

GRADE BOOK 126

PASTS

FIELD BOOK

No. 385

228
12
18
28
66

25

490
110
560
65114
560
9112
15073
560
9002

Our Leather Bound Engineers Note Books are carried in the following rulings:

- No. 380 LEVEL BOOK. Left and Right Hand Page the same as Left Hand Page of this Book.
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THE FREDERICK POST CO.
ENGINEERING and DRAFTING SUPPLIES
IRVING PARK STATION
CHICAGO, ILL.
MICROFILMED

APR 8 1965

Inducted
1/27/29
H.H.

Some Construction
Dwight Road 47th St

10-10-27
D. 5000
Nothing
Nooney

SM 11182
Dwight Rd 47th St
332.19
332.20
332.21
332.22
332.23

DE - St. Dwight 165th of 24th	333.39	820 770	333.400 10.11 Chowans
40th - MH	333.10	919 826 279	334.17 334.31
135th of MH	332.90	949 811 138	333.16 342.22
87th - MH	332.50	379 361 18	
39th of MH	332.17	946 822 124	
78th - MH 249th St. Front Path	332.84	945 822 123	
54th	333.07	912 834 78	
108th	333.30	899 811 88	
112th	333.52	876 822 154	
116th	333.71	853 822 131	
270th - DE	334.00	830 806 24	

MH 78th of 24th	332.50	977 821 156	
39th	332.33	906 812 94	
78th	332.16	1013 822 191	
112th - Existing Sewer	332.00	1029 1015 of Existing	

Sewer Lateral's Broodway
Between 27th + 28th St. on S Side

15-15-27

2

Lateral #1 Lot line 1-2
50' E of E.L. 27145

19070
7.13
6.50
2.63

BM 19092
6.90
19793
11.84

N.W. 1/4
Broodway
27145

Lateral Lot line 4-5
300' E of E.L. 27145

18510
12.72
9.84
2.88

19654
12.72
17408
1.12

12522
11.02
16478
1.13
16531
1.12
BM 16347
N.E. 1/4
Broodway
27145
16339

Lateral Lot line 3
350' E of E.L. 27145

17330
13.52
8.87
4.65

Lateral Lot line 2
450' E of E.L. 27145

16590
9.33
2.82
12.75

Lateral Lot line 1
550' E of E.L. 27145

15850
18.1
2.37
18.77

27th St Paving

Conduit No

BN	229	133.36		131.07	N.E.P. Market 1 27th St
TP	978	130.76	12.38	120.98	
N End Curb Inlet = 118 5 of S. L. Marker			144.63	6.13 10.26 -4.83	
125'S			124.48	6.28 11.76 -7.34	
138'S = S End Curb Inlet			124.70	6.06 6.95 -0.26	

Conduit No 3

BN	041	131.48		131.07	
TP	699	126.14	12.33	118.15	
N End Conduit			117.00	14.22 17.52 -2.02 Ch	
35'E			114.25	17.54 11.85	
76'E = E End Conduit			111.50	14.64 11.03 -3.22	

Sept or Construction
27th Between G & F

112.17
3

07.0 = Existing MH 2 G		151.00			
40'H		152.00			
80'H = Break		153.00			
130'd		155.15			
180'H		157.30			
230'H	202 04507	159.45			
289.2'H = 0 E		162.00			
334.2'H = 0 E		164.15			

BN =	1122	131.38		170.16	N.P. F. 27
E.L. 27th St		97		172.0	
5'E of E.L.		67		174.7	
35'E		10		180.4	

Sept or Laterals 27th Between G & F

	Property Frontline	8/170.16	N.P. F. 27
No 1	168.10	17.60	
No 2	161.00	10.00	
No 3	156.30	17.40	
No 4	154.20	16.00	
No 5 Extra	105.00	15.25	

Weekly Survey 451

Page 199

BM 102.99.80

K St

Paved

Break 90.92 @ 90.80

Lower cut 20

L St

Paved

Imperial

50' Curve in this Block

Lower cut 15

100.36

30' cut

100.38

Lower cut 15 BM 77.46

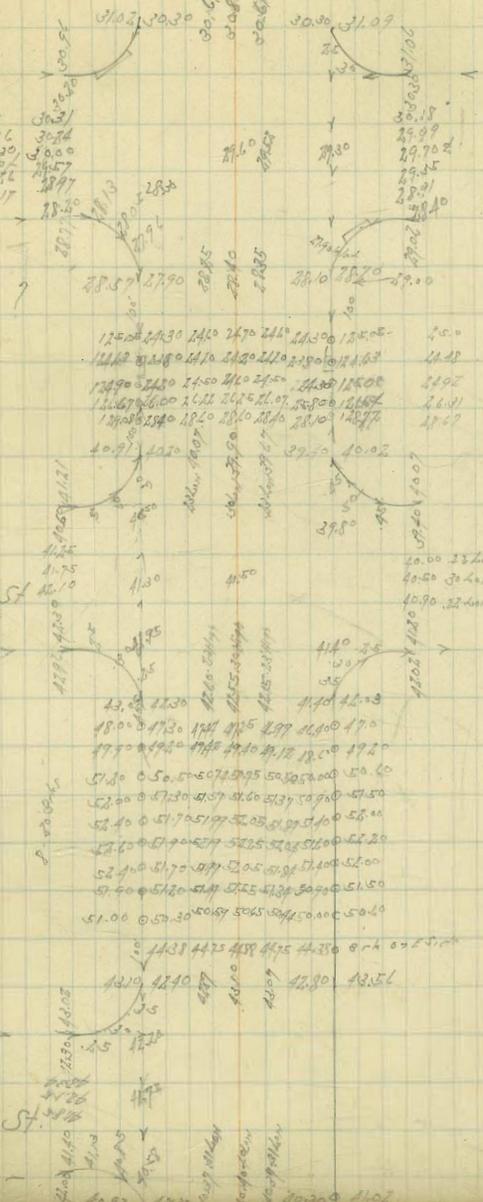
H.E.P.

Paved

15.11.4

BM 131.06 N.E. 80

30' Curve
Mark



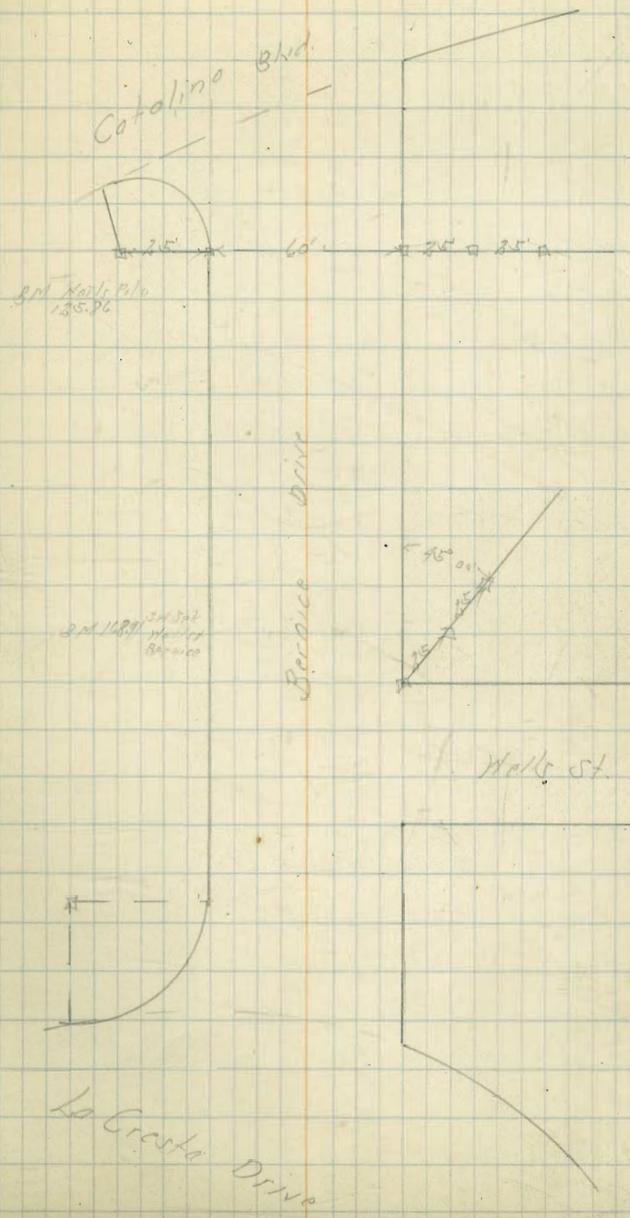
27

8M

8M

3r

7



3rd 1/2 1/2 1/2 1/2

3rd 1/2 1/2 1/2 1/2 Berice

La Cresta Drive

Catalina Blvd.

Berice Drive

Hells St

Redondo St. Grades

	E.L.	41208.19
N.L. Santa Cruz	182.65	193.49
80'H - BVC	184.71	201.09
70'H	187.09	
120'H - EVC	189.10	
168.5'H - S/L Wildwood Road	190.75	91.75 on Wildwood
N.L. Wildwood Road	192.23	92.75
89.8'H - EVC	192.29	
71.5'H - BVC	192.01	
111.5'H	191.20	
151.62'H - EVC	189.45	
201.62	187.51	
251.62	185.58	

201.09
192.29
89.8
192.29

CT. N.L. Redondo
to Wildwood

E	182.65	84.71	87.09	89.10	90.75
	16.8	16.3	14.0	11.9	10.3
	15.8	15.3	13.0	10.9	9.6
	14.8	14.3	12.0	9.7	8.7

E	192.23	92.29	92.01	91.20	89.45	87.51
	15.9	15.3	14.1	12.0	10.3	8.7
	14.9	14.3	12.0	9.7	8.7	
	13.9	13.3	11.0	8.7	7.7	

Grades North

12

201.09
192.29
89.8
192.29

Bermice Drive Grades
LaCresta to Catalina Blvd

12-27-22
15

	S		N	
HL LaCresta end			11939 - Tap Ch. End	
10'H			17020	BM 15222 LaCresta
30'H			17094	15225 + Bermice
50'H			17067	15224
75.65'H - FC	17111		16975	17641
112.32'H - EL Wells	16875		16825	17210
				16231
				16811
				16914
				15230
				15223
				15219
				15214
				15209
				15204
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				13684

Arlington Drive Sewer Construction

Chatsworth Blvd to 310th of Arlington

1-11-28
Sewer
Start
Monday

M.H. 2 - 20' E of M.H.	127.88	16.28 9.65 -6.77	341.33.12	M.H. 60 Chatsworth at Arlington
40' W	130.28	12.55 7.38 -5.20	140.74	
80' W	132.68	16.36 -6.49	156.20	
120' W - M.H. 3	135.08	9.08 7.03 +7.96	155.78	
50' W of M.H. 2	142.86	13.78 2.76 -7.06	152.66	
100' W	150.55	18.06 17.06 +6.99	156.67	
150' W	158.29	19.90 17.90 +7.90	170.54	
200' W	166.02	15.44 13.44 +7.15	186.08	
225.9' W - M.H. 4	170.00	16.53 -6.87	205.22	
50' W of M.H. 4	173.91	2.55 +6.87	211.77	
100' W	177.82	16.90 -6.63	211.15	
150' W	181.72	14.14 -6.6	211.15	
200' W	185.64	14.53 13.11 +6.96	211.15	
250' W	189.55	12.62 +6.62	211.15	
300' W	193.45	9.05 8.27 +6.62	211.15	
345.7' W - M.H. 5 - of Arlington	197.03	17.50 -6.72	211.15	
50' W of M.H. 5	200.63	14.34 7.54 -6.75	211.15	
100' W	202.43	11.14 8.67 -6.77	211.15	
150' W	206.63	8.81 8.01 -6.77	211.15	
170' W - M.H. 6	207.91	8.91 8.15 +6.8	211.15	
50' W of M.H. 6	208.81	8.06 -6.77	211.15	
100' W	209.71	7.16 6.30 -6.80	211.15	
150' W	210.61	1.00 -6.81	211.15	
170' W - O.E.	210.97		211.15	

Chatsworth Blvd Sewers
At Arlington Or

SW Line Arlington	130.28	13.21 7.55 -6.77	144.01
40' W - M.H. 2	137.88	17.68 4.77	
40' W of M.H. 2 E of Arlington	125.79	18.46 10.31 -7.67	
Chatsworth Blvd At Ridge Road			
SW of Ridge Road	152.60	15.77 13.77 -7.70	144.59
100' W - M.H. 7	151.52	17.83 +6.77	
200' W - M.H. 6 Ridge Road	148.50	18.98 -6.61	
Chatsworth Blvd At Wildwood			
Opp SW E.C. S.W. Wildwood	170.04	12.55 4.75 on Cb	180.59
45' W	167.54	13.05 8.25 +4.80 on Pav.	
99' W - M.H. 11 of Wildwood	165.04	15.55 6.68 on Pav.	
38' W of M.H. 11	163.90	16.64 10.94 +6.70 on Cb	
Chatsworth At LaGrasta			
1/2 E of E.C. Chatsworth			109.14
Opp LaGrasta	109.63	10.51 13.15 +6.30	
25' W - M.H. 16	110.82	12.34 12.07 -6.25	
60' W - End SW LaGrasta	112.74	4.60 10.54 +6.86	

Ridge Road Sayers Construction
Chatsworth to Harrington

1-13-28

Wildwood Road Sayers Construction

17

MM No 7 - 20' of W.L. Chatsworth 43' W	151.52	170.7 10.29 +16.8	169.41 16.50 0.91	NFB Chatsworth Harrington
46' W	155.20	13.99 +6.77	165.21 0.88	
92' W	159.88	8.71 +6.37	161.51 16.50	
138' W	162.56	17.65 +7.29	178.81 16.99	
184' W	166.24	4.25 +7.31	183.55 16.90	
230' W - MM No 8	169.92	19.57 +6.07	199.49 17.83	
276' W	171.46	15.49 +6.15	207.65 18.10	
322' W	172.99	12.95 +6.2	220.64 18.65	NFB Harrington
368' W	174.53	16.16 +6.27	236.81 18.28	
414' W	176.06	8.35 +6.90	245.16 18.36	
460' W - MM No 9	177.60	6.71 +6.94	251.87 18.37	
506' W of MM 9	180.04	11.48 +6.71	263.35 18.37	
552' W	182.48	13.15 +6.77	276.50 18.37	
598' W	184.92	11.46 +6.77	287.96 18.37	
644' W	187.36	8.17 +6.77	296.13 18.37	
690' W - MM 10 to Harrington	189.80	2.65 +6.77	301.80 18.37	
736' W - MM Harrington	191.00			

MM 11 - 20' of W.L. Chatsworth 82'	165.04	15.55 +5.87	170.91 16.07	NFB Chatsworth Harrington
47.5' W	168.03	12.54 +6.15	180.57 16.07	
95' W	171.03	8.51 +6.65	189.54 16.07	
142.5' W	174.02	6.57 +6.27	196.11 16.07	
190' W	177.01	4.65 +5.74	201.76 16.07	
237.5' W	180.00	11.66 +6.29	213.42 16.07	
285' W - MM 12	183.00	8.66 +7.70	222.08 16.07	NFB Harrington
332.5' W	187.00	14.75 +7.60	236.75 16.07	
380' W	191.05	10.22 +7.78	246.97 16.07	
427.5' W	195.07	16.13 +7.81	263.10 16.07	
475' W	199.10	7.85 +7.84	270.95 16.07	
522.5' W - MM 13 to Harrington	203.12	7.77 +7.81	278.72 16.07	
570' W of MM 13	205.51	17.15 +7.85	295.87 16.07	
617.5' W of MM 13	207.06	15.64 +7.87	311.50 16.07	
665' W	208.53	14.13 +7.87	325.63 16.07	
712.5' W	210.04	13.61 +7.87	339.24 16.07	
760' W - MM 14	211.56	12.09 +7.87	351.33 16.07	
807.5' W of MM 14	215.76	10.28 +7.87	361.61 16.07	
855' W	218.77	7.02 +7.37	368.63 16.07	
902.5' W	222.37	10.28 +7.37	378.91 16.07	
950' W - D.F.	225.98	7.17 +5.93	386.08 16.07	

Wildwood Road Seder Construction
Redondo to 130 E

1-20-28

NH 28 - Wildwood + Redondo	182.00	1594 1975	233.15 NH 28 E
13" E	187.81	1588 1624	13.23 21.22
86 E	193.61	1608 1726	6.82 22.13
129 E	199.42	1726 1799	20.72 20.14
176 E	205.22	1799 1872	7.37 20.72
215 E - NH 15	211.03	1872 1945	7.37 19.75
11 E of NH	213.74	1945 2018	7.37 19.75
86 E	216.45	2018 2091	7.37 19.75
129 E	219.15	2091 2164	7.37 19.75
172 E	221.86	2164 2237	7.37 19.75
215 E - DE	224.57	2237 2310	7.37 19.75

Redondo St. Seters

2-10-28

18

NH 28 - Redondo + Wildwood	182.00	1193 1833	BM 190.55 NH 28 3.83 Redondo 193.98
176 E	180.75	13.18 18.37	
99.35 E	179.50	14.13 17.50	
148.87	178.25	15.68 18.84	
198.50 - End	177.01	11.97 14.76	
DE - 71.44 N of NH 28	182.50	14.43 18.73	
16.35 N	181.12	12.81 16.39	
92.70 N	179.74	14.18 17.66	
139.05 N	178.36	15.52 18.71	
185.38 N - NH 29	176.99	16.84 18.36	
50 N of NH	176.64	17.52 18.74	
100 N	176.29	17.64 18.73	
150 N	175.94	17.88 18.74	
200 N	175.59	18.36 18.71	
250 N - Further Sider	175.24	18.19 18.26	

La Costa Drive Sewer Construction
N.Y. of Chatsworth

1-24-28

		187.57	120.00
		131.74	100.00
M.H. 16 La Costa & Chatsworth	116.82	117.99	104.80
41 N.Y.	112.35	111.15	100.00
88 N.Y.	113.81	112.12	100.00
133 N.Y.	115.31	113.77	100.00
176 N.Y.	116.80	115.10	100.00
220 N.Y. - MH A 90' W	118.30	116.48	100.00
44 N.Y. of MH	119.71	117.65	100.00
88 N.Y.	121.12	119.00	100.00
132 N.Y.	122.51	120.33	100.00
176 N.Y.	123.93	121.66	100.00
220 N.Y. - DE	125.34	122.99	100.00

La Costa Drive

1-24-28

20

DE N of N.L. Harrison Drive	126.76	109.91	100.00
49 N of DE	126.47	109.62	100.00
98 N.Y.	126.07	109.33	100.00
148 N.Y.	125.73	109.04	100.00
197.5 N of MH 18 A N of	125.38	108.75	100.00
49 N.Y.	125.04	108.46	100.00
98 N.Y.	124.69	108.17	100.00
148 N.Y.	124.35	107.88	100.00
197.5 N - MH 19 A	124.00	107.59	100.00
48 N.Y. of DE	123.66	107.30	100.00
96.34 N.Y.	123.31	107.01	100.00
144.52 N.Y.	122.98	106.72	100.00
192.70 - MH 20 A 70' W	122.65	106.43	100.00
50.6 N.Y. of MH	122.31	106.14	100.00
101.2 N.Y.	121.97	105.85	100.00
151.8 N.Y.	121.63	105.56	100.00
202.4 N.Y.	121.29	105.27	100.00
253 N.Y. - DE	120.95	104.98	100.00

LioCrasto Drive
Server Laterals

	HL		FL			HL		FL
N° 108	116.80	1449 2.19 -15.07	N° 109	115.50	15.50 11.24 -23.78	N° 128	127.00	12.67 2.86 -11.67
N° 110	119.00	12.00 2.19 -15.81	N° 111	118.00	14.89 4.07	N° 129	128.00	18.17 7.97 -10.50
N° 112	121.60	9.40 8.63 -15.77	N° 113	120.50	10.58 6.17 -4.38	N° 130	128.50	18.17 2.09 -16.08
N° 115	125.50	18.05 10.17 -7.67	N° 114	120.50	10.58 6.17 -4.38	N° 131	129.60	17.07 2.34 -14.77
N° 117	128.00	15.55 10.20 -10.70	N° 116	123.10	7.60 2.25 -5.35	N° 132	130.50	19.91 12.77 -7.17
N° 119	129.00	14.55 10.87 -10.87	N° 118	125.70	5.30 2.36 -2.94	N° 133	133.00	18.11 12.63 -5.48
N° 121	130.00	13.55 11.70 -15.70	N° 120	127.30	16.45 10.35 -6.10	N° 134	137.00	18.11 8.16 -9.95
N° 122	132.50	14.25 4.27 -19.57	N° 121	127.30	16.45 10.35 -6.10	N° 135	140.00	12.82 7.24 -12.36
N° 123	135.00	18.67 7.02 -10.33	N° 122	127.60	15.75 12.07 -3.68	N° 136	145.00	14.82 8.25 -11.37
N° 125	139.60	17.07 8.20 -8.77	N° 123	127.60	15.75 12.07 -3.68	N° 137	148.00	11.82 0.75 -11.07
N° 126	128.10	18.07 7.04 -11.07	N° 124	127.60	15.75 12.07 -3.68	N° 138	148.00	11.82 0.75 -11.07
N° 127	127.00	19.67 8.13 -10.50	N° 125	127.60	15.75 12.07 -3.68	N° 139	148.00	11.82 0.75 -11.07

157.82
6.77
157.05
N° 140
10.00
157.05

15.50
11.24
-4.26

LaGrange Drive
Semi Laterals

Left		Right	
N° 161	168.9°	N° 160	175.50°
	18.10 2.95 +16.60		16.85 5.74
			ON 16891 ON 204 Bernie
		N° 157	176.60
			18.55 4.00 +17.55
N° 156	176.00	N° 158	186.00
	18.15 2.95 +15.80		8.5 3.6 +4.7
			18.75 14.14 0.01
N° 155	176.50		
	17.5 1.9 +15.7		
N° 154	176.9°		
	17.5 6.3 +11.6		
N° 152	176.80	N° 153	185.50
	12.5 6.0 +18.3		1.8 6.3 +7.5
N° 151	177.60		
	16.75 6.7 +10.7		
N° 150	177.80		
	11.3 7.2 +18.6		
N° 149	178.40		
	15.7 8.9 +6.9		
N° 148	178.80		
	11.5 6.8 +14.8		
N° 147	178.80		
	11.0 10.8 +1.2		
N° 146	179.10	N° 145	182.00
	11.7 6.3 +14.7		8.7 4.3 +14.7
N° 144	181.40		
	8.8 4.8 +14.3		

Left		Right	
N° 143	183.30		
	7.0 2.0 +4.8		
N° 142	185.20		
	16.8 1.2 +15.6		
N° 141	187.00		
	15.0 7.5 +7.5		
N° 139	188.40	N° 140	191.00
	12.2 6.7 +5.5		11.0 4.5 +6.5
		D.E. 188.03	13.8 1.6 +12.2

Centralama Drive & Nabaska Drive
Series Construction

Bernice Drive Series Construction

20-25
25

N 1/4 Line Centralama	19.12	21.69 5.63 +13.06	895.64 4.87 900.51 9.975 1006.5 4.01 966.4	N.Y. 80 Chickens Wastone
60 S. of "	18.99	21.83 7.35 +14.48	811	S.Y. 80 Chickens Tennison

M.H. 25	140.00	13.45 8.91 20.47	811/1685 0.76 1090.3 16.78	S.Y. 80 Bernice Stall
156 N.W. of M.H.	155.50	17.06 8.75	152.41 5.25 157.66 14.86 172.52 12.28 184.80 10.57	
91.28 N.W.	151.17	8.78 8.21 +3.57	141.11 12.28 153.39 10.57	
134.98 N.W.	146.75	14.11 3.57 17.68	132.75 12.50 145.25	
182.56 N.W.	143.34	18.51 14.64 33.15	125.19 11.55 136.74	S.Y. Stall Bernice Catalina

Chatsworth Blvd - Tenneyson - Centralama Dr.

729.20 N.W. - M.H. 26	137.82	15.90 14.64 1.26	132.75 12.50 145.25	
456.1 N.W. of M.H. 26	133.45	15.90 14.64 1.26	125.19 11.55 136.74	
91.88 N.W.	130.98	12.451 7.22	118.53 12.28 130.81	
126.98 N.W.	124.51	17.19 14.64 2.55	111.37 12.28 123.65	
182.56 N.W.	120.06	17.19 14.64 2.55	103.87 12.28 116.15	
229.20 N.W. - M.H. 27	116.86	17.19 14.64 2.55	96.37 12.28 108.65	
503.25 N.W. - End of M.H.	112.82	17.19 14.64 2.55	88.87 12.28 101.15	

N End	81.54	12.01 1.04 +10.97	10.50 1.04 +11.54
65 N. - M.H. 21 Drop	81.26	19.29 1.04 +18.25	10.50 1.04 +11.54
65 N. of M.H.	80.02	20.63 1.04 +19.59	
136 N. of M.H.	78.77	21.86 1.04 +20.82	
Stub S. of M.H.	70.14	19.51 1.04 +18.47	

Ridge Road
Sewer Laterals

2-8-58

	SL		HL		
N° 35	157.00	$\frac{15.41}{1.59}$	N° 34	155.20	$\frac{15.81}{1.75}$
N° 37	162.00	$\frac{11.41}{1.83}$	N° 36	159.00	$\frac{16.01}{1.87}$
N° 39	167.50	$\frac{5.91}{1.41}$	N° 38	164.00	$\frac{9.41}{1.63}$
N° 41	171.00	$\frac{15.44}{1.36}$	N° 40	169.00	$\frac{2.21}{1.37}$
N° 43	174.50	$\frac{11.94}{1.84}$	N° 42	172.00	$\frac{14.44}{1.80}$
N° 45	175.50	$\frac{1.092}{1.78}$	N° 44	174.00	$\frac{12.44}{1.63}$
N° 47	176.50	$\frac{9.92}{1.77}$	N° 46	175.50	$\frac{10.94}{1.60}$
N° 49	178.50	$\frac{7.92}{1.77}$	N° 48	176.50	$\frac{9.94}{1.55}$
N° 51	180.00	$\frac{1.44}{1.27}$	N° 50	178.00	$\frac{8.44}{1.77}$
N° 53	183.00	$\frac{11.16}{1.67}$	N° 52	180.50	$\frac{5.94}{1.37}$
N° 55	186.50	$\frac{16.64}{13.73}$	N° 54	183.50	$\frac{15.64}{13.73}$
N° 57	189.50	$\frac{8.14}{1.70}$	N° 56	186.00	$\frac{12.14}{13.70}$
			N° 58	189.00	$\frac{10.14}{13.71}$

2M 160.00
13.00
173.41
173.39
173.03
186.06
186.35
187.74

8.

Bernice Sewer Laterals

2-15-58

26

	HL	
N° 162	166.50	$\frac{8.24}{1.77}$
N° 163	169.50	$\frac{8.24}{1.77}$
N° 164	157.50	$\frac{8.24}{1.77}$
N° 165	152.50	$\frac{8.24}{1.77}$
N° 166	147.50	$\frac{8.24}{1.77}$
N° 167	142.50	$\frac{8.24}{1.77}$
N° 168	137.50	$\frac{8.24}{1.77}$
N° 169	132.50	$\frac{8.24}{1.77}$
N° 170	127.50	$\frac{8.24}{1.77}$
N° 171	123.00	$\frac{8.24}{1.77}$
N° 172	120.00	$\frac{8.24}{1.77}$

2M 160.00
13.00
173.41
173.39
173.03
186.06
186.35
187.74

Wild Wood Road
Water Grades
Harrington to Redondo

2-15-88

27

	5' Top Peg	Bottom Ditch		
At Harrington	211.85	208.85	15.34 15.26 +0.08	211.85 15.26 +0.09
50' H		210.82	13.37 10.24 +3.13	224.10 224.10 +0.00
100' H		216.79	11.40 8.21 +3.19	229.51 229.51 +0.00
150' H - 8' L	217.75	217.75	6.68 6.68 +0.00	217.80 217.80 +0.05
190' H - 8' L	220.17	217.17	3.00 2.93 +0.07	206.17 206.17 +0.00
240' H		220.18	4.01 3.94 +0.07	197.80 197.80 +0.00
290' H - 8' L	224.19	223.19	1.00 0.93 +0.07	199.61 199.61 +0.00
320' H	227.72	224.72	3.00 2.93 +0.07	196.61 196.61 +0.00
350' H	228.70	225.70	3.00 2.93 +0.07	194.55 194.55 +0.00
380' H	229.19	226.19	3.00 2.93 +0.07	192.70 192.70 +0.00
410' H = E.V.C.	229.01	226.01	3.00 2.93 +0.07	193.58 193.58 +0.00
440' H		225.11	3.90 3.83 +0.07	
470' H - 8' L	228.22	225.22	3.00 2.93 +0.07	
500' H	227.52	224.52	3.00 2.93 +0.07	
530' H	226.25	223.25	3.00 2.93 +0.07	
560' H	224.39	221.39	3.00 2.93 +0.07	
590' H	221.92	218.92	3.00 2.93 +0.07	
610' H = F.V.C.	220.10	217.10	3.00 2.93 +0.07	
655' H		212.92	3.00 2.93 +0.07	
700' H - 8' L	211.55	208.55	3.00 2.93 +0.07	
750' H		201.88	3.00 2.93 +0.07	
800' H		195.22	3.00 2.93 +0.07	
849.34' - I.L. Redondo	191.55	188.55	3.00 2.93 +0.07	

Redondo St Water Grader
Santa Cruz to Harrogness

2-17-28

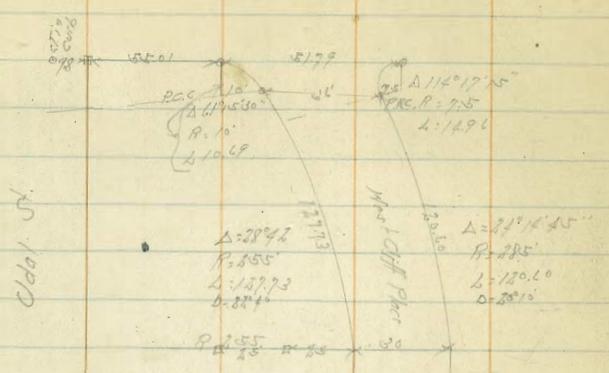
N.L. Santa Cruz	1788°	14.40 11.25 +3.15	801 90.55 +1.25 193.87	Redondo + Wildwood
30H	1809°	9.99 7.18 +2.81	1.30 8.87 +7.57	
70H	1833°	7.99 7.18 +0.81	7.99 6.37 +1.62	
120H	1853°	6.37 3.55 +2.82		
168.5H - S.L. Wildwood	1869°	5.09 2.01 +3.08		
N.L. Wildwood	86.2°	4.70 2.59 +2.11		
27H	884°	5.28 2.03 +3.25		
77H	90.83	6.57 4.26 +2.31		
127H	89.56	8.59 5.11 +3.48		
177H	87.50	11.89 7.41 +4.48		
227H	85.60	14.09 9.70 +4.39		
277H	83.69	13.79 9.31 +4.48		
327H	82.21	11.20 6.72 +4.48		
377H	81.41	15.09 10.51 +4.58		
427H	81.00	15.89 11.31 +4.58		
477H - S.L. Harrogness	80.79	17.28 12.70 +4.58		

Redondo St Sewer Laterals

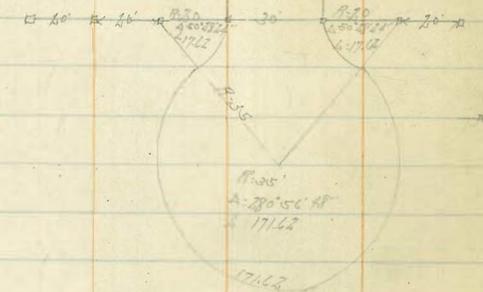
2-18-28
28

N	F
N° 173	N° 166
180.30	183.60
14.23 7.25 +6.97	13.02 6.97 +6.05
801 90.55 +1.25 193.87	801 199.55 6.01 196.60 14.40 182.20 6.60 191.10
N° 174	N° 175
181.50	187.80
15.12 7.02 +8.10	13.83 6.85 +6.97
N° 176	N° 176
183.50	183.50
13.63 7.01 +6.62	
N° 177	N° 107
182.00	186.60
14.69 7.85 +6.84	10.82 7.09 +3.73
N° 178	N° 179
180.50	185.50
16.13 6.82 +9.31	14.13 8.02 +6.11
N° 181	N° 180
178.90	183.00
17.93 9.21 +8.72	13.62 8.50 +5.12
N° 182	N° 182
177.70	182.50
18.93 10.21 +8.72	14.13 8.02 +6.11
N° 183	N° 184
177.20	180.00
18.93 10.21 +8.72	16.62 10.51 +6.11
N° 186	N° 185
177.20	179.50
18.93 10.21 +8.72	15.12 9.01 +6.11
N° 187	N° 187
178.00	178.00
19.18 10.00 +9.18	
N° 188	N° 189
176.90	178.00
16.13 4.50 +11.63	13.62 7.51 +6.11
N° 189	N° 190
177.50	177.50
13.62 7.51 +6.11	
N° 191	N° 191
177.50	177.50
14.82 10.17 +4.65	13.62 7.51 +6.11

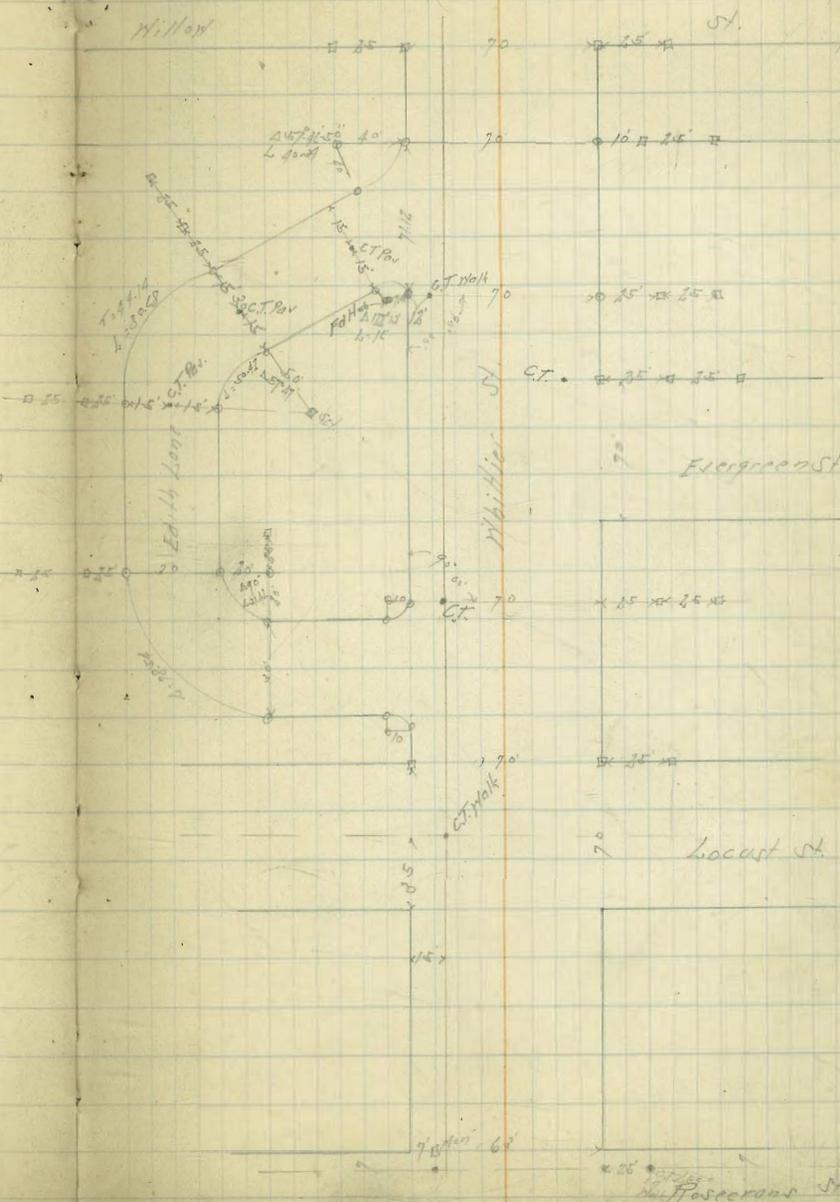
TAKS



Old St.



Whittier



97-47
142-47

Locust St.

115-47
116-47
117-47
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200-47

Whittier St Grader
 Willow to Locust.

Waste	#	S' L Sta	S	SWM
EL Willow	164.18	EL Willow	165.18	167.18
55 E	162.73	46 E	164.75	155.60
110 E - P.C.	162.28	96 E	162.38	152.44
150 E	160.98	137.97 E - P.C.	160.98	152.44
190 E	158.68	170.00 E - P.C.	160.98	152.44
230 E - E.V.C.	155.08	209.09 E - P.C.	157.98	152.44
265 E	151.53	250.00 E - P.C.	156.02	152.44
300 E - W.L. Evergreen	147.98	265.00 E	156.53	152.44
		300 E - Bk	148.48	152.44
		335 E	145.93	152.44
EL Evergreen	144.68	370 E - Bk	143.68	152.44
40 E	139.78	44 E	137.78	152.44
80 E	134.78	150 E	132.78	152.44
120 E	129.78	190 E	127.78	152.44
160 E - Bk	124.68	530 E - P.C.	120.68	152.44
240 E - Bk	115.18	580 E - P.C.	115.18	152.44
280 E - E.L. Lane	111.18	600 E - E.L. Lane	111.18	152.44

155.21
 109
 31 157.74
 NE No. 100
 100
 100
 100
 100
 100

2-23-21
 Simon
 31st
 30

	06	02.70	01.28	59.68	57.38	54.28	51.08	47.88
N	164.00	68.22	62.22	60.82	57.58	55.28	51.52	47.88
	3.24	2.8	3.2	5.4	7.7	12.4	12.7	7.2
		1.29	+18	+18.4	+14.8	+12.5	+13.3	+12.2
S	165.01	68.75	62.32	60.89	56.88	54.78	51.62	48.45
	2.03	3.1	2.1	3.0	9.5	11.4	8.7	6.2
	3.24	2.2	1.5	1.6	11.6	12.7	10.4	8.2
		70.8	+0.6	0.0	-10	0.0	+0.5	+0.8
N	13.48	37.78	32.08	26.38		15.28	11.18	
	14.18	38.48	32.78	27.08	20.18	15.28	11.18	
	13.5	35	31.5	25.5	17.5	13	8.3	
	13.2	34.8	31.2	25.2	17.2	12.7	8.0	
	-1.1	0.0	+0.4	0.0	21.2	21	18	
S	45.98	43.48	37.78	32.08	26.38		15.28	12.18
	46.38	43.88	38.18	32.48	26.78	20.68	15.68	12.58
	45.9	43.5	37.5	31.8	26.0	19.5	15.0	11.8
	45.2	42.8	36.8	31.1	25.3	18.8	14.3	11.1
	44.4	42.0	36.0	30.3	24.5	18.0	13.5	10.3

West Cliff Place Grades

Curb Grades 879m

N.L. Sta	N.L. Grades	S.L. Sta	S.L. Grades	BM 1571
FL Willow	175.90	FL Willow	180.30	187.51
1496 - PRC	174.40	1069 - PRC	178.44	174.61
4674	171.20	3038 - 3rd	175.00	161.49
7853 - 2nd	168.00	5737	171.75	149.10
10704	164.70	84.40	168.50	150.10
13556 - EC	161.40	111.41	165.25	149.17
17704	156.59	13848 - EC	162.00	
21853 - Pch	151.78	16990	158.81	
22853 - Pvc	150.60 out	20139 - 8th	156.40	
23615 - PRC	149.90	22139 - Pch	152.40	
24853	148.80	23901 - PRC	out	
26853	147.50	24139	151.20	
28853	147.10	26560	150.28	
30853	147.50	28981	149.35	
		32402	148.43	
		22825	147.50	

Fire Hydrant West Cliff Place

BM	0.37	156.27	155.90
Fire Hyd			148.21

FL	175.90	74.40	71.20	120.00	142.00	61.40	51.57	51.78	46.00
SL	180.30	78.44	75.00	71.35	125.00	65.45	62.00	58.41	54.40
H	188.00	175.00	171.00	175.00					
S	52.40	51.20	50.28	49.25	48.49	47.50			
BM	1571	1571	1571	1571	1571	1571	1571	1571	1571

West Cliff Place Notes

0.00 - End	148.00	144.60	142.20
40' W		141.20	138.80
80' W - 2nd	152.80	149.60	147.20
120' W		153.80	151.40
160' W - 3rd - EC	162.00	158.60	156.20
195' W - 4th	166.80	162.80	160.40
242' W		168.70	166.30
290' W - FL Willow	178.00	172.60	170.20

M.H. 6 Rosecrans Whittier	8.89	1554 5.00 +8.45	1930M 211801	5M. 90 Rosecrans Locust
50.5' W. Break	10.00	983 2.00 +6.50	19.04	
97.17' W	16.00	1470 1.00 +7.93	17.04 12.64	1801 101
143.84' W	22.00	829 2.00 +5.76	31.26 18.13	1801 101
190.5' W. M.H. 5	28.00	1143 2.00 +8.31	44.11 10.05	19.05 11.05
231.75	39.50	1784 2.00 +6.94	57.06 10.05	3070
272.0' W	51.00	496 2.00 +7.80	70.11 10.05	
314.25' W	62.50	734 2.00 +7.31	82.44 10.05	
355.50' W. M.H. 2 Locust 4	74.00	1132 1.00 +7.31	92.8 10.05	
405.5' W	86.67	2120 2.00 +8.27	105.0 10.05	
455.5' W	99.34	3134 2.00 +8.27	117.24 10.05	
505.50' W. M.H. 3	112.00	4148 2.00 +8.27	129.58 10.05	
549.5' W	117.60	5162 2.00 +8.27	141.92 10.05	
593.5' W	123.20	6176 2.00 +8.27	154.26 10.05	
637.5' W	128.80	7190 2.00 +8.27	166.60 10.05	
681.5' W	134.40	8204 2.00 +8.27	178.94 10.05	
725.5' W. M.H. 2 Ferguson	140.00	9218 2.00 +8.27	191.28 10.05	
765	143.50	10232 2.00 +8.27	203.62 10.05	
805.5	147.00	11246 2.00 +8.27	215.96 10.05	
845.5	150.50	12260 2.00 +8.27	228.30 10.05	
885.5 = M.H. 1	154.00	13274 2.00 +8.27	240.64 10.05	
927.5	155.00	14288 2.00 +8.27	252.98 10.05	
969.5	156.00	15302 2.00 +8.27	265.32 10.05	
1011.5	157.00	16316 2.00 +8.27	277.66 10.05	
1043.5	158.00	17330 2.00 +8.27	290.00 10.05	
1085.5 = Fisher M.H. 116	159.00	18344 2.00 +8.27	302.34 10.05	

M.H. Rosecrans	12.00	2.80	10.48 2.00 +2.64
50' W		15.47	7.00
100' W		24.14	9.54 3.00 +6.54
150' W. Bth	52.00	28.20	15.60 14.10 +1.50
186.60' W		37.47	1.96 2.00 +3.96
223.92' W		46.14	1.80 1.20 +3.00
260' W. Bth	58.00	54.80	7.54 2.00 +5.54
300' W. F.L. Locust	71.00	67.80	15.8 1.20 +14.60
335' W. 2 Locust		79.20	3.24 2.36 +5.60
370' W. M.L. Locust	94.00	80.20	4.02 1.10 +2.92
357' of M.L. Locust		99.80	8.16 2.67 +5.49
70' W. Bth	112.00	108.80	9.78 2.26 +7.52
140' W	130.50	117.30	14.58 1.57 +13.01
180		123.00	8.88 2.00 +6.88
220		128.70	3.38 1.27 +2.11
260		134.40	5.95 2.26 +3.69
300 - F.L. Ferguson	143.35	140.10	4.08 2.27 +1.81
340	148.30	145.10	19.89 1.56 +18.33
380' W		148.25	7.75 2.26 +5.49
420' W	154.10	151.40	6.60 2.26 +4.34
460' W. F.L. Locust	156.70	153.50	2.90 2.00 +0.90
500' W. TC	160.70	157.50	2.00 2.00 +0.00
540' W		158.90	2.00 2.00 +0.00
582' W		160.36	6.17 2.53 +3.64
600' W. F.L. Locust	165.00	166.80	5.00 2.00 +3.00

Whittier St Stairway
At Locust

4-19-88

36

for date
Whittier Locust

BM	5.30	112.41		107.11
N° 1			0.42	111.99
N° 2			2.06	110.95
N° 3			3.32	109.09
N° 4			7.84	104.57
N° 5			11.30	101.11
TP	0.00	101.11	11.30	101.11
N° 6			18.5	95.26
N° 7			7.03	94.08
N° 8			9.58	91.53
TP	0.16	89.35	11.92	89.19
N° 9			11.70	77.65
TP	0.28	76.63	13.00	76.35
N° 10			0.83	75.80
N° 11			6.03	70.60
N° 12			7.79	68.84
N° 13			13.26	63.37
TP	5.04	65.41	13.76	62.27
N° 14			8.15	60.21

West Cliff Place
Sewer

4-20-28

Edith Lane Water Gravel

37

DF	160.00	7.50	155.00	Nails Pole
4475		2.50	157.50	8 1/2" Rounding
4175	155.57	12.01	159.31	1/2" + 1/2" + 1/2"
86.50	151.50	2.87	157.75	1/2" + 1/2" + 1/2"
125.25	147.25	12.06	167.58	
167.00 = NH 200 A	142.00	2.02	160.00	
174.00 = NH 190 A	180.25	16.01	196.26	
35' N of NH = Plug	146.00	10.64	156.64	
35' N of NH = Plug	130.00	2.48	127.52	

070 = End Return out	156.00	153.90	14.66	BM	166.00
710 = B.C. 450 P	152.00	149.00	6.01		152.00
P1		141.80	9.01		150.81
F.C. 450 P	148.00	145.00	4.64		155.81
2471		140.31	15.27		145.07
4782		135.67	11.92		133.15
951E		132.10	4.23		128.92
143.51 Bit	134.00	121.00	14.07		114.93
1935		127.00	8.30		116.63
243.5 = B.C. 20 P	136.00	123.00	9.21		117.39
258.5 = A		118.50	6.26		111.13
FC 20 P	121.50	115.00	17.21		93.92
45' N = B.C. Sol. Water	118.00	115.00	14.25		79.75

West Cliff Place Sewer Leads

N° 40	161.50	6.25	167.75	N° 41	162.00	5.37	167.37
N° 42	157.80	6.51	164.31	N° 43	153.20	6.11	159.31
N° 44	145.00	14.31	159.31	N° 45	146.4	12.91	159.31
BM	0.61	156.51	155.90	Nails Pole			
TP	0.02	143.98	12.55	143.96			
TP	0.24	131.48	12.84	131.14			
TP	0.78	119.86	12.40	119.08			
TP	0.17	114.57	8.46	111.29			
Flow Line 115' N.E. of West Cliff Place	10.18		104.40				
	11.25		107.50				

1935		127.00	5.21		121.79
243.5 = B.C. 20 P	136.00	123.00	9.21		116.79
258.5 = A		118.50	6.26		112.53
FC 20 P	121.50	115.00	17.21		97.79
45' N = B.C. Sol. Water	118.00	115.00	14.25		83.54

Senior Laterals Tennyson
Willow to Evergreen

41

S.L.		N.L.		
No 24	194.34	4.88 <u>2.74</u> +2.14	No 25	7.30 193.90 <u>2.15</u> +5.38 199.22 -0.49 <u>198.73</u> +2.91 201.64 <u>3.12</u> -7.74 193.90
				B.M. S.W Willow & Tennyson
26	194.73	4.49 <u>1.10</u> +3.39	27	6.91 194.73 <u>3.12</u> +3.79
28	193.58	5.64 <u>2.60</u> +3.04	29	193.58 <u>5.64</u> 0.49 +5.15
30	190.72	8.50 <u>5.10</u> +3.40	31	190.72 <u>8.50</u> 4.92 +3.58
32	186.15	13.07 <u>8.97</u> +4.10	33	186.15 <u>13.07</u> 9.63 +3.44
34	181.29	17.93 <u>14.65</u> +3.28	35	181.29 <u>17.93</u> 14.78 +3.15

Grades Alley Block 3 City Heights Annex No 1
 Sub of Block 2-4-9-12 No 1027
 University to Park Between Highland + 45th St.

20 wide

	H	F	
S.L. University	350.40	350.20	87 349.56
35N	350.50	350.40	352.29
70N	350.60	350.50	353.99
105N	350.70	350.60	355.66
140N - PK	350.80	350.70	357.33
160N	351.00	350.90	358.99
180N - F.I.C.	351.50	351.40	359.66
210N - P.V.C.	351.40	351.40	359.66
230	352.00	352.00	359.66
250N - F.I.C.	352.20	352.10	349.57
298N	352.11	352.11	
334N	352.11	352.11	
376N	352.11	352.11	
412N	352.11	352.11	
460N - P.V.C.	352.40	352.40	
480N	352.50	352.50	
500N - F.I.C.	352.40	352.40	
520N - B.C.	352.20	352.20	
569N	352.90	352.90	
598 P.C. - S.L. Park	353.60	353.60	

H	F								
350.30	50.40	50.50	50.60	50.70	50.80	51.00	51.20	52.10	52.00
513	8.07	7.87	7.77	7.67	7.57	7.47	7.37	7.27	7.17
	+0.16	+0.19	+0.03	+0.13	+0.17	+0.11	+0.10	+0.09	+0.08

H	F								
350.40	50.50	50.60	50.70	50.80	51.00	51.50	52.10	52.00	
513	7.93	7.83	7.73	7.63	7.53	7.43	7.33	7.23	
	+0.15	+0.18	+0.12	+0.16	+0.20	+0.14	+0.13	+0.12	

F	H								
353.10	53.31	53.17	53.28	53.14	53.10	53.50	54.10	54.20	
537	5.11	4.83	4.51	4.25	3.95	3.65	3.35	3.05	
	+0.17	+0.03	+1.00	+1.00	+1.00	+1.00	+1.00	+1.00	

H	F								
353.20	53.44	53.48	53.98	54.16	54.10	54.50	54.10	54.20	
537	4.83	4.70	4.55	4.43	4.33	4.23	4.13	4.03	
	+0.14	+0.17	+0.17	+0.16	+1.00	+1.00	+1.00	+1.00	

F	H								
353.90	53.10								
537	4.16								
	+0.15								

Center Laterals

	West Side	East Side
No 2	345.14	345.19
No 1	345.44	345.15
No 5		345.45
No 6		346.04
No 7		347.19
No 8		347.80

12-16-28
 Survey
 Melbury
 Kennedy
 Flood

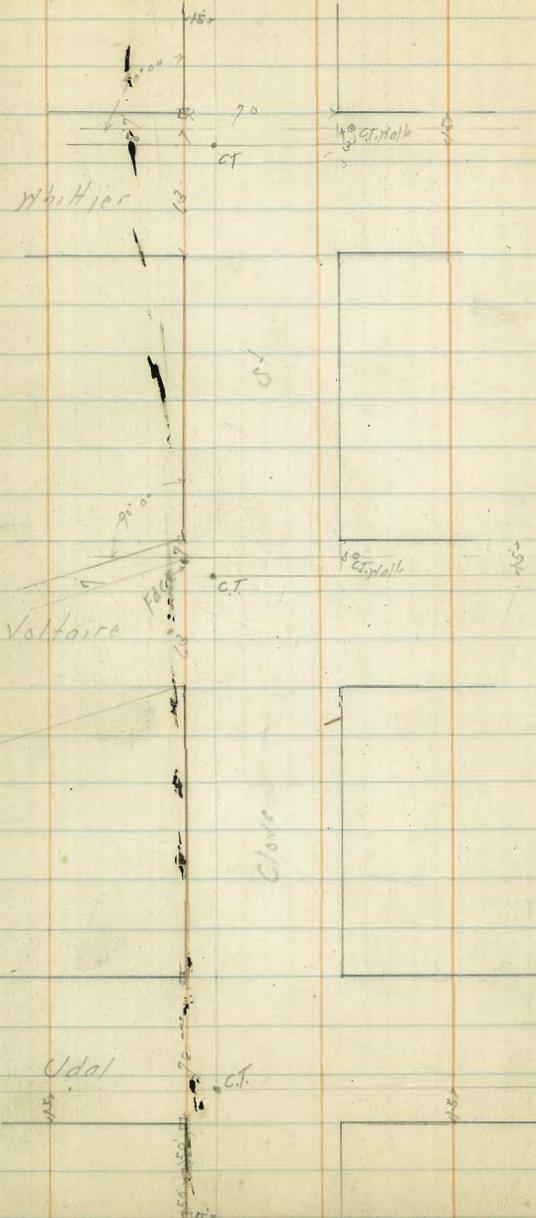
42

Clave St. Tiers

indexed
ask.

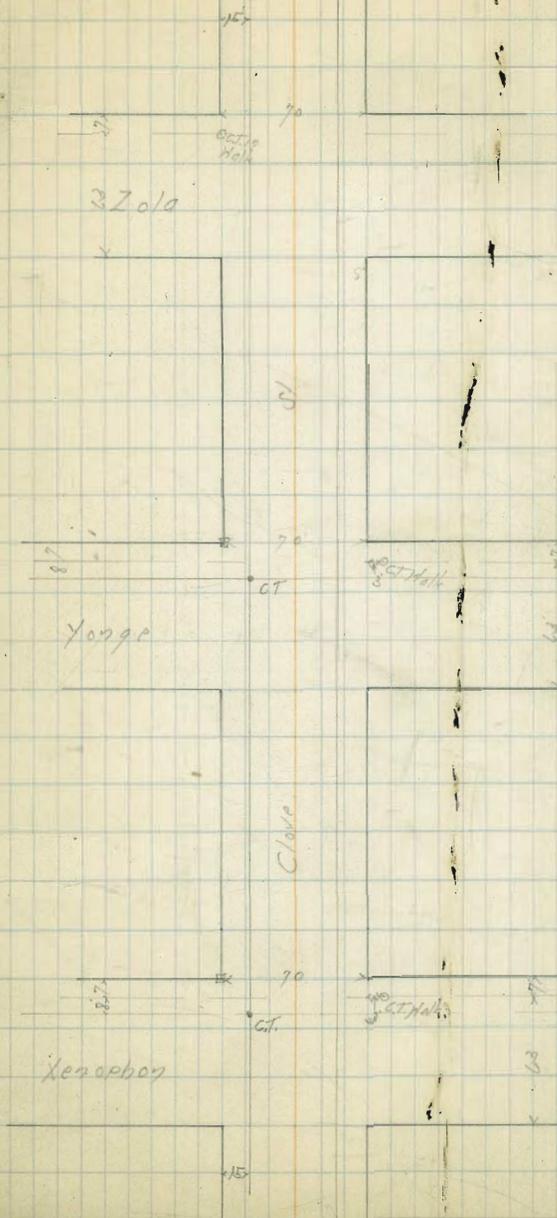
See T.P. 26

87-8-9-10



Clave St. Tiers

47



Closest Grades
Curtis to Udal

1928
Sutton
Bliss
Knappe
Oriskany
49

	F	M								
SL Curtis	13498	13658	SWBP 13134 12829 14419 14208 15255 15263 15291 15665 923	13480 ^{c6}	3618	3768	3900 ^{c4} 519 505	4343	4768	4988
25S - End Pet	13618	13718						0.8 1.0 -0.2	2.0 2.0 4.7	2.5 2.5 13.2
625S	13768	13868								
100S - Brk	13918	14018		N 13658	3718	3868	4018	4218	4818	5068
1375S	14343	14418	13255 3.63		71	70	53	42	17.5	8.5
175S - Pet	14768	14818	13878		+1.5	+1.2	+1.6	+1.4	12.5	1.9
200S - N.L. Braking	14988	15068	16153 8.64 15516 1316 15040 6.47 15217 1249 13749 14837 6.23	N 13655						
SL Braking	15228	15278		SWBP 15228	5418	5468	5358	5258	5068	4868
50S - PVC	15418	15468			713	124	122	120	140	158
90S	15468	15518			68	56	42	110	128	128
130S	15358	15408	SETH 14784	N 13278	5418	5518	5408	5308	5118	4978
150S - PVC	15258	15308			136	112	112	125	125	152
175S - End Pet	15068	15118			172	127	161	157	121	121
200S - N.L. H/c/H	14868	14778								
SL H/c/H	14668	14768		F 14668	4668	4625	4606	4568	4530 ^{c5}	
75S - End Pet	14668	14718			20	23	23	26	26	277
75S	14635	14685			64	87	183	136	79	300
125S	14602	14652			-0.4	-2.7	-2.6	-2.9		
175S - End Pet	14548	14618		N 14718	4718	4625	4652	4618	4580 ^{c6}	
200S - N.L. Lole	14520 ^{c2}	14580 ^{c6}			50	55	58	78	52	57
					64	77	104	81	2.6	
					-1.3	3.3	-1.6	0.3	-0.1	

Closest Grades
Curtis to Udal

	F		H	
S.L. Zola	146.18		146.98	BY 147.84 S.E. Topog. Claret
250 - Reduct	147.18		147.68	115.5 120.2 10.7
750	150.41		150.85	110.2 112.4 2.2
1250	153.14		154.02	117.8 119.4 1.6
1750 - Reduct	156.88		157.18	119.8 120.0 0.2
2000 S. - H.L. Young	158.48	159.86	158.58	149.18 S.E. Topog. Claret + Young
				155.0 174.4
S.L. Young	159.98	160.38 ^b	160.48	160.8
250 - Reduct	160.98		161.68	BY 159.05 S.E. Topog. Claret
750	163.75		164.51	158.2 162.0 3.8
1250	166.52		167.34	175.2 176.0 0.8
1750 - Reduct	169.28		170.18	BY 168.28 S.E. Topog. Claret
3000 - H.L. Xenophon	170.58		171.68	172.18
S.L. Xenophon	172.68		174.18	174.8
250 - Reduct	174.18		175.18	
750	177.1		177.8	
1250	180.2		180.5	
1750 - Reduct	183.28		183.18	
2000 S. - H.L. Xenophon	184.58	185.58	183.98	184.08

E	146.18	147.18	150.41	153.14	156.88	158.48	58.41
	146	132	10.0	2.7	3.5		
		12.7	2.7	2.4	0.8		
		12.1	2.4	2.7			
H	146.28	147.18	150.85	154.02	157.18	158.58	58.18
	13.6	12.7	2.5	2.4	3.2	1.8	
		8.0	2.5	5.6	3.3	6.3	2.3
	172.18		2.8	2.8	-0.1	-0.5	2.1
BY	162.88						
E	159.98	160.98	163.75	166.52	169.28	170.58	70.58
	15.5	16.8	10.0	7.8			
	12.7	12.8	2.3	2.7			
	12.8	12.8	2.7	2.3			
H	160.18	160.48	166.8	169.51	173.4	176.8	76.41
	12.3	12.6	10.8	8.0	5.2	11.0	11.7
	15.5	16.5	2.7	2.8	2.8	2.6	2.4
	11.3	11.5	11.7	12.8	12.8	15.1	14.5
	176.52						
BY	170.47						
E	172.68	174.18	177.1	180.2	183.28	184.58	84.58
	14.6	14.6	10.0	5.0	5.0		
	11.3	11.3	2.6	2.9	2.4		
H	174.18	174.18	175.8	177.8	180.5	183.98	84.01
	10.0	10.0	2.0	1.0	2.3	10.5	10.4
	2.0	2.0	6.7	1.0	2.7	8.1	2.1
	2.0	2.0	12.1	4.0	16.5	13.3	12.2

Clavot Grades

	F		H	
S.L. White Her	185.28	1846.00	185.08	1847.81
25'S = Reduce	185.88		185.18	
75'S	185.41		184.85	
125'S	184.94		184.57	
175'S = Reduce	184.48		184.18	
200'S = S.L. Valtaire	184.38	180.0000	182.58	181.38
S.L. Valtaire	182.48	184.08	181.28	182.78
25'S = Reduce	180.68		179.68	
75'S	176.58		175.68	
125'S	172.68		171.68	
175'S = Reduce	168.78		167.68	
200'S = S.L. Udal	167.48	164.71	165.58	164.08
S.L. Udal	166.28	167.48	164.48	164.28

194.49
6.44
34.18
SE Top Hyd.
Clavot Hyd. Her

F	195.88	85.88	85.41	84.94	84.48	84.38
		8.6	9.1	9.6	10.0	10.1
		8.2	8.6	9.2	9.6	

	F	H				
H	184.78	185.01	85.18	84.85	84.58	84.18
	8.3	9.4	8.3	9.6	10.0	10.2
	8.3	9.3	8.3	8.4	8.3	10.2
	10.4	10.1	10.2	11.2	12.1	11.8

194.49
6.44
34.18
SE Top Hyd.
Clavot Hyd. Her

F	184.48	182.18	80.88	76.58	72.18	68.78	69.48	71.28
	8.6	10.0	11.0	5.7	9.6	13.5	14.8	15.4
	10.4	10.4	10.2	11.4	13.7	14.4	14.6	14.6

	F	H				
H	182.28	181.28	79.18	75.68	71.68	67.68
	8.8	8.8	3.5	6.5	10.5	6.0
	8.7	8.7	3.6	7.6	10.3	6.0
	10.5	11.8	12.1	11.6	10.8	6.0

178.68
8.27
34.18
SE Top Hyd.
Clavot Udal

F	167.48	164.78		
	5.8	6.1		
	5.8	6.1		
	10.2	11.8		

	F	H
H	167.48	164.78
	8.4	8.2
	8.4	8.2
	11.0	11.0

Xenophon St Grades

	S	N
HL Close	17418	17248
50' N - VC	17668	17578
90' N	17858	17808
130' N - EIC	17928	17908
179' N	17983	17963
228' S - End of No	18018	18018

5-2-28

Xenophon St Senior

	S	N
DE	17430	17047
50' F of DE	17260	17157
100' F	17090	16900
150' F	16920	16730
200' F	16750	16560
250' F - HH N'1 & Close	16580	16410
285' F - End of E.L. Close	16411	16241

Xenophon St Water Grades

	S	N
HL Close	17315	17145
50' N	17505	17335
90' N	17595	17425
130' N	17685	17515
179' N	17680	17510
228' S - End	17665	17495

4-11-28

53

N	17448	75.78	78.08	79.08	79.63	80.18
		8.2	6.1	5.1	4.6	4.0
		12.7	8.0	3.6	2.2	1.6
		13.7	13.2	12.1	10.4	8.9

S	17418	76.68	78.58	79.48	79.83	80.18
		12.2	10.3	9.4	8.0	8.7
		17.2	13.3	8.4	6.8	14.5
		17.7	16.6	14.1	12.8	15.8

5-2-28

Xenophon St Senior Lakeside

	S	N
No 51	17460	16920
No 53	17330	17250
No 55	17530	17470
No 57	17570	17540
No 59	17602	17600

T. St. Grades
37th St to 40th St

	N	S
FL 37th St	77.10	77.10
40th	74.60	74.10
80th - 81st	77.10	77.10
130th	79.10	79.80
160th	81.40	82.00
200th	82.90	83.60
240th - F.L.C.	84.00	84.70
280th	85.01	85.52
320th	86.02	86.81
360th	87.03	87.6
400th	88.04	88.99
440th	89.05	89.81
480th	90.06	89.63
520th	91.07	90.15
560th	92.09	91.59
600th - 44th St	93.10	92.10

SM 40th SW. 500
National
+ 37th St
5.07
59.08
13.02
76.96
71.14
16.65
83.77
83.63
90.03
93.71
91.99
92.10

77.10
77.92
SM 71.14
N 77.82
75.93

4.13.28

54

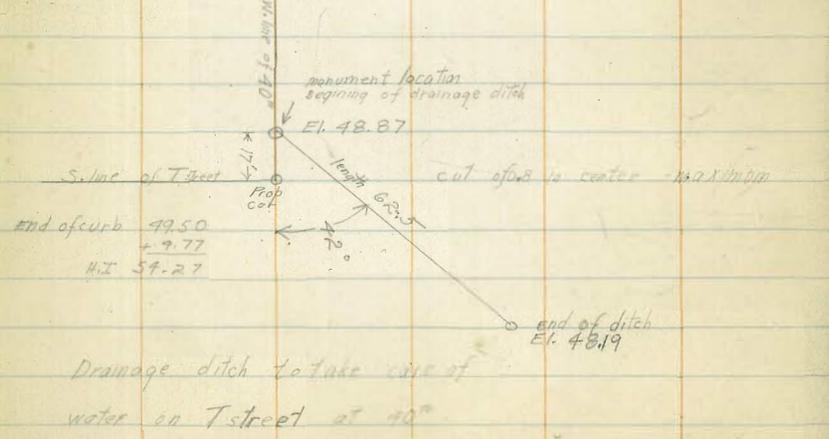
N 77.00 ⁰⁵	77.60	77.10	79.10	81.40	82.20	84.00 ¹⁰¹	85.01	86.02
	11.79	0.7	0.7	2.7	0.2	9.7	8.7	7.7
	11.89	0.3	0.2	2.1	0.2	8.6	7.6	6.7
		5.01	0.5	1.06	1.06	11.7	11.5	10.0
S 71.00 ⁰⁵	74.10	77.10	79.80	82.00	83.60	84.20 ⁰⁸²	85.52	86.31
	13.99	0.7	0.7	4.7	1.6	8.9	8.2	7.4
		13.2	1.07	1.29	1.3	11.9	11.7	11.0
N 87.03	88.04	89.05	90.06	91.07	92.09	93.00 ⁰⁶		
	6.7	0.7	0.7	1.6	1.6	2.71		
	7.08	0.1	0.1	0.1	1.06	1.06	0.79	
S 87.16	87.99	88.81	89.63	90.45	91.28	92.00 ⁰⁶		
	6.7	0.7	0.7	0.3	0.5	1.71		
	11.2	7.01	0.3	1.01	1.02	0.0	1.71	

98.60
8191.77
55.80
TN + 38.12

	N	S	11921.0 Ford
FL 281.51	921.0	921.0	12.60 on top TP 86.14
50.5	926.0	926.0	87.14
100.5 - B.V.C L.S.	941.0	931.0	74.84
140.5	944.0	934.0	76.53
180.5	941.0	931.0	75.37
220.5	931.0	923.0	
260.5	916.0	910.0	
300.5	896.0	891.0	
340.5 - F.V.C L.S.	871.0	867.0	
382.5	834.0	826.8	
424.5	797.0	798.6	
466.5	760.0	764.1	
508.5	723.0	730.2	
606.5 - W.L. 39 th St	686.0	676.0	686.0

N	920.0 ⁶ 5.60	926.0 5.3 +5.9	941.0 4.5 7.9	941.0 4.2 7.2	941.0 4.0 7.5	931.0 5.5 10.2	916.0 7.0 9.0	896.0 8.8 12.0	871.0 10.5 14.5	834.0 15.2 18.2
S	91.00 ⁶ 1.10 6.71	92.60 6.0 7.03	93.10 5.5 10.2	93.40 5.2 10.9	93.10 5.5 11.7	92.30 7.3 11.3	91.00 7.6 10.6	89.10 8.5 10.7	86.70 11.0 13.9	83.40 15.4 18.4
N	79.70 7.1 8.9	76.00 7.4 -3.5	72.30 11.3 -5.2	68.60 13.8 -5.4	72.60 11.1 -3.4					

S	75.84 7.3 10.5 -3.8	76.44 7.7 10.7 -3.6	73.02 7.4 11.3 -0.2	69.60 5.7 8.8 -1.5	79.60					
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37' curb in

rate

83.70
84.50
85.20
85.60
85.80
85.90
84.50
83.60
rate
80.30
79.40
78.70
78.20
78.00
78.00
78.00
78.40
78.90
79.70
80.70
rate
86.00

39' curb in

rate

84.80
85.70
86.30
86.70
86.70
86.20
85.50
84.50
84.60

rate

81.30
80.90
79.70
79.20
78.00
78.00
79.30
79.20
80.70

rate

87.00

Teak Street

37' curb in

80.50

85.98
1.45
87.43 H.I.

82.82 BM, 37' S.W. corner
+ 9.46
92.28
- 12.94
79.34
+ 8.25
87.59 H.I.

	H	J		
FL 39160	66.60	66.60	1417537	68.60
50.15	65.37	66.22	1277	68.60
100.30	64.14	64.83	68.60	68.60
150.45	62.91	63.45	68.60	68.60
200.60	61.68	62.06	68.60	68.60
250.75	60.45	60.68	68.60	68.60
300.90	59.22	59.89	68.60	68.60
351.05	57.99	57.91	68.60	68.60
401.20	56.76	56.58	68.60	68.60
451.35	55.53	55.14	68.60	68.60
501.50	54.30	53.95	68.60	68.60
551.65	53.07	53.37	68.60	68.60
601.80	51.84	50.98	68.60	68.60
652.00 - H.L. 10th St	50.60 - 51.10	49.60	68.60	68.60

7537
577
87670

Tic
T + 20th St

H	66.60	66.60	65.37	64.14	62.91	61.68	60.45	59.22	57.99	56.76
	8.8	10.0	11.2	12.4	13.6	14.8	16.0	17.2	18.4	19.6
	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8

J	68.60	67.60	66.22	64.83	63.45	62.06	60.68	59.29	57.91	56.52
	8.8	7.8	6.8	5.8	4.8	3.8	2.8	1.8	0.8	-0.2
	2.0	1.0	0.0	-1.0	-2.0	-3.0	-4.0	-5.0	-6.0	-7.0

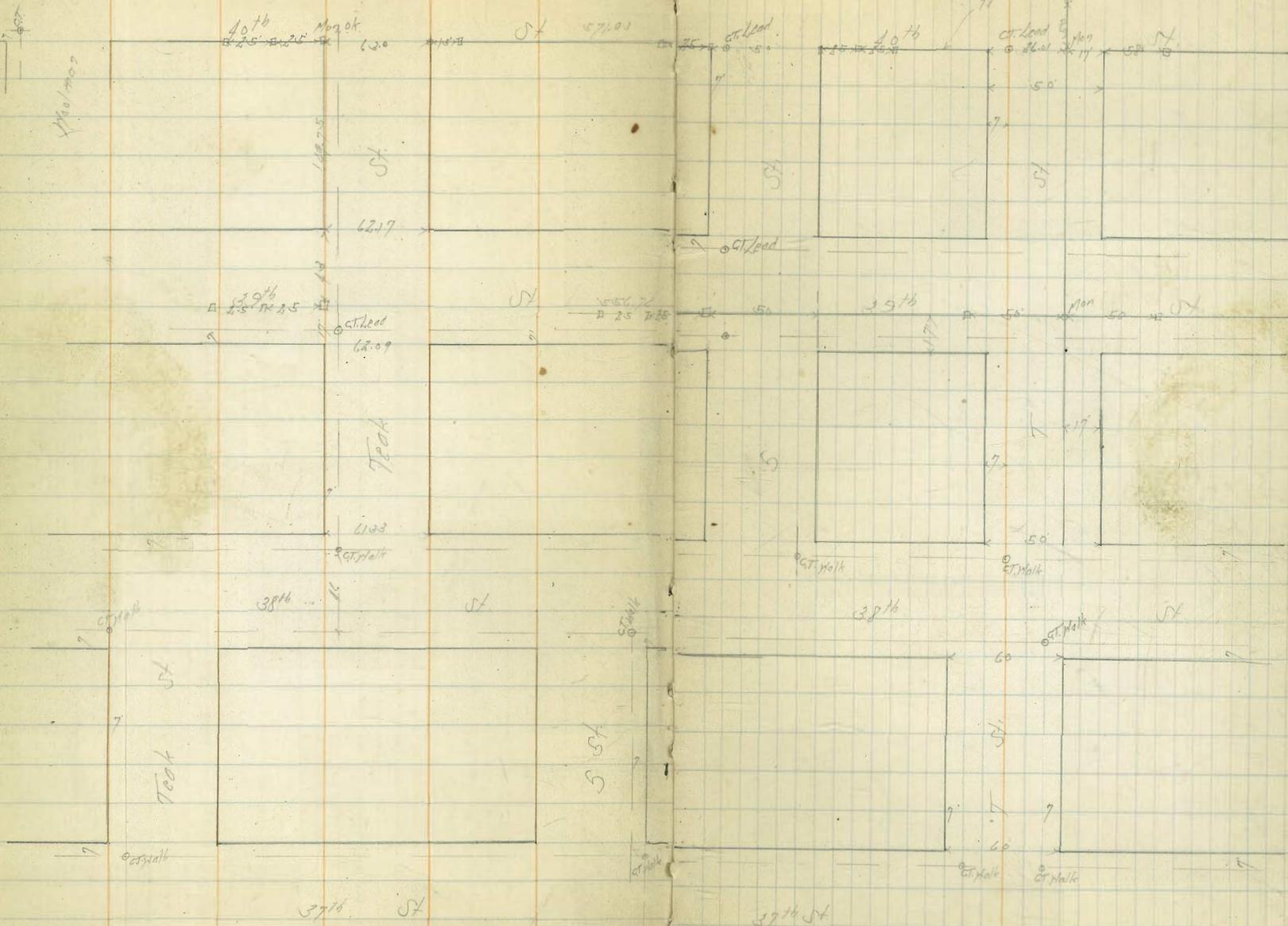
H	55.53	54.30	53.07	51.84	50.60	49.37
	10.5	9.5	8.5	7.5	6.5	5.5
	1.5	1.5	1.5	1.5	1.5	1.5

J	55.11	53.75	52.37	50.98	49.60	48.20
	10.8	9.8	8.8	7.8	6.8	5.8
	1.8	0.8	-0.2	-1.2	-2.2	-3.2

5753
703
51

Tic
T + 20th St

BM



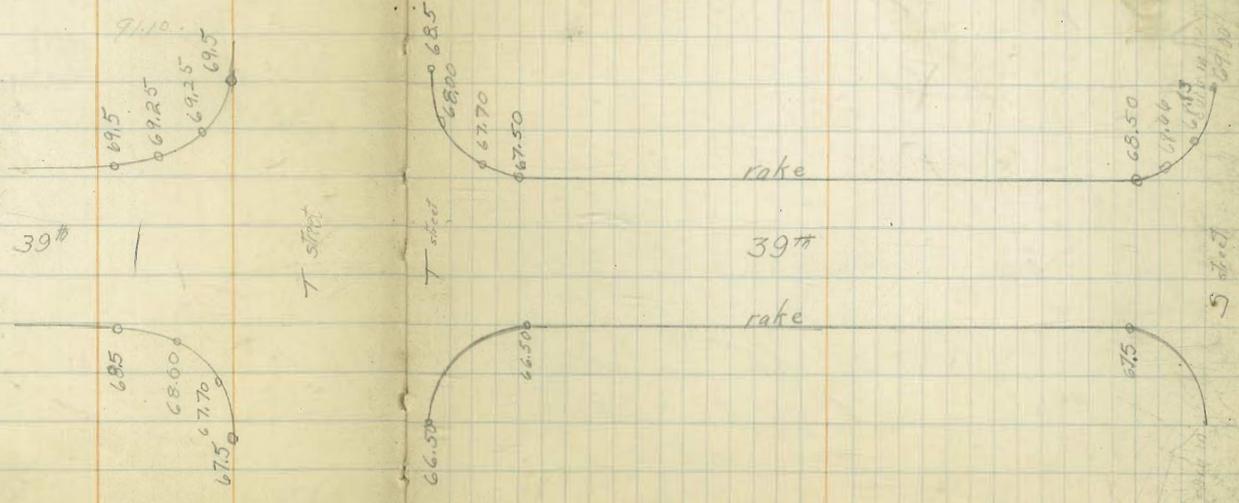
"S" St Grades
 37 1/2 St to 40 1/2 St.

84.10
 818.27 SF
 5 ST + 27 1/2

47.38
 58

FL 37 1/2	84.10	83.10	301 7 1/4
40 E. 38 E	85.50	84.48	84.37
80 E	86.90	85.69	85.88
120 E	87.50	87.57	87.88
160 E. EYE	87.90	87.10	88.00
200 E	88.14	87.54	88.16
250 E	88.39	87.99	88.26
300 E	88.63	88.43	88.36
350 E	88.88	88.88	88.47
400 E	89.12	89.32	88.57
450 E	89.36	89.76	88.67
500 E	89.61	90.21	88.77
550 E	89.85	90.65	88.87
600 E	90.10	91.10	88.97

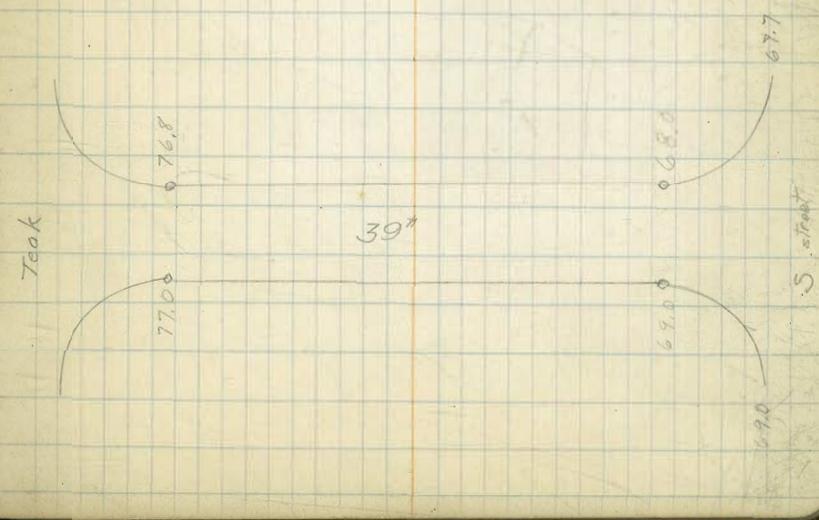
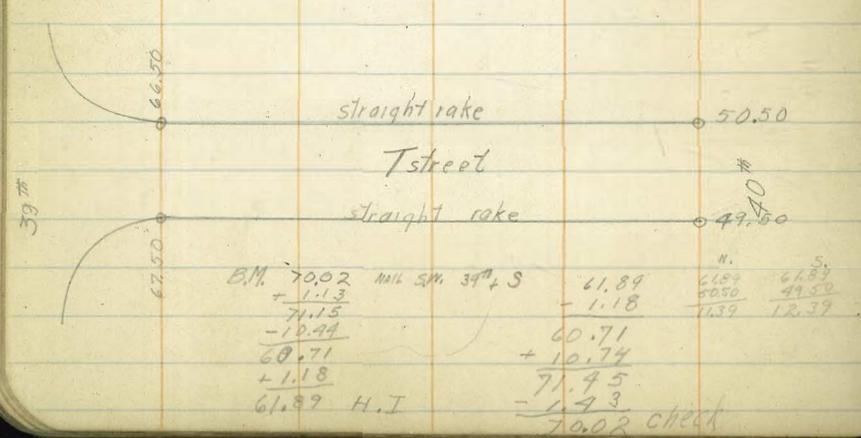
N	84.00	85.50	86.70	87.50	88.90	88.14	88.39	88.63
S	88.00	87.48	85.69	86.57	87.10	87.54	87.99	88.43
N	88.88	89.12	89.36	89.61	89.85	90.09	90.33	90.57
S	88.88	89.32	89.76	90.21	90.65	91.10	91.54	91.98



FL 28 1/2 M	92.10	92.60	21899.0	117.80
115	92.00	92.47	80.3	54.35 MD
80	90.90	91.33	97.93	
130	89.80	90.20	12.82	
160	88.70	89.07	85.87	
200	87.60	87.93	71.63	
240	86.50	86.80	56.77	
280	85.40	85.67	42.77	
320	84.30	84.54	28.77	
360	83.20	83.40	14.77	
400	81.90	82.00	0.0	
440	80.10	80.10		
480	77.80	77.80		
520	75.10	75.10		
560	72.10	72.10		
600	69.10	69.10		

N	92.00	92.00	90.90	89.80	88.70	87.60	86.50	85.40	84.30
	193	159	125	81	47	13.3	11.4	12.5	2.3
	174	125	105	72.1	70.9	0.0	10.4	12.2	2.1
S	92.50	92.47	91.33	90.20	89.07	87.93	86.80	85.67	84.54
	743	635	526	417	308	199	89	12.3	13.1
	153	105	56	12.3	12.1	11.3	10.4	12.3	13.1
N	82.10	81.90	80.10	77.80	75.10	72.10	69.10	67.10	65.10
	3.5	2.1	0.6	1.0	1.6	2.1	2.7	3.2	3.8
	1.3	0.2	1.7	2.7	3.7	4.7	5.7	6.7	7.7
S	82.40	82.00	80.10	77.80	75.10	72.10	69.10	67.10	65.10
	165	108	52	1.8	1.6	1.4	1.2	1.0	0.8
	157	107	46	1.8	1.6	1.4	1.2	1.0	0.8

75.10
75.20
76.00
81
5 x .04
5 x .04
5 x .04



FL 39/40	67.80	68.10	67.60	67.60
50F	68.09	68.26	67.96	67.96
100F	68.37	68.12	68.12	68.12
150F	68.66	68.38	68.38	68.38
200F	68.94	68.65	68.65	68.65
250F	69.23	68.91	68.91	68.91
300F	69.52	69.17	69.17	69.17
350F	69.81	69.43	69.43	69.43
400F	70.10	69.70	69.70	69.70
450F	70.39	69.70	69.70	69.70
500F	70.68	69.50	69.50	69.50
550F	70.97	69.50	69.50	69.50
600F	71.26	69.10	69.10	69.10
650F	71.55	68.85	68.85	68.85
700F	71.84	68.60	68.60	68.60
750F	72.13	68.60	68.60	68.60

N	68.10	67.80	68.09	68.37	68.66	68.94	69.23	69.52	69.81
	7.8	2.6	7.7	7.0	8.8	8.5	8.7	8.1	7.1
	9.6	9.6	10.7	10.2	9.5	7.7	8.5	8.1	8.1
	-0.3	0.0	-0.8	-1.5	-0.7	+1.7	+1.3	+1.3	0.0
S	67.60 = 67.60	67.96	68.12	68.38	68.65	68.91	69.17	69.43	
	9.8	7.5	7.9	8.8	8.3	8.6	8.7	7.5	
	10.0	11.8	10.1	9.7	7.4	8.2	8.1	6.0	
	-0.6	-2.3	-1.8	-2.2	-1.9	-0.6	+0.6	-0.5	
N	70.10	70.20	70.00	69.50	69.80	67.65	66.50 = 66.50		
	8.8	8.1	8.0	7.4	8.0	7.1	7.3		
	10.4	10.4	10.7	10.0	10.8	8.2	7.0		
	-0.1	0.4	-1.7	-1.0	-1.8	+6.9	+3.0		
S	69.70	69.70	69.50	68.90	68.10	66.85	65.60 = 64.60		
	1.8	4.5	2.1	5.0	8.7	7.8	11.2		
	7.8	8.6	8.1	8.0	7.2	7.7	7.8		
	-3.1	-2.3	+0.9	+2.0	+1.5	-2.2	+1.1		

76.77
6.30
75.47
7.50
83.61
84 80.89
25/11/14
2088

76.77
6.30
75.47
7.50
83.61
84 80.89
25/11/14
2088

29th St. Grades

S.L. 50F	67.60	68.60	69.10
51.58.5	67.35	67.35	
102/165	67.10	67.10	
154.715	66.85	67.85	
306.345 = 122.5	66.60 = 66.60	67.60	68.60

F	67.60	67.35	67.10	66.85	66.60
	9.8	10.6	10.3	10.6	10.8
	10.0	11.0	10.4	10.3	10.7
	-0.5	+1.0	+1.4	+0.3	+1.7
N	69.10 = 68.60	68.35	68.10	67.85	67.60 = 68.60
	1.3	8.1	9.3	9.6	9.8
	10.0	11.0	10.8	10.3	10.7
	+1.0	+1.0	+1.5	+1.7	+1.7

Truck Grades
37th St to 40th St.

511.21
5000
10000
31

	N	S	
FL 37 th St	79.10	80.60	81.28
40 th St	81.35	82.75	83.29
80 th - 84 th	83.60	84.90	85.45
120 th St	85.20	86.40	87.26
160 th St	85.90	86.90	87.55
200 th St	85.30	86.30	87.18
240 th - F.V.C.	83.20	84.70	
270 th St	82.05	83.05	
300 th - 84 th	80.10	81.40	
340 th St	79.10	80.10	
380 th St	78.10	79.10	
420 th St	78.50	79.40	
460 th - F.V.C.	79.80	80.80	
506.676	81.90	82.90	
553.332	84.00	85.00	
600 th - N.L. 38 th St	86.10	87.10	

N	79.00	81.25	83.60	85.30	85.90	85.30	83.70	82.05	80.10	79.10
	70.00	77	77	77	77	77	77	77	77	77
	10.08	22	22	22	22	22	22	22	22	22
S	80.50	81.25	81.90	82.40	82.90	83.30	83.70	84.05	84.40	84.80
	850	63	41	22	22	22	22	22	22	22
	850	290	131	42	42	42	42	42	42	42
N	78.10	78.50	79.20	81.90	84.00	86.60				
	88	74	71	69	65	74				
	7.8	7.7	7.5	7.2	7.7	7.50				
	1.0	1.0	1.0	1.0	1.0	1.0				
S	79.10	79.40	80.20	82.90	85.00	87.00				
	157	85	61	32	22	22				
	15.0	8.7	6.1	3.2	2.2	2.2				
	1.7	1.8	1.0	1.0	1.0	1.0				

Culvert No 1

	Top	Bottom	Notes
N End of Inlet	78.07	78.53	Top of Culvert
F " " "	78.00	78.51	Top of Culvert
So End of Culvert	75.00	75.87	Bottom of Culvert
41.5 ft	74.18	75.21	
83.0 ft	73.36	74.39	
124.5 ft - N End of Conc Pipe	72.54	73.57	
143.5 ft - S. Ch. of No. 1 man	72.20	73.23	Top of Inlet

Check on 39th between 5+T

B.M. 39th + S. 4002

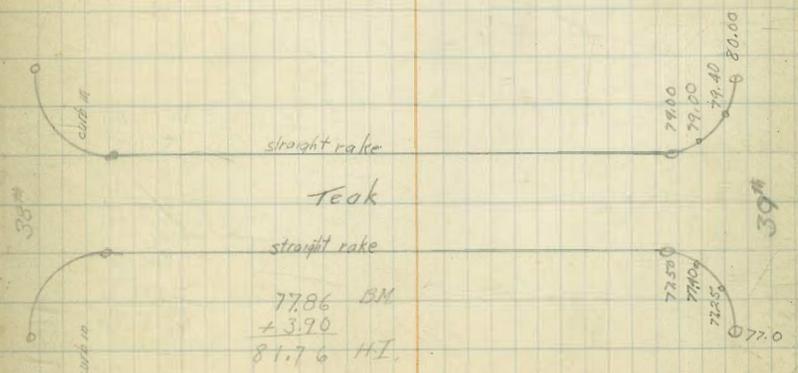
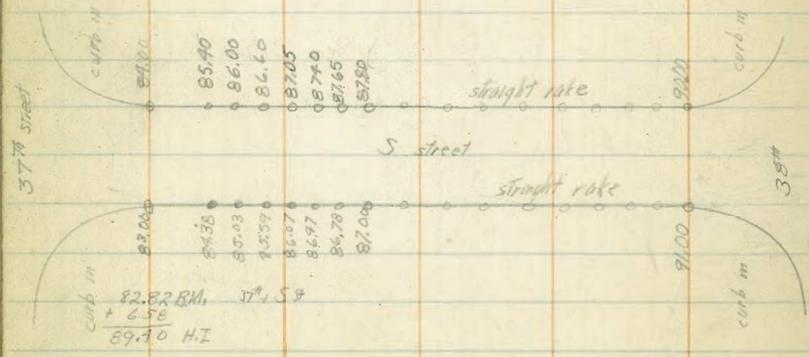
Cor 39 th + S	68.10	68.35	68.10	67.85	67.60
West	68.6	68.35	68.10	67.85	67.60
	10.9	11.2	11.2	11.7	11.9
	9.4	9.2	9.2	8.9	7.8
	+1.5	+1.0		+3.9	+4.1
East	39 th + S	67.60			
	11.9				
	12.1				
	-0.2				
				39 th + T	
				66.60	
				12.9	
				11.4	
				+1.4	

Teak St Grader

5-11-20
62

Station	North	South	Notes
FL 38 1/2 St	88.10	87.60	417348 84. Ford
500'	82.35	87.68	8876 89.6
1000'	86.60	86.79	9178 92.0
1500'	85.85	86.85	9344 93.3
2000'	85.10	84.94	9510 93.7
2500'	84.35	84.08	9676 94.1
3000'	83.60	83.10	9842 94.5
3500'	82.85	82.19	10008 94.9
4000'	82.10	81.29	10174 95.3
4500'	81.35	80.36	10340 95.7
5000'	80.60	79.44	10506 96.1
5500'	79.85	78.52	10672 96.5
6000'	79.10	77.60	10838 96.9

N	88.00 ⁰⁶	87.35	86.60	85.85	85.10	84.35	83.60	82.85	82.10
	5.75	6.1	6.9	7.6	8.4	9.2	9.9	10.6	11.4
	5.67	6.5	7.6	8.8	10.0	11.2	12.5	13.7	15.0
S	88.50 ⁰⁶	87.68	86.79	85.85	84.94	84.08	83.10	82.19	81.27
	7.98	8.5	9.7	10.6	11.5	12.4	13.2	14.1	15.0
	5.14	5.8	7.2	8.4	9.6	10.8	12.0	13.2	14.4
N	81.35	80.60	79.85	79.10	78.35				
	7.6	8.0	8.9	9.6	10.3				
	11.04	12.1	13.2	14.5	15.7				
S	80.36	79.44	78.52	77.60	76.68				
	11.1	12.3	13.6	14.9	16.2				
	14.63	16.7	18.5	20.5	22.7				



Browning St. Sewer Laterals

130-25

SL	#	NL	
		N°1	126.50 ¹²⁸⁸ ^{2.00} 126.50 128.50 129.50 130.50
		N°2	127.50 ¹¹⁸⁸ ¹³⁵⁰ 127.50 128.50 129.50 130.50
		N°3	128.50 ¹⁰⁸⁸ ^{2.00} 128.50 129.50 130.50
		N°4	129.50 ⁹⁸⁸ ^{1.72} 129.50 130.50
		N°5	130.50 ⁸⁸⁸ ^{1.04} 130.50 131.50
		N°6	133.50 ¹⁵⁹⁶ ¹⁰⁵² 133.50 134.50
		N°7	134.80 ¹⁴⁶⁶ ^{2.18} 134.80 135.80
		N°8	136.20 ¹³²⁶ ⁸⁵² 136.20 137.20
		N°9	137.20 ¹²²⁶ ¹⁵⁵⁶ 137.20 138.20
		N°10	138.60 ¹⁰⁸⁶ ⁶²² 138.60 139.60
		N°11	139.20 ⁸⁸⁶ ²⁸² 139.20 140.20
		N°12	141.00 ⁸⁴⁶ ²⁷² 141.00 142.00
		N°13	142.00 ⁷⁴⁶ ²⁸² 142.00 143.00
		N°14	143.40 ⁶⁴⁶ ²⁵² 143.40 144.40
		N°15	144.40 ⁵⁴⁶ ²⁵² 144.40 145.40
		N°16	145.80 ⁴⁴⁶ ²⁶² 145.80 146.80
		N°17	146.80 ³⁴⁶ ²⁸² 146.80 147.80

Curtis St. Sewer Laterals

130-27

64

SL	#	NL	
		N°27	115.60 ¹⁵³² ⁸²² 115.60 116.60 117.60 118.60
		N°28	117.40 ¹⁴³² ²⁶² 117.40 118.40 119.40
		N°29	119.30 ¹¹³² ¹⁶² 119.30 120.30
		N°30	118.70 ¹²³² ⁷²⁰ 118.70 119.70
		N°31	121.10 ⁹³² ²⁰² 121.10 122.10
		N°32	122.90 ⁸³² ¹⁶² 122.90 123.90
		N°33	124.40 ⁷³² ¹⁵² 124.40 125.40
		N°34	127.30 ¹⁰⁵² ⁴¹² 127.30 128.30
		N°35	127.80 ¹⁰⁰² ⁴¹² 127.80 128.80
		N°36	127.80 ⁹⁰² ⁴¹² 127.80 128.80
		N°37	128.20 ⁸⁰² ⁴⁵² 128.20 129.20
		N°38	128.20 ⁷⁰² ⁴⁵² 128.20 129.20
		N°39	128.90 ⁶⁰² ⁴⁵² 128.90 129.90
		N°40	128.90 ⁵⁰² ⁴⁵² 128.90 129.90
		N°41	128.90 ⁴⁰² ⁴⁵² 128.90 129.90
		N°42	128.90 ³⁰² ⁴⁵² 128.90 129.90
		N°43	130.60 ²⁰² ⁴⁵² 130.60 131.60
		N°44	131.60 ¹⁰² ⁴⁵² 131.60 132.60
		N°45	132.90 ⁸² ⁴⁵² 132.90 133.90
		N°46	132.90 ⁷² ⁴⁵² 132.90 133.90
		N°47	133.20 ⁶² ⁴⁵² 133.20 134.20
		N°48	134.20 ⁵² ⁴⁵² 134.20 135.20
		N°49	135.60 ⁴² ⁴⁵² 135.60 136.60

Clove St. Serris Ft Yonge

5.9.28

N.L. Clove	153.92	13.11 +5.33	BN/1220 113.7 104.14	SE Trench Clove 100 ft
35 E - N.H. N°2	159.00	11.12 +5.25		
70 ft - F.L. Clove	152.62	11.53 +5.25 +1.08		

Voltaire St Serris Loderle

N° 60	185.60	6.77 +5.27	
N° 61	184.80	8.17 +5.27 +3.77	

Clove St + Udal St Serris

F.L. Clove	112.82	8.15 +5.27	
70 ft - N.L. Clove	157.25	13.67 +5.27 +9.41	

Clove St. Water Graded

5.9.28

65

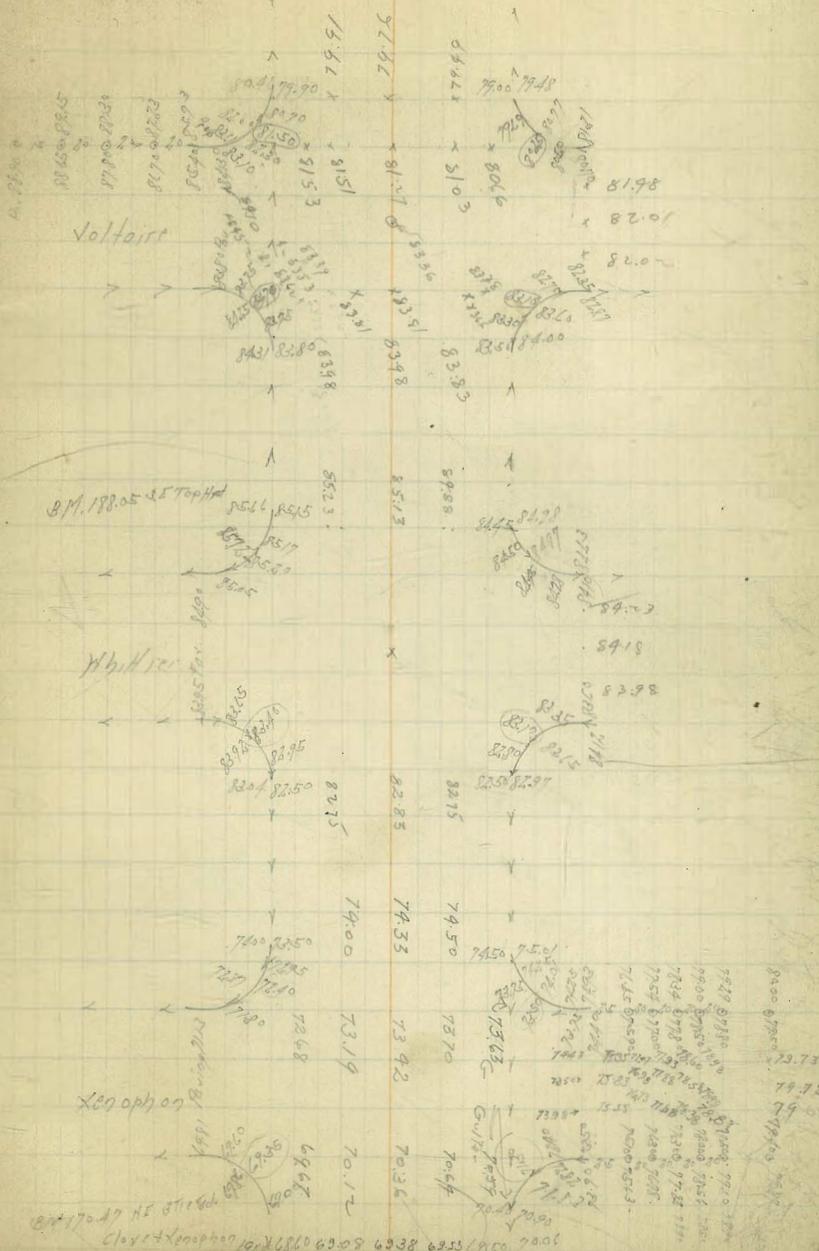
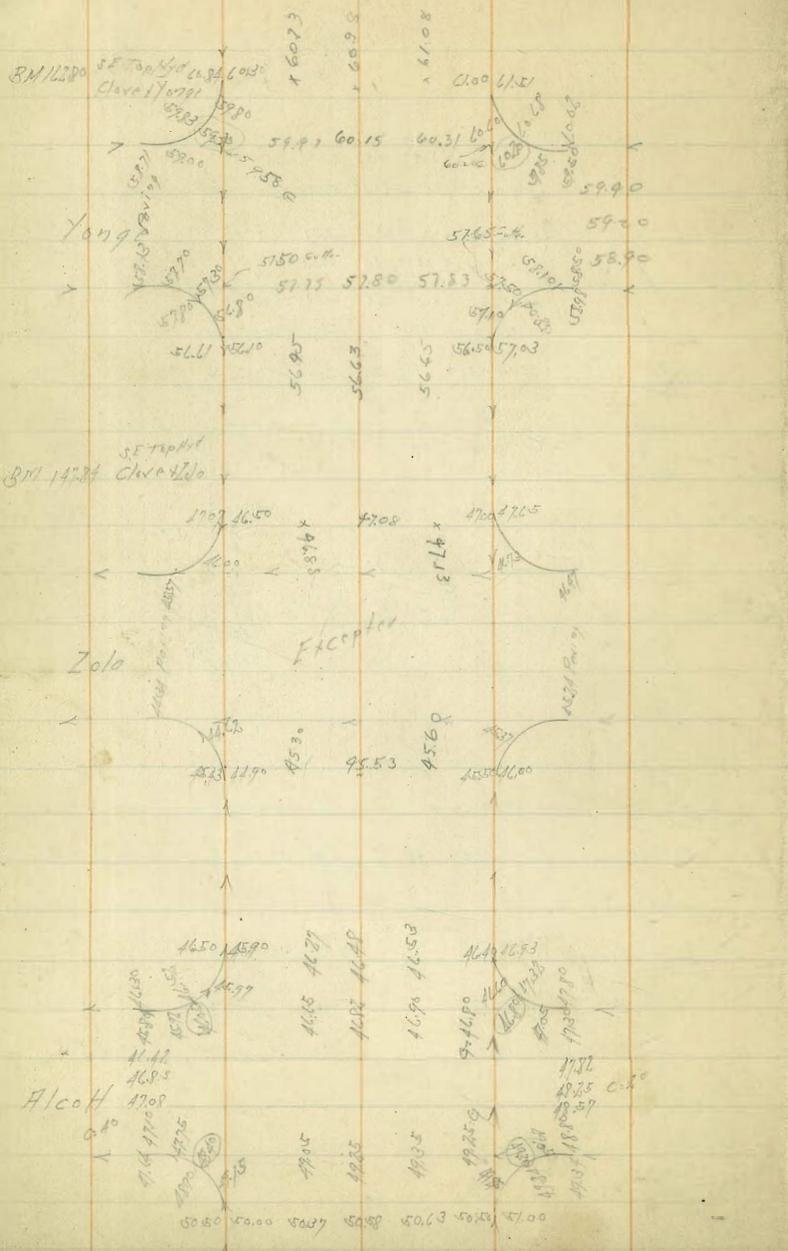
S.L. Yonge	157.41	152.10 +5.27 +5.25	156.20 +7.35 +3.53	BN/1220 113.7 104.14	SE Trench Clove 100 ft
75 ft	160.25		9.22 +5.27		
75 ft	163.02	13.02 +5.27 +4.10			
75 ft	165.78		11.16 +5.27 +5.25		
200 ft - N.L. Xerophan					

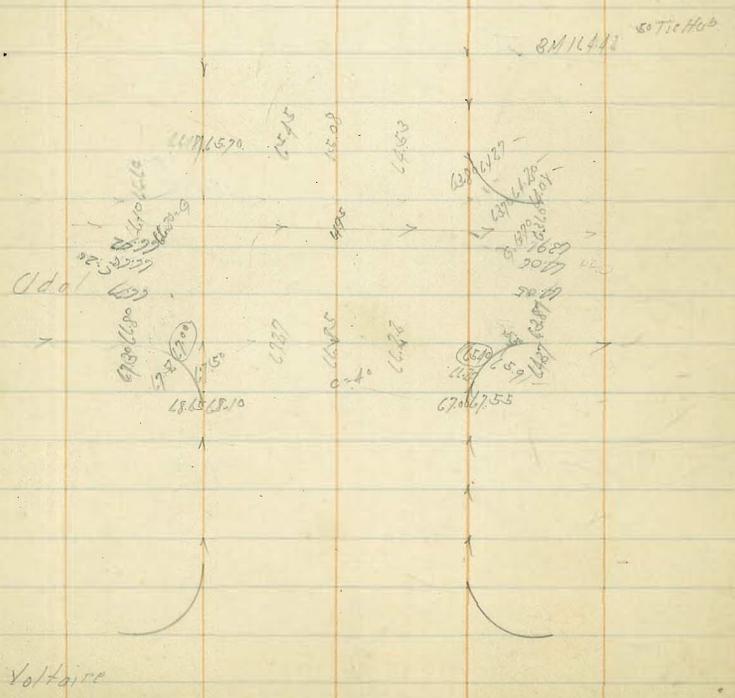
S.L. Xerophan	170.68	6.46 +5.27	170.56 +5.27		
75 ft	172.71		8.33 +5.27 +2.76		
75 ft	176.74	11.50 +5.27			
75 ft	179.78		8.46 +5.27 +2.59		
200 ft - N.L. Voltaire					

S.L. Xerophan	182.31	181.15 +5.27 +5.27	181.00 +5.27 +5.27		
75 ft	181.91		6.93 +5.27		
75 ft	181.44	6.93 +5.27			
75 ft	180.98		7.66 +5.27		
200 ft - N.L. Voltaire					

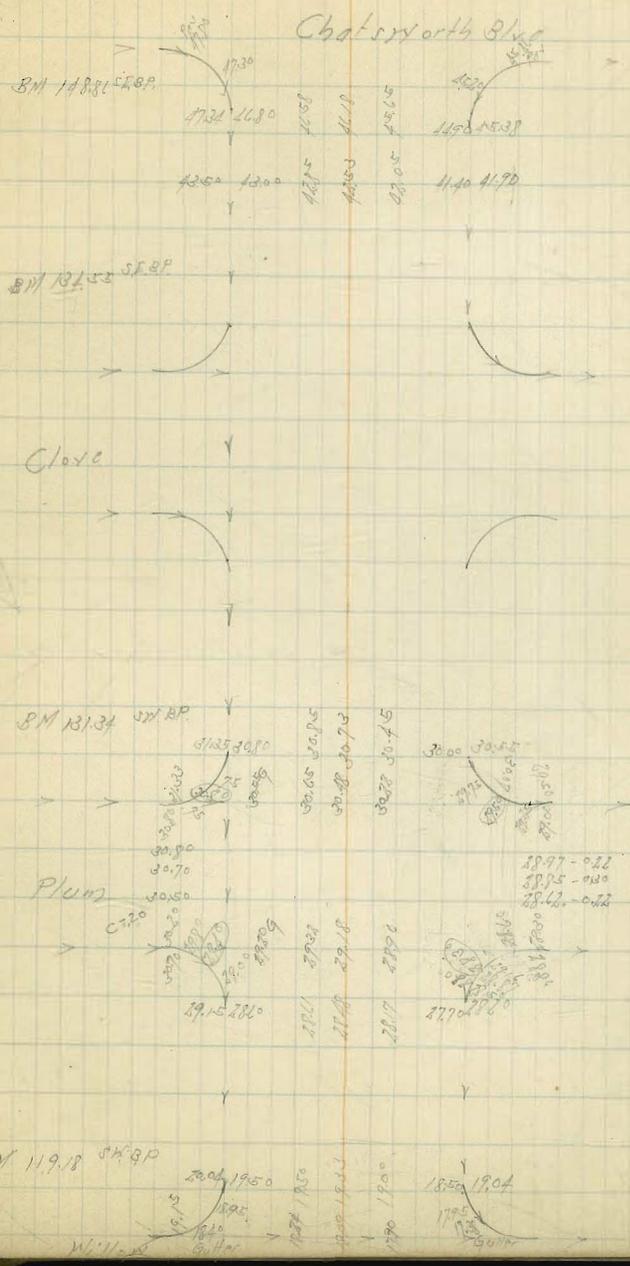
S.L. Voltaire	181.30	181.30 +5.27 +5.25	179.60 +5.27 +5.27		
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S.L. Udal	162.90	7.17 +5.27 +3.50	160.90 +5.27 +5.27		
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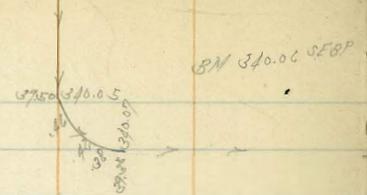
Voltaire



Plum

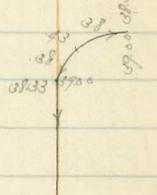
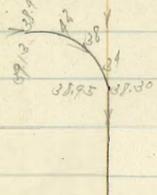
BM 11918 SFBP

Madison Ave Paving



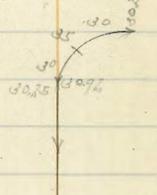
BN 340.00 CFBP

Mississippi



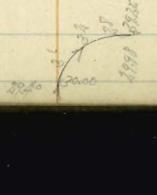
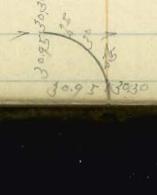
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Alabama

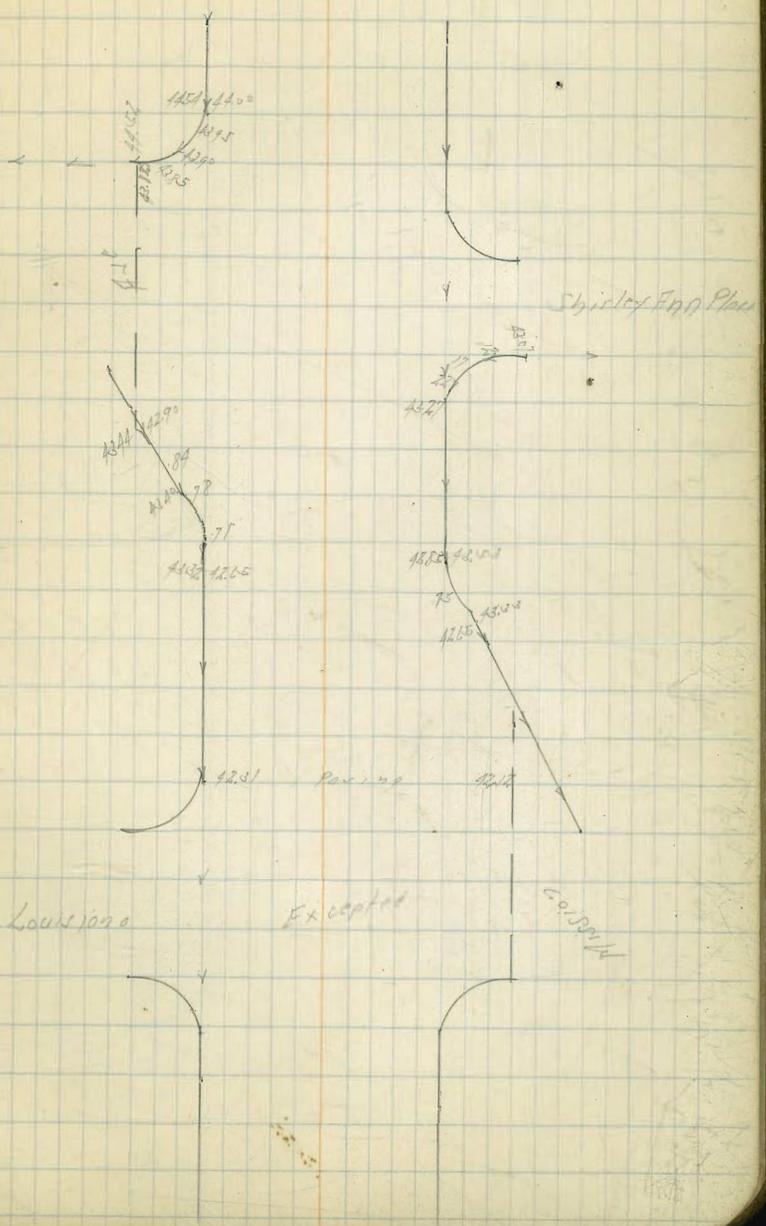


BN 340.00 CFBP

Florida



70



Madison Ho Par 109



BM 37899 SEB

Used 27 3/4" W
T & C

Used 27 3/4" W
T & C

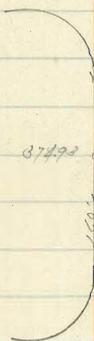
71

Excepted

Hamilton

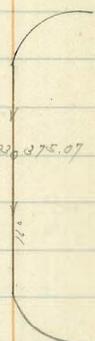
Utah

Excepted



37492 37433

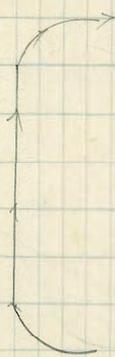
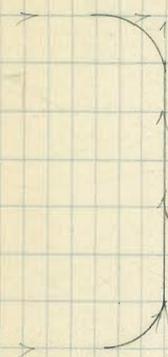
100'



37320 37507

110'

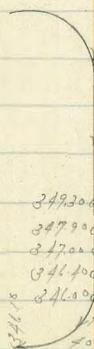
Intersection
Cal



Arizona

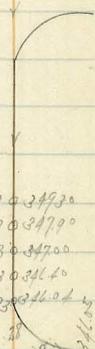
Idaho

Excepted



34920 34863
34720 34763
34720 34623
34600 34573
34600 34550

Acad 241.18
100'



38110 34920
37320 34790
36330 34700
35730 34620
35230 34500

Acad 241.18
100'

BM 34603 STEP



Texas

Oregon

Excepted

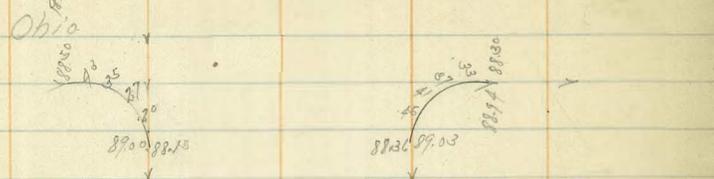


4491 4480
4511 4460



4491 4480
4410 4450

Madison Arc Pairing

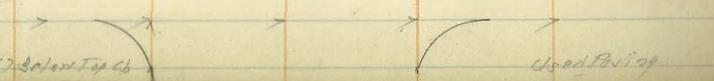


30th Excepted.

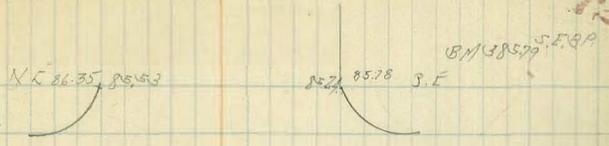


Used Pairing

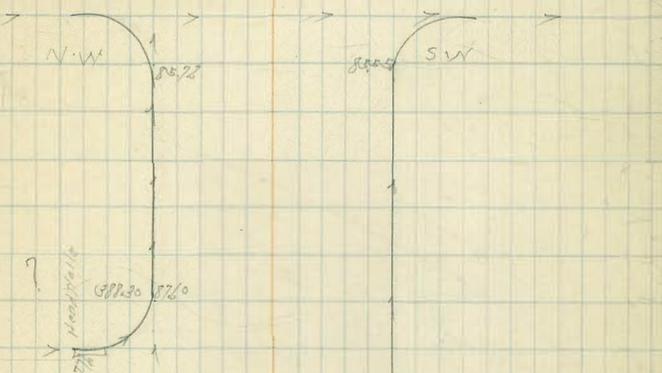
Kansas Excepted



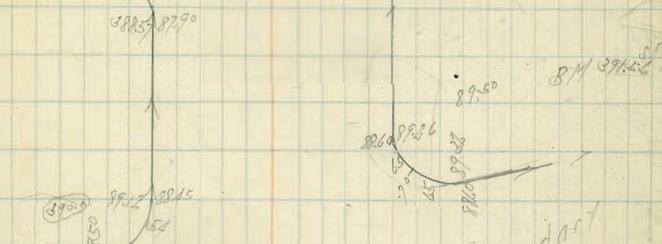
Used Pairing



lands Excepted

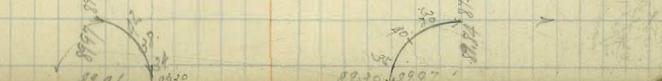


31st



Boundary

Illinois



Used Pairing

Madison Ave Pairing

74

90.25 89.59
 90.31 89.70
 89.87 89.75
 68
 70
 324

90.90 89.74
 90.06 89.87
 89.71 89.61
 71
 338

90.52 91.23
 90.16 91.23
 91.23 90.67
 51
 62

90.90 91.37
 90.72 91.37
 90.82 91.37
 90.87 91.37
 77
 82

393.25 92.79

92.99 393.57 $8M$ 92.39 $558P$

Milroy

93.70 93.51

93.24 93.67

592.94 92.50

72.73 592.96

3546

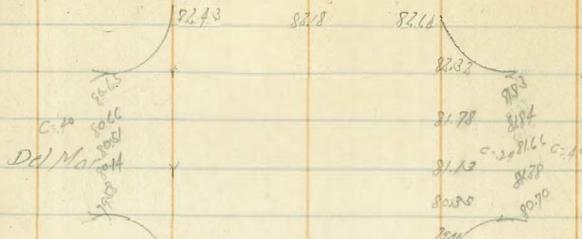
Excepted

592.94 92.53

92.09 392.51

Catalina Blvd Paving

BM 1812 SET



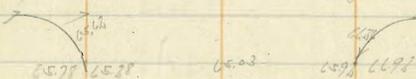
7877 7847 7822 7702 8002

7815 7715 7740 7823 7923

7633 7182 7157 7623 7333



Coronado



6571 6521 6603 6593 6692

6000 6200 6225 6300 6400

6243 6192 6218 6321 6243



Santa Cruz



5973 5973 5973

Orchard

9220 9236

9020 9005 905

8872 8867 8836

8856 8830 8900

8976 8971 8926

8900 8925 8950

Dd 74

Edgemont St. Paving
Cedar to Grape

Elm

318

30630 0 763
30755 0 1.18
30535 0 4.68
30370 0 4.03
30240 0 1.93
30510 0 4.74
30280 0 1.53
30180 0 3.13
30400 0 3.02
30090 0 5.13
30710 0 7.13

32115 0 20.17
32330 0 27.93
32545 0 29.91
32760 0 26.73
32975 0 29.02
33190 0 27.03
33405 0 29.68
33620 0 27.93
33835 0 29.82
34050 0 29.23
34265 0 27.51
34480 0 27.33
34695 0 25.74
34910 0 23.83
35125 0 21.53

311.00

Cedar

ST

318

30267 0 2.76
30032 0 3.08
29800 0 3.05
29570 0 3.64
29340 0 2.02
29110 0 3.02
28880 0 2.10
28650 0 2.02
28420 0 3.05
28190 0 2.05
27960 0 3.07
27730 0 2.07

3111 0 22.15
3093 0 23.10
3075 0 23.15
3057 0 23.15
3039 0 23.15
3021 0 23.15
3003 0 23.15
2985 0 23.15
2967 0 23.15
2949 0 23.15
2931 0 23.15
2913 0 23.15
2895 0 23.15
2877 0 23.15
2859 0 23.15
2841 0 23.15

316.00

ST

Edgemont St. Paving

5-13-21
8

Grape

7201 7165 Per
sq. ft. Area

Per 7135 7001

115

47.41 44.86

200

155.50 51.00

Fir ST

254.50

251.10

249.35

247.58

220.03 19.30

Per 19.25

Elm

112.70

28.05 17.30

ST

115

122.42 91

100

54.30 25.70

10

84 155.25

0 257.25

0 200.25

0 177.10

84 22.27

19.30 22.03

Per 19.00

ST

112.70

13.07 9.25

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder
stake for any width roadway, slope 1 1/2 to 1.
If ground is nearly level, the cut or fill at side
stake is located by the double entry method to
left column and top row. The number is body
of table in same row and column gives distance
from side stake to slope stake. If ground is not

IMPROVED TABLES

AND

INFORMATION

To find Tangent and External for curve of
any other degree divide by degree of curve and
add correction found in column of corrections.
Degree of curve with a given L may be found
by dividing tangent (or external), opposite L by
given tangent (or external).
The distance from a point on the tangent to
the curve is very nearly the square of the tangent
length divided by twice the radius.

TABLE II—Continued
TRIGONOMETRIC FORMULAE (continued)

In any triangle:

Given a, b, C; to find c, B, A.

Use Law of Lines.

Given A, B, c; to find a, b, C.

Use Law of Lines.

Given a, b, c; to find A, B, C.

$$\text{Let } \frac{a+b+c}{2} = s, \sqrt{\frac{(s-a)(s-b)(s-c)}{s}} = r$$

$$\cos \frac{1}{2} A = \sqrt{\frac{s(s-a)}{bc}}$$

$$\tan \frac{1}{2} A = \frac{r}{s-a}$$

$$\tan \frac{1}{2} B = \frac{r}{s-b}$$

$$\tan \frac{1}{2} C = \frac{r}{s-c}$$

Area of a triangle:

$$\text{Area} = \frac{1}{2} ab \sin C$$

$$\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}$$

PRISMOIDAL FORMULA.

$$\text{Vol.} = \frac{h}{6} (B+b+4M)$$

h = altitude; b, B = bases; M = midsection

TABLE III
INCHES AND FRACTIONS OF AN INCH IN DECIMALS OF A FOOT

	0	1	2	3	4	5	6	7	8	9	10	11	
$\frac{1}{16}$	.0052	.0885	.1719	.2552	.3385	.4219	.5052	.5885	.6719	.7552	.8385	.9219	$\frac{1}{16}$
$\frac{3}{16}$	.0104	.0938	.1771	.2604	.3438	.4271	.5104	.5938	.6771	.7604	.8438	.9271	$\frac{3}{16}$
$\frac{1}{4}$	.0156	.0990	.1823	.2656	.3490	.4323	.5156	.5990	.6823	.7656	.8490	.9323	$\frac{1}{4}$
$\frac{5}{16}$	.0208	.1042	.1875	.2708	.3542	.4375	.5208	.6042	.6875	.7708	.8542	.9375	$\frac{5}{16}$
$\frac{3}{8}$	.0260	.1094	.1927	.2760	.3594	.4427	.5260	.6094	.6927	.7760	.8594	.9427	$\frac{3}{8}$
$\frac{7}{16}$	.0313	.1146	.1979	.2813	.3646	.4479	.5313	.6146	.6979	.7813	.8646	.9479	$\frac{7}{16}$
$\frac{1}{2}$	.0365	.1198	.2031	.2865	.3698	.4531	.5365	.6198	.7031	.7865	.8698	.9531	$\frac{1}{2}$
$\frac{9}{16}$	.0417	.1250	.2083	.2917	.3750	.4583	.5417	.6250	.7083	.7917	.8750	.9583	$\frac{9}{16}$
$\frac{5}{8}$	.0469	.1302	.2135	.2969	.3803	.4635	.5469	.6302	.7135	.7969	.8802	.9635	$\frac{5}{8}$
$\frac{11}{16}$	.0521	.1354	.2188	.3021	.3854	.4688	.5521	.6354	.7188	.8021	.8854	.9688	$\frac{11}{16}$
$\frac{3}{4}$	.0573	.1406	.2240	.3073	.3906	.4740	.5573	.6406	.7240	.8073	.8906	.9740	$\frac{3}{4}$
$\frac{13}{16}$	.0625	.1458	.2292	.3125	.3958	.4792	.5625	.6458	.7292	.8125	.8958	.9792	$\frac{13}{16}$
$\frac{7}{8}$	.0677	.1510	.2344	.3177	.4010	.4844	.5677	.6510	.7344	.8177	.9010	.9844	$\frac{7}{8}$
$\frac{15}{16}$	.0729	.1563	.2396	.3229	.4063	.4896	.5729	.6563	.7396	.8229	.9063	.9896	$\frac{15}{16}$
1	.0781	.1615	.2448	.3281	.4115	.4948	.5781	.6615	.7448	.8281	.9115	.9948	1
	.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167	1.000	
	0	1	2	3	4	5	6	7	8	9	10	11	

TABLE IV
USEFUL RELATIONS.

Lineal feet	×.00019	= miles
Lineal yards	×.0006	= miles
Square inches	×.007	= square feet
Square feet	×.111	= square yards
Square yards	×.0002067	= acres
Acres	×4840	= square yards
Cubic inches	×.00058	= cubic feet
Cubic feet	×.03704	= cubic yards
Links	×.22	= yards
Links	×.66	= feet
Feet	×1.5	= links
360°	= 21600'	= 1296000"
Radius	= arc of 57.2957790°	
Arc of 1°	(radius = 1)	= .017453292
Arc of 1'	(radius = 1)	= .000290888
Arc of 1"	(radius = 1)	= .000004848

$$\pi = 3.141592654 \quad \sqrt{\frac{1}{4}} = 0.564190$$

$$\frac{\pi}{4} = 0.785398163 \quad \sqrt[3]{\frac{6}{\pi}} = 1.240700982$$

$$\frac{\pi}{6} = 0.523598776 \quad \pi^2 = 9.869604401$$

$$\sqrt{\frac{4}{\pi}} = 1.128379167 \quad \frac{1}{\pi^2} = 0.101321184$$

$$\frac{\pi}{6} = 0.523598776 \quad \sqrt{\pi} = 1.772453851$$

$$\frac{4\pi}{3} = 4.188790205 \quad \frac{1}{\pi} = 0.3183099$$

Curvature of Earth's surface = about 0.7 feet in 1 mile

Curvature in feet = 0.667 (Dist. in miles)²

Difference between arc and chord length, 0.05 feet in 11½ miles

$$\text{Probable error of a single observation} = 0.6754 \sqrt{\frac{Mv^2}{n-1}}$$

Error in chaining of 0.01 feet in 100 feet:

Due to—

1. Length of tape error of 0.01 feet
2. Alignment. One end 1.4 feet out of line
3. Sag of tape at centre of 0.61 feet.
4. Temperature difference of 15°
5. Difference of pull of 15 lbs.

STADIA REDUCTION FORMULAE.

$$\text{Horizontal Distance} = R - R \sin^2 a + C \cos a$$

$$\text{Vertical Distance} = R \frac{1}{2} \sin 2a + C \sin a$$

$$R = \text{Reading} \times \frac{\text{distance from Object glass to cross hairs}}{\text{distance between cross hairs}}$$

C = distance from Object glass to cross hairs + distance from Object glass to center of instrument.

a = angle of elevation for mid Reading

53
25
488

26

429
15
444

452
15
467
444
411
456
3
485

528

522
1050
528

561
15
546

522
15
507

517

475 490 529
470 15
460 510
10 25
510

453

522
15
513

433

517
502
490
2996
908

591

21

598

55
11073
536
73
17
56

494
15
479

453
17
436

417

440
30
470

410

567
20
547

478
15
463

668
15
653