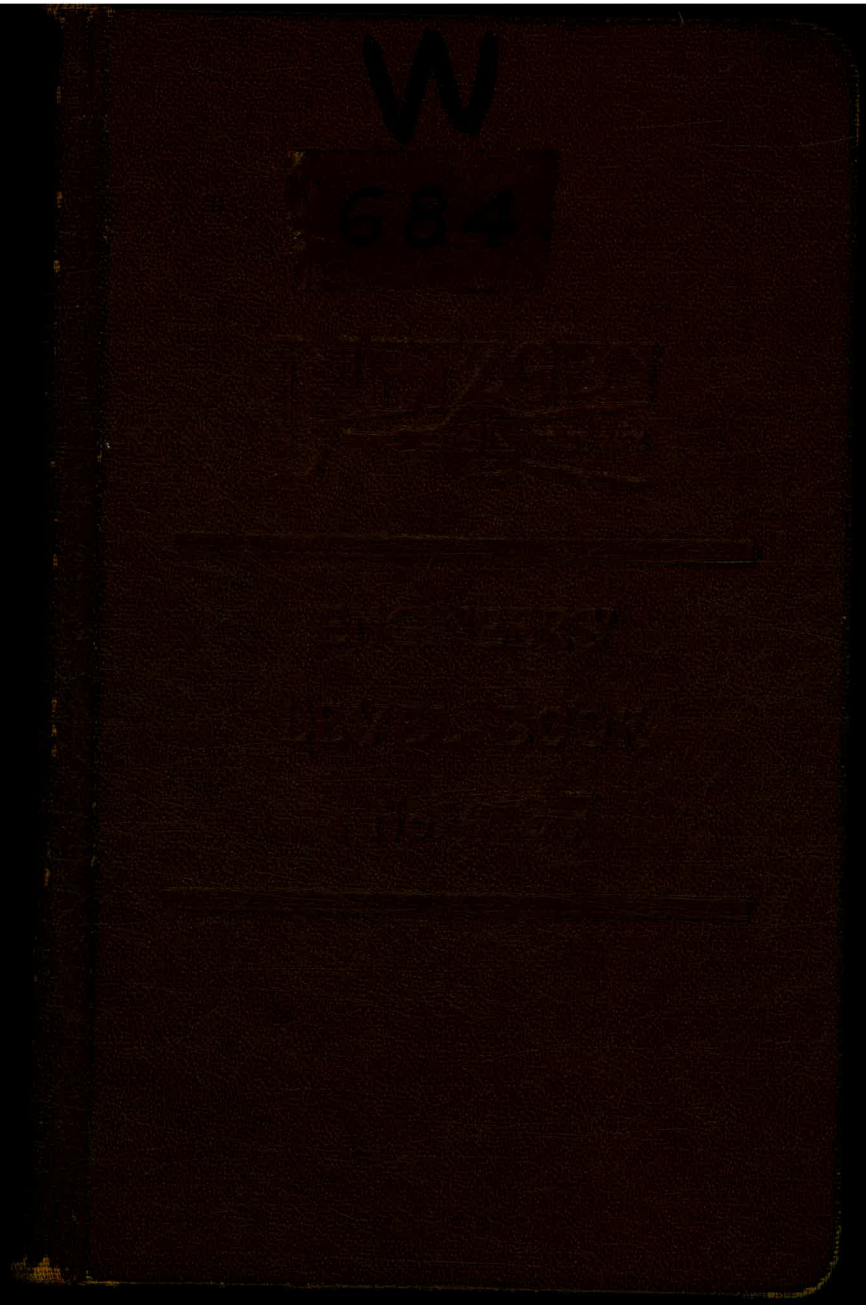

W
684

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1.

For Single Track Embankment.

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

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be 30.6+(20—16)÷2 or 2 ft. added to 30.6 =32.6. For slopes of 1 on 1½ see inside of back cover.

684

77+55 - 3/4" WATER - 1.4 deep

77+56½ 1"90s - 1.2 deep

THORN ST. PIPELINE CONSTRUCTION

BONITA CONNECTION

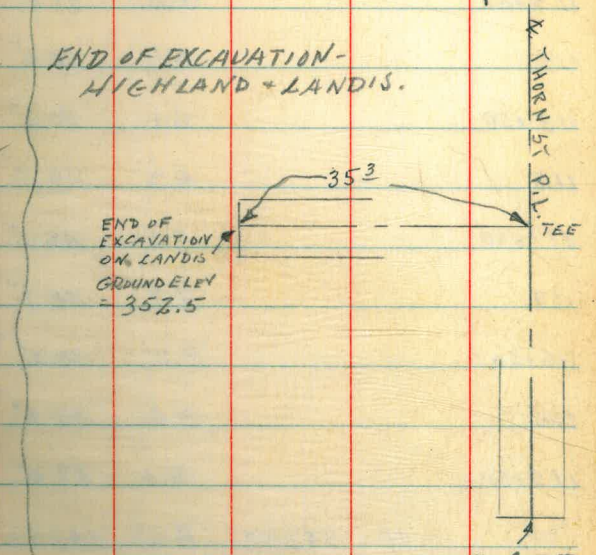
Profile of offsets - grades and cuts - Thorn St. P.I.

B.M	2.92	356.45		353.53	
121+75 5 8' off to East			3.5	352.9	346.40
8' off to east 121+46 5					
2' offset N.E. Cor. of Valve chamber			3.35	353.10	
2' offset N.W. Cor. V.Ch.			3.12	353.33	
2' offset S.W Cor. V.Ch.			3.17	353.28	
2' offset S.E Cor. V.Ch.			3.50	352.95	
8' off to east 121+00			4.1	352.3	346.40
120+50			4.5	351.9	345.90

May 25 1945 1
Soper - notes
King & Stephens - rod

DEC. 5, 1945
SOPER
WARD
PHILLIPS

END OF EXCAVATION - HIGHLAND + LANDIS.



	BM	4.31	357.84		353.53
	121+82 4 ℄			4.8	353.0
6.5					
5.9	ON STUB - LANDIS			5.3	352.5
6.0					

		356.45				
120			5.0	351.4	345.40	6.0
119+50			5.4	51.0	344.90	6.1
119			5.8	50.6	344.40	6.2
118+50			6.1	50.3	343.90	6.4
118			6.9	49.5	343.40	6.1
117+50			7.3	49.1	342.90	6.2
117			7.7	48.7	342.40	6.3
116+50			8.2	48.2	341.90	6.3
116			8.6	47.8	341.40	6.4
115+50 x			9.0	47.4	340.90	6.5
TP	0.40	347.92	8.93	347.52		
115			0.9	347.0	339.36	7.6
114+75 x			1.2	46.7	338.60	8.1
+50			1.3	46.6	338.60	8.0
114			1.9	46.0	338.60	7.4
113+50			2.7	45.2	338.60	6.6
113+25 x			3.1	44.8	338.60	6.2

347.92

113	3.6	344.3	338.18	6.1
112+50	4.4	43.5	337.36	6.1
112	5.1	42.8	336.53	6.3
111+50	6.1	41.8	335.71	6.1
111	6.8	41.1	334.89	6.2
110+50	7.7	40.2	334.07	6.1
110	8.4	39.5	333.24	6.3
109+50	9.3	38.6	332.42	6.2
109 X	10.0	37.9	331.60	6.3
108+50	11.0	36.9	330.57	6.3
8' off to east				
108+07.22 △ X	11.6	36.3	329.70	6.6
			Rec. elev	
ck on B.M.	11.18	336.74	336.72	

B.M.	0.71	322.22		321.51		B.P.N.W. Cor. 41st + Myrtle
82+00	x		0.9	321.3	313.80	7.5
+50			1.4	20.8	313.80	7.0
83	x		1.6	20.6	313.80	6.8
+25	x		1.4	20.8	313.40	7.4
+50			2.3	19.9	312.55	7.3
+90	x		3.9	18.3	310.8 311.20	7.5 7.1 These grades changed to conform to Contractors work sheet
84+25			5.2	17.0	308.26	8.7
+60	x		7.4	14.8	305.30	9.5
85			9.1	13.1	305.30	7.8
+25	x		9.9	12.3	305.30	7.0
+75			11.2	11.0	304.05	6.9
86+25	x		12.6	309.6	303.0 ~~302.80~~	6.6 6.8
TT	12.12	321.74	12.60	309.62		
86+50			11.9	309.8	302.80	7.0
87	x		11.5	10.2	303.2 ~~302.80~~	7.0 7.4
+50			10.0	11.7	304.93	6.8

		321.74				
87+75	x		9.2	312.5	305.7 ~~306.00~~	6.8 ~~6.5~~
88+00	x		8.2	13.5	306.2 ~~306.40~~	7.3 ~~7.1~~
+50	x		6.1	15.6	306.8 306.40	8.8 ~~9.2~~
89	x		3.8	17.9	309.8 ~~310.60~~	8.1 ~~7.3~~
+25	x		3.4	18.3	311.2 ~~311.80~~	7.1 ~~6.5~~
+75	x		1.1	20.6	313.50	7.1
90	x		0.9	20.8	314.00	6.8
+50			0.5	21.2	314.13	7.1
IP.		8.98 330.42	0.30	321.44		
90+75	x		8.4	322.0	314.20	7.8
91			8.5	21.9	314.60	7.3
+50	x		7.8	22.6	315.40	7.2
92			7.0	23.4	315.53	7.9
+25	x		7.1	23.3	315.60	7.7
+75	x		5.9	24.5	317.30	7.2
93			5.6	24.8	317.70	7.1
+50			4.8	25.6	318.50	7.1
+75	x		4.4	26.0	318.90	7.1

		330.42				
					Rec.	
Ck. on B.M.			4.34	326.08	326.12	B.P.N.W. Cor Myrtle + VanDyke
94+00			4.5	325.9	318.90	7.0
+50			4.4	26.0	318.90	7.1
+75	x		4.6	25.8	318.90	6.9
95			4.8	25.6	318.70	6.9
+25	x		5.0	25.4	318.50	6.9
+50			5.3	25.1	317.77	7.3
96+00	x		5.8	24.6	316.30	8.3
+50			7.0	23.4	315.50	7.9
+75	x		7.9	22.5	315.10	7.4
97			8.7	21.7	314.27	7.4
TP	8.68	329.72	9.38	321.04		
97+50	x		10.2	319.5	312.60	6.9
97+75	x		10.7	19.0	312.20	6.8 June 9 - Grades changed to conform to layout sheets
98+25	x		10.8	18.9	312.5 ~~312.20~~ 312.8 ~~313.1~~	6.4 6.7 7.1 7.4 June 12 - Grade lowered to clear sewer line
+50			9.2	20.5	313.10 313.5 ~~314.6~~	7.4 8.9 7.8
99	x		7.3	22.4	314.90 313.7 ~~314.90~~	7.5 10.5 9.3
+50			5.5	24.2	314.90	9.3

		329.72				
99+70	x			4.7	325.0	314.5 315.5 314.90
100				2.4	27.3	316.6 317.6 317.60
100+50	x			0.1	29.6	320.8 321.8 322.40
TP				0.13	329.59	
		6.95	336.54			
100+75	x			5.8	330.7	322.7 323.3 323.40
101	x			4.7	31.8	323.9 324.30
+25	x			4.5	32.0	324.5 324.80
+50				4.2	32.3	324.80
102				3.7	32.8	324.80
+50				3.9	32.6	324.80
103	x			3.7	32.8	324.80
+50				3.5	33.0	325.60
104	x			3.2	33.3	326.40
+50				3.3	33.2	326.40
105	x			3.0	33.5	326.40
TP		6.31	339.61	3.24	333.30	
105+50				5.4	334.2	327.00

10.5 9.5 10.1 10.7 9.7 9.7 8.8 7.8 7.5

On x - 100+50

8.0 9.4 7.3 7.9 7.5 7.5 7.2 7.5 8.0 7.8 8.0 7.4 6.9 6.8 7.1 7.2

339.61

106		4.9	334.7	327.60	7.1
+25		5.0	34.6	328.70	5.9
+50		4.7	34.9	328.70	6.2
107		4.3	35.3	328.70	6.6
+50		3.4	36.2	329.17	7.0
108		3.0	36.6	329.63	7.0
ck on B.M.		2.92	336.69	Rec. 336.72	B.P. N.W. Cor. Highland & Myrtle

B.M.	3.86	325.37		321.51	
TP	1.48	320.50 / 330.50	6.35	319.02 / 329.02	
Set B.M	12.57	321.30 / 331.30	11.77	308.73 / 318.73	
72+00			8.1	313.2	302.98
450 x			7.3	314.0	304.10
73			6.6	314.7	304.10
+30 x			7.4	313.9	304.8 / 304.10
+50			7.1	314.2	305.7 / 305.30
74			5.5	315.8	308.1 / 308.30
+25 x			4.7	316.6	309.3 / 309.80
+50 x			4.0	317.3	309.9 / 310.20
75			3.1	318.2	310.20
+50			2.9	318.4	310.20
76			2.6	318.7	310.20
+50 x			2.31	319.0	310.20
TP	5.81	325.10 / 335.10	2.01	319.29 / 329.29	
76+80			5.9	319.2	310.20 / 309.90

B.P.N.W. Cor 41st + Myrtle

Nail in power pole - 39th + Myrtle

10.2 12' OFFSET

9.9 11' OFFSET

10.6

9.1
9.8 Changed to conform to layout sheets

8.5

7.7

7.3

7.4

8.0

8.2

8.5

8.8

9.0

	325.10 335.10			
~~77+10~~ x		6.4	~~318.7~~	~~309.90~~ 310.20
77+17		5.6	319.3	310.20
77+25		~~4.6~~	319.3	310.57
77+50 x			319.5	311.70
78		5.6	319.5	311.70
+50		4.8	320.3	311.70
79		4.6	320.5	311.70
+50		4.4	320.7	311.70
80		4.2	320.9	311.70
+50		4.1	321.0	311.70
+85 x		4.0	321.1	311.70
81		3.9	321.2	311.97
+50		3.8	321.3	312.88
ck. on B.M		3.62	321.48 ~~331.48~~	Rec 321.51

~~8.5~~	
9.1	
8.7	
7.8	
7.8	
8.6	
8.8	
9.0	
9.2	
9.3	
9.4	
9.2	
8.4	
B.P.N.W. Cor. 41st & Myrtle	

B.M.	3.58	312.31		308.73		Nail in power pole 39th + Myrtle
71+50			1.0	311.3	301.87	9.4 — 12' offsets
71+00			2.8	309.5	300.76	8.7 — "
70+75			4.2	308.1	300.20	7.9
70+50			6.6	305.7	299.10	6.6
70+25			9.1	303.2	296.70	6.5
TP	0.26	299.53	13.04	299.27		
69+95			1.7	297.8	291.80	6.0
TP	0.17	286.87	12.83	286.70		
69+50			1.1	285.8	279.9 ~~280.40~~	5.9
TP	0.76	275.46	12.17	274.70		
69+10			3.6	271.9	266.0 ~~266.40~~	5.9
TP	2.63	265.87	12.22	263.24		
68+90			5.6	260.3	257.40	2.9
TP	0.61	254.37	12.11	253.76		

		254.37				
68+70			5.5	248.9	246.30	2.6
TP	2.04	243.75	12.66	241.71		
68+50			3.3	240.4	237.7 237.40	2.7
68+34 00 67+91 72			6.7	237.0	231.00	6.0
TP			12.15	231.60		on manhole
	7.28	238.88				
67+75			2.5	236.4	229.65	6.8
67+50			3.2	235.7	228.17	7.5
67+25			3.8	235.1	226.68	8.4
67+00			5.8	233.1	225.20	7.9
66+75			5.6	233.3	225.20	8.1
+50			5.7	233.2	225.20	8.0
66+26.68 BC			6.1	232.8	225.20	7.6

June 18, 1915
Super
King
Stephens

		238.88				
66+00			7.5	231.4	225.20	6.2
65+50			8.6	230.3	223.9 / 223.60	6.4 / 6.7 changed to conform to layout sheets
65+00			9.8	229.1	222.57	6.5
64+50			11.8	227.1	221.54	5.6
64+00			10.8	228.1	220.51	7.6
63+75			9.7	229.2	220.00	7.2
63+50			7.7	231.2	219.10	12.1
TP	0.63	227.77	11.74	227.14		
63+00			2.9	224.9	217.32	7.6
62+50			5.4	222.4	215.54	6.9
62+00			7.1	220.7	213.75	7.0
61+50			8.4	219.4	211.97	7.4
61+00			11.7	216.1	210.18	5.9
60+89.15	E.C.		12.2	215.6	209.80	5.8
TP	1.76	224.01	5.52	222.25		On manhole

℄ and offset profile after benching, Thorn St ℄

	224.01			
60+75 ℄		8.5	215.5	
" 12'Off		8.5	215.5	209.29 6.2'
60+50 ℄		9.1	214.9	
" 12'Off		8.3	215.7	208.40 7.3'
60+25 ℄		9.8	214.2	
" 12'Off		8.9	215.1	208.00 7.1'
60+00 ℄		10.4	213.6	
" 12'Off		8.8	215.2	208.00 7.2'
59+75 ℄		9.8	214.2	
" 12'Off		9.0	215.0	208.00 7.0'
59+50 ℄		8.3	215.7	
" 12'Off		8.0	216.0	208.8 208.00 7.2' Grades changed to conform to layout sheet

		224.01				
59+35 ℄			6.1	217.9		
" 12' off			4.7	219.3	210.8 ~~210.00~~	8.5'
59+00 ℄			3.1	220.9		
" 6' off			1.9	222.1	213.1 ~~213.80~~	9.0'
PT	7.72	230.45'	1.28	222.73'		
58+75 ℄			7.0	223.4		
" 6' off			6.2	224.2	215.6 ~~216.00~~	8.6'
58+50 ℄			6.3	224.1		
" 6' off.			4.9	225.5	216.3 ~~216.00~~	9.2' / 9.5 Raised to clear sewer
58+25 ℄			5.9	224.5		
" 6' off			5.4	225.0	216.7 ~~216.00~~	8.3' / 9.0
58+00 ℄			5.7	224.7		
" 6' off.			5.7	224.7	216.9 ~~216.00~~	7.8' / 8.7

		230.45			
57+85 ℄			5.3		
" 6' x			5.3	225.1	216.9 / ~~216.00~~
57+65 BC ℄			3.4	227.0	
" 6' ⊥			3.4	227.0	217.8 / ~~217.70~~
PP			1.81	228.64	
	12.68	241.32			
57+50 ℄			12.7	228.6	
" 6' ⊥ x			12.8	228.5	219.00
57+00 ℄			8.0	233.3	
" 6' ⊥			7.8	233.5	225.81

8.2
9.1

9.2
9.3

Rim of Sewer M.H. Rec. 228.6

9.5

7.7

June 27 1945
Super
King
Stephens

	241.32				
56+67 ℄		5.2	236.1		
" 6'⊥		5.2	236.1	230.30	5.8
56+50 ℄		4.2	237.1		
" 6'⊥		~~4.2~~	~~237.1~~		
56+38 ℄		3.9	237.4	231.62	
" 6'⊥		4.0	237.3	231.62	5.7
56+10 ℄		3.7	237.6		
" 6'⊥		3.6	237.7	232.00	5.7
~~56+00 ℄~~		~~3.6~~			
~~" 6'⊥~~		~~3.7~~			
55+81 ℄		3.8	237.5		
" 6'⊥		3.8	237.5	232.00	5.5

	241.32				
55+50 ℄		4.4	236.9		
" 6' Off		4.0	237.3	231.38	5.9
55+00 ℄		4.4	236.9		6.5
" 6' Off.		4.2	237.1	230.40	6.7
54+50 ℄		5.5	235.8		6.4
" 6' Off		3.4	237.9	229.41	8.5
54+03.75 ℄		8.6	232.7		4.2
" 6' Off ×		7.6	233.7	228.50	5.2
53+75 ℄		12.0	229.3		
" 6' Off		11.8	229.5	217.00	12.5
0.73	230.19	11.86	229.46		
53+55 ℄		3.5	226.7		
" 6' Off.		3.4	226.8	209.00	17.8

		230.19				
53+25 ℄			8.1	222.1		
" 6' Off.			8.1	222.1'	209.00	13.1'
53+00 ℄			12.1	218.1		
" 6' Off			12.1	218.1	209.00	9.1'
PI	2.78	220.90'	12.07	218.12'		
52+50 ℄			7.7	213.2		4.2
" 6' Off.			7.1	213.8'	209.00	4.8'
52+00 ℄			7.1	213.8		4.8
" 6' Off.			6.9	214.0'	209.00	5.0'
51+50 ℄			5.9	215.0		6.0
" 6' Off			6.3	214.6'	209.00	5.6'

		220.90				
51+12.3 ℄			2.6	218.3		
" 6' off			1.5	219.4	210.42	9.0
TP	6.29	226.60	0.59	220.31		
50+95.25 ℄			5.4	221.2		
" 6' off to back tangent			6.3	220.3	212.6	7.7
50+93.5 ℄			5.1	221.5		
" 10' off x			5.7	220.9	212.81	8.1
50+70 - 10' off x			2.7	223.9	217.80	6.1
TP			10.46	216.14 ~~210.44~~		on sewer M.H.

July 3-95
Soper
King
Stephens

Offset grades - Thorn St PL.

B.M	7.50	311.14 ~~301.14~~ ~~341.14~~		303.64	
T.P.	2.35	311.51 341.51	1.98	309.16 ~~339.16~~	
~~49+05~~	℄		8.1	308.4	
	10' off South		3.0	308.5	300.00
	8' off North		3.0	308.5	300.00
49+10	℄		3.2	308.3	
49+20	℄		8.9	302.6	
	15' N		11.8	299.7	296.70
T.P.	0.17	298.95 ~~328.95~~	12.73	298.78 ~~328.78~~	
49+40	℄		6.9	292.1	
	10' N		8.5	290.4	284.70

BP NE Cor Thorn & Nile

~~8.5~~ PAGE 35

~~8.5~~

3.0

5.7

T. P.	0.88	287.07 ~~317.09~~	12.76	286.19 ~~316.19~~	
49+56	Bench		6.8	280 .2	
T. P	0.05	274.79 ~~304.79~~	12.33	274.74 ~~304.74~~	
49+90	℄		6.3	268 .5	
	10'		7.8	267..0	260.09
T. P.	1.61	263.55 ~~293.55~~	12.85	261.99 ~~291.94~~	
50+04	℄ Bench		7.8	255. 8	
T. P.	1.17	252.45 ~~282.45~~	12.27	251.28 ~~281.28~~	
T. P.	0.48	242.49 272 .44	10.49	241.96 ~~271.96~~	
50+44	℄		0.5	241 .9	

6. 9

~~30+44~~ 10'		242.44 ~~242.44~~	4.9	237.5	233.50
T.P.	0.18	230.32 ~~260.32~~	12.30	230.14 ~~260.14~~	
T.P.	2.41	220.38	12.35	217.97	
B.M.			4.26	216.12	216.14

CONTINUED ON PAGE 20

4.0	
Top M.H.	

July 14, 1945
Soper
King
Stephens

Profile of offset points - 8' South of ℄ Thorn St PL.

B.M.	7.64	326.62		318.98	
			6.70	319.92	
9+91.5			6.6	320.0	314.2+
10+00			6.9	319.7	314.13
10+03				319.7	314.10
+50	x		6.0	320.6	313.70
11+00	x		5.8	320.8	313.70
+40	x		5.5	321.1	312.90
+50			5.5	321.1	312.90
12+00			5.1	321.5	312.90
+50			4.9	321.7	312.90
13			5.0	321.6	312.90
+50	x		5.7	320.9	312.90
+75	x		7.0	319.6	312.3 312.50
14+00			8.4	318.2	311.8

B.P.N.W. Cor 31st & Thorn St.

B.P.S.W. Cor 30 1/4 & Thorn St.

5.8	~~BEGINNING OF WORK~~
5.6	
5.6	
6.9	
7.1	
8.2	
8.2	
8.6	
8.8	
8.7	
8.0	
7.3	Changed to conform to work sheets.
6.9	

		326.62			
14+45	x		10.8	315.8	309.3 309.1	6.5
+75			12.0	314.6	309.1	5.5
15+00	x		11.0	315.6	309.10	6.5
+25	x		10.3	316.3	309.40	6.9
+50			9.6	317.0	310.07	6.9
16+00	x		8.2	318.4	311.40	7.0
B.M			7.64	318.98		B.P.N.W. Cor 31st & Thorn
	5.01	323.99				
16+50			4.7	319.3	311.40	7.9
17+00			3.8	320.2	311.40	8.8
+50			3.0	321.0	311.40	9.6
18			2.2	321.8	311.40	10.4
+50			3.0	321.0	311.40	9.6

		323.99				
19			4.6	319.4	311.40	8.0
+25	x		5.4	318.6	311.40	7.2
+75			6.0	318.0	310.99	7.0
20+10	x		6.6	317.4	310.70	6.7
+50			8.2	315.8	308.94	6.9
21+00			10.4	313.6	306.73	6.9
+50			12.6	311.4	304.52	6.9
II	0.76	312.39	12.36	311.63		
22+00			3.1	309.3	302.31	7.0
+38	x		4.8	307.6	300.63	7.0
+53.5	x		5.5	306.9	298.59	8.3
+69	x		6.1	306.3	295.83	10.5

		312.39				
22+85			6.6	305.8	294.44	11.4
23+01			7.1	305.3	294.40	10.9
+50			8.4	304.0	294.40	9.6
+81			9.1	303.3	294.40	8.9
+97			9.5	302.9	294.27	8.6
24+13			9.4	303.0	293.79	9.2
24+45			8.9	303.5	293.40	10.1
+61			8.7	303.7	294.37	9.3
PI	8.34	311.50	9.23	303.16		

		311.50				
24+77	x		7.6	303.9	295.34	8.6
+93	x		7.4	304.1	296.31	7.8
25+00	x		7.3	304.2	296.70	7.5
+50			5.9	305.6	298.20	7.4
+90	x		5.1	306.4	299.40	7.0
26+15	x		4.8	306.7	299.40	7.3
+50			3.6	307.9	300.57	7.3
+75	x		2.5	309.0	301.40	7.6
27+00			1.4	310.1	301.40	8.7
TP	9.91	321.08	0.33	311.17		
27+50	x		8.9	312.2	301.40	10.8
28	x		7.6	313.5	305.70	7.8
+25	x		7.0	314.1	307.00	7.1
+75	x		6.0	315.1	308.00	7.1

		321.08				
29+10 x			5.8	315.3	308.00	7.3
+50			4.7	316.4	309.33	7.1
30+00 x			3.5	317.6	311.00	6.6
+45 x			2.5	318.6	313.0 313.30	5.6
31			1.2	319.9	313.30	6.6
TP	4.88	324.40	1.56	319.52		
31+50			4.0	320.4	313.30	7.1
32			4.5	319.9	313.30	6.6
+25 x			4.5	319.9	313.30	6.6
+50			4.7	319.7	312.93	6.8
33 x			5.0	319.4	312.20	7.2
33+11.52 B.C.			5.1	319.3	311.68	7.6
+40 x			5.3	319.1	310.40	8.7
+65			5.4	319.0	310.40	8.6
33+95.88 E.C.			5.7	318.7	310.40	8.3

		324.40				
34+29.90	B.C.		5.9	318.5	310.40	8.1
+60			6.2	318.2	310.40	7.8
+90	x		6.8	317.6	310.40	7.2
35+14.26	E.C.		7.4	317.0	310.0	7.0
					Rec.	
R			6.41	317.99	318.01	B.P.M. W. Cor. Thorn + Gregory.
B.M.	0.91	318.92		318.01		
					309.6	
35+25	x		2.3	316.6	309.80	7.0
35+50			3.9	315.0	307.85	7.2
35+97.67	B.C.	x	7.2	311.7	304.50	7.2
36+25			9.2	309.7	301.66	8.0
+50			11.0	307.9	299.06	8.8

		318.92				
36+65	x		12.1	306.8	297.50	9.3
TP	0.48	307.07	12.33	306.59		
36+75			1.2	305.9	297.28	8.6
36+97 36 Back 36+99 31 Ahd.			2.8	304.3	296.80	7.5
37+25	x			302.9	295.40	7.5
37+50			6.5	300.6	293.00	7.6
37+67 40 B.C.			8.1	299.0	291.33	7.7
+75			8.8	298.3	290.60	7.7
38+00			11.8	295.3	288.20	7.1
TP	5.19	299.33	12.93	294.14		
38+25	x		7.0	292.3	285.80	6.5
+50	x		8.4	290.9	284.40	6.5

		299.33				
38+76 24 BC			8.7	290.6	284.40	6.2
39	x		8.5	290.8	284.40	6.4
+25			7.6	291.7	285.30	6.4
+50			6.5	292.8	286.21	6.6
+75			5.6	293.7	287.11	6.6
39+80 38 Back						
39+79 18 Ahd EC.			5.4	293.9	287.30	6.6
40+15	x		4.2	295.1	288.60	6.5
40+65	x		2.4	296.9	288.60	8.3
TP		10.31	2.56	296.77	307.08	
41+00	x		8.9	298.2	291.50	6.7
+50	x		7.2	299.9	293.80	6.1

		307.08			
42			5.5	301.6	295.33
+25	x		4.7	302.4	296.10
B.M.			3.38	303.70	
+50.			4.4	302.7	296.43
43+00	x		3.8	303.3	297.10
43+50			3.0	304.1	297.10
44+00			2.2	304.9	297.10
+50	x		1.4	305.7	297.10
+85			0.7	306.4	299.8 300.30
TT		7.15 313.43	0.84	306.24	
45			6.8	306.6	300.5 ~~300.54~~
+50			6.1	307.3	301.37
46	x		5.2	308.2	302.20

6.3	
6.3	
B.P.N.E. Cor. Thorn + Nile Rec. 303.64	
6.3	
6.2	
7.0	
7.8	
8.6	
6.6	
6.1	
5.9	
6.0	

313.43

46+50		4.9	308.5	302.60
+75		4.6	308.8	302.80
47		4.5	308.9	302.80

CONTINUED ON NEXT PAGE

+50		4.2	309.2	
+85		4.0	309.4	
48+20		4.0	309.4	
+50		4.1	309.3	
		4.92	308.51	308.5 Rec

5.9
6.0
6.1

ct. on 8' offset - 49+05

B.M.	9.94	313.58		303.64	B.P.N.E. Cor Thorn + Nile
47+50			4.4	309.2	302.80 — 6.4'
+66 2			4.2	309.4	302.80 — 6.6'
+81 99			4.2	309.4	301.46 — 7.9'
+87 48			4.1	309.5	301.42 — ADAPTER - CHANGE IN SIZE OF PIPE 8.1'
48+15 6			4.1	309.5	300.35 — 9.2'
+45 2			4.2	309.4	300.00 — 9.4'
+74			4.6	309.0	300.00 — 9.0'
49+03			5.0	308.6	300.00 — 8.6'

CONTINUED ON PAGE 21

Grades for Valve chamber - Highland & Landis Thon St PL

B.M.	3.66	357.19	353.53	
2'0ff. nail S.W. Cor.		3.94	353.25	345.00
2'0H. N.W. Cor.		3.87	353.32	345.00
2'0H N.E Cor		4.08	353.11	345.00
2'0H. S.E. Cor.		4.30	352.89	345.00

GRADE - Top of CONC. Floor

FLOOR Grade STAKED LEVEL - PITCH TO SUMP

TO BE TAKEN UP IN FIELD

B.P.N.W. Cor. Highland & Landis

346.40 - Grade - bottom of pipe

c 8.25 — 2.00 — 348.40 Grade - ℄ pipe — 3.00

345.00 - Grade - Top of conc. floor in chamber.

c 8.32

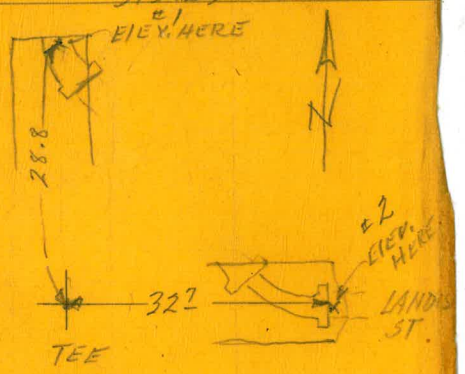
c 8.11 — 357.19 − 3.95 = 353.24

4.50

c 7.89

ELEV'S OF 30" C.I.P. AT HIGHLAND AND LANDIS

B.M	3.92	357.45	353.53	B.P.N. W COR HIGH. + LANDIS
#1 21+74 ±		6.23	351.22	TOP OF 30" C.I.P. 1' EAST OF BELL
NOTE: IT LOOKS AS THO THIS FITTING IS ON A DOWN GRADE TO NORTH. AT #2 THE GRADE LOOKS TO BE UP, TO THE NORTHWEST				
#2		6.71	350.74	TOP OF 30" C.I. EAST OF BELL OF BELL + STIG BEND. BELL TO EAST
TOP OF NEW 30" LANDIS ST		8.15	349.30	
TOP OF NEW 30" HIGHLAND AVE		8.16	349.29	



GRADES - VALVE CHAMBER - 30th & THORN AND FOR JACKING UNDER TRACKS

B.M.	5.24	325.16	319.92	
ck on ℄ 9+91 ℄		5.1	320.1	Rec - 320.0
2' off N.W. Cor		5.06	320.10	311.70
2' off S.W. Cor.		5.14	320.02	311.70
Gutter - North line 45° East of West line of Chamber.		5.4	319.8	
Gutter - South line 45° East of West line of Chamber		5.5	319.7	
2' off N.E. Cor		5.36	319.80	312.00
2' off S.E. Cor.		5.42	319.74	312.00

CUTS FOR JACKING PIPE UNDER TRACKS

℄ 9+75	5.07	320.09	312.96
℄ 9+50	5.11	320.05	312.96

Thorn St Pl.

B.P.S.W. Cor 30th & THORN

8.40

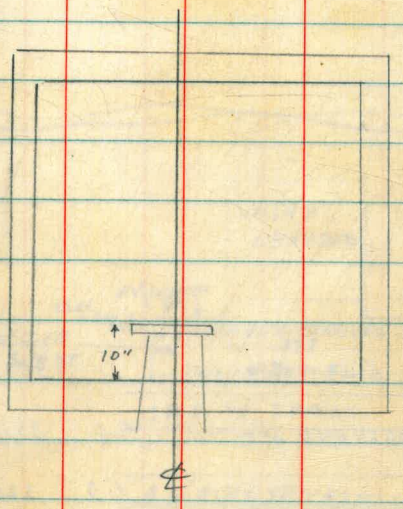
8.32

7.80

7.74

7.13

7.09



STAKED TO GIVE 10" CLEARANCE FROM END OF REDUCER SECTION, IN PLACE

B.M.	5.01	324.93		319.92	
					Rec
Ckon 9175			4.84	320.09	320.09
			12.04	312.89	
			12.02	312.91	

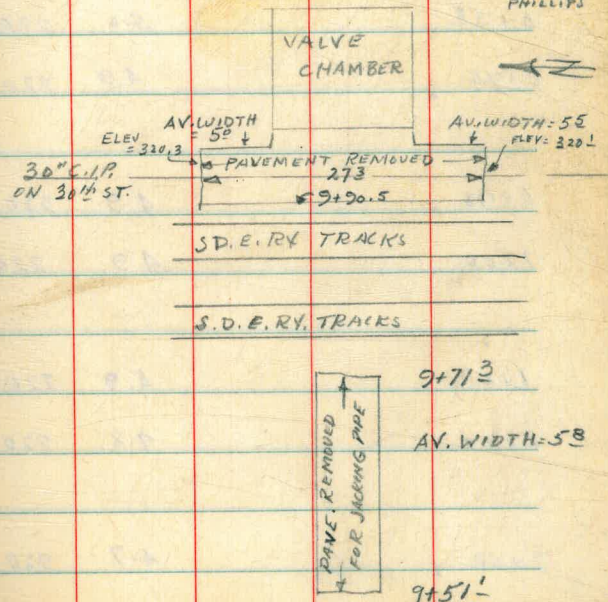
B.M	5.43	325.35		319.92	
ON PAVE. NORTH END OF DITCH			5.1	320.3	
" " SOUTH " " "			5.3	320.1	

B.P.S. W. COR 30th & THORN

GRADE - BOTTOM OF PIPE FOR JACKING = 312.96
3.79
TOP OF PIPE = 316.75

312.96
03
312.93 = TOP OF TIE FOR JACKING = ½" BELOW GRADE

DEC. 6, 1945
SO PER
WARD
PHILLIPS



Aug 13, 1945
Soper
King
Phillips

PROFILE OF 6' OFFSETS (left) BONITA CONN. P.L.

B.M.	1.52	225.28'	223.76'	Top of F. Hyd. S.E. Cor. 65th + Imperial Ave	
		4.02	221.26'	B.P.S.E. Cor. 63rd + Imp. Rec. 221.27	
				Cut	
6'OH. 0+00		5.0	220.3'	211.0'	9.3' (No grade given on plans. To be checked in field
0+42	x	4.9	220.4'	211.10'	9.3'
0+58	x	5.0	220.3'	211.52'	8.8'
0+74	x	4.9	220.4'	212.36'	8.0'
0+90	x	4.9	220.4'	212.78'	7.6'
1+00		4.9	220.4'	212.79'	7.6'
1+50		4.9	220.4'	212.86'	7.5'
2+00		4.8	220.5'	212.93'	7.6'
2+50	x	4.7	220.6'	213.0'	7.6'

		225.28				
3+00	x		4.5	220.8	213.70	7.1
3+50			4.0	221.3	213.98 ~~214.03~~	7.3
4+00			3.8	221.5	214.26 ~~214.37~~	7.2
4+25	x		3.7	221.6	214.40	7.2
TP	3.76	224.95	4.09	221.19		Grade lowered to give clearance for air valves.
4+50			3.1	221.8	214.40 ~~214.70~~	7.4
5+00			3.2	221.7	214.40 ~~214.70~~	7.3
+25	x		3.4	221.5	214.10	7.1
+50			3.6	221.3	214.13 ~~214.16~~	7.2
6+00			4.2	220.7	213.60 ~~213.62~~	7.1
+50			4.8	220.1	213.07 ~~213.08~~	7.0
7+00			5.3	219.6	212.53 ~~212.54~~	7.1
+50	x		5.8	219.1	212.00	7.1
8+00			6.8	218.1	210.87	7.2
+50			8.0	216.9	209.75	7.2

		224.95				
9+00			9.2	215.7	208.62	7.1
+50			10.3	214.6	207.50	7.1
10+00			11.4	213.5	206.37	7.1
TP	0.12	213.48	11.59	213.36		
10+50			1.0	212.5	205.25	7.3
11+00			2.4	211.1	204.12	7.0
+50			3.6	209.9	203.00	6.9
12			4.3	209.2	201.80 ~~202.50~~	7.4 ~~6.7~~
+50			5.0	208.5	201.53 ~~202.00~~	7.0 ~~6.5~~
13+00			5.6	207.9	201.27 ~~201.50~~	6.6 ~~6.4~~
+50			5.8	207.7	201.00	6.7
14+00			5.0	208.5	200.78	7.7
+50			4.7	208.8	200.57	8.2

GRADE LOWERED TO CLEAR GAS & WATER LINES

		213.48				
15+00			4.3	209.2	200.35	8.9
+50			4.3	209.2	200.13	9.1
16+00			4.9	208.6	199.93	8.7
ck on B.M.	0.34	213.05	0.77	212.71		Top of F. Hdy. 63rd & Imp. Rec. 212.62; 212.64; 212.67 etc. Book G75
~~+6125~~			~~4.9~~	~~208.1~~		
+32.02 Δ			5.0	208.0	199.8	8.2
+50	x		5.3	207.7	199.7	8.0
17+00			6.0	207.0	199.7	7.3
17+36.22 Back						
17+00 ahead	x		6.6	206.4	199.60	6.8
17+50	x		7.4	205.6	198.70	6.9
18			8.5	204.5	197.43	7.1

13+50 – 17+36
Grade lowered by contractors engineer to give clearance on 6" water line

		213.05				
18+50			9.8	203.2	196.17	7.0
19+00	x		11.2	201.8	194.80	6.9
+50	x		13.0	200.0	193.10	6.9
ℙ	0.31	201.48	11.88	201.17		
20+00			3.6	197.9	190.77	7.1
+50			5.7	195.8	188.43	7.4
21	x		8.0	193.5	186.10	7.4
+50			10.3	191.2	184.05	7.2
22+00	x		12.4	189.1	182.00	7.1
ℙ	0.94	190.22	12.20	189.28		
22+50			3.0	187.2	180.25	7.0
23	x		4.6	185.6	178.50	7.1
+50			6.0	184.2	177.40	6.8
24	x		6.7	183.5	176.30	7.2
+50			7.2	183.0	175.76	7.2
25			7.7	182.5	175.21	7.3

		190.22				
25+50			8.2	182.0	174.67	7.3
TP	1.78	183.78	8.22	182.00		
25+75			2.0	181.8	174.40	7.4
26+00			2.2	181.6	173.73	7.9
+50			2.7	181.1	172.40	8.7
27			3.2	180.6	172.32	8.3
+50			3.6	180.2	172.25	8.0
28			4.1	179.7	172.17	7.5
+50			4.6	179.2	172.10	7.1
29			5.1	178.7	171.64	7.1
+50			5.5	178.3	171.18	7.1
30			5.9	177.9	170.72	7.2
+50			6.5	177.3	170.26	7.0
31			7.0	176.8	169.80	7.0
+50			7.5	176.3	168.90	7.4
TP	0.69	176.77	7.70	176.08		

		176.77				
32+00			1.2	175.6	168.00	7.6
+50			2.3	174.5	167.10	7.4
33			3.6	173.2	166.20	7.0
+50			5.1	171.7	164.53	7.2
34			6.6	170.2	162.87	7.3
+50			8.0	168.8	161.20	7.6
35			9.6	167.2	159.95	7.3
+50			11.0	165.8	158.70	7.1
36			12.1	164.7	157.97	6.7
TP	208	166.90	11.95	164.82		
36+50			2.9	164.0	157.25	6.8
37			3.5	163.4	156.52	6.9
+50			4.1	162.8	155.80	7.0
38			4.4	162.5	155.60	6.9
38+14.8			4.4	162.5	155.53	7.0
+50			4.6	162.3	155.40	6.9

		166.90'				
39+00	x		4.8	162.1'	155.20	6.9'
+50	x		4.8	162.1'	151.80	10.3'
+75	x		4.9	162.0'	151.80	10.2'
40+25	x		5.0	161.9'	154.80 ~~155.00~~	7.1'
40+50			5.0	161.9'	154.80 ~~155.00~~	7.1'
41+00			5.1	161.8'	154.80 ~~155.00~~	7.0'
+50			5.2	161.7'	154.80 ~~155.00~~	6.9' GRADE LOWERED TO GIVE CLEARANCE FOR AIR VALVES.
PI	440	166.15'	5.15	161.75'		
Set B.M.			1.45			Top of F. Hyd. LINNET DR + IMP.
~~41+75~~	x		~~4.4~~	~~161.7~~	~~154.80 155.00~~	
42+00	x		4.5	161.6'	154.80	6.8'
+24.62	Δ		4.5	161.6'	154.8 ~~154.66~~	6.8 6.9 Grade raised to clear sewer
42+44.1	x			161.6'	154.8	6.8
~~+50~~			~~4.6~~	~~161.5~~	~~154.50~~	7.0

		166.15'				
43	×		5.1	161.0'	154.20	6.8'
+38.11 BC.			5.8	160.3'	153.54	6.8'
+50			6.1	160.0'	153.33	6.7'
+75'	×		6.7	159.4'	152.90	6.5'
44			7.5	158.6'	151.96	6.6'
+25			8.4	157.7'	151.01	6.7'
+50			9.3	156.8'	150.07	6.7'
+75			10.3	155.8'	149.12	6.7'
45+00			11.3	154.8'	148.18	6.6'
+25'			12.2	153.9'	147.24	6.7'
IP		0.37 154.57'	12.01	154.14'		
45+50			1.5	153.0'	146.29	6.7'
+75'	BC.		2.4	152.1'	145.35	6.8'
+96.9	EC.		3.1	151.4'	144.54	6.9'
46+00	×				144.40	

	154.51			
46+50		4.4	150.1	143.20
47+00		4.9	149.6	142.67
+50		5.5	149.0	142.15
48+00		5.7	148.8	141.62
+50		6.0	148.5	141.10
+80.13 BC.		6.1	148.4	140.17
+90		6.1	148.4	139.86
49		6.2	148.3	139.55
+10		6.2	148.3	139.24
+20		6.2	148.3	138.93
+30		6.3	148.2	138.62
+40		6.4	148.1	138.31
+50		6.4	148.1	138.00

6.9
6.9
6.9
7.2
7.4
8.2
8.5
8.8
9.1
9.4
9.6
9.8
10.1

		154.51				
49+60			6.5	148.0	138.19	9.8
49+70.8	EC.		6.6	147.9	138.39	9.5
50+00			6.7	147.8	138.93	8.9
+25				147.9	139.40	8.5
PI	3 41	151.72	6.20	148.31		
50+50			3.8	147.9	139.40	8.5
51			3.9	147.8	139.40	8.4
+50			4.2	147.5	139.40	8.1
52			4.6	147.1	139.40	7.7
~~+25~~			~~4.6~~	~~147.1~~		
+50			4.6	147.1	139.40	7.7
53			4.3	147.4	140.24	7.2
+35.15	BC		4.1	147.6	140.83	6.8
+50			4.0	147.7	141.08	6.6

		151.72				
53+75			3.6	148.1	141.50	6.6
~~54+00~~			~~3.1~~	~~148.6~~		
+0569.EC			2.9	148.8	142.46	6.3
+25			2.2	149.5	143.20	6.3
PT	11.25	162.74	0.23	151.49		
54+75			10.8	151.9	145.60	6.3
55+25			8.5	154.2	148.00	6.2
+50			7.4	155.3	148.89	6.4
56			5.1	157.6	150.66	6.9
+50			3.0	159.7	152.44	7.3
57			1.1	161.6	154.21	7.4
+25			0.5	162.2	155.10	7.1
PT	6.69	168.68	0.75	161.99		
57+75			5.6	163.1	156.03	7.1

		168.68'			
58+00			5.4	163.3'	156.17	7.1'
+50			5.2	163.5'	156.51	7.0'
59			4.9	163.8'	156.85	7.0'
+43.20 BC.			4.5	164.2'	157.15	7.1'
+50			4.5	164.2'	157.20	7.0'
60			4.1	164.6'	157.20	7.4'
+50			4.2	164.5'	157.20	7.3'
61			4.8	163.9'	156.72	7.2'
ck on B.M.			4.17	164.51'		(Rec 164.57) 164.54 etc
61 +50			5.2	163.5'	156.24	7.3'
62			5.9	162.8'	155.76	7.0'
+22.42 E.C.			6.2	162.5'	155.55	7.0'
R	3.12	165.43'	6.37	162.31'		
62+50			3.3	162.1'	155.28	6.8'

Aug 14, 1945
Soper
King
Phillips

		165.43			
63+00	x		3.8	161.6	154.80	6.8
+50			4.0	161.4	154.52	6.9
64+00			4.2	161.2	154.25	7.0
+50			4.5	160.9	153.97	6.9
65+00	x		4.6	160.8	153.70	7.1
+50			4.8	160.6	153.63	7.0
66+00			5.0	160.4	153.57	6.8
+50	x		5.1	160.3	153.50	6.8
67			5.3	160.1	153.20	6.9
+50			5.6	159.8	152.90	6.9
68			5.8	159.6	152.60	7.0
ck on B.M.		0.29	162.33	3.39	162.04	Top of K. Hdy S.E. Cor 54th & Imp. Rec. 162.08; 162.09 etc.
68+50	x			3.0	159.3	152.30	7.0
69+00				3.4	158.9	151.79	7.1

		162 33				
69+50			3.8	158.5	151.29	7.2
70+00			4.5	157.8	150.78	7.0
+50			5.0	157.3	150.28	7.0
71+00			5.5	156.8	149.77	7.0
+50			6.1	156.2	149.26	6.9
72+00			6.5	155.8	148.76	7.0
+50			6.8	155.5	148.25	7.3
+75			6.9	155.4	148.00	7.4
73			7.0	155.3	148.00	7.3
+50			7.3	155.0	148.00	7.0
TP	5.51	160.61	7.23	155.10		
74			5.6	155.0	148.00	7.0
+50			5.6	155.0	148.00	7.0
ck on B.M.			3.30	157.31	148.00	Top of F. Hdg S.E. Cor 53rd + Imp. Rec. 157.34; 157.35 etc.
75+00			5.4	155.2	148.00	7.2

		160.61				
75+50	x		5.3	155.3	148.40	6.9
76			4.6	156.0	149.40	6.6
+50			3.7	156.9	150.40	6.5
77+00			2.6	158.0	151.40	6.6
+50	x		1.6	159.0	152.40	6.6
78			1.1	159.5	152.40	7.1
+50	x		1.2	159.4	152.40	7.0
79+00			2.0	158.6	151.62	7.0
TP	2.05	160.68	1.98	158.63		
79+50			2.9	157.8	150.85	7.0
80			3.6	157.1	150.07	7.0
+50	x		4.4	156.3	149.38	7.0
81			5.0	155.7	148.85	6.9
+50	x		5.4	155.3	148.40	6.9

		160.68				
82+00			5.6	155.1	148.40	6.7
+18.8			5.6	155.1	148.40	6.7
+66.5			5.0	155.7	145.50	10.2
+82.5			4.7	156.0	145.50	10.5
83+15			3.7	157.0	148.04	9.0
+62.3			2.4	158.3	151.74	6.6
TP	9.52	167.62	2.58	158.10		
84+00			8.1	159.5	152.50	7.0
+25			7.3	160.3	153.00	7.3
+50			6.5	161.1	153.77	7.3
85			5.1	162.5	155.31	7.2
+50			3.5	164.1	156.84	7.3

		167.62				
86+00			1.9	165.7	158.38	7.3
TP	10.27	176.96	0.93	166.69		
86+50			9.6	167.4	159.92	7.5
87			8.1	168.9	161.46	7.4
+50			6.6	170.4	163.00	7.4
88			4.9	172.1	164.94	7.2
+50			3.1	173.9	166.88	7.0
89			1.2	175.8	168.82	7.0
TP	10.37	186.81	0.52	176.44		
ck on B.M.			6.97	179.84		Top of F. Hyd. S.E. Cor Euclid Tmp: Rec 179.93; 179.92 dc.
89+37 6			9.8	177.0	170.28	6.7
+69 6			8.5	178.3	170.64	7.7
+85 6			8.0	178.8	171.23	7.6

	186.81			
90+01.7		7.3	179.5	172.24
90+33.7		6.0	180.8	173.74
90+50		5.4	181.4	174.25
91 ×		4.1	182.7	175.80
+50 ×		3.2	183.6	176.70
92+00		2.8	184.0	176.70
+50		2.8	184.0	176.70
(Rtd. to back tang.)				
93+00		3.0	183.8	176.70
93+25		2.6	184.2	176.70
+50		2.6	184.2	176.70
93+60			184.3	176.70
℄ 93+66.59 ℄ BENITA STEEL			184.4	

7.3
7.1
7.2
6.9
6.9
7.3
7.3
7.1
7.5
7.5
7.6

SEPT. 22, 1945
SOPER
WARD
PHILLIPS

GRADES - VALVE CHAMBER - BONITA CONN. 0+14

B.M.	2.16	225.92		223.76	
					GRADE - TOP OF CONC. FLOOR
2' OH. S.W. COR			5.57	220.35	209.90 ~~210.20~~
2' OH S.E. COR			5.54	220.38	210.20 ~~210.50~~
2' OH N.E. COR			5.52	220.40	210.50 ~~210.80~~
2' OH. N.W. COR			5.75	220.17	210.20 ~~210.50~~

SEPT. 25, 1945

B.M	2.00	225.76		223.76	
			11.13	214.6	

TOP. F HYD.

CUT

SEPT. 25 - GRADE LOWERED 0.30

10.45
~~10.15~~

10.18
~~9.88~~

9.90
~~9.60~~

9.97
~~9.67~~

TOP OF EXIST. 36" - 2nd MAIN P.L.

Rec. 214.5±

GRADES - S.O. CHAMBER - 0+36 BONITA CONN.

B.M.	3.19	226.95'		223.76	
					GRADE - TOP OF CONC. FLOOR
2'oH set S.W. COR			6.54	220.41'	210.50	9.91'
2'oH S.E. COR			6.55	220.40'	210.50	9.90'
7'oH. N.E. COR			6.86	220.09'	210.20	9.89'
6'oH. N.W. COR			6.78	220.17'	210.20	9.97'

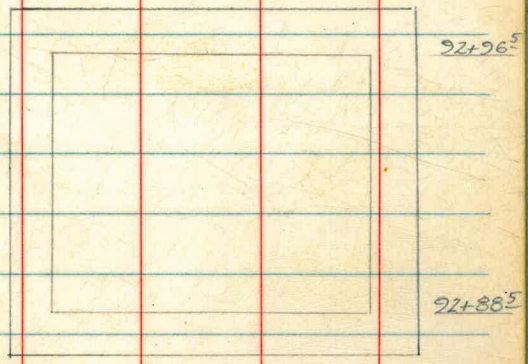
Oct 5, 1945
Soper
Ward
Phillips

GRADES - VALVE CHAMBER - 92+92 BONITA CONN

B.M.	9.15	188.99		179.84
TP	5.25	189.31	4.93	184.06
2' offset NAIL S.W. COR			5.46	183.85	175.70
2' off NAIL S.E. COR			5.38	183.93	175.40
2' off HUB N.E. COR			4.49	184.82	175.40
2' off HUB N.W. COR.			4.86	184.45	175.70
ck on G'H 93+00			5.4	183.9	Rec. 183.8

TOP OF F. N.Y.D. S.E. COR EUCLID - JMP.

8.15



8.53

9.42

8.75

THORN ST

MEASUREMENT OF CONCRETE BASE IN PLACE FOR REPAVING OF THORN ST.

Oct. 26, 1935

10+72 ~~7~~	5.65
~~+80~~	~~5.75~~
+80	5.75
~~11+00~~	
+90	5.90
11+00	5.60
+10	6.00
+17	7.40
+20	6.10
+30	6.10
+36	6.00
+40	5.35
+50	5.40
+60	5.65
+63	6.10

11+70	6.40
+77	6.50
+80	6.20
+90	6.00
12+00	5.90
+10	6.15
+12	6.50
+19	5.60
+24	5.60
+30	6.30

12+40	5.55
+50	5.55
+60	5.60
+70	5.60
+80	5.40
+90	5.55
13+00	5.50
+10	5.50
+20	5.50
+30	5.50

13+40	5.55
+44	5.55
+50	6.00
+63	6.10
+65	5.40
+70	5.60
+80	5.50
+90	5.55
14+00	5.55
14+60	5.55
14+70	5.70
+74	5.50
+78	5.10
+80	5.85
+90	5.60
15+00	5.70
+10.	5.70
+13	6.30
+15	5.90
+20	5.60

15+33	5.60
+38	6.40
+39	5.60
+50	5.60
+70	5.50
+80	5.60
16+00	5.70
+10	5.60
+20	5.80
+40	6.10
16+47	7.80
+50	5.60
+55	6.70
+60	6.00
+66	6.00
+70	8.30
+73	8.20
+77	5.90
+79	6.60
+83	6.50

16+86	5.70
+90	7.00
+95	6.00
17+00	7.30
+11	6.40
+18	7.40
+23	6.60
+27	7.40
+32	6.50
+40	6.00
17+50	6.10
+60	6.50
+70	6.30
+80	6.10
+90	5.70
+93	5.70
18+04	7.40
+11	5.70
+20	5.60
+37	5.60

18+40	7.10
+43	5.60
+58	5.55
+62	6.10
+70	6.70
+75	6.00
+80	6.00
+90	5.70
18+97 - ℄ OF A.V. CONC. CHAMB. DIAMETER = 4.5	
19+00	5.55
19+07	6.20
+10	5.80
+15	6.10
+24	6.20
+28	6.00
+34	5.60
+50	5.70
+70	5.60
+78	5.70
+84	5.70

NOTE: BETWEEN 19+78 AND 19+84 THERE ARE TWO PATCHES ~~OUTSIDE THE 5.70 WIDTH.~~
TO THE NORTH - 7.30 x 3.00
TO THE SOUTH - 2.60 x 5.70

19+90	5.80		20+90	5.50	
20+00	5.60		21+00	5.60	
+10	5.60		+10	5.80	
+20	5.50		+20	5.40	
+30	5.40		+30	5.50	
+40	5.55		+50	5.60	
+50	5.60		+71	5.60	
+60	5.70		+73	6.60	
+74	5.50		21+77	5.60	
+80	5.60		22+15	5.60	

22+20	6.70		22+84	7.10	
+25	6.10		+87	6.00	
+27	5.55		+89	6.00	
+30	6.00		+96	7.60	
+33	5.60		23+00	5.70	
+50	5.60		+10	5.70	
+60	5.70		+12	7.60	
+70	5.70		+20	9.20	
+80	6.00		+23	10.1	
+82	6.40		+28	8.9	

23+34	8.0		24+60	6.50	
+37	5.50		+64	7.10	
+40	5.40		+67	5.70	
24+00	5.40		+70	5.50	
+10	5.50		+73	6.10	
+20	5.50		+75	6.50	
+30	5.60		+78	6.30	
+40	5.60		+81	6.30	
+46	5.40		+83	5.80	
+50	6.20		+85	5.70	

24+88	5.90		25+61	5.80	
+92	6.10		+66	7.20	
25+00	6.50		+70	6.80	
+07	6.50		+80	6.80	
+10	6.00		+90	6.00	
+17	6.80		26+00	6.40	
+26	6.80		+03	10.20	
+30	6.30		+04	13.40	
+40	6.00		+08	13.50	
+50	5.60		+09	9.5	

26+11	6.50		27+42	6.10	
+20	6.50		+44	6.40	
+30	6.00		+47	5.80	
+40	5.70		+52	6.50	
+50	5.60		+60	6.50	
+90	5.60		+70	6.00	
27+10	5.80		+77	5.80	
+16	6.50		+81	7.60	
+30	6.00		+84	8.60	
+36	5.70		+87	9.00	

27+90	7.00		28+90	5.70	
28+00	6.00		29+00	5.70	SOUTH - 5.2 x 4.0 NORTH - 4.4 x 4.1 OUTSIDE OF DITCH WIDTH
+10	7.40		29+11	5.60	
+20	7.00		29+24.00	5.6	END PAVE. FACE OF CURB
		NOTE: 7.8 Lin. Ft. OF CURB REPLACED			
+30	6.80	NOTE: 7.3 " " " "			"
+40	5.80		31+69.20	5.7	END CURB BEGIN. PAVE
+50	6.10		+80	5.7	
160	6.10		32+00	5.6	
		TO NORTH - 9.6 x 3.4 OUTSIDE OF WIDTH AS SHOWN			
+70	6.00	TO SOUTH - 4.2 x 5.0 AND 9.1 x 4.3 OUTSIDE OF WIDTH AS SHOWN			
+80	6.00		32+20	5.6	

32+30	5.70		33+32	7.70		34+20	6.40	35+20	5.50
32+50	5.70		+40	8.00		+30	6.10	+30	5.50
+60	5.80		+48	7.20		+40	6.20	+40	5.40
+70	6.00		+60	7.00		+50	6.40	+50	5.50
+80	5.90		+67	6.10		+60	6.50	+90	5.50
+90	5.60		+72	5.70		+70	5.80	36+00	5.40
33+10	5.60		+80	7.20		+80	5.70	+40	5.40
+15	6.70		+90	6.30		+70	5.60	+50	5.50
+20	7.20		34+00	6.20		35+00	5.50	+60	5.40
+28	7.20		+10	6.00		+10	5.40	37+50	5.40

37+60	5.50		38+80	5.40	
			TO SOUTH - 2.5 x 2.5 OUTSIDE WIDTH AS SHOWN		
			TO NORTH 2.5 x 1.8 " " " "		
+80	5.50		39+00	5.60	
+90	5.40		+10	5.50	
38+10	5.40		39+18.25	5.50	END OF ASPHALT TOPPING
38+20	5.60		+30	5.80	
+30	5.50		+50	5.80	
			39+80.38 Back		
+40	5.30		39+79.18 AHD	5.70	
+50	5.50		40+00	5.70	
+60	5.30		+50	5.60	
+70	5.40		41+00	5.70	

			TO SOUTH - 4.5 x 0.6		
41+50	5.60		44+00	5.80	
			TO SOUTH 4.5 x 0.7		
42+00	5.70		+05	6.70	
+50	5.70		+08	5.80	
+54	8.00		+40	5.90	
+57	6.00		+43	8.50	
+85	5.60		+48	5.80	
43+00	5.70		+64	5.70	
+08	6.82		+71	7.00	
+17	5.80		+73	5.80	
			TO SOUTH 15 x 5.2		
+50	5.8		+85	6.00	

44+87	7.5
+89	5.90
45+00	5.70
TO NORTH 6°×0.5	
+50	5.70
45+91.9	5.70

MEASUREMENT OF HOLES CUT IN PAVEMENT ON THORN ST. IN ORDER TO SHUT OFF WATER SERVICES. OCT. 23, 1945

#1		#11		
10+60±	5.0 × 2.4	24+40±	3.0 × 2.7	
#2		#12		
15+12±	4.0 × 2.5	27+85±	2.7 × 2.6	
#3		#13		
15+27±	4.4 × 3.0	36+20±	2.3 × 2.7	
#4		#14		
17+90±	2.0 × 2.2	37+10±	6.6 × 2.2	
#5		#15		
18+46±	2.0 × 2.5	38+00±	2.5 × 2.5	
#6		#16		
18+76±	2.2 × 2.2	38+40±	3.2 × 2.2	
#7		#17		
19+25±	2.6 × 2.6	43+33±	4.5 × 2.7	CONCRETE
#8		#18		
21+10±	2.4 × 2.3	45+50±	3.8 × 2.3	CONCRETE
#9		#19		IS THIS A SERVICE? NOT PATCHED OCT 23-45
21+75±	2.6 × 2.7	46+80	2.8 × 3.7	
#10				
23+62±	2.1 × 3.7			

Oct 20, 1945

ASPHALT BASE IN PLACE - HIGHLAND AVE.

108+57	6.3		110+00	5.7	
+70	6.4		+25	5.6	
+80	6.6		+50	5.6	
+90	8.0		+75	5.6	
109+00	7.5		111+00	5.8	
+10	6.0		+25	6.0	
+25	5.7		+50	6.0	
+50	6.8		+75	5.7	
+75	6.3		112	6.0	
112+25	5.8				
+50	6.0				
+75	6.0				
113+00	6.0				
+25	5.7				
+50	5.8				
+75	5.8				
114+00	5.8				
114+07	5.7	END OF ASPHALT BASE IN PLACE - OCT. 20-45			

Use 36" from ℄ pipe to top conc. floor in G.V. chambers, providing this gives 6½ feet in the clear. By verbal orders - Mr. Brown. June 27-45

15.5
9.75
9.90

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½

For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	25.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52,6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

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