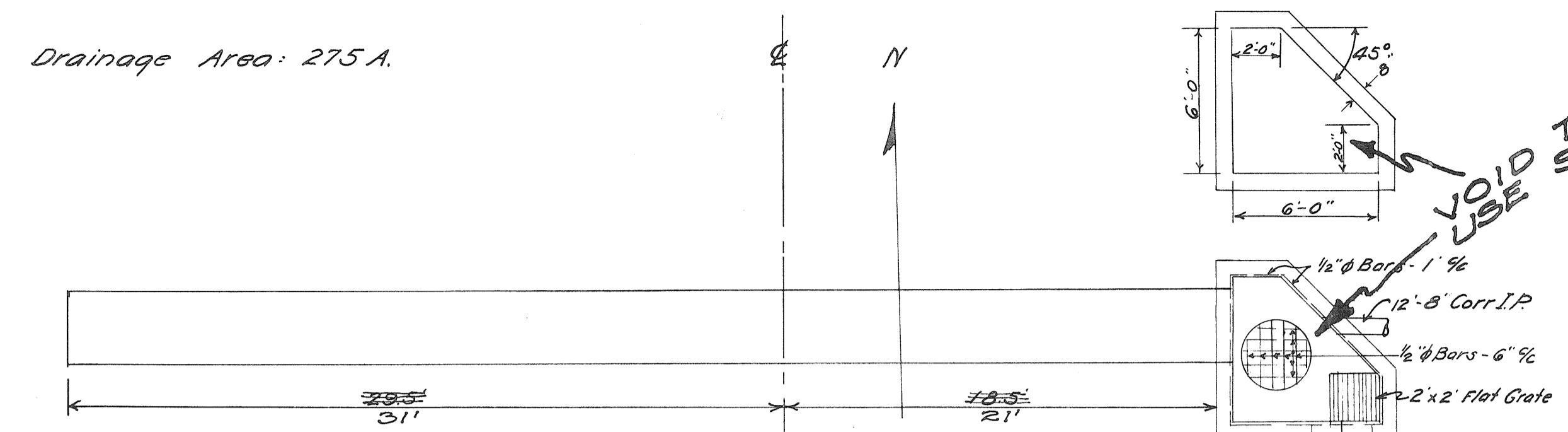
Present Structure  
None  
Proposed Structure  
44"-18" Pipe  
2 Std. No. 1-2 C.B.

Quantities  
Excavation 32 Cu. Yds.  
18" Pipe 44 Lin. Ft.  
Std. No. 1-2 C.B. 2

Std. Dwg. No.  
S-27 PC 1-2  
I-B CB 1-2

**VOID**  
VOID THIS C.B. NO. 1-2  
USE STD. C.B. NO. 2-4

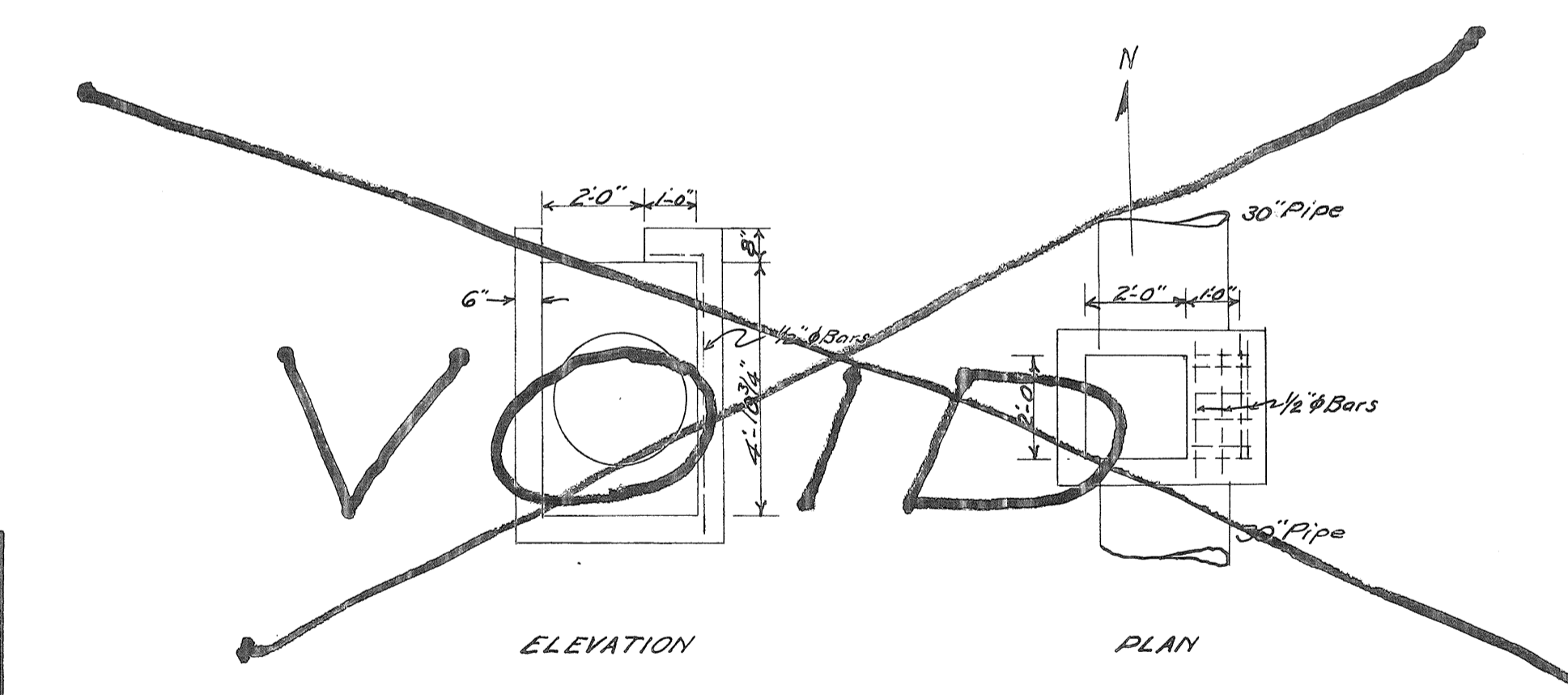
1-C Sheet No 7  
Sta. 135+15  
Drainage Area: 275 A.



Present Structure  
5x5x30 Culvert - Stone walls, Plank floor (Remove)  
Proposed Structure  
52"-36" Pipe  
1 Std. 2-A C.B.

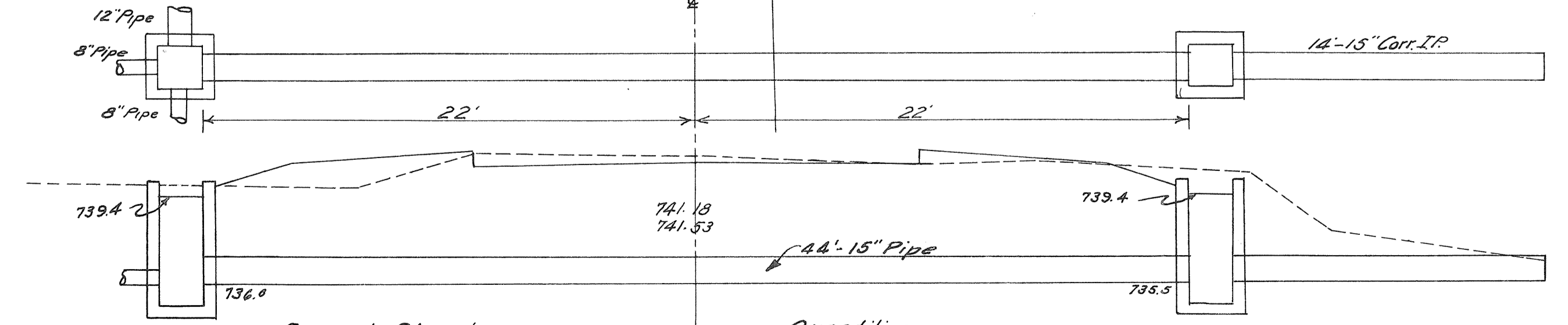
Quantities  
Excavation 30 Cu. Yds.  
36" Pipe 52 Lin. Ft.  
Std. 2-A C.B. 1  
8" Corr. I.P. 12 Lin. Ft.  
Channel Exc. 152 Cu. Yds.  
Removal 5x5x30 Culvert } Lurrip

Std. Dwg. No.  
S-27 PC 1-2  
I-B CB 2-4



Modified No. 2-3 Catch Basin  
To be used at Sta. 127+00  
on right and at Sta. 131+00  
on right

1-C Sheet No 8  
Sta. 164+39  
Drainage Area: 35 A.



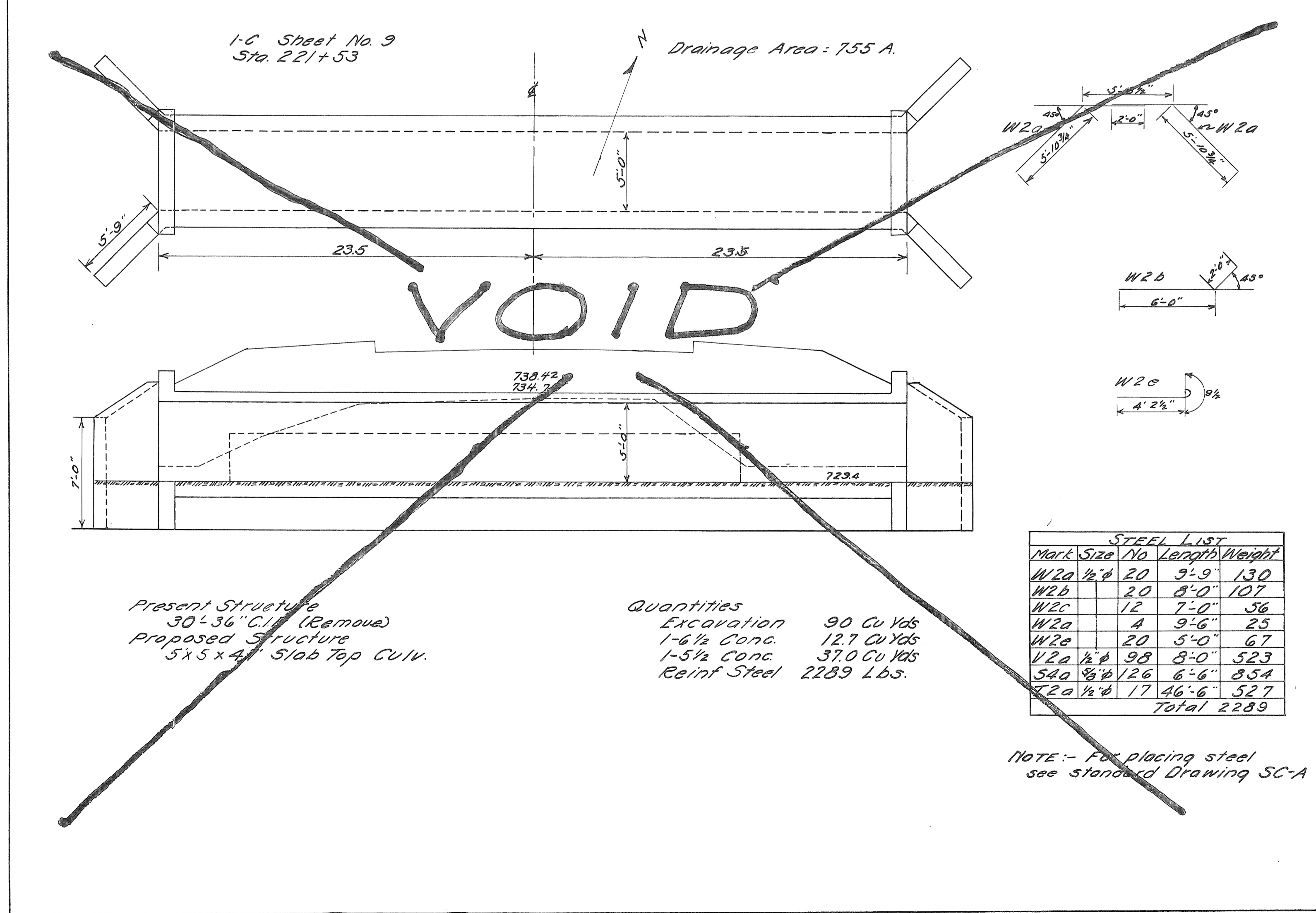
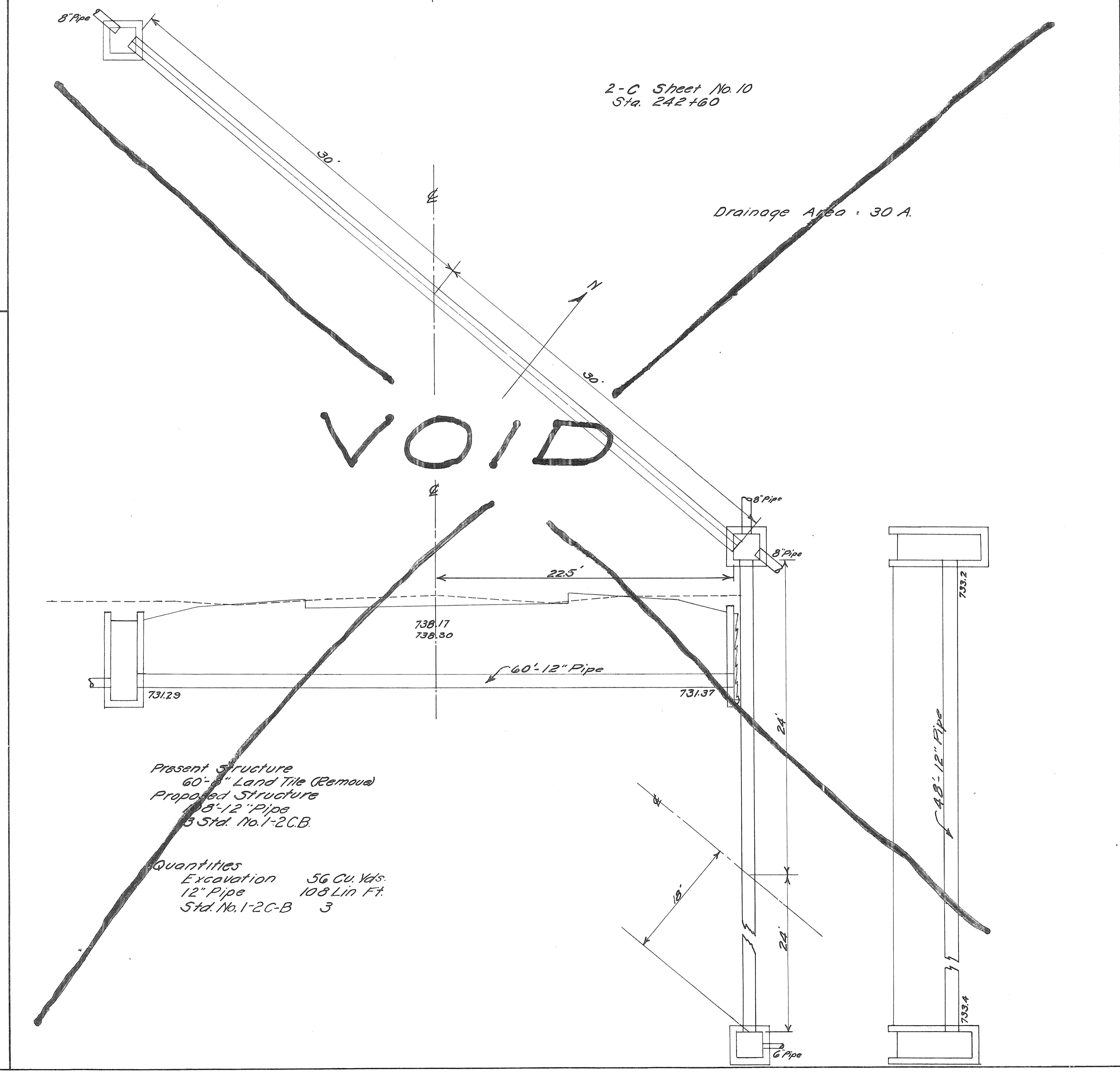
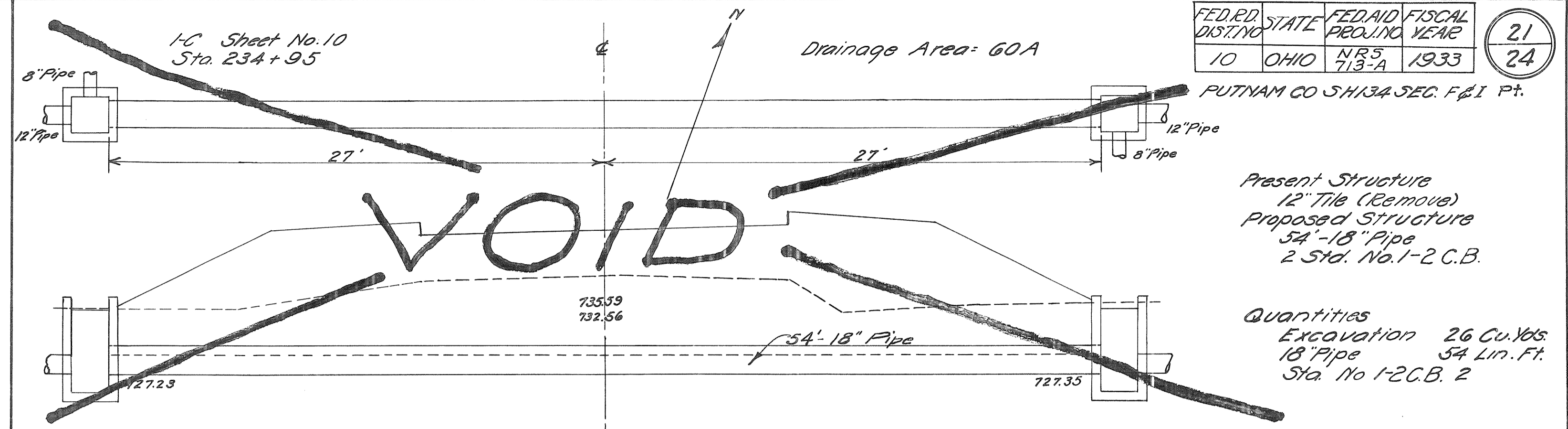
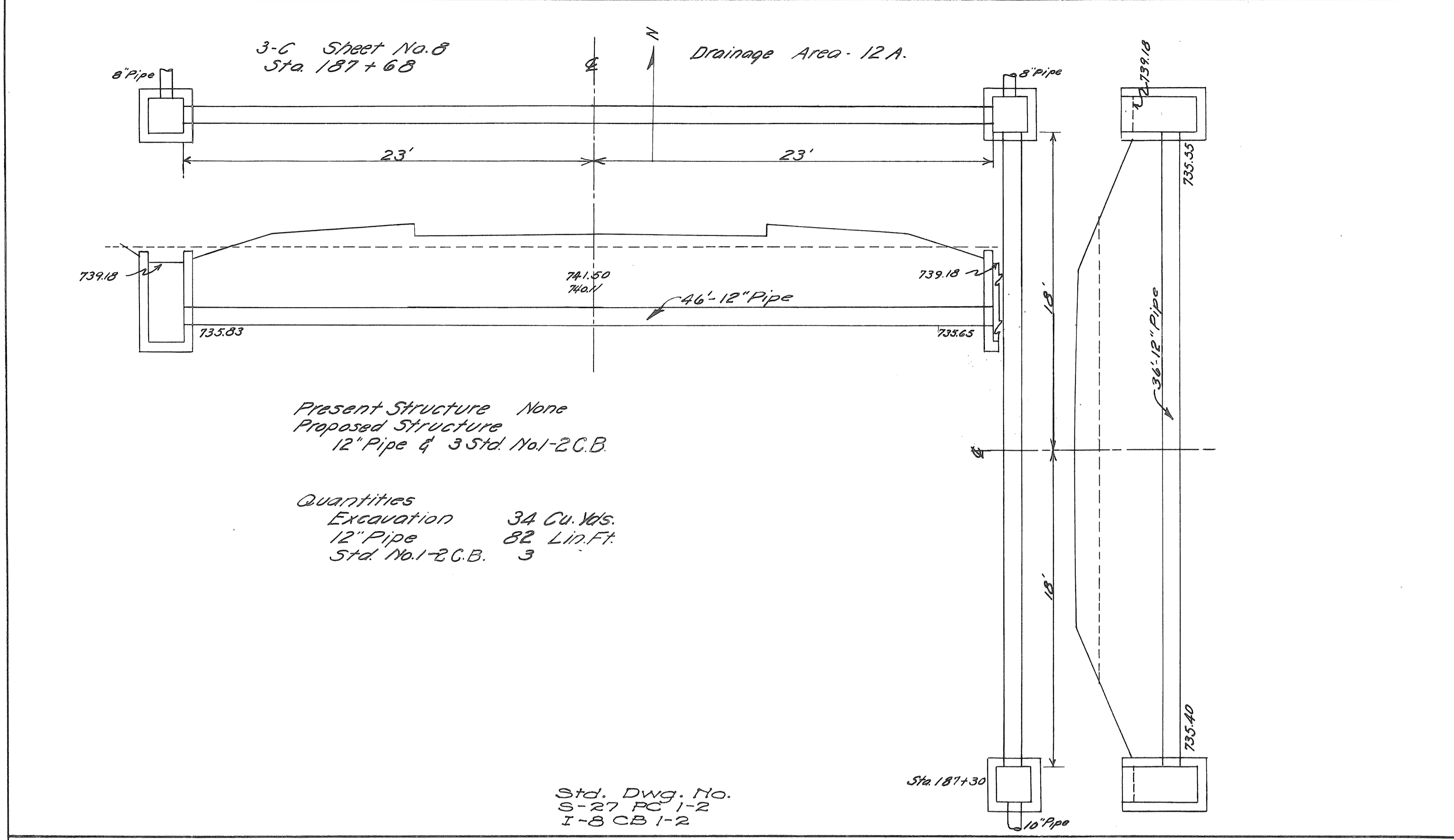
Present Structure  
50"-8" Tile (Remove)  
Proposed Structure  
44"-15" Pipe  
2 Std. No. 1-2 C.B.  
14"-15" Corr. I.P.

Quantities  
Excavation 28 Cu. Yds.  
15" Pipe 44 Lin. Ft.  
Std. No. 1-2 C.B. 2  
15" Corr. I.P. 14 Lin. Ft.

Std. Dwg. No.  
S-27 PC 1-2  
I-B CB 1-2

Note: Removal of 8" Drain Tile included in excavation for payment.

PUTNAM CO SH/13A SEC. F&I Pt.

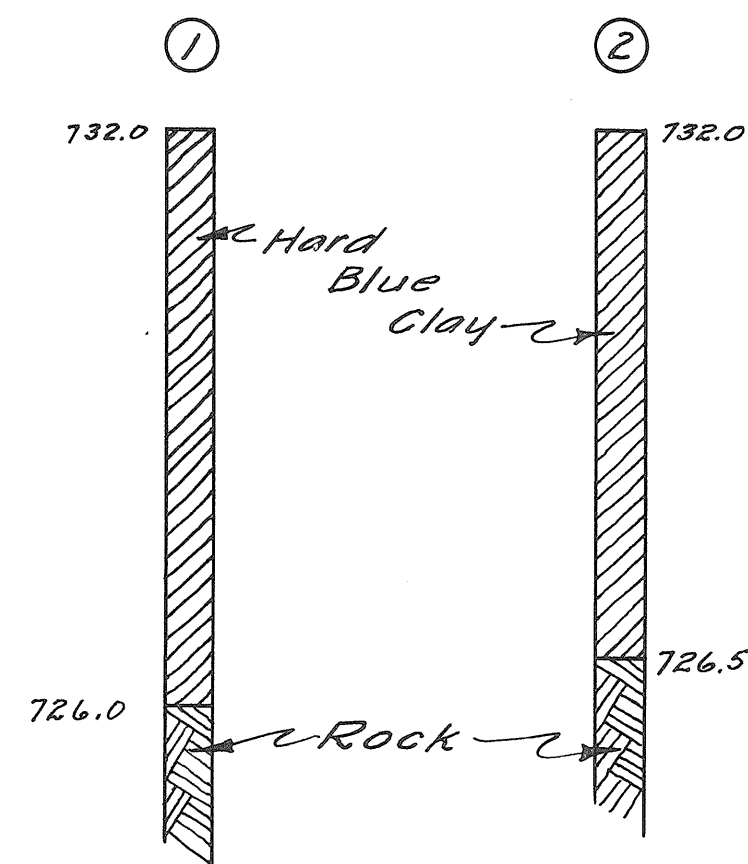


FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO	NR5 713-A	1933

22  
24

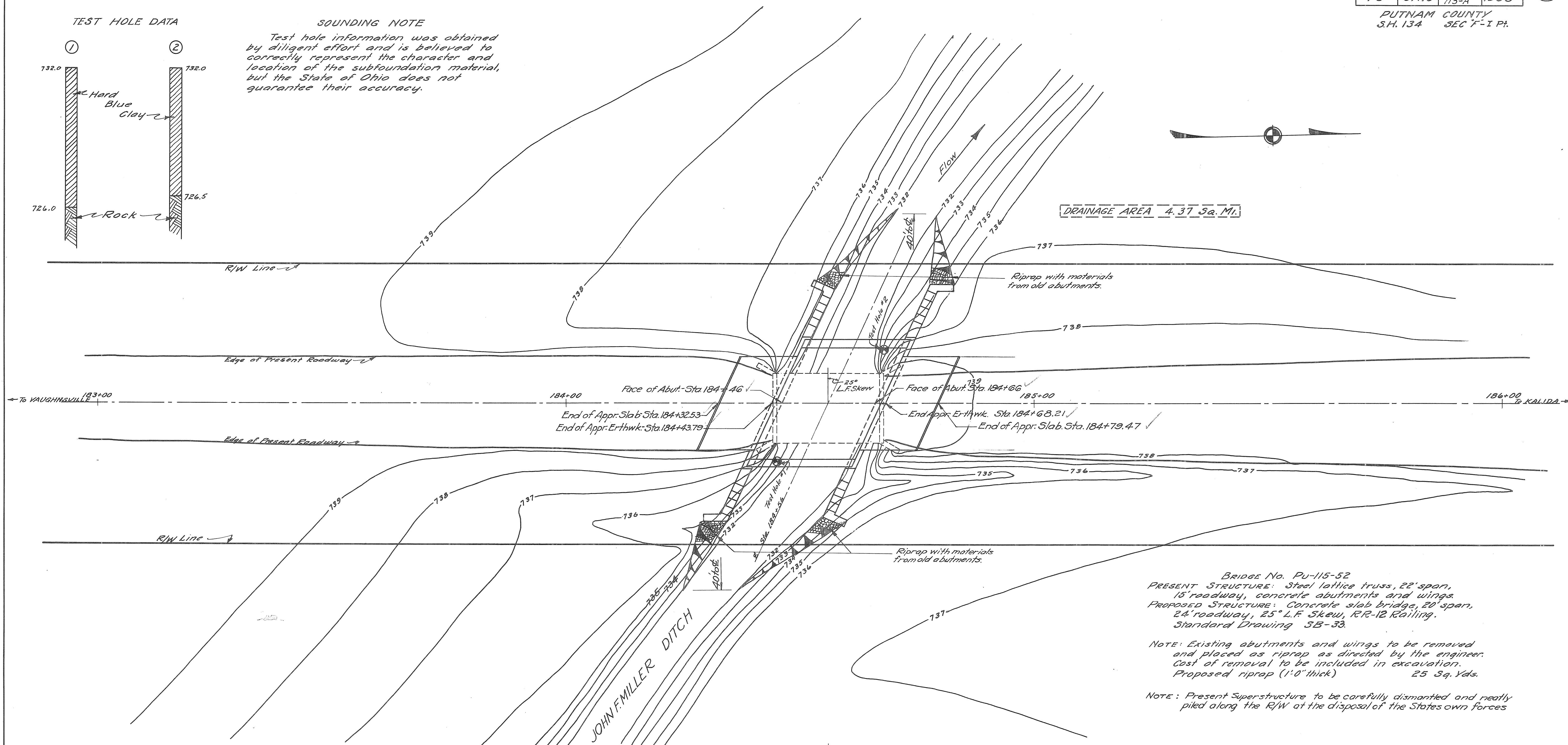
PUTNAM COUNTY  
S.H. 134 SEC. F-1 Pt.

TEST HOLE DATA



SOUNDING NOTE

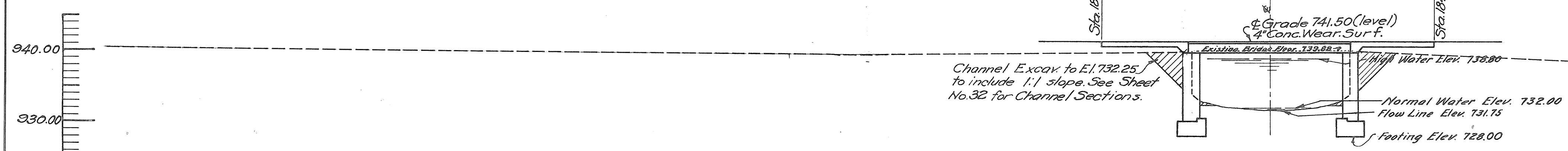
Test hole information was obtained by diligent effort and is believed to correctly represent the character and location of the subfoundation material, but the State of Ohio does not guarantee their accuracy.



BRIDGE No. PU-115-52  
 PRESENT STRUCTURE: Steel lattice truss, 22' span, 15' roadway, concrete abutments and wings.  
 PROPOSED STRUCTURE: Concrete slab bridge, 20' span, 24' roadway, 25° L.F. Skew, RR-12 Railing.  
 Standard Drawing SB-33.

NOTE: Existing abutments and wings to be removed and placed as riprap as directed by the engineer. Cost of removal to be included in excavation. Proposed riprap (1'0" thick) 25 Sq. Yds.

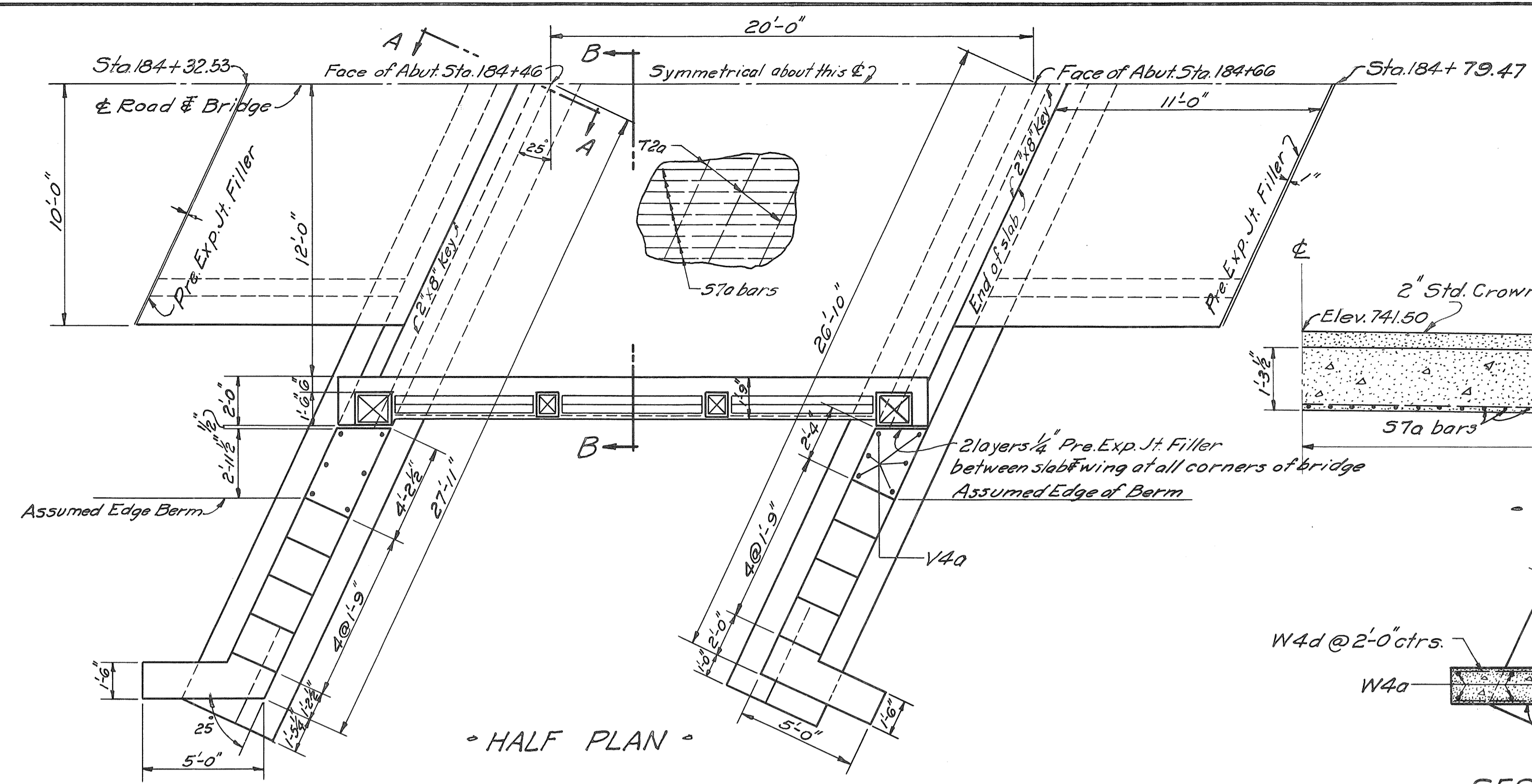
NOTE: Present Superstructure to be carefully dismantled and neatly piled along the R/W at the disposal of the States own forces



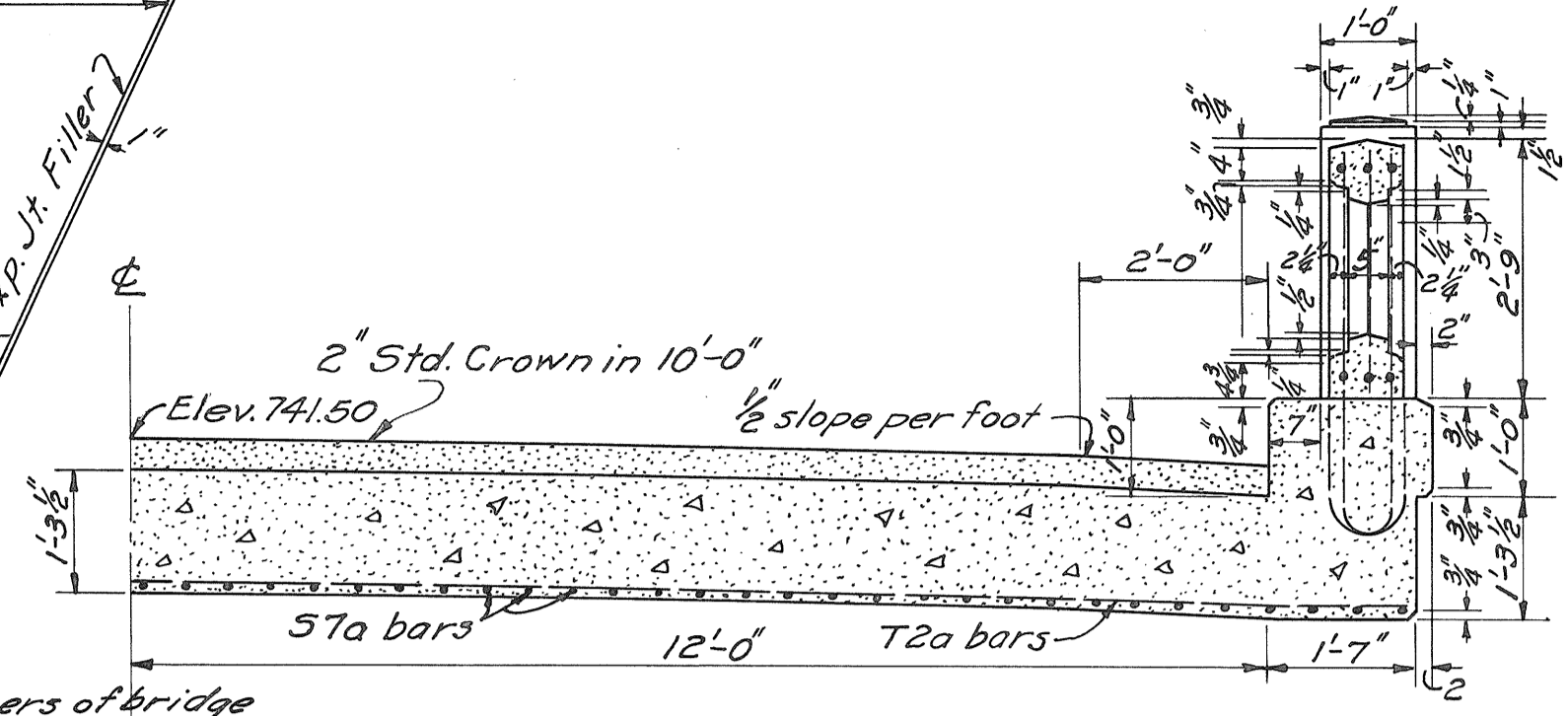
PROFILE ON C

BRIDGE No. PU. 115-52

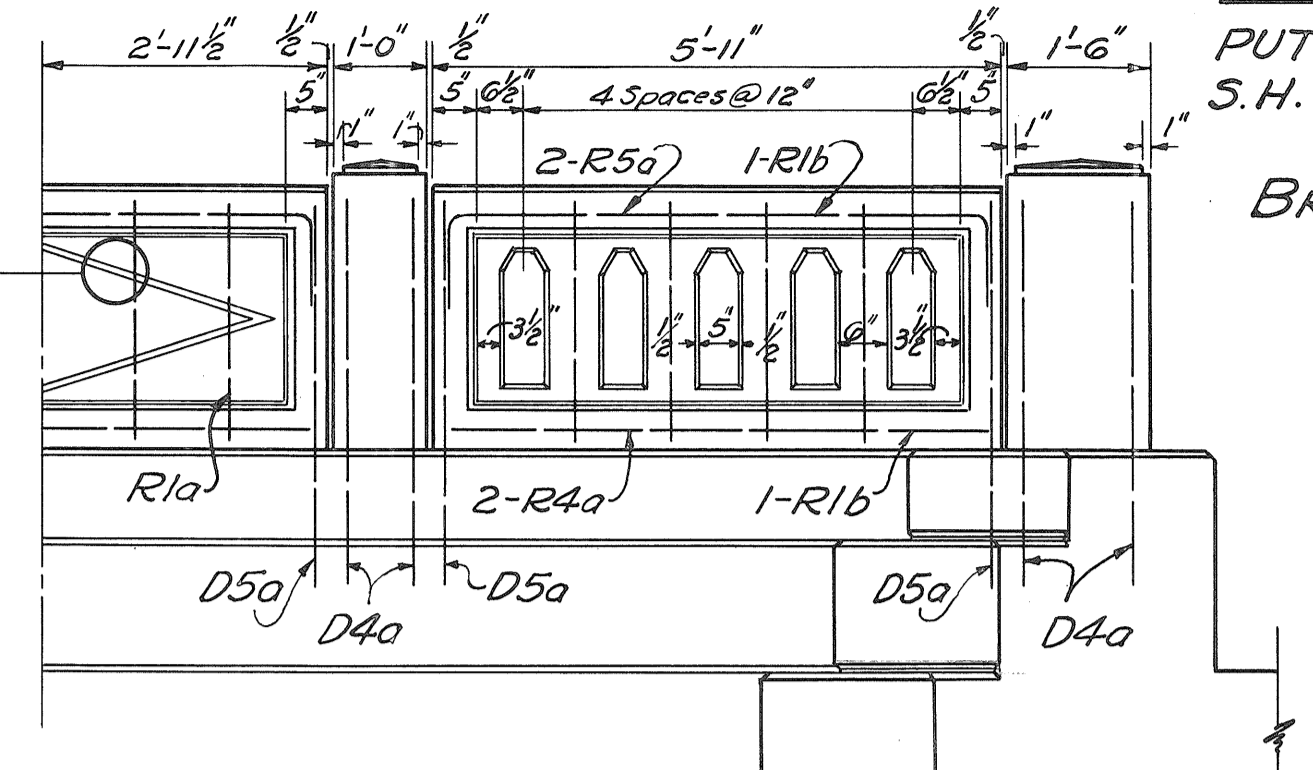
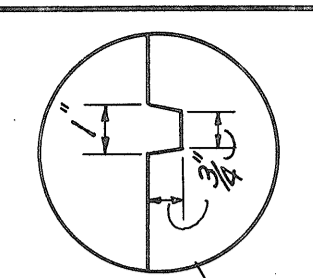
STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES			
SITE PLAN			
BRIDGE OVER JOHN F. MILLER DITCH S.H. 134 PUTNAM COUNTY SEC. F STA. 184+56			
Present Topography		Proposed Work	
Surveyed	Drawn	Des.	Drn.
W.F.	E.W.E.	G.E.K.	E.W.E.
		Ckd.	Rev.
		C.R.H.	



- HALF PLAN -



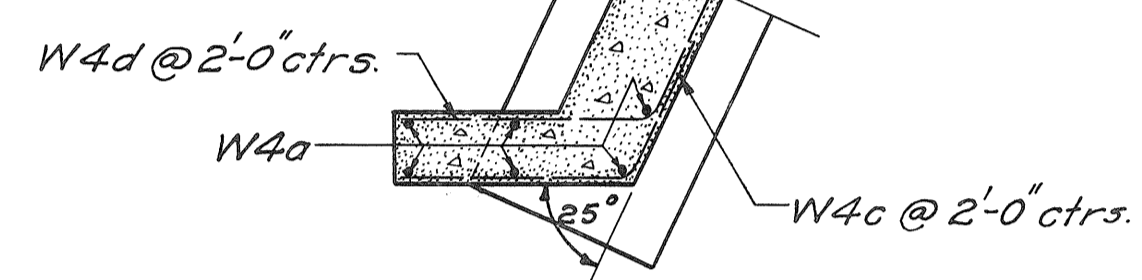
- SECTION B-B -



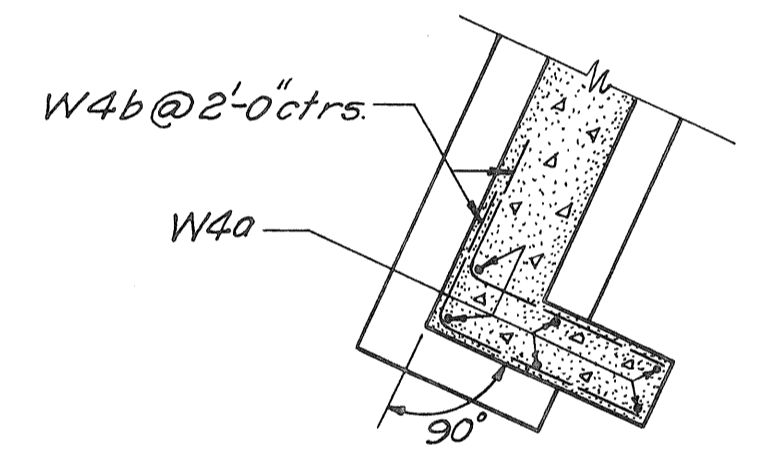
- HALF ELEVATION OF RAILING -

- GENERAL NOTES -

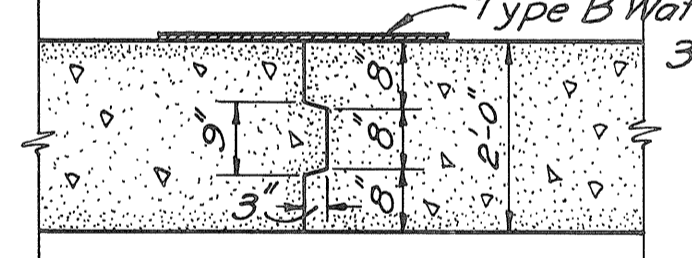
**SUPERSTRUCTURE** shall be a 20'-0" Standard Concrete Slab Span, 24'-0" roadway, 25° L.F. Skew.  
**SUBSTRUCTURE** to be standard type with wings as shown. Present abutments and wings to be removed and used as rip rap or otherwise disposed of as directed by the Engineer. Cost of removal included in the cost of Excavation.  
**PRESENT SUPERSTRUCTURE** to be carefully dismantled and neatly piled along the right of the States own forces.  
**CHANNEL** to be excavated to Elev. 732.25 within the limits shown on site plan with a 1:1 slope. All excavation below Elev. 732.00 shall be classed as Wet Excavation and all excavation above Elev. 732.00 shall be classed as Dry Excavation.  
**APPROACH SLABS** 11'-0" long by 20'-0" wide by 8 1/2" thick, to be provided, constructed as shown by Std. Drwg. No. AS-31  
**CONCRETE** in Superstructure, Wearing Surface, Approach Slabs and Railing to be 1:5 1/2 mix. Concrete in Walls and Footings to be 1:6 1/2 mix.  
**CHAMFER** all corners 3/4" unless otherwise shown on plans  
**CAMBER** No camber is required or desired, but special care shall be taken to avoid sag. To insure against sag, a slight camber will be permitted. The wearing surface along curbs shall be placed with special care to avoid depressions that will hold water.  
**CONSTRUCTION JOINTS**: No horizontal construction joints other than those shown will be permitted. Vertical construction joints allowed only by special permission of the Engineer. All construction joints in abutments above low water elevation shall be sealed on back with Type "B" Waterproofing 36" wide strip.  
**BRIDGE** designed for H-15 loading.



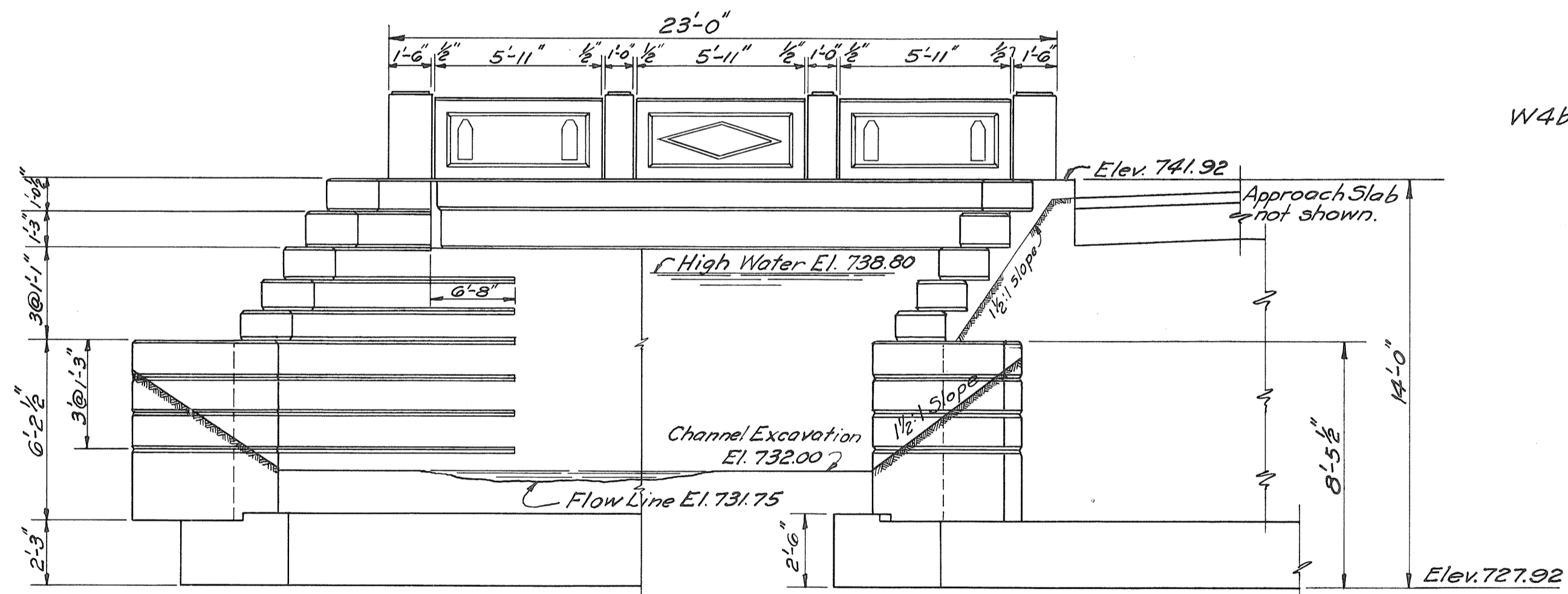
- SECTION C-C -



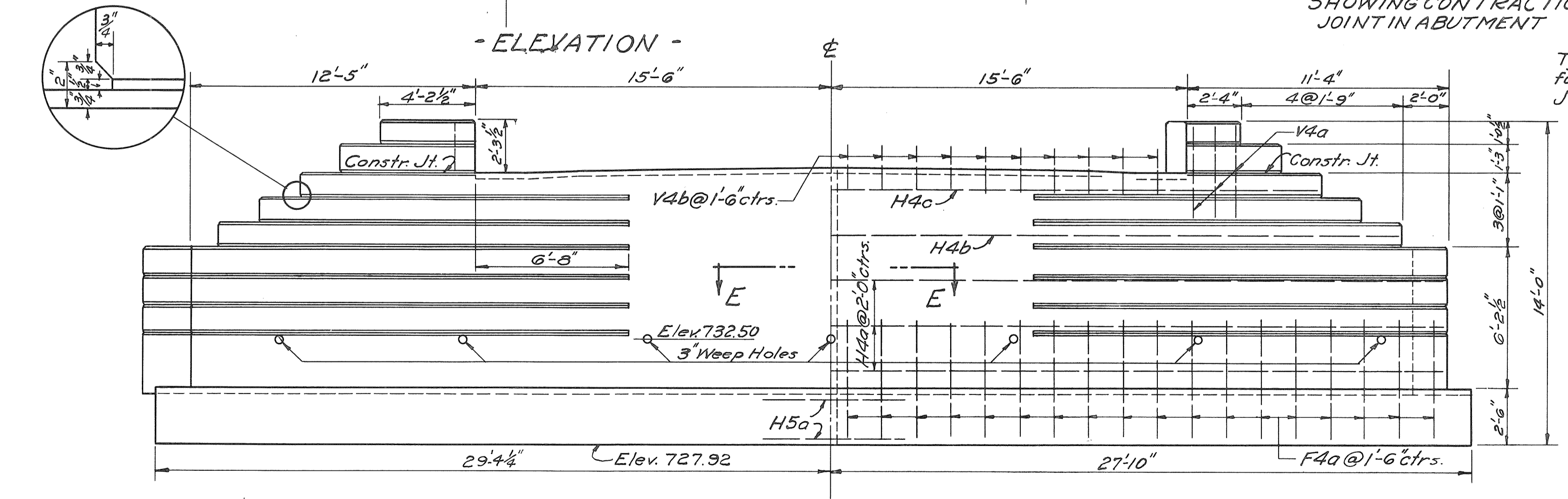
- SECTION D-D -



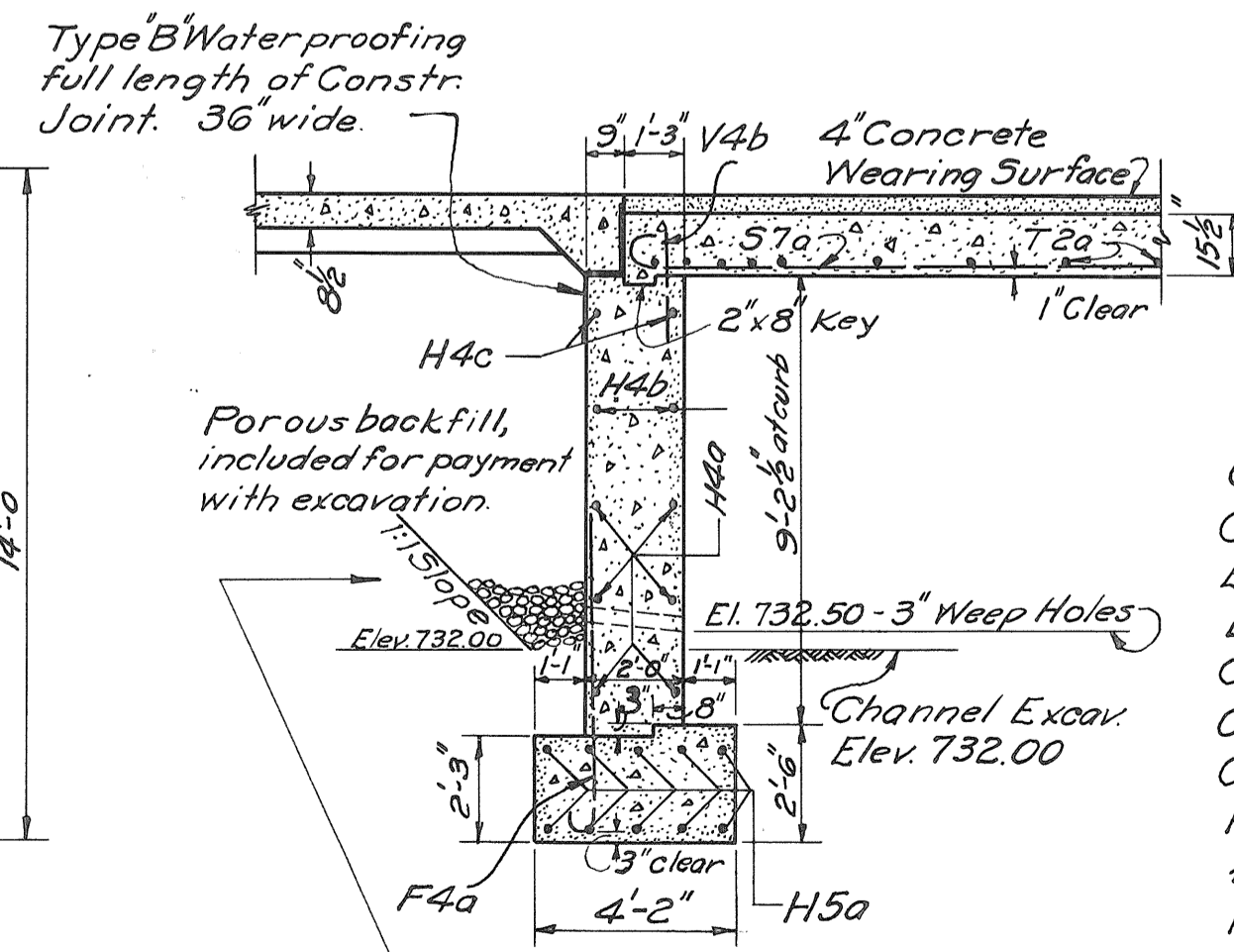
PART SECTION E-E  
SHOWING CONTRACTION  
JOINT IN ABUTMENT



- ELEVATION -



- FRONT VIEW SOUTH ABUTMENT -  
North Abutment same except opposite hand.



- HALF SECTION A-A -

STEEL LIST

Mark	Size	No.	Length	Spacing	Shape	Weight	BENDING DETAILS	
<b>SUPERSTRUCTURE</b>								
57a	1 1/8"	60	23'-3"	5 1/2"	Bent	3725	3R STA 7 3R	
T2a	1 1/2"	16	29'-6"	8" @ 24"	Strt.	316		
D4a	3/4"	16	8'-8"	As shown	Bent	145		
D5a	3/4"	12	8'-3"	"	"	149		
							4335	
<b>SUBSTRUCTURE</b>								
F4a	5/8"	72	6'-3"	1'-6"	Bent	469		
V4a	3/8"	24	4'-0"	As shown	Strt.	100		
V4b	3/8"	40	2'-0"	1'-6"	"	83		
H4a	3/8"	24	28'-7"	2'-0"	"	716		
H4b	3/8"	8	26'-7"	"	"	222		
H4c	3/8"	8	23'-3"	"	"	194		
H5a	3/8"	20	6'-0"	1'-0"	"	180		
W4a	3/8"	24	5'-9"	As shown	"	72		
W4b	3/8"	12	7'-6"	2'-0"	Bent	94		
W4c	3/8"	6	7'-6"	2'-0"	"	47		
W4d	3/8"	6	8'-0"	2'-0"	"	50		
							2227	
<b>RAILING</b>								
R1a	3/8"	26	2'-6"	As shown	Strt.	Included with railing for payment		
R1b	3/8"	6	5'-7"	"	"	"		
R2a	3/8"	12	5'-7"	"	"	"		
R2b	3/8"	12	7'-7"	"	Bent	"		
<b>REPLACEMENT BARS</b>								
Rep. 1	3/8"	2	3'-6"	-	Strt.	3		
Rep. 2	1/2"	2	4'-0"	-	"	5		
Rep. 4	3/8"	2	4'-6"	-	"	9		
Rep. 5	3/8"	2	6'-0"	-	"	17		
Rep. 7	1"	2	6'-0"	-	Bent	32		
							66	
<b>GRAND TOTAL</b>							<b>6628</b>	

- ESTIMATED QUANTITIES -

Channel Excavation	88 cu. yds.
Cofferdams, Sheeting & Pumping	Lump Sum
Excavation, Dry	35 cu. yds.
Excavation, Wet	110 cu. yds.
Concrete 1-5 1/2 (Superstructure)	33.1 cu. yds.
Concrete 1-6 1/2 (Footings)	41.6 cu. yds.
Concrete 1-6 1/2 (Walls)	80.9 cu. yds.
Reinforcing Steel	6628 lbs.
1/2 Prem. Exp. Jt. Filler	40 sq. ft.
Reinf. Conc. Railing Type RR-12 (1-5 1/2 mix)	46 lin. ft.
Type "B" Waterproofing	24 sq. yds.
Removal of Existing Superstructure	Lump Sum
Rip Rap (Hand Laid, Grout Filled)	25 Sq. Yds.
Conc. Wear. Surface (2"-1:5 1/2 mix)	60.4 Sq. Yds.
Reinf. Conc. Appr. Slabs (3 1/2"-1:5 1/2 mix)	48.9 Sq. Yds.

NOTE: Replacement Steel to be used to replace test specimens cut from reinforcing steel in Superstructure and Substructure. Not to be used as test specimens.

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES						
GENERAL PLAN & ELEVATION STRUCTURAL DETAILS & QUANTITIES BRIDGE OVER JOHN F. MILLER DITCH BRIDGE NO. PU-115-52 S.H. 134 PUTNAM COUNTY SEC. F STA. 184+56						
DESIGNED FROM STD.	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.E.K.	M.H.C.	J.V.C.	C.E.K.			



STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
**KALIDA — LIMA ROAD**  
SH134 SEC.1  
**PUTNAM COUNTY**  
UNION TWP. 1934  
LENGTH 21210.85 FT.

FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO		1934

1  
25

PUTNAM COUNTY  
SH134 SEC.1

The Standard Specifications of The State of Ohio in force on date of contract will govern this improvement.  
I hereby approve these plans and declare that the making of this improvement will require the closing to traffic of the highway and that detours will be provided as shown on the plans and estimates and that necessary right-of-way will be provided.

Approved: Gay M. Cartwright  
Date 7-11-34 Resident District Deputy Director

Approved: W. H. C. ...  
Date 7-12-34 Resident Division Deputy Director

Approved: \_\_\_\_\_  
Date \_\_\_\_\_ Chief Engineer, Bureau of Bridges

Approved: \_\_\_\_\_  
Date \_\_\_\_\_ Chief Engineer, Bureau of Maintenance

Approved: Edwin A. ...  
Date 7-24-34 Chief Engineer, Bureau of Construction

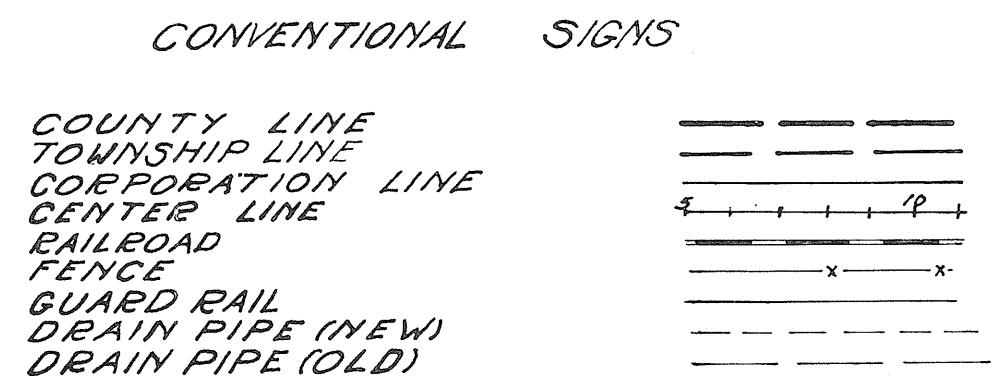
Approved: H. P. Chapman  
Date 7-12-34 Chief Engineer, 1st Asst. Director

Approved: W. H. ...  
Date 7-25-34 Director of Highways

Recommended for approval: \_\_\_\_\_  
Date \_\_\_\_\_ District Engineer, Bureau of Public Roads

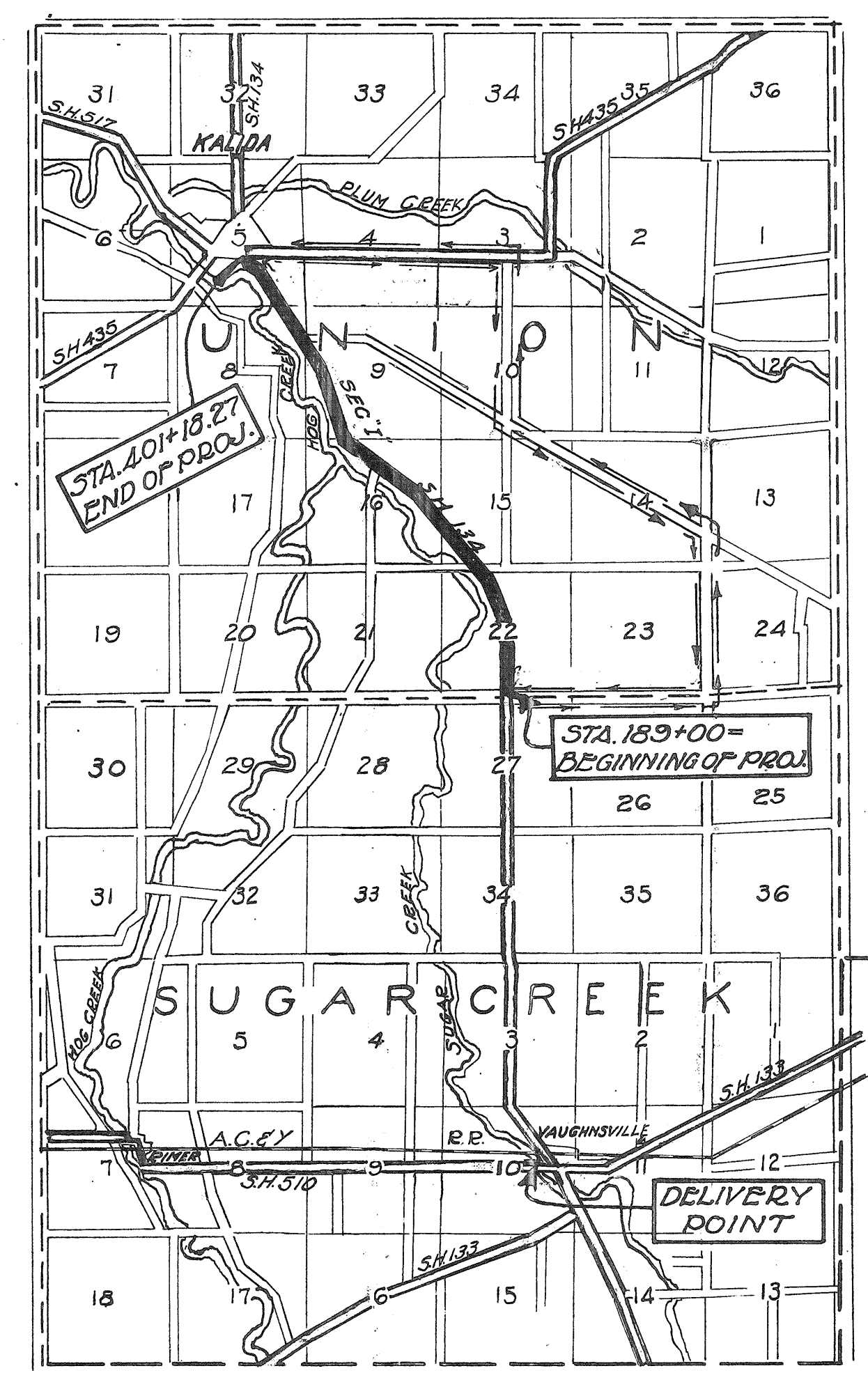
Recommended for approval: \_\_\_\_\_  
Date \_\_\_\_\_ Chief Engineer, Bureau of Public Roads

Approved: \_\_\_\_\_  
Date \_\_\_\_\_ Chief of Bureau



INDEX

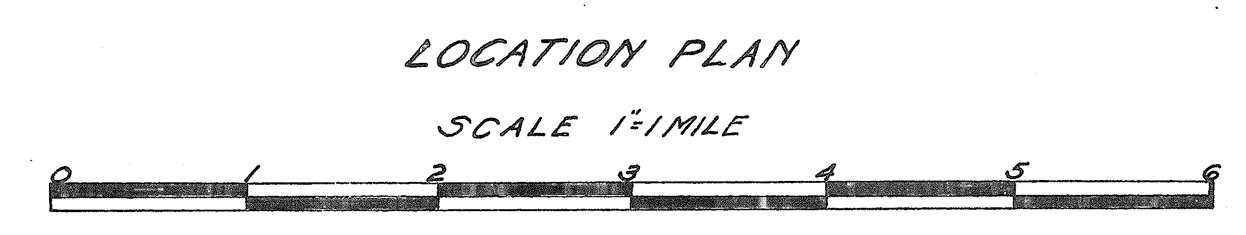
TITLE PAGE	1	PLAN SCALES
TYPICAL SECTION	2	PLAN 1"=100'
PLANS & PROFILE	3-9	PROFILE (VERT.) 1"=10'
STRUCTURAL PLANS	13-24	PROFILE (HOR.) 1"=100'
SUMMARY SHEET	25	CROSS SEC. 1"=5'
CROSS SECTION	11-18	
CURVE DATA	10	



RECEIVED  
Date: 7-2-34  
By: W. H. ...  
CLERK OF SALES

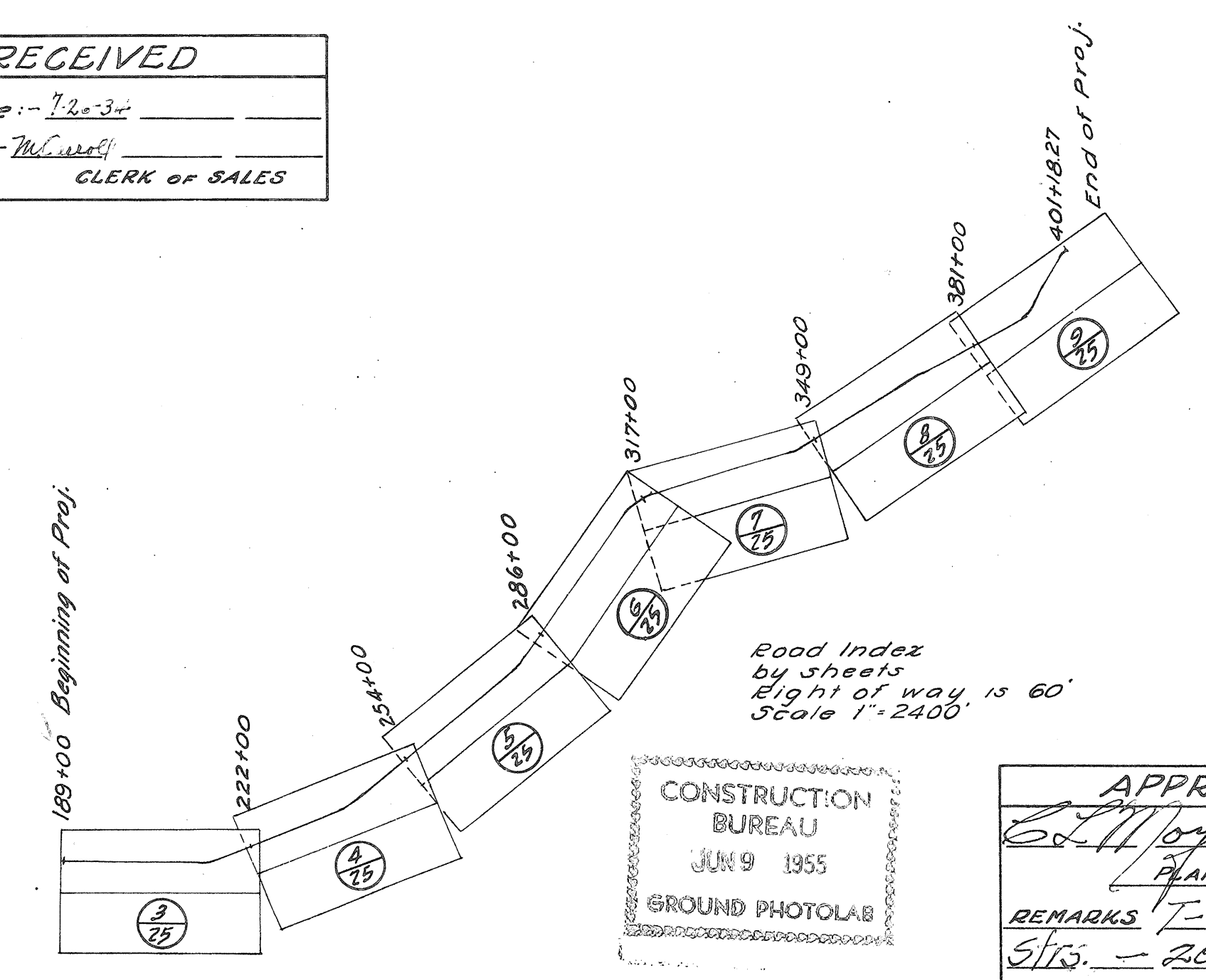
SUPPLEMENTAL PRINTS OF STRUCTURAL STANDARDS

- SLAB BRIDGE S.B.33
- SLAB TOP CULVERT S.T.C.34
- PIPE CULVERT S-21 RC.2, S-21 RC.3
- CATCH BASIN T-8 CB.1, T-8 CB.2
- APPROACH SLAB A.S.-31
- CONCRETE PAVEMENT T-70 J (JULY 1934)



CHECKING RECORD		
OFFICE	BY	DATE
RESIDENT	W.H.C. P.A.S.	7-11-34
DIVISION	C.R.D.	7-12-34
CENTRAL-CONSTRUCTION	W.H.C.	7-20-34
CENTRAL-BRIDGES		
BUR. OF PUB. ROADS		

PORTION TO BE IMPROVED  
DETOURS  
IMPROVED  
HAUL ROADS  
STATE ROUTES

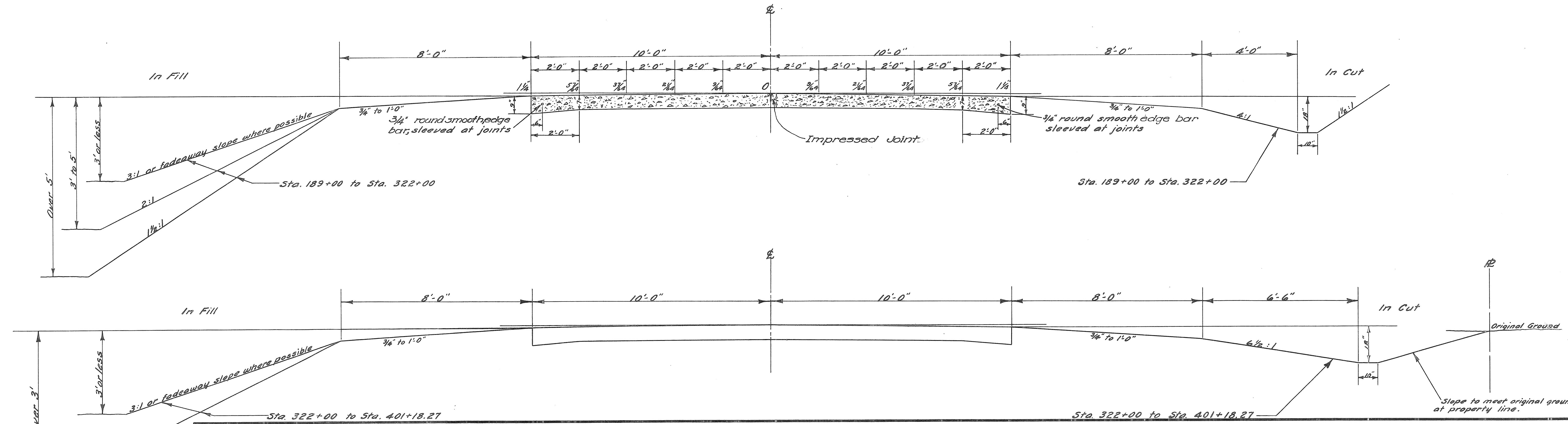


CONSTRUCTION BUREAU  
JUN 9 1935  
GROUND PHOTOLAB

APPROVED  
W. H. ... 7-13-34  
PLANNING ENGINEER  
REMARKS: T-70 PAV. 14' & 8' STR. - 20' WIDTH

FILE NO. PUTNAM-134- SEC-1  
DATE OF LETTING 1934  
CONTRACT NO. \_\_\_\_\_

# TYPICAL SECTION FOR 9-7-7-9 CONCRETE PAVEMENT STD. DWG. T-70-J (7-1-34)



**NOTE**

The regular specifications for Portland Cement Concrete Pavement, Item T-70 will govern except as follows:

T-70.12-Forms and Form Setting. The base of forms shall have a width of not less than eight (8) inches.

T-70.14-Proportions. The amount (by volume) of the fine aggregate shall be not less than twenty-eight (28) percent or more than thirty-six (36) percent of the sum obtained by adding (not mixing) the volume of the fine aggregate and the volume of the combined and mixed coarse aggregates.

T-70.16-Consistency. There shall be used such an amount of water that the consistency of all batches will be uniform and so that the concrete will show a slump of not greater than one (1) inch nor less than one half (1/2) inch.

T-70.19-Placing and Finishing Concrete. The concrete shall be compacted and finished by a finishing machine of the tandem screed type with the screeds not less than five (5) feet apart, one half the project by a type of finishing machine described in paragraph (a) and the other half of the project by a machine described in paragraph (b) following:

(a) The front screed of the machine shall be eighteen (18) inches wide and equipped with a "bull nose" front edge built on not less than a two (2) inch radius so as to insure compaction, and mounted thereon there shall be three (3) vibratory electric motors. The rear screed shall be equipped with two (2) vibratory electric motors. (The number of motors specified applies to screeds of twenty (20) foot length). The vibratory electric motors shall have a vibrating frequency of not less than thirty-five hundred (3500) pulsations per minute.

(b) The front screed of the finishing machine shall be so arranged that the concrete can be struck off at a sufficient height above the top of the forms to allow for compaction with vibration. The screed which does the striking off shall not rest on the forms and shall be adjustable for height of operations above the forms. The finishing machine shall also be equipped with a vibrating "pan" located between the first and second screed. This "pan" shall be so designed and constructed that the concrete for the full width of the pavement slab can be vibrated simultaneously. The vibrating "pan" shall not rest on or be in contact with the road forms. The vibrators shall have a vibrating frequency of not less than thirty-five hundred (3500) pulsations per minute and the vibrating "pan" shall be equipped with vibrating elements spaced not more than six (6) feet apart.

**GRADE DIFFERENTIAL**

The yardage quantities for this project are calculated using a theoretical typical section 20 ft wide, 8" thick, 2" crown, 8' berm. To maintain the same yardage and substitute a 9-7-7-9 concrete pavement 20 ft wide, 1 1/2" crown, 8' berms, the center line grade should be lowered the difference in the edge of pavement grade (.1961' or .0164') plus the difference in crown height (.75' or .0625') or a total of .0789' or .08'-1"

**NOTE:** In lieu of the specifications for the construction of Contraction Joints, Item T-70.27 and Expansion Joints, Item T-70.28 and dowel bars for such joints as shown by Standard Construction Drawing T-70-J, alternate joints will be approved using the "Translode" bases for pre-moulded expansion joints with either 1" sponge rubber, 1" cork or 1" bituminous fillers and the "Translode" Contraction Joints.

The spacing of the joints, 3/4" edge bars, construction joints and the longitudinal center joint shall be in accordance with the details as shown on Standard Construction Drawing T-70-J.

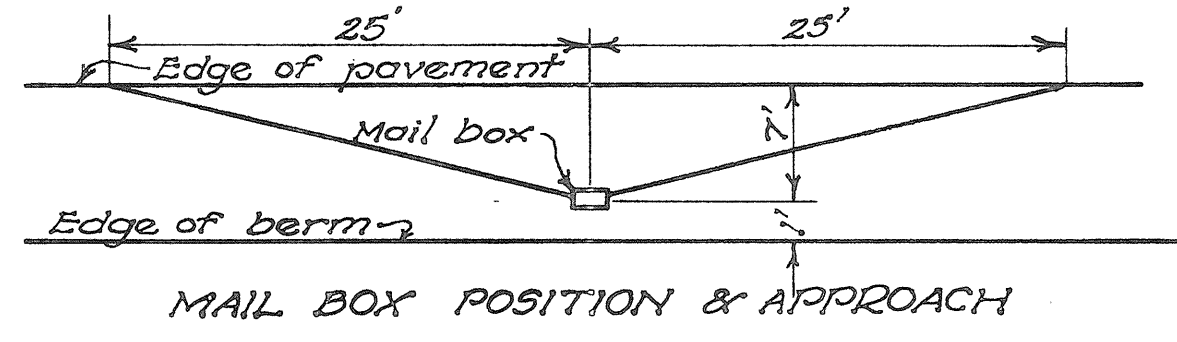
**NOTES**

All berms, slopes and ditches to be finished in accordance with these drawings except where shown otherwise on cross section sheets.

All pipe shall have cemented joints where same are within 25 feet of trees or as directed by Engineer.

All drives shall be surfaced, with amount indicated on plan, of #46 aggregate and all mail box approaches with approximately 3 cu. yd. of #46 aggregate. Side road approaches shall be surfaced with the amount of #46 aggregate called for on the profile sheets.

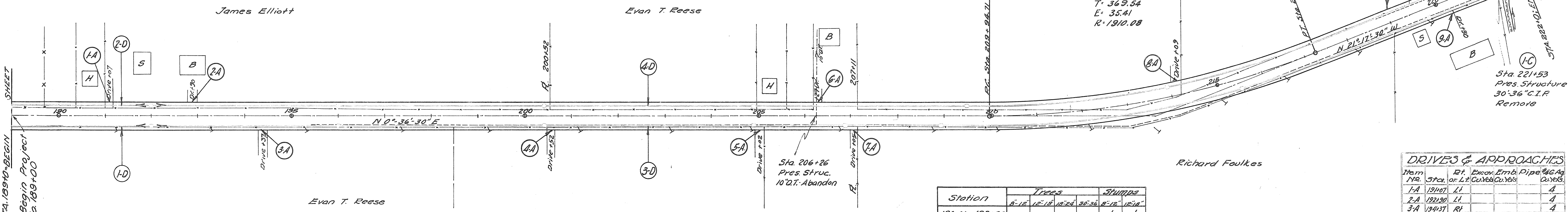
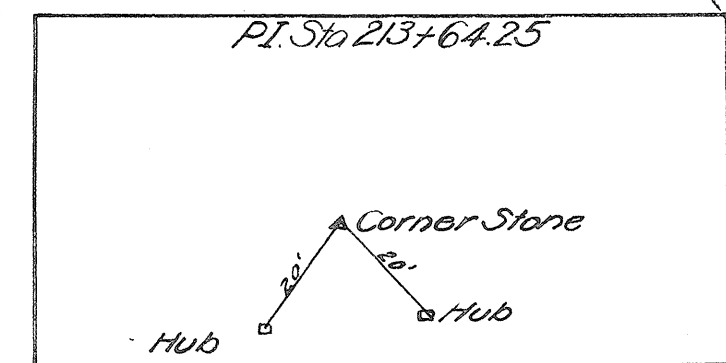
Contractor to so handle grading operations that existing road metal (consisting of traffic bound material) shall be placed on berms in a uniform manner. This is necessary to be done only at such points that proposed grade line makes it necessary to cut existing road surface.



**APPROVED**

DATE			
BY			

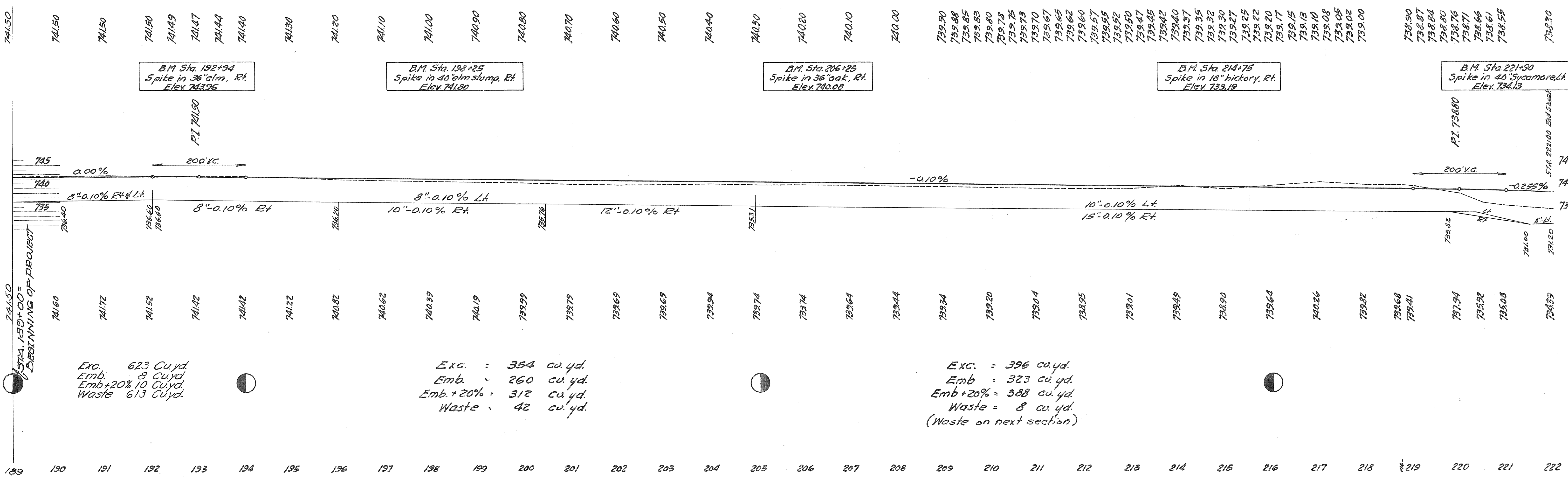
Item No.	Station		Rt. or Lt.	Pipe - Lin. Ft.					Cork I.P. - Lin. Ft.	Sta. Mal. 2' C.E.	Remarks
	From	To		8"	10"	12"	15"	18"			
1-D	189+00	192+00	Rt.	399						1	C.B. Sta. 192+00
2-D	189+00	192+00	Lt.	399						1	C.B. Sta. 192+00
3-D	192+00	221+50	Rt.	398	438	448	1635			7	C.B. Sta. 196+00 - 200+00 - 204+30 - 206+30 - 208+94 - 215+50 - 219+80
4-D	192+00	221+50	Lt.	1284	1637			16		6	C.B. Sta. 196+00 - 200+00 - 204+30 - 208+94 - 215+50 - 220+35
5-D	221+50	222+00	Lt.	28				16			
<b>Totals</b>				2308	2075	448	1635	16	16	16	15



Item No.	Station	Removals		Type	Size	Exc. Cu. Yds.	Concrete Cu. Yds.	Rein. Steel Lbs.	Remarks	
		Type	Size							
1-C	221+53	C.I.P.	36" 30	SM. Slab Top Culk	5x5x7x8	90	38.4	19.6	2589	Std. Conc. Slab Top Culvert.
<b>Totals</b>						90	38.4	19.6	2589	

Station	Trees				Stumps							
	8"-12"	12"-18"	18"-24"	30"-36"	8"-12"	12"-18"						
190+00 - 192+00					1	1						
200+00 - 202+00					1	1						
202+00 - 203+00	1											
203+00 - 204+00					1	1						
<b>Totals</b>							1	2	1	2	3	3

Item No.	Sta.	Rt. or Lt.	Excav. Cu. Yds.	Emb. Cu. Yds.	Pipe Culs.	% Ag.	Remarks
1-A	191+07	Lt.					A
2-A	192+80	Lt.					A
3-A	194+37	Rt.					A
4-A	200+52	Rt.					A
5-A	205+02	Rt.					A
6-A	206+27	Lt.					A
7-A	207+05	Rt.					A
8-A	210+02	Lt.					A
9-A	220+30	Rt.		30			G
10-A	220+50	Lt.		50			G
<b>TOTALS</b>				80			44



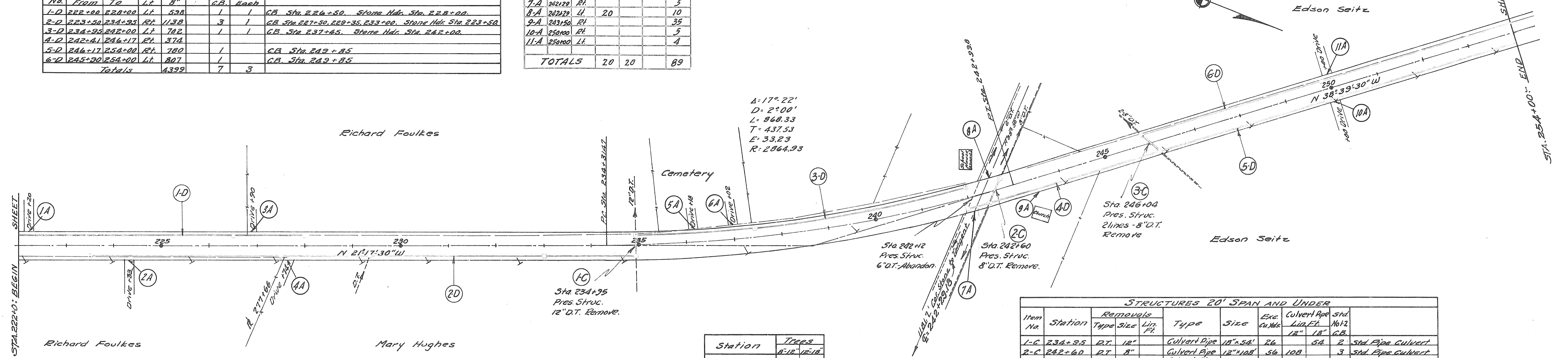
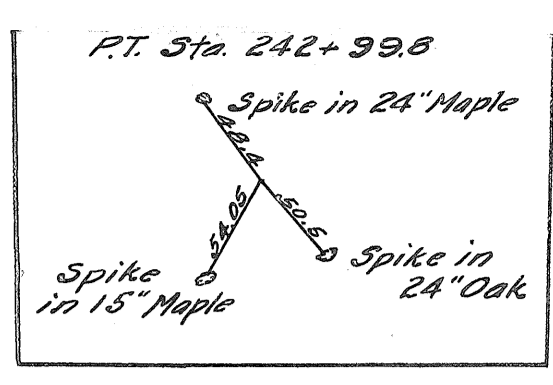
Exc. 623 Cu. yd.  
Emb. 8 Cu. yd.  
Emb.+20% 10 Cu. yd.  
Waste 613 Cu. yd.

Exc. : 354 cu. yd.  
Emb. : 260 cu. yd.  
Emb.+20% : 312 cu. yd.  
Waste : 42 cu. yd.

Exc. : 396 cu. yd.  
Emb. : 323 cu. yd.  
Emb.+20% : 388 cu. yd.  
Waste : 8 cu. yd.  
(Waste on next section)

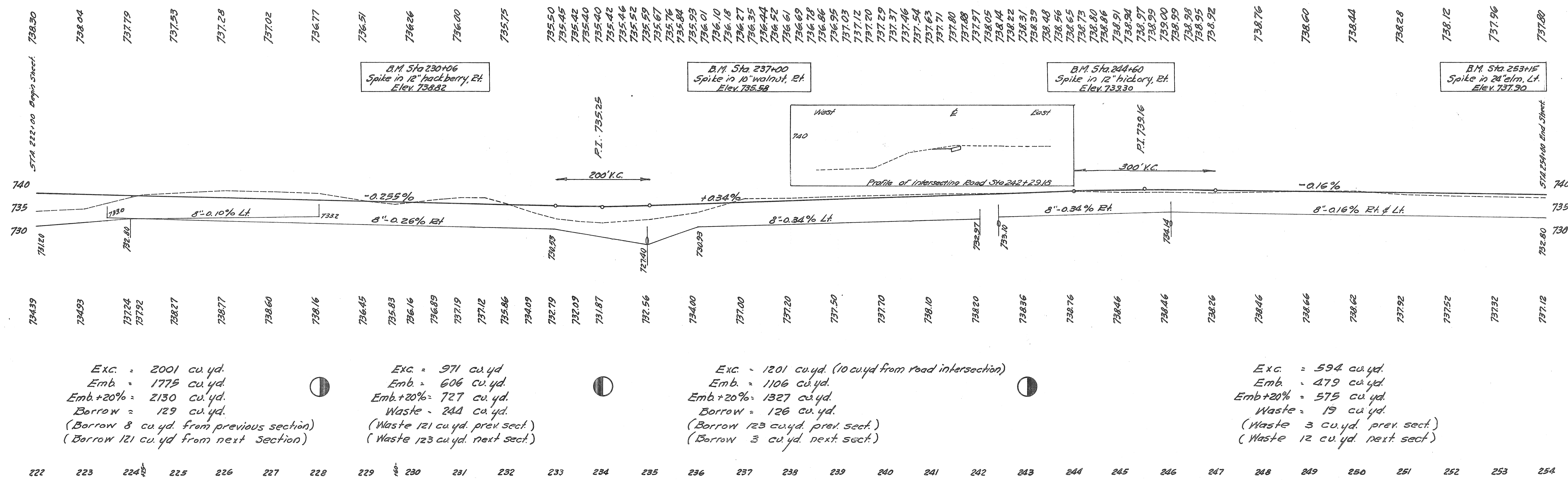
Item No.	Station From To	Rt or Lt	Pipe Size	Length	24" Stone Header	Remarks
1-D	222+00	228+00	8"	600	1	CB Sta 226+50 Stone Hd. Sta 228+00
2-D	223+30	234+95	8"	1130	3	CB Sta 227+50, 229+35, 233+00 Stone Hd. Sta 223+50
3-D	234+95	242+00	8"	702	1	CB Sta 237+85 Stone Hd. Sta 242+00
4-D	242+41	246+17	8"	374		
5-D	246+17	254+00	8"	780	1	CB Sta 242+85
6-D	245+30	254+00	8"	807	1	CB Sta 242+85
Totals				4399	7	3

Item No.	Sta.	Rt or Lt	Excav Cu Yd	Emb Cu Yd	Pipe #	46" Pipe Cu Yd
1-A	222+20	Lt		20		6
2-A	224+33	Rt				4
3-A	226+90	Lt				6
4-A	227+74	Rt				6
5-A	236+18	Lt				4
6-A	237+02	Lt				4
7-A	242+29	Rt				5
8-A	242+29	Lt	20			10
9-A	243+50	Rt				35
10-A	250+00	Rt				5
11-A	250+00	Lt				4
TOTALS			20	20		89



Item No.	Station	Removals Type	Size	Exc. Cu Yd	Culvert Pipe Lin. Ft.	Std. No. 12
1-C	234+95	Rt 12"	Culvert Pipe 18"x54'	26	54	2 Std. Pipe Culvert
2-C	242+60	Rt 8"	Culvert Pipe 12"x108'	56	108	3 Std. Pipe Culvert
3-C	246+04	Rt 2-8"	Culvert Pipe 12"x52'	31	52	2 Std. Pipe Culvert
Totals				113	160	54

Station	8" 12"	12" 18"
222+00 - 230+00		1
230+00 - 241+00		1
245+10	1	
Totals	1	2



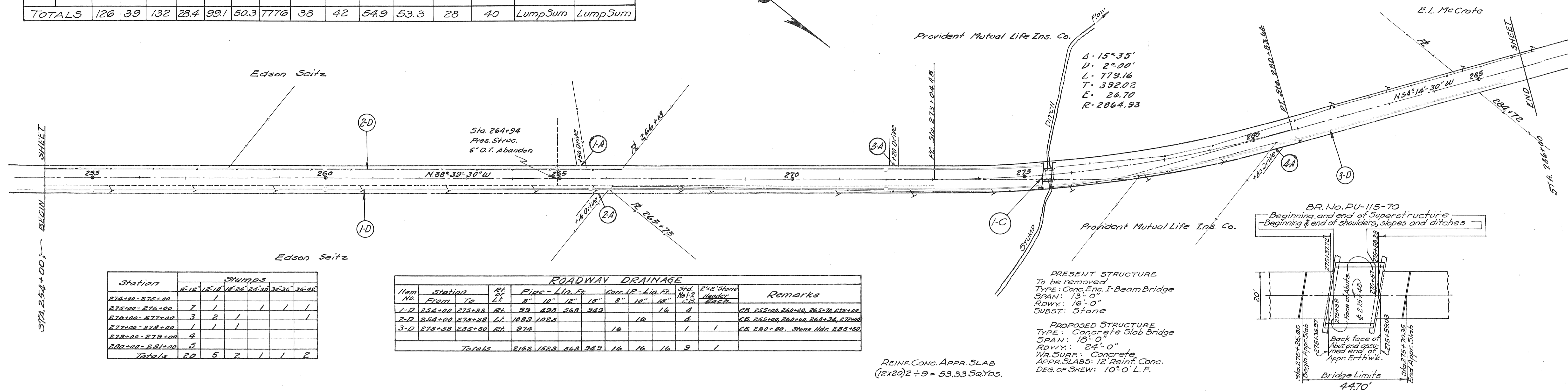
STRUCTURES - 20 FT. SPAN AND UNDER														
ITEM No.	Station	Excavation			Concrete			Reinf. Steel Lbs.	W.P. Pipe Sq. Ft.	Conc. Rail Lin. Ft.	Conc. Wear Surf. 4" Sq. Yds.	Reinf. Conc. Appr. Slabs Sq. Yds.	Type "B" Water Proofing Sq. Yds.	Rip-Rap and Gravel Sq. Yds.
		Wet Cuyds.	Dry Cuyds.	Chann. Cuyds.	Supers. Cuyds.	Wall Cuyds.	Footing Cuyds.							
I-C	275+48	126	39	132	28.4	99.1	50.3	7776	38	42	54.9	53.3	28	40
TOTALS		126	39	132	28.4	99.1	50.3	7776	38	42	54.9	53.3	28	40

DRIVES & APPROACHES			
Item No.	Sta.	Dist. or Exec. Emb. Lt.	Pipe % G. Ag. Cuyds.
1-A	265+50	Lt.	4
2-A	266+16	El.	4
3-A	272+20	Lt.	4
4-A	280+80	El.	8
TOTALS		15	20

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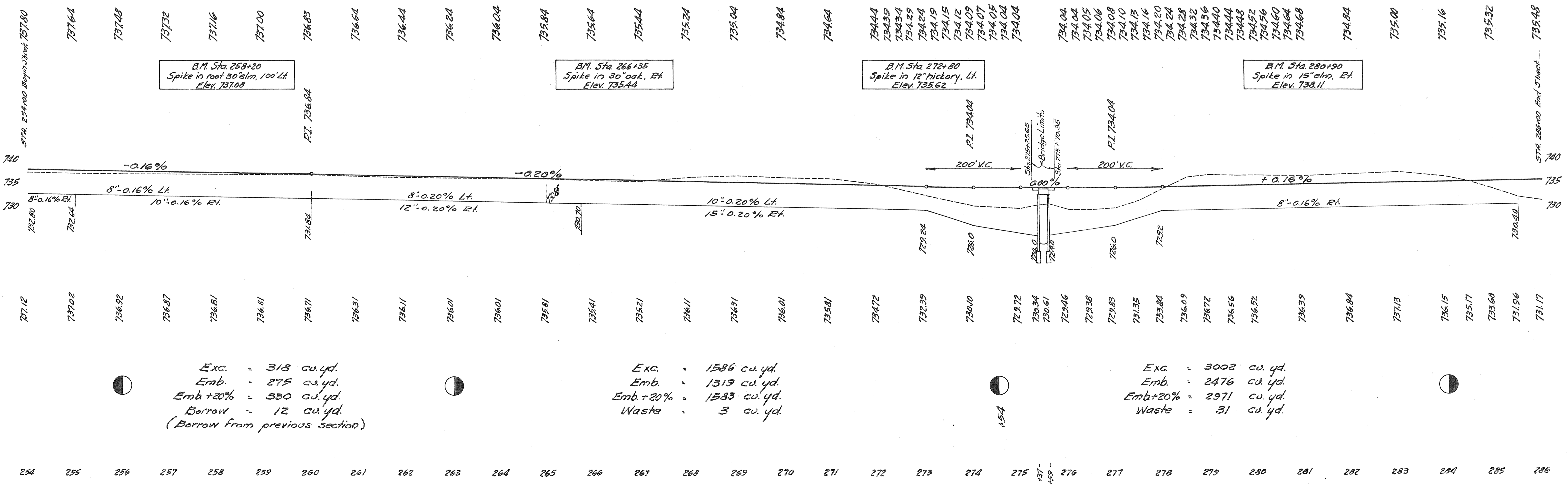
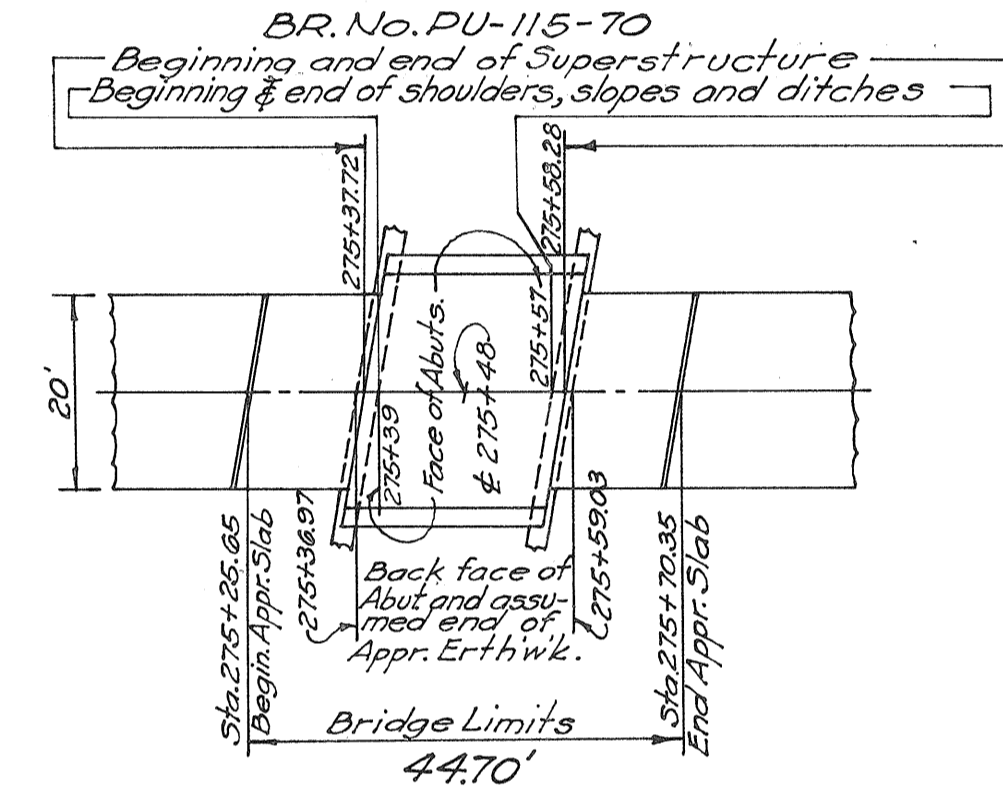
Station	Stumps					
	8" x 12"	12" x 12"	12" x 24"	24" x 30"	30" x 36"	36" x 42"
274+00 - 275+00	1					
275+00 - 276+00	7	1		1	1	1
276+00 - 277+00	3	2	1			1
277+00 - 278+00	1	1	1			
278+00 - 279+00	4					
280+00 - 281+00	5					
TOTALS	20	5	2	1	1	2

ROADWAY DRAINAGE										
Item No.	Station From To	Rt. Lt.	Pipe - Lin. Ft.			Cov. IP - Lin. Ft.	Std. No. 12	2"x2" Stone Header Each	Remarks	
			8"	10"	12"					
1-D	254+00 - 272+38	Rt.	99	490	368	949	16	4	CB 255+00, 260+00, 262+70, 272+00	
2-D	254+00 - 275+38	Lt.	1089	1025				1	CB 255+00, 260+00, 264+34, 272+00	
3-D	275+58 - 285+50	Rt.	974					1	CB 280+80, Stone Mdr. 285+50	
TOTALS			2162	1523	368	949	16	16	9	1

REINF. CONC. APPR. SLAB  
(12x20)2 ÷ 9 = 53.33 Sq. Yds.

PRESENT STRUCTURE  
To be removed  
TYPE: Conc. Eng. I-Beam Bridge  
SPAN: 13'-0"  
RDWY: 16'-0"  
SUBST: Stone

PROPOSED STRUCTURE  
TYPE: Concrete Slab Bridge  
SPAN: 18'-0"  
RDWY: 24'-0"  
WR. SURF: Concrete  
APPR. SLABS: 12" Reinf. Conc.  
DEG. OF SKEW: 10° 0' L.F.

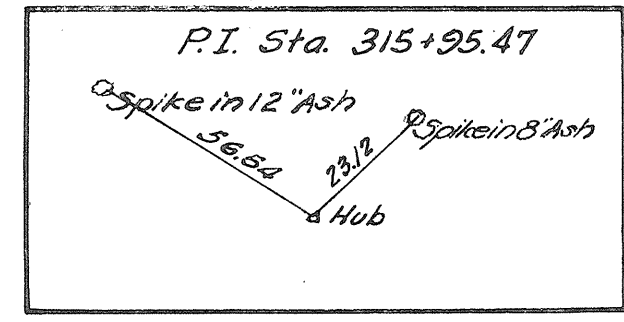


Exc. = 318 cu. yd.  
Emb. = 275 cu. yd.  
Emb + 20% = 330 cu. yd.  
Borrow = 12 cu. yd.  
(Borrow from previous section)

Exc. = 1586 cu. yd.  
Emb. = 1319 cu. yd.  
Emb + 20% = 1583 cu. yd.  
Waste = 3 cu. yd.

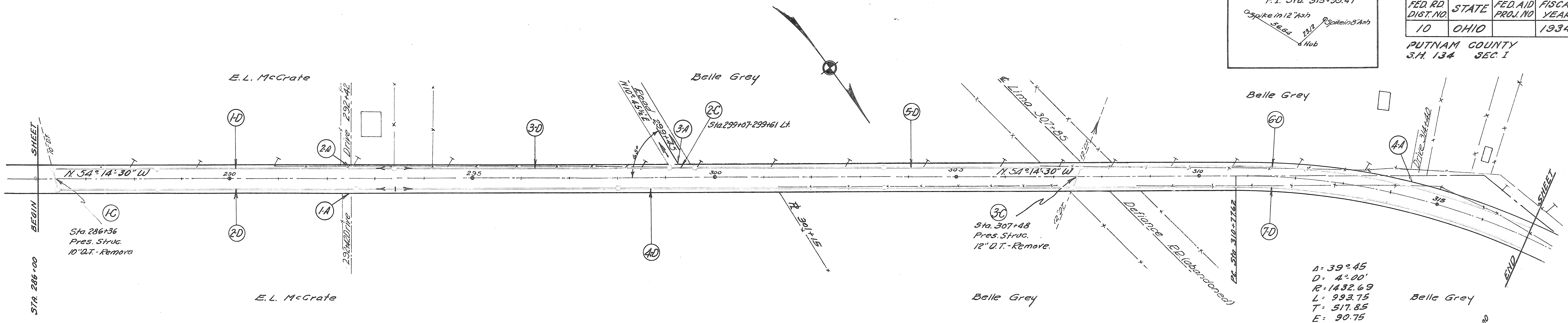
Exc. = 3002 cu. yd.  
Emb. = 2476 cu. yd.  
Emb + 20% = 2971 cu. yd.  
Waste = 31 cu. yd.

254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286



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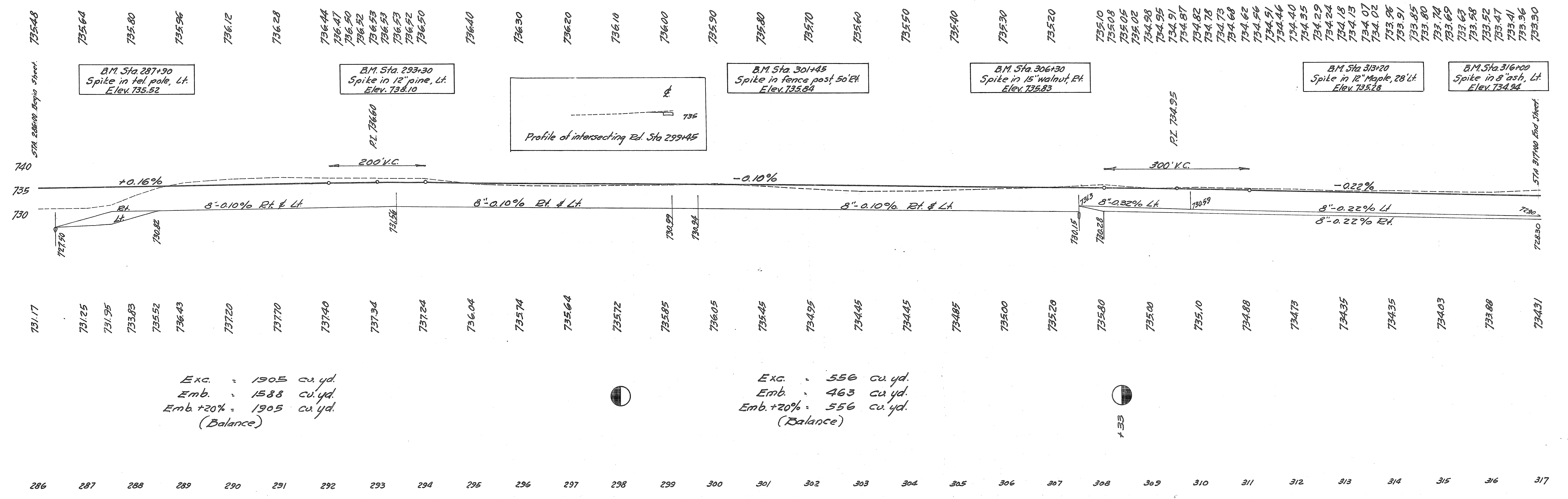
PUTNAM COUNTY  
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Item No.	Station	RT Lt.	Pipe - Lin. Ft.	Std. No. 12 C.B.	Remarks
1-D	286+31	293+40	Lt. 705	2	C.B. Sta. 288+50, 293+40
2-D	286+41	293+40	Rt. 694	2	C.B. Sta. 288+50, 292+60
3-D	293+40	299+07	Lt. 566		
4-D	293+40	307+40	Rt. 1395	2	C.B. Sta. 298+00, 303+50
5-D	299+41	307+57	Lt. 793	1	C.B. Sta. 303+50
6-D	307+57	317+00	Lt. 932	2	C.B. Sta. 302+78, 314+40
7-D	307+40	317+00	Rt. 957	1	C.B. Sta. 313+50
Totals			6048	10	

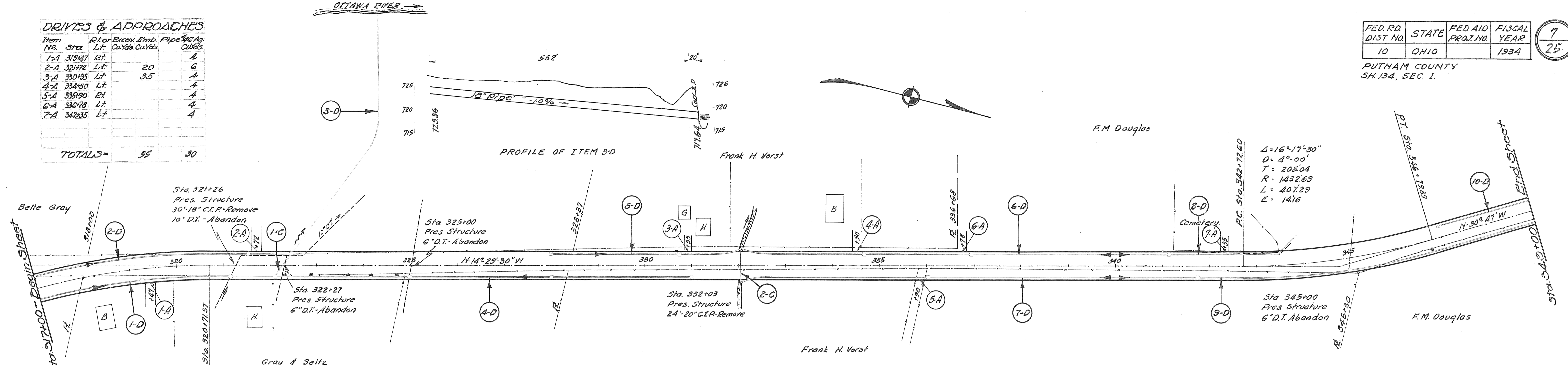
Item No.	Station	Removals		Type	Size	Exc. Cu. Yds.	Culvert Pipe Lin. Ft.	Std. No. 12	Remarks	
		Type	Size Lin. Ft.							
1-C	286+36	RT	12"	Culvert Pipe	12"x52'	22	52	2	Std. Pipe Culvert	
2-C	286+41 to 293+40			Culvert Pipe	12"x50'	22	50	2	Std. Pipe Culvert	
3-C	307+48	RT	12"	Culvert Pipe	12"x48'	3A	48	2	Std. Pipe Culvert	
Totals						78	152	48	6	

Item No.	Sta.	12' of Exc. Lt.	Exc. Cu. Yds.	Emb. Cu. Yds.	Pipe % C.V.	% Ag.
1-A	286+42	RT				5
2-A	292+42	Lt.				5
3-A	299+46	Lt.	10			10
4-A	314+40	Lt.				4
TOTALS			10			24



**DRIVES & APPROACHES**

Item No.	Sta.	Rt or Lt	Exc. Emb. Lt. Cu. Yds.	Emb. Pipe Cu. Yds.	% Gr. Ap. Cu. Yds.
1-A	31947	Rt.			4
2-A	32172	Lt.	20		6
3-A	33035	Lt.	35		4
4-A	33450	Lt.			4
5-A	33690	Rt.			4
6-A	33678	Lt.			4
7-A	34235	Lt.			4
TOTALS=			55		30



**TREES**

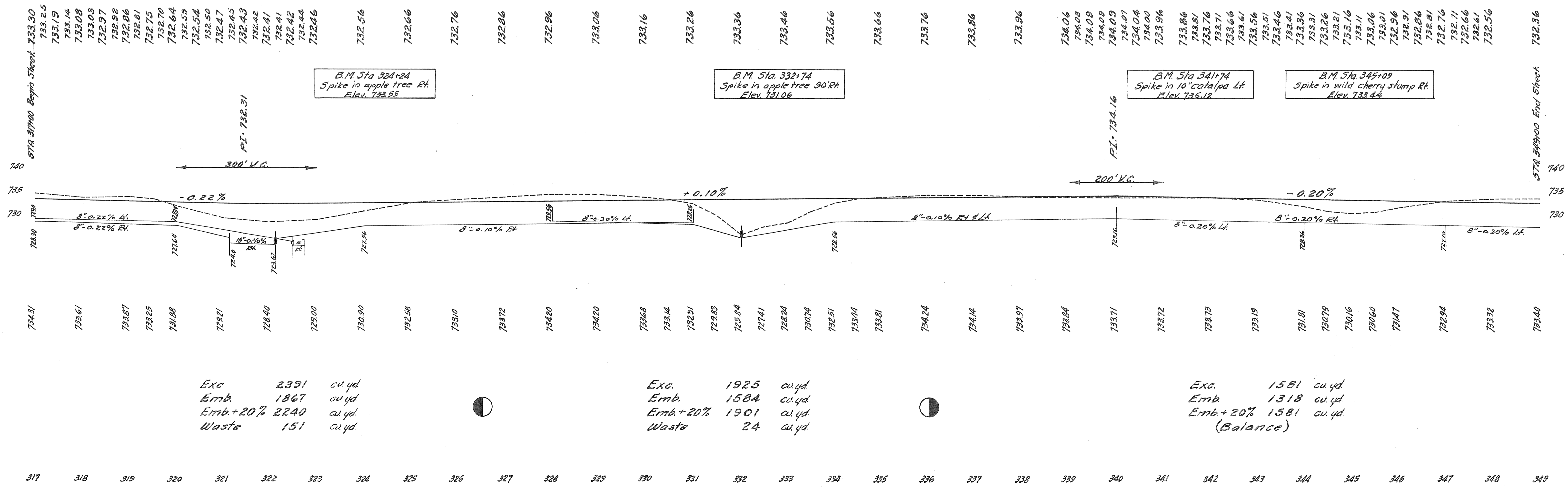
STATION	SIZE
318+20	12-18 18-24
346+74	1
Total	1 1

**ROADWAY DRAINAGE**

ITEM No.	STATION FROM TO	Rt. or Lt.	PIPE - LIN. FT.					Core IP. Lin. Ft.	STD. No. of C.P.	2" x 2" Stone Headers	REMARKS
			8"	10"	15"	18"	24"				
1-D	317+00	Rt.	410					2		CB Sta. 319+30, 321+14	
2-D	317+00	Lt.	344	24				1		CB 321+50	
3-D	322+46	Lt.			552		20				
4-D	322+09	Rt.	886					2	1	CB 325+00, 328+00, Stone Hdr. 331+00	
5-D	328+00	Lt.	383			16		1	1	Stone Hdr. 328+00, CB 330+75	
6-D	332+05	Lt.	775			16		2		CB 334+65, 336+90	
7-D	332+05	Rt.	777			16		1		CB 336+00	
8-D	340+00	Lt.	382			16		1		CB 341+15	
9-D	340+00	Rt.	894					2		CB 341+75, 345+00	
10-D	347+00	Lt.	200					1		Stone Header 347+00	
Total			5253	24		646	64	20	12	3	

**STRUCTURES 20 FT. SPAN AND UNDER**

ITEM No.	STATION	REMOVALS			TYPE	SIZE	Exc. Cu. Yd.	CULVERT PIPE		1:5% STA. CONC. No. 12	REMARKS	
		TYPE	SIZE	LINE FT.				18"	21"			
	321+26	C.I.P.	18"	30								
1-C	322+27				Culvert Pipe	18" x 64'	32	64		2	Std. Pipe Culvert	
2-C	332+03	C.I.P.	20"	24	Culvert Pipe	21" x 76'	22	76	2.0		Std. Pipe Culvert	
Total							54	64	76	2.0	2	



Exc. 2391 cu. yd.  
Emb. 1867 cu. yd.  
Emb. + 20% 2240 cu. yd.  
Waste 151 cu. yd.

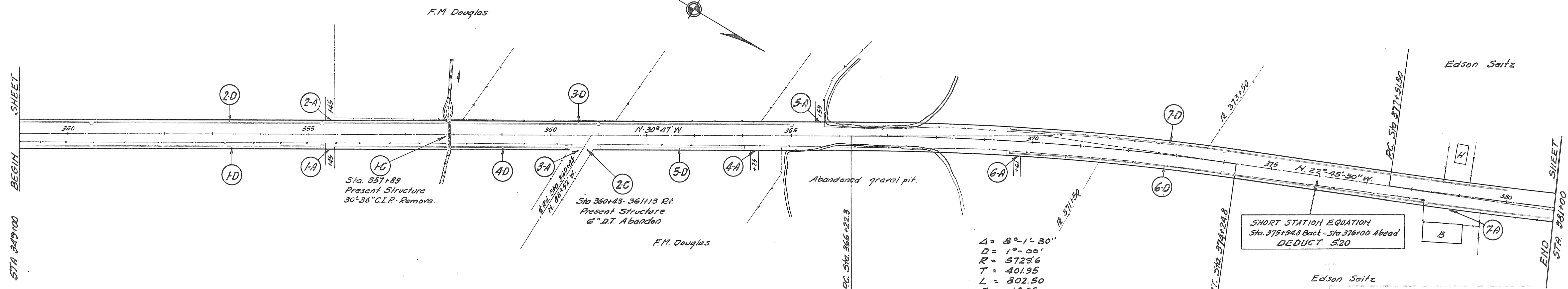
Exc. 1925 cu. yd.  
Emb. 1584 cu. yd.  
Emb. + 20% 1901 cu. yd.  
Waste 24 cu. yd.

Exc. 1581 cu. yd.  
Emb. 1318 cu. yd.  
Emb. + 20% 1581 cu. yd.  
(Balance)

Ticks in 2'-2" states  
 Sta. 370+24.22

FED. AID DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO		1934

PUTNAM COUNTY  
 S.H. 134 SEC. 1.

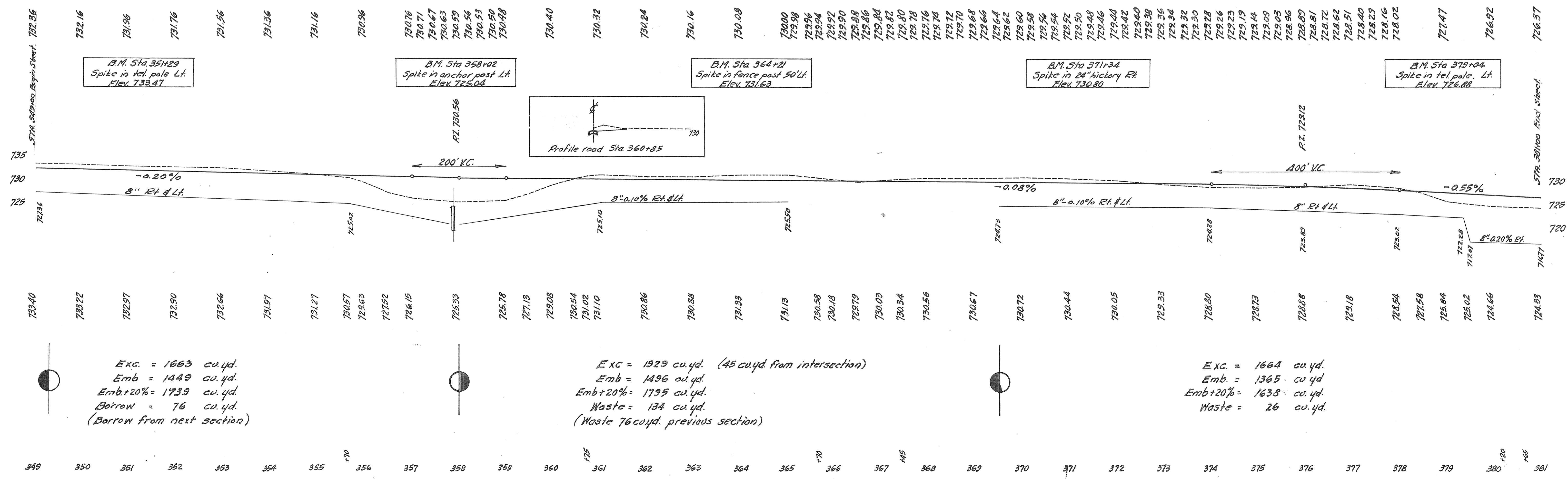


Item No	Station From To	Rel. Lt.	Pipe Size	Grate	Str. No.	Remarks
1-D	349+00 357+87	RT	8 1/2"	16"	2	C.B. Sta 350+50, 355+30
2-D	349+00 357+87	LT	8 1/2"	16"	2	C.B. Sta 350+50, 355+30
3-D	357+92 365+00	LT	6 1/2"	16"	2	C.B. Sta 361+00, 365+00
4-D	357+92 360+43	RT	2 1/2"	16"		
5-D	361+13 364+00	RT	2 1/2"	16"	1	C.B. Sta 364+00
6-D	369+45 374+00	RT	11 1/2"	30"	3	C.B. Sta 369+45, 374+00, 378+30
7-D	369+45 374+00	LT	10 1/2"	16"	3	C.B. Sta 369+45, 374+00, 378+30
Totals			511.8	80	13	

Item No	Station	Removals		Type	Size	Exc. Cu. yd.	Concrete Cu. yds.	Rein. Steel lbs	Std. No. 12	Remarks	
		Type	Size								
1-C	357+89	C.I.P.	36" 30"	Conc. Slab Top	5'-5" x 7'-8"	100	43.4	210	2935	Std. Slab Top Culvert	
2-C	360+43	RT	12" x 66"	Culvert Pipe	12" x 66"	33	66		2	Std. Pipe Culvert	
Totals						133	66	43.4	210	2935	2

SHORT STATION EQUATION  
 Sta. 375+94.8 Back - Sta. 376+00 Ahead  
 DEDUCT 5.20

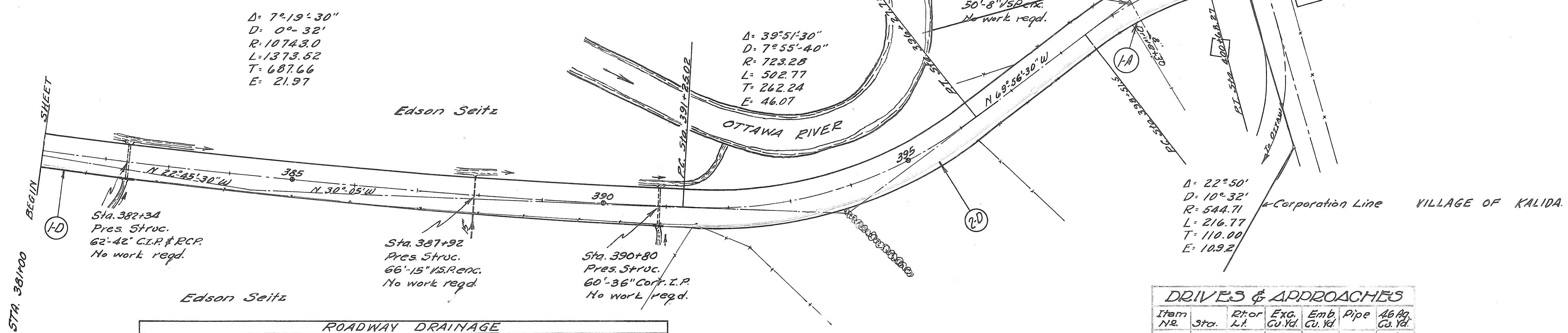
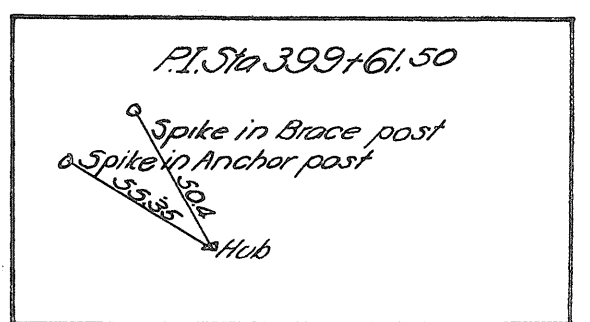
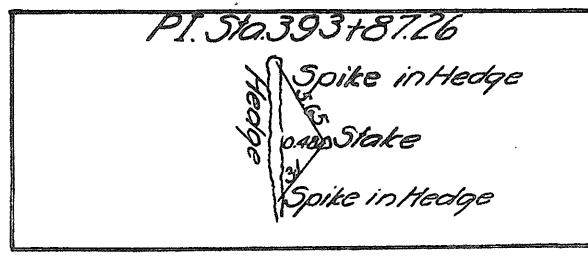
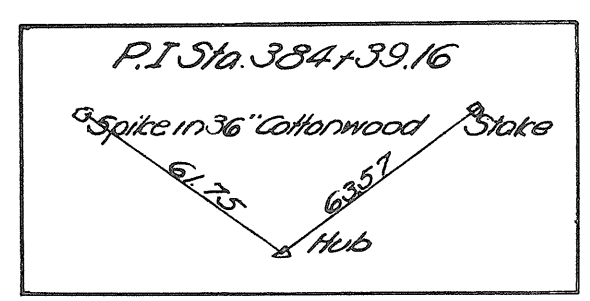
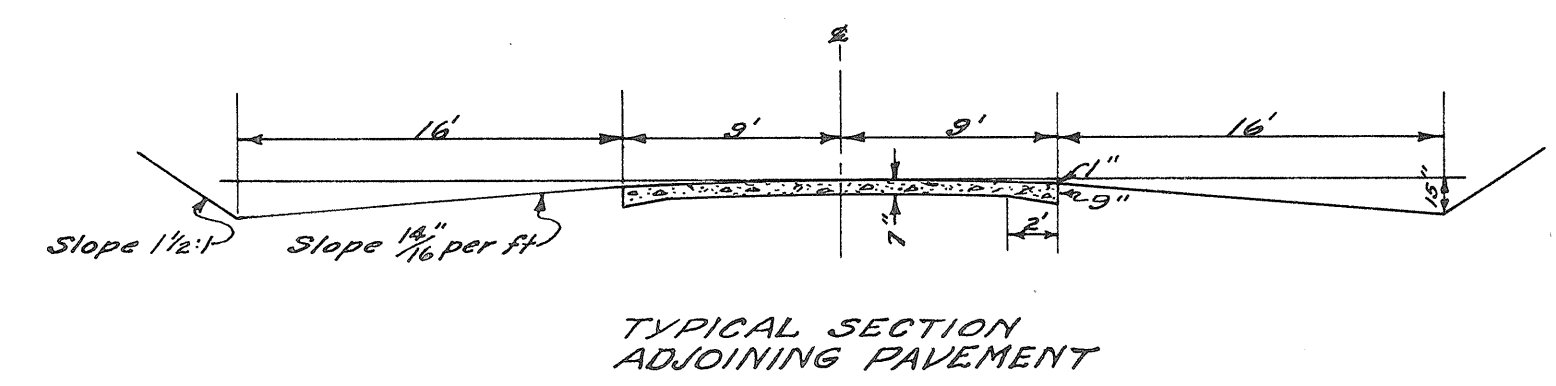
Item No	Spec.	Est. or Excav. Lt.	Emb. Cu. Yds.	Pipe No. 12	Remarks
1-A	355+45	RT			4
2-A	355+45	LT			4
3-A	360+85	RT			20
4-A	364+25	RT			4
5-A	365+99	LT			4
6-A	369+61	RT			4
7-A	371+80	RT			4
TOTALS					44



Exc. = 1663 cu. yd.  
 Emb. = 1449 cu. yd.  
 Emb.+20% = 1739 cu. yd.  
 Borrow = 76 cu. yd.  
 (Borrow from next section)

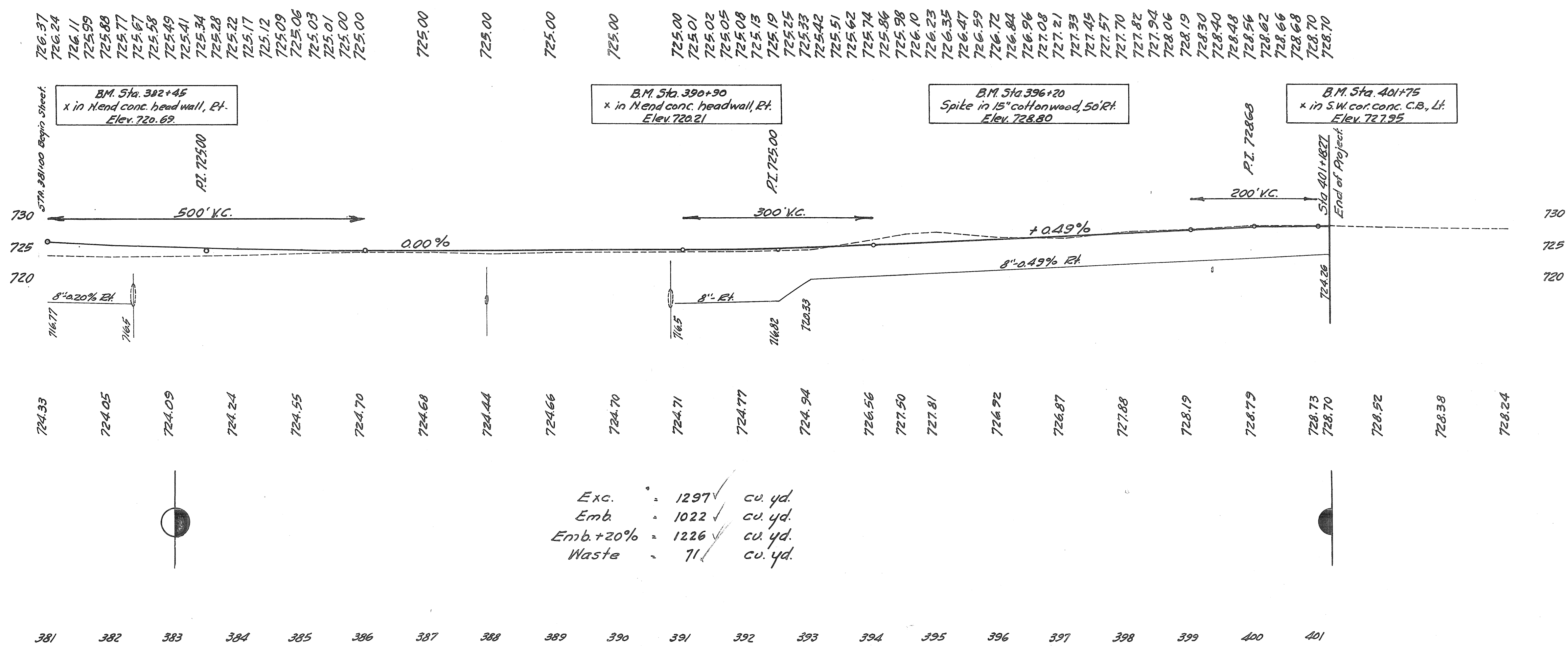
Exc. = 1929 cu. yd. (45 cu. yd. from intersection)  
 Emb. = 1496 cu. yd.  
 Emb.+20% = 1795 cu. yd.  
 Waste = 134 cu. yd.  
 (Waste 76 cu. yd. previous section)

Exc. = 1664 cu. yd.  
 Emb. = 1365 cu. yd.  
 Emb.+20% = 1638 cu. yd.  
 Waste = 26 cu. yd.



ROADWAY DRAINAGE						
Item No.	Station	RT or LT	Pipe Dia.	Comp. Lin. Ft.	St. No. 1-2	Remarks
L-D	382+00-382+30	RT	14	16	2	
R-D	390+80-401+18	RT	10 1/2	16	2	C.B. 393+40, 397+28, Stone Hd. 401+18
Totals			11 1/2	32	2	

DRIVES & APPROACHES						
Item No.	Sta.	RT or LT	Exc. Cu. Yd.	Emb. Cu. Yd.	Pipe	Ab. Cu. Yd.
1-A	399+30	RT				4
2-A	399+60	LT				4
TOTALS						8



Exc. = 1297 cu. yd.  
 Emb. = 1022 cu. yd.  
 Emb.+20% = 1226 cu. yd.  
 Waste = 71 cu. yd.

381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401

RC. 209+94.71 D=3°00' L. RT. 217+24.71

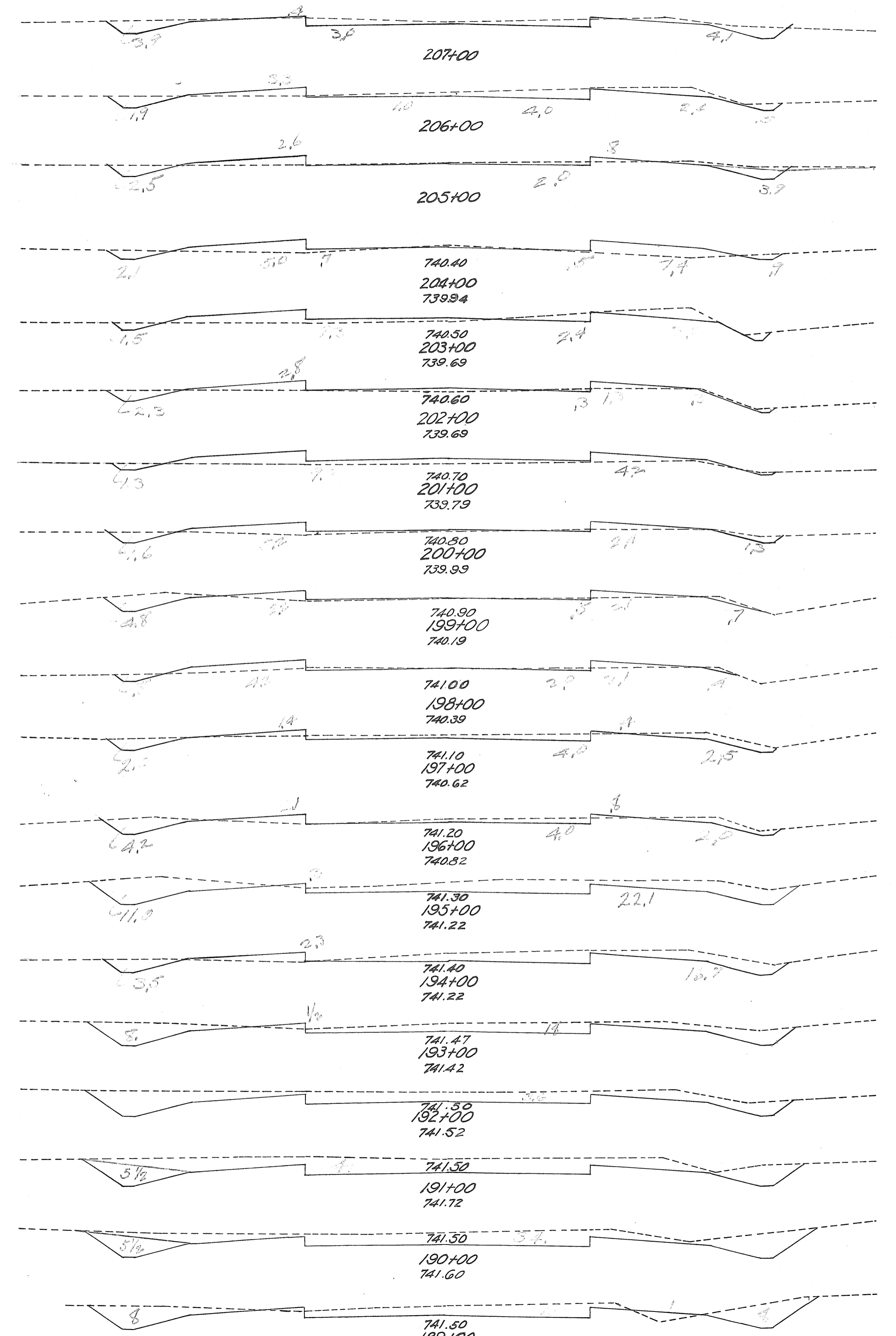
LEFT		RIGHT					
Deduct from Gr. Elev.	Edge of Pkt.	Width	Station	Grade Elev.	Width	Edge of Pkt.	Add to L. Edge
0.17	739.74	10.00	209+94.71	739.91	10.00	739.74	0.00
	739.73		209+00.00	739.90		739.76	0.03
	739.71		+25.00	739.83		739.86	0.15
	739.65		+50.00	739.33		739.95	0.27
	739.66		+75.00	739.03		740.05	0.39
	739.64		+94.71	739.81		740.12	0.48
	739.63		210+00.00	739.80		740.14	0.51
	739.61		+25.00	739.79		740.24	0.63
	739.59		+44.71	739.76		740.31	0.72
	739.53		+50.00	739.75		740.30	
	739.56		+75.00	739.73		740.28	
	739.53		211+00.00	739.70		740.25	
	739.50		+25.00	739.67		740.22	
	739.48		+30.00	739.65		740.20	
	739.45		+75.00	739.62		740.17	
	739.43		212+00.00	739.60		740.15	
	739.40		+25.00	739.57		740.12	
	739.39		+50.00	739.55		740.10	
	739.35		+75.00	739.52		740.07	
	739.33		213+00.00	739.50		740.05	
	739.30		+25.00	739.47		740.02	
	739.28		+50.00	739.45		740.00	
	739.25		+75.00	739.43		739.97	
	739.23		214+00.00	739.40		739.95	
	739.20		+25.00	739.37		739.92	
	739.18		+50.00	739.35		739.90	
	739.15		+75.00	739.32		739.87	
	739.13		215+00.00	739.30		739.85	
	739.10		+25.00	739.27		739.82	
	739.09		+50.00	739.25		739.80	
	739.05		+75.00	739.22		739.77	
	739.03		216+00.00	739.20		739.75	
	739.00		+25.00	739.17		739.72	
	739.99		+50.00	739.15		739.70	
	739.96		+74.71	739.13		739.68	0.72
	739.93		217+00.00	739.10		739.65	0.60
	739.91		+24.71	739.08		739.63	0.48
	739.89		+30.00	739.05		739.61	0.36
	739.85		+75.00	739.02		739.58	0.24
	739.83		218+00.00	739.00		739.55	0.12
	739.81		+24.71	738.98		739.53	0.00

No Extra Pavement

RC. 273+04.48 D=2°00' L. RT. 280+83.64

LEFT		RIGHT					
Deduct from Gr. Elev.	Edge of Pkt.	Width	Station	Grade Elev.	Width	Edge of Pkt.	Add to L. Edge
0.17	734.26	10.00	273+04.48	734.43	10.00	734.26	0.00
	734.22		+25.00	734.39		734.29	0.07
	734.17		+50.00	734.34		734.33	0.16
	734.12		+75.00	734.29		734.37	0.25
	734.07		273+00.00	734.24		734.41	0.34
	734.04		+04.48	734.21		734.42	0.36
	734.02		+25.00	734.19		734.41	0.43
	733.99		+50.00	734.15		734.45	0.52
	733.95		+75.00	734.12		734.49	0.54
	733.92		274+00.00	734.09		734.46	
	733.90		+25.00	734.07		734.44	
	733.88		+50.00	734.05		734.42	
	733.85		+75.00	734.04		734.41	
	733.87		275+00.00	734.03		734.41	
			+25.00	734.01		734.41	
			+50.00	733.99		734.41	
			+75.00	733.97		734.41	
			276+00.00	733.95		734.41	
			+25.00	733.93		734.41	
			+50.00	733.91		734.41	
			+75.00	733.89		734.41	
			277+00.00	733.87		734.41	
			+25.00	733.85		734.41	
			+50.00	733.83		734.41	
			+75.00	733.81		734.41	
			278+00.00	733.79		734.41	
			+25.00	733.77		734.41	
			+50.00	733.75		734.41	
			+75.00	733.73		734.41	
			279+00.00	733.71		734.41	
			+25.00	733.69		734.41	
			+50.00	733.67		734.41	
			+75.00	733.65		734.41	
			280+00.00	733.63		734.41	
			+25.00	733.61		734.41	
			+50.00	733.59		734.41	
			+75.00	733.57		734.41	
			281+00.00	733.55		734.41	
			+25.00	733.53		734.41	
			+50.00	733.51		734.41	
			+75.00	733.49		734.41	
			282+00.00	733.47		734.41	
			+25.00	733.45		734.41	
			+50.00	733.43		734.41	
			+75.00	733.41		734.41	
			283+00.00	733.39		734.41	
			+25.00	733.37		734.41	
			+50.00	733.35		734.41	
			+75.00	733.33		734.41	
			284+00.00	733.31		734.41	
			+25.00	733.29		734.41	
			+50.00	733.27		734.41	
			+75.00	733.25		734.41	
			285+00.00	733.23		734.41	
			+25.00	733.21		734.41	
			+50.00	733.19		734.41	
			+75.00	733.17		734.41	
			286+00.00	733.15		734.41	
			+25.00	733.13		734.41	
			+50.00	733.11		734.41	
			+75.00	733.09		734.41	
			287+00.00	733.07		734.41	
			+25.00	733.05		734.41	
			+50.00	733.03		734.41	
			+75.00	733.01		734.41	
			288+00.00	732.99		734.41	
			+25.00	732.97		734.41	
			+50.00	732.95		734.41	
			+75.00	732.93		734.41	
			289+00.00	732.91		734.41	
			+25.00	732.89		734.41	
			+50.00	732.87		734.41	
			+75.00	732.85		734.41	
			290+00.00	732.83		734.41	
			+25.00	732.81		734.41	
			+50.00	732.79		734.41	
			+75.00	732.77		734.41	
			291+00.00	732.75		734.41	
			+25.00	732.73		734.41	
			+50.00	732.71		734.41	
			+75.00	732.69		734.41	
			292+00.00	732.67		734.41	
			+25.00	732.65		734.41	
			+50.00	732.63		734.41	
			+75.00	732.61		734.41	
			293+00.00	732.59		734.41	
			+25.00	732.57		734.41	
			+50.00	732.55		734.41	
			+75.00	732.53		734.41	
			294+00.00	732.51		734.41	
			+25.00	732.49		734.41	
			+50.00	732.47		734.41	
			+75.00	732.45		734.41	
			295+00.00	732.43		734.41	
			+25.00	732.41		734.41	
			+50.00	732.39		734.41	
			+75.00	732.37		734.41	
			296+00.00	732.35		734.41	
			+25.00	732.33		734.41	
			+50.00	732.31		734.41	
			+75.00	732.29		734.41	
			297+00.00	732.27		734.41	
			+25.00	732.25		734.41	
			+50.00	732.23		734.41	
			+75.00	732.21		734.41	
			298+00.00	732.19		734.41	
			+25.00	732.17		734.41	
			+50.00	732.15		734.41	
			+75.00	732.13		734.41	
			299+00.00	732.11		734.41	
			+25.00	732.09		734.41	
			+50.00	732.07		734.41	
			+75.00	732.05		734.41	
			300+00.00	732.03		734.41	
			+25.00	732.01		734.41	
			+50.00	731.99		734.41	
			+75.00	731.97		734.41	
			301+00.00	731.95		734.41	
			+25.00	731.93		734.41	
			+50.00	731.91		734.41	
			+75.00	731.89		734.41	
			302+00.00	731.87		734.41	
			+25.00	731.85		734.41	
			+50.00	731.83		734.41	
			+75.00	731.81		734.41	
			303+00.00	731.79		734.41	
			+25.00	731.77		734.41	
			+50.00	731.75		734.41	
			+75.00	731.73		734.41	
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			+25.00	731.69		734.41	
			+50.00	731.67		734.41	
			+75.00	731.65		734.41	
			305+00.00	731.63		734.41	
			+25.00	731.61		734.41	
			+50.00	731.59		734.41	
			+75.00	731.57		734.41	
			306+00.00	731.55		734.41	
			+25.00	731.53		734.41	
			+50.00	731.51		734.41	
			+75.00	731.49		734.41	
			307+00.00	731.47		734.41	
			+25.00	731.45		734.41	
			+50.00	731.43		734.41	
			+75.00	731.41		734.41	
			308+00.00	731.39		734.41	
			+25.00	731.37		734.41	
			+50.00	731.35		734.41	
			+75.00	731.33		734.41	
			309+00.00	731.31		734.41	
			+25.00	731.29		734.41	
			+50.00	731.27		734.41	
			+75.00				

30 20 10 0 10 20 30



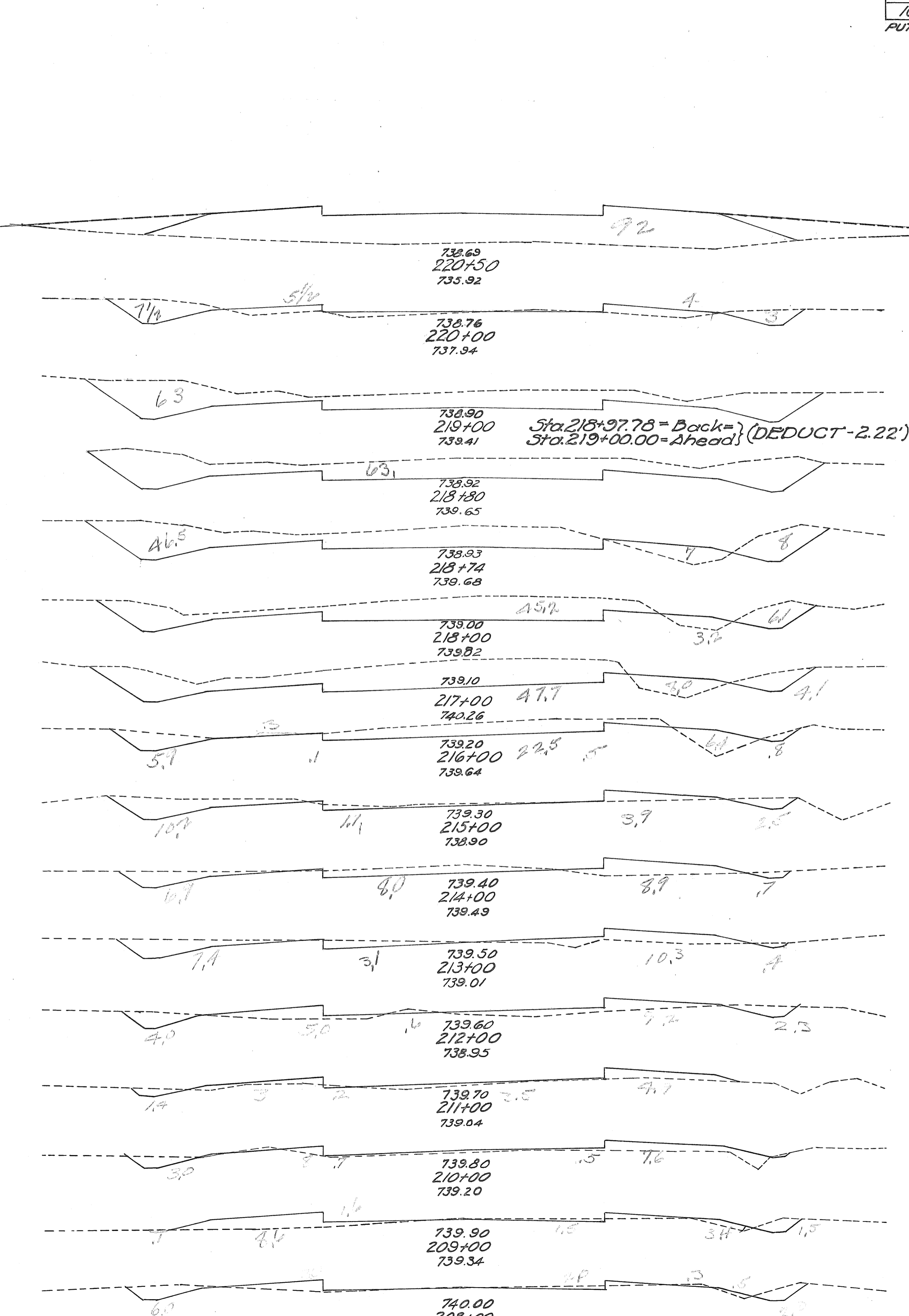
STA. 189+00 = BEGINNING OF PROJECT.

30 20 10 0 10 20 30

End Area	Cubic Yds.		Exc.	Emb.
	Exc.	Emb.		
14.5	0.6			
		46	7	
10.3	3.3			
		35	12	
8.4	3.4			
		23	32	
4.0	13.6			
		21	39	
7.1	7.3			
		18	26	
2.9	6.6			
		8	37	
1.3	13.2			
		8	44	
2.9	10.4			
		17	27	
6.0	4.3			
		17	20	
3.2	6.3			
		25	15	
10.4	1.8			
		38	9	
10.2	2.9			
		80	6	
33.1	0.3			
		99	5	
20.2	2.3			
		85	5	
26	0.5			
		115	1	
36	0			
		153	0	
46.5	0			
41	0			
		139	0	
34	0			
39.5	0			
		131	2	
31	1			

From Sta. 194+00 To Sta. 205+00  
Exc. 623 Cu. Yds.  
Emb. 8  
Waste 613

30 20 10 0 10 20 30



FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO		1934

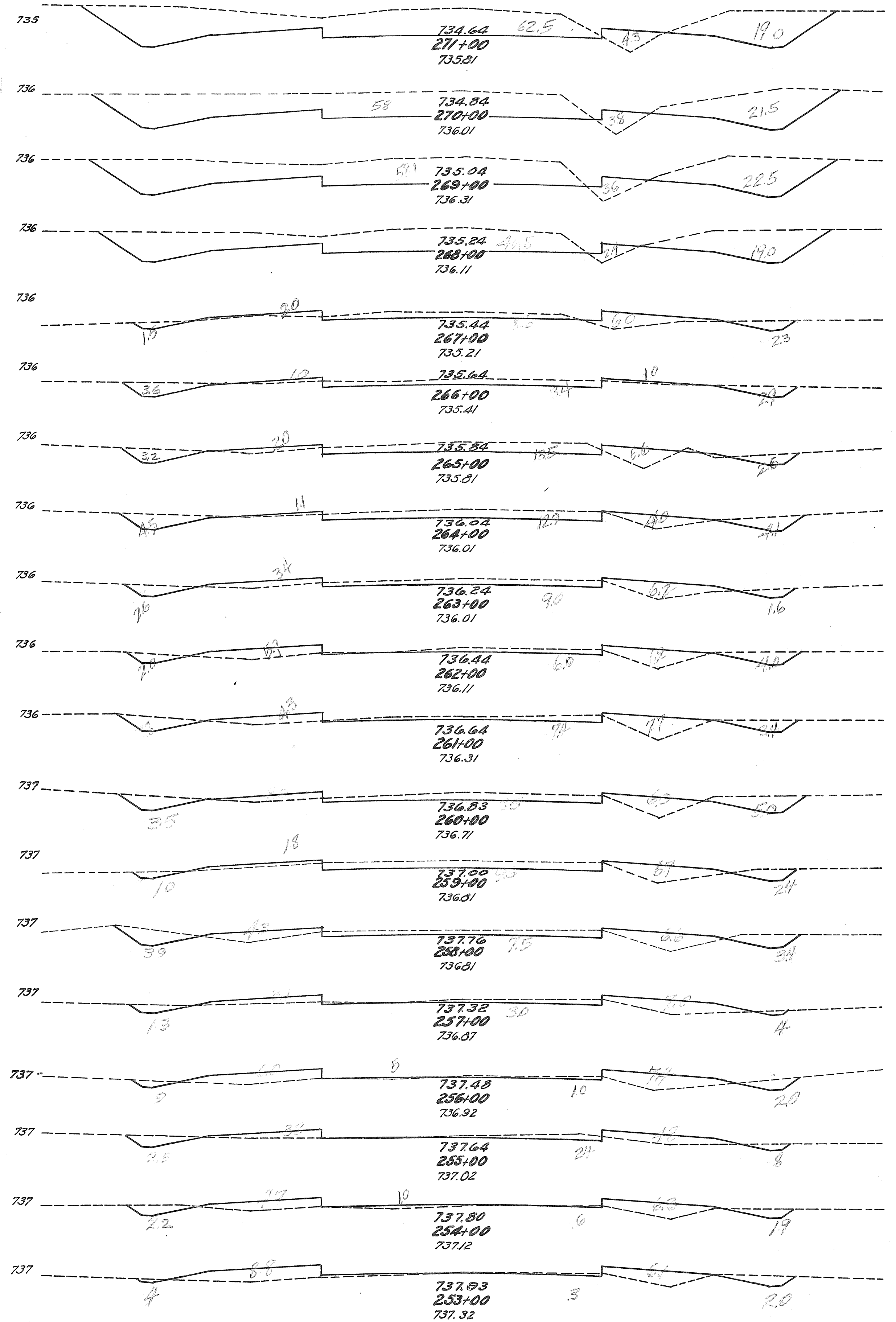
End Area	Cubic Yds.		Exc.	Emb.
	Exc.	Emb.		
0	92			
		5	94	
10.5	9.5			
		136	9	
63	0			
		47	0	
63	0			
		13	1	
54.5	7			
		145	14	
51.3	3.2			
		191	21	
51.8	8			
		149	27	
29.5	6.6			
		80	21	
13.8	4.5			
		54	25	
15.6	9.1			
		49	36	
10.9	10.4			
		33	46	
6.9	4.2			
		16	48	
1.6	11.5			
		9	39	
3.0	9.6			
		11	43	
3.1	13.6			
		21	35	
8.3	5.2			
		42	11	

From Sta. 205+00 To Sta. 216+00  
Exc. 399 Cu. Yds.  
Emb. 389  
Waste 613

30 20 10 0 10 20 30



30 20 10 4 10 20 30



30 20 10 4 10 20 30

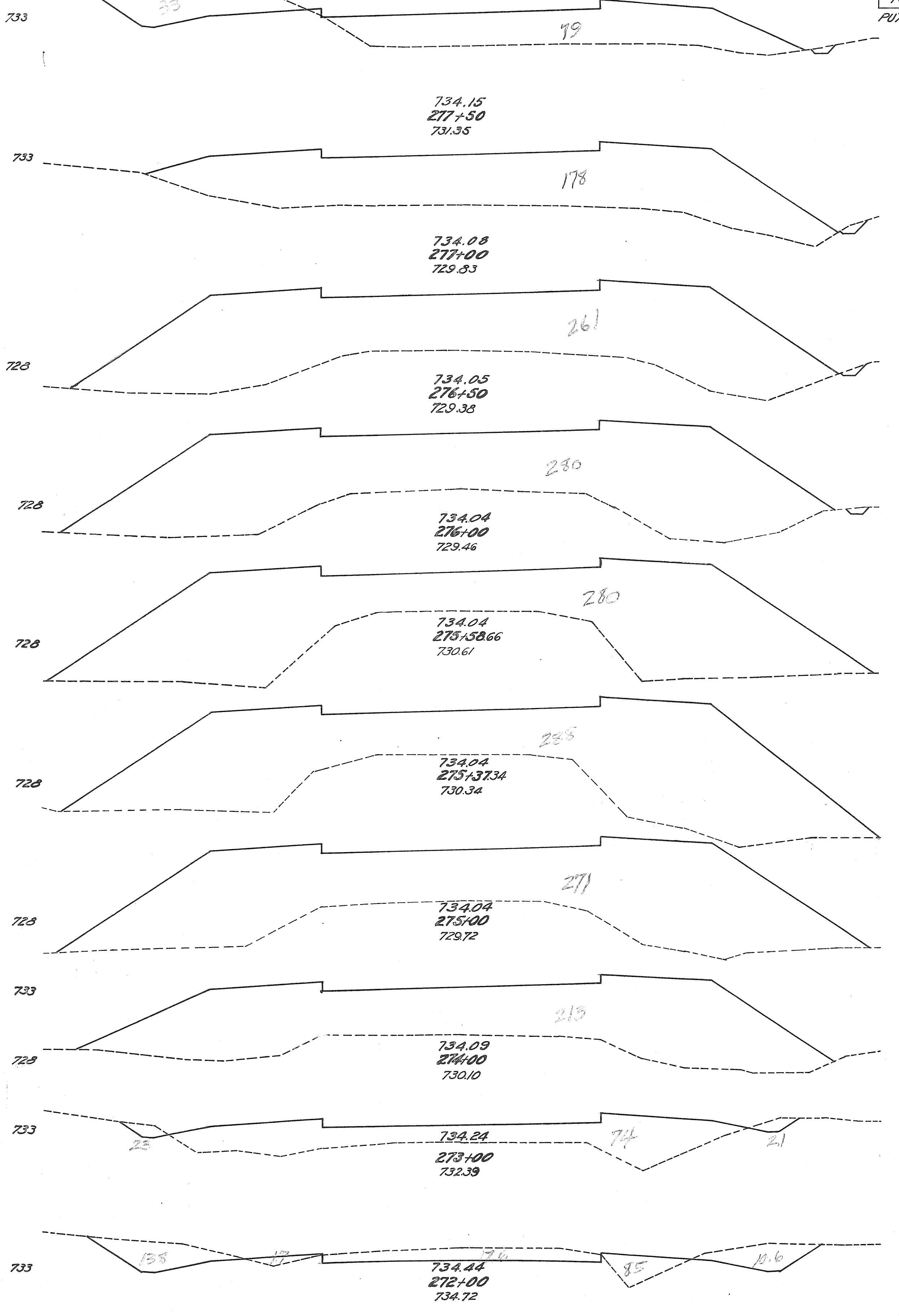
End Area		Cu. Yds.		Exc.	Emb.
Exc.	Emb.	Exc.	Emb.		
81.5	4.3	298	15		
79.5	3.8	296	14		
80.6	3.6	271	11		
65.5	2.4	144	19		
12.4	8.0	51	19		
14.9	2.0	63	18		
19.3	7.6	76	24		
21.5	5.1	64	27		
13.2	9.6	47	40		
12.0	12.1	49	45		
14.6	12.0	58	39		
17.0	9.0	56	32		
13.0	8.5	52	36		
14.8	10.9	38	39		
5.7	10.1	18	44		
3.9	13.9	18	42		
5.7	8.6	19	38		
4.7	12.0	14	50		
2.7	14.9	18	47		

Exc. = 1586 Cu. Yds.  
Emb. = 1919 " "  
Exc. + 20% = 1883 " "  
Emb. = 1586 " "  
From Sta. 263+00 To Sta. 274+54

Exc. = 518 Cu. Yds.  
Emb. = 275 " "  
Exc. + 20% = 590 " "  
Below

From Sta. 256+00 To Sta. 263+00

30 20 10 4 10 20 30



30 20 10 4 10 20 30

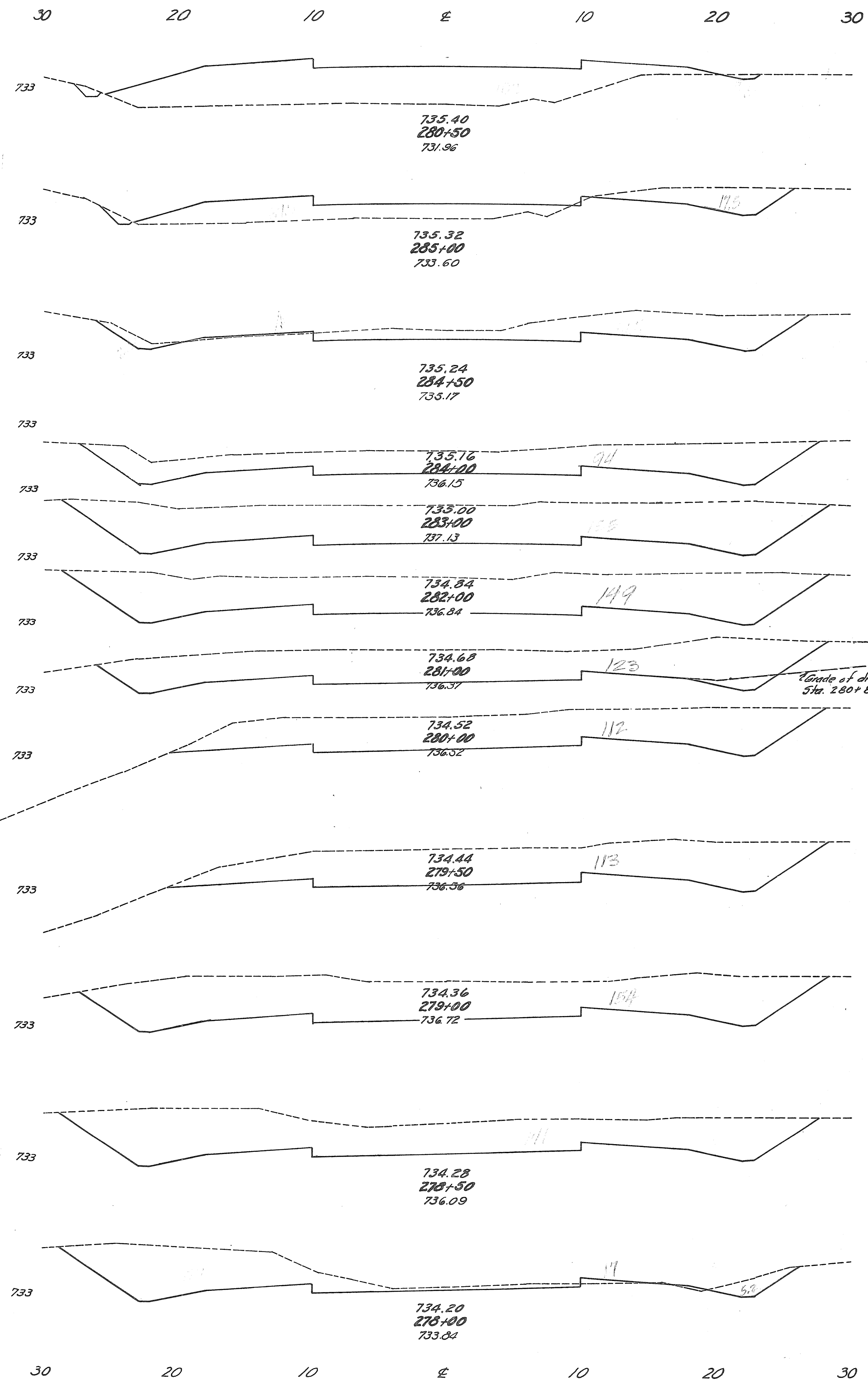
End Area		Cu. Yds.		Exc.	Emb.
Exc.	Emb.	Exc.	Emb.		
33	79				
		31	238		
0	178				
		0	406		
0	261				
		0	501		
0	280				
		0	429		
0	280				
		0	386		
0	288				
		0	386		
0	271				
		(439)			
0	213				
		8	532		
44	74				
		86	156		
420	104				
		229	27		

FED. RD. DIST. NO. 10 STATE OHIO FED. AID FISCAL YEAR 1934

PUTNAM CO. SH 134 SEC. 1

13 25

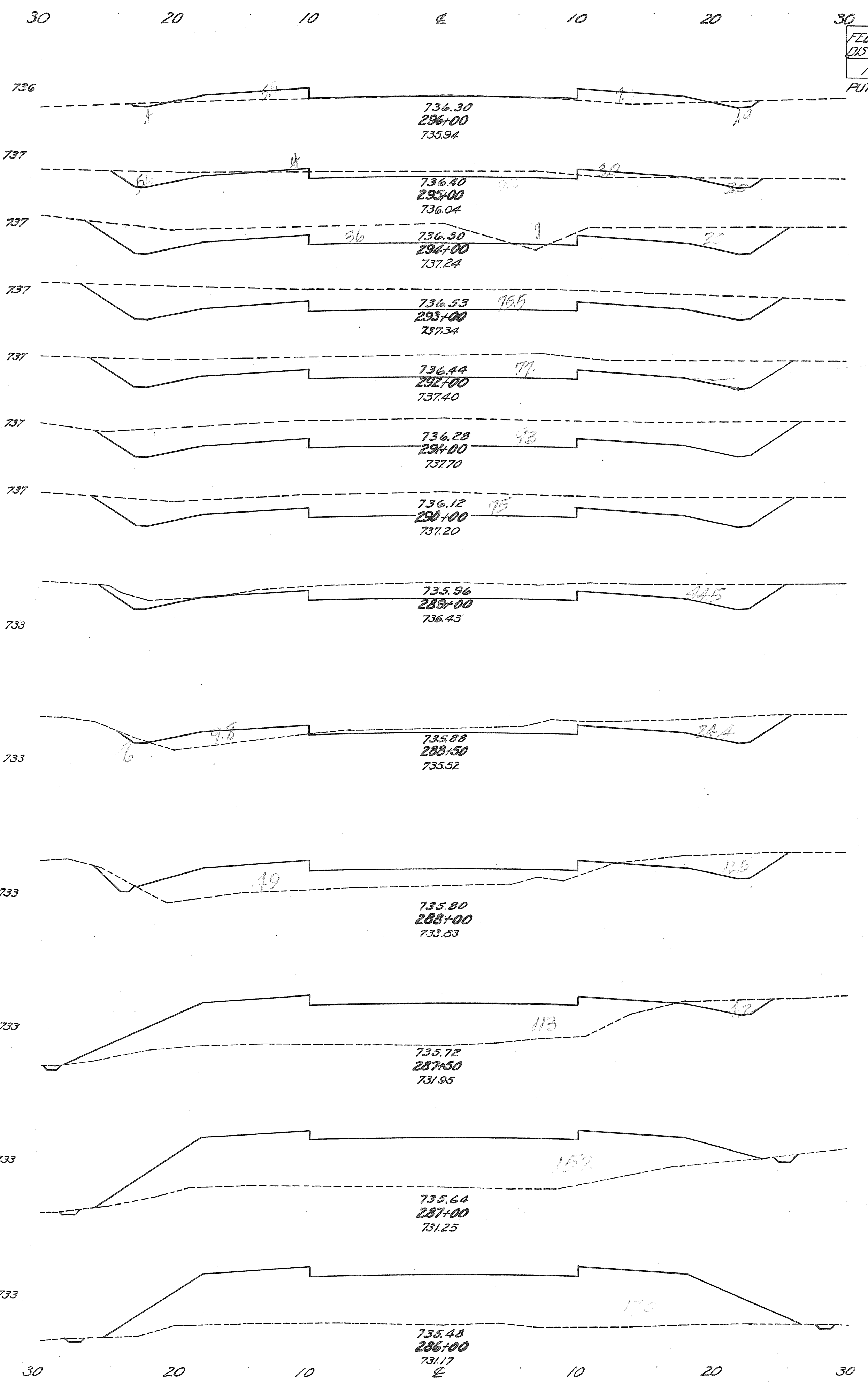
Bridge



End Area		Cu. Yds.	
Exc.	Emb.	Exc.	Emb.
5	102		
		17	129
175	375		
		64	35
52	8		
		135	1
94	0		
		461	0
155	0		
		563	0
149	0		
		504	0
123	0		
		435	0
112	0		
		208	0
113	0		
		247	0
154	0		
		273	0
141	0		
		190	2
64.2	1.7		
		90	75

3002 Cu. Yds.  
Exc. = 2809  
Emb. = 2911  
Comp. = 20%  
Waste = 31

From Sta. 274+54  
To Sta. 284+00



End Area		Cu. Yds.	
Exc.	Emb.	Exc.	Emb.
1.4	12.8		
		36	30
17.8	3.4		
		137	8
56	0.7		
		243	0
75.5	0		
		282	0
77	0		
		315	0
93	0		
		311	0
75	0		
		221	0
44.5	0		
		64	9
25.0	9.8		
		35	54
12.5	4.9		
		15	150
4.2	11.3		
		245	
0	15.2		
		596	
0	17.0		
		0	25.2

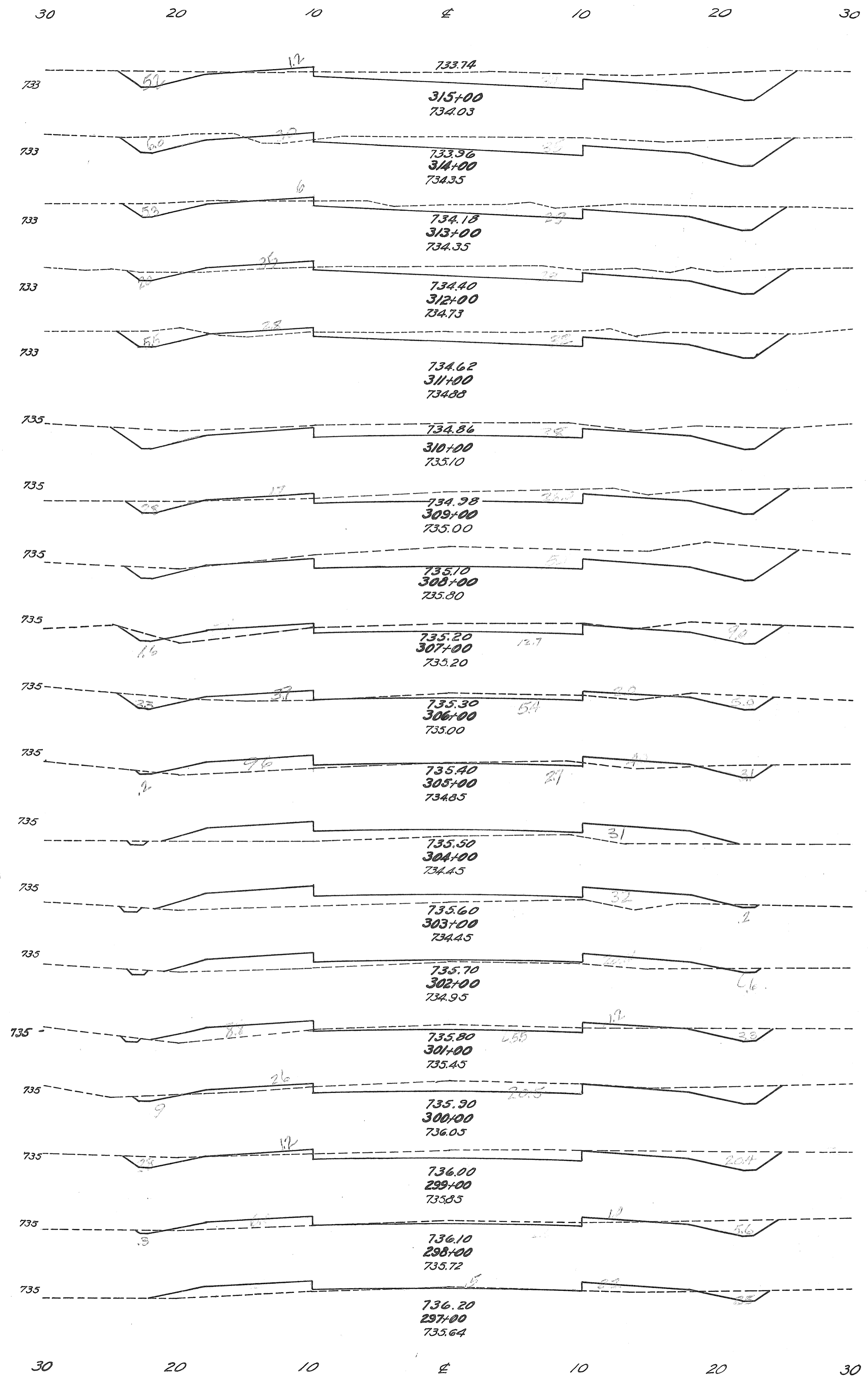
From Sta. 284+00  
To Sta. 298+00

Exc. = 1905 Cu. Yds.  
Emb. = 1588  
Emb. + 20% = 1905

FED. RD. DIST. NO. 10 STATE OHIO FED. AID PROJ. NO. 1934 FISCAL YEAR 1934

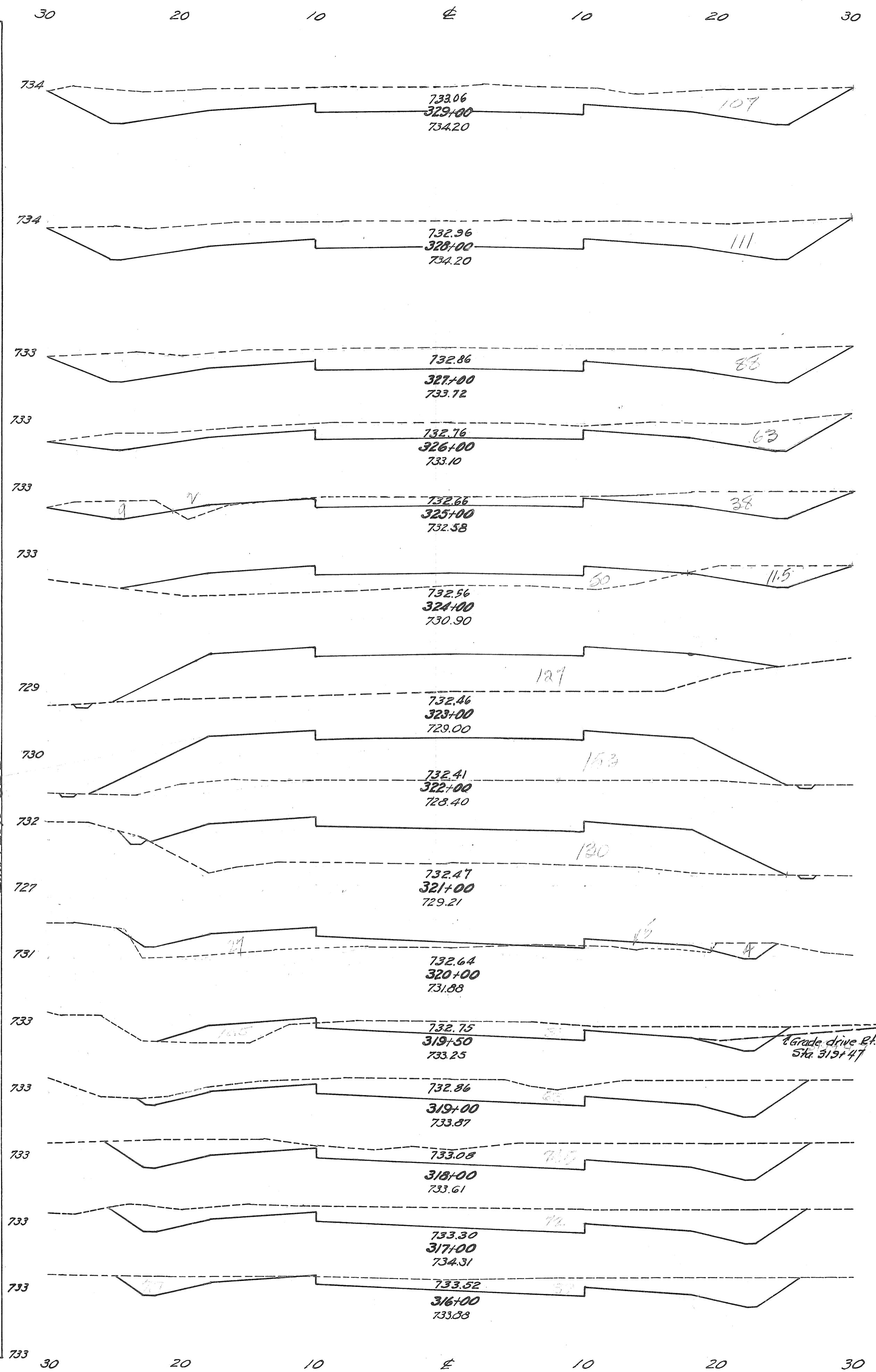
RUTMAN CO. S.H. 134 SEC. 1

14 25



End Area		Cu. Yards	
Exc.	Emb.	Exc.	Emb.
39.2	12		
		148	8
41.0	3.0		
		139	7
34.3	0.6		
		121	8
31.0	3.5		
		127	12
37.5	2.8		
		140	5
38	0		
		124	3
29	1.7		
		(93)	(3)
		154	3
		(61)	(0)
54	0		
		143	10
23.3	5.4		
		87	21
13.7	5.9		
		37	36
6.0	13.6		
		11	81
0	31.0		
		0	117
0.2	32.0		
		2	97
0.6	20.4		
		17	56
8.8	10.0		
		56	23
21.4	2.6		
		83	7
23.2	1.2		
		59	15
8.7	7.0		
		22	34
3.0	11.6		
		8	45

Exc. = 556.74 Cu. Yds.  
Emb. = 463 " "  
Exc. + Emb. = 1020 " "  
From Sta. 298+00  
To Sta. 308+53



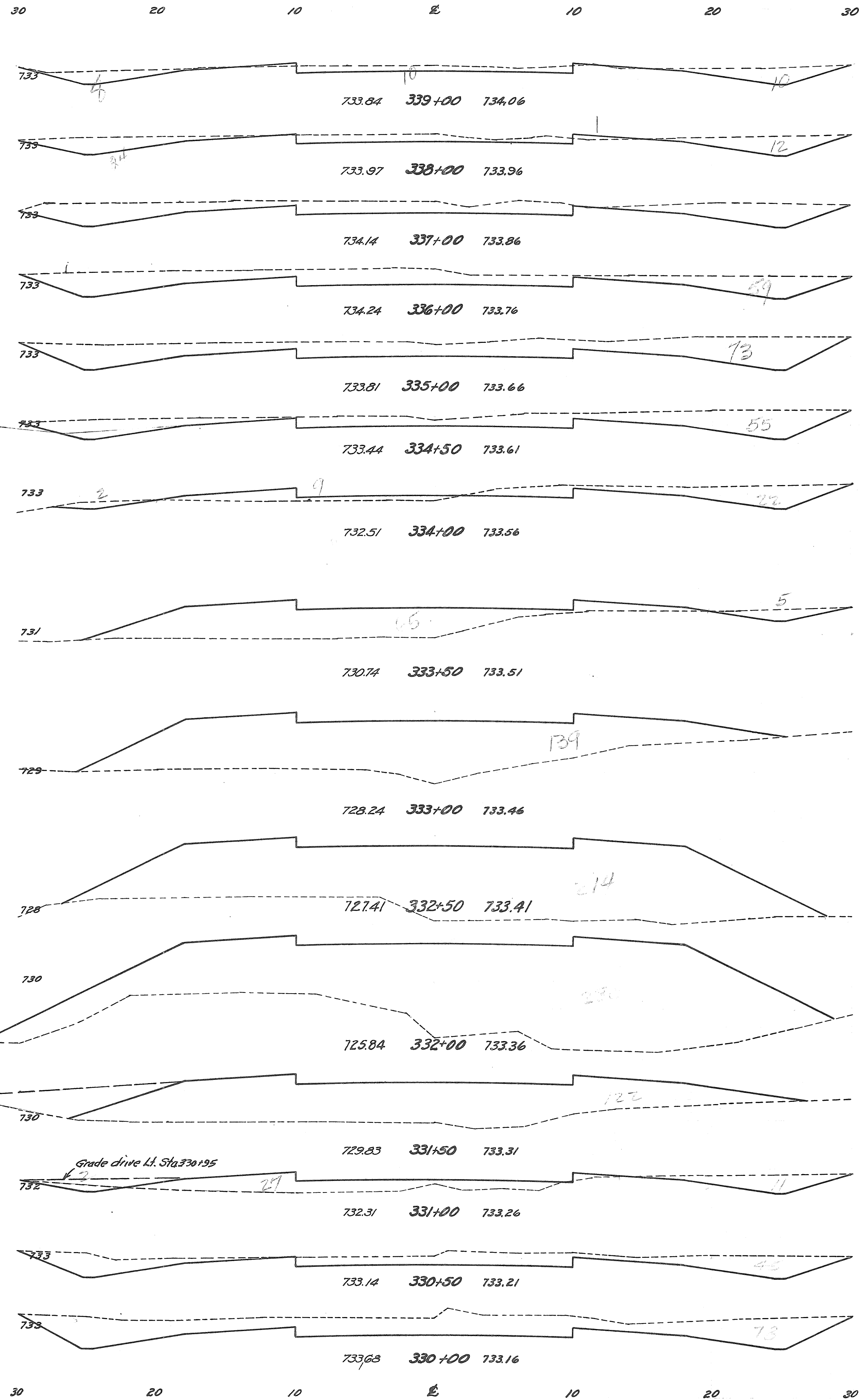
FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO		1934

End Area		Cu. Yards	
Exc.	Emb.	Exc.	Emb.
107	0		
		404	0
111	0		
		369	0
88	0		
		(152)	
		280	0
		(128)	
63	0		
		204	4
47	2		
		108	96
11.5	50		
		21	328
0	127		
		0	518
0	153		
		0	524
0	130		
		9	300
5	32		
		35	39
3.3	10.5		
		89	10
63	0		
		255	0
74.5	0		
		271	0
72	0		
		220	0
46.7	0		
		159	2

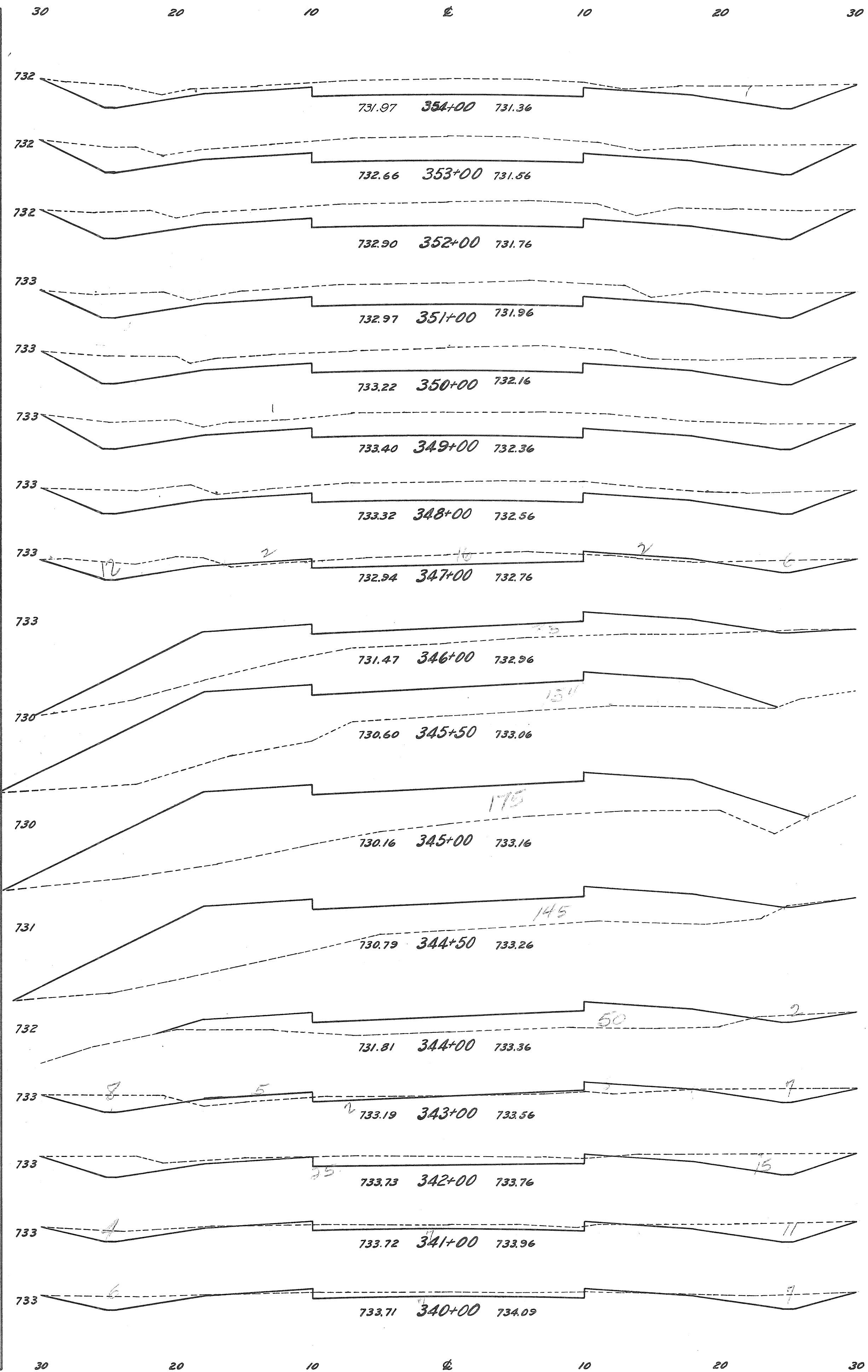
  

Exc. = 2391 Cu. Yds.  
Emb. = 1897 " "  
Exc. + Emb. = 4288 " "  
From Sta. 308+33  
To Sta. 326+50



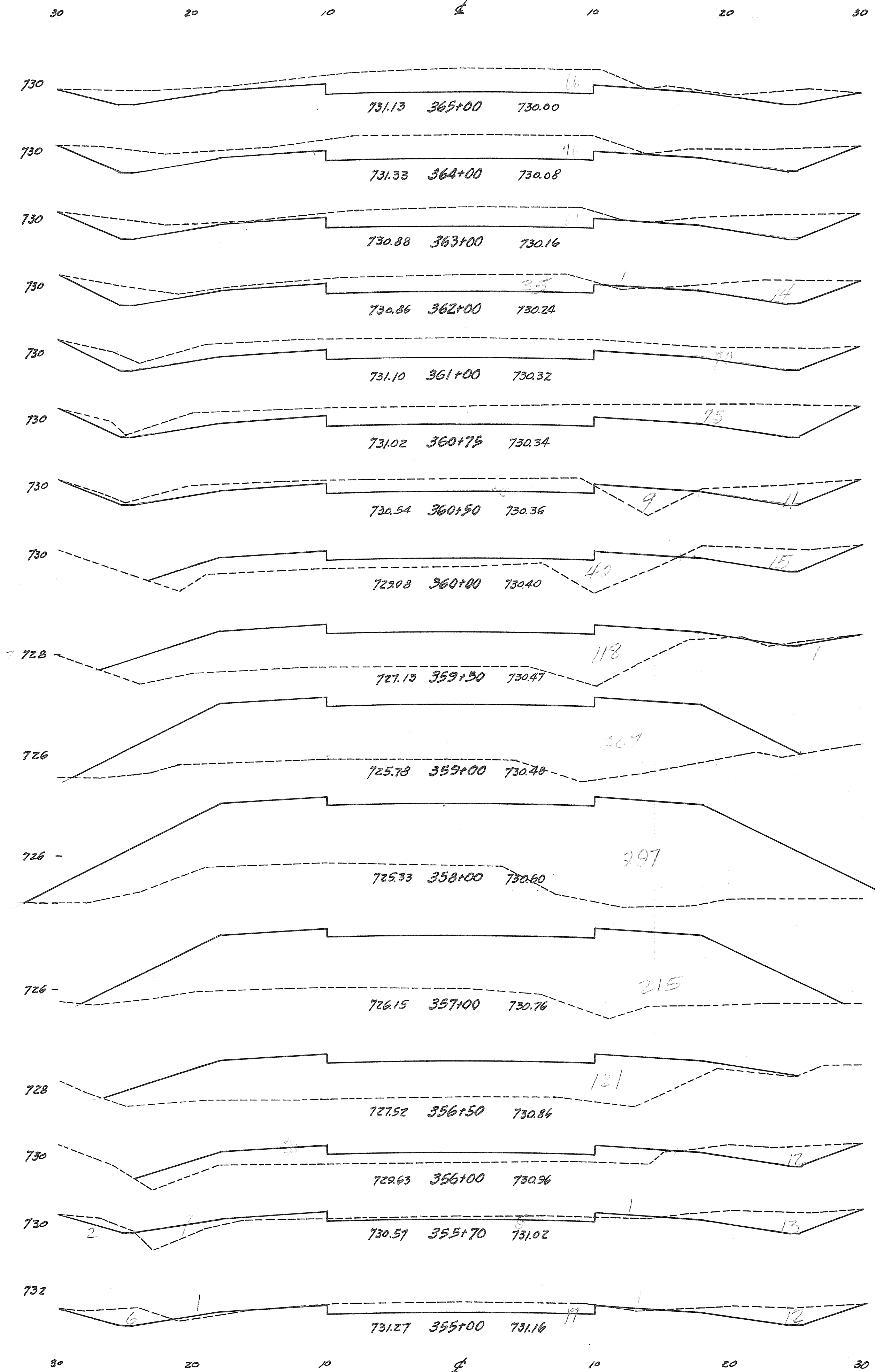
End Area		Cu. Yds.	
Exc.	Emb.	Exc.	Emb.
28	1	119	4
36	1	174	2
58	0	217	0
59	0	244	0
73	0	119	0
55	0	73	8
24	9	27	68
5	65	5	189
0	139	0	327
0	214	0	457
0	280	0	372
0	122	12	138
13	27	63	25
45	0	114	0
78	0	343	0

Emb + 20% = 190 cu. yd.  
 Waste = 24 cu. yd.  
 Exc. = 1925 cu. yd.  
 Emb = 1584 cu. yd.  
 From Sta. 326+50 To Sta. 336+00



FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	16/25
10	OHIO		1934	
PUTNAM COUNTY SH. 134 SEC. 1				
End Area	Cu. Yds.	Exc.	Emb.	
57	0			
81	0	256	0	
90	0	317	0	
76	0	307	0	
83	0	294	0	
87	0	(219) 315 (96)	0	
70	0	291	0	
34	4	192	7	
1	83	66	161	
0	154	1	219	
0	175	0	305	
0	145	0	296	
2	50	2	181	
17	10	35	111	
40	1	106	20	
22	1	115	4	
20	1	78	4	
		89	4	

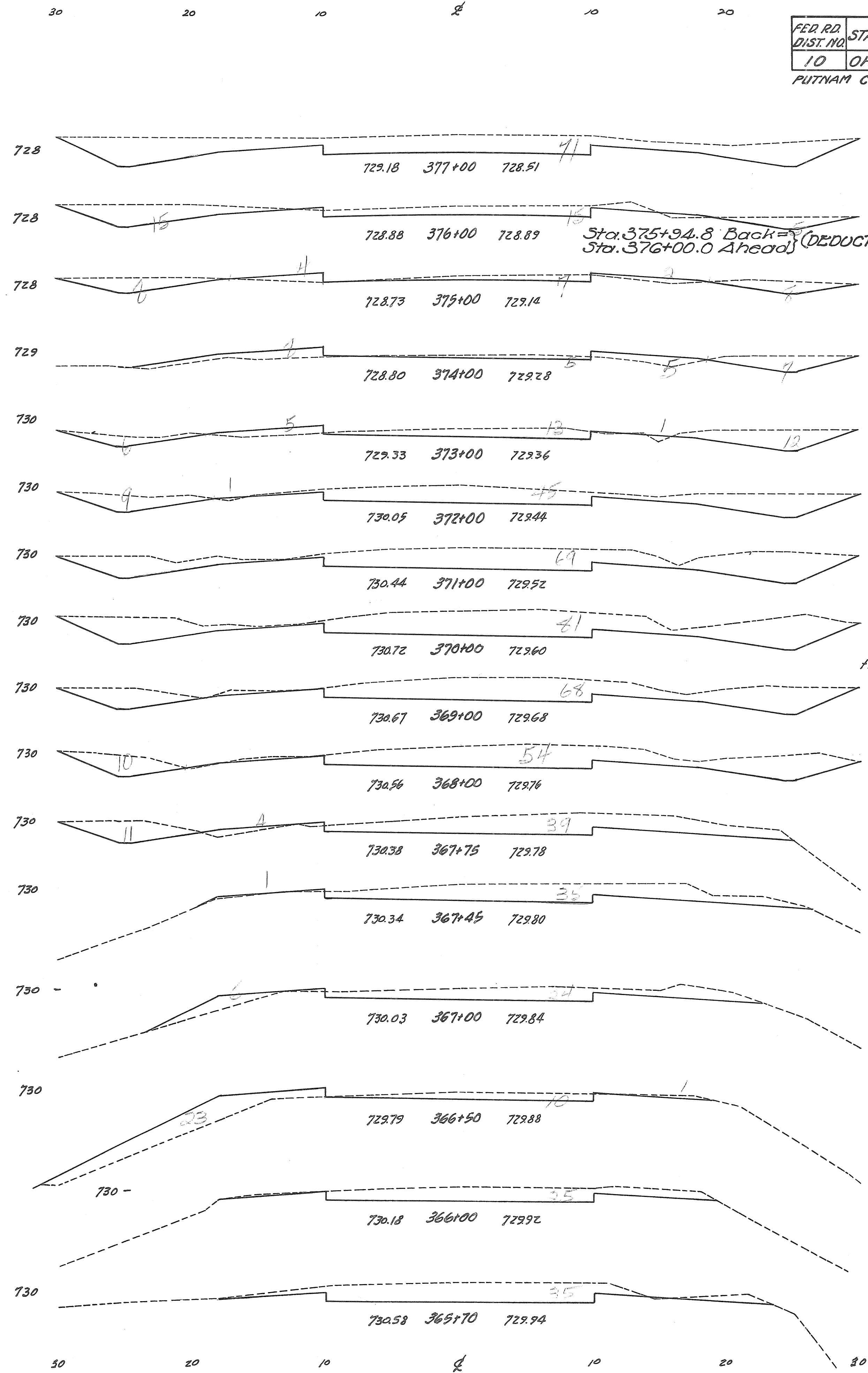
From Sta. 349+30 To Sta. 358+00  
 Emb + 20% = 1581 cu. yd.  
 BALANCE  
 Exc. = 1581 cu. yd.  
 Emb = 1318 cu. yd.  
 From Sta. 336+00 To Sta. 349+30



End Area	Cu. Yds.	Exc.	Emb.
66	0	263	0
76	0	254	0
61	0	204	2
49	1	220	2
70	0	67	0
75	0	54	4
41	9	52	47
15	42	15	148
1	118	0	301
0	207	0	933
0	297	0	948
0	215	0	311
0	121	11	145
12	36	18	26
20	10	71	15
35	2	170	4

Exc. = 1884 Cu. Yd. Emb. = 1496 Cu. Yd. From Sta. 358+00 To Sta. 369+50

Exc. = 1663 Cu. Yd. Emb. + 20% = 1739 Cu. Yd. Borrow = 76 Cu. Yd. From Sta. 358+00 To Sta. 369+50



FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR.
10	OHIO		1934

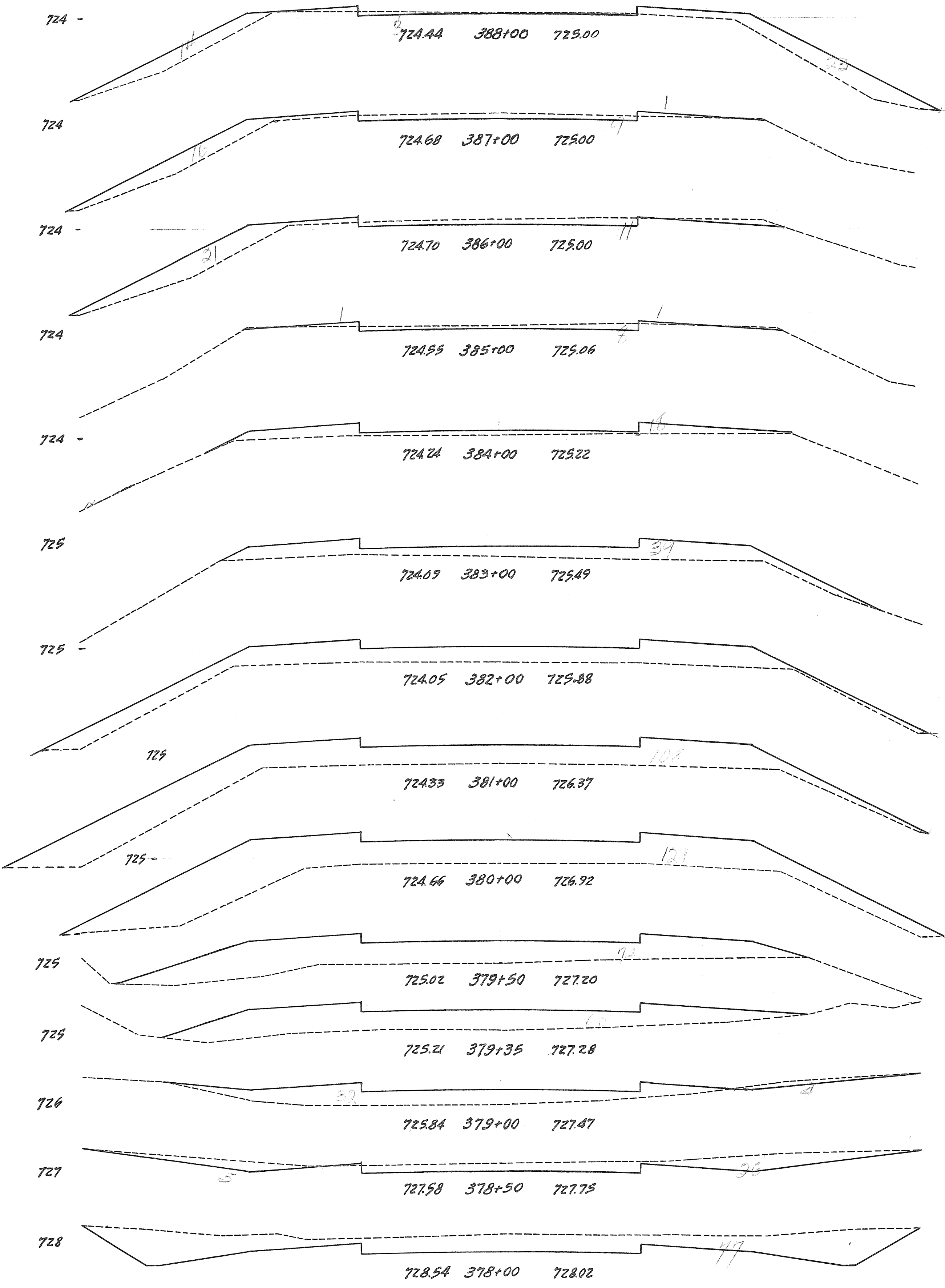
PUTNAM COUNTY S.H. 134 Sec. 1

End Area	Cu. Yds.	Exc.	Emb.
71	0	196	2
35	1	107	13
23	6	65	35
12	13	80	35
31	6	157	13
54	1	228	2
69	0	278	0
81	0	(144) 276	0
68	0	(132)	0
64	0	249	0
50	4	53	2
50	4	47	3
35	1	49	6
24	6	32	27
11	23	33	21
25	0	33	0
35	0	131	0

Exc. = 1795 Cu. Yd. Emb. + 20% = 1854 Cu. Yd. Waste = 85 Cu. Yd. + 45 Cu. Yd. = 130 Cu. Yd. From Sta. 369+50 To Sta. 383+00

17  
25

30 20 10 0 10 20 30



End Area		Cu. Yds.	
Exc.	Emb.	Exc.	Emb.
3	37		
		22	100
9	17		
		37	70
11	21		
		35	43
8	2		
		15	37
0	18		
		0	106
0	39		
		0	202
0	70		
		0	330
0	108		
		0	424
0	121		
		0	181
0	74		
		0	38
0	60		
		3	60
4	32		
		32	30
31	0		
		100	0
77	0		
		274	0

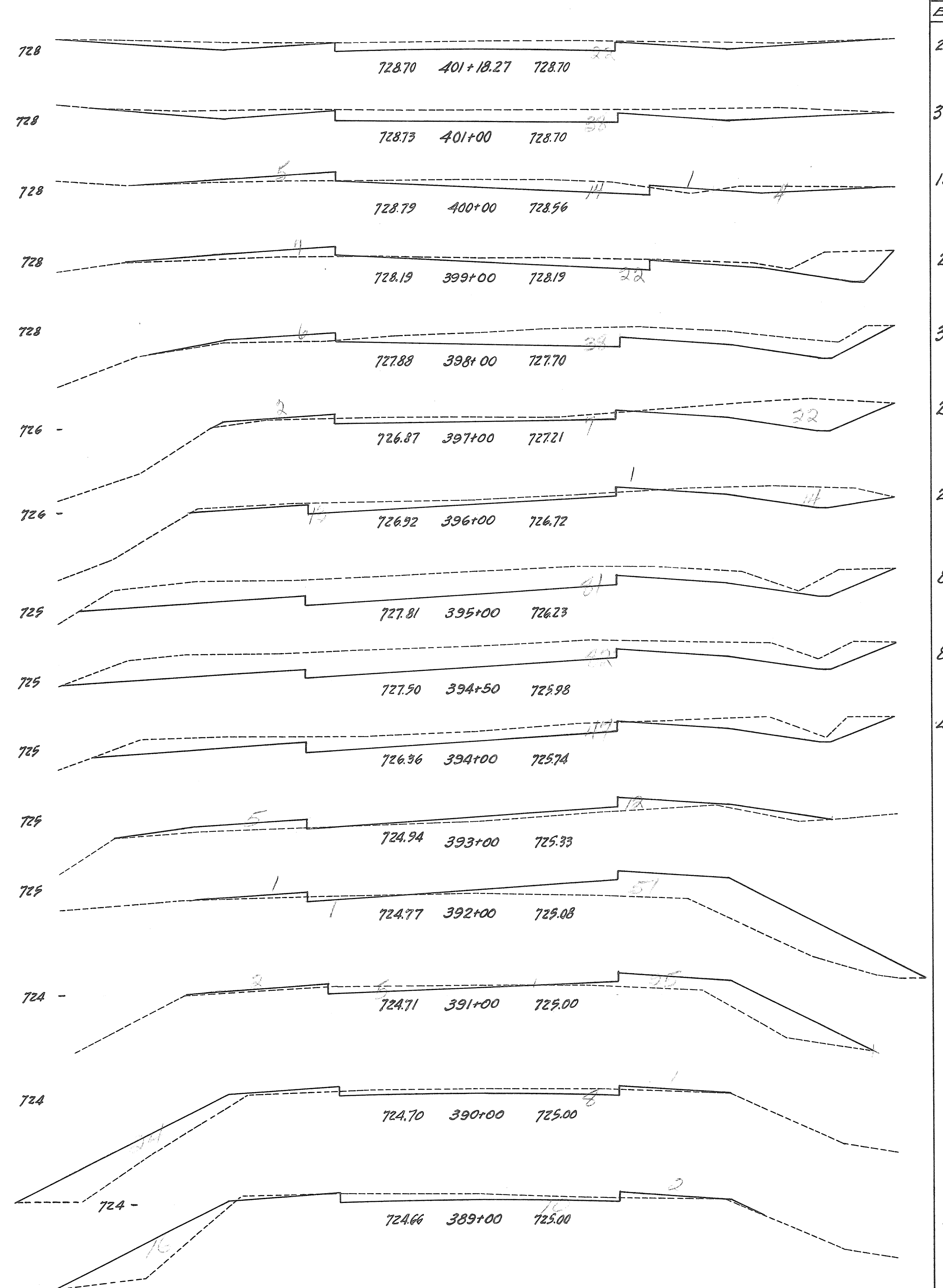
From Sta. 383+00 To Sta. 401+18.27  
 Exc. = 1664 Cu. Yd.  
 Emb. = 1365 Cu. Yd.  
 Emb + 20% = 1638 Cu. Yd.  
 Waste = 26 Cu. Yd.

30 20 10 0 10 20 30

STA. 401+18.27 = END OF PROJECT

FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO		1934

PUTNAM CO. SH. 134 SEC. I.



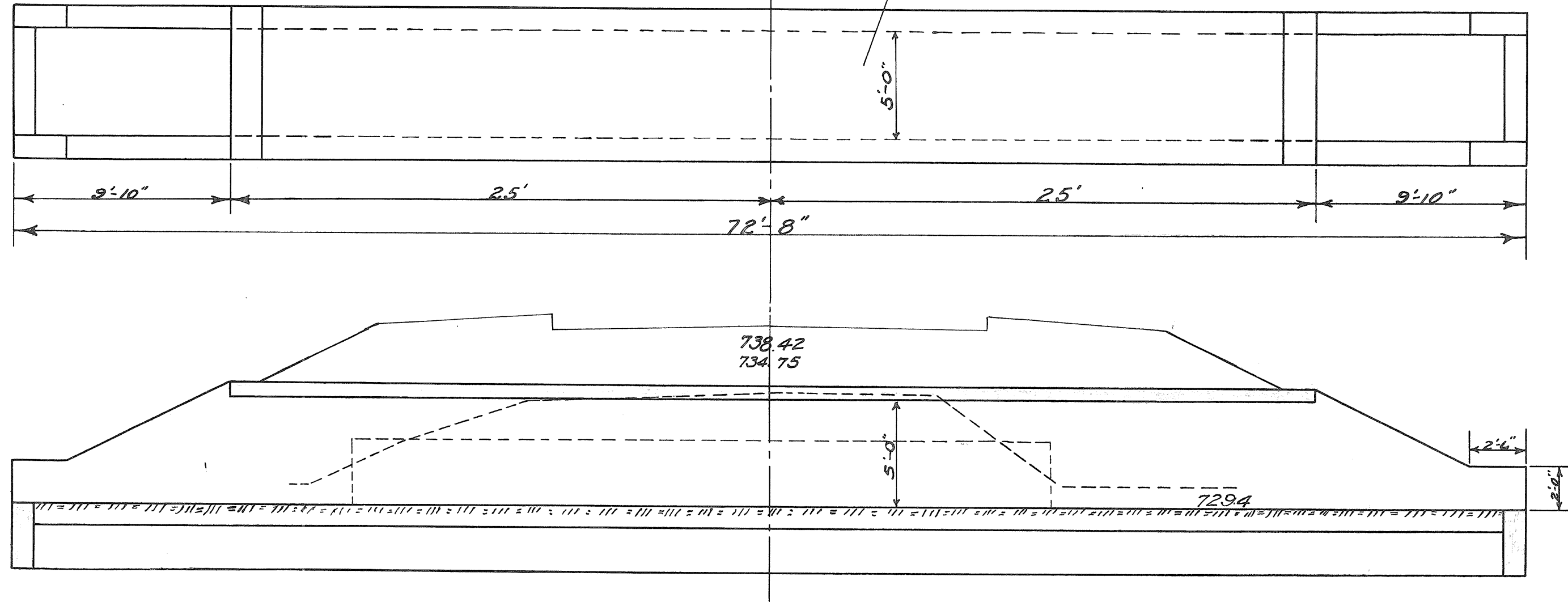
End Area		Cu. Yds.	
Exc.	Emb.	Exc.	Emb.
22	0		
		20	0
38	0		
		104	11
18	6		
		74	24
22	7		
		111	24
38	6		
		124	15
29	2		
		104	6
27	1		
		200	2
81	0		
		151	0
82	0		
		119	0
47	0		
		87	32
0	17		
		2	128
1	52		
		11	146
5	27		
		24	96
8	25		
		33	80
10	18		
		24	102

Exc. = 1297 Cu. Yd.  
 Emb. = 1022 Cu. Yd.  
 Emb + 20% = 1226 Cu. Yd.  
 Waste = 71 Cu. Yd.

30 20 10 0 10 20 30

1-C Sheet No 3  
Sta. 221+53

Drainage Area: 755 A



**CULVERT DATA**  
 Present Structure:  
 30"-36" C.I.P. (Remove)  
 Proposed Structure  
 5'x5'x12'-8" Slab Top Culvert  
 Std. Drg. No. STC-34.

**ESTIMATED QUANTITIES**

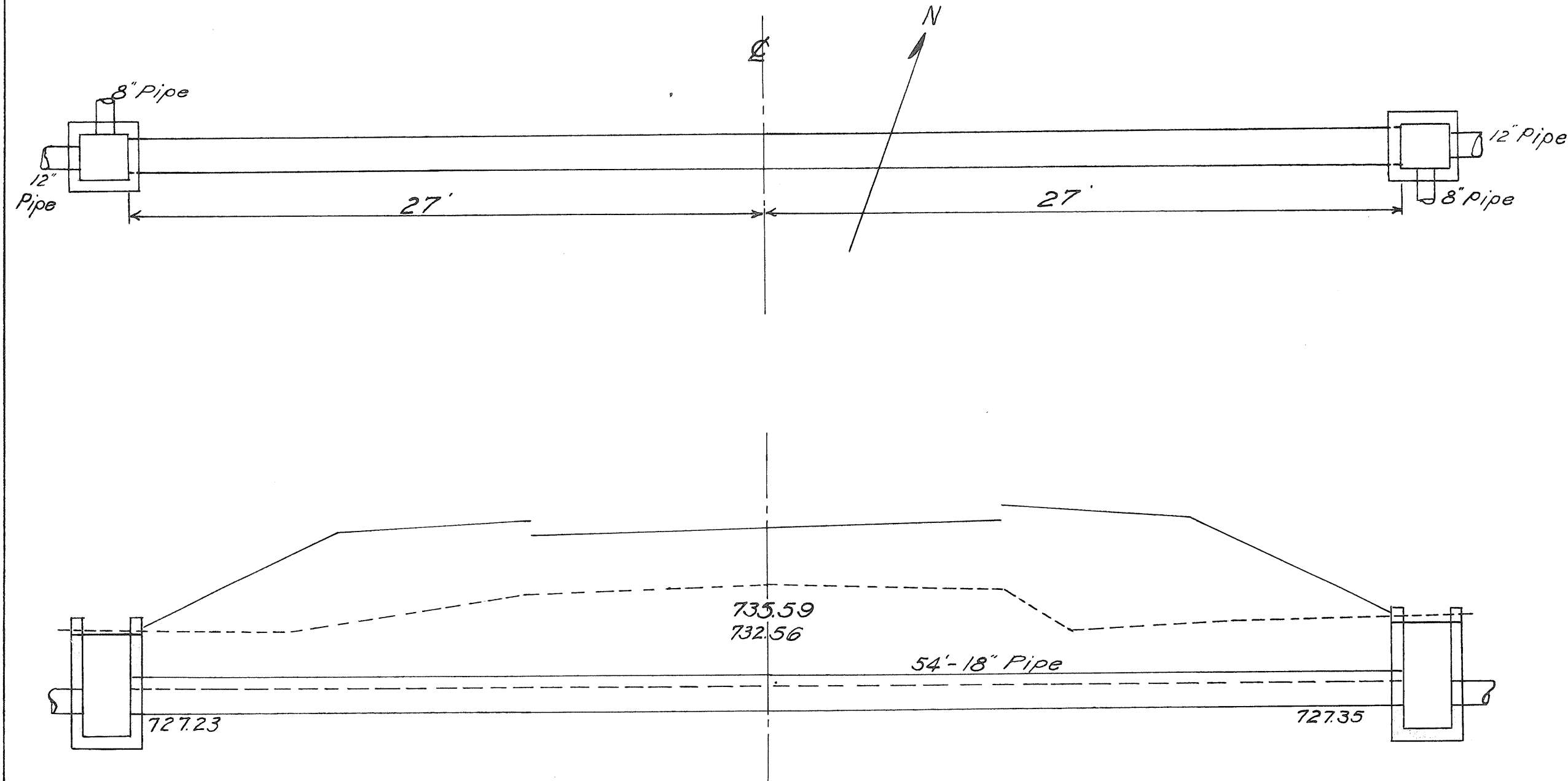
Excavation 90 Cu.Yds.  
 1-6 1/2 Conc. 19.6 Cu.Yds.  
 1-5 1/2 Conc. 38.4 Cu.Yds.  
 Reinf. Steel 2589 Lbs.

Mark	Size	No.	Length	Weight
W30	1/2"	136	8'-0"	925
S10	3/4"	134	6'-6"	308
T2a	1/2"	17	49'-6"	562
T2b	1/2"	20	11'-6"	154
C2a	1/2"	2	14'-0"	16
C2b	1/2"	6	6'-0"	24
Total				2589

NOTE-For placing steel  
 See Standard Drawing STC-34

1-C Sheet No 4  
 Sta. 234+95

Drainage Area: 60 A.



**CULVERT DATA**

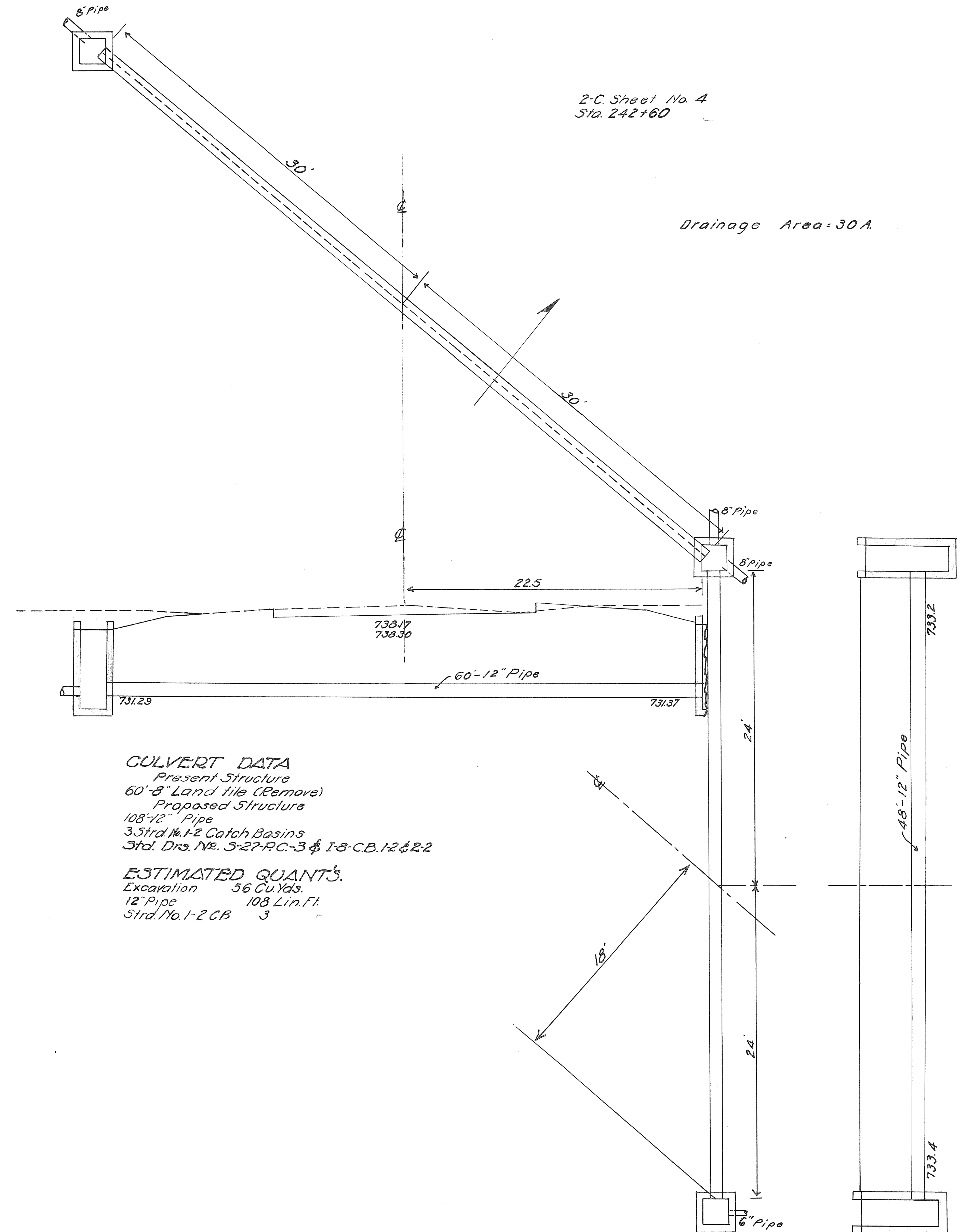
Present Structure  
 12" tile (remove)  
 Proposed Structure  
 54'-18" Pipe  
 2 Str. No. 1-2 C.B.  
 Std. Drg. No. S-27-PC-3  
 & I-B-C.B. 1-2 & 2-2

**ESTIMATED QUANTITIES**

Excavation 26 Cu.Yds.  
 18" Pipe 54 Lin.Ft.  
 Std. No. 1-2 C.B. 2

2-C Sheet No 4  
 Sta. 242+60

Drainage Area: 30 A.



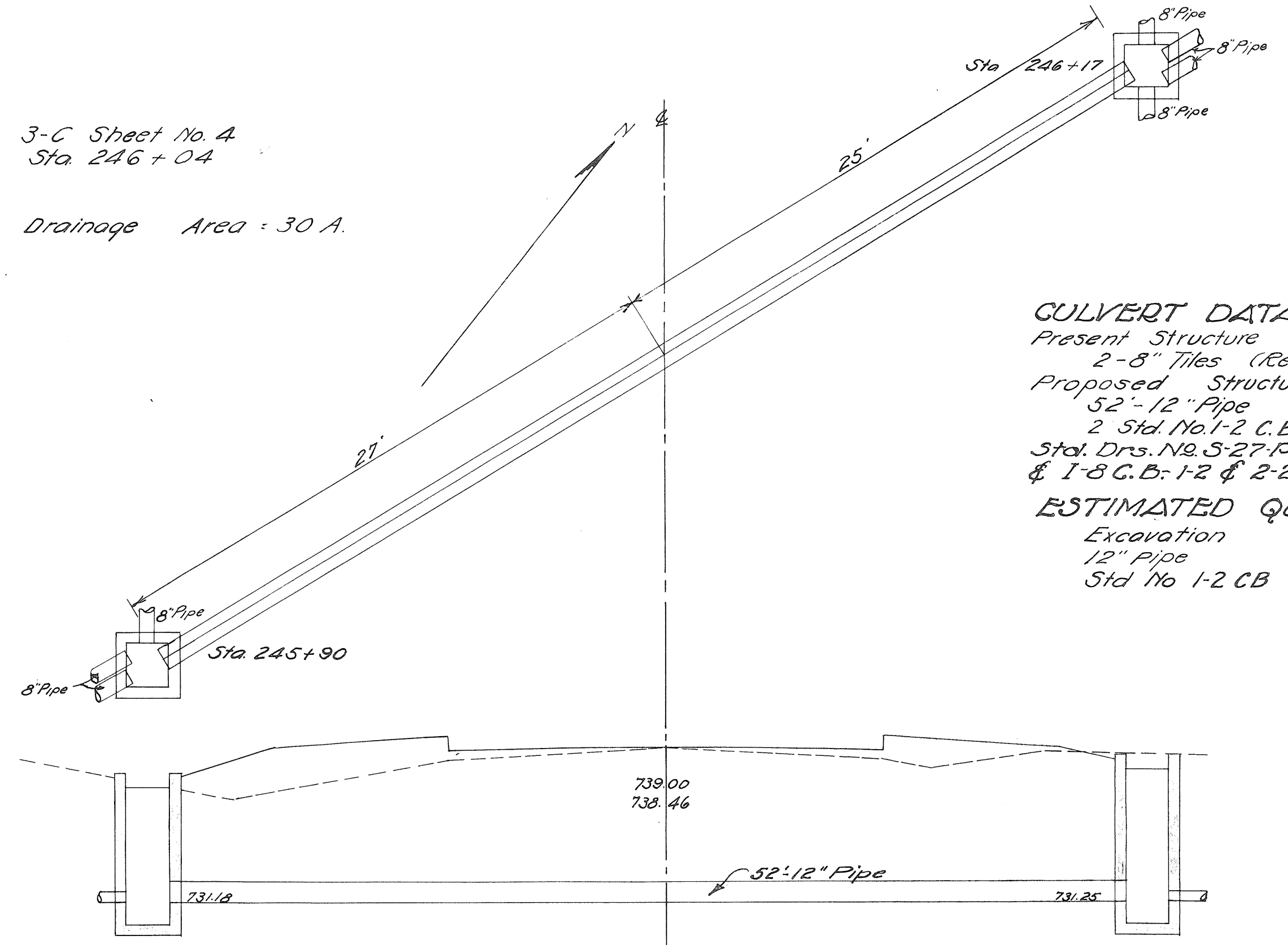
**CULVERT DATA**

Present Structure  
 60'-8" Land tile (Remove)  
 Proposed Structure  
 108'-12" Pipe  
 3 Str. No. 1-2 Catch Basins  
 Std. Drg. No. S-27-PC-3 & I-B-C.B. 1-2 & 2-2

**ESTIMATED QUANTITIES**

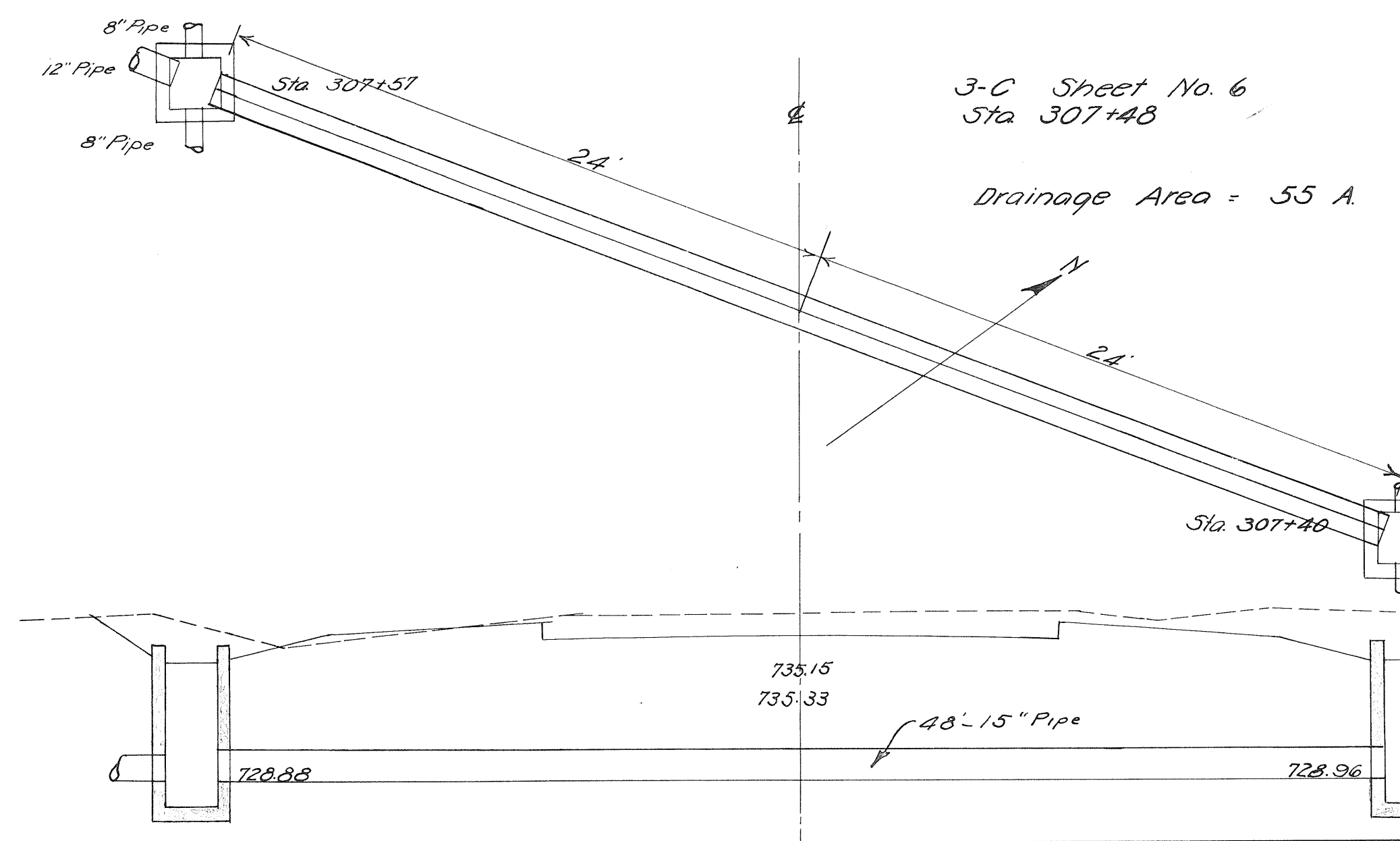
Excavation 56 Cu.Yds.  
 12" Pipe 108 Lin.Ft.  
 Str. No. 1-2 C.B. 3

3-C Sheet No. 4  
Sta. 246+04  
Drainage Area = 30 A.



**CULVERT DATA**  
Present Structure  
2-8" Tiles (Remove)  
Proposed Structure  
52'-12" Pipe  
2 Std. No. 1-2 C.B.  
Std. Drs. No. 5-27-R.C.-3  
& 1-8-C.B. 1-2 & 2-2

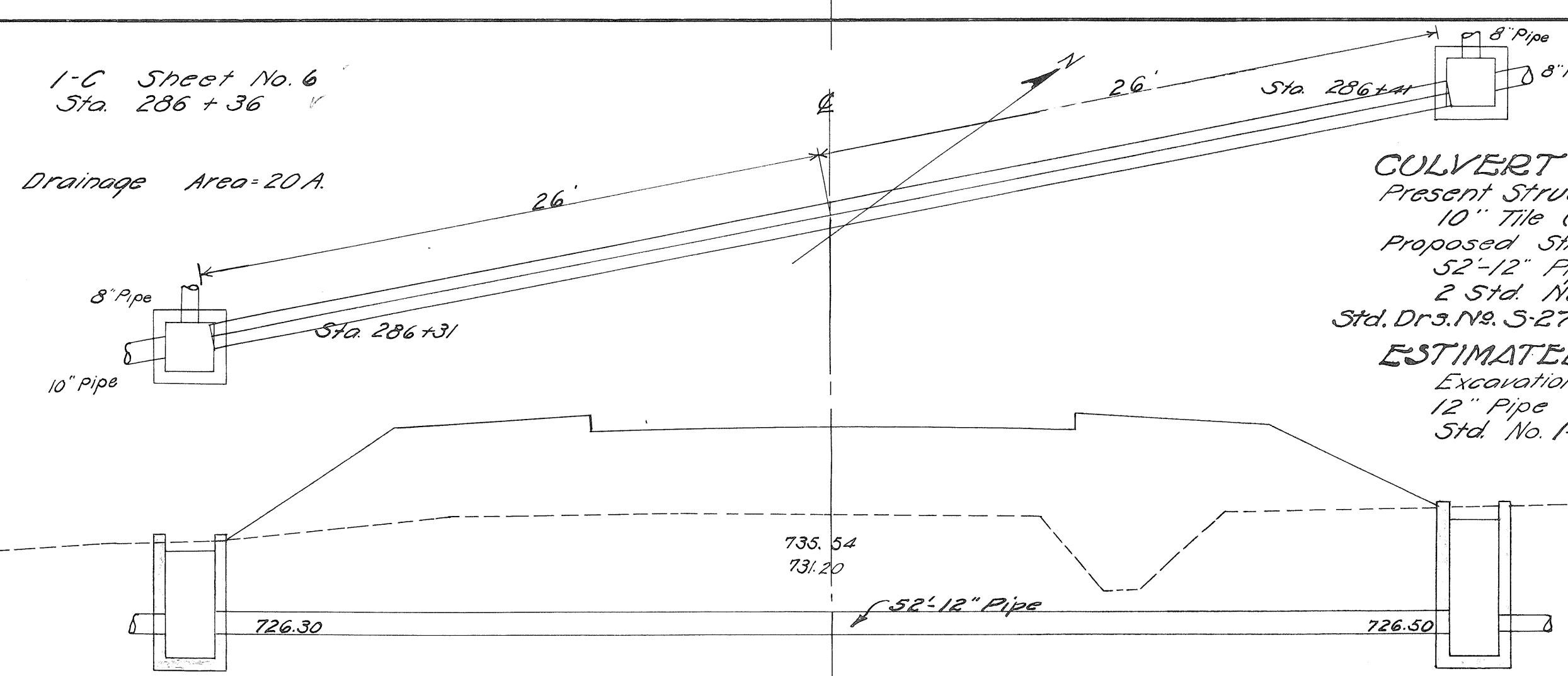
**ESTIMATED QUANTITIES**  
Excavation 31 Cu. Yds.  
12" Pipe 52 Lin. Ft.  
Std. No. 1-2 C.B. 2



**CULVERT DATA**  
Present Structure  
12" Land Tile (Remove)  
Proposed Structure  
48'-15" Pipe  
2 Std. No. 1-2 C.B.  
Std. Drs. No. 5-27-R.C.-3  
& 1-8-C.B. 1-2 & 2-2

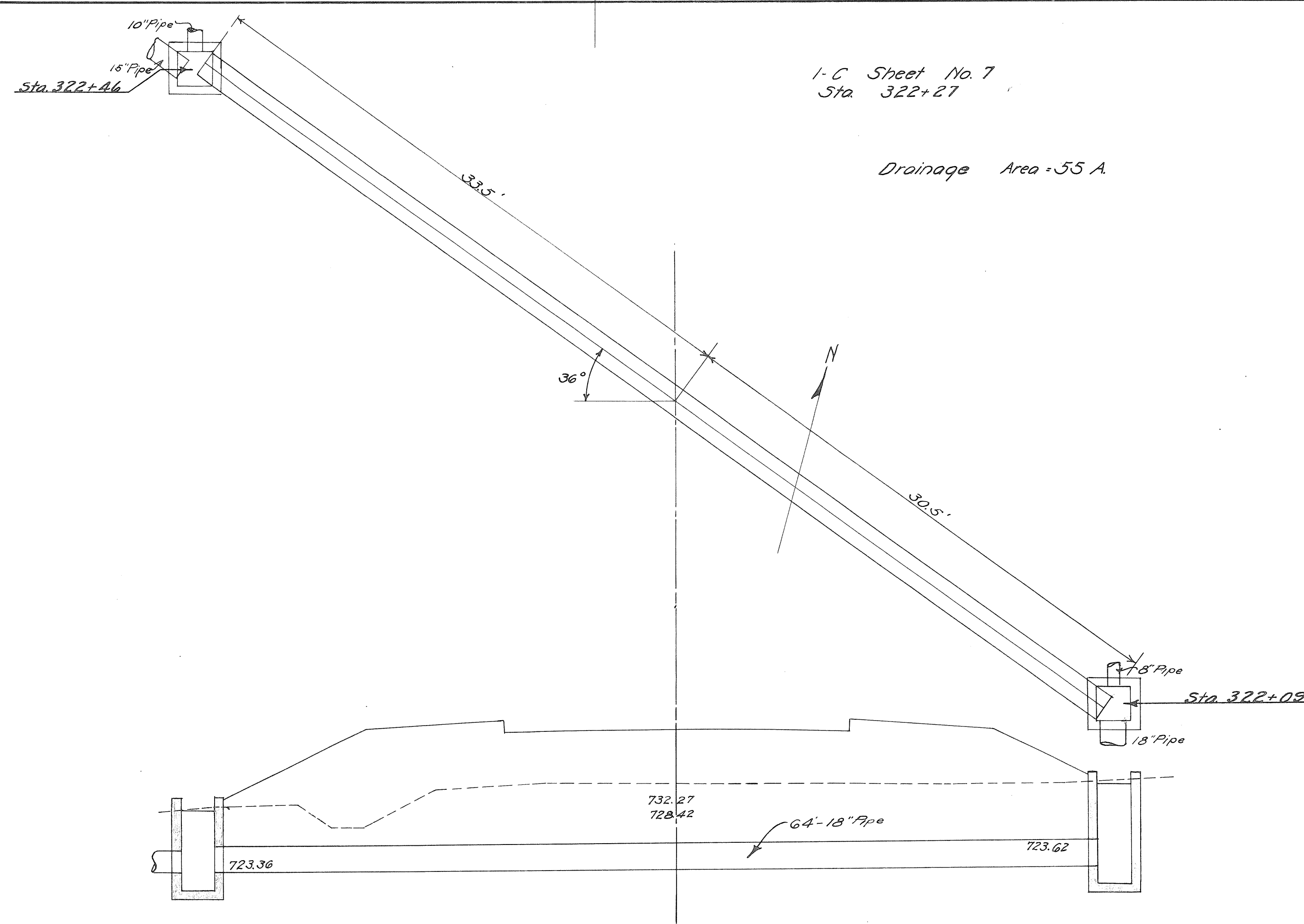
**ESTIMATED QUANTITIES**  
Excavations 34 Cu. Yds.  
15" Pipe 48 Lin. Ft.  
Std. No. 1-2 C.B. 2

1-C Sheet No. 6  
Sta. 286+36  
Drainage Area = 20 A.



**CULVERT DATA**  
Present Structure  
10" Tile (Remove)  
Proposed Structure  
52'-12" Pipe  
2 Std. No. 1-2 C.B.  
Std. Drs. No. 5-27-R.C.-3, & 1-8-C.B. 1-2 & 2-2

**ESTIMATED QUANTITIES**  
Excavation 22 Cu. Yds.  
12" Pipe 52 Lin. Ft.  
Std. No. 1-2 C.B. 2

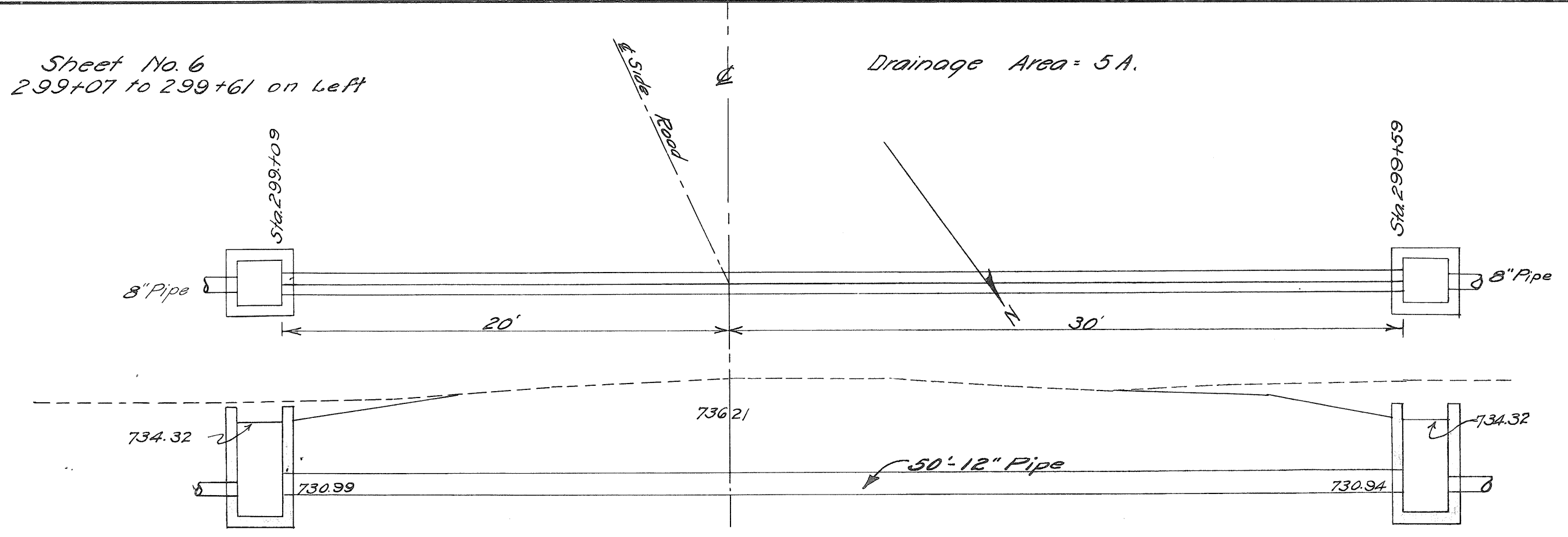


1-C Sheet No. 7  
Sta. 322+27  
Drainage Area = 55 A.

**CULVERT DATA**  
Present Structure  
6" Tile (Abandon)  
Proposed Structure  
64'-18" Pipe  
2 Std. No. 1-2 C.B.  
Std. Drs. No. 5-27-R.C.-3  
& 1-8-C.B. 1-2 & 2-2.

**ESTIMATED QUANTITIES**  
Excavation 32 Cu. Yds.  
18" Pipe 64 Lin. Ft.  
Std. No. 1-2 C.B. 2

2-C Sheet No. 6  
Sta. 299+07 to 299+61 on Left  
Drainage Area = 5 A.



**CULVERT DATA**  
Present Structure - None  
Proposed Structure  
50'-12" Pipe  
2 Std. No. 1-2 C.B.  
Std. Drs. No. 5-27-R.C.-3  
& 1-8-C.B. 1-2 & 2-2.

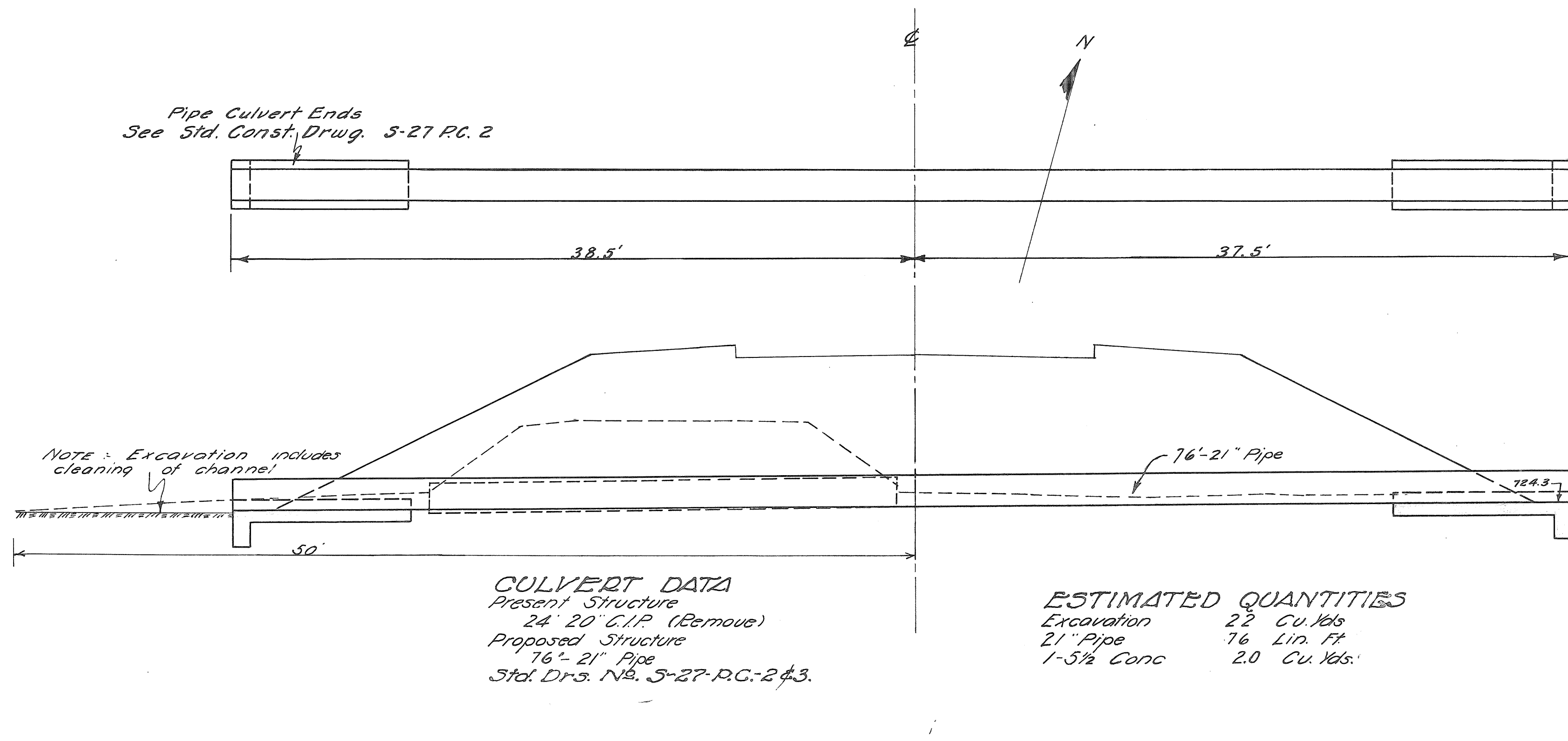
**ESTIMATED QUANTITIES**  
Excavation 22 Cu. Yds.  
12" Pipe 50 Lin. Ft.  
Std. No. 1-2 C.B. 2

2-C Sheet No. 7  
Sta. 332+03

Drainage Area = 70 A

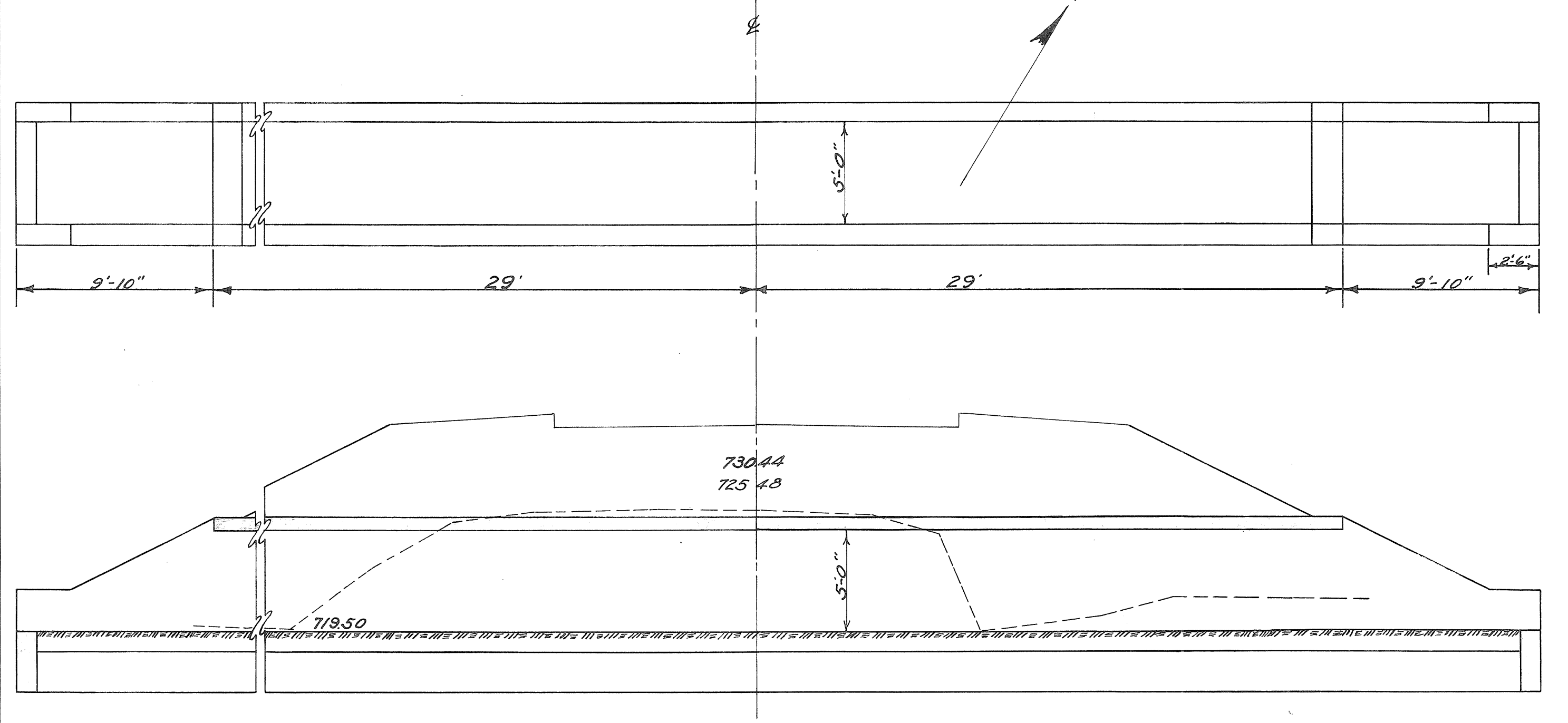
1-C Sheet No. 8  
Sta. 357+89

Drainage Area = 720 A.



**CULVERT DATA**  
Present Structure  
24' 20" C.I.P. (Remove)  
Proposed Structure  
76'-21" Pipe  
Std. Drs. No. S-27-P.C.-2 & 3.

**ESTIMATED QUANTITIES**  
Excavation 22 Cu. Yds.  
21" Pipe 76 Lin. Ft.  
1-5/2 Conc. 2.0 Cu. Yds.



**CULVERT DATA**  
Present Structure  
30'-36" C.I.P. Remove  
Proposed Structure  
5'x5'x17'-8" Slab Top Culk.  
Std. Dr. STC-34.

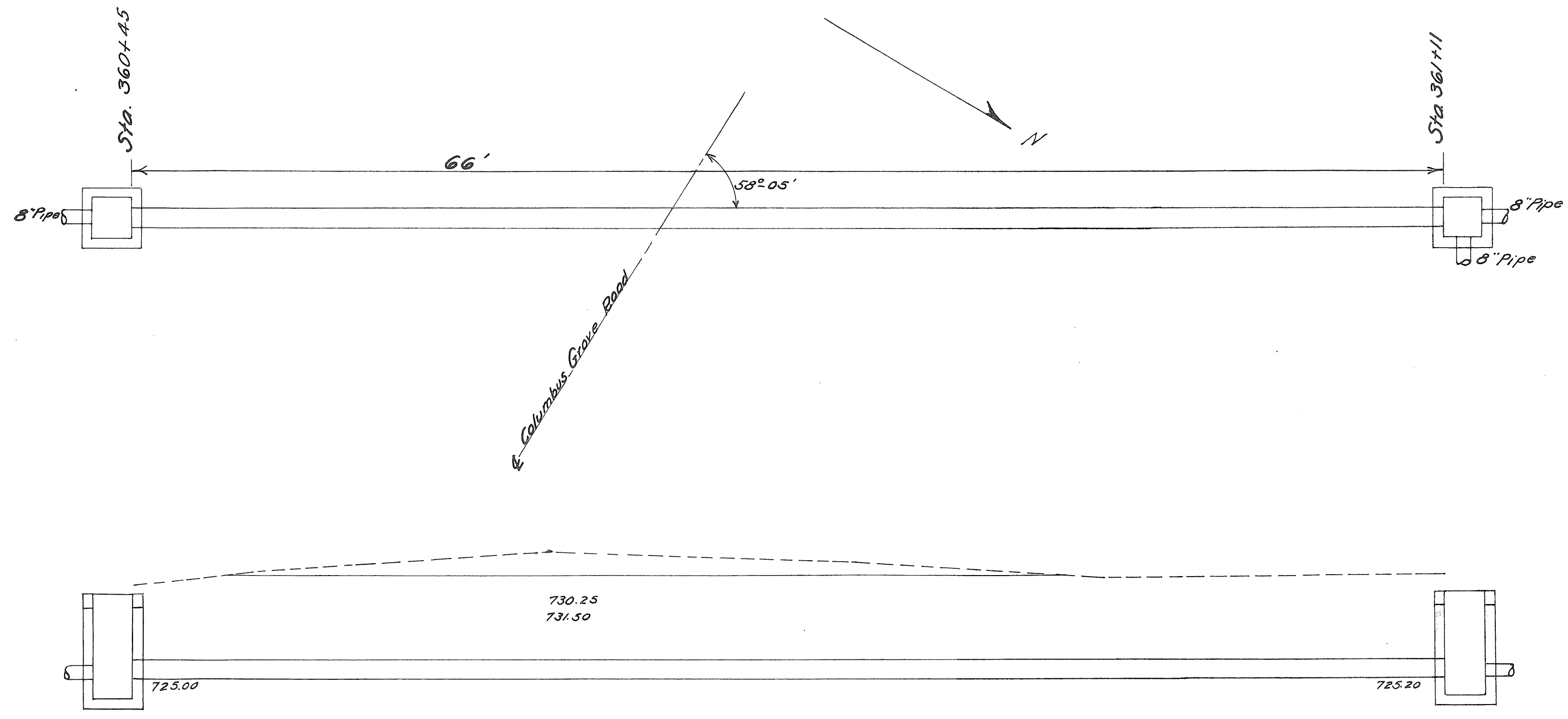
STEEL LIST				
Mark	Size	No.	Length	Weight
W30	1/2"	152	8'-0"	1034
S40	3/4"	155	6'-6"	1051
T20	1/2"	17	57'-6"	653
T20	1/2"	20	11'-6"	154
C20	1/2"	2	14'-0"	19
C20	1/2"	6	6'-0"	24
Total				2935

**ESTIMATED QUANTITIES**  
Excavation 100 Cu. Yds.  
1-6 1/2 Conc. 21.0 Cu. Yds.  
1-5 1/2 Conc. 43.4 Cu. Yds.  
Reinf. Steel 2935 Lbs.

Note - For placing steel  
See Standard Drawing STC-34

2-C Sheet No. 8  
Sta. 360+43 to 361+13 on Right

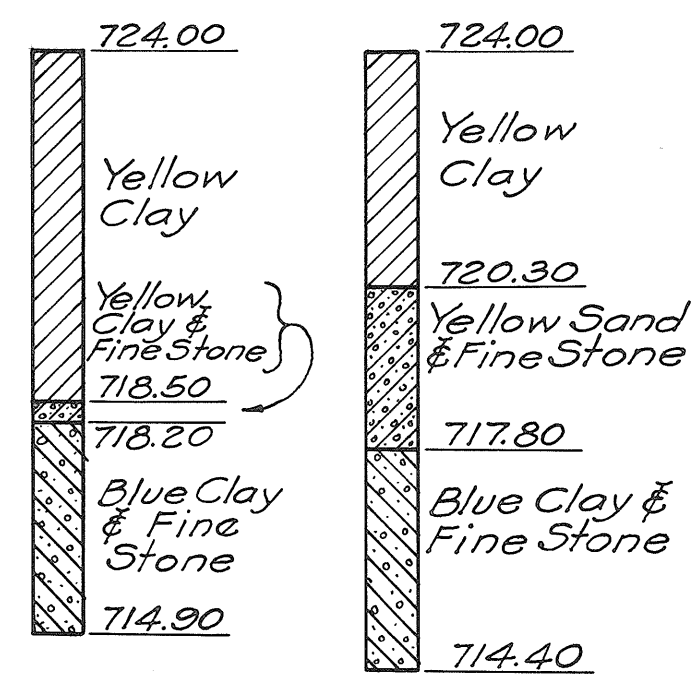
Drainage Area = 10 A.



**CULVERT DATA**  
Present Structure  
6" Land Tile (Abandon)  
Proposed Structure  
66'-12" Pipe  
2 Std. No. 1-2 C.B.  
Std. Drs. No. S-27-P.C.-3 & I-8-C.D.-1-2 & 2-2.

**ESTIMATED QUANTITIES**  
Excavation 33 Cu. Yds.  
12" Pipe 66 Lin. Ft.  
Std. No. 1-2 C.B. 2

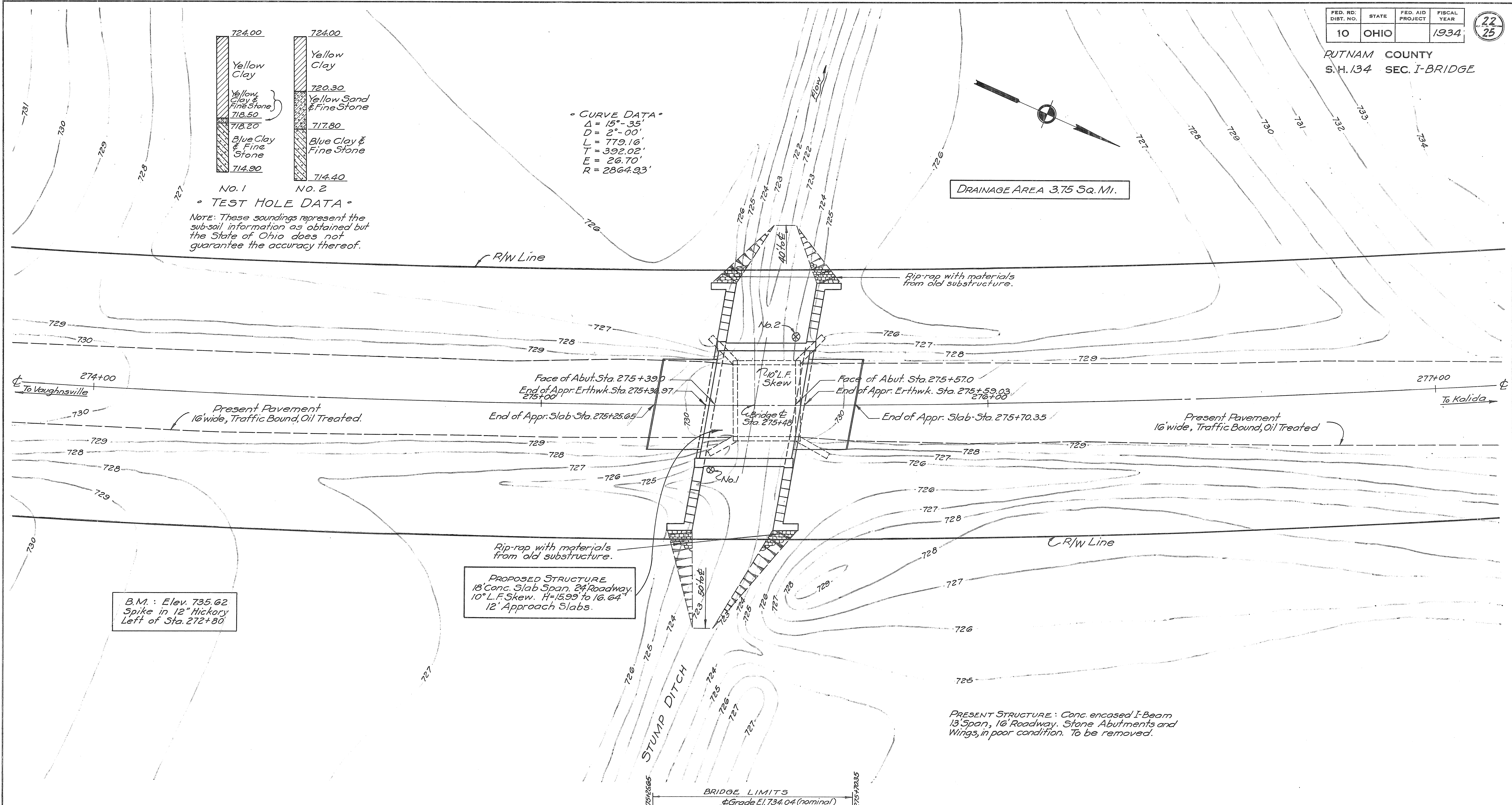
PUTNAM COUNTY  
S.H. 134 SEC. I-BRIDGE



• TEST HOLE DATA •  
NOTE: These soundings represent the sub-soil information as obtained but the State of Ohio does not guarantee the accuracy thereof.

• CURVE DATA •  
Δ = 15° - 35'  
D = 2° - 00'  
L = 779.16'  
T = 392.02'  
E = 26.70'  
R = 2864.93'

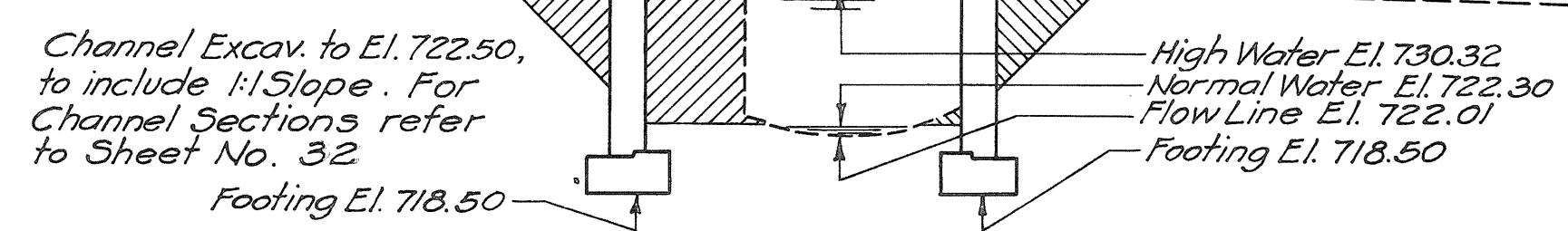
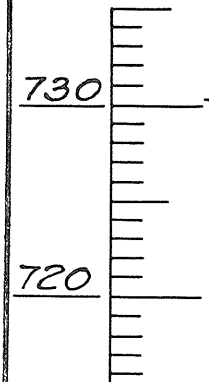
DRAINAGE AREA 3.75 Sq. Mi.



B.M. : Elev. 735.62  
Spike in 12" Hickory  
Left of Sta. 272+80

PROPOSED STRUCTURE  
18' Conc. Slab Span, 24' Roadway,  
10° L.F. Skew, H=15.99 to 16.64  
12' Approach Slabs.

PRESENT STRUCTURE: Conc. encased I-Beam  
13' Span, 16' Roadway. Stone Abutments and  
Wings, in poor condition. To be removed.



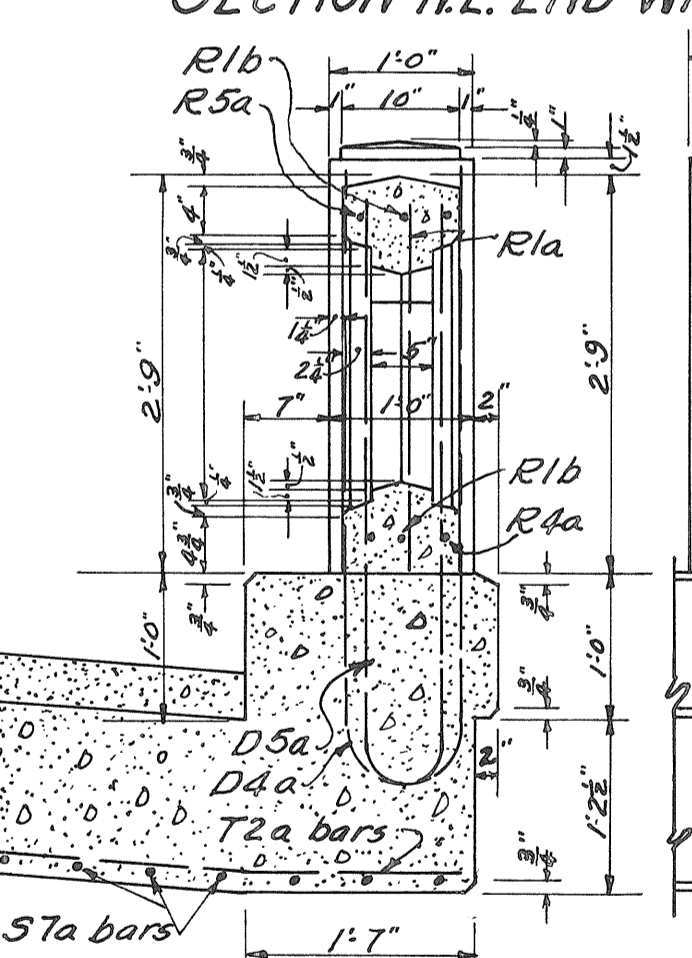
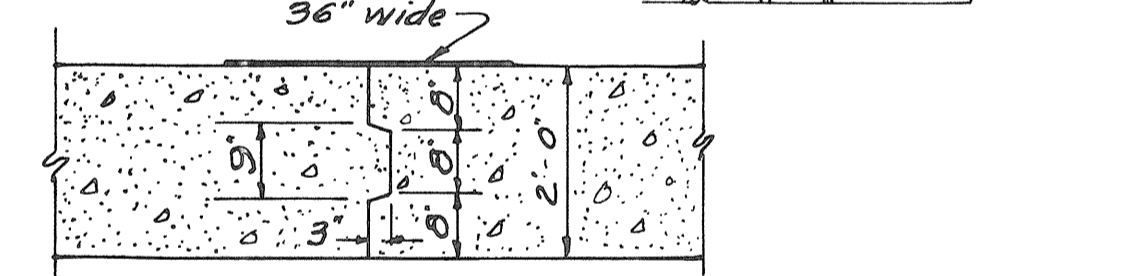
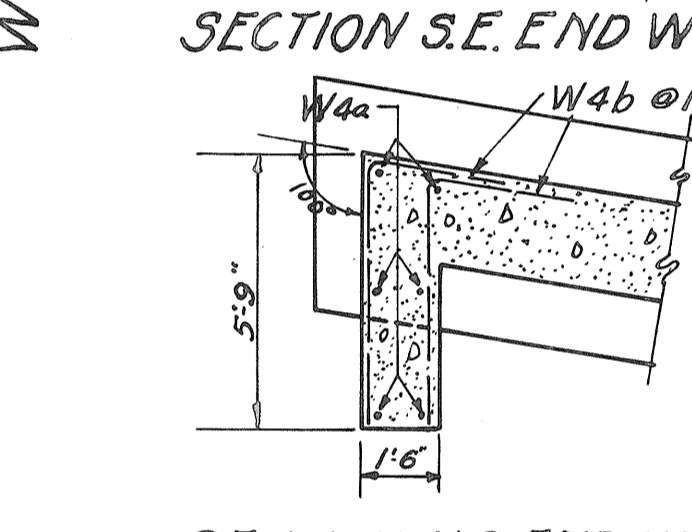
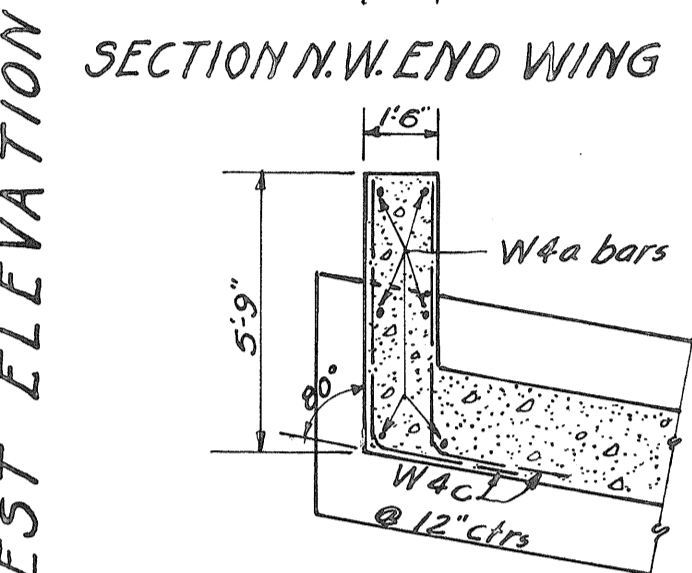
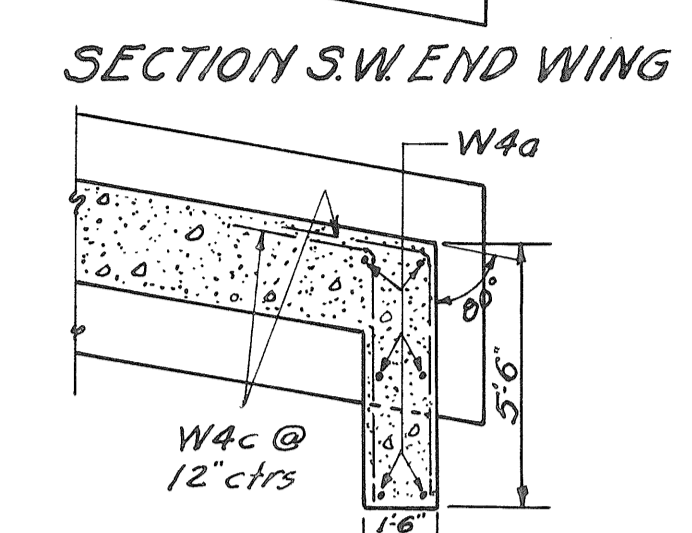
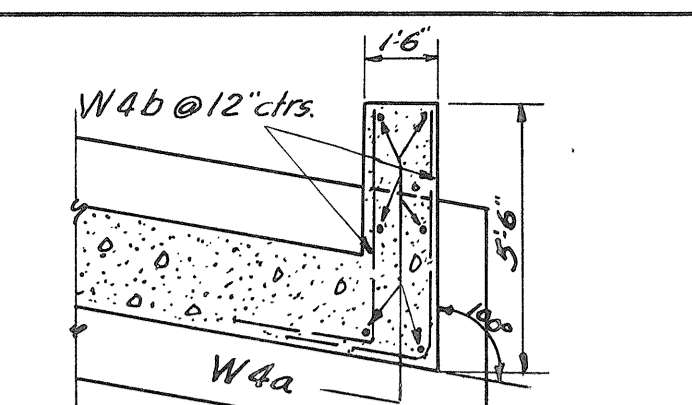
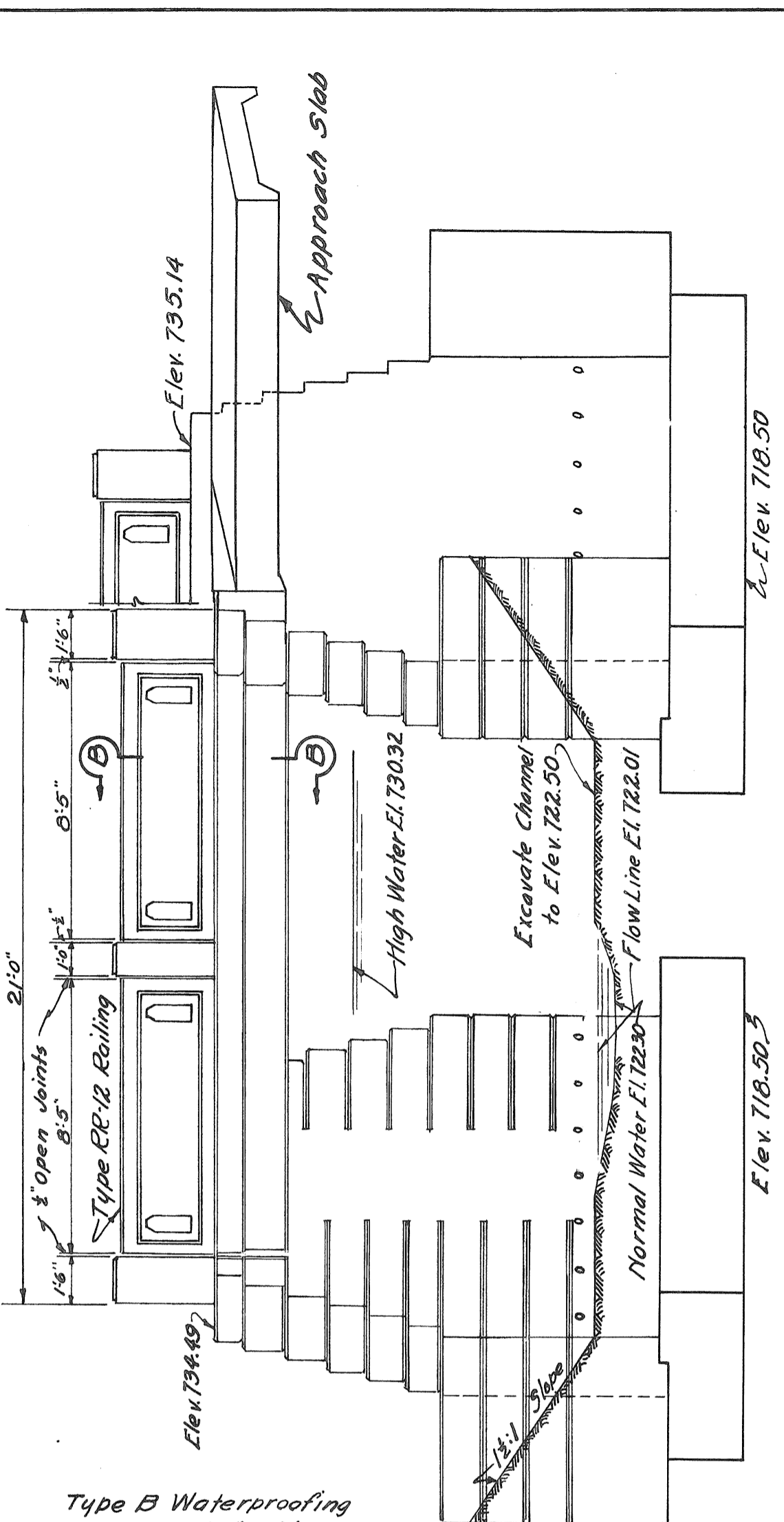
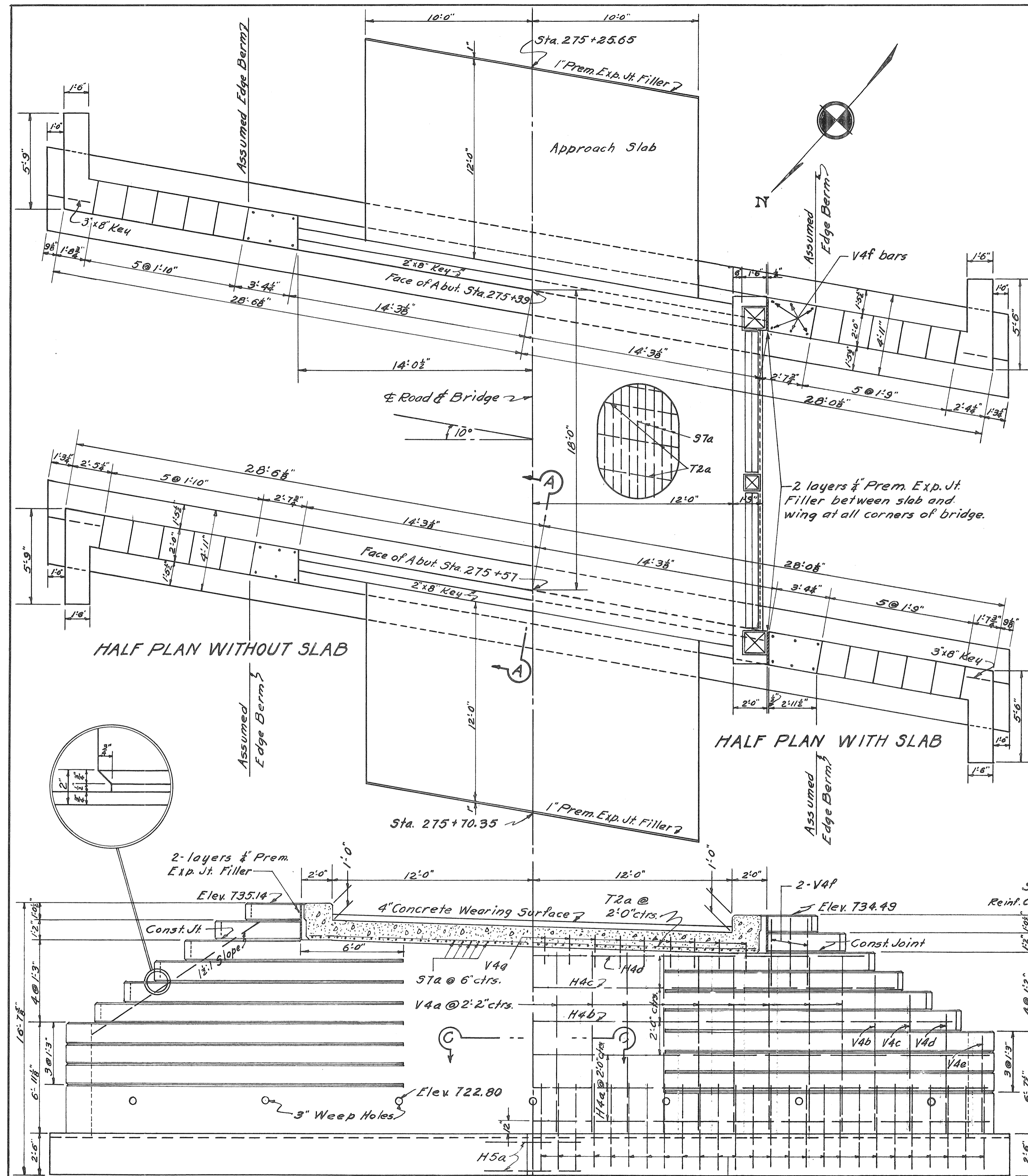
• PROFILE ON CL •

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
BUREAU OF BRIDGES

• SITE PLAN •  
BRIDGE No. Pu. 115-70  
BRIDGE OVER STUMP DITCH

S. H. 134 PUTNAM COUNTY  
SECTION I-BRIDGE STA. 275+48

PRESENT TOPOGRAPHY		PROPOSED WORK	
Surveyed	Drawn	Designed	Drawn
W.F.	W.F.	C.E.K.	E.W.E. C.R.H.



### REINFORCING STEEL LIST

Mark	Size	No.	Length	Spacing	Shape	Weight	Bending Details
<b>SUPERSTRUCTURE</b>							
S7a	1"Ø	54	22'-0"	6"	Bent	3172	
T2a	1/2"Ø	16	27'-2"	8" & 24"	Str't.	290	
D4a	3/8"Ø	12	8'-0"	shown	Bent	109	
D5a	3/8"Ø	8	8'-3"	"	"	89	
						TOTAL	3670
<b>SUBSTRUCTURE</b>							
W4a	3/8"Ø	24	6'-6"	shown	Str't.	163	
H4a	"	24	29'-6"	24"	"	738	
H4b	"	8	27'-5"	"	"	228	
H4c	"	8	25'-8"	"	"	214	
H4d	"	8	22'-7"	"	"	185	
V4a	"	72	10'-6"	"	"	789	
V4b	"	8	9'-3"	"	"	77	
V4c	"	8	8'-0"	"	"	67	
V4d	"	8	6'-9"	"	"	56	
V4e	"	8	5'-6"	"	"	46	
V4f	"	24	4'-0"	shown	"	100	
V4g	"	36	2'-0"	18"	"	75	
H5a	3/8"Ø	20	6'-0"	12"	"	180	
F4a	3/8"Ø	104	5'-11"	13"	Bent	643	
W4b	"	28	8'-2"	12"	"	239	
W4c	"	28	8'-2"	"	"	239	
						TOTAL	4039
<b>RAILING</b>							
R1a	3/8"Ø	28	2'-6"	shown	Str't.	Included with railing for payment	
R1b	"	8	8'-1"	"	"	"	
R4a	3/8"Ø	8	8'-1"	"	"	"	
R5a	3/8"Ø	8	10'-2"	"	Bent	"	
<b>REPLACEMENT STEEL</b>							
Rep 1	3/8"Ø	2	3'-6"	"	Str't.	3	
Rep 2	1/2"Ø	2	4'-0"	"	"	5	
Rep 4	3/8"Ø	2	4'-6"	"	"	9	
Rep 5	3/8"Ø	2	6'-0"	"	"	18	
Rep 7	1"Ø	2	6'-0"	"	Bent	32	
						TOTAL	67
						GRAND TOTAL	7776

NOTE:- Replacement steel to be used to replace test specimens cut from reinforcing steel in Superstructure and Substructure. Not to be used as test specimens.

SOUTH ABUTMENT ELEVATION  
NORTH ABUTMENT OPPOSITE HAND

**GENERAL NOTES**

**SUPERSTRUCTURE** shall be a 18'-0" Standard Concrete Slab Span, 24'-0" Roadway, 10° L.F. Skew.

**SUBSTRUCTURE** to be standard type with wings as shown. Present abutments and wings to be removed and used as Rip Rap or otherwise disposed of as directed by the Engineer. Cost of removal included in cost of excavation.

**PRESENTS SUPERSTRUCTURE** to be dismantled using concrete portion as Rip Rap and steel I beams to be neatly piled along R/W at the disposal of the States own forces.

**CHANNEL** to be excavated to Elev. 722.50 within the limits shown on Site Plan with a 1:1 slope. All excavation below Elev. 722.50 shall be classed as "Wet Excavation" and all excavation above Elev. 722.50 shall be classed as Dry Excavation.

**APPROACH SLABS** 12'-0" long by 20'-0" wide by 9" thick to be provided, constructed as shown by Std. Drwg. No. A5:31

**CONCRETE** in Superstructure, Wearing Surface, Approach Slabs and Railing to be 1-1/2 mix. Concrete in Walls and Footings to be 1-6/8 mix.

**CHAMFER** all corners 3/4" unless otherwise shown.

**CAMBER**. No camber is required or desired but special care shall be taken to avoid sag. To insure against sag a slight camber will be permitted. The wearing surface along curbs shall be placed with special care to avoid depressions that will hold water.

**CONSTRUCTION JOINTS**. No horizontal construction joints other than those shown will be permitted. Vertical construction joints allowed only by special

permission of the Engineer. All construction joints in abutments above low water elevation shall be sealed on back with Type B Waterproofing, 36" wide.

**BRIDGE** designed for H-15 loading.

**ESTIMATED QUANTITIES**

Channel Excavation	132 Cu. Yds.
Wet Excavation (Foundation)	126 Cu. Yds.
Dry Excavation (Foundation)	39 Cu. Yds.
Removal of Existing Superstructure	Lump Sum
Cofferdams, Sheeting & Pumping	Lump Sum
Concrete 1-1/2 mix (Superstructure)	28.4 Cu. Yds.
Concrete 1-6/8 mix (Walls)	99.1 Cu. Yds.
Concrete 1-6/8 mix (Footings)	50.3 Cu. Yds.
Reinforcing Steel	7776 Lbs.
1/2 Prem. Exp. Jt. Filler	38 Sq. Ft.
Concrete Railing, Type RR-12 (1-1/2 mix)	42 Lin. Ft.
Wearing Surface (4" concrete 1-1/2 mix)	54,959 Yds.
Approach Slabs (9" concrete 1-1/2 mix, Reinf)	53.3 Sq. Yds.
Rip Rap (hand laid, grout filled)	40 Sq. Yds.
Waterproofing, Type B	2.8 Sq. Yds.

STATE OF OHIO  
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BUREAU OF BRIDGES

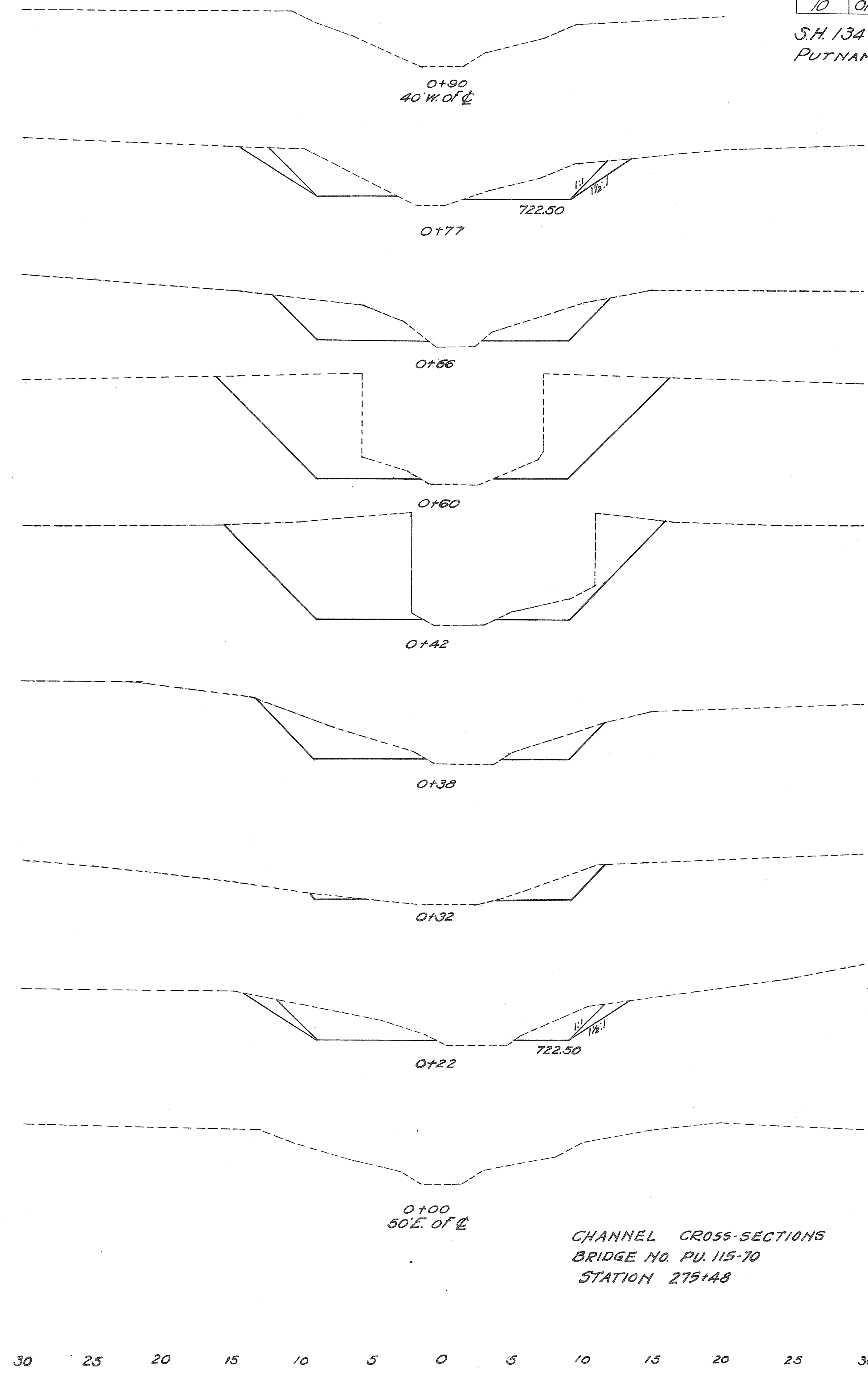
**GENERAL PLAN & ELEVATION  
STRUCTURAL DETAILS, NOTES & QUANTITIES**  
BRIDGE No. PU-15-70  
BRIDGE OVER STUMP DITCH  
S.H. 134 PUTNAM COUNTY  
SEC. 1 BRIDGE STA. 275+48

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.E.K.	M.H.C.	M.H.C.	M.H.C.		5/23/33	

FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO		1934

24  
25

S.H. 134 SEC. 1  
PUTNAM COUNTY



END AREA	CU. YDS.	
	CUT	FILL
0		
33.3		8
26.8		
32		12
102		15
96.3		66
25.3		9
8.4		4
22.8		6
28.8		12
0		
<b>TOTAL</b>	<b>132</b>	

CHANNEL CROSS-SECTIONS  
BRIDGE NO. PU. 115-70  
STATION 275+48

