

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
MASSILLON - DOVER ROAD
S.H. (I.C.H.) 77 - SEC. 'T'
TUSCARAWAS COUNTY
FRANKLIN TOWNSHIP
MAY 1932

FED. AID DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	1 30
10	OHIO	630-C	1932	

S.H. (I.C.H.) No. 77 - SEC. "T"
TUSCARAWAS COUNTY

The Standard Specifications of the STATE of OHIO,
Department of Highways in force on date of contract
will govern this improvement; and the necessary Right
of Way will be provided.

I hereby approve these plans and declare that the
making of the improvement will require the closing to
traffic of highway and that detours will be provided as
indicated on the plans. *As provided for in the estimate
the Contractor will be required to maintain one way
traffic (24 hours per day if necessary) during the time
required to place the wearing course on the existing
pavement (S.H. 414) at the beginning of the project as
shown on the detailed plan. (Sheet #6)*

Approved: G. E. Arnold
Date: 6-21-32 Resident District
Deputy Director

Approved: Chas. E. McKee
Date: 6-21-32 Resident Division
Director

Approved: Edmund H. Little
Date: 6-23-32 Chief Engineer
Bureau of Construction

Approved: _____
Date: _____ Chief Engineer
Bureau of Maintenance

Approved: J. V. Burke
Date: 6-22-32 Chief Engineer
Bureau of Bridges

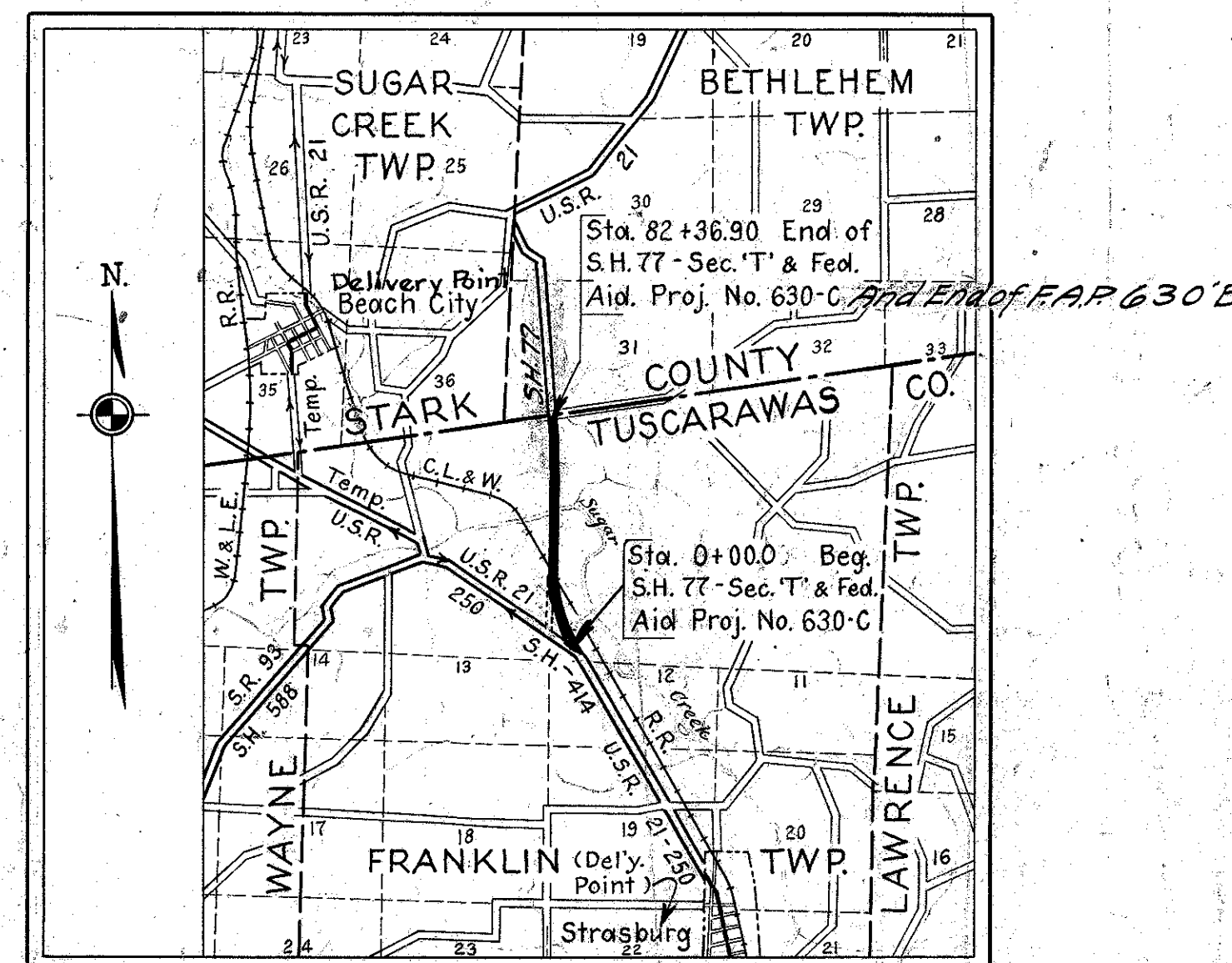
Approved: H. O. Chapman
Date: 6-24-32 Chief Engineer &
First Assistant Director

Approved: O. O. Merrill
Date: 6-24-32 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.



LOCATION PLAN
SCALE IN MILES
0 1/2 1 2 3

CONVENTIONAL SIGNS

County Line	-----
Township Line	-----
Section Line	-----
Property Line Not Fenced	-----
Center Line	-----
City or Village Line	-----
Fence	-----
Telephone or Telegraph	T T T
Steam Railroad	-----
Guard Rail	-----
Drain Pipe - New	-----
Drain Pipe - Old	-----

STATE ROADS	=====
OTHER IMPROVED ROADS	=====
PORTION TO BE IMPROVED	=====
DETOURS SHOWN THUS	=====

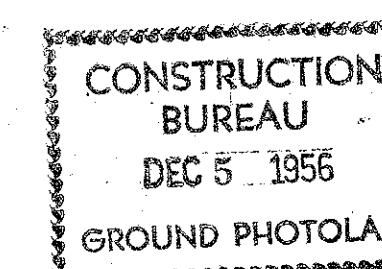
NET LENGTH OF PROP. NO. 1	8,209.92 FEET - 1.554 MI.
NET LENGTH OF PROP. NO. 2	239.08 FEET - 0.045 MI.
NET LENGTH OF PROJECT	8,449.00 FEET
NET LENGTH OF PROJECT	1.599 MILES

SCALES

PLAN	1" = 100'
PROFILE - HORIZONTAL	1" = 100'
PROFILE - VERTICAL	1" = 10'
CROSS SECTIONS	1" = 5'
STRUCTURAL PLANS - AS SHOWN	

INDEX OF SHEETS

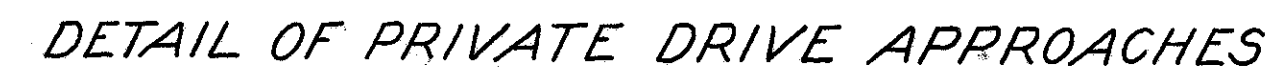
TITLE PAGE	1
TYPICAL SECTION	2
PLAN & PROFILE	3 - 6
CROSS SECTIONS	7 - 21
CURVE TABLES	22
STRUCTURAL PLANS	6 - 23 - 24-25-26-27-28-29
SUMMARY SHEET	30



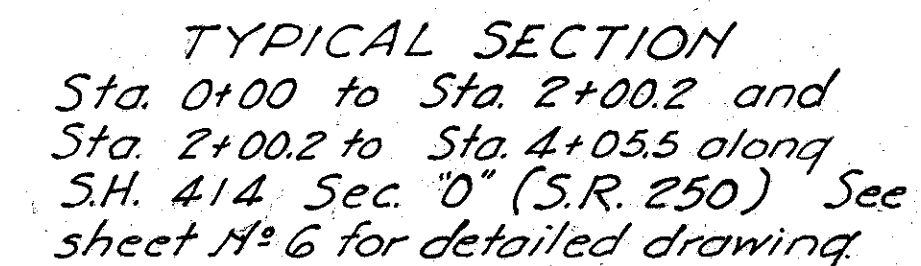
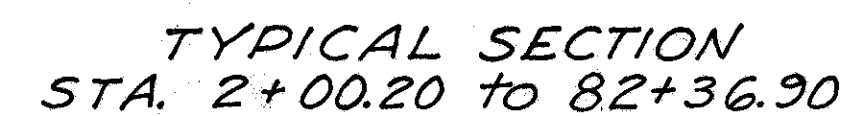
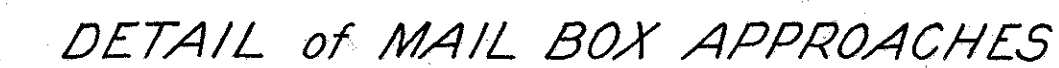
Supplemental Prints of Structural Standards
are Drawings No. BC-A; 300; A5-31, RR-B



Note :-
The excavation quantities on this plan were calculated for a section having an 8" uniform depth of trench for a 20' width pavement with 2" Crown and 8'-0" berms. For a 9 3/4" Brick Pavement 20' wide with 2" Crown and 8'-0" berms raise the profile grade 0.08 of a foot and the yardage will remain the same.



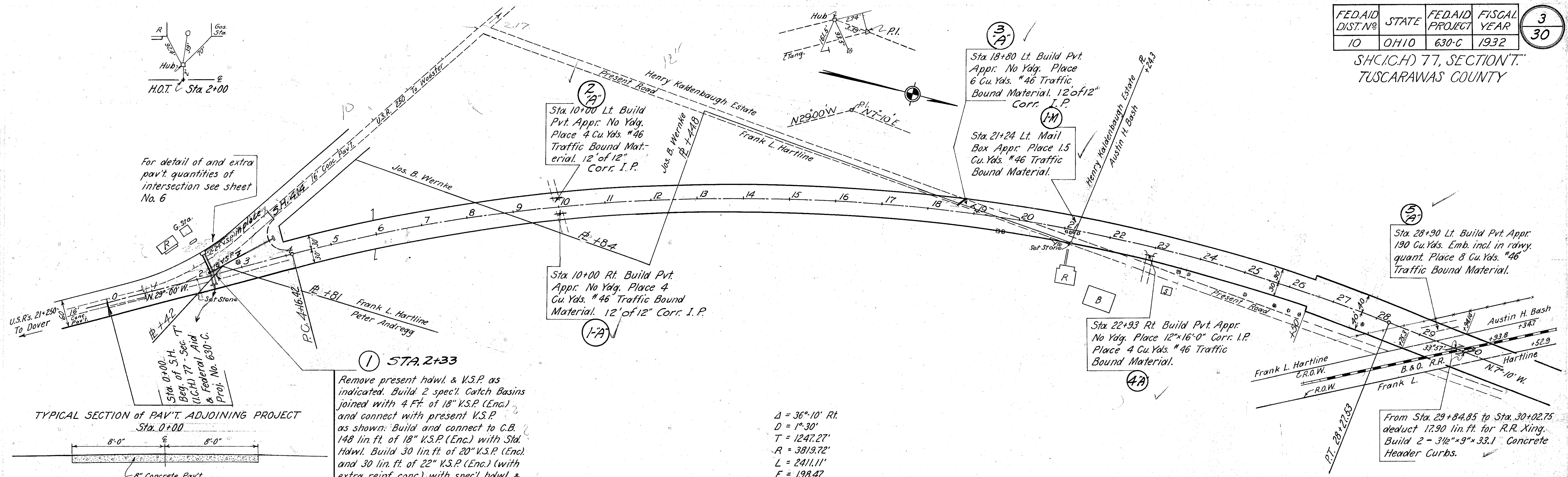
Scale $\sim 1/2$ in. = 1 ft.



Note:- In lieu of the provisions contained in Items T-9.24 and T-9.25 of the General Specifications brick will be purchased per thousand, freight paid on the nearest siding, guaranteeing that 36 brick will lay a completed and accepted square yard of pavement for 3" depth. ~~depths and that 40 brick will lay a completed and accepted square yard of pavement for a 4" depth.~~ All other provisions of Items T-9.24 and T-9.25 shall apply.

Note :-
Pavement on all curves will be superelevated, and on all curves where the degree of curvature is over 5° will be widened. (See Curve Table Sheet No. 22).

SHC(CH) 77, SECTION 'T'
TUSCARAWAS COUNTY



① STA. 2+33
Remove present hawl. & V.S.P. as indicated. Build 2 spec'l. Catch Basins joined with 4 Ft. of 18" V.S.P. (Enc.) and connect with present V.S.P. as shown. Build and connect to C.B. 148 lin. ft. of 18" V.S.P. (Enc.) with Std. Hawl. Build 30 lin. ft. of 20" V.S.P. (Enc.) and 30 lin. ft. of 22" V.S.P. (Enc.) (with extra reinf. conc.) with spec'l. hawl. & connect to C.B. (See detail - Sheet #6)

B.M. - Sta. 2+15 - 50' Lt.
+ S. end gas pump island.
Elev. 913.26

Exc. 82 Cu. Yds.
1-5 1/2 Conc. 3.8 Cu. Yds.
Reinf. Steel 180 Lbs.
18" V.S.P. Enc. 148 Lin. Ft.
20" " " 30 Lin. Ft.
22" " " 30 Lin. Ft.
Spec. C. Basins 2
Masonry & V.S.P. Removed 4 Cu. Yds.
1-B Concrete 1.5 Cu. Yds.

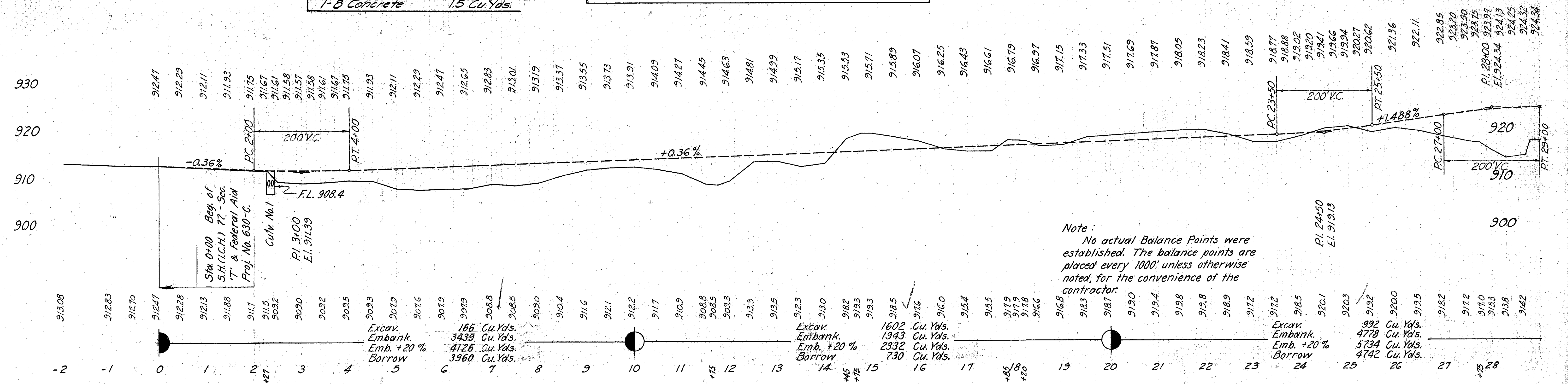
For crown grade of finished pavement
add 0.08 ft. to profile grade shown below

$\Delta = 36^{\circ}10'$ Rt.
 $D = 1^{\circ}30'$
 $T = 1247.27'$
 $R = 3819.72'$
 $L = 2411.11'$
 $E = 198.47$

B.M. - Sta. 16+40 - 100' Lt.
Spk. E. side 12" W. Ch.
Elev. 918.81

B.M. - Sta. 21+00 - 100' Rt.
+ N.W. Cor. step of West
Porch. Elev. 920.44

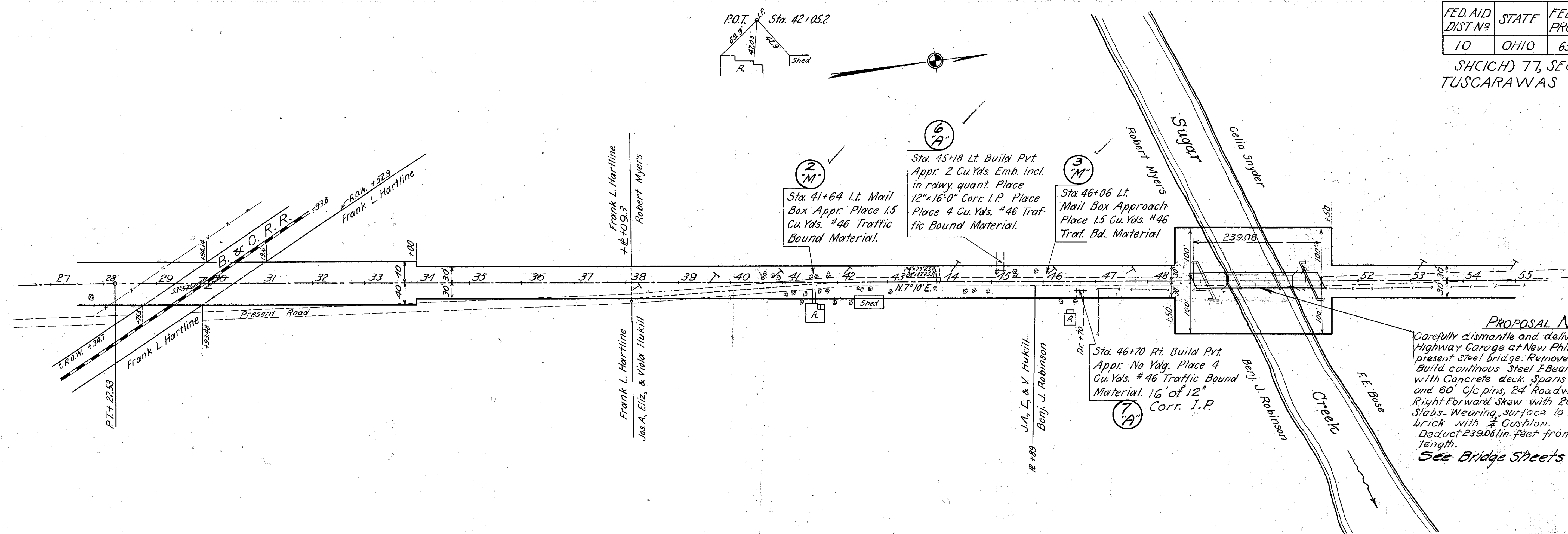
B.M. - Sta. 27+75 - 30' Rt.
Spk. W. side 18" W. Ch.
Elev. 916.21



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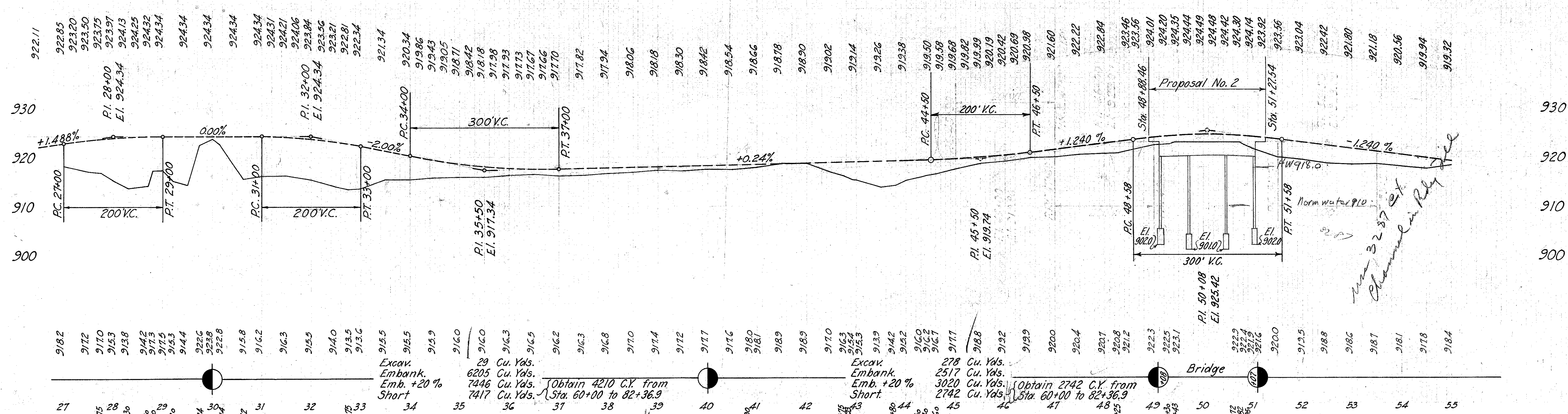
4
30

SHCICH 77, SECTION T
TUSCARAWAS COUNTY

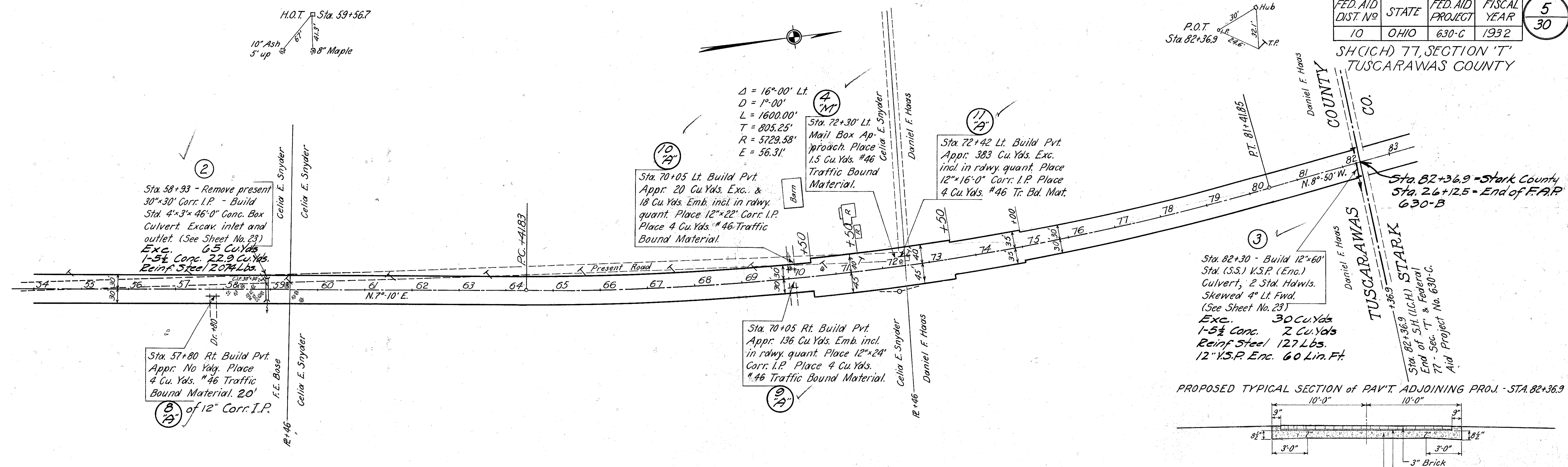


For crown grade of finished pavement add 0.08 ft. to profile grade shown below

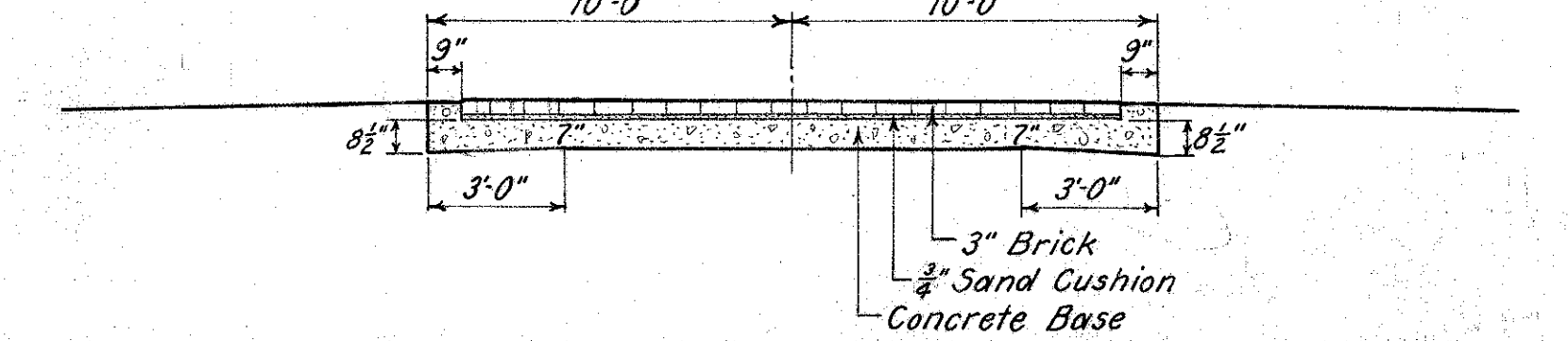
B.M. - Sta. 41+80 - 50' Rt. + N.W. Cor. Stone step to W. porch. Elev. 920.20



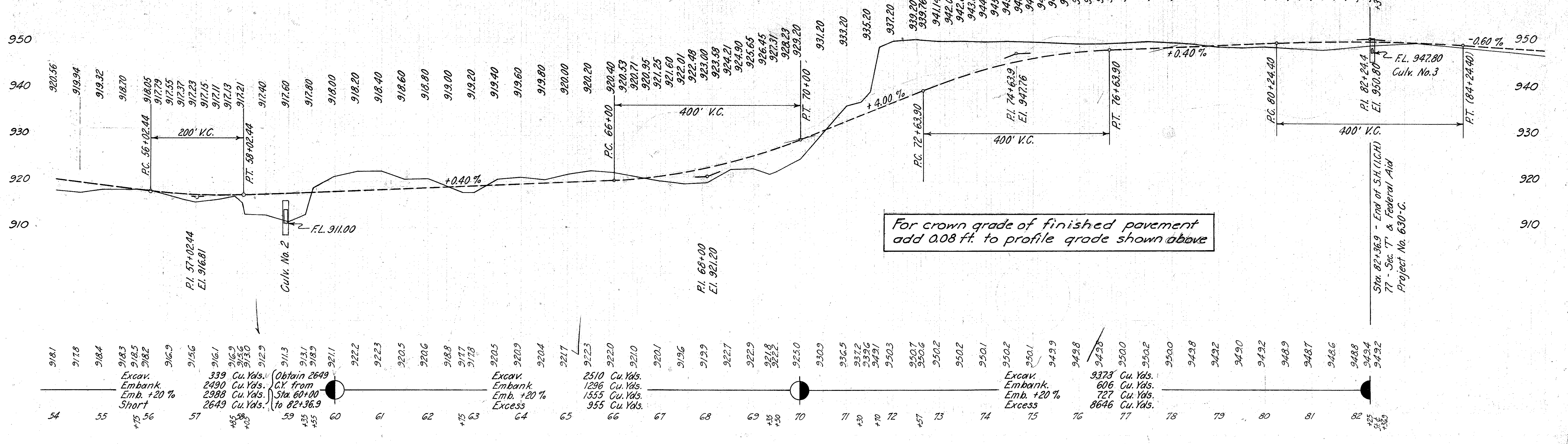
SH(C)H 77, SECTION 'T'
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PROPOSED TYPICAL SECTION OF PAV'T. ADJOINING PROJ. - STA. 82+36.9



B.M. - Sta. 57+25 - 35' Lt. Spk. E. Root 18" Elm. Elev. 918.70	B.M. - Sta. 65+75 - 30' Lt. Spk. E. side Tel. Pole Elev. 923.25	B.M. - Sta. 69+30 - 25' Lt. Spk. N.E. side Tel. Pole Elev. 924.01	B.M. - Sta. 72+30 - 100' Lt. Spk. E. Root 48" Oak Elev. 951.48	B.M. - Sta. 81+00 - 250' Rt. Spk. W. Root 18" Ash Elev. 948.98
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	6 30
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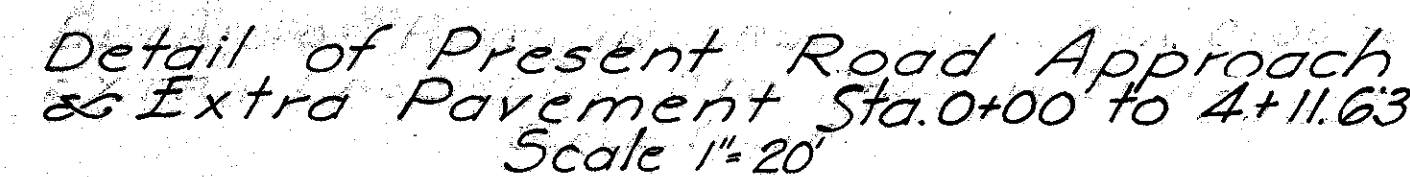
S.H. (I.C.H) 77 SEC. "T"
TUSCARAWAS COUNTY.

Total area of brick for approach = 1577.7 Sq.Yds.

Total quantity of T-14 Bit Surface Course = 34 Tons

* Excavation = 56 Cu. Yds. & Embankment = 61 Cu. Yds.

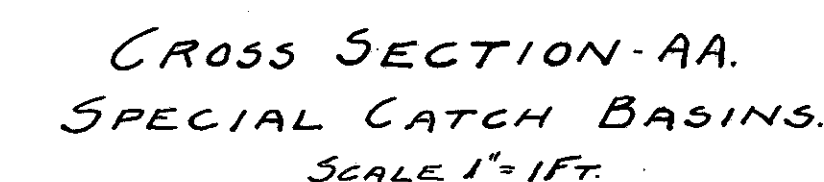
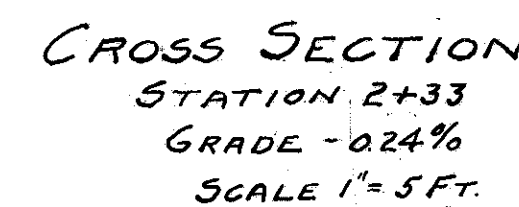
* Included in roadway quantities.



Remove Present Headwall and Pipes as indicated. Build two special Catch Basins joined with 4 lin. ft. of 18" VSP (Enc) and connect with special VSP as shown. Build and connect to CB 748 1 lin. ft. of 18" VSP (Enc) with Std. Headwall. Build 30 lin. ft. of 20" VSP (Enc) and 30 lin. ft. 22" VSP (Enc) with special Headwall and connect to C. Basins. Excavate Inlet and Outlet.

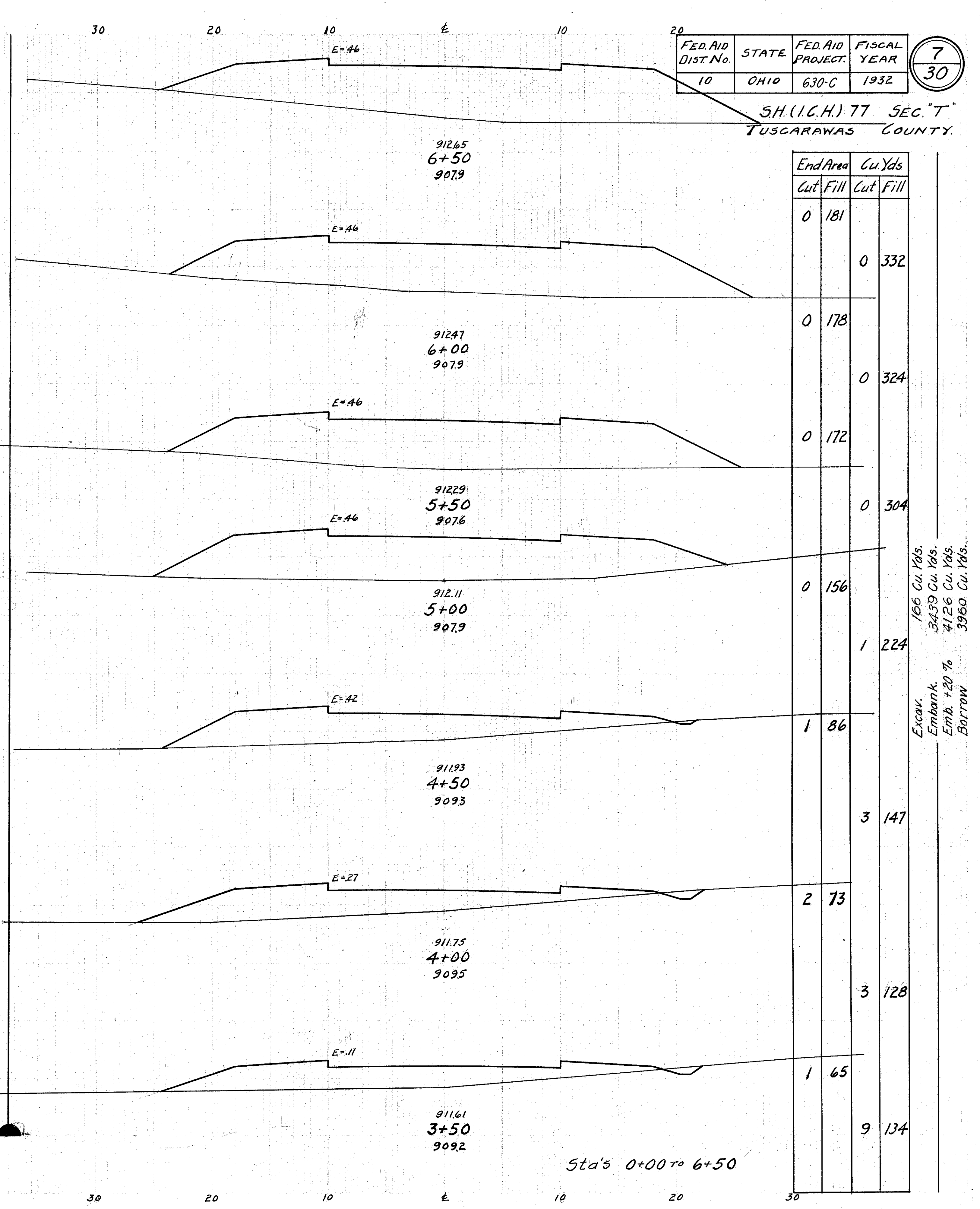
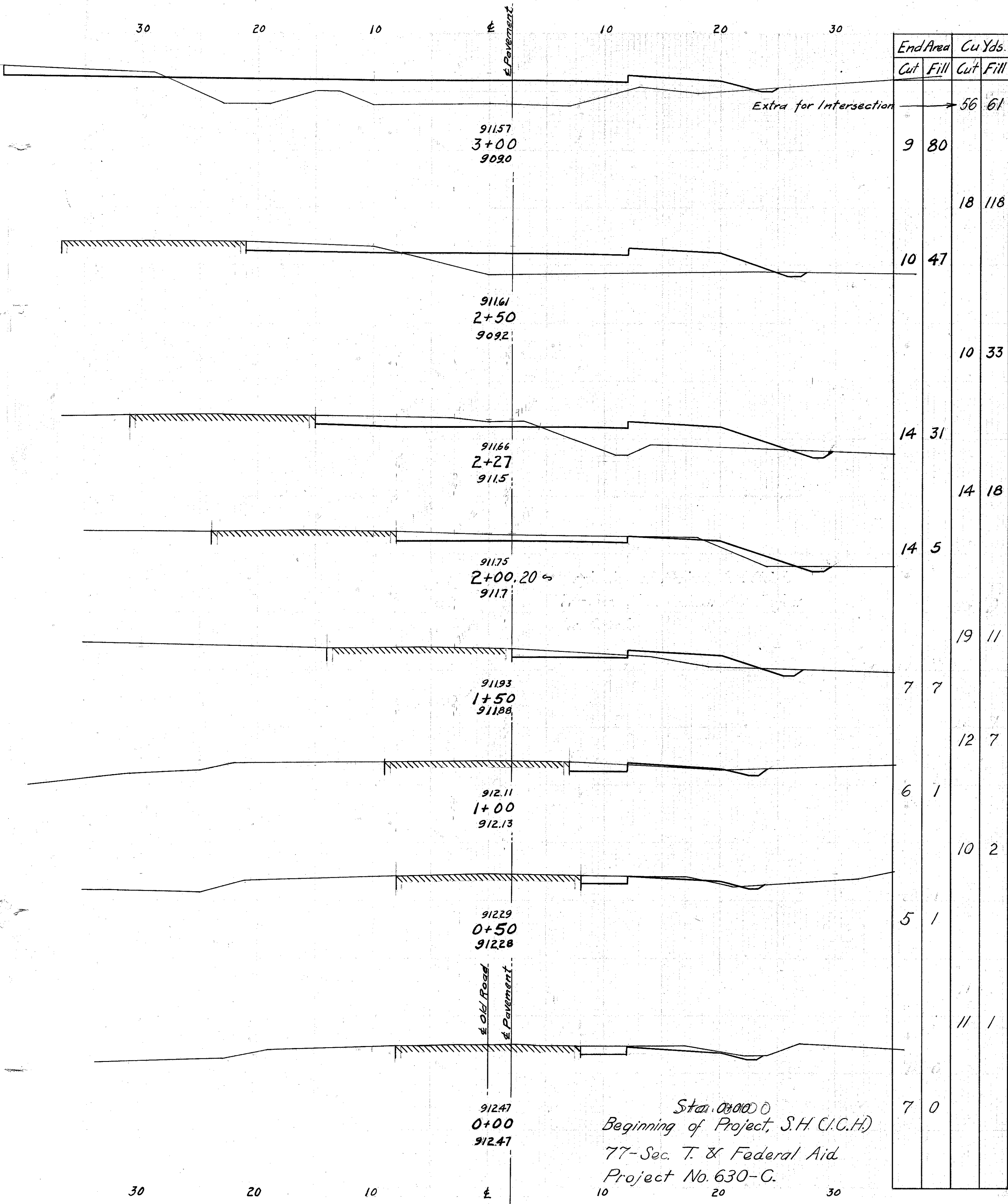
Excavation Total	82 Cu.Yds.
Special Catch Basins	2 Complete

and V.S.P. (ENC). 4 Cu. Yds

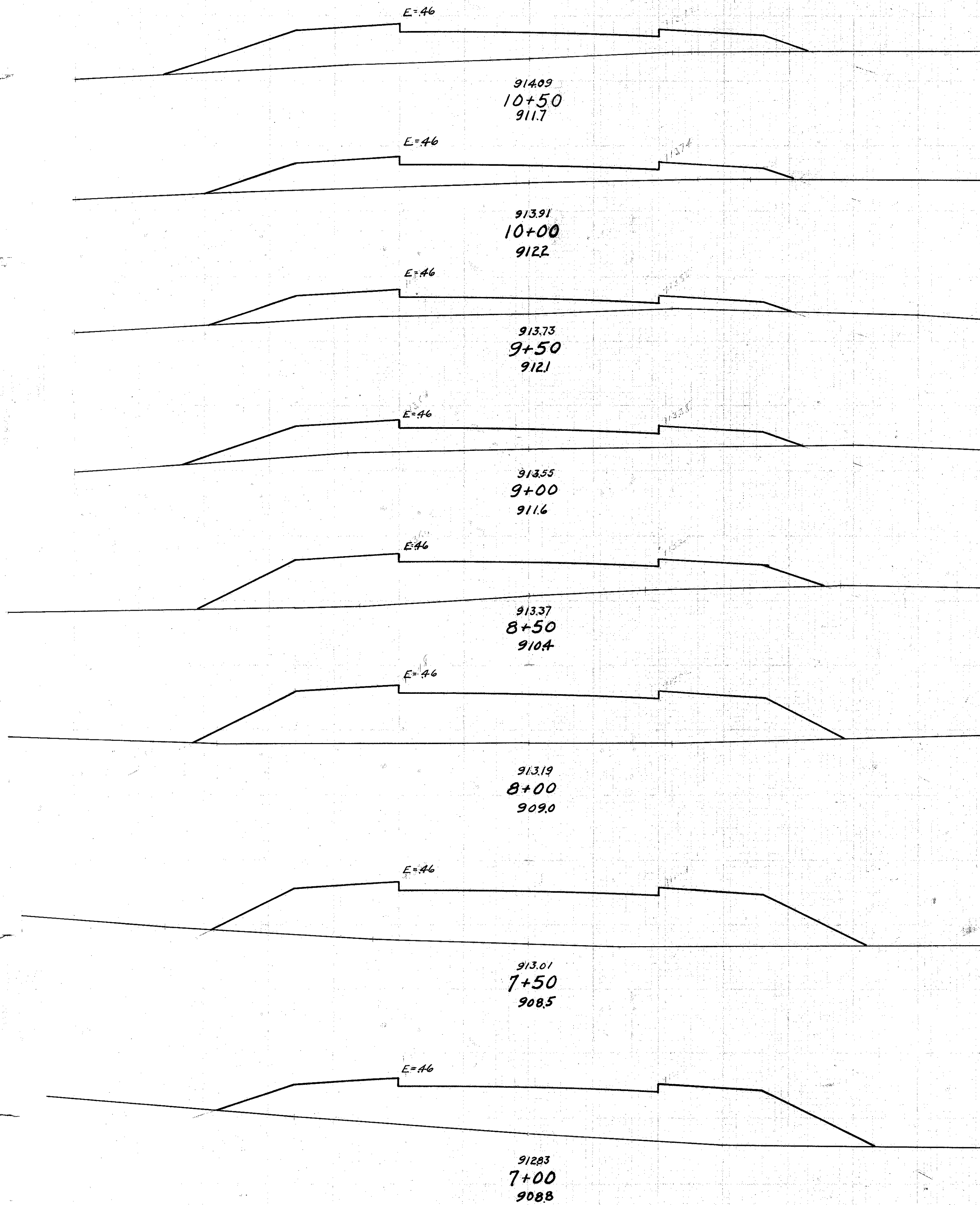


Drawn By : J.H.D.
Date : 4-29-32
Checked By : H.E.R.
Date : 4-30-32
Checked By : F.L.B.
Date : 6-21-32 Asst. Div. Engr.

①
STATION 2+33

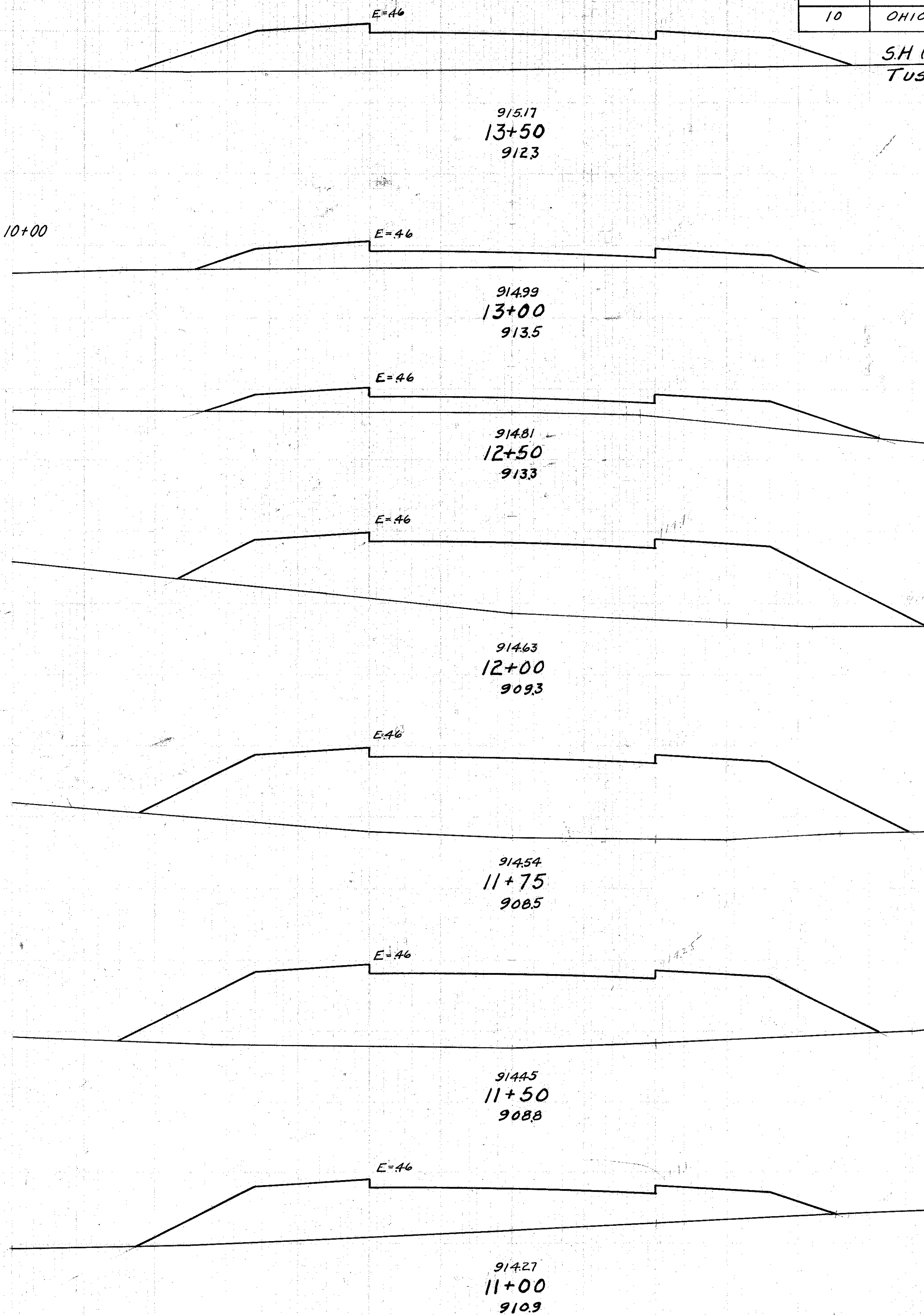


30 20 10 0 10 20 30



End Area		Cu Yds.	
Cut	Fill	Cut	Fill
0	91	0	143
0	63	0	107
0	52	0	115
0	72	0	175
0	117	0	262
0	166	0	317
0	176	0	307
0	156	0	312

30 20 10 0 10 20 30



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End Area		Cu Yds.	
Cut	Fill	Cut	Fill
0	111	0	147
0	48	0	95
0	55	0	245
0	210	0	211
0	245	0	217
0	224	0	325
0	127	0	202

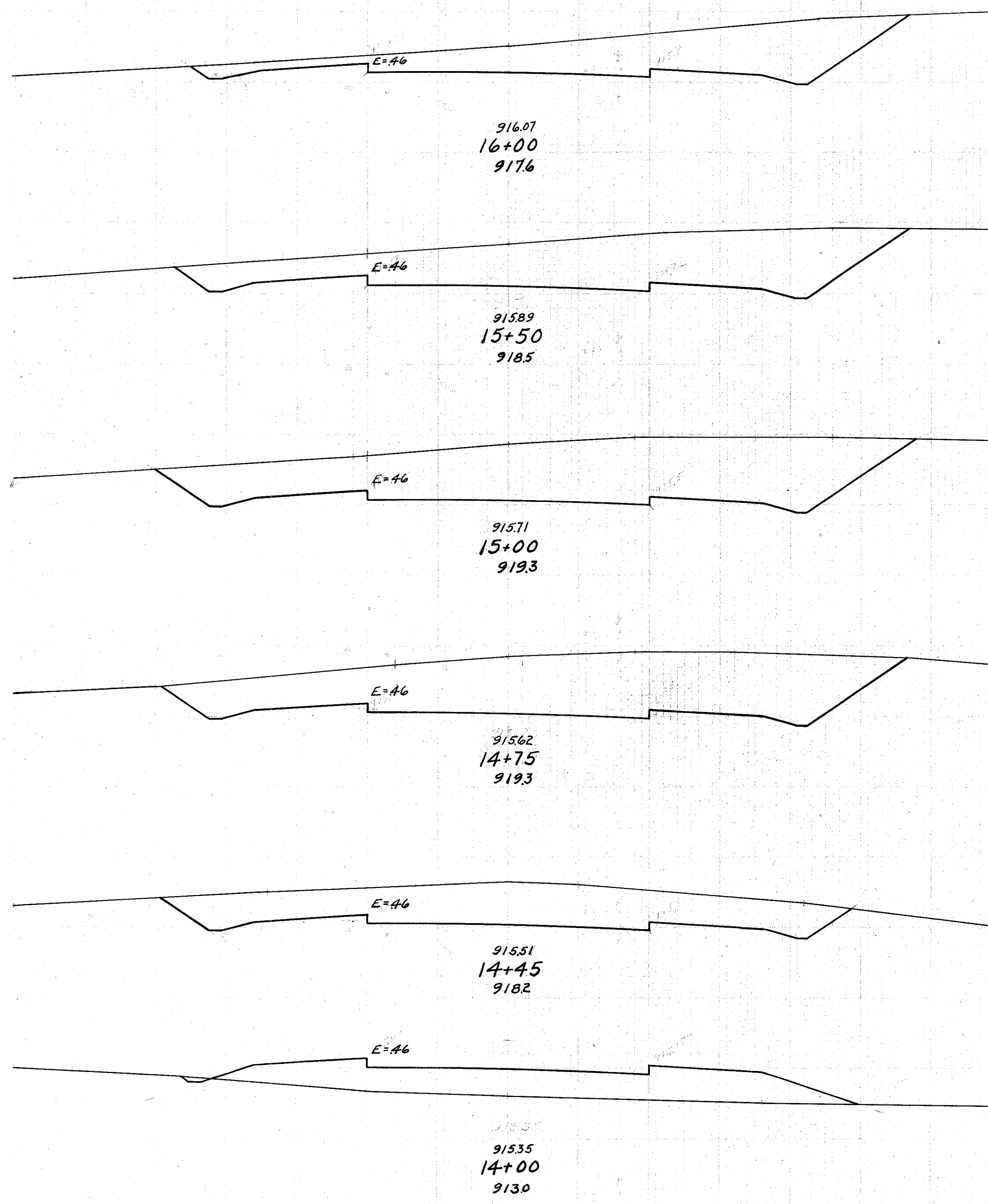
Sta's. 7+00 to 13+50

30 20 10 0 10 20 30

30 20 10 0 10 20 30

30 20 10 ± 10 20 30

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
104	0		
		230	0
144	0		
		308	0
189	0		
		171	0
180	0		
		164	0
116	0		
		98	68
1	82		
		1	178



30 20 10 ± 10 20 30

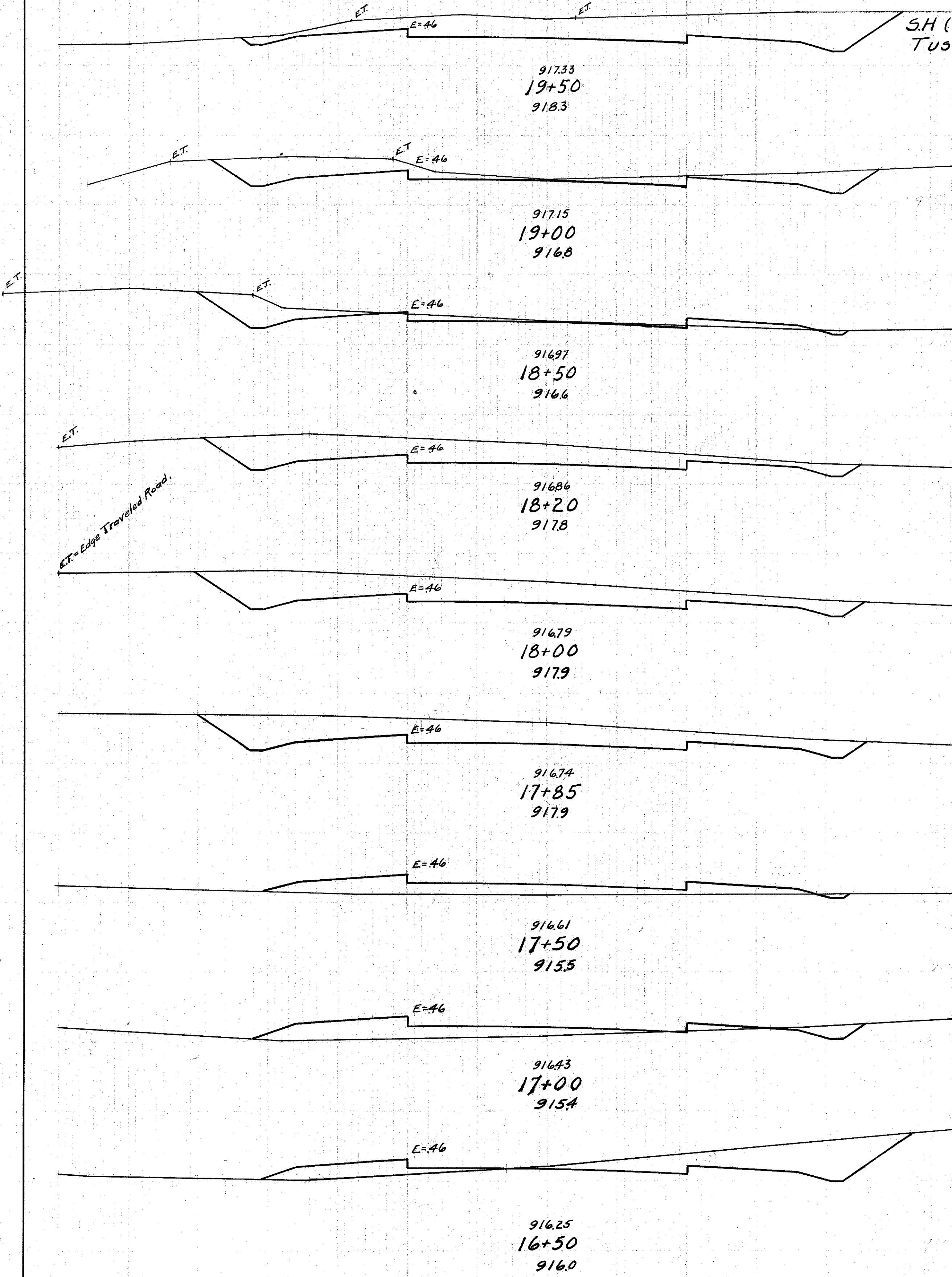
30 20 10 ± 10 20

FED. AID.	STATE	FED. AID.	FISCAL
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TUSCARAWAS COUNTY.

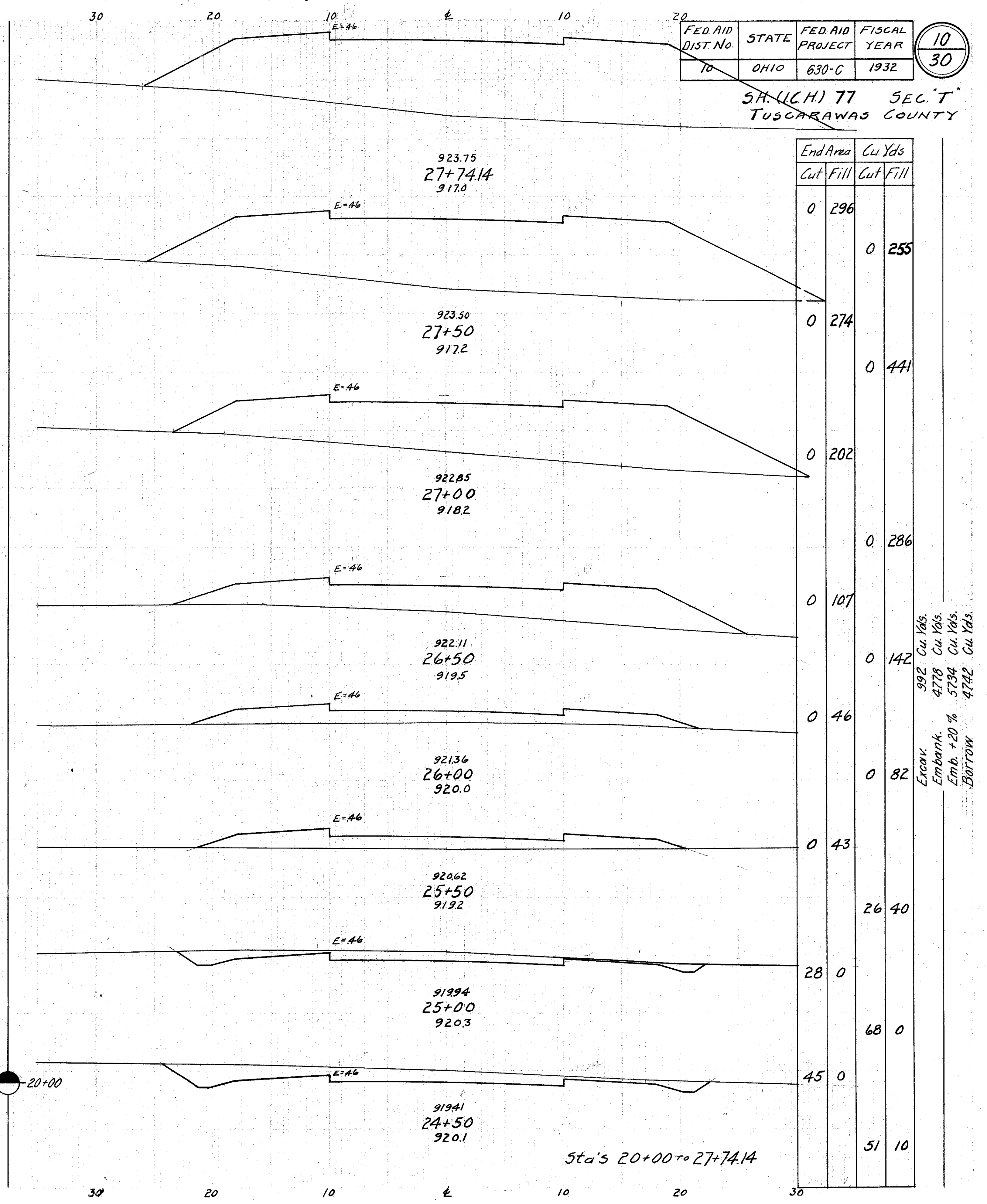
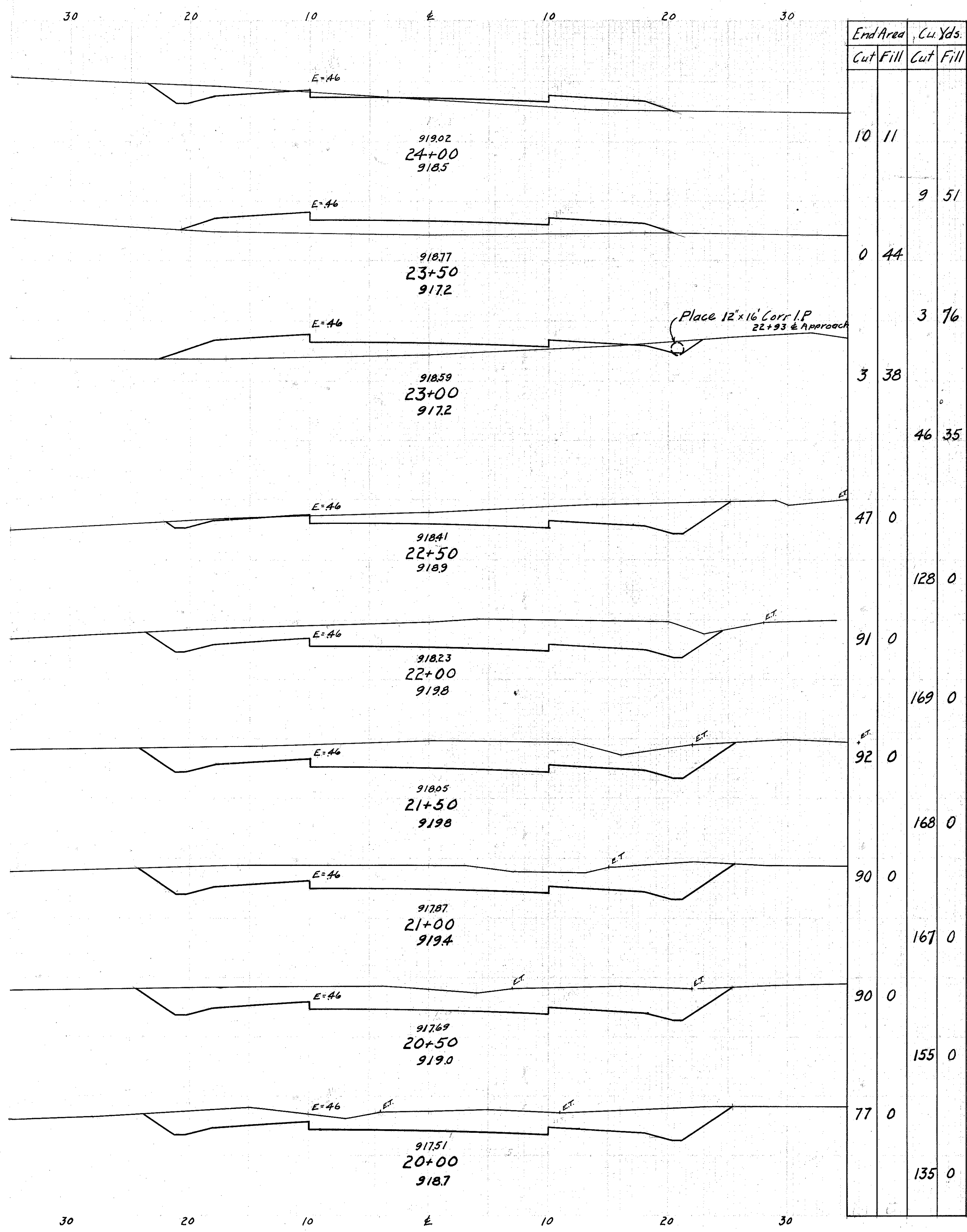
End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
69	0		
		99	0
38	0		
		51	4
17	4		
		43	2
60	0		
		47	0
67	0		
		37	0
67	0		
		44	18
1	27		
		5	47
4	24		
		38	32
37	10		
		131	9



30 20 10 ± 10 20

Sta's 14+00 to 19+50

Excav. 1602 Cu. Yds.
Embank. 1943 Cu. Yds.
Emb. +20 % 2332 Cu. Yds.
Borrow 730 Cu. Yds.



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Sta's 20+00 to 27+74.14

30 20 10 0 10 20 30

End Area		Cu.Yds.	
Cut	Fill	Cut	Fill
0	392		
		0	296
0	408		
		0	190
		0	314
0	440		
		0	167
0	461		
		0	729
0	523		
		0	534
0	438		
		0	352

92434
29+20
915.3

E=07

92434
29+00
917.5

E=14

92433
28+80
917.3

E=17

92431
28+70
914.2

E=29

92416
28+30
913.8

E=38

92397
28+00
915.3

Dashed Lines represent
Cross Section on E Road Approach.

Sta 28+90LT.
Build Pvi Road Approach

30 20 10 0 10 20 30

30 20 10 0 10 20

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End Area		Cu.Yds.	
Cut	Fill	Cut	Fill
0	401		
		0	483
0	285		
		1	393
1	157		
		1	64
2	91		
		1	130
1	178		
		1	235
0	351		
		0	413

92434
31+00
916.2

92434
30+62
915.8

92434
30+14
922.8

92434
30+00
923.8

92434
29+74
922.6

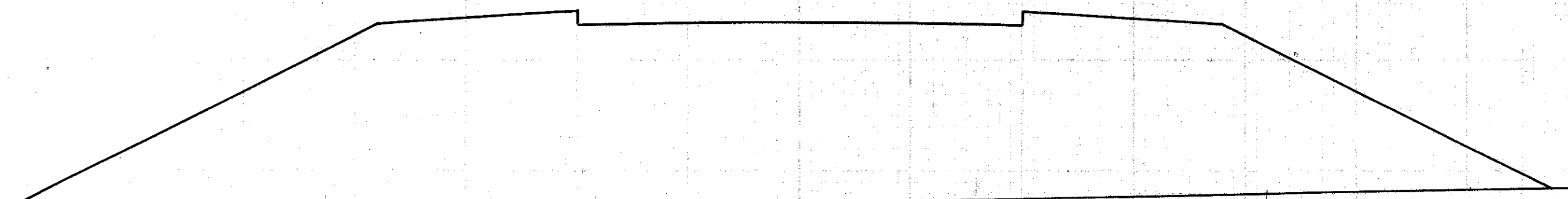
92434
29+50
914.4

Sta's 28+00 to 31+00

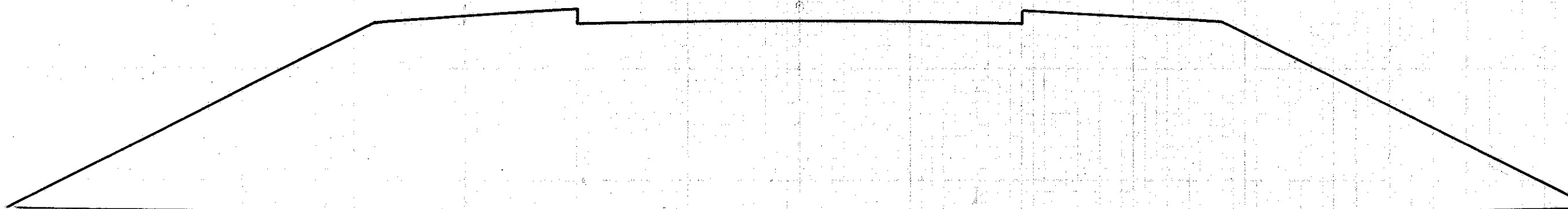
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30 20 10 4 10 20 30

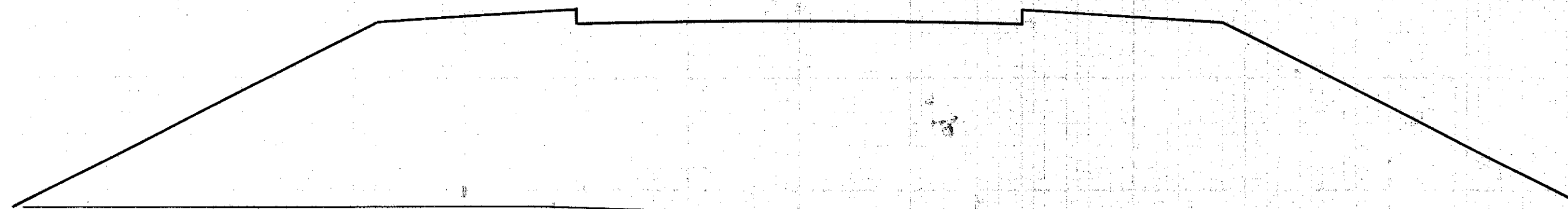
End Area		Cu Yds.	
Cut	Fill	Cut	Fill
0	432		
		0	420
0	475		
		0	439
0	474		
		0	832
0	424		
		0	744
0	379		
		0	722



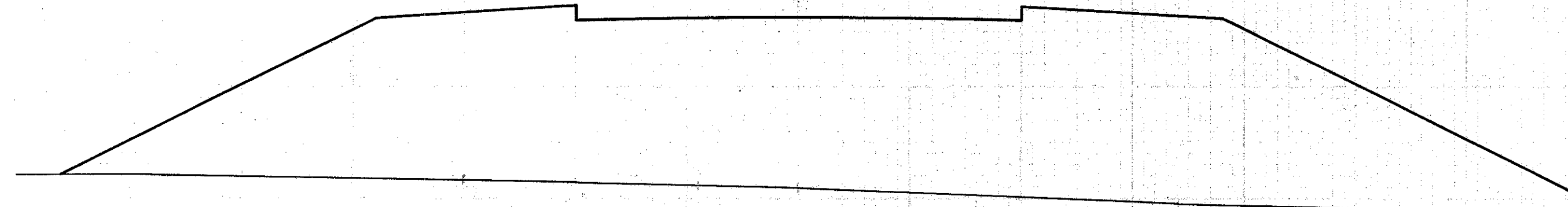
92234
33+00
913.6



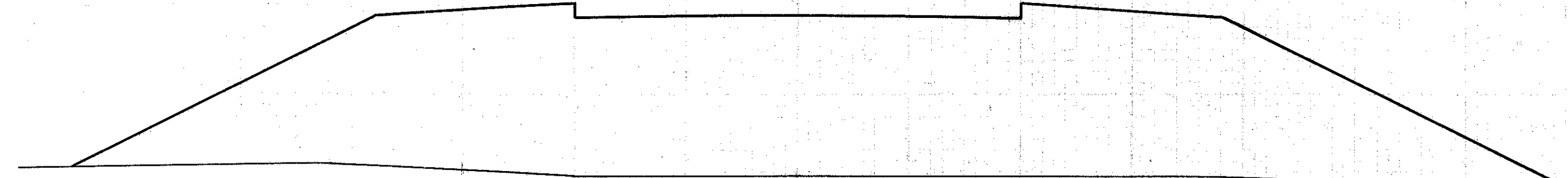
92281
32+75
913.5



92321
32+50
914.0



92384
32+00
915.5



92421
31+50
916.3

30 20 10 4 10 20 30

30 20 10 4 10 20 30

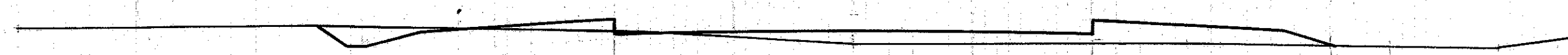
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91770
37+00
916.2



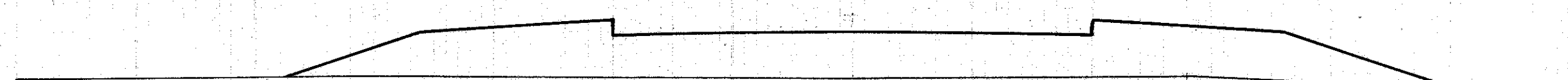
91767
36+50
916.5



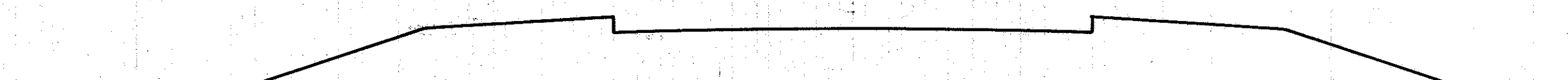
91783
36+00
916.3



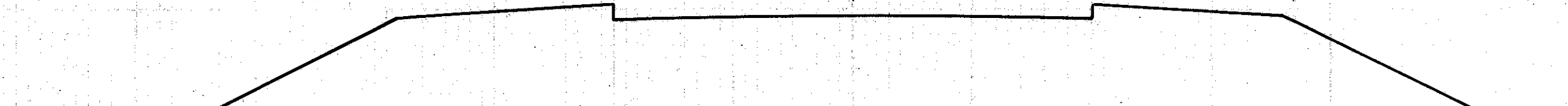
91818
35+50
916.0



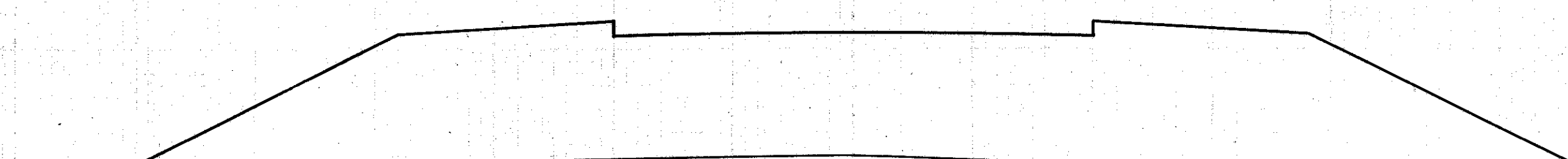
91871
35+00
916.0



91943
34+50
915.9



92034
34+00
915.5



92134
33+50
915.5

30 20 10 4 10 20 30

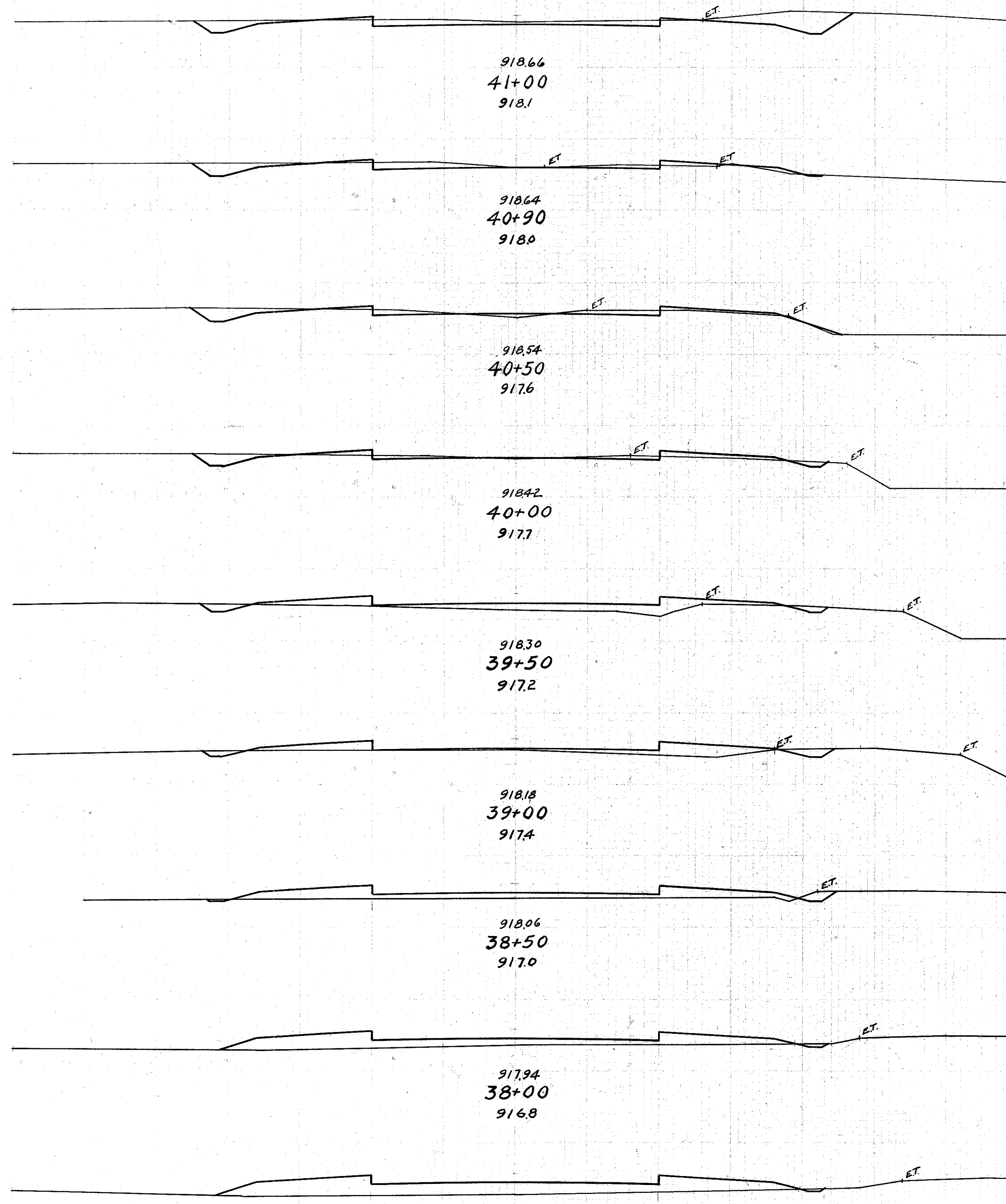
End Area		Cu Yds.	
Cut	Fill	Cut	Fill
1	27		
		3	39
2	15		
		3	45
1	34		
		1	87
0	60		
		0	137
0	88		
		0	195
0	123		
		0	294
0	194		
		0	432
0	272		
		0	652

Excav. 29 Cu Yds.
Embank. 6205 Cu Yds.
Emb. +20% 7446 Cu Yds.
Short 7417 Cu Yds.
Borrow 3207 Cu Yds.
- Obtain 4210 C.Y. from Sta. 60+00 to 82+36.9

Sta's 31+50 to 37+00

30 20 10 0 10 20 30

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
18	1		
	5	1	
8	2		
	11	3	
7	2		
	12	6	
6	4		
	7	18	
2	16		
	4	26	
2	12		
	3	29	
1	19		
	2	41	
1	25		
	2	56	
1	35		
	2	57	



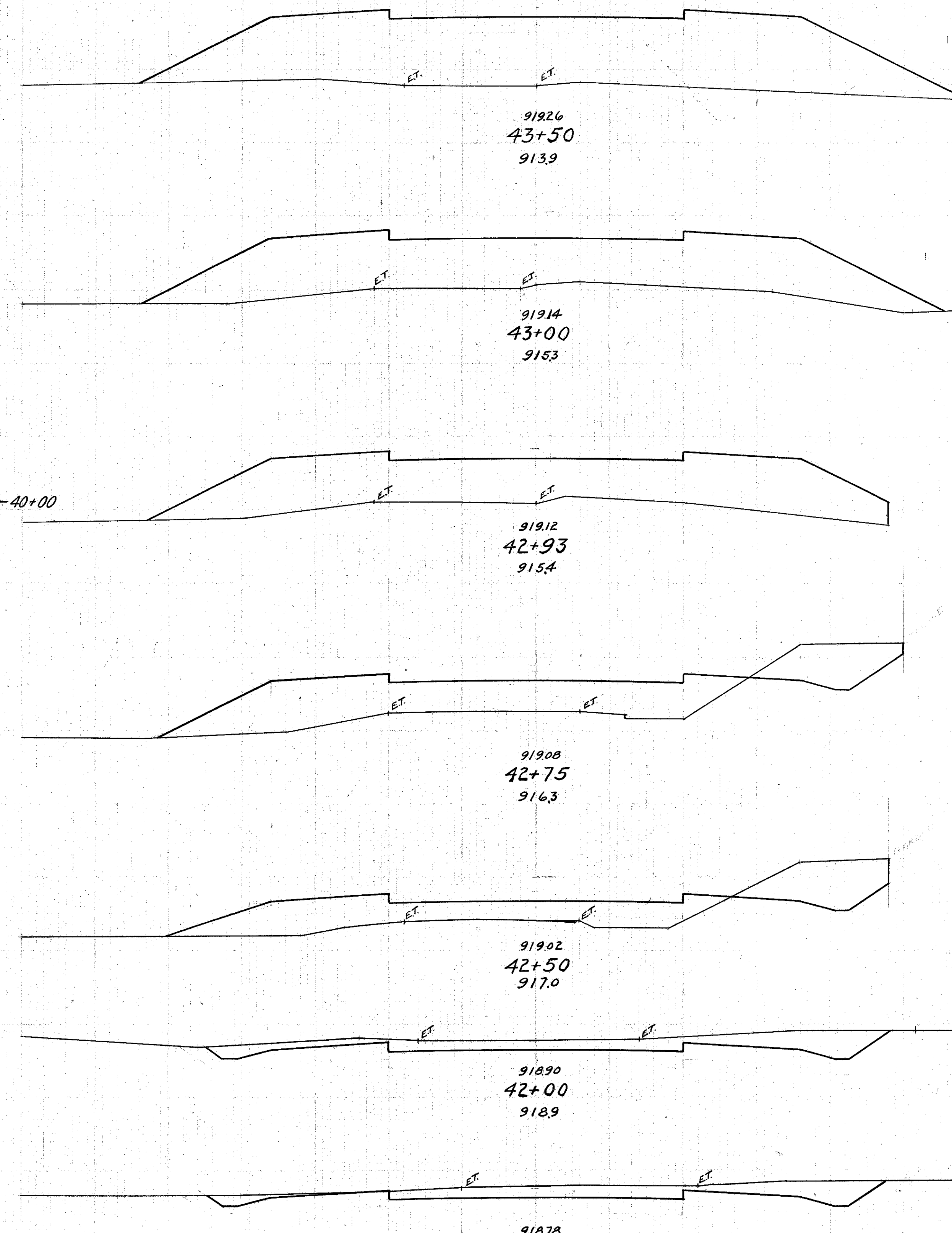
30 20 10 0 10 20 30

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End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
0	221		
	0	357	
0	165		
	0	41	
0	150		
	7	80	
22	90		
	21	69	
24	59		
	57	55	
37	0		
	64	0	
32	0		
	46	1	



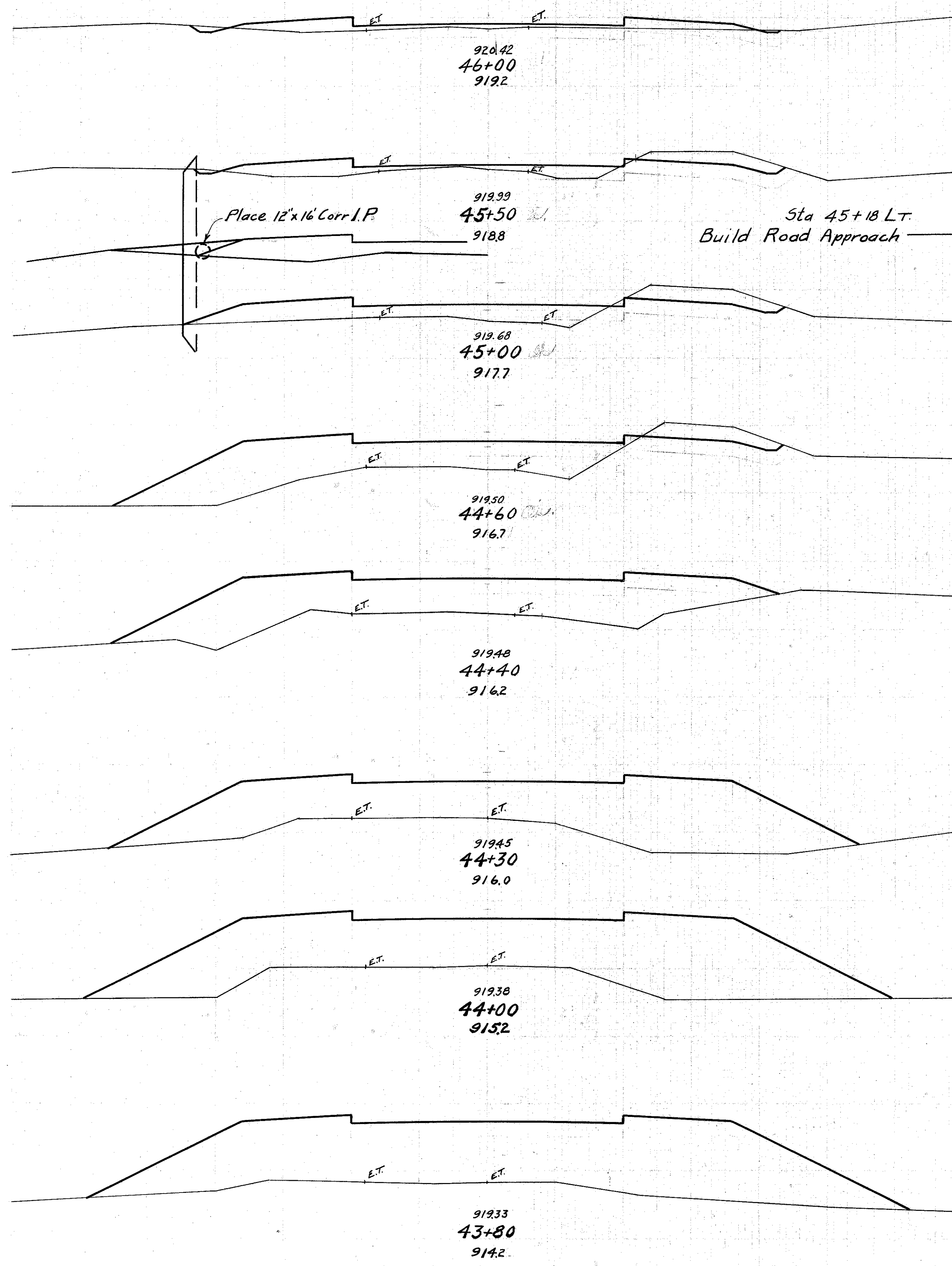
Sta's 37+50 to 43+50

30 20 10 0 10 20 30

30 20 10 0 10 20 30

30 20 10 0 10 20 30

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
1	17		
		9	32
9	18		
		0	2
	18	18	48
10	34		
		15	92
10	91		
		4	81
0	129		
		0	57
0	180		
		0	222
0	220		
		0	172
0	245		
		0	259



30 20 10 0 10 20 30

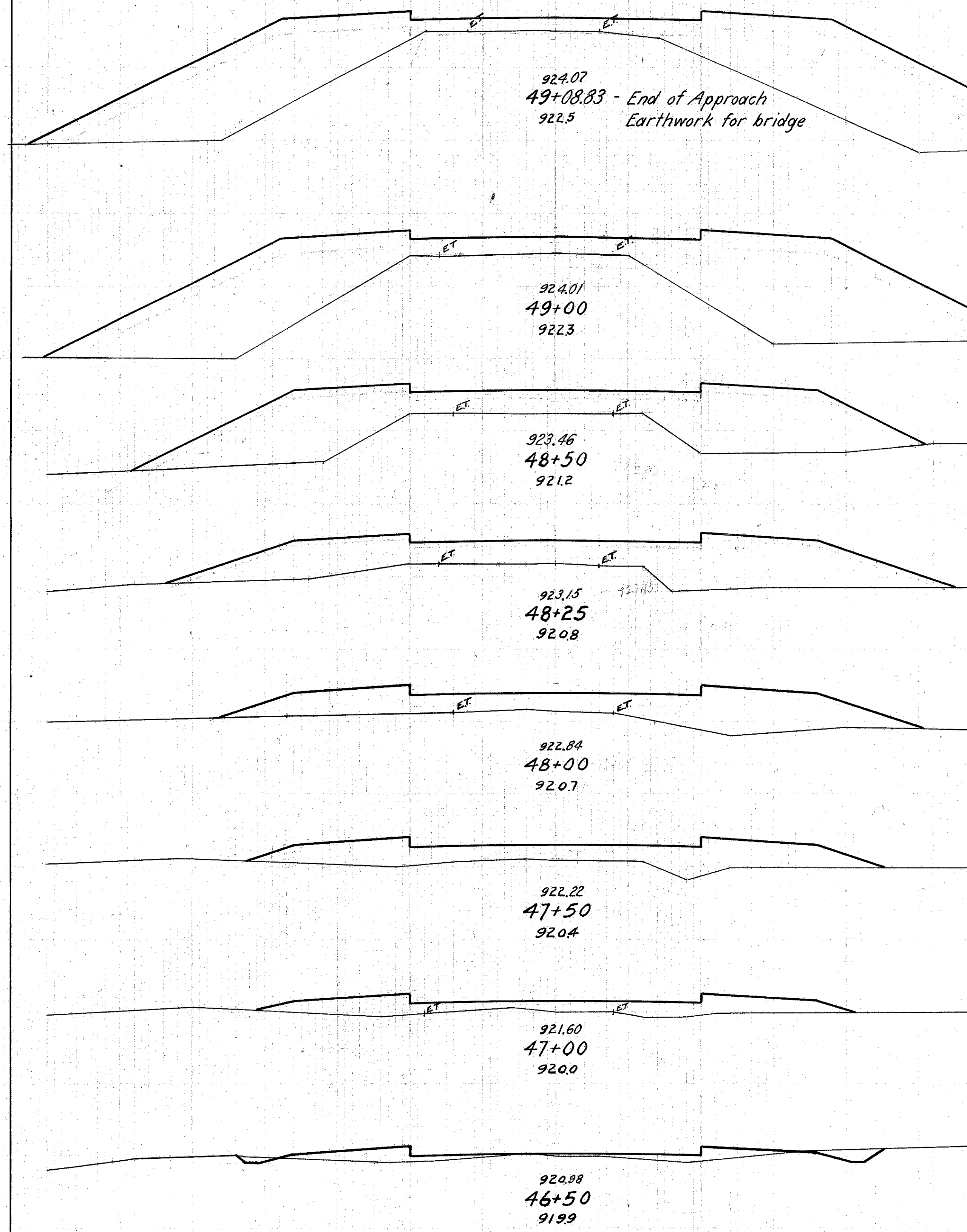
30 20 10 0 10 20 30

FED AID DIST No	STATE	FED AID PROJECT	FISCAL YEAR
10	OHIO	630-C	1932

14
30

S.H. (I.C.H.) 77 SEC. T.
TUSCARAWAS COUNTY.

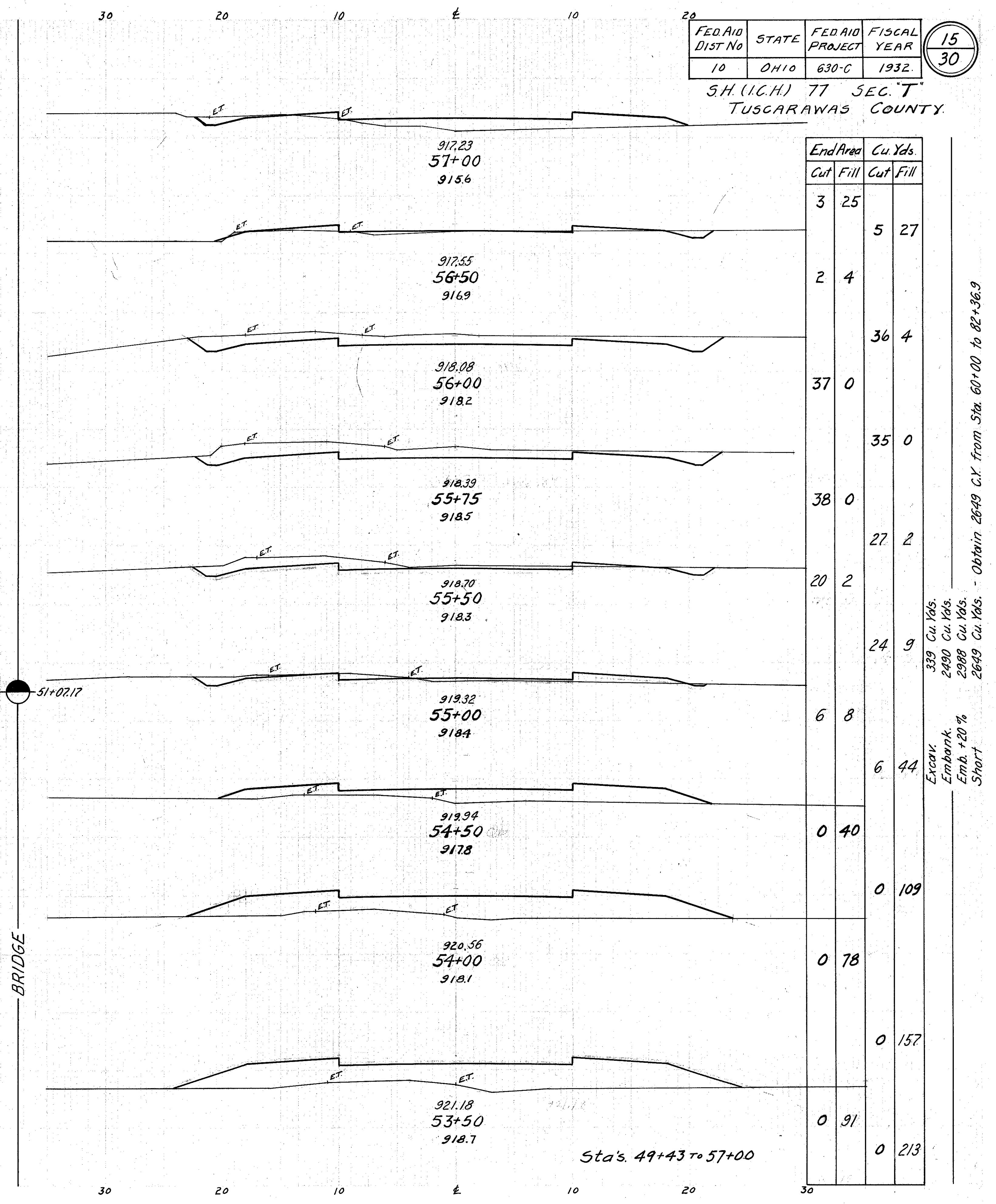
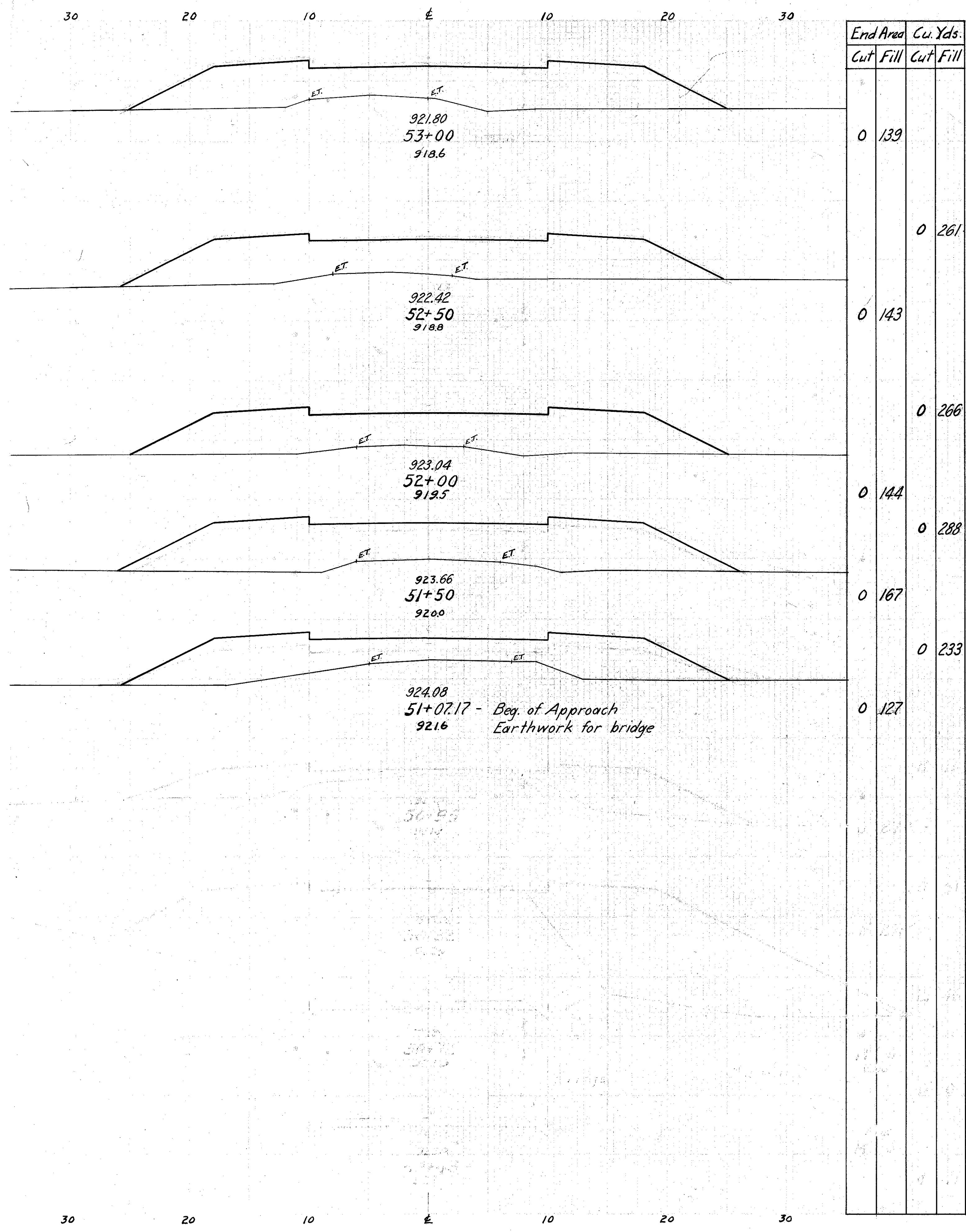
End Area		Cu Yds	
Cut	Fill	Cut	Fill
0	239		
		0	79
0	242		
		0	364
0	151		
		0	120
0	108		
		0	87
0	79		
		0	127
0	58		
		0	87
0	36		
		4	46
4	14		
		5	29



30 20 10 0 10 20 30

Sta's 43+80 to 49+30

Excav. 278 Cu. Yds.
Embank. 2517 Cu. Yds.
Short 3020 Cu. Yds.
Obtain 2742 Cu. Yds. from Sta. 60+00 to 82+36.9

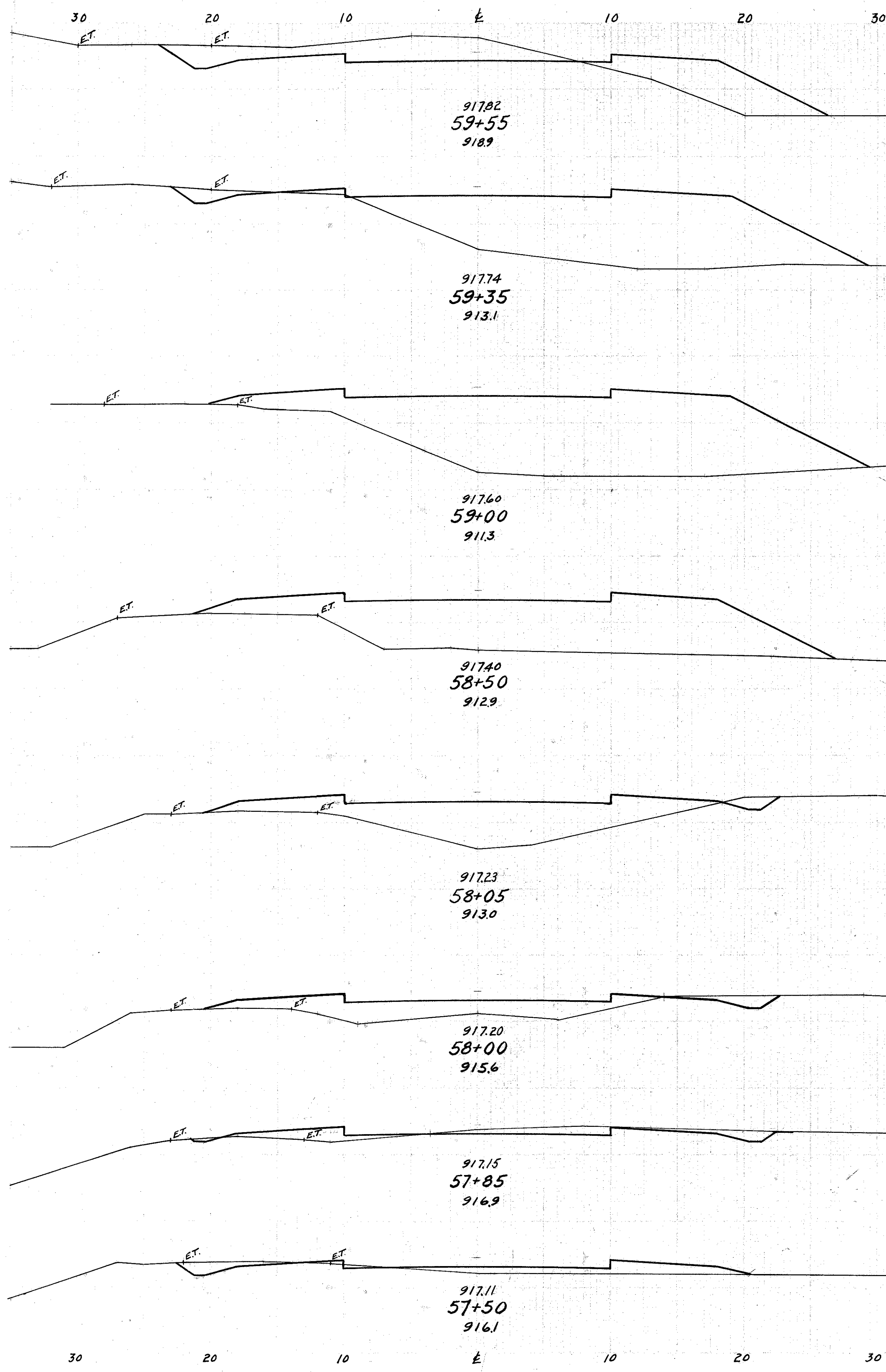


FED. AID DIST. No. 10
 STATE OHIO
 FED. AID PROJECT 630-C
 FISCAL YEAR 1932.
 5 H. (I.C.H.) 77 SEC. T
 TUSCARAWAS COUNTY

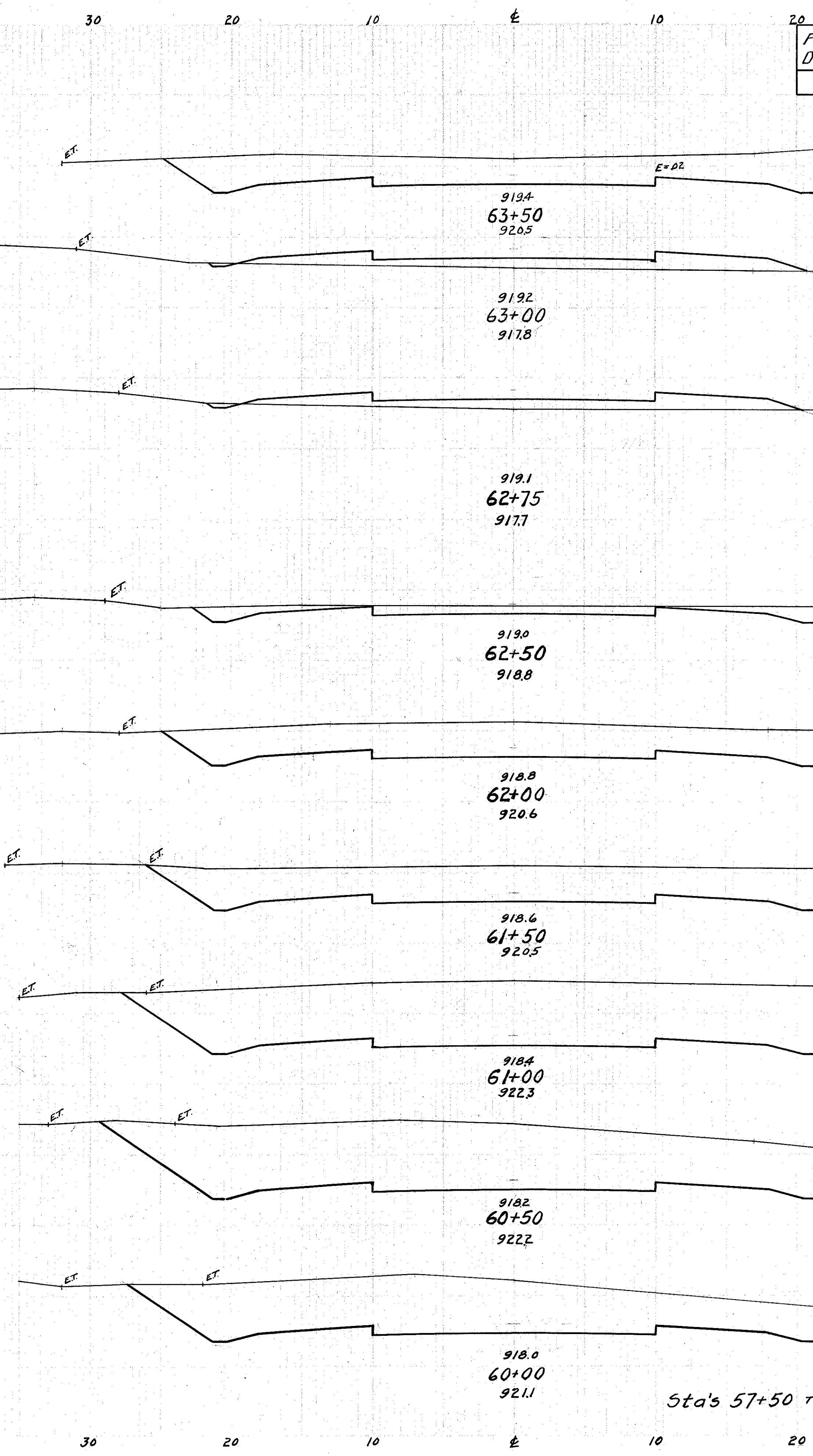
15
30

339 Cu. Yds. Excav.
 2490 Cu. Yds. Embank.
 2988 Cu. Yds. Emb. +20%
 2649 Cu. Yds. Short
 - Obtain 2649 C.Y. from Sta. 60+00 to 82+36.9

Sta's. 49+43 to 57+00



End Area		Cu Yds.	
Cut	Fill	Cut	Fill
38	34		
		16	66
4	145		
		2	218
0	191		
		0	310
0	144		
		3	182
3	74		
		1	10
4	38		
		4	12
10	6		
		9	14
4	15		
		7	37



FED AID DIST NO	STATE	FED AID PROJECT	FISCAL YEAR
10	OHIO	630-C	1932

S.H. (I.C.H.) 77 SEC. "T"
TUSCARAWAS COUNTY.

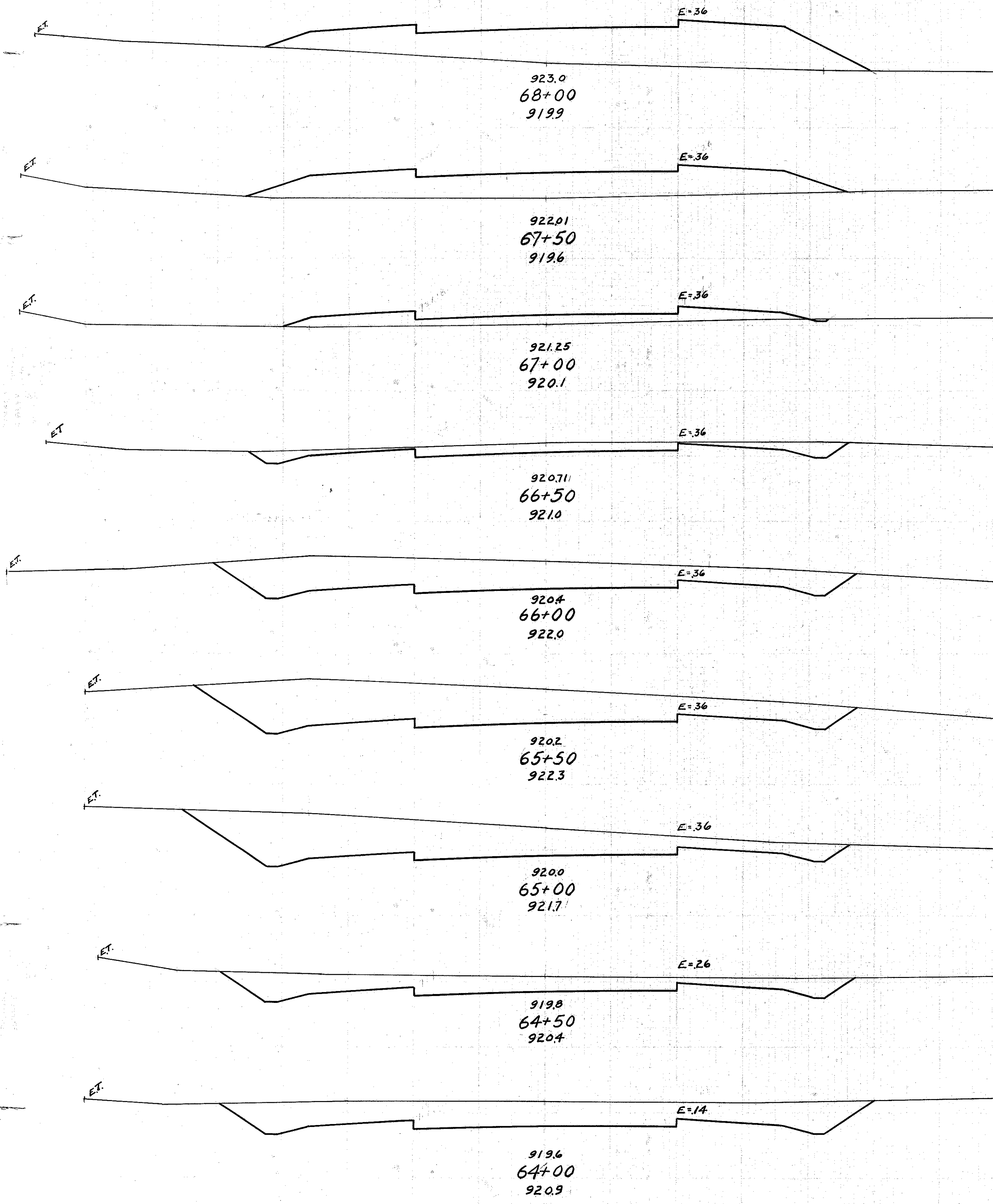
16
30

End Area		Cu Yds.	
Cut	Fill	Cut	Fill
99	0		
		93	28
1	30		
		1	27
		1	28
		13	13
27	0		
		123	0
106	0		
		207	0
118	0		
		313	0
220	0		
		401	0
213	0		
		345	0
159	0		
		164	28

Sta's 57+50 to 63+50

60+00

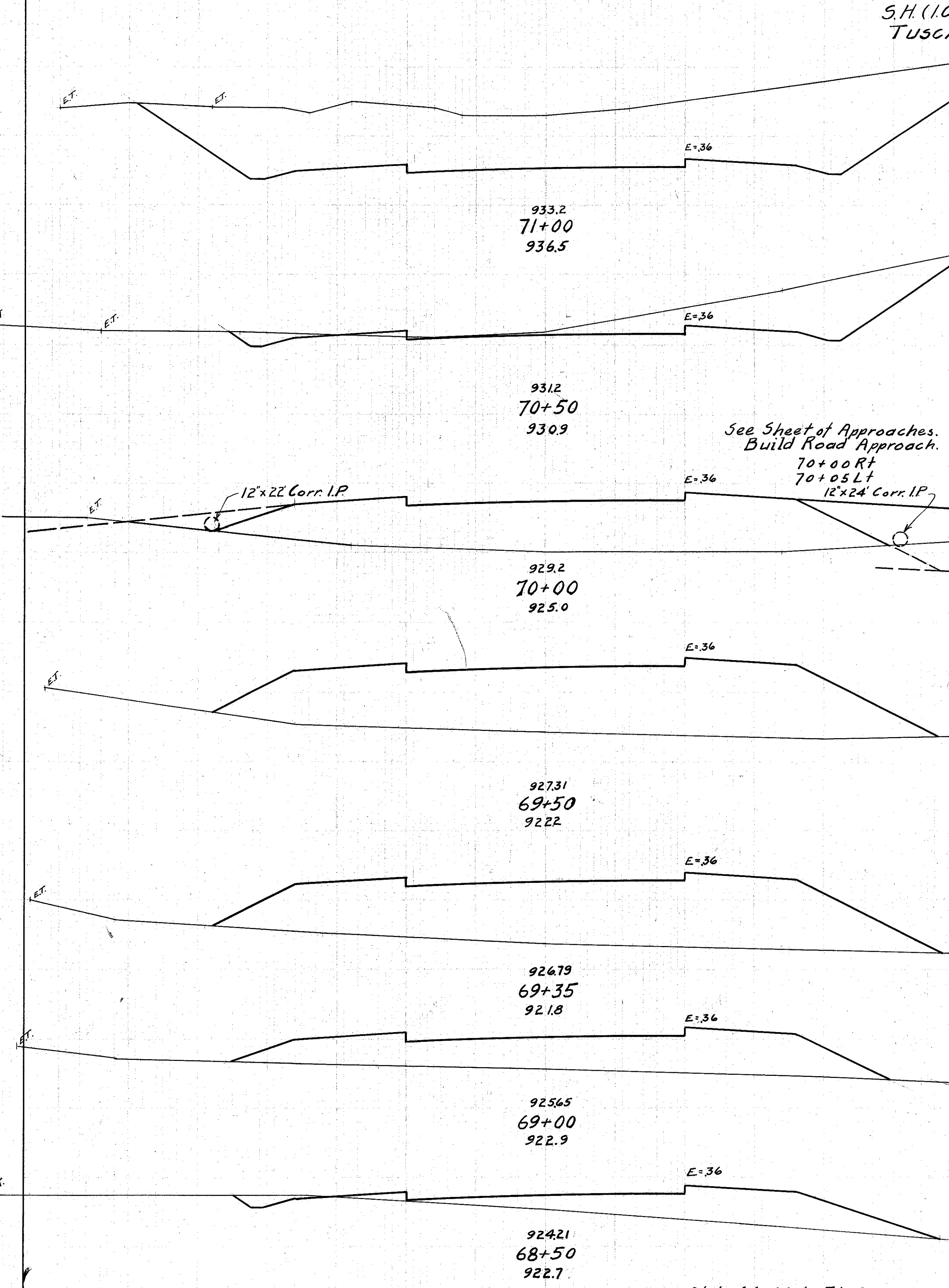
30 20 10 E 10 20 30



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
0	104	0	170
0	80	0	102
0	30	26	28
28	0	115	0
96	0	201	0
121	0	210	0
106	0	149	0
55	0	133	0
89	0	174	0

30 20 10 E 10 20 30

30 20 10 E 10 20



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
264	0	305	1
66	1	0	136
0	148	20	18
0	330	61	138
0	208	0	112
0	195	0	192
0	102	3	146
3	56	3	148

30 20 10 E 10 20

FED. AID DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	630-C	1932

S.H. (I.C.H.) 77 SEC. "T"
TUSCARAWAS COUNTY.

17

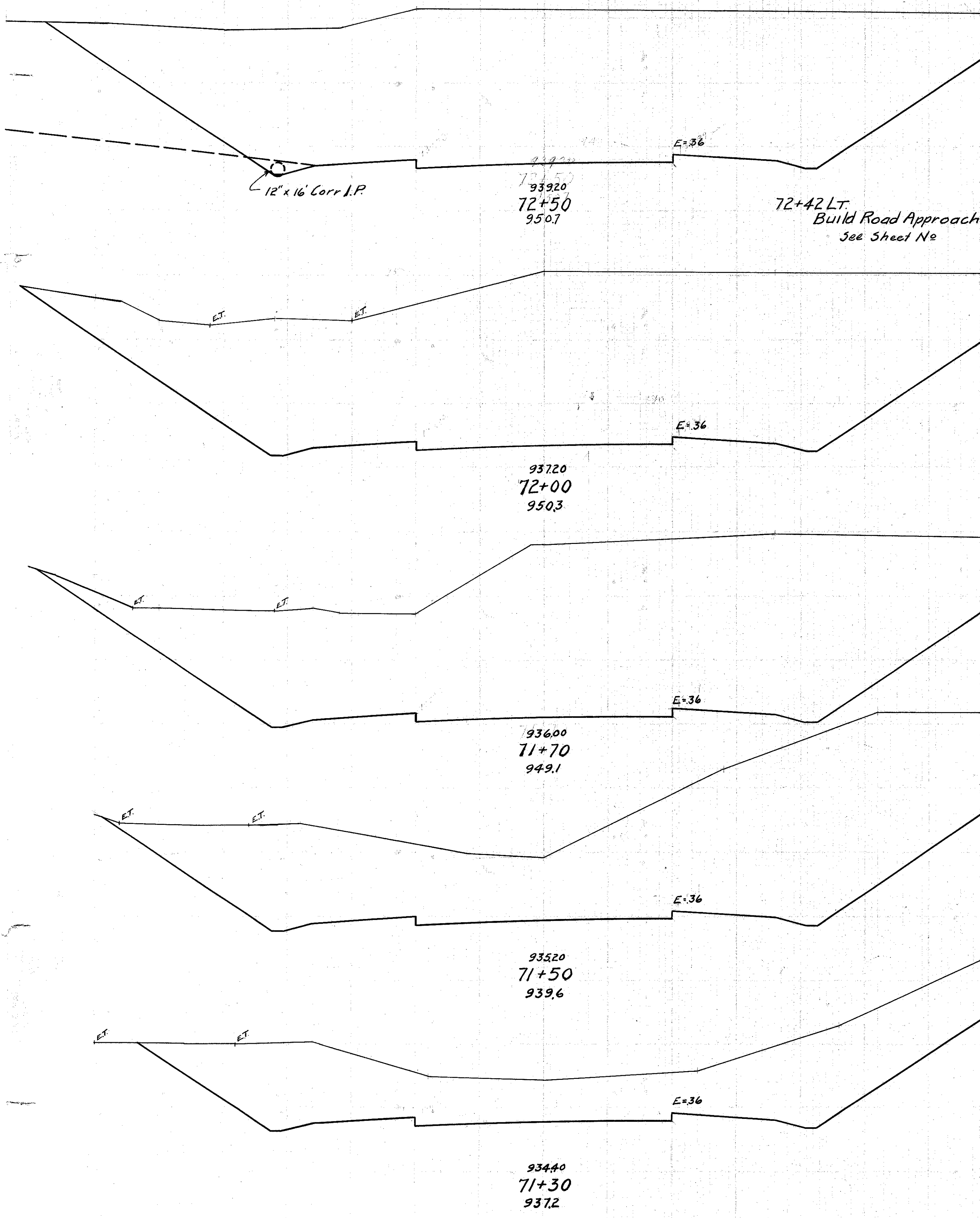
30

Excav. 2510 Cu. Yds.
Embank. 1296 Cu. Yds.
Emb. +20% 1555 Cu. Yds.
Excess 935 Cu. Yds.

Sta's 64+00 to 71+00

30 20 10 0 10 20 30

End Area		Cu Yds.	
Cut	Fill	Cut	Fill
713	0	383	0
1373	0		
770	0		
832	0		
728	0		
489	0		
593	0		
346	0		
342	0	337	0



30 20 10 0 10 20 30

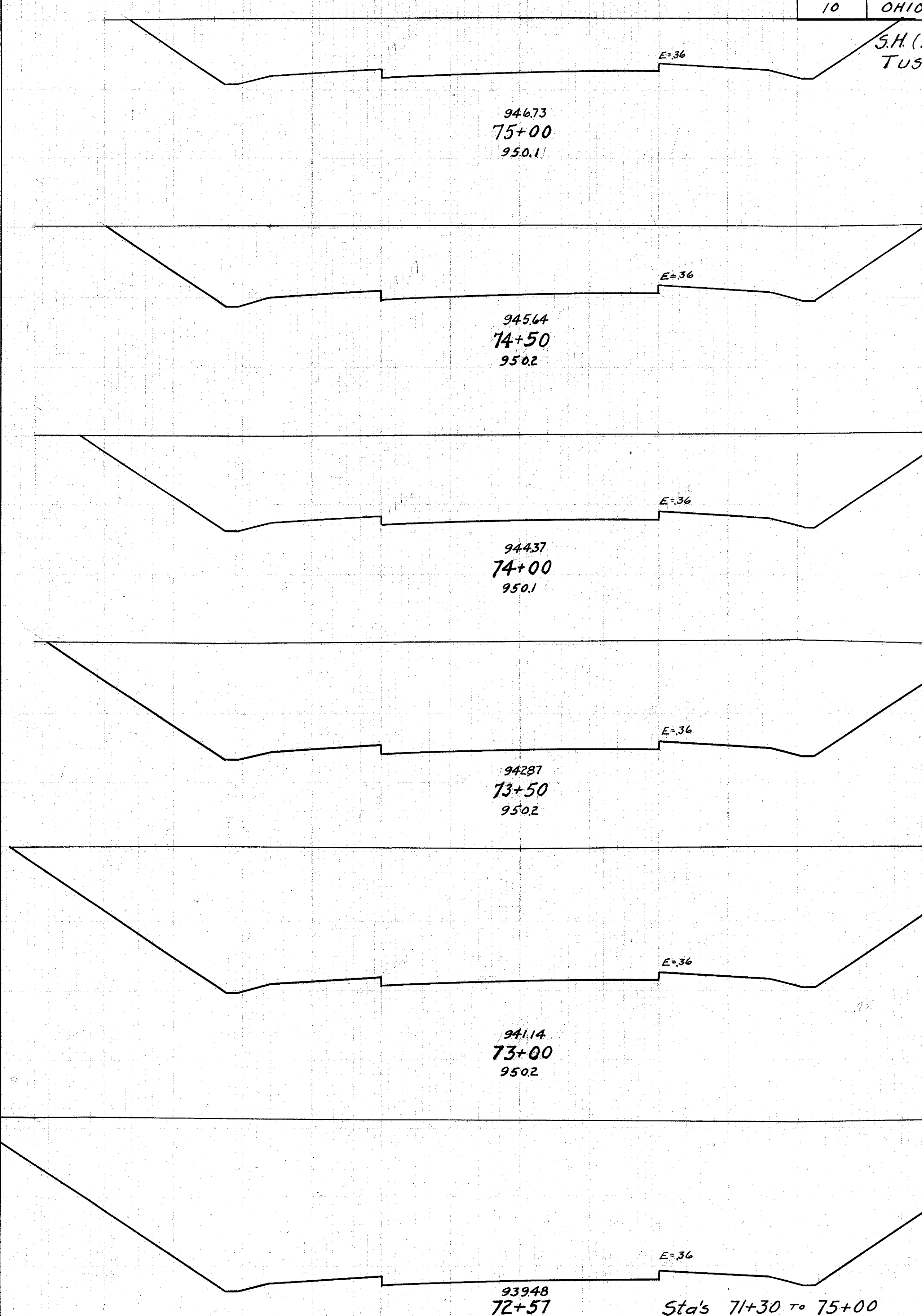
30 20 10 0 10 20

FED.AID DIST NO.	STATE	FED.AID PROJECT	FISCAL YEAR
10	OHIO	630-C	1932

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30

S.H. (I.C.H.) 77 SEC. "T"
TUSCARAWAS COUNTY.

End Area		Cu Yds.	
Cut	Fill	Cut	Fill
197	0		
259	0	422	0
340	0	555	0
441	0	723	0
569	0	935	0
730	0	1034	0
187	0		

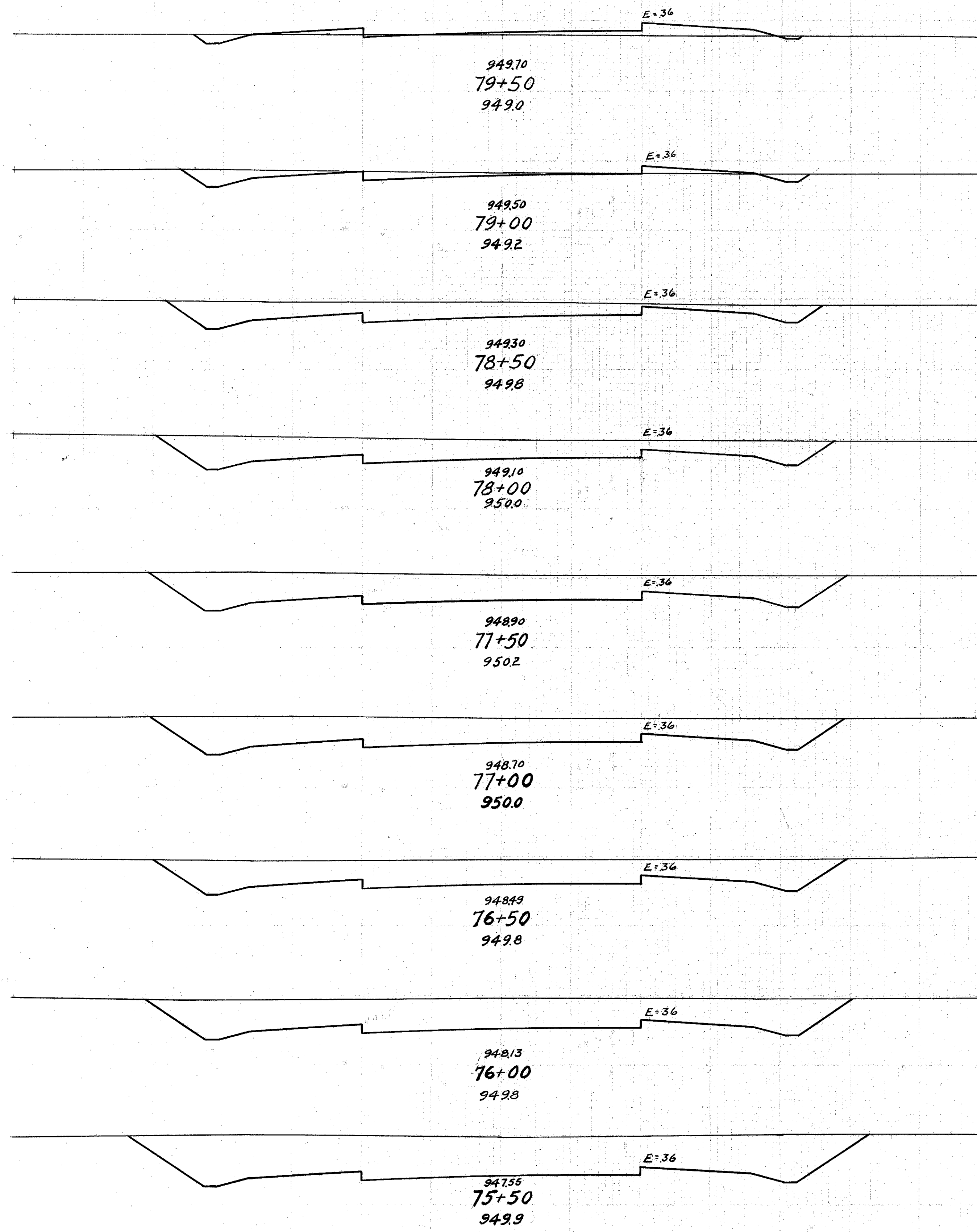


30 20 10 0 10 20

Excav. 9373 Cu. Yds.
Emb. 606 Cu. Yds.
Emb. + 20% 727 Cu. Yds.
Excess 8646 Cu. Yds.

30 20 10 E 10 20 30

End Areas		Cu. Yds.	
Cut	Fill	Cut	Fill
3	12		
		15	14
13	3		
		55	3
46	0		
		105	0
68	0		
		145	0
89	0		
		163	0
87	0		
		158	0
84	0		
		173	0
103	0		
		231	0
146	0		
		318	0



30 20 10 E 10 20 30

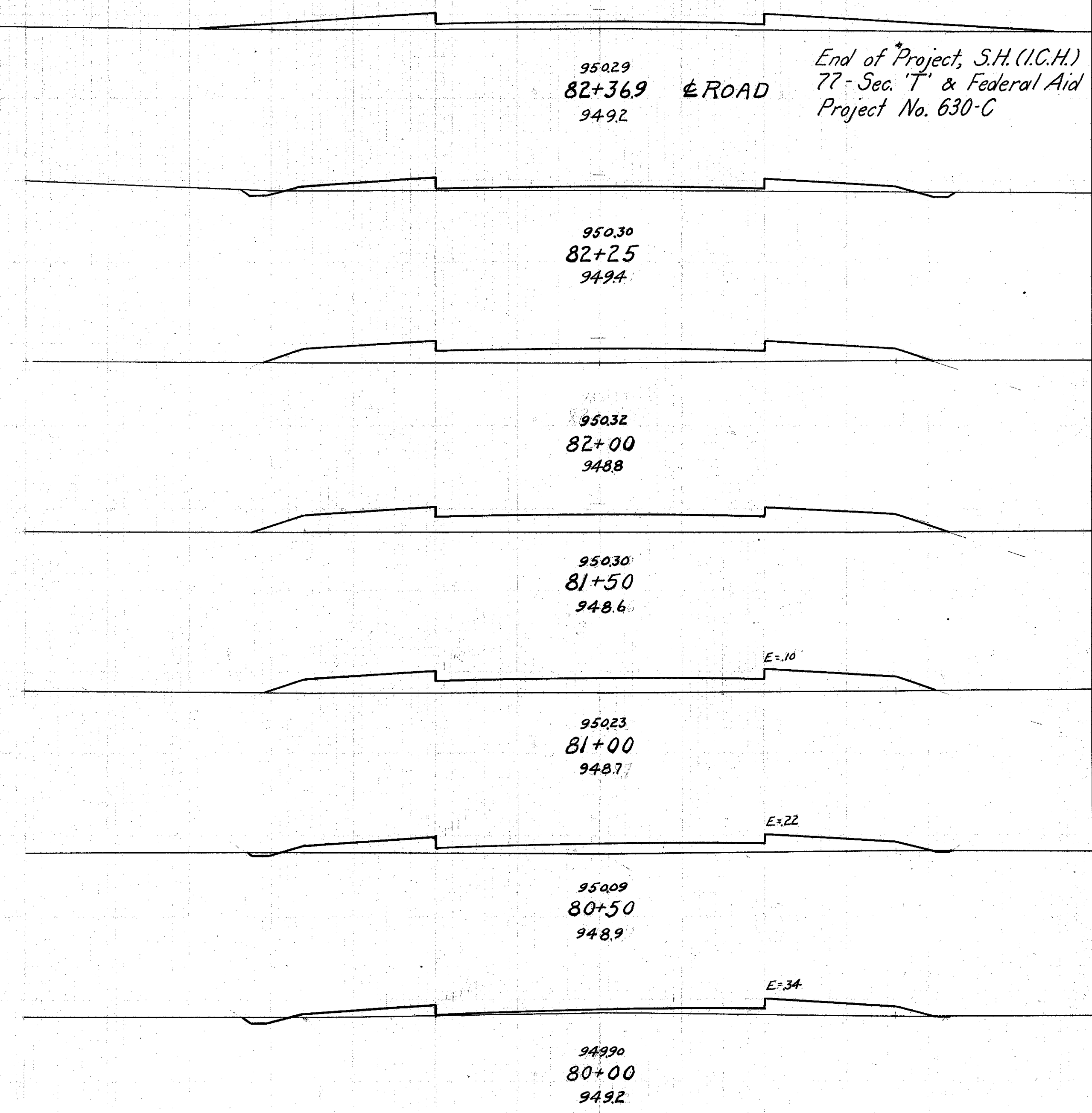
30 20 10 E 10 20

FED AID DIST NO	STATE	FED AID PROJECT	FISCAL YEAR
10	OHIO	630-C	1932

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S.H. (I.C.H.) 77 - SEC. "T"
TUSCARAWAS COUNTY.

End Area		Cu Yds	
Cut	Fill	Cut	Fill
0	23		
		0	8
1	13		
		1	22
0	34		
		0	72
0	44		
		0	76
0	38		
		1	56
1	23		
		2	36
1	16		
		4	26



30 20 10 E 10 20 Sta's 75+50 to 82+36.9

FED AID DIST. NO	STATE	FED AID PROJECT	FISCAL YEAR	20 30
10	OHIO	630-C	1932	

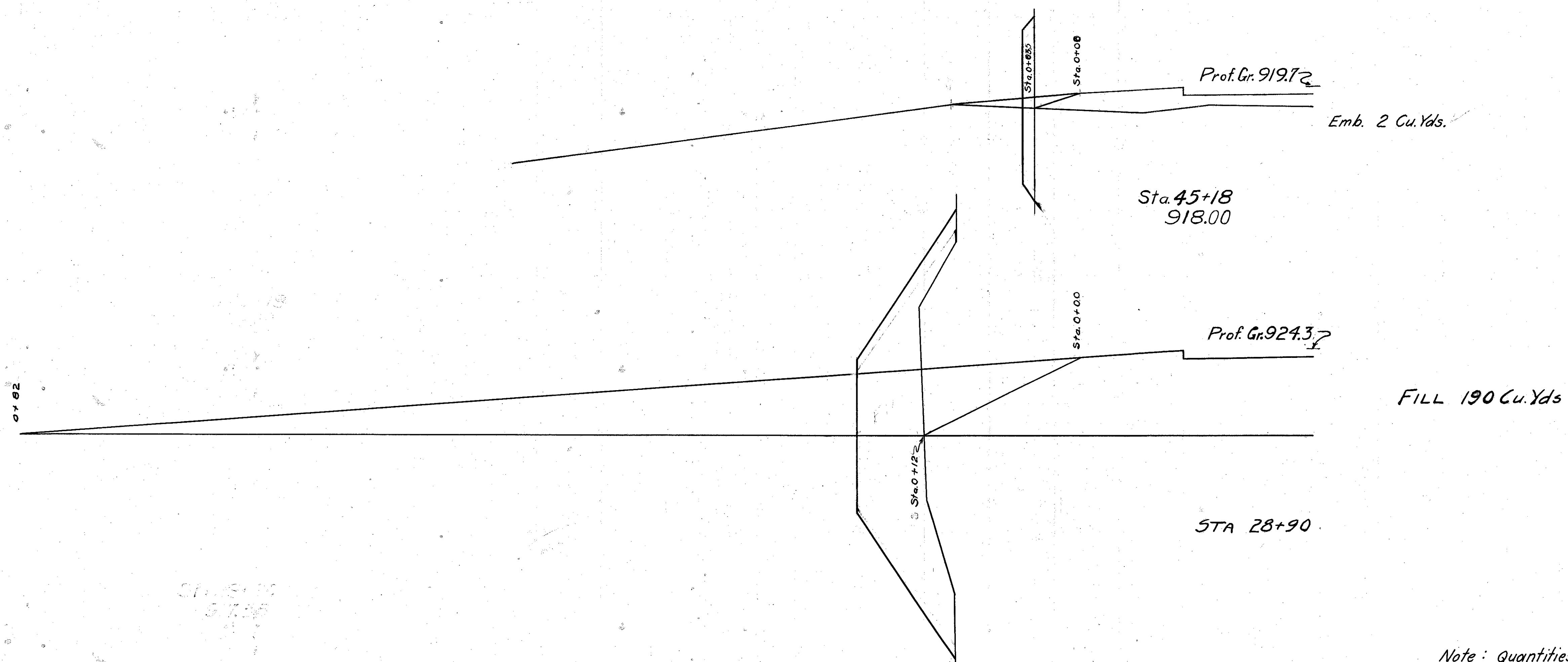
S.H. (I.C.H) 77-SEC. 'T'
TUSCARAWAS COUNTY

Prof. Gr. 917.25
No Ydg.

Sta. 57+80
916.83

Prof. Gr. 921.0
No Ydg.

Sta. 46+70
920.08



Prof. Gr. 918.57
No Ydg.

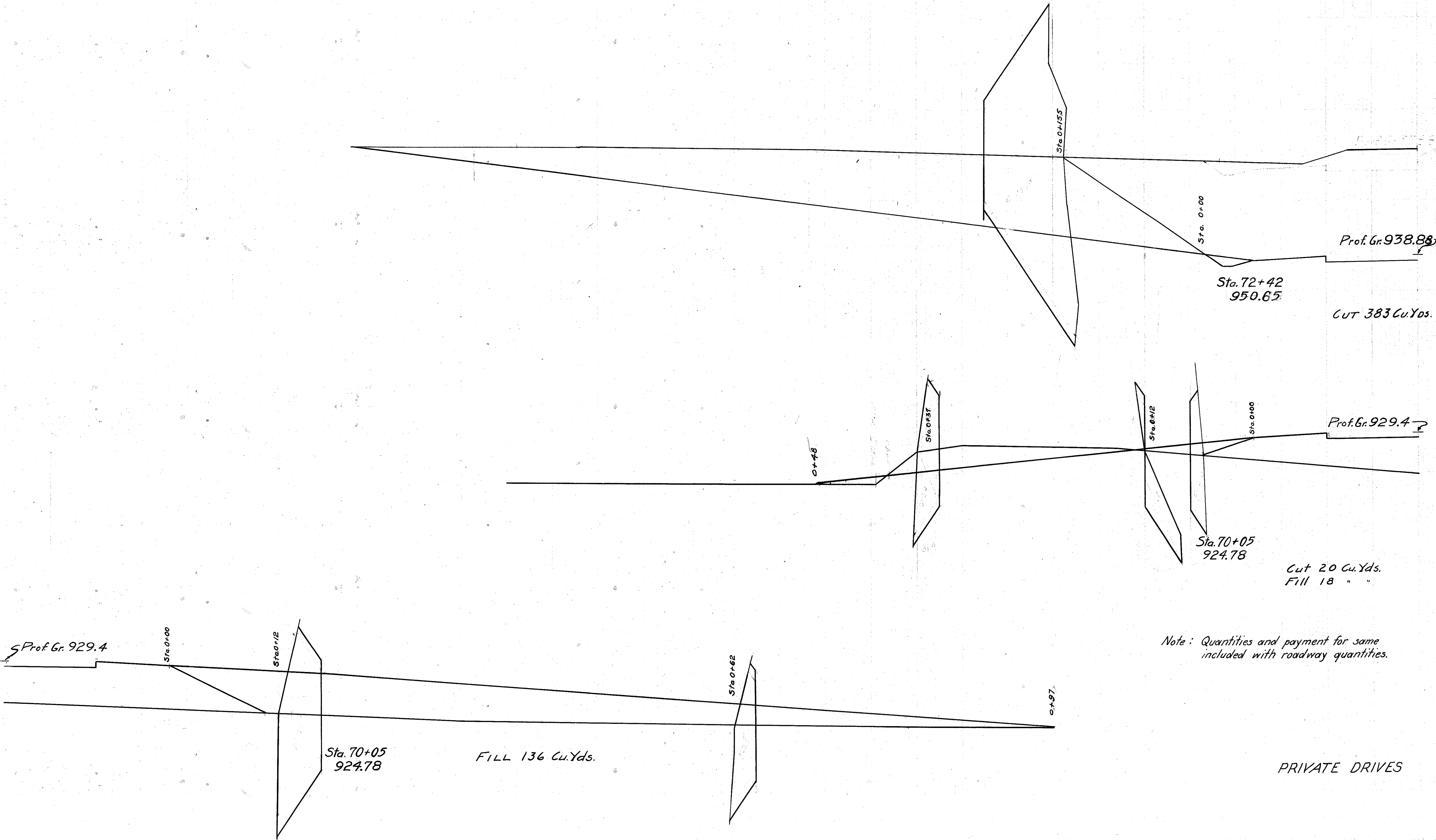
Sta. 22+93
917.79

Note: Quantities and payment for
same included with roadway
quantities.

PRIVATE DRIVES

FED AID DIST No	STATE	FED AID PROJECT	FISCAL YEAR	
10	OHIO	630-C	1932	21 30

S.H.(I.C.H.) 77 - SEC. "T"
TUSCARAWAS COUNTY

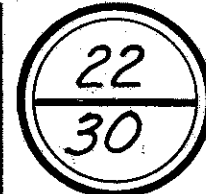


Note : Quantities and payment for same
included with roadway quantities.

PRIVATE DRIVES

CURVE TABLES

FED. AID DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	630-C	1932



S.H. (I.C.H.) 77 - SEC. 'T'
TUSCARAWAS COUNTY

P.C. - 4+13.03			L.C. - 2411.11		P.T. - 28+24.14	
			D - 1°-30' Rt.			
LEFT					RIGHT	
EDGE OF PAV'T.	WIDTH	STATION	E GRADE ELEV.	WIDTH	EDGE OF PAV'T.	
911.43	10.00	3+16.42	911.60	10.00	911.43	
911.45		3+25	911.58		911.41	
911.55		3+50	911.61		911.44	
911.69		3+75	911.67		911.50	
911.85		4+00	911.75		911.58	
911.95		4+16.42	911.81		911.64	
912.01		4+25	911.84		911.67	
912.18		4+50	911.93		911.76	
912.28		4+66.42	911.99		911.82	
912.31		4+75	912.02		911.85	
912.40		5+00	912.11		911.94	
912.49		5+25	912.20		912.03	
912.58		5+50	912.29		912.12	
912.67		5+75	912.38		912.21	
912.76		6+00	912.47		912.30	
912.85		6+25	912.56		912.39	
912.94		6+50	912.65		912.48	
913.03		6+75	912.74		912.57	
913.12		7+00	912.83		912.66	
913.21		7+25	912.92		912.75	
913.30		7+50	913.01		912.84	
913.39		7+75	913.10		912.93	
913.48		8+00	913.19		913.02	
913.57		8+25	913.28		913.11	
913.66		8+50	913.37		913.20	
913.75		8+75	913.46		913.29	
913.84		9+00	913.55		913.38	
913.93		9+25	913.64		913.47	
914.02		9+50	913.73		913.56	
914.11		9+75	913.82		913.65	
914.20		10+00	913.91		913.74	
914.29		10+25	914.00		913.83	
914.38		10+50	914.09		913.92	
914.47		10+75	914.18		914.01	
914.56		11+00	914.27		914.10	
914.65		11+25	914.36		914.19	
914.74		11+50	914.45		914.28	
914.83		11+75	914.54		914.37	
914.92		12+00	914.63		914.46	
915.01		12+25	914.72		914.55	
915.10		12+50	914.81		914.64	
915.19		12+75	914.90		914.73	
915.28		13+00	914.99		914.82	
915.37		13+25	915.08		914.91	
915.46		13+50	915.17		915.00	
915.55		13+75	915.26		915.09	
915.64		14+00	915.35		915.18	
915.73		14+25	915.44		915.27	
915.82		14+50	915.53		915.36	
915.91		14+75	915.62		915.45	
916.00		15+00	915.71		915.54	
916.09		15+25	915.80		915.63	
916.18		15+50	915.89		915.72	
916.27		15+75	915.98		915.81	
916.36		16+00	916.07		915.90	
916.45		16+25	916.16		915.99	
916.54		16+50	916.25		916.08	
916.63		16+75	916.34		916.17	
916.72		17+00	916.43		916.26	
916.81		17+25	916.52		916.35	
916.90		17+50	916.61		916.44	
916.99		17+75	916.70		916.53	
917.08		18+00	916.79		916.62	
917.17		18+25	916.88		916.71	
917.26		18+50	916.97		916.80	
917.35		18+75	917.06		916.89	
917.44		19+00	917.15		916.98	
917.53	10.00	19+25	917.24	10.00	917.07	
Continued						

917.62	10.00	19+50	917.33	10.00	917.16
917.71		19+75	917.42		917.25
917.80		20+00	917.51		917.34
917.89		20+25	917.60		917.43
917.98		20+50	917.69		917.52
918.07		20+75	917.78		917.61
918.16		21+00	917.87		917.70
918.25		21+25	917.96		917.79
918.34		21+50	918.05		917.88
918.43		21+75	918.14		917.97
918.52		22+00	918.23		918.06
918.61		22+25	918.32		918.15
918.70		22+50	918.41		918.24
918.79		22+75	918.50		918.33
918.88		23+00	918.59		918.42
918.97		23+25	918.68		918.51
919.06		23+50	918.77		918.60
919.17		23+75	918.88		918.71
919.31		24+00	919.02		918.85
919.49		24+25	919.20		919.03
919.70		24+50	919.41		919.24
919.95		24+75	919.66		919.49
920.23		25+00	919.94		919.77
920.56		25+25	920.27		920.10
920.91		25+50	920.62		920.45
921.28		25+75	920.99		920.82
921.65		26+00	921.36		921.19
922.02		26+25	921.73		921.56
922.40		26+50	922.11		921.94
922.77		26+75	922.48		922.31
923.14		27+00	922.85		922.68
923.49		27+25	923.20		923.03
923.79		27+50	923.50		923.33
924.05		27+77.53	923.76		923.59
924.18		28+00	923.97		923.80
924.25		28+27.53	924.11		923.94
924.31		28+50	924.25		924.08
924.30		28+75	924.32		924.15
924.24		29+00	924.34		924.17
924.17	10.00	29+27.53	924.34	10.00	924.17
No Extra Area					

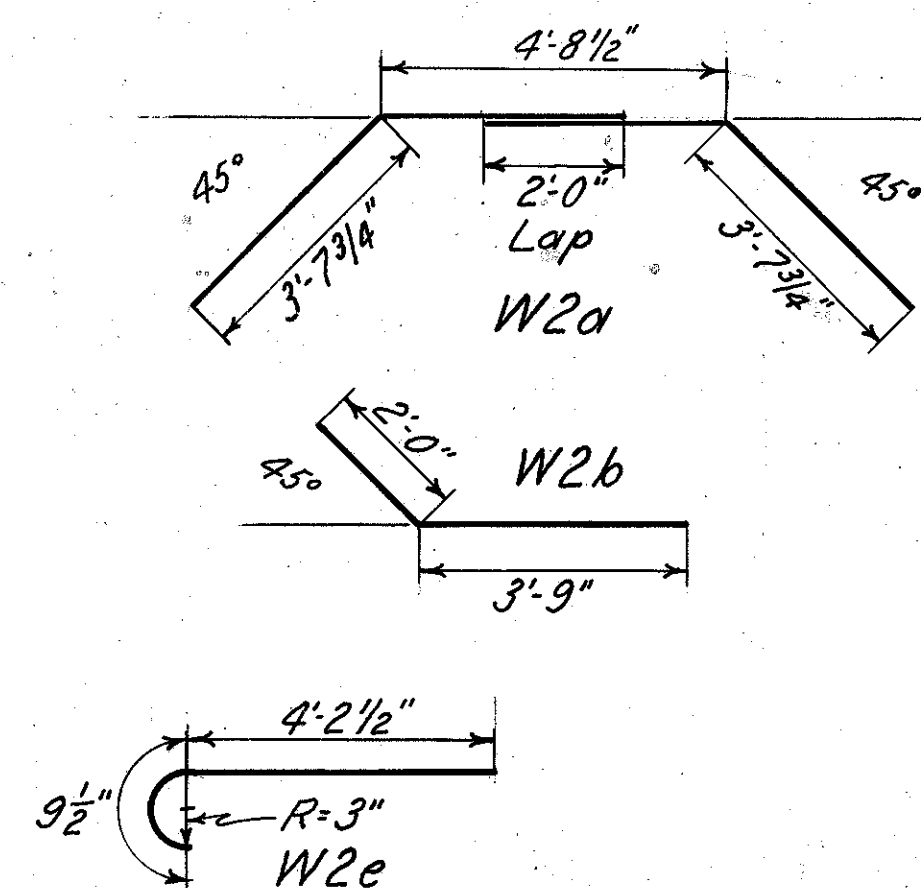
P.C. - 64+41.85		L.C. - 1600.00'		P.T. - 80+41.85	
		D - 1°-00' LT.			
LEFT				RIGHT	
EDGE OF PAV'T.	WIDTH	STATION	E GRADE ELEV.	WIDTH	EDGE OF PAV'T.
919.20	10.00	63+41.85	919.37	10.00	919.20
919.23		63+50	919.40		919.25
919.33		63+75	919.50		919.41
919.43		64+00	919.60		919.57
919.53		64+25	919.70		919.73
919.60		64+41.85	919.77		919.84
919.63		64+50	919.80		919.89
919.73		64+75	919.90		920.05
919.80		64+91.85	919.97		920.16
919.83		65+00	920.00		920.19
919.93		65+25	920.10		920.29
920.03		65+50	920.20		920.39
920.13		65+75	920.30		920.49
920.23		66+00	920.40		920.59
920.36		66+25	920.53		920.72
920.54		66+50	920.71		920.90
920.78		66+75	920.95		921.14
921.08		67+00	921.25		921.44
921.43		67+25	921.60		921.79
921.84		67+50	922.01		922.20
922.31		67+75	922.48		922.67
922.8	10.00	68+00	923.00	10.00	923.19
Continued					

923.41	10.00	68+25	923.58	10.00	923.77
924.04		68+50	924.21		924.40
924.73		68+75	924.90		925.09
925.48		69+00	925.65		925.84
926.28		69+25	926.45		926.64
927.14		69+50	927.31		927.50
928.06		69+75	928.23		928.42
929.03		70+00	929.20		929.39
930.03		70+25	930.20		930.39
931.03		70+50	931.20		931.39
932.03		70+75	932.20		932.39
933.03		71+00	933.20		933.39
934.03		71+25	934.20		934.39
935.03		71+50	935.20		935.39
936.03		71+75	936.20		936.39
937.03		72+00	937.20		937.39
938.03		72+25	938.20		938.39
939.03		72+50	939.20		939.39
940.02		72+75	940.19		940.38
940.97		73+00	941.14		941.33
941.86		73+25	942.03		942.22
942.70		73+50	942.87		943.06
943.48		73+75	943.65		943.84
944.20		74+00	944.37		944.56
944.86		74+25	945.03		945.22
945.47		74+50	945.64		945.83
946.07		74+75	946.24		946.43
946.56		75+00	946.73		946.92
947.00		75+25	947.17		947.36
947.38		75+50	947.55		947.74
947.70		75+75	947.87		948.06
947.96		76+00	948.13		948.32
948.17		76+25	948.34		948.53
948.32		76+50	948.49		948.68
948.43		76+75	948.60		948.79
948.53		77+00	948.70		948.89
948.63		77+25	948.80		948.99
948.73		77+50	948.90		949.09
948.83		77+75	949.00		949.19
948.93		78+00	949.10		949.29
949.03		78+25	949.20		949.39
949.13		78+50	949.30		949.49
949.23		78+75	949.40		949.59
949.33		79+00	949.50		949.69
949.43		79+25	949.60		949.79
949.53		79+50	949.70		949.89
949.63		79+75	949.80		949.99
949.70		79+91.85	949.87		950.06
949.73		80+00	949.90		950.07
949.83		80+25	950.00		950.11
949.89		80+41.85	950.06		950.13
949.92		80+50	950.09		950.14
950.00		80+75	950.17		950.16
950.06		81+00	950.23		950.16
950.11		81+25	950.28		950.15
950.14		81+41.85	950.31		950.14
No Extra Area					

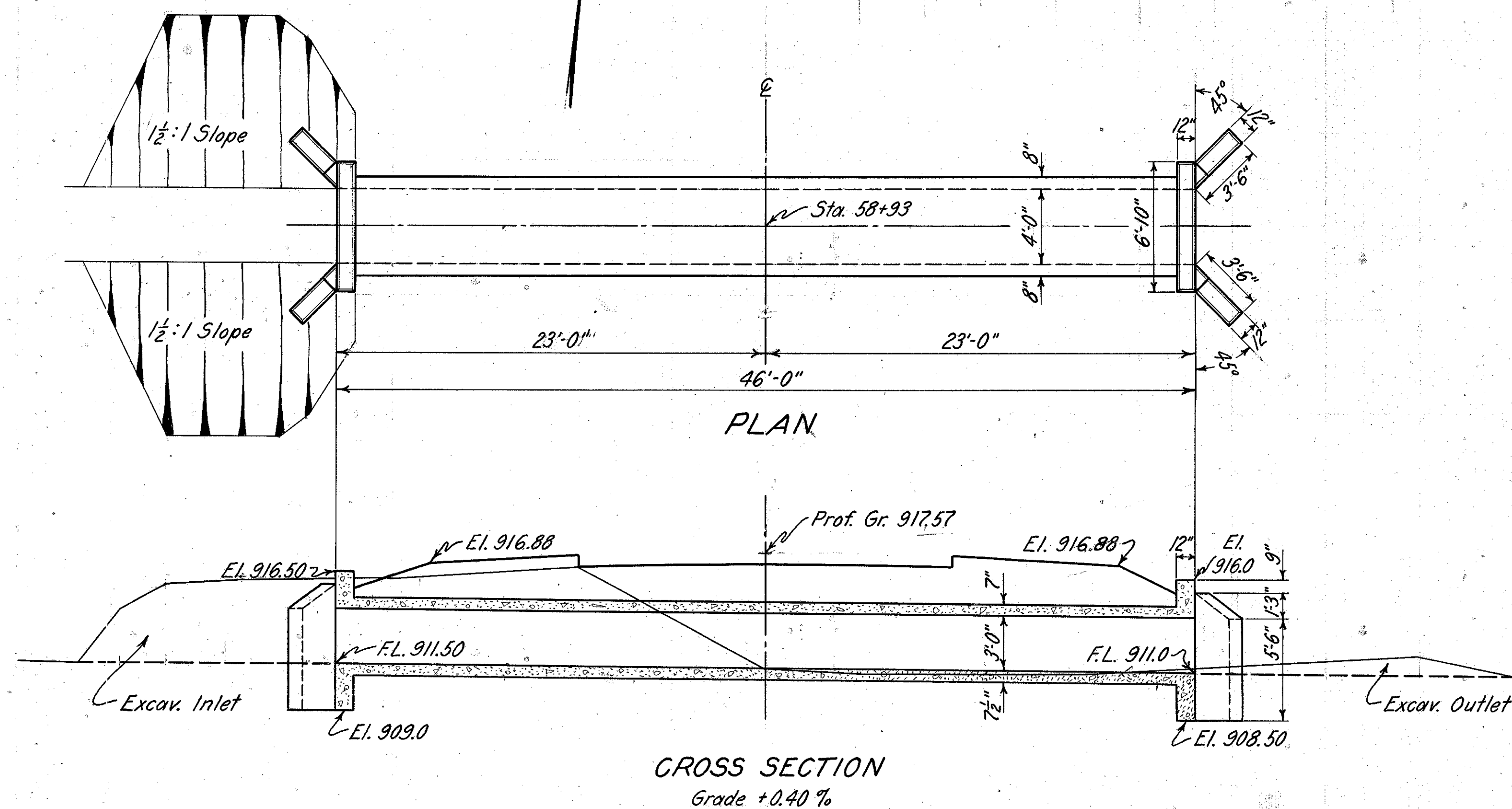
FED. AID DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	630-C	1932

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S.H. (I.C.H.) 77 - SEC. 'T'
TUSCARAWAS COUNTY



STEEL LIST						
Mark	No.	Size	Length	Shape	Spacing	Weight
Hdwls. & Wings						
W2a	16	1/2" ϕ	7'-0"	Bent	As shown	75
W2b	12	"	5'-9"	"	"	46
W2c	12	"	5'-6"	Str.	"	44
W2d	4	"	7'-0"	"	"	19
W2e	12	"	5'-0"	Bent	"	40
S4a	8	5/8" ϕ	5'-1"	Str.	"	42
V2a	4	1/2" ϕ	4'-0"	"	"	11
Barrel						
S4a	211	5/8" ϕ	5'-1"	Str.	5"	1118
V2a	88	1/2" ϕ	4'-0"	"	1'-0"	235
T2a	28	"	23'-9"	"	As shown	444
Total						2,074



Drawn By: *ALB*
Date: 4-26-32
Checked By: *J.H.O.*
Date: 4-30-32
Checked By: *FLB*
Date: 6/21/32 Asst. Div. Engr.

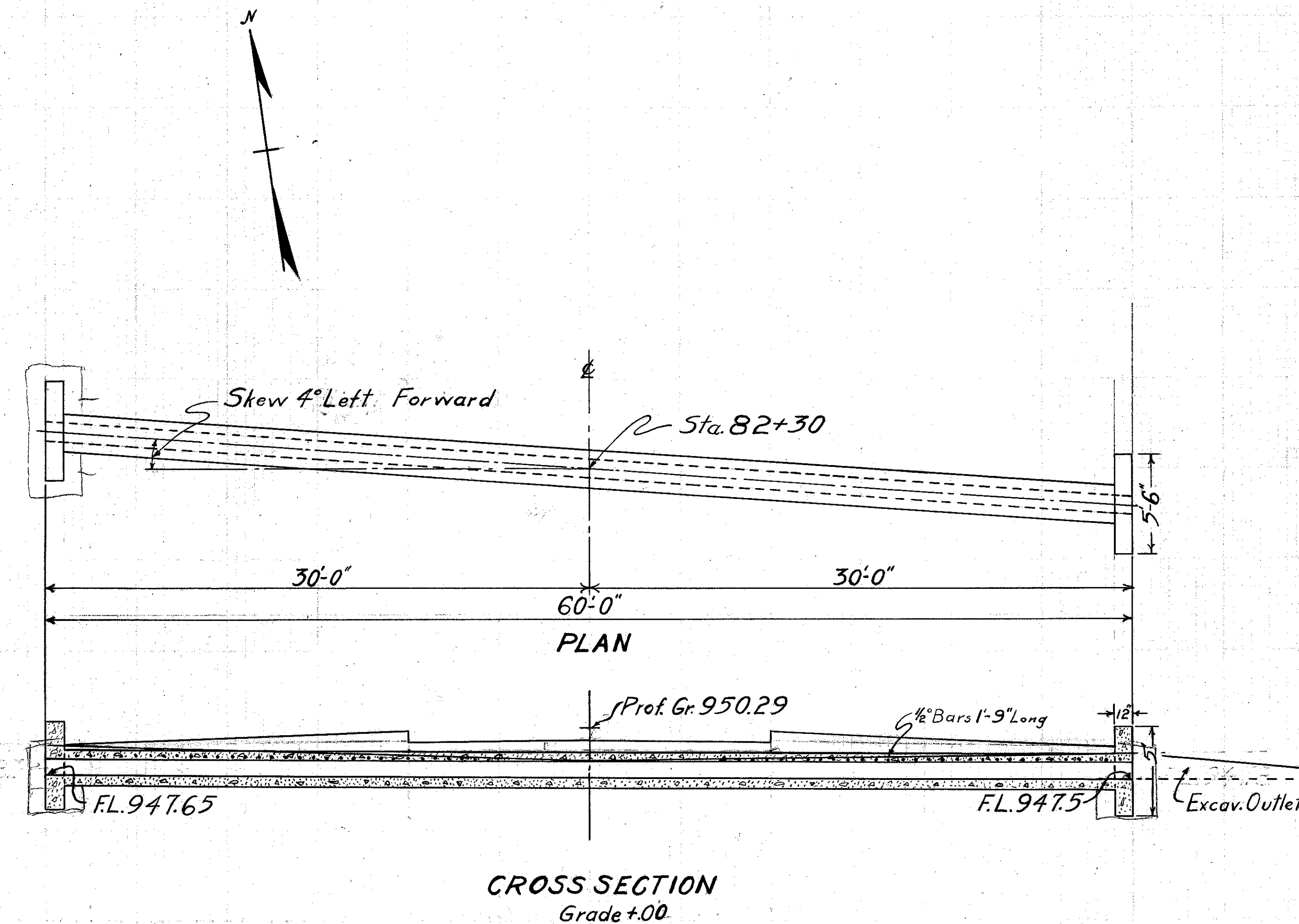
CULVERT DATA

Type: Std. Concrete Box Culvert - Dr. No. BC-A.
Size: 4'x3'x46'-0"
Work Req'd: Remove 30"x30' Corr. I.P. - Build
Std. 4'x3'x46'-0" Concrete Box Culvert.
Excavate inlet and outlet as shown.

ESTIMATED QUANTITIES

Excavation 65 Cu. Yds.
Concrete - 1:5 1/2 Mix 22.9 Cu. Yds.
Reinforcing Steel 2,074 Lbs.

STA. 58+93 (2)



ESTIMATED QUANTITIES

Excavation 30 Cu. Yds.
12'(SS) V.S.P. Encased (1:5 1/2) 60 Ft.
Standard Hdwls. (1:5 1/2) 2
Reinforcing Steel (Special) 62 Lbs.
Headwalls (Steel) 65 Lbs.
127 Lbs.

Drawn By: *ALB*
Date: 4-28-32
Checked By: *J.H.O.*
Date: 4-30-32
Checked By: *FLB*
Date: 6-21-32 Asst. Div. Engr.

CULVERT DATA

Type: Std. (SS) V.S.P. (Enc) Culvert Dr. No. 300
Size: 12'x60'-0"
Work Req'd: Build 12'x60' (SS) V.S.P. (Enc)
Pipe Culvert - 2 Std Hdwls. (1:5 1/2)
Install 60'-1/2 Rd. Reinforcing Bars
1'-9" Long As Shown on 9'-C-C.
Excavate Outlet

STA. 82+30

(3)

FED. AID DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	630-C	1932

24
30

S.H. (I.C.H.) 77 - SEC. 'T'
TUSCARAWAS COUNTY

B.&O. R.R. Bridge - 1/6 mi. Upstream - Type,
Plate Girder - 3 - 65 ft. Spans - Concrete
Piers & Abutments - 13.8 ft. Clear Height -
Effective waterway area above normal water
line El. of 910.0 = 2045 sq. ft. - Skewed 10° to
stream. - No over flow.

PROPOSED STRUCTURE
Continuous Steel I-beam bridge
with conc. deck. Spans 60'-0", 75'-0",
60'-0" & piers. 24' Rdwy. 26° 2' Skew
3" brick + 3/4" cushion Wear Surf.
20 ft. Appr. Slabs
H = 22.6 ft.

Face of Abutment - Sta 51+04.39
End of Appr. Earthwork - Sta 51+07.17
End of Appr. Slab - Sta 51+27.54
Proposed E. (Tang.) - N. 7° 10' E.

Drainage Area
268 sq. mi.

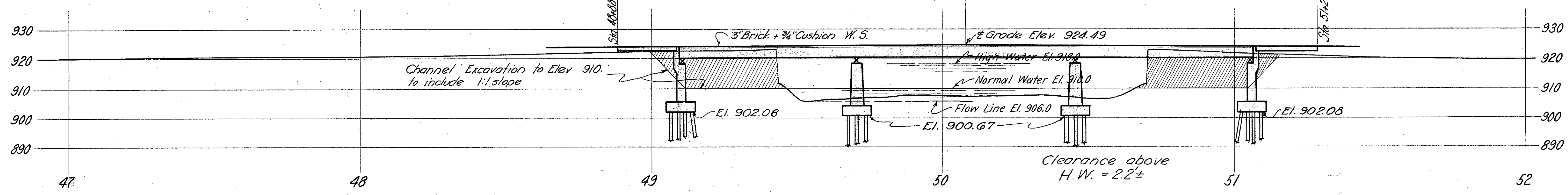
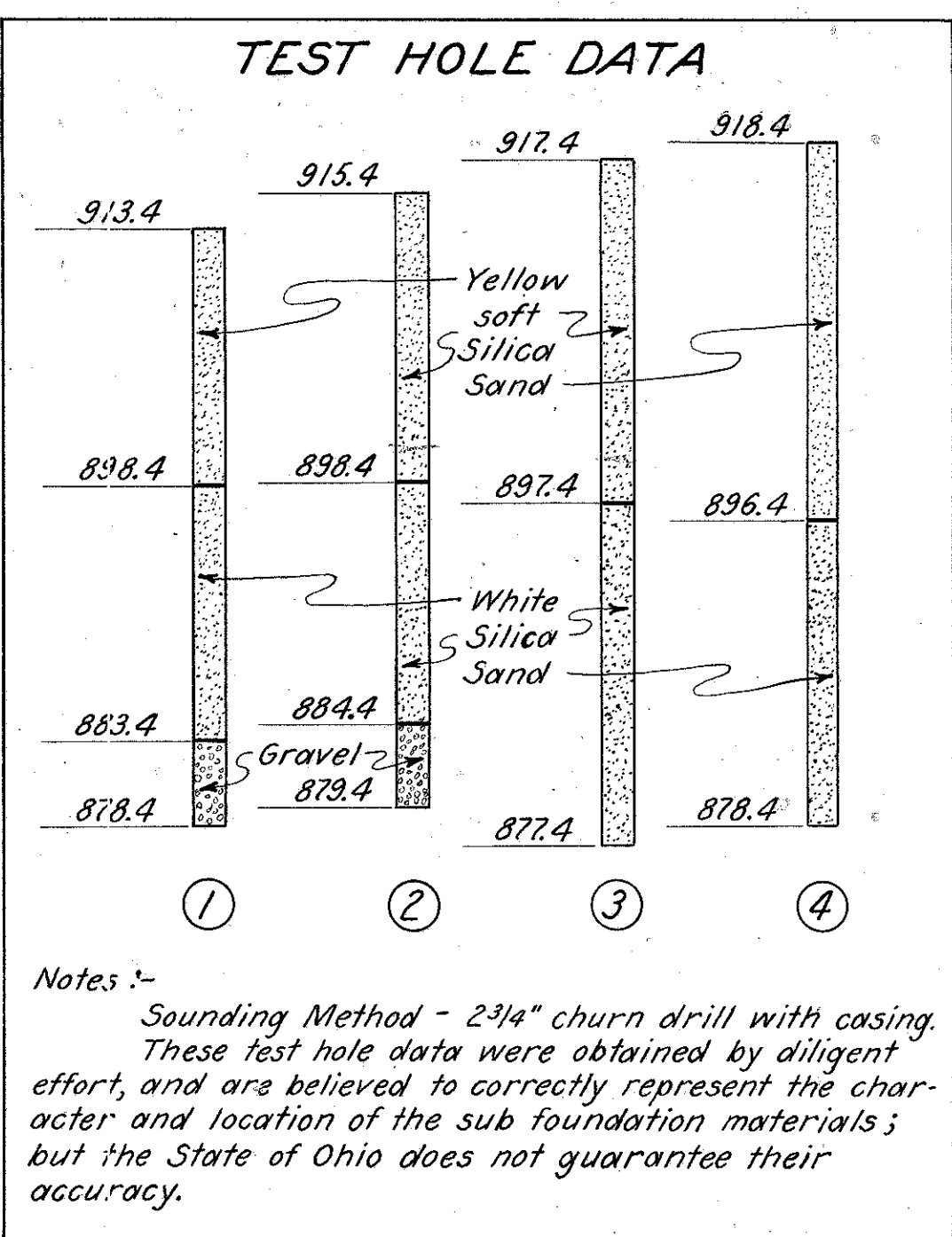
PRESENT BRIDGE DATA

Bridge No. TU-21-401 (to be removed)
Type - Thru Truss, Double Intersecting Warren - Span c to c
128'-4" - Clear Span 125'-6"
Width - 15'-4" Between Railing - 18'-4" Out to out of Trusses.
Height - Max. 14'-11" - Min. 11'-8"
Floor - Wood Block
Substructure - Stone Abutments.

Normal Water Elev. - 910.0
High Water Elev. - 918.0
Flow Line Elev. - 906.0
Elev. on floor North end of bridge - 923.1
Elev. on floor South end of bridge - 923.1

County Highway Bridge - 1 mi. Downstream -
Type, Iron Pratt Truss - 113 ft. Clear Span -
Stone Abutments - 9 ft. Clear height - Effective
waterway area above normal water line El. 910.0 =
1017 sq. ft. - Skewed 3° to stream. - Stream over-
flows west bank with average high water.

PROPOSED NO. 2 BRIDGE LIMITS
PROFILE ON PROPOSED CENTER LINE



PROPOSAL No 2

SITE PLAN
S.H. (I.C.H.) No. 77 - SECTION "T"
OVER SUGAR CREEK
BR. No. TU-21-401
TUSCARAWAS COUNTY
STATE OF OHIO

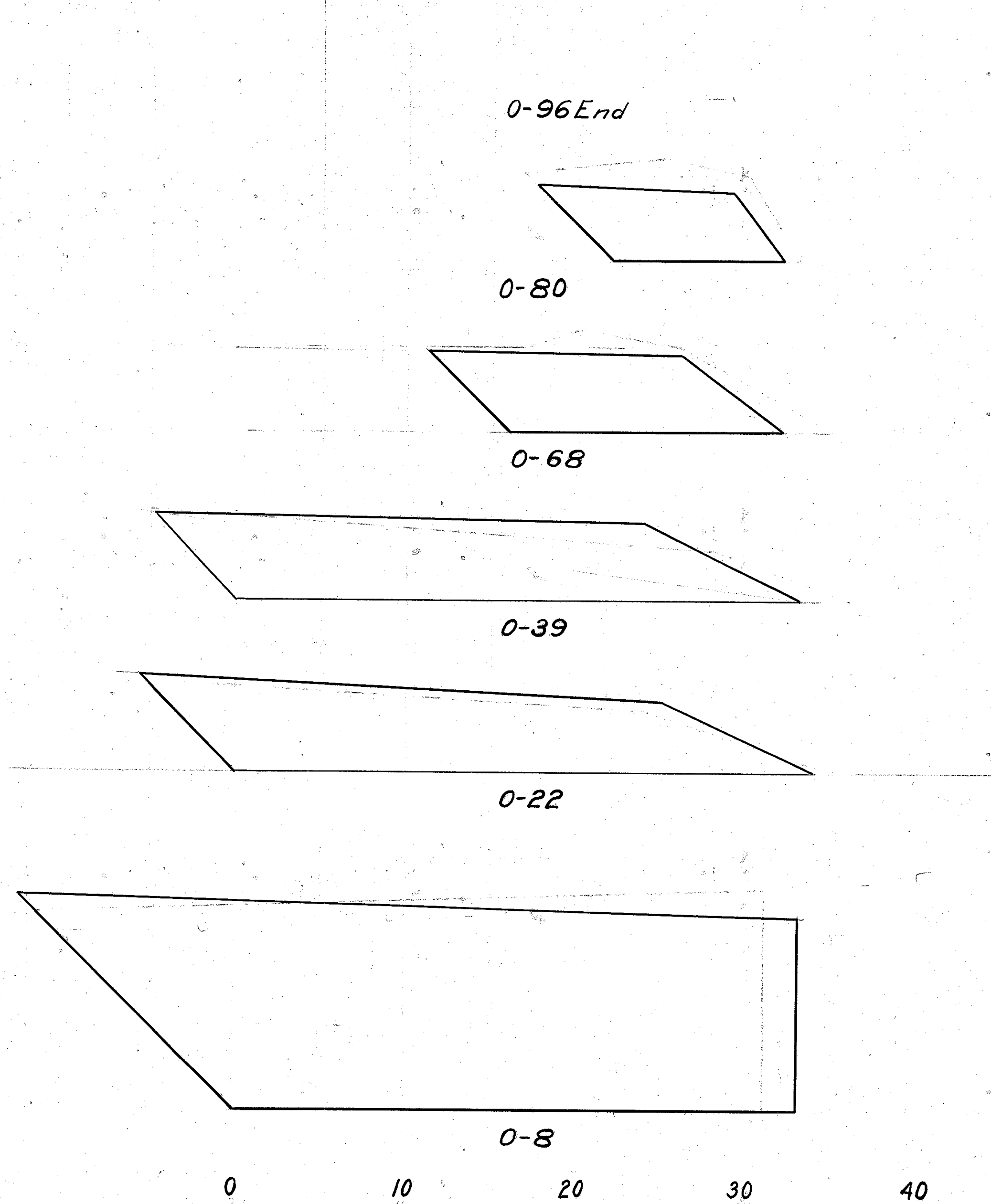
SCALE 1" = 20' APRIL 16, 1932

Present Topography		Proposed Work			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
H. R.	W. H. B.	C. P. S.	W. T. H.	R. T. Z.	M. W.

FED.AID DIST. NO.	STATE	FED.AID PROJECT	FISCAL YEAR	
10	OHIO	630-C	1932	25 30

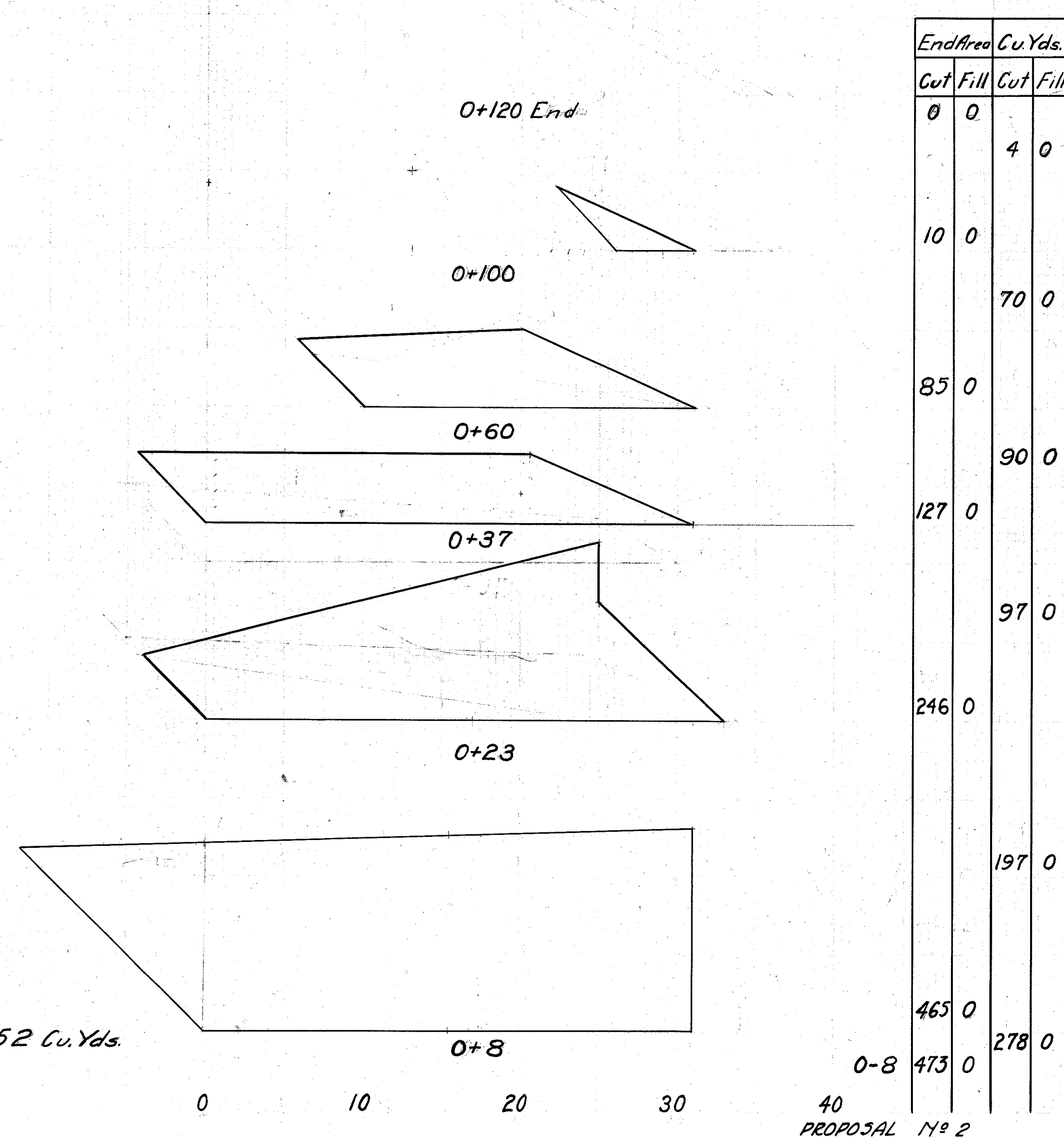
SH.(I.C.H) 77-Sec. 'T'
TUSCARAWAS COUNTY.

Total Excavation 3287 Cu. Yds.
Payment for Same Included
in Bridge Quantities.
Excavation to Elev. 910 to
Include a 1:1 Slope.

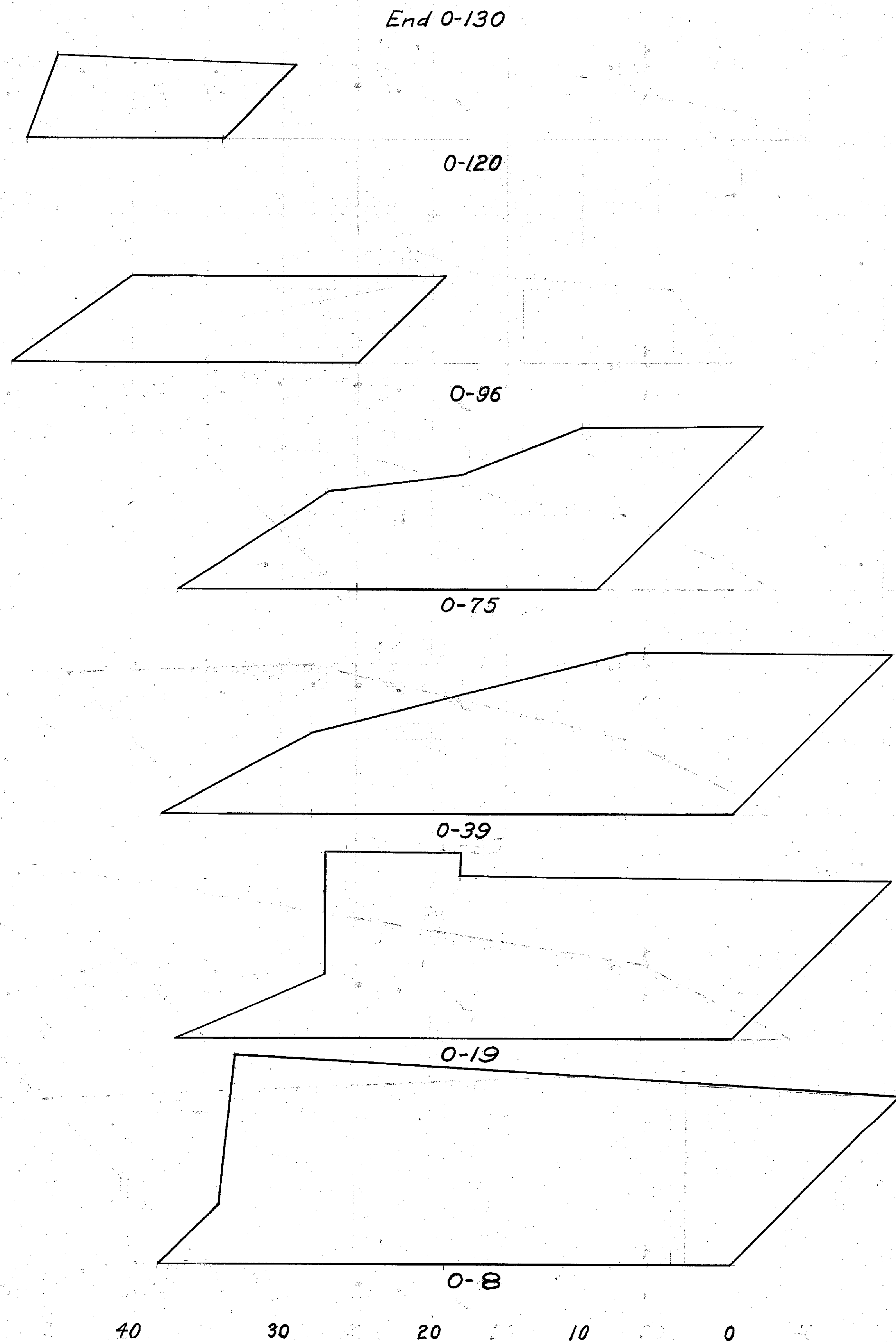


End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
0	0	13	0
45	0	26	0
73	0	120	0
150	0	95	0
151	0	162	0
473	0		

Channel Change
South Bank.
Excavation 1152 Cu. Yds.

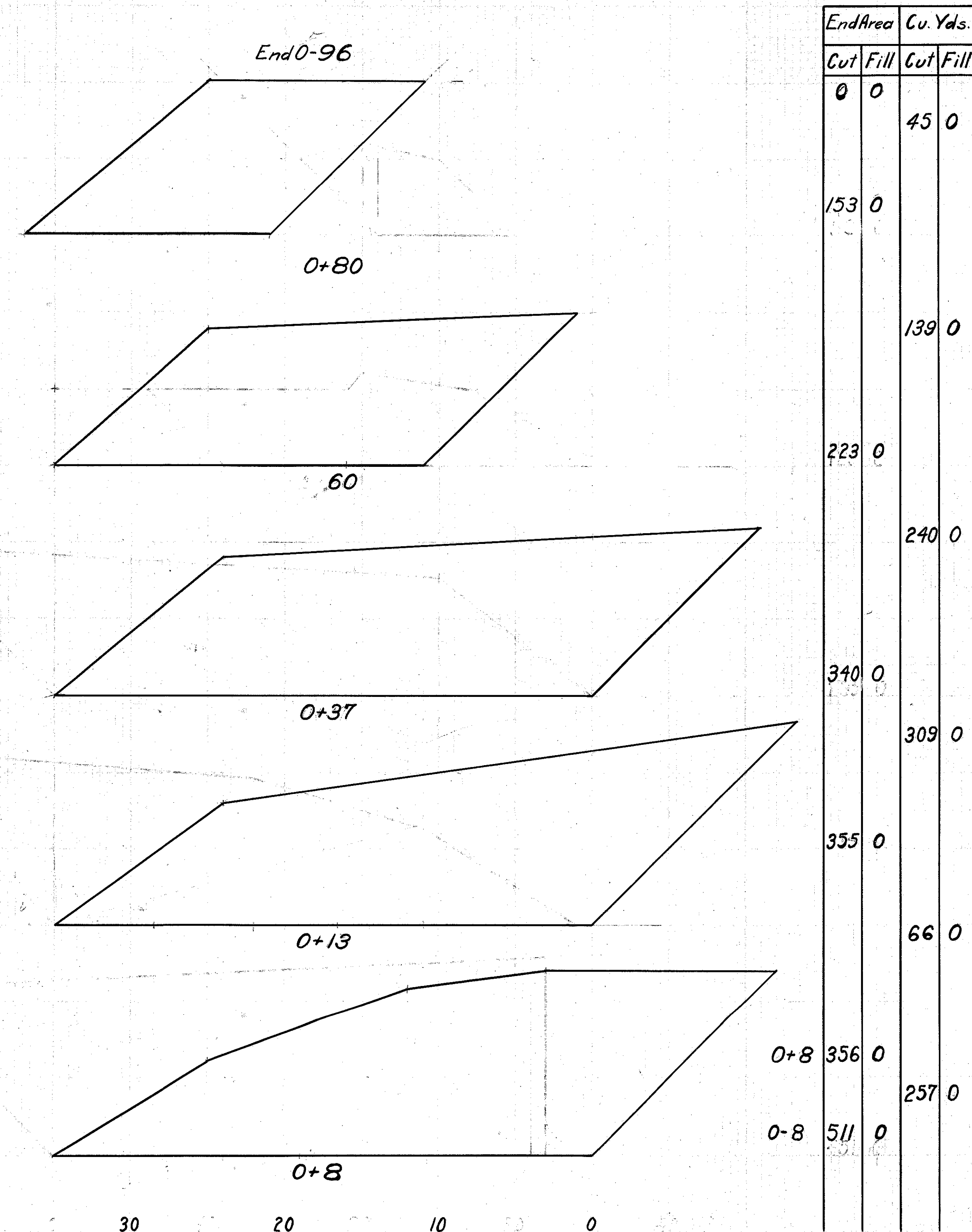


End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
0	0	4	0
10	0	70	0
85	0	90	0
127	0	97	0
246	0	197	0
465	0	278	0
473	0		

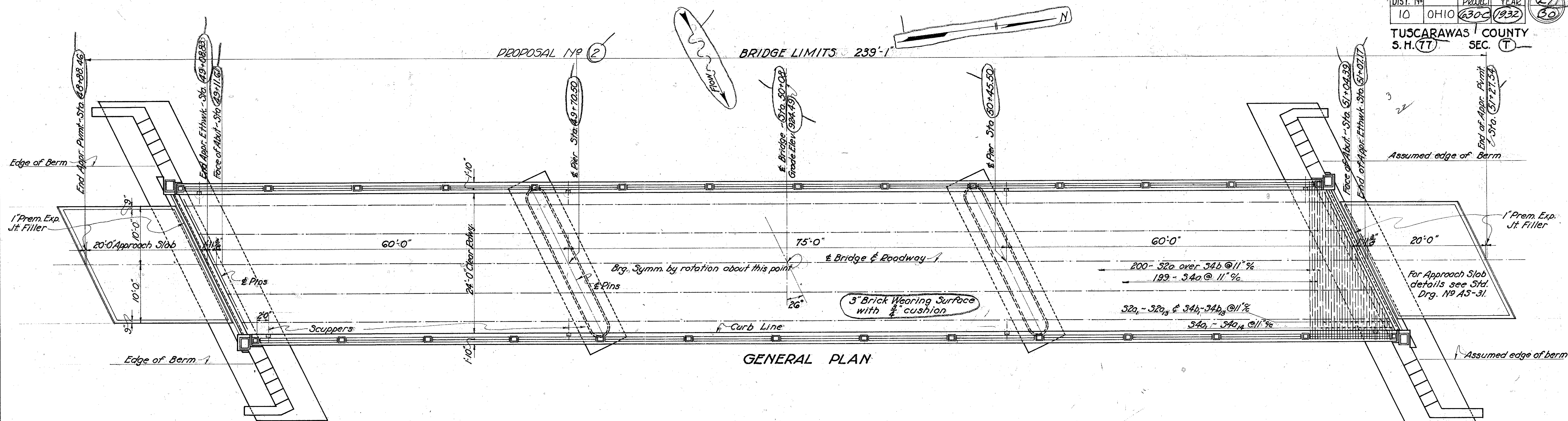


End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
0	0	14	0
75	0	91	0
129	0	145	0
243	0	381	0
329	0	266	0
389	0	183	0
511	0		

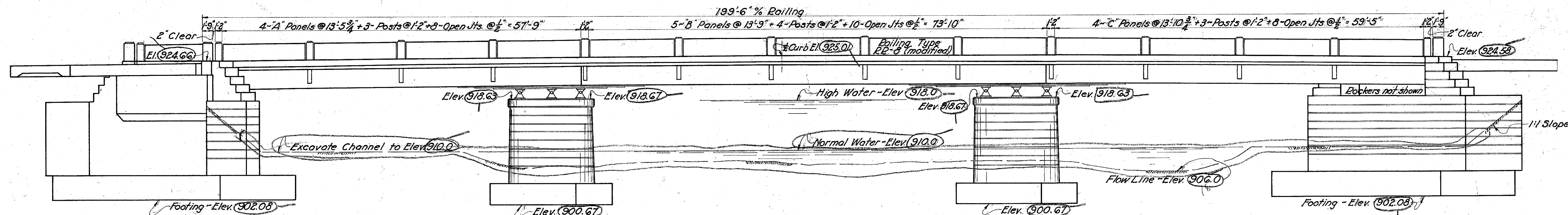
Channel Change.
North Bank.
Excavation 2135 Cu. Yds.



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
0	0	45	0
153	0	139	0
223	0	240	0
340	0	309	0
355	0	66	0
356	0	257	0
511	0		



GENERAL PLAN



ELEVATION

QUANTITIES

Cofferdams, Sheet piling & Pumping	Lump Sum
Dry Excavation	140 Cu. Yd.
Wet Excavation	375 Cu. Yd.
Channel Excavation	3287 Cu. Yd.
1-5 1/2 Concrete - Superstructure	145 Cu. Yd.
1-6 1/2 Concrete - Walls	320 Cu. Yd.
1-6 1/2 Concrete - Footings	255 Cu. Yd.
Type 'B' Waterproofing	40 Sq. Yd.
Reinforcing Steel	54,560 Lb.
Reinf. Conc. Br. Railing - 1-5 1/2 mix (RR-8 mod)	3.99 Lin. Ft.
Structural Steel	205,000 Lb.
Reinf. Conc. Appr. Slabs (12" thick) 1-5 1/2 mix	888 Sq. Yds.
First Test Pile	Lump Sum
Timber Piling (Estimated Length 20 Ft.)	3,680 Lin. Ft.
Removal of Existing Bridge	Lump Sum
Hand Laid Riprap	40 Sq. Yd.
Brick Wearing Surface, Wire cut lug type or repressed lug type, laid 3" depth with F-1 filler on a 3" cushion	600.0 Sq. Yd.
1/4" Premoulded Expansion Jt. Filler	23 Sq. Yd.

GENERAL NOTES

SUPERSTRUCTURE shall be a continuous steel beam bridge, spans, 2@ 60 ft. & 1@ 75 ft., with a 24 ft. roadway. 26° P.F. skew. Beams shall be fixed over piers and expansion provided at abutments. Reinforced concrete approach slabs as shown on Std. Drg. No. AS-31 shall be used.

LOADING. H-15

CONCRETE MIX shall be 1-6 1/2 for Walls and Footers and 1-5 1/2 for superstructure and Approach Slabs.

CHAMFER all exposed edges 3/4" unless otherwise noted.

CONSTRUCTION JOINTS. No horizontal construction joints other than those shown will be permitted. Vertical construction joints allowed only by special permission of the Engineer.

PILING. Timber piling (estimated length 20 ft.) shall be used. Test pile shall be driven first.

END FINISH shall be used as a templet for top of back wall on abutments. Backwall shall be built after structural steel has been erected.

EXCAVATION. All excavation below Elev. 910 shall be classed as "Wet Excavation". All excavation above Elev. 910 except that included in "Channel Excavation" shall be classed as "Dry Excavation".

RAILING shall be type RR-8 modified as shown on Sheet 29.

WEARING SURFACE shall be wire cut lug type or repressed lug type brick laid 3" depth on a 3" cushion with F-1 filler.

EXISTING BRIDGE shall be carefully dismantled and delivered to the State Highway garage at New Philadelphia.

PRESENT STONE ABUTMENTS shall be removed and used for Riprap as directed by the Engineer. Payment for removal included in "Channel Excavation".

RIVETS shall be 1/2"?

ROCKERS shall be so placed that when the bridge is completed the rockers will be vertical at average temperature.

SHEET LEAD. There shall be a 1/2" layer of sheet lead under all shoes and bearing plates.

CAMBER. In order to offset dead load deflection and provide for a vertical curve over the finished structure the 60 ft. lengths of 36" rolled beams shall have a minimum camber of 1/4" and the 75 ft. lengths a minimum camber of 1/2" under no load. During the milling of the ends and the fabrication of the splices the beams shall be so supported that this camber is maintained.

ERECTION NOTE. Before riveting the field splices of the main beams all structural steel shall be lightly pinned and bolted together. Then the bottom flange splice of the pier shall be thoroughly pinned, bolted and riveted. Next, the end of the beam at the adjacent abutment shall be raised 2 in. and supported until all beam splices are complete.

PROPOSAL No. 2

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

**GENERAL PLAN & ELEVATION,
NOTES & ESTIMATED QUANTITIES**

BRIDGE NO. TU-21-401
OVER SUGAR CREEK

TUSCARAWAS COUNTY S. H. 77
SEC. T STA. 60+08

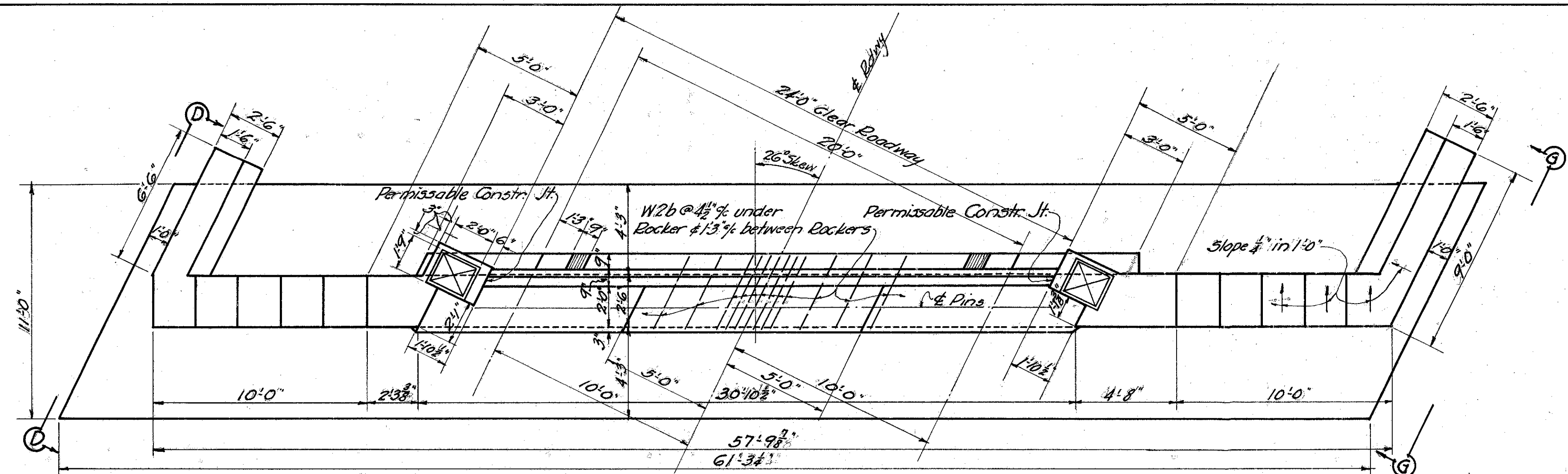
DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISION

JUL JUL SRE CNA RAC 9/23/32

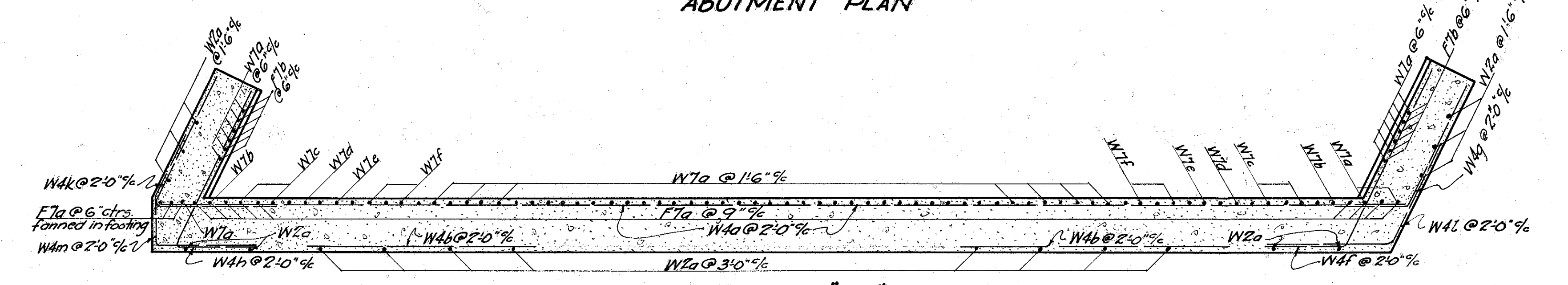
TUSCARAWAS COUNTY
SH. 77 SEC. 7

REPLACEMENT STEEL				
Mark	Size	No.	Length	Weight
R8r	1" x 8"	2	6'-0"	41
R7r	1" x 7"	2	6'-0"	32
R5r	1" x 5"	2	5'-0"	13
R4r	1" x 4"	2	4'-0"	9
R2r	1" x 2"	2	4'-0"	5
R1r	1" x 1"	2	3'-6"	3
TOTAL				105

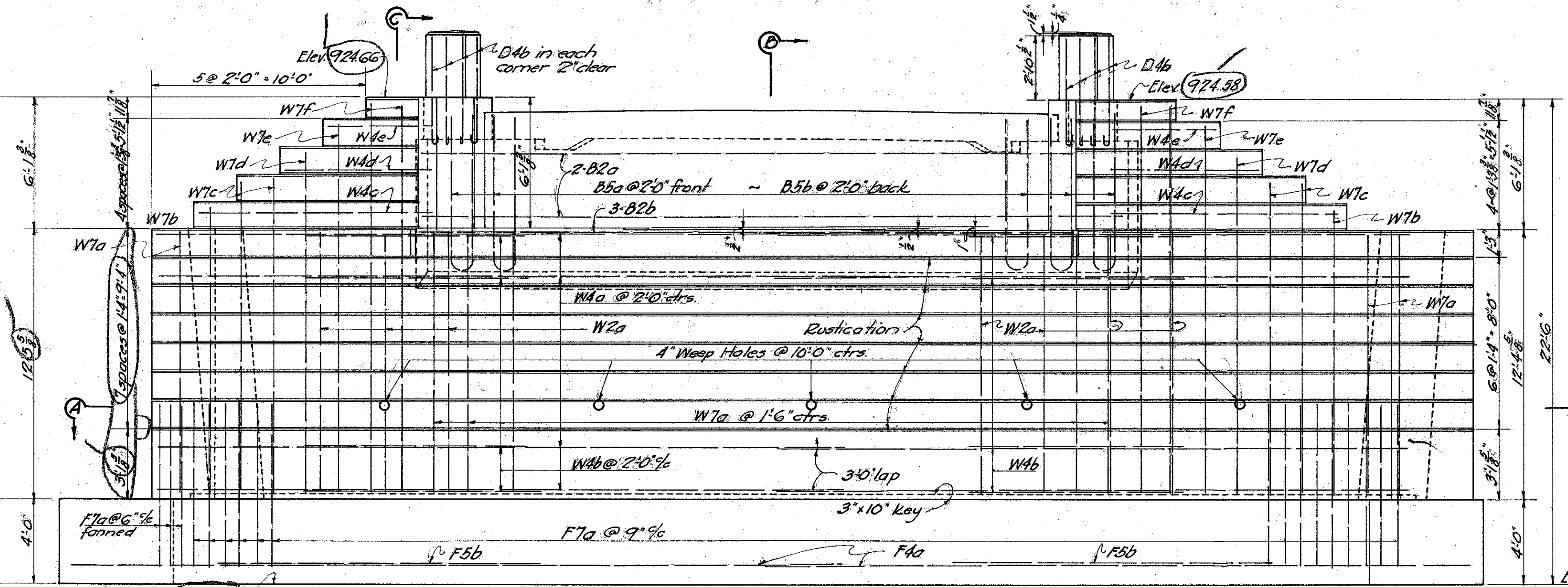
TYPICAL SECTION THRU RUSTICATION



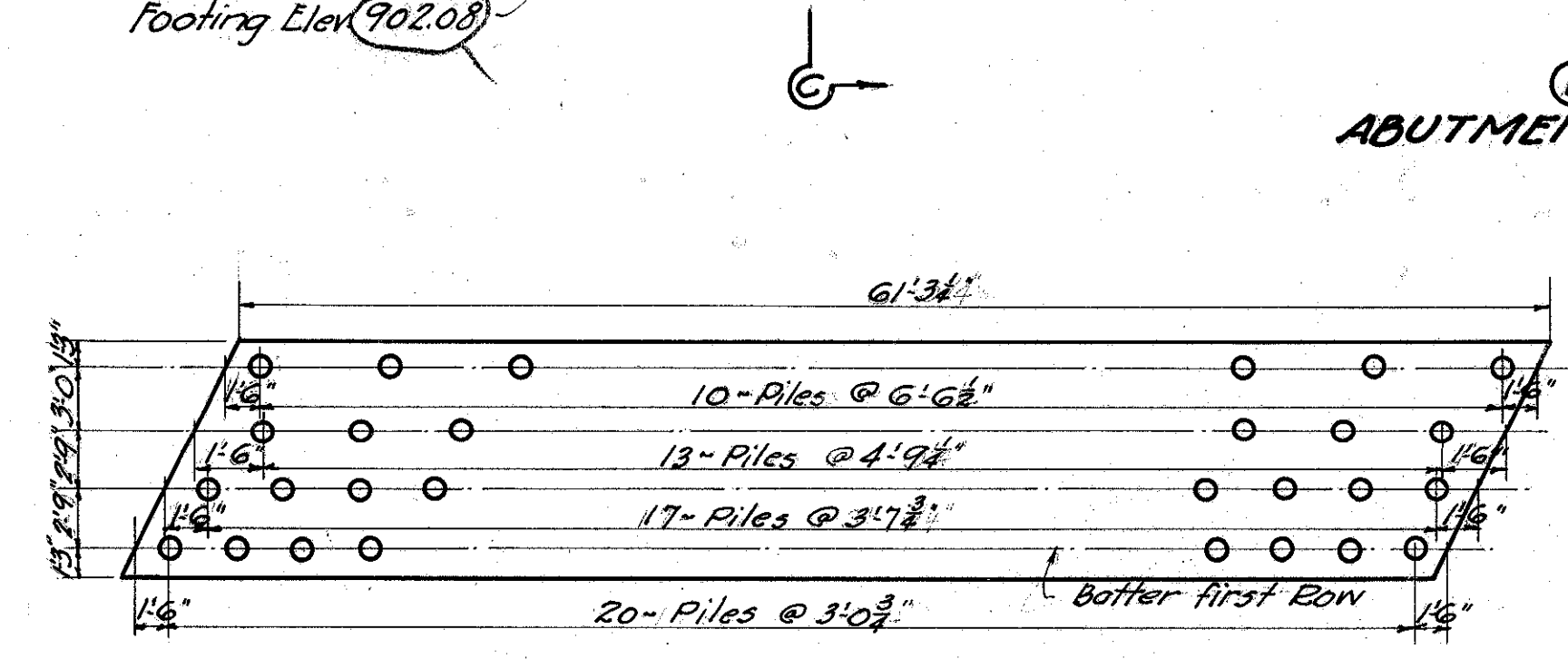
ABUTMENT PLAN



SECTION A-A



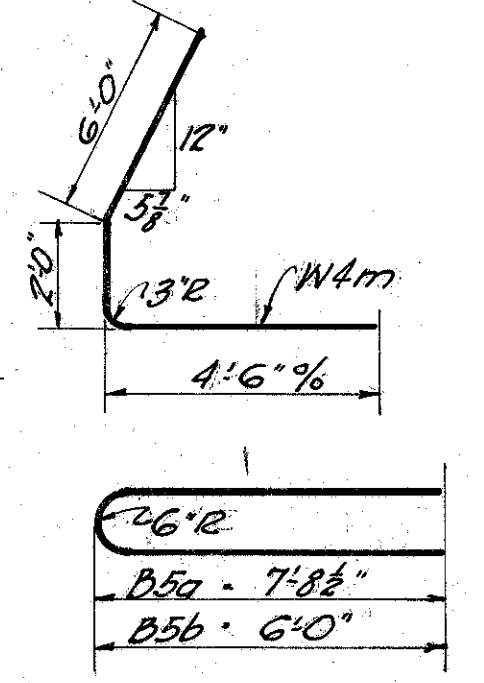
ABUTMENT ELEVATION



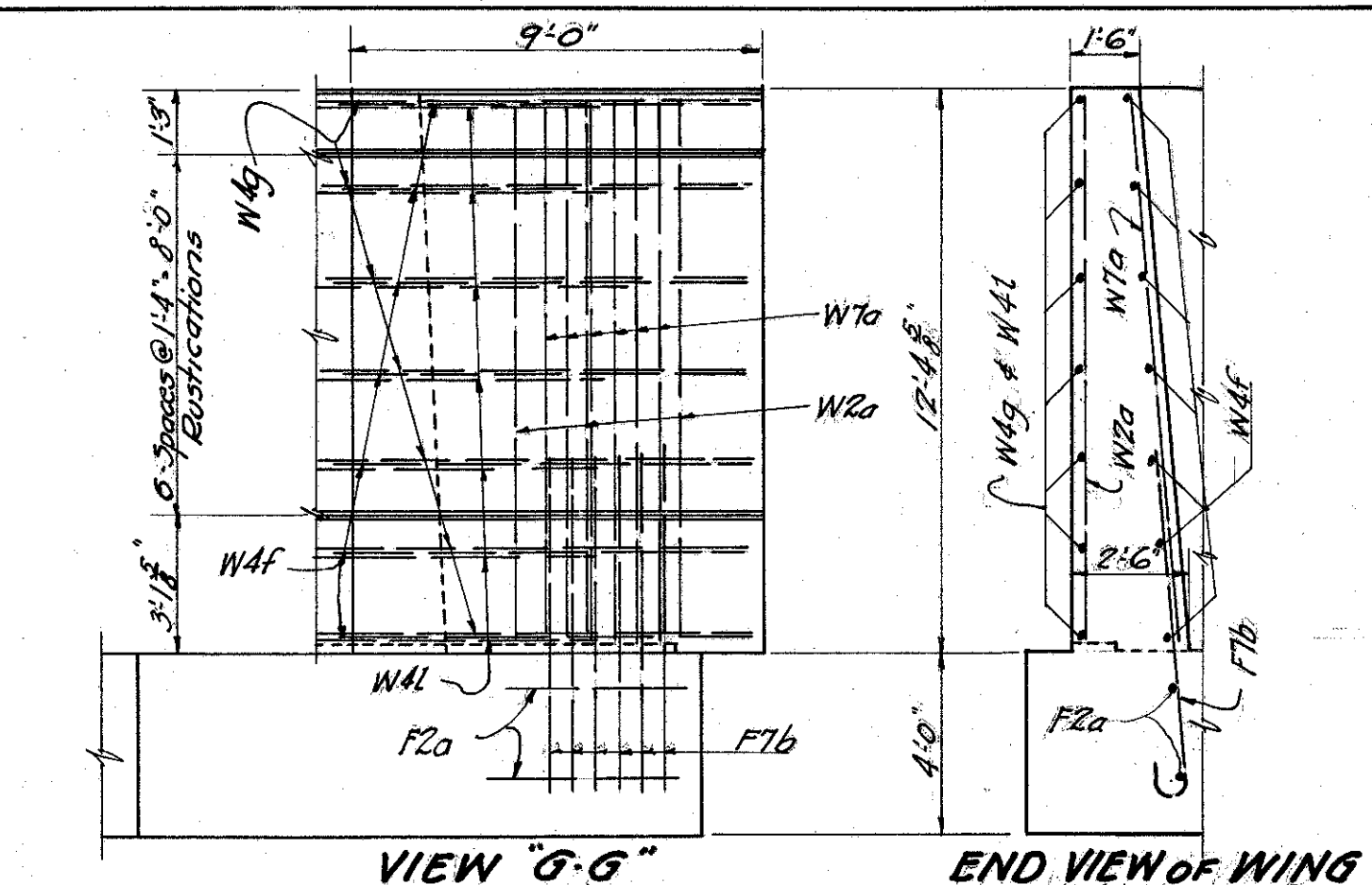
PILING LAYOUT

P4b1	13'-0"
P4a1 & P4b1	13'-3"
P4a2 & P4b2	13'-6"
P4a3	13'-9"

D4a	7'-4"
D5a	7'-2"
P4a	12'-4"

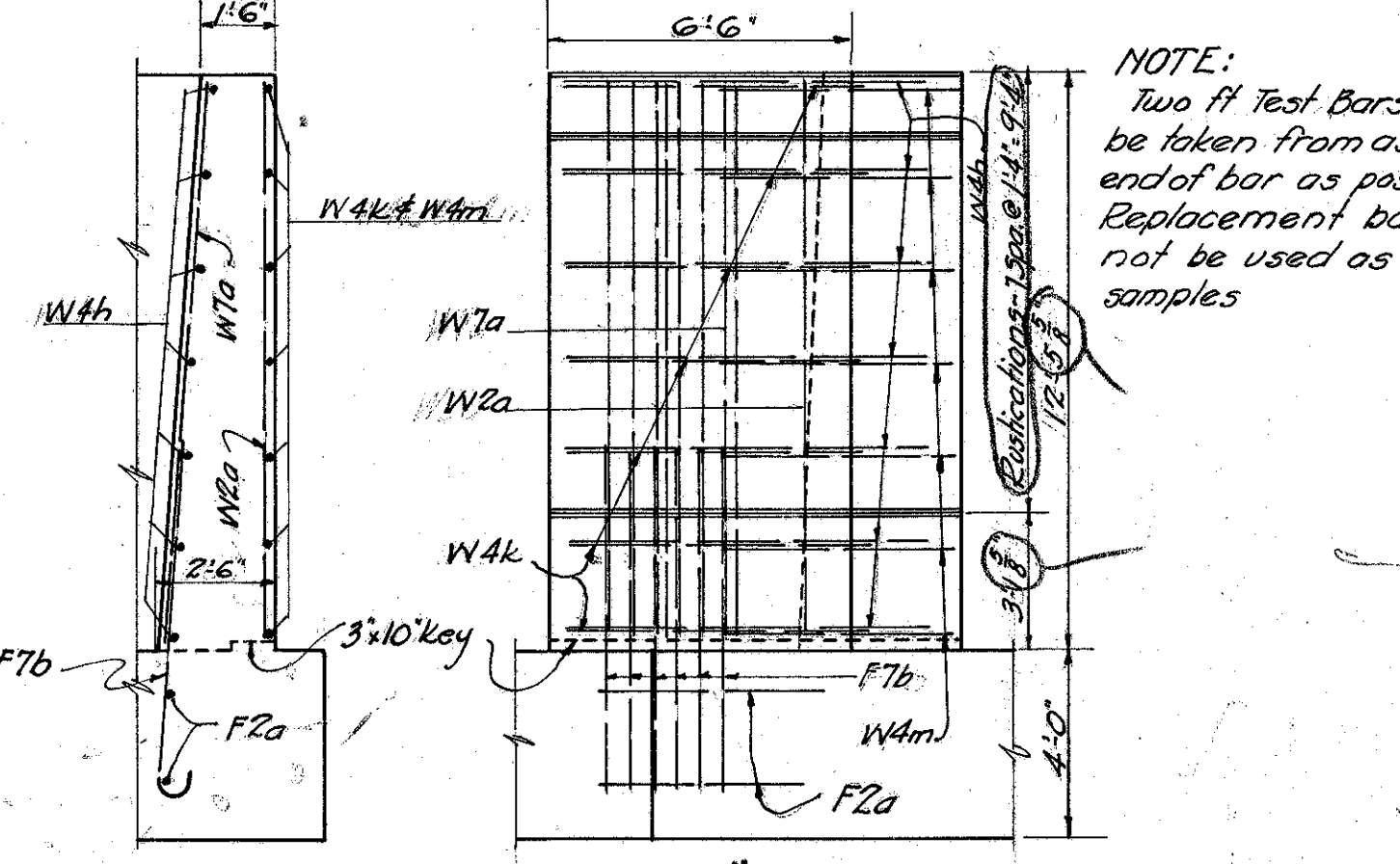


BAR DIAGRAMS



VIEW G-G

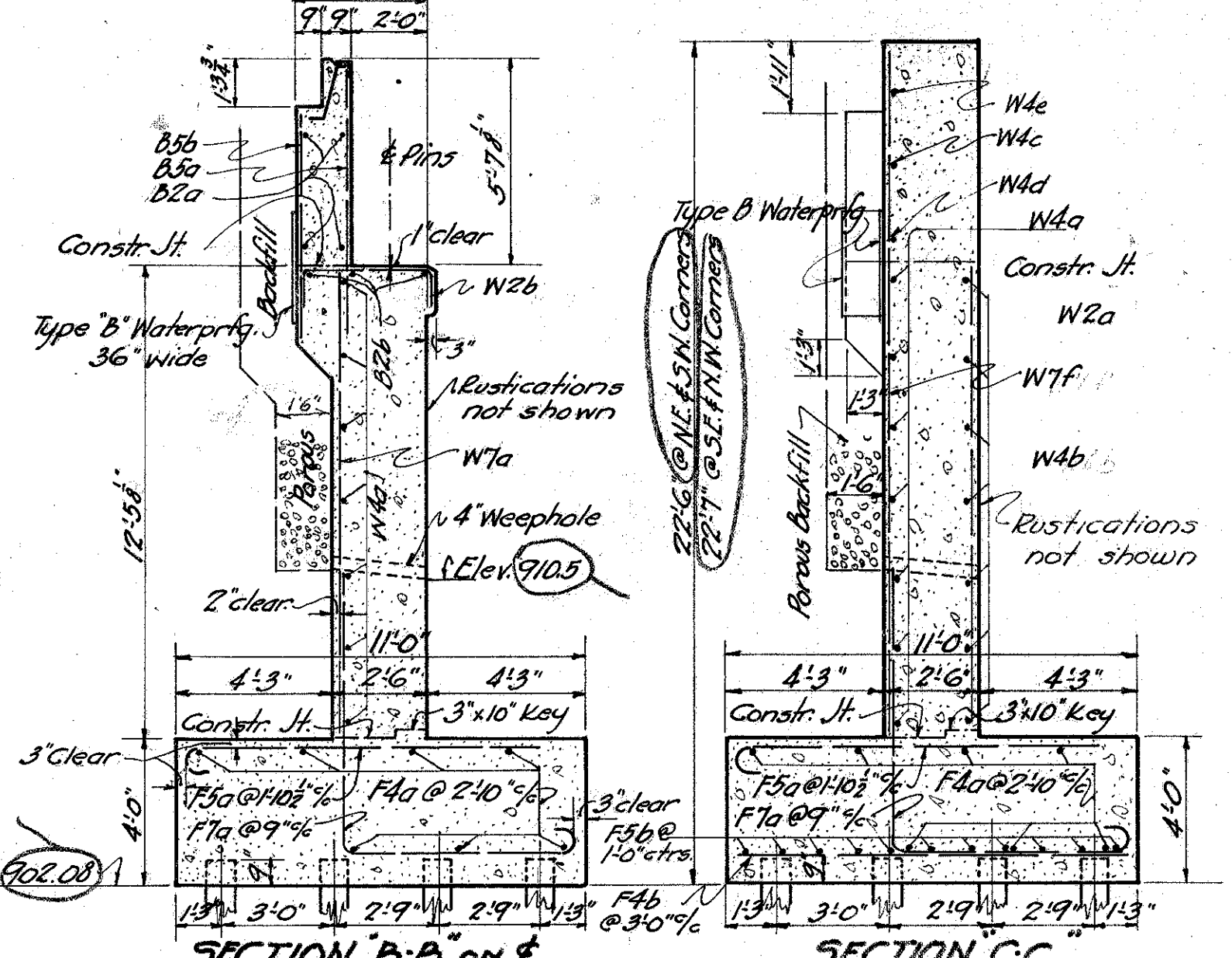
END VIEW OF WING



END VIEW OF WING

VIEW D-D

NOTE:
Two ft Test Bars shall be taken from as near end of bar as possible. Replacement bars shall not be used as test samples



SECTION B-B ON E

SECTION C-C

ABUTMENT STEEL LIST					
Mark	Size	No.	Shape	Length	Weight
W7a	1"	74	5fr	12'-3"	2423
W7b	1"	4	5fr	13'-6"	144
W7c	1"	8	5fr	14'-9"	315
W7d	1"	4	5fr	16'-0"	171
W7e	1"	4	5fr	17'-3"	184
W7f	1"	8	5fr	18'-3"	390
W4a	3/8"	28	5fr	30'-9"	899
W4b	3/8"	28	5fr	10'-0"	292
W4c	3/8"	4	5fr	11'-0"	46
W4d	3/8"	4	5fr	7'-0"	29
W4e	3/8"	4	5fr	5'-0"	21
W4f	3/8"	14	8t	12'-3"	179
W4g	3/8"	14	8t	11'-9"	171
W4h	3/8"	14	8t	11'-0"	161
W4i	3/8"	14	8t	12'-0"	175
W4j	3/8"	14	8t	14'-0"	204
W4k	3/8"	14	8t	13'-0"	190
W2a	1/2"	36	5fr	12'-3"	295
W2b	1/2"	38	8t	5'-9"	223
B5a	3/8"	32	8t	16'-0"	770
B5b	3/8"	32	8t	12'-6"	601
B2a	1/2"	8	5fr	33'-0"	1176
B2b	1/2"	6	5fr	30'-0"	120
D4b	3/8"	16	8t	6'-0"	100
F7a	1"	138	8t	14'-3"	6018
F7b	1"	24	8t	8'-6"	545
F5a	3/8"	66	8t	10'-6"	1041
F5b	3/8"	44	5fr	15'-0"	992
F4a	3/8"	28	5fr	32'-0"	935
F4b	3/8"	24	5fr	10'-9"	269
F2a	1/2"	8	5fr	3'-6"	19
TOTAL					18107

RAILING & PIER STEEL						
P2a	3/8" φ	42	8t	5'-0"	140	
P4a	3/8" φ	60	8t	11'-9"	736	
D4a	3/8" φ	56	8t	9'-0"	526	
D5a	3/8" φ	78	8t	8'-0"	938	
R1a	3/8" φ	364	5fr	2'-6"	Included Per Payment with Railing	
R1bA	3/8" φ	16	5fr	13'-3"		
R1bB	3/8" φ	20	5fr	13'-6"		
R1bC	3/8" φ	16	5fr	13'-9"		
R2aA	3/8" φ	16	8t	13'-3"		
R2aB	3/8" φ	20	8t	15'-6"		
R2aC	3/8" φ	16	8t	15'-9"		
R2bA	3/8" φ	16	8t	15'-0"		
R2bB	3/8" φ	20	8t	15'-3"		
R2bC	3/8" φ	16	8t	15'-6"		
D4b	3/8" φ	36	5fr	14'-3"		837
P4C	3/8" φ	20	5fr	26'-0"		543
TOTAL						3720

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

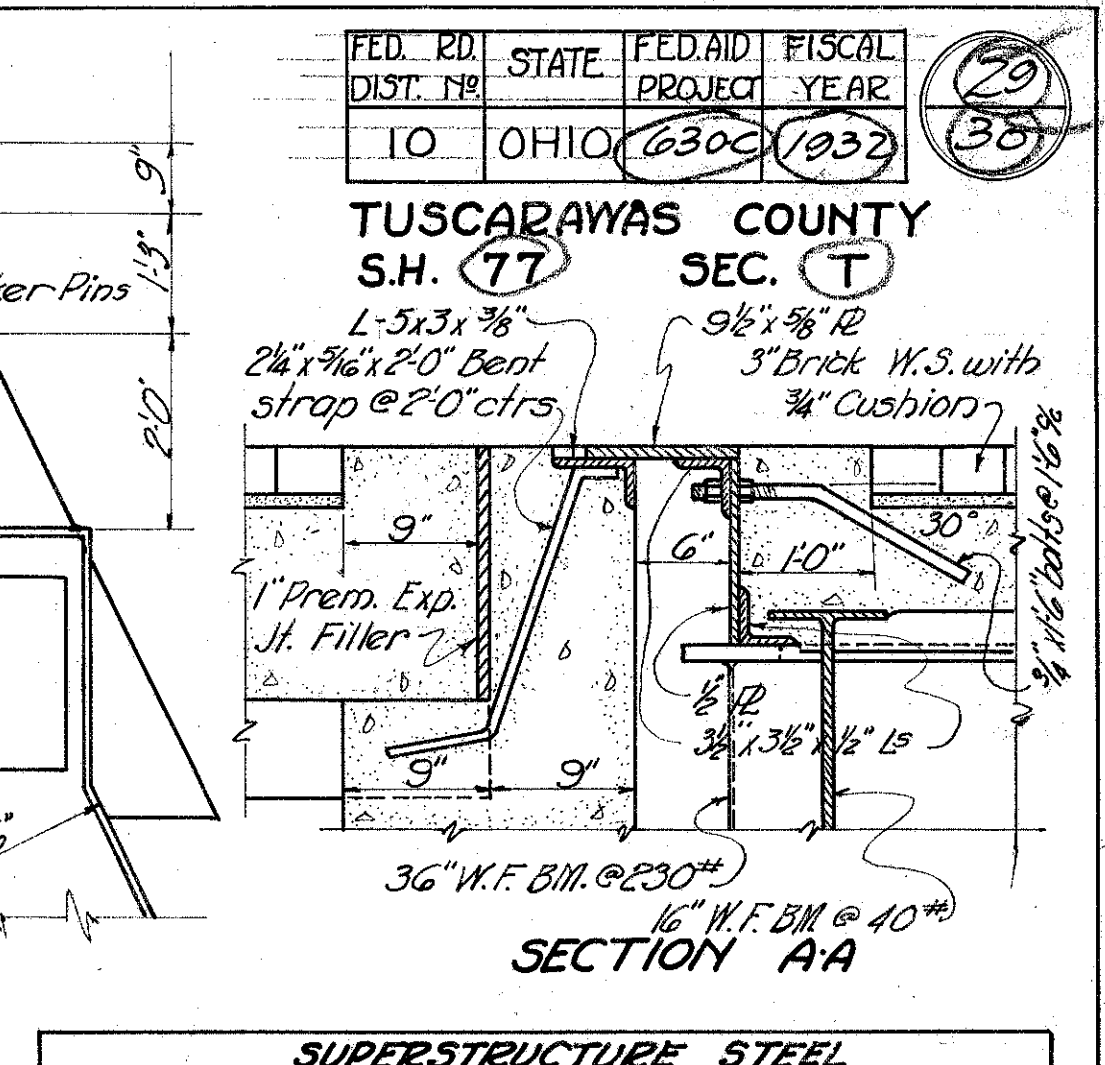
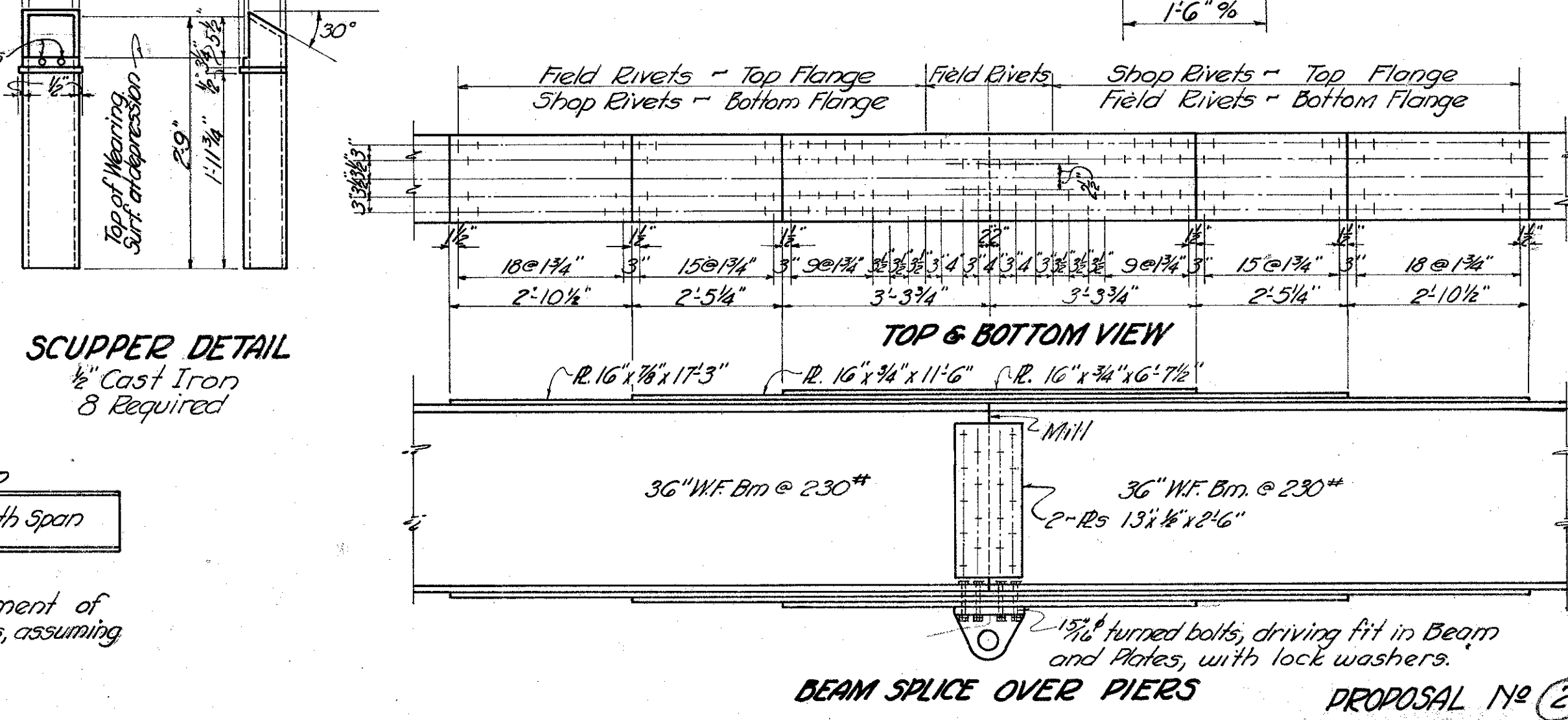
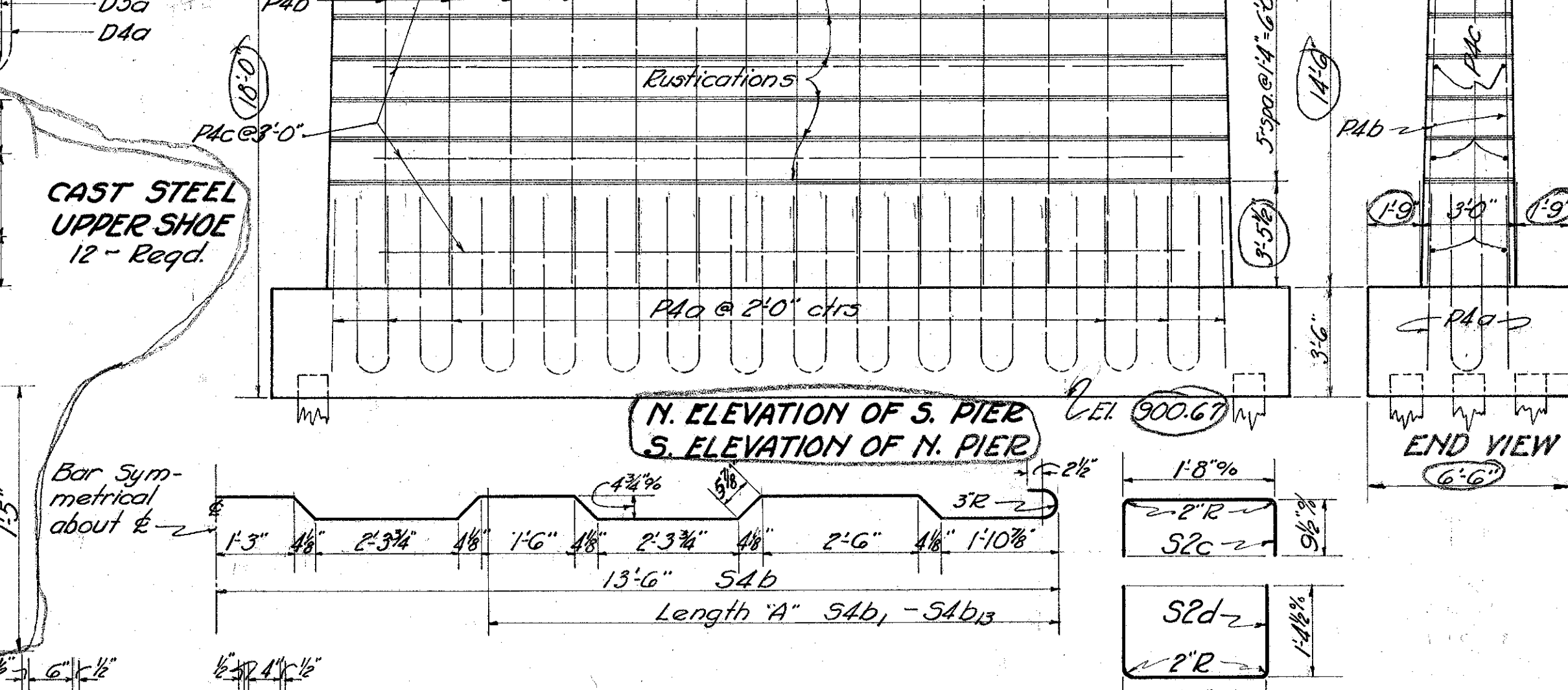
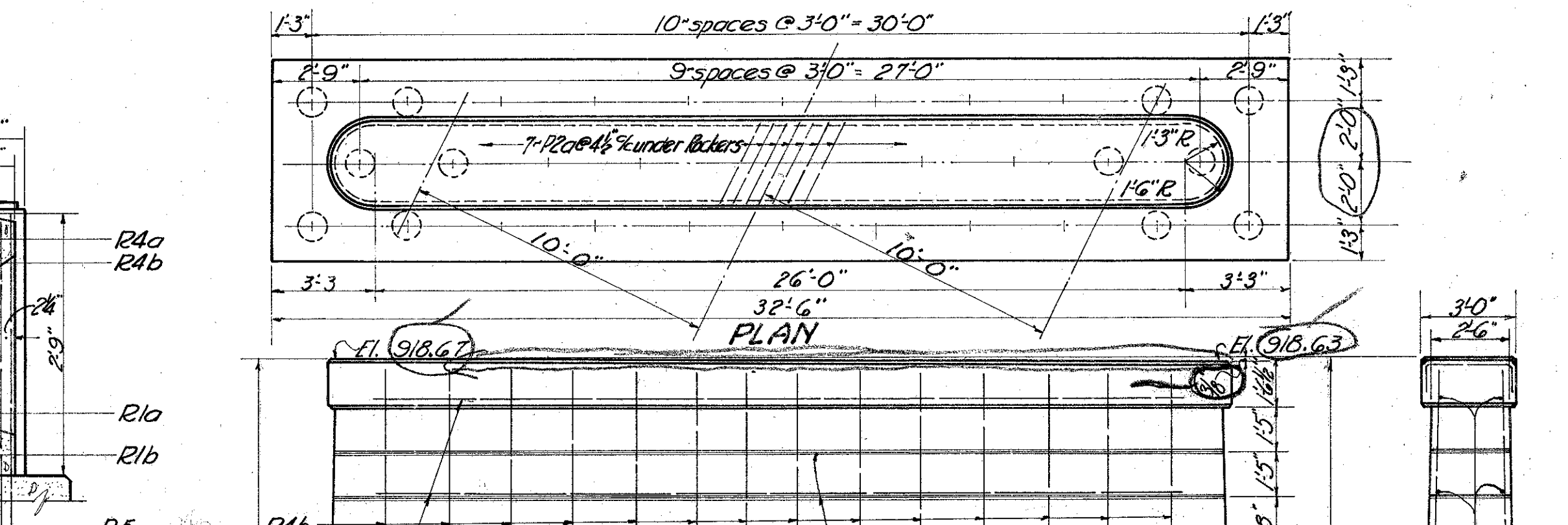
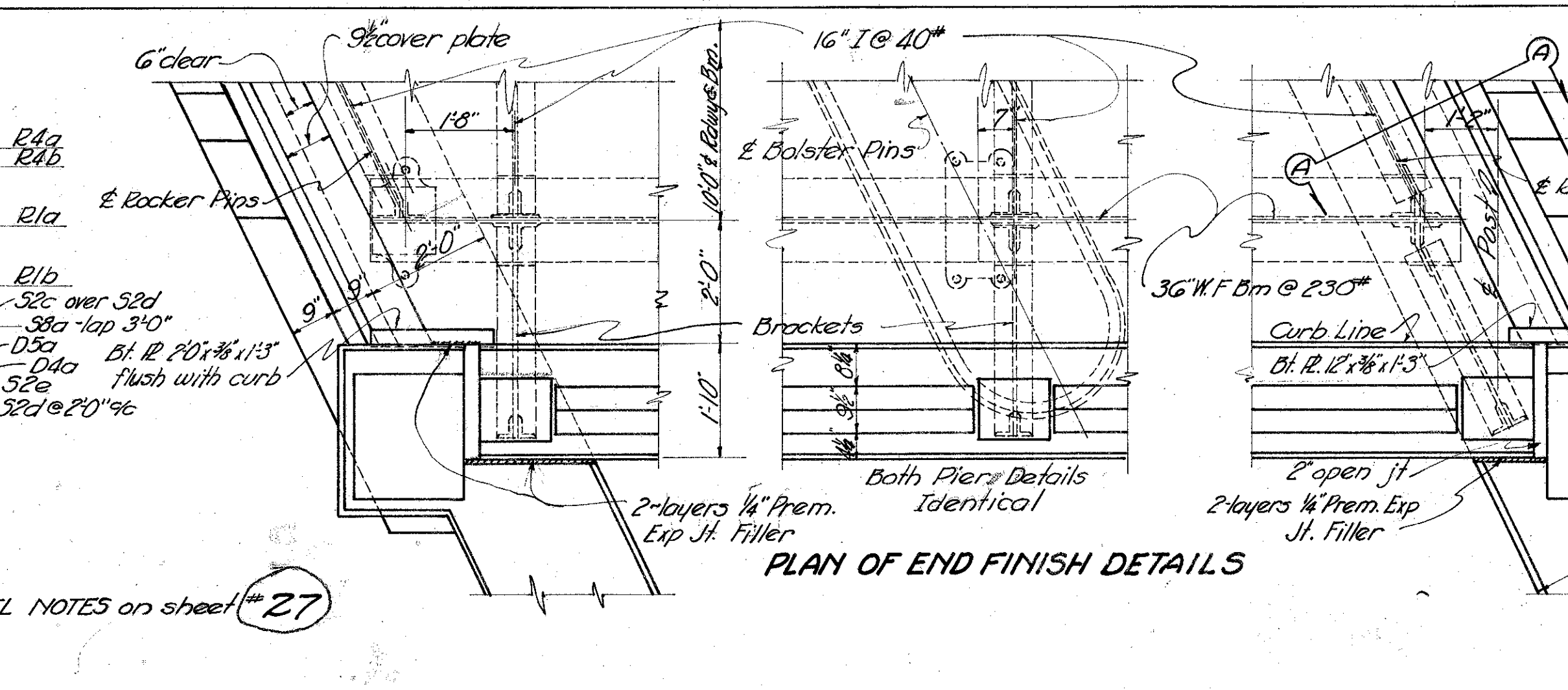
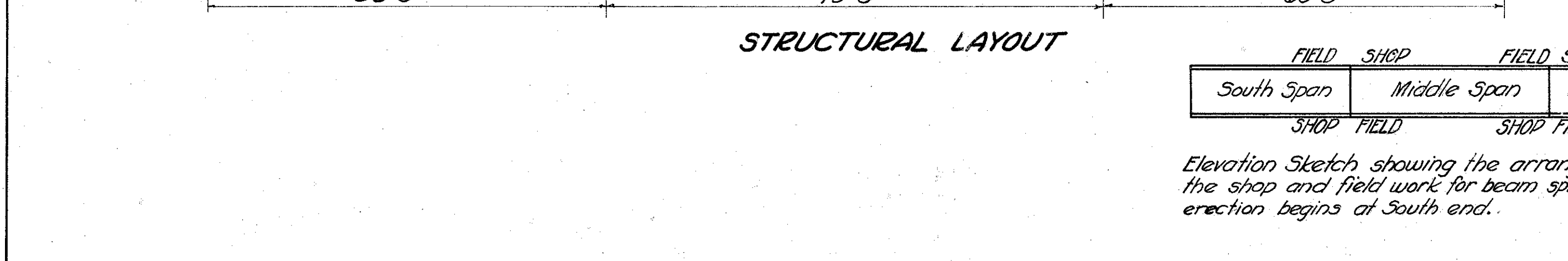
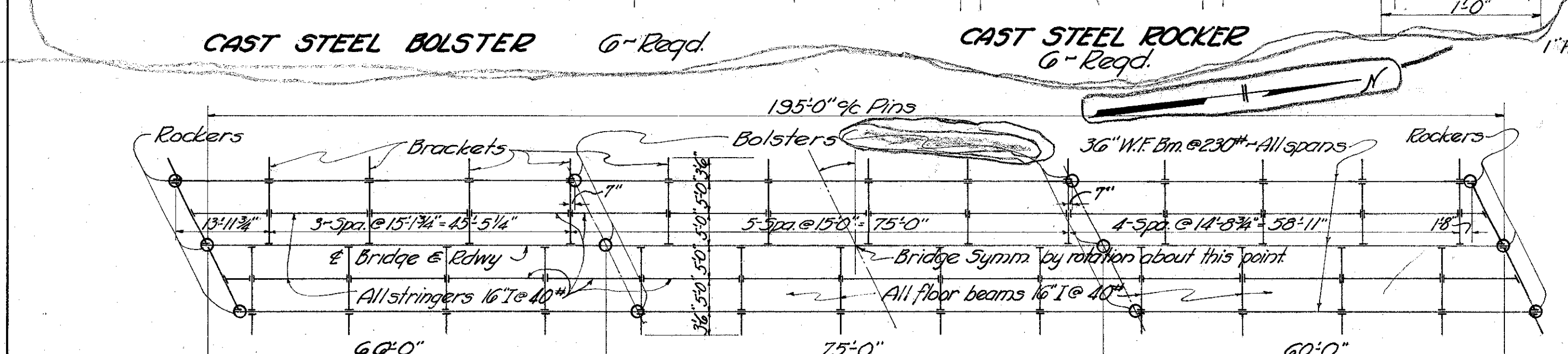
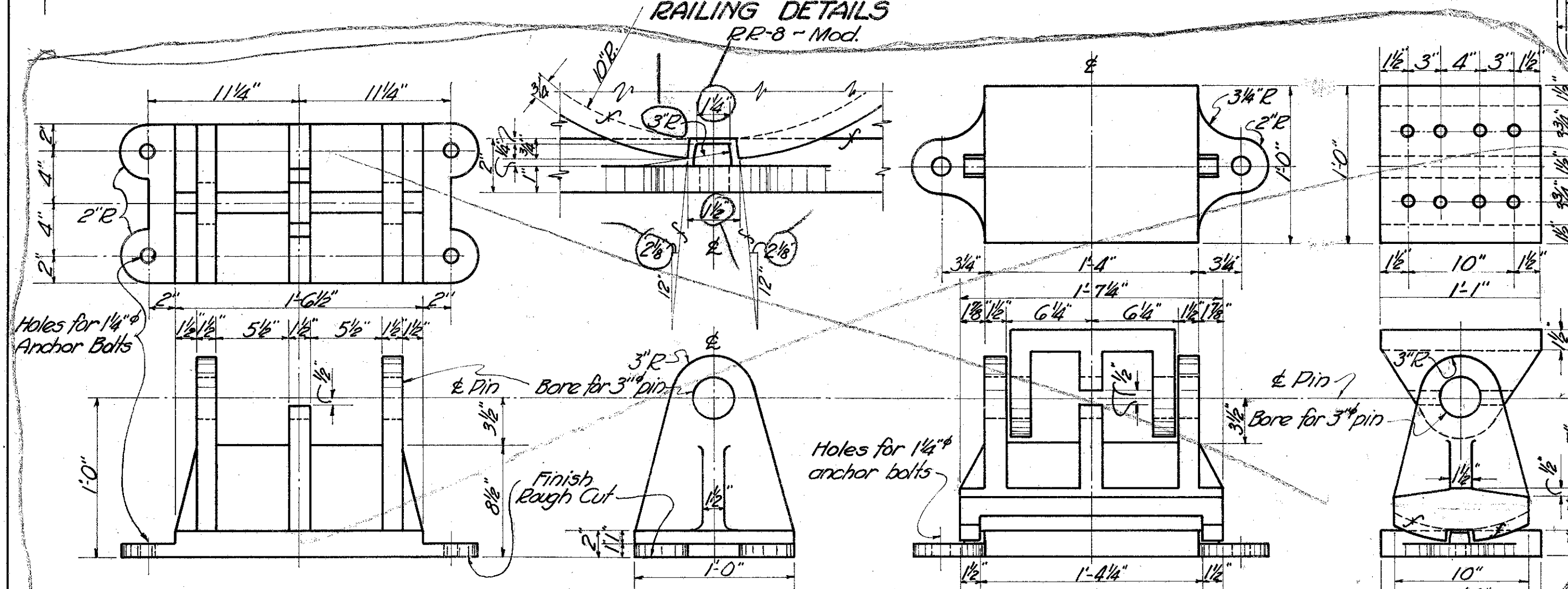
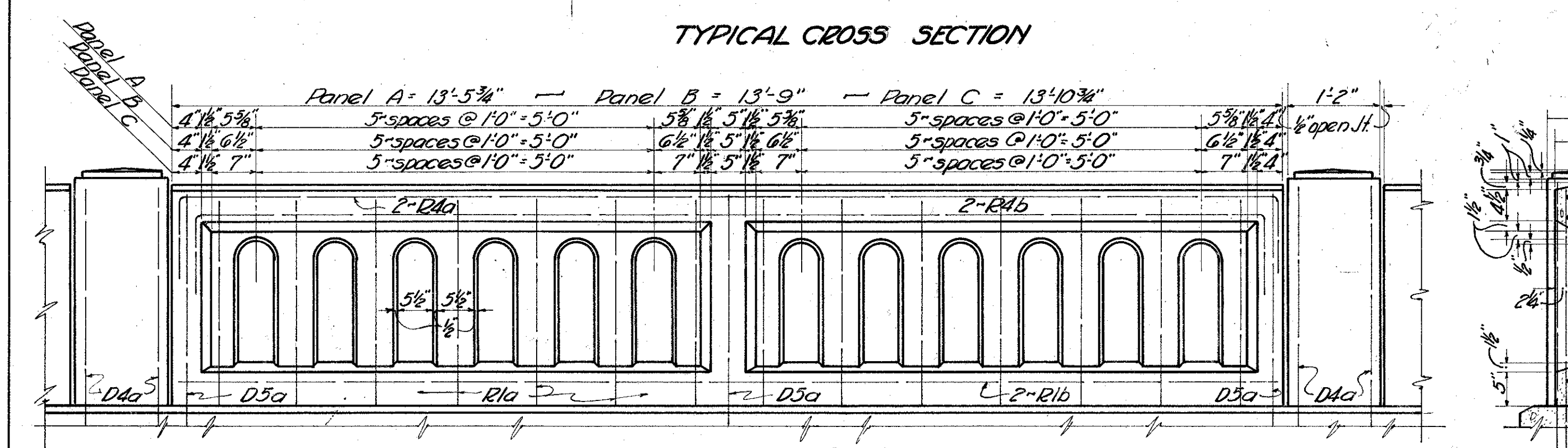
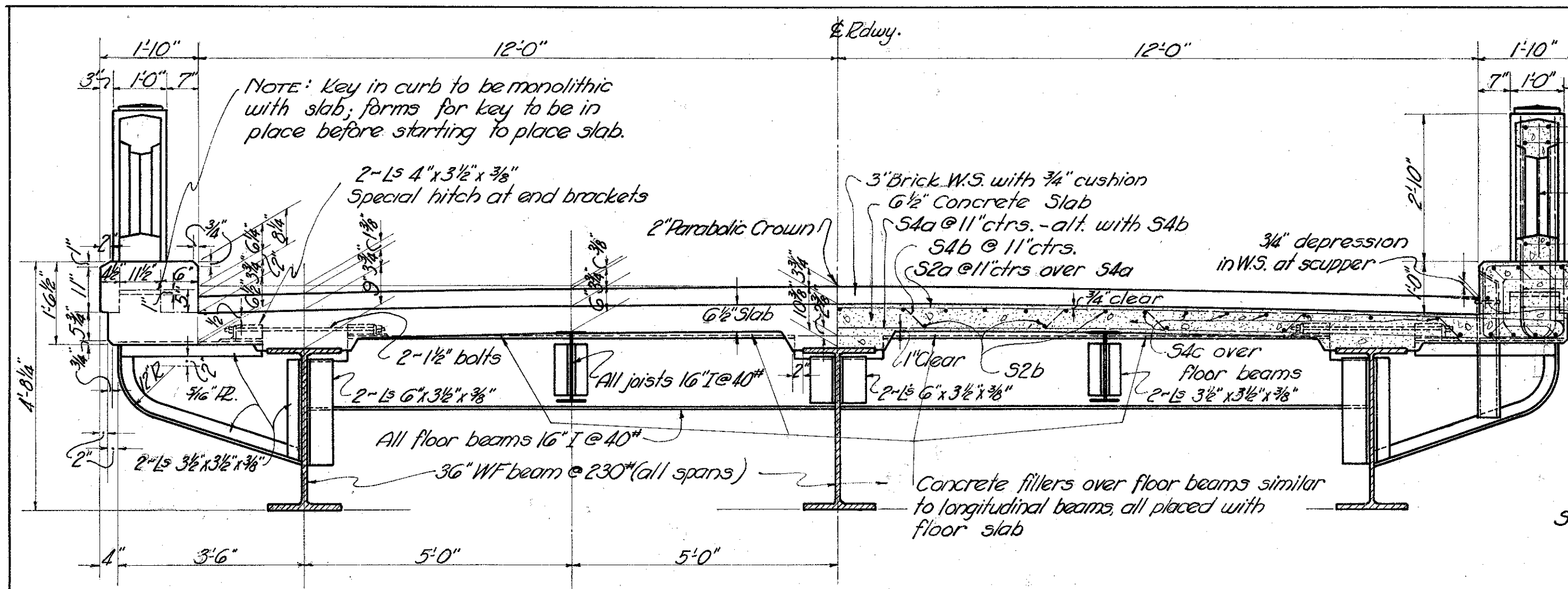
ABUTMENT DETAILS

BRIDGE NO. TU-21-40L
OVER SUGAR CREEK

TUSCARAWAS COUNTY SH. 77
SEC. 7 STA. 50+00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.G.U.	L.G.U.	J.P.N.	C.H.A.	H.A.C.	4/22/32	

PROPOSAL No. 2



SUPERSTRUCTURE STEEL									
Mark	Size	No.	Shape	Length	Weight				
S4b	5/8"	2	Bent	27'-0"	6262				
S4b1	5/8"	2	Bent	25'-6"	58				
S4b2	5/8"	2	Bent	23'-7"	54				
S4b3	5/8"	2	Bent	21'-9"	50				
S4b4	5/8"	2	Bent	19'-10"	45				
S4b5	5/8"	2	Bent	18'-0"	41				
S4b6	5/8"	2	Bent	16'-1"	37				
S4b7	5/8"	2	Bent	14'-3"	33				
S4b8	5/8"	2	Bent	12'-4"	29				
S4b9	5/8"	2	Bent	10'-6"	25				
S4b10	5/8"	2	Bent	8'-7"	20				
S4b11	5/8"	2	Bent	6'-9"	16				
S4b12	5/8"	2	Bent	4'-10"	12				
S4b13	5/8"	2	Bent	3'-0"	8				
S4a	5/8"	199	Strt	27'-0"	5609				
S4a1	5/8"	2	Strt	25'-6"	53				
S4a2	5/8"	2	Strt	24'-8"	52				
S4a3	5/8"	2	Strt	22'-9"	47				
S4a4	5/8"	2	Strt	20'-11"	44				
S4a5	5/8"	2	Strt	19'-0"	40				
S4a6	5/8"	2	Strt	17'-2"	36				
S4a7	5/8"	2	Strt	15'-3"	32				
S4a8	5/8"	2	Strt	13'-5"	28				
S4a9	5/8"	2	Strt	11'-6"	24				
S4a10	5/8"	2	Strt	9'-8"	20				
S4a11	5/8"	2	Strt	7'-9"	16				
S4a12	5/8"	2	Strt	5'-10"	12				
S4a13	5/8"	2	Strt	4'-0"	8				
S4a14	5/8"	2	Strt	2'-2"	4				
S2a	1/2"	199	Strt	27'-0"	3706				
S2a1	1/2"	2	Strt	25'-6"	34				
S2a2	1/2"	2	Strt	24'-8"	33				
S2a3	1/2"	2	Strt	22'-9"	31				
S2a4	1/2"	2	Strt	20'-11"	28				
S2a5	1/2"	2	Strt	19'-0"	25				
S2a6	1/2"	2	Strt	17'-2"	23				
S2a7	1/2"	2	Strt	15'-3"	20				
S2a8	1/2"	2	Strt	13'-5"	18				
S2a9	1/2"	2	Strt	11'-6"	15				
S2a10	1/2"	2	Strt	9'-8"	13				
S2a11	1/2"	2	Strt	7'-9"	10				
S2a12	1/2"	2	Strt	5'-10"	8				
S2a13	1/2"	2	Strt	4'-0"	5				
S2a14	1/2"	2	Strt	2'-2"	3				
S8a	1"	112	Strt	30'-3"	11,533				
S4c	5/8"	286	Strt	8'-0"	2,329				
S2b	1/2"	105	Strt	30'-6"	2,139				
S2c	1/2"	196	Bent	3'-3"	426				
S2d	1/2"	196	Bent	4'-3"	556				
S2e	1/2"	28	Strt	30'-3"	566				
TOTAL					34,176				

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SUPERSTRUCTURE & PIER DETAILS

BRIDGE NO. TU-21-401
OVER SUGAR CREEK

TUSCARAWAS COUNTY SH. 77
SEC. T STA. 50+00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.G.U.	L.G.U.	L.G.U.	C.H.A.	R.H.C.	4/29/32	

SUMMARY OF QUANTITIES

FED. AID DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	30 30
10	OHIO	630-C	1932	

S.H. (I.C.H.) 77 - SEC. 'T'
TUSCARAWAS COUNTY

STRUCTURES 20 FT. & UNDER														
NO.	STATION	TYPE	SIZE	LENGTH	EXC.	CONCRETE		REINF.	VIT. SEWER PIPE				SPEC'L. CATCH BASIN	EXIST. CONC. MASONRY & K.S.P. REMOVED Cu. Yds.
					DRY	1-8	1-5½	STEEL	(Enc) Lin. Ft.					
					Cu. Yds.	Cu.Yd.	Cu.Yds	Lbs.	12"	18"	20"	22"		
1	2+33	K.S.P. (Enc)	18"-20"-22"	148'-30'-30'	82	1.5	3.8	180		148	30	30	2	4
2	58+93	Std. Conc. Box	4'x3'	46'-0"	65		22.9	2,074						
3	82+30	K.S.P. (Enc)	12"	60'-0"	30		2.0	127	60					
TOTAL					177	1.5	28.7	2381	60	148	30	30	2	4

SUMMARY of PRIVATE DRIVES-"A"				
Nº	STATION	Rt. or Lt.	12" CORR. IRON PIPE Lin. Ft.	#46 TRAFFIC BOUND MATERIAL Cu. Yds.
1A	10+00	Rt.	12'	4
2A	10+00	Lt.	12'	4
3A	18+80	Lt.	12'	6
4A	22+93	Rt.	16'	4
5A	28+90	Lt.		8
6A	45+18	Lt.	16'	4
7A	46+70	Rt.	16'	4
8A	57+80	Rt.	20'	4
9A	70+05	Rt.	24'	4
10A	70+05	Lt.	22'	4
11A	72+42	Lt.	16'	4
TOTAL			166	50

SUMMARY of EXCAVATION & EMBANKMENT							
FROM STA.	TO STA.	EXC.	EMB.	EMB+20% CU. YDS.	SHORT	EXCESS	BORROW
0+00.0	10+00	166	3439	4126	3960		3960
10+00	20+00	1602	1943	2332	730		730
20+00	30+00	992	4778	5734	4742		4742
30+00	40+00	29	6205	7446	7417		3207
40+00	49+08.83	278	2517	3020	2742		
49+08.83	51+07.17			BRIDGE			
51+07.17	60+00	339	2490	2988	2649		
60+00	70+00	2510	1296	1555		955	
70+00	82+36.9	9373	606	727		8646	
TOTAL		15,289	23,274	27,928	22,240	9,601	12,639
Less Channel Excavation Prop. #2 Contractor to Furnish							3,287 → 9,352

DERIVATION of PAVEMENT QUANTITIES					
STATIONS	6" CONC. BASE	9"x3 1/2" CONC. CURB	3" BRICK	8" CONC. BASE	7-6 BIT. SURFACE COURSE
	Sq. Yds.	Lin. Ft.	Sq. Yds.	Lin. Ft.	Tons
Road Approach (Beg. of Project)					
See Detail ~ Sheet No. 6	638.3	748.4	1577.7	280.8	34
Sta. 2+00.20 to 29+84.85					
(2784.65x20) ÷ 9	6,188.1				
(2784.65-2114.3) + 2784.65		5357.9			
18.5(2784.65-1.34) ÷ 9			5,721.2		
Sta. 29+84.85 (Header Curb)		33.1			
Sta. 29+84.85 to 30+02.75 - R.R. Xing.					
Sta. 30+02.75 (Header Curb)		33.1			
Sta. 30+02.75 to 48+88.46					
(1885.71x20) ÷ 9	4,190.5				
1885.71 x 2		3,771.4			
18.5(1885.71-1.34) ÷ 9			3,873.4		
Sta. 48+88.46 to 51+27.54 ~ Bridge					
Sta. 51+27.54 to 82+36.90					
(3109.36x20) ÷ 9	6,909.7				
3109.36 x 2		6,218.7			
(18.5x3109.36) ÷ 9			6,391.5		
TOTALS	17,926.6	16,162.6	17,563.8	280.8	34

LENGTH of PROJECT				
	GROSS LENGTH	DEDUC- TIONS	NET LENGTH	
	Lin. Ft.	Lin. Ft.	Lin. Ft.	Miles
PROPOSAL No. 1				
Approach S.H. 414 - Sec. 'O'	230.00			
Sta. 0+00.00 to 82+36.90	8,236.90			
TOTAL	8,466.90			
DEDUCTIONS				
Sta. 29+84.85 to 30+02.75 - R.R. Xing.		17.90		
Sta. 48+88.46 to 51+27.54 - Bridge		239.08		
TOTAL			8,209.92	1.554
PROPOSAL No. 2				
Bridge				
Sta. 48+88.46 to 51+27.54	239.08		239.08	0.045
Proposals No. 1 & 2 TOTAL			8,449.00	1.599

SUMMARY OF MAIL BOX APPROACHES - "M"				
Nº	STATION	Rt. or Lt.	#46 TRAFFIC BOUND MATERIAL Cu. Yds.	Size
1-M	21+24	Lt.	1.5	See Sheet #2
2-M	41+64	Lt.	1.5	"
3-M	46+06	Lt.	1.5	"
4-M	72+30	Lt.	1.5	"
TOTAL			6	

Finishing Berms, etc.
Sta. 0+00 to Sta. 49+08.83 = 4908.83 Lin. Ft.
Sta. 51+07.17 to Sta. 82+36.90 = 3129.73 Lin. Ft.
Approach S.H. 414 - Sec. 'O'
TOTAL (Both sides) = 8038.56
Deduct for P.R. 17.90
Total 8020.66 Say 8021'

SUMMARY of ROADWAY & PAVEMENT QUANTITIES
PROPOSAL Nº1 - CONTRACT Nº1
Excavation (Unclassified) 15,289.0 Cu. Yds.
Borrow (Contractor to furnish) 9,352.0 Cu. Yds.
Finishing Berms, etc. (both sides) 8021 Lin. Ft.
#46 Traffic Bound Material (Drives & M. Boxes) 56.0 Cu. Yds.
12" Corr. Iron Pipe 166.0 Lin. Ft.
6" Concrete Base 17,926.6 Sq. Yds.
8" Concrete Base 280.8 Sq. Yds.
9"x3 1/2" Concrete Curb 16,162.6 Lin. Ft.
3" Brick Pav't 17,563.8 Sq. Yds.
7-6 Bituminous Surface Course 34.0 Tons

PROPOSAL Nº2 (BRIDGE)
STA. 48+88.46 to STA. 51+27.54
FOR ESTIMATED QUANTITIES
SEE SHEET Nº 27