



# 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

**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  $30.6 + (20 - 16) \div 2$  or 2 ft. added to 30.6 = 32.6. For slopes of 1 on 1 1/2 see inside of back cover.

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# G-250

(54)

INDEXED  
*Completely*  
*except page # 46.*

MICROFILMED

APR 13 1965

This Field Book is manufactured of a High Grade 50% Rag Paper having a WATER RESISTING SURFACE, and is sewed with Bing Special Enamel Waterproof thread.

Made in U. S. A.

S.W. Cor. 7<sup>th</sup> + K - 10' R.P.s to 7' Mon - Nails in

Pave

Water Grades

		116.85 = w.c.b. Grade		
0+00 = N.L.B	16.91	113.8	C	3.1
+50	11.87	108.6		3.3
INDEXED W.K. OCT 6 1949	05.15	01.7		3.5
+50 = Meets profile	98.07	95.0		3.1
2~	90.56	88.0		2.6
changed 2+25'	87.10	84.6		2.5
+65'	82.43	79.7		2.7
+95 = T	78.20	75.7		2.5

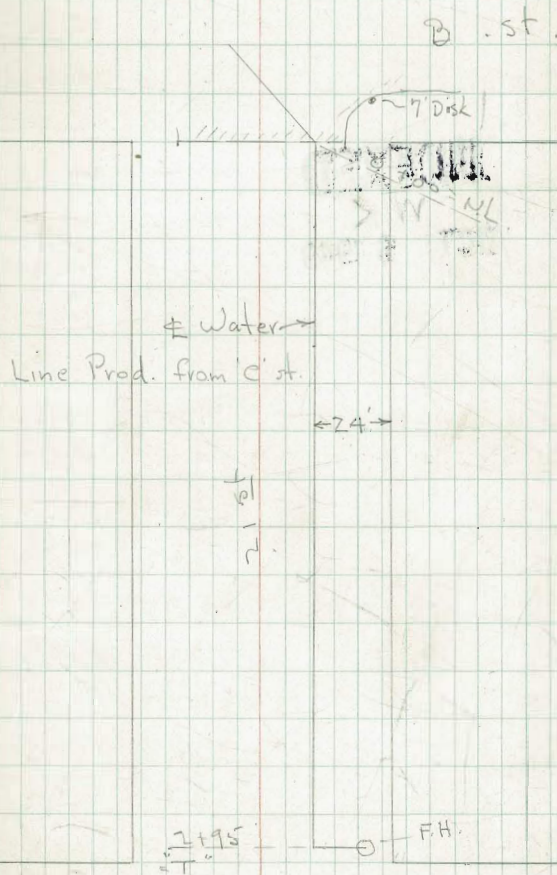
Lowered Grade at Bottom to put  
under ground:

60138

W.O. 60218

10-27-48 - 7.0.

1



A St

# Sewer Grades - Trunk # 1

0+00 = end of #2 -

		24.89 = Mon. Kendall Grade		
0+00 = M.H. 72	8.55 22.58	14.02	8.55	
+25	8.38 22.73	14.08	8.65	
+50	22.50	14.14	8.36	
+75	22.55	14.21	8.34	
1 ~	22.63	14.27	8.36	
+25	23.19	14.33	8.86	
+50	7.51 23.62	14.39	9.23	
+75	7.45 23.68	14.45	9.23	
2 ~	7.04 24.09	14.52	9.57	
+25	24.45	14.59	9.87	
+50	24.94	14.64	10.30	
+75	25.27	14.70	10.57	
3 ~	25.76	14.77	10.99	
+25	26.27	14.83	11.44	
+50	26.87	14.89	11.98	
+75	27.45	14.95	12.50	
4 ~	27.82	15.02	12.80	
+25	28.19	15.09	13.11	
+50	28.21	15.14	13.07	
+75	28.02	15.20	12.82	
5 ~	27.81	15.27	12.54	
+25	27.49	15.33	12.16	
+50	27.25	15.39	11.86	

**INDEXED**  
W.K.  
OCT 6 1949

+75	26.89	15.45	11.44	
6 ~	26.48	15.52	10.96	
+20	26.29	15.57	10.72	
6+35.60 = M.H. 2 - 10 RT.	26.17	15.61	10.56	
+50 - 6 RT.	26.03	15.65	10.38	
+75	25.21	15.71	9.50	
7 ~	24.27	15.77	8.50	
+25	23.35	15.83	7.52	
+50	22.75	15.89	6.86	
+75	22.98	15.95	7.03	
8 ~	22.80	16.02	6.78	
+25	22.77	16.08	6.69	
+50	23.13	16.14	6.99	
+75	23.50	16.21	7.29	
9 ~	5.11 23.81	16.27	7.54	
+25.80 = M.H. 3	4.77 24.07	16.33	7.64	
+50	4.83 24.21	16.39	7.82	
+75	4.73 24.31	16.45	7.96	
10 ~	4.61 24.43	16.52	7.91	
+25	4.52 24.52	16.58	7.94	
+50	4.41 24.63	16.64	7.99	
+75	4.33 24.71	16.70	8.01	
11 ~	4.24 24.80	16.77	8.03	
+25	4.14 24.90	16.83	8.07	
+50	4.07 24.97	16.89	8.08	

6 Rt

26.34 = Ingraham

+75	3.98	25.06	16.95	8.11
12~	3.85	25.19	17.02	8.17
+1570 = M.H. 4	3.90	25.24	17.06	8.18
	6.81			
+25		25.28	17.08	8.20
+50	6.66	25.49	17.14	8.35
+75	6.43	25.72	17.21	8.51
13~	6.27	25.88	17.27	8.61
+25	6.14	25.97	17.33	8.64
+50	6.05	26.10	17.39	8.71
+75	5.91	26.24	17.45	8.79
14~	5.57	26.58	17.52	9.06
+25	5.36	26.79	17.58	9.21
+50	5.19	26.96	17.64	9.32
+75	5.15	27.00	17.70	9.30
15~	5.14	27.01	17.77	9.24
+25	5.09	27.06	17.83	9.23
+50	5.02	27.13	17.89	9.24
+75	4.88	27.27	17.95	9.32
16~	4.74	27.41	18.02	9.39
+25	4.60	27.55	18.08	9.47
+50	4.53	27.62	18.14	9.48
+75	4.30	27.85	18.21	9.64
17~	4.18	27.97	18.27	9.70
+25	4.07	28.08	18.33	9.75

3

17+50	3.94	28.21	18.39	9.82
+75	3.83	28.32	18.45	9.87
18~	3.72	28.43	18.52	9.91
+25	3.62	28.53	18.58	9.95
+50	3.53	28.62	18.64	9.98
+75	3.53	28.62	18.70	9.92
19~	4.00	28.15	18.77	9.38
+25	4.59	27.56	18.83	8.73
+40.39 = M.H. 5	9.44	26.80	18.87	7.93
B.M. = end of cb.		3.44	28.71	
			28.99	
			10' Rt.	
19+40.39 = M.H. 5				
+50	9.12	27.12	18.89	8.23
+75	8.05	28.19	18.95	9.24
20~	7.90	28.34	19.02	9.32
+25	7.58	28.66	19.08	9.58
+50	7.35	28.89	19.14	9.75
+75	7.06	29.18	19.21	9.97
21~	6.87	29.37	19.27	10.10
+25	6.61	29.63	19.33	10.30
+50	6.31	29.93	19.39	10.54
+75	5.82	30.42	19.45	10.97
22~	5.39	30.85	19.52	11.33
+25	5.05	31.19	19.58	11.63
+50	4.82	31.42	19.64	11.78

B.M. on Valve

34.30

22+75	4.42	31.82	19.70	12.12
23~	4.12	32.12	19.77	12.35
+25	3.84	32.40	19.83	12.57
+50	3.39	32.85	19.89	12.96
+75	2.95	33.29	19.95	13.34
24~ -10' Rt.	2.62	33.62	20.02	13.60
+25 -6' Rt.	11.00	34.23	20.08	14.15
+50 "	10.50	34.67	20.14	14.53
+75 "	9.90	35.33	20.21	15.12
25~ "	9.30	35.87	20.27	15.60
+25	8.61	36.62	20.33	16.29
+50	7.92	37.31	20.39	16.92
+75	7.91	37.32	20.45	16.87
26~	8.01	37.22	20.52	16.70
+10 = M.H. 6	8.12	37.11	20.54	16.57
+25	8.05	37.18	20.58	16.60
+50	8.12	37.11	20.64	16.47
+75	8.14	37.09	20.70	16.39
27~	7.98	37.25	20.77	16.48
+25	8.07	37.16	20.83	16.33
+50	7.71	37.52	20.89	16.63
+75	7.45	37.78	20.95	16.83
28~	7.42	37.81	21.02	16.79
+25	4.98	37.95	21.08	16.87

4

28+50	5.29	37.64	21.14	16.50
+75	5.50	37.43	21.21	16.22
29~	5.62	37.31	21.27	16.04
+25	5.74	37.19	21.33	15.86
+50	5.91	37.02	21.39	15.63
+75	6.08	36.85	21.45	15.40
30~	6.12	36.81	21.52	15.29
+25	6.05	36.89	21.58	15.30
+50	5.92	37.01	21.64	15.37
+75	5.90	37.03	21.70	15.33
31~	5.82	37.11	21.77	15.34
+25	5.76	37.17	21.83	15.34
+50	5.46	37.47	21.89	15.58
+75	4.99	37.94	21.95	15.99
32~	4.50	38.43	22.02	16.41
+25	4.10	38.83	22.08	16.75
+50	3.50	39.43	22.14	17.29
+75	2.72	40.21	22.21	18.00
+85.08 = M.H. 7	2.54	40.39	22.23	18.16

New Stakes- M.H. 6 + 7 + Bet.

23+75-10' Rt. 11.37 33.86 20.19 13.37

24+00-10' Rt. 11.05 33.88 20.23 13.65

24+50-20' Lt. 9.16 35.77 20.30 15.47

25+00 " 6.26 38.87 20.38 18.19

25+50 5.71 39.22 20.45 18.77

26+10 <sup>15+45 Lt</sup> M.H. 6 5.37 39.56 20.54 19.02

26+50 5.68 39.25 20.64 18.61

27+00 6.01 38.92 20.77 18.15

27+50-20' Lt. 6.56 38.37 20.89 17.48

27+50-20' Rt. 4.97 39.96 20.89 19.07

28+00 4.98 39.95 21.02 18.93

28+50 4.98 39.95 21.14 18.81

29+00=T.P. 5.43 39.50 21.27 18.23

29+50 5.59 38.90 21.39 17.51

30+00 6.43 38.06 21.52 16.54

+50 5.92 38.57 21.64 16.93

31- 6.12 38.37 21.77 16.60

+50 6.07 38.42 21.89 16.53

32~ 5.23 39.26 22.02 17.24

+50 4.02 40.47 22.14 18.33

+85.08-M.H. 7 3.17 41.32 22.23 19.09

Fortuna  
Nail in Pole - SW.  
S.E. Pipe

40.58

41.22



0-in M.H.

~~53.66~~ 53.64

32 + 85.08 = M.H. 7				22.23	
26' Lt.					
33 - No stake				22.27	
+20	9.40	40.71	22.31	18.40	
+50	8.34	41.77	22.39	19.38	
34 -	7.49	42.62	22.52	20.10	
+50	6.34	43.77	22.64	21.13	
35 ~	5.68	44.43	22.77	21.66	
+50	4.79	45.32	22.89	22.43	
36	3.41	46.70	23.02	23.68	
+50 T.P.	1.83	48.28	23.14	25.14	
37 -	6.75	50.65	23.27	27.38	
+50	5.78	51.62	23.39	28.23	
38 ~	4.68	52.72	23.52	29.20	
+50	5.26	52.14	23.64	28.50	
39	8.88	48.52	23.77	24.75	

6

39 + 32.86 = M.H. 8	8.82	48.58	23.85	24.73
+50 - 24' Lt.	7.44	48.76	24.91	
+50 - 24' Lt.	6.83	49.37	23.89	25.48
40 -	9.00	47.20	24.02	23.18
+50	9.32	46.88	24.14	22.74
41 -	10.68	45.52	24.27	21.25
+50	12.15	44.05	24.39	19.66
<del>48.54</del>	12.03	44.17 = Cor. Walk		
42 ~	5.35	43.19	24.52	18.67
+50	5.43	43.11	24.64	18.47
43 ~	5.70	42.84	24.77	18.07
+50	4.59	43.95	24.89	19.06
44 ~	4.15	44.39	25.02	19.37
$\pi = 51.92$				
+50	6.83	45.09	25.14	19.95

Cor. Brick wall → 43.73

+ Haines  
Nail - Reed~~47.98~~

24' Lt.

45 -		6.04	45.88	25.27	20.61
+50		5.36	46.56	25.39	21.17
46 -		4.54	47.38	25.52	21.86
46 + 37.02 = M.H. 9	3.70		48.22	25.62	22.60
	34' Rt.	2.67	48.75		→ 23.13
+50		2.20	49.22	25.64	22.58
47 -		3.03	48.39	25.77	22.62
+50		5.71	45.71	25.89	19.82
48 -	34' Rt. 10' Rt.	0.88	41.25	26.02	15.23
+25		2.51	39.62	26.08	13.54
+50		3.72	38.41	26.14	12.27
+75		4.77	37.36	26.21	11.15
49 -		6.06	36.07	26.27	9.80
+25		6.83	35.30	26.33	8.97
+50		7.59	34.54	26.39	8.15
+75		8.58	33.55	26.45	7.10
50 -		8.72	33.41	26.52	6.89

F 0.66 = To Top M.H.

32.38 -  
Mon. Cressham  
+ Reed

50 + 25	9.22	32.91	26.58	6.33
+50	9.28	32.85	26.64	6.21
+75	9.54	32.59	26.70	5.89
51 -	5.62	32.25	26.77	5.48
+25	5.67	32.20	26.83	5.37
+50	5.72	32.15	26.89	5.26
+75	5.50	32.37	26.95	5.42
52 -	5.94	31.93	27.02	4.91
52 + 13 = M.H. 10	6.77	31.10	27.05	4.05
		10' + 20' S.		
+25	6.04	31.83	27.09	4.75
+50	4.74	33.13	27.14	5.99
+75	4.47	33.40	27.21	6.39
53 -	4.55	33.32	27.27	6.05
+25	3.84	34.03	27.33	6.70
+50	3.21	34.66	27.39	7.27
+75	3.08	34.79	27.45	7.34
54 -	3.10	34.77	27.52	7.25
+25	2.32	35.55	27.58	7.97
+50	2.13	35.74	27.64	8.10
+75	2.04	35.83	27.70	8.13
55 -	1.64	36.23	27.77	8.46
+25	1.44	36.43	27.83	8.60
+50	1.73	36.14	27.89	8.25

10' Lt.

55+75	5.82	36.60	27.95	8.65
56 ~	5.10	37.32	28.02	9.30
+25	4.72	37.70	28.08	9.62
+55	4.19	38.23	28.14	10.09
+75	3.85	38.57	28.21	10.36
57 ~	3.76	38.66	28.27	10.39
+25	2.96	39.46	28.33	11.13

57+38.10 = M.H. 11 3.01 39.41 28.37 11.04

= Prop. Pipe at Alley.  
6' Rt.

39.43

57+50	9.65	39.62	28.39	11.23
+75			28.45	
58 ~	8.95	40.32	28.52	11.80
+25	8.43	40.84	28.58	12.26
+50	7.62	41.65	28.64	13.01
+75	6.59	42.68	28.70	13.98
59 ~	5.32	43.95	28.77	15.18
+25	4.79	44.48	28.83	15.65
+50	4.64	44.63	28.89	15.74
+75	4.93	44.34	28.95	15.39
60 ~	5.24	44.03	29.02	15.01
+25	5.35	43.92	29.08	14.84

60+50	5.26	44.01	29.14	14.87
+75	5.16	44.11	29.21	14.90
61 ~	4.71	44.56	29.27	15.29
+25	4.21	45.06	29.33	15.73
+50	4.09	45.18	29.39	15.79
+75	3.70	45.57	29.45	16.12
62 ~	3.35	45.92	29.52	16.40
+25	3.05	46.22	29.58	16.64
+50	2.63	46.64	29.64	17.00
+75	2.20	47.07	29.70	17.37
63 ~	1.76	47.51	29.77	17.74
+06.76 = M.H. 12	1.65	47.62	29.79	17.83

6 Ft. Both ways

Nail in S.W. Pole

47.43

63+25	1.64	46.47	29.83	16.64
+50	2.10	46.01	29.89	16.12
+75	2.46	45.65	29.95	15.70
64 ~	2.95	45.16	30.02	15.14
+25	3.49	44.62	30.08	14.54
+50	3.79	44.32	30.14	14.18
+75	4.06	44.05	30.21	13.84
65 ~	4.27	43.84	30.27	13.57
+25	4.44	43.67	30.33	13.34

SE. Hornblende Fanuel

41.23

6' Rt.

65 + 50	4.72	43.39	30.39	13.00	
+75	4.95	43.16	30.45	12.71	
66 ~	5.09	43.02	30.52	12.50	
+25	5.26	42.85	30.58	12.27	
+50	5.23	42.88	30.64	12.24	
+75	5.35	42.76	30.70	12.06	
67 ~	5.36	42.75	30.77	11.98	
+25	5.54	42.57	30.83	11.74	
+50	5.66	42.45	30.89	11.56	
+75	5.83	42.28	30.95	11.33	
68 ~	6.00	42.11	31.02	11.09	
+25	6.44	41.67	31.08	10.59	
+50	6.74	41.37	31.14	10.23	
+75	6.88	41.10	31.20	9.87	
+86.60 = MH	7.11	41.00	31.24	9.76	
69 ~	T.P.	7.15	40.96	31.27	9.69
+25		7.39	41.33	31.33	10.00
+50		6.79	41.93	31.39	10.54
+75		6.41	42.31	31.45	10.86
70 ~		6.09	42.63	31.52	11.11
+25		5.76	42.96	31.58	11.38
+50		5.35	43.37	31.64	11.73
+75		4.94	43.78	31.70	12.08

848 + 10'

6' Rt.

71 ~	4.52	44.20	31.77	12.43	
+25	4.11	44.61	31.83	12.78	
+50	3.72	45.00	31.89	13.11	
+75	3.32	45.40	31.95	13.45	
72 ~	2.93	45.79	32.02	13.77	
+25	2.59	46.13	32.08	14.08	
+50	2.56	46.16	32.14	14.02	
+75	2.18	46.54	32.21	14.33	
73 ~	T.P.	1.77	46.95	32.27	14.68
+25		7.21	47.30	32.33	14.97
+50		6.89	47.62	32.39	15.23
+75		6.53	47.98	32.45	15.53
74 ~		6.26	48.25	32.52	15.73
+25		5.96	48.55	32.58	15.97
+50		5.61	48.90	32.64	16.26
+75		5.24	49.27	32.70	16.57
75 ~		4.92	49.59	32.77	16.82
+25		4.58	49.93	32.83	17.10
+50		4.23	50.28	32.89	17.39
+85.58 = M.H. 14				32.98	
± Cross				50.68	
B.M. = Cor. N.W. Ret.				51.00	
Petspar + Fanuel					

9

75 + 45.58 = M.H. 14	3.57	50.88	32.98	17.90
76 ~ 6 Rt.	4.50	49.95	33.02	16.93
+25	3.71	50.74	33.08	17.66
+50	3.30	51.15	33.14	18.01
+75	3.46	50.99	33.21	17.78
77 ~	3.62	50.83	33.27	17.56
+25	3.75	50.70	33.33	17.37
+50	3.91	50.54	33.39	17.15
+75	4.04	50.41	33.45	16.96
78 ~	4.11	50.34	33.52	16.82
+25	4.21	50.24	33.58	16.66
+50	4.33	50.12	33.64	16.48
+75	4.62	49.83	33.70	16.13
79 ~	4.88	49.57	33.77	15.80
+25	5.14	49.31	33.83	15.48
+50	5.23	49.22	33.89	15.33
+75	5.44	49.01	33.95	15.06
80 ~	5.68	48.77	34.02	14.75
+25	5.96	48.49	34.08	14.41
+50	6.31	48.14	34.14	14.00
+75	6.72	47.73	34.21	13.52
81 ~	7.28	47.17	34.27	12.90
+25	7.83	46.62	34.33	12.29
+50	8.40	46.05	34.39	11.66
81 + 64.76 = M.H. 15	8.34	46.11	34.43	11.68

+ Everts  
Nail in fence - Felspar

47.93 10

81 + 64.76 = M.H. 15				
82 ~	11.08	46.40	34.52	11.88
+25	10.86	46.62	34.58	12.04
+50	10.48	47.00	34.64	12.36
+75	10.12	47.36	34.70	12.66
83 ~	9.61	47.87	34.77	13.10
+25	9.06	48.42	34.83	13.59
+50	8.45	49.03	34.89	14.14
+75	8.07	49.41	34.95	14.46
84 ~	7.64	49.84	35.02	14.82
+25	7.00	50.48	35.08	15.40
+50	6.12	51.36	35.14	16.22
+75	5.44	52.04	35.21	16.83
85 +	4.74	52.74	35.27	17.47
+14.80 = M.H. 16	4.22	53.26	35.31	17.95
end cb = N.E. Cor.			54.49	
85 + 25	3.05	52.90	35.33	17.57
+50	2.99	52.96	35.39	17.57
+75	3.07	52.88	35.45	17.43
86 ~	3.21	52.74	35.52	17.22
+25	3.42	52.53	35.58	16.95
+50	3.64	52.31	35.64	16.67

Lo. Pipe Dawes + Emerald 48.90  
 F.H. Dawes + Diamond 54.77

86+75	3.74	52.21	35.70	16.57
87~	3.87	52.08	35.77	16.31
+25	4.24	51.71	35.83	15.88
+50	4.85	51.10	35.89	15.21
+75	5.40	50.55	35.95	14.60
88~	5.88	50.07	36.02	14.05
+25	6.45	49.50	36.08	13.42
+50	6.87	49.08	36.14	12.94
+75	7.18	48.77	36.21	12.56
89~	7.60	48.35	36.27	12.08
+25	7.71	48.24	36.33	11.91
+50	7.97	47.98	36.39	11.59
+75	8.30	47.65	36.45	11.20
90~	8.69	47.27	36.52	10.75
+25	9.20	46.75	36.58	10.17
+50	9.82	46.13	36.64	9.49
+75	10.10	45.85	36.70	9.15
90+94.30 = M.H. 17 <sup>10.27</sup>	45.68	36.76	8.92	
91+25	9.88	46.07	36.83	9.24
+50	9.42	46.53	36.89	9.64
+75	7.99	47.04	36.95	10.09
92~	7.63	47.40	37.02	10.38

92+25	7.18	47.85	37.08	10.77
+50	6.62	48.41	37.14	11.27
+75	6.04	48.99	37.21	11.78
93~	5.34	49.69	37.27	12.42
+25	4.84	50.19	37.34	12.85
+50	4.36	50.67	37.41	13.26
+75	3.84	51.19	37.48	13.71

94+03.70 - Meet <sup>3.26</sup> Pipe 51.77 37.57 14.20

Nw. Bayard + Law - 58.93  
 Begin at M.H. at Law + Bayard

116+45.43 = M.H. #21	18.91	43.19	43.13	
+75	3.58	58.52	43.24	15.28
117-	3.75	58.35	43.27	15.08
+25	3.96	58.14	43.33	14.81
+50	4.18	57.92	43.39	14.53
+75	4.42	57.68	43.45	14.23
118	4.61	57.49	43.52	13.97
+25	4.85	57.25	43.59	13.67
+50	5.02	57.08	43.64	13.44
+75	5.21	56.89	43.70	13.19

N.E. Law + Mission

55.10

119~	5.40	56.70	43.77	12.93
+25	5.64	56.46	43.83	12.63
+50	5.83	56.27	43.89	12.38
+75	5.97	56.13	43.95	12.18
120~	6.26	55.84	44.02	11.82
+25	6.43	55.67	44.08	11.59
+50	6.66	55.44	44.14	11.30
+75	6.89	55.21	44.21	11.00
121~	7.05	55.05	44.27	10.79
+25	7.26	54.84	44.33	10.51
+50	7.47	54.63	44.39	10.24
+75	4.03	54.36	44.45	9.91
122~	4.57	53.82	44.52	9.30
+25	4.53	53.86	44.58	9.28
+43.22 = M.H. 22	4.60	53.79	44.63	9.16
+75	9.87	54.19	44.70	9.49
123~	9.35	54.71	44.77	9.94
+25	8.94	55.12	44.83	10.29
+50	8.51	55.55	44.89	10.66
+75	8.12	55.94	44.95	10.99
124~	7.76	56.30	45.02	11.28
+25	7.24	56.82	45.08	11.74
+50	6.80	57.26	45.14	12.12
+75	6.34	57.72	45.21	12.51

N.E. Wilbur + Mission

66.25

12

125~	5.87	58.19	45.27	12.92
+25	5.45	58.61	45.33	13.28
+50	5.05	59.01	45.39	13.62
+75	4.50	59.56	45.45	14.11
126~	4.16	59.91	45.52	14.39
+25	3.81	60.25	45.58	14.67
+50	3.37	60.69	45.64	15.05
+75	2.95	61.11	45.70	15.41
127~	2.48	61.58	45.77	15.81
+25	2.07	61.99	45.83	16.16
+50	1.64	62.42	45.89	16.53
+75	1.25	62.81	45.95	16.86
128~	0.85	63.21	46.02	17.19
+25	0.46	63.60	46.08	17.52
+50	10.42	63.98	46.14	17.84
+75	10.02	64.38	46.21	18.17
129~	9.62	64.75	46.27	18.51
+25	9.19	65.21	46.33	18.88
+50	8.70	65.70	46.39	19.31
+75	8.30	66.10	46.45	19.65
130~	7.91	66.49	46.52	19.97
+25	7.45	66.95	46.58	20.37
+50	7.00	67.40	46.64	20.76
+75	6.51	67.89	46.70	21.19

119~	5.40	56.70	43.77	12.93
+25	5.64	56.46	43.83	12.63
+50	5.83	56.27	43.89	12.38
+75	5.97	56.13	43.95	12.18
120~	6.26	55.84	44.02	11.82
+25	6.43	55.67	44.08	11.59
+50	6.66	55.44	44.14	11.30
+75	6.89	55.21	44.21	11.00
121-	7.05	55.05	44.27	10.79
+25	7.26	54.84	44.33	10.51
+50	sp - 7.47	54.63	44.39	10.24
+75	4.03	54.36	44.45	9.91
122~	4.57	53.82	44.52	9.30
+25	4.53	53.86	44.58	9.28
+42.22 = M.H.22	4.60	53.79	44.63	9.16
+75	9.87	54.19	44.70	9.49
123~	9.35	54.71	44.77	9.94
+25	8.94	55.12	44.83	10.29
+50	8.51	55.55	44.89	10.66
+75	8.12	55.94	44.95	10.99
124~	7.76	56.30	45.02	11.28
+25	7.24	56.82	45.08	11.74
+50	6.80	57.26	45.14	12.12
+75	6.34	57.72	45.21	12.51

125~	5.87	58.19	45.27	12.92
+25	5.45	58.61	45.33	13.28
+50	5.00	59.03	45.39	13.62
+75	4.55	59.45	45.45	14.11
+100	4.10	59.87	45.52	14.39
+125	3.65	60.29	45.58	14.67
+150	3.20	60.71	45.64	15.05
+175	2.75	61.13	45.70	15.41
+200	2.30	61.55	45.77	15.81
+225	1.85	61.97	45.83	16.16
+250	1.40	62.39	45.89	16.53
+275	0.95	62.81	45.95	16.86
+300	0.50	63.23	46.02	17.19
+325	0.05	63.65	46.08	17.52
+350	0.00	64.07	46.14	17.84
+375	0.00	64.49	46.21	18.17
+400	0.00	64.91	46.27	18.51
+425	0.00	65.33	46.33	18.88
+450	0.00	65.75	46.39	19.31
+475	0.00	66.17	46.45	19.65
+500	0.00	66.59	46.52	19.97
+525	0.00	67.01	46.58	20.37
+550	0.00	67.43	46.64	20.76
+575	0.00	67.85	46.70	21.19

413/48

G-250/69 3.



131 ~	5.97	68.43	46.77	21.66
+25	5.46	68.94	46.83	22.11
+50	4.98	69.42	46.89	22.53
+75	4.43	69.97	46.95	23.02
132 ~	3.90	70.50	47.02	23.48
+25	3.40	71.00	47.08	23.92
+50	2.96	71.44	47.14	24.30
+65.51 = MH. 23	2.76	71.64	47.18	24.46
133 ~	4.31	71.15	47.27	23.88
+25	4.49	70.97	47.33	23.64
+50	4.94	70.52	47.39	23.13
+75	5.59	69.87	47.45	22.42
134 ~	5.11	70.35	47.52	22.83
+27.65 = MH. 24	4.49	70.97	47.59	23.38

Begin Grades for Sewer  
Trunk #2 - W.O. 60057  
Plan - 1260-D

15.29 = Top Hyd.

190 + 32.45 = Meet Pipe = M.H. 50				
	4.60	13.31	6.49	6.82
190 + 50	4.84	13.07	6.51	6.56
+ 75	5.30	12.61	6.53	6.08
191 ~	5.42	12.49	6.55	5.94
+ 25	5.53	12.38	6.57	5.81
+ 50	5.63	12.28	6.59	5.69
+ 75	5.71	12.20	6.61	5.59
192 ~	5.53	12.38	6.63	5.75
+ 25	6.11	11.80	6.65	5.15
+ 50	6.36	11.55	6.67	4.88
+ 75	6.44	11.43	6.69	4.74
193 ~	6.99	10.92	6.71	4.21
+ 25	6.11	11.80	6.73	5.07
+ 50	7.05	10.86	6.75	4.11
+ 75	5.38	12.53	6.77	5.76
194 ~	5.89	12.02	6.79	5.23
+ 25	7.60	10.31	6.81	3.50
+ 50	7.53	10.38	6.83	3.55
+ 75	5.78	12.13	6.85	5.28
195 ~	5.15	12.76	6.87	5.89

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B.P. in Bridge

13.72

195 + 25	5.22	12.69	6.89	5.80
+ 38.39 = M.H. 51	5.39	12.52	6.90	5.62
195 + 50	6.12	12.72	6.91	5.81
+ 75	6.54	12.30	6.93	5.37
196 ~	6.60	12.24	6.95	5.29
+ 25	6.09	12.75	6.97	5.78
+ 50	5.79	13.05	6.99	6.06
+ 75	5.37	13.47	7.01	6.46
197 ~	5.62	13.22	7.03	6.19
+ 25	5.56	13.28	7.05	6.23
+ 38.39 = M.H. 52	5.62	13.22	7.06	6.16

bridge

Bent. #		Bottom of 8" beam	Top Pipe	cut from Beam to Top of Pipe					
1	Last cuts →	10.15	9.86	- 0.59	199 + 32.39 = M.H. 53	5.91	12.91	7.22	5.69
		10.14		0.58	8' Lt.				
2		10.26	9.58	- 0.68	+50	5.61	13.21	7.23	5.98
		10.25		0.67	+75	5.26	13.56	7.25	6.31
3		10.13	9.60	- 0.53	200 ~	5.20	13.62	7.27	6.35
		10.13			+25	5.07	13.75	7.29	6.46
4		10.21	9.62	- 0.59	+50	5.27	13.55	7.31	6.24
		10.21			+75	5.40	13.42	7.33	6.09
5		10.04	9.64	- 0.40	201 ~	5.52	13.30	7.35	5.95
		10.04			+25	5.33	13.49	7.37	6.12
6		10.13	9.67	- 0.46	+41.96 = M.H. 54	5.18	13.64	7.38	6.26
		10.12		0.45					
7		9.99	9.69	- 0.30	+75	5.38	13.44	7.41	6.03
		9.99		0.29	202 ~	5.57	13.25	7.43	5.82
8		10.01	9.71	- 0.30	+25	5.53	13.29	7.45	5.84
		10.00		0.29	+50	5.40	13.42	7.47	5.95
9		10.01	9.74	- 0.27	+75	5.42	13.40	7.49	5.91
		10.00		0.26	203 ~	6.00	12.82	7.51	5.31
10		10.04	9.76	- 0.28	+25	5.66	13.16	7.53	5.63
		10.04		0	+50 8' Lt.	5.38	13.44	7.55	5.89
11		9.87	9.79	- 0.08	+77.26 = M.H. 55	5.28	13.54	7.57	5.97
		9.86		0.07					
					204 ~ 10' Lt.	5.54	13.09	7.59	5.50
					+25	5.42	13.21	7.61	5.60

				9.61 = Nail in pole Lt. 207+80	
204 +50	10' Lt.	5.66	12.97	7.63	5.34
+75		5.56	13.07	7.65	5.42
205 ~		5.68	12.95	7.67	5.28
+25		5.53	13.10	7.69	5.41
+50		5.39	13.24	7.71	5.53
+75	10' Lt.	6.71	11.92	7.73	4.19
+91.41 = M.H. 56	17' Lt.	4.96	13.67	7.74	5.93
	$\pi = 19.12$				
206 ~	17' Lt.				
+25		5.28	13.84	7.77	6.07
+50		5.04	14.08	7.79	6.29
+75		4.83	14.29	7.81	6.48
207 ~		4.65	14.47	7.83	6.64
+25		4.44	14.68	7.85	6.83
+50		4.25	14.87	7.87	7.00
+75		4.09	15.03	7.89	7.14
208 ~		4.09	15.03	7.91	7.12
+25		3.97	15.15	7.93	7.22
+50	$\pi = 21.11$	5.85	15.26	7.95	7.31
+75		5.66	15.45	7.97	7.48
209 ~		5.53	15.58	7.99	7.59
+25		5.40	15.71	8.01	7.70
+50		5.35	15.76	8.03	7.73
+75		5.25	15.86	8.05	7.81
210 ~		5.26	15.85	8.07	7.78

					13.88 = Nail in Pole 11+80	16
210 +25		5.09	16.02	8.09	7.93	
+50		4.70	16.41	8.11	8.30	
+75		4.54	16.57	8.13	8.44	
211 ~		4.44	16.67	8.15	8.52	
+25		4.35	16.76	8.17	8.59	
+50		4.23	16.88	8.19	8.69	
+75		4.12	16.99	8.21	8.78	
212 ~		4.32	16.79	8.23	8.56	
+25		4.39	16.72	8.25	8.47	
+49.39 = M.H. 57	17' Lt.	4.05	17.06	8.27	8.79	
	$\pi = 27.07$					
+75		8.10	18.97	8.29	10.68	
213 ~		7.06	20.01	8.31	11.70	
+25		6.45	20.62	8.33	12.29	
+50		5.85	21.22	8.35	12.87	
+75		5.58	21.49	8.37	13.12	
214 ~		5.46	21.61	8.39	13.22	
+25		4.16	22.91	8.41	14.50	
+50		3.66	23.41	8.43	14.98	
+75		4.15	22.92	8.45	14.47	
215 ~		4.62	22.45	8.47	13.98	
+25		5.52	21.55	8.49	13.06	
+50		6.05	21.02	8.51	12.51	
+75		6.80	20.27	8.53	11.74	
216 ~		5.75	21.32	8.55	12.77	

24.15 = Mail Pole  
M.H. 58

$\bar{x} = 24.32$

216 + 25	2.79	21.53	8.57	12.96
+50	3.99	20.33	8.59	11.74
+75	6.31	18.01	8.61	9.40
217 ~	4.25	20.07	8.63	11.44
+25	4.47	19.85	8.65	11.20
+50	5.07	19.25	8.67	10.58
+75	4.86	19.46	8.69	10.97
218 ~	4.40	19.92	8.71	11.21
+25	3.93	20.39	8.73	11.66
+50	3.63	20.69	8.75	11.94
+75	3.35	20.97	8.77	12.20
219 ~	2.96	21.36	8.79	12.57
+25	2.69	21.63	8.81	12.82
+50	2.05	22.27	8.83	13.44
+75	1.96	22.36	8.85	13.51
220 ~	2.00	22.32	8.87	13.45
+25	1.12	23.19	8.89	14.30
+50	1.42	22.90	8.91	13.99
+73.01 = M.H. 58	0.86	23.46	8.93	14.53

$\bar{x} = 25.20$

10' Rt.

221 ~	2.45	22.75	8.95	13.80
+25	2.98	22.22	8.97	13.25
+50	3.57	21.63	8.99	12.64
+75	4.17	21.03	9.01	12.02

17

222 ~	4.80	20.40	9.03	11.37
+25	5.46	19.74	9.05	10.69
+50	6.11	19.09	9.07	10.02
+75	6.54	18.66	9.09	9.57
223 ~	7.06	18.14	9.11	9.03
+25	7.59	17.61	9.13	8.48
+50	7.97	17.23	9.15	8.09
+75	8.49	16.71	9.17	7.54
+97.84 = M.H. 60	9.05	16.15	9.19	6.96
224 + 25	8.59	16.61	9.21	7.40
+50	7.92	17.28	9.23	8.05
+75	9.96	18.14	9.25	8.89
225 ~	9.21	18.89	9.27	9.62
+25	8.69	19.41	9.29	10.12
+50	8.40	19.70	9.31	10.39
+75	8.07	20.03	9.33	10.70
226 ~	7.78	20.32	9.35	10.97
+25	7.10	21.00	9.37	11.63
+50	6.57	21.53	9.39	12.14
+75	6.14	21.96	9.41	12.55
227 ~	5.28	22.82	9.43	13.39
+25	4.67	23.43	9.45	13.98
+50	3.89	24.21	9.47	14.74

25.33 Pole - opp  
Light 231+00

10' Lt. 28.10

227+75		3.19	24.91	9.49	15.42
228~		2.94	25.16	9.51	15.65
+25	$\pi=31.84$	6.30	25.54	9.53	16.01
+50		5.75	26.09	9.55	16.54
+75		5.71	26.13	9.57	16.56
229~		5.73	26.11	9.59	16.52
+25		5.38	26.46	9.61	16.85
+50		4.10	27.65	9.62	18.02
			27.74		18.11
+80.18 = M.H.	10' N.	6.1	27.15	9.66	17.49
		3.37	28.47		18.81

- 14' Lt. Both ways

$\pi=28.50$

230~	10' Lt.	1.42	26.99	9.67	17.32
			27.14		17.47
+25		1.95	26.41	9.69	16.72
			26.61		16.92
+50		2.89	25.76	9.71	16.05
			25.97		16.26
+75		3.31	25.10	9.73	15.37
			25.25		15.52
231~		3.92	24.45	9.75	14.70
			24.64		14.89
+25		4.61	23.81	9.77	14.04
			23.95		14.18
+50		5.30	23.10	9.79	13.31
			23.26		13.47
+75		6.01	22.40	9.81	12.59
			22.55		12.74
232~		6.50	22.06	9.83	12.23
+25		7.05	21.51	9.85	11.66
+50		7.58	20.98	9.87	11.11
+75		8.15	20.41	9.89	10.52
233+05.21 = (62)	10' E.	8.92	19.64	9.92	9.72

18

10' Rt.

233+25		5.90	22.66	9.93	12.73
+50		4.48	24.08	9.95	14.13
+75	$\pi=37.55$	12.51	25.04	9.97	15.07
234~		12.17	25.38	9.99	15.39
+25		12.12	25.43	10.01	15.42
+50		11.84	25.71	10.03	15.68
+75		12.43	25.12	10.05	15.07
235~		12.19	25.26	10.07	15.29
+25		11.61	25.94	10.09	15.85
+50		10.97	26.58	10.11	16.47
+75		10.78	26.77	10.13	16.64
236~	14' Rt.	9.63	27.92	10.15	17.77
+25	"	8.61	28.94	10.17	18.77
+50	"	7.50	30.05	10.19	19.86
+75		6.08	31.47	10.21	21.26
237~		4.72	32.83	10.23	22.60
+25		3.96	33.59	10.25	23.34
+50		3.31	34.24	10.27	23.97
+75		3.44	34.11	10.29	23.82
238~		3.58	33.97	10.31	23.66
+25		4.78	32.77	10.33	22.44
+50		6.67	30.88	10.35	20.53
+66.61 = (63)		6.78	30.77	10.37	20.40

	Cross on M.H. Noyes K = 34.88		29.27		
	12' Rt.		Grade		
239~		6.22	28.63	10.39	18.24
+25'		8.27	26.58	10.41	16.17
+50		9.54	25.31	10.43	14.88
+75'		10.66	24.19	10.45	13.74
240~		11.59	23.26	10.47	12.79
+25'		11.69	23.16	10.49	12.67
+50		11.80	23.05	10.51	12.54
+75'		11.85	23.00	10.53	12.47
241~		11.70	23.15	10.55	12.60
+25'		9.49	25.36	10.57	14.79
+50		8.22	26.63	10.59	16.04
+75'		7.72	27.13	10.61	16.52
242~		7.89	26.96	10.63	16.33
+25'		9.27	25.58	10.65	14.93
+50		9.03	25.82	10.67	15.15
+75'		9.29	25.56	10.69	14.87
243~		8.86	25.99	10.71	15.28
+25'		8.58	26.27	10.73	15.54
+50		8.04	26.81	10.75	16.06
+75'		6.35	28.50	10.77	17.73
244~		4.50	30.35	10.79	19.56
+25'	12' Rt.	2.36	32.49	10.81	21.68
+41.21 = (64)		0.94	33.91	10.83	23.08
+75 - 20' Lt.	T 37.09	3.04	34.05	10.85	23.20

	12' Lt.	37.09	Top Hyd. Reed.	31.77	19	
245'			2.71	34.38	10.87	23.51
+25'			2.63	34.46	10.89	23.57
+50			2.99	34.10	10.91	23.19
+75'			3.17	33.92	10.93	22.99
246~			3.38	33.71	10.95	22.76
+25'		34.68	3.68	33.41	10.97	22.44
+50	15' Rt.		1.07	33.61	10.99	22.62
+75'			1.80	32.88	11.01	21.87
247~			2.76	31.92	11.03	20.89
+25'			3.36	31.32	11.05	20.27
+50			4.04	30.64	11.07	19.57
+75'			4.50	30.18	11.09	19.09
248~			4.98	29.70	11.11	18.59
+25'			5.20	29.48	11.13	18.35
+50			5.60	29.08	11.15	17.93
+75'			6.21	28.47	11.17	17.30
249~			7.07	27.61	11.19	16.42
+25'			8.32	26.36	11.21	15.15
+50			9.45	25.23	11.23	14.00
+80	15' Rt. 56' = M.H. 65	32.36	10.65	24.03	11.26	12.77
250~	10' Rt.		9.27	23.09	11.27	11.82
+25'			10.79	21.57	11.29	10.28
+50			12.79	19.57	11.31	8.26
+75'	23.57		6.00	17.57	11.33	6.24

10' Rt.

23.57

251~	7.74	15.83	11.35	4.49
+25	8.91	14.66	11.37	3.29
+50	9.45	14.12	11.39	2.73
+75	9.21	14.26	11.41	2.95
252~	9.01	14.56	11.43	3.13
+25	7.43	16.14	11.45	4.69
+50	6.03	17.54	11.47	6.07
+75	5.40	18.17	11.49	6.68
253~	4.74	18.83	11.51	7.22
+25	4.45	19.12	11.53	7.89
+50	4.01	19.56	11.55	8.01
+75	3.30	20.27	11.57	8.70
254~	2.33	21.24	11.59	9.65
+25	1.28	22.29	11.61	10.68
+50	0.62	22.95	11.63	11.32
+75	0.13	23.44	11.65	11.79
15' Rt. Bothways	35.65			
15' Rt.				
255~	11.88	23.77	11.67	12.10
+25	10.57	25.08	11.69	13.39
+50	8.53	27.12	11.71	15.41
+75	8.27	27.28	11.73	15.65
256~	6.92	28.73	11.75	16.98
+25	5.99	29.66	11.77	17.89
+50	5.12	30.53	11.79	18.74

15' Rt. 35.65

23.37 = Mon. - Movcell + P.P.

20

+75	4.05	31.60	11.81	19.79
257~	2.46	32.19	11.83	20.36
+25	2.71	32.94	11.85	21.09
+50	2.03	33.62	11.87	21.75
+60.06	2.39	33.26	11.88	21.38
+75	4.09	31.56	11.89	19.67
258~	4.32	31.33	11.91	19.42
+25	4.72	30.93	11.93	19.00
+50	5.54	30.11	11.95	18.16
+75	6.11	29.54	11.97	17.57
259~	6.82	28.83	11.99	16.84
+25	7.77	27.88	12.01	15.87
+50	8.25	27.40	12.03	15.37
+75	8.81	26.84	12.05	14.79
15' Rt.				
260~	9.39	26.26	12.07	14.19
+25	3.70	25.77	12.09	13.68
+50	4.26	25.21	12.11	13.10
+75	5.02	24.45	12.13	12.32
261~	5.84	23.63	12.15	11.48
+25	6.73	22.74	12.17	10.57
+50	7.25	22.22	12.19	10.03
+75	7.74	21.73	12.21	9.52
262~	8.12	21.25	12.23	9.12
+25	8.43	21.04	12.25	8.79



28.15 = Pipe  
Honey cutt

29.47

262+50 - 10' Lt.	8.77	20.70	12.27	8.43
+75	9.04	20.43	12.29	8.14
263 ~	9.32	20.15	12.31	7.84
+25	9.60	19.87	12.33	7.54
+50	9.99	19.48	12.35	7.13
+75' 10' Rt.	9.94	19.53	12.37	7.16
264 ~	10.42	19.05	12.39	6.66
+25	10.96	18.51	12.41	6.10
+46.86 <sup>10' Rt. Both ways</sup>	10.55	18.92	12.43	6.49
= MH. (68) <sub>26.06</sub>				
+75	7.05	19.01	12.45	6.56
265 ~	6.92	19.14	12.47	6.67
+25	6.72	19.34	12.49	6.85
+50	6.55	19.51	12.51	7.00
+75	6.44	19.62	12.53	7.09
266 ~	6.52	19.54	12.55	6.99
+25	6.67	19.39	12.57	6.82
+50	6.58	19.48	12.59	6.89
+75	6.52	19.54	12.61	6.93
267 ~	6.26	19.80	12.63	7.17
+25	6.11	19.95	12.65	7.30
+50	6.01	20.05	12.67	7.38
+75	5.71	20.35	12.69	7.66
268 ~	5.26	20.80	12.71	8.09
+25	4.27	21.79	12.73	9.06

Nail in Pole - Fatuna  
+ Honey cutt

19.87

21

268+50	3.62	22.44	12.75	9.69
+75	3.25	22.81	12.77	10.04
269 ~	2.57	22.49	12.79	10.70
+25	1.86	24.20	12.81	11.39
+50	1.24	24.82	12.83	11.99
+75	0.46	25.60	12.85	12.75
270 ~ <sub>31.64</sub>	5.23	26.41	12.87	13.54
+25	4.43	27.21	12.89	14.32
+62.86 = (69)	3.36	28.28	12.92	15.36
+75 <sub>π=29.69</sub>	1.95	27.74	12.93	14.81
271 ~ <sub>10' Rt.</sub>	2.10	27.59	12.95	14.64
+25	2.50	27.19	12.97	14.22
+50	2.99	26.70	12.99	13.71
+75	3.52	26.17	13.01	13.16
272 ~	3.97	25.72	13.03	12.69
+25	4.39	25.30	13.05	12.25
+50	4.82	24.87	13.07	11.80
+75	5.31	24.38	13.09	11.29
273 ~		23.90	13.11	10.79
+25		23.56	13.13	10.43
+50		23.12	13.15	9.97
+75		22.79	13.17	9.62
274 ~		22.44	13.19	9.25
+25		22.06	13.21	8.85

2678. Pipe Sequoia + Fotuna

274 +50	10' Rt.	6.15	21.83	13.23	8.60
+75			21.68	13.25	8.43
275~			21.72	13.27	8.45
+25			21.68	13.29	8.39
+50			21.99	13.31	8.68
+75			22.30	13.33	8.97
276~			22.68	13.35	9.33
+25			23.31	13.37	9.94
+50			24.03	13.39	10.64
+75			24.62	13.41	11.21
277~			24.89	13.43	11.46
+27= MH. 70			25.61	13.45	12.16
+50			25.80	13.47	12.33
x +75			25.80	13.49	12.31
278~			25.74	13.51	12.23
+25			25.66	13.53	12.13
+50			25.49	13.55	11.94
+75			25.03	13.57	11.46
279~			24.60	13.59	11.01
+25			24.10	13.61	10.49
+50			23.55	13.63	9.92
+75			22.97	13.65	9.32
280~			22.46	13.67	8.79
+25			22.04	13.69	8.25

Pipe 24.31

22

280 +50	10' Rt.		21.82	13.71	8.11
+75			21.42	13.73	7.69
281~			20.88	13.75	7.13
+25			20.39	13.77	6.62
+50			20.06	13.79	6.27
+75			19.86	13.81	6.05
282~			19.76	13.83	5.93
+25			19.74	13.85	5.89
+50			19.85	13.87	5.98
+75			20.45	13.89	6.56
+98.25= MH. 71			21.01	13.91	7.10
283 +25			21.33	13.93	7.40
+50			21.70	13.95	7.75
+75			22.00	13.97	8.03
284~			22.32	13.99	8.33
+35.87= MH. 72				14.02	

Sewer Grades - 8" Line in Alley - N. + S.  
of M.H. 3 - 1261-D - Sheet 1

Line to N. - 7' Lt.

0+00	24.07	17.25	6.82
+25' = Cross	24.51	17.44	7.07
+50 "	24.67	17.63	7.04
+75' - stake	24.71	17.82	6.89
1~	24.76	18.00	6.76
+25'	24.77	18.19	6.58
+50	24.83	18.38	6.45
+75'	24.93	18.57	6.36
2~	25.01	18.76	6.25
+25' = Nail	25.05	18.94	6.11
+50 "	25.13	19.13	6.00
+75'	25.13	19.32	5.81
3~	25.16	19.51	5.65
+32.5' = Ext. M.H.	19.74		

# 517

**INDEXED**

W.K.  
OCT 6 1949

Grades for New 12" Culverts at Jewell + La Playa

	53" pipe	F.L. Box	F.L. Conn.	
W. Inlet	19.92	22.17	19.92	3.25
E. Inlet	19.61	22.11	19.61	3.50
Clean out	18.46	22.93	18.70	4.23

23

Line to S. - 4' Lt.

0+00	17.25		
+25'	24.10	17.35	6.75
+50	24.91	17.45	7.46
+75'	25.66	17.55	8.11
1~	26.20	17.65	8.55
+25'	26.60	17.75	8.85
+50	26.67	17.85	8.82
+75'	27.04	17.95	9.09
2~	26.93	18.05	8.88
+25'	27.05	18.15	8.90
+50	26.80	18.25	8.55
+75'	26.57	18.35	8.22
3+05' =	18.46		

M.H. # 528

7-26-49 - 7.0.

24

± Grades - Redland Dr. - 55<sup>th</sup> to 204.8 W.BM - s.w. 7<sup>th</sup> ct.

437.54

0+00 = W.L. 55<sup>th</sup>

36.80

36.80 = exist. <sup>conc.</sup> Pave

+10 = P.C.

35.95

36.30  
5.95

F 0.35

INDEXED

W.K.

+25

34.65

35.31  
4.65

F 0.66

OCT 6 1949

+50

32.81

33.67  
2.81

F 0.86

+75

31.05

32.04  
1.05

F 0.99

1~

29.16

30.40  
9.16

F 1.24

+25

27.46

28.77  
7.46

F 1.31

+50

26.26

27.13  
6.26

F 0.87

+75

25.37

25.50  
25.37

F 0.13

2+04.8 = end.

24.60

4.60  
23.55

C 1.05

√5th to Melvin Dr.

Stakes for Culvert - Imperial Ave

Cut off - 7390-L

W.O. 22014 INDEXED 4-4-49 - 7.0.

B.M. - Top M.H. W.K. 142.43

OCT 6 1949

Outlet = 54.5' N. of  $\Phi$  - 6' W.  $\frac{489}{42.22}$   $\frac{42.22}{136.45}$  c 5.77

$\Phi$  of Inlet - 10'  
23' N. of  $\Phi$  = cb. face  $\Phi$

10' E. of  $\Phi$  Inlet.  $\frac{499}{42.13}$   $\frac{42.13}{36.69}$  c 5.44

10' W. of  $\Phi$  Inlet.  $\frac{579}{41.32}$   $\frac{41.32}{36.69}$  c 4.63

$\Phi$  Row. - 6' W.  $\frac{9.12}{37.99}$   $\frac{7.99}{37.00}$  c 0.99

33' S. of  $\Phi$  = cb. at  $\Phi$  10' Inlet.

10' E. of  $\Phi$   $\frac{9.17}{37.94}$   $\frac{7.94}{37.31}$  c 0.63

10' W. "  $\frac{8.64}{38.47}$   $\frac{8.40}{37.31}$  c 1.16

Rt. 6' + 2' at 90° ahead  
54.5' S =  $\Phi$  Cleanout  $\frac{7.35}{39.76}$   $\frac{9.76}{37.53}$  c 2.23

+35 6' Lt.  $\frac{8.46}{38.65}$   $\frac{6.5}{38.03}$  c 0.62

+70  $\frac{7.57}{39.54}$   $\frac{9.54}{38.53}$  c 1.01

+105  $\frac{5.72}{41.39}$   $\frac{41.39}{39.03}$  c 2.36

+40  $\frac{6.50}{41.61}$   $\frac{41.61}{39.53}$  c 2.08

+75  $\frac{6.13}{40.98}$   $\frac{98}{40.03}$  c 0.95

2+10  $\frac{6.55}{40.56}$   $\frac{96}{40.53}$  c 0.03

of 36" CI.  $\frac{12.38}{44.73}$   $\frac{44.73}{141.17}$  c 3.56

- FL. Exist. Pipe

c 1.09

Water + Sewer Lat. in Alley Bk. 97  
 City Hts. - 7426-L - w.o. 31543  
 4-27-49 - 7.0.

**INDEXED**

334.38

W.K.

OCT 6 1949

0+00 = N.L. Myrtle

Grade

all on Rt. - Stakes 2' Back

2+35 = (3) 11.52 22.86 <sup>22.86</sup> 317.08 c 5.78 = FL.

2+43 = (W) 11.34 22.04 <sup>23.04</sup> 22.40 c 0.64 = Top Pav

2+85 (2) 10.35 24.03 <sup>24.03</sup> 18.09 c 5.94

2+93 (W) # 10.20 24.18 <sup>4.18</sup> 23.44 c 0.74

4+10 (1) 8.35 26.03 <sup>6.03</sup> 20.64 c 5.39

4+18 (W) <sup>-1' Back</sup> 8.19 26.19 <sup>19</sup> 26.05 c 0.14

Grades for Paue - 20' Alley - Block B

Montecello - 7284-L

W.O. 31457

INDEXED

5-5-49-70

W.K.

OCT 6 1949

Lt = E.

Rt = W.

0+00 - Ave 2' B. 5.36 91.50 391.11 C 0.39

2' B. 5.13 91.73 91.11 C 0.62

+20 - 2' B. 5.26 91.60 91.17 C 0.43

2' B. 5.00 91.86 91.17 C 0.69

+40 - 2' B. 5.11 91.75 91.20 C 0.55

N - on Line 4.87 91.99 91.20 C 0.79

+60 - 2' B. 4.80 92.06 91.17 C 0.89

1' B. 4.86 92.00 91.17 C 0.83

+95 - 2' B. 5.28 91.58 91.06 C 0.52

2' B. 5.35 91.51 91.06 C 0.45

1+30 - 2' B. 4.95 91.91 90.96 C 0.95

2' B. 5.64 91.22 90.96 C 0.26

+65 - 2' B. 5.80 91.06 90.85 C 0.21

N - 0.24 B. 5.54 91.32 90.85 C 0.47

2+00 - 2' B. 5.88 90.98 90.75 C 0.23

N - 0.02 B. 3.96 92.90 90.75 C 2.15

+35 - 2' B. 5.79 91.07 90.64 C 0.43

N - 0.0 = on Line 3.82 93.04 90.64 C 2.40

+70 - N - 0.14 B. 4.36 91.32 90.54 C 0.78

2' B. 4.52 91.16 90.54 C 0.62

3+05 - N - 0.24 B. 3.91 91.77 90.43 C 1.34

1' B. 4.38 91.30 90.43 C 0.87

395.68

		395.68	F		
3+40	-2' B.	$\frac{5.08}{90.60}$	$\frac{90.60}{90.33}$	C 0.27	
+75	-2' B.	$\frac{4.99}{90.69}$	$\frac{90.69}{90.22}$	C 0.47	
4+10	-2' B.	$\frac{5.15}{90.53}$	$\frac{90.53}{90.12}$	C 0.41	
+45	-2' B.	$\frac{4.48}{91.20}$	$\frac{91.20}{90.01}$	C 1.19	
+80	-2' B.	$\frac{4.82}{90.86}$	$\frac{90.86}{89.91}$	C 0.95	
5+15	-2' B.	$\frac{5.02}{90.66}$	$\frac{90.66}{89.80}$	C 0.86	
+50	-N- 0.54 B.	$\frac{3.91}{91.77}$	$\frac{91.77}{89.70}$	C 2.07	
+85	-N- .04 in	$\frac{4.59}{91.09}$	$\frac{91.09}{89.59}$	C 1.50	
6+20	-N- 22 in	$\frac{4.79}{90.89}$	$\frac{90.89}{89.49}$	C 1.40	
+60	-2' B.	$\frac{5.67}{90.01}$	$\frac{90.01}{89.37}$	C 0.64	
+80	-2' B.	$\frac{5.41}{90.26}$	$\frac{90.26}{89.26}$	C 1.00	
7+00	-2' B.	$\frac{3.44}{89.81}$	$\frac{90.01}{89.06}$	C 0.75	

+30.82 =  
N.L. Adams

88.68  
4.57 = cb. cut

			W.	28	
1' B.		$\frac{4.68}{91.00}$	$\frac{91.00}{90.33}$	C 0.67	
2' B.		$\frac{4.42}{91.26}$	$\frac{91.26}{90.22}$	C 1.04	
2' B.		$\frac{4.67}{91.01}$	$\frac{91.01}{90.12}$	C 0.89	
2' B.		$\frac{4.32}{91.36}$	$\frac{91.36}{90.01}$	C 1.35	
-N- 0.04 B		$\frac{2.56}{93.12}$	$\frac{93.12}{89.91}$	C 3.21	
2' B.		$\frac{5.21}{90.47}$	$\frac{90.47}{89.80}$	C 0.67	
2' B.		$\frac{4.95}{90.73}$	$\frac{90.73}{89.70}$	C 1.03	
2' B.		$\frac{4.69}{90.99}$	$\frac{90.99}{89.59}$	C 1.40	
2' B.		$\frac{4.60}{91.08}$	$\frac{91.08}{89.49}$	C 1.59	
2' B.		$\frac{4.87}{90.81}$	$\frac{90.81}{89.37}$	C 1.44	
-2' B.		$\frac{4.94}{90.74}$	$\frac{90.74}{89.26}$	C 1.48	
-2' B.		$\frac{2.56}{90.69}$	$\frac{90.69}{89.06}$	C 1.63	

88.68  
4.57 = cb. cut



Rough Grades - Dawes - Loring  
 to Chalcedony. Plan - 7349 - L  
 w.o. 31569 . 6-2-49 - 7.0.

Chalcedony to Law.

0+00 = N.L. Chalcedony  
 +10 = end cb. 69.71  
 +50 - S - 1' B. 71.6 70.50 c 1.1

1+00 - N. 0.1' in 72.7 71.4 c 1.3

+50 INDEXED  
 W.K. 73.0 72.3 c 0.7

2 ~ OCT 6 1949 74.0 73.2 c 0.8

+35 74.3 73.86 c 0.4

+70 - 21' = S.L. Law. 74.8 74.50 c 0.3

0+00 = N.L. Law. 76.9 76.10 c 0.8

+50 - Line 78.2 77.26 c 1.0

1+00 0.1 B. 79.0 78.4 c 0.6

77.96 = Cross in Step - NW Law + Dawes  
 83.91 = N.W. 7' Disk - " Beryl + "

29

E. side  
 70.30  
 70.53  
 73.0 73.05 c 2.0  
 73.75 72.7 c 1.7  
 N = Line 75.6 73.0 c 2.6  
 N = 0.1' B. 76.0 73.96 c 2.0  
 1' B. 75.2 74.64 c 0.6  
 75.8 75.30 c 0.5  
 77.9 76.90 c 1.0  
 0.3' B. 79.3 78.1 c 1.2  
 1' B. 80.2 79.3 c 0.9

96.51 = SE Cross in step - Wilbur.

		W.	
1+50	80.0	<sup>80.0</sup> 79.6	C 0.4
2 ~ - 1' B = Cross	81.1	<sup>1.1</sup> 80.74	C 0.4
+35' - 1' B.	81.7	<sup>1.7</sup> 81.55	C 0.2
+70 = S.L. Beryl cb.	82.35	82.36	
0+00 = N.L. Beryl - cb =	84.00	84.02	
+50	87.0	<sup>7.0</sup> 85.36	C 1.6
1 ~	88.7	<sup>8.7</sup> 86.7	C 2.0
+35 = M.H.	787.3'S = 87.81 = C 0.6		
+50	787.3'N = 87.97 = F 0.10	<sup>9.5</sup> 88.0	C 1.5
2 -	90.3	<sup>90.3</sup> 89.35	C 1.0
+35	91.5	<sup>91.5</sup> 90.28	C 1.2
+70 = S.L. Wilbur	91.9	<sup>1.9</sup> 91.08	C 0.8
0+00 = N.L. Wilbur	93.0	92.97 - Grade	
+50	94.6	<sup>4.6</sup> 94.96	F 0.4

103.70 = SW. D in Ret - boring

		E.	
cut - Line 504 F 0.1	81.65	<sup>1.6</sup> 80.5	C 1.1
cut Line	82.7	<sup>2.7</sup> 81.7	C 1.0
0.4 B.	83.25	82.54	C 0.7
cb =	83.30	82.32	
cb =	84.96	85.02	
86.5	<sup>0.5</sup> 86.36	C 0.1	89.3
87.8	<sup>7.8</sup> 87.7	C 0.1	90.3
88.5	<sup>8.5</sup> 88.0	C 0.5	91.8
89.7	<sup>9.7</sup> 89.33	C 0.4	93.3
90.7	<sup>0.7</sup> 90.26	C 0.4	94.1
92.3	<sup>2.3</sup> 92.20	C 0.1	94.5
94.3	<sup>4.3</sup> 94.07	C 0.2	96.1
95.9	<sup>5.9</sup> 95.96	F 0.1	97.5
			<sup>7.5</sup> 95.96
			C 1.5

30

		W	
1+00	97.5	<sup>7.5</sup> 96.9	C 0.6
+50	99.8	<sup>9.8</sup> 98.9	C 0.9
2-	01.5	<sup>01.5</sup> 100.85	C 0.6
+35	02.7	<sup>2.7</sup> 02.2	C 0.5
+70 = S.L. Loring = end.	03.60	03.60	

± M.H. Bet. Loring + Wilbur.

N. +12	3N	97.92	98.69	F 0.77
±			98.57	
	3S	97.49	98.45	F 0.96

		E	
98.0	<sup>8.0</sup> 97.9	C 0.1	99.5
00.0	99.9	C 0.1	02.6
01.8	01.85	F 0.1	05.2
03.05	<sup>03.2</sup> <sub>3.05</sub>	F 0.15	05.7
			04.68
			04.60

Rough Grades - Law - Cass to Evers  
 Plan 7078-L - W.O. 31569 -  
 6-2-49 - 7.0.

		N. Side		
E.L. Cass = 0+00		68.48	68.50	
+50		69.5	69.30 <sup>9.5</sup>	C 0.2
1 ~	<b>INDEXED</b> W.K. OCT 6 1949	70.3	70.0 <sup>0.3</sup>	C 0.3
+50		71.5	70.7 <sup>1.5</sup>	C 0.8
2 ~		72.3	71.4 <sup>2.3</sup>	C 0.9
+50		72.9	72.06 <sup>2.9</sup>	C 0.8
3 ~		74.0	72.75 <sup>4.0</sup>	C 1.2
+50		74.6	73.44 <sup>4.6</sup>	C 1.2
4 ~		75.1	74.1 <sup>5.1</sup>	C 1.0
+50		76.2	74.8 <sup>6.2</sup>	C 1.4
+98.12 = W.L. Daves		76.9	75.57 <sup>6.9</sup>	C 1.3

		S. Side		
		67.49	67.50	
18 - Cross		68.2	68.3 <sup>8.2</sup>	F 0.1
		69.3	69.0 <sup>9.3</sup>	C 0.3
		70.0	69.7 <sup>75.0</sup>	C 0.3
		70.9	70.4 <sup>0.9</sup>	C 0.5
		72.1	71.06 <sup>2.1</sup>	C 1.0
		72.7	71.75 <sup>2.7</sup>	C 0.9
		73.5	72.44 <sup>3.5</sup>	C 1.1
		74.2	73.1 <sup>4.2</sup>	C 1.1
		74.5	73.8 <sup>4.5</sup>	C 0.7
		74.8	74.47 <sup>4.8</sup>	C 0.3

0+00 = E.L. Dawes	77.9	<sup>7.9</sup> 76.90	C 1.0
+10	78.2	<sup>8.2</sup> 77.15	C 1.0
+50	79.4	<sup>9.4</sup> 78.4	C 1.0
+90	81.4	<sup>81.4</sup> 79.7	C 1.7
1+30	82.6	<sup>2.6</sup> 80.65	C 1.9
+65	83.6	<sup>3.6</sup> 81.16	C 2.4
2 ~	82.8	<sup>2.8</sup> 81.67	C 2.1
+50	83.6	<sup>3.6</sup> 82.4	C 1.2
3 ~	84.05	<sup>4.05</sup> 83.1	C 1.0
+35	85.2	<sup>5.2</sup> 83.6	C 1.6
+73.10	86.0	<sup>6.0</sup> 84.17	C 1.8

4+12.10 = W.L.  
Sub. = Meet Paue

84.84 84.83 - Top cb.

33

75.85	75.85	-	G -
76.0	<sup>6.0</sup> 76.15		F 0.2
77.4	77.4	-	G -
79.2	<sup>9.2</sup> 78.7		C 0.5
80.1	<sup>0.1</sup> 79.65		C 0.4
80.6	<sup>0.6</sup> 80.16		C 0.4
80.5	<sup>0.5</sup> 80.67		F 0.2
80.7	<sup>0.7</sup> 81.4		F 0.7
82.6	<sup>2.6</sup> 82.1		C 0.5
82.8	<sup>2.8</sup> 82.6		C 0.2
84.3	<sup>4.3</sup> 83.17		C 1.1
83.87	83.88		

Curb Cuts + ~~Stakes~~ on Felspar  
 Lamont to Morrell - see P. 72

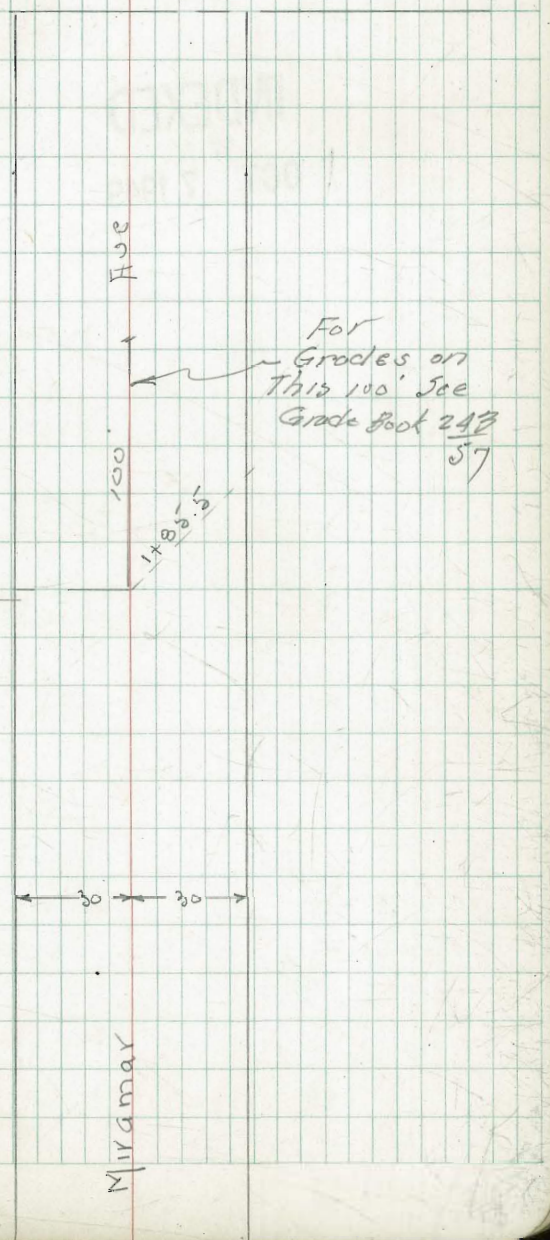
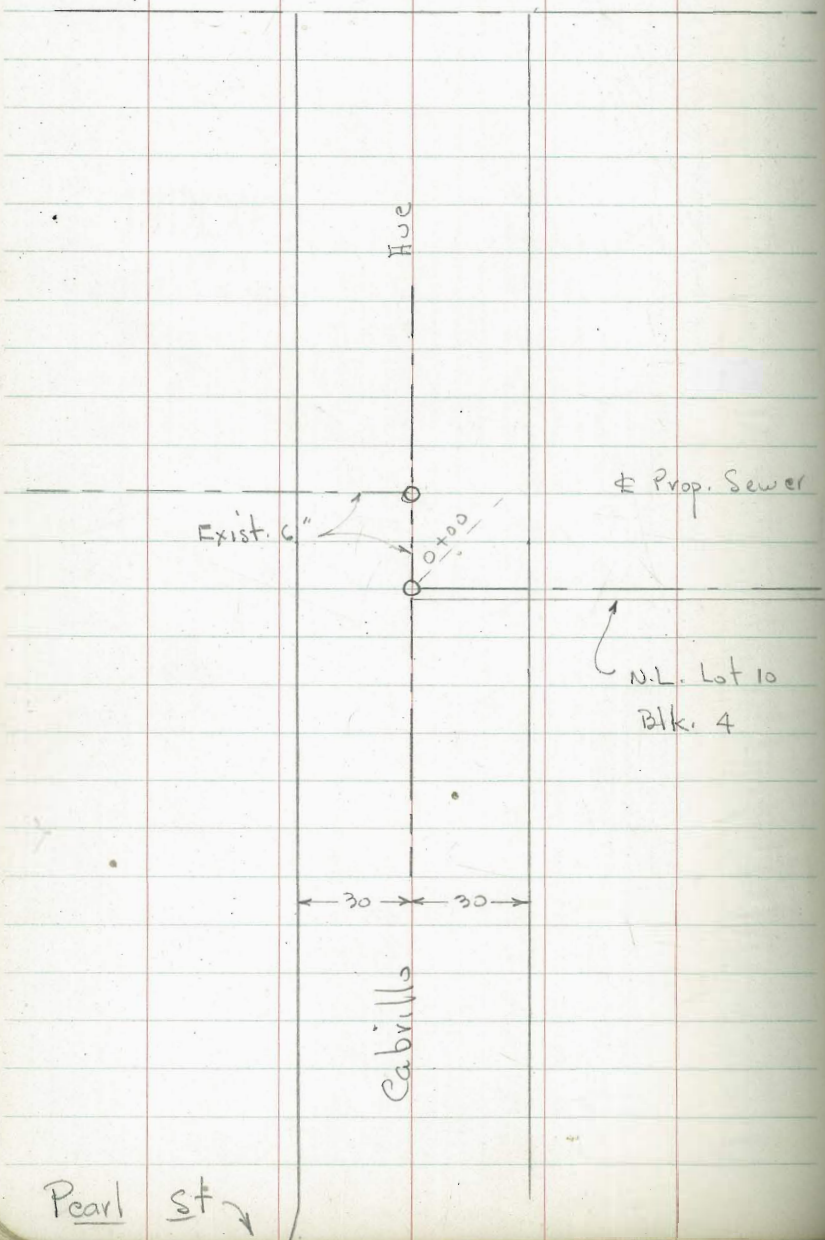
E.L. Lamont	N.	Φ ok. = Top ✓	S.
0+00	87.20 87.21	86.25	84.45 +
+10	86.75	85.85	84.40
+20	86.29	85.52	84.31
+30	85.83	85.13	84.08
+40	85.37	84.68	83.75
+80	83.62	83.03	82.25
1+20	81.88	81.39	80.75
+40	81.06	80.63	80.05
+60	80.37	79.98	79.45
+80	79.79	79.44	78.94
2+00	79.33	79.01	78.54
+20	78.99	78.68	78.23
+40	78.77	78.47	78.02
+80	Rake		
3+20			
+45			
+70	77.73	77.42	76.98
+90	77.48	77.18	76.73
4+10	77.04	76.74	76.29
+30	76.42	76.12	75.67
+50	75.61	75.31	74.86
+70	74.62	74.32	73.87
+90	73.44	73.04	72.69
5+00 =	72.95	72.30	72.11

INDEXED

W.K.

OCT 6 1949

W.L. Morrell



Grades for Prop. Sewer along - N. Line  
 of Lot 10 - Blk 4 - Center Addn  
 146.55

Exist. 6"  
 0+00 = F.L.

**INDEXED**  
 W.K.  
**OCT 7 1949**

			133.07	
+25'		9.24 37.31	37.31 34.0	C 3.31
+50'	88.13	2.92 43.63	43.63 39.5	4.13
+75'		11.25 46.88	46.88 43.25	3.63
1 ~		7.90 50.23	50.23 47.00	3.23
+25'	69.32	3.88 54.25	4.25 50.75	3.50
+50'		10.11 59.21	9.21 54.5	4.71
+75'		3.04 66.24	66.24 55.20	11.04
+95.50 - $\frac{5+10}{0+1}$		2.94 66.38	66.38 55.50	10.88
= ± Miramar				

1.89 146.55 12.47 144.66  
 N.W. 7' cut. 2.12 157.13 155.01  
 Pearl + Cabrillo



Curb Stakes on law - Cass to Everets

INDEXED

N.

0+00 = E.L. Cass

W.K.

68.50

OCT 7 1949

+06 = P.C. Ret.

68.61

68.58<sup>61</sup>

c 0.03

+30

68.92

69.02<sup>92</sup>

F 0.10

+65

69.32

69.50<sup>32</sup>

F 0.18

1~

= cb.

69.90

69.99

69.04

69.04

c 0.05

+50

70.68

70.22

70.22

c 0.54

2~

= cb.

71.33

71.37

70.94

70.94

c 0.57

+50

72.18

72.06<sup>2.18</sup>

c 0.12

71.62

71.62

c 0.56

3-

73.04

72.75<sup>3.04</sup>

c 0.29

72.39

71.75<sup>2.39</sup>

c 0.64

+50

73.76

73.44<sup>76</sup>

c 0.32

72.99

72.44<sup>99</sup>

c 0.55

4~

74.33

74.13<sup>33</sup>

c 0.20

73.74

73.13<sup>74</sup>

c 0.41

+50

74.96

74.82<sup>96</sup>

c 0.14

74.38

73.82<sup>4.38</sup>

c 0.56

+ 88.12 = P.C.

30' Rad. Ret.

75.50

75.36<sup>50</sup>

c 0.14

74.70

74.36<sup>70</sup>

c 0.34

Dawes  
0+00 = E.L.  
+10 = P.C.

N.

77.09	77.16 <sup>16</sup> <sub>09</sub>	F 0.06	
+ 50	78.26	78.43 <sup>43</sup> <sub>26</sub>	F 0.17
+ 90	79.88	79.71 <sup>88</sup> <sub>71</sub>	C 0.17
1+10	80.35	80.27 <sup>35</sup> <sub>27</sub>	C 0.08
+ 30	80.92	80.65 <sup>92</sup> <sub>65</sub>	C 0.27
+ 65	81.27	81.16 <sup>27</sup> <sub>16</sub>	C 0.11
2+00	81.58	81.67 <sup>58</sup> <sub>67</sub>	F 0.09
+ 50	82.08	82.40 <sup>08</sup> <sub>40</sub>	F 0.32
3~	82.81	82.12 <sup>81</sup> <sub>12</sub>	F 0.31
+ 35	83.74	83.63 <sup>74</sup> <sub>63</sub>	C 0.11
+ 73.10	84.29	84.17 <sup>29</sup> <sub>17</sub>	C 0.12
+ 93.10	84.64	84.47 <sup>64</sup> <sub>47</sub>	C 0.17
4+13.10 = Meet.	84.84	84.83 = Top cb	

S.

38

76.21	76.15 <sup>21</sup> <sub>15</sub>	C 0.06
77.57	77.43 <sup>57</sup> <sub>43</sub>	C 0.14
78.74	78.71 <sup>74</sup> <sub>71</sub>	C 0.03
79.43	79.27 <sup>43</sup> <sub>27</sub>	C 0.16
79.90	79.65 <sup>90</sup> <sub>65</sub>	C 0.25
80.71	80.16 <sup>71</sup> <sub>16</sub>	C 0.55
80.56	80.67 <sup>56</sup> <sub>67</sub>	F 0.11
81.31	81.40 <sup>31</sup> <sub>40</sub>	F 0.09
82.20	82.12 <sup>20</sup> <sub>12</sub>	C 0.08
82.85	82.63 <sup>85</sup> <sub>63</sub>	C 0.22
83.45	83.17 <sup>45</sup> <sub>17</sub>	C 0.28
83.65	83.47 <sup>65</sup> <sub>47</sub>	C 0.18
83.86	83.88 = Top cb	

Curb Stakes on Dawes - Chalcedony to Law

		E.			W.	
10's of S.L. Law. 0+00 = P.C. =		74.70	75.11 4.70	F 0.41	74.11	74.32 F 0.21
+40	<b>INDEXED</b> W.K.	74.23	74.34 23	F 0.11	73.61	73.60 <sup>61</sup> C 0.01
+80	<b>OCT 7 1949</b>	73.55	73.57 55	F 0.02	72.98 <sup>41</sup>	72.87 <sup>98</sup> C 0.11
1+13.15 = N.L. Alley 2' Back of		71.77	72.89 1.77	F 1.12	71.35	72.23 <sup>35</sup> F 0.88
on N. 2' Back at E.L.		74.15	4.13 73.09	C 1.04	72.78	72.46 <sup>78</sup> C 0.32
on S. 2' Back E.L.		73.69	3.69 72.71	C 0.98	72.55	72.10 <sup>55</sup> C 0.45
1+27.15 = S.L. Alley 2' Back		71.97	72.51 1.97	F 0.54	72.20	71.87 <sup>20</sup> C 0.33
1+70		71.93	1.93 71.83	C 0.10	71.31	71.23 <sup>31</sup> C 0.08
2+20		71.10	1.10 70.86	C 0.24	70.37	70.32 <sup>37</sup> C 0.05
2+50.30 = P.C. =			70.49			69.69
10' N. of N.L. Chalcedony						
		N.	72.19 3'-06 72.25	F 0.06		
± Alley ± of M.H.			72.19			
		S	72.08 2.08 72.13	F 0.05		

## Curb stakes - Dawes - Law to Beryl

Law				
0+00=PC.	76.11	76.33 <sub>11</sub>	F 0.22	
+40	77.23	77.26 <sub>23</sub>	F 0.03	
+80	78.19	78.19	G-	
S.L. 1+13=2'B.	78.79	79.00 <sub>8.79</sub>	F 0.21	
2'B. - at E.L.	79.80	79.80 <sub>80</sub>	C 0.59	
2'B. E.L.	79.96	79.96 <sub>96</sub>	C 0.29	
=N.L. 1+37	78.36	79.47 <sub>8.36</sub>	F 1.11	
+70	80.34	80.28 <sub>34</sub>	C 0.06	
2+10	81.19	81.21 <sub>19</sub>	F 0.02	
2+50=PC. Beryl	81.98	82.15 <sub>1.98</sub>	F 0.20	
		82.36		
	3' = 07	79.15 <sub>N</sub>	F 0.41	
E Alley = M.H.		79.49		
	78.75 S	79.42 <sub>75</sub>	F 0.67	

INDEXED

OCT 7 1949

E.

	77.14	77.14	G.	
	78.04	78.10 <sub>04</sub>	F 0.06	
	78.94	79.06 <sub>8.94</sub>	F 0.12	
	79.49	79.90 <sub>49</sub>	F 0.41	
	80.54	80.54 <sub>54</sub>	C 0.42	
cross	81.10	81.60 <sub>10</sub>	C 0.50	
	78.84	80.38 <sub>8.84</sub>	F 1.54	
	80.80	81.22 <sub>0.80</sub>	F 0.42	
	81.70	82.18 <sub>1.70</sub>	F 0.48	
=Nail in M.H.	83.09	83.15 <sub>09</sub>	F 0.06	
		83.32		

Int. of Law + Dawes

N.W. Ret.

W. end

75.36

75.50 75.57<sub>53</sub> F 0.07

± 75.47 75.83<sub>47</sub> F 0.36

75.81 76.10<sub>81</sub> F 0.29

N. end.

76.33

N.E. Ret.

N. end.

77.14

76.84 76.90<sub>84</sub> F 0.06

± 76.58 76.80<sub>58</sub> F 0.22

76.85 76.90 F 0.05

E. end.

77.20 77.15

S.E. Ret.

E. end

76.19 76.15

76.02 75.85<sup>6.02</sup> C 0.17

± 75.16 75.55<sub>16</sub> F 0.39

74.92 75.20<sub>92</sub> F 0.38

S. end.

74.70 75.11

S.W. Ret.

S. end.

74.11 74.32

74.37 74.48<sub>37</sub> F 0.11

± 74.56 74.53<sup>56</sup> C 0.03

74.72 74.77<sub>72</sub> C 0.25

74.40 74.36

Curb. Stakes - Beryl to Wilbur		84.01	84.02 W.	
Beryl 0+00 = P.C.	84.13	84.30 13	F 0.17	
+40	85.25	85.36 25	F 0.11	
+80	86.17	86.42 17	F 0.25	
S.L. 1+13 = 2' B.	86.16	87.35 2.16	F 1.19	
2' B at Line	88.86	87.55 8.86	C 1.31	
2' B " "	89.53	88.09 9.53	C 1.44	
N.L. 1+37 = 2' B.	87.43	87.88 43	F 0.45	
+70	88.47	88.81 47	F 0.34	
+10	89.37	89.87 37	F 0.50	
+50 = P.C. Wilbur	90.25	90.93 25	F 0.68	
= S.L. = end.	90.59	91.08 0.59	F 0.49	

		85.02		
		F.		
	84.87	85.30 4.87	F 0.43	
	86.09	86.36 .09	F 0.27	
	87.08	87.42 .08	F 0.34	
	87.94	88.35 37	F 0.41	
	89.07	89.55 9.07	C 0.52	
	91.44	89.09 1.44	C 1.35	
	87.77	88.88 7.77	F 1.11	
	89.35	89.81 35	F 0.46	
	90.29	90.87 29	F 0.58	
	91.40	91.93 40	F 0.53	
	91.85	92.20 1.85	F 0.35	

Curb Stakes - Dawes -	Wilbur	to	Loring.
N.L.	92.66	92.97	F 0.31
Wilbur		W.	
0+00 = P.C.	92.97	93.39	F 0.42
+ 40	94.50	94.96	F 0.46
+ 80	96.33	96.53	F 0.20
S.L. 160.			
1+13 = 2'B.	97.82	97.90	F 0.08
2'B - at line	98.82	98.11	C 0.71
2'B at line	98.21	98.89	F 0.68
N.L.			
1+37 = 2'B.	97.76	98.69	F 0.93
+ 70	99.91	00.06	F 0.15
2 + 10	01.86	01.63	C 0.23
+ 54 = P.C.	03.20	03.36	F 0.16
6' S. of S.L.	03.60	03.60	

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W.K.  
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92.95	94.07	F 0.12
94.22	94.39	F 0.17
95.50	95.96	F 0.46
97.06	97.53	F 0.47
97.39	98.90	F 1.51
98.81	99.11	F 0.30
02.21	02.21	C 2.32
99.21	99.69	F 0.48
00.85	01.06	F 0.21
02.35	02.63	F 0.28
04.00	04.36	F 0.36
04.67	04.60	

43

E.+W. Alley Grades - Federal Blvd. Sub.  
 0.25' excepted - both sides

0-30 = Pave	26.31	26.31	N.
0-10 = 2'B. W.N.	27.33	25.96	7.33 C 1.37 ← 1.37
0+00 = E.L. 47 <sup>1/2</sup> 2'B.	27.02	26.10	7.02 C 0.92 ← 1.02
+20 = 2'B.	26.97	26.50	6.97 C 0.47
+30 = ①			
+40 = 2'B.	28.49	26.90	8.49 C 1.59
+45 = ④			
+60 = 2'B.	28.78	27.10	8.78 C 1.68
+80 = 2'B.	28.68	27.30	8.68 C 1.38
1+12.5 ⑥			
1+20 = 2'B.	28.62	27.49	8.62 C 1.13
+60 = 2'B.	27.70	27.68	7.0 C 0.02
2+00 = 2'B.	27.79	27.86	7.99 F 0.07
+20 = ①			
+30 = 2'B. = P.C.	28.15	28.00	8.15 C 0.15
2+55 = 2'B. S.L.			
± of Curve on N.	28.35	28.35	G
2+80 = S.L. = Cor.			

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W.O. 31411 ② 7-27-49 - 7.0  
 Plan 7000-L 44

227.88 = Disk in Dr.	25.37	25.35	S.
Cross on Gut.	25.41	25.31	5.41 C 0.10 ← 0.44
2'B.	26.20	25.80	6.20 C 0.40 ← 0.70
2'B. FL.	26.74	26.20	6.74 C 0.54
27.62	22.29	22.29	7.62 C 5.33
2'B.	27.00	26.60	7.00 C 0.40
26.88	22.24	22.24	6.88 C 4.64
2'B.	26.94	26.80	27.09 C 0.14 ← 0.14
1+00 = ③	22.79	22.79	27.09 C 4.30
	29.33	22.46	27.29 C 6.87
Cut - 0.24 B.	27.97	27.24	29.33 C 0.73 ← 0.73
Cut - 0.33 B.	28.09	27.48	8.09 C 0.61 ← 0.61
2'B.	27.12	27.72	7.12 F 0.60 ← 0.60
2'B.	27.52	27.90	27.08 C 5.24 ← 5.24
27.47	28.02	27.90	27.52 F 0.38 ← 0.38
27.98	28.15	27.98	27.47 F 0.55 ← 0.55
	27.98	27.98	28.15 F 0.17 ← 0.17



N. + S. 30' Alley  
 one's Excepted.

W.

0-25 = E. side			
0-15 = ⑧ on E.			
0+00 = PC. on W.	29.25	28.70 <sup>9.25</sup>	C 0.55
+35 - 2' B.	29.44	29.08 <sup>4</sup>	C 0.36
+40 - ⑨ on E.			
+70 - cut - 0.23 B.	29.94	29.46 <sup>94</sup>	C 0.48
+105 - cut - 0.16 B.	30.70	29.84 <sup>30.70</sup>	C 0.86
+40 - Nail - 2' B.	30.83	30.22 <sup>83</sup>	C 0.61
+75.03 - Nail - 2' B.	30.78	30.60 <sup>78</sup>	C 0.18
+85.03 - Nail - 2' B.	30.80	30.63 <sup>80</sup>	C 0.17
+95.03 = S.L. p. - 2' B.	30.76	30.65 <sup>76</sup>	C 0.11
2+05.03			
+10.03	30.62	30.50 <sup>62</sup>	C 0.12
⊕ at end	30.71	30.64 <sup>71</sup>	C 0.07

E. 45

2' B.	27.92	28.32	F 0.40
	27.97	7.92	
	23.40	C 4.57	
2' B.	27.94	28.50	F 0.56
		7.94	
cut 0.85' B.	29.06	28.95 <sup>9.00</sup>	C 0.21
0.85' B.		28.78	
		23.90	C 4.88
cut 0.80' B.	30.25	29.20 <sup>30.25</sup>	C 1.05
cut 1.54' B.	30.26	29.55 <sup>30.26</sup>	C 0.71
cut 1.50' B.	30.91	29.90 <sup>30.91</sup>	C 1.01
cb =	30.26	30.26	
1/4	30.29	30.28	
1/2	30.24	30.22	
3/4	30.24	30.20	
		30.45	
30' E.	30.20	30.22	
"	30.40	30.27 <sup>40</sup>	C 0.13
on E.L. at End.	30.76	30.76 = G.	



Pauc Grades - Alley Blk. 44 - Normal Hts.

7285-L w.o. 21496 2-21-49  
7.0.

B.M. = SE. 39<sup>th</sup> + Adams 270.87

E. + W. Alley <sup>88.03</sup> 88.74 N. Side

0+00 = E.L. Cherokee **INDEXED** 285.75

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W.K.

+20 2' B. 3.06 84.97 84.40<sup>.97</sup> C 0.87

+40 14 B = Nail 3.02 85.01 83.33<sup>5.01</sup> C 1.68

+60 2' B. 5.42 82.61 82.40<sup>.61</sup> C 0.21

1+00 2' B. 6.51 81.52 81.00<sup>.52</sup> C 0.52

+40 2' B. 7.69 80.24 79.60<sup>80.34</sup> C 0.74

+60 <sup>Ct.</sup> 102 B. 7.73 80.30 78.84<sup>80.30</sup> C 1.46

+80 0.66 B = Ct. 8.97 79.06 78.25<sup>9.06</sup> C 0.81

2+00 2' B. 9.54 78.49 77.78<sup>8.49</sup> C 0.71

+20 2' B. 9.82 78.21 77.41<sup>8.21</sup> C 0.80

+40 2' B. 9.75 78.28 77.17<sup>8.28</sup> C 1.11

47

80.34 <sup>80.34</sup> 74.60 C 5.74

TF 88.03

S. Side

2' B. 2.59 85.44 285.50<sup>74</sup> F 0.06

2' B. 3.46 84.57 84.20<sup>57</sup> C 0.37

2' B. 4.59 83.44 83.10<sup>44</sup> C 0.34

2' B. 5.30 82.73 82.15<sup>73</sup> C 0.58

2' B. 7.40 80.63 80.72<sup>63</sup> F 0.09

3' B = Cross 8.85 79.18 79.30<sup>18</sup> F 0.12

3' B = Cross 8.93 79.10 78.59<sup>9.10</sup> C 0.51

3' B = Cross 9.18 78.85 78.00<sup>85</sup> C 0.85

3' B 10.94 77.09 77.53<sup>09</sup> F 0.44

3' B. 11.32 76.71 77.16<sup>71</sup> F 0.45

3' B 11.38 76.45 76.92<sup>45</sup> F 0.27

		88.03		N. Side	
2+60	-2' B.	10.22	77.81	<sup>7.81</sup> 76.99	C 0.82
3+00	-2' B.	10.35	77.69	<sup>7.68</sup> 76.63	C 1.05
		<u>81.11</u>			
+40	-2' B.	4.69	76.43	<sup>.43</sup> 76.26	C 0.17
+80	-2' B.	4.97	76.14	<sup>6.14</sup> 75.89	C 0.25
4+00	2.5' B.	5.24	75.87	<sup>.87</sup> 75.71	C 0.16
+20	2' B.	5.33	75.78	<sup>.78</sup> 75.45	C 0.33
+40	-2' B.	5.61	75.50	<sup>.50</sup> 75.04	C 0.46
+60	1.5' B.	5.85	75.26	<sup>5.26</sup> 74.47	C 0.79
+80		6.20	74.91	<sup>4.91</sup> 73.70	C 1.21
		7.41	73.70	73.60	

				S. Side	48
2' B.		11.33	76.70	76.74	F 0.04
2' B.		11.82	76.21	<sup>21</sup> 76.38	F 0.17
		<u>81.11</u>			
2' B.		4.90	76.31	<sup>31</sup> 76.01	C 0.30
2' B.		5.58	75.53	<sup>53</sup> 75.64	F 0.11
2' B.		5.83	75.28	<sup>28</sup> 75.46	F 0.18
<del>0.12</del> B = N.			75.34	<sup>34</sup> 75.19	C 0.15
0.12 B = N		5.00	76.11	<sup>6.11</sup> 74.73	C 1.38
-2' B.		6.27	74.84	<sup>84</sup> 74.10	C 0.74
		7.85	73.26	73.28	

N. + S. 15' Alley - Blk. 44

E. + W. Alley

0+00 = S.L. 0.5 B = Nail 4.28 80.35 3 79.75 C 0.60

W. Side

E. Side

79.30

+20 - 1' B. 5.02 79.61 79.70 F 0.09

1' B 5.69 78.94 79.40 F 0.46

+40 - 2' B. 5.17 79.46 79.76 F 0.30

2' B 5.60 79.03 79.46 F 0.43

+80 - 2' B. 5.28 79.35 79.88 F 0.53

0.27 B = cut 5.46 79.17 79.58 F 0.41

1+20 - 2' B. 4.54 80.09 80.00 C 0.09

2' B. 5.41 79.22 79.70 F 0.48

+60 - 2' B. 3.50 81.13 79.80 C 1.33

0.2 B = Cross 4.96 79.67 79.50 C 0.17

2+00 - 2' B. 3.36 81.27 79.60 C 1.67

0.2 B = Cross 4.99 79.64 79.30 C 0.34

5.37 79.26 79.30

78.92 78.95

Grades for Sewer Blk 35 - Prop Union

W.O. 80116

11-17-48 - 7.0.

π

255.41

241.99 = <sup>Hub.</sup> 3+06.68  
B.1856-35

0+00 = M.H. 1

12.30

38.10

10.82

39.57

10.69

39.71

38.10

235.00 s = 3.10

w = 4.57

39.71

35.25 4.46

+35

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W.K.

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+70

10.32

45.09

45.09

35.49 9.60

1+05

9.12

46.29

46.29

35.74 10.55

+40

9.06

46.35

46.35

35.98 10.37

+75

8.39

47.02

47.02

36.23 10.79

2+10

8.48

46.93

46.93

36.47 10.46

+45

9.06

46.35

46.35

36.72 9.63

2+95.10 = M.H. 2

10.95

44.46

44.46

37.00 s 7.46

50

0+00 = M.H. 2

11.64

43.77

+35

9.37

46.04

+70

7.55

47.86

1+05

5.39

50.02

+40

3.75

51.66

+68

2.91

52.50

1+90 = D.E.

90.1

55.40

E  
10.95

43.77

E = 237.00 6.77

46.04

38.45 7.59

47.86

39.80 8.06

50.02

41.20 8.82

51.66

42.60 9.06

52.50

43.60 8.90

55.40

44.60 C10.80

Sewer Grades - Blk. 51 - Roseville

Plan 6855-L - B. 1744-25

W.O. 31084

3-19-48 - 70

99.24<sup>Mon-Plum</sup>  
+ Fenlon.

0+00 = M.H. # 2 = 4 Fenlon - 116 W. of Plum.

	123.61			
0+00 = M.H. 1	11.05 12.56	12.56	107.60	4.96
- 6 Lt.				
+35	9.20 14.41	14.41	08.30	6.11
+70	8.33 15.28	15.28	09.00	6.28
1+05	8.34 15.27	15.27	09.70	5.57
1+40	8.79 14.82	14.82	10.40	4.42
+75	8.89 14.72	14.72	11.10	3.62
2+10	8.47 15.14	15.14	11.80	3.34
+45	7.71 15.90	15.90	12.50	3.40
2+70.6 = M.H. # 2 <sup>out</sup>	3.42 20.19	20.19	13.00	<del>7.19</del>
= D.E. 21' - S.E.	5.46 18.15	18.15	13.15	5.00

INDEXED  
W.K.  
OCT 7 1949

M.H. 2 = <sup>6 Lt.</sup> 10+20 on Diag. 0+00	20.42	20.42 13.00	7.42
+35	1.86 21.75	21.75 16.04	5.71
+70	0.46 23.15	23.15 19.09	4.06
1+05	11.94 24.10	24.10 22.13	1.97
+40	8.48 27.58	27.56 25.18	2.38
+75	2.09 33.95	33.95 28.23	5.72
2+10	10.82 37.46	37.46 31.29	6.17
+37	7.99 40.29	40.29 33.65	6.64
2+64 = D.E.	5.12 43.16	43.16 36.00	7.16
15' W. of W.L. clove			

45' of Sewer in Dickens & close

N.W. Mon.

153.68

0+00- Ext MH = F.L. of Stub. 146.93

+22.5

55.66

55.66

47.60

8.06

+45' = D.F.

56.33

56.33

48.28

8.05

INDEXED

W.K.

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Grades for Paving - Alley Blk 1  
 Watkins + Biddles add. - Plan - 7216-L  
 Book 1819 - P. 9

INDEXED

0+00 = E.L. Fern

W.K.  
OCT 7 1949

S. side

74.74

N. side

74.84

+20

74.22

74.34

+50

73.44

73.60

+70

72.96

73.13

+90

72.55

72.73

1+10

Void  
staked By  
Sommermeyer

72.21

72.40

+30

71.94

72.14

+65

71.48

71.68

2+00

71.03

71.23

2+17 = Cross  
curb + InletTop cb.  
71.02

71.02

+41 = Outlet of  
Culvert.  
F.L.

56.88

Grades for Culvert at Imperial +  
Woodman 7287-L - B. 1756 - 56

INDEXED

W.K.

23040 - sw. ct.

OCT 7 1949

Curtain Wall + Outlet of Culvert

6' W. of W. end of wall	7.90	23.14	Top wall 221.12	C 2.02
6' E. of E. end of Wall	12.26	18.78	221.12	F 2.34
6' out from end of W. Pipe	10.17	20.87	FL. 218.50	C 2.37
6' out " " " E. Pipe	12.02	19.02	218.50	C 0.52
10' E. of P.C. of E. pipe	11.51	19.53	218.61	C 0.92
10' W. of P.C. of W. Pipe	6.45	24.59	218.64	C 5.95
10' E. of Ely. Pipe 28 S. = Midway Bet. P.C.'s	10.57	20.47	218.99	C 1.48
3.5' E. = Cross in Wall opp. P.C. of E. pipe	6.42	24.62	24.62 219.37	C 5.25
10' W. of W. Pipe = opp. above	10.41	20.63	219.37	C 1.26
Cross on top of Wall - Bet pipes		21.08	18.50	C 2.58 To F.L. Pipes

Curtain Wall + Inlet of Culvert.

6' N. of N. end wall	3.88	27.16	Top wall 222.74	C 4.42
6' S. of S. end wall	8.38	22.66	222.74	F 0.08
6' out from E. end of E. Pipe	8.52	22.52	FL. 220.12	C 2.40
6' out " " " W. Pipe	9.14	21.90	220.12	C 1.78

stakes on cb. line for N. "H" Inlet.

0+60	$\frac{9.73}{24.00}$	29.56	F 5.56
		24.00	
1+00	$\frac{7.68}{26.05}$	29.74	F 3.69
		26.05	

See P. 57

Grades for Alley Pave - Blk 39 REVUB OF  
 Teralta - Plan = 7051-L-B. 1800  
 NW 33rd + Orange **INDEXED**  
 W.K.  
 OCT 7 1949  
 0+00 = N.L. Orange

+20 - S-2'B	$\frac{6.35}{74.57}$	$\frac{57}{74.27}$	C 0.30
+40 - S-2'B	$\frac{6.02}{74.90}$	$\frac{75.08}{74.90}$	F 0.18
+60 - N- 0.35' in	$\frac{4.86}{76.06}$	$\frac{76.06}{75.50}$	C 0.56
+80 - N- 0.20' in	$\frac{4.62}{76.30}$	$\frac{76.30}{75.74}$	C 0.56
1+00 - N- 0.03' in	$\frac{4.03}{76.89}$	$\frac{76.89}{75.95}$	C 0.94
+20 - N- 0.30' B	$\frac{4.21}{76.71}$	$\frac{76.71}{76.12}$	C 0.59
+40 S- 2' B	$\frac{4.08}{76.84}$	$\frac{76.84}{76.25}$	C 0.59
+60 cross in Cent. 2' B	$\frac{3.66}{77.26}$	$\frac{77.26}{76.33}$	C 0.93
+95 N- 0.30' B	$\frac{3.10}{77.82}$	$\frac{77.82}{76.43}$	C 1.39
2+30 N- 0.40' B	$\frac{2.83}{78.09}$	$\frac{78.09}{76.54}$	C 1.55

7.0.  
1-3-49 55

0.22 in = Cross	$\frac{5.10}{75.82}$	$\frac{75.82}{74.45}$	C 1.37
0.50 B = Nail	$\frac{5.14}{75.78}$	$\frac{75.78}{75.23}$	C 0.55
0.16 in = N.	$\frac{5.13}{75.79}$	$\frac{75.79}{75.65}$	C 0.14
1' B = S.	$\frac{4.86}{76.06}$	$\frac{76.06}{75.89}$	C 0.17
1' B = S	$\frac{4.85}{76.07}$	$\frac{76.07}{76.10}$	F 0.03
2' B = S	$\frac{3.96}{76.96}$	$\frac{76.96}{76.27}$	C 0.69
2' B = S	$\frac{3.68}{77.24}$	$\frac{77.24}{76.40}$	C 0.84
0.40' B = N.	$\frac{3.14}{77.78}$	$\frac{77.78}{76.48}$	C 1.30
0.60' in = N.	$\frac{2.76}{78.16}$	$\frac{78.16}{76.58}$	C 1.58
2' B = S	$\frac{3.33}{77.59}$	$\frac{77.59}{76.69}$	C 0.90

			West	
2+65	0.60 B = N.	$\frac{1.94}{78.98}$	$\frac{78.98}{76.65}$	c 2.33
3+00	0.75 B = N.	$\frac{2.55}{78.37}$	$\frac{78.37}{76.75}$	c 1.62
	$\bar{T} = 383.09$			
+35	2' B = S	$\frac{5.03}{78.06}$	$\frac{78.06}{76.86}$	c 1.20
+70	2' B = S	$\frac{4.97}{78.12}$	$\frac{78.12}{76.96}$	c 1.16
4+05	0.35' B = N	$\frac{4.95}{78.14}$	$\frac{78.14}{77.07}$	c 1.07
+40	2' B = Cross	$\frac{5.66}{77.43}$	$\frac{77.43}{77.18}$	e 0.25
+75	0.10' B = N	$\frac{4.43}{78.66}$	$\frac{78.66}{77.28}$	c 1.38
5+10	0.50' B = Cross	$\frac{5.14}{77.95}$	$\frac{77.95}{77.39}$	c 0.56
+45	Line - Cut	$\frac{4.73}{78.36}$	$\frac{78.36}{77.49}$	c 0.87
+80	0.03' in = Cut	$\frac{5.12}{77.97}$	$\frac{77.97}{77.60}$	c 0.37
6+07	= S.L. El Cajon		77.68	

			East.	
0.58' B = N.		$\frac{2.67}{78.30}$	$\frac{78.30}{76.80}$	c 1.50
1.56' B = N.		$\frac{2.57}{78.35}$	$\frac{78.35}{76.90}$	c 1.45
2' B = S		$\frac{4.82}{78.27}$	$\frac{78.27}{77.01}$	c 1.26
2' B = S		$\frac{5.12}{77.97}$	$\frac{77.97}{77.12}$	c 0.85
0.44' B = N		$\frac{3.85}{79.24}$	$\frac{79.24}{77.22}$	c 2.02
0.98' B = N		$\frac{4.04}{79.05}$	$\frac{79.05}{77.33}$	c 1.72
2' B = S		$\frac{4.92}{78.17}$	$\frac{78.17}{77.43}$	c 0.74
2' B = S		$\frac{5.35}{77.74}$	$\frac{77.74}{77.54}$	c 0.20
2' B = S		$\frac{5.16}{77.93}$	$\frac{77.93}{77.64}$	c 0.29
2' B = S		$\frac{4.70}{78.39}$	$\frac{78.39}{77.75}$	c 0.64
			77.82	

## Rough Grades - Imperial + Woodman.

INDEXED

OCT 7 1949  
W.K.

stakes 10' Back from Inc Prop.

Station	Offset	Side	Grade	Notes
0+00	$\frac{3.1}{30.6}$	N. side	229.30	C 1.3
+50	$\frac{7.2}{26.5}$		29.52 26.5	F 3.0
1~	$\frac{7.7}{26.0}$		29.74 26.0	F 3.7
+50	$\frac{6.7}{27.0}$		29.96 27.0	F 2.9
2+00 = end	$\frac{5.2}{28.5}$		30.18 28.5	F 1.7
<hr/>				
0+47.07 = Beg.	$\frac{0.1}{33.6}$	S. Side	29.51	C 4.1
10' B. from P.h.			29.74	
+50	$\frac{9.5}{24.2}$		29.96 24.2	F 5.8
2+00 = end.	$\frac{12.8}{20.9}$		30.18 20.9	F 9.3

## Pipe Grades - around Curve.

57

P.C.	Station	Grade	Notes
	219.37		
1	12.52 20.14	20.14 19.47	C 0.67
2	12.94 19.72	9.72 19.58	C 0.14
3	12.15 19.51	19.68 9.51	F 0.17
4	12.09 19.57	19.79 9.57	F 0.22
5	12.88 19.78	19.90 9.78	F 0.12
6	12.20 20.46	0.46 20.01	C 0.45
EC.	7 = at wall	9.95 22.71	22.71 Top wall 20.12 C 2.59

Grades for Pave - Alley Blk. 44  
 Hensleys Sub. 6986-L 1-5-49  
 0.25 exception - each side INDEXED 7.0.  
 W.D. 31232 W.K.

			66.85	OCT 7 1949		
0+00	WL 27 <sup>th</sup> 2' B = S		$\frac{2.37}{64.48}$	$\frac{4.49}{64.20}$	C 0.28	
+20	0.88 B = in Conc. cut.		$\frac{2.82}{64.03}$	$\frac{4.03}{63.63}$	C 0.40	
+60	0.85 B = cut.		$\frac{3.85}{63.00}$	$\frac{63.00}{62.76}$	C 0.24	
1+00	0.85 B = cut		$\frac{4.21}{62.64}$	$\frac{2.64}{62.40}$	C 0.24	
+						
+35	0.81 B = cut		$\frac{4.17}{62.58}$	$\frac{2.58}{62.31}$	C 0.27	
+70	0.66 B = cut		$\frac{4.22}{62.63}$	$\frac{2.63}{62.22}$	C 0.41	
2+05	5' B = S		$\frac{5.96}{60.89}$	$\frac{62.14}{60.89}$	F 1.25	
+40	2' B = S		$\frac{5.41}{61.44}$	$\frac{62.05}{61.44}$	F 0.61	
+75	2' B = S		$\frac{5.95}{60.90}$	$\frac{61.96}{60.90}$	F 1.06	
3+10	2' B = S		$\frac{5.85}{61.00}$	$\frac{61.87}{1.00}$	F 0.87	
+45	2' B = S		$\frac{6.22}{60.63}$	$\frac{61.79}{60.63}$	F 1.16	

						N. Side
2' B = S			$\frac{2.29}{64.56}$	$\frac{4.56}{64.20}$	C 0.36	
0.35 B = N.			$\frac{2.07}{64.78}$	$\frac{64.78}{63.63}$	C 1.15	
0.50 B = S			$\frac{4.33}{62.52}$	$\frac{62.76}{62.52}$	F 0.24	
2' B = Cross			$\frac{4.49}{62.36}$	$\frac{62.40}{2.36}$	F 0.04	
0.07 B = Nail ?			$\frac{3.92}{62.93}$	$\frac{2.93}{62.31}$	C 0.62	
0.55 B = Nail			$\frac{4.09}{62.76}$	$\frac{2.76}{62.22}$	C 0.54	
0.50 B = S			$\frac{5.47}{61.58}$	$\frac{62.14}{62.05}$	F 0.09 F 0.56	
0.93 B = N.			$\frac{5.12}{61.73}$	$\frac{62.05}{61.73}$	F 0.32	
1.35 B = N.			$\frac{5.30}{61.55}$	$\frac{61.96}{61.55}$	F 0.41	
0.65 B = N.			$\frac{5.63}{61.22}$	$\frac{61.87}{61.22}$	F 0.65	
1' B = S			$\frac{5.70}{61.15}$	$\frac{61.79}{1.15}$	F 0.64	



Pipe Grades around Curve.

PC. = FL.	13.22	19.44	19.44	
1	12.56	20.10	<sup>20.10</sup> 19.52	C 0.58
2	12.78	19.88	<sup>9.88</sup> 19.61	C 0.27
3	12.69	19.97	<sup>9.97</sup> 19.70	C 0.27
4	12.96	19.70	<sup>9.70</sup> 19.79	F 0.09
5	13.05	19.61	<sup>9.61</sup> 19.88	F 0.27
6	12.80	19.86	<sup>8.86</sup> 19.97	F 0.11
7	12.03	20.63	<sup>8.63</sup> 20.06	C 0.57

Grades on cb. line for S. cb. Inlet "H"

0+60	5.36	28.53	<sup>9.53</sup> 29.56	F 1.03
0+96.16 - Top cb.	6.47	27.42	<sup>27.42</sup> 29.68	F 2.26
FL. 24" Pipe			25.40	C 2.02
Top Pipe - 0+00	8.82	25.07		
1+00	6.90	26.99	<sup>26.99</sup> 29.74	F 2.75

24" Culvert. to S.

0+00 = Inlet				25.40
+60 = 5' w.	6.53	27.36	<sup>7.36</sup> 26.18	C 1.18
+96 = end - 4' ahead.	1.22	32.27	26.65	C 5.62
Curb Grades				
0+00	2.70	30.79	29.30	C 1.49
+50	4.00	28.89	29.52	F 0.63
1~	4.95	28.54	29.74	F 1.20
+35	5.25	28.24	29.89	F 1.65
+70	5.01	28.48	30.05	F 1.57
2+00 = end	4.75	28.74	30.18	F 1.44
0+47.07	2.56	30.93	29.51	C 1.42
1+00	4.19	29.30	29.74	F 0.44
+50	4.69	28.80	29.96	F 1.16
2+00 = end.	4.74	28.75	30.18	F 1.43

stakes along Bank

30.00  
30.00



Cirades for Sewer - 43<sup>rd</sup> + Beta

Plan 7047-h - Book 1669 - 34

1-20-49 - 62.57 = stub. 1455.11

7.0.  $\pi = 75.18$

0+00 = Exist. M.H. - 5' Lt. 54.56

+25	8.94	66.24	54.74	11.50
+50	9.17	66.01	54.91	11.10
+75	8.80	66.38	55.08	11.30
1+00	8.86	66.32	55.26	11.06
+25	10.80	64.38	55.44	8.94
1+55.11 = 5' S. = To W. = M.H. # 1	12.82	62.36	55.65	6.71
= 0+00 = 5' Rt. = To N.			55.76	6.60
+50	8.25	66.93	58.56	8.37
1~	4.98	70.20	61.36	8.84
+50	2.69	72.49	64.16	8.33
2~ $\pi = 86.20$	10.89	75.31	66.96	8.35
+50	7.75	78.45	69.76	8.69
2+90 = M.H. # 2	5.49	80.71	72.00	8.71
= 0+00				
+50	3.15	83.05	73.95	9.10
1~	0.89	85.31	75.90	9.41
+50 $\pi = 92.73$	6.25	86.48	77.85	8.63
+80	5.44	87.29	79.02	8.27
2+04.31 = M.H. 3	5.79	86.94	79.97	6.97
5' S. + E.				

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ct. = + Beta 87.63 61

0+00 = M.H. 3 79.97

+50	4.91	87.82	80.82	7.00
1~	4.36	88.37	81.67	6.70
+50	3.46	89.27	82.52	6.75
1+78 = DE.	3.18	89.55	83.00	6.55

Extra Grades on Pave Bet 0+00 + M.H. 1

1+31	9.65	63.16	55.48	7.68
1+40 = Pave	9.55	63.26	55.54	7.72
New Offsets - M.H. 2 to 3 + to DE				
0+00 = M.H. 2			72.00	
+50	9.07	83.13	73.95	9.18
1~	7.06	85.14	75.90	9.24
+50	5.95	86.25	77.85	8.40
+80	5.19	87.01	79.02	7.99
2+04.31 = M.H. 3	5.15	87.05	79.97	7.08
0+50	4.48	87.72	80.82	6.90
1~	4.17	88.03	81.67	6.36
+50	3.35	88.85	82.52	6.33
+78 = DE.	2.89	89.31	83.00	6.31

See P. 63

Rough Grades - W.L. Haines

0+00 = N.L. 13.5 40.9 <sup>40.9</sup> 39.4 C 1.5

1 ~ 11.0 43.5 <sup>3.5</sup> 41.5 C 2.0

2 ~ 9.2 45.2 <sup>5.2</sup> 43.5 C 1.7

3 ~ 6.9 47.5 <sup>7.5</sup> 45.5 C 2.0

4 ~ 3.0 51.4 <sup>51.4</sup> 47.5 C 3.9

5 ~ 1.9 52.5 <sup>2.5</sup> 49.5 C 3.0

+25 = S.L. Pac. Beach Dr. <sup>2.2</sup> 82.2 <sup>2.2</sup> 50.0 C 2.2

6+00 4.9 49.5 50.0 F

N.L. P.B. Dr.

6+75 = N.L. P.B. 6.6 47.8 <sup>51.8</sup> 47.8 F

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Rough Grades - Pac. Beach Dr. - S. side

0+00 = E.L. Ingraham = cb.

1 ~ 3.7 46.2 46.6 F 0.4

2 ~ 4.7 45.2 46.2 F 1.0

3 ~ 6.0 43.9 45.8 F 1.9

4 ~ 6.6 43.3 45.4 F 2.1

5 ~ 5.0 44.9 45.0 F 0.1

Cont. from P. 61

Beta St Sewer

0+00 =	M.H. 3 -	<sup>4E.</sup> Note: Moved	79.97	
+50		5.81 86.39	80.35	6.04
1 ~		6.19 86.01	80.70	5.31
+50		6.00 86.20	81.05	5.15
2 ~		5.53 86.67	81.40	5.27
+50		4.89 87.31	81.75	5.56
3 -		4.33 87.87	82.10	5.77
+26 =	M.H. 4	<sup>To W.</sup> 3.98 88.22	82.28	5.94
0+00		<sub>To E.</sub>	82.38	5.84
+50		3.31 88.89	83.18	5.71
1 ~		2.43 89.77	83.98	5.79
+50		1.62 90.58	84.78	5.80
2 ~		5.34 91.77	85.58	6.19
+50 =	DE	4.33 92.78	86.38	6.40

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Rough Grades - Pac. Beach Dr.  
Ingraham to Jewell.

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0+00 = E.L. Ingraham to S.

S. side

46.05 = end Ret.

+50 4.0 46.4 46.5 F 0.1

1 ~ 4.1 46.3 46.6 F 0.3

+50 4.7 45.7 46.4 F 0.7

2 - 5.2 45.2 46.2 F 1.0

+

+50 5.7 44.7 46.0 F 1.3

3 ~ 5.9 44.5 45.8 F 1.3

+50 7.6 42.8 45.6 F 2.8

4 ~ 6.9 43.5 45.4 F 1.9

+50 5.9 44.5 45.2 F 0.7

5+05 = W.L. Jewell 5.6 44.8 45.0 F 0.2

To S.

2-4-49

46.11 = c.t.

84

N. Side.

$\frac{4.7}{46.2} = F 0.3$

to N.

0+29.25 = E.L. Ingraham 4.3 46.1 46.5 F 0.4

$\frac{4.6}{46.3} = F 0.3$  4.7 45.7 46.6 F 0.9

$\frac{4.7}{46.2} = F 0.4$  4.8 45.6 46.6 F 1.0

$\frac{4.7}{46.2} = F 0.2$  5.4 45.0 46.4 F 1.4

$\frac{5.0}{45.9} = F 0.3$  5.9 44.5 46.2 F 1.7

$\frac{5.1}{45.8} = F 0.2$  6.2 44.2 46.0 F 1.8

$\frac{5.3}{45.4} = F 0.4$  6.5 43.9 45.8 F 1.9

$\frac{5.6}{45.3} = F 0.3$  6.8 43.6 45.6 F 2.0

$\frac{5.7}{45.2} = F 0.2$  6.6 43.8 45.4 F 1.6

$\frac{5.8}{45.1} = F 0.1$  6.1 44.3 45.2 F 0.9

$\frac{6.0}{44.9} = F 0.1$  5.2 45.2 45.0 C 0.2

To N.

5+30 = W.L. Jewell

5.39 44.97 = end of cb.  
44.9

# Sewer Grades on Amherst St.

68<sup>th</sup> to 70<sup>th</sup> - Plan 1287-D W.O. 31408

		<u>57.91</u>			
0+00 =	G.W.	6.81	51.00		9.25
M.H. 7	G.Rt.	6.89	50.92	441.75	9.17
+35		7.13	50.68	41.85	8.83
+70		7.10	50.71	41.96	8.75
1+05		6.62	51.19	42.06	9.13
+40		6.45	51.36	42.17	9.19
+75		6.33	51.48	42.27	9.21
2+10		6.16	51.65	42.38	9.27
+45		5.97	51.84	42.48	9.36
+80		5.87	51.94	42.59	9.35
3+15		6.15	51.94	42.69	9.25
+50		5.90	52.19	42.80	9.39
+76 =	M.H. 8 To W.	5.74	52.35	42.88	9.47
0+00	To E.		52.35	42.98	9.37
+35		5.64	52.45	43.26	9.19
+70		5.67	52.42	43.54	8.88
1+05		5.63	52.46	43.82	8.64
+40		5.53	52.56	44.10	8.46
+75		5.28	52.81	44.38	8.43
2+10		5.00	53.09	44.66	8.43
+45		4.52	53.57	44.94	8.63

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Pole-Alley + E-69<sup>th</sup>

456.14

65

		<u>58.09</u>			
2+80		4.05	54.04	45.22	8.82
3+04 = M.H. 9		3.72	54.37	45.41	8.96
0+00					
+35		2.21	54.88	45.69	9.19
+70		2.82	55.27	45.97	9.30
1+05		2.54	55.55	46.25	9.30
+40		2.26	55.83	46.53	9.30
+75		5.44	56.19	46.81	9.38
2+10		5.17	56.46	47.09	9.37
+45		5.09	56.54	47.37	9.17
+80		4.97	56.66	47.65	9.01
3+00 = M.H. 10		4.88	56.75	47.81	8.94
0+00					
+35		4.73	56.90	48.09	8.81
+70		4.64	56.99	48.37	8.62
1+05		4.53	57.10	48.65	8.45
+40		4.33	57.30	48.93	8.37
+75		4.04	57.59	49.21	8.38
2+16 = D.E.		3.77	57.86	49.54	8.32

La Mesa Colony

Sewer Grades in Alley Blk 4

Bet. 67<sup>th</sup> + 68<sup>th</sup>

S.W. 67 <sup>th</sup> + El Cajon	55.79		453.70	
6w.				
0+00 = M.H. 2	4.41	51.37	439.08	12.29
+35 = W.R.T.	5.07	50.71	39.18	11.52
+70	5.11	50.67	39.29	11.38
1+05	4.76	51.02	39.39	11.63
+40	4.24	51.50	39.50	12.00
+75	4.03	51.78	39.60	12.15
2+10	2.64	53.10	39.71	13.39
+45	2.26	53.52	39.81	13.71
+80	1.60	54.18	39.92	14.26
3+15	1.74	54.04	40.02	14.02
+51.64 = M.H. 3	2.04	53.74	40.13	13.61
0+00)	58.41			
+35	5.44	52.93	40.23	12.70
+70	5.77	52.64	40.34	12.30
1+05	6.09	52.32	40.44	11.88
+40	5.59	52.82	40.55	12.27
+75	5.27	53.14	40.65	12.49
2+10	4.93	53.48	40.76	12.72
+45	4.78	53.63	40.86	12.77
+80	4.10	54.31	40.97	13.34
3+15	3.84	54.57	41.07	13.50
+50 = M.H. 4	3.77	54.64	41.19	13.45
6+12' N.				

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Top Hyd. Alley + 68<sup>th</sup>

457.19

68<sup>th</sup> - M.H. 7 to M.H. 4

66

M.H. 4				
0+00 =			41.19	
+35	4.85	53.96	41.29	12.67
+70	5.41	53.40	41.40	12.00
1+05	6.23	52.58	41.50	11.08
+40	7.21	51.60	41.61	9.99
+75	7.80	51.01	41.71	9.30
+90.03 = M.H. 7			41.75	

In Alley Block 6

$\bar{n} = 62.19$

0+00 = M.H. 4		54.64	45.84	8.80
+35	7.23	54.96	46.08	8.88
+70	7.30	54.89	46.33	8.56
1+05	7.02	55.17	46.57	8.60
+40	6.60	55.59	46.82	8.77
+75	6.25	55.94	47.06	8.88
2+10	6.15	56.04	47.31	8.73
+45	5.93	56.26	47.55	8.71
+80	5.44	56.75	47.80	8.95
3+15	4.97	57.22	48.04	9.18
+40 = M.H. 5	5.04	57.15	48.22	8.93
0+00				

62.19

+35'	4.99	57.20	48.46	8.74
+70	4.83	57.36	48.71	8.65
1+05	4.63	57.56	48.95	8.61
+40	4.64	57.55	49.20	8.35
+75	4.18	58.01	49.44	8.57
2+10	4.83	57.36	49.69	7.67
+45	5.78	56.41	49.93	6.48
+80	6.95	55.24	50.18	5.06
3+15	7.42	54.77	50.42	4.35
+39.48 = M.H. 6	7.61	54.58	50.60	3.98
= 0+00	Top pipe	11.82	50.37	

+35'	7.36	54.83	50.84	3.99
+70	7.01	55.18	51.09	4.09
1+05	6.89	55.30	51.33	3.97
+40	6.68	55.51	51.58	3.93
+75	5.68	56.51	51.82	4.69
2+00 = D.E.	4.63	57.56	52.00	5.56

Sewer Grades - 67<sup>±</sup>

87

state Mon - B.C.				437.85
				<u>29.62</u>
Conn. 0+00				427.23
0+21.97 - 6' Lt.	6.99	32.63	27.39	5.24
0+63.94	5.70	33.92	27.55	6.37
0+95.92 = M.H. 1	4.11	35.51	27.70	7.81
				To N.
				27.80
0+35	3.14	34.48	28.69	7.79
+70	1.72	37.90	29.59	8.31
1+05	0.32	39.30	30.49	8.81
+40		<u>51.28</u>	40.70	31.39
+75	9.17	42.11	32.28	9.83
2+10	7.78	43.50	33.18	10.32
+45	6.54	44.74	34.08	10.66
+80	5.12	46.16	34.98	11.18
3+15	3.85	47.43	35.87	11.56
+50 - 8.5 Rt.	2.56	48.72	36.77	11.95
+85	1.38	49.90	37.67	12.23
4+20	0.33	50.95	38.57	12.38
+39.67 = M.H. 2				29.08

88.19 = N.E. C.T.  
Lamont.  
**68**

Curb Grades - on Felspar - Plan 7371-4  
W.O. 31208 - 5-17-49 - 7.0

		u. side		
0+00 = F.L. Lamont		87.97	87.60	
+10	INDEXED W.K. OCT 10 1949	87.55	87.28 <sup>55</sup>	C 0.27
+20		86.89	86.93 <sup>89</sup>	F 0.04
+30		86.31	86.54 <sup>21</sup>	F 0.23
+40		86.05	86.12 <sup>05</sup>	F 0.07
+80		84.58	84.27 <sup>58</sup>	C 0.21
+120		82.96	82.63 <sup>96</sup>	C 0.33
+40		82.13	81.81 <sup>213</sup>	C 0.32
+60		81.41	81.12 <sup>41</sup>	C 0.29
+80		80.73	80.54 <sup>73</sup>	C 0.19
+200		80.22	80.08 <sup>22</sup>	C 0.14
+20	79.91	79.74 <sup>91</sup>	C 0.17	

	S. side		
	85.02	85.00	
	84.93	84.95 <sup>93</sup>	F 0.02
	84.58	84.81 <sup>58</sup>	F 0.23
	84.44	84.58 <sup>44</sup>	F 0.14
	84.24	84.25 <sup>24</sup>	F 0.01
	82.79	82.75 <sup>79</sup>	C 0.04
	81.27	81.25 <sup>27</sup>	C 0.02
	80.56	80.55 <sup>56</sup>	C 0.01
	80.10	80.10 <sup>10</sup> 79.95	C 0.15
	80.05	80.05 <sup>05</sup> 79.44	C 0.61
	79.10	79.10 <sup>10</sup> 79.04	C 0.06
	78.81	78.73 <sup>81</sup>	C 0.08



N. side

2+40	79.72	79.52 <sup>72</sup>	C 0.20
+80	79.14	79.20 <sup>14</sup>	F 0.06
3+20	79.26	78.88 <sup>26</sup>	C 0.38
+70	79.50	78.48 <sup>50</sup>	C 1.02
+90	78.85	78.23 <sup>85</sup>	C 0.62
4+10	78.15	77.79 <sup>15</sup>	C 0.36
+30	77.77	77.17 <sup>77</sup>	C 0.60
+50	77.45	76.36 <sup>45</sup>	C 1.09
+70	75.97	75.37 <sup>97</sup>	C 0.60
+90	74.59	74.19 <sup>59</sup>	C 0.40
5+00 = w.L. Morrell	73.54	73.70	

S. side

69

78.50	78.52 <sup>50</sup>	F 0.02
78.21	78.20 <sup>21</sup>	C 0.01
77.96	77.88 <sup>96</sup>	C 0.08
77.57	77.48 <sup>57</sup>	C 0.09
77.31	77.23 <sup>31</sup>	C 0.08
76.92	76.79 <sup>92</sup>	C 0.13
76.25	76.17 <sup>25</sup>	C 0.08
75.56	75.36 <sup>56</sup>	C 0.20
74.29	74.27 <sup>29</sup>	F 0.02
72.76	73.19 <sup>76</sup> 2.70	F 0.43
72.04	72.70	

## Grades on C.I. Pressure Sewer

Reed + Mission = 1268 - D

INDEXED

W.K.

K = 5.84

OCT 10 1949

0+00 =	167 3.54	2.33	3.51	-1.71	5.22
+50	2.84 2.37 3.67	3.49	2.35	-1.71	4.06
1 ~	1.54	4.33	1.51	-1.71	3.22
+41.43 = Hng.	4.41 5.90	5.09	0.75	-1.71	2.46
2 ~	3.72 1.49	4.38	1.46	-1.71	3.17
+50	4.04 1.17	4.69	1.15	-1.71	2.86
3 ~	5.32 -0.11	5.80	-0.13	-1.71	1.58
+46.51 = Hng.	5.65 0.42	6.08	-0.44	-1.71	1.27
4 ~	5.85				
+50	5.60 -0.39	6.12	-0.39	-1.71	1.32
5 ~	5.24 -0.03	5.91	-0.06	-1.71	1.65
+50	5.00 0.21	5.66	+0.19	-1.71	1.90
6 ~	4.73 0.48	5.40	0.45	-1.71	2.16
+50	5.88 1.33	4.54	1.31	-1.71	3.02
6+40 = BvK. +50	3.01 2.20	3.67	2.18	-1.62	3.82
7 ~	2.01 3.14	2.73	3.12	-1.18	4.32
+50	0.62 4.59	1.19	4.57	-0.74	5.33
7+90.40 = Hng.		1.23	4.62	-0.38	5.00

12.22

8+20	4.36	-0.12	4.47
+50	5.05	+0.14	4.91
9 ~	5.78	0.58	5.20
+50	6.23	1.02	5.21
10 ~	6.71	1.46	5.25
+50	6.99	1.90	5.09
11 ~	7.43	2.34	5.09
+50	7.71	2.78	4.93
12 ~	8.02	3.22	4.80
+50	8.11	3.46	4.65
13 ~	8.28	3.56	4.72
+35	8.24	3.63	4.61
+69.64 = Hng.	8.87	3.70	5.17
			14.40
14 ~	8.23	3.76	4.47
+50	9.18	3.86	5.32
15 ~	9.18	3.97	5.21
+50	9.16	4.07	5.09
16 ~	9.22	4.17	5.05
+50	9.26	4.27	4.99
17 ~	9.27	4.38	4.89
+50	9.25	4.48	4.77
18 ~	9.31	4.58	4.73
+50	9.49	4.68	4.81
19 ~	9.83	4.79	5.04
+48.47 =	9.68	4.90	4.78
± Dawes			

Nail in Pole

11.79

Daves  
N.E..25 Rt.  $\bar{A} = 21.42$ 

20~	10.82	10.60	5.59	5.01
+50	10.23	11.19	6.27	4.92
21~	10.27	11.15	6.95	4.20
+50	9.87	11.55	7.63	3.92
22~	8.92	12.50	8.31	4.19
+50	7.99	13.43	8.99	4.44
23~	6.08	15.34	9.67	5.67
+50	4.39	17.03	10.35	6.68
24~	3.69	17.73	11.03	6.70
+50	3.40	18.02	11.71	6.31
25~	3.21	18.21	12.39	5.82
+50	2.70	18.72	13.07	5.65
26~	2.36	19.06	13.75	5.31
+50	1.72	19.70	14.43	5.27
27~	8.73	20.37	15.11	5.26
+50	7.75	21.35	15.79	5.56
28~	6.84	22.26	16.47	5.79
+50	5.98	23.12	17.15	5.97
29~	5.43	23.67	17.83	5.84
+50	4.74	24.36	18.51	5.85
30~	4.07	25.03	19.19	5.84
+50	3.96	25.14	19.97	5.27
31~	3.48	25.62	20.55	5.07
+50	2.86	26.24	21.23	5.01
32~	1.73	27.37	21.91	5.40

 $\bar{A} = 29.10$ 

29.10

70

32+50	0.93	28.17	22.59	5.58
33~	7.75	29.07	23.27	5.80
+50	6.95	29.87	23.95	5.92
34~	6.25	30.57	24.63	5.94
+50	5.60	31.22	25.31	5.91
35~	5.21	31.61	25.99	5.62
+50	4.66	32.16	26.67	5.49
36~	4.21	32.61	27.35	5.26
+50	4.50	32.32	28.03	4.29
+83.45	5.09	31.73	28.48	3.25

 $\bar{A} = 36.82$ cross  
on Conc

Exist. M.H.

Grades for Wall on S. side of El Cajon  
E. of 53<sup>rd</sup> - Plan = 3665-B

# 2391

W.O. 60349

4-21-49-

7.0.

4.88  
395.68

Marcellena + El Cajon

395.68

N.W. Spike in Pole

8+35 = opp. E.L. 53<sup>rd</sup>5.73  
94.53

Top wall

398.00

F 3.47

94.53  
7

Bottom of Wall

4.53

393.00

C 1.53

+ 63

**INDEXED**5.88  
94.38

97.90

F 3.52

4.38

4.38

93.10

C 1.28

**OCT 10 1949**

9+10

5.78  
94.48

97.80

F 3.32

4.48

4.48

93.27

C 1.21

+ 60

5.54  
94.72

97.40

F 2.68

4.72

4.72

93.45

C 1.27

+ 70

5.49  
94.77

97.36

F 2.59

4.77

4.77

93.49

C 1.28

10+04

5.33  
94.93

97.20

F 2.27

4.93

4.93

93.61

C 1.32

10+25 = end.

5.37  
94.89

96.70

F 1.81

4.89

4.89

93.69

C 1.20

Rough Grades for Paving Felspar  
- Bet. Lamont + Morrell - Plan 7371-L

W.O. 31208 5-12-49 - 7.0.

87.28 88.19 = N.E. ct.

Lamont +20 86.93 N. Side

F.L. Morrell 0+00 = Top-cb. 87.98 87.60

+20 86.54

+40 - 1' B. 86.4 86.12<sup>0.4</sup> C 0.3

+80 INDEXED 84.7 84.4<sup>4.7</sup> C 0.3

W.K.  
OCT 10 1949

+120 83.7 82.6<sup>3.7</sup> C 1.1

+140 81.81

+60 82.4 81.12<sup>2.4</sup> C 1.3

+80 80.54

2+00 80.08 81.0 80.1<sup>1.0</sup> C 0.9

+20 79.74

+40 80.4 79.52<sup>0.4</sup> C 0.9

+80 80.1 79.2<sup>0.1</sup> C 0.9

2+20 80.1 78.9<sup>0.1</sup> C 1.2

+70 78.48 80.9 78.5<sup>0.9</sup> C 2.4

+90 78.23

4+10 = cross. 1' B. 77.79 79.5 77.8<sup>9.5</sup> C 1.7

0+10 84.95

+20 88.81

+30 84.58

Topcb. S. side

85.03 85.0

5' B. 84.25 83.9 84.3<sup>0.9</sup> F-0.4

1' B. 82.8 82.8 - 0.0

81.25 81.1 81.3<sup>1.1</sup> - F 0.2

80.55

79.95 80.3 80.0<sup>0.3</sup> C 0.3

79.44

79.04 79.2 79.0<sup>9.2</sup> C 0.2

78.73

78.5 78.52 - 0.0

78.1 78.2<sup>8.1</sup> F 0.1

78.0 77.9<sup>78.0</sup> C 0.1

77.48 78.2 77.5<sup>8.2</sup> C 0.7

77.23

76.79 77.4 76.8<sup>77.4</sup> C 0.6

4+30

77.17

N. Side

4+50  
+70

76.36

78.0

<sup>8.0</sup>  
76.4

c 1.6

Marvell  
8+00 = W.L.

73.53

73.70

4+90

74.19

76.17

S. side

73

75.36

76.3

<sup>6.3</sup>  
75.4

c 0.9

74.37

72.04

72.70

72.19

Grades - for Pave - 20' Alley - Blk 8 - Mt. View  
 Plan - 7327 - L. 5-13-49 - 7.0.

or's exception on each side

w.D. 31460

**INDEXED**

Y.K.

**OCT 10 1949**

a+00 = N.L. Landis

341.00

N.W. Chamounie  
 - Landis

W. side

343.50

= cut. in db.

+40 - 4' B = S 43.88 43.80<sup>88</sup> C 0.08

+80 - 2' B. 44.17 44.10<sup>17</sup> C 0.07

1+20 - 2' B. 44.46 44.40<sup>46</sup> C 0.06

+40 0.42 B = Nail 45.44 45.44<sup>44</sup> C 0.86

+60 0.27 B = N. 46.13 46.13<sup>13</sup> C 1.32

+80 2' B = Cross 44.86 45.09<sup>09</sup>  
 4.86 F 0.23

2+00 1' B = S 45.64 45.64<sup>64</sup> C 0.21

+20 2' B 46.40 45.81<sup>40</sup> C 0.59

+40 - 2' B 46.45 46.27<sup>45</sup> C 0.18

+60 - 2' B 46.87 46.77<sup>87</sup> C 0.10

E. Side

43.80 = cut

1' B = S 44.21 44.10<sup>21</sup> C 0.11

2' B 44.51 44.40<sup>51</sup> C 0.11

2' B 45.11 44.70<sup>11</sup> C 0.41

15' B = N 45.97 44.88<sup>97</sup> C 1.09

50' B = S 45.84 45.10<sup>84</sup> C 0.74

0.40 B = N. 46.44 45.39<sup>44</sup> C 1.05

2' B 47.03 45.72<sup>03</sup> C 1.31

2' B 47.41 46.11<sup>41</sup> C 1.30

2' B 48.37 46.54<sup>37</sup> C 1.83

2' B 48.51 47.04<sup>51</sup> C 1.47

			W.	
2+80	- 2' B.	47.50	<sup>7.50</sup> 47.32	C 0.18
3+10	- 2' B	48.80	<sup>8.80</sup> 48.19	C 0.61
+40	- 2' B.	50.10	<sup>50.10</sup> 49.06	C 1.04
+60	- 0.62 B = N.	50.80	<sup>50.80</sup> 49.59	C 1.21
+80	- 2' B.	50.45	<sup>50.45</sup> 50.01	C 0.44
4+00	- .72 B = N.	51.41	<sup>51.41</sup> 50.33	C 1.08
+20	- .37 B = N.	51.58	<sup>1.58</sup> 50.54	C 1.04
+40	- .39 B = N.	52.30	<sup>2.30</sup> 50.64	C 1.66
+60	- 2' B	51.04	<sup>1.04</sup> 50.60	C 0.44
5+06	- 2' B.	50.98	<sup>98</sup> 50.51	C 0.47
+26	- 0.17 B = N	51.23	<sup>1.23</sup> 50.22	C 1.01
+46	- 2' B = Cross	50.97	<sup>50.97</sup> 49.45	C 1.52
+66	- 2' B	51.11	<sup>51.11</sup> 48.21	C 2.90
+86.8 = St. Wightman			46.50	

			E.	75
2' B.		48.72	<sup>8.72</sup> 47.58	C 1.14
2' B = Cross		49.81	48.43	C 1.38
2' B.		50.36	<sup>50.36</sup> 49.29	C 1.07
2' B = Cross		50.41	<sup>50.41</sup> 49.80	C 0.59
0.22 in = N.		51.45	<sup>1.45</sup> 50.21	C 1.24
0.64 in = cut.		51.51	<sup>1.51</sup> 50.51	C 1.00
0.29 in = cut		51.57	<sup>1.57</sup> 50.70	C 0.87
2' B =		51.34	<sup>1.34</sup> 50.79	C 0.55
0.05' B = N.		52.24	<sup>2.24</sup> 50.75	C 1.49
2' B		50.77	<sup>77</sup> 50.56	C 0.21
3' B = S		50.19	<sup>50.23</sup> 50.19	F 0.04
4' B = S		50.14	<sup>50.14</sup> 49.42	C 0.72
2' B =		50.24	<sup>50.24</sup> 48.10	C 2.14
			46.30	



Curb Grades - Illinois St.  
 S. of Madison - Plan - 7049-L  
 W.O. 31295 - 5-16-49 - 70.  
 28475 = Nail - end of Pavc  
 cb. Grade  
 E. Side

S.L. Madison  
 0+00 =

**INDEXED**  
 W.K.  
**OCT 10 1949**

+50				
end of cb. on Lt. +90 = opp	end. cb. 89.12	89.10		
1+40	88.53	88.85 <sub>.53</sub>	F 0.32	
+90	88.50	88.61 <sub>.50</sub>	F 0.11	
2+40	88.30	88.37 <sub>.30</sub>	F 0.07	
+90	88.14	88.13 <sub>.14</sub>	C 0.01	
3+40	87.68	87.89 <sub>.68</sub>	F 0.21	
+90	87.73	87.65 <sub>.73</sub>	C 0.08	
4+40	87.38	87.41 <sub>.38</sub>	F 0.03	
+76.7 = end.	87.27	87.23 <sub>.27</sub>	C 0.04	

					W. Side
end cb.	89.89	389.85			
	89.88	89.57 <sup>88</sup>	C 0.31		
	89.60	89.35 <sup>60</sup>	C 0.25		
	88.88	89.08 <sup>88</sup>	F 0.20		
	88.52	88.80 <sup>52</sup>	F 0.28		
	88.72	88.53 <sup>72</sup>	C 0.19		
	87.94	88.25 <sup>94</sup>	F 0.31		
	87.93	87.98 <sup>93</sup>	F 0.05		
	87.88	87.70 <sup>88</sup>	C 0.18		
	87.29	87.43 <sup>29</sup>	F 0.15		
	86.80	87.23 <sup>80</sup>	F 0.43		

B.M. = N.W. Pipe - 42<sup>nd</sup> & Hilltop

155.19

Conc. Sewer  
End of Exist 6"

147.20 - F.L.

0+27.45 = Nail on fence

55.77

147.39

8.38

0+54.90 = ~~±~~ M.H. 1  
= 4' # Bothways  
To E.

56.35

147.58

8.77

+35' - 4' Rt.

55.85

47.75

8.10

+70

INDEXED

55.38

47.93

7.45

1+05'

W.K.

55.35

48.10

7.25

+34

OCT 10 1949

53.60

48.25

5.35

+70.7 = end = 4's  
2' E. of EL.

53.91

48.43

5.48

3' W = 4" C.I. to S.  
to 0+00

48.42

5.49

0+30 - 4' Lt.

53.03

48.72

4.31

+55'

52.61

48.97

3.64

+90 = end. = 4' Lt.

51.72

49.32

2.40

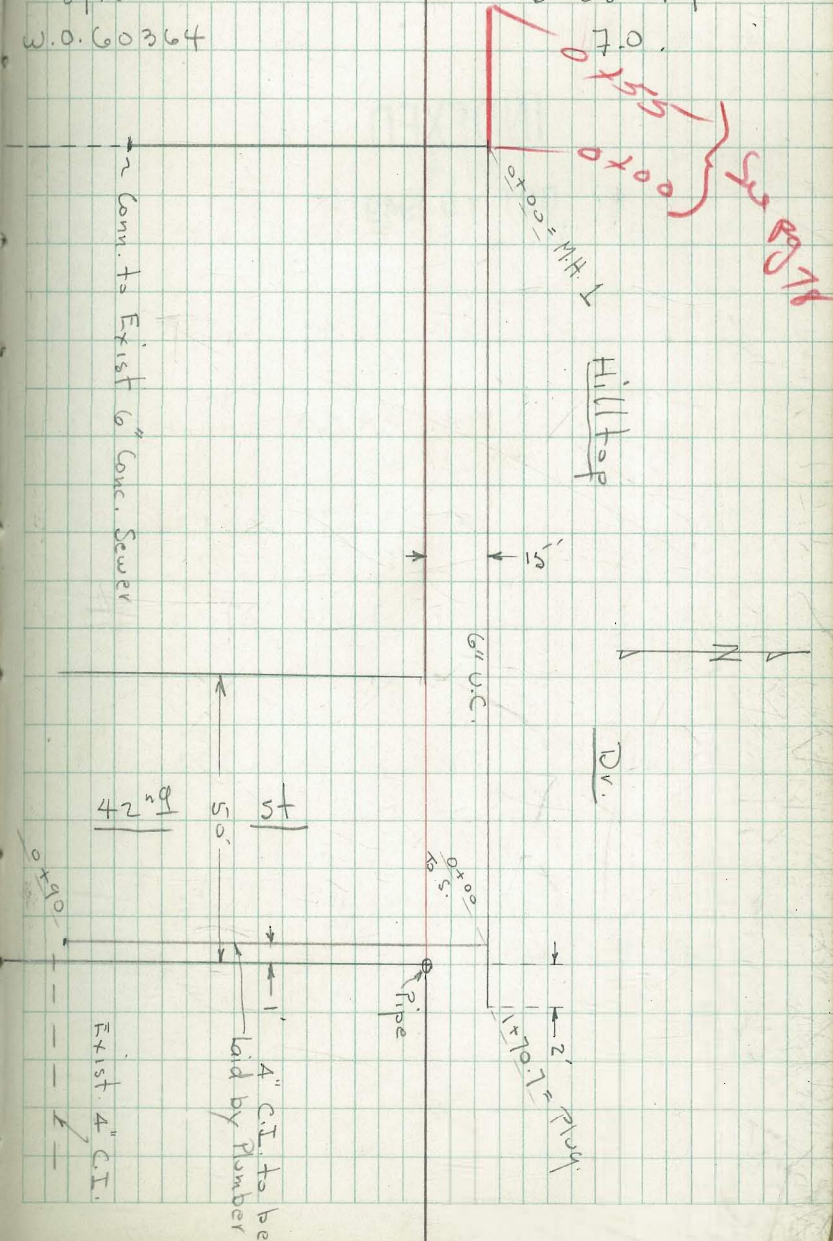
Stake Sewer - City Job

# 3718

W.O. 60364

6-28-49

777



Grades for Sewer in Patricia Dr.  
2434-B-

INDEXED

W.K.  
OCT 10 1949

0+00 = Ext. M.H.	2.29	26.82	426.39	10.43
+34	3.62	35.49	<sup>35.49</sup> 26.56	8.93
+70	4.91	34.20	<sup>34.20</sup> 26.74	7.46
1+05	6.20	32.91	<sup>32.91</sup> 26.92	5.99
1+4 1.22 = M.H. 1	7.41	31.70	<sup>31.70</sup> 27.10	4.60
25' N. = end.	7.85	31.26	<sup>31.26</sup> 27.23	4.03

7-31-52 Roberts  
170 Grade

78

0+00 Exist MH

~~162.77~~  
~~147.58~~  
GR 1517  
622  
C 8.97

0+27.5

~~162.77~~  
~~147.86~~  
GR 1491  
614  
C 8.77

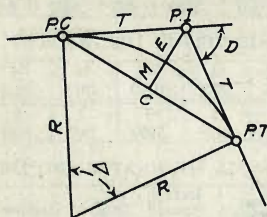
0+55 DE

~~162.77~~  
~~148.13~~  
GR 1464  
5.93  
C 8.71

Sewer - 42d 2 Hilltop - stakes  
7-31-52 Roberts

# DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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## CURVE FORMULAS

Radius= $R = \frac{50}{\sin \frac{D}{2}}$  (1) Degree of Curve= $D$  and  $\sin \frac{D}{2} = \frac{50}{R}$  (2)

Tangent= $T = R \tan \frac{\Delta}{2}$  (3) Length of Curve= $L = 100 \frac{\Delta}{D}$  (4)

Middle ordinate= $M = R(1 - \cos \frac{\Delta}{2})$  (5)  $= R \text{vers} \frac{\Delta}{2}$  (6)

External= $E = T \tan \frac{\Delta}{4}$  (7)  $= R \div \cos \frac{\Delta}{2} - R$  (8)  $= R \text{exsec} \frac{\Delta}{2}$  (9)

Long Chord= $C = 2 R \sin \frac{\Delta}{2}$  (10)  $\Delta$  = Central Angle

## EXPLANATION AND USE OF TABLES

**Stations.**—Given P. I. = Sta. 161 + 60.35 to find Sta. of P. C. and P. T.  $\Delta = 62^\circ 10'$   $D = 8^\circ 20'$ . From Table IV for  $1^\circ$  curve  $T = 3454.1$  and  $\div 8\frac{1}{3} = 414.49$  ft. From Table V correction = .36 or  $T = 414.85$  ft. P. C. = Sta. P. I. -  $T = 157 + 45.50$ . Also from (4)  $L = 746.00$  and P. T. = Sta. P. C. +  $L = 164 + 91.50$ .

**Offsets.**—Tangent offsets vary (approximately) directly with  $D$  and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft. = 7.27 ft. Distance = 158 - Sta. P. C. = 54.50, hence offset =  $7.27 (54.50 \div 100)^2 = 2.16$  ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus  $(54.50)^2 \div (2 \times 688.26) = 2.16$  ft.

**Deflections.**—Deflection angle =  $\frac{1}{2} D$  for 100 ft.,  $\frac{1}{4} D$  for 50 ft., etc. For  $c$  ft. = (in minutes)  $.3 \times C \times D^\circ$  or = defl. for 1 ft. from Table III  $\times C$ . For Sta. 158 of above curve =  $.3 \times 54.5 \times 8\frac{1}{3} = 136.2'$  or  $2^\circ 16.2'$ , or =  $2.50 \times 54.5 = 136.2'$  from Table III. For Sta. 159 deflection angle =  $2^\circ 16.2' + 8^\circ 20' \div 2 = 6^\circ 26.2'$ , etc.

**Externals.**—May be found in similar manner to tangents. Thus  $E$  for curve above is 115.37. For from Table IV for  $1^\circ$  curve  $E = 960.6$  for  $8^\circ 20' = 960.6 \div 8\frac{1}{3} = 115.27$  and from Table V correction = .10 or  $E = 115.37$  ft. Or suppose  $\Delta = 32^\circ$  and  $E$  is measured and found to be 42 ft. What is  $D$ ? From Table IV  $E = 230.9$  and  $\div 42 = 5.5$  or  $D = 5^\circ 30'$ .

392.00 = ct

142.43  
+ 4.68  

---

147.11 = π  
- 5.94  

---

141.17

111  
83  
28

47.47 = Horn r  
Gresham

41.22  
9.71  
50.93  
0.26

56.70  
3.67  
53.03 = Nail - P.B. Dr.

50.67  
6.03  
56.70  
12.90  
43.80  
6.42  
50.22  
12.80  
37.42  
0.11  
37.53

4.98  
5.89  
10.87  
28  
11.15

50.22  
1.14  
49.08 = Nail - Reed

37.53  
5.17  
32.38 = Mon. Gresham + Reed

8.97  
147.55  
156.55  
622  
6277

5.14  
4.34  
1.50

6.99 = Sea Wall

5.73  
12.72  
9.39  
3.33  
2.51  
+ 5.84  
- 6.23  
- 0.39  
6.24  
5.85  
1.30  
4.55 = B.M. - S.E.  
Bajard + Reed

55.11  
20  
35.11  
+ "  
+ 31  
+ 40

40.00  
35.11  
4.89

55.44

Tracks = 1.40

72.23  
32.3  
75.46  
3.82  
71.64

DISTANCES FROM CENTER OF ROADWAY FOR  
CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1 1/2  
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	26.2	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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