...SEVILLE ...

...ZA SURVEY ...

...H ST GRADES ...

...ONT ST GUTTERS ...

...

Sec. 3RD Bet. Upas &

...alnut P. 24

...rades 2 X Sec. ...

...H. Bridge ...

...MAN ...

TRANSIT

F.B. 111

Returning the difference of latitude and departure in running
30 chains at any course from 1 to 60 minutes.
City Hall, San Diego, Cal.

Minutes.	Links.	Minutes.	Links.	Minutes.	Links.
					..... 95⅔
					 98
					.....100⅓
					.....102⅔
					105
					.....107⅓
					.....109⅔
					112
					.....114⅓
					.....116⅔
					119
					.....121⅓
					.....123⅔
					126
					.....128⅓
					.....130⅓
					133
					.....135⅓
					.....137⅔
					140

Book no 111

name.

date.

CO.

nstruments, etc.

N FRANCISCO, CAL.

PES.

second, the number of
rizontal measurement.

							Angle.	Cor. in Links.
							°	
							25	10·54
							26	11·26
							27	12·24
7	0·76	14	[illegible]	21	[illegible]		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

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

25
7
175

2450
6
1470

196 –
186

10.25 Bm
11.66 +
21.91
11.57 +
3348
9.54 +
4302
2.92 –
40.10
11.44 +
51.54
9.12 +
6066
3.90
5676

5.60
3.7
1.8 higher

Stat

	South	Midway	Center
	52.70	53.30	53.78
0+0	6.20	5.60	5.12
	52.90	53.56	54.00
25	6.00	5.34	4.90
	53.12	53.79	54.25
50	5.78	5.11	4.65
	53.40	54.08	54.50
75	5.60	4.82	4.40
	53.70	54.30	54.80
1+00	5.20	4.60	4.10

Check up Elev at Borrow pit
Jan 20th 1896 — Capps

159.47
11.01
170.48
0.48
170.00
7.62
177.62
0.33
177.29
8.85
186.14
0.40
185.74
4.49
190.23

190.23

	Rod	Rod		Rod	Rod
Rod 1	182.20	184.70	186.80	186.50	186.30
	8.00	5.50	3.40	3.70	3.90
			(186.14)		
2	180.44	180.74	183.14	184.84	183.84
	5.70	5.40	3.00	1.80	2.30
3		177.14	180.6	181.44	181.84
		9.00	5.50	4.70	4.30
4		172.94	177.44	179.14	179.84
		13.20	8.70	7.00	6.30
5		172.44	173.34	177.34	178.44
		13.70	12.80	8.80	7.70
6		169.82	171.82	174.62	177.82
		7.80	(172.62) 0.80	3.00	0.66
7		167.32	169.62	172.82	175.32
		10.30	8.00	4.80	2.30
8		165.62	167.42	171.22	173.72
		12.00	10.20	6.40	3.90
9		163.32	165.42	168.12	172.82
		14.30	12.20	9.50	4.80
10		163.08	(170.48) 162.88	165.88	170.18
		9.40	7.60	4.60	0.00
11	159.08	159.78	161.28	162.78	166.88
	11.40	10.70	9.20	7.70	3.60
12	156.88	157.68	158.68	160.28	162.38
	13.60	12.80	11.80	10.20	7.90
13	155.38	156.58	157.18	158.38	157.08
	15.10	13.90	13.30	14.10	13.40

25	30	30	30		1
12					2
	25				3
	24				4
	14				5
	22				6
	27				7
	30				8
	30				9
	30				10
12					11
15					12
25					13

40.00
2.33
42.33

Sta	Rod	Elev			
	(42.33)				
0+0	3.85	39.5			
+25	4.30	39.0			
+50	4.80	38.5			
+75	5.30	38.0			
1+00	5.75	37.5			
+25	6.30	37.0			
+50	7.60	35.7			
+75	8.20	35.1			
2+00	8.90	34.4			
+25	9.60	33.7			
+50	10.30	33.0			
+75	10.90	32.4			
+90	10.90	32.4			

Roseville Road

4.30 R.
.76
3.54

3.69
2.93
.76
4.30

10.25
4.07
14.32
11.69
2.63
0.30
2.93

July 12th 1897.

12 / 50 (.42
48
20

Checked up Oct 15 1897

(the pin at Cor Wetherby St. South Street is set out 100' S.W and in line with Witherbee)

Stat	N. 12'	Center 12' S	Grade
0+0	+0.70	-0.20	+0.10 4.00
50	+3.30	+2.90	+3.30 3.33
1+00	+8.20	+7.60	+7.30 2.66
50	+10.80	+10.20	+10.60 2.00
2+00	+9.70	+9.60	+10.10 1.33
50	+5.40	+5.10	+6.30 0.66
3+00	-0.40		-0.40 0.00
50		(2.93) 5.00	
4+00		5.80	
39Δ		5.80	
5+00		6.40	
50		5.70	
6+00		5.70	
50		6.00	
7+00		6.40	
50		2.50	R. R.
8+00		6.50	
50		4.50 (3.54)	
9+00		5.00	
50		5.40	
10+00		5.60	

from Station 0+0 to S 3+00 the grade is 1.32%, Grade level of S 0+0 = 4.00'
S 3+00 Grade Elevation is city datum, true grade

From S 3+00 to S 38+40 the grade of Sub-grade is -0.76'

From S 38+40 to end of road true grade is -0.10

From S 3+00 to end of road true grade is -0.10'

The sub-grade shall have a crown of 0.25'

The true grade shall have a crown of 0.42'

Thickness of Red earth layer shall be 0.66 ft at crown & 0.5' at sides

Crown grade of finished road is -0.10' ft

Stat	W .12	Center 12 S
10+50		4.90
11+00		4.90
50		4.90
12+00		5.70
50		4.90
13+00		4.50
50		4.70
14+00		4.50
		(3.57) R = 4.33
50		4.90
15+00		6.60
50		5.40
16+00		5.30
50		5.50
17+00		5.40
50		5.30
18+00		4.70
50		5.40
19+00		4.90
50		4.30
20+00		4.50

4.33
−.76
3.57

5.82
76
4.56

7

Stat-	N 12	Center	S 12		
20+50		4.30			
		(4.24) R =	4.90		
21+00		5.00			
50		4.60			
+90		5.00			
23+00		6.30			
24+00		6.30			
25.00		4.90			
50		5.40			
26+00		4.60			
		(4.56)			
50					
27+00					
50					
28+00		4.90			
50		5.10			
29+00		5.30			
50		5.30			
30+00		5.30			
		5.10			

4.90
— 76
4.24

about 75' S of Station 21+90 drove a lath 3ft long, with head to sub-grade = -0.76

552
141
4,11
141
2,70

59.66
27
59,39

7.84
1.33
9,17

5)1.33 (2.66
1.0 4
30 1,064
30

3.84
2.66
6,50

58.33
1.06
59,39

55.66
1.33
54.33

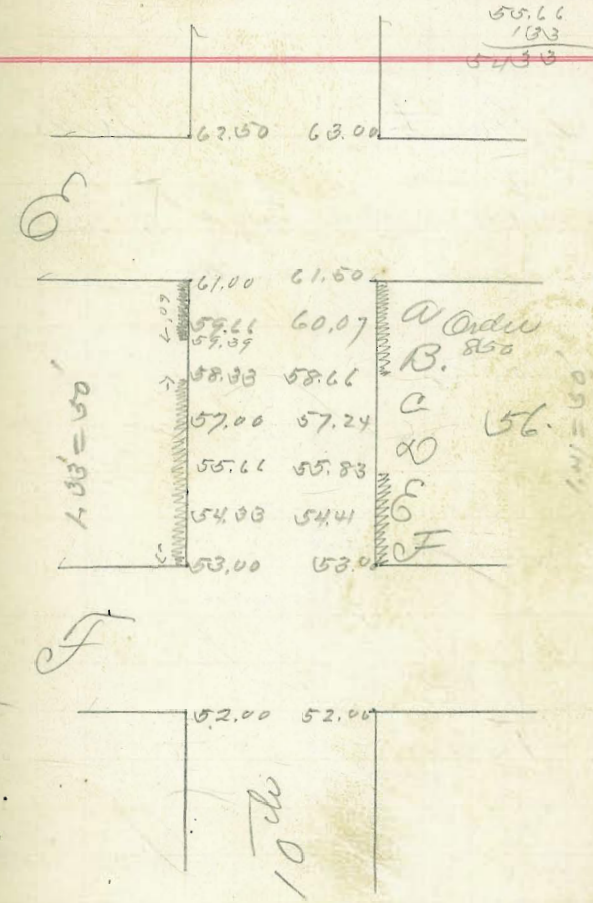
Order No - 850 July 13 97

Kelley Cow

62.32 B.M.
4.24

66.56	66.56	66.56	66.56
61.50	60.07	58.66	
5.06	6.49	7.90	

58.66
2.33
60.99
53
7.90



Order No 851. July 17-97

Robinson & Elkins

62.32
2.52

64.84	64.84	64.84	64.84	64.84	64.84	64.83
61.00	59.39	58.33	57.00	55.66	54.33	53.00
3.84	5.45	6.51	7.84	9.18	10.51	11.83

55.66
2.86

58.52	58.52	58.52
54.33	53.00	
4.19	5.52	

Order No 853

July 17-97

Nagle

58.52	58.52	58.52
53.00	54.41	55.83
5.52	4.11	2.69

58.52
4.35
54.17 on B.M.

6)95 .16 325
6 3 1752
35 .48 34252
4 50.08
.52 39260

Wm C. Smart Aug 12-97

Survey of Lots 10 & 11 Bek
226 Land & Town Co -

Order No 881.

3.75
16
2250
375
.6000

225
.24
03
225.27

622 Logan Ave

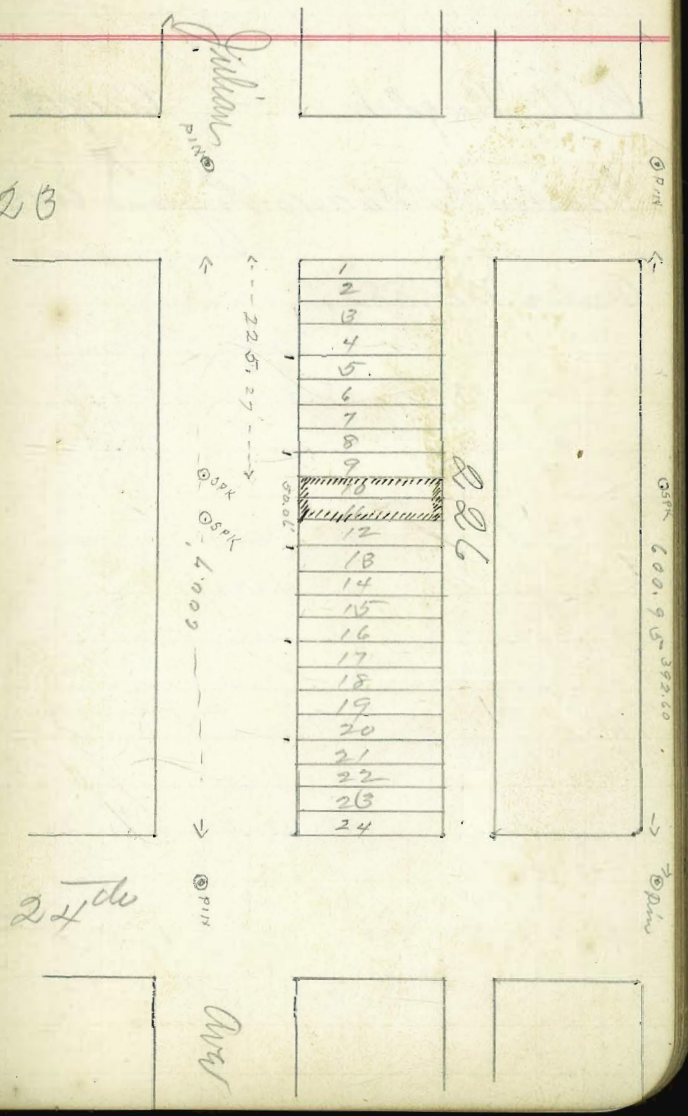
325
50
17
392

224.00
200.24
3
200

6)7 1.27
10
6
40

6.9
.7
43
200
22

43.-
243.24
3
243.27



C. A Nagle Aug 12-97

Grades to No 740 Logan Ave.

Order No. 882.

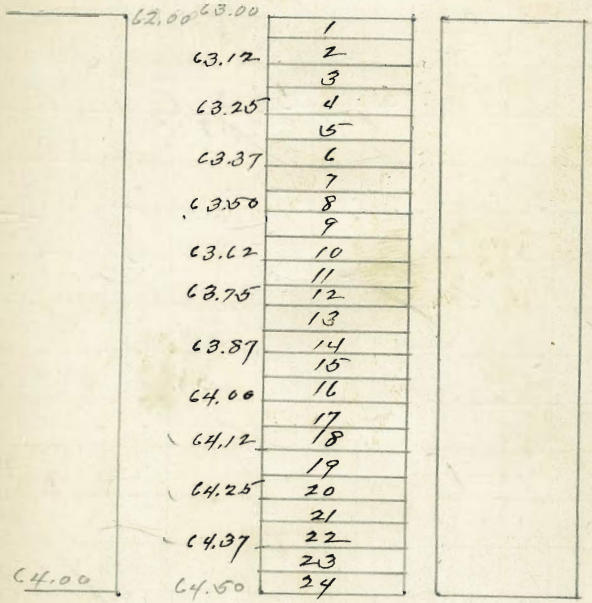
66.31 B M.
2.47

68.78	68.78	68.78	68.78
64.37	64.25	64.12	
4.41	4.53	4.66	

Logan

C2.00 C3.00

25th do



26th

C4.00 C4.50

J Englebert Aug 13th

Order No. 883.

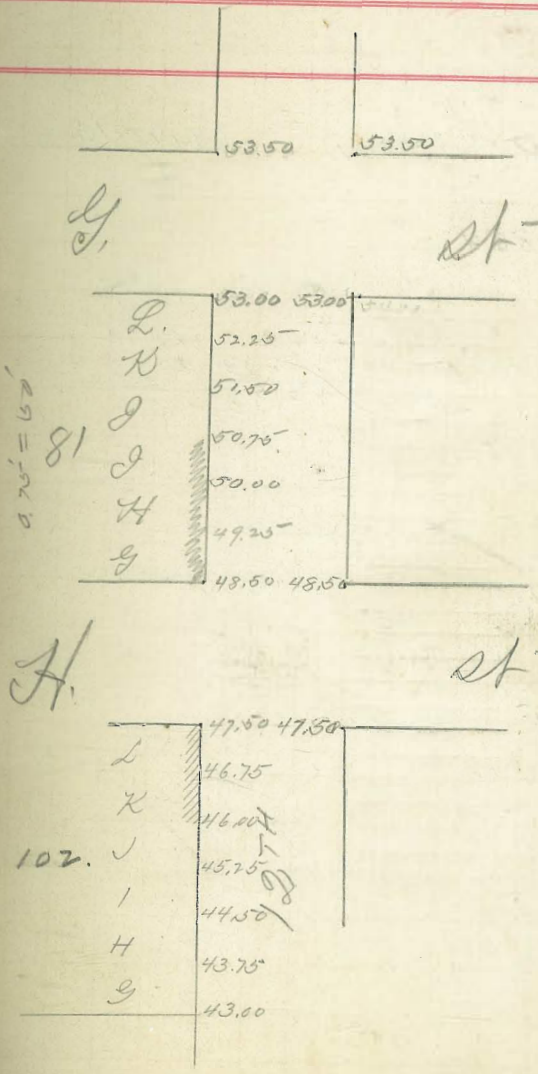
49.08 B.M
5.22

54.30	54.30	54.30	54.30
48.50	49.25	50.00	50.75
5.80	5.05	4.30	3.55

J. Englebert Aug. 14th 1897

Order # 886

49.08 B.M	52.33	52.33
3.25	46.75	46.00
52.33 H.I	5.58	6.33
47.50		
4.83		



Robinson - Elkins Aug 13 - 97

Order No 884

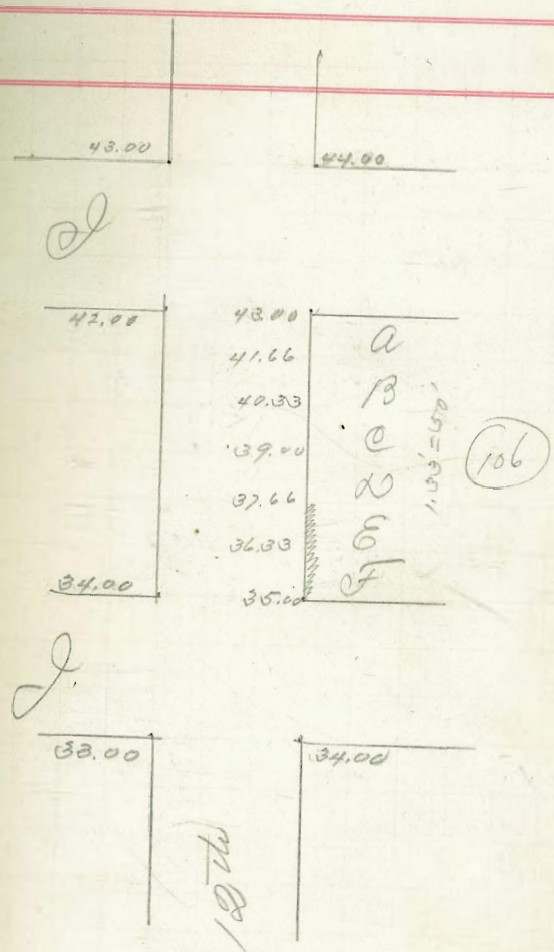
36.90 B.M.
2.22

39.12	39.12	39.12
35.00	36.33	37.66
4.12	2.79	1.46

39.12
1.71
87.41
7.06
44.47
37.66
6.81

44.49
43
1.47

44.47
0.50
43.97 on B.M.



132.45
02
132.47 132.47 132.47 132.47
127.50 129.50 .998
4.97 2.97 122.49
2.32

124.81 124.81 124.81 124.81
118.50 120.50 116.50 118.50
6.31 4.31 8.31 6.31
1.7
2.6

68.99 B.M.
10.38
79.37 H.I.
69.00
10.37
10.1
.27

79.37
0.47
78.90
11.68
90.58
1.13
89.45
11.89
101.34

101.34
0.93
100.41
11.04
111.45
0.95
110.50
11.16
121.66
1.73
119.93

119.93
12.05
131.98
3.36
128.62
6.92
135.54
2.97
132.57

132.45 B.M.
0.33
132.78
129.50
3.28

89.84 B.M.
305
92.89 92.89
90.50 88.50
2.39 4.39

89.84 B.M.
318
93.02
90.50
2.52

132.78
120.50
12.28

132.78
11.30
121.48
1.92
123.40 123.40 123.40 123.40
118.50 120.50 116.50 118.50
4.90 2.90 6.90 4.90

89.84
363
93.47 93.47
88.50
4.97

Order - 89.84
11.42
101.26
101.26
90.50
10.76
6.15 } 66
4.61
2.80 } 30
1.81

175.4
40
215.4
140
54

126.50
128.50
255.00
127.5

128.50
78.75
75.50
154.25
77.12

127.50 129.50
122.60 124.60
118.50 120.50

117.50 118.60 119.50 119.60 119.50

95.16
90.50
5) 4.66 (.93
45
16
.558

85.25
82
5) 3.25 (.65
30
25

A

116.50 118.50
112.16 113.83
107.80 109.16
103.50 104.50
99.16 99.83
94.83 95.16
90.50 90.50

300.20

82.00
78.75
160.75
80.37

a
B
C
D
E
30
66

B

89.84 B.M.
2.70
92.54
82.65
9.89

82.65
2.54
85.19
80.37
4.82

85.19
77.12
8.07

88.50 88.50
85.25 85.25
82.00 82.65
82.00
80.37
78.75 78.75
77.12
75.50 75.50
72.25 72.25
69.00 69.00

300.70

a
B
C
D
E
F
Haack

C

13TH

		SW	NW	NE	SE
63.42		63.42	63.42	63.42	63.42
59.50	3.16	58.50	59.50	58.50	57.50
3.92		4.92	3.92	4.92	5.92

St

	69.00	69.00	
	68.60	69.00	68.60

C St

	68.00	68.00	
	66.58	66.42	
	65.17	64.83	
	63.75	63.25	
	62.33	61.67	
	60.92	60.08	
	59.50	58.50	
58.50	58.85	59.00	58.35	57.50

D St.

	58.50	57.50	
	58.75	57.58	
	59.00	57.67	
	59.25	57.75	
	59.50	57.83	
	59.75	57.92	
	60.00	58.00	

E 13TH St.

60.26
3.16
63.42 63.42 63.42 63.42
60.00 58.00
3.42 5.42

60.26 B.M.
3.40
63.66 63.66 63.66 63.66 63.66 63.66 63.66
60.00 59.50 59.00 58.50 58.00 57.50 57.00
3.66 4.16 4.66 5.16 5.66 6.16 6.66
260 270 330 320 333
+1.56 +1.70 +1.46 +2.36 +2.56 +3.33

63.66 63.66 63.66 63.66 63.66 63.66 63.66
58.00 57.66 57.33 57.00 56.66 56.33 56.00
5.66 6.00 6.33 6.66 7.00 7.33 7.66
540 500 460 400 4 350
+1.60 +1.80 +2.16 +3.00 +3.30 +4.16

68.66
6.72
59.94 59.94 59.94 59.94 59.94
56.00 55.33 54.66 54.00 53.33
3.94 4.61 5.28 5.94 6.61
28 260 270 470 61
+1.14 +2.11 +1.58 +1.24 +.50

57.66 4.40
6.194 6.194
56.00 57.00
5.94 4.94
370 260
+2.24 +2.34

59.94 59.94 59.94 59.94 59.94
57.00 56.25 55.50 54.75 54.00
2.94 3.69 4.44 5.19 5.94
09 150 160 290 46
+2.04 +2.19 +2.84 +2.29 +1.34

4.71
53.54 B.M.
58.25 58.25 58.25 58.25
52.50 54.00 55.50 57.00
5.75 4.25 2.75 1.25

58.25 58.25 58.25 58.25 58.25 58.25 58.25
52.00 52.66 53.33 54.00 54.66 55.33 56.00
6.25 5.59 4.92 4.25 3.59 2.92 2.25

Wall line NE Cor F-18 Dec 21-97
60.26 62.54 62.54 56.25
2.28 56.33 56.66 4.90
62.54 6.21 5.88 61.15
56.25 25 25 54.50
6.29 5.96 5.63 6.65
2.00
4.65 Set 2' high

60.26
3.49
63.75 63.75 63.75
57.00 56.00
6.75 7.75

54
52.5
1.5
57.83
25
57.58

60.26 B.M. "A.C." walking
3.27
63.53 63.53
57.25 57.25
6.28 6.28
Property grades

60.00 58.00

E

60.00 58.00
59.50 57.66
59.00 57.33
58.50 57.00
58.00 56.66
57.50 56.33
57.00 56.00

59.94 59.94
52.66 52.00
7.28 7.94
700 760
+.30 +.44

59.94 59.94
53.25 52.50
6.69 7.44
50
+1

F

a
B
C Kelley Cow
D
E
F
53
Is this point at 2'+

56.00 54.33 52.50 50.75 49.00

57.00 56.00
56.25 55.33
55.50 54.66
54.75 54.00
54.00 53.33
53.25 52.66
52.50 52.00

a
B
C
D
E
F
Left 1'

G 2' SPK 2' SPK 2' SPK 2' SPK 2' SPK 2' SPK

A1

50.06 BM
710
57.16
562
53.54

6.40
59.94 59.94 59.94 59.94 59.94 59.94 59.94

50.06 BM
116
51.22 51.22 51.22 51.22
4850 4450 4350 40
2,72 6,72 7,72 1,22

44.50
092
46.42 46.42 46.42
44 43.75 43.50
1.42 1.67 1.92

53.54
274
56.28

56.28 56.28 56.28 56.28 56.28 56.28 56.28
52.50 52.08 51.67 51.25 50.83 50.42 50.00
3.78 4.20 4.61 5.03 5.45 5.86 6.28
340 82 380 490 510 560
.38 1.00 .80 .10 +.35 +.22

56.28 56.28 56.28 56.28 56.28 56.28 56.28
52.00 51.66 51.33 51.00 50.66 50.33 50.00
4.28 4.62 4.95 5.28 5.62 5.95 6.28
300 210 120 220 430 440
1.28 2.52 2.75 3.08 1.32 1.55

53.54 BM
436
57.90 57.90 57.90 57.90 57.90
52.50 51.92 52.25 51.72 52.00
5.40 5.98 5.65 6.18 5.90

May 26-98

Order No 989

50.06 BM
2.77
52.83 52.83 52.83
46.53 46.00 45.16
6,00 6,83 7.67

672 52.25
772 51.50
1444 10375
722 51.82

57.00
52.25
10325
57.62

59.94

B
51.50 51.92 52.25 51.72 51.00
52.50 52.00
52.08 51.66 a
51.67 51.33 B
51.75 51.00 C
50.83 50.66 D
50.42 50.33 E
50.00 50.00 F

H
48.50 48.50
47.83 47.66 a
47.16 46.83 B
46.50 46.00 C 104
45.83 45.16 D
45.16 44.33 E
44.50 43.50 F
44.00

I
44.00 43.75 43.50
43.25

36.90 BM
4 23
41.13
1.41
39.72
6.52

46.24	46.24	46.24	46.24	46.24	46.24	46.24
44.00	42.75	41.50	40.25	39.00	37.75	36.50
2.24	3.49	4.74	5.99	7.24	8.49	9.74
2.00	2.70	3.40	4.70	5.80	6.80	9.00
+.20	+.79	+1.34	+1.29	+1.44	1.69	+.74

46.24	46.24	46.24	46.24	46.24	46.24	46.24
43.50	42.16	40.83	39.50	38.16	36.83	35.50
2.74	4.08	5.41	6.74	8.08	9.41	10.74
2.1	2.00	2.90	4.00	5.30	5.40	8.50
.60	2.01	2.51	+2.70	+2.78	4.01	+2.24

12.63 BM
4.52
17.15 17.15
13
4.15

36.90 BM
2.37
39.27 39.27
34.50 33.50
4.77 5.77

45.42	45.42	45.42
36.50	36.00	35.50
8.92	9.42	9.92

36.90 BM
2.30
39.20 39.20
34.50 34 33.50
4.70 5.20 5.70

34.50
6.79

41.29	41.29	41.29
36.50	36.00	35.50
4.79	5.29	5.79

41.29	41.29
35.85	35.35
5.44	5.94

Order No 1004 July 21st 98
Grade to Pt J

36.90 BM
2.51
39.41
8.48
30.93
1.85
32.78

32.78 32.78
27.33 23.75
5.45 9.03

36.90
2.27
39.17 39.17 39.17 39.17 39.17 39.17
36.50 36.00 35.50 33.50
2.67 3.17 3.67 5.67

43.00
43.75
43.37

44.50 43.50

34.50
36
70.50
35.25

I

M

43.47 43.25
43.00 44.00 43.75 43.50 42.50
42.75 42.16
41.50 40.83
40.25 39.50
39.00 38.16
37.75 36.83
36.50 35.50
35.50 35.85 36.00 35.35 34.50

42.50
43.75
86.25
43.15

35.50
36
71.50
35.75

J

M

33.50 34.00
34.50 33.50
L 30.92 30.08
K 27.33 26.67
J 23.75 23.25
I 20.17 19.83
H 16.58 16.42
G 13.00 13.00

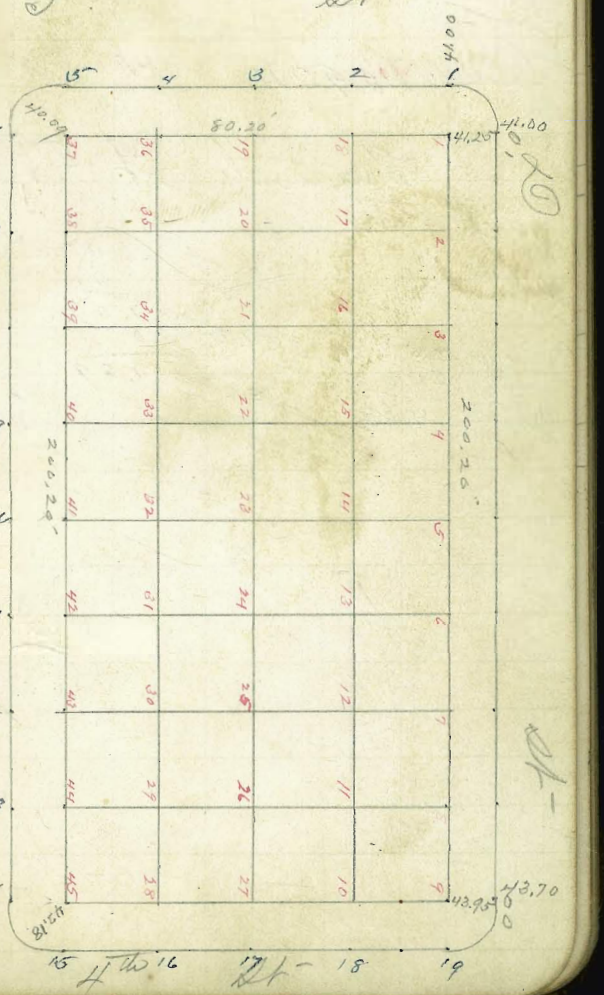
K

M

Levels on the Plaza.

Sept 7th – 97

Stat	Rod	Stat	Rod	Stat	Rod
	(46.34)		39.9		38.6
1	6.40	20	6.40	39.00	7.70
	41.3		40.0		39.0
2	5.00	21	6.30	40	7.30
	41.5		40.4		39.4
3	4.80	22	5.90	41	7.00
	41.4		40.7		39.5
4	4.40	23	5.60	42	6.80
	42.3	40.	40.9		39.6
5	4.00	24	5.40	43	6.50
	42.7		41.2		40.2
6	3.60	25	5.10	44	6.10
	43.0		41.7		40.5
7	3.30	26	4.60	45	5.50
	43.2		42.1	(45.69)	41.1
8	3.10	27	4.20	1	4.60
	43.4		42.2	2	41.7
9	2.90	28	5.10	3	42.1
	42.5		41.0	4	38.4
10	3.80	29	5.30	15	38.0
	42.2		40.8	6	38.1
11	4.10	30	5.70	(46.21) 7	38.1 8.10
	41.9		39.9	8	38.4 7.80
12	4.40	31	6.40	9	38.6 7.60
	41.7		39.5	10	39.1 7.10
13	4.60	32	6.80	11	39.3 6.90
	41.4		39.4	12	39.6 6.60
14	4.90	33	6.90	13	40.0 6.20
	41.2		39.3	14	40.5 5.70
15	5.10	34	7.00	15	41.0 5.20
	41.0		39.0	16	41.4 4.80
16	5.30	35	7.30	17	42.1 4.10
	40.7		(45.30)	18	42.4 3.80
17	5.60	36	38.9 6.40	19	42.7 2.60
	39.9			(45.69)	
18	5.40	37	38.1 8.20	0.	41.6 4.60
	(45.30)		38.3		
19	39.4 5.90	38	8.00	00	



Franks Ave Sept 14-97

Order No 924

Grades to Lot F Blk 127

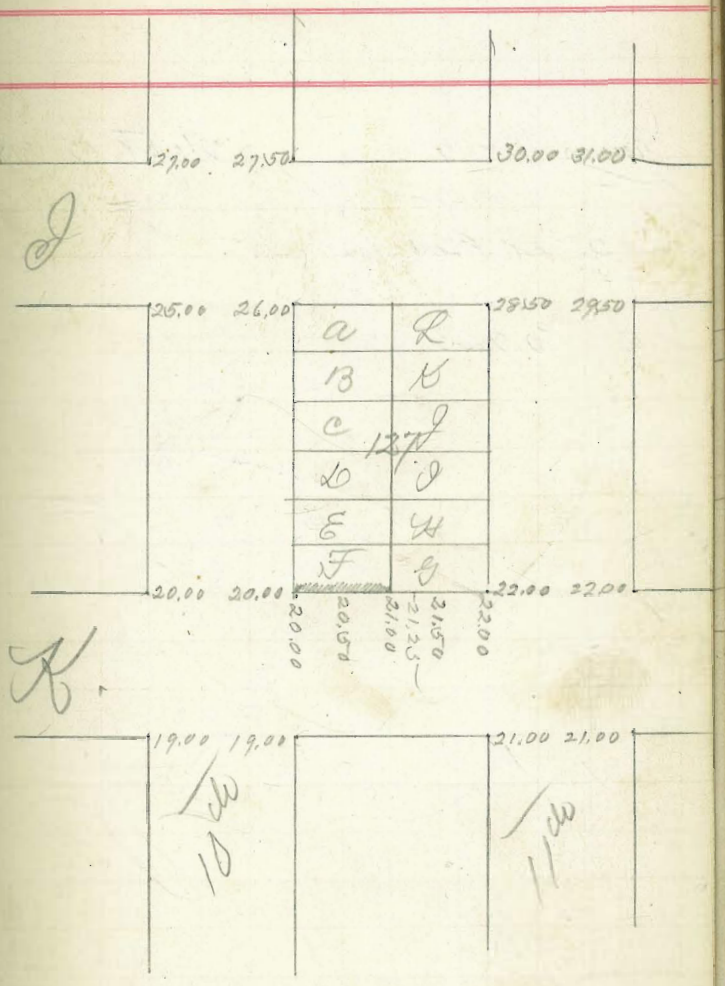
Horton

26.49 BM
1.40
27.89
20
7.89

20.00
5.64
25.64
21.00
4.64

25.64
21.25
4.39

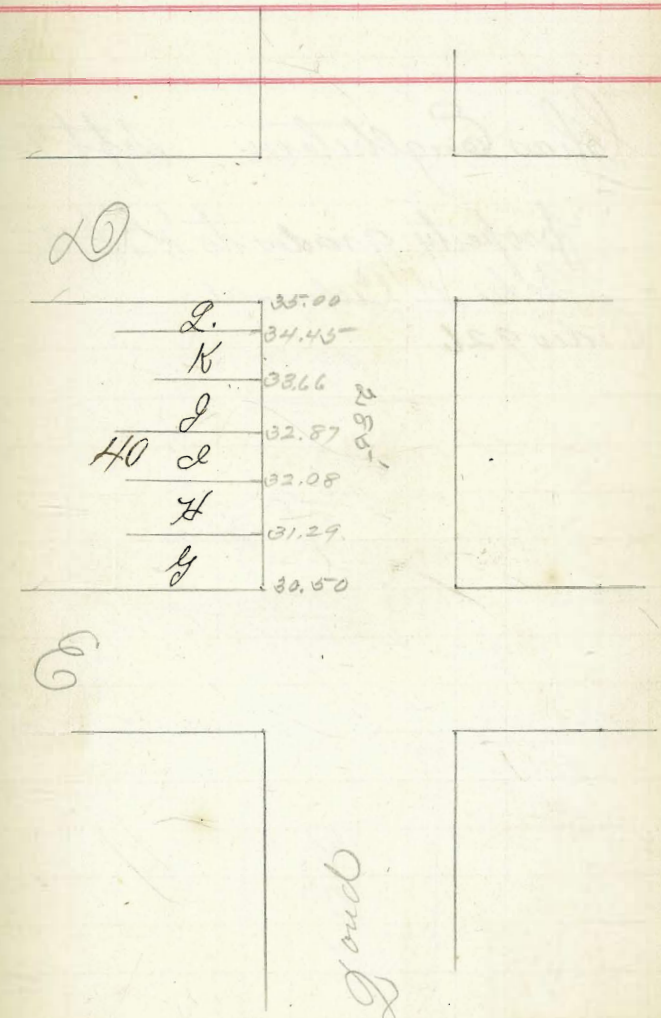
25.64
20.50
5.14



James McNear Sept 15 97
Grades to Phipps property
on 2nd st Bet D. Esb

Order No 925

Vaid No Survey



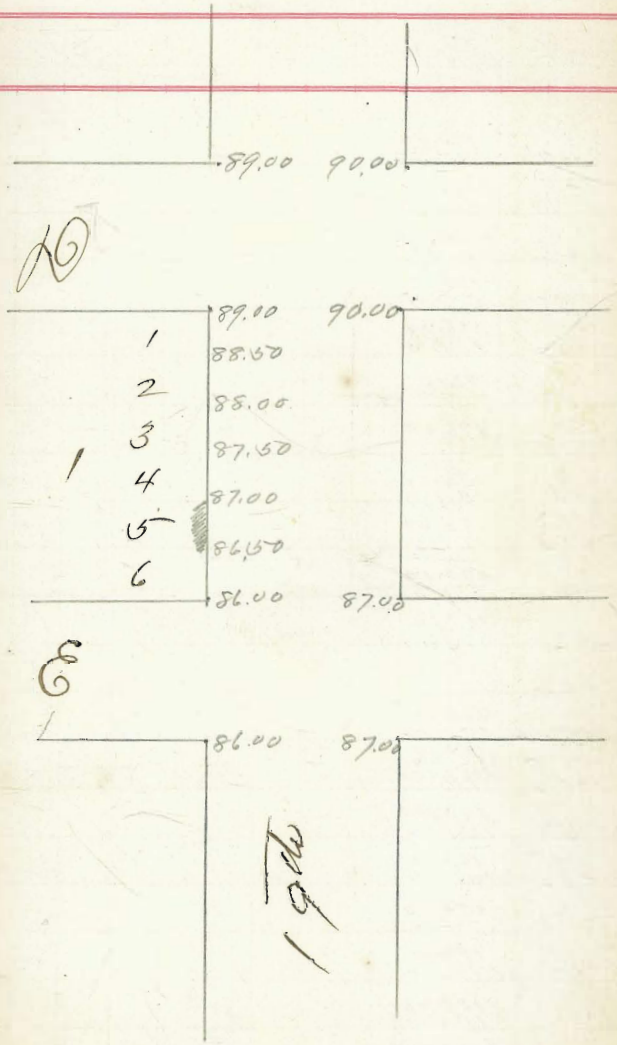
Chas Englbretson Sept 15-97

property grades to Lot 5
Bek & Culverwell.

Order 926

94.38 B M
2.49
96.87
11.64
85.23
4.58
89.81 | 89.81
87.00 | 86.50
2.81 | 3.31
25 | 25
property 2.56 | 3.06 = Prop

points set 2 feet inside property line



Levels (preliminary) from F st - down alley in Blk 8 Sept 15 - 97
to 24th sheet - 25th st sewer

Stat-	Rod	Elev-			
		(184.82)			
	180.60				
0+0	4.20				
	180.90				
+40	3.90				
	180.50				
0+a	4.30				
	179.60				
50	5.20				
	178.30				
1+00	6.50				
	177.10				
50	7.70				
	176.20				
2+00	8.60				
	174.20				
50	10.60				
	173.20				
3+00	11.60				
		(176.14)			
	170.10				
0+0	6.00				
	167.60				
50	8.30				
	165.90				
1+00	10.20				
	163.70				
50	12.40				
	164.10				
+75	12.00				
	165.10				
2+00	11.00				
	163.40				
50	12.70				
		(165.26)			
	160.60				
3+00	4.70				
	158.30				
50	7.00				
	156.10				
4+00	9.20				
	153.90				
50	11.40				
		(156.04)			
	152.60				
5+00	3.40				
	150.80				
50	5.20				

N line F

7.72
177.10 BM
184.82
10.10
174.72
1.42
176.14
12.00
164.14
1.12
165.26
11.35
153.91
2.13
156.04

S line F

N line G.

S line G.

Center line alley Blk 8
West prop line of 25th st

25th st sewer

145.19
8.50
136.69

Stat	Rod	Elev			
6+00	148.60 7.40				
50	146.30 9.70				
7+00	144.10 11.90	(145.19)			
+50	141.60 3.60				
8+00	138.40 6.80				
30	136.70 8.50				

156.04
11.75
144.29
0.90
145.19

East line 24th
Center line 24th

283.36 B.M.
6.66
289.95 289.95 289.95 289.95 289.95 289.95
285.50 284.95 289.95 286.00 285.20 285.76
4.45 5.00 3.95 4.22 4.49 4.75 4.20
4.72 4.47

9.45
4.72

4.20
4.76
8.96
4.476

282.97 B.M. Cr Spruce & 5th
3.20
286.17
4.76
2814.2
9.70
2911.2
2.61
2886.1 = B.M. Nozzle Hyd at S.E. Cor 4th & Walnut
2.67
2912.8

Walnut Dept 15-99

291.28 291.28 285.64 291.28 291.28 291.28 291.28
286.00 285.82 285.46 285.28 285.10
5.28 5.46 5.64 5.82 6.00 6.18
5.20 5.20 5.20 5.20 5.50 5.50
+8 +.26 .44 .62 .50 .68

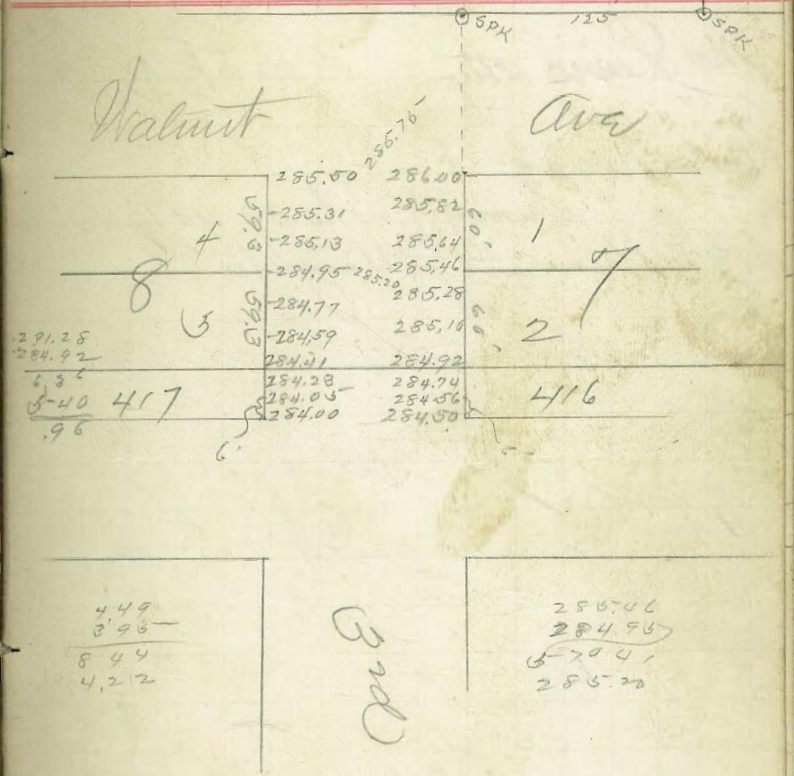
291.28 291.28 291.28 291.28 291.28 291.28 291.28
285.50 285.31 285.13 284.95 284.77 284.59 284.41
5.78 5.97 6.15 6.33 6.51 6.69 6.87
5.80 6.10 6.10 6.20 6.50 6.30 6.7
.13 .39 .17

Stat.	East	Cent	Cen W	Cent	W.
	286.1	286.2	285.8	285.6	285.5
0+0	5.20	5.10	5.60	5.70	5.57
	286.1	286.0	285.7	285.5	285.2
20	5.20	5.30	5.60	5.80	6.10
	286.1	285.9	285.9	285.2	285.2
40	5.20	5.40	5.40	6.10	6.10
	286.1	285.8	285.6	285.2	285.1
60	5.20	5.50	5.70	6.10	6.20
	285.8	285.7	285.4	285.1	284.8
80	5.60	5.60	5.90	6.20	6.50
	285.8	285.7	285.3	285.1	285.0
1+00	5.60	5.60	6.00	6.10	6.30
	285.9	285.5	285.1	284.9	284.6
20	5.40	5.80	6.20	6.40	6.70

285.46
284.96
5.70
285.20

24
4.72
5.

Cross Section B-C
Bet-Upas - Walnut Ave



4.49
3.96
8.44
4.22

285.46
284.96
5.70
285.20

See Estimate Book P. 139

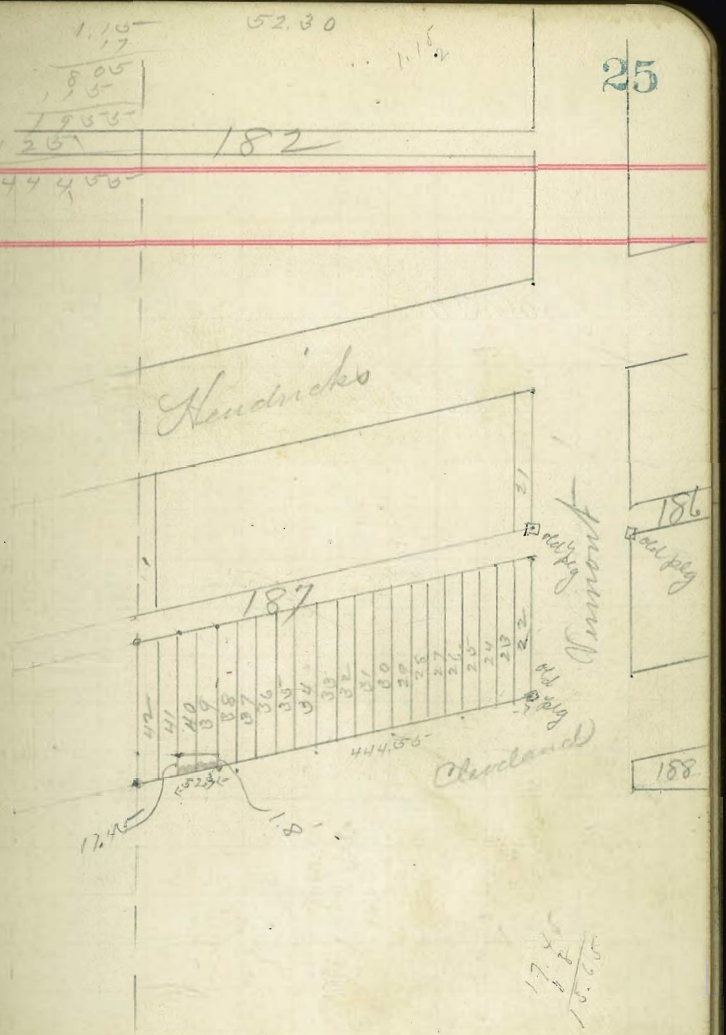
Mr Lewis atty Sept 18-97

Order No 929

Survey of Lots 39-40 Blk 187 ~~Minnesota~~ Heights

set spikes at all four corners of lots are cut off by N. line of Minnesota Ave.

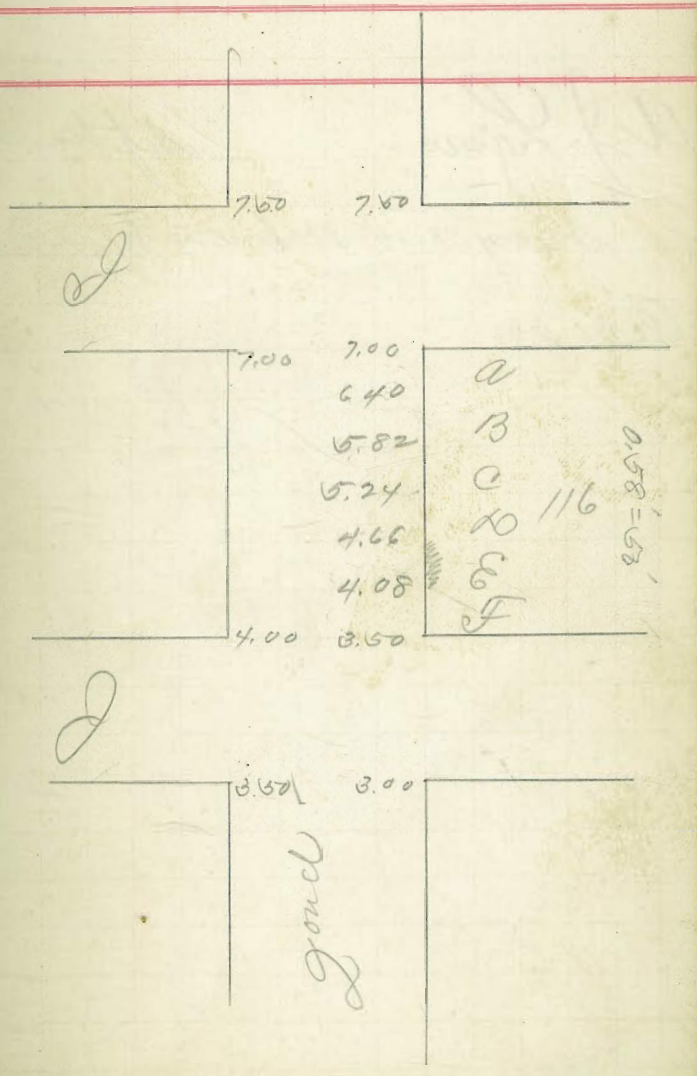
Then spikes were set 1.8 at one end & 17.45 at the other.



Order No 930 Sept 18-97

Grades to E. Bek 116 Hatoc

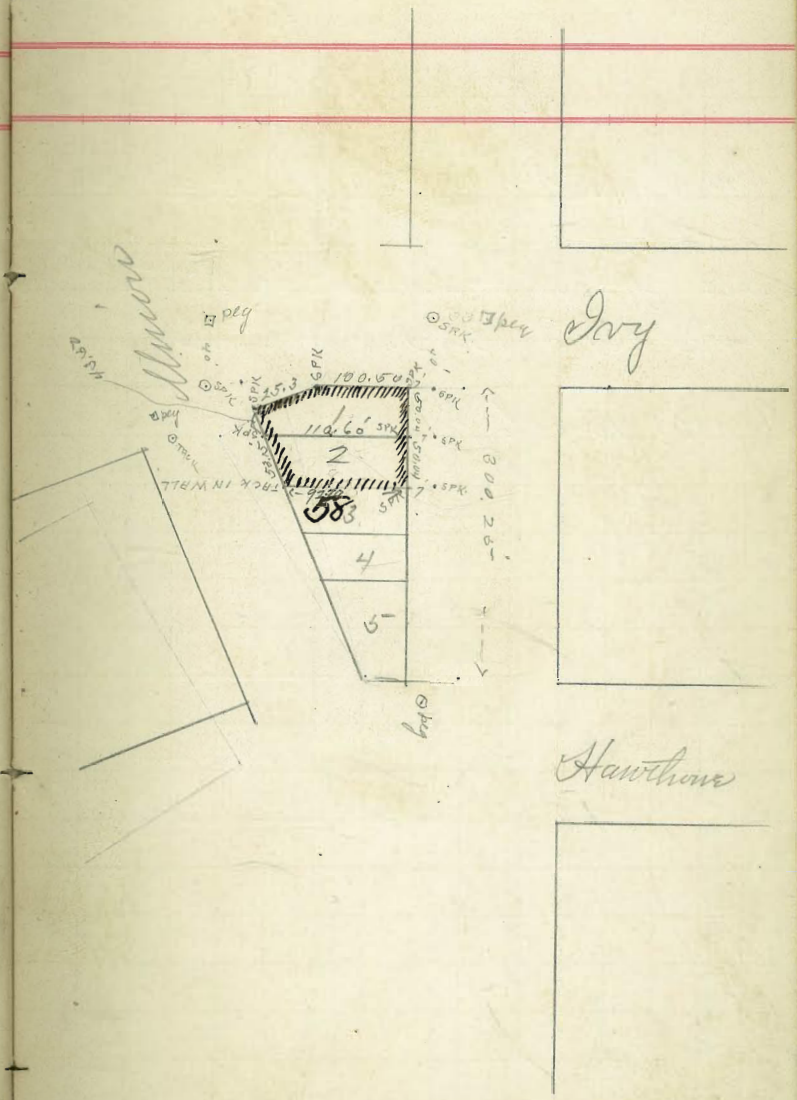
7.04	
3.45	
10.49	10.49
4.08	4.66
6.41	5.83



A J Lyons. Sept 21-97

Survey 1-2 Blk 58 Middleton

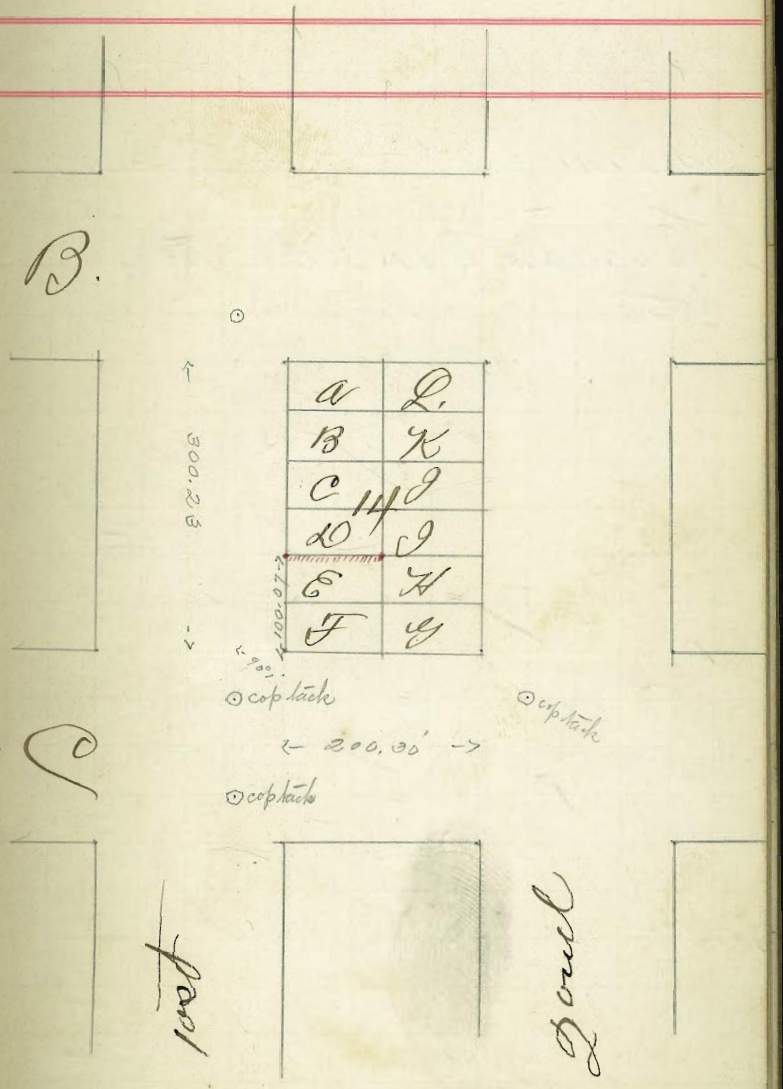
Addn 931



Dr. Gunn Sept 30 97

Survey of division line Bet
Lots L. E. Blk 14 Horton.

Order No 936



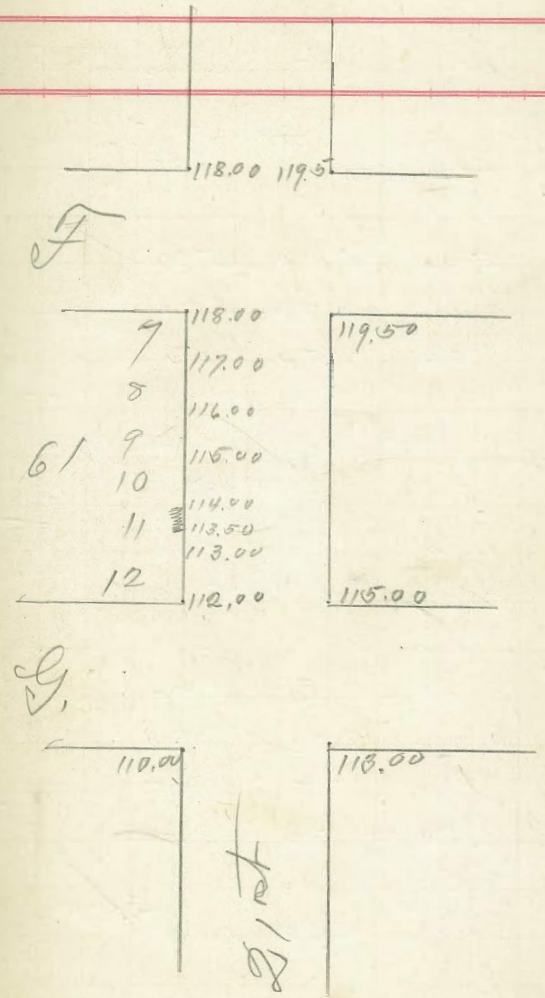
O. E. Winders

Order 941 Oct 20 97

Grades N 1/2 Lot 11 Bek 61

Mtts

113.85	B M
2.65	
116.50	116.50
113.50	114.00
3.00	2.50



Cross Section

184.62 B.M.
9.63
194.25

Order 948 Nov 2nd 1899

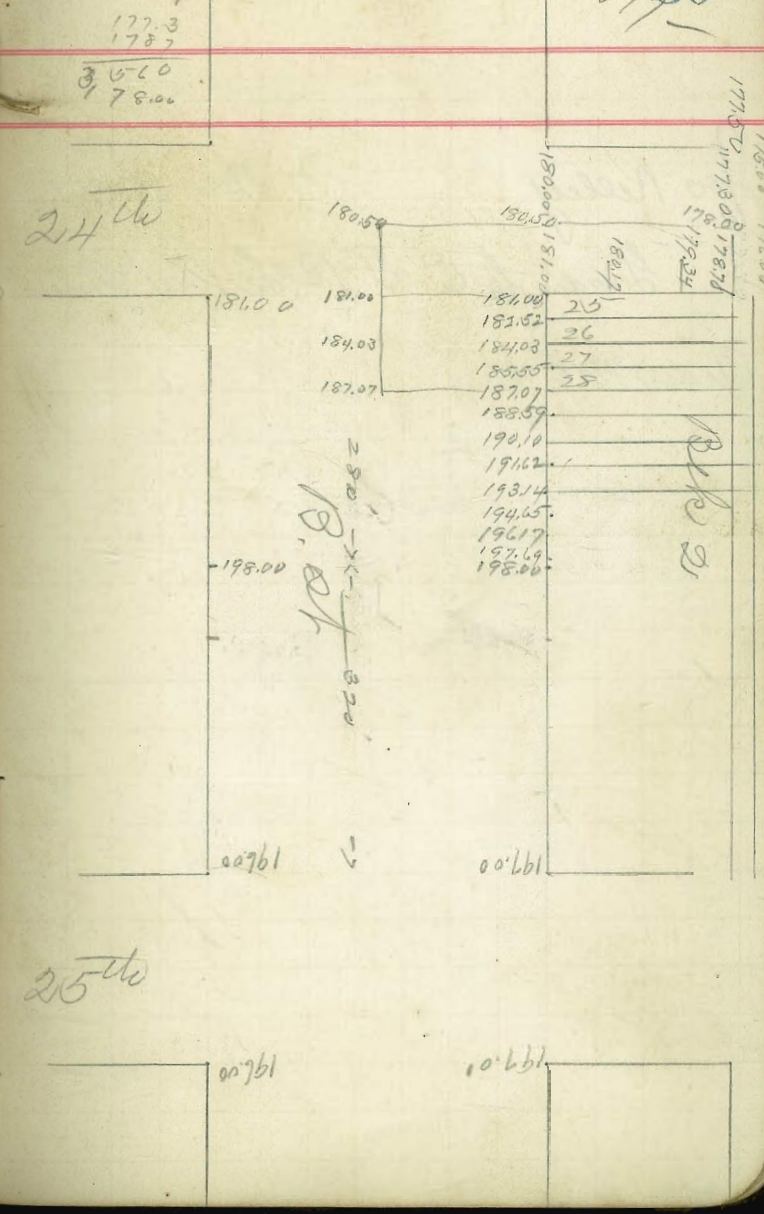
30

Stat	N.	Curb	Center
	Cross section B st N 1/2 (194.25)		
NE Cor 24th B.	184.50 .5	184.60	185.00 +4.00
0+0	9.70	9.60	9.20
25	186.80	186.80	186.90
	7.40	7.40	7.30
50	189.20	188.80	188.90
	5.00	5.40	5.30
75	190.70	190.50	190.60
	3.50	3.70	3.60
1+00	192.70 +5.70	192.70	192.60 +5.60
	1.50	1.50	1.60

Cross Section E 1/2 24th – N. E. 1/4 of Intersection (186.88)

184.62 B.M.
2.26
186.88

	E	Curb	Center	
0+0	185.00	184.40	182.50	
	1.90	2.50	4.40	Center line B –
+26	184.70	183.90	181.80	
	2.20	3.00	5.10	
+40	184.50	183.80	180.70 0.20	N line B –
	2.40	3.10	6.20	
25	181.20	179.70	176.90	
	5.70	7.20	10.00	
50	178.70	177.70	176.10	
	8.20	9.20	10.80	
75	177.80	176.70	175.60	
	9.10	10.20	11.30	
1+00	177.40	177.20	176.00	
	9.00	9.70	10.90	
25	178.00	177.10	176.30	
	8.90	9.80	10.60	
+40	177.90 0.8	177.60	176.50 1.60	
	9.00	9.30	10.50	



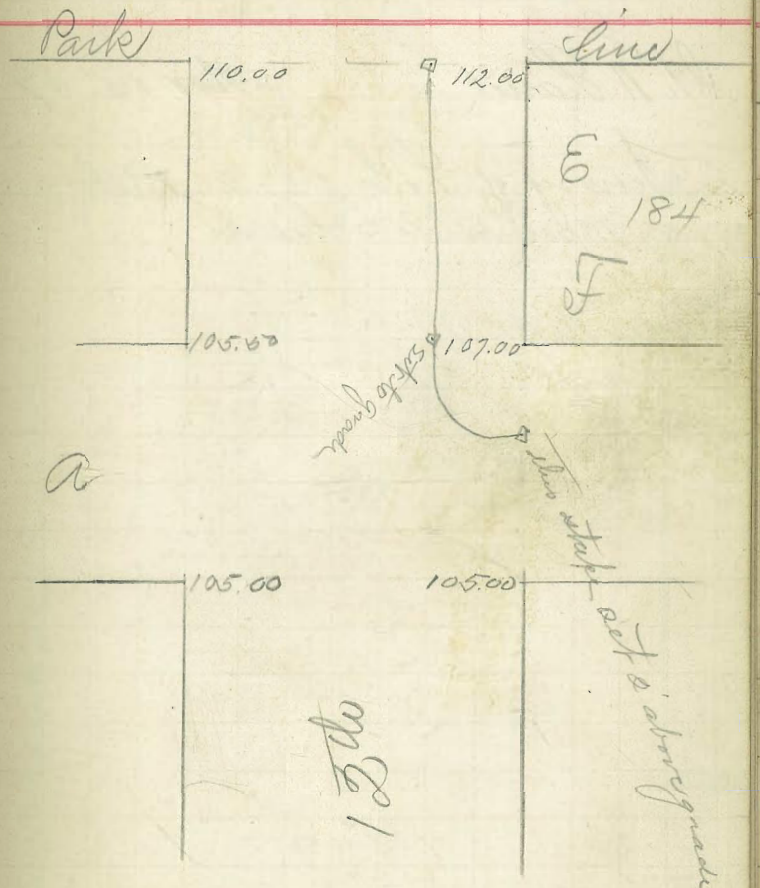
Jos Kelley Nov 15-97

Grades to E. F Blk 184 Horton

Order No 956

99.75
6 23
105 98
0 18 3
105,15
8 38
113,53

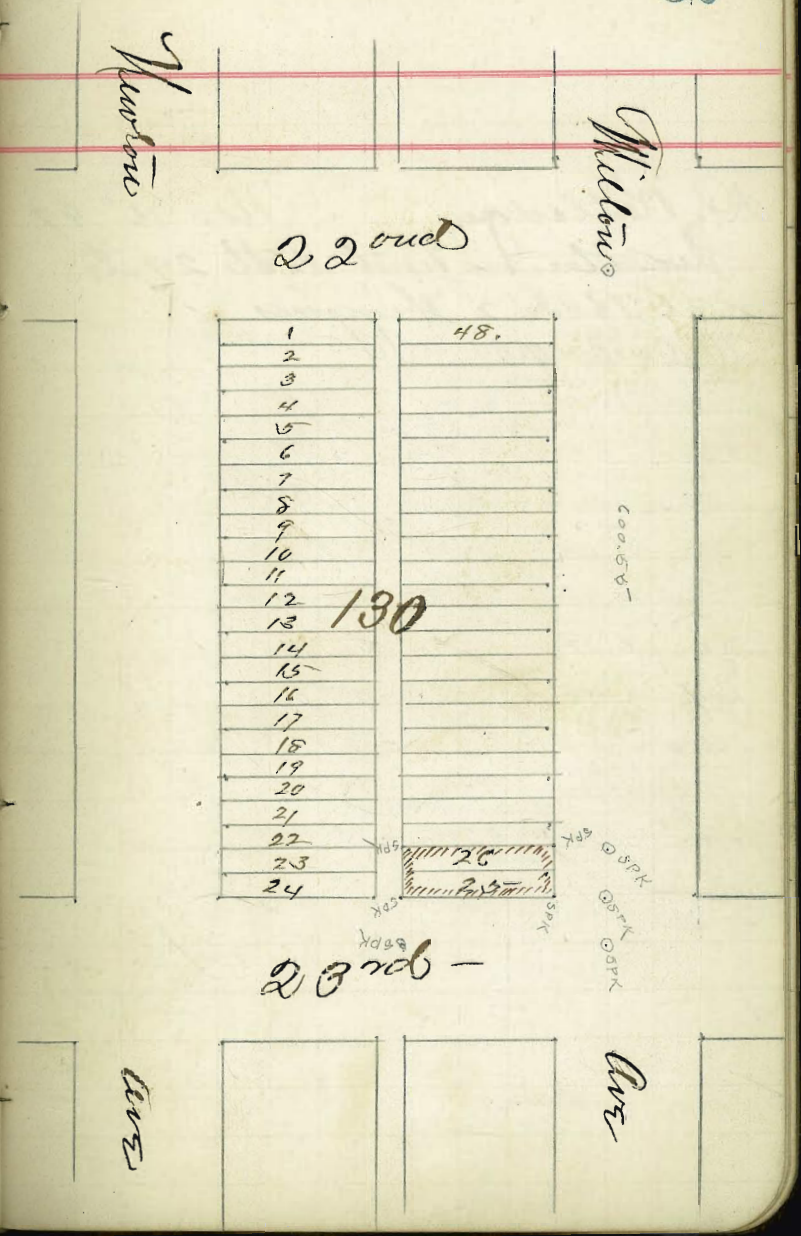
113.53 113.53 113.53
105.50 107.00 112.00
8,03 6,53 1,53



G. N Land Nov 15-97

Survey of Lots 25-26 Belp.
130 Mannasse-Schillers

Order No 949.



204.69
+ 3.76
200.93 B.M. Spike in Tel Pole –

191.46 B.M. Elec Mast
1.13
202.59
1.97
200.62
4.07
204.69
12.00
192.69
1.29
193.98

D. Rutledge Nov 16° 97
Quantities in front lots 29 to
36 Blk 2 Higgins
Order No. 951

Stat	North	Cent (204.69)	Center	
0+0	2.90	2.80	2.40	S 0+0 = East line of Lot-36
25	3.40	3.30	2.80	
50	4.20	4.30	3.60	
75	5.00	5.30	4.70	
1+00	6.20	6.10	5.80	
25	7.40	7.10	7.10	
50	8.60	8.60	8.40	
75	9.60 multo 11.00	11.80 (193.98)	12.00	
2+00	8.60	4.50	5.60	

24 do

181.00	25
182.50	26
184.08	27
185.55	28
187.07	29
188.59	30
190.10	31
191.62	32
193.14	33
194.65	34
196.17	35
197.69	
198.00	Bunk 36
197.93	37
	38
	39
197.93	40
	41
	42
	43
197.62	44
	45
	46
	47
197.00	48

25 do

(38.53)

Inclination Rod No 4 1.60
No 3. 3.80
No 2. 5.10
" 6. 1.60
" 7. 2.30
" 8 2.50
" 1 3.10
" 9 2.40
" 5 2.10

John Tyaico Nov 16-97

Quantities in Front Lot 12
Blk 52 Sherman 50' on 17th
& 100 ft on L. sheet
Order No 9.52 (38.53)

Stat	South	Cent	1/4 Stake	Center
	32.70	33.50	34.70	34.90
0+0	5.80	5.00	3.80	3.60
	34.30	32.36	34.30	34.20
12.5	4.20	6.20	4.20	4.30
	33.50	33.80	33.90	34.30
25	5.00	4.70	4.60	4.20
	32.70	33.20	32.96	33.40
37.5	5.80	5.30	5.60	5.10
	32.50	32.50	32.70	33.10
50	6.00	6.00	5.80	5.40
	31.90	29.90	32.20	32.40
62.5	6.60	8.60	6.30	6.10
	31.50	28.60	29.90	31.40
75	7.00	9.90	8.60	7.10
	30.90	29.40	29.70	30.50
87.5	7.60	9.10	8.80	8.00
	30.80	30.40	28.70	29.20
1+00	7.70	8.10	9.80	9.30

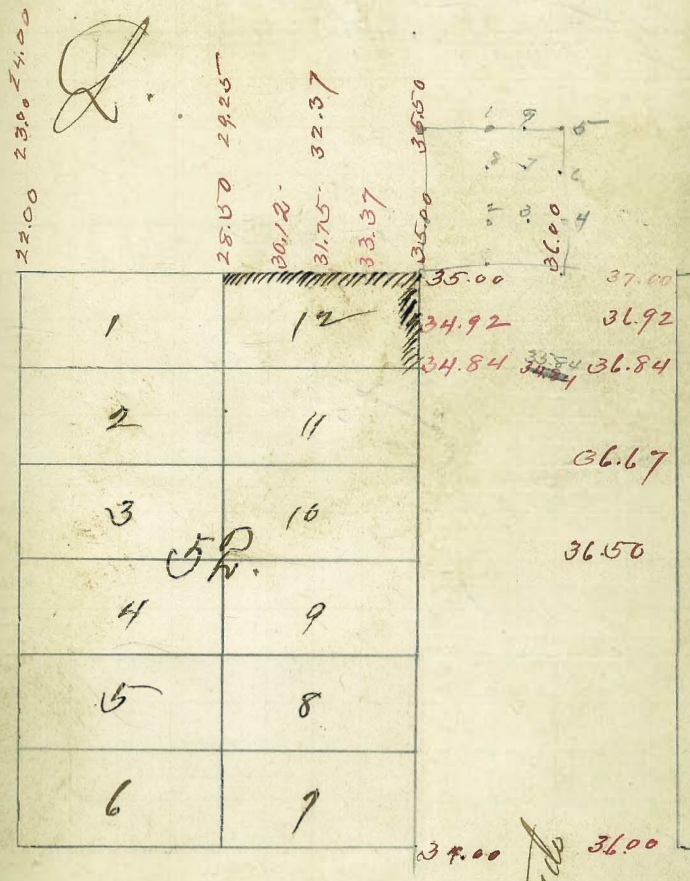
L. sheet

	West	cent	1/4 Stake	Center
	32.70	33.20	33.90	35.50
0+0	5.80	5.30	4.60	3.00
	34.40	34.60	34.10	34.80
25	4.70	3.90	4.40	3.70
	34.10	34.90	34.90	35.30
50	4.40	3.60	3.60	3.20

43.27 / 0.36 / 43.63 / 9.53 / 34.10

43.27 / 0.39 / 43.66 / 9.08 / 34.58 / 3.96 / 38.54

38.53 / 10.89 / 27.64 / 2.27 / 29.91 / 6.51 / 23.40 / 8.62 / 32.02 / 1.87 / 30.15 / 31.00



26.49 BM
1 32
27.81 27.81 27.81
20
7.81

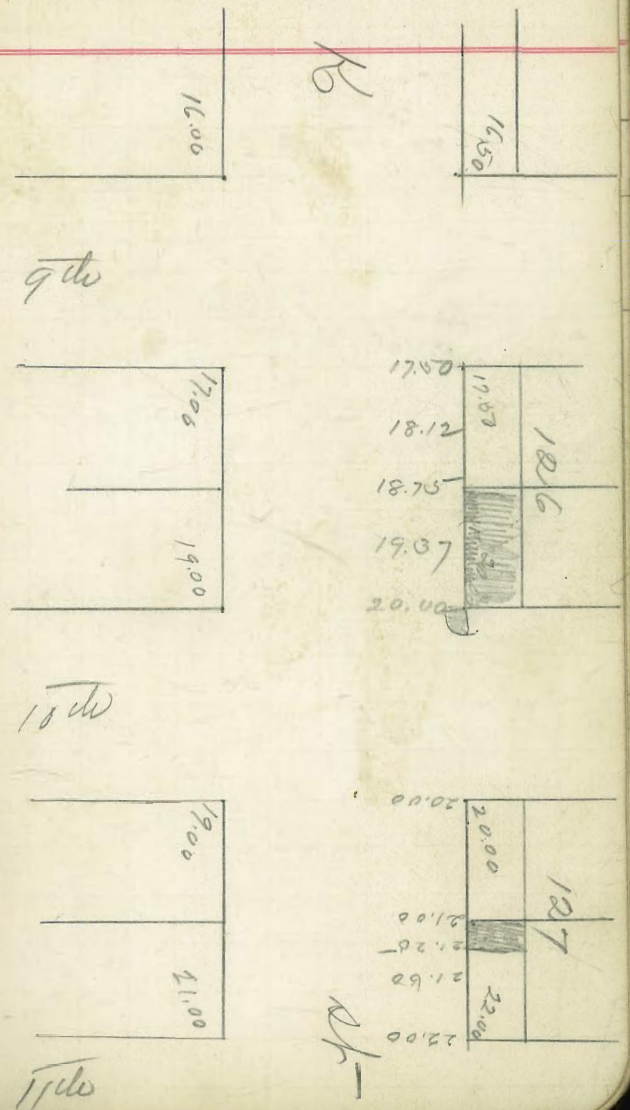
20.00 T.P. Stake
3.29
23.29 23.29 23.29
19.37 18.76 17.60
3.92 4.53 5.69

23.29 23.29
21 21.25
2.29 2.04

Checked Oct 21-97

26.49 BM
1 32
27.81
6.87
20.94 = BM Spike in tel pole N.W Cor
3.51 of 15th & K" sts

24.45 24.45 24.45 | 24.45 24.45
24.45 19.37 18.76 | 21.00 21.25
20
4.45 5.08 5.70 | 3.45 3.20



38.39
35
3.39

36.90 BM 12th J
1.49

38.39	38.39	38.39	38.39
34.00	31.75	29.50	27.25
4.39	6.64	8.89	11.14

27.25 T.P.
2.14

29.39	29.39
25	20.50
4.39	8.89

Checked Dec 21st 97
36.90 BM
1.82

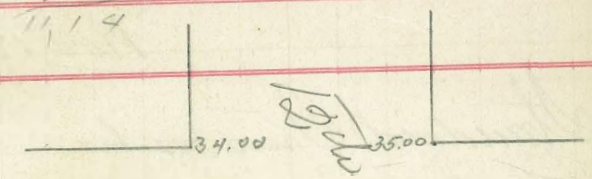
38.72	38.72	38.72
34	31.75	29.50
4.72	6.97	9.22

27.25
2.37

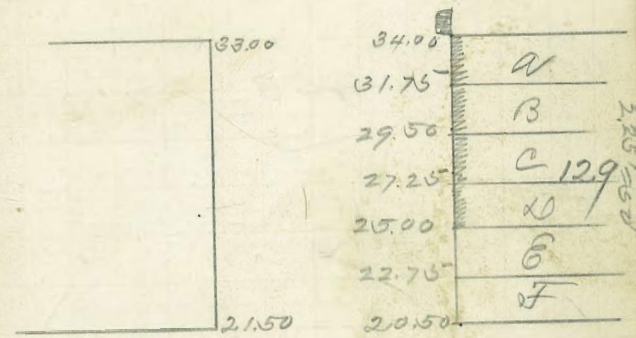
29.62	29.62
25	20.50
4.62	9.12

38.72
27.25
11.47

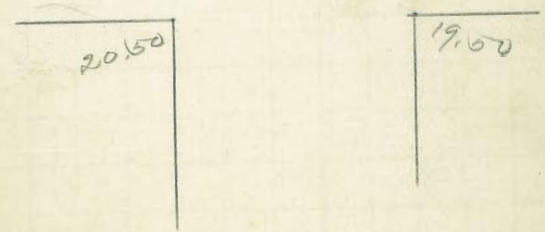
4.39
2.25
6.64
2.25
8.89
2.25
11.14



J



K



Nov 18th 97

Standard Iron works

Survey of Lot H. & I Blk

137 Horton

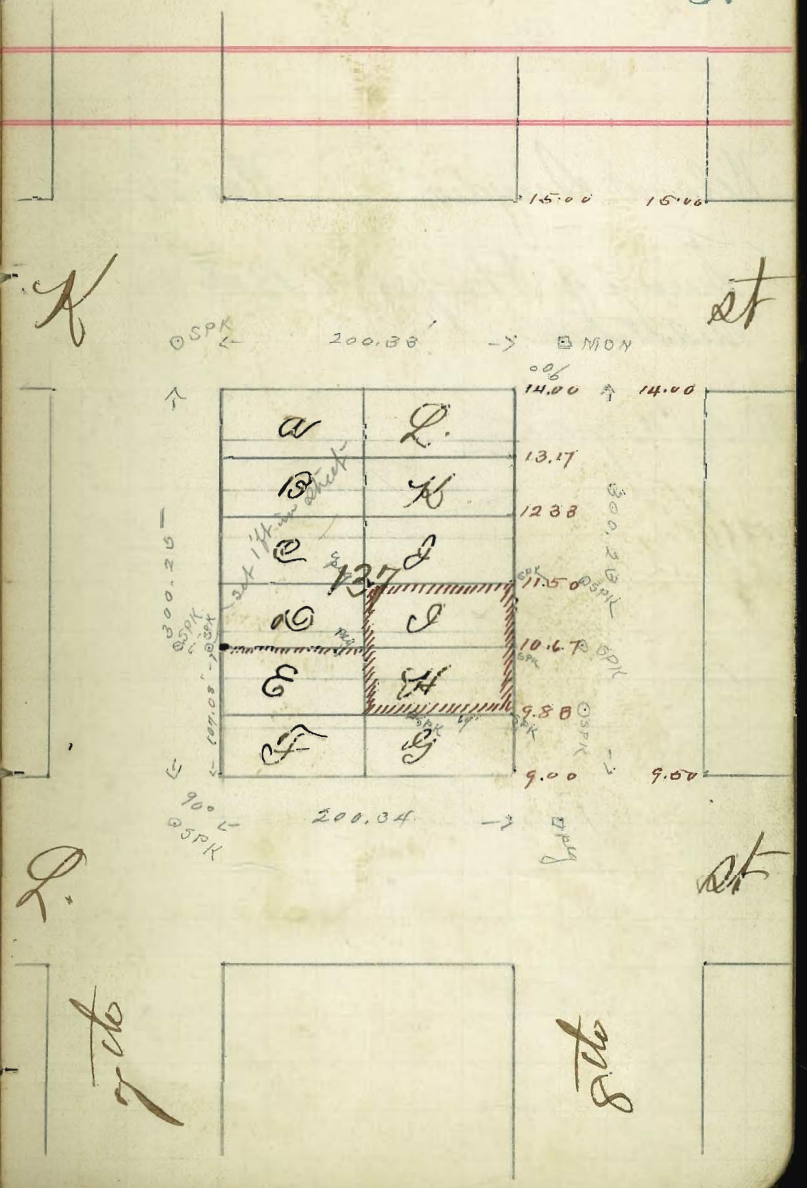
Order No 953

16.14 B M
0.92
17.06 17.06
5.97 7.30
N cor 1.09 9.76 S cor

11.75 10.08
.09 9.76
.66 .32

57.04 4
50.04
50.04

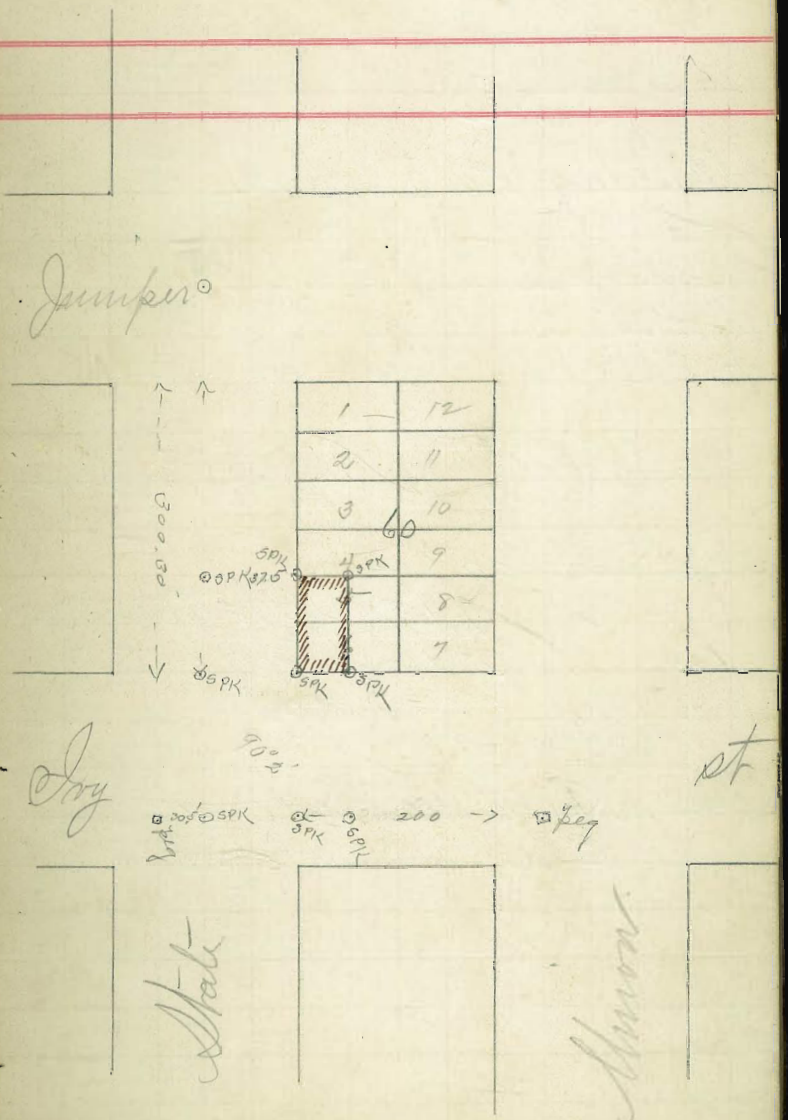
9.88
.25
10.08



Nelson Snyder Nov 24-97

Survey of W/2 of 5-6 Bek 60
Middletown

Order No 9655



Building 50' 3" square

Width of Furnace 10' 6"
Length " " 40' 6"
Height " 10'

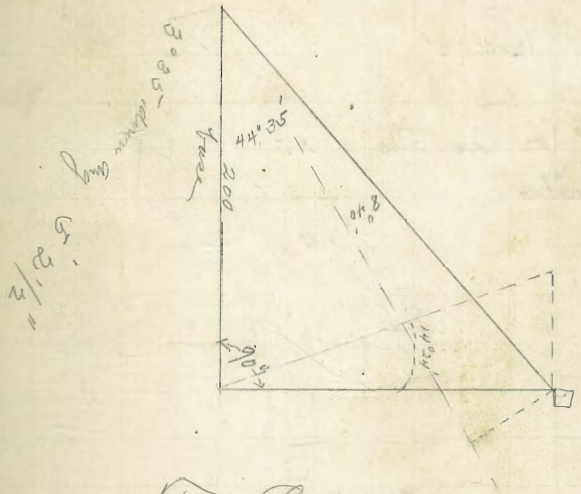
Stack at top Furnace is 9' sft sq-

Furnace 22' 6" long
" " 7' 6" deep to top ash pan
" " 6" 10" to top of grate bars
" " 6' width

diam Centre Man Hole 31" diam
" End " " 25" " "

add 3' 1"

10 buck stays on a side
8 ash holes on Each side



Tub Large
Circ 36' 7" outside Thickness of staves 1 3/4"
depth 7' 7"

Smaller tanks
14' 8" Circ
3' 10" depth.

J. F. Orr Dec 7-97

Grades to Lot "a" Blk 192
Horton

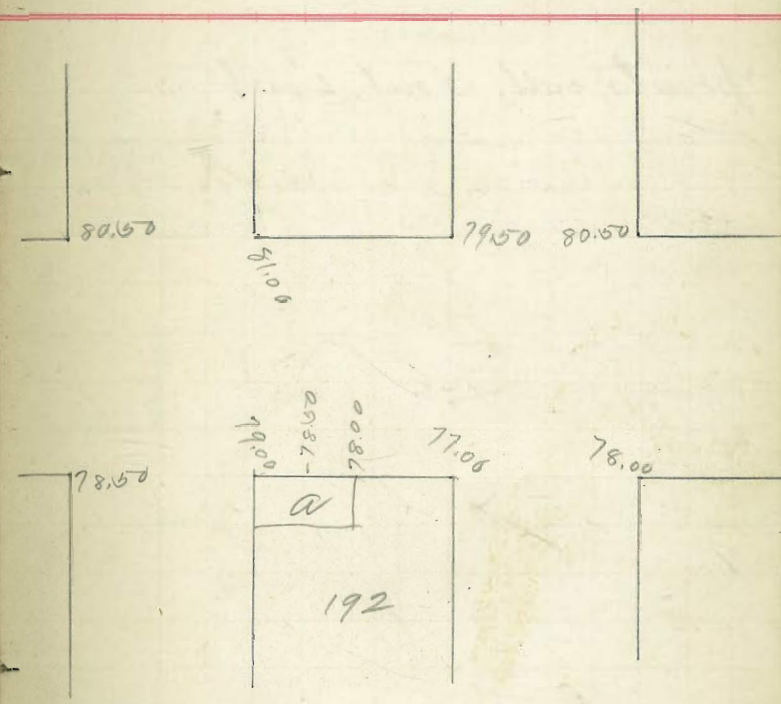
79.75 B M
4.71
84.46
79
5,46

84.46
78.50
5,96

84.46
78
6,46

84.46
77
7,46

79.00
77.00
156.00
78.00
79
157
78.50



Front Sheet - Gutters

points, curb. 3' out, 6' out

209.59 B.M
0.31

209.90	209.90	209.90	209.90	209.90
200.93	200.68	201.12	201.67	200.50
8.97	9.22	8.78	8.23	9.40

209.90	209.90	209.90
199.76	199.51	199.94
10.14	10.39	9.96

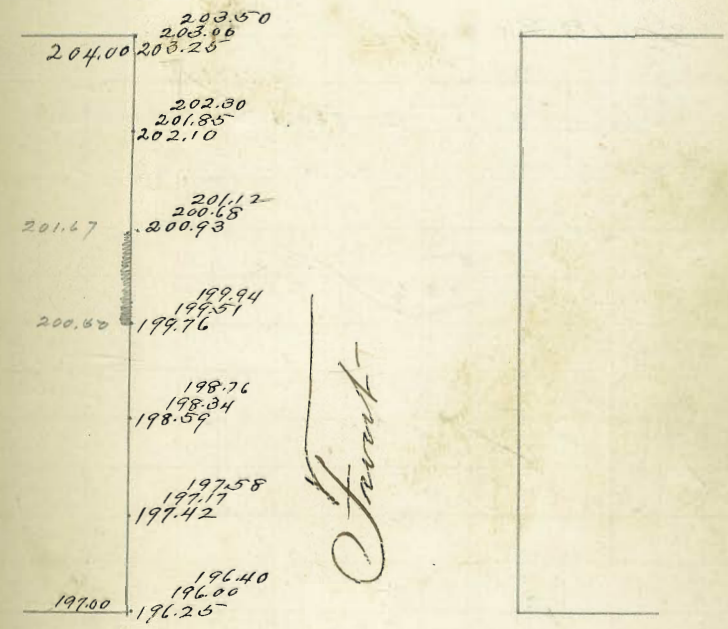
6)7(1.17
6
10
6
2

200.50
1.17
201.67

204.00
197
401
200.50

10.14
9.4
7.4
8.97
8.23
7.4

Laurel



Kalmia

7.66
1.87
6.28
1.37
4.91

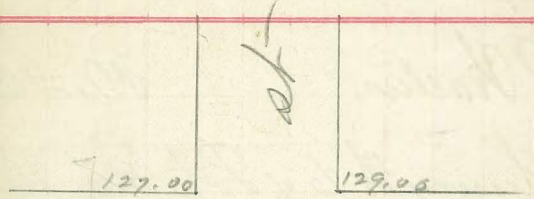
Dr Pepper
Order No 960

Dec 17. 97

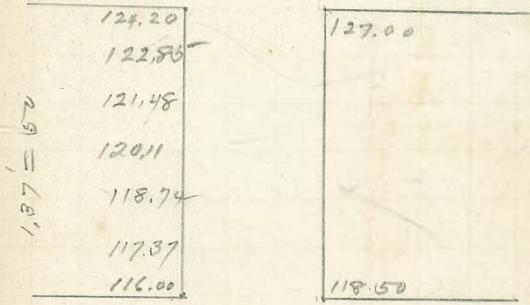
Grades to Lot 2 Blk 2 Camellia according to old 6th st grade

122.36
1.29

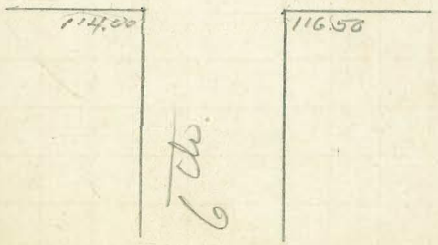
123.65	123.65	123.65
116.00	117.37	118.74
7.65	6.28	4.91



Adair

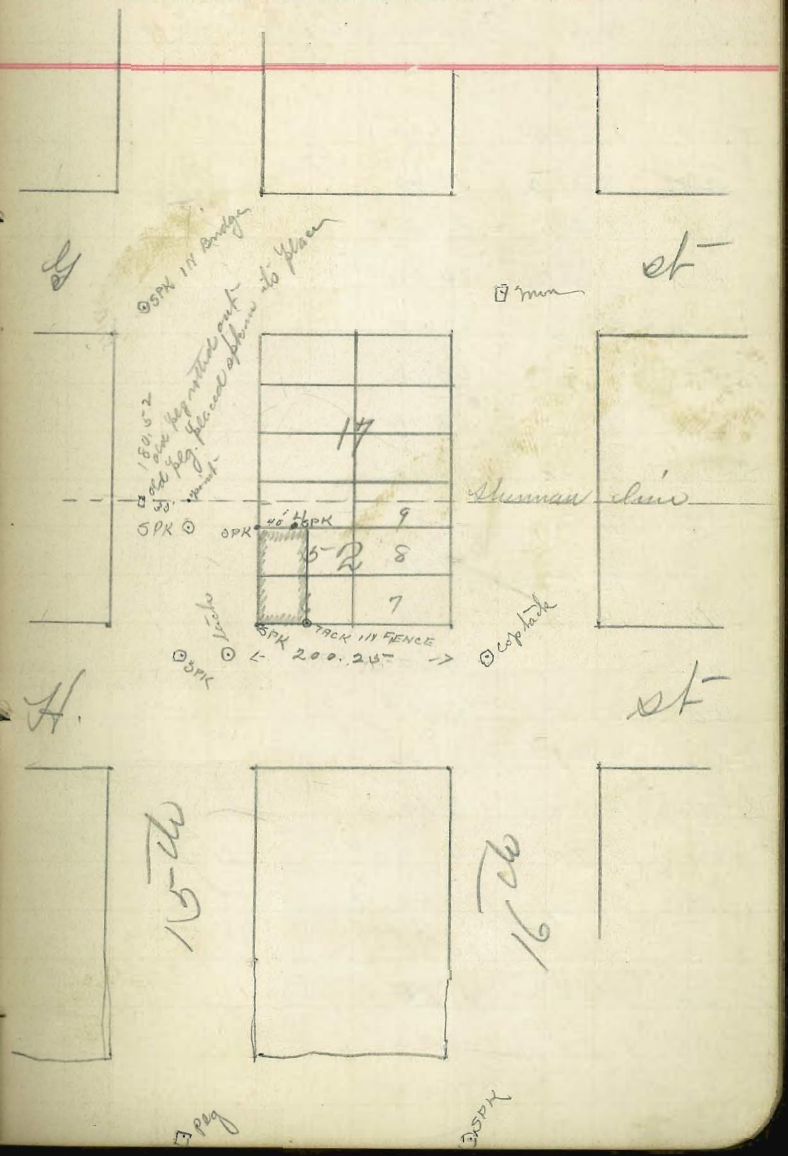


Beech



H. P. Wallin Dec 20-97

Survey W 1/2 of Lots 5-6 Blk 2 Sherman.



Level over wagon road from Twiggs (?) St along Jaun St to Wilhelmina, along Wilhelmina to Johnston Heights (Center line)

Dec 24th 1897

Capps –

Stat	Rod	Elev
	(64.13)	
0+0	12.40	51.70
25	8.30	55.80
50	6.60	57.50
1+00	3.50	60.60
50	2.00	62.10
2+00	1.00	63.10
	(75.31)	
50	11.60	63.70
3+00	11.40	63.90
50	7.50	67.80
	(86.79)	
4+00	9.10	77.70
	(98.58)	
50	11.30	87.30
5+00	3.00	95.60
	(110.62)	
50	8.40	102.20
6+00	2.60	108.00
	(122.57)	
50	9.40	113.20
7+00	5.70	116.90
50	2.00	120.60
	(134.06)	
8+00	9.00	125.10
50	2.50	131.60
9+00	0.30	133.80
	(145.51)	
50	7.50	138.00

Cent Twiggs ?

3+50 Cent Horney St ?

7.00 Cent Condé St ?

56.76 BM
7.37
64.13
0.36
63.77
11.54
75.31
0.00
75.31
11.48
86.79
0.00
86.79
11.79
98.58
0.00
98.58
12.04
110.62
0.00
110.62
11.95
122.57
0.00
122.57
11.49
134.06
0.00
134.06
11.45
145.51

See Bk 104 p 84

Spike in Cor Post near 8 0+0

Stat	Rod	Elev
10+00	3.30 (157.04)	142.20
50	8.30	148.70
11+00	1.10 (168.47)	155.90
50	1.60 (180.20)	166.90
12+00	5.60	174.60
50	0.00 (191.71)	180.20
13+00	5.00	186.70
50	4.30	187.40
14+00	6.20	185.50
50	4.80	186.90
15+00	3.20	188.50
50	3.20	188.50
16+00	7.20	184.50
50	10.90	180.80
17+00	10.30	181.40
50	5.70	186.00
18+00	1.40 (203.53)	190.30
50	11.00	192.50
19+00	7.90	195.60
50	1.50 (215.38)	202.00
20+00	4.30	211.10

10+50
} Arista St ?

14+00
} Ampudia St ?

17+50
} Frias

64.13
83
55.8

145.51
55.8
89.7

142
55
87

145.51
0.00
145.51
11.53
157.04
0.00
157.04
11.43
168.47
0.00
168.47
11.73
180.20
0.00
180.20
11.51
191.71
0.00
191.71
11.82
203.53
0.00
203.53
11.85
215.38

350
7
2450

Stat	Rod	Elev
	(226.87)	
20+50	10.50	216.40
21+00	4.20	222.70
	(238.45)	
50	10.10	228.30
22+00	1.70	236.70
	(249.81)	
50	6.30	243.50
23+00	4.90	244.90
50	4.40	245.40
24+00	2.50	247.30
	(259.54)	
+42.5 Δ	8.90	250.60
25+00	3.60	255.90
50	0.30	259.20
	(270.95)	
26+00	8.70	262.20
50	7.50	263.40
27+00	5.70	265.20
+46 Δ	6.90	264.00
28+00	6.50	264.40
50	5.40	265.50
29+00	3.50	267.40
	(282.16)	
50	11.30	270.90
30+00	8.70	273.50
50	7.40	274.80

21+00 Cent Concordia ?

24+25 West Side Witherbee ?

S 24+42.5 is Angle in Witherbee - Juan st

S 27+46 = Δ in Witherbee - street in Johnston Height

215.38
0.00
215.38
11.49
226.87
0.00
226.87
11.58
238.45
0.00
238.45
11.36
249.81
2.00
247.81 = B.M. 5 tacks in top post 4"x4" at Cor Juan - Witherbee
11.73
259.54
0.00
259.54
11.41
270.95
0.00
270.95
11.21
282.16

Stat	Rod	Elev
31+00	4.40	277.80
50	2.10	280.10
	(287.66)	
32+00	6.10	281.60
50	5.00	282.70
33+00	4.20	283.50
+32.50	4.90	282.80

287.7
75
280.2

282.16
21
280.1

282.16
0.74
281.42
6.24
287.66
4.48
283.18 = 13 m

spk in cor post p yard on top hill

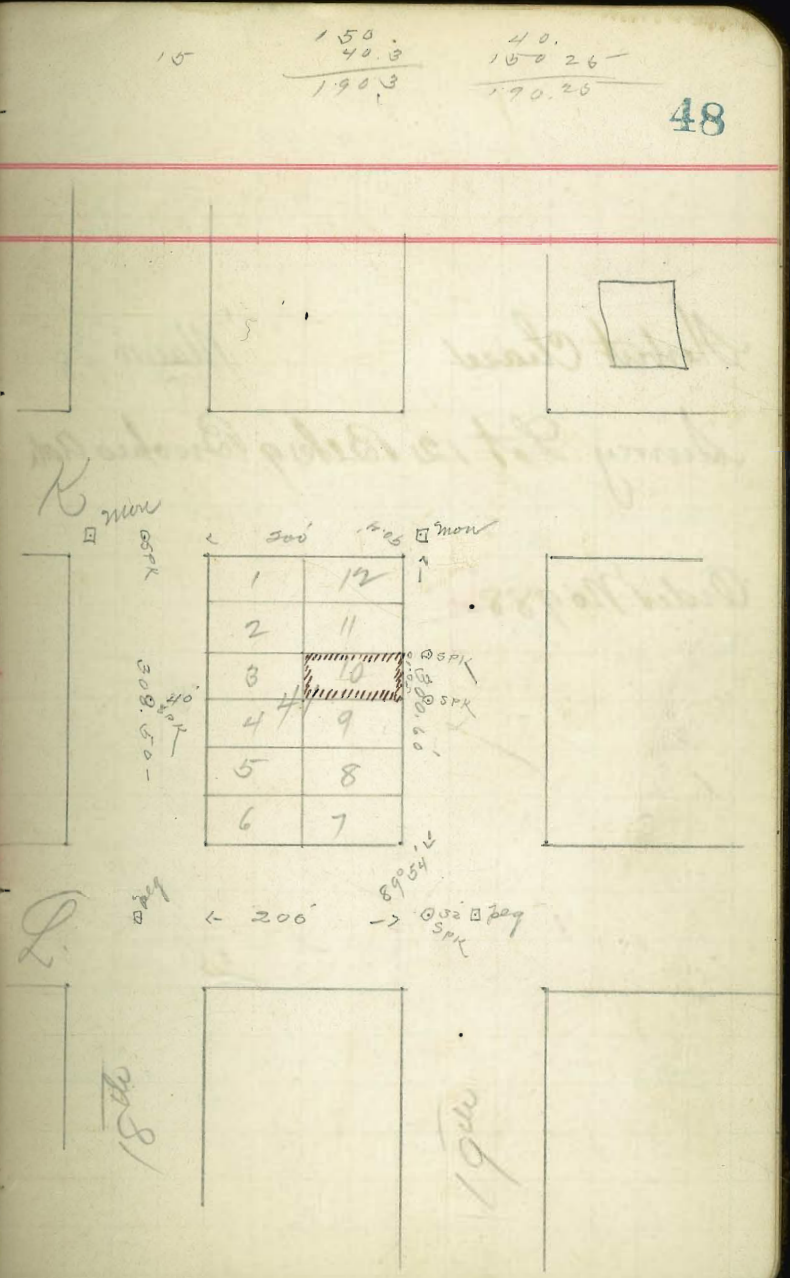
E. H. Bowler. May 2nd 98

Survey Lot 10 Bek 41

Sherman

Order No 985

Set spikes at all four corners

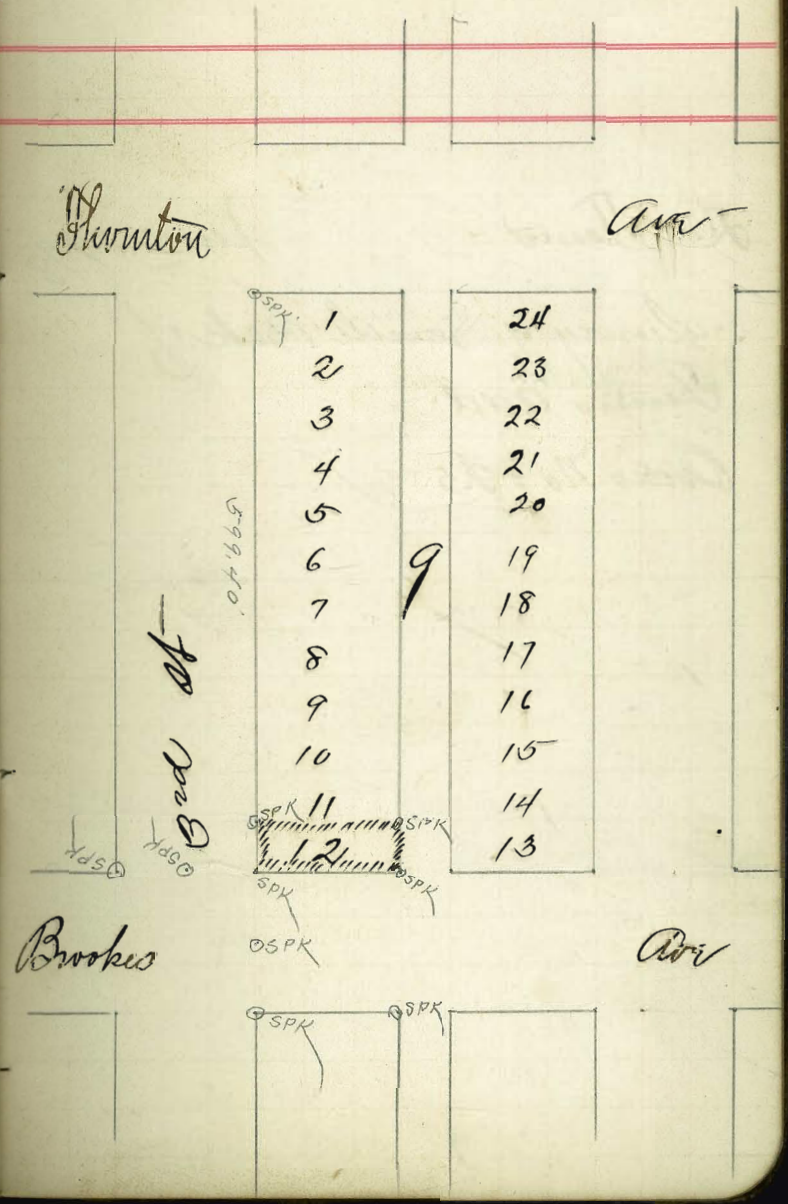


Herbert Chase May 10. 98

Survey Lot 12 Blk 9 Brookes Add

Surveyed from Original Points (corners)

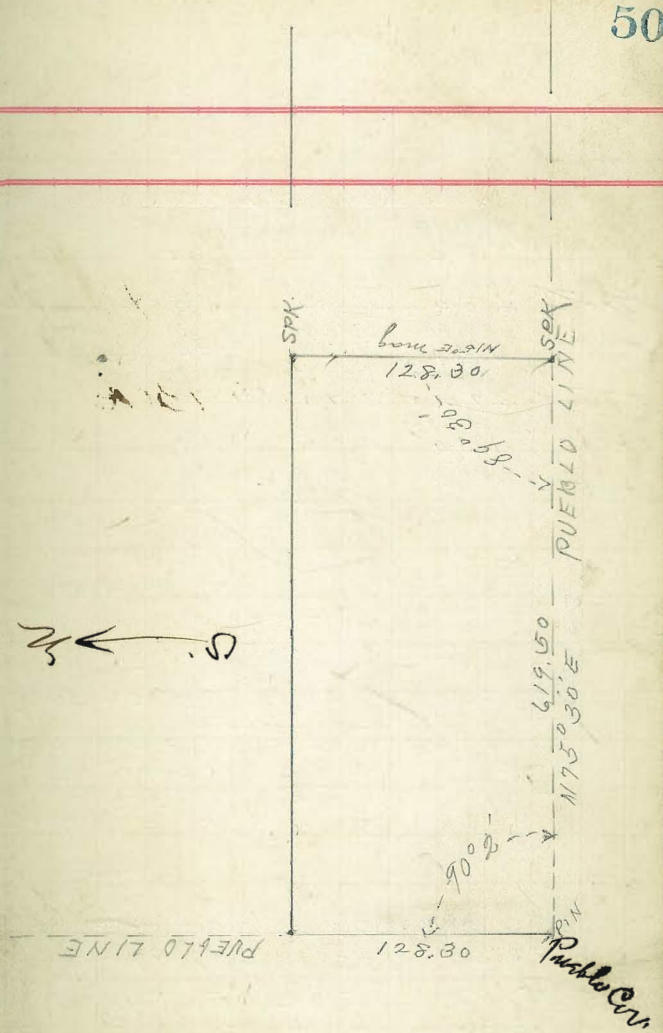
Order No 988.



Dr Fenn June 27.98

Survey of South Bek of Fenns Add.

Order No 995



Sta	South	Curb	Curb
		(293.51)	
	288.30	288.40	288.60
0+0	5.20	5.10	5.00
	288.70	288.90	288.70
+25	4.80	4.60	4.80
	288.90	288.80	288.70
+50	4.60	4.70	4.80
	289.50	289.50	288.80
+75	3.70	3.70	4.70
	289.20	289.60	288.90
1+00	4.30	3.90	4.60
	289.10	289.10	288.90
+35	4.40	4.40	4.60

288.88 B.M.
4.63

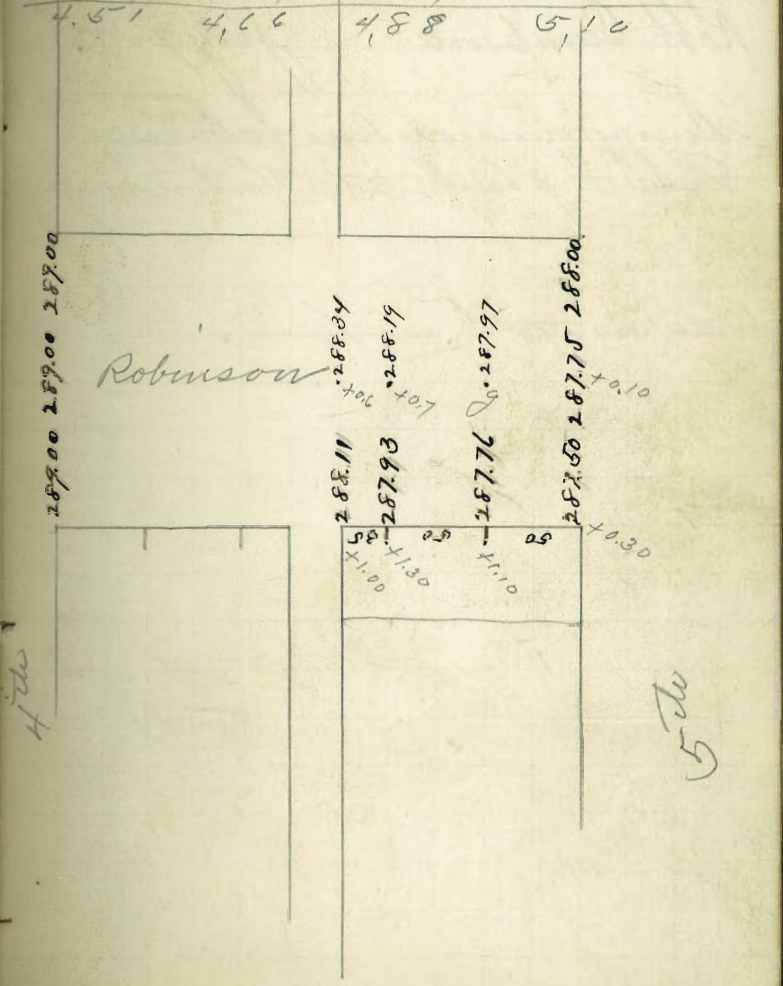
293.51	293.51	293.51	293.51
288.11	287.93	287.76	287.60
5.40	5.58	5.75	5.91
4.40	4.30	4.60	4.57
+1.00	1.28	1.15	.34

293.51	293.51	293.51	293.51
288.34	288.19	287.97	287.76
5.17	5.32	5.54	5.76
4.60	4.60		5.6
.57	.72		.16

288.88 B.M.
5.97

292.85	292.85	292.85	292.85
288.11	287.93	287.76	287.60
4.74	4.92	5.09	5.25
	5.00	5.22	

292.85	292.85	292.85	292.85
288.34	288.19	287.97	287.76
4.51	4.66	4.88	5.10

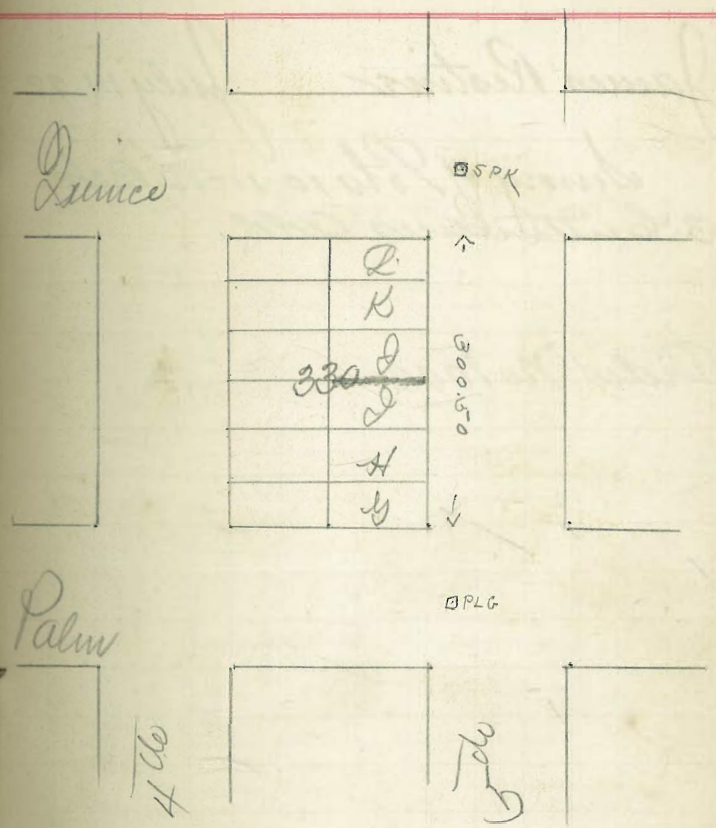


150.26
40
190.26

Robt Campion July 7th 98

Survey division line between
Lots L J Blk 330 Horton

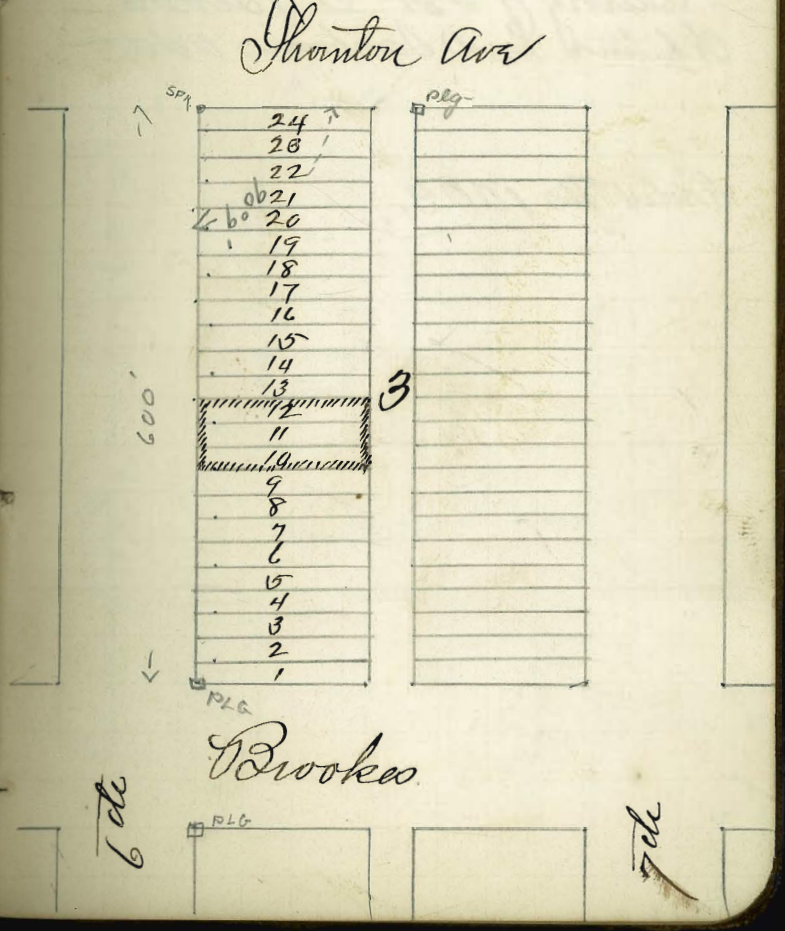
Order No 998



James Restivo July 14. 98

Survey of Lots 10-11-12 Blk 3 Crittenden's Add.

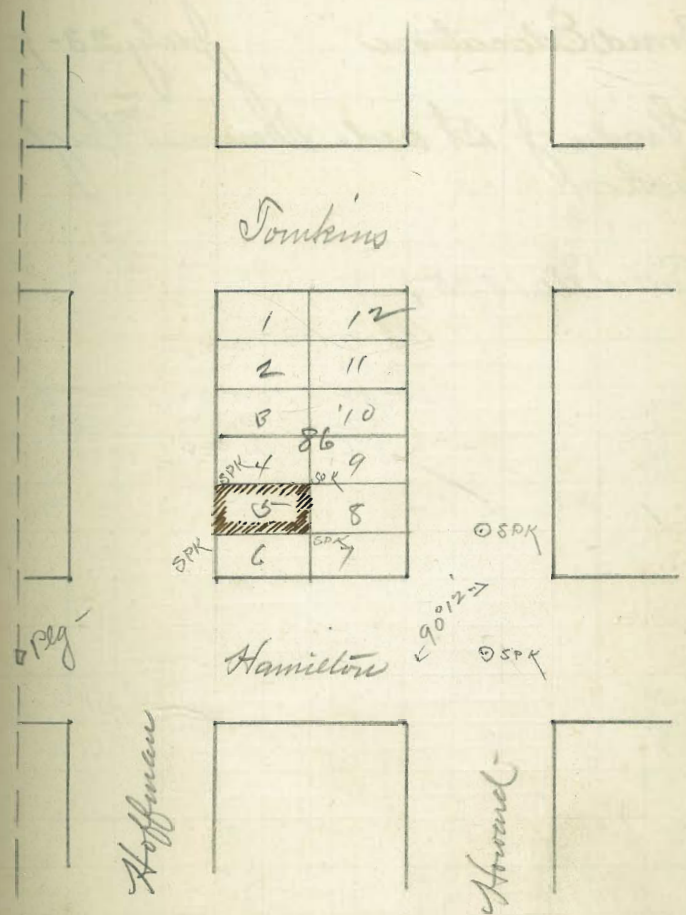
Order No 1000.



Mr Kamman July 20-98

Survey of Lot 5 Blk 86
Whitmer Land Sanborn's add—

Order No 1003.



Board Education July 23-98.

Grades J' St side Sherman Heights school.

Order No 1005

103.45 B.M
2.03
105.48
101.12
4.36

105.48
100.50
4.98

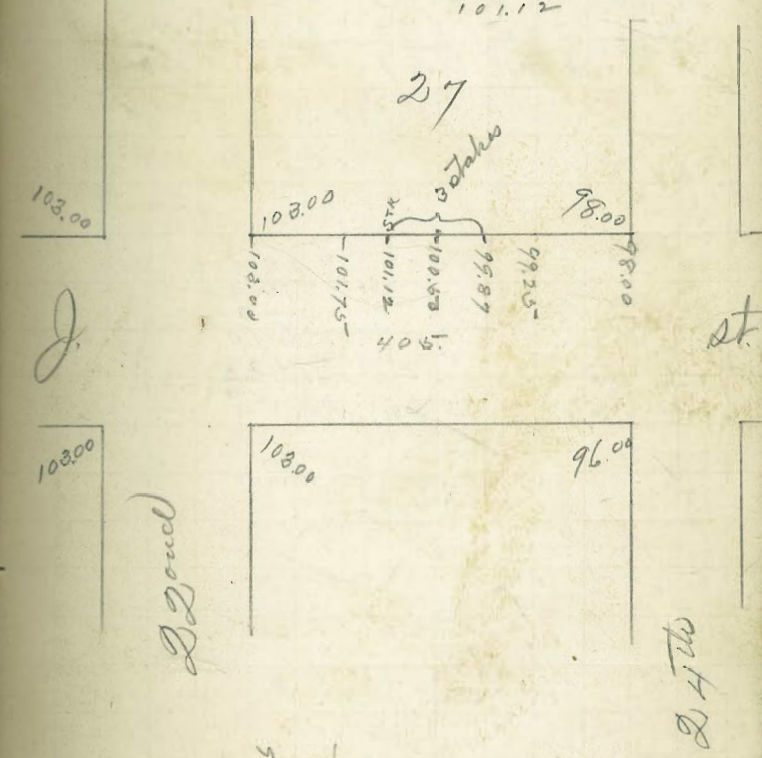
105.48
99.87
5.61

98.00
1.25
99.25
1.25
100.50
1.25
101.75
1.25
103.00

103
98
4) 5 (1.25
4
10
8
20

98
103
201
100.50

101.75
100.50
202.25
101.12



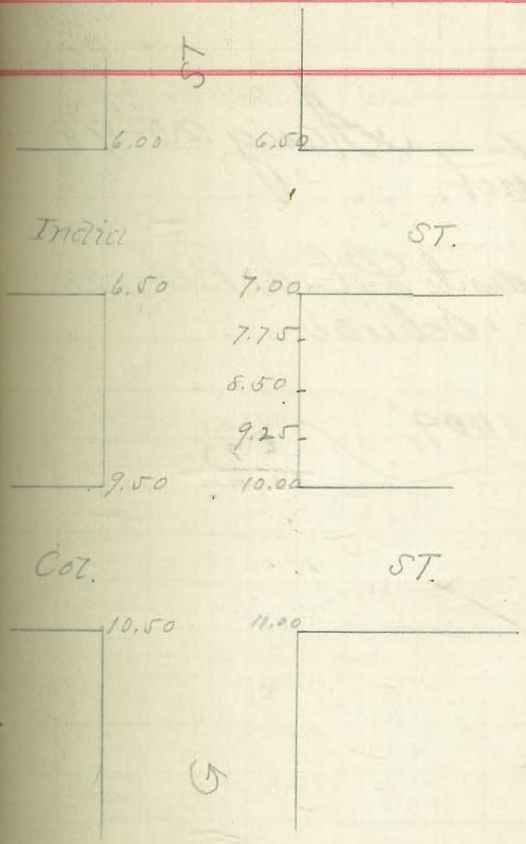
99.25
99.87
100.50
101.13
101.75
102.37
100.50
99.87
99.25
100.50
99.25

Keeley Contract- Aug 17 - 1898

4.06 B.m Cor H - India
7.42

11.48	11.48	11.48	11.48	11.48
7	7.75	8.50	9.25	10.00
4.48	3.73	2.98	2.23	1.48

10.00
6.77
16.77
4.20
12.57



39.50
1.91
41.41
1.91
43.32
1.91
45.23

45.23
1.91
47.14
1.91
49.05
1.91
50.96

J. M. Hunt. Aug 25-98

Grades to Lot 41 Blk 128
Mannasse & Schiller

Order No 1009,

39.96 BM
7.04
47.00 47.00
43.33 42.86
3.67 4.14

41.42
48
41.90
48
42.38
48
42.86
48
43.34

51.00
39.50
6)11.50 (1.91
6
55
54
10

Melton

39.00 40.00

SPK @ 20 79' @ SPK 20' @ SPK

4)1.92 (48
16
32

24th

39.50 40.50

48.
47
46
45
44
43
42
41.

41.42
41.90
42.38
42.86
43.33
45.25
47.16
49.08
25
51.00 52.00

600.40

39.50
1.92
41.42
1.91
43.33
1.92
45.25
1.91
47.16
1.92
49.08
1.92
50.00
10

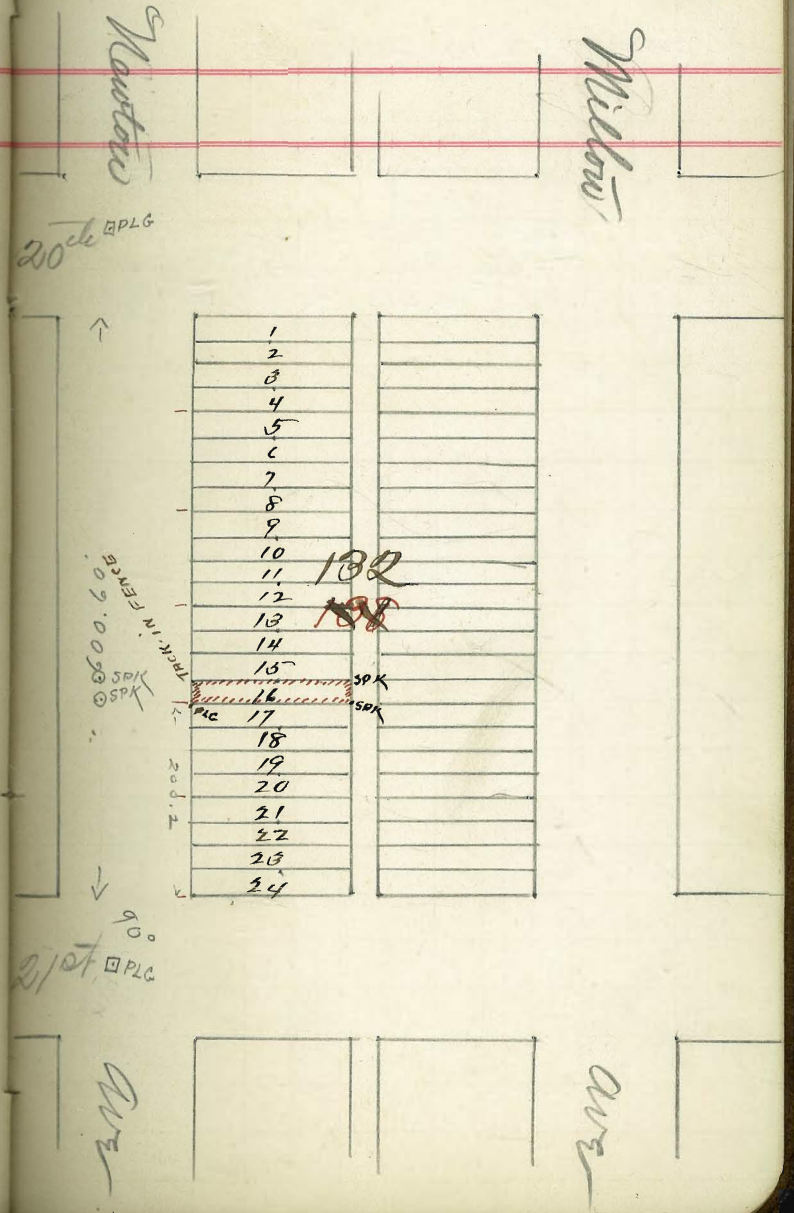
25th

51.00 52.00

Ave

Order No 1010 Aug 26th – 98

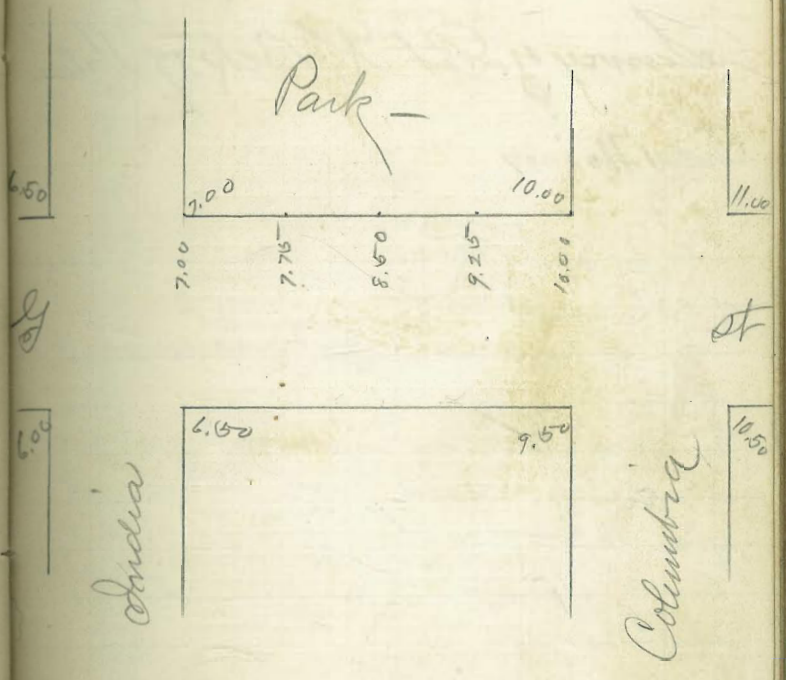
Survey of Lot 16 Bek ~~138~~ 132
Manassa and Schillers Add.



Checking Kelly Contract

4.06 B.M Sept 7-98

11.56	11.56	11.56	11.56	11.56
7	7.75	8.50	9.25	10.00
4.56	3.81	3.06	2.31	1.56

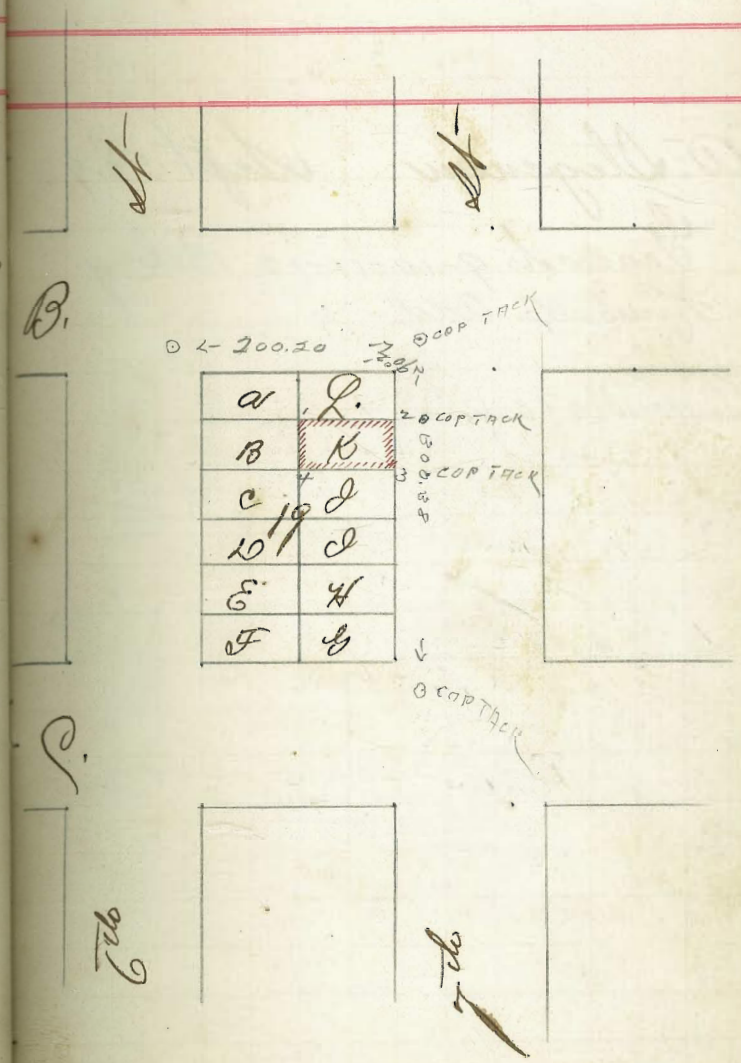


B. L. Muir Sept 10-98

Survey of Lot K Blk 19 Horton

Order No 1017

Cor 2 spike driven in fence post, head of spk exact cor.
Cor 1. spike driven in stable, head exact corner,
Cor No 4 tack driven in post of stable exact line bet Lots J & K. bat 5' east of cor to lot
Cor 3. spike driven in fence post, head exact cor



135.56
9.45
126.11

A. Stegenau Sept 30. 98

Grades to 9-10-11-12 Blk 9
Kimball Add-

Order No 1019.

118.20 B.M Cor 22 & H.
5.76
12396
0.97
12299
11.61
13460
1.49
13311
11.54
14465
14150
315
4.15 1 ft low

144.65
143.75
.90
1.90 1 ft low

144.65
1.90
142.75
7.63
150.38
146.00
4.38
5.38 1 ft low

Stakes all set one ft below the official grade

2.30 37.2

135.56
11.36
124.20
2.36
126.56
8.35
118.21 B.M. 22nd

157.
129.5
6)27.5
24
35

4.60
0
9.20

157
92
1478

150.38
23
148.08

H.I = 158.07
ROD
Sta 0. = 3.23
+50 = 5.78
1 = 8.15
+50 = 10.45
4.10 - 2 = 3.88
+50 = 6.29
3 = 8.70
+50 = 11.18
4 = 4.72
+50 = 7.12
5 = 4.75
+50 = 6.87
6 = 9.45

B.M = 177.10
1.73
178.83
11.45
167.38
1.89
169.27
11.33
157.94 N.W
0.13 cor
158.07 25th

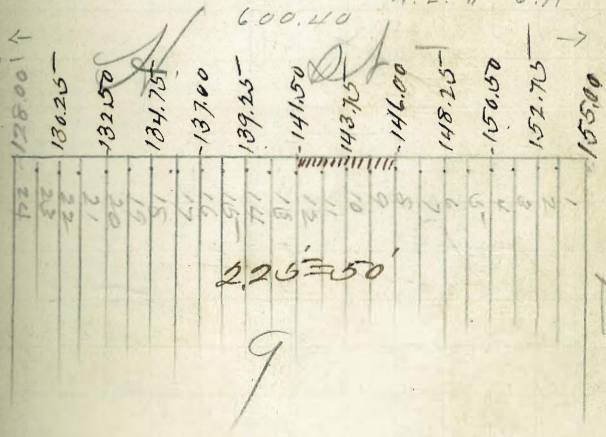
129.50

158.07
11.73
146.34
2.73
149.07 = H.I.
11.53
137.54
2.68
140.22 = H.I.
9.63
130.59
4.97
135.56 H.I.

157.00

S.W. Cor 24th 11.60. N.W. Cor. 8.75
N.E. " 6.71

600.40



12
55
60
60
6.60

6.71
58
6.13
58
5.55
57
4.98

101.01
100.92
09

Mr Arnold Nov 4 98

Survey E/ Gradesto Lots
10-11-12 Bk 48 Utto.

Order No. 1027

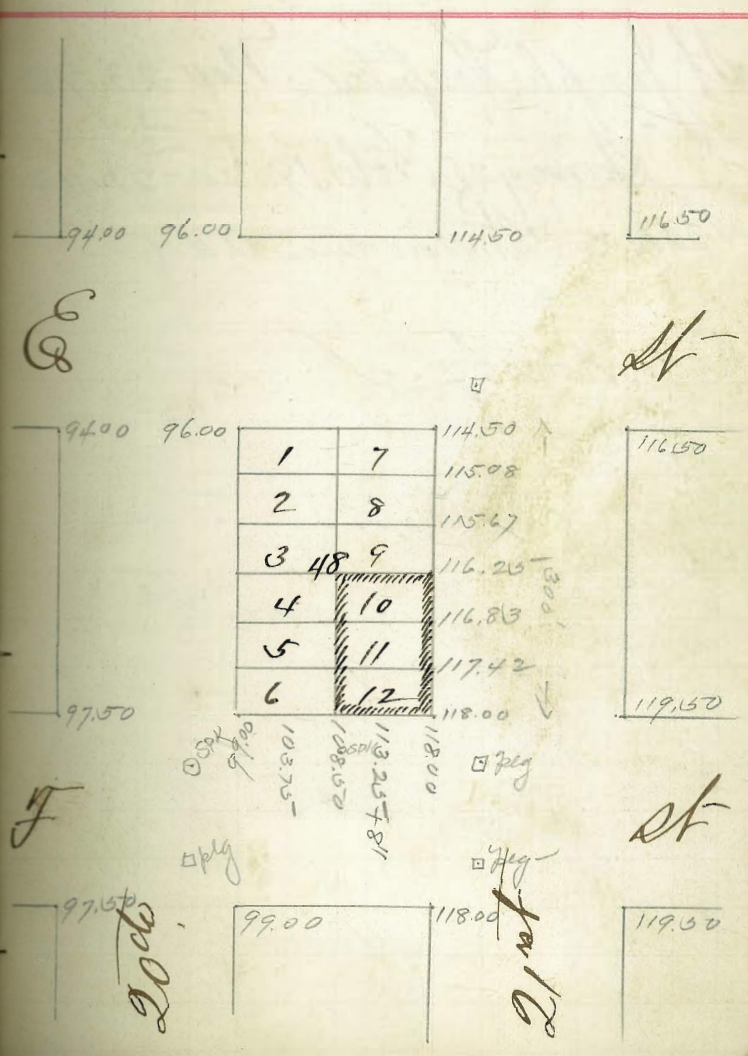
113.85 B.M
4.78
118.63
1.85
116.78
6.18

122.96 122.96 122.96 122.96
116.25 116.83 117.42 118.00
6.71 6.13 5.54 4.96

118.00 on Stake
0.72
118.72
113.25
5.47
4.73 Rod
.74
Cut 8"

118.72
11.33
107.39
4.00
111.39
108.50
2.89
1.34
1.55
Cut 1" 6½"

111.39
10.47
100.92 on B.M
Cor 20 & 7

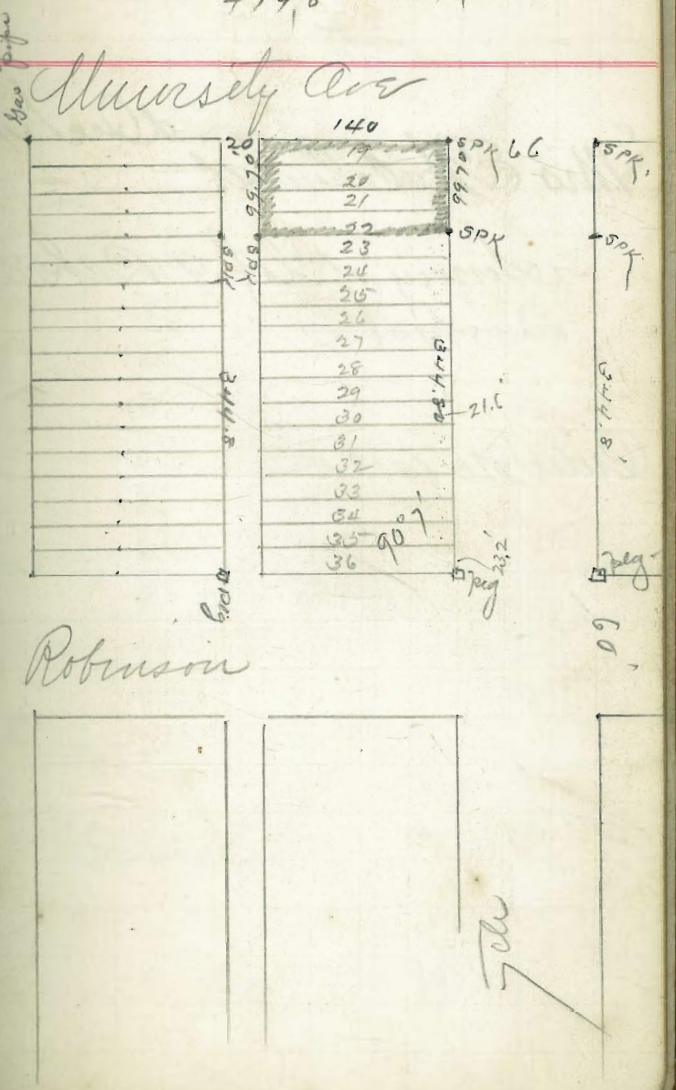


St Joseph Hospital. Nov 23. 98

Survey of Lots 19-20-21-22

Blk 15 Chittenden Add.

Order No 1029



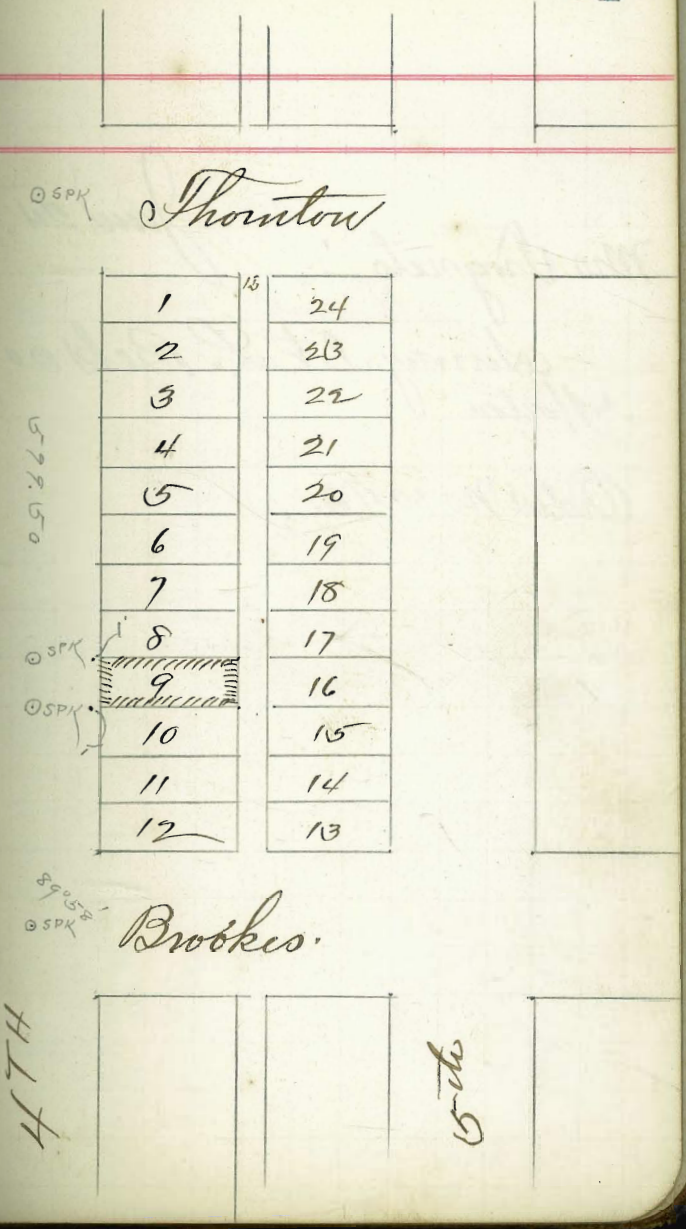
Mrs E. H. Schmidt Dec 14-98

Survey of lot 9 Blk 8
Brookes

Order No 1035

Spikes set 1 foot west of true Cor in front of lot.

229.83 230 / 17 12)50 / 48 64



Jan 24, 99

Mrs Trogneto

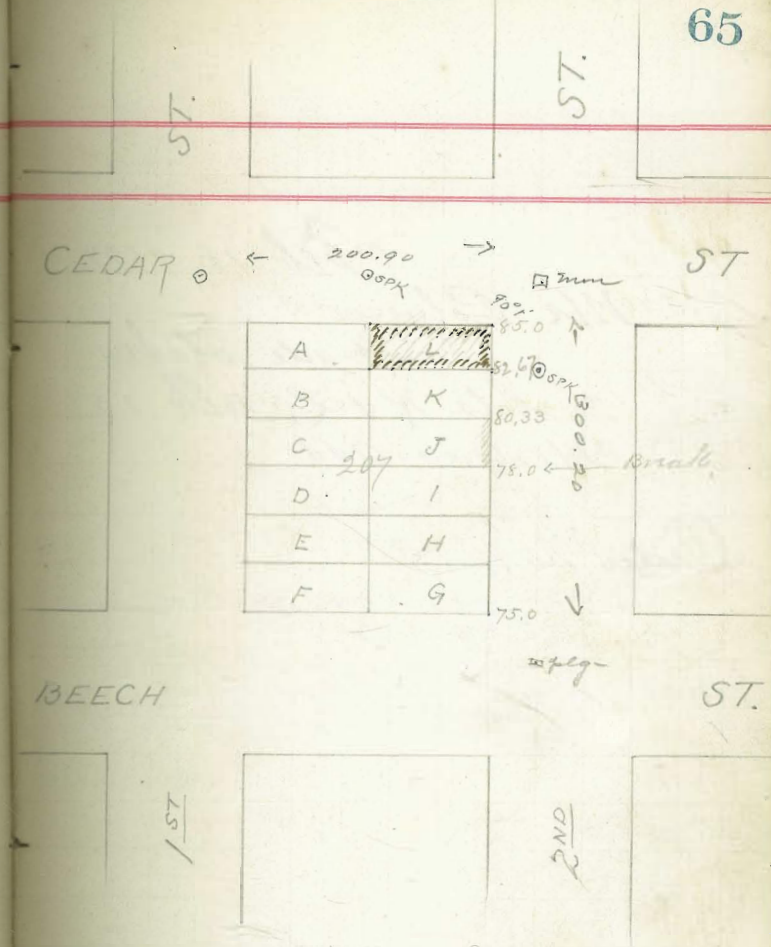
Survey lot L. Bek 207
Horton

Order No 1043.

Comb Grades Lot J. B. 207 Jan 10/99

77.65 B.M.	83.53	83.53
5.88	80.33	78.00
83.53 H I	3.20	5.53

Order No. 1053.



Feb. 18. 1899

Mr Polyicw
Grade staker
to lots K & L, Blk. 251
Horton's Add.

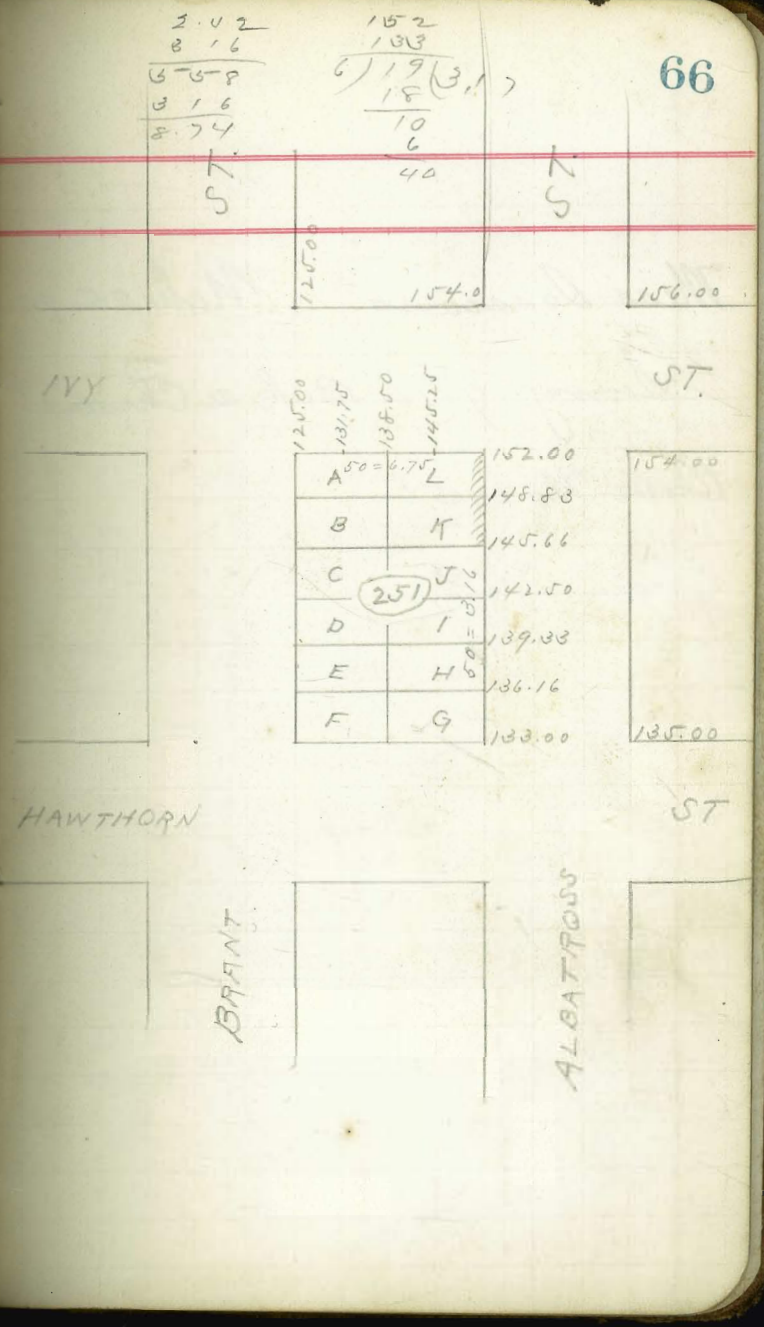
Order No 1045

151.22 B.M Cor S.W.
3.20

154.42	154.42	154.02
152.00	148.83	145.66
2.42	5.59	8.76

2.42
8.16
6-6-8
3.16
8.74

152
133
6) 19 (3.1
18
10
6
40

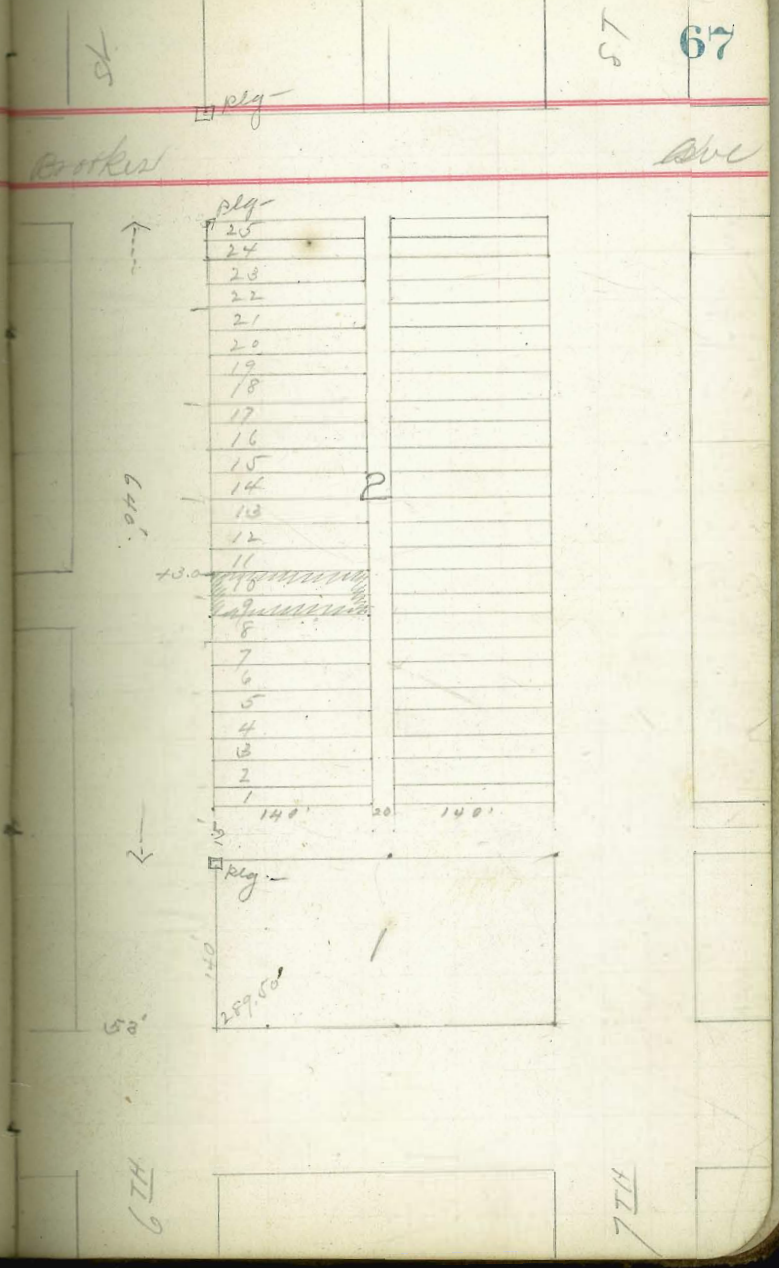


Miss Sessions Mch 25-99

Survey 9-10 Bck 2 Chrillade

Order No 1056

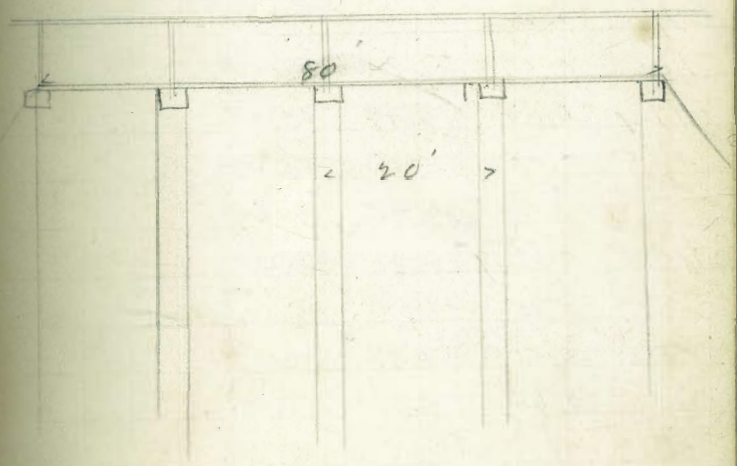
Original plgs,



Raising the Indian St. Bridge and regrading a portion of Indian St Road.

Sta	Rod	Elev	Grade	+	−	
S.L. Kalmia =	(48.96)		43.00			
0+0	6.30	42.66	44.48	+ 6.30		42.66
+40	8.84	40.08	45.96			
+51	9.20	39.76	46.37			
	10.46	38.50				
1+31	9.18	39.78	49.33			
	10.44	38.52				
+50	7.70	41.26	50.03			
2	7.87	44.09	51.88			
+50	1.90	47.06	53.73			
	(59.90)				0.87	
3	9.75	50.15	55.58	+ 11.81		
+50	6.72	53.18	57.43			
4	3.45	56.45	59.29			
+50	0.55	59.35	61.14			
	(70.39)				1.01	
5	7.51	62.88	63.00	+ 11.50		
+50	4.50	65.89	64.84			
6	1.52	68.87	66.69			
	(81.54)				0.70	
+50	9.60	71.94	68.54	+ 11.90		
7	6.95	74.59	70.39			

B.M. St. Center Indian + Kalmia -
North Line Kalmia.
South end Bridge
Elev. on Cap.
North end Bridge.
Elev on Cap



Sta	Rod	Elev.	Grade	+	−
		(81.54)			
+50	4.55	76.99	72.24		
8	1.57	79.97	74.09		
		(98.29)			0.30
+50	10.50	82.79	75.94	+12.05	
9	7.65	85.64	77.79		
+50	4.97	88.32	79.64		
10	3.72	89.57	81.49		
+50	2.40	90.89	83.34		
11	1.88	91.41	85.19		
+50	0.67	92.62	87.04		
12	0.50	93.79	88.89		
+50	2.50 (97.68)	95.18	90.75		
13	1.33	96.35	92.60		
+50	0.87	96.81	94.45		
14	0.30	97.38	96.30		
+50	2.50 (101.21)	98.71	98.15		
15	1.65	99.56	100.00		

4266 B.M.
9.46
52.12
0.50
51.62
11.90
63.52
0.13
63.39
11.64
75.03
0.58
74.45
11.74
86.19
0.51
85.68
12.00
97.68 H.I.
0.40
97.28
3.93
101.21 H.I.

5/3/99

70

Sta	Rod	Elev	Grade	+	−	BM
		(48.86)				
0	6.2	42.66		+ 6.20		42.66
+40	8.8	40.06				
+51	9.2	39.66				
Bridge						
1+32	9.1	39.71				
+50	7.6	41.26				
+75	6.5	42.31				
2	4.8	44.06				
+25	3.2	45.61				
+50	1.8	47.04 TP			− 1.8	
		(57.64)			+ 10.60	
+75	9.0	48.64				
3	7.3	50.34				
+25	5.7	52.94				
+50	4.6	53.04				
+80	2.5	55.14				

Cross Sections on India St from Center Kalmia to Center Laurel 5/3/99

Sta		West —			Center Line	East —				
Center Kalmia St 0+00 =				7.3 Rod / 12.0 crs / 41.56	(48.86) / 6.2 / 42.66 / 43.0	5.5 Rod / 12.0 crs / 43.36				
+40		Y Sec. Rod 14. / 3.4 / 31.46	Y Sec. Rod 14.0 / 18.0 crs / 34.86	9.1 Rod / 12.0 crs / 39.76	8.8 / 40.06 / 43.0	8.2 Rod / 12.0 crs / 40.66	8.8 / 25.0 crs / 40.06			
+51	South End Bridge			9.0	9.2 / 39.66 / 43.0	9.0				
1+32	North End Brr			9.1	9.1 / 39.71 / 43.0	9.0				
1+50		14. / 6.8 / 37.0	9. / 3.0 / 37.76	8.1 / 10. crs / 40.76	7.6 / 41.26 / 43.0	8.1 / 13. crs / 40.76	14. / 9.8 / 31.0	level		
1+75		14. / 1.0 / 37.1	9. / 4.1 / 38.1	6.6 / 10. crs / 42.20	6.5 / 42.31 / 43.55	6.5 / 9.0 crs / 42.86	8.5 / 21. crs / 40.36	14. / 3.6 / 36.76		
2		level	12. / 6.5 / 38.66	4.7 / 11. crs / 44.16	4.8 / 44.06	4.6 / 11. crs / 44.26	8. / 5.4 / 38.86	14. / 0.5 / 38.36	level	
2+25		level 50'	12. / 7.2	3.5 / 11. crs	3.2	3.3 / 13. crs	9. / 7.0	14 / 0.5	5/4 level	
2+50		14. / 1.0	14. / 7.0	2.1 / 12. crs	1.8	1.8 / 12. crs	10. / 8.1	11. / 1.0	12. / 5.8	level
2+75		level 20ft	14. / 7.4	9.3 / 14. crs	(57.64) / 9.0	9.1 / 10. crs	13. / 8.9	9. / 0.8	5.0 / 5.6	level
3+00		7ft / 2.8 / 14.	12. / 6.5	7.6 / 16. crs	7.3	7.3 / 10. crs	14. / 10.0	12. / 1.0		

						Center Line (57.64)					
3 + 25			8.5 / 31. out	9.4 / 23. out	6.0 / 15. out	5.7	5.4² / 10. out	14. / 9.4	14. / 1.6		
3 + 50				5.4 / 28.0 out	4.3 / 12.0 out	4.6	4.2² / 11. out	11.1 / 23.0 out	13.0 / 35.0 out		
3 + 80	Center Laurel St —				2.8 / 20.0 out	2.5	2.3 / 11.0 out	5.4² / 21.0 out	6.3 / 30.0 out		

48
6
5,33) 28800 (54
2663
2250
2232

288.
4
1152

12 bbls to 108 ft - curb - Return steps,

Hayes - Cunningham -

38.53 38.53 38.53
360
34.93
35

Sontle line

38.53 38.53 38.53
35.00 31.75 28.50
3.53 6.78 10.03
6 77
+.78 +2.3

88
3.3
264
264
2904

Center

38.53 38.53 38.53
3550 3237 2925
3.03 6.16 9.28
3.60 530 9.30
-0.50 +.86 9

38.53 38.53 38.53 38.53
36 3584 34.84
2.53 2.69 3.69
3 3.7
27

177.52 40.00
7.03
47.03 47.03
569 41.00 43.70
5 6.03 3.33
519

77

193.98 193.98 193.98 193.98
187.07 184.03 181 1162
6.91 9.95 298 18236
1166

184.02 18402 184.02
181 180.60
3.02 3.52

184.02 184.02
17870 178.00
532 6.02

38.53

40.00 B.m.
7.13
47.13 47.13
41.25 48.95
5.88 3.18

47.13
6.12
41.00

18.80
12.80
31.60
12.80
44.40
12.8
57.2
12.8
70.0

40.00
7.13
47.13 47.13
4009 4218
7.04 4.95

47.13
41.25
5.88

12.80
12.80
25.60
12.8
38.40
12.80
51.20
12.80
65.00

4000
601
4601 46.01 46.01
4009 3984 41.00
5.92 6.17 5.01

46.01
4218
3.83

4601
4193
4.08

383
23
4.08

592
25
6.17

40.00 B.m.
7.25
47.25 47.25
43.70 41.93
3.55 5.32

5.25
4.83
.42

43.95
41.25
2.70

588
27
3.588
27
.58

4.95
29
7.85

42.18
4009
2.09

5.25
4.83
.42

12
42
24
48
5.04

132.67
10.95
121.72
1.84
123.56
118.50
5.06

123.56 123.56 123.56 123.56
12050 119.60 119.50 118.60
3.06 3.96 4.06 4.96

123.56 123.56 123.56 123.56 123.56
11650 11660 117.50 117.60 118.50
7.06 6.96 6.06 5.96 5.06

12) 7.00 (4.1
72 6

3 13
1 6
2 7

46.02 46.02 46.02 46.02
4218 40.09 41.25 43.95
3.84 5.93 4.77 3.07

3.10
2.90
.20

44.50
4.90
49.40 49.40 49.40 49.40 49.40
44 43.75 43.50 43.47 43.25
5.40 5.65 5.90 5.93 6.15

51.50 52.50
52.25 52
103.75 52.25
51.87

52.25
51
103.25
51.62
51.72

40.00
6.86
46.86 46.86 46.86
4009 4218 4395
6.77 4.68 2.91

43.27
0.28
43.55
8.93
34.62
4.54
39.16

39.16 39.16 39.16
35.50 32.37 29.25
3.66 6.79 9.91

39.16 39.16 39.16
35.00 31.75 28.50
4.16 7.41 10.66

39.16 39.16 39.16 39.16
35.00 34.84 35.84 36.00
4.16 4.32 3.32 3.16

42.50
43.75
~~4.99~~
~~10~~
~~5.09~~

4.99
10
4.89
4.10
.79

4.24

3.17
.25
2.92

600
30
37
667

4.99 4.99 4.99 4.99 4.99 4.99
3.20 3.50 4.20
1.79+ 1.49+ .79+ -0.2 -0.6 -0.7

4.99 4.99 4.99 4.99
-0.2 4.00 4.00 4.1
+1.00 1.00+ +.89

3.50
.89
4.39 4.39 4.39 4.39 4.39 4.39
3.10 3.40 3.80 -0.4 -.71 = 47+50
1.29+ .99+ .59+ g = 8 46+50

5.20 5.00 5.20 5.40 5.90
4.39 4.39 4.39 4.39 4.39
-.81 -.61 -.81 -1.00 -1.51
= 49+50

4.80 4.70 5.00 4.90 5.00 4.00
2.86 2.86 2.86 2.86 ~~2.86~~ 2.86 2.86
-1.94 -1.84 -2.14 -2.04 -2.14 -1.14

4.00
2.86 2.86
-1.14

413

355
583
4133

89.84 BM
4.90
94.74 94.74
90.50 88.50
4.24 6.24

129.50
3.17
132.67 132.67
127.6 128.6
5.07 4.07

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

111

TRAVERSE TABLE FOR TRANSIT BOOK.

From 1° to 90° for a distance of 100.

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

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	98.32	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.		

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