

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF CONSTRUCTION

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

LORAIN COUNTY
S. H. 290 SEC. S (Pt) & N (Pt)

OBERLIN - NORWALK ROAD

S.H. 290 SEC. S (Pt) & N (Pt)

LORAIN COUNTY

CAMDEN TOWNSHIP

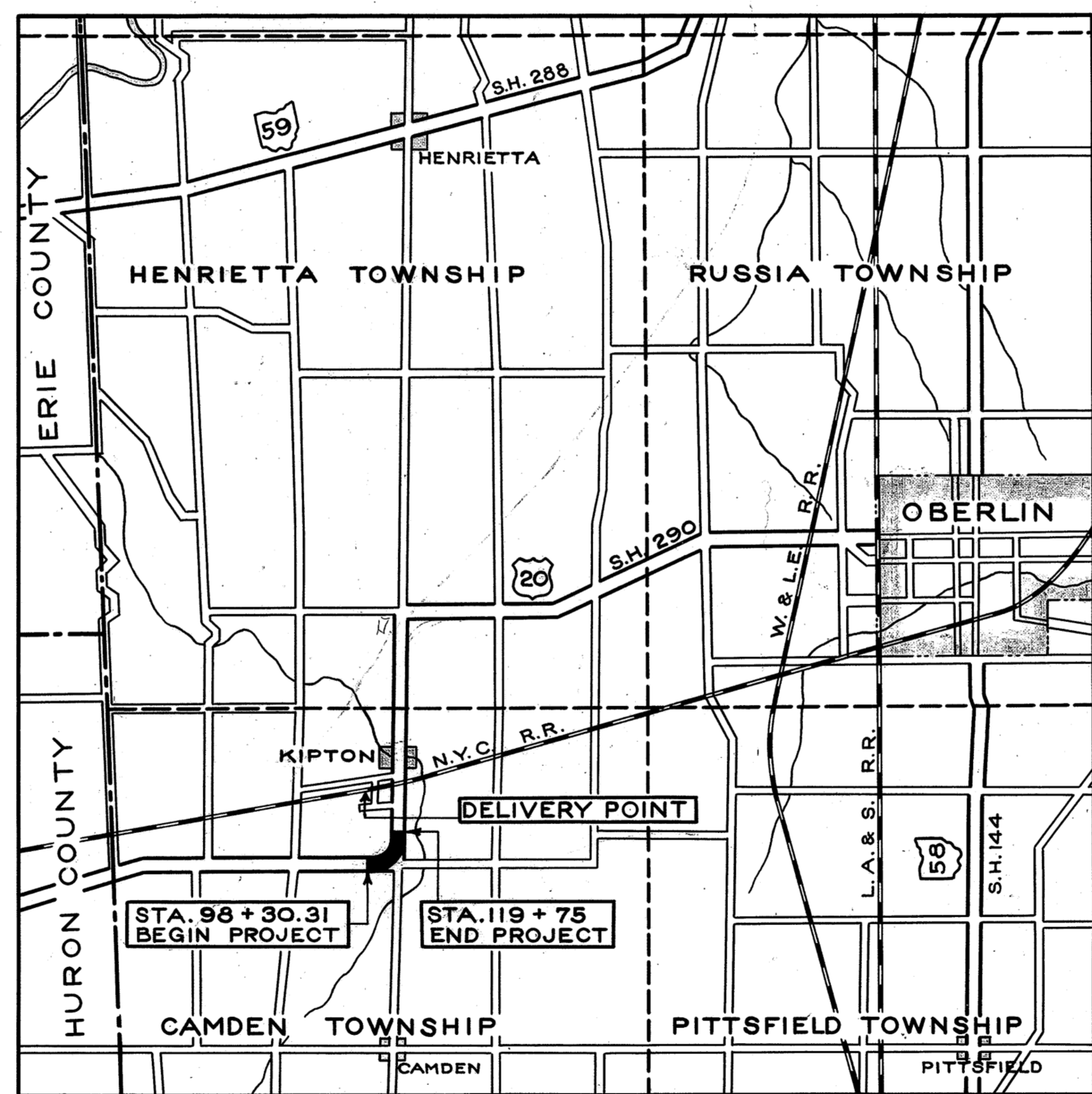
NET LENGTH OF PROJECT 2144.69 LIN. FT.

CONVENTIONAL SIGNS

STATE LINE	=====
COUNTY LINE	-----
TOWNSHIP LINE	-----
SECTION LINE	-----
PROPERTY LINE	-----
CENTER LINE	-----
CITY OR VILLAGE LINE	-----
FENCE LINE	-x-x-x-
STEAM RAILROAD	====
ELECTRIC RAILROAD
POLE LINE	o-o-o-o
GUARD RAIL	o-o-o-o
DRAIN PIPE, NEW
DRAIN PIPE, OLD	-----

INDEX OF SHEETS

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AVERAGE HAUL 0.5 MILES
LOCATION PLAN
SCALE OF MILES

PORTION TO BE IMPROVED	=====
DETOURS SHOWN THUS	-----
STATE HIGHWAYS	-----
IMPROVED COUNTY ROADS	-----
UNIMPROVED COUNTY ROADS	-----

SCALES

PLAN	1" = 50'
PROFILE, VERTICAL	1" = 5'
PROFILE, HORIZONTAL	1" = 50'
CROSS-SECTIONS	1" = 5'

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, IN FORCE ON DATE OF CONTRACT, WILL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THE IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY. SEE TRAFFIC NOTE ON SHEET No 2.

NECESSARY RIGHT OF WAY HAS BEEN PROVIDED.

APPROVED *H.P. Logan*
DATE 6-1-34 RESIDENT DISTRICT DEPUTY DIRECTOR

APPROVED *C.R. Ault*
DATE 6-12-34 RESIDENT DIVISION DEPUTY DIRECTOR

APPROVED _____
DATE _____ CHIEF ENGINEER, BUREAU OF MAINTENANCE

APPROVED _____
DATE _____ CHIEF ENGINEER, BUREAU OF BRIDGES

APPROVED *Elmer Hilty*
DATE 6-23-34 CHIEF ENGINEER, BUREAU OF CONSTRUCTION

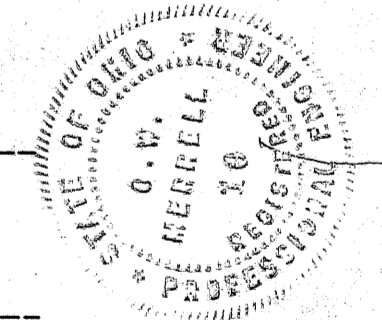
APPROVED *H.P. Chapman*
DATE 6-23-34 FIRST ASST. DIRECTOR & CHIEF ENGINEER

APPROVED *W.M. Merrill*
DATE 6-23-34 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



CONSTRUCTION BUREAU
AUG 25 1934
GROUND PHOTOLAB

CHECKING RECORD		
OFFICE	BY	DATE
RESIDENT (Drawn Div. Office)		
DIVISION	G.T.B.	6-4-34
BUREAU OF MAINTENANCE		
BUREAU OF BRIDGES		
BUREAU OF CONSTRUCTION	W.R.U.	6-14-34
BUREAU OF PUBLIC ROADS		

RECEIVED	
BY <i>W. Carroll</i>	
CLERK OF SALES	
7-26	
6-23 1934	
DATE	

APPROVED	
BY <i>W.M. Merrill</i>	6-13 1934
PLANNING ENGINEER	DATE
REMARKS <i>IT-10-10-8-10</i>	
<i>20' Width 4' dia & str.</i>	

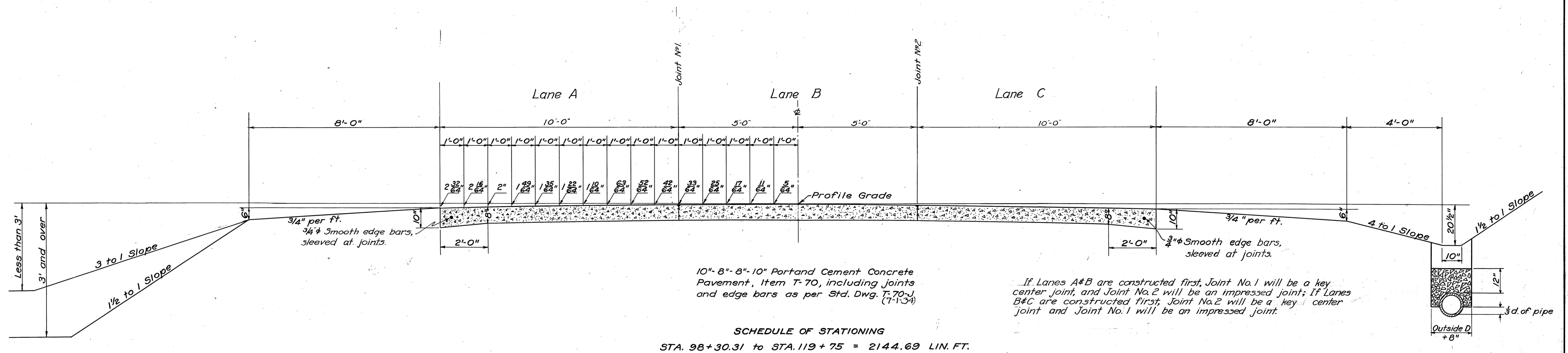
FILE NO. 116-L
LORAIN 290-S Pt & N Pt
DATE OF LETTING 1934
CONTRACT No. _____

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS:-
T-70-3; BT-70-71-E N1; T-70-71-E N1; S-27-RC.2&3; I-1,2,3,4,5; I-8CB.1-2, 2-2
G-707; BT-50-70-71 E N1;

TYPICAL SECTION

TYPE T-70

STD. CONST. DWG. T-70-J
(7-1-34)



10"-8"-8"-10" Portland Cement Concrete
Pavement, Item T-70, including joints
and edge bars as per Std. Dwg. T-70-J
(7-1-34)

If Lanes A#B are constructed first, Joint No. 1 will be a key center joint, and Joint No. 2 will be an impressed joint; If Lanes B#C are constructed first, Joint No. 2 will be a key center joint and Joint No. 1 will be an impressed joint.

TRAFFIC AND CONSTRUCTION NOTES

Traffic shall be maintained over the Project at all times. Pavement between Sta. 101+50 to Sta. 111+50 to be constructed first and ready for traffic before the rest of Project is constructed. Sta. 98+30.31 to Sta. 101+50 and Sta. 111+50 to 119+75 shall be constructed half width at a time so that at least one way traffic will be maintained at all times. Necessary Watchmen and Flagmen shall be provided so as to properly protect and direct traffic, all of same to be included in lump sum bid for Maintaining Traffic, including Lights, Signs, Barricades and Watchmen, Twenty Four Hour Service.

High Early Strength Portland Cement will be used in pavement between Sta. 98+30.31 to Sta. 101+50 and Sta. 111+50 to Sta. 119+75.

Removal of existing Macadam Pavement and Concrete Curbs included for payment in unit price bid for Roadway Excavation.

NOTE

In lieu of the specifications for the construction of Construction Joints, Item T-70.26, Contraction Joints, Item T-70.27 and Expansion Joints, Item T-70.28, they shall be placed in accordance with the frequency, dowel length, dowel spacing and metal expansion caps as shown on Standard Construction Drawing T-70-J.

APPROVED

6-23-34 RC			
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2144.69

BEGIN PROJECT
 BEGIN S.H. 290 SEC. S(Pt) } STA. 98+30.31

LORAIN COUNTY
 S.H. 290 SEC. S(Pt) & N(Pt)

(D) ROADWAY DRAINAGE

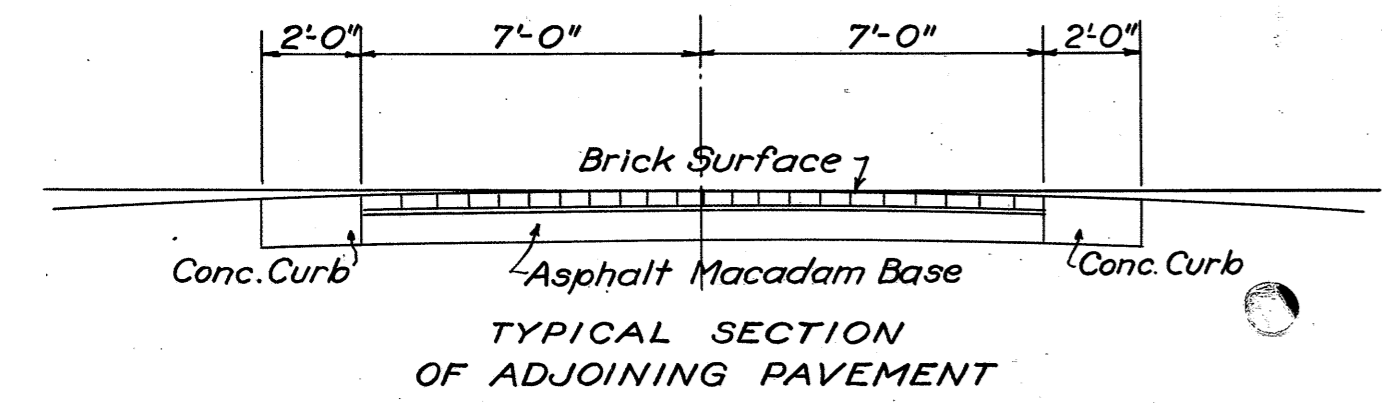
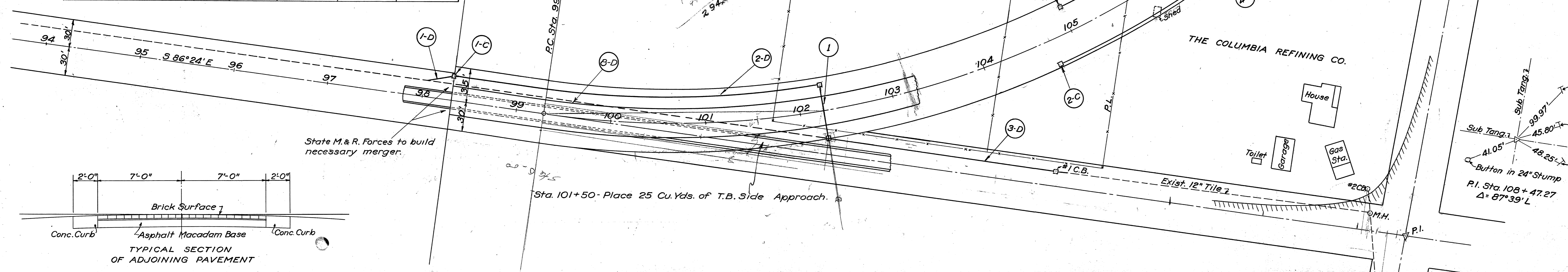
ITEM NO	FROM STATION	TO STATION	SIDE	12" PIPE LIN. FT.	10" TILE CLEAN & RELAY LIN. FT.	12" TILE CLEAN & RELAY LIN. FT.	10" TILE REMOVED-STORED LIN. FT.
1-D	98+00	98+29	Lt.		29		
2-D	98+31	102+24	Lt.	393			
3-D	See Plan					240	
4-D	104+76	107+49	Rt.	273			
5-D	105+01	107+49	Lt.	248			
6-D	107+51	108+00	Lt.	49			
7-D	107+51	108+00	Rt.	49			
8-D	98+29	102+25					396
TOTALS				1012	29	240	396

(C) CATCH BASINS

ITEM NO	STATION	SIDE	NO 1-2 C.B.	NO 2-2 C.B.
1-C	98+30	Lt.	1	
2-C	104+75	Rt.		1
3-C	105+00	Lt.	1	
4-C	107+50	Lt.		1
5-C	107+50	Rt.		1
TOTALS			2	3

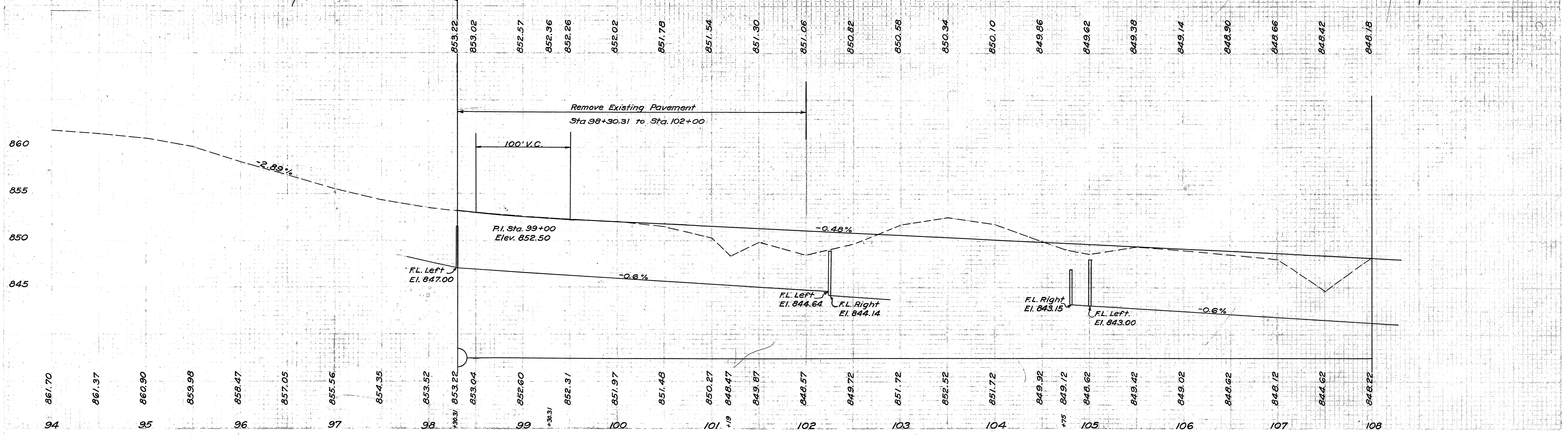
1 Sta. 102+25 - Build Std. 15"x 56'-0" Pipe Culv. with 2 Std. No 2-2 C.Bs. See Sheet # 13 for Struct. Details.

P.I. = Sta. 108+47.27
 $\Delta = 87^{\circ}39' L$
 $D = 6^{\circ}00'$
 $T = 916.96'$
 $R = 955.37'$
 $L = 1460.83'$



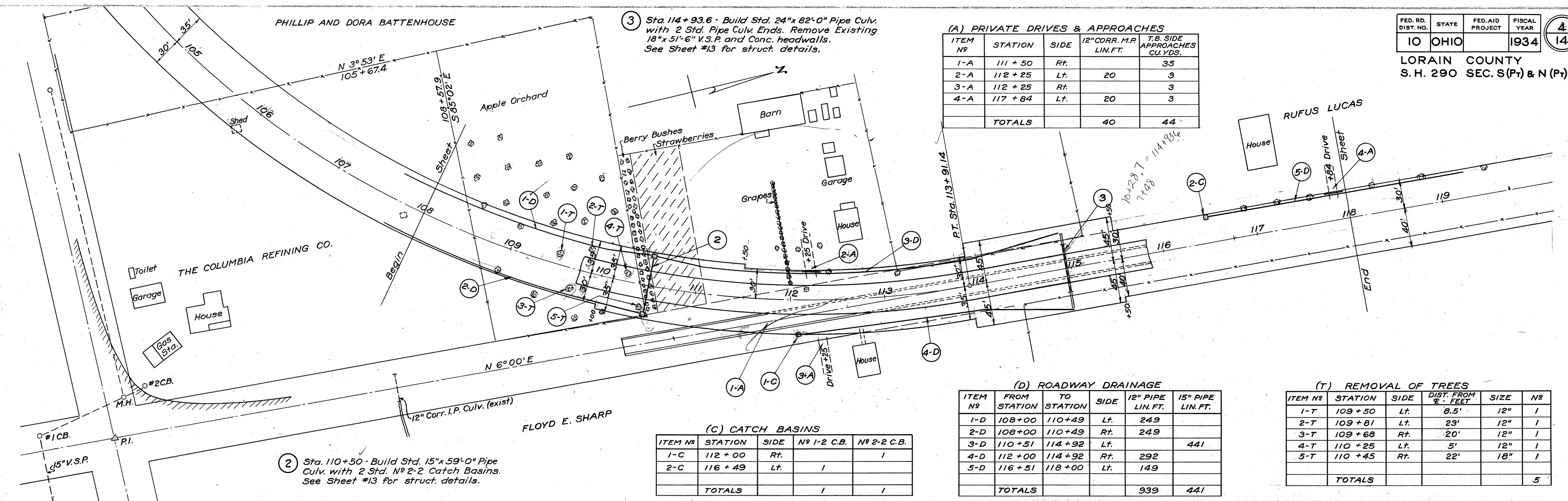
B.M. Elev. 862.62
 Spike in 20" Elm - Right
 Sta. 92+54

BEGIN PROJECT
 BEGIN S.H. 290 SEC. S(Pt) } STA. 98+30.31



LORAIN COUNTY
S. H. 290 SEC. S(P) & N (P)

PLAN	SUBMITTED	DATE
	BY	
	FOR	
	BY	
	FOR	
	BY	
	FOR	



3 Sta. 114+93.6 - Build Std. 24"x 82'-0" Pipe Culv. with 2 Std. Pipe Culv. Ends. Remove Existing 18"x 51'-6" V.S.P. and Conc. headwalls. See Sheet #13 for struct. details.

2 Sta. 110+50 - Build Std. 15"x 59'-0" Pipe Culv. with 2 Std. No 2-2 Catch Basins. See Sheet #13 for struct. details.

(A) PRIVATE DRIVES & APPROACHES

ITEM No	STATION	SIDE	12" CORR. M.P. LIN. FT.	T.B. SIDE APPROACHES CU. YDS.
1-A	111 + 50	Rt.		35
2-A	112 + 25	Lt.	20	3
3-A	112 + 25	Rt.		3
4-A	117 + 84	Lt.	20	3
TOTALS			40	44

(C) CATCH BASINS

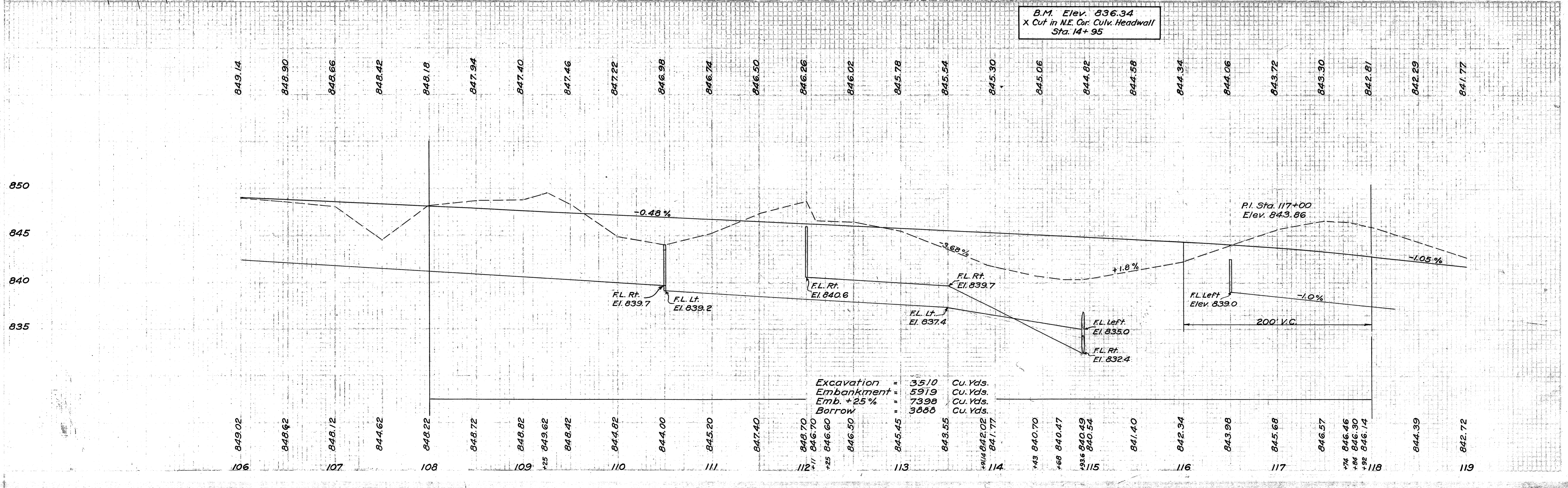
ITEM No	STATION	SIDE	No 1-2 C.B.	No 2-2 C.B.
1-C	112 + 00	Rt.		1
2-C	116 + 49	Lt.	1	
TOTALS			1	1

(D) ROADWAY DRAINAGE

ITEM No	FROM STATION	TO STATION	SIDE	12" PIPE LIN. FT.	15" PIPE LIN. FT.
1-D	108+00	110+49	Lt.	249	
2-D	108+00	110+49	Rt.	249	
3-D	110+51	114+92	Lt.		441
4-D	112+00	114+92	Rt.	292	
5-D	116+51	118+00	Lt.	149	
TOTALS				939	441

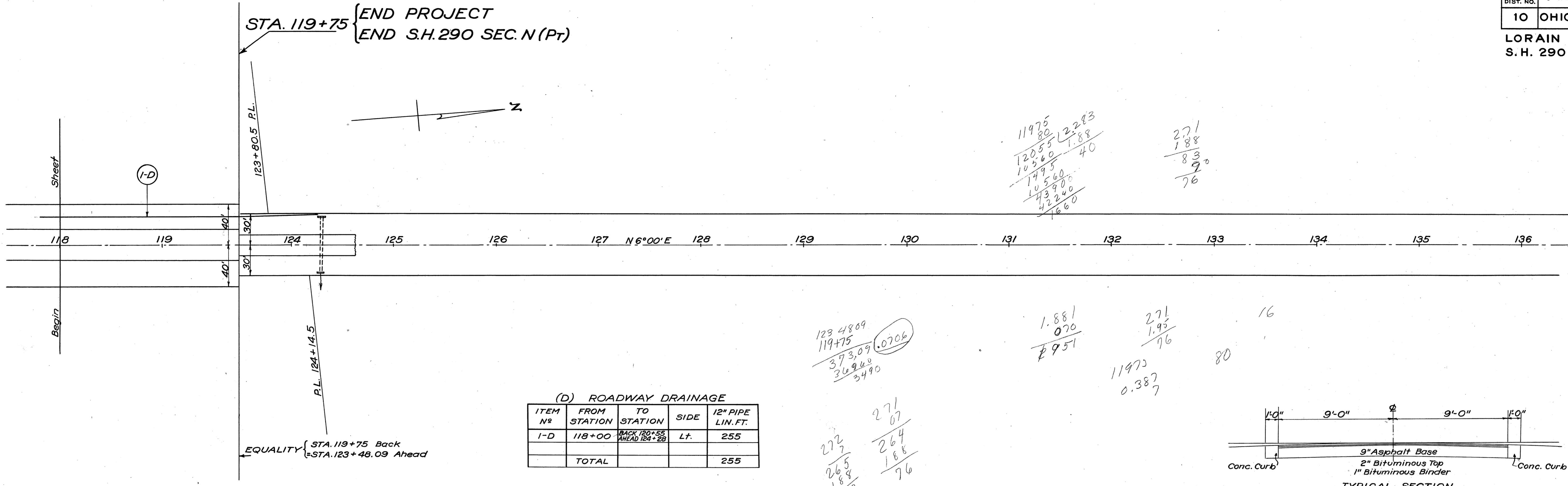
(T) REMOVAL OF TREES

ITEM No	STATION	SIDE	DIST. FROM P. FEET	SIZE	No
1-T	109 + 50	Lt.	6.5'	12"	1
2-T	109 + 81	Lt.	23'	12"	1
3-T	109 + 68	Rt.	20'	12"	1
4-T	110 + 25	Lt.	5'	12"	1
5-T	110 + 45	Rt.	22'	18"	1
TOTALS					5



Excavation = 3510 Cu. Yds.
Embankment = 5919 Cu. Yds.
Emb. + 25% = 7398 Cu. Yds.
Borrow = 3668 Cu. Yds.

PLAN
CHECKED BY
DATE
NO. OF WAY CHECKED



11975
80
12055
10560
1795
14560
4390
1660

2283
1.88
40

271
188
83
92
76

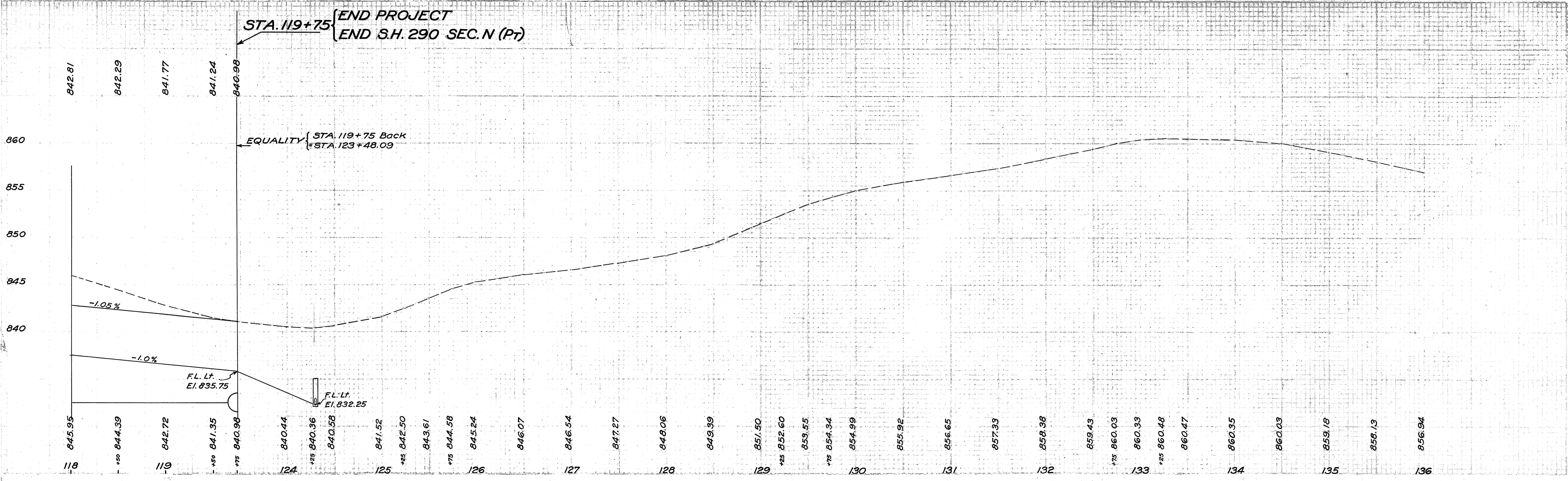
123 4809
119+75
373,09
36940
3490

271
07
264
188
76

1.881
070
2951

271
1.95
76

80
16



SUPERELEVATED CURVE

P.I. STA. 108+47.27 D=6°00'

LEFT			CENTER LINE		RIGHT		
DEDUCT FROM & GRADE	EDGE OF PAVEMENT	WIDTH	STATION	GRADE	WIDTH	EDGE OF PAVEMENT	ADD TO LT. EDGE GRADE
0.21'	853.01	15'	98+30.31(PC-100)	853.22	15'	853.01	0.00'
0.21'	852.81	15'	+50	853.02	15'	853.06	0.25'
0.21'	852.37	15'	99+00	852.57	15'	853.25	0.88'
0.21'	852.15	15'	+30.31 P.C.	852.36	15'	853.41	1.26'
0.21'	852.05	15'	+50	852.26	15'	853.56	1.51'
0.21'	851.90	15'	+80.31(PC+50)	852.11	15'	853.79	1.89'
0.21'	851.81	15'	100+00	852.02	15'	853.70	1.89'
0.21'	851.57	15'	+50	851.78	15'	853.46	1.89'
0.21'	851.33	15'	101+00	851.54	15'	853.22	1.89'
0.21'	851.09	15'	+50	851.30	15'	852.98	1.89'
0.21'	850.85	15'	102+00	851.06	15'	852.74	1.89'
0.21'	850.61	15'	+50	850.82	15'	852.50	1.89'
0.21'	850.37	15'	103+00	850.58	15'	852.26	1.89'
0.21'	850.13	15'	+50	850.34	15'	852.02	1.89'
0.21'	849.89	15'	104+00	850.10	15'	851.78	1.89'
0.21'	849.65	15'	+50	849.86	15'	851.54	1.89'
0.21'	849.41	15'	105+00	849.62	15'	851.30	1.89'
0.21'	849.17	15'	+50	849.38	15'	851.06	1.89'
0.21'	848.93	15'	106+00	849.14	15'	850.82	1.89'
0.21'	848.69	15'	+50	848.90	15'	850.58	1.89'

LEFT			CENTER LINE		RIGHT		
DEDUCT FROM & GRADE	EDGE OF PAVEMENT	WIDTH	STATION	GRADE	WIDTH	EDGE OF PAVEMENT	ADD TO LEFT EDGE GRADE
0.21'	848.45	15'	107+00	848.66	15'	850.34	1.89'
0.21'	848.21	15'	+50	848.42	15'	850.10	1.89'
0.21'	847.97	15'	108+00	848.18	15'	849.86	1.89'
0.21'	847.73	15'	+50	847.94	15'	849.62	1.89'
0.21'	847.49	15'	109+00	847.70	15'	849.38	1.89'
0.21'	847.25	15'	+50	847.46	15'	849.14	1.89'
0.21'	847.01	15'	110+00	847.22	15'	848.90	1.89'
0.21'	846.77	15'	+50	846.98	15'	848.66	1.89'
0.21'	846.53	15'	111+00	846.74	15'	848.42	1.89'
0.21'	846.29	15'	+50	846.50	15'	848.18	1.89'
0.21'	846.05	15'	112+00	846.26	15'	847.94	1.89'
0.21'	845.81	15'	+50	846.02	15'	847.70	1.89'
0.21'	845.57	15'	113+00	845.78	15'	847.46	1.89'
0.21'	845.37	15'	113+41.14(P.T.-50')	845.58	15'	847.26	1.89'
0.21'	845.33	15'	+50	845.54	15'	847.11	1.78'
0.21'	845.13	15'	+91.14 P.T.	845.34	15'	846.39	1.26'
0.21'	845.09	15'	114+00	845.30	15'	846.24	1.15'
0.21'	844.85	15'	+50	845.06	15'	845.37	1.52'
0.21'	844.65	15'	114+91.14(P.T.+100')	844.86	15'	844.65	0.00'

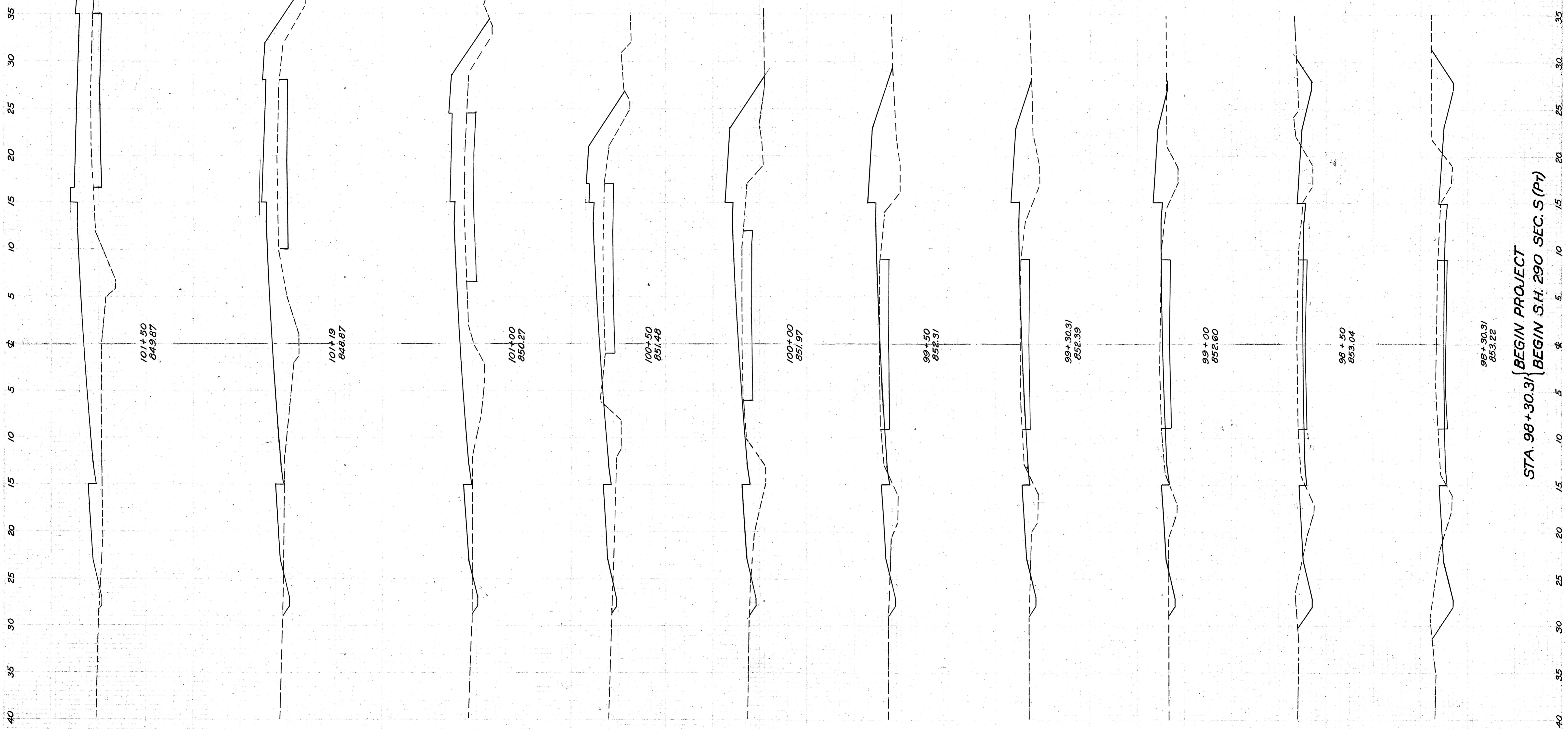
98+30.31

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

7
14

LORAIN COUNTY
S. H. 290 SEC. S (Pt) & N (Pt)

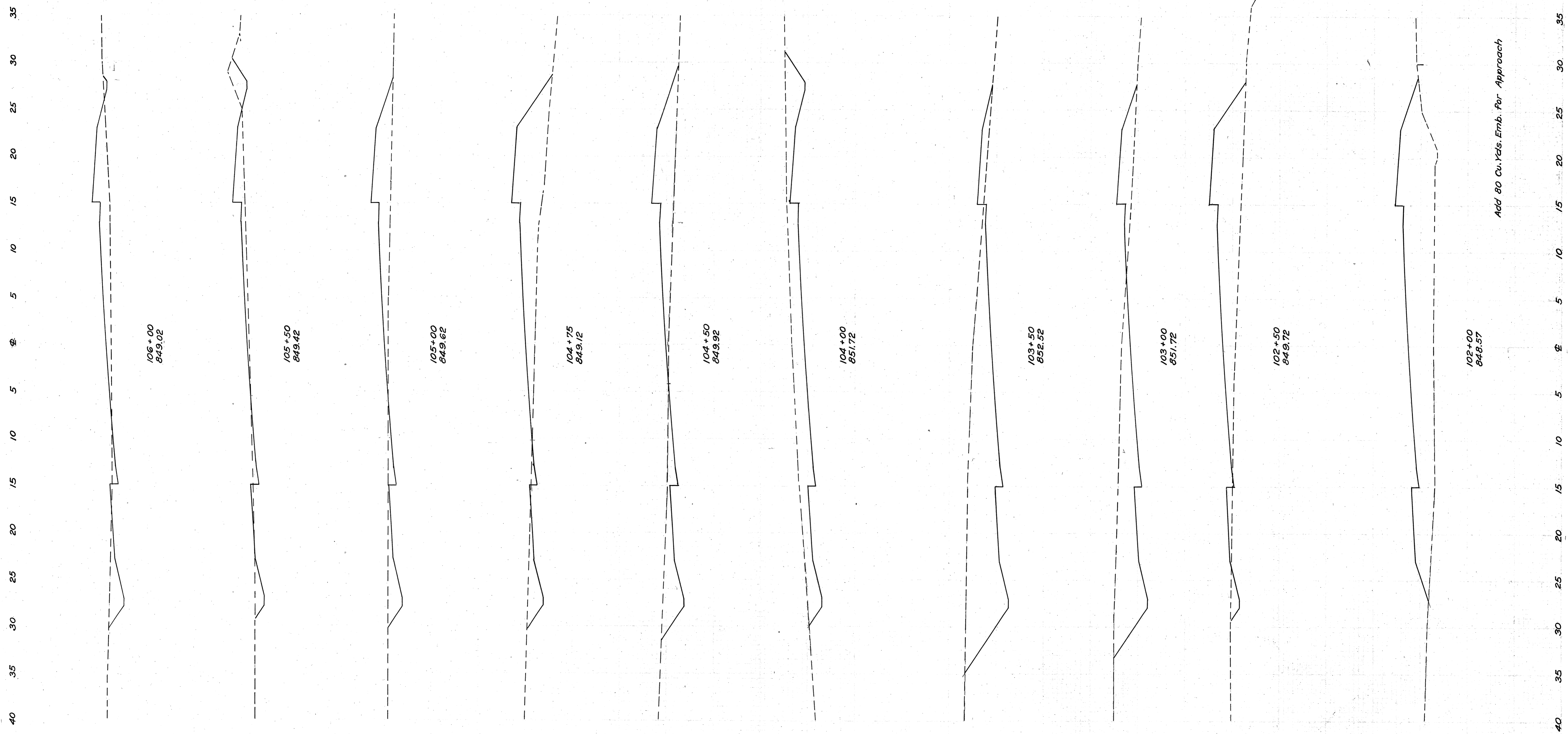
END AREA CU. YDS.	
CUT	FILL
1	132
2	137
2	106
1	70
2	93
3	155
1	74
3	147
2	85
5	142
3	68
3	44
4	52
4	52
4	41
21	20
20	13
34	17



STA. 98+30.31 { BEGIN PROJECT
S. H. 290 SEC. S (Pt)

LORAIN COUNTY
S. H. 290 SEC. S (P_r) & N (P_r)

END AREA	CUT	FILL	CUT	FILL	CU. YDS.
12	31				47
				21	52
11	20				48
				24	49
15	36				36
				12	49
11	67				36
				16	49
23	39				36
				86	36
70	0				7
				174	7
118	8				28
				175	28
71	22				94
				69	94
3	80				206
				3	206
0	142				254
				1	80



Add 80 Cu. Yds. Emb. for Approach

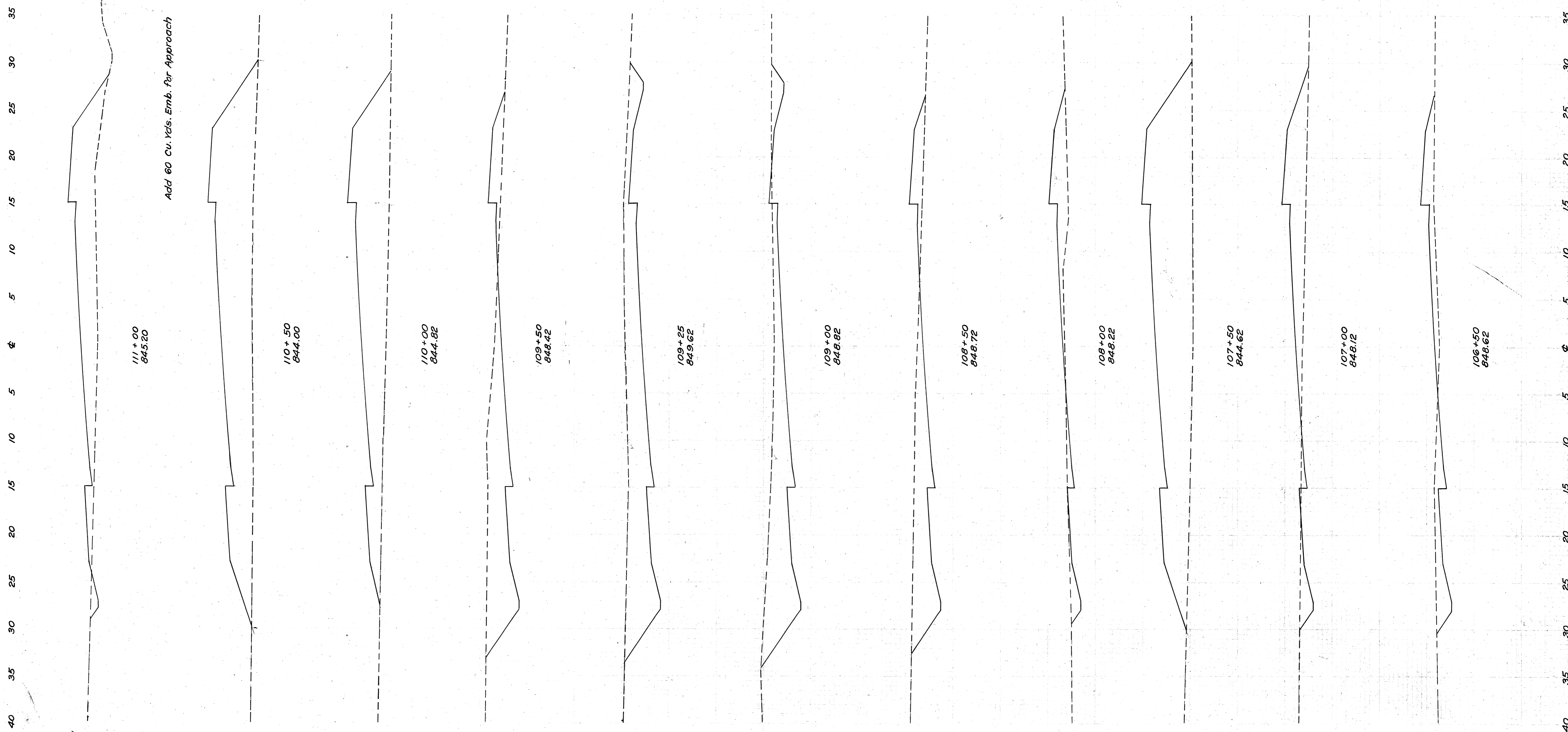
Excavation = 3510 Cu. Yds.
 Embankment = 5919 Cu. Yds.
 Emb. + 25% = 7398 Cu. Yds.
 Borrow = 3888 Cu. Yds.

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

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LORAIN COUNTY
 S.H. 290 SEC. S(Pt) & N (Pt)

END AREA	CUT	FILL	CU. YDS.
2	85		
		2	304
0	179	0	291
0	135	66	140
71	16	85	7
112	0		
90	1	137	19
58	19	63	43
10	27	9	2/6
0	206		
10	50	9	237
20	24	28	69
		30	51

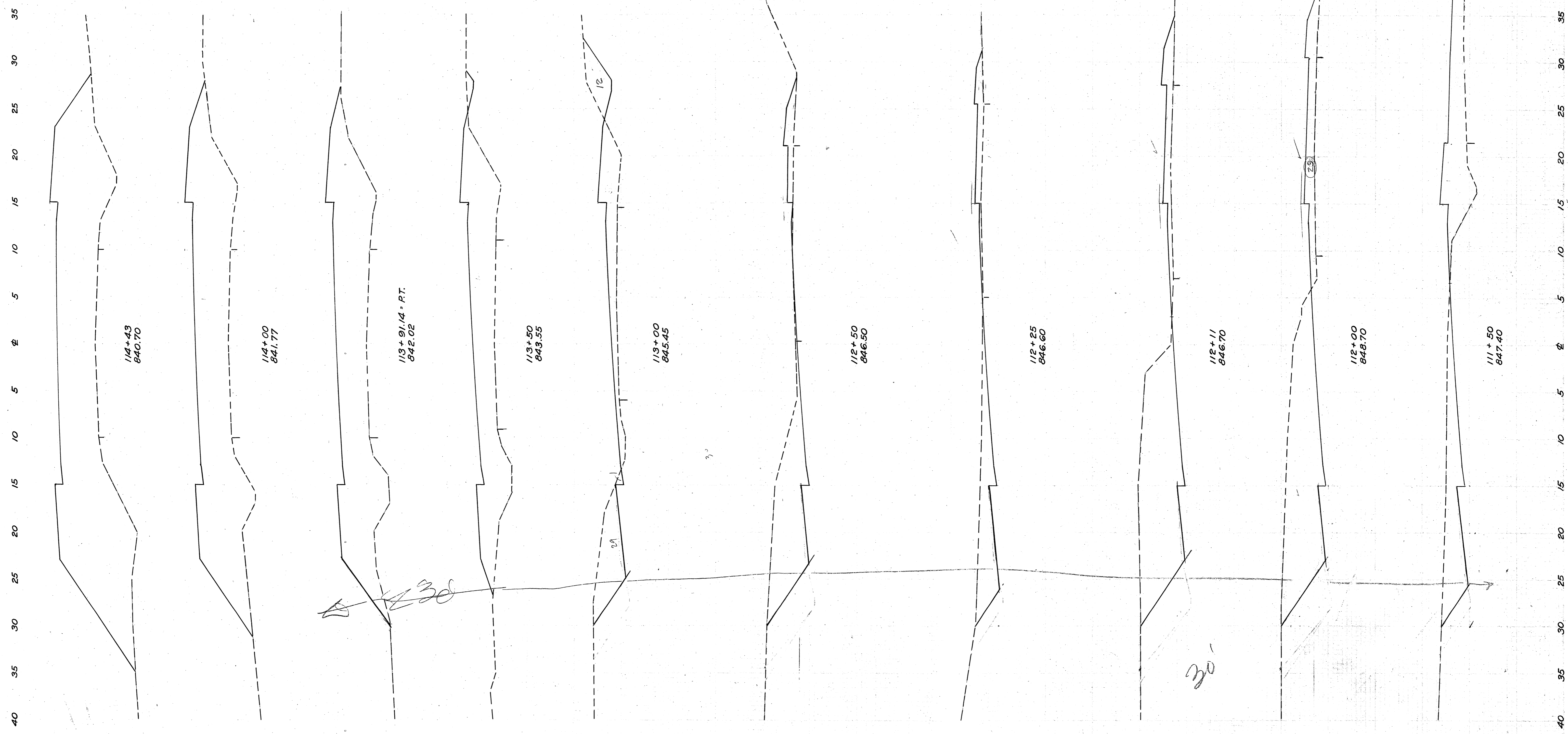


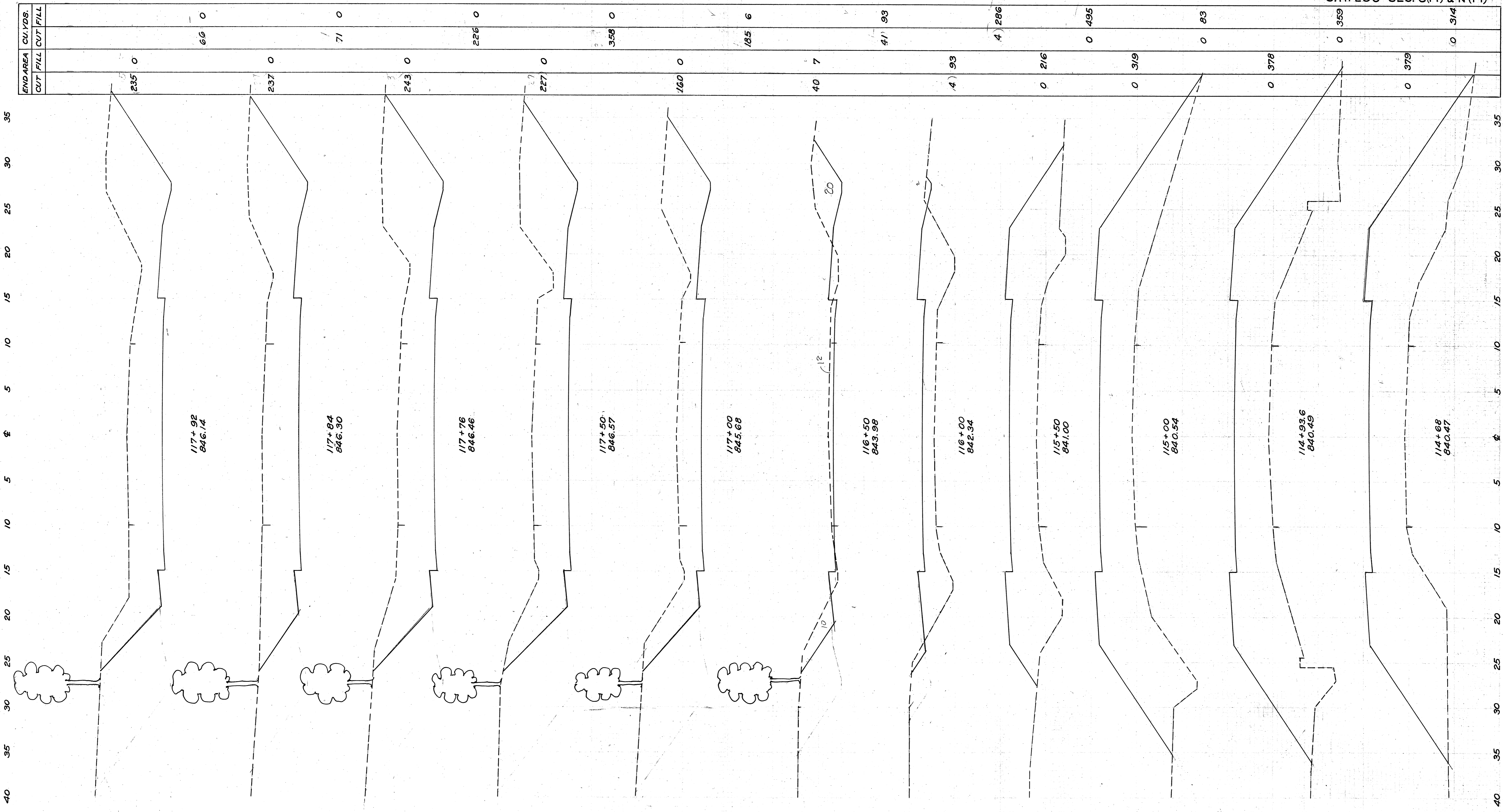
FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO		1934

10
14

LORAIN COUNTY
S.H. 290 SEC. S(Pt) & N (Pt)

END AREA CU. YDS.		CU. YDS.	
CUT	FILL	CUT	FILL
0	299	0	409
0	215	0	66
0	189	2	238
2	123	41	150
42	39	98	45
64	10	48	11
40	13	38	9
107	20	43	10
106	29	141	87
46	65	44	139





FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	12 14
10	OHIO		1934	

LORAIN COUNTY
S.H. 290 SEC. S(Pt) & N(Pt)

END AREA	CUT	FILL	CU. YDS.
CUT	FILL	CUT	FILL
16	23		
48	9		30 15
112	0		148 8
194	0		283 0
242	0		404 0
			71 0

STA. 119+75 { END PROJECT
END S.H. 290 SEC. N(Pt)

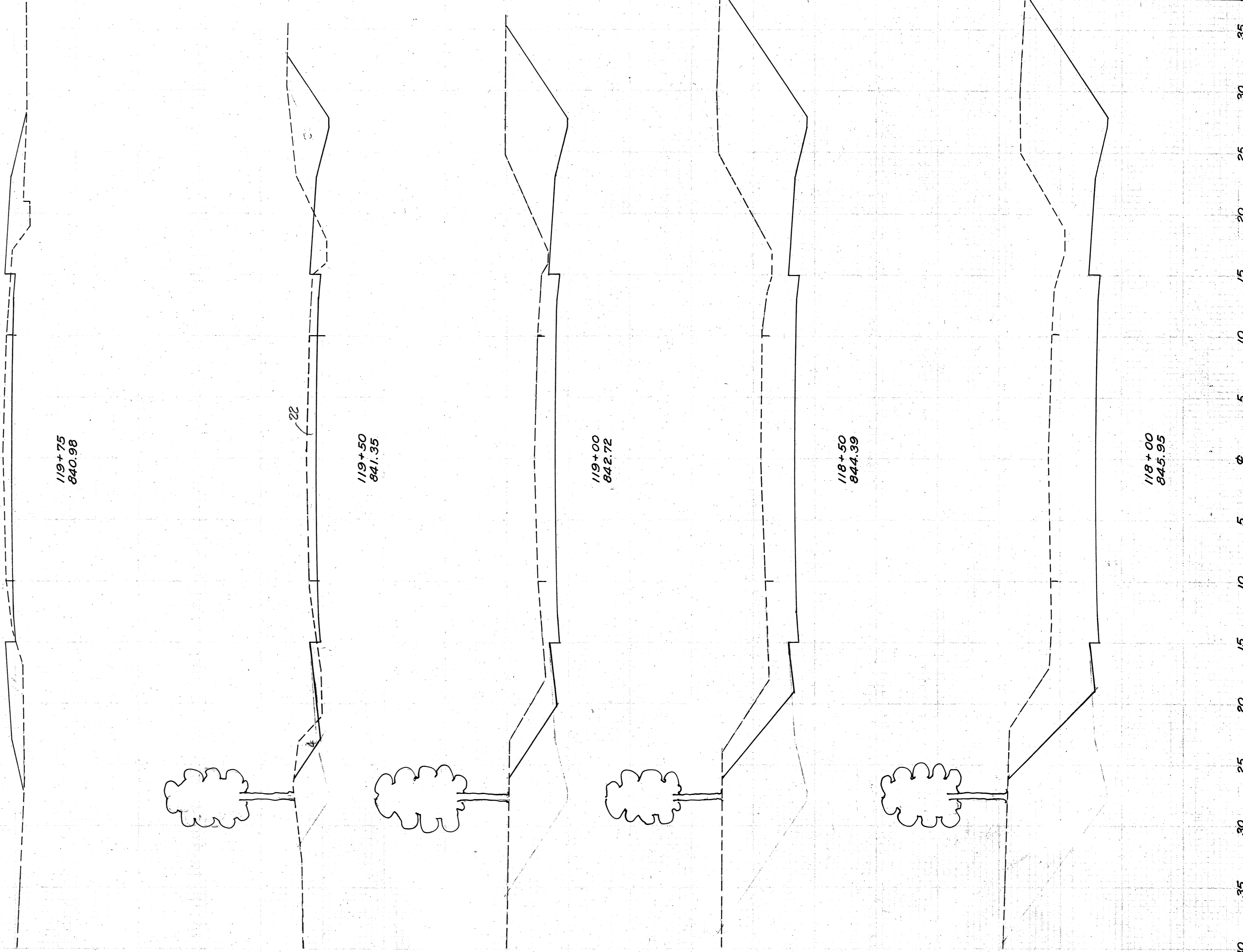
119+75
840.98

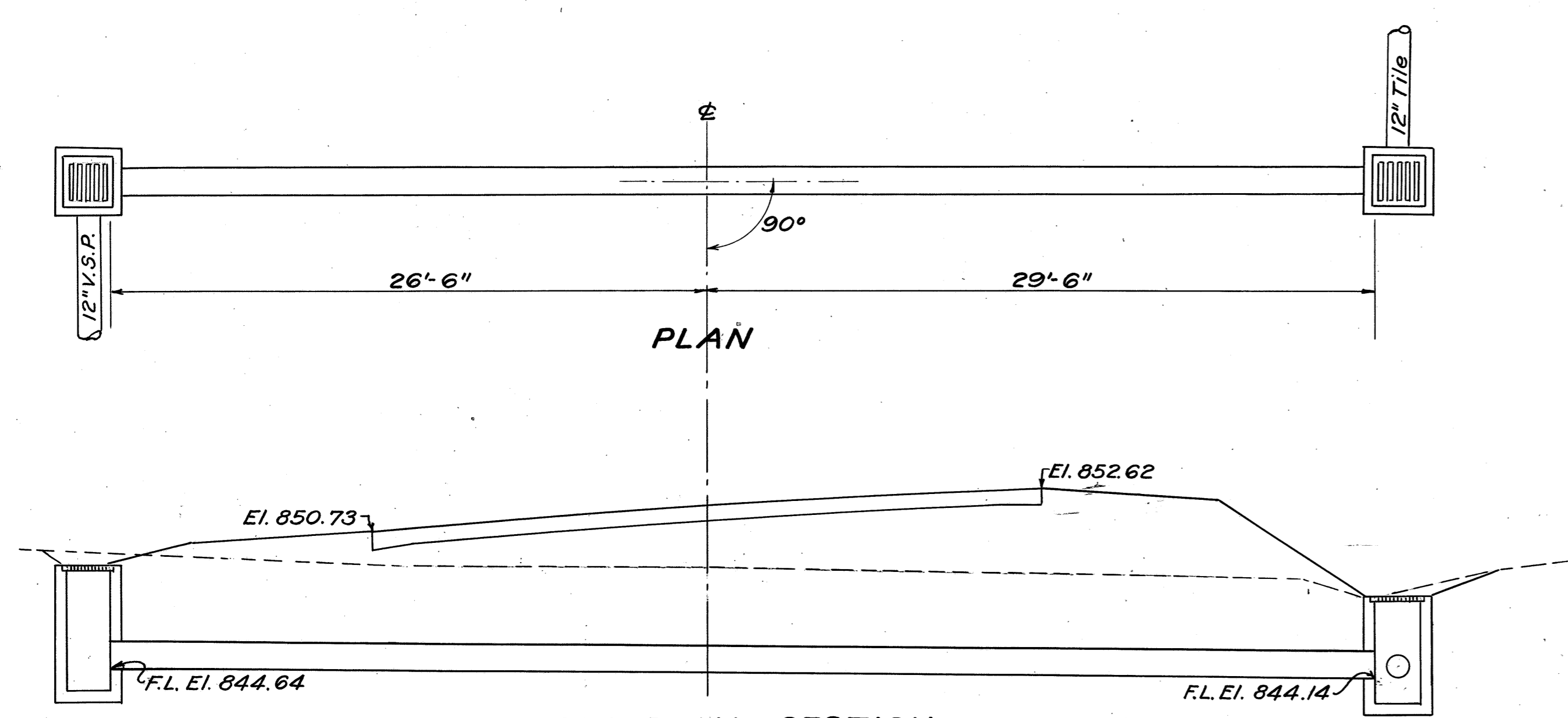
119+50
841.35

119+00
842.72

118+50
844.39

118+00
845.95



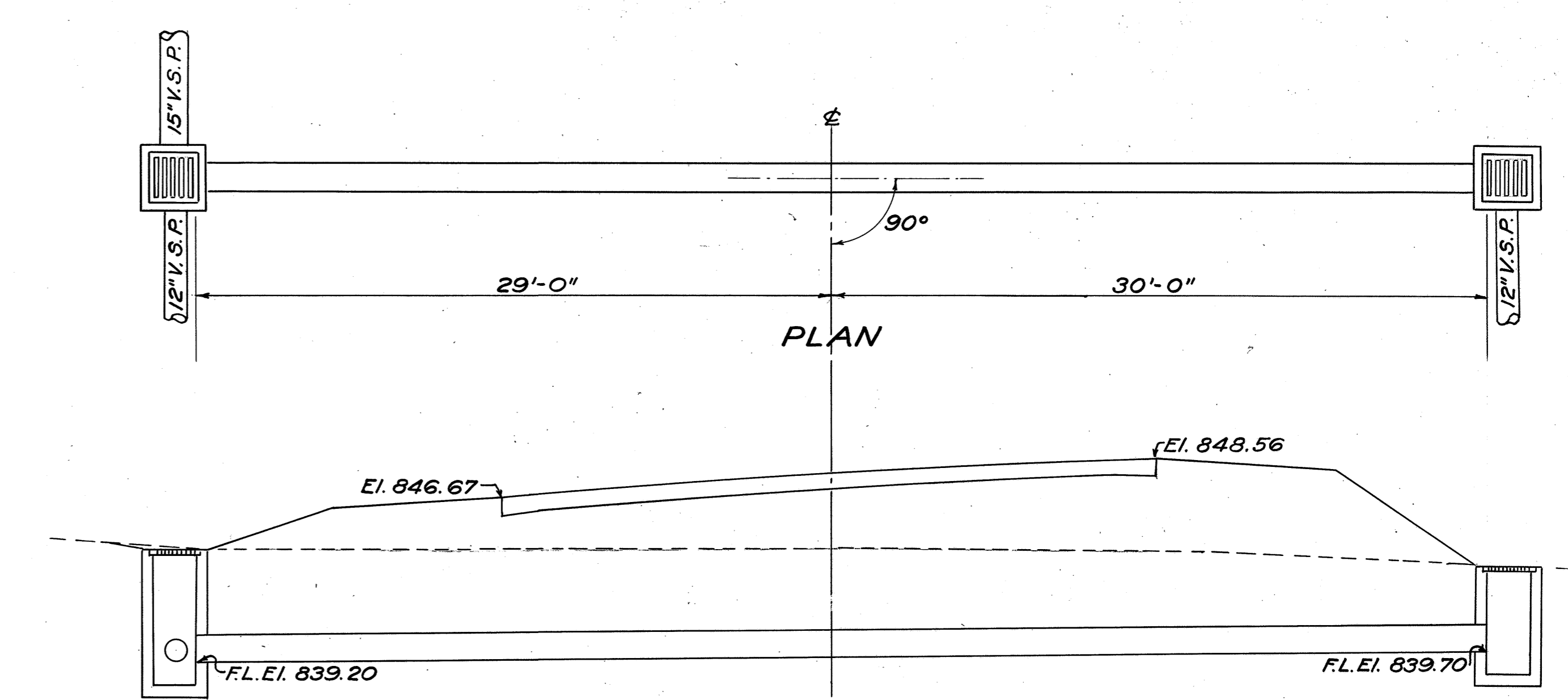


CULVERT DATA
 Type - Pipe Culvert
 Size - 15" x 56'-0"
 Work Required - Build Std. 15" x 56'-0" Pipe Culvert with 2 No 2-2 Catch Basins.

ESTIMATED QUANTITIES
 Excavation, Structural 20 Cu. Yds.
 15" Pipe for Rdwy. Culv. 56 Lin. Ft.
 Std. No 2-2 Catch Basins 2 Units

Standard Dwgs. S-27 RC. 3 ; I-8 C.B. 2-2

STA. 102+25 ①

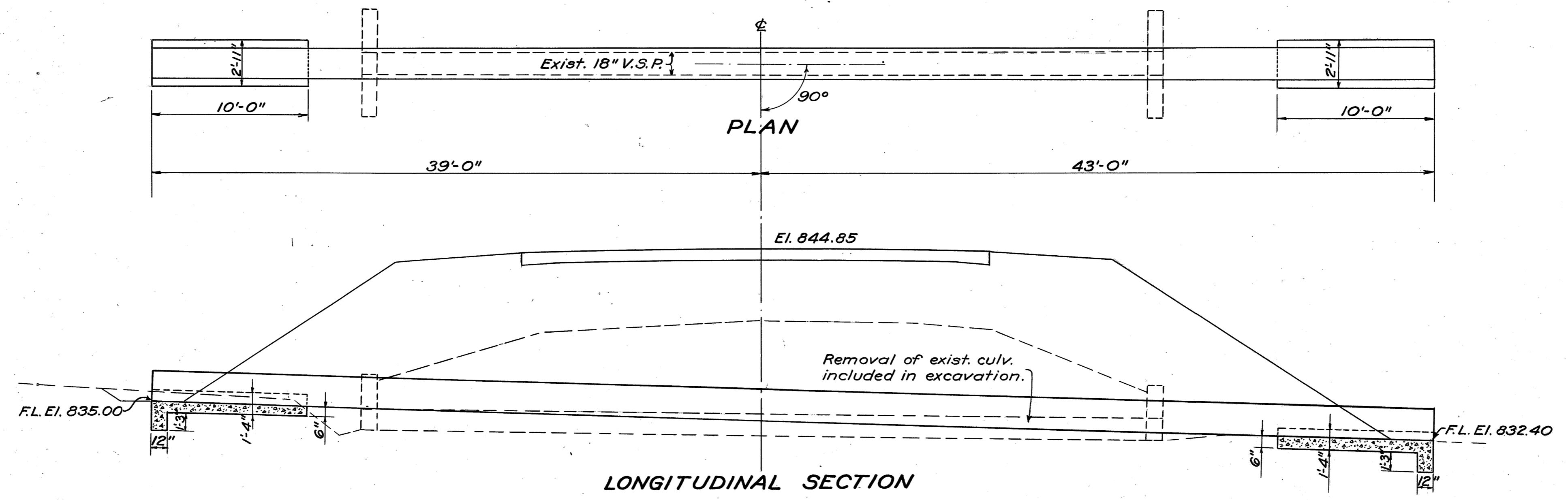


CULVERT DATA
 Type - Pipe Culvert
 Size - 15" x 59'-0"
 Work Required - Build Std. 15" x 59'-0" Pipe Culvert with 2 No 2-2 Catch Basins.

ESTIMATED QUANTITIES
 Excavation, Structural 20 Cu. Yds.
 15" Pipe for Rdwy. Culv. 59 Lin. Ft.
 Std. No 2-2 Catch Basins 2 Units

Standard Dwgs. S-27 RC. 3 ; I-8 C.B. 2-2

STA. 110+50 ②



CULVERT DATA
 Type - Pipe Culvert
 Size - 24" x 82'-0"
 Work Required - Build Std. 24" x 82'-0" Pipe Culvert with Std. Pipe Culv. Ends. Remove exist. 18" x 51'-6" V.S.P. and conc. headwalls.

ESTIMATED QUANTITIES
 Excavation, Structural 40 Cu. Yds.
 24" Pipe for Roadway Culvert 82 Lin. Ft.
 Concrete (1-5/8 mix) Cradles and cut off walls 2.15 Cu. Yds.

Standard Dwgs. S-27 RC. 2 ; S-27 RC. 3

STA. 114+93.6 ③

SUMMARY TABLES

LORAIN COUNTY
S. H. 290 SEC. S(P₁) & N(P₁)

TABLE No 1
STRUCTURE QUANTITIES (20 FT. SPAN & UNDER)

STRUCTURE No	STRUCT. DETAILS ON SHEET No	STATION	TYPE	SIZE	EXCAV.		CULVERT PIPE		STANDARD No 2-2 CATCH BASIN	STANDARD CONST. DWGS. No
					STRUCT. UNCLASS.	1-5 1/2 CONC.	15"	24"		
						PIPE ENDS				
1		102+25	Pipe	15"x56'-0"	20		56		2	S-27RC. 3; I-8CB2-2
2		110+50	Pipe	15"x59'-0"	20		59		2	S-27RC. 3; I-8CB2-2
3		114+93.6	Pipe	24"x82'-0"	40	2.15	82			S-27RC. 2&3
TOTALS					80	2.15	115	82	4	

TABLE No 2
EXCAVATION & EMBANKMENT

FROM STATION	TO STATION	EXCAV. CU. YDS.	EMB. CU. YDS.	EMB. +25% CU. YDS.	BORROW CU. YDS.
98+30.31	119+75	3510	5919	7398	3888
TOTALS		3510	5919	7398	3888

TABLE No 3
ROADWAY DRAINAGE

TOTALS FROM SHEET No	12" PIPE LIN. FT.	15" PIPE LIN. FT.	10" TILE CLEAN & RELAY LIN. FT.	12" TILE CLEAN & RELAY LIN. FT.	10" TILE REMOVED-STORED LIN. FT.
3	1012		29	240	396
4	939	441			
5	255				
TOTALS		2206	441	29	240

TABLE No 4
CATCH BASINS

TOTALS FROM SHEET No	No 1-2 C.B.	No 2-2 C.B.
3	2	3
4	1	1
TOTAL		

TABLE No 5
PRIVATE DRIVES & APPROACHES

TOTAL FROM SHEET No	12" CORR. M.P. LIN. FT.	T.B. SIDE APPROACHES CU. YDS.
3		25
4	40	44
TOTALS		

TABLE No 6
REMOVAL OF TREES

TOTALS FROM SHEET No	No REMOVED
4	5
TOTAL	

CALCULATIONS AND SUMMARIES

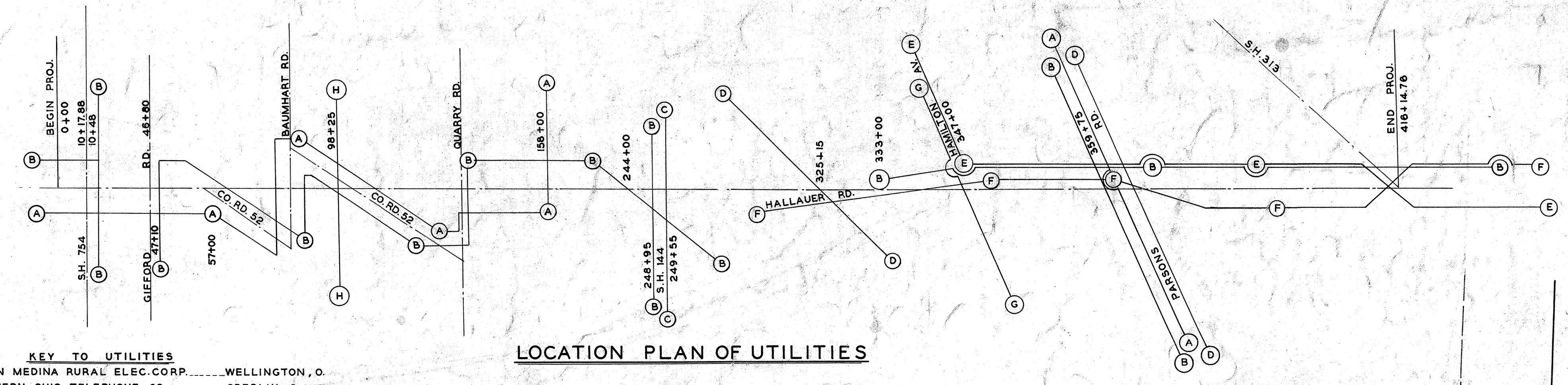
LINE	CALCULATIONS	TOTALS	UNITS
1			
2	LENGTH OF PROJECT		
3	Sta. 98+30.31 to Sta. 119+75 = 2144.69 Lin. Ft. = 0.406 miles	0.406	Miles
4			
5	FINISHING SHOULDERS, SLOPES & DITCHES		
6	See line # 3 = 2144.69 lin. ft. Use	2145	Lin. Ft.
7			
8	10"x 8"x 8"x 10" PORTLAND CEMENT CONCRETE PAVEMENT		
9	USING HIGH EARLY STRENGTH PORTLAND CEMENT, SEC. M-1.2		
10	Sta. 98+30.31 to Sta. 101+50 = 319.69 lin. ft.		
11	Sta. 111+50 to Sta. 119+75 = 825.00 " "		
12	1144.69 lin. ft.		
13	Area = 1144.69 x 30 ÷ 9 = 3815.6 sq. yds.	3815.6	Sq. Yds.
14			
15	USING PORTLAND CEMENT, SEC. M-1.1		
16	Sta. 101+50 to Sta. 111+50 = 1000.0 lin. ft.		
17	Area = 1000 x 30 ÷ 9 = 3333.3 sq. yds.	3333.3	Sq. Yds.
18			
19	REMOVAL AND DISPOSAL OF EXISTING PAVEMENT		
20	Sta. 98+30.31 to Sta. 102+00 = 369.69 lin. ft.		
21	Area = 369.69 x 18 ÷ 9 = 739.4 sq. yds.	739.4	Sq. Yds.
22			
23			
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ITEM	SUMMARY	REFERENCE			TOTALS	UNITS
		SHEET	LINE	TABLE		
ROADWAY						
E-1	Roadway Excavation (Unclassified)	14		2	3510	Cu. Yds.
E-4	Borrow (Contractor to furnish)	14		2	3888	Cu. Yds.
E-5	Finishing Slopes, Shoulders and ditches	14	6		2145	Lin. Ft.
E-8	Removal and Disposal of Existing Pavement	14	21		739.4	Sq. Yds.
E-9	Trees Removed and Disposed Of	14		6	5	Units
I-1	12" Corrugated Metal Pipe for Driveways, Sec. M-6.4	14		5	40	Lin. Ft.
I-3	12" Pipe for Roadway Drainage, with aggregate cover	14		3	2206	Lin. Ft.
I-3	15" Pipe for Roadway Drainage with aggregate cover	14		3	441	Lin. Ft.
I-6	10" Tile Cleaned and Relaid	14		3	29	Lin. Ft.
I-6	12" Tile Cleaned and Relaid	14		3	240	Lin. Ft.
I-6	10" Tile Removed and Stored	14		3	396	Lin. Ft.
I-8	Std. No 1-2 Catch Basins	14		4	3	Units
I-8	Std. No 2-2 Catch Basins	14		4	4	Units
I-17	Traffic Bound Side Approaches	14		5	69	Cu. Yds.
PAVEMENT						
T-70	10"x 8"x 8"x 10" Portland Cement Concrete Pavement using High Early Strength Portland Cement Sec. M-1.2	14	13		3815.6	Sq. Yds.
T-70	10"x 8"x 8"x 10" Portland Cement Concrete Pavement	14	17		3333.3	Sq. Yds.
STRUCTURES (20 FT. SPAN & UNDER)						
E-2	Excavation for Structures (Unclassified)	14		1	80	Cu. Yds.
S-1	Concrete for Culvert Ends (1-5 1/2)	14		1	2.15	Cu. Yds.
S-27	15" Pipe for Roadway Culverts, R.C.P. Sec. M-6.6(b)	14		1	115	Lin. Ft.
S-27	24" Pipe for Roadway Culverts, R.C.P. Sec. M-6.6(b)	14		1	82	Lin. Ft.
I-8	Std. No 2-2 Catch Basins	14		1	4	Units

LORAIN CO. S.H. 290 SEC. 2(P₁) & N(P₁) 1934 (14)

LoR-20-178

R/W SHOWN ON THIS PLAN SECURED BY EASEMENTS OR APPROPRIATION

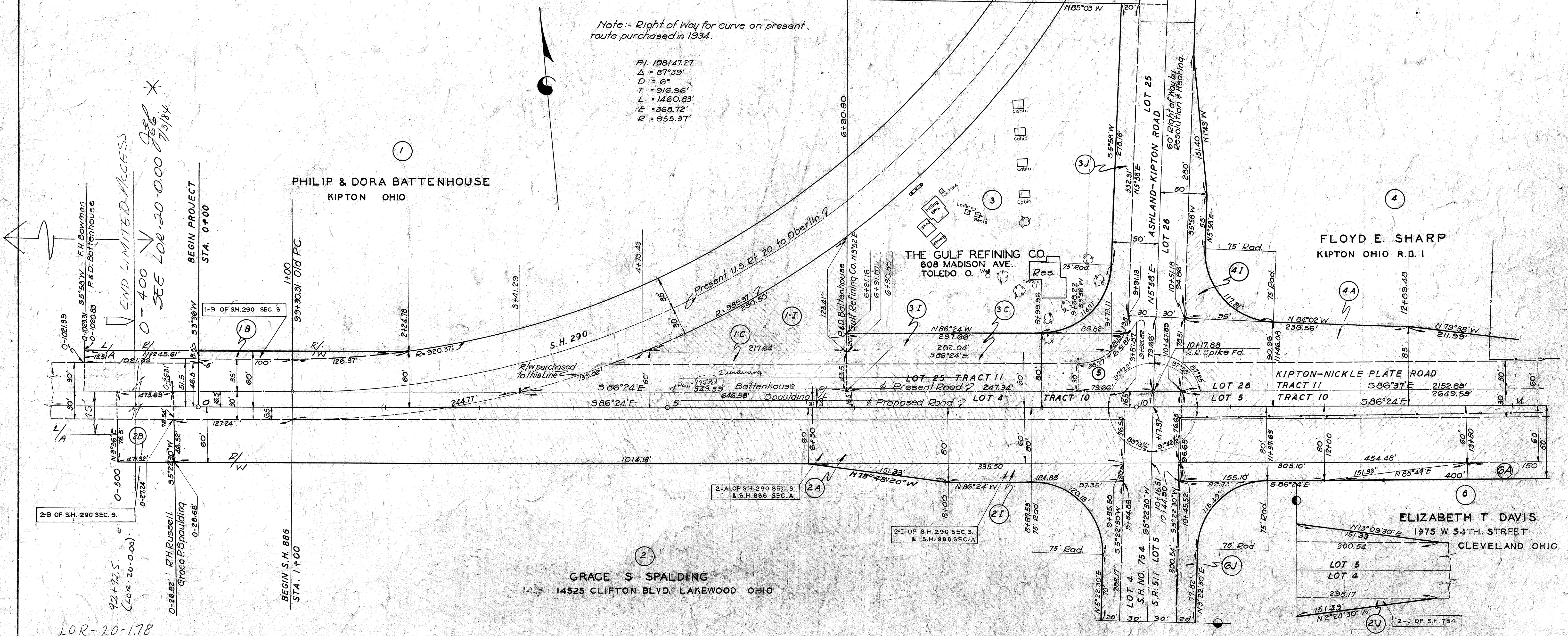


- KEY TO UTILITIES**
- A. LORAIN MEDINA RURAL ELEC. CORP. WELLINGTON, O.
 - B. NORTHERN OHIO TELEPHONE CO. OBERLIN, O.
 - C. OHIO ELECTRIC POWER CO. OBERLIN, O.
 - D. BUCKEYE PIPELINE CO. WAKEMAN, O.
 - E. BELL TELEPHONE CO. CLEVELAND, O.
 - F. MARION RESERVE POWER & LIGHT CO. MARION, O.
 - G. OHIO FUEL GAS CO. COLUMBUS, O.
 - H. OHIO PUBLIC SERVICE CO. ELYRIA, O.

LOCATION PLAN OF UTILITIES

Note: - Right of Way for curve on present route purchased in 1934.

P.I. 108+47.27
Δ = 87°33'
D = 6°
T = 916.96'
L = 1460.83'
E = 368.72'
R = 955.87'



END LIMITED ACCESS
 SEE LoR-20-000 9/3/34

2-B OF S.H. 290 SEC. S.

0-28.02' B.H. Russell
Grace S Spaulding

BEGIN S.H. 886
STA. 1+00

GRACE S SPALDING
14525 CLIFTON BLVD. LAKEWOOD OHIO

