

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
NATIONAL ROAD  
S. H. 1. SEC. D-2 PET. NO.  
MADISON COUNTY  
SUMMERFORD & DEER CREEK TWP. JAN. 1932

File  
C-3

The Standard Specifications of the State of Ohio, Department of Highways, in force on date of contract will govern this improvement.  
I, hereby approve these plans and declare that the making of this improvement will require the closing to traffic of the highway and that detours will be provided as shown on the plan and estimates, and certify that the right-of-way 80' wide is available for the construction, maintenance and repair of the above highway.

Approved: \_\_\_\_\_  
Date \_\_\_\_\_ Resident District  
Deputy Director.

Approved: H. D. Schoonover  
Date 2-5-32 Resident Division  
Deputy Director.

Approved: Edwin Wiley  
Date 2-20-32 Deputy Director  
Bureau of Construction.

Approved: \_\_\_\_\_  
Date \_\_\_\_\_ Deputy Director  
Bureau of Maintenance.

Approved: \_\_\_\_\_  
Date \_\_\_\_\_ Deputy Director  
Bureau of Bridges.

Approved: H. P. Chapman  
Date 2-16-32 Chief Engineer, 1st Asst. Director.

Approved: Oliver Merrill  
Date 2-16-32 Director of Highways.

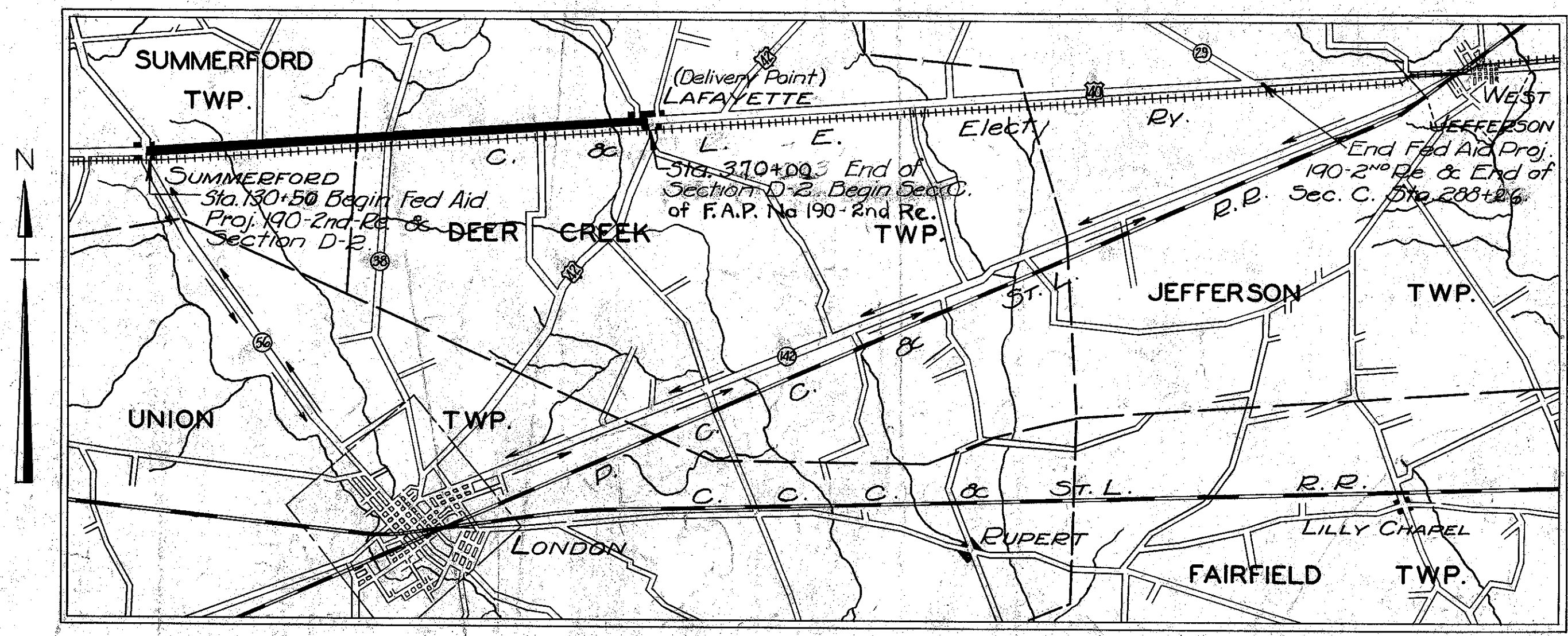
Recommended for Approval: \_\_\_\_\_  
Date \_\_\_\_\_ District Engineer.  
Bureau of Public Roads.

Recommended for Approval: \_\_\_\_\_  
Date \_\_\_\_\_ Chief Engineer.  
Bureau of Public Roads.

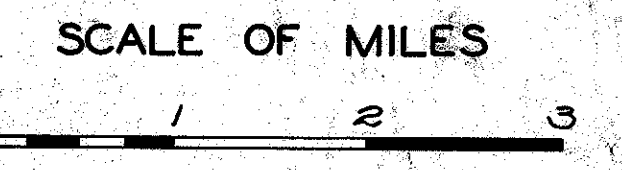
Approved: \_\_\_\_\_  
Date \_\_\_\_\_ Chief of Bureau.

~CONVENTIONAL SIGNS~

STATE LINE	-----
COUNTY LINE	-----
TOWNSHIP LINE	-----
SECTION LINE	-----
PROPERTY LINE, NOT FENCED	-----
CENTER LINE	o o o
CITY OR VILLAGE LINE	-----
FENCE	x x x
HEDGE	
TELEPHONE OR TELEGRAPH	TTTTTTTTT
STEAM RAILROAD	=====
ELECTRIC LINE	+++++
GUARD. RAIL	-----
DRAIN PIPE - NEW	-----
DRAIN PIPE - OLD	-----

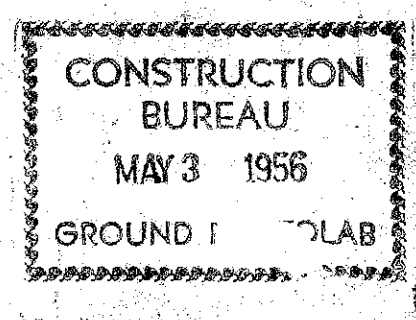


LOCATION PLAN



PORTION TO BE IMPROVED  
DETOURS SHOWN THUS  
IMPROVED ROADS

PLANS	1" = 50'	TITLE PAGE	P. 1
PROFILE VERTICAL	1" = 5'	TYPICAL CROSS SECTION	2
PROFILE HORIZONTAL	1" = 50'	PLANS AND PROFILE	3-19
CROSS SECTIONS	1" = 5'	CROSS SECTIONS	20-39
		STRUCTURAL PLANS	41-45
		INTERSECTIONS	40
		SUMMARY SHEET	46-47



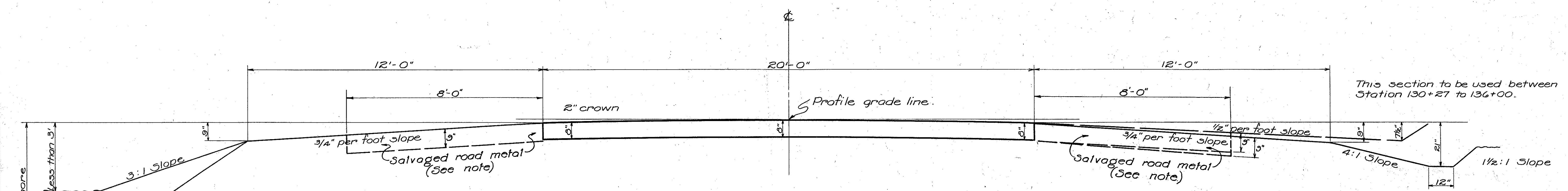
We, the Commissioners of Madison County, hereby approve these plans.

Date \_\_\_\_\_ County Commissioners

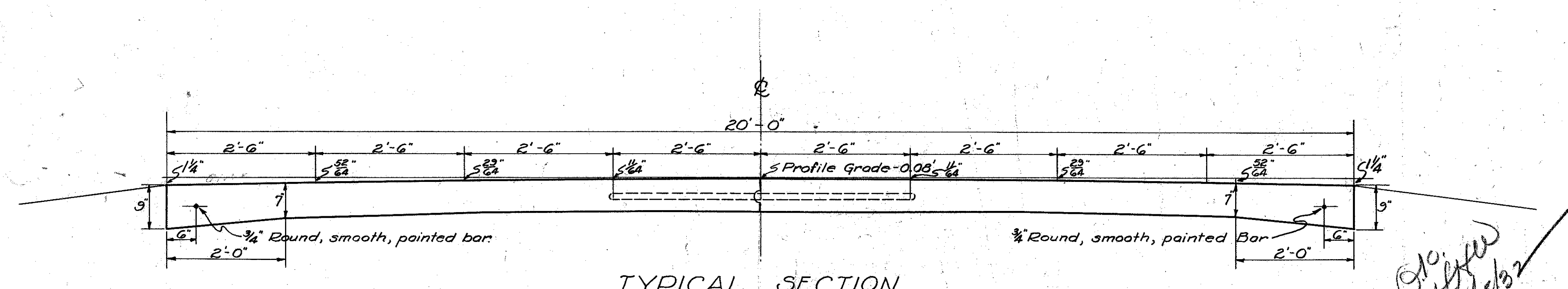
SUPPLEMENTAL PRINTS OF STRUCTURAL STANDARDS  
DRAWINGS NO. 95, 98, 100, 105, 300, SC-A, BC-B, AS-2430.



# TYPICAL SECTION

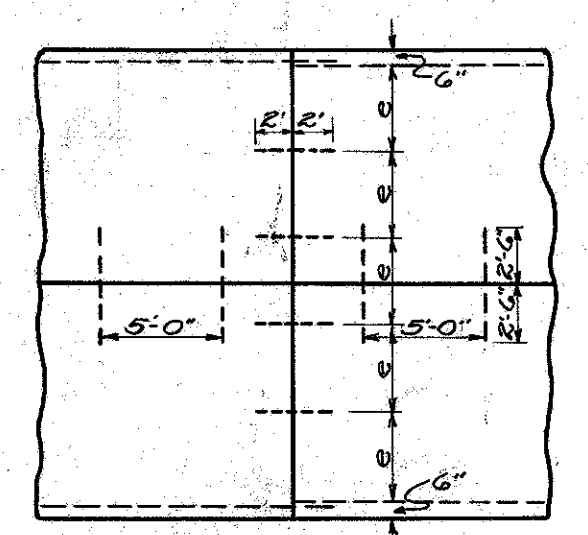


Earthwork has been calculated from this <sup>theoretical</sup> typical grading section.  
To Be Used Between Station 130+27.0 to 369+79.0.

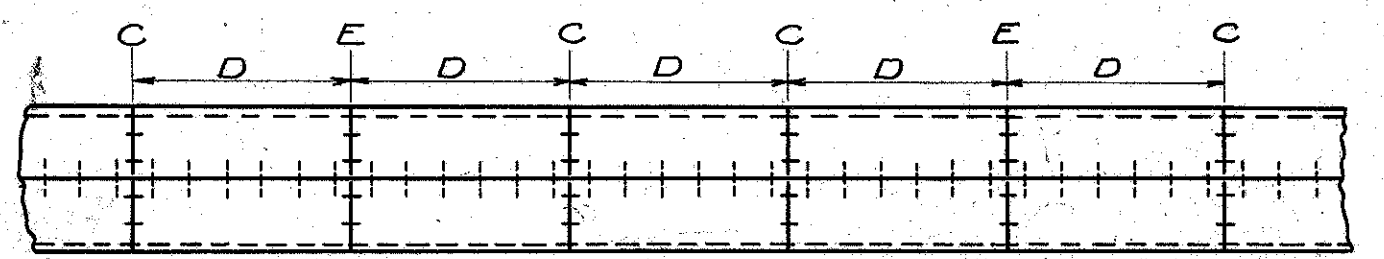


TYPICAL SECTION  
for  
CONCRETE PAVEMENT

Including: - Center Joint, dowels and edge bars as per Std. Dr. #98 or 100 and including transverse expansion and contraction jts. as per Standard Drawings N<sup>o</sup> 95 & 123 as per specifications. Berm and Ditch section to be same as shown on theoretical typical grading section.  
To Be Used BETWEEN STA. 130+27.0 to 369+79.0  
Limestone Sand conforming to specifications may be used.



DETAIL OF TRANSVERSE JT.



DETAIL SHOWING CENTER JOINT & FREQUENCY OF TRANSVERSE JOINTS.

C = Contraction joint.  
E = Expansion joint (Sept. 15 to May 15).  
D = 25' for gravel aggregate  
D = 30' for stone or slag aggregate

NOTE: - Grade line has been laid, cross sections plotted and yardage calculated for a theoretical typical section for a 20' pavement having a uniform 8" depth and a 2" crown as shown above.  
For the typical conc. pavement to be used as shown having a 1/4" crown the grade of the edge of the pavement shall be lowered 0.0134' for equal yardage, the elevation of the ditch remaining the same.  
The center line grade shall be lowered by the amount of the difference in crown between the theoretical and the concrete typical section plus the difference in the edge grades or a total of (0.0625 + 0.0134 = 0.0759) or 0.08'

~ NOTES ~

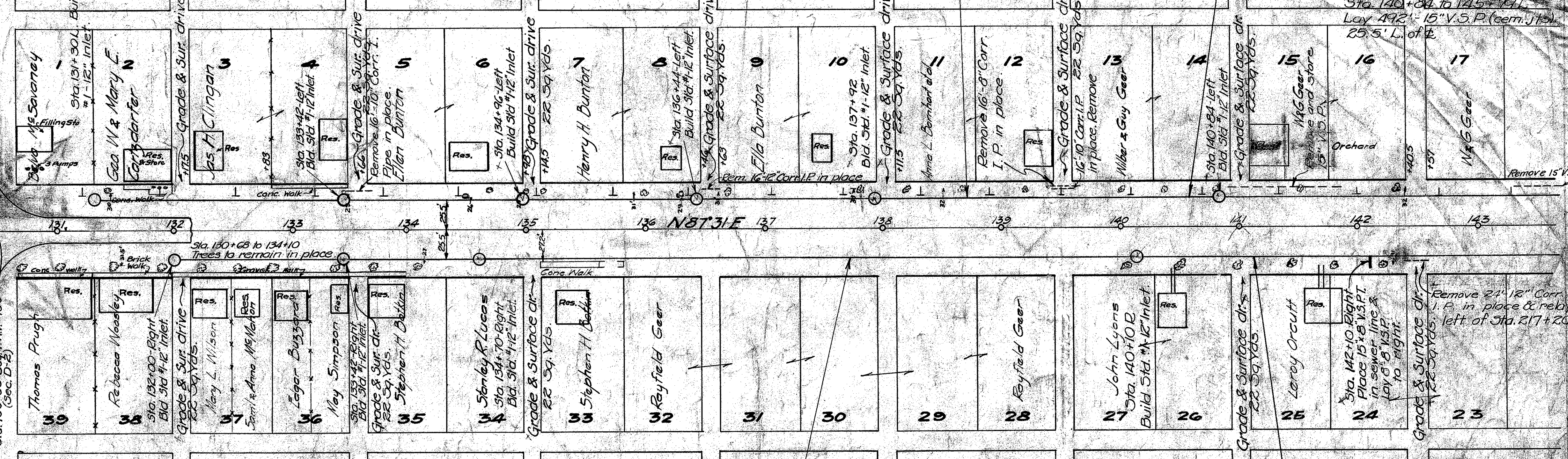
Where V.S.P. is called for double strength V.S.P. (Sec. 6.8a) shall be used and Reinforced Concrete Pipe (Sec. 6.5a) may be used as an alternate.  
Where V.S.P. (cem. jts.) is called for double strength V.S.P. (Sec. 6.8a) shall be used and Reinforced Concrete Pipe (Sec. 6.5a) with collars or cem. jts. may be used as an alternate.  
Where V.S.P. (enc.) is called for single strength V.S.P. including 1:8 concrete for encasement shall be used and Reinf. Concrete Pipe (Sec. 6.5b) with collars or cem. jts. may be used as an alternate.

The Contractor shall so conduct his grading operations so that the existing road metal shall be salvaged and placed adjacent to the pavement as shown. It shall then be thoroughly compacted with a roller weighing not less than 5 tons. Private drives and approaches to be surfaced in the same manner. (See Sheet N<sup>o</sup> 3)  
Payment for this work shall be included in the unit price bid for excavation and shall include removing this material from the present road, stock piling if necessary, trenching out, and placing this material as shown and rolling.

*Checked  
H. J. B. 2/1/32*



### VILLAGE OF SUMMERFORD



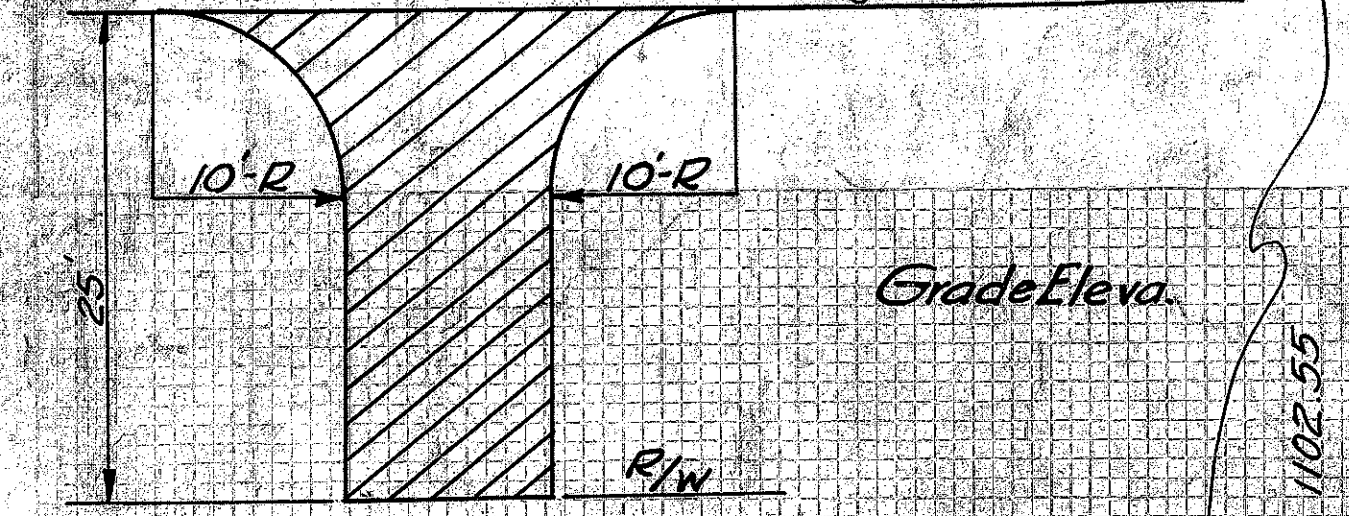
Remove open top of existing No. 2 C.B. Place Manhole top at elevation conforming to grade & crown of pave & widening. Lay 40' of 12" V.S.P. (enc.) & 20' of 12" V.S.P. (enc. jts).  
Build Sid #1-12 Inlet 876' L of  $\Phi$  including excav. & 1.0 conc. for enclosure cement for enclosed pipe. See Sheet 41 for M.H. Top (Lowering C.B. to new Elev. included in price of M.H. Top) in place.

Sta. 130+48 Left  
Remove open top of existing No. 2 C.B. Place Manhole top at elevation conforming to grade & crown of pave & widening. Lay 40' of 12" V.S.P. (enc.) & 20' of 12" V.S.P. (enc. jts).  
Build Sid #1-12 Inlet 876' L of  $\Phi$  including excav. & 1.0 conc. for enclosure cement for enclosed pipe. See Sheet 41 for M.H. Top (Lowering C.B. to new Elev. included in price of M.H. Top) in place.

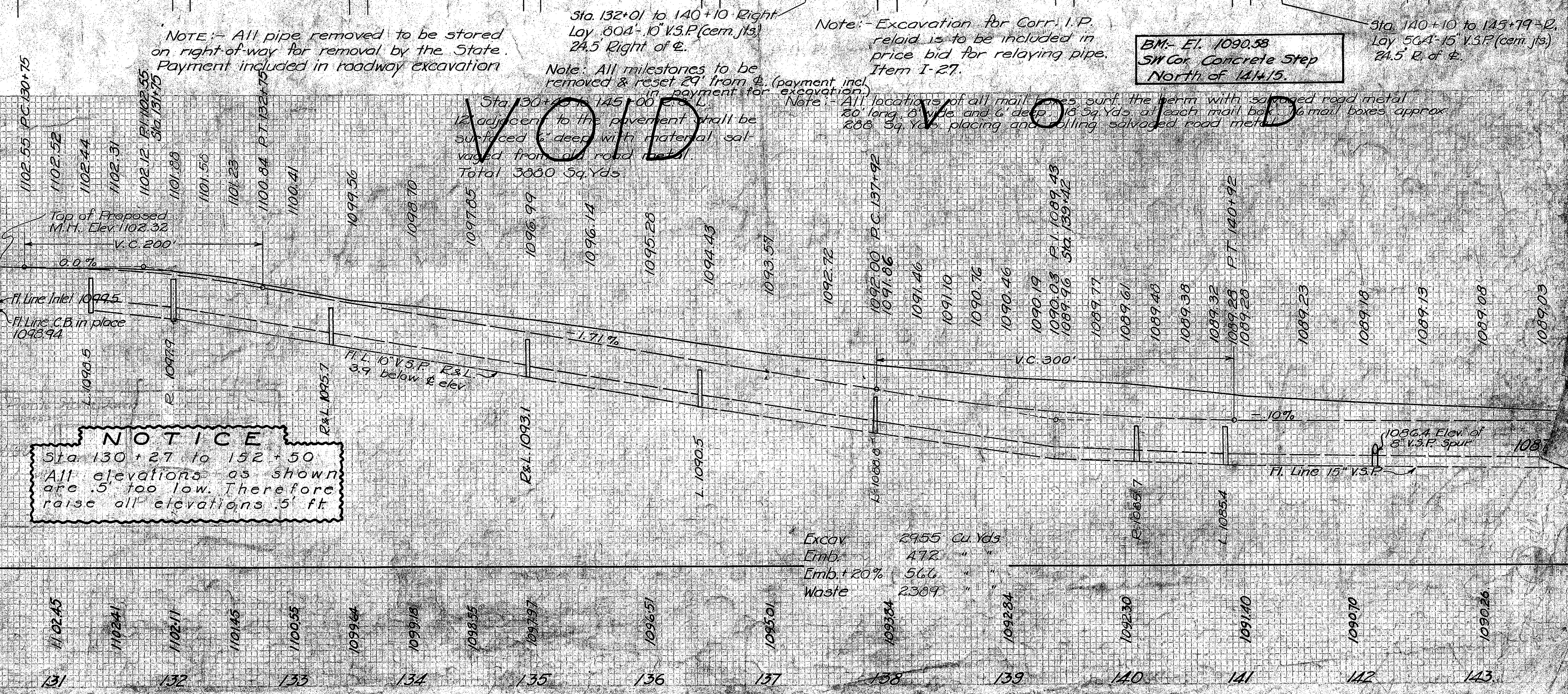
Sta. 130+15 left  
Lower present M.H. and place M.H. top of elev. of new pave. Plug inlet on side. Build Sid #1-12 inlet 86' L. of  $\Phi$  and connect to M.H. with 60'-10" V.S.P. (cem. jts).  
Sta. 129+95 Left  
Build spec. #2 Inlet & connect to sewer in place with 4'-10" V.S.P.

Sta. 128+86 to 133+86  
Build intersection & extra width pavement. (See Sh. #40)

Note: All drives where noted on plans shall be graded to the R/W line and surfaced (10' wide & 6" deep) with material to be salvaged from old metal in place. Payment for this work shall be included in unit price bid for excavation and shall Edge of Pavement.



include removing this material from present road stock piling if it is necessary, grading and placing this material where called for, & rolling with a 3-ton tandem roller. Unless otherwise stated each drive will have 36 sq. yds. to be surfaced.



Typical Section of pavement adjoining F.A.P. 190 and extending approx. three miles west.

**NOTICE**  
Sta. 130+27 to 152+50  
All elevations as shown are .5' too low. Therefore raise all elevations .5' ft.

Excav	2955 Cu. Yds
Emb.	472 "
Emb. + 20%	566 "
Waste	2369 "

150

150

150

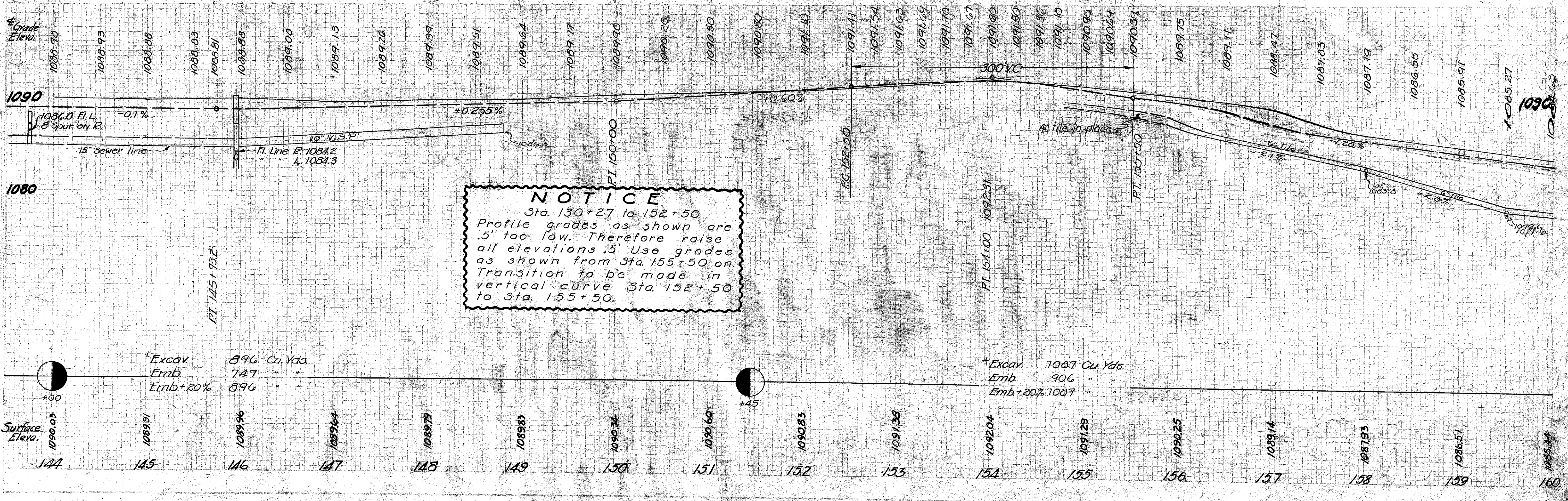
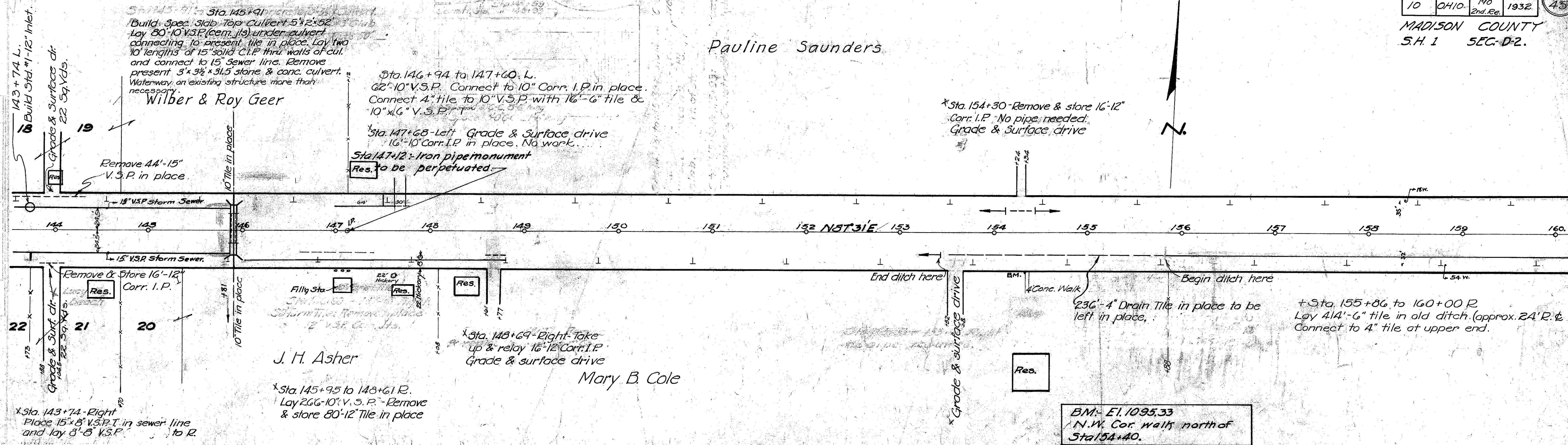


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO	190 2nd. Re.	1932

MADISON COUNTY  
S.H. 1 SEC. D-2

Pauline Saunders

1





FED. ROAD DIST. No.	STATE	FED. AID PROJ. No.	FISCAL YEAR
10	OHIO	190 2nd. Re.	1938

5  
45

MADISON COUNTY  
S.H. 1 SEC. D-2

Pauline Saunders

Amanda Tanner

②  
X Sta 166+42: Build 8'x4' 5" Slab Top Culvert, Length-52'  
Remove 6x5x30 Conc. culvert  
Lay 10'-15" V.S.P. (con. jt) under culvert  
40' L. of  $\phi$  and 70' R. of  $\phi$  Connect to 15" Tile on left & headwall on rt.

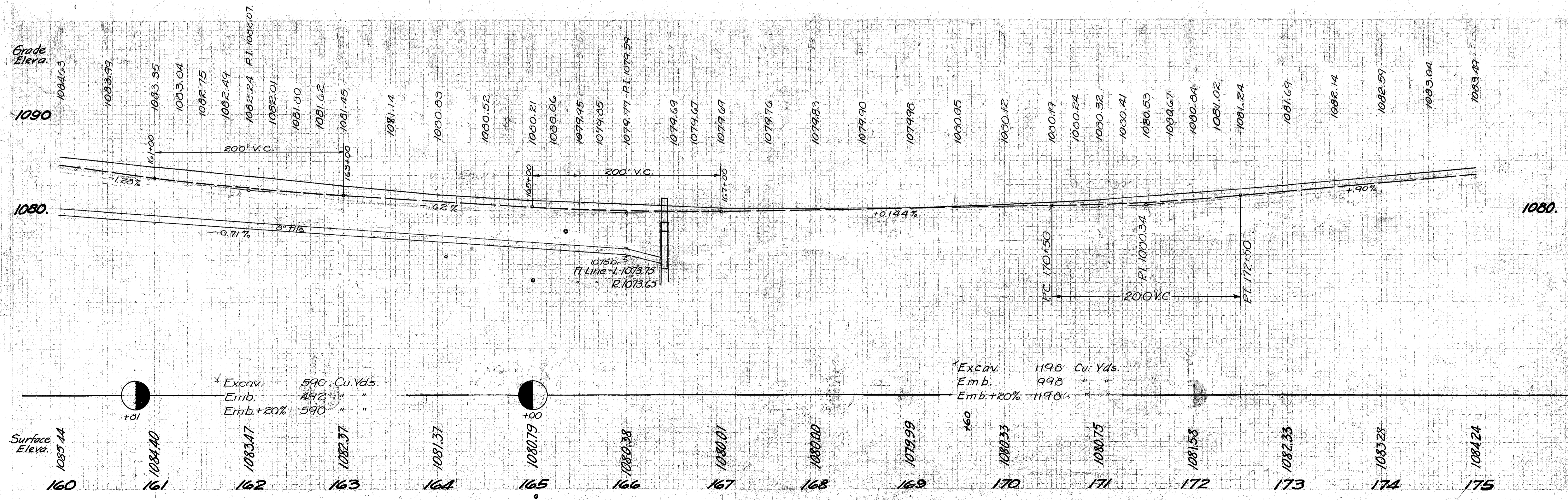
15" Tile in place  
County drain

X Grade and surface drive

X Sta. 160+00 to 166+38 R.  
Lay 6x38"-8" tile in old ditch line approx. 24' R.  $\phi$ .

Mary B. Cole

Lucy E. Beach





Amanda Tanner

B. J. Gwynne

Lucy E. Beach

X Sta. 174+90 - 176+30 L. Take up & relay.  
12" of 10" Corr. I.P. Lay 8" of 10" Corr.  
I.P. of New 8" 120'-10" V.S.P.

X Sta. 183+54 Left  
Grade side Rd. approach to a distance  
of 60' left of  $\frac{1}{2}$  as shown below.  
Surface 6' deep 18' wide with material to  
be salvaged from old metal 105 Sq. Yds.  
Additional Excav. for approach  
included in Rawly Excav.

Sta. 183+54 L.  
Build Sta. 56' x 12' V.S.P. (enc.) Side  
Road Culvert 31" 6" L. at  $\frac{1}{2}$   
40'-10" V.S.P. in pl. remove & store.

+ Sta. 186+40 L.  
Take up and relay  
16'-12" Corr. I. Pipe  
Grade & surf. drive

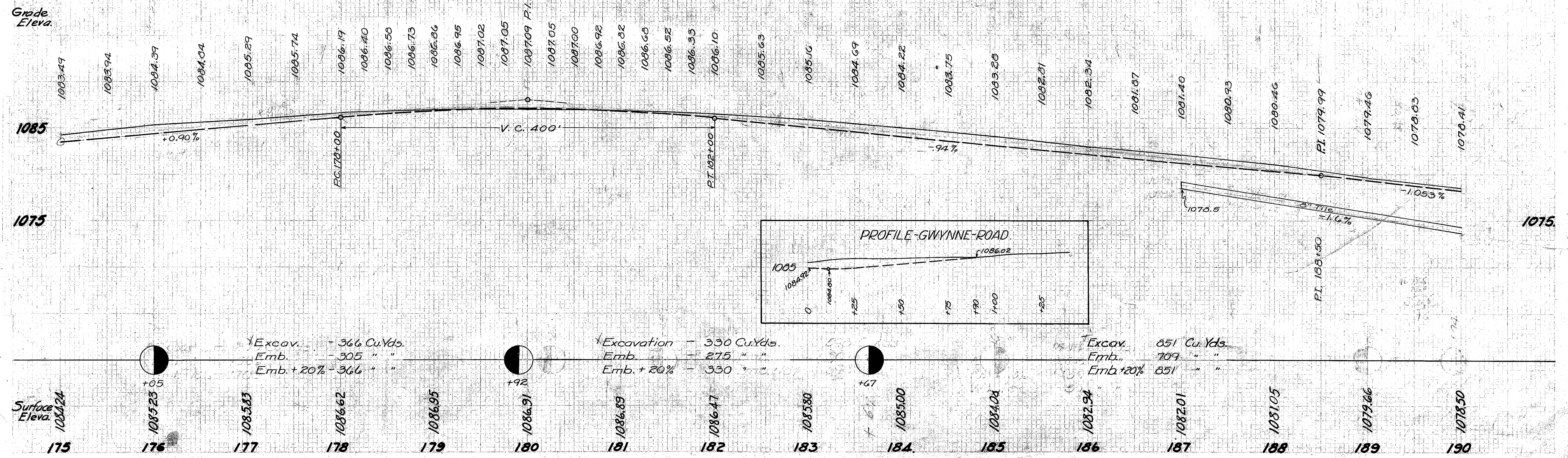
Sta. 183+54 L.  
Lay 54'-10" Corr. I.P.

Sta. 183+50, C.I. Box Man+  
Sta. 185+00, C.I. Box. Man+  
Both Mans to be perpetuated.

+ Sta. 187+00 to 195+54 R.  
Lay 854'-0" tile in old ditch line.

X Sta. 179+96 R.  
Take up & relay 16'-12" Corr. I.P.  
Grade & Surf. drive.

B.M. - Eleva 1086.85.  
Spice in root of Burr Oak.  
South of Sta. 182+20.









FED. DIST.	STATE	FED. AID PROJ. YEAR	FISCAL YEAR
10	OHIO	2nd. Re. 190	1932

8  
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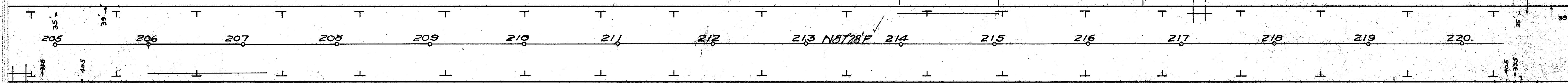
MADISON COUNTY  
S.H. I. SEC. D-2.

Baldwin J. Gwynne

Sta 214+00 to Sta 215+05 L.  
Lay 108 lin-ft 10" V.S.P.

Sta 217+20 L.  
Lay 241-12" Corr. IP taken up  
Grade and surface drive  
from E. of Sta. 142+50

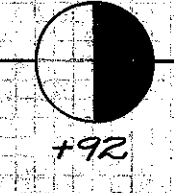
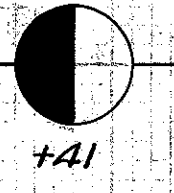
Lucy E. Beach.



Sta 206+01-207+27R. Lay 126  
lin-ft. 12" V.S.P.



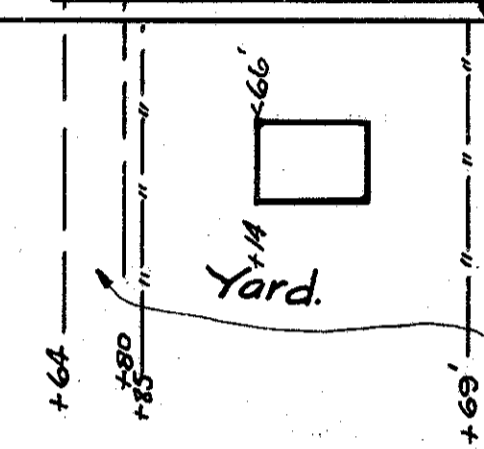
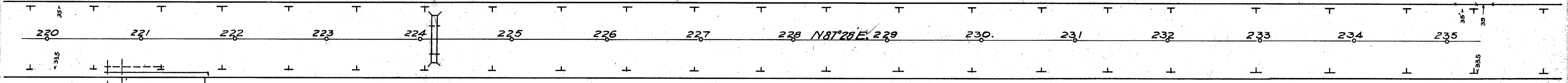
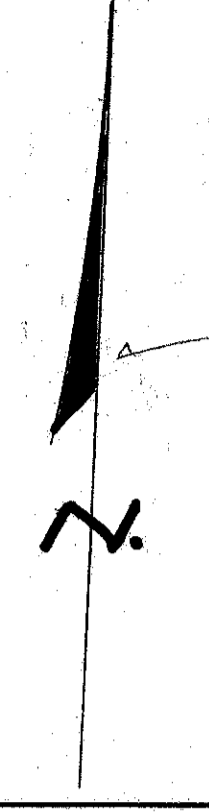
Exca - 1190 Cu. Yds.  
Emb. - 992 " "  
Emb. +20% - 1190 " "





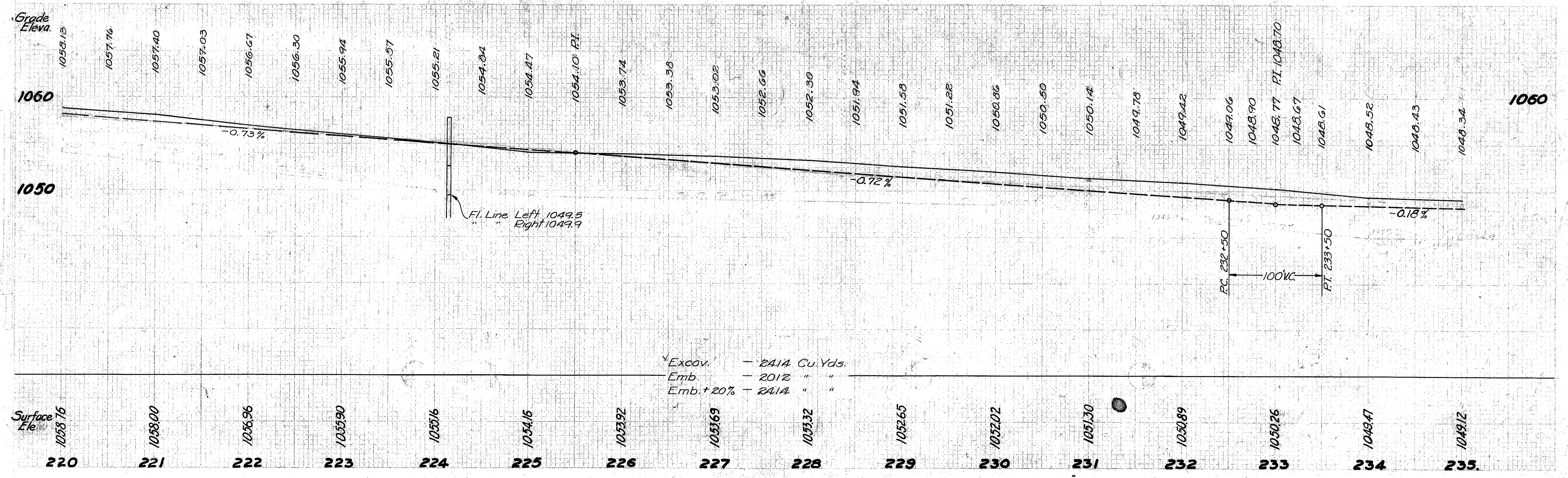
(A)  
Sta. 224+16.  
Build Std. 5'x3'x52' Top Culvert  
Remove present 4'x4'x32' Conc. Box.  
Waterway on existing structure more than necessary.

Baldwin J. Gwynne



Sta. 220+64 to 221+70 R.  
Take up & relay 18'-12" Corr. I.P.  
and lay 92'-12" V.S.P.  
remove 50'-12" Tile in place.  
Grade and surface drive

Lucy E. Beach





FED. RD. DIST.	STATE	FED. AID PROJ. YEAR	FISCAL YEAR
10	OHIO	190 2nd. Re.	1938

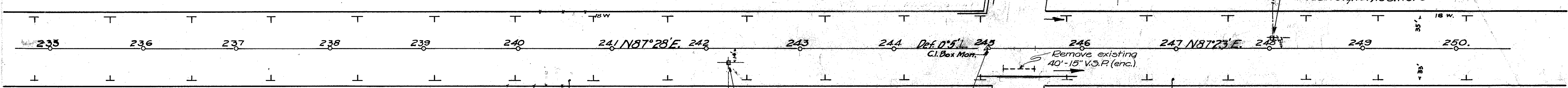
10  
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MADISON COUNTY.  
S.H. 1. SEC. D-2

Sta. 245+35.2 and 245+44.45 R. & L.  
Build Intersection as shown on Sheet No. 40  
to be built half at a time. So as to maintain  
traffic at all times on S.H. 239

Baldwin J. Gwynne : Sta. 244+60 L.  
Lay 00'-0" V.S.P. to 40'  
back on Side road.

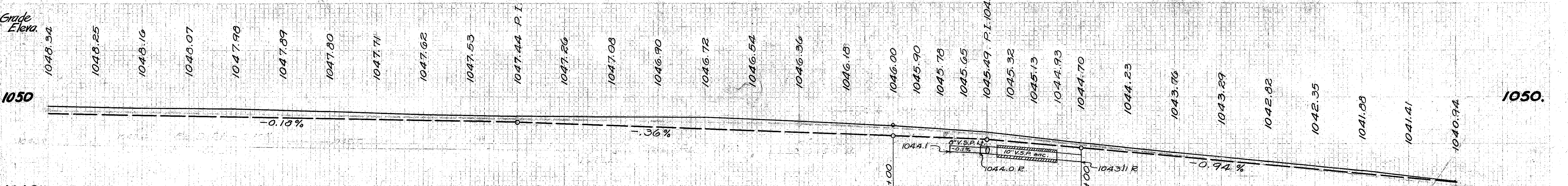
Sta. 247+00 Remove Flash Signal  
St. Edminson Gwynne  
Completed, 1938  
21 ft. from



Lucy E. Beach

MARYSVILLE  
Surface Treated

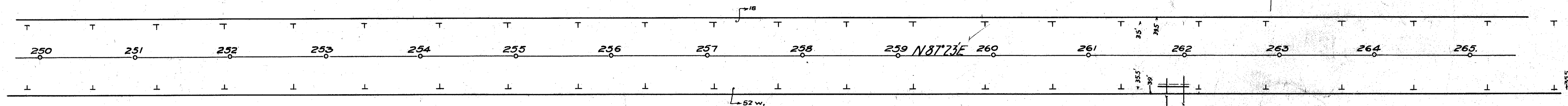
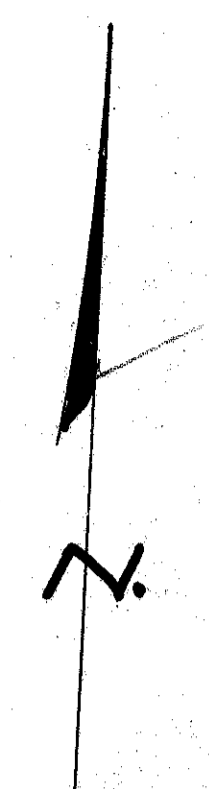
Herbert Dye



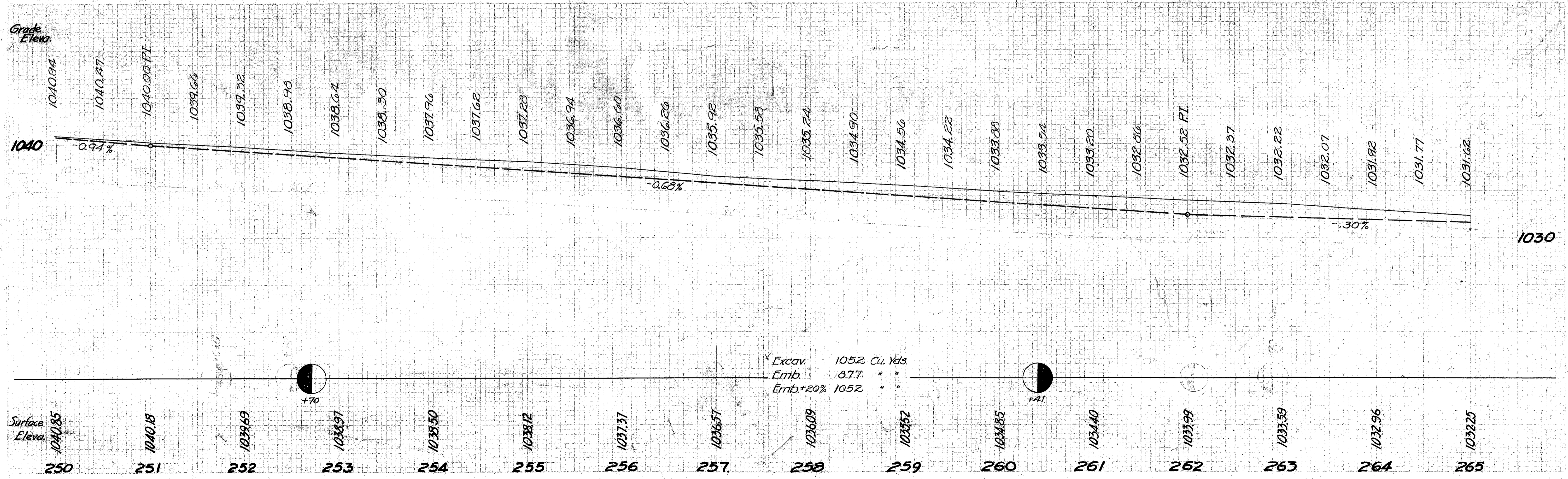
Station	Surface Elev.	Excav.	Emb.	Emb. + 20%
235	1049.12			
236	1048.92			
237	1048.73			
238	1048.42	565 Cu. Yds.	471 "	565 "
239	1048.19			
240	1047.91			
241	1047.81			
242	1047.76			
243	1047.45			
244	1046.95	1366 Cu. Yds.	1138 "	1366 "
245	1046.20			
246	1045.07			
247	1044.65			
248	1043.02			
249	1042.12			
250	1040.85			



Edminson Gwynne



Herbert Dye



Excav. 1052 Cu. Yds.  
 Emb. 877 " "  
 Emb.\*20% 1052 " "

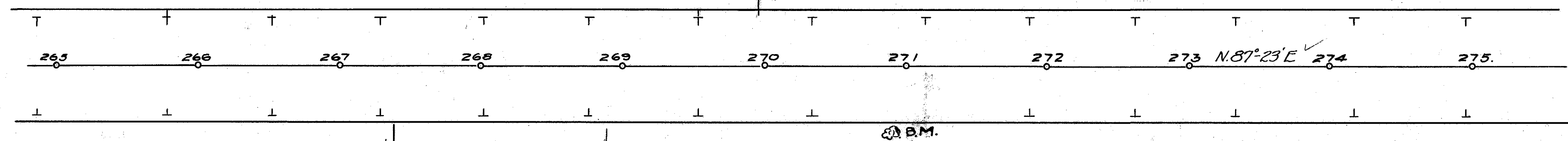
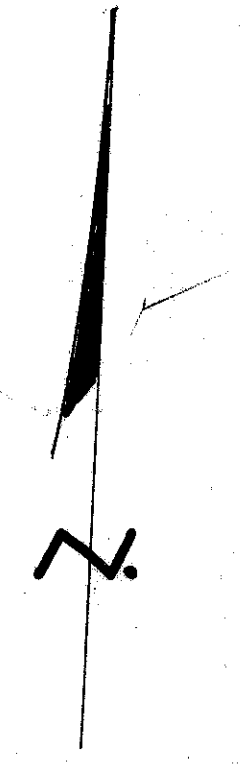


FED. DIST.	STATE	FED. PROJ. YEAR	FISCAL YEAR
10	OHIO	190 2nd Re.	1932

12  
45

MADISON COUNTY  
S.H. 1. SEC. D-2.

Edminson Gwynne

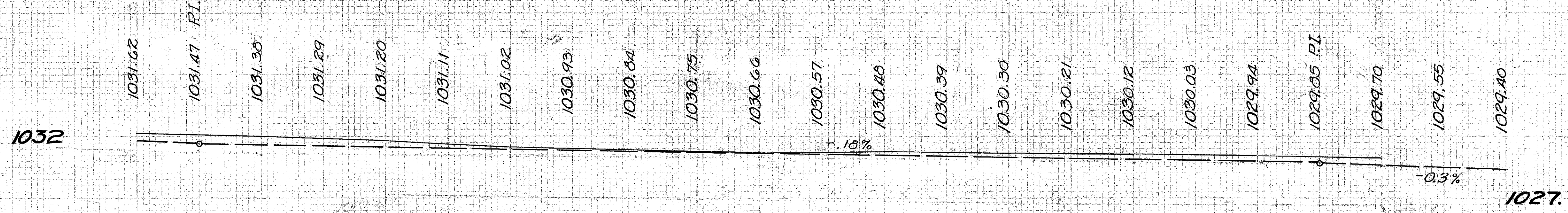


Herbert Dye

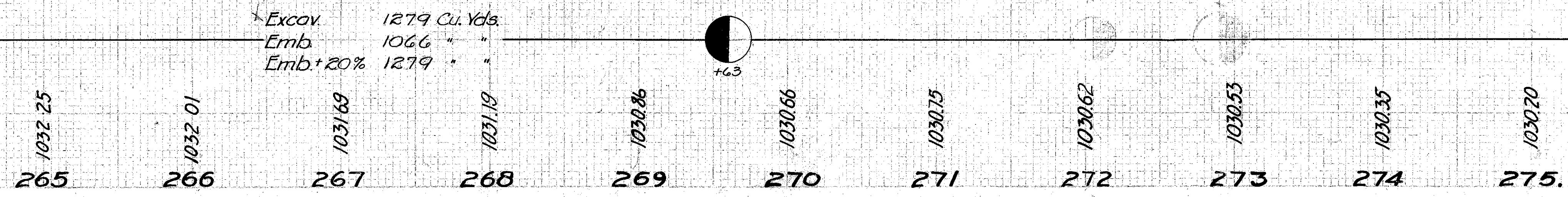
Helen Wilson

B.M. - Elev. - 1028.12  
Spike in root of Elm tree  
south of Sta. 270+90.

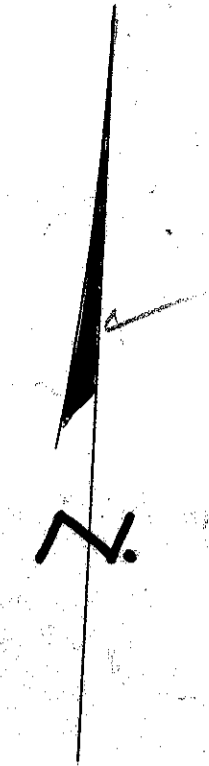
Grade Elev.



Surface Elev.



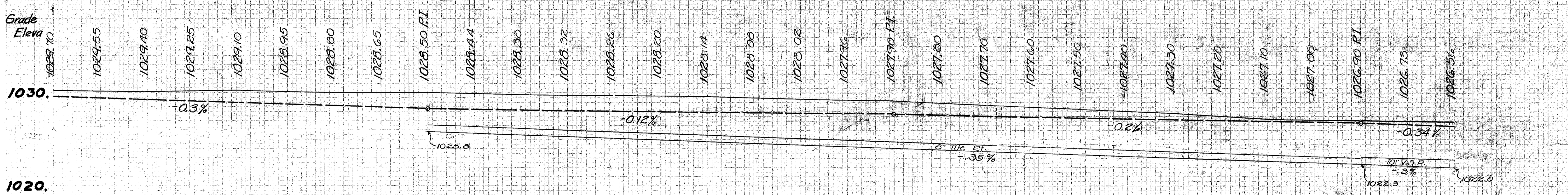
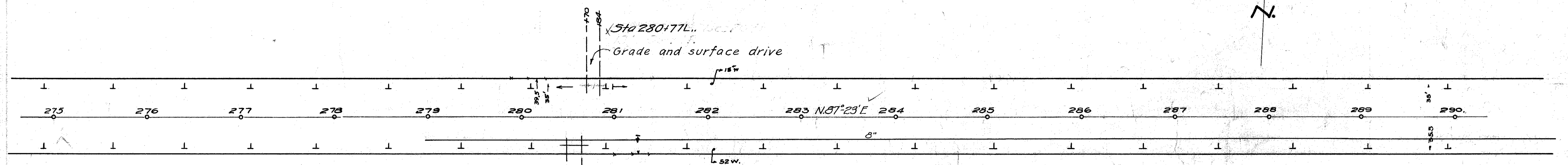




Edminson Gwynne

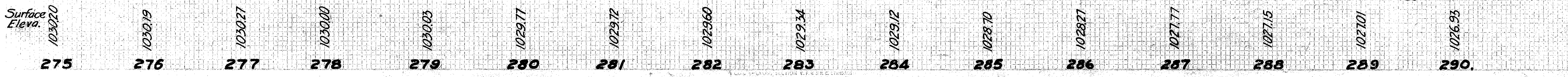
Helen Wilson

Ed. J. & Mary Cauley



Excav. 1375 Cu. Yds  
Emb. 1146 " "  
Emb+20% 1375 " "

Excav. 1263 Cu. Yds  
Emb. 1053 " "  
Emb+20% 1263 " "



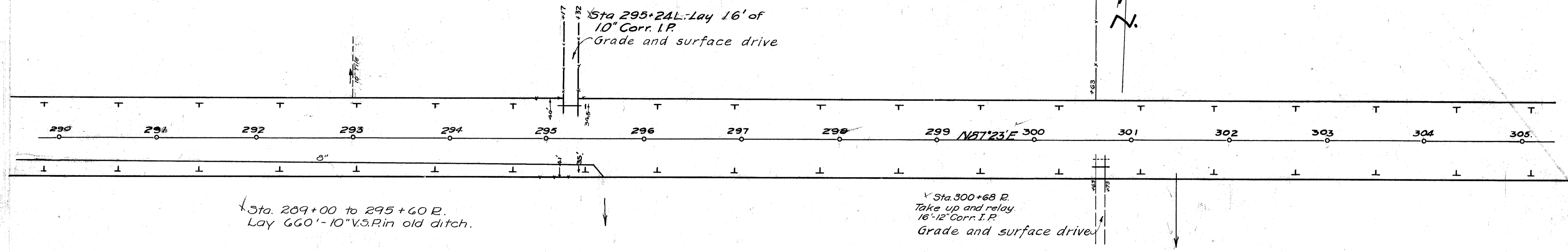
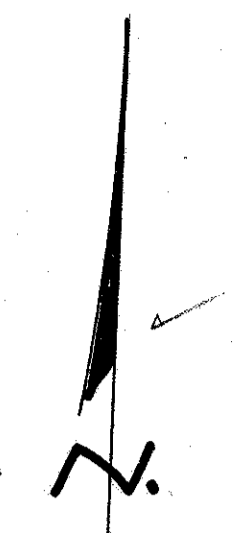


FED RD DIST	STATE	FED AID PROJ.	FISCAL YEAR
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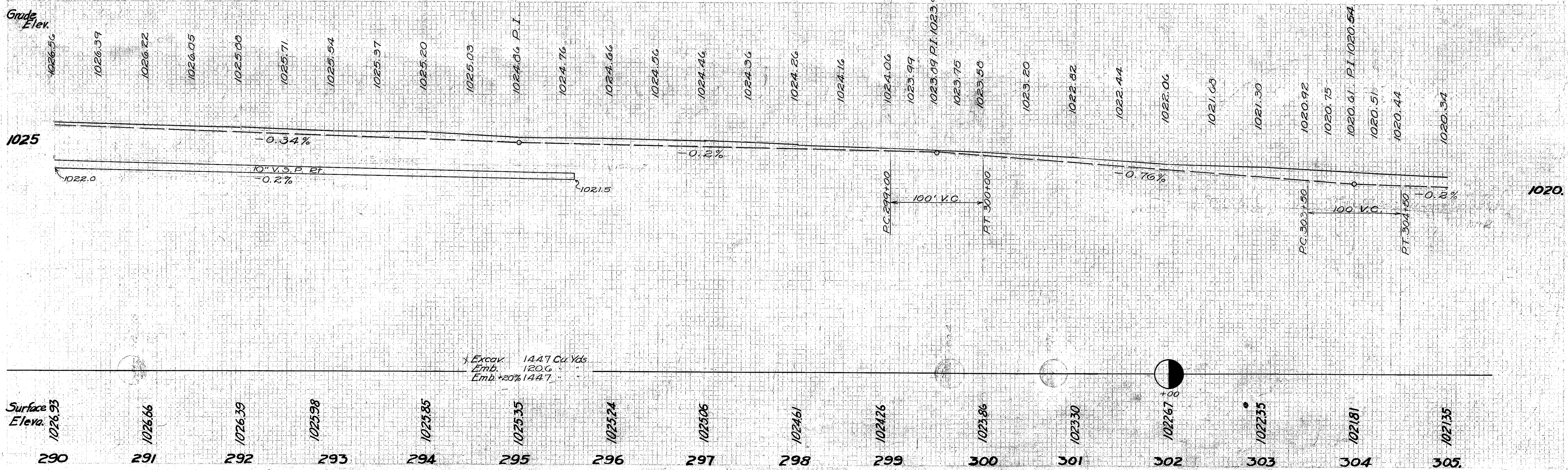
14  
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MADISON COUNTY.  
SH. 1. SEC. D-2.

Edminson Gwynne



Edward J. & Mary Cauley





Edminson Gwynne

x (5)

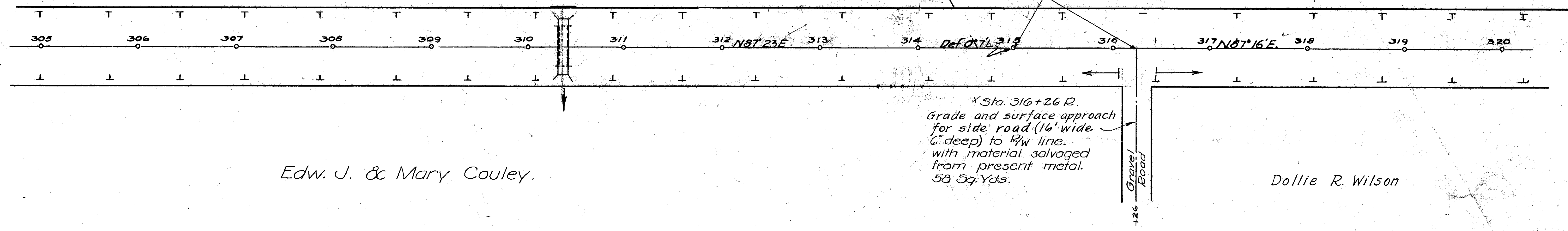
Sta. 310+30.  
Extend present 10'x5'x40'6" conc. box  
8'-9" on R. & L. with Std. Box Culvert. Remove  
top of old headwalls to top of old slab.  
Repair honey combs in wall of present structure.

40'-6"  
17'-6"  
58

Emaline Richmond Heirs.

Sta 315+00 & Sta 316+26.  
C.I. Box Monuments to be  
perpetuated.

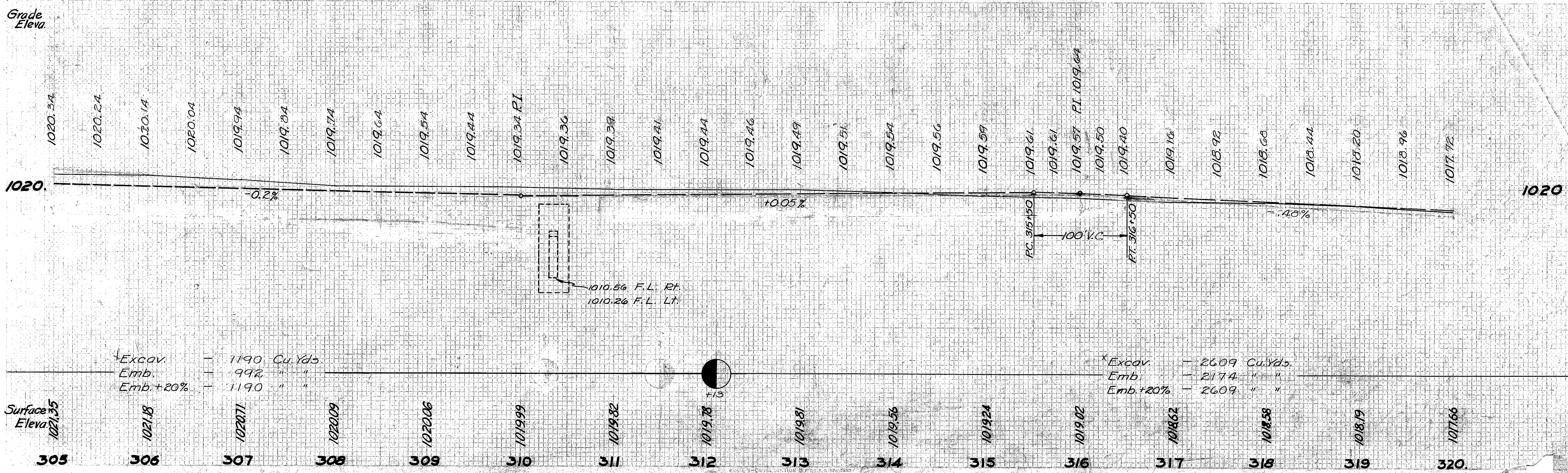
N



Edw. J. & Mary Couley.

x Sta. 316+26 R.  
Grade and surface approach  
for side road (16' wide  
6" deep) to R/W line.  
with material salvaged  
from present metal.  
58 Sq. Yds.

Dollie R. Wilson

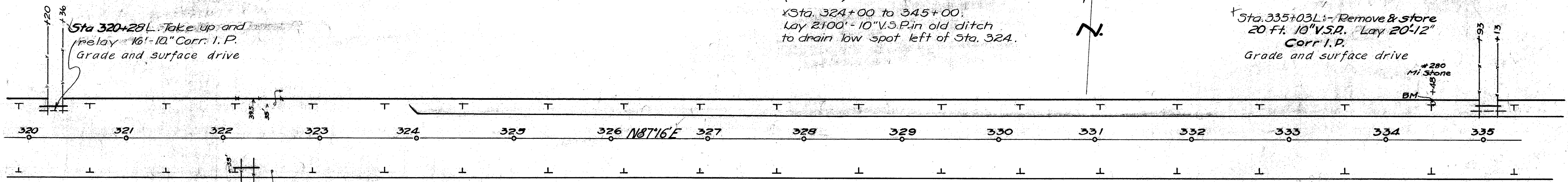




E. Richmond (heirs)

X Sta. 324+00 to 345+00.  
Lay 2100' - 10" V.S.P. in old ditch  
to drain low spot left of Sta. 324.

X Sta. 335+03L: - Remove & store  
20 ft. 10" V.S.P. Lay 20'-12"  
Corr. I.P.  
Grade and surface drive

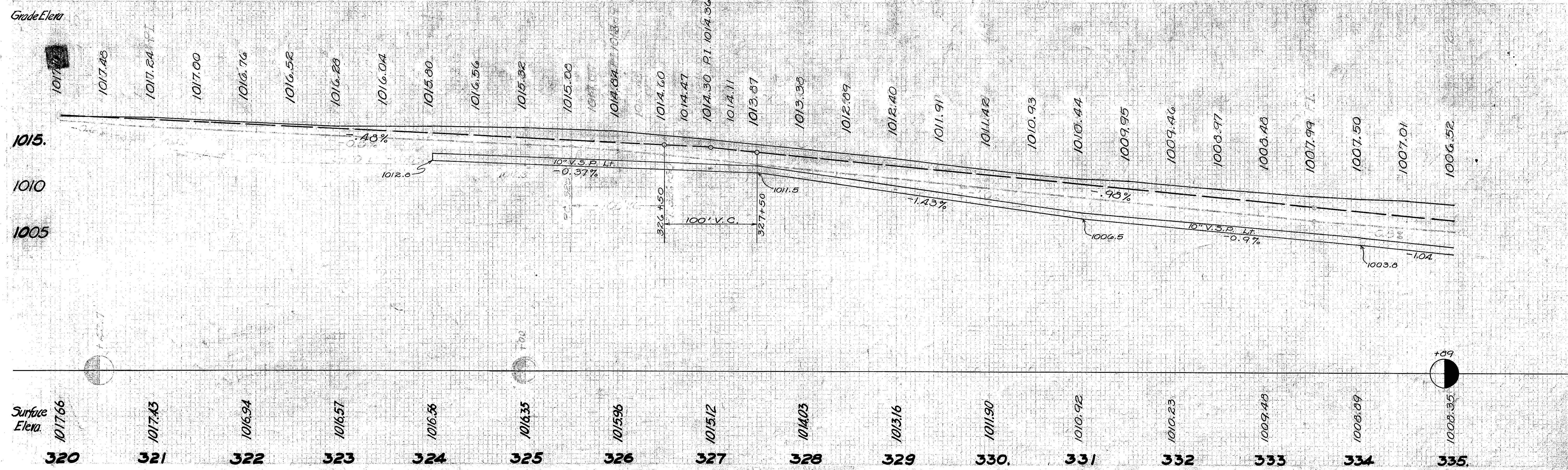


Sta 320+28L Take up and  
relay 16'-10" Corr. I.P.  
Grade and surface drive

X Sta 322+24R Lay 20'  
10" Corr. I.P.  
Grade and surface drive

Dollie R. Wilson

BM: Sta 234+48, El. 1009.39  
Top of Mile Stone No 260.





MADISON COUNTY  
S. H. 1 SEC. D-2.

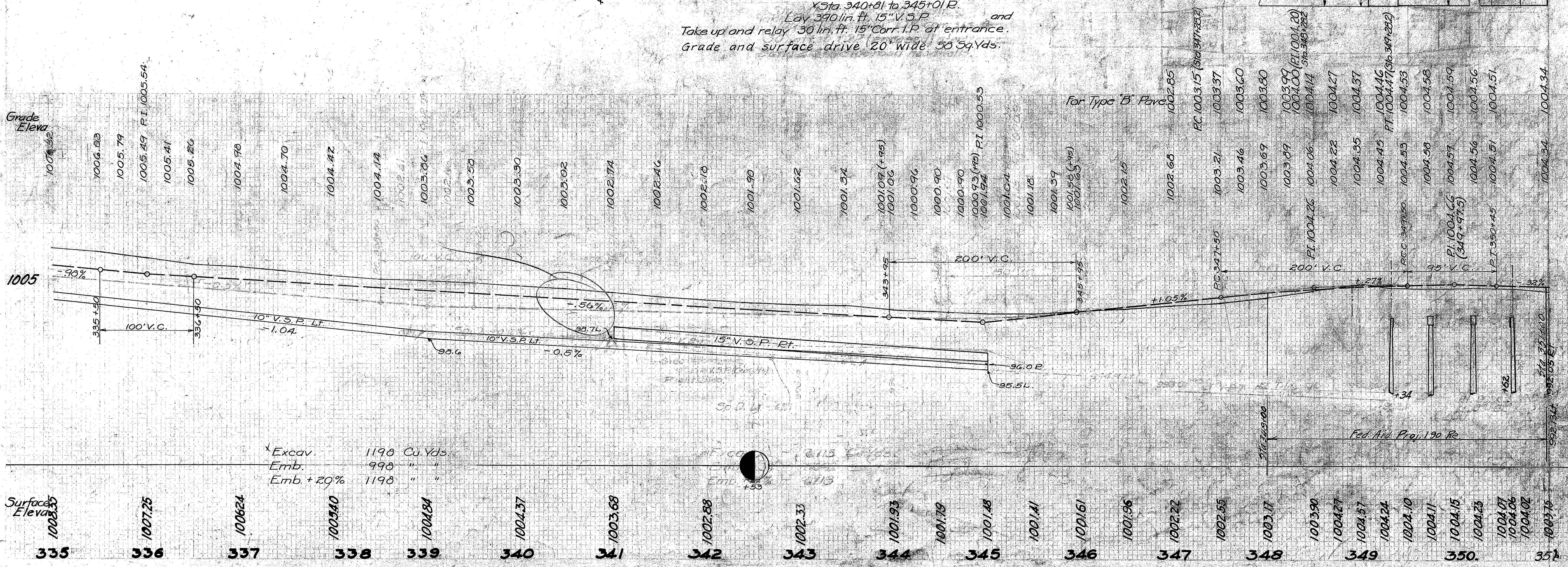
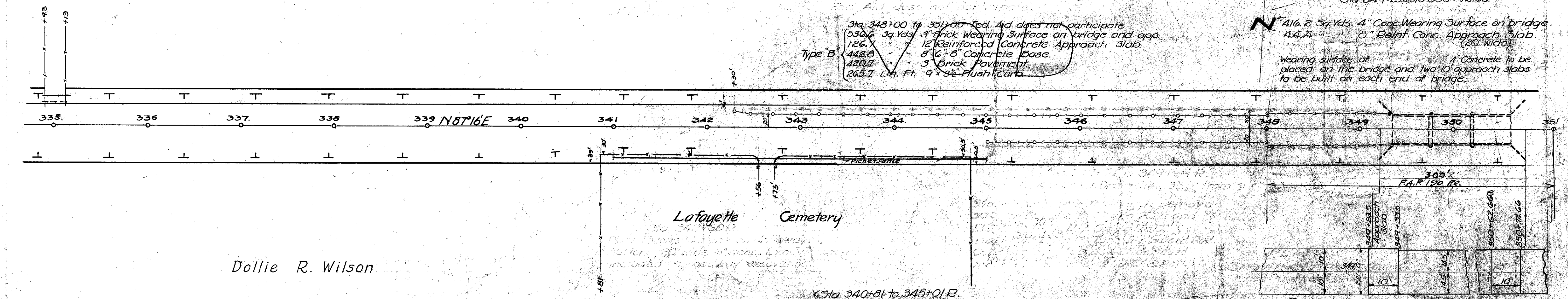
Sta. 349+33.5 to 350+62.66.  
3-40' Spans 30' Rdwy. Conc. Beam Bridge in place.  
Approaches & conc. wearing surface omitted when bridge was built in 1929.  
Sta. 349+23.5 to 350+72.66

NOTE: All guard rail in place to be removed by State.  
New guard rail to be built later, after fill has settled.

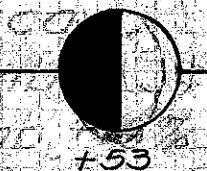
E. Richmond (Heirs)

Sta. 345+00 to 351+00 Red Aid does not participate  
530.6 Sq. Yds. 3" Brick Wearing Surface on bridge and app.  
126.7 " 12" Reinforced Concrete Approach Slab.  
442.8 " 8" 6" Concrete Base.  
420.7 " 3" Brick Pavement.  
265.7 Lin. Ft. 9" 3/4" Flush Curbs

416.2 Sq. Yds. 4" Conc. Wearing Surface on bridge.  
44.4 " 8" Reinf. Conc. Approach Slab.  
(20' wide)  
Wearing surface of 4" Concrete to be placed on the bridge and two 10' approach slabs to be built on each end of bridge.



Excav. 1198 Cu. Yds  
Emb. 998 " "  
Emb. + 20% 1198 " "





Sta. 350+62 to 353+50 Left  
Lay 788' of 15" Vit. Pipe (open jts.)  
37'-6" from  $\frac{1}{2}$  of Road

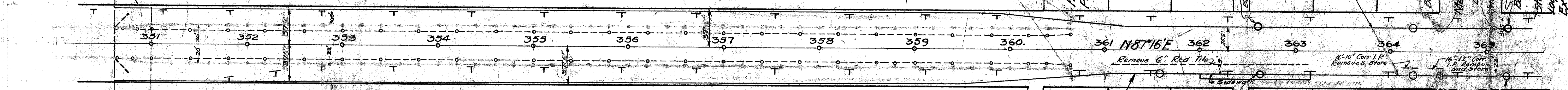
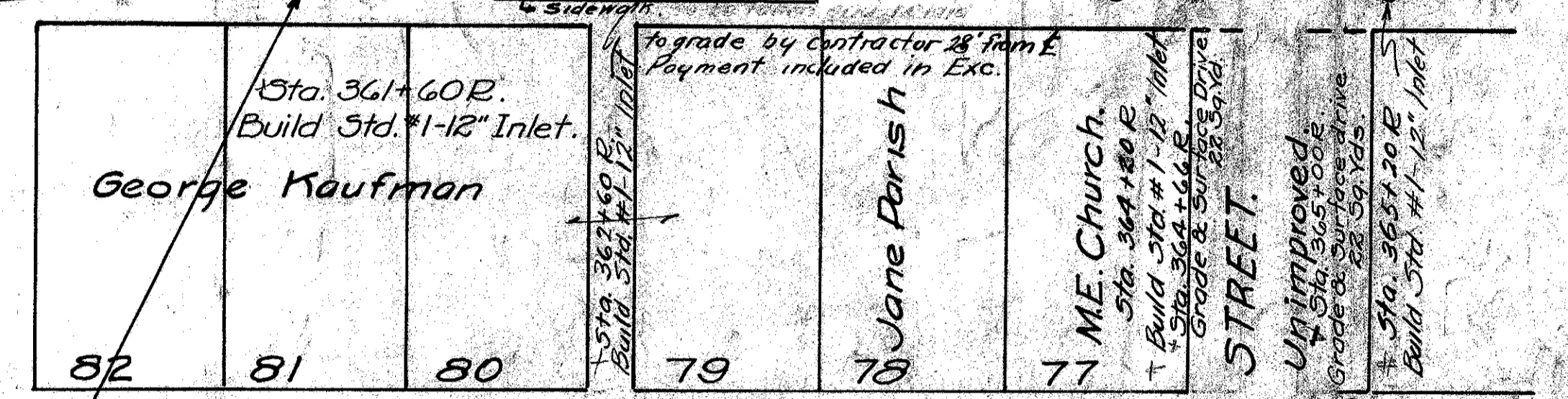
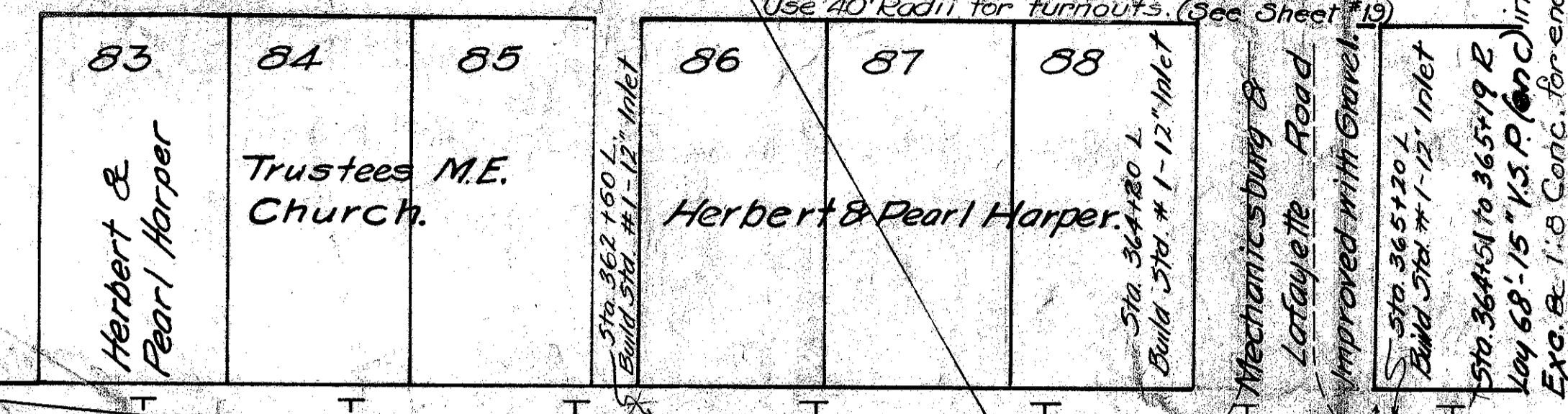
Sta. 358+50 to 360+49  
Lay 200 lin. ft. 15" V.S.P. (open jts.)

Sta. 360+49 to 364+51 L. Lay  
398 lin. ft. 15" VSP (cem. joints)  
24.5' Left of  $\frac{1}{2}$  of Road  
Standard 10' Side Roadhead width.

Sta. 364+77 Left  
Build approach for Side Rd. 250' Left of  $\frac{1}{2}$  Exc. MADISON COUNTY  
included in Rdwy. Exc. S.H. 1. SEC. D-2.  
609 Cu. Yds. 4 1/2" W.B. Base Course  
x609 " " " " Surt.  
Use 40' Radii for turnouts. (See Sheet 19)

Sta. 350+62 to 353+50 R. & L.  
Build 36" Type D Guard Rail 226' from P.I.  
Fed. Aid does not participate. Right of Way not approved of the engineer.  
Sta. 351+00 to Sta. 361+04 L.  
Build 1004' Type D Guard Rail

Sta. 360+49 R. & L.  
Build 2 sta. side road headwalls for 15" V.S.P. Sewer Line, 31' R. & L. and Left of  $\frac{1}{2}$ .



Fed. Aid Proj. 190-R.  
Sta. 350+62 to 353+50 R. & L.  
Build 36" Type D Guard Rail 226' from P.I.  
Fed. Aid does not participate. Right of Way not approved of the engineer.  
Sta. 351+00 to Sta. 361+04 L.  
Build 1004' Type D Guard Rail

Sta. 350+62 to 358+50 R. & L.  
Lay 788'-18" Vit. Sewer Pipe  
37' from  $\frac{1}{2}$  of road

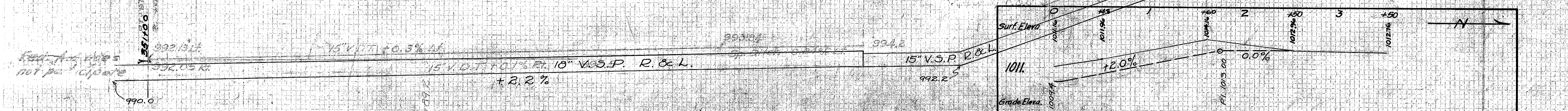
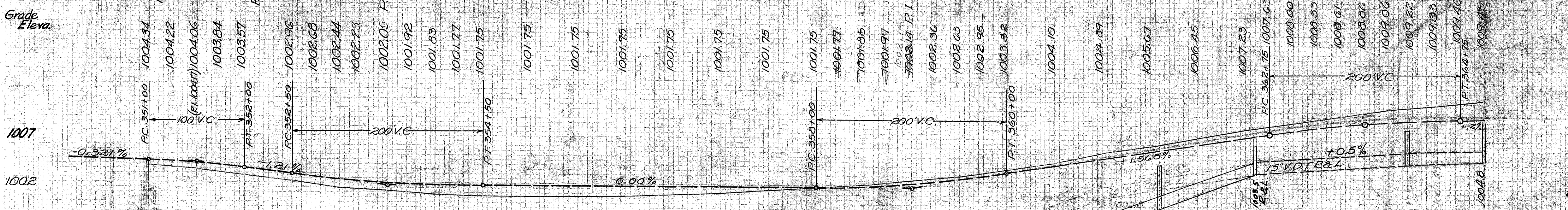
Sta. 358+50 to 360+49 R.  
Lay 200 lin. ft. 15" V.S.P. (open jts.)

Dollie R. Wilson

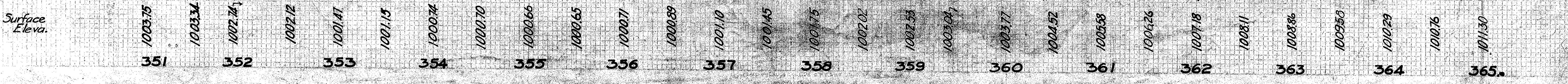
VILLAGE OF LAFAYETTE.

360+49 to 364+51 R. Lay  
398 Lin. ft. 15" V.S.P. (cem. jts.)  
24.5' R. of  $\frac{1}{2}$ .

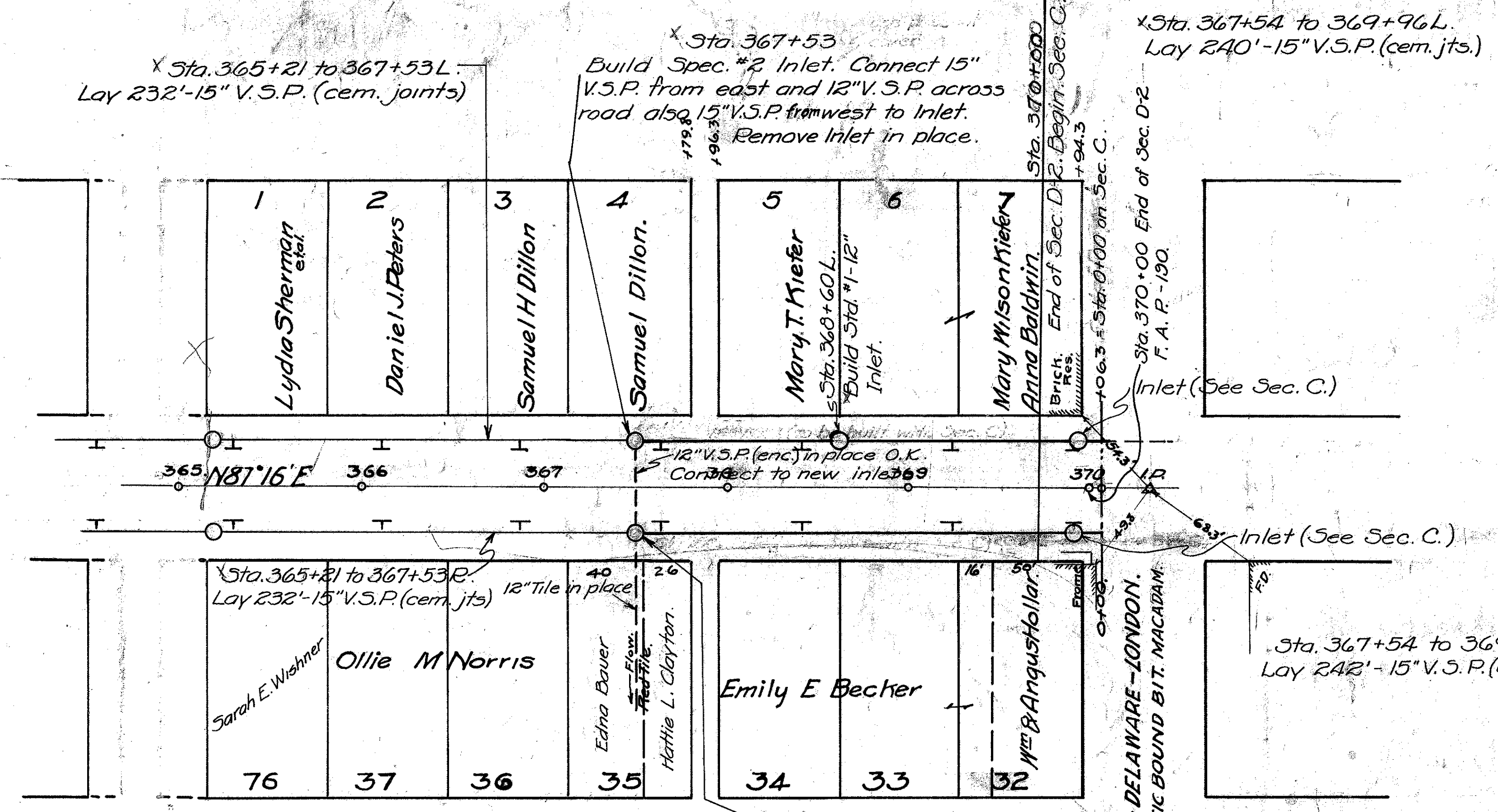
Sta. 364+51 to 365+19 R.  
Lay 68'-15" V.S.P. (exc.) including  
Excavation and 1-8 Concrete for encasement.



Exc. 3326 Cu. Yds.  
Emb. 6307 " "  
+28% 6368 " "  
Borrow 3042 " "  
to be obtained from waste from S.H. 1. Sec. C. (Sta. 0-27 to 13+00.)







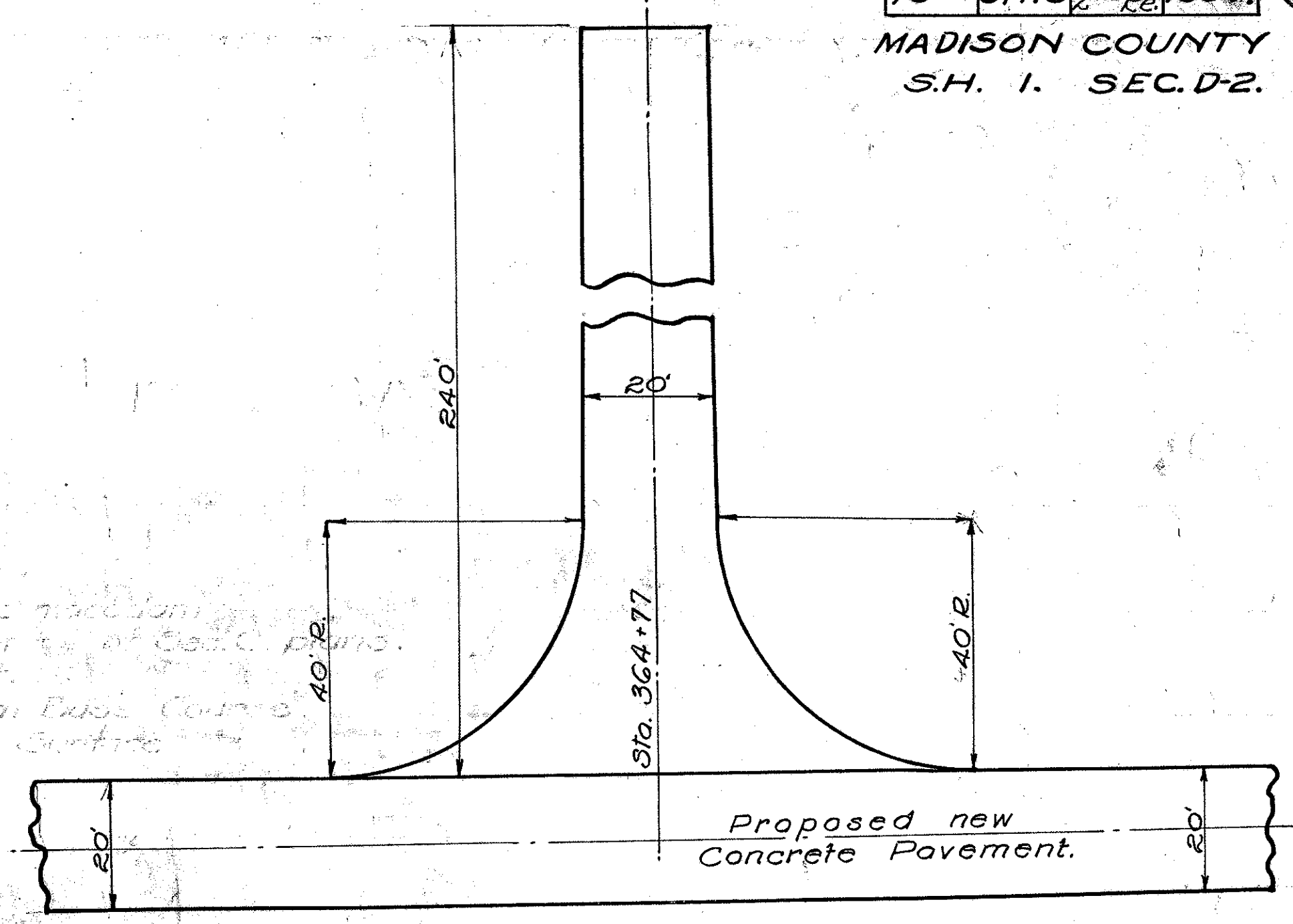
VILLAGE OF LAFAYETTE.

Sta. 367+53.2  
Build Spec. #2 Inlet  
Connect 15" V.S.P. from east and west also 12" tile from south, to this inlet. Remove Inlet in place.

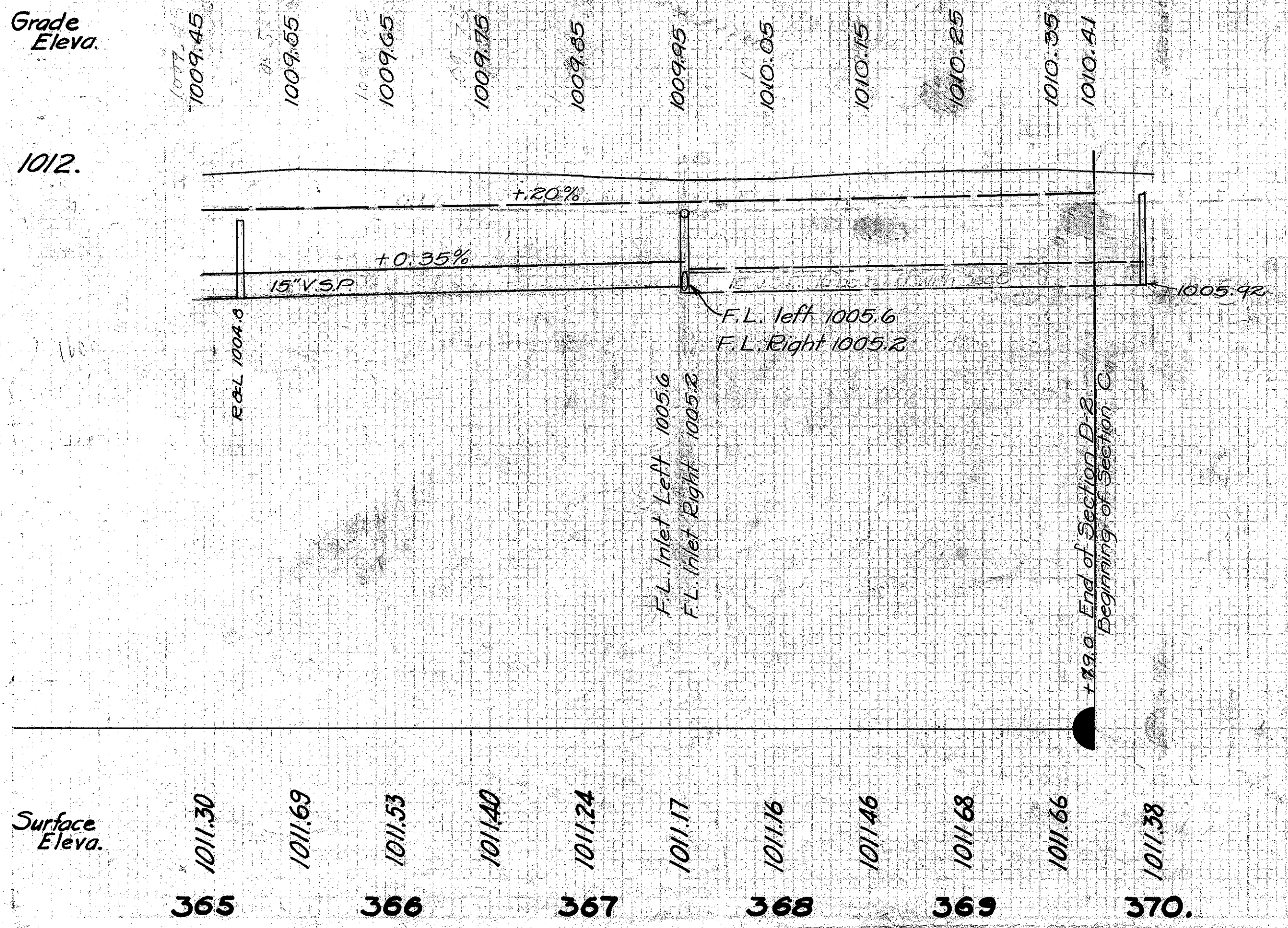
Sta. 366+79 to 369+79 R.  
Build 10' extra width pavement and 100' transition (See Sheet #42, Sec. C plans).  
277 Sq. Yds. extra pavement.

Sta. 361+00 to 369+79 R & L.  
12' adjacent to the pavement shall be surfaced 6" deep with material salvaged from old road metal.  
Total 2211 Sq. Yds.

Sta. 363+20 to 369+79 R.  
Sta. 362+00 to 369+79 L. (deducting 50' for side road)  
Build gravel or stone sidewalk 4' wide & 6" deep with #46 aggregate.  
Total 617 Sq. Yds.

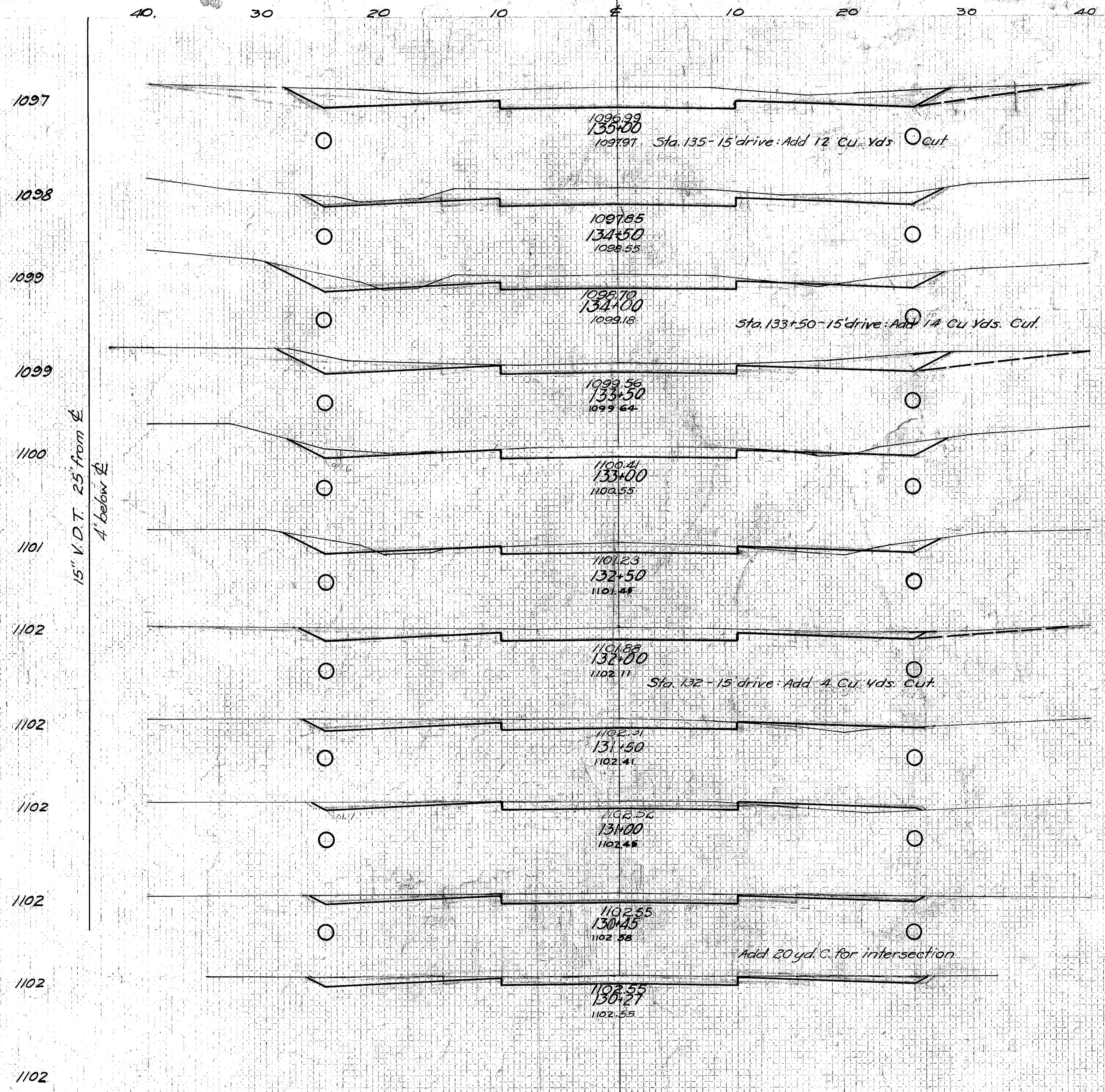


Sta. 364+77 Left  
Build Macadam Approach for side road. Excavation shown on cross sections.  
603 Sq. Yds. - 4 1/2" W. B. Mac. Base Course.  
603 Sq. Yds. - 4 1/2" W. B. Mac. Surf. Course.





Sellers  
Daire  
Holiday  
151



15" V.D.T. 25' from &  
4' below &

15" V.D.T. 25' from &  
4' below &

AREA		VOL	
CUT	FILL	CUT	FILL
72	0	112	0
43	0	81	1
40	1	114	1
44	0	66	1
27	1	45	5
22	4	59	4
42	0	14	4
30	4	44	9
18	5	47	5
28	0	19	0
29	0	20	0

T. Exc. 2965 cu. yds.  
Emb. 472 cu. yds.  
20% 566 cu. yds.  
Waste 2389 cu. yds.

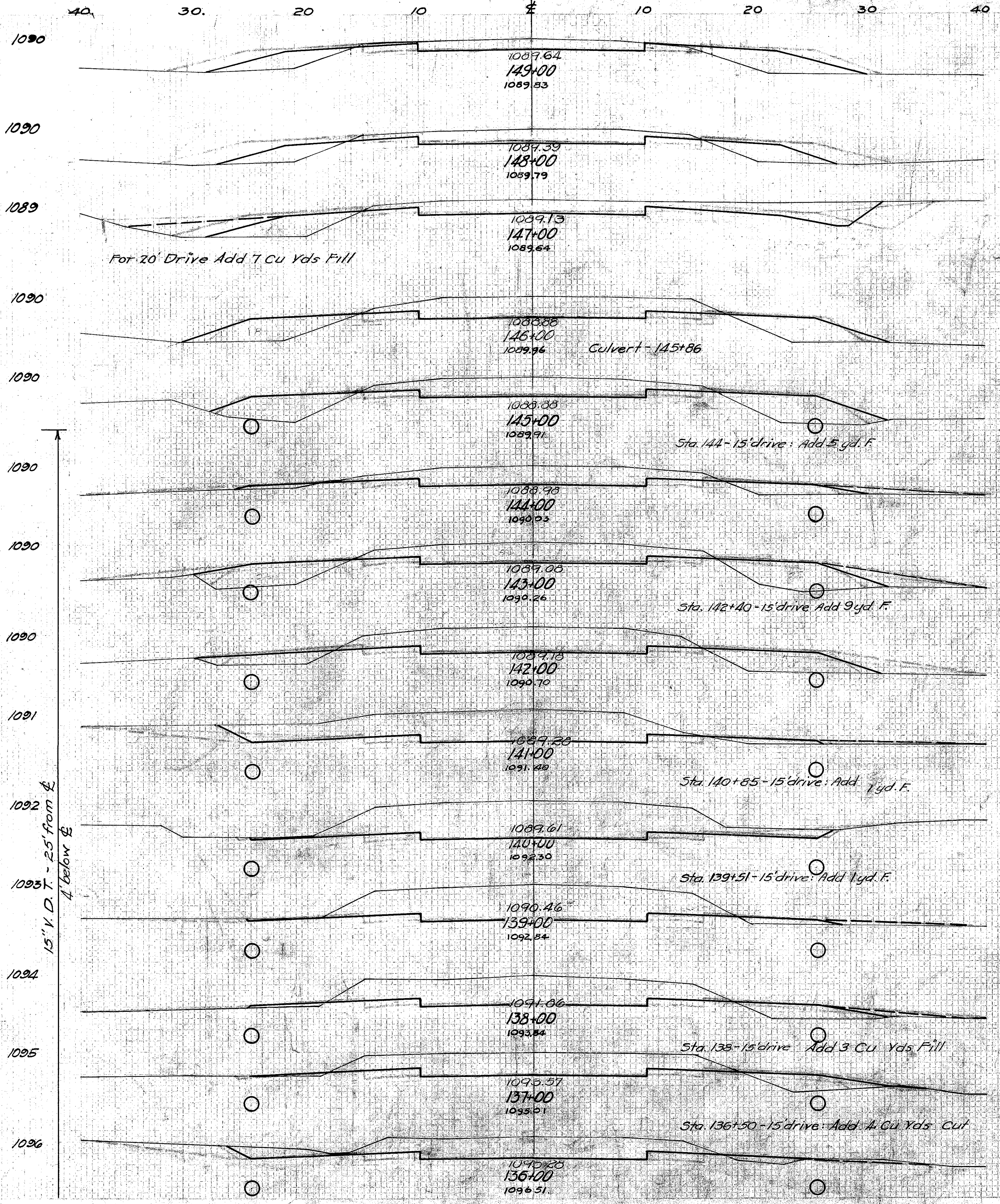
Sta. 130+27

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	190 2nd Re.	1932

20  
45

MADISON COUNTY  
S.H. 1. SEC. D-2





AREA		VOL.	
CUT	FILL	CUT	FILL
17	28	83	89
28	20	144	67
50	16		
		180	96
47	36		
		167	150
43	45		
		157	104
42	11		
		163	104
46	45		
		191	139
57	30		
		257	61
62	13		
		341	6
102	0		
		348	7
86	4		
		294	31
73	13		
		246	46
60	12		
		211	26
54	3		
		233	6
72	0		

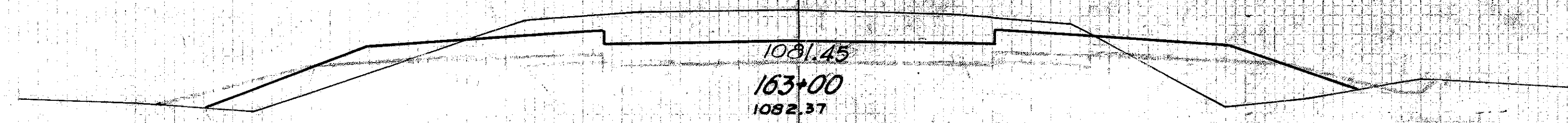
T. Exc. - 896 cu yds  
 Emb. - 747 cu yds  
 Emb. + 20% - 896 cu yds

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	21 45
10	OHIO	190 End. Re.	1932	

MADISON COUNTY  
 S.H. 1. SEC. D-2.  
 Sta 148+82

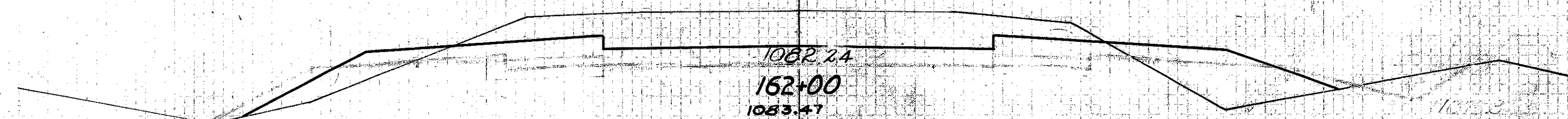


1082



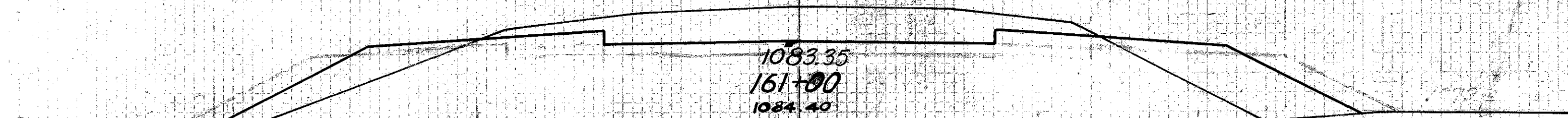
1081.45  
163+00  
1082.37

1083



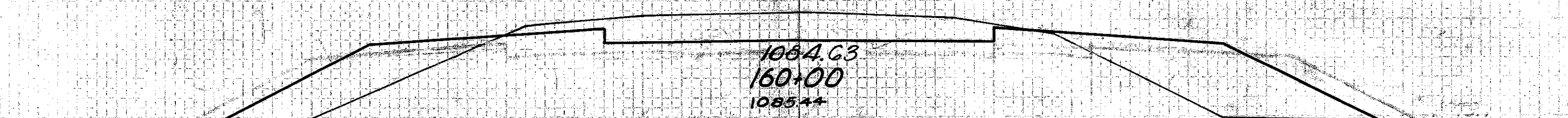
1082.74  
162+00  
1083.47

1084



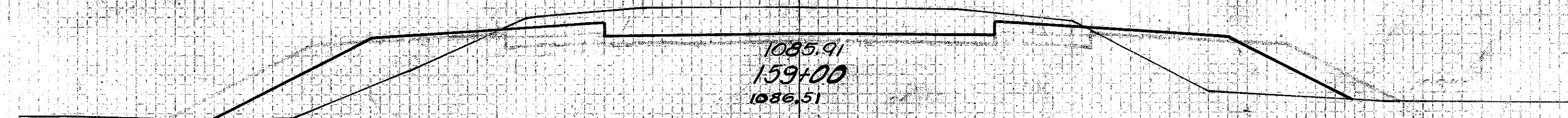
1083.35  
161+00  
1084.40

1085



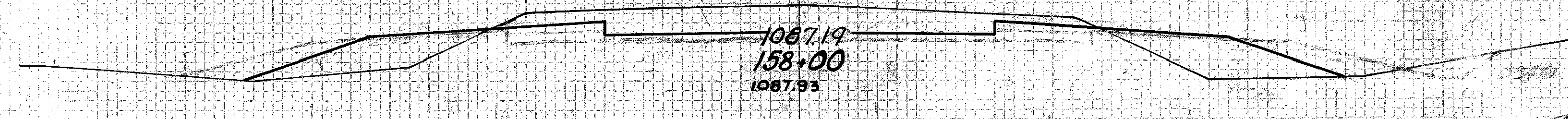
1084.63  
160+00  
1085.44

1086



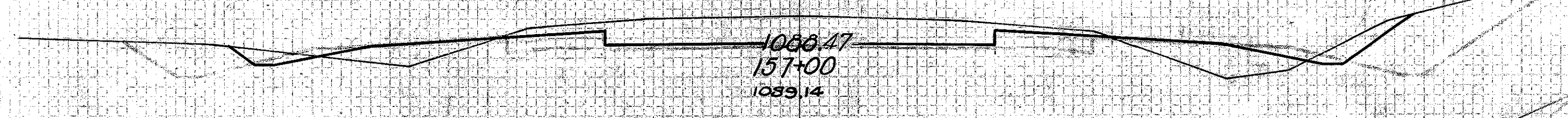
1085.91  
159+00  
1086.51

1087



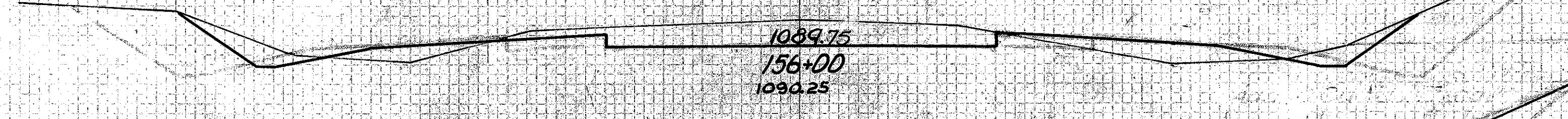
1087.19  
158+00  
1087.93

1089



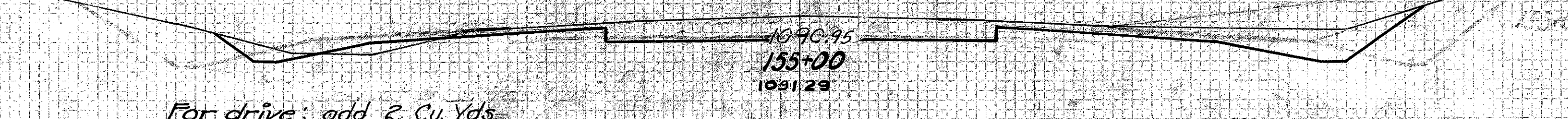
1088.47  
157+00  
1089.14

1090



1089.75  
156+00  
1090.25

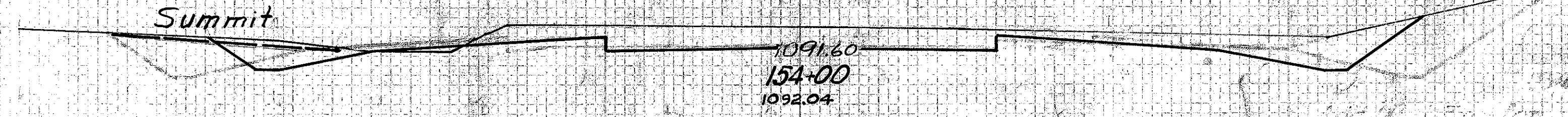
1091



1090.95  
155+00  
1091.29

For drive: add 2 Cu. Yds

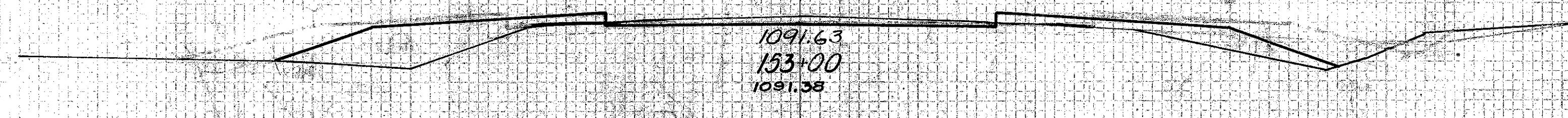
1092



Summit

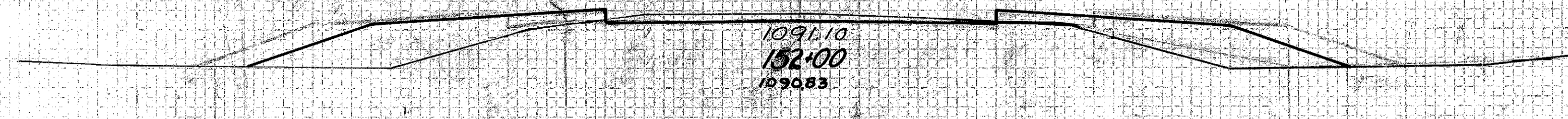
1091.60  
154+00  
1092.04

1091



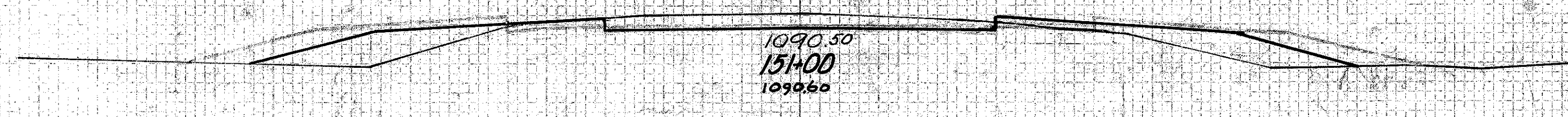
1091.63  
153+00  
1091.38

1090



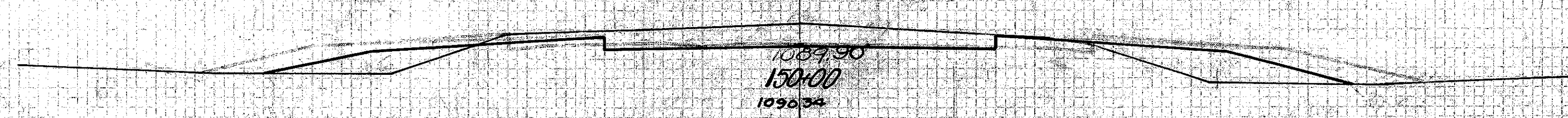
1091.10  
152+00  
1090.83

1090



1090.50  
151+00  
1090.60

1090



1089.90  
150+00  
1090.34

AREA	VOL
CUT	FILL
38	36
50	29
40	35
30	54
32	45
34	31
38	16
31	13
47	2
54	1
5	32
7	44
13	26
25	19
17	28

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	22 45
10	OHIO	190 2nd. Re	1932	

MADISON COUNTY  
S.H. 1. SEC. D-2.

Excav 590 Cu Yds  
Emb 492  
Emb +20% 590

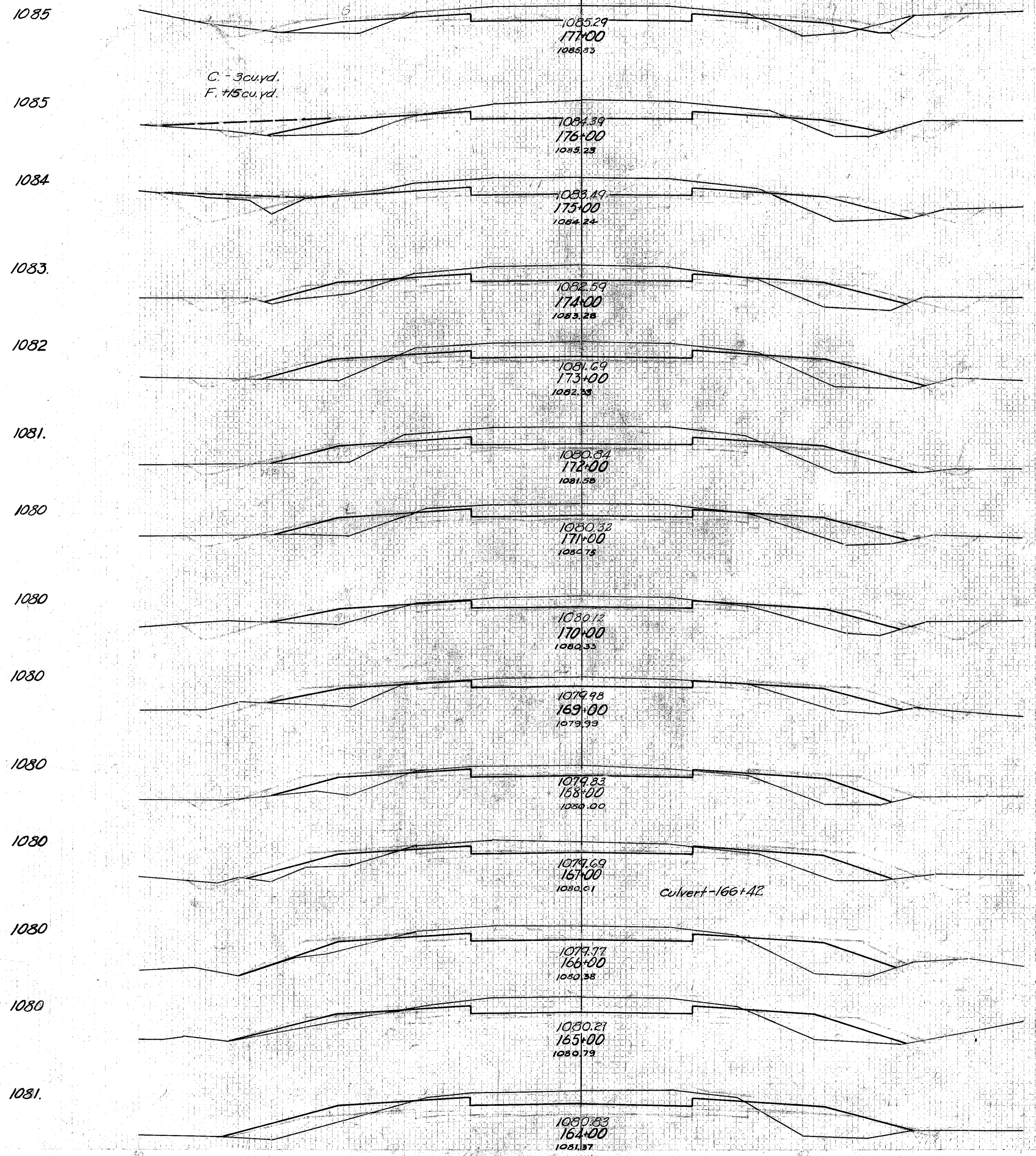
Sta 160+81

Excav 1087 Cu Yds  
Emb 906  
Emb +20% 1087

Sta 151+45



40 30 20 10 0 10 20 30 40



AREA		VOL	
CUT	FILL	CUT	FILL
36	12		
		132	45
		139	53
		7	3
39	18		
		148	56
41	12		
		135	69
32	25		
		122	106
34	32		
		137	106
40	25		
		120	93
25	25		
		83	91
20	24		
		68	91
17	25		
		72	94
22	26		
		85	93
24	24		
		102	100
31	30		
		119	96
33	22		
		0	0
		113	98
28	31		
		122	124
38	36		

Drive

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	23 45
10	OHIO	190 2nd. Re.	1932	

MADISON COUNTY  
S.H. 1. SEC. D-2.

Sta. 176+05

+ Exc. 1198 cu yds.  
Emb. 998  
Emb + 20% 1198

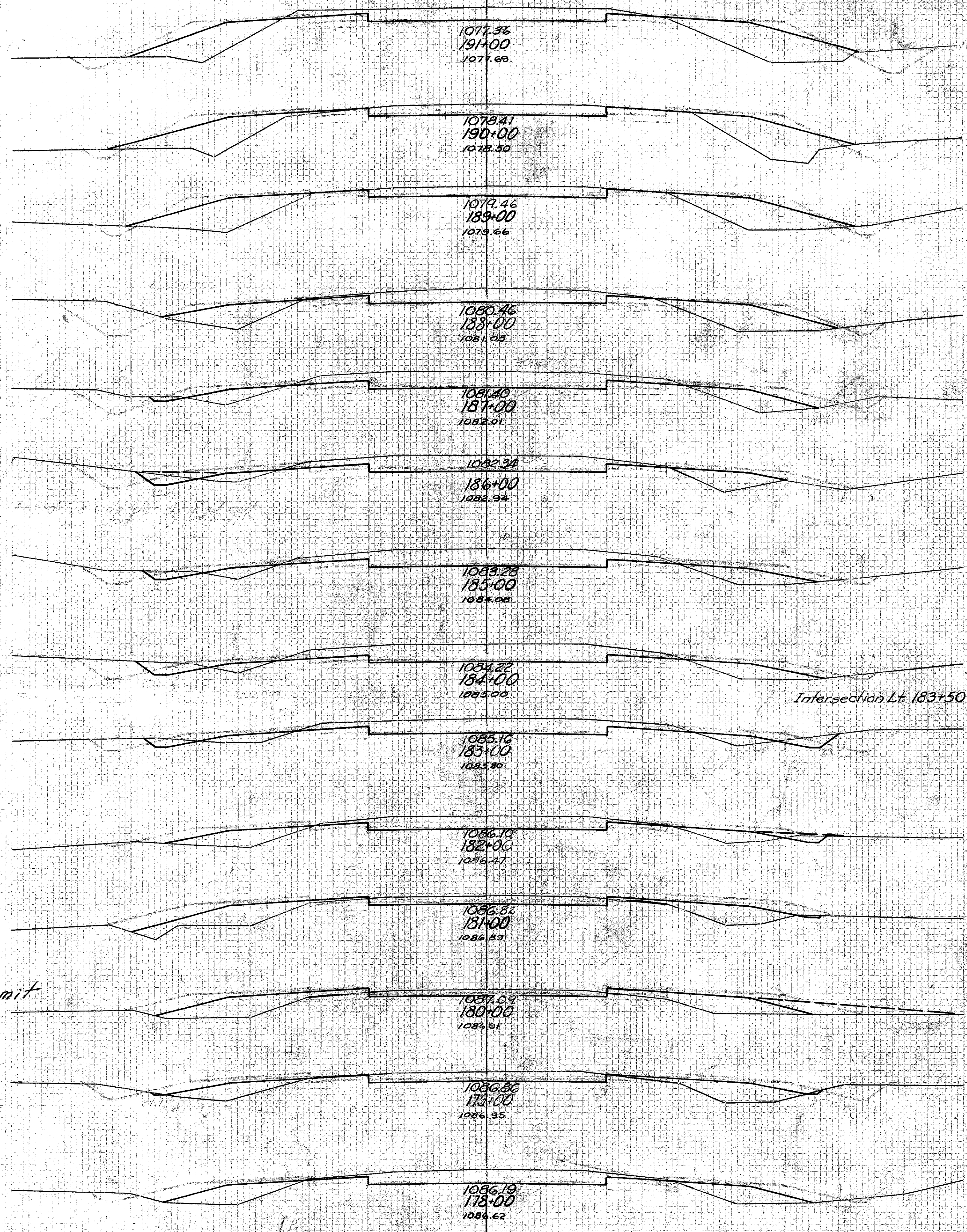
Sta. 165+00

Mud



40 30 20 10 0 10 20 30 40

1077  
1078  
1079  
1081  
1082  
1082  
1084  
1085  
1085  
1086  
1086  
1086  
1086  
1086  
1086



AREA		VOL.	
CUT	FILL	CUT	FILL
24	44		
		74	169
16	47		
		63	165
18	42		
		76	139
23	33		
		107	87
35	14		
		131	46
36	11		
		141	44
40	13		
		154	43
43	10		
		55	10
		48	31
36	7	98	21
		113	43
25	16		
		72	81
14	28		
		44	115
10	34		
		5	8
		48	106
		45	98
16	23		
		76	80
25	20		
		113	59
36	12		

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	190 2nd Re.	1932

24  
45

MADISON COUNTY  
S.H. 1. SEC. D-2.

Drive Lt.

Intersection Lt. 183+50

Drive Rt.

Drive Rt.

Summit

Exc. 851 cu yds  
Emb. 70.9

Emb. 20% 851

Sta. 183+67

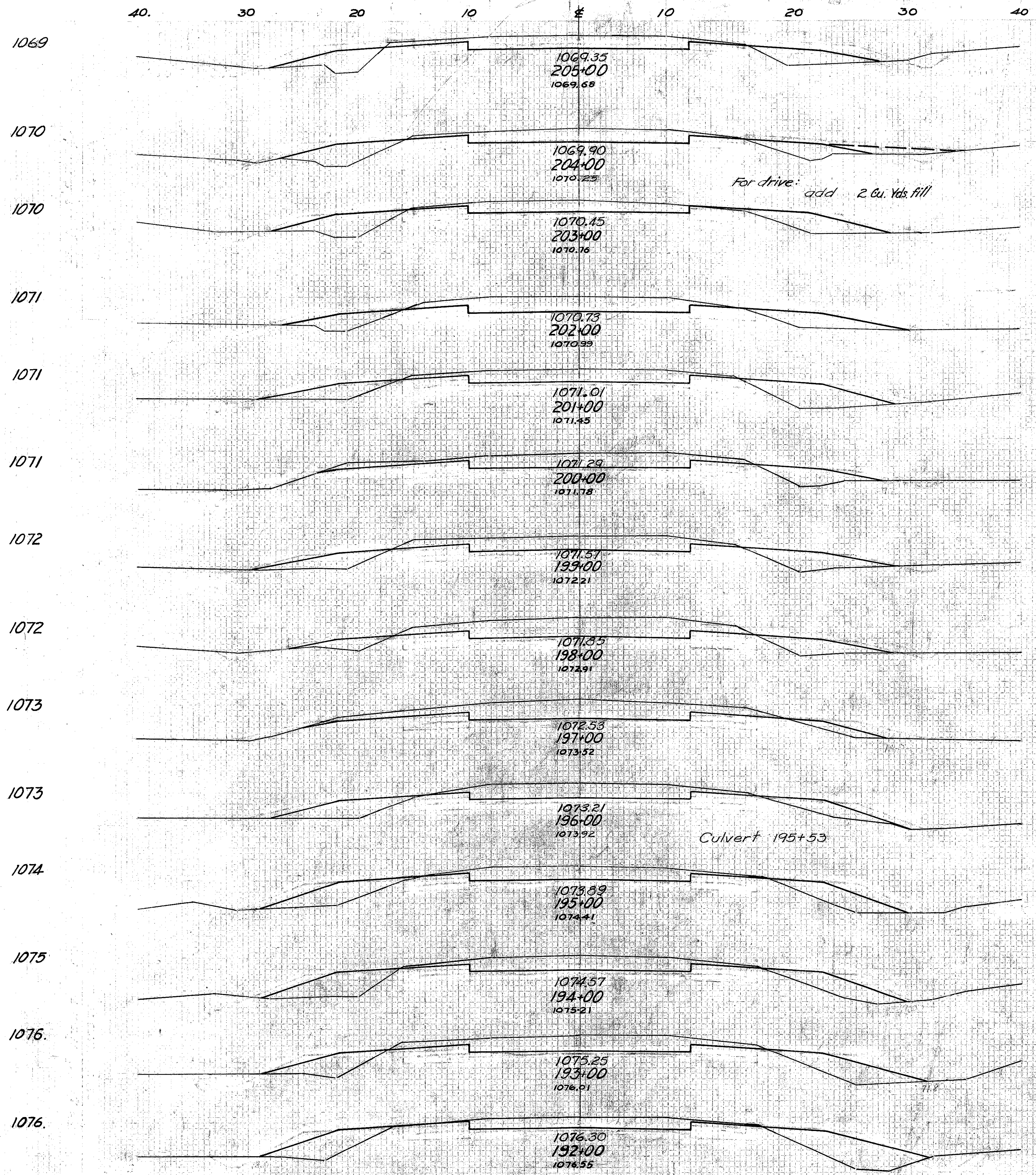
Exc. 330 Cu Yds  
Emb. 275  
+ 20% 330

Sta. 179+92

Exc. 366 Cu Yds  
Emb. 305  
+ 20% 366

PLAN





AREA	VOL.
CUT	FILL
22	21
	85 81
24	23
	85 2 93
22	27
	100 87
32	20
	111 89
28	28
	111 70
32	10
	120 61
33	23
	143 72
44	16
	7 2
	163 39
	156 37
44	5
	137 52
30	23
	107 93
38	27
	107 102
30	29
	119 107
34	29
	102 125
21	40
	81 153
	83 156
24	44
	2 3

+Exc - 855 cu. yds  
 Emb - 713 cu. yds  
 Emb +20% - 855 cu. yds

Sta. 197+95

+Exc - 809 cu. yds  
 Emb - 674 cu. yds  
 Emb +20% - 809 cu. yds

Sta. 191+02

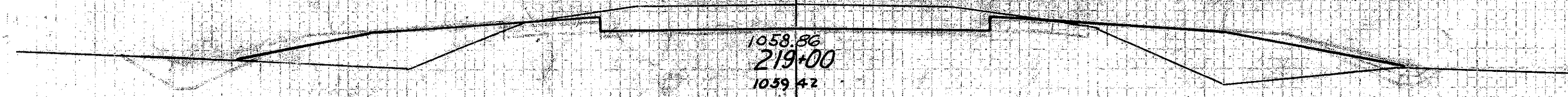
FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	190 2nd Re.	1932

25  
45

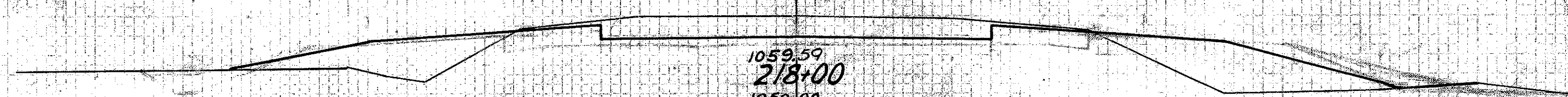
MADISON COUNTY  
 S.H. 1. SEC. D-2.



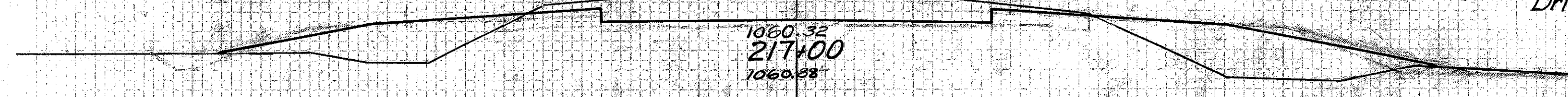
1059



1060

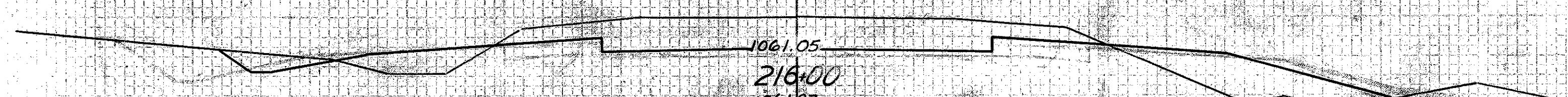


1060



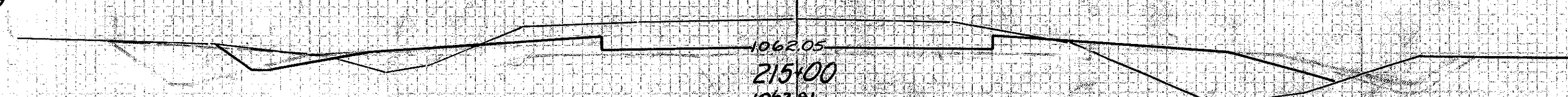
Drive Lt.

1062



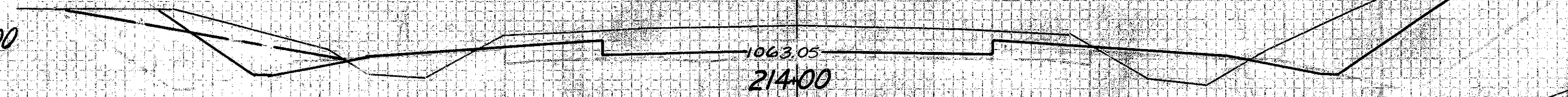
1062

215+07

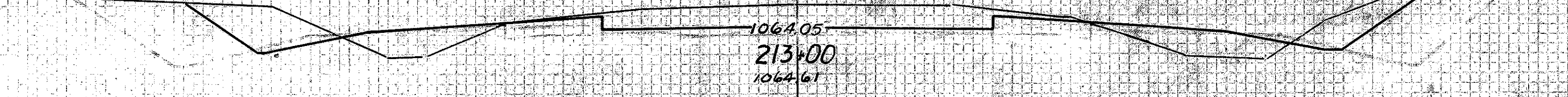


1063

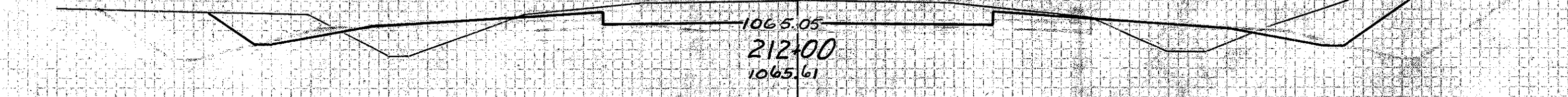
214+00



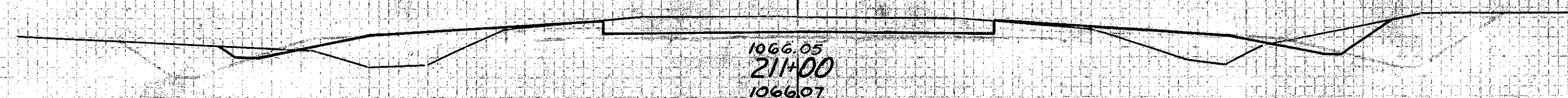
1064



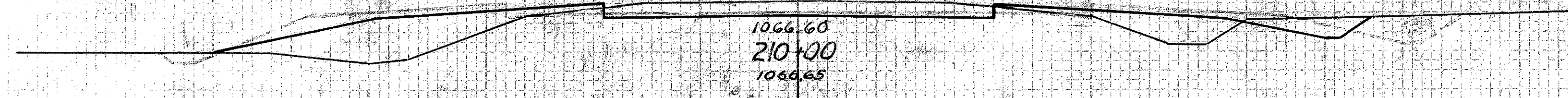
1065



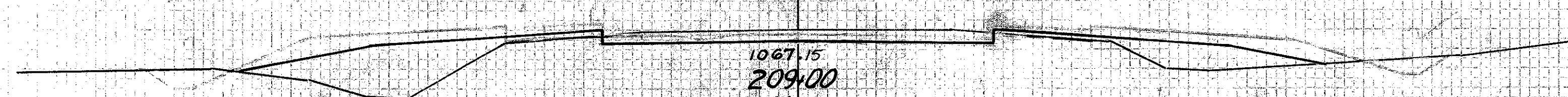
1066



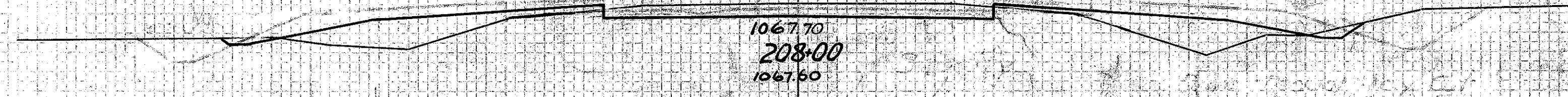
1066



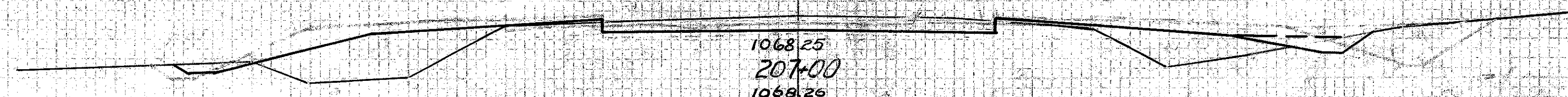
1068



1067

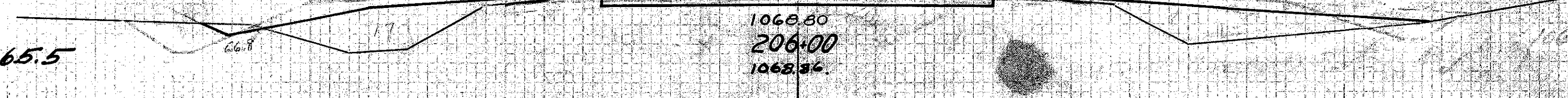


1068



1068

1065.5



AREA		VOLTS.	
CUT	FILL	CUT	FILL
26	38		
		93	139
24	37		
		96	154
26	46		
		10	10
		130	131
		120	121
44	25		
		150	94
37	26		
33		178	72
63	13		
65		196	57
41	13		
		154	63
42	16		
		117	65
21	19		
		74	94
17	32		
		59	124
13	35		
		52	115
15	27		
			+2
		57	109
16	32		
14	34		
		33	76
		56	128
		23	52
16	35		
16	35		
		70	104
22	21		

Excav = 1190 cu yds  
 Emb. = 992 cu yds  
 +20% = 1190 cu yds

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	190 2nd. Re.	1932

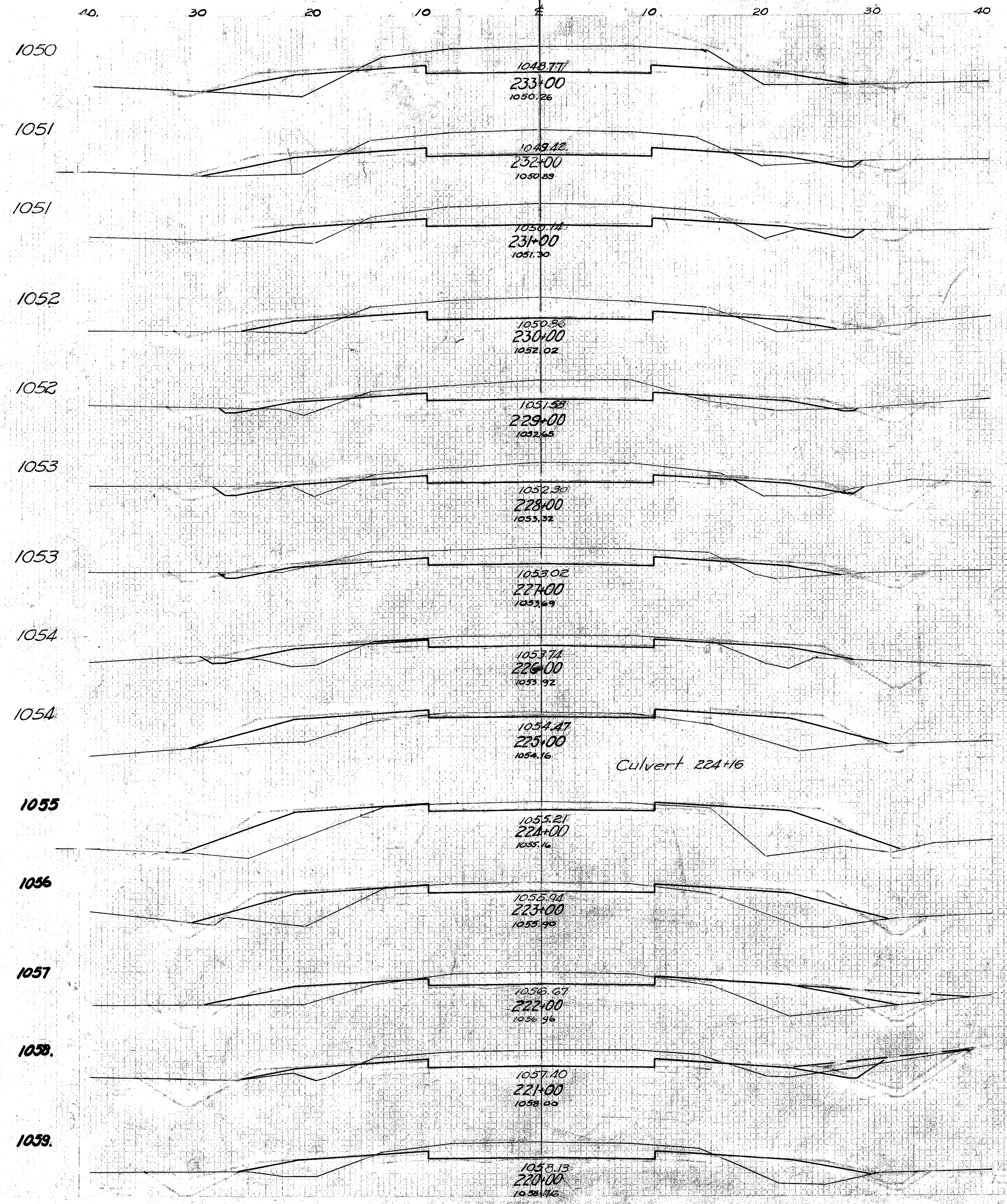
26  
45

MADISON COUNTY  
S.H. 1. SEC. D-2.

Sta 216+92

Sta 206+41

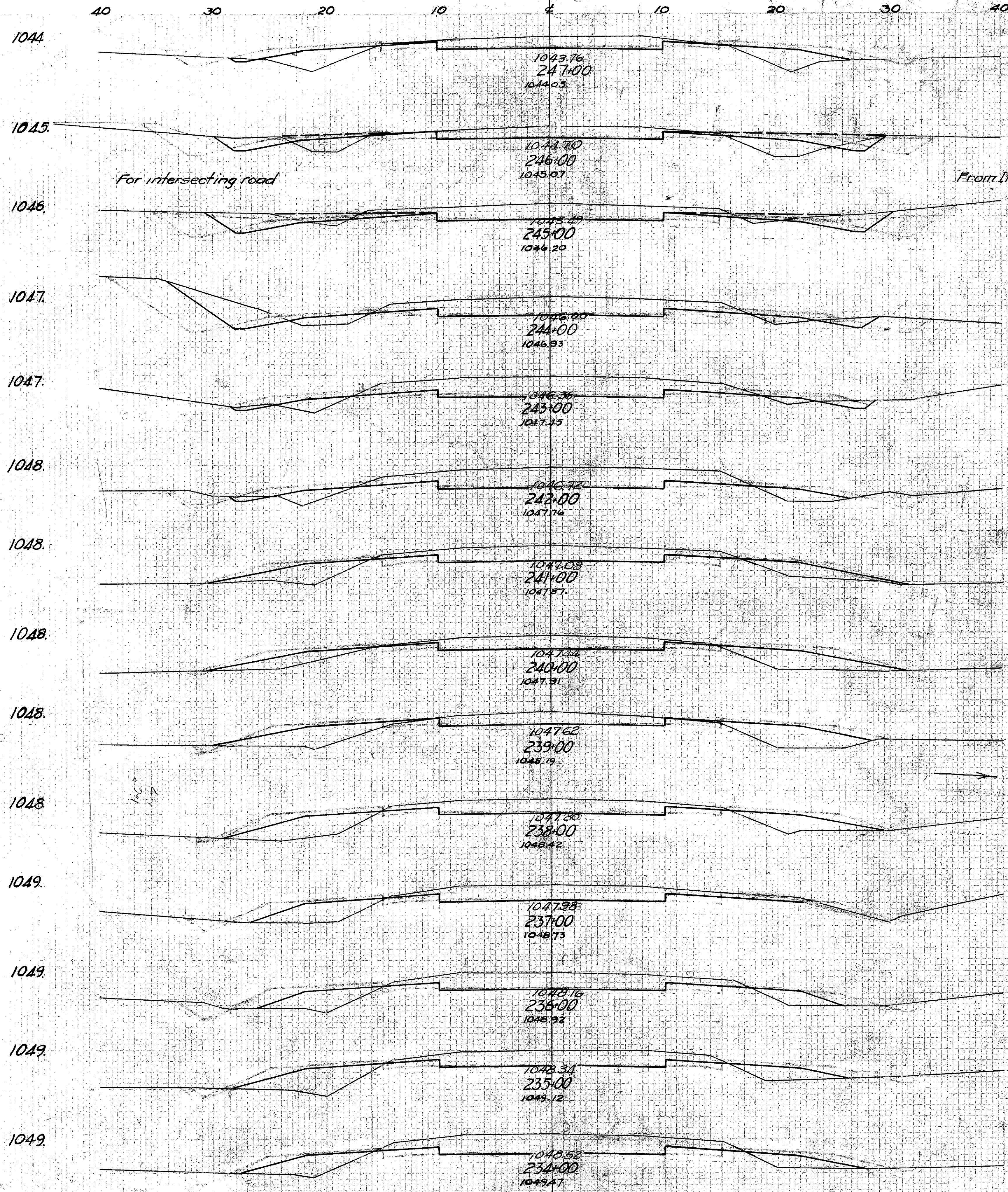




AREA		VOL	
CUT	FILL	CUT	FILL
60	21		
		217	63
57	14		
		194	43
43	12		
		172	44
45	12		
		151	44
38	12		
		152	44
44	12		
		156	37
40	8		
		111	54
20	21		
		52	152
8	61		
		41	237
14	67		
		56	220
16	52		
		67	193
20	52		
20	42		
		106	107
37	16		
37	10		
		124	74
30	30		
		104	126
26	38		
		95	

Exc - 2414 cu yds  
 Emb - 2012 cu yds  
 \*Emb + 20% - 2414 cu yds.

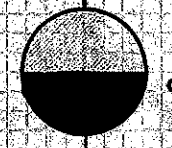




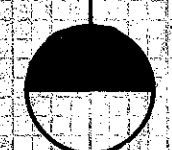
AREA.	VOL.
CUT	FILL
21	22
	91.69
28	15
22	26
	89
	96.67
30	10
50	3
	193.77
54	6
	191.22
49	6
	181.31
49	11
	80.31
	157.61
	77.30
36	22
	117.93
24	28
	81.115
20	34
	96.119
32	30
	122.80
34	13
	78.34
	130.57
	52.23
36	18
	130.81
34	26
	141.83
42	19
	189.74

Excav. 1366 cu. yds.  
 Emb. 1138 cu. yds.  
 Emb. +20% 1366 cu. yds.

Excav. 565 cu. yds.  
 Emb. 471  
 Emb. +20% 565



Sta. 241+49



Sta. 236+40

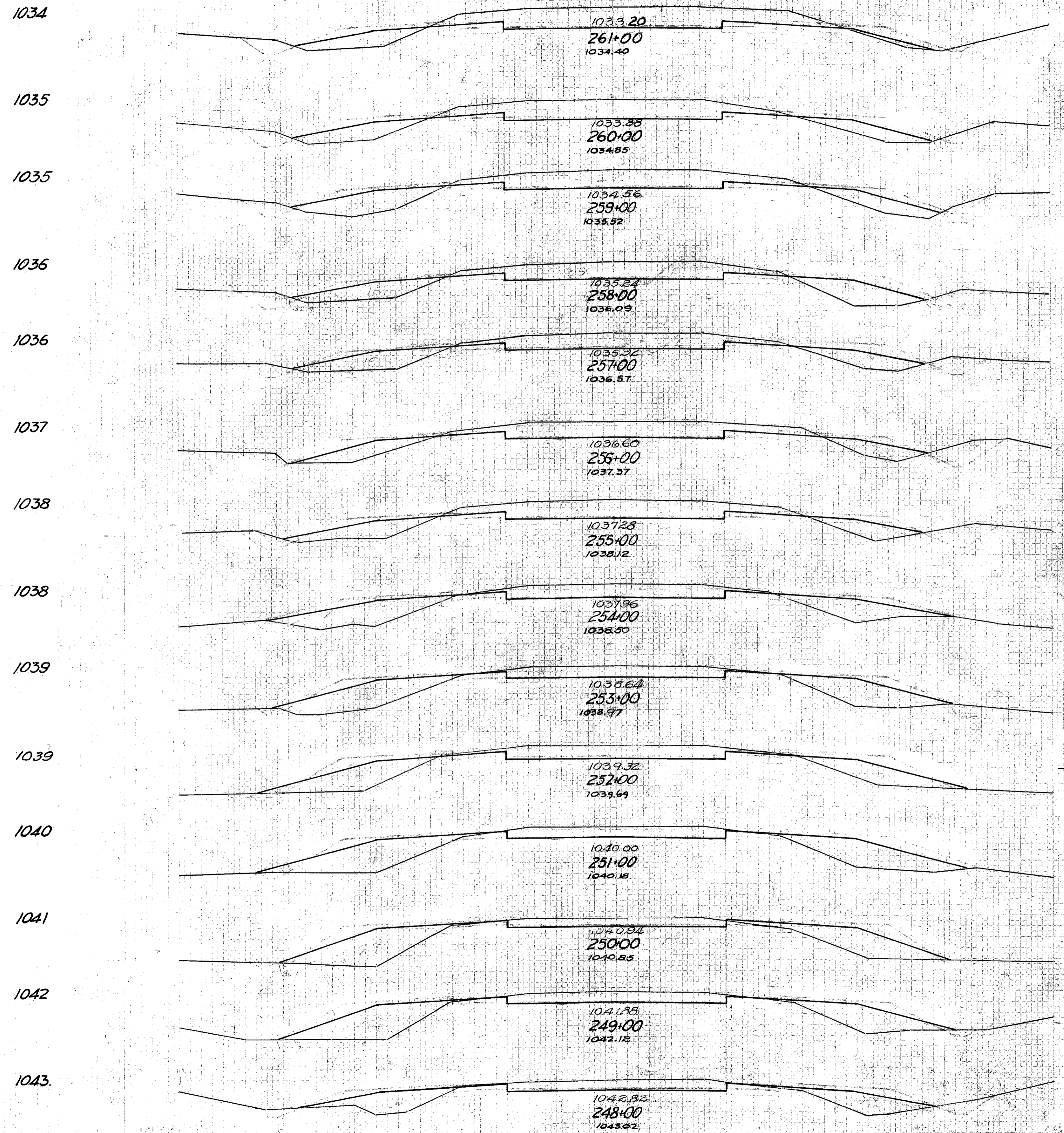
FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	190 2nd Re.	1932

28  
45

MADISON COUNTY  
 S.H. 1. SEC. D-2



40 30 20 10 0 10 20 30 40



AREA		VOL.	
CUT	FILL	CUT	FILL
53	12	106	39
		180	67
		74	28
44	24		157
			100
41	30		148
			115
39	31		135
			109
34	28		137
			91
40	21		152
			81
42	23		128
			130
27	47		94
			178
24	49		27
			47
		91	157
		64	170
25	36		83
			170
20	56		63
			198
14	51		78
			183
28	48		85
			144
18	30		72
			96
21	22		

FED. RD. DIST. NO. 10 STATE OHIO FED. AID PROJECT 190 2nd.Re. FISCAL YEAR 1932

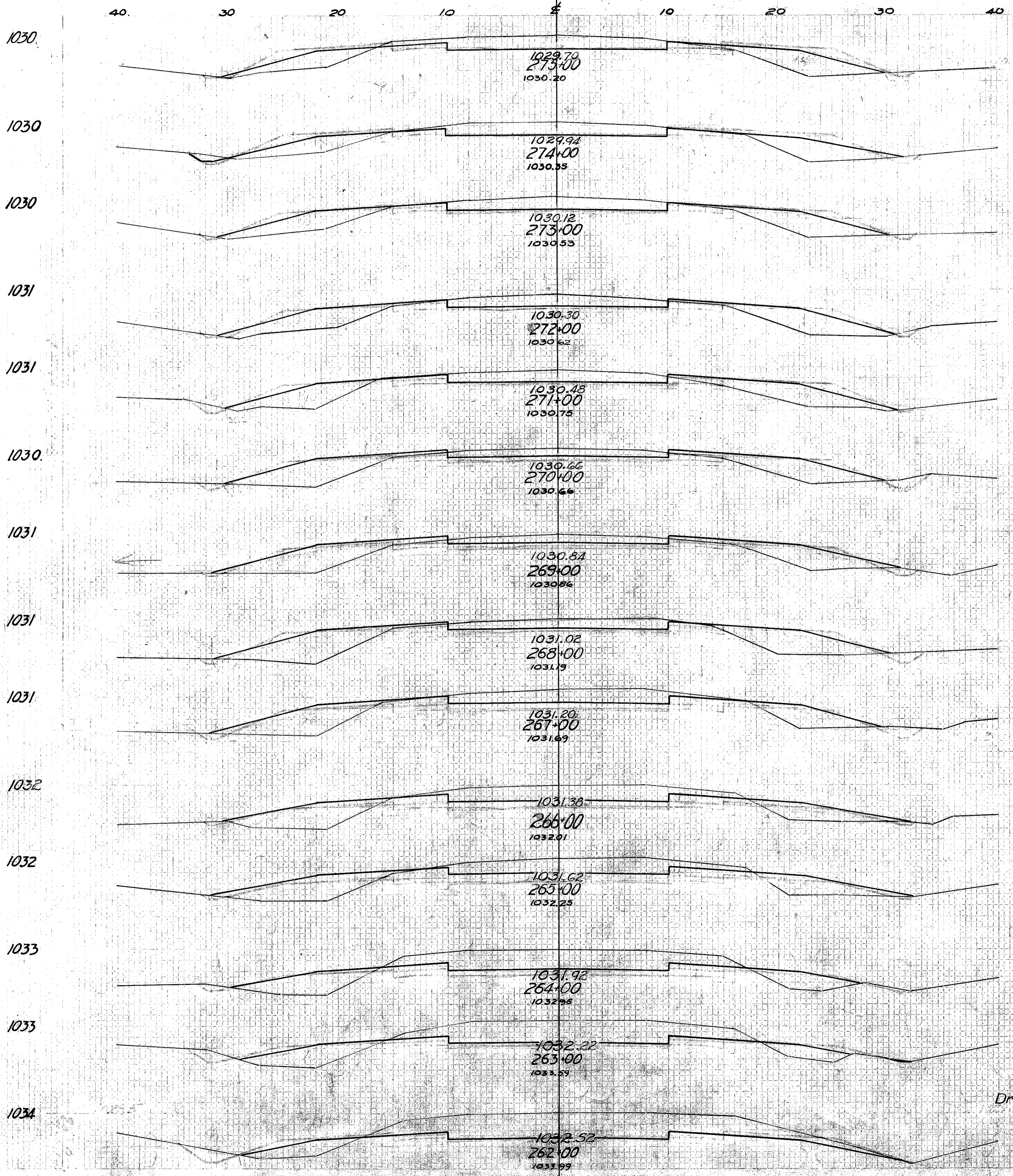
MADISON COUNTY  
S.H. 1. SEC. D-2  
Sta. 260+41

(29)  
(45)

Exc. — 1052 cu yds  
Emb. — 877 cu yds  
Emb. + 20% — 1052 cu yds

252 + 70





AREA	VOL.
CUT	FILL
28	30
	96 115
24	32
	85 124
22	35
	78 144
20	43
	76 150
21	38
	65 157
14	47
	21 65
	54 176
	33 111
15	48
	59 178
17	48
	81 161
27	39
	106 131
30	32
	111 128
30	37
	137 120
14	28
	178 93
52	22
	233 59
	5
74	10
	235 41

FED. RD. DIST. NO. 10 OHIO STATE 190 2nd Re. PROJECT 1932 FISCAL YEAR 30 45

MADISON COUNTY  
S.H. 1. SEC. D-2.

Exc. - 1375 cu yds.  
Emb. - 1146  
+ Emb. + 20% - 1375

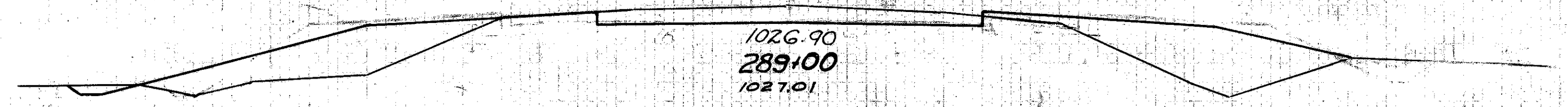
Exc. - 1279 cu yds.  
Emb. - 1066 cu yds.  
+ Emb. + 20% - 1279 cu yds.

Sta. 269+63

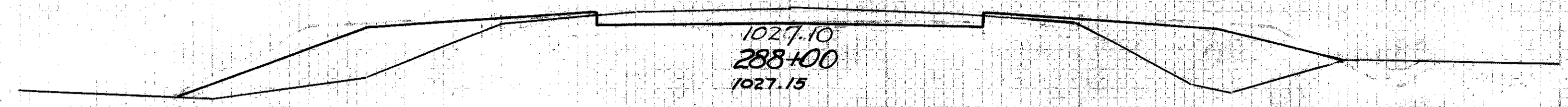
Drive Rt.



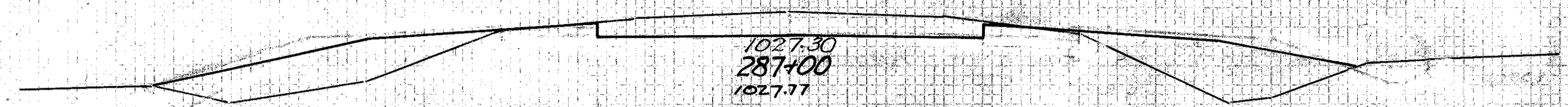
1027



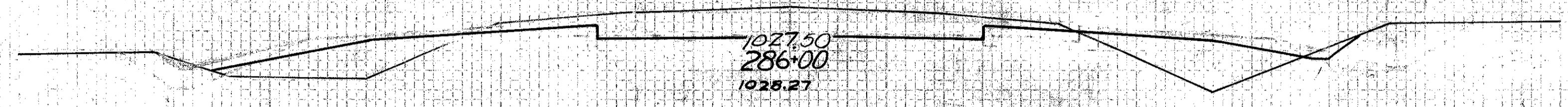
1027



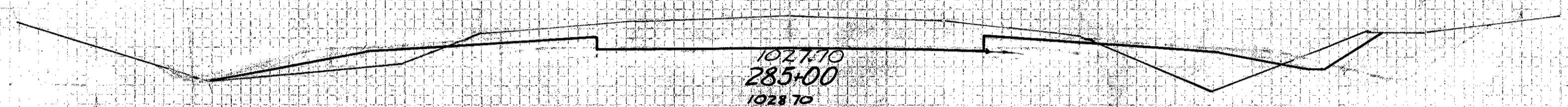
1028



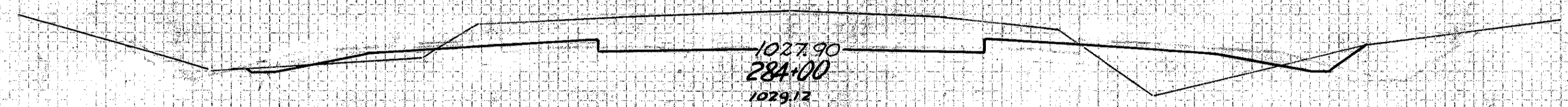
1028



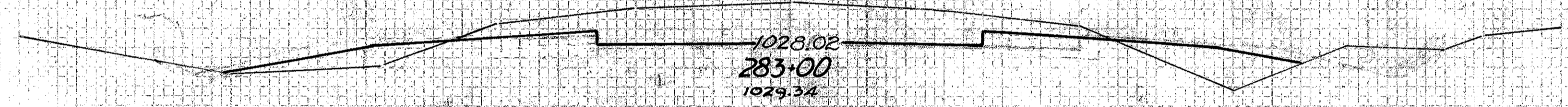
1029



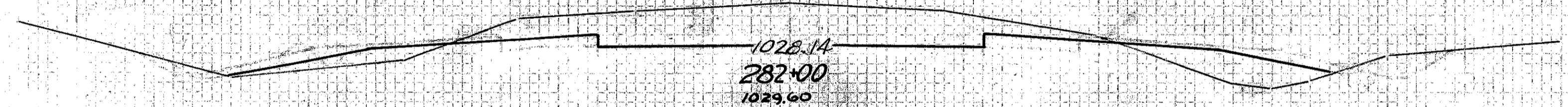
1029



1029

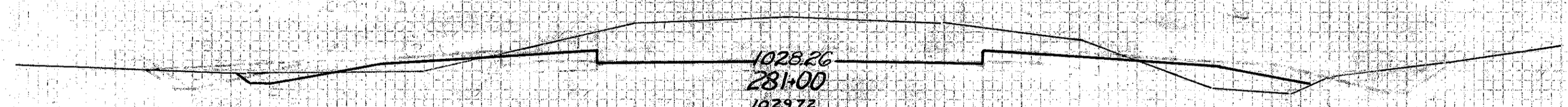


1029

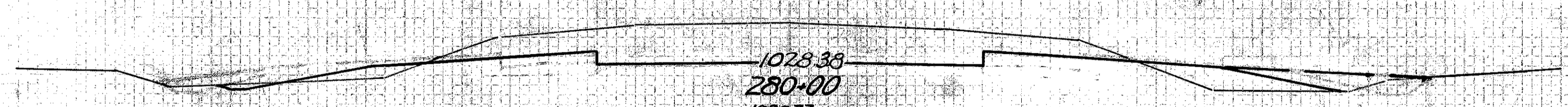


Drive

1030

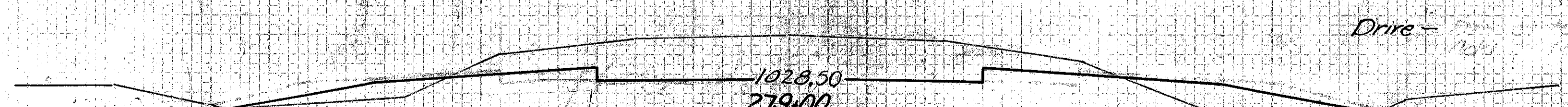


1030

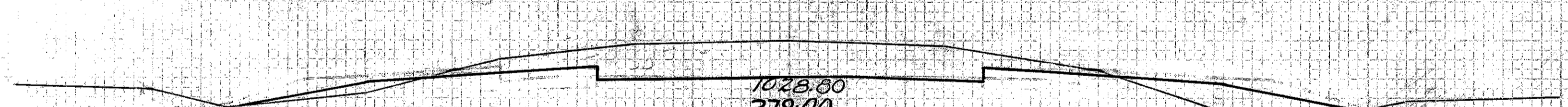


Drive

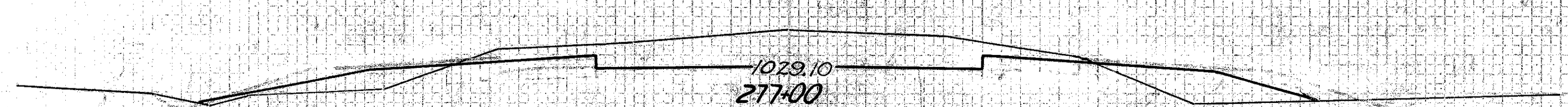
1030



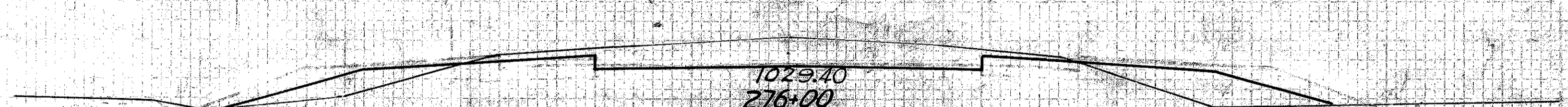
1030



1030



1030



AREA VOL.	
CUT	FILL
16	61
	59 215
16	55
	74 200
24	53
	107 161
34	34
	137 98
40	19
	178 65
56	18
	196 69
50	21
	194 72
55	18
	200 54
	72
56	11
	84 17
	211 41
	127 24
58	11
	215 57
	2
58	20
	280 65
50	15
	170 65
12	20
	135 80
31	23
	107 98
28	30

Exc - 1263 cu yds  
Emb - 1053 cu yds  
Emb + 20% - 1263 cu yds



280+60

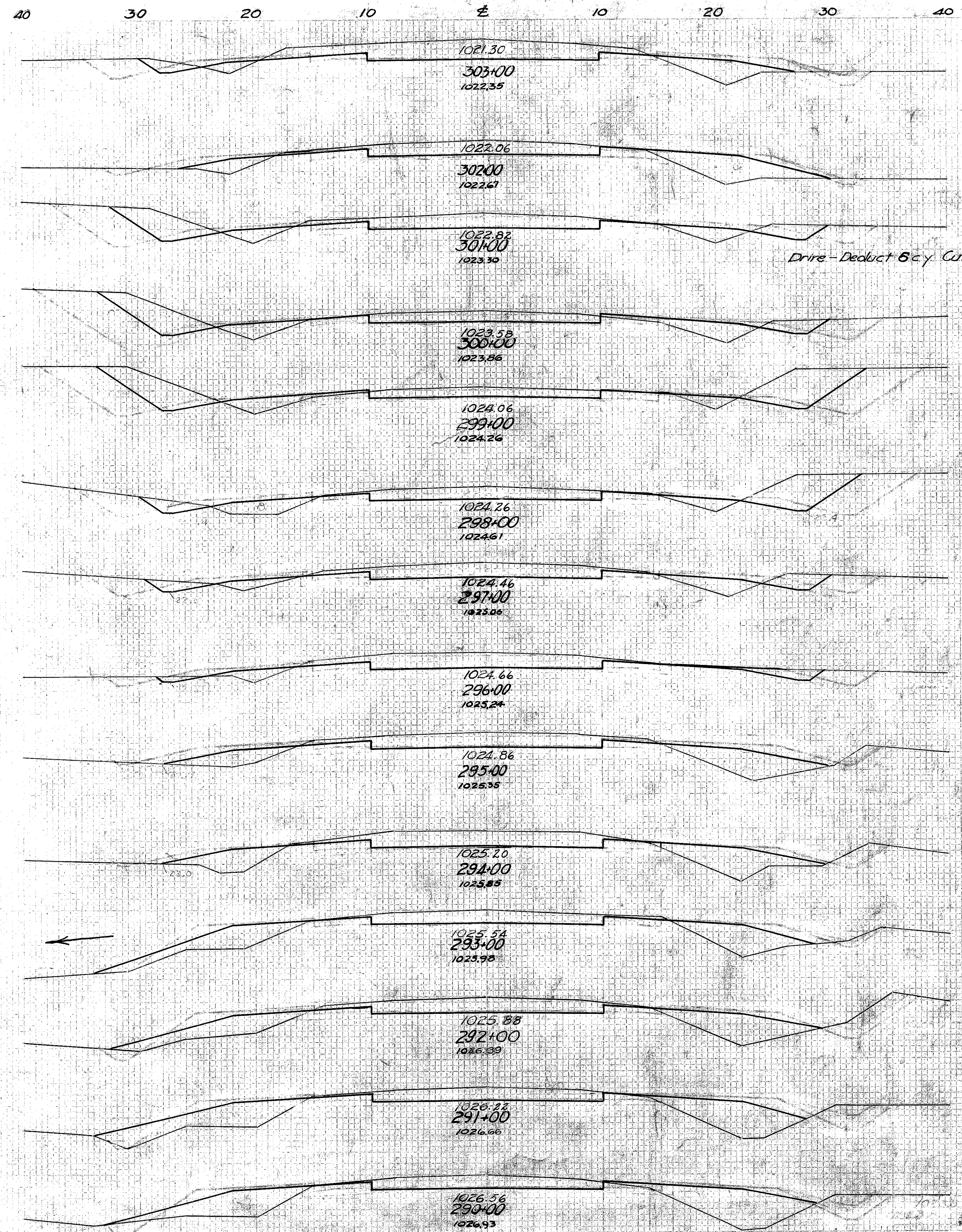
FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	190 2nd. Re.	1932

31  
45

MADISON COUNTY  
S.H. 1. SEC. D-2.



1022  
1023  
1023  
1024  
1024  
1025  
1025  
1025  
1025  
1025  
1026  
1026  
1026  
1026  
1027  
1027



AREA	VOL
CUT	FILL
39	14
	117 74
24	26
	0 0
	131 67
47	10
	131 67
	-6
	156 48
37	16
	148 50
43	11
	159 43
43	12
	148 41
37	10
	133 76
35	4
	111 59
25	28
	2
	102 113
31	33
	98 131
22	38
	85 137
24	36
	85 159
22	50
	67 180
14	47
	28 100
	56 200
	28 100

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	190 2nd Re.	1932

MADISON COUNTY  
S.H. 1. SEC. D-2.

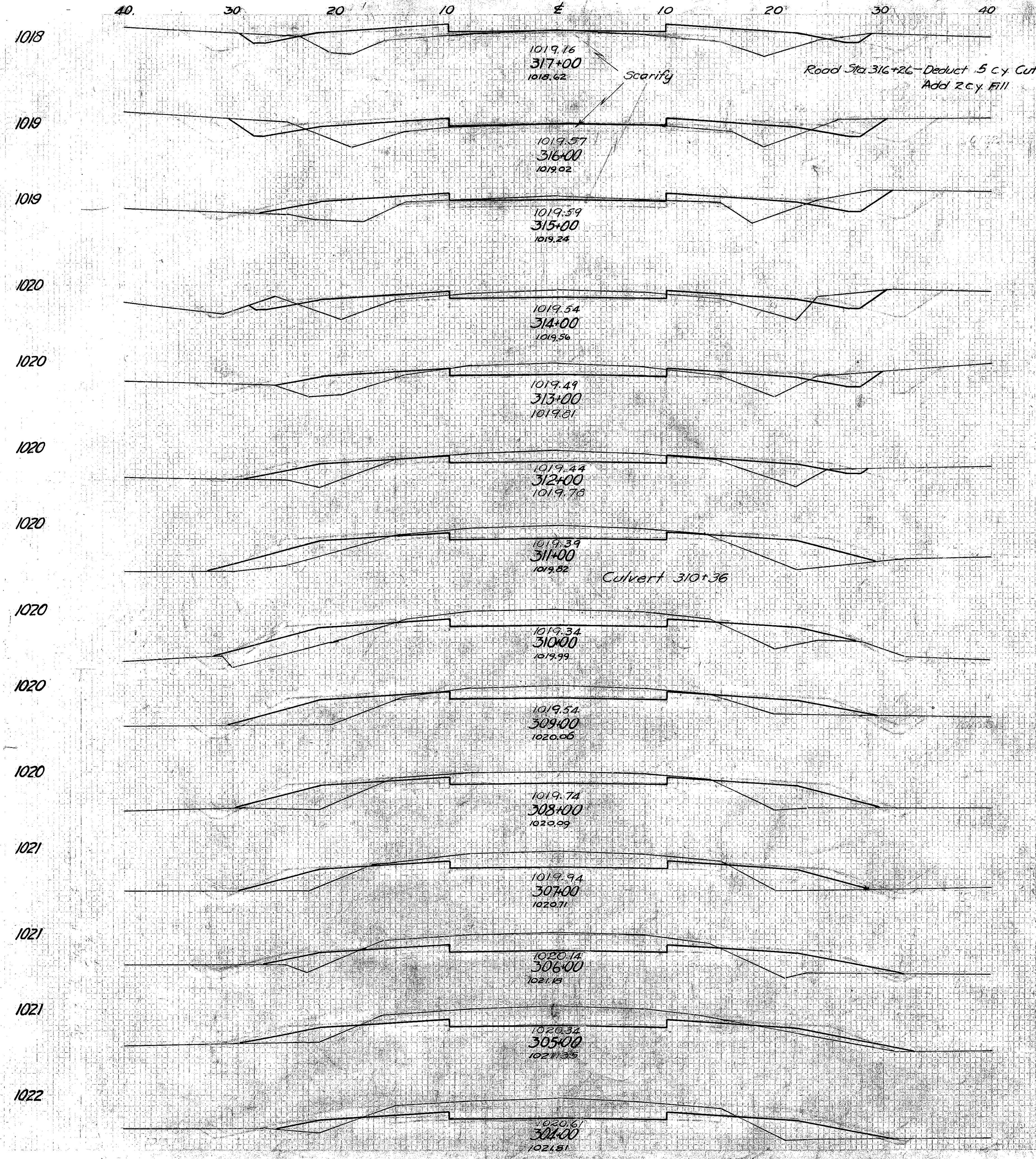
Sta. 302+00

Exc. - 1447 cu yds  
Emb. - 1206 cu yds  
+ 20% = 1447 cu yds

Sta. 289+50

32  
45





AREA VOL.	
CUT	FILL
3	39
	-5 42
15	33 133
	50 117
12	30
	61 100
21	24
	85 96
25	29
	71 90
	81 104
	10 14
19	27
	80 120
24	38
	107 131
34	33
	98 120
19	32
	80 124
24	35
	100 113
30	26
	131 102
41	29
	154 76
42	12
	159 57
44	19
	154 61
39	14

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	33 45
10	OHIO	190 2nd Re	1932	

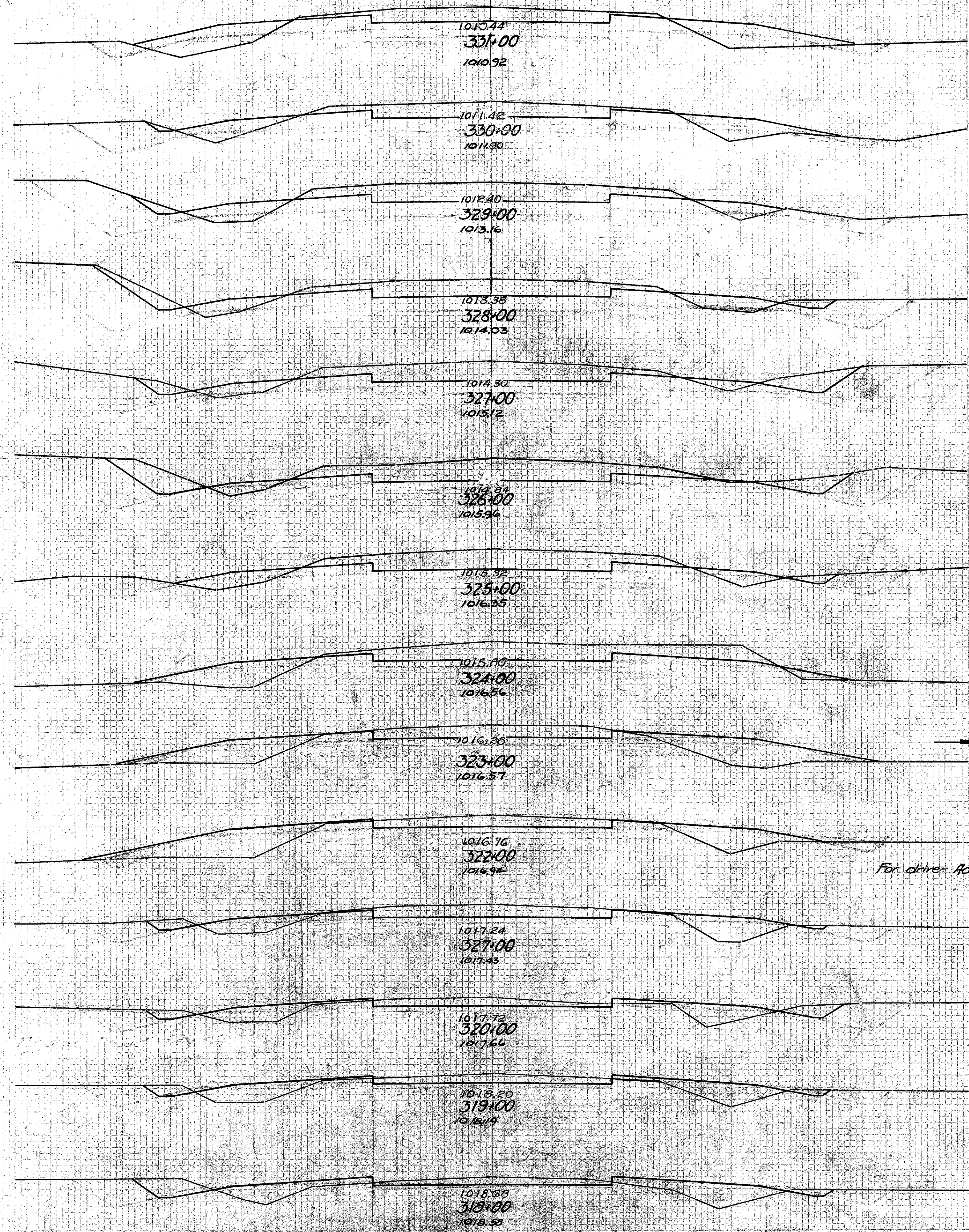
MADISON COUNTY  
S.H. 1. SEC. D-2.

Sta. 312+13

Exc. - 1190 cu. yds  
Emb. - 992 cu. yds  
+ Emb. ± 20% - 1190 cu. yds



1011  
1012  
1013  
1014  
1015  
1016  
1017  
1017  
1017  
1017  
1018  
1018  
1018  
1018  
1019



For drive Add 3 cu. Yds. Fill

AREA		VOL.	
CUT	FILL	CUT	FILL
28	39	117	122
32	27	141	85
44	19	167	63
46	15	181	48
52	11	213	30
63	5	198	37
44	15	159	70
42	23	115	135
20	50	70	176
18	45	78	126
24	23	74	85
16	23	57	94
15	28	63	106
19	29	41	126
3	39		

Excav 2609 Cu. Yds  
Emb. 2174  
+ 20% 2609

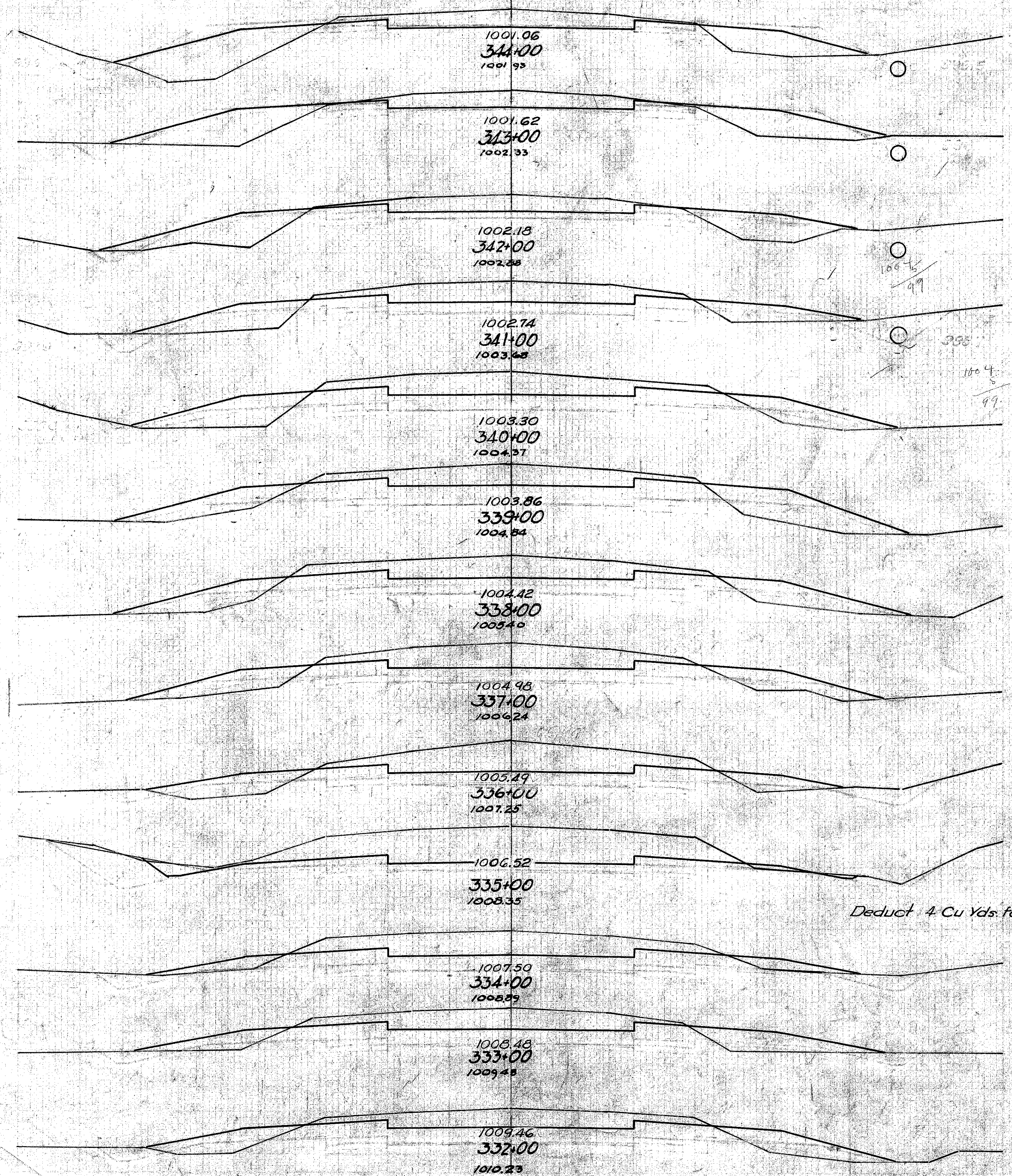
FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	190 2nd. Re	1932

MADISON COUNTY  
S.H. 1. SEC. D-2.



40 30 20 10 0 10 20 30 40

1002  
1002  
1003  
1004  
1004  
1005  
1005  
1006  
1007  
1008  
1009  
1009  
1010



AREA	VOL	
	CUT	FILL
30	54	
22	43	96 189
		40 81
		85 174
50		45 93
24	46	
		109 148
35	34	
		143 139
42	41	
		146 169
37	50	
		144 159
41	36	
		154 128
42	33	
		170 109
50	26	
		263 50
92	1	
		-4
		28 3
		263 24
		235 21
50	12	
		163 74
35	28	
		133 107
34	30	
		115 128
23	39	

FED. RD. DIST.	STATE	FED. AID PROJ. YEAR	FISCAL YEAR	
10	OHIO	190 2nd. Re.	1932	35 45

MADISON COUNTY  
S.H. 1 SEC. D-2.

Sta. 342+53

Exc. 1198 Cu Yds  
+ Emb 998  
+ Emb +20% 1198

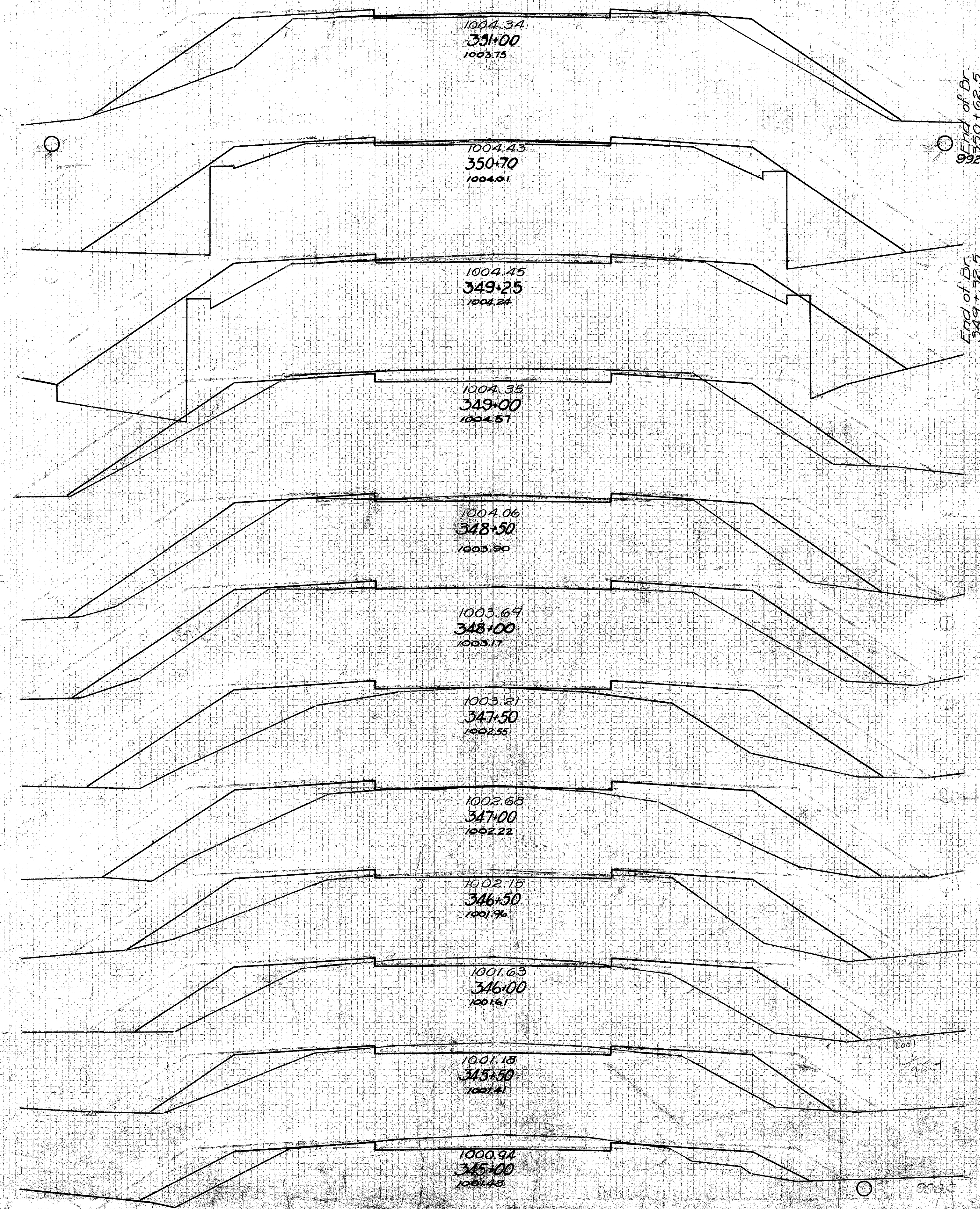
Deduct 4 Cu Yds for drive

Sta. 334+89



40 30 20 10 4 10 20 30 40

1003  
1004  
1004  
1004  
1004  
1004  
1003  
1002  
1002  
1002  
1001  
1001  
1001



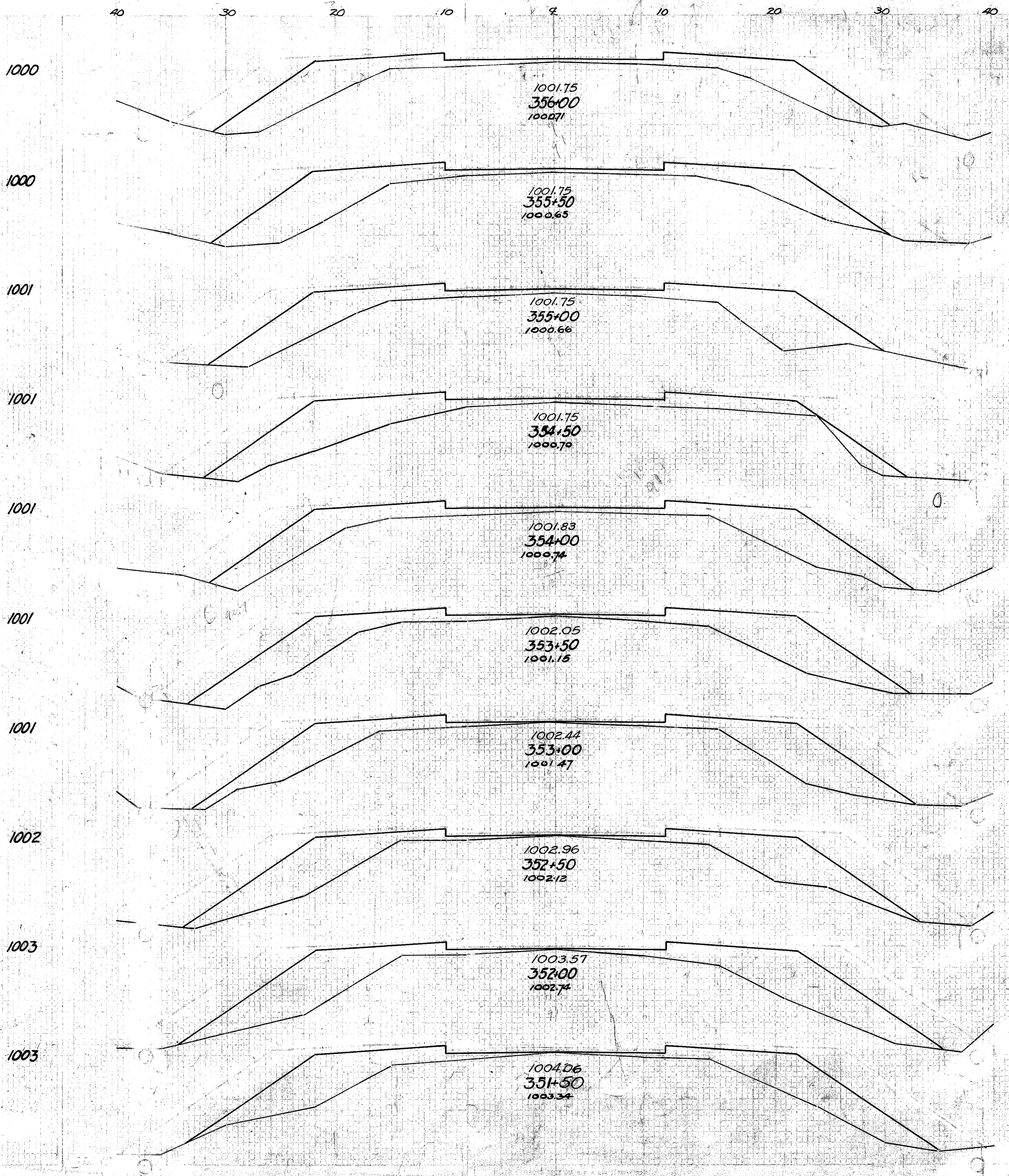
AREA	VOL
CUT	FILL
6	62
7	97
7	113
2	16
3	5
11	6
11	130
19	83
30	49
35	119
8	80
8	146
0	80
0	205
0	141
0	250
0	129
8	202
8	89
17	159
11	83
23	123
14	50
34	76
23	32
49	80
30	54

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	190 2nd Re	1932

36  
45

MADISON COUNTY  
S.H. 1. SEC. D-2.





AREA	VOL.
CUT	FILL
0	100
0	191
0	105
0	209
0	120
0	209
0	105
0	200
0	112
0	219
0	125
0	219
0	112
0	215
0	120
0	246
0	147
0	252
0	126
6	174
6	62

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	190 2nd. Re.	1932

MADISON COUNTY  
S.H. 1. SEC. D-2.

(37)  
45



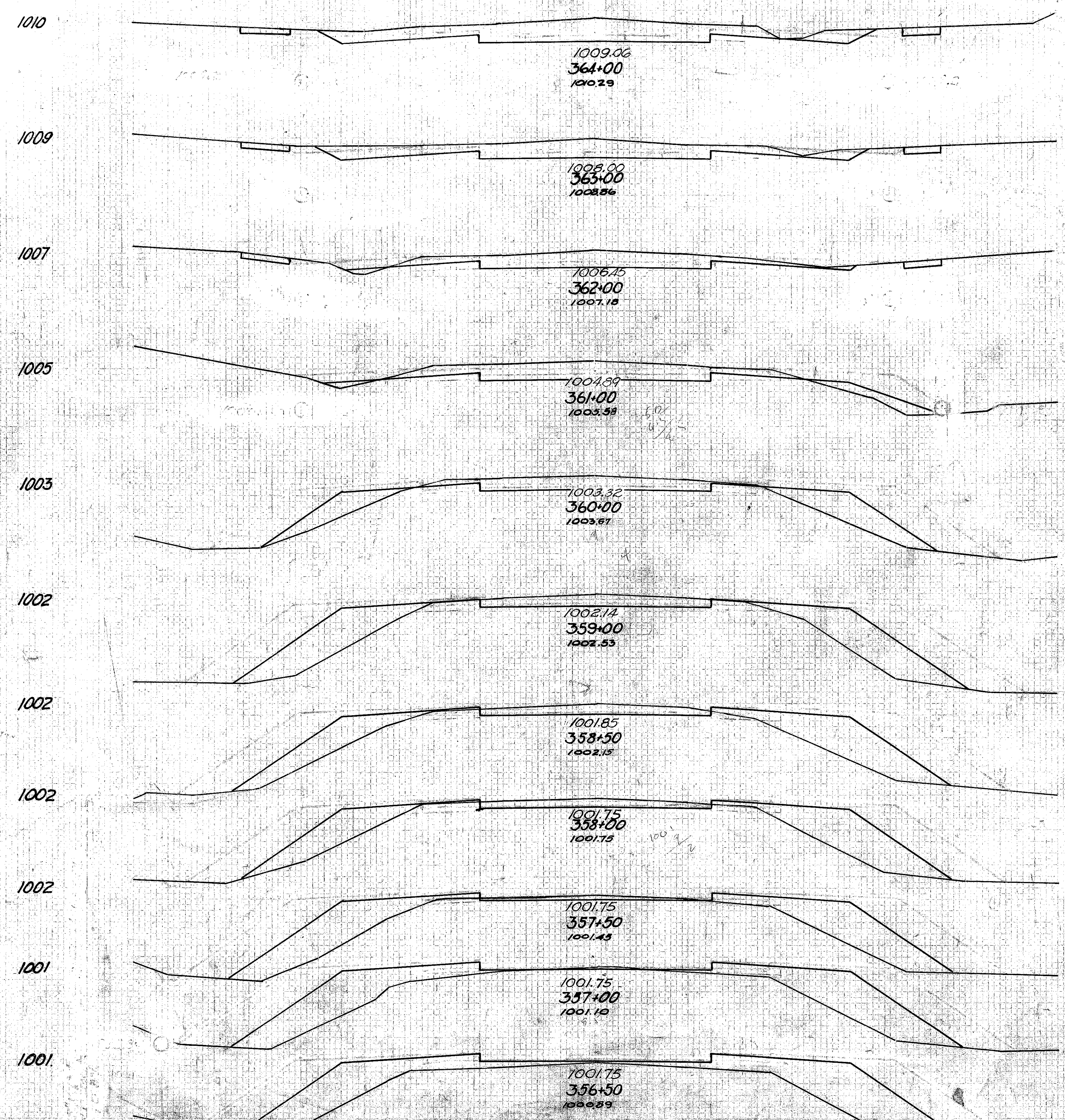
40 30 20 10 0 10 20 30 40

AREA	VOL	
	CUT	FILL
1010	58 0	196 0
1009	48 0	148 2
1007	32 1	131 20
1005	39 10	119 98
1003	25 43	83 244
1002	20 78	35 137
1002	18 70	28 124
1002	13 65	19 143
1002	8 90	8 176
1001	1 100	0 191
1001	0 107	0 191

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	190 2nd. Re.	1932

38  
45

MADISON COUNTY  
S. H. 1. SEC. D-2.



Excavation 3526 Cu. Yd.  
Embankment 5307 " "  
+ 20% Borrow 3042 " "

To be obtained from waste on S.H. 1 - Sec. C  
and placed by Contractor for that Section



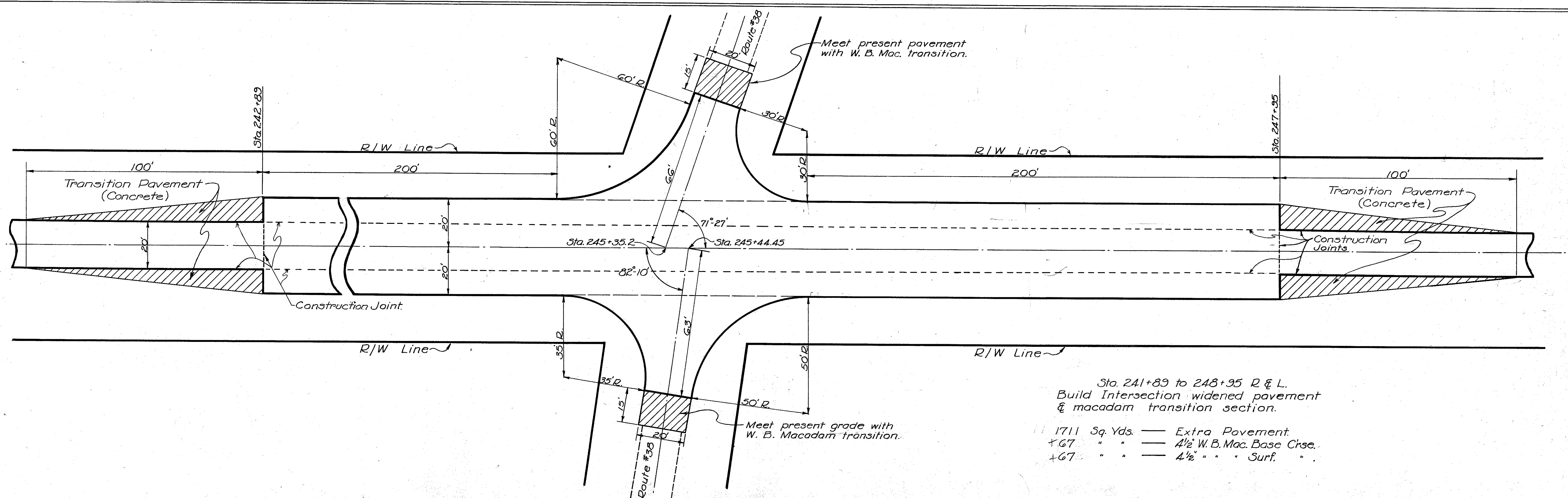
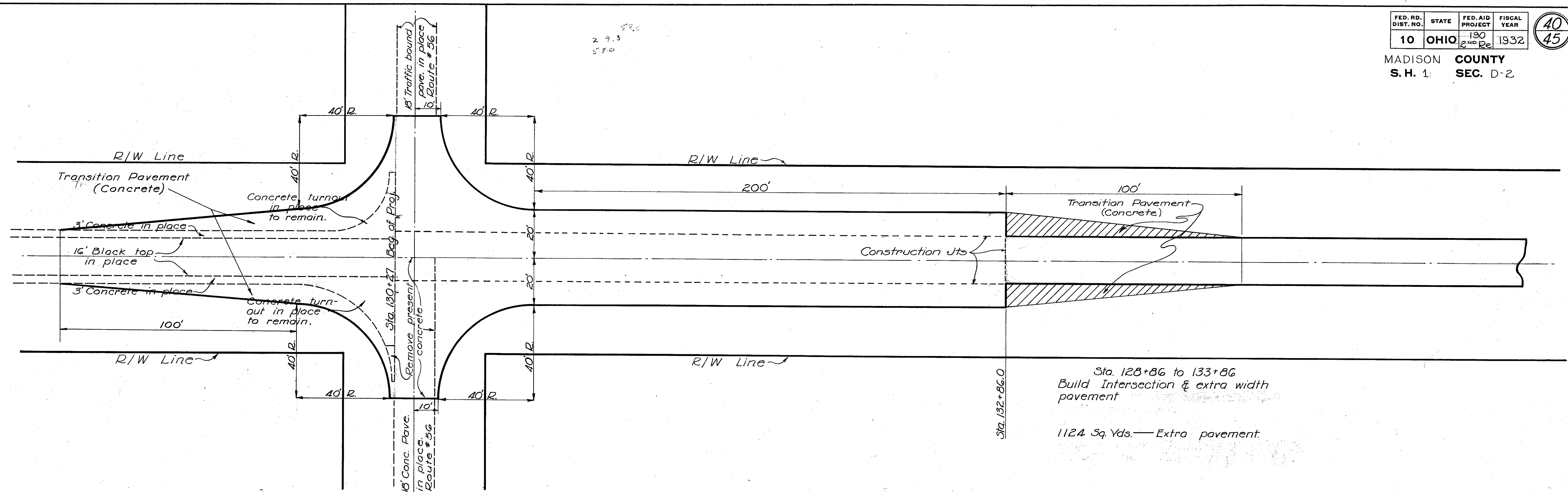




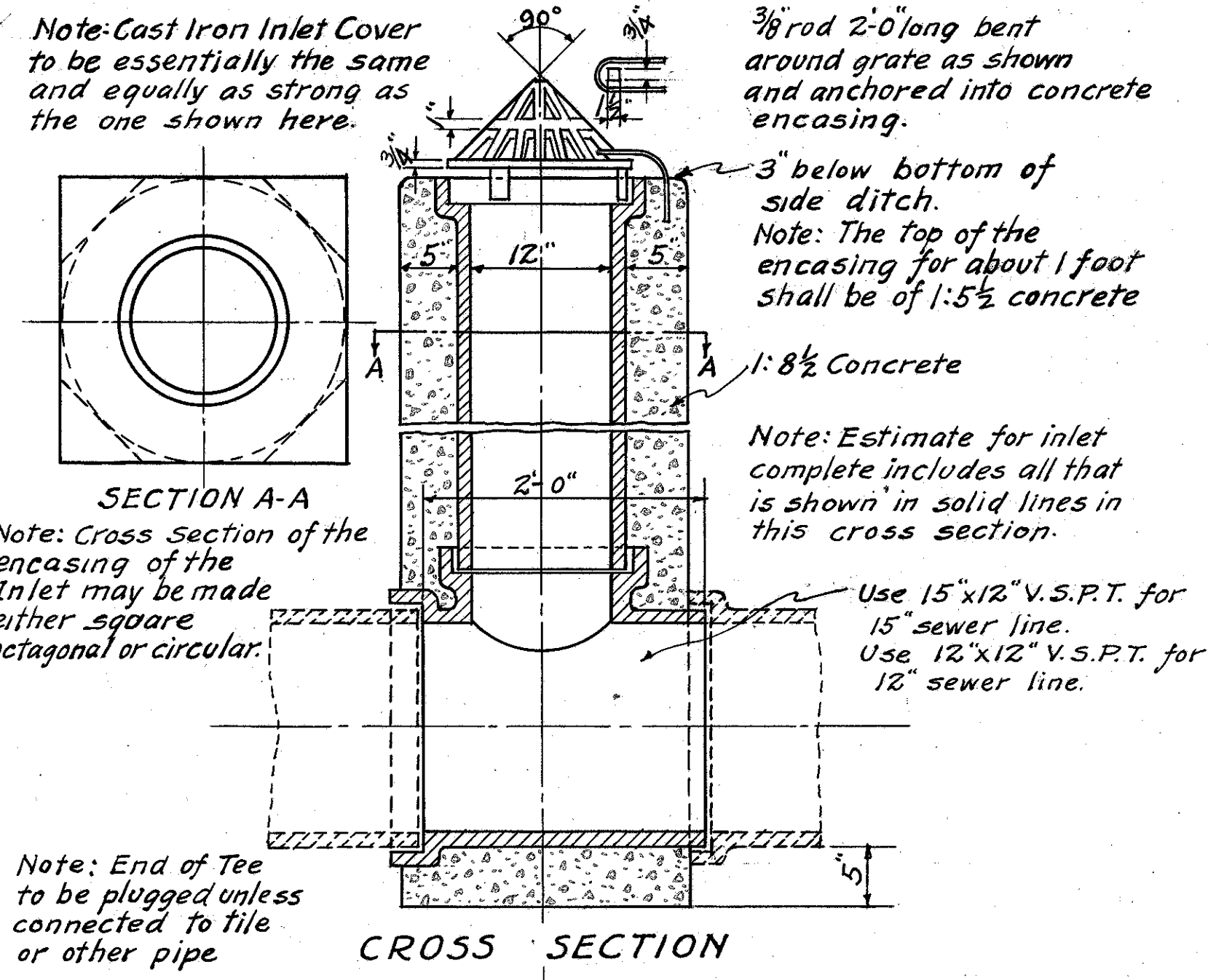
FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	190 2ND DE	1932

40  
45

MADISON COUNTY  
S. H. 1. SEC. D-2

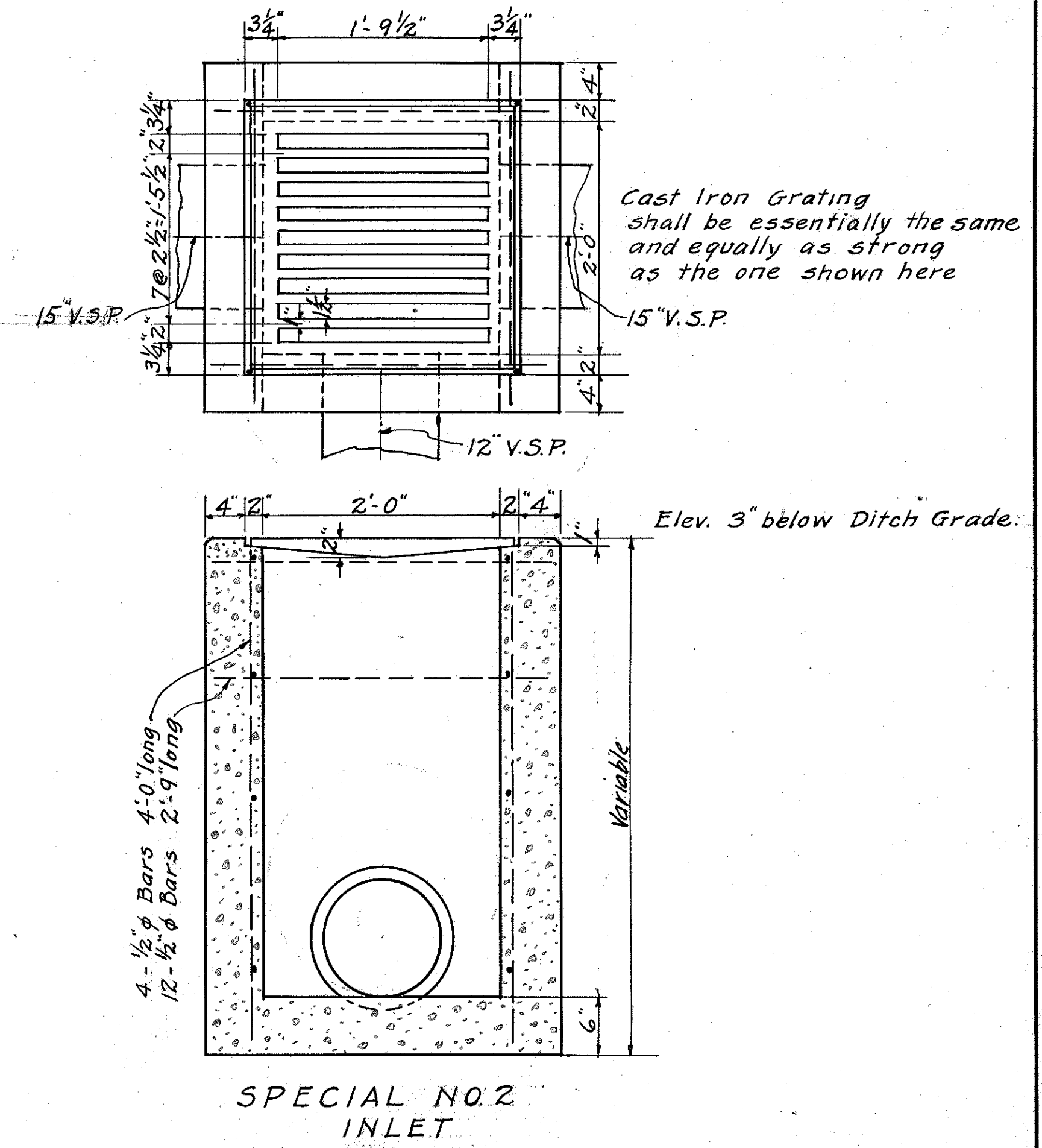
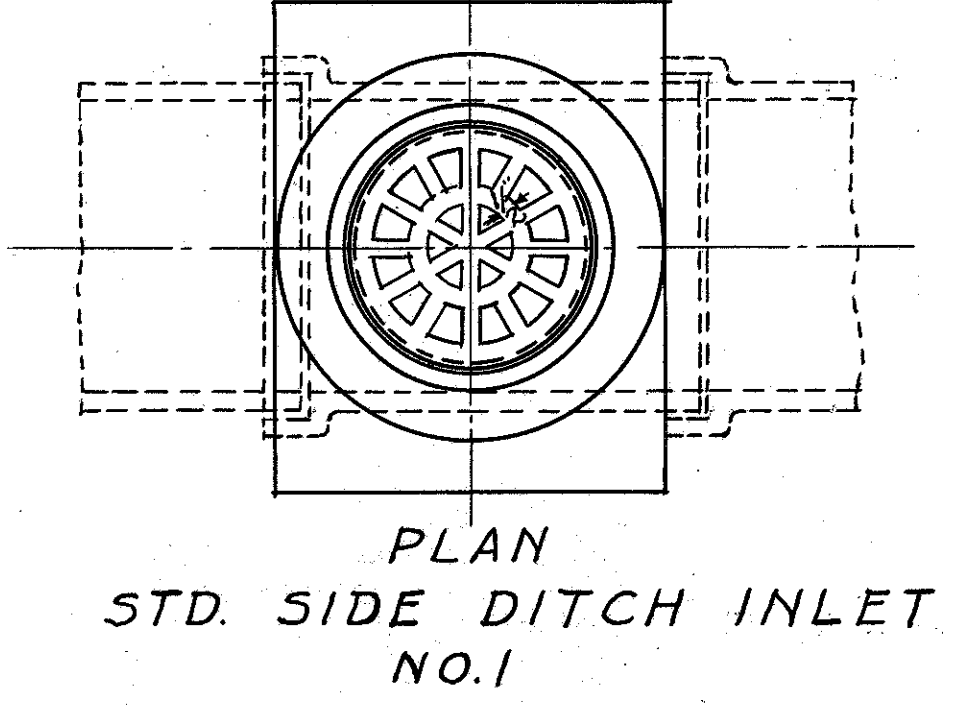




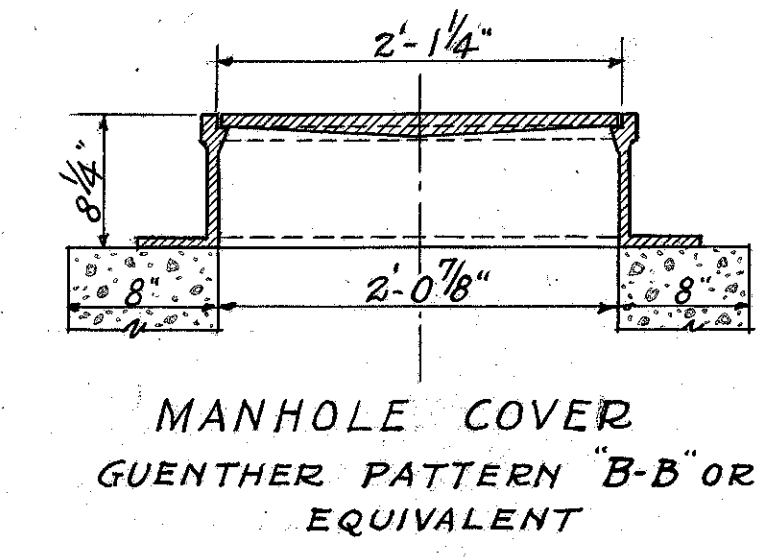


SECTION A-A  
Note: Cross Section of the Inlet may be made either square octagonal or circular.

CROSS SECTION

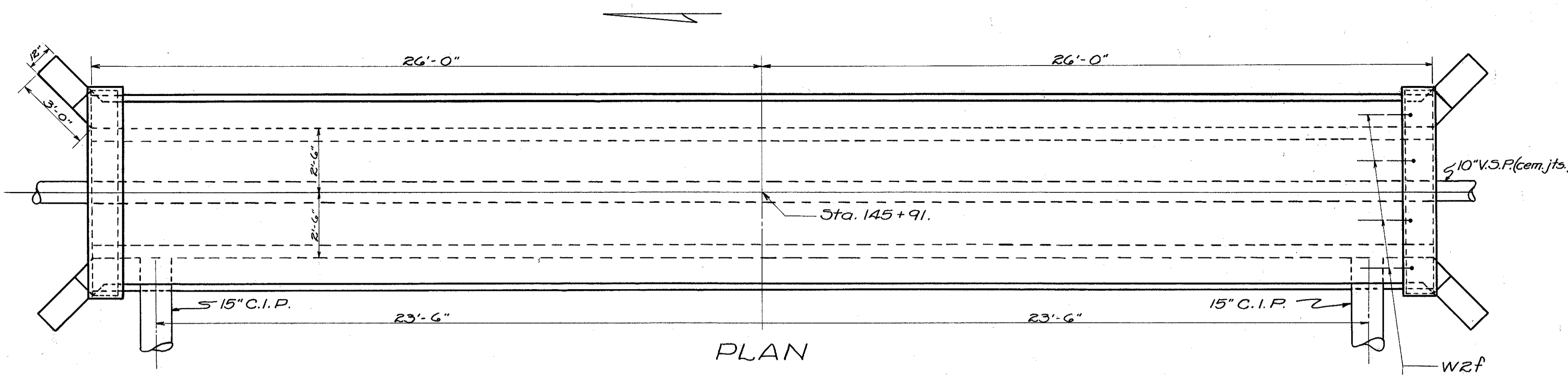


SPECIAL NO. 2  
INLET





MADISON COUNTY  
S. H. 1 SEC. D-2.

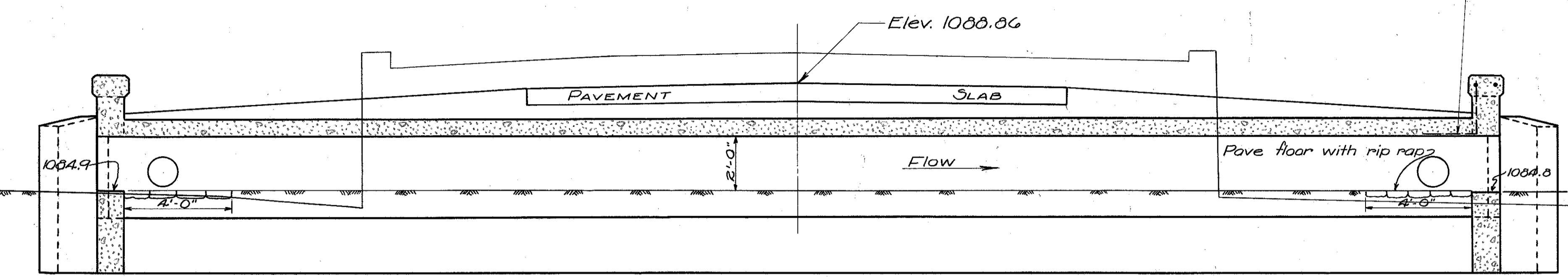


\* STEEL LIST

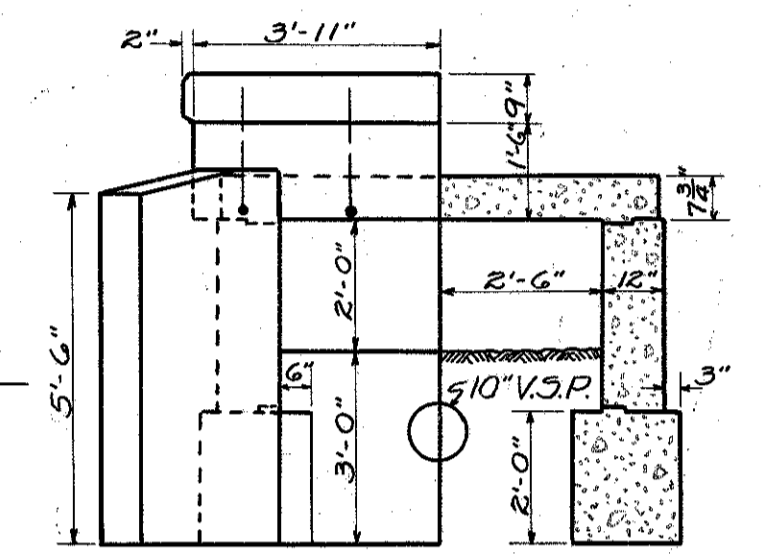
Mark	Size	Shape	No.	Length	Weight
T2a	1/2" #	Str.	26	26'-9"	465
V2a	"	"	104	5'-0"	347
W2a	"	Bent	20	7'-0"	94
W2b	"	"	8	5'-3"	28
W2c	"	Str.	12	5'-6"	44
W2d	"	"	4	7'-0"	19
W2e	"	Bent	8	5'-0"	27
SAa	3/8" #	Str.	139	6'-6"	942
W2f	1/2" #	Bent	8	4'-0"	21
				Total	1987

The Reinf. Steel is named and bent as shown on Std. Dr. SC-A. Reference to same shall be made in placing of steel.

**CULVERT DATA**  
TYPE :- Spec. Slab Top Culvert, Dr. SC-A.  
SIZE :- 5'-0" x 2'-0" x 52'-0".  
Work Req'd :- Remove old 3' x 3.5' x 31.5' stone & concrete culvert in place. Build spec. slab top culvert with coping on headers. Lay 80' of 10" V.S.P. (cem. jts.) 40' R. & 40' L. under culvert and connect to old farm drain. Place 10' of 15" C.I.P. 23.5' Rt. & 23.5' Lt. connecting to 15" storm sewer as shown. The floor of culvert shall be paved with rip-rap as shown. Build slab of culvert level and control flow thru culvert by cut-off walls.



CROSS SECTION

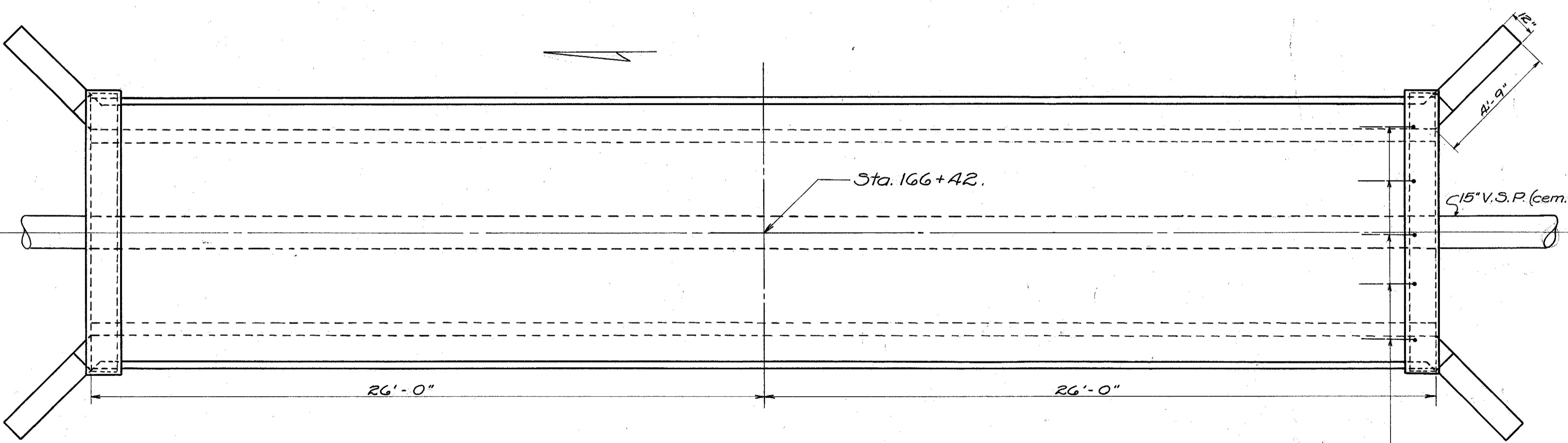


HALF END VIEW HALF SEC.

ESTIMATED QUANTITIES.

EXCAVATION	84	Cu. Yds.
CONCRETE, 1:5 1/2	31.0	" "
CONCRETE, 1:6 1/2	14.0	" "
REINF. STEEL	1987	Lbs.
10" V.S.P. (cem. jts.)	80	Lin. Ft.
15" C.I.P. (Solid)	20	" "

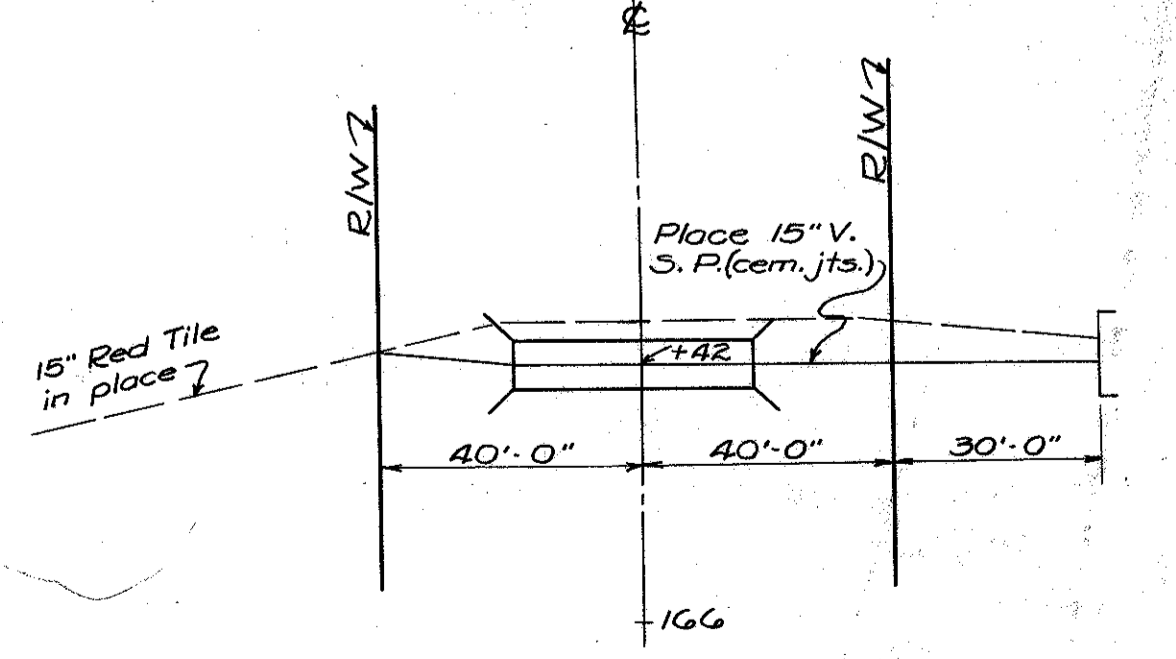
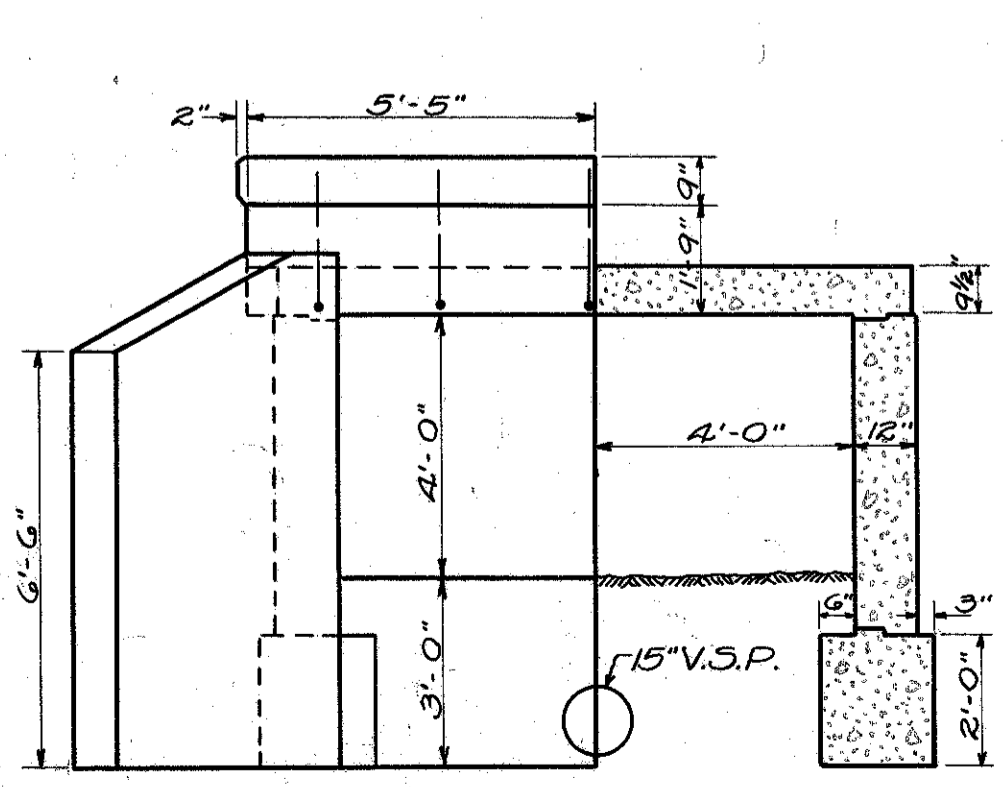
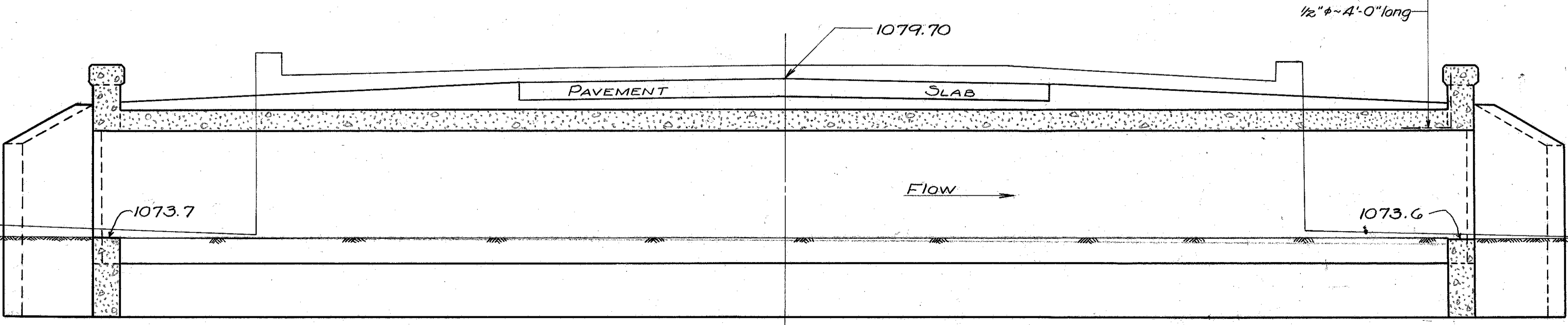
STA. 145+91. (1)



**CULVERT DATA**  
TYPE :- Standard Slab Top Culvert (except headers) Dr. SC-A.  
SIZE :- 8'-0" x 4'-0" x 52'-0".  
Work Req'd :- Remove present 6' x 5' x 30' concrete culvert. Build std. slab top culvert with special headers & coping. Lay 110' of 15" V.S.P. (cem. jts.) under culvert, 40' on Lt. connecting to 15" tile & 70' on Rt. connecting to headwall in place. Build slab of culvert level and control flow thru culvert by height of cut-off walls.

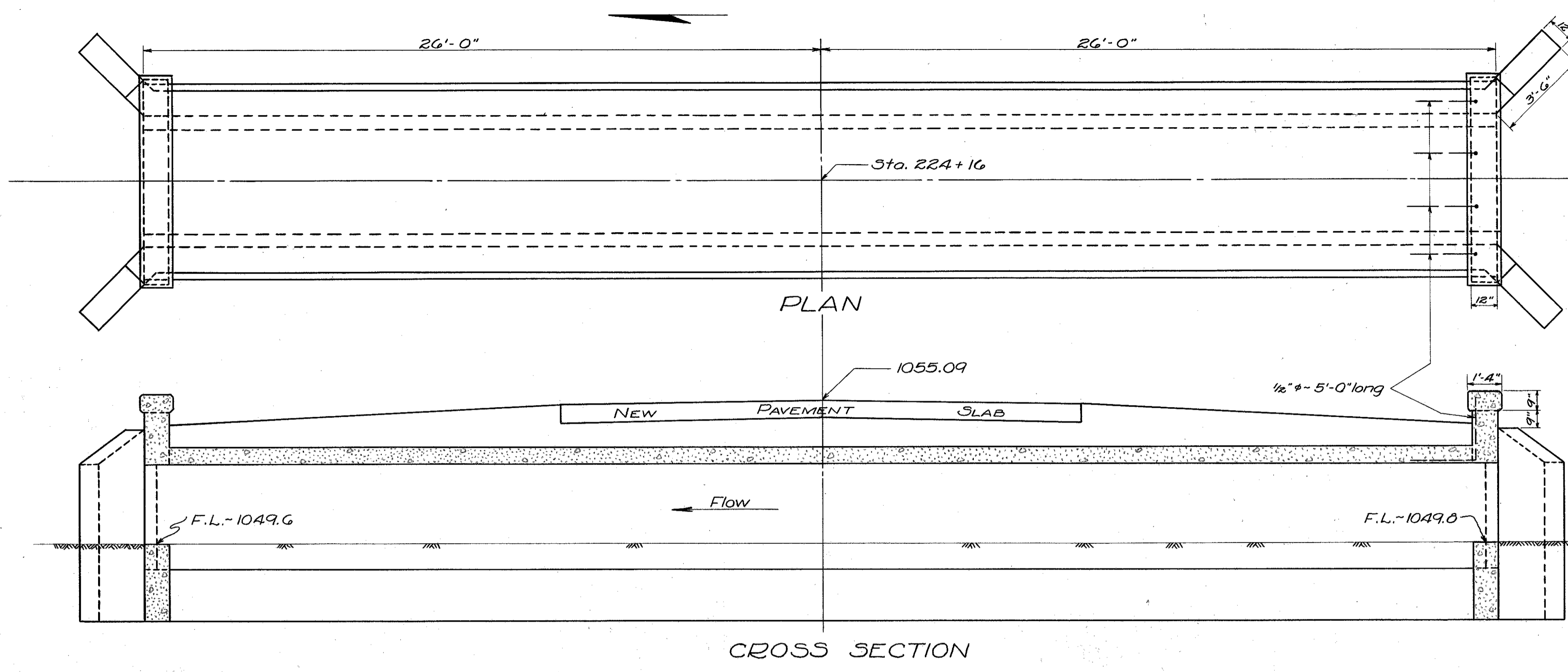
ESTIMATED QUANTITIES

EXCAVATION	168	Cu. Yds.
CONCRETE, 1:5 1/2	42.5	" "
CONCRETE, 1:6 1/2	14.0	" "
REINF. STEEL	3278	Lbs.
15" V.S.P. (cem. jts.)	110	Lin. Ft.



STA. 166+42. (2)



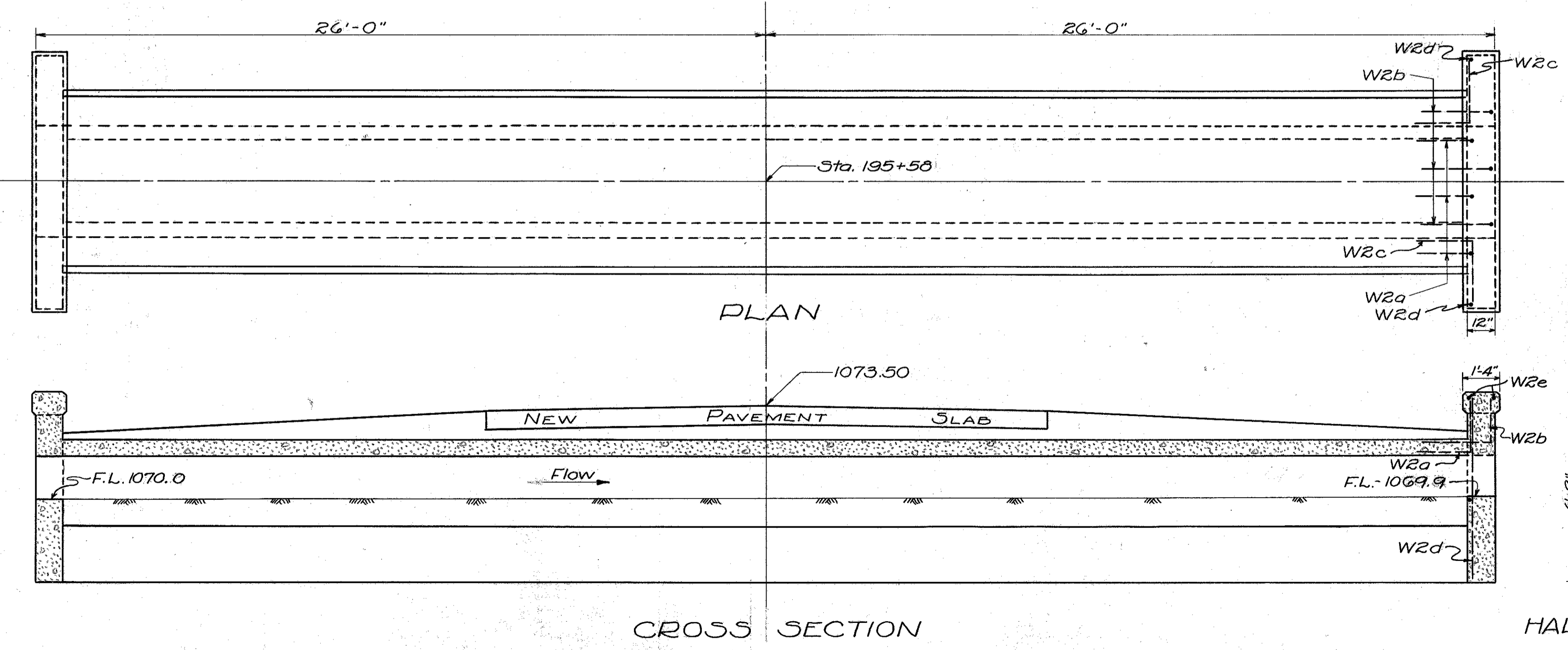


**CULVERT DATA**  
 TYPE : Std. Slab Top Culvert, Dr. SC-A.  
 SIZE : 5'-0" x 3'-0" x 52'-0"  
 Work Req'd : Remove 4'x4'x32' Conc. Box Culvert in place. Build Std. Slab Top Culvert with coping. Slab of culvert shall be built level and flow thru culvert controlled by cut off walls.

**ESTIMATED QUANTITIES.**  
 Excavation 66 Cu.Yds. ✓  
 Concrete 1:6 1/2 14.0 " " ✓  
 Concrete 1:5 1/2 29.3 " " ✓  
 Reinf. Steel 210.7 Lbs. ✓

STA. 224+16. ✓

4.



**STEEL LIST**

Mark	Size	Shape	Length	Space	No.	Wt.
S4a	5/8"	Str.	5'-6"	4 1/2' ctr.	125	717
V2a	1/2"	"	4'-6"	12' ctr.	108	325
TRa	"	"	26'-9"	12' ctr.	10	179
WRa	"	Bent	3'-9"	Des.	6	15
WRb	"	"	4'-0"	"	6	16
WRc	"	"	4'-3"	"	12	34
WRd	"	Str.	6'-6"	"	4	17
WRe	"	"	8'-9"	"	6	35
Total						1338

Note :-  
 Reference to Standard Drawing SC-A shall be made in placing S4a, V2a and TRa bars.

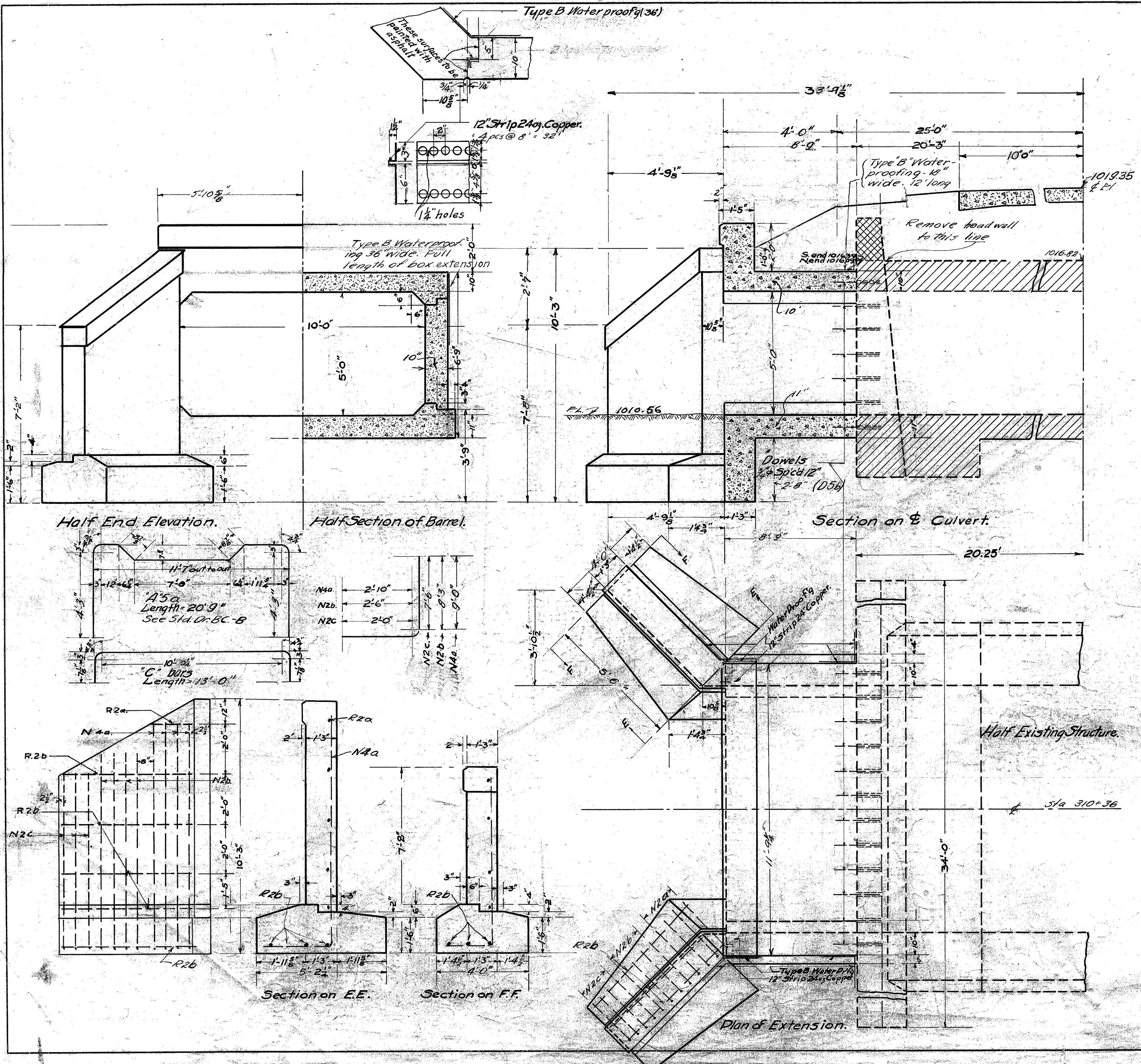
**CULVERT DATA**  
 TYPE : Spec. Slab Top Culvert ~ Std. Dr. SC-A.  
 SIZE : 4'-0" x 1'-6" x 52'-0"  
 Work Req'd : Remove 28"x24"x41' Stone Box in place. Build special slab top culvert with straight wings and coping. Build slab of culvert level and control flow thru culvert by the height of the cut-off walls.

**ESTIMATED QUANTITIES**  
 Excavation 52 Cu.Yds. ✓  
 1:5 1/2 Conc. 18.1 " " ✓  
 1:6 1/2 Conc. 13.5 " " ✓  
 Reinf. Steel 1338 Lbs. ✓

STA. 195+58. ✓

3





**STEEL LIST.**

Mark	Size	Shape	Length Ft	Spd	No	Weight	Length
A5a	3/4"	Bent	20	9	6 1/2	43	1340
B5a	3/4"	Str.	11	3	6 1/2	21	354
C4a	5/8"	Bent	13	0	19 1/2	21	285
D4a	3/4"	Str.	6	0	19 1/2	21	131
E4a	5/8"	"	8	6	"	96	851
H2a	1/2"	Bent	3	8	12	48	118
H2b	1/2"	Str.	11	3	12	0	60
							90
N4a	5/8"	Bent	11	10	12	16	197
N2b	1/2"	"	10	9	12	16	115
N2c	1/2"	"	9	6	12	12	76
							114
R2a	1/2"	Str.	1	6	24	4	4
R2b	1/2"	"	5	3	24	28	98
							147
D5b	3/8"	"	2	0	12	68	204
							136
<b>Total</b>						<b>3833</b>	<b>lbs</b>

**ESTIMATED QUANTITIES**

Material	Items	Amount	Units
1-5/8" Concrete	5-1	37.8	Cu. Yds
Steel Reinf.	5-4	3833	lbs.
Copper Exp. Jt.	1-13	32	lbs. ft.
Dowel hole	1-18	68	" "
Earth EXCAV.	1-2	36	Cu. Yds.
Water Proofing Type B	5-3	35	Sq. Yds.

**Culvert Data**  
 Type :- Conc. Box Culvert Extension.  
 Size : 10' x 5' x 58.0'  
 Work Rd. :- Extend present 10' x 5' x 40.6" conc. Box Culvert 8'-9"  
 Rt and Lft. Remove old head-walls (as indicated) to top of old slab.  
 Repair honey combs in walls of present structure.

NOTE:-  
 Plan and Section not to scale.

5  
**EXTENSION  
 CONCRETE BOX CULVERT.**  
 Span-10' Height 5'-0"  
 Station 310+36.  
 Reference Drawings - BC-B8 & CM-A

Scale 1"=2'



