

**COUNTY HIGHWAY**  
**BUREAU OF CONSTRUCTION**  
**MILLERSBURG — CHARM ROAD.**  
**ROAD No 76 and 72 SEC. "C" RESOLUTION**  
**HOLMES COUNTY**  
**CLARK TWP. FEBRUARY 1924.**

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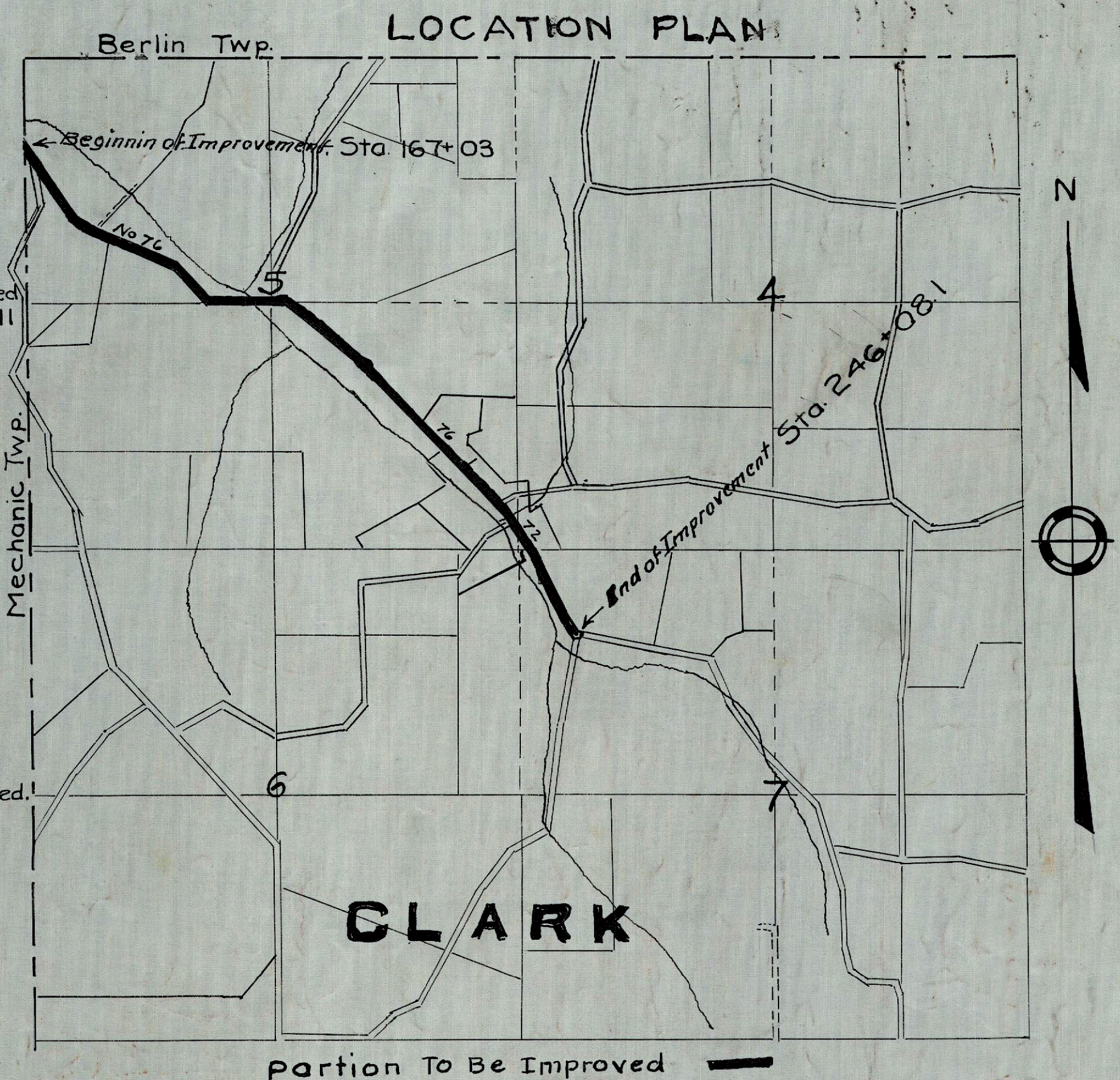
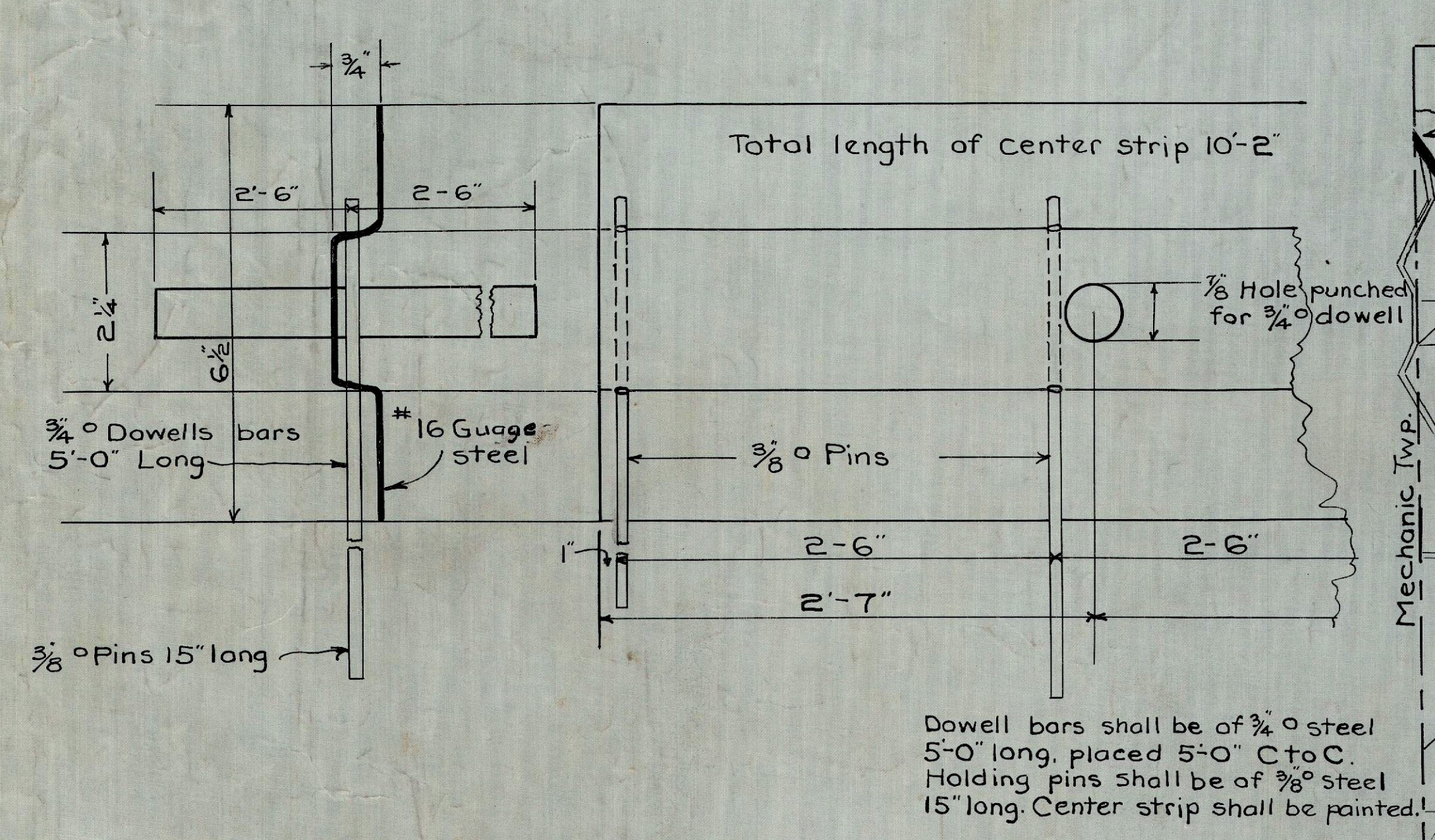
The Standard Specifications of the State of Ohio Division of Highways in force on date of contract will govern improvement

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and no detours will be provided except at culverts as shown on bridge and culvert Plans.

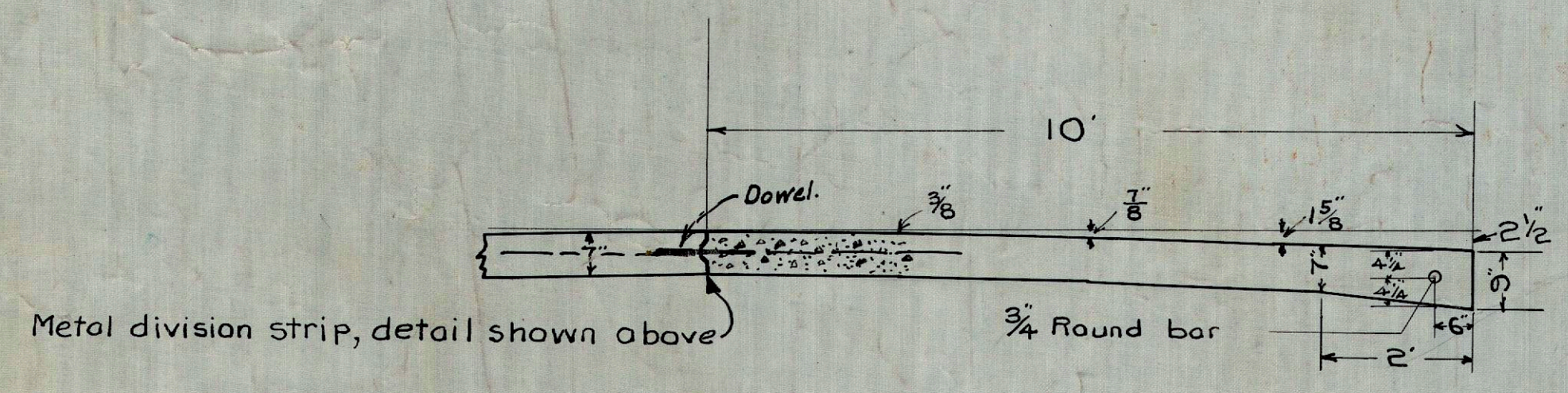
Approved *J. K. Troutman*  
 Date 4-4-24 County Surveyor

We the Commissioners of Holmes County hereby approve these plans and certify that the right of way 60 feet wide is available for the construction, maintenance & repair of highway

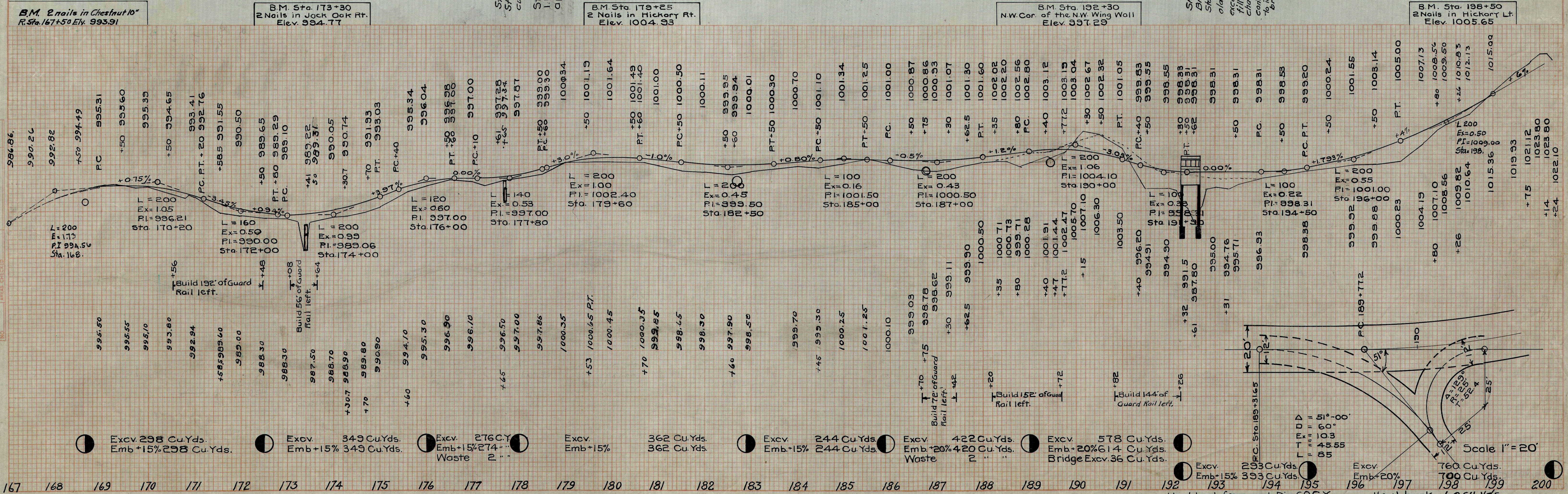
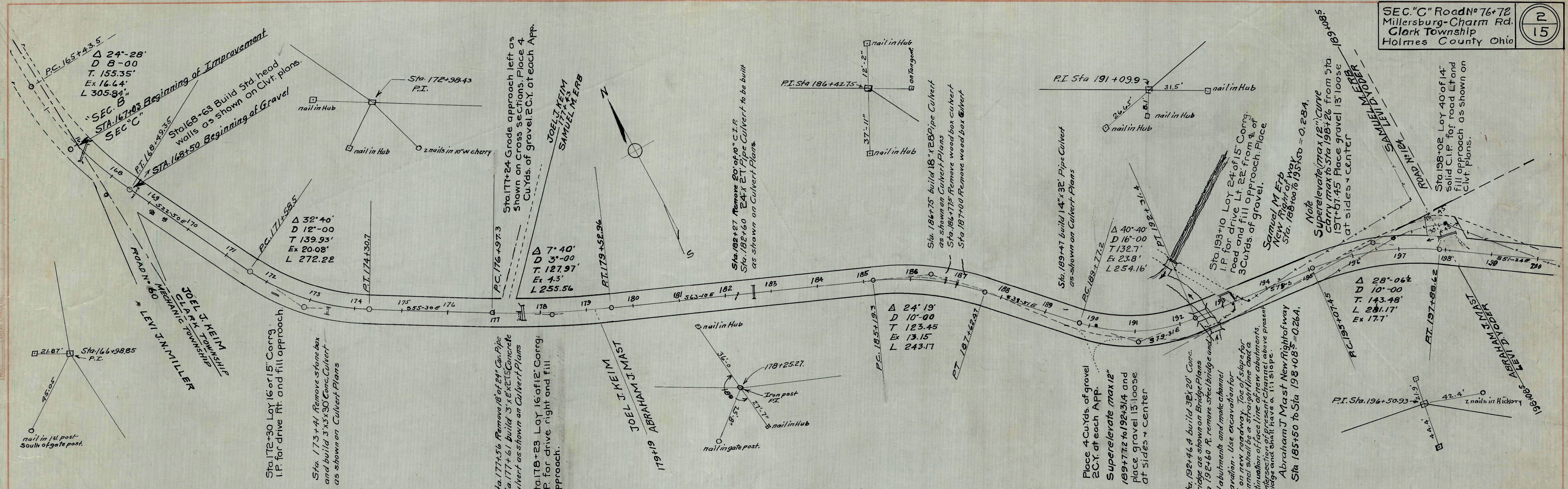
Date \_\_\_\_\_ County Commissioners



**SCALES**  
 Plan --- 1" = 100'  
 Profile (Vert) 1" = 10'  
 Profile (Hor.) 1" = 100'  
 Cross Sections 1" = 5'







FINAL SURVEY PLOTTED TEMPLATE NOTE BOOK NO. 15888

ORIGINAL SURVEY PLOTTED TEMPLATE NOTE BOOK NO. 15888

Scale 1" = 20'



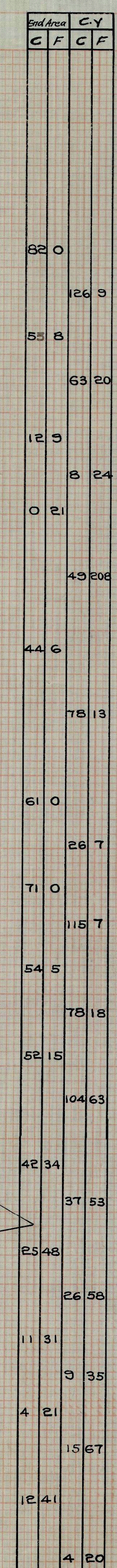
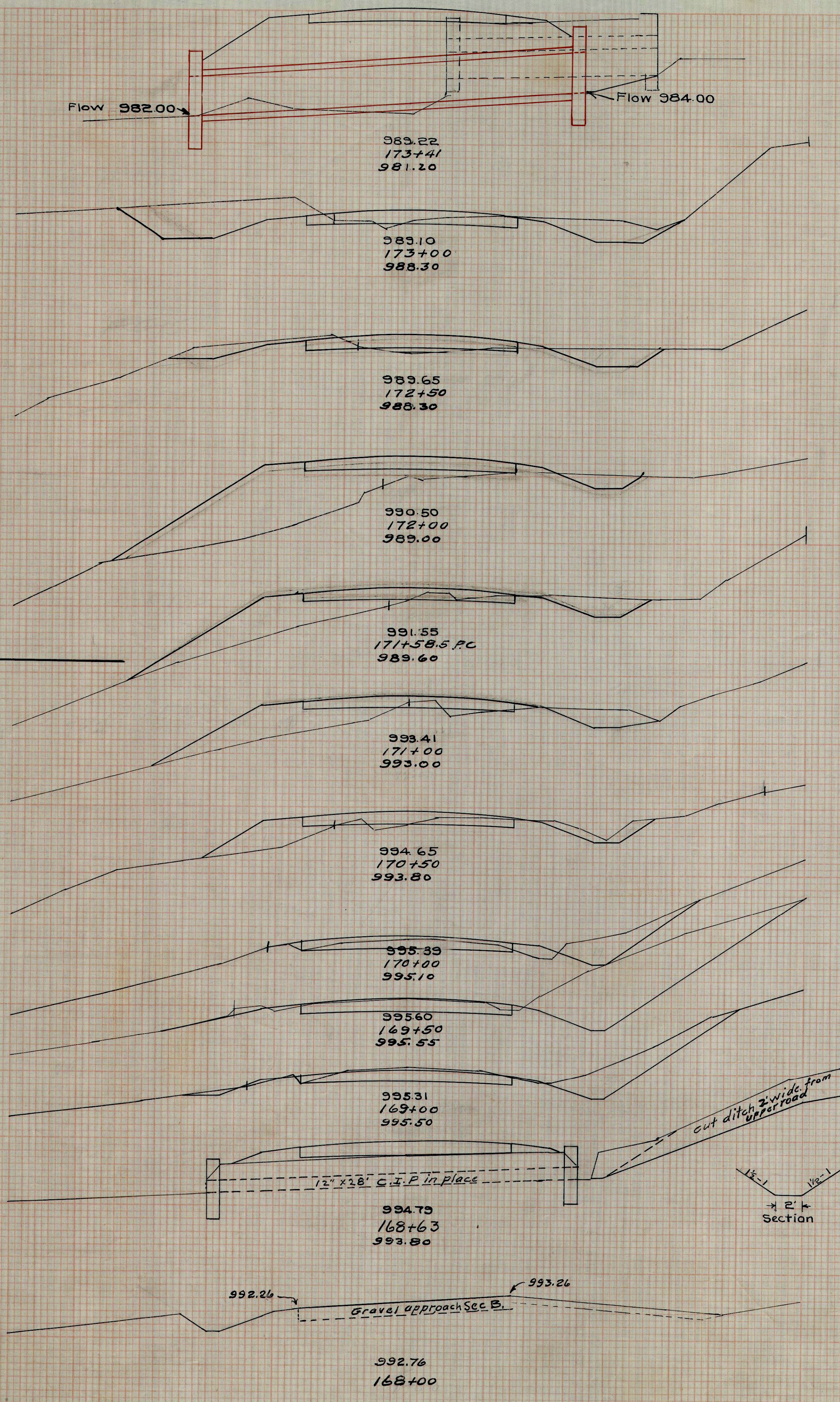




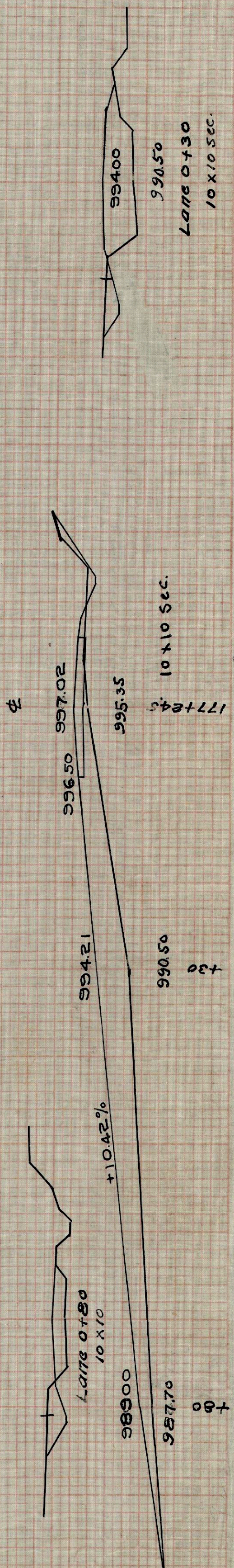




Note: - From Sta. 171+58.5 to Sta. 179+00 on this sheet all grades are marked correct but the Sections are all plotted 1' too high



Approach L. C. 25 Cu Yds  
 L. F. 25 " " " " (Included)

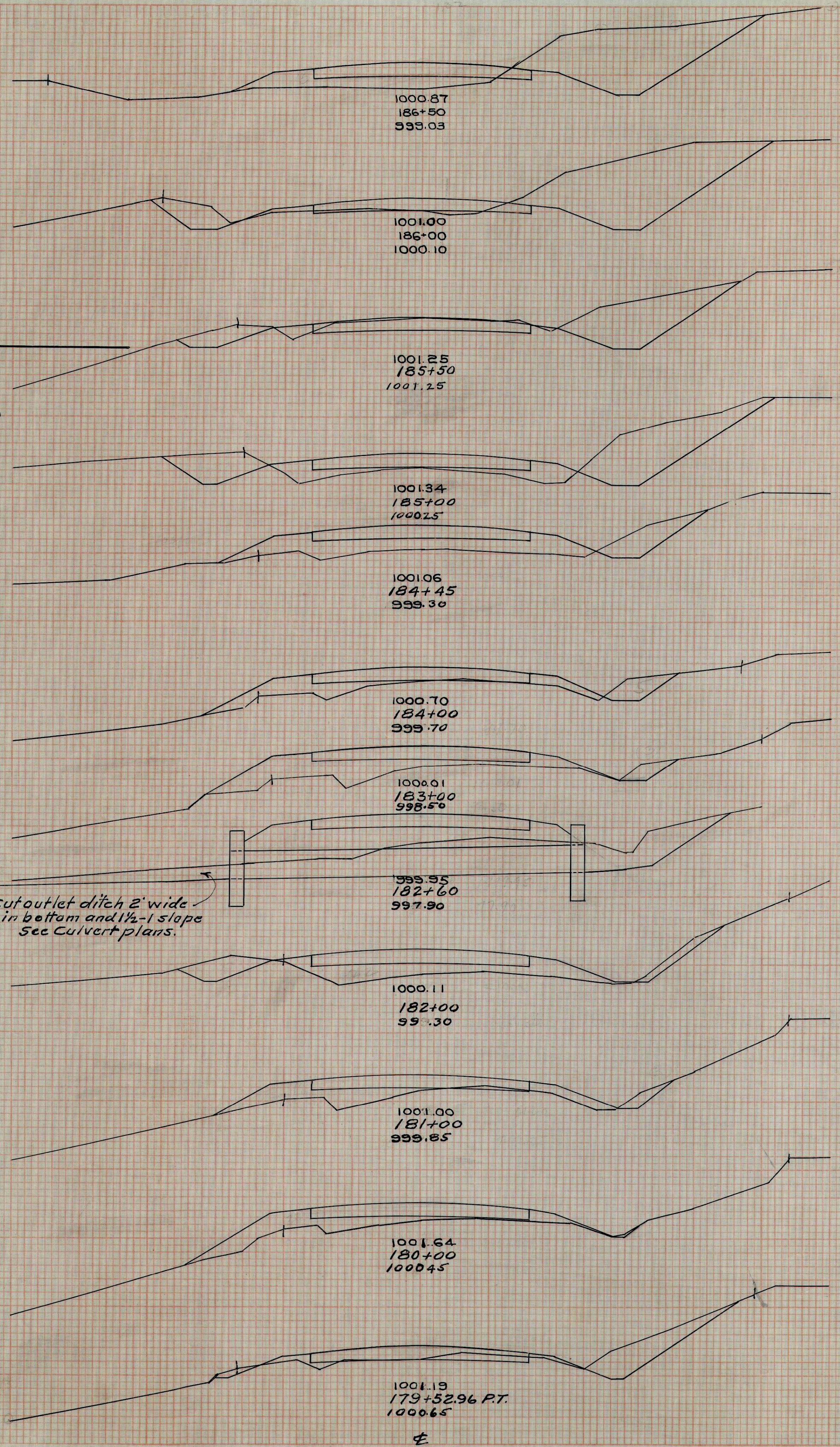




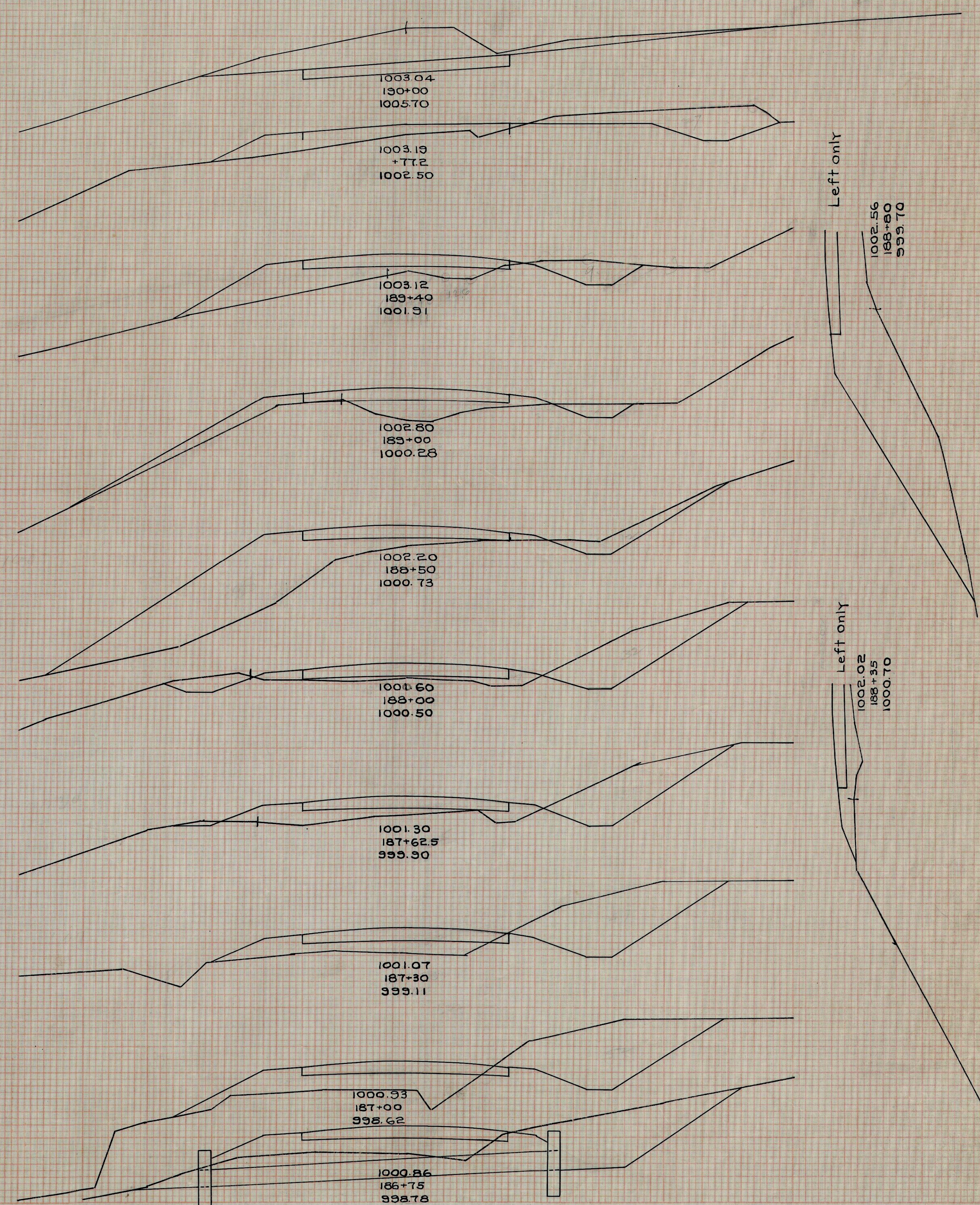
End Area		C.Y.	
C	F	C	F
52	15		
103	21		
66	2		
102	7		
44	3		
82	20		
45	14		
56	42		
10	28		
13	47		
5	19	15	107
3	31	11	64
12	44	22	85
9	23	22	88
3	18	3	82
1	20	15	26
18	4	58	7

Note: - From Sta. 179+52.96 to Sta. 185+50 on this sheet all grades are marked correct but the sections are all plotted 1' too high.

Cutoutlet ditch 2' wide in bottom and 1 1/2' slope See Culvert plans.



End Area		C.Y.	
C	F	C	F
55	0		
35	11		
27	12		
24	31		
9	32		
9	54		
4	27		
15	175		
12	88		
4	163		
32	8		
43	23		
31	20		
46	38		
47	33		
56	42		
52	30		
42	34		
41	29		
43	24		





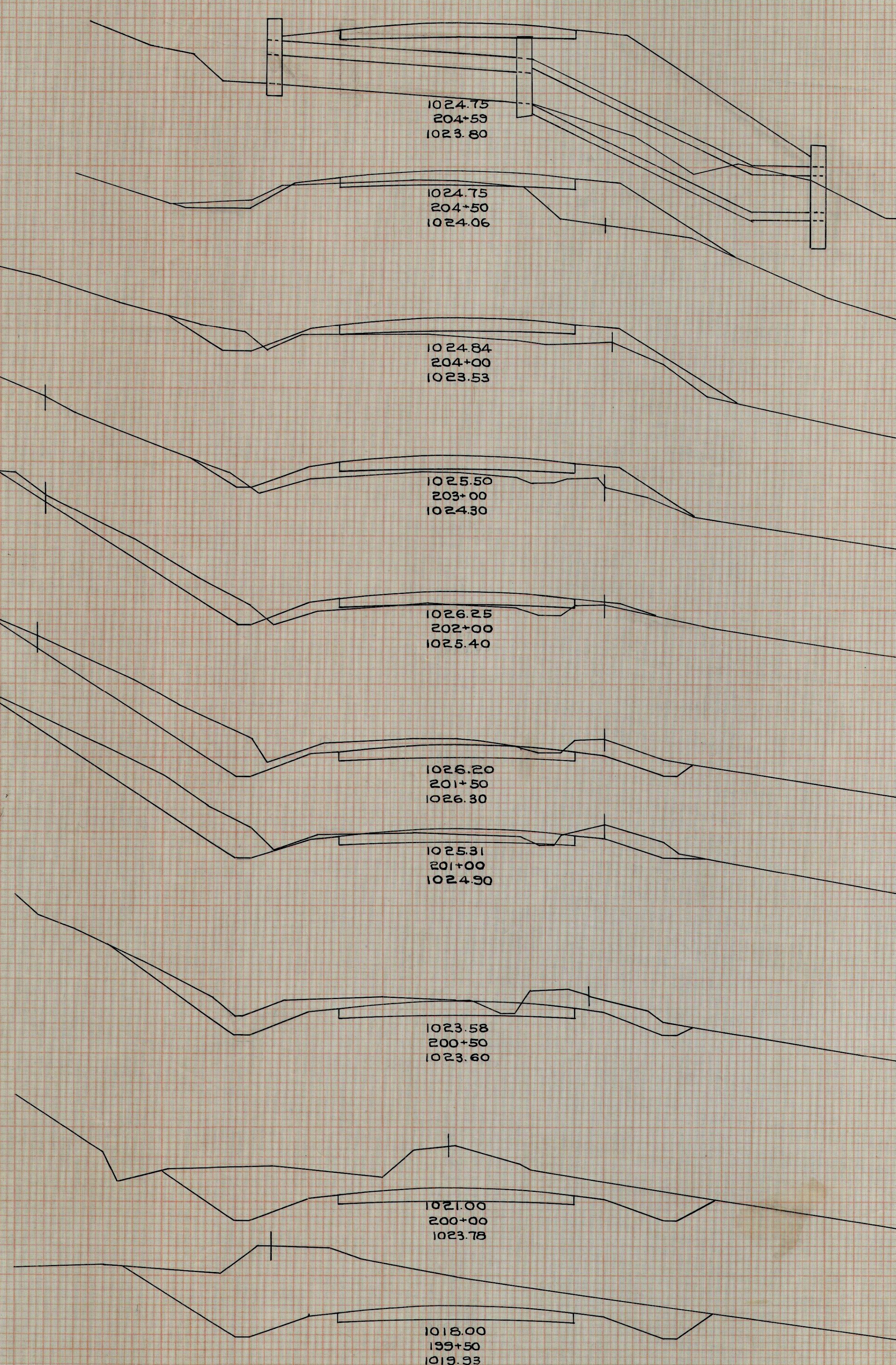




End Area	C.Y.
C	F
0	100
0	29
0	30
4	54
5	19
13	85
2	13
35	61
17	8
69	10
58	0
34	0
45	0
78	0
40	0
111	0
81	0
181	0
116	0
176	0

DATE \_\_\_\_\_  
 BY \_\_\_\_\_  
 ORIGINAL SURVEY PLOTTED \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 AREA CHECKED \_\_\_\_\_

DATE \_\_\_\_\_  
 BY \_\_\_\_\_  
 ORIGINAL SURVEY PLOTTED \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 AREA CHECKED \_\_\_\_\_

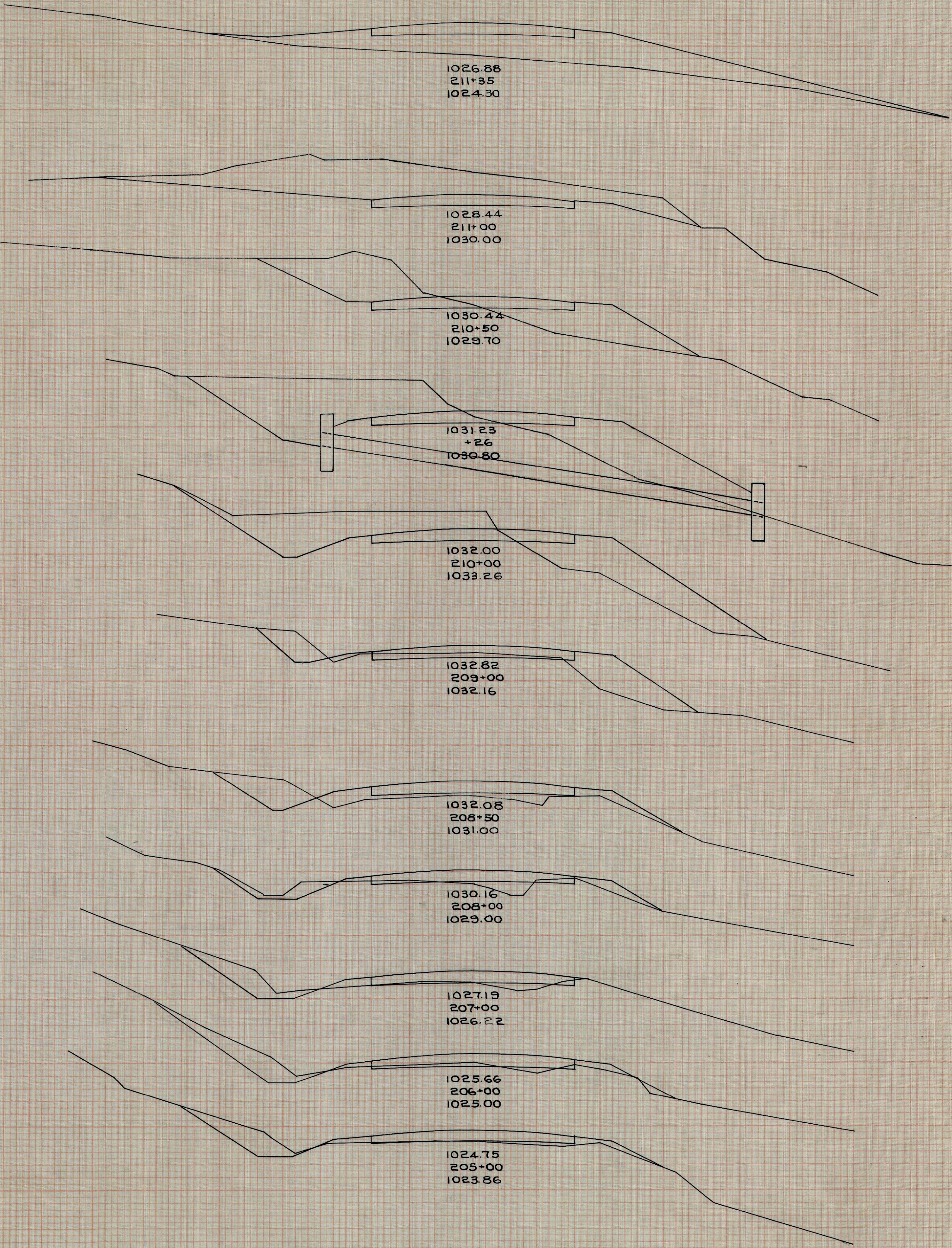


1012.90  
0+60  
1016.13

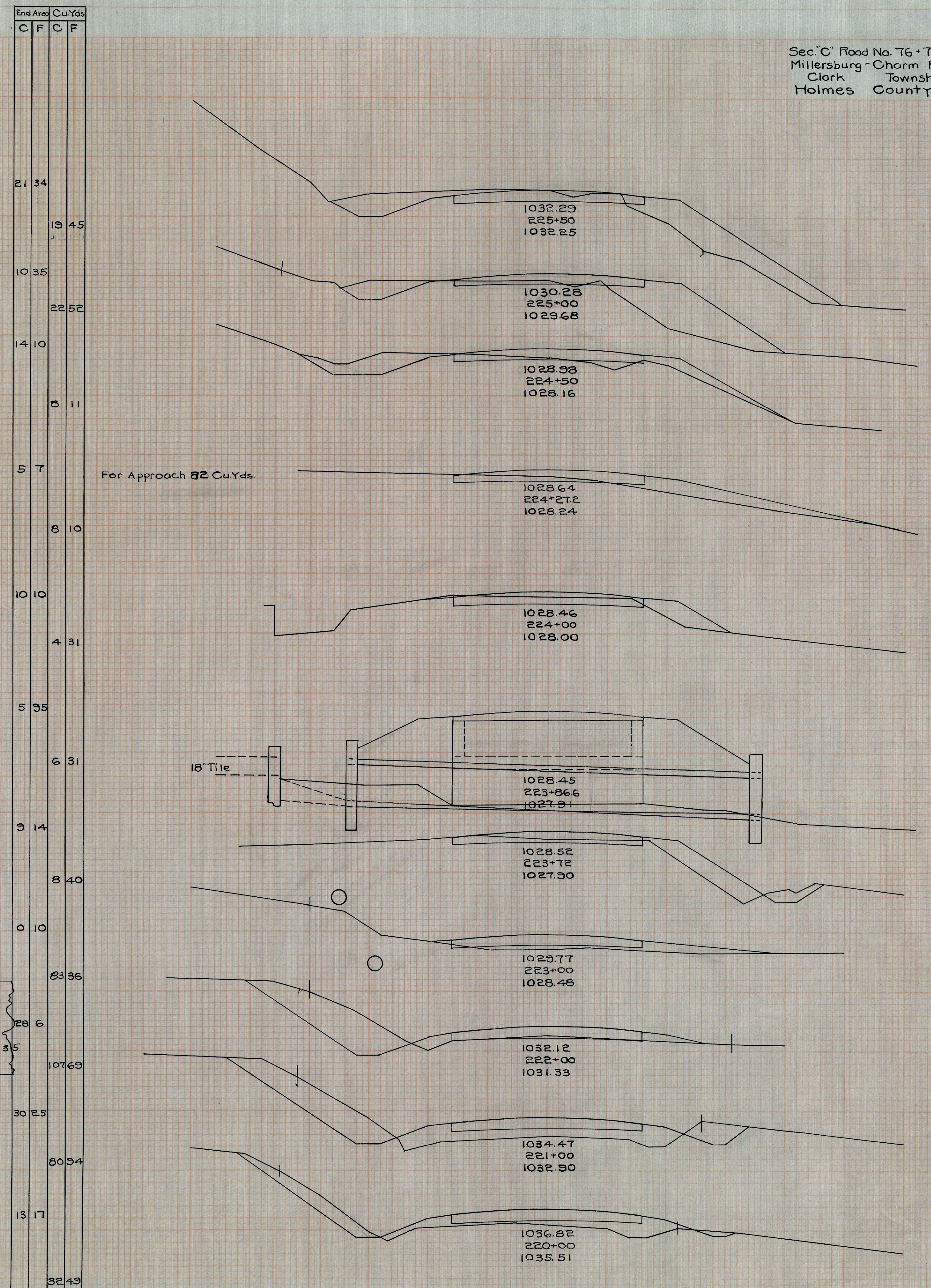
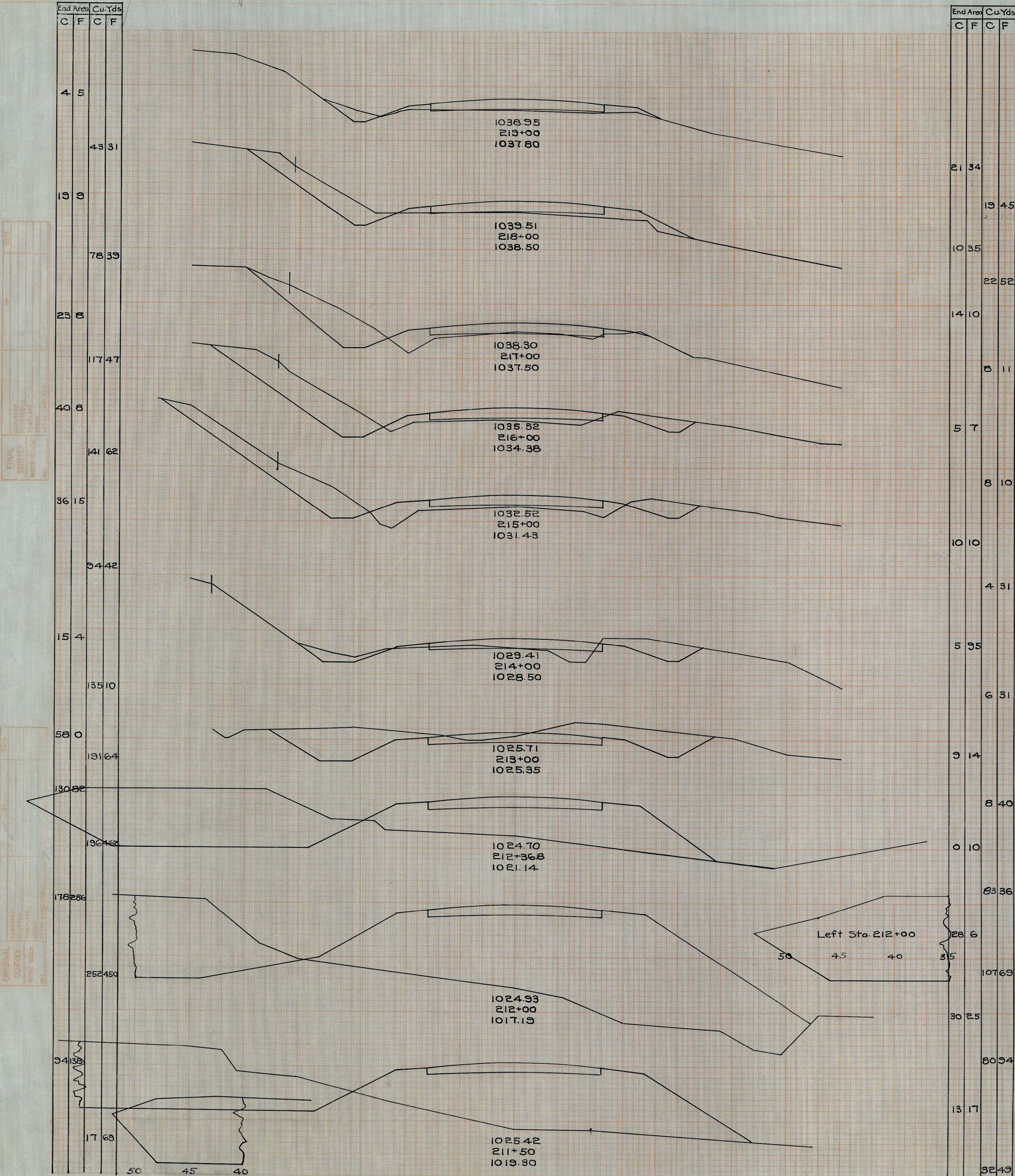
1011.54  
0+40  
1013.00

Sections for Side Road  
 Scale 1" = 10'

End Area	C.Y.
C	F
0	75
17	27
90	0
115	31
35	28
48	40
67	43
54	47
50	43
177	43
13	21
4	34
9	15
13	24
6	7
35	24
13	4
46	23
12	6
39	31
9	8
8	91







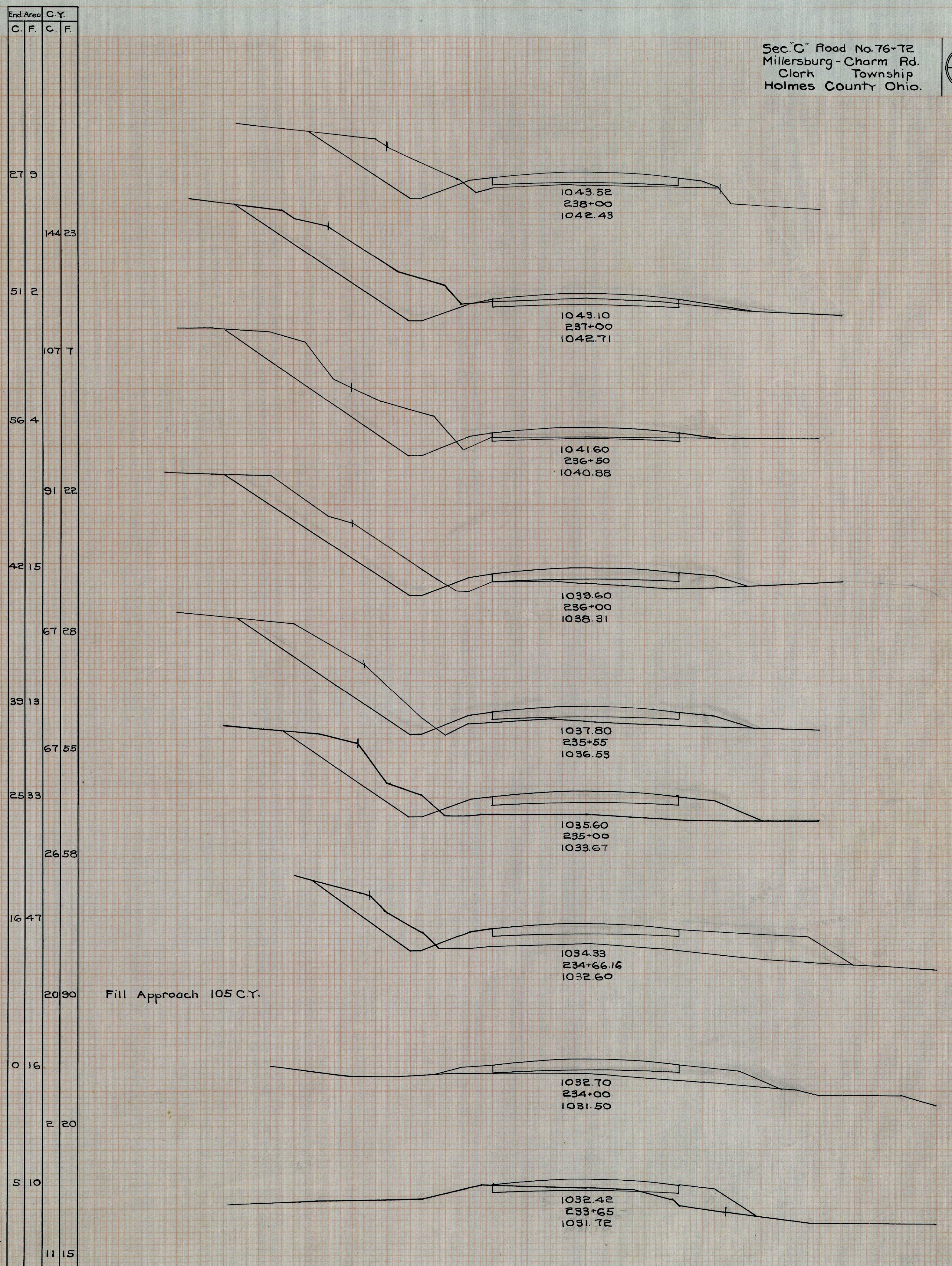
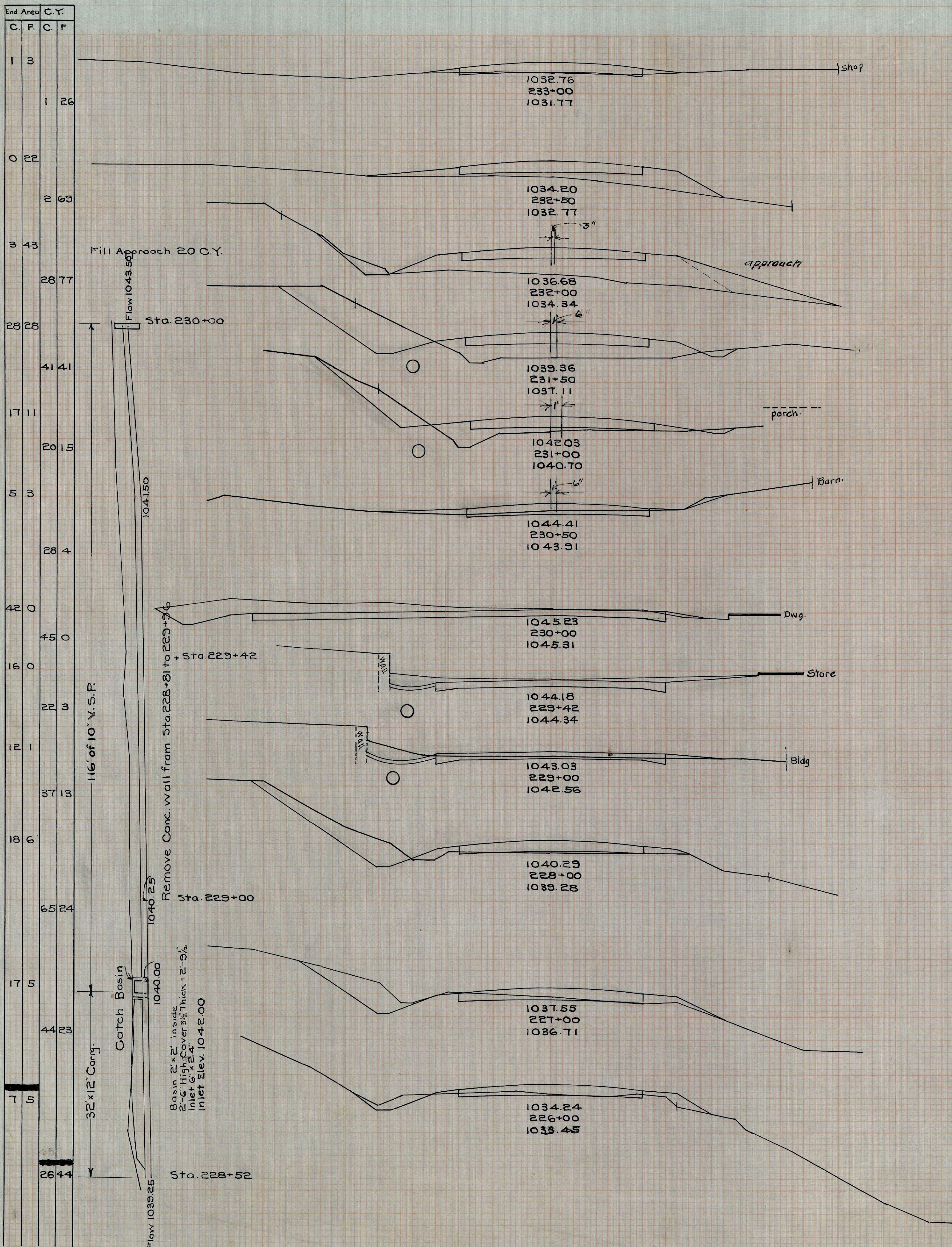
For Approach 82 Cu.Yds.

Left Sta. 212+00  
 50 45 40 35

FINAL SURVEY MAP

ORIGINAL SURVEY MAP



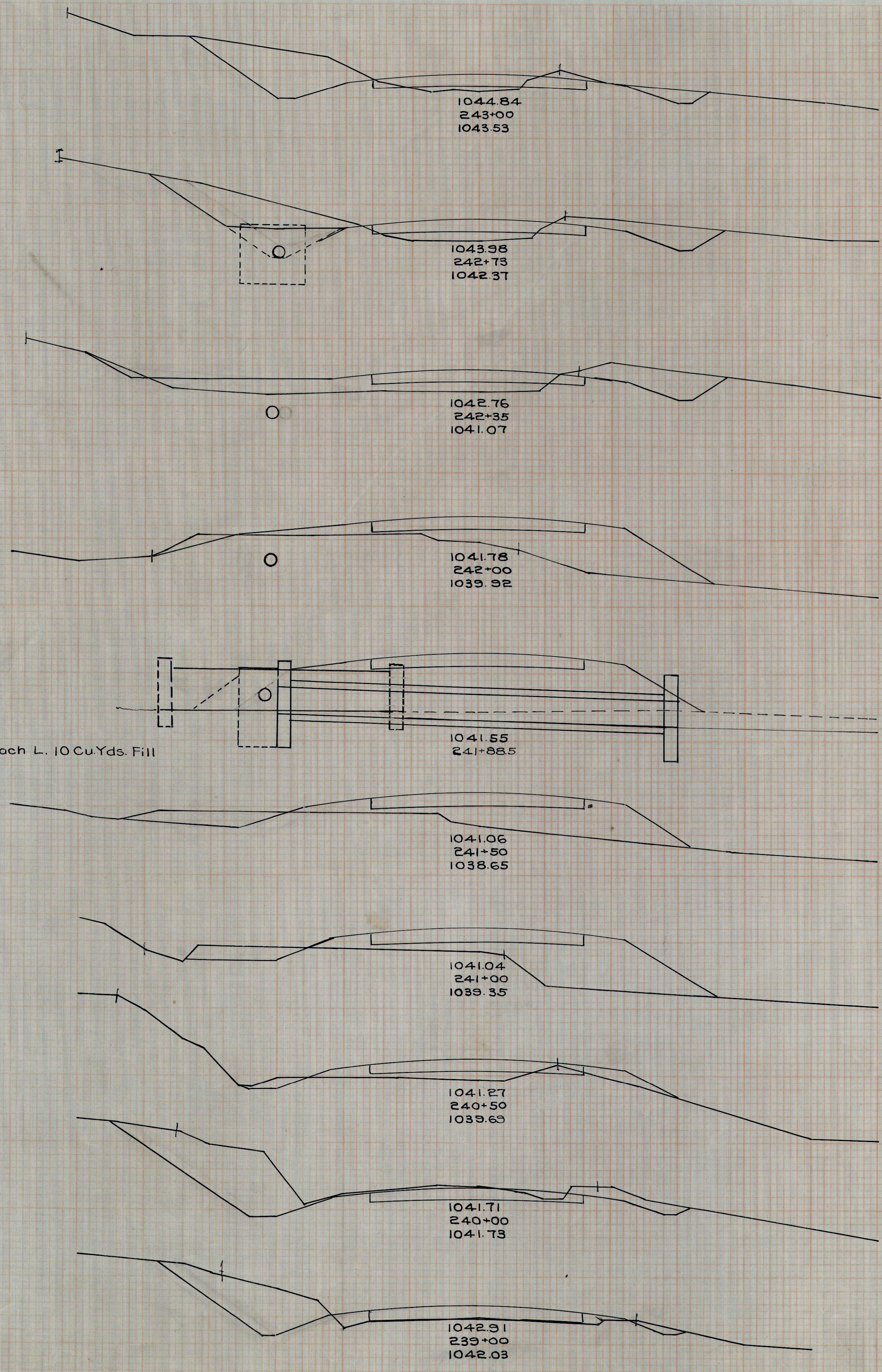


FINAL SURVEY PLANNED MORE BACK

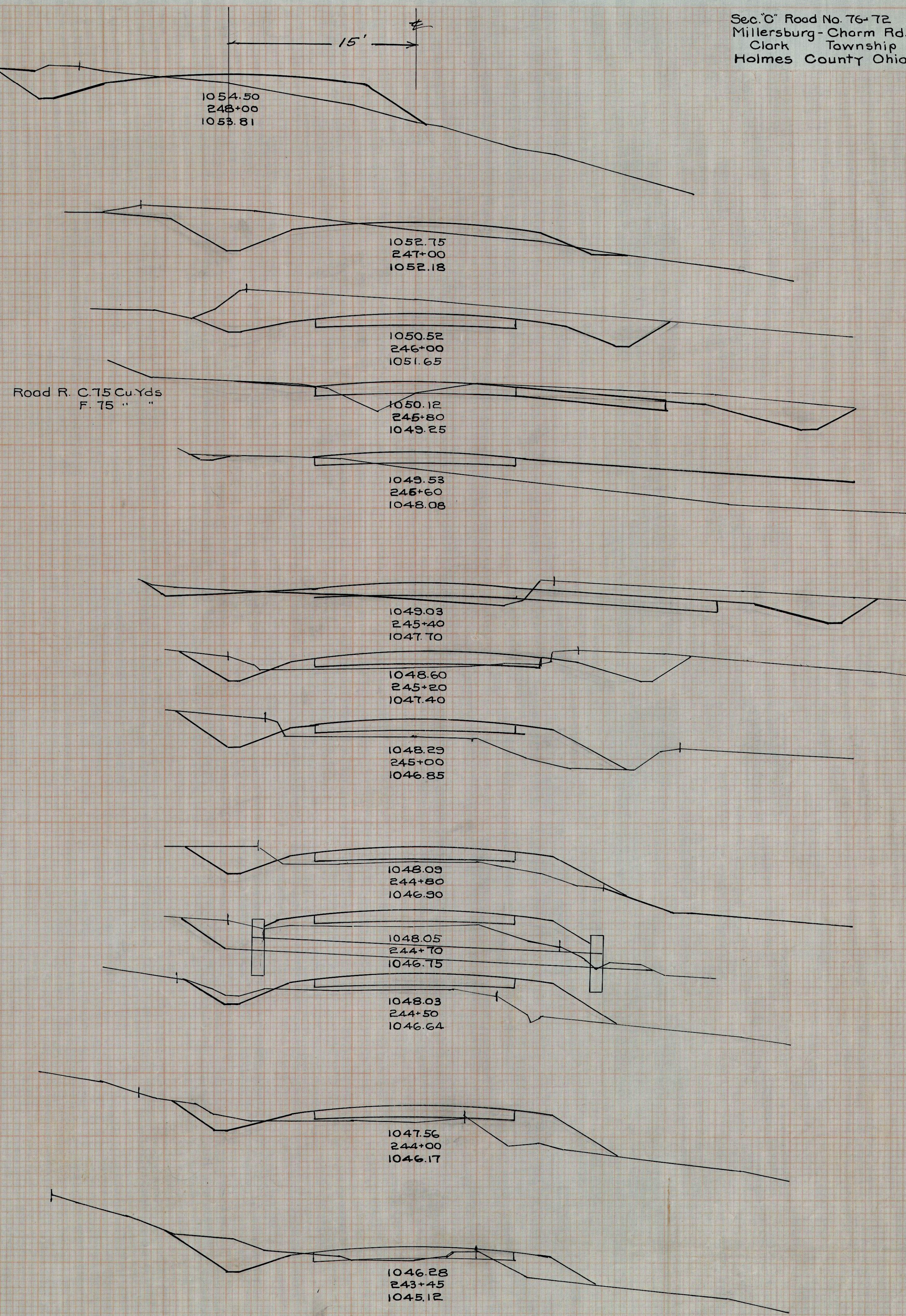
ORIGINAL SURVEY PLANNED MORE BACK



End Area		C. Y.	
C.	F.	C.	F.
35	3		
		33	8
		33	6
		33	23
16	28		
		8	60
2	48		
		4	27
16	66		
		8	30
10	8		
		15	30
6	51		
		8	63
2	14		
		50	17
60	2		
		163	13
28	4		
		102	28



End Area		C. Y.	
C.	F.	C.	F.
24	38		
16	18		
		84	63
25	13		
		161	16
75	0		
		39	2
28	4		
		6	43
2	67		
		13	41
36	5		
		20	5
21	6		
		13	15
12	28		
		8	27
10	16		
		4	12
6	23		
		4	23
3	25		
		6	58
4	24		
		20	42
15	10		
		41	14



Sec. C Road No. 76-72  
Millersburg - Charm Rd.  
Clark Township  
Holmes County Ohio

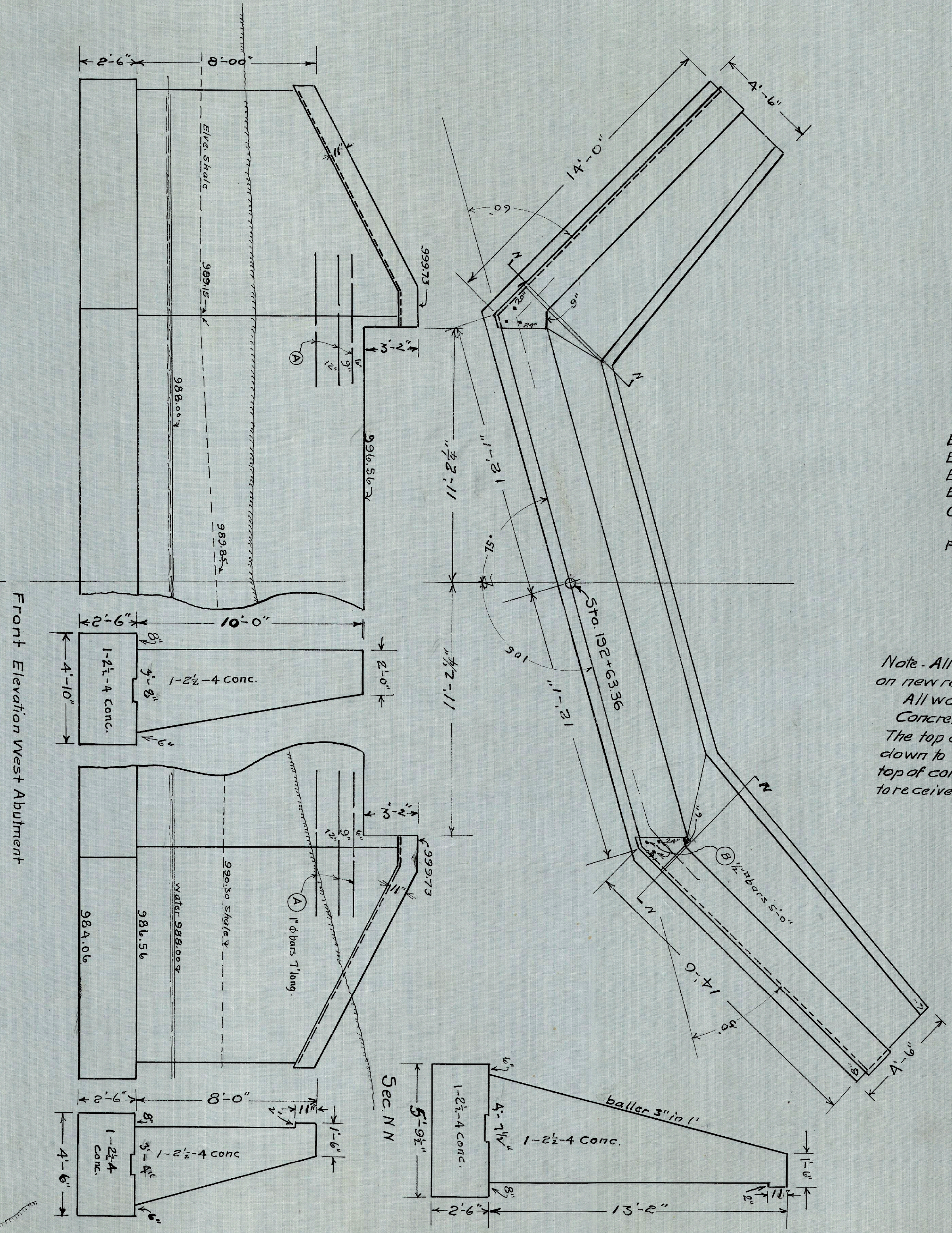
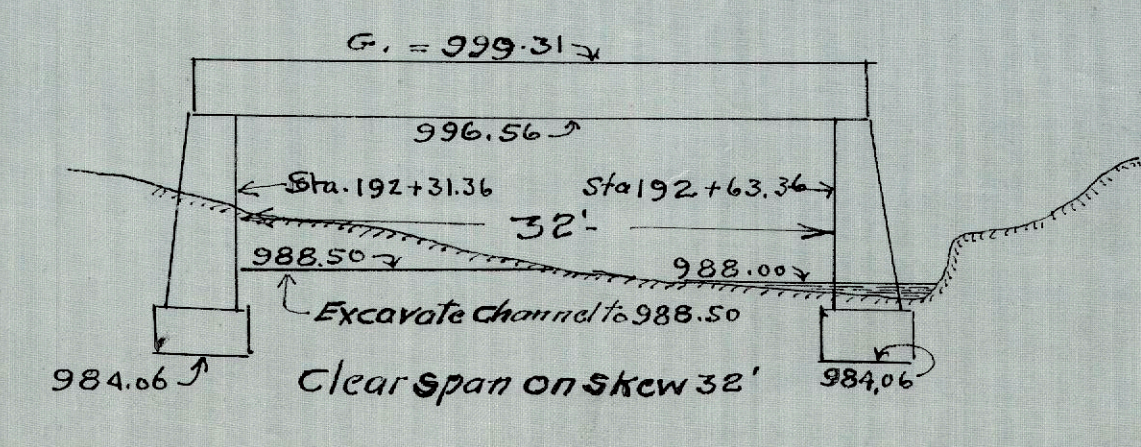
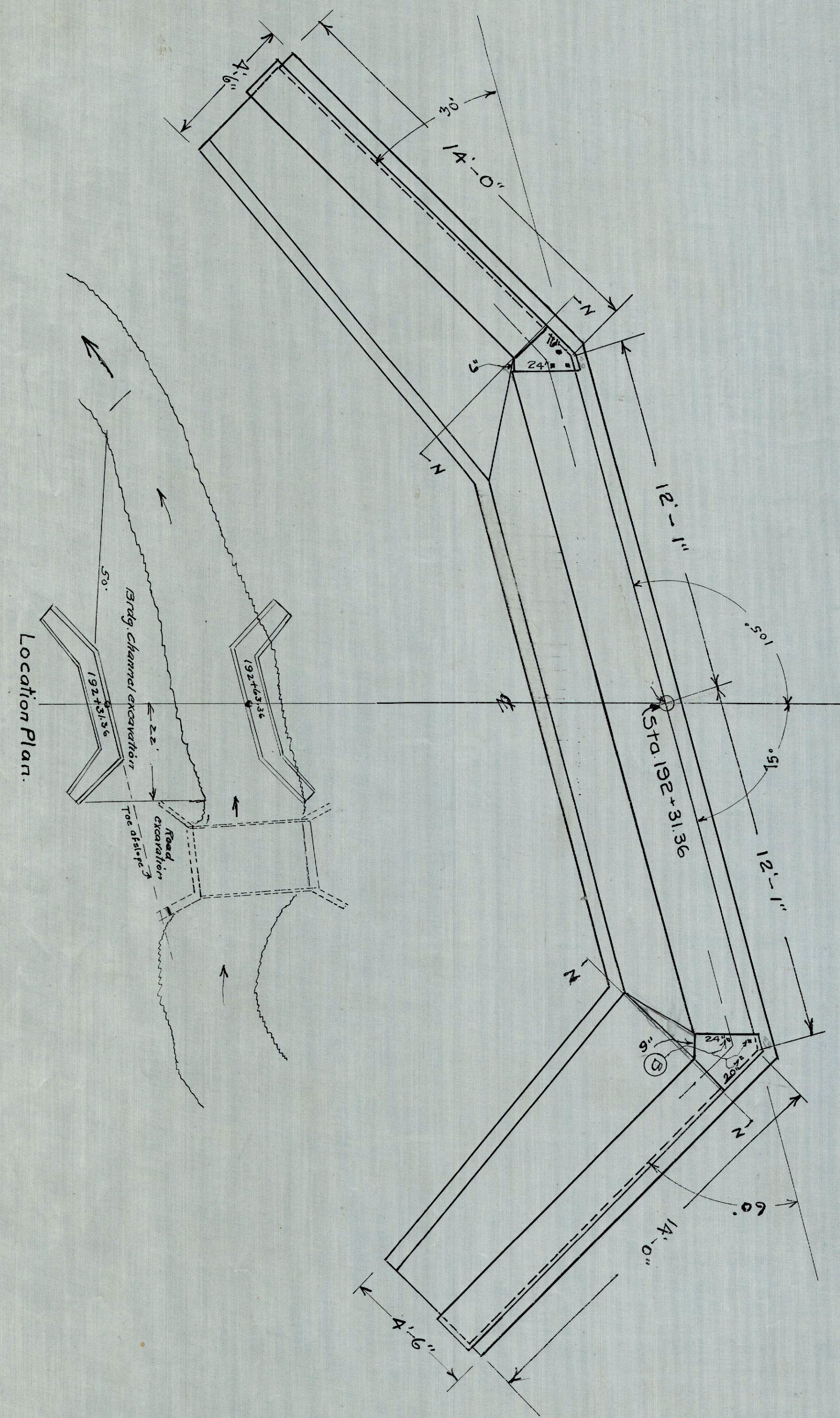
FINAL SURVEY  
APPROVED  
DATE

ORIGINAL SURVEY  
APPROVED  
DATE









**ESTIMATED QUANTITIES**

Excavation and backfill earth dry	40 Cu. Yds.
Excavation " " " Stone "	21 " "
Excavation " " " wet "	91 " "
Excavation Channel	53 " "
Concrete 1-2 1/2-4 Footers	45.22 " "
" " 1-2 1/2-4 Breastwall-Wings	106.86 " "
Reinforcing Steel	275 #

Note - All excavated material shall be backfilled and surplus placed on new roadway for approaches to bridge.  
 All workmanship and material shall conform to specifications.  
 Concrete shall be mixed to a consistency not exceeding 2" slump test.  
 The top of abutments shall have an even and level surface troweled down to a dense hard surface. Forms shall not project higher than top of concrete. Before backfilling supports shall be set off footer offsets to receive false work for superstructure.

Steel List  
 12 A bars 1" dia 7'-0" long  
 12 B " 1/2" dia 5'-0" "

**PLAN FOR CONCRETE-SUB-STRUCTURE FOR CONCRETE BRDG. MILLERSBURG-CHARM RD. Sta. 192+47.36 Sec. C**



STEEL LIST					
Mark	No.	Size	Length	Space	Place
X	4	3/4" $\phi$	6'-0"	as shown	Curtain
X	6	3/4" "	6'-0"	" "	Abutment
C	53	3/4" "	14'-0"	5" C/C	Slab
E	6	1/2" "	24'-0"	2" " "	Slab
B	4	1/2" $\phi$	14'-0"	as shown	Curbs
F	4	1/2" $\phi$	13'-6"	" "	Railing
G	16	" "	3'-6"	" "	Small Posts
K	16	" "	4'-0"	" "	end "
O	4	3/4" $\phi$	2'-0"	" "	Dowels
O1	12	1/2" "	2'-6"	18"	Arch Dam
X	4	3/4" $\phi$	3'-0"	" "	" "

All bars shall be deformed bars

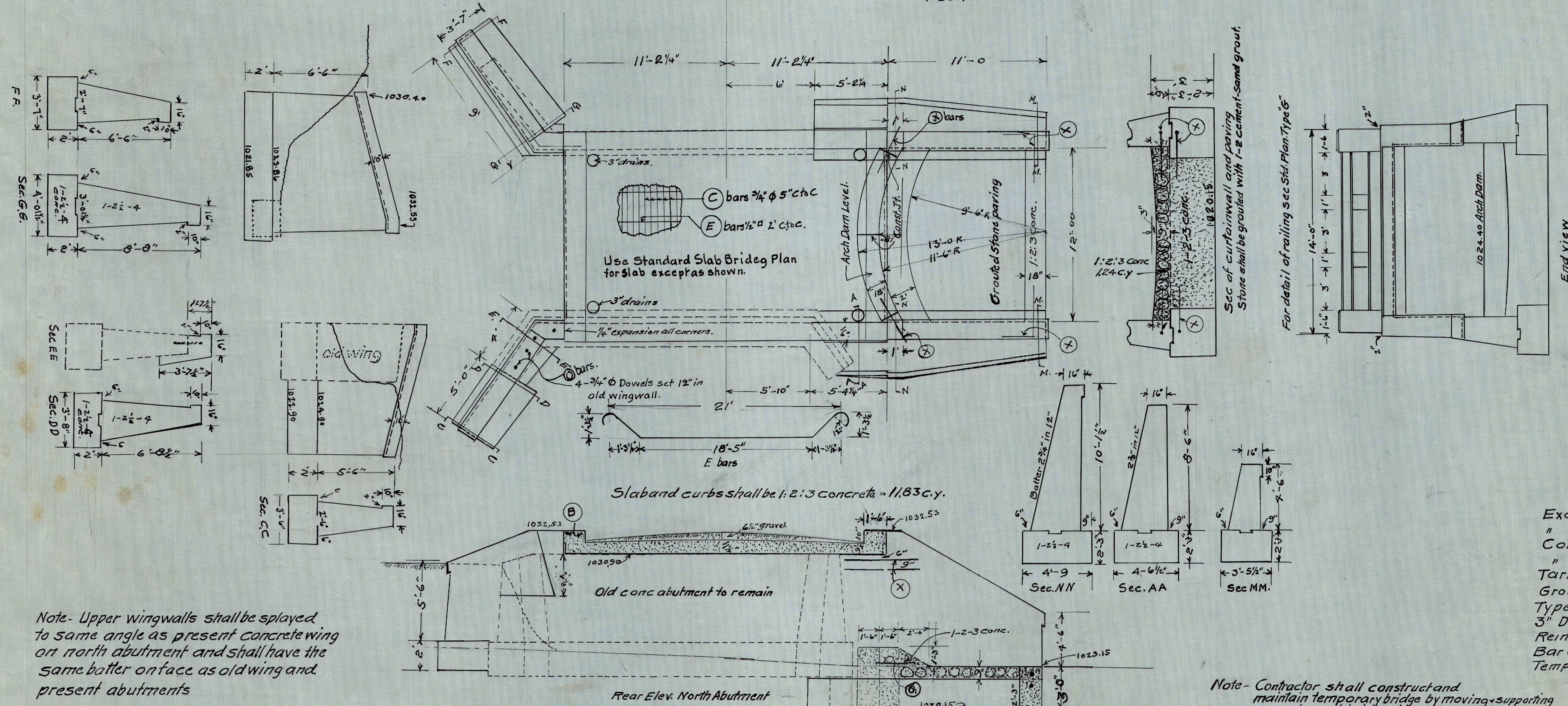
Batter wings same as old abutment

remove 2 courses Stone and tie in with conc. wing

Old stone abutment to remain but must be pointed up with a 1-2 cement mortar

old conc. footer approx.

1-2-3 Conc. above Elev 1022.40 1.93 C.Y.  
 1-2 1/2-4 Conc below " 1022.40 1.37 C.Y.



Slab and curbs shall be 1:2:3 concrete = 11.83 c.y.

Rear Elev. North Abutment

Sec of curtailwall and paving Stone shall be grouted with 1-2 cement-sand grout.

For detail of railing see Std. Plan Type G

End view

ESTIMATED QUANTITIES

Excavation+refill dry	34. C.Y.
" " " " wet	31. C.Y.
Concrete 1-2 1/2-4	44.9 C.Y.
" " 1-2-3	15.0 C.Y.
Tarred felt 1/4"	10. Sq.ft.
Grouted Stone paving 9" 1/12"	12.5 Sq.yds.
Type "G" Concrete Railing	28 Linft.
3" Drain Tite	4
Reinforcing Steel	15.37 pounds
Bar Chairs and barties	
Temp Bridge + detour	

Note - Upper wingwalls shall be splayed to same angle as present concrete wing on north abutment and shall have the same batter on face as old wing and present abutments

All workmanship and material must conform to specifications

Note - Contractor shall construct and maintain temporary bridge by moving supporting present wood bridge to east and shall construct and maintain impassable condition a detour across said bridge for all traffic during the construction of this bridge and shall remove same when traffic is resumed across new structure. Co. Commissioners to provide the required right of way.

PLAN FOR CONCRETE BRIDGE SEC. C MILLERSBURG-CHARM RD. SPAN 12' ROADWAY 20' STA 233+46.5



# SUMMARY OF QUANTITIES

## ROADWAY

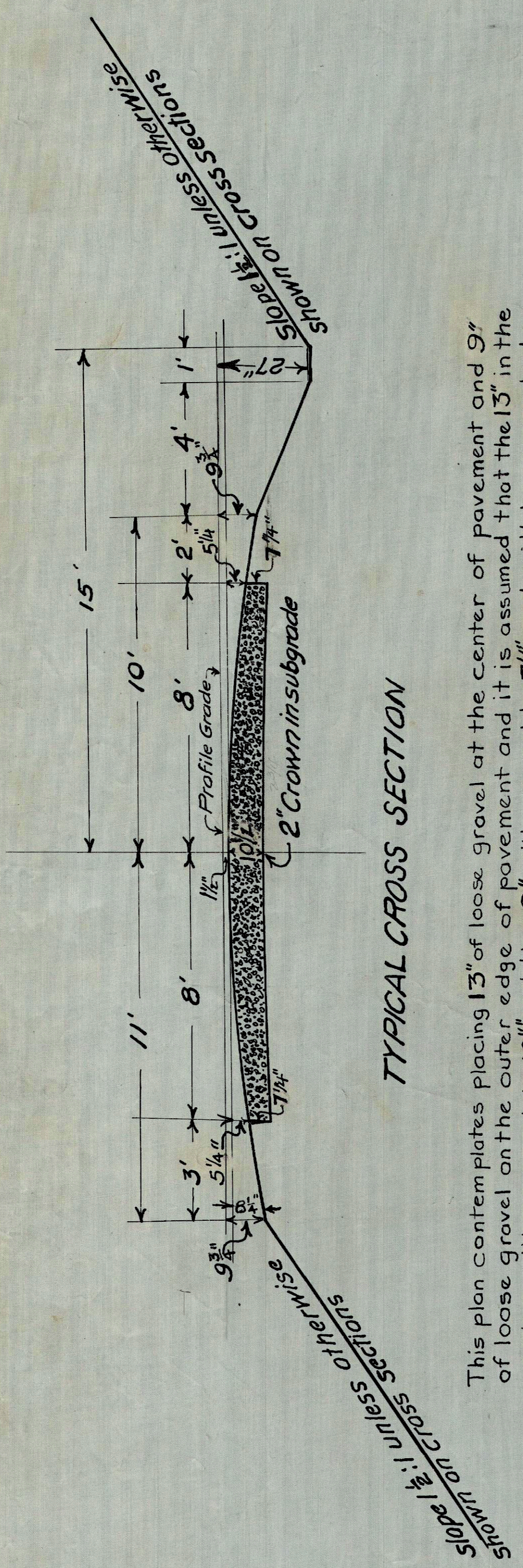
Excavation unclassified	7877 Cu.Yds.
Borrow	40 " "
Gravel pavement 10 1/2" center 7 1/4" sides compacted	12449.9 Sq.Yds.
Gravel pavement 11" center 11" sides loose 9" compacted	1207.1 " "
Gravel pavement 8" center 3" sides loose on bridge Sta. 233+46.5	30 " "
Finishing slopes 1/40 Ditches (both sides)	7969 Lin. Ft.
Clearing and grubbing	
Removing culvert pipe 8" to 12"	100 Lin. Ft.
Loose gravel for approaches	44 Cu.Yds.
Guard rail (Type "E")	1816 Lin. Ft.
Pipe relaid for private driveways 8" to 24"	50 Lin. Ft.
" laid " " " new Corrg. 80' of 12" and 56' of 15"	136 " "
" " inside ditch new V.S.P. for storm sewer 366' of 10" and 92' of 15"	458 " "
Concrete 1-2-4 Headwalls - catch basin + gutter paving including 186 # steel & Excav.	9.70 Cu.Yds.
Concrete paving 7" center 9" sides reinforced and including metal center joint 1-1/2-3 Mix	316 Sq.Yds.
Removing 28 ft. Lattice girder bridge including 100 Cu.Yds. channel excv. and abutments	100 Cu.Yds.

## CULVERTS & BRIDGES UNDER 20'

Excavation	291 Cu.Yds. Dry	31 Cu.Yds. Wet	322 Cu.Yds.
Channel excavation dry			77 " "
Concrete 1-3-5 Mix			00 " "
Concrete 1-2 1/2-4 "			44.9 " "
Concrete 1-2-4 "			14.3 " "
Concrete 1-2-3 "			111.7 " "
Concrete bridge railing (Type "G")			28 Lin. Ft.
Reinforcing steel			6714 Lbs.
Solid C.I.P. 64' of 12", 72' of 14", 58' of 18" and 27' of 24"			221 Lin. Ft.
Grouted stone culvert base Sta. 204+59			5 Cu.Yds.
Grouted stone bridge paving 12" sides 9" center Sta. 233+46.5			12.5 Sq.Yds.
Drain tile 3" x 1'			4 Lin. Ft.
Culvert pipe removed 8" to 24"			34 " "
Removing old structure Sta. 233+46.5 and 5 temporary crossings			
Bars chairs, ties & spacers required			
Tarred felt expansion			10 Sq. Ft.

## BRIDGES OVER 20'

Dry excavation	40 Cu.Yds.	Tarred felt expansion (1/2")	28 Sq. Ft.
Dry excavation shale rock	21 " "	Tarred paper 3 ply 50 sq. ft. 2 ply 666 sq. ft.	716 " "
Channel excavation	53 " "	3" V.S.P. Drains	4 Ft.
Rock excavation wet	91 " "	Concrete bridge railing (Type "G")	71 Lin. Ft.
Removing old structure	No	Reinforcing steel	8961 Lbs.
temporary bridge	No	Bar chairs, bar ties & bar spacers required	
Concrete 1-2 1/2-4 Mix	152.08 Cu.Yds.	Concrete paving 4" thick 1-2-3 Mix	77.34 Sq.Yds.
Concrete 1-2-3 1/2 "	38.25 " "	Tarred felt expansion 1/2"	12 Sq. ft.

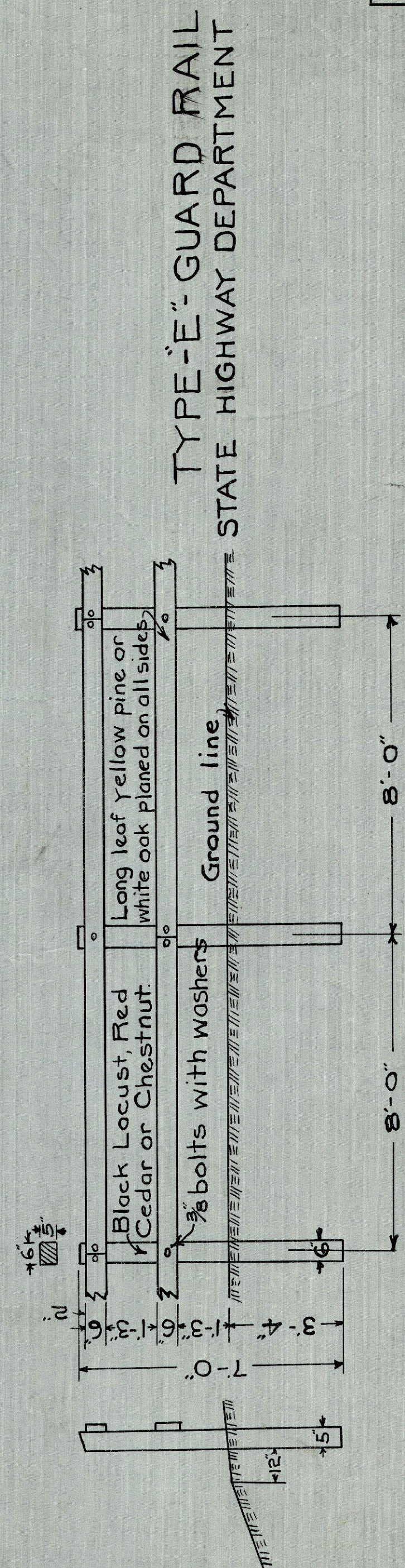


TYPICAL CROSS SECTION

This plan contemplates placing 1 1/2" of loose gravel at the center of pavement and 9" of loose gravel on the outer edge of pavement and it is assumed that the 1 1/2" in the center will compact to 10 1/2" and the 9" will compact to 7 1/4" and will be accepted as such. The gravel shall be placed as follows: - Plank 9" wide shall be staked along edge of pavement with a clearance of 16" with the top edge 5" below the profile grade. Narrow plank with blocks nailed on or set on blocks in order to make 9" will not be permitted.

Where ruts form in subgrade same shall be leveled off before placing gravel. The gravel shall then be placed between plank forms 9" deep at the side forms and 1 1/2" deep on the center line making 1" above profile grade and being a crown of 6" in the loose gravel. The gravel shall conform to a parabolic curve. The contractor shall provide a suitable template having this crown and check the gravel as same is spread. The berms shall be built up or dressed off as may be required to 1 1/4" below the top of the 9" side forms.

On super-elevated curves and public road approaches the gravel shall be placed uniformly 1 1/2" loose, 1/4" above profile grade and on subgrade 10 1/2" below profile grade.



TYPE "E" GUARD RAIL  
 STATE HIGHWAY DEPARTMENT

All surfaces in contact to be painted before assembling and all exposed surfaces to have two (2) coats of white lead and linseed oil paint. Post to be set vertical, in line parallel to grade line. Rails to be secured to posts without splitting. In order to secure proper alignment and grade, bolt holes shall be bored and the top of the post trimmed after the post are set and the rails nailed to them. Posts shall be treated with carbolineum from a point one foot above the ground line to a point one foot below the ground line.

2	WOOD	Posts	5	1/2	7
2	WOOD	Rails	2	6	16
6	Carriage	Bolts	3/8	7	1/2
6	Washers		3/8	7	1/2
7	1/2	Spikes	4	0	15