

901

901

F.B. 901

LEVEL BOOK.

No. 410 T

IND

301

EUGENE DIETZGEN CO

Drawing Materials and Surveying Instru

NEW YORK.

CHICAGO.

SAN FRANCISCO.

TABLES FOR EXCAVATIONS AND EMBANK DISTANCES FROM CENTER OF ROADWAY FOR CROSS-

ROADWAY 20 FEET WIDE. SIDE SLOPES 1 TO 1.

FOR SINGLE TRACK EXCAVATION.

MICROFILMS

DEC 16 1954

1902. No. 30340.

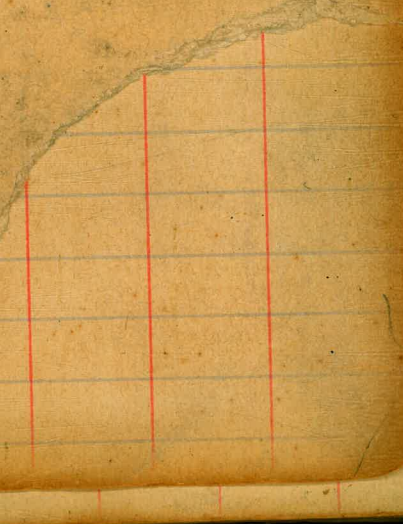
	0	.1	.2	.3	.4	.5	.6	.7	.8
0	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8
1	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8
2	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8
3	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8
4	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8
5	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8
6	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8
7	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8
8	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8
9	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8
10	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8
11	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8
12	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8
13	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8
14	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8
15	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8
16	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8
17	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8
18	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8
19	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8
20	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8
21	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8
22	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8
23	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8
24	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8
25	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8
26	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8
27	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8
28	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8
29	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8
30	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8
31	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8
32	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8
33	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8
34	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8
35	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8
36	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8
37	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8
38	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8
39	49.0	49.1	49.2	49.3	49.4	49.5	49.6	49.7	49.8
40	50.0	50.1	50.2	50.3	50.4	50.5	50.6	50.7	50.8

Calculated by F. E. Paradis, C. E.

327.6+69
327 3+57

901

Contour levels
Book 915 Page 40



901

1
1

25					
26	36.0				
27	37.0	37.1			
28	38.0	38.1	38.2		
29	39.0	39.1	39.2		
30	40.0	40.1	40.2	40.3	
31	41.0	41.1	41.2	41.3	
32	42.0	42.1	42.2	42.3	
33	43.0	43.1	43.2	43.3	
34	44.0	44.1	44.2	44.3	
35	45.0	45.1	45.2	45.3	45.4
36	46.0	46.1	46.2	46.3	46.4
37	47.0	47.1	47.2	47.3	47.4
38	48.0	48.1	48.2	48.3	48.4
39	49.0	49.1	49.2	49.3	49.4
40	50.0	50.1	50.2	50.3	50.4

Calculated by

	33.23			
9416 M.H. & Alley bet K&L			19.23	
940	5.4	27.8	19.33	
8450	4.99	28.24	19.63	
840	4.6	28.6	19.93	
7490 M.H. Δ 95 of S.L. K. ST	4.4	28.8	20.00	
7450	4.41	28.82	20.15	
740	4.2	29.0	20.33	
6450	3.76	29.47	20.52	
640	9.7	23.5	20.70	
T.P. 6.81	39.96	0.08	33.15	
5440	12.5	27.5	20.92	
540	9.31	30.65	21.11	
4450	9.63	30.33	21.27	
440			21.46	
see book 917 page 4			21.50	
3486 M.H. & Alley bet J & K				

SEE 155 D
 For East San Diego Outfall 16"
 From Market North.

31.3841 31.38 31.38 31.38 31.38
 19.33 19.63 19.93 20.23 20.53
 12.55 11.75 11.45 11.15 10.85

28.82	31.62	31.62	31.62	
2.50	19.63	19.93	20.20	
31.62	11.99	11.69	11.62	
8.5 ✓				
29.74	33.58			
3.84	23.50			
33.58	10.1			
8.6 ✓				
8.7 ✓		33.58		
		20.70		
		12.58		
8.8 ✓				
8.7 ✓	29.47	30.65		
	3.84	35.1		
	33.31	34.16		
	20.70	20.92		
	12.61	13.24		
8.7 ✓				
9.0 ✓				
2.8 ✓	28.82	32.77	32.77	
	3.95	20.18	20.73	
	32.77	12.62	12.14	
6.6 ✓				
9.5	28.82			
	3.67			
	32.49	32.49		
	20.33	20.52		
	12.16	11.97		
9.0				
		30.33	30.33	33.62
		4.41	3.29	21.50
		32.77	33.62	12.12
		21.29	21.29	7.77
		5	12.93	4.35
		3.5		
		12		
		42.0		

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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Outfall sewer Charles Valley from M.H.
 N.C. 80 P.R. South
 Book 360 page 8

	1.02	3.13	2.16		
684+ M.H. near N.C. 80 P.R. ^{Page 9}				-3.20	12.2
684+ 1060	12.79	0.79	2.19	-3.27	5.5
69+0 bottom str.	10.84	1.95		-3.30	5.3 ✓
+50	7.11	5.7		-3.37	9.1 ✓
70+0	5.98	6.51		-3.45	10.3 ✓
+50	6.7	6.1		3.52	9.6 ✓
71+0	9.61	3.18		3.60	6.8 ✓
+50	9.0	3.8		3.67	7.5 ✓
72+0	3.30	9.49		3.75	13.2 ✓
+50	6.0	6.8		3.82	10.6 ✓
72+90 M.H. Δ 351	6.58	9.72	3.07	3.88	2.0 ✓
73+0	2.45	4.13		3.90	8.1 ✓
+50	5.6	1.0		3.97	5.0 ✓
74+0	9.0	-2.4		-4.05	1.7 ✓
+50	9.2	-2.6		-4.12	1.5 ✓
75+0 M.H. Δ ✓	4.1	2.5		4.20	6.7 ✓
+50	2.5	4.1		4.27	3.4 ✓
76+0 M.H. Δ	5.76	0.32		4.35	5.2 ✓

9.49
 2.40
 4.13
 3.95
 3.08
 3.88
 11.90 11.96

	M.H.	M.H.
9.10	6.51	6.51
2.38	3.97	4.05
6.51 M.H.	10.48	10.56
	10.63	10.71
	10.78	10.86

72 90
 68 35
 454

25
 26
 27
 28
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 37
 38
 39
 40

6.58

76+50

5.84 0.74 -4.42

77+0

3.12 3.96 -4.50

+50

3.93 2.65 -4.57

78+0

7.68 -1.10 -4.65

+50

5.69

12.15

9.09 2.51 -4.72
3.46

79+0

2nd rd west

1.00 11.15 -4.80

79+37.5 MHC 40' E.L. = E. 32.5'

+50

2.4 9.8 -4.85

80+0

2.86 9.29 -4.87

+50

5.0 7.2 -4.95

81+0

7.0 5.2 -5.02

+50

7.9 4.3 -5.10

82+0

8.2 4.0 -5.17

+50

2.8 3.4 -5.25

83+0

2.7 3.5 -5.32

4.95

7.79

9.31 2.84 -5.40

+50

4.8 3.0 5.47

84+0

4.6 3.2 -5.55

H6th road bridge

+50 on bridge

5.62

85+0 on bridge

5.70

107th road bridge

cont p. 15

Bolt in pole 3.59 = 50 x of bridge

7.60
6.51
1.09

110

4.1

7.8

15

7.24
7.51

88

6.51 6.51 6.51 6.51 3.59
4.42 4.50 4.57 4.65 3.66
10.93 11.01 11.08 11.16 7.24 M

5.2 ✓ 7.24 7.24 7.24 7.24 7.24

8.0 ✓ 5.55 5.47 5.40 5.32
12.71 12.79 12.71 12.64 7.56

7.2 ✓ 7.25 7.25 7.25 7.25 7.25

3.7 ✓ 5.32 5.25 5.17 5.10 5.02
12.57 12.50 12.42 12.35 12.27

2.2 ✓ 35.80 3.59 10.76 10.76
2.2 7.17 4.95 4.91

16.0 ✓ 3.59 50.0 74.75

14.6 ✓ 3.20 3.59 9.48
11.99 5.89 0.65

14.2 ✓ 4.85 9.48 H.1 8.83
16.84 4.85 15.50 H.1

12.2 ✓ 17.33 2.80
20.30

10.2 ✓ -1.10 4.98
6.08 4.51

9.4 ✓ 4.98 7.49
4.72 7.70

9.2 ✓ 0.22 M. 0.22
-5.57 -5.70 5. E

8.7 ✓ 5.79 5.92

8.8 ✓ 5.92

8.2 ✓ 4.48 5.92
1.08

8.0 ✓ 4.48 5.92

8.2 ✓ 5.92
1.08 7.00

8553

8508

CS

	5.98			
60+50	3.83	2.15	-1.63	
60+00	5.1	0.9	-1.53	
+50	5.56	0.42	-1.43	
59+03 ² = M.H. 3rd of E. line 33 rd St	5.0	1.0	-1.33	X
+50	4.66	1.32	-1.23	
+20	4.6	1.4	-1.17	
T.P.				
58+0	4.6	1.4	-1.13	
+50 change of line begins here	4.31	1.67	-1.03	
57+30 M.H. & Alley ← 11.72	10.4	1.3	-0.99	X
57+0	10.65	1.14	-0.93	
+85	13.1	-1.4	-0.80	
+50			-0.83	
+35	12.0	-0.3	-0.80	
56+0	10.62	1.10	-0.73	
+50	11.9	9.5	-0.63	
55+0	11.99	9.73	-0.53	
+50	9.97	1.75	-0.43	
54+0	9.5	1.2	-0.33	
+50 M.H. Alley Nat. Logan	9.4	2.3	-0.23	
53+0	8.98	2.74	-0.13	
T.P.	8.98	2.74		

0.20%
Grade

2.74	8.37	8.37	8.37	
3.18	0.23	1.3		
5.12	8.60	8.50		
8.3741				
1.75	12.13	12.13		
10.38	0.33	0.43		
12.1347	12.46	12.56	12.66	12.76
3.84				
2.4	1.10	6.48	6.45	6.48
1.8	5.35	0.92	0.80	0.90
2.3	6.4841	7.21	7.28	7.35
2.5		7.41	7.41	7.47
	1.10	1.10		
	10.10	9.87		
	11.20	10.97		
	0.63	0.63		
	11.83	11.60		
	11.80	11.57		
	0.93	1.10		
	4.81	4.81		
	5.5	5.91		
		6.82		
		5.95		
		5.7		
			6.88	
				4.4
				5.7
				5.7
				6.75
				4.63
				11.38
				6.99
				7.96
				3.42
				7.72
				0.73
				8.05
				-1.06
				8.51
				-1.52
				3.2

10
6.7
10

21
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27
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29
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31
32
33
34
35
36
37
38
39
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11.84

44+0 4.3 7.65 1.67

450 4.1 7.7 1.77

43+0 7.86 3.83 8.01 4.87
T.P. 15.87

450 7.6 8.3 3.97

42+0 7.3 8.6 4.07

450 7.11 8.76 4.17

41+0 6.9 9.0 4.27

40+68 M.H. 6.4 9.5 4.33

40+50 6.47 9.65 4.37

40+0 5.8 10.1 4.47

450 5.2 10.7 4.57

37+0 4.26 11.61 4.67

450 3.6 12.3 4.77

38+0 3.45 12.42 4.87

450 3.0 12.9 4.97

37+0 3.18 12.69 5.07

450 3.9 12.0 5.17

36+0 5.67 3.50 12.37 5.27
T.P. 18.04

450 4.81 13.23 5.37

10.59 10.49 10.39 10.29 10.19 14.66
3.76 14.66 14.66 14.66 14.66
5.91 2.17 2.27 2.37 2.47
14.66 M. 12.49 12.39 12.29 12.19 12.09 11.99

12

5.2 ✓ 11.41 15.00 15.00 15.00 15.00 12.69
3.39 2.72 2.87 2.97 3.07 3.17
15.00 12.23 12.13 12.03 11.93 11.83 3.29
12.37 12.87 12.69
4.23 3.07
1.72 1.538
3.07 3.27
13.93 12.11 12.01 14.98
16.81

5.9 ✓ 12.37 12.87

6.1 ✓ 1.72 1.538
3.07 3.27
13.93 12.11 12.01

6.3 ✓

6.5 ✓

6.6 ✓

6.7 ✓

7.2 ✓

7.1 ✓

7.6 ✓

8.1 ✓

8.9 ✓

9.5 ✓

9.6 ✓

9.9 ✓

9.6 ✓

8.8 ✓

9.1 ✓

9.9 ✓

	13.04	-Yod	Top stake	Grade	
35+0		5.01	73.03	3.47	9.5 ✓
45 +50		4.52	13.52	3.57	10.0 ✓
43- 3A+42	(Ocean View Blvd) M.H. Woolman	4.4	13.6	3.59	10.0 ✓
	4.51 18.03	4.52	13.52		
43 37+0		5.05	12.98	3.67	9.3 ✓
42 +50		4.8	13.2	3.77	9.4 ✓ No bot stake
45 33+0		7.7	10.3	3.57	6.4 ✓
41+ +50		10.66	7.37	3.97	3.4 ✓
40+ 32+0		8.16	9.87	4.07	5.8 ✓
40+ +50		5.8	12.7	4.17	3.5 ✓ No bot stake
40+ 31+0		6.41	11.62	4.27	7.4 ✓
40+ +50		4.96	13.07	4.37	8.7 ✓
37- 30+ P.M.H. Krowm 614	19.47	4.70	13.33	4.47	7.9 ✓
45+ +50		6.29	13.18	5.11	8.1 ✓
38+ 29+0		4.8	14.7	5.75	9.0 ✓
45+ +50		4.35	14.62	6.37	8.2 ✓
37+ 28+0		4.6	14.9	7.07	7.9 ✓
45+ +50		4.23	15.24	7.55	7.6 ✓
36+ 27+0		2.6	16.9	8.32	8.6 ✓
45+ +50	5.73 23.07	2.13	17.34	8.96	8.4 ✓

15.35
3.47
11.91

M.N.
11.81 11.71 11.61 11.51 11.41 11.31

Mitt.
11.21 11.11 11.01 10.91

11.62
4.47
16.09

16.09
4.17
11.92

16.09
4.37
11.72

16.09
4.47
11.62

13.18
4.76
17.94

17.94
5.11
12.83

17.94 17.94 17.94 17.94
5.75 6.39 7.04 7.68
12.19 11.55 10.90 10.26

15.24
5.89
11.13

21.13 21.13
8.32 8.96
12.81 12.17

4760.5
34.42
1313.5

23.07

26+0		5.4	17.7	9.60
25+70	M.H. break	5.4	17.7	10.00
25+50		5.5	17.6	10.17
25+0		5.1	18.0	10.45
450		4.6	18.5	10.73 10.87
24+0		4.5	18.6	11.01
450		4.51	18.56	11.29
23+0		4.2	18.9	11.57
450		4.04	19.03	11.85
22+0		3.84	19.23	12.13
450		3.57	19.56	12.41
21+25	6.25 25.90	3.42	19.65	12.50
21+0	21+13 L 1034 R	6.03	19.87	12.64
20+50		5.36	20.54	12.91
20+0		4.9	21.0	13.18
19+50		4.7	21.2	13.45
19+0		4.7	21.2	13.72
18+50		4.2	21.7	13.99

continued on page 15

21.13 21.13
9.60 10.00
11.53 11.13

	18.56 4.27	22.83 10.17 12.66	22.83 10.25 12.88	
8.1 ✓	22.83 ✓	23.18 23.18 10.87 11.01	18.56 23.69 ✓ 5.13 11.29	23.69 23.69 12.40
7.7 ✓	18.56 4.62 23.18	23.31 12.17		
7.4 ✓	18.56 4.80 23.36	23.36 23.36 11.57 11.85 11.79 11.51	23.36 23.36 12.13 11.23	
7.6 ✓	19.56 4.97	24.53 24.53 12.14 12.40	24.53 24.53 12.64 12.91	24.53 24.53 13.18
7.8 ✓	24.53 ✓	12.12 12.03	11.59 11.62	11.35
7.6 ✓	20.54 4.85 25.39 ✓	25.39 25.39 13.43 13.72 11.94 11.67		
7.3 ✓	22.10 4.07 26.17	26.17 12.18		
7.3 ✓		0.27		
7.2 ✓				
7.1 ✓				
7.2 ✓				
7.2 ✓				
7.2 ✓				
7.8 ✓				
7.8 ✓				
7.5 ✓				
7.7 ✓				

(See p 8)

779

85+10	Tied 20 nest	4.3	3.5	5.72
85+53 ⁺	M.H. L.O. 46' L.	4.4	3.4	5.78
86+0		4.2	3.6	5.85
+50		3.9	3.9	5.92
87+0		3.8	4.0	6.00
+50		3.7	4.1	6.07
88+0		3.6	4.2	6.15
+50		3.4	4.4	6.22
89+0		3.2	4.6	6.30
+51	5.00	3.11	4.68	6.37
90+0		4.8	4.9	6.45
+50		4.9	4.8	6.52
91+0		4.8	4.9	6.60
+50		5.1	4.6	6.67
92+0		5.0	4.7	6.75
+50	Tied out 17 nest	4.0	5.7	6.82
93+0		2.4	7.3	6.80
+50		2.4	7.3	6.97
94+0	M.H.	3.8	5.9	7.05

962
1.72
7.84 B.M. SPK tel. pole lat 3 D 242 61.6

7.11

15

9.2 ✓	4.98 5.27 10.75	10.75 10.75 10.75 10.75 6.90 6.95 6.99 6.82 17.65 17.70 17.74 17.57	5.68 A.M. 2 SPK tel. pole W.L. 32' 50' of S.D. 242 61.6
9.2 ✓	3.59 4.98 7.11	8.84 8.84 8.84 8.84 8.84 8.84 6.60 6.62 6.45 6.37 6.30 6.75	
9.5 ✓	12.09 6.41 5.68	15.44 15.36 15.29 15.21 15.14 15.59	
9.8 ✓	3.16 5.84 M 4.0 4.34	5.68 8.9 8.9 3.30 8.98 M 8.98 8.95 8.97 6.30 6.22 6.15	
10.0 L	5.68 3.80 3.98 M	8.98 8.98 2.98 6.15 6.07 4.78 15.13 15.05 1.20	
10.2 ✓			
10.4 ✓	4.20 B.M. SPK S.E. Post of bridge railing SPK 4.12		
10.6 ✓	8.32	8.32 8.32 8.32 8.32 5.92 5.85 5.78 5.73	
10.9 ✓		14.24 14.17 14.10 14.05	
11.1 ✓	4.70 3.24 7.94 12.28	7.84 1.07	
11.3 ✓	4.34 4.56		9.400 8.553.4 8.26.6
11.3 ✓	0.22		
11.5 ✓			
11.5 ✓			
12.5 ✓			
14.2 ✓			
14.3 ✓			
13.0 ✓			

85.534
152
871.24

	9.68				
94+50		4.3	5.4	7.12	
95+0		4.4	5.3	7.20	
+50		4.70	4.98	7.27	
96+0		4.9	4.8	7.35	
+50		5.1	4.6	7.42	
97+0		5.2	4.5	7.50	
+50	3.63	8.08	5.23	4.45	7.57
98+0		3.8	4.3	7.64	
+50		4.2	3.9	7.71	
99+0		4.56	3.52	7.79	
+50		4.5	3.6	7.86	
100+0		4.8	3.3	7.94	
+50		5.1	3.0	8.01	
101+0		5.3	2.8	8.09	
+50		5.56	2.52	8.16	
102+0		5.79	2.34	8.23	
+50		5.84	2.14	8.30	
103+0		5.7	2.4	8.38	
	3.12	8.36			
103+35 Δ M.H.		4.04	1.32	8.43	

6.37
~~6.37~~
~~4.13~~
~~2.24~~

2.24
 4.13
 6.37 M.

✓	✓	✓	✓	✓	✓
103+0	102+50	102+0	101+50	101+0	100+50
6.37	6.37	6.37	6.37	6.37	6.37
8.38	8.30	8.23	8.16	8.09	8.01
14.75	14.67	14.60	14.53	14.46	14.38
3.52	100+0	99+50	99+0	98+50	
3.35	6.87	6.87	6.87	6.87	
6.87 M.	7.94	7.86	7.79	7.71	
	14.81	14.73	14.66	14.58	
	2"4	3"5	4"	5"	
	✓	✓	✓	✓	
4.45	98	150	97+0	150	96
3.64	8.09	8.09	8.09	8.09	8.09
8.09 M.	7.64	7.57	7.50	7.42	7.35
	15.73	15.66	15.59	15.51	15.44
	✓	✓	✓	✓	✓
4.98					
4.58					
7.56 M.	95+0	94+50	94+0		
	9.56	9.56	9.56		
	7.20	7.12	7.05		
	16.76	16.68	16.61		
2.24	2.24	5.20			
2.62	2.96	5.43			
4.86	5.20 M.	6.3			4.15
4.92					8.43
5.06					12.58
	2.24				
	1.91				
	4.15 M.				

		5.36				
103+50	0.93	-2.26	8.55	-3.19	-8.45	
ground.			3.6	5.9		
104+0			2.81	-5.07	8.53	
+25			4.3	6.6		
+50			3.47	5.73	8.60	
			4.4	6.7		
105+0			3.31	5.57	8.68	
+50			4.5	6.8		
			3.15	5.41	-8.75	
			4.7	7.0		
106+0			2.74	5.00	8.83	
+50			4.9	7.2		
			2.96	5.22	8.90	
			5.1	7.4		
107+0			3.29	6.15	8.98	
+50			5.3	7.6		
			3.99	6.25	9.05	
			6.2	8.5		
108+0			4.21	6.47	9.13	
+50			6.4	8.7		
			4.60	6.86	9.20	
			6.8	9.1		
109+0			5.52	7.78	9.28	
+50			7.3	9.6		
			5.88	8.14	9.35	
			7.4	9.7		
110+0			5.32	7.64	9.43	
+50			7.8	10.1		
	3.96	-4.28	5.98	-8.24	-9.50	
			6.2	10.5		
111+00			4.33	8.61	9.58	
			6.6	10.9		
111+50			5.11	9.39	9.65	
			7.1	11.4		
112+00			5.21	-9.49	9.73	

cut stks cut ground

5.26	
2.6	
3.46	
2.87	
3.11	
3.33	
3.83	
3.68	
2.83	
2.80	
2.66	
2.34	
1.50	
1.21	
1.79	
1.26	
0.97	
0.26	
0.24	

2.57 2.57 2.57 2.57
 2.14 2.63 3.85
 9.98 5.20 2.12

-5.07
 2.50
 -2.57

9.5
 2.57
 2.82
 5.39

2.57 2.57 2.57
 3.68 3.60
 -3.75 6.11 6.03 5.99
 +6.18
 11.40
 -5.00 5.02 5.02 5.02 5.02
 0.02 9.73 9.65 9.58 9.50
 +5.02 4.71 4.63 4.56 4.48

11.00
 5.02 5.02 5.02 5.02
 4.43 4.35 4.28 4.20
 4.41 4.33 4.26 4.18

5.02
 5.12
 2.8
 8.90
 5.02

112.00
 103.35
 8.65

105.00
 112.00
 105.00
 6.50

4.15
 8.97
 12.64

- 9.5 = Elev of water taken Nov 13th 1913 at 3:30 AM. Tide = - 0.1

92.00
78.33
14.67

18

Senior Alleybet National Grand from 21.16
 Sta 57430 outfall line E. for 1800 to D.E. 143

3 mi. Sta 5740 main line
 4.31 5.95

0+0 3 M.H. Sta 57430

450		3.79	2.16	-0.92
1+0	J	2.66	3.29	-0.83
1+50		2.7	3.3	-0.75
2+0		3.3	2.7	-0.66
450		3.72	2.23	-0.58
3+0		4.4	1.6	-0.49
3+50 M.H.		4.4	1.6	-0.41
4+0		4.8	1.2	-0.32
450		4.9	1.1	-0.24
5+0		4.9	1.1	-0.15
450		5.27	0.68	-0.07
6+0		5.2	0.8	-0.00
450		6.6	-0.6	+0.09
7+0		4.3	1.7	0.18
7+0.5 M.H. break		2.8	3.2	0.20
T.P.	11.65	17.35	0.25	5.70
450	12.22	29.44	0.13	17.22
			8.7	20.7
7+60 break		5.28	24.16	16.00

Not used

"C"-2 Line

Sewer in Alley between Newton
and National, East of 33rd St.

Sta.	Ground	Grade	
9 +90	22.3	18.00	M.H.
10	23.3	19.40	
10+40	31.3	25.00	Break
+50	32.5	25.26	
11	36.43	26.54	
+50	37.0	27.83	
12	36.8	29.11	
+50	37.29	30.40	
13	39.23	31.69	
13+15	39.3	32.09	M.H.
+50	39.8	32.97	
14	39.9	34.26	
+50	41.83	35.54	
15	44.3	36.83	
+50	45.91	38.11	
16	47.5	39.40	
16+15	48.1	39.80	M.H.
+50	49.0	40.69	
17	49.95	41.97	
+50	51.82	43.26	
18+00	53.7	44.55	Dead End.

Sewer in Alley between Newton
and National, East of 33rd St.

Sta. Ground Grade

0+00	-1.00	M.H. @ 33 rd St.	
+50	2.16	-0.92	
1	3.29	-0.83	
+50	3.3	-0.75	
2	2.7	-0.66	
+50	2.23	-0.58	
3	1.6	-0.49	
3+50	1.6	-0.41	M.H.
4	1.2	-0.32	
+50	1.1	-0.24	
5	1.1	-0.15	
+50	0.68	-0.07	
6	0.8	0.00	
+50	-0.6	+0.09	
7	1.7	0.18	
7+05	3.2	0.20	M.H.
+50	20.7	13.13	
+60	24.16	16.00	Break
8	27.0	16.35	
+50	27.2	16.78	
9	26.16	17.22	
+50	22.3	17.65	

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$$\begin{array}{r} 1.14 \\ 4.87 \\ \hline 6.01 \end{array}$$

$$\begin{array}{r} 6.01 \\ 0.92 \\ \hline 6.93 \end{array}$$

$$\begin{array}{r} 6.01 \\ 0.23 \\ \hline 6.24 \end{array}$$

$$\begin{array}{r} 6.01 \\ 0.25 \\ \hline 6.26 \end{array}$$

$$\begin{array}{r} 6.01 \\ 0.66 \\ \hline 6.67 \end{array}$$

$$\begin{array}{r} 6.01 \\ 0.58 \\ \hline 6.59 \end{array}$$

$$\begin{array}{r} 6.01 \\ 0.49 \\ \hline 6.50 \end{array}$$

$$\begin{array}{r} 6.01 \\ 0.31 \\ \hline 6.32 \end{array}$$

$$\begin{array}{r} 6.01 \\ 0.24 \\ \hline 6.25 \end{array}$$

$$\begin{array}{r} 6.01 \\ 0.15 \\ \hline 6.16 \end{array}$$

19

3.08 ✓
 4.1 ✓
 4.1 ✓
 3.4 ✓
 2.8 ✓
 2.1 ✓
 2.0 ✓
 1.5 ✓
 1.3 ✓
 1.3 ✓
 0.8 ✓
 0.8 ✓
 0.7 ✓
 1.5 ✓
 3.0 ✓
 1.6
 3.2

					floor
		29.44			
5	8+0		2.4	27.0	16.35
	+50		2.2	27.2	16.78
0+	9+0		3.28	26.16	17.22
1	+50		7.1	22.3	17.65
	+90 M.H. break		7.1	22.3	18.00
2	10+0		6.1	23.3	19.40
	T.P.	11.74	0.08	29.36	
3	10+90 break	41.08	9.8	31.3	25.00
3	+50		8.6	32.5	25.26
4	11+0		4.65	36.43	26.54
5	+50		4.1	37.0	27.83
	12+0		4.3	36.8	29.11
6	+50		3.79	37.29	30.40
7	13+0		1.85	39.23	31.69
7	+15 M.H.		1.8	39.3	32.09
	+50		1.3	39.8	32.97
8	14+0		1.2	39.9	34.26
	T.P.	12.32	0.49	40.59	
	+50	52.91	11.08	41.83	35.54
9	15+0		8.6	44.3	36.83
	+50		7.00	45.91	38.11

cut	26.16	29.18	29.18	29.18	29.18	29.18
	3.07	16.35	16.78	17.22	17.65	18.00
	29.18	12.83	12.40	11.96	11.53	11.18
10.7 ✓				36.43		40.9
				9.95		2.19
10.4 ✓				4.59		13.7
				5.7		
8.9 ✓						
4.7 ✓	36.43	39.68	39.68	39.68	39.68	39.68
	3.25	26.54	27.83	29.11	30.40	31.69
	39.68	13.14	18.5	10.57	9.28	7.99
4.3 ✓						
	39.50					
	4.56					
3.7	44.36	44.36	44.36	44.36	44.36	44.36
		2.97	4.46	5.54		
6.3		11.39	10.10	8.82		
7.2 ✓						
9.9 ✓						
9.2 ✓						
7.7 ✓						
6.9 ✓						
7.5 ✓						
7.2 ✓						
6.8 ✓						
5.6 ✓						
6.3						
7.5						
7.2						

52.91

5
0+
+
1
2
3
3
4
5
6
7
7
8
9
+

16+0			5.4	47.5	39.40	8.1
16+15 M.H.	✓		4.8	48.1	39.80	8.3
150			3.9	49.0	40.69	8.3
17+0			2.96	49.95	41.97	8.0
150	4.83	56.65	1.09	51.82	43.26	8.6
18+0 R.E.			3.0	53.7	44.55	9.2
18+0			3.81		47.55	5.1

sewer alley bet National & Logan from M.H.
 outfall Line @ 33rd St Sta 53+50 E for 1360' to
 D.E. 145' E of E.L. 35th St.

B.M.					-0.23
B.M.	806	7.73			
0+0 M.H. Outfall Line					-0.23
+50			5.46	2.27	-0.14
1+0			5.38	2.35	-0.05
+50		b	5.0	2.7	+0.04
2+0			6.3	1.4	0.13
+50			9.0	-1.3	0.22
+70			5.94	1.79	0.26
3+0			5.55	2.18	0.32
+50			5.0	2.7	0.41
+60 M.H.			4.6	3.1	-0.43
4+0			4.69	3.04	0.50
+50			5.42	2.31	0.60
5+0			5.4	2.3	0.69
+50			5.6	2.1	0.78
6+8			5.60	2.13	0.87
+50			4.8	2.9	0.96
+75 M.H. break			3.2	4.5	1.00
7+0	12.20	18.54	1.39	6.24	2.00
+50 break			7.0	11.5	4.00

"C-2" Line

Sewer in Alley between
National & Logan, east of 33rd

Sta.	Ground	Grade	
10+00	33.1	27.00	M.H.
+50	35.9	30.25	
11	38.8	33.50	
+50	42.0	36.75	
12	45.1	40.00	Break
+50	46.8	41.56	
13	48.3	43.12	
+50	49.9	44.68	
+60	49.9	45.00	Dead End.

Sewer in Alley between National and Logan, east of 33rd.

Sta. Ground Grade

0+00	-0.23	4 33rd
+50	2.27	-0.14
1	2.35	-0.05
+50	2.7	+0.04
2	1.4	0.13
+50	-1.3	0.22
+70	1.79	0.26
3	2.18	0.32
+50	2.7	0.41
+60	3.1	0.43 M.H.
4	3.04	0.50
+50	2.31	0.60
5	2.3	0.69
+50	2.1	0.78
6	2.13	0.87
+50	2.9	0.96
+75	4.5	1.00 M.H. ✓
7	6.34	2.00
+50	11.5	4.00 Break
8	16.9	8.60
+50	21.2	13.20
9	25.3	17.80
+50	29.68	22.40

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-0.23	7.96	7.96	7.96	7.96	7.96	7.96	7.96	7.96	7.96
8.19	0.14	0.05	0.04	0.13	0.22	0.26	0.32	0.41	0.43
7.96	8.10	8.01	7.92	7.83	7.74	7.70	7.64	7.55	7.50
7.96	7.96	7.96	7.96	7.96	7.96	7.96	7.96	7.96	7.96
0.50	0.69	0.69	0.78	0.87	0.96	1.00			
7.96	7.36	7.27	7.18	7.09	7.00	6.96			

cut

- 2.4
- 2.4
- 2.7
- 1.3
- 1.5
- 1.5
- 1.9
- 2.3
- 2.7
- 2.5
- 1.7
- 1.6
- 1.3
- 1.3
- 1.9
- 3.5
- 1.3
- 7.5

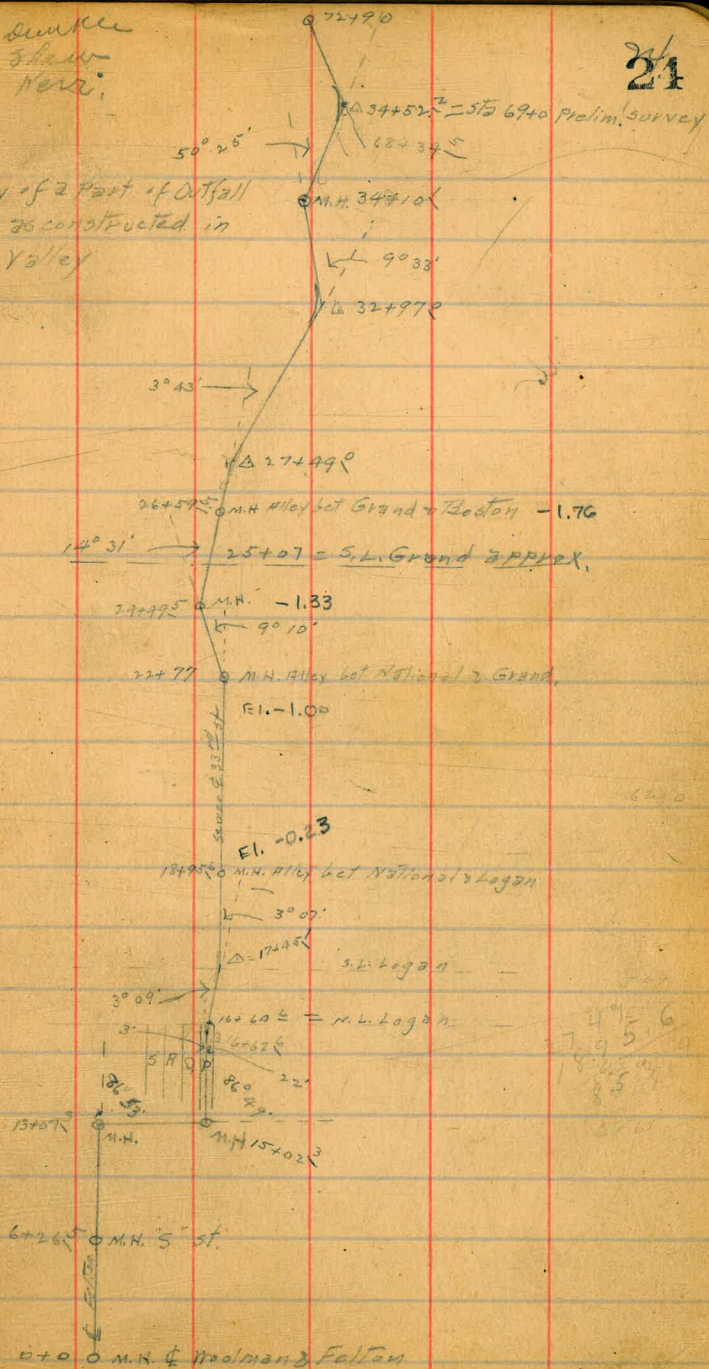
5			18.54				
0	8+0			1.6	16.9	8.60	8.3
	T.P.	11.85	30.08	0.31	18.23		
	+50			8.9	21.2	13.20	8.0
1	9+0			4.8	25.3	17.80	7.5
2	+50	11.16	40.84	0.40	29.63	22.40	7.3
	10+0 M.H. break			7.7	33.1	27.00	6.1
	+50			4.9	35.9	30.25	5.7
3	11+0			2.0	38.8	33.50	5.3
	T.P.	10.60	51.44	0.00	40.84		
	+50			9.4	42.0	36.75	5.3
4	12+0 break			6.3	45.1	40.00	5.1
	+50			4.6	46.8	41.56	5.2
5	13+0			3.1	48.3	43.12	5.2
6	+50			1.5	49.9	44.68	5.2
	+60 D.E.			1.5	49.9	45.00	4.9

Sta 69 to Hatch

Sumner
1/20 Shaw
1/11 Keri

24

Survey of 2 part of Outfall
sewer constructed in
Cholla Valley



Walker
Osborne
Hazard
7-15-43

Proposed
Preliminary Levels for Sewer
South
1' from North Lirie Broadway
Between 30th and Edgemont
And in E Alley Blk 4 - Treasure Hill Add
Which is between Broadway and C-st.
~ Levels Page 26 ~

C-Street
Const. Notes. See P. 27

25

5
0

1

2

3

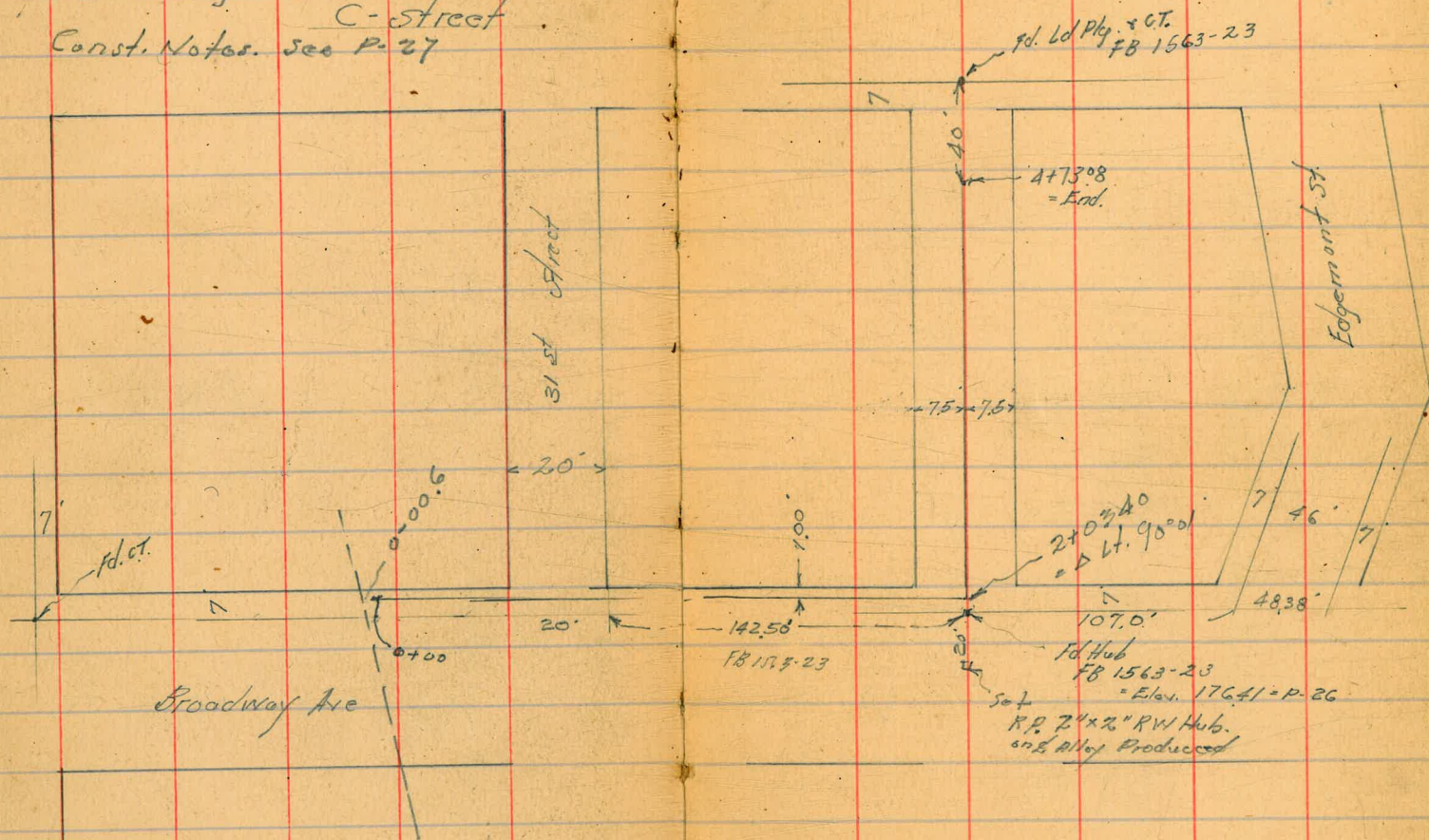
4

5

6

8

5



Walker
Osborne
Hazard
7-15-43

Levels for Proposed Sewer
as shown in sketch P-25

26

		Σ				Σ		
S	B.M.							
0	on Hub P-25	4.79	181.20	176.41	2+03.4' Alt.	11.83	176.98	
	T.P. #1	0.29	168.41	13.08 168.12	2+20 (2+20) 70' Rt.	10.3	178.5	
1	T.P. #2	0.56	156.28	12.69 155.72	2+35 70' Rt.	17.4	171.4	
2	0+00 = W. Side ch.		22.0	134.3	2+50	7.2	181.6	
	+03 in ch.		23.0	133.3	70' Rt.	13.7	175.1	
3	+09 = E. Bank "		20.6	135.7	70' Rt.	5.1	183.7	
	+17		20.6	135.7	+85	3.3	185.5	
4	+50		11.7	144.6	70' Rt.	9.1	179.7	
	+63		5.7	150.6	T.P. 2.00	197.70	0.11	188.70
5	10' Rt in Small Wash		8.2	147.1	3+00	6.5	191.2	
6	T.P. #3	12.11	167.83	0.56 155.72 on Rock	+17	6.0	191.7	
	0+93		0.6	167.2	35' Rt. Approx. opp Pleasantburg. Depth = ?	9.4	188.3	
	T.P. #4	12.48	179.86	0.45 167.38 " "	3+50	5.2	192.5	ditch on Rt. Above L
	1+00		9.2	170.7	50' Lt. = 8 ft in Hill	5.2	192.5	
	+08		6.6	173.3	70' Lt.	9.3	188.4	End slope card to 90' Lt.
8	+20		3.5	176.4	3+85	4.3	193.4	
	+50		0.4	179.5	4+00	3.1	194.6	
	T.P. Starting B.M.	12.41	188.81	3.46 176.40 0.01 = diff	35' Lt. = 8 ft in Hill	4.5	193.2	
	1+85		9.9	178.9	60' Lt.	8.0	189.7	
					80' Lt.	12.2	185.5	

Walker
Osborne
Hazard
7-1643

Grades
for Construction of Sewer
as shown in sketch P. 25

Station	TP	Elev. Stake	Elev. Flow Line	Cuts	offsets	Elev. Stub
0-00.60 = Existing Sewer	147.64	17.07	130.57			Elev. Stub 0+50
0+00		14.01	133.63	130.74	+2.89	146.96
	TP Page 26					0.68.7
	156.28					147.64 TP
0+50 = Brk.		9.32	146.96	141.00	+5.96	6' Lt.
						P-26
						TP #2
TP	12.11	167.83	0.56	155.72		167.38
0+87 = Brk		171.94 TP	7.32	164.62	160.24	+4.38
0+93			0.6			171.94
TP	12.48	179.86	0.45	167.38		
1+00			8.37	171.49	160.48	+11.01
TP	12.41	188.81	3.46	176.40		
1+50			8.31	180.50	161.70	+18.80
2+03.40 = ALT			12.36	176.45	163.00	+13.45
						6' East.
+50			4.13	184.68	174.18	+10.50
						6' Lt.
TP	9.00	199.70	0.11	188.70		Elev. Stub
2+83.4 = Brk.		190.27 TP	10.67	190.17	182.20	+7.97
3+00			6.58	191.12	183.40	+7.72
						3+00
						191.12
						5.15.7
						190.27
+50			5.28	192.42	187.02	+5.40
3+63.4 = Brk		190.27 TP	3.52	192.71	188.00	+4.71
4+00			2.80	194.90	188.67	+6.23
+35			1.81	195.89	189.32	+6.57
4+73.08 = End			2.73	194.97	190.00	+4.97

Cont. from p. 26

19770

28

5

0

4+10

2.2 195.5

135

1.7 196.0

1

150

1.8 195.9

2

173.08

2.3 195.4

30' Lt.

3.6 194.1

55' Lt.

7.0 190.7

80' Lt.

12.6 185.1

5+06.08-SL. C-st.

5.90 191.8

FB. 1563-23

4

chk Wend cb. Alley

6.09 191.61

191.65

0.04 diff.

5

6

8

9

5

0

1

2

3

4

5

6

8

9

5

0

1

2

3

4

5

6

8

9

5

0

1

2

3

4

5

0

8

Canyon Line from M.H. 5/30 to Alley bet H & I str & narrow X
 st bet 32³⁰ & 33¹⁴

see book 370/47

B.M.	6.40	55.23		48.83	
0+0 - M.H.			6.40	48.83	43.00 X
+50			6.15	48.95 ²	43.60
1+0			4.85	50.8 ⁸	44.21
T.P.	10.01	64.92	0.92	54.91	
+50			5.6	59.3	44.82
1465 ³ - M.H. & H'st			12.1	52.8	45.00 X
2+0			14.1	50.8	45.92
+50			13.4	51.5	47.24
3+0			12.40	52.52	48.56
3+24 ⁵ - M.H. & Alley bet G & H			11.6	53.3	49.20 X
+50			10.6	54.3	49.86
4+0			8.77	56.15	51.13
+50			7.9	57.0	52.40
5+0			8.9	56.0	53.67
+50			5.27	59.65	54.94
6+0			4.1	60.8	56.21
+50	8.62	69.32	4.22	60.70	57.48
7+0			5.03	64.29	58.75
7+09 ³⁵ - M.H. & Alley bet F & G			4.94	64.38	59.00 X
	12.82	77.20			
7+50			11.50	65.70	59.86

note - the stakes changed for line & elev of top of st

32

~~49.24~~ 49.24 69.24 69.24 69
 58.75 57.45 59.86
 10.49 11.76 9.38

4.29
 4.95
 69.24
 59.00
 10.24
 59.65
 1.88
 61.53
 8.97
 52.56
 4.07
 56.63
 7.25
 48.98

41.53 61.53 61.53 61.53 61.53 61.53 61.53
 56.24 54.94 53.67 52.40 51.13 49.86 48.56
 5.32 6.59 7.86 9.13 10.40 11.67 12.93

56.63 56.63 56.63 56.63 56.63 56.63 56.63
 48.56 47.24 45.92 45.00 44.52 44.21 43.80 43.40
 8.07 9.39 10.71 11.63 11.81 12.42 13.03 13.63

5.8 /

5.5 /

6.2 /

14.5 /

7.8 /

4.9 /

4.3 /

4.0 /

4.1 /

4.4 /

5.0 /

4.6 /

3.3 /

4.7 /

4.6 /

3.2 /

5.5 /

5.4 /

5.8 /

SEE 901/44

	HI.	Rod	ELEV.	SEWER GRADE	CUT
8+0	7720	9.9	67.3	60.90	6.4 ✓
9+0		8.95	68.25	61.95	6.3 ✓
9+0		0.90	76.30	62.99	13.3
9+50		7.7	69.5	64.94	5.5 —
10+0		6.5	70.7	65.08	5.6 —
10+50		4.9	72.3	66.13	6.2 —
11+0		4.88	72.32	67.00	5.3 ✗
11+0		4.0	73.2	67.36	5.9
11+0	8768				
11+50	12.25	1.77	75.43	68.90	6.5
12+0		11.0	76.7	70.55	6.2
12+50		11.2	76.5	72.19	4.3
13+0		6.0	81.7	73.84	7.9
13+50		6.7	81.0	75.48	5.5
14+0		4.42	83.26	77.13	6.1
14+0	11.65	0.74	86.94		
14+50	9859	11.0	87.6	78.77	8.8
15+0		11.7	86.9	80.00	6.9
15+0		11.7	86.9	80.25	6.7
15+0		11.73	86.86	81.50	5.3
16+0		10.4	88.2	82.79	5.4
16+0		7.2	91.4	84.00	7.3

69.24 69.24 69.24
 60.90 61.95
 8.34 7.29

17+0	9859	7.9	90.7	85.33	5.4	-	
+50		6.0	92.6	86.60	6.0	✓	
18+0		4.57	94.02	87.87	6.1	✓	
+50		3.2	95.4	89.14	6.3	✓	
+82 ⁹³	M.H. Alley bot C ⁹³ D ⁹³	2.75	95.84	90.00	5.8	✓	
	12.34 106.36						
19+0		10.18	96.18	90.45	5.7	✓	
+50		8.9	97.5	91.77	5.7	✓	
20+0		7.6	98.8	93.09	5.7	✓	
+50		8.3	98.1	94.41	3.7	✓	
21+0		5.1	101.3	95.73	5.6	✓	
+50		4.4	102.0	97.04	5.0	✓	
22+0		1.68	104.68	98.36	5.3	✓	
+50	12.15 118.33	0.18	106.18	99.68	6.5	✓	
22+99 ⁶⁵	M.H. Alley bot B ⁶⁵ C ⁶⁵	12.0	106.3	101.00	5.3	✓	106.37
23+50		10.1	108.2	102.80	5.9	✓	
24+0		5.81	109.52	103.61	5.9		
+50		7.5	110.8	104.91	5.9		
25+0		6.7	111.6	106.22	5.4		
+50		6.3	112.0	107.54	4.5		
26+0		4.38	113.95	108.83	5.1		

$$\frac{112}{101} = 1.11$$

$$112 \div 11$$

$$\frac{101}{106.36} = 1.04$$

		112.33				
26+50			3.2	115.1	110.13	5.0
27+0	12.66	129.91	1.08	117.25	111.44	5.8
27+20 ⁸⁵	M.H. Alley bet "A" & "B"		12.1	117.8	112.00	5.8
+50			12.8	117.1	112.77	4.3
28+0			9.43	120.48	114.05	6.4
+50			7.8	122.1	115.33	6.8
29+0			7.3	122.6	116.61	6.0
29+15 M.H.	"A"		7.5	122.4	117.00	5.4
+50			5.8	124.6	118.09	6.5
30+0			3.16	126.75	119.64	7.1
+50			0.9	129.0	121.20	7.8
31+0	12.77	141.94	0.74	129.17	122.75	6.4
+50			12.1	129.8	124.31	5.3
32+0			10.5	131.4	125.86	5.5
+50			8.3	133.6	127.42	6.2
33+0			6.46	135.48	128.97	6.5
+50			5.0	136.9	130.53	6.4
34+0			5.5	136.4	132.08	4.3

$$\frac{23.00}{4.20}$$

117.85

122.49

3526
2914
611.13
36
+

	141.94		Grade	Cut	
34+50		3.31	133.63	133.64	5.0
35+00		1.1	140.8	135.19	5.6
35+26 ¹³ M.H. ^{13.07} 32 = 51, 154.54		0.05	141.49	136.00	5.5 ✓
35+50		12.3	142.3	137.10	5.2 ✓
36+00		9.7	144.9	139.40	5.5 ✓
36+50		7.2	147.4	141.70	5.7 ✓
37+00 Break		1.6	153.0	144.00	9.0 -
37+50		2.3	152.3	144.98	7.3 -
38+00		4.0	150.6	145.96	4.6 ✓
38+53 = M.H. - N. lme Beech		3.0	151.6	147.00	4.6 ✓
39+00 T.P. 10.18 163.14		1.60	152.86	148.40	4.5 ✓
39+50		9.7	153.4	149.89	3.5 ✓
40+00		6.6	156.5	151.38	5.1 ✓
40+50 d Edgemoat		6.5	156.6	152.87	3.7 ✓
40+88 = M.H. T.P. 10.75 170.29		3.60	159.54	154.00	5.5 ✓
41+00		9.73	160.56	154.35	6.2 ✓
41+50 T.P.		8.8	161.5	155.80	5.7 ✓
42+00		8.3	162.0	157.25	4.7 ✓
42+50		7.4	162.9	158.70	4.2 ✓

151.68

159.64

	14.1.						
43+00	170.29	5.3	165.0	160.15	4.8		
43+30.1 = M.H.		4.17	166.12	161.00	5.1		166.21
750		4.0	166.3	161.59	4.7		
44+0		4.5	165.8	163.06	2.8		
+50 T.P.	12.36	181.82	0.83	169.46	164.54	5.0	
45+0			8.0	173.8	166.01	7.8	
+50			6.3	175.5	167.49	8.0	
46+0			1.3	180.5	168.96	11.6	
+50			4.8	177.0	170.44	6.6	
47+0 ⁷	12.23	190.14	3.91	177.91	172.00	5.9	178.03
+50			11.7	178.4	174.50	3.9	
48+0			9.2	180.9	177.15	3.8	
+50			6.1	184.0	179.81	4.2	
49+0	6.92	194.82	2.24	187.90	182.96	5.4	
49+28 ⁷ M.H.			4.90	189.92	184.00	5.9	
+50			5.2	189.6	184.76	4.9	
50+0			3.9	190.9	186.58	4.3	
+50 T.P.	10.09	204.21	0.65	194.17	188.40	5.8	
50+93 ⁵ M.H.	10.09	2.5° 30' L	11.7	192.5	190.0	2.5	

E Cedar

E 31st

22661' graph

91

499.7

228.1
3.6
231.7
2.0
9.7

		209.21	0.32	203.89		
	1280	216.69				
	+R	H.I.	-R	210.17	Grade	cut
	13.85			194.17		
51+0		208.02	16.3	191.8	190.27	1.5
51+50			12.0	196.1	192.23	3.9
52+0			9.9	198.2	194.19	4.0
+50			6.4	201.6	196.15	5.5
T.P.	11.50	218.82	0.70	207.32		
53+0			11.4	207.4	198.11	9.2
53+48.7	MHA	250.51				
T.P.	3.94	213.57				
54+0			5.1	208.5	202.17	6.3
+50			3.5	210.1	204.30	5.8
55+0			1.6	212.0	206.43	5.6
+50	12.34	225.24	0.67	212.90	208.56	4.3
56+0	MHA		9.6	215.6	210.69	4.9
+50			8.1	217.1	212.82	4.3
57+0			6.7	218.5	214.95	3.5
+50			4.1	221.1	217.08	4.0
T.P.	12.23	233.77	3.70	221.54		
58+0			7.7	226.1	219.21	6.9
+50			3.9	229.9	224.34	8.6
+65	MHA		6.7	227.1	222.00	5.1
58+80			5.7	228.1	222.52	5.6
T.P.	10.52	243.98	0.31	233.46		
59+50	T.P.	12.75	255.99	0.74	243.24	
	T.P.	11.73	257.70	0.02	255.97	
60+0						

~~259.97~~
 259.87 Lower step same angle. No 3963

	257.70				
60+25		245.1	227.60	17.5	
60+50	14.6	243.1	228.47	14.6	
61+0	19.8	237.9	230.22	7.7	
61+33 M.H. 72' of S.W. Alley M.H. moved from 61+55		236.7	231.39	5.3	
61+55 Alley bet Grape & Hawthorn	9.2	248.5	232.00		

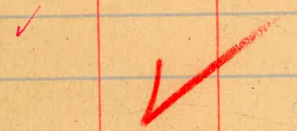
35
 3
 175

237.9
 4.2
 242.1
 5.4
 247.5
 236.7

237.90
 2.80
 240.70
 228.04
 12.06

243.39
 12.2
 255.3
 10.0
 245.1

228.47
 17
 228.64



263.88						
9 + 18 M.H. E. Fir st.	3.5	260.4	255.00 ² 256.00 ²	5.4		
9 + 50	2.33	261.55	254.95	4.4 4.6		
10 + 0	7.84	270.82	258.43	4.6		
4 + 0	6.4	264.7	259.91	4.5		
11 + 0	5.1	265.7	260.39	4.3		
4 + 50	3.6	267.2	262.87	4.3		
12 + 0	2.38	268.44	264.35	4.1		
12 + 24 = D.E. 35' S of Grape	1.7	269.1	265.00	4.1		



Somer Alley bet E & F from D.E 25' E of 5th St
 E Line 30th St to M.H. Trunk Line 32nd St, 14
 double
 1/2
 1/4
 1/8
 1/16
 1/32
 1/64
 1/128
 1/256
 1/512
 1/1024
 1/2048
 1/4096
 1/8192
 1/16384
 1/32768
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		147.39					
9+0			8.4	139.0	133.67		5.3 ✓
	0.73	135.55	12.57	134.82			
+50. break M.H.			9.4	126.2	121.00		5.2 ✓
T.P.	1.42	129.41	12.54	123.87			
10+0			5.6	118.8	113.85		5.0 ✓
10+20 break			8.5	115.9	111.00		4.9 ✓
+50			12.3	112.1	108.75		3.4 ✓
	1.79	113.93	12.27	112.14			
11+0 break			4.0	109.9	105.00		4.9 ✓
+50			7.1	106.8	96.50		10.3 ✓
	1.10	102.67	12.36	101.57			
12+0 break			9.9	92.8	88.00		4.8 ✓
12+55 M.H. Trunk line					84.00		

3000 ft Alley bet G 84 from M.H. Main line Sta 3224
West to D.E. for 550

	10.09	66.24		56.15	
0+0 M.H. Canyon Line				49.20	
100			5.98	60.26	59.52
T.P.	12.58	78.15	0.67	65.87	
120			1.9	76.3	65.84
1+25 break			2.5	75.7	70.00
1450	10.95	87.07	2.06	76.09	70.71
2+0		✓	11.2	75.9	72.12
2+50 M.H.			8.4	78.7	73.53
3+0			4.4	82.7	74.94
3+50			4.5	82.6	76.35
4+0			1.99	85.08	77.76
4+50			1.1	86.0	79.17
5+0	4.12	90.98	0.21	86.86	80.58
5+50 D.E.			3.49	87.49	82.00

✓

5

250

44

X

2.7

10.5

5.7

5.4

3.3 ✓

5.2 ✓ X

7.8

6.3

7.3

6.8

6.3

5.5

876

Saver & Alley bet Galt from M.M. Canyon Line Sta 3+24
East for 190 to D.E.

cut

45

	7.93	64.08		56.15		
0+0 = M.M. Canyon Line				49.2		
0+50	✓		10.62	53.46	49.73	3.7
0+75 break			9.2	54.9	50.00	4.9
T.P.	12.09	75.67	0.50	63.58		
1+0			9.8	65.9	61.00	4.9
T.P.	6.19	81.66	0.20	75.47	70.00	5.7
+25 break			6.0	75.66		5.4
+50 break			4.5	76.2	71.0	
1+90 D.E.			4.7	77.0	72.00	5.0



5

Sewer Alley bet "F" & "G" from M.H. Sta 7+09³⁵ canyon
 Line to D.E. 25' E of E.L. 32'¹⁹

	10.25	75.95		65.70		
0+0 = M.H. Sta 7+09 ³⁵					59.00	
0+30			10.45	65.50	63.28	2.2
1+0			4.4	71.5	67.56	3.9
T.P.	7.93	83.53	0.35	75.60		
1+20 Break			4.41	79.12	71.00	8.1
1+50			3.6	79.9	71.33	8.6
2+0			4.2	79.3	73.00	6.3
2+30 D.E.			5.1	78.4	74.00	4.4

Sewer Alley bet "F" & "G" from M.H. Sta 7+09³⁵

Canyon Line to D.E. 80' E
 75.95

0+0 = M.H.					59.00	
0+40 Break		83.53	10.44	65.51	63.50	2.0
0+80 D.E.			4.47	79.06	73.00	6.1



5

Somer Alley bet "E" & "F" from M.H. 57 to 10492³⁷ Canyon Line
to D.E. 25 W. of N.L. 33³⁵

47

			11450			
	10:22	85.65	75.43			
M.H. 57 to M.H. 10492³⁷					67.00	
150			8.77	76.88	72.60	4.3
140	9.31	92.44	2.52	83.13	78.20	4.9
1425 break			6.2	86.2	81.00	5.2
1450			5.0	87.4	81.34	6.1
240			4.92	87.52	82.00	5.5
450			4.4	88.0	82.67	5.3
2175 D.E. 25 W. of 33 rd			4.0	88.4	83.00	5.4

X

✓

5

Sewer Alley bet D¹ & E from M.M. 14+90³ Canyon Line ~~West~~
 To D.E. 75' E of E.L. 32²²

48

	11.67	98.53	86.86		
0+0 M.M. 14+90 ³				80.00	
0+50 break		14.8	83.7	81.00	2.7
1+0		9.52	89.01	85.42	3.6
TIP	11.65	110.11	0.10	98.93	
1+50		9.2	100.9	89.84	11.1
2+0 break		8.8	101.3	94.26	7.0
2+50		4.8	105.3	96.63	8.7
3+0 break	5.77	114.69	1.19	108.92	99.00
3+44 = D.E. 75' E of 32 ²²		1.2	113.5	107.00	6.5
25' E of 32 ²²				111.00	

Sewer Alley Bet D² & E from M.M. 14+90³ East

157' to D.E. 25' W of M.L. 33²⁴
 98.53

0+0 = M.M. 14+90 ³				80.00	
1+0 break		5.0	93.5	87.00	6.5
1+0		2.00	96.53	88.87	7.7
1+57 D.E. 25' W of 33 ²⁴		0.6	77.9	91.00	6.9

50+

Senior Alex got "C" & "D" from M.H. 573 1942 Canyon Line
 root for 489' to DE 25 E of 32nd St.

49

	12.37	108.55		96.18		
0+0 = M.H.					90.00	
0+50			12.24	96.31	92.94	3.4
0+80 break			9.5	99.0	95.00	4.0
1+0			7.3	101.3	97.50	3.8
T.P.	12.86	120.99	0.42	108.13		
1+45 break			11.5	109.2	105.00	4.2
1+50			10.9	112.1	106.80	3.3
T.P.	12.92	133.02	0.89	120.10		
2+0			3.7	129.3	124.80	4.5
T.P.	12.82	145.26	0.08	132.94		
T.P.	12.46	157.63	0.59	142.19		
2+45 break			10.9	146.7	141.00	5.7
2+50			9.8	147.8	146.75	6.0
2+78.5 break			4.7	152.9	147.00	5.9
3+0	9.38	164.65	2.36	155.27	147.59	7.7
4+50			5.4	159.3	149.55	9.8
4+0			6.7	158.0	151.51	6.5
4+50			8.6	156.1	153.47	2.6
4+89.0 E. 25 E of 32 nd			3.1	161.6	155.00	6.6

✓ ~~not in~~

call again

4/8/46 Ole Moen says this sewer is in
 He has rodded through it 489 ft.
 G.R.H.

Alley Bet O's D. from N.N. Sta 1818223 canyon line East
 for 311' to D.E. 163.6' E of E.L. 3314

50

040 - M.H.	12.37	108.55		96.18	90.00	
T.P.	8.62	116.05	1.12	107.43	102.0	8.5
0+50 break			5.57	107.6 110.96	96.25	6.9
1+0 break			5.5	110.5	103.00	7.5
1+20 break	✓			110.0	105.00	5.0
1+50			6.4	109.6	105.16	4.4
2+0			6.1	109.9	105.42	4.5
2+50			5.4	110.6	105.68	4.9
3+0			2.0	114.0	105.94	8.1
3+11 D.E.			1.1	114.9	106.00	8.9

5

Sewer Alley bet B²⁰ from N.H. 513 22+40⁰⁰ canyon line
 West for 320 to D.E. 25 E of 37th of

				22+50.		
	12.46	118.64		106.18		
0+0=M.H.				101.00		
150			4.2	114.4	111.00	3.4
	12.49	130.68	0.45	118.19		
0+80=brnk		✓	8.50	122.18	117.00	5.2
140			7.2	123.5	118.50	5.0
150			4.7	126.0	122.25	3.8
T.P.	12.40	142.66	0.42	130.26		
2+0 brnk			10.9	131.8	126.00	5.8
150			2.9	139.8	136.42	3.4
T.P.	12.98	155.26	0.38	142.28		
3+0	9.17	160.54	3.89	151.37	146.83	4.6
3+70 D.F.			4.2	156.3	151.00	5.3



5

Sewer Alley bet "A" & "B" from M.H. 2700³⁵ Canyon Line
 west for 120 to D.E. 25' E of 32nd St

	8.37	128.85		120.48		
0+0 M.H.					112.00	
0+40 break			7.2	121.7	118.00	3.7
+50			2.94	125.91	120.90	5.0
T.P.	11.09	139.31	0.63	128.22		
+10		151.53	0.1	128.77		
			9.33	142.20	135.40	6.8
	3.98	154.63	0.88	150.65		
1+40 D.E.			2.2	152.4	147.00	5.4

Sewer Alley bet "A" & "B" from M.H. 2700⁴⁵ Canyon Line

East for 285' to D.E.
 123.85

0+0 M.H.					112.00	
+50			5.16	123.69	119.22	4.5
		139.31				
+10			8.6	130.7	126.44	4.3
T.P.	12.36	151.53	0.14	139.17		
+50			12.55	135.98	133.66	5.3
+80 break			7.2	144.3	138.00	6.3
2+0			5.4	146.1	139.45	6.7
2+35 D.E.			3.1	148.4	142.00	6.4

not in

Sewer Alley bet E & F from M.H. 32nd to 34th Canyon
 line west to Sta 3+41 M.H. 32nd of = 0+0 on canyon line
 west of 32nd 110

0+0	11.99	95.12	83.13			
0+0 M.H.			67.00	53	X	
0+50		✓ 11.3	83.8	77.00	6.8	
1756 rock		7.56	87.56	82.00	5.6	
1+0		6.5	88.6	82.19	6.4	
1+50		2.9	92.2	82.56	9.6	
2+0	7.09	101.02	11.9	93.93	82.94	11.0
2+50		5.1	95.9	83.31	12.6	
3+0		5.7	95.3	83.69	11.6	
3+41 M.H.		12.5	88.5	84.00	4.5	

✓
 5

Sewer Canyon Line west of 32nd from M.H. 2/2

3+41 Alley bet E & F
see book 831 page 76

				GR ELEV	Sewer GRADE	CUT
	101.02					
0+0 = M.H. 0 1/2 3+41 Alley line		12.5	88.5	84.00	4.5	
+50		10.48	90.54	86.27	4.3	
+10		7.1	93.9	88.54	5.4	
+50		2.1	92.9	90.81	2.1	
2+0	1220 109.68	3.54	97.48	93.08	4.4	
+50		7.6	102.1	95.36	6.7	
3+0		6.8	102.9	97.63	5.3	
3+30 M.H. A		4.26	105.42	99.00	6.4	
3+50		5.95	103.73	100.18	3.6	
4+0	1201 118.98	2.71	106.97	103.12	3.9	
+50		5.5	113.5	106.06	7.4	
5+0 break		5.34	113.64	109.00	4.6	
+50		3.4	115.6	110.25	5.4	
6+0		5.23	113.75	111.50	2.3	
6+19 ⁷ M.H. A Alley bet D & E	1286 131.00	0.84	118.14	112.00	6.1	
+50		2.4	123.6	115.00	8.6	
6+90 break		3.4	127.6	119.20	8.6	
7+0		5.3	125.7	119.31	6.4	
+50		5.7	125.3	120.84	4.5	

151.77
 117.31
 3.06
 314

151.77
 2.76
 140.74

			GR. ELEV.	SEWER GRADE	CUT	
	131.00					
8+0			4.0	127.0	122.88	4.6
8+20 M.H.	140.74		11.4	129.3	123.00	6.3
8+50			10.7	130.0	124.60	5.4
9+0			8.7	132.0	127.26	4.7
10+0			6.9	133.8	129.86	3.9
10+0 Δ			4.8	135.9	132.62	3.3
10+0			2.0	138.7	135.35	3.3
	3.26	142.00	2.00	138.74		
11+0			0.6	141.4	138.04	3.4
11+21 ⁸ Δ M.H. Alley bet C & D, 8° 30' R			7.31	126.87	139.00	6.9
11+50			4.6	149.6	140.7	7.9
					140.7	8.1
					143.8	1.6
12+0			7.8	145.4	145.5	4.0
T.P.	11.08	163.49	0.77	152.41	147.00	7.0
12+0			9.5	154.0	147.0	11.0
12+0	11.87	175.23	0.08	163.41		
12+0	3.51	177.31	1.03	173.30		
13+0			0.51	124.30	127.69	
Sewer run through Culvert,						
12+14 ⁸ Δ M.H. Alley bet C & D, 8° 30' L			1.87	175.44	145.00	
T.P.	0.09	164.71	12.69	164.62		
13+0			1.9	162.8	146.15	16.7
13+75					151.8	2.8
14+0			10.19	154.52	147.71	
14+0					152.21	1.8
14+0			10.7	154.0	149.25	
14+0					152.48	2.4
15+0			9.81	154.90	152.48	
15+05 ¹³ Δ M.H. Alley bet B & C, 33° 30' L			10.1	154.6	152.50	2.1
T.P.	12.62	177.03	0.30	164.41		

Culvert

			GR. ELEV.	SEWER GRADE	CUT
	177.03				
15+50			9.62	167.43	160.1
15+95 break			5.8	171.2	168.00
16+0			4.5	172.5	168.27
T.P.	12.73	189.07	0.69	176.34	174.2
+50 5° 13' R			6.9	182.2	170.93
T.P.	12.26	200.97	0.86	188.91	171.3 ✓
T.P.	6.24	206.29	0.92	200.05	
17+0			3.07	303.22	173.59
17+00 ²⁸ 17+00 ^{11.5} 17+00 ^{14° 30' R}			3.17	303.12	175.29
18+0			2.7	203.6	176.25
	4.91	198.63	12.57	193.72	171.4
18+0 9° 15' R			10.0	188.6	178.92
18+0			11.02	187.61	181.58
19+0			9.9	188.7	184.24
19+33 M.H. Alley bet "A" & "B"			7.1	191.5	186.00



}

191.6
34
176.92
20.31
2.6
2.1
178.01
170.92
3.22

Alley bet D & E from MN. Canyon Line Sta 6+192 W for
 on 225 W of 31/2 St.

B.M.	530	133.90		127.60	
0+0 MN. 6+192 Canyon Line			112.00	112.00	
0+32	✓		17.1	116.3	114.91
0+55 break			13.9	119.5	117.00
0+82			4.8	128.6	124.02
T.P.	12.81	145.82	0.39	133.01	
1+32			6.2	139.6	137.00
T.P.	12.70	158.78	0.24	145.58	
1+82 break			3.4	154.9	150.00
T.P.	12.56	170.61	0.23	158.05	
2+32			4.4	166.2	160.75
T.P.	12.31	183.11	0.31	170.30	
2+75 break			5.5	177.6	170.00
2+82			4.7	185.4	170.80
T.P.	11.47	194.39	0.19	182.92	
3+32			11.4	183.0	176.53
3+82			7.4	187.0	182.26
4+32			1.39	193.00	188.00

✓
5

3.7
2.4

3.1
3.0
2.1

193.00

6.1
1.4
2.5
4.6
2.6
4.9
5.5
7.6
7.6
6.5
4.7
5.0

Alley bet C & D west from 11721³ canyon line

B.M.	9.45	153.05		148.60	
0+0 M.H. 11721 ³ canyon line				139.00	
0+20 break			15.0	143.1	140.00
T.R.	13.31	170.99	0.37	157.68	3.1
+50			12.5	158.3	152.5
T.P.	12.43	183.12	0.30	170.89	165.00
+100			7.0	176.1	171.00
T.P.	12.58	195.28	0.42	182.70	177.00
+150			6.0	182.1	183.75
T.R.	12.35	207.36	0.27	195.01	186.00
+200			11.2	190.7	191.50
2+40 break			6.32	201.04	197.00
+250			4.6	202.8	197.09
+300			2.25	205.11	197.51
+350			2.3	205.1	197.94
+400			3.2	204.2	198.36
+500			3.1	204.3	198.79
+75 D.E.			3.3	204.1	199.00

5

C

158.2
159.2
151.4

176.1
177.1
169.3

176.1
184.6
187.1
189.3
195.2
198.7

58

Alley bet "B" & "C" west from M.H. 5th 15705¹³ canyon line
for 305'

59

				16.0		
B.M.	11.45	183.95		172.50		
0+0 M.H.				152.50	7.1	
0+50			3.7	180.3	173.75	6.6
0+60 break			2.0	182.0	175.00	4.0
T.P.	12.26	195.72	0.49	183.46		
1+0			7.7	188.0	185.50	2.5
T.P.	12.32	107.88	0.16	195.56		
1+40 break			9.4	198.5	193.00	5.5
1+50			5.3	199.6	193.85	5.8
2+0			3.8	204.1	198.09	6.0
2+50	8.67	115.68	0.37	207.01	202.33	4.7
3+0			3.8	211.9	206.57	5.3
3+05 D.E			3.4	212.3	207.00	5.3

✓

3

Filey Lot A'D B. from M.H. Sta 19+32 canyon Line

60

X

West from Sta 19+33

	12.07	203.57	191.50		
T.P.	12.85	216.36	206.23.51		
0+0-M.H. Sta 19+33			186.00	5.5	
0+45 break		10.10	206.3	200.00	6.3
0+50	✓	9.3	207.1	200.92	6.2
1+0		1.7	214.7	210.15	4.6
1+10 D.E		0.4	216.0	212.00	4.0

East from M.H. 19+33

			191.50			
0+0-M.H. 19+33			186.00	5.5		
	216.36					
0+50		7.4	209.0	200.00	9.0	
0+75 break		3.7	212.7	207.00	5.7	
1+0	4.40	219.12	1.64	214.72	209.05	5.6
1+35 D.E		2.2	216.9	212.00	4.9	

✓

b

Sewer Levels in Alley
BLK 127 Choates Add.

See p 46 This Book

SW Man.	0.26	94.42	94.16	F 4 32 nd
T.P.	0.73	<u>82.74</u>	12.41	82.01
0+00	MH Rim	12.84	69.90	
"	F.L.	23.44	59.10	X
"	ground	18.3	64.4	
0+05		19.9	62.8	
0+17		18.2	64.5	
0+28		12.11	70.6	
0+40		10.4	72.3	
0+49		10.6	72.1	
0+68		4.0	98.7	
T.P.	0+78	4.30	<u>83.30</u>	3.74 79.00
				STUB 3' N of D.E.
0+93.5	= 1.5 to P.P.			
1+00		3.8	79.5	
1+47		4.0	79.3	
"	80' N = F.L. SOIL PIPE	4.94	78.38	
2+00		4.9	78.40	
2+46	= 1.5 N to P.P.	5.2	78.1	

Cont'd. p. 47

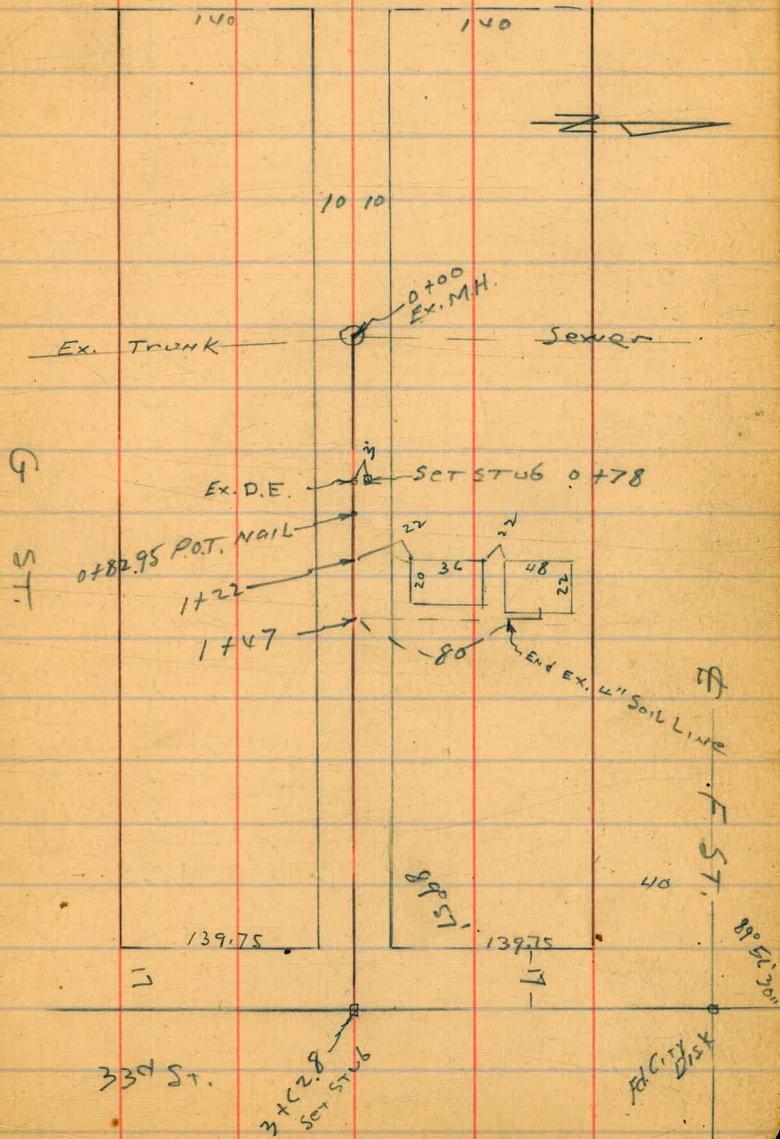
PPS OUT
of POSITION

C Moore
Sant' Mich' Meyer
Bc 99
4-12-46

Indexed
c.s.k.

61

32nd St.



Sewer Lot Line bet Ida 33rd

L

62

B.M.	North					
0+0 = M.H. Canyon Line 38+53	12.14	163.82	151.68	147.00	4.7	
+50			8.6	155.2	152.33	2.9
+75 break			3.6	160.2	155.00	5.2
T.P.	13.14	176.91	0.15	163.67		
+100			11.0	165.8	162.50	3.3
T.P.	12.06	188.57	0.30	176.51		
+150			7.3	181.3	177.50	3.8
T.P.	11.22	199.58	0.21	188.36		
+175 break			9.2	190.4	185.00	5.4
+200			4.2	195.4	191.00	4.4
T.P.	12.48	212.03	0.03	199.55		
+150			5.3	206.7	103.00	3.7
T.P.	4.63	215.63	1.03	211.00		
+175 D.E.			24.7	213.16	209.00	4.2

~~cutback to p. 11~~

Sewer Level Front p. 11

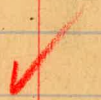
83.30

83.30

3+00	6.0	77.3
+	6.3	77.0
+46	4.8	78.5
3+59 = 1.4 N to E.P.P.		78.05
3+62.8 = ST-6	5.25	77.8

T.P.	12.93	95.84	0.39	82.91
check back to orig B.M.		1.09	94.15	94.16

	H.T.	South	Ground			
0+0 = M.H. 32+53 Canyon Line			151.68	147.00	4.7	
	11.55	163.23				
0+50	V		7.8	155.4	152.38	3.0
0+65 Brk.			4.4	158.8	154.00	4.8
T.P.	10.78	173.42	0.59	162.64		
1+0			6.4	167.0	161.58	5.4
1+25 Brk. T.P. 12.90	185.72		0.60	172.82	167.00	5.8
1+50			8.5	177.2	171.16	6.0
T.P.	11.39	196.15	0.96	184.76		
2+0			9.8	186.4	179.50	6.9
2+45 Brk.			4.4	191.8	187.00	4.8
2+50			4.0	192.2	187.41	4.8
T.P.	9.85	205.02	0.98	195.11		
3+0			8.0	197.0	191.50	5.5
3+55 D.E.			8.40	201.62	196.00	5.6



b

Idast Line

B.M.	H.I.	✓				
0+0 = M.H. 40+58 Canyon Line			159.64	-154.00		5.6
0+50	10.27	169.91	5.1	164.8	160.66	4.1
0+60 BTK.			3.6	166.3	162.00	4.3
T.P.	12.09	181.10	0.90	169.01		
1+0			5.2	175.9	171.64	4.3
T.P.	12.76	193.66	0.20	180.90		
1+50			7.2	186.5	183.69	2.8
T.P.	12.31	205.90	0.27	193.39		
2+0			5.0	200.7	195.73	5.0
T.P.	11.91	217.15	0.46	205.24		
2+50			5.2	212.0	207.78	4.2
T.P.	12.69	229.39	0.45	216.70		
2+80 BTK. M.H.			10.8	219.6	215.00	4.6
3+0			6.3	223.1	217.33	5.8
T.P.	11.34	239.95	0.78	228.61		
3+40 BTK.			8.2	231.7	227.00	4.7
3+50			8.0	231.9	222.56	9.3
4+0			3.3	236.6	225.38	11.2
4+50			1.7	238.2	228.20	10.0
5+0 D.E.			1.3	238.6	231.00	7.6
			1.34	238.71		

L

238.74

B.M.	North					
0+0 = N.H. 5 1/2 40+88 Canyon Line	11.95	171.59	159.64	154.00	5.6	
0+50			11.2	160.4	157.33	3.1
0+90 Brk			8.6	163.0	160.00	3.0
1+0			4.4	167.2	163.64	3.6
T.P.	12.37	183.01	0.95	170.64		
T.P.	11.92	184.70	0.23	182.78	182.78	
1+50			6.0	186.7	181.82	4.9
T.P.	13.29	207.79	0.12	194.58		
2+0			5.1	202.7	200.00	2.7
T.P.	12.11	219.79	0.09	207.68		
2+50			6.1	213.7	209.38	4.3
T.P.	13.15	232.38	0.56	219.23		
2+80 Brk.			13.7	218.7	215.00	3.7
3+00			11.0	221.4	217.18	4.2
3+50			4.4	228.0	222.63	5.4
3+90 D.E.			0.9	231.5	224.00	7.5

Lot Line bet 31st & Ida from N.H. 5/2 43+30
 canyon line south for 317' D.E

	11.31	177.93		166.12		
0+0-M.H. 43+30				161.00	5.1	
+50		11.1	166.3	164.03	2.3	
1+0	12.69	189.62	0.51	176.93	167.06	9.8
+50		11.5	178.1	170.09	8.0	1+17 178.9 1+41 180.3
1+65 break		15.4	174.2	171.00	3.2	
2+0	13.04	201.67	0.99	188.63	183.50	5.1 18.1
2+35 break	12.92	214.07	0.52	201.15	196.00	5.2
T.P.	11.56		0.71	213.36		
+50			8.3	205.8	199.84	6.0
	11.56	224.92	0.71	213.36		
3+0			6.5	218.4	212.64	5.8
3+17 D.E			2.6	222.3	217.00	5.3



b

221.9
~~166.12~~

sewer-canyon East from 513 47+02 to M.H. Canyon Line
 To sta 5+37 M.H. Alley bet Ida 232nd

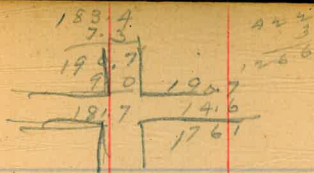
I see book 370 page 17

47+50

B.M.				178.44	
	10.33	188.77			
0+0 M.H. 47+02 ⁷ canyon line				172.00	
0+30			3.1	176.1	173.27
+50				185.7	174.11
0+75				181.7	175.17
1+0			5.4	183.4	176.22
1+50					178.33
+66 M.H. Alley bet 31 st Ida			5.18	183.59	179.00
2+0			4.2	184.6	180.07
+50			2.6	186.2	181.65
3+0	11.06	198.45	1.38	187.39	183.23
+50			8.5	191.0	184.81
3+37 M.H. Δ			8.0	190.4	186.00
4+0			8.1	190.4	186.50
+50			5.8	192.7	188.49
5+0			4.0	194.5	190.50
T.P.	10.80	207.05	2.20	196.25	4.0
5+37 ⁷ M.H. Alley bet Ida 232 nd			10.57	196.48	192.00



5



67

31

Sewer Alley bet Id 3 & 31st from M.H. Sta 1466
 Canyon line N to 25 S of Grape St & South for 177'

	North					
B.M.					183.59	
0+0 = M.H. Sta 1466	12.96	196.55			183.59	179.00
+50			3.2	193.4	187.05	6.4
T.P.	12.53	208.69	0.39	196.16		
1+0			8.1	200.6	195.10	5.5
1+18 break			5.4	203.3	198.00	5.3
+50			1.3	207.4	198.50	8.9
T.P.	9.22	217.38	0.03	208.66		
2+0			7.3	210.6	199.80	11.3
+50			7.5	210.4	200.10	20.3
3+0			8.7	209.2	200.90	8.3
3+05 break			8.9	209.0	201.00	8.0
+50			13.2	204.7	203.96	0.8
4+0 M.H.			4.2	213.7	207.25	6.5
+50			1.6	216.3	210.53	5.8
T.P.	12.60	230.40	0.08	217.30		
5+0			14.2	216.2	213.82	2.4
5+18 break			10.0	220.4	215.00	5.4
+50			8.5	221.9	220.44	1.5
T.P.	12.94	243.28	0.06	230.34		
6+0			8.2	235.1	128.94	6.2
T.P.	13.01	256.17	0.12	243.16		
+50			12.4	243.8	137.44	6.4
6+65 M.H.			11.4	244.8	240.00	4.8

256.17

7+0			8.9	247.3	240.60	6.7
+50			5.3	250.9	241.45	9.5
8+0			3.0	253.2	242.30	10.9
+50			7.7	248.5	243.15	5.4
9+0 break			6.3	249.9	244.00	5.9
T.R.	12.81	268.33	0.65	255.52		
9+40 break			4.9	263.4	259.00	4.4
+50			4.1	264.2	259.61	4.6
	4.77	272.53	0.57	267.6		
10+0			4.6	267.9	262.67	5.1
10+38 D.E.			2.5	270.0	265.00	5.0

South

B.M.		196.55				
0+0 M.H. 5/2 1466				183.59	179.00	4.6
0+50			15.0	181.6	180.70	0.9
1+0			5.5	191.1	182.40	8.7
1+50			3.3	193.3	184.10	9.2
1+77 D.E.			8.2	188.9	185.00	3.9

Alley bet Ida's 32nd from M.H. 512 5+372 canyon line
 North for 905' to Ft. 255 of Grape
 South for 385' to D.E. 4+96
 E. of Alley to Sta 2140 thence angle to left to Sta 3460 - intersection
 of M.H. of 5 park & lot line bet Ida's 32nd thence South on lot line to 4+96-50

B.M.	North	196.48			
040-M.H. 512 5+372	12.22	208.70	196.48	192.00	
450			4.5	209.2	200.12
T.P.	12.52	221.14	0.03	208.62	
0+80 break			11.9	209.7	205.00
140			9.4	211.7	206.90
160			5.0	216.1	211.63
1+75 M.H. & Elm?			3.4	217.7	214.00
240	12.67	233.59	0.22	220.92	216.22
450			6.8	226.8	220.66
340			4.6	229.0	225.10
T.P.	13.23	246.74	0.28	233.31	
480			12.4	234.3	229.54
440			6.4	240.3	233.92
450			4.5	242.2	238.42
T.P.	12.57	259.21	0.10	246.64	
540			9.5	249.7	242.86
5+35 M.H.			6.9	252.3	246.00
450			5.6	253.6	246.90
640			2.7	256.5	250.13
6+45 break			3.3	255.9	253.00
T.P.	12.58	271.72	0.07	259.14	
740			5.4	266.3	261.25
7+25 break			1.8	269.9	265.00

214.00
 4.90
 218.90
 6.60
 212.30

70

N of Cedar

4.5

4.1

4.2

4.8

4.5

3.7

4.7

6.1

3.9

4.5

6.3

3.8

6.8

6.3

6.7

6.4

2.9

5.1

4.9

47

9.40

5

1600

210.7

		271.72				
7+50	8.23	279.76	0.19	271.53	265.97	5.6
8+0			5.4	274.4	267.91	6.5
+50			4.0	275.8	269.85	6.0
9+05 F.T.			3.1	276.7	272.00	4.7
		South				
B.M.						
		207.05				
0+0 = M.H. 5/2 5+37				196.45	192.00	4.5
+50			2.8	204.3	199.92	4.4
T.P.	11.90	218.82	0.13	206.92		
1+0			5.7	213.1	207.84	5.3
T.P.	12.99	231.03	0.78	218.04		
+50			7.9	223.1	215.76	7.3
2+0 break	11.84	242.03	0.84	230.19	223.68	6.5
2+40 break M.H. 10.41		245.14	7.3	234.70	228.00	6.7
+50			9.7	235.4	228.08	7.3
3+0			6.3	238.8	228.47	10.3
3+50			4.4	240.7	228.86	11.8
3+60 = A Mt. N. of S. 22153		248.32				
		at line 104				
T.P.	1.79	241.53	4.4	240.7	228.94	11.8
4+0			5.37	239.74		
			1.8	239.7	229.25	10.5
4+50			3.7	237.8	229.64	8.2
4+96 D.E. 50 Mt. of Cedar			7.9	233.6	230.00	3.6

235.40			
7.74			
243.14	43.14	43.14	43.14
28.08	28.47	28.86	28.94
15.06	14.67	14.28	14.20

237.80			
3.54			
241.34	41.34	41.34	
29.25	29.64	30.00	
12.09	11.70	11.34	

Center 31st St from M.H., 47+02 Canyon Line South
 East for 845' to D.E. 75.5 S. of S.L. Beech St
 Center 15' west of 31st

				47+50			
B.M.	1124	189.64				178.40	
0+0 = M.H. 47+02						172.00	
0+40 Δ		✓	9.1	180.5	176.80		3.7
0+50 B.M.			8.3	181.3	178.00		3.3
T.P.	1238	201.54	0.48	189.16			
1+0 B.M.			4.8	196.7	191.00		5.7
1+50			2.6	198.9	193.75		5.2
T.P.	1206	213.46	0.14	201.40			
2+0			11.8	201.7	196.50		5.2
2+50			9.8	203.7	199.25		4.5
3+0 B.M.			6.9	206.6	202.00		4.6
3+30			4.3	209.2	205.30		3.9
T.P.	1217	225.05	0.48	212.98			
3+50			11.1	214.0	207.50		6.5
3+65			8.7	216.7	209.15		7.3
4+0 M.H. B.M.			7.4	217.7	213.00		4.7
4+50			5.4	219.7	215.00		4.7
5+0			3.2	221.9	217.00		4.9
4+50 T.P.	1117	235.20	1.02	224.03	219.00		5.0
6+0			8.8	226.7	221.00		5.4
4+50			6.6	228.6	223.00		5.6
7+0 B.M.			5.0	230.2	225.00		5.2
7+50		↳	5.5	229.7	225.69		4.0
						225.00	
						225.69	
8+0			5.0	230.2	226.38		3.8
						226.38	
8+45 D.E. 75.5 S. of S.L. Beech St			4.0	231.2	227.00		4.2
						227.00	

Canyon Line from M.H. St 494287 main line west
 for 146.3 to M.H. & Grove St

		H.I.		GL.	MINI EI.	
B.M.	12.69	200.59		187.90		222.60 3.00 226.20
0+0 = M.H. St 494287						26.20 26.20 26.20 26.20 16.83 15.85 14.28 13.10 9.37 10.65 11.72 13.20
0+45			6.9	193.7	187.08	6.6
1+0			2.6	198.0	190.85	7.1
1+46.3 M.H. & Grove St			2.1	198.5	194.00	4.5
T.P.	12.34	212.43	0.50	200.09		26.20 26.20 18.10 19.00 8.10 7.20
SEWER & Grove St from M.H. 1+46.3						195.6
T.P.	11.78	South	0.17	212.26		
B.M.		224.04				
0+0 = M.H. 1+46.3				198.5	194.00	4.5
7+50 break						3.31
T.P.	7.42	231.32	9.7	214.3	211.00	
1+0			0.14	223.90		
1+50			0.6	224.7	211.50	13.2
2+0			5.7	225.6	212.00	13.6
2+40			10.0	226.3	212.50	8.8
3+50 break			12.0	219.3	213.00	6.3 cut 6.0'
3+40			10.7	220.6	214.25	6.3 ✓ graded st
4+50			9.5	221.3	215.50	6.2 ✓
4+40			8.7	222.6	216.83	5.8 ✓
4+50			8.1	223.2	218.10	5.1
4+85 S.D.E. 35' of Cedar St			7.5	223.8	219.00	4.8
0+0 = M.H. 1+46.3				198.5	194.00	4.5
4+50 break						
1+0	5.3	235.3	5.9	218.1	214.00	4.1
1+45 D.E. 25' of Elm St			1.3	230.0		11.8
			1.9	233.4	218.21	11.4

Alley Line from M.H. 513 53+48 Canyon line West for
165.3' Thence North to D.E. 35' S of Flr to 513 3+22

Σ

B.M.	12.80	222.43		209.63		
	13.10	235.03	0.50	221.93	200.00	Stop
0+0 = M.H. 513	53+482			209.6	209.00	5.6
150			4.0	231.0	226.85	4.1
T.P.	12.90	247.93	0.00	235.03		
+70 break			9.5	238.4	236.00	2.4
110			1.1	246.8	242.00	4.8
T.P.	10.30	257.13	1.10	246.83		
+110 break			3.2	248.9	244.00	4.9
150			5.2	251.9	246.90	
+165 ³ M.H. A			5.2	252.4	248.00	4.4
2+0			4.0	253.6	248.67	4.9
150		157.46 ←	2.5	255.1	249.62	5.5
3+0			1.7	155.9	250.35	5.3
3+22 ⁵ D.E. 35' S of Flr			1.4	156.2	251.00	5.2

700
196
7132
238
70
75
74

152.4

256.6

Senior Alley & bet Ivy & Juniper
from D.E. 25' E of 30th St East for 1055' to D.E.
57' W of M.L. 32nd St

East from M.H. Canyon Line

B.M.	4.91	289.78	284.87	
0+0 = M.H. Canyon line	8.6	281.2	275.00	6.2
+50	9.7	280.1	275.17	4.9
+100	9.3	280.5	275.34	5.2
+150	7.1	282.7	275.51	7.2
+200	6.5	283.60	275.69	7.9
+150	5.3	284.5	275.86	8.6
+300 M.H.	4.9	284.9	275.83	8.9
+150	4.9	284.9	276.20	8.7
+400	4.8	285.0	276.38	8.6
+450	4.5	285.3	276.55	9.2
+500	3.9	285.9	276.72	9.2
+150	3.6	286.2	276.90	9.3
+600 M.H.	3.46	286.32	277.07	9.3
+150	3.5	286.3	277.24	9.0
+700	3.7	286.1	277.42	8.7
+150	4.20	285.58	277.59	8.0
+7+80	4.9	284.9	277.70	7.2
+8+30	5.3	284.0	277.87	6.1
+8+70	6.9	282.9	278.00	4.9

West from M.H. Canyon Line

	289.78			
0+0 = M.H. Canyon Line	8.6	281.2	275.00	6.2
+50	8.3	281.5	275.41	6.1
+100	8.7	281.1	275.83	5.3
+120 D.E. 25' E of 30th	8.6	281.2	276.00	5.2
	89.47	89.47	89.47	89.47
	89.36	89.36	89.36	89.36
	285.58	285.58	285.58	285.58
	3.89	3.89	3.89	3.89
	11.97	11.55	11.79	11.88
	289.78			
	85.58			89.36
	3.73			7.59
	89.36			11.77
	283.60	283.60	89.56	89.56
	5.11	5.26	7.24	6.90
	287.71	289.56	12.32	12.49
			12.66	12.89
	283.60	88.71	88.71	89.71
	5.11	7.63	7.20	7.58
	287.71	12.33	12.51	12.68
				12.85
				19.22
				283.60
				5.14
				287.04
				78.06
				87.04
				3.53
				8.98
				8.54
	8+81	4.90	287.80	6.5
	9+01			17.7
	9+21			28.6
	9+41			17.9
	+1000 stake			8.2
	10+0			4.8
	10+55 D.E. 57' W of M.L. 32nd			3.8

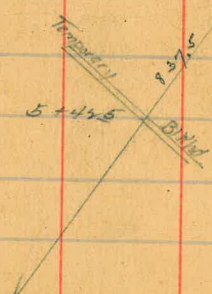
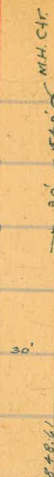
continued on next page sta 8+81

2

Location of 32nd St Outfall Sewer

9' Davis
5' Roche
18' Moore

Bay Front St.



79

Levels over a portion of 32nd St Outfall Sewer

	243	436	192 BM, Top M.H. Foot of 32 nd St
Top Flow Line ch M.H.		12.21	-7.85
No. edge M.H. Ground		6.1	-1.7
127		1.6	2.8
150		2.0	2.4
170		2.0	2.4
150		1.6	2.8
200 No M.H.		1.5	2.9
	4.31 City Datum		
532	13.32 C.G.S. Datum		8.00 SPK BIKM/CB Gen. Elev. M.L.L.W.
Top outfall Sta 5+42.5	11.40		-7.09 City Datum
Top " Sta 5+47.5 end	11.97		-7.66 " "

Ralston st x-act,
 Felton
 Swinells 80
 Bancroft 80'

59.03
 5730
 1.73
 2.83

59.03 6113
 59.03 59.03
 210
 0.46

10.33
 173 330 19
 173
 1570
 1557

19
 31
 19
 38
 399

405
 123
 282
 669
 4614
 3565

951
 2614
 3565

3000
 386
 2614

254
 28
 2032
 508
 7112

413 | 10.50 | 2.54
 8.26
 21.40
 40.65
 17.50

1.27

254
 13
 762
 254
 3302

640
 36
 3840
 1920
 23040

6400
 32
 12800
 19200
 800

777
 173
 210
 383
 4114
 5730
 384

1217
 1220
 538

785
 54425
 295
 8375

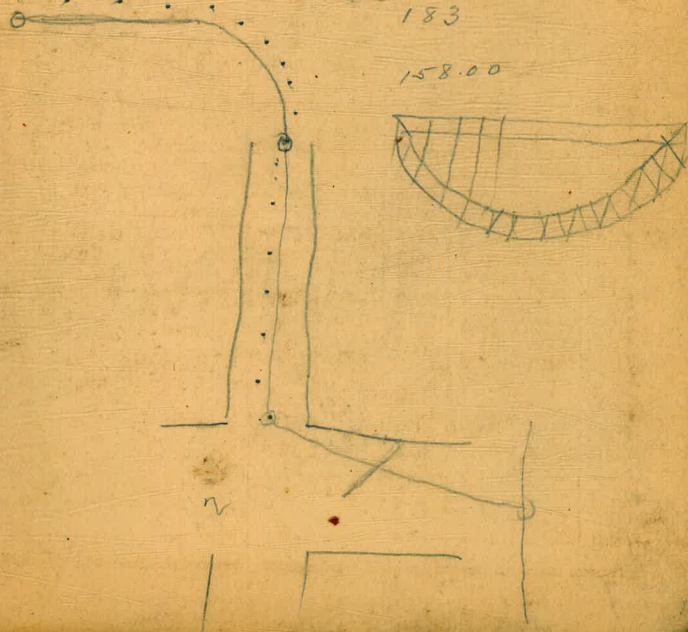
2995
 3130
 3130
 3130

75' S of S.W. Beech
 8445

Crown st
 145' N
 485.5 S = 35' x Beech

4366
 183

158.00



Handwritten notes and calculations on the left page, including numbers like 3224, 400, 244, 700, 660, 12100, 4700, 56, 66, 400, 121, 244, 330, 700, 660, 12100, 4700, 56, 66, 400, 121, 244, 330, 700, 660, 12100, 4700, 56, 66, 400.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING
ROADWAY 16 FEET WIDE. SIDE SLOPES 1½ TO 1
FOR SINGLE TRACK EMBANKMENT.

	0	.1	.2	.3	.4	.5	.6	.7	.8
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2

Calculated by F. E. Paradis, C. E.



DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING
ROADWAY 14 FEET WIDE. SIDE SLOPES 1½ TO 1
FOR SINGLE TRACK EMBANKMENT.

	1	.2	.3	.4	.5	.6	.7	.8	.9
0	7.15	7.30	7.45	7.60	7.75	7.90	8.05	8.20	8.35
1	8.05	8.20	8.35	8.50	8.65	8.80	8.95	9.10	9.25
2	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35
3	10.15	10.30	10.45	10.60	10.75	10.90	11.05	11.20	11.35
4	11.15	11.30	11.45	11.60	11.75	11.90	12.05	12.20	12.35
5	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35
6	13.15	13.30	13.45	13.60	13.75	13.90	14.05	14.20	14.35
7	14.15	14.30	14.45	14.60	14.75	14.90	15.05	15.20	15.35
8	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35
9	16.15	16.30	16.45	16.60	16.75	16.90	17.05	17.20	17.35
10	17.15	17.30	17.45	17.60	17.75	17.90	18.05	18.20	18.35
11	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35
12	19.15	19.30	19.45	19.60	19.75	19.90	20.05	20.20	20.35
13	20.15	20.30	20.45	20.60	20.75	20.90	21.05	21.20	21.35
14	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35
15	22.15	22.30	22.45	22.60	22.75	22.90	23.05	23.20	23.35
16	23.15	23.30	23.45	23.60	23.75	23.90	24.05	24.20	24.35
17	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35
18	25.15	25.30	25.45	25.60	25.75	25.90	26.05	26.20	26.35
19	26.15	26.30	26.45	26.60	26.75	26.90	27.05	27.20	27.35
20	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35
21	28.15	28.30	28.45	28.60	28.75	28.90	29.05	29.20	29.35
22	29.15	29.30	29.45	29.60	29.75	29.90	30.05	30.20	30.35
23	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35
24	31.15	31.30	31.45	31.60	31.75	31.90	32.05	32.20	32.35
25	32.15	32.30	32.45	32.60	32.75	32.90	33.05	33.20	33.35
26	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35
27	34.15	34.30	34.45	34.60	34.75	34.90	35.05	35.20	35.35
28	35.15	35.30	35.45	35.60	35.75	35.90	36.05	36.20	36.35
29	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35
30	37.15	37.30	37.45	37.60	37.75	37.90	38.05	38.20	38.35
31	38.15	38.30	38.45	38.60	38.75	38.90	39.05	39.20	39.35
32	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35
33	40.15	40.30	40.45	40.60	40.75	40.90	41.05	41.20	41.35
34	41.15	41.30	41.45	41.60	41.75	41.90	42.05	42.20	42.35
35	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35
36	43.15	43.30	43.45	43.60	43.75	43.90	44.05	44.20	44.35
37	44.15	44.30	44.45	44.60	44.75	44.90	45.05	45.20	45.35
38	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35
39	46.15	46.30	46.45	46.60	46.75	46.90	47.05	47.20	47.35
40	47.15	47.30	47.45	47.60	47.75	47.90	48.05	48.20	48.35

Calculated by F. E. Paradis, C. E.