7

ENGINEERS'
LEVEL BOOK
№410

S.D 527

F.B. 527

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning
Roadway 16 feet wide. Side Slopes 1 on 1.
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

MICROFILMED
1964

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be 30.6+(20—16)÷2 or 2 ft. added to 30.6 =32.6. For slopes of 1 on 1½ see inside of back cover.

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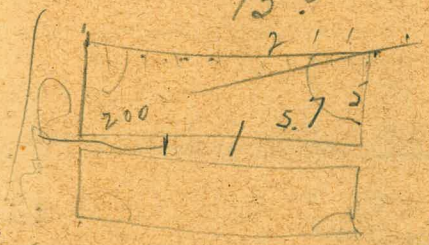
8.04
5.60
13.64



6.550
13.100

1.55
39.00

237.07
39
236.68

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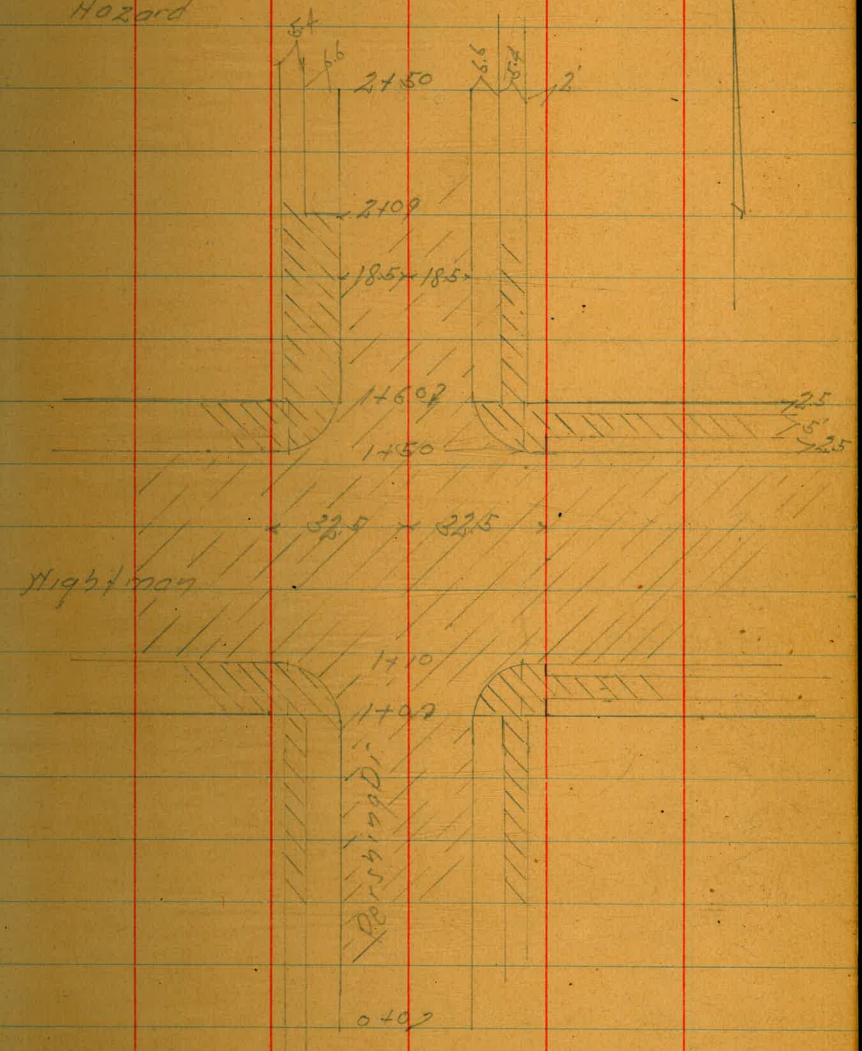
Levels Center Block E Bell Crest Page 26
" " " D. " 27-28
Sewer Alinement and Levels, Latona Drive 29-31
Levels on Euclid, Castle to Howard 32-33

Cross Section Pershing Drive
At Wightman

May 28-1942
Sisson
W Moore
Hazard

Indexed
C.S.K.

1-A



Pershing Drive

Red & Plotted 5/25/42 (W.)

1+30	= ℄ Wightman				
1+20					
1+10	= S Cb Line				
1+0	= S.L. Wightman				
0+50					
0+0	= 100' South of S.L. Wightman				
BM	4.83	342.84		338.01	S.W. BP Wightman & Pershing

Lt. = W ℄ Rt. = E 1-B

335.92 6.92 57.5	337.73 5.11 32.5	337.93 4.91 18.5	338.16 4.68 9.25	338.26 4.58	338.37 4.47 9.25	338.46 4.38 18.5	338.63 4.21 32.5	340.65 2.19 82.5
335.87 6.97 57.5	337.75 5.09 32.5	337.99 4.85 18.5	338.19 4.65 9.25	338.33 4.51	338.43 4.41 9.25	338.50 4.34 18.5	338.62 4.22 32.5	340.64 2.20 82.5
336.26 6.58 57.5 = Cb	335.56 7.28 57.5 = Gutter	338.10 4.74 32.5 = Cb	337.32 5.52 32.5 = Gutter	337.65 5.19 18.5	337.99 4.85 9.25	338.20 4.64	338.31 4.53 9.25	338.38 4.46 18.5
338.57 4.27 32.5 = Gutter	339.06 3.78 32.5 = Cb	340.40 2.44 82.5 = Gut	341.02 1.82 82.5 = Cb					
338.01 4.83 18.5	337.61 5.23 18.5	338.10 4.74 9.25	338.42 4.42	338.48 4.36 9.25	338.45 4.39 18.5	339.06 3.78 18.5		
338.37 4.47 18.5	338.04 4.80 18.5	338.86 3.98 9.25	339.26 3.58	339.17 3.67 9.25	338.85 3.99 18.5	339.31 3.53 18.5		
338.65 4.19 18.5 = Cb	338.46 4.38 18.5 = Gutter	339.15 3.69 9.25	339.62 3.22	339.59 3.25 9.25	339.28 3.56 18.5 = Gutter	339.77 3.07 18.5 = Cb		

342.84

Pershing Drive

	Lt			℄			Rt	1-C
2+0	337.53 5.31 30.5 = Hly Walk	337.32 5.52 18.5	336.98 5.86 18.5	337.77 5.07 9.25	338.17 4.67	338.14 4.70 9.25	337.88 4.96 18.5	338.44 4.40 18.5
1+75	337.32 5.52 30.5 = Hly Conc Walk	337.07 5.77 18.5 = Cb	336.72 6.12 18.5 = Gutter	337.39 5.45 9.25	337.62 5.22	337.61 5.13 9.25	337.57 5.27 18.5	338.06 4.78 18.5
1+60 = N.L.	337.24 5.60 30.5 = Hly Conc Walk	337.04 5.80 18.5 = Cb	336.73 6.11 18.5 = Gutter	337.17 5.67 9.25	337.34 5.50	337.45 5.39 9.25	337.49 5.35 18.5 = Gutter	337.98 4.86 18.5 = Cb
1+55	337.01 5.83 20.0 = Cb	336.74 6.10 20.0 = Gutter	337.08 5.76 9.25	337.26 5.58	337.43 5.41 9.25	337.57 5.27 20.0 = Gutter	337.90 4.94 20.0 = Cb	
1+50 - N Curb Line	335.43 7.41 57.5 = Cb	334.84 8.00 57.5 = Gutter	337.06 5.78 32.5 = Cb	336.46 6.38 32.5 = Gutter	336.88 5.96 18.5	337.16 5.68 9.25	337.32 5.52	337.49 5.35 9.25	337.58 5.26 18.5	337.74 5.10 32.5 = Gutter	338.03 4.81 32.5 = Cb	339.68 3.18 82.5 = Gutter	340.25 2.59 82.5 = Cb
1+40	335.51 7.33 57.5	337.19 5.65 32.5	337.43 5.41 18.5	337.67 5.17 9.25	337.80 5.04	337.89 4.95 9.25	338.02 4.82 18.5	338.13 4.71 32.5	340.25 2.59 82.5

342.84

342.84

Pershing Drive

1-D

	Lt.		℄		Rt.	
	337.65	337.22	338.14	338.76	338.73	338.47	339.15
2+50	5.19 18.5	5.62 18.5	4.70 9.25	4.08	4.11 9.25	4.37 18.5	3.69 18.5
	337.48	337.08	337.95	338.46	338.57	338.17	338.83
2+25	5.36 18.5 = Cb	5.76 18.5 = Gutter	4.89 9.25	4.38	4.27 9.25	4.67 18.5 = Gutter	4.01 18.5 = Cb

342.81

1-E.

1-F

Scott – Swift alley MH #394 ÷ F.T. #47

Chisholm } 9-29-22
Smale }

Sta	+	H.I	–	Elev.	Grade 1.68%	Cut	Staked on 6' offset West
0 + 00	From Page 76 Book 507			361.11	352.70	8.41	MH # 394
+25	7.81	368.92	7.13	361.79	353.12	8.67	
+50			7.38	361.54	353.54	8.00	
+75			6.98	361.94	353.96	7.98	
1			6.30	362.62	354.38	8.24	
+25			5.94	362.98	354.80	8.18	Grade Sheet # 467
+50			5.30	363.62	355.22	8.40	
+75			4.70	364.22	355.64	8.58	
2			3.85	365.07	356.06	9.01	
+25			3.53	365.39	356.48	8.91	
+50			3.32	365.60	356.90	8.70	
+75			3.06	365.86	357.32	8.54	
3 TP			2.74	366.18	357.74	8.44	
+25	6.42	372.60	5.81	366.79	358.16	8.63	
+39.10			5.66	366.94	358.40	8.54	MH # 393

Cont'd on Page 2

Cont'd from Page 1

Chisholm
Smale } 9-29-'22

Sta	+	H.I.	−	Elev.	Grade	Cut	Staked on 6' offset West
					1.674%		
0+00		372.60	5.66	366.94	358.40	8.54	MH #393
+25			6.69	365.91	358.82	7.09	
+50			6.81	365.79	359.24	6.55	
+75			4.86	367.74	359.66	8.08	
1+00			4.69	367.91	360.07	7.84	
+25			4.53	368.07	360.49	7.58	
+50			4.29	368.31	360.91	7.40	Grade Sheet #468
+75			3.84	368.76	361.33	7.43	
2+00			3.47	369.13	361.75	7.38	
+25			3.11	369.49	362.17	7.32	
+50 TP			2.67	369.93	362.59	7.34	
+75	6.64	376.57	6.58	369.99	363.00	6.99	
3+00			6.16	370.41	363.42	6.99	
+25			5.55	371.02	363.84	7.18	
+35			5.34	371.23	364.01	7.22	MH #392

Cont'd on Page 3

Cont'd from Page 2

Sta.	+	H.I.	−	Elev.	Grade 1.673%	Cut	Staked on 6' offset West.
0+00		376.57	5.34	371.23	364.01	7.22	MH # 392
+25			4.98	371.59	364.43	7.16	
+50			4.98	371.59	364.85	6.74	
+75			4.88	371.69	365.26	6.43	
1			4.33	372.24	365.68	6.56	
+25			3.67	372.90	366.10	6.80	
+50			3.45	373.12	366.52	6.60	Grade Sheet # 469
+75			3.16	373.41	366.94	6.47	
2			3.25	373.32	367.36	5.96	
+25 TP			2.90	373.67	367.77	5.90	
+50	5.70	379.37	5.40	373.97	368.19	5.78	
+75			5.26	374.11	368.61	5.50	
3+00			5.07	374.30	369.03	5.27	
+25			4.73	374.64	369.45	5.19	
N.W. +34½			4.62	374.75	369.60	5.15	MH # 391

Cont'd on Page 4

Cont'd from Page 3

Sta.	+	H.I	I–	Elev.	Grade	Cut	Staked on 6' offset North
					.421		
0+00		379.37	4.62	374.75	369.60	5.15	MH #391
+25			4.49	374.88	369.71	5.17	
+50			4.43	374.94	369.81	5.13	Grade Sheet #470
+75			4.32	375.05	369.92	5.13	
N.W. 93 +94			4.17	375.20	370.00	5.26	MH #390
				374.49		0.26	Street Grade MH #391
			4.32	375.04		0.16	Street Grade MH #390

Cont'd on Page 5

Cont'd from Page 4

Sta	+	H.I.	−	Elev	Grade 196%
0+00		379.37	4.17	375.20	370.00
+25 TP			4.71	374.66	370.20
+50	7.71	382.37	6.62	375.75	370.40
+75			6.16	376.21	370.60
1			5.72	376.65	370.80
+25			5.07	377.30	371.00
+50			4.98	377.39	371.19
+75			5.17	377.20	371.39
2			4.69	377.68	371.59
+25			4.31	378.06	371.79
+50			4.15	378.22	371.99
+75			4.03	378.34	372.19
3			4.25	378.12	372.39
+15			4.07	378.30	372.51

Cont'd on Page 6

Gershelm
Smale } 9-29-22

Cut	Staked on 6' offset West.
5.20	MH # 390
4.46	
5.35	
5.61	
5.85	
6.30	
6.20	Grade Sheet # 471
5.81	
6.09	
6.27	
6.23	
6.15	
5.73	
5.79	MH # 389

Cont'd from Page 5.

Sta.	+	H.I	-	Elev.	Grade .798%
0+00		382.37	4.07	378.30	372.51
+25 TP			3.92	378.45	372.71
+50	5.27	383.72	5.37	378.35	372.91
+75			5.82	377.90	373.11
1			5.35	378.37	373.31
+25			5.41	378.31	373.51
+50			5.56	378.16	373.71
+75			5.06	378.66	373.91
2			4.71	379.01	374.11
+25			4.39	379.33	374.31
+50			4.73	378.99	374.51
+75			4.65	379.07	374.70
3			4.71	379.01	374.90
+12 TP			4.59	379.13	375.00
TP	4.23	383.36	6.52	376.84	
B.M.	3.42	380.26	5.84	374.42	374.35

~End of Sewer~

Chisholm } 9-29-22
Smale }

Cut	Staked on 6' offset West
5.79	MH # 389
5.74	
5.44	
4.79	
5.06	
4.80	
4.45	Grade Sheet # 472
4.75	
4.90	
5.02	
4.48	
4.37	
4.11	
4.13	F.T. # 47

B.P. N.W. Scott & Orange

8

Wilson - Storey alley MH# 357 - F.T. #44
MH# 356 - F.T. #43

Chisholm & Hile 10-2-22

Sta.	+	H.I.	-	Elev.	Grade 399%	Cut	Staked on 6' offset East
0+00	From Book	507 Page 72		329.15	321.16	7.99	MH# 357
+25	7.64	336.79	6.54	330.25	321.26	8.99	
+50			5.74	331.05	321.36	9.69	
+75			5.37	331.42	321.46	9.96	
1+00			4.69	332.10	321.56	10.54	
+25			4.38	332.41	321.66	10.75	
+50			4.54	332.25	321.76	10.49	
+75			4.54	332.25	321.86	10.39	Grade Sheet # 452
2+00			4.93	331.86	321.96	9.90	
+25			5.15	331.64	322.06	9.58	
+50			5.33	331.46	322.16	9.30	
+75			5.77	331.02	322.26	8.76	
3+00 TP			6.12	330.67	322.36	8.31	
+25	4.30	334.97	4.78	330.19	322.46	7.73	
+50			5.54	329.43	322.56	6.87	
+75			6.28	328.69	322.66	6.03	
4			7.05	327.92	322.76	5.16	
+25			7.40	327.57	322.86	4.71	

Cont'd on Page 11

Cont'd from Page 10

Chisholm Hile 10-2-22

	+	H I	-	Elev	Grade	Cut	Staked on 6' offset East
4 + 50		334.97	8.06	326.91	322.96	3.95	
+ 60 63			8.34	326.63	323.00	3.63	F.T. #44
TP			2.53	332.44			
B.M.	2.75	335.19	2.49	332.70	332.65		2x2 hub on 6' offset West at MH #356 Sog P.73

Cont'd on Page 12

Cont'd from Page 11

Chisholm Hile } 10-2-22

Sta	+	H.I.	−	Elev	Grade 1.25%	Cut	Staked on 6' offset West
0+00	From S07	Page 73		332.65	329.00	3.65	MH# 356
+25	7.54	340.19	6.62	333.57	329.31	4.26	
+50			6.70	333.49	329.63	3.86	
+75			6.10	334.09	329.94	4.15	
1			6.02	334.17	330.25	3.92	
+25			5.41	334.78	330.56	4.22	
+50			4.58	335.61	330.88	4.73	Grade Sheet # 457
+75			3.37	336.82	331.19	5.63	
2			2.83	337.36	331.50	5.86	
+25			2.13	338.06	331.81	6.25	
+50			2.26	337.93	332.13	5.80	
+75			2.56	337.63	332.44	5.19	
3	TP		2.39	337.80	332.75	5.05	
+20	7.42	345.22	7.31	337.91	333.00	4.91	MH# 355

Cont'd on Page 13

Cont'd from Page 12

Bishop Hile 10-2-22

Sta.	+	HI	-	Elev	Grade 1.25%	Cut	Staked on 6' offset West
0+00		345.22	7.31	337.91	333.00	4.91	MH # 355
+25			5.82	339.40	333.31	6.09	
+50			5.64	339.58	333.63	5.95	
+75			4.76	340.46	333.94	6.52	
1			4.20	341.02	334.25	6.77	
+25			4.42	340.80	334.56	6.24	Grade Sheet # 458
+50			4.91	340.31	334.88	5.43	
+75			6.29	338.93	335.19	3.74	
2			8.93	336.29	335.50	0.79	
+25			9.78	335.44	335.81	F. 0.37	
+50			6.23	338.99	336.13	2.86	
+75 TP			3.57	341.65	336.44	5.21	
3	12 23	353.88	10.19	343.69	336.75	6.94	
+20			9.44	344.44	337.00	7.44	MH # 354

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Sta.	+	H.I.	−	Elev	Grade 1.911%	Cut	Staked on 6' offset West
0+00		353.88	9.44	344.44	340.00	4.44	MH # 354
+30			6.37	347.51	340.57	6.94	
+50			5.72	348.16	340.96	7.20	
+75			5.77	348.11	341.43	6.68	
1			5.51	348.37	341.91	6.46	
+25			4.07	349.81	342.39	7.42	Grade Sheet. # 459
+50			3.70	350.18	342.87	7.31	
+75			2.92	350.96	343.34	7.62	
2			2.40	351.48	343.82	7.66	
+25			2.15	351.73	344.30	7.43	
+50 TP			2.07	351.81	344.78	7.03	
+75	7.86	359.67	7.38	352.29	345.26	7.03	
3			6.46	353.21	345.73	7.48	
+25			6.32	353.35	346.21	7.14	
+40			6.10	353.57	346.50	7.07	MH # 353

Cont'd on Page 15

Cont'd from Page 14

Chisholm Hile } 10-2-22

Sta.	+	H.I.	−	Elev.	Grade 1.912%	Cut	Staked on 6' offset West
0+00		359.67	6.10	353.57	346.50	7.07	MH # 353
+25			5.56	354.11	346.98	7.13	
+50			4.99	354.68	347.46	7.22	
+75			4.35	355.32	347.93	7.39	
1			3.18	356.49	348.41	8.08	
+25			2.80	356.87	348.89	7.98	Grade Sheet # 460
+50			2.30	357.37	349.37	8.00	
+75			1.51	358.16	349.85	8.31	
2 TP			1.23	358.44	350.32	8.12	
+25	5.82	364.26	5.74	358.52	350.80	7.72	
+50			5.41	358.85	351.28	7.57	
+75			5.59	358.67	351.76	6.91	
3			5.05	359.21	352.24	6.97	
+25			5.00	359.26	352.71	6.55	
+39 8			5.12	359.14	353.00	6.14	MH # 352
B.M.			3.69	360.57	360.45	B.P. N.W. Wilson & University	

Cont'd on Page 16

Cont'd from Page 15

Chisholm Hall 10-3-22

Sta.	+	H.I	-	Elev	Grade 1.25%	CHT	Staked on 6' offset West
0+00	From Book 507 Page 74			362.25	357.25	5.00	MH# 351
+25	9.78	372.03	9.21	362.82	357.56	5.26	
+50			8.54	363.49	357.88	5.61	
+75			7.74	364.29	358.19	6.10	
1			7.10	364.93	358.50	6.43	
+25			6.53	365.50	358.81	6.69	Grade Sheet # 461
+50			5.22	366.81	359.13	7.68	
+75			4.96	367.07	359.44	7.63	
2			4.60	367.43	359.75	7.68	
+25			4.04	367.99	360.06	7.93	
+50			3.54	368.49	360.38	8.11	
+75			3.64	368.39	360.69	7.70	
3 TP			2.72	369.31	361.00	8.31	
+25	6.10	375.41	6.23	369.18	361.31	7.87	
+40			6.08	369.33	361.50	7.83	MH# 350

Cont'd on Page 17

Cont'd from Page 16

Chisholm Hall 10-3-22

Sta.	+	H.I.	-	Elev.	Grade 1.311%	Cut	Staked on 6' offset West
0+00		375.41	6.08	369.33	361.50	7.83	MH # 350
+30			6.95	368.46	361.89	6.57	
+50			6.57	368.84	362.16	6.68	
+75			5.34	370.07	362.48	7.59	
1			4.83	370.58	362.81	7.77	
+25			4.77	370.64	363.14	7.50	
+50			4.43	370.98	363.47	7.51	Grade Sheet # 462
+75			4.21	371.20	363.79	7.41	
2			3.93	371.48	364.12	7.36	
+25			4.26	371.15	364.45	6.70	
+50 TP			3.69	371.72	364.78	6.94	
+75	6.27	377.99	5.85	372.14	365.11	7.03	
3			5.45	372.54	365.43	7.11	
+25			5.32	372.67	365.76	6.91	
+40			5.53	372.46	365.96	6.50	MH # 349

Cont'd on Page 18

Cont'd from Page 17

Chisholm } 10-3-22
Hall }

Sta	+	H.I	−	Elev	Grade 1.311%	Cut	Staked on 6' offset West.
0+00		377.99	5.53	372.46	365.96	6.50	MH # 349
+25			5.06	372.93	366.29	6.64	
+50			4.51	373.48	366.62	6.86	
+75			4.63	373.36	366.94	6.42	
1			4.54	373.45	367.27	6.18	
+25			3.98	374.01	367.60	6.41	
+50			3.57	374.42	367.93	6.49	Grade Sheet # 463
+75			3.52	374.47	368.25	6.22	
2 TP			3.22	374.77	368.58	6.19	
+25	5.45	380.22	5.11	375.11	368.91	6.20	
+50			4.53	375.69	369.24	6.45	
+75			4.24	375.98	369.57	6.41	
3			4.85	375.37	369.89	5.48	
S.W. +30 8			4.44	375.78	370.30	5.48	MH # 348
B.M.			4.76	375.46	375.44	B.P. N.W.	Storey & Orange
				375.60		0.18	Street Grade MH # 348

Cont'd from Page 18

Sta S.W	+	H.I	−	Elev	Grade ·406%
0+00		380.22	4.44	375.78	370.30
+25	6.37	382.15	6.43	375.72	370.40
+49½			6.42	375.73	370.50
				375.77	

Cont'd on Page 20

Chisholm Hall } 10-4-22

Cut	
	Staked on 6' offset South
5.48	M# 348 – 2x2 at center & at P.I. of 6' offset So & W. & at P.I of 6' offsets No. & E. Take
5.32	grade from hub at So. W P.I.
5.23	M# 347 – 2x2 at center & at P.I. of 6' offsets So & W. & at PI of 6' offsets No. & E. Take grade from hub at So. W. P.I.
F. 0.04	Street Grade M# 347
	Grade Sheet # 464

Cont'd from Page 19

Chisholm
Hall } 10-4-22

Sta.	+	H.I	-	Elev.	Grade .4%	Cut	Staked on 6' offset West
0+00		382.15	6.42	375.73	370.50	5.23	MH # 347
+25			6.73	375.42	370.60	4.82	
+50			4.88	377.27	370.70	6.57	
+75			4.71	377.44	370.80	6.64	
1			4.67	377.48	370.90	6.58	
+25			4.80	377.35	371.00	6.35	Grade Sheet # 465
+50			4.40	377.75	371.10	6.65	
+75			4.03	378.12	371.20	6.92	
2			3.84	378.31	371.30	7.01	
+25			4.07	378.08	371.40	6.68	
+50			3.89	378.26	371.50	6.76	
+75			3.67	378.48	371.60	6.88	
+87			3.90	378.25	371.65	6.60	MH # 346

Cont'd on Page 21

Cont'd from Page 20

Chisholm Hall } 10-4-02

Sta	+	H.I.	−	Eley	Grade .4%	Cut	Staked on 6' offset West.
0+00		382.15	3.90	378.25	371.65	6.60	M# 346
+25 TP			2.88	379.27	371.75	7.52	
+50	3.62	382.89	4.72	378.17	371.85	6.32	
+75			4.64	378.25	371.95	6.30	
1			4.79	378.10	372.05	6.05	
+25			4.75	378.14	372.15	5.99	Grade Sheet # 466
+50			4.54	378.35	372.25	6.10	
+75			4.78	378.11	372.35	5.76	
2			4.79	378.10	372.45	5.65	
+25			4.59	378.30	372.55	5.75	
+50			4.73	378.16	372.65	5.51	
+75			4.93	377.96	372.75	5.21	
3			5.00	377.89	372.85	5.04	
+25			4.82	378.07	372.95	5.12	
+40 TP			4.74	378.15	373.01	5.14	F.T. # 43
TP	3.93	382.08	5.42	376.66			
B.M.	3.58	380.24	4.78	375.46	375.44		B.P. N.W. Storey + Orange

~ End of Sewer ~

Wabash Ave + Scott – Swift alley sewer
MH # 403 – MH # 395

Chisholm
Shawker } 10-11-22

Sta	+	H.I	–	Elev.	Grade 6.81 3/10	Cut	Staked on 6' offset West
0+00	From Book 508 Page 74			294.16	290.88	3.28	MH # 403
+25	13.07	307.23	8.85	298.38	292.58	5.80	
+50			4.85	302.38	294.29	8.09	
+75 TP			2.19	305.04	295.99	9.05	
1	11.88	316.92	9.62	307.30	297.69	9.61	
+25			7.53	309.39	299.40	9.99	Grade Sheet # 473
+50			6.42	310.50	301.10	9.40	
+75			4.97	311.95	302.80	9.15	
2			4.21	312.71	304.51	8.20	
+25			4.01	312.91	306.21	6.70	
+50			3.88	313.04	307.91	5.13	
N.W. +80 6			1.68	315.24	310.00	5.24	MH # 402 – 2x2 hubs at center

+ at PI of 6' offset as shown here

Cont'd on Page 23

Chisholm } 10-11-27
Shawver }

Cont'd from Page 22.

Sta	+	H.I.	−	Elev.	Grade 6.378 %	Cut	Staked on 6' offset North
0+00		316.92	1.68	315.24	310.00	5.24	MH# 402
+25	11.10	326.34	8.48	317.86	311.59	6.27	
+50			7.64	318.70	313.19	5.51	
+75			5.50	320.84	314.78	6.06	Grade Sheet #474
1+00			3.64	322.70	316.38	6.32	
+25			1.70	324.64	317.97	6.67	
N.W. +41"			0.96	325.38	319.00	6.38	MH# 401

Cont'd on Page 24

Cont'd from Page 23

Chisholm
Shawver 10-11-22

Sta.	+	H I	–	Elev.	Grade 4.516%	Cut	Staked on 6' offset West.
0 + 00		326.34	0.96	325.38	319.00	6.38	MH # 401
+ 25 TP			1.07	325.27	320.13	5.14	
+ 50	12.22	337.49	12.27	325.22	321.26	3.96	
+ 75			12.21	325.28	322.39	2.89	
1			9.72	327.77	323.52	4.25	Grade Sheet # 475
+ 25			8.94	328.55	324.65	3.90	
+ 50			7.53	329.96	325.77	4.19	
+ 75	12.88	342.84	—	—	326.90		Stake out
2			7.56	335.28	328.03	7.25	
+ 25			6.04	336.80	329.16	7.64	
+ 50			4.10	338.74	330.29	8.45	
+ 75			2.42	340.42	331.42	9.00	
3			0.62	342.22	332.55	9.67	
+ 10	11.77	353.99	11.30	342.69	333.00	9.69	MH # 396

Cont'd on Page 25.

Cont'd from Page 24

Chisholm
Shawver } 10-11-22

Sta.	+	H.I.	-	Elev.	Grade 4.513%	Cut	Staked on 6' offset West
0+00		353.99	11.30	342.69	333.00	9.69	MH #396
+25			9.34	344.65	334.13	10.52	
+50			6.86	347.13	335.26	11.87	
+75			5.18	348.81	336.38	12.43	
1			4.25	349.74	337.51	12.23	
+25			3.64	350.35	338.64	11.71	
+50			2.49	351.50	339.77	11.73	Grade Sheet #476
+75 TP			1.53	352.46	340.90	11.56	
2	7.26	359.72	5.87	353.85	342.03	11.82	
+25			5.55	354.17	343.15	11.02	
+50			5.23	354.49	344.28	10.21	
+75			5.05	354.67	345.41	9.26	
3			4.96	354.76	346.54	8.22	
+10.20			5.15	354.57	347.00	7.57	MH #395
B.M.			5.15	354.57	354.52		2x2 hub on 6' offset West from center of MH #395

Levels in center of Block E Belle Crest
5-9-23

J.E.Ellis
H.B.Preston
R.A.Preston

Sta	+	H.I.	−	Elev	Grade
Euclid + Univ. N.W.Cor. B.M.	3.14			340.63	
		343.77	3.27		
T.P.				340.50	
	3.50	344.00			
			2.04	341.96	
T.P.	7.20	349.16			
Center Castle St			6.7 Center 6.7	342.46	
0+00		Top on stake 7.2	7.0	342.16	
0+50		7.0	on water Pipe 7.7	341.46	
1+00		8.1	10.8	338.36	
1+50		8.6	10.6	338.56	
2+00		9.8	10.9	338.26	
2+50		10.2	11.9	337.26	
3+00		11.4	12.5	336.66	
3+50		12.1	13.8	335.36	
4+00		13.1	13.6	335.56	
4+50		14.0	14.1	335.06	
T.P.			9.30	339.86	

Levels notes on Block D Belle Crest
For Sewer

5-9-23 JEEllis HB Preston RA Preston

Sta	+	K	−	Elev	Grade
T.P.				339.86	
	2.30	342.16			
Center Castle 3P		6' offset on stakes	Center 1.8	340.36	
0+00		3.2	3.2	339.16	
0+50		3.8	4.1	338.06	
1+00		5.4	5.3	336.66	
1+50		5.9	5.8	336.36	
2+00		7.1	6.9	335.26	
2+50		10.0	10.1	332.06	
T.P.			12.12	330.04	
	2.38	332.42			
3+00		7.3	6.4	326.02	
3+16			11.9	320.52	
3+50		2.8	5.9	326.52	
T.P.			2.35	330.07	
	11.01	341.08			
4+10		7.0	9.4	331.68	
4+50		6.5	9.0	332.08	

5-9-23

J.E.Ellis
H.B.Preston
R.A.Preston

	+	⊼ 6' offset on stake	− center Line	Elev	Grade
5+00		3.5	7.2	333.88	
5+50		2.4	4.9	336.16	
6+00		2.2	2.5	338.58	
6+27 41		2.6	2.7	338.38	

Level notes Block D Belle Crest
For Sewer

Sewer Latana Drive

45.29

1+90 40

1

0+00

6+33 50 P.I. 45°29' R

6+00

5+00

4+00

3+00

2+00

1+00

0+00

3+89 90 P.I. 22° 03' R

3

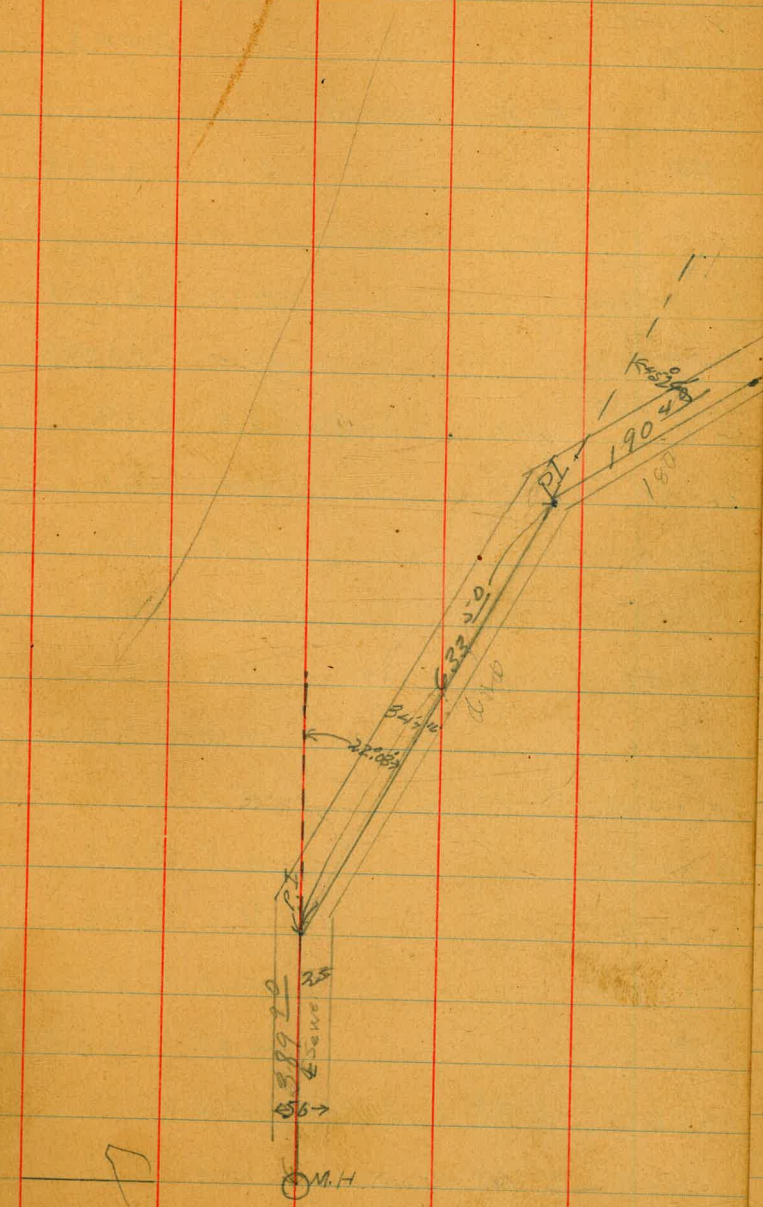
2

1

0+00 Center M.H. Euclid a

5-18-23

J.E. Ellis
Shumman
Preston



Levels for Sewer on Latana Drive 5-19-23 JE Ellis Sturman Preston

Sta.	+	HI	—	Elev	Ground Elev
B.M. NW Cor Euclid & Univ				340.63	
	3.01	343.64			
T.P.			3.12	340.52	
	4.07	344.59			
Bottom of M.H. Center of Euclid			13.70	330.89	Bottom of M.H. 330.89
T.P. on Top of M.H. center Euclid & Highland			4.04	340.55	Top of M.H. 340.55
M.H. Euclid & Highland (Top)					
0+00	5.97	346.52	6.0		340.5
0+20			6.6		339.9
0+50			3.8		342.7
1+00			4.0		342.5
1+50			4.7		341.8
2+00			5.3		341.2
2+50			5.1		341.4
3+00			4.8		341.7
3+50			4.7		341.8
3+89.90			4.9		341.6
T.P.			4.95	341.57	
0+00	5.98	347.55	6.0		341.6
0+50			5.5		342.1

Levels for Sewer on Latang Drive

Sta	+	HI	−	Elev
1+00		347.58	5.6	
1+50			5.7	
2+00			5.7	
2+50			5.6	
3+00			5.8	
3+50			5.8	
4+00			5.7	
4+50			6.2	
5+00			6.9	
T.P.			6.29	341.26
5+50	2.07	343.33	3.3	
6+00			4.1	
6+33.50			5.1	
0+00			5.1	
0+50			5.7	
1+00			7.5	
1+50			8.5	
1+90.40			9.5	
T.P. B.M.	Hub N.E. Cor.		10.98	332.35

JE Ellis
Shurtman
Preston

342.0
341.9
341.9
342.0
341.8
341.8
341.9
341.4
340.7
340.0
339.2
338.2
338.2
337.6
336.8
334.8
333.8

Levels on Eudd. Castle toltowind. for Sewer

Ellis
Walker
Preston

9/20/23

Sta.	+	⊼	−	F	Elev	
					340.63	B.M. N.W. Cor. Euclid + Univ.
	3.37	344.00				
T.P.			4.07		339.93	
	11.55	351.48				
T.P.			8.56		342.92	
	5.35	348.27				
T.P.			5.84		342.43	
	3.58	346.01				
			15.75		331.26	Botton of M.H. Euclid + Castle
			2.11		343.90	Top " " " " " "
SEL Castle.			Cor Euclid			
0+00			1.5		344.5	
0+50			2.4		343.6	
1+00			3.1		342.9	
1+50			4.1		341.9	
2+00			4.7		341.3	
2+50			5.3		340.7	
3+00			5.9	50' W of EPL 7.3	340.1	338.9
3+50			6.7	8.2	339.3	337.8

Levels on Euclid Castle to Howard

Ellis
Walker
Preston

9-20-23

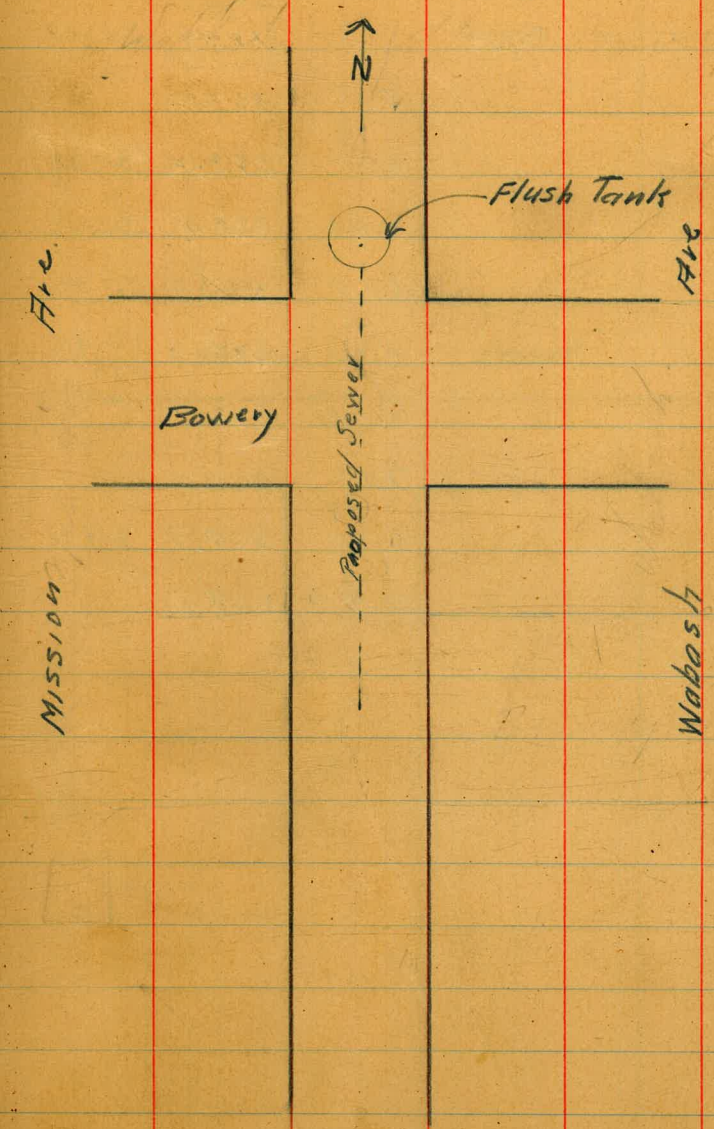
	+	π	− ℄ of Euclid	50' W of EPL		
4+00 NPL Roselawn Ave		346.01	7.5	9.3	338.5	336.7
4+50 SPL Roselawn Ave			8.2	10.2	337.8	335.8
5+00			9.3		336.7	
5+50			10.6		335.4	
6+00 NPL Howard			12.2		333.8	
6+28			13.0		333.0	

Levels on Alley From Flush Tank N of N.P.L. of Bowery to 100' S. of S.P.L. of Bowery

Sta	+	⊼	−	Elev	Grade
Top of Flush Tank				Assumed Elev	
0+00				300.00	311.00
	1.18	301.18			
N.P.L. Bowery					
0+20			0.7	300.50	
S.P.L. Bowery					
1+00			1.3	299.9	
1+50			3.3	297.9	312.25
1+70			7.9	293.3	
2+00			20.0	281.2	

Ellis
Walker
Preston
Lauelmyer

1-11-24

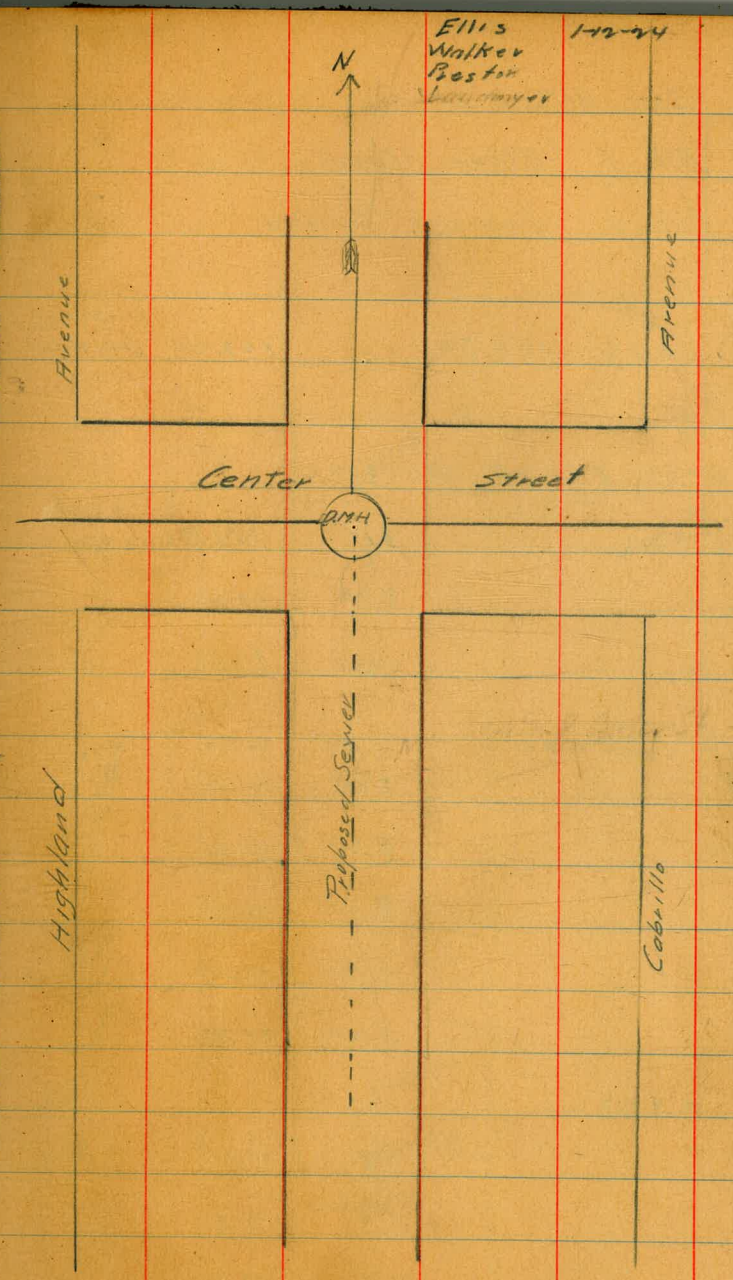


Levels on Ground Line From ℄ Center to 300' South of D.M.H.

Sta	+	⊼	−	Elev	Grade
0+00	12.12	329.58		Bottom of M.H. 317.46	317.46
0+00 SPL Center St			5.18	Top of M.H. 324.40	
0+40			5.40	324.2	317.62
0+50			4.50	325.1	317.66
0+75			3.70	325.9	317.76
1+00			4.60	325.0	317.86
1+50			6.10	323.7	1+20 317.94
2+00			7.40	322.2	
2+50			8.80	320.8	318.46
3+00			10.40	319.6	

Ellis
Walker
Preston
Lauchmyer

1-12-24



xsec alley 15' wide

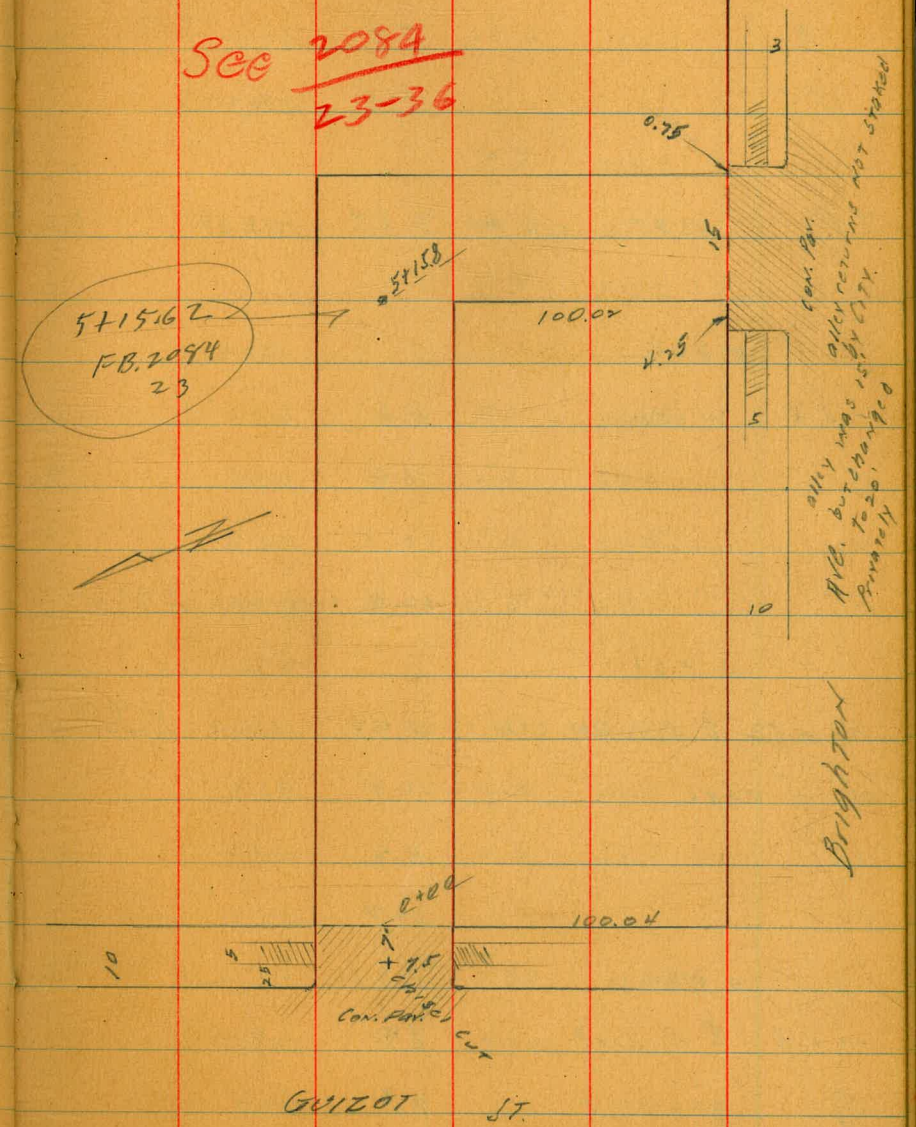
Blk 1 Ocean View

Blk 1 Sunset Grove

SEBP	0.34	107.76		107.40	Brighton Guizot
	0+10 Ely cb Guizot				
S	Par		9.11	98.65	
C	"		9.60	98.16	
N	"		10.10	97.66	
	0+00				
N	Top cent wall		7.80	99.94	
N	cb		9.30	98.46	
N	Par		9.35	98.41	
C	"		9.28	98.48	
S	"		8.75	99.01	
S	cb		8.24	99.50	
	0+03				
S			7.7	100.1	
C			8.5	99.3	
N			8.5	99.3	
N	Top wall end		7.57	100.19	

Indexed
C.S.K.
Moore
4-13-89

See 2084
23-36



		107.76			
	0 + 20				
N			6.2	101.6	
C			5.8	102.0	
S			5.5	102.3	
T.P.	13.05	116.94	3.87	103.89	
	0 + 46				
− 1.5	Wedge		11.3	105.6	
S			11.4	105.3	
C			12.5	104.4	
N			12.9	104.0	
	0 + 61				
N − 53	E Sin. gar. cem.		11.47	105.47	West entrance
N S edge	" "	"	11.5	105.4	"
C			11.2	105.7	
S			10.7	106.2	
	0 + 72				
− 1.5	E w' step cem.		8.90	108.04	
S	ground		9.9	107.0	

		116.94		
C			10.5	106.4
N			11.0	105.9
	1 + 00			
N			7.7	109.2
C			8.1	108.8
S			7.7	109.2
	1 + 26			
S			5.1	111.8
C			5.3	111.6
N			5.3	111.6
	+ 30 E Sin. gar. dirt		3.8	113.1
	1 + 50			
N			1.8	115.1
C			2.2	114.7
S			2.2	114.7
T.P.	12.31	128.95	0.30	116.64

		128.95			
	2+00				
S			7.8	121.2	
C			8.1	120.9	
N			8.0	121.0	
	2+07				
S – 1.2	Sin gar.		7.4	121.6	South entrance
	2+50				
N			2.7	126.3	
C			2.9	126.1	
S			2.9	126.1	
T.P.	12.49	140.98	0.66	138.29	
	2+96				
S	℄ Sin. gar.	on ground	10.4	130.6	South entrance
C			10.2	130.8	
N			10.3	130.7	
	3+50				
N			4.6	136.4	
C			5.1	135.9	

		140.98			
S	r edge Sin. gar. beg. Cornwall 4' High		5.0	136.0	gar. South entrance
	3+71				
S	℄ entrance Thru wall		3.6	137.4	
C			3.0	138.0	
N			2.7	138.3	
	3+91				
N			0.8	140.2	
C			1.3	139.7	
S end wall.			1.4	139.6	
	3+97				
S	℄ Sin. gar.		0.4	140.6	South entrance
T.P.	12.03	152.86	0.15	140.83	
	4+25				
S			10.8	142.1	
C			10.1	142.8	
N			9.9	143.0	

152.86

4+50			
N	7.5	145.4	
C	8.0	144.9	
S	8.1	144.8	
4+90			
S	5.1	147.8	
C	5.3	147.6	
N beg. Stucco wall	4.9	148.0	
5+15.80 = W.L. alley to South			
N	3.1	149.8	
C on hub	3.57	149.29	
S	3.7	149.2	
5+18			
N E Sw gar. cent.	2.89	149.97	
5+30.8 = E.L. alley to South			
S	3.6	149.3	
C	3.0	149.9	
N	2.8	150.1	

152.86

S.L. West alley = 0+00			
0+07			
W	4.0	148.9	
C	3.4	149.3	
E	3.8	149.1	
+4 N edge Cem. apr	3.78	149.07	
+7 " " do. gar.	3.60	149.26	
0+18			
-7 S edge do. gar	3.65	149.21	Cent.
-4 " apron	3.78	149.08	
E	4.1	148.8	
C	4.5	148.4	
W	4.9	148.0	
0+21			
E beg. cem. wall	3.89	148.97	Top
" " " "	4.1	148.8	ground
0+50			
W	5.9	147.0	
C	6.7	146.7	
E	5.6	147.3	
E Top wall	4.57	148.34	

		152.84			
	0+75				
E	Top wall		5.30	147.56	
E			7.1	145.8	
C			8.1	144.8	
W			7.3	145.6	
	1+00 = N L Brighton				
W - 4.25	Top curb		10.44	142.22	
" "	Pav.		10.96	141.90	
W	"		10.87	141.99	
C	"		10.60	142.26	
E	"		10.05	142.81	
+ 0.75	"		10.05	142.81	
+ 0.75	Top curb		9.25	143.61	
	1+10 = N cb Line Brighton				
E	Pav		10.37	142.49	
W	"		11.28	141.58	
T.P.	9.15	154.35	7.66	145.20	
SWBP	Brighton + Venice		3.00	151.35	151.35

151.48	
19.68	
40.60	

8/31/39 Miller Walker Bevers

7 Sec Lapway Knoxville to Lieta 50' wide 10' cbs

Indexed C.S.K.

	+	#1	−		
BM. Top. cb	8.21	7.06		−1.15	Wly cb Nashville Sly Line Lapway

50 Ely from Wly Line Knoxville

−10			5.11	+2.0	
N			5.1	+2.0	
cb			5.1	+2.0	
℄			5.1	+2.0	
+6			5.1	+2.0	
cb			6.1	+1.0	
S			6.3	+0.8	
+10			5.4	+1.7	

25' E. of W. Line = E. Line Pacific View Sub.

−10			6.1	+1.0	
S			6.5	+0.6	
cb			6.3	+0.8	
+7			6.0	+1.1	
℄	ground		5.1	+2.0	
+2.85 Top. Conc. Mon			6.11	+0.85	S. E. Line cor Sub.
cb			5.6	+1.5	
N			5.7	+1.4	
+10			5.6	+1.5	

7.06

0+00 = Wly. Line Knoxville

−10			6.0	+1.1	
N			6.1	+1.0	
cb			6.0	+1.1	
℄			5.5	+1.6	
cb			6.5	+0.6	
S			6.2	+0.9	
+10			6.3	+0.8	

0+50

−10			6.1	1.0	
S			6.0	1.1	
cb			6.3	0.8	
℄			6.1	1.0	
cb			5.7	1.4	
N			5.6	1.5	
+10			5.5	1.6	

1+00

−10			5.6	1.5	
N			6.0	1.1	
cb			5.8	1.3	
℄			5.9	1.2	

		7.06 1+00 (cons)		
cl			6.0	+ 1.1
S			6.0	+ 1.1
+10			6.0	+ 1.1
		1+43		
-10			6.6	+ 0.5
S			6.5	+ 0.6
cl			6.4	+ 0.7
℄			6.1	+ 1.0
cl			5.5	+ 1.6
N			5.8	+ 1.3
+10			6.1	+ 1.0
		1+75		
-10			1.3	+ 5.8
N			3.5	+ 3.6
cl			4.1	+ 3.0
℄			5.1	+ 2.0
S			5.3	+ 1.8
cl			4.0	+ 3.1
W			3.2	+ 3.9
+10			2.3	+ 4.8

		7.06 1+99 37 c S. Line Bruckers Sub.		
-10			1.8	+ 5.3
-5			1.8	+ 5.3
S			3.8	+ 3.3
cl			5.2	+ 1.9
conc. cl. S. End cl & walls			6.98	+ 0.08
℄			4.4	+ 2.7
cl			4.0	+ 3.1
+2			2.3	+ 4.8
N			2.0	+ 5.1
+ 4			+ 0.8	+ 7.9
+10			+ 0.9	+ 8.0
		2+50		
-10			+ 3.3	+ 10.4
-5			+ 3.3	+ 10.4
N			0.7	+ 6.4
cl			3.7	+ 3.4
℄			4.6	+ 2.5
cl			5.6	+ 1.5
conc. cl.			7.16	- 0.10
S			5.7	+ 1.4
+10			4.5	+ 2.8

	7.06		
	3+00		
-10		6.5	+0.6
S		6.5	+0.6
el		6.6	+0.5
conc. el		7.37	-0.21
℄		6.1	+1.0
el		5.3	+1.8
N		3.2	+3.9
+2		1.0	+6.1
+10		0.5	+6.6
	3+50		
-10		5.7	+1.4
N		6.1	+1.0
el		6.1	+1.0
℄		6.6	+0.5
el		6.5	+0.6
S		6.4	+0.7
+10		6.4	+0.7
	4+00		
-10		6.3	+0.8
S		6.3	+0.8

	7.06		
el		6.7	+0.4
conc. el		7.77	-0.71
℄		6.6	+0.5
el		6.5	+0.6
N		6.5	+0.6
+10		6.4	+0.7
	4+50		
-10		6.2	+0.9
N		6.1	+1.0
el		6.1	+1.0
℄		6.3	+0.8
el		7.0	+0.1
S		7.0	+0.1
+10		6.5	+0.6
	5.00		
-10		6.3	+0.8
S		6.7	+0.4
el		6.9	+0.2
conc. el		7.90	-0.84
℄		6.3	+0.8

		7.06		
		5+00 con		
el			6.2	+0.9r
N			6.3	+0.8
+10			6.6	+0.5
		5+50		
-10			6.9	+0.2
N			6.8	+0.3
el			6.6	+0.5
℄			6.7	+0.4
el			7.1	0.0
S			7.1	0.0
+10.			6.1	+1.0
	6+00 = Ely Line Nashville			{50' wide {10' chs
S.			7.8	-0.7
el	{conc. el. barrier {" Return		7.5	-0.4
℄			7.2	-0.1
el			6.8	+0.3
N			6.6	+0.5
T.P.	4.54	5.39	8.21	-1.15

		5.39		
	0+00 = W'ly Line Nashville			
		curb & walk in ons.		
S			6.4	+1.0
S. el conc. el			6.54	+1.15
S. el ground			6.3	+0.9
℄			6.0	+0.6
el			5.3	+0.1
N			5.1	+0.3
		0+50		
-10			4.8	+0.6
N			4.8	+0.6
el			4.8	+0.6
℄			5.6	+0.2
el	ground		6.4	-1.0
el	conc.		6.68	-1.29
S			6.5	-1.1
		1+00		
S			6.5	-2.1
el	conc.		6.72	-1.33
+2			6.1	-0.72
℄			5.5	-0.1
el			4.6	+0.8
N			4.5	+0.9
+10			4.4	+1.0

5.39

1+50

-10		5.2	+0.2
N		4.8	+0.6
el		4.9	+0.5
℄		5.4	0.0
+12		6.0	-0.6
el	conc & dirt.	6.84	-1.45
+9		6.7	-1.3
S.		6.0	-0.6
+10		5.5	-0.1

2+00

-10		5.8	-0.4
S		6.3	-0.9
el	conc. & ground	6.81	-1.42
+5.		5.6	-0.2
℄		5.2	+0.2
el		5.8	-0.4
N		5.5	-0.1
+10		5.7	-0.3

5.39

2+50

-10		4.8	+0.6
N		5.3	+0.1
el		4.7	+0.7
℄		5.1	+0.3
+10		5.4	0.0
el.	conc & ground.	6.92	-1.53
+5		6.7	-1.3
+1.		5.2	+0.2
+10.		5.2	+0.2

3+00

-10		5.5	-0.1
-1		5.5	-0.1
S.		6.8	-1.4
el	conc	6.95	-1.56
el	ground	6.4	-1.0
+5		4.8	+0.6
℄		5.0	+0.4
el		4.5	+0.9
N		5.4	0.0
+10		5.5	-0.1

		5.39		
		3+50		
-10			5.2	+0.2
N			5.2	+0.2
el			4.6	+0.8
℄			4.4	+1.0
+10			5.3	+0.1
el	ground		6.7	-1.3
el	conc.		7.10	-1.71
S			6.9	-1.5
+1.			5.6	-0.2
+10.			5.6	-0.2
T.P.	6.78	5.14	7.03	-1.64
		4+00		
-10.			5.4	-0.3
-1.			5.6	-0.5
S			6.7	-1.6
el	conc. + dirt.		6.90	-1.76
+8			4.3	+0.8
℄			4.0	+1.1

		5.14		
el			4.0	+1.1
N			4.7	+0.4
+10			4.7	+0.4
		4+83 8	{Wly Line Druckers. sub {Wly End. el + walk	
-10			5.3	-0.2
N			5.3	-0.2
el			5.3	-0.2
℄			5.3	-0.2
+10			5.6	-0.5
el	conc. + ground.		6.93	-1.79
S			6.8	-1.7
+1			5.3	-0.2
+10			5.3	-0.2
		5+00		
-10			5.3	-0.2
S			5.3	-0.2
el			5.3	-0.2
℄			5.6	-0.5
el			5.2	-0.1
N			5.2	-0.1
+10			5.2	-0.1

5.14 5+50 Lapwai

N-10		5.6	-0.5	
N		5.6	-0.5	
el		5.8	-0.7	
℄		5.8	-0.7	
el		5.4	-0.3	
S		5.4	-0.3	
+10		5.4	-0.3	

6+20 = Ely Line Paul St.

S		5.8	-0.7	
el		5.9	-0.8	
℄		5.9	-0.8	
el		5.3	-0.2	
N.		5.2	-0.1	

X. See. Lieta St. 50 Wide Wly Line Pacific View = ℄

100' S. of S. Line Lapwai

E		6.4	-1.3	
℄		6.5	-1.4	
W		6.6	-1.5	

5.14 Sly Line Lapwai Lieta

47

-100.	Being graded	6.0	-0.9	
W	" "	5.9	-0.8	
℄		5.7	-0.6	
E		5.7	-0.6	

℄ Lapwai

E		5.9	-0.8	
℄		5.4	-0.3	
W	Being graded	5.5	-0.4	
+100	Being graded	6.2	-1.1	

0+00 = N'ly Line Lapwai St.

-100	Being grading	6.2	-1.1	
W		5.3	-0.2	
℄		5.1	0.0	
E		5.2	-0.1	

1+00

Ely		5.4	-0.3	
℄		5.7	-0.6	
W		5.9	-0.8	

		5.14		
		2+00		
W			5.7	−0.6
℄			5.6	−0.5
E			5.7	−0.6
	2+85 = Sly Line of King St			
Ely BM Cor Hub.			5.84	−0.70
E			5.1	0.0
℄			5.2	−0.1
W.			5.1	0,0
	0+00 = Nly Line of			
W.			5.1	0,0
℄.			5.3	−0.2
E.			5.4	−0.3
	1+00			
E.			5.2	−0.1
℄.			5.1	0.0
W.			5.2	−0.1
T.P.	4.01	4.99	4.16	0.98

		4.99		
		2+00		
W			4.9	+0.1
℄			5.1	−0.1
E			5.0	0.0
	2+80 = Sly Line Maxwell St.			
E			4.7	+0.3
℄			5.2	−0.2
W			5.1	−0.1
+100			4.9	+0.1
	3+30 = Nly Line Maxwell St.			
−100			5.1	+0.1
W			4.6	+0.4
℄			4.6	+0.4
E			4.8	+0.2
	4+30			
E			4.9	+0.1
℄			4.8	+0.2
W			4.9	+0.1
T.P. Hub ℄ Licta & Maxwell			5.62	−0.63

. x Sec. Nashville.

B.M. Top cb	6.75	5.60		-1.15	see page 4
	100' Sly from Sly Line Lapwai				
Wly cb.	conc.		6.60	-1.0	
Ely cb	"		6.53	-0.93	
	Sly Line Lapwai				
E			6.4	-0.8	
E cb	conc.		6.76	-1.16	
℄			6.1	-0.5	
W. cb	conc		6.75	-1.15	
W			6.6	-1.0	
	Sly cb. Lapwai.				
W			6.75	-1.15	
cb			6.5	-0.9	
℄			6.0	-0.4	
cb			6.1	-0.5	
E			6.0	-0.4	
		℄			
E			5.8	-0.2	
cb			5.8	-0.2	
℄			5.8	-0.2	

	5.60			
cb			6.2	-0.6
W			6.2	-0.6
	Nly cb Line			
W			5.5	+ 0.1
cb			6.0	-0.4
℄			5.8	-0.2
cb			5.7	-0.1
E			5.3	+ 0.3
	0+00 = Nly Line			
E			5.1	0.5
cb			5.5	+0.1
℄			5.7	-0.1
cb			5.8	-0.2
W			5.3	+ 0.3
	1+00			
W			4.8	+0.8
cb			5.6	0.0
℄			5.6	0.0
cb			5.5	+0.1
E			5.6	0.0

5.60

2+00

E	5.5	+ 0.1	
eb	5.5	+ 0.1	
℄	5.4	+ 0.2	
eb	5.3	+ 0.3	
W	4.6	+ 1.0	

2+70

W	4.7	+ 0.9	
eb	5.0	+ 0.6	
℄	5.1	+ 0.5	
eb	5.1	+ 0.5	
E	5.1	+ 0.5	

2+85 = Sly Line King St. 50' wide

E	5.1	+ 0.5	
eb	4.9	+ 0.7	
℄	4.9	+ 0.7	
eb	5.2	+ 0.4	
W	5.2	− 0.4	
N Blk. Cor. Hub.	6.46	− 0.86	

5.60

℄

W	4.5	+ 1.1	
eb	4.7	+ 0.9	
℄	5.0	+ 0.6	
eb	4.9	+ 0.7	
E	4.9	+ 0.7	

0+00 = Nly Line King St.

E	4.5	+ 1.1	
eb	4.9	+ 0.7	
℄	5.0	+ 0.6	
eb	5.0	+ 0.6	
W	5.1	+ 0.5	

0+50

W	4.9	+ 0.7	
eb	4.9	+ 0.7	
℄	3.9	+ 1.7	
eb	2.9	+ 2.7	
E	2.3	+ 3.3	

		5.60		
		1+00		
E			+0.3	+ 5.3
el			0.8	+ 4.8
℄			1.0	+ 4.6
el			2.5	+ 3.1
W			4.0	+ 1.6
+10			4.4	+ 1.2
		1+50		
−10			1.5	+ 4.1
W.			0.3	+ 5.3
T.P.	5.30	10.63	0.27	5.33
el			4.6	+ 6.0
℄			3.1	+ 7.5
el			3.0	+ 7.6
E			3.3	+ 7.3
		2+00		
E			3.0	+ 7.6
el			3.0	+ 7.6
℄			3.0	+ 7.6
el			3.0	+ 7.6
W			3.2	+ 7.4
+10				

		10.63		
		2+40		
W			2.3	+ 8.3
el			2.7	7.9
℄			2.3	8.3
el			2.2	8.4
E			2.4	8.2
+10			4.0	6.6
		2+80 = Sly Line Maxwell		
−10			5.4	4.7
E			4.9	5.7
el			4.2	6.4
℄			3.9	6.7
el			4.2	6.4
W			4.3	6.3
		3+05 = Nly Line Pacific View Sub & Maxwell St		
W			5.0	5.6
el			5.1	5.5
℄			5.8	4.8
el			6.1	4.5
E			7.2	3.4
+10			8.1	2.5

		10.63		Nashville	
		3+30			
E			9.6	1.0	
el			9.7	0.9	
℄			9.2	1.4	
el			9.0	1.6	
W			9.1	1.5	
		3+50			
W			10.5	0.1	
el			10.4	0.2	
℄			10.3	0.3	
el			10.2	0.4	
E			10.2	0.4	
		4+20			
E			9.1	1.5	
el			9.2	1.4	
℄			9.3	1.3	
el			9.2	1.4	
W			9.0	1.6	
		4+30			
W			11.3	-0.7	
T.P. S. Wly Blk. Cor Hub			4.18	6.45	

		X Sec. Knoxville			
B.M. Mon	11.10	12.05		0.95	{S.E.C. 52 Pacific View. Sub Page 41
		N'ly Line Lapwai.			
100.C			10.1	1.9	
E. Line			10.1	1.9	
el			10.5	1.5	
℄			10.7	1.3	
el			11.0	1.0	
W			11.4	0.6	
		1+00			
-10			9.8	2.2	
W			9.8	2.2	
el			9.8	2.2	
℄			10.5	1.5	
el			10.6	1.4	
E			10.2	1.8	
+10			10.1	1.9	
		2+00			
-10			10.2	1.8	
E			10.4	1.6	
el			10.5	1.5	

	12.05			
℄		10.7	1.3	
ch		10.9	1.7	
N		10.3	1.7	
+10		9.4	2.6	
	2+45			
-10		8.1	3.9	
W		8.8	3.2	
ch		9.0	3.0	
℄		10.2	1.8	
ch		10.3	1.7	
E		10.6	1.4	
+10		10.0	2.0	
	2+85 = Sly Line King			
-10		10.1	1.9	
E		8.9	3.1	
ch		9.0	3.0	
℄		8.6	3.4	
ch		8.0	4.0	
W		7.7	4.3	

	12.05			
	℄ King.			
W		6.7	5.3	
ch		7.0	5.0	
℄		7.4	4.6	
ch		8.8	3.2	
E		9.4	2.6	
+20		10.2	1.8	
+50		10.2	1.8	
	0+00 = Nly Line King			
-20		10.2	1.8	
-10		9.4	2.6	
E		7.9	4.1	
ch		7.3	4.7	
℄		6.7	5.3	
ch		6.0	6.0	
W		5.7	6.3	
	0+25			
-10		4.4	7.6	
W		4.4	7.6	
ch		5.7	6.3	
℄		7.0	5.0	

		12.05			
		0+25 con			
el			8.0	4.0	
E			8.4	3.6	
+20			9.5	2.5	
		0+60			
-20			9.3	2.7	
E			9.2	2.8	
el			9.0	3.0	
℄			8.4	3.6	
el			8.0	4.0	
W			7.7	4.3	
+10			6.7	5.3	
		1+00			
-10			8.2	3.8	
W			8.8	3.2	
el			9.1	2.9	
℄			9.0	3.0	
el			9.0	3.0	
E			9.0	3.0	
+10			9.0	3.0	

		12.05			
		2+00			
-10			8.5	3.5	
E			8.5	3.5	
el			8.6	3.4	
℄			8.5	3.5	
el			8.5	3.5	
W			8.5	3.5	
+10			8.4	3.6	
	2+80 = Sly Line Maxwell St.				
W			8.5	3.5	
el			8.5	3.5	
℄			8.5	3.5	
el			8.5	3.5	
E			8.4	3.6	
	3+05 Nly Line of Pacific View Sub				
E			8.3	3.7	
el			8.5	3.5	
℄	ground.		8.3	3.7	
℄	Hub Elg Cor Pacific Vista		9.35	2.70	
el			8.3	3.7	
W			8.4	3.6	

Knoxville

		12.05			
		3+30			
W			8.7	3.3	
el			8.7	3.3	
℄			8.4	3.6	
eb			8.2	3.8	
E			8.6	3.4	
		4+30			
E			8.6	3.4	
eb			8.6	3.4	
℄			8.5	3.5	
eb			8.5	3.5	
W			8.6	3.4	
W			9.2	2.8	
eb			9.2	2.8	
℄			9.4	2.6	
eb			9.2	2.8	
E			9.2	2.8	
T.P. ℄ Hub			9.35	2.70	

King St. x See.
12.05
0+00 = Wly Line Knoxville

S			7.7	4.3	
eb			7.4	4.6	
℄			6.7	5.3	
eb			5.9	6.1	
N.			5.7	6.3	
		0+30			
N			2.8	9.2	
el			4.0	8.0	
℄			4.2	7.8	
eb			5.1	6.9	
S			4.8	7.2	
		0+70			
S			2.4	9.6	
el			2.7	9.3	
℄			2.7	9.3	
eb			3.2	8.8	
N			3.2	8.8	

	12.05		
	1+00		
N	2.7	7.3	
el	3.3	6.7	
t	2.4	9.2	
el	2.8	9.2	
S	2.8	9.2	
	1+50		
S..	2.6	9.4	
el	3.8	8.2	
t	2.3	9.7	
el	3.1	6.9	
N	2.9	9.1	
	2+00		
N	2.6	9.4	
el	3.0	9.0	
t	2.4	9.6	
el	2.4	9.6	
S	2.5	9.5	
	2+45		
S	3.0	9.0	
el	2.6	9.4	

	12.05		
t	3.0	9.0	
el	3.0	9.0	
N	3.2	9.8	
	2+70		
N	3.6	8.4	
+7	3.0	9.0	
el	7.6	4.4	
t	8.2	3.8	
el	8.0	4.0	
+9	7.0	5.0	
S	2.2	9.8	
+10	2.2	9.8	
	3+00		
S	3.5	8.5	
+2	8.2	3.8	
el	9.0	3.0	
t	9.1	2.9	
el	8.2	3.8	
+3	3.5	8.5	
N.	3.7	8.3	

		12.05			
		3+03			
N			3.7	8.3	
+7			3.5	8.5	
el			8.2	3.8	
℄			9.2	2.8	
el			9.2	2.8	
9 W			8.4	3.6	
+10			8.4	3.6	
T.P.	619	9.40	8.84	3.21	
		4+00			
−10.			6.7	2.7	
S			7.0	2.4	
el			7.1	2.3	
el			7.2	2.2	
el			7.0	2.4	
+2			6.1	3.3	
+			1.4	8.0	
N.			1.3	8.1	
		5+00			
N			1.7	7.7	
+6			1.7	7.7	

		9.40			
+8			6.2	3.2	
el			7.5	1.9	
℄			7.6	1.8	
el			7.4	2.0	
S			7.5	1.9	
+10			7.8	1.6	
		5+50			
−10			8.4	1.0	
S			8.2	1.2	
el			7.9	1.5	
℄			7.8	1.6	
el			7.7	1.7	
+3			7.7	1.7	
+5			5.1	4.3	
N			4.7	4.7	
		6+00 = Ely Line Nashville			
N			8.3	1.1	
el			8.6	0.8	
℄			8.7	0.7	
el			9.0	0.4	
S			9.0	0.4	

		9.40			
C.E. T.P. Hub	6.50	5.64	10.26	page 50 −0.86	N. W. Blk Nashville & King
		0+00 = Wly Line Nashville			
S			5.3	0.3	
℄			4.7	0.9	
N			4.9	0.7	
		0+10			
N			4.9	0.7	
℄			4.7	0.9	
S			4.4	1.2	
		1+00			
S			4.5	1.1	
℄			4.4	1.2	
N			4.5	1.1	
		2+00			
N			5.0	0.6	
℄			4.9	0.7	
S			5.0	0.6	
		3+00			
S			5.0	0.6	
℄			4.9	0.7	
N			5.0	0.6	

		5.64			
		4+00			
N			5.0	0.0	
℄			4.9	0.7	
S			4.9	0.7	
		5+00			
S			5.7	−0.1	
℄			5.5	+0.1	
N			5.3	+0.3	
		6+20 = Ely Line Lieta			
N			6.4	−0.8	
℄			5.5	+0.1	
S			5.6	0.0	
S. Blk. Cor Hub.			6.34	−0.70	= −0.70

9/5/39 Maxwell St. X. Sec. 50' wide.
Miller
Walker
Bliss

BM Hub.	4.56	7.26		2.70	Ely Cor. Park Vista Sub. Page 54.
	0+00 = Wly. Line Knoxville.				
S.			3.8	3.5	
cb.			3.8	3.5	
℄.			3.6	3.7	
cb.			3.9	3.4	
N.			4.0	3.3	
		1+00			
N-10			4.2	3.1	
N			4.2	3.1	
cb			4.2	3.1	
℄			4.0	3.3	
cb			3.9	3.4	
S			3.9	3.4	
+10			3.9	3.4	
		2+00			
-10			4.7	2.6	
S			4.5	2.8	
cb			4.4	2.9	

		7.26			
℄			4.2	3.1	
cb			4.0	3.3	
N			4.0	3.3	
+10			4.4	2.9	
		3+00			
-10			5.2	2.1	
N			5.0	2.3	
cb			5.0	2.3	
℄			5.0	2.3	
cb			5.0	2.3	
S			5.0	2.3	
+10			5.0	2.3	
		4+00			
-10			5.6	1.7	
S			5.5	1.8	
cb			5.3	2.0	
℄			5.6	1.7	
cb			5.5	1.8	
N			5.7	1.6	
+10			5.7	1.6	

7.26

5+00

-10	6.1	1.2	
N	5.8	1.5	
el	5.6	1.7	
℄	6.1	1.2	
el	6.1	1.2	
S	5.8	1.5	
+10	5.3	2.0	

5+75

-10	5.0	2.3	
S	5.4	1.9	
el	5.5	1.8	
℄	5.7	1.6	
el	6.2	1.1	
N	6.6	0.7	
+10	7.4	-0.1	

6+00 = Ely Line Nashville

N	6.3	1.0	
el	6.1	1.2	
℄	3.9	3.4	
el	2.5	4.8	
S	1.6	5.7	

7.26

chk. SWly Blk. Cor. Hub at Nashville			0.81	6.45	-6.45

0+00 = Wly Line Nashville

S		1.0	6.3	
el		1.4	5.9	
℄		1.7	5.6	
el		4.0	3.3	
N		5.8	1.5	

0+75

-10.		7.5	-0.2	
N.		6.9	0.4	
el		6.4	0.9	
℄		5.4	1.9	
+13		5.5	1.8	
el		3.7	3.6	
S		3.2	4.1	

T.P.	3.78	6.38	4.66	2.60

6.38

0+.80

−10	4.7	1.7	
S	4.7	1.7	
el	4.7	1.7	
⊄	4.9	1.5	
el	5.5	0.9	
N	6.0	0.4	
+10	6.6	−0.2	

1+05

−10	8.5	−2.1	
N.	5.9	+0.5	
el	5.3	1.1	
⊄	5.0	1.4	
el	4.8	1.6	
S	4.6	1.8	
+10	4.6	1.8	

1+30

−10	4.8	1.6	
S	4.8	1.6	
el	5.0	1.4	
⊄	5.3	1.1	

6.38

el	8.5	−2.1	
N	8.5	−2.1	
+10	8.5	−2.1	

1+40

−10,	8.6	−2.2	
N	8.6	−2.2	
el	8.6	−2.2	
⊄	8.1	−1.7	
el	5.7	+0.7	
S	5.2	+1.2	
+10	5.2	+1.2	

2+00

−10	8.3	−1.9	
S	8.6	−2.2	
el	8.6	−2.2	
⊄	8.6	−2.2	
el	8.6	−2.2	
N	8.6	−2.2	
+10	5.1	+1.3	
+20	5.1	+1.3	

6.38

2+17

-10	5.1	+ 1.3
N	5.1	1.3
cl	8.1	− 1.7
℄	8.8	− 2.4
cl	8.4	− 2.0
S	8.4	− 2.0
+10	8.4	− 2.0

2+28

-10	8.4	− 2.0
S	8.4	− 2.0
cl	8.6	− 2.2
℄	5.1	+ 1.3
cl	4.8	+ 1.6
N	4.8	+ 1.6
+10	4.8	+ 1.6

2+45

-10	6.5	− 0.1
E	5.2	+ 1.2
cl	4.8	+ 1.6
℄	4.5	+ 1.9

cl	5.0	+ 1.4
S	5.0	+ 1.4
+10	7.0	− 0.6

3+00

-10	5.0	+ 1.4
S	5.0	+ 1.4
cl	5.0	+ 1.4
℄	5.0	+ 1.4
cl	5.7	+ 0.7
N	5.6	+ 0.8
+10	5.6	+ 0.8

4+00

-10	5.3	+ 1.1
N	5.3	+ 1.1
cl	6.0	+ 0.4
℄	5.6	+ 0.8
cl	6.1	+ 0.3
S	6.1	+ 0.3
+10	5.5	+ 0.9

6.38

5+00

-10	5.2	+ 1.2
S	5.2	+ 1.2
el	5.7	+ 0.7
℄	5.4	+ 1.0
el	5.8	+ 0.6
N	5.7	+ 0.7
+10	5.7	+ 0.7

6+00

-10	6.1	+ 0.3
	6.0	+ 0.4
℄	6.4	0.0
	7.3	- 0.9
S	6.2	+ 0.2

Hub. ℄ Lieta + Maxwell 7.01 -0.13

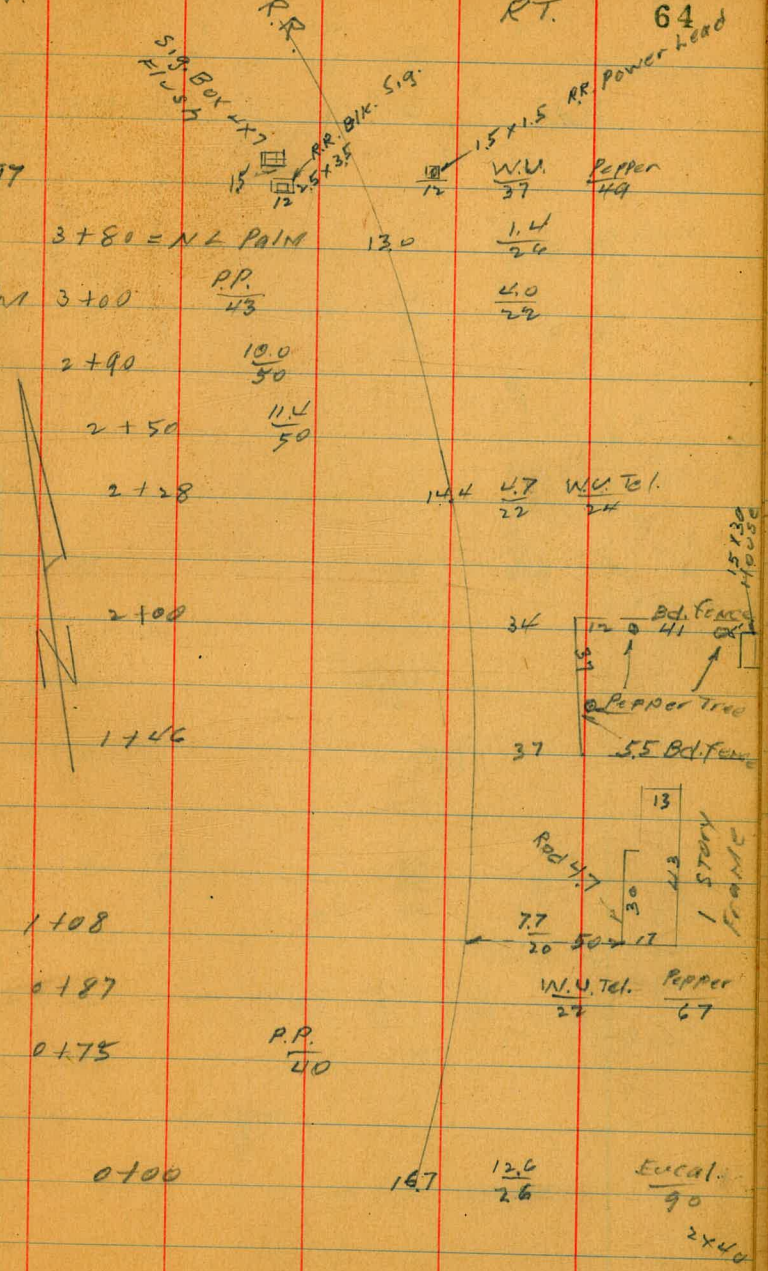
Why not go to Lieta

INDEXED
EFB

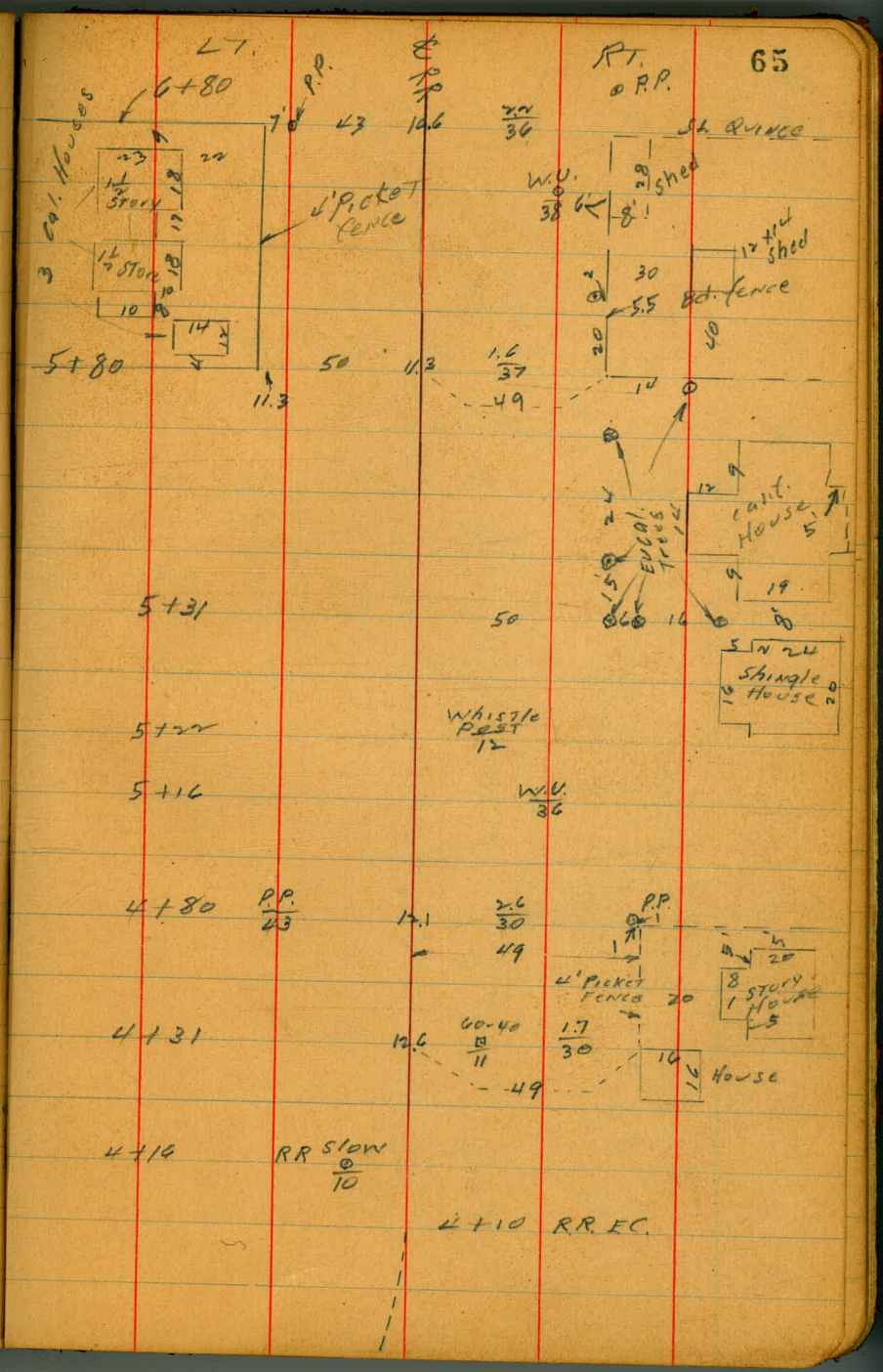
Levels & Location of Houses
Fences Trees etc.
on Calif. Olive to Quince
Moore 6-6-40

Top E rail Santa Fe Main Line 12.80 See Palm St. & see for Rail El. on ℄ Palm St.

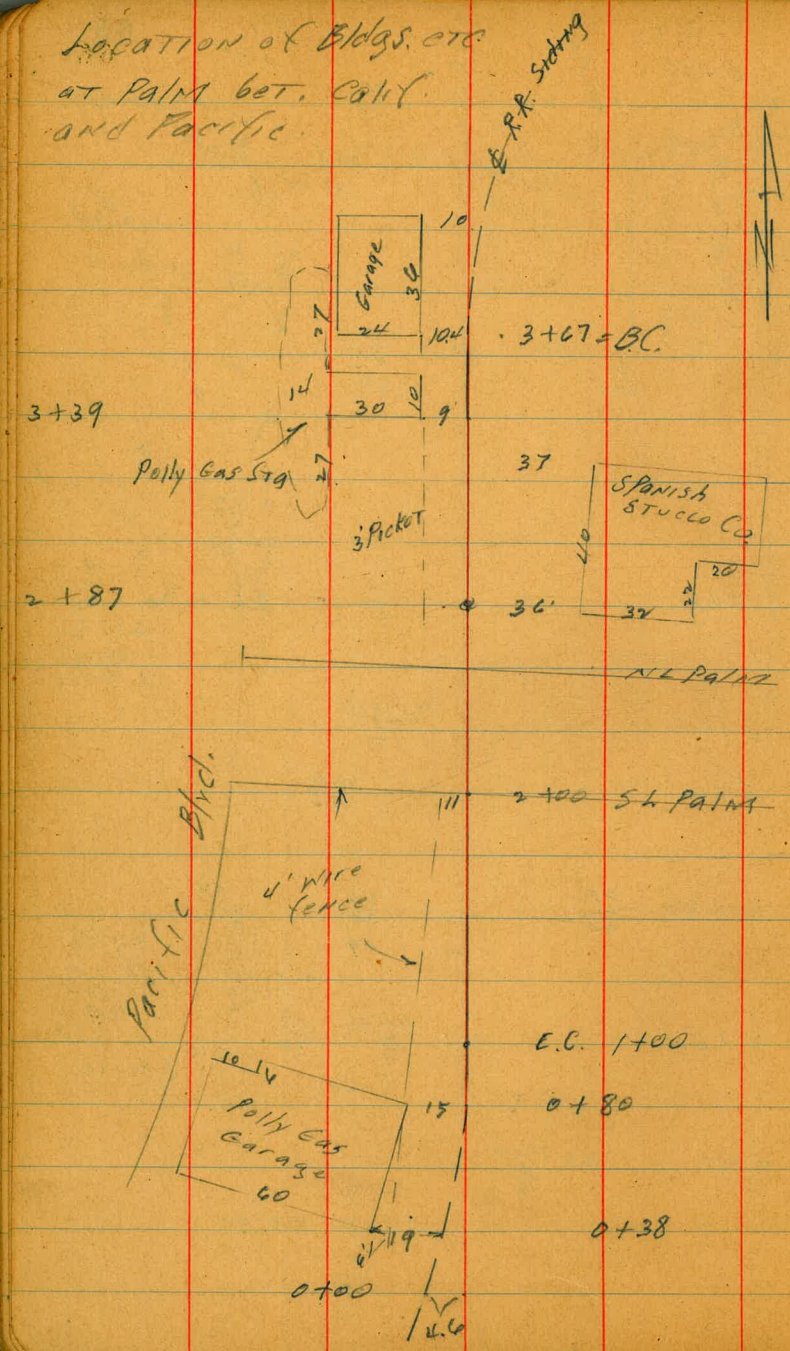
LT. ℄ R.R. RT.



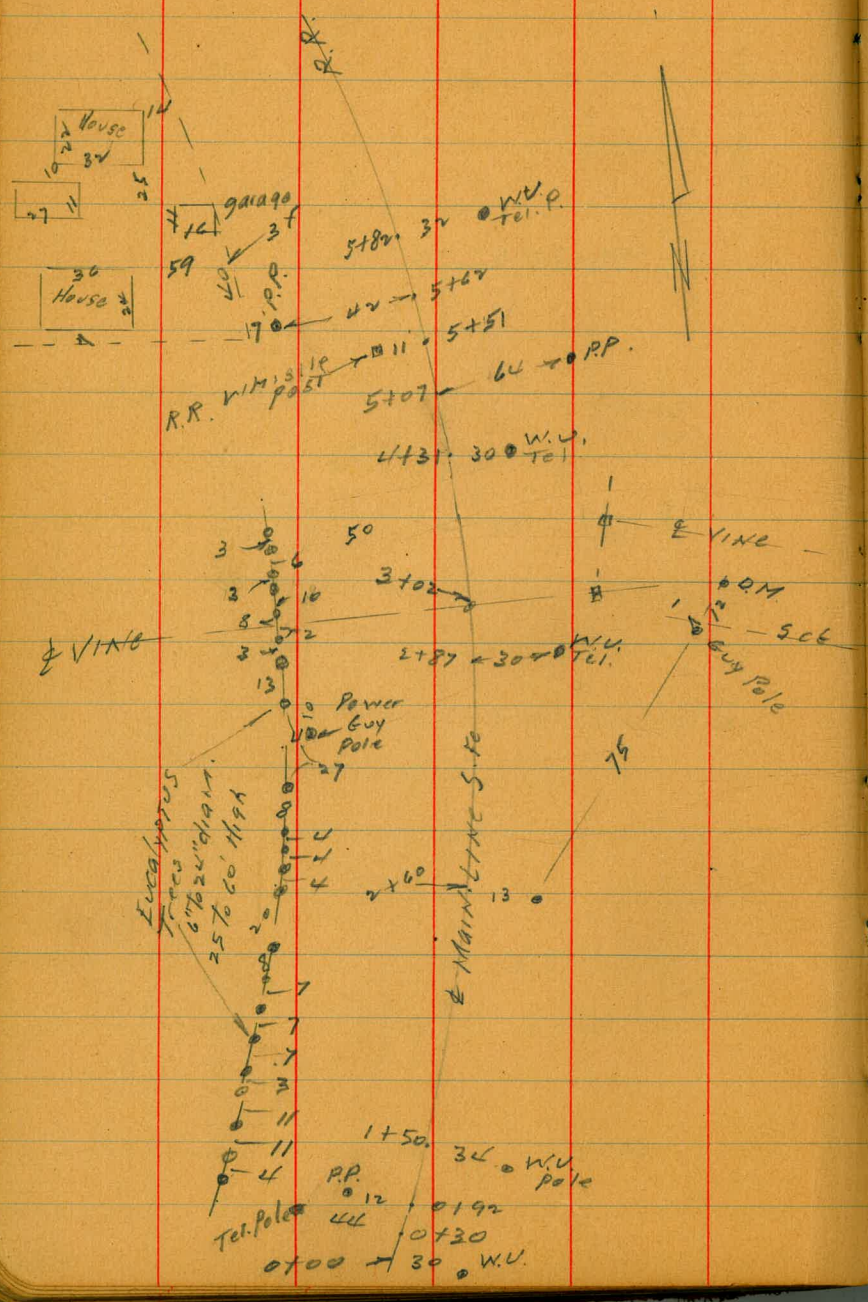
Calif. Olive to Quince



Location of Bldgs. etc
at Palm bet. Calif
and Pacific



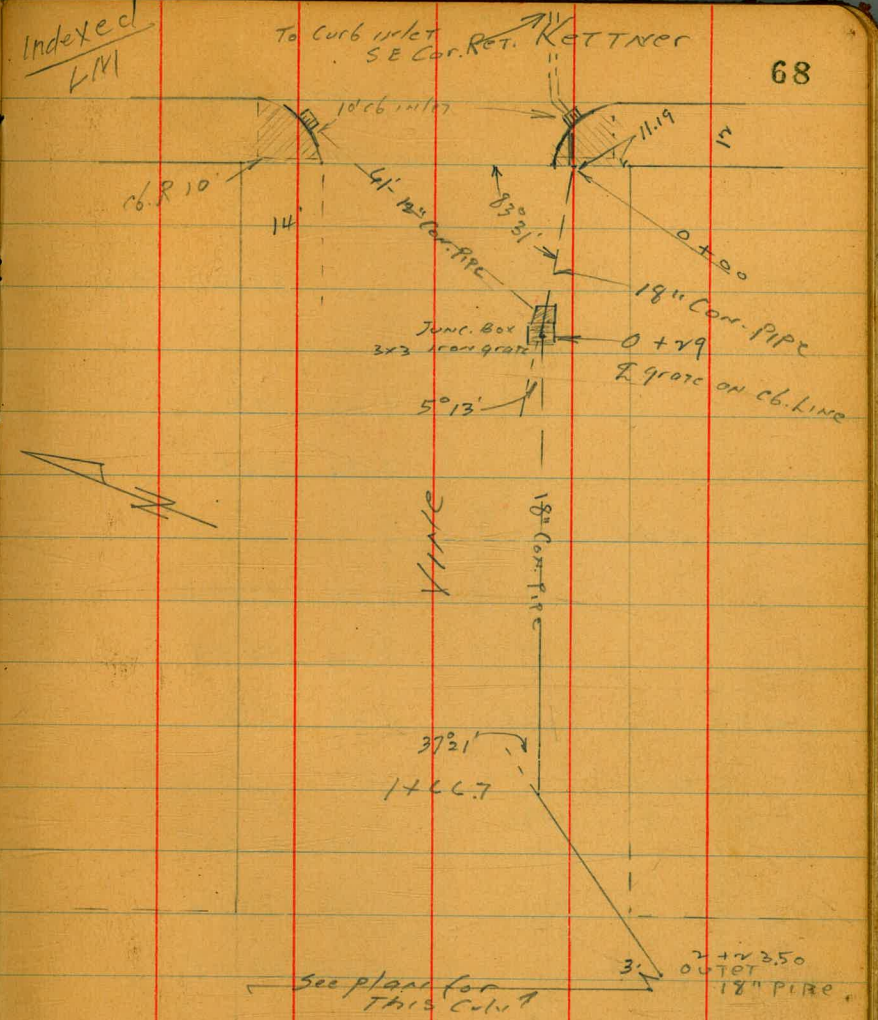
Location of Poles etc.
Vine and Calif.



Moore Location of drains
Osborne on Vine Bet. Kettner & Calif.
5-23-11

SEBP	4.11	43.69		39.58	Vine Kettner
NW cb. inlet F.L. 12" pipe			7.24		
SW " " " 18" "			8.21		
0+29 Top grate		Δ 5°13'	8.70		
" F.L. Junc. Box			11.40		
T.P	1.07	32.08	12.68	31.01	
1+44.7	Δ 37°21'	F.L.	9.42		
2+23.5	outlet	F.L.	11.68		

Indexed
LM



indexed
C.S.K.

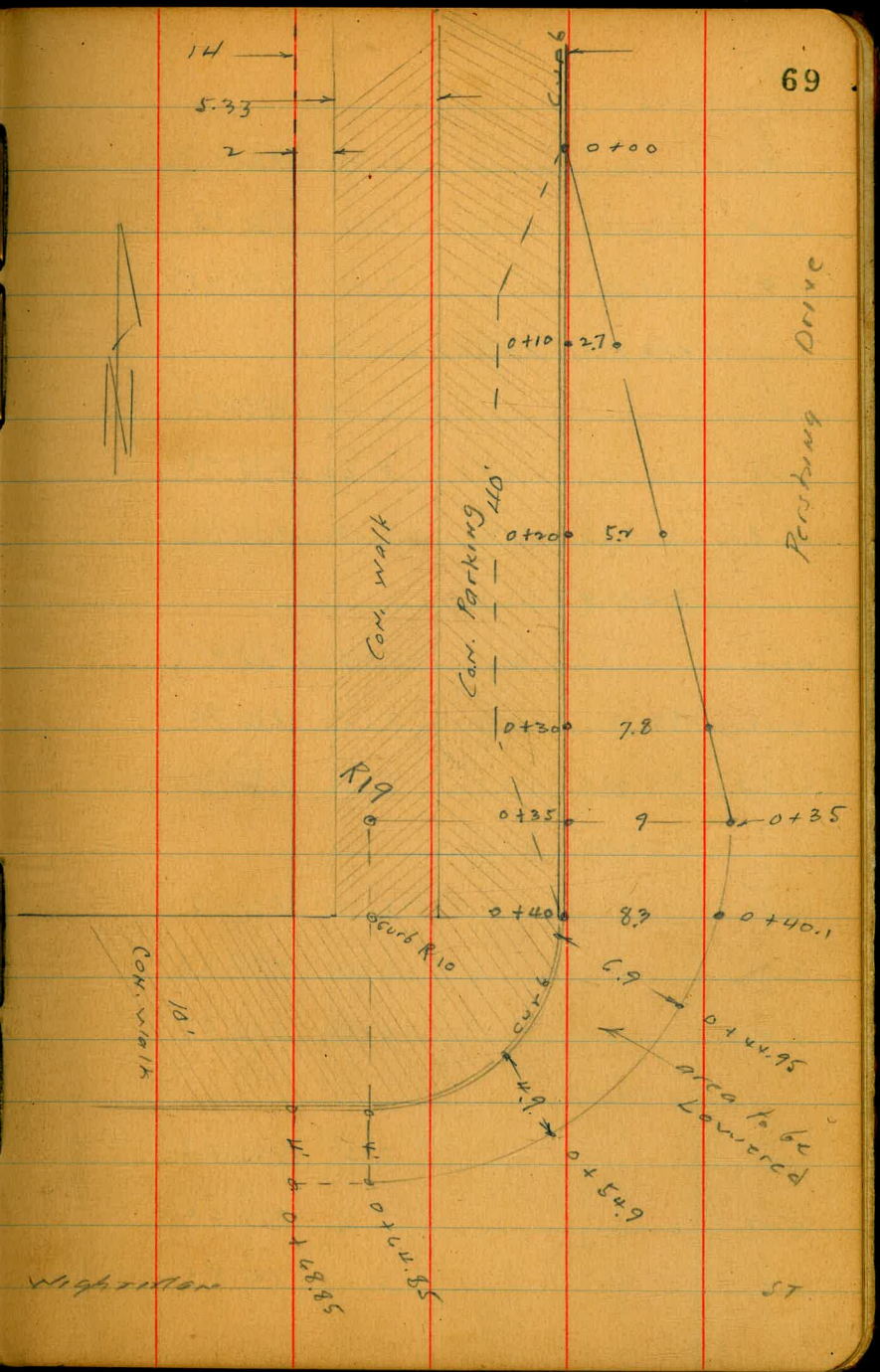
Moore
Hazard
Hoopes
4-11-42

Levels to Lower pav. elev.

NW Cor. Wightman & Pershing Drive

Wightman
Pershing Dr.

SWBP	4.32	342.33	338.01	
40' N. of N.L. Wightman = 0+00				
cb			5.00	337.33
gut			5.34	336.99
	0+10			
cb			5.10	337.23
gut			5.39	336.94
+ 2.7			5.22	337.11
	0+20			
cb			5.22	337.09
gut			5.57	336.76
+ 5.2			5.15	337.18
	0+30			
cb			5.27	337.06
gut			5.61	336.72
+ 7.8			5.11	337.22



3 Nov 33

0+35			
cb		5.31	337.02
gut		5.60	336.73
+9		5.08	337.25
0+40.1 on NL Wightman			
cb		5.08	337.05
gut		5.60	336.73
+8.3		5.19	337.14
0+44.95			
cb		5.09	337.04
gut		5.55	336.78
+6.9		5.33	337.00
0+54.9			
cb		5.30	337.03
gut		5.60	336.73
+4.9		5.40	336.93
0+64.85			
cb		5.31	337.02
gut		5.71	336.62
+4		5.48	336.85

3 Nov. 33

0+68.85 = WL Pershing Dr.			
cb		5.06	337.07
gut		5.85	336.48
+4		5.59	336.74
0+69.85			
cb		5.35	336.98
gut	old. Con par	5.97	336.36
+4	" " "	5.68	336.65
0+78.85 10' w of WL Pershing			
cb		5.94	336.39
gut	old Con. par	6.55	336.78
+4	" " "	6.18	336.15

Note! gut & out Rods on new oil & Rock Surfacing

W/S Orange Produced N.

-.50 -.20 +.00

E Ramp Produced S

-.86 -.27 +.07

W Orange Produced S

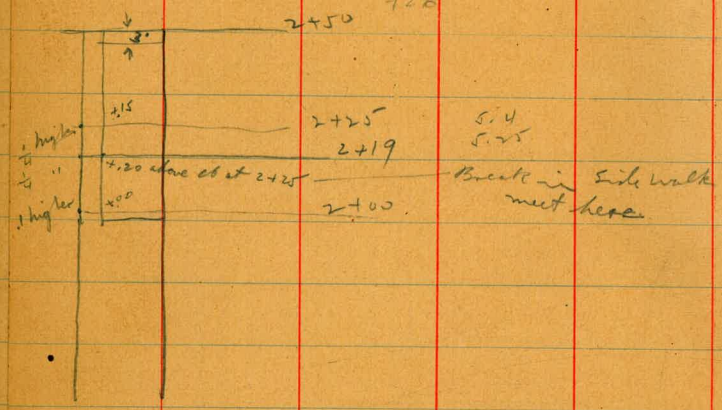
-.67 -.23 +.03

E/L Orange Produced N.

-.45 -.19 -.01

4.92
.37
4.59

4.59
.33
4.26



5.4
5.25

Calculation of Earthwork.

Width	HEIGHT 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	.02	.04	.06	.07	.09	.11	.13	.15	.17	.18	.20	.22	.24	.26	.28
2	.04	.07	.11	.15	.18	.22	.26	.30	.33	.37	.41	.44	.48	.52	.56
3	.06	.11	.17	.22	.28	.33	.39	.44	.50	.56	.61	.67	.72	.78	.83
4	.07	.15	.22	.30	.37	.44	.52	.59	.67	.74	.81	.89	.96	1.04	1.11
5	.09	.19	.28	.37	.46	.56	.65	.74	.83	.93	1.02	1.11	1.20	1.30	1.39
6	.11	.22	.33	.44	.56	.67	.78	.89	1.00	1.11	1.22	1.33	1.44	1.55	1.67
7	.13	.26	.39	.52	.65	.78	.91	1.04	1.16	1.30	1.42	1.55	1.68	1.81	1.94
8	.15	.30	.44	.59	.74	.89	1.04	1.19	1.33	1.48	1.63	1.78	1.92	2.08	2.22
9	.17	.33	.50	.67	.83	1.00	1.17	1.33	1.50	1.67	1.83	2.00	2.17	2.33	2.50
10	.18	.37	.56	.74	.93	1.11	1.30	1.48	1.67	1.85	2.04	2.22	2.41	2.59	2.78
11	.20	.41	.61	.82	1.02	1.22	1.43	1.63	1.83	2.04	2.24	2.44	2.65	2.85	3.06
12	.22	.44	.67	.89	1.11	1.33	1.56	1.78	2.00	2.22	2.44	2.67	2.89	3.11	3.33
13	.24	.48	.72	.96	1.20	1.44	1.68	1.92	2.16	2.41	2.65	2.89	3.13	3.37	3.61
14	.26	.52	.78	1.04	1.30	1.55	1.81	2.08	2.33	2.59	2.85	3.11	3.37	3.63	3.89
15	.28	.56	.83	1.11	1.39	1.67	1.94	2.22	2.50	2.78	3.06	3.33	3.61	3.89	4.17
16	.30	.59	.89	1.18	1.48	1.78	2.07	2.37	2.67	2.96	3.26	3.56	3.85	4.15	4.44
17	.31	.63	.94	1.26	1.57	1.89	2.20	2.52	2.83	3.15	3.46	3.78	4.09	4.41	4.72
18	.33	.67	1.00	1.33	1.67	2.00	2.33	2.67	3.00	3.33	3.67	4.00	4.33	4.67	5.00
19	.35	.70	1.06	1.41	1.76	2.11	2.46	2.82	3.17	3.52	3.87	4.22	4.57	4.92	5.28
20	.37	.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33	3.70	4.07	4.44	4.81	5.18	5.56
21	.39	.78	1.17	1.55	1.94	2.33	2.72	3.11	3.50	3.89	4.28	4.67	5.06	5.44	5.33
22	.41	.81	1.22	1.63	2.04	2.44	2.85	3.26	3.67	4.07	4.48	4.89	5.30	5.70	6.11
23	.43	.85	1.28	1.70	2.13	2.56	2.98	3.41	3.83	4.26	4.68	5.11	5.54	5.96	6.39
24	.44	.89	1.33	1.78	2.22	2.67	3.11	3.56	4.00	4.44	4.89	5.33	5.78	6.22	6.67
25	.46	.92	1.39	1.85	2.31	2.78	3.24	3.70	4.17	4.63	5.09	5.56	6.02	6.48	6.94
26	.48	.96	1.44	1.92	2.41	2.89	3.37	3.85	4.33	4.82	5.30	5.78	6.26	6.74	7.24
27	.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
28	.52	1.04	1.55	2.07	2.59	3.11	3.63	4.15	4.67	5.18	5.70	6.22	6.74	7.26	7.78
29	.54	1.07	1.61	2.15	2.68	3.22	3.76	4.30	4.83	5.37	5.91	6.44	6.98	7.52	8.06
30	.56	1.11	1.67	2.22	2.78	3.33	3.89	4.44	5.00	5.55	6.11	6.67	7.22	7.78	8.33
31	.57	1.15	1.72	2.30	2.87	3.44	4.02	4.59	5.17	5.74	6.32	6.89	7.46	8.04	8.61
32	.59	1.18	1.78	2.37	2.96	3.56	4.15	4.74	5.33	5.92	6.52	7.11	7.70	8.30	8.89
33	.61	1.22	1.83	2.44	3.05	3.67	4.28	4.89	5.50	6.11	6.72	7.33	7.94	8.55	9.17
34	.63	1.26	1.89	2.52	3.15	3.78	4.40	5.04	5.67	6.29	6.93	7.56	8.18	8.81	9.44
35	.65	1.30	1.94	2.59	3.24	3.89	4.53	5.18	5.83	6.48	7.13	7.78	8.42	9.08	9.72
36	.67	1.33	2.00	2.67	3.33	4.00	4.66	5.33	6.00	6.67	7.33	8.00	8.67	9.33	10.00
37	.68	1.37	2.06	2.74	3.42	4.11	4.79	5.48	6.17	6.85	7.54	8.22	8.91	9.59	10.28
38	.70	1.41	2.11	2.82	3.52	4.22	4.92	5.63	6.33	7.03	7.74	8.44	9.15	9.85	10.56
39	.72	1.44	2.17	2.89	3.61	4.33	5.05	5.78	6.50	7.22	7.95	8.67	9.39	10.11	10.83
40	.74	1.48	2.22	2.96	3.70	4.44	5.18	5.92	6.67	7.41	8.15	8.89	9.63	10.37	11.11

Table gives cu. yds. in 1 ft. of a triangle of given width and height. Corrections for tenths of width are one tenth the values found under each height considering the widths from 1 to 9 as tenths and similarly the corrections for tenths of height are one tenth the figures opposite width considering the heights from 1 to 9 as tenths. Thus if w =16.2 and h =5.3, cu. yds. =1.48+.028+.089 =1.597 cu. yds. or practically 160 cu. yds. per 100 ft. If w exceeds 40 ft., use one half and multiply result by 2, if both w and h are large use one half of each and multiply result by 4. Any cross-section may be divided into triangles by the following rule. To the triangle of the sum of the outside cuts (or fills) =h, and ½ the roadbed =w, add the triangles formed by taking the distance out to each break in turn (=w's) by the difference between the cuts (or fills) on each side of it (=h's) always subtracting the outer from the inner.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½.

For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	25.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9+(20—16)÷2 or 2 ft. added to 41.9 =43.9. For slopes of 1 on 1 see inside of front cover.

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