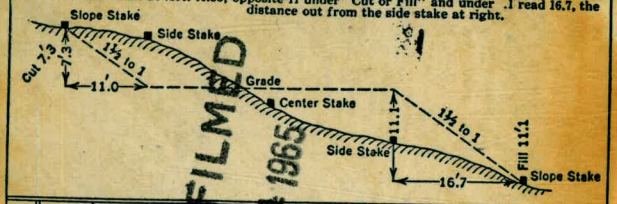
W675

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 1½ to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right.



Cut or Fill	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	Cut or Fill
	Distance out from Side or Shoulder Stake										
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

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675

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Room 268 Civic Center
Telephone Main 5161

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11,083-5. k, m, yc. kM.

Indexed to - 80 - 2/7/46

Bonita P.L. - Connec. along Imperial Ave

~ INDEX ~

	Pages
Align. sta. 0+00 to 17+36.22	8
" 17+36.22 to 94+00	9 - 1
" Alternate 92+15 to 130+156	
= Bonita line on 45th St.	9 - 10
℄ part. tie pts.	5 - 6
Profile levels	13 - 59
" " on alternate	60 - 75
check levels	76 - 77
TIES TO 63rd ST.	78
Revision at Churchward + Imperial	79
TIES FROM LOCATED LINE to EXISTING BONITA STEEL at IMPERIAL and CHURCHWARD	80

ALIGNMENT IMPERIAL AVE.
PIPE LINE

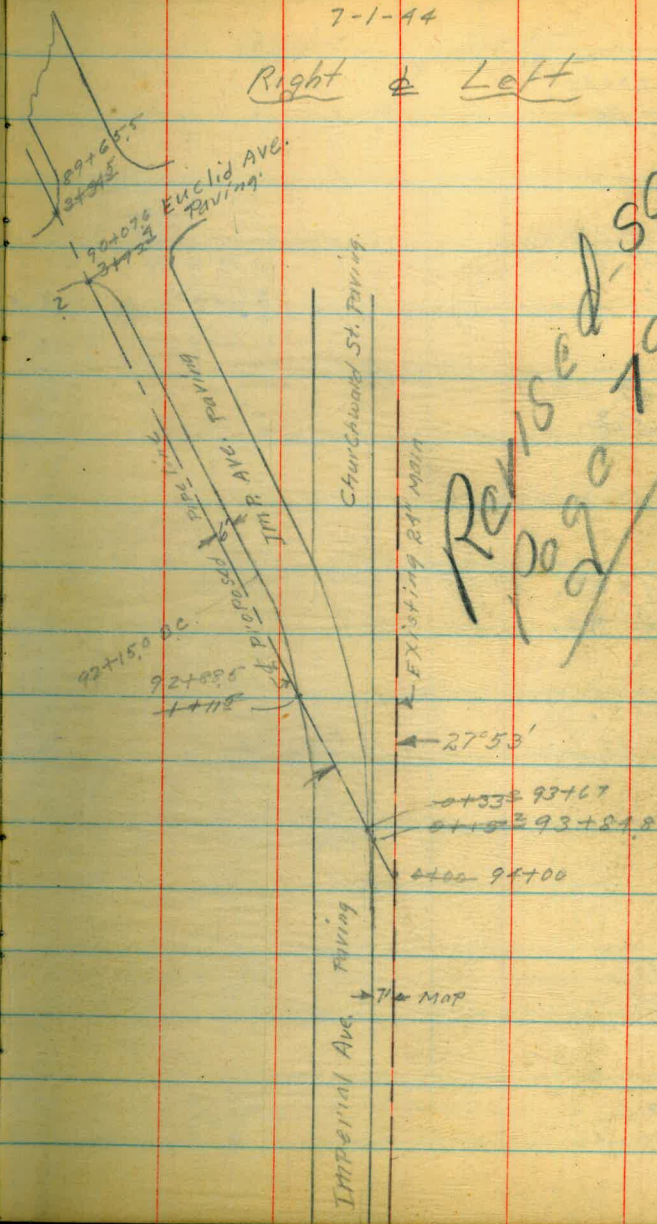
Note 0+00 reversed from Bonita Pl. at Churchward & Imperial Ave. to Otay 2nd M. Pl. - east of 65th St.

94+00
~~0+00~~ = point on Bonita pipe-line see Sketch

7-1-44

1

Right ℄ Left



Revised see Page 19

~~Lt~~ ~~Rt.~~

Right ℄ Left

59+43.29 BC fd. L.P. C.T. ℄ Pav.
~~34+56.80 E.C.~~

60+29.5
~~33+70.5~~

Rt
~~Lt.~~
Δ 13°10' ~~Rt.~~
R 1215
T
L 279.22
T=140.22

62 22.42
60 84.7
137.72

60+90
+84.7
5.3

Begin. A Sphalt
end Conc. Pav.

60+84.7
~~33+15.3~~

℄ dirt Road
55th St

62+22.42 EC. fd. L.P. C.T. ℄ Pav.
~~31+77.58 B.C.~~

68+19.1
~~25+80.8~~
54th St. ?

~~25+44.9~~
68+55.1

74+49.5
~~19+50.5~~

℄ dirt St.
53rd St.

81+50
~~12+50~~

℄ dirt St.
52nd St
?

					28
					277²
49 ~~45~~	~~16°14~~				
25 + ~~25~~	~~10°30'~~			Δ 41°33'30" Lt. R 126	
				L 90.67	T. 47.43 m.H.
+50	~~4°46'~~				
49+70.8 EC ~~44+29²~~ ~~B.C.~~					
53+30.16 BC. ~~+64.84~~ E.C. ~~4°10'~~					
+50	~~3°18'~~				
~~40+25~~					
				Δ 8° 20' Rt R. 485	T = 35.33 m.H.
54 ~~40+00~~	~~0°20'~~			L 70.53	
54+05.69 E.C. ~~39+94.31~~ B.C.					

Continued Page 7

~~42+58.55~~
~~51+41.45~~

℄ Merlin St.
Conc. Paved St.

43+38.11 B.C.
~~+61.89 L.C. 21°08'30"~~

+50 ~~20°10'~~

44
~~50~~ ~~16°05'~~

+50 ~~11°59'~~

Δ 42°17' ~~Rt.~~ Lt.
R 350
T 135.35
L 258.29

45
~~49~~ ~~7°53'~~

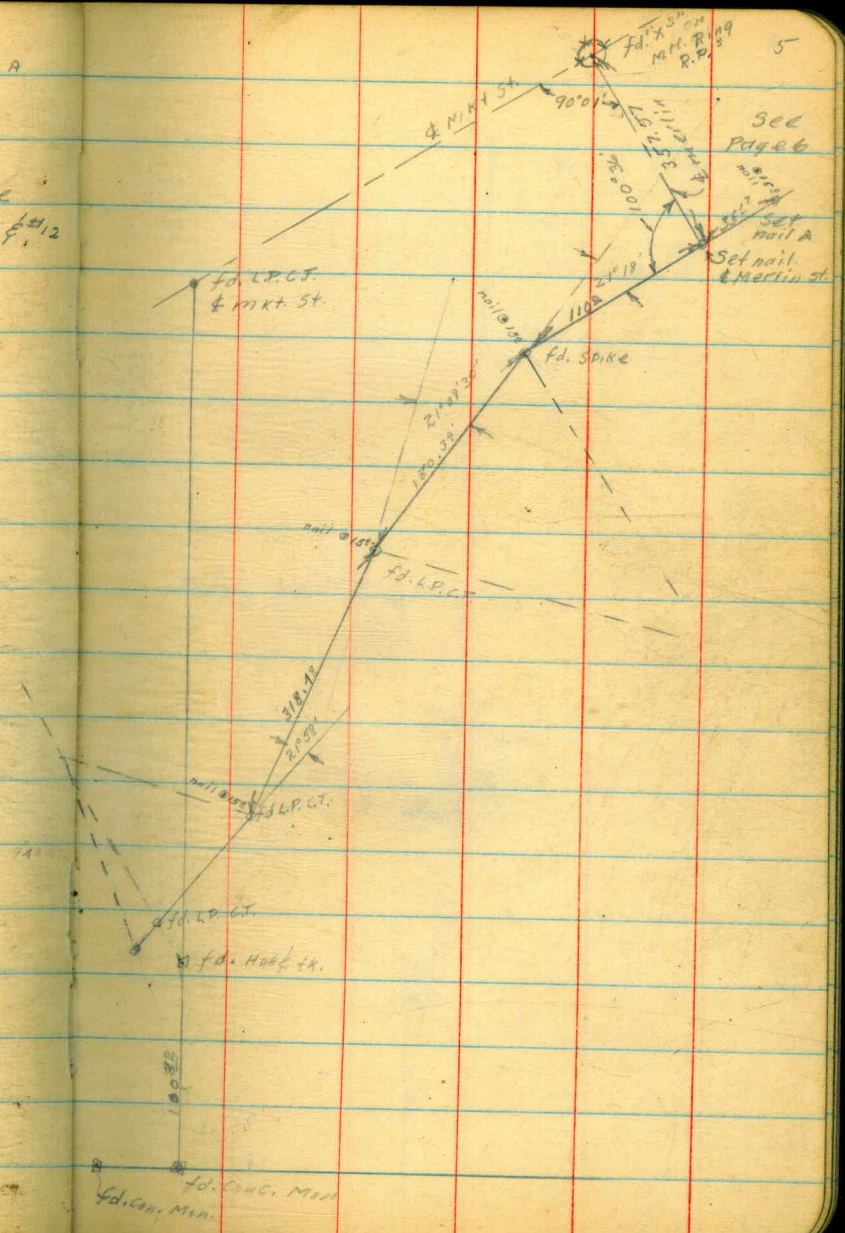
45+50
~~48+50~~ ~~3°48'~~

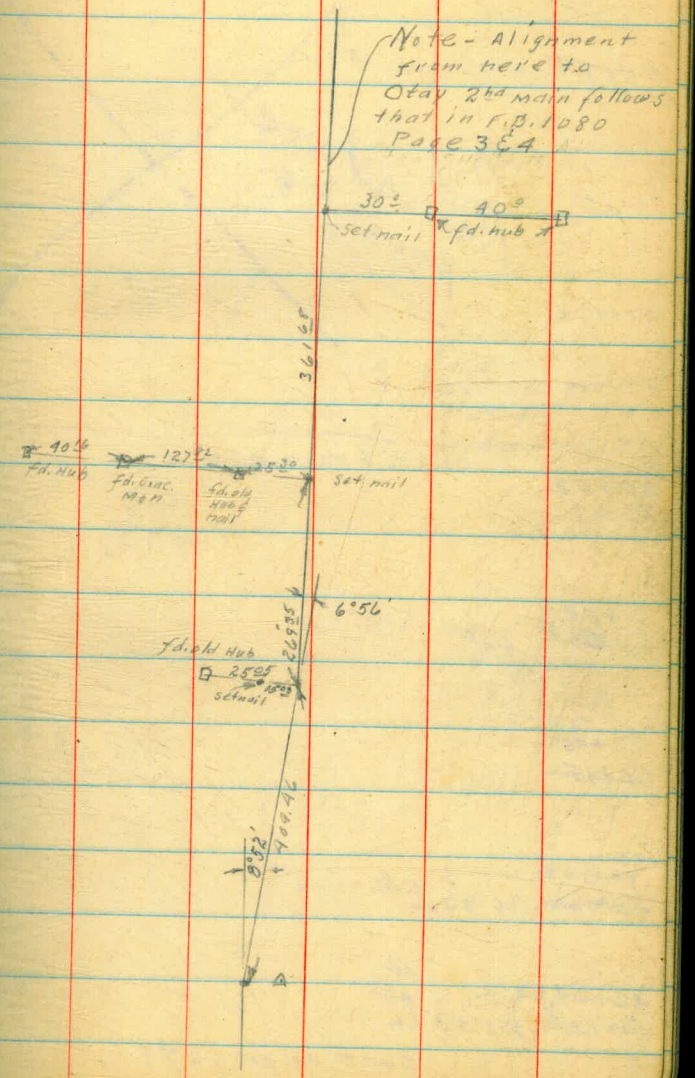
45+96.40 EC.
~~48+03.60 B.C.~~

48+80.13 B.C.
~~45+19.87 E.C. 20°46'45"~~

ALIGNMENT IMPERIAL AVE
from E. line Lot 16 Rancho MISSION to A
Point E. of 60th St.

Note - Old tie points shown Here
& next page Are from F.B. #1080 & #12
Also tie sheet for Imperial Ave.




Note - Alignment from here to Otay 2nd main follows that in F.B. 1080 Page 3 & 4
30°
40°
set nail
fd. hub
361.68
40.16
fd. Hub
127.82
fd. conc. Mon
25.30
fd. old Hub & nail
set nail
6°56'
269.95
fd. old Hub
25.05
15.03
set nail
409.46
8°52'

Continued from page 4

94+38.30

92+28.20

Revised see page +8

91+83±

78+04.0' ∠ 0°15'30" Lt.

cont. from page 8

20+32
~~73+68~~

31+84.7
~~62+15.30~~ Pot

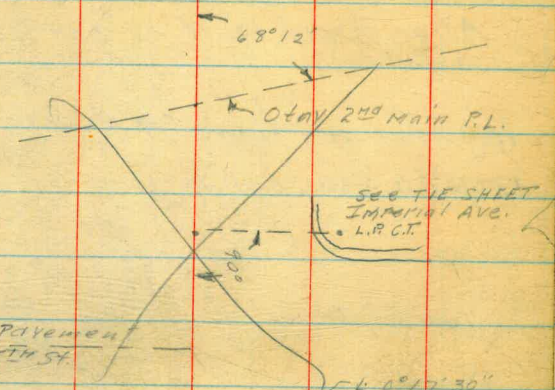
33+05
~~60+95~~

38
~~37~~+14.8
~~55+85.20~~ ∠ 6°56' ~~Lt.~~ Rt.

42+24.62
~~51+75.38~~ ∠ 8°52' ~~Lt.~~ ~~Rt.~~ Lt.

cont. on page #4

~~Lt.~~ Rt. ℄ ~~Rt.~~ Lt.



℄ Pavement
65th St.

15.0' ∠ 0°17'30" In ℄ 63rd St. See F.B. 1080 Page 4

℄ dirt St.
? 63rd St.
62nd St.

45' 40'
fd. Hub R.P.S. See Book 1080 Page 3

℄ 60th St
18' dirt St.

?
15.03 ∠ 7°00' Lt. in F.B. 12 Page 57

15.05 ∠ 9°03' Lt. in F.B. 12 Page 57

Revision Alignment Between
Otay 2nd main P.L. to 63rd St.

Align. changed 12' N. of north edge part

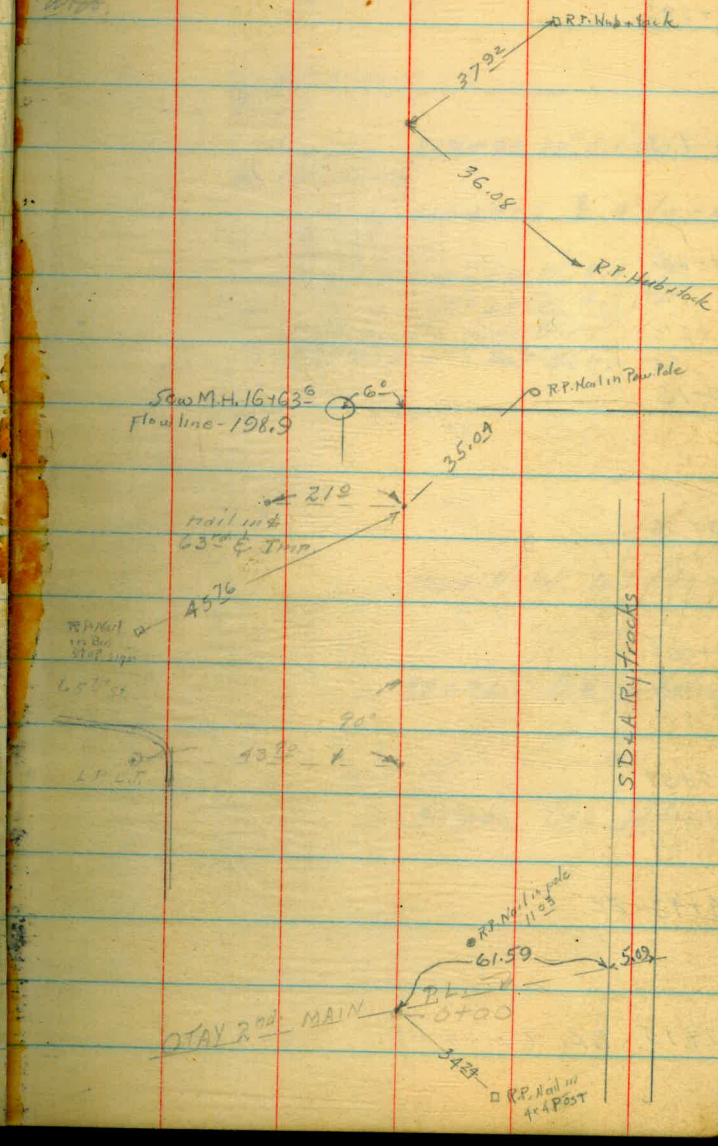
17+00 ahead see page *7 (lower half)
=
17+36.22 L 3°16' Rt. = 17+00 End Revision

16+32.01 L 3°01' Left.

2+07.79

0+00

7-12-44 Lt. & Rt. 8



Alternate Line Imperial Ave.
From CHURCHWARD to 95th St

123+29.9

120+13.3

116+87.5

114+23

110+16

103+36

100+06.5

95+59

94+43 E.C.

92+15 B.C. Curve Rt.

℄ 20' dirt st.
46th St.

℄ 15' dirt st.

℄ PYNCHONE St. 8'

119+90 12" C.I. drain 2.4 D.

← 15' →

116+97.6 ? 4' deep P.F.

℄ 47th
Conc. Paved. St.

116+78 W. 5.5' P.F.

114+28 G. 4.3 P.F.

℄ Escudilla St. Dirt

48th St. 114+12 W. 2.7 deep P.F.

℄ 10' dirt road

℄ Imperial Ave

℄ 10' dirt road
49th St.

100+18 W. 1.3' deep P.F.

℄ 30' dirt st.
OZARK St.

97+96.5 Gas 2.3' deep P.F.

℄ Dirt st. 30'
50th St.

95+46 Gas 2' deep P.F.

Profile-page 60

130+15.6

130+10.8

130+06.85

℄ 10

13.5

Bonita. P.L. D. 4.6 P.E.

Sewer M.H. 4.8

13.6 to F.L.

℄ 45th St 30' dirt st.

Profile Imperial Ave P.L. from Churchward to Otay 2nd M. P.L.

	3.59	188.75 ~~188.68~~			185.16 ~~185.09~~
	SEE PAGE 79				
94+00 ~~0+00~~ on pav.			6.0		182.8
7' off.			5.7		183.1
+ 85 ~~15~~			5.35		183.40
+50 6' so. on pav.			4.8		~~184.0~~
			4.6		~~184.2~~
93 ~~1~~+00 6' so. on pav.			4.7		~~184.1~~
			4.5		184.3
+ 88.5 ~~11.5~~			4.8		184.0
+50 edge pav.			4.8		184.0
			4.6		184.2
92 ~~2~~ edge pav			4.7		184.1
			4.2		184.6

7-2-44 Rt. & Lt. 13

City Datum

Tel. Pole # D. 11651 T.

B.M. Nail in pole N. Side Imperial & Churchward Intersec.

depth of P.L. at 0+00 3.0 (P.F.)

Top grnd. over Bonita PL at Imperial & Churchward

92+84.5 W.H.

1+15.5 ⌀ 8.0
tel. pole D11651T

91+86 W.H.

2+14 ⌀ 6.0
tel. pole
#84296 H

Rt. & Lt.

		188.75 ~~188.68~~			
91+50 ~~2+50~~			5.2	183.6	
edge Pav.			5.0	183.8	
91 ~~3+~~00			6.2	182.6	
edge Pav.			5.9	182.9	
+50			7.7	181.1	
edge Pav.			7.3	181.5	
08 +~~92~~			9.0	179.8	
90 ~~4+~~00			9.2	179.6	
edge Pav.			9.2	179.6	
+65.5 +~~34.5~~			10.6	178.2	
+50			11.1	177.7	
edge Pav.			11.1	177.7	
TP			8.83	179.9~~8~~2 ~~179.85~~	
	0.23	180.1~~6~~5 ~~180.08~~			

WH. 90+36
3+64 ○ 5°
tel. Pole
33956

BM. TOP F.P. S.E. Cor. Euclid & Imp.

		180.18 5 ✓ ~~180.08~~				Rt.	℄	Lt.			
89 ~~5~~ 100			4.7	175.5 ✓							
edge pav.			4.3	175.9 ✓							
76 + ~~24~~						tel. Pole #93951 ○ 3°					
+50			6.5	173.7 ✓							
edge pav			6.2	174.0 ✓							
88 ~~6~~ 100			8.4	171.8 ✓							
edge pav.			8.1	172.1 ✓							
+50			10.1	170.1 ✓							
edge pav.			9.7	170.5 ✓							
28 + ~~72~~						tel. pole #11655 ○ 3°					
87 ~~7~~ 100			11.7	168.5 ✓							
edge pav			11.2	169.0 ✓							

		180.15 ~~180.08~~			
BC+50 ~~7+50~~			13.5	166.7	
edge pav.			12.8	167.4	
				167.6 ~~167.59~~	
TP			12.49		
		169.3 ~~169.26~~			
	1.67				
86 ~~8+00~~			4.0	165.3	
edge			3.6	165.7	
86 ~~+14~~					
68 ~~+32~~					
+50			5.4	163.9	
edge pav.			5.0	164.3	
38 ~~+62~~					
19 ~~+81~~					
03 ~~+97~~					
85 ~~9+00~~			7.0	162.3	
edge pav.			6.6	162.7	

Rt. ℄ Lt.

Water meter □ 12'

8" dirt drive

Water meter □ 12'

8" dirt drive

Water meter □ 4"

		169.3~~4~~ 3 ✓ ~~169.26~~					Rt. & Lt.				
84 +68 ~~9+32~~							8' dirt drive				
+50			8.5	160.8							
edge pav			8.1	161.2							
84 ~~10~~			10.1	159.2			-0.3 / 7	+0.2 / 2			
edge pav.			9.7	159.6							
+50			10.8	158.5		-3.6 / 13	+0.2 / 7	+0.2 / 2	-0.5 / 2		
edge pav.			11.3	158.0							
83 ~~11~~			12.8	156.5			-4.0 / 12	0.0 / 5	-0.2 / 2		
edge pav.			12.8	156.5							
TP			12.49	156.8~~5~~ 4 ✓ ~~156.77~~							
	4.61	161.4~~6~~ 5 ✓ ~~161.38~~									
82+72 ~~11+28~~			10.29	151.16 ✓		Fl. line Right		← 14°	39.8		
			11.69	149.76 ✓		" " Left			16" culvert		

		161.9~~6~~5 ~~161.38~~				Rt.	±	Lt.		
+50			5.7	155.8		-1.6 / 11.5	0.0 / 5	-0.3 / 2		
edge pav			5.9	155.6						
82 ~~12~~+00			6.2	155.3		-1.0 / 13	+0.4 / 5	0.7 / 2		
edge pav			6.3	155.2						
+50			6.3	155.2			-0.2 / 13			
edge pav.			6.1	155.4						
81 ~~13~~+00			5.8	155.7						
edge pav.			5.6	155.9						
+50			5.3	156.2						
edge pav			5.1	156.4						
+ ~~70~~ 30 + ~~83~~ 17						Watermeter □ 20' 8' dirt drive				
80 ~~14~~+00			4.5	157.0						
edge pav			4.3	157.2						

					Rt. ℄ Lt.
		161.40 5 ✓ ~~161.38~~			
+50			3.7	157.8 ✓	
edge pav			3.5	158.0 ✓	
+ ~~66~~ 34					□ 12'
+ ~~85~~ 15					8' dirt drive
~~15~~ 79 +00			2.9	158.6 ✓	
edge pav.			2.7	158.8 ✓	
+50			2.1	159.4 ✓	
edge pav.			2.0	159.5 ✓	
~~16~~ 78 +00			2.1	159.4 ✓	
edge pav.			1.9	159.6 ✓	
+ ~~41~~ 59					Stub Power pole guy @ 93 to pole #77441
+50			2.3	159.2 ✓	
edge			2.4	159.1 ✓	
~~17~~ 77			3.4	158.1 ✓	
edge pav.			3.4	158.1 ✓	

							Rt.	℄	Lt.
		161.45 ~~161.38~~							
+50 edge pav.			4.4	157.1					
			4.5	157.0					
TP			5.32	156.13 ~~156.06~~					
	3.84	159.97 ~~159.90~~							
76 ~~+8~~ +00 edge pav.			3.8	156.2					
			3.9	156.1					
+50 edge pav.			4.7	155.3					
			4.6	155.4					
75 ~~+6~~ +00 edge pav.			5.0	155.0			12" ?	18" Conc H.S.	
			4.7	155.3					
80 + ~~26~~			7.18	152.79	Fl. line Right			6°	35°
			7.31	152.66	" " Left				
+50 edge pav.			5.1	154.9					
			4.9	155.1					
B.M.			2.63	157.33 ~~157.27~~	Top F.P.	S.E. Cor. 53rd & Imp.			

Rt. & Lt.

		159.98 ~~159.90~~			
74 ~~70~~+00			5.2	154.8	
edge Pav.			4.9	155.1	
+50			5.2	154.8	
edge Pav.			4.8	155.2	
73 ~~71~~+00			5.1	154.9	
edge Pav.			4.6	155.4	
+78 ~~22~~					8' dirt drive
+50			4.9	155.1	
edge Pav			4.4	155.6	
+34 ~~66~~					Water meter □ 13°
+26 ~~74~~					8' dirt drive
+08 ~~92~~					8' dirt drive
72 ~~22~~+00			4.4	155.6	
edge Pav.			4.1	155.9	
+77 ~~23~~					Water meter □ 13°

		159.98 ~~159.40~~			
71+50 ~~22+50~~			3.8	156.2	
edge pav.			3.7	156.3	
71 ~~23~~+00			3.5	156.5	
edge pav.			3.1	156.9	
+50			3.0	157.0	
edge pav			2.5	157.5	
70 ~~24~~+00			2.4	157.6	
edge pav.			2.1	157.9	
+50			1.7	158.3	
edge pav.			1.5	158.5	
TP			1.54	158.94 ~~158.36~~	
	6.63	165.06 ~~164.99~~			

		165.0 ~~164.99~~				
69 ~~25~~ 100 edge pav.			6.4	158.7		
			6.1	159.0		
55.1 + ~~44.9~~			5.79	159.27		edge 54th St. pav
+50 edge pav			5.8	159.3		
			5.7	159.4		
			9.82	155.24	To Top	Fl. line M.H.
			16.02	149.04	To Fl. L.	N. of Imp. on 54th
			4.88	160.18	To Top	Fl. line M.H.
			11.08	153.98	To Fl. L.	S. of Imp on 54th
+19.1 ~~+80.9~~			5.64	159.42		edge 54th St. pav.
68 ~~26~~ 100 edge pav.			5.6	159.5		
			5.4	159.7		
B.M.			2.98	162.08		Top F.P. S.E. Cor. 54th & Imp.
+50 edge pav.			5.5	159.6		
			5.1	160.0		

					Rt.	℄	Lt.
	165.0 ✓ ~~+64.99~~						
67 ~~27~~+00 edge pav.		5.0	160.1 ✓			-0.2 / 13	
		4.8	160.3 ✓				
+50 edge pav		4.7	160.4 ✓		-3.1 / 13	+0.3 / 5	
		4.6	160.5 ✓				
66 ~~28~~+00 edge pav.		4.4	160.7 ✓		-3.4 / 13	+0.1 / 5	-0.4 / 2
		4.5	160.6 ✓				
+50 edge pav.		4.6	160.5 ✓	2 - 3/4' W.L. from 54th st. to Sta. 30+00	-2.7 / 13	14° +0.5	
		4.4	160.7 ✓			W.L. El. 158.8	
65 ~~29~~+00 edge pav.		4.5	160.6 ✓			0.0 / 13	
		4.2	160.9 ✓				
+50 edge pav.		4.3	160.8 ✓				
		4.1	161.0 ✓				

		165.08 ~~+64.99~~			
TT			4.05	161.08 ~~+60.94~~	
	5.80	166.82 ~~+66.74~~			
61+24 ~~29+76~~					12' dirt drive
61 ~~30~~+00			5.7	161.1	
edge pav			5.6	161.2	
+ 50			5.4	161.4	
edge pav			5.4	161.4	
~~+60~~ 40					12' dirt drive
63 ~~31~~+00			5.2	161.6	
edge pav			5.1	161.7	
+ 50			4.8	162.0	
edge pav.			4.6	162.2	
62 ~~32~~+00			4.3	162.5	8' dirt drive
edge pav.			4.0	162.8	

		166.8 ~~166.74~~			
+50 edge pav			3.7	163.1	
			3.3	163.5	
61 ~~33~~ edge pav			3.1	163.7	
			2.9	163.9	
+50 edge pav.			3.0	163.8	
			3.0	163.8	
TP				164.5	
B.M.			2.27	~~164.47~~	nail in P.P. S.W. Cor. 55th & I MP pole II 878 P
	3.79	168.3 ~~168.26~~			
60 ~~34~~ 6' ~~Rt~~ Lt on pav.			3.8	164.5	
			3.7	164.6	
46 ~~+56~~ 6' ~~Rt~~ Lt on pav	3.6 ~~3.7~~		4.3	164.0	
			4.2	164.1	

		168.3~~8~~ 3 ~~168.26~~				Rt.	℄	Lt.			
59 ~~35~~			4.6	163.7							
6' ~~Rt.~~ Lt. on PAV			4.5	163.8							
+50			5.0	163.3							
6' ~~Rt.~~ Lt. on PAV			4.9	163.4							
58 ~~36~~			5.3	163.0			0.5/11	0.0/5	0.0/2		
6' ~~Rt.~~ Lt. on PAV			5.0	163.3							
+50			5.8	162.5		+2.8/16	+.2/11	0.0/5.0			
6' ~~Rt.~~ Lt. on PAV			5.5	162.8							
57 ~~37~~			7.2	161.1		+1.6/10	+1.6/7	+0.2/5.0			
6' ~~Rt.~~ Lt. on PAV			6.7	161.6							
+50			9.0	159.3		1.6/10	1.6/8	0.0/5			
6' ~~Rt.~~ Lt. on PAV			8.5	159.8							

						Rt.	℄	Lt.		
		168.3~~8~~ 3 ~~168.26~~								
56 ~~58~~			11.1	157.2			-0.3 / 13			
PAV 6' ~~Rt.~~ Lt.			10.7	157.6						
TP			12.34	~~155.99~~ ~~156.02~~ 155.92						
	1.40	157.~~42~~ 39 ~~157.32~~								
+50			1.4	156.0		-2.5 / 8	+0.8 / 2	-0.6 / 2		
6' ~~Rt.~~ on Lt. PAV			2.0	155.4						
55 ~~39~~			3.5	153.9		-4.0 / 8	+0.4 / 2	-0.8 / 2		
6' ~~Rt.~~ Lt. on PAV			4.2	153.2						
+50			6.0	151.4		-2.1 / 8	+0.4 / 2	-0.8 / 1		
6' ~~Rt.~~ on Lt. PAV			6.6	150.8						
54 +05.69 ~~+94.31~~	~~B.C.~~ EC		8.3	149.1		+1.2 / 8	+1.0 / 2	-0.4 / 1		
6' ~~Rt.~~ on Lt. PAV			8.6	148.8						

		157.39 ~~+57.32~~					10.7 10.2 Rt.	℄	10.39 Lt.		
53+50 ~~40+50~~			9.6	147.8			+2.2 / 8	+1.2 / 2			
6' ~~Rt.~~ on Lt. Pav.			9.6	147.8							
+35.16 ~~+64.84~~ Be. ~~E.C.~~			9.8	147.6							
6' ~~Rt.~~ on Lt. Pav			9.7	147.7							
53 ~~41~~			9.4	148.0			-2.2 / 8	+1.2 / 3	-0.7 / 2		
6' ~~Rt.~~ on Lt. Pav.			9.9	147.5							
+50			10.4	147.0			-1.0 / 10	+1.5 / 5			
6' ~~Rt.~~ on Lt. Pav.			10.2	147.2							
+39 ~~+61~~			12.72	144.67		Lt. ~~Rt.~~ Fl. line		℄ 20" Conc. Pipe Culvert			
			13.60	143.~~77~~ 79		Rt. ~~Lt.~~ Fl. line		11.5	36'		
52 ~~42~~			10.7	146.7				0.0 / 8			
6' ~~Rt.~~ on Lt. Pav.			10.2	147.2							

						Rt.	℄	Lt.
		157.39 ~~157.32~~						
TP			10.34	147.05 ~~146.98~~				
	7.42	154.47 ~~154.40~~						
51+50 ~~42+50~~			7.3	147.2		0.0 / 10	+0.9 / 5	
6' ~~Rt.~~ Lt. on Pav.			6.9	147.6				
51 ~~43~~			6.8	147.7		−0.2 / 10	+0.9 / 5	
6' ~~Rt.~~ Lt. on Pav.			6.6	147.9				
+50			6.7	147.8	−2.5 / 27	−1.5 / 16	+0.4 / 11 +0.4 / 2	
6' ~~Rt.~~ Lt. on Pav.			6.5	148.0				
50 ~~44~~			6.6	147.9	In wash	−7.2 / 24	+1.3 / 8 +1.0 / 2	
6' ~~Rt.~~ Lt. on Pav.			6.6	147.9				
+70.8 ~~+29.2~~	EC. ~~BC.~~		7.0	147.5				
6' ~~Rt.~~ Lt. on Pav			6.5	148.0				

		.47 154.~~50~~ ~~154.40~~	✓								
49+50 ~~44+50~~			6.9	147.6	✓	In wash	-5.0 / 16	+1.0 / 6	0.0 / 4.		
6' ~~Rt.~~ Lt. on Pav.			6.3	148.2	✓						
25 ~~+75~~			6.7	147.8	✓						
6' ~~Rt.~~ Lt. on Pav			6.2	148.3	✓						
49 ~~45~~			6.6	147.9	✓	In Wash	-2.0 / 25	+0.7 / 20	+0.7 / 9	-0.2 / 5	
6' ~~Rt.~~ Lt. on Pav			6.1	148.4	✓						
80.13 ~~+19.87~~			6.6	147.9	✓						
6' ~~Rt.~~ Lt. on Pav.			6.1	148.4	✓						
+50			6.4	148.1	✓	In wash	-4.7 / 28	+0.3 / 1.9	+1.1 / 5		
6' ~~Rt.~~ Lt. on Pav			5.9	148.6	✓						
48 ~~46~~			5.8	148.7	✓	In wash	-5.0 / 23		+1.1 / 5		
6' ~~Rt.~~ Lt. on Pav.			5.7	148.8	✓						

		154.~~50~~ .47 ~~154.40~~	✓		
+50			5.7	148.8	✓
6' ~~Rt.~~ Lt. on pav			5.4	149.1	✓
47 ~~4.7~~			5.0	149.5	✓
6' ~~Rt.~~ Lt. on pav.			4.9	149.6	✓
46+50			4.5	150.0	✓
6' ~~Rt.~~ Lt. on pav			4.4	150.1	✓
45+96.4 ~~48+03.6~~	E.C. ~~B.C.~~		3.1	151.4	✓
6' ~~Rt.~~ on Lt. Pav.			3.1	151.4	✓
+50			1.3	153.2	✓
6' ~~Rt.~~ on Lt. Pav.			1.4	153.1	✓
TP		✓	1.18	153.~~32~~ .29 ~~153.22~~	✓
	13.00	166.~~32~~ .29 ~~166.22~~			

50+61.89

Right & Left.

In wash	-3.5/16	+1.0/6	0.0/4
In wash		-3.1/13	0.0/9
		-2.4/16	0.0/4
In wash		-3.5/16	-0.1/9
		-5.0/16	-0.7/13

						Rt.	℄	Lt.
		166.29 ~~166.32~~						
45 ~~49+00~~			11.4	154.9		-8.5 / 21	0.0 / 6	
6' ~~Rt.~~ Lt. on Pav.			11.4	154.9				
+50			9.3	157.0		-12.5 / 19	+0.3 / 6	
6' ~~Rt.~~ Lt. on Pav			9.4	156.9				
44 ~~50~~			7.3	159.0		-12.5 / 25 -6.0 / 19	0.0 / 6	
6' ~~Rt.~~ Lt. on Pav.			7.6	158.7				
+50			6.0	160.3		+1.0 / 25	0.0 / 6	
6' ~~Rt.~~ Lt. on Pav.			6.2	160.1				
+38.11 ~~+61.89~~	BC. ~~E.C.~~		5.8	160.5				
6' ~~Rt.~~ Lt. on Pav.			6.0	160.3				
43 ~~51~~			5.1	161.2				
6' ~~Rt.~~ Lt. on Pav.			5.3	161.0				

						Rt. & Lt.
		166.~~32~~ .29 ~~166.22~~		161.~~97~~ .91 ~~161.84~~		
B.M.		166.~~68~~ .65 ~~166.45~~	4.38			B.M. Nail in N.E. Curb. Merlin & Imp. 161.71 El. 161.71 (Rec.)
	4.74					
42+76 ~~5+24~~			5.1	161.6		Wedge pav. Merlin St.
~~5+41.45~~ +58.55			5.0	161.7		& Merlin St.
			6.11	160.54		To D.M.H. R. side Imp. at Merlin
			11.71	154.94		Fl. line sewer
+50			5.0	161.7		
6' ~~Rt.~~ Lt. on Pav			5.0	161.7		
~~+61~~ 39			5.0	161.7		E. edge pav. Merlin St.
~~+75.38~~ +24.62			5.0	161.7		
6' ~~Rt.~~ Lt. on Pav.			5.0	161.7		
~~5+00~~ 42			5.0	161.7		
6' ~~Rt.~~ Lt. on Pav.			5.0	161.7		

					Rt.	℄	Lt.
		166.65 ~~166.60~~ ~~+166.45~~ ✓					
~~41+50~~ ~~52+50~~ 6' ~~Rt.~~ Lt. on Pav.			4.9	161.8 ✓			
			4.9	161.8 ✓			
41 ~~53~~ 6' ~~Rt.~~ Lt. on Pav.			4.9	161.8 ✓			
			4.8	161.9 ✓			
41+50 6' ~~Rt.~~ Lt. on Pav.			4.9	161.8 ✓	-1.7/12	-0.7/5	0.0/3
			4.8	161.9 ✓			
40 ~~54~~ 6' ~~Rt.~~ Lt. on Pav			5.0	161.7 ✓	2.5/12	-2.5/6	-0.3/3
			4.7	162.0 ✓			
61 +~~39~~			9.50	157.15 ✓	Fl. line Rt side Lt	412" Conc. Culvert ← 7°	
			10.50	156.15 ✓	Fl. line Lt. side Rt.		36 z
+50 6' ~~Rt.~~ Lt. on Pav.			5.0	161.7 ✓			
			4.7	162.0 ✓	-2.6/12	-2.6/6	-0.3/3

		~~166.68~~ .65 ~~166.45~~	✓			Rt.	℄	Lt.		
39 ~~55~~ +00			4.8	161.9 ✓		-2.5 / 6	-0.4 / 3			
6' ~~Rt.~~ on ~~Lt.~~ Pav.			4.5	162.2 ✓						
+50			4.6	162.1 ✓			-1.0 / 8			
6' ~~Rt.~~ on ~~Lt.~~ Pav.			4.3	162.4 ✓						
14.8 + ~~85~~			4.4	162.3 ✓						
6' ~~Rt.~~ on ~~Lt.~~ Pav.			4.2	162.5 ✓						
38 ~~56~~			4.4	162.3 ✓		-1.3 / 10	+0.3 / 7			
6' ~~Rt.~~ on ~~Lt.~~ Pav.			4.2	162.5 ✓						
+50			4.1	162.6 ✓						
6' ~~Rt.~~ on ~~Lt.~~ Pav.			3.9	162.8 ✓						
37 ~~57~~			3.4	163.3 ✓						
6' ~~Rt.~~ on ~~Lt.~~ Pav			3.3	163.4 ✓						

Rt. & Lt.

		166.~~58~~ .65 ~~166.45~~			
36+50 ~~57+50~~			2.7	164.0	
6' ~~Rt.~~ on Lt. Pav.			2.7	164.0	
TP.			2.44	164.~~24~~ .21 ~~164.01~~	
	12.21	176.~~45~~ .42 ~~176.22~~			
36 ~~58~~			11.7	164.7	
6' ~~Rt.~~ on Lt. Pav.			11.7	164.7	
+50			10.9	165.5	
6' ~~Rt.~~ on Lt. Pav.			10.7	165.7	
35 ~~59~~			9.1	167.3	
6' ~~Rt.~~ on Lt. Pav.			8.8	167.6	
+50			8.3	168.1	
6' ~~Rt.~~ on Lt. Pav.			7.7	168.7	

Rt. ℄ Lt.

		176.42 ✓ ~~176.22~~			
34 ~~60~~			6.7	169.7	✓
6' ~~Rt.~~ Lt. on Pav			6.3	170.1	✓
+50			4.7	171.7	✓
6' ~~Rt.~~ Lt. on Pav.			4.7	171.7	✓
23 ~~+77~~					
33+05 ~~60+95~~			3.3	173.1	✓
33 ~~61~~			3.5	172.9	✓
6' ~~Rt.~~ Lt. on Pav.			3.3	173.1	✓
+50			2.5	173.9	✓
6' ~~Rt.~~ Lt. on Pav.			2.0	174.4	✓
32 ~~62~~			1.6	174.8	✓
6' ~~Rt.~~ Lt. on Pav.			0.8	175.6	✓
+50			0.6	175.8	✓
6' ~~Rt.~~ Lt. on Pav.			0.2	176.2	✓

Power pole
Trans. & Arc lite
#70151 O ← 10'

℄ 60th St.

		~~176.45~~ 176.42 ~~176.22~~			
TP			0.39	~~175.83~~ 176.03	
	8.16	~~183.99~~ 184.19 ~~184.22~~			
~~63~~ 31			7.6	176.6	
6' ~~Rt.~~ Lt. on Pav.			7.4	176.8	
~~+44~~ +56					
+50			7.2	177.0	
6' ~~Rt.~~ Lt. on Pav.			6.9	177.3	
~~64~~ 30			6.5	177.7	
6' ~~Rt.~~ Lt. on Pav.			6.4	177.8	
+50			6.2	178.0	
6' ~~Rt.~~ Lt. on Pav			6.0	178.2	
~~65~~ 29			5.8	178.4	
6' ~~Rt.~~ Lt. on Pav			5.5	178.7	

173015 Rt. ℄ Lt

Power Pole
173015 O← 9°

		184.~~22~~ .19 ~~183.99~~	✓				Rt.	℄	Lt.		
28+50 ~~65+50~~			5.3	178.9	✓		-1.3 / 8	+0.2 / 4			
6' ~~Rt.~~ on ~~Lt.~~ Pav.			5.0	179.2	✓						
28 ~~66~~			4.9	179.3	✓		-2.2 / 12	0.0 / 4			
6' ~~Rt.~~ on ~~Lt.~~ Pav.			4.5	179.7	✓						
+96 ~~+04~~						Power Pole #70154		0.9			
+70 ~~+30~~			10.2	174.0	✓	Fl. line R.R. Culvert 60' left. #6.83					
+50			4.5	179.7	✓						
6' ~~Rt.~~ on ~~Lt.~~ Pav.			4.1	180.1	✓						
27 ~~67~~			4.1	180.1	✓		1.5 / 6	0.0 / 3			
6' ~~Rt.~~ on ~~Lt.~~ Pav.			3.6	180.6	✓						
			7.21	176.98	✓	Fl. line R. end.		9.8	34²		
54 ~~+46~~			7.31	176.88	✓	Fl. line L. end.		℄ 20" conc. Pipe culvert			
+50			3.4	180.8	✓		-2.2 / 8	+0.4 / 3			
6' ~~Rt.~~ on ~~Lt.~~ Pav.			3.1	181.1	✓						
26 ~~68~~			3.1	181.1	✓		-2.0 / 5	0.0 / 1			
6' ~~Rt.~~ on ~~Lt.~~ Pav.			2.6	181.6	✓						

		.19 ~~.22~~ 184. ~~183.99~~	✓		
25+50 ~~68+50~~			2.7	181.5	✓
6' ~~Rt.~~ Lt. on PaV.			2.2	182.0	✓
25+40 ~~68+60~~					
25 ~~6.9~~			2.3	181.9	✓
6' ~~Rt.~~ Lt. on PaV.			1.7	182.5	✓
TP			1.80	.39 182. ~~42~~ ~~182.19~~	✓
	12.28	.67 194. ~~70~~ ~~194.47~~			
+50			12.3	182.4	✓
6' ~~Rt.~~ Lt. on PaV			11.7	183.0	✓
24 ~~70~~			11.5	183.2	✓
6' ~~Rt.~~ Lt. on PaV			11.2	183.5	✓
+50			10.5	184.2	✓
6' ~~Rt.~~ Lt. on PaV.			10.5	184.2	✓

$-\frac{2.2}{10}$ $-\frac{2.0}{6}$ $\frac{0.0}{1}$

Power Pole
Arc. lite
~~Ft~~ No. Number
0 & 9°

					Rt. ℄ Lt.
		194.~~70~~ .67 ~~194.97~~			
23+07 ~~70+93~~					Power pole O← 12° # 70156
23 ~~71~~		9.3	185.4		
6' ~~Rt.~~ Lt. on Pav.		9.1	185.6		
+50		7.8	186.9		−3.0 / 12 +0.4 / 4
6' ~~Rt.~~ Lt. on Pav		7.5	187.2		
22 ~~72~~		5.9	188.8		−2.1 / 10 +0.4 / 5
6' ~~Rt.~~ Lt. on Pav		5.6	189.1		
					−1.2 / 10
+50		3.9	190.8		
6' ~~Rt.~~ Lt. on Pav.		3.5	191.2		
21 ~~73~~		1.8	192.9		
6' ~~Rt.~~ Lt. on Pav.		1.2	193.5		
+74 ~~+26~~					Power Pole Prc. Lite O← 12° # 70157
TP		0.59	194.~~11~~ .08 ~~193.08~~		

				194.~~11~~ .08 ~~193.88~~	
	12.39	206.~~50~~ .47 ~~206.27~~			
20+50 ~~73+50~~ 6' ~~Rt.~~ Lt. on Pav.			11.0	195.5	
			10.8	195.7	
+ 28 ~~72~~			10.5	196.0	
20 ~~74~~ 6' ~~Rt.~~ Lt. on Pav.			8.8	197.7	
			8.6	197.9	
+50 6' ~~Rt.~~ Lt. on Pav.			6.6	199.9	
			6.4	200.1	
19 ~~75~~ 6' ~~Rt.~~ Lt. on Pav			4.8	201.7	
			4.6	201.9	
+53 ~~147~~					
+50 6' ~~Rt.~~ Lt. on Pav.			3.5	203.0	
			3.2	203.3	

Rt ℄ Lt.

℄ 62nd St.

Trans. Power Pole

70158

O ← 14°

		206.~~50~~ .47 ~~206.27~~			
18 ~~76~~ 6' ~~Rt.~~ on Lt. Pav.			2.2	204.3 ✓	
			1.9	204.6 ✓	
+50 6' ~~Rt.~~ on Lt. Pav			1.0	205.5 ✓	
			0.8	205.7 ✓	
TP		✓	1.03	205.~~47~~ .44 ~~205.24~~ ✓	
	8.58	214.~~05~~ .02 ~~213.82~~			
17 = 17+36.22 ~~77~~ 6' ~~Rt.~~ on Lt. Pav.	EQUATION See P. 52		7.6	206.4	
			7.6	206.4	

Revised see page 52

+50 6' ~~Rt.~~ on Lt. Pav.			6.8		
			6.7		
+70					
+94			6.4		
78+04 L 6' ~~Rt.~~ on Lt. Pav.			6.1		
			6.0		

Power Pole Arc. lite #70159 O 15°

℄ 63rd st.

		214.05		
+50 6' Rt. on Pav.			5.2	
			5.2	
			1.32	212.73
	0.90	213.63 ~~213.52~~		
79 6' Rt. on Pav.			4.4	
			4.3	
+50 6' Rt. on Pav.			4.6	
+83				
+99				
80 6' Rt. on Pav.			5.0	
			4.9	
+50 6' Rt. on Pav.			5.3	
			5.3	

℄

9.8 edge pav.

B.M. Top F.P. S.E. Cor. Imp. & 63rd St. El. 212.64 (Rec.)

Palm 78+75 12°

10° edge pav.

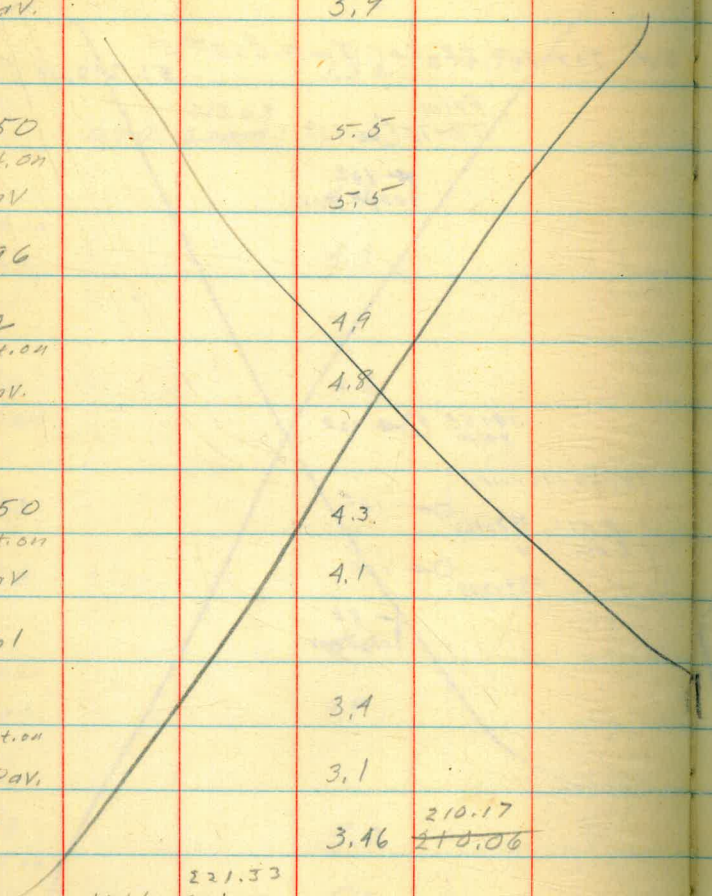
79+55 Palm 12°

Transformer pair #70160 16°

& arc. lite #170398 16°

8.6 edge pav.

		213.63 ~~213.52~~			
81 6' Rt. on Pav.			6.1		
			5.9		
+50 6' Rt. on Pav			5.5		
			5.5		
+96					
82 6' Rt. on Pav.			4.9		
			4.8		
+50 6' Rt. on Pav			4.3		
			4.1		
+61					
83 6' Rt. on Pav.			3.4		
			3.1		
TP			3.46	210.17 ~~210.06~~	
	11.16	221.33 ~~221.22~~			
+46					



℄

9° edge pav.

Power trans. Pole Arc lite #70161 O 15°

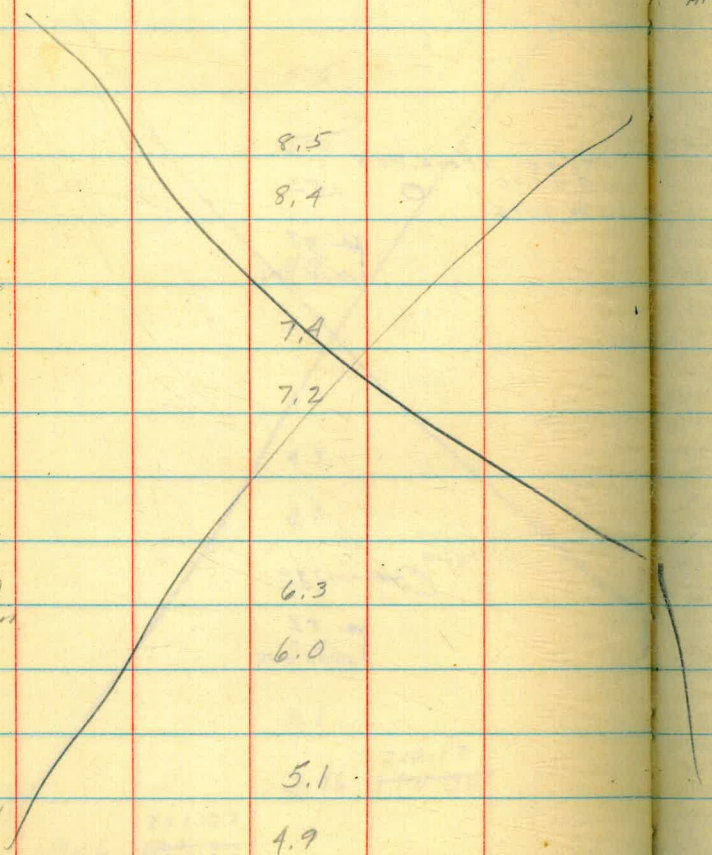
9¹ edge pav.

Palm 13°

9⁸ edge pav.

Palm 13°

		221.33 ~~221.22~~	
+50			9.6
6' Rt. on pav			9.6
+56			
+82			
84			8.5
6' Rt. on pav.			8.4
+30			
+50			7.4
6' Rt. on pav.			7.2
+70			
+85			
85+00			6.3
6' Rt. on pav			6.0
+10			
+50			5.1
6' Rt. on pav.			4.9
+98			



℄

Power Pole Arc lite # 70162 ← 14.5

Palm ← 13°

← 9.4 edge pav.

Palm ← 12°

Palm ← 12°

Power Pole Arc lite # 171821 ← 13.9

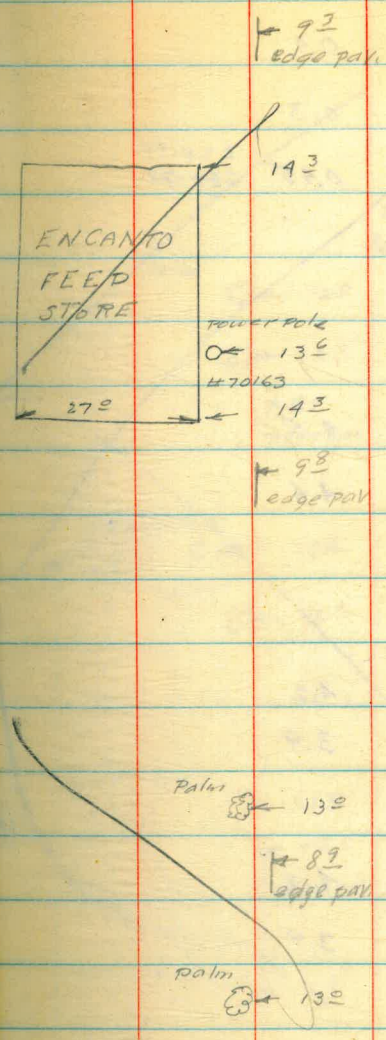
← 9.5 edge pav.

Palm ← 12°

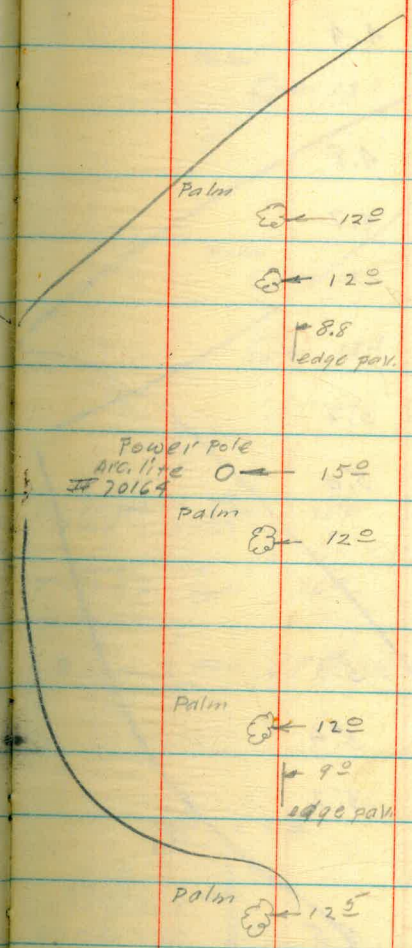
Palm ← 12°

221.33
~~221.22~~

86+00 6' Rt. on Pav.	4.0
	3.7
+15	
+50 6' Rt. on Pav.	2.8
	2.5
+66	
+86.8	
87 6' Rt. on Pav.	2.0
	1.7
+50 6' Rt. on Pav.	1.5
	1.3
+65	
88 6' Rt. on Pav.	1.0
	0.8
+10	

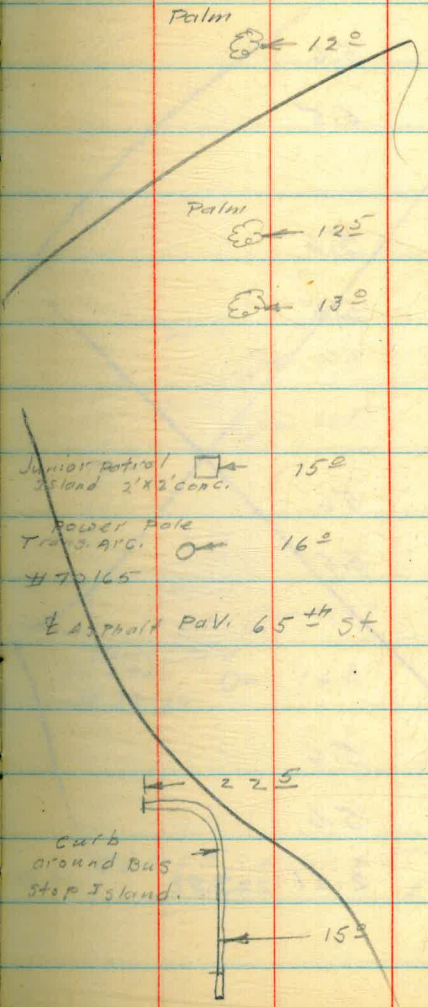


		221.33 ~~221.22~~		
+50 6' Rt. on Pav.			0.4	
			0.3	
TP			0.45	220.88 ~~220.77~~
	5.15	226.03 ~~225.92~~		
+51				
+92				
89 6' Rt. on Pav.			4.5	
			4.4	
+03				
+40				
+50 6' Rt. on Pav.			4.2	
			3.9	
+82				
90+00 6' Rt. on Pav.			4.2	
			3.9	
+23				



226.03
~~225.92~~

+50	4.5
6' Rt. on Pav.	4.4
+63	
91	4.8
6' Rt. on Pav	4.7
+04	
+42	
+50	5.2
6' Rt. on pav.	5.0
+58	
+60	
+83	5.5
92+00	5.4
6' Rt. on pav.	5.2
+01	
+50	5.5
6' Rt. on Pav	5.3
+69	



	226.03 ~~225.92~~	
+71		
+76		
93+00 6' Rt. on Pav.	5.6	5.5
+50 6' Rt. on Pav.	5.6	5.5
+55		
+90		
94+00 6' Rt. on Pav.	5.6	5.5
+25		
+34		
+38 3/ 6' Rt. on Pav.	5.6	5.6
	2.21	223.82

3'X4' conc. Junior Patrol Island — 15°

Power Pole #74150 — 16°

Palm — 13°

Palm — 13°

Palm — 13°

Power Pole Arc lite #70166 — 16°

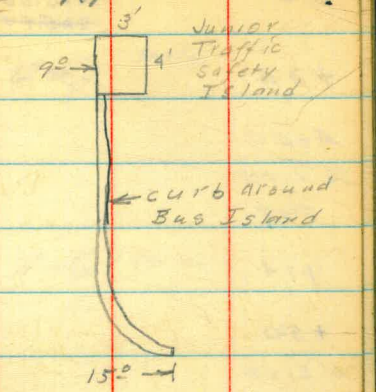
B.M. TOP F.P. S.E. Cor. 65th & Imp. El. 223.76 (Rec.)

PROFILE REVISION 65th to 63rd St 7-12-44 Lt. & Rt.

	2.30	226.06 ~~225.44~~		223.76 ~~223.64~~	B.M. Top F.P. S.E. Cor. 65th & Imp. El. 223.76 (Rec.)		
0+00 6' Left on Pav.			6.1	220.0	Ground over Otay 2nd M.P.		
			5.8	220.3			
+02						10'	Power pole #70166
+12						7'	Palm
+46						7	Palm
+50			6.0	220.1			
6' L. on PAV			5.8	220.3			
+81						7.5	Palm
1+00 6' L. on Pav.			6.0	220.1			
			5.7	220.4			
+50			6.0	220.1			
6' L. on Pav.			5.7	220.4			
+61						10°	Power pole #74150

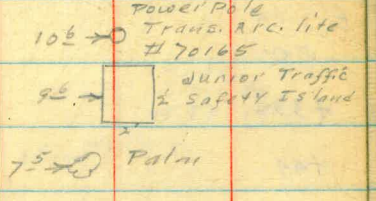
		226.06 ~~225.94~~		
+63.5				
2+00		5.8	220.3	
6' L. on				
Pav.		5.6	220.5	
+35				
		4.79	221.27 ~~221.15~~	
+50		5.8	220.3	
6' L. on				
pav		5.5	220.6	
+53				
+77				
+78.5				
+93				
3+00		5.6	220.5	
6' L. on				
Pav.		5.2	220.9	
+32				
+50		5.0	221.1	
6' L. on				
Pav.		4.8	221.3	

Lt. ℄ Rt



B.P. S.E. Cor. 65th & Imp. El. 221.27 (Rec.)

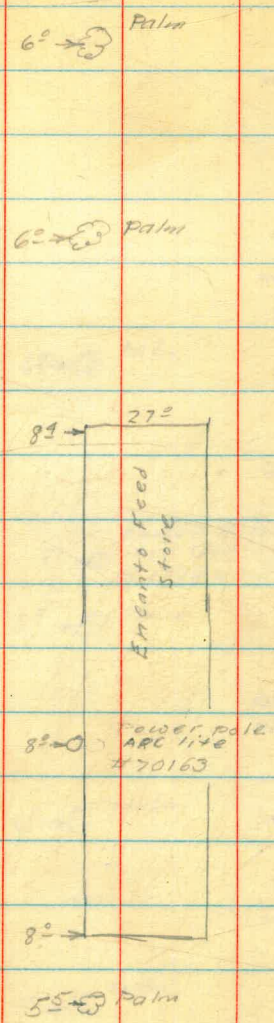
℄ 65th St.



		226.06 ~~225.44~~				Lt.	℄	Rt			
+74									6.8	Palm	
4+00			4.9	221.2							
6' L. on Pav.			4.6	221.5							
+14									7.0	Palm	
+50			4.6	221.5							
6' L. on Pav.			4.2	221.9							
+55									7.0	Palm	
+96									6.5	Palm	
5+00			4.6	221.5							
6' L. on Pav.			4.4	221.7							
+33.5									9.0	Power Pole Arc. Lite #70164	
+44									6.0	Palm	
+50			4.9	221.2							
6' L. on Pav.			4.7	221.4							
+84									6.0	Palm	
6+00			5.6	220.5							
6' L. on Pav.			5.4	220.7							

		226.06 ~~225.71~~		
+26				
+50			6.2	219.9
6' L. on pav.			6.0	220.1
+67				
7+00			6.6	219.5
6' L. on pav.			65	219.6
+49				
TP			7.28	218.78 ~~218.66~~
	1.42	220.20 ~~220.08~~		
+50			1.4	218.8
6' L. on pav.			1.1	219.1
+70				
8+00			2.4	217.8
6' L. on pav.			2.1	218.1
+21				
+38				

Lt. ℄ Rt



		220.20 ~~220.08~~			
+50			3.5	216.7	
6' L. on Pav.			3.2	217.0	
9+00			4.7	215.5	
6' L. on Pav.			4.4	215.8	
+26					
+50			5.8	214.4	
6' L. on Pav.			5.5	214.7	
+51					
+66					
10+00			6.8	213.4	
6' L. on Pav.			6.6	213.6	
+07					
+50			8.0	212.2	
6' L. on Pav.			7.8	212.4	
+53					
+81					

Lt. ℄ Rt.

			6°	Palm	
			8°	Power Pole Arc. lite #171821	
			6°	Palm	
			6°	Palm	
			7°	Palm	
			8.5	Power Pole Arc. lite #70162	

						Lt. & Rt.
		220.20 ~~220.08~~				
+94						6° ~~5°~~ Palm
11+00 6' L. on pav.			9.5	210.7		
			9.2	211.0		
+50 6' L. on pav.			10.7	209.5		
			10.4	209.8		
+75						7° ~~5°~~ Palm
12+00 6' L. on pav.			11.4	208.8		
			11.1	209.1		
+42						O Power Pole Trans. Arc. lite #70161
TP			11.03	209.17 ~~209.05~~		
	4.24	213.41 ~~213.29~~				
12+50 6' L. on pav.			5.1	208.3		
			4.9	208.5		
13+00 6' L. on pav.			5.7	207.7		
			5.5	207.9		
+50 6' L. on pav.			6.1	207.3		
			5.7	207.7		

		213.41 ✓			
14+00			5.1	208.3	✓
6' L. on Pav.			5.0	208.4	✓
+37					
+50			4.9	208.5	✓
6' L. on Pav.			4.7	208.7	✓
+55					
+81					
15+00			4.6	208.8	✓
6' L. on Pav.			4.3	209.1	✓
+50			4.5	208.9	✓
6' L. on Pav.			4.3	209.1	✓
+63					
16+00			5.0	208.4	✓
6' L. on Pav.			5.9	207.5	✓
+32.01 L			5.7	207.7	✓
6' L. on Pav.			5.5	207.9	✓
			0.76	212.65	✓

Lt. ℄ Rt.

9.3 #1703098

Transformer Galley

9.3 #70160

7.5 palm

7.0 palm

B.M. TOP F.R. S.E. Cor. 63rd & Imp. El. 212.62 (Rec.)

	213.41 ✓			
+50 6' Left on Pav.		6.0	207.4 ✓	
		5.7	207.7 ✓	
17+00 6' L. on Pav.		6.5	206.9 ✓	
		6.4	207.0 ✓	
+36.22 = 17+00 6' L. on Pav.		7.0	206.4 ✓	
		6.9	206.5 ✓	

See pg. 44

Profile Alternate Line Churchward to 45th St. on N. side of Imperial

					Left	Right
	1.23	186.39 ~~186.32~~		185.16 ~~185.09~~	B.M. nail in Tel. Pole Churchman & Imp.	N.W. Cor. El. 185.09 (Rec.)
92+15	B.C.		2.4	184.0		
edge pav.			2.3	184.1		
+50			2.4	184.0		
edge pav.			2.2	184.2		
+86						3'→O Tel. Pole # D11651T
93+00			2.5	183.9		
edge pav.			2.5	183.9		
+50			3.1	183.3		
edge pav.			3.1	183.3		
+75						3'→O Tel. Pole # 300530
94+60			4.6	181.8		
edge pav.			4.2	182.2		
+43	E.C.		5.9	180.5		
edge pav.			5.3	181.1		

						Lt.	℄	Rt.
		186.39 ~~186.32~~						
+50			6.0	180.4				
edge pav.			5.6	180.8				
+78								7° ○ Tel pole #83955H
95+00			7.3	179.1				
edge pav.			6.6	179.8				
+50			8.5	177.9				
edge pav.			7.8	178.6				
+59			8.6	177.8	℄ 50th st.			
96+00			9.7	176.7				
edge pav.			9.4	177.0				
+28								6.5' ○ Tel. pole D11198T
+50			11.5	174.9				
edge pav.			11.0	175.4				
97+00			13.0	173.4				
edge pav.			12.9	173.5				
+06								8' dirt drive
+17								8° □ water meter

		186.39 ~~186.32~~		
+24				
+33				
TP			12.91	173.48 ~~173.41~~
	1.24	174.72 ~~174.65~~		
+50			3.6	171.1
edge pav.			3.2	171.5
+56				
+73				
+78				
+85				
+94				
98+00			5.8	168.9
edge pav.			5.5	169.2
+01				
+50			8.3	166.4
edge pav.			7.8	166.9

Lt.	℄	Rt.
		8' dirt drive
		7° →
		8° →
		7° □ water meter
		6³ tree
		6² O Power Pole # D11197T
		8' paved drive
		5¹ →
		6⁵ → □ Meter

						Lt.	℄	Rt.
		174.72 ~~174.65~~						
99+00 edge			10.6	164.1				
pav			10.1	164.6				
+26								65 tel. Pole # 84280 H
+50			12.8	161.9				
edge pav.			12.4	162.3 ✓				
TP			13.04	161.68 ~~161.61~~				
	1.00	162.68 ~~162.61~~						
100+00			2.7	160.0				
edge pav.			2.6	160.1				
+06.5			3.5	159.2		℄ Ozark St.		
+25								7 water meter
+50			5.6	157.1				
edge pav.			5.0	157.7				
+76								6 tel. Pole # D11195T
101+00			7.6	155.1				
edge pav.			7.1	155.6				
+47								5.5 conc. drive

		162.68 ~~162.61~~			
101+50			9.5	153.2	
edge pav.			9.2	153.5	
+70					7º → conc. Drive
102+00			11.1	151.6	
edge pav.			11.0	151.7	
+02					11º → □ water meter
+27					8º → tel. Pole #011194 T
+50			12.9	149.8	
edge pav.			12.5	150.2	
TP			13.09	149.59 ~~149.54~~	
	0.92	150.51 ~~150.44~~			
103+00			1.8	148.7	
edge pav.			1.6	148.9	
+36			2.7	147.8	℄ 14th St.
+50			3.0	147.5	
edge pav.			2.9	147.6	
+76					6º → tel. pole #84295 H

		150.51 ~~+50.44~~				Lt.	℄	Rt.		C5
104+00 edge			4.1	146.4						
Pav.			3.9	146.6						
+50			4.7	145.8						
edge										
Pav.			4.7	145.8						
105			5.4	145.1						
edge										
Pav.			5.3	145.2						
+24							6.5 → O	tel. pole # D11192T		
+50			6.1	144.4						
edge										
Pav.			5.9	144.6						
106			6.4	144.1						
edge										
Pav.			6.5	144.0						
+50			6.6	143.9						
edge										
Pav.			6.8	143.7						
+77							6.2 → O	tel. pole # D11191T		
107			7.1	143.4						
edge										
Pav.			6.9	143.6						

						Lt.	℄	Rt.
		150.51 ~~150.44~~						
107+50			7.3	143.2				
edge pav.			7.1	143.4				
108			7.4	143.1				
edge pav.			7.3	143.2				
TP			~~7.38~~	143.13 ~~143.06~~				
	1.07	144.20 ~~144.13~~						
+27								5^{6} ⊸ tel. pole # 307330 H
+50			1.9	142.3				
edge pav.			1.4	142.8				
109			2.9	141.3				
edge pav.			2.5	141.7				
+50			4.6	139.6				
edge pav.			4.0	140.2				
+79								5^{3} ⊸ tel. pole # 84292 H
110			6.1	138.1				
edge pav.			5.7	138.5				
+16			6.6	137.6	℄ 48th St.			

						Lt.	℄	Rt.
		144.20 ~~144.13~~						
+50 edge Pav.			7.7	136.5				
			7.4	136.8				
+57							6º □ water meter	
+83							4º ⊞ conc. steps	
111 edge Pav.			9.7	134.5				
			9.4	134.8				
+02							℄ 8' dirt Drive	
+14							4º □ water meter	
+28							6º → O tel. pole #307329H	
+50 edge Pav.			11.3	132.9				
			11.4	132.8				
TP			13.07	131.13 ~~131.06~~				
	030	131.43 ~~131.36~~						
112 edge Pav.			0.3	131.1				
			0.7	130.7				
+50 edge Pav			1.7	129.7				
			2.7	128.7				

		131.43 ~~131.36~~				Lt.	℄	Rt.		
+60									2.5 □ Meter	
+77									conc. Drive	
+85									5° ⊗ tel. Pole # 307328 H	
113			5.2	126.2						
edge pav.			5.0	126.4						
+32									℄ 8' dirt Drive	
+50			7.2	124.2						
edge pav.			7.5	123.9						
+92									6° ○ tel. Pole # D11185T	
114			9.8	121.6						
edge pav			9.8	121.6						
+23			11.1	120.3	℄ ESCUELA ST.					
+50			12.3	119.1						
edge pav			12.0	119.4						
+89									7° ⊗ tree	
TP			13.09	118.34 ~~118.27~~						
	0.96	119.30 ~~119.23~~								

						Lt.	℄	Rt
		119.30 ~~119.23~~						
115			2.0	117.3				
edge pav.			1.8	117.5				
+21								7° tree
+50			3.6	115.7				
edge pav.			3.4	115.9				
+51								4° O tel. pole # D 11184 T
+68								℄ 8' drive (dirt)
+72								4° □ watermeter
+85								8° tree
116.			5.0	114.3				
edge pav.			4.9	114.4				
+25						Begin service Sta. & Gro. OPENING		
+45						Filler for Buried gas tank 550 Gal.		9°
+50			6.4	112.9				
edge pav.			6.3	113.0				
+53						Gas Island		14°
+62						Filler for Buried Gas. Tank 550 Gal.		8°
+63						Gas Island		

						Lt.	℄	Rt.	70
		119.30 ~~119.23~~							
+78						8" water main		15⁵ → 8" gate	
+87.5			7.4	111.9		℄ 47th St. Conc. Paved.			
117			7.8	111.5					
edge pav.			7.8	111.5					
			7.11	112.19 ~~112.12~~		B.P. S.E. Cor. 47th ℄ Imp. El. 112.23			
+13								6° ○ tel. pole # 432796 H	
+50			9.8	109.5					
edge pav			9.4	109.9					
118			11.4	107.9					
edge pav.			11.0	108.3					
+30								5° ○ tel. pole # 11827	
+50			12.7	106.6					
edge pav.			12.6	106.7					
TP			~~13.08~~	106.22 ~~106.15~~					
	1.12	107.34 ~~107.27~~							
+90								15° → tree	

						Lt.	℄	Rt.
		107.34 ~~107.27~~						
119 edge			2.5	104.8				
PaV.			2.2	105.1				
+11							14° → ⊗	Tree
+50			4.2	103.1				
edge PaV			3.7	103.6				
+65							15° ⊗	tree
+80							6° ○	tel. pole #306151
120			5.5	101.8				
edge PaV			5.2	102.1				
+23			6.2	101.1				
+50			6.7	100.6				
edge PaV.			6.5	100.8				
+90							15° ⊗	
121			11.9	95.4			⊗	6 trees in all +90 to +65
edge PaV.			7.8	99.5				
+31							5° ○	tel. pole #414520
							⊗	

		107.34 ~~107.27~~				Lt.	℄	Rt.		
121+50			9.4	97.9						6 trees in all +90 to +65
edge pav.			9.2	98.1						
+65								15°		
								℄ dirt alley		
+70										
122			11.0	96.3						
edge pav			10.7	96.6						
+50			13.0	94.3						
edge pav			12.7	94.6						
+65								6° → □ W. meter		
+80								5.5 → ○ tel. pole # 306153 H		
TP			12.92	94.42 ~~94.35~~						
	1.93	96.35 ~~96.28~~								
123			3.9	92.5						
edge pav.			3.8	92.6						
+29.9						℄ 46th St.				
+44.5								14°	□ □ 2 W. meters	

						Lt	℄	Rt.	73
		96.35 ~~96.28~~							
123+50			6.8	89.6					
edge pav.			6.4	90.0					
+70								15 □ water meter	
124			9.6	86.8					
edge pav			9.3	87.1					
+30								6° O tel. Pole # 306154 H	
+50			12.1	84.3					
edge pav.			12.2	84.2					
TP			13.00	83.35 ✓ ~~83.28~~					
	0.08	83.43 ✓ ~~83.36~~							
125			2.7	80.7					
edge pav.			2.4	81.0					
+50			5.9	77.5					
edge pav			5.4	78.0					
+71								5.8 O tel. Pole # 306155 H	
126			8.8	74.6					
edge pav			8.3	75.1					

						Lt.	℄	Rt.	74
		83.43 ~~83.36~~							
126+50 edge			11.4	72.0					
PAV			11.2	72.2					
TP			~~12.99~~	70.49 ~~70.37~~					
	0.95	71.39 ~~71.32~~							
+92							5.6	Power stub Guy #P173876	
127 edge			1.7	69.7					
PAV			1.7	69.7					
+10							6.2	tree	
+22							6.4		
+28							6.8	tree	
+44.5							6.4	tree	
+50			4.0	67.4					
edge PAV			4.0	67.4					
+58							6.6	tree	
+69							6.8	W. meter	
+74							6.2	tree	

						Lt.	℄	Rt.
		71.39 ✓ ~~71.32~~						
128 edge pav.			6.6	64.8				
			6.2	65.2				28' dirt drive
+21								
+50 edge pav.			8.2	63.2				
			8.3	63.1				
+76.3								7" O tel. Pole #306156 H
129 edge pav.			9.6	61.8				
			9.9	61.5				
+50 edge pav.			10.7	60.7				
			11.1	60.3				
130 edge pav.			11.7	59.7				
			11.6	59.8				
+06.85			11.7	59.7				℄ 45th St on top conc. sewer box
			11.56	59.83				S. Edge M.H. Ring Sewer
+10.8			25.16	46.23				F.L.
+15.6			11.7	59.7				on grnd. over Bonita P.L.
BM. TP			9.48	61.91 ✓ ~~61.84~~				depth of P.L. 4.6 (P.F.) Nail in tel. pole # 448271 L N.W. Cor. 45th & Imp.
	9.45	71.36 ✓ ~~71.29~~						

						Lt.	℄	Rt.
		71.36 ~~71.29~~						
			0.69	70.67 ~~70.60~~				
	12.76	83.43 ~~83.36~~						
			0.13	83.30 ~~83.23~~				
	12.32	95.62 ~~95.55~~						
			0.54	95.08 ~~95.01~~				
	11.79	106.87 ~~106.80~~						
			0.55	106.32 ~~106.25~~				
	8.25	114.57 ~~114.50~~						
			2.41	112.16 ~~112.09~~				

B.P. S.E. Cor Imp & 47th El. 112.23

Levels Imperial Ave 1-13-44

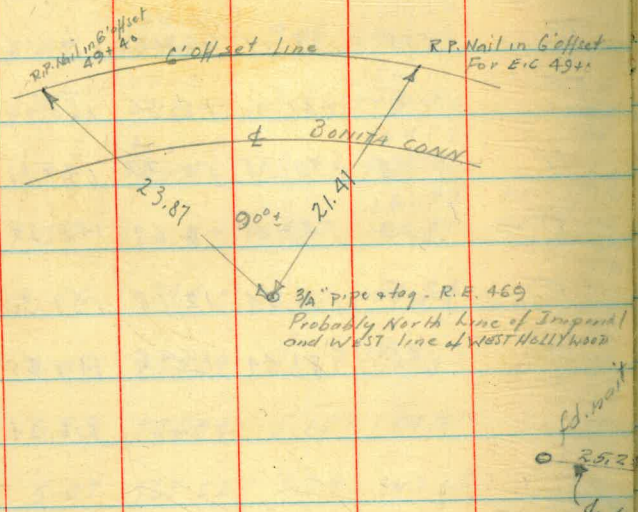
63rd to 47th St.

B.M.	0.95	213.12 ~~212.98~~		212.67 ~~212.52~~	Top F.P. S.E. Cor. 63rd & Imp
TP	0.92	203.49 ~~203.35~~	10.55	202.57 ~~202.43~~	
TP	0.60	191.11 ~~190.97~~	12.98	190.51 ~~190.37~~	
TP	2.54	184.16 ~~184.02~~	9.49	181.62 ~~181.48~~	
TP	1.57	178.27 ~~178.13~~	7.46	176.70 ~~176.56~~	
TP	0.96	166.80 ~~166.66~~	12.43	165.84 ~~165.70~~	
TP BM	1.56	163.49	4.87	161.93 ~~161.79~~	Nail N.E. Cor. Merlin St.
TP	3.56	159.40	12.65	150.84	
TP	7.96	155.09	7.27	147.13	
TP	11.53	166.44	0.18	154.91	
TP	5.07	168.22	3.29	163.15	
B.M.			3.65	164.57	Nail in Pole #878P S.W. Cor. 55th St.
TP	4.54	165.44	7.32	160.90	
TP B.M.	0.07	162.16	3.35	162.09	Top F.P. S.E. Cor. 54 & Imp.
TP B.M.	5.67	163.02	4.81	157.35	Top F.P. S.E. Cor. 53rd & Imp.
TP B.M.	6.17	164.57	4.62	158.40	Top F.P. S.E. Cor. 52nd & Imp.
TP	11.34	175.77	0.14	164.43	
		175.77			
	12.92	187.53	1.16	174.61	
B.M.			7.60	179.93	F.P. S.E. Cor. Euclid & Imp.
TP B.M.	0.13	185.29	2.37	185.16	
TP	0.95	173.31	12.93	172.36	
TP	1.15	161.90	12.56	160.75	
TP	0.94	150.05	12.79	149.11	
TP	0.30	143.68	6.67	143.38	
TP	0.04	131.54	12.18	131.50	
TP	1.86	121.44	11.96	119.68	
			9.20	112.24	B.P. S.E. Cor. 47th St. El. 112.23

Byler
King
Otten
Stephens

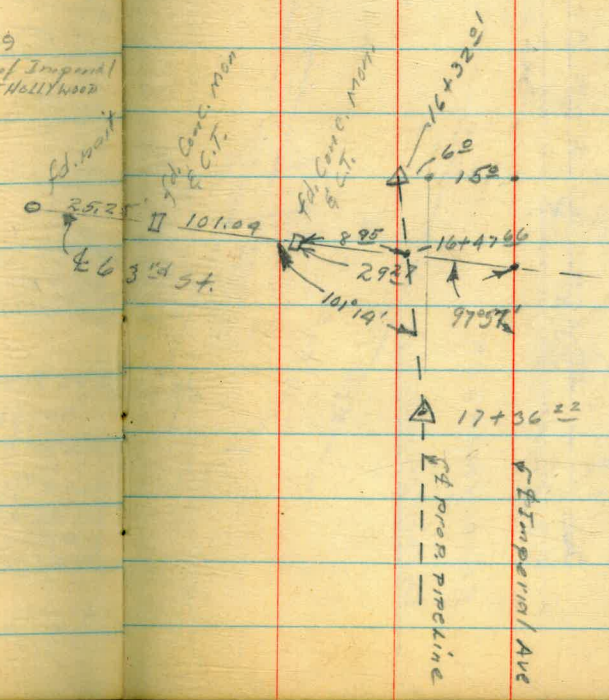
R.P.'s For PROP. COR.

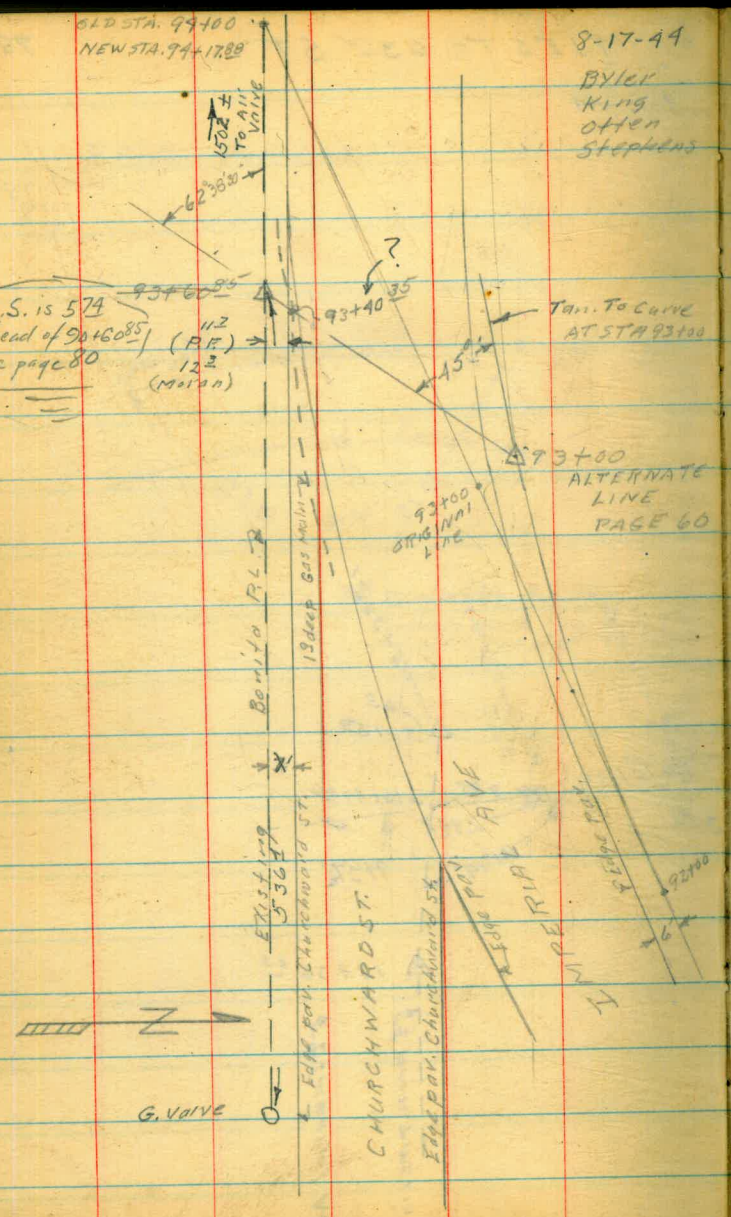
Sept. 1, 1945
Soper
King
Phillips



TIES TO 63rd ST

8-2-44





8-17-44

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Stephens

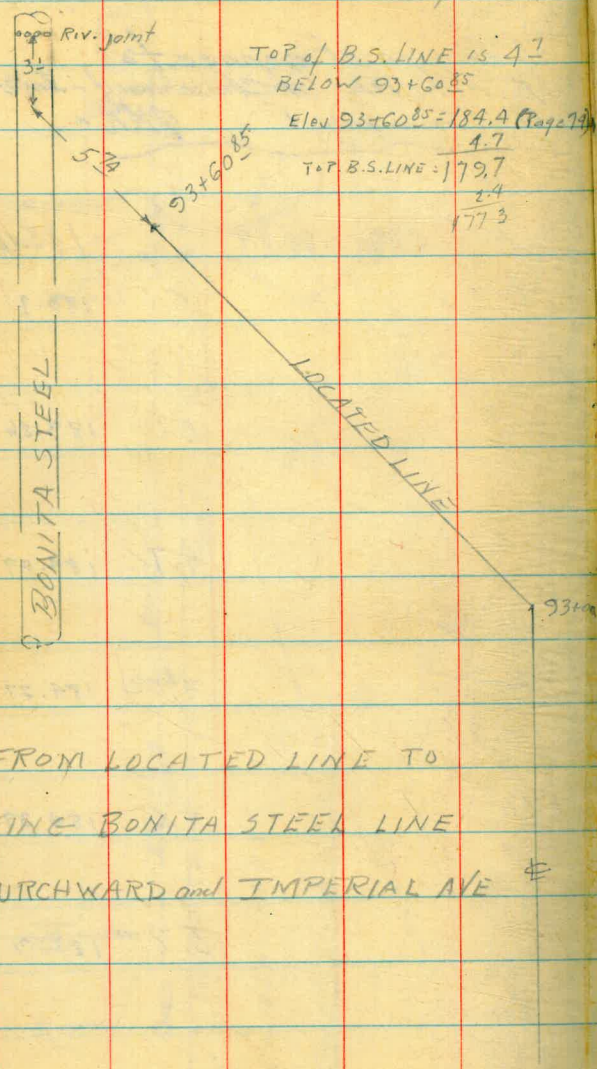
Profile & ALIGNMENT ALTERNATE LINE IMPERIAL P.L. AT Churchward

Revision of connec. to Bonita PL. at Churchward & Imperial. from page 1 MK.

	3.83	188.99		185.16	B.M. Nail in pole N. side Churchward & Imperial
93+00			5.1	183.9	
+08			5.13	183.86	edge pav.
+50			4.7	184.29	
+52.65					
+57			4.72	184.27	edge pav
+60.85			4.6	184.39	
94			5.7	183.3	

Bonita Connec

Aug 4 1945
Soper
King
Phillips



TOP of B.S. LINE is 4.7
BELOW 93+60.85

Elev 93+60.85 = 184.4 (Page 74)
4.7
TOP B.S. LINE = 179.7
2.4
177.3

TIES FROM LOCATED LINE TO
EXISTING BONITA STEEL LINE
AT CHURCHWARD and IMPERIAL AVE

B.M. Pole N. side Imperial at Churchward intersec. el. 18.09

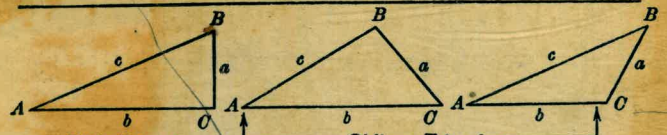
B.M. Nail in L.P. in curb N.E. Cor Merlin & IMPERIAL El. 16.71

B.M. Top F.P. S.E. Cor. 63rd & IMPERIAL El. 212.62

B.M. Top F.P. S.E. Cor. 65th & IMPERIAL El. 223.64

Please Return to
City of San Diego Water Dept.
Room 268 Civic Center
Telephone Main 5161

TRIGONOMETRIC FORMULÆ



Right Triangle — Oblique Triangles

Solution of Right Triangles

For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{b}$, $\operatorname{cosec} = \frac{c}{a}$

Given	Required	
a, b	A, B, c	$\tan A = \frac{a}{b} = \cot B,\ c = \sqrt{a^2+b^2} = a\sqrt{1+\frac{b^2}{a^2}}$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B,\ b = \sqrt{(c+a)(c-a)} = c\sqrt{1-\frac{a^2}{c^2}}$
A, a	B, b, c	$B = 90° - A,\ b = a \cot A,\ c = \frac{a}{\sin A}.$
A, b	B, a, c	$B = 90° - A,\ a = b \tan A,\ c = \frac{b}{\cos A}.$
A, c	B, a, b	$B = 90° - A,\ a = c \sin A,\ b = c \cos A,$

Solution of Oblique Triangles

Given	Required	
A, B, a	b, c, C	$b = \frac{a \sin B}{\sin A},\ C = 180° - (A+B),\ c = \frac{a \sin C}{\sin A}$
A, a, b	B, c, C	$\sin B = \frac{b \sin A}{a},\ C = 180° - (A+B),\ c = \frac{a \sin C}{\sin A}$
a, b, C	A, B, c	$A+B = 180° - C,\ \tan \frac{1}{2}(A-B) = \frac{(a-b)\tan\frac{1}{2}(A+B)}{a+b},$ $c = \frac{a \sin C}{\sin A}$
a, b, c	A, B, C	$s = \frac{a+b+c}{2},\ \sin\frac{1}{2}A = \sqrt{\frac{(s-b)(s-c)}{bc}},$ $\sin\frac{1}{2}B = \sqrt{\frac{(s-a)(s-c)}{ac}},\ C = 180° - (A+B)$
a, b, c	Area	$s = \frac{a+b+c}{2},\ \text{area} = \sqrt{s(s-a)(s-b)(s-c)}$
A, b, c	Area	$\text{area} = \frac{b\,c \sin A}{2}$
A, B, C, a	Area	$\text{area} = \frac{a^2 \sin B \sin C}{2 \sin A}$

REDUCTION TO HORIZONTAL

Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = 5° 10′. From Table, Page IX. cos 5° 10′ = .9959. Horizontal distance = 319.4 × .9959 = 318.09 ft. Horizontal distance also = Slope distance minus slope distance times (1 − cosine of vertical angle). With the same figures as in the preceding example, the following result is obtained. Cosine 5° 10′ = .9959. 1 − .9959 = .0041. 319.4 × .0041 = 1.31. 319.4 − 1.31 = 318.09 ft.

When the rise is known, the horizontal distance is approximately:—the slope distance less the square of the rise divided by twice the slope distance. Thus: rise = 14 ft., slope distance = 302.6 ft. Horizontal distance $= 302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$ ft.

MADE IN U. S. A.