498

Return to City Engineers Office
City Hall, San Diego, Cal.

400

LEVEL

F.B. 498

Return to City Engineers Office
City Hall, San Diego, Cal.

Published by H. S. Crocker Company, Stationers, Drawing Materials, and Mathematical Instruments, San Francisco.

Table showing the difference of latitude and departure in running 80 chains at any course from 1 to 60 minutes.

MINUTES.	LKS.	MINUTES.	LKS.	MINUTES.	LKS.
1	2⅓	21	49	41	95⅔
2	4⅔	22	51⅓	42	98
3	7	23	53⅔	43	100⅓
4	9⅓	24	56	44	102⅔
5	11⅔	25	58⅓	45	105
6	14	26	60⅔	46	107⅓
7	16⅓	27	63	47	109⅔
8	18⅔	28	65⅓	48	112
9	21	29	67⅔	49	114⅓
10	23⅓	30	70	50	116⅔
11	25⅔	31	72⅓	51	119
12	28	32	74⅔	52	121⅓
13	30⅓	33	77	53	123⅔
14	32⅔	34	79⅓	54	126
15	35	35	81⅔	55	128⅓
16	37⅓	36	84	56	130⅓
17	39⅔	37	86⅓	57	133
18	42	38	88⅔	58	135⅓
19	44⅓	39	91	59	137⅔
20	46⅔	40	93⅓	60	140

MICROFILMED DEC 1964

TABLE FOR RUNNING ON SLOPES.

In the following table the first column shows the angle, the second the number of links to be added to a chain on the slopes, to make one chain, horizontal measurement.

ANGLE	COR. IN LINKS	ANGLE	COR. IN LINKS	ANGLE	COR. IN LINKS	ANGLE	COR. IN LINKS
°		°		°		°	
4	0.24	11	1.88	18	5.14	25	10.54
5	0.38	12	2.24	19	5.76	26	11.26
6	0.55	13	2.63	20	6.42	27	12.24
7	0.76	14	3.06	21	7.11	28	13.37
8	0.98	15	3.53	22	7.85	29	14.34
9	1.24	16	4.02	23	8.64	30	15.47
10	1.55	17	4.56	24	9.47	35	22.07

Crocker Quality

LEVEL BOOK

No. 400

COMMUNI CONSENSU PRIMO TRADE MARK

MANUFACTURED BY

A. S. Crocker Co.

SAN FRANCISCO
and
SACRAMENTO

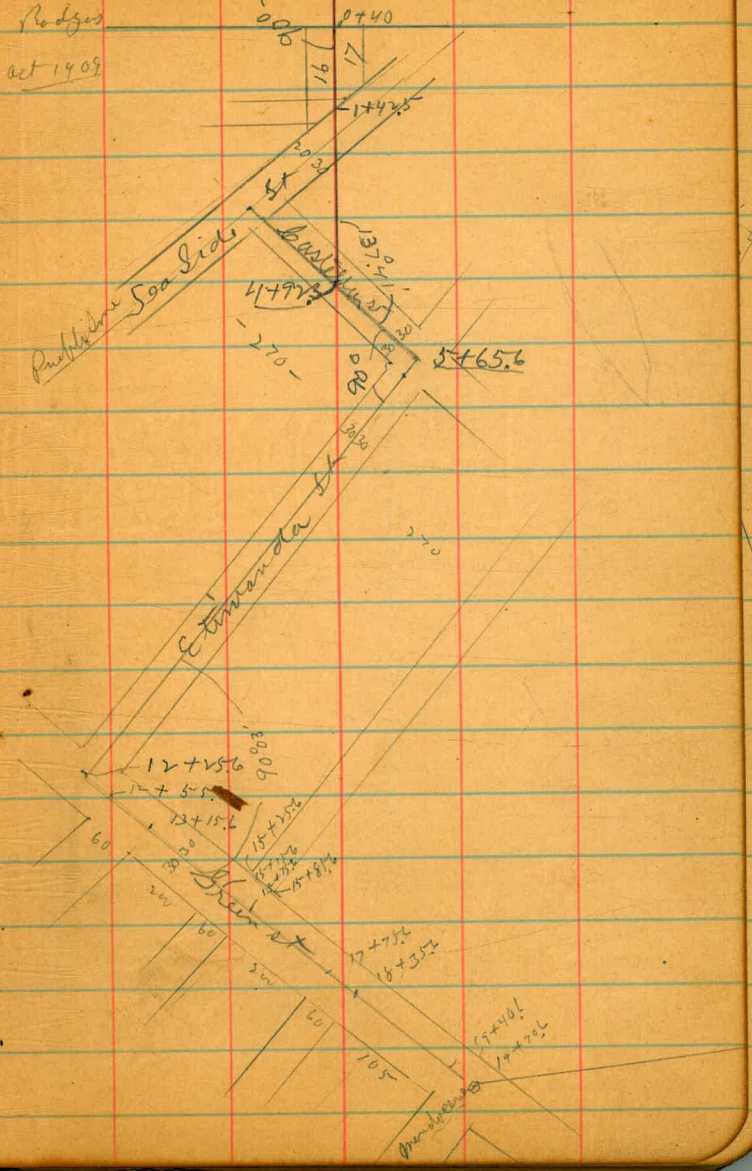
Change of Line
of
Point Loma Blvd
from
Ocean Beach Park
to
Loma Alta No 2

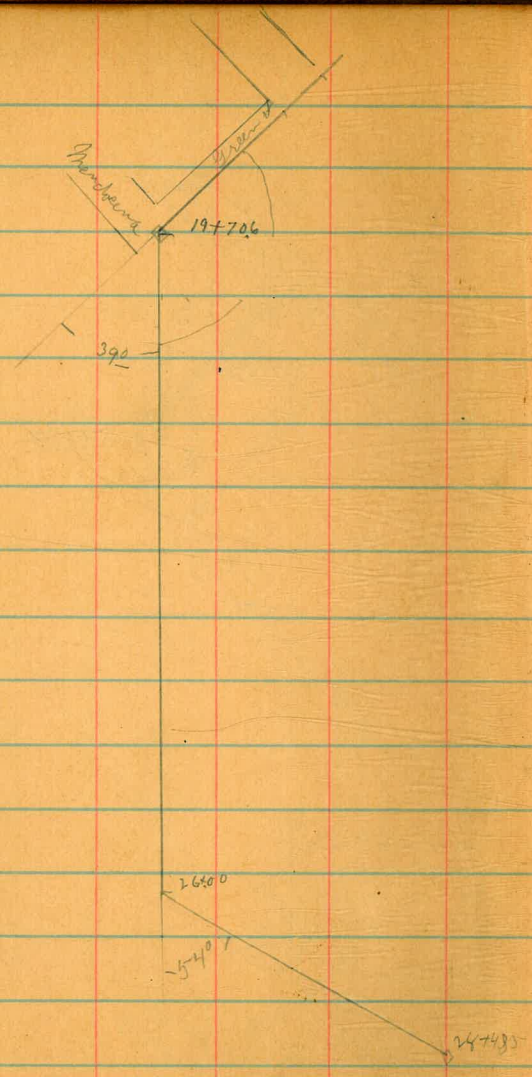
Clough
Donnan
Rodgers

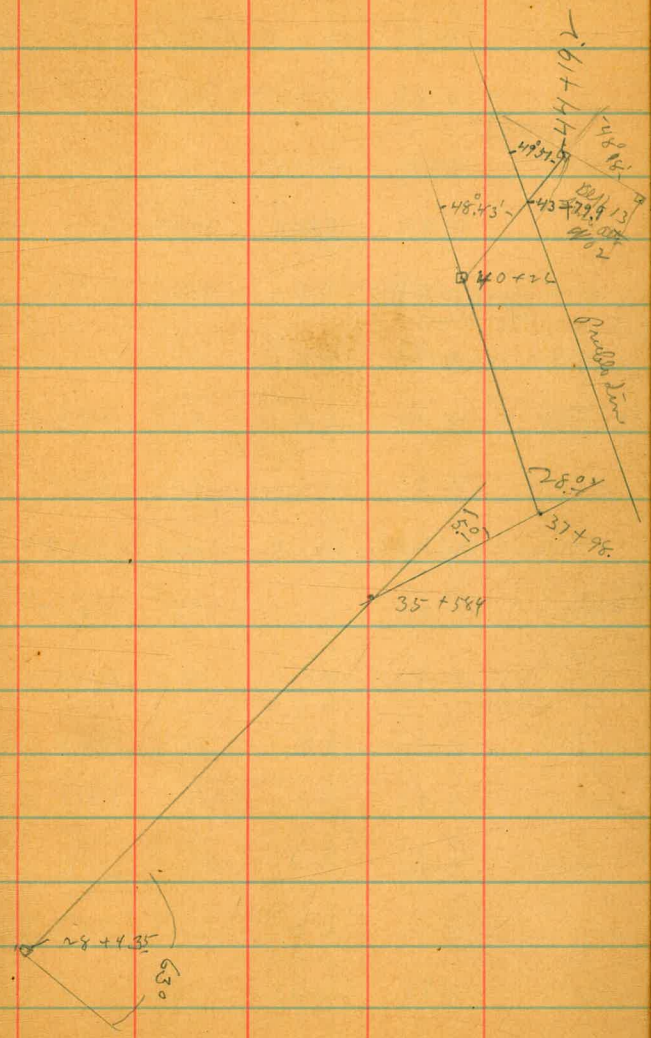
act 1909

W Point Loma Blvd

1




Mendocina
Green
19+70.6
39.0
26+00
54°
24+43.5


44+19.2
49°51'
48°18'
48°43'
43+79.9
40+26
Pueblo Sin
28.0
37+98
15.0
35+58.4
28+4.35
63°

Clough
Dorman
Rodgers
Oct 09

— Levels for —

Profile for change of
Butvd from AB Park
to Soma Alta No 2

POSTED

	1.95	44.95		43.00	Bm Grade Stake
	5.85	38.27	12.54	32.41	Bm
00 = Center of Blvd at Sat 16+17			11.0	27.3	
+40 = Sats 16+17			11.1	27.2	
+50			9.5	28.8	
1			7.4	30.9	
+42.5 = W Line of Sea Side st			5.9	32.4	
+50			5.6	32.7	
2			4.4	33.9	
+50			4.5	33.8	
3			4.2	34.1	
+50			3.7	34.6	
4			3.0	35.3	
TP	6.69	42.57	2.39	35.88	
+50			6.7	35.9	

42.57

+92.3 = Center of Castellar st			6.8	35.8
5			7.6	35.0
+50			12.5	30.1
+65.6 = Center of Elwanda + Castellar st			14.3	28.3
6			6.7	35.9
+50			3.4	39.2
7			3.1	39.5
+50			3.2	39.4
TP	4.10	44.15	2.52	40.05
8			5.0	39.2
+50			4.9	39.3
9			4.8	39.4
+50			4.6	39.6
10			4.7	39.5
+50			4.2	40.0
11			4.7	39.5
+50			5.0	39.2
TP	12.64	52.58	4.18	39.97

POSTED

		52.58		
12			13.3	39.3
12+25.6 = bent of Green & Elowanda			13.3	39.3
12+55.6 = W2 of			12.6	40.0
13+15.6 = E2 of			10.6	42.0
13+50			8.8	43.8
14			5.7	47.5
+50			1.3	51.3
TP	12.88	65.46	0.0	52.58
15			9.7	55.8
+15.6 = W2 of			8.3	57.2
+25.6 = W2 of			7.7	57.8
+75.6 = E2			4.2	61.3
+85.6 = E2 of			3.4	62.1
16			2.1	63.4
TP	12.17	77.46	0.17	65.29
16+50			10.6	66.9
17			7.6	69.9
+50			5.3	72.2

		77.46		
17+75.6 = W2 of			4.7	72.8
18+35.6 = E2 of			4.4	73.1
+50			4.9	72.6
19			7.7	69.8
+40.6 = W2 of			9.3	68.2
+70.6 = bent of Green & Mendolera			10.7	66.8
20			10.4	67.1
TP	+.05	64.68	12.78	64.73
+50			0.8	63.9
21			4.1	60.6
+50			8.7	56.0
TP	0.06	51.73	13.01	51.67
22			0.8	51.0
+50			10.0	41.7
TP	0.08	38.95	12.86	38.87
23			5.6	33.3
+50			10.9	28.0
TP	.01	26.01	12.95	26.00
24			3.0	23.00
+50			6.6	19.4
25			10.5	15.5

		2601		
25+50			12.8	13.2
TP	4.49	17.44	13.02	12.95
26	= angle		9.3	8.1
+50			11.3	6.1
27			14.3	3.1
+50			11.2	6.2
28			7.5	9.9
+435	= angle		4.8	12.6
29			7.6	9.8
+50			8.3	9.1
30			8.5	8.9
+50			8.8	8.6
31			9.0	8.4
+50			8.3	9.1
TP	8.89	18.68	7.55	9.89
32			12.60	6.1
+50			15.6	3.1
33			15.3	3.4
+50			15.7	3.0

		1868		
34			13.5	5.2
+50			9.2	9.5
35			5.7	13.0
+584	= angle		3.0	15.7
36			3.1	15.6
+50			7.9	10.8
37			8.8	9.9
+50			5.6	13.1
+98	= angle		4.0	14.7
TP	T 1241	31.09	00	18.68
38+50			12.4	18.7
39			8.9	22.2
+50			5.6	27.5
TP	959	37.38	3.30	27.79
40			7.9	29.5
+26	= angle		6.8	30.5
+50			5.4	32.0
41			9.1	28.3
+50			11.3	26.1
42			12.6	24.8

3738

42+50		15.0	22.4	
43		13.4	24.0	
+50		13.7	23.7	
44799 = Pueblo Sin		11.4	26.0	
44		10.3	27.1	
+19.2 = NW bar Blk 13		8.77	28.61	+ NW for B 13 Table 2

POSTED

A-section Stephens St Lewis To N. L. of 5/9/10 Dunkle
Getti & Ft. Stockton Drive Shaw
Stephens 50' wide 5 1/4's
B.M. Con. Mon. Stephens & Lewis 276.36 Evans

B.M.	2.26	278.62			
		S.L. Lewis			
E			2.5	276.1	
crb			3.0		
1/4			3.2		
M			3.5	275.1	
1/4			3.5		
crb			3.4		
W			2.4	276.2	
		0+25 S. of Lewis			
W			3.8	274.8	
crb			4.2		
1/4			4.1		
M			4.0	274.6	
1/4			4.3		
crb			5.0		
+7			5.0		
E			4.4	274.2	

		0+50			
E			5.1	273.5	
+2			6.2		
crb			6.7		
1/4			6.6		
M			5.3	273.3	
1/4			5.7		
crb			6.4		
W			4.9	273.7	
		0+75			
W			6.8	271.8	
crb			7.3		
1/4			7.3		
M			6.5	272.1	
1/4			7.5		
crb			7.6		
E			7.3	271.3	

		278.62			
		1+0			
E			8.0	270.6	
crb			8.3		
1/4			8.3		
M			7.8	270.8	
1/4			8.5		
crb			8.0		
W			8.5	270.1	
		1+25			
W			8.7	269.9	
crb			8.3		
1/4			7.7		
M			8.2	270.4	
1/4			6.7		
crb			7.8		
E			7.8	270.8	

		1+50			
E			6.9	271.7	
crb			7.2		
1/4			7.2		
M			7.8	270.8	
1/4			8.0		
crb			8.2		
W			8.1	270.5	
		1+75			
W			8.0	270.6	
crb			7.9		
1/4			7.3		
M			7.2	271.4	
1/4			6.8		
crb			6.8		
E			6.9	272.2	

	278.62			
	270			
E		7.3	271.3	
crb		7.5		
"4		7.4		
M		8.0	270.6	
"4		8.3		
crb		8.8		
W		8.5	270.1	
	275			
W		9.7	268.9	
crb		9.7		
"4		9.4		
M		9.2	269.4	
"4		8.7		
crb		8.8		
E		8.1	270.5	

	278.62			
	250			
E		9.6	269.0	
crb		9.9		
"4		9.9		
M		10.4	268.2	
"4		10.7		
crb		10.7		
W		11.2	267.4	
274.7 = N.L. Gatti & Ft Stockton Drive				
W		12.1	266.5	
Crb		11.5		
"4		11.3		
M		10.4	268.2	
"4		10.0		
Crb		10.3		
E		10.6	268.0	

x-section Sicard from Kearney to 28th
" 60' wide 5 1/4's

5/4/10 Dunkle
Shaw
Evans

B.M. S. cor Julian & Sicard				73.00	
B.M.	3.25	76.25			
	E. L. Kearney				
S			9.6	66.7	
crb			9.8	66.5	
1/4			10.1	66.2	
M			9.5	66.8	
1/4			9.7	66.6	
crb			9.0	67.3	
N			8.0	68.3	
		0+25 E			
N			8.5	67.8	
crb			9.0	67.3	
1/4			9.0	67.3	
M			9.1	67.2	
1/4			9.2	67.1	
crb			9.2	67.1	
S			9.2	67.1	

		0+50			
S			8.8	67.5	
crb			8.8	67.5	
1/4			8.6	67.7	
M			8.6	67.7	
1/4			8.5	67.8	
crb			8.4	67.9	
N			7.9	68.3	
		0+75			
N			7.6	68.7	
crb			7.9	68.4	
1/4			8.1	68.2	
M			8.2	68.1	
1/4			8.3	68.0	
crb			8.4	67.9	
S			8.3	68.0	

76.8

1+0		
S	7.7	68.6
crb	8.3	68.0
1/4	8.2	68.1
M	8.1	68.2
1/4	7.7	68.6
crb	7.7	68.6
N	7.4	68.9
1+25		
N	6.8	69.5
crb	6.9	69.4
1/4	7.0	69.0
M	7.5	68.8
1/4	7.7	68.6
crb	7.7	68.6
S	6.8	69.5

1+50		
S	6.9	69.4
crb	7.2	69.1
1/4	7.3	69.0
M	6.6	69.7
1/4	6.5	69.8
crb	6.4	69.9
N	6.3	70.0
1+75		
N	5.6	70.7
crb	5.9	70.4
1/4	6.4	69.9
M	6.4	69.9
1/4	6.6	69.7
crb	6.1	70.2
S	6.1	70.2

76.3

2+0

S	5.4	70.9
Crk	5.6	70.7
1/4	6.2	70.1
M	6.0	70.3
1/4	5.9	70.4
Crk	5.7	70.6
+5	5.5	70.8
+6	5.0	71.3
N	4.7	71.6

2+25

N	4.4	71.9
+ 3	4.4	71.9
+ 4	5.0	71.3
Crk	5.0	71.3
1/4	5.6	70.7
M	5.6	70.7
1/4	5.7	70.6
Crk	5.2	71.3
S	4.8	71.5

2+50

S	4.4	71.9
Crk	4.8	71.5
1/4	5.0	71.3
M	5.1	71.2
1/4	5.1	71.2
Crk	4.7	71.6
+7	4.5	71.8
+8	3.9	72.4
N	3.7	72.6

2+75

N	2.9	73.4
+2	2.9	73.4
+3	3.9	72.4
Crk	4.2	72.1
1/4	4.7	71.6
M	4.6	71.7
1/4	4.8	71.5
Crk	4.5	71.8
S	4.0	72.3

76.3

3+0 = W.L. Julian graded

S	3.3	73.0
crb	3.6	72.7
1/4	4.4	71.9
M	3.7	72.6
1/4	4.2	72.1
+2	4.6	71.7
crb	3.6	72.7
N	2.7	73.6

E.L. Julian

N	2.5	73.8
crb	2.8	73.5
1/4	3.3	73.0
M	3.1	73.2
1/4	3.6	72.7
crb	3.0	73.3
S	2.4	73.9

0+25 E of Julian

S	2.1	74.2
crb	3.1	73.2
1/4	3.6	72.7
M	3.4	72.9
1/4	3.2	73.1
crb	2.7	73.6
N	1.6	74.7

0+50 E

N	1.9	74.4
crb	2.7	73.6
1/4	3.6	72.7
M	3.4	72.9
1/4	3.6	72.7
crb	3.4	72.9
S	2.5	73.8

76.3

0+75

0	3.0	73.3
crb	3.4	72.9
1/4	3.5	72.8
M	3.4	72.9
1/4	3.1	73.2
crb	2.6	73.7
+8	2.2	74.1
N	0.9	75.4

1+0

N	1.6	74.7
+3	2.7	73.6
crb	2.8	73.5
1/4	3.0	73.3
M	3.3	73.0
1/4	3.5	72.8
crb	3.4	72.9
5	3.0	73.3

1+25

5	3.7	72.6
crb	3.7	72.6
1/4	3.7	72.6
M	3.3	73.0
1/4	3.1	73.2
crb	2.8	73.5
+7	2.7	73.6
N	2.0	74.3

1+50

N	1.4	74.9
crb	3.0	73.3
1/4	3.2	73.1
M	3.3	73.0
1/4	3.4	72.9
crb	3.6	72.7
5	3.7	72.6

		76.25			
		1+75			
S			3.5	72.8	
crb			3.4	72.9	
1/4			3.4	72.9	
M			3.5	72.8	
1/4			3.3	73.0	
crb			3.2	73.1	
N			2.3	74.0	
		2+0			
N			2.5	73.8	
crb			2.9	73.4	
1/4			3.1	73.2	
M			3.2	73.1	
1/4			3.3	73.0	
crb			3.3	73.0	
S			3.3	73.0	
T.P.	10.15	83.38	3.02	73.23	

		2+25			
S			10.2	73.2	
crb			10.2	73.2	
1/4			10.2	73.2	
M			10.0	73.4	
1/4			9.9	73.5	
crb			9.8	73.6	
N			9.6	73.8	
		2+50			
N			9.4	74.0	
crb			9.7	73.7	
1/4			9.8	73.6	
M			9.9	73.5	
1/4			10.1	73.3	
crb			10.0	73.4	
S			10.0	73.4	

83.4

2+90

S	9.1	74.3
crb	9.2	74.2
1/4	9.2	74.2
M	9.3	74.1
1/4	9.4	74.0
crb	9.1	74.3
N	8.9	74.5

3+0 = W.L. Irving graded

N	6.7	76.7
crb	7.1	76.3
1/4	7.5	75.9
M	6.9	76.5
1/4	8.2	76.2
crb	6.9	76.5
S	6.7	76.7

E.L. Irving

S	5.3	78.1
crb	6.0	77.4
1/4	6.6	76.8
M	6.0	77.4
1/4	6.3	77.1
crb	5.8	77.6
N	5.5	77.9

0+25 E

N	4.1	79.3
crb	5.1	78.3
1/4	5.6	77.8
M	5.5	77.9
1/4	5.8	77.6
crb	5.8	77.6
S	4.7	78.7

		83.38		
		0+50 E		
S			4.3	78.1
crb			4.8	77.6
1/4			4.8	77.6
M			4.4	79.0
1/4			4.4	79.0
crb			4.2	79.2
N			3.2	80.2
		0+75		
N			2.0	81.4
crb			3.3	80.1
1/4			3.7	79.7
M			3.4	80.0
1/4			3.5	79.9
crb			3.6	79.8
S			3.5	79.9

		1+0		
S			2.6	81.8
crb			2.7	81.7
1/4			2.5	81.9
M			2.5	81.9
1/4			2.7	81.7
crb			2.3	81.1
N			1.4	82.0
		1+25		
N			0.7	82.7
crb			1.3	82.1
1/4			1.2	82.2
M			1.3	82.1
1/4			1.6	81.8
crb			1.3	82.1
S			1.5	81.9
T.P.	8.81	90.76	1.43	81.95

90.8

1+50		
S	7.9	82.9
crb	7.8	83.0
1/4	7.4	83.4
M	7.5	83.3
1/4	7.1	83.7
crb	7.2	83.6
N	7.3	83.5
1+75		
N	6.5	84.3
crb	6.8	84.0
1/4	7.1	83.7
M	6.8	84.0
1/4	6.9	83.9
crb	7.0	83.8
S	7.2	83.6

2+0		
S	6.7	84.1
crb	6.4	84.4
1/4	6.5	84.3
M	5.8	85.0
1/4	6.1	84.7
crb	6.5	84.3
N	6.3	84.5
2+25		
N	5.4	85.4
crb	5.0	85.8
1/4	4.9	85.9
M	5.6	85.2
1/4	6.1	84.7
crb	6.2	84.6
S	6.3	84.3

90.8

2+50

S	5.8	85.0
crb	5.7	85.1
1/4	5.6	85.2
M	5.6	85.2
1/4	5.1	85.7
crb	5.1	85.7
N	5.1	85.7

2+75

N	4.6	86.2
crb	5.0	85.8
1/4	5.1	85.7
M	5.2	85.6
1/4	5.1	85.7
crb	5.1	85.7
S	5.2	85.6

3+0 = W.L. Harrison graded

S	4.8	86.0
crb	5.1	85.7
1/4	5.3	85.5
M	4.7	86.1
1/4	5.0	85.8
crb	4.5	86.3
N	4.5	86.3

E.L. Harrison

N	2.9	87.9
crb	3.4	87.4
1/4	3.8	87.0
M	3.8	87.0
1/4	4.3	86.5
crb	3.8	87.0
S	3.7	87.1
	3.76	crb. struck

90.8

0+25' E. of Harrison

E	3.9	86.9
crb	4.0	86.8
"/4	3.8	87.0
M	3.6	87.2
"/4	3.1	87.7
crb	2.9	87.9
N	2.4	88.4

0+50

N	2.3	88.5
crb	3.0	87.8
"/4	3.2	87.6
M	3.9	86.9
"/4	4.2	86.6
crb	4.3	86.5
S	4.5	86.3

0+75

S	4.4	86.4
crb	4.4	86.4
"/4	4.2	86.6
M	3.8	87.0
"/4	3.5	87.3
crb	3.5	87.3
N	3.1	87.7

1+0

N	2.7	88.1
crb	3.1	87.7
"/4	3.2	87.6
M	3.6	87.2
"/4	4.0	86.8
crb	4.1	86.7
S	4.3	86.5

90.8

1+25

S	3.7	87.1
crb	3.6	87.2
1/4	3.7	87.1
M	3.5	87.3
1/4	3.5	87.3
crb	3.5	87.3
N	3.5	87.3

1+50

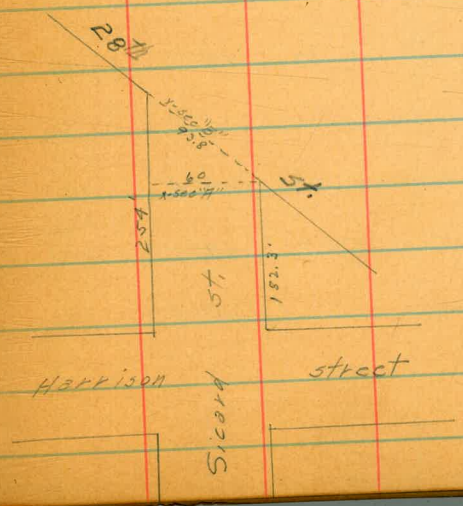
N	3.0	87.8
crb	3.1	87.7
1/4	3.1	87.7
M	3.1	87.7
1/4	3.1	87.7
crb	3.1	87.7
S	3.1	87.7

1+82.3 = x-sec "A"

S	3.4	87.4
crb	3.4	87.4
1/4	3.3	87.5
M	3.3	87.5
1/4	3.2	87.6
crb	3.2	87.6
N	2.9	87.9

x-section "B"

N	1.9	88.9
crb	2.3	88.5
1/4	2.5	88.3
M	2.6	88.2
1/4	3.3	87.5
crb	3.3	87.5
S	3.4	87.4



x-section Brant St UPas to Spruce 5/11/10 Dunkle
" " 80' wide 5' 1/4 Shaw

B.M. Plg Walnut & First 250.90 Evans

B.M.	1.92	252.82			
T					
T.P.	5.49	250.74	7.57	245.25	
	S.L. UPas				
E			6.6	244.1	
Crb			6.7	244.0	
1/4			6.7	244.0	
M			7.2	243.5	
1/4			7.6	243.1	
Crb			7.7	243.0	
W			8.1	242.6	
	0+25 S of UPas				
W			8.5	242.2	
Crb			7.9	242.8	
1/4			7.6	243.1	
M			7.1	243.6	
1/4			6.3	244.4	
Crb			6.6	244.1	
E			6.2	244.5	

		250.74			
		0+50			
E			6.1	244.6	
Crb			6.5	244.2	
1/4			6.9	243.8	
M			7.0	243.7	
1/4			7.8	242.9	
Crb			8.2	242.5	
W			8.9	241.8	
		0+75			
W			8.5	242.2	
Crb			8.1	242.6	
1/4			8.0	242.7	
M			7.2	243.5	
1/4			6.8	243.9	
Crb			6.6	244.1	
E			6.0	244.7	

	250.74			
	140			
E		5.6	245.1	
crb		6.3	244.4	
1/4		6.7	244.0	
M		7.3	243.4	
1/4		7.9	242.8	
crb		8.1	242.6	
W		8.4	242.3	
	1+25			
W		8.1	242.6	
crb		7.9	242.8	
1/4		7.8	242.9	
M		7.1	243.6	
1/4		6.3	244.4	
crb		5.9	244.8	
E		5.3	245.4	

	250.74			
	1+50			
E		5.1	245.6	
crb		5.8	244.9	
1/4		6.0	244.7	
M		6.7	244.0	
1/4		7.4	243.3	
crb		7.5	243.2	
W		7.8	242.9	
	1+75			
W		7.4	243.3	
crb		7.2	243.5	
1/4		7.1	243.6	
M		6.4	244.3	
1/4		5.7	245.0	
crb		5.4	245.3	
E		4.7	246.0	

	250.74		
	2+0		
E		4.3	246.4
crb		4.7	246.0
1/4		5.2	245.5
M		6.0	244.7
1/4		6.5	244.2
crb		6.8	243.9
W		7.0	243.7
	2+25		
W		6.4	244.3
crb		6.0	244.7
1/4		5.9	244.8
M		5.4	245.3
1/4		4.5	246.2
crb		4.3	246.4
E		3.9	246.8

	250.74		
	2+50		
E		3.5	247.2
crb		4.0	246.7
1/4		4.2	246.5
M		4.8	245.9
1/4		5.3	245.4
crb		5.3	245.4
W		5.8	244.9
	2+75		
W		5.3	245.4
crb		4.8	245.9
1/4		4.8	245.9
M		4.5	246.2
1/4		4.2	246.5
crb		4.2	246.5
E		3.8	246.9

250.74

3+0 = N.L. Thorn 80' wide

E	4.3	246.4
Crk	4.7	246.0
"4	4.7	246.0
M	4.8	245.9
"4	4.7	246.0
Crk	4.9	245.8
W	5.2	245.5

N. Crk

W	5.4	245.3
Crk	5.1	245.6
"4	5.0	245.7
M	4.7	246.0
"4	4.9	245.8
Crk	4.9	245.8
E	4.9	245.8

250.74

N "4

E	4.9	245.8
Crk	5.1	245.6
"4	5.1	245.6
M	4.9	245.8
"4	5.1	245.6
Crk	5.2	245.5
W	5.4	245.3

Center

W	5.5	245.2
Crk	5.5	245.2
"4	5.4	245.3
M	5.4	245.3
"4	5.6	245.1
Crk	5.6	245.1
E	5.4	245.3

250.74

5 1/4

E	6.0	244.7
Crb	5.8	244.9
1/4	5.8	244.9
M	5.6	245.1
1/4	5.7	245.0
Crb	5.6	245.1
W	5.9	244.8

5. Curb

W	6.0	244.7
Crb	5.8	244.9
1/4	5.7	245.0
M	5.7	245.0
1/4	6.0	244.7
Crb	5.9	244.8
E	6.0	244.7

250.74

5. L. Thorn

E	6.3	244.4
Crb	6.2	244.5
1/4	6.2	244.5
M	6.1	244.6
1/4	5.8	244.9
Crb	6.0	244.7
W	6.2	244.5

0+25 5. of Thorn

W	6.7	244.0
Crb	6.5	244.2
1/4	6.6	244.1
M	6.6	244.1
1/4	6.5	244.2
Crb	6.4	244.3
E	6.6	244.1

	250.74		
	0+50		
E		7.4	243.3
Crb		7.3	243.4
1/4		7.4	243.3
M		7.2	243.5
1/4		7.4	243.3
Crb		7.7	243.0
W		7.6	243.1
	0+75		
W		8.9	241.8
Crb		8.2	242.5
1/4		8.1	242.6
M		7.9	242.8
1/4		8.0	242.7
Crb		8.0	242.7
E		8.1	242.6

	250.74		
	1+0		
E		9.0	241.7
Crb		8.8	241.9
1/4		8.8	241.9
M		8.7	242.0
1/4		8.9	241.8
Crb		8.8	241.9
W		9.1	241.6
	1+25		
W		9.4	241.3
Crb		9.5	241.2
1/4		9.5	241.2
M		9.4	241.3
1/4		9.3	241.4
Crb		9.3	241.3
E		9.9	240.8

		250.74		
		1+50		
E			10.3	240.4
crb			10.1	240.6
"4			10.1	240.6
M			10.3	240.4
"4			10.5	240.2
crb			10.4	240.3
W			10.2	240.5
		1+75		
W			10.7	240.0
crb			11.4	239.3
"4			11.4	239.3
M			11.1	239.6
"4			10.8	239.9
crb			10.8	239.9
E			10.7	240.0
T.P.	1.81	241.61	10.94	239.80

		241.61		
		2+0		
E			2.6	239.0
crb			2.4	239.2
"4			2.3	239.3
M			2.7	238.9
"4			3.6	238.0
crb			3.5	238.1
W			2.6	239.0
		2+25		
W			4.1	237.5
crb			5.2	236.4
"A			5.2	236.4
M			4.1	237.5
"4			4.0	237.6
crb			4.0	237.6
E			4.7	236.9

		241.61		
		2+50		
E			7.3	234.3
Crb			7.0	234.6
1/4			7.1	234.5
M			7.0	234.6
1/4			8.0	233.6
Crb			7.9	233.7
W			6.9	234.7
		2+75		
W			10.1	231.5
Crb			10.9	230.7
1/4			10.6	231.0 (5.4)
M			9.9	231.7 (5.4)
1/4			10.2	231.4
Crb			10.9	231.2 (5.8)
E			10.5	230.8 (6.0)
T.P.	2.41	233.18	10.84	230.77

		233.18		
		3+0 - N.L. SPRUCE St.		
E			11.9	221.3 (5.3)
Crb			9.7	223.5 (5.0)
1/4			9.2	224.0 (5.6)
M			7.2	226.0
1/4			4.3	228.9 (4.6)
Crb			4.6	228.6 (5.0)
W			5.6	227.6 (5.3)

Section 8th St Penn to Brookes & Brookes 8th to 9th 5/14/10 Dunkle Shane Evans.
" " 50' wide 5 1/4

B.M. P/g Penn & Brookes				286.86
	2.89	289.75		
T.P.	1.07	280.95	9.87	279.88
T.P.	4.05	273.94	11.06	269.89
	5.10	274.90	4.14	269.80
		S.L. Penn.		
E			5.6	269.3
crb			5.9	
+1			6.2	
1/4			5.9	
M			6.0	268.9
1/4			6.5	
crb			6.9	
W			6.5	268.4
		0+25 S		
W			5.4	269.5
crb			5.7	
+1			6.2	
1/4			5.6	
M			5.2	269.7
1/4			5.3	
+4			5.5	
Crb			4.9	
E			4.8	270.1

	274.90			
	0+50			
E		4.1	270.8	
crk		4.4		
+1		5.0		
"9		4.6		
M		4.5	270.4	
"9		4.5		
+4		4.9		
crk		4.5		
W		4.9	270.0	
	0+75			
W		4.6	270.3	
crk		4.3		
+1		4.7		
"9		4.1		
M		4.0	270.9	
"9		4.1		
+4		4.1		
crk		3.8		
E		3.7	271.2	

	274.90			
	1+0			
E		3.4	271.5	
crk		3.5		
+1		4.0		
"9		3.9		
M		3.8	271.1	
"9		4.2		
+4		4.5		
crk		4.2		
W		4.5	270.4	
	1+25			
W		4.0	270.9	
crk		4.0		
+1		4.4		
"9		4.1		
M		3.7	271.2	
"9		3.9		
+4		4.0		
crk		3.6		
E		3.3	271.6	

	274.9			
	1+50			
E		3.5	271.4	
crk		3.5		
+1		4.3		
1/4		4.1		
M		3.7	271.2	
1/4		4.3		
+4		4.6		
crk		4.1		
W		4.2	270.7	
	1+75			
W		4.2	270.7	
crk		4.1		
+1		4.6		
1/4		4.2		
M		3.7	271.2	
1/4		4.0		
+4		4.3		
crk		3.6		
E		3.6	271.3	

	274.9			
	2+0			
E		3.7	271.2	
crk		3.7		
+1		4.5		
1/4		4.3		
M		3.9	271.0	
1/4		4.4		
+4		4.8		
crk		4.2		
W		4.4	270.5	
	2+25			
W		4.4	270.5	
crk		4.4		
+1		5.0		
1/4		4.7		
M		4.3	270.6	
1/4		4.4		
+4		4.7		
crk		4.1		
E		4.1	270.8	

		274.9		
		2+50		
E			4.3	270.6
crb			4.4	
+1			5.0	
"				
"/4			4.9	
M			4.5	270.4
"/4			4.9	
+4			5.3	
crb			4.7	
W			4.7	270.2
		2+91 = sec A see Page 32		
W			6.4	268.5
crb			5.9	
"/4			5.8	
M			5.9	269.0
"/4			6.0	
+2			5.9	
+3			4.6	
crb			4.5	
E			4.3	270.6

		274.9		
		sec "B"		
E			4.5	270.4
crb			4.8	
"/4			4.8	
+1			6.2	
M			6.3	268.6
"/4			6.0	
crb			6.1	
W			6.4	268.5
		0+25 s of "B"		
W			7.0	267.9
crb			7.3	
"/4			7.3	
M			7.7	267.2
+2			7.4	
+4			5.7	
"/4			5.7	
crb			5.4	
E			5.2	269.7

	274.90			
	sec "C"			
E		6.8	268.1	
crb		7.4		
"4		7.8		
+6		10.9		
M		10.9	264.0	
"4		10.3		
crb		10.1		
W		9.7	265.2	
	sec "D"			
W		11.1	263.8	
crb		11.4		
"4		11.5		
M		11.8	263.1	
+5		11.3		
"4		8.2		
crb		7.2		
E		6.8	268.1	

	0+27.5 of "D"			
E		11.5	263.4	
crb		11.4		
"4		11.2		
M		12.2	262.7	
+5		14.6		
"4		14.7		
crb		14.6		
W		14.6	260.3	
T.P.	3.38	265.34	12.94	261.96
	0+50.5 of "D"			
W		7.6	257.7	
crb		8.1		
"4		8.1		
+5		7.5		
M		4.9	260.4	
+4		2.4		
"4		1.9		
crb		1.7		
E		1.4	263.9	

265.34

0+75 of "D"

E		1.5	263.8
crk		1.8	
1/4		2.1	
+5		2.9	
M		6.1	259.2
+8		11.3	
1/4		11.6	
crk		11.3	
W		10.7	254.6

1-sec "E"

W		12.6	252.7
crk		13.1	
1/4		13.5	
+4		13.5	
M		7.0	258.3
+8		2.8	
1/4		2.4	
crk		1.9	
E		1.5	263.8

265.34

1-sec "E"

E		1.5	263.8
crk		2.2	
+3		2.7	
1/4		3.6	
M		9.3	256.0
+6		15.2	
1/4		15.0	
crk		14.9	
W		14.7	250.6
T.P.	1.55	258.29	8.60	256.74

1-sec "G"

W		11.8	246.5
crk		12.1	
1/4		12.5	
M		13.0	245.3
+2		9.2	
+5		6.1	
1/4		6.1	
crk		4.5	
E		1.6	256.7

258.29

x-sec "H"

E	1.6	256.7
cole	4.6	
"9	6.7	
+2	7.0	
+5	9.1	
+8	13.8	
M	13.9	244.4
"9	13.7	
cole	13.6	
W	13.7	244.6

x-sec "I"

W	17.1	241.2
cole	17.3	
"9	17.4	
M	18.1	240.2
+6	18.0	
"9	14.6	
+3	10.8	
Cole	10.2	
E	7.8	250.5

12.22

x-sec "J" N.L. Brookes

E			17.5	240.8 ~~244.8~~
Cole			17.7	
"9			19.9	
+3			21.1	
M			20.6	237.7
"9			19.0	
cole			18.5	
W			17.1	241.2
T.P.	0.60	246.57	12.32	245.97

x-sec "K"

N			5.6	241.0
T.P.	2.05	241.08	7.59	239.03
cole			4.0	
"9			6.5	
+5			8.6	
M			11.2	239.9
"9			16.8	
cole			17.4	
S			21.1	220.0

241.08

1-sec "L"

S	21.1	220.0
Crb	17.3	
"4	16.3	
M	9.5	231.6
+12	3.4	
"4	3.1	
Crb	2.8	
N	2.4	238.7

1-sec "M"

N	0.2	240.9
Crb	3.0	
"4	4.7	
+1	7.6	
M	7.8	233.3
"4	7.6	
+3	8.0	
Crb	9.1	
S	13.9	227.2

241.08

0+25 E of sec "M"

S	13.4	227.7
Crb	10.4	
"4	10.6	
M	11.2	229.9
+5	11.2	
+6	8.5	
"4	5.9	
Crb	4.3	
N	0.7	240.4

0+50 E of M

N	5.2	235.9
Crb	7.9	
"4	9.4	
+12	11.9	
M	14.8	226.3
"4	14.0	
Crb	13.8	
+5	13.3	
S	15.4	225.7

T.P.	2.13	231.85	11.36	229.72

231.85

0+75 E of M

S			10.5	221.4
+8			7.9	
Crk			8.1	
1/4			8.5	
M			9.5	222.4
+5			9.5	
+7			7.1	
1/4			5.2	
Crk			4.5	
N			1.4	230.5

1+0 E of "M"

N			7.5	224.4
Crk			10.0	
1/4			10.7	
+3			11.8	
T.P.	0.60	219.78	12.67	219.18
+5			1.7	
M			1.0	218.8
1/4			0.0	
+2			+0.2	
Crk			1.1	
S			4.8	215.0

219.78

1+25 E of M.

S	10.7	209.1
Crk	8.4	
1/4	6.4	
+7	3.9	
M	4.7	215.1
1/4	6.0	
+2	6.0	
+4	3.5	
Crk	3.0	
N	1.1	218.7

1+62.8 E of "M" = W.L. 9th St.

N	9.4	210.4
+3	9.9	
+4	11.8	
Crk	11.5	
1/4	11.1	
M	11.2	208.6
+3	11.1	
1/4	13.9	
Crk	14.4	
S	15.8	204.0

Blvd

Levels on Herbert St Robinson to Upas				5/18/10	Dunkle
" " 80 wide					Shaw
B.M. brass Plg Univ Ave & Univ Blvd.				301.73	Evans,
B.M.	3.23	304.96			
T.P.	3.34	302.14	6.16	298.80	
		S. L. Robinson			
W			8.0	294.1	
ctr			7.3	294.8	
E			7.2	294.9	
		0+25 S of Robinson			
E			7.2	294.9	
ctr			8.8	293.3	
W			10.7	291.4	
		0+50			
W			12.7	289.4	
ctr			9.6	292.5	
E			8.3	293.8	
		0+75			
E			9.0	293.1	
ctr			13.5	288.6	
W			17.4	284.7	
T.P.	5.46	294.75	12.85	289.29	

		294.75			
		1+0			
W			13.2	281.6	
ctr			16.4	278.4	
E			3.3	291.5	
		1+25			
E			6.3	288.5	
ctr			29.2	270.6	
W			13.0	281.8	
		1+50			
W			15.0	279.8	
ctr			30.3	264.5	
E			11.2	283.6	
T.P.	0.45	282.47	12.73	282.02	
		1+75			
E			8.6	273.9	
ctr			18.9	263.6	
W			3.7	278.8	

		282.47		
		2+0		
W			2.7	279.8
ctr			17.1	265.4
E			18.2	264.3
		2+25		
E			25.1	257.4
ctr			16.4	266.1
W			0.5	282.0
		2+50		
W			6.1	276.4
T.P.	0.88	270.77	12.58	269.89
ctr			6.9	263.9
E			17.2	253.6
		2+75		
E			20.6	250.2
ctr			14.0	256.8
W			3.2	267.6

		270.77		
		3+0 = N.L. Pennsylvania 80'		
W			11.1	259.7
ctr			19.7	251.1
E			18.0	252.8
		Center Penna		
E			19.8	251.0
ctr			22.4	248.4
W			19.9	250.9
		S.L. Penna.		
W			24.0	246.8
ctr			14.2	256.6
E			7.5	263.3
T.P.	12.84	253.19	0.42	270.35
		0+25 S		
E			8.9	274.3
ctr			18.9	264.3
W			27.4	255.8

		283.19		
		0+50		
W			19.3	263.9
ctr			8.8	274.4
E			0.2	283.0
T.P.	12.24	294.97	0.46	282.73
		0+75		
E			5.5	289.5
ctr			13.3	281.7
W			26.2	268.8
		1+0		
W			17.5	277.5
ctr			4.3	286.7
E			3.8	291.2
		1+25		
E			2.1	292.9
ctr			4.0	291.0
W			8.7	286.3

		294.97		
		1+50		
W			3.9	291.1
ctr			2.1	292.9
E			1.7	293.3
		1+75		
E			0.5	294.5
ctr			1.7	293.3
W			3.8	291.2
T.P.	3.84	296.82	1.99	292.98
		2+0		
W			5.4	291.4
ctr			3.9	292.9
E			2.0	294.8
		2+25		
E			2.6	294.2
ctr			3.8	293.0
W			6.2	290.6

296.82

2+50

W	6.7	290.1
ctr	4.0	292.8
E	3.1	293.7

2+75

E	2.8	294.0
ctr	4.0	292.8
W	7.7	289.1

3+0 = N.L. Cypress 80'

W	6.9	289.9
ctr	4.5	292.3
E	1.9	294.9

Center Cypress

E	3.3	293.5
ctr	5.5	291.3
W	6.8	290.0

296.82

S.L. Cypress.

W	7.4	289.4
ctr	5.3	291.5
E	2.6	294.2

0+25 S

E	2.4	294.4
ctr	5.7	291.1
W	8.4	288.4

0+50

W	8.4	288.4
ctr	6.2	290.6
E	3.4	293.4

0+75

E	4.2	292.6
ctr	6.7	290.1
W	8.8	288.0

296.82

	1+0		
W		9.0	287.8
Ctr		6.2	290.6
E		5.0	291.8
	1+25		
E		5.6	291.2
Ctr		6.4	290.4
W		8.5	288.3
	1+50		
W		7.3	289.5
Ctr		7.5	289.3
E		5.5	291.3
	1+75		
E		5.4	291.4
Ctr		6.2	290.6
W		6.7	290.1

296.82

	2+0		
W		5.9	290.9
Ctr		6.9	289.9
E		5.6	291.2
	2+25		
E		6.0	290.8
Ctr		6.4	290.4
W		5.1	291.9
	2+50		
W		5.0	291.8
Ctr		6.0	290.8
E		6.0	290.8
	2+75		
E		6.0	290.8
Ctr		5.1	291.7
W		4.7	292.1

		296.82		
	3+0 = N.L. Brookes 80'			
W			5.0	291.8
ctr			6.2	290.6
E			6.1	290.7
T.P.	3.22	295.08	4.96	291.86
	Center			
E			5.1	290.0
ctr			4.7	290.4
W			3.5	291.6
	S.L. Brookes			
W			3.6	291.5
ctr			5.2	289.9
E			6.2	288.9
	0+25 S			
E			6.8	288.3
ctr			5.5	289.6
W			3.8	291.3

		295.08		
	0+50			
W			4.4	290.7
ctr			6.1	289.0
E			7.4	287.7
	0+75			
E			8.1	287.0
ctr			6.8	288.3
W			4.5	290.6
	1+0			
W			4.8	290.3
ctr			7.1	288.0
E			9.0	286.1
	1+25			
E			9.9	285.2
ctr			7.6	287.5
W			5.0	290.1

		295.08		
		1+50		
W			5.0	290.1
ctr			7.5	287.6
E			12.7	282.4
		1+75		
E			15.9	279.2
ctr			7.6	287.5
W			4.9	290.1
		2+0		
W			5.0	290.1
ctr			7.5	287.6
E			17.7	277.4
		2+25		
E			20.2	274.9
ctr			8.6	286.5
W			6.5	288.6
T.P.	0.65	283.14	12.59	282.99

		283.14		
		2+50		
W			4.9	278.2
ctr			4.0	279.1
E			11.6	271.5
		2+75		
E			15.2	267.9
ctr			13.0	270.1
W			14.5	268.6
T.P.	0.99	271.43	12.70	270.44
	3+02	N.L. Myrtle 80		
W			9.2	262.2
ctr			7.1	264.3
E			7.9	265.5
	0+10	5.0 f. N.L. Myrtle		
E			8.4	263.0
ctr			9.8	261.6
W			13.0	258.4

		271.43		
		Center Myrtle		
W			4.7	266.7
ctr			2.6	268.8
E			4.1	267.3
T.P.	12.79	283.61	0.61	270.82
		S.L. Myrtle.		
E			5.9	279.7
ctr			3.9	279.7
W			7.8	275.8
		0+25 S		
W			5.1	278.5
T.P	11.10	294.31	0.40	283.21
ctr			5.1	286.2
E			9.3	285.0
		0+50		
E			7.0	287.3
ctr			6.3	288.0
W			13.7	280.6

		294.31		
		0+75		
W			11.4	282.9
ctr			5.8	288.5
E			5.1	289.2
		1+0		
E			4.4	289.9
ctr			5.5	288.8
W			9.9	284.4
		1+25		
W			8.5	285.8
ctr			6.0	288.3
E			4.3	290.0
		1+50		
E			4.6	289.7
ctr			5.9	288.4
W			7.5	286.8

294.31

1+75

W	5.6	288.7
ctr	5.6	288.7
E	3.9	290.4

2+0

E	4.2	290.1
ctr	4.9	289.4
W	5.0	289.3

2+25

W	4.2	290.1
ctr	4.4	289.9
E	4.2	290.1

2+50

E	3.6	290.7
ctr	3.7	290.6
W	3.3	291.0

294.31

2+75

W	3.0	291.3
ctr	3.3	291.0
E	3.2	291.1

3+0 = N.L. UP25

E	3.0	291.3
ctr	1.9	292.4
W	2.3	292.0

Levels on Albert St Robinson To UPBS 5/18/10 Drinkle
" " 80' wide Shaw
B.M. hub S.W. Herbert & Robinson 294.11 Evans

B.M.	4.59	298.70			
		S.L. Robinson			
E			5.5	293.2	
ctr			14.0	284.7	
W			26.5	272.2	
		0+25 S			
W			31.9	266.8	
ctr			18.1	280.6	
E			7.2	291.5	
		0+50			
E			8.1	290.6	
T.P.	2.48	288.44	12.74	285.96	
ctr			12.8	275.6	
W			25.5	262.9	
		0+75			
W			26.1	262.3	
ctr			14.9	273.5	
E.			1.4	287.0	

		288.44			
		1+0			
E			7.4	281.0	
T.P.	1.67	277.17	12.94	275.50	
ctr			9.6	267.6	
W			16.3	260.9	
		1+25			
W			15.4	261.8	
ctr			17.8	259.4	
E			0.8	276.4	
		1+50			
E			5.9	271.3	
ctr			20.6	256.6	
W			11.0	266.2	
		1+75			
W			10.0	267.2	
ctr			21.7	255.5	
E			11.0	266.2	

		277.17		
		2+0		
E			3.3	273.9
ctr			23.4	253.8
W			8.2	269.0
		2+25		
W			5.6	271.6
ctr			19.6	257.6
E			7.1	270.1
T.P.	12.93	286.45	3.65	273.52
		2+50		
E			35.8	250.7
ctr			26.2	260.3
W			10.7	275.8
		2+75		
W			8.0	278.5
ctr			25.1	261.4
E			37.3	249.2

		286.45		
		3+0 = N.L. Penna. 80'		
E			35.5	251.0
ctr			20.0	266.5
W			4.3	282.2
T.P.	5.27	290.50	1.22	285.23
		center		
W			3.8	286.7
ctr			18.5	272.0
E			34.6	255.9
		S.L. Penna		
E			30.1	260.4
ctr			14.9	275.6
W			2.1	288.4
		3+25 S		
W			2.3	288.2
ctr			12.3	278.2
E			27.4	263.1

		290.50		
		0+50		
E			29.3	261.2
ctr			12.7	277.8
W			4.4	286.1
T.P.	0.26	277.92	12.84	277.66
		0+75		
W			2.9	275.0
ctr			9.7	268.2
E			22.9	255.0
		1+0		
E			28.2	249.7
ctr			19.5	258.1
W			12.8	265.1
T.P.	1.32	266.24	13.00	264.92
		1+25		
W			10.1	256.1
ctr			16.5	249.4
E			21.8	244.4

		266.24		
		1+50		
E			24.9	241.3
ctr			24.1	242.1
W			18.9	247.3
T.P.	0.12	254.45	11.91	254.33
		1+75		
W			13.5	241.0
ctr			16.1	238.3
E			15.9	238.5
		2+0		
E			15.1	239.3
ctr			18.2	236.2
W			18.8	235.6
		2+25		
W			17.6	236.8
ctr			13.7	240.7
E			6.8	247.6
T.P.	12.67	266.51	0.61	253.84

		266.51		
		2+50		
E			10.2	256.3
ctr			21.5	245.0
W			25.9	240.6
		2+75		
W			23.1	243.4
ctr			15.4	251.1
E			2.9	263.6
T.P.	11.67	277.75	0.43	266.08
		370 = N.L. Cypress 80'		
E			5.7	272.1
ctr			19.2	258.6
W			28.2	249.6
		Center		
W			16.2	261.6
ctr			6.5	271.3
T.P.	12.75	289.92	0.58	277.17
E			4.9	285.0

		289.92		
		S.L. Cypress		
E			0.7	289.2
ctr			9.2	280.7
W			21.2	268.7
		0+25 S		
W			16.9	273.0
ctr			5.4	284.5
E			0.5	289.4
		0+50		
E			0.6	289.3
ctr			4.3	285.6
W			10.2	279.7
		0+75		
W			6.1	283.8
T.P.	8.39	293.58	4.73	285.19
ctr			6.9	286.7
E			4.8	288.8

	293.58		
	1+0		
E		4.0	289.6
ctr		7.3	286.3
W		7.7	285.9
	1+25		
W		6.3	287.3
ctr		6.7	286.9
E		4.3	289.3
	1+50		
E		4.6	289.0
ctr		5.9	287.7
W		5.6	288.0
	1+75		
W		4.5	289.1
ctr		5.0	288.6
E		4.4	289.2

	293.58		
	2+0		
E		4.4	289.2
ctr		4.4	289.2
W		3.9	289.7
	2+25		
W		3.4	290.2
ctr		3.9	289.7
E		4.1	289.5
	2+50		
E		3.5	290.1
ctr		3.4	290.2
W		3.5	290.1
	2+75		
W		3.7	289.9
ctr		3.3	290.3
E		3.5	290.1

		293.58		5/19/10	Drinkle Thurn Evans
	3+0 = N.L. Brookes 80'				
E			3.9	289.7	
ctr			3.8	289.8	
W			4.4	289.2	
	Center				
W			5.6	288.0	
ctr			4.7	288.9	
E			5.0	288.6	
	S.L. Brookes				
E			6.1	287.5	
ctr			5.5	288.1	
W			5.5	288.1	
T.P.	2.20	289.38	6.40	287.18	
		0+25 S			
W			3.5	285.9	
ctr			1.9	287.5	
E			2.9	286.5	

		289.38		
		0+50		
E			4.6	284.8
ctr			3.4	286.0
W			9.3	280.1
		0+75		
W			19.5	269.9
ctr			8.8	280.6
E			7.9	281.5
T.P.	0.83	277.43	12.78	276.60
		1+0		
E			3.9	273.5
ctr			9.0	268.4
W			16.7	260.7
		1+25		
W			23.9	253.5
ctr			18.8	258.6
E			7.2	270.2

		277.43			
		1+50			
E			7.4	270.0	
T.P.	0.57	265.15	12.85	264.55	
ctr			12.6	252.6	
W			18.0	247.2	
		1+75			
W			16.1	249.1	
ctr			14.2	251.0	
E			1.3	263.9	
		2+0			
E			7.3	257.9	
ctr			18.4	246.8	
W			10.3	254.9	
		2+25			
W			2.9	262.3	
ctr			12.8	252.4	
E			12.4	252.8	

		2+50			
E			10.7	254.5	
ctr			6.4	258.8	
T.P	12.37	276.69	0.83	264.32	
W			10.4	266.3	
		2+75			
W			2.1	274.6	
ctr			9.3	267.4	
E			13.9	262.8	
		3+0 = N.L. Myrtle		50'	
E			6.3	270.4	
T.P	12.25	287.91	1.03	275.66	
ctr			11.0	276.9	
W			9.2	278.7	
		center			
W			3.2	284.7	
ctr			2.8	285.1	
E			4.8	283.1	
T.P.	8.15	294.39	1.67	286.24	

294.39

S.L. Myrtle

E	6.4	288.0
ctr	7.3	287.1
W	8.1	286.3

0+25

W	7.7	286.7
ctr	6.6	287.8
E	5.9	288.5

0+50

E	5.2	289.2
ctr	6.4	288.0
W	7.3	287.1

0+75

W	6.9	287.5
ctr	6.2	288.2
E	5.5	288.9

294.39

1+0

E	5.5	288.9
ctr	5.9	288.5
W	6.5	287.9

1+25

W	6.0	288.4
ctr	5.1	289.3
E	5.1	289.3

1+50

E	4.8	289.6
ctr	5.1	289.3
W	5.5	288.9

1+75

W	5.1	289.3
ctr	4.9	289.5
E	4.0	290.4

	299.39		
	2+0		
E		4.5	289.9
ctr		5.3	289.1
W		5.5	288.9
	2+25		
W		5.8	288.6
ctr		5.7	288.7
E		5.1	289.3
	2+50		
E		5.8	289.1
ctr		6.3	288.1
W		6.2	288.2
	2+75		
W		7.0	287.4
ctr		6.5	287.9
E		5.6	288.8

	3+0 = N.L. UP25		
E		5.2	289.2
ctr		6.2	288.2
W		7.3	287.1

x-section Ivy st Fern to 600' E of 31st st, 5/19/20 Dunkle
" 80' wide 5' 1/4 3s Shaw
Evans.

B.M. N.E. 30th & Ivy R.R. spike 286.24

B.M.	2.97	289.21		
		E.L. Fern st		
S		289.2	8.1	281.1
crb			8.1	281.1
1/4			8.7	280.5
M			7.7	281.5
1/4			8.2	281.0
crb			8.0	281.2
N			7.2	282.0
		0+25 E		
N			8.9	280.3
crb			9.3	279.9
1/4			9.6	279.6
M			10.0	279.2
1/4			10.3	278.9
crb			10.3	278.9
S			10.3	278.9

		289.21		
		0+50 E		
S		289.2	11.3	277.9
crb			11.1	278.1
1/4			11.4	277.8
M			10.9	278.3
1/4			10.2	279.0
crb			10.0	279.2
N			9.8	279.4
T.P.	3.67	281.83	11.05	278.16
		0+75		
N		281.8	7.8	274.0
crb			8.6	273.2
1/4			8.6	273.2
M			6.0	275.8
1/4			6.0	275.8
crb			5.3	276.5
S			5.7	276.1

	281.83		
	1+0		
S	281.8	9.4	272.4
Crk		9.2	272.6
1/4		7.8	274.0
+16		7.9	273.9
M		10.7	271.1
+5		13.1	268.7
1/4		12.6	269.2
Crk		11.3	270.5
N		8.6	273.2
	1+25		
N		9.5	272.3
Crk		13.7	268.1
1/4		14.5	267.3
M		8.1	273.7
+19		7.7	274.1
1/4		8.4	273.4
Crk		11.3	270.5
S		16.6	265.2

	281.83		
	1+50		
S	281.8	4.0	277.8
Crk		5.2	276.6
1/4		5.7	276.1
M		5.9	275.9
1/4		5.2	276.6
Crk		5.5	276.3
N		7.9	273.9
	1+75		
N		2.8	279.0
Crk		2.9	278.9
1/4		3.1	278.7
M		3.2	278.6
1/4		3.5	278.3
Crk		3.2	278.6
S		3.1	278.7

		281.83			
		240			
S		281.8	3.2	278.6	
Crb			2.8	279.0	
1/4			2.8	279.0	
M			2.5	279.3	
1/4			2.2	279.6	
Crb			2.0	279.8	
N			1.8	280.0	
		2+25			
N			1.4	280.4	
Crb			1.7	280.1	
1/4			1.9	279.9	
M			2.4	279.4	
1/4			2.6	279.2	
Crb			2.9	.9	
S			3.2	278.6	

		281.83			
		2+50			
S		281.8	2.7	279.1	
Crb			2.6	279.2	
1/4			2.5	279.3	
M			2.0	279.8	
1/4			1.4	280.4	
Crb			1.3	280.5	
N			1.1	280.7	
		2+75			
N			0.9	280.9	
Crb			1.0	280.8	
1/4			1.0	280.8	
M			1.6	280.2	
1/4			2.0	279.8	
Crb			2.2	279.6	
S			2.7	279.1	
T.P.	5.94	286.20	1.57	280.26	

	286.20			
	3+0			
S		6.2	280.0	
Crk	286.2	5.9		
"/4		5.9	280.3	
M		5.6	280.6	
"/4		4.8	281.4	
Crk		4.9	281.3	
N		4.7	281.5	
	3+25			
N		4.3	281.9	
Crk		4.6	281.6	
"/4		4.7	281.5	
M		5.1	281.1	
"/4		5.5	280.7	
Crk		5.6	280.6	
S		6.0	280.2	

	3+50			
S	286.2	5.3	280.9	
Crk		4.9	281.3	
"/4		4.9	281.3	
M		4.6	281.6	
"/4		4.3	281.9	
Crk		4.1	282.1	
N		3.8	282.4	
	3+75			
N		3.8	282.4	
Crk		4.0	282.2	
"/4		4.0	282.2	
M		4.6	281.6	
"/4		4.7	281.5	
Crk		4.7	281.5	
S		5.1	281.1	

	286.20		
	4+0		
S	286.2	4.9	281.3
Crb		4.7	281.5
1/4		4.4	281.8
M		4.4	281.8
1/4		4.0	282.2
Crb		3.8	282.4
N		3.6	282.6
	4+25		
N		3.5	282.7
Crb		3.8	282.4
1/4		4.1	282.1
M		4.4	281.8
1/4		4.6	281.6
Crb		4.7	281.5
S		5.1	281.1

	286.20		
	4+50		
S	286.20	5.0	281.2
Crb		4.9	281.3
1/4		4.8	281.4
M		4.4	281.8
1/4		4.1	282.1
Crb		3.9	282.3
N		3.5	282.7
	4+75		
N		3.5	282.7
Crb		3.9	282.3
1/4		3.9	282.3
M		4.3	281.9
1/4		4.4	281.8
Crb		4.4	281.8
S		5.0	281.2

	286.20		
	5+0		
S	286.2	4.7	281.5
Crb		4.6	281.6
1/4		4.6	281.6
M		4.2	282.0
1/4		3.4	282.8
Crb		3.5	282.7
N		3.3	282.9
	5+25		
N		3.1	283.1
Crb		3.4	282.8
1/4		3.7	282.5
M		4.0	282.2
1/4		4.1	282.1
Crb		4.1	282.1
S		3.9	282.3

	5+50		
S	286.2	4.2	282.0
Crb		4.1	282.1
1/4		4.0	282.2
M		3.5	282.7
1/4		3.5	282.7
Crb		3.3	282.9
N		3.0	283.2
	5+75		
N		2.9	283.3
Crb		3.2	283.0
1/4		3.1	283.1
M		3.0	283.2
1/4		3.5	282.7
Crb		3.6	282.6
S		4.0	282.2

286.20

5+96 = W.L. 31st St 60'

S	286.2	3.5	282.7
Crb		3.4	282.8
1/4		3.4	282.8
M		3.1	283.1
1/4		2.9	283.3
Crb		2.8	283.4
N		2.6	283.6

W. curb

N		2.5	283.7
Crb		2.7	283.5
1/4		2.9	283.3
M		2.9	283.3
1/4		3.3	282.9
Crb		3.3	282.9
S		3.5	282.7

W 1/4

S	286.2	3.3	282.9
Crb		3.3	282.9
1/4		3.3	282.9
M		2.9	283.3
1/4		2.8	283.4
Crb		2.8	283.4
N		2.3	283.9

Center

N		2.1	284.1
Crb		2.4	283.8
1/4		2.5	283.7
M		2.9	283.3
1/4		2.9	283.3
Crb		2.9	283.3
S		2.8	283.4

		286.20		
		E. 1/4		
S		286.2	2.7	283.5
Crb			2.7	283.5
1/4			2.6	283.6
M			2.5	283.7
1/4			2.5	283.7
Crb			2.5	283.7
N			2.3	283.9
		E Curb		
N			2.2	284.0
Crb			2.3	283.9
1/4			2.4	283.8
M			2.5	283.7
1/4			2.6	283.6
Crb			2.5	283.7
S			2.7	283.5

5/21/10 Dunkle Shaw Evans

		E. L. 31st St.		
S		286.2	2.8	283.4
Crb			2.7	283.5
1/4			2.6	283.6
M			2.4	283.8
1/4			2.3	283.9
Crb			2.4	283.8
N			2.0	284.2
T.P.	4.47	288.64	2.03	284.17
		0+25' E		
N		288.6	3.7	284.7
Crb			4.5	284.1
1/4			4.6	284.0
M			4.6	284.0
1/4			4.5	284.1
Crb			4.6	284.0
S			5.0	283.6

	288.64			
	0+50			
S	288.6	4.8	283.8	
Crb		4.6	284.0	
"4		4.7	283.9	
M		4.4	284.2	
"4		4.3	284.3	
Crb		4.3	284.3	
N		4.0	284.6	
	0+75			
N		3.7	284.9	
Crb		4.1	284.5	
"4		4.2	284.4	
M		4.4	284.2	
"4		4.3	284.3	
Crb		4.5	284.1	
S		4.6	284.0	

	1+0			
S	288.6	3.8	284.8	
Crb		4.3	284.3	
"4		4.3	284.3	
M		4.2	284.4	
"4		3.8	284.8	
Crb		3.8	284.8	
N		3.3	285.3	
	1+25			
N		3.2	285.4	
Crb		3.6	285.0	
"4		3.8	284.8	
M		3.9	284.7	
"4		4.1	284.5	
Crb		4.1	284.5	
S		4.2	284.4	

	288.64			
	1450			
S	288.6	4.1	284.5	
Orb		4.1	284.5	
"		4.0	284.6	
M		3.9	284.7	
"		3.7	284.9	
Orb		3.6	285.0	
N		3.3	285.3	
	1475			
N		3.4	285.2	
Orb		3.5	285.1	
"		3.8	284.8	
M		3.7	284.9	
"		4.1	284.5	
Orb		4.0	284.6	
S		4.0	284.6	

	288.64			
	2+0			
S	288.6	4.0	284.6	
Orb		3.9	284.7	
"		3.9	284.7	
M		4.0	284.6	
"		3.9	284.7	
Orb		3.8	284.8	
N		3.7	284.9	
	2+25			
N		4.4	284.2	
Orb		4.2	284.4	
"		4.2	284.4	
M		4.4	284.2	
"		4.3	284.3	
Orb		4.3	284.3	
S		4.3	284.3	

	288.64			
	2+50			
S	288.6	4.5	284.1	
Crk		4.9	283.7	
"4		4.9	283.7	
M		4.9	283.7	
"4		5.0	283.6	
Crk		5.0	283.6	
N		5.0	283.6	
	2+75			
N		6.1	282.5	
Crk		6.2	282.4	
"4		6.2	282.4	
M		6.2	282.4	
"4		5.7	282.9	
Crk		5.5	283.1	
S		5.4	283.2	

	3+0			
S	288.6	6.7	281.9	
Crk		7.1	281.5	
"4		7.6	281.0	
M		8.0	280.6	
"4		8.4	280.2	
Crk		8.4	280.2	
N		8.1	280.5	
	3+25			
N		16.7	271.9	
Crk		18.0	270.6	
"4		18.1	270.5	
M		17.2	271.4	
"4		13.5	275.1	
Crk		12.0	276.6	
S		9.0	279.6	
T.P.	1.67	278.26	12.05	276.59

		278.26			
		3+50			
S		278.3	1.4	276.9	
Crb			6.6	271.7	
1/4			9.2	269.1	
M			14.3	264.0	
1/4			13.5	264.8	
Crb			13.1	265.2	
N			10.4	267.9	
		3+75			
N			2.4	275.9	
Crb			9.6	268.7	
1/4			12.2	266.1	
M			19.3	259.0	
1/4			10.5	267.8	
Crb			7.9	270.4	
S			1.8	276.5	

		278.26			
		4+0			
S		278.3	3.1	275.2	
Crb			9.7	268.6	
1/4			12.0	266.3	
M			22.6	255.7	
+5			24.7	253.6	
1/4			17.3	261.0	
Crb			14.9	263.4	
N			10.4	267.9	
		4+25			
N			20.9	257.4	
Crb			21.9		
1/4			22.9		
+16			28.4		
M			26.7	251.6	
1/4			18.7		
Crb			16.7		
S			10.7	267.6	
T.P.	0.11	266.18	12.19	266.07	

		266.18		
		4+50		
S			7.8	258.4
Crb			15.6	
"/4			17.1	
M			21.5	244.7
+5			22.4	
"/4			21.0	
Crb			19.0	
N			19.1	247.1
		4+75		
N			0.6	265.6
Crb			2.7	
"/4			3.4	
M			9.5	256.7
"/4			20.0	
Crb			22.3	
+5			24.5	
S			18.5	247.7

		266.18		
		5+0		
S			24.6	241.6
+5			25.0	
Crb			18.5	
"/4			16.8	
M			6.4	259.8
T.P.	12.98	278.68	0.48	265.70
"/4			7.0	
Crb			4.9	
+7			2.1	
N			1.3	277.4
		5+25		
N			0.3	278.4
Crb			1.6	
"/4			2.4	
M			12.1	266.6
"/4			20.7	
Crb			22.6	
S			31.0	247.7

		278.68			
		5+50			
S			26.6	252.1	
crb			20.2		
1/4			18.0		
M			10.1	268.6	
+17			2.6		
T. P	6.78	282.91	2.55	276.13	
1/4			5.7		
crb			4.9		
N			3.9	279.0	
		5+75			
N			3.6	279.3	
crb			4.1		
1/4			4.6		
+7			5.6		
M			11.1	271.8	
1/4			16.9		
crb			18.4		
S			25.1	257.8	

6+0 E of 31st St

S			17.9	265.0	
crb			11.8		
1/4			9.8		
+11			6.7		
M			5.1	277.8	
1/4			3.5		
crb			3.4		
N			2.9	280.0	

9 | Clough
17 | Dunn
10 | Fitzpatrick

X Sec of Alley Blk 476 Nor Extention
(20)

	7,92	264,91		256,99	BM Sutter & Goldfinch
	E Line of Goldfinch				
n			6,6	258.3	
b			6,7	258.2	
s			6,8	258.1	
	4' E Goldfinch				
s			4,5	260.4	
+2'			6,0		
b			6,2	258.7	
+4			6,0		
n			4,2	260.7	
	50' E of Goldfinch				
n			5,1	259.8	
+2'			5,8		
b			6,0	258.9	
+7			5,7		
s			4,6	260.3	
	100' E of Goldfinch				
s			5,8	259.1	
+2'			6,4		
b			6,6	258.3	
n			6,1	258.8	

		264,91			Alley
	150' E of Goldfinch				
n			8,3	256.6	
b			7,4	257.5	
s			7,2	257.7	
	200' E of Goldfinch				
s			8,3	256.6	
b			8,6	256.3	
n			8,3	256.6	
	250' E of Goldfinch				
n			9,0	255.9	
b			9,8	255.1	
s			9,6	255.3	
TP	5,36	261,42	8,85	256,06	
	300' E of Goldfinch				
s			5,8	255.6	
b			6,5	254.9	
n			6,0	255.4	

261.42

	350'	E of Goldfinch		
n			5.5	255.9
b			5.9	255.5
s			5.2	256.2
	400	E of Goldfinch		
s			5.0	256.4
b			5.2	256.2
n			4.7	256.7
	450	E of Goldfinch		
n			4.1	257.3
b			4.7	256.7
s			4.5	256.9
	480	E of W of Eagle		
s			4.2	257.2
b			4.0	257.4
n			4.0	257.4

12 Hatch
17 Moore
10 Rogers

See Hooker Street from Gettis Washington

BM	SE RR Spk 390	280.98		277.076	Lewis Hooker
TP	9.40	281.57	8.80	272.17	
		S L Getti			
W			9.4	272.2	
cb			{9.5 / 10.0	272.1 / 271.6	
1/4			9.7	271.9	
C			9.1	272.5	
1/0			9.1	272.5	
cb			{9.2 / 8.6	273.0	
E			7.9	273.7	
	25' S				
F			7.4	274.2	
			8.5	273.1	
			8.8	272.8	
			9.2	272.4	
			9.3	272.3	
			9.8	271.8	
W			9.6	272.0	

80' wide

		281.57			
		50' S			
W			9.2	272.4	
			8.8	272.8	
			8.8	272.8	
			8.3	273.3	
			7.9	273.7	
			7.5	274.1	
F			6.6	275.0	
	75' S				
F			6.2	275.4	
			6.8	274.8	
			7.2	274.4	
			7.6	274.0	
			8.2	273.4	
			{8.9 / 7.6	273.2 / 274.0	
W			7.8	273.8	

Hmar (Larc)

28157

100 S

W	8.2	273.4
cb	7.5	274.1
+9'	7.2 / 7.7	274.4 / 273.9
1/9	7.6	274.0
	6.8	274.8
	5.7	275.9
	5.2	276.4
E	4.8	276.8

125 S

E	4.0	277.6
	4.1	277.5
	4.7	276.9
	6.1	275.5
	6.6	275.0
	6.6	275.0
W	7.8	273.8

28157

150 S

W	7.1	274.5
	6.0	275.6
	5.4	276.2
	4.6	277.0
	3.9	277.7
	3.5	278.1
E	3.7	277.9

175 S

E	3.7	277.9
	3.3	278.3
	3.2	278.4
	3.6	278.0
	3.9	277.7
	4.6	277.0
W	5.3	276.3

Hoover (Lark)

281.57

200 S

W	4.0	277.6
	3.7	277.9
	3.4	278.2
	3.1	278.5
	3.0	278.6
	3.3	278.3
E	4.1	277.5

225 S

E	5.2	276.4
	4.2	277.4
	3.7	277.9
	3.3	278.3
	3.2	278.4
	3.1	278.5
W	3.4	278.2

281.57

250 S

W	3.6	278.1
	3.7	277.9
	4.1	277.5
	4.7	276.9
	5.3	276.3
	5.9	275.6
E	7.0	274.6

275 S

E	8.2	273.4
	7.5	274.1
	6.7	274.9
	6.1	275.5
	5.6	276.0
	5.1	276.5
W	4.7	276.9

Hooker (Lark)

281.57

300 S = Nt Washington

W	6.1	275.5
	6.7	274.9
	7.1	274.5
	7.5	274.1
	8.0	273.6
	8.7	272.9
E	9.2	272.4

Moore Alley Cross Section 20' wide
12/21/26 BIK 16 Univ. Hgts

SEOP	341	384.46 ✓		381.05	Madison Oregon
NL Madison = 00					
E	top alley return		3.90	380.56	
E			4.3	80.2	
C	Plotted Larry 12/24/26		4.7	79.8	
W			4.4	80.1	
W	" " "		4.07	80.39	
0+50					
W			3.6	80.9	
C			4.1	80.4	
E			3.9	80.6	
1+08					
-6	℄ garage cem floor		3.1	81.4	
-4	" " Apron 8' wide		3.35	81.11	level
E			3.4	81.1	
C			3.8	80.7	
W			3.7	80.8	

384.46 Adams to Madison Hamilton to Oregon

1+21					
W-7	Garage dirt floor		3.6	80.9	
1+48					
W	℄ double Garage " "		3.5	81.0	on line
C			3.7	80.8	
E			3.4	81.1	
+6	" garage cem floor		3.05	81.41	
1+93					
-6	garage " "		2.90	81.56	
E			3.3	81.2	
C			3.3	81.2	
W			3.2	81.3	
T.P.	6.04	387.73 ✓	2.77	381.69 ✓	
2+48					
W			5.8	81.9	
C			5.9	81.8	
E			6.0	81.7	
+1 St	Garage cem floor		5.65	82.08	

38773

3+74			
E -7 NL garage cem floor	5.52	82.21	
3+02			
E	6.0	81.7	
℄ Corner MH	5.34	82.39	
W	5.7	82.0	
3+32			
-2 ℄ garage cem floor	5.36	82.37	
W	5.7	82.0	
C	5.9	81.8	
E	5.7	82.0	
3+58			
E -6 garage cem floor	4.26	83.47	
3+68			
E	4.6	83.1	
C	5.1	82.6	
W	5.3	82.4	
+2 garage cem floor	5.03	82.7	

38773

4+07			
W	4.8	82.9	
C	4.4	83.3	
E	4.3	83.4	
+4 garage dirt floor	4.3	83.4	
4+35			
E	4.7	83.0	
C	4.8	82.9	
W fence 0.3 in alley	4.7	83.0	
4+54			
E -1.5 SL cem Approx	3.72	84.0	
4+72			
E -1.5 NL cem Approx	3.72	84.0	
W SL " "	4.05	83.68	on line
4+90			
E -5.5 double garage dirt	3.5	84.2	floor
4+97			
W -NL cem Approx	4.04	83.69	on line

38773

C			3.9	83.8	
E			3.8	83.9	
5+04					
E - 5.5 SL 3 door garage			3.55	84.18	dirt floor
5+34					
E - 5.5 NL	"	"	3.4	84.3	" "
E			3.6	84.1	
C			3.4	84.3	
W			3.8	83.9	
5+81					
W			3.1	84.6	
C			3.5	84.2	
E			3.2	84.5	
6+00 = SL Adams					
E	on paving		5.02	82.71	
C	"	"	5.33	82.40	
W	"	"	5.20	82.53	

38773
669
381.04
3.35
384.39
3.34
381.05
381.05 Check

4300 Grade Castellar & Sealia

93.5

1823

254

287.2 W

289.2 E

277076 SW RR Sgt.
Lewis Hooker

793.5
715.6
8

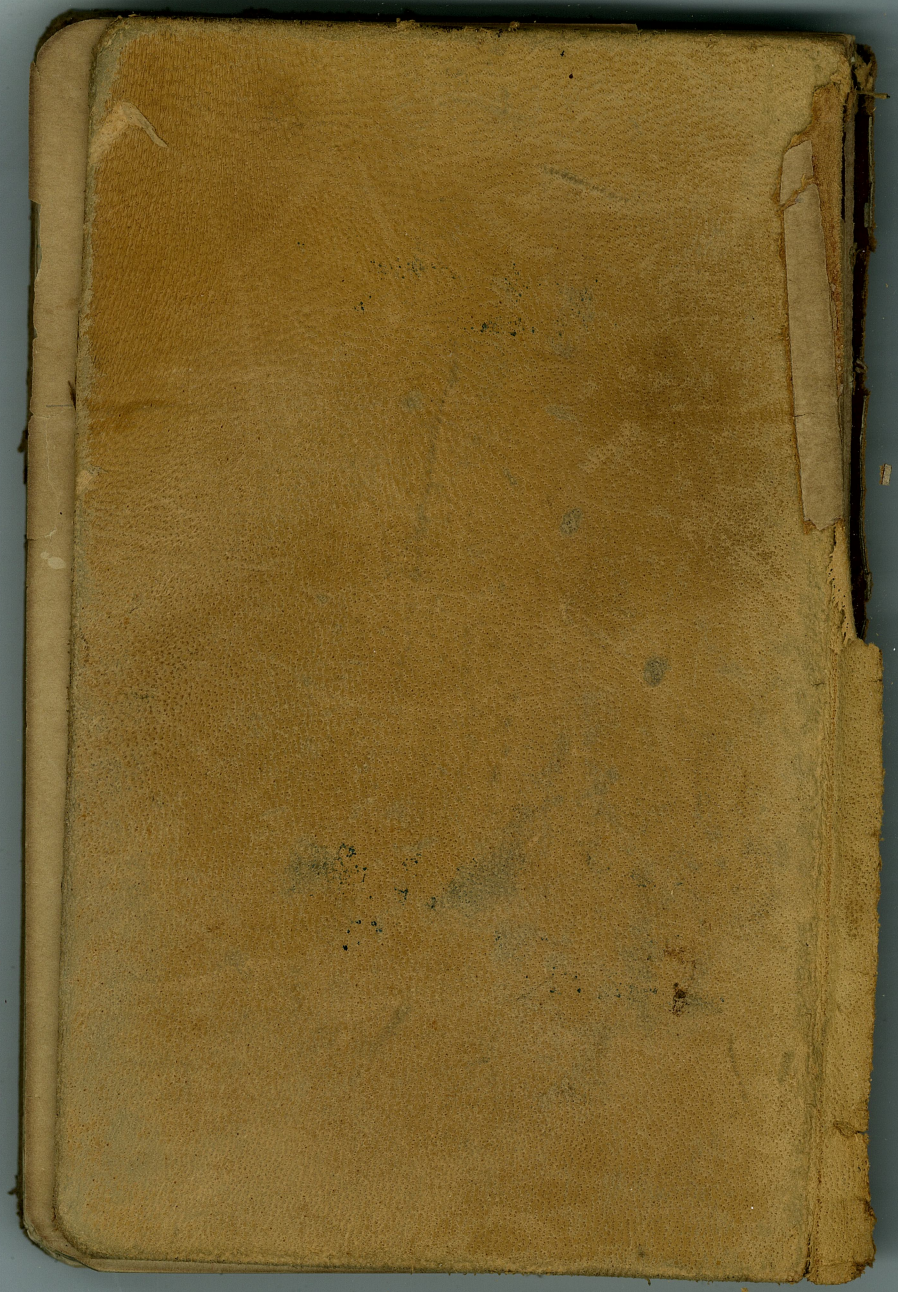
765.5
13.1
6.5
19.6
14.6
9.2

13.1
6.5
19.6
13.1
2.7
13.1
45.8
5.6
51.4

302.14
8.03
294.11

Published by H. S. CROCKER COMPANY, Stationers, Drawing Materials, Mathematical Instruments, etc., San Francisco.

TRAVERSE TABLE FOR TRANSIT BOOK.

From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0			100.00	0.44	100.00	0.87	99.99	1.31	89
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	88
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	87
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	86
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	85
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	84
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	83
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	82
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	81
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	80
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	79
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	78
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	77
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	76
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	75
15	96.59	25.88	96.48	26.30	96.36	26.72	96.25	27.14	74
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	73
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	72
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	71
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	70
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	69
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	68
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	67
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	66
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	65
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	64
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	63
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	62
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	61
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	60
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	59
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	58
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	57
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	56
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	55
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	54
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	53
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	52
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	50
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	49
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	48
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	47
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	46
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	45
45	70.71	70.71							
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees
	DEGREES		¾ DEGREE.		½ DEGREE.		¼ DEGREE.