1294

cable Sunset Cliff

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INDEX

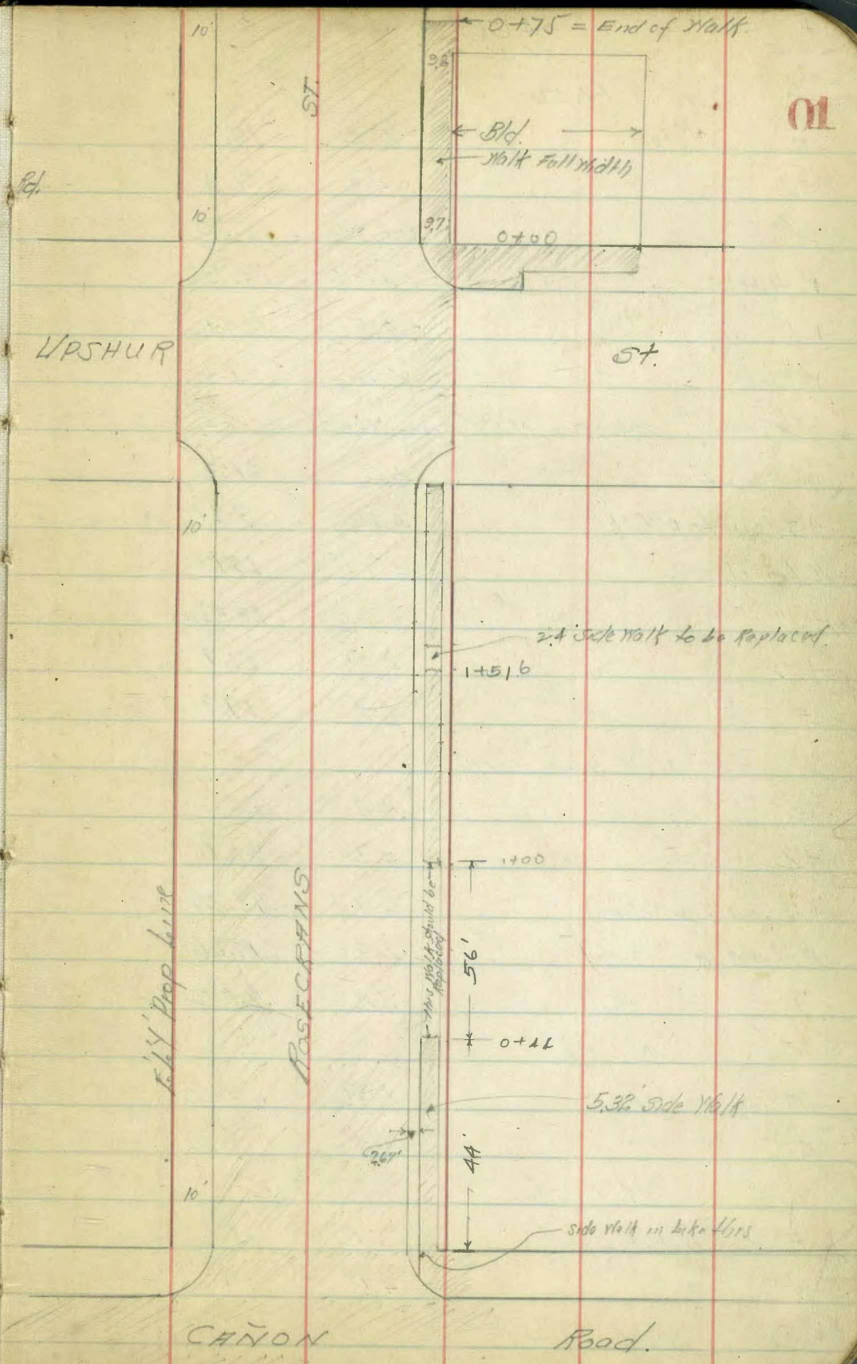
Walker / Replinger / Lockyer / Matthews 11-5-28

Cross Section Rosecrans St. Varying widths
From S'LY Cañon Rd. to Military Res.

Note: See Page 42 Before Reducing Rods this B.M. should be used

	3.91	24.71 / ~~24~~.56		20.80 S.W. B.P. / ~~20~~.65 Rosecrans & Cañon Rd.	
S'LY Cañon Rd = 0+00					
N. P.L. top Walk			.347	21.09	
W " cb.			4.01	20.55	
E " "			5.00	19.56	
E. P.L. on Ground			5.1	19.5	
{ 0+13 = ℄ Fire Plug on South		Rod on top	2.61	21.95 }	
0+07 = ℄ Acacia on E			R = 4.8	19.8	8.5 inst.
+26 = " " " "			" = 4.6	20.0	" "
+42 = " " " "			4.5	20.1	" " "
+59 = " " " "			4.4	20.2	" " "
+78 = " " " "			4.7	19.9	" " "
+94 = " " " "			4.3	20.3	" " "
0+58					
E			4.80	19.76	
+8			4.4	20.2	
E top cb.			5.30	19.26	
W " "			4.32	20.24	
W			4.0	20.6	
1+00					
W			4.2		
" top cb			4.43	20.13	
E " "			5.53	19.03	
+2			4.6	20.0	
E			4.5	20.1	

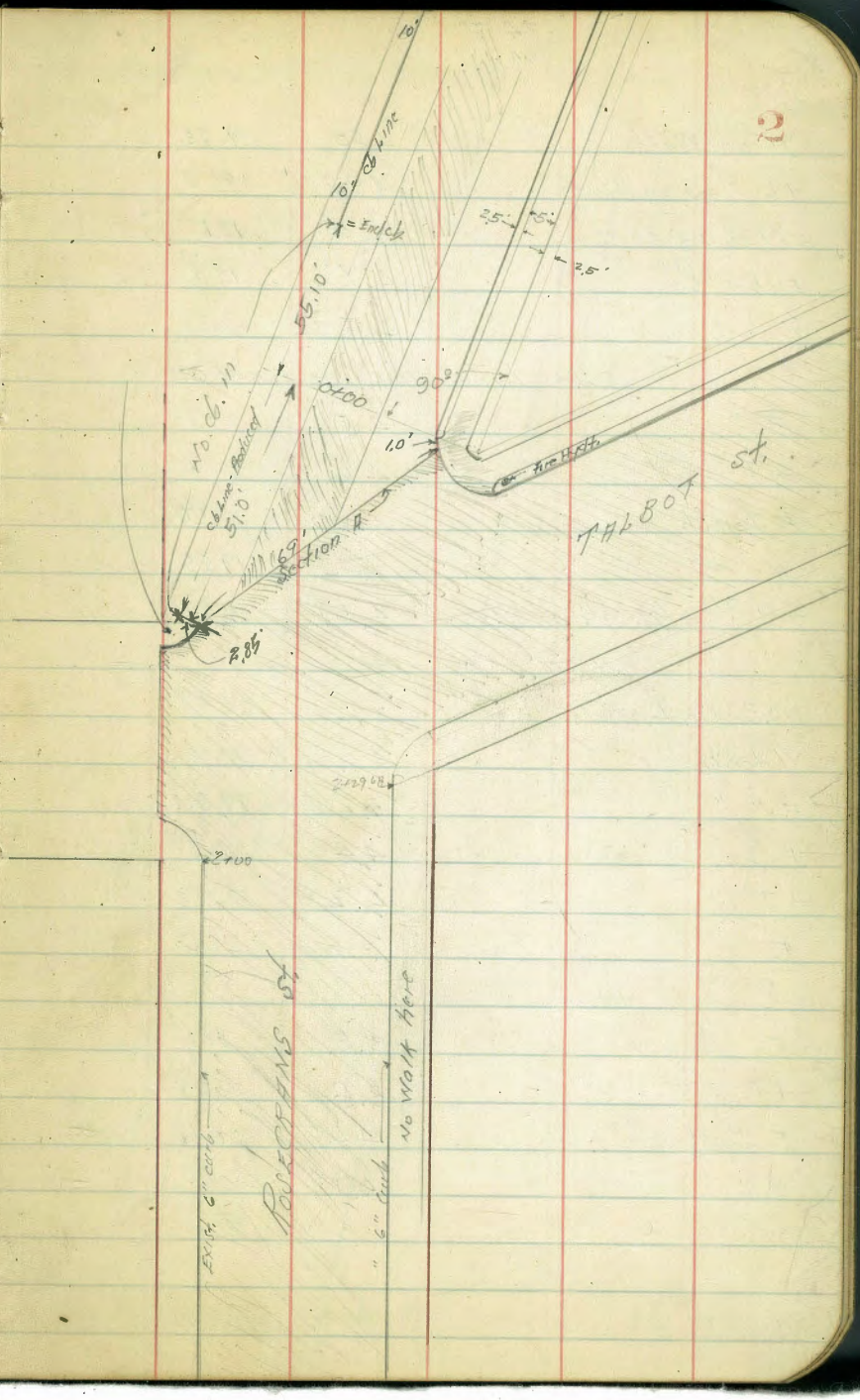
Plotted Jan 16-29. GBH



~~24.56~~ 24.71

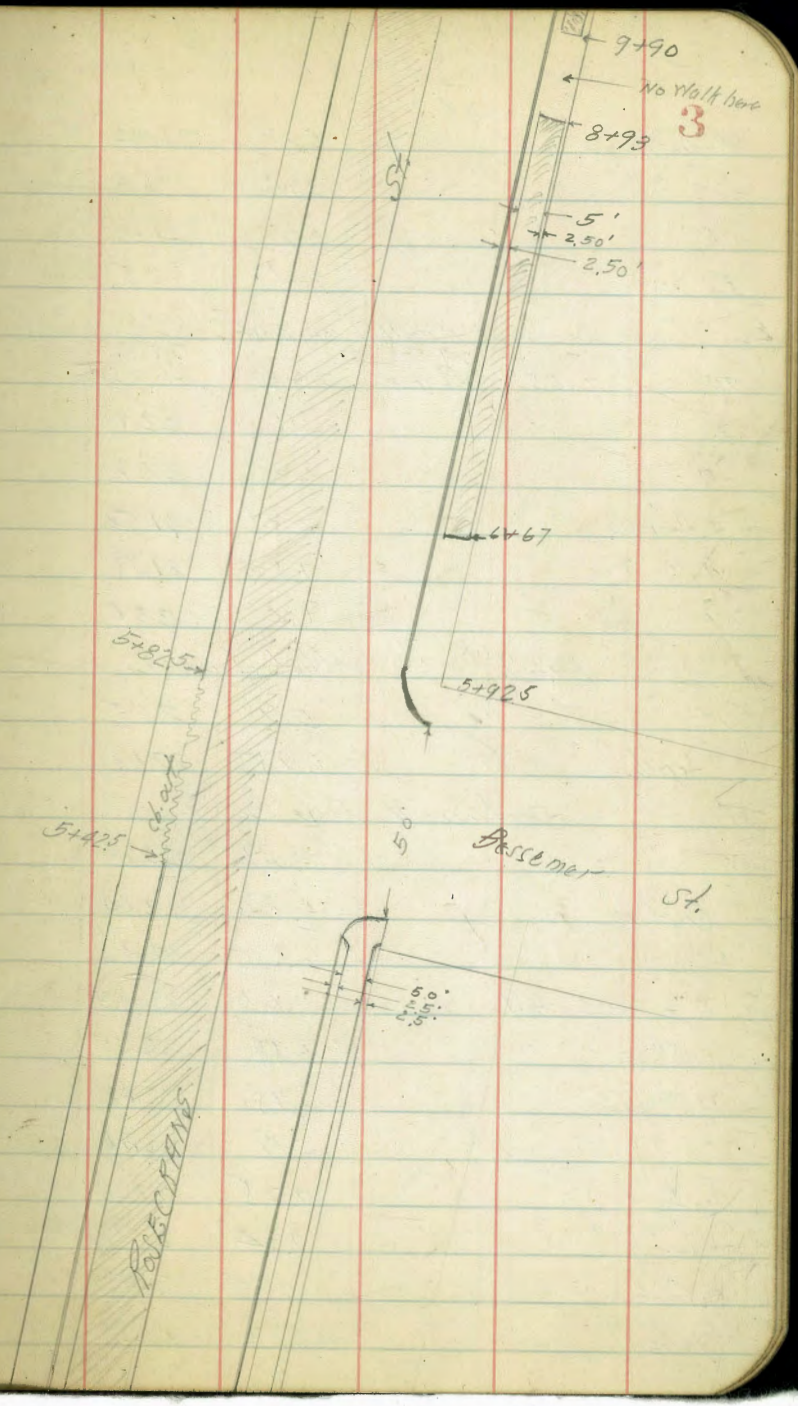
1450

~~E~~	5.3	19.3
+8	5.2	19.3
E top cb	5.78	18.78
W top cb	4.71	19.85
+8	4.5	20.1
W	4.0	20.6
2+00 = N&Y Line Upchur- st.		
W	4.4	20.2
+2 on top Walk	4.68	19.88
W top cb.	4.96	19.60
E " "	6.03	18.53
+2	4.9	19.7
E	4.7	19.9
N&Y Line + 9'		
E	4.4	20.2
+4	4.6	20.0
+6 on top Return	6.17	18.39
W cb +4 " "	4.90	19.66
W	4.4	20.2
N cb		
W on End Return	4.86	19.70
E " " "	6.20	18.36
S&Y cb.		
E top cb End Return	6.19	18.37
W " " " "	4.91	19.65
S&Y cb + 3'		



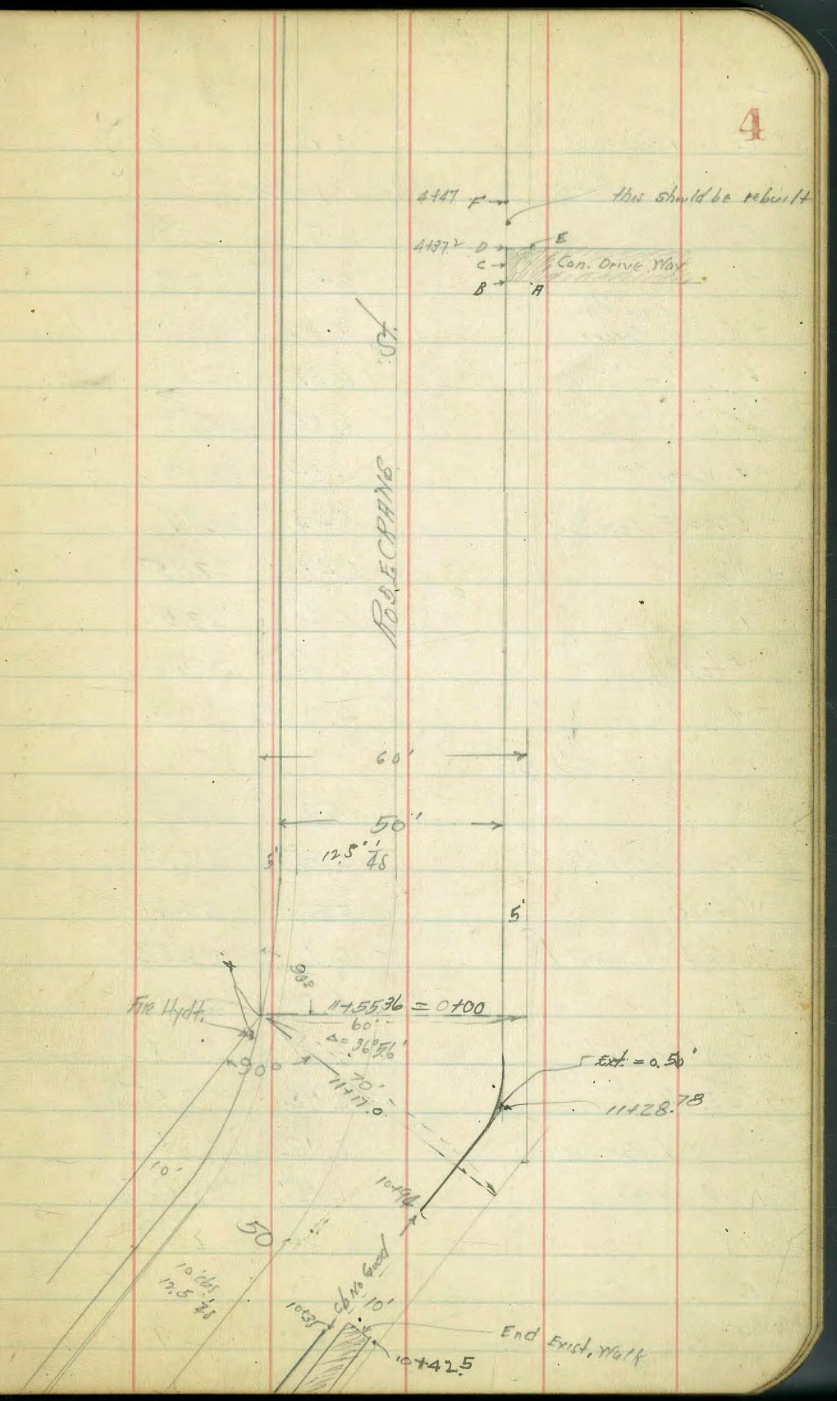
24.56
24.71

W on Walk	4.80	19.76
+6 " top on Return	4.99	19.57
E'l'y cb + 3' " "	6.0	18.6
E cb + 5	4.7	19.9
E	4.5	20.1
S&Y Line Upshur = 0+00		
E	4.5	20.1
+7	4.6	20.0
E top cb.	6.00	18.56
W " "	5.03	19.53
+9.70 = top Walk at Blk.	4.59	19.97
0+50		
+0.3 on top Walk	3.93	20.63
W top cb.	4.40	20.16
E " "	5.25	19.31
+2	4.4	20.2
+7	4.3	20.3
E	3.6	21.0
1+00		
E	3.6	21.0
+7	3.8	20.8
E top cb.	4.45	20.11
W " "	3.75	20.81
W	3.2	21.4
1+50		
W	2.3	22.3



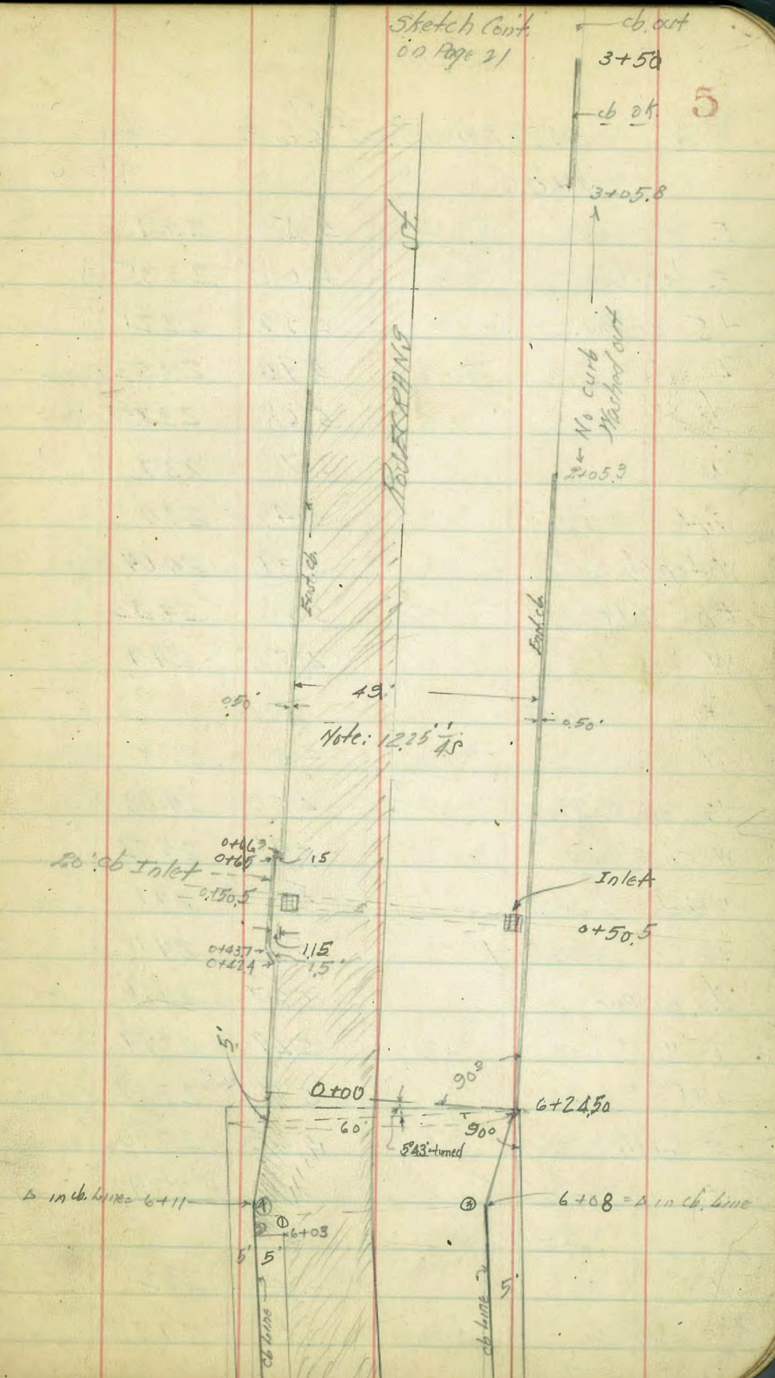
Rosecrans St.

W top Cb.		3.12	21.44
E " "		3.74	20.82
+4		3.7	21.4
E		2.1	22.5
	2+00 = N&Y Talbot on East.		27.03
T.P.	7.55	2.68	27.88
E		6.6	22.8
+7		6.5	22.9
E top Cb.		7.91	21.52
W " "		7.57	21.86
W		6.4	23.0
	2+29.68 = N&Y Talbot St on W		
W		5.9	23.5
" top Cb.		6.95	22.48
	Section A Page 2		
W " "		6.29	23.14
" Gut. on Pav.		6.82	22.61
+4		6.60	22.83
+4 on W top Rail		6.61	22.82
+10.5' E " "		6.58	22.85
+14.5 on Pav.		6.75	22.68
L " "		6.79	22.64
E 4 " "		7.25	22.18
+6.7' " "		7.54	21.89
E Gut " "		7.93	21.50
E top Cb.		7.50	21.93



ok → ~~29.43~~ 29.58

E cb + 10' = E L	6.8	22.6
0+00 see sketch Page 2		
E	6.5	22.9
cb.	6.4	23.0
+ 6.3' East edge on Paving	7.10	22.33
1/4 " "	6.82	22.61
℄ " "	6.54	22.89
+ 1 = W edge "	6.54	22.89
+ 4.2 = E top Rail	6.44	22.99
+ 9.2 = W " "	6.48	22.95
1/4	6.4	23.0
W top cb.	6.29	23.14
W	6.0	23.4
0 + 50		
W	5.0	24.4
+ 2 on top Walk	5.65	23.78
W top cb.	5.82	23.61
" Gut. on Ground	6.1	23.33
1/4	6.0	23.4
4.6 = W top Rail	6.07	23.36
9.3 = E " "	6.08	23.35
℄ = West edge Paving	6.12	23.31
1/4 = on Pav	6.37	23.06
+ 7.5 " " East edge	6.66	22.77
E cb. on Ground	6.6	22.8
E	6.5	22.9



2943 L
29.58

0+55 = beginning of cb. on E	641	
1+00		
E	5.5	23.9
E. top cb.	6.08	23.35
+5 on Pav.	6.27	23.21
¼ " "	5.90	23.53
½ " "	5.68	23.75
¼	5.7	23.7
Gut	5.4	24.0
W top cb.	5.39	24.04
+8" Walk	5.71	24.22
W	4.5	24.9
1+50		
W	4.0	25.4
+2 on Walk	4.80	24.63
W cb	4.91	24.52
" Gut	5.3	24.1
¼	5.3	24.1
½ on Pav.	5.27	24.16
¼ " "	5.49	23.94
+7.5" "	5.79	23.64
E. top cb.	5.63	23.80
E.	5.5	23.9
2+00		
E.	5.2	24.2
E. top cb.	5.20	24.23

2943 L
29.58

+5 on Pav	5.39	24.04
¼ " "	5.04	24.39
½ " "	4.82	24.61
¼	4.8	24.6
Gut	4.9	24.5
W top cb.	4.44	24.99
W	4.1	25.3
2+50		
W	3.4	26.0
+2 on Walk	3.81	25.62
W top cb.	3.96	25.47
" Gut	4.6	24.8
¼	4.4	25.0
½ on Paving	4.39	25.04
¼ " "	4.64	24.79
+7.5' " "	4.94	24.49
E. top cb.	4.77	24.66
E.	4.3	25.1
3+00		
E.	4.3	25.1
E. top cb.	4.36	25.07
+5 on Pav.	4.56	24.87
¼	4.23	25.20
½ " "	3.94	25.49
¼ " "	4.00	25.43
Gut.	4.1	25.33

		~~2943~~ 29.58		
W top cb.			3.47	25.96
" cb + 8 on top Walk			3.35	26.08
W			3.0	26.4
3+50				
W			2.8	26.6
" top cb.			3.04	26.39
Gut			3.6	25.8
1/4			3.5	25.9
℄ on top Paving			3.52	25.91
1/4 " " "			3.76	25.67
+75 " " "			4.12	25.31
E top cb.			3.95	25.48
E			3.8	25.63
4+00				
E			3.6	25.8
E top cb.			3.52	25.91
Gut			3.9	25.5
+5 on Pav.			3.63	25.80
1/4 " "			3.34	26.09
℄ " "			3.08	26.35
1/4			3.2	26.23
Gut			3.2	26.23
W top cb.			2.57	26.86
W			2.4	27.0
4+50				
W			1.4	28.0

		~~2943~~ 29.58			
+2 on Walk			2.01	27.42	7
W top Walk			2.13	27.30	
Gut			2.8	26.6	
1/4			2.8	26.6	
℄ on Pav.			2.68	26.75	
1/4 " "			2.95	26.48	
+75			3.27	26.16	
E top cb.			3.13	26.30	
E			3.3		
T.P.	10.47	37.30 ~~37.15~~	2.75	26.83 ~~26.68~~	
5+00					
E			10.0	27.2	
E top cb.			10.46	26.69	
+5 on Pav.			10.59	26.56	
1/4			10.26	26.89	
℄			9.95	27.20	
1/4			10.0	27.2	
Gut.			10.0	27.2	
W top cb.			9.47	27.68	
+8 " Walk			9.35	27.80	
W			9.0	28.15	
5+28 = ℄ Fire Hydt. (Rd on top.) on W 19' W. W. Cb.			6.73		
T.P. on N.W. B.P. Rosecrans & Bessemer		37.15	9.25	27.90	
				28.05 = B.M.	
Note think B.M. at Canon Rd. Has been moved. Will now turn back to Canon Rd.				0.15 = difference	
	1.62	29.67		28.05 = Above B.M.	
T.P.	2.61	24.65	7.63	22.04	

2465

cbk. on S.W. B.P. Rosecrans & Cañon Rd. 385 — 20.80
original Elev → 20.65
Note: Will now make Corrections from Page 1 to Page 7 — 0.15

~~39.05~~

11.15 39.20 — ~~27.90~~ 28.05 — N.W. B.P. Rosecrans & Bessemer St.

5+37.5 = N'LY' Line Bessemer St. 60' wide 10' cbs. 10'45

W	10.4	28.7
+2' on Walk	10.90	28.15
W top cb.	11.10	27.95
" Gut.	11.4	27.7
¼	11.4	27.7
+4.5 on W Rail	11.40	27.65
+9.3 " E "	11.40	27.65
℄ " Pav.	11.53	27.52
¼ " "	11.85	27.20
+7.5' on "	12.20	26.85
+11 " Ground	11.7	27.35
E. cb. top.	12.08	26.97
+2	11.4	27.7
E.	12.0	27.1

5+42.5 = N Cb. = End cb on E. See sketch

E.	11.5	27.6
+5	10.9	28.2
E. top cb.	11.95	27.10
+5 on Pav.	12.07	27.13
¼ " "	11.68	27.37
℄ " "	11.42	27.63

39.20

¼	11.3	
Gut.	11.3	27.8
W top cb. = End Return	11.01	28.04
N ¼		
W	10.9	28.2
cb.	10.8	28.3
¼	11.0	28.1
℄ on Pav.	11.24	27.81
¼ " "	11.57	27.48
+7.5 " "	11.88	27.17
cb. on Ground	11.6	27.5
+6	11.2	27.9
E	12.4	27.7
℄		
E	11.6	28.5
+4	11.2	28.9
cb. on Ground	11.3	28.8
+5 on Pav.	11.73	27.32
¼ " "	11.43	27.62
℄ " "	11.10	27.95
¼	11.0	28.1
cb.	11.0	28.1
W	10.8	28.3
S ¼		
W	10.3	28.8
cb.	10.7	28.4

39.20
39.05

½	10.7	28.4
¼ on Par.	10.95	28.10
¼ " "	11.25	27.81
+7.5 " "	11.55	27.50
E. top ch.	11.35	27.70
+6	11.2	27.9
E.	13.0	26.1
+5	14.8	25.3
5 Ch. = beginning ch. on E		
-5	12.6	24.5
E.	11.0	28.1
E. top ch.	11.43	27.62
+5 on Par.	11.42	27.63
¼ " "	11.13	27.92
½ " "	10.76	28.29
¼ " Ground	10.5	27.55
ch.	10.5	28.65
W top ch. = End Return	10.13	29.92
5+92.5 = South Line Basement St.		
W	9.3	30.75
" top ch.	10.12	28.93
¼	10.2	28.9
+4.6 = top W. Rail	10.40	28.65
+9.3 = " E Rail	10.37	28.68
½ on Par.	10.54	28.51
¼ " "	10.80	28.25

39.20
39.05

9

+7.5 on Par.	11.19	27.86
Gut	11.5	27.6
E top ch.	11.11	27.94
+8	10.6	28.45
E.	11.2	27.85
+5	13.5	25.6
T.P. on Pvt. 12.83 40.88 40.73	11.15	27.90 ~~28.05~~
6+50		
-5	12.0	28.7
E.	10.3	30.4
E. top ch.	10.23	30.50
" Gut	10.9	29.8
+5 on Paving	10.33	3040
¼ " "	9.99	30.74
½ " "	9.68	31.05
+7	9.6	31.1
¼	10.0	30.7
W Gut	10.2	30.5
" top ch.	9.17	31.56
"	8.8	32.87
7+00		
W	6.3	34.43
+7 on Walk	6.86	33.87
W top ch.	7.06	33.67
" Gut	7.5	33.2
" ¼	7.7	33.03

~~40.88~~
40.73

¼ + 5	7.5	33.23
℄ on Pav.	7.45	33.28
¼ " "	7.73	33.0
+7.5 " "	8.10	32.63
E. Gut.	8.6	32.13
E. top Cb.	8.17	32.56
E	7.9	32.8
+5.	9.0	31.7
7+50		
-5	5.9	34.8
E	5.5	35.2
" top Cb.	5.77	34.96
" Gut	6.3	34.4
+5 on Paving	5.82	34.91
¼ " "	5.48	35.25
℄ " "	5.21	35.52
+7	5.3	35.4
¼	5.3	35.4
W Gut	5.4	35.3
" top Cb.	4.72	36.01
W	4.4	36.3
8+00		~~38.1~~
W	2.3	38.4
+2 on top W/a/k	2.38	38.35
W top Cb.	2.56	38.17
" Gut	3.2	37.53

~~40.88~~
40.73

10

¼	3.1	37.63
℄ on Paving	3.05	37.68
¼ " "	3.35	37.38
+7.5 " "	3.67	37.06
E. Gut	4.1	36.63
E. top Cb.	3.56	37.17
E	3.4	37.33
+5	3.2	37.53
8+50		
E. -5	2.8	37.93
E.	1.3	39.43
" top Cb.	1.30	39.43
" Gut.	1.9	38.83
+5 on Paving	1.41	39.29
¼ " "	1.11	39.62
℄ " "	0.80	40.73
¼	1.0	39.73
W Gut.	1.0	39.73
" top Cb.	0.34	40.39
+8 on Walk	0.12	40.61
W	0.0	40.73
T.P. 11.96	~~52.38~~ 52.23	0.46 ~~40.27~~ ~~40.42~~
9+00		
W	9.2	43.0
+2	9.7	42.5
W top Cb. in Driveway	10.28	41.95

39.93

~~52.38~~
52.23

¼	10.2	42.0
℄ on Pav.	10.08	42.15
½ " "	10.35	41.88
+7.5 " "	10.71	41.52
E. Gut	11.1	41.13
" top Cb.	10.60	41.63
E.	10.4	41.8
+7	10.6	41.6
+10	14.8	37.4
9+50		
E-10	7.7	44.5
E-5	7.5	44.7
E	8.3	43.9
" top Cb	8.37	43.86
" Gut	8.6	43.6
+5 on Pav.	8.50	43.73
¼ " "	8.17	44.06
℄ " "	7.87	44.36
¼	7.7	44.5
W Gut	8.0	44.2
" top Cb.	7.37	44.86
+5	7.7	44.5
W	7.1	45.1
10+00		~~47.3~~
W	4.9	47.3
+2 on Walk.	4.95	547.28

~~52.38~~
52.23

11

W top Cb	5.10	47.13
" Gut	5.7	46.5
½	5.7	46.5
℄ on Pav.	5.65	46.58
¼ " "	5.88	46.35
+7.5 " "	6.28	45.95
E. Gut	6.7	45.5
" top Cb	6.15	46.08
E.	5.6	46.6
10+42.5 = End East Walk on West.		
E	3.4	48.8
+5	4.3	47.9
E. top Cb.	4.24	47.99
" Gut	4.7	47.5
+5 on Pav.	4.25	47.98
¼ " "	4.00	48.23
℄ " "	3.71	48.52
¼	3.9	48.3
W Gut	4.1	48.1
" ~~top Cb.~~		
+7.5 on top Walk	3.08	49.15
	3.0	49.23
{10+35 = End Cb. on West.	3.59	48.64 }
10+47		
W	+7.5	54.7
+7	1.4	50.8

	52.38 / 52.23			
W. Gut.		3.8	48.4	
" ℄		3.6	48.6	
℄ on Paving		3.51	48.72	
¼ " "		3.76	48.47	
+7.5 " "		4.06	48.17	
E. Gut.		4.5	47.73	
" top cb		4.04	48.19	
+6		4.1	48.1	
E		3.3	48.9	
	52.27		48.61	
T.P.	8.27 57.03	3.62	48.76	
	10+58.7 = P.C. of Pav.			
E		7.4	49.5	
+4		8.1	48.8	
E cb.		8.18	48.76	
" Gut.		8.7	48.2	
+5 on Pav.		8.22	4866	
¼ " "		7.92	48.96	
℄ " "		7.73	49.15	
+3 " E Rail		7.90	48.98	
+7.72 " W "		7.68	49.20	
¼		8.0	48.9	
W cb on Ground		8.0	48.9	
cb + 6		4.1	52.8	
W		3.0	53.9	
{10+94 = beginning cb. on W.		6.09	50.79	}
	11+17 see sketch			

	57.03 / 56.88		
W	1.7	55.2	
+5	3.9	53.0	
W top cb.	5.56	51.32	
¼	5.9	51.0	
℄	5.9	51.0	
+1.5 = W Rail	5.84	51.04	
+6.8 = E Rail	5.96	50.92	
+9.9 = West edge Paving	6.01	50.87	
¼ on "	6.04	50.84	
cb +6' = East edge Paving	6.61	50.27	
E Gut. = cb +9.5	6.6	50.3	
E top cb. = E. Line	6.26	50.62	
11+28.78 on top cb. on West	5.30	51.58	see sketch
11+55.36 = 0+00	see sketch Page 4		
E = top cb.	6.26	50.62	
E+3.8 = east edge Paving	6.52	50.32	
¼ on Pav.	5.82	51.06	
+6.8 = West edge Paving	5.61	51.27	
+9.9 = East Rail	5.49	51.39	
℄	5.3	51.6	
+2.5 = West Rail	5.25	51.63	
¼	5.4	51.48	
W top cb. in Driveway	5.75	51.63	
W	4.4	52.5	
	0+10		
W	4.0	52.9	

57+03
57+88

+5 = top cb.	4.36	52.52
W. Gut.	5.0	51.9
" ¼	5.2	51.7
¼ + 3.9 = top W Rail	5.02	51.86
℄	5.2	51.7
+0.4 = top E Rail	5.24	51.66
+3 = West edge Paving	5.39	51.49
¼ = on Paving	5.67	51.21
+11.3 = East edge Paving	6.20	50.68
E cb.	6.5	50.4
" " +2.2	6.2	50.7
+2.2 on top cb.	5.96	50.92
E.	5.6	51.30
0+30		
E	5.2	51.7
+5 = top cb.	5.40	51.48
E Gut	5.8	51.1
+4.2 = East edge Paving	5.62	51.26
¼ on Paving	5.14	51.74
+11.7 " West edge Paving	4.71	52.17
℄	4.7	52.18
+2.4 = E Rail	4.80	52.08
+7.3 = W "	4.62	52.26
¼	4.8	52.1
W. Gut.	4.8	52.1
" top cb.	3.86	53.02

57+03
57+88

W	3.6	53.3
0+50		
W	3.3	53.6
cb.	3.51	53.37
Gut	4.3	52.6
¼	4.5	52.4
+2.6 = W Rail	4.22	52.66
+9.5 = E "	4.38	52.50
℄ = West edge Paving	4.21	52.67
¼ on Pav	4.66	52.22
+7.5 " East edge Paving	5.05	51.83
E Gut	5.4	51.48
E top cb.	4.96	51.92
E	4.7	52.2
0+60		
E	4.8	52.1
" top cb.	4.81	52.07
" Gut	5.1	51.8
+5 = East edge Pav.	4.96	51.92
¼ on Pav.	4.55	52.33
℄ " "	4.13	52.75
+3 " E Rail	4.29	52.59
+4.7 " W "	4.15	52.73
¼	4.2	52.68
W Gut	4.3	52.58
" top cb.	3.45	53.43

5703
16.88

W	37	53.7
0+70		
W	37	53.7
" top cb	348	53.40
" Gut	40	52.9
¼	41	52.8
+4.8 = W Rail	416	52.72
+9.5 = E "	429	52.59
℄ on West edge Pav.	412	52.76
½ " Pav.	451	52.37
+7.5 " "	488	52.00
E Gut.	57	51.7
E top cb.	475	52.13
E	47	52.2
0+80		
E	48	52.1
E top cb.	475	52.13
" Gut	51	51.8
+5 = Pav.	487	52.01
¼	448	52.40
℄	407	52.81
E Rail	430	52.58
W "	419	52.69
¼	411	52.77
W Gut	42	52.7
" top cb	454	52.34

5703
16.88

W	33	53.3
0+90		
W	37	53.7
" top cb.	363	53.23
" Gut	46	52.28
¼	43	52.6
W Rail	426	52.62
E "	433	52.55
℄ on Pav.	414	52.74
½ " "	453	52.35
+7.5 " "	491	51.97
E Gut	51	51.8
" top cb.	476	52.12
E	47	52.2
1+00		
E	50	51.9
" top cb.	488	52.00
" Gut	53	516
+5 on Pav.	508	51.80
¼ " "	470	52.18
℄ " "	428	52.60
E Rail	440	52.48
W "	438	52.50
¼	46	52.28
Gut	48	52.1
W top cb.	383	53.05

5703
57.88

W	3.5	
1+10		
W	3.9	52.9
" top Cb.	4.05	52.83
" Gut	5.7	51.7
¼	5.0	51.9
W Rail	4.59	52.29
E "	4.63	52.25
L on Pav.	4.57	52.36
¼ " "	4.83	52.05
+7.5 " "	5.22	51.66
E Gut	5.6	51.3
E top Cb.	5.09	51.79
E	5.3	51.6
1+20		
E	5.5	51.4
" top Cb.	5.46	51.74
Gut	5.8	51.1
+5 on Pav	5.55	51.33
¼ " "	5.17	51.71
L " "	4.88	52.00
E Rail	4.87	52.01
W "	4.85	52.03
¼	5.2	51.7
Gut.	5.4	5.5
W top Cb.	4.36	52.52

5703
57.88

15

W	4.0	
1+30		
W	4.3	52.6
" top Cb.	4.71	52.17
" Gut	5.7	51.2
¼	5.5	51.4
W Rail	5.16	51.72
E "	5.16	51.72
L on Pav.	5.20	51.68
¼ " "	5.49	51.39
+7.5 " "	5.82	51.06
E Gut	6.2	50.7
E top Cb.	5.79	51.09
E	5.8	51.1
1+40		
E	6.2	50.7
" top Cb.	6.10	50.8
" Gut	6.5	50.4
+5 on Pav.	6.75	50.63
¼ " "	5.90	50.98
L " "	5.60	51.28
E Rail	5.54	51.34
W "	5.54	51.34
¼	5.8	51.1
Gut	6.0	50.9
W top Cb	5.11	51.77

5703
56.88

W		48	
1+50			
W		51	51.8
" top cb.		5.49	51.39
" Gut		5.8	51.1
¼		6.7	50.7
W Rail		5.92	50.96
E "		5.92	50.96
℄ on Pav.		6.00	50.88
¼ " "		6.34	50.54
+75 " "		6.68	50.20
E Gut		6.7	50.2
" top cb		6.51	50.37
E		6.6	50.3
2+00			
E		8.6	48.3
" top cb		8.52	48.36
" Gut		8.7	48.18
" +5 on Pav.		8.68	48.20
¼ " "		8.37	48.51
℄ " "		8.04	48.84
E Rail		7.97	48.91
W "		7.97	48.91
¼		8.2	48.7
Gut		8.4	48.5
W top cb.		7.54	49.34

5703
56.88

W			74	
T.P.	0.15	48.63 48.78	840	4848 48.63
2+50				
W.			0.6	48.6
" top cb			1.23	47.40
" Gut			1.7	46.9
+7			2.4	46.2
½			2.0	46.6
W Rail			1.73	46.9
E "			1.74	46.89
℄ on Pav.			1.74	46.89
½ " "			2.07	46.56
+75 " "			2.42	46.21
E Gut			2.8	45.8
E top cb.			2.24	46.39
E			2.4	46.2
3+00				
E			4.6	44.0
" top cb.			4.36	44.27
" Gut.			4.8	43.8
+5 on Pav.			4.36	44.27
¼ " "			4.01	44.62
℄ " "			3.74	44.89
E Rail			3.74	44.89
W Rail			3.76	44.87
¼			4.1	44.5

		~~48.78~~ 48.63		
+5			4.4	44.2
W Gut			4.0	44.6
" top cb			3.19	45.44
W			3.0	45.6
3+50				
W			5.1	43.5
" top cb.			5.20	43.43
" Gut			6.1	42.53
+7			6.4	42.2
¼			6.2	46.4
W Rail			5.7	42.89
E "			5.77	42.86
℄ on Pav.			5.72	42.91
¼ " "			6.02	42.61
+7.5			6.41	42.22
E Gut			6.8	41.8
E top cb.			6.29	42.34
E			6.0	42.6
4+00				
E			8.6	40.0
E top cb			8.27	40.36
" Gut			8.5	40.1
+5 on Pav			8.40	40.2
¼ " "			8.02	40.61
℄ " "			7.74	40.89
E Rail			7.82	40.81

		~~48.78~~ 48.63		
W Rail			7.81	40.82
¼			8.0	40.6
+5			8.2	40.4
Gut			8.2	40.4
W top cb.			7.20	41.4
W			7.0	41.6
T.P.	0.99	40.97 ~~41.12~~	8.65	39.98 ~~40.13~~
A on Drive Way at Prop. Line			0.35	40.62
B " top cb.			0.56	40.41
C " ℄ Drive Way at cb Line			1.17	39.80
D " top cb.			0.99	39.98
E " Drive Way at prop. Line			0.75	40.22
F " top cb.			1.40	39.57
4+50				
W			0.5	40.92
" top cb.			1.58	39.39
" Gut			2.4	38.6
¼			2.5	38.5
℄ on Pav.			2.12	38.85
¼ " "			2.40	38.57
+7.5 " "			2.74	38.23
Gut			2.9	38.1
E top cb.			2.67	38.20
E			2.9	38.1
5+00				
E			4.7	36.3

~~4112~~ 40.97

E. top cb.		4.65	36.32
" Gut		5.2	35.8
+5 on Pav.		4.74	36.23
1/4 " "		4.39	36.58
℄ " "		4.06	36.91
1/4		4.5	36.5
W Gut		4.3	36.7
" top cb.		3.53	37.44
W		2.0	39.0
	5+50		
W		4.2	36.8
" top cb.		5.56	35.41
" Gut		5.9	35.1
+7		7.0	34.0
1/4		6.4	34.6
℄ on Pav.		6.01	34.96
1/4 " "		6.41	34.56
+7.5 " "		6.82	34.15
E Gut.		7.1	33.9
" top cb.		6.65	34.32
E		6.9	34.1
	6+00		
E		8.0	33.0
" top cb		8.61	32.36
" Gut		8.6	32.4
+5 on Pav.		8.86	32.11

~~4112~~ 40.97

1/4 on Pav.		8.42	32.55
℄ " "		7.91	33.06
+1.2 = West edge Paving		7.87	33.10
+4.5 = E Rail		7.79	33.18
+9.2 = W "		7.88	33.09
1/4		8.1	32.9
+6		8.4	32.6
W Gut		7.7	33.3
" top cb.		7.37	33.60
W		6.0	35.0
① = on Paving		8.97	32.00
② " " at cb. Line		9.27	31.70
③ = top cb sta 6+08 on W		7.58	33.39
④ = 6+11 = Δ in cb on E - top cb.		8.94	32.03
	6+24.5 = 0+00 (See sketch Page 5)	Note. 50' St.	49' Rdway
E top cb.		9.42	31.55
" Gut on Pav.		9.98	30.99
1/4 " "		9.02	31.95
+9.25 = West edge Paving		8.67	32.30
℄		8.6	32.4
+0.25 = on E Rail		8.59	32.38
+5 = " W "		8.70	32.27
1/4		8.4	32.6
+7		9.0	32.0
W Gut		8.7	32.3
" top cb.		8.08	32.89

(margin, vertical: See sketch for location of these pts.)

12.25 1/4 S

0+20		
W top cb.	8.53	32.44
" Gut	9.0	32.0
℄	8.8	32.2
+7.8 = W Rail	9.10	31.87
℄	9.1	31.9
+0.75 = E "	9.03	31.94
+3.5 = W edge Paving	9.06	31.91
E ℄ on Pav.	9.42	31.55
" Gut " "	10.15	30.82
" top cb.	9.69	31.28
0+42.4 see sketch		
E. top cb.	9.62	31.35
" Gut. on Pav.	10.32	30.65
" ℄ " "	9.60	31.37
+7.85 " west edge Pav.	9.31	31.66
℄+11.2 = E. Rail	9.30	31.67
℄	9.3	31.67
+3.6 = W "	9.40	31.57
℄	9.1	31.9
W. Gut.	9.4	31.6
" top cb.	8.78	32.19
0+56.5 = ℄ Inlets		
W top cb.	8.82	32.15
" " Grating at cb line	9.84	31.13
E " " " " "	10.43	30.54

41.12
4097

E top cb.	9.71	31.26
0+66.3		
E top cb.	9.67	31.30
" Gut. on Pav.	10.52	30.45
" ℄ " "	9.68	31.29
+7.35 " " west edge	9.35	31.62
+10.65 = E Rail	9.28	31.69
℄	9.3	31.7
+3 " = W "	9.37	31.60
℄	9.0	32.0
W Gut	9.5	31.5
W top cb.	8.82	32.15
0+83.7 = Bk. in cb. line on E		
W " "	8.71	32.26
" Gut	9.2	31.8
" ℄	9.0	32.0
+9.15 = W Rail	9.25	31.72
℄	9.2	31.8
+1.6 = E "	9.15	31.82
+5 = west edge Paving	9.18	31.79
℄ on Pav.	9.42	31.55
E Gut on Pav.	10.23	30.74
" top cb.	9.73	31.24
1+14.5 = Bk. in cb. line on E		
E top cb.	9.31	31.66
" Gut. on Pav.	9.78	31.19

4/12
4017

¼ on Paving	8.95	32.02
+6.95 on Paving West edge	8.66	32.31
+10.25 " E Rail	8.65	32.32
℄	8.7	32.3
+2.7 = W "	8.70	32.27
¼	8.6	32.4
W Gut.	8.1	32.9
" top cb.	8.13	32.87
1+40		
W top cb.	7.39	33.58
" Gut.	8.1	32.9
¼	8.0	33.0
℄	7.8	33.2
+5 on West edge Paving	7.88	33.09
¼ " Pav.	8.17	32.80
E Gut on Paving	8.94	32.03
" top cb.	8.48	32.49
1+80		
E. top cb.	7.00	33.97
" Gut. on Paving	7.45	33.52
¼ " "	6.71	34.26
+7.25 " " West edge	6.44	34.53
℄	6.3	34.7
¼	6.8	34.2
W Gut.	6.9	34.1
W top cb.	5.94	35.03

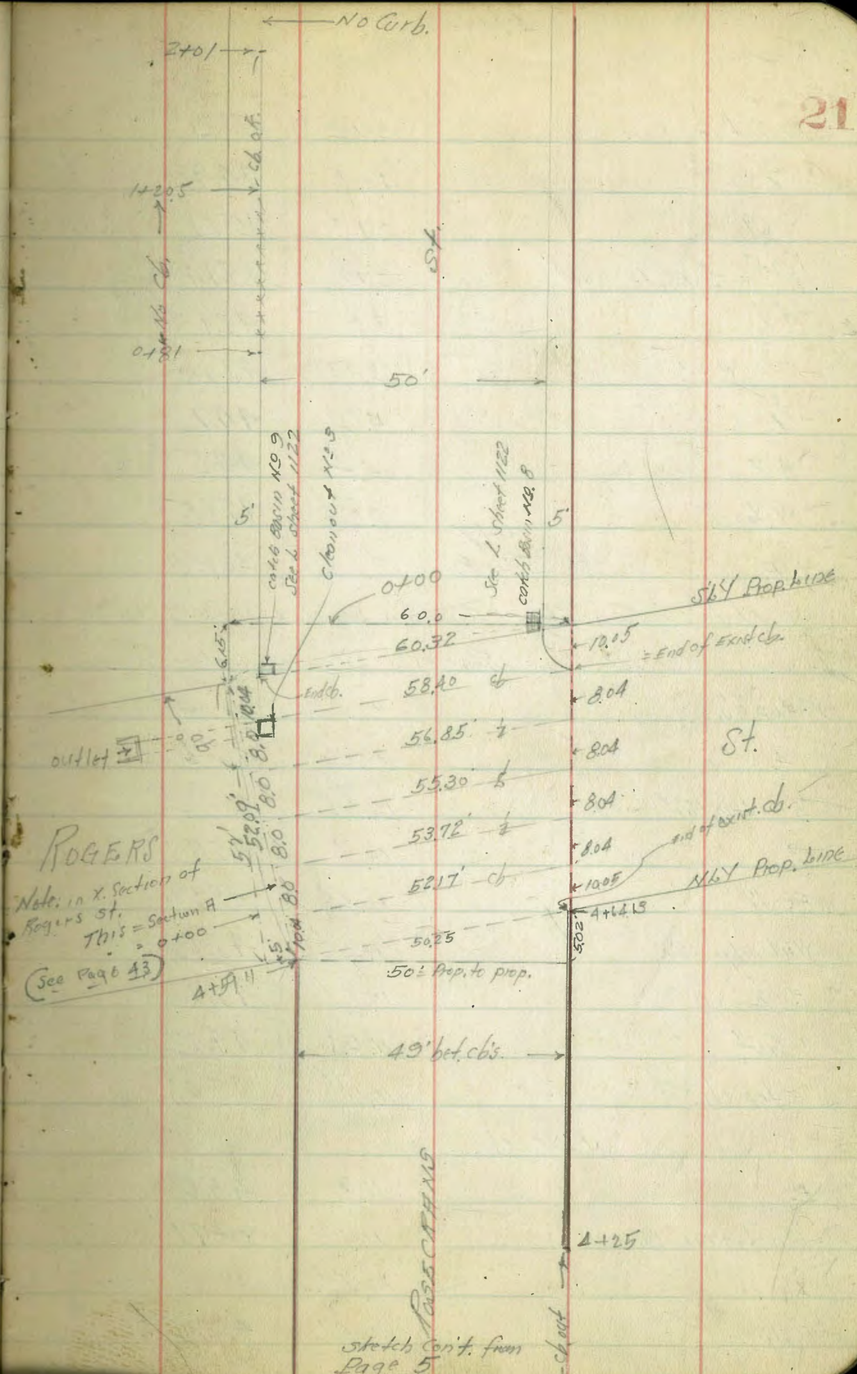
4/12
4017

2+05.3 = End of cb. on West See Sketch Page 5

W	5.39	32.58 (5.)
Gut.	6.1	34.9
+2	6.9	34.1
+5	6.0	35.0
¼	5.8	35.2
℄	5.5	35.5
+5 on Pav. West edge	5.46	35.51
¼ " "	5.72	35.25
E. Gut. on Paving	6.42	34.55
E. top cb.	6.00	34.97
2+50		
E " cb.	4.26	36.71
" Gut. on Pav.	4.70	36.27
¼ " "	3.97	37.00
+7.75 " "	3.75	37.22
℄	3.8	37.2
¼	4.1	36.9
+5	3.8	37.2
+8	4.8	36.2
W on Ground	4.3	36.7
T.P. 12.10 ~~47.08~~ 48.93	4.14	~~36.94~~ 36.93
3+05.8 = Beginning Good cb. on West.		
W top cb.	8.93	40.0
" Gut.	9.7	39.2
¼	9.9	39.0

1908
1893

℄	9.6	39.3
+5 on Paving	9.51	39.42
¼ " "	9.75	39.18
E Gut " "	10.43	38.50
" top cb.	9.96	38.97
3+50 = End Good cb. on West sketch Page 5		
E top cb.	8.14	40.79
" Gut. on Paving	8.61	40.32
" ¼ " "	7.96	40.97
+6.9 " "	7.76	41.17
℄	7.8	41.1
¼	8.2	40.7
W Gut	8.3	40.6
" top cb.	7.23	41.7
4+00		
W on Ground	6.0	42.9
+3	6.4	42.5
¼	6.1	42.8
℄	5.8	43.1
+5 on Paving	5.78	43.15
¼ " "	6.04	42.89
E Gut. " "	6.70	42.23
E top cb.	6.25	42.68
4+25 on end cb. on West see sketch	4.38	44.55
4+50		
E top cb.	4.25	44.68



~~49.08~~ 47.93

E Gut on Pav.			3.72	45.21
1/4 " "			4.01	44.92
+69 " "			3.75	45.18
10.25 = E. Rail			3.79	45.14
℄			3.8	45.1
W "			3.77	45.16
1/2			4.2	44.7
+7			4.4	44.5
W top cb			3.28	45.65
T.P.	9.88	56.17 ~~56.32~~	2.64	46.29 ~~46.44~~

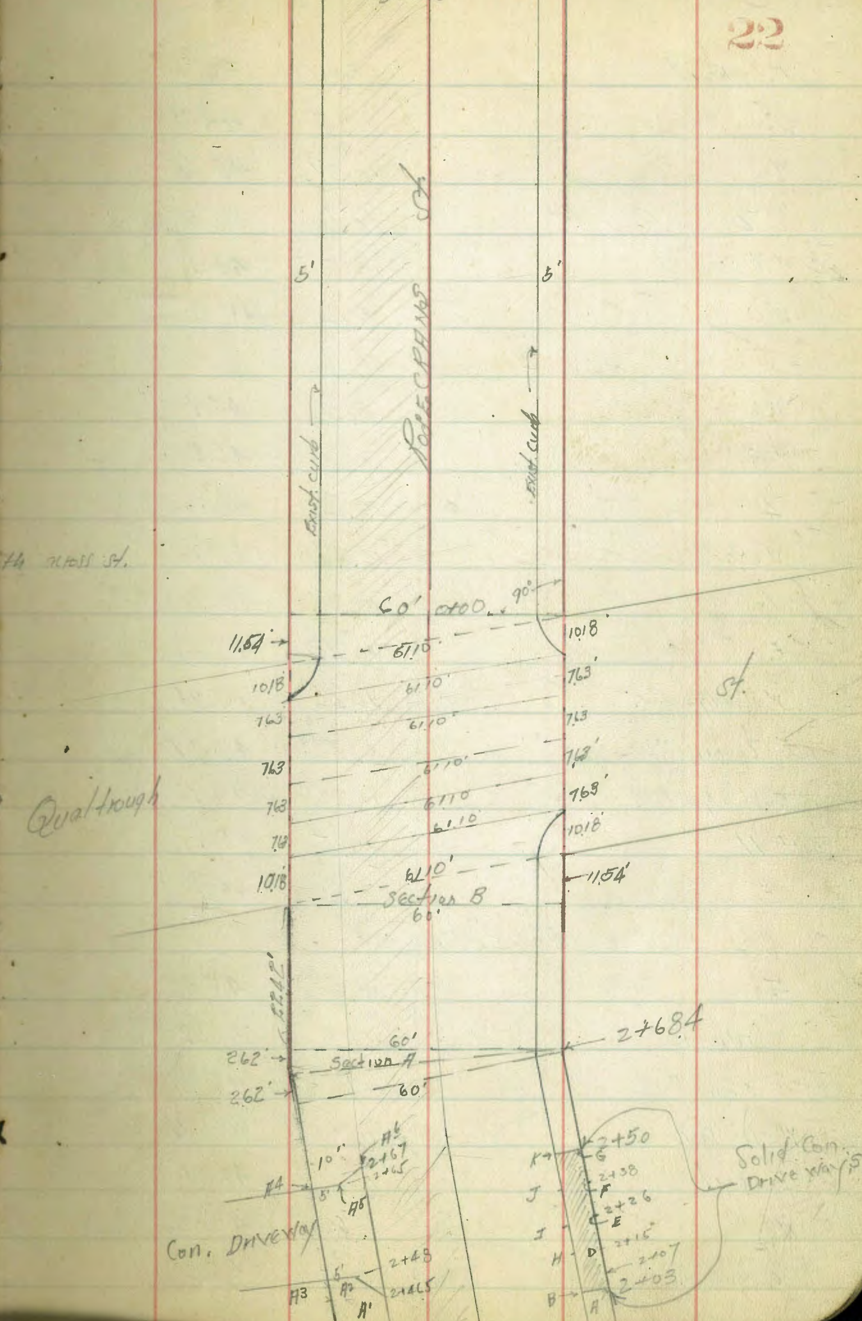
Note: in Cross Section of Intersection Rogers 1/4's are 1/4 of total length across st.

Note: for location Points, Paving, Etc. See 6 sheet 1/22

NLY Line Rogers

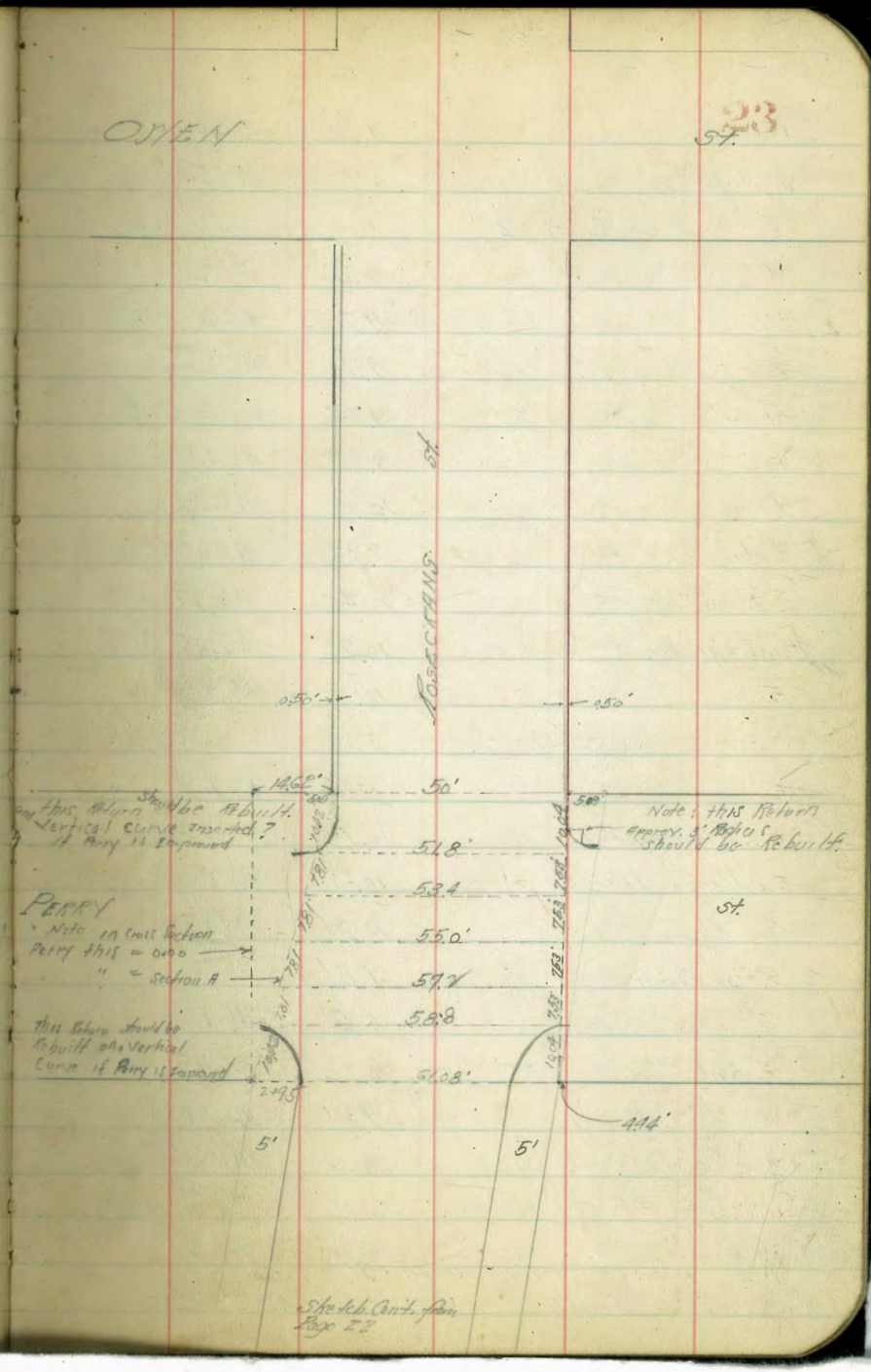
W top cb.			10.00	46.17 ~~46.32~~
" 1/4			10.8	45.4
W top Rail			10.65	45.52
℄			10.7	45.5
E " "			10.66	45.51
West edge Pav.			10.64	45.53
E 1/4 on "			10.91	45.26
" Gut " "			11.65	44.52
" top cb.			11.14	45.03
NLY cb.				
E.			11.2	45.0
E 42.4 = East edge Pav.			11.38	44.79
1/4 on "			10.81	45.36
W edge " "			10.41	45.76

Sketch Con't. Page 23



~~56 37~~
~~56 17~~

E. Rail	10.40	45.77
℄	10.5	44.7
W "	10.39	45.78
" ¼	10.6	45.6
¼ +7	10.5	45.7
W	8.2	48.0
NLY ℄		
W	8.3	47.9
+3	9.√	46.8
¼	10.2	46.0
W Rail	10.21	45.96
℄	10.3	45.9
E. "	10.23	45.94
West edge Pav.	1026	45.91
⅜ ¼ on "	1070	45.47
East edge Pav.	11.2√	44.93
¼ +11	10.5	45.7
E.	11.3	44.9
℄ ROGERS		
E.	10.6	45.6
" Edge Pav.	11.08	45.09
" ¼ on "	10.58	45.59
W edge Pav.	10.11	46.06
℄ = E Rail	10.07	46.10
W "	10.05	46.12
¼	9.9	46.3



		56.32 57.17		
+7			9.6	46.6
W			8.7	47.5
	South ¼			
W			8.0	48.2
+2			9.2	47.0
¼			9.7	46.5
W Rail			9.85	46.32
E "			9.88	46.29
℄			10.0	46.2
W edge Pav.			9.94	46.23
E ¼ on "			10.40	45.77
East edge Pav.			10.82	45.35
E			10.8	45.4
	South cb.			
E			13.1	43.1
top ℄ clean out #3			10.75	45.42
East edge Paving			10.65	45.52
" ¼ on "			10.31	45.86
W edge Paving			9.81	46.36
℄			9.8	46.4
E Rail			9.72	46.45
W "			9.69	46.48
¼			9.6	46.6
+13			8.9	47.3
W			7.9	48.3

Note: Beginning of South line Papers 5' c6s

South 12.50' ℄S

		56.37 57.17		
W			7.3	48.9
" top cb.			8.98	47.19
+1.5 on ℄ Inlet #8			8.94	47.23
¼			9.3	46.9
W Rail			9.47	46.70
E "			9.51	46.66
℄ on West edge Pav.			9.56	46.61
¼ " Pav.			9.98	46.19
+7' East edge Pav.			10.38	45.79
+11.0 = ℄ on top Catch Basin #9			10.22	45.95
E top cb.			10.22	45.95
E			10.6	45.6
	0+00	See sketch Page 21		
E			10.8	45.4
+2			10.2	46.0
E top cb.			10.05	46.12
" Gut.			10.6	46.11
+5 on Paving			10.20	45.97
¼ " "			9.79	46.38
℄ " "			9.40	46.77
E Rail			9.36	46.81
W "			9.37	46.80
" ¼			9.2	47.0
W top cb.			8.98	47.19
"			7.3	48.9

0+50

~~56.32~~ 56.17

W	62	50.0	
" top cb.	6.57	49.60	
" Gut.	7.0	49.2	
+7	7.6	48.6	
℄	7.2	49.0	
℄ on Paving	6.98	49.19	
¼ " "	7.35	48.82	
+7 " "	7.62	48.55	
E Gut.	8.0	48.17	
" top cb.	7.46	48.75	
E	7.4	48.8	
{0+81 on End cb. on E	5.96	50.21	}
1+00			
E	5.0	51.2	
cb.	5.2	51.0	
+5 on Pav.	5.11	51.06	
¼ " "	4.80	51.37	
℄ " "	4.69	51.48	
℄	4.8	51.4	
W Gut.	4.7	51.5	
" top cb.	4.03	52.14	
W	3.4	52.8	
{1+20.5 = Beginning Grade cb	3.97	52.20	on E}
1+50			
W	0.9	55.3	
" top cb.	1.61	54.56	

~~56.32~~ 56.17

25

W Gut.		2.1	54.1	
" ¼		2.0	54.2	
℄ on Pav.		1.93	54.24	
¼ " "		2.30	53.87	
+7 " "		2.62	53.55	
E Gut		2.9	53.3	
" top cb.		2.43	53.74	
E		2.5	53.7	
T.P. 9.89	65.72 ~~65.87~~	0.34	55.83 ~~55.98~~	
2+00				
E		9.5	56.2	
" top cb.		9.53	56.19	
" Gut.		10.3	55.4	
+5 on Pav.		9.76	55.96	
¼ " "		9.35	56.37	
℄ " "		8.98	56.74	
¼		9.3	56.4	
Gut.		9.1	56.6	
W top cb.		8.64	57.08	
2+03 on curb.		8.48	57.24	
2+03 " Walk at Prop.		8.17	57.55	
2+07 on curb.		8.26	57.46	
2+09 on Walk at Prop. = Garage Floor		7.00	58.72	West side
2+15 = H.		8.33	57.39	
2+15 at D = Garage Floor.		7.05	58.67	
2+26 at I		7.35	58.37	

6587
69.72

Garage

2+26 of E on Floor	6.37	59.35
+38 of J	7.22	58.50
2+38 " F = Garage Floor	6.40	59.32
2+50		
of G on Walk	6.14	59.58
W top cb. = K	6.9	59.53
" Gut.	6.6	59.1
" ¼	6.8	58.9
W Rail	6.76	58.96
E "	6.61	59.11
℄ on Pav.	6.53	59.19
¼ " "	6.85	58.87
E edge Paving	7.13	58.59
" cb. in Drive Way	6.82	58.90
E on " "	6.54	59.18
A¹	7.27	58.51
A²	6.92	58.80
A³	6.56	59.16
A⁴	6.11	59.61
A⁵	6.32	59.40
A⁶	6.39	59.33

East side

2+68.4 Section A on split of Angle

E	5.7	60.5
cb.	5.9	59.8
+5 on Pav.	6.18	59.54
¼ " "	5.86	59.86

6587
61.72

26

℄ on Pav.	5.50	60.22
+1.7 " Westerly Pav.	5.45	60.27
+1.9 = E Rail	5.55	60.17
W "	5.73	59.99
¼	5.8	59.8
W Gut.	5.8	59.8
" top cb.	5.27	60.45
W	5.3	60.4
Section B = Rl ∆ to Rosecrans on E		
W	4.3	61.4
" top cb.	4.12	61.60
Gut.	4.7	61.0
¼	4.7	61.0
+3.5 = W Rail	4.55	61.17
E "	4.41	61.31
+11.5 = W edge Pav.	4.40	61.32
℄ on "	4.40	61.32
¼ " "	4.71	61.01
+6.6 = East edge "	4.97	60.75
cb.	5.0	60.7
E	5.0	60.7
T.P. on SE BP. Rosecrans & Qualthough	3.83	61.89 62.04 62.07 = BM. 0.03 = Error Correction Made here
	6771	61.92
579	6786	62.07 = Above BM.
N 4° Qualthough	See sketch	Page 22
E	7.0	60.7

6786
6771

E. cb. on Ground	6.8	60.9
+5.9 on Paving (East edge)	6.84	60.87
E ¼ " "	6.77	60.94
℄ " "	6.25	61.46
+0.5 " West edge Paving	6.13	61.58
+3.85 = East Rail	6.09	61.62
West "	6.24	61.47
¼	6.4	61.3
W Gut	6.2	61.5
" top cb.	5.56	62.15
W	5.5	62.2

North cb. Line Qualtrough St.

W top cb. on End Return	5.45	62.26
" cb. on Ground	6.0	61.71
" ¼	6.2	61.51
+4.2 = W Rail	5.99	61.72
+9 = E Rail	5.83	61.88
+12.3 = West edge Paving	5.94	61.77
℄ on Pav.	5.95	61.76
E ¼ " "	6.27	61.44
+7 " East edge Pav.	6.61	61.10
E cb. on Ground	7.5	60.21
E	8.1	59.60
N ¼		
E	7.8	59.9
" cb.	7.1	60.6

6786
6771

E cb + 5.5' = East edge Pav.	6.45	61.26
" ¼ on Paving	6.13	61.58
℄ " "	5.78	61.93
+0.3 " West edge Paving	5.77	61.94
+3.8 = E Rail	5.69	62.02
+8.4 = W "	5.82	61.89
W ¼	6.0	61.7
W cb.	6.0	61.7
W	5.8	61.9

℄ Qualtrough

W	5.6	62.1
cb.	5.9	61.8
W ¼	5.7	62.0
+4.4 = W Rail	5.67	62.04
+9.2 = E Rail	5.58	62.13
+12.5 = West edge Paving	5.62	62.09
℄ on Pav.	5.62	62.09
E ¼ " "	5.95	61.76
+7.4 = East edge Pav.	6.28	61.43
cb.	7.1	60.61
E	7.6	60.11

S ¼

E	7.9	59.8
cb.	6.8	60.9
+5.5 on East edge Paving	6.12	61.59
¼ " Pav.	5.80	61.91

67.86
67.71

℄ on Paving	5.16	62.25
+0.2 = West edge Pav.	5.16	62.25
+3.5 = E. Rail	5.43	62.28
+8.3 = W "	5.50	62.21
¼	5.5	62.21
cb.	5.9	62.17
W	5.5	62.21
S cb. Qual through St.		
W top cb. = End of Return	4.53	63.18
" cb.	6.0	61.71
¼	5.4	62.31
+4.7 = W Rail	5.36	62.35
+9.5 = E "	5.32	62.39
℄ on West edge Paving	5.33	62.38
E ½ " Paving	5.62	62.09
+7.6 = East edge Paving	5.96	61.75
E cb.	6.7	61.0
E on Ground at End Return	6.8	60.9
" " top cb. " " "	5.80	61.91
S.L. Qual through St.		
E	7.3	60.4
+7	5.5	62.2
E top cb.	5.66	62.05
" Gut.	6.3	61.41
+5 = East edge Pav.	5.77	61.94
E ½ on Pav.	5.45	62.26

67.86
67.71

℄ on Pav. (West edge)	5.13	62.58
+3.4 = E Rail	5.16	62.55
+8.2 = W "	5.20	62.51
½	5.2	62.5
Gut	5.6	62.1
W top cb.	4.55	63.16
W	4.4	63.31
0+00 = Rf. △ to Rosecrans St. Qual through		
W	4.1	63.31
" top cb.	4.55	63.16
" Gut.	5.6	62.11
½	5.2	62.51
+4.6 = W Rail	5.17	62.54
E "	5.12	62.59
℄ on Pav.	5.02	62.69
½ " "	5.30	62.41
+7.5 " "	5.60	62.11
Gut	6.2	61.51
E top cb.	5.61	62.10
+4	5.5	62.21
E	7.7	60.0
+5	8.4	59.3
0+50		
-5	8.7	59.0
E	5.4	62.3
E top cb.	5.16	62.55

	67.86 67.71		
E Gut	5.6	62.11	
+5 on Pav.	5.30	62.41	
¼ " "	498	62.73	
½	470	63.01	
¼	47	63.0	
W Gut	50	62.7	
" top cb.	422	63.49	
"	3.8	63.9	
1+00			
W	2.7	65.0	
+½	3.1	64.6	
W top cb.	390	63.81	
" Gut	4.3	63.41	
" ¼	44	63.3	
½ on Pav.	488	63.33	
¼ " "	464	63.07	
+7.5"	495	62.76	
E Gut	5.2	62.5	
" top cb.	484	62.87	
E₀	45	63.21	
+5	4.6	63.11	
1+50			
E	4.2	63.5	
E top cb.	451	63.20	
" Gut	49	62.8	
+5 on Pav.	4.66	63.05	

	67.86 67.71		29
¼ on Pav.	432	63.39	
½ " "	396	63.75	
¼	4.0	63.7	
Gut	3.8	63.9	
W top cb.	357	64.14	
W	3.0	64.7	
2+00			
W	2.6	65.1	
" top cb.	320	6451	
" Gut	4.0	63.7	
" ¼	3.8	63.9	
½ on Pav.	370	64.0	
¼ " "	396	63.75	
+7.5" "	432	63.39	
E₀ Gut.	47	63.0	
E₀ top cb.	419	63.52	
E₀	4.1	63.6	
2+50			
E₀	3.7	64.0	
" top cb.	3.84	63.87	
" Gut	4.3	63.4	
+5 on Pav.	395	63.76	
¼ " "	364	64.07	
½ " "	336	64.32	
¼	3.5	64.2	
W Gut	3.5	64.2	

	67.86 / 67.71		
W top cb.		2.90	64.81
"		2.1	65.6
T.P. 4.56	69.27 / 69.42	3.00	64.71 / 64.86
cht. on N.E. B.P. Rosecrans & Perry		5.15	64.12
			64.15 = Recorded Elev. B.P.
			0.03 = Amount off
cht. on B.M. Quathrough & Rosecrans		7.34	62.08
			62.07 - B.M. Page 26
			.001 - Error
2+95 - Sta. on N.E. this section Parallel to Perry			
Note: for this intersection see sketch Page 23			
" #3. are ½ of total dist. as per sketch			
W		3.7	65.6
+5 on top cb		4.09	65.18
Gut.		4.7	64.6
¼		4.6	64.7
+7.35 = W Rail		4.53	64.74
E Rail		4.63	64.64
℄ = West edge Pav.		4.56	64.71
¼ on Pav.		4.88	64.39
+5.3 " East edge Pav.		5.10	64.17
+10.6 = East Gut. & cb.		5.6	63.7
+10.6 = " top cb.		5.12	64.15
E		5.1	64.2
N cb.			
E		5.5	64.8
+8.8 = East edge Pav.		5.05	64.22
¼ on Pav.		4.81	64.46
+14.7 = West edge Pav.		4.55	64.72
℄		4.6	64.7

	69.42 / 69.27		
℄ +25 = East Rail		4.61	64.66
W "		4.50	64.77
¼		4.60	64.67
+10		4.1	64.9
W		3.0	66.3
N ¼			
W		3.0	66.3
+1		4.0	65.3
¼		4.5	64.8
+6.7 = W Rail		4.50	64.77
E Rail		4.63	64.64
℄ +0.6 = West edge Pav.		4.59	64.68
¼ on Pav.		4.80	64.47
+6.6 = East edge Pav.		5.02	64.25
E		5.5	63.8
℄			
E		5.4	63.9
+6.4 = E edge Pav.		5.02	64.25
¼ on Pav.		4.77	64.50
+12.8 = West edge Pav.		4.60	64.67
℄		4.6	64.7
+2.4 = E Rail		4.67	64.60
W Rail		4.50	64.77
¼		4.6	64.7
+8		4.0	65.3
W		2.8	66.5

6942
69.27

S ¼

W	2.6	66.7
+5	4.2	65.1
℄	4.5	64.8
+6.6 = W Rail	4.52	64.75
E "	4.71	64.56
℄	4.6	64.7
+14 = West edge Pav.	4.61	64.66
¼ on Pav.	4.87	64.40
+8 = East edge Pav.	5.15	64.12
E	5.3	64.0
S cb.		
E on top cb.	5.13	64.14
+4 = East edge Pav.	5.33	63.94
¼ on Pav.	4.98	64.29
+12.10 = West edge Pav.	4.65	64.62
℄	4.8	64.5
+14 = E Rail	4.77	64.50
W "	4.59	64.68
¼	4.6	64.7
+7	4.5	64.8
W on Ground	3.1	66.2
" " top cb.	4.10	65.17
S. Line Party = 0+00	Note from here to Gut. Line 4.5 cbs. 12.25 45	
W on Ground	2.4	66.9
" " top cb.	4.16	65.11

6942
69.27

31

+4	4.5	64.8
¼	4.6	64.7
+6.8 = W Rail	4.77	64.50
E "	4.98	64.29
℄	5.0	64.3
+2.6 = West edge Pav.	4.83	64.44
¼ on Pav.	5.18	64.19
+10.3 = East edge Pa.	5.69	63.58
E Gut.	5.8	63.5
" top cb.	5.18	64.09
0+25		
E top. cb.	6.47	62.80
" Gut.	7.0	62.3
+3.7 = East edge Paving	6.67	62.60
¼ = on Pav.	6.26	63.01
+11.4 = West edge Pav.	5.92	63.35
℄ on Pav.	6.0	63.27
+2.5 = E Rail	6.04	
W "	5.62	63.45
½	5.6	63.7
W. Gut.	5.8	63.5
" top cb.	5.35	63.92
" on Ground.	4.2	65.1
T.P. 0.84	63.09 63.24	62.25 62.40
	7.02	
0+50		
W on Ground	0.0	

		~~63.24~~ 63.09		
W top cb.			0.35	62.74
Gut			0.6	62.5
¼			0.7	62.4
+4.4 = W Rail			0.87	62.22
E "			1.03	62.06
℄ on Pav.			0.92	62.17
¼ " "			1.34	61.75
+7.75 " "			1.70	61.39
E Gut			2.1	61.0
" top cb.			1.50	61.59
	0+75			
" " "			2.71	60.38
" Gut			3.4	59.7
+4.5 = Pav.			2.90	60.19
¼ on Pav.			2.49	60.60
℄ " "			2.16	60.93
¼			2.1	61.0
Gut			1.8	61.3
W top cb.			1.55	61.54
" on Ground			1.1	62.0
	1+00			
" " "			1.9	61.2
" top cb			2.91	60.18
" ¼			3.3	59.8
℄ on Pav.			3.43	59.66
¼ " "			3.81	59.28

Note: All curb on West is covered with dirt from bank. Only stations of 25' uncovered for Elev. the rest assumed to be O.K.

		~~63.24~~ 63.24		
+7.75 = Pav.			4.20	58.89
E Gut			4.5	58.6
" top cb.			4.03	59.06
	1+25			
E top cb.			5.27	57.82
" Gut			5.9	57.2
" Pav.			5.42	57.67
¼ "			5.02	58.07
℄ on "			4.68	58.41
¼			4.6	58.5
W Gut			4.0	59.1
" top cb.			4.16	58.93
" on Ground			3.2	59.9
	1+50			
" " "			4.2	58.9
" top cb.			5.41	57.68
+3			5.3	57.8
¼			6.0	57.1
℄ on Pav.			5.91	57.18
¼ " "			6.28	56.81
+7.75 " "			6.67	56.42
E Gut			7.0	56.1
" top cb			6.54	56.55
	1+75			
" " "			7.77	55.32
" Gut			8.3	64.8

6324
63.09

+4.5 = Pav.	7.92	55.17
¼ on "	7.51	55.58
℄ " "	7.12	55.97
¼	7.2	55.9
+9	6.7	56.4
W top cb.	6.67	56.42
" on Ground.	5.4	57.7
2+00		
" " "	6.7	56.4
" top cb.	7.92	55.17
+2	8.0	55.1
¼	8.4	54.7
℄ on Pav.	8.39	54.70
¼ " "	8.79	54.30
+7.75 " "	9.18	53.91
E. Gut.	9.5	53.6
" top cb.	9.05	54.04
2+25		
E " "	10.32	52.77
" Gut	10.7	52.4
+4.5 = Pav.	10.46	52.63
¼ on "	10.06	53.03
℄ " "	9.69	53.40
¼	9.8	53.3
W Top cb.	9.15	53.94
2+50		

6324
63.09

33

W top cb.	10.42	52.67
" ¼	11.0	52.1
+4.4 = W. Rail	11.00	52.09
E "	11.06	52.03
℄ on Pav.	10.95	52.14
¼ " "	11.31	51.78
+7.75 " "	11.70	51.39
E Gut	12.1	51.0
" top cb	11.48	51.61
TP 1.72	53.08	51.36
2+75		
E top cb.	2.52	50.41
" Gut.	2.2	50.7
" top Pav.	2.71	50.22
¼ " "	2.30	50.63
℄ on Pav	1.98	50.95
E Rail	1.96	50.97
W "	2.00	50.93
¼	1.7	51.2
W Top cb.	1.47	51.46
W on Ground.	1.2	51.7
3+00 = NL. Owen st.		Intersection Paved with exception of Car Track.
W top cb.	2.75	50.18
" " Pav. of cb.	2.75	50.18
" ¼ on Pav.	3.14	49.79
W Rail	3.10	49.83

Note: Fire Hydt at N.E. Rosecrans & Owens 3' North P.S. on Rosecrans

~~5308~~
52.93

E Rail	309	49.84
℄ on Pav.	323	49.70
¼ " "	354	49.39
E. Gut. = Flow Line Inlet	481	48.12
E top Cb.	381	49.12
cht. on S.E. BP Rosecrans + Owens	486	~~48.07~~ 48.27
		48.07 = BM.
		0.15 = diff.
S Line Owens = 0+00		
E top Cb.	483	48.10
" Gut. on Pav.	572	47.21
¼ " "	488	48.05
℄ " "	450	48.43
E Rail	445	48.48
W "	445	48.48
¼	451	48.42
W Gut on Pav.	470	48.23
" top Cb	384	49.09
0+15		
" " "	410	48.83
" Gut	50	47.9
¼	47	48.2
W Rail	471	48.22
E "	469	48.24
℄ on Pav.	461	48.32
¼ " "	494	47.99
+7.75 " "	531	47.62

~~5308~~
52.93

34

E Gut	55	47.4
E top Cb	515	47.78
0+50		
E " "	586	47.07
" Gut +45	62	46.73
" Pav.	607	46.86
¼ on Pav.	570	47.23
℄ " "	536	47.57
¼	56	47.3
W Gut.	57	47.2
" top Cb.	487	48.06
1+00		
" " "	596	46.97
" Gut	70	45.9
" ¼	65	46.4
℄ on Pav.	643	46.50
¼ " "	678	46.15
+7.75 on "	718	45.75
E Gut.	74	45.5
" top Cb.	694	45.99
1+50		
" " "	807	4486
" Gut	86	44.3
" " +45 = Pav.	822	44.71
¼ on "	786	45.07

		5308 / 52.93		
℄ on Pav.			7.55	45.38
¼			7.5	45.4
W Gut			7.9	45.0
" top cb.			7.05	45.88
T.P.	1.20	46.55 (46.40)	7.73	~~45.35~~ 45.20
2+00				
W top cb.			1.59	44.81
" Gut			2.5	43.9
" ¼			2.1	44.3
℄ on Pav.			2.09	44.31
¼ " "			2.39	44.01
+77.5 " "			2.78	43.62
E Gut			3.2	43.2
" top cb.			2.60	43.80
2+50				
" " "			3.69	42.71
" Gut			4.1	42.3
+45 on Pav.			3.82	42.58
¼ " "			3.47	42.93
℄ " "			3.13	43.27
¼			3.4	43.0
W Gut			3.3	43.1
" top cb.			2.68	43.72
3+00 = Nly Nichols				
W top cb.			3.72	42.68
" on Ground			3.1	43.3

Note: No curb returns in on West curb stops at line 12.50' curbs

		46.55 (46.40)		
¼			4.2	42.2
W Rail			4.20	42.2
E "			4.21	42.19
℄ on Pav.			4.16	42.24
¼ " "			4.56	41.84
E. Gut. on pav.			5.24	41.16
" top cb.			4.74	41.66
Chk. on NE. B.P. Rosecrans + Nichols			4.73	41.67 ~~41.87~~ 41.63 = BM.
N cb.				
E Line on Pav.			5.40	41.0
" ¼ " " "			4.74	41.66
℄ " "			4.30	42.10
E Rail			4.44	41.96
W "			4.44	41.96
¼			4.2	42.2
W			2.7	41.70
℄ Nichols				
W			3.1	43.3
+2			3.7	42.7
¼			4.3	42.1
W Rail			4.62	41.78
E "			4.60	41.80
℄ on Pav.			4.48	41.92
¼ "			4.87	41.53
E " "			5.60	40.80

Note: E half of Intersection Paved.

4655
46.40

℄ on Paving	5.71	40.69
" ¼ " "	4.97	41.43
℄ " "	4.65	41.75
E. Rail	4.80	41.6
W. "	4.80	41.6
" ¼	4.5	41.9
+9	4.2	42.2
W	3.5	42.9
S Line Nichols = 0+00		
W top cb.	4.28	42.12
" on Ground	3.6	42.8
+3	4.5	41.9
¼	4.6	41.8
W Rail	4.86	41.54
E "	4.89	41.51
℄ on Pav.	4.78	41.62
¼ " "	5.12	41.28
E Gut. on Pav.	5.78	40.62
" top cb.	5.25	41.15
0+50		
" " "	5.94	40.46
" Gut.	6.3	40.1
+45 = Pav.	6.20	40.2
¼ on "	5.83	40.6
℄ " "	5.45	40.95

Note.
Fire Hydt.
S.E. Nichols
+ Rosecrans
P.C. on Nichols

4655
46.40

¼ "	5.5	40.9
Gut	5.4	41.0
W top cb.	4.94	41.46
" on Ground	4.0	42.4
1+00		
" " "	4.5	41.9
" top cb.	5.62	40.78
Gut.	6.3	40.1
¼	6.2	40.2
℄ on Pav.	6.11	40.29
¼ " "	6.47	39.93
+77.5 " "	6.81	39.59
E Gut.	7.0	39.4
" top cb.	6.58	39.82
1+50		
" " "	7.27	39.13
" Gut	7.6	38.8
+45 on Pav.	7.49	38.91
¼ " "	7.13	39.27
℄ " "	6.80	39.60
¼	7.0	39.40
Gut.	6.6	39.8
W top cb.	6.27	40.13
" on Ground.	5.5	40.9
2+00		
" top cb.	6.90	39.50

	46.55 / 46.40		
W Gut.		7.8	38.6
" ¼		7.7	38.7
½ on Pav.		7.46	38.94
¼ " "		7.84	38.56
+7.75" "		8.23	38.17
E Gut		8.3	38.1
" top Cb.		7.92	38.48
	2+50		
E " "		8.60	37.80
" Gut.		8.9	37.5
+.45 = Pav.		8.92	37.48
¼ on "		8.54	37.86
½ " "		8.16	38.24
¼		8.2	38.2
Gut		8.3	38.1
W top Cb.		7.58	38.82
	2+85		
" " "		8.13	38.27
" Gut.		8.6	37.8
" ¼		8.6	37.8
½ on Pav.		8.67	37.73
¼ " "		9.03	37.37
+7.75 " "		9.44	36.96
E Gut.		9.6	36.8
" top Cb.	41.57	9.25	37.15
T.P. on N.Y. BP Pasecrans & McCall St.	3.41 41.74	8.22	~~38.33~~ 38.18 / 38.14 = BM

	41.74 / 41.57		
	3+00 = N.L. McCall St. Intersection Road		Except on of Car tracks
E top Cb.		4.62	36.97
" Gut Flow Inlet on Pav.		5.82	35.77
+1.5 " " " "		5.82	35.77
+1.5 on Pav.		4.62	36.97
¼ " "		4.25	37.34
½ " "		4.01	37.58
E Rail		3.94	37.65
W "		3.94	37.65
¼ on Pav.		3.84	37.75
+1.075" "		3.45	38.14
+1.075 on Flow Line Inlet		4.50	37.09
W Gut. " " " "		4.50	37.09
" top Cb.		3.44	38.15
	S.L. McCall = 0+00		
" " "		3.97	37.62
" " Pav. of Cb.		4.85	38.64
¼ on "		4.33	37.26
W Rail		4.52	37.07
E "		4.52	37.07
½ on Paving		4.48	37.11
¼ " "		5.05	36.54
E Gut. "		5.90	35.69
" top Cb.		5.00	36.59
	0+50		
" " "		5.28	36.31

4174
41.59

E Gut	58	35.80
+4.5 = Pav.	541	36.18
½ on "	502	36.57
¿ " "	465	36.94
¼	48	36.8
Gut	46	37.0
W top ch.	423	37.36
1+00		
" " "	451	37.08
" Gut.	50	36.59
½	50	36.59
¿ on Pav.	493	36.66
½ " "	525	36.34
+7.75 "	576	35.93
E Gut.	579	35.7
" top ch.	557	36.02
1+50		
" " "	580	35.79
" Gut	62	35.4
+4.5 = Pav.	591	35.68
½ on "	556	36.03
¿ " "	521	36.38
½	54	36.2
Gut.	54	36.2
W top. ch	476	36.83
2+00		

4174
41.59

W top ch.	501	36.58
" Gut.	55	361
" ½	54	362
¿ on. Pav.	542	36.17
½ " "	580	35.79
+7.75 " "	620	35.39
Gut.	64	35.2
E top ch.	608	35.51
2+50		
" " "	636	35.23
" Gut.	68	34.8
+4.5 = Pav.	650	35.09
½ on "	609	35.50
¿ " "	571	35.85
½	57	35.9
Gut.	58	35.8
W top ch.	523	36.36
2+85		
" " "	539	36.20
" Gut	60	35.6
½	58	35.8
¿ on. Pav.	592	35.67
½ " "	625	35.34
+7.75 " "	660	34.99
Gut	68	34.8
E top ch.	645	35.14

~~41.74~~ 41.57

Intersection Paved except car tracks

3+00 = N.L. LAWRENCE st.

W top cb.			6.57	35.02
" Gut = Flow Line Inlet on Pav.			7.58	34.01
+15 " " " " "			7.58	34.01
1.5' on Pav.			6.59	35.0
1/4 " "			6.16	35.43
℄ " "			5.96	35.63
+10' on E Rail (settled rail)			5.81 6.16	35.43
W "			6.08	35.51
1/4 on Pav.			5.73	35.86
+10.75 on "			5.52	36.07
+10.75 " Flow Line Inlet on Pav.			6.49	35.10
W Gut. " " " " "			6.49	35.10
" top cb.			5.50	36.09
T.P.	3.97	39.71 (34.56)	6.00	35.74 (35.57)

Note: 6" Combination Walk on West

S.L. LAWRENCE = 0+00

Note: 2" Iron Pipe for Fire Hydt. S.E. Cor. Lawrence & Rosecrans, on P.C. on Rosecrans

W top cb.	3.45	36.11
" Gut. on Paving	4.27	35.29
1/4 " "	3.95	35.61
+2.75 " "	4.00	35.56
W. Rail	4.13	35.43
E. "	4.15	35.41
℄ on Pav.	4.10	35.46
1/4 " "	4.54	35.02
E Gut. on Pav.	5.28	34.28
" top cb.	4.48	35.08

~~39.71~~ 39.56

0+50		
E. top cb.	4.75	34.81
" Gut	5.4	34.16
+4.5 on Pav.	4.91	34.65
1/4 " "	4.53	35.03
℄ " "	4.23	35.33
1/4	4.5	35.06
Gut	4.7	34.86
top cb.	3.71	35.85
1+00		
W top cb.	3.95	35.61
" Gut.	4.8	34.76
1/4	4.6	34.96
℄ on Pav.	4.45	35.11
1/4 " "	4.80	34.76
+7.75 " "	5.17	34.39
Gut.	5.5	34.1
E. top cb.	5.00	34.56
1+50		
" " "	5.2 ✓	34.32
" Gut.	5.7	33.9
+4.5 = Pav.	5.38	34.18
1/4 on "	5.03	34.53
℄ " "	4.72	34.84
1/4	4.9	34.7
W Gut.	5.1	34.5

	39.71 / 34.56		
W top Cb.		4.21	35.35
2+00.			
" " "		4.45	35.11
" Gut.		5.0	34.6
¼		5.1	34.5
½ on Paving		4.98	34.58
¾ " "		5.29	34.27
+7.75' " "		5.66	33.90
Gut		5.95	33.7
top Cb.		5.53	34.03
2+50.			
" "		5.73	33.83
Gut.		6.2	33.4
+4.5' = Pav.		5.91	33.65
¼ on		5.55	34.01
½ "		5.20	34.36
¾		5.3	34.3
Gut.		5.4	34.2
top Cb		4.70	34.86
3+00 = N.L. Kellog St		Intersection Paved exception = Car tracks	
W top Cb.			
2+85			
W top Cb		4.92	34.64
" Gut		5.3	34.3
¼		5.3	34.3
½ on Pav.		5.39	34.17

		39.71 / 34.56			
¼ on Pav.				5.68	33.88
+7.75' " "				6.03	33.53
Gut				6.0	33.6
E. top Cb.				5.87	33.69
3+00 = N.L. Kellog St.				Intersection Paved with the exception of Car Tracks	
" " "				5.99	33.57
Gut on Flow Inlet on Pav.				6.97	32.59
+1.5' " " " " "				6.97	32.59
+1.5' " top Pav.				5.98	33.58
½ " "				5.68	33.88
¾ " "				5.44	34.12
E. Rail				5.43	34.13
W "				5.42	34.14
+10 = on Pav.				5.40	34.16
¼				5.28	34.28
+10.75' on Pav.				5.03	34.53
+10.75' = Flow Line Inlet on Pav.				6.20	33.36
Gut - " " " " "				6.20	33.36
W top Cb.				5.00	34.56
Chk. N.E.R.R. Sections & Kellog				5.97	33.59 / 33.74 / 33.60 = B.M. 0.14
		39.71			34.22
T.P.	5.23	39.66		5.28	34.43
S.L. Kellog St. = 0+00					
W top Cb.				4.92	34.59
" Gut - Flow Line Inlet				6.07	33.44
+15 = " " "				6.07	33.44

~~3966~~
37.57

+1.5 on Pav.	498	34.53
½ " "	529	34.22
+2.75 " "	537	34.14
W Rail	548	34.03
E. "	550	34.01
℄ on Pav.	545	34.06
½ " "	571	33.80
+10.75 on Pacing	591	33.60
+10.75 = Flow Line Inlet	696	32.55
E Gut. " " "	6.96	32.55
" top cb.	597	33.54
0+1.5		
" " "	582	33.69
" Gut	64	33.1
+4.5 = Pav.	6.00	33.51
½ on "	565	33.86
℄ " "	537	34.19
½	53	34.21
W Gut.	57	34.31
" top cb.	482	34.69
0+50		
" " "	461	34.90
" Gut	57	34.31
" ½	57	34.31
℄ on Pav.	515	34.36
½ " "	544	34.07

~~3966~~
37.57

+7.75 on Pav.	578	33.73
E Gut.	6.0	33.51
" top cb.	558	33.93
1+00		
" " "	531	34.20
" Gut	55	34.01
+4.5 = Pav.	550	34.01
½ on "	513	34.38
℄ " "	482	34.69
½	50	34.51
W Gut.	50	34.51
" top cb.	433	35.18
1+50		
" " "	403	35.48
" Gut. on Pav.	498	34.63
½ " "	463	3488
+2.75 " "	462	34.89
W Rail	454	34.97
E. "	455	34.96
℄ on Pav.	456	34.95
½ " "	486	34.65
E Gut.	557	33.99
" top cb.	496	34.55
1+85.23 See ℄ sheet 1122		
" " "	480	34.71
" Gut. on Pav	547	34.24

39.66 ← 39.57

				Elev.	
¼ on Pav.ᵗ			4.71	34.80	
½ " "			4.37	35.14	
¼ " "			4.31	35.17	
W. Gut. on Pav.			4.66	34.85	
" top Ch. in Drive Way			4.66	34.85	
W top ch. U.S. Govt. Line			3.45	36.06	
E. " " " " "			4.47	35.04	
T.P.	6.83	47.76	5.73	34.43	
T.P. on BR N.W. McCall & Rosecrans			7.95	39.01	Page 37
T.P. chk. on N.E.B.P. Rosecrans & Kellog	6.27	40.70	5.23	34.43 / 39.74	Page 40
T.P.	10.18	48.50	2.38	38.32	Page 37.
T.P.	1.59	49.78	0.31	48.19	
T.P.	0.95	38.44	12.29	37.49	
T.P.	1.02	27.50	11.96	26.48	
T.P.	12.86	32.92	7.44	20.06	
T.P.	10.59	43.16	0.35	32.57	
T.P.	0.23	30.84	12.55	20.61	
T.P.	1.15	20.07	11.92	18.97	
chk. on S.W. Bessemer & Rosecrans			5.88	14.19	
T.P.	2.80	19.07	7.80	17.77	
T.P.	4.55	10.47	9.15	5.92	
T.P.	4.37	11.32	3.52	6.95	S.W.B.P. Rosecrans & Canon Rd.
T.P.	3.12	7.51	6.93	4.39	
chk. on S.W.B.P. Rosecrans & Carleton			6.65	0.86	

See opposite page for these Levels - Walker

39.66 → 39.17

T.P.	6.27	40.70	5.23	34.43	
chk. on N.E.B.P. Rosecrans & Kellog Page 40			6.96	33.74	N.W.B.P. Rosecrans & McCall St. Page - 37. S.E.B.P. Rosecrans & Owens Page - 34
T.P.	10.18	48.50	2.38	38.32	
T.P.	11.97	60.16	0.31	48.19	
T.P.	9.21	69.10	0.27	59.89	
chk. N.E.B.P. Rosecrans & Perry Page 20			4.87	64.23	S.E.B.P. Rosecrans & Qualthrough Page 26
T.P.	1.59	63.64	7.05	57.05	
T.P.	0.95	52.30	12.29	51.35	
T.P.	1.02	41.36	11.96	40.34	
T.P.	12.86	46.78	7.44	33.92	
T.P.	10.59	57.02	0.35	46.43	
N.W.B.P. Rosecrans & McCall St.					
S.E. " " & Owens " Page 34					
T.P.	0.23	44.70	12.55	44.47	
T.P.	1.15	33.93	11.92	32.78	
chk. Rosecrans & Bessemer			5.88	20.05	
T.P.	2.80	28.93	7.80	26.13	
T.P.	4.55	24.33	9.15	19.78	S.W.B.P. Rosecrans & Canon Rd. Page 1
T.P.	4.37	25.18	3.52	20.81	
T.P.	3.12	21.37	6.93	18.25	
chk. on S.W.B.P. Rosecrans & Carleton			6.65	14.72 / 14.55 - B.M. 0.17 = diff.	

Note: Concluded that B.M. S.W. Rosecrans and Canon Rd. whose Recorded Elev. = 20.65 is o.k. and that B.M's at Rosecrans & Bessemer and Rosecrans and Qualthrough are High.

Walker
Ruplinger
Lacky
Mattoon
11-16-28

Cross Section ROGERS {52' wide, 10' cbs, 8' 48} Note: Actual width of st. varying
Bet. Rosecrans + Bay

	1.59	63.48 ✓		61.89	S.W. B.P. = corrected Elev. Rosecrans & Qualtrough
T.P.	0.95	57.14 ✓	12.29	51.19 ✓	
T.P.	6.99	47.17	11.96	40.18	
	Section A Page 21				
N top cb.			2.14	45.03	
cb.			2.2	45.0	
½			2.4	44.8	
℄			1.6	45.6	
¼			1.8	45.4	
+4			5.1	42.1	
cb.			4.0	43.2	
+4			3.8	43.4	
+6			1.9	45.3	
S			1.8	45.4	
	0+00 Page 21				
-10'			2.0	45.2	
S			1.8	45.4	
+4			2.0	45.2	
+6			3.8	43.4	
cb.			5.0	42.2	
+4			5.5	41.7	
¼			2.6	44.6	
℄			2.0	45.2	
+4			4.6	42.6	
¼			4.3	42.9	

Plotted Jan. 16-29 C.B.H.

47.17

+3		4.7	42.5
cb.		3.4	43.8
N		4.3	42.9
+5		4.0	43.2
	0+07		
-10		8.5	38.7
N		8.6	38.6
cb.		9.0	38.2
+5		9.1	38.1
¼		9.0	38.2
℄		7.2	40.0
¼		6.5	40.7
+2		7.4	39.8
cb.		7.5	39.7
S		6.0	41.2
+10		6.5	40.7
	0+17		
-15		12.1	35.1
S		12.0	35.2
cb.		10.8	36.4
+6		10.8	36.4
½		11.4	35.8
℄		12.2	35.0
½		12.7	34.5
cb.		12.6	34.6
N		12.5	34.7

47.17

+15			17.4	34.8
TP	0.83	35.34	12.66	34.51
	0+25			
-15			2.5	32.8
-7			1.9	33.4
N			2.6	32.7
cb.			3.2	32.1
¼			3.0	32.3
℄			2.5	32.8
+7			5.2	30.1
¼			4.4	30.9
+7 on top Cor. Iron Drain			3.0	32.3
cb.			3.3	32.0
+6			2.8	32.5
S			2.6	32.7
+15			2.6	32.7
	0+30			
-15			2.7	32.6
-7			4.2	31.1
S			5.3	30.0
+3			6.6	28.7
cb.			5.8	29.5
+6			6.2	29.1
½			7.0	28.3
+4			5.9	29.4
℄			6.4	29.9

3534

℄+5			5.3	30.0
¼			5.2	30.1
cb.			5.6	29.7
N			5.9	29.4
+15			4.6	∠ sheet 1122
	0+39 = End of outlet			
-15			6.6	28.7
N			7.5	27.8
cb.			7.1	28.2
¼			7.0	28.3
+3			8.2	28.1
℄			7.1	28.2
¼			7.6	27.7
+7			8.1	27.2
+7 on top Cor. at outlet			7.40	27.9
+7 " Floor Line "			9.20	26.1
cb.			7.4	27.9
+4			7.9	27.4
S			6.1	29.2
+15			5.3	30.0
	0+53			
-15			8.0	
S			8.3	28.0
+5			8.8	26.5
cb.			10.2	25.1
¼			10.4	24.9

3534

+4			10.5	24.8
L			10.0	25.3
¼			9.7	25.6
cb.			9.4	25.9
N			9.1	25.9
+15			8.4	26.9
	0+72			
-15			11.7	23.6
N			12.2	23.1
cb.			12.3	23.0
¼			12.7	22.6
L			12.7	22.6
¼			12.5	22.8
cb.			13.0	22.3
S			13.0	22.3
+15			13.4	21.9
T.P.	0.60	2331	12.63	22.71
	0+81			
-10			3.9	19.4
S			3.9	19.4
cb.			3.1	20.2
¼			2.3	21.0
L			2.5	21.8
¼			3.0	20.3
cb.			2.4	20.9
N			1.7	21.6

2331

45

+10			2.0	21.3
	0+97			
-10			5.4	17.9
N			5.2	18.1
cb.			5.0	18.3
¼			4.9	18.4
L			4.5	18.8
¼			4.6	18.7
cb.			4.5	18.8
S			4.7	18.6
+10			5.0	18.3
	1+10			
-10			7.8	15.5
S			7.0	16.3
cb.			6.0	17.3
¼			5.5	17.8
L			5.0	18.3
¼			5.0	18.3
cb.			5.3	18.0
N			5.4	17.9
+10			5.4	17.9
	1+15			
-10			5.9	17.4
-½			10.3	13.0
N			6.0	17.3
cb.			6.5	16.8

		23 31		
¼			6.4	16.9
¼			6.4	16.9
¼			6.9	16.4
+1			10.5	12.8
cb.			12.3	11.0
+5			11.5	11.8
+6			7.7	15.6
S			7.9	15.4
+1			11.4	11.9
+7			11.4	11.9
+8			8.4	14.9
+10			8.4	14.9
	1+21			
-12			10.1	13.2
-10			13.0	10.3
-7			14.7	8.6
-3			10.7	12.6
S			9.4	13.9
+6			9.1	14.2
cb.			13.2	10.1
+4			13.8	10.0
¼			12.2	11.1
+3			11.8	11.5
+4			8.2	15.1
¼			8.0	15.3
¼			7.4	15.9

		23 31		
cb.			7.2	16.1
+5			7.4	15.9
+6			12.3	11.0
N			14.5	8.8
+4			14.5	88
+10			7.2	16.1
+11			6.9	16.4
	1+28			
-10			7.9	15.4
-6			13.0	10.3
N			16.0	7.3
+4			8.3	15.0
cb.			8.5	14.8
¼			8.6	14.7
¼			9.1	14.2
+4			9.1	14.2
¼			12.8	10.5
+3			10.9	9.4
cb.			15.4	7.9
+2			10.5	12.8
+8			10.6	13.7
S			15.2	8.1
+5			16.4	6.9
+11			11.3	12.0
TP	1.23	18.49	11.05	12.26
	1+37			

1349

-10			6.7	7.3
-4			5.3	8.2
S			10.6	2.9
+4			9.5	4.0
+6			6.8	6.7
cb.			6.1	7.4
¼			5.8	7.7
+3			4.8	8.7
&			6.4	13.1
ż			0.0	13.5
cb.			0.1	13.4
+6			5.1	8.4
N			6.4	7.1
+5			6.4	7.1
+8			+1.2	12.3
+10			+1.7	11.8
	1+48			
-10			0.5	13.0
N			1.1	12.4
+4			5.5	8.0
+6			5.7	7.8
cb.			2.2	11.3
+5			3.4	10.1
+6			5.3	8.2
ż			6.4	7.1
+7			6.7	6.8

1349

+3			1.6	11.9
2			2.0	11.5
+7			2.1	11.4
ż			7.7	5.8
+6			8.5	5.0
cb.			10.0	3.5
+4			11.7	1.8
+5			8.4	5.1
+8			9.5	4.0
S			11.6	1.9
+4			9.0	4.5
+15			11.0	2.5
	1+53			
-15			10.7	2.8
-4			9.7	3.8
S			14.5	-1.0
+7			14.5	-1.0
cb.			9.4	4.1
¼			5.2	8.3
2			2.2	11.3
+5			1.7	11.8
+6			7.8	5.7
+8			8.0	5.5
¼			5.7	7.8
+5			4.2	9.3
cb.			6.8	6.7

		13.49		
+2			9.5	4.0
+6			1.3	12.2
N			1.0	12.5
+10			0.3	13.2
	1+58			
-15			16.1	-1.6
N			15.1	-1.6
cb.			15.5	-2.0
i			15.5	-2.0
d			15.5	-2.0
i			15.5	-2.0
cb.			15.5	-2.0
S			15.0	-1.5
+15			15.5	-2.0
	2+00			
-20			19.0	-5.5
S			19.0	-5.5
cb.			19.0	-5.5
i			19.0	-5.5
d			19.0	-5.5
i			19.0	-5.5
cb.			19.0	-5.5
N			19.0	-5.5
+20			19.0	-5.5

Note, WLY Line San Antonio St. 18 Approx. 0.5 lower

T.P. on White Post 7.23 6.26

Walker
Rupliner
Leaky
Mattoon
11-16-28

Cross Section PERRY St.
Bet. Rosecrans & San Antonio st.

50' wide
10' cbs
7.5' 4s

1.12	65.27			64.15	S.E.B.P. Rosecrans & Perry
	Section A see sketch P-23				
A S			1.1	64.2	
+7' = top Return			1.12	64.15	
cb.			1.4	63.9	
¼			1.4	63.9	
℄			1.4	63.9	
¼			1.5	63.8	
cb. on top Return			1.11	64.16	
S " " cb.			1.14	64.13	
	0+00 see sketch P-23				
-10			6.9	58.4	
S			5.2	60.1	
+5			3.3	62.0	
cb.			2.8	62.5	
¼			2.3	63.0	
℄			2.3	63.0	
¼			2.0	63.3	
cb.			1.5	63.8	
N			1.1	64.2	
	0+14				
N -5			2.9	62.4	
N			3.2	62.1	
cb.			3.2	62.1	
¼			3.5	61.8	

Plotted 1-16-29
GBH

		65.27		
℄			4.0	61.3
¼			3.8	61.5
+3			3.8	61.5
cb.			5.3	60.0
S			8.5	56.8
+10			10.0	55.3
	0+29			
-10			12.9	52.4
S			12.6	52.7
cb.			11.5	53.8
+5			10.0	55.3
¼			10.1	55.2
℄			9.9	55.4
¼			9.0	56.3
cb.			9.2	56.1
+5			9.5	55.8
N			10.0	55.3
+10			8.4	56.9
	0+42			
-15			12.1	53.2
N			13.0	52.3
cb.			14.2	51.1
¼			15.1	50.2
℄			16.0	49.3
¼			16.0	49.3
cb.			15.3	50.0

65.27

S			15.1	50.2
+15			15.5	49.8
T.P.	0.25	~~52.69~~ 52.75	12.77	~~52.44~~ 52.50
	0+67			
-15			7.7	45.1
S			7.2	45.6
cb.			7.5	45.3
¼			7.6	45.2
℄			7.4	45.4
¼			6.8	46.0
cb.			6.5	46.3
N.			6.0	46.8
+15			5.6	47.2
	0+93 = ℄ Con. Walk on South 3.75 Wide to House			
-15			11.5	41.3
N			11.8	41.0
cb.			12.0	40.8
¼			12.3	40.5
℄			12.1	40.7
¼			12.2	40.6
cb.			12.3	40.5
S			13.60	39.2
+14 at House			13.3	39.5
T.P.	0.20	40.16	12.79	39.96

1+12 = ℄ Con. Walk on South 4' Wide House 14' Back

40.16

-14 on Walk at House		5.56	34.60
S " "		5.01	35.15
cb.		4.0	35.8
¼		3.5	36.7
℄		3.2	37.0
¼		3.6	36.6
cb.		3.7	36.5
N		4.0	36.2
+15		3.8	36.4
	1+35		
-15		8.1	32.1
N		7.8	32.4
cb.		7.5	32.7
¼		7.8	32.4
℄		6.6	33.6
¼		6.6	33.6
cb.		6.8	33.4
S		7.2	33.0
+10		7.9	32.3
	1+59		
-10		12.0	28.2
S		11.2	29.0
cb.		10.3	29.9
¼		10.0	30.2
℄		10.7	29.5
¼		11.0	29.2

40.16

cb			11.2	29.0
N			11.3	29.0
+10			11.6	28.6
T.P	0.08	29.00	11.2	28.92 on Post
	1+87			
-10			4.5	24.5
N			4.5	24.5
cb.			3.7	25.3
¼			4.0	25.0
⅝			4.0	25.0
¼			3.4	25.6
cb.			2.7	26.3
+6			2.0	27.0
S			2.0	27.0
+10			2.1	26.9
	1+89			
-10			3.2	25.8
S			2.8	26.2
cb.			2.2	26.8
¼			2.3	26.7
⅝			3.0	26.0
¼			3.7	25.3
cb.			4.0	25.0
N			4.9	24.1
+10			5.5	23.5
	2+01			

29.00

-10			5.2	23.8
N			4.5	24.5
cb.			4.3	24.7
¼			4.2	24.8
⅝			4.2	24.8
¼			4.4	24.6
cb.			4.5	24.5
S			4.3	24.7
+10			4.6	24.4
	2+26			
-10			9.3	19.7
S			8.7	20.3
cb.			8.8	20.2
¼			8.6	20.4
⅝			8.7	20.3
¼			8.7	20.3
cb.			8.9	20.1
N			9.1	19.9
+10			9.0	20.0
	2+51			
T.P	2.06	19.51	11.55	17.45
-5			3.6	15.9
N			3.6	15.9
cb.			3.4	16.1
¼			3.5	16.0
⅝			3.5	16.0

1951

℄		3.6	15.9
cb.		3.5	16.0
S		3.2	16.3
+5		3.4	15.1
	2+63		
−5		5.3	14.2
S		5.1	14.4
cb.		5.2	14.3
℄		5.3	14.2
℄		5.3	14.2
℄		5.7	13.8
cb.		5.5	14.0
N		5.7	13.8
+5		5.8	13.7
	2+68		
N		7.7	11.8
+4		7.5	12.0
cb.		6.8	12.7
℄		6.5	13.0
℄		6.3	13.2
℄		6.2	13.3
cb.		6.3	13.2
S		6.0	13.5
	2+83		
S		8.7	10.8
cb.		8.3	11.2

1951

℄		8.5	11.0
℄		8.4	11.1
℄		8.3	11.2
cb.		8.0	11.5
N		8.0	11.5
	2+95		
N		11.5	8.0
cb.		10.7	8.8
℄		10.0	9.5
℄		9.7	9.8
+3		10.2	9.3
℄		9.3	10.2
cb.		8.9	11.6
S		8.3	11.2
	3+05		
S		9.5	10.0
cb.		10.2	9.3
℄		12.1	7.4
+2		13.3	6.2
+4		13.5	6.0
+4		11.1	8.4
℄		11.2	8.3
℄		11.4	8.1
cb.		11.6	7.9
N		12.5	7.0
TP	3.74	11.93	11.32 8.19

~~#87~~
11.93

3+09

N	5.6	6.3
+4	5.0	6.9
+5	7.3	4.6
cb.	7.4	4.5
¼	7.0	4.9
℄	6.8	5.1
+5	7.3	4.6
½	6.7	5.2
+3	6.1	5.8
+4	3.3	8.6
cb.	3.3	8.6
S	2.5	9.4

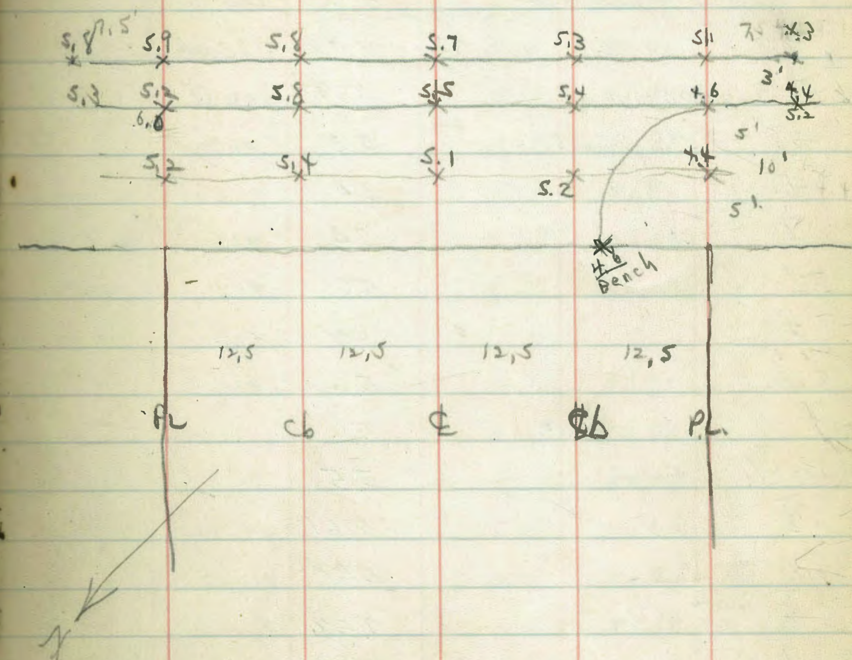
3+10⁴ = W'ly Line San Antonio St.

S	8.1	3.8
" top cb.	8.34	3.59
" Gut.	8.7	3.2
¼	8.1	3.8
℄	8.4	3.5
¼	9.0	2.9
N top cb.	8.88	3.05
N	8.8	3.1

~~Left BM on SE [illegible]~~ ~~8.34~~ ~~San Antonio + Perry~~

cbk. on T.P. in White Post 5.80 6.13 Page 48
6.26 = T.P.
6.13

HI 8.19



Walker
Ruplinger
Locky
Mattoon
11-19-28

CURB LEVELS
CYPRESS ST.

12 cbs
6.5 ½s

from W.L. Vermont st. West 0+00 St. B.P.

	4.51	290.49		285.98	Robinson's Vermont
chk. on B.P. NE Penn. Ave Vermont		W.L. Vermont = 0+00	5.55	284.94	
N TP	3.94	286.95	7.48	283.01	
℄ - 2.5 on top Return			4.89	282.06	
℄ - 2.5' " Gut. on Ground			5.3	81.70	
cb.			5.4	81.60	
¼			5.4	81.6	
℄			5.6	81.4	
¼			5.7	81.3	
S cb.			5.6	81.4	
0+03					
S cb. on Ground			5.5	81.5	
¼ " Pav.			5.61	81.34	
℄ " "			5.49	81.46	
¼ " "			5.52	81.43	
cb. " "			5.47	81.48	
+1.2 " at cb. on Gutter			5.46	81.49	
+1.2 on top cb.			4.89	82.06	
0+06					
N cb. - 0.6' on top cb.			4.90	82.05	
℄ - 0.6 " Gut. on Pav.			5.40	81.55	
N cb. on Pav.			5.42	81.53	
¼ on "			5.30	81.65	
℄ " "			5.34	81.61	
¼ " "			5.37	81.58	

286.95

S.cb. on dirt.	5.3	81.7
0+11 = beginning Combination Walk on South		
S top cb.	4.91	82.04
" Gut. on Pav.	5.24	81.71
¼ " "	5.12	81.83
℄ " "	5.07	81.88
¼ " "	5.10	81.85
N Gut. " "	5.27	81.68
N top cb.	4.93	82.02
0+25		
" " "	4.96	81.99
" Gut. on Pav.	5.25	81.70
¼ " "	5.08	81.87
℄ " "	5.05	81.90
¼ " "	5.11	81.84
S Gut. " "	5.27	81.68
" top cb.	4.94	82.01
0+50		
S. top cb.	5.01	81.94
" Gut. on Pav.	5.31	81.64
N " " "	5.35	81.60
" top cb.	5.04	81.91
0+75		
" " "	5.10	81.85
" Gut. on Pav.	5.43	81.52
S. " " "	5.44	81.51

29049
286.95

S top cb.	506	81.89
1+00		
S " "	516	81.79
" Gut. on Pav.	550	81.45
N " " "	553	81.42
" top cb.	515	81.80
1+25		
" " "	527	81.68
" Gut. on Pav.	562	81.33
S " " "	556	81.39
" top cb.	523	81.72
1+50		
" " "	535	8160
S Gut. on Pav	566	81.29
N " " "	565	81.30
" top cb.	539	81.56
1+75		
" " "	548	81.47
" Gut. on Pav.	580	81.15
S " " "	579	81.16
" top cb.	546	81.49
2+00		
" " "	557	81.38
" Gut. on Pav.	589	81.06
N " " "	583	81.12
N top cb.	556	81.39

29049
286.95

2+25		
N top cb.	580	81.15
N Gut. on Pav.	605	80.90
S " " "	605	80.90
" top cb.	574	81.21
2+50		
" " "	590	81.05
" Gut. on Pav.	621	80.74
N " " "	620	80.75
" top cb.	595	81.00
2+75		
" " "	628	80.67
N Gut. on Pav.	652	80.43
S " " "	640	80.55
" top cb.	612	80.83
3+00		
" " "	631	80.64
" Gut. on Pav.	662	80.33
N " " "	678	80.17
" top cb.	653	80.42
3+25		
N " "	680	80.15
N Gut. on Pav.	709	79.86
S " " "	676	80.19
" top cb.	652	80.43
3+50		

	29049 286.95		
S top ch.		6.76	80.14
" Gut. on Par.		6.98	79.97
N " " "		7.36	79.59
N top ch.		7.02	79.93
	3+75		
" " "		7.31	79.64
" Gut. on		7.68	79.27
S "		7.17	79.78
S top ch.		6.91	80.04
	4+00		
" " "		7.05	79.90
" Gut. on Par.		7.37	79.58
N " " "		8.00	78.95
N top ch.		7.57	79.38
Chk. N.E. BP. Bond + Vermont		2.01	284.94 ✓ Page 54

60' wide
10' cbs
10' ¼s

Haller St X Sec
Redwood to Thorn

12-11-28
Miller

B.M. Blk. Cor. Hub	-7.55	308.89		301.34	S.W. Redwood + Van Couver
	00 = N. Line Redwood				
W			6.7	302.2	
cb			6.6	302.3	
¼			6.5	302.4	
c			6.2	302.7	
¼			6.1	302.8	
cb			6.4	302.5	
E			6.33	302.56	N.E. Blk Cor Hub Redwood & Haller
		50' N.			
E			5.2	303.7	
cb			5.2	303.7	
¼			5.0	303.9	
c			5.2	303.7	
¼			5.3	303.6	
cb			5.4	303.5	
W			5.5	303.4	
		100' N			
W			4.7	304.2	
cb			4.5	304.4	
¼			4.5	304.4	
c			4.0	304.9	
¼			4.4	304.5	
cb			4.4	304.9	
E			4.4	304.9	

Platted Jan 17-29 CBH.

308.89

	150' N	
E	3.6	305.3
cb	3.5	305.4
¼	3.7	305.2
c	3.0	305.9
¼	3.7	305.2
cb	3.7	305.2
W	3.9	305.0
	200' N.	
W	3.0	305.9
cb	3.0	305.9
¼	2.8	306.1
c	2.4	306.5
¼	2.8	306.1
cb	2.7	306.2
E	2.8	306.1
	250' N.	
E	2.7	306.2
cb	2.4	306.5
¼	2.2	306.7
c	1.8	307.1
¼	2.2	306.7
cb	2.0	306.9
E ? (W)	2.1	306.8

3.08.89

300' N of Redwood.

W			1.2	307.7
cl			1.0	307.9
¼			1.3	307.6
C			1.0	307.9
¼			1.8	307.1
cl			2.5	306.4
E			4.2	304.7
		320' N		
E			6.7	302.2
cl			3.2	305.7
¼			1.5	307.4
C			1.0	307.9
¼			1.0	307.9
cl			0.9	308.0
W			0.9	308.0
T.P.	3.19	311.34	0.74	308.15
		350' N		
W			3.0	308.34
cl			3.0	308.34
¼			3.2	308.1
C			3.5	307.8
¼			4.7	306.6
cl			8.6	302.7
E			13.3	299.0
+ 10			19.3	292.0

Haller.

311.34

390' N.

E - 15	24.8	287.5
E	14.6	296.7
cl	10.1	301.2
¼	6.2	305.1
C	4.2	307.1
¼	3.3	308.0
cl	2.8	308.5
W	2.7	308.6
	415' N	
W	2.4	308.9
cl	2.9	308.4
¼	4.4	306.9
C	7.8	303.5
¼	11.8	299.5
cl	16.8	294.5
E	22.0	289.3
+ 20	32.8	278.5
	440' N.	
- 20	37.4	273.9
E	24.4	284.9
cl	20.8	290.5
¼	15.2	296.1
C	10.5	300.8
¼	6.5	304.8
cl	3.7	307.6
W	2.5	308.8

311.34
470'N of Redwood

W.	3.1	308.2
℄	4.6	306.7
1/4	7.6	303.7
e	12.8	298.5
1/4	18.2	291.1
℄	23.2	288.1
E	28.6	282.7
+15	36.6	274.7

500'N.

-10	38.0	273.3
E	32.8	278.5
℄	18.0	293.3
1/4	23.1	288.2
e	17.3	294.0
1/4	11.6	299.7
℄	6.9	304.4
W.	4.6	306.7

535'N.

W	6.2	305.1
℄	9.8	301.5
1/4	12.4	298.9
c	16.0	295.3
1/4	20.5	290.8
℄	25.3	286.0
E	30.1	281.2
+15	37.8	273.5

311.34 Haller

560'N = P.C. into Thorn on W. = 60's. of Thorn

e			37.0	274.3	
℄			32.5	278.8	
1/4			27.2	284.1	
e			23.0	288.3	
1/4			18.4	292.9	
℄			14.3	297.0	
W T.P.	9.26	309.99	10.61	300.73	on P.C. Hub W. Line Haler

See A see Page 60. 15+00'

W.	11.3	29.87
+10' E	16.8	29.32
+20' E	22.3	28.77
+30. E.	26.5	28.35
+40' E	32.5	27.75

See B 30+00

W	13.1	29.69
+10' E	18.5	29.15
+20' E	23.6	28.64
+30' E	29.8	28.02
+40' E	35.7	27.43

See C. 60+00

S.W.	10.6	299.4
+10' N.E.	15.9	294.1
+20' N.E.	21.0	289.0
+30' N.E.	26.0	284.0
+40' N.E.	31.8	27.82

309.99

Sec. D. 75°00

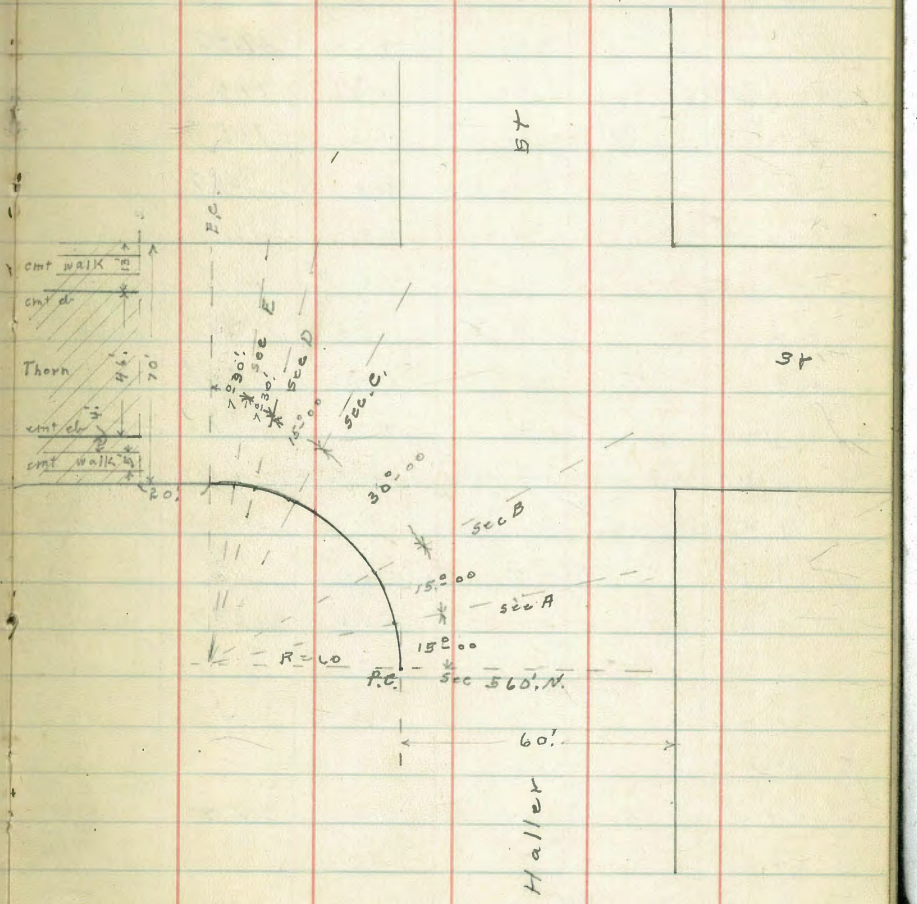
S.W.	4.2	305.8
+10'N.E.	8.1	301.9
+20'N.E.	12.5	297.5
+30'N.E.	16.8	293.2
+40'N.E.	19.4	290.6
+50'N.E.	23.5	286.5
+60'N.E.	26.0	284.0

Sec. E. 82°30'

S	2.4	307.6
+10'N	2.9	307.1
+20'N	7.2	302.8
+30'N	11.4	298.6
+40'N	14.5	295.5
+50'N	17.1	292.9
+40'N	19.4	290.6
+70'N	23.0	287.0

E.C. 259.95 E. of E. line Vancouver

S line Thorn	2.2	307.8
+13 = S cb "	2.5	307.5
+24 = S ¼ "	2.1	307.9
+35 = ℄ "	4.8	305.2
+46 = N ¼ "	7.8	302.2
+57 = N cb "	12.3	297.7
+70 = N line "	14.0	296.0
20'N. of N. "	20.8	289.2



309.99

R 40' E. of E. Line Vancouver = E. End Improvements

10' N. of N. line Thorn	5.7	304.3	
" " "	2.6	307.4	
1' S. of " " "	0.8	309.2	
N. el	1.00	~~3000~~	308.99 cmt el
+1 = gutter	1.8	308.2	
N. 1/4	1.3	308.7	
℄	1.3	308.7	
S. 1/4	1.7	308.3	
+10 = gutter	2.3	307.7	
S. el	1.50	308.50	308.49 cmt. el
+9	1.4	308.6	
S. Line	0.2	309.8	

X set Haller from 260' N. of Redwood to 370' N. of Redwood.

End curb W. side Haller

B.M.	4.44	3.11.63	307.19	
260' N. of Redwood				
W. el.	5.98	305.65		
℄	6.7			
E. 1/4	6.9			
gutter	7.2			
N. End E. el.	6.38	305.25		
E. Line	6.3			
265' N.				
E. Line	5.3			
E. el	5.2			
E. 1/4	4.4			
+7	4.5			
℄	6.4			

311.63

310' N. of Redwood

℄	6.0		
3' E.	4.7		
E. 1/4	4.4		
E. el.	3.9		
5' E.	5.1		
E. Line	7.7	303.9	
335' N.			
E. Line	11.7		
E. el	6.5		
H.W.	4.3		
E. 1/4	4.2		
7' W.	4.2		
℄	5.7		

360' N. - N. End Grading on W. 1/2

℄	5.1		
+2 E.	4.5		
E 1/4	4.4		
+4' E	4.7		
E. el.	8.5		
E. Line	13.6	298.0	
370' N.			
E. Line	13.7		
E. el	9.4		
E. 1/4	4.7		
℄	4.3		

40' wide
10' cls
10' "45"

Haller St X Sec
Redwood St. South.

12-11-28
miller

B.M.	0.29	302.85		302.56	page 57.
	00 = S. Line Redwood				
E			2.1	300.7	
cl			2.0	300.8	
1/4			1.7	301.1	
c			1.9	300.9	
1/4			2.2	300.6	
cl			2.2	300.6	
W			2.4	300.4	
		40'S.			
W			4.2	298.7	
cl			4.1	298.8	
1/4			3.8	299.1	
℄			3.6	299.3	dirt.
℄			3.97	298.88	Top M.H.
1/4			3.7	299.2	
cl			3.6	299.3	
E			3.7	299.2	
		80'S			
E			6.9	296.0	
cl			6.5	296.4	
1/4			6.3	296.6	
c			6.2	296.7	
1/4			6.4	296.5	
cl			6.3	296.6	
W			7.0	295.9	

Plotted Jan 17-29 - C.B.H

		302.85 120'S.		
W			11.5	291.4
cl			11.1	291.8
1/4			10.8	292.1
c			10.3	292.6
1/4			10.7	292.2
cl			10.6	292.3
E			10.9	292.0
T.P.	0.98	290.92	12.91	289.94
		160'S		
E			3.5	287.4
cl			3.3	287.6
1/4			3.2	287.7
c			3.1	287.8
1/4			3.6	287.3
cl			4.1	286.8
W			4.8	286.1
		165'S		
W-2.1 = Front of House			6.7	
W			6.7	284.2
cl			6.1	284.8
1/4			5.9	285.0
+2			5.8	285.1
+5			4.1	286.8
c			4.1	286.8
1/4			3.5	287.4
cl			4.0	286.9
E			4.2	286.7

290.92

185' S. of Redwood

E			6.8	284.1	
el			6.9	284.0	
1/4			6.8	284.1	
e			6.9	284.0	
1/4			6.8	284.1	
el			6.9	284.0	
W			7.4	283.5	
W. + 2.6 = Front of House			7.4	283.5	ground
" " "			6.1	284.8	floor

200' S.

W			10.8	280.1	
el			9.8	281.1	
1/4			9.2	281.7	
e			8.7	282.2	Top M.H
1/4			8.0	282.9	
el			8.0	282.9	
E			8.5	282.4	

210' S

E			9.7	281.2	
el			9.5	281.4	
1/4			9.7	281.2	
e			10.9	280.0	
1/4			11.1	279.8	
el			11.6	279.3	
W			11.6	279.3	
T.P.	2.56	281.67	11.81	279.11	

281.67

220' S.

-10			10.1	271.6	
W.			7.2	274.5	
el			5.5	276.2	
1/4			3.0	278.7	
+5			3.0	278.7	
e			5.2	276.5	
+5			2.8	278.9	
1/4			2.6	279.1	
el			2.5	279.2	
E			2.4	279.3	

230' S.

E			4.3	277.4	
el			4.5	277.2	
1/4			5.3	276.4	
+6			6.1	275.6	
e			8.7	273.0	
1/4			8.7	273.0	
el			10.0	271.7	
W			12.7	269.0	
+10			14.1	267.6	
T.P.	1.66	282.93	0.40	281.27	

243' S.

W			19.5	263.4	
el			18.5	264.4	
1/4			15.8	267.1	
e			15.2	267.7	

		282.93		
		243' S (con)		
E. 1/4			11.5	271.4
cl			10.6	282.3
E			10.5	282.4
T.P.	0.60	270.69	12.84	270.09
		263' S. of Redwood		
E			8.0	262.7
cl			8.7	262.0
1/4			10.2	260.5
+5			11.2	259.5
T.P.	0.24	257.97	12.96	257.73
C			1.2	257.8
1/4			2.2	255.8
cl			3.8	254.2
W.			7.0	251.0
		285' S.		
W			18.5	239.5
cl			15.0	243.0
1/4			12.3	245.7
E			11.8	246.2
1/4			9.4	248.6
cl			7.9	250.1
E			6.5	251.5
		295' S.		
E			11.3	246.7
cl			13.0	245.0
1/4			14.6	243.4

Haller

61

		257.97		
E			17.5	240.5
1/4			17.5	240.5
cl			19.5	238.5
W			22.5	235.5
		305' S.		
W			19.7	238.3
cl			23.0	235.
1/4			21.1	236.9
C			21.3	236.7
1/4			20.0	238.0
cl			18.3	239.7
E			17.2	240.8
		320' S.		
E			23.7	234.3
cl			24.7	233.3
1/4			23.3	234.7
C			21.7	236.3 Top M.H.
1/4			20.3	237.7
cl			18.5	239.5
W			16.0	242.0
		332' S		
W			12.7	245.3
cl			15.3	242.7
1/4			17.7	240.3
C			20.1	237.9
1/4			22.6	235.4

257.97

332' S. of Redwood (com.)

cl			25.5	232.5
E			27.6	230.4
		355' S.		
E			20.3	237.7
cl			17.3	240.7
1/4			14.2	243.8
C			11.8	246.2
1/4			9.0	249.0
cl			7.0	251.0
W			4.0	254.0
T.P.	11.80	268.68	1.09	256.88
		375' S.		
W			6.4	262.3
cl			8.7	260.0
1/4			11.0	257.7
C			13.5	255.2
1/4			15.5	253.2
cl			19.0	249.7
E			21.5	247.2
		400' S		
E			10.7	258.0
cl			8.7	260.0
1/4			6.8	261.9
C			3.7	265.0
T.P.	8.70	277.28	0.10	268.58
1/4			9.1	68.2

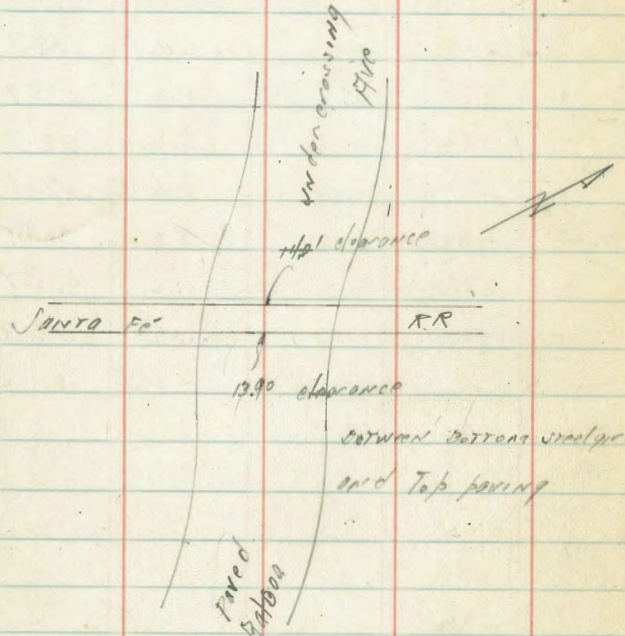
277.28

65

cl			7.0	270.3
W			3.4	273.9
		420'S = 200' N. of Quince Book		
W			1.9	275.4
cl			3.0	274.3
1/4			3.6	273.7
C			5.6	271.7
1/4			7.2	270.1
cl			8.8	268.5
E.			11.6	265.7
T.P.	9.50	285.35	1.43	275.85
			4.10	281.25 = 281.27

1-4-9 Moose

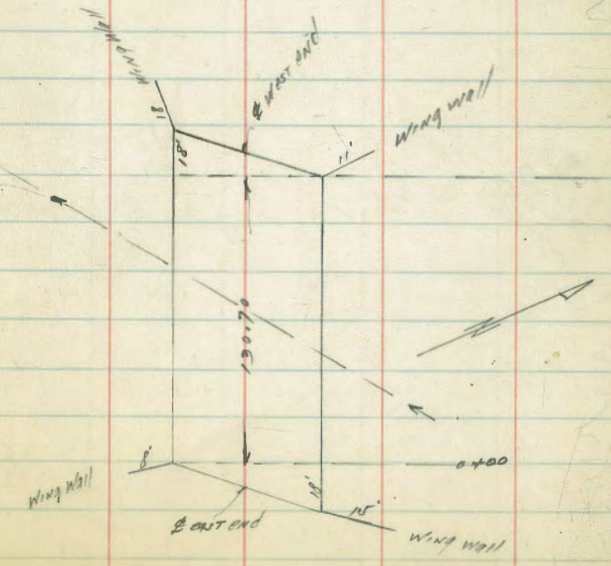
Under crossing on Balboa Ave. American Park



Bridge elev. Balboa Ave & Rose Cañon Creek

U.S.G.S. Balboa & Rose Cañon	0.46	19.57		✓19.31	check
TP	4.09	17.38	6.45	13.79	
℄ east end bridge on paving			4.30		
" west " " " "			4.10		
0+00 in creek bed			12.4	5.0	
0+25 " " "			11.4	6.0	
0+50 " " "			12.7	4.7	
0+75 " " "			12.9	4.5	
1+00 " " "			13.0	4.4	
1+25 " " "			13.3	4.1	
1+50 " " "			12.8	4.6	
1+30.7 " " "			8.5		

25.43
− 6.12
19.31

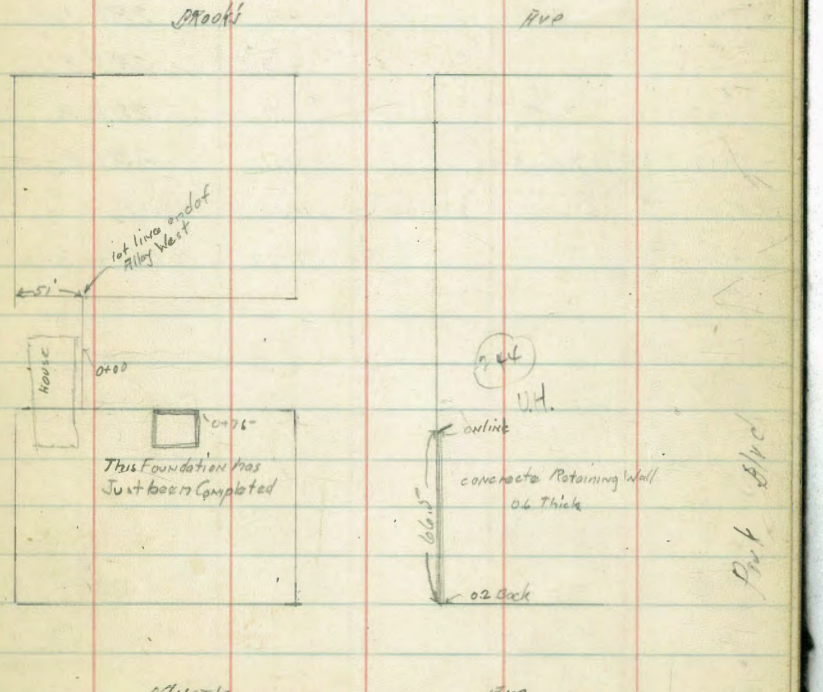


Moore

Levels on Retaining Wall Alley Blk. 244 U.H.

	7.95	297.08		289.13	S.E. cor. B.P. Brookes + Herbert
T.P.	3.33	295.16	5.25	291.83	
Pavement on E.L. Alley + N.L. of Myrtle			5.24	289.92	= Begining of Wall starts to rise here 0.2 Back
Topch. " " " " " "			4.84		
5' North on E.L. Alley = top of Wall: 0.2 Back			3.70		
ground at base of Wall			5.1		
25' North top Wall			3.35		
ground			4.8		
50' N. top Wall			2.93		
ground			4.5		
66.5' N. = Top of end of Wall on line			2.58		
ground			4.4		
T.P.	0.62	292.45	3.33	291.83	

Note: New Cross Sections in North + South Alley in FB 2153/14 by F.B. Walker 10-31-51



Levels ON ℄ of E. & W. Alley

	0.62	292.48		291.83	= T.P
	See Sketch				
0+00 = E.b. of lot closing Alley ON ℄			9.2	282.3	
0+25			14.1	278.4	
0+50			16.6	275.9	
0+55			16.4	276.1	
0+75			9.4	283.1	
concrete ON South. E. Edge 20' long					
Top of Foundation Wall For Garage ON line			8.99	283.46	
0+87			8.6	283.9	
1+00			4.9	287.6	
1+25			2.7	289.8	
1+70			1.7	290.8	
2+17.5 = ℄ of N. & S. Alley			0.7	291.8	
T.P	5.16	297.01	0.60	291.85	
ON Beach			7.87	289.14	-.01 error

Plotted 1-29-29 CSH

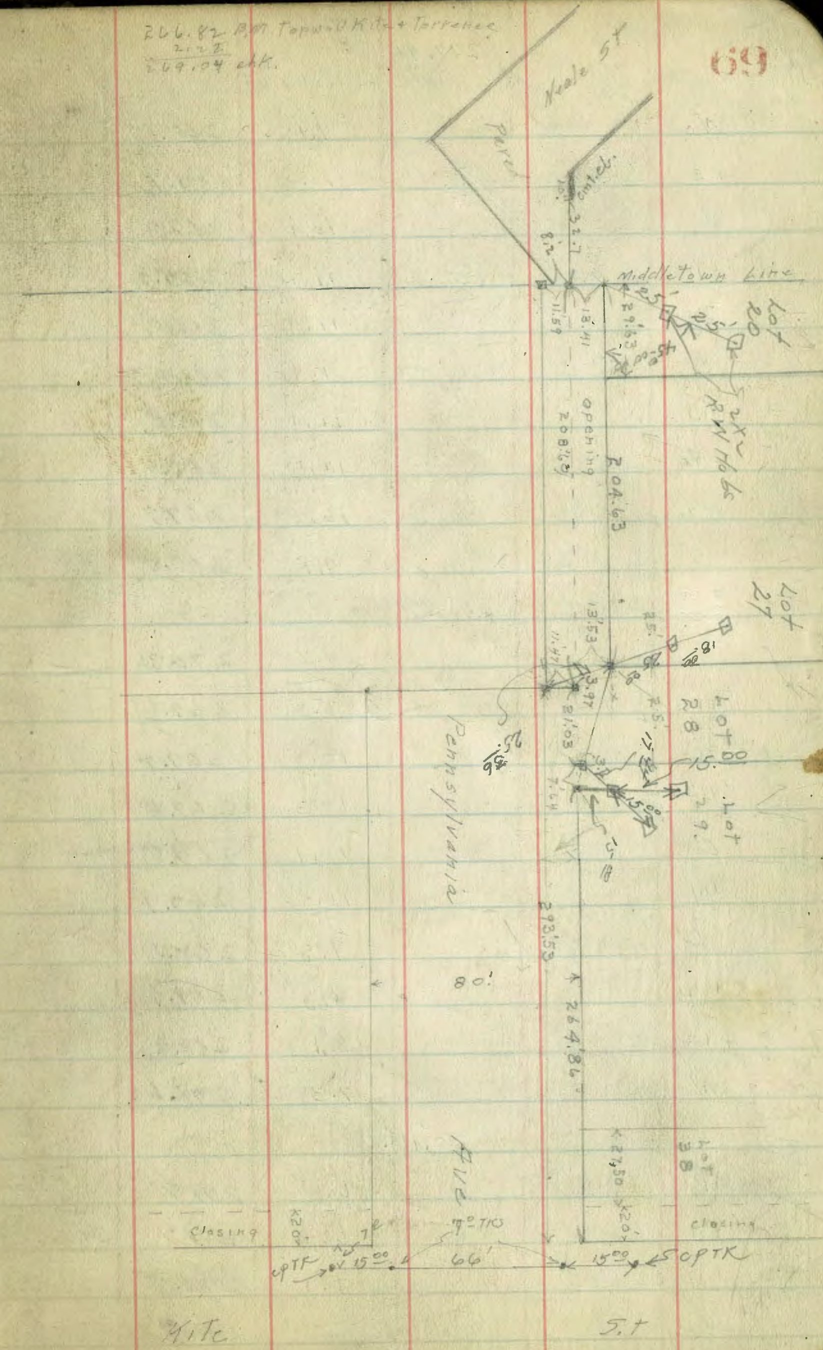
80' wide
14' cbs
13' 1/4 s

Pennsylvania Ave X Sec
Kite to Neale

BM. BP	5.09	269.07		263.98	N.W. Kite + Terrence
set BM. BP. T.P.	11.89	277.94	3.02	266.05	N.E. Kite & Penn Ave
00 = W. Line of Kite St = W. Line cmt. walk.					
N			11.16	266.78	cmt walk
cb			11.46	266.48	cmt. cb ✓
gutter			12.12	265.82	Pavmt.
1/4			12.04	265.90	"
c			12.04	265.90	"
1/4			12.20	265.74	"
gutter			12.50	265.44	"
cb			11.95	265.99	cmt. cb ✓
S			11.65	266.29	cmt. walk
2' W = W. end 10' Rad cb. returns + W. Line Pavmt.					
S			9.1	268.8	
+10			10.2	267.7	
cb			11.96	265.98	cmt. cb
gutter			12.47	265.47	Pavmt
1/4			12.16	265.78	
c			12.02	265.92	
1/4			12.04	265.90	
gutter			12.11	265.83	
cb			11.46	266.48	cmt. cb
+2			11.0	266.9	
+11			10.6	267.3	
N			9.5	268.4	

Plotted 2/18/29
A.C.L.

266.82 BM Top wall Kite + Terrence
2.22
269.04 chk.



		277.94 5' W. of W. Line Kittie St				277.94		Penn. Ave		
N			9.1	268.8	1/4		7.6	270.3		
+3			10.2	267.7	C		7.8	270.1		
cl			10.9	267.0	1/4		7.3	270.6		
+1			12.0	265.9	cl		7.5	270.4		
1/4			11.9	266.0	+10		6.7	271.2		
C			11.9	266.0	S		6.9	271.0		
1/4			12.1	265.8		100' W				
+dr.			12.1	265.8	S		5.7	272.2		
+2			10.0	267.9	+6		5.7	272.2		
S			9.1	268.8	+8		6.7	271.2		
		45' W.			cl		6.6	271.3		
S			7.7	270.2	1/4		6.4	271.5		
+12			8.3	269.6	C		6.4	271.5		
cl			10.5	267.4	1/4		6.1	271.8		
1/4			10.3	267.6	cl		6.0	271.9		
C			10.1	267.8	+7		6.1	271.8		
1/4			10.2	267.7	+8		5.4	272.5		
cl			9.8	268.1	N		5.4	272.5		
+2			8.3	269.6		150' W				
+12			8.1	269.8	N		3.2	274.7		
N			7.3	270.6	cl		4.2	273.7		
		80' W.			+4		3.7	274.2		
N			6.0	271.9	1/4		3.6	274.3		
+7			6.2	271.7	C		3.8	274.1		
+10			7.1	270.8	1/4		3.6	274.3		
cl			7.2	270.7	cl		4.0	273.9		

	277.94 150' W. (con)		
S cb +8		4.1	273.8
+10		3.2	274.7
S		3.4	274.5
	165' S.		
S		2.6	275.3
+5		3.3	274.6
cb		3.1	274.8
1/4		3.2	274.7
c		3.2	274.7
1/4		3.0	274.9
cb		3.0	274.9
N		2.8	275.1
	200' W.		
N		1.6	276.3
cb		1.5	276.4
+1		2.1	275.8
1/4		2.2	275.7
c		2.2	275.7
1/4		2.3	275.6
cb		2.2	275.7
+6		2.5	275.4
+8		1.6	276.3
S		1.8	276.1
	235' W.		
S		1.4	276.5
cb		1.4	276.5

		277.94			
1/4			1.3	276.6	
c			1.3	276.6	
1/4			1.1	276.8	
cb			1.1	276.8	
N			0.8	277.1	
264.'86 W. = Δ Beginning of opening on N. Line					
N			0.7	277.2	
cb			0.9	277.0	
1/4			0.9	277.0	
c			1.0	276.9	
1/4			1.1	276.8	
cb			1.3	276.6	
S			1.2	276.7	
293.'53 W. = W. End. 80' St.					
S			0.9	277.0	
cb			1.0	276.9	
1/4			0.9	277.0	
+5			0.8	277.1	ground
+5. on S. side garage cmt. floor			0.23	277.71	Noyardage ✓
c			0.6	277.3	
+6			0.8	277.1	
+6 on N. side garage cmt. floor			0.25	277.69	no yardage ✓
1/4			0.9	277.0	
cb			0.9	277.0	
old N Line			0.9	277.0	
T.P.	0.96	277.96	0.94	277.00	

277.96

293.53 (con)

12' N. of old N. Line = New N. Line		0.8	277.2
From above Sec. West Roadway = 25' wide			
0.0 = 297.50 W. = Δ on N. Line of opening = Line Bet. Lots 27 & 28			
N.		0.8	277.2
+12.5 = C		0.9	277.1
S		0.9	277.1
	35' W of Δ on N. Line opening		
S		1.2	276.8
+12.5 = C		1.3	276.7
N		1.1	276.9
	70' W		
N		1.6	276.4
+12.5 = C		1.9	276.1
S		1.9	276.1
	100' W		
S		2.5	275.5
+12.5 = C		2.5	275.5
N		2.2	275.8
	135' W.		
N		3.3	274.7
+12.5 = C		3.9	274.1
S		3.8	274.2
	155' W.		
S		5.2	272.8
+12.5 = C		5.3	272.7
N		5.0	273.0

277.96

Penn Ave

180' W

N? (S)			6.5	271.5
+2			6.7	271.3
+4			7.5	270.5
+12.5 = C			7.5	270.5
S			7.3	270.7
	195' W.			
S			8.6	269.4
+2			8.6	269.4
+3			9.5	268.5
+12.5 = C			9.2	268.8
+4			9.2	268.8
+6			8.1	269.9
N			8.1	269.9
	204.63 W. = Middletown Line			
N			8.6	269.4
+9			8.8	269.2
+10.6			10.0	268.0
1' E. of above = outlet of 12" Corlton Pipe			10.53	267.43 flow line
N + 13.41 = old N. Line Penn = N.E. Cor pavement			10.60	267.36
N + 22.6 = S.E. Cor. Pavement			10.48	267.48
N. + 25 = S.			10.0	268.0
T.P.	4.86	269.70	13.12	264.84
T.P.	6.57	275.97	0.30	269.40
chK on BM.			6.59	269.38 = 269.38 N.W. Sutter & Middletown Line

X See Alley Blk N. Univ Hts
Collier to Copley Bet Oregon + Idaho

3-23-29
Mills

B.M.	3.99	390.82		386.83	N.E. 21 Tab + Adams
T.P.	6.36	393.98	3.20	387.62	
chk on BM. S.W. Idaho + Collier			4.78	389.20	
T.P.	7.89	396.76	5.11	388.87	
		00 = N. line Collier			
N. emt. eb.			7.71	389.05	
N. par'mt.			8.01		
℄ "			8.21		
E. "			7.90		
E. emt. eb			7.54	389.22	
		5'N			
E			7.0		
e			7.6		
W			7.3		
		10'N			
W			6.8		
e			6.9		
E			6.7		
		40'N			
E			5.8		
e			5.9		
W			5.8		
	74'N, garage on E. emt. floor 13.5 Back				
W			5.0		
e			5.1		
E			5.1		
+13.5			4.84		floor

Notes used in Field Book 1301

396.76

87'N. - double garage on W emt. floor 6.6 Back

E		4.8	
e		5.0	
W.		5.4	emt.
+3		5.45	emt. apron
+6.6		5.30	floor
112'N garage on E. emt. floor 4.5 Back			
W		5.1	
e		5.0	
E		4.9	
+4.5		4.6	floor
152'N = S. End double garage on W. emt. floor 7' Back			
E		4.4	
e		4.3	
W		4.4	
+4		4.32	emt. apron
+7		4.00	floor
170'N { N. end double garage on W garage on E. emt. floor 5' Back			
W-7		4.01	
-4		4.43	
W		4.1	
e		3.9	
E		3.2	
+1.4		3.09	emt apron
+5.		2.87	floor

		396.76						396.76		Alley Blk N. Univ Hts	
		200.' N									
E			3.3			T.P	5.54	394.41	7.89	388.87	S.W. Collier & Idaho.
E			3.3			chk on BM			5.21	389.20	
W.			3.4							0.M 389.35	
	235' N. double garage on W. cmt. floor			7.2 Back							
W - 7.2			3.23		floor	BM				384.91	S.E. Adams & Idaho
W - 4.4			3.56		cmt. Apron	BM.				391.55	N.W. Utah & Collier
W			3.5								
E			3.4								
E			3.0			BM	3.22	390.05		386.83	N.E. Utah & Adams S.E. Idaho
		245' N				chk BM.			5.27.	384.78 - 384.91	& Adams.
E			2.8								
E			3.4			BM.	6.31	393.14		386.83	N.E. Utah & Adams NW. Utah &
W			3.7			T.P. on BM	3.99	395.39	1.74	391.40 - 391.55	Collier SW. Idaho &
		380.3 N				chk on BM.			6.19	389.20 - 389.20	Collier above
℄ on M.H.			4.1								
		290.' N.				BM.	2.89	391.93		389.04	S.E. Adams & 30th N.C. Utah &
W			5.1			T.P. BM.			5.20	386.73 - 386.83	Adams
E			4.8								
E			4.0			BM.	2.75	387.66		384.91	S.E. Idaho & Adams
	300.4 N. = S. Line Copley Ave					T.P.	4.07	383.96	7.77	379.89	
E cmt. ch			5.49	391.27		T.P. BM.	6.20	385.07	5.09	378.87 - 378.85	S.E. Idaho & Madison S.E. Oneida &
E. pavmt.			5.86			chk on. BM.			on. Road Playgone 4.07	381.00 - 381.05	Madison
℄ "			5.99								
W. "			5.89								
W. cmt. ch			5.61	391.15							

X-Section Alley Blk. 9, Ocean Beach Park.

Jaeger, Clavert, Barnes } April 6th 1929.

HI 29.78

STA	+	H.I.	−	Elev.
SW. B.P. Voltaire & Sunset Blvd.				25.62
	5.85	31.47		
T.P.			6.13	25.34
	4.44	29.78 ✓		
W. Curb Sunset Blvd.				
N.L. Alley				
Curb Top			4.02	25.76
✓ Both			4.45	25.33
S.L. Alley				
Curb Top			3.92	25.86
✓ Both.			4.40	25.38
0+00 W.L. Sunset Blvd.				
S. Curb Top			3.65	26.13
✓ Both.			3.94	25.84
℄			4.26	25.52
N. Curb Both.			3.99	25.79
✓ Top			3.80	25.98
+.50				
N.L.			4.0	25.8
℄			4.5	25.3
S.L.			4.5	25.3
0+93 Garage on South				
+3 Dirt Floor			4.6	25.2
S.L.			4.6	25.2
℄			5.1	24.7

Potted 4-7-29 EAB.

	+	H.I.	−	Elev. 75
N.L.			4.8	25.0
1+00				
N.L.			5.0	24.8
℄			5.1	24.7
S.L.			4.7	25.1
T.P.			5.97	23.81
	4.01	27.82 ✓		
1+55 Garage on South				
+3' Dirt Floor			3.6	24.2
S.L.			3.6	24.2
℄			3.9	23.9
N.L.			3.6	24.2
1+67 Garage on North				
+7' Dirt Floor			3.5	24.3
N.L.			3.8	24.0
℄			3.8	24.0
S.L.			3.8	24.0
2+00				
S.L.			4.3	23.5
℄			4.3	23.5
N.L.			4.0	23.8
2+09 Garage on North				
+6.5 Concrete Floor			3.40	24.42
N.L.			3.7	24.1
℄			4.4	23.4

		27.82			
Sta	-	+	H.I.	-	Elev.
S.L.				4.3	23.5
2+50					
S.L.				4.8	23.0
℄				4.7	23.1
N.L.				4.6	23.2
2+85		Garage on North			
+5.5		Dirt Floor		5.3	22.5
N.L.				5.3	22.5
℄				5.4	22.4
S.L.				5.6	22.2
3+00					
S.L.				5.4	22.4
℄		Top of Manhole		5.40	22.60
N.L.				5.3	22.5
3+09		Garage on South			
N.L.				5.5	22.3
℄				5.5	22.3
S.L.				5.5	22.3
+5.5'		Dirt Floor		5.4	22.4
3+30		Garage on South			
+5.5'		Dirt Floor		5.9	21.9
S.L.				6.0	21.8
℄				6.1	21.7
N.L.				6.2	21.6

		27.82			
Sta	-	+	H.I.	-	Elev.
3+50					
N.L.				6.3	21.5
℄				6.3	21.5
S.L.				6.3	21.5
4+00					
S.L.				7.1	20.7
℄				7.1	20.7
N.L.				7.1	20.7
		T.P.		7.73	20.09
			3.29	23.38	
4+42		Garage on South			
N.L.				3.4	20.0
℄				3.4	20.0
S.L.				3.5	19.9
+7.5'		Dirt Floor		3.3	20.1
4+62		Garage on North			
S.L.				3.8	19.6
℄				3.6	19.8
N.L.				3.6	19.8
+1.5'				3.6	19.8
5+00					
N.L.				4.3	19.1
℄				4.4	19.0
S.L.				4.5	18.9

≠3.38

Sta		-	+	H.I.	-	Elev.
5+08	Garages on North & South					
	+9' Dirt Floor				4.N	19.2
	S.L.				4.6	18.8
	℄				4.5	18.9
	N.L.				4.4	19.0
	+6' Dirt Floor				4.4	19.0
5+44	Garage on South					
	N.L.				4.9	18.5
	℄				5.1	18.3
	S.L.				5.0	18.4
	+7.5' Dirt Floor				4.6	18.8
6+00	30 E.L. Cable					
	S. Curb Top				6.56	16.82
	✓ Bott.				6.7N	16.6.6
	℄				7.15	16.23
	N. Curb Bott.				6.71	16.67
	✓ Top				6.55	16.83
	E. Curb Cable					
	N. Curb Top				6.80	16.58
	✓ Bott.				7.33	16.05
S.	✓ Top				6.78	16.60
	✓ Bott.				7.40	15.98
	T.P.				7.3N	16.06
		4.6N	20.68			
	SW. B.P. Cable & Brighton		14.00		6.63	16.75

77

Sta		+	H.I.	-	Elev.
	T.P.				17.06

Sta	-	+	H.I.	-	Elev.

Sta		+	H.I.	-	Elev.

STA	-	+	H.I.	-	Elev.

STA		+	H.I.	-	Elev.

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope 1½ to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

TABLE No. 9.

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections.

Degree of curve with a given I may be found by dividing tangent, (or external), opposite I by given tangent, (or external).

The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

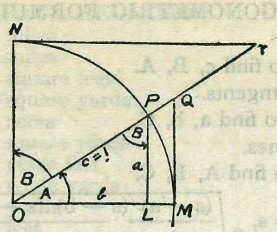


TABLE II

TRIGONOMETRIC FORMULÆ.

$\angle A = \angle MOP \qquad \angle B = \angle PON = \angle OPL$

$R = OB = c = 1$

$$\sin A = \frac{a}{c} = \frac{a}{1} = a = \cos B = LP$$

$$\cos A = \frac{b}{c} = \frac{b}{1} = b = \sin B = OL$$

$$\tan A = \frac{a}{b} = \frac{MQ}{OM} = \frac{MQ}{1} = MQ = \cot B = MQ$$

$$\cot A = \frac{NT}{ON} = \frac{NT}{1} = NT = \tan B = NT$$

$$\sec A = \frac{OQ}{OM} = \frac{OQ}{1} = OQ = \csc B = OQ$$

$$\csc A = \frac{OT}{ON} = \frac{OT}{1} = OT = \sec B = OT$$

$$\text{vers } A = \frac{LM}{OP} = LM = \text{covers } B \#$$

$$\text{covers } A = \frac{OP - LP}{OP} = OP - LP = \text{vers } B$$

$$\text{exsec } A = PQ = \text{coexsec } B$$

$$\text{coexsec } A = PT = \text{exsec } B$$

$$\sin \tfrac{1}{2} A = \sqrt{\frac{1 - \text{Cos } A}{2}} \qquad \cos \tfrac{1}{2} A = \sqrt{\frac{1 + \text{Cos } A}{2}}$$

$$\sin 2A = 2 \sin A \cos A \qquad \cos 2A = \cos^2 A - \sin^2 A$$

$$\text{Law of Sines} \quad \frac{\sin A}{a} = \frac{\sin B}{B} = \frac{\sin C}{C}$$

$$\text{Law of Cosines} \quad c^2 = a^2 + b^2 - 2ab \cos C$$

$$\text{Law of Tangents} \quad \frac{a+b}{a-b} = \frac{\tan \tfrac{1}{2}(A+B)}{\tan \tfrac{1}{2}(A-B)}$$

Table II—Continued
TRIGONOMETRIC FORMULAE (continued)

In any triangle:

Given a, b, C; to find c, B, A.
Use Law of Tangents.

Given A. B. c; to find a, b, C.
Use Law of Sines.

Given a, b, c; to find A, B, C.

Let $\frac{a+b+c}{2} = s$, $\sqrt{\frac{(s-a)(s-b)(s-c)}{s}} = r$

$\cos \frac{1}{2} A = \sqrt{\frac{s(s-a)}{bc}}$

$\tan \frac{1}{2} A = \frac{r}{s-a}$

$\tan \frac{1}{2} B = \frac{r}{s-b}$

$\tan \frac{1}{2} C = \frac{r}{s-c}$

Area of a triangle:

Area $= \frac{1}{2}$ ab Sin C

Area $= \sqrt{s(s-a)(s-b)(s-c)}$

PRISMOIDAL FORMULA.

Vol. $= \frac{h}{6}(B+b+4M)$

h = altitude: b. B = bases; M = midsection

Table III
INCHES AND FRACTIONS OF AN INCH IN DECIMALS OF A FOOT

	0	1	2	3	4	5	6	7	8	9	10	11	
1/16	.0052	.0885	.1719	.2552	.3385	.4219	.5052	5885	.6719	.7552	.8385	9219	1/16
1/8	.0104	.0938	.1771	.2604	.3438	.4271	.5104	.5938	.6771	.7604	.8438	.9271	1/8
3/16	.0156	.0990	.1823	.2656	.3490	.4323	.5156	.5990	.6823	.7656	.8490	.9323	3/16
1/4	.0208	.1042	.1875	.2708	.3542	.4375	.5208	.6042	.6875	.7708	.8542	.9375	1/4
5/16	.0260	.1094	.1927	.2760	.3594	.4427	.5260	.6094	.6927	.7760	.8594	.9427	5/16
3/8	.0313	.1146	.1979	.2813	.3646	.4479	.5313	.6146	.6979	.7813	.8646	9479	3/8
7/16	.0365	.1198	.2031	.2865	.3698	.4531	.5365	.6198	.7031	.7865	.8698	.9531	7/16
1/2	.0417	.1250	.2083	.2917	.3750	.4583	.5417	.6250	.7083	.7917	.8750	.9583	1/2
9/16	.0469	.1302	.2135	.2969	.3803	.4635	.5469	.6302	.7135	.7969	.8802	.9635	9/16
5/8	.0521	.1354	.2188	.3021	.3854	.4688	.5521	.6354	.7188	.8021	.8854	9688	5/8
11/16	.0573	.1406	.2240	.3073	.3906	.4740	.5573	.6406	.7240	.8073	.8906	.9740	11/16
3/4	.0625	.1458	.2292	.3125	.3958	.4792	.5625	.6458	.7292	.8125	.8958	.9792	3/4
13/16	.0677	.1510	.2344	.3177	.4010	.4844	.5677	.6510	.7344	.8177	.9010	.9844	13/16
7/8	.0729	.1563	.2396	.3229	4063	.4896	.5729	.6563	.7396	.8229	.9063	.9896	7/8
15/16	.0781	.1615	.2448	.3281	.4115	.4948	.5781	.6615	.7448	.8281	.9115	.9948	15/16
1	.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167	1.000	1
	0	1	2	3	4	5	6	7	8	9	10	11	

Table IV
USEFUL RELATIONS

Lineal feet	×.00019	= miles
Lineal yards	×.0006	= miles
Square inches	×.007	= square feet
Square feet	×.111	= square yards
Square yards	×.0002067	= acres
Acres	×4840	= square yards
Cubic inches	×.00058	= cubic feet
Cubic feet	×.03704	= cubic yards
Links	×.22	= yards
Links	×.66	= feet
Feet	×1.5	= links

360° = 21600′ = 1296000″

Radius = arc of 57.2957790°

Arc of 1° (radius = 1) = .017453292

Arc of 1′ (radius = 1) = .000290888

Arc of 1″ (radius = 1) = .000004848

$\pi = 3.141592654$

$\sqrt{\frac{1}{4\pi}} = 0.564190$

$\frac{\pi}{4} = 0.785398163$

$\sqrt[3]{\frac{6}{\pi}} = 1.240700982$

$\frac{\pi}{6} = 0.523598776$

$\pi^2 = 9.869604401$

$\sqrt{\frac{4}{\pi}} = 1.128379167$

$\frac{1}{\pi^2} = 0.101321184$

$\frac{\pi}{6} = 0.523598776$

$\sqrt{\pi} = 1.772453851$

$\frac{4.\pi}{3} = 4.188790205$

$\frac{1}{\pi} = 0.3183099$

Curvature of Earth's surface = about 0.7 feet in 1 mile

Curvature in feet = 0.667 (Dist. in miles)²

Difference between arc and chord length, 0.05 feet in 11½ miles

Probable error of a single observation $= 0.6754\sqrt{\frac{\Sigma v^2}{n-1}}$

Error in chaining of 0.01 feet in 100 feet:
Due to—

1. Length of tape error of 0.01 feet
2. Alignment. One end 1.4 feet out of line
3. Sag of tape at centre of 0.61 feet.
4. Temperature difference of 15°
5. Difference of pull of 15 lbs.

STADIA REDUCTION FORMULÆ.

Horizontal Distance $= R - R \sin^2 a + C \cos a$

Vertical Distance $= R \frac{1}{2} \sin 2a + C \sin a$

$R = \text{Reading} \times \frac{\text{distance from Object glass to cross hairs}}{\text{distance between cross hairs}}$

C = distance from Object glass to cross hairs + distance from Object glass to center of instrument.

a = angle of elevation for mid Reading

TABLE IX. TANGENTS AND EXTERNALS TO A 1° CURVE

I	T	E	I=10°	I	T	E	I=20°	I	T	E	I=30°
1°	50.00	.218	+	11°	551.70	26.500	+	21°	1061.9	97.577	+
10′	58.34	.297	5° C.	10′	560.11	27.313	5° C	10′	1070.6	99.155	5° C
20′	66.67	.388	T	20′	568.53	28.137	T	20′	1079.2	100 75	T
30′	75.01	.491	.03	30′	576.95	28.974	.06	30′	1087.8	102.35	.10
40′	83.34	.606	E	40′	585.36	29.824	E	40′	1096.4	103.97	E
50′	91.68	.733		50′	593.79	30.686		50′	1105.1	105.60	
2°	100.01	.873	.001	12°	602.21	31.561	.006	22°	1113.7	107.24	.013
10′	108.35	1.024		10′	610.64	32.447		10′	1122.4	108.90	
20′	116.68	1.188		20′	619.07	33.347		20′	1131.0	110.57	
30′	125.02	1.364		30′	627.50	34.259		30′	1139.7	112.25	
40′	133.36	1.552		40′	635.93	35.183		40′	1148.4	113.95	
50′	141.70	1.752		50′	644.37	36.120		50′	1157.0	115.66	
3°	150.04	1.964	10° C.	13°	652.81	37.070	10° C.	23°	1165.7	117.38	10° C.
10′	158.38	2.188	T	10′	661.25	38.031	T	10′	1174.4	119.12	T
20′	166.72	2.425	.06	20′	669.70	39.006	.13	20′	1183.1	120.87	.19
30′	175.06	2.674	E	30′	678.15	39.993	E	30′	1191.8	122.63	E
40′	183.40	2.934	.003	40′	686.60	40.992	.011	40′	1200.5	124.41	.025
50′	191.74	3.207		50′	695.06	42.004		50′	1209.2	126.20	
4°	200.08	3.492		14°	703.51	43.029		24°	1217.9	128.00	
10′	208.43	3.790		10′	711.97	44.066		10′	1226.6	129.82	
20′	216.77	4.099		20′	720.44	45.116		20′	1235.3	131.65	
30′	225.12	4.421		30′	728.90	46.178		30′	1244.0	133.50	
40′	233.47	4.755		40′	737.37	47.253		40′	1252.8	135.35	
50′	241.81	5.100	15° C.	50′	745.85	48.341	15° C.	50′	1261.5	137.23	15° C.
5°	250.16	5.459	T	15°	754.32	49.441	T	25°	1270.2	139.11	T
10′	258.51	5.829	.09	10′	762.80	50.554	.19	10′	1279.0	141.01	.29
20′	266.86	6.211	E	20′	771.29	51.679	E	20′	1287.7	142.93	E
30′	275.21	6.606	.004	30′	779.77	52.818	.017	30′	1296.5	144.85	.038
40′	283.57	7.013		40′	788.26	53.969		40′	1305.3	146.79	
50′	291.92	7.432		50′	796.75	55.132		50′	1314.0	148.75	
6°	300.28	7.863		16°	805.25	56.309		26°	1322.8	150.71	
10′	308.64	8.307		10′	813.75	57.498		10′	1331.6	152.69	
20′	316.99	8.762		20′	822.25	58.699		20′	1340.4	154.69	
30′	325.35	9.230		30′	830.76	59.914		30′	1349.2	156.70	
40′	333.71	9.710	20° C.	40′	839.27	61.141	20° C.	40′	1358.0	158.72	20° C.
50′	342.08	10.202	T	50′	847.78	62.381	T	50′	1366.8	160.76	T
7°	350.44	10.707	.13	17°	856.30	63.634	.26	27°	1375.6	162.81	.39
10′	358.81	11.224	E	10′	864.82	64.900	E	10′	1384.4	164.86	E
20′	367.17	11.753	.006	20′	873.35	66.178	.022	20′	1393.2	166.95	.051
30′	375.54	12.294		30′	881.88	67.470		30′	1402.0	169.04	
40′	383.91	12.847		40′	890.41	68.774		40′	1410.9	171.15	
50′	392.28	13.413		50′	898.95	70.091		50′	1419.7	173.27	
8°	400.66	13.991		18°	907.49	71.421		28°	1428.6	175.41	
10′	409.03	14.582	25° C.	10′	916.03	72.764	25° C.	10′	1437.4	177.55	25° C.
20′	417.41	15.184	T	20′	924.58	74.119	T	20′	1446 3	179.72	T
30′	425.79	15.799	.16	30′	933.13	75.488	.32	30′	1455.1	181.89	.49
40′	434.17	16.426	E	40′	941.69	76.869	E	40′	1464.0	184.08	E
50′	442.55	17.065		50′	950.25	78.264		50′	1472.9	186.29	
9°	450.93	17.717	.007	19°	958.81	79.671	.028	29°	1481.8	188.51	.065
10′	459.32	18.381		10′	967.38	81.092		10′	1490.7	190.74	
20′	467.71	19.058		20′	975.96	82.525		20′	1499.6	192.99	
30′	476.10	19.746		30′	984.53	83.972		30′	1508.5	195.25	
40′	484.49	20.447		40′	993.12	85.431		40′	1517.4	197 53	
50′	492.88	21.161		50′	1001.7	86.904		50′	1526.3	199.82	
10°	501.28	21.887	30° C.	20°	1010.3	88.389	30° C.	30°	1535.3	202.12	30° C.
10′	509.68	22.624	T	10′	1018.9	89.888	T	10′	1544.2	204.44	T
20′	518.08	23.375	.19	20′	1027.5	91.399	.39	20′	1553.1	206.77	.59
30′	526.48	24.138	E	30′	1036.1	92.924	E	30′	1562.1	209.12	E
40′	534.89	24.913	.008	40′	1044.7	94.462	.034	40′	1571.0	211.48	.078
50′	543.29	25.700		50′	1053.3	96.013		50′	1580.0	213.86	

T = R tan ½ I E = R exsec ½ I

TABLE IX. TANGENTS AND EXTERNALS TO A 1° CURVE

I	T	E	I=40°	I	T	E	I=50°	I	T	E	I=60°
31°	1589.0	216.3	+	41°	2142.2	387.4	+	51°	2732.9	618.4	+
10′	1598.0	218.7	5° C.	10′	2151.7	390.7	5° C.	10′	2743.1	622.8	5° C.
20′	1606.9	221.1	T	20′	2161.2	394.1	T	20′	2753.4	627.2	T
30′	1615.9	223.5	.13	30′	2170.8	397.4	.17	30′	2763.7	631.7	.21
40′	1624.9	226.0	E	40′	2180.3	400.8	E	40′	2773.9	636.2	E
50′	1633.9	228.4		50′	2189.9	404.2		50′	2784.2	640.7	
32°	1643.0	230.9	.023	42°	2199.4	407.6	.037	52°	2794.5	645.2	.056
10′	1652.0	233.4		10′	2209.0	411.1		10′	2804.9	649.7	
20	1661.0	235.9		20′	2218.6	414.5		20′	2815.2	654.3	
30′	1670.0	238.4		30′	2228.1	418.0		30′	2825.6	658.8	
40′	1679.1	241.0		40′	2237.7	421.4		40′	2835.9	663.4	
50′	1688.1	243.5		50′	2247.3	425.0		50′	2846.3	668.0	
33°	1697.2	246.1	10° C.	43°	2257.0	428.5	10° C.	53°	2856.7	672.7	10° C.
10′	1706.3	248.7	T	10′	2266.6	432.0	T	10′	2867.1	677.3	T
20′	1715.3	251.3	.26	20′	2276.2	435.6	.34	20′	2877.5	682.0	.42
30′	1724.4	253.9	E	30′	2285.9	439.2	E	30′	2888.0	686.7	E
40′	1733.5	256.5	.046	40′	2295.6	442.8	.075	40′	2898.4	691.4	.112
50′	1742.6	259.1		50	2305.2	446.4		50′	2908.9	696.1	
34°	1751.7	261.8		44°	2314.9	450.0		54°	2919.4	700.9	
10′	1760.8	264.5		10′	2324.6	453.6		10′	2929.9	705.7	
20′	1770.0	267.2		20′	2334.3	457.3		20′	2940.4	710.5	
30′	1779.1	269.9		30′	2344.1	461.0		30′	2951.0	715.3	
40′	1788.2	272.6		40′	2353.8	464.6		40′	2961.5	720.1	
50′	1797.4	275.3	15° C.	50′	2363.5	468.4	15° C.	50′	2972.1	725.0	15° C.
35°	1806.6	278.1	T	45°	2373.3	472.1	T	55°	2982.7	729.9	T
10′	1815.7	280.8	.40	10′	2383.1	475.8	.51	10′	2993.3	734.8	.63
20′	1824.9	283.6	E	20′	2392.8	479.6	E	20′	3003.9	739.7	E
30′	1834.1	286.4	.070	30′	2402.6	483.4	.116	30′	3014.5	744.6	.168
40′	1843.3	289.2		40′	2412.4	487.2		40′	3025.2	749.6	
50′	1852.5	292.0		50′	2422.3	491.0		50′	3035.8	754.6	
36°	1861.7	294.9		46°	2432.1	494.8		56°	3046.5	759.6	
10′	1870.9	297.7		10′	2441.9	498.7		10′	3057.2	764.6	
20′	1880.1	300.6		20′	2451.8	502.5		20′	3067.9	769.7	
30′	1889.4	303.5		30′	2461.7	506.4		30′	3078.7	774.7	
40′	1898.6	306.4	20° C.	40′	2471.5	510.3	20° C.	40′	3089.4	779.8	20° C.
50′	1907.9	309.3	T	50′	2481.4	514.3	T	50′	3100.2	784.9	T
37°	1917.1	312.2	.53	47°	2491.3	518.2	.68	57°	3110.9	790.1	.84
10′	1926.4	315.2	E	10′	2501.2	522.2	E	10′	3121.7	795.2	E
20′	1935.7	318.1	.093	20′	2511.2	526.1	.151	20′	3132.6	800.4	.225
30′	1945.0	321.1		30′	2521.1	530.1		30′	3143.4	805.6	
40′	1954.3	324.1		40′	2531.1	534.2		40′	3154.2	810.9	
50′	1963.6	327.1		50′	2541.0	538.2		50′	3165.1	816.1	
38°	1972.9	330.2		48°	2551.0	542.2		58°	3176.0	821.4	
10′	1982.2	333.2	25° C.	10′	2561.0	546.3	25° C.	10′	3186.9	826.7	25° C.
20′	1991.5	336.3	T	20′	2571.0	550.4	T	20′	3197.8	832.0	T
30′	2000.9	339.3	.67	30′	2581.0	554.5	.85	30′	3208.8	837.3	1.05
40′	2010.2	342.4	E	40′	2591.0	558.6	E	40′	3219.7	842.7	E
50′	2019.6	345.5		50′	2601.1	562.8		50′	3230.7	848.1	
39°	2029.0	348.6	.117	49°	2611.2	566.9	.189	59°	3241.7	853.5	.283
10′	2038.4	351.8		10′	2621.2	571.1		10′	3252.7	858.9	
20′	2047.8	354.9		20′	2631.3	575.3		20′	3263.7	864.3	
30′	2057.2	358.1		30′	2641.4	579.5		30′	3274.8	869.8	
40′	2066.6	361.3		40′	2651.5	583.8		40′	3285.8	875.3	
50′	2076.0	364.5		50′	2661.6	588.0		50′	3296.9	880.8	
40°	2085.4	367.7	30° C.	50°	2671.8	592.3	30° C.	60°	3308.0	886.4	30° C.
10′	2094.9	371.0	T	10′	2681.9	596.6	T	10′	3319.1	892.0	T
20′	2104.3	374.2	.80	20′	2692.1	600.9	1.02	20′	3330.3	897.5	1.27
30′	2113.8	377.5	E	30′	2702.3	605.3	E	30′	3341.4	903.2	E
40′	2123.3	380.8	.141	40′	2712.5	609.6	.227	40′	3352.6	908.8	.340
50′	2132.7	384.1		50′	2722.7	614.0		50′	3363.8	914.5	

T = R tan ½ I E = R exsec ½ I

TABLE X.

MIDDLE ORDINATES OF RAILS

Length of Rail (feet)

C ° ′	R Feet	30 Inch	28 Inch	26 Inch	24 Inch	22 Inch	20 Inch	C °	R Feet	30 Inch	28 Inch	26 Inch	24 Inch	22 Inch	20 Inch
0-20	17189	.08	.07	.06	.05	.04	.03	8	716.8	1.88	1.64	1.42	1.20	1.01	.84
0-40	8594	.16	.14	.12	.10	.08	.07	9	637.3	2.12	1.84	1.60	1.35	1.14	.94
1-0	5730	.24	.20	.18	.15	.13	.10	10	573.7	2.36	2.05	1.78	1.50	1.27	1.04
1-20	4297	.31	.27	.23	.20	.17	.13	11	521.7	2.59	2.26	1.95	1.65	1.39	1.15
1-40	3438	.39	.34	.29	.25	.21	.17	12	478.3	3.83	2.47	2.15	1.81	1.54	1.26
2-0	2865	.47	.41	.35	.30	.25	.20	13	441.7	3.05	2.66	2.30	1.96	1.66	1.36
2-20	2456	.55	.48	.41	.35	.29	.23	14	410.3	3.30	2.87	2.48	2.10	1.78	1.46
2-40	2149	.63	.55	.47	.40	.33	.27	15	383.1	3.54	3.08	2.68	2.26	1.91	1.57
3-0	1910	.71	.62	.53	.45	.38	.31	16	359.3	3.76	3.28	2.83	2.40	2.04	1.67
3-20	1719	.78	.68	.59	.50	.42	.35	17	338.3	4.00	3.48	3.02	2.57	2.16	1.78
3-40	1563	.86	.75	.65	.55	.46	.38	18	319.6	4.21	3.67	3.18	2.70	2.28	1.87
4-0	1433	.94	.82	.71	.60	.50	.42	19	302.9	4.45	3.89	3.36	2.86	2.41	1.98
4-20	1323	1.02	.89	.77	.65	.55	.45	20	287.9	4.70	4.09	3.55	3.00	2.54	2.09
4-40	1228	1.10	.96	.83	.70	.59	.48	22	262.0	5.16	4.44	3.84	3.30	2.80	2.29
5	1146	1.18	1.03	.89	.75	.63	.52	24	240.5	5.64	4.92	4.20	3.59	3.04	2.50
6	955.3	1.41	1.23	1.06	.90	.76	.62	26	222.3	6.07	5.29	4.58	3.88	3.29	2.70
7	819.0	1.65	1.44	1.24	1.05	.89	.73								

TABLE XI.

SHORT RADIUS CURVES

Radius Feet	Chord Feet	Central Angle	Deflection Angle	Deflection for 1 Foot
35	10	16-26	8-13	49.3
45	10	12-46	6-23	38.3
50	15	17-16	8-38	34.5
60	15	14-22	7-11	28.8
75	15	11-30	5-45	23.0
100	20	11-30	5-45	17.3
120	20	9-34	4-47	14.3
150	20	7-39	3-49	11.5
190	25	7-32	3-46	9.15
200	25	7-10	3-35	8.6
225	25	6-25	3-12	7.7
240	25	5-58	2-59	7.2
250	25	5-44	2-52	6.9
275	25	5-12	2-36	6.2
288	50	9-58	4-59	6.0
300	50	9-32	4-46	5.7
350	50	8-12	4-06	4.9
376	50	7-40	3-50	4.6
400	50	7-10	3-35	4.3
410	50	7-00	3-30	4.2

To find length of curve divide angle from P. C. to P. T. by central angle of chord, and multiply by length of chord.

TABLE XII.

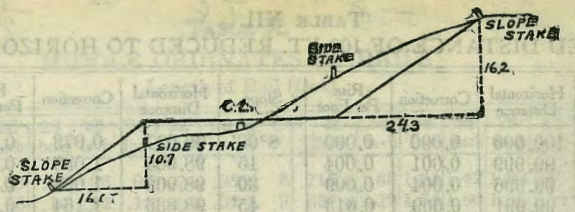
INCLINED DISTANCE OF 100 FT. REDUCED TO HORIZONTAL

Slope	Horizontal Distance	Correction	Rise Per Foot	Slope	Horizontal Distance	Correction	Rise Per Foot
0°00′	100.000	0.000	0.000	8°00′	99.027	0.973	0.139
15′	99.999	0.001	0.004	15′	98.965	1.035	0.143
30′	99.996	0.004	0.009	30′	98.902	1.098	0.148
45′	99.991	0.009	0.013	45′	98.836	1.164	0.152
1 00	99.985	0.015	0.017	9 00	98.769	1.231	0.156
15	99.976	0.024	0.022	15	98.700	1.300	0.161
30	99.966	0.034	0.026	30	98.629	1.371	0.165
45	99.953	0.047	0.031	45	98.556	1.444	0.169
2 00	99.939	0.061	0.035	10 00	98.481	1.519	0.174
15	99.923	0.077	0.039	15	98.404	1.596	0.178
30	99.905	0.095	0.044	30	98.325	1.675	0.182
45	99.885	0.115	0.048	45	98.245	1.755	0.187
3 00	99.863	0.137	0.052	11 00	98.163	1.837	0.191
15	99.839	0.161	0.057	15	98.079	1.921	0.195
30	99.813	0.187	0.061	30	97.992	2.008	0.199
45	99.786	0.214	0.065	45	97.905	2.095	0.204
4 00	99.756	0.244	0.070	12 00	97.815	2.185	0.208
15	99.725	0.275	0.074	15	97.723	2.277	0.212
30	99.692	0.308	0.078	30	97.630	2.370	0.216
45	99.657	0.343	0.083	45	97.534	2.466	0.221
5 00	99.619	0.381	0.087	13 00	97.437	2.563	0.225
15	99.580	0.420	0.092	15	97.338	2.662	0.229
30	99.540	0.460	0.096	30	97.237	2.763	0.233
45	99.497	0.503	0.100	45	97.134	2.866	0.238
6 00	99.452	0.548	0.105	14 00	97.030	2.970	0.242
15	99.406	0.594	0.109	15	96.923	3.077	0.246
30	99.357	0.643	0.113	30	96.815	3.185	0.250
45	99.307	0.693	0.118	45	96.705	3.295	0.255
7 00	99.255	0.745	0.122	15 00	96.593	3.407	0.259
15	99.200	0.800	0.126	15	96.479	3.521	0.263
30	99.144	0.856	0.131	30	96.363	3.637	0.267
45	99.087	0.913	0.135	45	96.246	3.754	0.271

TABLE XIII.

MINUTES IN DECIMALS OF A DEGREE.

0 30″	.00833	10′ 30″	.17500	20′ 30″	.34167	30′ 10″	.50833	40′ 30″	.67500	50′ 10″	.84167
1 00	.01667	11 00	.18333	21 00	.35000	31 00	.51667	41 00	.68333	51 00	.85000
30	.02500	30	.19167	30	.35833	30	.52500	30	.69167	30	.85833
2 00	.03333	12 00	.20000	22 00	.36667	32 00	.53333	42 00	.70000	52 00	.86667
30	.04167	30	.20833	30	.37500	30	.54167	30	.70833	30	.87500
3 00	.05000	13 00	.21667	23 00	.38333	33 00	.55000	43 00	.71667	53 00	.88333
30	.05833	30	.22500	30	.39167	30	.55833	30	.72500	30	.89167
4 00	.06667	14 00	.23333	24 00	.40000	34 00	.56667	44 00	.73333	54 00	.90000
30	.07500	30	.24167	30	.40833	30	.57500	30	.74167	30	.90833
5 00	.08333	15 00	.25000	25 00	.41667	35 00	.58333	45 00	.75000	55 00	.91667
30	.09167	30	.25833	30	.42500	30	.59167	30	.75833	30	.92500
6 00	.10000	16 00	.26667	26 00	.43333	36 00	.60000	46 00	.76667	56 00	.93333
30	.10833	30	.27500	30	.44167	30	.60833	30	.77500	30	.94167
7 00	.11667	17 00	.28333	27 00	.45000	37 00	.61667	47 00	.78333	57 00	.95000
30	.12500	30	.29167	30	.45833	30	.62500	30	.79167	30	.95833
8 00	.13333	18 00	.30000	28 00	.46667	38 00	.63333	48 00	.80000	58 00	.96667
30	.14167	30	.30833	30	.47500	30	.64167	30	.80833	30	.97500
9 00	.15000	19 00	.31667	29 00	.48333	39 00	.65000	49 00	.81667	59 00	.98333
30	.15833	30	.32500	30	.49167	30	.65833	30	.82500	30	.99167
10 00	.16667	20 00	.33333	30 00	.50000	40 00	.66667	50 00	.83333	60 00	1.00000



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1½ TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0 00	0 15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1 65	1 80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3 45	3.60	3 75	3.90	4.05	4.20	4 35	2
3	4.50	4 65	4.80	4.95	5 10	5 25	5 40	5.55	5.70	5.85	3
4	6.00	6 15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7 50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9 00	9 15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10 65	10.80	10.95	11.10	11.25	11.40	11.55	11 70	11.85	7
8	12.00	12 15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13 50	13 65	13 80	13 95	14.10	14.25	14.40	14 55	14.70	14.85	9
10	15.00	15 15	15 30	15 45	15.60	15.75	15.90	16.05	16.20	16 35	10
11	16 50	16 65	16 80	16.95	17 10	17.25	17.40	17.55	17.70	17.85	11
12	18 00	18 15	18.30	18 45	18.60	18 75	18.90	19.05	19.20	19 35	12
13	19 50	19 65	19.80	19.95	20.10	20.25	20 40	20.55	20.70	20.85	13
14	21.00	21 15	21.30	21.45	21 60	21.75	21.90	22 05	22 20	22 35	14
15	22 50	22 65	22 80	22 95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24 15	24 30	24 45	24.60	24.75	24 90	25 05	25.20	25.35	16
17	25.50	25 65	25.80	25 95	26.10	26 25	26 40	26.55	26.70	26.85	17
18	27.00	27 15	27.30	27 45	27.60	27.75	27.90	28.05	28 20	28.35	18
19	28 50	28 65	28 80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30 00	30 15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31 50	31 65	31.80	31.95	32 10	32 25	32.40	32.55	32 70	32 85	21
22	33 00	33 15	33 30	33 45	33.60	33 75	33.90	34.05	34.20	34.35	22
23	34 50	34 65	34.80	34.95	35.10	35 25	35 40	35.55	35.70	35 85	23
24	36.00	36 15	36.30	36 45	36.60	36.75	36.90	37.05	37 20	37.35	24
25	37.50	37 65	37 80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39 00	39 15	39 30	39 45	39 60	39.75	39.90	40.05	40.20	40.35	26
27	40 50	40 65	40 80	40.95	41.10	41.25	41 40	41.55	41.70	41.85	27
28	42 00	42 15	42.30	42.45	42.60	42 75	42.90	43.05	43.20	43.35	28
29	43 50	43 65	43.80	43 95	44.10	44 25	44 40	44.55	44.70	44 85	29
30	45 00	45 15	45.30	45 45	45.60	45.75	45 90	46.05	46 20	46.35	30
31	46.50	46.65	46.80	46 95	47.10	47.25	47.40	47.55	47 70	47.85	31
32	48 00	48 15	48.30	48 45	48.60	48 75	48.90	49.05	49 20	49.35	32
33	49.50	49 65	49.80	49.95	50.10	50.25	50.40	50.55	50 70	50.85	33
34	51 00	51.15	51.30	51.45	51.60	51.75	51 90	52.05	52.20	52.35	34
35	52 50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54 00	54 15	54.30	54 45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55 50	55 65	55.80	55 95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57 30	57 45	57.60	57 75	57.90	58.05	58.20	58 35	38
39	58 50	58.65	58 80	58 95	59.10	59 25	59.40	59 55	59.70	59.85	39
40	60 00	60 15	60 30	60 45	60 60	60.75	60 90	61 05	61 20	61.35	40
41	61.50	61 65	61 80	61 95	62 10	62 25	62.40	62 55	62 70	62.85	41
42	63 00	63.15	63 30	63 45	63 60	63 75	63 90	64 05	64 20	64.35	42
43	64.50	64 65	64 80	64.95	65.10	65 25	65 40	65.55	65.70	65.85	43
44	66 00	66 15	66 30	66.45	66.60	66 75	66.90	67.05	67.20	67.35	44
45	67 50	67 65	67 80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69 00	69 15	69 30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70 50	70 65	70 80	70 95	71.10	71.25	71 40	71.55	71.70	71.85	47
48	72.00	72 15	72.30	72.45	72.60	72.75	72.90	73 05	73.20	73 35	48
49	73 50	73 65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75 15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

Computed by L. Leland Locke.

243
63
85
295.
305
320 X
332 X
55
75
400
420

1931 USGSBM

26.62
+5.85
32.47
6.13
26.34
4.44
30.78
5.97
24.81
4.01
28.82
7.73
21.09
3.29
24.38
7.32
17.06
4.62
21.68
6.63
15.05

10.2
7.6
17.8
25.4
7.6
33.0
40.7

27.5 = 2
25.1 = Pin
28.7 = E Rail
33.5 = W Rail
70.0
365
225
140

2265
175
515

225
1225
1025

345
1725
5175
69.00

3.8

10.25
1550
525
72

119224
50
96135° - dist at Quoltrough

29049
495
535

5637
5617
1114
4503

171
125
46
278
125
300095
772
2228
175
48
27
95

281.27
1.66
282.93

4632
95
37
4617
95
4712
4503
209

07
2422

310.4
14.6
325.0

195
1225
725

32.7
25
7.7
26
5.1
20.9
2
21.2

6.1262
0.44
218

7.3
26
4.7

10.38
6.95
17.33

1117
23
1094