City Surveys

No 3

2

F.B.S

MICROFILMED
DEC 1 1964
Return to City Engineers Office
City Hall, San Diego, Cal.

5

able 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	2 1/3	21	49	41	95 2/3
2	4 2/3	22	51 1/3	42	98
3	7	23	53 2/3	43	100 1/3
4	9 1/3	24	56	44	102 2/3
5	11 2/3	25	58 1/3	45	105
6	14	26	60 2/3	46	107 1/3
7	16 1/3	27	63	47	109 2/3
8	18 2/3	28	65 1/3	48	112
9	21	29	67 2/3	49	114 1/3
10	23 1/3	30	70	50	116 2/3
11	25 2/3	31	72 1/3	51	119
12	28	32	74 2/3	52	121 1/3
13	30 1/3	33	77	53	123 2/3
14	32 2/3	34	79 1/3	54	126
15	35	35	81 2/3	55	128 1/3
16	37 1/3	36	84	56	130 1/3
17	39 2/3	37	86 1/3	57	133
18	42	38	88 2/3	58	135 1/3
19	44 1/3	39	91	59	137 2/3
20	46 2/3	40	93 1/3	60	140

PUBLISHED BY
EDWARD DENNY & CO.
DRAWING PAPER & MATERIAL, MATHEMATICAL INSTRUMENTS,
STATIONERS AND PRINTERS,
SAN FRANCISCO, CAL.

Table for Running on Slopes.

In the following table the first column shows the angle, the second, the nu links to be added to a chain on the slopes, to make one chain, horizontal measureme

Angle.	Cor. in links	Angle.	Cor. in links.	Angle.	Cor. in links.	Angle.	Cor. i
°		°		°		°	
4	0·24	11	1·88	18	5·14	25	10·
5	0 38	12	2·24	19	5·76	26	11·
6	0·55	13	2·63	20	6·42	27	12·
7	0·76	14	3·06	21	7·11	28	13·
8	0·98	15	3·53	22	7·85	29	14·
9	1·24	16	4·02	23	8·64	30	15·
10	1·55	17	4·56	24	9·47	35	22·

2 7a 5
Return to City Engineers Office
City Hall, San Diego, Cal.

Location of Tramway at Sweet Water dam 1-3

Board of Education Location of Sherm Heights on Sherman Heights 4

Gardner W.H. Bed 7

Lot G Blk. 39 H.A. Inst & grades W.W. Stewart dgt 8

Board of Education x of Gymnasium site at Russ School 10-13

Lot C Blk 38 H.A. 15

Lots I & J Blk 56 N.T. 16

Board of Education, grades for gymnasium grounds at Russ School. 17

32nd St connections with P.L. 1161 18-20

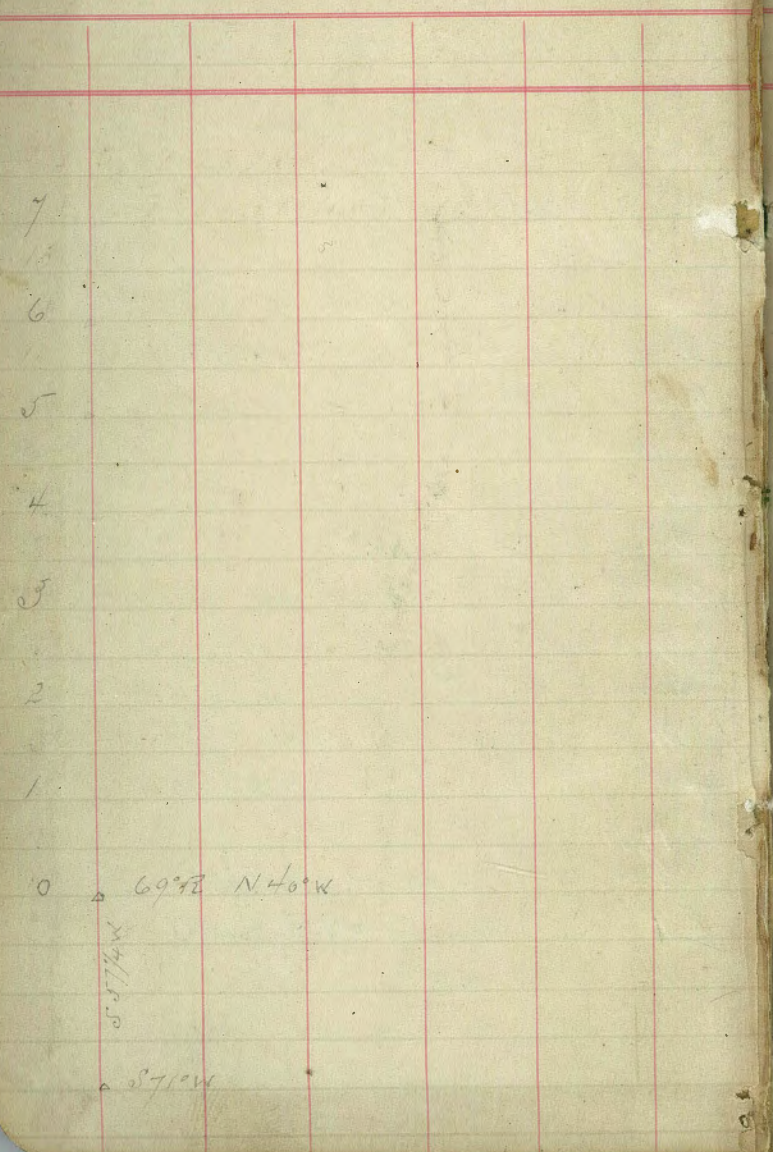
A line across Old Town Flat 21-32

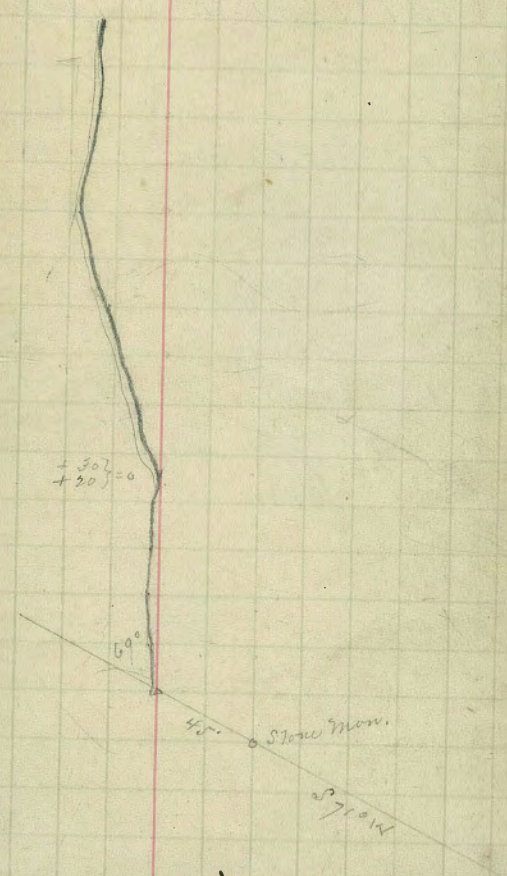
Ginty J Survey lots G H & I Blk 147 H.A. 34

Curb grades for B.E. & F. Blk 43 H.A. 35

Kenny Inst Survey & grades Lot A Blk 247 H.A. 36

County Surveyor —
Helper - $2 per day & Expenses
$10.00 per day for Inst.
$5.5


7
6
5
4
3
2
1
0
69°½ N 40° W
S 57¼ W
S 71° W


+30
+20 } = 0
69°
45°
Stone Mon.
S 71° W

28th St

28th Street 110,5

Sta	+	K.S.	−	Elev	B.M.
	Commence here on Street				
	0,63	23.28			22,65
1	1,51	13,79	11,00	12,28	
1 +75					
6 2					
	11,52	23.80	1,51	12.28	
5 +25			1	[illegible]	
+50					
4 +73					
3					
3	7.32	29.41	1,71	22,09	
+14					
2 +40	Colton.				
+66					
1 0					
+25					
0 +50					
+75					
1					
+25					

Level Notes on Tram Way
for Hauling Rock
Sweet Water Quarry

G.H.J. Mar 9/89

Sta	H.I.	Rod	El			+	H.I.	−	El		BM
0	242.4	3.6	238.8			0.38	242.38	12	El top of track		242.00
+40		5.8	236.6								
+90			232.5								
1+40	231.7		228.2	+40		1.36	231.74	12.00	230.38		
+80			223.8	+80							
	220.5		218.4	+90		0.68	220.52	11.90	219.84		
+62			211.8	+99							
+82	211.4		203.8	2+12		2.72	211.44	11.80	208.72		
+90	199.5		193.3	+32		0.00	199.52	11.92	199.52		
2+40			184.6								
+90			187.7					6.76			192.76

Sta	HI	Rod	El
3+40			
	195.2		
3+40		5.4	189.8
+50		5.1	190.1
4		4.6	190.6
+50		5.0	190.2
5		6.1	189.1
+50		7.1	188.1
6		6.5	188.7
+50		6.3	188.9
7		5.8	189.4

+	HI	-	El	BM
240	195.16			192.76

	196.3		
+50		5.3	191.0
8		4.6	191.7

6.98	196.34	5.80	189.36

Spencer
Dyton
Findlay
Hinsley.

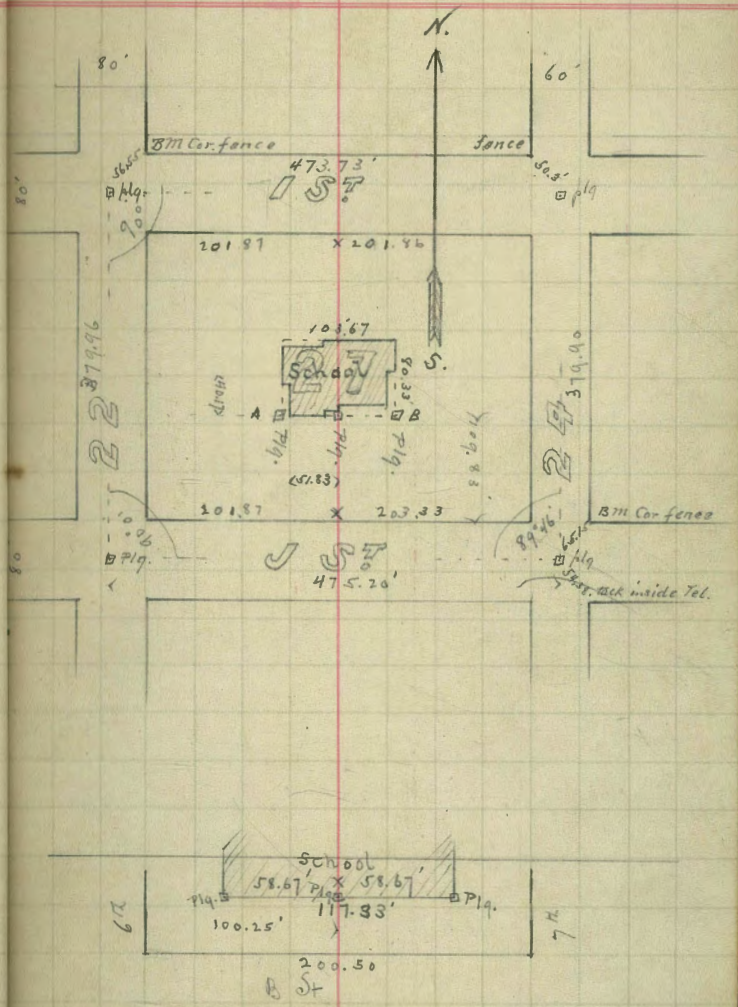
Mch 27.

Location of School House for School Board.

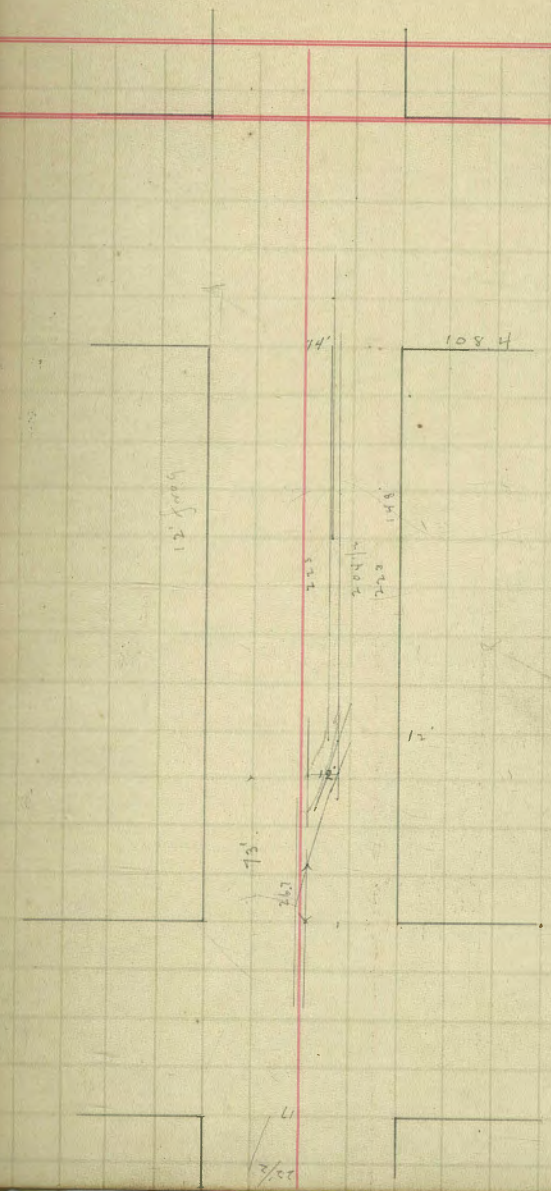
Set Plugs on Line A B

201.87
203.33
405.20

475.20
473.73
1.47



175 Intersec cen 2 spurs
155 pt frog 2 "
115 pc on main spur
211 Inter 2 cen of atl st line & angle line
225 Inter cen curve ang line + main spur
215 switch throw on spurs 5" throw - also end of rails
8½' from cen switch throw to cen curve of angle
Spur No 2 runs back on tangent from frog
274 Intersec Cen Atl with cen of Curve on Ang line
Ang line. Curve ends ~~#~~ 73' S of E st
abt 7936 Curve



Deed W. K. Gardner to

Feb. 29th 1872 Thos L Nesmith

Conveying

Blk 19 + 20 Gardner's Addition
Commencing at North West cor of
Blk 19 thence Easterly along North line
C. St 480' thence 90° Southerly along
West line of 19th St 380' to North line
Culverwell's Add, thence 90° Westerly
along said North line Culverwell's Add.
80' to East line of 17th St; thence 90° along
East line 17th St 380' to beginning as laid
own on Official Map of Gardner's Addition
Lockling - Filed with Recorder
Sept 2nd 1870 Said Property being
in Orange Hill Park Reservation
according to said Map.

Book 4 of Deeds Page 177 -

Hamlin
Finley
Orton
Hendry –

May 2/89

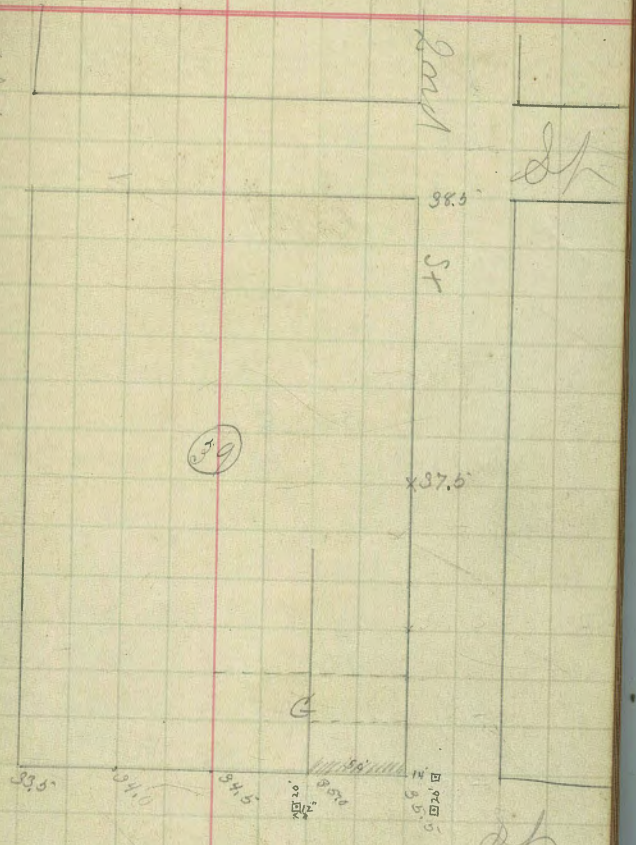
W. W. Stewart
Agt.

Sta	+	H.I.	Grade	Rod.	
Cut grades for E ½ of Lot 6 Blk. 39 H.H.					
37.20	3.67	40.77			
			35.00	5.77	
			35.50	5.27	
				0.50	
Grades & cut lines surveyed. Points as indicated					
Cut grades for E ½ of Lot 9 Blk					
37.199	4.965	42.164			
			35.00	7.164	
			35.50	6.664	
				0.50	
				3.86	38.304

Checked

See Page 33

May 23 1889
Hamlin Work
Astor Levl
Williams Rod
Kensley.



x 5th St

May 3. 89

Sta	Rod	El	Rod	El	Rod	El
		West (142.3)	Center Track		East	
2	6.5	135.8				
+50	5.5	136.8	5.9	136.4		
3	4.9	137.4	4.8	137.5		
+40	3.6	138.7	3.6	138.7		
Elm						
0	2.3	140.0	2.3	140.0	2.3	140
+50	0.8	141.5	0.3	142.0	0.2	142
		(153.6)				
1	9.8	143.8	9.2	144.4	9.7	143
+50	7.2	146.4	6.6	147.0	7.2	146
2	4.8	148.8	3.8	149.8	4.6	147
+50	1.8	151.8	1.3	152.3	1.9	151
		(164.5)				
3	10.0	154.5	10.0	154.5	10.1	154
+40	7.9	156.6	8.1	156.4	8.0	156
Fir						
0			5.9	158.6	6.0	158
+50			3.2	161.3	3.3	161
					0.4	164

Hudson Level

Spencer Rod + Rock

9

BM	+	HI	−	El
140.078	2.22	142.30		
131.611	10.69	142.30		
	11.82	153.57	0.55	141.75

Track is about .5' above street

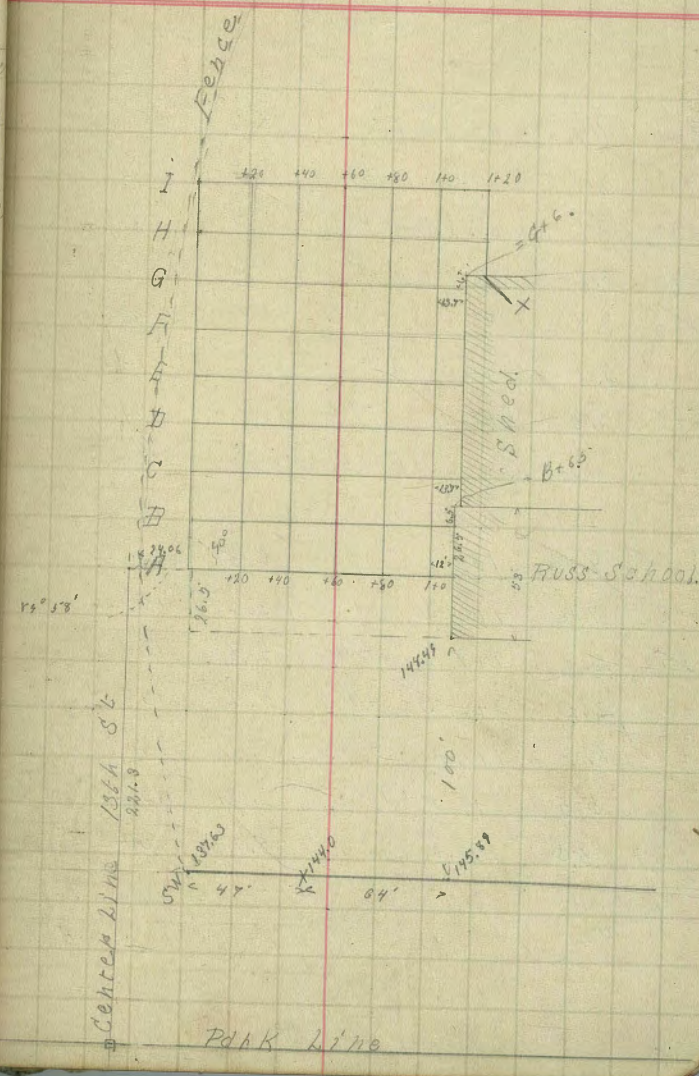
	11.93	164.52	0.98	152.59
160.246			4.13	160.39

May 7 1889

Twenty foot points for x Sections
ing Site of gymnasium for
Russ School.

Pt A back 26.5 at right angle
to front of building

Hamlin Transit
Finley
Peters
Hensley



X Section of Ditch for School building & Russ School

Sta	Rod	Elev			
			(155.4)		
A	9.9	145.5	B	8.7	146.7
+20	9.7	145.7	+20	7.7	147.7
+40	9.1	146.3	+40	7.4	148.0
+60	8.1	147.3	+60	7.1	148.3
+80	7.8	147.6	+80	6.9	148.5
1	7.1	148.3	1	6.9	149.1
+12	6.5	148.9	+12	6.0	149.4
			B+6.5	5.7	149.7
C	8.3	147.1	D	6.5	148.9
+20	7.1	148.3	+20	5.0	150.4
+40	6.8	148.6	+40	4.8	150.6
+60	6.1	149.3	+60	5.2	150.2
+80	6.0	149.4	+80	5.2	150.2
1	5.5	149.9	1	5.3	150.1
+13.7	5.3	150.1	+13.7	5.1	150.3

Side of Shed

BM	+	HI	-	Elev
98.87	8.96	177.43		
	8.53	155.39	0.97	146.86

of School house — See sketch

X Section of Lot for Rear Sch

Sta	Rod	Elev	Sta	Rod	Elev
			(155.4) from preceding p		
E	5.4	150.0	F	4.8	150.6
+20	3.1	152.3	+20	2.1	153.3
+40	2.5	152.9	+40	0.8	154.6
+60	3.6	151.8	+60	2.1	153.3
+80	4.1	151.3	+80	2.8	152.6
1	4.3	151.1	1	3.6	151.8
+13.7	4.5	150.9	+13.7	3.2	152.2
G	4.6	150.8	H	4.6	150.8
+20	2.4	153.0	+20	3.4	152.0
+40	0.3	155.1	+40	1.7	153.7
+60	1.6	153.8	+60	1.7	153.7
+80	2.1	153.3	+80	1.6	153.8
1	2.6	152.8	1	1.7	153.7
+13.7	2.2	153.2	+20	1.9	153.5
G+6	2.1	153.3	At intersection of 1+20 with side of shed, marked + in sketch	1.9	153.5
Cor of Shed - see sketch					
I	5.1	150.3	I+80	1.7	153.7
+20	3.1	152.3	1	1.2	154.2
+40	2.4	153.0	+20	0.9	154.5
+60	2.0	153.4			

Stn	+	HI	−	Elev	
SW Cor of School house		155.39	6.9	148.49	
			9.5	145.89	On Wall in front of door 100 ft from school house and on line of west side.
			11.4	144.0	64' ft from last point to break in grade
#	0.79	144.38	11.80	143.59	
			6.75	137.63	S W Cor of Wall 47' from break in grade
#	0.57	133.10	11.45	132.53	
#	0.70	121.89	11.91	121.19	
#	1.16	118.80	9.25	112.64	
BM			8.46	105.34	S. 12th Dtz.

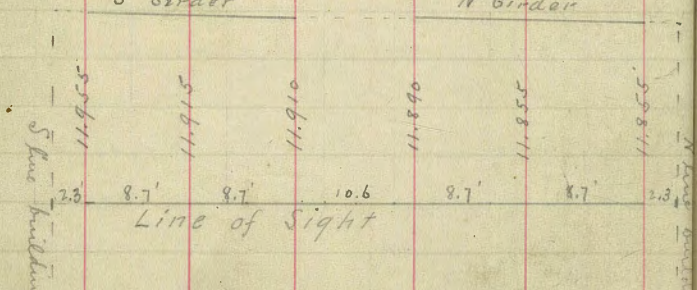
P.M.S.
L.H.S.
Hudson

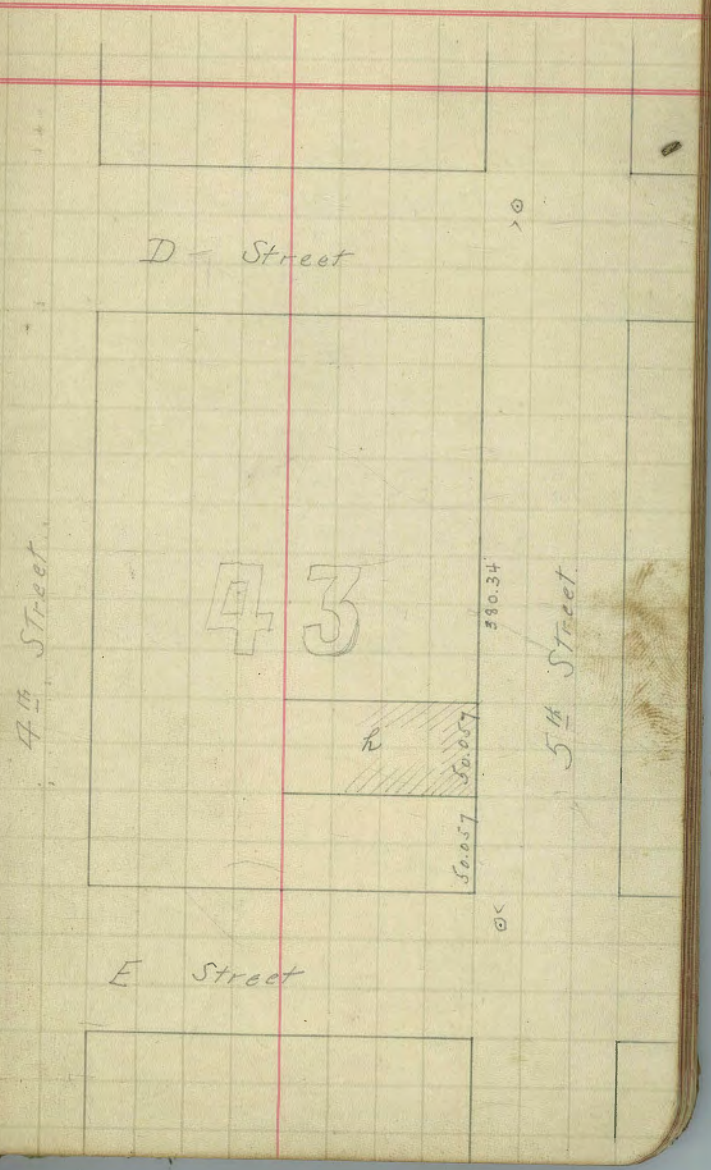
May 9. 89

Brick face of wall at S E 9.68 from 10' line - dressed stone face 9.58' do.
S line of brick 1/4" on lot G.
N E Cor Brick 10.06' from 10' line
North wall on line

Location of Building front on Lot G Blk 43. H.A. for Comstock & Trotsche

Also Elevations at different points of Iron girder in face of building

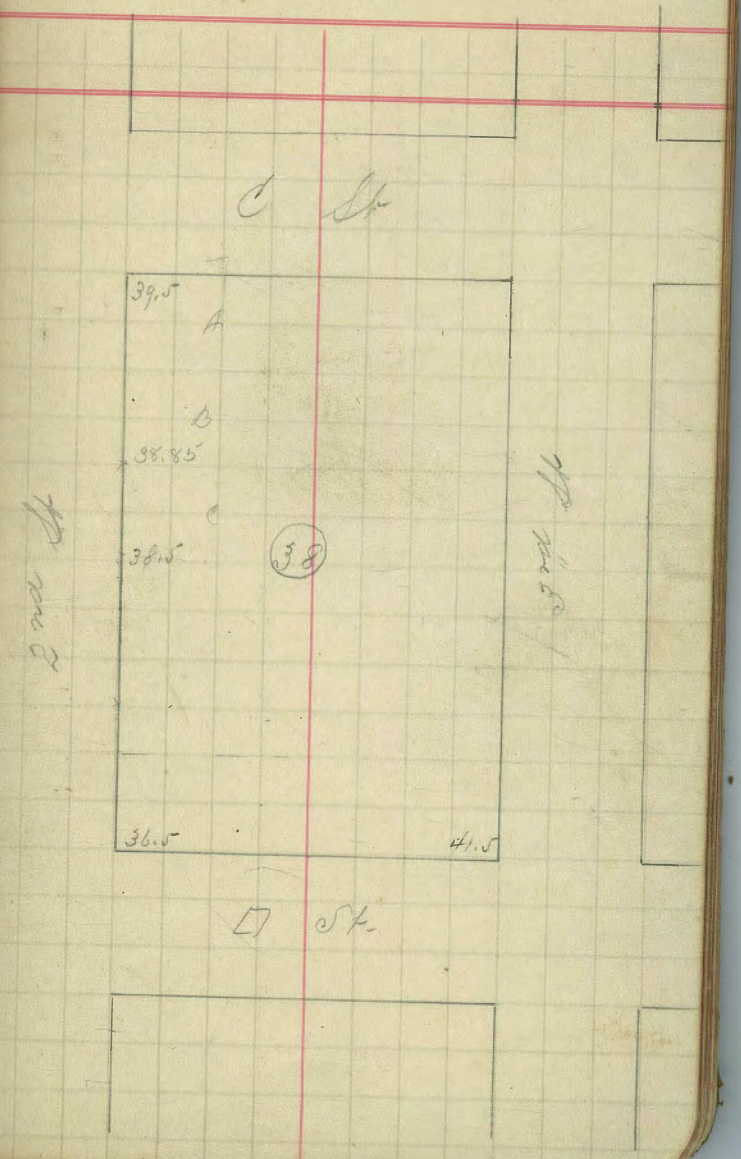




Bk	Lt	HI	Grade	Rod	
Grade at Blk 38 H A -					
order of Mill St & Donald					
37.20	4.40	41.60			
			38.43	2.77	
			38.50	3.10	
				-	Elev
2nd & C				3.90	38.30

Completed May 15 1885

Hamlin
Finley
Orford
Hensley



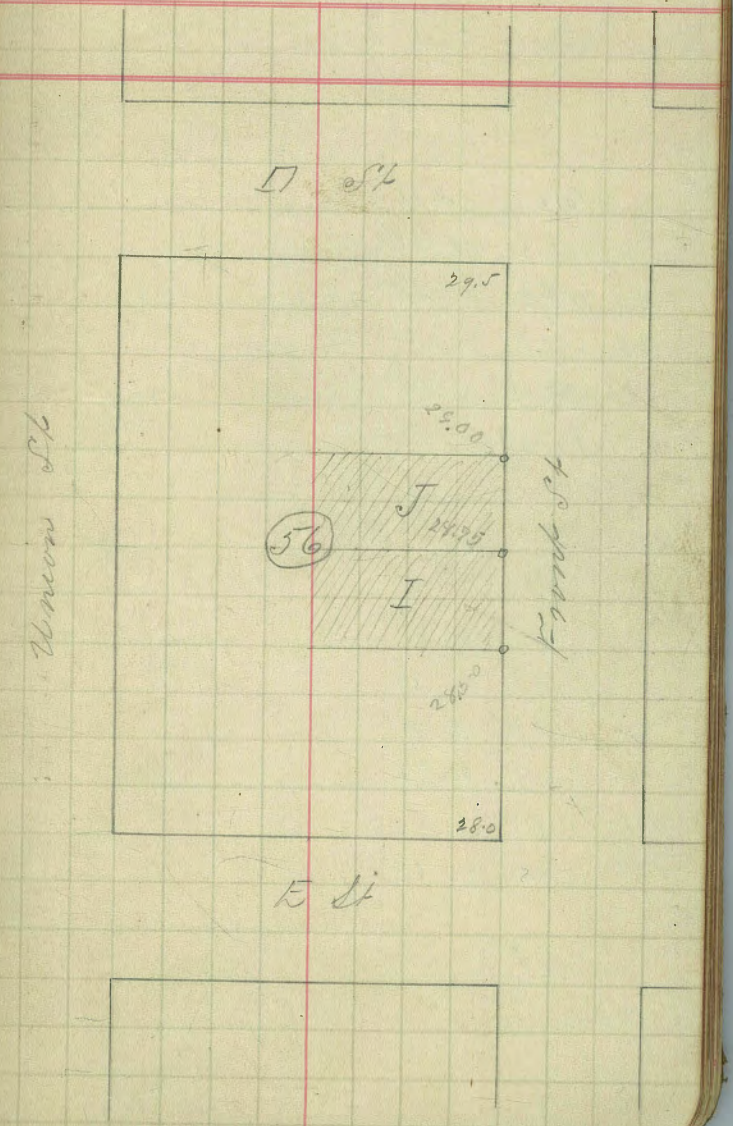
BM	+	HI	Grade	Rod	

Grades at Lots I & J Blk 56 N. T
order of Will McDonald

32.146	1.62	33.766			
			29.00	4.766	
			28.75	5.016	
			28.50	5.266	
				—	Elev
Front & E St				6.20	27.566

Completed Aug 15 1889

Hamlin
Finley
Orton
Hensley



Finishing stakes for McDonald
at Gymnasium grounds Rust School

Sta	Grade	Rod
		135.42
#		
I	151.5	3.92
+ 60	152.5	2.92
1 + 20	153.6	1.82
H 1+137	150.2	2.22
G 1+137	152.8	2.62
F 1+137	152.0	3.42
C 1+137	151.2	4.22
A 1+137	150.5	4.92
+ 60	149.6	5.82
A + 0	148.5	6.92
C	149.2	6.22
E	150.0	5.42
G	150.7	4.72
C + 60	151.7	3.72
E + 60	151.1	4.32

Completed May 15 1884
Hamlin
Caton
Finley
Hendley

BM	+	HI	−	Elev
58.86	9.98	148.84		
4.58		155.42	2.00	146.84
#	0.68	144.58	11.52	140.90
#	9.84	133.76	11.66	132.92
#	0.13	122.47	11.42	122.34
#	1.38	114.16	9.69	112.78
BM			8.86	106.30

Connection of 32nd Street with West Line Pueblo Lot 1161

May 16 1889

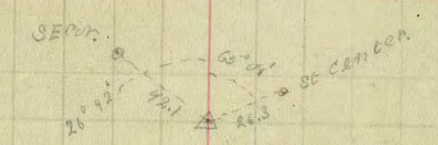
28.6
17
45.6

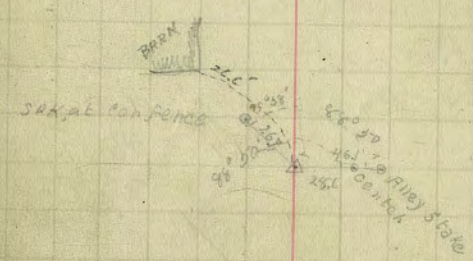
Sta

2+05 Olive Ave to SE Cor 42.1
L 26° 42' Left.
To St Center 26.3
L 65° 08' Right.

26.7 to spk at cor of fence at SE Cor of alley L 29° 58' Left
46.1 to stake north side of alley west side of street L 88° 50' R
28.6 to intersection of center line of S with S line of Pueblo. L 88° 50' R
N.W. cor of 1161, stake & mound.

Connection of 32nd St to W line of Pueblo 1161





Sta	
21+10	Δ to NW cor 180°10' Left Dist 49.2
	SW Cor 12°07' Right 32.3
17+30	Δ to NW cor 168°30 Right 46.5
	N.E. Cor 116°53' Left 45.8
13+20	Δ 1°53 left to cent of Boston Ave
	SW Cor 24°08' R. Dist 57.7
9+50	Δ 15°55' R. Dist 26.4 cent. Grand Ave
	NW cor 136°41' R. Dist 37.
	39.6 to SW. cor Δ 53° 53' Right
	16.1 to cent L 104° 19' Right
6+00	Nathrndl Ave

26445 S W cor Pueblo Lot 1161

24490 Δ to S W cor 18° 16' Left 31.8'
↘ to N W 179° 49' Left 50.5

A Line Along Old Town Fla

+50	4° 12'	Left	S 65° 10 W						12	△	12	
6									9		16	
5									8		17	
4									9		16	
3									7		18	
2									8		17	
1									9		16	
= 0 72+97.8	41° 24'	Left	S 69° 22 W Backsight on Sta 5+72						12	○	Sta 0 = 72+97.8 S line	
										○	Sta 58 S line	

A. Line across Old Town Flats.

750	5° 21	Left	S 59° 49 W	
16				
15				
14				
13				
12				
	see book 6 Page 20.			
11				
10				
9				
8				
7				

	18	7
	15	10
T. on stake □ set	9	14
	6	19
	3	22
	4	21
	4	21
	3	22
	6	19
	8	17
	4	5

+50 4° 09' Left S 55° 40W

26

25

24

23

22

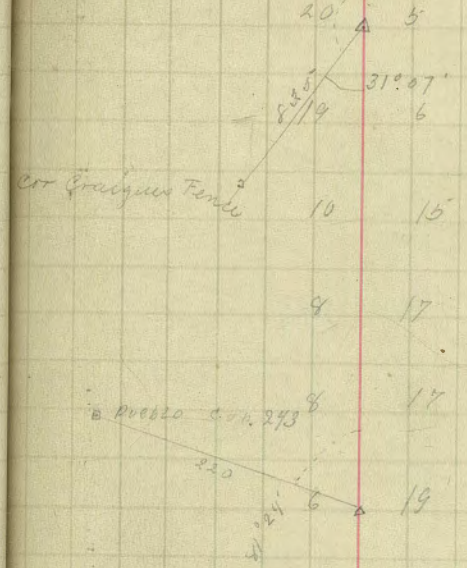
21

20

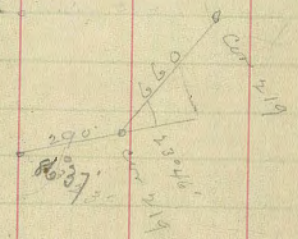
19

18

17

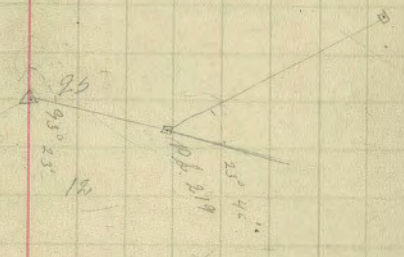


40	Edge of Bluff.		
35			
34	93° 25'	Right	
33			
32			
31			
30			
29			
28			
27			



Base of Hill

14	95	
13	12	
17	4	
17	8	
17	8	
16	10	
19	6	
20	5	



43

42

+85

41

40

+30

39

38

37

36

35

34 Δ 78° 52' Right from Backsight on Sta 36+50

S 45° 28 E

18

5

0

5

18

21

37

38

49

46

53

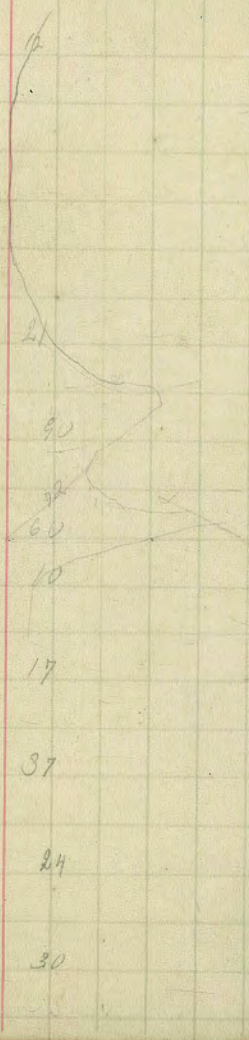
36+50

78° 52'

Sta 34

0

53.						
52						
51						
50						
49		S 84° 30 E				
+99.8	39° 24'	Left	S 31° 18' E			
47						
46						
45						
44						
93+93.6	53° 34'	Right	S 8° 11 W			



N 44° 30 E

63 53° 16' Left N 61° 24' E

62

61

60

59

58

+60 Angle in fence

57

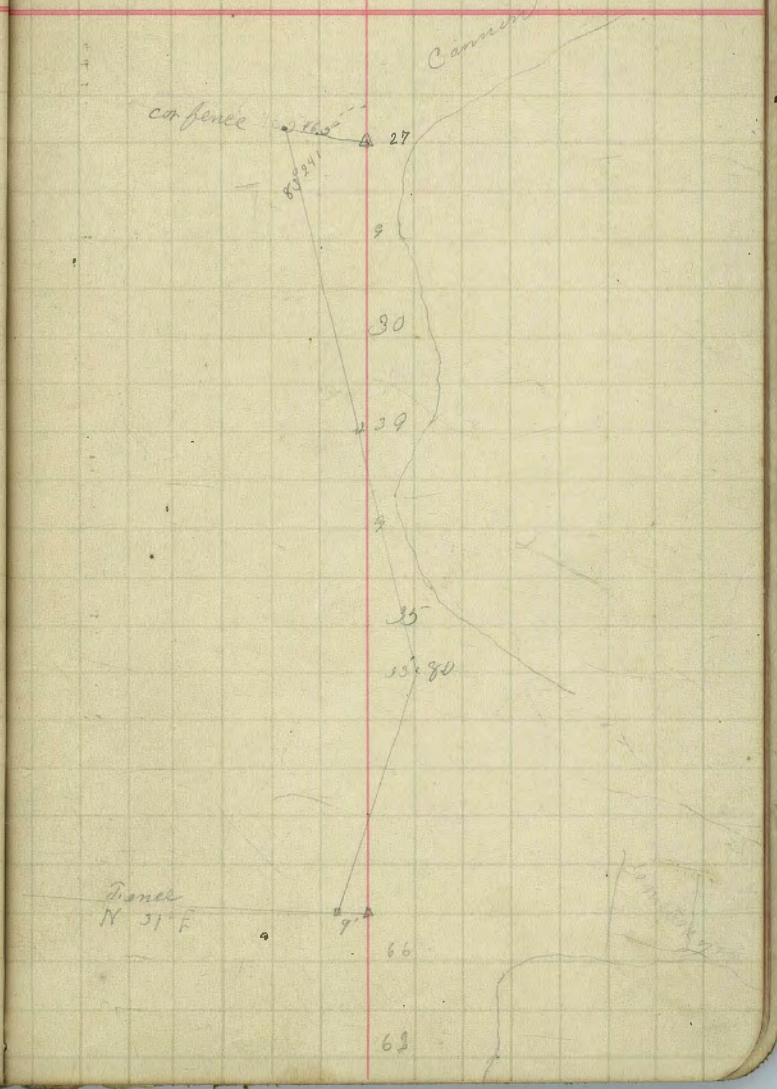
56

S 78° 30 E

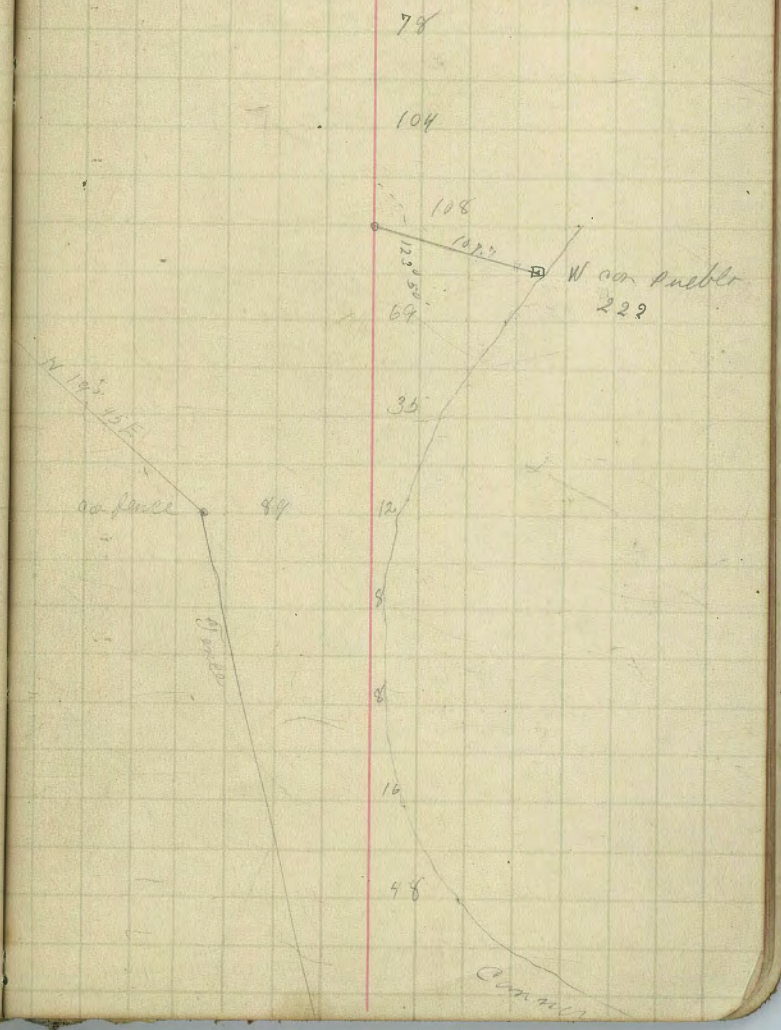
+61 34° 02 Left S. 65° 20 E

55

54



74		N 88° 30' E				
73						
72	41° 38'	Right	S 76° 57' E			
71						
70						
69						
68						
67						
66						
65						
64						



85

84

83

82

81

80

79

78

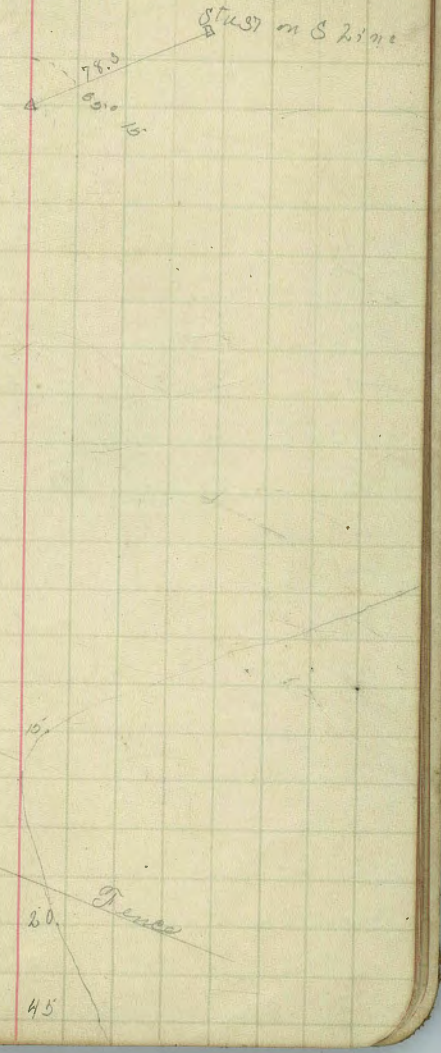
450

77

+69,4 fence

76

75



105
104
103
102
101
100
99
98
97
96
95
94
93
92
91
90
89
88
87
+79.5 fence
86

N 22° E Fence

125						
124						
123			N 38° 39' E			
122						
121						
120						
119	20°54	Left	N 82° 09' E			
118						
117						
116						
115						
114						
113						
112						
111						
110						
109						
108						
107						
+7.9						
106						

N 22° E
Fence

+70

134

133

132

131

130

129

128

S 64° 35' E

S 51° 02' E

+13.6 46° 49' Right CEn. Hancock & Isias

127

126

+61

Blk 515

1 oz
13.6
60.4

St Center 2nd S
Wilterble. (1)

Center

C.S.R.R.

Check of Grades for W.W. Stewart cor 2nd & D Sts

B.M.	+	H.I.	−	Grade	Rod	Elev	E ½ Lot G Blk 39 H.A.
37.199	4.275	41.474					
				35.50	5.974	N W Cor	
				35.00	6.474	50 W of N W Cor	
			3.162		38.312		

10.80 10.80
4.50 8.25
2.30 4.55

10 - .15

Survey for J. Ginty

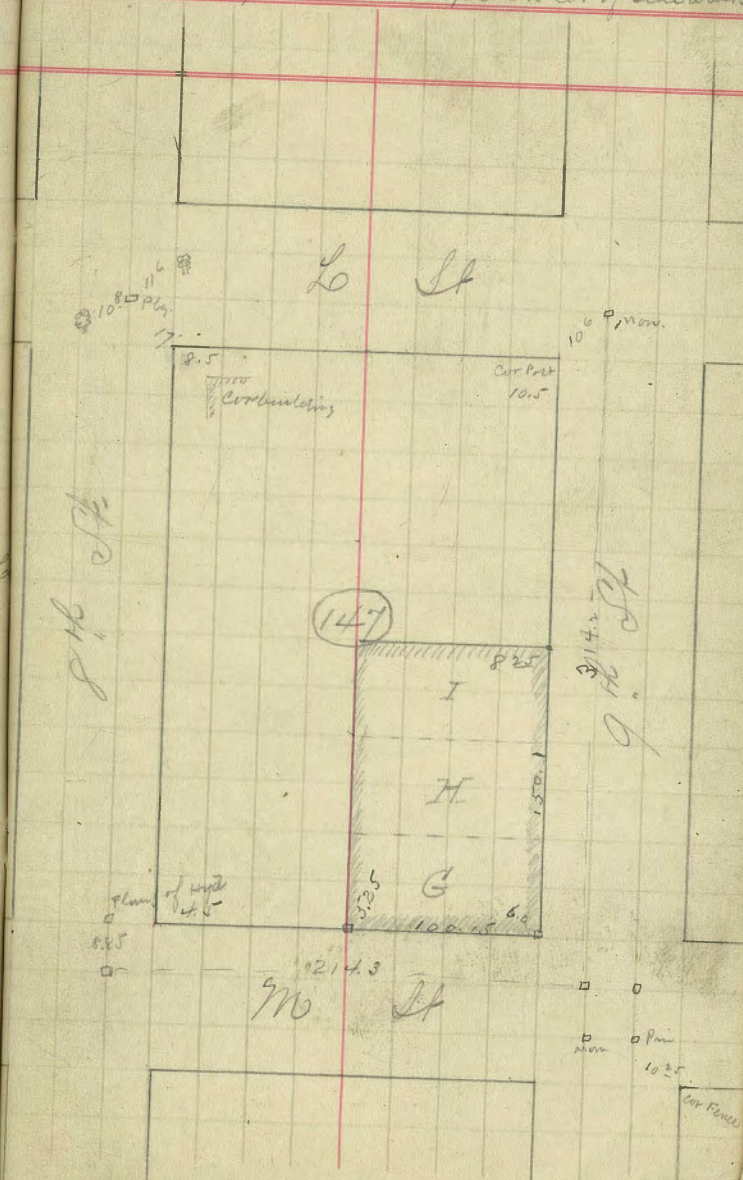
Lots G. H + I Blk 147 HA

B.M.	N.E cor	8th + M.			6.61
	4.19	10.80			
			5.30	5.80	
			4.55	6.25	
			2.30	8.50	
			0.84	9.96	
	4.80	14.76			
BM	S.W cor	Sidewalk	2.48	12.28	N.E. cor 9th + L

Shaw - Crowell Hubon

June 13/89 -

B.M. - N.E cor 8th + M = 6.61 N End Hyd Hinge
B.M. S.W " 9 + M. 4.69 Brace Pole 40' S of S.W cor
B.M. N.E. " 9 + L 12.28 Spk. S.W cor of sidewalk



BM	+	HI	Grad	Rod	−	Elev

Curb grades Lots D.E.F Blk 43 H.A.

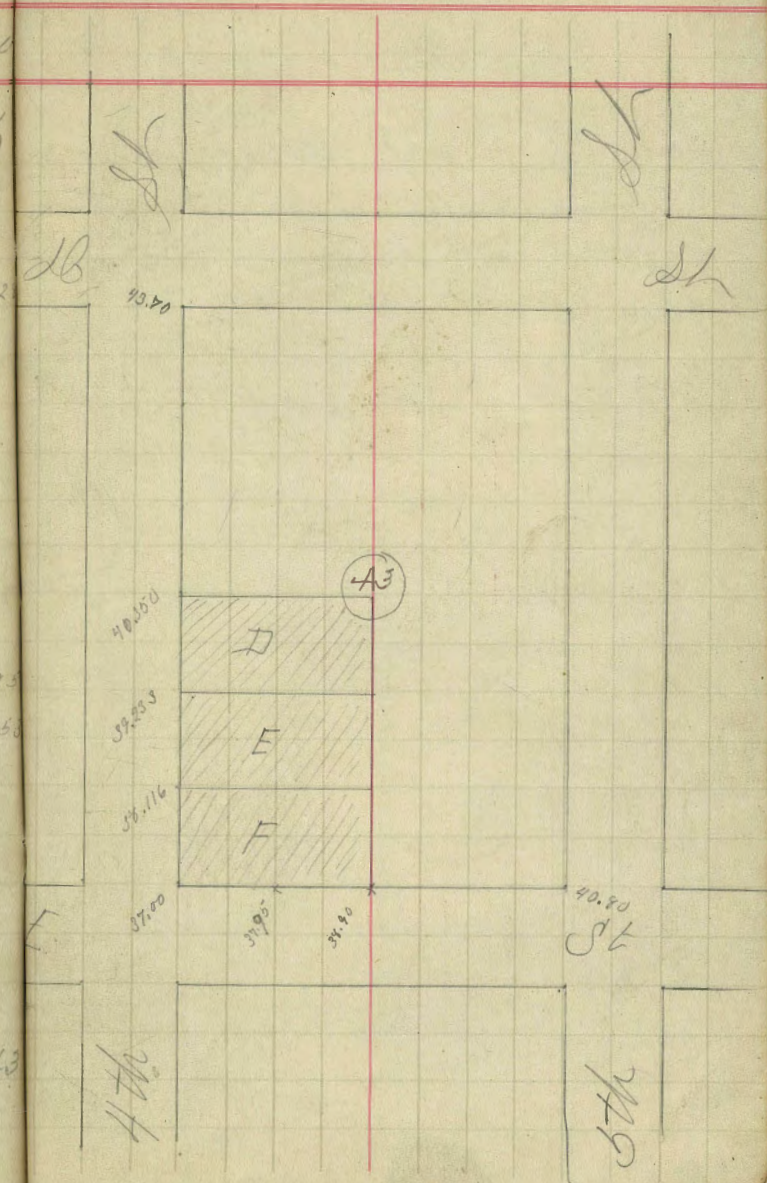
BM =	3.96	42.388				38.42
From NE of 4th SE to NW of 5th SE			37.00	5.388 ✓		
			.95 37.95	.950 4.438 ✓		
			.95 38.90	.950 3.488 ✓		
From N.E. of 4th SE to 1+50 North			38.116	4.272 ✓		
			1.117 39.233	1.117 3.155 ✓		
			1.117 40.350	1.117 2.038 ✓		
	7.870	47.848			2.43	39.95
					1.31	46.53

Completed June 13 1889

Hamlin, Book
Orton Level
Williams Rod
Hensley

Chk. J. M. Shaw

Curb at West line of Lot G. Blk 43 is 6" above grade —
H. Hamlin —



Survey of Lot D Blk 247 H.H.

for Mrs Kenny by order of Jos Falkenham.

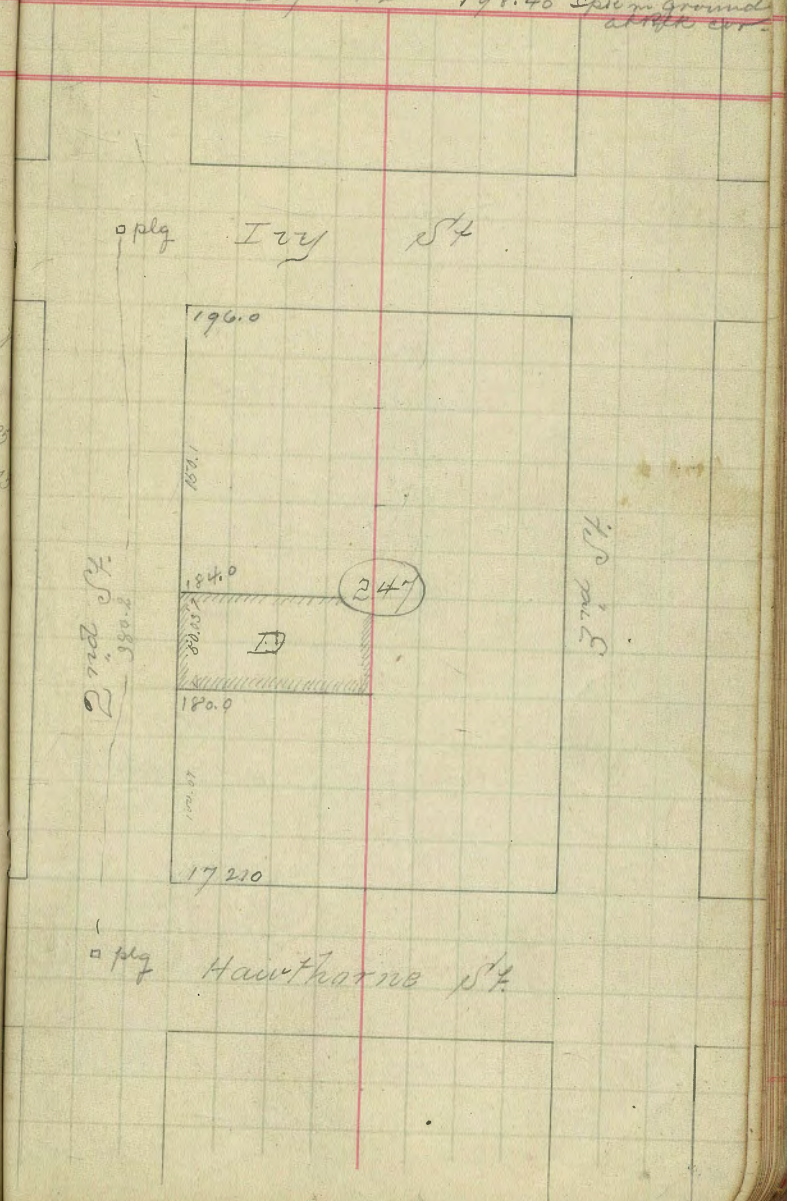
BM	+	H I		Elev	Grade	Cut
198.70	2.32	200.72	-			
			7.37	193.35	184.0	9.35
			8.97	191.75	180.0	11.75
#	0.34	189.09	11.97	188.75		
#	11.15	188.67	11.57	177.52		
#	5.35	191.33	2.69	185.98		
BM I & Ivy			0.82	190.51	190.52	

Completed June 15 1893

Hamlin
Carter
Williams
Hensley.

193.35
191.75
1.60

BM NE cor Hawthorn + 2nd 176.15 Top of Blk Cor
BM NE cor Grape + 2nd 176.13 Spike on fence
BM NW cor Ivy + 2nd 198.40 Spike in ground



BM	+	HI	−	Elev		
41.635	1.66	43.295				
			2.87	40.425	Curb 5th &	
			3.96	39.335	Curb 100' W of 5th & E	
			4.44	38.855		
			5.39	37.905		
#	9.446	47.001	5.96	37.515		
36 & 4th BM			0.49	46.511		
41.635	1.95	43.585				
			38.90	4.685		
			37.95	5.635		
			37.00	6.585		
#	4.15	41.605	6.13	37.455		
			38.116	3.489		
			39.23	2.375		
BM 4th & B.			3.189	38.416		

39.335
38.900
.435

39.335
38.900
.435

23

Sum of Weights

11.955

11.915

11.910

11.890

11.855

11.855

From first pt to intec 24.06
∠ 89° 58'
to park line 194.82 + 26.25

194.82
26.50
221.32

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

VERSE TABLE FOR TRANSIT BOOK,

From 1° to 90° for a distance of 100.

City Hall, San Diego, Cal.

REES.	¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.
Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
	100.00	0.44	100.00	0.87	99.99	1.31	8
1.75	99.98	2.18	99.97	2.62	99.95	3.05	8
3.49	99.92	3.93	99.91	4.36	99.88	4.80	8
5.23	99.84	5.67	99.81	6.10	99.79	6.54	8
6.98	99.73	7.41	99.69	7.85	99.66	8.28	8
8.72	99.58	9.15	99.54	9.58	99.50	10.02	8
10.45	99.41	10.89	99.36	11.32	99.31	11.75	8
12.19	99.20	12.62	99.14	13.05	99.09	13.49	8
13.92	98.97	14.35	98.90	14.78	98.84	15.21	8
15.64	98.70	16.07	98.63	16.50	98.56	16.93	8
17.36	98.40	17.79	98.33	18.22	98.25	18.65	7
19.08	98.08	19.51	97.99	19 94	97.90	20.36	7
20.79	97.72	21.22	97.63	21.64	97.53	22.07	7
22.50	97.34	22.92	97.24	23.34	97.13	23.77	7
24.19	96.92	24.62	96.81	25.04	96.70	25.46	7
25.88	96.48	26.30	96.36	26.72	96.25	27.14	7
27.56	96.00	27.98	95.88	28.40	95.76	28.82	7
29.24	95.50	29.65	95.37	30.07	95.24	30.49	7
30.90	94.97	31.32	94.83	31.73	94.69	32.14	7
32.56	94.41	32.97	94.26	33.38	94.12	33.79	7
34.20	93.82	34.61	93.67	35.02	93.51	35.43	6
35.84	93.20	36.24	93.04	36.65	92.88	37.06	6
37.46	92.55	37.86	92.39	38.27	92.22	38.67	6
39.07	91.88	39.47	91.71	39.87	91.53	40.27	6
40.67	91 18	41.07	91.00	41.47	90.81	41.87	6
42.26	90.45	42.66	90.26	43.05	90.07	43.44	6
43.84	89.69	44.23	89.49	44.62	89.30	45.01	6
45.40	88.90	45.79	88.70	46.17	88.50	46.56	6
46.95	88.09	47.33	87.88	47.72	87.67	48.10	6
48.48	87.25	48.86	87.04	49.24	86.82	49.62	6
50.00	86.38	50.38	86.16	50.75	85.94	51.13	5
51.50	85.49	51.88	85.26	52.25	85.04	52.62	5
52.99	84.57	53.36	84.34	53.73	84.10	54.10	5
54.46	83.63	54.83	83.39	55.19	83.15	55.56	5
55.92	82.66	56.28	82.41	56.64	82.16	57.00	5
57.36	81.66	57.71	81.41	58.07	81.16	58.42	5
58.78	80.64	59.13	80.39	59.48	80.13	59.83	5
60.18	79.60	60.53	79.34	60.88	79.07	61.22	5
61.57	78.53	61.91	78.26	62.25	77.99	62.59	5
62.93	77.44	63.27	77.16	63.61	76.88	63.94	5
64.28	76.32	64.61	76.04	64.94	75.76	65.28	4
65.61	75.18	65.93	74.90	66.26	74.61	66.59	4
66.91	74.02	67.24	73.73	67.56	73.43	67 88	4
68.20	72.84	68.52	72.54	68.84	72.24	69.15	4
69.47	71.63	69.78	71.33	70.09	71.02	70.40	4
70.71							
Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
REES.	¼ DEGREE.		½ DEGREE.		¾ DEGREE.		

by Edward Denny & Co., Stationers, Drawing Materials,
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