1047

KEUFFEL & ESSER CO.

DRAWING MATERIALS
AND
SURVEYING INSTRUMENTS.

NEW YORK.

CHICAGO. ST. LOUIS. SAN FRANCISCO. MONTREAL.

Tables for Excavations and Embankments.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.
ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.
FOR SINGLE TRACK EXCAVATION.

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

Calculated by Julien A. Hall, M. Am. Soc. C. E.

4 2
7 10
1
1
11 0
10
3 2
7 0
1 10
10
13 81

1
1 10
7 10
5 2
10
10
2
10
32
2 6
7
3
12 6

Book 1701
Page 27
Hawthorn

Book 1047

Corner of Bacon St from septic south for

• Stakes set 6' East of ℄					
B.M.	4+1	13.93		9.52	grade
entrance to septic tank					0.00
0+0 = M.H. 4' E of E.L. Septic tank					+0.20
0+22 53 M.H.					0.48
0+27 53			7.42	6.51	0.52
+50			7.47	6.46	0.68
1			7.47	6.46	1.04
+21 31 = M.H. ℄ Bacon 26°00' L.			7.22	6.71	1.20
+50			7.00	6.93	1.24
2			6.33	7.60	1.60
+50			5.92	8.01	1.36
3			5.61	8.32	1.42
+25					1.45
+50			5.55	8.38	1.49
					1.52
4			5.55	8.38	1.55
+25					1.58
+39 88 M.H. Alley bet Lots 8 & Voltaire			5.45	8.48	1.60
+50			5.44	8.49	1.61
					1.64
5			5.20	8.73	1.67
+25	3.35	12.87		9.52	1.70
+50			4.05	8.82	1.74
+63					1.76
6			3.70	9.17	1.80
					1.83
+50			4.16	8.71	1.86
					1.89
7			1.20	8.67	1.92
					1.96
+34 40 M.H. ℄ Alley bet Voltaire & Muir			4.66	8.21	1.97

	9.52		0+25 0+50			M.H. 31	
	3.36	11.18	11.18	11.18	11.40	1+21	
	12.88 M.H.	0.48	0.52	0.68	11.18	11.18	
cut	6.38	10.70	10.66	10.50	1.04	1.20	
	6.50	7.00	3.66	3.50	10.14	9.98	1
	4.68	3.70	1+50				
	11.18 M.H.	11.18	11.18	11.18	11.18		
		0.48	1.24	1.30	1.36		
5.99	11.18	10.70	9.94	9.88	9.82		
	4.66		4.44	4.38	4.32		
	6.52		2.94				
5.18							
	9.52	12.98	12.98	12.98	12.98	12.98	12.95
	3.46	1.30	1.36	1.42	1.20	1.24	1.27
5.42	12.98 M.H.	11.68	11.62	11.56	11.78	11.74	11.71
		6.62	6.62	6.56			
5.51					12.98	12.98	12.98
	12.98				1.33	1.39	1.45
	1.49				11.65	11.59	11.53
5.69	11.49						6.53
	6.49						
		9.52		13.43	13.43	13.43	
		3.91		1.52	1.55	1.58	
6.39		13.43 M.H.		11.91	11.88	11.85	
	9.52	1.09		6.91	6.88	6.85	
	4.29	11.94					
6.65	13.81 M.H.	13.81	13.51	13.81			
	1.58	1.61	1.64	1.67			
6.90	12.23	12.20	12.19	12.14			
		7.20	7.19	7.14			
6.89							
	9.52	14.05	14.05	14.05			
	4.53	1.70	1.76	1.80			
6.83	14.05 M.H.	12.35	12.29	12.25			
	1.67	7.35	7.29	7.25			
6.98	12.38						
	9.52	14.04	14.04	14.04	14.04	14.04	14.04
	4.52	1.73	1.96	1.99	1.83	1.86	1.89
7.06	14.04 M.H.	12.31	12.08	12.05	12.21	12.18	12.15
	1.80	7.31	7.08	7.05	7.21	7.18	7.15
7.08	12.24						
	1.24						
7.37							
6.85							
6.94							
6.24							

		12.87			
7+50			4.87	8.00	1.99
					2.02
8+0			5.19	7.65	2.05
					2.08
+50			5.60	7.27	2.12
					2.15
9			5.80	7.07	2.18
					2.21
+50			5.96	6.91	2.24
			6.38		2.27
+99 17	= M.H. & Alley Lot Main & Long Branch			6.49	2.31
					2.34
10+50			6.52	6.35	2.37
					2.40
11			6.77	6.10	2.43
					2.46
+50			6.91	5.96	2.50
					2.53
12	4.23	10.11	6.99	5.88	2.56
					2.59
+50			4.44	5.67	2.62
					2.65
+91 7	= No end of iron pipe		4.50	5.61	2.67
13			4.51	5.60	2.68
					2.71
+50			4.62	5.49	2.74
+75					2.77
14			4.65	5.46	2.81
					2.84
+50			4.72	5.39	2.87
					2.90
15			4.47	5.64	2.93
					2.96
+31 7	= 300 end iron pipe		4.46	5.65	2.97
~~+50~~					+'
			4.35	5.76	3.00
					3.03
+71 7	= M.H.		4.34	5.77	3.03
		6.07 11.84			

		14.09	14.04	14.04						
		2.02	2.05	2.08						
6.01		12.02	11.99	11.96						
		7.02	6.94	6.96						
5.63										
	4.53	12.40	12.40	12.40	12.40	12.40				
	9.52	2.12	2.15	2.18	2.21	2.24				
5.15	2.88	10.28	10.25	10.22	10.19	10.16				
	12.40 HH,	5.28	5.25	5.22	5.19	5.16				
	2.08									
4.89	10.32									
	5.32									
	9.52	12.38	12.38	12.38	12.38	12.38	12.38	12.38	12.38	12.38
	2.86	2.27	2.30		2.37	2.40	2.43	2.46	2.50	
4.67	12.38 HH,	10.11	10.08	10.04	10.01	9.98	9.95	9.92	9.88	
	2.24	5.11	5.08	5.04	5.01	4.98	4.95	4.92	4.88	
4.18	10.14									
	5.14	12.38								
		2.53								
3.98		9.85								
		4.85								
	4.53	10.09	10.09	10.09	10.09	10.09	10.09	10.09		
	5.56	2.56	2.59	2.62	2.65	2.68	2.71	2.74		
3.67	10.09 HH,	7.53	7.50	7.47	7.44	7.41	7.38	7.35		
	2.53	2.53	2.50	2.47	2.44	2.41	2.38	2.35		
3.46	7.56									
	2.56									
3.32			3.28 Lot ditch cape May							
	10.09	4.53	4.53	4.53	10.59	10.59	10.59			
	2.50	5.50	3.28	6.06	3.00	3.03				
3.05	7.59	10.03 HH,	1.25		4.59					
		5.25		10.59 HH,	2.59	7.56				
		4.78				2.56				
2.94		3.28								
		1.50								
	10.59	10.59	10.59	10.59	10.59	10.59	10.59	10.59	10.59	
	2.74	2.77	2.80	2.83	2.86	2.89	2.92	2.95		
2.92	7.85	7.82	7.79	7.76	7.73	7.70	7.67	7.64		
	2.75	2.82	2.78	2.75	2.72	2.69	2.66	2.63		
2.75										
		10.59	10.59							
		2.96	3.00							
2.65		7.63	7.59							
		2.63								
2.52										
	4.53	10.64	10.64	10.64	10.64	10.64				
	6.11	2.68	2.71	2.74	2.77	2.81				
2.71	10.64 HH	7.96	7.93	7.90	7.87	7.83				
		2.96	2.93	2.90	2.87	2.83				
2.65										
2.76	10.64	10.64	10.64	10.64	10.64	10.64				
	2.84	2.87	2.90	2.93	2.96					
2.74	7.80	7.77	7.74	7.71	7.68					
	2.80	2.77	2.74	2.71	2.68					

		11.84			
16+0			5.93	5.91	3.06
					3.09
16+50			5.70	6.14	3.12
					3.15
17			5.43	6.41	3.19
					3.22
+50			5.08	6.76	3.25
					3.28
18			5.16	6.68	3.31
					3.34
+50			5.15	6.69	3.38
+15					3.41
19			5.00	6.84	3.44
					3.47
+50			4.82	7.02	3.50
~~+38~~			4.79		3.5
+61	3 M.H. Alley bet Cape May & Saratoga			7.05	3.52
+15					3.53
20			4.68	7.16	3.57
					3.60
+50			4.57	7.27	3.63
					3.66
21			4.40	7.44	3.69
					3.72
+50			4.22	7.62	3.76
T.P.	5.37	13.37	3.84	8.00	7.77
22			5.60	7.77	3.82
				7.	3.85
+50			5.39	7.98	3.89
					3.92
23			5.17	8.20	3.96
	Break beg of 12"		5.03		3.99
+41	℄ Alley bet Saratoga & Santa Monica			8.34	4.00
	5.80	14.55		8.35	
+50					4.02
					4.07
24			5.99	8.56	4.12
					4.17
+50			5.73	8.72	4.23

	0.59 H.I.	10.59	10.59	10.59	10.59		
	13.06	3.09	3.12	3.15	3.19		
	7.53	7.50	7.47	7.44	7.40		
2,85	2.50	2.50	2.47	2.44	2.40		
3,02	10.59	10.59	10.59	10.58			
	3.22	3.25	3.28	3.31			
3,22	7.37	7.34	7.31	7.27			
	2.37	2.34	2.31	5.27			
3,51	8.00			19+0			
	9.43	12.43	12.43	12.43	12.43	19+50	
3,37	12.43 H.I.	3.34	3.38	3.41	3.44	12.43 3.50	
	3.34	9.09		9.07		4.53	
3,31	9.09	12.43 H.I.	9.05	4.02		5.7 ✓	
		5.05					
	12.43	3.31					
3,40	4.19	9.12	12.43	12.43		10.28 H.I.	
	7.24	4.12	3.34			8.20	
3,52		12.43	3.41			5.20	
		3.31				13.20 H.I.	
		9.12	12.43			7.79	
3,53			3.38			4.4 check	
	12.43	12.43	9.05			13.20 13.20 13.20	
3,59	3.34	3.34				3.82 3.86 3.89	
	9.09	9.09	9.05			9.38 9.34 9.31	
3,64	4.09	(4.09)				4.35 4.31	
					13.20	13.20 13.20	
3,75					3.92	3.96 3.99	
					9.28	9.24 9.21	
	12.43	6.00			4.28	4.24 4.21	
3,86	3.35	4.03	12.13 12.13	12.13			
	9.05	12.43	3.41	3.44	3.47	3.50 3.53	
3,95	12.13	3.41	8.72	8.69	8.66	8.62 8.60	
	3.38	8.72		3.69	3.66	3.62 3.60	
4,09	8.75	3.72					
	5						
4,24	3.75						
	12.13	12.13	12.13	12.13	12.13	12.13 12.13	
4,34	3.57	3.60	3.63	3.66	3.69	3.72 3.76	
	8.56	8.53	8.50	8.47	8.44	8.41 8.37	
	(3.56)	(3.53)	(3.50)	(3.47)	(3.44)	(3.41) (3.37)	
	12.13	12.13	12.13	12.13	12.13	12.13	
4,44	3.79	3.82	3.85	3.89	3.92	3.96	
	8.34	8.31	8.28	8.24	8.21	8.17	
4,47	3.34	3.31	3.28	3.24	3.21	3.17	
	~~12.63~~	H.I.	12.63				
	~~4.30~~	=3.39	4.23				

	14.55				
25		5.51	9.04	4.28 ✓ 4.33 ✓	4.71
+50		5.24	9.31	4.38 ✓ 4.44 ✓	4.87
26		4.93	9.62	4.49 ✓ 4.54 ✓	5.08
+50		4.63	9.92	4.59 ✓ 4.65 ✓	5.27
27		4.41	10.14	4.70 ✓ 4.75 ✓	5.39
	Break beg of 10"				
+21	℄ Santa Monica & Newport	4.32	10.23	4.80 ✓	5.43
+50		4.26	10.29	4.89 ✓	5.40
28		4.06	10.49	4.97 ✓ 5.04 ✓	5.55
+50		3.93	10.62	5.12 ✓ 5.20 ✓	5.47
29		3.53	11.02	5.28 ✓ 5.36 ✓	5.66
~~+50~~ +75 +93		2.93	11.62	5.44 ✓ 5.52 ✓	6.10
30		2.62	11.93	5.60 ✓ 5.65 ✓ 5.67	6.26
~~30+43~~ +25 ~~+50~~		2.37	12.18	5.75 ✓ 5.83	6.35
30+6.4	Great 7.26 20.25		12.99	5.88 ✓	
31+01	Alley bet Newport & Niagara 27.85		12.40	6.00 ✓ 6.12 ✓	6.40
+50		7.69	12.46	6.25 ✓ 6.38 ✓	6.21
✓ 32		7.40	12.85	6.51 ✓ 6.64 ✓	6.34
+50		7.24	13.01	6.77 ✓ 6.90 ✓	6.24
33		6.77	13.48	7.03 ✓ 7.16 ✓	6.45
+50		6.09	14.16	7.30 ✓ 7.43 ✓	6.86
34		5.34	14.91	7.56 ✓ 7.69	7.35

0.20 0.316 Tunnel

775 B.M. N.W. Santa Monica B Bacon

4.87 / 13.62 H.I. / 3.99 / 4.63 r / 4.63 chek ✓
3.75 / 6.23 / 14.98 H.I. / 4.23 / 10.75 / 5.75

14.98 − 4.28 = 10.70, 5.70 ✓; 14.98 − 4.33 = 10.65, 5.65 ✓; 14.98 − 4.38 = 10.60, 5.60 ✓; 14.98 − 4.44 = 10.54, 5.54 ✓; 14.98 − 4.44 = 10.54, 5.44
14.98 − 4.79 = 10.19; − 4.80 = 5.39

14.98 − 4.49 = 10.49, 5.49 ✓; 14.98 − 4.54 = 10.44, 5.44 ✓; 14.98 − 4.59 = 10.39, 5.39 ✓; 14.98 − 4.65 = 10.33, 5.33; 14.98 − 4.70 = 10.28, 5.28; 14.98 − 4.75 = 10.23, 5.23 ✓; 14.98 − 4.80 = 10.18

2840

14.98 − 4.80 = 10.18, 5.18 ✓; 14.98 − 4.89 = 10.09, 5.09 ✓; 14.98 − 4.97 = 10.01, 5.01 ✓; 14.98 − 5.04 = 9.94, 4.94 ✓; 14.98 − 5.12 = 9.86, 4.86 ✓; 14.98 − 5.20 = 9.78, 4.78 ✓

11.05 N.E. / 5.23 / 16.28 H.I. / 5.20 / 11.08 / 6.08
16.28 − 5.28 = 11.00, 6.00 ✓; 16.28 − 5.36 = 10.92, 5.92 ✓; 16.28 − 5.44 = 10.84, 5.84 ✓; 16.28 − 5.52 = 10.76, 5.76 ✓; 16.28 − 5.60 = 10.68, 5.68 ✓; 16.28 − 5.65 = 10.63, 5.63 ✓

16.28 − 5.88 = 10.40, 5.40 ✓; 16.28 − 6.00 = 10.28, 5.28 ✓; 16.28 − 6.12 = 10.16, 5.16 ✓; 16.28 − 6.25 = 10.03, 5.03 ✓; 16.28 − 6.38 = 9.90, 4.90 ✓; 16.28 − 6.51 = 9.77, 4.77 ✓

11.05 / 6.63 / 17.68 H.I. / 5.65 / 12.03 / 7.03
17.68 − 5.75 = 11.93, 8.93 ✓
12.99 / 6.06 / 19.05 H.I. / 6.51 / 12.54
19.05 − 6.64 = 12.41, 7.41 ✓; 19.05 − 6.77 = 12.28, 7.28 ✓; 19.05 − 6.90 = 12.15, 7.15 ✓; 19.05 − 7.03 = 12.02, 7.02 ✓; 19.05 − 7.16 = 11.89, 6.89 ✓

19.05 − 7.30 = 11.75, 6.75 ✓; 19.05 − 7.43 = 11.62, 6.62 ✓; 19.05 − 7.56 = 11.49, 6.49 ✓; 19.05 − 7.69 = 11.36, 6.36 ✓; ~~19.05~~

20.25

34+50 — 4.49 — 15.76 — 7.83 ✓

"break beginning of 8"

4.03

+81 7 ℄ Alley bet Niagara & Narragansett — 16.22 — 8.00 ✓

+87 — 8.07 ✓

35 — 3.77 — 16,48 — 8.24 ✓

+34 — 8.68 ✓

+50 — 3,15 — 17,10 — 8,89 ✓ — 9.32 ✓

36 — 2.56 — 17,69 — 9.55 ✓

9.88 ✓

+50 — 1.60 — 18.65 — 10,20 ✓

7.58 — 26.58 — 19.08 — 10.53 ✓

37 — 7.34 — 19.24 — 10.85 ✓

11,18 ✓

+50 — 6.56 — 20.02 — 11,50 ✓

11.83 ✓

38 — 5.84 — 20.74 — 12.16 ✓

12.49 ✓

+50 — 5.04 — 21.54 — 12,81 ✓

Belmonte

4.94

Break

+61 ℄ Alley bet Narragansett — 21.64 — 13.00 ✓

8.01 — 32.05 — 24.04

+75 — 13.07 ✓

39 — 9.75 — 22.30 — 13.20 ✓

13.33 ✓

+25

+50 — 8.95 — 23.10 — 13.46 ✓

13.59 ✓

40 — 8.24 — 23.81 — 13.72 ✓

13.85 ✓

+50 — 7.55 — 24.50 — 13.99 ✓

14.12 ✓

41 — 6.96 — 25.09 — 14.25 ✓

14.38 ✓

+50 — 6.31 — 25.74 — 14.51 ✓

14.64 ✓

42 — 5.61 — 26.44 — 14.78 ✓

+25

+37 — 5.05

+41 ℄ Alley bet Del Monte & Santa Cruz — 27.00 — 15.00

14.91 ✓

14.97 ✓

7,93 ✓ — 9.05 H.I. / 7.83 / 11.22 ✓ / 6.22 ✓ — 12.99 / 7.91 / 20.90 H.I. / 7.83 / 13.07 ✓ — 20.90 / 8.00 / 12.90 / 7.90 ✓ — 20.25 / 1.20 / 19.05 — 17.08 / 26.55 / 7.90 / 18.67 — 32.05 / 10.53 / 21.6

8.22 — No drop

8.24

8,21 — 19.08 / 3.24 / 22.32 H.I. / 8.00 / 14.32 / 9.32 — 22.32 / 8.07 / 4.25 / 9.25 — 22.32 / 8.24 / 14.08 / 9.08 — 22.32 / 8.68 / 13.64 / 8.64 ✓

8.14

8.45 — 19.08 / 3.65 / 22.73 H.I. / 8.68 / 14.05 / 9.05 — 22.73 / 8.89 / 13.84 / 3 / 10.84 — 22.73 / 9.22 / 13.51 / 10.51 / 8.51 ✓ — 22.73 / 9.55 / 13.18 / 8.18 ✓ — 22.73 / 9.88 / 12.85 / 7.85 ✓ — 22.73 / 10.20 / 12.53 / 7.53 ✓ — 22.73 / 10.53 / 12.20 / 7.20 ✓ — 22.73 / 10.85 / 11.88 / 6.88 ✓

8.39

8.52 — 22.73 / 8.89 / 11.18 / 6.85 ✓ — 22.73 / 11.50 / 11.23 / 6.23 ✓ — 22.73 / 11.83 / 10.90 / 5.90 ✓ — 19.08 / 5.90 / 24.98 H.I. / 11.83 / 13.15 / 5 / 8.15 — 19.08 / 5.93 / 25.01 H.I. / 11.83 / 13.18 / 8.18 — 15.01 / 12.16 / 12.85 / 5 / 7.85 ✓

8.58

8.72

8.64 — No drop — 25.01 / 12.49 / 12.52 / 7.52 — 25.01 / 12.82 / 12.19 / 7.19 — 19.08 / 7.59 / 26.67 H.I. / 12.82 / 13.85 — 26.67 / 13.00 / 13.67 — 26.67 / 13.07 / 13.60 / 8.60 — 26.67 / 13.20 / 13.47 / 8.47 ✓

9,10 — 26.67 / 13.33 / 13.34 / 8.34 — 24.04 / 3.88 / 27.92 H.I. / 13.33 / 14.59 / 9.59 — 27.92 / 13.46 / 14.46 / 9.46 — 27.92 / 13.59 / 14.33 / 9.33 ✓ — 27.92 / 13.72 / 14.20 / 9.20 ✓ — 27.92 / 13.85 / 14.07 / 9.07 ✓

9.64

10,09 — 24.04 / 5.30 / 29.34 H.I. / 13.85 / 15.49 — 29.34 / 13.99 / 15.35 / 10.35 ✓ — 29.34 / 14.12 / 15.22 / 10.22 ✓ — 29.34 / 14.25 / 15.09 / 10.09 ✓ — 24.04 / 5.59 / 29.63 H.I. / 14.38 / 15.25 / 10.25 ✓

10,51

10.84

11,23 — 24.04 / 6.78 / 30.82 H.I. / 14.88 / 16.44 — 30.82 / 14.51 / 16.31 / 11.31 — 30.82 / 14.64 / 16.18 / 11.18 ✓ — 30.82 / 14.78 / 16.04 / 11.04 ✓ — 30.82 / 14.91 / 15.91 / 10.91 ✓ — 30.82 / 15.00 — M.H. 30.82 / 14.97 / 15.85 / 10.85

11.66 — 28.99 / 2.46 / 31.45 H.I. / 15.00 / 16.45 — M.H. 31.75 / 15.00 / 16.75

12.00 — No drop east — 3' drop west — 28.99 / 3.03 / 32.02 H.I. / 14.97 / 17.05 / 12.05 — 32.02 / 15.00 / 17.02 — 31.75 / 14.98 / 16.77 / 5 / 11.77

28.99 / 2.95 / 31.94 / 15.00 / 16.94 / 31.84

5

Sewer @ Bacon St

B.M. N.E. brass Mg Bacon & Coronado 45.51

47.15 North

							45.51	46.85	46.85	46.85	46.85	
							1.34	37.00	35.40	34.27	33.14	
							46.85 H.I.	9.85	11.45	12.58	13.71	
						T.P.	8.27	4.85 ✓	6.45 ✓	7.58 ✓	8.71 ✓	
						end of work	38.58					
							3.81	42.39				
							42.39 H.I.	28.00				
								14.39				
040=M.H. @ Alley bet Santa Cruz & Coronado			9.04	38.11	Drop	32.00	Going South					
						28.00	6.11					
							10.11					
+75						28.11		38.58	39.63	39.63	39.63	39.63
+50	3.32	38.46	12.01	35.14		28.12	8.92	1.05	28.11	28.22	28.33	28.50
+75						28.33		39.63 H.I.	11.52	11.41	11.30	11.13
/			5.94	32.52		28.45	4.07	28.00	6.52 ✓	6.41 ✓	6.30 ✓	6.13 ✓
								11.63				
+10 D.E.			6.45	32.01		28.50	3.51					
	1.64	47.15		45.51								
		South										
			9.04	38.11	Drop	28.00 ✓	10.11					
040=M.H. @ Alley bet Santa Cruz & Coronado						32.00	6.11					
+25						33.14 ✓						
+50			6.81	40.34		34.27 ✓	6.07					
+75						35.40 ✓						
/			4.16	42.99		36.54	6.45					
+10 D.E.			3.66	43.49		37.00 ✓	6.49 ✓					

Pump House Ocean Beach Sewer

B.M. S.M. brass pig Abbott Voltaire 2.47

4.65 7.12

opposite Sunset Supper Club N.E. corner walk

T.P. end of wall K west side of West Point Loma Blvd 4.97 2.15

4.23 6.38 4.87 +1.51 elev rail. Top of M.H.

Elev floor +2.00

Elev inlet -8.25

Elev extreme bottom -17.00

" East " East bottom concrete -14.17

" ~~ground~~

Elev ground at division

" 6" discharge line -2.50

elev overflow pipe -1.00

3.5 3 6 8

~~4.33~~

4.33 from ℄ 16" To ℄ 6"

5.5' " ℄ " To N edge M.H.

2.15 B.M.
4.04
6.19
13.00
19.19
7.63
11.56

2.15
4.52
6.67
5.16
1.51

14'
14
28
4
32"
2' 8"
6' 8"

8.25

2.15
2.68
4.83 M.H.

4.83
8.25
13.08
12.90

4.83
13.00
17.83

4.83 M.H.
12.90
8.07

4.83
16.50
21.33

4.83
16.00
20.83

4.83
17.00
21.83
20.33
1.50

17.83
3.50
21.33

14.17
2.33
16.50

2.15
2.03
4.18 M.H.
2.15
2.05
4.20 M.H.

4.18
13.00
17.18

4.18
17.00
21.18

4.20
13.00
17.20

4.20
15.50
19.70

65
35
325
195
2,275
2.31

2.15
3.97
6.12 M.H.

8.00
2.27
10.27
5.12
16.39

8.00
2.31
10.31
6.12
16.43

11.43 = 4' cut STA 0+66

11.43 = 5' cut STA 0+66

Line & grades for 6" discharge pipe from pump house to M.H. near Septic Tank. Line to be 2' N of S. curb line from Sta 0+58 to Sta 3+75 thence on straight line to M.H. Line & grade taken on curb to Sta 3+75 - from 3+75 to M.H. stakes set 6' S of ℄

Note for sketch see ~~Book~~ Book 966 page 41

	+R	HI	-R	Elev	Grade	Cut
B.M.	3.91	6.06		2.15		
0						
0+20 = S.L. pump house					-2.50 changed acct floor Elev	
					-4.36	
0+34					-3.19	
0+58			4.52	1.54	-2.36	3.90
0+75			4.55	1.51	-2.32	3.83
1			4.70	1.36	-2.26	3.62
+25			4.80	1.26	-2.20	3.46
+50			4.93	1.13	-2.13	3.26
+75			5.05	1.01	-2.07	3.08
2 break			5.05	1.01	-2.00	3.01
+25			4.68	1.38	-1.79	3.17
+50			4.38	1.68	-1.57	3.25
+75			4.02	2.04	-1.35	3.39
3			3.66	2.40	-1.13	3.53
+25			3.31	2.75	-0.91	3.66
	6.40	9.15				
+50			6.14	3.01	-0.70	3.71

0.873

Elev discharge - 4.15

10

15 joints 6" GI, should be 17 joints

2.15	2.15	5.65
3.07	3.50	10.06
5.22	5.65 M.I.	4.41
4.15	3.19	4.35
9.37	8.84	2.36
	4.10	209
	4.74	

55)200 | 3.45
174
260
232
280

		9.15				
3+75 on curb			5.78	3.37	−0.48	3.85
4			5.46	3.69	−0.26	3.95
+50			4.52	4.63	+0.18	4.45
5			3.63	5.52	+0.62	4.90
+50			2.84	6.31	+1.05	5.26
6			2.71	6.44	+1.49	4.95
+50			2.39	6.76	+1.93	4.83
	4.77	11.53				
157.5 = M.H.					+2.00	
" " " " elev. bottom					+0.48	

6.76
4.27
11.03
2.00
9.03
.60
8.43

6" Service Line West Point Loma Blvd from M.H. near pump house Northeasterly for 383' to existing 8" sewer — stakes set 6' N of ℄ — See Book 1966 P 41

B.M.	4.84	6.35	1.51		
0+00 M.H.					
+25					
+50			25 constructed =		−8.00
			4.91	1.44	−7.69 −7.66 −7.63
1					
			5.39	0.96	−7.26
+50					
+70					
2+20			5.33	1.02	−6.89
2+03 M.H.			4.85	1.50	−6.74
+22			5.11	1.24	−6.50
+50					−6.26
			4.51	1.84	−5.91
3					
+50			3.72	2.63	−5.28
			2.75	3.60	−4.65
+83 end of existing 8" sewer			2.05	4.30	−4.24

Brg = 21K
B 19° 41' Hub ℄

12

	1.50	5.86		7.42	
	4.36	6.74		1.45	
	5.86 M.H.	(12.60)	5.86		
		2.60	6.89		
			12.75		
	5.86	2.32	2.32		
		10.76	10.76		
		13.08	13.08		
9.07		5.86	5.86		
		7.22	7.22		
8.22					
	1.50	6.49	5.91		
7.91	4.41		6.49		
	5.91 M.H.		12.40		
8.02					
7.74	2.15	6.22		6.22	
	4.07	13.91		13.52	
	6.22 M.H.	−7.69 = bot 18" at M.H.			−7.30
7.75					
		M.H. 2+03	2.50		
7.91	2.15	7.22	3.72	1.26	
	5.07	−6.50	6.22	1.9	
	7.22 M.H.	13.72		1.134	
8.25		10		1.26	
		3.72		2.394	
8.54		7.22	3.50		
		6.26	3.98		
		13.48	7.48 M.H.		
	2.15	3.48	6.26		
	3.94		13.74		
	6.09 M.H.		3.74		
		13.80 rod bottom 18" pipe		2.15	
		13.27		4.10	
				6.25 M.H.	
	6.09 M.H.	6.09			
	4.54	13.80			
	1.55	7.79 clear bottom M.H.			
		7			
		7.78	6.25	6.25	6.25
			7.69	7.66	7.63
			13.94	13.91	13.88
			5	6	
			8.94	7.91	7.88
			7.94		

16" Cement effluent line from M.H. near pump house to septic tank.

Stakes set 6 N of ℄

B.M.	4.75	6.26		1.51	
0+00 = M.H. near pump house			7.94	−1.68	−8.00
					−7.96
+50			4.23	2.03	−7.82
					−7.73
1			5.33	0.93	−7.64
+25					−7.55
+50			5.28	0.98	−7.45
					−7.37
					−7.33
2			4.70	1.56	−7.27
+17					−7.21
+50			4.31	1.95	−7.08
+73 M.H. break R 27° 32"			4.22	2.04	−7.00
	9.11	11.15			
3			3.76	2.39	−6.89
+50			3.11	3.04	−6.69
4			3.45	3.70	−6.47
+50			6.34	4.81	−6.27
5			5.53	5.62	−6.05
+50			4.23	6.92	−5.85
+77 = outlet from septic tank					−5.75

Cut

6.32

9.85

8.57

8.43

8.83

9.03

9.04

9.28

9.73

10.17

11.08

11.67

12.27 12.08 new cut.

+0.77 +2.00

Pole opp. Chamberlains Res.

16" C.I. outfall sewer from M.H. near pump house West of Loma Blvd

B.M.	3.48	5.63		2.15	
	2.06	−2.60	10.29	−4.66	
0+00 M.H.					−8.00
0+12					8.42
0+24					8.84
0+36					9.26
0+48					9.68
0+60					10.10
0+72					10.52
0+84					10.94
0+96					11.36
1+08					11.78
1+20					12.20
1+32					12.62
1+44					13.04
1+56					13.46
1+68					13.88
1+80					14.30
1+92					14.55 14.72

6" C.I. Pipe Newport Ave anchored on Benbough Bldg

15

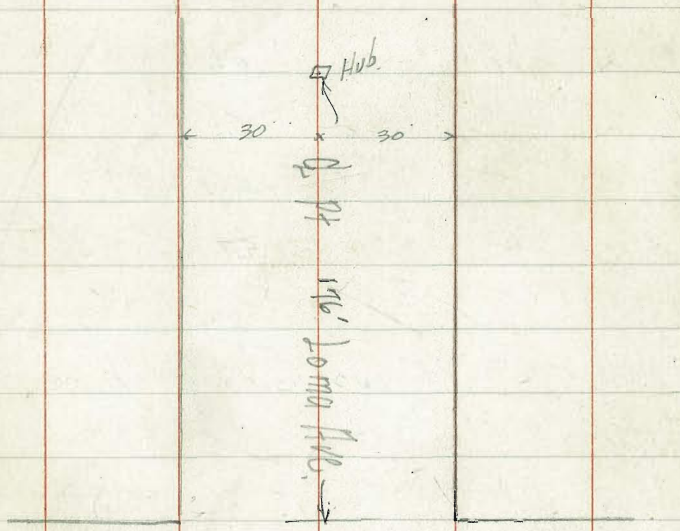
	4.59	11.09		6.50		
0+0 = S. end of 6" C.I. Pipe through seawall					-1.74	
+12			4.84	6.25	-1.60	7.85
+24			4.84	6.25	-1.45	7.70
+36			4.86	6.23	-1.31	7.54
+48			4.83	6.26	-1.16	7.42
+60			4.87	6.22	-1.02	7.24
+72			4.86	6.23	-0.87	7.10
+84			4.84	6.25	-0.73	6.98
+96			4.84	6.25	-0.58	6.83
1+08			4.86	6.23	-0.44	6.67
1+20			4.88	6.21	-0.29	6.50
1+32			4.83	6.26	-0.15	6.41
1+44			4.83	6.26	0.00	6.26

1/2 D

155.7 / 4.5 / 160.2

3/28/27 Gregory Levels and Location
Point Loma Ave Outfall

					B.P. NW Cor Mar + De Foe
on B.M.	2.35	38.47		36.12	
T.P.	2.61	32.47	8.61	29.86	
T.P.	4.45	24.55	12.37	20.10	
					on cb NW De Foe + Pt Loma Ave
			5.42	19.13	
T.P.	0.62	12.82	12.35	12.20	
	Levels on Pt Loma Ave				
185' N. of W.L. De Foe			4.8	8.0	
188' " " "			4.4	8.4	
192' " " "			6.6	6.2	
200' " "			9.3	3.5	Rock
206' " "			10.9	1.9	
T.P.	0.32	0.20	12.94	-0.12	
212' N. of W.L. De Foe			+ 3.9	-3.7	
240' " " "			4.9	-4.7	on Rock
275' " " "			6.0	-5.8	Rock 0.5 Lower
300 " " "			6.7	-6.5	
350 " " "			7.7	-7.5	
400 " " "			8.3	-8.1	Rock 3.5 Lower
410 " " "			8.4	-8.2	Rock 3.3 Lower
450 " " "			9.0	-8.8	
475 " " "			9.5	-9.3	Rock 2' Lower
500 " " "			10.0	-9.8	on Rock



3/28/24 Gregory Cross Section of West End of Pt Loma Ave.

	11.17	23.37		12.20	T.P. on page 16
		135' W. of W.L.		De Foe	
S. cb			4.80	18.5	on cement
S. gutter			5.6	17.7	
5' N. of S. cb			4.8	18.5	
20' N. of ℄ of St			4.6	18.7	
11' N. of ℄			5.1	18.2	
14' " "			5.6	17.7	
20' N. gutter			5.9	17.4	
N cb			5.0	18.3	on cement
		142' W. of W.L.		De Foe	
N gutter			6.0	17.3	
9' N. of ℄			4.6	18.7	
℄			3.8	19.5	
10' S. of ℄			3.5	19.8	
20' " " = S gutter			5.9	17.4	
		148' W. of W.L.		De Foe	
20' S. of ℄			4.3	19.	
15' " "			4.4	18.9	
10' S. of ℄			3.7	19.6	
℄			3.8	19.5	
10' N. of ℄			3.9	19.4	
20' " "			6.0	17.3	
		154' W. of W.L.		De Foe	
30' N. of ℄			4.7	18.6	
℄			4.5	18.8	
20' S. of ℄			4.6	18.7	
		160' W. of W.L.		De Foe	
20' S. of ℄			6.0	17.3	
12' " "			4.6	18.7	
9' " "			8.5	14.8	
3' " "			8.4	14.9	
℄			7.6	15.7	
10' N. of ℄			6.4	16.9	
14' " "			4.9	18.4	
20' " "			4.4	18.9	
		164' W. of W.L.		De Foe	
20' N. of ℄			4.5	18.8	
14' " "			4.6	18.7	

	23.37				
10' N.o x ℄		7.3	16.0'		
℄		10.4	12.9'		
10' S.o x ℄		11.3	12.0'		
14' " "		8.6	14.7'		
16' " "		5.9	17.4'		
20' " "		10.5	12.8'		
	170' W.o x W L		De Foe		
20' S.o x ℄		10.8	12.5'		
16' " "		10.2	13.1'		
15' " "		11.1	12.2'		
10' " "		12.5	10.8'		
5' " "		11.1	12.2'		
℄		7.4	15.9'		
4' N.o x ℄		7.0	16.3'		
10' " "		3.4	19.9'		
20' " "		4.3	19.0'		
	171' W.o x W L		De Foe		
20' N.o x ℄		4.3	19.0'		
9' " "		3.2	20.1'		
4' " "		1.1	22.2'		

℄		7.1	16.2'	1.75 1.02
10' S.o x ℄		12.4	10.9'	
15' " "		13.0	10.3'	
20' " "		17.0	6.3'	
	176' W.o x W L		De Foe	
20' S.o x ℄		17.7	15.6'	
17' " "		17.6	15.7'	
15' " "		13.0	10.3'	
11' " "		12.4	10.9'	
5' " "		6.6	16.7'	
2' " "		0.6	22.7'	
℄		0.53	22.8'	on hub
20' N.o x ℄		1.4	21.9'	
	179' N.o x W L		De Foe	
20' N.o x ℄		1.0	22.3'	
℄		0.7	22.6'	Top of Block
	185' W.o x W L		De Foe	
℄		15.4	7.9'	
10' N.o x ℄		0.9	22.4'	Top of Block
20' " "		0.8	22.5'	" " "

11/16/25 Cross Section of 37th ST. Florence to National. Moore Preston Walker 60' wide 10' abs, 10' 1/4s

S.F. Tab Hydt	0.17	87.85		87.68	Florence + 38th
T.P.	0.37	75.78	12.44	75.41	
		S.L. at Florence = 0+00			
E			6.0	69.8	
cb			6.4	69.4	
1/4			6.5	69.3	
c			7.1	68.7	
1/4			7.0	68.8	
cb			7.4	68.4	
w			7.7	68.1	
	25' S				
w			8.2	67.6	
cb			7.9	67.9	
1/4			7.4	68.4	
c			7.4	68.4	
1/4			7.1	68.7	
cb			6.9	68.9	
E			6.6	69.2	
	50' S				
E			7.3	68.5	

75.78

cb	7.6	68.2	
1/4	7.5	68.3	
c	7.9	67.9	
1/4	7.9	67.9	
cb	8.4	67.4	
w	8.9	66.9	
75' S			
w	9.2	66.6	
cb	9.0	66.8	
1/4	8.8	67.0	
c	8.8	67.0	
1/4	8.3	67.5	
cb	8.1	67.7	
E	8.0	67.8	
100' S			
E	9.0	76.8	
cb	9.2	76.6	
1/4	9.6	76.2	
c	10.0	75.8	
+3	10.2	75.6	

		7578			
+5			11.5	64.3	
+8			10.1	65.7	
1/4			10.0	65.8	
cb			10.2	65.6	
w			10.5	65.3	
	125'S				
w			12.0	63.8	
cb			11.9	63.9	
+3			12.2	63.7	
+6			11.9	63.9	
1/4			11.8	64.0	
C			11.4	64.4	
+5			11.5	64.3	
1/4			10.7	65.1	
cb			10.2	65.5	
E			9.8	66.0	
	150'S				
E			10.2	65.6	
+3			10.4	65.4	
cb			11.4	64.4	

		7578			37th
+7			11.7	64.1	
1/4			11.2	64.4	
C			11.9	63.9	
1/4			12.9	62.9	
cb			13.2	62.6	
w			13.0	62.8	
	175'S				
w			14.0	61.8	
cb			14.0	61.8	
1/4			13.9	61.9	
C			13.3	62.5	
+3			12.8	63.0	
1/4			12.7	63.1	
cb			12.6	63.2	
+4			12.5	63.3	
E			11.5	64.3	
F.P.	163	6481	12.60	63.18	
	200'S				
E			13.3	61.5	
+5			13.7	61.1	

64.81

cb			3.4	61.2	
1/4			3.7	61.1	
c			3.9	60.9	
1/2			4.1	60.7	
cb			3.6	61.2	
+8			3.2	61.6	
1N			2.7	62.1	
	216'S				
W			2.8	62.0	
+2			2.9	61.9	
+4			3.6	61.2	
cb			3.9	60.9	
+5			4.0	60.8	
+7			6.0	S8.8	
1/4			4.7	60.1	
C 4			5.4	S9.4	
1/4			5.7	S9.1	
cb			5.5	S9.3	
+7			5.6	S9.2	
E			5.2	S9.6	
+5			5.6	S9.2	

64.81

37+1

21

218'S

W 1/2			4.9	S9.9	
+1			5.0	S9.8	
+2			6.0	S8.8	
+5			5.9	S8.9	
+6			5.5	S9.3	
+7			4.2	60.6	
cb			4.1	60.7	
+7			3.7	61.1	
+9			2.9	61.9	
1N			2.8	62.0	
	235'S				
-10			8.3	S6.5	
E			8.3	S6.5	
cb			8.3	S6.5	
1/2			8.2	S6.6	
c			8.0	S6.8	
1/4			7.4	S7.4	
+1			7.4	S7.4	
+4			8.5	S6.3	
+8			8.3	S6.5	

		64.81			
CB			6.7	58.1	
+6			6.6	58.2	
+9			5.5	59.3	
W			5.3	59.5	
	242'S				
W			6.7	58.1	
+4			7.6	57.2	
CB			7.9	56.9	
+3			7.9	56.9	
+4			9.0	55.8	
+6			9.2	55.6	
+7			8.1	56.7	
W 1/4			8.4	56.4	
	250'S				
W			7.8	56.0	
CB			8.7	56.1	
1/4			9.2	55.6	
C			9.6	55.2	
1/4			9.7	55.1	
CB			9.8	55.0	

		64.81			
E			10.2	54.6	
+10			10.1	54.7	
	265'S				
-10			11.3	53.5	
E			10.6	54.2	
CB			10.9	53.9	
1/4			11.0	53.8	
C			11.1	53.7	
1/4			11.0	53.8	
CB			10.8	54.0	
+1			10.4	54.4	
W			10.1	54.7	
	286.2'S = NL of Logan				
W			12.7	52.1	See Culvert
CB			12.4	52.4	Notes on Logan +37+h
1/4			12.5	52.3	
C			12.3	52.5	
1/4			11.9	52.9	
CB			11.4	53.4	
E			11.1	53.7	

37+h

22

64.81

SLLOGAN - 0+00

E			4.0	60.8	
cb			5.2	59.6	
1/4			6.4	58.4	
C			8.1	56.7	
1/3			10.1	54.7	
cb			11.2	53.6	
W			12.2	52.6	
	25'S				
-5			9.8	55.0	
W			9.3	55.5	
cb			8.4	56.4	
1/4			8.0	56.8	
C			7.1	57.7	
1/4			6.5	58.3	
+5			6.0	58.8	
cb			5.0	59.8	
E			4.5	60.3	
	50'				
E			4.7	60.1	

64.81

37+h

23

+2			5.3	59.5	
cb			5.9	58.9	
1/4			6.9	57.9	
C			7.8	57.0	
1/4			8.5	56.3	
cb			8.8	56.0	
W			9.3	55.5	
+5			9.8	55.0	one Lower
		75'S			
-5			9.8	55.0	
W			9.4	55.4	
cb			9.2	55.6	
1/4			9.0	55.8	
C			8.2	56.6	
1/3			7.3	57.5	
cb			5.7	59.1	
E			4.9	59.9	
		100'S			
E			4.8	60.0	
cb			5.2	59.6	

		6/4/81			
1/4			6.4	S8.8	
C			7.8	S7.0	
1/4			8.8	S6.0	
Ch			9.4	S5.4	
W			9.8	S5.0	
+5			10.3	S4.5	ON LAWN
	175'S				
-5			10.5	S4.3	
W			10.2	S4.6	
Ch			9.3	S5.5	
1/4			8.6	S6.2	
C			7.5	S7.3	
1/4			6.1	S8.7	
+4			4.8	60.0	
Ch			5.0	S9.8	
E			E.1	S9.7	
	150'S				
E			5.9	S8.9	
Ch			5.7	S9.1	
+6			5.4	S9.4	

		6/4/81			
+7			7.3	S7.5	
1/4			7.6	S7.2	
C			8.3	S6.5	
1/4			9.1	S5.7	
Ch			9.9	S4.9	
W			11.0	S3.8	
+5			11.2	S3.6	
	175'S				
-5			12.6	S2.2	
W			12.1	S2.7	
Ch			11.7	S3.1	
1/4			11.0	S3.8	
C			10.2	S4.6	
+7			9.2	S5.7	
1/4			8.6	S6.2	
+3			7.8	S7.0	
Ch			7.4	S7.4	
E			6.8	S8.0	
	200'S				
E			7.6	S7.2	

		64.81					64.81			37 th 25
cb			8.3	√6.5		E		7.0	√7.8	
+9			9.1	√5.7			250' S			
1/J			9.5	√5.3		E		7.8	√7.0	
+2			10.5	√4.3		cb		8.5	√6.3	
c			11.3	√3.5		1/J		8.8	√6.0	
1/J			11.8	√3.0		+5		10.3	√4.5	
cb			12.5	√2.3		+8		11.1	√3.4	
w/			12.9	√1.9		c		11.7	√3.1	
+5			13.1	√1.7		1/6		11.9	√2.9	
	225' S					+5		11.6	√3.2	
-5			13.3	√1.5		cb		11.9	√2.9	
w/			12.7	√2.1		w/		11.9	√2.9	
cb			12.2	√2.6		+5		11.9	√2.9	
1/J			11.8	√3.0			271' S			
+5			12.1	√2.7		w/		12.5	√2.3	
c			11.6	√3.2		cb		12.5	√2.3	
+6			10.7	√4.1		+6		12.2	√2.5	
+8			9.6	√5.2		+8		13.3	√1.5	
1/J			8.8	√6.0		1/J		13.6	√1.2	
cb			7.8	√7.0		+7		13.3	√1.5	

		64.81						57.84			
+9			13.7	51.1		cb			6.4	51.4	
C			12.8	52.0		+4			7.0	50.8	
+4			10.5	54.3		+5			5.9	51.9	
1/4			9.4	55.4			293'S				
+1			9.0	55.8		W			6.1	51.7	
cb			9.2	55.6		+6			6.0	51.8	
E			9.1	55.7		+7			7.2	50.6	
T.P.	2.33	57.84	9.30	55.51		cb			8.4	49.2	
	281'S					+5			8.5	49.3	
E			2.3	55.5		+7			9.1	48.7	
cb			2.6	55.2		1/4			8.8	49.0	
+9			2.9	54.9		C			9.0	48.8	
1/4			4.4	53.4		+5			7.8	50.0	
+1			5.9	51.9		+8			6.8	51.0	
+5			6.8	51.0		1/4			5.3	52.5	
C			7.7	50.0		+4			2.7	55.1	
+5			8.0	49.8		cb			2.7	55.1	
1/4			7.6	50.2		E			2.3	55.5	
+4			7.5	50.3			296'S				
+4			6.8	51.0		E			2.9	54.9	

		57.8					57.8			
cb			2.8	55.0				9.7	48.1	
+8			2.8	55.0	cb on Conn Return			9.97	47.97	
1/4			5.6	52.2	W			9.5	48.3	
+5			8.4	49.4	TP on BP + National	SW 37+4		11.0	46.8	
C			9.0	48.8						
1/4			9.5	48.3						
cb			9.5	48.3						
+5			9.6	48.2						
W			8.7	49.1						
	299'S									
E 1/4			9.0	48.8						
+3			7.7	50.1						
cb			7.7	51.1						
E			7.2	50.6						
	300'S = NL of National									
E			7.2	50.6						
cb on Return			8.86	48.98						
+7			8.5	49.3						
1/4			9.2	48.6						
C			9.6	48.2						

Moore
Preston
Walker

Cross Section of Newton Hwy

	37+4	50.56		46.82	80' wide 14' cbo 13' 1/4 s
	10' W of W/L 39th		=		60' wide 10' cbo 10' 1/4 c
N			14.6	36.0	
cb			15.9	35.6	
1/4			15.3	35.3	
c			14.7	35.9	
1/4			12.9	37.7	
cb			11.4	39.2	
S			11.8	38.8	
	W/L 37+41				
S			11.1	39.5	
cb			11.2	39.4	
1/4			11.9	38.7	
c			12.6	38.0	
1/4			13.3	37.3	
+5			12.8	37.8	
+10			13.1	37.5	
cb			13.5	37.1	
N			14.0	37.6	

50.56

Newton

	w cb		
N		13.2	37.4
+5		12.2	38.4
cb		11.4	39.2
1/4		11.6	39.0
c		10.8	39.8
1/4		11.0	39.6
cb		10.7	39.9
S		10.5	40.1
	W 1/4		
S		9.2	41.4
cb		9.7	40.9
1/4		10.0	40.6
c		9.5	41.1
+9		9.7	40.9
1/4		10.4	40.2
+6		11.0	39.6
cb		11.0	39.6
+8		11.0	39.6
N		12.0	38.6

E.

N	11.4	39.2	
cb	10.5	40.1	
1/4	10.3	40.3	
c	9.4	41.2	
1/4	9.4	41.2	
cb	8.7	41.9	
S	8.6	42.0	

E 1/2

S	8.4	42.2	
cb	8.3	42.3	
1/4	8.5	42.1	
c	8.8	41.8	
1/4	9.3	41.3	
+3	9.6	41.0	
+7	9.0	41.6	
cb	9.1	41.5	
N	10.3	40.3	

E ct

N	8.9	41.7	

cb	8.2	42.4	
+6	7.7	42.9	
+8	8.2	42.4	
1/4	8.3	42.3	
c	7.9	42.7	
1/4	7.6	43.0	
cb	7.4	43.2	
S	7.5	43.1	

E. L. 37+h = 0+00

S	6.1	44.5	
cb	6.3	44.3	
1/4	6.7	43.9	
c	6.9	43.7	
1/4	7.1	43.5	
+6	7.1	43.5	
+8	6.6	44.0	
cb	6.8	44.1	
N	7.3	43.3	

25' E

N	4.0	46.6	

		50.56		
cb			3.4	47.2
+7			3.6	47.0
1/4			3.9	46.7
c			3.9	46.7
1/4			4.4	46.2
+3			4.0	46.6
cb			4.2	46.4
S			4.6	46.0
	50' E			
S			3.2	47.4
cb			2.8	47.8
1/4			2.5	48.1
c			2.1	48.5
1/4			1.7	48.9
+5			0.6	50.0
cb			0.5	50.1
N			0.3	50.3
T.P.	12.12	62.43	0.25	50.31
	75' E			
N			11.3	51.1

		62.43		
cb			11.5	50.9
+6			11.6	50.8
1/4			12.5	49.9
c			12.6	49.8
1/4			13.0	49.4
+2			12.5	49.9
cb			12.9	49.5
S			13.4	49.0
	100' E			
S			12.6	50.4
cb			11.8	50.6
1/4			11.3	51.1
c			11.0	51.4
1/4			10.9	51.5
+5			10.1	52.3
cb			9.9	52.5
N			9.7	52.7
	125' E			
N			8.9	53.5
cb			9.2	53.2

62.H3

+8		9.2	53.2	
1/4		9.6	S2.8	
C		9.5	52.9	
1/4		10.1	S2.3	
Cb		10.8	S1.6	
S		11.0	S1.4	
	150° E			
S		9.6	S2.8	
Cb		9.5	S2.9	
1/4		9.2	S3.0	
C		8.9	S3.5	
1/4		8.6	S3.8	
+4		8.1	S4.3	
Cb		7.9	S4.5	
N		7.5	S4.9	
	175° E			
N		6.9	S5.5	
Cb		7.5	S4.9	
1/4		8.2	S4.2	
C		7.9	S4.5	

62.H3

1/4	8.3	S4.1	
Cb	8.3	S4.1	
S	8.6	S3.8	
200° E			
S	7.9	S4.5	
Cb	7.8	S4.6	
1/4	7.3	S5.1	
C	7.3	S5.1	
1/4	7.5	S4.9	
Cb	7.2	S5.2	
N	6.2	S6.0	
225° E			
N	5.6	S6.8	
Cb	6.2	S6.2	
1/4	6.4	S6.0	
C	6.7	S5.7	
1/4	6.9	S5.5	
Cb	7.3	S5.1	
S	7.7	S4.7	

		62.43			
	250' E.				
S			8.1	54.3	
Cb			7.1	55.3	
+4			6.4	56.0	
1/4			6.2	56.2	
C			6.0	56.4	
1/4			6.0	56.4	
Cb			6.0	56.4	
N			5.6	57.0	
	275' E				
N			4.7	57.7	
Cb			5.3	57.1	
1/4			5.1	57.3	
C			5.0	57.4	
1/4			5.3	57.1	
Ct			5.1	57.3	
S			6.0	56.4	
+5			6.3	56.1	
	300' E				
-5			4.7	57.7	
S			4.6	57.8	

		62.43			
Cb			3.9	58.5	
+8			3.3	59.1	
+10			3.8	58.6	
1/4			4.0	58.4	
C			3.7	58.7	
1/4			3.5	58.9	
Ct			3.3	59.1	
N			3.1	59.3	
	325' E				
N			1.9	60.5	
Cb			2.0	60.4	
1/4			2.2	60.2	
C			2.3	60.1	
1/4			2.2	60.2	
Ct			1.5	60.9	
S			1.2	61.2	
T.P.	12.13	74.26	0.30	62.13	
	350' E				
S			11.2	63.1	
Cb			11.7	62.6	

		7.4.26			
1/4			12.3	62.0	
e			12.7	61.6	
1/4			12.7	61.6	
cb			12.5	61.8	
N			11.8	62.5	
	375' E				
N'			10.4	63.9	
cb			11.0	63.3	
1/4			11.1	63.2	
e			10.5	63.8	
1/4			10.5	63.8	
+4			10.6	63.7	
+7			9.7	64.5	
cb			9.6	64.7	
S			9.3	65.0	
	3.95' E				
S			8.2	66.1	
cb			8.1	66.2	
+7			8.2	66.1	
+9			9.2	65.1	

		7.4.26			
1/4			9.2	65.1	
e			8.9	65.4	
1/4			9.4	64.9	
cb			9.2	65.1	
N			9.4	64.9	
	400' E				
N'			7.8	66.5	
cb			7.7	66.6	
1/4			8.9	65.4	
e			8.5	65.8	
1/4			8.9	65.4	
+4			8.8	65.5	
+8			7.2	67.1	
cb			7.2	67.1	
S			7.4	66.9	
	4.25' E				
S			5.2	69.1	
cb			5.4	68.9	
+7			5.9	68.4	
+11			6.7	67.6	

		7/26			
1/4			6.7	67.6	
e			6.6	67.7	
+10			6.7	67.6	
1/4			6.2	68.1	
cb			5.8	68.5	
N			6.0	68.3	
	455' E				
N'			4.8	69.5	
cb			4.8	69.5	
1/4			4.8	69.5	
e			4.6	69.7	
1/4			4.9	69.4	
+4			4.9	69.4	
+5			4.3	70.0	
cb			3.9	70.4	
S			3.7	70.6	
	475' E				
S			2.6	71.7	
cb			2.8	71.5	
+6			3.0	71.3	

		7/26			
1/4			4.1	70.2	
+3			3.7	70.6	
e			3.9	70.4	
1/4			3.9	70.4	
cb			3.4	70.9	
N			3.3	71.0	
	500' E				
N'			1.4	72.9	
cb			1.5	72.8	
1/4			2.7	71.6	
e			2.8	71.5	
1/4			2.9	71.4	
+4			2.9	71.4	
+5			1.5	72.8	
cb			1.2	73.1	
S			0.9	73.4	
	525' E				
S			0.2	74.1	
cb			0.5	73.8	
+7			0.6	73.7	

		74.26			
+9			1.6	72.7	
1/4			1.7	72.6	
C			1.6	72.7	
1/4			1.3	73.0	
Cb			0.7	73.6	
N			0.7	736	
T.P.	520	79.05	0.41	73.85	
	550'E				
N			4.6	74.4	
Cb			4.7	74.3	
1/4			5.0	74.0	
C			5.0	74.0	
1/4			5.5	73.5	
+4			5.4	736	
+6			4.4	74.8	
Cb			4.1	74.9	
S			4.2	74.8	
	575'E				
S			4.1	74.9	
Cb			3.8	75.2	

		79.05			
+7			3.7	75.3	
+9			4.7	74.3	
1/4			4.6	74.4	
C			4.3	74.7	
1/4			4.5	74.5	
+6			4.0	75.0	
Cb			3.8	75.2	
N			4.0	75.0	
	600'E =	W L of	3rd St.		60' wide
N			3.8	75.2	10' Cbg 10' 1/4's
Cb			3.7	75.3	
1/4			4.2	74.8	
C			4.0	75.0	
1/4			4.1	74.9	
+4			4.0	75.0	
+6			3.1	75.9	
Cb			3.0	76.0	
S			3.1	75.9	
	+8				
S			3.1	75.9	

		79.05			
cb			3.1	75.9	
+8			3.2	75.8	
+10			3.8	75.2	
1/4			4.0	75.0	
c			3.8	75.2	
1/4			4.2	74.8	
cb			4.0	75.0	
N'			4.1	74.9	
	W cb				
N'			4.1	74.9	
cb			4.1	74.9	
1/4			4.2	74.8	
c			3.8	75.2	
1/4			3.9	75.1	
cb			4.2	74.8	
S			4.1	74.9	
	W 1/4				
S			3.9	75.1	
cb			3.9	75.1	
1/4			3.7	75.3	

		79.05		
c			3.7	75.3
1/4			3.9	75.1
cb			4.0	75.0
N			4.3	74.7
	E			
N'			4.1	74.9
cb			4.0	75.0
1/4			3.9	75.1
c			3.7	75.3
1/4			3.6	75.4
cb			3.7	75.3
S			3.6	75.4
	E 1/4			
S			3.7	75.3
cb			3.8	75.2
1/4			3.8	75.2
c			3.7	75.3
1/4			3.8	75.2
cb			4.0	75.0
N			4.1	74.9

79.05

	+8		
N/		4.0	75.0
cb		3.8	75.2
1/4		3.9	75.1
C		3.7	75.3
1/4		3.8	75.2
cb		3.7	75.3
S		3.6	75.4
	E cb		
S		2.1	76.9
cb		2.3	76.7
+8		2.8	76.2
+11		3.8	75.2
1/4		3.8	75.2
C		3.7	75.3
1/4		3.6	75.4
+4		2.6	76.4
cb		3.0	76.0
N		2.9	76.1

79.05 Newton

EL of 38th = 0+00

N	3.1	75.9
cb	2.7	76.3
+10	2.3	76.7
1/4	3.5	75.5
C	3.5	75.5
1/4	3.8	75.2
+3	3.7	75.3
+5	2.6	76.4
cb	2.4	76.6
S	2.3	76.3
ON 13' Mon. Newton 38th	3.62	75.43
25' E		
S	2.4	76.6
Cb	2.2	76.8
+5	2.1	76.9
+11	3.7	75.3
1/4	3.5	75.5
C	3.4	75.6
1/4	3.8	75.2

		79.05						79.05			
+1			3.7	75.3		+11			5.0	74.0	
+3			2.4	76.6		11/4			5.1	73.9	
cb			2.6	76.4		c			5.1	73.9	
~			3.1	75.9		11/4			5.0	74.0	
	50' E					+3			4.9	74.1	
~			2.3	76.7		+6			3.8	75.2	
cb			2.8	76.2		cb			2.8	76.2	
+6			3.4	75.6		~			1.9	77.1	
+11			4.3	74.7			100' E				
11/4			4.4	74.6		~			2.2	76.8	
c			4.1	74.9		cb			2.8	76.2	
11/4			4.4	74.6		+8			4.3	74.7	
+2			4.3	74.7		+11			5.5	73.5	
+6			2.7	76.3		11/4			5.8	73.2	
cb			2.7	76.3		c			5.9	73.1	
S			3.0	76.0		11/4			5.9	73.1	
	75' E					+2			5.7	73.3	
S			3.4	75.6		+6			4.0	75.0	
cb			3.7	75.3		cb			3.9	75.1	
+8			4.3	74.7		S			4.1	74.9	

	101' E	79.05			
S			4.4	74.6	
cb			4.5	74.5	
+8			5.1	73.9	
S 1/4			6.1	72.9	
	125' E				
S			6.4	72.6	
cb			6.5	72.5	
1/4			6.9	72.1	
e			6.6	72.1	
1/4			6.4	72.6	
cb			5.2	73.8	
N			4.4	74.6	
	150' E				
N			4.8	74.2	
cb			5.5	73.5	
+11			6.8	72.2	
1/4			6.8	72.2	
c			7.1	71.9	
1/4			7.5	71.5	
cb			7.8	71.2	

		79.05		
S			8.1	70.9
	175' E			
S			8.4	70.6
cb			8.3	70.7
1/4			7.8	71.2
c			7.1	71.9
1/4			7.0	72.0
+5			6.7	72.3
+7			6.1	72.9
cb			5.9	73.1
N			5.4	73.6
	200' E			
N			5.7	73.3
cb			6.0	73.0
+6			6.2	72.8
+8			7.2	71.8
1/4			7.3	71.7
e			7.6	71.4
1/4			8.1	70.9
cb			8.1	70.9
S			8.7	70.3

	225'E	79.05		
S			9.5	69.5
cb			8.7	70.3
+8			7.9	71.1
1/4			8.4	70.6
c			7.8	71.2
1/4			7.5	71.5
+6			7.2	71.8
+8			5.9	73.1
cb			6.0	73.0
N			6.1	72.9
	250'E			
N			7.4	71.6
cb			7.2	71.8
+6			7.2	71.8
+7			8.6	70.4
1/4			8.9	70.1
C			8.8	70.2
1/4			9.3	69.7
+4			8.6	70.4
cb			9.5	69.5
S			10.2	68.8

	275'E	79.05		
-5			12.9	66.1
S			12.6	66.4
cb			11.5	67.5
+10			10.5	68.5
1/4			11.1	67.9
c			10.8	68.2
1/4			10.8	68.2
+6			10.8	68.2
+8			9.4	69.5
cb			9.6	69.4
N			10.4	68.6
+5			10.8	68.2
T.P.	-0.0'	66.16	12.88	66.17
	300'E			
-5			1.6	64.6
N			1.6	64.6
cb			0.8	65.4
+5			0.7	65.5
+9			1.3	64.9

		66.16			
1/4			1.2	65.0	
e			1.0	65.2	
1/4			0.9	65.3	
+2			0.6	65.6	
cb			1.3	64.9	
S			2.3	63.9	
+5			2.6	63.6	
	325' E				
-10			6.1	60.1	
S			5.5	60.7	
+7			4.6	61.6	
cb			5.2	61.0	
1/4			5.1	61.1	
+5			4.2	62.0	
e			4.2	62.0	
1/4			4.2	62.0	
+1			5.2	61.0	
cb			5.7	60.5	
N			6.2	60.0	
+10			6.3	59.9	

		66.16			Newton #1
	332' E				
-10			7.4	58.8	
N			7.3	58.9	
cb			6.5	59.7	
+6			5.3	60.9	
1/4			4.9	61.3	
C			5.0	61.2	
+7			5.0	61.2	
1/4			6.1	60.1	
+5			7.0	59.2	
cb			6.8	59.4	
S			6.4	59.8	
+10			7.1	59.1	
	336' E				
N 1/4			5.2	60.0	
+7			5.8	60.4	
cb			6.8	59.4	
N			9.6	56.6	
+15			9.1	57.1	

		6616			
	342 E				
-15			9.4	56.8	
N			9.5	56.7	
tb			8.1	58.1	
+8			6.4	59.8	
N 1/4			5.8	60.4	
	345 E				
-15			10.5	55.7	
S			9.8	56.4	
cb			10.1	56.1	
+8			9.2	57.0	
1/4			7.5	58.7	
+N			6.4	59.8	
C			6.0	60.2	
1/4			5.8	60.4	
+10			6.5	59.7	
a			7.6	58.6	
+3			8.5	57.7	
+10			8.9	57.3	
N			8.1	58.1	

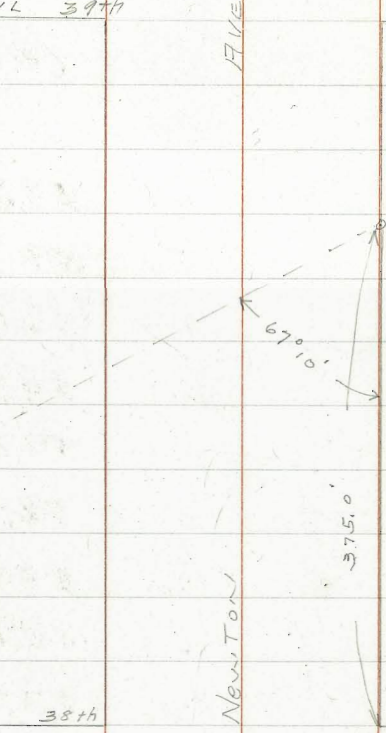
		6616			Newton 4x
+10			6.8	59.4	
	360 E				
-5			5.8	60.4	
N			6.2	60.0	
+10			7.0	59.2	
cb			6.5	59.7	
1/4			6.4	59.8	
C			6.6	59.6	
+8			6.8	59.4	
1/4			8.0	58.2	
+8			12.3	53.9	
cb			12.8	53.4	
S			13.0	53.2	
+15			13.1	53.1	
T.P.	537	6.29	5.6	60.52	SW Cor of Meter Box

Level Notes for culvert on Newton bet 38th & 39th

outlet = 0.00			16.7	49.6	
+20			15.9	50.4	
+25 = SL Newton			14.1	52.2	
+47			12.8	53.5	

Location for proposed Culvert Newton bet. 38th + 39th

WL 39th — 5T



EL 38th — ST

66.29

+60	6.9	√9.4
+93	6.5	√9.8
1+00	8.4	√7.9
+12	9.6	√6.7
+20	9.7	√6.6
+25	8.1	√8.2

66.29 — Newton #3

1+30	9.9	√6.4
+34	9.0	√7.3
+36	7.3	√9.0
	375' E	
-20	15.0	51.3
-11	14.6	51.7
-7	15.4	50.9
-3	15.4	50.9
S	14.1	52.2
Cb	13.3	53.0
+8	12.7	53.6
1/4	10.7	√5.6
+N	8.4	58.1
+8	7.1	59.2
C	7.0	59.3
1/4	6.8	59.5
+11	6.6	√9.7
Cb	6.4	60.1
N	4.1	62.2

		6629			
	400' E				
N			2.1	64.2	
cb			4.7	61.6	
+7			6.3	60.0	
1/4			6.4	59.9	
C			6.9	59.4	
+8			7.8	58.8	
1/4			9.4	56.9	
+4			10.8	55.5	
cb			12.1	54.2	
+3			12.0	54.3	
S			12.4	53.9	
+15			13.4	52.9	
	425' E				
-15			10.5	55.8	
S			9.5	56.8	
cb			8.3	58.0	
1/4			7.1	59.2	
+4			6.3	60.0	
C			5.6	60.7	

		6629			NEWTON NJ
1/4			5.3	61.0	
+6			5.0	61.3	
cb			3.6	62.6	
N			0.9	65.7	
	450' E				
N			0.3	66.0	
+10			1.4	64.9	
cb			2.1	64.2	
+6			2.9	63.4	
1/4			3.1	63.2	
C			3.4	62.9	
1/4			4.1	62.2	
cb			4.4	61.9	
S			4.7	62.1	
	460' E				
S			3.0	63.3	
+16			2.1	64.2	
cb			1.7	64.6	
1/4			1.7	64.6	
+3			2.0	64.3	

		66.29		
C			2.2	64.1
1/4			2.2	64.1
+7			2.1	64.2
ch			1.6	64.6
∩			0.0	66.3
T.P.	7.53	73.66	0.16	66.13
	48.0' E			
∩			4.5	69.2
+10			5.2	68.3
ch			5.2	68.3
+6			5.2	68.3
+8			6.1	67.6
1/4			6.5	67.2
+8			6.7	67.0
+11			6.4	67.3
C			6.5	67.2
+9			6.8	66.9
1/4			6.2	67.5
+6			6.0	67.7
ch			6.2	67.5
+7			6.6	67.1

		73.66		Newton
S			8.1	65.6
	500' E			
S			7.0	66.7
+5			6.5	67.2
ch			6.3	67.4
1/4			5.9	67.8
C			5.3	68.4
1/4			4.7	69.0
+5			4.2	69.5
+6			3.7	70.0
ch			3.6	70.1
∩			3.0	70.7
	525' E			
∩			1.6	72.1
+6			2.2	71.5
ch			2.6	71.1
+9			2.7	71.0
1/4			3.3	70.4
C			4.4	69.3
+10			5.2	68.5

		73.66		
1/4			5.2	68.21
ch			6.1	67.6
S			7.8	65.9
+5			9.6	64.1
	550' E			
-5			9.2	64.5
S			8.6	65.1
ch			7.2	66.5
1/4			5.9	67.8
C			5.0	68.7
+8			4.2	69.5
1/4			3.2	70.5
ch			2.9	70.8
N			1.3	72.4
	575 E			
N			2.7	71.0
4			3.4	70.3
1/4			4.9	68.8
+4			5.3	68.4
+6			5.8	67.9

		73.66			NEWTON
C			6.5	67.2	
1/4			7.3	66.4	
ch			8.4	65.3	
S			9.4	64.3	
+5			10.3	63.4	
	600' E = w	of 39th			
-5			11.6	62.1	
S			11.0	62.7	
ch			10.2	63.5	
1/4			9.1	64.6	
C			8.1	65.6	
1/4			6.5	67.2	
ch			5.4	68.3	
N			4.5	69.2	
TP	7.05	80.56	0.15	73.51	
Check to BM. 13 Mon Newton 4 36th			5.13	75.43	75.43

11/17/25
Moore

Cross Section 38+11 60' wide
NATIONAL to BOSTON 10' chs
10' 1/4's

80.56

St. Nat'l.

E	2.8	77.8	
+5	3.3	77.3	
cb	4.1	76.5	
+1	4.8	75.8	
1/4	5.0	75.6	
c	5.1	75.5	
1/4	5.3	75.3	
+9	5.7	74.9	
cb	5.1	75.5	
w	4.8	75.8	

25' S

w	4.9	75.7	
cb	5.3	75.3	
1/4	5.4	75.2	
c	5.1	75.5	
1/4	5.1	75.5	
+7	5.2	75.4	
cb	4.5	76.1	

80.56

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+3	3.2	77.4	
E	2.8	77.8	

50' S

E	2.9	77.7	
+7	3.4	77.2	
cb	5.1	75.5	
1/4	5.4	75.2	
c	5.4	75.2	
1/4	5.2	75.3	
cb	5.7	74.9	
+3	4.4	76.2	
w	4.5	76.1	

75' S

w	4.6	76.0	
+9	4.6	76.0	
cb	5.7	74.9	
1/4	5.6	75.0	
c	5.7	74.9	
1/4	5.7	74.9	
cb	5.8	74.8	

		80.56			
+1			5.6	75.0	
+1			4.0	76.6	
E			3.3	77.3	
	100's				
E			3.7	76.9	
+5			4.1	76.5	
cb			5.7	74.9	
1/4			5.8	74.8	
C			5.7	74.9	
1/4			5.7	74.9	
+9			6.0	74.6	
cb			5.2	75.4	
W			5.1	75.5	
	115's				
W			5.8	74.8	
cb			6.2	74.4	
1/4			5.9	74.7	
C			5.8	74.8	
1/4			6.0	74.6	
cb			5.9	74.7	

		80.56			38 th 48
+5			4.5	76.1	
E			4.1	76.5	
	140's				
E			4.3	76.3	
+8			5.1	75.5	
cb			6.0	74.6	
1/4			6.0	74.6	
C			6.0	74.6	
1/4			6.1	74.5	
cb			6.0	74.6	
W			6.1	74.5	
	145's				
W			6.3	74.3	
cb			5.9	74.7	
1/4			6.1	74.5	
C			6.1	74.5	
1/4			6.1	74.5	
cb			5.8	74.8	
E			5.4	75.2	

		8056					8056		38+4	
	160' S				Cb			5.6	75.0	
E			5.2	75.4	1/4			5.8	74.8	
Cb			5.7	74.9	e			6.1	74.5	
+1			6.1	74.5	1/4			6.2	74.4	
1/4			6.0	74.6	Cb			6.3	74.3	
C			6.1	74.5	W			6.3	74.3	
1/4			6.2	74.4		225' S				
Cb			6.1	74.5	W			6.1	74.5	
W			6.2	74.4	Cb			6.3	74.3	
	175' S				1/4			6.1	74.5	
W			5.8	74.8	e			6.2	74.4	
Cb			6.1	74.5	1/4			6.0	74.6	
1/4			6.1	74.5	Cb			5.7	74.9	
C			5.9	74.7	E			5.6	75.0	
1/4			6.0	74.6		250 S				
Cb			6.0	74.6	E			5.3	75.3	
+3			5.4	75.2	+5			6.0	74.6	
E			5.3	75.3	Cb			6.2	74.4	
	200' S				1/4			6.0	74.6	
E			5.0	75.6	C			6.0	74.6	

		80.56		
1/4			6.1	74.5
+6			6.4	74.2
cb			5.6	75.0
W			5.6	75.0
	275'S			
W			5.8	74.8
cb			6.0	74.6
+3			6.3	74.3
1/4			6.1	74.5
C			5.9	74.7
1/4			5.8	74.8
+7			5.7	74.9
cb			5.4	75.2
+5			5.5	75.1
E			4.9	75.7
	298.5'S Approx. = NL of NEWTON			
E			4.7	75.9
cb			4.5	76.1
+1			5.4	75.2
1/2			5.7	74.9

		80.56		38+h
C			5.7	74.9
1/4			5.8	74.8
+7			6.0	74.6
cb			5.6	75.0
W			5.4	75.2
	SL of NEWTON = 0+00			
W			4.6	76.0
+8			4.5	76.1
cb			5.6	75.0
1/4			5.4	75.2
C			5.1	75.5
1/4			5.2	75.4
+8			5.0	75.6
cb			3.7	76.9
E			3.8	76.8
	25'S			
E			4.0	76.6
cb			4.0	76.6
+2			5.2	75.4
1/4			5.3	75.3

		80.56			
C			5.3	75.3	
1/4			5.7	74.9	
+8			5.8	74.8	
Cb			5.3	75.3	
+2			4.8	75.8	
W			4.9	75.7	
	50' S				
W			5.1	75.5	
+7			5.1	75.5	
Cb			6.0	74.5	
1/4			5.7	74.9	
C			5.5	75.1	
1/4			5.5	75.1	
+8			5.3	75.3	
Cb			3.8	76.8	
E			3.9	76.7	
	75' S				
E			5.0	75.6	
Cb			5.0	75.6	
+2			5.8	74.8	

		80.56			38 + h
1/4			5.8	74.8	
C			5.6	75.0	
1/4			5.6	75.0	
Cb			6.0	74.6	
+2			5.1	75.5	
W			5.3	75.3	
	100' S				
W			5.4	75.2	
+9			5.3	75.3	
Cb			6.1	74.5	
1/4			6.0	74.6	
C			5.8	74.8	
1/4			6.2	74.4	
+8			5.9	74.7	
Cb			4.7	75.9	
E			4.7	75.9	
	125' S				
E			5.4	75.2	
Cb			5.3	75.3	
+2			6.3	74.3	

		80.56			
1/4			6.3	74.3	
c			6.2	74.4	
1/4			6.3	74.3	
+9			6.5	74.1	
cb			6.1	74.5	
w			5.8	74.8	
	150'S				
w			6.3	74.3	
cb			6.2	74.4	
+3			6.8	73.8	
1/4			6.7	73.9	
c			6.3	74.3	
1/4			6.4	74.2	
+6			6.4	74.2	
cb			5.8	74.8	
+3			5.5	75.1	
E			5.9	74.7	
	175'S				
E			6.7	73.9	
cb			6.1	74.5	

		80.56			38 + 4 57
+7			6.8	73.8	
1/4			6.8	73.8	
c			6.8	73.8	
1/4			6.9	73.7	
+8			7.0	73.6	
cb			6.6	74.0	
w			6.5	74.1	
T.P.	3.05	76.64	6.97	73.59	
	200'S				
w			2.2	74.4	
cb			2.4	74.2	
+1			3.2	73.4	
1/4			3.2	73.4	
c			3.0	73.6	
1/4			3.0	73.6	
cb			3.0	73.6	
E			3.3	73.3	
	225'S				
E			3.6	73.0	
cb			3.2	73.4	

		76.64		
1/4			3.3	73.3
c			3.2	73.4
1/4			3.3	73.3
+8			3.2	73.4
cb			2.4	74.2
W			2.3	74.3
	250'S			
W			2.8	73.8
cb			2.7	73.9
+2			3.5	73.1
1/4			3.5	73.1
c			3.2	73.4
1/4			3.4	73.2
+9			3.3	73.3
cb			2.7	73.9
E			2.7	73.9
	275'S			
E			3.6	73.0
cb			3.5	73.1
1/4			3.6	73.0

		76.64		38+4	53
E			3.6	73.0	
1/4			3.6	73.0	
+8			3.5	73.1	
cb			3.0	73.6	
W			3.0	73.6	
	300'S = N.L		Boston =		80' wide
W			3.2	73.4	14" cbo 13' 1/4 S
cb			3.2	73.4	
+2			3.6	73.0	
1/4			3.6	73.0	
c			3.5	73.1	
1/4			3.6	73.0	
cb			3.7	72.9	
E			3.7	72.9	
	Ncb				
E			3.5	73.1	
cb			3.3	73.3	
1/4			3.6	73.0	
c			3.5	73.1	
1/4			3.7	72.9	

		766			
cb			3.4	73.2	
W			3.2	73.4	
	+7				
W			3.6	73.0	
cb			3.6	73.0	
1/4			3.8	72.8	
C			3.6	73.0	
1/4			3.5	73.1	
cb			3.4	73.2	
E			3.4	73.2	
	N 1/4				
E			3.3	73.3	
cb			3.3	73.3	
1/4			3.5	73.1	
C	N 8° 40' 16.5'		3.5	73.1	
1/4			3.8	72.8	
cb			4.0	72.6	
W			4.3	72.3	
	E				
W			4.3	72.3	

		766			38+44
cb			4.0	72.6	
1/4			3.7	72.9	
C			3.5	73.1	
1/4			3.3	73.3	
cb			3.2	73.4	
E			3.3	73.3	
	S 1/4				
E			2.7	73.9	
cb			2.6	74.0	
1/4			3.1	73.5	
C			3.2	73.2	
1/4			3.4	73.2	
cb			3.5	73.1	
W			3.8	72.8	
on 13' Mon		Boston & 38+44	3.18	73.46	
	S cb				
W			3.6	73.0	
cb			3.3	73.3	
1/4			3.1	73.5	
C			3.2	73.4	

		76.64		38+14	
1/4			3.0	73.6	
+5			2.5	74.1	
d6			2.8	73.8	
E			3.0	73.6	
	SL of BOSTON				
F			3.0	73.6	
d6			3.1	73.5	
+6			2.7	73.9	
1/4			3.1	73.5	
C			3.1	73.5	
1/4			3.0	73.6	
C6			3.1	73.5	
W			3.0	73.6	
T.P.	0.02	63.79	12.87	63.77	
T.P.	0.78	51.68	12.89	50.90	
T.P.	2.47	42.60	11.55	40.13	
Check to BM 13 Mon. Z. #3814			6.56	36.04	36.16

4.8 EYE

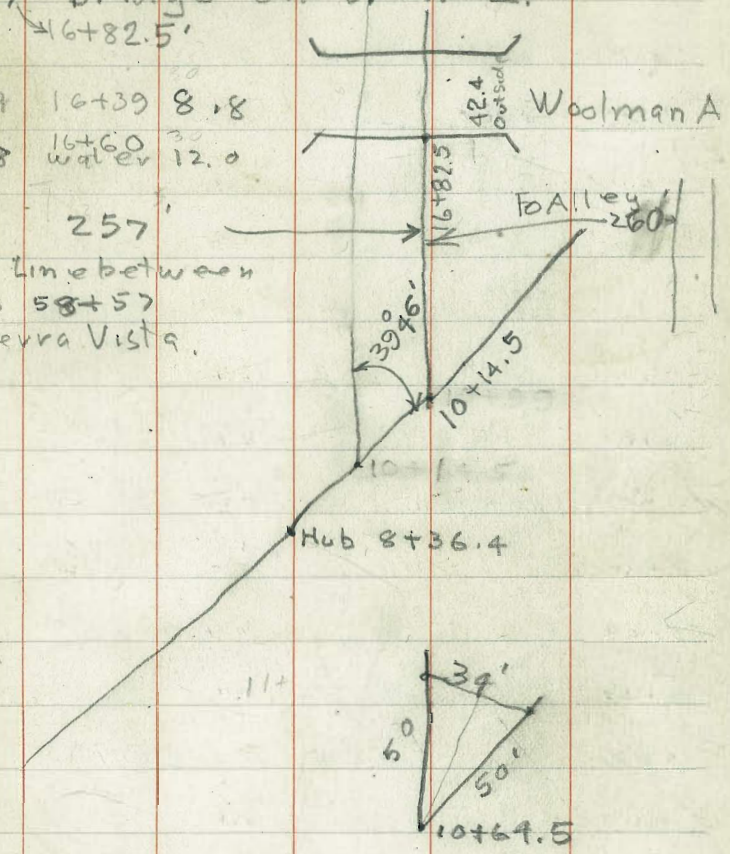
Line in Caruthers Add.

0+00 Main Line		103.8 N. of 40th St.	
	Ground at Hub.	B.M 31.0	H.I 31.6
8+36.4		.6	31.0
9+12	8+62	3.1	28.5
9+17	8+67	5.0	26.6
9+50	9+00	4.8	26.8
10+00	9+50	4.5	27.1
10+12	9+62	3.0	28.6
+30	9+80	2.7	28.9
+33	9+83	3.7	27.9
10+50	10+00	3.0	28.6
10+64.5	10+14.5	2.7	28.9
10+99		2.8	28.8
16+70.5		2.5	29.1
10+76.5		1.5	30.1
11+19.5	10+50	1.7	29.9
11+50	11+00		
12+00	11+50		
12+50	12+00		
13+00	12+50		
13+50	13+00		
1400	13+50	Between 1400 & 1450 Bank work at	
14+50	14+00		
15+00	14+50		
15+50	15+00		

16+00	15+50	HI	
16+50	16+00	Ground 5.8	
16+83	Edge of Bank	5.8	
17+27	Bridge on S. at E.		0+00
	16+82.5		
16+84	16+39	8.8	
16+98	16+60 water	12.0	

257'

To Line between Lots 58+57 Sierra Vista.



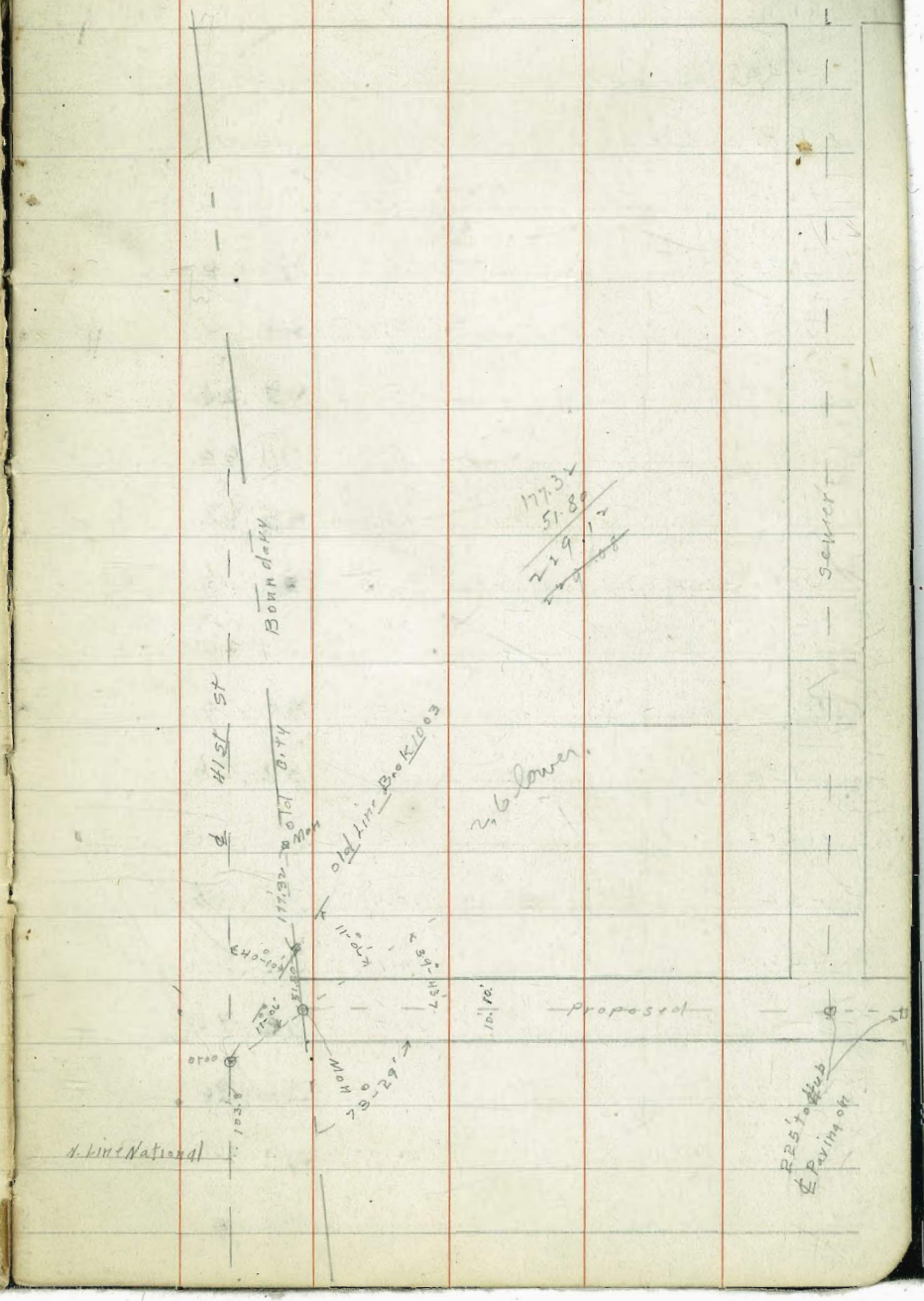
1682.5
1014.5
668.0

Sewer Levels Thru

9-17-26 miller wal show

BM	0.14	45.58		45.40	Top Hudy 40th & National
T.P.	0.21	53.01	12.78	52.80	
T.P.	0.14	39.95	13.24	39.77	
T.P.	5.55	33.64	11.86	28.09	
0+00 = 0+00 Back 100 ft Page	℄ 41st St			5.95	27.69	on stub
0+50				5.6	28.04	
1+00				5.4	28.24	
1+50				5.1	28.54	
2+00				4.7	28.94	
2+22 35	∠ 39°43' R. MoH.			5.12	28.52	on MoH
2+50				5.0	28.64	
3+00				4.9	28.74	
3+50				4.6	29.04	
4+00				5.8	27.84	
+25				5.6	28.04	W Bank River
+35				9.6	24.04	River Bottom
+50				8.8	24.84	
5+00				8.8	24.84	
+50				7.9	25.74	
6+00				9.7	23.94	

39.95
4.70
35.25 ± BM B.P. NW 41st & National



		33.64			
6+42			11.7	21.9	River Bottom
+53			5.1	28.54	E. Bank River
F.P.	12.65	46.22	0.07	33.57	
7+00			10.0	36.22	
+50			8.4	37.82	
8+00			8.1	38.12	
+50			6.7	39.52	
9+00			4.6	41.62	
+40			1.1	45.12	
T.P.	2.24	48.26	0.20	46.02	
℄ N+S 20' Lane 9+55.50	∠ 90°∠		0.1	48.26	
10+00			4.0	44.26	
+50			7.9	40.36	
11+00			9.5	38.76	
+50			10.4	37.86	
12+00			10.7	37.56	
+50			11.5	36.76	
13+00			12.0	36.26	
T.P.	9.76	46.02	12.00	36.26	

		46.02			
13+50			10.0	36.0	
14+00			9.6	36.42	
+50			8.6	37.42	
15+00			6.1	39.92	
	S. Line Carruthers Resub Blk 58				
15+18	E & W Fence 1 1/2" Pipe Iron Post Block pulled out				
+50			5.0	41.02	
16+00			4.8	41.22	
+50			4.1	41.9	
17+00			4.1	41.92	
+50			4.9	41.12	
18+00			6.5	39.52	
+50			10.8	35.22	
19+00			12.3	33.7	
+50			12.6	33.4	
20+00			12.4	33.62	
T.P.	8.06	41.78	12.30	33.72	
+50			7.8	33.98	
21+00			7.5	34.28	
+50			7.0	34.78	
22+00			6.3	35.48	

		41.78			
22+50			5.8	35,9 8	
22+85 + or − ℄ R St			4.8	36.98	
Set BM spk			4.66	37.12	BM 20' base + R. St
T.P.	4.97	44.14	4.61	37.17	
ch K on BM B.P.N.E. cut R St Bridge			1.73	40.05	

Sewer Levels & Broadway 9/20/26 mills

	33rd	To	35th								
BM	2.59	109.14		106.55	Mon N.W. 33rd + Bdw.	7+50		99.90	9.0		90.9
0+00 = E. line 33rd			2.6		106.5	8+00			10.8		89.1
0+25			1.8		107.3	T.P.	0.68	87.32	13.24	86.64	
0+75			2.9		106.2	+50			1.2		86.12
1+00			4.7		104.4	9+00			3.7		83.62
+50			5.0		104.14	+50			5.1		82.22
2+00			6.7		102.4	10+00			6.6		80.72
+50			7.8		101.3	+50			10.3		77.02
3+00			8.4		100.7	T.P.	0.20	74.33	13.19	74.13	
+50			9.0		100.14	11+00			9.6		64.73
4+00			9.0		100.14	T.P.	0.07	61.31	13.09	61.24	
+25			8.0		101.14	+50			2.0		59.31
+60			8.2		100.94	12+00			3.7		57.61
5+00			10.0		99.14	+50			4.5		56.81
T.P.	0.79	99.90	10.03	99.11		in 35th St 12+92 4" M.H.			5.16		56.15 ground ~~47.19~~
+50			1.7		98.2	12+92			13.12		Flow line 48.19
N Line 34th 4+00			2.5		97.4						
℄ 34th St 4+30			3.4		96.5						
E Line 34th 4+40			3.8		96.1						
7+00			5.5		94.4						

Sewer Levels

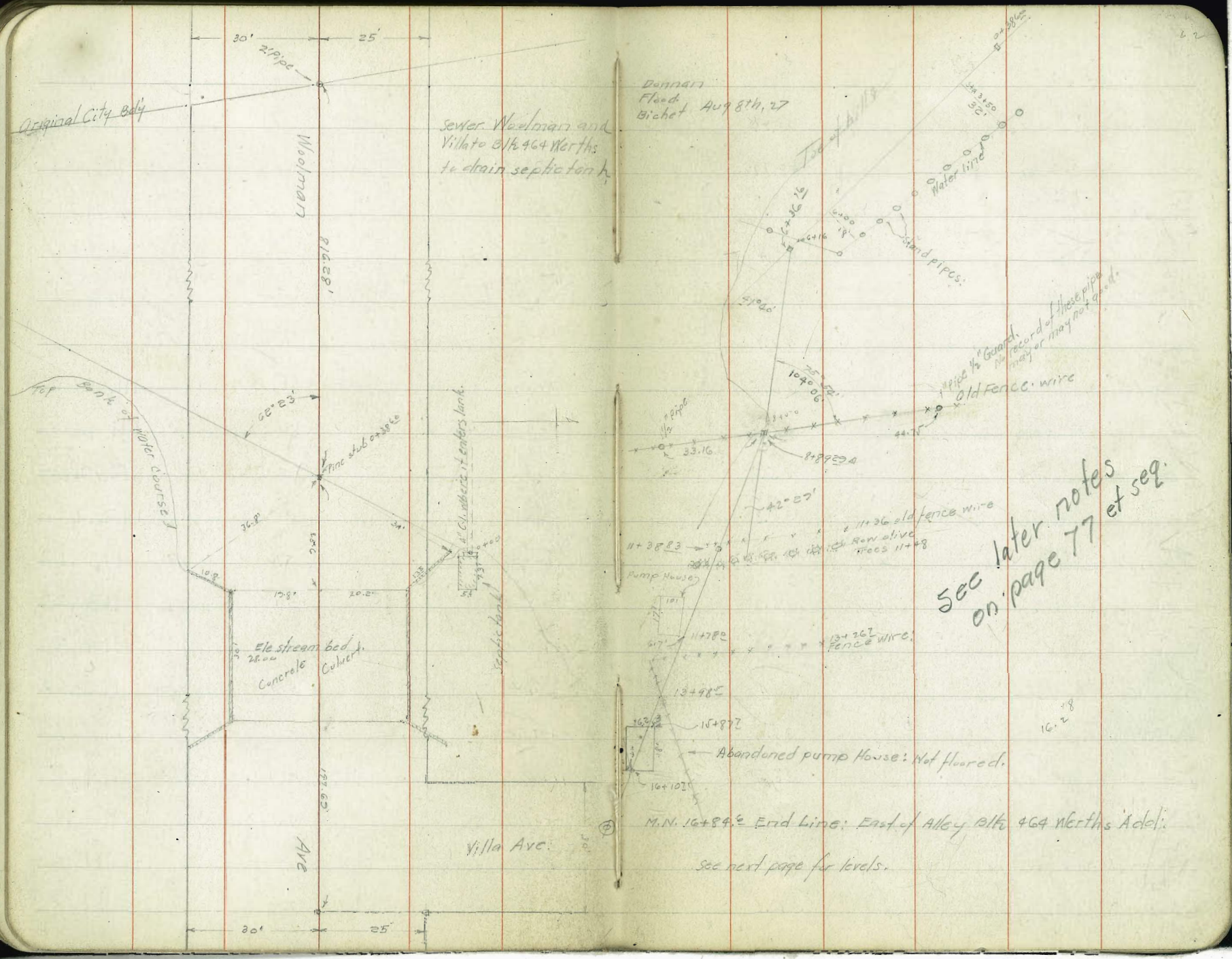
℄ Alley Bet C & Bdw. from M.H. in 35th St To ℄ Lin - 33rd St

9/20/21 Miller

Ref. 61.31 Page 60

0+00 - MH ℄ Alley Bet C & Bdw IN 35th St			61.31		50.21 Flow Line
			11.10		
0+00			61.31		57.51 ground
			3.8		
T.P.	12.43	71.34 ✓	2.80	58.51 ✓	
0+50			12.6		58.74 ✓
1+00			12.0		59.34 ✓
+50			10.6		60.74 ✓
+65			7.9		63.44 ✓
T.P.	12.50	83.60 ✓	0.24	71.10 ✓	
2+00			8.2		75.4 ✓
+11			2.9		80.7 ✓
+19			1.7		81.9 ✓
T.P.	13.22	96.10 ✓	0.72	82.88 ✓	
+23			11.2		84.9 ✓
+50			8.2		87.9 ✓
3+00			6.2		89.9 ✓
+50			2.3		93.8 ✓
T.P.	13.17	109.21 ✓	0.06	96.04 ✓	
4+00			11.2		98.01 ✓
+50			8.7		100.51 ✓
+75			8.7		100.51 ✓

		109.21			102.1 ~~101.10~~
5+00			7.1		
+50			1.6		107.61 ✓
+95			0.7		108.51 ✓
6+00			1.0		108.21 ✓
+50			1.7		107.51 ✓
℄ 34th St +60			0.5		108.71 ✓
T.P.	9.49	118.32 ✓	0.34	108.83 ✓	
7+00			4.7		111.62 ✓ 8.32 4.34
+50			6.5		111.82 ✓ 109.98 3.60 113.58 7.02
8+00			5.6		112.72 ✓ 106.56 101.55 34 Bdw
+50			6.1		112.22 ✓
9+00			5.2		113.12 ✓
+50			5.1		113.22 ✓
10+00			3.8		114.52 ✓
+45			5.7		112.62 ✓
+75			5.6		112.72 ✓
11+00			3.9		114.42 ✓
+40			4.9		113.42 ✓
+60			6.7		111.62 ✓
12+00			7.8		110.52 ✓
+50 = 40' E of 33rd St			8.3		110.02 ✓



See later notes on page 77 et seq.

For Construction notes see page 65 also see page 78

	+	⊼	−	Ele	
	4.56	46.99		42.43 D.P.	Culvert Weidman near Villa:
on top of 4" C.I. Pipe outlet at East edge of tank			13.73	33.26	
On top of concrete septic tank			8.88	38.11	
0+00 = On top of 4" C.I. Intake pipe W.L. of overhang on tank = Bottom embankment:			14.0 ±	32.97	
0+12 Top of Road fill			5.6	41.4	
0+38.6 on Hub in Roadway			4.75	42.24	
0+68 Top of Roadway embankment			4.9	42.1	
0+83 Toe of slope "		"	10.5'	36.5	
23 Lt of 0+83 is in streambed not in deepest place: see sketch:			16.0	31.0	
1+00			11.3	35.7	
1+50			11.7	35.3	
2+00			11.8	35.2	
2+50			11.7	35.3	
#	6.15	41.64 ✓	11.50	35.49 ✓	On standpipe
3+00			6.2	35.4	
3+50			6.1	35.5	
4+00			5.9	35.7	
4+50			5.9	35.7	
5+00			5.4	36.2	
5+50			5.5	36.1	

Changed see page 67

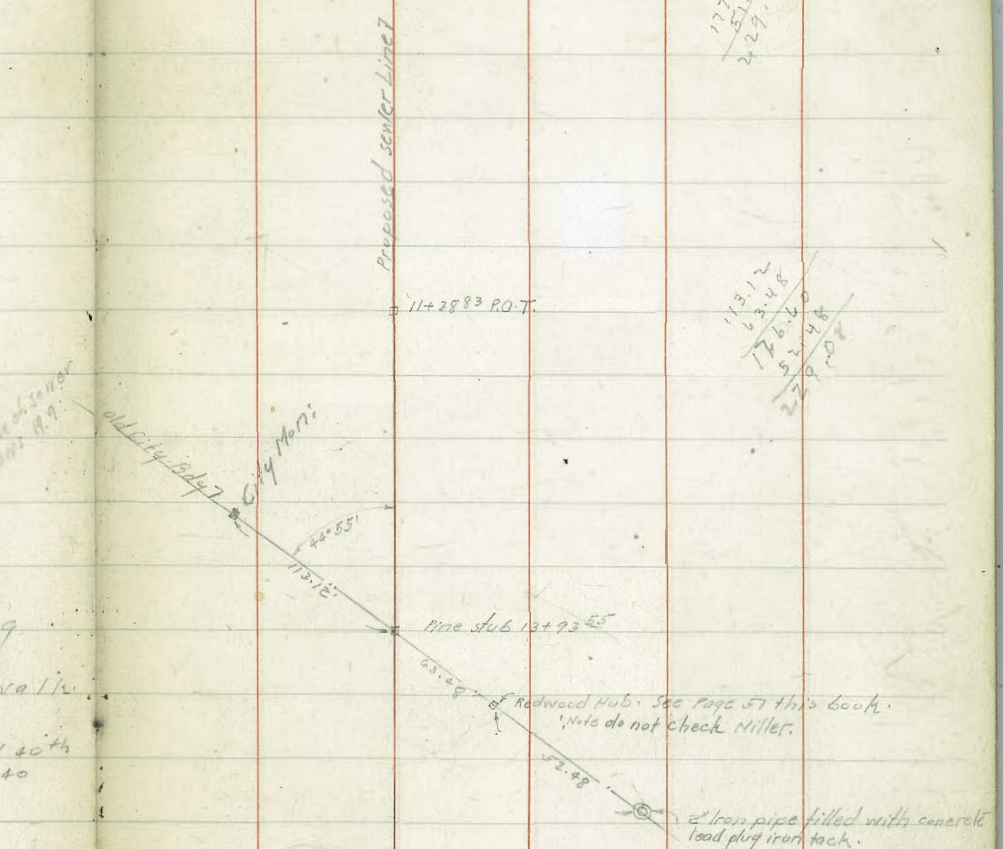
Changed

	+	⊼ 41.64	−	Ele	
6+00			5.9	35.7	
6+36.5 A Lt	41°40' = 573.7	See page 68	6.65	34.99	On pine stub
6+50			6.6	35.0	
7+00			7.6	34.0	
7+50			8.3	33.3	
8+00			8.7	32.9	
8+50			9.3	32.3	
# 8+89.9 A Rt	42°23' 2.36	36.14 ✓	7.84	28.30 ✓	On pine stub
9+50			3.4	32.7	
10+00			3.8	32.3	
10+50			4.6	31.5	
11+00			5.2	30.9	
11+50			5.2	30.9	
12+00			5.5	30.6	
12+50			5.4	30.7	
13+00			6.3	29.8	
13+50			6.8	29.3	
14+00			6.8	29.3	
#	5.89	34.91 ✓	7.12	29.02 ✓	
14+50			6.8	29.1	

	+	π 34.91	−	Ele
15+00			6.4	28.5
15+50			6.5	28.4
15+88			5.2	29.7
15+95 old well-main now filling it.			12.3	22.6
16+11			12.3	22.6
16+25			6.1	28.8
16+50			6.8	28.1
16+84.60 = End line Elev on Centre M.H. Cover			6.68	28.23
Flow line M.H.			14.73	20.18
#	16.57	46.10	0.38	34.53 Rock
#	10.94	55.07	1.97	44.13 Paving
#	11.71	66.49	0.29	54.78 Sidewalk
#			10.3	65.46 Hyd 3rd 40th and National 65.40

Protide observed shows 19.9

National and 41st N.W. Cor Hyd 37.76



Cut stakes Sierra Vista outfall
See page 63

	+	π	−	Ele	Grade	Cut
				B.M. 42.43 Sep. 2-27	Donnan Flood Bichete	
	9.78	47.21				

Note 0+00 = ℄ San Miguel and 25' South of the N.L. of Woolman.

0+00 = M.H. 1#			2.86	43.35	32.00	11.35
0+50			9.50	37.71	31.63	6.08
1+00			9.44	37.77	31.27	6.50
1+50			9.43	37.78	30.90	6.88
2+00			9.76	37.45	30.54	6.91
2+50			10.08	37.13	30.17	6.96
3+00 #	3.50	40.54	10.17	37.04	29.81	7.23
3+20 = M.H. N°2#			3.50	37.04	29.66	7.38
3+50			4.20	36.34	29.44	6.90
4+00			3.92	36.62	29.08	7.54
4+50			3.77	36.77	28.71	8.06
5+00			4.05	36.49	28.35	8.14
5+50			4.70	35.84	27.98	7.86
5+73 = M.H. N°3# = 6+30			5.78	34.76	27.81	6.95
6+00			5.93	34.61	27.62	6.99
6+50			6.55	33.99	27.25	6.74
7+00			7.42	33.12	26.89	6.23
7+50			7.84	32.70	26.52	6.18
8+00			6.40	34.14	26.16	7.98

See also page 78

#	+	π 40.54	−	Elc	Grade	Cut:
8+26.83 = M.H.4#	6.05	39.55	7.04	33.50	25.96	7.54
8+50			5.83	33.77	25.79	7.93
9+00			6.61	32.94	25.43	7.51
9+50			7.20	32.35	25.06	7.29
10+00			8.00	31.55	24.70	6.85
# 10+50	3.67	34.94	8.28	31.27	24.33	6.94
10+92.59 = M.H.5#			8.55	31.39	24.04	7.37
11+50			3.92	31.02	23.60	7.42
12+00			3.82	31.12	23.24	7.88
12+50			4.83	30.11	22.87	7.24
13+00			5.48	29.46	22.01	6.95
13+57 ± M.H.6#			5.41	29.53	22.08	7.45
14+00			5.96	28.98	21.78	7.20
# 14+50	9.66	38.49	6.11	28.83	21.41	7.42
15+00			9.72	28.77	21.05	7.72
15+50			9.42	29.07	20.68	8.39
16+00			10.03	28.46	20.32	8.14
16+22.41 = M.H.#7			18.42	20.07	20.16	
#			0.69	37.80 = 37.76 Top Hyd		

N.W. National and 41st.

Walker
Bliss 1-19-40
Isbell

Preliminary Levels For Sewer
in 47th St. North of Ocean View Blvd.
And in Ocean View Blvd. From N.L. 47th
to San Miguel Ave

Levels on Page 71

2+70.12 = E. Line East St. on North.

2+64.70 = E. Line East St. on South

1+35.06 = ℄ Alley on North

1+32.35 = ℄ Alley on South.

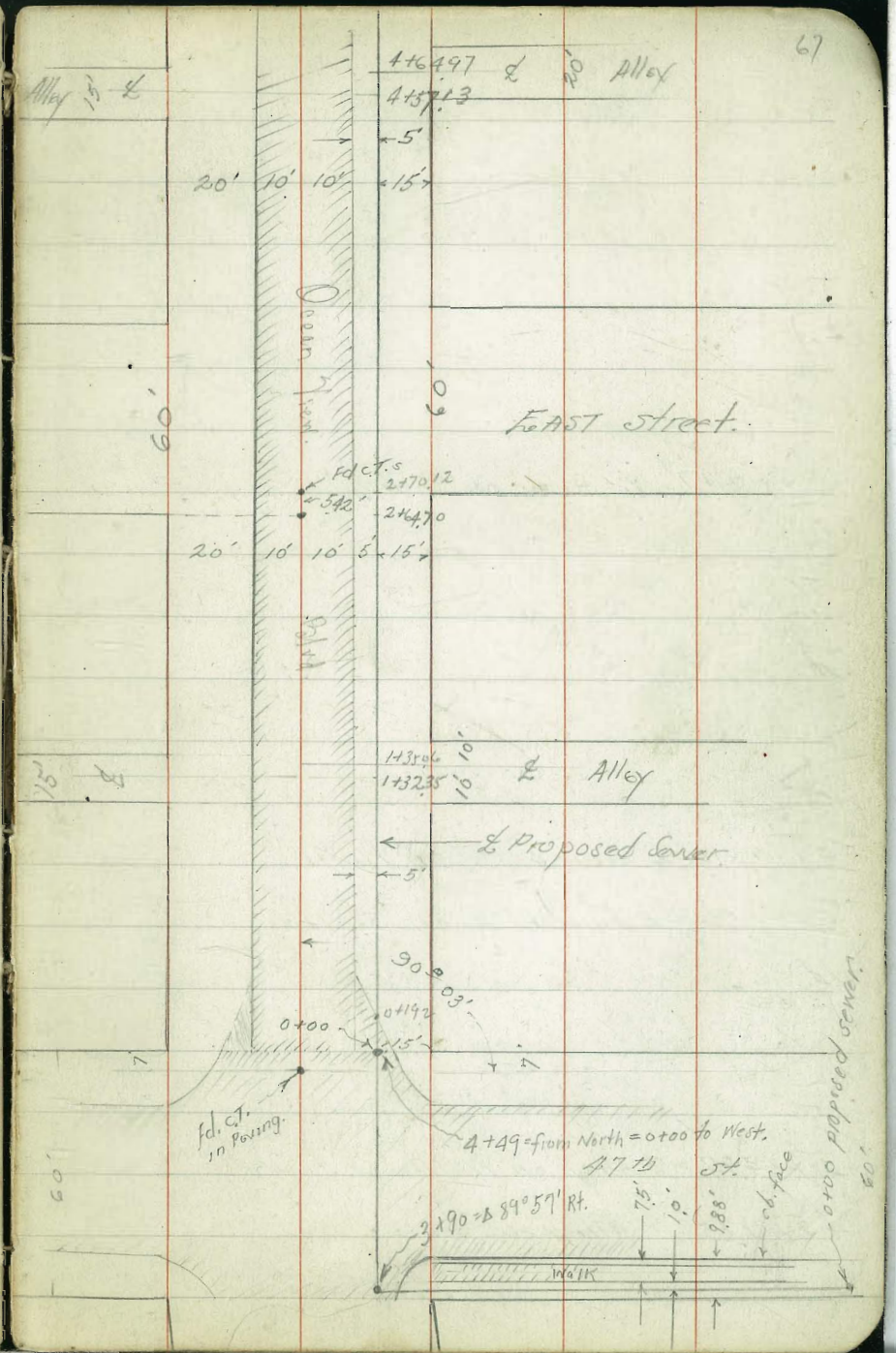
0+00 = West Line 47th St.

4+49 = Above 0+00

X 90

3+80 = Δ 89°57' Rt.

0+00 = 8.5' East of East cb. 47th 375' North NL Ocean View



8+02.17 = ℄ Alley on South.

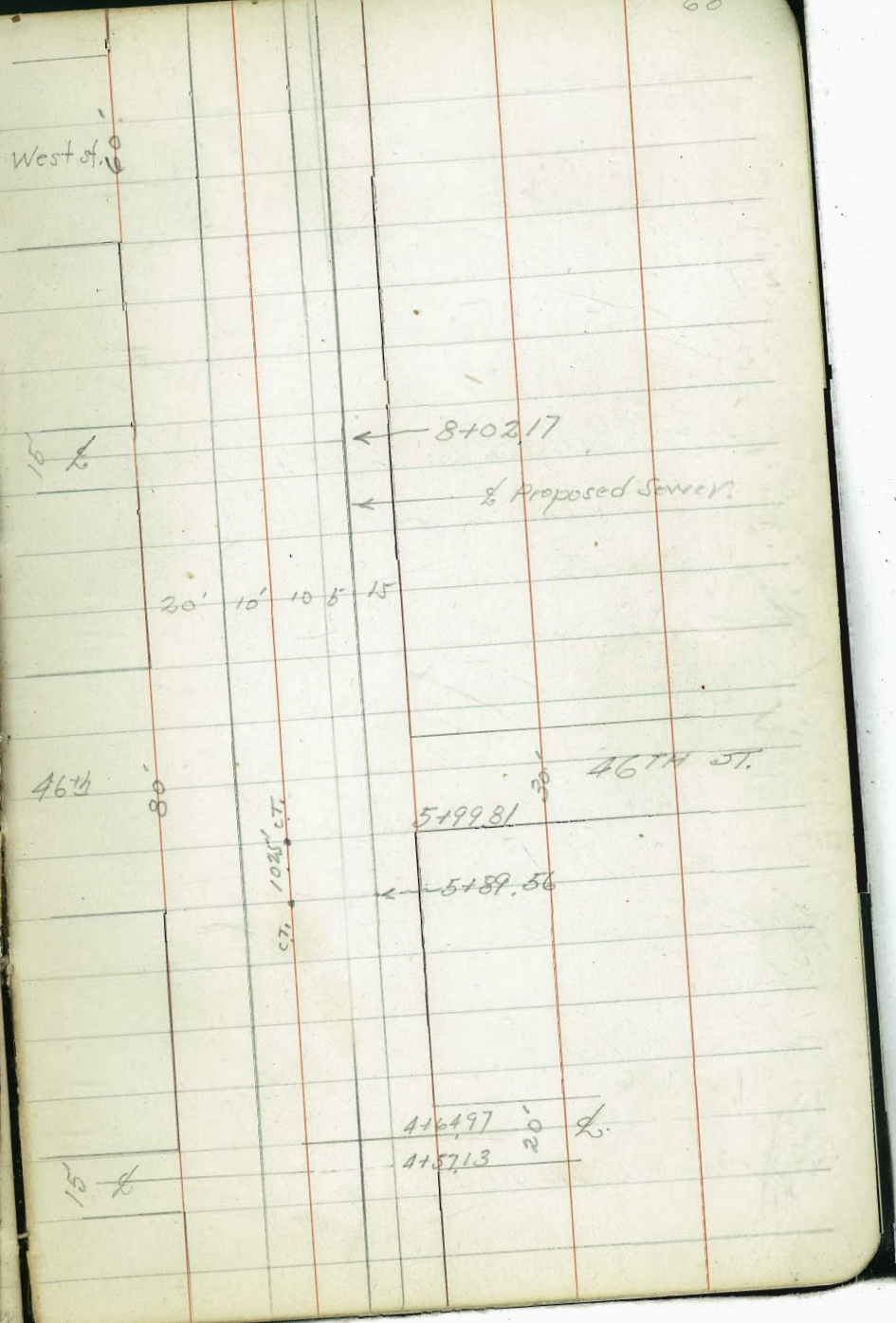
5+99.81 = ℄ Line 46th on North.

5+89.56 = ℄ Line 46th on South.

4+64.97 = ℄ Alley on North.

4+57.13 = ℄ Alley on South.

0+00 = 8.5' East of East cb.

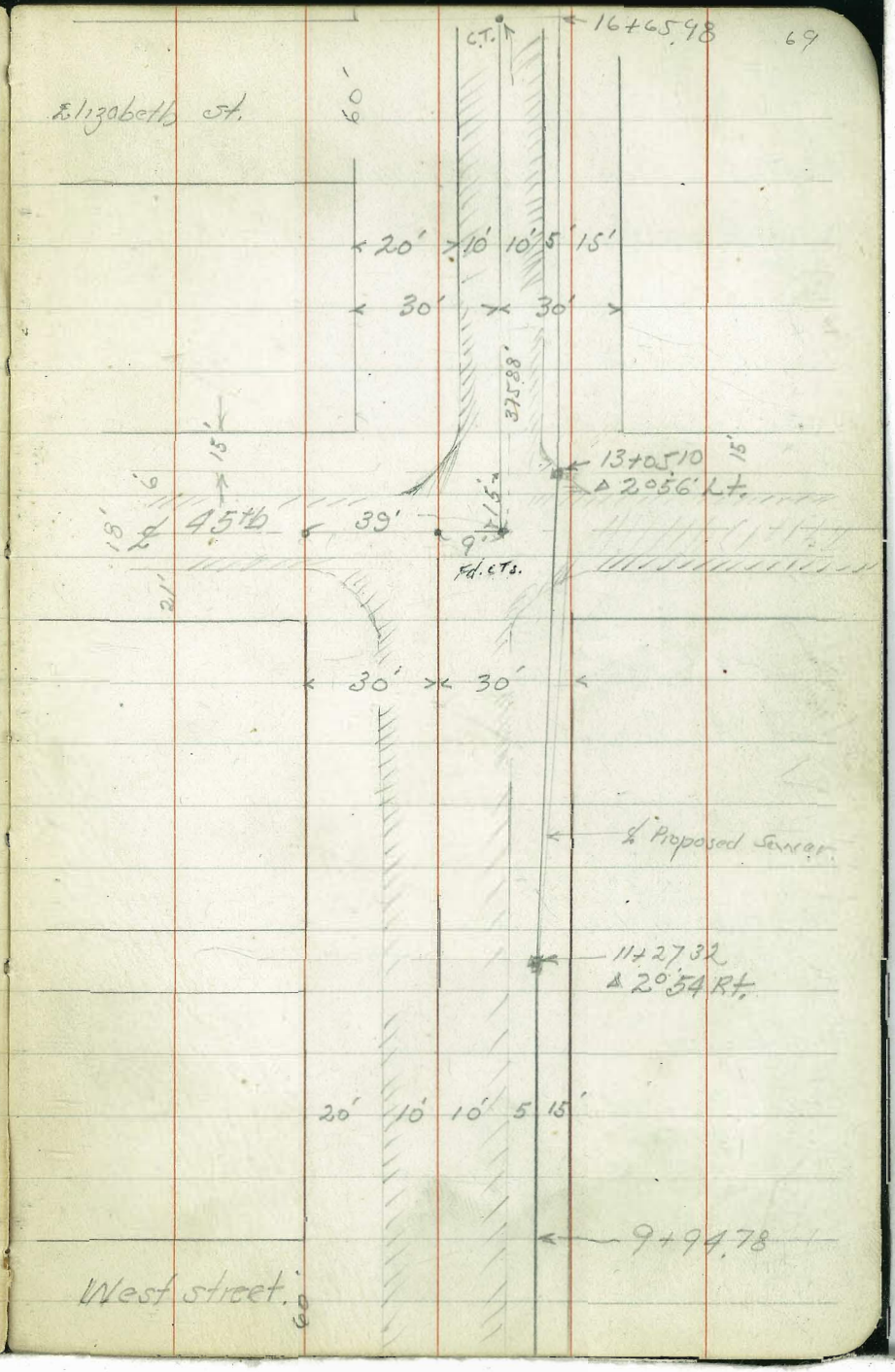


16+65.98 = W.L. Elizabeth St. on South.

13+05.10 = Δ 2°56' Lt. = 6' West of strip paving on South

11+27.32 = Δ 2°54' Rt. = ℄ Alley on South

9+94.78 = W.L. West St. on South.



32+16.50 = Rt. Δ to Existing MH.

31+38.2 = West edge Wing Wall

31+36.9 = East edge Wing Wall

31+03.5 = West edge Wing Wall

31+02.1 = East edge Wing Wall

Δ 5°23' Lt.

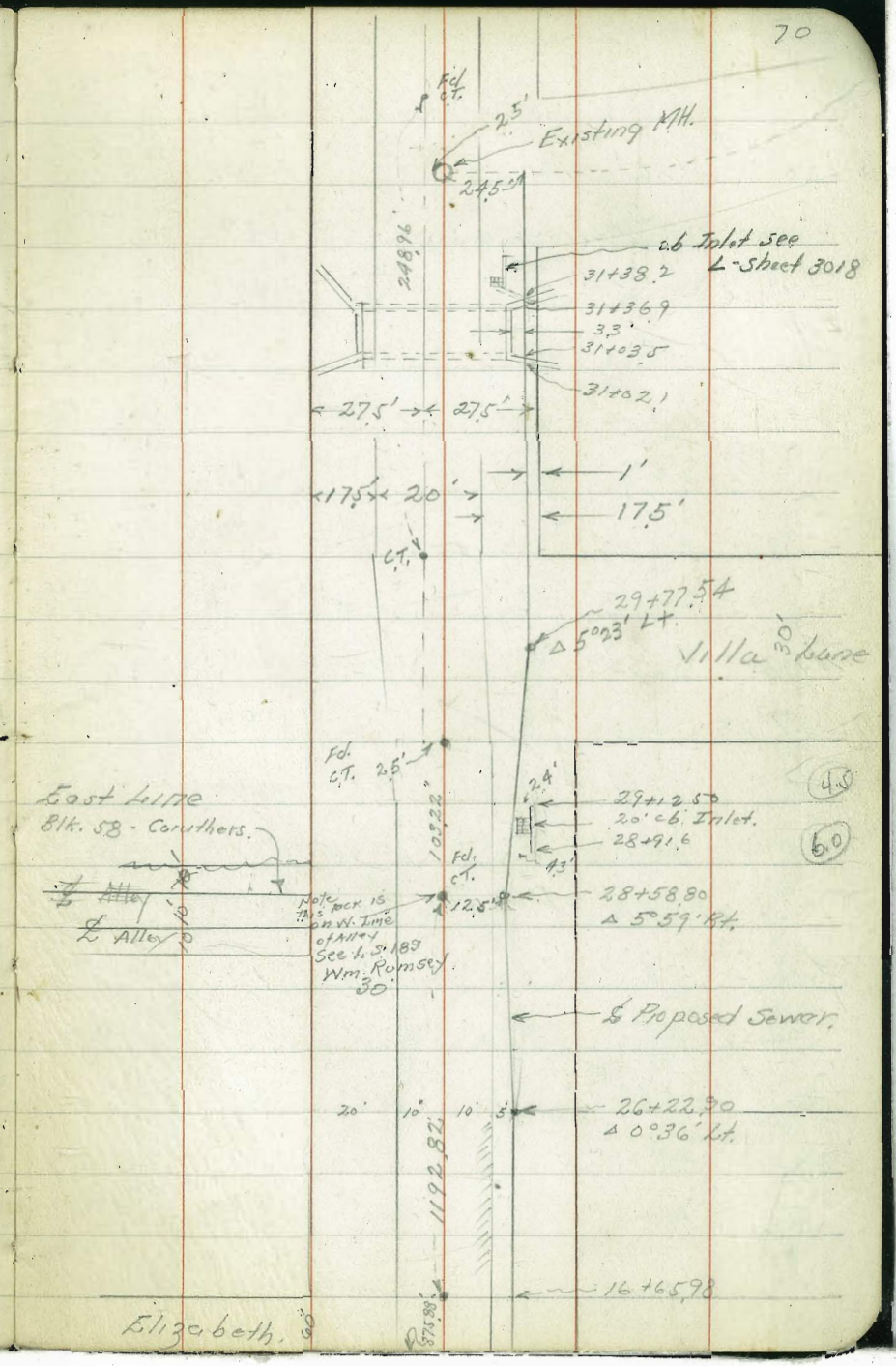
29+77.54 = ℄ Villa Lane

Δ 5°59' Rt.

28+58.80 = ℄ Alley on South. See F.B. 1211 - Pages 5-11-12
Also Grade 130 - 11 57

26+22.90 - Δ 0°36' Lt.

16+65.98 = West Line Elizabeth on South.



Walker Bliss Isbell - 1940

LEVELS for SEWER
47th St. And Ocean View Blvd.
Location Page 67-70

SW BP. Ocean View + 47th	3.86	120.35		116.49	Grd. Book 130-58
0+00 = 3.75' N.W.L. Ocean View			10.63	109.72	1' Rt. on Walk
7' Lt. of 0+00			11.8	108.6	
50' Lt. "			11.0	109.4	
0+50			10.15	110.20	1' Rt. on Walk.
7' Lt. of 0+50			12.5	107.9	
50' Lt. "			11.6	108.8	
0+71.5	4.5' Lt. on Top Culvert 18"		12.05	108.30	
1+00			9.50	110.85	1' Rt. on Walk
7' Lt. of 1+00			11.6	108.8	
50' " " " "			11.2	109.2	
1+50			8.68	111.67	
40' Lt. of 1+50			8.8	111.6	
2+00			7.75	112.60	1' Rt. on Walk
40' Lt.			7.6	112.8	
2+50			6.83	113.52	1' Rt. " "
3+00			5.90	114.45	" " "
+50			5.06	115.29	" " "
3+75 on Walk			4.60	115.75	
+85 " top Ch.			4.91	115.44	

120.35

3+85 Paving on Gutter			5.20	115.15
+90 = ∠ 89°57' Rt			5.15	115.20
4+19 = ℄ Paving			4.76	115.59
+49 = W.L. 47th = 0+00			5.11	115.24
0+19.2			5.92	114.43
0+50			8.4	112.0
5' Lt. on Paving			7.43	112.92
1+00			10.8	109.6
5' Lt. " "			10.09	109.26
1+32.35 = ℄ Alley on South.			12.5	107.9
5' Lt.			11.86	108.49
50' "			11.7	108.7
100' Lt			8.3	112.2
150' Lt			5.7	114.7
250' " = lowest point in Alley			10.7	109.7
1+35.06 = ℄ Alley on North.			12.7	107.7
5' Lt. on Pav.			11.94	108.41
90' Rt.			13.0	107.4
225' Rt. = lowest point			21.0	99.4 in Alley
T.P.	0.18	107.52	13.01	107.34

	107.52			
1+50		0.6	106.9	
2+00		3.7	103.8	
+64.7 = Ε.L. East st. on South.		6.3	101.2	
5' Lt. on paving.		6.00	101.52	
3+00.12 = Ε East st. on N		7.4	100.1	
230' Rt. = North		12.4	95.1	Approx. low point
200' South.		4.9	102.6	
3+50		8.4	99.1	
4+00		9.4	98.1	
5' Lt. on paving.		9.09	98.43	
4+57.13 = Ε Alley on South.		10.9	96.6	
5' South. on Paving.		10.20	97.32	
50' "		8.3	99.2	
225' "		9.0	98.5	
275 " = Lowest point		9.7	97.8	
4+64.97 = Ε Alley on N		11.0	96.5	
5' South on paving.		10.35	97.17	
115' N in Ε Alley		9.7	97.8	
215' " " " "		14.0	93.5	on Rim of Canyon
250 = Approx. bottom Canyon		29.0	78.5	Approx. Rd.

	107.52			
T.P.	3.42	98.13	12.81	94.71
5+00			2.3	95.8
5' South on Paving.			1.60	96.53
5+50			2.9	95.2
5' South " "			3.8	94.3
5+89.56 = Ε Lt. 46th on South			3.5	94.6
5' South on Paving.			3.30	94.83
6+69.56 = Ε Lt. 46th on South			4.7	93.4
5' South on Paving.			4.35	93.78
7+00			4.7	93.4
5' South. on Paving.			4.60	93.53
7+50			4.9	93.2
8+02.17			5.1	93.0
5' South on Paving			5.00	93.13
50' "			2.7	95.4
250' "			4.3	93.8
400' " lowest point (approx.)			6.0	92.1
70' North			5.9	92.2
120' "			26.0	72.1
220' "			5.9	92.2

on C.T. & Paving. 5+99.81

Rim Canyon

Bottom Canyon

Bias Canyon

98.13

8+50	5.5	92.6	
9+00	5.8	92.3	
5' South on Paving	5.38	92.75	
9+34.78 = Eliz. West st. ℄	6.1	92.0	
5' South on Paving	5.48	92.65	
9+94.78 = Wly Wat. on South	6.4	91.7	
5' South on Paving.	5.92	92.21	
10+50	7.1	91.0	
5' South " "	6.81	91.32	
11+27.32 = ℄ Alley (Δ 2°54' Rt.) on South	8.8	89.3	
5' South on Paving	8.15	89.98	
50' " in Alley	4.6	93.5	
250' " " "	9.2	88.9	
325' " " "	10.0	88.1	
400' " " "	10.0	88.1	
20' North	6.6	91.5	
160' " Rim Canyon.	9.9	88.2	
12+00	11.2	86.9	
8.6' South on Paving	10.53	87.60	
12+60.10 E.L. 45th	12.8	85.3	
11.6' South on Paving	12.53	85.60	

98.13 π

π = Corrected.

T.P.	.056		12.66	85.47	
	0.56	86.00		85.44	
13+05.10 = Δ 2°56' Lt. on Paving			1.30	84.70	
75' N			3.3	82.7	
175' North			8.3	77.7	
150' South			+3.0	89.0	
13+50			3.1	82.9	
14+00			5.6	80.4	
5' South on Paving.			5.21	80.79	
14+50			7.8	78.2	
+70.10 = ℄ Easement on South			8.7	77.3	
5' South			8.38	77.62	
150' "			7.1	78.9	
15+50			12.3	73.7	
T.P.	1.29	74.40	12.89	73.11	
16+35.98 = ℄ Elizabeth			4.6	69.8	
5' South			4.24	70.16	
100' "			4.0	70.4	
200' "			3.2	71.2	
16+65.98 = W.L. Elizabeth			6.0	68.4	
5' South on Paving			5.59	68.81	

73

Cont. B.M. C.T. 45th + Ocean Ave. Gnd. Book 130-57

Above B.M. = Gnd 8-30-57

		74.40			
17+00			82	66.2	
5' South on Paving			7.80	66.60	
17+50			12.2	62.2	
T.P.	0.55	62.36	12.59	61.81	
17+99.09 = ℄ 6' Easement on South			23	60.1	
5' South on Paving.			2.03	60.33	
45' " =S.L.			+2.3	64.7	
125' "			+3.3	65.7	
18+50			5.4	57.0	
30' N.			5.6	56.8	
75' "			11.0	51.4	
75" +20' East of house			8.8	53.6	West side House Ground. 17+79
19+00			8.7	53.7	
5' South Paving.			8.50	53.86	
19+50			11.7	50.7	
T.P.	0.48	50.06	12.78	49.58	
20+00			2.6	47.5	
3' South on Pav.			2.99	47.57	
10' N			2.3	47.8	
20.5' N on Ret. Wall			5.7	44.4	
" " at Bottom Wall			9.4	40.7	

		50.06			11.6 / 1.5 / 13.1	74
20+50			5.0	45.1		
21+19.6 = ℄ 18" Culvert No 1			7.5	42.6		L-sheet 3019
5' South.			7.67	42.39		
33' " on Flowline			11.92	38.14		
34' N " " "			13.1	37.0		
21+50			8.0	42.1		
5.7 N on Wall			7.2	42.9		
8' N			13.3	36.8		creek bed
22+00			8.6	41.5		
5' South on Paving.			8.26	41.80		
5.8 N on Wall			7.7	42.4		
8' "			14.0	36.1		creek bed
22+50			9.0	41.1		
23+00			9.5	40.6		
5' South on Paving.			9.02	41.04		
23+50			9.8	40.3		
24+00			10.00	40.06		
5' South on Paving.			9.82	40.24		
24+17			10.3	39.8		
5.7 North = Δ in Wall			9.4	40.7		
8' " in creek bed.			14.1	36.0		

		50.06			
5' South on Pav.			9.92	40.14	
T.P.	2.41	42.28	10.19	39.87	
24+50			2.7	39.6	
25+00			3.2	39.1	
5' South on Paving			2.74	39.54	
25+50			3.6	38.7	
26+22.90 = Δ 0°36' Lt.			4.4	37.9	
5' South on Paving.			3.65	38.63	
26+50			4.5	37.8	
27+00			4.8	37.5	
4.2' Lt. on Paving			4.27	38.01	
27+50			5.0	37.3	
28+00			5.1	37.2	
3.2' Lt. " "			5.01	37.27	
28+58.80 = Δ 5°59' Rt.			5.60	36.68	
2.5' Lt. on Paving.			5.37	36.91	
29+02.5			6.0	36.3	℄ Culvert No 2 L-3018
14' Rt. on Flow line 18" pipe			10.47	31.81	
6.7 Lt. on Paving.			5.63	36.65	
34.7 " on Flow line 18" pipe			10.78	31.50	

		42.28			
29+77.54 = Δ 5°23' Lt.			4.48	37.80	on Stub.
14.5' Lt. on Paving.			4.96	37.32	
30+00			4.1	38.2	
16.3' Lt. on Paving.			4.47	37.81	
30+50			2.7	39.6	
31+02.1 = East edge Wing Wall			1.7	40.6	on ground.
" " " " " "			0.00	42.3	on top Wall
31+05 in Creek bed			14.5	27.8	
16.5' Lt. on pav.			2.17	40.11	
T.P.	5.28	45.86	1.70	40.58	100' E Sun Mon.
BM Chk. B.P. in Hd Wall			3.44	42.42	Grid 8-30-54
Bottom Concrete slab Ret. Wall				42.43 =	Above BM.
31+30.5 = Creek bed.			16.5	29.4	
" " on slab wall			12.7	33.2	
3' Rt. on Wall			14.2	31.7	
31+35.4 to Wing Wall			12.44	33.42	
31+36.9 on top Wing Wall			3.49	42.37	
15' Rt. on Flow 18" Culvert			13.79	32.07	L-Sheet 3018 outlet.
31+38.2 on ground			4.0	41.9	at Wall
31+58			3.6	42.3	
9.7' Lt. on Flow 18" pipe			11.79	34.07	inlet.

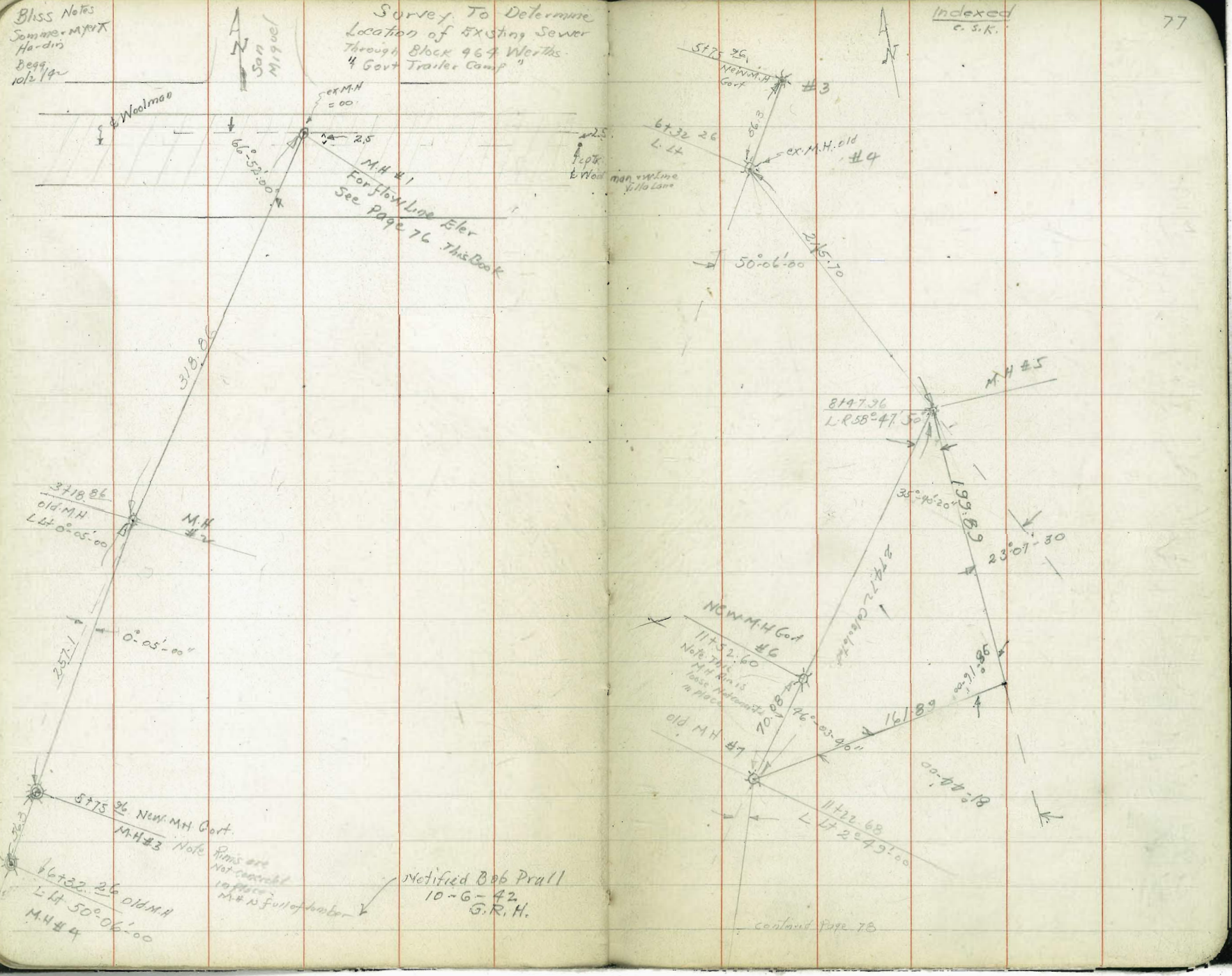
4586

32+16.6 at Rt ∠ to Exist. MH	3.4	42.5
16.5 Lt on Paving.	3.03	42.83
24.0' " " Rim MH.	2.89 (10.83)	42.97
" " Flow " "	13.72	32.14

Bliss Notes
Somare - Myers
Hardin
Begg
10/2/42

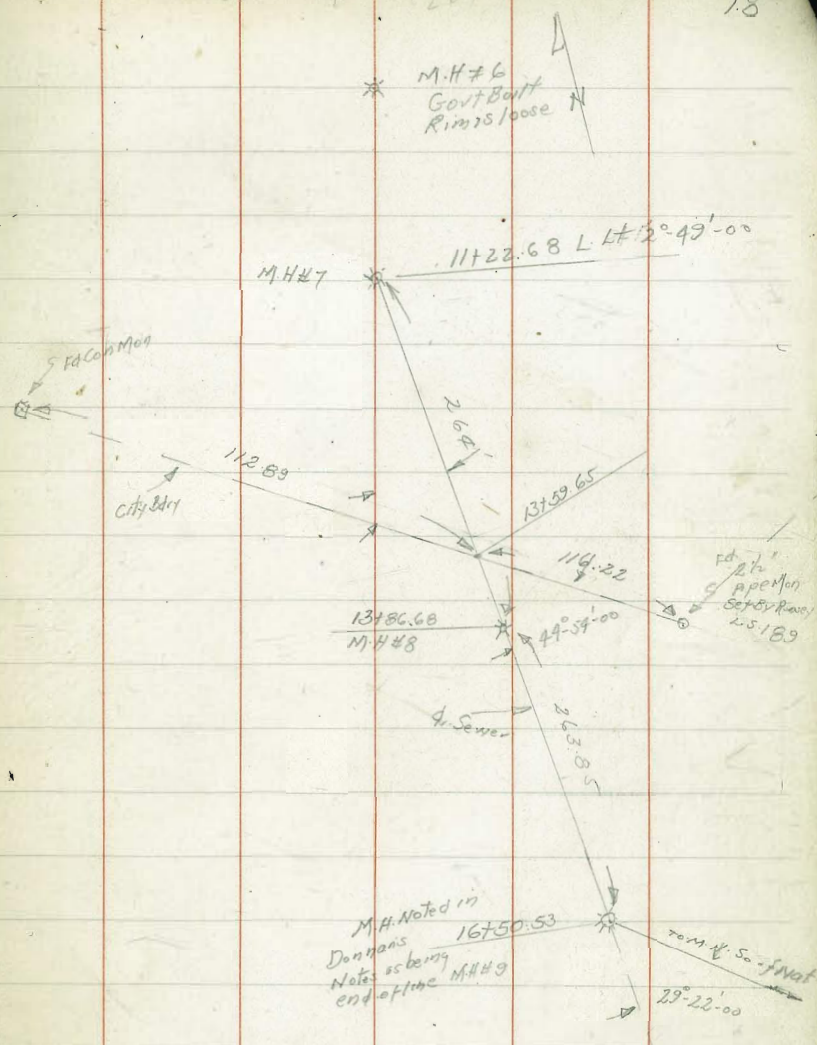
Survey To Determine Location of Existing Sewer Through Block 964 Worths 4 Govt Trailer Camp"

Indexed
C. S. K.



Levels to Determine Elev of Flow Lines of MH's in Govt Trailer Camp

BM	4.96	47.38		42.42	B.P. in North Headwall of Bridge 100' East of Sentinel
T.P. M.H. # 2	2.75	39.94	10.19	37.19	
	Flow Line		10.11	29.83	
	Rim		3.56	36.38	
#3 Govt M.H.	Flow		11.88	28.06	Note This M.H. Rim Has not been concreted in. M.H. is full of lumber
	Rim		4.65	35.29	
#4 old	Flow		12.34	27.60	
Rim	4.89	39.53	5.30	34.64	
TP	4.83	37.41	6.95	32.58	
M.H. #5	Flow		11.19	26.22	
	Rim		6.08	31.33	
M.H. #6	Flow		12.90	24.51	
	Rim		6.25	31.16	
M.H. # 7	Rim 2.32	34.35	5.18	32.28	
	Flow		10.26	24.29	
M.H. #8	Flow Line		12.15	22.40	
	Rim 2.92	33.16	4.31	30.24	
M.H. # 9	Rim 8.29	39.10	2.35	30.81	
	Flow Line		19.01	20.09	
BM BP N.W. Bdry Nat			3.84	35.26	
				35.15	
				0.11 Diff	



	+	H.I.	−	E.I
Bench T.P.	10.0	110.0		100.0
0			9.0	
+30			7.0	
1+00			0.0	110.0
T.P.	11.0	120.0	1.0	109.0
+50			8.0	111.0
2+00			4.0	116.0
+60			1.9	118.1
— —				

A

$\frac{10\,3.0}{2.0}$ / 40

C

$\frac{10\,3.7}{6.3}$ / 30 — $\frac{5.7}{20}$ — $\frac{4.2}{15}$ — $\frac{4.1}{10}$ — 4.1 — $\frac{3.9}{10}$ — $\frac{3.2}{20}$ — $\frac{2.3}{23}$ — $\frac{2.0}{30}$

B

8½"
34"

2.70
14
2.56

256' of sheet piling west Pitloma Blvd at pump sta.

B.M. N.E. bronze plg Abbott & Newport 6.504

4.90 11.40

T.P. 0.84 2.68 9.56 1.84

2.68

54
29
.74
182 to N 31
9.7' to East ℄ St

62° 23'
124 46

0+00
197.69
38+60.00 = St.

68° 23'

1+36.74 = Δ ℄ 41° 40' 2+89.78

from outside of wall to ctr wet well 8' 9" ctr 12" of pipe
" inside of wet well elev - 1.00 To ℄ 16" C.I. 4' 1½"

Including Nov 9th

49617 6" cement pipe 14 F.T.
612 6" C.I. 161 M.H.

5715 8"
1140 10"
2500 14"
3.80 12"

59964 Total

12) 812 (67
72
92
84
80
(12) 40 (33
36

6578
15.7
8136 1198.09

166598
133.11

1.57
50
2,07
5
2.57

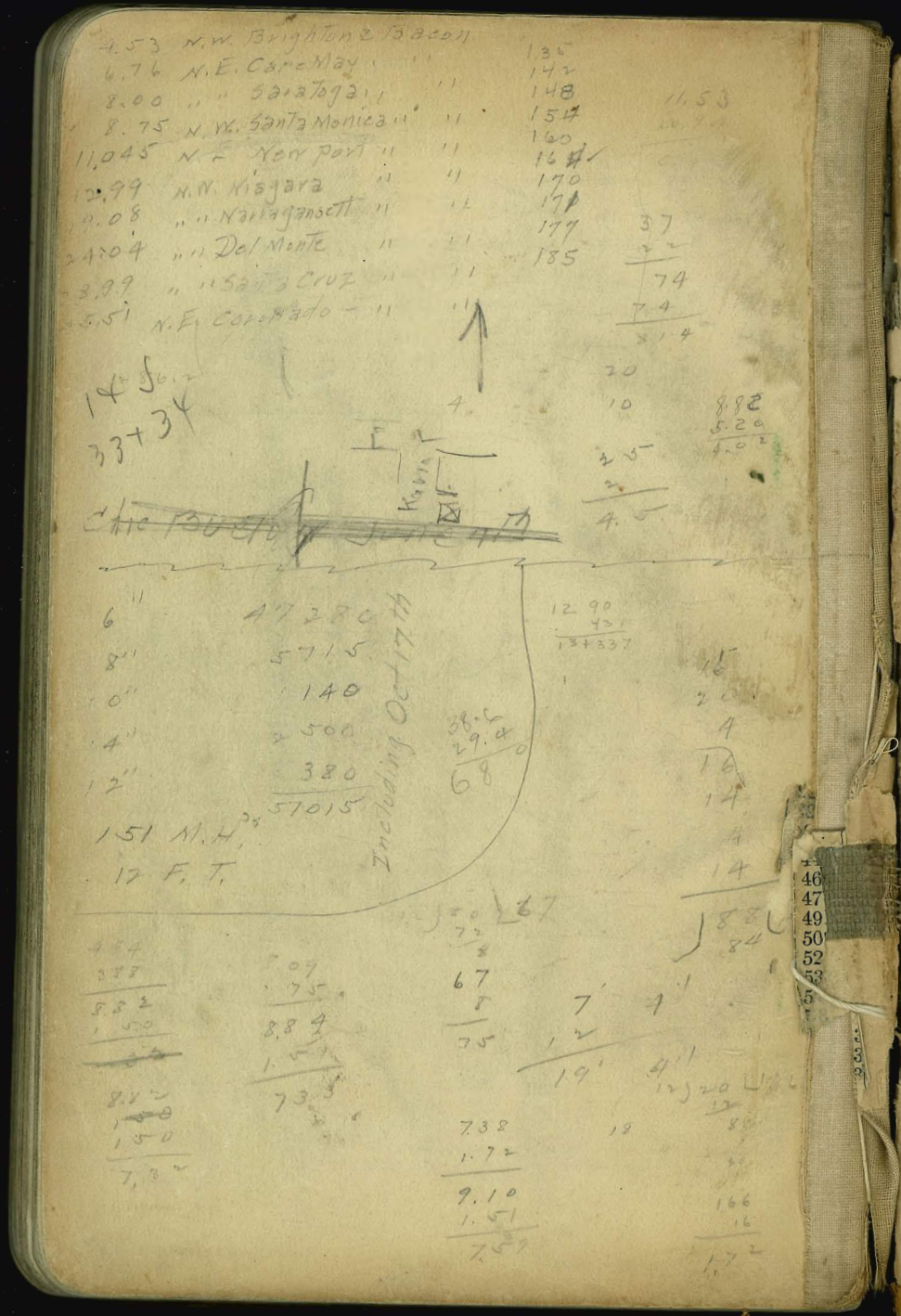
6+36.16
6384
1.57
50
1.87

42.4
14.4
28.0

2.07

12.00
2.57
9.43

12.00
2.57
9.43
6.0
8.93



DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES 1½ TO 1.

FOR SINGLE TRACK EMBANKMENT.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	7.0	7.2	7.3	7.5	7.6	7.8	7.9	8.1	8.2	8.4	0
1	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.6	9.7	9.9	1
2	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.1	11.2	11.4	2
3	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	3
4	13.0	13.2	13.3	13.5	13.6	13.8	13.9	14.1	14.2	14.4	4
5	14.5	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	5
6	16.0	16.2	16.3	16.5	16.6	16.8	16.9	17.1	17.2	17.4	6
7	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7	18 9	7
8	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	8
9	20.5	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	9
10	22.0	22.2	22.3	22.5	22.6	22.8	22.9	23.1	23.2	23.4	10
11	23.5	23.7	23.8	24.0	24.1	24.3	24.4	24.6	24.7	24.9	11
12	25.0	25.2	25.3	25.5	25.6	25.8	25.9	26.1	26.2	26.4	12
13	26.5	26.7	26.8	27.0	27.1	27.3	27.4	27.6	27.7	27.9	13
14	28.0	28.2	28.3	28.5	28.6	28.8	28.9	29.1	29.2	29.4	14
15	29.5	29.7	29.8	30.0	30.1	30.3	30.4	30.6	30.7	30.9	15
16	31.0	31.2	31.3	31.5	31.6	31.8	31.9	32.1	32.2	32.4	16
17	32.5	32.7	32.8	33.0	33.1	33.3	33.4	33.6	33.7	33.9	17
18	34.0	34.2	34.3	34.5	34.6	34.8	34.9	35.1	35.2	35.4	18
19	35.5	35.7	35.8	36.0	36.1	36.3	36.4	36.6	36.7	36.9	19
20	37.0	37.2	37.3	37.5	37.6	37.8	37.9	38.1	38.2	38.4	20
1	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
	3.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44.2	44.4	24
	5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
	0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
	5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
	0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
	5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
	.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
	.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
	5.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
	6.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
	61.0	61.2	61.3	61.5	61.6	61.8	61.9	62.1	62.2	62.4	36

Calculated by Julien A. Hall, M. Am. Soc. C. E.