

1660

PRELIMINARY SEWER



ENGINEERS

FIELD BOOK

No. 403F

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

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

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

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

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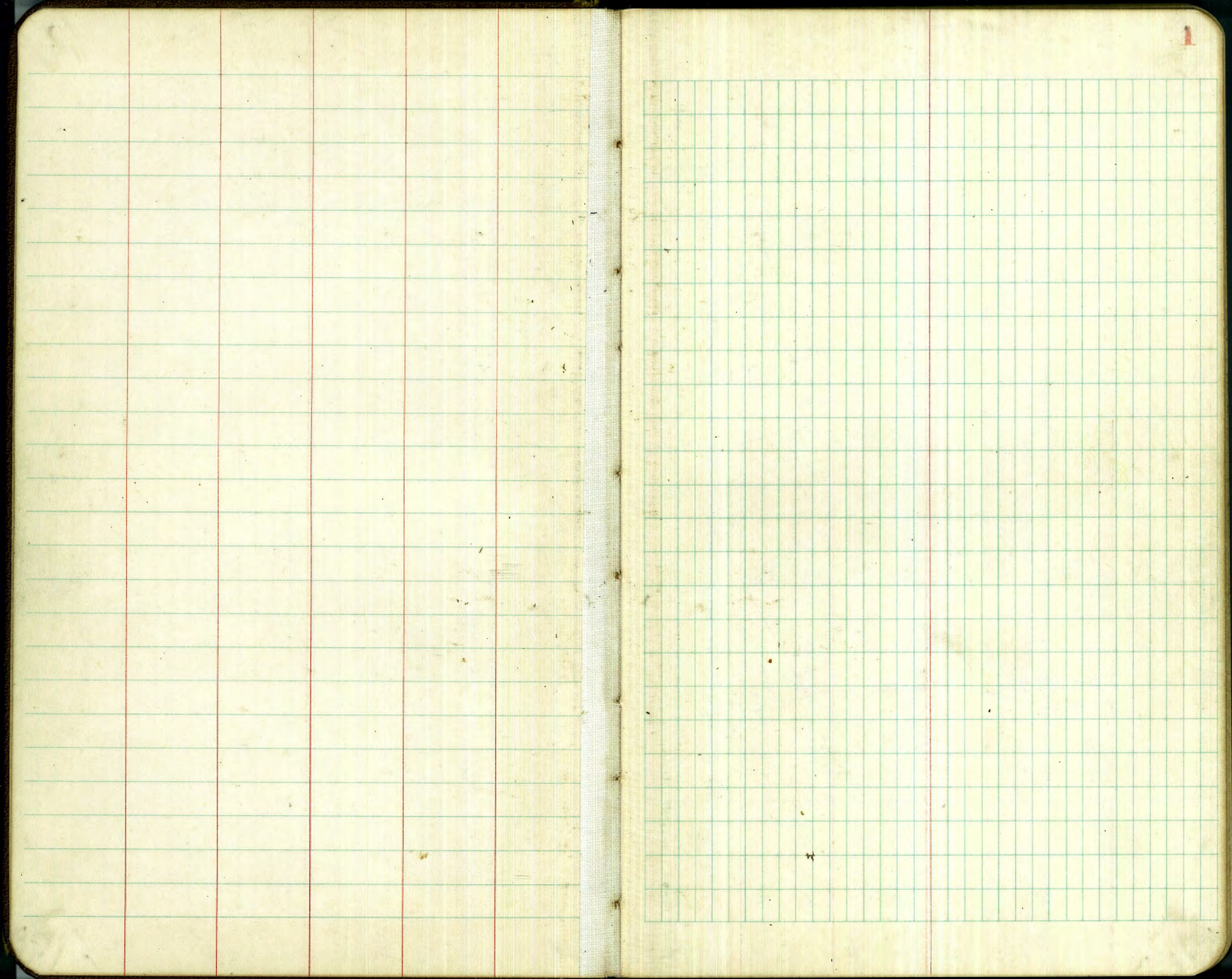
1660

CITY ENGINEER'S OFFICE

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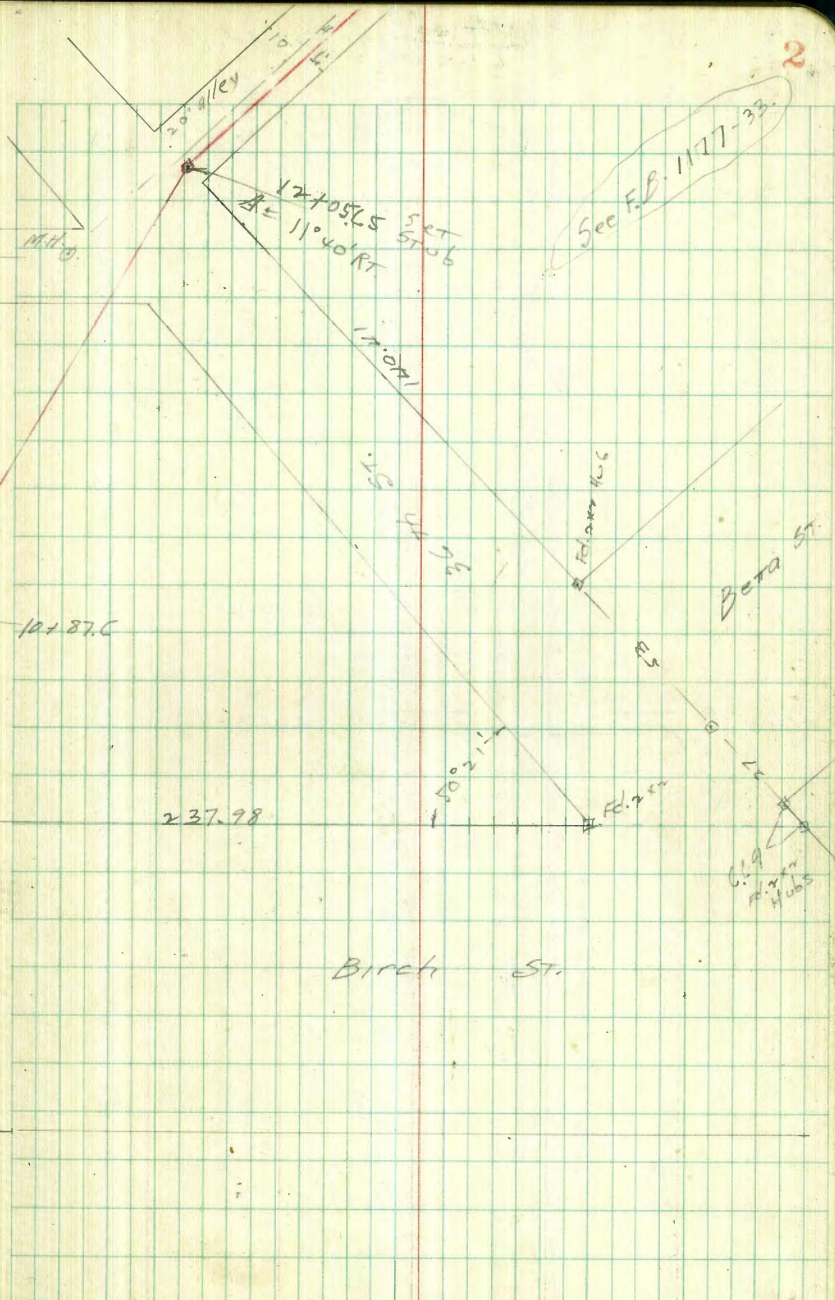
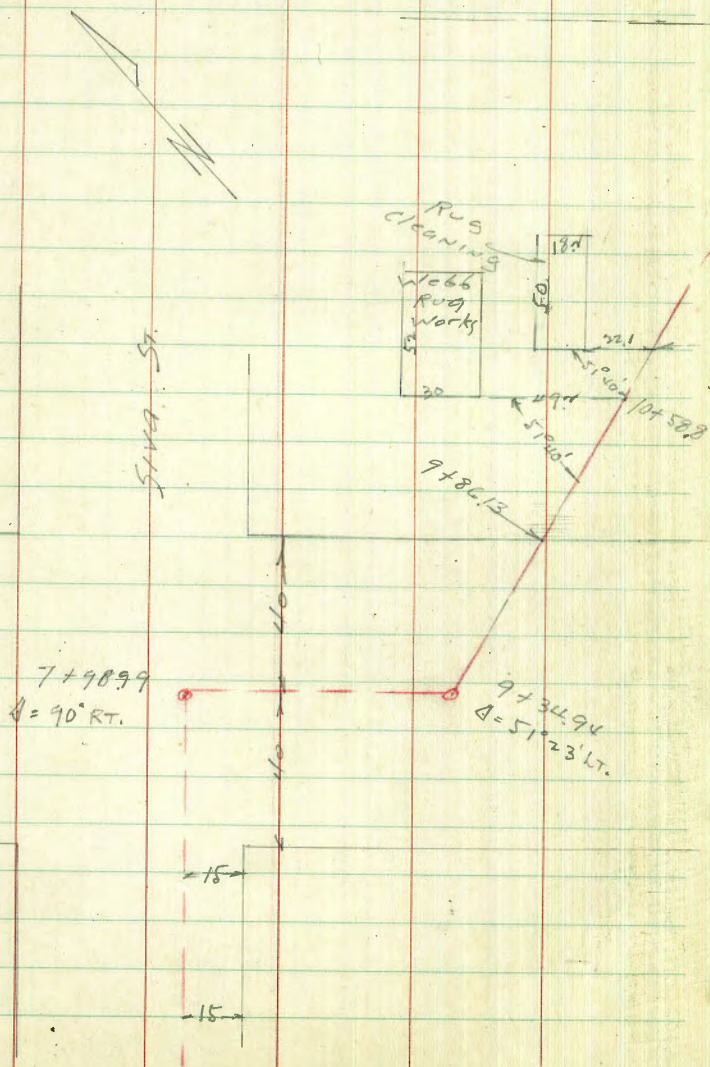
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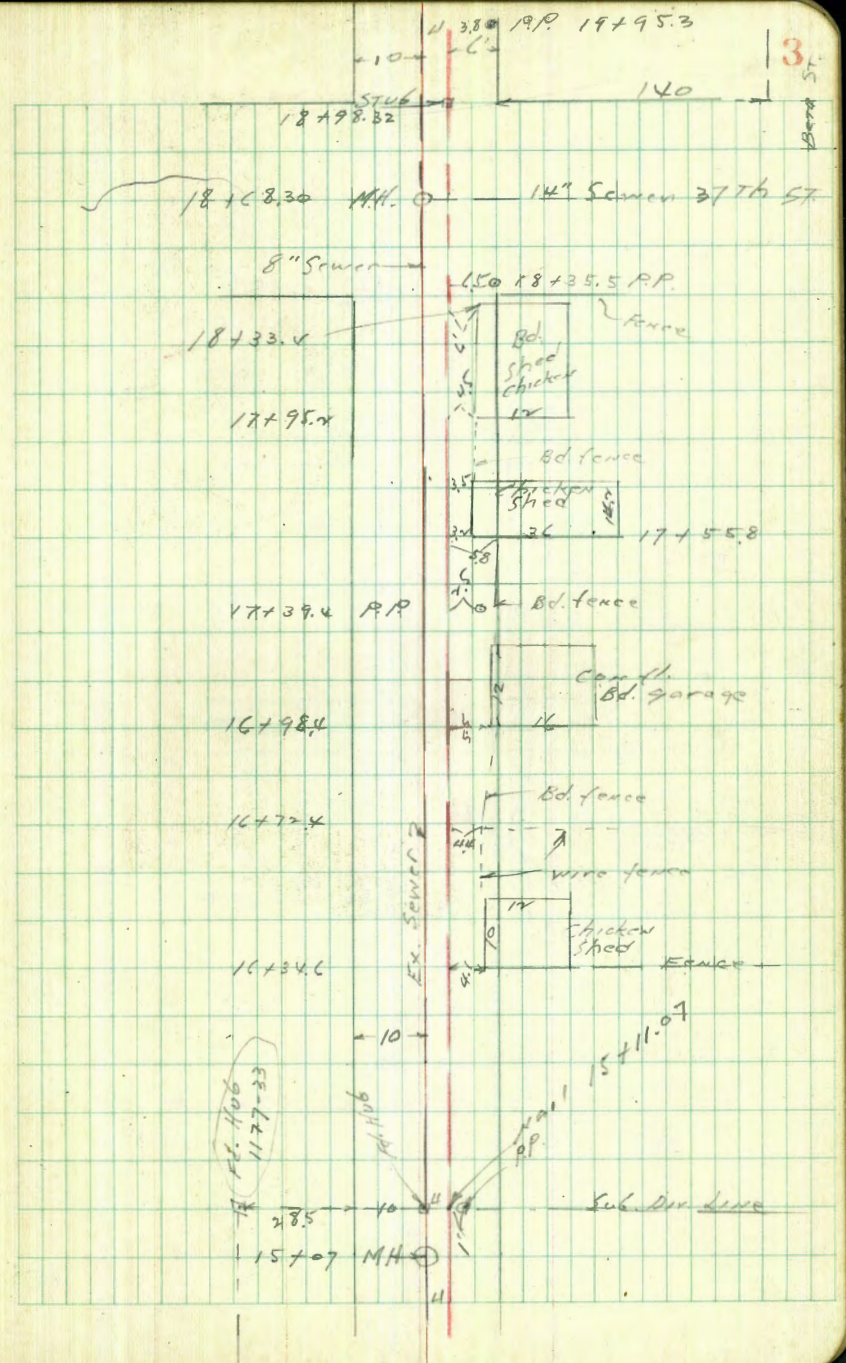
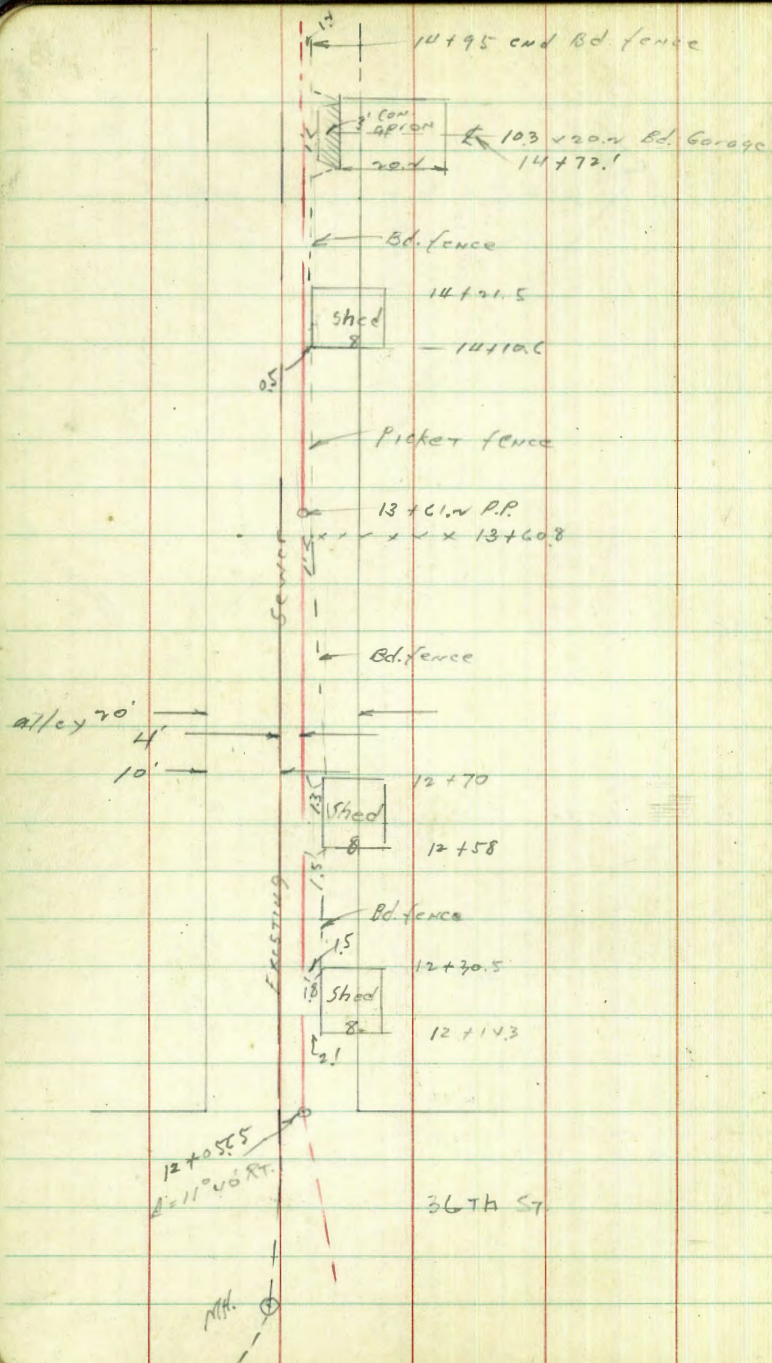
Made in U. S. A.

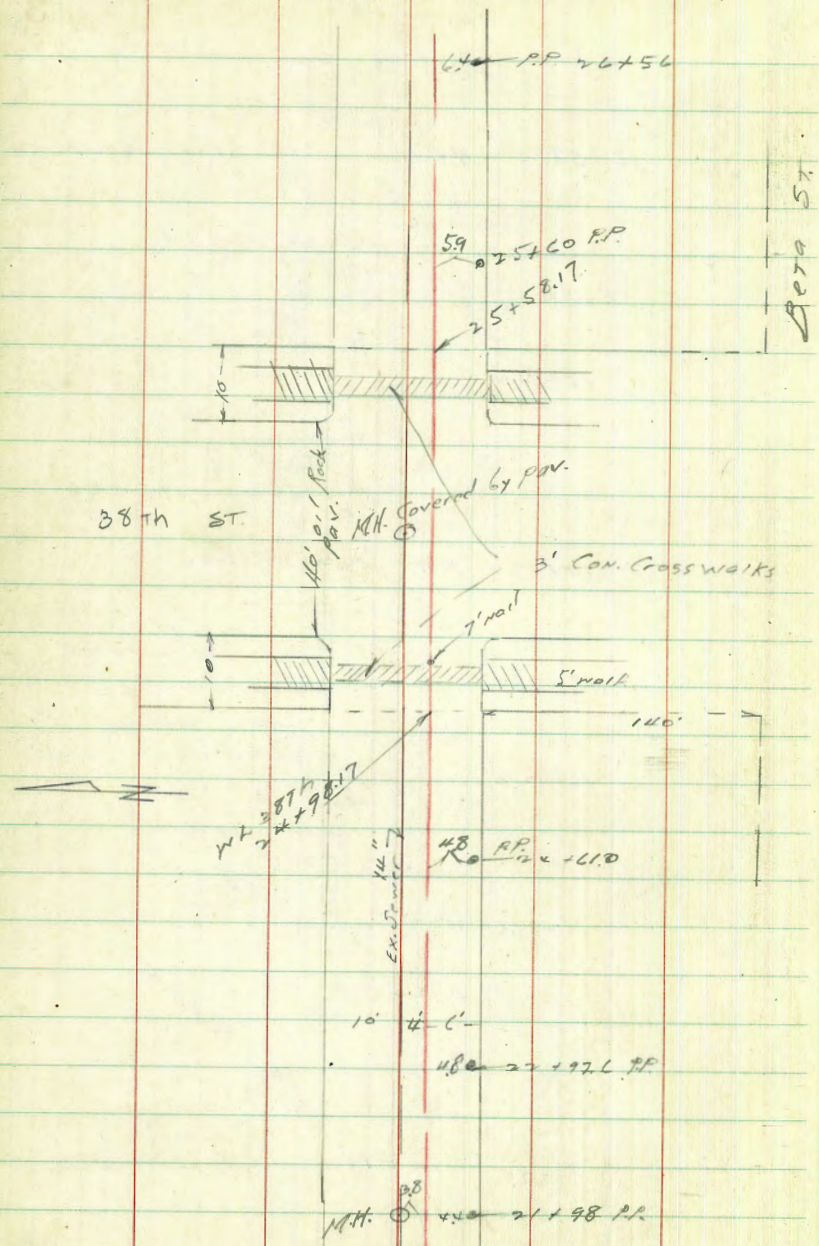


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C.S.K.

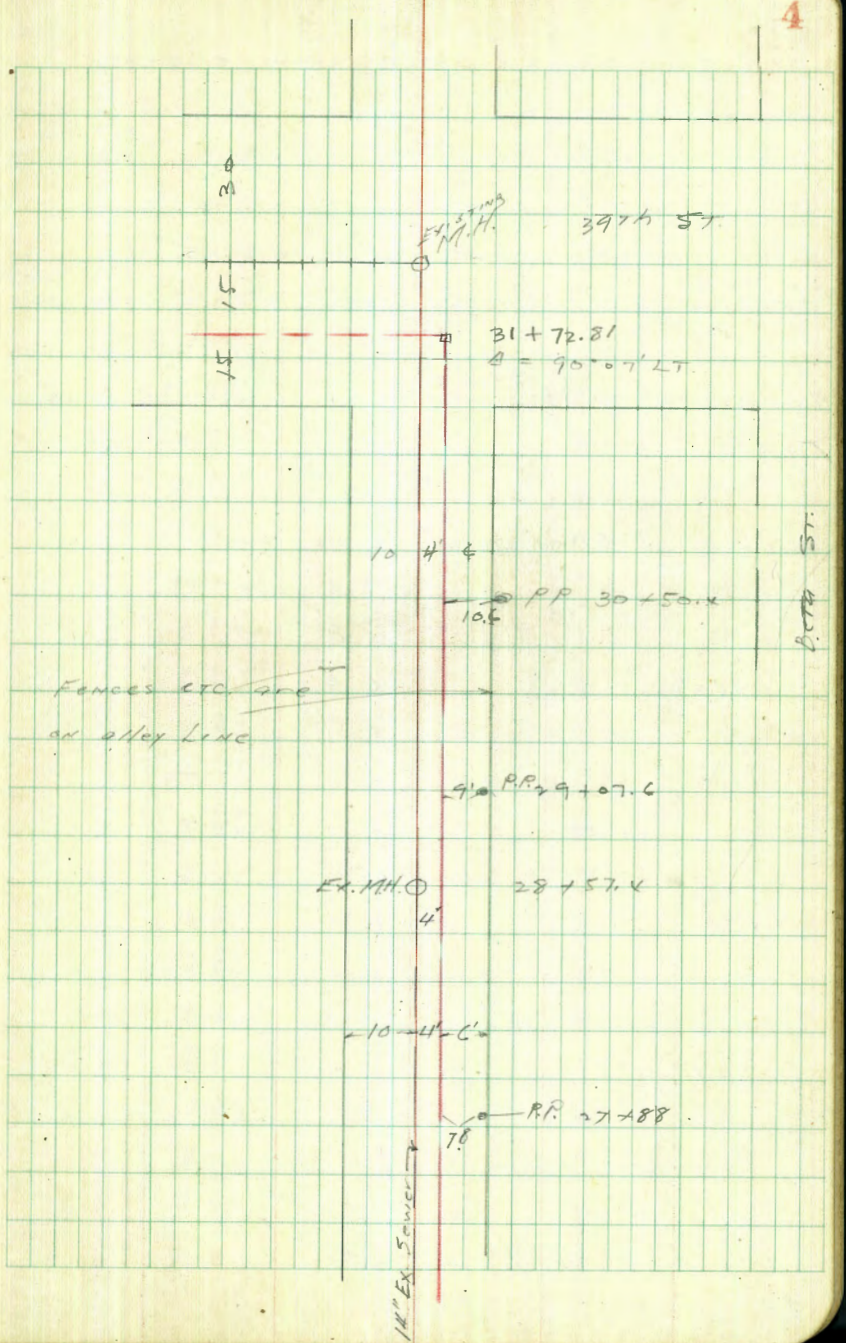
C. Moore Proposed change of align.
Sommerstein
W. Moore ENCANTO TOWN Sewer
9-14-43 Betw. SIVA & 3976







Beta St



Beta St

Fences etc are on alley line

Sewer Levels on Line change (P. 2)

SEBP	2.96	13.09	✓	10.13	3874 + 8029
T.P.	3.98	11.90	✓	5.17	7.92
T.P.	3.99	10.28	✓	5.41	6.49
Fd. iron pipe T.P. pole	5.21		✓	303	7.45
					SE. 36' + BETA MKD 729
7+98.99	A 90° RT	Siva & Birch	✓	2.47	10.19
8+50			✓	4.5	8.2
9			✓	5.4	7.3
9+34.9X	A 51° RT	LT	✓	6.00	6.66
+50			✓	5.5	7.2
+75			✓	6.8	5.9
+81.3			✓	6.9	5.8
10			✓	6.5	6.2
+75			✓	6.7	6.4
"	22 RT		✓	6.5	6.2
"	42 RT	Bot. ditch	✓	11.4	1.3
+58			✓	6.3	6.4
"	9 RT		✓	6.2	6.5
"	24 RT	Bot. ditch	✓	11.4	1.3
+69			✓	3.0	9.7
"	9 LT		✓	6.1	6.6
"	20 LT		✓	5.2	7.5
"	7 RT		✓	6.2	6.5
"	19 RT	Bot. ditch	✓	11.3	1.4

(12.66)

5

10+85		6.7	6.0	✓	edge ditch
"	2 LT	6.7	6.0	✓	
"	10 LT	2.5	10.2	✓	
"	18 LT	5.4	7.3	✓	
"	4 RT	10.8	1.9	✓	
"	33 RT	11.4	1.3	✓	ditch
"	33 RT	7.3	5.4	✓	
11+00		10.6	2.1	✓	ditch
"	6 LT	7.1	5.6	✓	
"	17 LT	2.3	10.4	✓	
"	25 LT	5.3	7.4	✓	
"	19 RT	11.3	1.4	✓	ditch
"	31 RT	6.0	6.7	✓	
11+25		10.7	2.0	✓	
"	9 LT	10.4	2.3	✓	
"	19 LT	7.2	5.5	✓	
"	23 LT	2.0	10.7	✓	
"	36 LT	6.2	6.5	✓	
"	12 RT	11.0	1.7	✓	
"	28 RT	6.2	6.5	✓	
11+50		11.0	1.7	✓	ditch
"	12 LT	11.0	1.7	✓	
"	20 LT	5.2	7.5	✓	
"	5 RT	10.7	2.0	✓	ditch
"	17 RT	5.7	7.0	✓	

12.66

11 + 63		10.5	2.2	
"	5 LT	11.7	1.0	
"	12 LT	10.6	2.1	
"	21 LT MH	5.69	6.97	RIM
"	"	11.09	1.57	F.L.
"	30 LT	6.0	6.7	
"	8 RT	5.8	6.9	
11 + 86 + 1/2	15" Water Line	10.4	2.5	ground
"	"	12.5	0.1	Top 16" pipe
12 + 05.65 A	11" 40' RT	7.55	5.11	STUB
"	10' RT	5.8	6.9	
"	3' LT	7.7	5.0	
"	7 LT	10.1	2.6	ditch
"	13 LT	10.9	1.8	"
"	17 LT	10.5	2.2	"
"	30 LT	5.8	6.9	
12 + 14		6.1	6.6	
"	5' RT	5.2	7.4	
"	2 LT	6.3	6.4	
"	15 LT	11.4	1.3	ditch
"	23 LT	11.5	1.1	"
"	40 LT	5.7	7.0	

T.P. STUB C.51 $\langle 11.62 \rangle$ 7.55 $\langle 5.11 \rangle$ 12 + 05.65

11.52

6

12 + 50		4.8	6.8	
"	25 LT	4.6	7.0	S edge ditch
"	37 LT	11.0	0.6	"
13		4.8	6.8	
+ 50		5.1	6.5	
14		4.8	6.8	
+ 50		4.8	6.8	
15		4.7	6.9	
15 + 07		4.7	6.9	
"	4' LT MH RIM	5.38	$\langle 6.24 \rangle$	
"	" " FL	11.63	$\langle -0.01 \rangle$	
15 + 50		4.4	7.2	
16		4.5	7.1	
+ 50		4.3	7.3	
17		4.5	7.1	
T.P. C.15	$\langle 13.48 \rangle$	4.29	$\langle 7.33 \rangle$	
17 + 50		6.0	7.5	
18		5.7	7.8	
+ 42		5.7	7.8	
+ 55		7.0	6.5	
18 + 68.3	Int. 14" Sewer	6.5	7.0	
"	4' LT MH RIM	6.47	7.01	
"	" " " FL	14.47	$\langle -0.99 \rangle$	FL 14" Line
18 + 78		7.3	6.2	

1348

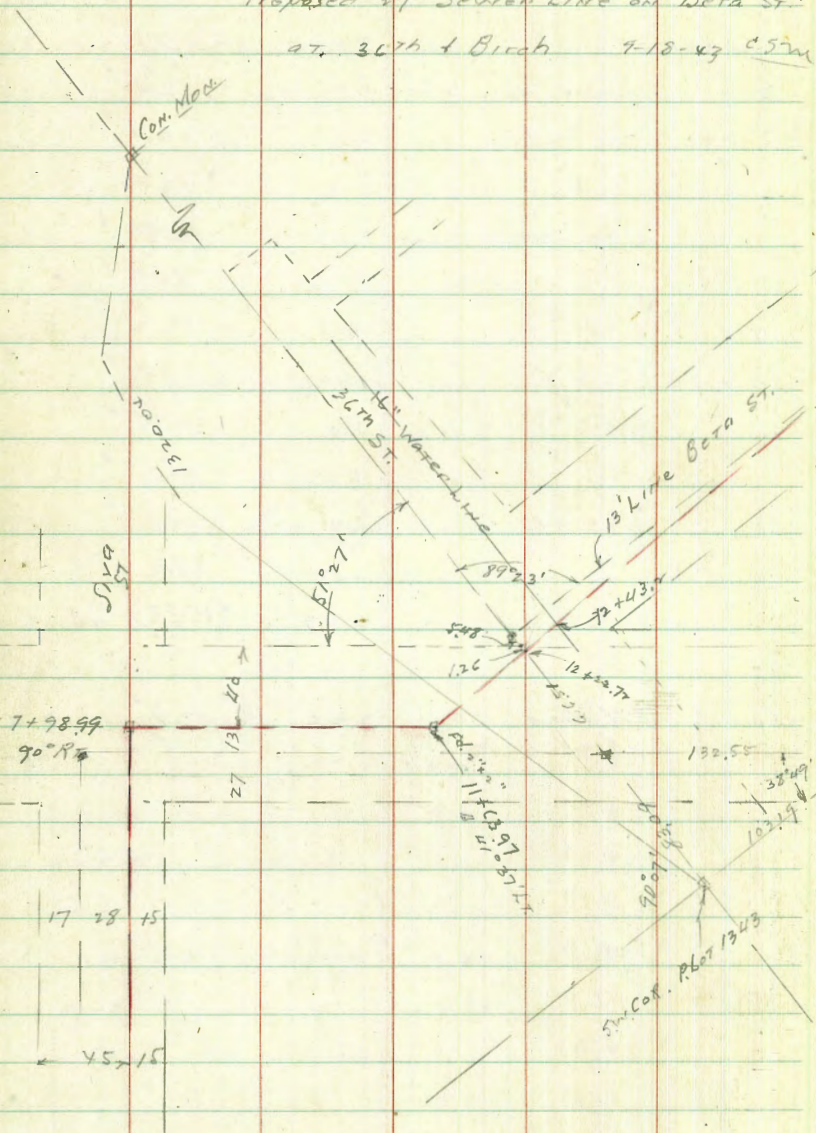
18+85		5.7	8.3	✓
18+98	37 E.L. 377h	5.15	8.33	✓ STUB
19+50		5.7	8.1	✓
20		5.1	8.4	✓
+50		5.7	8.3	✓
21		5.0	8.5	✓
250		4.8	8.7	✓
21+98		4.7	9.1	✓
"	4' LT M.H. Rim	4.31	9.17	✓
"	" " FL	13.65	0.17	✓
T.P.	4.93	3.61	9.27	✓
22+50		5.2	8.9	✓
23		5.6	9.2	✓
+50		5.3	9.5	✓
24		4.9	9.9	✓
+50		4.8	10.0	✓
24+98.17	W.L. 387h	4.6	10.2	✓
25+0.8		5.27	9.53	✓
+78	H.H. 4' LT. covered with Pav.	4.22	9.92	✓
+48		4.97	9.83	✓
+58.17	E.L. 387h	4.6	10.2	✓
4' L		3.5	11.3	✓
+50		3.7	11.4	✓
T.P.	4.63	3.39	11.41	✓

1804

27		6.1	11.9	✓
+50		5.9	12.1	✓
28		5.0	12.4	✓
+50		5.6	12.4	✓
+57.4		5.6	12.0	✓
"	4' LT M.H. Rim	5.15	12.89	✓
"	" " FL	16.55	1.49	✓
29		4.8	13.2	✓
+50		4.3	13.7	✓
30		3.7	14.3	✓
+50		3.7	14.6	✓
31		3.7	14.6	✓
+50		2.7	15.3	✓
31	+72.81 A 90° 07' LT	2.49	15.55	✓ STUB
check to M.H. Rim		2.26	15.78	✓
15' E & 4' N of A RT.			15.76	0.02

Proposed 27" Sewer Line on Beta St.

at 3076 + Birch 7-18-43 C.S.M.



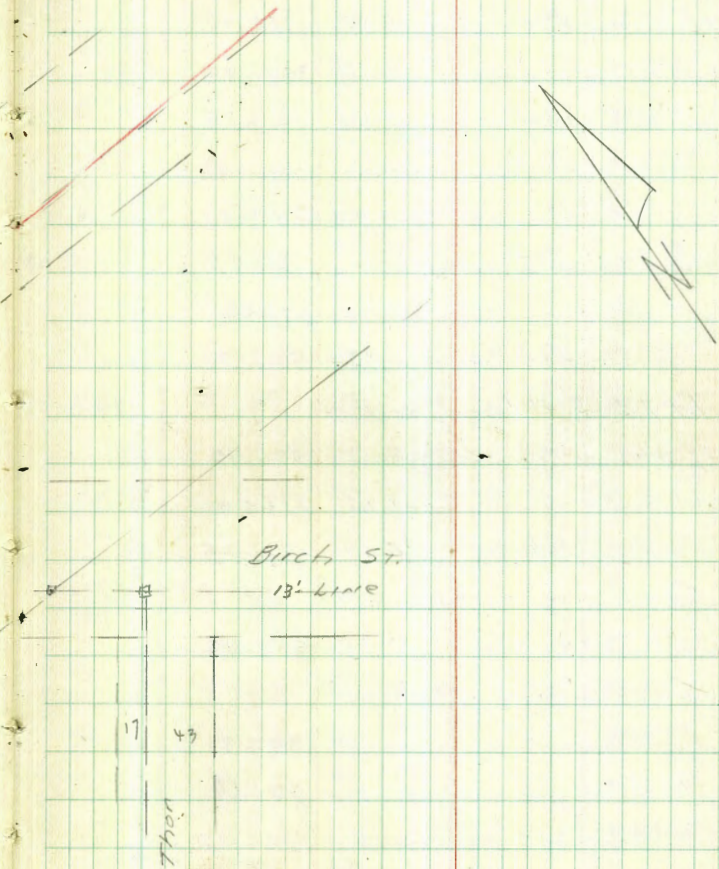
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C.S.R. 1

8

B.M.
Iron Pin in P.P.
7.45 (P. 5)

1.38 8.83
12 + 43.0 = Tap 10" Water Pipe 7.1

1.73



17 43
Thor

Walker
Hazard
Harding
11-19-43

Elevations Sewer Laterals
And Water Mains in Alley
Between 37th + 38th St.
From University Ave to Wightman
Block 56, City Heights

1.19	353.28	352.09	
0+00 = S.W. Univ. L. Pav.	5.38	347.90	
0+02 on Top 6" Water Main	8.48	344.80	5' East of L.
0+20 on Rim MH	5.90	347.38	
1+26 = S. Sewer Lateral on East			
T.P. #1	3.83	344.14	12.97 340.31
19' W. of E. of Alley on Top 4" Cast Iron Pipe	7.53	336.61	336.28
38 " " " " "	7.08	337.06	
T.P. #2	5.03	344.24	4.93 339.21
1+74 = S. 4" Lateral on East			335.67
25' East of E. Alley on Top "	8.12	336.12	
41' " " " " "	7.74	336.50	
T.P. #3	0.03	338.78	5.49 338.75
5+08			
5' East of E. on 1" Gas Lat.	11.35	327.43	
6+50 = S. Gate 6" Water			
on Top Valve	11.45	327.33	
" " 6" Pipe	13.12	325.66	
T.P. #4	0.82	327.22	12.38 326.40
chk. NW B.P.	7.51	319.71	319.70 - RM. 0.01 = Error

Additional Elev. on opp Page

indexed
c.s.d.

Levels for 6" Water Line 9
Ground Profile 5' East of E. Alley

56 Univ.	0.34	347.72	347.38	Rim MH. opp Page
0+00				
+20 = S.H.	0.4	347.3		
+50	3.2	344.5		
+100	7.7	340.0		
+26	8.6	339.1		
1+33 on Floor Garage on E	9.1	338.6		
1+50	8.8	338.9		
1+69 = N edge 4 Car Garage on West				
N.L. on Conc. Apron	7.70	340.02		
+2' " " Floor	7.55	340.17		
2+04 = S end Above Garage	7.68	340.04		2" W.W.L. on Floor
1+74	8.7	339.0		
2+100	9.0	338.7		
2+10 = N edge 6 Car Garage on W				
N.L. on Floor	8.15	339.57		
2+75 = S edge Above Garage	8.17	339.55		W.L. on Floor
2+33 = L Garage on E	9.5	338.2		did Floor
2+70 = " " " "	9.1	338.6		" "
2+50	8.9	338.8		
+75	9.0	338.7		
3+00	10.1	337.6		
T.P. 0.28	337.84	10.16	337.56	

Cont. P. 10

Profile Levels Alley.

Cont. from P-9

337.84

3754 = N edge Garage on East = North Ept.	2.75	335.09	Wood Floor
3752	2.0	335.7	
4700	3.8	334.0	
450	5.6	332.2	
4795 = S door to Basement on W	7.15	330.69	Conc. Under Door Main Floor is dirt
5706 " " " " " "	7.41	330.43	" " "
5700	6.7	331.1	
708 over 11" Bus	7.1	330.7	on West
5730 = 5" Doorway to Basement	7.77	330.07	Conc. Floor this side
5747 on Conc. lip to Basement	7.92	329.92	
5750	7.9	329.9	
5762 = N edge 2.5" Conc. Walk on W Parallel to Alley	7.78	330.06	W. Alley = East edge Walk
5787 S " " " "	7.97	329.87	
6700	8.8	329.0	
714 = N Gut Wightmore	9.7	328.1	
W.L. on ch. Rd	8.1	329.7	
chh	11.45	326.39	
		326.40	
		001	

Const. Grade 6" Main Grid Book 210-55

Check Levels
 Encanto Trunk Sewer Construction
 Constructors Grades - Grd. Book 212
 From Dalbergia & Siva

Dalbergia & Siva	To 69th & Imperial	BM 131 Mon-Grd. 212-2
0+00	2.82	5.59 01
+25	0.59	7.82
+50	7.28	0.43
+75	6.59	1.82
1+00	2.13	6.28
+25	4.26	3.45 01 H
+50	1.76	3.65
+75	5.07	3.34 01
2+00	4.55	3.86 01
+25	4.80	3.61 01
+50	4.31	4.10 01
+75	4.59	3.82 02
3+00	4.89	3.52 02
+25	4.96	3.45 02
+50	5.18	3.23 02
+75	5.25	3.16 02
4+00	4.94	3.47 02
+1899 = 1/4 MH 1 = Δ H 1031'30	4.83	3.58 02
+50	4.68	3.73 02
+75	4.44	3.97 02
5+00	4.07	4.34 02
+25	4.17	4.24 02

Indexed
 C.S.K.

π
 841

5+50	4.38	4.03 01
+75	4.00	4.41 02
6+00	4.19	4.22 02
+25	4.08	4.33 02
+50	4.21	4.20 01
+75	2.99	5.42 02
7+00	2.02	6.39 01
T.P. 6.99	13.38	2.02 6.39 01
chk 6+50 -	9.18	4.20
chk 9+349# P-2	6.66	6.72

Note.

This set of stakes were all re-set
 see P-12 for new check levels

Mulker
Hogurd.
Hurdin

~ Checks levels ~
 ENRIANTO TRUNK SEWER CONSTRUCTION
 GRADE Book 212 - P. 4
 From DeLburgia + Siva
 To 69th Imp.

chk BM	2.77	8.48	5.71
0+00		2.80	5.68
+25		1.05	7.43 ol Low
+50		8.40	0.08
+75		7.08	1.40 ol "
1+00		2.12	6.36 ol H
+25		4.97	3.51 ✓
+50		5.12	3.36 ol
+75		4.98	3.50 ol High
2+00		4.68	3.80 ol
+25		4.76	3.72 ol
+50		4.46	4.02 ol
+75		4.76	3.72 ol
3+00		5.10	3.38 ol
+25		5.17	3.31 ol
+50		5.34	3.14 ol
+75		5.44	3.04 ol
4+00		5.16	3.32 ol
+18.99 - 2174#1 = 1'31"90 H		4.91	3.57 ol
+50		4.80	3.68 ol
+75		4.42	4.06 ol
5+00		4.29	4.19 ol
+25		4.06	4.42 ol

8.48

5+50	4.59	3.89	0.14
+75	4.14	4.34	0.1
6+00	4.24	4.24	.02
+25	4.49	3.99	.03
7P			
750	2.32	13.46	4.34
4.14			0.1
6+75	8.20	5.26	.02
7+00	6.90	6.56	.02
+25	6.06	7.40	.02
+50	4.77	8.69	.02
+75	3.82	2.64	.02
7+98.99	14	2.83	10.63
✓			
	3.05	10.41	.02
8+75	4.04	2.42	.02
950	4.76	8.70	.02
+75	5.45	8.01	.02
9+00	6.06	7.40	.01
+25	6.27	7.19	.02
chk starting BM in grid 212-4	6.80	6.66	-
9+50	6.58	6.88	.02
+75	7.37	6.09	.02
10+00	7.38	6.08	.01
+25	12.69	0.77	.02
+50	7.93	5.53	.01
+75	7.55	5.91	.02
11+00	7.17	6.29	.02

12

1346

+25		7.93	6.03	02
+50		11.64	1.82	02
11+6397 = MH#3	SL 42°46	10.54	2.92	01
12-3-43	Grades see Grid 212-6			
	4.72	10.73	6.01	Blow stub 11+25 Grid 212-6
11+6397 = MH#3		7.82	2.91	
+75		7.97	2.76	01
12+00		8.19	2.54	
+25		8.21	2.52	01
+50		8.22	2.51	01
+75		8.49	2.24	
13+00		7.65	3.08	01
+25		7.81	2.91	
+50		7.60	3.13	01
+75		6.87	3.86	01
14+00		6.00	4.73	01
+25		5.18	5.55	01
+50		4.94	5.79	
+75		4.89	5.84	
15+00		5.02	5.71	
+25		5.11	5.62	01
+50		5.21	5.52	01
+75		5.37	5.36	01
16		5.25	5.48	
+30 = MH#4		5.16	6.57	
+50		4.99	5.74	

Encanto Trunk Tower Const. 13
Check Levels

10.73

16+75		5.03	5.70	01
17+00	Covered by Ground			
17+25		4.76	5.97	01
+50		4.56	6.17	02
+75	5.81	11.71	1.83	5.90 02
18+00		5.41	6.30	02
+25		5.24	6.47	03
+50		4.78	6.93	03
+75		4.79	6.92	03
19+00		5.35	6.36	02
+25		5.35	6.36	02
+50		5.03	6.62	02
+75		4.73	6.98	01
20+00		4.72	6.99	02
+25		4.70	7.01	
+50		4.78	6.93	02
+75		4.56	7.15	01
21+00		4.50	7.21	01
+25		4.46	7.25	02
+50		4.37	7.34	01
+75		4.18	7.53	02
22+00		3.88	7.83	02
+25		3.89	7.82	02
+50		3.89	7.82	01
+75		3.73	7.98	01

TP	1171				
23+00	6.53	14.54	3.70	8.01	.02
+25			6.60	7.94	.02
+50			6.71	7.83	.01
+75			6.74	7.80	-
24+00			6.30	8.24	.01
+25			6.63	7.91	.02
+50			6.63	7.91	.01
+75			6.52	8.02	.02
25+00			6.47	8.10	.04
+25			6.06	8.48	.01
+50			5.95	8.59	.01
+75			5.57	8.97	.01
Chk BTA SE. Bch + 38 th * corrected			4.40	10.14	
Grid 212-8	4.40	14.53		10.13	
26+05			5.04	9.49	.01
+25			4.21	10.32	-
+50			4.24	10.29	-
+75			3.63	10.90	-
27			3.26	11.27	.01
+25			3.25	11.28	-
+50			2.90	11.63	-
+75			2.84	11.69	.01
28+00			2.93	11.60	
+25			2.85	11.68	-
+50			2.61	11.92	-

Check Levels

Encanto Sensor Construction

14

TP	14.53				
28+75	7.98	20.09	2.42	12.11	.02
Dble chk 28+00			8.47	11.62	.02
29+00			7.91	12.18	.03
+25			7.69	12.40	.03
+50			7.53	12.56	.03
+75			7.17	12.92	.03
30+00			6.35	13.74	.03
+25			5.72	14.39	.03
+50			5.46	14.63	.03
+75			5.43	14.66	.03
31+00			5.40	14.69	.03
+25			5.46	14.63	.02
+50			5.60	14.49	.02
+75			5.61	14.48	.03
32+00			5.48	14.61	.03
+25 ⁹⁵ = 2 nd 11/18 + 20 ⁰⁰ 7			5.44	14.65	.03

Walker
Hazard
Hazard
12-14-43

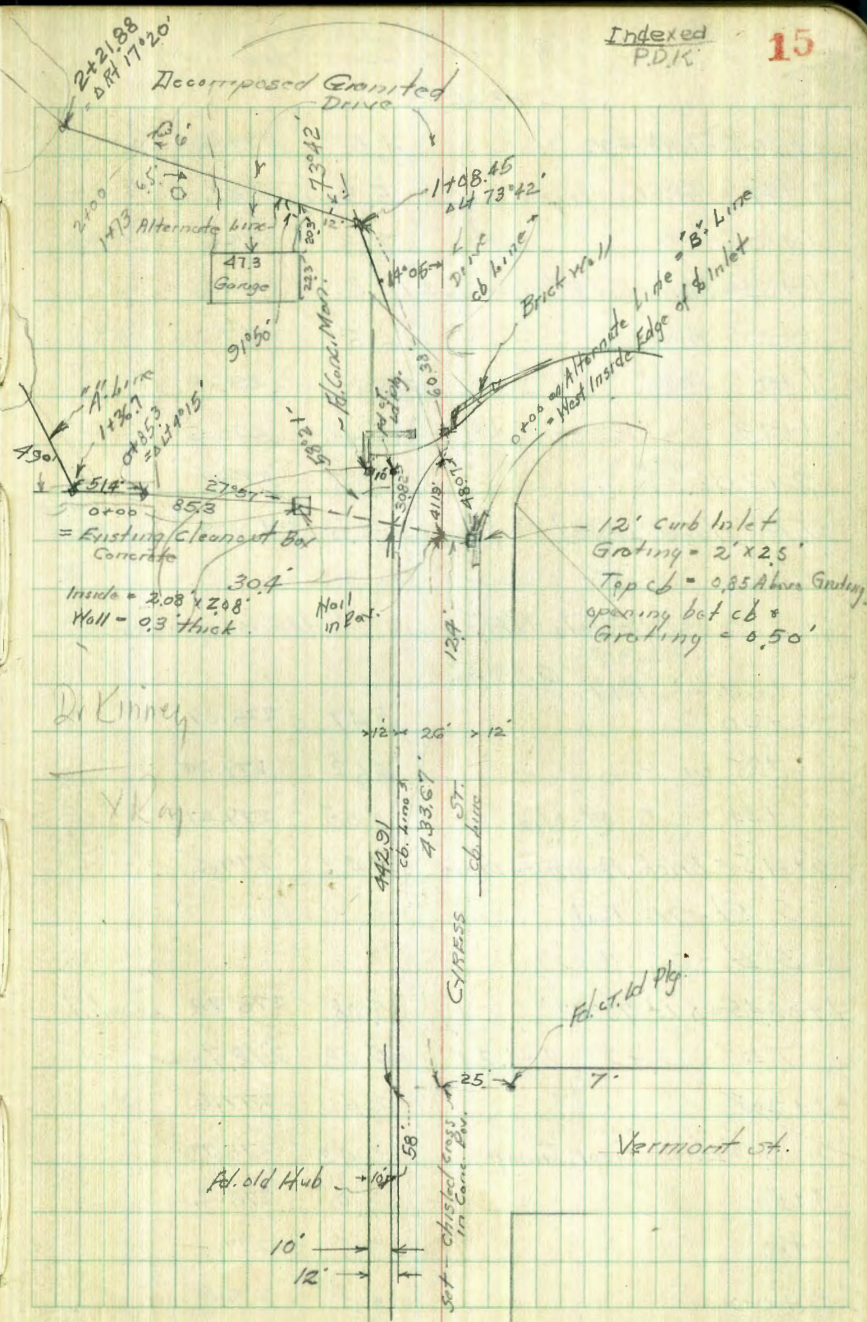
Location Proposed Culvert
at End of Cypress St. and Cypress Way.
across lots 2 and 1
Map #1790 - Marston Hills.

Levels - "A" - Line

B.M.	1.28	286.22		284.94
TP	1.21	283.86	3.57	282.65
South inside edge Inlet = 0+42.8 "A" line on Grating.		5.47		278.39
0+42.8 on Flow 16" Conc. Pipe		7.27		276.59
0+00 on Top 2.08' x 2.08' Box		3.54		280.32
0+00 on Flow 16" Conc. Pipe		7.90		275.96
+25 on Grated Drive		2.9		281.0
+49.5 " " " at cb		2.9		281.0
+49.6 Top 4" Curb Drive		2.44		281.42
+75		2.6		281.3
0+85.3 = Alt 27° 57'		2.96		280.90
1+00 in E. 3' Grated Walk		3.5		280.4
+14 = Alt " " "		3.9		280.0
+17 = 3" Orange Tree 5.3' Rt				
+20 = W. side Walk		4.0		279.9
+31 = 3 1/2" Orange Tree 3' Rt				

Cont. P. 16

Run Canyon



DeKinney

V.K.M.

Vermont St.

"A" Line Cont. from P-15

283.86 ✓

1+36.7 = Δ Rt 42°	4.3	279.6	
1+47 = Rim Canyon	5.3	278.6	
1+50	7.3	276.6	
1+54 = Flow = End 8" Pipe culvert	11.3	272.6	
1+67 in Wash	16.8	267.1	
1+80 " "	28.1	255.8	
1+93 " "	30.4	253.5	
2+10 " "	37.5	246.4	
TP Hand Level	34.0	249.9	✓ Jump on Rock

Levels - "B" Line = Alternate line

283.86

W. Inside edge Inlet = 0+00	5.47	278.39	
+25 on Pipe	4.62	279.29	
+44 " " W. edge	4.05	279.81	
0+61.5 = Brick Post Gate Drive	4.4	279.5	
5' Rt. = N Post			
5' Lt. = S "			
1+08.45 = Δ Lt 73°42'	5.08	278.78	on Stub
TP 2.43	281.21	5.08	278.78 ✓
1+205	2.6	277.6	
20.3' Lt. on Floor Garage	2.43	278.78	
1+50	3.0	278.2	
+80	3.5	277.7	
2+00	4.4	276.8	

"B" Line

16

281.21 ✓

2+21.88 Rt 17°26'	5.28	275.93	
+25 = Rim Canyon	5.4	275.8	
2+35 in "	12.7	268.5	
2+60 " " "	23.0	258.2	
+73 in Canyon	27.0	254.2	
2+86 = S " " Approx 30° Rt	29.5	251.7	
Hand Level			
chk. Stamp opp Page	31.9	249.3	✓
		249.9	
		0.6	
TP 4.88	283.66	2.43	278.78 ✓
TP 4.78	286.24	2.20	281.46
chk. starting 8X1.	1.31	284.93	✓
		284.24	
		0.01	

Walker
Hogard

Check Levels
Encanto Sewer
From Station 45+10.25

for
Const Grades see Grade 212-11

Sta	8.62	26.10	17.48	
45+10.25				
+40			8.57	17.53 ✓
+70			8.73	17.37 01
46+00			8.18	17.92 ✓
+25			8.37	17.73 ✓
+50			7.59	18.51 ✓
+75			6.24	19.16 ✓
47+00			6.56	19.54 01
+25			6.39	19.71 01
+50			6.17	19.93 01
+75			5.46	20.64 01
48+00			5.26	20.84 01
+25			4.66	21.44 02
+50			4.26	21.14 01
+75			5.12	20.98 ✓
49+00			4.96	21.14 01
+25			4.79	21.31 01
+50			4.62	21.48 01
+75			4.48	21.62 01
50+00			4.37	21.73 01
+20.44-A			4.24	21.86 01
+50			4.13	21.97 01

2610

17

50+75			3.97	22.13 01
51+00			3.76	22.34 02
+25			3.65	22.45 03
+50	6.45	29.03	3.52	22.58 03
+75			6.37	22.66 04
52+00			6.43	22.60 04
+25			6.53	22.50 04
+50			6.21	22.82 04
+75			5.99	23.04 04
53+00			5.80	23.23 04
+25			5.57	23.46 04
+51.08-A			5.36	23.67 05
+75			5.13	23.90 05
54+00			5.03	24.00
Re run from station 51+00				
	8.57	26.05	1	17.48
TR				
51+00	6.49	28.83	3.71	22.34 ✓
+25			6.38	22.45 03
+50			6.25	22.58 01
+75			6.17	22.66
52+00			6.23	22.60
+25			6.33	22.50
+50			6.01	22.82
+75			5.79	23.04
53+00			5.60	23.23

Check Levels
 Enlanto Tower Cont. from
 p. 17

28.83

53+25			5.37	23.46	04
+51.08			5.17	23.66	04
+75			4.94	23.82	00
54+00			4.84	23.99	04
+25			4.81	24.02	04
+50			4.90	23.93	03
55+00			4.95	23.88	03
+25			4.51	24.32	03
+50			4.20	24.63	04
+75			3.83	25.00	03
56+00			3.38	25.45	02
+35			2.83	26.00	03
56+70 = A			2.24	26.59	03
7.P					
57+00	6.24	33.29	1.78	27.05	03
+25			6.00	27.29	02
+50			5.95	27.34	02
+75			6.12	27.17	02
58+00			6.49	26.80	03
+25			6.59	26.70	02
+50			6.72	26.57	03
+75			6.61	26.68	04
59+00			6.49	26.80	03
+30			6.15	27.14	03
+60			5.67	27.62	04
+92.97 = A			4.71	28.58	04

18

33.29

60+25			4.77	28.52	03
+50			4.89	28.40	03
+75			4.47	28.82	04
61+00			4.10	29.19	03
+25			3.87	29.42	03
+50			3.07	30.22	04
+75			4.41	28.88	04
62+00			5.86	27.43	04
+25			6.32	26.97	00
+50			6.69	26.60	04
+75			6.96	26.33	04
63+00			6.94	26.35	03
7.P	11.15				
+35.51 = A	37.62		6.80	26.49	02
				26.47	Correction
+70			11.02	26.60	01
64+00			11.16	26.46	01
+25			11.04	26.58	02
+50			11.15	26.47	02
+75			10.54	27.08	03
65+00			9.21	28.41	
+30			6.68	30.94	
65+61.30 = A					
= 68+04.50 = Equation			3.73	33.89	
68+25			3.27	34.35	
+50			4.44	33.18	
+75			2.65	34.97	
69+00			3.33	35.29	

37.62

69+25	1.88	35.74
+50	2.12	35.50
+75	3.48	34.20
70+00	7.33	30.29
+25	2.31	28.31
+50	8.15	29.47
+75	4.77	32.85
71+00	3.04	34.58
TP 13.02 +27.37-Δ	48.13	2.51 35.11
71+50	11.80	36.23
+75	10.29	37.14
72+00	11.13	37.00
+25	10.32	37.81
+50	9.70	38.43
+75	8.90	39.23
73+00	8.45	39.68
+30	7.57	40.56
+60	5.03	43.10
73+31.88 = Δ Equations = 73+88.38 = Ahead	1.14	46.92
chk 8M FB. 1618-17	2.18	38.25 38.29 0.04 diff.

Not in table
New 76+00
#308932

check Levels

19

The run from station 63+35.51

To

8.23	31.24	23.91
63+35.51	5.42	26.53
chk	5.45	26.50

1-11-44

check Levels Cont.

			Elev. stake 7319135
0.96	47.95	46.99	
74+25	2.99	44.96	01
+50	5.86	42.09	'
+75	7.37	40.58	'
75+00	8.46	39.49	'
+25	9.18	38.77	'
+50	9.80	38.15	01
+75	10.12	37.83	'
76+00	10.43	37.52	01
TP			
+25 405	41.29	10.71	37.24 01
+50	4.25	37.04	02
+75	4.64	36.65	02
77+00	5.00	36.29	01
+25	5.31	35.98	02
+50	5.26	36.03	02
+75	5.45	35.84	01
78+00	5.65	35.64	01
+22.48 = 8 MH	4.97	36.32	01

Cont. P. 23

Walker
Hazen/A
Hardin

Ericant Trunk Sewer
- Check levels -
on construction stake

1-10-44

Constructors Grades in Gal. Book 212-30

	8.18	150.33		142.15
202+00			2.05	141.28 ✓
+3287=A			2.18	141.15 01
+65			8.17	142.16 ✓
203+00			6.47	143.86 ✓
+50			5.53	144.80 ✓
204+00			4.65	145.68 ✓
+50			4.26	146.07 ✓
205+00			4.00	146.33 ✓
+50			4.61	145.72 ✓
206+00			4.78	145.55 ✓
+50			3.97	146.36 ✓
TP	7.09	154.78	2.64	147.69 ✓
207+00			6.50	148.28 ✓
+35			5.26	148.82 ✓
+70			6.73	148.05 ✓
208+1188=A			6.04	148.74 ✓
+55			4.55	150.23 01
+95.24=A			4.87	149.91 ✓
209+25			2.41	152.37 ✓
+56.4			2.41	152.43 ✓
	2.41	154.84	2.85	151.29 ✓
+95.7				

154.84

210+50	2.29	151.85 ✓	
211+00	2.46	152.38 ✓	
+50	1.47	153.37 ✓	
211+90	1.68	153.16 01	
212+29.24	1.85	153.49 02	
212+60			
TP 12.12	166.87	0.09	154.75 ✓
212+80	12.09	154.78 01	
213+25	11.96	154.91 ✓	
+50	9.18	157.69 ✓	
214+00	8.36	158.51 01	
+50	6.87	160.00 01	
215+00	6.97	159.90 ✓	
+30	5.27	161.60 ✓	
+63.38=A 2+42.50*	3.62	163.18 ✓	
216+00	2.76	164.11 ✓	
TP			
+50 7.25	171.88	2.24	164.63 01
217+00	6.41	165.47 ✓	
+50	6.19	165.69 01	
218+00	5.24	166.64 01	
+50	4.83	167.05 01	
219+00	3.65	168.23 ✓	
TP 5.18	170.08 ✓		
+27.01=A	175.26		
TP 8.65 Elev	170.93		
2 Noils NW Pole 60th + Atkins	3.98	171.28 ✓	
219+60	1.42	169.31 01	

1-10-94

Check Levels
Encanto Sewer Const.

179.93

220+00	2.46	170.47	01
+50	7.35	171.98	01
221	5.59	174.34	01
+50	4.59	175.24	-
222	3.92	176.01	-
+50	5.49	174.44	-
223+00	8.95	170.98	01
+21.41 = Δ 40°58'20"	8.54	171.39	-
+60	7.55	172.38	-
224+00	13.35	183.46	TR
+50	13.59	162.87	01
225	11.26	171.51	01
+50	10.70	172.76	01
226+000	7.24	176.22	
+60	4.96	178.50	
+80	4.55	178.91	01
227+12.97	3.60	179.86	01
+50	2.94	180.52	01
228+00	4.63	178.83	01
+50	5.27	178.19	01
229+00	7.29	176.17	01
+50	4.73	178.73	01
230+00	1.31	182.15	01
+50	12.83	195.92	TR
231+00	11.48	184.44	-

21

195.92

231+40	10.67	185.35	01		
+78.02	9.38	186.54	-		
196.00	Rosed to Marked Levels in Plotting Survey F816N-P.46				
232+20	8.00	188.00	-		
+60	6.25	189.75	-		
233	4.98	191.02	-		
+50	3.85	192.15	-		
TR	6.75	191.19	11.56	184.44	on Rock
234+00	7.73	183.46	-		
+50	6.44	184.75	01		
235+00	4.99	184.20	02		
+35	4.71	186.48	02		
+70	4.08	187.11	01		
236+03.63	4.42	186.77	02		
+50	3.29	187.90	01		
TR	7.00	207.87	+ 3.68	200.87	
237+00	13.33	194.54	-		
+50	7.86	200.01	03		
238+00	5.85	202.02	03		
+50	6.82	201.05	02		
239+00	5.08	202.79	03		
+50	4.42	203.45	03		
+75	5.60	202.27	03		

Cont. p. 22

Ernesto Serran Const.
Check books

		207.87			
2 Mon Stark & Akins					
T.P.	6.94	208.77	6.04	201.83	01
	L.M.H.#61				
240 + 49.28	-ALLO 028		7.28	201.49	01
241 + 00			2.12	201.65	01
+50			6.19	202.58	02
242 + 00			5.62	203.15	02
+50			5.15	203.62	01
243 + 00			4.40	204.37	01
+50			4.42	204.35	01
244 + 00			4.40	204.37	01
+50			4.27	204.50	01
245 + 00	POT. -MH #62		4.07	204.70	
TP	chks FB 11.11.47		5.00	203.77	64 & Akins

1-11-44

Encanto Trunk Sewer Const.

Check levels
Cont from P-12

41.29

78 +50	4.84	36.45	01
+75	4.32	36.97	01
79 +00	3.34	37.95	01
+25	2.19	39.10	02
+50	1.48	39.81	02
+75	0.98	40.31	01
80 +00	0.60	40.69	01
^{T.P.} +25	2.72	43.55	046 40.83 01
+50	2.44	41.11	01
+75	2.07	41.48	02
81 +00	1.92	41.69	01
+25	1.99	41.56	02
+50	2.28	41.27	02
+75	2.85	40.70	01
82 +00	3.53	40.02	01
+25	4.47	39.08	
+50	6.20	37.35	01
+75	8.22	35.33	01
83 +00	8.98	34.57	01
+25	9.21	34.34	✓
+50	9.37	34.18	
+75	9.18	34.37	
84 +00	9.11	34.44	✓
+25	9.09	34.46	✓

23

T.P.		43.55	
84 +50	5.46	39.93	2.08 34.47 ✓
+75			5.41 34.52 ✓
85 +00			5.46 34.47 ✓
+25			5.37 34.56 01
+50			5.47 34.46 02
+75			5.42 34.51 01
86 +00			5.24 34.71 01
+25			5.17 34.76 02
+50			4.78 35.15 02
+75			4.30 35.63 01
chk B.M. ST. W. Alley			2.97 36.96
			<u>37.05</u>
			.09 diff
F.B. 1618			
18			
No Correction Made			

1-19-44

Encanto Trunk Sewer
- Check Levels

T Grd. 212-21
62.37

116+65.72	2.97	59.40	
+33	3.32	59.05	
116+00	3.61	58.76	01
+66	4.07	58.30	
+33	3.99	58.38	
115+00	4.79	57.58	
+66	5.11	57.26	01
+33	4.82	57.55	✓
114+00	5.18	57.19	
+66	5.22	56.45	✓
+33	6.13	56.24	
113+00	6.39	55.98	01
+66	6.34	56.03	
+33	6.41	55.96	
112+00	6.27	56.10	
+70	5.82	56.48	✓
+40	5.40	56.97	
111+0557 ^Δ MH	3.15	59.22	
T.P. 3.86			63.74
C.T. Rd. Sp. 2 Imp. 48 ^{1/2}	2.49	59.88	
110+70	3.63	60.11	01
+35	3.23	59.51	
110+00	10.58	53.16	01
109+66	10.28	53.46	
+33	10.89	52.85	

24

T
63.74

109+00	1.63	63.97	11.40	52.34	-
+66			1.63	52.39	01
+33			1.83	52.14	01
108+00			2.36	51.71	02
+66			2.54	51.43	01
+33			2.77	51.20	01
107+00			2.99	50.98	01
+70			3.43	50.54	02
+40			4.25	49.72	01
+10			5.09	48.88	02
105+87.79 ^Δ MH#27			7.36	46.61	01
+60			8.06	45.91	01
+40			8.53	45.44	01
105+00			8.62	45.35	01
+66			8.86	45.11	01
+33			9.17	44.80	01
104+00			10.19	43.78	01
+66			9.20	44.77	
+33			9.77	44.20	01
103+00	5.58	42.04	10.51	43.46	01
102+67.18 ^Δ MH#26			5.17	43.87	01
+50			5.86	43.18	01
+25			7.07	41.97	01
102+00			2.93	46.11	01
+75			3.21	45.83	01

42.04

101+50	3.05	45.99	01
+25	2.94	46.10	✓
101+00	3.30	45.74	01
+75	3.82	45.22	01
750	2.86	46.18	01
+25	3.90	45.14	01
100+00	5.30	43.74	01
+75	5.66	43.38	01
750	7.20	41.84	0
+25	7.28	41.76	02
99+00	7.68	41.36	01
+65	7.90	41.14	01
+32 = MH# 25	7.40	41.64	✓
28+00	6.90	42.14	01
+75	6.55	42.49	-
T.P.			
750 4.60 46.22	6.72	42.32	01
+25	5.03	41.89	01
27+00	4.95	41.97	01
+75	5.15	41.77	01
+50	6.33	40.59	01
+25	7.17	39.75	01
96+00	6.58	40.34	01
+75	5.57	41.35	01
+50	6.15	40.77	01
+25	5.61	41.31	01

46.92

95+00	6.87	40.05	02
94+50	4.18	42.74	02
170 on wall E	3.75	43.17	
+44 " " "	4.57	42.35	
+25	4.62	42.30	02
+19 " " "	4.64	42.28	
93+98.26 = MH# 14	4.86	42.06	02 2/16
+75 19' Lt. on Pav	5.02	41.90	
+750	5.25	41.67	03
+25	5.46	41.46	02
93+00	5.57	41.35	02
+75	5.70	41.22	02
+50	5.91	41.01	02
+25	6.12	40.80	02
92+00	6.33	40.59	01
T.P.			
+75 2.77 43.21	6.48	40.44	-
+50	2.98	40.33	01
+25	3.13	40.08	02
91+00	3.35	39.86	01
+75	3.53	39.68	-
90+50 = MH	3.73	39.48	02
+25	3.88	39.33	02
90+00	4.03	39.18	02
89+75	4.22	38.99	02

1-19-44

Encanto Sewer - Trunk Line
Check Levels

43.21

89+50		4.41	38.80	02
+25		4.59	38.62	02
89+00		4.77	38.44	02
+75		4.97	38.24	02
+50		5.16	38.05	03
+25		5.37	37.84	03
88+00		5.52	37.69	02
+75		5.69	37.52	03
+50		5.86	37.35	03
+25		6.06	37.15	03
86+90.68	MH #22	6.24	36.97	03
86+94.63				
chk. at Pkg. W. L. Alley		6.21	37.00	
to Occur Views.			36.97	
Grd. Book 212-17			003	

26

Walker
Hazard
9-27-44

Encanto Trunk Sewer

Check Levels on Construction Stakes

From 64th to 69th

Grades in Grid Book 212-

Station	Grade	Elev. of Top of Pipe	Elev. of Bottom of Pipe	Notes
5.95	210.57	204.62	215+00.27	
245+50	5.09	205.48		
246	7.36	203.21	01	
+50	5.01	205.56		
247	4.12	206.45		
+50	3.53	207.04	01	
248	2.82	207.75	01	
+50	2.07	208.50	01	
T.P.	10.55	218.33	2.79	207.78
249+00	9.23	209.10	01	
+50	8.11	210.22		
+98.35-NH 63	1.98	216.35		
250+50	6.09	212.24	01	
251+00	5.48	212.85		
+50	10.45	207.88	01	
252	9.20	209.13	01	
+50	7.76	210.57		
T.P.	7.84	217.64	8.53	209.80
253	6.64	211.00		
+50	6.66	210.98	01	
254	6.60	211.04	01	
+297-NH 64	6.50	211.14	01	
+50	6.36	211.28	01	

217.64

255+00	5.13	212.51		
+50	4.50	213.14		
256+00	4.23	213.41		
+50	3.92	213.72		
+80	3.89	213.75		
T.P.	11.71	225.91	3.44	214.30 on Rock
257+10.58-NH 65	4.05	221.86	01	
+50	12.17	213.74	01	
258+00	11.27	214.64		
+50	9.35	216.56	01	
259	9.40	216.51		
+50	7.62	218.29		
260	5.27	220.64		
T.P.	8.05	232.04	1.92	223.99
260+50	7.99	224.05	01	
261	6.76	225.28	01	
+50	5.43	226.61	01	
262+01.14-NH 66	4.43	227.61		
+50	4.65	227.39		
263	4.00	228.04	01	
+50	11.92	243.55	0.48	231.56.02
264+00	12.02	231.53	01	
+50	10.69	232.86	01	
264+06.40-NH	9.70	233.85	01	

Cont p. 28

~ Check Levels ~
Encanto Sewer Const.

243.55

265+20	8.69	234.86	01
+50	8.08	235.97	01
266	6.69	236.86	01
+50	5.91	237.69	01
267	4.63	238.92	01
+35	3.86	239.69	01
+71.4 ⁰ =MH 68	2.41	241.14	01
268	1.32	242.23	01
TP on Rock 7.18	0.28	243.27	01
+50	6.73	243.72	01
269	5.31	245.14	02
+50	3.51	246.99	01
270	2.33	248.12	01
+30	1.62	248.83	01
+56.40 ⁰ =MH 62	0.14	250.31	02
271+00	9.83	251.17	01
+50	8.52	252.48	01
272	6.76	254.24	02
+30	6.48	254.52	02
272+56 MH #70	5.69	255.31	01
273+00	2.31	258.63	01
+50	1.59	259.41	02
274+00	1.89	259.11	02
+50	1.82	259.18	02
275	2.96	258.04	02

28

261.00

275+30	3.70	257.30	01
TP 1.81			
275+55 MH #71	4.11	256.89	01
276+00	2.63	256.07	02
+50	4.07	254.63	02
277	5.74	252.96	02
+40	6.12	252.58	01
+76.45	5.15	253.55	02

Walker
Hazard
1-29-44
Check Levels on Const. Stakes
Ericants Trunk Sewer
From 45th to Euclid Ave.

Construction Notes in Grub Book 212
21, 28.

Stations	5.25	65.35	59.40	St. Stake 116+65.12 Gr 212-21
117+00		5.20	59.45	
+333		6.27	59.08	
+66.6		6.43	58.92	
118+00		5.75	59.60	
+333		5.59	59.76	
+66.6		5.33	60.02	
119		5.06	60.29	
+333		4.61	60.74	
+66.6		5.44	59.91	
120		4.55	60.80	
+333		4.66	60.69	
+66.6		4.95	60.40	
121		2.33	62.02	
+333		5.61	59.74	
+66.6		6.69	58.66	
T.P. 122+00	6.84	66.74	5.45	59.90
122+44.4 =123+31.81			6.20	60.54
+65			6.77	59.97
124			6.08	60.66
+33			4.83	61.91

66.74

29

124+66			4.85	61.89
125+00			6.07	60.67
+33			3.33	63.41
+66			4.49	62.25
126+00			4.36	62.38
+33			4.25	62.49
+66			3.41	63.33
127+00	5.21	71.17	0.78	65.96
+33			5.51	65.66
+66			6.40	64.77
128+00			7.40	63.77
+33			6.98	64.19
+66			5.83	65.34
129+00			5.68	65.49
+33			5.20	65.97
+66			4.96	66.21
130+00			4.78	66.39
+33			4.72	66.15
+66			4.03	67.14
131			5.04	66.13
+40			4.98	66.19
17887 MM32			4.32	66.85
132			4.23	66.94
+33			5.21	65.96
+66			5.14	66.03

	71.17			
133+00		5.17	66.00	
^{TP} 7.33	7.20	74.00	4.37	66.80
+66		6.77	67.23	
134+00		6.42	67.58	
+40		6.79	67.31	
+78.87 = MH 33		5.41	68.59	
135+00		5.08	68.92	
+33		4.98	69.02	
+66		4.16	69.84	
136		3.08	70.92	
+33		3.80	70.20	
+66		3.80	70.20	
137		3.36	70.64	
5.71 ^{TP} 5.71		3.02	70.98	
+55.35 = NH 34	80.90	2.81	71.19	
138+00		8.06	72.84	
+50		8.26	72.64	
139+00		7.65	73.25	
+50		7.11	73.79	
140+00		6.12	74.78	
+30		5.53	75.37	
140+56.55 NH. 35		5.16	75.74	
141+00		4.32	76.58	
+50		3.17	77.73	
142+00		3.62	77.28	

	80.90			
142+50		4.11	76.79	
143+00		5.75	75.15	
+50		2.76	78.14	
144+00		2.50	78.40	
^{TP} 2.74	88.27	2.37	78.53	
145+00		7.44	80.83	
+50		8.61	79.66	
146+00		6.14	82.13	
+24.78 = NH 36		4.85	83.42	
+60		6.99	81.28	
147		6.11	82.16	
+50		7.02	81.25	
148		6.36	81.91	
+50		7.01	81.26	
+86.78 = NH 37		5.44	82.83	
149+20	6.15	89.76	4.66	83.61
+60		6.61	83.14	
150+00		6.67	83.02	
+50		5.76	84.00	
151		4.93	84.83	
+50		4.82	84.94	
152+00		4.47	85.29	
+50		4.84	84.92	
153+00		4.08	85.68	
+23.40 NH 38		3.79	85.97	

89.76

153+60			1.31	88.45
^{T.P.} 154+00	9.13	27.40	1.49	88.27
750			7.68	89.72
155			7.81	89.59
+50			7.97	89.43
156			6.70	90.70
+35			8.11	89.29
+70			7.86	89.54
157+0.33 ² MH # 39			3.75	93.65
+35			3.65	93.75
+70			6.85	90.55
158+0.50 ⁷ = MH # 40			2.75	94.65
+50			4.08	93.32
T.P. on Rock 746	99.63		5.23	92.17
159			5.68	93.95
750			6.33	93.30
160			7.17	92.46
+50			5.66	93.97
161			5.82	93.81
+50			5.46	94.17
162			4.84	94.79
+50			5.39	94.24
162+955 ⁰				
= 162+94.66 MH # 41			4.19	95.47
163+35			2.32	97.31
^{T.P.} +65	7.04	104.96	1.71	97.22

109.26

164+00			5.25	92.71
+33			5.12	92.84
+66			6.01	98.95
165+00			7.42	97.54
+33			6.71	98.25
+66			7.40	97.56
166			7.19	97.77
+33			6.21	98.75
+66			5.49	99.47
167			3.84	101.12
+33			1.94	103.02
+66			4.85	100.11
+94.77 = MH # 42			4.23	100.73
168+30			4.13	100.83
+65			4.23	100.73
169+00			4.07	100.89
+33			4.01	100.95
^{T.P.} +66	12.86	114.17	3.65	101.31
170+00			11.80	102.37
+33			10.06	104.11
+66			2.78	104.32
171+00			10.90	103.27
+33			10.59	103.58
+66			9.90	104.27
172+00			7.43	106.74

31

		114.17		
172+33			6.20	107.27
+66			8.56	105.61
173+00			3.59	110.58
T.P.	4.43	118.50'	0.10	114.07
+33			6.72	111.71
+66			7.01	111.42
173+99.19 = MH 43			11.55	106.95
174+35			8.65	109.85
+76.41 = MH 44			10.14	108.36
175+00			9.66	108.84
+33			7.76	110.74
+66			7.51	110.99
176+00			7.05	111.45
+33			5.60	112.90
+66			5.63	112.87
177+00			5.54	112.96
+33			4.61	118.89
T.P.				
+66	3.93	118.14'	4.29	114.31'
178+00			3.67	114.50
+33			3.36	114.78
+66			3.14	115.00
179+00			4.58	113.56
+40			4.22	113.22

		118.14		
179+8.5 = Wood Bridge			4.97	113.17
180+18			4.70	113.44
T.P.	7.37	124.82	0.92	117.45
chk BP 8th SW. Cor Bridge			3.68	121.14
5+12 + 50 + 7 R.R.				121.05
This line runs through from 117+ to 180+00				
With no corrections made.				

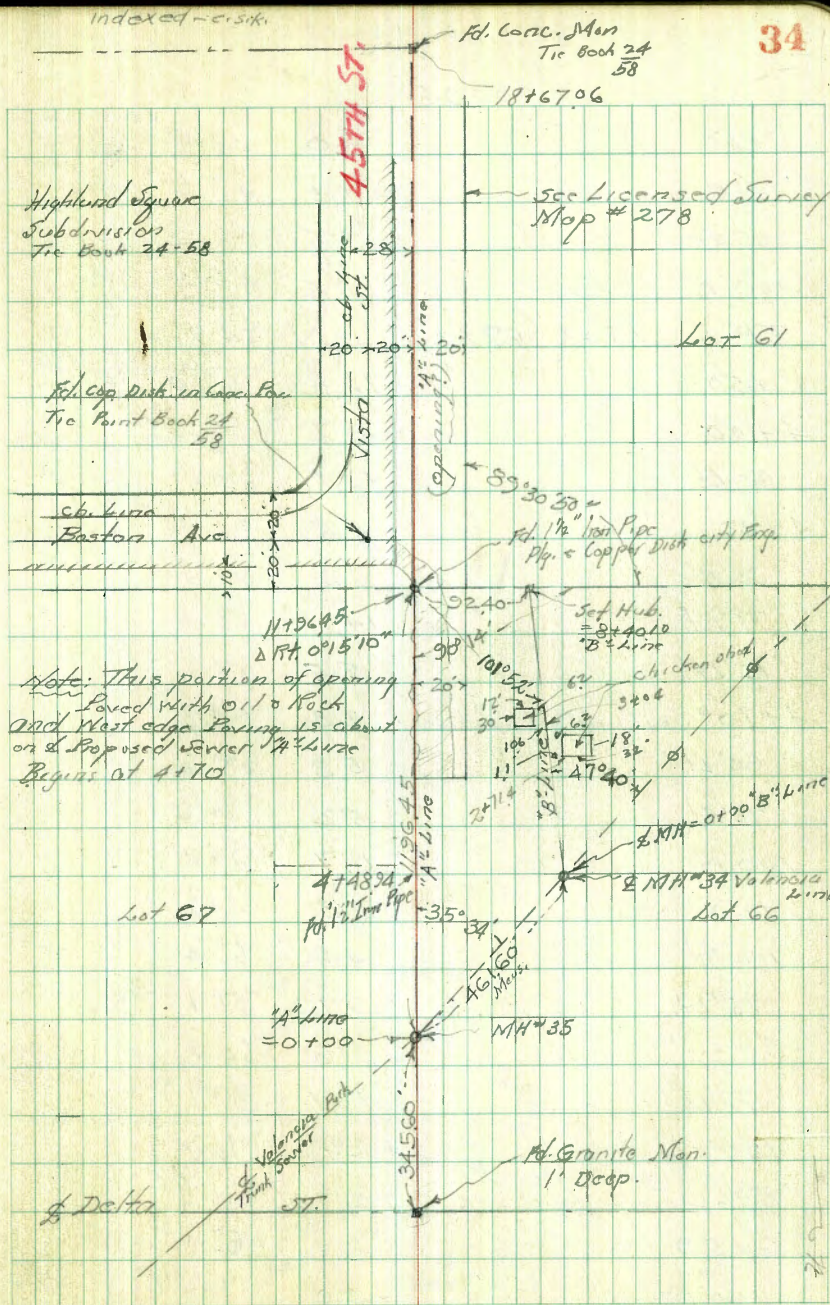
Walker
Hazard
Hordin

Location Proposed Sewer
Lots 66, 67, And 61 Horton's Purchase
And in 45th St. Between
Delta And Logan Ave.

Levels for "A"-Line			
FB 1609 19	4.07	47.48	43.41
TP	12.00	(54.94)	4.54 42.94
on Cover M.H. #34 on "B" Line		7.23	47.71
" Flood " "		13.65	41.29
"A"-Line			
M.H. #35			
= 0+00 on Concrete Cover	12.00		42.94
" " Flow Line	17.81		37.13
0+23 in Wash	12.5		42.4
+38	10.8		44.1
0+50	10.5		44.4
1+00	10.0		44.9
75' H.	10.2		44.0
50' R _L	10.0		44.9
1+25	10.1		44.8
+50	8.9		46.0
2+00	4.7		50.2
75' H.	3.6		51.3
25' R _L	2.0		45.9
100' R _L	9.0		45.9
2+15	4.6		50.3
+50	6.8		48.1

B.M. B.P.
In Vertical Wall
Bridge
on Delta St.

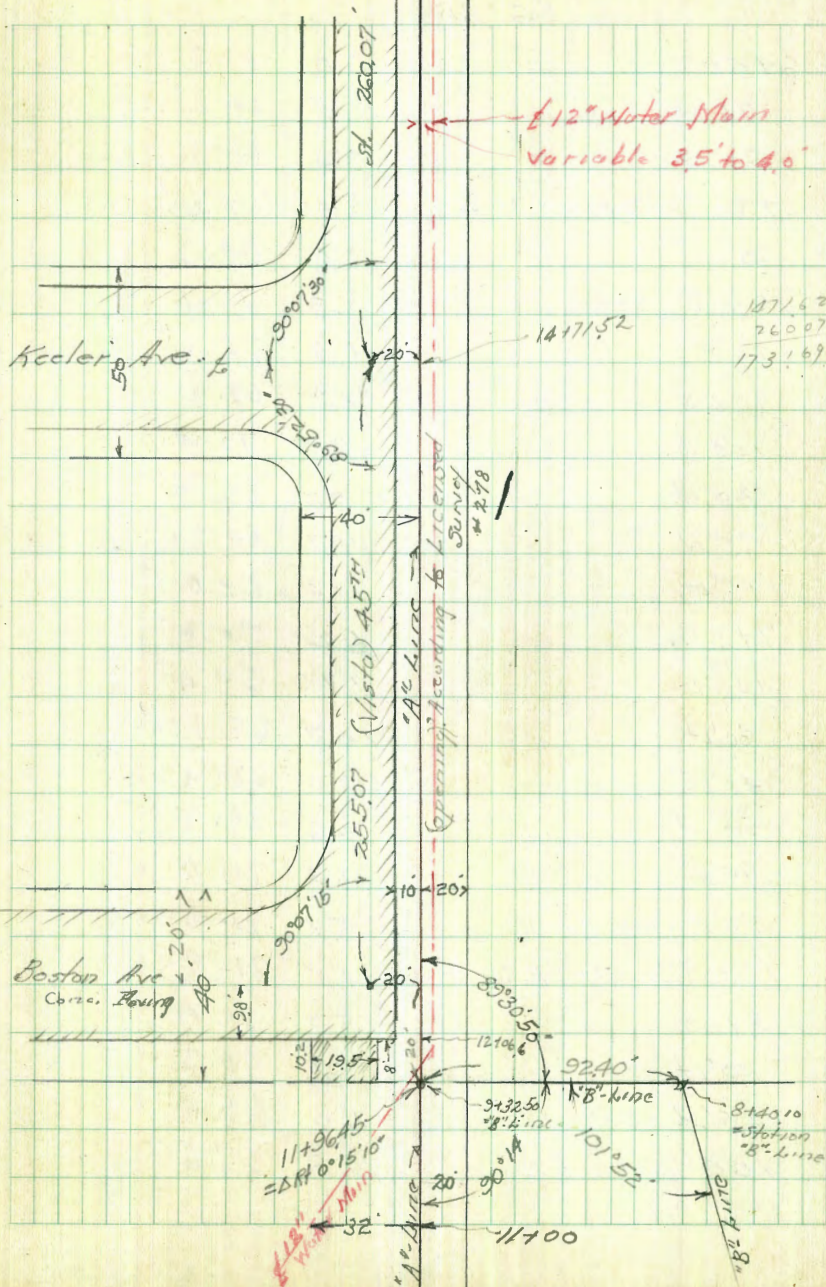
Indexed - c.s.k.



"A" LINE
 (54.24)

3+00	6.0	48.9	outs on lt. Above 2
4' R	7.3	47.6	
25' R	8.5	46.4	
100' R	8.5	46.4	
T.P. 13.03	(67.80)	0.17	(34.77) st. Above 2
3+50	10.8	57.0	
4+00	8.7	59.1	
60' R	17.1	50.7	
4+40	4.8	63.0	
30' R	6.2	60.9	
75' R	14.0	53.8	
75' L	5.5	62.3	
4+70 = South end of 1st Park Pass	3.3	64.5	
60' L	5.3	62.5	
70' R	5.2	62.6	
100' R	11.7	56.1	
5+00	3.3	64.5	
100' R	4.4	63.4	
75' L	9.7	58.1	Uniform slope to B
5+50	3.6	64.2	
75' L	10.1	57.7	Uniform slope to B
100' R	+2.4	70.2	
(5+65) S edge House on R	100' R = 12.7	70.5	
6+00	2.7	65.1	
100' R	+3.0	70.80	
20' L	4.2	65.6	
75' L	7.0	60.8	

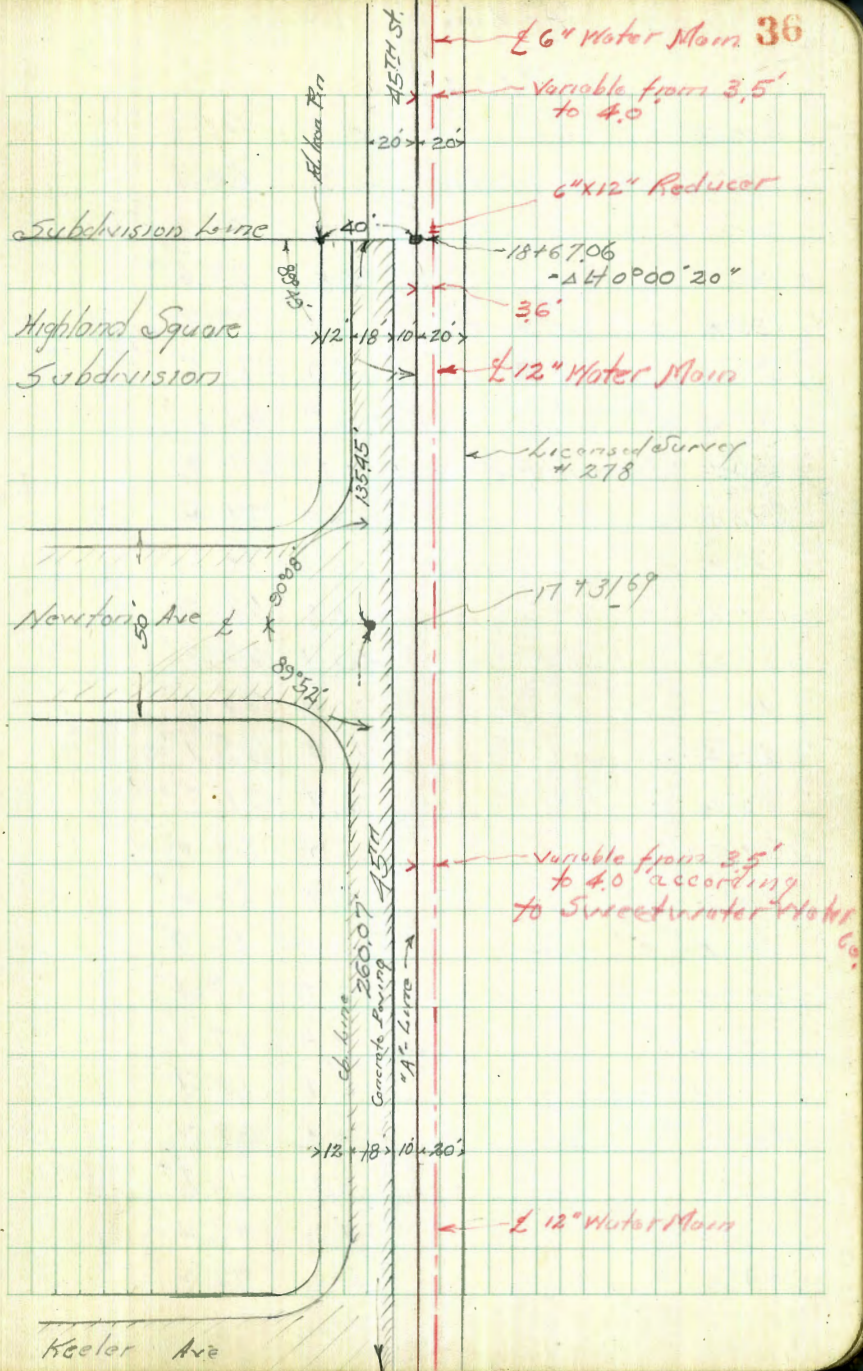
35



"A" Line

(67.80)

67.50		0.0	67.8	✓
75' Lt		3.8	64.0	✓
20' Lt		1.2	66.6	✓
TR	9.11	0.51	(67.29)	
20' R		7.1	69.3	✓
105' R		0.3	76.1	SW Cor House Above SE Cor
129' R		1.3	75.1	✓
71.00		7.2	69.2	✓
105' R		0.0	76.4	
20' Lt		2.9	66.5	✓
75' Lt		11.7	64.7	✓
95' Lt		14.4	62.0	✓
77.57		6.2	70.2	✓
100' Lt		17.0	59.4	✓
60' Lt		10.7	65.7	✓
45' Lt		8.0	68.4	✓
20' Lt		6.6	69.8	✓
20' R		5.4	71.0	✓
30' R = N.E. Cor House		5.1	71.3	✓
(77.80) 30' R = S.E. Cor House		4.5	71.9	✓
87.00		5.0	71.4	✓
20' Lt		6.1	70.3	✓
65' Lt = Bit in Hill		11.0	65.4	✓
100' Bottom of Draw		17.8	58.6	✓

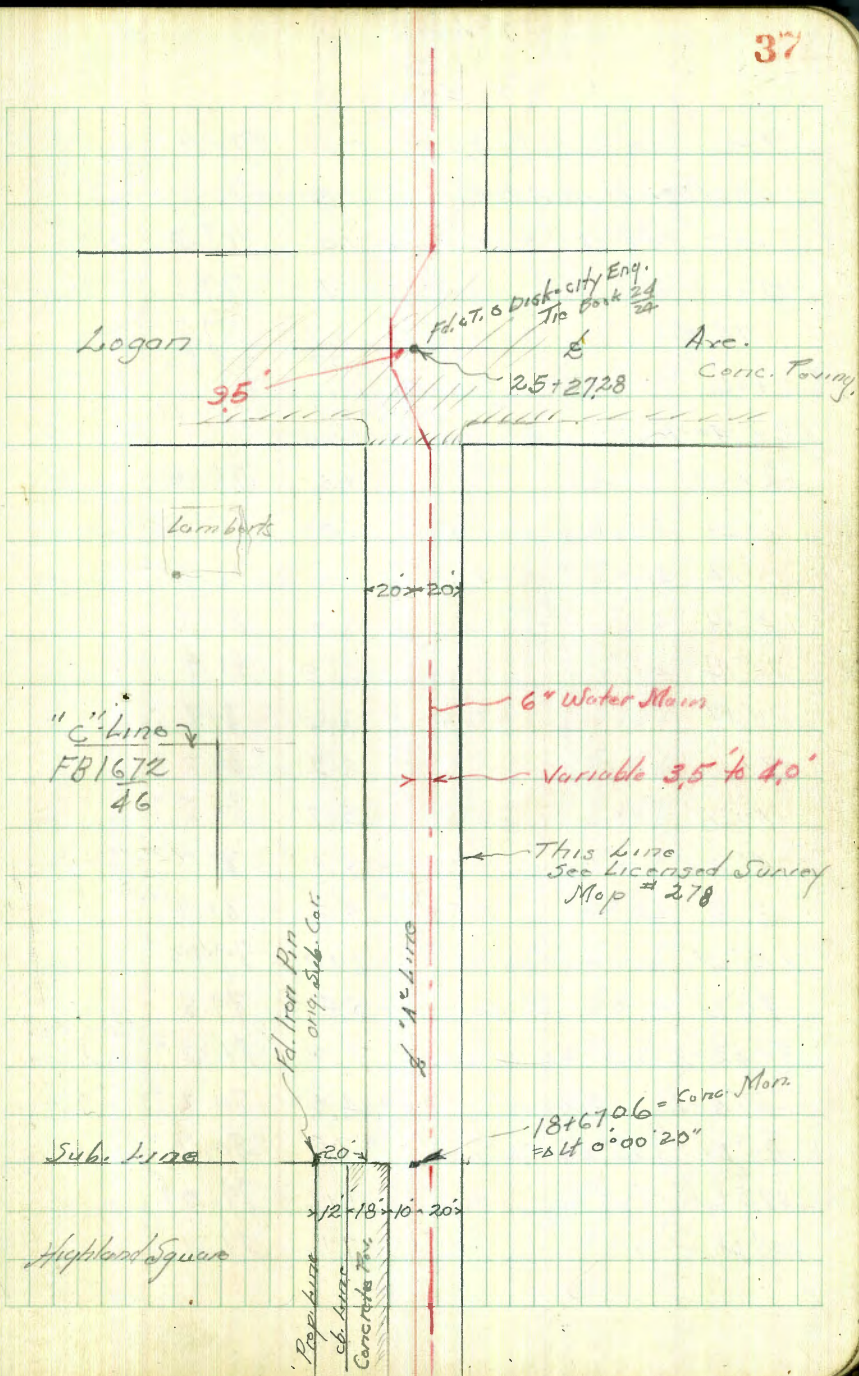


"A" Line

7640

8+55	4.6	71.8	✓
90' H. - Bottom of Drive	15.9	60.5	✓
20 "	7.0	69.4	Uniform Slope to 90' Lt
20' R	3.8	72.6	✓
98' R - N.E. Cor. House	2.6	73.8	✓
940'	4.9	71.5	✓ Rts. Above
20' H Bk	6.7	69.7	✓
60' H - Bottom of Drive	13.7	62.7	✓
9+40	5.0	71.4	✓ Rts. Above
+70	6.1	70.3	✓
10+00	8.2	68.2	✓ Rts. Above
10+25	10.1	66.3	✓
10' Lt	11.3	65.1	✓
40' Lt.	11.3	65.1	✓
80' Lt.	4.7	71.7	✓
10+50	10.0	66.4	✓
40' Lt.	10.0	66.4	✓
40' Rt	10.0	66.4	✓
10+85	9.3	67.1	✓
40' Lt.	9.3	67.1	✓
70' Rt	6.7	69.7	✓
11+00	8.2	68.2	✓ 32' Lt - 12" Water Main
+25	5.8	70.6	✓ Rts. Above
70' Lt.	7.0	69.4	✓
11+50	4.2	72.2	✓

37



"A" line

(76.40)

T.P.	12.51	(88.23)	0.68	(75.72)	on top 2'ish in 1 1/2" iron Pipe
11+36.45	= Δ Rt 0° 15' 10"		11.30	(76.23)	
(11+37.5)	4.8' Lt. = Δ Water Valve		11.0	77.2	
12+00			10.7	77.5	
75 R			10.7	77.5	
(12+06.6)	10' Lt. = J.F. Car Conc. Paving		10.37	77.86	
12+14	= Int. Street Water Service Main		10.1	78.1	Depth of Main = ?
12+50			2.6	78.6	
10' Lt.	on E edge Paving		10.40	77.88	
3' Rt	- Approx. Δ Water Main		9.6	78.6	
4' Rt			6.6	81.6	
20' Rt			6.3	81.9	
70' Rt			7.3	80.9	
13+00			8.2	80.0	
20' R			5.7	84.5	
4' R			5.0	83.7	
3' R			8.2	80.0	
10' Lt.	on edge Pav		2.10	79.13	
80' Lt	= S.W. Cor House		8.4	79.8	
13+42	= Δ Guy Pole 12" dia.		7.0	81.2	Elec. Co. on line
7' R	= " Anchor		4.1	84.1	
80' Lt	= Back edge House		7.5	80.7	
147.5 ± Lt	= Δ 15' Alley on Pav		9.16	79.07	
200' Lt			7.1	81.1	

38

(88.23)

14+00			5.4	82.8	
2' R	= Top cut Bank		5.0	83.2	
5' R	Top " "		2.9	85.3	
70' R			2.7	85.5	
10' Lt.	on Edge Paving		6.03	82.20	
75' Lt.	opp W end House		7.3	80.9	20' S
147.5' Lt	= Δ 15' Alley on Paving		8.70	79.53	
162' Lt	= 10' S S.W. Cor House		7.7	80.5	Ground rises to west from here
14+50			4.2	84.0	
14+71.52	= Δ Keeler st. on West		3.8	84.4	
5' R	= Top Bank		2.0	86.2	
75' R			1.0	87.2	
10' Lt.	on Edge Paving		4.35	83.88	
147.5 ± Lt	= Δ Alley on Pav.		7.57	80.66	
200' Lt.	on Pav. & Keeler		4.06	84.17	
15+00			3.0	85.2	
10' Lt.	on edge Pav		3.78	84.45	
5' Rt.			1.4	86.8	
70 R			0.0	88.2	
15+50			1.5	86.7	
7 R	6.75	(93.87)	1.11	(87.12)	5' S.W. of Fly. Excavation 20' E. Fly. 45' S W. of Fly.
16+00			6.1	87.8	
10' Lt.	on Conc. Pav		6.08	87.79	Break in Paving Grade
10' Rt	= Top Bank		2.9	91.0	
70' Rt.			3.1	90.8	

<93.87>

16+50	6.0	87.9	outs on both sides Above h
10' Lt. on Pav	6.31	87.56	
17+00	5.9	88.0	
10' Lt. on Pav.	6.54	87.33	
17+31.62 = 2 Newton	6.1	87.8	
10' Lt. on Paving.	6.65	87.22	
147.5 ± Lt. of Alley on Pav	6.13	87.74	
18+00	6.6	87.3	ft. Above
200' Lt.	9.9	84.0	Ground Rise to West from here
150' Lt.	9.9	84.0	
80' Lt.	8.8	85.1	
10' Lt.	6.32	86.95	
18+67.06 ± Lt 0°00'20"	6.93	86.94	on Conc. Man
10' Lt. on NE Cor. Conc. Paving	7.13	86.74	
120' Lt.	10.1	83.8	
200' Lt.	11.4	82.5	Ground Rises to West from here
19+00	5.5	88.4	ft. Above
60' Lt.	6.3	87.6	
90' Lt.	9.3	84.6	
190' Lt.	12.4	81.5	Rises to W from here
19+50	6.6	87.3	
19+90 ± Rough Apply. Ramped out of an West	7.4	86.5	
100' Lt.	9.0	84.9	
200' Lt.	11.0	82.9	
300' Lt.	12.9	81.0	

<93.87>

20+50	8.5	85.4	
200' Lt.	12.6	81.3	
100' Lt.	10.8	83.1	
21+00	9.2	84.7	
100' Lt.	11.6	82.3	
200' Lt.	12.6	81.3	
21+50	9.9	84.0	
22+00	9.7	84.2	
220' Lt.	12.6	81.3	
100' Lt.	11.5	82.4	20' W of House
T.P. 5.51	9.63	84.24	
22+50	5.5	84.2	
22+70 ± Pushing outlet on South side House on West	7.3	82.4	33' Lt. SW. Cor.
23+00	5.6	84.1	
23+40 ± Plumbing outlet on this side South side House on West	7.3	82.4	85' Lt. SW. Cor. House
23+50	5.9	84.3	
85' Lt.	6.5	83.2	
24+00	5.0	84.7	
24+35 ± (Lambert's) South edge House	4.9	84.8	on West
86' Lt. = 2" Soil. stick	6.5	83.2	on Ground
24+97.3 ± South edge Paving	4.69	85.06	Logan Ave
100' Lt.	6.8	83.0	
25+07 ± Logan Ave Valley gutter	4.99	84.76	
25+27.28 ± Logan Ave	4.73	85.02	on Cop. Deck

"A" Line

		$\langle 89.75 \rangle$		
TR	11.41	101.03	0.13	89.62 ✓
TR	12.57	113.60	0.00	101.03 ✓
TR	8.13	121.13	0.60	113.00 ✓
cht. N.W. BR Logan 27th	2.26	118.87		✓
		118.83 - 8M		
		2.04 = Error		

Levels for "B" Line sketch P. 34

				$\langle 47.71 \rangle$
12.12	$\langle 59.83 \rangle$			
2 MH #34	Vulcania Pit Line			
0+00	on Pt. MH	12.12	6"	47.71 ✓
	" Flori MH	18.54		41.29 ✓
0+50		12.1		47.7 ✓
+75		12.1		47.7 ✓
1+00		11.7		48.1 ✓
+40		8.6		51.2 ✓
1+61	chicken Int. Wire Fence	4.5		55.3 ✓
TR	11.88	71.01	0.70	$\langle 59.13 \rangle$
1+99	Int. chicken wire Fence	11.3		59.7 ✓
2+18	" " " "	8.5		62.5 ✓
+34	" " " "	7.3		63.7 ✓ 4:1 slope
+47	" " " "	6.6		64.4 ✓
+62	" " " "	5.5		65.5 ✓
+71.2		4.9		66.1 ✓
3+00		4.5		66.5 ✓
7+05	" " " "	5.2		65.8 ✓

$\langle 71.01 \rangle$

3+24	Elderberry Tree 3' RT			
+47	Int chicken Wire Fence	5.3		65.17 ✓
3+98	MH + Wire Fence 3.6			67.4 ✓
TR	11.03	$\langle 80.95 \rangle$	1.09	$\langle 69.92 \rangle$
4+10	2" Fruit Tree 25' Lt.			
4+24	3" " " 1' RT			
4+49	Int. Fence	10.8		70.1 ✓
4+70	Sw. Cur. chicken shed	2.7		71.6 ✓ 2.5' RT
+88	N.W. " " "			6' RT
4+95	14' Lt. = SSE. Cur. Burroughs			11.2 ✓
4+98	65' - NE " "			
4+94	2 1/2" Poplar Tree 3' Lt.			
5+00		7.7		73.2 ✓
5+51	Int. chicken Wire Fence	6.0		75.0 ✓
7+0	Lt.	6.5		74.5 ✓
6+00	on Pt. Hub	4.82		76.13 ✓
6+0	Lt.	5.5		75.5 ✓
6+18		5.4		75.6 ✓
6+60		10.0		71.0 ✓
6+0	Lt.	13.6		67.3 ✓
7+00		6.3		74.6 ✓
+20		4.6		76.3 ✓
+50		6.2		74.7 ✓
15' Lt.		11.7		69.2 ✓

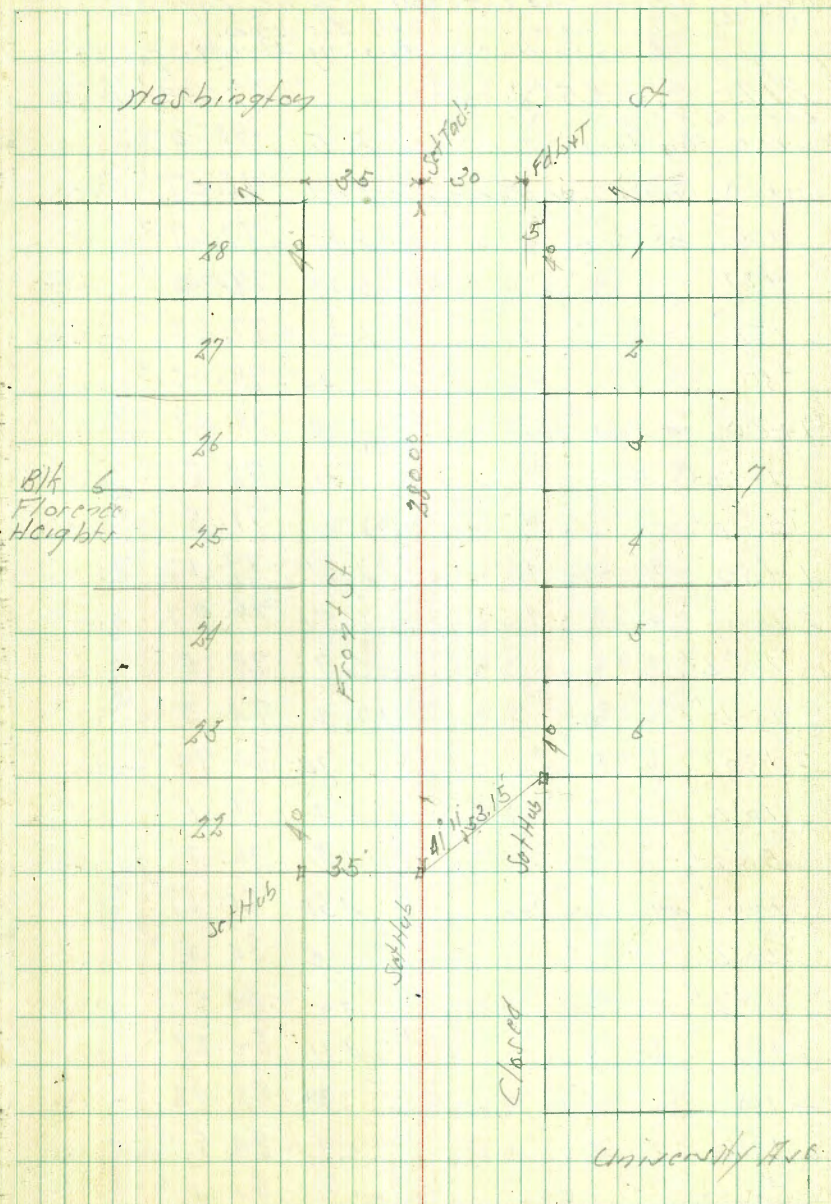
Cont. P. 41

(80.95)

8+00	55	75.4 ✓
30' Lt.	9.0	71.9 ✓
8+27	67	74.2 ✓
8+40.10 on Hub	5.59	75.36 ✓ Int. W.L. Lot 66
on Ptg. in Pipe		
chk. 11+96.45 P. 38	4.05	76.90 ✓
		76.93
		0.03
	5.2	82.1
		76.93 = Above Pipe
8+60	56	76.8 ✓
+75	54	76.7 ✓
+95	41	78.0 ✓
9+11	3.9	78.4 ✓
+16	47	77.4 ✓
9+32.50 = 11+96.45 on "A" line P. 35	5.2	76.9 ✓

Closing of Front St. Between
University + Washington

March 6-11 41
S. New
Bliss
Osborn



Walker
Hugart
Hurdin
1-3-44

Levels for Tower Boston Ave
Between 45th and 43rd
From 12+06.45 on "A" Line Page 35
This line 10' South of Boston
Along South edge Existing Paving.

B.M.	9.55	(86.48)	(76.93)
12+06.45 "A" Line			
0+00 this line	8.5	78.0	
0+10 on S.E. Cur Paving	8.41	78.07	
+20 on Pav.	8.81	77.67	
+27	9.23	77.25	
+38	8.89	77.59	
+50	8.42	78.06	
1+00 on Edge Pav.	8.05	78.43	
10' Lt.	8.0	78.5	
25' Lt.	15.0	71.5	
1+50 on edge "	7.31	79.17	
2+00 " " "	6.51	79.97	
10' Lt.	6.9	79.6	
25' Lt.	12.2	74.3	
2+50 " " "	5.74	80.74	
10' Lt.	5.4	81.1	
3+0 Lt.	7.8	78.7	
3+00 on Edge Pav	4.91	81.57	
50' Lt.	6.3	80.2	
10' Lt.	2.0	83.5	
3+50	4.11	82.37	
4+00	3.32	83.16	
10' Lt.	2.0	84.5	
50' Lt.	6.4	80.1	

Station Page
11+96.45
P. 38

Prop on Rt Above

Indexed
C.S.K.

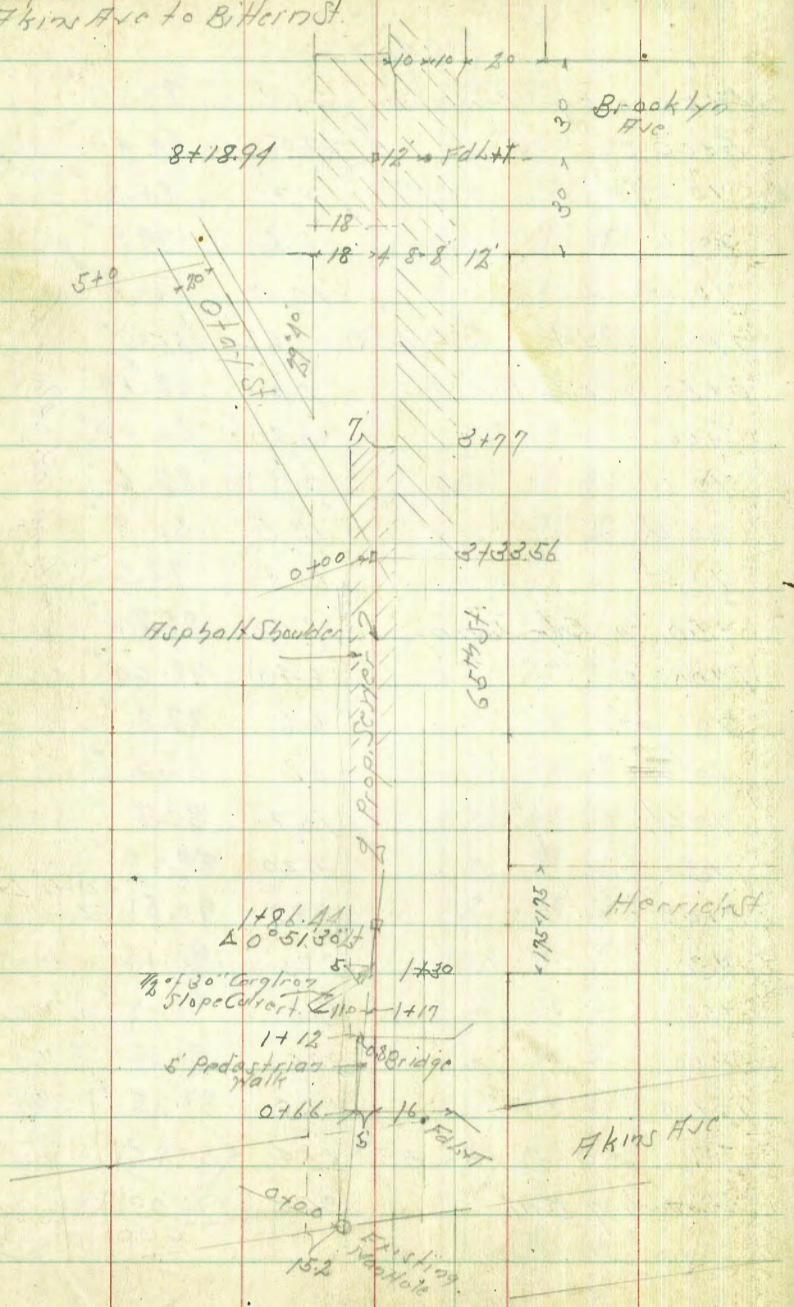
(86.48)

4+50 on Edge Pav.	2.61	83.87	
5+00 " " "	2.02	84.46	
10' Lt.	2.7	84.3	
20' Lt.	6.6	79.9	
70' Lt.	10.0	76.5	
T.P.	8.54	(84.40)	0.62 (85.86)
5+50 on Edge Pav.	2.21	85.19	
6+00 " " "	8.40	86.00	
10' Lt.	8.8	85.6	
20' Lt.	13.5	80.9	
70' Lt.	15.8	78.6	
6+50 on Edge Paving	7.58	86.82	
7+00 " " "	6.40	88.00	
10' Lt.	6.6	87.8	
20' Lt.	8.9	85.5	
70' Lt.	10.7	83.7	
7+50 " " "	5.20	89.20	
8+00 " " "	3.89	90.51	
7+30 " " "	3.25	91.15	
7+50 " " "	3.18	91.22	
9+00 " " "	2.85	90.55	
10+00 " " "	6.65	87.75	
T.P.	0.67	(86.53)	8.59 (85.86)
chk. Studing B.M.	9.60	76.93	0.00

outs on Rt Above

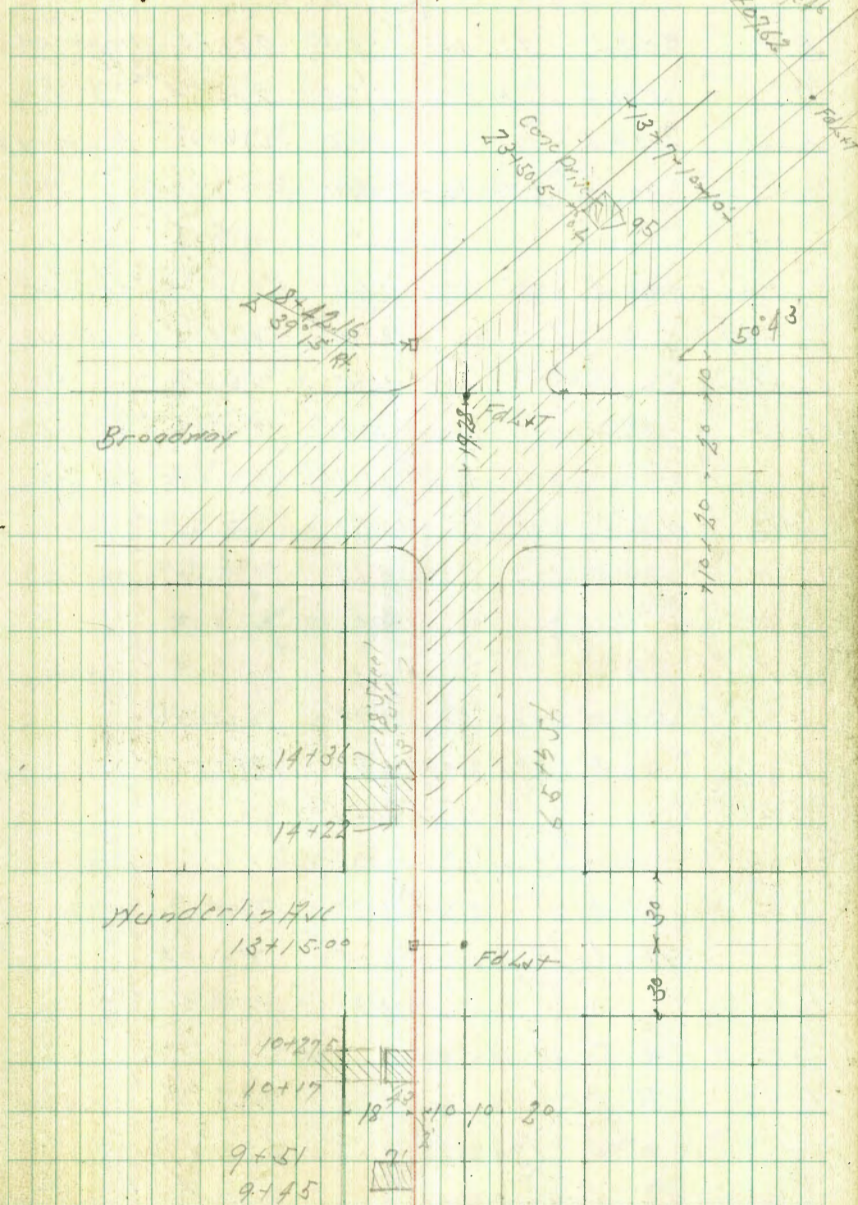
outs Lt
Level to E

Proposed Sewer 65th St.
 Fkins Ave to Bittern St.



March 23 19
 Susan
 Bliss
 Osborn

43



Proposed Section 65^{1/2} St.
4 kms Ave. to Bitterroot St.

BM	0.84	221.48	223.64	JETop Hyd
TP	5.49	221.23	215.74	Imper sp 25750
0+0		4.95	216.28	Rim of MH
+30	90' Lt of 2 1/2 Wly Power Pole			
+50		5.1	216.1	
+66	Wly Bridge	5.90	215.33	on Deck
+69		14.6	206.6	Bot. Creek
+78		16.5	204.7	" "
+70		5.6	215.6	on Deck
"		15.4	205.8	Bot. Creek
+12	Wly Bridge	13.7	207.5	
"		5.61	215.62	on Deck
+30		5.0	216.2	
+50		2.3	217.9	228 Bot 5900
+86.44	2' 10' 30" Lt	0.98	220.25	
TP	11.84	232.09	220.25	
2+0		11.0	211	
+08	10' Lt of 2 1/2 Wly Power Pole			
+50		7.3	224.8	
"	68' Lt of 4 1/2 Wly of House	11.05	221.0A	on Floor
3+0		2.3	228.8	
+22	10' Lt of 2 1/2 Wly Pole			
"	66' Lt of 4 1/2 Wly House	4.73	227.36	on Floor
TP	10.85	242.32	231.47	
+59	Approx. Oldy Main	8.6	233.7	

44

				242.32
2777	Wly Black Shoulder	6.8	235.5	
470		4.6	237.7	
+50		0.2	241.5	
TP	10.50	252.52	0.24	242.02
+88	10' Lt of 2 1/2 Wly Power Pole			
570		6.9	245.7	
+50		3.0	249.6	
TP	11.73	263.96	0.35	252.23
670		10.5	253.5	
+50		6.5	257.5	
+58	10' Lt of 2 1/2 Wly Power Pole			
770		2.3	260.7	
TP	6.90	270.42	0.38	262.52
+50		6.8	263.7	
870		4.2	266.3	
+1891	2' Brooklyn	2.6	266.9	
TP	8.87	275.89	3.46	267.02
+29	27' Lt of 2 - Gas Gate			
+50	Wly Pole	8.05	267.84	
970		6.1	269.8	
+27	15' Lt of 2 1/2 Wly Power Pole			
+50		3.75	272.14	Y
1070		1.8	274.1	Y
+17	Wly Conc Slab	1.20	274.69	Y
+875	Wly " "	0.77	275.12	Y

TP	9.95	$\langle 275.89 \rangle$	0.41	$\langle 275.48 \rangle$	
10+50		$\langle 285.43 \rangle$	9.2	276.2	
+66	10' Lt of $\frac{1}{2}$ Wly Power Pole				
11+0			7.4	278.0	
+35	117' Rt of $\frac{1}{2}$ Wly House	6.24		279.19	07 Floor
+50			5.2	280.2	
12+0			3.1	282.3	
+50			0.9	284.5	
TP	11.35	$\langle 295.83 \rangle$	0.95	$\langle 284.48 \rangle$	
+86	10' Lt of $\frac{1}{2}$ Wly Power Pole				
13+0			9.3	286.5	
+15	$\frac{1}{2}$ Wly Underlain	8.89		286.94	
+50			7.2	288.6	
14+0			4.6	291.2	
+24	$\frac{1}{2}$ Wly Black Drive	2.88		292.95	
+34	Wly " "	2.35		293.48	
+39	10' Lt of $\frac{1}{2}$ Wly Pole				
+50			1.7	294.1	
TP	12.38	$\langle 307.52 \rangle$	0.69	$\langle 295.14 \rangle$	
15+0			10.8	296.7	
+17	$\frac{1}{2}$ Wly Black Pav Drive	9.80		297.72	
+27	Wly " " " "	9.28		298.24	
+50			8.1	299.4	
+62	10' Lt of $\frac{1}{2}$ Wly Power Pole				
16+0			5.1	302.4	

TP	16+50	2.5	305.0	
+73	10' Lt of $\frac{1}{2}$ Wly Power Pole			
17+0		0.0	307.5	
TP	9.51	$\langle 316.85 \rangle$	0.21	$\langle 307.51 \rangle$
+50			6.2	310.6
+65	47' Lt of $\frac{1}{2}$ Fly 30" Euc. Trn			
+99.8	Sty Pav 179	4.68		312.17
+81	10' Lt of $\frac{1}{2}$ Wly Power Pole			
8+11		4.61		312.21
18+0	07 Pav 179	3.84		313.01
+33.4	Wly Pav 179	2.73		314.12
+34.26		2.9		313.9
TP	12.93	$\langle 326.90 \rangle$	2.88	$\langle 313.97 \rangle$
+42.16	139° 15' Rt	12.29		314.61
+50		12.2		314.7
19+0		9.8		317.1
+50		6.3		320.6
20+0		2.4		324.5
"	45' Lt of $\frac{1}{2}$ Brk Down	5.0		321.9
TP	12.97	$\langle 339.62 \rangle$	0.25	$\langle 326.65 \rangle$
+50		11.5		328.1
21+0		7.4		332.2
"	30' Lt of $\frac{1}{2}$ Brk Down	9.8		329.8
+50		8.7		335.9
TP	12.98	$\langle 352.10 \rangle$	0.50	$\langle 339.12 \rangle$

		$\langle 352.10 \rangle$	
22+0		12.3	339.8 ✓
"	27' Lt of $\frac{1}{2}$ - Brk Down	15.6	336.5 ✓
+50		7.6	344.5 ✓
"	30' Lt of $\frac{1}{2}$	12.8	339.3 ✓
23+0		3.3	348.8 ✓
"	30' Lt of $\frac{1}{2}$	5.0	347.1 ✓
TP	12.93 $\langle 364.85 \rangle$	0.18	$\langle 351.92 \rangle$ ✓
+50		11.8	353.0 ✓
24+0		8.2	356.6 ✓
"	35' Lt of $\frac{1}{2}$ - $\frac{1}{2}$ x Fly House	9.48	355.37 ✓ on Floor
+50		4.8	360.0 ✓
+76		3.6	361.2 ✓
"	43' Lt of $\frac{1}{2}$ - $\frac{1}{2}$ x Fly House	6.00	358.85 ✓ on Floor
25+0	Rat.	1.81	363.04 ✓ on Hub
TP	13.00 $\langle 377.20 \rangle$	0.65	$\langle 364.20 \rangle$ ✓
+50		12.0	365.2 ✓
26+0		10.1	367.1 ✓
"	18' Lt of $\frac{1}{2}$	15.3	361.9 ✓
+08'	66' Lt of $\frac{1}{2}$ - $\frac{1}{2}$ x Fly Anchor Post		
+50		8.8	368.4 ✓
27+0		7.8	369.4 ✓
"	20' Lt of $\frac{1}{2}$	10.2	367.0 ✓
"	40' Lt " "	14.9	362.3 ✓
+50		6.5	370.7 ✓
28+0		5.2	371.9 ✓
"	30' Lt of $\frac{1}{2}$	10.3	

		$\langle 377.20 \rangle$	
28+50		3.4	373.8 ✓
"	30' Lt of $\frac{1}{2}$	9.0	368.2 ✓
TP	13.08 $\langle 390.03 \rangle$	0.25	$\langle 376.95 \rangle$ ✓
29+0		12.9	377.1 ✓
+50		11.0	379.0 ✓
"	20' Lt of $\frac{1}{2}$	12.5	377.5 ✓
+88	3' Lt of $\frac{1}{2}$ - $\frac{1}{2}$ Cluster of 60' Pine Tree		
30+0		9.0	381.0 ✓
"	1' Lt of $\frac{1}{2}$ - Top Cut	6.3	383.8 ✓
+76	3' Lt of $\frac{1}{2}$ - $\frac{1}{2}$ 8' Olive Tree		
+56.5	5' x 4' Porch	6.30	384.73 ✓
+77.21	- A	5.33	384.80 ✓
BM		0.36	$\langle 389.67 \rangle$ ✓
Cont'd	See 166A 37		

1st Lt + T
 3rd Lt + T
 Klauber

Bittern St.
 Fd Hub.
 Klauber Hse.
 13-7-70-10
 25+07.62
 26+77.21
 27+77.21
 28+77.21
 29+77.21
 30+77.21
 97.56
 60° 43' 1/2
 Cross
 See 166A 37

Proposed Sewer Otay St
65th to Brooklyn

Sketch Page 43

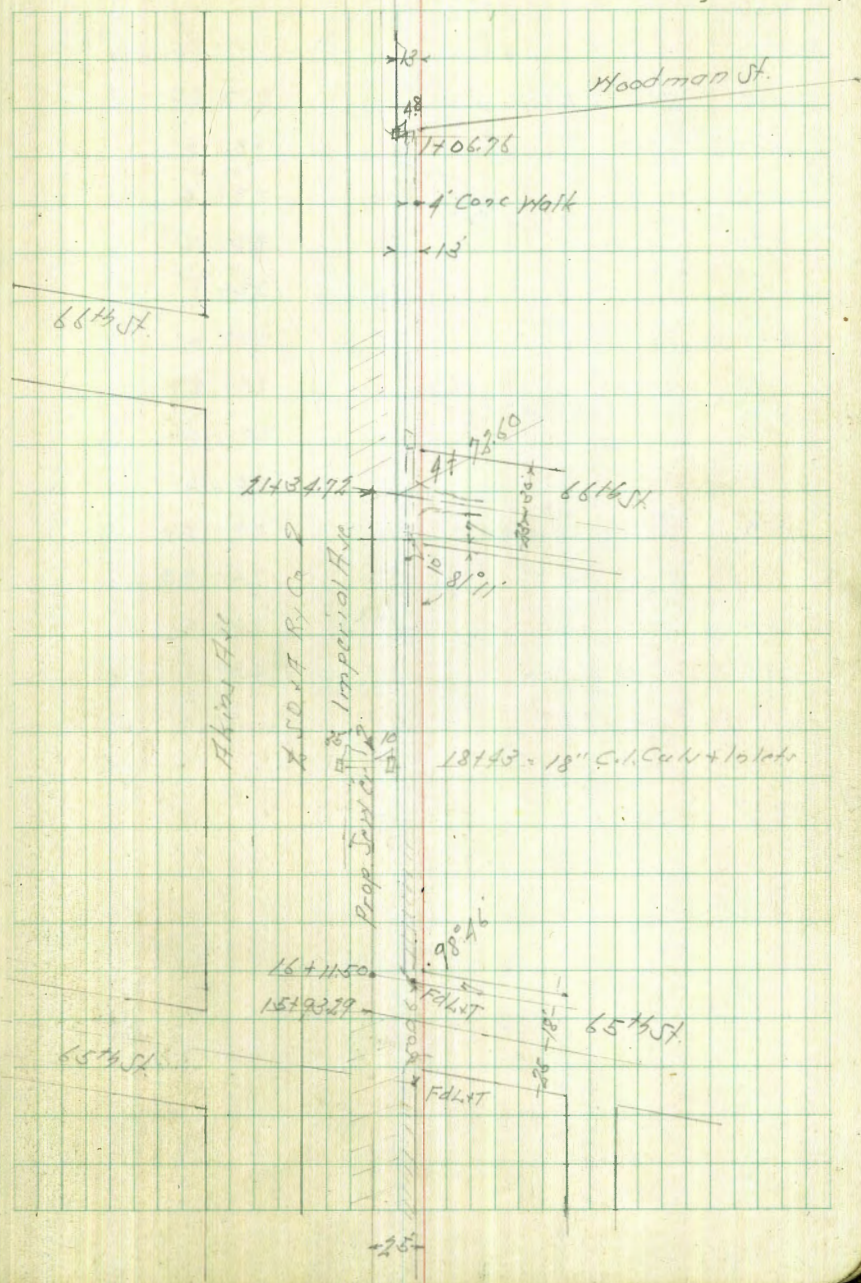
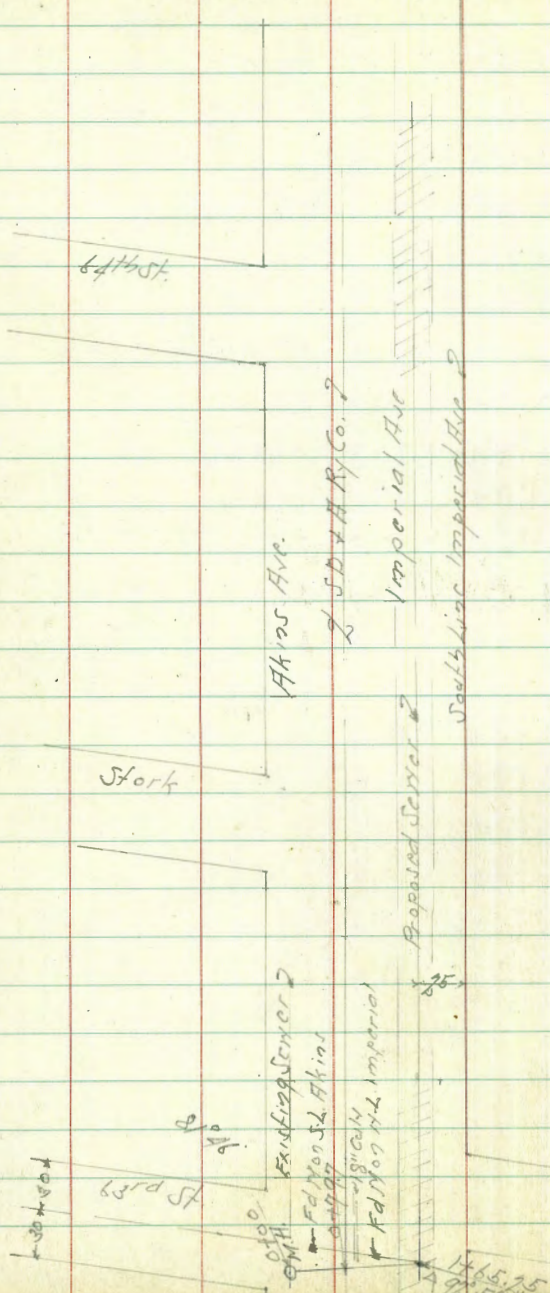
B.M.	0.10	222.87	222.64	SE Top of H ₂ O Imperial P.A.A.
	11.81	234.82	223.01	
0+0			2.09	231.73 ✓
TP	12.79	247.52	0.09	244.73 ✓
+150			11.6	235.9 ✓
1+0			8.2	239.3 ✓
+21	12.5	10' of L - Wly Pewer Pole		
+50			4.0	243.5 ✓
TP	11.90	258.85	0.37	247.15 ✓
2+0			11.2	247.6 ✓
450			7.2	251.6 ✓
+74	10	10' of L - Wly Pewer Pole		
3+0			3.5	255.3 ✓
	12.52	270.86	0.51	258.34 ✓
+50			11.1	259.5 ✓
4+0			7.6	263.3 ✓
+50			4.5	266.4 ✓
5+0			2.1	268.8 ✓
TP	596	275.28	1.54	269.32 ✓
B.M.			8.25	267.03 ✓

2 LVT
8 Brooklyn Ave
453704

March 6-44
Sisson
Bliss
Osborne

47

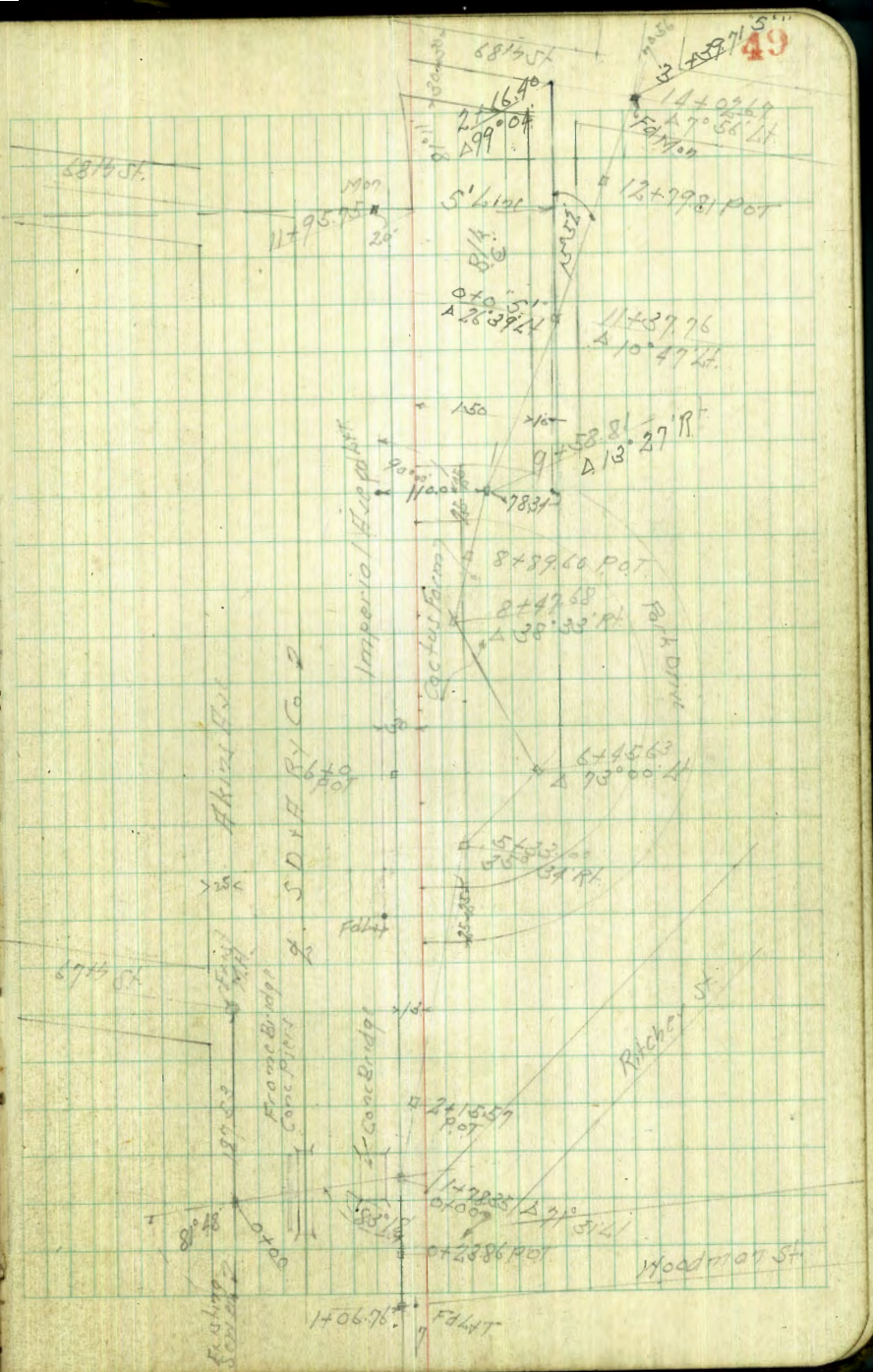
Proposed Sewer Imperial Ave
63rd St to Jamacha Road + 69th St.



Levels Proposed Sewer Block C Encanto Hts Junction

S'Line
Sketch opposite page

B.M.	12.18	244.73	232.55	0.0000 11+87.76 Elev 232.55
0+0	-	11+37.76	232.55	
+01	-	9.2	235.5	
+26	-	10.1	234.6	
+50	-	9.5	235.2	
+70	-	8.6	236.1	
+80	-	7.1	237.6	
+76	MSR of rd = NYC Cor Single House	2.92	241.81	02 Floor
2+0	-	1.7	240.0	
+50	-	4.1	240.6	
+57	5' x 1/2 Paving	3.97	240.76	
+66.40	1.99° 04' Rt. to 687.51	3.80	240.93	road
2+0	-	4.7	240.0	
+25	5' x 1/2 Pav.	5.2	239.5	
+89.71	-	6.49	238.24	07 Floor



6975 ft

50 + 50

FAMON

1970264

30 30

Samacha Road

6816 ft

Oiled pit

FAMON

1470267

A 7056 ft

to water

Proposed Section From Atkins Ave West of 67th
Through Encanto Park Add. to Sarnocha Road & 89th St

Sketch Page 49

B.M.	3.23	(233.53)	230.30	7' Lt. 11.2 Woodman 57' Imperial
0+0	= Existing Sewer	11.3	222.2	✓
+20		14.8	218.7	✓
+50		15.0	218.5	✓
+67.9	114 2" Top Wall Conc	14.57	218.96	✓
+73		15.0	218.5	✓
"	6.5 Rt. 11/4 Conc Pier			
"	6.7 Lt. 11/4 " "			
+	Bot. Horiz. Bracing	9.62	224.91	✓
	Bot. Stringer	7.22	226.31	✓
	Top Rail	4.69	228.84	✓
+89		15.4	218.1	✓
"	8.6 Rt. 5/4 Conc Pier			
"	4.7 Lt. " " "			
140		14.0	219.5	✓
+33		12.8	220.7	✓
+50	11/4 Bridge Conc	14.0	219.5	✓
"	3.8 Rt. Conc Abut.			
"	16.1 Lt. Conc Abut.			
+56.3	Bot. Conc Stringer	7.62	225.91	✓
	Deck of Bridge	4.56	228.97	✓
1+70.2	1.6 Rt. Conc Abut.			
"	13.1 Lt. "			
+73.3	Top of Water Main	7.25	226.28	✓
"	5.5 Rt. 5/4 12" x 12" Conc Pier			
"	4.6 Lt. 11/4 " " "			

March 10-98
5:10 PM
8:15 PM
3:29 PM

(223.53)

1+78.25A	71' 31" Lt.	13.4	220.1	✓
2+0		10.0	223.5	✓
+05		7.2	226.3	✓
+15.57	2" RT	6.6	226.9	✓
+17	28 Lt. = 5/4 18" Local Tree			
+35	67 Lt. 5/4 10" Acacia Tree			
+50		6.4	227.1	✓
+83		12.6	220.9	✓
"	22 Lt. Wire Bank Protector			
3+0		12.7	220.8	✓
"	5.2 Lt. Wire Bank Protector			
+22.5	5/4 10" Head Foot Br.	5.95	227.58	✓
"	Bottom Log Stringer			
"	Deck Bridge	4.84	228.69	✓
+50		10.4	223.1	✓
+74	19' Lt. = 5/4 Wire Bank Protector			
+78		11.2	222.3	✓
+83		12.3	221.2	✓
4+0		11.8	221.7	✓
TP	6.84	(228.32)	120.5	(221.48)
+30		4.8	223.5	✓
"	10' Rt. Bottom Walk	7.5	220.8	✓
+50		3.9	224.4	✓
+82.5	2.3 Foot Bridge	0.0	228.5	✓
"	Bottom Stringer			
"	Deck of B.	10.90	229.2	✓
+90		5.2	223.1	✓

228.32

510	- Bot. Wash	61	222.2	✓
415		40	224.3	✓
+38	- 135°34 Rt	440	223.92	✓ on Hub
+70		40	224.3	✓
610	- Bot. Wash	45	223.8	✓
+30		28	225.5	✓
+45.63	Δ 73°00 Lt	290	225.42	✓ on Hub
TP	4.44	290	229.85	✓
+85	1 Lt. Sly Shed		225.42	✓
710	- Bot. Wash	51	224.8	✓
+08	2 Lt. Fly Blank			
+25.5	2 3' Foot Bridge	+0.60	230.5	✓
"	- Bottom String			
"	Deck Bridge	+1.40	231.3	✓
+50	- Bot. Wash	45	225.4	✓
810	" "	40	225.9	✓
+47.68	Δ Rt	3.76	226.10	✓ on Hub
TP	11.91	2.76	228.01	✓
+53		116	226.4	✓
"	10 Lt = Sly 18" Fuc Tree			
+90		92	228.8	✓
+81		64	231.6	✓
910		62	231.8	✓
+40	1 Lt = Sly 18" Fuc Tree			
+50		52	232.8	✓
+58.81	Δ 13°27 Rt	18	233.2	✓

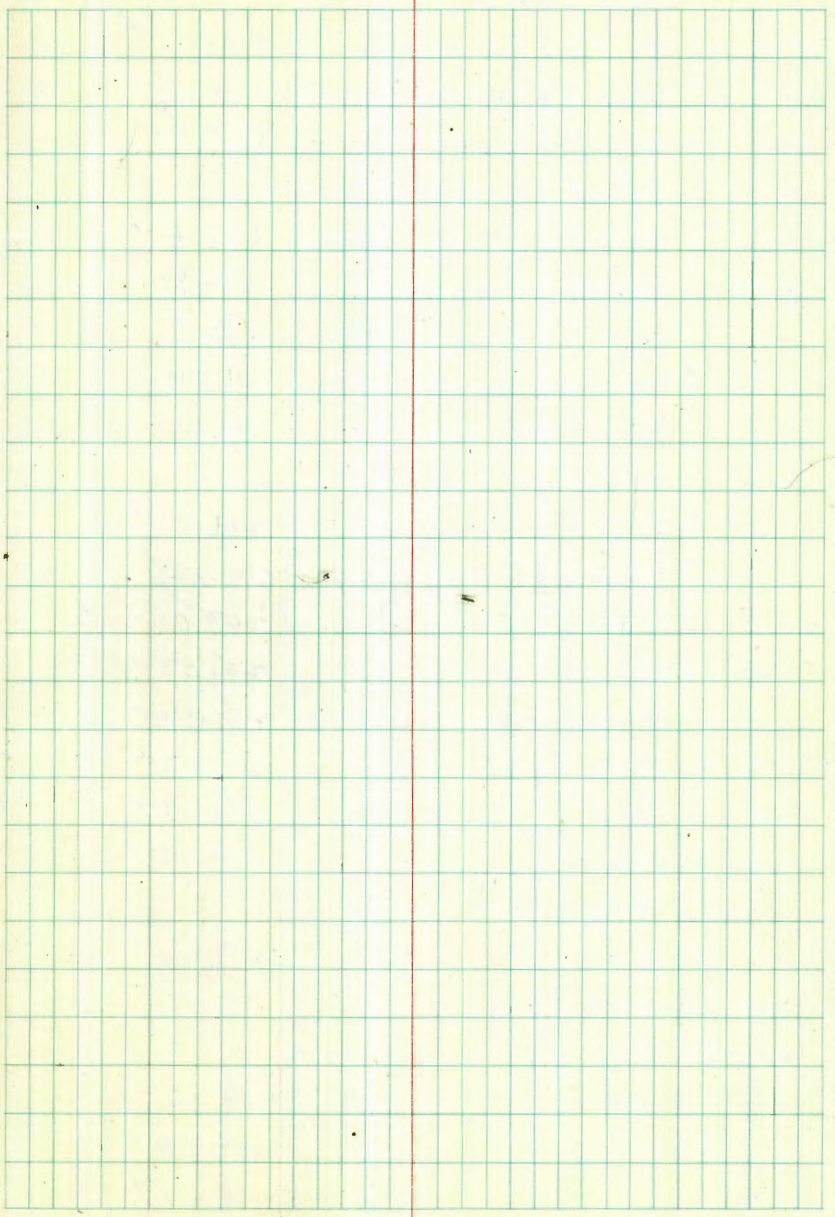
52

238.01

9191	64 Lt. Sly 40" Fuc Tree			
+75	55 Rt = 114 21" "			
1010		42	233.8	✓
+50		58	234.2	✓
1110		30	235.0	✓
TP	8.69	290	243.80	✓
+20	- 114 + Bottom Wash	143	229.5	✓
+30	- Fly " "	143	229.5	✓
+57.76	Δ 10°47 Lt	11.25	234.55	✓ on Hub
+40		8.6	235.2	✓
+50		8.7	235.1	✓
1210		80	235.8	✓
+50		60	237.8	✓
+67	82 Lt = Sly 21" Popper Tree			
+80		49	238.9	✓
+84.9	114 Wire Fence Chicken Yard			
+93.6	S.H. Car 9x12 Shed			
1310		47	239.1	✓
+06	- Fly Wire Fence Chicken Yard			
+137	131 Lt = S.H. Car House			
+50		42	239.6	✓
+80	80 Rt. 114 30" Plow Tree			
+82	52 Lt. Sly Popper Pole			
+83		41	239.7	✓
+91		51	238.7	✓

243.80 ✓

14+02.68	A 7° 56' 41"	4.5	239.3	✓
+50	02 oil. Pav	4.0	239.8	✓
TP	8.06	247.89	239.83	✓
15+0		7.4	240.5	✓
+50		6.7	241.2	✓
16+0		6.1	241.8	✓
+50		5.5	242.4	✓
17+0		4.9	243.0	✓
+50		4.6	243.3	✓
18+0		4.1	243.8	✓
+50		3.1	244.8	✓
+77	W/y Plank Bridge 20' W. of	2.0	245.9	✓ on Deck
+80	Bottom Deck	6.1	241.8	✓
+89	Fly Plank Bridge 69	1.9	246.0	✓ on Deck
19+02.64	30' E of W.L. 68' 15"	1.8	246.1	✓
TP	9.55	255.32	245.97	✓ 97 Mon Jamaico Rd + 87' 15" W.
B.M.		1.95	253.37	✓ Top of 1st 5' 10" 6" 6" 6" 6" Imperial 1697 1/2 253.44



Proposed Sewer Akin Ave. at 68th St.
Along Imperial Ave to 66th St.

Sketch Page 48

BM	0.62	(213.24)	212.62	SE Top of Hyd Imperial + 68 th St.
TP	2.12	(202.36)	13.00	(200.24)
0+0	= MH Akin 5 x 63 rd	16.5	185.9	Ground
+17.5	0.5' Lt. NY Pile of Bulk Head			
+20	Ground	12.0	190.4	✓
+20	Top Plank Bulk Head	59	196.5	✓
+50		26	199.8	✓
+79.7	Top Rail + Ground	1.34	201.0 ²	✓
+87	1.0' Lt = NY 18" Corq. Iron Culv.	2.42	199.92	Flan Line
+87	4' Rt = 2" Pipe North & South			
+87	±	0.6	201.8	✓
TP	12.64	(213.95)	1.05	(201.31)
1+0		1.09	203.0	✓
+41	= NY Paving	6.42	207.53	✓
+56	± " ±	6.09	207.86	✓
+65.25	= Δ 92° 52' Lt.	6.12	207.83	✓
2+0		5.62	208.33	✓
+50		4.85	209.10	✓
+53.5	11.5' Rt = NY C6 x Walk			
3+0		4.69	209.26	✓
+02	11.5' Rt = Fly C6 x Walk			
+39	11.5' Rt = Conc Island Gas Pump			
+50		4.95	209.00	✓
4+0		5.41	208.54	✓
+50		5.92	208.0 ²	✓

March 15-14

515509
815017
8099

54

		(213.95)	6.05	207.90	✓
5+0					
TP	8.89	(217.08)	5.76	(208.19)	✓
+11	11.7' Rt = NY C6 x Walk				
+50			8.72	208.36	✓
6+0			8.08	209.00	✓
+50			7.33	209.75	✓
7+0	11.8' Rt = C6 x Walk		6.22	210.86	✓
+50			5.00	212.08	✓
8+0			3.69	213.39	✓
+50			2.57	214.51	✓
9+0			1.38	215.70	✓
TP	10.07	(225.75)	1.40	(215.68)	✓
+50			8.87	216.91	✓
10+0			7.70	218.05	✓
+15	11.5' Rt = Fly C6 Conc Walk Corq. Fat				
+50			6.60	219.15	✓
11+0			6.09	219.66	✓
+50			5.66	220.09	
12+0			5.12	220.63	
+50			4.50	221.25	
13+0			3.98	221.77	
+50			3.60	222.15	
14+0			2.98	221.82	
+50			4.31	221.44	
+70	11.6' Rt = NY Curb				

		225.75		
15+0		4.63	221.12	
+50		4.89	220.86	
TP	3.99	224.85	220.85	
16+0		4.11	220.74	
BM		1.18	223.67	SET ON F.H.S. 1000.00 15.00 223.64
+50	11.5 Rt = Curb	4.22	220.63	
+90	11.5 Rt = Fly Curb			
17+0		4.28	220.57	
+50		4.34	220.51	
18+0		4.59	220.26	
+43	10' Rt = Inlet 18" Cast Iron Curb	7.87	216.98	
+43	35' Lt = Outlet	8.97	215.88	
+50		4.55	220.30	
19+0		4.33	220.52	
+27	14' Rt = Gas Dump			
+50		4.19	220.66	
20+0		4.01	220.84	
+50		3.66	221.19	
21+0		2.94	221.91	
+34.72 = 7.66 1/2		2.24	222.61	

Proposed Sewer Imperial Ave
Woodman St. to 66th St.

Sketch Page 48 & 49

BM	423	234.53	230.30	by 57' line of Imperial W. Woodman
0+0	- 1478.35 to East	14.4	220.1	✓
+7		15.8	218.7	✓
+12	Top Conc. Ring 11/1.83 See Plans for Ring Hd. & Footing	11.83	222.70	✓
+20		4.3	230.2	✓
+32		2.8	231.7	✓
"	26 Lt. 11/4 Tel. Pole			
+40	23 Lt. 11/4 Fire Hyd			
+42	= Fly Paving Oil	4.8	229.7	✓
+75	07 " "	5.18	229.05	✓
+95	= 11/4 " "	5.38	229.15	✓
+10		4.6	229.9	✓
+7	22 Lt. 11/4 Tel. Pole			
+10	5' Rt. 5/8" Gas & Elec MH			
+12	26 Lt. 11/4 12" Paper Tr. C			
+50		5.7	228.8	✓
2+0		5.4	229.1	✓
+50		6.6	227.9	✓
3+0		7.4	227.1	✓
+50		8.7	225.8	✓
+53	25 Lt. 11/4 Anchor Pole			
4+0		9.6	224.9	✓
+50		10.6	223.9	✓
+85		12.0	222.5	✓
+72.6	= 1/2 66th St to South	12.2	222.3	✓
21484.72	To West	12.03	222.50	✓

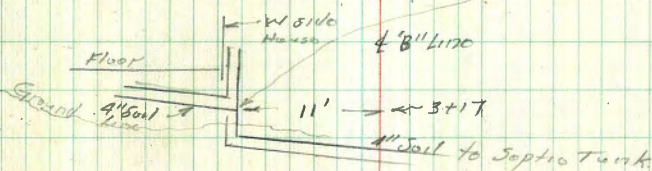
87.91

4+00	6.9	81.0	✓
+50	7.0	80.9	✓
4+80 = End, on stake	6.92	80.99	✓
"B" - side			
0+92 = Δ 22° 57'	4.74	83.17	✓ on stake
1+11 = N edge oil Pipe	4.80	83.11	✓
1.3' Lt on rolled curb	4.32	83.59	✓
1+31.5 = N edge conc. Pvc	4.41	83.50	✓ on 8" stuck Patch
1+52 = S " " "	4.20	83.71	✓ " "
+58 = S " " Shoulder	4.5	83.4	✓
1+67	5.6	82.3	✓
2+00	5.6	82.3	✓ 1' curb
4.48 (87.79) Δ Rt 31° 43'	4.60	83.31	✓ 2+47.5 opps. SW. cor House 3' Lt " "
+51.49	4.9	82.9	✓
3+00	4.9	82.9	✓ 18" Euc Tree 2.5' Rt
+51	4.5	83.3	✓
+95.6 = N edge Conc walk	5.42	82.37	✓
1' Lt = Conc. Step	4.89	82.90	✓
3+99 = S edge Above "	5.43	82.36	✓ 2' curb
4+05.8 = N edge Conc. Drive	5.44	82.35	✓
+24.4 = S " " "	5.46	82.33	✓ 12" olive Tree
4+50	6.0	81.8	✓ 4' Lt
4+65 = End = opp Soil stuck	5.90	81.89	✓
9.5' Lt = House	6.0	81.8	✓

87.79

58

(4+04) 7' Lt on 4" Soil line to Septic Tank 6.70 81.09 Top Pipe
 Above Line under West side House cant be raised.
 3+20 = 10" Accacia Tree 3.5' Lt.
 3+17 = Int. Soil Line 11' Lt at House on ground 4.6 83.2
 " 11' Lt on Floor under House 4.27 83.52



TP 525 (89.63) 341 (84.38)
 chg starting BM 461 (85.02) ✓

Victory Monor Sewer Prelim.

$\langle 187.81 \rangle$

2+50	47	183.1	✓
3' RA on N. edge Paring.	464	183.17	✓
3+00	52	182.6	✓
3' RA " " " "	508	182.73	✓
3+35 = A.R. 20° 10' 30"	530	182.51	✓
+38 = N edge Paring. Market ch.	561	182.20	✓
+53 = S " " " "	532	182.49	✓
+68 = S " " " "	556	182.25	✓
S.E. BP Market & Pithe	525	181.86	No Record my book
+83	65	181.3	✓
4+00	92	178.6	✓
+26	132	174.6	✓
T.P. 0.95 $\langle 175.69 \rangle$	13.07	$\langle 174.74 \rangle$	
4+57 = A.R. 28° 20' on Hub.	4.85	170.84	✓
5+00	4.2	171.5	✓
+50	4.2	171.5	✓
6+00	3.8	171.9	✓
+50	3.4	172.3	✓
6+73 on P.O.T. Hub.	3.14	172.55	✓
7+00	4.1	171.6	✓
+50	4.9	170.8	✓
8+00	8.7	167.0	✓
+50	12.1	163.6	✓
T.P. 0.99 $\langle 164.37 \rangle$	12.11	$\langle 163.58 \rangle$	
9+00 = A 2° 30' 14" on Hub.			
750	33	161.3	✓

$\langle 164.57 \rangle$

61

10+00	5.1	159.5	✓
+50	6.9	157.7	✓
11+00	8.7	155.9	✓
+15	11.3	153.3	✓
+20 = E edge ch.	15.1	149.5	This ch. Has 48" Conc. Culvert at Market
+26 = W " " "	14.9	149.7	
+33	13.1	151.5	✓
+50	10.8	153.8	✓
+70	9.2	155.4	✓
12+00	9.5	158.1	✓
+20	8.9	155.7	✓
+50	10.4	154.2	✓
T.P. 3.44 $\langle 156.33 \rangle$	11.68	152.89	✓
12+90 = A.R. 20° 26'	5.98	150.35	on Hub
13+00	6.4	149.9	✓
+50	7.2	149.1	✓
14+00	7.9	148.4	✓
+50	9.4	146.9	✓
15+00	10.8	145.5	✓
+50	10.6	145.7	✓
16+00	9.7	146.6	✓
+56.64 = A.L. 85° 15'	9.87	146.46	on Hub
T.P. 0.26 $\langle 145.00 \rangle$	12.29	$\langle 144.04 \rangle$	✓
17+00	2.4	144.6	✓
+35	5.9	139.1	✓
+50	7.8	137.2	✓

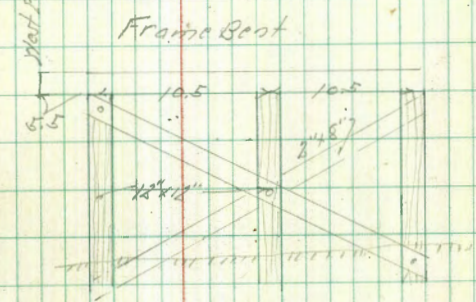
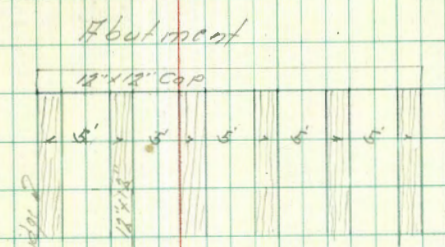
Cont. p. 62

<145.00>

18+00		10.1	134.9 ✓
+30		11.8	133.2 ✓
750		13.3	131.7 ✓
+60		11.0	134.0 ✓
+62.35	N Rail SD & A RR	10.12	134.88 ✓
+73		11.2	133.8 ✓
TR	1.86 <136.45>	10.41	<134.59>
18+85		8.1	128.3 ✓
+95		8.1	128.3 ✓
19+00		7.3	129.1 ✓
+15		6.3	130.1 ✓
+50		7.3	129.1 ✓
+63		7.4	129.0 ✓
170		11.3	125.1 ✓
+87		12.1	124.3 ✓
+93	at N.H. on Ground	13.7	122.7 ✓
12+24.72	N.H. on Run #M Drawing 1005-D	7.36	129.09 ✓
ch. B.M. Spke. in Pole	#70138	10.89	<125.56> ✓

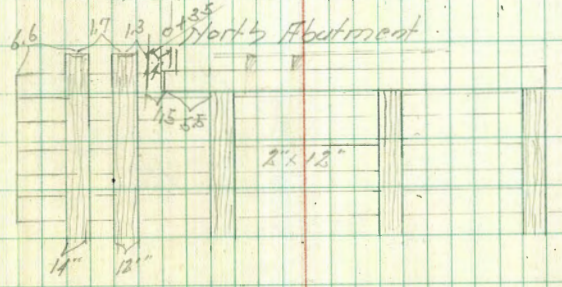
N.H. Scaled
FB. 1688
40

Frame Trestle 64th St North of Atkins Ave 62
3 Panels 2 Beams



N.L. N. 6.81 DRY WOOD

Pile Trestle 63rd St + Atkins Ave



Proposed Sewer 84 1/2" ST
 Atkins Ave to Brooklyn Ave.

Sketch Page 63

B.M.	0.85	(224.49)	223.64	SFT Opt'd
TP	2.97	(215.64)	212.67	Imperial + noted
B.M.		8.63	207.01	Mon 5.27 ft 8.64 1/2 ST
0+0	= Existing M.H. #	10.98	204.72	on Pipe
"	Atkins 464 1/2 ST			
"	Flow Line to North	20.85	194.79	
+50		10.9	204.7	
+84.8	= Sly Bridge	9.25	206.29	on Deck
"		17.6	198.0	on Ground
+95		18.1	197.2	
1+19		18.5	197.1	
+25		15.0	200.6	
+31.5	= 1/4 Bridge	9.21	206.43	on Deck
"		15.0	200.6	on Ground
TP	3.73	(210.77)	860	(207.04)
+80			6.8	204.0
+88.2	= 1/2 12" Conc Culvert	6.8	204.0	
"	9.5 ft Flow Line	10.20	200.77	
"	220 ft " "	9.00	201.77	
2+0		6.6	204.2	
+50		5.1	205.4	
+80	8' 1/2" Fly Power + Tail Pole			
+87.50	Δ 1 1/4 90° Rt	3.06	207.71	on Stub
3+0		1.9	208.9	
TP	12.99	(223.03)	0.73	(210.01)
+50		5.1	217.6	

Index
 on 5K

June 7-14
 S. S. 03
 B. S. S.
 Osborne

64

		(223.03)		
3+70			0.5	222.5
TP	12.91	(235.46)	0.48	(222.55)
4+0			7.5	228.0
4+0			1.7	233.8
TP	10.20	(243.05)	0.71	(234.75)
+60	78' 1/2" Fly Power + Tail Pole			
+75			7.3	237.7
+84	256' 1/2" = 2 House		7.78	237.27
5+0			5.3	239.7
+50			3.6	241.4
6+0			2.4	241.6
"	50' 1/2"		9.1	235.9
+50			4.0	241.0
+66	2' Tail Pole			
+80			5.8	239.2
7+0			7.7	237.3
+80			12.1	232.9
TP	6.31	(239.66)	12.00	(233.05)
+55			16.1	223.3
+75			16.4	223.0
8+0			11.1	228.3
+88	2' Tail Pole			
+50			4.7	234.7
+75			2.6	236.8
+90.25	= 1/2 Brooklyn		0.4	239.0
B.M.			1.79	237.57

Mon
 Brooklyn 1644
 237.63

Proposed Saxon Stork St.
Hkins Ave to Brooklyn Ave.

Sketch Page 63

BIV	278	(210.79)	207.01	Mon St Hkins & 64th Page 64
BM		6.76	(204.03)	Mon St Hkins & Stork
0+0	= Ex. Sking Mt. Hkins & Stork	9.23	201.46	00 R.M.
"	Flare line to North	20.92	189.87	
TP	2.62	(203.26)	101.5	(200.64)
+10		2.5	200.8	
+15	6' 1" - 1/2 16' Paper Tree leaning over			
+50		3.6	199.7	
1+0		5.0	198.3	
+50		8.7	194.6	
+75		10.9	192.4	
2+0		9.7	192.6	
+50		4.5	198.8	
+90	64' H - 1/4 of House Entrance	2.60	200.66	07 floor
3+0		2.2	201.1	
+50		0.4	202.9	
TP	12.98	(215.91)	0.33	(202.92)
4+0		10.1	205.8	
+50		4.7	201.2	
TP	12.75	(228.66)	0.00	(215.91)
5+0		9.6	219.1	
+50		1.2	227.4	
TP	12.89	(241.27)	0.28	(228.38)
6+0		6.6	234.7	

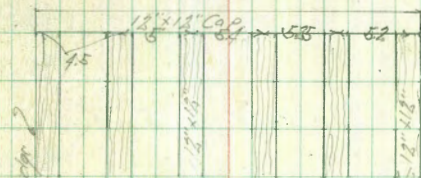
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65

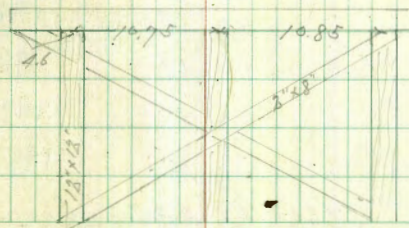
(241.27)

6+50		0.9	240.4	
TP	12.78	(253.74)	0.31	(240.96)
7+0		8.1	245.6	
+50		2.6	251.1	
TP	12.07	(266.51)	0.30	(253.44)
8+0		10.5	256.0	
+50		6.2	260.3	
9+0		2.8	263.7	
+25	S.L. Brooklyn	1.0	265.5	
TP	6.94	(272.77)	0.68	(265.83)
BIV		5.58	(267.19)	Mon 8 Brooklyn Stork
+55	S. Brooklyn	5.2	267.6	

Frame Truss 19' 0" N of North of Hkins Ave
North West end 3 Panels 2 Bents



Frame Bed



Proposed Saver 63rd St.
Hkins Ave to Broadway

Sketch Page 63

BM	0.27	$\langle 212.89 \rangle$	212.62	SE Top of Hill Imperial St 75th St
TP 83	1.39	$\langle 202.52 \rangle$	11.76	$\langle 201.13 \rangle$
0+0	- Exist. MA Hkins + 63rd St. Sealed	7.18	195.34	Top of Hill
"	"	17.4	185.1	Ground
+1.5	"	16.5	186.0	
+23	44' Lt: Fly 30" C.I. Cube	14.8	187.7	
+35	2' x 2' Plank Bit Head	13.1	189.4	Bottom Ground
"	"	7.1	195.4	Top " 6'
"	4' 9" on Drop	5.07	197.45	Deck Bridge
+43	"	5.5	197.0	
+61	78' Lt: Fly 24' Pepper Tree			
+72	105' Lt: Fly Paper Pole			
+75	"	7.4	195.1	
1+0	"	8.8	193.7	
+06.03	- A 8° 26' Lt	8.97	193.55	on Stubs
+50	"	9.2	193.3	
TP	7.47	$\langle 200.84 \rangle$	9.15	$\langle 193.37 \rangle$
+50	75' Lt	9.8	191.0	
2+0	"	7.1	193.7	
"	100' Lt	9.2	191.6	
+56	"	6.4	194.4	
3+0	"	5.2	195.6	
+50	"	3.7	197.1	
4+0	"	1.5	199.3	
TP	12.97	$\langle 213.16 \rangle$	0.45	$\langle 200.39 \rangle$

Indexed
0.5K

June 9-44

Sisson

81.55 X

8099

66

		$\langle 213.16 \rangle$		
4+50			8.9	204.3 ✓
5+0			1.6	211.6 ✓
TP	13.13	$\langle 225.94 \rangle$	0.35	$\langle 212.81 \rangle$
+50			8.3	217.6 ✓
6+0			1.6	224.3 ✓
TP	12.97	$\langle 238.38 \rangle$	0.33	$\langle 225.61 \rangle$
+50			7.7	230.7 ✓
7+0			1.0	237.4 ✓
TP	12.84	$\langle 250.88 \rangle$	0.34	$\langle 238.04 \rangle$
+50			6.3	244.6 ✓
8+0			0.7	250.2 ✓
TP	12.94	$\langle 263.58 \rangle$	0.24	$\langle 250.64 \rangle$
+50			8.0	255.6 ✓
9+0			3.3	260.3 ✓
TP	13.01	$\langle 276.34 \rangle$	0.25	$\langle 262.33 \rangle$
+50			10.6	265.1 ✓
10+0			4.3	271.0 ✓
BM			5.07	271.27 ✓
+15.22	= 2 Brooklyn		2.90	273.44 ✓
"	"		3.5	273.8 ✓
TP	12.94	$\langle 289.25 \rangle$	0.0	$\langle 276.34 \rangle$
+50			11.2	278.1 ✓
11+0			6.0	283.3 ✓
"	100' Lt		12.3	277.0 ✓
TP	12.76	$\langle 301.81 \rangle$	0.23	$\langle 289.05 \rangle$

SE Top of Hill
Brooklyn St
63rd St
271.20
on Map

on Ground

$\langle 301.87 \rangle$

11+50		12.6	289.2	✓
12+0		5.8	296.0	✓
"	50' Lt	11.6	290.2	✓
TP	7.33	$\langle 308.33 \rangle$	0.81	$\langle 301.00 \rangle$
+50		6.3	302.0	✓
13+0		2.1	305.2	✓
"	160' Lt = 11 1/2 House	15.14	293.19	07 Floor
+50		2.6	305.7	✓
14+0		5.6	304.7	✓
"	50' Lt	12.7	295.6	✓
+50		5.3	303.0	✓
15+0		7.8	300.5	✓
BM		8.68	299.65	Handwritten + 63.00 299.65
+15.22	Handwritten	8.1	300.2	✓
TP	3.90	$\langle 302.55 \rangle$	8.68	$\langle 299.65 \rangle$
+50		6.0	297.5	✓
16+0		7.3	296.2	✓
"	75' Lt	16.0	287.5	✓
+50		6.7	296.8	✓
+87	89' Lt = 1/2 Dr. Garage	8.39	295.76	Core Floor
17+0		12	299.3	✓
TP	12.68	$\langle 315.87 \rangle$	0.36	$\langle 303.19 \rangle$
+50		10.7	305.2	✓
18+0		3.9	314.0	✓
TP	12.83	$\langle 328.37 \rangle$	0.53	$\langle 315.51 \rangle$

 $\langle 328.37 \rangle$

18+50		10.6	317.8	✓
19+0		5.9	322.5	✓
"	75' Lt	15.0	313.4	✓
TP	9.31	$\langle 336.45 \rangle$	1.23	$\langle 327.14 \rangle$
+50		8.0	328.4	✓
+86.3	Shy Cook Pavement	4.19	337.26	✓
20+06.14	2 1/2 Broadway	3.60	337.85	✓
			324.42	02 Lt

Proposed Sewer 62nd St.
 Atkins Ave. to Brooklyn Ave.

Sketch Page 63

BM	4.43	(205.56)	(201.12)	TP & Page 66
TP	0.55	(196.56)	9.55 (196.0)	Wood St. 42 ft 2 62nd St.
BM			8.80 (187.76)	on Rim
0+0	= Existing M.H. Atkins		8.94 (187.62)	on Rim
"	2' Floor Line 11.97 Below Rim Floor Line to North		20.19 176.27	175.85 2' FL.
+50		9.4	187.2	
1+0		7.5	189.1	
+28.3	Sky Frame Bridge	6.15	190.21	on Deck
+30		13.8	182.8	
+43		16.6	180.0	
+56		15.4	181.2	
+73		15.0	181.6	
+79.5	Wly Bridge	6.20	190.36	on Deck
2+0		6.9	189.7	
+50		7.7	188.9	
3+0		6.6	190.0	
TP	12.58	(206.57)	26.3 (193.93)	
+50		10.9	195.6	
+80		7.1	199.4	
4+0		5.2	201.3	
+50		0.5	206.0	
TP	12.80	(218.97)	0.34 (206.17)	
+75		12.0	207.0	
5+0		9.5	209.5	
+50		5.2	213.8	

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June 9-44

6+0			1.5	217.5	
TP	12.51	(221.18)	0.30	(218.67)	
+28	50 FT - 2 House		11.86	(219.32)	on Floor
+50			9.6	221.6	
7+0			4.7	226.5	
"	3' RT - Wly Dirt Road		6.3	229.9	
+50			0.8	230.4	
"	75 FT		3.4	228.2	
"	75 FT		5.4	225.8	
TP	10.17	(240.77)	0.56	(230.67)	
+77.60	POT		8.98	234.01	on Stud
8+0			8.2	232.6	
+50			8.3	232.5	
"	50 FT		13.5	227.3	
9+0			9.0	231.8	
+50			7.5	233.3	
10+0			5.2	235.6	
+50			1.0	239.8	
TP	8.98	(248.95)	0.82	(248.97)	
+79.50	2' Brooklyn		5.6	243.3	
"			6.61	(242.34)	on Man
BM			4.23	(244.71)	5.14 Spk Pole Brooklyn 42 244.62

Proposed Sewer Fergus St.
Hkins Ave to Brooklyn Ave

Sketch Page 63

BM	2.83	(190.59)	(187.76)	Mon St Hkins Ave Page 68
TP 8	5.89	(186.13)	10.35 (180.24)	
0+0	Exist. MH Hkins	5.89	(180.24)	0.78 m
"	+ Fergus			
"	F/Day to North	16.53	169.60	169.202 Fl.
"	F.L. 11.04 Below Rim	9.2	176.9	Ground
+09		9.2	176.9	
+10		6.4	179.7	
+50		5.2	180.9	
+7.5		4.8	181.3	
+40		3.2	182.9	
TP	12.75	(198.53)	0.26 (185.77)	
+50		10.1	188.4	
2+0		5.7	192.8	
+20		3.8	194.7	
+50		2.6	195.9	
2+0		1.2	197.3	
TP	12.47	(210.73)	0.26 (193.26)	
+40	130 ft. N W 1/4 House	9.33	201.20	0.7 Fee.
+50		11.4	199.3	
4+0		9.9	200.8	
+50		8.3	202.4	
5+0		5.6	206.1	
+50		1.8	208.9	
TP	12.69	(222.83)	0.59 (210.14)	
6+0		10.4	212.4	

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C.S.K.

June 12-44
S. J. 002
Bliss
Osborne

69

	(222.83)	
6+50	7.0	215.8
7+0	3.2	219.6
TP	12.80	(235.15)
+50	11.1	224.0
8+0	7.9	227.2
+50	5.8	229.3
9+0	4.0	231.1
+50	1.4	233.7
TP	13.42	(247.37)
10+0	10.3	237.0
+50	6.8	240.5
11+0	3.9	243.4
+46.50 - 1/2 Brooklyn	2.2	245.1
BM	2.66	(244.65)

2 May
Brooklyn
Fergus
244.56

Proposed Seyer 61st St.
 Hkins Ave to Brooklyn Ave

B.M. 2	297	(184.2)		(180.24)	0.2 Rms Mid Hkins Fergus Page 49
0+0	- First M.H. Hkins	11.86	(172.35)		0.2 Rm 163.60
"	2 FL. 8.75 Below Rms Flax Line	20.16	(164.05)		
+15		12.6	171.6	✓	
+23		14.5	169.7	✓	
+55		14.6	169.6	✓	
+70		10.2	174.0	✓	
+70		10.2	174.0	✓	
+75.0		9.2	175.0	✓	
+80		7.0	177.2	✓	
2+0		4.6	179.6	✓	
TP	12.89	(196.68)	0.42	(183.79)	
+25		4.2	185.5	✓	
+65		5.3	191.4	✓	
3+0		4.1	192.6	✓	
"	75 Lt	5.6	191.1	✓	
+50		3.1	193.6	✓	
4+0		1.4	195.3	✓	
"	100 Lt	2.2	194.4	✓	
TP	11.94	(208.40)	0.22	(196.16)	
+50		11.5	196.9	✓	
5+0		9.9	198.5	✓	
+50		8.9	199.5	✓	
6+0		6.2	202.1	✓	
"	50 Lt	12.1	195.3	✓	
"	100 Lt	7.4	201.0	✓	

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 C.S.K.

Jan 11-14
 S. W. S.
 81.51 ST
 Osborne
 70

(208.40)

6+50		4.8	203.6	✓	
7+0		3.4	205.0	✓	
"	50 Lt	8.8	199.6	✓	
"	100 Lt	0.0	208.4	✓	
+50		0.3	208.1	✓	
TP	12.79	(220.85)	0.34	(202.05)	
8+0	1	9.4	211.4	✓	
"	100 Lt	10.0	210.8	✓	
+50		6.8	214.0	✓	
9+0		3.5	217.3	✓	
+50		2.1	219.7	✓	
"	55 Lt. of House	0.3	220.5	✓	0.2 Floor
TP	11.63	(220.22)	0.27	(220.52)	
10+0		232.21	10.2	222.0	✓
+50		7.4	224.8	✓	
11+0		4.0	228.2	✓	
"	100 Lt	6.4	225.8	✓	
+50		0.4	231.8	✓	
TP	10.32	(242.09)	0.44	(231.77)	
12+0		6.8	235.3	✓	
+07.68	of Brooklyn	6.5	235.6	✓	
B.M.		6.83	(235.26)	✓	\$ Mon 8.00 6.00 235.19

Proposed Sewer Brooklyn Ave

60th St to 64th St

Sketch Page 6

BM	6.85	(234.36)	234.47	147th Brooklyn Ave 60th St
0+0	= E.L. 60th St	6.9	234.4	
+50		9.5	231.8	
+100		11.9	229.4	
+150		12.7	228.6	
2+0		12.7	228.6	
"	75' Rt of S	12.8	228.5	
+50		11.8	229.5	
3+0		10.0	231.3	
"	75' Rt of S	13.1	228.2	
+50		7.1	233.9	
+77.90	= E.L. 61st St	5.8	235.5	
BM		6.16	(235.16)	Mon 8-00' E.L. 61st St
4+0		4.9	236.4	
+50		2.3	239.0	
5+0		0.4	240.9	
"	75' Rt of S	4.2	237.1	
+50		1.0	240.3	
6+0		1.3	240.0	
"	100' Rt of S	2.0	239.3	
TP	12.87	(253.12)	10.7	(240.25)
+50			12.2	240.9
7+0			10.7	242.4
+52.30	= E.L. Ferguson St		8.1	245.0
BM			8.52	(244.54)

Indexed
C.S.K.

Jan 17 44

J. J. J. J.

81st St

25th Ave

71

8+0			5.7	247.4	1st Floor
+50			4.6	248.5	
+70			4.2	248.9	
"	80' Rt of House		10.72	(247.40)	1st Floor
9+0			3.2	249.9	
+50			1.9	251.2	
+60			1.7	251.4	
"	80' Rt of House		9.72	(248.39)	1st Floor
10+0			0.8	252.3	
+50			1.1	252.0	
11+0			2.6	250.5	
"	75' Rt of S		10.6	242.5	
+50			5.3	247.8	
12+0			9.3	243.8	
+12.66	= E.L. 62nd St		9.8	243.3	
BM			10.91	(242.2)	Mon 8-00' E.L. 62nd St
+50			10.1	243.0	
13+0			5.9	247.2	
"	10' Rt of S		9.4	243.7	
TP	12.83	(261.91)	4.04	(249.05)	
+50			10.3	251.6	
14+0			6.5	255.4	
"	75' Rt of S		9.4	252.5	
+50			2.5	259.4	
TP	12.60	(274.22)	0.29	(261.62)	

(27922)

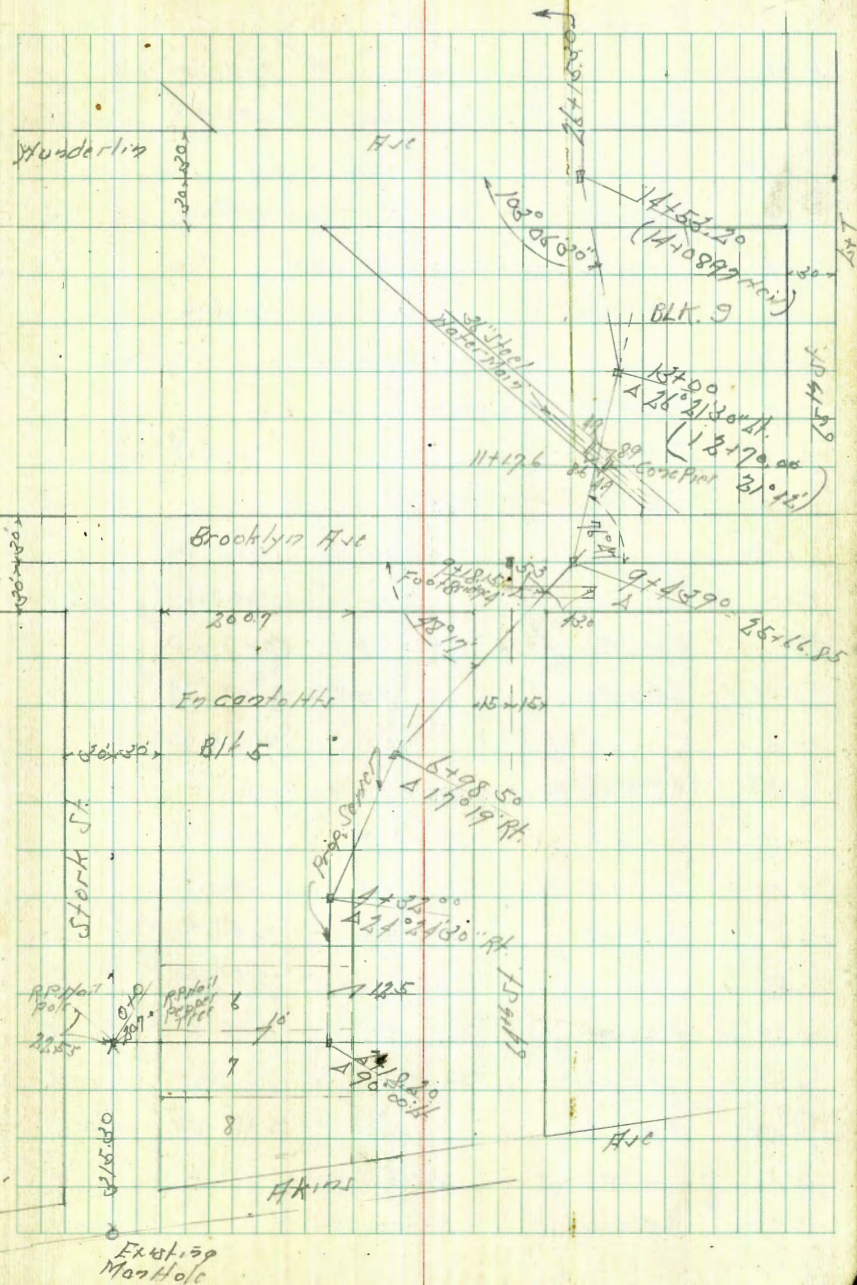
15+0		10.3	263.9 ✓	
"	45 ft - 2 1/4 Hrs House	12.52	261.70 ✓	on floor
+50		5.1	269.1 ✓	
16+0		0.0	274.2 ✓	
TP	2.26	(277.15)	0.33	(273.89)
+10		2.2	275.0 ✓	
+18.18	2 1/2 hrs of	2.1	272.7 ✓	
BM		3.80	273.35 ✓	None Brooklyn St Street
17+0		5.1	272.0 ✓	
+50		6.7	270.4 ✓	
18+0		8.3	268.8 ✓	
+10		8.6	268.5 ✓	
"	50 ft - 2 1/4 Hrs House	14.00	(263.15)	on floor
+50		9.5	269.6 ✓	
19+0		10.0	269.1 ✓	
"	75 ft of	15.0	262.1 ✓	
+50		9.9	267.2 ✓	
20+0		9.5	267.6 ✓	
+50		9.5	267.6 ✓	
+75.27	2 1/2 Stork	9.5	267.6 ✓	
BM		9.96	(267.19)	None Brooklyn St Street
TP	0.71	(268.5)	9.28	(267.87)
21+0		1.1	267.5 ✓	
+50		1.8	266.8 ✓	
22+0		3.0	265.6 ✓	
"	22 ft - 2 1/4 Hrs House	5.72	(262.89)	on floor

(268.11)

23+0		1.3	264.3 ✓	
+60		6.4	267.2 ✓	
24+0		9.8	258.8 ✓	
TP	0.55	(256.10)	13.05	(255.55)
+50		2.8	253.3 ✓	
24+0		6.8	249.3 ✓	
"	75 ft of	17.2	236.8 ✓	
+50		10.2	245.9 ✓	
TP	0.94	(244.27)	12.78	(243.33)
25+0		2.7	241.6 ✓	
+21.80	2 1/4 Stork	6.2	238.0 ✓	
BM		6.72	(237.55)	None Brooklyn St Street
+47		7.6	236.7 ✓	
+46.85		16.1	228.2 ✓	

Cont 1669 - Page 72

$$\frac{25 \times 21.80}{26.02} = 0$$



Proposed Sewer Blocks 5 F7 canta Heights

Sketch Page 73

B.M.	110	(205.13)	204.05	204.05	204.05	204.05
0+0	= 3415.30	2 Starkest	3.70	(201.43)	07 Hub	
+18	9' Lt of 1/2	Sly 18" Pepper Tree				
+20			3.1	202.0		
+46	8' Lt of 1/2	Sly 8" Pepper Tree				
+50			2.5	201.6		
+88	7.5' Lt of 1/2	Sly 14" Pepper Tree				
+90	8.5' "	Sly 10" Pepper Tree				
1+0			2.4	202.7		
+42	8.3' Lt of 1/2	Sly 18" Pepper Tree				
+50			1.3	203.8		
2+0			1.0	204.1		
TP	1220	(216.18)	115	(203.95)		
+18.80	A 90° 00' Lt		12.39	203.79	07 Stub	
+27			11.6	204.6		
+28	= 3 Wire E/W Cross Fence					
+29			10.5	205.7		
+50			9.5	206.7		
3+0			8.3	207.9		
+27			7.0	209.2		
+29			5.9	210.3		
+34	4.6' Lt of 1/2	3" Fig Tree				
+50	P.O.T.		4.23	211.35	07 Stub	
+60	5' Rt of 1/2	5" Quince Tree				
+74	5' Lt of 1/2	8" Peach "				

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C.P.R.

June 17-14
5:00 PM
8:10 PM
05600000

74

3+88	5' Lt of 1/2	6" Peach Tree			
4+0			5.9	212.3	
+29	2	2" Fig Tree			
+32	A 24° 34' 30" Rt		3.6	212.6	
TP	642	(218.97)	3.63	(212.55)	07 Stub
+64	= 11 x 5 W x 2 W x 2 W x 2 W x 2 W	4.5		214.5	
+83	5.2' Lt of 1/2	8" Pepper Tree			
5+0			4.8	214.2	
+50			4.1	214.9	
6+0			3.4	215.6	
+10	90° Rt	11 1/4 12" Elm Tree			
+27	48° Rt	11 1/4 0.8" " "			
+40			2.5	216.5	
+50	8' Lt	11 1/4 14" Elm Tree	1.8	217.2	
TP	1256	(230.12)	1.41	(217.56)	
+98.50	A 19° 19' Rt		12.39	(217.73)	07 Stub
7+50			7.4	222.7	
+75			7.5	222.6	
8+0			2.5	227.6	
TP	916	(238.89)	0.48	(229.64)	
+50			7.2	231.6	
+70	3.4' Lt	Fly Tel Pole			
+75			6.7	232.1	
+84	12.5' Rt	11 1/4 20" Elm			
9+0			7.0	231.8	

(228.80)

9+0.5	1' Rt = 8 1/2		
+15		7.4	231.4
+12.15	2' 4' Foot Bridge	5.43	233.37 on Deck
+42.90	2' Brooklyn	10.55	228.25 on Stub
BM	2.60	(240.17)	1.23 (237.57) Mon 2' Brooklyn
10+0		11.1	229.1
+20		10.5	229.7
+30		8.6	231.6
+50		8.5	231.7
11+0		7.0	233.2
+12		5.0	235.2
+17.6	5 1/2' fine Cone Piers taken on diagonal	19' Rt = Cone Pier	8.6' Lt = Pier
+25.6	11 1/4 " " "	4.9' Lt = " "	8.9' Rt = " "
		+5.17	245.34 Bottom of Steel Pipe
+50		4.2	236.0
12+0		2.2	238.0
"	5' Rt - Bot Draw	3.7	236.5
"	5' Lt	0.0	240.2
+50		1.2	239.0
"	5' Lt	+1.4	241.6
"	5' Rt	2.7	237.5
+67		1.8	238.4
TP	10.80	(249.21)	1.76 (238.47)
+80		8.1	241.1

(249.21)

12+80	13' Rt - Bot Draw	11.2	238.0
"	5' Lt	7.3	241.9
13+0	21' Rt 30' Lt	7.59	241.62 on Stub
"	8' Rt	10.2	239.0
"	5' Lt	5.7	243.5
+15		7.1	242.1
"	7' Rt	10.8	238.4
"	5' Lt	4.9	244.3
+50		4.9	244.3
+60		4.7	244.5
"	5' Lt	3.0	246.2
"	7' Rt - Bot Draw	8.2	241.0
+75	" "	6.9	242.3
14+0		6.0	243.2
+22		4.1	245.1
+48		3.0	246.2
+53.20	26' + 15.30' Nucleolin see page 77.	3.62	(245.59) on Stub

Proposed Sewer Wandering Pipe
60th St. to West of 65th St.

Sketch Page 62

BM	0.91	(275.25)	274.34	1st 2 of Wandering Pipe of 60th
0+0	FL of 60th St	1.3	274.0	
+50		6.0	269.0	
1+0		10.4	264.8	
+50		13.1	262.1	
2+0		14.2	261.0	
+10	18' Lt. 1/2" 18' Conc. Catch Basin	17.54	(257.71)	Flow Line
"	18' Rt. Drop Catch Basin	21.58	253.67	Flow Line
+50		14.3	261.0	
3+0		12.5	262.7	
+50		9.4	265.8	
4+0		4.4	270.8	
TP	12.53	(287.39)	0.48	(274.77)
+50		10.2	277.1	
5+0		4.5	283.0	
+50		0.0	287.3	
TP	12.50	(299.57)	0.29	(287.07)
6+0		9.5	290.0	
+50		7.1	292.4	
7+0		4.5	295.0	
"	75' Rt of 1/2"	8.0	291.5	
+50		2.5	297.0	
8+0		1.0	298.5	
"	75' Rt of 1/2"	7.1	292.4	
TP	5.13	(304.35)	0.29	(299.27)

Indexed
c.s.k.

June 20-44
S. 1102
Bliss T
0560-54

76

(304.35)

8+50		4.5	299.8	
9+0		3.3	301.0	
"	100' Rt = 1/2" 1/4 House	4.50	299.8	2nd Floor
+50		3.5	300.8	
10+0		6.5	297.8	
+50		11.3	293.0	
TP	1.17	(292.85)	12.67	(291.68)
11+0		4.4	288.4	
"	+50	8.1	284.7	
12+0		10.2	282.6	
+50		11.3	281.5	
13+0		11.9	281.0	
+50		12.3	280.5	
TP	11.24	(291.90)	12.19	(280.66)
14+0		11.2	280.7	
+50		10.9	281.0	
+76	= 36" Conc Culvert	10.1	281.8	275.9 Cal. Wandering Pipe
"	30' Lt = 1/2" 1/2" 30" Conc	14.30	277.60	Flow Line
"	38.5' Rt. Outlet " "	18.12	273.78	" "
15+0		8.8	283.1	
"	120' Rt of 1/2" 1/4 House	11.20	280.60	2nd Floor
+50		2.8	288.1	
TP	12.70	(304.22)	0.48	(291.54)
16+0		9.7	294.5	
+50	12 = 1/2" 63rd St	4.1	300.1	

		(304.22)			
BM			4.62	(299.60)	Mon 1/19 Wunderlin King
TP	12.64	(316.26)	0.60	(303.62)	
17+0			10.8	305.5	
+50			5.2	311.0	
18+0			0.1	316.2	
TP	5.23	(321.15)	0.34	(315.92)	
18+0	100 ft of 2		6.6	314.6	
+25			28	318.4	
+50			15	319.7	
19+0			21	319.1	
"	75 ft of 2		8.8	312.4	
+50			39	317.3	
+90	45 ft of 2 + 1 1/4 House		7.10	314.05	on Floor
20+0			6.9	314.2	
+28			7.8	313.3	
"	45 ft - 2 + 1 1/4 House		11.35	309.80	on Floor
+50			8.2	313.0	
21+0			2.5	312.7	
"	75 ft of 2		18.8	302.4	
+50.07	POT		11.09	310.06	on Stub
TP	0.46	(308.56)	13.05	(298.10)	
22+0			5.9	302.7	
"	75 ft of 2		11.9	296.7	
+50	Approx. Water in		13.0	295.6	
TP	0.52	(296.02)	13.06	(295.50)	

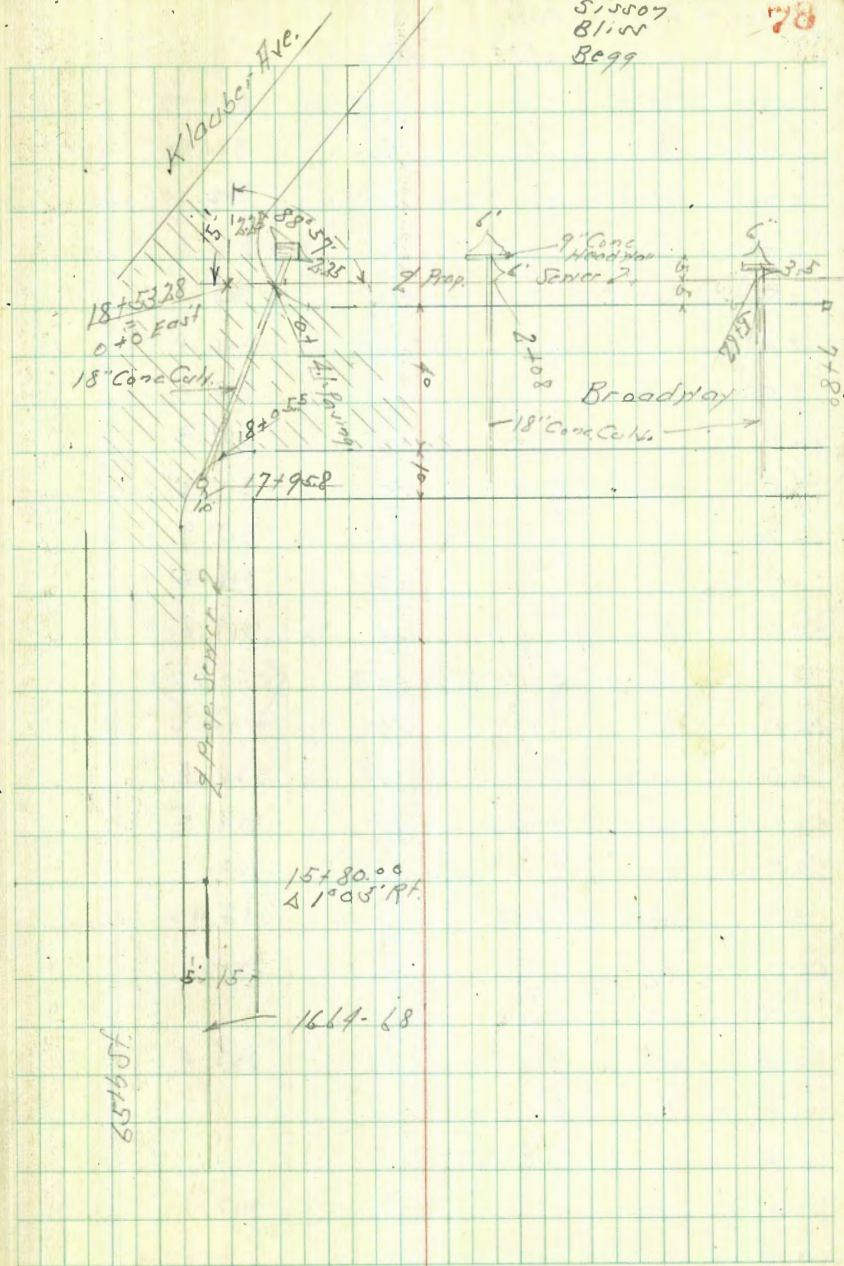
		(296.02)			
23+0			5.9	290.1	
+50			11.6	284.2	
TP	0.86	(284.25)	12.63	(283.39)	
+75			8.4	280.8	
24+0			7.8	276.4	
"	35 ft of 2		11.2	273.0	
"	100 " "		9.3	275.0	
+50			6.9	277.3	
+80			8.2	276.0	
25+0	POT		10.70	(273.55)	on Stub
"	50 ft of 2		1.84	265.8	
TP	0.34	(272.25)	12.34	(271.91)	
+20			1.8	270.4	
+35			5.6	266.6	
+50			12.3	260.0	
TP	0.27	(259.78)	12.74	(259.51)	
+80			4.6	255.2	
26+0			10.0	249.8	
TP	4.36	(253.98)	10.16	(249.62)	
+15.20			8.38	(245.60)	
Floor of 36" Water Main on Wunderlin King.					
BM	12.29	285.84		273.55	on Stub 251.0
	12.82	298.28	0.38	285.46	
27+38	Fixed 36" Water Main	3.61		294.67	Top of Water Main

Proposed Sewer 65th St.
South of Broadway

B.M.	2.15	(314.39)	312.24	3P 54.26 Broadway 1/2 Foot N. of Pav. on 65th St. #1664-70
15+80.00	A 1° 03' Rt	020.1 Pw	142	300.2 ✓
16+0			132	301.2 ✓
+50			10.1	304.3 ✓
17+0			70	307.4 ✓
"	3' Lt of 2		7.3	307.1 ✓
"	3' Rt " "		5.4	309.0 ✓
+50			4.1	310.3 ✓
"	3' Lt		4.6	309.8 ✓
"	1' Rt		1.8	312.6 ✓
"	5' Rt		1.8	312.6 ✓
TP	10.11	(322.35)	2.15	(312.24)
+80			82	314.2 ✓
"	4' Lt		10.9	311.5 ✓
"	3' Rt		7.0	315.4 ✓
"	5' Rt		7.2	315.2 ✓
+95.8	1' Lt. Sly 18" Core Culk		12.34	310.01 ✓ Flare Line
18+0			10.1	312.3 ✓
+01	21' Rt. 2 Fire Hyd			
+05.5	Sly Pav 17.9		9.03	313.32 ✓
+78.3	" "		8.4	314.0 ✓
+53.28	Cross of Pav.		7.62	314.73 ✓

Feb. 5-15
Sisson
Bliss
Begg

78



Proposed Sewer Broadway
65' x 8' to 78' East

322.35 Bl. Ford

0+0		7.62	314.73	✓
+11	Ely Pav	7.51	314.84	✓
+16	3' Lt. 11/4 18" Conc	10.21	312.14	Floor level
+50		7.1	315.3	✓
+70		7.3	315.1	✓
+70		6.5	316.1	✓
+50		7.0	315.4	✓
2+0		6.5	315.9	✓
+08	6' Lt. 11/4 18" Conc Culvert	10.08	312.27	Floor level
+50		6.5	315.9	✓
3+0		5.6	316.8	✓
+50		4.6	317.8	✓
TP	12.45	330.22	4.58	317.77
4+0		11.0	319.2	✓
+50		9.4	320.8	✓
5+0		8.7	321.5	✓
+50		7.5	322.7	✓
+62	3.5' Lt. 11/4 18" Conc. Culv	11.30	318.92	Floor level
6+0		6.1	324.1	✓
+15	3' Lt. 4" Olive Tree			
+36	7' Lt. 5" Olive "			
+50		5.8	325.0	✓
+60	7' Lt. 5/4 12" O.T.			
+81	7' Lt. 5/4 8" O.T.			
7+0		4.5	325.7	✓
+02	6.5' Lt. 11/4 12" Olive Tree			
+24	6' Lt. 5/4 10" " "			

79

330.22

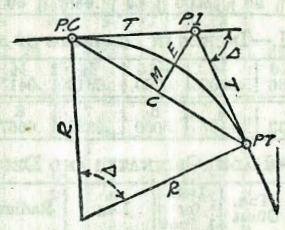
7+47	6' Lt. 5/4 16" Olive Tree			
+50		4.4	325.8	✓
+80		5.07	325.15	on Floor
7+45	90' Rt. 11/4 11/4 From 6.82 House 44' Long Plumbing on Sly End		323.39	on Floor N End

May 1-45

BM	12.07	327.64		315.57	N.W. B.P. W. 1/2 Sec 10 T. 2 N. R. 10 W.
TP	11.34	327.65	1.32	326.21	
TP	6.02	338.02	5.65	332.00	
BM			10.80	327.22	S.E. Prop. P. P. 1 Landis & S. 2 West
TP	12.50	339.72	10.80	327.22	
			4.22	325.50	

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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51.80
691
43.89

CURVE FORMULAS

- Radius— $R = \frac{50}{\sin \frac{D}{2}}$ (1) Degree of Curve— D and $\sin \frac{D}{2} = \frac{50}{R}$ (2)
- Tangent— $T = R \tan \frac{\Delta}{2}$ (3) Length of Curve— $L = 100 \frac{\Delta}{D}$ (4)
- Middle ordinate— $M = R(1 - \cos \frac{\Delta}{2})$ (5) $= R \text{vers } \frac{\Delta}{2}$ (6)
- External— $E = T \tan \frac{\Delta}{4}$ (7) $= R \div \cos \frac{\Delta}{2} - R$ (8) $= R \text{exsec } \frac{\Delta}{2}$ (9)
- Long Chord— $C = 2 R \sin \frac{\Delta}{2}$ (10) Δ —Central Angle

EXPLANATION AND USE OF TABLES

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

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

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

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

616X

308
28

43367

924

442.91

1435.1 = E Logon.

1216.45

255.07

1471.52

14-57
81.46
96.39

1166
416

450

450

270.2 T.P.

270.3 MAP

938

9639

130

139.28
 1172
 150.00

11 + 6397
 41 37' LT

11 63.97
 58.75
 22.72
 20.5
 43.22

12 209
 51
 790

12 1094
 65
 1734
 1084
 416
 2000

10.35 So.
 416+5773

1°36' - 12790

304.98
 1125
 749
 376

1495
 2175
 4175

168
 38
 206
 5
 211

171
 50
 221

870.53
 532.00
 348.53
 1200

532
 65
 167

532
 30.82
 507.18
 58
 543.18

5248
 444
 225
 669

320.0
 25
 60
 99.70
 60.83
 65.83
 880.53
 265.
 200.
 65
 7
 58-0
 201.1113
 674 2760.000
 2584
 2760
 2604
 760
 671
 870
 571
 811

DISTANCES FROM CENTER OF ROADWAY FOR
CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1 1/2
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

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