

I.C.H. 506 SEC. D
HARRISON COUNTY

STATE OF OHIO
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS

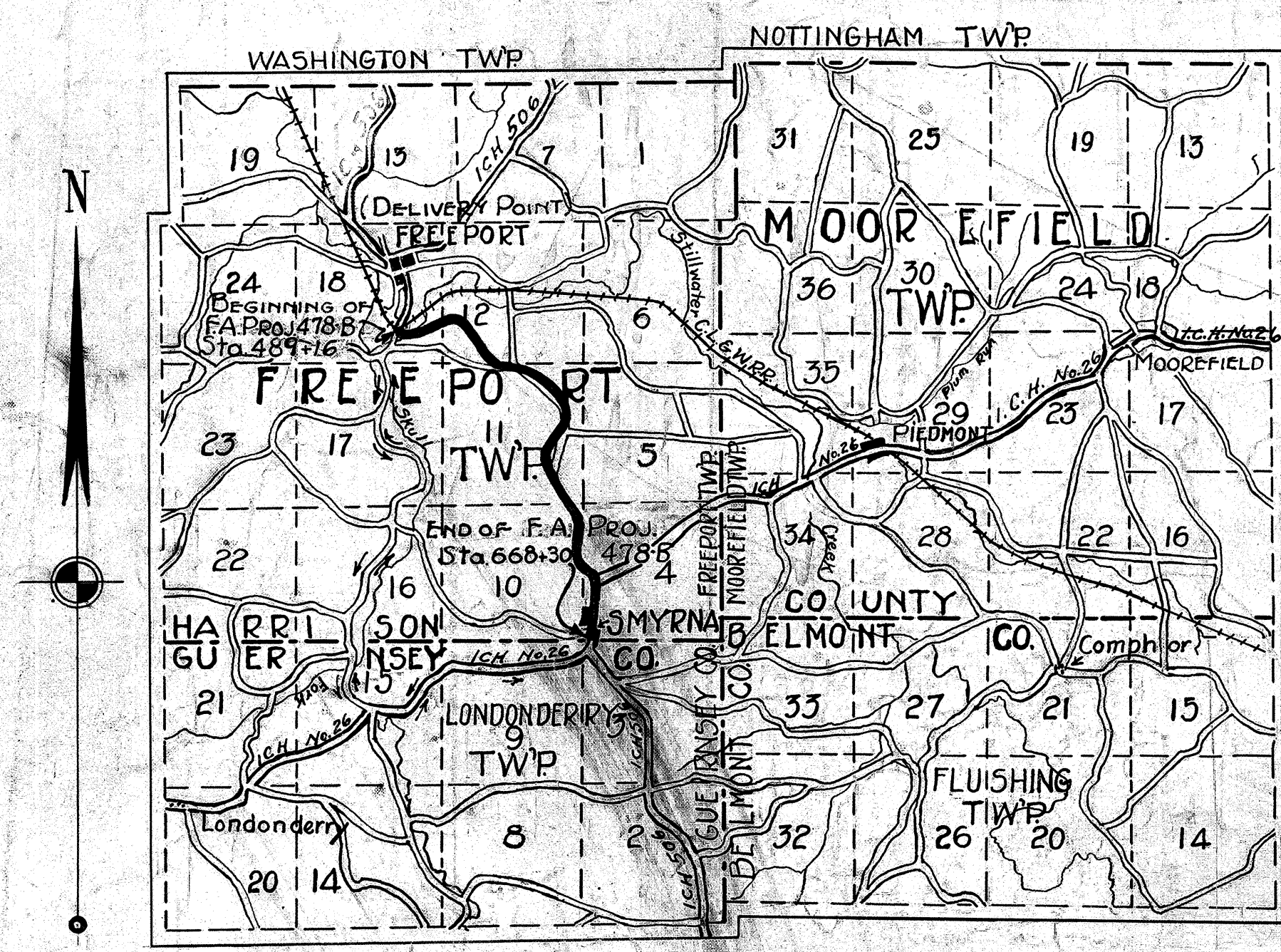
DIVISION OF HIGHWAYS

DENNISON ~ NATIONAL ROAD

I.C.H. NO. 506 SECTION-D PETITION NO. 5443

HARRISON COUNTY

FREEPORT TOWNSHIP AUGUST, 1927



LOCATION PLAN



PORTION TO BE IMPROVED
DETOURS SHOWN THUS
IMPROVED ROADS

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.

SCALES
Plan 1" = 100'
Profile (Vertical) 1" = 10'
Profile (Horizontal) 1" = 100'
Cross Sections 1" = 5'



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The Standard Specifications of the State of Ohio Division of Highways 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 plan and estimates.

Approved: D. Moser
Date, August 20, 1927 Resident Engineer.

Approved: Ed. Stengel
Date, August 27, 1927 Resident Deputy,
State Highway Commissioner.

Approved: Root. S. Brighten
Date, 9-17-27 Chief Engineer,
Bureau of Construction.

Approved: _____
Date, _____ Chief Engineer,
Bureau of Maintenance.

Approved: J. B. Bunker
Date, 9/2/27 Chief Engineer,
Bureau of Bridges.

Approved: Harry J. Turk
Date, 9-17-27 State Highway Engineer.

Approved: St. J. Schlesinger
Date, 9-17-27 Director of Highways and
Public Works.

CONVENTIONAL SIGNS

State line	----
County line	-----
Township line	- - - - -
Section line	- . - . -
Property line not fenced	o - - - - o
Center line	o - - - - o
City or village line	o - - - - o
Fence	x - - - - x
Telephone or telegraph	
Steam railroad	+ + + + +
Electric line	- . - . -
Guard rail	- . - . -
Drain pipe (new)	- . - . -
Drain pipe (old)	- . - . -
Right of Way Marker	o o

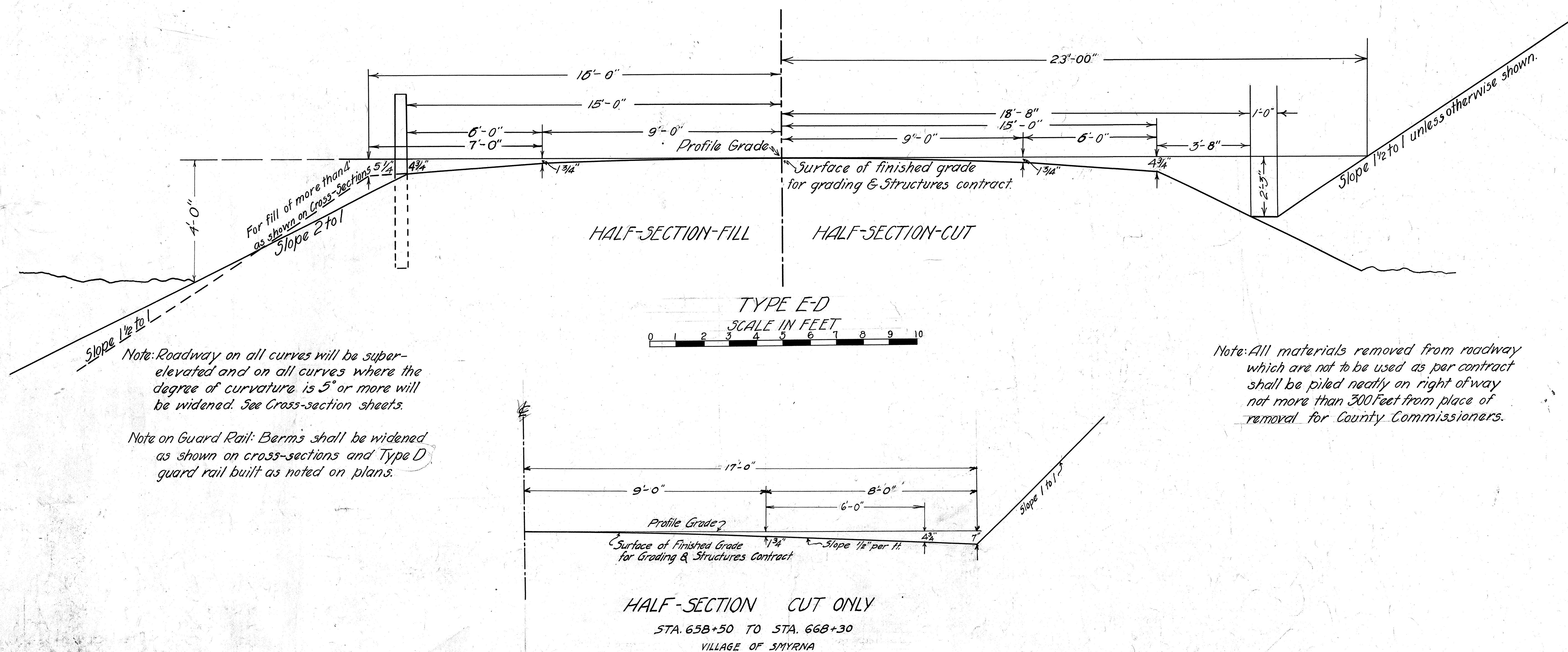
We, the Commissioners of Harrison County hereby approve these plans and certify that the right-of-way 60 feet wide together with such additional as may in places be necessary for slopes in cuts and fills is available for the construction, maintenance and repair of the above highway.

J. M. Rice
R. W. Raymond
R. W. English

Date 9-17-27 County Commissioners.

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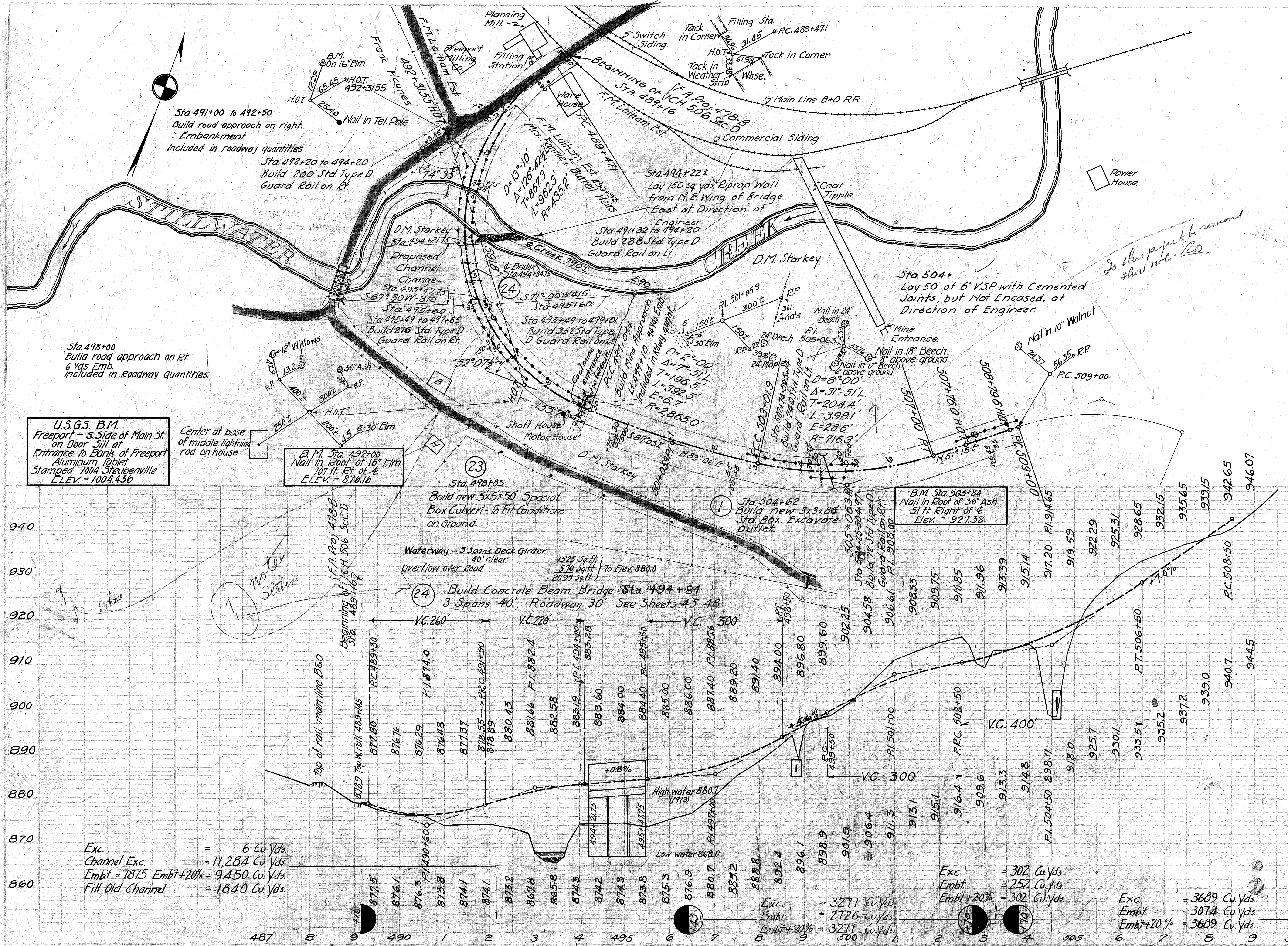
TYPICAL SECTION

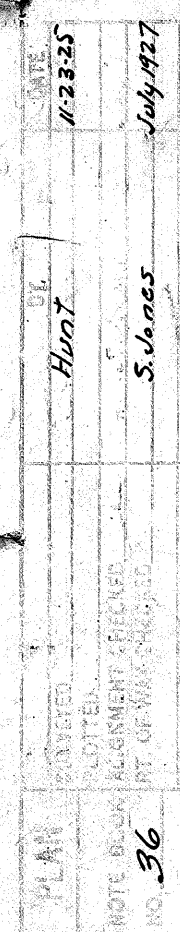


FEDERAL ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR
10	OHIO	478-B	1927

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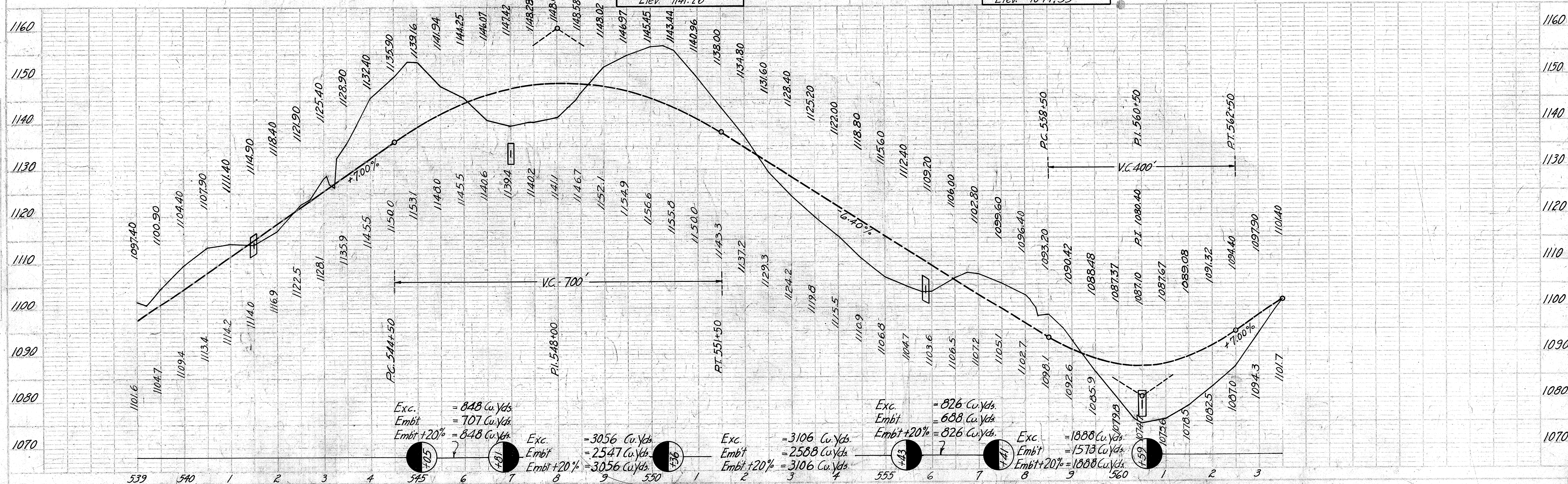
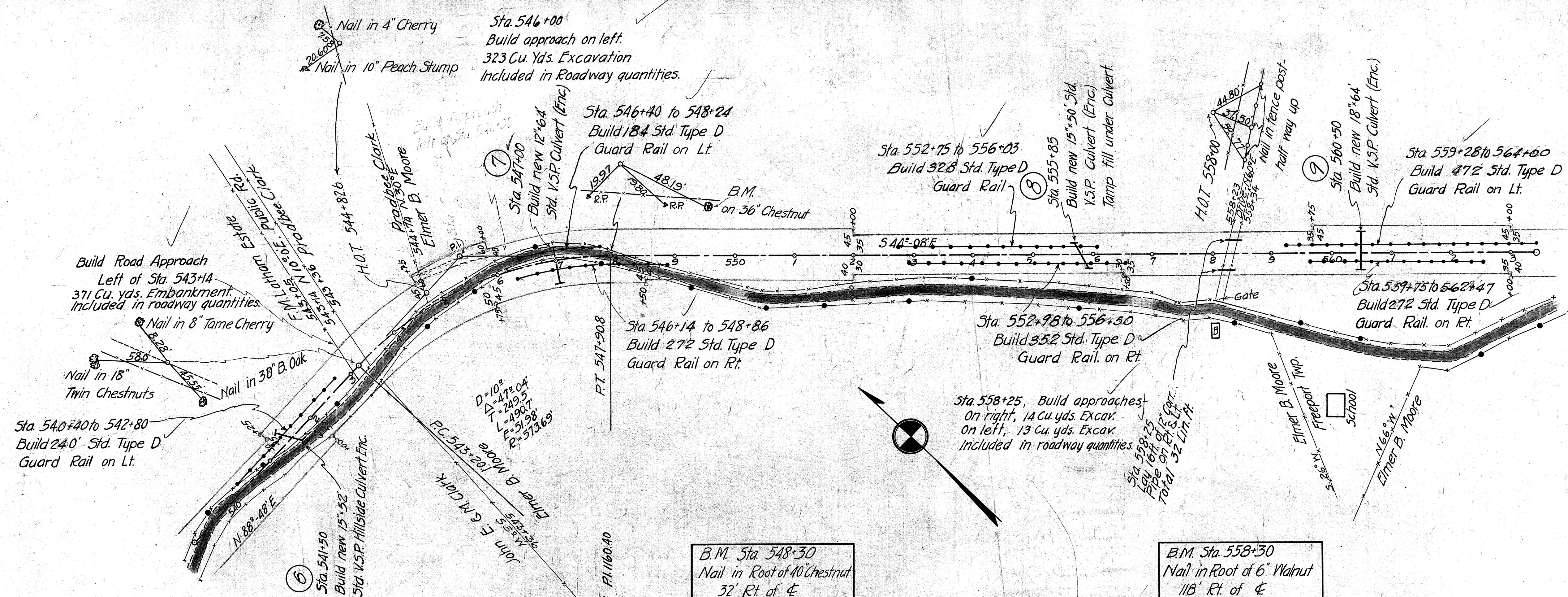




FEDERAL ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR
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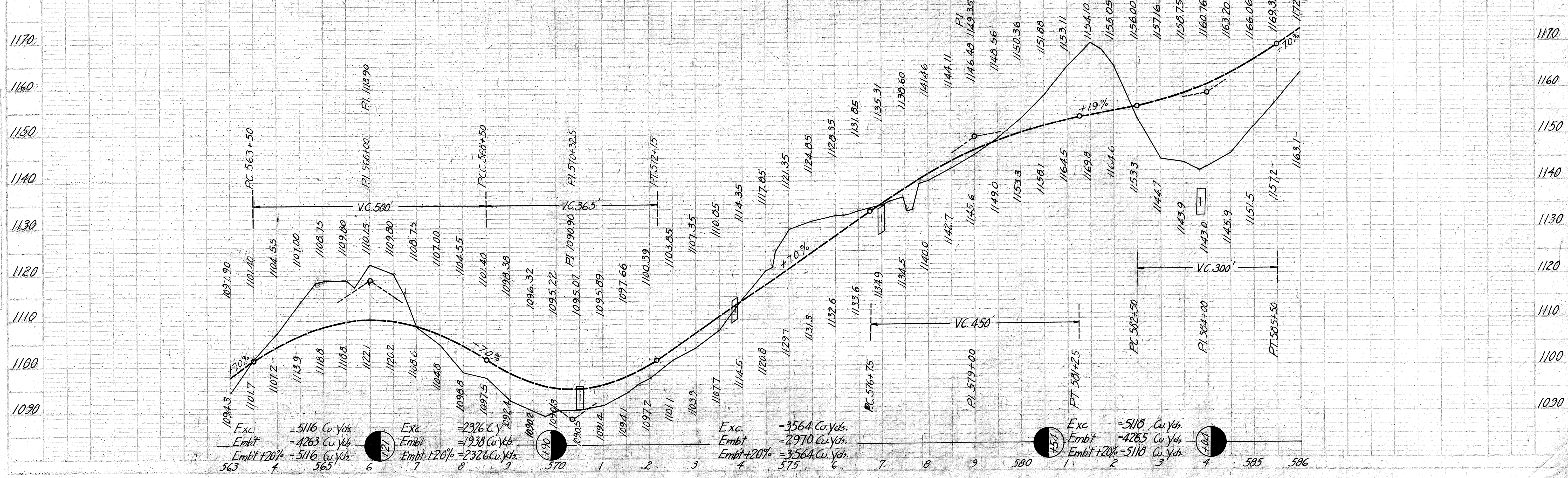
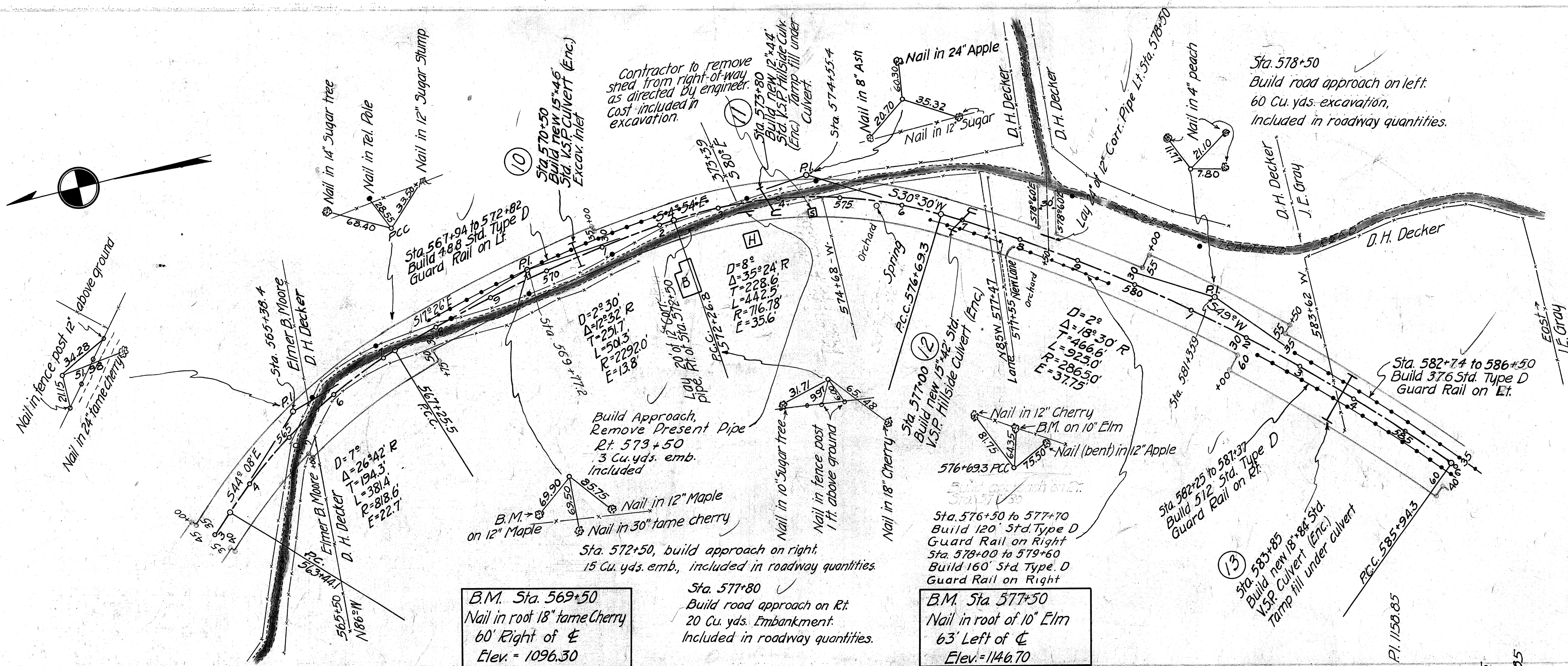
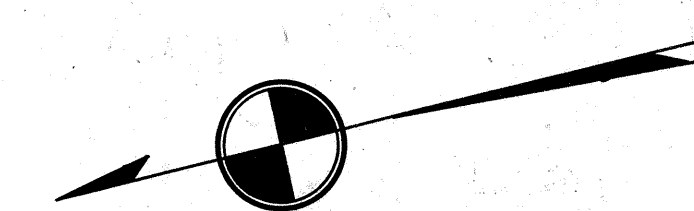
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$$\frac{8}{56}$$

Diagram of a triangular truss section with the following labels and dimensions:

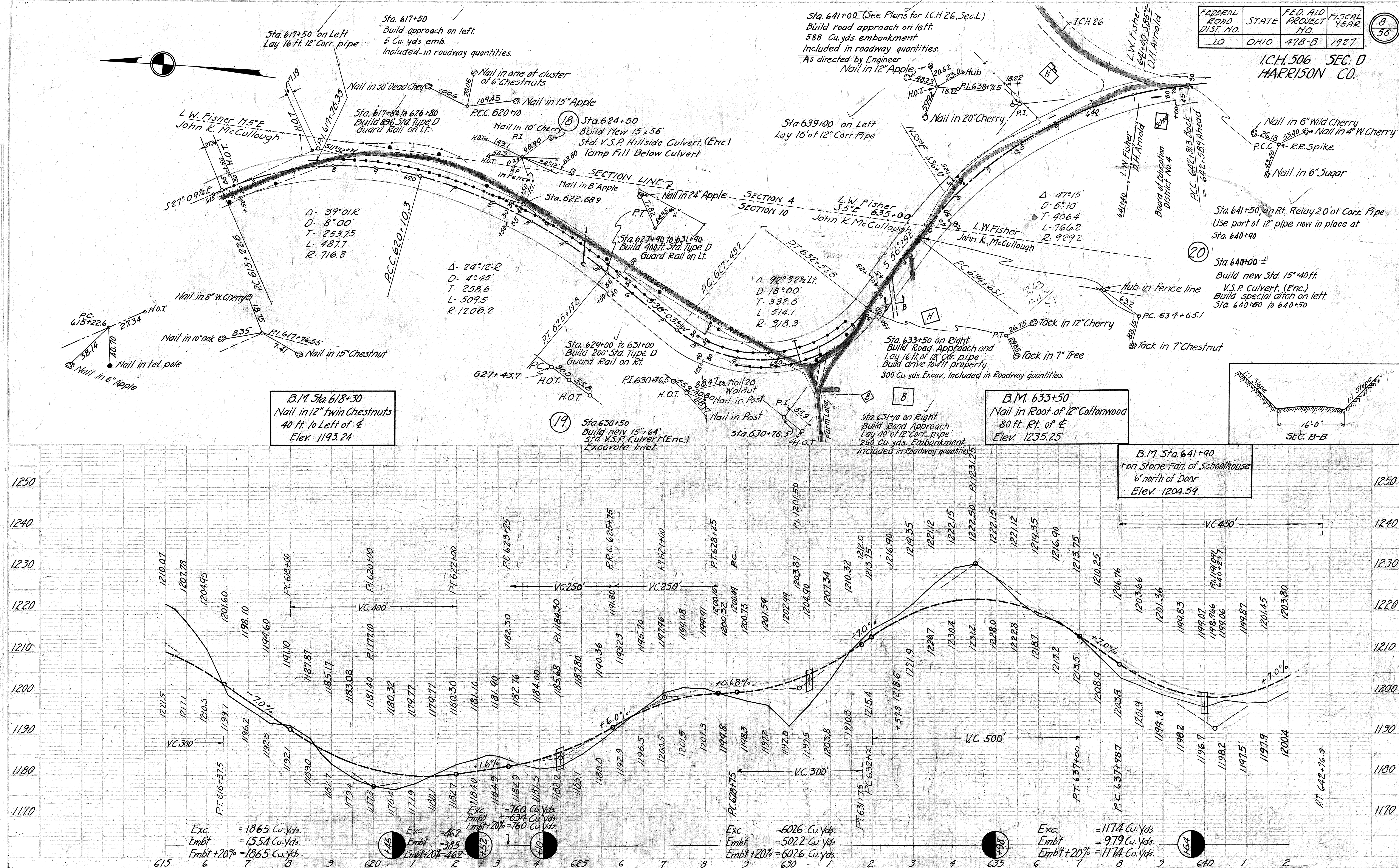
- Top-left joint: Nail in 6" Wild Cherry
- Top-right joint: Nail in 4" W. Cherry
- Bottom-left joint: P.C.C.
- Bottom-right joint: R.R. Spike
- Bottom joint: Nail in 6" Sugar
- Dimensions:
 - Top-left to Top-right: 26.18
 - Top-left to Bottom-left: 53.40
 - Top-right to Bottom-right: 43.40

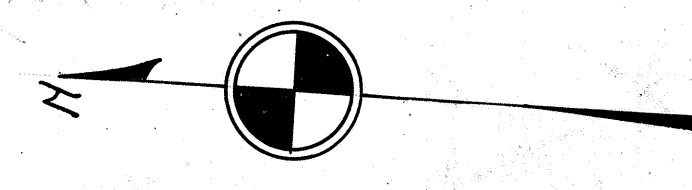
Sta. 641+50, on Rt. Relay 20' of Corr. Pipe
Use part of 12" pipe now in place at
Sta. 640+90

Sta. 640+00 ±
Build new Sta. 15' x 40 ft.
V.S.P. Culvert. (Enc.)
Build special ditch on left,
Sta. 640+00 to 640+50

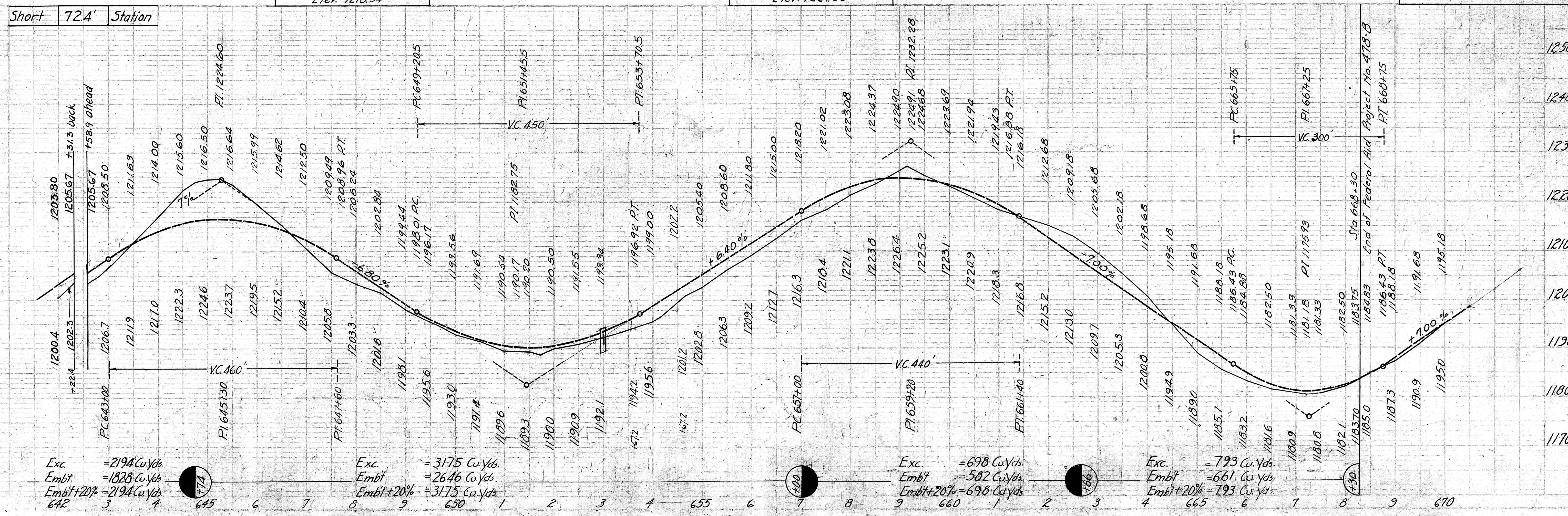
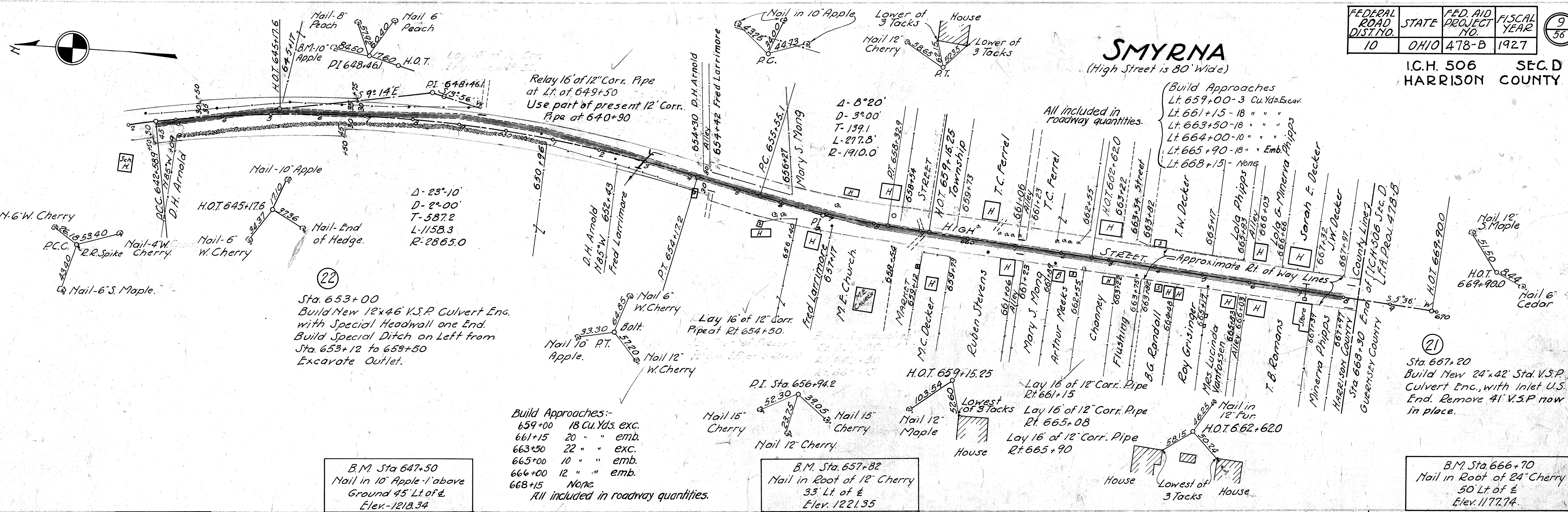
"Chestnut

B.M. Sta. 641+90
+ on Stone Fan. of Schoolhouse
6" north of Door
Elev. 1204.59





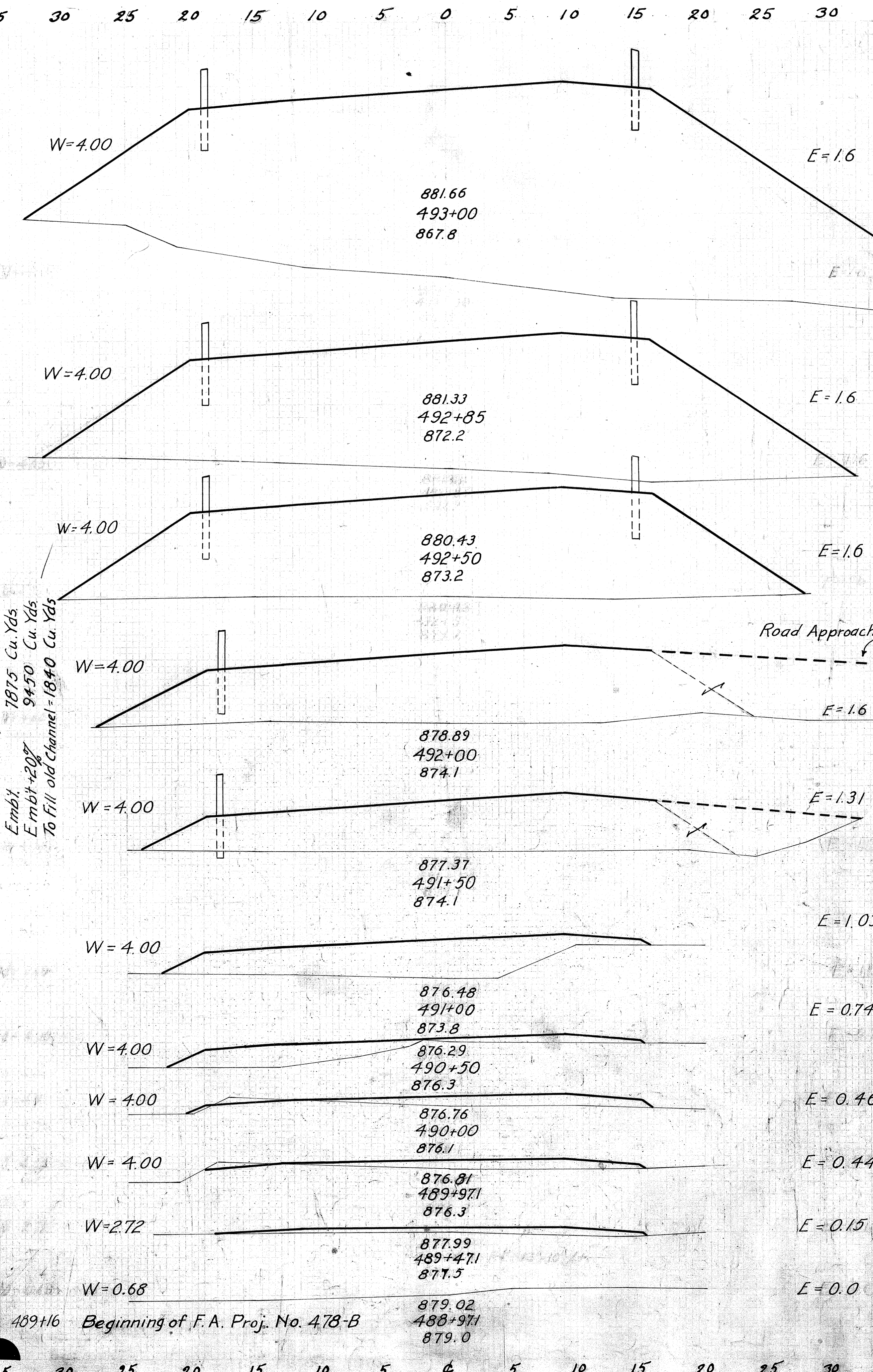
FEDERAL ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	956
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Exc.	= 2194 Cu. Yds.	Exc.	= 3175 Cu. Yds.	Exc.	= 698 Cu. Yds.	Exc.	= 793 Cu. Yds.
Embt	= 1828 Cu. Yds.	Embt	= 2646 Cu. Yds.	Embt	= 582 Cu. Yds.	Embt	= 661 Cu. Yds.
Embt+20%	= 2194 Cu. Yds.	Embt+20%	= 3175 Cu. Yds.	Embt+20%	= 698 Cu. Yds.	Embt+20%	= 793 Cu. Yds.

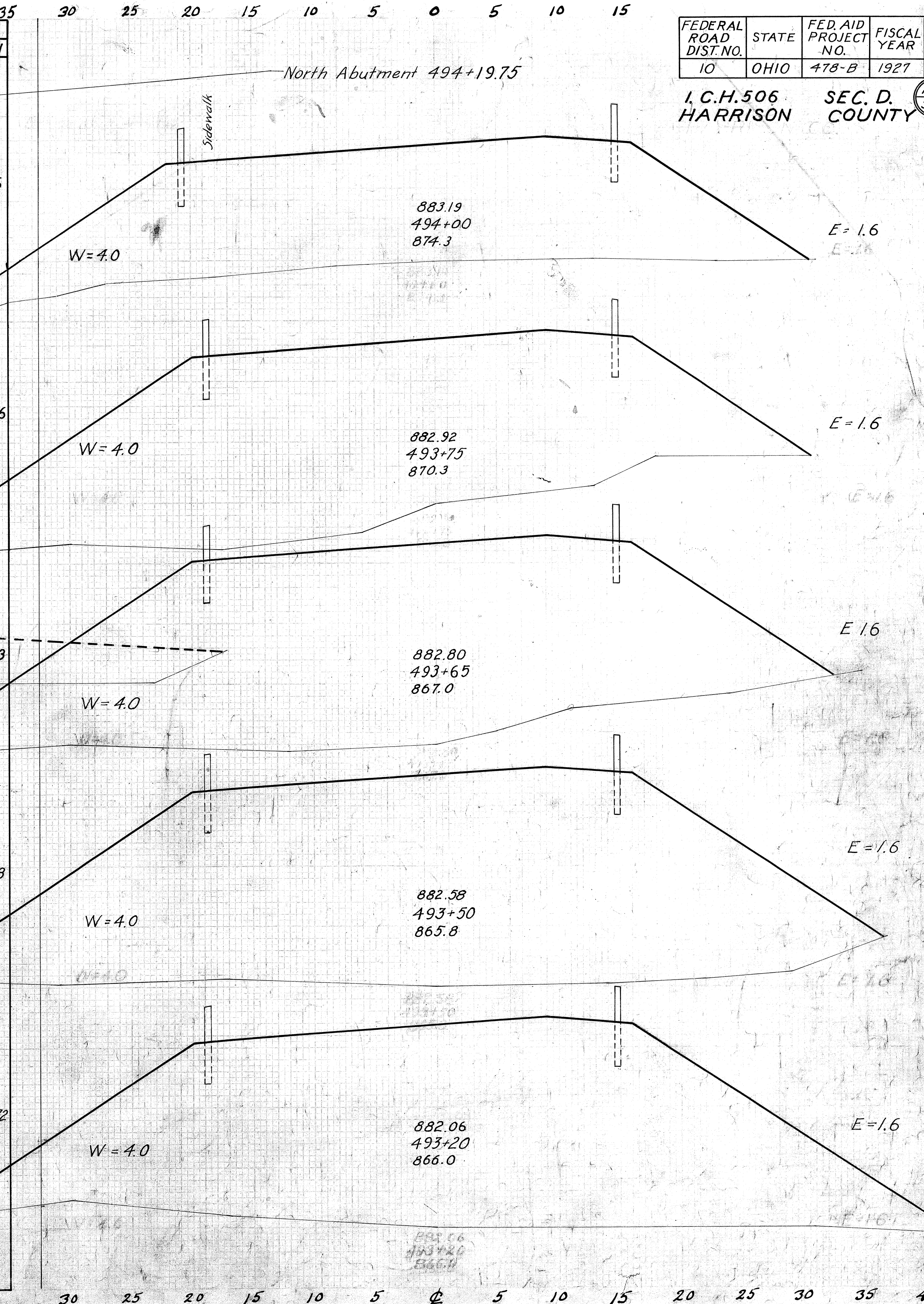
End Area		Cu.Yds.	
Cut	Fill	Cut	Fill
0	802	0	644
0	359	0	359
0	482	0	482
0	550	0	550
0	358	0	358
0	676	0	676
0	372	0	372
0	512	0	512
0	181	0	181
0	238	0	238
0	76	0	76
0	98	0	98
0	30	3	44
2	17	0	2
2	16	3	26
0	12	0	11
0	0	0	0

6 Cu.Yds.
 Exc. Channel Exc. 11,284 Cu.Yds.
 Emb'd. 1875 Cu.Yds.
 Emb'd. 9450 Cu.Yds.
 To Fill old Channel = 1840 Cu.Yds.



489+16 Beginning of F.A. Proj. No. 478-B

End Area		Cu.Yds.	
Cut	Fill	Cut	Fill
0	535	0	396
0	535	0	596
0	779	0	779
0	303	0	303
0	858	0	858
0	513	0	513
0	990	0	990
0	1072	0	1072
0	939	0	939



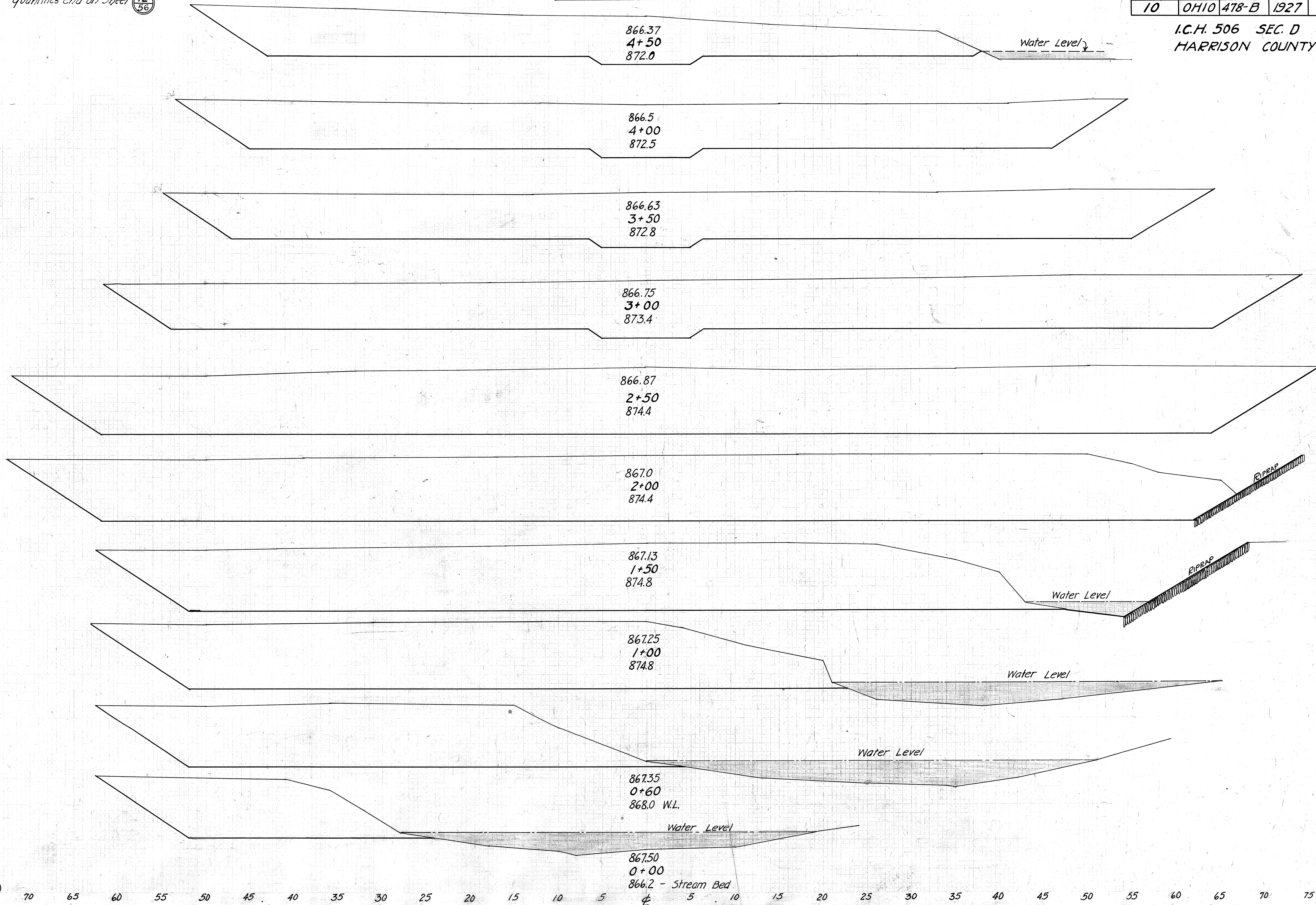
North Abutment 494+19.75

Sidewalk

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End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
391	0		
		861	0
539	0		
		1066	0
612	0		
		1255	0
743	0		
		1626	0
1013	0		
		1830	0
964	0		
		1561	0
722	0		
		1180	0
552	0		
		683	0
370	0		
		598	0
168	0		
		218	0
0	0		

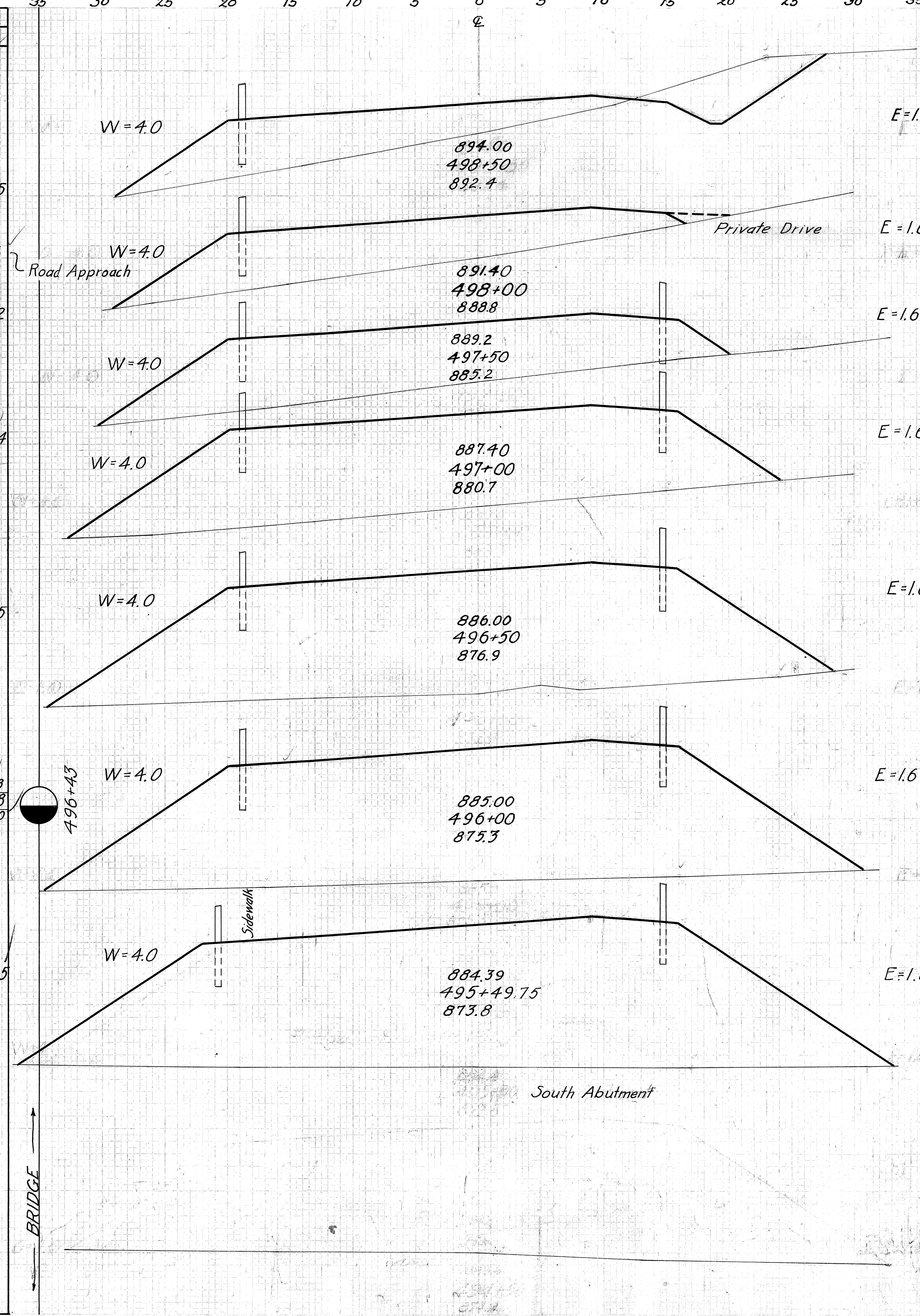


Design
Parameters

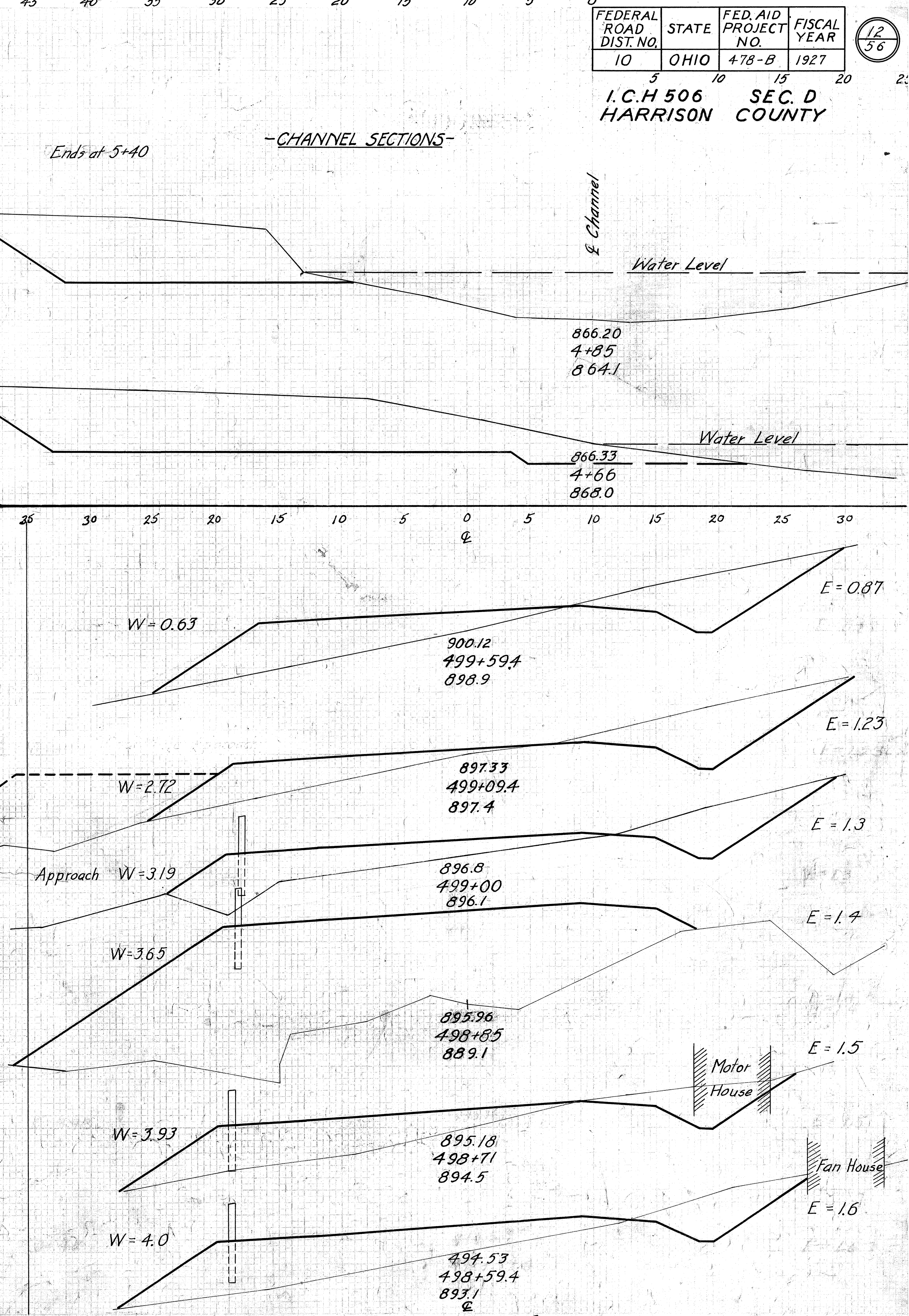
DATE	
BY	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
33	110	10	37
29	235		
0	143	6	
0	332		
0	216		
0	524		
0	350		
0	765		
0	476		
0	158		
0	928		
0	770		
0	528		
0	1065		
0	600		

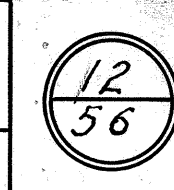


End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
116	0		
114	0		
113	0		
207	0		
177	0		
50	70		
97	107		
55	4		
15	19		
36	65		
10	121		
0	371		
7	116		
28	76		
12	39		
29	104		



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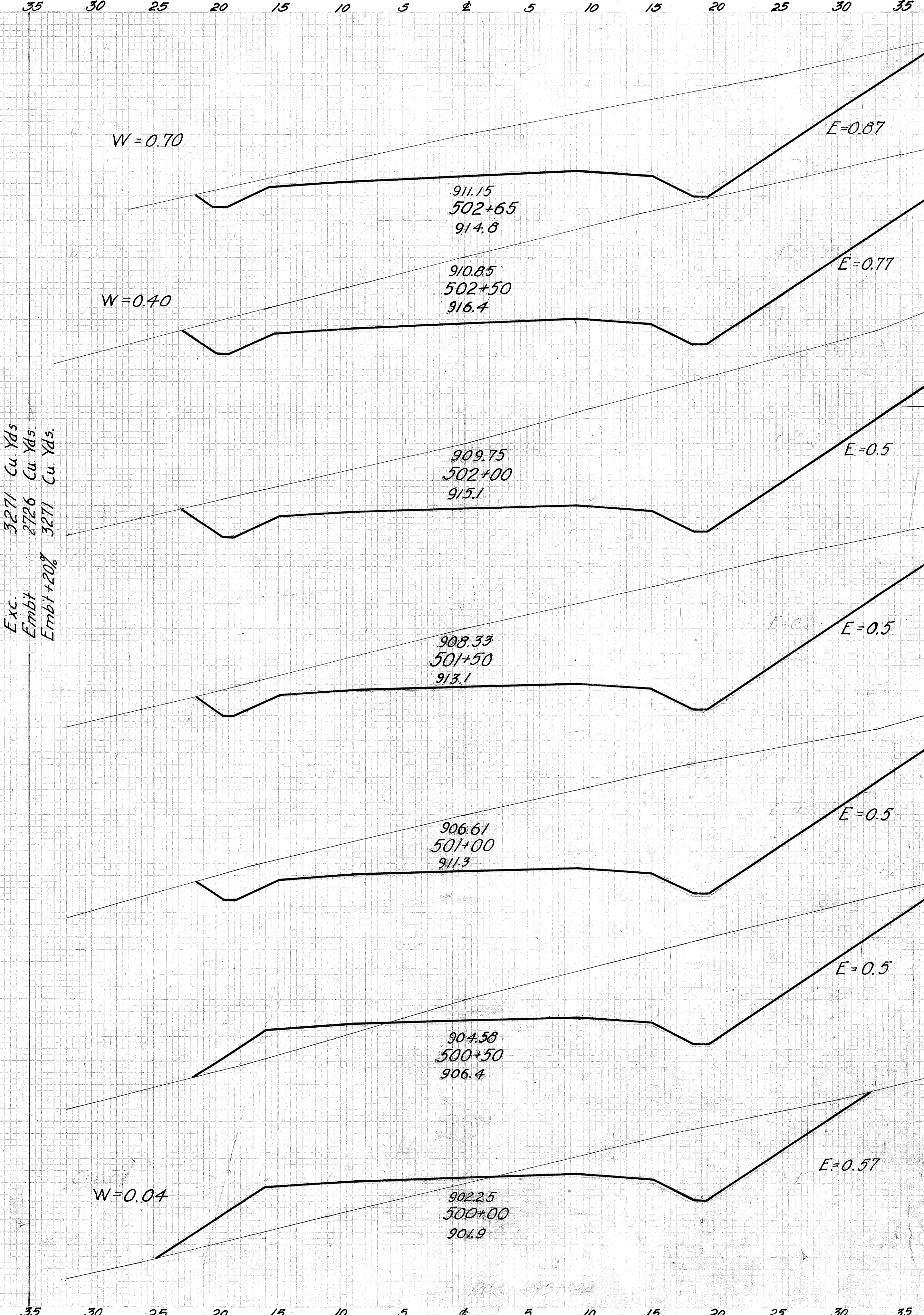


ORIGINAL SURVEY
 DATE
 BY
 NO.
 AREAS CHECKED

ORIGINAL SURVEY
 DATE
 BY
 NO.
 AREAS CHECKED

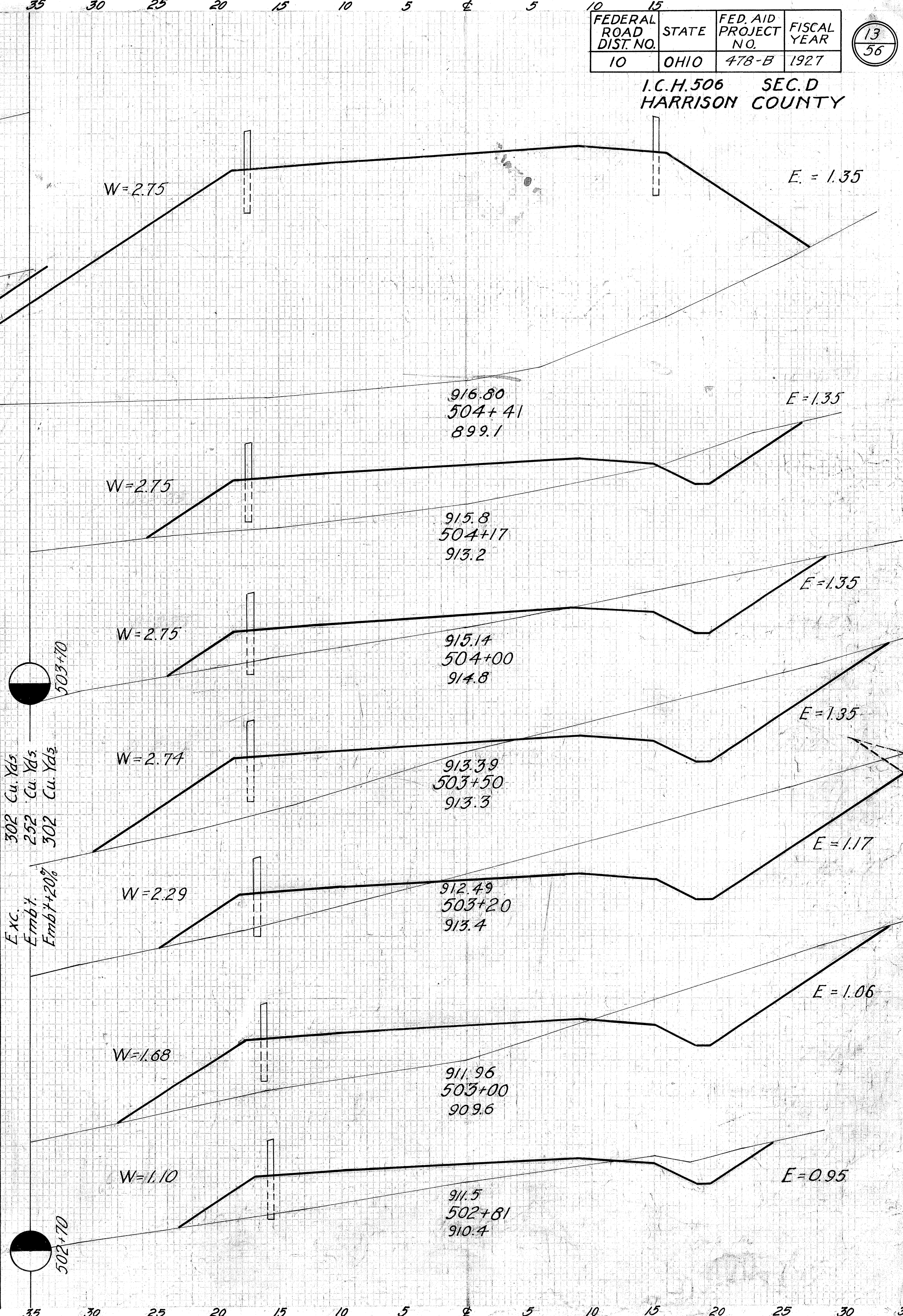
End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
220	0		
	171	0	
397	0		
	768	0	
442	0		
	714	0	
329	0		
	600	0	
319	0		
	461	17	
179	19		
	240	65	
80	51		
	98	91	

Exc. Cu. Yds.
 Embt. Cu. Yds.
 Embt + 20% Cu. Yds.

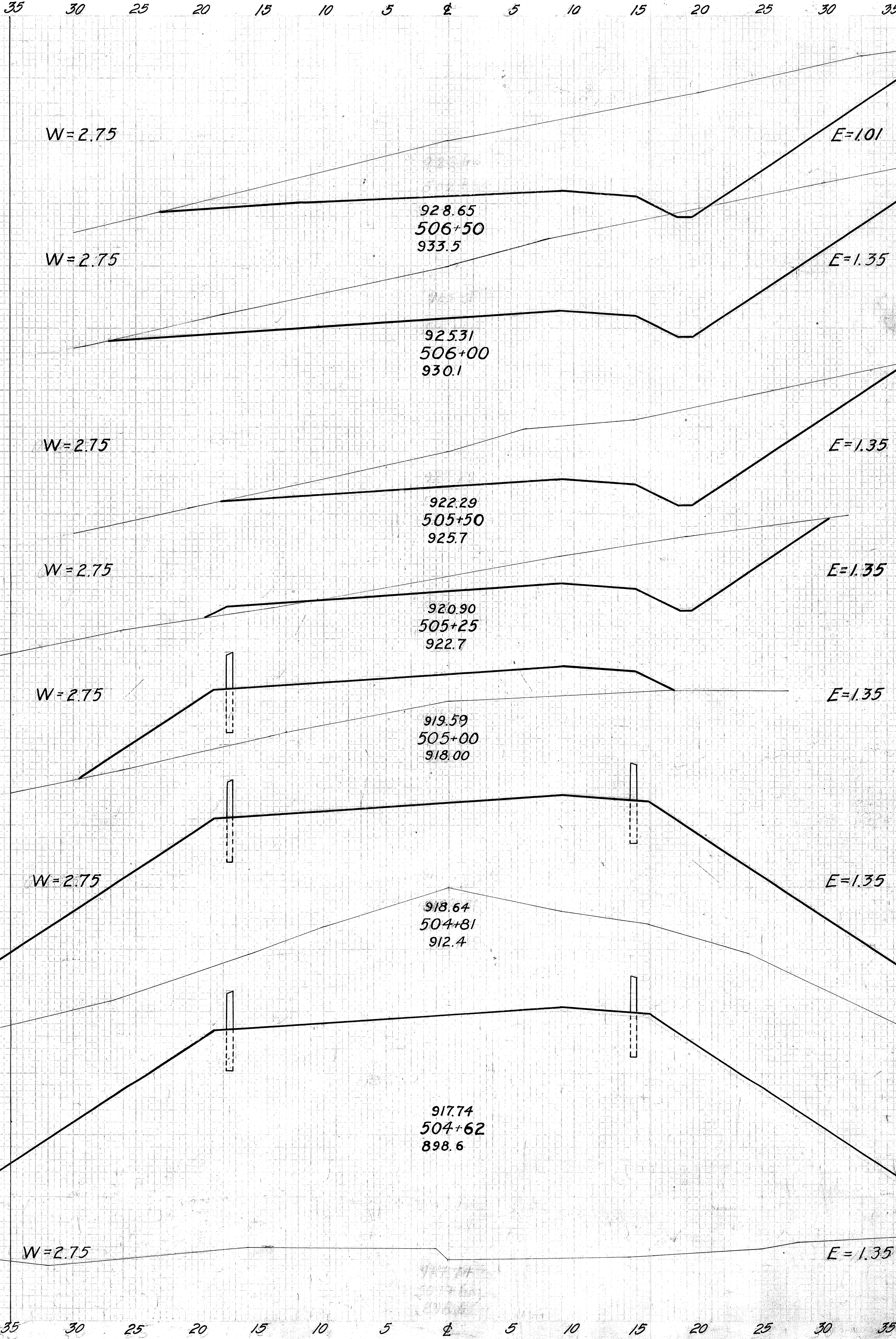


End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
	0	827	
	0	952	
8	475		
18	118		
19	52		
41	46		
53	65		
106	123		
53	58		
73	87		
117	67		
137	34		
74	51		
62	104		
26	58		
13	61		
32	18		
71	18		
39	0		

Exc. Cu. Yds.
 Embt. Cu. Yds.
 Embt + 20% Cu. Yds.

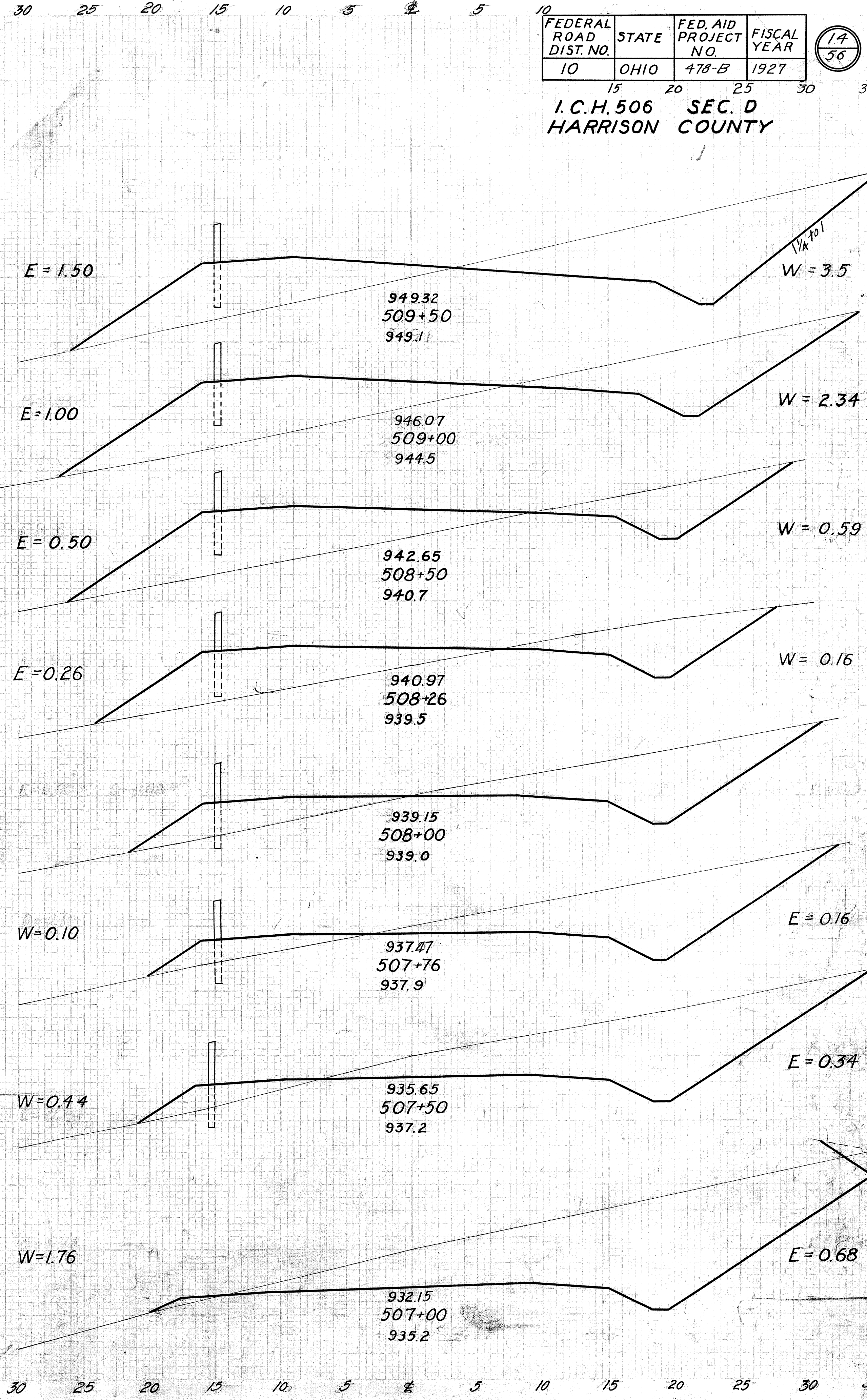


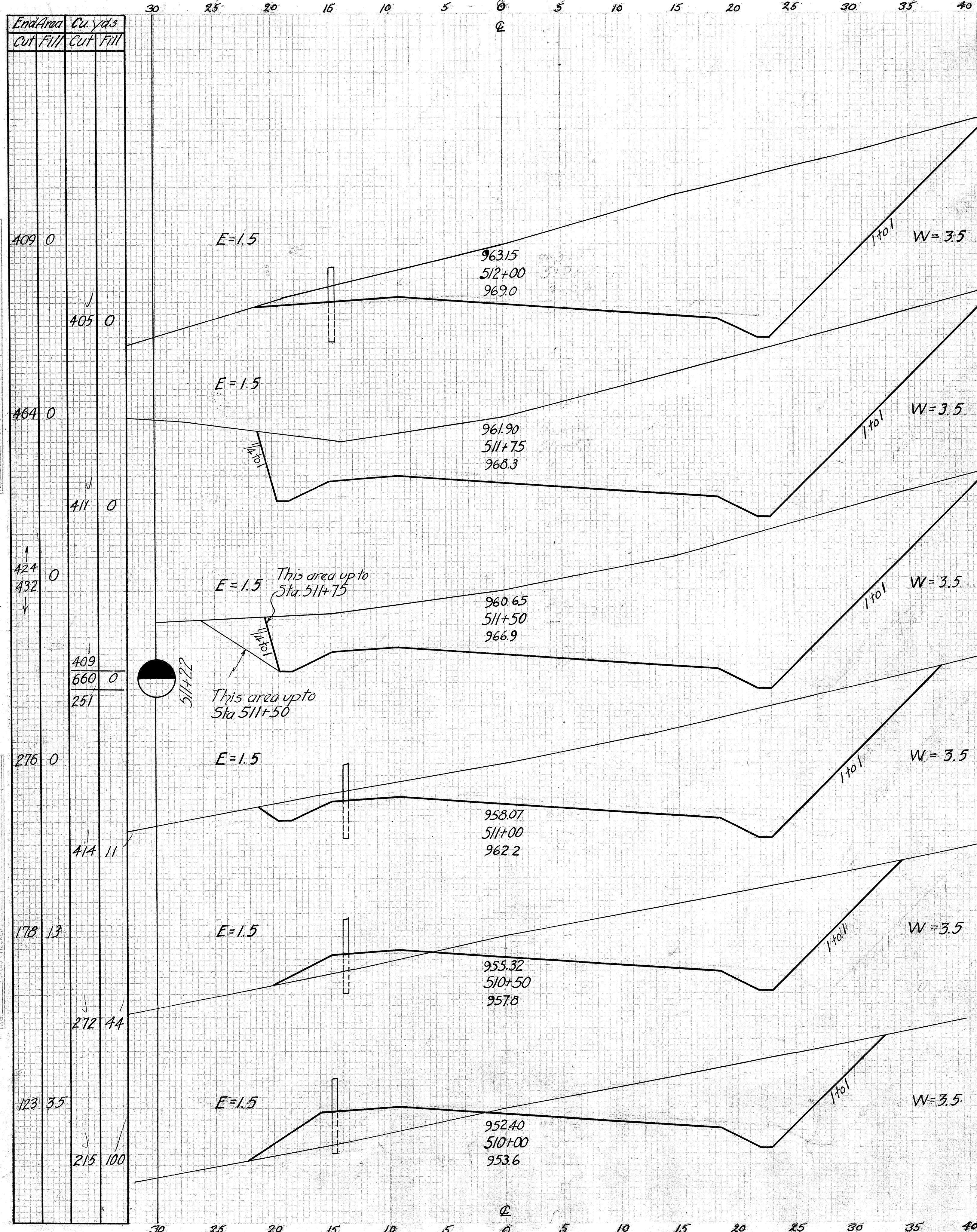
End Area		Cu. yds.	
Cut	Fill	Cut	Fill
279	0		
	537	0	
301	0		
	453	0	
188	0		
	130	1	
93	3		
	43	60	
0	125		
	0	277	
0	663		
	0	646	
0	1175		



End Area		Cu. yds.	
Cut	Fill	Cut	Fill
109	73		
	162	160	
66	100		
	97	180	
39	94		
	36	71	
42	67		
	57	48	
77	33		
	76	23	
93	18		
	107	17	
129	16		
	310	16	
206	1		
	449	1	

Exc. 3689 Cu. Yds.
Embl. 3074 Cu. Yds.
Embl. +20% 3689 Cu. Yds.





DATE _____
 BY _____
 SURVEY PLOTTED _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____

DATE _____
 BY _____
 SURVEY PLOTTED _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____

The diagrams show the construction of a road embankment in five stages, from top to bottom:

- Stage 1:** Stationing 515+50. Elevation 984.65 at the centerline. Slope E=1.3, width W=2.5.
- Stage 2:** Stationing 515+00. Elevation 981.15 at the centerline. Slope E=1.3, width W=2.5.
- Stage 3:** Stationing 514+50. Elevation 977.73 at the centerline. Slope E=1.3, width W=2.5.
- Stage 4:** Stationing 514+00. Elevation 974.48 at the centerline. Slope E=1.3, width W=2.5.
- Stage 5:** Stationing 513+92. Elevation 973.98 at the centerline. Slope E=1.3, width W=2.5.

The diagrams are plotted on a grid with a vertical axis labeled 'E' (Elevation) and a horizontal axis labeled 'Q' (Stationing). The vertical axis ranges from 45 to 35, and the horizontal axis ranges from 35 to 0 to 35. The diagrams are labeled with stationing and elevation data at the centerline.

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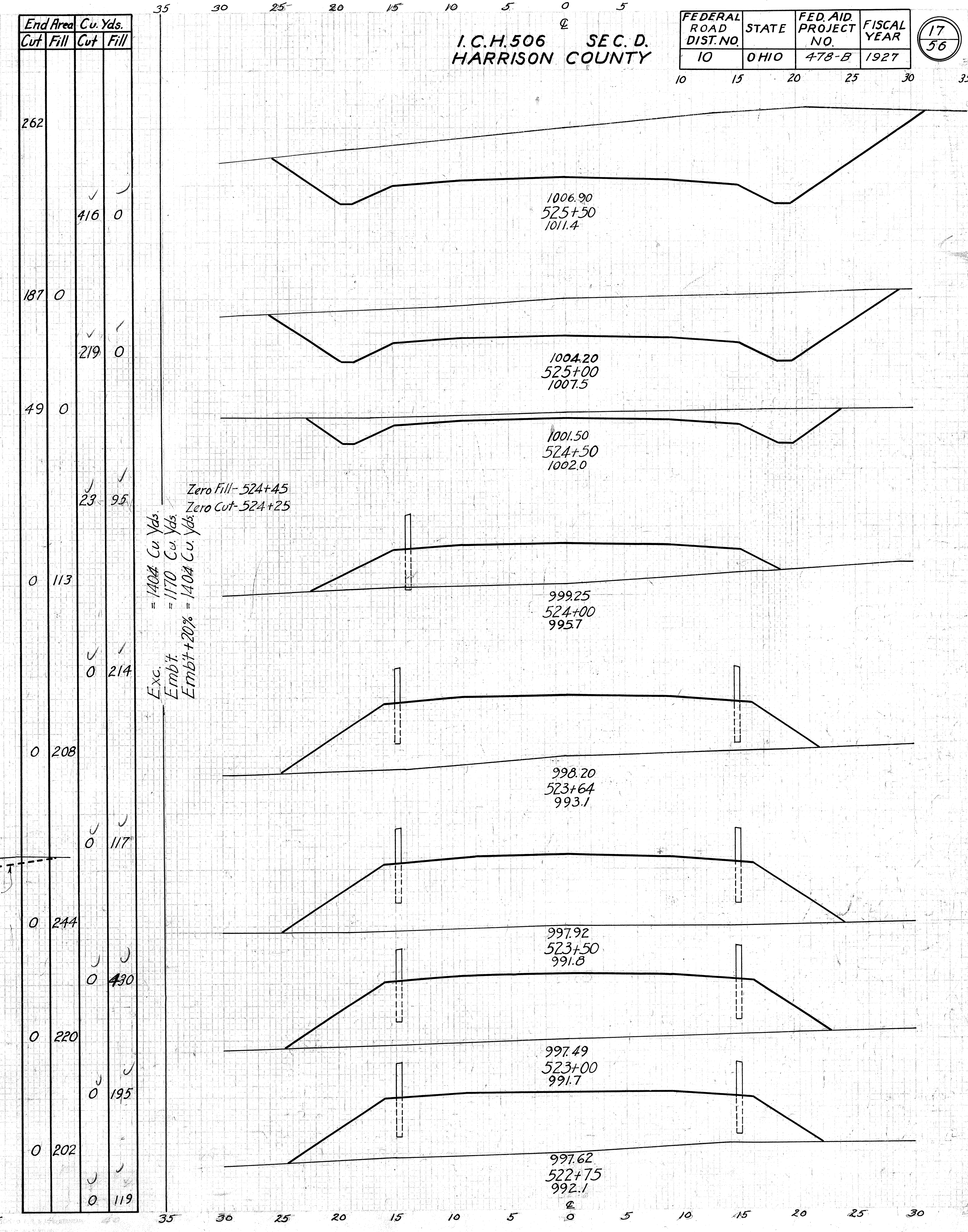
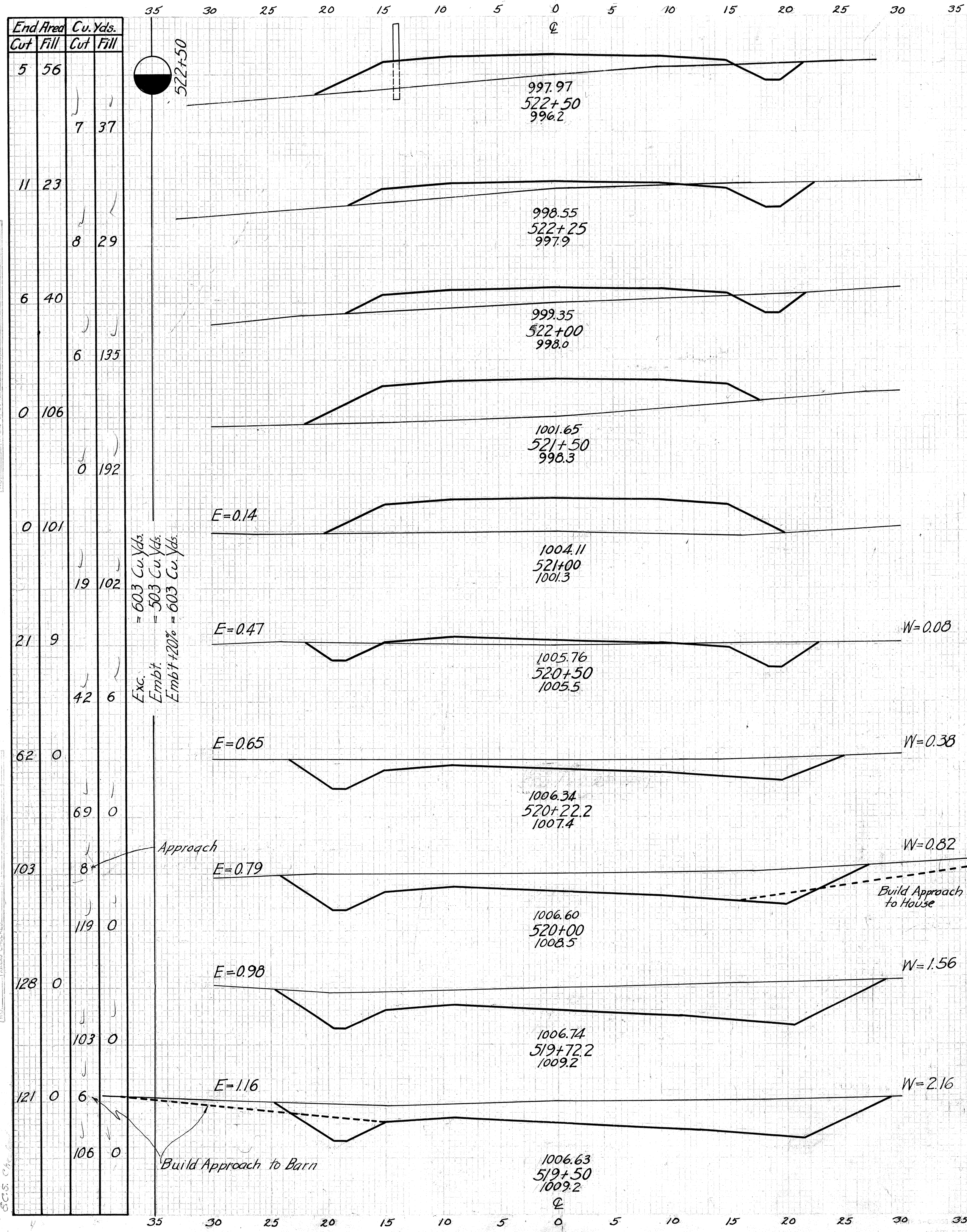
Exc. = 1182 Cu. Yds.
Embt. = 985 Cu. Yds.
Embt + 20% = 1182 Cu. Yds.

Station	Top Width (W)	Bottom Width (E)	Elevation	Stationing
1	2.5	1.3	1006.30	519+22.2
2	2.5	1.3	1005.85	519+00
3	2.5	1.3	1004.26	518+50
4	2.5	1.3	1001.86	518+00
5	2.5	1.3	998.65	517+50
6	2.5	1.3	995.15	517+00
7	2.5	1.3	991.65	516+50
8	2.5	1.3	988.15	516+00
9	2.5	1.3	986.40	515+75

4	ORIGINAL	SURVEYED	BY	DATE
	NUMBER	PLOTTED		
	NOTE BOOK	TEMPLATE		
		PC'S		
	AND	AREAS CHECKED		

DATE	
BY	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

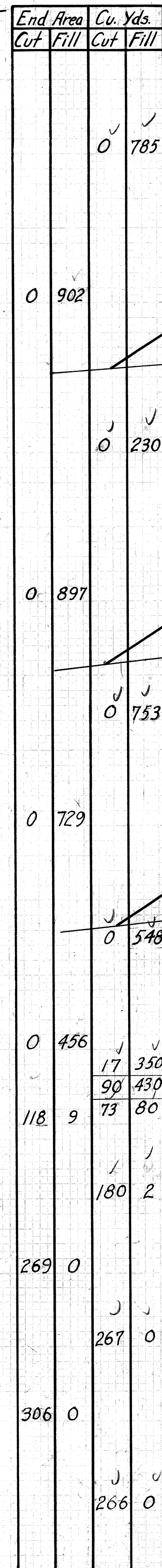
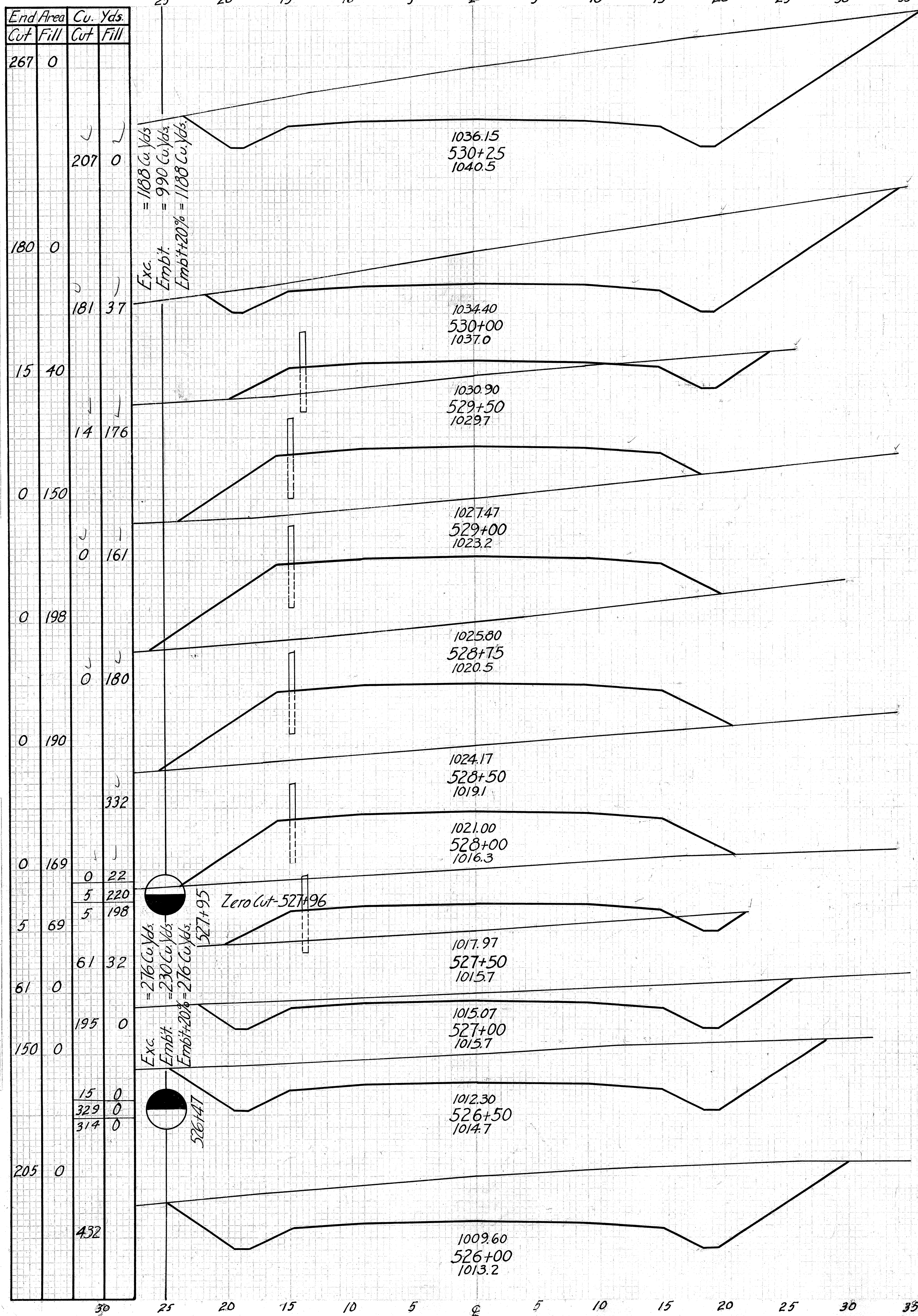


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BY	
REVIEWED	
SURVEY	
NOTE BOOK	
NO.	

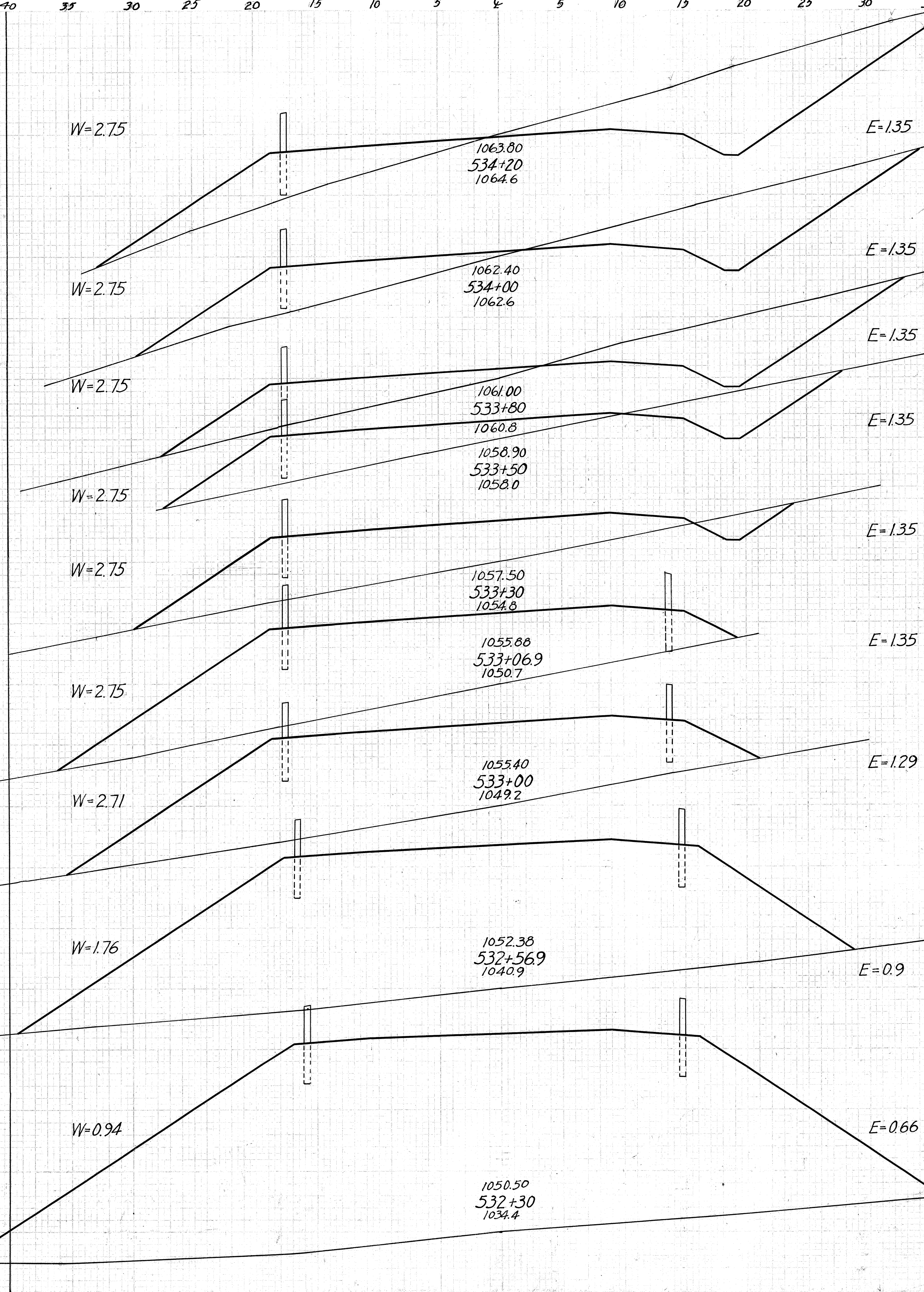
DATE	
BY	
REVIEWED	
SURVEY	
NOTE BOOK	
NO.	



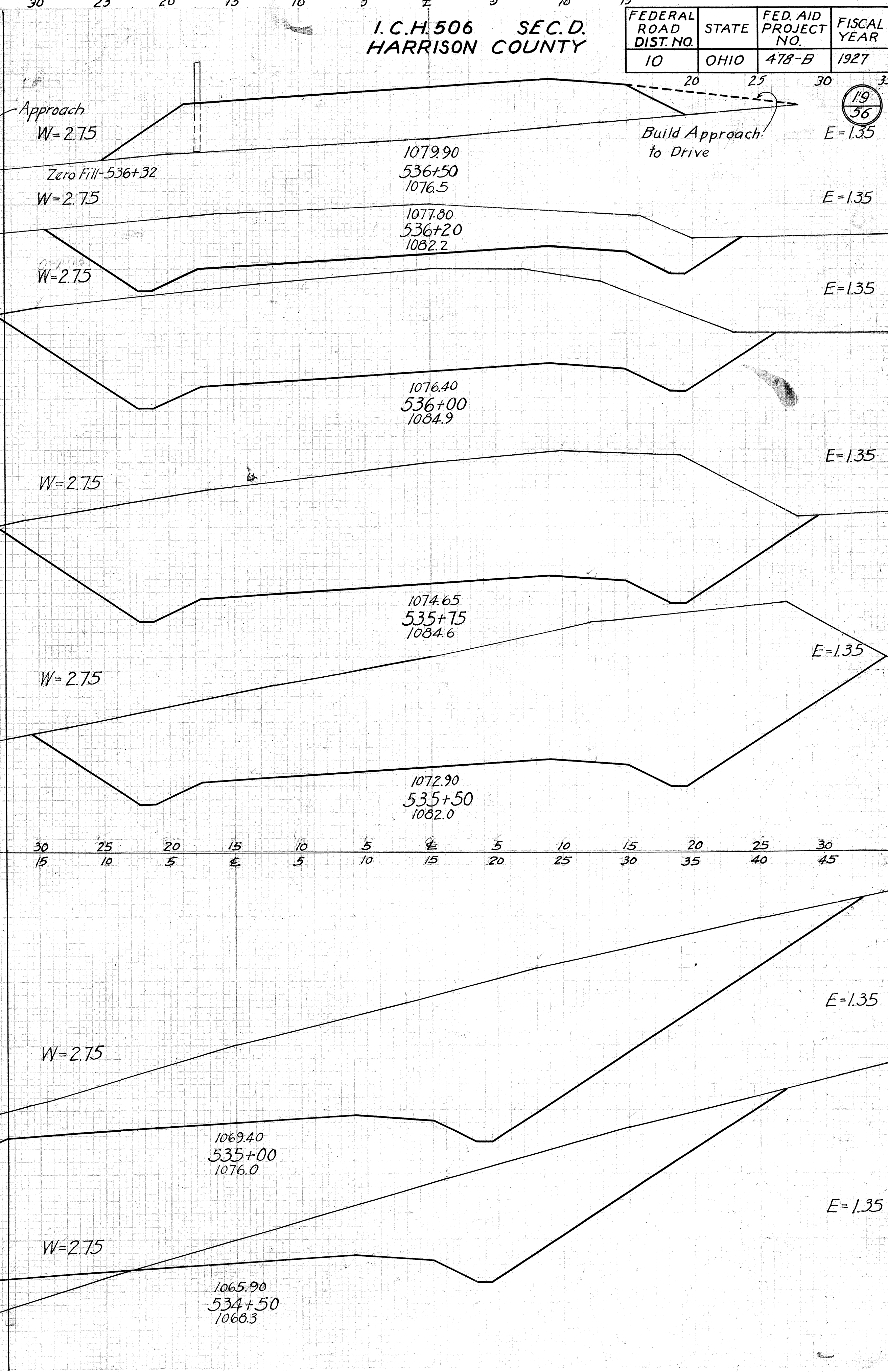
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End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
122	66	✓	✓
		179	50
		✓	✓
		77	48
87	64	✓	✓
		60	46
76	60	✓	✓
		61	77
33	78	✓	✓
		16	82
9	144	✓	✓
		4	183
0	283	✓	✓
		0	76
0	314	✓	✓
		0	732
0	604	✓	✓
		0	766
0	933	✓	✓



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
0	145	✓	✓
182	0	51	31
		209	0
382	0	✓	✓
		407	0
498	0	✓	✓
		474	0
526	0	✓	✓
		892	0
437	0	✓	✓
		590	11
200	24	✓	✓



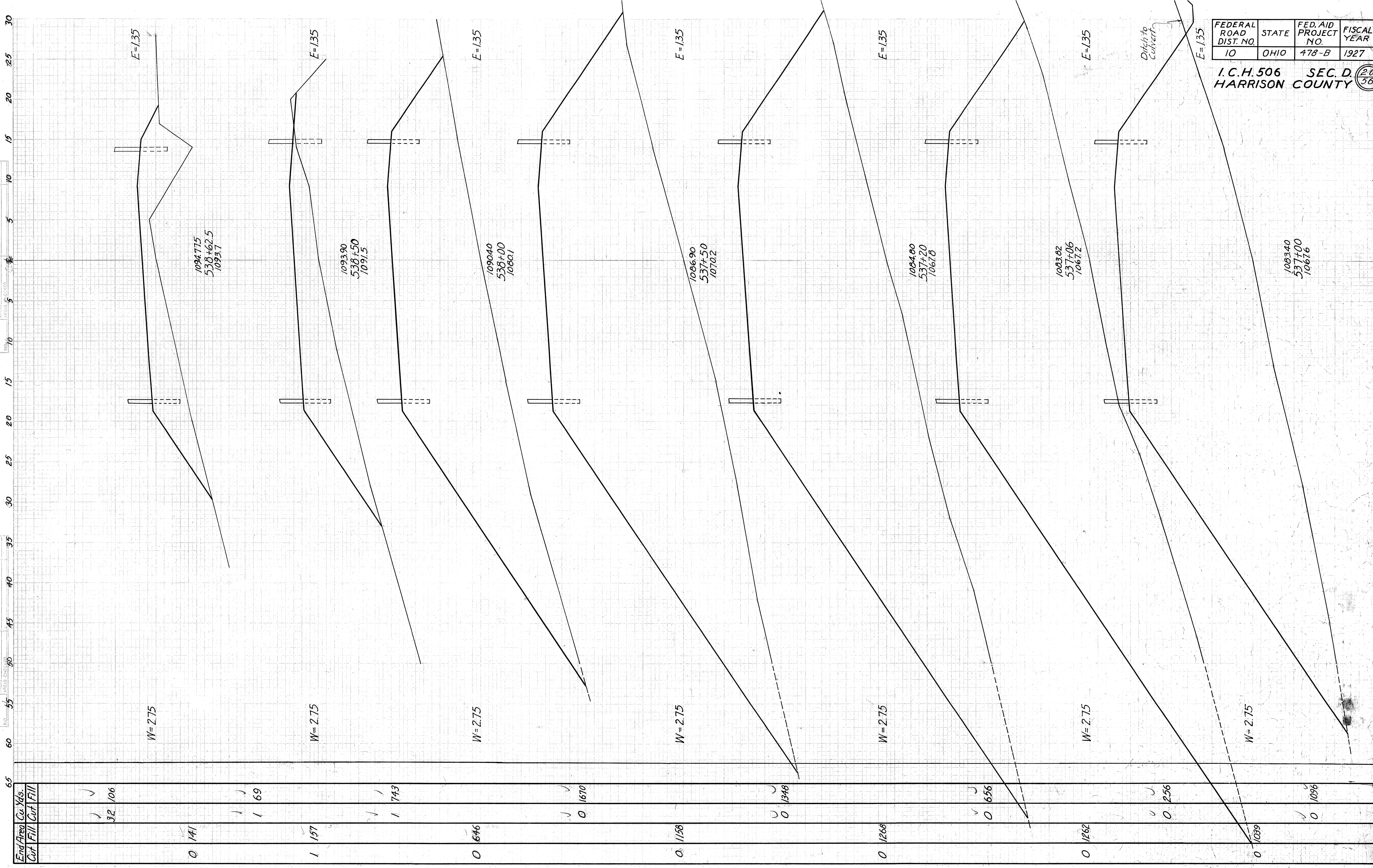
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SURVEY	PLOTTED	
NOTE BOOK	TEMPLATE	
NO.	55	40
	50	45
	55	50
	60	55

FINAL	SURVEYED	DATE
SURVEY	PLOTTED	
NOTE BOOK	TEMPLATE	
NO.	10	5
	15	10
	20	15
	25	20
	30	25



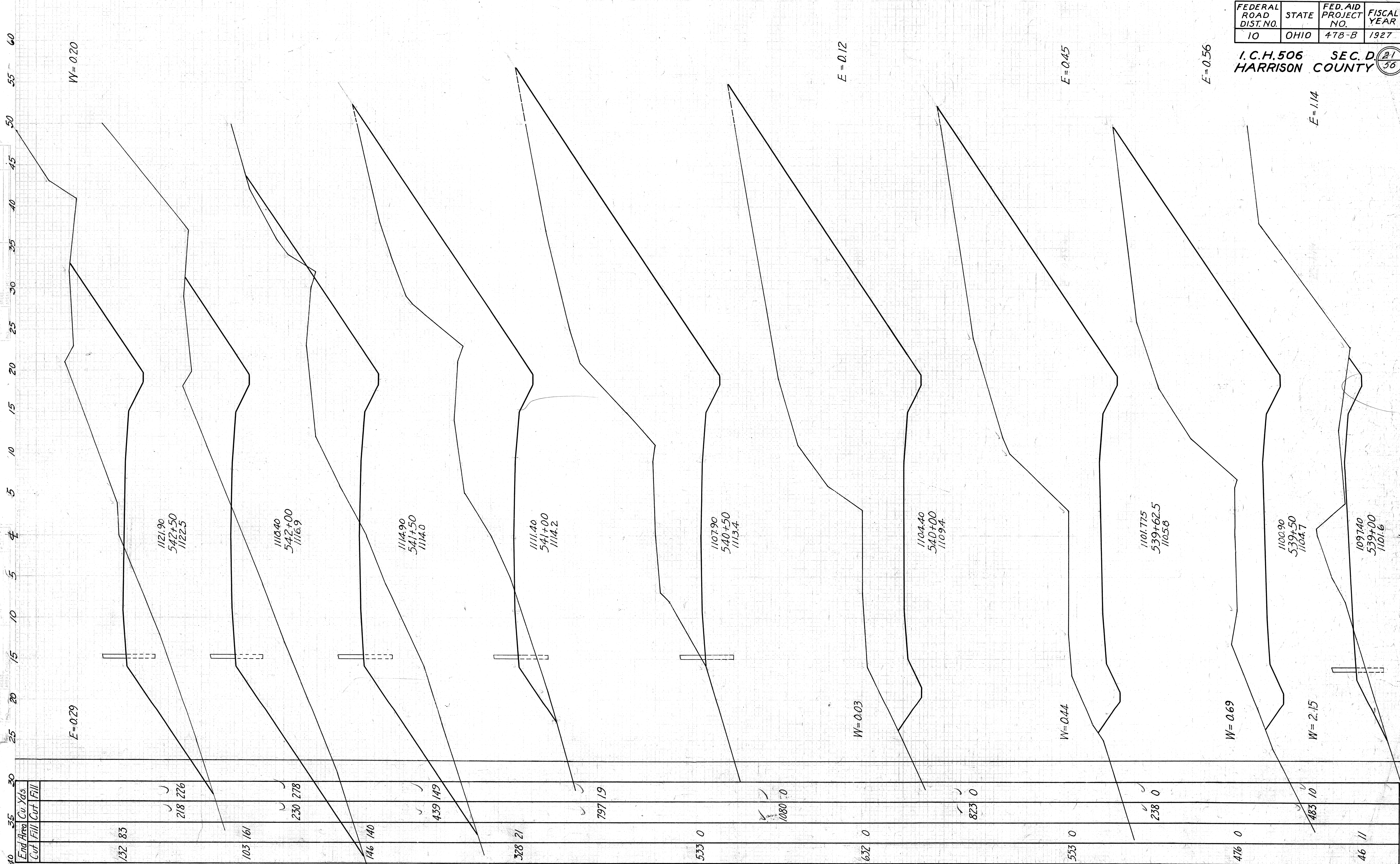
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End Area	Cu. Yds.	Cut	Fill	Cut	Fill
0	141	✓	✓	32	106
1	157	✓	✓	1	69
0	646	✓	✓	1	743
0	1158	✓	✓	0	1670
0	1268	✓	✓	0	1348
0	1262	✓	✓	0	656
0	1039	✓	✓	0	256
0	1096	✓	✓	0	1096

DESIGNED	CHECKED	DATE
SURVEY	NOTED	
BOOK	SECTION	
SHEET NO.		

DESIGNED	CHECKED	DATE
SURVEY	NOTED	
BOOK	SECTION	
SHEET NO.		



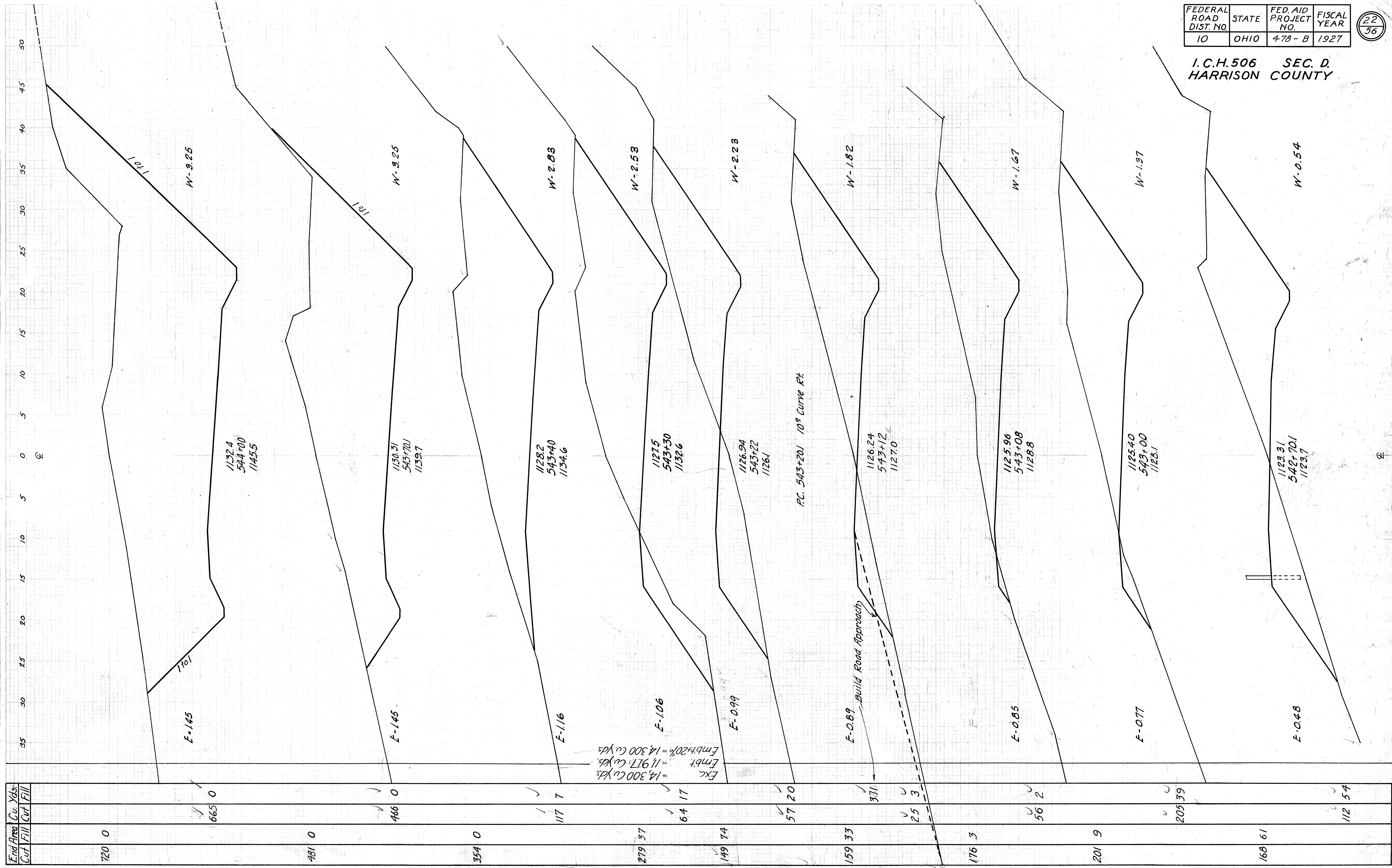
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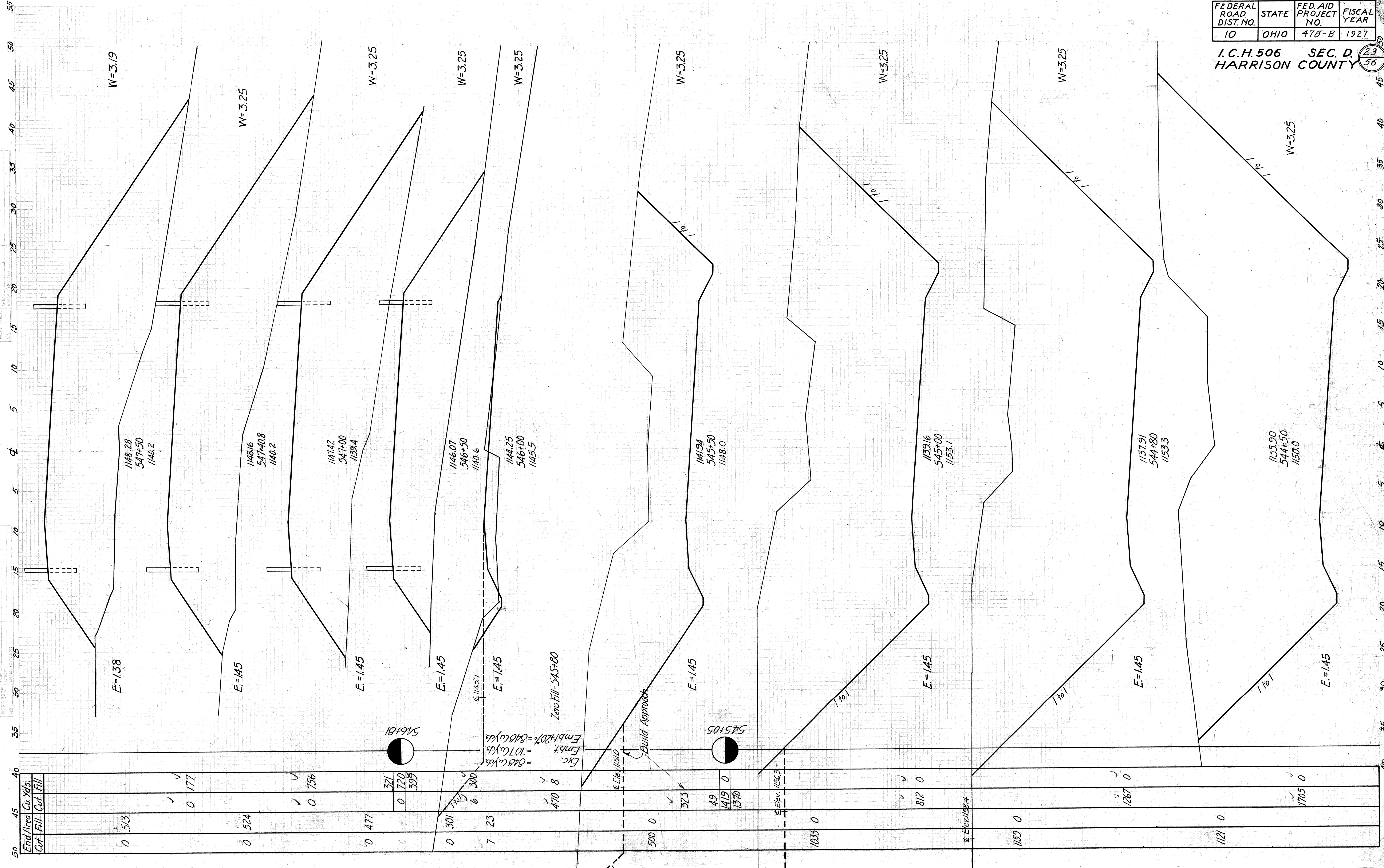
FINAL SURVEY	SURVEYOR	DATE
NAME	PLOTTED	
NO.	TEMPERATURE	
	WIND	
	MOISTURE	

ORIGINAL SURVEY	SURVEYOR	DATE
NAME	PLOTTED	
NO.	TEMPERATURE	
	WIND	
	MOISTURE	



FINAL SURVEY	DATE
NO. 1	DATE
NO. 2	DATE
NO. 3	DATE
NO. 4	DATE
NO. 5	DATE
NO. 6	DATE
NO. 7	DATE
NO. 8	DATE
NO. 9	DATE
NO. 10	DATE

ORIGINAL SURVEY	DATE
NO. 1	DATE
NO. 2	DATE
NO. 3	DATE
NO. 4	DATE
NO. 5	DATE
NO. 6	DATE
NO. 7	DATE
NO. 8	DATE
NO. 9	DATE
NO. 10	DATE

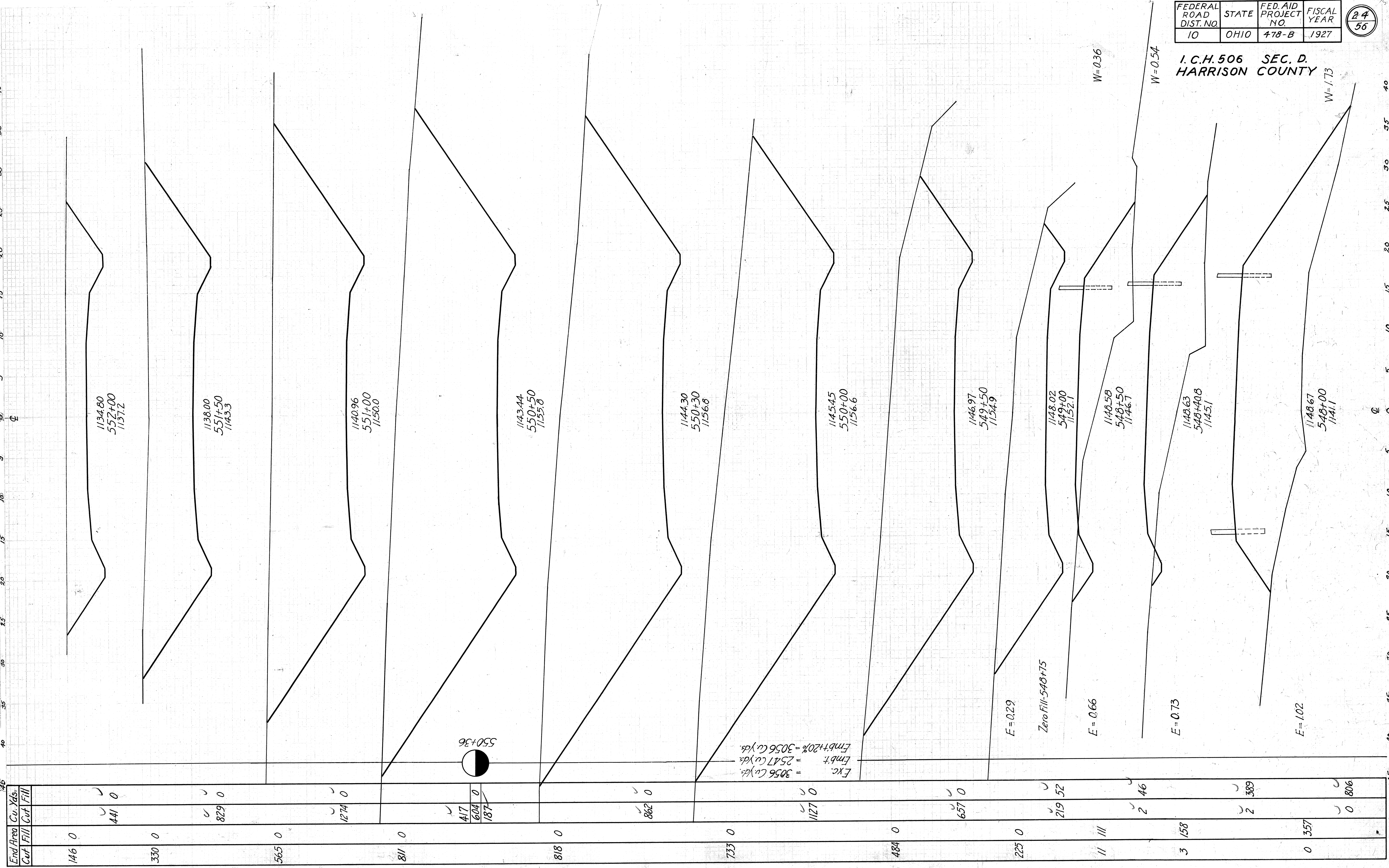


NO.	DATE	3
FINAL	SURVEY	3
SURVEY	PLOTTED	3
NOTE BOOK	TEMPLATE	3
	AREAS	3
	ENCLOS.	3

FEDERAL ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR
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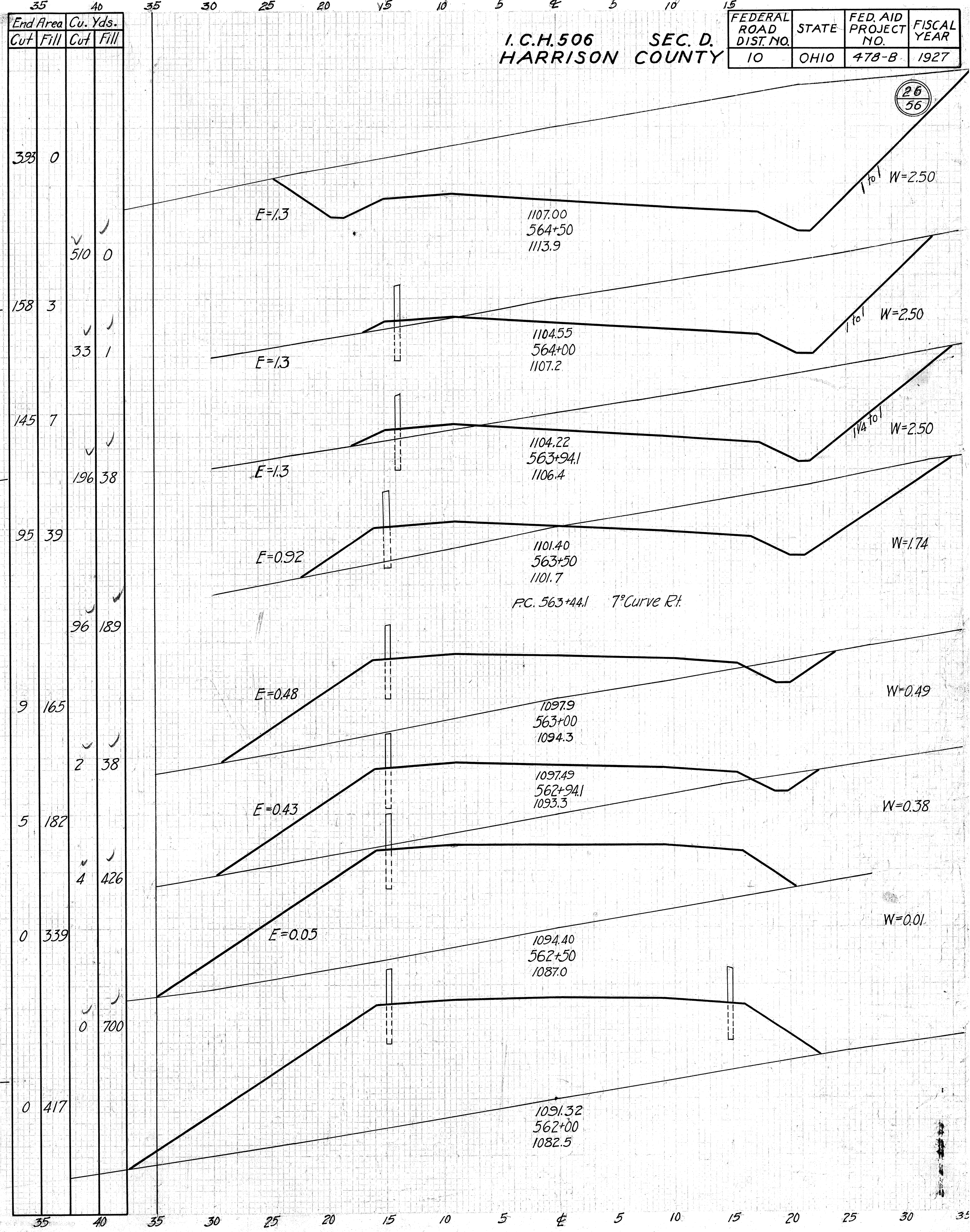
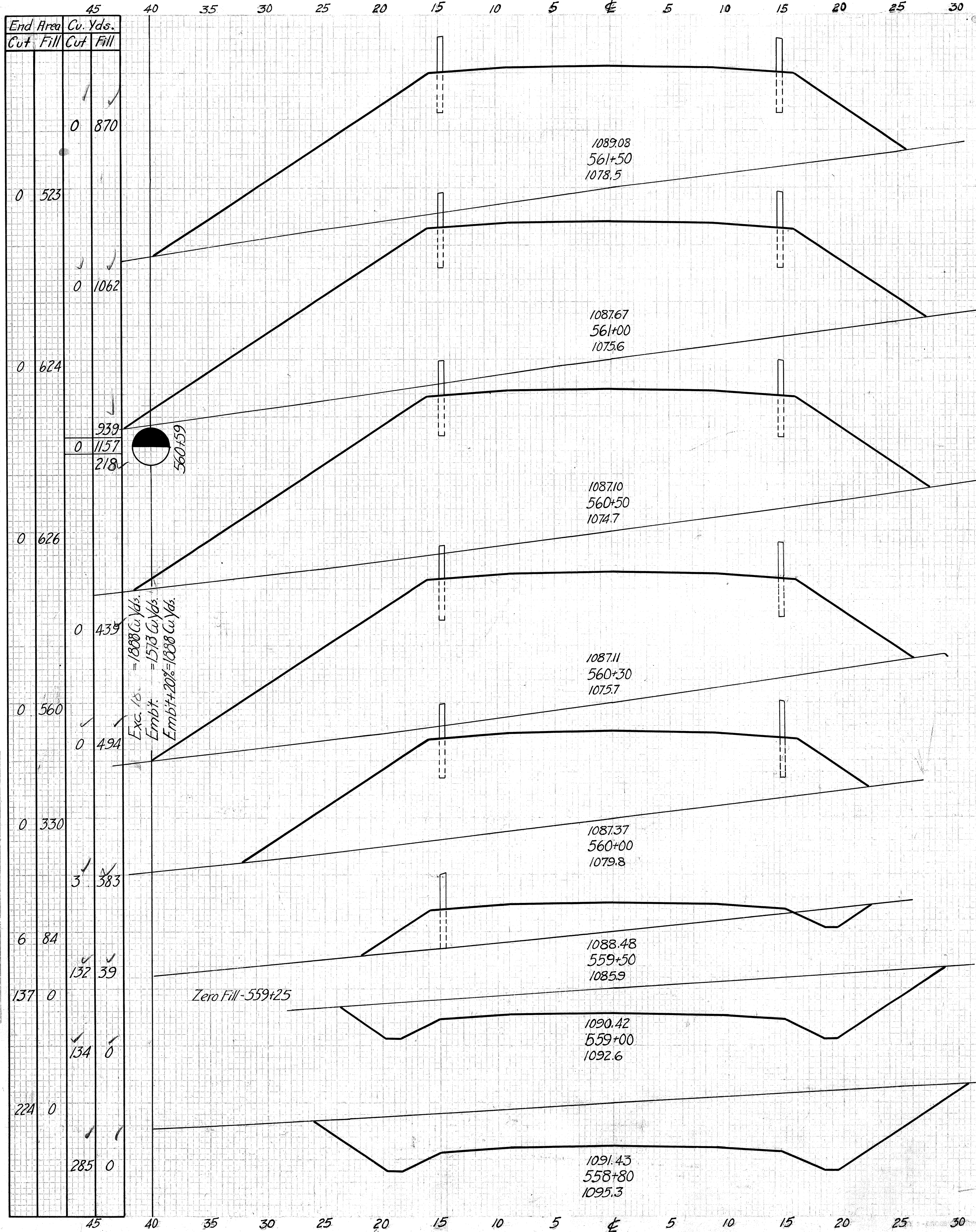
I.C.H. 506 SEC. D.
HARRISON COUNTY

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DATE	BY	CHIEF ENGINEER	DATE	BY	CHIEF ENGINEER

DATE	BY	CHIEF ENGINEER	DATE	BY	CHIEF ENGINEER



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HARRISON COUNTY

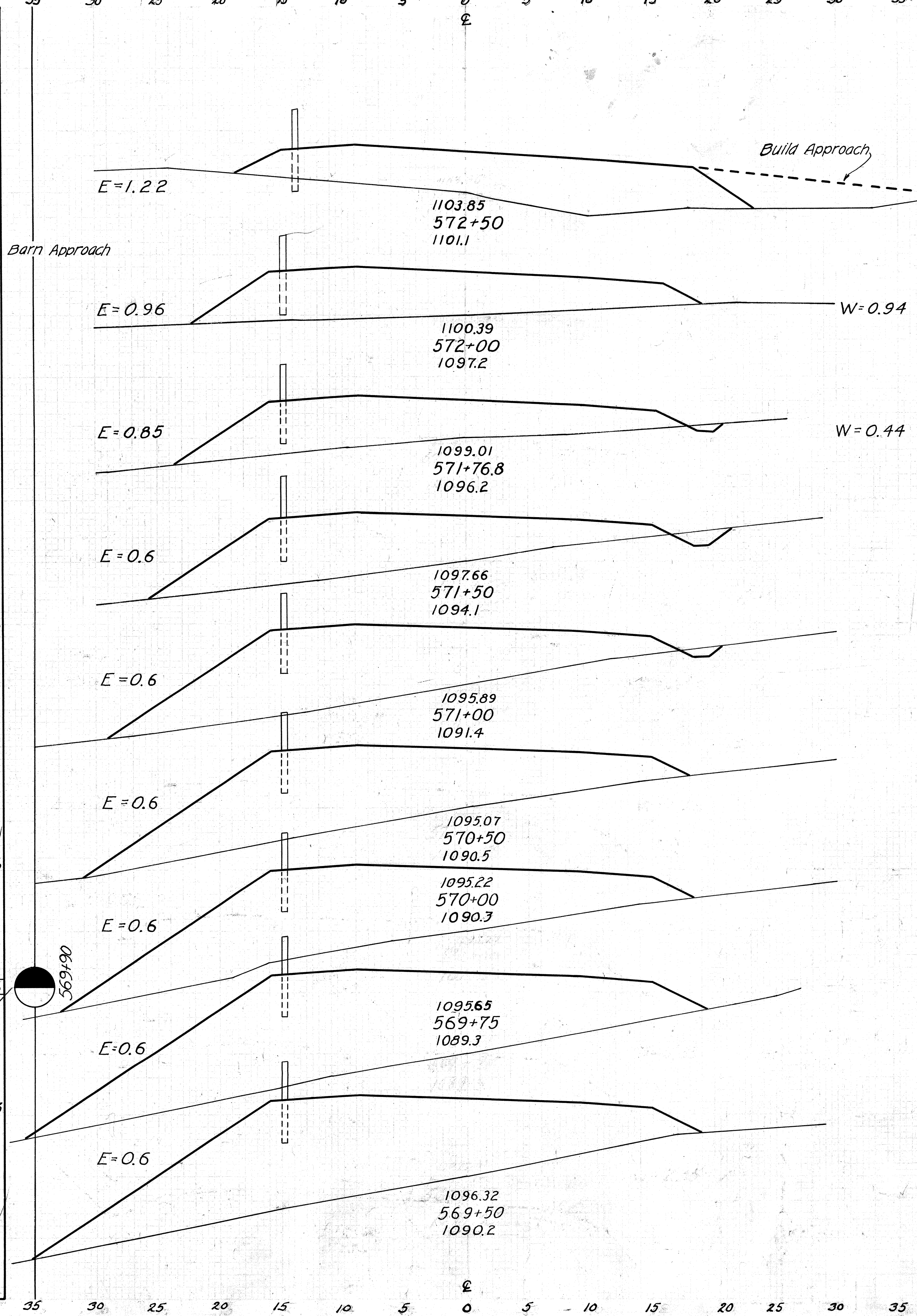
FEDERAL ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR
10	OHIO	478-B	1927

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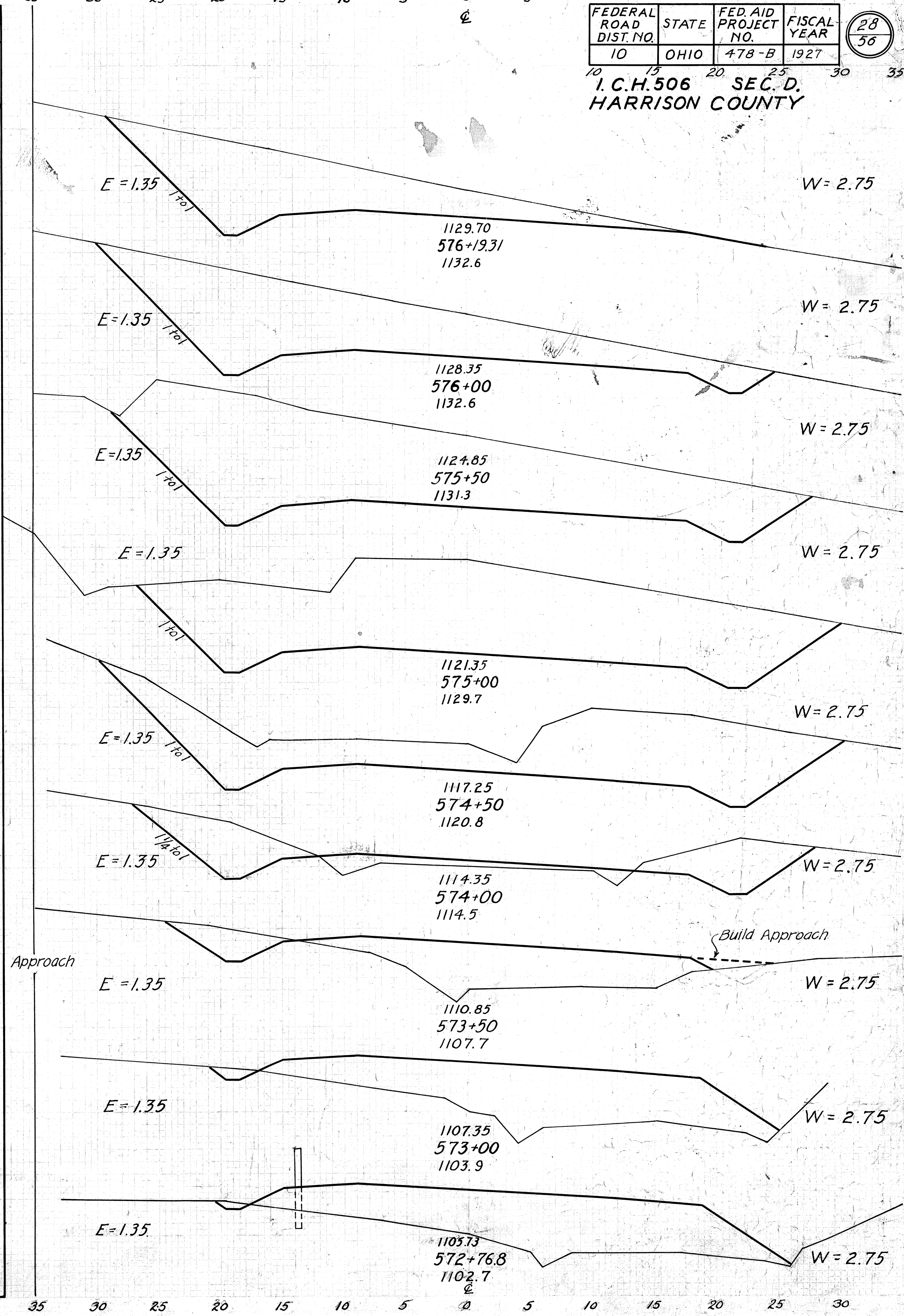
DATE
BY
SURVEYED
PLANNED
NOTED
NOTE BOOK
AREA CHECKED

DATE
BY
SURVEYED
PLANNED
NOTED
NOTE BOOK
AREA CHECKED

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
0	130	0	234
		15	
0	123		
		1	104
1	119		
		3	129
4	140		
		6	308
2	193		
		2	373
0	210		
		0	406
0	228		
		104	
		0	246
		142	
0	305		
		1	
		0	273
0	284		
		0	501



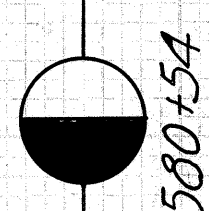
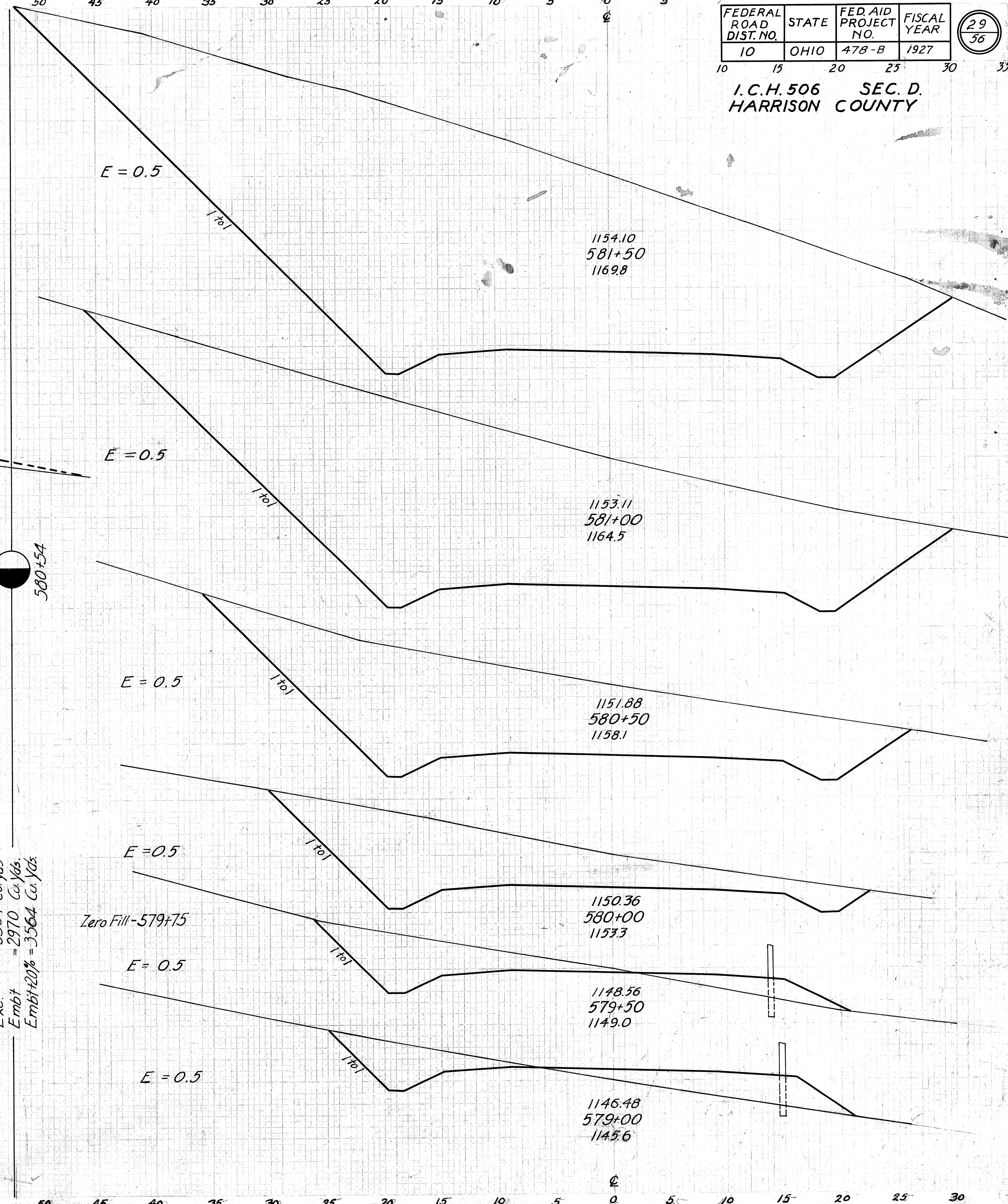
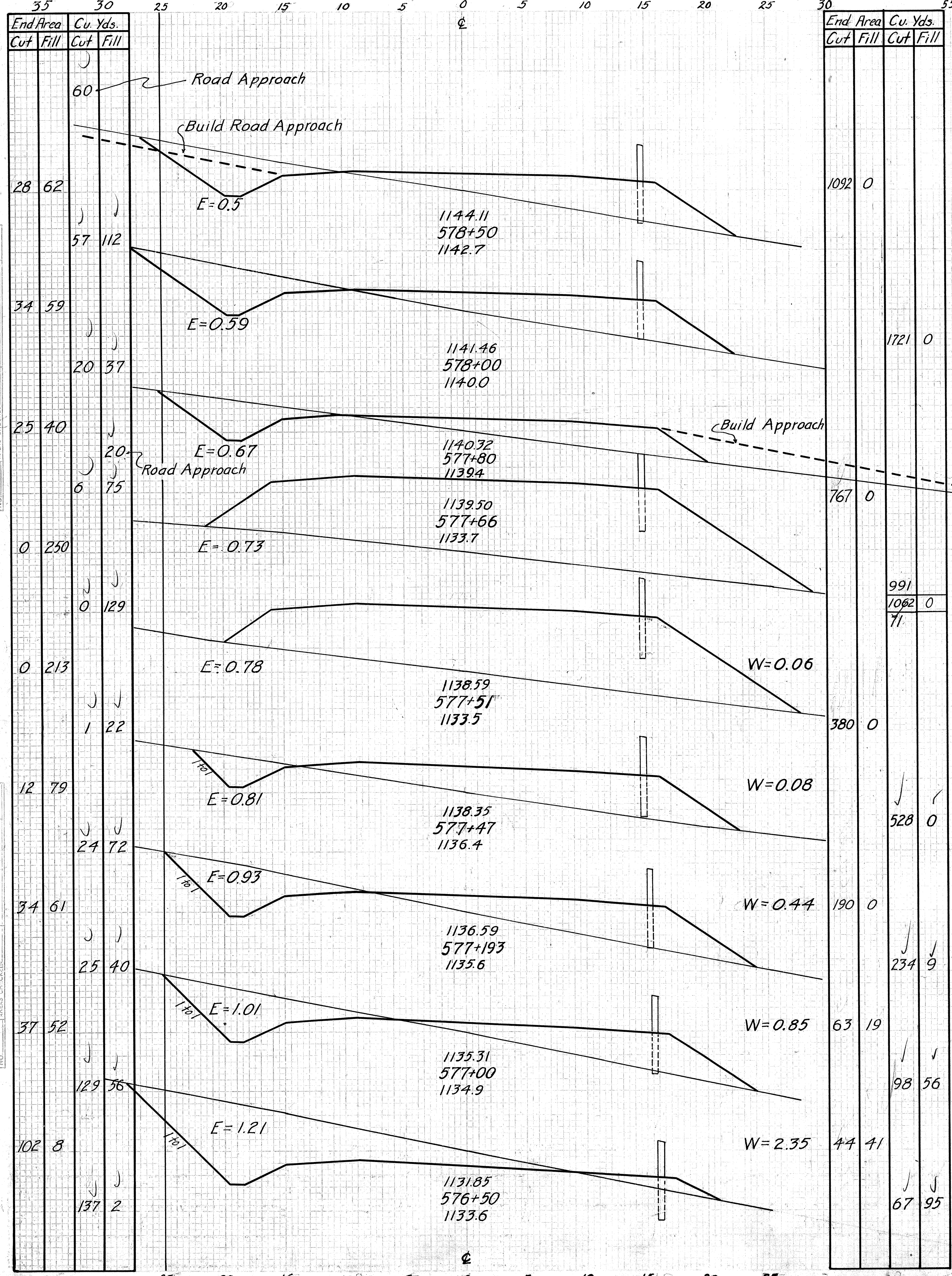
End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
140	0		
		125	0
210	0		
		494	0
324	0		
		607	0
331	0		
		505	0
214	0		
		263	14
70	15		
		81	91
		3	
17	83		
		18	206
2	140		
		1	122
1	144		
		1	136



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Exc. = 3564 Cu. Yds.
Embt = 2970 Cu. Yds.
Embt+10% = 3564 Cu. Yds.

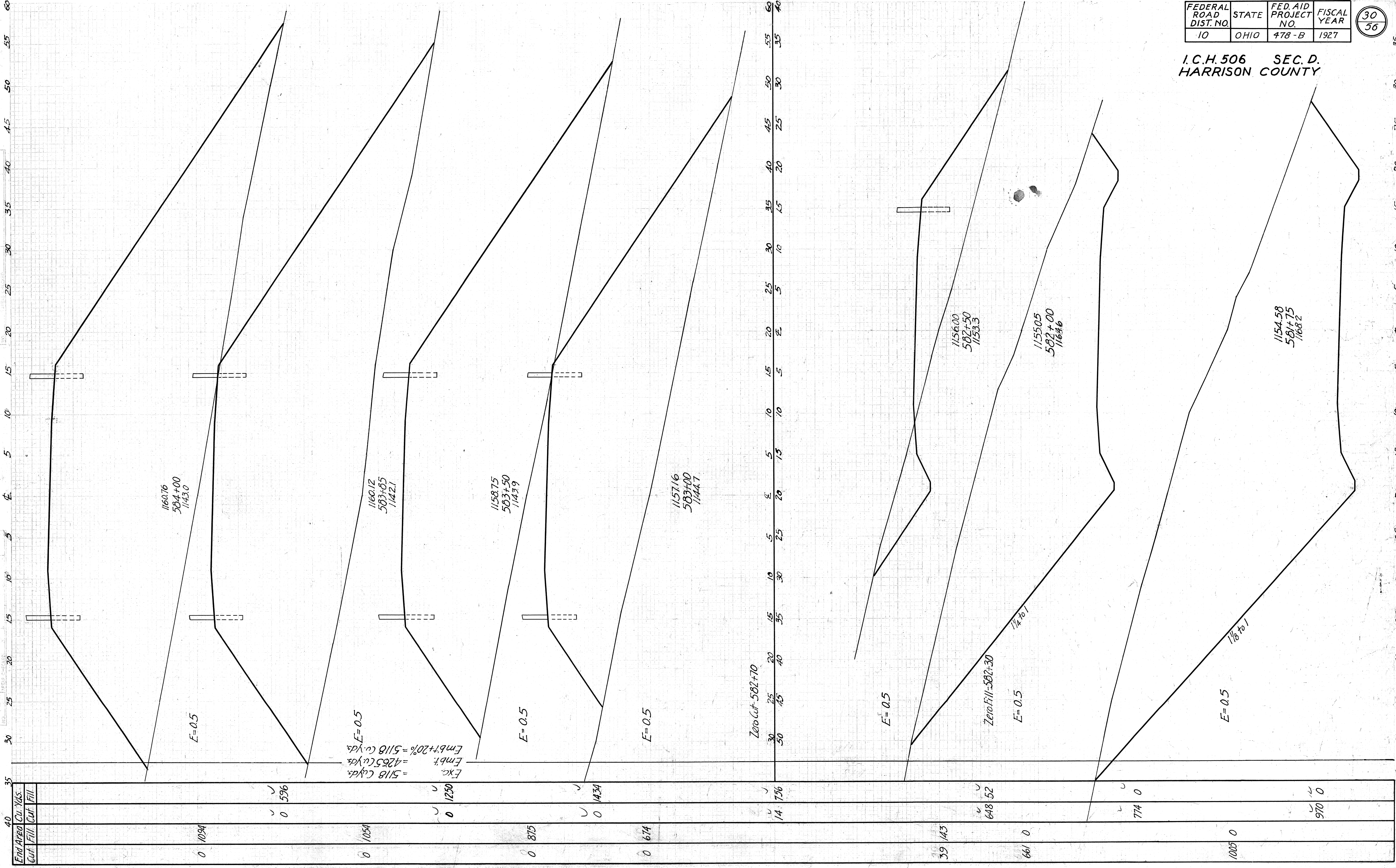
FEDERAL ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR
10	OHIO	478-B	1927

FEDERAL ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR
10	OHIO	478-B	1927

FEDERAL ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR
10	OHIO	478-B	1927

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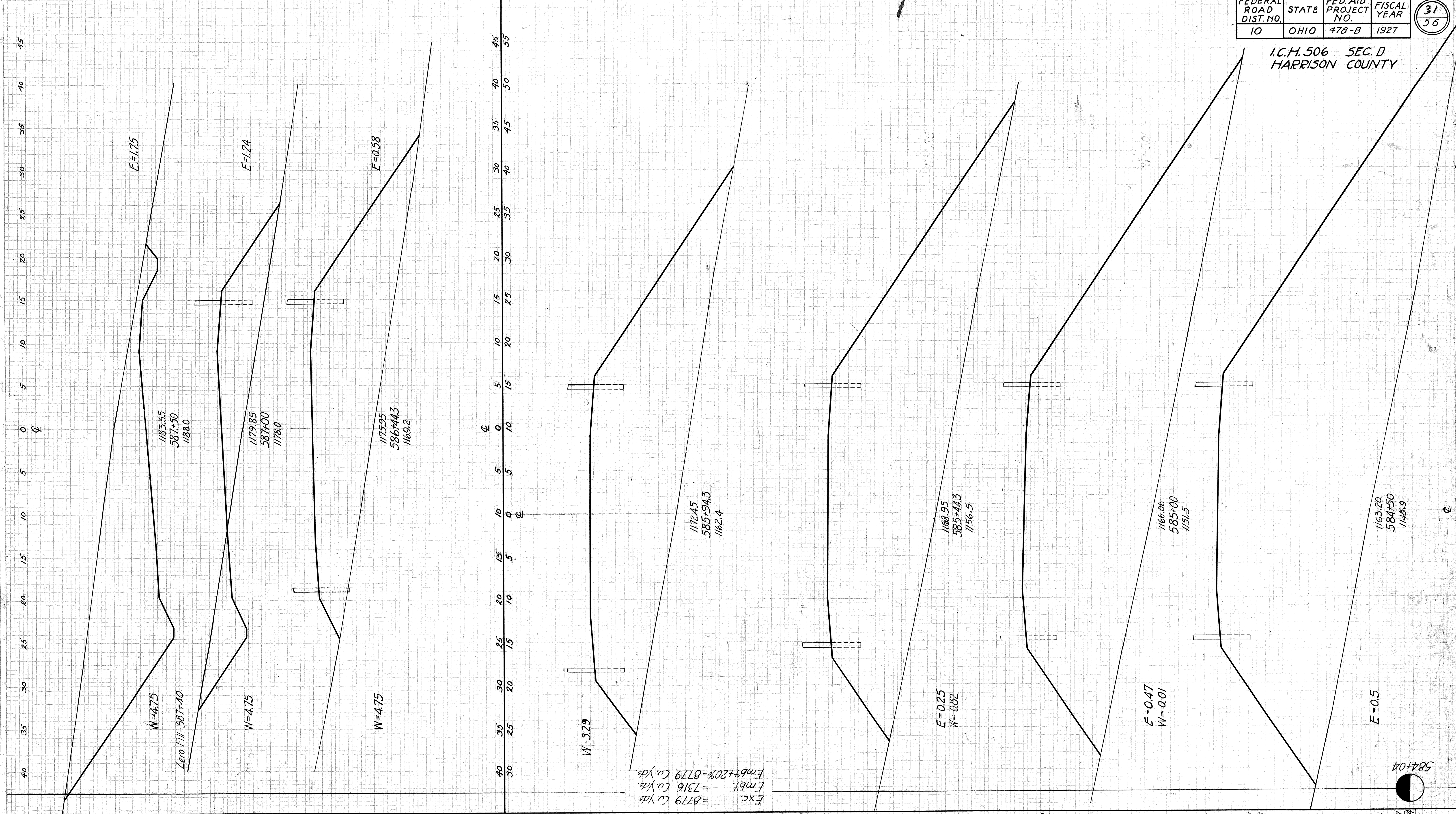
30
56



NO.	DATE	BY	DATE
NO.	DATE	BY	DATE
NO.	DATE	BY	DATE
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NO.	DATE	BY	DATE
NO.	DATE	BY	DATE
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End Area	Cu. Yds.	Cut	Fill
291	0		
40	106		
0	330		
0	495		
0	682		
0	857		
0	1103		
0	1857		
0	2034		
0	177		



FEDERAL ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR
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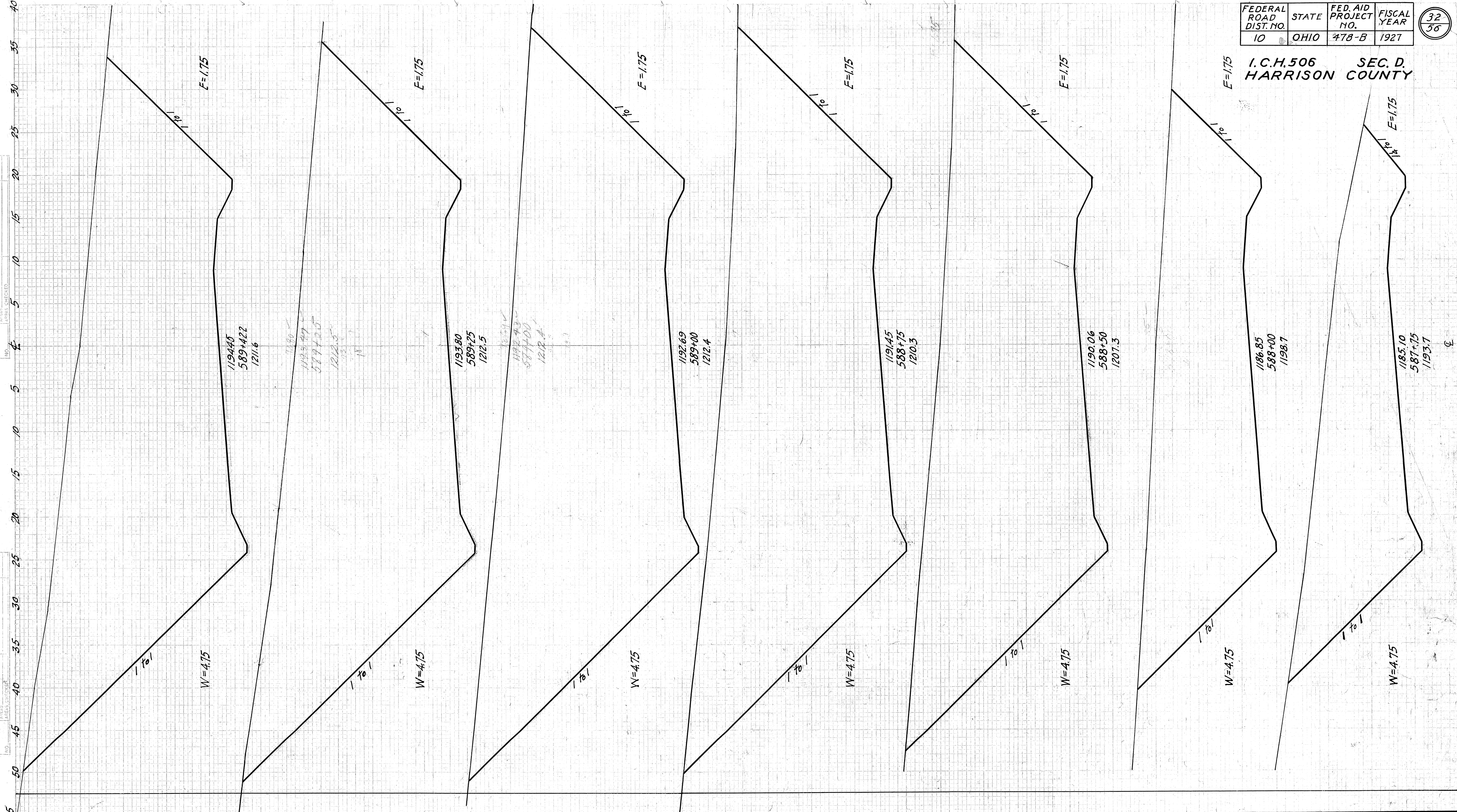
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HARRISON COUNTY

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ORIGINAL	DATE
SURVEY	PLOTTED
NOTE BOOK	TERMINATE
NO.	AREA CHECKED

FINAL	SURVEY	DATE
NOTE BOOK	PLOTTED	
NO.	TERMINATE	
AREA CHECKED		

End Area	Cu. Yds.	Cut	Fill
1159	0		
1260	0		770
1350	0		1207
1283			1219
1133	0		1119
679	0		1678
487	0		540
			360



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SEC. D.

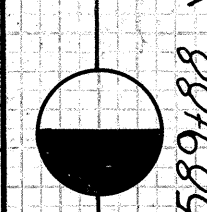
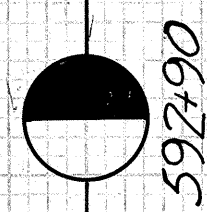
45		40		35		30		25		20		15		10		5		0		5		10		15		20		25		30		35		40		45	
End Area		Cu. Yds.																																			
Cut	Fill	Cut	Fill																																		
0	269	0	514																																		
0	421	0	413																																		
0	186	0	288																																		
6	125	6	288																																		
51	142	51	142																																		
49	28	49	28																																		
274	13	274	13																																		
248	0	248	0																																		
815	0	815	0																																		
633	0	633	0																																		
386	0	386	0																																		
1598	0	1598	0																																		
1242	0	1242	0																																		
1094	0	1094	0																																		
326	0	326	0																																		

101
0 514
413

Exc. = 1532 Cu. Yds.
Embl. = 1271 Cu. Yds.
Embl. + 20% = 1532 Cu. Yds.

386
1598
1242

326



592+90

592+50

589+88

589+50

1195.29
592+50
1189.3

1196.40
592+00
1191.9

1197.23
591+50
1193.9

1197.47
591+00
1197.1

1197.14
590+50
1200.8

1196.24
590+00
1206.1

1194.75
589+50
1211.1

1186.12
596+00
1188.9

1187.85
595+50
1193.4

1189.79
595+00
1192.7

1190.75
594+50
1194.6

1191.95
594+00
1193.5

1193.07
593+50
1188.1

1194.18
593+00
1187.2

1192.07
593+50

1194.18
593+00
1187.2

W = 0.08

W = 1.38

W = 4.08

W = 4.75

Zero Fill - 590+75

1/4 to 1

1/4 to 1

E = 0.2

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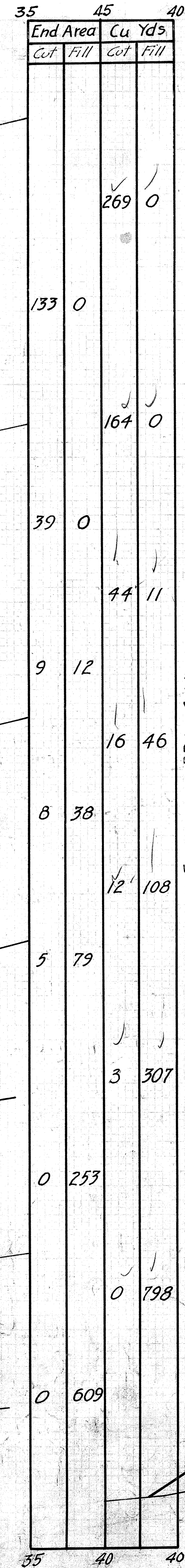
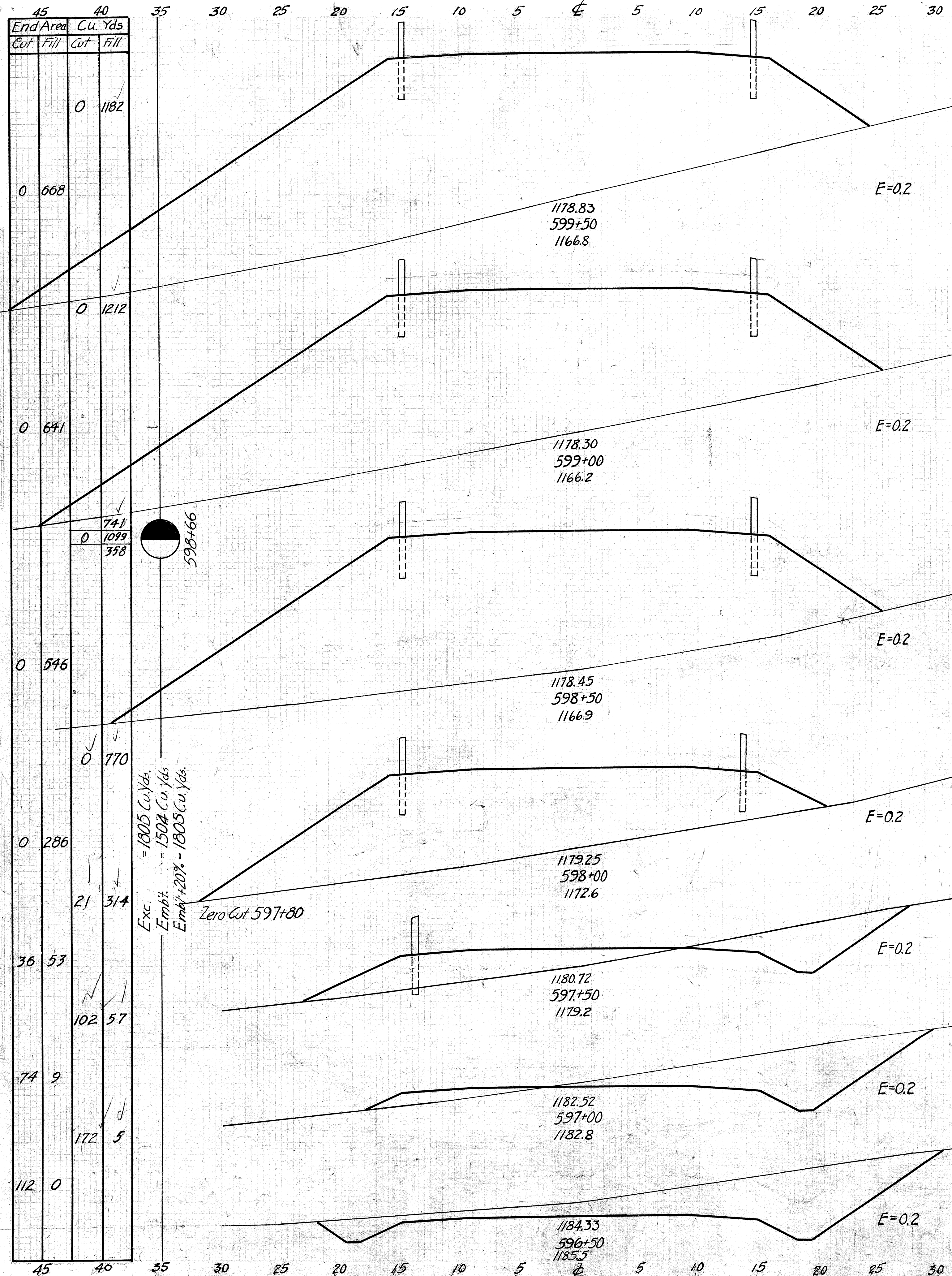
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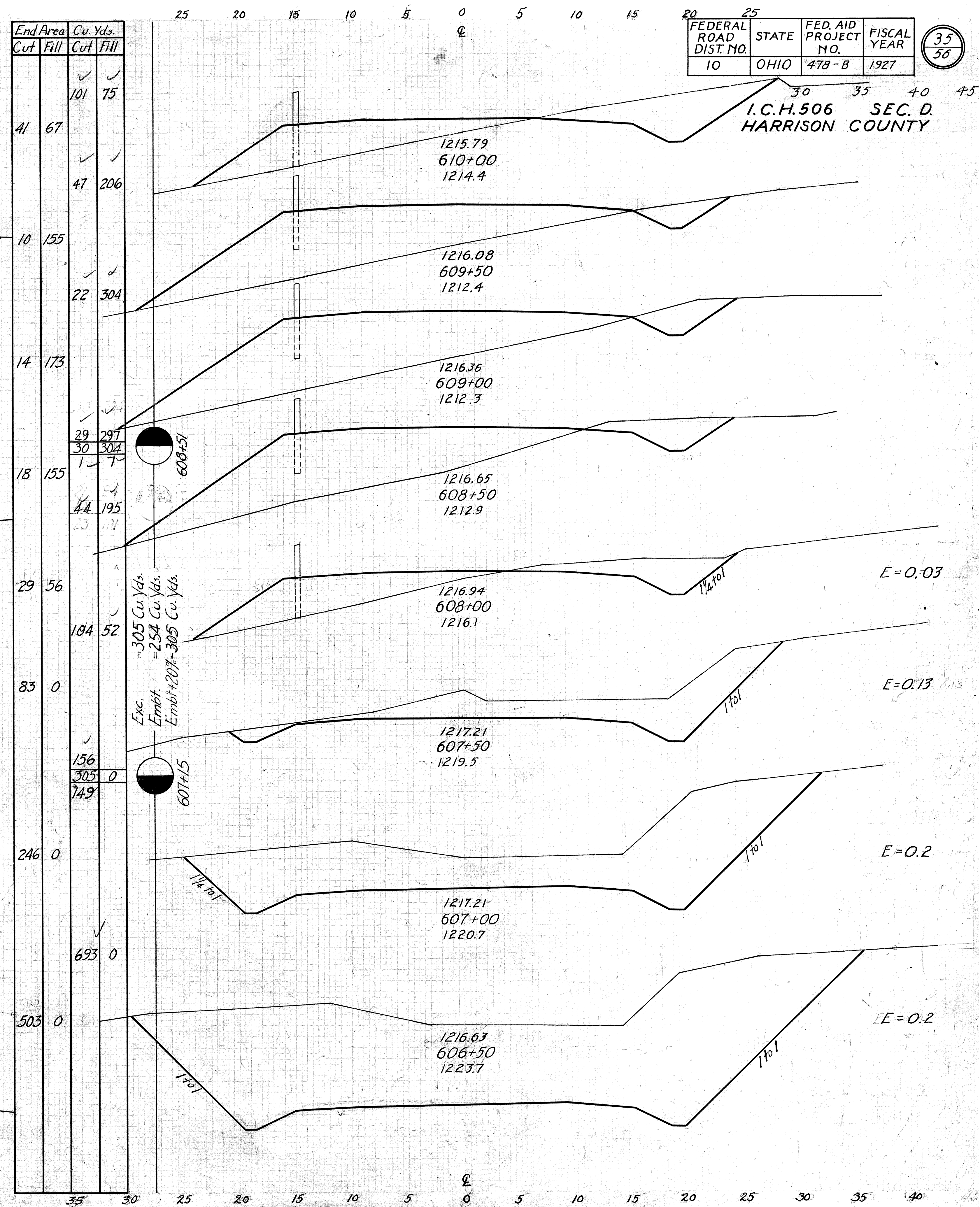
E = 0.2

E = 0.2

E = 0.2

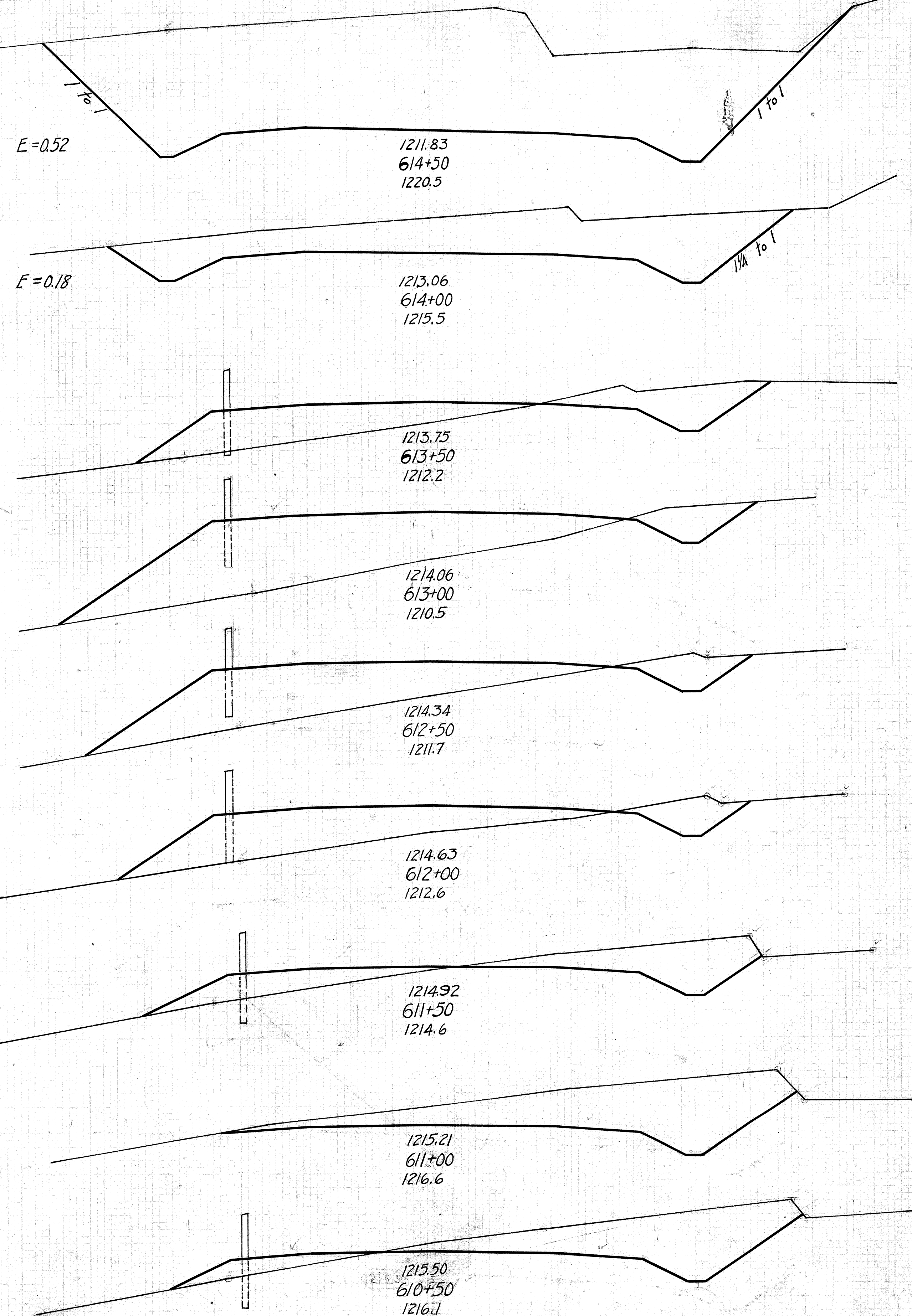


OF CIVIL	SOURCES	DATE
STREET	PLOTTED	7
TEMPLE	INDEX	7
HISTE BOOK	NOT RECORDED	7
NO.		

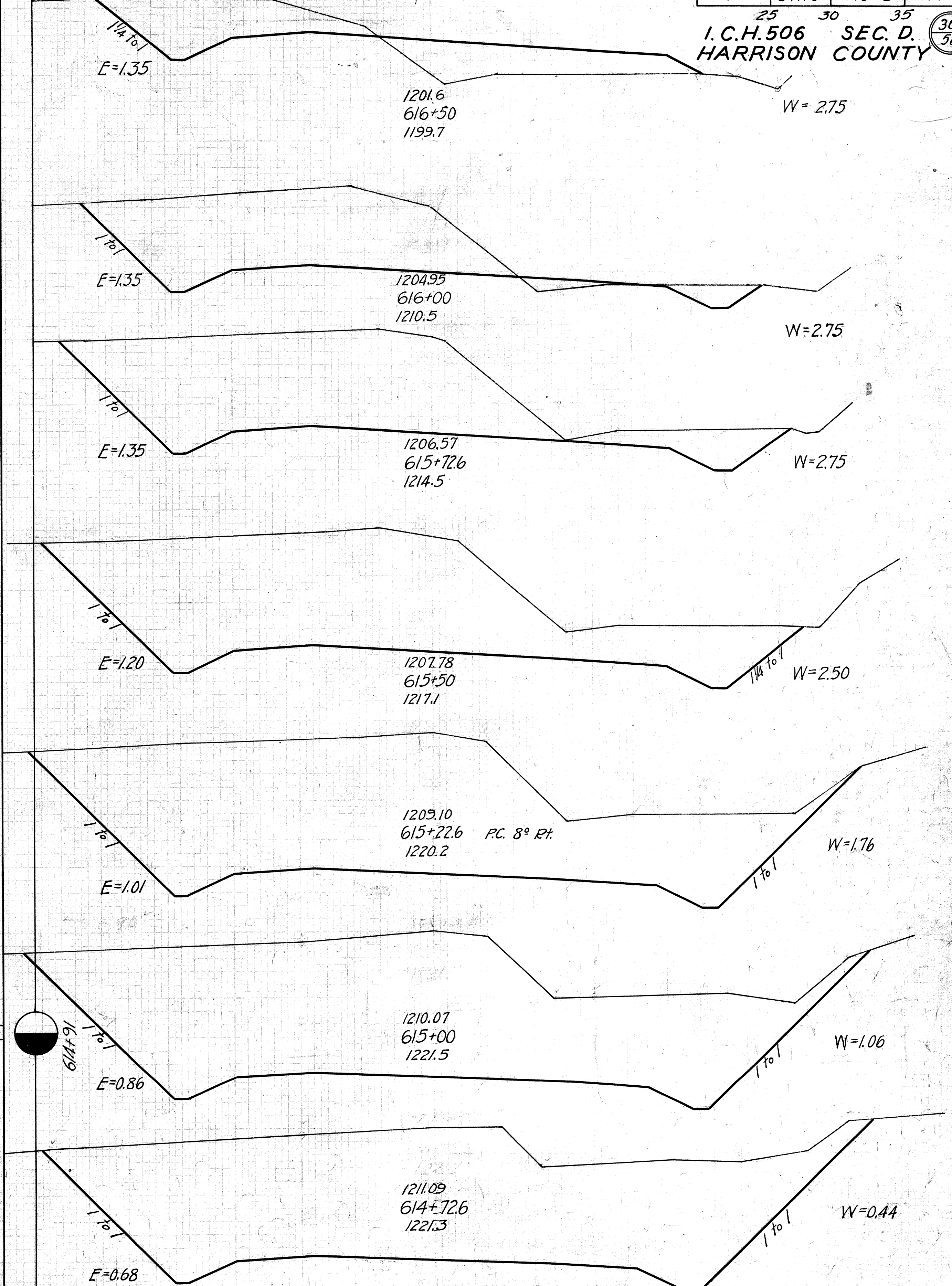


End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
383	0		
		✓	1
	476	0	
131	0		
	✓	✓	✓
	145	20	
26	56		
	✓	✓	✓
	38	181	
15	139		
	✓	✓	✓
	26	221	
13	100		
	✓	✓	✓
	24	164	
13	77		
	✓	✓	✓
	46	95	
37	26		
	✓	✓	✓
	124	24	
97	0		
	✓	✓	✓
	153	13	
68	14		

Exc. = 1920 Cu Yds.
Embl. = 1600 Cu Yds.
Embl. + 20% = 1920 Cu Yds.



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
54	43		
	✓	✓	✓
	206	44	
169	4		
	✓	✓	✓
	214	2	
253	0		
	✓	✓	✓
	249	0	
343	0		
	✓	✓	✓
	399	0	
444	0		
	✓	✓	✓
	391	0	
489	0		
	✓	✓	✓
	158	0	
	489	0	
	331	0	
474	0		
	✓	✓	✓
	358	0	



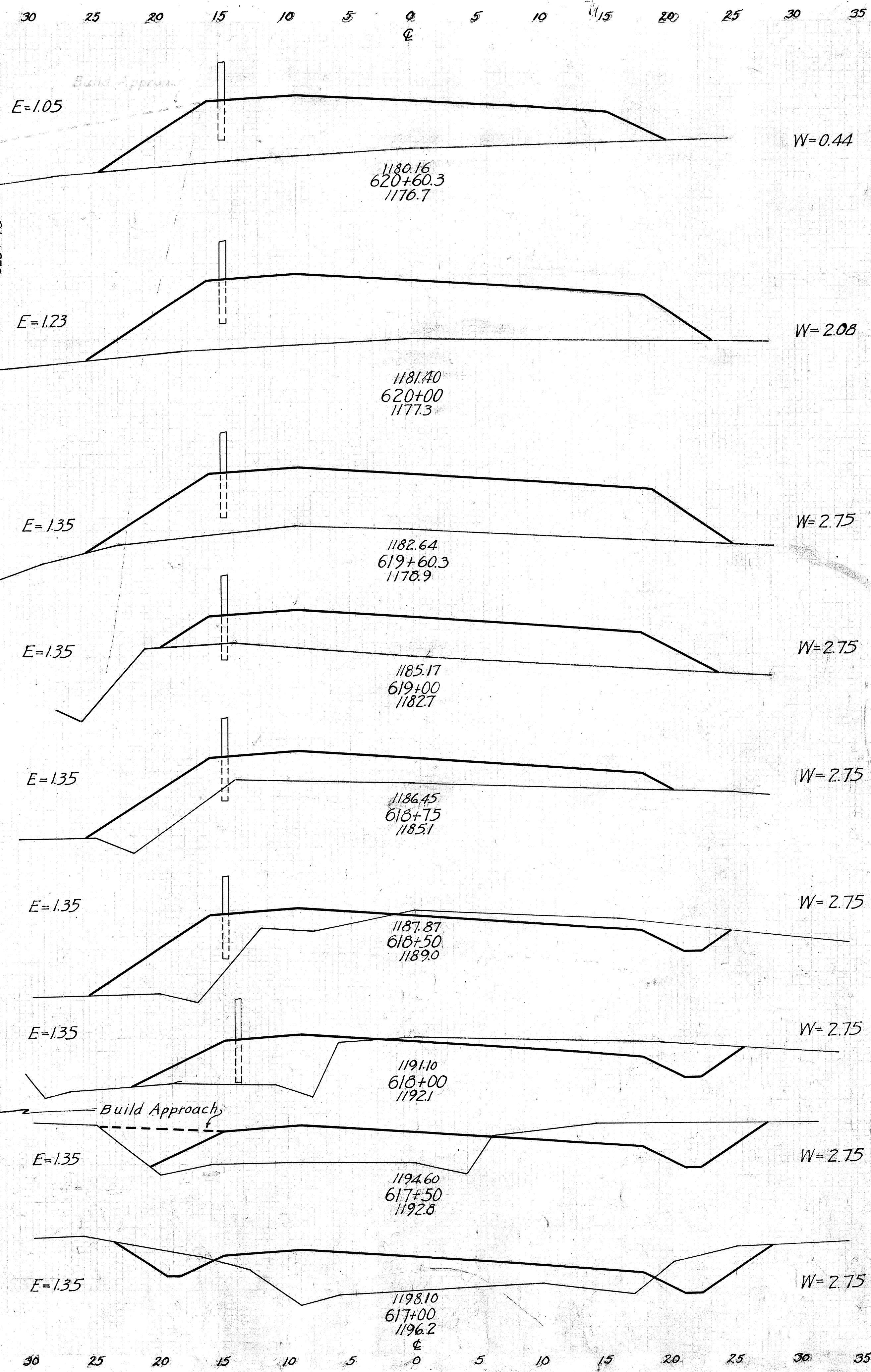
FEDERAL ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR
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End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
0	149	4	162
0	197	0	283
0	189	0	333
0	110	0	93
0	91	10	68
22	56	47	94
29	45	60	100
36	63	57	129
26	76	74	110

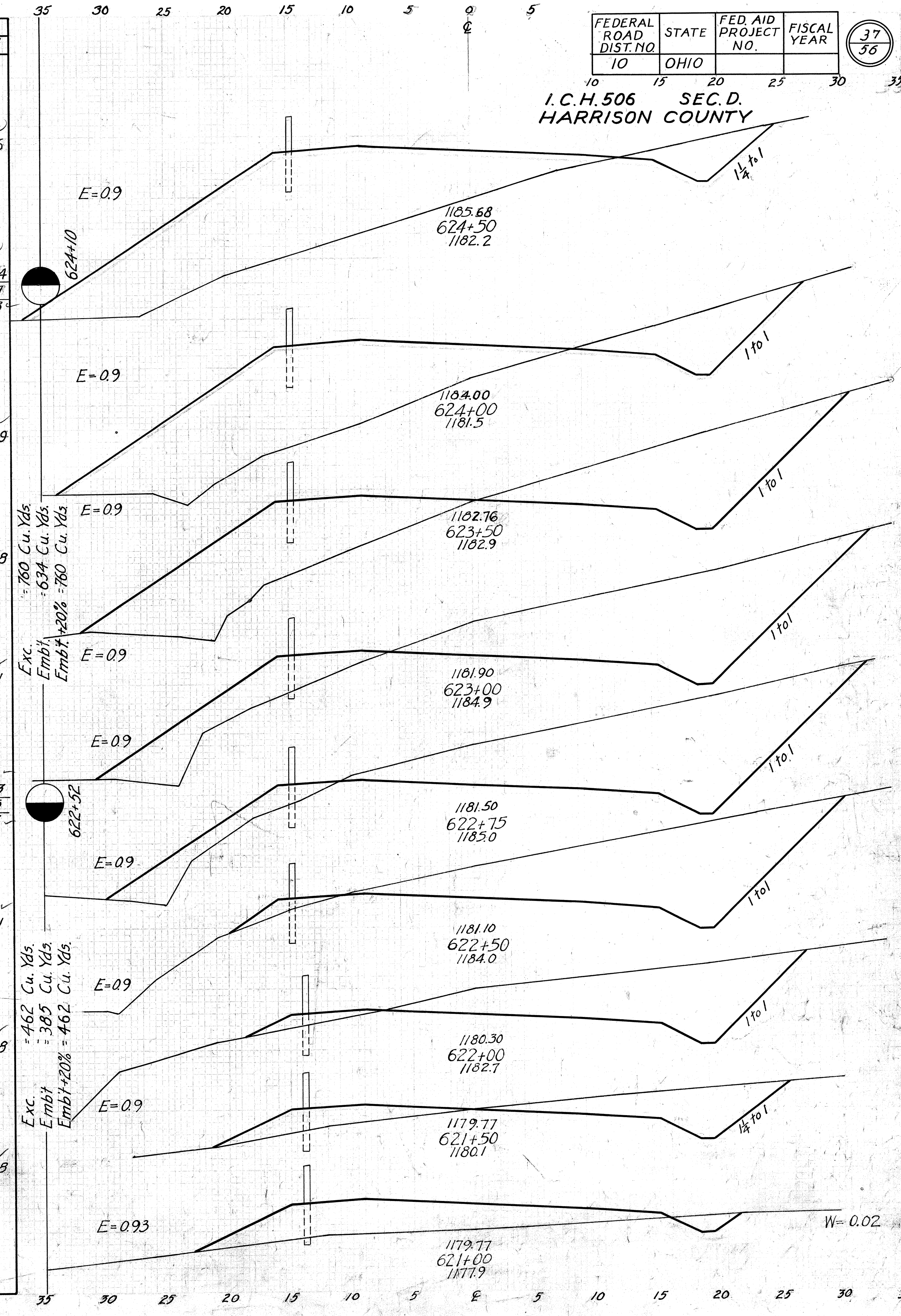
Exc. = 1865 Cu. Yds.
Embl. = 1554 Cu. Yds.
Embl. + 20% = 1865 Cu. Yds.



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
21	247	45	386
49	209	52	334
152	319	65	417
115	135	13	83
180	57	174	41
195	30	148	13
161	5	165	18
249	11	171	3
108	7	144	28
47	23	48	88
5	712		

Exc. = 760 Cu. Yds.
Embl. = 634 Cu. Yds.
Embl. + 20% = 760 Cu. Yds.

Exc. = 462 Cu. Yds.
Embl. = 385 Cu. Yds.
Embl. + 20% = 462 Cu. Yds.

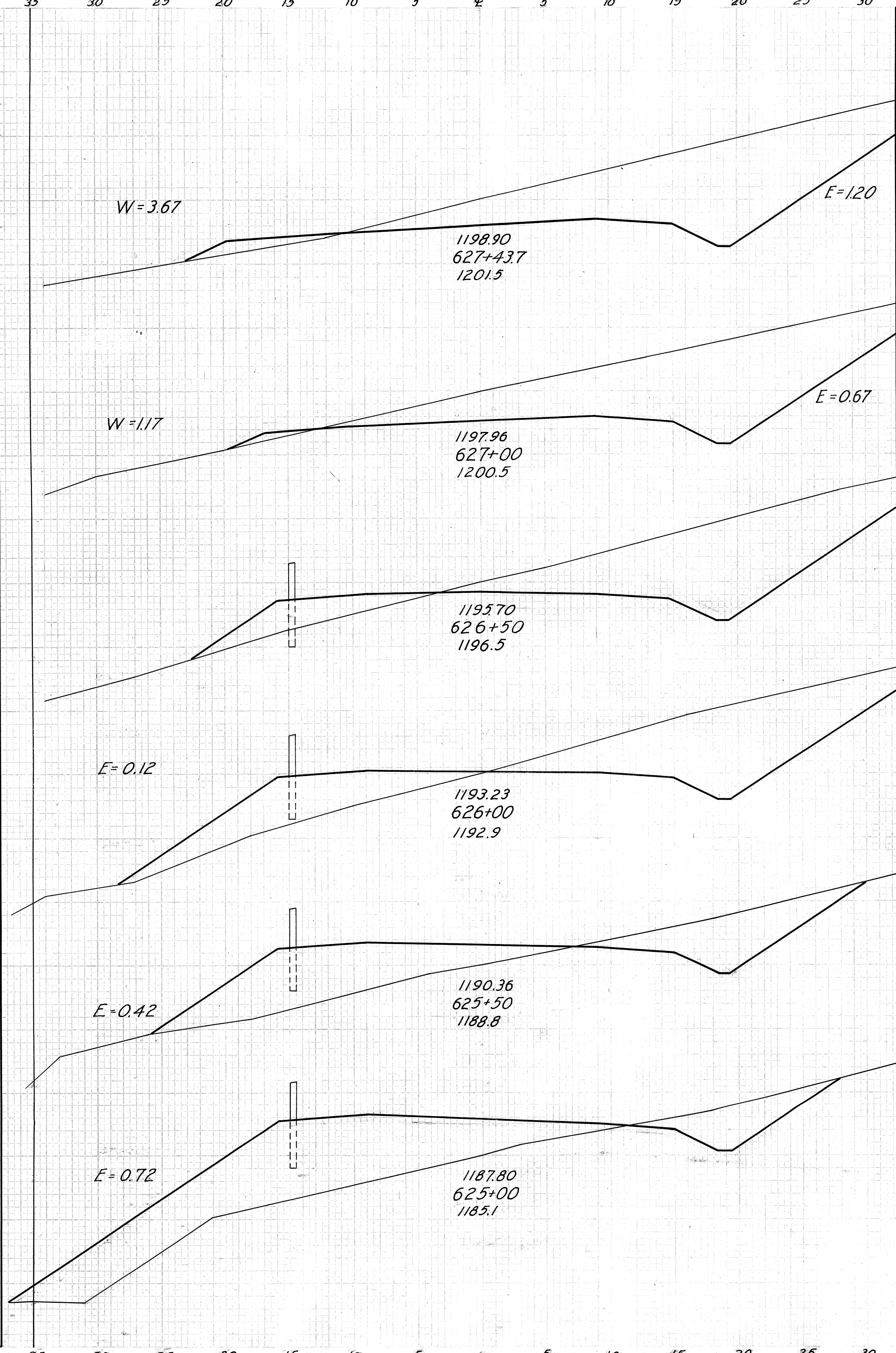


FEDERAL ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR
10	OHIO		

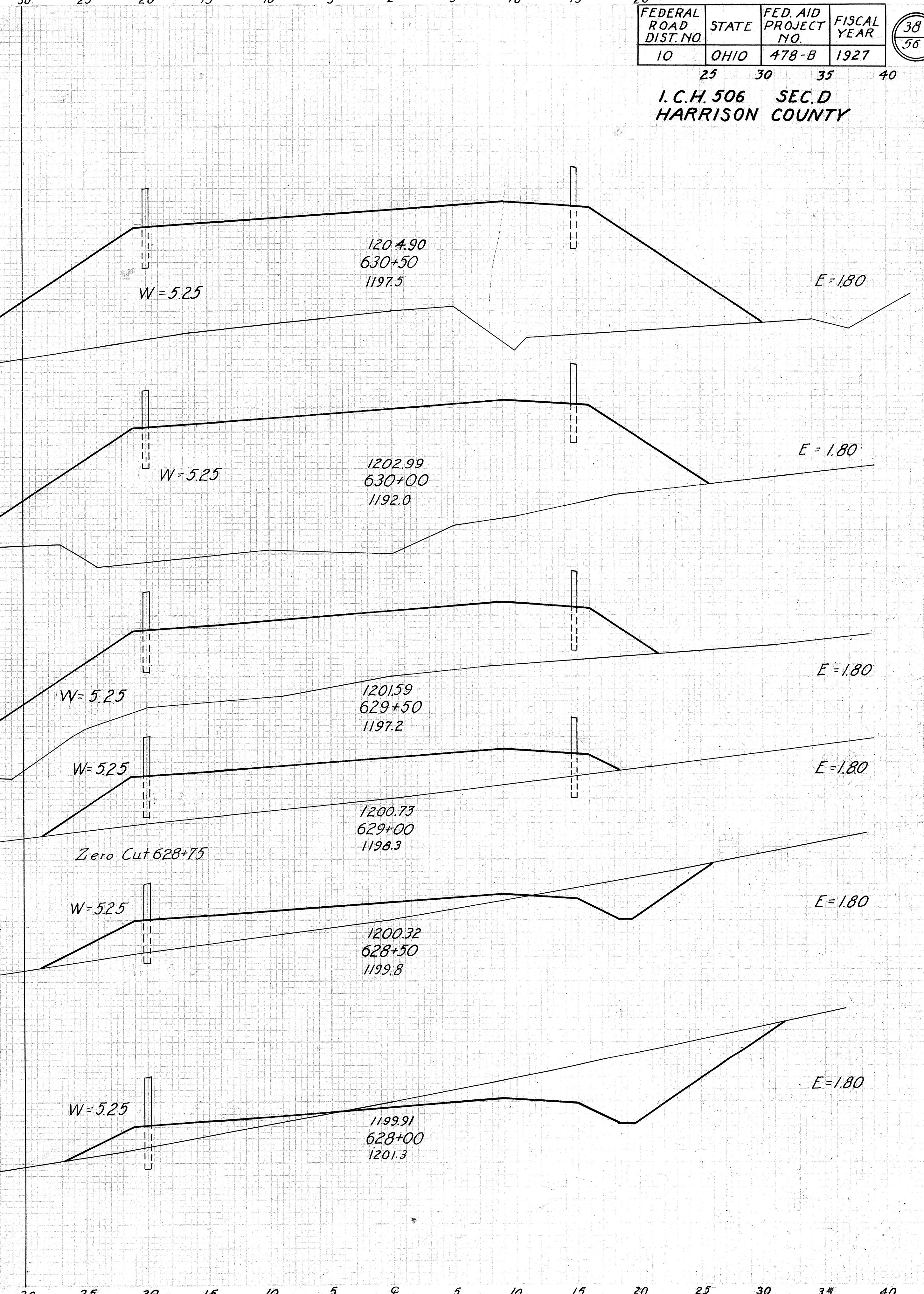
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End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
179	8		
		291	9
181	3		
		307	28
151	27		
		256	82
126	61		
		161	137
48	87		
		70	243
28	175		

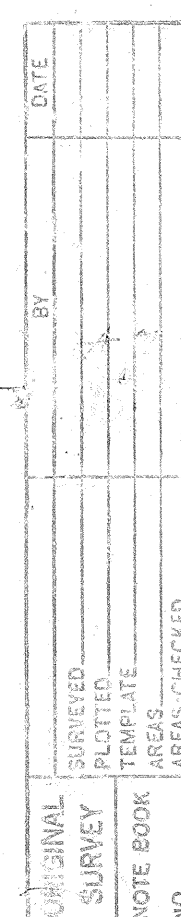


End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
0	713		
0	510		
0	947		
0	513		
0	751		
0	298		
0	406		
0	140		
11	190		
24	65		
97	82		
81	24		
		270	33



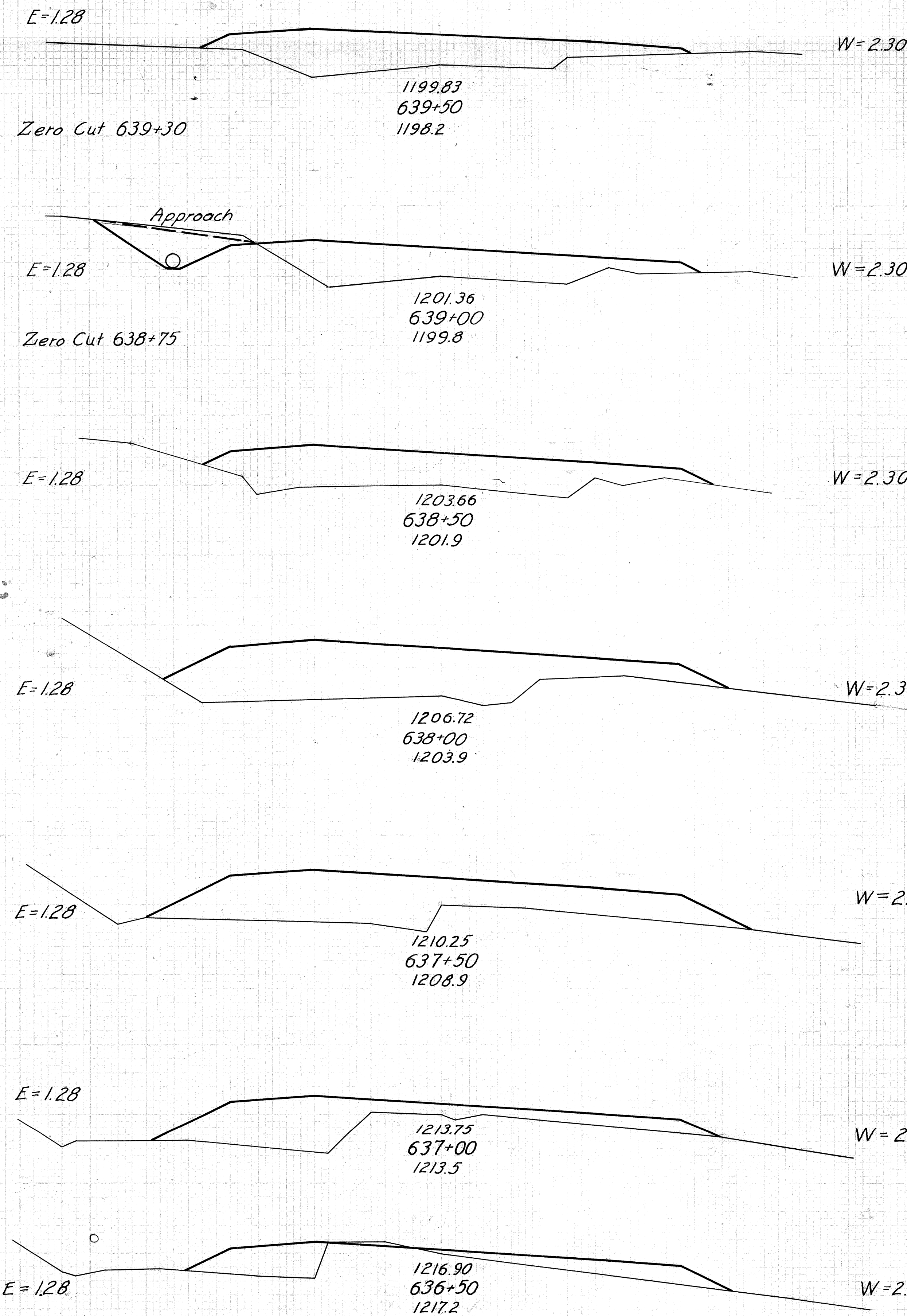
$$\frac{39}{56}$$

20 25 30 35 40



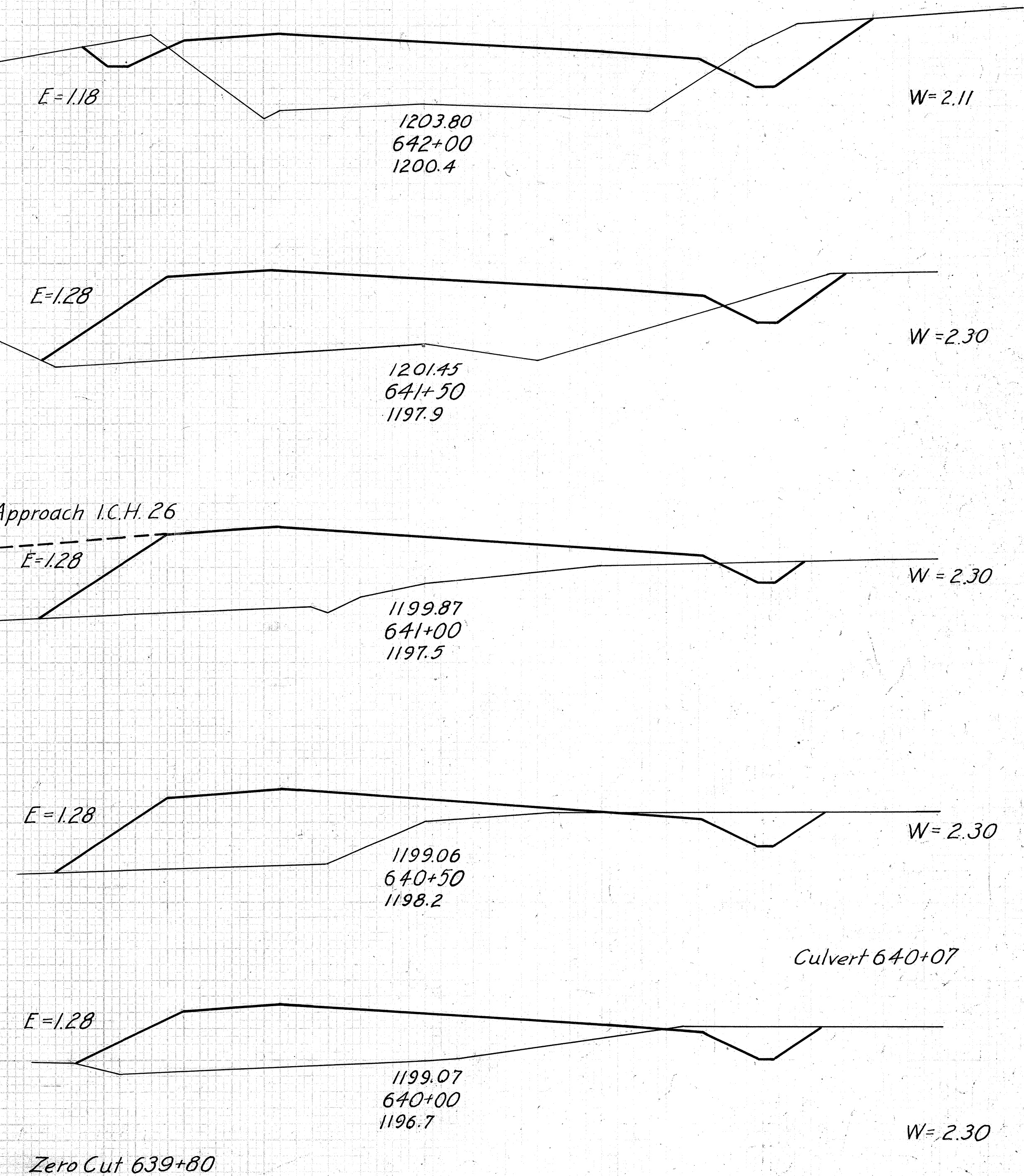
End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
0	66	✓	✓
		11	116
19	59	✓	✓
		9	126
0	77		
		0	175
0	112		
		1	✓
		0	201
0	105		
		0	159
0	67		
		0	✓
		0	97
1	38		

Exc. = 1174
Embt = 979
Embt + 20% = 1174

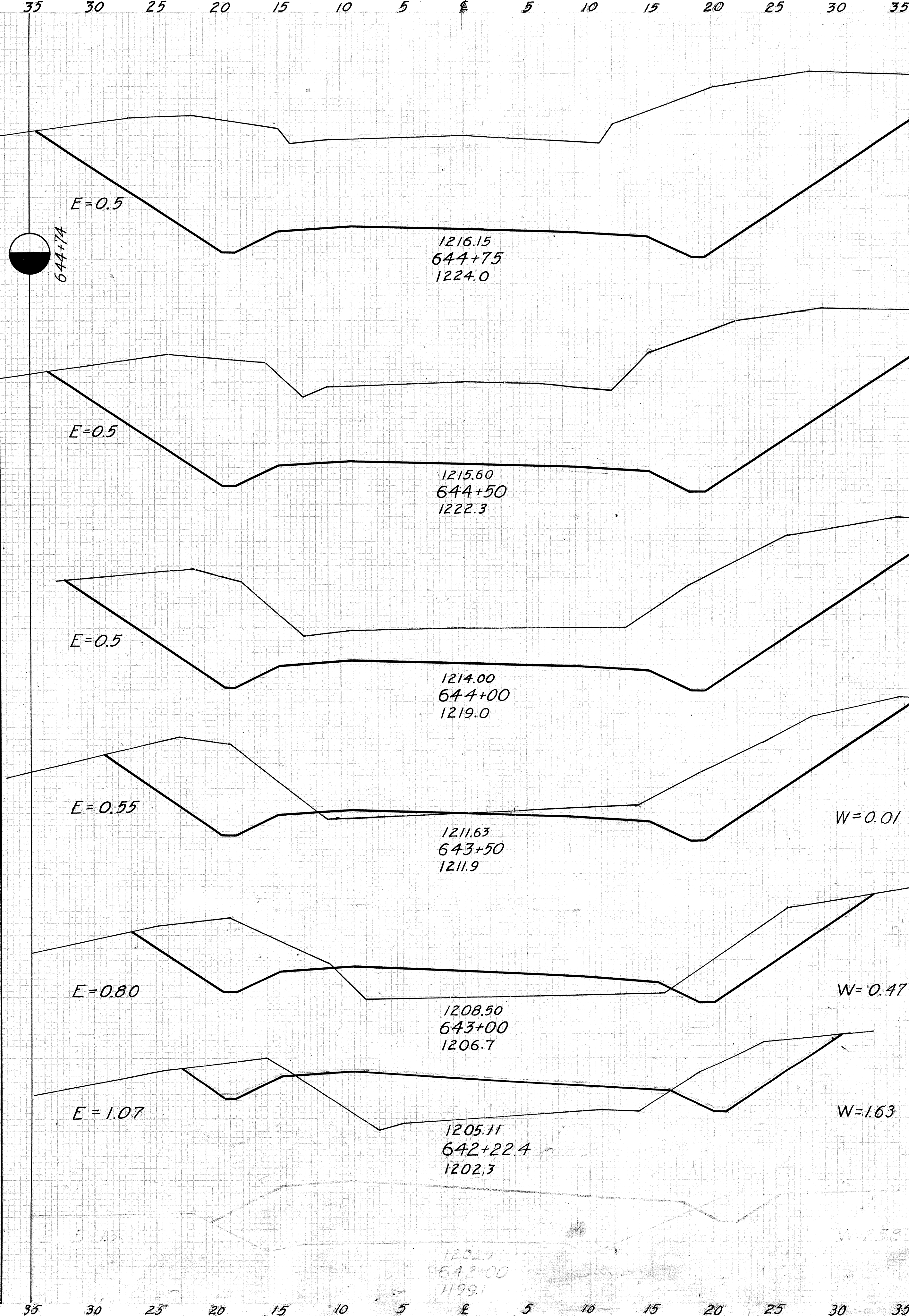


End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
		33	84
28	122		
		34	268
9	167		
		12	270
4	124		
		15	198
12	90		
		21	169
11	92		
		3	103
		4	146
		1	43

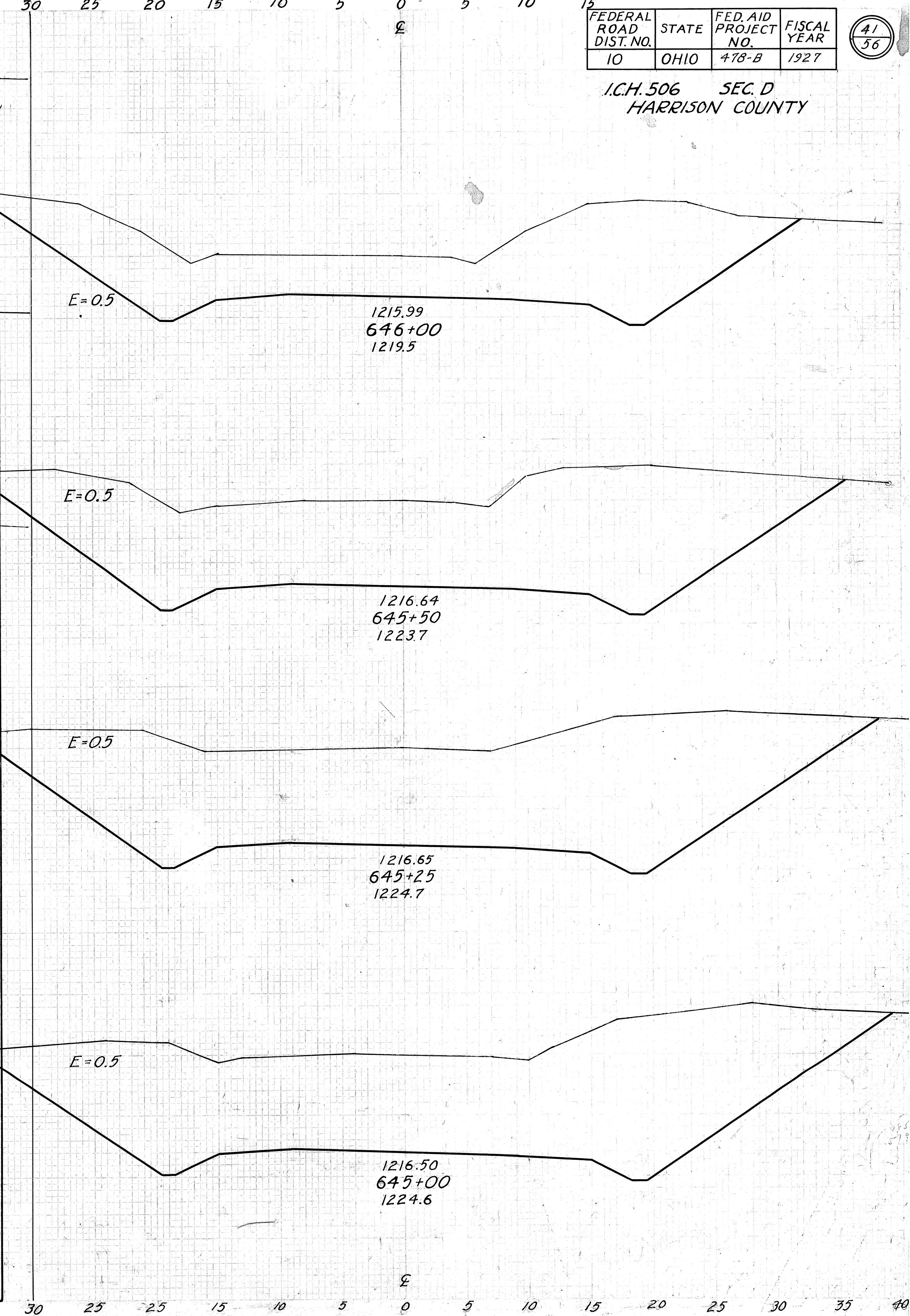
Exc. = 2194
Embt = 1828
Embt + 20% = 2194



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
577	0	23	0
510	0	503	0
330	0	480	0
172	3	778	0
92	48	465	3
52	81	244	47
		109	98



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
433	0	310	0
745	0	495	0
488	0	558	0
524	0	573	0
532	0		



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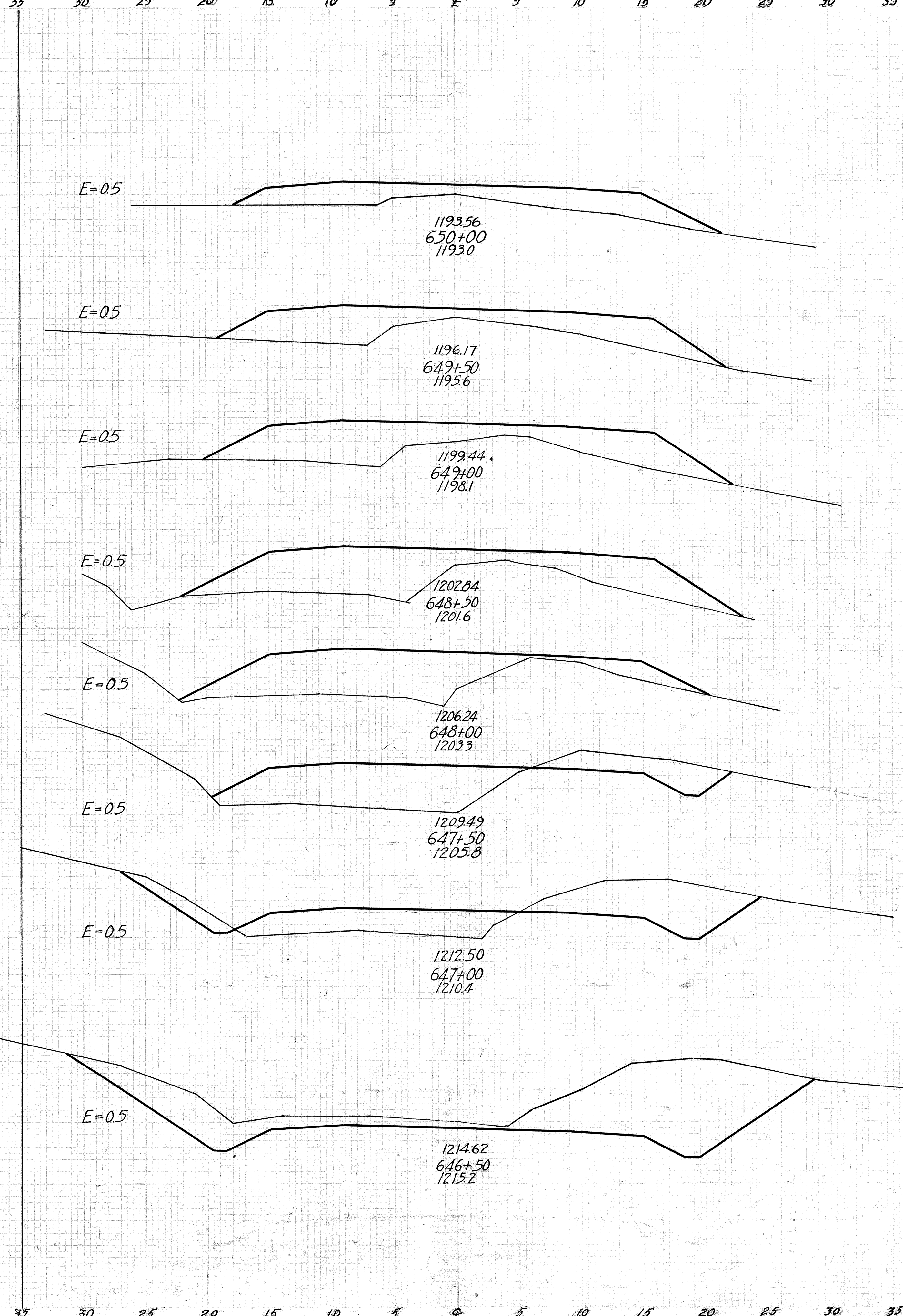
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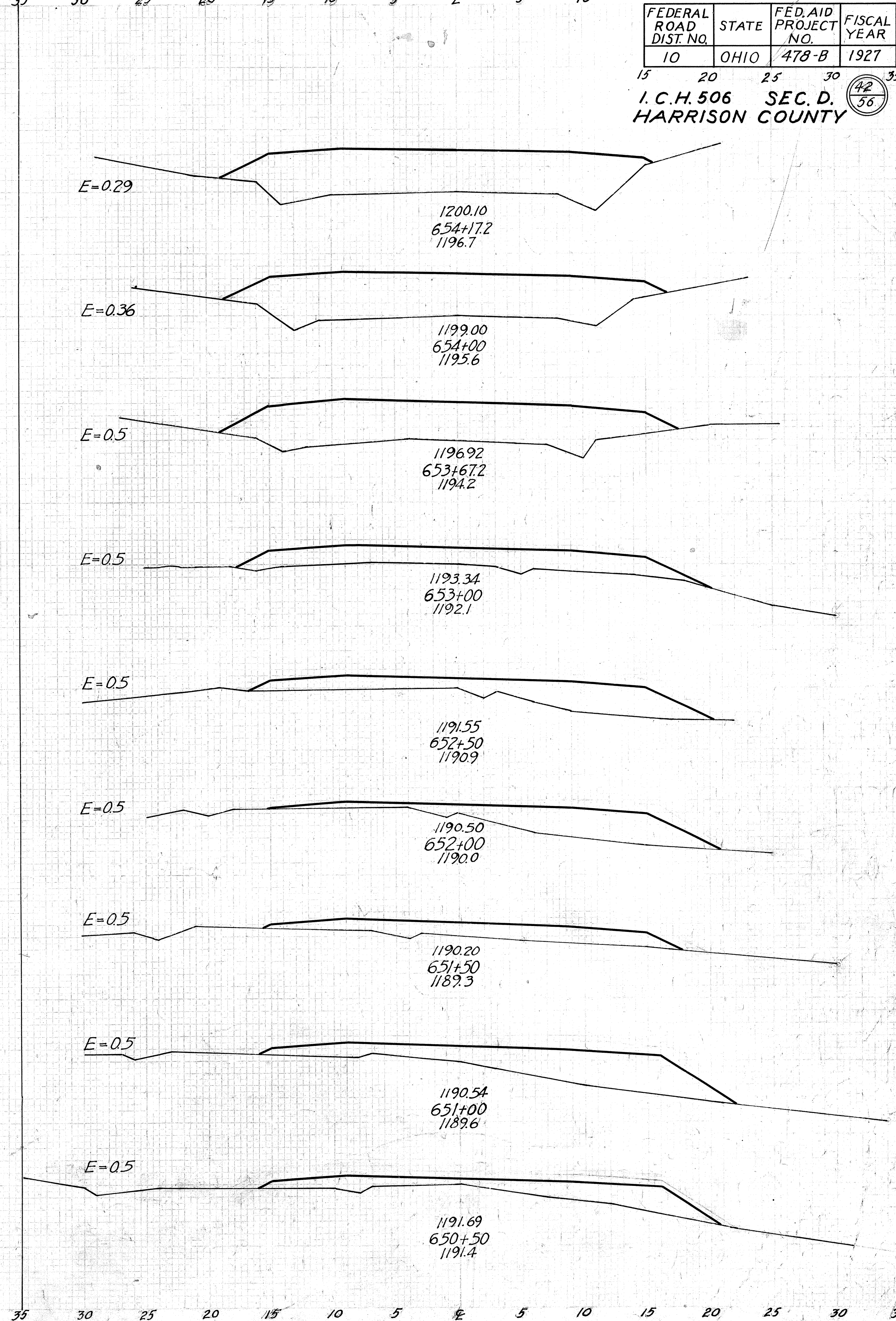
DATE	BY	CHIEF	ENGINEER	PLANNING	DESIGN	CONSTRUCTION
NO.	NO.	NO.	NO.	NO.	NO.	NO.

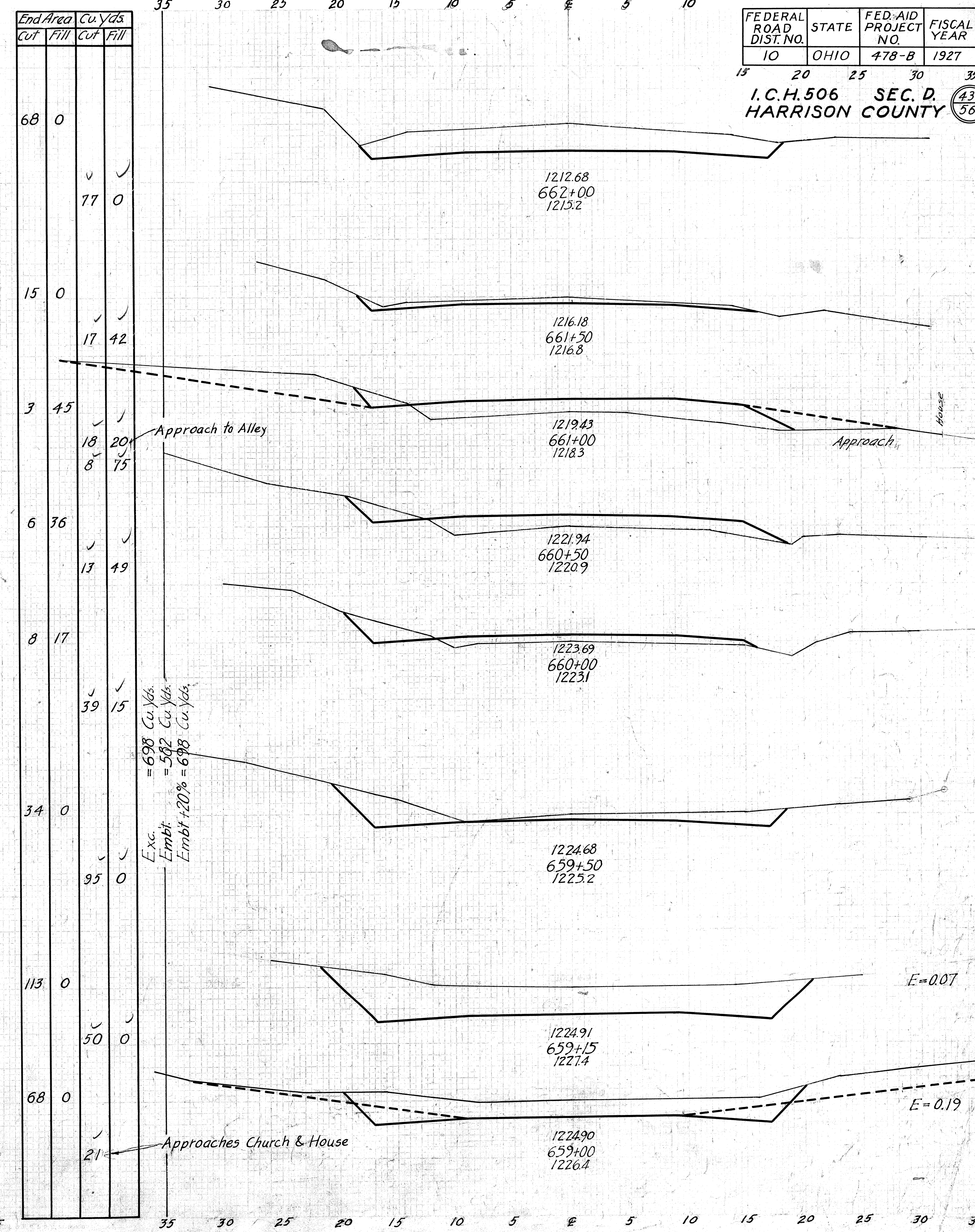
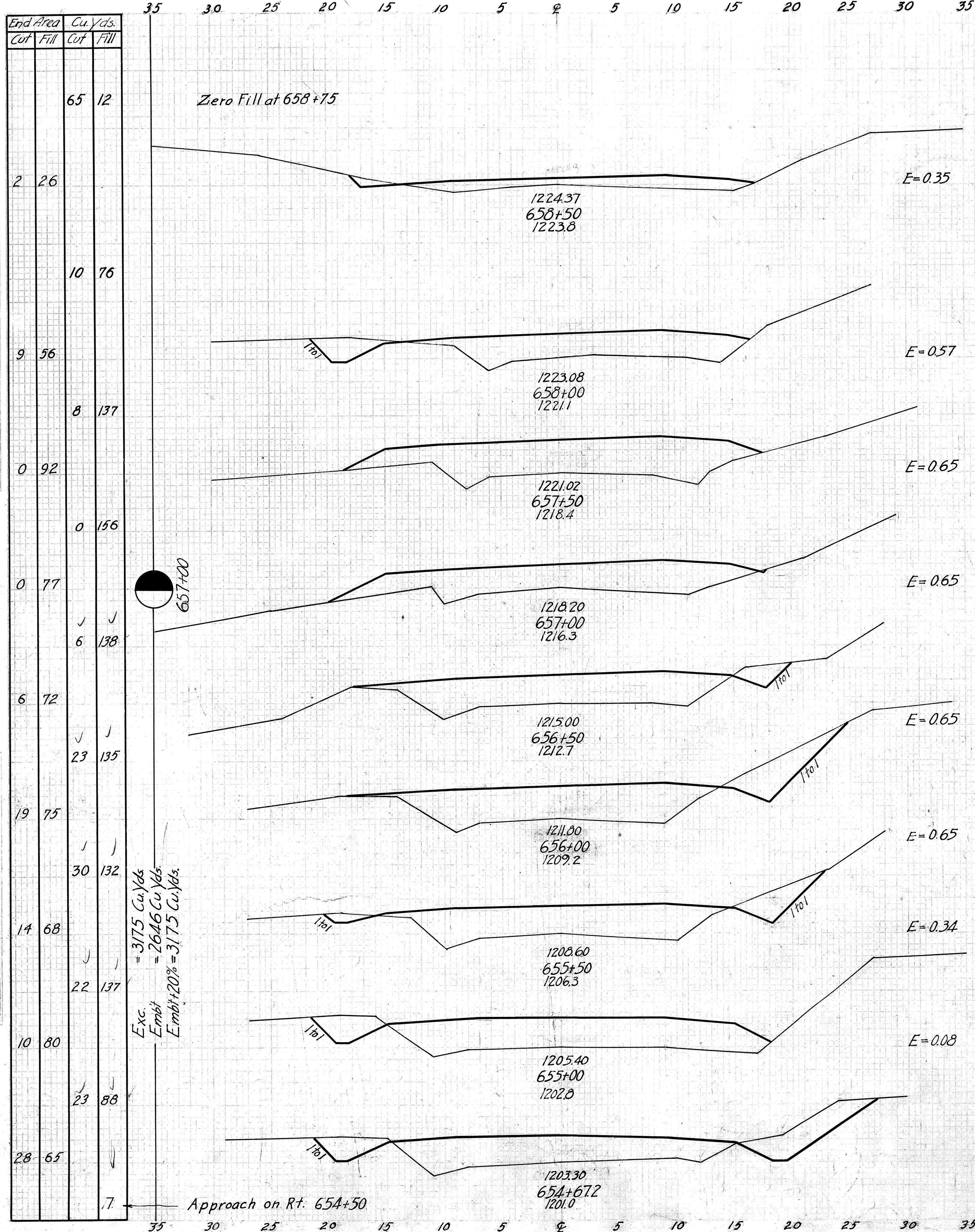
DATE	BY	CHIEF	ENGINEER	PLANNING	DESIGN	CONSTRUCTION
NO.	NO.	NO.	NO.	NO.	NO.	NO.

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
		0	85
0	55	0	118
0	72	0	159
0	90	0	180
0	104	0	180
0	90	22	150
24	72	77	105
59	41	201	38
158	0		

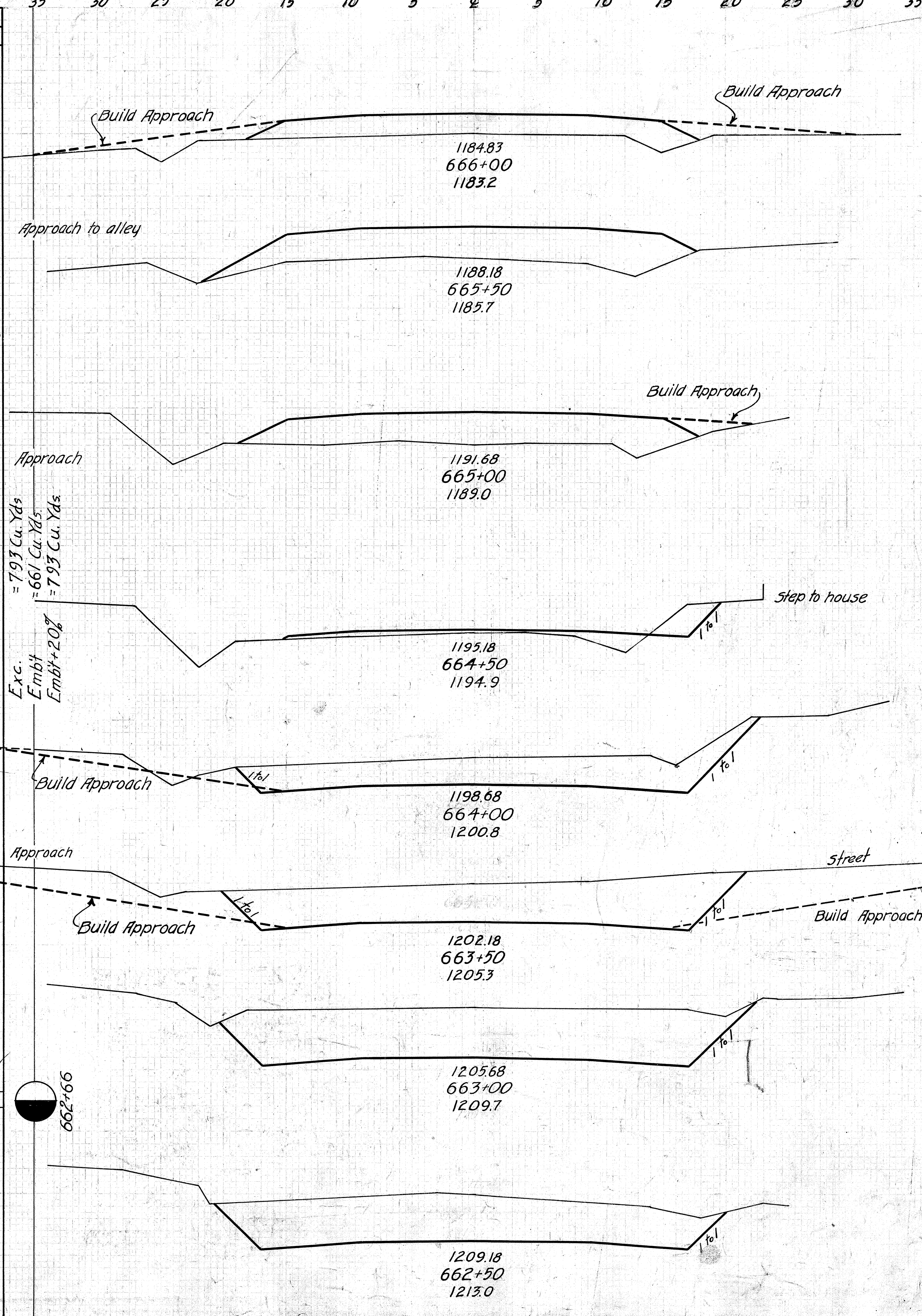


End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
		26	162
0	110	0	70
0	110	0	135
0	102	0	192
0	52	0	93
0	49	0	86
0	44	0	72
0	34	0	91
0	62	0	93
0	37		

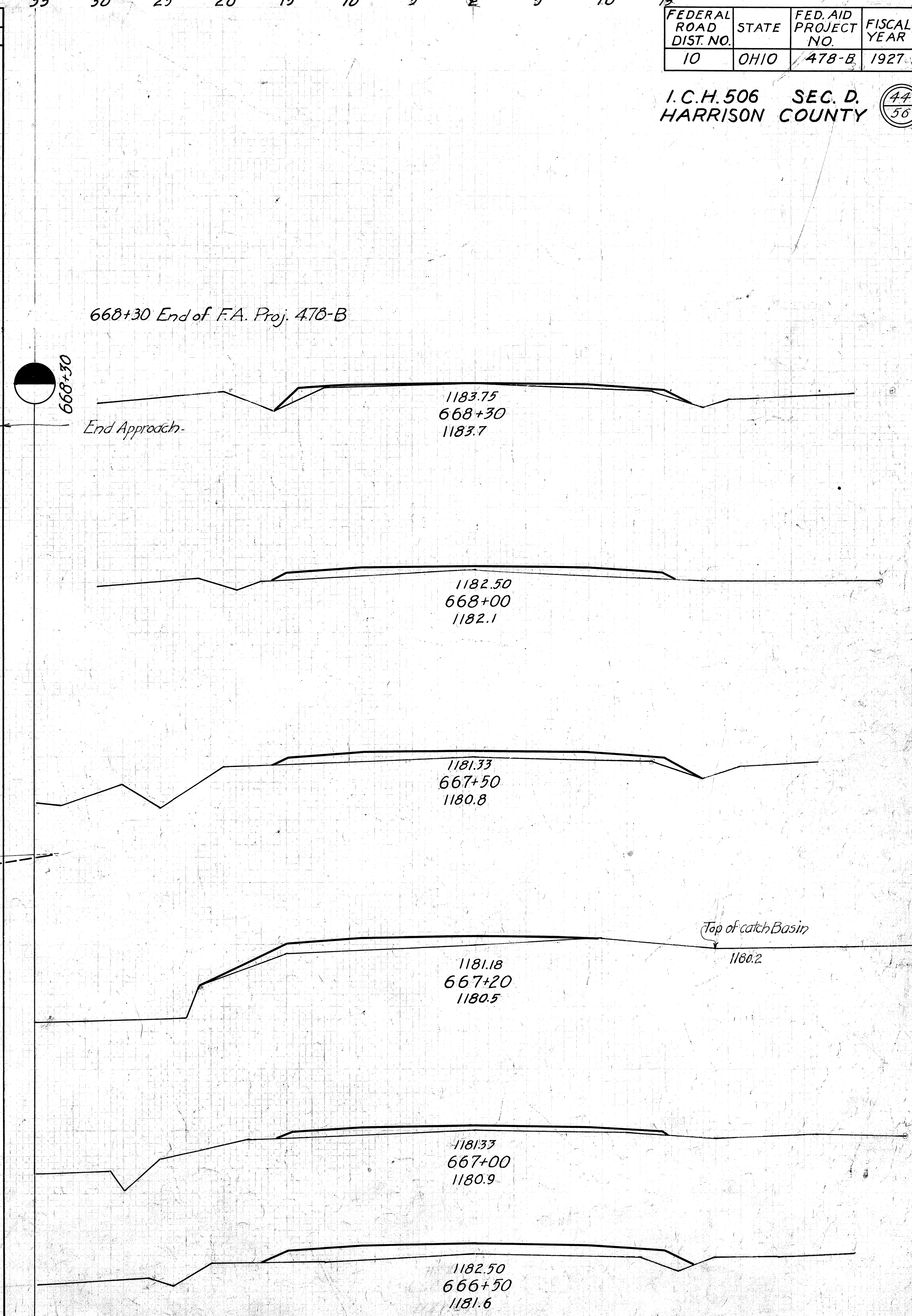




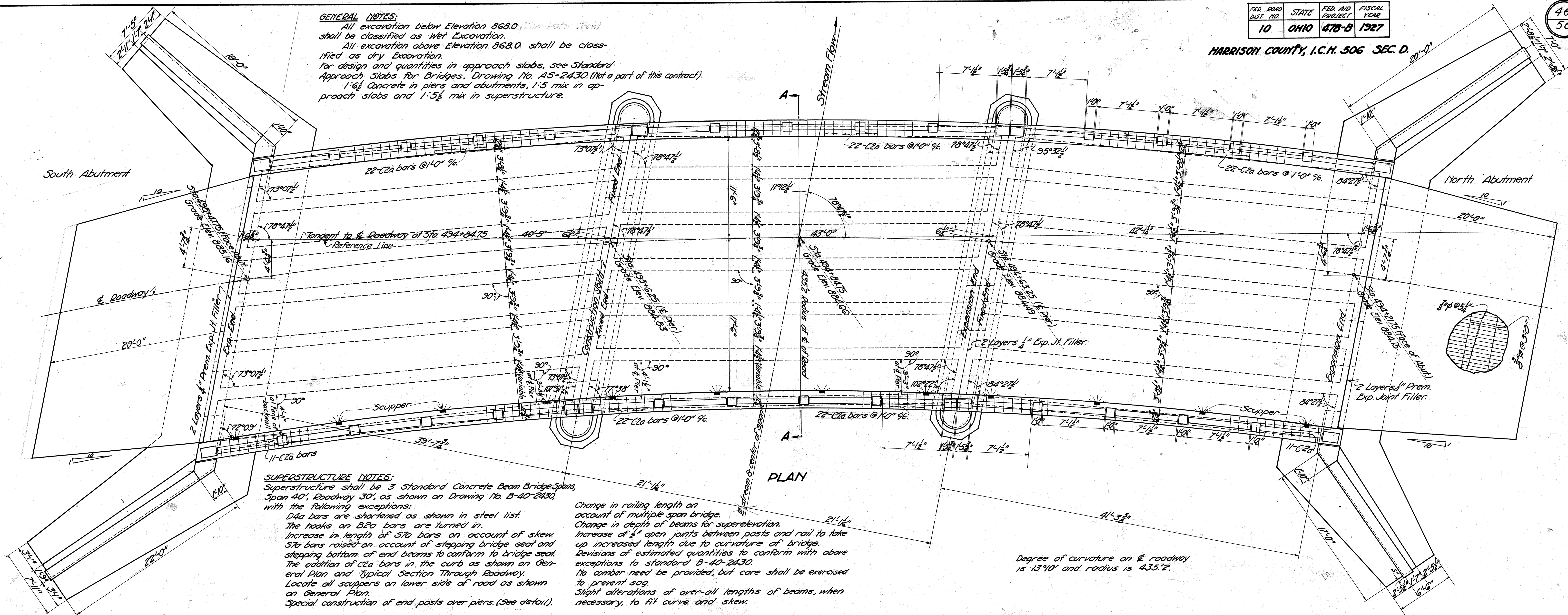
End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
		0	83
0	55		
		0	136
		30	
0	92		
		0	159
0	80	10	
		8	86
8	13		
		87	12
86	0	10	
		199	0
129	0	40	
		267	0
160	0		
		182	0
		272	0
		98	0
134	0		
		187	0



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
		0	8
0	8		
		0	24
0	18		
		0	37
0	22		
		0	23
0	20		
		0	13
0	14		
		0	45
0	35		



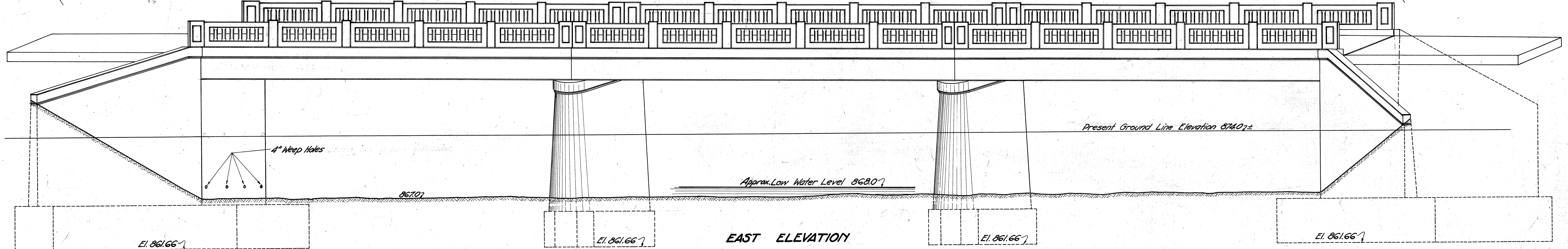
GENERAL NOTES:
 All excavation below Elevation 868.0 shall be classified as Wet Excavation.
 All excavation above Elevation 868.0 shall be classified as dry Excavation.
 For design and quantities in approach slabs, see Standard Approach Slabs for Bridges, Drawing No. A5-2430. (Not a part of this contract).
 1'6" Concrete in piers and abutments, 1'5" mix in approach slabs and 1'5" mix in superstructure.



SUPERSTRUCTURE NOTES:
 Superstructure shall be 3 Standard Concrete Beam Bridge Spans, Span 40', Roadway 30', as shown on Drawing No. B-40-2430, with the following exceptions:
 Data bars are shortened as shown in steel list.
 The hooks on B2a bars are turned in.
 Increase in length of 57a bars on account of skew.
 57a bars raised on account of stepping bridge seat and stepping bottom of end beams to conform to bridge seat.
 The addition of C2a bars in the curb as shown on General Plan and Typical Section Through Roadway.
 Locate all scuppers on lower side of road as shown on General Plan.
 Special construction of end posts over piers. (See detail).

Change in railing length on account of multiple span bridge.
 Change in depth of beams for super-elevation.
 Increase of 1/8" open joints between posts and rail to take up increased length due to curvature of bridge.
 Revisions of estimated quantities to conform with above exceptions to standard B-40-2430.
 No camber need be provided, but care shall be exercised to prevent sag.
 Slight alterations of over-all lengths of beams, when necessary, to fit curve and skew.

Degree of curvature on E roadway is 13°10' and radius is 435.2.



SUPERSTRUCTURE QUANTITIES

Concrete 1'5" Mix	205 Cu.Yds.
Reinforcing Steel	57180 Lbs.
1/4" Premolded Exp. Joint Filler	936 Sq.Ft.
Wearing Surface	416 Sq.Yds.
1/8" Phosphor Bronze Plates	174 Lbs.
Cast Iron Scuppers	12 Pcs.
Railing	259 Lin.Ft.

SUBSTRUCTURE QUANTITIES

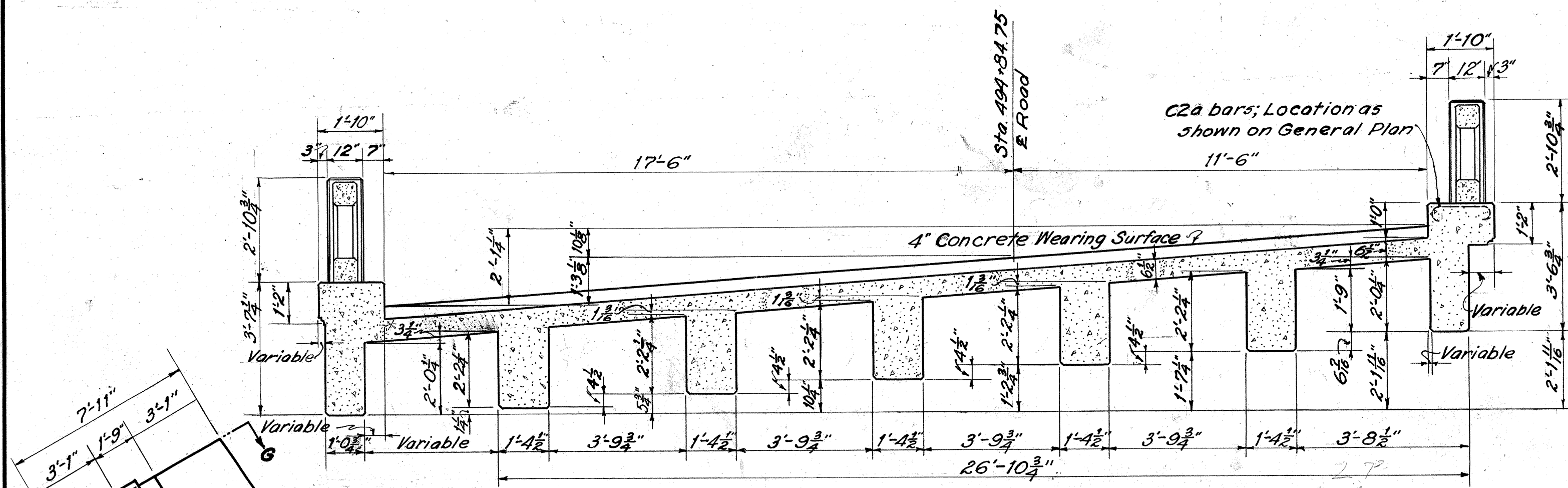
Wet Excavation	530 Cu.Yds.
Dry Excavation	300 Cu.Yds.
1'6" Concrete in Footings	336 Cu.Yds.
1'6" Conc. in Abut. and Pier Walls	312 Cu.Yds.
Reinforcing Steel	17330 Lbs.
Piling (20' Length Assumed)	3940 Lin.Ft.

GENERAL QUANTITIES

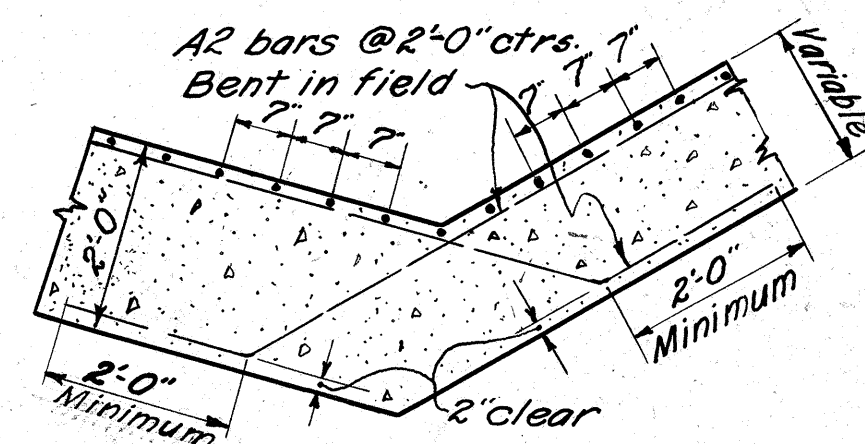
Channel Excavation	11284 Cu.Yds.
Rip Rap	150 Sq.Yds.

**GENERAL PLAN & ELEVATION
 ESTIMATED QUANTITIES
 BRIDGE OVER
 STILLWATER CREEK
 HARRISON COUNTY - 506 - D
 AUGUST, 1927.**

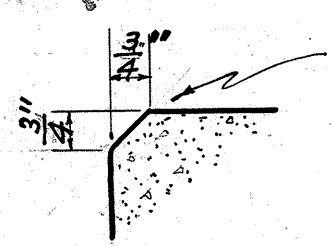
Designed K.E.D.	Drawn K.E.D.	Traced C.P.S.	Checked J.M.M.	Reviewed W.H.R.
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TYPICAL SECTION THROUGH SUPERSTRUCTURE (A-A)

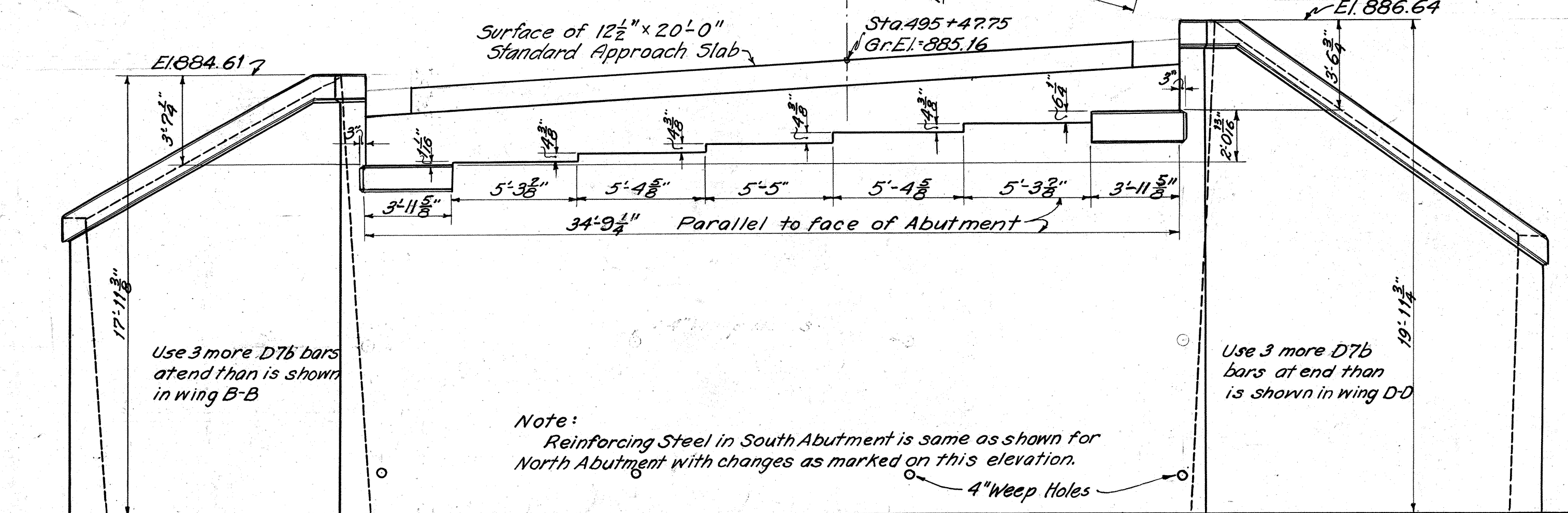


TYPICAL SECTION AT JUNCTION OF ABUTMENT & WING



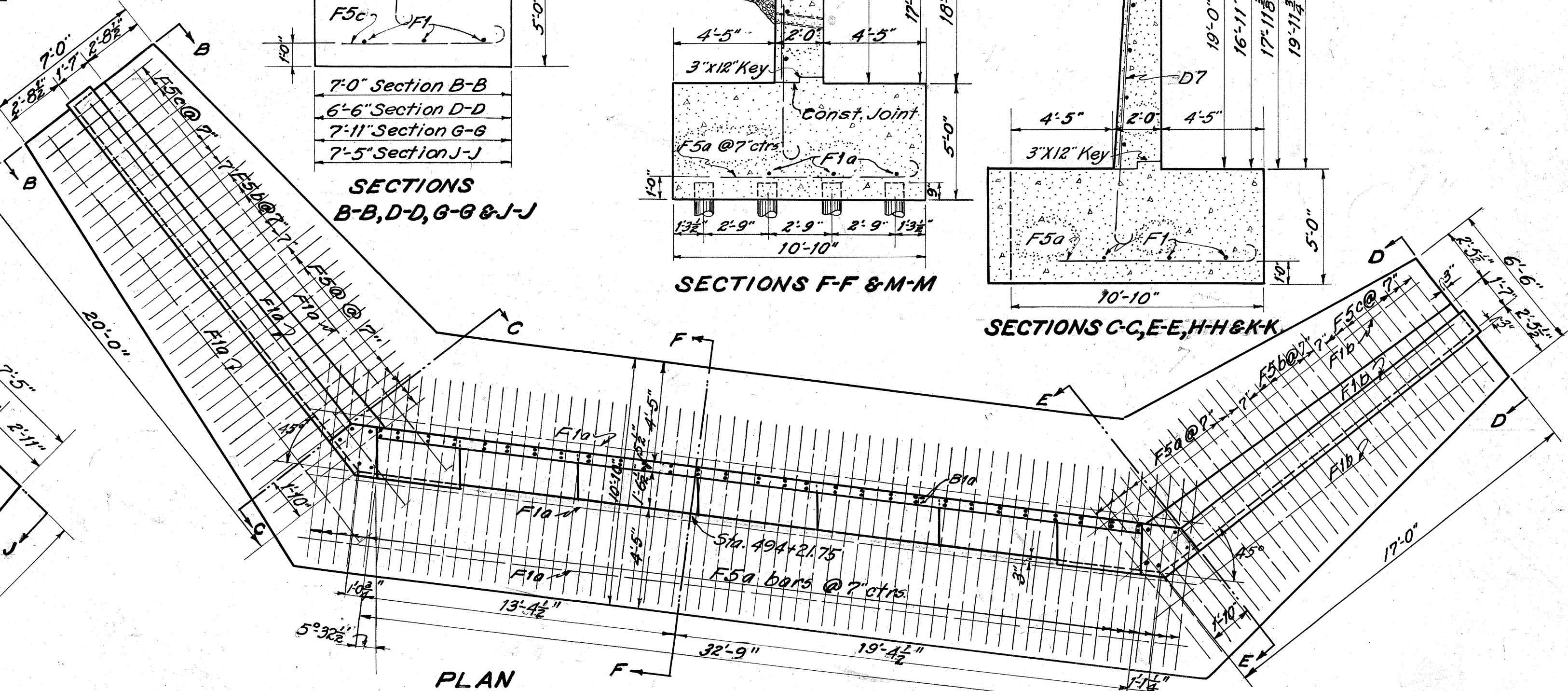
Chamfer for all exposed edges, except as otherwise shown

PLAN

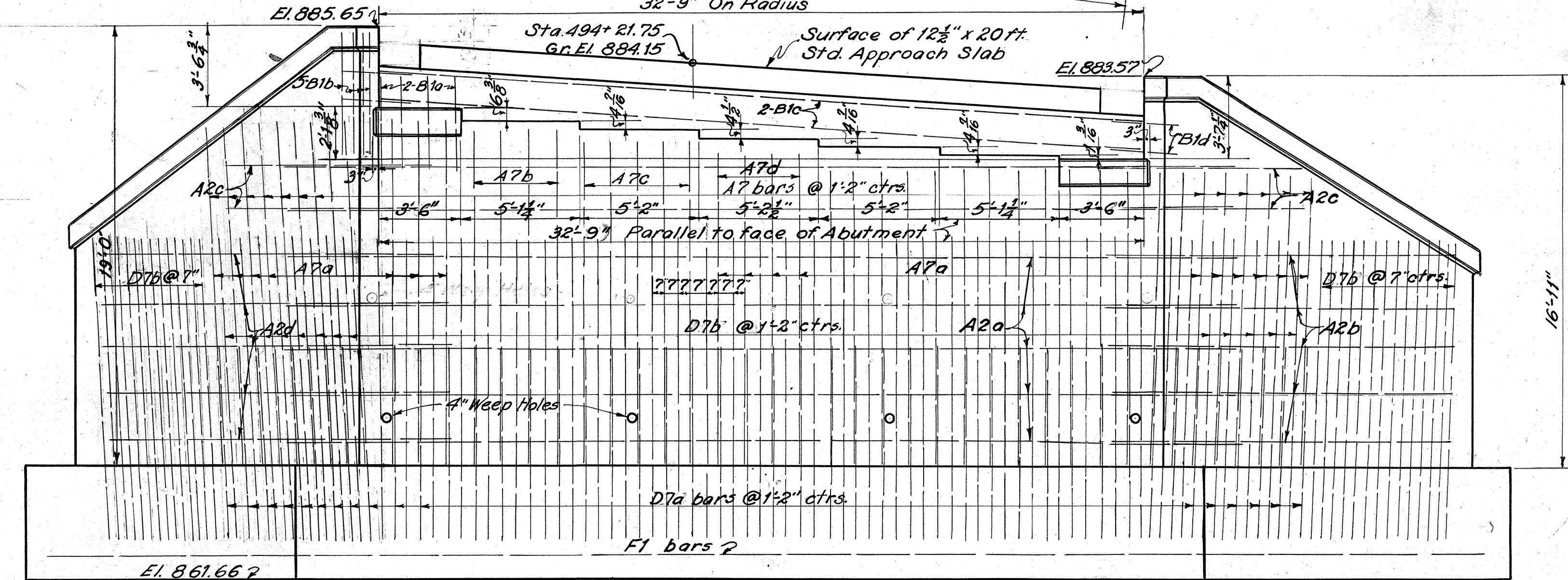


Note: Reinforcing Steel in South Abutment is same as shown for North Abutment with changes as marked on this elevation.

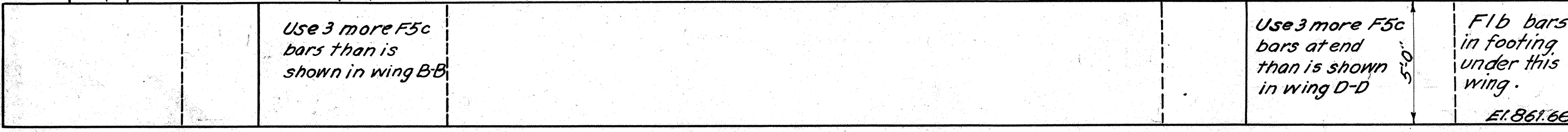
FRONT ELEVATION OF SOUTH ABUTMENT



PLAN



FRONT ELEVATION OF NORTH ABUTMENT



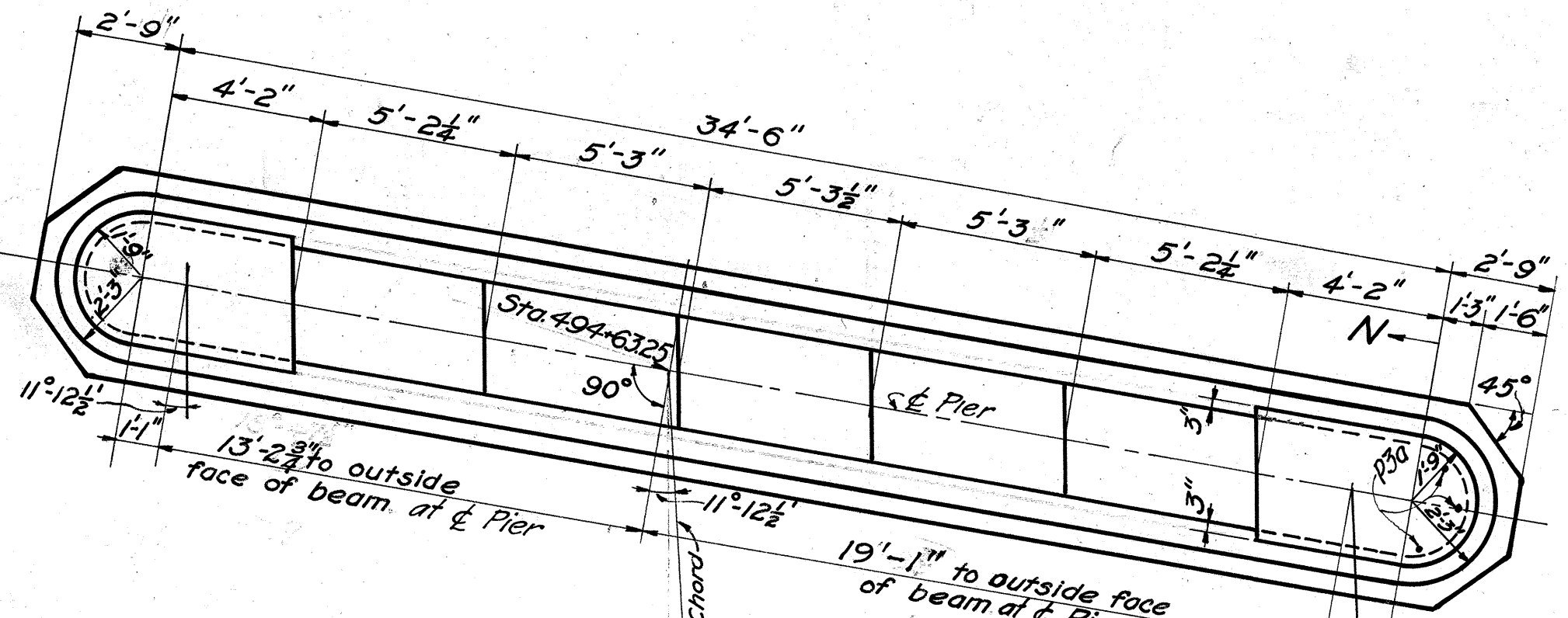
ABUTMENT PLANS & ELEVATIONS
SECTION THRU SUPERSTRUCTURE
BRIDGE OVER
STILLWATER CREEK
HARRISON COUNTY 506-D
AUGUST 1927

STEEL LIST
Two Abutments & Two Piers

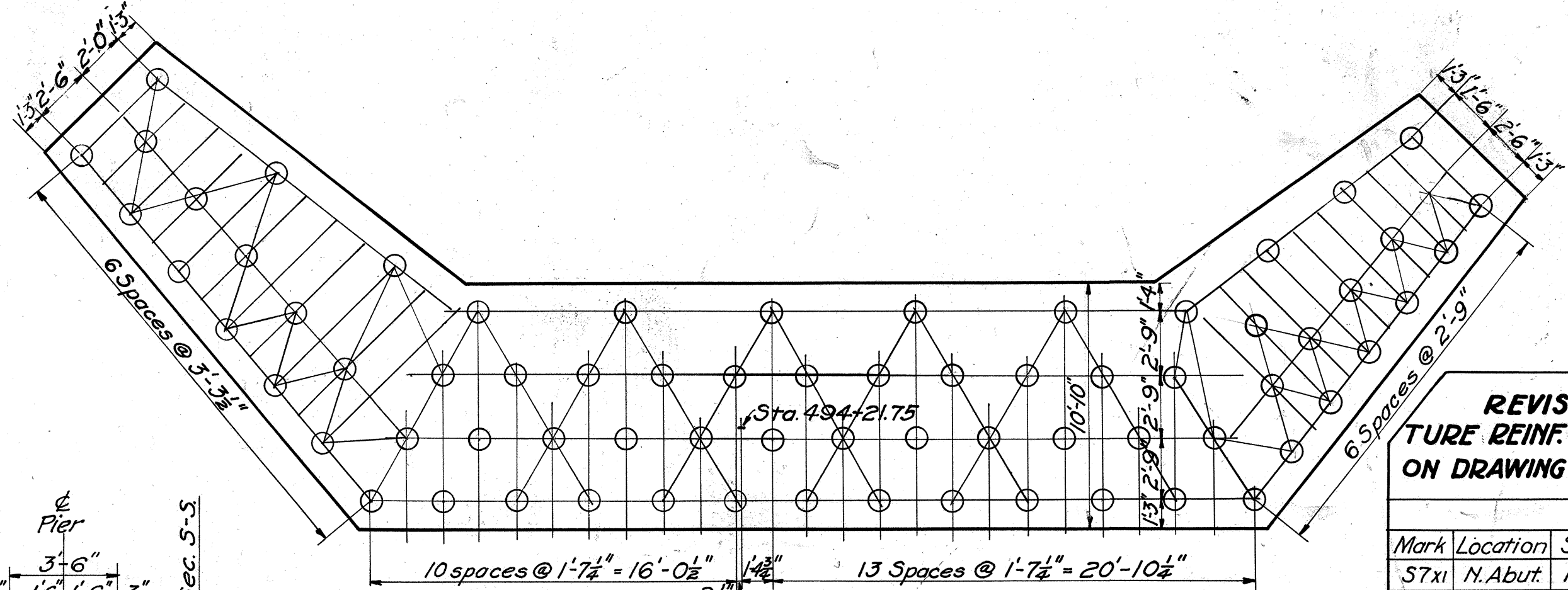
Mark	Size	Shape	No. Req.	Length	Weight
F1a	3/8"	Straight	18	22'-0"	14.9
F1b	3/8"	"	6	18'-0"	41
B1a	3/8"	"	118	3'-9"	166
B1b	3/8"	"	20	5'-3"	40
B1c	3/8"	"	16	18'-6"	111
B1d	3/8"	"	16	3'-0"	18
A2a	1/2"	Bent in	28	22'-3"	417
A2b	1/2"	field	10	20'-0"	134
A2c	1/2"	"	8	13'-6"	72
A2d	1/2"	"	10	25'-0"	167
P3a	1/2"	Straight	9	14'-6"	111
P3b	1/2"	"	29	14'-9"	364
P3c	1/2"	"	16	15'-9"	214
P3d	1/2"	"	20	34'-0"	578
P3e	1/2"	"	54	5'-0"	230
F5a	3/4"	Bent	192	9'-3"	2668
F5b	3/4"	"	28	8'-0"	336
F5c	3/4"	"	44	7'-0"	462
D7a	1"	Bent	90	9'-3"	2223
D7b	1"	"	150	13'-9"	5507
A7a	1"	Straight	24	15'-0"	961
A7b	1"	"	8	14'-6"	310
A7c	1"	"	10	14'-0"	374
A7d	1"	"	8	13'-6"	288
A7e	1"	"	40	13'-0"	1389
TOTAL					17,330

REVISIONS OF SUPERSTRUCTURE REINF. STEEL FROM DETAILS SHOWN ON DRAWING NO. B-40-2430

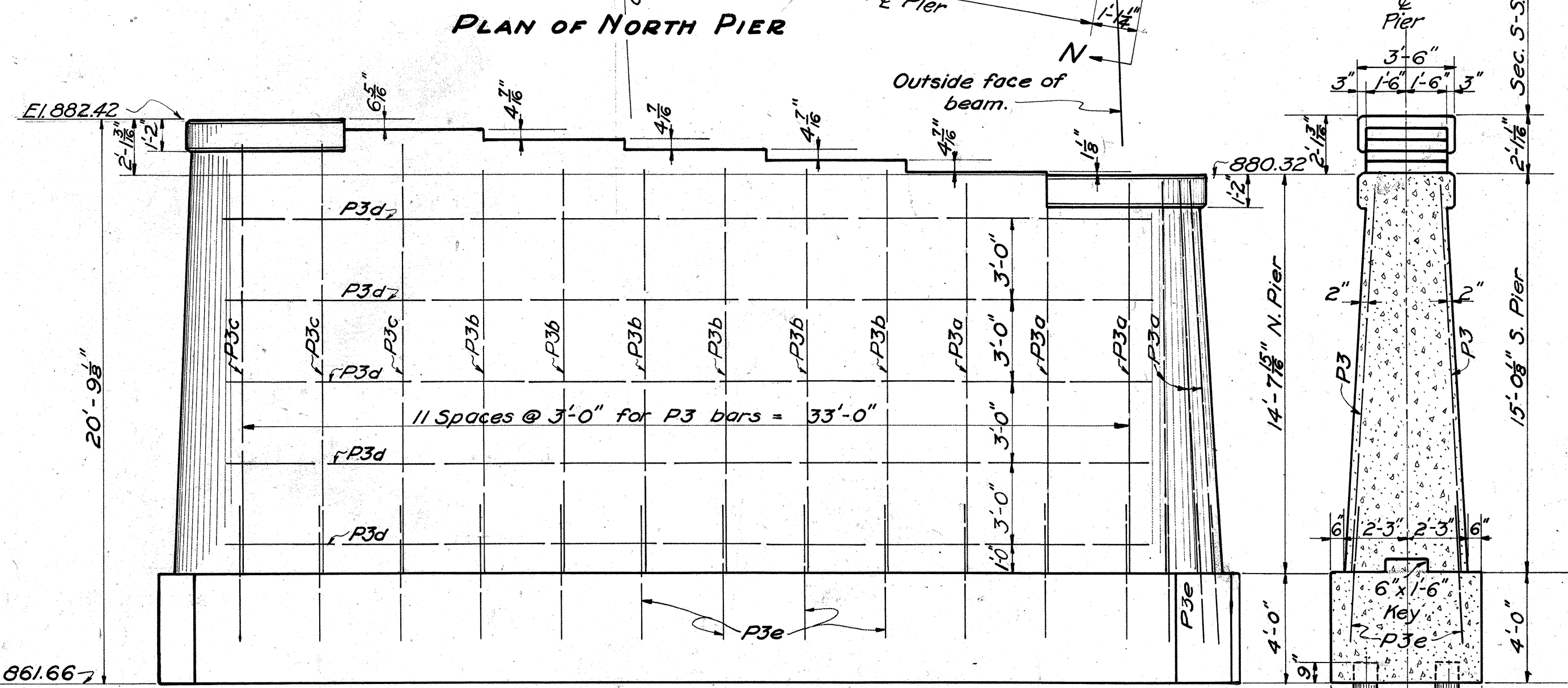
S7x Bar's					
Mark	Location	Size	Shape	No. Req.	Length Extra Wt.
S7x1	N. Abut.	1"	Straight	3	32'-0"
S7x	N. Pier	1"	"	6	32'-6"
S7x2	S. Pier	1"	"	6	32'-9"
S7x3	S. Abut	1"	"	3	33'-6"
Total Extra in S7x over Std.					= (+) 32#
D4a Railing					
D4a	Railing	5/8"	Bent	192	8'-3"
Total Reduction in D4a from Std.					= (-) 150#
C2a Curb					
C2a	Curb	1/2"	Bent	132	2'-8"
Total extra for C2a bars					= (+) 238#
Change in bending of B2a. No change in weight or dimensions.					
Total extra steel 120#					
Steel as per Standard Plan				57,060#	
Total Superstructure Steel				57,180#	



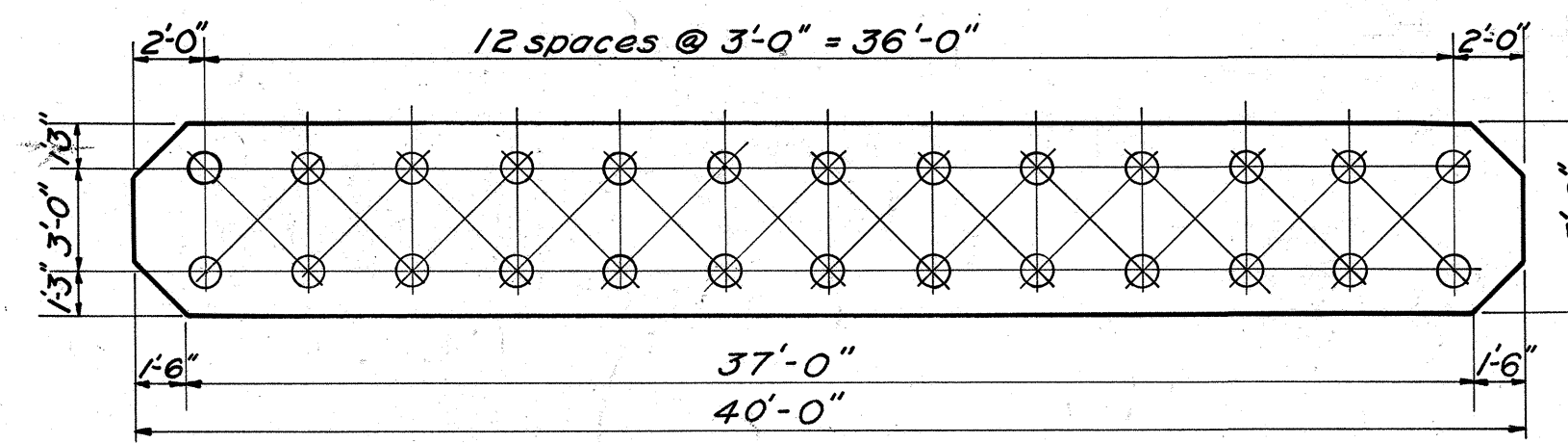
PLAN OF NORTH PIER



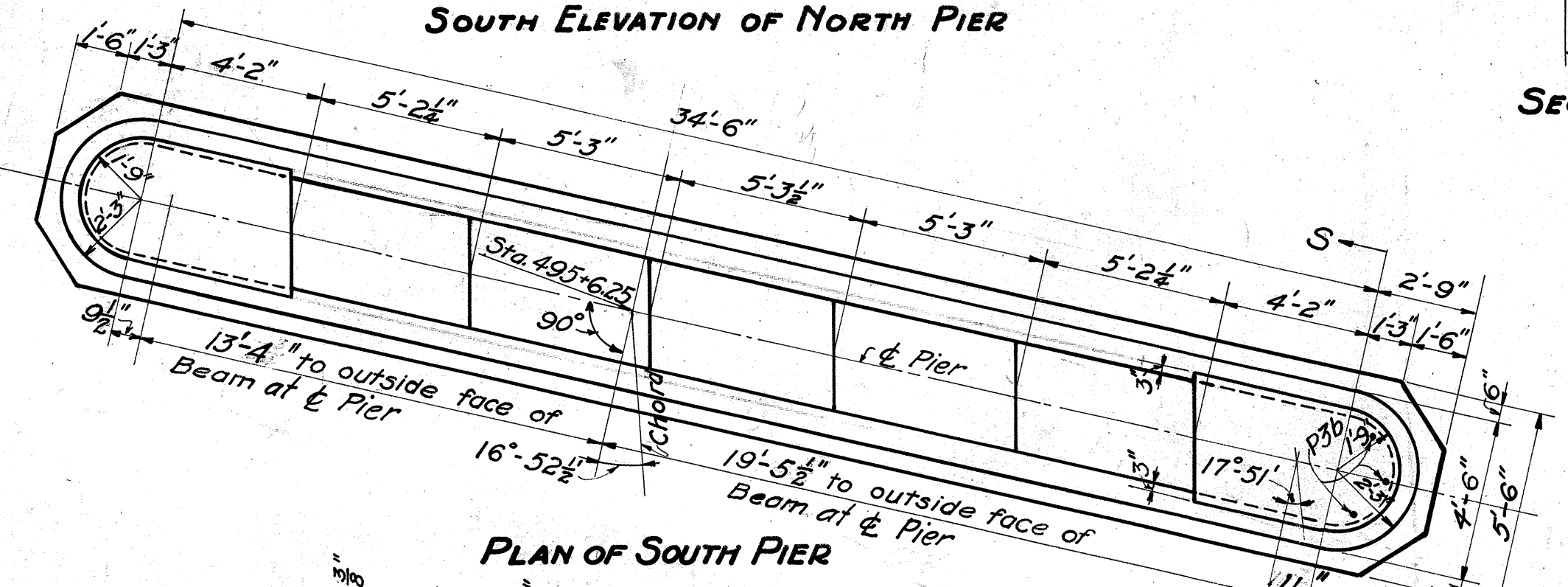
PILING PLAN OF NORTH ABUTMENT.



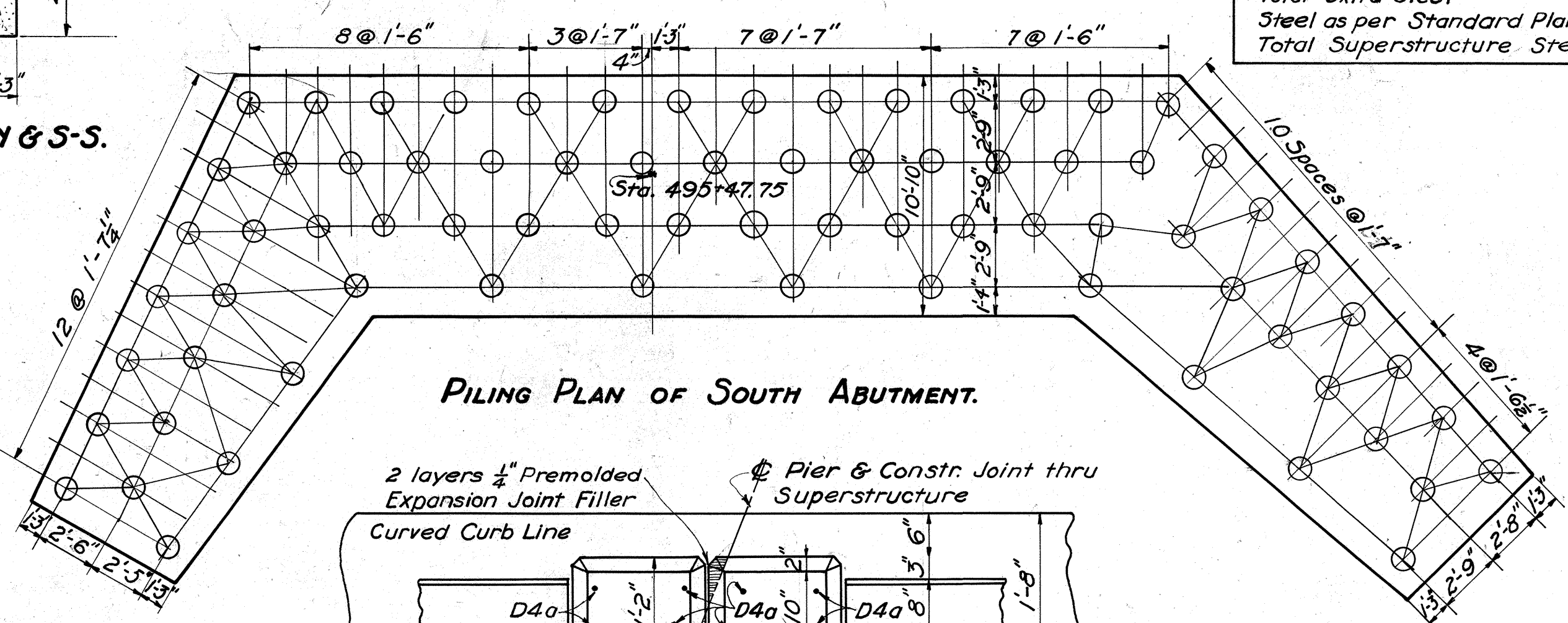
SOUTH ELEVATION OF NORTH PIER



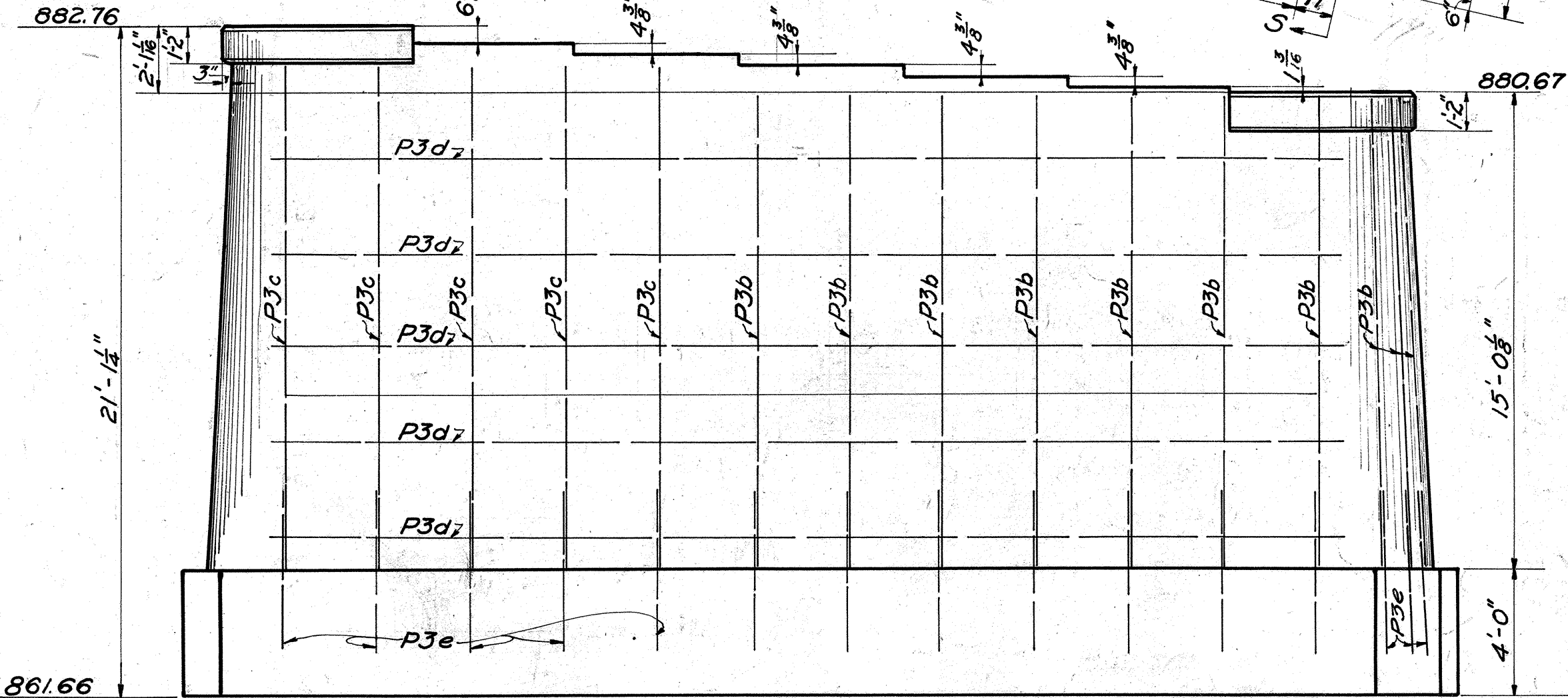
PILING PLAN OF NORTH & SOUTH PIER



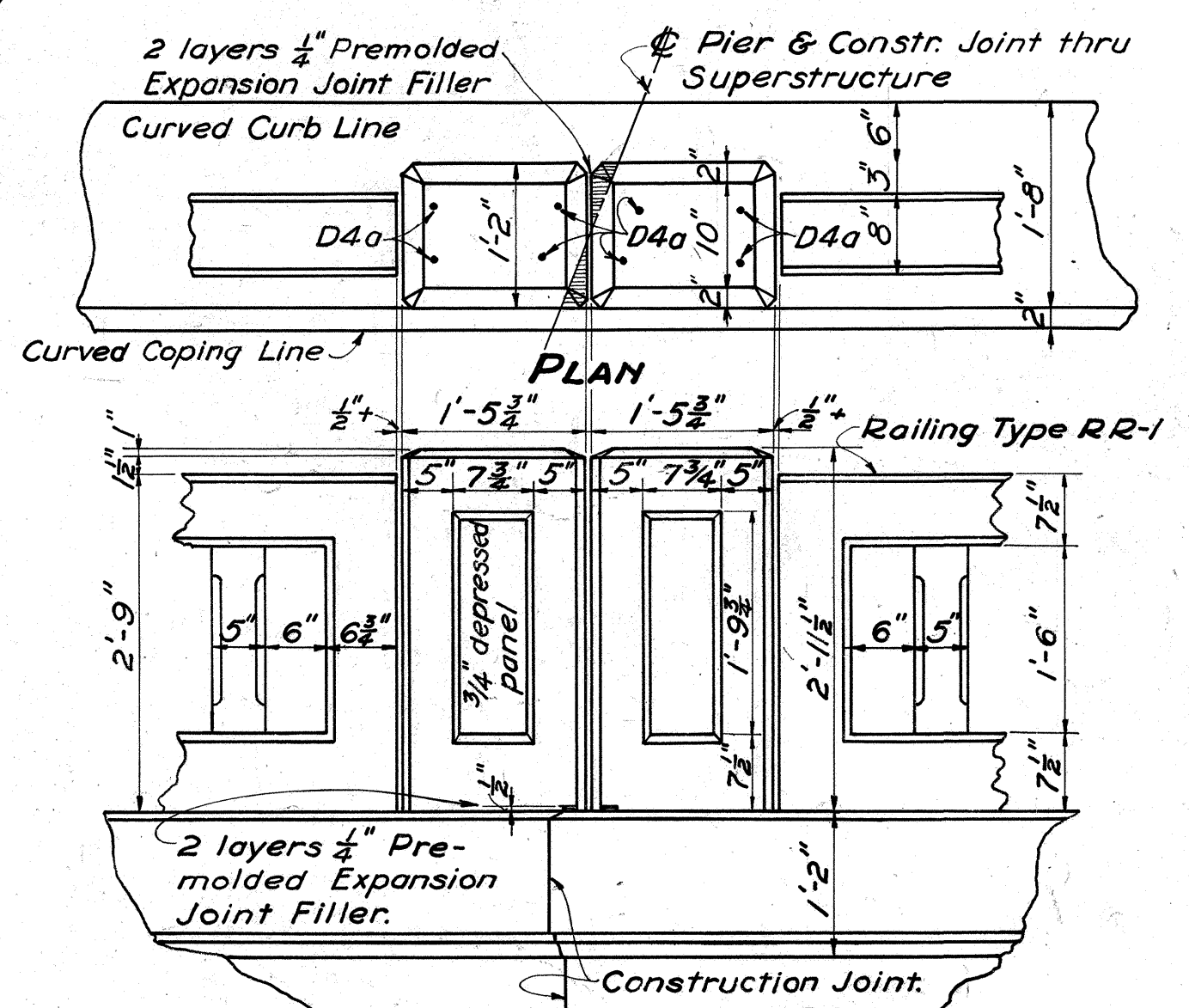
PLAN OF SOUTH PIER



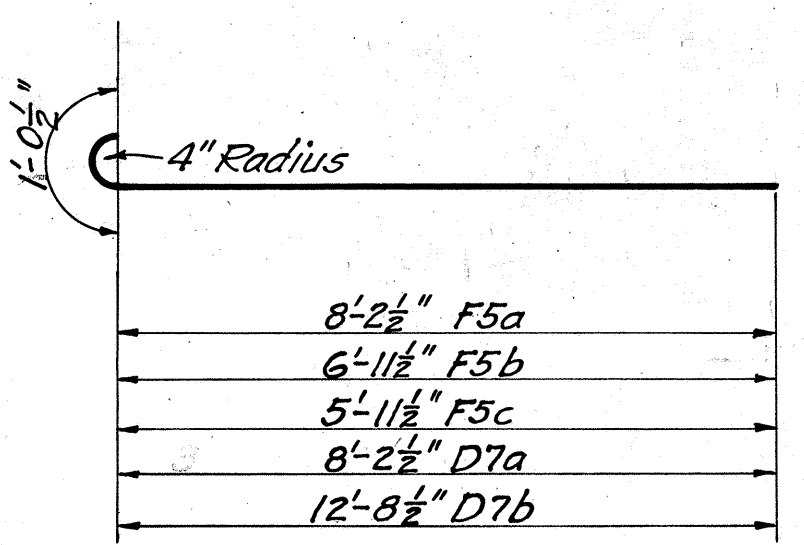
PILING PLAN OF SOUTH ABUTMENT.



SOUTH ELEVATION OF SOUTH PIER



ELEVATION
TYPICAL DETAILS FOR END POSTS OVER PIERS.



PIER PLANS & ELEVATIONS
PILING PLANS
REINFORCED STEEL QUANTITIES

BRIDGE OVER
STILLWATER CREEK
HARRISON CO. - 506 - D
AUGUST 1927

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED
K.E.DUMBAULD	K.E.DUMBAULD	R.C.P.	J.M. MONTZ	W.H. RABE

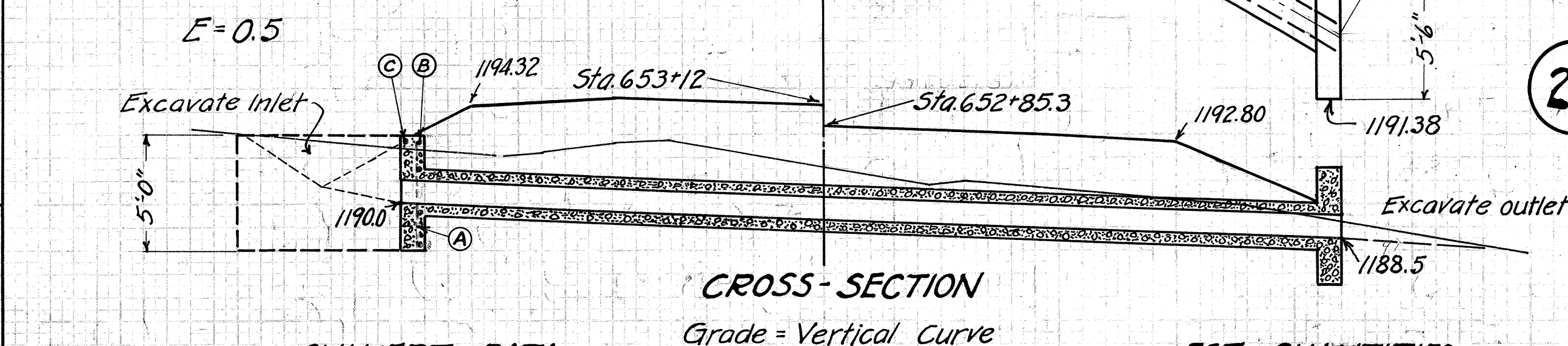
FEDERAL ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR
10	OHIO	478-B	1927

49
56

ICH 506 SEC. D
HARRISON COUNTY

Des.	No.	Length	Remarks
A	7	1/2" 4'-9"	
B	4	1/2" 11'-9"	Bend in Field
C	1	1/2" 10'-3"	Bend in Field

Steel in Headwall = 60#



CULVERT DATA

Type: Standard V.S.P. Culvert, Dr. #300
Size: 12" x 46 ft.
Work Req: Build new V.S.P. Culvert (Enc.) with Special Headwall on one End. Build Special ditch on left from Sta. 653+12 to Sta. 653+50. Excavate Outlet.

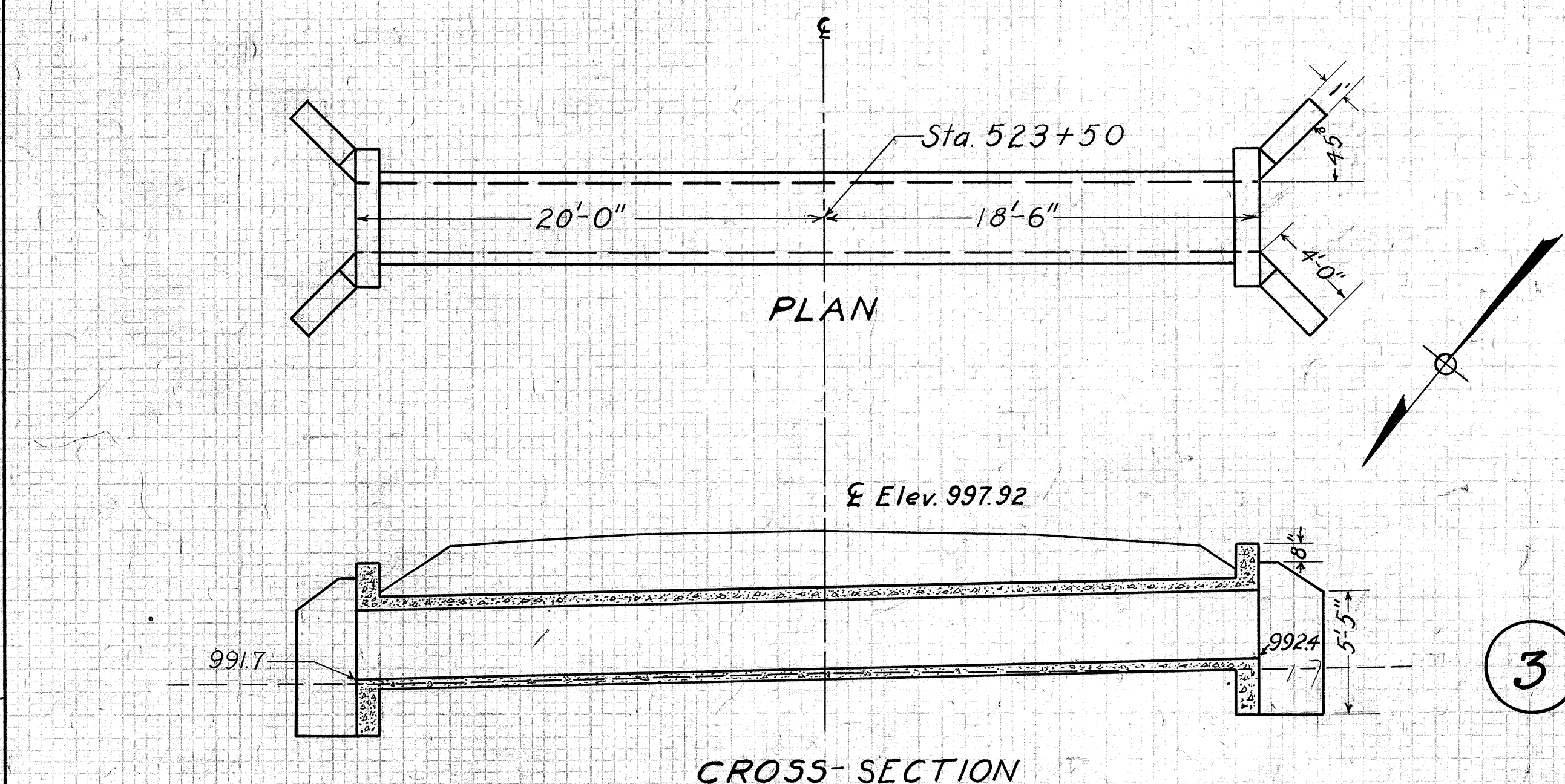
Drawn by: E.J.S.
Date: 8-18-1927.
Checked by: S.J.
Date: 8-18-1927.

EST. QUANTITIES

Excav.: 29 Cu.yds. (Incl. Exc. for Spec. Ditch)
Conc.: 1-5 1/2 3 Cu.yds.
Conc.: 1-8 5 Cu.yds.
Steel: 95 lbs.
12" V.S. Pipe 46 ft.

Checked by: H.H.
Date: 8/17/27 Asst. Div. Engr.

STA. 653+00



CULVERT DATA

Type: Std. Box Culvert Dr. #301
Size: 3' x 3' x 8'-6"
Work Req: Build Std. Box Culvert

Drawn by: F.H.B.
Date: 4/2/27

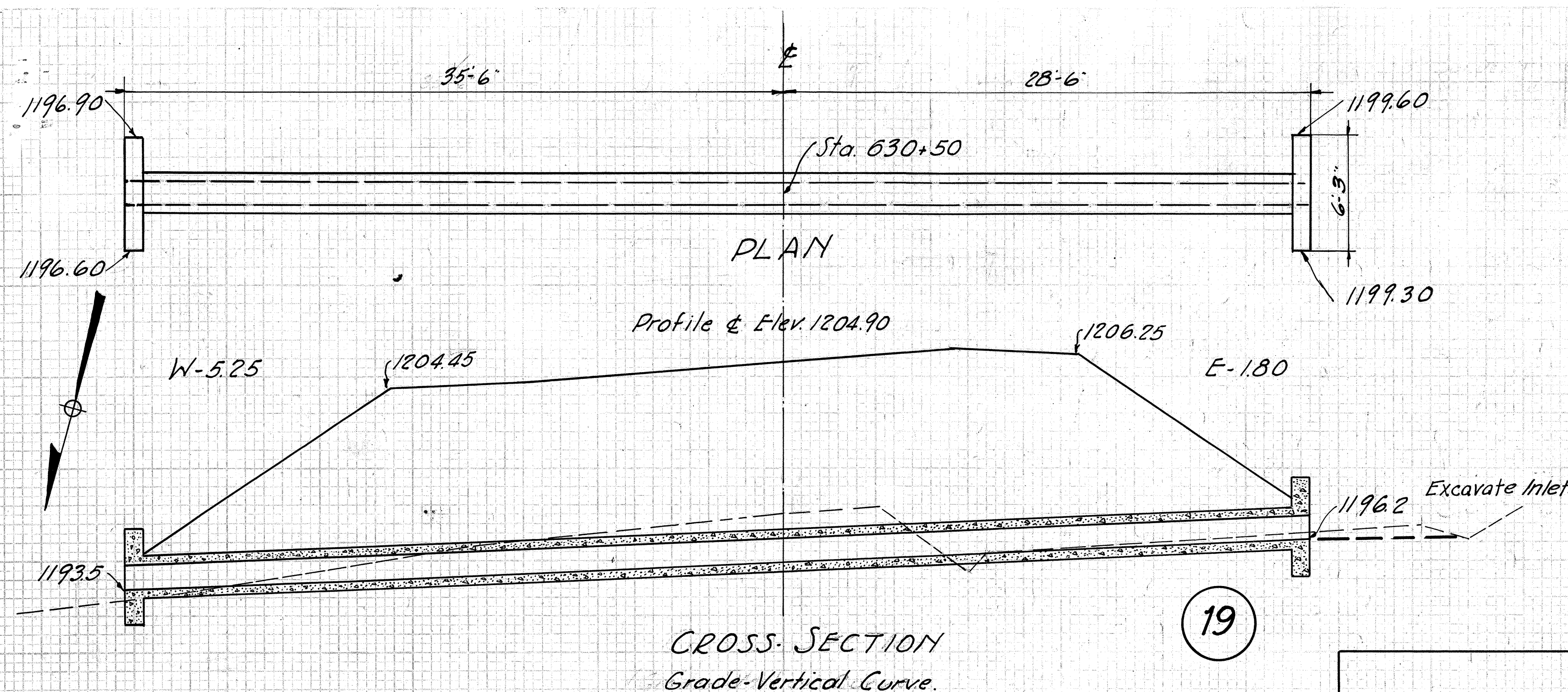
Checked by: E.J.S.
Date: 6-29-27

EST. QUANTITIES

Excav.: 9 cu yds.
Conc.: 1-5 1/2 17.1 cu. yds.
Reinf. Steel: 860 lbs.

Checked by: H.H.
Date: 8/17/27 Asst. Divn. Engr.

Sta. 523+50



CULVERT DATA

Type: Standard V.S.P. Culvert Dr. #300
Size: 15" x 64'
Work Req: Build New V.S.P. Culvert Enc. Excavate Inlet

Drawn by: E.J.S.
Date: 8-13-27

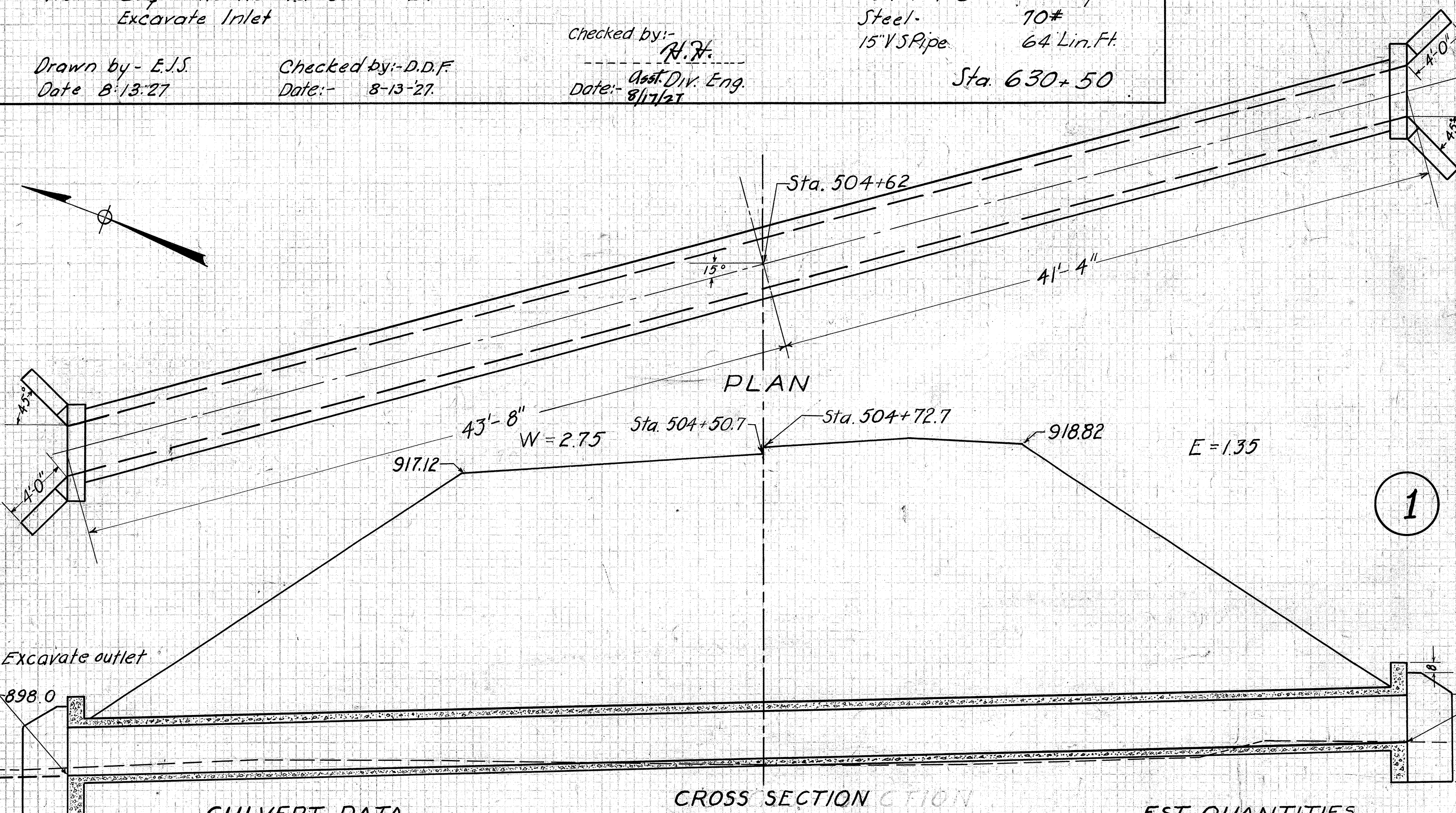
Checked by: D.D.F.
Date: 8-13-27

Checked by: H.H.
Date: 8/17/27 Asst. Div. Engr.

EST. QUANTITIES

Excav.: 15 cu.yds.
Conc.: 1-5 1/2 - 2.3 cu.yds.
Conc.: 1-8 - 8.1 cu.yds.
Steel: 70#
15" V.S. Pipe: 64 Lin. Ft.

Sta. 630+50



CULVERT DATA

Type: Std. Box Culvert Dr. #301
Size: 3' x 3' x 8'-6"
Work Req: Build Std. Box Culvert

Drawn by: F.H.B.
Date: 4/1/27

Checked by: E.J.S.
Date: 6-29-27

CROSS SECTION

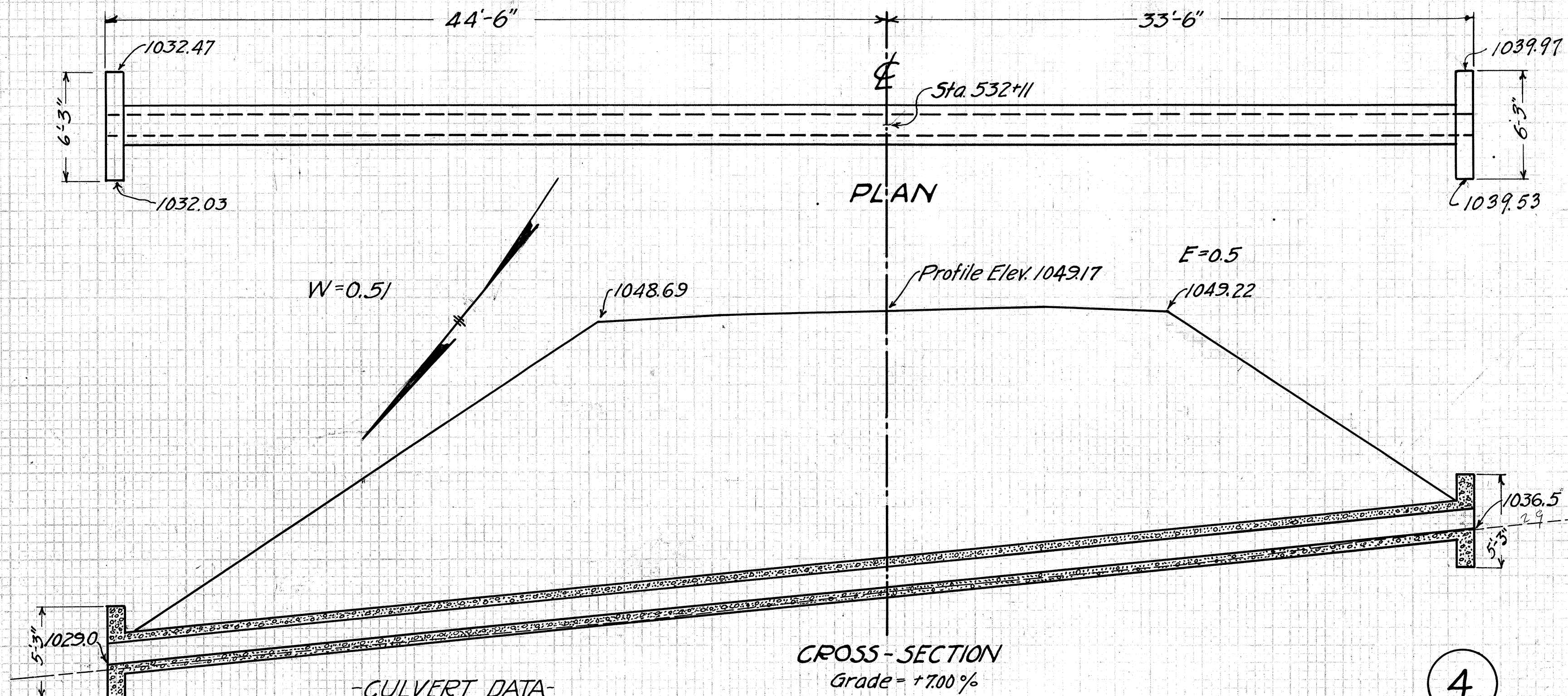
Grade: Vertical Curve

EST. QUANTITIES

Excav.: 25 cu.yds.
Conc.: 1-5 1/2 31.8 cu yds.
Reinf. Steel: 1870 lbs.

Sta. 504+62

Checked by: H.H.
Date: 8/17/27 Asst. Divn. Engr.



-CULVERT DATA-
Type:- Std. V.S.P. Culvert Dr. #300
Size:- 15'x78'
Work Req'd- Build New V.S.P. Culvert Enc.

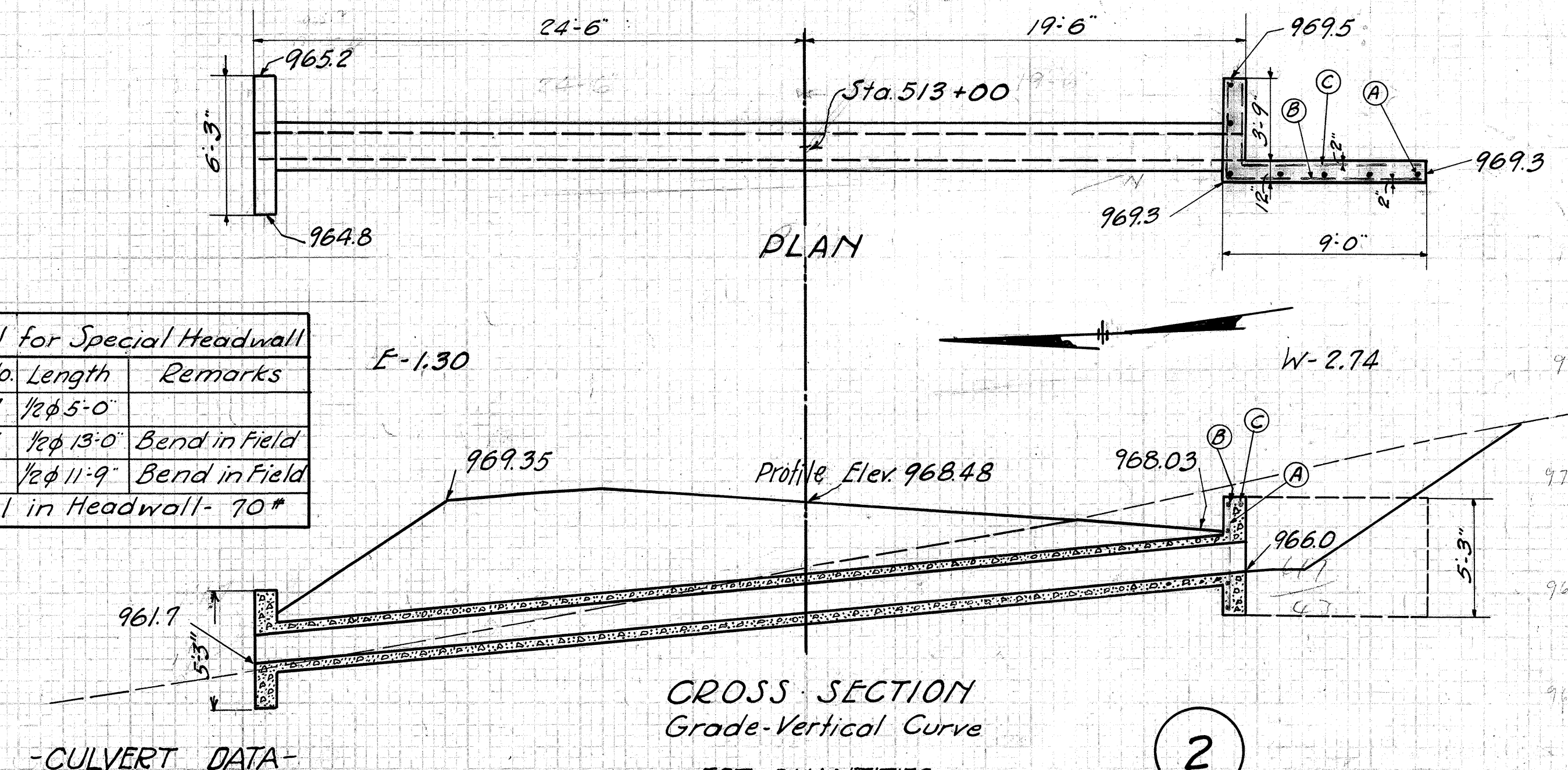
Drawn by: F.H.B. Checked by: E.J.S.
Date: 4-2-1927 Date: 6-30-1927

Checked by: H.H.
Asst. Div. Engr.
Date: 8/17/27

-EST. QUANTITIES-
Excav. - 8.0 Cu. yds.
Conc. 1:5 1/2 - 2.3 Cu. yds.
Conc. 1:8 - 10.1 Cu. yds.
Reinf. Steel - 70 Lbs.
1.5" V.S. Pipe - 78 Lin. ft.
Sta. 532+11

Des. No.	Length	Remarks
A	7 1/2'x5'-0"	
B	4 1/2'x13'-0"	Bend in Field
C	1 1/2'x11'-9"	Bend in Field

Steel in Headwall - 70#



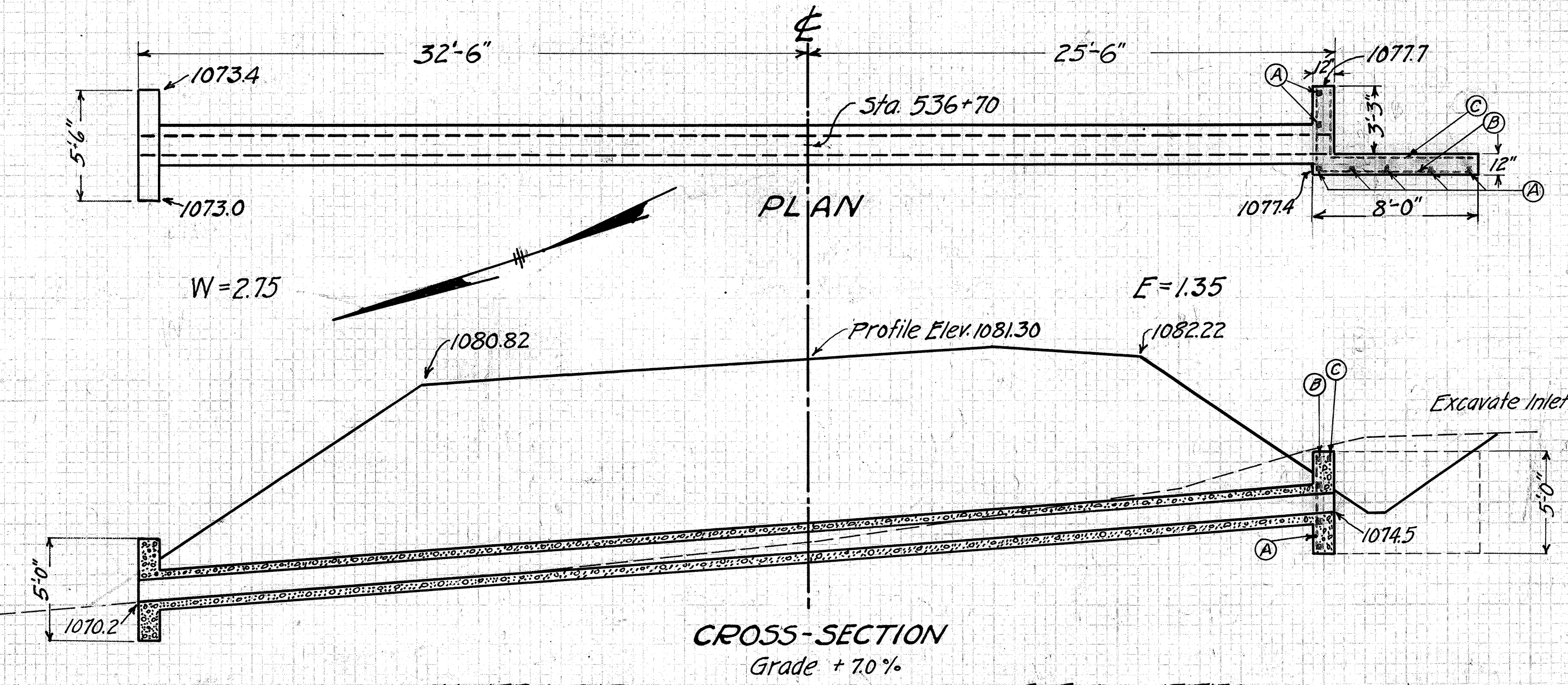
-CULVERT DATA-
Type:- Std. V.S.P. Culvert Dr. #300
With special headwall.
Size:- 15'x44'

Work required:- Build new V.S.P. Culvert Enc.
Build Special Headwall one End
Drawn by: E.J.S. Checked by: D.D.F.
Date: 7-6-1927 Date: 7-27-1927

-EST. QUANTITIES-
Excavation - 20 Cu. yds.
Conc. 1:5 1/2 - 3.5 Cu. yds.
Conc. 1:8 - 5.5 Cu. yds.
Reinf. Steel - 105 lbs.
1.5" V.S. Pipe - 44 Lin. ft.

Des.	No.	Length	Remarks
A	7	1 1/2'x4'-9"	
B	4	1 1/2'x11'-9"	Bend in Field
C	1	1 1/2'x10'-3"	Bend in Field

Steel in headwall - 60#

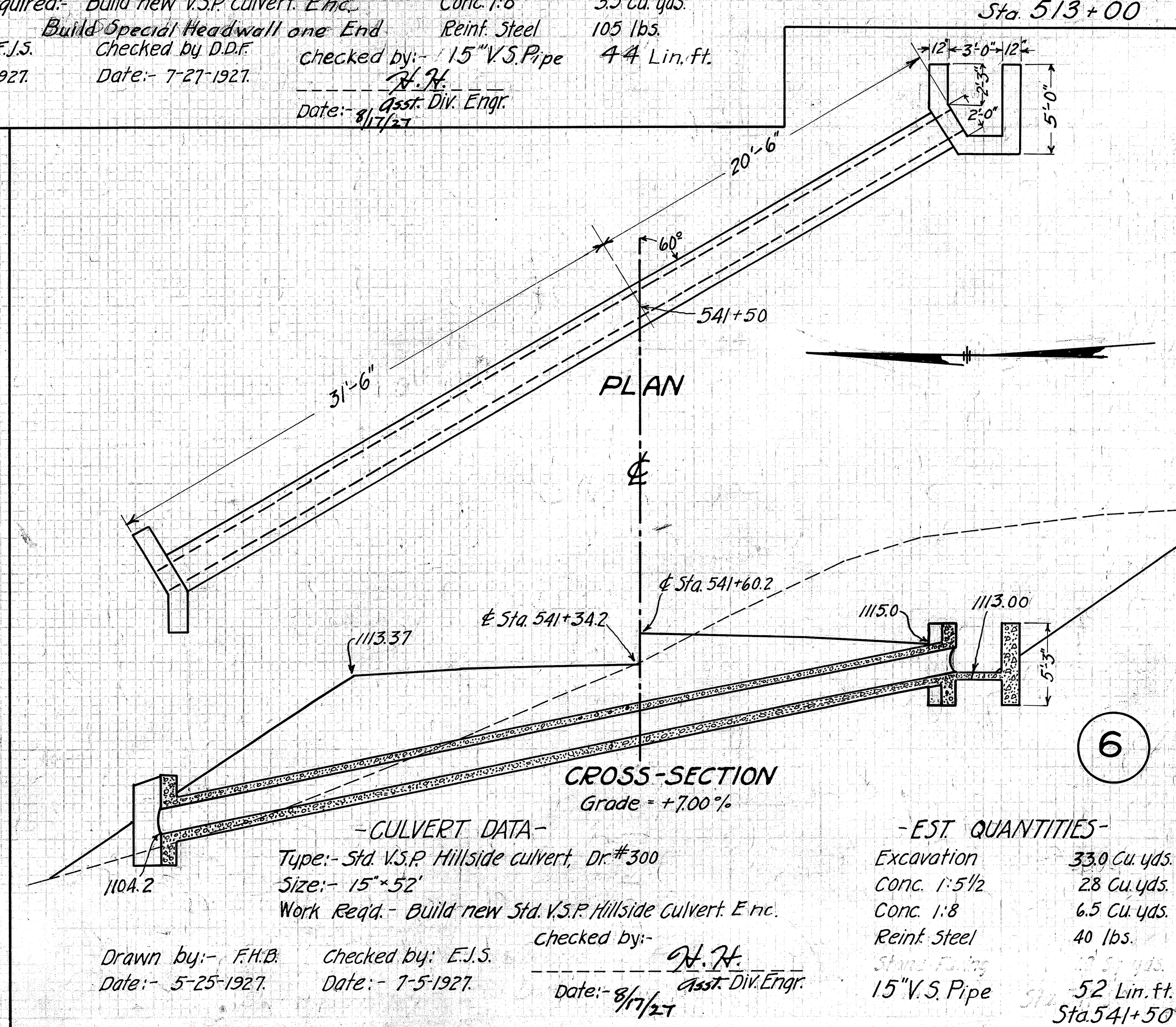


-CULVERT DATA-
Type: Std. V.S.P. Culvert Dr. #300
With special headwall.
Size: 12'x58'

Work Req'd- Build New V.S.P. Culvert Enc.
Excavate inlet and build special ditch on right, Sta. 536+70 to 537+20.
Build Special Headwall one end
Drawn by: F.H.B. Checked by: E.J.S.
Date: 4-4-1927 Date: 7-21-1927

-EST. QUANTITIES-
Excav. - 25 Cu. yds. (Incl. excav. for special ditch)
Conc. 1:5 1/2 - 3.0 Cu. yds.
Conc. 1:8 - 6.0 Cu. yds.
Reinf. Steel - 95 lbs.
12" V.S. Pipe - 58 Lin. ft.

Checked by: H.H.
Asst. Div. Engr.
Date: 8/17/27



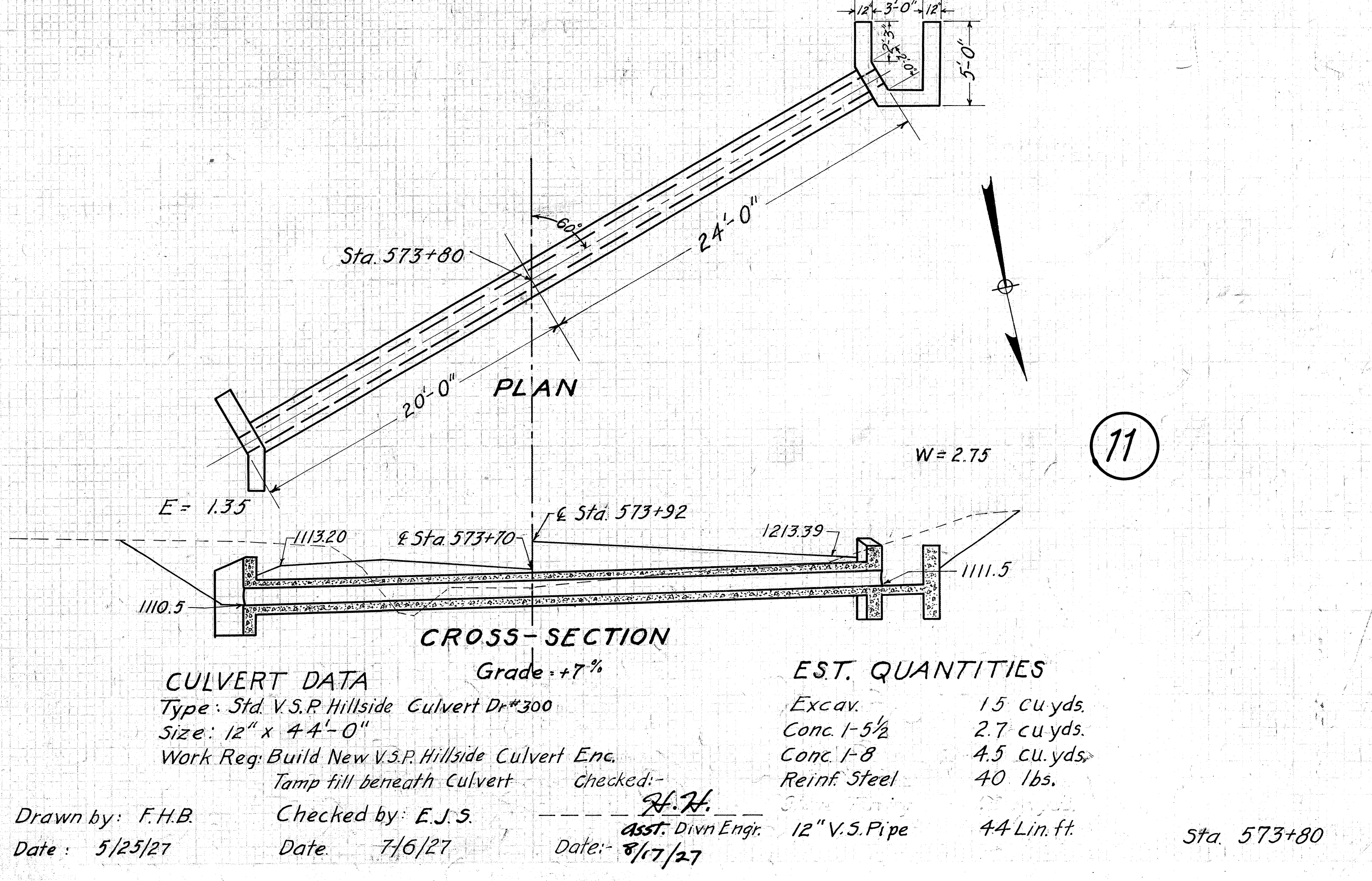
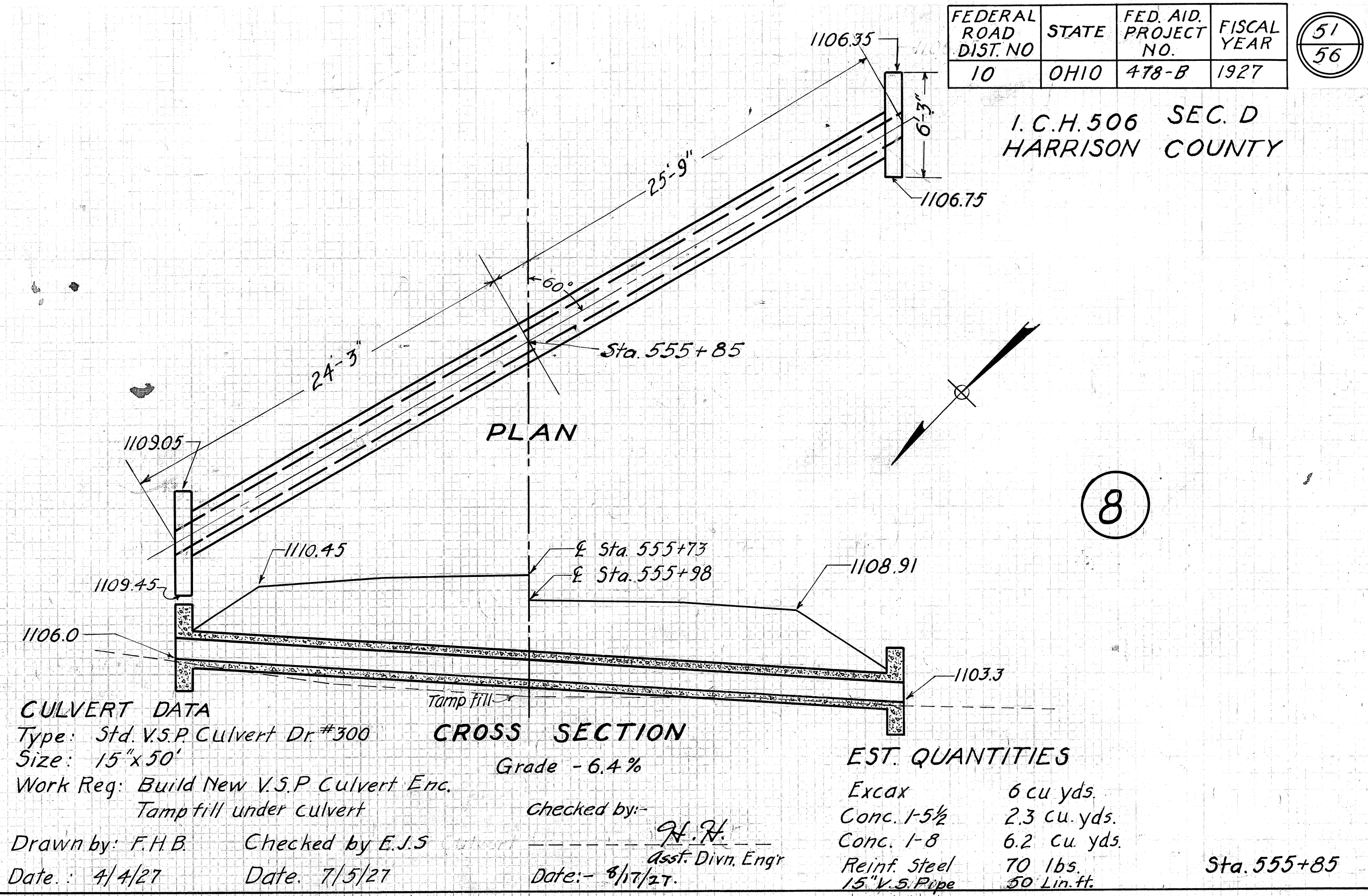
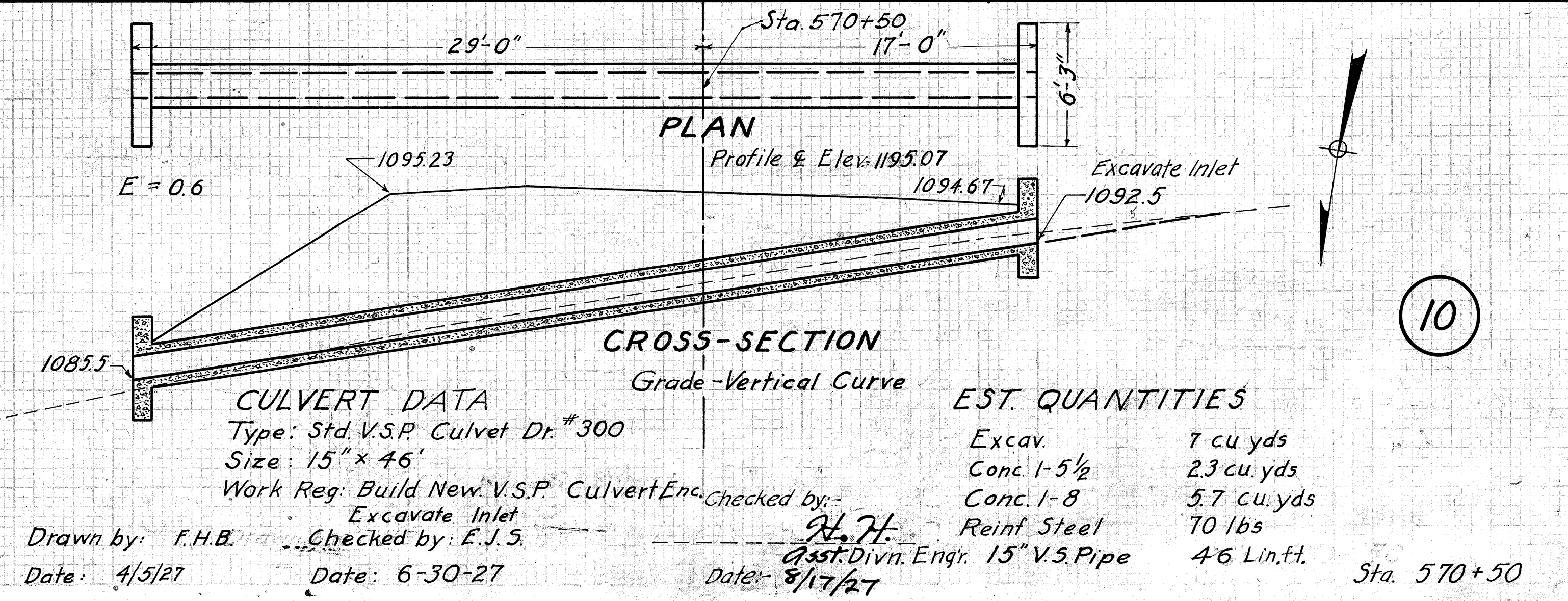
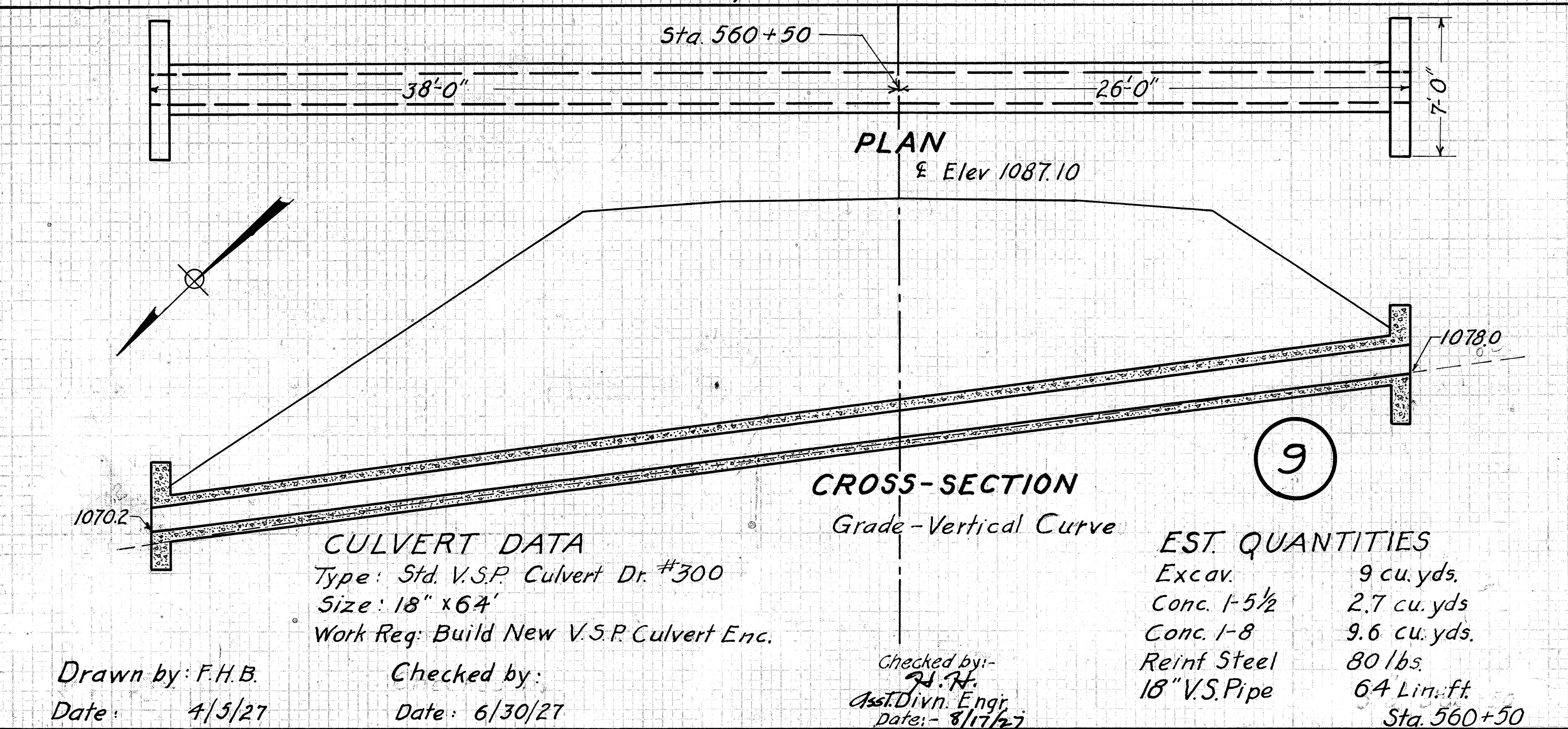
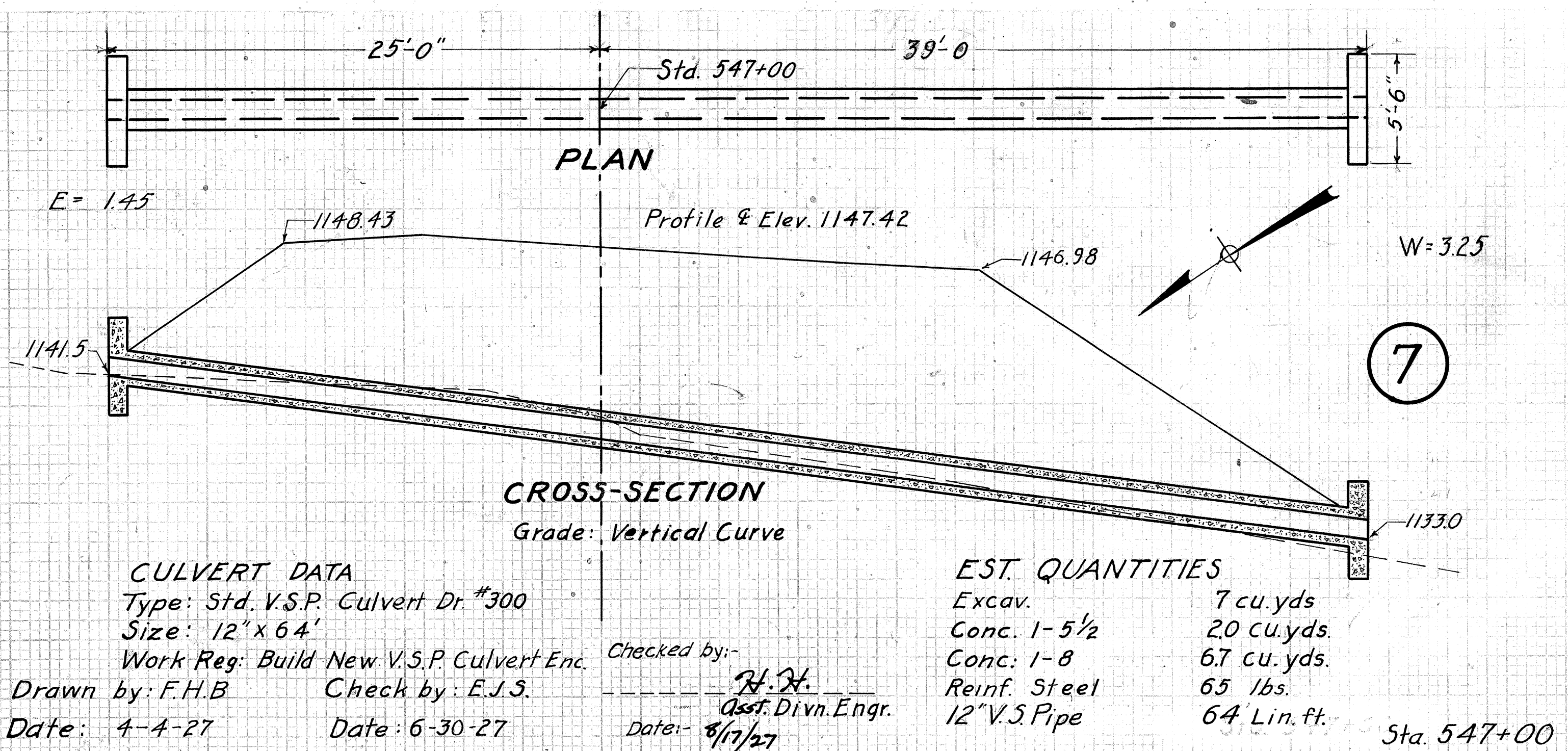
-CULVERT DATA-
Type:- Std. V.S.P. Hillside culvert, Dr. #300
Size:- 15'x52'

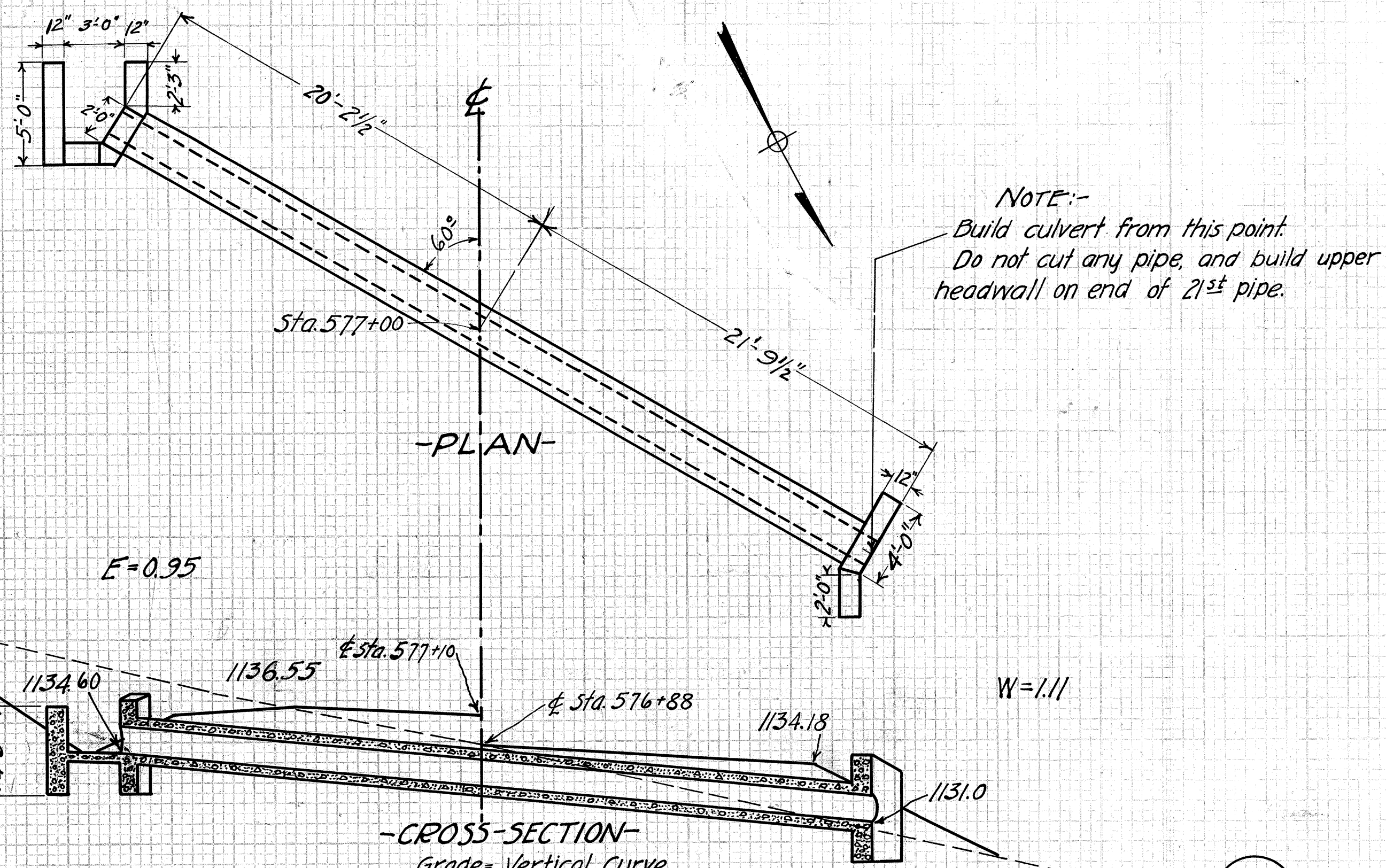
Work Req'd- Build new Std. V.S.P. Hillside Culvert Enc.
Drawn by: F.H.B. Checked by: E.J.S.
Date: 5-25-1927 Date: 7-5-1927

-EST. QUANTITIES-
Excavation - 33.0 Cu. yds.
Conc. 1:5 1/2 - 2.8 Cu. yds.
Conc. 1:8 - 6.5 Cu. yds.
Reinf. Steel - 40 lbs.
15" V.S. Pipe - 52 Lin. ft.
Sta. 541+50

Checked by: H.H.
Asst. Div. Engr.
Date: 8/17/27

I.C.H. 506 SEC. D
HARRISON COUNTY

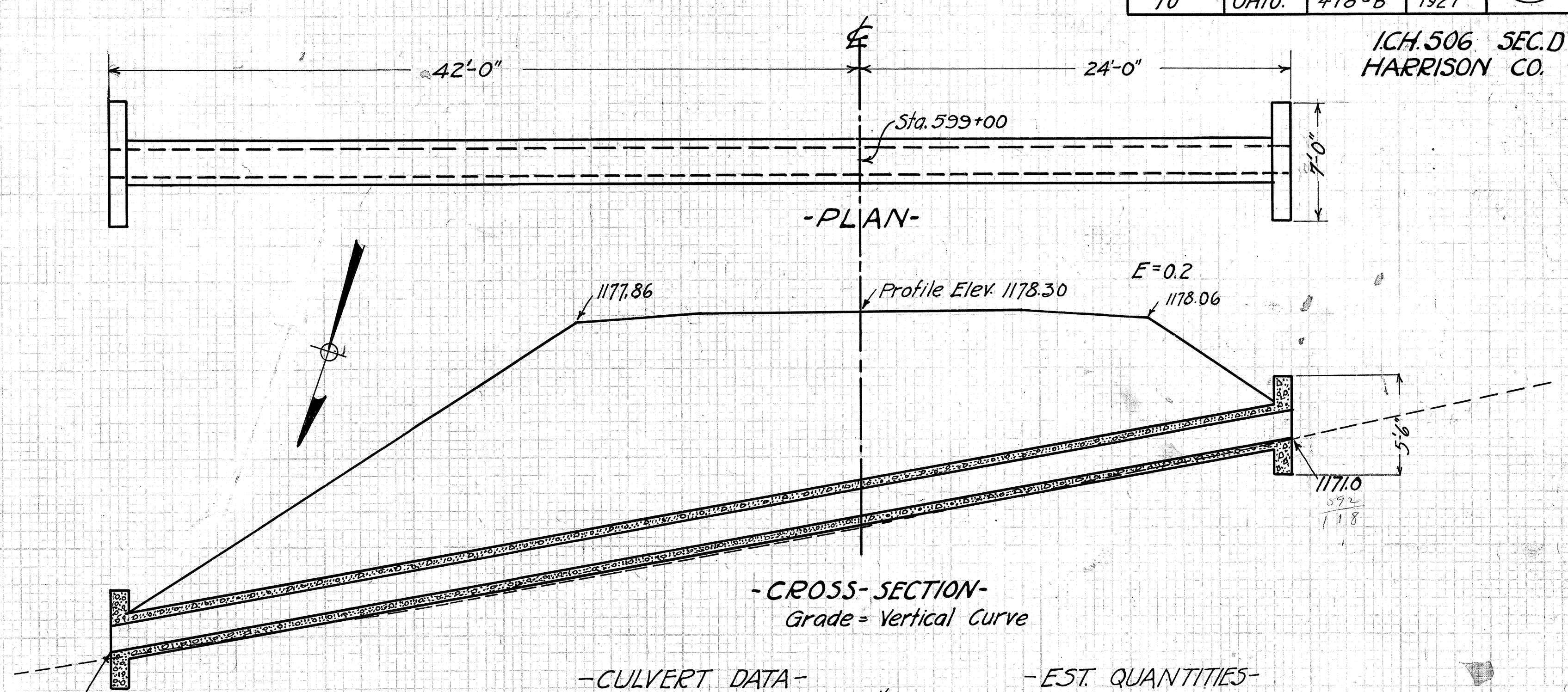




-CULVERT DATA-
Type:- Std. V.S.P. Hillside Culvert, Dr. #300
Size:- 15' x 42'
Work Req'd. Build new V.S.P. Hillside Culvert Enc.
Drawn by:- F.H.B. Checked by:- E.J.S. checked by:- H.H.
Date:- 4-5-1927. Date:- 7-5-1927. Date:- 8/17/27

-EST. QUANTITIES-
Excavation - 20 Cu. yds.
Conc. 1:5 1/2 28 Cu. yds.
Conc. 1:8 52 Cu. yds.
Reinf. Steel 40 lbs.
15" V.S. Pipe 42 Lin. Ft.

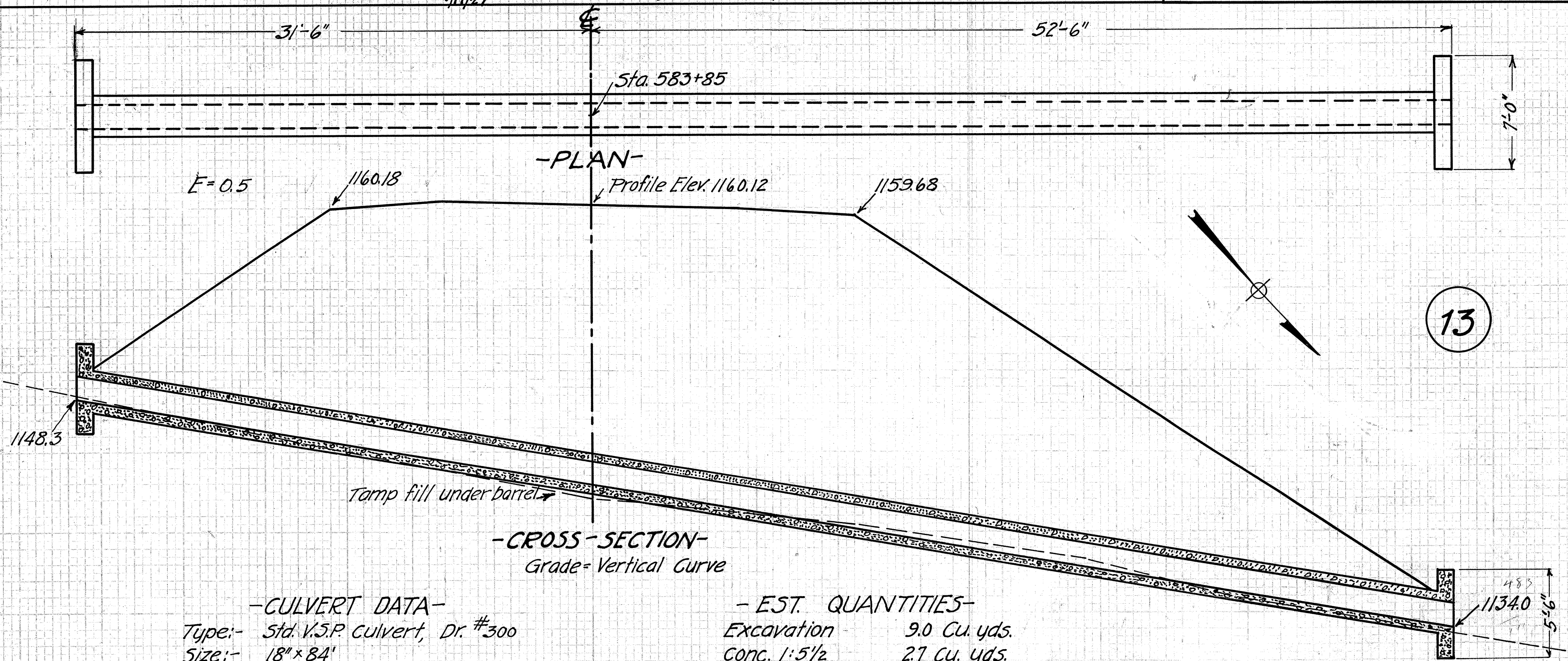
STA. 577+00



-CULVERT DATA-
Type:- Std. V.S.P. Culvert, Dr. #300
Size:- 18' x 66'
Work Req'd. Build new Std. V.S.P. Culvert Enc.
Drawn by:- F.H.B. Checked by:- E.J.S. checked by:- H.H.
Date:- 5-26-1927. Date:- 6-30-1927. Date:- 8/17/27

-EST. QUANTITIES-
Excavation - 70 Cu. yds.
Conc. 1:5 1/2 27 Cu. yds.
Conc. 1:8 99 Cu. yds.
Reinf. Steel 80 lbs.
18" V.S. Pipe 66 Lin. ft.

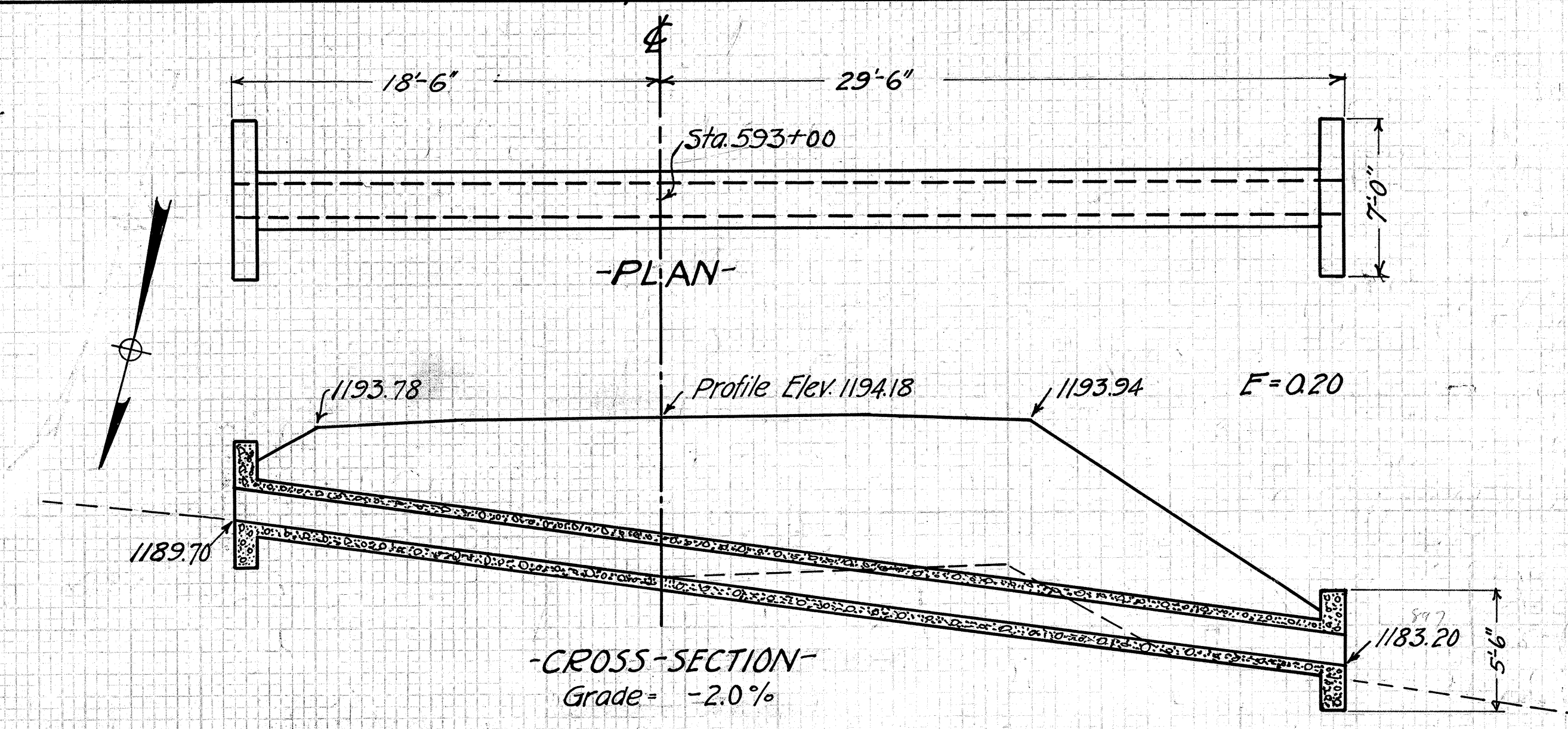
STA. 599+00



-CULVERT DATA-
Type:- Std. V.S.P. culvert, Dr. #300
Size:- 18' x 84'
Work Req'd. Build new Std. V.S.P. Culvert. Enc. Tamp fill
Drawn by:- F.H.B. Checked by:- E.J.S. checked by:- H.H.
Date:- 4-5-1927. Date:- 6-30-1927. Date:- 8/17/27

-EST. QUANTITIES-
Excavation 9.0 Cu. yds.
Conc. 1:5 1/2 27 Cu. yds.
Conc. 1:8 126 Cu. yds.
Reinf. Steel 80 lbs.
18" V.S. Pipe 84 Lin. ft.

STA. 583+85



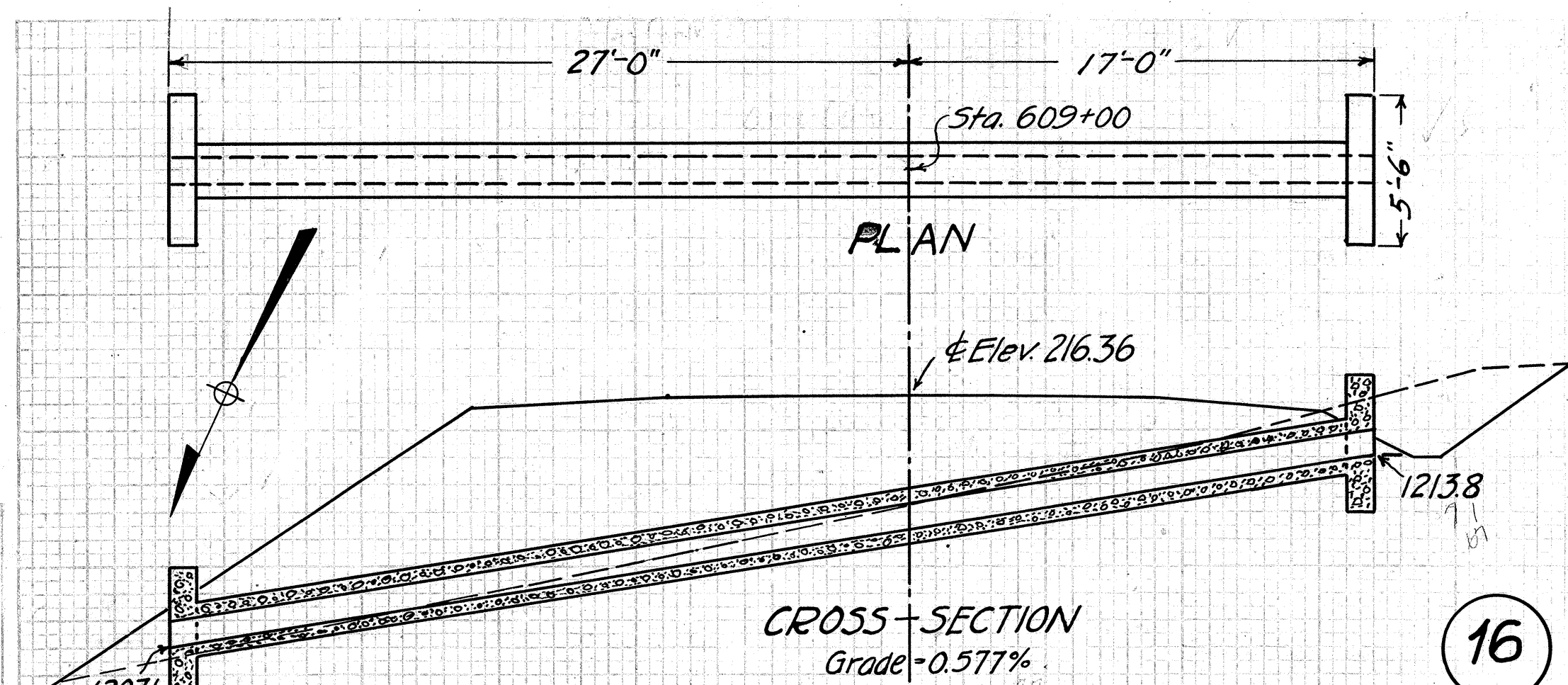
-CULVERT DATA-
Type:- Std. V.S.P. culvert, Dr. #300
Size:- 18' x 48'
Work Req'd. Build new Std. V.S.P. Culvert. Enc.
Drawn by:- F.H.B. Checked by:- E.J.S. checked by:- H.H.
Date:- 5-26-1927. Date:- 6-30-1927. Date:- 8/17/27

-EST. QUANTITIES-
Excavation 9.0 Cu. yds.
Conc. 1:5 1/2 27 Cu. yds.
Conc. 1:8 71 Cu. yds.
Reinf. Steel 80 lbs.
18" V.S. Pipe 48 Lin. ft.

STA. 593+00

FEDERAL ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	
10	OHIO	478-B	1927	53 56

IC.H. 506 SEC. D
HARRISON COUNTY



CULVERT DATA

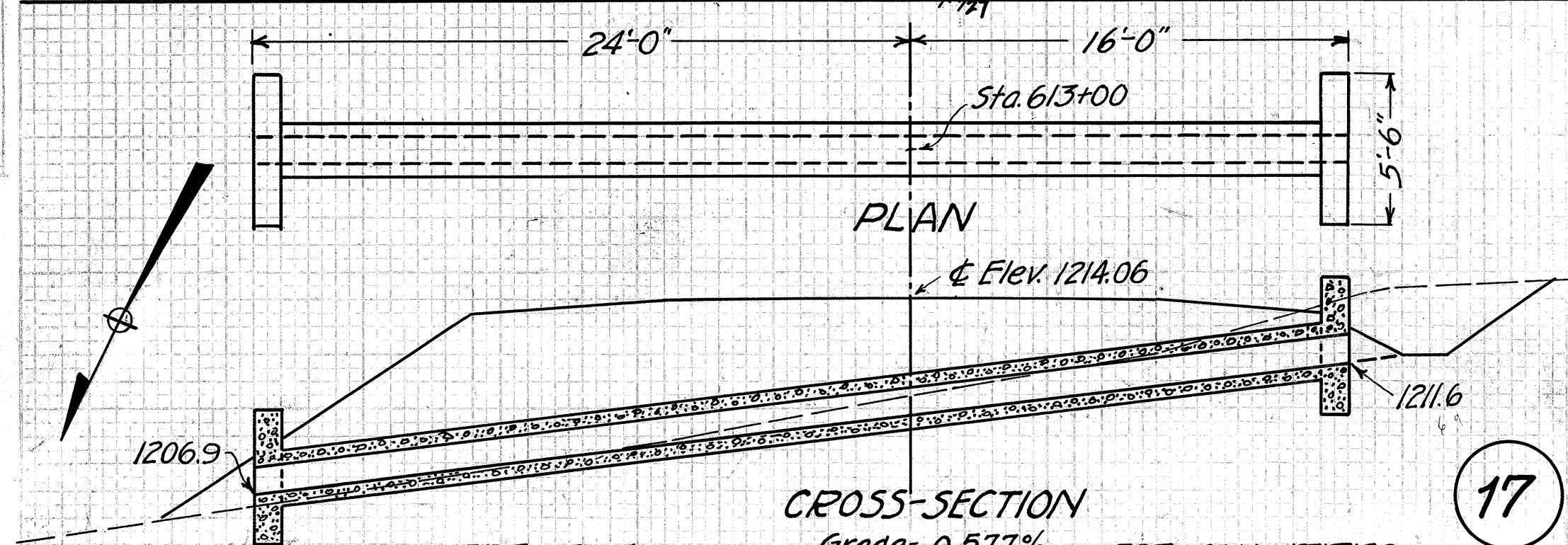
Type:- Std. V.S.P. Culvert, Dr. #300
Size:- 12" x 44"
Work Req.:- Build new Std. V.S.P. Culvert, Enc.
Do not excavate ditch on upstream end, forward for 5 ft.

Drawn by:- F.H.B. Date:- 5-26-1927
Checked by:- E.J.S. Date:- 6-30-1927

EST. QUANTITIES

Excav. 10 Yds.
Conc. 1:5 1/2 2.0 Cu. yds.
Conc. 1:8 4.5 Cu. yds.
Steel 65 lbs.
12" V.S. Pipe 44 Lin. ft.
Sta. 609+00

16



CULVERT DATA

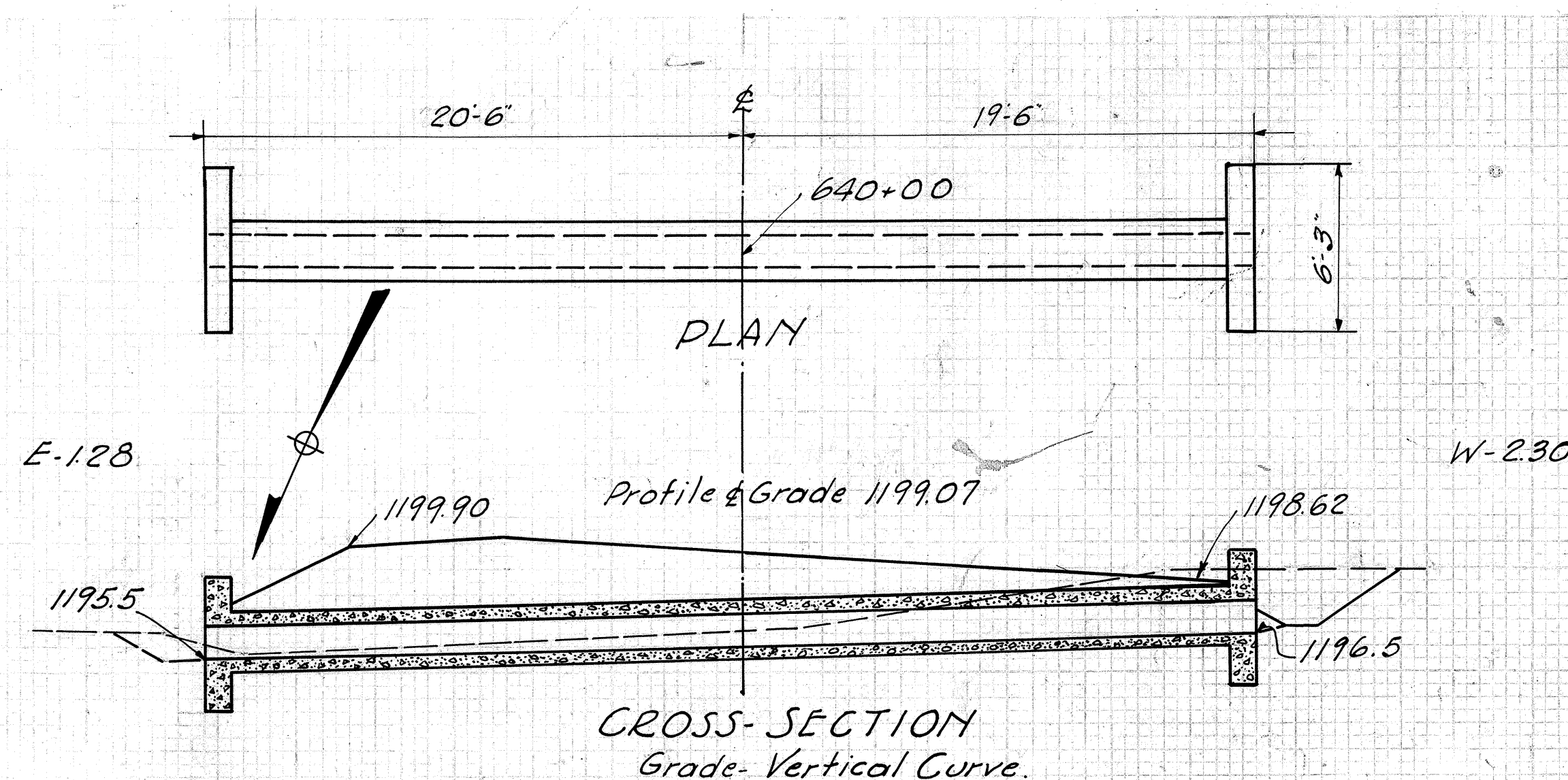
Type:- Std. V.S.P. Culvert Dr. #300
Size:- 12" x 40"
Work Req.:- Build new Std. V.S.P. Culvert, Enc.
Do not excavate ditch on upstream end forward for 5 ft.

Drawn by:- F.H.B. Date:- 5-26-1927
Checked by:- E.J.S. Date:- 6-30-1927

EST. QUANTITIES

Excav. 10 Cu. yds.
Conc. 1:5 1/2 2 Cu. yds.
Conc. 1:8 4.1 Cu. yds.
Steel 65 lbs.
12" V.S. Pipe 40 Lin. ft.
Sta. 613+00

17



CULVERT DATA

Type:- Std. V.S.P. Culvert Dr. #300
Size:- 15" x 40"
Work Req.:- Build New Std. V.S.P. Enc.
Culvert. Build Special
Ditch on Left- Sta. 640+00 to 640+50

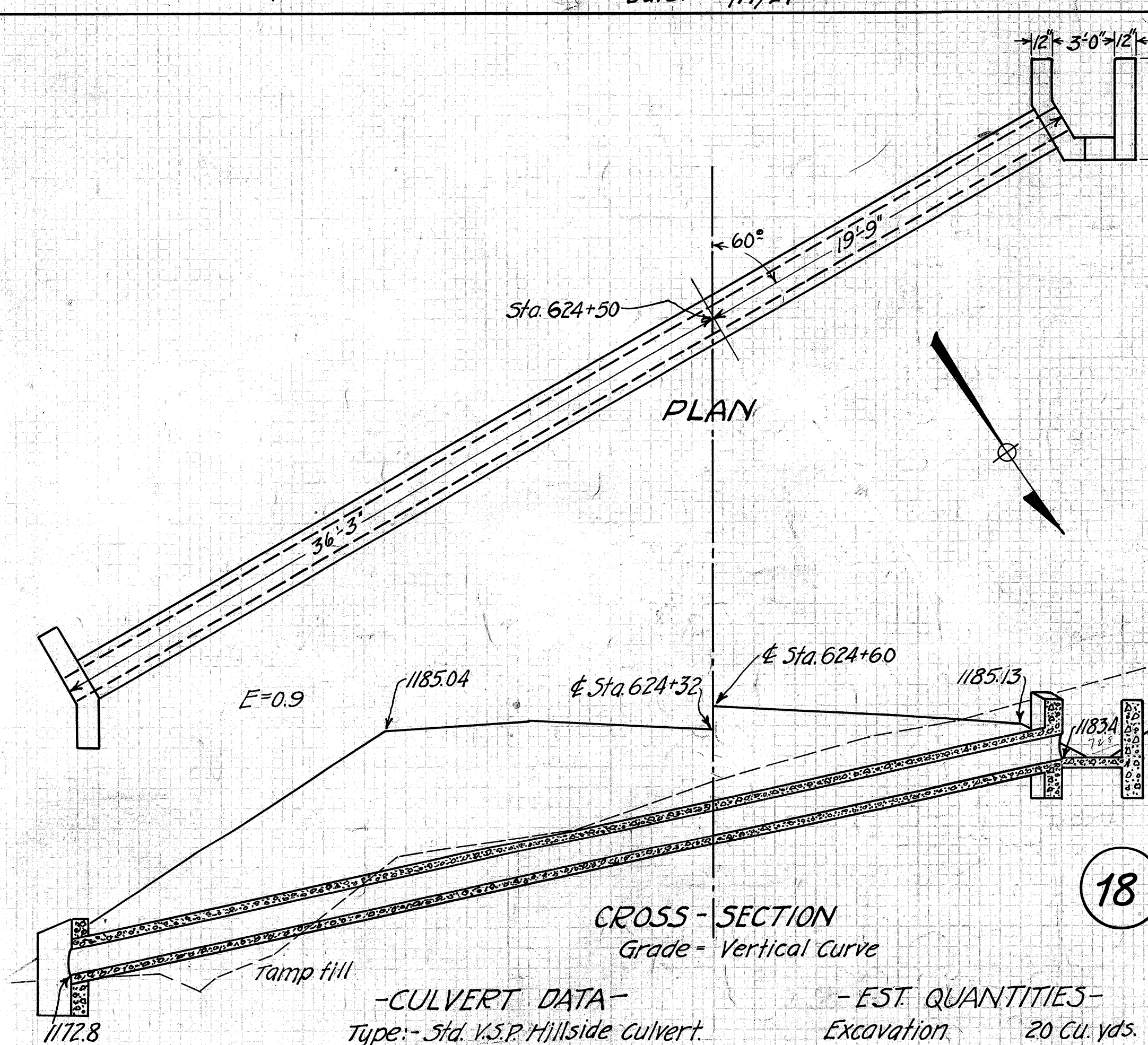
Drawn by:- E.J.S. Date:- 8-13-27
Checked by:- D.D.F. Date:- 8-15-1927

EST. QUANTITIES

Excav. - 15 cu yds. Including yardage
Conc. 1:5 1/2 - 2.3 cu yds. for Special Ditch.
Conc. 1:8 - 4.9 cu yds.
Steel - 70 lbs.
15" V.S. Pipe 40 Lin. ft.

Checked by:- H.H. Date:- 8/17/27
Asst. Div. Engineer.

20



CULVERT DATA

Type:- Std. V.S.P. Hillside Culvert.
Size:- 15" x 56"
Work Req.:- Build New Std. V.S.P. Hillside Culvert Enc.
Tamp fill under barrel.

Drawn by:- F.H.B. Date:- 5-27-27

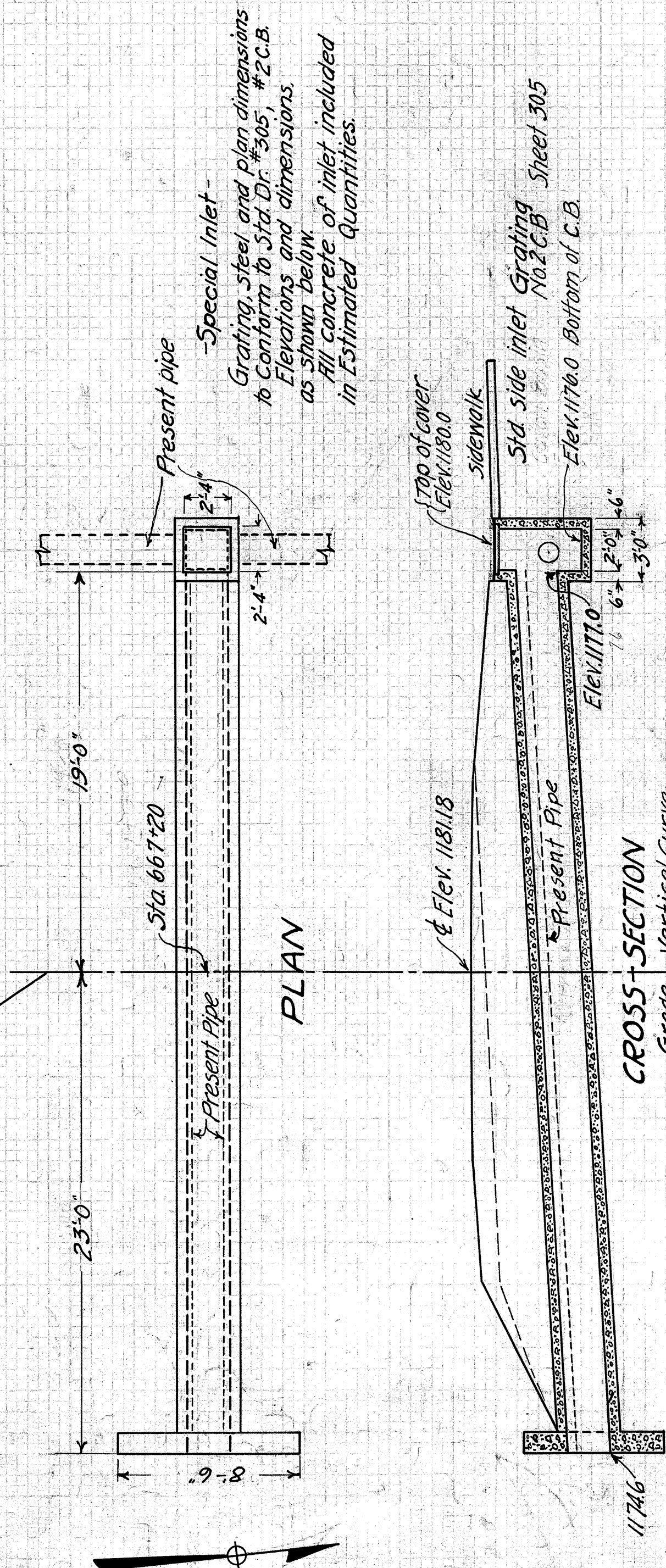
Checked by:- E.J.S. Date:- 7-7-27

Checked by:- H.H. Date:- 8/17/27
Asst. Div. Eng.

EST. QUANTITIES

Excavation 20 Cu. yds.
Conc. 1:5 1/2 2.8 Cu. yds.
Conc. 1:8 7.0 Cu. yds.
Reinf. Steel 40 lbs.
18" V.S. Pipe 56 Lin. ft.
15" V.S. Pipe 5 Lin. ft.
Sta. 624+50

18



EST. QUANTITIES

Excav. 24 Cu. yds.
Conc. 1:5 1/2 2.6 Cu. yds.
Conc. 1:8 8.3 Cu. yds.
Steel 80 lbs.
One C.I. Grating
24" V.S. Pipe 42 Lin. ft.
Sta. 667+20

CULVERT DATA

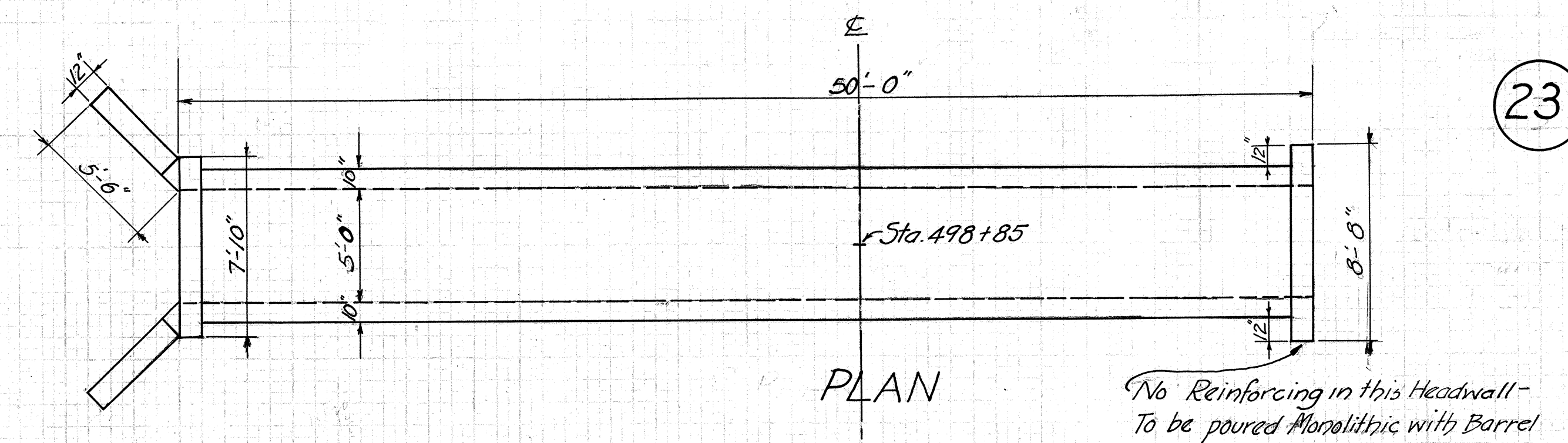
Type:- Std. V.S.P. Culvert, Dr. #300
Size:- 24" x 42"
Work Req.:- Build new V.S.P. Culvert Enc.
with special inlet.
Remove 41" V.S.P. now in place.

21

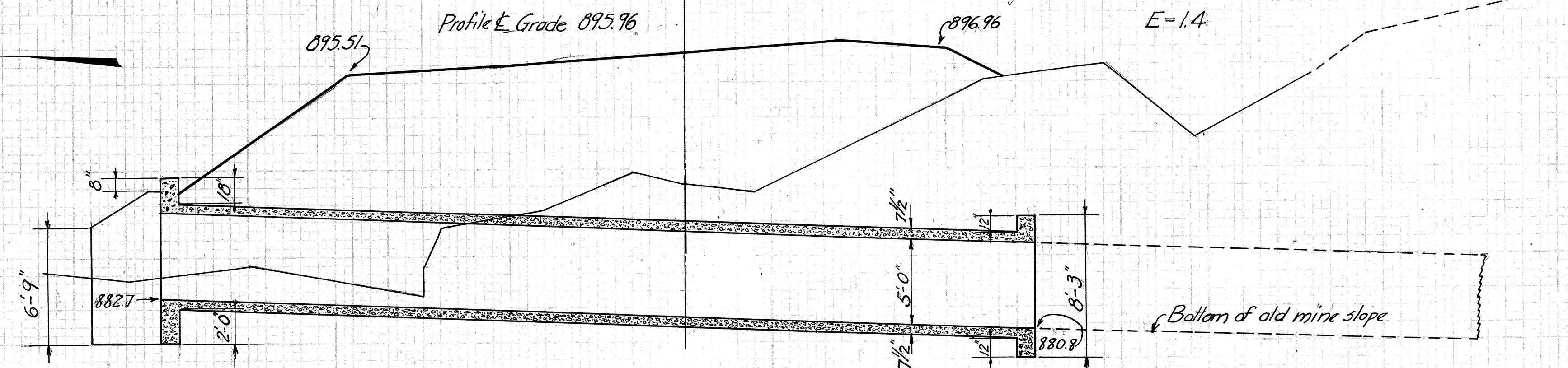
Drawn by:- E.J.S. Date:- 7-21-1927
Checked by:- D.D.F. Date:- 7-27-1927
Checked by:- H.H. Date:- 8/17/27
Asst. Div. Eng.

I.C.H. 506 SEC. D
HARRISON COUNTY

Note: If Necessary Change Location and Grade of Culvert
to fit Conditions on Ground.



W = 3.65



CROSS-SECTION
Grade = +5.6%

CULVERT DATA

Type - Special Box Culvert

Size - 5'x5'x50'

Work Required - Build Special Box Culvert
To fit Condition on Ground.

Drawn by - E.J.S. C.H.C.H.
Date 8-18-27 D.M.C.

Checked by H.H.
Date 9/27/27 Div. Eng.

EST. QUANTITIES

Excav. - 140 Cu. Yds.

Conc. 1-5/2 - 36.2 Cu. Yds.

Reinf. Steel - 1770 Lbs.

Sta. 498+85

STEEL LIST.

BARREL OF CULVERT

C- Bars				D- Bars				E- Bars				Wt. Steel per lin. ft. of Barrel	Concrete Cu. Yds. per lin. ft. of Bbl.
Size	No. per lin. ft.	Length	Spacing Top Bot.	No. per lin. ft.	Length	Spacing Top Bot.	No. in Top and Bottom	No.	Length	No.	Length		
1/2"	35	6'-3"	6"	8"	2	6'-0"	12"	10	10	10	49'-6"	33.9	.617

HEADWALL

A- Bars		B- Bars		C- Bars		D- Bars		E- Bars		Total Steel Lbs.	Total Concrete Cu. Yds.
No.	Length	No.	Length	No.	Length	No.	Length	No.	Length		
2	6'-6"	2	7'-6"	1/2	4	6'-3"	2	6'-0"	69	73	4.9

All Bars to be 3/8" except C- Bars as noted above

For DETAILS REFER TO STANDARD DRAWING # 301

FEDERAL ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR
10	OHIO	478-B	1927

I.G.H 506
HARRISON

SEC. D
COUNTY

SUMMARY OF QUANTITIES - CONTINUED

SUMMARY OF EXCAVATION AND EMBANKMENT

FROM STATION	TO STATION	EXCAV.	EMB.	EMB. + 20%	CHANNEL EXCAV.	FILLING OLD CHAN.
489+16	496+43	6	7875	9450	11,284	1840
496+43	502+70	3271	2726	3271		
502+70	503+70	302	252	302		
503+70	511+22	3684	3074	3689		
511+22	513+97	2101	1751	2101		
513+97	518+88	1182	985	1182		
518+88	522+50	603	503	603		
522+50	526+47	1404	1170	1404		
526+47	527+95	276	230	276		
527+95	531+23	1188	990	1188		
531+23	545+05	14300	11917	14300		
545+05	546+81	848	707	848		
546+81	550+36	3056	2547	3056		
550+36	555+43	3106	2588	3106		
555+43	557+41	826	688	826		
557+41	560+59	1888	1573	1888		
560+59	566+21	5116	4263	5116		
566+21	569+90	2326	1938	2326		
569+90	580+54	3564	2970	3564		
580+54	584+04	5118	4265	5118		
584+04	589+88	8779	7316	8779		
589+88	592+90	1532	1277	1532		
592+90	594+87	829	691	829		
594+87	598+66	1805	1504	1805		
598+66	607+15	5289	4407	5289		
607+15	608+51	305	254	305		
608+51	614+91	1920	1600	1920		
614+91	620+46	1865	1554	1865		
620+46	622+52	462	385	462		
622+52	624+10	760	634	760		
624+10	634+98	6026	5022	6026		
634+98	639+64	1174	979	1174		
639+64	644+74	2194	1828	2194		
644+74	657+00	3175	2646	3175		
657+00	662+66	698	582	698		
662+66	668+30	793	661	793		
TOTALS		91,776	84,352	101,220	11,284	1840

SUMMARY OF TYPE D GUARD RAIL

FROM STATION	TO STATION	SIDE	FT.
491+32	494+20	Lt.	288
492+20	494+20	Rt.	200
495+49	497+65	Rt.	216
495+49	499+01	Lt.	352
502+74	505+14	Lt.	240
504+25	504+97	Rt.	72
507+46	511+38	Lt.	392
512+00	515+76	Lt.	376
522+50	524+10	Lt.	160
522+60	523+96	Rt.	136
527+50	529+50	Lt.	200
531+00	534+76	Lt.	376
531+32	533+16	Rt.	184
536+32	539+28	Lt.	296
536+64	538+64	Rt.	200
540+40	542+80	Lt.	240
546+14	548+86	Rt.	272
546+40	548+24	Lt.	184
552+75	556+03	Lt.	328
552+98	556+50	Rt.	352
559+28	564+00	Lt.	472
559+75	562+47	Rt.	272
567+94	572+82	Lt.	488
576+50	577+70	Rt.	120
578+00	579+60	Rt.	160
582+25	587+37	Rt.	512
582+74	586+50	Lt.	376
591+27	593+75	Rt.	248
597+22	601+30	Lt.	408
598+00	600+64	Rt.	264
607+70	610+82	Lt.	312
611+27	613+75	Lt.	248
617+84	626+80	Lt.	896
627+90	631+90	Lt.	400
629+00	631+00	Rt.	200
TOTAL			10440

RECAPITULATION

PROPOSAL No. 1	PROPOSAL No. 2
ROADWAY	BRIDGE
Net Length of Road 17754.5 Lin. Ft. - 3.362 Miles	Channel Excavation 11,284 Cu. Yds.
Excavation Unclassified 91776 Cu. Yds.	Rip rap 150 Sq. Yds.
Finishing Shoulders, Slopes, & Ditches - Both Sides 17754.5 Lin. Ft.	Met Excavation 530 Cu. Yds.
Type D Guard Rail 10440 Lin. Ft.	Dry Excavation 300 Cu. Yds.
6" Vit. Sewer Pipe in Place 50 Lin. Ft.	Piling (20 ft. lengths assumed) 3940 Lin. Ft.
12" Galvanized Corrugated Metal Pipe 244 Lin. Ft.	1-6 1/2 Footing Concrete 336 Cu. Yds.
Relaying 12" Corrugated Pipe 36 Lin. Ft.	1-6 1/2 concrete in Abuts. and Piers above Footings. 312 Cu. Yds.
	1-5 1/2 concrete in Superstructure. 205 Cu. Yds.
	4" Concrete Wearing Surface, 1:5 mix. 416 Sq. Yds.
BRIDGES AND CULVERTS	Reinforcing Steel. 74,510 Lbs.
20' SPAN AND UNDER	1/4" Premolded Expansion Joint Filler 936 Sq. Ft.
Excavation Including Backfill 472 Cu. Yds.	1/8" Phosphor Bronze Plates 174 Lbs.
1-5 1/2 Concrete 136.6 Cu. Yds.	Cast Iron Scuppers 12 Pcs.
1-8 Concrete 137.5 Cu. Yds.	Railing (Type R-R-1) 259 Lin. Ft.
Reinforcing Steel 5900 Lbs.	Net Length of Bridge Floor 129 Lin. Ft.
12" Vitrified Sewer Pipe 296 Lin. Ft.	
15" Vitrified Sewer Pipe 472 Lin. Ft.	
18" Vitrified Sewer Pipe 262 Lin. Ft.	
24" Vitrified Sewer Pipe 42 Lin. Ft.	
4" V.S. Pipe underdrain at direction of engineer 100 Lin. Ft.	
C. I. Grating 1	