

917

F.B. 917

LEVEL BOOK

373

IND

# KEUFFEL & ESSER CO.

DRAWING MATERIALS

AND

SURVEYING INSTRUMENTS.

NEW YORK.

CHICAGO.

SAN FRANCISCO.

ST. LOUIS.

## TABLES FOR EXCAVATIONS AND EMBANKMENTS.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

MICROFILMED  
 ROADWAY IS FEET WIDE. SIDE SLOPES 1 TO 1.

FOR SINGLE TRACT EXCAVATION.

Copyright, 1885, by Keuffel & Esser Co.

	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.

ENGINEERING DEPARTMENT,  
 SAN DIEGO,  
 CITY OF CALIFORNIA.

16" Sewer from M.H. on E 33rd  
 and E Alley between J & K  
 North to Lemon Grove Blvd.

Sta.	Ground	Grade	
0+00	32.0	21.50	M.H. E 33rd
0+05	31.99	21.52	
+55	31.1	21.75	
1+05	29.75	22.98	
+55	29.71	22.21	
2+05	29.5	22.44	
+55	26.3	22.67	
2+82	27.7	22.80	M.H. = 0+00
=0+00	"	"	
+50	25.0	22.98	
1	30.13	23.16	
+50	30.87	23.35	
2	32.22	23.53	
+50	32.74	23.71	
3	33.5	23.90	
3+27		24.00	M.H. E Alley between
+50	29.10	24.20	Island & "J"
4	28.8	24.64	
+50	30.22	25.08	
5	31.8	25.51	
+50	31.1	25.95	
6	30.74	26.39	

Field Book 217

Sta.	Ground	Grade	
+69		27.00	M.H. & Alley between Market and Island ↗
+100			
+100	34.33	27.00	
+50	33.54	27.36	
		32.72	27.72
+50	32.66	28.08	
2		33.39	28.45
+50	32.98	28.81	
+65	32.98	28.91	M.H. 25°07' R.
3		33.86	29.17
+50	35.93	29.53	
4		35.80	29.90
+50	35.00	30.26	
5		34.60	30.62
+50	36.58	30.98	
6		37.13	31.35
+51.5	36.36	31.73	M.H. 37°13' L
7		38.27	32.07
+50	43.03	32.43	
8		43.67	32.80
+50	42.43	33.16	
9		39.36	33.52
+50	40.31	33.88	
+65.5	40.55	34.00	M.H. 33°28' L
10		42.15	34.37

Field Book 518

Sta. Ground Grade

+50 42.68 34.83

42.51 35.29

+50 45.96 35.75

2 46.25 36.21

+50 46.64 36.67

+72.4 46.90 36.88 M.H. & F St.

13 47.05 37.13

+50 47.50 37.59

14 47.68 38.05

+50 48.47 38.51

15+11.4 50.32 39.09 M.H. 10' N. of & Lemon Grove

+50 50.26 39.93

16 51.01 40.89

+50 51.68 41.85

17 52.02 42.81

+50 52.38 43.77

+61.8 52.33 44.00 M.H. & Benesch

v  
Platted

"C"-2 Line

1

Senior Daley 60' H<sup>2</sup>O I<sup>2</sup> 55' from M.H. 520  
 3rd St East for 880' To M.H. Canyon line

17/13  
 W. of  
 Summit  
 Shaw  
 Kern

30 Mi	6.94	55.92	48.98		
0+0 M.H. 520 W. of 330' 0+0 322.5'				43.00	
0+0.0		8.27	47.65	41.62	6.0
1+0		10.0	45.9	40.25	5.7
+50		6.0	49.9	38.87	11.0
2+0		5.1	50.8	37.50	13.3
+50	1.57	45.00	12.51	43.41	36.12
3+0		2.9	42.1	34.25	7.9
+50		7.4	37.6	33.37	4.2
4+0 M.H.		8.3	36.7	32.00	4.7
+50		8.35	36.62	31.68	4.9
5+0		8.6	36.4	31.37	5.0
+50		8.9	36.1	31.05	5.0
6+0		9.0	36.0	30.74	5.3
+50		9.5	35.5	30.43	5.1
7+0	585	40.82	10.03	34.97	30.12
+50		4.5	36.3	29.86	6.5
8+0		4.5	36.3	29.49	6.8
+50		5.9	34.9	29.18	5.7
+80 M.H. Canyon line Drop,	6.9		33.9	28.00	6.9

36.62	40.97	40.97	40.97	40.97	40.97	40.97
4.35	32.00	31.68	31.37	1.05	0.74	0.43
40.97 H.	8.97	9.29	9.60	9.92	10.23	10.54
1.72						
6.25	40.97	40.97	40.97	40.97	40.97	
	0.12	9.80	9.49	9.18	27.00	
	10.85	11.17	11.48	11.79	13.97	

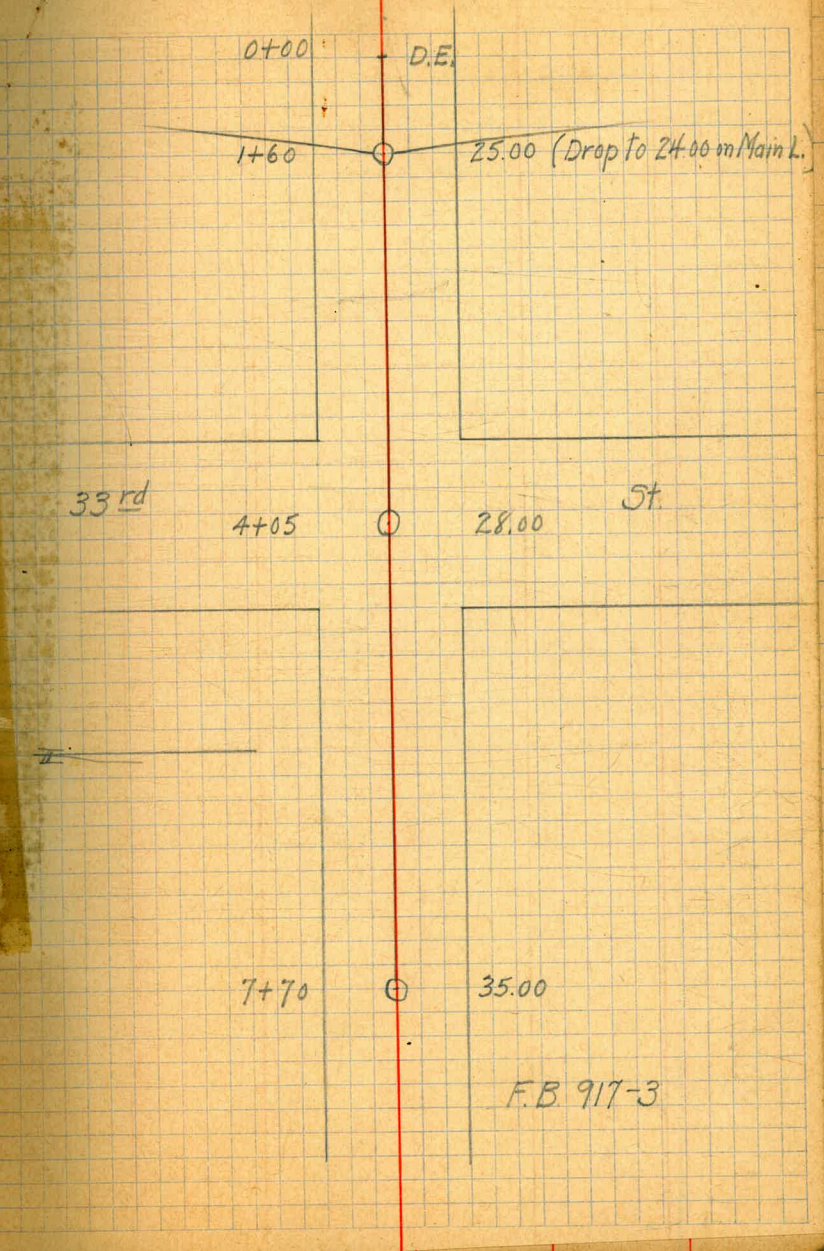
Sec 901-32

Serrer & Alley bet I & J Sts from D.E. 405 E of 33rd  
 west for 900' to D.E. 35 E of 32 1/2 St

	3.01	39.11	36.0	
0+0 = D.E. 405 E of 33rd St		4.4	34.7	30.00
0+50		5.5	33.6	28.14
1+0		5.8	33.3	26.26
+50		10.3	28.8	24.38
Drop 1+60 M.H. Canyon Line		10.8	28.3	22.50
2+0		7.81	31.30	25.42
+50		7.5	31.6	26.10
3+0		7.6	31.5	26.78
+50		6.3	32.5	27.46
4+0		4.5	34.3	27.84
4+05 M.H. E 33rd St		4.6	34.5	28.00
+50		4.71	34.40	28.10
5+0		4.1	35.0	29.10
+50		3.68	35.43	30.00
6+0	12.31	49.90	37.07	31.4
+50		11.1	38.8	32.00
7+0		10.2	39.7	33.66
+50		10.00	39.90	34.62
7+70 M.H. TIP	11.75	61.29	42.2	35.00
8+0		10.5	50.8	42.80
8+20 break		7.3	54.0	48.00
+50		5.6	55.7	51.38
9+0 D.E. TP	9.31	69.07	59.76	57.00
		7.7	61.4	

3440  
4.46

Alley bet. Island and J St.





Serrer & Alley bet I & J 575 from D.E 405 E of 3359  
 West for 900' to D.E 35 E of 3245

4.7 ✓  
 5.5 ✓  
 7.0 ✓  
 4.4  
 4.8 ✓  
 5.8 ✓  
 5.5 ✓  
 4.4 ✓  
 6.5 ✓  
 5.5 ✓  
 5.2 ✓  
 4.7 ✓  
 5.4 ✓  
 6.1 ✓  
 6.0 ✓  
 5.3 ✓  
 7.2 ✓  
 8.0  
 6.0  
 4.3  
 4.4

34.40  
 4.46  
 38.8641

38.86	38.86	38.86	38.86	38.86
18.00	27.32	26.71	26.12	25.07
10.86	11.54	12.14	12.76	13.37

38.86	38.86	38.86	38.86	38.86	38.86
23.30	24.82	30.78	31.74	2.70	3.66
10.00	9.94	8.08	7.12	6.16	5.20

38.86 38.86 38.86  
 4.62 5.00  
 4.24 3.50

31.30	36.80	36.80	36.80	36.80
5.50	24.00	46.76	38.14	30.20
36.80	12.80	10.54	8.66	6.80

34.88  
 67.66

CS

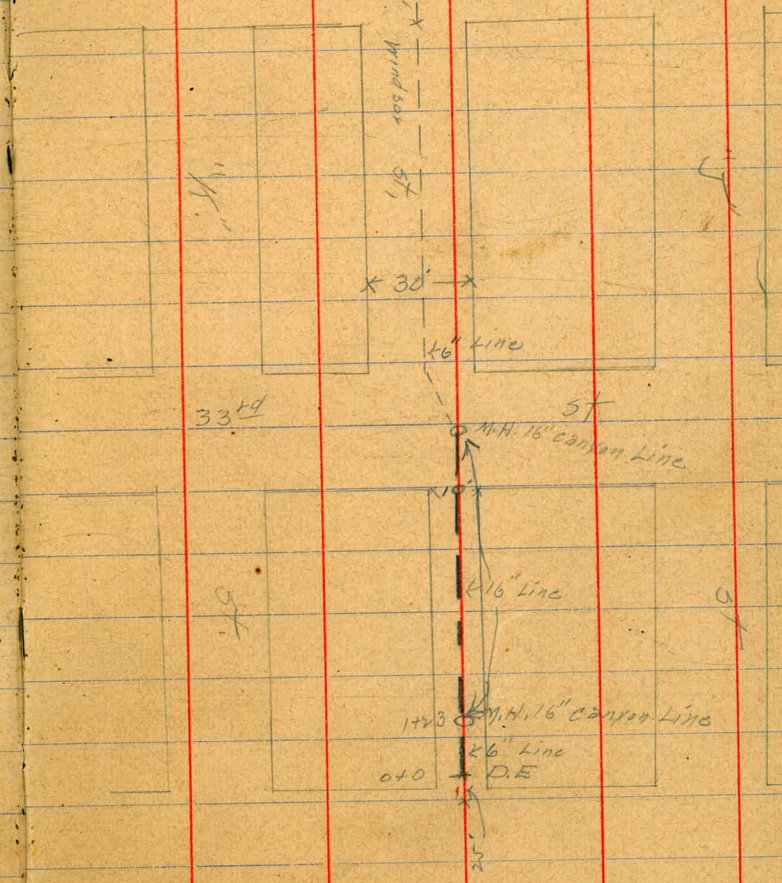
Sewer Alley bet J & K" see opp page

	5.16	36.46	31.30		
0+0		5.1	31.4	26.00	5.4 ✓
+50		5.5	31.0	25.60	5.4 ✓
+10		5.4	31.1	25.19	5.9 ✓
+23 M.H Prop.		8.8	27.7	25.00 22.80	4.9
+50		10.2	26.3	22.67	3.6 ✓
+20		7.0	29.5	22.44	7.1
+50		6.75	29.71	22.21	7.5
+30		6.71	29.75	22.98	6.8
+50		5.4	31.1	21.95	9.4
+40		4.47	31.99	21.52	10.5
+70.5 M.H @ 33' 5" drop.	4.5	32.0	21.50	26.00	10.5
+435 Angle	5.2	31.3	26.38		4.9 ✓
+50	5.00	31.46	26.57		4.9 ✓
+50	4.4	32.1	27.20		4.9 ✓
+50	3.2	33.3	27.83		5.5 ✓
+60	2.33	34.13	28.46		5.7 ✓
+50	1.9	34.6	29.09		5.5 ✓
+70	2.0	34.5	29.72		4.8 ✓
+740 M.H.	2.1	34.4	30.22		4.1 ✓

11/16" 3' offset 16" line

31.46	36.87	36.87	36.87	36.87	36.87	36.87	36.87
5.41	6.38	6.57	7.20	7.83	8.46	9.09	9.72
36.87 M	10.49	10.30	9.67	9.04	8.41	7.78	7.15
29.71	34.85	34.85	34.85				
5.14	45.19	25.60	26.00				
37.25 M	9.66	9.25	8.83				

32 1/2 9+50 D.E. 0+



		36.96				
7:50		2.0	34.5	30.35	4.2 ✓	
8:0 break	11.42	46.90	0.93	35.43	31.00	4.5 ✓
8:50		9.4	37.5	34.08	3.4 ✓	
8:65 break		5.5	41.4	35.00	6.4 ✓	
T.P.	12.18	58.32	0.76	46.14		
9:40	12.40	70.40	0.32	58.00	52.18	5.8
9:20 break		4.6	65.5	62.00	3.8	
T.P.	5.06	74.85	0.61	69.79		
9:50 D.E.		3.4	71.5	67.00	4.5	

35.48  
3.97  
39.4577

39.45 39.45 39.45  
31.00 30.35 30.22  
8.45 9.10 9.23

39.45 39.45  
4.08 5.00  
5.37 4.45



16 main from M.H. Sta 1+23 on Alley line between  
 J & K 1/2 M.H. Sta 8+80 Alley line bet H & I

See pages 2 to 5

J	6.07	35.78	29.71			
0+0 M.H. Sta 1+23		8.1	27.7	22.80	4.9 ✓	
0+50		10.8	25.0	22.98	2.0 ✓	
1+0		5.65	30.13	23.16	7.0 ✓	
1+50		4.91	30.87	23.35	7.5 ✓	
2+0		3.58	32.22	23.53	8.7 ✓	
2+50		3.04	32.74	23.71	9.0 ✓	
3+0		2.3	33.5	23.90	9.16 ✓	
3+77 M.H. Alley bet I & J Sta 1+60 5/16 L			24.00		✓	
4+50		6.68	29.10	24.20	4.9 ✓	
4+0		7.0	28.8	24.64	4.2 ✓	
2+50		5.58	30.22	25.08	5.1 ✓	
5+0		4.0	31.8	25.51	6.3 ✓	
4+50		4.7	31.1	25.95	5.2 ✓	
6+0	688	37.62	504	30.74	26.39	4.1
7+50		26	35.0	26.83	8.2	
6+69 M.H. Sta 8+80 Alley line				27.00		

30.10	33.92	33.79	33.77		
3.39	22.50	22.45	22.67		
33.99 M	11.19	11.01	11.34		
30.13	35.31	35.31	35.31	25.31	25.31
5.13	23.16	23.35	23.53	23.71	23.70
35.31	12.15	11.96	11.78	11.60	11.41
32.74	36.49	36.49	36.49	36.49	36.49
3.75	23.71	23.90	24.20	24.64	25.08
36.49	12.78	12.59	12.29	11.85	11.41
30.74	35.38	35.38	35.38	35.38	
4.64	25.31	25.31	26.37	26.83	
35.38 M	9.87	9.43	8.99	8.54	

Location of M.H.T. 1922 - - 4.12  
 from N.L. Owens to S.L. Kellogg

BM. Mer. & Owens & San Antonio			16.69	
T.P.	1.03	17.72	1271	5.01
T.P.	2.43	7.44		
Mer. CLV near N.L. San Antonio		10.64		-3.20
sta.	3.44	+0.24		
		Dist from N.L. San Anti		
N.L. Owens =		79.0 E	4.36	-4.12 = M.H.T.
S.L. Owens		46.0 E	"	"
+25 S.		35.5 E	"	"
+50 S.		27.0 E	"	"
+75 "		20.3 E	"	"
100' S.		12.5 E	"	"
125' S.		5.3 E	"	"
150' S.		2.4 W.	"	"
175' S.		10.0 W.	"	"
200' S.		14.0 W.	"	"
225' S.		19.0 W.	"	"
250' S.		23.0 W.	"	"
275' S.		26.0 W.	"	"
300 S. = N.L. Nichols		28.5 W.	"	"

Sta.	Dist from El. San Antonio								
St. Nicholas	31.0 W.	436	-412			643			
25'S.	33.4 W.					74.2 E	1055	-412	MHT.
50'S.	35.0 W.					58.0 E.			
75'S.	35.5 W.					46.0 E.			
100'S.	34.0 W.					100'S.	48.0 E.		
125'S.	31.5 W.					125'S.	59.0 E.		
150'S.	27.7 W.					150'S.	58.5 E.		
175'S.	23.0 W.					T.P.	7.27	-0.84	
T.P.	10.4 W.					5.18	4.34		
		223	-1.99			175'S.	60.0 E	8.46	-4.12 MHT.
	8.42	6.43				200'S.	67.5 E.		
200'S.	2.0 W.	1055	-4.12	MHT.		225'S.	73.5 E.		
225'S.	21.0 E.	"				250'S.	102.0 E.		
250'S.	40.0 E.	"				275'S.	117.0 E.		
275'S.	56.0 E.	"				300'S - NL Lawrence	123.0 E.		
300'S = NL McCall	70.0 E.	"				<del>225</del> # fish houses etc.			
St. McCall	71.0 E.	"				St. Lawrence.	114.0 E.		
St. McCall	69.0 E.	"				25'S.	113.0 E.		
						50'S.	110.0 E.		
						75'S.	112.0 E.		

434

100'S.	1120E	846	- 412	MHT.
125'S.	1160E	"	"	
150'S.	1210E	"	"	
175'S.	1280E	"	"	
200'S.	1370E	"	"	
225'S.	1510E	"	"	
250'S.	180'E	"	"	
275'S.	192'E	"	"	
300'S = N.L. Kellogg = N.L. Pier.	193'E Flower pier	846 325	- 412 + 1.09	
St. Kellogg.	188'E	846	- 412	
T.P.		187	247	
	9.19	11.66		
Mag. & San Antonio & Lawrence.		446	7.20	ox. 1.22



OWENS St Profile - present ground  
on & Proposed Sea Wall.

West  
of 4/4/16  
Moore

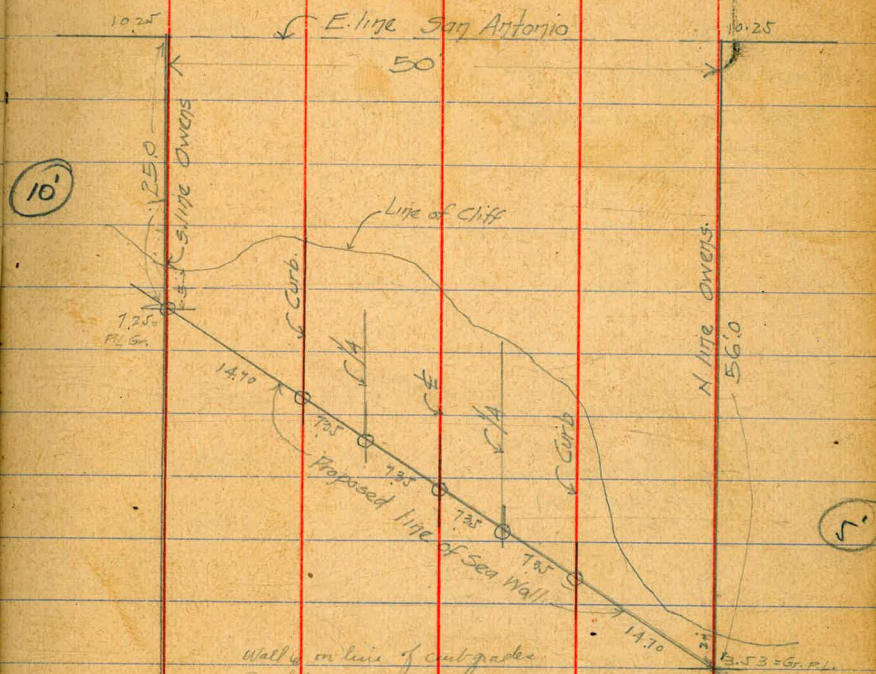
11

Owens			
Mag. CL.V. near N.L. San Antonio.			-3.20
561	+2.41	surface	
N.L. Owens		1.8	+0.6
		5.3	-2.9
+8		1.9	+0.5
+9		4.0	-1.6
+14.3 = N.Curb.		4.1	-1.7
+22.05 N/4		4.0	-1.6
+29.40 E		4.0	-1.6
+36.75 S 1/4		4.1	-1.7
+44.10 S Curb.		3.7	-1.3
+58.8 = S.L. Owens		3.6	-1.2

Gr. Elevations	N.L. Owens St.		
B.M. Mag. CL.V. Near N.L. Owens.			-3.20
12.91	9.71		
36' E of E.L. San Ant. - E. Wall		9.08	0.63
54' " " " " top back		7.60	2.11
51' " " " "		7.9	2.4
50' " " " "		7.30	2.41

Elevations S.L. Owens			
25' E of E.L. San Ant.		10.90	-1.2
20' S of " " top back		4.64	5.07
15' " " " "		3.73	6.00

Make turn back 10ft.



Walls on line of curb grades.  
Parapets = 18" above average curb grades.

4.1 = top wall 25' East  
21 Ground @ 54'E  
20 Fill  
10 = 18" out the slope.

5' turn back

End turn back

10' turn back.

85  
1.1  
3.4  
1.1  
5.5

Hole 8' E of E Wall. N.L. Owens.

Surface top sand.	5.3	-2.9
sand & clay.	7.5	-5.1
Sandy clay getting harder.	9.0	-6.6
Sandy clay well packed.	9.6	-7.2

Hole N Curb line

Surface sand.	4.1	-1.7
End sand start sandy loam getting harder as we go down.	6.7	-4.3
Into hard tough clay material if dry would be hard pan.	9.1	-6.7

Hole N 1/4

Surface sand.	4.0	-1.6
End loose sand start sandy clay	6.4	-4.0
Through harder sandy clay - Beg sand strata	8.1	-5.7
" sand strata	8.7	-6.3
Hard tough clay & sand. Almost H.P.	9.0	-6.6

Hole E Owens

Surface Sand.	4.0	-1.6
End loose sand start clay loam soil	6.2	-3.8
Clay harder start sand strata	8.4	-6.0
End sand strata - Beg hard clay.	9.0	-6.6
Clay harder	9.2	-6.8

Test Holes - Owens St for Wall Foundation.

+241

12

Hole S 1/4

Surface sand	4.1	-1.7
End sand - Sandy clay & loam.	6.2	-3.8
End sandy clay - start coarse sand.	8.5	-6.1
End coarse sand - start hard clay.	9.0	-6.6
Hard clay - almost H.P.	9.2	-6.8

Hole S Curb.

Surface Sand.	3.7	-1.3
End sand - start sandy loam & clay.	6.4	-4.0
Hard clay, almost H.P.	8.6	-6.2

50' 5"

start clay loam.	6.8	-4.4
------------------	-----	------

53' 5"

Start " "	6.6	-4.2
-----------	-----	------

58' 5" - S.L. Owens

Surface - loose sand.	3.6	-1.2
End sand start clay & sandy loam.	4.6	-3.2
In hard clay, almost hard pan.	7.0	-4.6

Note: - Bottoms of all holes into material as per samples in office.

Proposed Sea Wall - E.L. Jay Antonio  
Across McCall St.

EM. Hill 30' E Rosecrans - NL. McCall. 4.38

0.78 5.16

NL. McCall

Surface loose sand. 5.8 -06

N. Corb.

Surface-loose sand. 6.1 -09

End sand-start black mud. 10.4 -5.2

N. 1/4

Surface-loose sand. 6.0 -08

±

Surface-loose sand. 5.9 -07

End sand-start black silt. 10.4 -5.2

Thru black silt - black sand. 11.4 -6.2

Still fine hard packed sand. 17.4 -12.2

1/4 West  
of  
Moore

5.16

13

5.1/4

Surface loose sand. 5.5 -03

S. Corb

Surface loose sand. 5.2 00

End sand-start Black oozy mud.  
full of small roots. 10.4 -5.2

End black mud-sand again  
still sand. 11.5 -6.3  
13.0 -7.8

S. L. McCall.

Surface loose sand. 6.0 -08

End sand-start black mud. 10.4 -5.2

Proposed Retaining Wall across Lawrence  
50ft. East of E.L. San Antonio

4/11/16 West  
O'Hay  
Moore

14

Els.

N.L. Lawrence.

Surface-sand.

-0.2

¢ Lawrence.

Surface-sand

0.5

top sewer pipe

1.5 below surface 1.0

sand-water soaked

6.0 " -5.5

still " " sand

12.0 " -11.5

S.L. Lawrence.

Surface-sand.

1.6

Proposed Retaining Wall across Kellogg  
117 ft East of EL San Antonio

4/5/16 West  
other  
1000

Elev.

	N.L. Kellogg	
Floor pier =		2.1
Surface sand.		0.0
Water soaked sand.		6.0
" " "		12.0

± Kellogg

Surface		
---------	--	--

S.L. Kellogg

Surface		
---------	--	--

Levels ± Proposed Retaining Wall 100' E of EL San Antonio  
of Kellogg St.

BN Mon. ± San Antonio & Lawrence 7.22

5.77 13.19

100' E of EL San Antonio = West pier. 51.51

Kellogg N.L. across 100' E of EL San Antonio	9.78	3.41	4.08	F.07
Pier floor.	10.19	3.00		
+7	9.5	3.3		
2	12.5	0.7		
1/4	12.5	0.7		
1/4	10.0	3.2		
±	9.6	3.6		
1/4	10.0	3.2		
c	10.2	3.0		
SL +7	1.8	5.3		
	7.10	6.07	4.25	

± Proposed Ret. Wall 105' E of EL San Ant.

	13.19		Gr.	Cutor Fill
N.L. Kellogg	Ground. { 10.70	2.5	3.80	F.13
	Sandy clay. { 13.20	0.0		
N. Curb.	Ground. { 12.60	0.6	3.55	F.30
	Sandy clay. { 17.0	-3.8		
1/4	Ground 10.5	2.7		
±	Ground. { 10.5	2.7	3.62	F.09
	Still concrete { 17.5	-4.3		
1/4	Ground 10.6	2.6		
S. Curb.	Ground. { 10.2	3.0	3.70	F.07
	Sandy clay. { 14.6	-1.4		
S.L. Kellogg	Ground. { 9.5	3.7	3.95	F.02
	Sandy clay. { 13.7	0.0		

± Levels Owens St Culvert  
= 1 ft. South of N. Curb line.

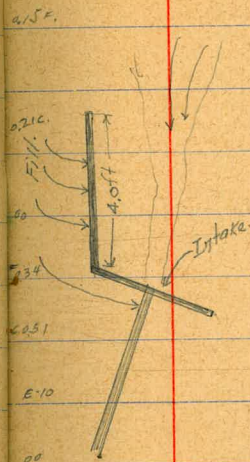
+	HI.	-	EL.	Flow line pr. 8" below curb for 12' long.
BM. Neg. SE. Rosecrans & Owens.			48.07	#
12.15	60.22			57.15.
0+00 = W.L. Rosecrans = Intake.	11.04	49.18	49.33	a.15.
+03	8.11	52.1		
+25 Hub.	9.25	50.97	50.78	
+50 "	8.04	52.18	52.23	
+73 " L.R. 22°10'	7.00	53.22	53.56	
1+48 <sup>ST</sup> = NL Owens.	4.06	56.16	55.65	
+25	3.57	56.65	56.57	
+11 <sup>S</sup> = Intake.	2.29	57.93	57.90	

Finish Surface Grade 68.7  
40.8  
5.1  
to toe 16.2  
Intake 14.7

Make headwall 3' at 1/2 to ± Pipe  
and 4 or 5 ft parallel to toe slope  
or 4 to N. Owens.

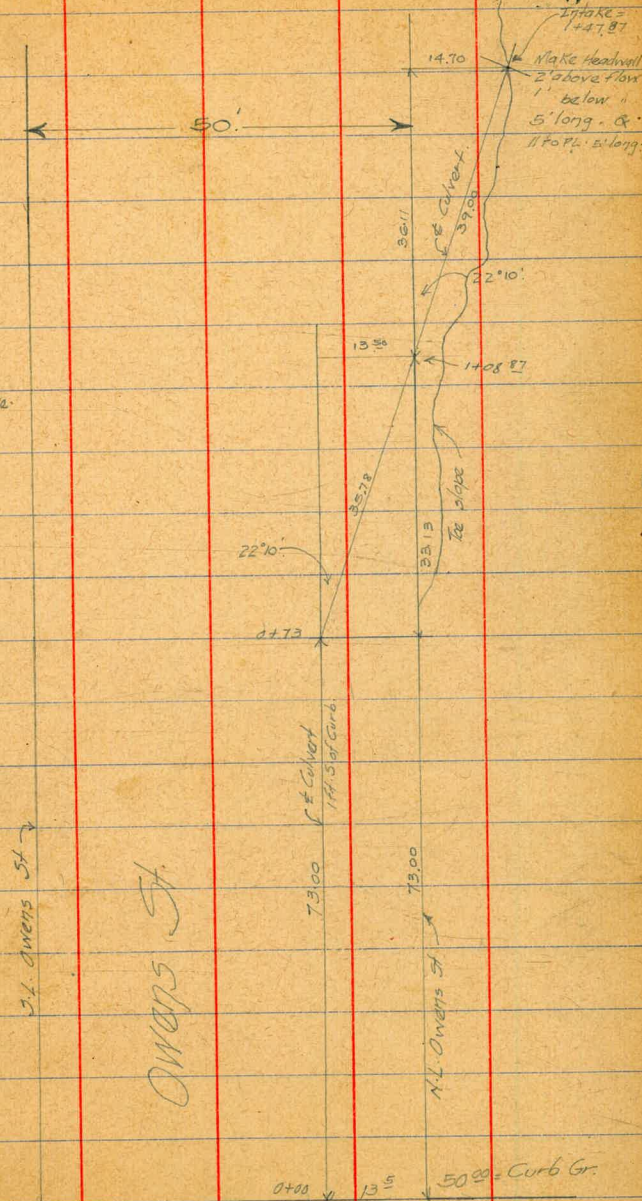
Sketch showing Owens St Culvert

West  
Owens  
Moore



16

Intake = 14.7 ft



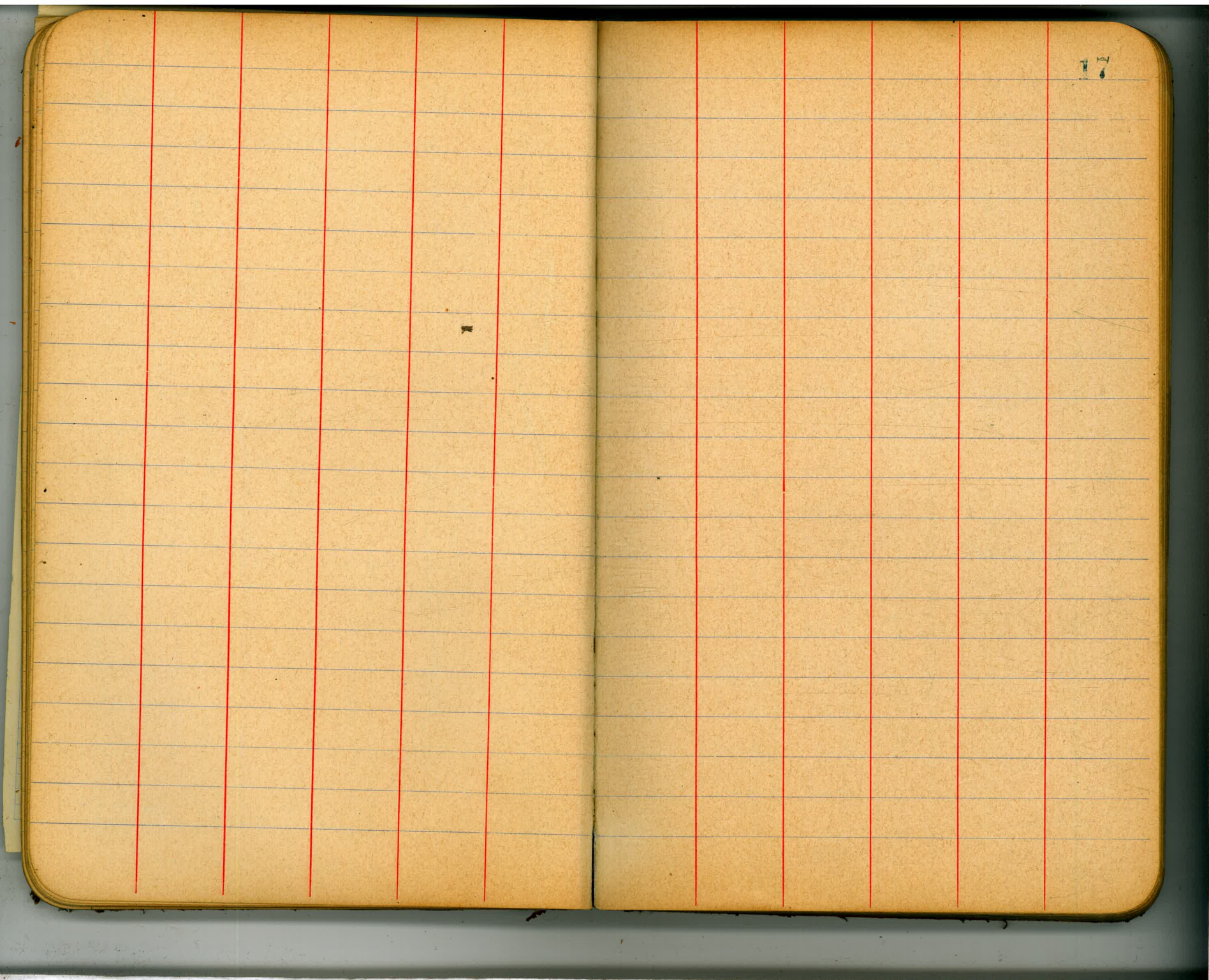
3.1 Owens St

Owens St

N. Owens St

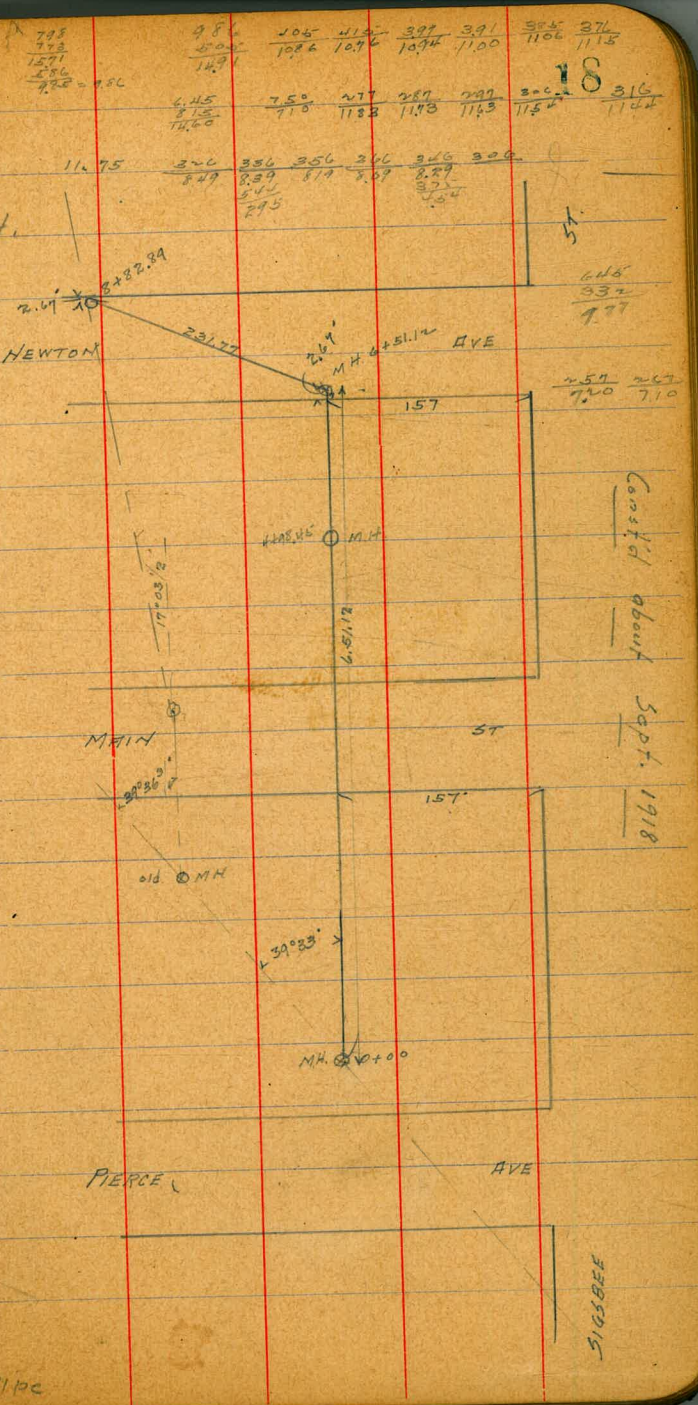
0+00 ↓ 13% ↓ 50' Curb Gr.

Rosecrans Street



Change in 16" sewer Bill's 25892 Manassas Schiller

X	5.39	11.84			Grade	Cut
B.M. X nails in New post oil tanks above ground			6.45			
0 to M.H.			8.02	3.88	2.47	1.35
150			6.30	5.34	2.57	2.97
	4.65	11.75	4.74	7.10		
1			4.77	6.98	2.67	4.31
+50			4.65	7.10	2.77	4.33
2			4.80	6.95	2.87	4.08
+50			5.37	6.38	2.97	3.41
3			5.39	6.36	3.06	3.30
	5.69	12.14	5.12	6.50		
+50			5.41	6.73	3.16	+3.44
4			7.95	4.19	3.26	+0.93
+50			5.84	6.34	3.36	2.96
+98 <sup>45</sup> M.H. & Alley			5		3.45	
5			4.14	8.02	3.46	4.56
+50			5.23	6.91	3.56	3.35
6			4.16	7.98	3.66	4.32
	2.09	15.29		13.20		
+57 <sup>12</sup> M.H.			4.16	11.13	3.76	7.37
7			5.43	9.86	3.85	6.01
+50			5.97	9.82	3.95	5.87
8			6.55	8.74	4.05	4.69
+50			8.34	6.95	4.15	2.80
+82 <sup>87</sup> M.H.			11.07	4.22	4.22	Bottom of pipe



SIGSBEE



















































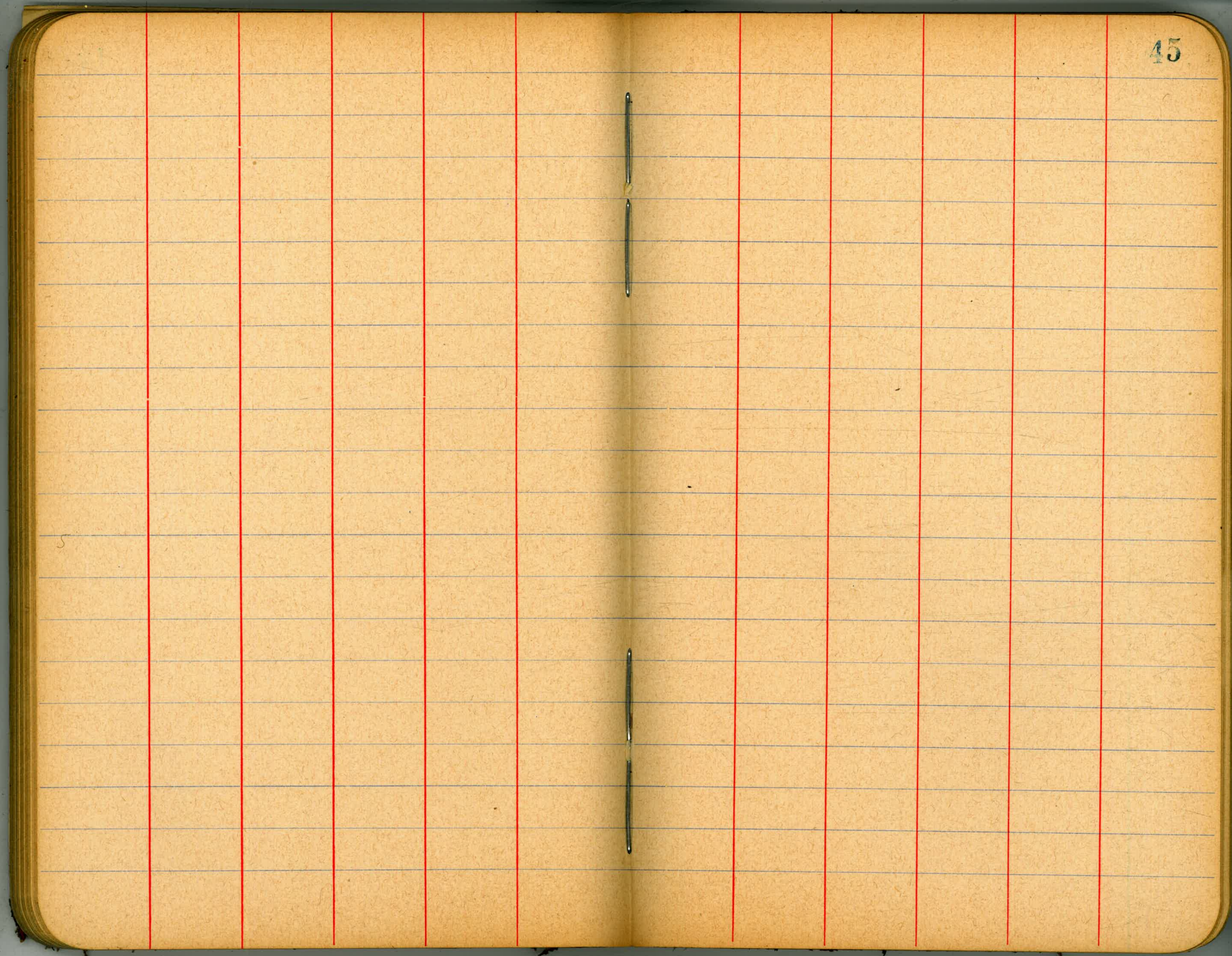




















Same as Peter ridge from M.H. Canyon Line or  
Sta 24465 on Peter ridge To D.F. 41 E of Nerney St

24465 M.H.	11.68	139.43		127.80		123.00
2540			1.2	138.3		127.73
T.P.	11.32	150.43	0.37	139.11		
T.P.	12.46	162.70	0.19	150.24		
T.P.	13.02	175.21	0.51	162.19		
25450			11.2	140		158.78
25460 BICK			8.9	146.3		165.00
2640			1.2	140		161.46
T.P.	12.03	166.93	0.31	174.99		
250			5.1	151.8		177.54
T.P.	12.30	199.00	0.23	156.70		
2740			2.6	189.4		185.00
27450	13.30	211.05	0.65	198.35		194.70
27490 W.K.				200.3		200.00
2840			9.3	207.0		200.27
<del>290</del>			<del>4.2</del>	<del>197.5</del>		
T.P.	10.05	220.99	0.79	210.91		
450			9.0	212.0		201.60
2940			7.6	213.5		202.93
750			9.7	214.3		204.26
3940			13.0	217.5		

3016  
2003  
551

3010  
2390  
225

cut 11.00



220.77

3040			7.9	213.1	205.59	7.5
+116 M.H. Drop			3.7	217.1	206.00	11.1
					210.00	7.1
+50			3.1	219.9	213.70	4.2
T.P.	12.21	232.56	0.74	220.25		
-3140			7.8	222.5	219.13	3.7
+50			3.0	219.0	224.56	4.4
T.P.	12.15	243.56	1.15	227.41		
31476 M.H.					227.39	
3240 break			8.5	235.1	230.00	5.1
32420			6.5	237	230.00	
32423 M.H.			5.4	238.6	237.7	6.5
+50			5.1	239.5	235.00	6.1
3340			3.4	240.7	244.50	5.4
33445 DE 41 E of Nerney			2.6	241.0	236.00	5.0

$$\begin{array}{r} 3325 \\ 3176 \\ \hline 149 \end{array}$$

$$\begin{array}{r} 3176 \\ 3016 \\ \hline 160 \end{array}$$

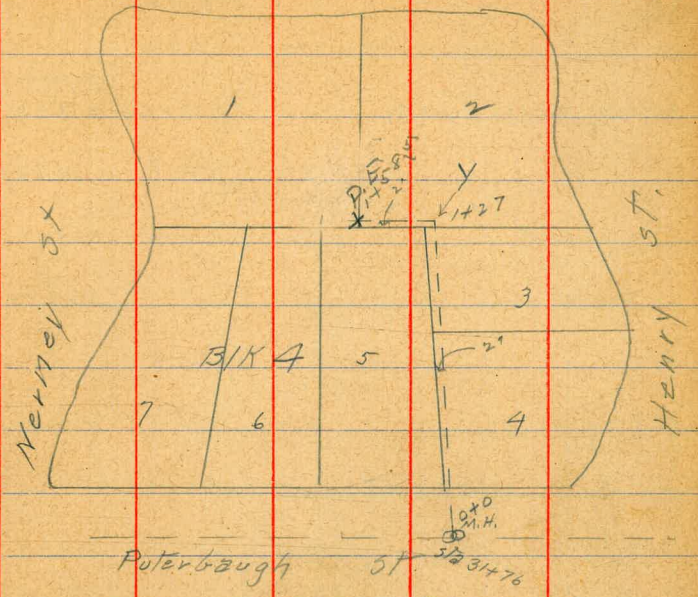
sewer for BIK 4 Ins. N 116 from N.H. St 31+76  
 Puterbaugh to D.E. 1+58<sup>5</sup> Lot 1.

	9.30	244.40	235.10	cut
0+0 = N.H. St 31+76			229.2	227.39
0+24 break	15.2		233.6	4.6
0+26	16.8		232.7	
0+50 break	5.7		241.8	4.8
1+0	2.6		244.24	4.0
1+27 Δ	5.36	249.60	241.97	3.8
1+58 <sup>5</sup> D.E.	0.16		244.00	3.5

5

Aleneida St.

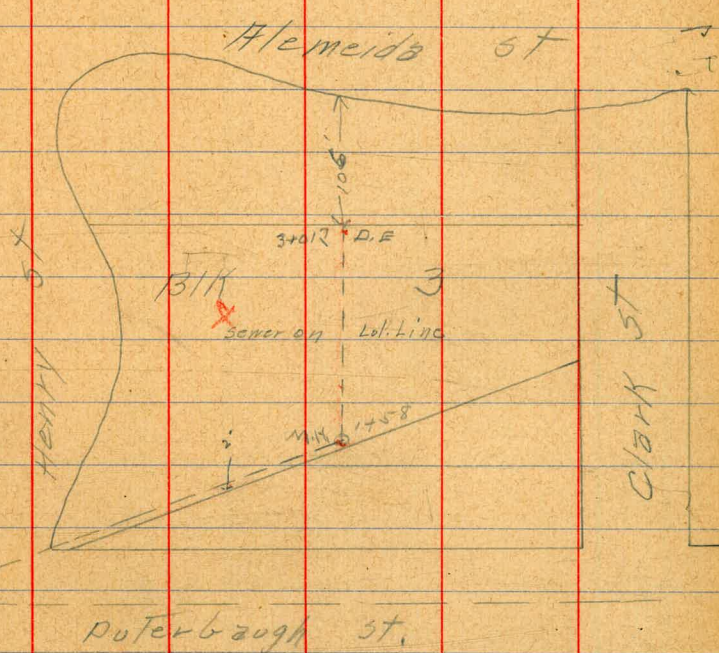
52



585  
29/8

sewer for BIK 3 Ins. Nghts from M.H. Sta 30+16  
 Puterbaugh to D.E. Sta 106.5 of Alemeida

			30+50		
	11.60	229.50	217.90		
0+0 = M.H. 30+16 Drop,			217.1	206.00	11.1
				210.00	7.1
0+30		14.7	214.8	211.80	3.0
0+50 break		11.0	218.5	213.00	5.5
1+0 break	12.44	240.75	119	228.31	225.00
					3.3
1+50		5.4	235.4		
1+58 M.H.		5.2	235.6	230.00	5.6
2+0	7.99	248.67	207	240.68	233.21
					7.5
2+50		4.2	244.5	237.03	7.5
3+01 <sup>7</sup> D.E		1.9	246.8	241.00	5.8



301.7  
 158  
 143.7



1/21/16 Ground 29TH ST 60' wide Ash St.  
 11000 10' wide  
 11100 10' wide  
 S From N.L. A St To S.L. of S. Road

29TH ST

55

BM	1.05	201.10	197.35	End of Curb at 29TH B	1/4	5.0	190.6
T.P.	0.57	195.57	6.40	195.0	cb	2.6	193.0
		N.L. A ST.			E	0.3	195.3
							32' No.
E			2.7	192.9	E	0.0	195.6
cb			4.9	190.7	cb	2.2	193.4
1/4			7.3	188.3	1/4	4.5	191.1
C			9.4	186.2	C	6.6	189.0
1/4			11.5	184.1	1/4	9.3	186.3
cb			13.3	182.3	cb	12.6	183.0
W			16.7	178.9	W-	16.8	178.8
+ 6			18.6	177.0	+20	17.1	178.5
+ 15			18.2	177.4			40' No.
		25' No.			1-20	16.8	178.8
- 15			17.1	178.5	W.	15.7	179.9
- 2			16.6	179.0	cb	13.1	182.5
W			14.0	181.6	1/4	10.2	185.4
cb			10.7	184.9	+5	9.5	186.1
1/4			2.1	186.5	C	5.8	188.8
C			7.4	188.2	1/4	3.7	191.9

cb	1.6	194.0
E	+0.5	196.1
63' No		
E	0.0	195.6
cb	2.1	193.5
1/4	2.8	192.8
C	4.1	191.5
+5	7.7	189.9
1/4	9.2	186.4
cb	12.1	183.5
W.	14.5	181.1
+5	15.9	179.7
+15	14.3	181.3
75' No.		
-15	14.6	181.0
W.	14.6	181.6
+5	11.3	184.3
cb	10.5	185.1
1/4	8.6	187.0
C	6.0	189.6

1/4	3.3	192.3
cb	2.8	192.8
E	+0.4	196.0
57.23 on East } No. = S.L. of So. Park. 88.37 - West }		
E	0.7	194.9
+4	2.7	192.9
cb	3.2	192.4
1/4	3.7	191.9
C	5.6	190.0
+5	5.8	189.8
1/4	4.5	191.1
+5	3.9	191.7
cb	6.8	188.8
W	12.0	183.6
+16	13.7	181.9
+20	13.1	182.5
T.P.	4.02	199.59
From here to Ash 29th St is 80' wide 20' walks 10' 1/2's		
S.L. So. Park.		
-20	9.1	190.6

199.59

-10	16.6	183.0
W	17.1	182.5
+10	17.7	181.9
cb	16.0	183.6
1/2	10.8	188.8
+5	7.9	191.7
C	8.5	191.1
+5	9.8	189.8
1/2	7.6	190.0
cb	7.7	191.9
+16	6.7	192.9
E	4.7	194.9
E	6.8	192.8
cb	7.5	192.1
1/2	6.7	192.9
C	6.6	193.0
1/2	7.0	192.6
cb	16.3	183.3
+5	16.9	182.7

18' No. (283' So. in BK 989)

199.59

2974 ST

57

W	15.7	183.9
+6	10.7	188.9
+9	5.6	194.0
40' No.		
W	5.6	194.0
+3	6.1	193.5
+5	7.9	191.7
+10	14.6	185.0
cb	15.5	184.1
1/2	15.2	184.4
+8.	5.8	193.8
C	5.8	193.8
1/2	6.2	193.4
+7	7.3	192.3
cb	6.7	192.9
E	5.9	193.7
55' No. = 245' So		
E	5.3	194.3
cb	5.7	193.9
+1	6.8	192.8

	199.59		
+5	6.9	192.7	
+7	5.6	194.0	
$\frac{1}{2}$	5.5	194.1	
C	5.4	194.2	
$\frac{1}{4}$	5.6	194.0	
+3	14.7	184.9	
cb	14.3	185.3	
+15	13.8	185.8	
W	5.7	193.9	
	75' No.		
W	4.5	194.1	
+2	13.1	186.5	
cb	13.1	186.5	
+6	13.8	185.8	
$\frac{1}{2}$	6.2	193.4	
+1	4.8	194.8	
C	4.5	195.1	
$\frac{1}{4}$	4.9	194.7	
+5	6.3	193.3	
+9	6.6	193.0	

	199.59	297" 35	58
cb	5.1	194.5	
E	4.8	194.8	
	90' No.		
E	4.1	195.5	
cb	4.4	195.2	
+2	6.0	193.6	
+5	4.3	195.3	
$\frac{1}{5}$	4.3	195.3	
+2	5.0	194.6	
C	4.0	195.6	
$\frac{1}{4}$	4.2	195.4	
+4	12.9	186.7	
cb	12.5	187.1	
+15	12.1	187.5	
W	7.0	192.6	
+2	3.0	196.6	
	100' No.		
-5	3.5	196.1	
W	7.7	191.9	
+5	7.2	192.4	



	199.59		
+10		11.9	187.7
cb		12.5	187.1
+6		12.3	187.3
1/2		5.8	193.8
+1		4.1	195.5
C		3.7	195.9
1/2		3.9	195.7
+6		3.9	195.7
cb		5.1	194.5
+3		4.0	195.6
E		3.7	195.9
	105' No.		
E		3.5	196.1
cb		3.8	195.8
+1		5.3	196.3
+3		3.5	196.1
1/2		3.7	195.9
C		3.5	196.1
+8		3.6	196.0
1/2		5.6	194.0

	199.59	2974.57	
+4		11.6	188.0
cb		11.8	187.8
+4		12.2	187.4
+8		10.5	189.1
+13		6.0	193.6
		3.6	196.0
W		3.5	196.1
	120' No.		
W		3.5	196.1
		3.9	195.7
+5		6.6	193.0
+12		11.1	188.5
cb		11.0	188.6
1/2		10.4	189.2
+2		3.1	196.5
C		3.1	196.5
1/2		3.0	196.6
cb		3.2	196.4
E		3.0	196.6
	135' No. = 165' 50. of ASH 81.		
E		2.4	197.2
cb		2.7	196.9

	199.59		
1/4	2.6	197.0	
C	2.6	197.0	
+8	2.6	197.0	
1/4	7.3	192.3	
+5	8.3	191.3	
+6	10.4	189.2	
cb	10.4	189.2	
+3	9.6	190.0	
+7	10.5	189.1	
+12	9.9	189.7	
+15	7.3	192.3	
+18	2.2	197.4	
W	2.2	197.4	
	155' No.		
W	2.1	197.5	
+2	2.1	197.5	
+6	6.3	193.3	
+12	8.8	190.8	
cb	9.5	190.1	
+5	8.4	191.2	

	199.59	297th St	60
+6	2.2	197.4	
1/4	2.1	197.5	
C	1.9	197.7	
(The east side of St is to grade from this to Ash.)			
	165' No.		
C	1.5	198.1	
1/4	1.7	197.9	
+2	1.9	197.7	
	8.3	191.3	
cb	8.5	191.1	
+5	8.3	191.3	
+10	3.9	195.7	
W	1.8	197.8	
	180' No.		
W	1.0	198.6	
+10	1.7	197.8	
+12	4.0	195.6	
+16	6.9	192.7	
cb	7.1	192.8	
1/4	6.9	192.7	
+4	5.0	194.6	

		199.59				205.79	2974 ST	
f5.0			0.9	198.7		245' No		
C			1.1	198.5	C		5.0	200.8
T.P.	6.71	205.79	0.51	199.08	1/4		5.4	200.4
		200' No.			+8	use this in Xigoring back section + leave out in Xigoring forward section	6.8	199.0
C			6.5	199.3	cb		8.8	197.0
+6			6.5	199.3	W		4.9	200.9
+6.5			11.4	194.4			4.4	201.4
1/4			12.3	193.5	W	275' No		
cb			11.3	194.5	cb		3.2	202.6
+5			7.3	198.5	+1		3.7	202.1
+10			6.2	199.6	1/4		5.2	200.6
W			6.0	199.8	C		4.3	201.5
		235' No.					3.8	202.0
						300' No. = 5L		
W			4.8	201.0	C		2.9	202.9
+13			5.1	200.7	1/4		3.5	202.3
			7.7	198.1				
cb			9.3	196.5	+8		4.1	201.7
+5			8.5	197.0	cb		3.3	202.5
			6.3	199.5				
1/4			5.6	200.2	W		2.8	203.0
C			5.4	200.4	07 B.M.		1.65	204.14 = 204.01

Kellog St. Cross Sections  
 Continued from Book 981 - Page 80.  
 50' W - 125 ft Wks - 625 ft. Quarters  
 175' East of E.L. Say Eljo  
53.75

NL.	8.3	45.4
C	8.7	45.0
+3	9.0	44.7
+4	12.0	41.7
1/4	12.3	41.4
+2	10.8	43.0
+3	8.5	45.2
E	8.4	45.3
1/4	8.3	45.4
C	8.2	45.5
SL.	7.5	46.2
200' East.		
SL.	9.4	44.3
C	9.9	43.8
1/4	10.2	43.5
E	9.9	43.8
1/4	10.6	43.1
+1	10.6	43.1
+3	13.5	40.2
C	13.8	40.0
+1	10.5	43.2
NL.	10.0	43.7
225' East.		
NL.	11.5	42.2
+11	12.0	41.7
C	15.2	38.5
+4	15.1	38.6
+5	12.3	41.4
1/4	12.5	41.2
E	11.3	42.4
1/4	11.5	42.2
C	11.3	42.4
SL.	10.8	43.0
T.P.	12.08	41.67

1.73 43.40

Kellog.

43.40

62

250' East.

SL.	2.1	41.3
C	2.8	40.6
1/4	2.9	40.5
E	2.9	40.5
1/4	3.3	40.1
+3	3.6	39.8
+4	5.8	37.6
C	5.9	37.5
+3	5.8	37.6
+4	3.2	40.2
NL.	2.9	40.5
275' East.		
NL.	4.2	39.2
+11	4.6	38.8
C	7.0	36.4
1/4	7.0	36.4
+1	7.0	36.4
+2	4.7	38.7
E	4.3	39.1
1/4	4.1	39.3
C	3.9	39.5
SL.	3.5	39.9
298' East.		
SL.	5.0	38.4
C	5.4	38.0
1/4	5.6	37.8
<del>+4</del> E	5.7	37.7
+4	5.7	37.7
+5	8.4	35.0
1/4	8.4	35.0
C	8.2	35.2
+2	5.9	37.5
NL.	6.1	37.3

Continued Page 65

3/16	Gregory Stops Miller	Levels on York A St from and 29 <sup>th</sup> St	DRAINS, Catch Basins etc. 29 <sup>th</sup> to 30 <sup>th</sup> see sketch Page 64	
B.M.	092	227.94	227.02	SE. 30 <sup>th</sup> + H. B.P.
T.P.	038	215.94	1238	21556
T.P.	629	209.48	1275	203.19
20 = Inlet of Culvert			10.9	198.6
+15			13.1	196.4
T.P.	089	1978.4	12.50	196.98
+34 = No. Line H St.			1.7	196.2
+46			4.1	193.8
+70			5.4	192.5
+96			7.2	190.7
1+20			8.1	189.8
1+25.8			0.1	190.8
1+42 = L pt.	267	190.89	9.65	188.22
1+70			3.3	187.6
2+00			5.6	185.3
2+30			7.0	183.9
2+40			7.4	183.5
2+80			8.8	182.1
2+87			9.7	181.2
			10.75	180.2
3+00			11.6	179.3
3+15			11.2	179.7
T.P.	258	181.40	12.07	178.82

			181.40	
3+30			4.5	176.9
3+42			5.1	176.3
3+63.4 = W.L. of 29 <sup>th</sup> St.			5.3	176.1
3+82.8 = Outlet			6.4	175.0
T.P.	972	188.54	2.58	178.82
at point D = connection of C.B. B. with Main pipe			8.2	180.3
at point C			12.2	176.3
10' No. of C.			12.9	175.6
18' - - -			8.0	180.5
Ch of C.B. A.			2.5	186.0
10' No. of point D.			2.0	186.5
T.P.	5.53	192.21	1.86	186.65
12' No. of point D			4.3	187.9
Ch of C.B. "B"			2.4	189.8

30th St

This hole is only 80x100

If wing walls are planned they should be arranged to parallel 102 street, i.e. INLET

142.0

80

57



These basins are 10' x 10' x 10'

at 10' intervals

5' of pipe to Drain on 30th

30th St

29th St

57

60

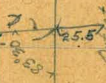
142.0

25.5

80.5R

80

57



Kellog. from p. 62 this book

43.40

300' East = NW Rosecrans - 50' Wide - Graded.

NL	8.8	34.6
C	8.5	34.9
1/4	8.7	34.7
E	9.1	34.3
1/4	7.6	33.8
C	10.1	33.3
+3	9.9	33.5
DL	8.7	34.7

E.L. Rosecrans St.

SL	9.7	33.7
C	10.6	32.8
1/4	9.4	34.0
E	9.0	34.4
1/4	9.2	34.2
C	10.3	33.1
NL	9.8	33.6
B.N. Plug NE. Rosecrans.	9.80	33.60

1.18

34.78

5' East.

NL	1.6	33.2
+8	1.9	32.8
+9	4.5	30.2
C	3.8	31.0
+2	1.9	32.8
1/4	1.5	33.1
E	1.5	33.2
1/4	1.6	33.1
+2	1.8	33.0
+3	3.8	31.0
C	3.8	31.0
+3	0.6	34.1
SL	0.3	34.5

Kellog.

34.78

25' East

SL	1.4	33.4
+5	2.1	32.6
+6	5.5	29.2
+11	5.8	29.0
C	7.1	27.6
1/4	2.8	32.0
E	3.2	31.6
1/4	2.9	31.8
+4	3.1	31.6
C	5.8	29.0
+5	5.7	29.0
+6	3.0	31.8
NL	2.8	32.0

38' East.

NL	3.3	31.5
+6	3.5	31.2
+7	6.4	28.3
C	6.5	28.2
+1	4.0	30.7
1/4	3.5	31.2
E	4.0	30.7
1/4	3.7	31.0
+4	6.3	28.4
C	7.0	27.7
+2	7.5	27.2
+4	6.6	28.1
+10	6.1	28.6
SL	2.0	32.8

40' East

SL	2.4	32.4
+4	6.5	28.2
+10	7.4	27.3
C	7.5	27.2
1/4	6.6	28.1
+4	4.2	30.5
E	4.0	30.7
1/4	3.5	31.2
+4	4.1	30.6
C	6.5	28.2
+5	6.5	28.2
+6	3.8	31.0
NL	3.4	31.4

Kellog.

34.78

50' East

NL	43	30.5
+6	45	30.3
+7	7.1	27.7
C	7.1	27.7
+5	7.0	27.8
1/4	43	30.5
E	47	30.1
+4	48	30.0
1/4	72	27.6
C	8.0	26.8
+10	73	27.5
SL	3.1	31.7

65' East

SL	36	31.2
+1	65	28.3
+6	88	26.0
C	82	26.6
+2	80	26.8
+3	55	29.3
1/4	60	28.8
E	54	29.9
1/4	53	29.5
+1	78	27.0
C	79	26.9
+5	79	26.9
+6	55	29.3
NL	5.1	29.7

75' East

NL	55	29.3
+4	57	29.1
+5	82	26.6
C	83	26.5
+3	83	26.5
+4	6.0	28.8
1/4	59	28.9
E	59	28.9
1/4	66	28.2
C	57	29.1
+2	7.8	27.0
+8	93	25.5
SL	4.7	30.1

Kellog.

34.78

87' East

-A = Top Brook	52	29.6
SL	9.9	24.9
+11	82	26.6
C	6.5	28.3
1/4	7.0	27.8
E	6.7	28.1
1/4	6.8	28.0
+2	6.8	28.0
+3	8.5	26.3
C	8.9	25.9
+7	8.9	25.9
+9	6.4	28.9
NL	6.0	28.8

100' East

NL	7.0	27.8
+10	7.3	27.5
C	9.4	25.4
1/4	9.6	25.2
+1	7.2	27.6
E	7.5	27.3
1/4	7.6	27.2
C	7.4	27.4
+2	7.4	27.4
+3	9.7	25.1
SL	10.5	24.3
+5 Top Brook	6.1	28.7

108' East

-1 " "	6.2	28.6
SL	9.4	25.4
+3	10.9	23.9
+6	10.8	24.0
+7	7.9	26.9
C	8.0	26.8
1/4	8.0	26.8
+3	8.2	26.6
+4	10.0	24.8
E	10.1	24.7
1/4	9.9	24.9
C	9.9	24.9
+2	7.9	26.7
NL	7.0	27.8

66



Kellog.  
34-78  
116' East.

NL.		76	27.2
c		87	26.1
+1		103	24.5
1/4		101	24.7
E		104	24.4
+5		105	24.3
1/4		85	26.3
c		84	26.4
+4		82	26.6
+6		112	23.6
+9		109	23.9
SL		93	25.5
+1	top bank.	66	28.2
-1	" "	68	28.0
SL		100	24.8
+7		110	24.8
+8		84	26.4
c		85	26.3
1/4		86	26.2
+1		107	24.1
+4		106	24.2
E		88	26.0
1/4		85	26.3
+2		103	24.5
c		104	24.4
+2		104	24.4
+3		85	26.3
NL.		77	27.1
	125' East.		
NL.		80	26.8
+9		88	26.0
+10		109	23.9
c		108	24.0
+5		107	24.1
1/4		90	25.8
+5		92	25.6
E		106	24.2
+5		110	23.8
1/4		90	25.8

Kellog.  
34-78

67

c		87	26.1
+5		86	26.2
+6		116	23.2
+9		118	23.0
SL		94	25.4
+2	top bank.	70	27.8
	141' East.		
-1	" "	72	27.6
SL		123	22.5
+8		124	22.4
+11		111	23.7
c		77	25.1
1/4		103	24.5
+2		117	23.1
E		118	23.0
+1		101	23.7
1/4		102	24.6
+3		102	24.6
+4		120	22.8
c		120	22.8
+2		120	22.8
+3		96	25.2
NL.		90	25.8
	144' East.		
NL.		93	25.5
+10		98	25.0
+11		122	22.6
c		123	22.5
+4		121	22.7
+5		105	24.3
1/4		105	24.3
E		104	24.4
+1		120	22.8
1/4		120	22.8
+1		105	24.3
c		100	24.8
+2		124	22.4
+9		124	22.4
SL		85	26.3

Kellog

34.78

150' East.

SL.	8.7	26.1
+4	10.0	24.8
+5	12.8	22.0
+11	12.1	22.7
c	10.3	24.5
1/4	10.7	24.1
+1	12.3	22.5
+5	12.1	22.7
E	10.7	24.1
1/4	10.7	24.1
+1	12.5	22.3
c	12.5	22.3
+1	10.6	24.2
NL	10.0	24.8

160' East.

NL	10.3	24.5
+10	10.6	24.2
+11	12.2	22.6
c	12.5	22.3
1/4	13.3	21.5
E	13.0	21.8
1/4	12.7	22.1
1/4	11.4	23.4
+2	11.2	23.6
+3	13.2	21.6
+8	13.3	21.5
+9	10.9	23.9
BL	9.6	25.2
T.P.	11.82	22.96

0.58

23.54

161' East.

SL.	-1.0	24.5
+5	0.3	23.2
+6	2.4	21.1
c	2.5	21.0
+3	0.5	23.0
1/4	0.6	22.9
+2	1.9	21.6

Kellog.

23.54

68

E	2.0	21.5
1/4	2.1	21.4
c	2.5	21.0
+2	0.1	23.4
NL	-0.6	24.1

169' East.

NL	-0.5	24.0
+9	-0.1	23.6
+10	2.4	21.1
c	2.6	20.9
+2	0.7	22.8
1/4	0.6	22.9
+5	0.7	22.8
E	1.9	21.6
+5	2.0	21.5
1/4	0.8	22.7
+4	0.6	22.9
c	2.7	20.8
+6	2.7	20.8
+7	0.2	23.3
SL	-0.9	24.4

175' East.

SL	-0.6	24.1
+8	1.0	22.5
+9	2.1	20.4
c	2.9	20.6
+2	2.9	20.6
+3	0.9	22.6
1/4	1.3	22.2
+1	2.4	21.1
+6	2.3	21.2
E	1.2	22.3
1/4	0.8	22.7
+4	1.1	22.4
+5	2.7	20.8
c	2.9	20.6
+3	2.6	20.9
+4	0.5	23.0
NL	-0.3	23.8

Kellog

23.54

200' East.

NL	16	21.9
+10	23	21.2
+11	4.1	19.4
c	4.1	19.4
+3	4.1	19.4
+4	2.5	21.0
1/4	2.6	20.9
E	2.9	20.6
+1	4.1	19.4
+4	4.0	19.5
1/4	2.8	20.7
+1	4.1	19.4
c	4.1	19.4
+6	3.9	19.6
SL	1.0	22.5

225' East.

SL	2.7	20.8
+6	3.9	19.6
+7	5.0	18.5
c	5.4	18.1
+4	5.5	18.0
+4.3	4.6	18.9
1/4	4.6	18.9
E	4.6	18.9
1/4	4.1	19.4
+1	5.3	18.2
c	5.2	18.3
+1	3.9	19.6
NL	3.5	20.0

250' East.

NL	5.2	18.3
c	5.5	18.0
1/4	5.8	17.7
E	6.5	17.0
+4	6.0	17.5
1/4	6.7	16.8
c	6.8	16.7
+8	5.9	18.2
SL	3.1	19.6

Kellog

23.54

275' East.

69

SL	5.8	17.7
+4	7.0	16.5
c	7.8	15.7
1/4	7.8	15.7
E	7.8	15.7
1/4	7.4	16.1
c	6.9	16.6
NL	7.1	16.4

300' East

NL	8.9	14.6
c	9.2	14.3
1/4	9.2	14.3
E	9.1	14.4
1/4	9.0	14.5
c	8.9	14.6
SL	8.6	14.9

325' E-WL San Agtologio - 50' W - 10' NWS - 75' H 95'

SL	9.2	14.3
c	9.5	14.0
1/4	9.7	13.8
E	10.0	13.5
1/4	10.3	13.2
c	10.5	13.0
NL	10.6	12.9

W Curb

NL	11.2	12.3
c	10.5	13.0
1/2	10.4	13.1
E	10.2	13.3
1/4	10.0	13.5
c	9.7	13.8
SL	9.5	14.0

W 1/4

SL	9.7	13.8
c	9.9	13.6
1/4	10.2	13.3
E	10.2	13.3
1/4	10.6	12.9
c	11.3	12.2
NL	11.6	11.9

Kellog

23.54

E San Antonio

NL		11.6	11.9
c		11.9	11.6
1/4		11.0	12.5
E		11.0	12.5
1/4		10.8	12.7
c		10.8	12.7
SL		10.4	13.1
	E. 1/4		
SL		11.0	12.5
c		11.3	12.2
1/4		11.2	12.3
E		11.2	12.3
1/4		11.5	12.0
c		11.9	11.6
+10		12.2	11.3
NL		16.2	7.3
T.P.		12.00	11.54

046

17.00

E. Curb.

NL		5.3	6.7
+6		5.2	6.8
+7		1.1	10.9
c		1.1	10.9
1/4		0.7	11.3
E		0.4	11.6
1/4		0.2	11.8
c		0.2	11.8
SL		-0.2	12.2

E.L. San Antonio

SL		0.7	11.3
c		1.0	11.0
1/4		1.2	10.8
E		1.1	10.9
1/4		1.2	10.8
c		1.7	10.3
+5		1.7	10.3
+8		6.4	5.6
NL		6.7	5.3

Kellog

12.00

5ft East

70

NL		6.9	5.1
+5		6.8	5.2
+7		5.6	6.4
c		4.6	7.4
+1		1.8	10.2
1/4		1.5	10.5
E		1.6	10.4
1/4		1.5	10.5
c		1.5	10.5
SL		1.1	10.9

10' East

SL		1.4	10.6
c		1.7	10.3
1/4		1.9	10.1
E		2.1	9.9
1/4		2.1	9.9
+4		2.1	9.9
c		4.0	8.0
+2		6.5	5.5
+6		7.2	4.8
+10		7.0	5.0
NL		1.7	10.3

15' East

NL		2.1	9.9
+2		6.4	5.6
+5		7.3	4.7
+10		7.3	4.7
c		5.1	6.9
1/4		3.0	9.0
+1		2.3	9.7
E		2.3	9.7
1/4		2.0	10.0
c		1.9	10.1
SL		1.6	10.4

25' East

SL		1.4	10.6
c		3.0	9.0
1/4		3.2	8.8
E		3.2	8.8
1/4		6.5	5.5

Kellog  
1200

C		6.6	5.4
NL		8.0	4.0
+6		4.6	7.4
+7	top bank	2.6	9.4
40' East			
-3	" "	4.1	7.9
-2		7.2	4.8
NL		8.2	3.8
C		8.6	3.4
+2		6.8	5.2
1/4		6.1	5.9
+3		4.2	7.8
E		4.3	7.7
1/4		4.2	7.8
C		3.9	8.1
SL		2.0	10.0
45' East			
SL		2.1	9.9
C		4.3	7.7
+3		4.4	7.6
+4		5.9	6.1
1/4		5.7	6.3
E		4.7	7.3
1/4		5.0	7.0
+2		7.6	4.4
C		8.9	3.1
+5		8.6	3.4
NL		6.9	5.1
+1	top bank	4.5	7.5
50' East			
NL		4.6	7.4
+7		8.7	3.3
C		9.2	2.8
+3		8.6	3.4
1/4		6.0	6.0
+1		4.8	7.2
E		4.8	7.2
+1		5.5	6.5
1/4		6.2	5.8
C		4.9	7.1
SL		2.6	9.4

Kellog

1200

75' East

71

SL		4.2	7.8
C		6.6	5.4
1/4		6.9	5.1
E		6.9	5.1
+2		6.9	5.1
+4		10.3	1.7
1/4		10.2	1.8
C		9.9	2.1
+4		6.7	5.3
NL		6.0	6.0
100' East. = Start of La Playa Wharf - NL Wharf = NL Kellog. 8' wide			
NL		8.6	3.4
+5	Flour Wharf	8.7	3.3
+8		11.1	0.9
C		11.6	0.4
+4		11.6	0.4
1/4		8.5	3.5
E		8.4	3.6
1/4		8.8	3.2
C		8.8	3.2
+3		8.3	3.7
+8		6.4	5.6
SL		6.0	6.0
110' East			
SL		11.4	0.6
C		11.5	0.5
1/4		10.0	2.0
E		10.8	1.2
1/4		10.6	1.4
+3		10.8	1.2
+4		12.2	-0.2
C		12.1	-0.1
NL		11.7	0.3
125' East			
NL		12.4	-0.4
+10.8		12.7	+1.5
C		12.7	-0.7
1/4		11.5	+0.5
E		11.9	+0.1
1/4		12.0	0.0
C		12.0	0.0
SL		11.8	+0.2

Kellog.  
1200  
150' East

SL		133	-13
C		130	-10
1/4		132	-12
E		136	-16
1/4		134	-14
C		134	-14
NL		137	-17
T.P.		1136	0.64

140  
2.04  
175' East

NL		50	-30
C		50	-30
1/4		50	-30
E		50	-30
1/4		51	-31
C		52	-32
SL		54	-34

200' East

SL		70	-50
C		68	-48
1/4		68	-48
E		67	-47
1/4		66	-46
C		66	-46
NL		65	-45

225' East

NL		86	-6.6
C		85	-6.5
1/4		86	-6.6
E		86	-6.6
1/4		87	-6.7
C		87	-6.7
SL		88	-6.8
T.P.		0.57	1.47

9.49 10.96

B.M. Along & Say Ant. B. Lawrence 3.76 7.20

722

3/21/10 West.  
often.  
Moore.

San Elijo St. Cross Sections  
 S-L Owens to N-L Kellog.  
 50ft wide - 10ft Walks - 75ft Quarters.

West  
 Open 3/22/10.  
 Moore

BM. & Mag. San Elijo & Owens 103.23

3.75 106.78

S-L Owens

(107.0)

WL	3.3	103.7
c	3.3	103.7
1/4	3.8	103.2
E	4.1	102.9
1/4	4.7	102.3
c	5.8	101.2
EL	7.1	99.9

25' South

EL	9.0	98.0
c	7.8	99.2
1/4	7.6	99.4
E	7.3	99.7
1/4	6.8	100.2
c	7.0	100.0
WL	7.2	99.8

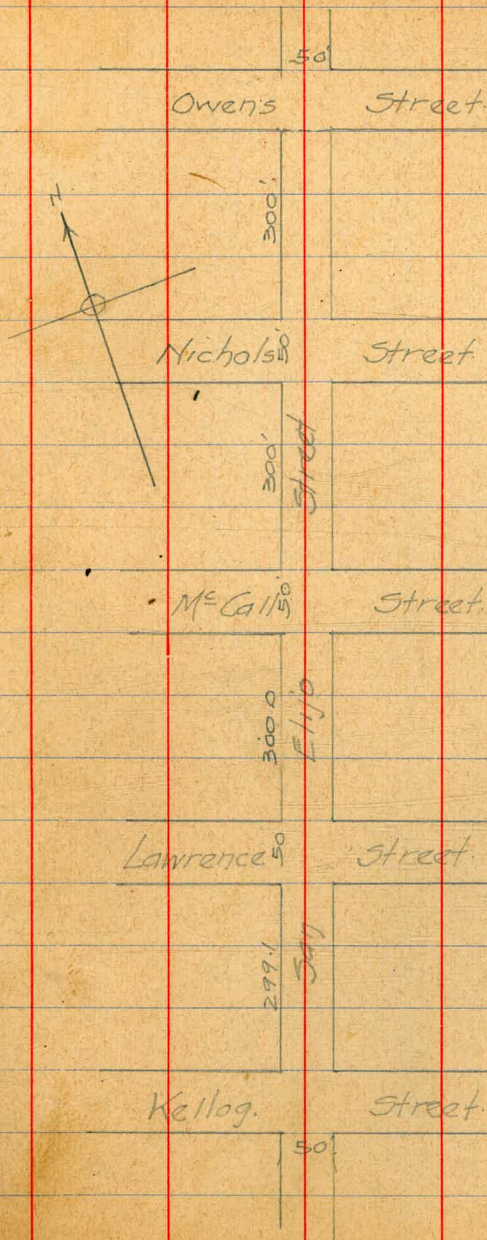
50' South

WL	11.1	95.9
c	11.1	95.9
1/4	10.9	96.1
E	11.3	95.7
1/4	11.8	95.2
c	12.1	94.9
EL	12.4	94.6
T.P.	12.82	94.16

132 95.48

75' South

EL	5.6	99.9
c	5.0	90.5
1/4	4.9	90.6
E	4.4	91.1
1/4	3.9	91.6
c	3.8	91.7
WL	3.4	92.1



## San Elijo

95.48

100' South

WL	50	90.5
C	70	88.5
1/4	72	88.3
1/2	82	87.3
3/4	90	86.5
C	91	86.4
EL	99	85.6

125' South

EL	125	83.0
C	111	84.4
1/4	106	84.9
1/2	95	86.0
3/4	82	87.3
C	73	88.2
WL	60	89.5

150' South

WL	70	88.5
C	84	87.1
1/4	92	86.3
1/2	102	85.3
3/4	119	83.6
C	123	83.2
EL	133	82.2

175' South

EL	145	81.0
C	134	82.1
1/4	129	82.6
1/2	113	84.2
3/4	104	85.1
C	96	85.9
WL	86	86.9

## San Elijo

95.48

200' South

WL	99	85.6
C	113	84.2
1/4	123	83.2
1/2	134	82.1
3/4	145	81.0
C	150	80.5
EL	157	79.8

275' South

EL	168	78.7
C	158	79.7
1/4	156	79.9
1/2	148	80.7
3/4	139	81.6
C	124	83.1
WL	114	84.1

T.P.

1233 83.15

0.76

83.91

250' South

WL	12	82.7
C	25	81.4
1/4	33	80.6
1/2	42	79.7
3/4	51	78.8
C	52	78.7
EL	53	78.4

275' South

EL	75	76.4
C	65	77.4
1/4	62	77.7
1/2	55	78.4
3/4	46	79.3
C	39	80.0
WL	26	81.3

74



Saj Elijo

83.91

300' S- N.L. Nichols - 50' Wide Int. between Nichols

WL	4.0	79.9
C	5.2	78.9
1/4	5.7	78.2
E	6.4	77.5
1/4	7.1	76.8
C	7.9	76.0
EL	8.6	75.3

S.L. Nichols

EL	10.9	73.2
C	10.1	73.8
1/4	9.3	74.6
E	8.6	75.3
1/4	7.7	76.2
C	7.3	76.6
WL	6.4	77.5

25' South

WL	7.2	76.7
C	8.4	75.5
1/4	9.0	74.9
E	10.1	73.8
1/4	10.7	73.2
C	11.2	72.7
EL	12.0	71.9

50' South

EL	13.4	70.5
C	12.8	71.1
1/4	11.8	72.1
E	11.1	72.8
1/4	9.9	74.0
C	9.0	74.9
WL	7.8	76.1

Saj Elijo

83.91

5

75' South

WL	10.4	73.5
C	10.9	73.0
1/4	11.5	72.4
E	12.5	71.4
1/4	13.3	70.6
C	14.1	69.2
EL	15.6	68.3
T.P.	13.01	70.90

1.80

72.70

100' South

EL	6.1	66.6
C	5.1	67.6
1/4	4.0	68.7
E	3.4	69.3
1/4	2.9	69.8
C	2.5	70.2
WL	1.6	71.1

125' South

WL	2.4	70.3
C	3.4	69.3
1/4	3.9	68.8
E	4.8	67.9
1/4	5.3	67.4
C	6.4	66.3
EL	6.7	66.0

150' South

EL	7.2	65.5
C	6.8	65.9
1/4	5.8	66.9
E	5.6	67.1
1/4	4.3	68.4
C	3.4	69.3
WL	2.3	70.5

San Elijo

72.70

175' South

WL	2.8	69.9
C	3.9	68.8
1/4	4.6	68.1
E	5.5	67.2
1/4	6.0	66.7
C	6.8	65.9
EL	7.3	65.4

200' South

EL	7.3	65.4
C	6.8	65.9
1/4	5.9	66.8
E	5.3	67.4
1/4	4.3	68.4
C	3.6	69.1
WL	2.6	70.1

225' South

WL	2.7	70.0
C	3.8	68.9
1/4	4.7	68.0
E	5.3	67.4
1/4	6.1	66.6
C	6.9	65.8
EL	7.4	65.3

250' South

EL	7.5	65.2
C	7.2	65.5
1/4	6.3	66.4
E	5.6	67.1
1/4	4.5	68.2
C	4.0	68.7
WL	2.9	69.8

San Elijo

72.70

275' South

WL	3.3	69.4
C	4.5	68.2
1/4	5.1	67.6
E	5.5	67.2
1/4	6.7	66.0
C	7.3	65.4
EL	8.0	64.7

300' S = N.L. McCall - 50' W. Eft. taken on N. McCall.

EL	8.5	64.2
C	7.6	65.1
1/4	7.5	65.2
E	7.2	65.5
1/4	5.5	67.2
C	4.9	67.8
WL	3.4	69.3

BM Nail NE Cor.

7.58 65.12 65.09<sup>OK</sup>

S.L. McCall.

WL	Note - 2 wire fences both 4.9	67.8
C	sides of bet. McCall and Lawrence, are both out in	67.0
1/4	at about average of 1/2 each.	66.1
E	Old poor fences partly	65.4
1/4	rotted out.	64.4
C		63.9
EL		63.1

75' South

EL	9.8	62.9
C	9.2	63.5
1/4	8.7	64.0
E	8.2	64.5
1/4	7.4	65.3
C	6.4	66.3
WL	4.6	68.1

San Elijo

72.70

50' South

WL	53	67.4
C	6.8	65.9
1/4	7.7	65.0
1/4	8.5	64.2
1/4	9.1	63.6
C	9.9	62.8
EL	9.8	62.9
T.P.	9.14	62.96

3.97

66.93

75' South

EL	4.8	62.1
C	4.6	62.3
1/4	3.9	63.0
1/4	3.7	63.2
1/4	2.8	64.1
C	2.2	64.7
WL	1.0	65.9

100' South

WL	1.6	65.3
C	2.8	64.1
1/4	3.5	63.4
1/4	4.4	62.5
1/4	4.7	62.2
C	5.4	61.5
EL	5.6	61.3

125' South

EL	6.2	60.7
C	5.9	61.0
1/4	5.3	61.6
1/4	4.7	62.2
1/4	3.9	63.0
C	3.3	63.6
WL	2.2	64.7

San Elijo

66.93

150' South

WL	2.1	64.8
C	3.1	63.8
1/4	3.9	63.0
1/4	4.9	62.0
C	5.4	61.5
EL	6.0	60.9
	6.1	60.8

175' South

EL	6.1	60.8
C	5.8	61.1
1/4	5.4	61.5
1/4	5.2	61.7
1/4	4.1	62.8
C	3.4	63.5
WL	2.5	64.4

200' South

WL	2.9	64.0
C	4.1	62.8
1/4	4.7	62.2
1/4	5.7	61.2
C	6.0	60.9
EL	6.7	60.2
	6.8	60.1

225' South

EL	7.5	59.4
C	7.2	59.7
1/4	6.8	60.1
1/4	6.4	60.5
1/4	5.5	61.4
C	5.0	61.9
WL	3.9	63.0

597 Elijo.

66.93

250' South.

WL	3.8	63.1
C	4.9	62.0
1/4	5.7	61.2
E	6.5	60.4
1/4	6.8	60.1
C	7.3	59.6
EL	7.4	59.5

295' South

EL	8.0	58.9
C	7.7	59.2
1/4	6.9	60.0
E	6.3	60.4
1/4	5.7	61.2
C	5.2	61.7
WL	4.1	62.8

300' S. = N.L. Lawrence 50' wide. Int. taken on Lawrence

WL	On E side 597 Elijo bet. Lawrence & Kellog. is	3.8	63.1
C	par 3 wire fence, 17 st. from .5 to .8 ft.	4.8	62.1
1/4		5.3	61.6
E		6.2	60.7
1/4		6.4	60.5
C		7.1	59.8
EL		7.6	59.3

S.L. Lawrence

EL	6.7	60.2
C	6.2	60.7
1/4	5.8	61.1
E	5.5	61.4
1/4	5.0	61.9
C	4.6	62.3
WL	3.5	63.4

597 Elijo.

66.93

8

25' South.

WL	4.0	62.9
C	5.0	61.9
1/4	5.6	61.3
E	6.5	60.4
1/4	6.8	60.1
C	7.1	59.8
EL	7.0	59.9
T.P.	6.43	60.50

5.71

66.21

50' South

EL	6.9	59.3
C	7.0	59.2
1/4	6.6	59.6
E	6.4	59.8
1/4	5.7	60.5
C	5.2	61.0
WL	4.2	62.0

75' South

WL	4.7	61.5
C	5.7	60.5
1/4	6.6	59.6
E	7.2	59.0
1/4	7.6	58.6
C	7.9	58.3
EL	7.9	58.3

100' South

EL	8.7	57.5
C	8.7	57.5
1/4	8.1	58.1
E	7.6	58.6
1/4	6.8	59.4
C	6.1	60.1
WL	5.1	61.1

San Elijo

6621

125' South

WL	5.4	60.8
C	6.4	59.8
1/4	7.3	58.9
1/2	8.1	58.1
3/4	8.4	57.8
C	9.0	57.2
EL	9.1	57.1

150' South

EL	9.1	57.1
C	9.2	57.0
1/4	8.8	57.4
1/2	8.2	58.0
3/4	7.5	58.7
C	6.9	59.3
WL	5.8	60.4

175' South

WL	5.7	60.5
C	7.0	59.2
1/4	7.4	58.8
1/2	8.2	58.0
3/4	8.5	57.7
C	8.8	57.4
EL	8.8	57.4

200' South

EL	8.0	58.2
C	8.2	58.0
1/4	7.8	58.4
1/2	7.5	58.7
3/4	6.6	59.6
C	6.1	60.1
WL	4.8	61.4

San Elijo

6621

9

225' South

WL	4.4	61.8
C	5.7	60.5
1/4	6.1	60.1
1/2	7.1	59.1
3/4	7.5	58.7
C	7.9	58.3
EL	8.1	58.1

250' South

EL	7.7	58.5
C	7.6	58.6
1/4	7.1	59.1
1/2	6.7	59.5
3/4	5.8	60.4
C	5.6	60.6
WL	4.4	61.8

Sag Elijo

6621

275' South

WL		47	61.5
C		59	60.3
1/4		64	59.8
1/4		74	58.8
1/4		76	58.6
C		79	58.3
EL		80	58.2

300' S. = N.L. Kellogg

EL		81	58.1	
C		76	58.6	
1/4		72	59.0	
1/4		70	59.2	
1/4		62	60.0	
C		55	60.7	
WL		51	61.1	
T.P.		1264	53.57	
T.P.	0.40	53.97	1269	41.28
	0.71	41.99		

B.M. Plug NE Rosecharis & Kellogg

8.40 33.59

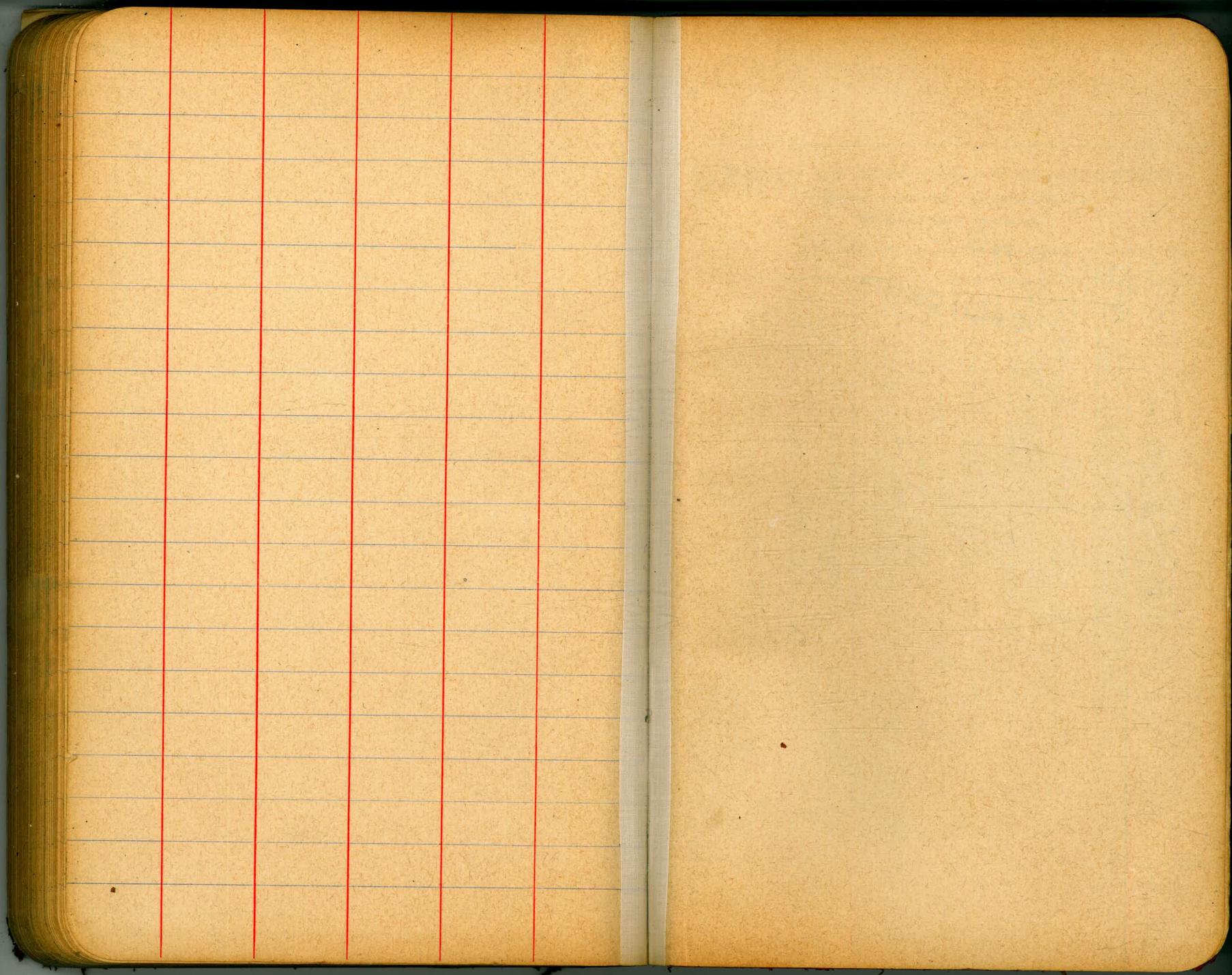
OK.  
33.60

West  
Otter  
Moore

3/22/16.

B.M. 1/4 Mon - Otters & Sag Apt. 1669  
" 300' E of Rosecharis N.L. H. 1669 9.38  
" 1/4 May Lawrence & Sag. Apt. 722

80



7670 Hub. N. of Wash. out.

644544

537  
213

121  
637  
677  
353

ENGINEERING DEPARTMENT,  
CITY OF  
SAN DIEGO,  
CALIFORNIA.

1462

231

2193

2273

3547

3747

3847

3947

4047

4147

4247

4347

4447

4547

4647

4747

4847

4947

5047

5147

5247

5347

5447

5547

5647

5747

5847

5947

6047

6147

6247

412  
124  
430

1219  
410  
2.07

1395345  
7943  
5193645  
3595960  
1402315

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES 1 1/2 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	3.5	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
21	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
22	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
23	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
24	43.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44.2	44.4	24
25	44.5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
26	46.0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
27	47.5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
28	49.0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
29	50.5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
30	52.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
31	53.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
32	55.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
33	56.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
34	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
35	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
36	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.

MADE IN GERMANY.