FIELD BOOK.

F.B. 108

108

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

MICROFILMED
DEC 7 1964

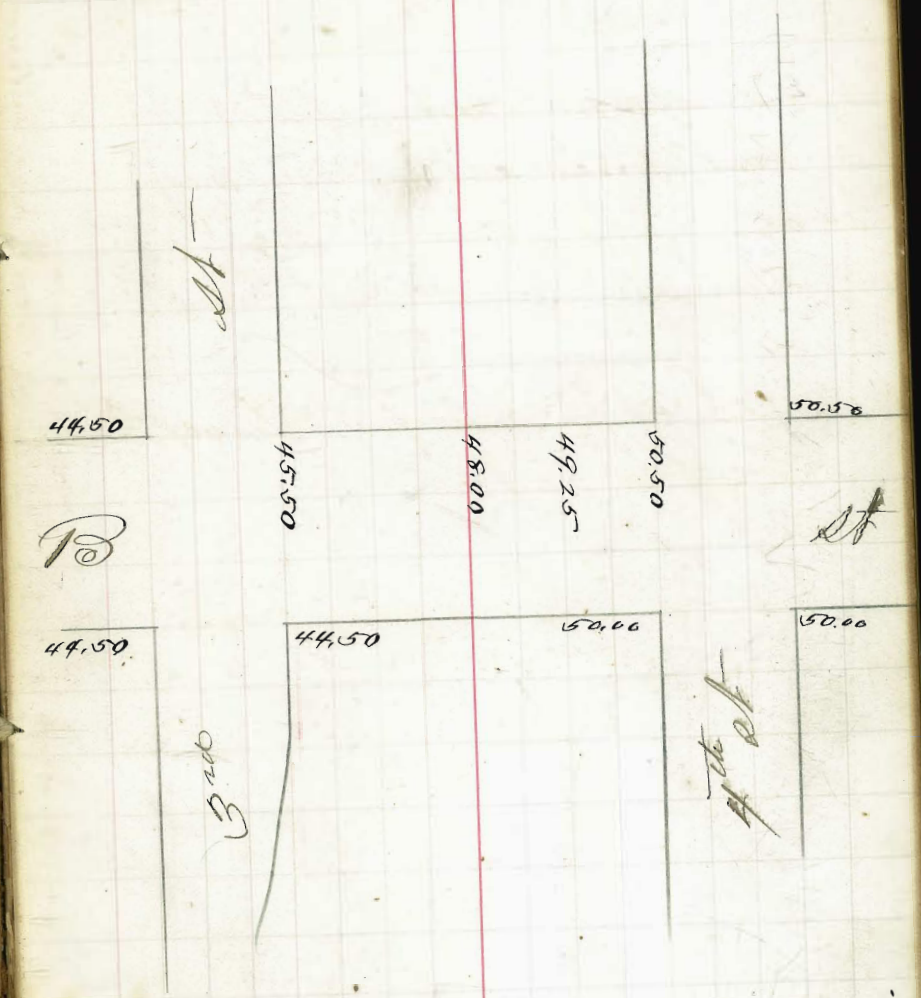
108

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

Stat	Rod	El.
		(54.93)
0+0	4.43	50.50
50	5.68	49.25
1+00	6.93	48.00

Setting Cut for Chauly Grade
April 30th 1894

Capper - Party



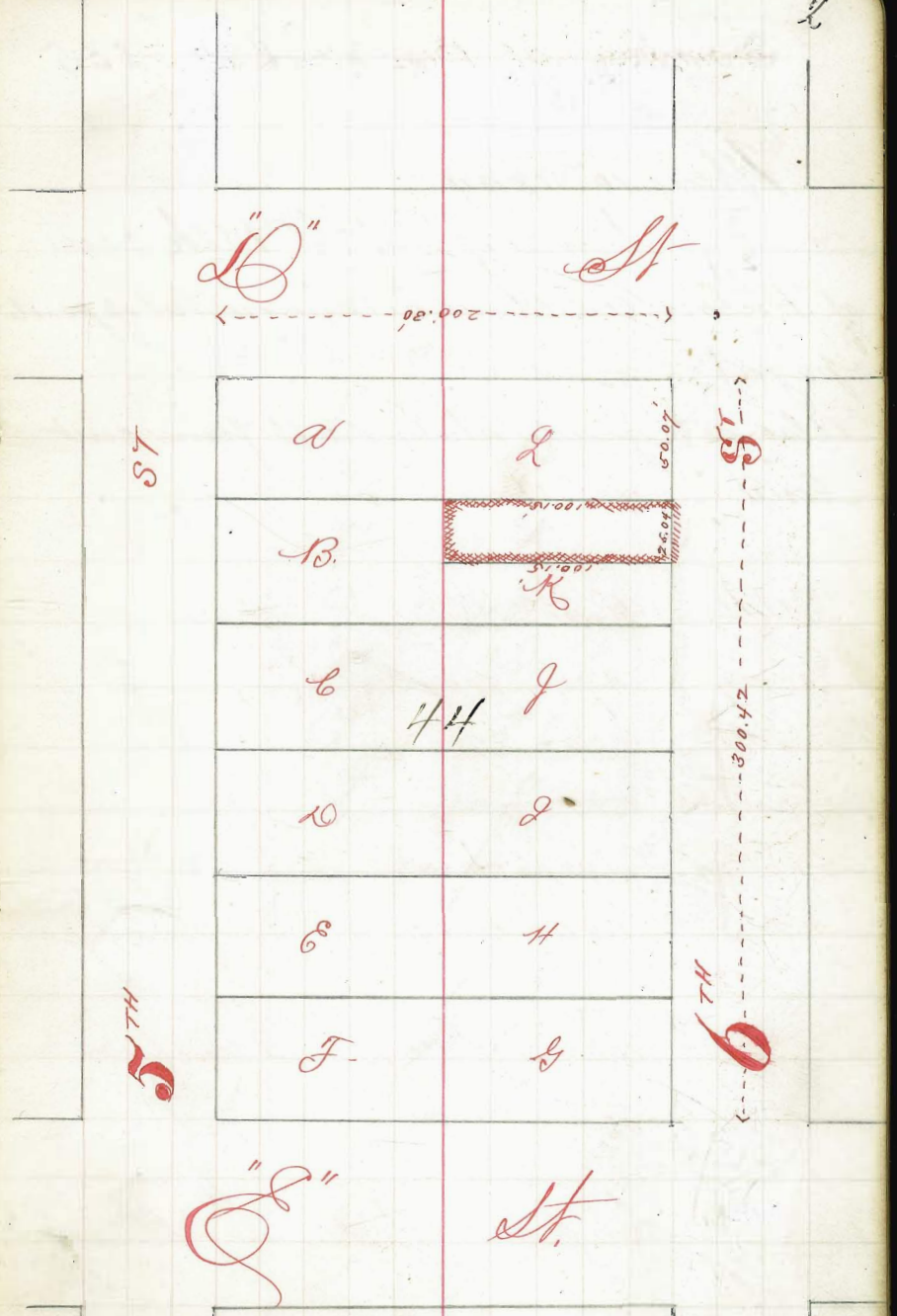
~~Survey of Pueblo Lot 335~~

April 5th 1894

Survey of North ½ of Lot K as shown on opposite page

Surveyed for David Frew.

Capps. Shaw. Williams



~~Survey of Pueblo Lot 335~~

May 10th 1894

Survey of Lot "G" Blk 204 of Horton Addition as shown on opposite page

Also set grade stakes 2 ft from curb line

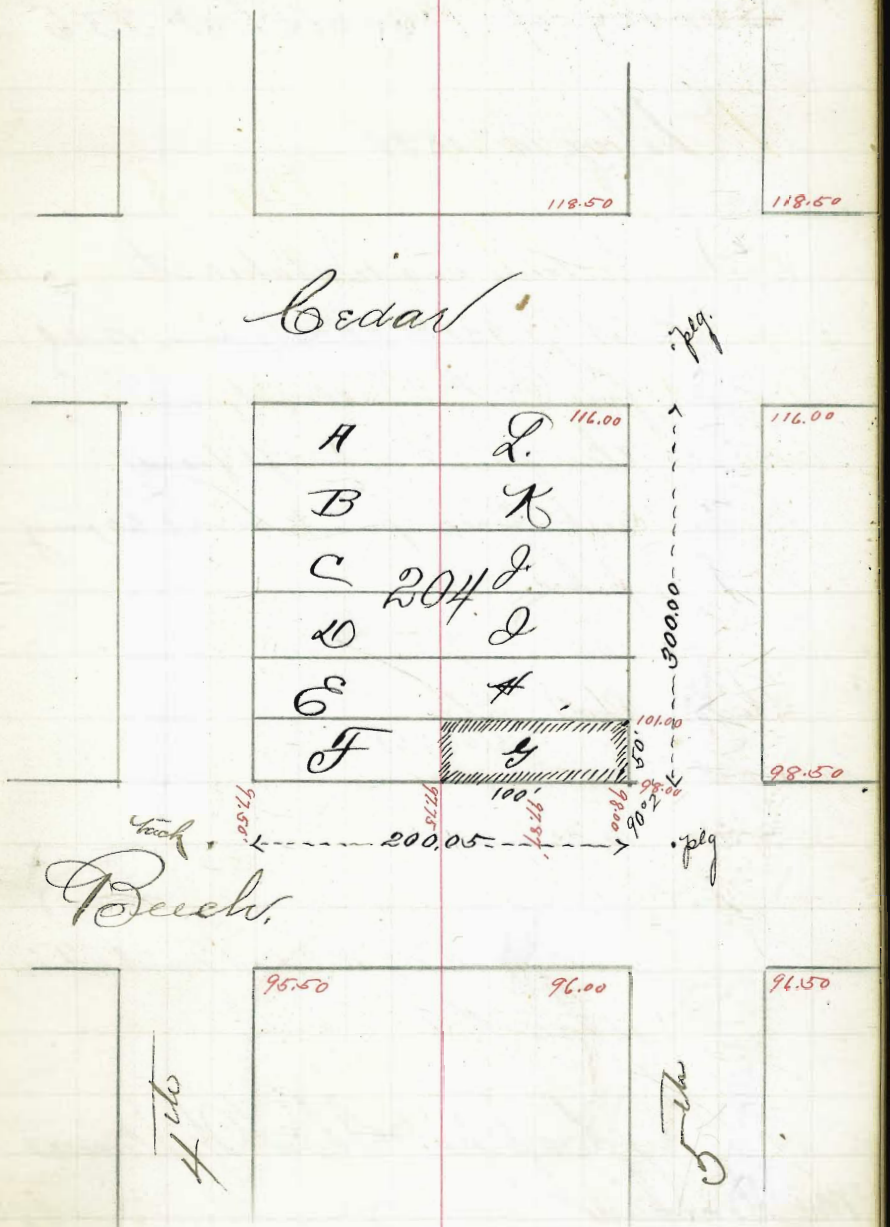
Stat	Rod	El. (102.90)
0+0	4.90	98.00
50	5.03	97.87
1+00	5.15	97.75
0+0	4.90	98.00
+50	1.90	101.00

Beech St

5th St

100.82 TBM N.E. Cor Beech & 5
2.08
102.90 H.I.

Capps. Williams - Shaw.



~~Survey of Pueblo Lot 336~~

May 14th 1894

Setting grade stakes to lot J" Blk 222 Hotchkiss add for O. H. Millard the points set 2 ft from curb line, points being 60 penny spikes

Stat	Rod	El. (104.26)
0+0	8.26	96.00
+50	10.26	94.00

102.79 B.M. N.E. Cor Front - Fir
1.47
104.26 H.I.

Capt. Shaw Williams
Mr Henikan July 31 1895

Lot K Blk 222 Curb grade

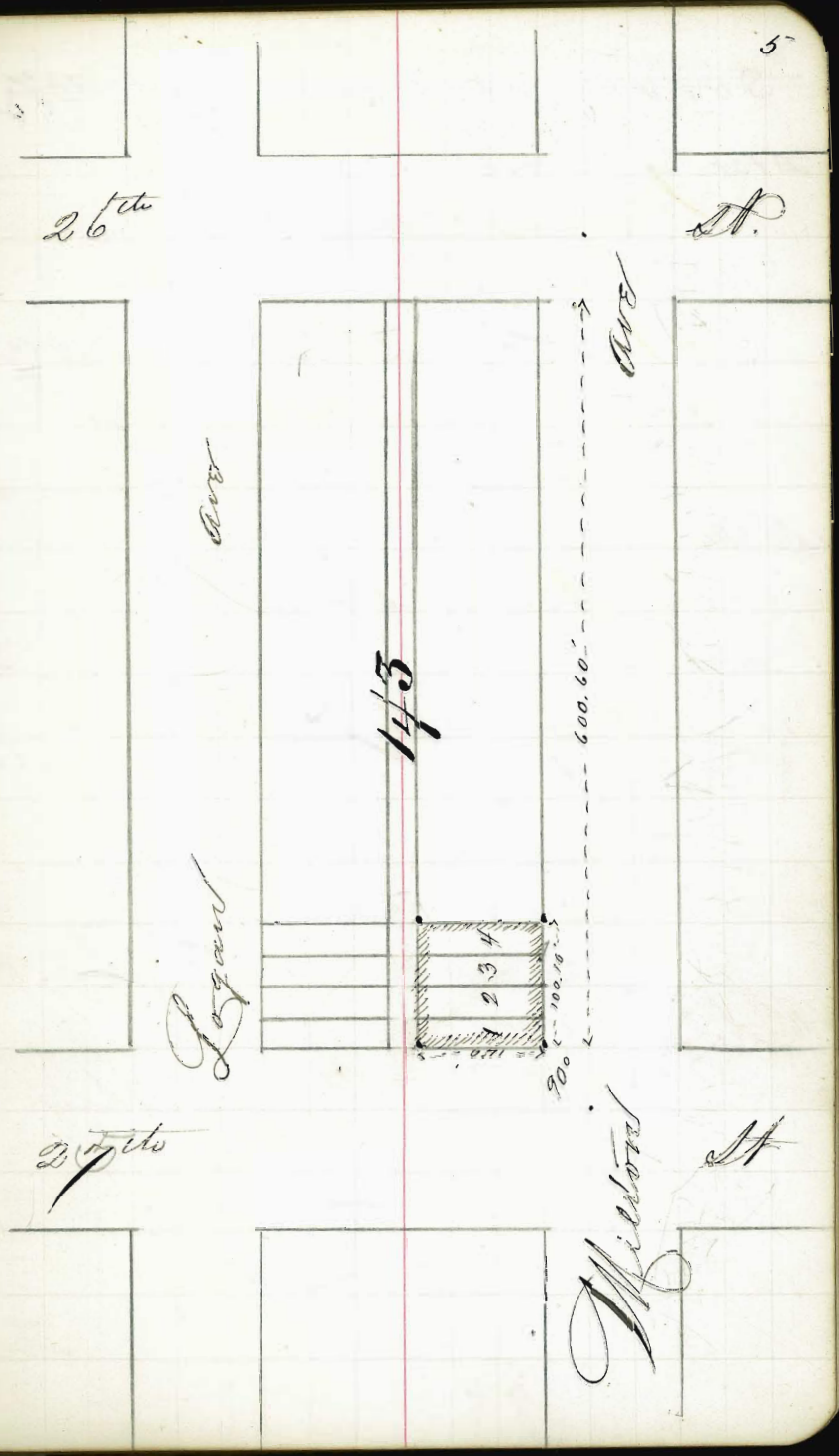
102.79 B.M.	103.91	103.91
1.12	98.	96
103.91	5.91	7.91

~~Survey of Pueblo Lot 336~~

May 14th 1894

Survey of Lots 1-2-3-4 in Blk 143 Land and Town Co.
Surveyed as shown on opposite page
For Willis Akles.

Capps. Shaw. Williams



~~Survey of Pueblo Lot 337~~

~~Dist~~ course

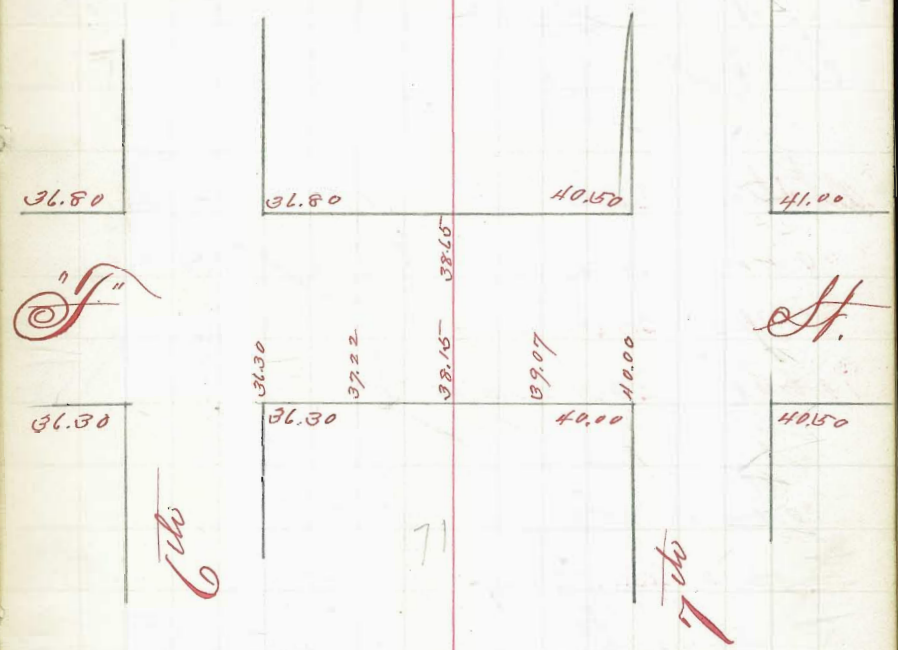
May 21st 1894

Setting cub stakes to S.W. Cor "F" & 7th

Stat	Rod	El
0+0	5.23	40.00 (45.23)
+50	6.16	39.07
1+00	7.08	38.15

43.14 B.W. S.E. Cor 7° & F.
2.09
45.23 H.I.

Surveyed May 21 1894
Cappe Williams Shaw



~~Survey of Pueblo Lot 337~~

May 21st 1894

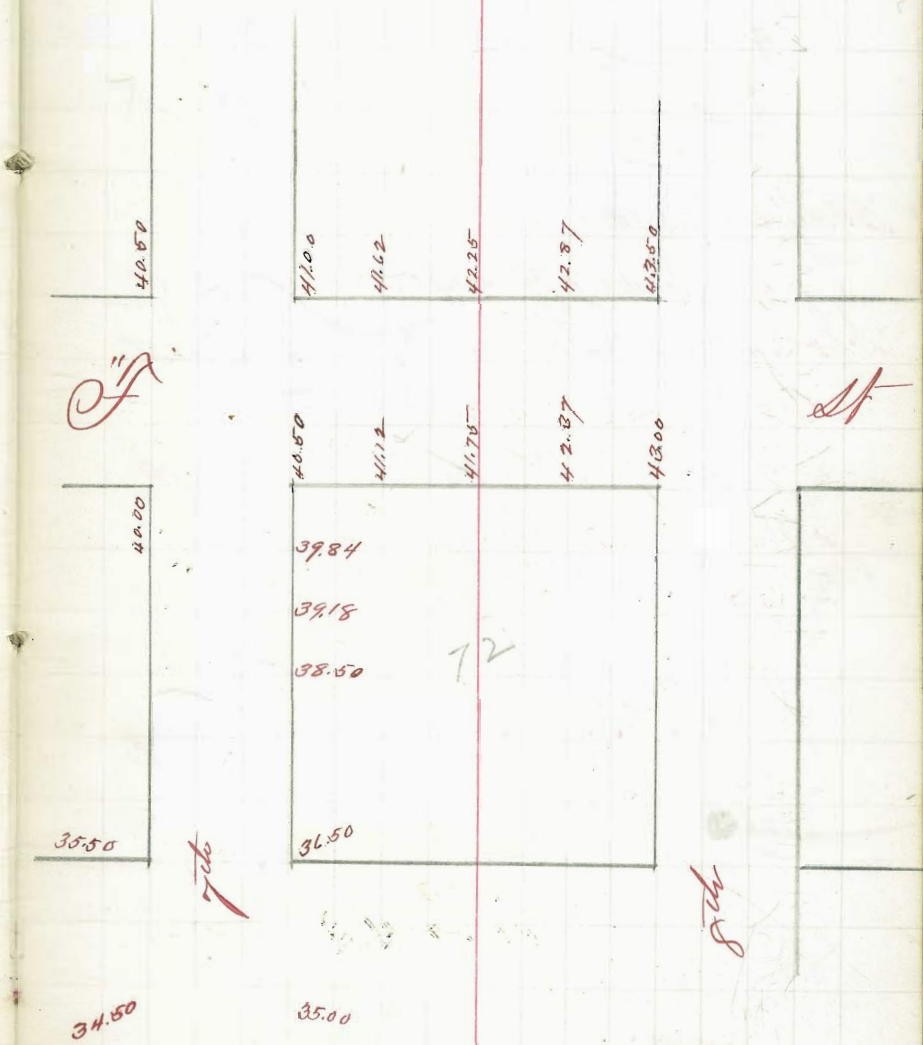
Setting grade stakes for Lot "A" S.E. cor of 7th & F for Marsh.

Station	Rod	El.	
			(46.17)
0+0	6.67	40.50	F st
+50	5.05	41.12	
1+00	4.42	41.75	

			(46.17)
0+0	6.67	40.50	
+50	6.33	39.84	

Capps Shaw Williams

46.14 B.M.
6.03
46.17 H.I.



~~Survey of Pueblo Lot 338~~

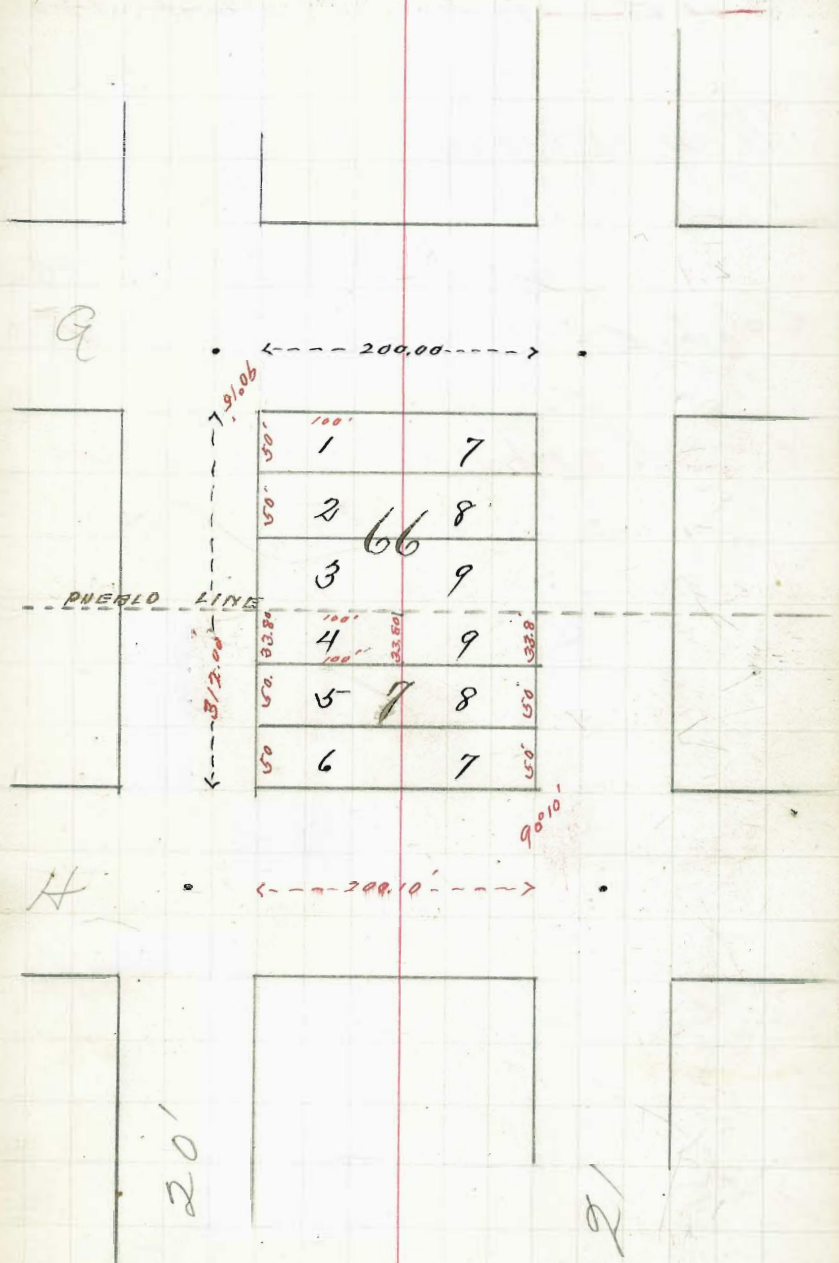
May 28th 1894

Survey of Lot 1, Blk 66. Colorado
and Taggart for Robert Campbell

May 28th 1894

Survey of Lot 4 Blk 77
Sherman add. for M. L. Herr

Capps. Shaw. Williams

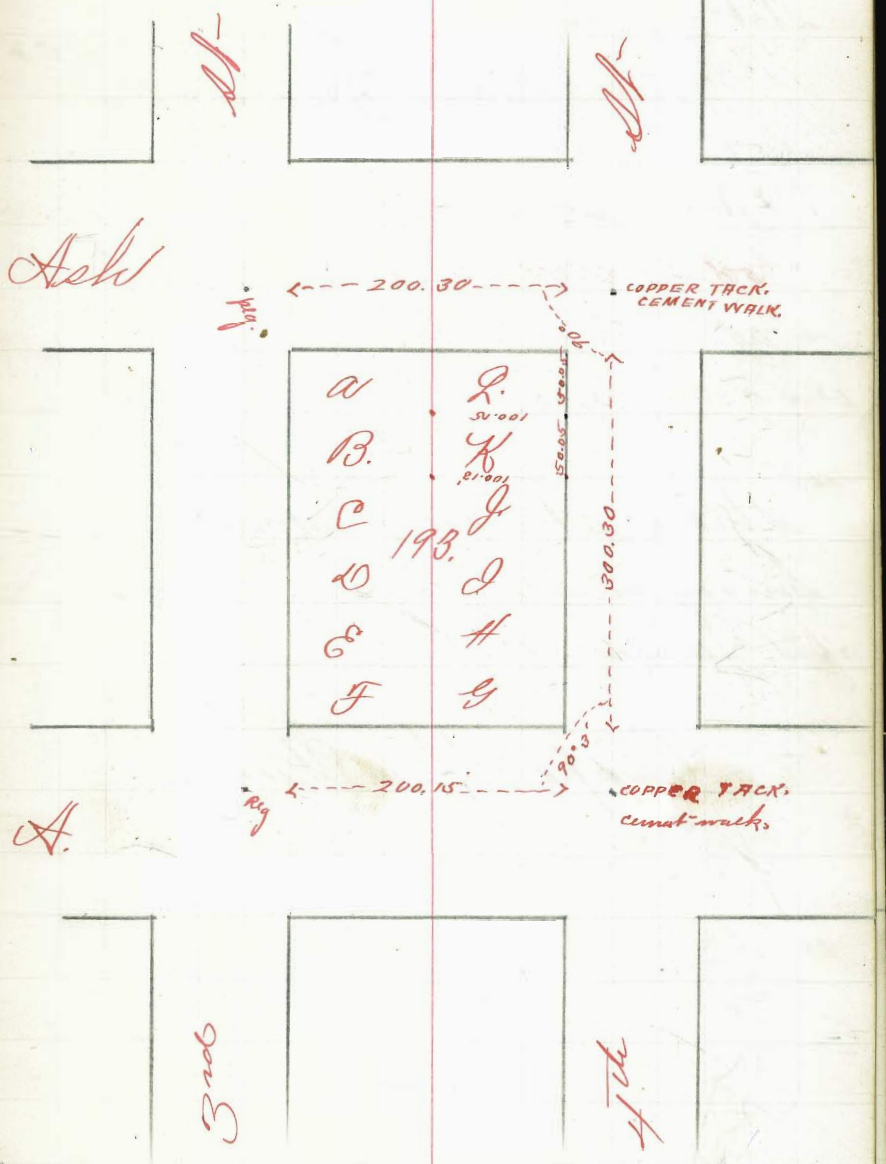


~~Survey of Pueblo Lot 338~~

May 28th 1894

Survey of Lot "K" Blk 193.
Hotton Addition for R. Niccolls.

Capper, Shaw & Williams



Survey of Pueblo Lot 339

Stat	Rod	El
0+0	4.65	43.00
+25	4.96	42.69
+50	5.28	42.37
+75	5.59	42.06
1+00	5.90	41.75

43.14 B.M. S.E. Cor 7th F
4.51
47.65 H.I.

Stakes set 3 feet from curb line
Survey made May 29th 1894
for James McNair

Capt. Shaw Williams

~~Survey of Pueblo Lot 339~~

May 29th 1894

Setting Cor N.E. to Beech & 3rd Ave

also N.W. Cor Beech & 4th

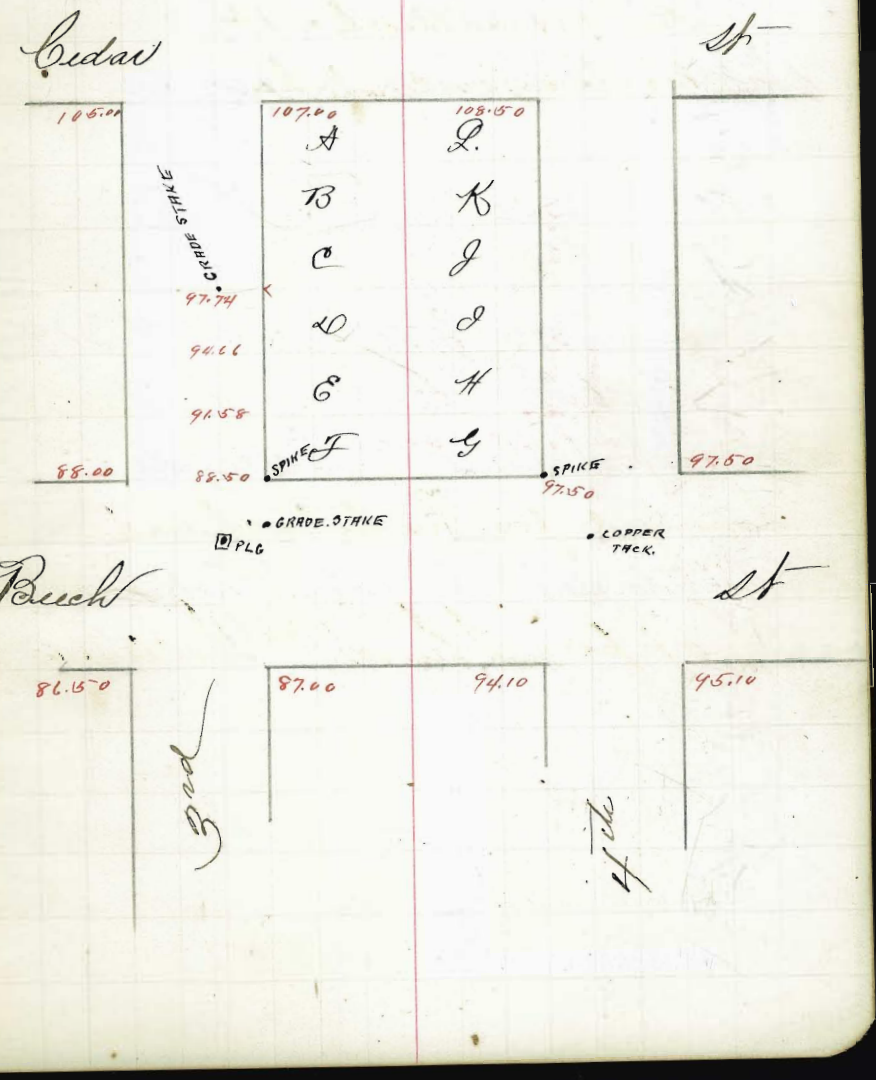
also two grade stakes.

B.M. = 89.14
Rod 9.92
99.06

99.06 99.06
88.50 97.74
10.56 1.32
Cor Rod Rod on 3rd

Surveyed for Catholic church —

Capps. Shaw. & Williams



~~Survey of Pueblo Lot 315~~

June 8 1894

Setting grade stakes to Lot "E" Blk 100 Hotchw.

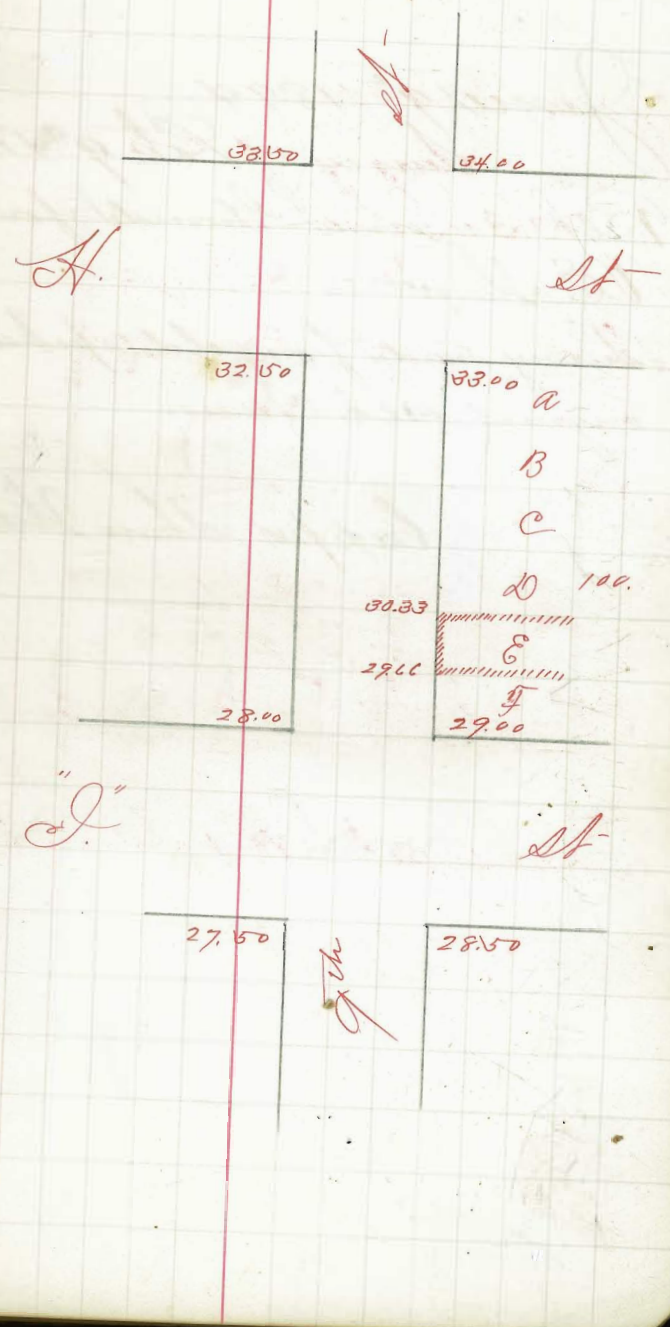
Over and Nagle

Stat	Rod	El.	H.I. (35.35)
0+0	5.02	30.33	
+50	5.69	29.66.	

34.06 B.M S E Cor / H. and 9"
129
35.35 H. I.

Capps / Shaw and Williams

Point set 2 ft from curb line



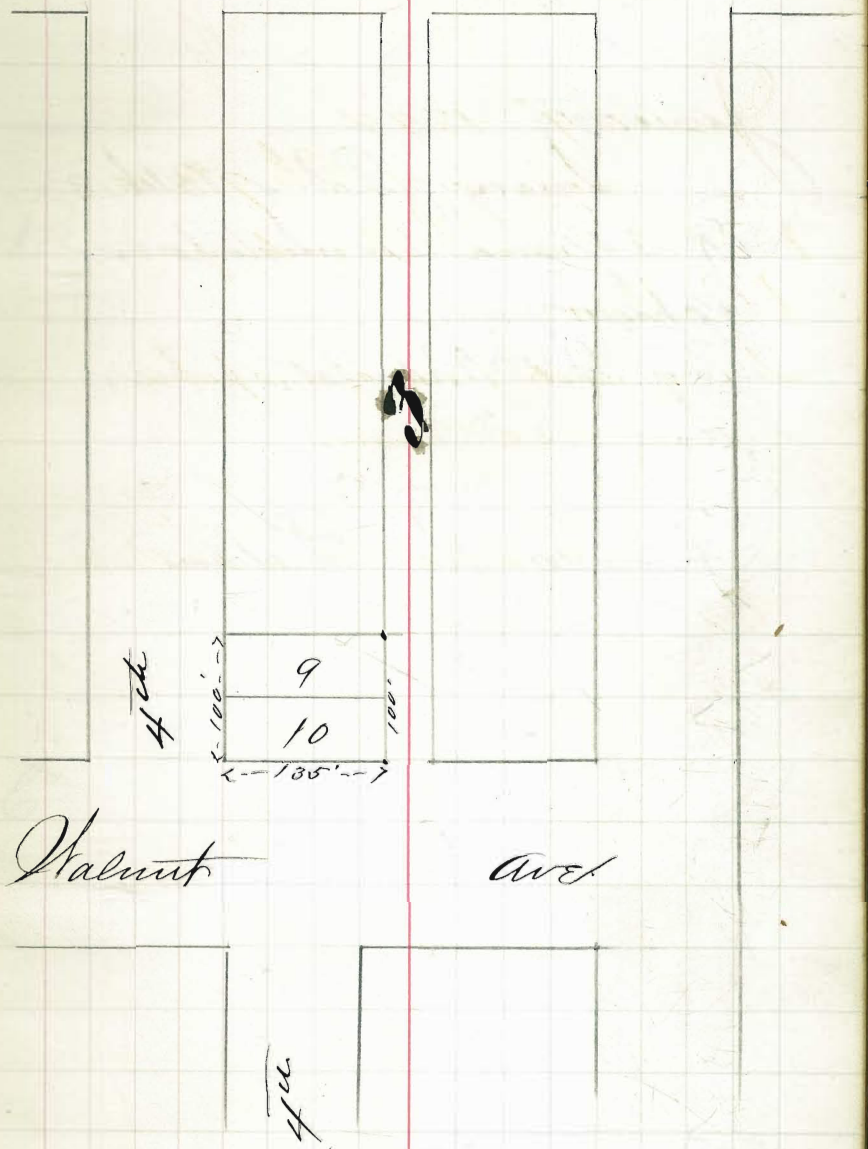
~~Survey of Pueblo Lot 315~~

June 9th 1894

Survey of Lots 9 & 10
Blk 3 Loma Grande for
V. E. Shaw.

Survey made from old (spikes)
original Blk Corners,

Capt. Shaw Williams

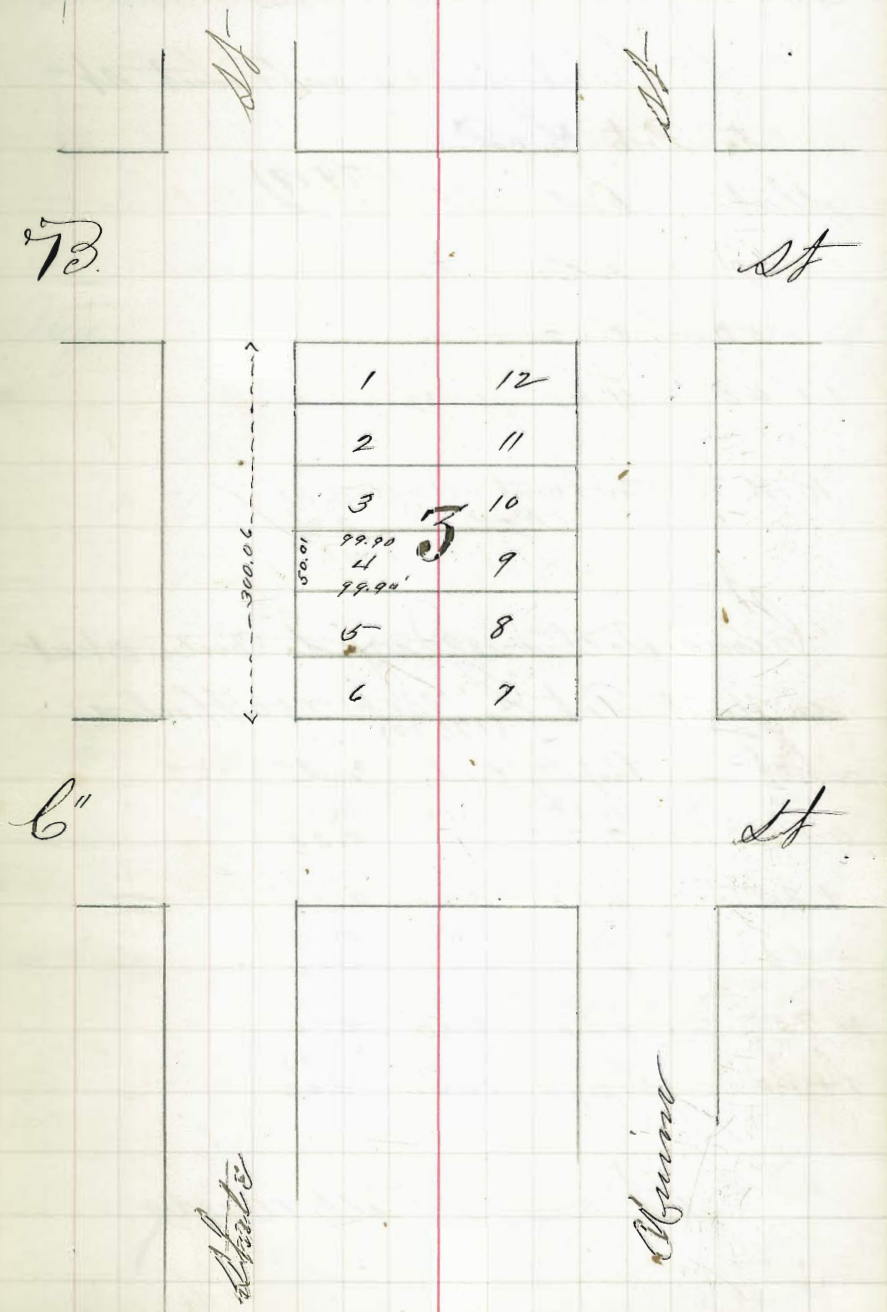


Survey of Pueblo Lot 3/4

June 13th

Survey of Lot 4 Blk 5
Middletown as shown on
opposite page
For J. D. Palmer

Crowell, Shaw, Williams



Survey of Pueblo Lot 314

Curb grades on Front St

to Lots K. & L.

Stat	Rod	El (179.17)
0+0	4.17	175.00
+50	8.02	171.15
1+00	11.85	167.32

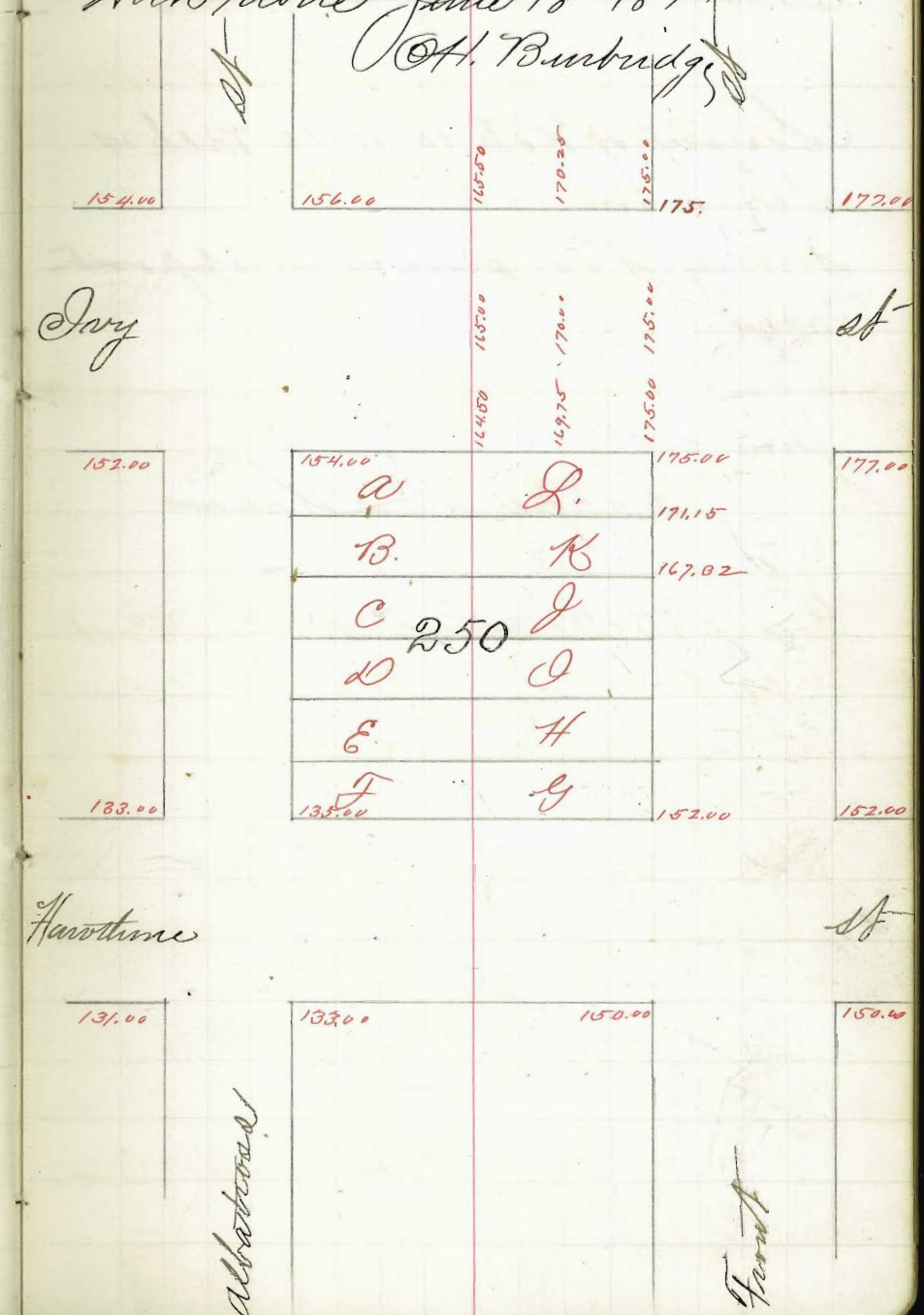
B.M. NW Cor Front & Ivy 176.31
Rod 2.86
179.17

Cross Section Ivy to Center street in front Lot "L" Block 250 Horton.

Stat	Property (176.79)	Curb	Center
0+0	174.55 2.25	175.85 1.45	176.50 0.30
+25	172.70 4.10	173.80 3.00	174.70 2.10
+50	170.70 6.10	171.20 5.60	170.80 6.00
+75	167.20 9.60	167.50 9.30	167.10 9.70
1+00	163.90 12.90	164.00 12.80	163.80 13.00

Cut 155.70 Fill 10 yds.

Work done June 18th 1894
H. Burbridge

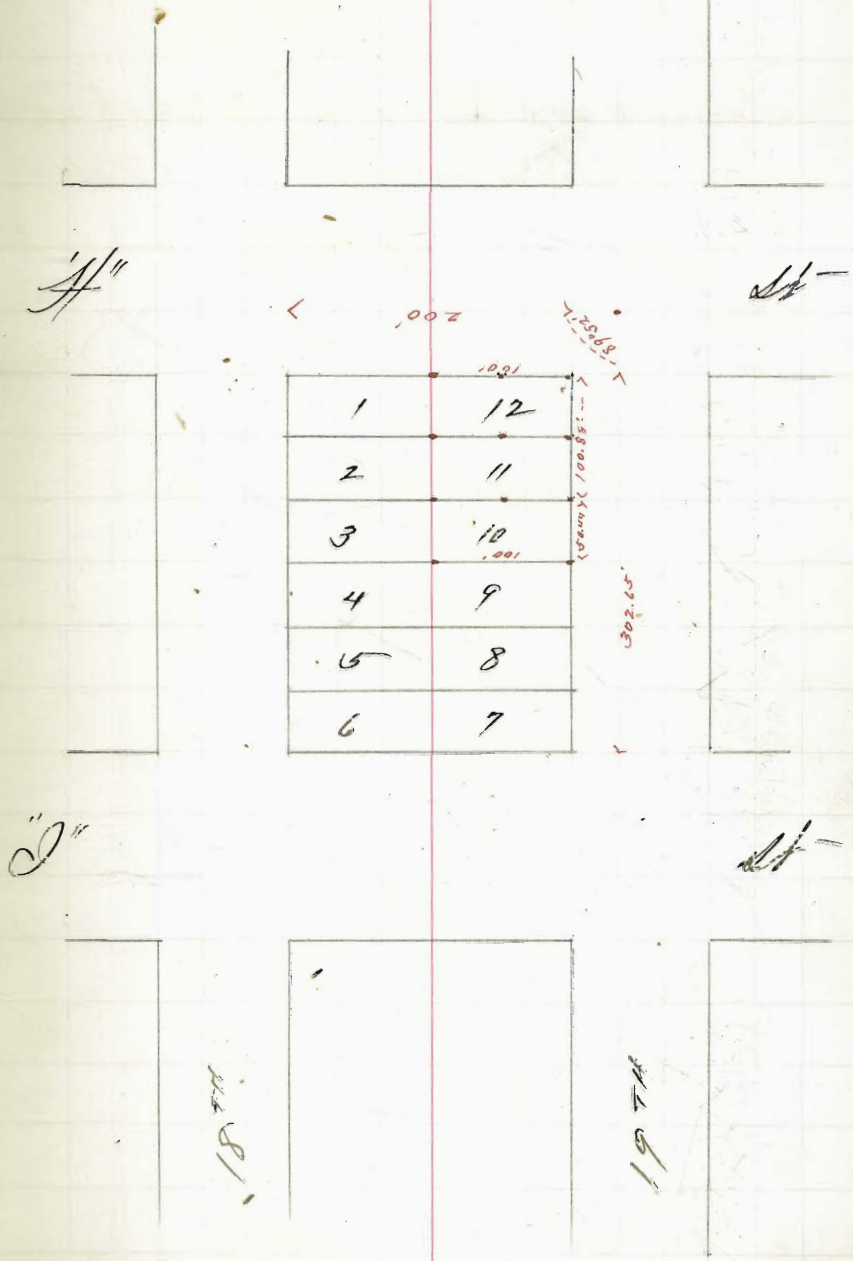


~~Survey of Pueblo Lot 313~~

Survey of Lots 10-11-12 Blk 14
Sherman's addition
Surveyed as shown on opposite
page.

June 21st 1894
Capt. Shaw. Williams

For J. B. Westgate

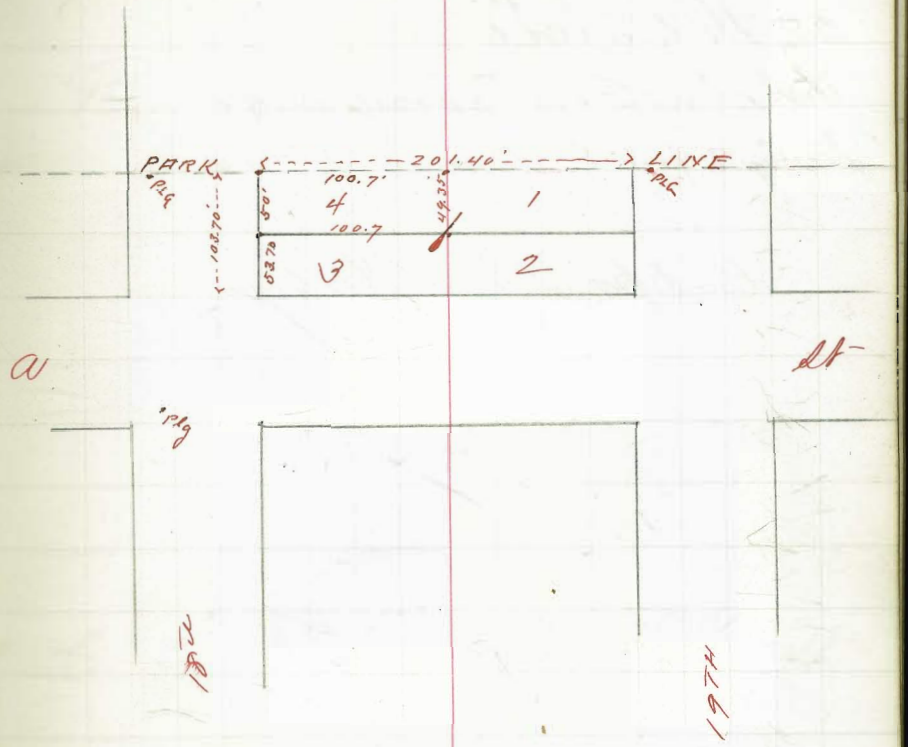


~~Survey of Pueblo lot 313~~

June 22nd 1894

Survey of a portion of Lot 4 B1 Gardners add as shown on opposite page for Mr Mendelson

Capt. Shaw. Williams

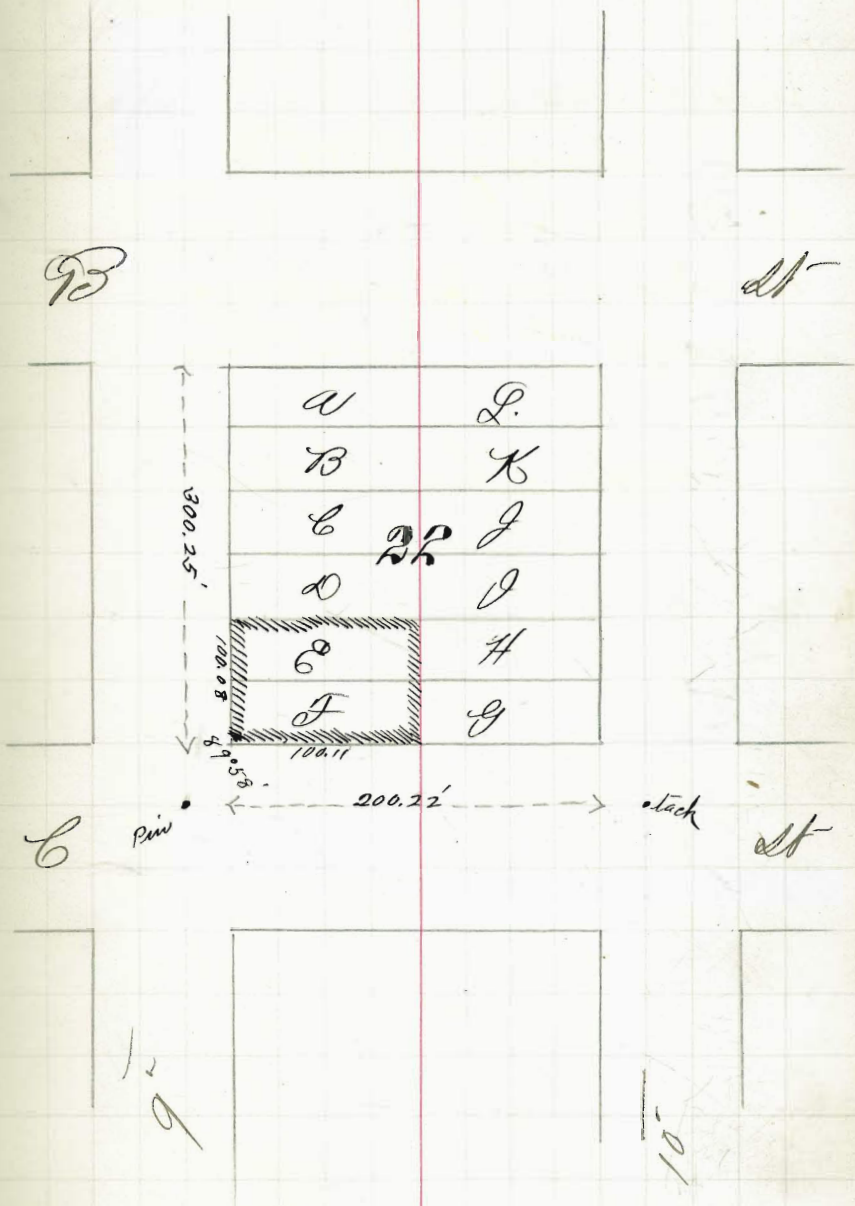


Survey of Pueblo Lot 312

July 3rd 1894

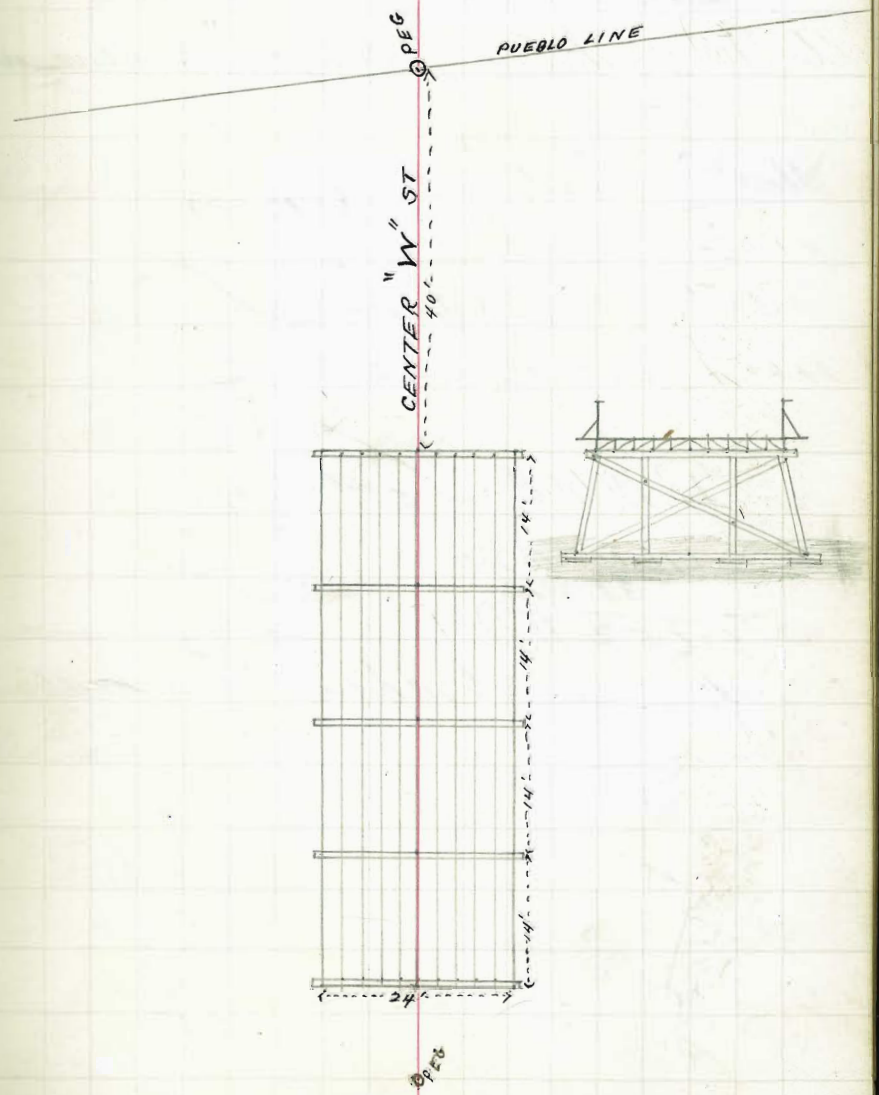
Survey of Lots E and F Blk 22 Hortons Add as shown on opposite page Surveyed for C. Samuel J. Fox

Capt. Shaw. Williams



~~Survey of Pueblo lot 312~~

"W" Street Bridge July 8th 1894
Capps & Shaw & Williams

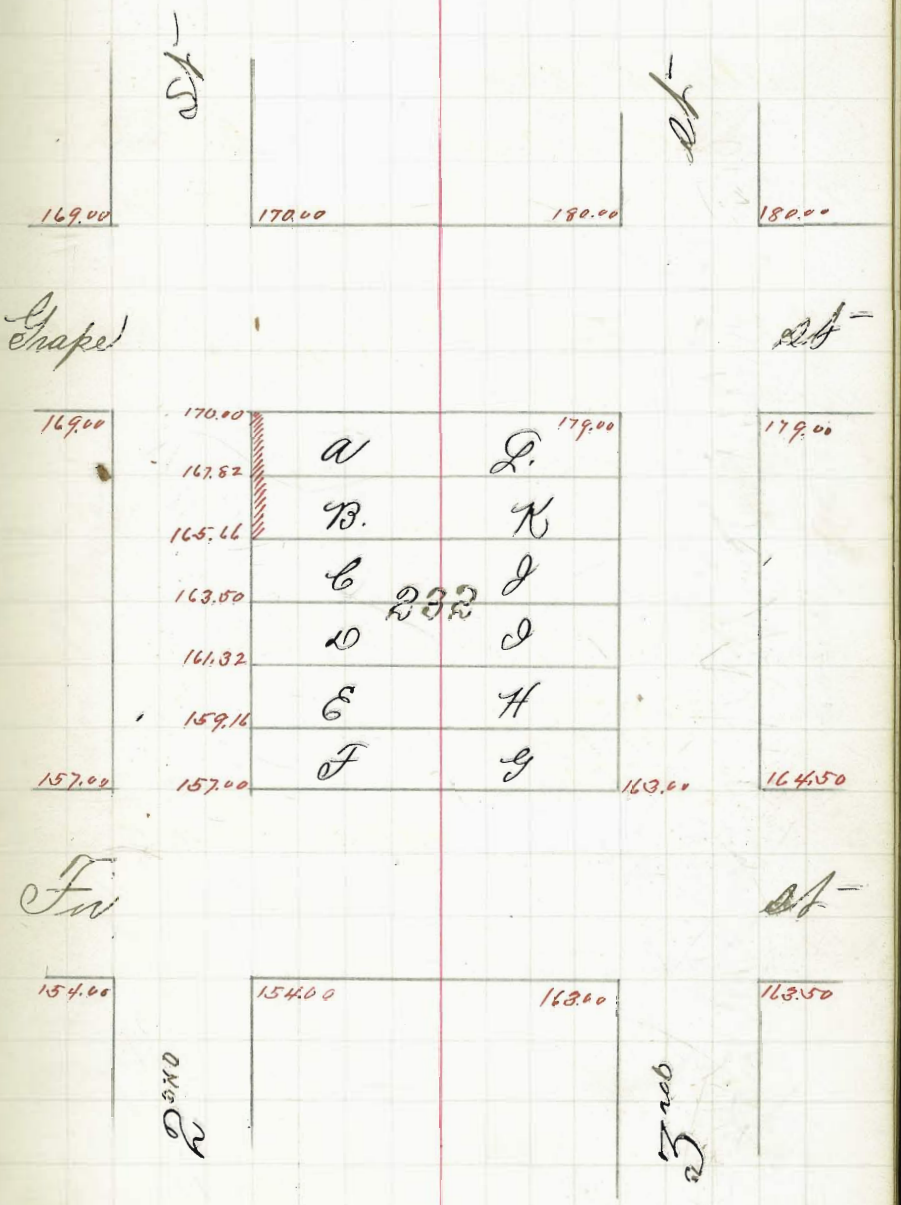


~~Survey of Pueblo book 311~~

July 14th 1894
Setting Curb grades to Lots
A-B. Blk 232. Hurlow for Mr Norman

Sta	Rod	El. (176.52)
0+0	6.52	170.00
+50	8.70	167.82
1+00	10.86	165.66

B.M. N.E. cor 2nd & Grape
176.15 B.M.
37 Rod
176.52 H.I.
Capps. Shaw. Williams



~~Survey of Pueblo Lot 311~~

24th St

c 0.2		180.50	180.50		c 0.5
c 0.3		183.12	183.25		c 0.94
c 0.35		185.74	186.00		c 0.94
grade		188.36	188.75		c 0.80
c 0.2	BREAK	191.00	191.50	BREAK	grade
grade		191.90	192.30		"
grade		192.80	193.10		"
grade		193.70	193.90		c 0.20
grade		194.60	194.70		c 0.2
grade	BREAK	195.50	195.50	BREAK	c 0.1
grade		194.00	194.32		c 0.10
c 0.18		192.50	193.16		grade
grade		191.00	192.00		c 0.10

South Side

North Side

25th St

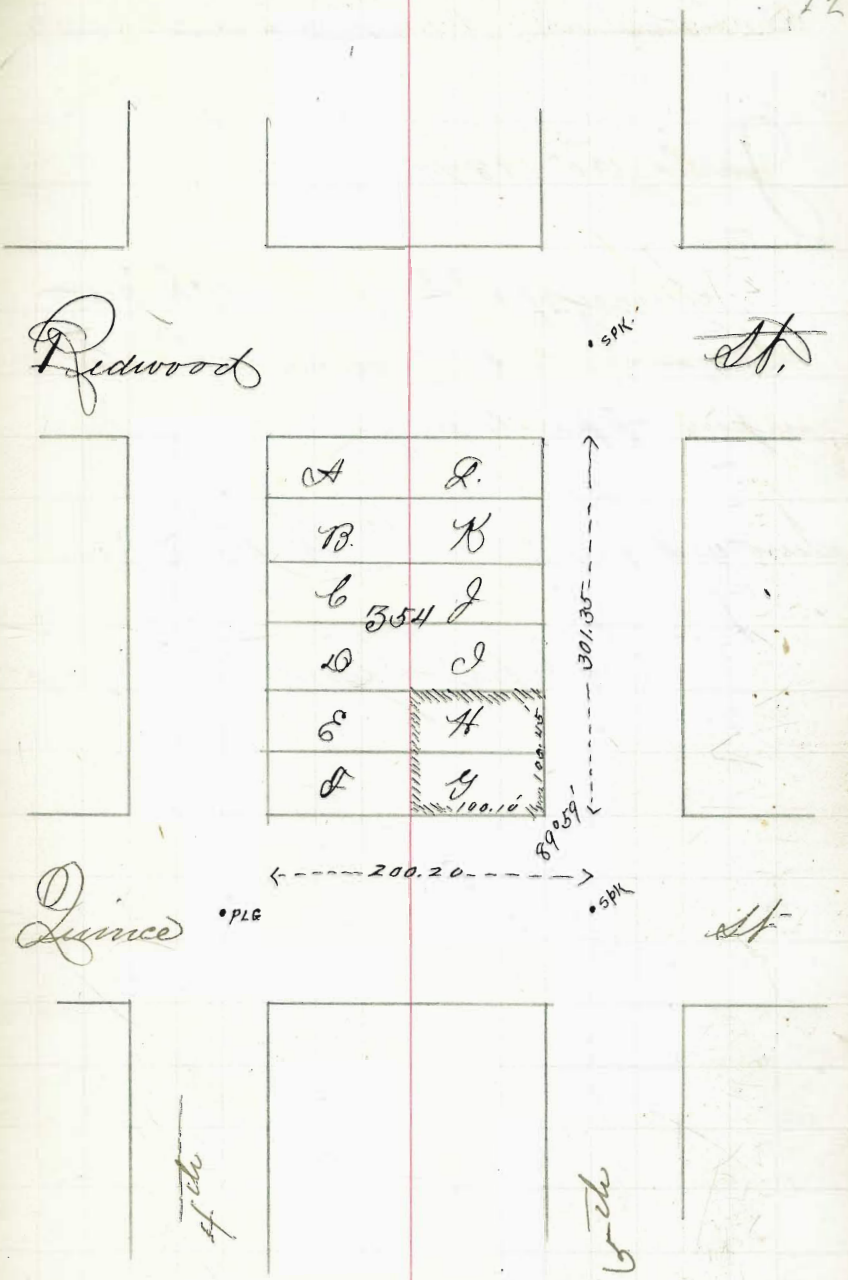
~~Survey of Pueblo Lot 239~~

July 28th 1894

Survey of Lots "G" and "H" in Blk 354 Horton, as shown upon opposite page

For ~~Scripps~~ F. S. Tripp

Capps. Shaw & Williams



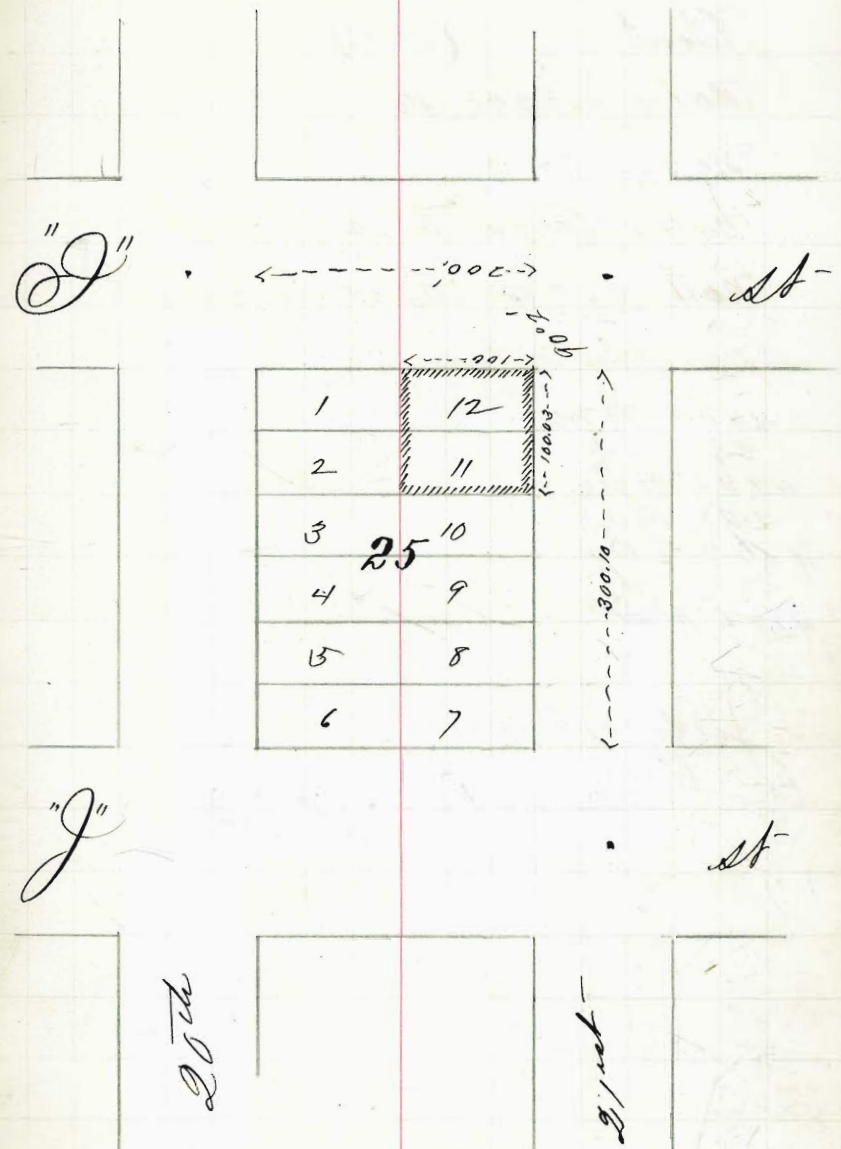
~~Survey of Pueblo Lot 239~~

July 30th 1894

Survey of Lots 11-12 Blk 25 — Sherman Addition, as shown upon opposite page

Surveyed for Ina G. Sprague

Capt. Shaw. Williams



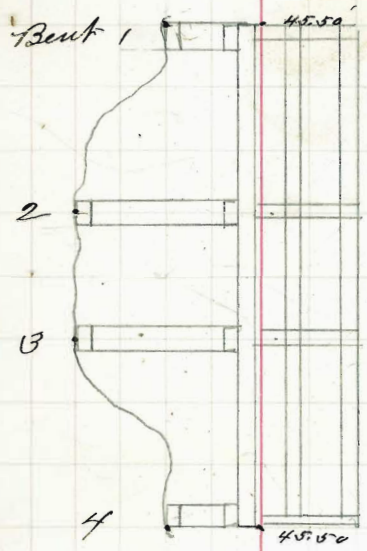
~~Survey of Pueblo Lot 240~~

Bent		(41.56)
No 1	1.29	40.27
No 2	10.29	31.27
No 3	10.24	31.32
No 4	2.18	39.38

44.03 = B.M
5.82 Rod
49.85 H.D.
9.58 Rod
40.27 T.P.
1.29 Rod
41.56 H.D.

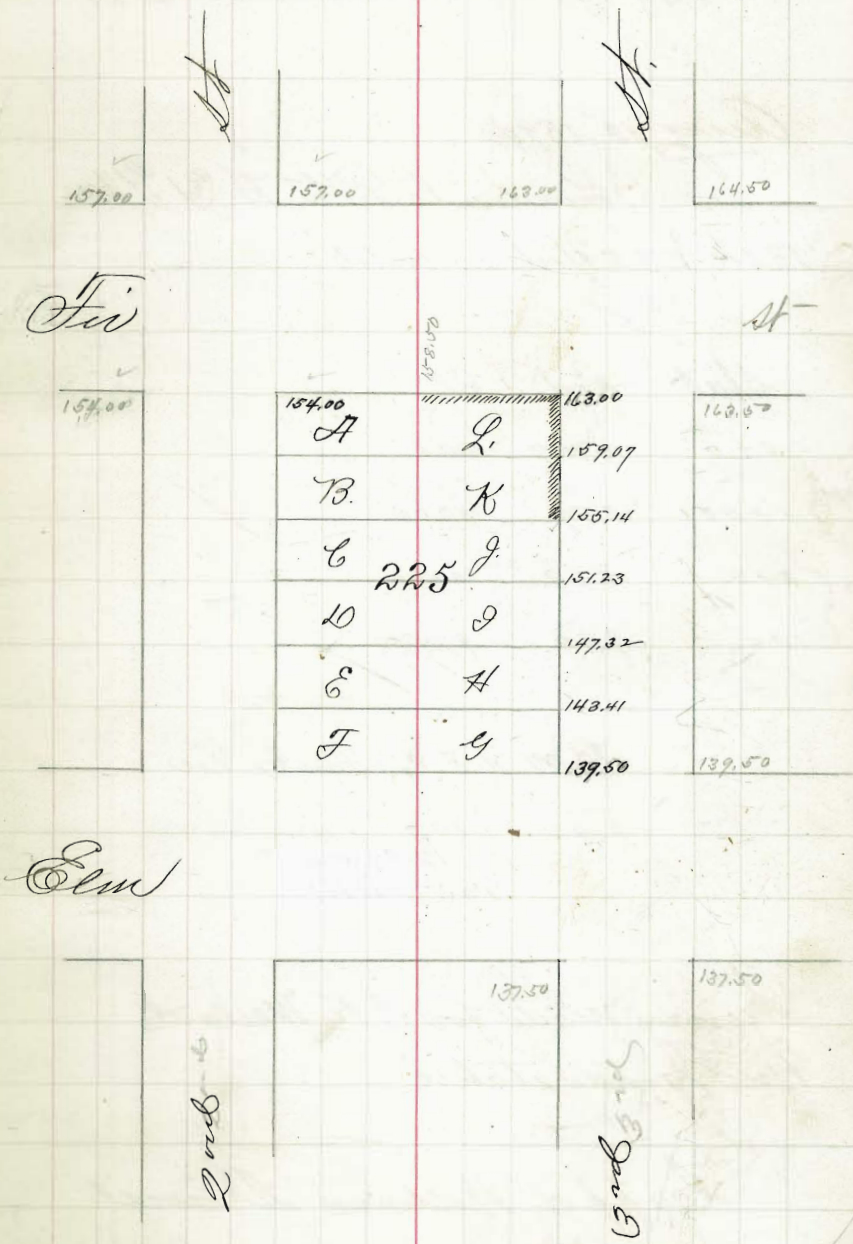
July 31st 1894
Capt. Party

South 200 feet of Pueblo
Elevation of floor = 45.50 ft



~~Survey of Pueblo Lot 240~~

Aug 8 1894
Graded to



~~Survey of Pueblo Lot 241~~

Aug 10th 1894

Grades to Lots "H & G"

Blk 235 Hotons add

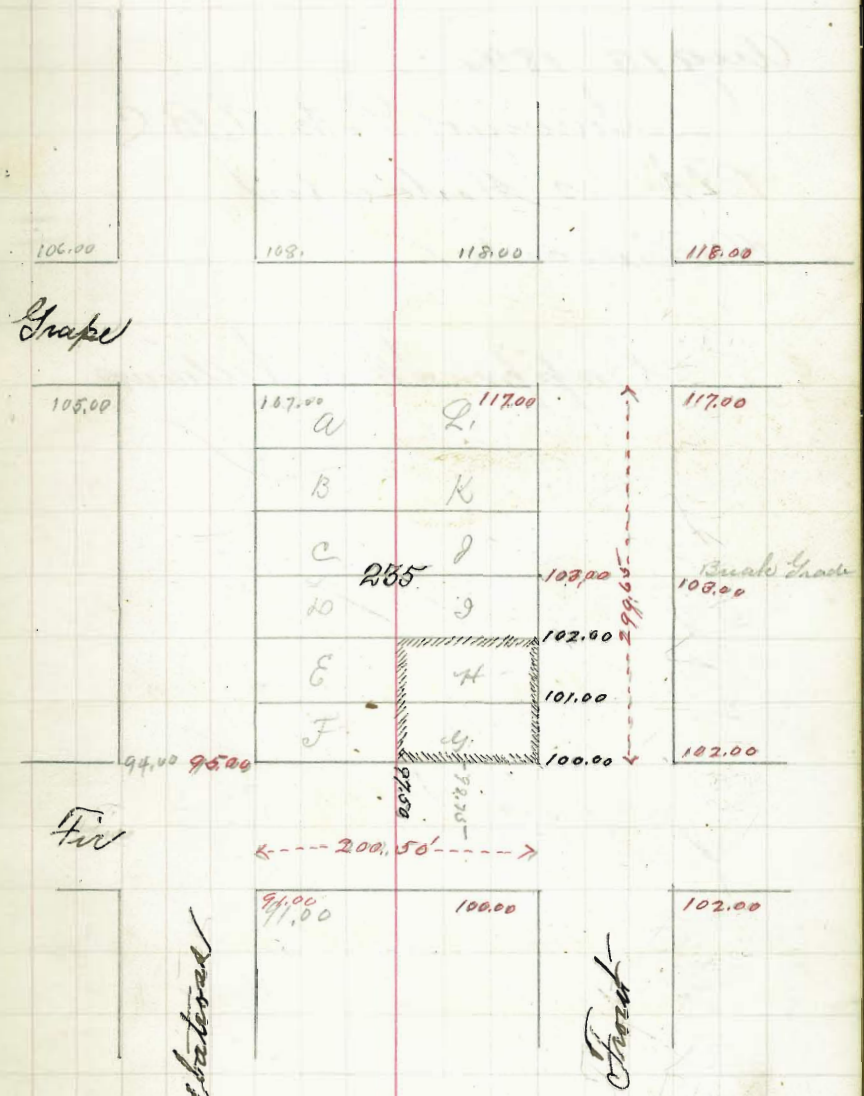
	Stat	Rod	El
Front	0+0	5.59	100.00
	1+00	3.59	102.00
Fir	0+0	5.59	100.00
	1+0	8.09	97.50

BM N.E. Cor Front - Fir

102.79 BM
280 Rod
105.59 H J

Survey Made for O.H. Mallard
Four grade stakes

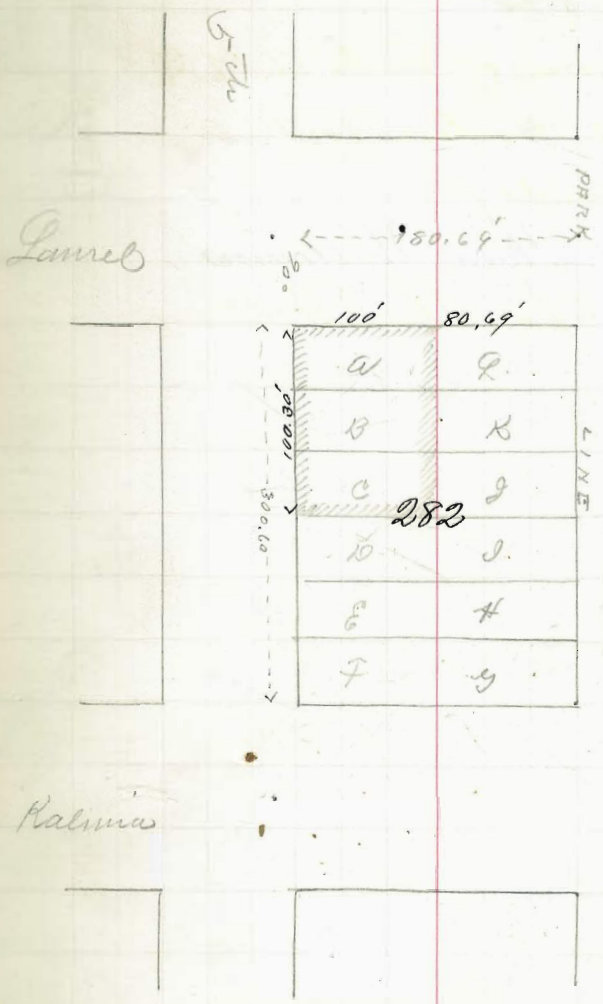
Capps Williams & Powell



~~Survey of Pueblo Lot 241~~

Aug 18th 1894
Survey of Lots A.B.C
Blk 282 Honolulu for
D N Edwards

Capt. Shaw. Williams

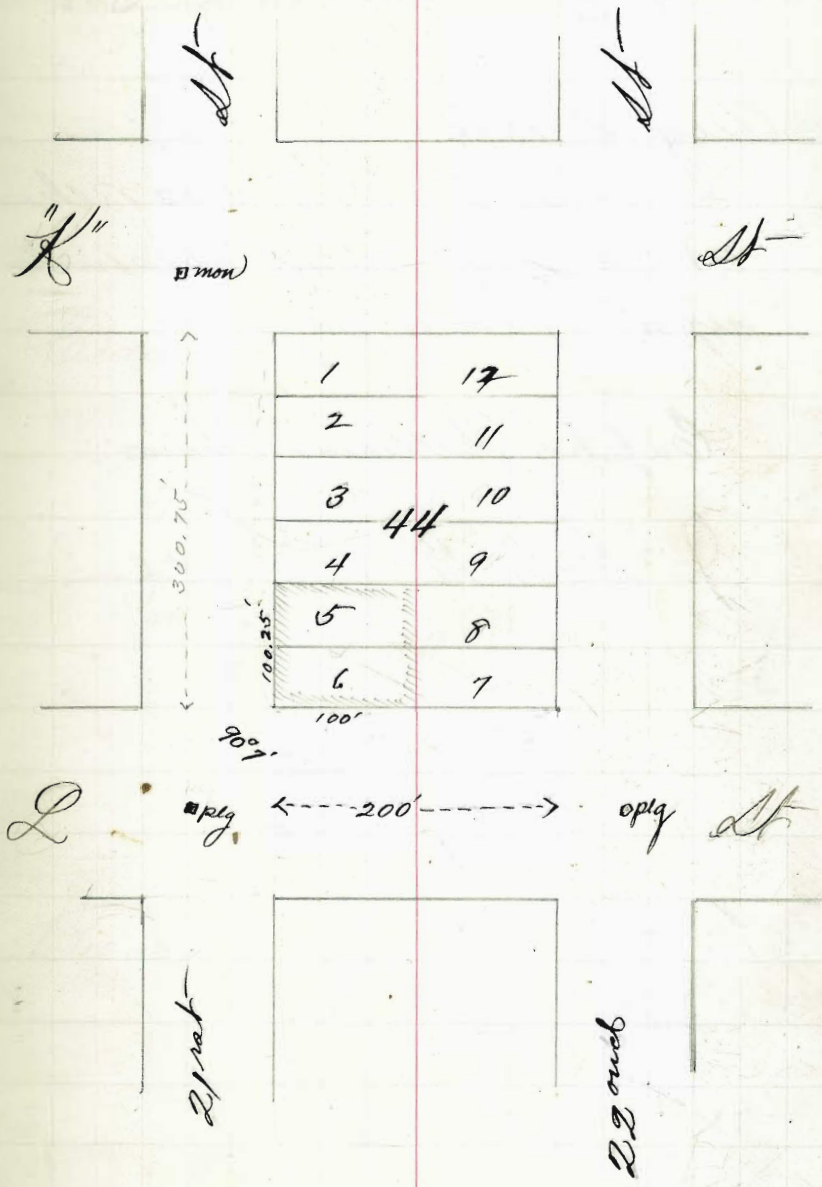


~~Survey of Pueblo lot 242~~

Survey of Lots 5 and 6 Blk 44 Sherman for Sam Smith

Aug 15th 1894

Capt. Shaw. Williams



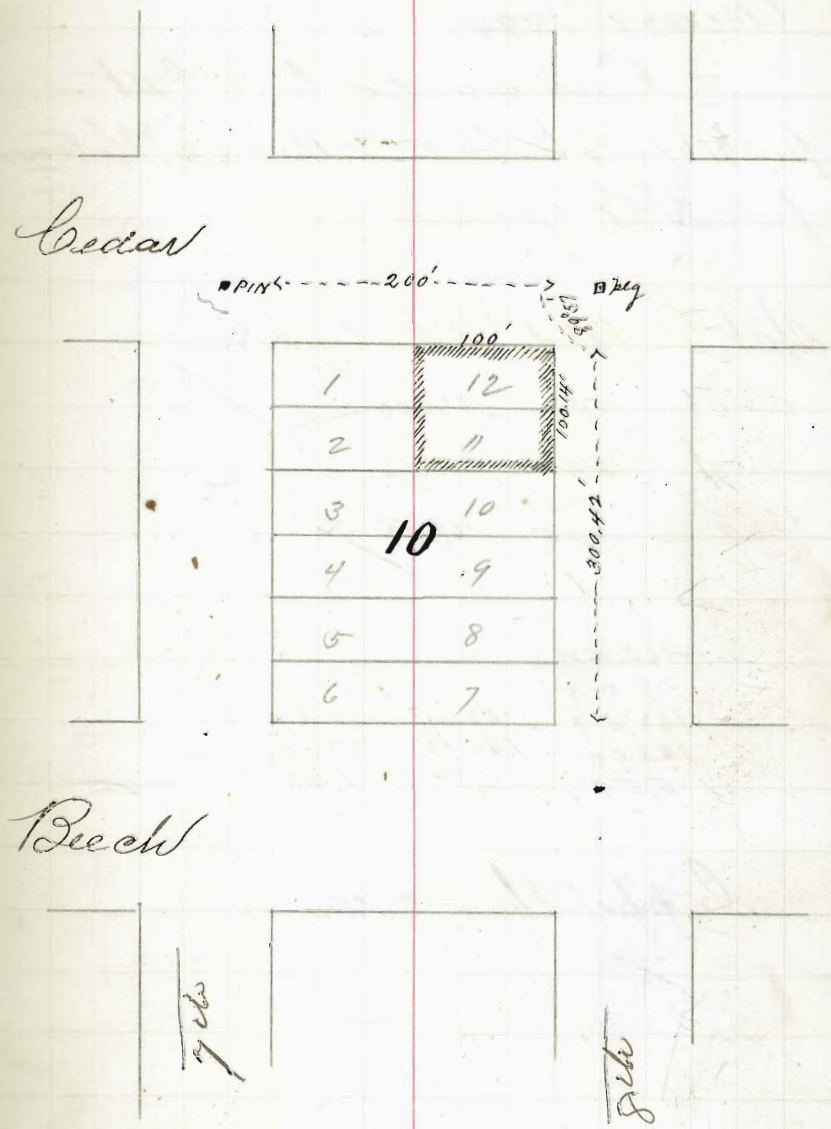
~~Survey of Pueblo lots 242~~

Aug 14th 1894

Survey of Lots 11-12 Blk 10 Carnahan add as shown upon opposite page

Capps. Williams, Shaw.

J. Wade McDonald



~~Survey of Pueblo lot 243.~~

Aug 17th 1894

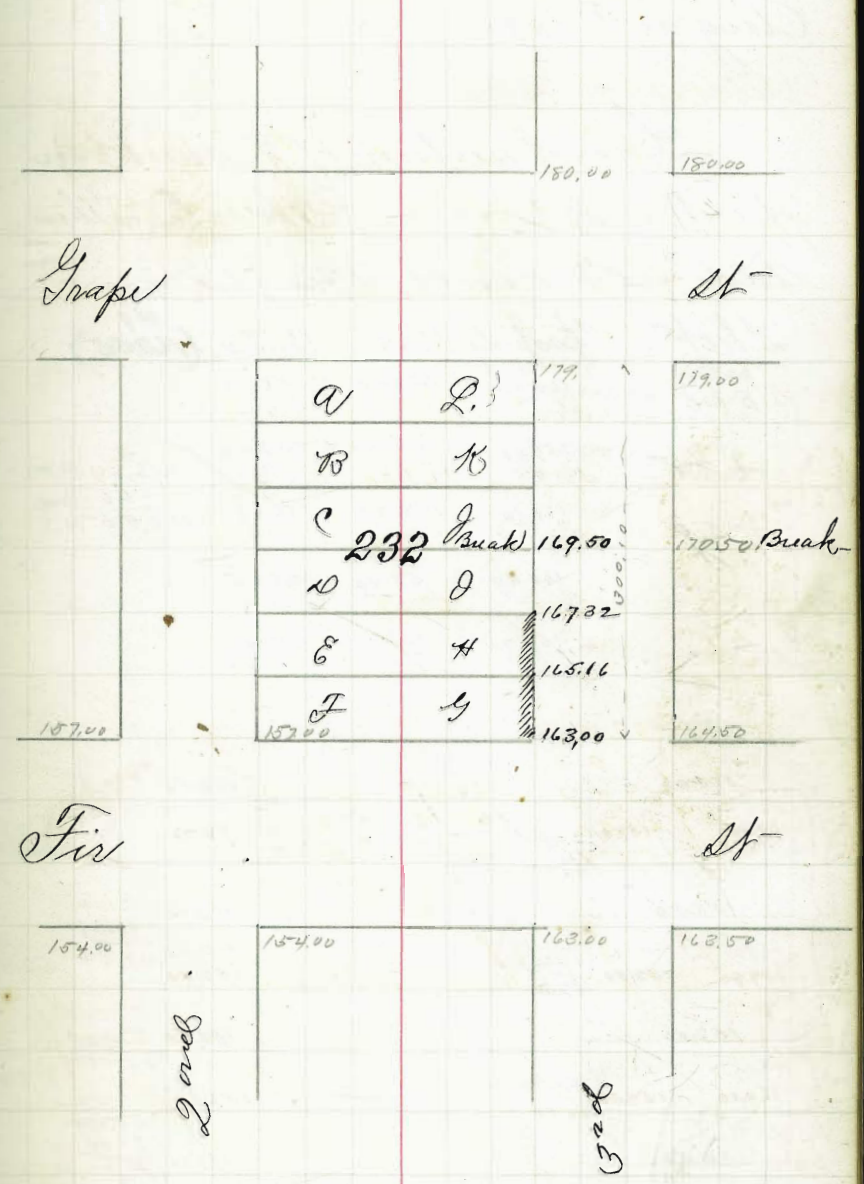
Cut grade to 3rd st front of Lots G. H. Blk 232. Hotow. for H. F. Christian

Stat	Rod	El (168.57)
0+0	5,57	163.00
+50	3,41	165,16
1+00	1,25	167.82

B.M. 161.54
7.03
168.57

168.57	168.57	168.57
163.00	165.16	167.82
5,57	3,41	1,25

Cappel Shaw. Williams



~~Survey of Pueblo Lot 243~~

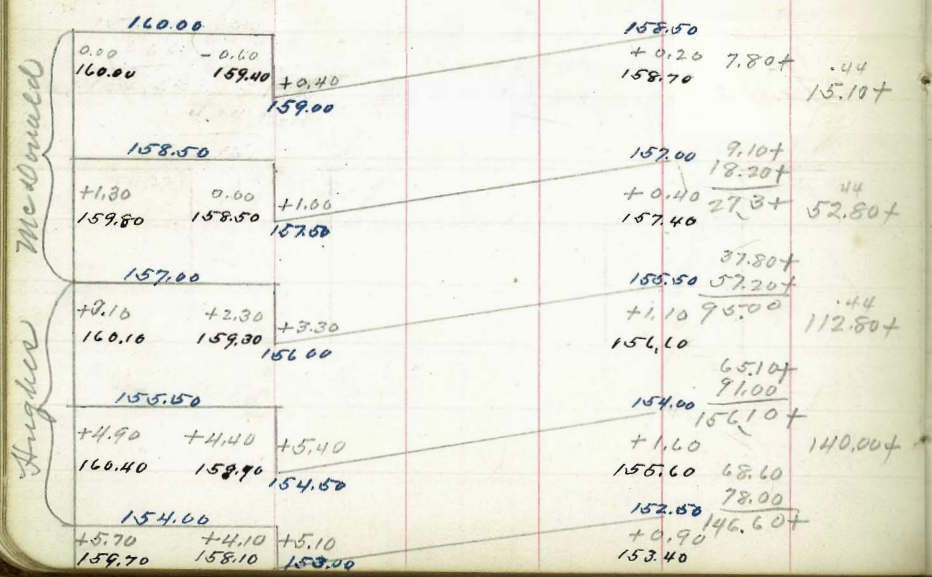
Aug 21st 1894

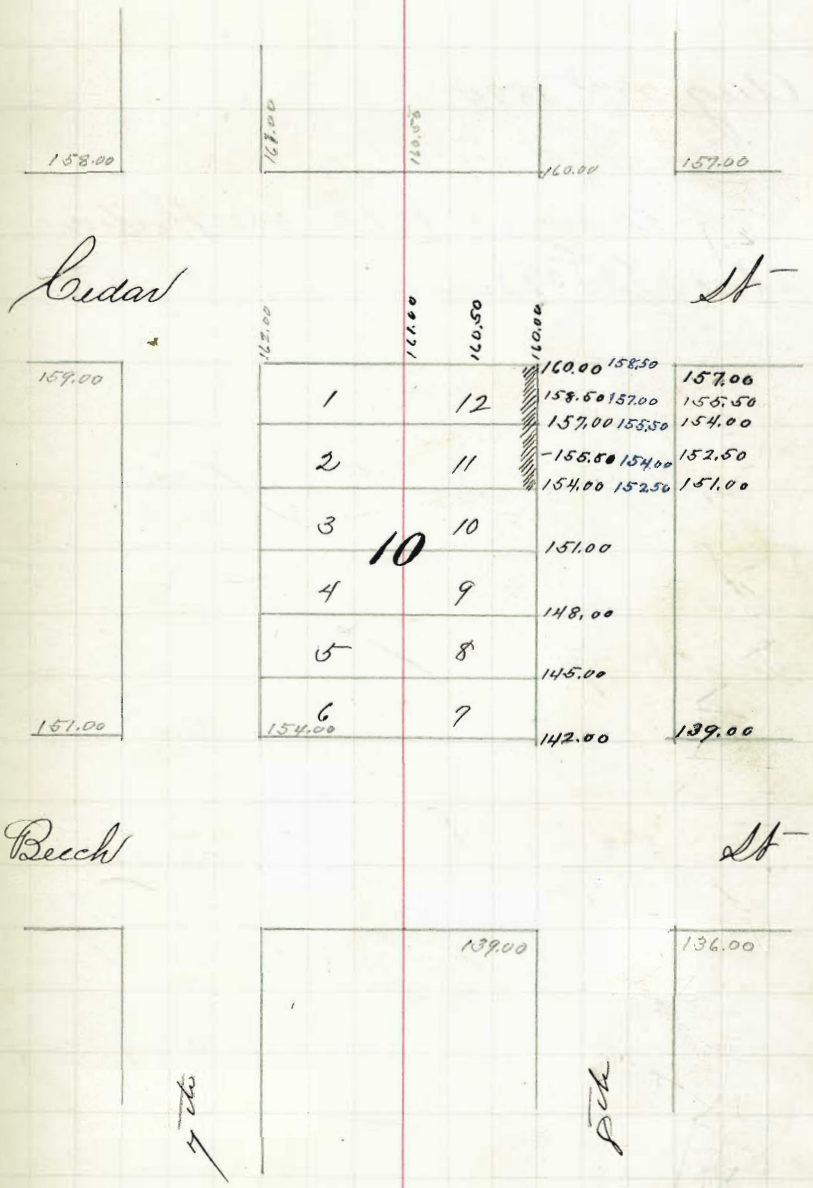
Cross section of 8th street in front of lots 12 Blk 10 Carruthers add for McDonald & Hughes

Stat	Property	Cut	Centre	
			H1 (163.55)	
0+0	160.00 / 3.55	159.40 / 4.20	158.70 / 4.90	
+25	159.80 / 3.80	158.50 / 5.10	157.40 / 6.20	156.89 BM
+50	160.10 / 3.50	159.30 / 4.30	156.60 / 7.00	6.66 Rod
75	160.40 / 3.20	158.90 / 4.70	155.60 / 8.00	163.55 HS
1+00	159.70 / 3.90	158.10 / 5.50	153.40 / 10.20	

McDonald — 8th St

Hughes





McDonald cut 67.90 yds

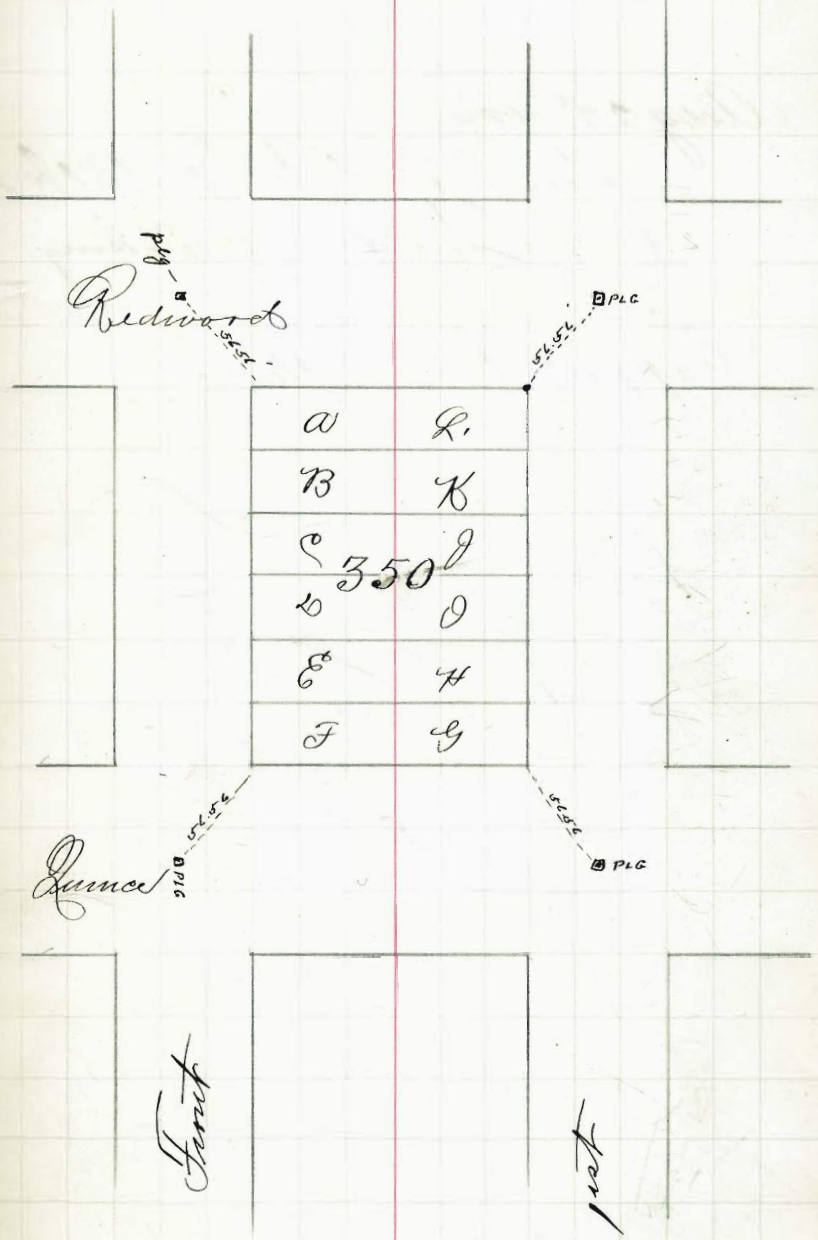
Hughes " 252.80 "

320.70 "

~~Survey of Pueblo Lot 222~~

Aug 21st 1894

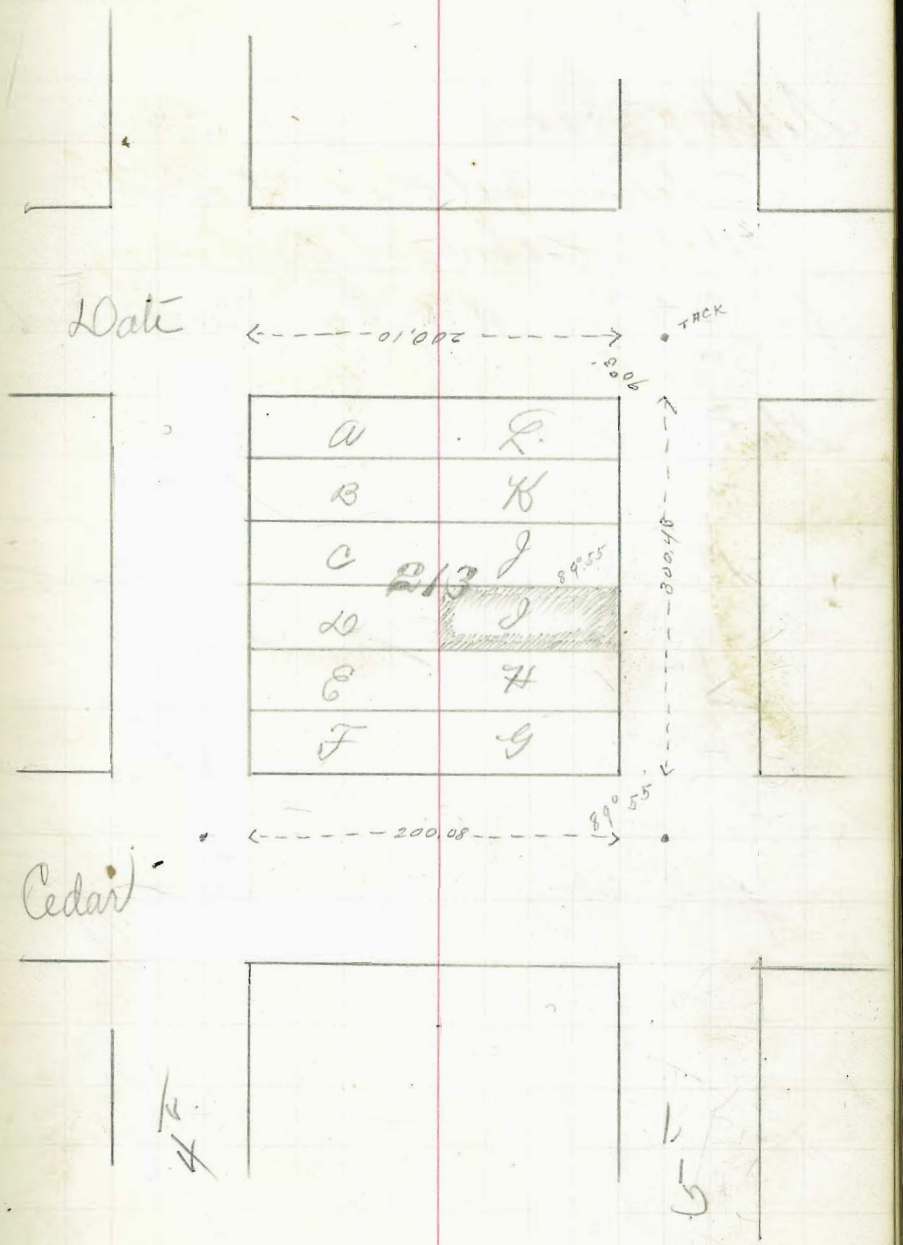
Survey of Blk 350 Horton
for T.S. Brandegee



~~Survey of Pueblo Lot 222~~

Aug 27th 1894
Survey of Lot "I" Blk
213 Hatton for W W Ecking

Capps. Shaw. Williams



~~Survey of Pueblo lots 1892~~

Sept 7th 1894

Setting Curb Grades to Lots

D. E. F Block 31 Holton,

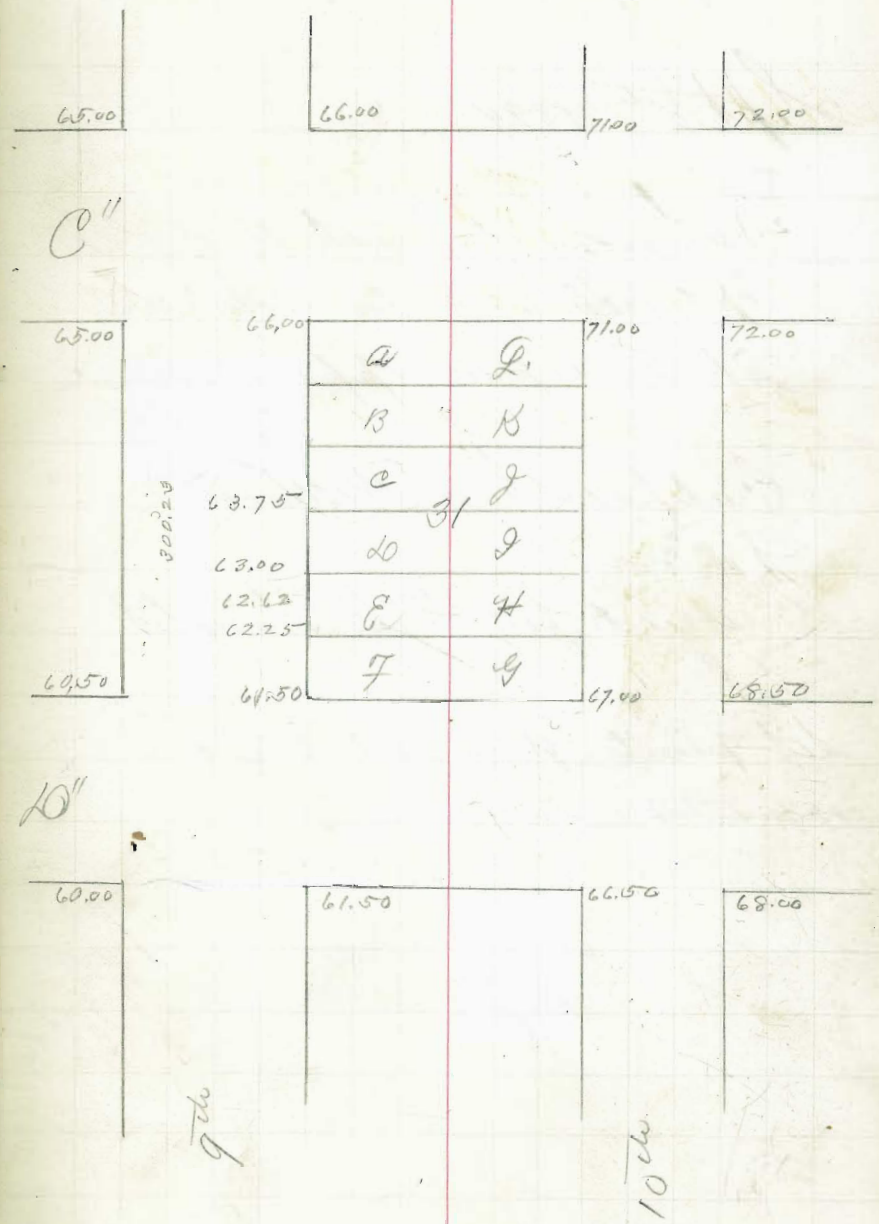
for D. H. Hewitt by Prof. Nagel Cond

Stat	Rod	El.	(H.I. 66.06)
0+0	4.56	61.50	
+75	3.44	62.62	
1+50	2.31	63.75	

Capps. Shaw. Williams.

66.06	66.06	66.06
61.50	62.62	63.75
4.56	3.44	2.31

62.12 BM
3.94 Rod
66.06 H.I.



~~Survey of Pueblo Lot 221~~

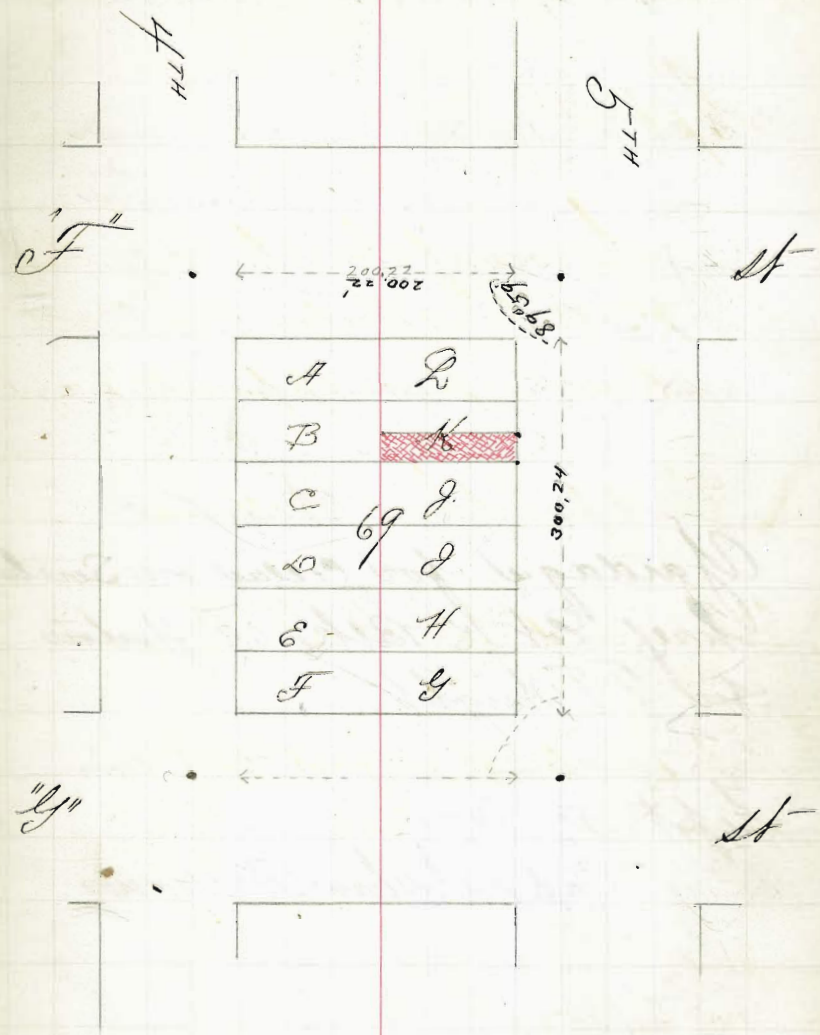
Sept 8th 1894

Survey of South 1/2 of Lot "K" Blk 69 Horton add as shown upon opposite page

Capps & Shaw. Williams

Surveyed for F. F. Wright

Set points 1 ft on front East line copper tack in Lead



~~Survey of Pueblo Lot 221~~

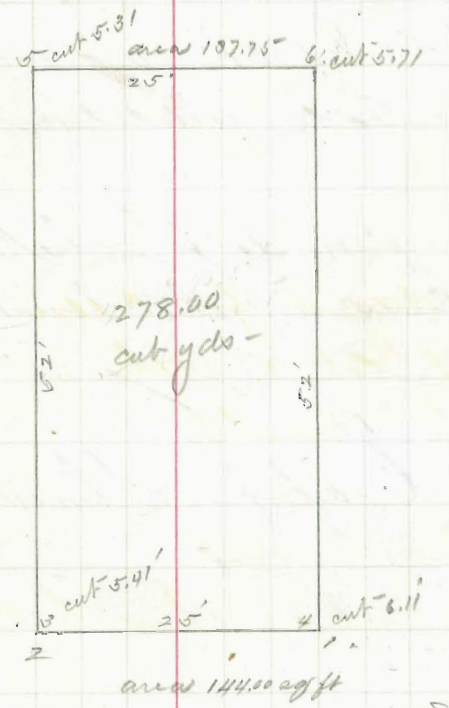
Stat	Rod	41 (36.61)	
1	4.80	31.80	grade
2	5.30	31.31	Sidewalk on 5th grade
3	7.40	29.21	
4	6.70	29.91	
5	7.50	29.11	
6	7.10	29.51	

Yardage for cellar on South half Lot 6 Blk 69 Hollow for F F Wright

Sept 7th 1894
Capps & Shaw Williams

35.67 B.M. S E Cor F. 5th
0.94
36.61

8 ft below highest grade on 5th street



27.30

32.90

5TH

5T

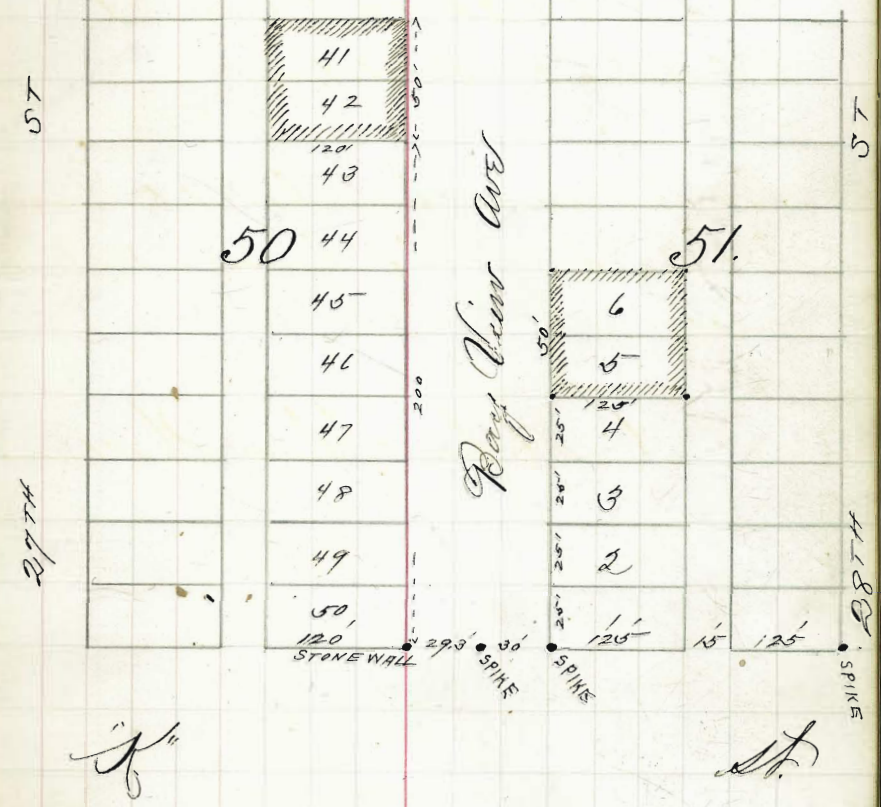
~~Survey of Pueblo lot 221~~

Sept. 11th 1894

Survey of Lots 5-6 Blk 51 and 41-42 Blk 50. Lowe and Olmstead addition

Survey made for the old German that lives in the house at stone wall

Capt. Shaw Williams



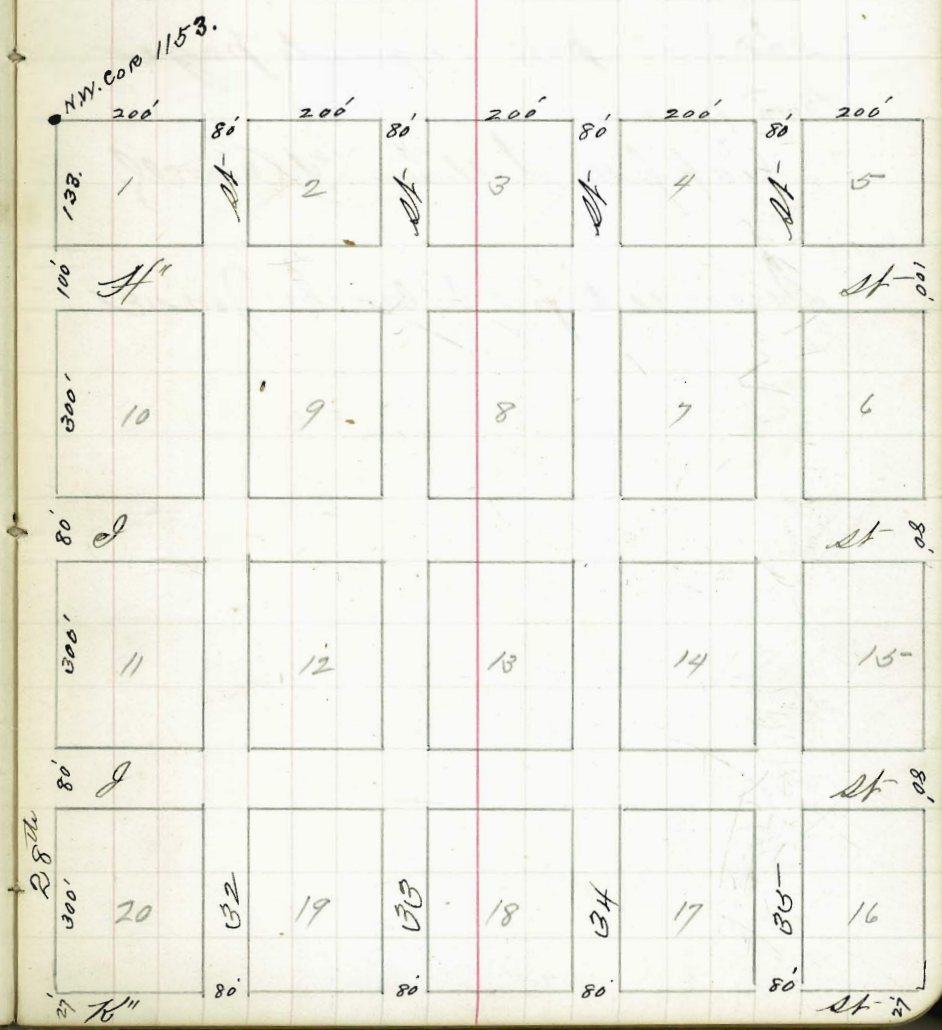
~~Survey of Pueblo Lot 220~~

Hoitto Addition

N.W. 1/4 Pueblo Lot 1153

Surveyed by James Pascoe Dec 1869

Lot contains 40 acres



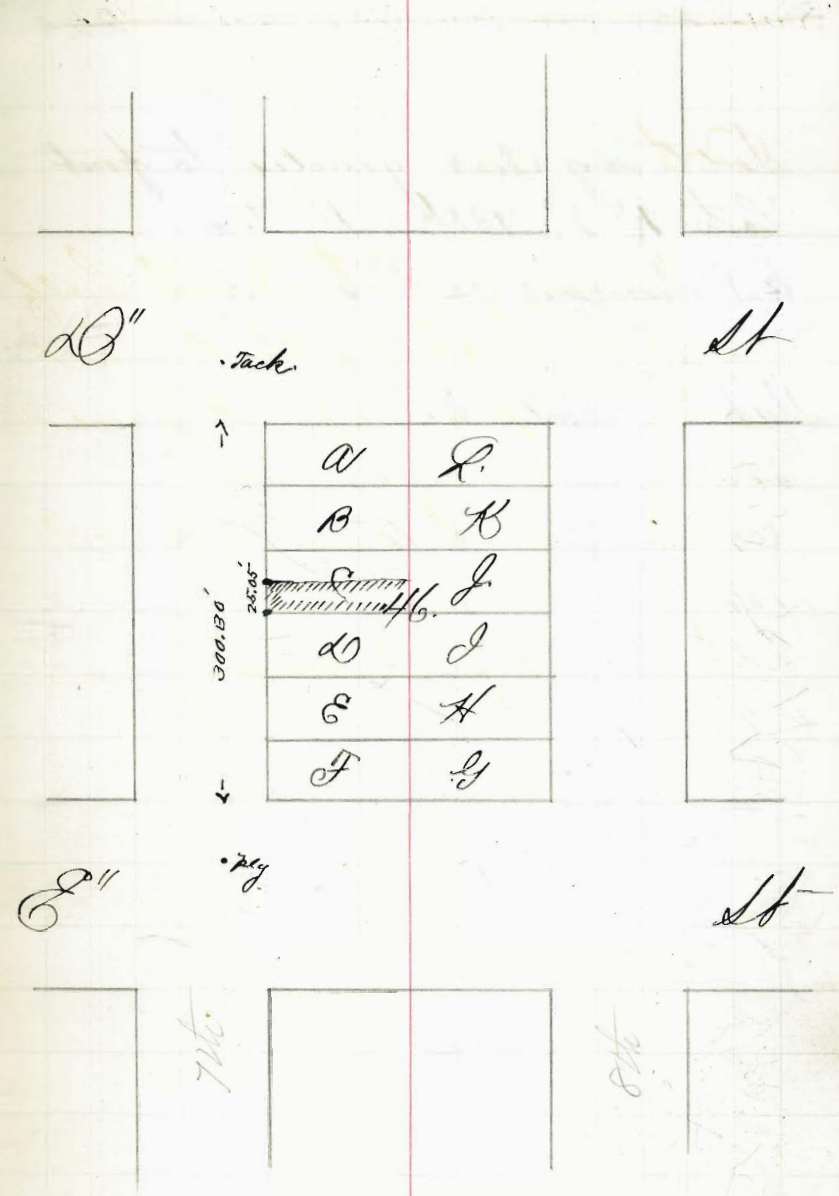
~~Survey of Pueblo Lot 220~~

Oct 4th 1894

Survey of Lots South half Lot "C" Blk 46 Horton as shown upon opposite page two points on front only.

Capt. Williams & Crowell.

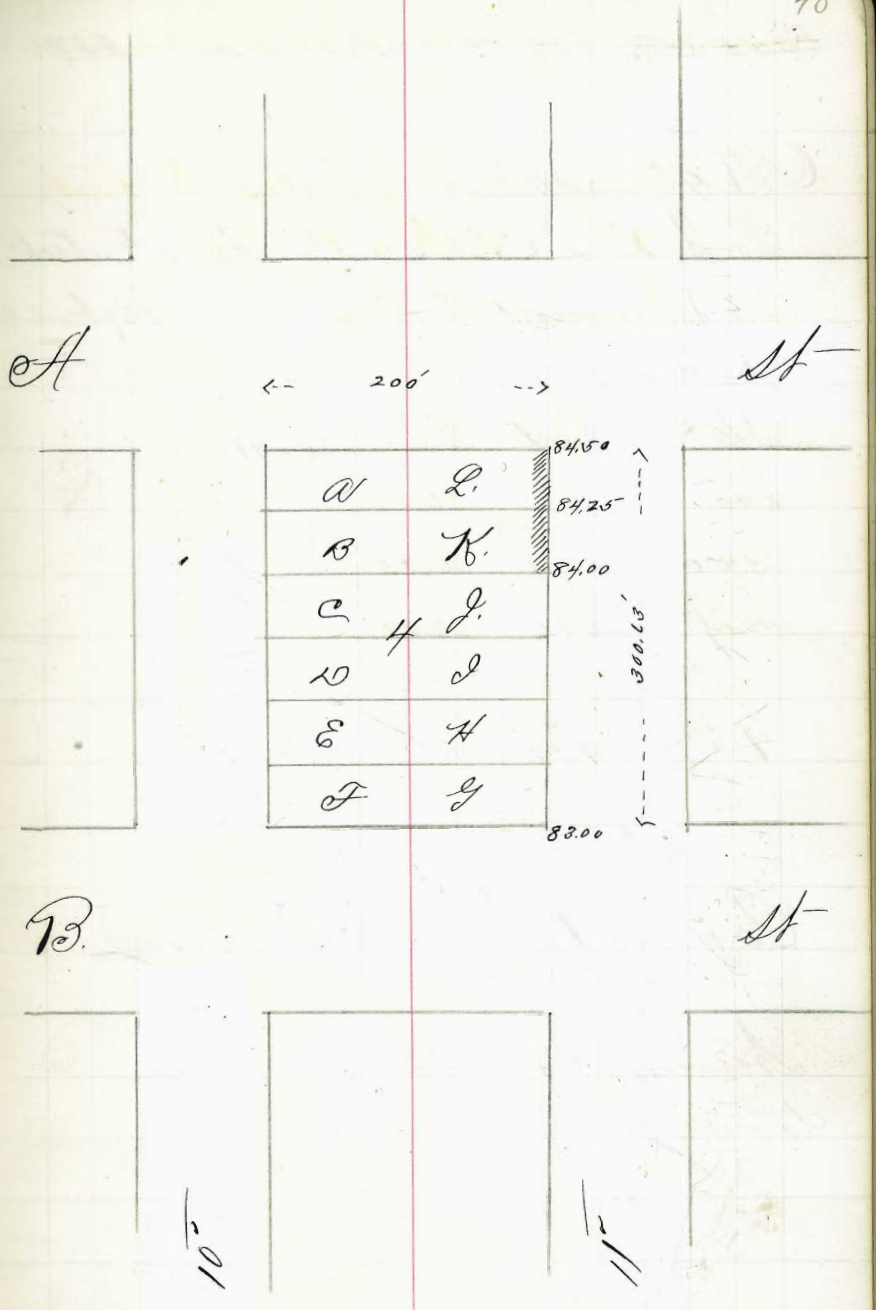
Surveyed for Blancke Jos. E.



~~Survey of Pueblo Lot 220~~

Setting Curb graded to front
Lots K L. Blk 4 Hortons.
for Samuel D. Fox

Stat	Rod	El.
0+0		84.50
50		84.25
1+00		84.00



~~Survey of Pueblo Lot 219~~

Oct 9th 1894

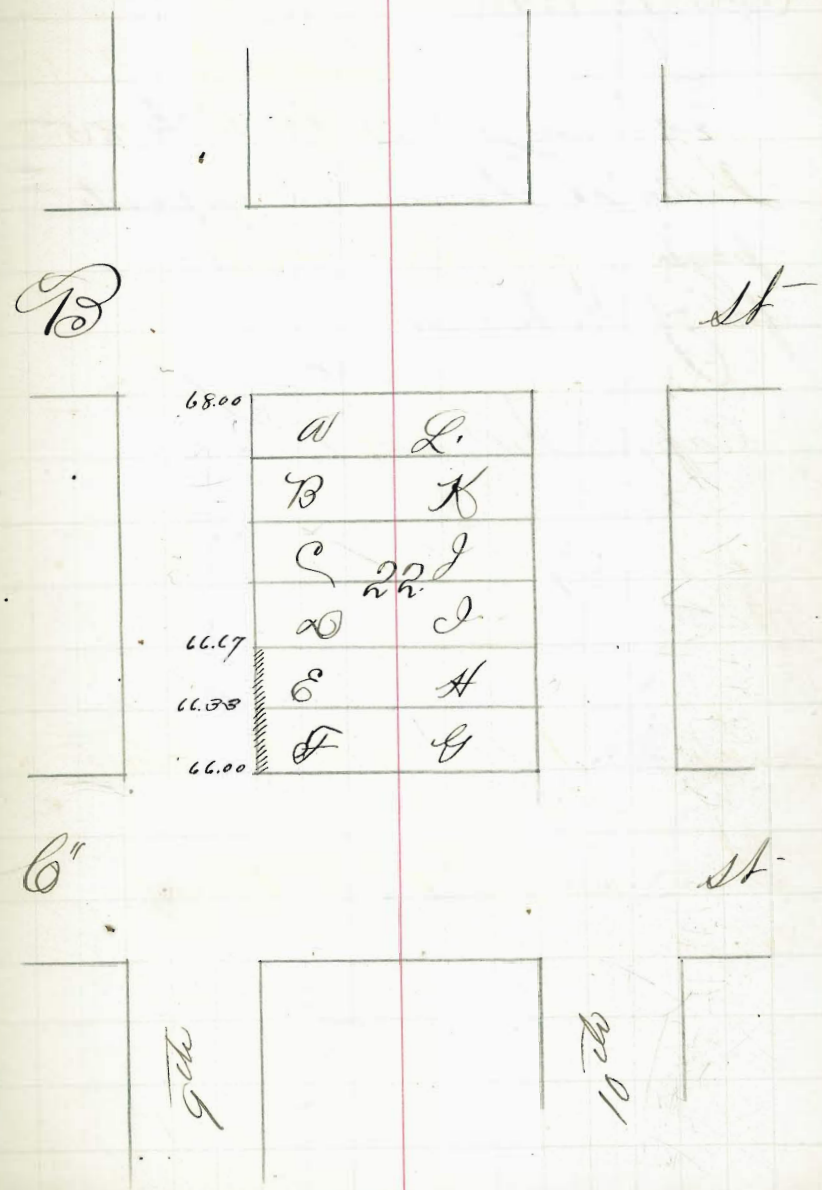
Setting Cut grades to 9th street side in front Lots "E" and "F" Blk 22 Hollow Add

Stat	Rod	El. (70.57)
0+0	4.57	66.00
+50	4.24	66.33
1+00	3.90	66.67

BM 62.12 SWCor Dwl 9th
845
70.57 A.J.

Capps Ramsey and Williams

Surveyed for B. N. Riggs
two stakes



Survey of Pueblo Lot 219

Oct 13 1894

Survey of Lot "C" Blk 85 Hotton as shown upon opposite page.
for J. W. Kreiss

Capps Williams, Ramsey.

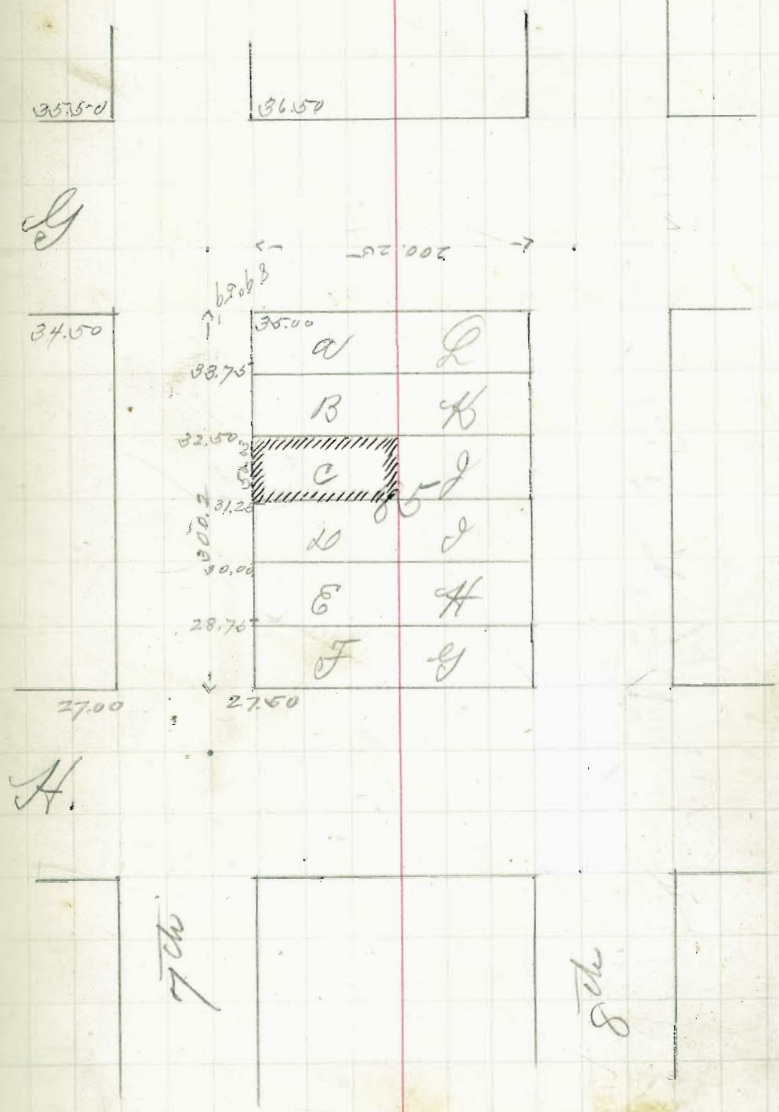
(36.15)

Nov 8th 1894.
One stake set at N.W. cor Lot C, head set to property grade (36.15)

Rod	El
3.40	32.75
	27.68
	85.2
	36.15

BM

36.15
32.75
3.40

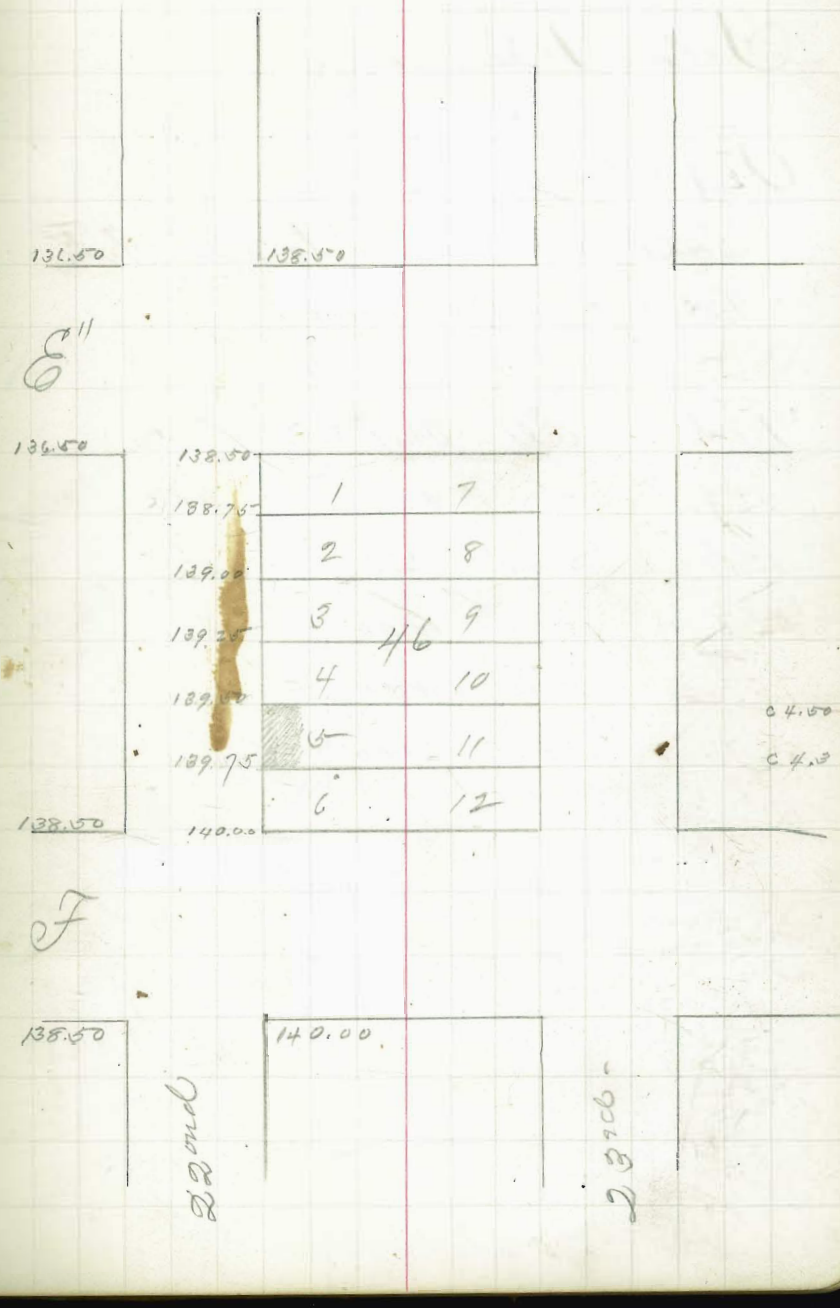


~~Survey of Pueblo lot 219~~

H. I. 147.86

Stat	Rod	El		
0+50	4.98	139.75	cut	3.13
1+00	5.43	139.50	"	2.93

140.45 BM
7.41
147.86 H. I.



~~Survey of Pueblo Lot 218~~

Silas Burnap.

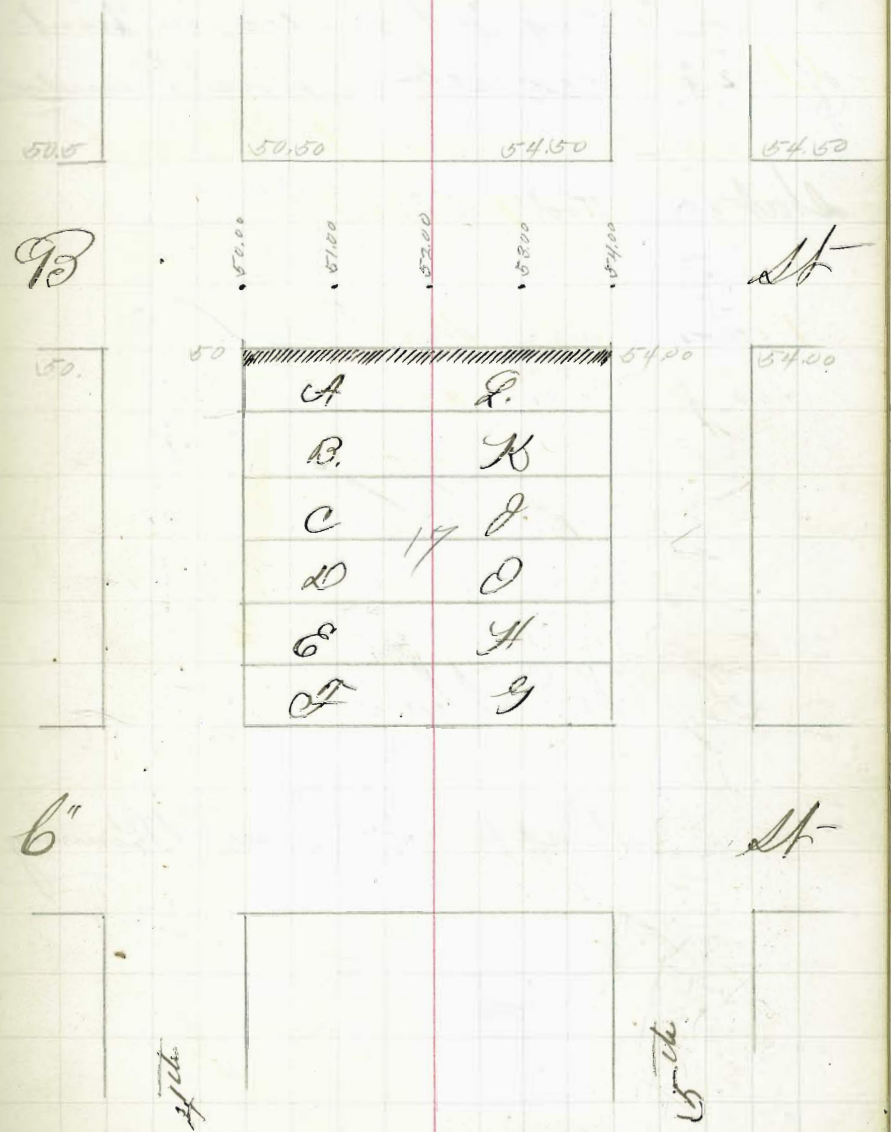
Nov 1st 1894

Setting Curb Grades to Lots A. K Blk 17 on "B" street.

Rod	El	Stat (58.67)
4.67	54.00	0+0
5.67	53.00	+50
6.67	52.00	1+00
7.67	51.00	+50
8.67	50.00	2+00

55.57
3.10
58.67

	58.63	58.63	58.63	58.63	58.63
55.57	54.00	53.00	52.00	51.00	50.00
3.06	4.63	5.63	6.63	7.63	8.63
58.63					



~~Survey of Pueblo Lot 248~~

Nov 17th 1894

Setting Curb graded in front of Lots 9 & 10 Blk 3 Loma Grande

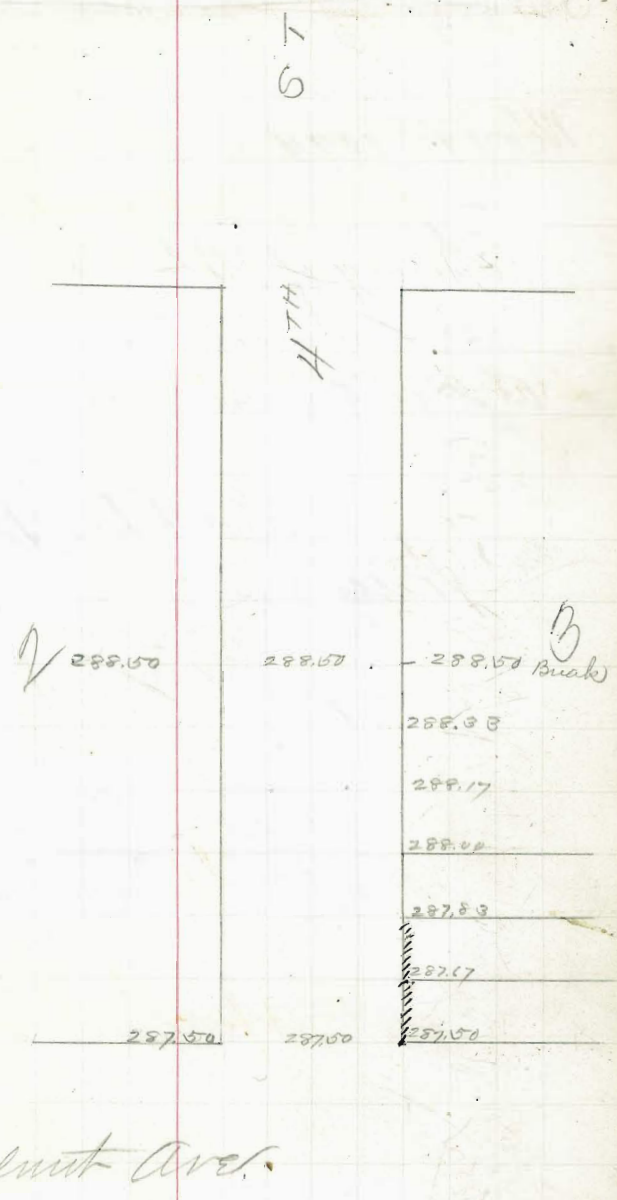
Stat	Rod	El.
0+0	5.14	287.50
+50	4.97	287.67
1+00	4.81	287.83

H.I (292.64)

B.M. 288.28
4.36
292.64

For V.E. Shaw.

Capper Williams & Ramsey



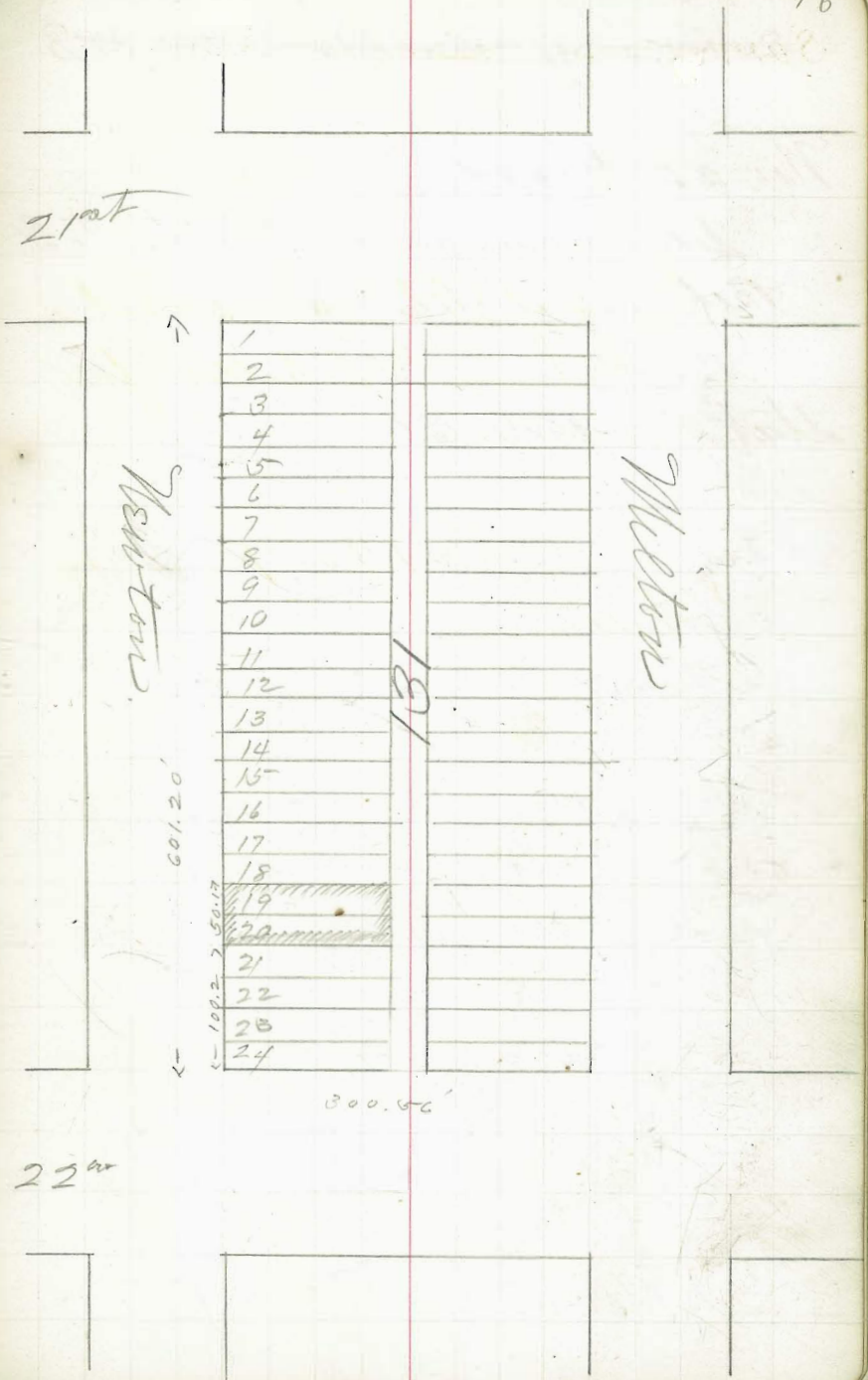
~~Survey of Pueblo Lot 218~~

Nov 19 1894

Survey of Lots 19-20 Blk 131 Manassa & Schiller for B L & Munro.

Capps. Ramsey

and Williams



~~Survey of Pueblo Lot 217~~

Nov 22nd 1894

Setting cut grade to Lots F-G. Blk 261 Hatton add

Stat	Rod	El. (239.76)	
0+0	9.76	230.00	stake on 5th street
Park line	2.26	237.50	stake on Park line

Run grade with transit bet the above two points

Stat	Rod	El. (237.49)	
0+0	7.49	230.00	
+50	5.66	231.83	5th Street
1+00	3.83	233.66	Rid
+25	2.92	234.57	

Capps. Ramsey. Williams

For Arnold —

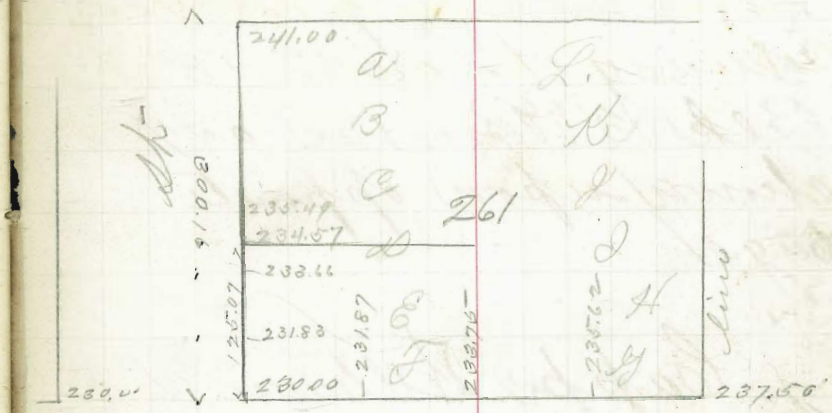
228.18
8 96
237.14
230
7.14

237.14
231.83
5.31

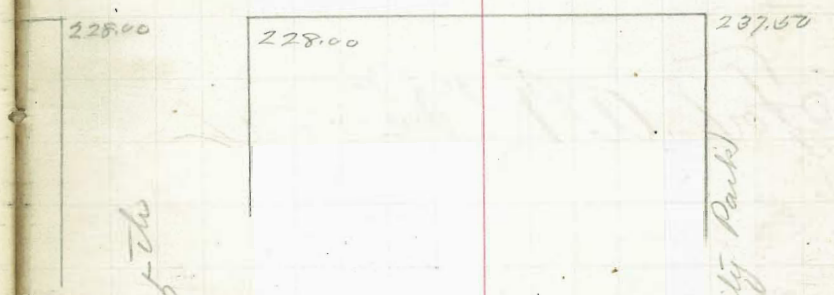
*237.14
233.66
3.48

237.14
234.57
2.57

237.14
230.00
8.62
239.62
237.50
2.12



Juniper St



~~Survey of Pueblo Lot~~ 217

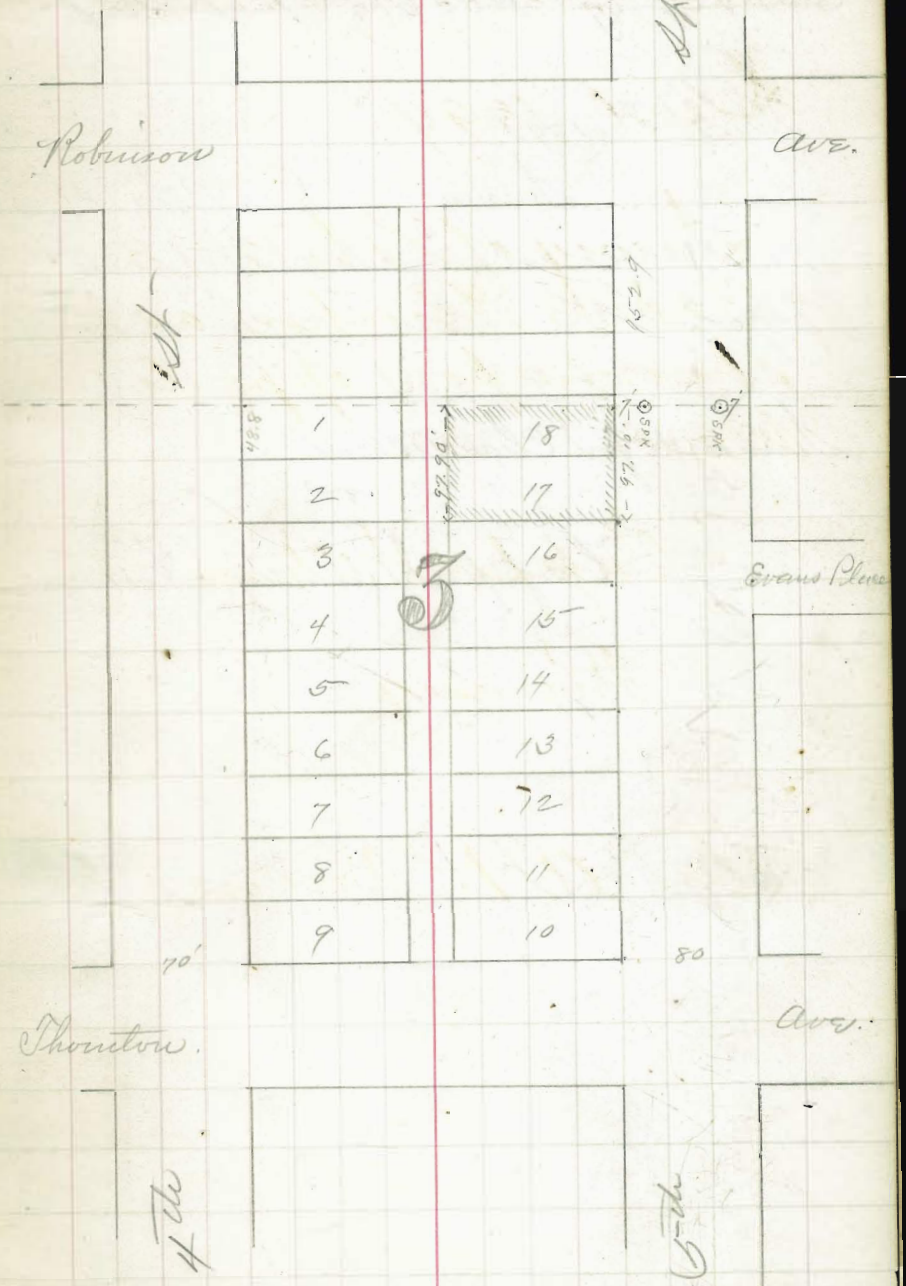
Dec 1 1894

Survey of Lots 17-18 Blk 13 Brooks as shown upon opposite page

Capps Williams

Ramsey.

For A. R. Rowen



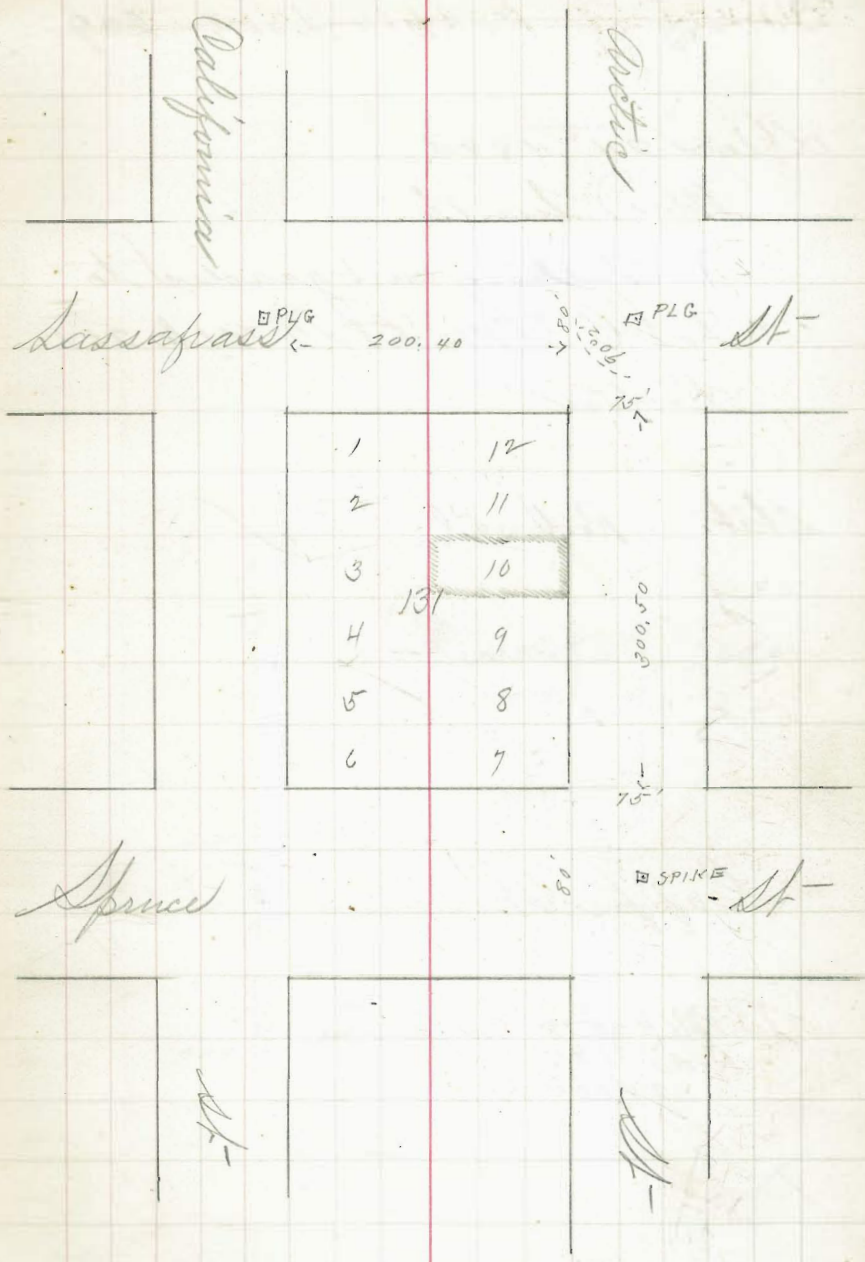
~~Survey of Pueblo Lot 217~~

Dec 18th 1894

Survey of Lot 10 Blk 131 Middleton as shown upon opposite page.

Surveyed for Chas Allen.

Capps. Ramsey. Kellum



~~Survey of Pueblo Lot 209~~

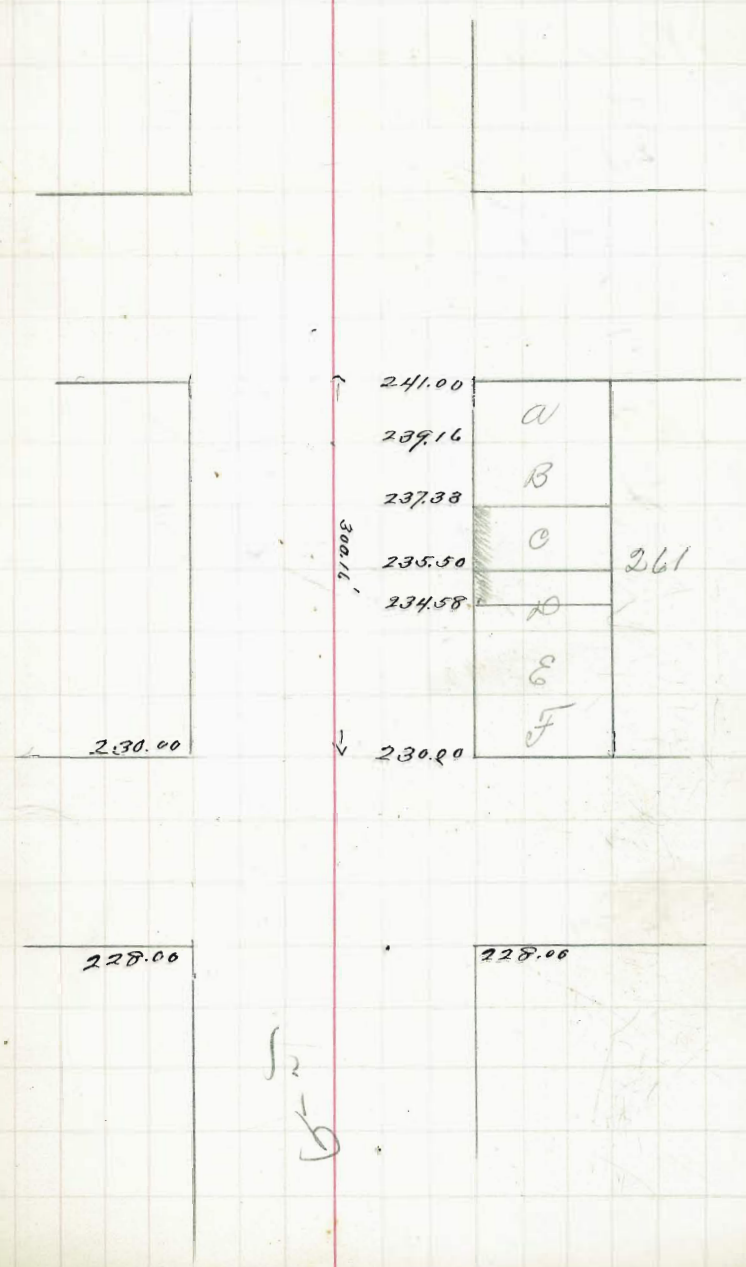
Dec 24th 1894
Mrs Smith.
Setting curb graded to
Lot "C" & N½ Lot D Blk 261
Horton

Stat	Rod	El.
0+0	5.46	234.58
+25	4.54	235.50
+75	2.71	237.33

(240.04)

Capper. Williams Ramsey

B.M 228.18 Cor Juniper 5"
Rod 11.86
240.04 H.J.



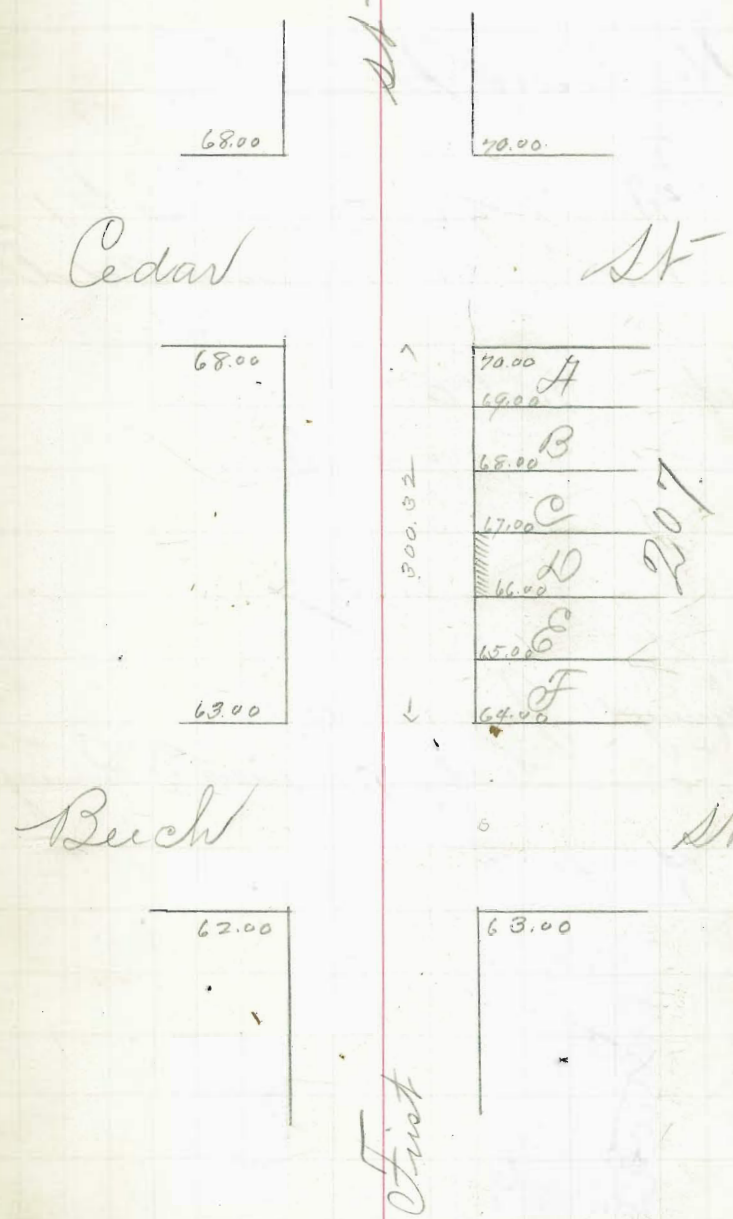
~~Survey of Pueblo Lot 209~~

January 4th 1894
For James McNair

Stat.	Rod	El. (69.50)
0+0	3.50	66.00
+50	2.50	67.00

63.05 BM SE Cor Beech + pat
6.45-
69.5-0 = H.9.

Capps. Williams - Rumsey -



~~Survey of Pueblo Lot 209~~

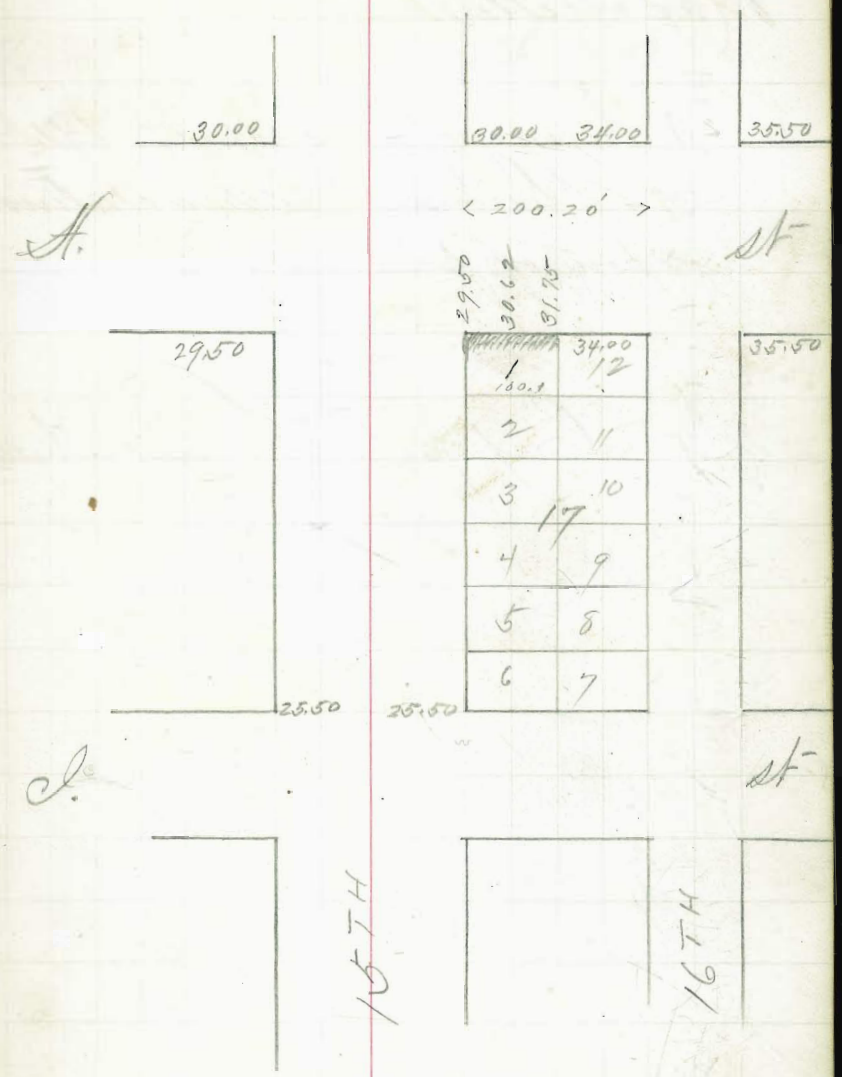
Herman Welsh

Curb grades to Lot 1
Blk 17 Sherman Add.

Stat	Rod El.	H.I.
0+0	6.29	31.75 (38.04)
+50	7.42	30.62
1+00	8.54	29.50

Surveyd Jan 10th 1894
Capt Wm. Williams & Rumsey

37.61 B.M. SE Cor Hr 16th
0.43
38.04



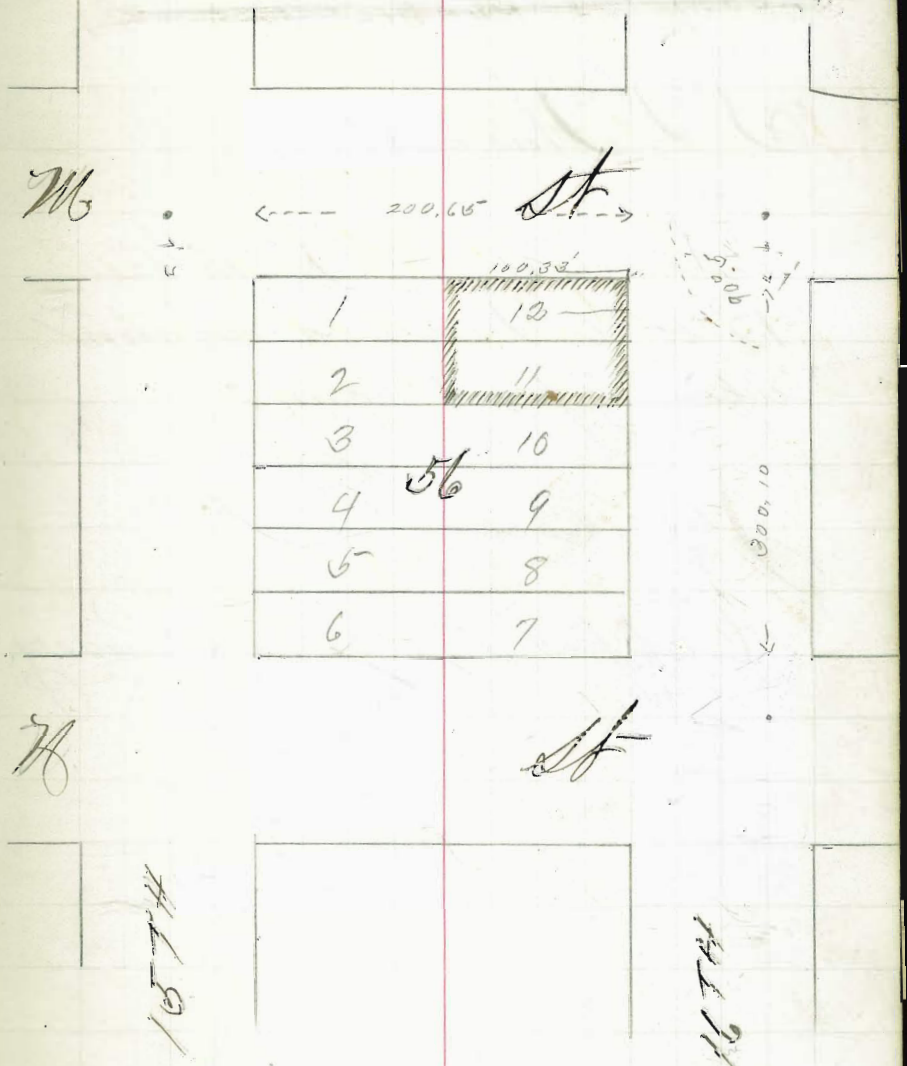
~~Survey of Pueblo book 209~~

Max Stiller

Survey of Lots 11-12 Blk 56 Sherman add as shown upon opposite page.

Capps Ramsey. Williams

Stone Building one foot in M. Street



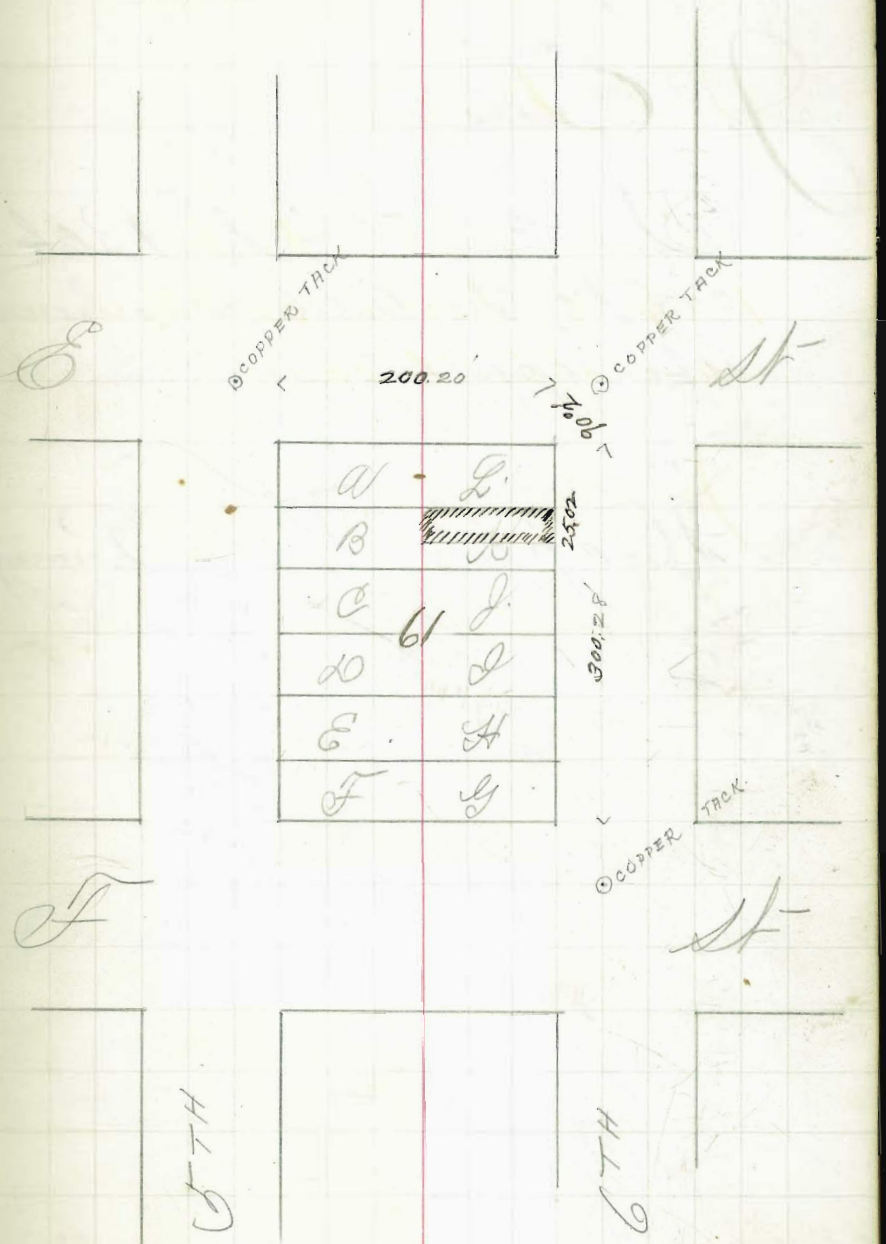
~~Survey of Pueblo Lot 209~~

S. W. Hackett

Survey of Lot K. W½ Blk 61 Horton as shown upon opposite page.

Jan 14th 1895

Capps & Williams, Ramsey.



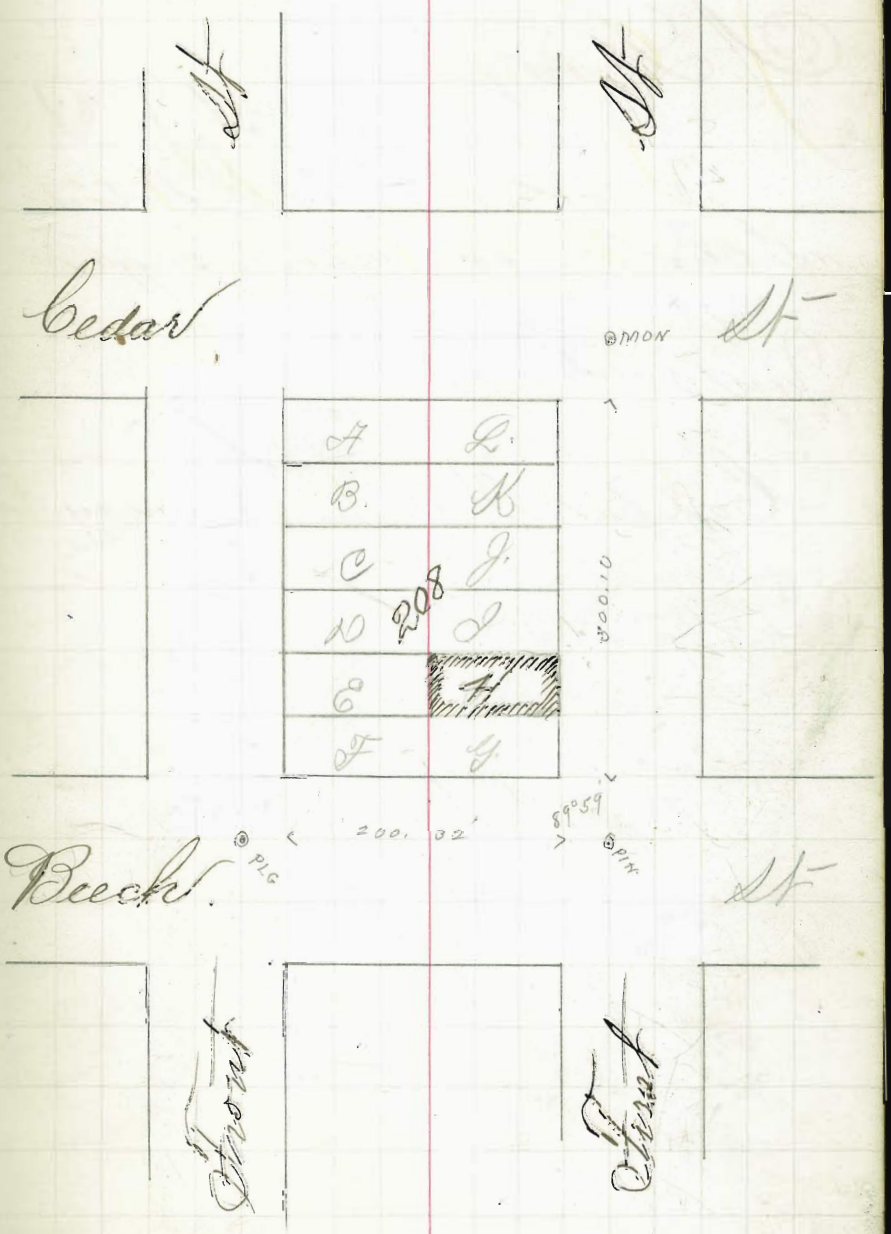
~~Survey of Pueblo Lot 209~~

J. Emler.

Survey of Lot 4" Blk 208 Hatton Add, as shown upon opposite page.

Capps, Williams Ramsey.

90.43 A.J.



~~Survey of Pueblo Lot 209~~

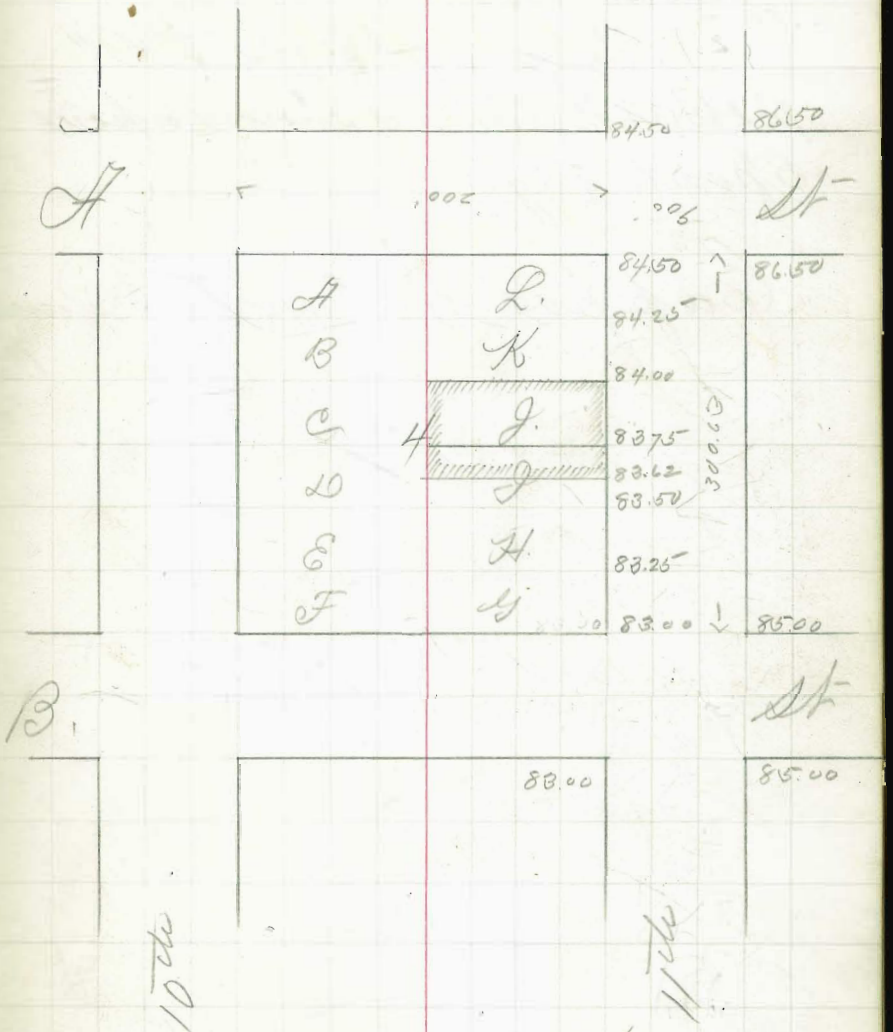
A. Levi

Survey of Lot J W
½ Lot J Blk 4 Hotson
as shown upon opposite page

Jan 22nd 1895

Capps & Williams & Ramsey.

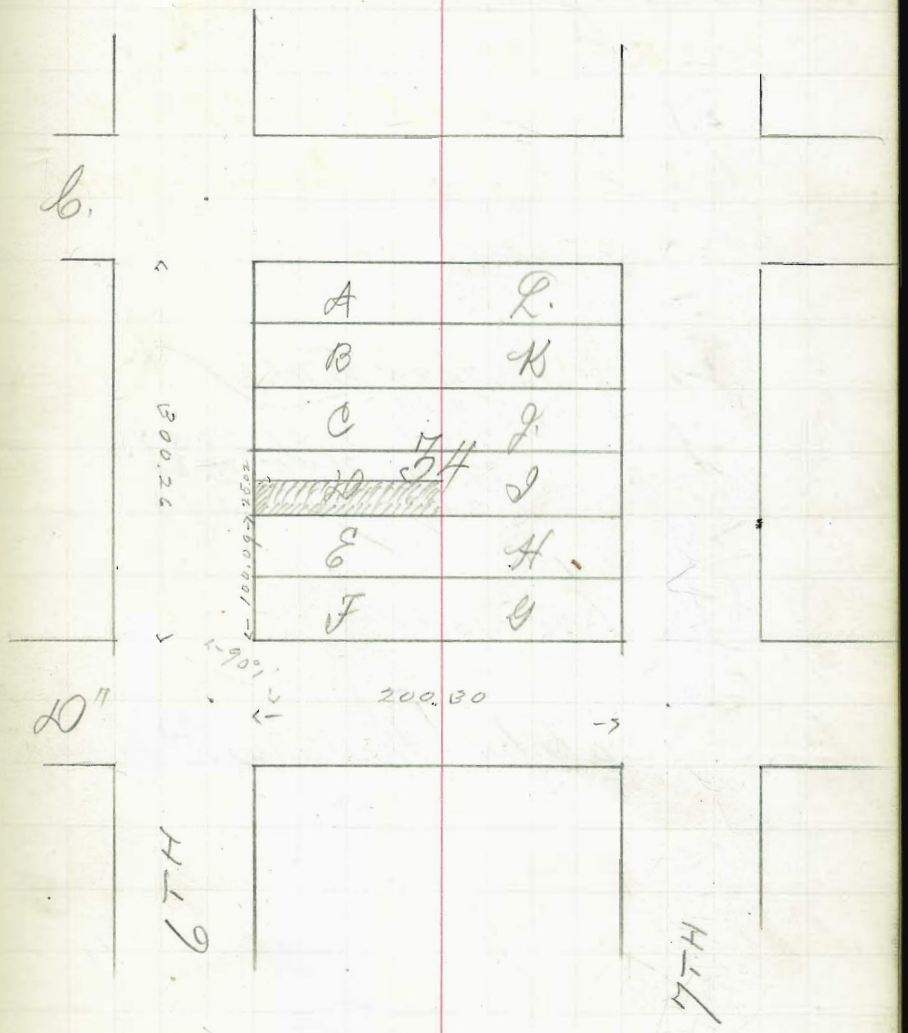
90.43
2.48
92.91 92.91 92.91
85.62 84
8.91
9.29 7.83
8.41 1.08
.88



~~Survey of Pueblo Lot 269~~

Don Vaul Norman 300.26
Jan 20th 1895 100.10
Survey of S 1/2 of Lot D"
Bk 34 Notes as shown upon
opposite page

Capps Williamson Ramsey



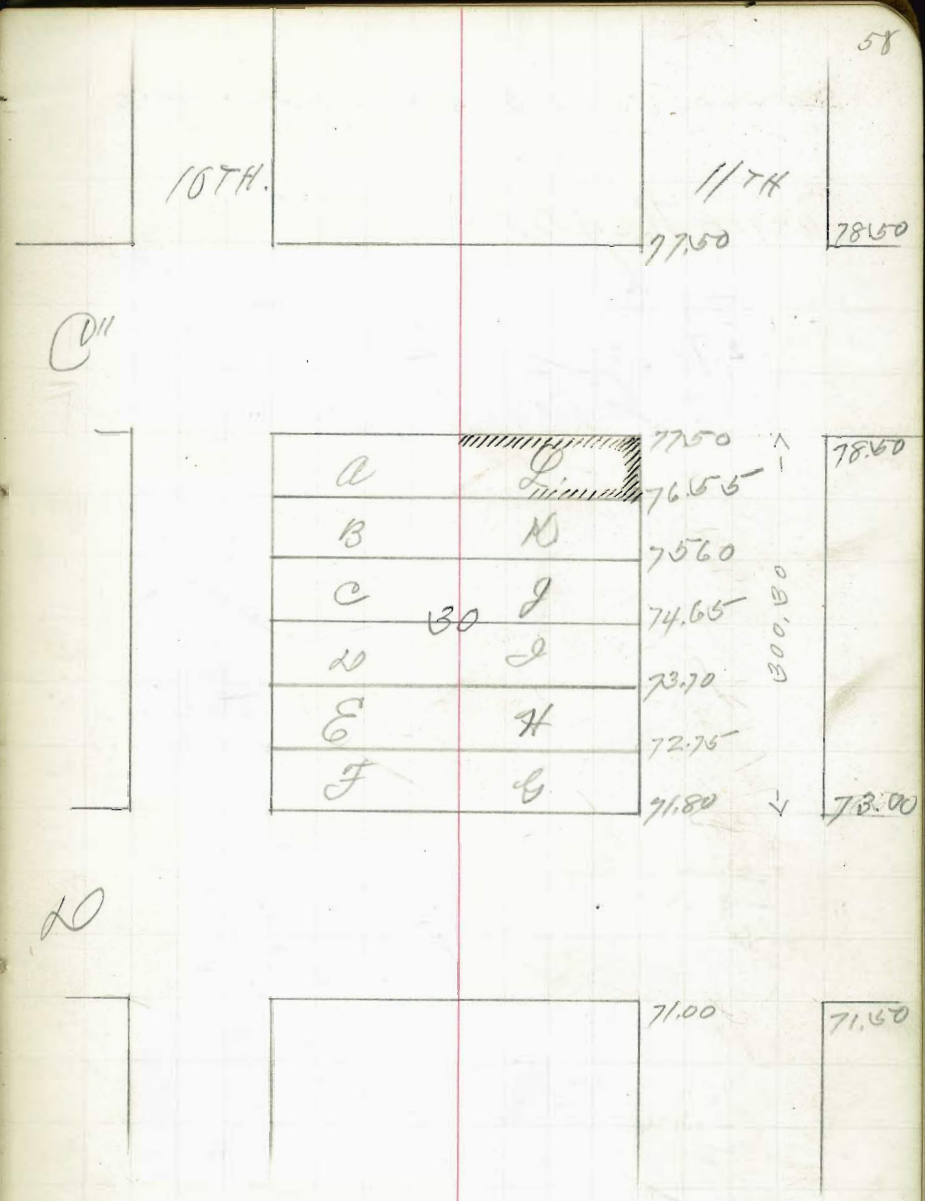
~~Survey of Pueblo Lot 210~~

Over to Nagle.

74.85	B.M.	
4.74		
79.59	79.59	79.59
77.50	76.55	75.60
2.09	3.04	3.99

Jan 30th 1895

Capt Pa. Williams & Ramsey



~~Survey of Pueblo Lot 210~~

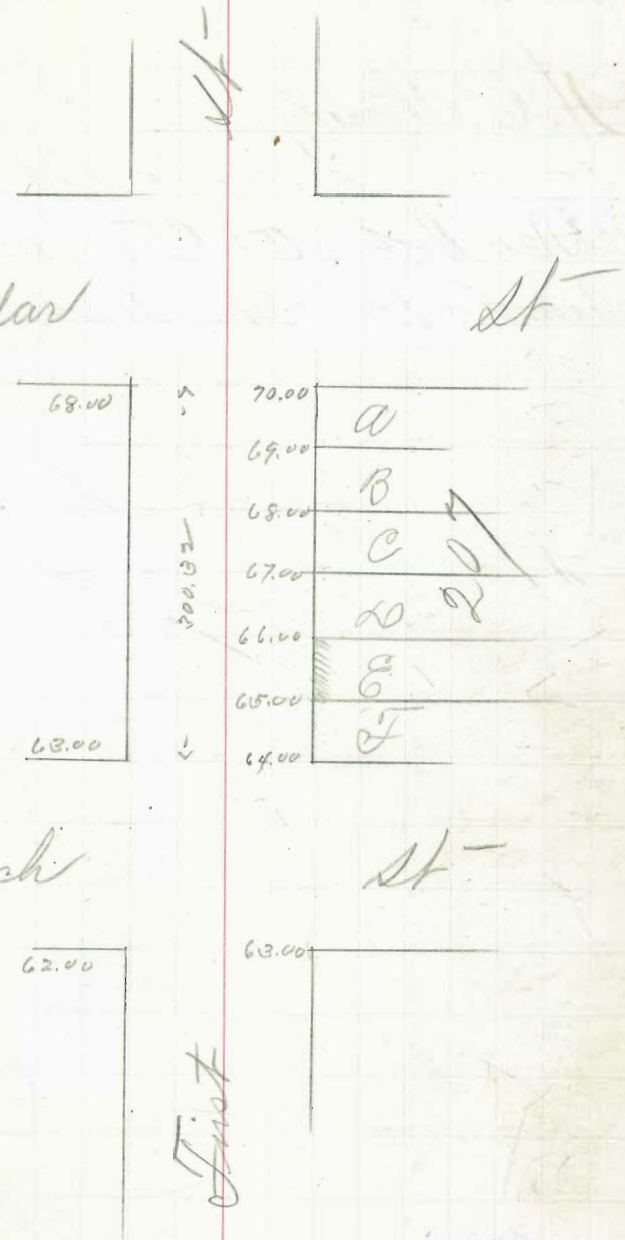
Over Nagle

Setting Grade Stakes to Lot
E Blk 207 Holton

63.05 B.M.
6.78
69.83 X1.8

69.83
65.00
4.83

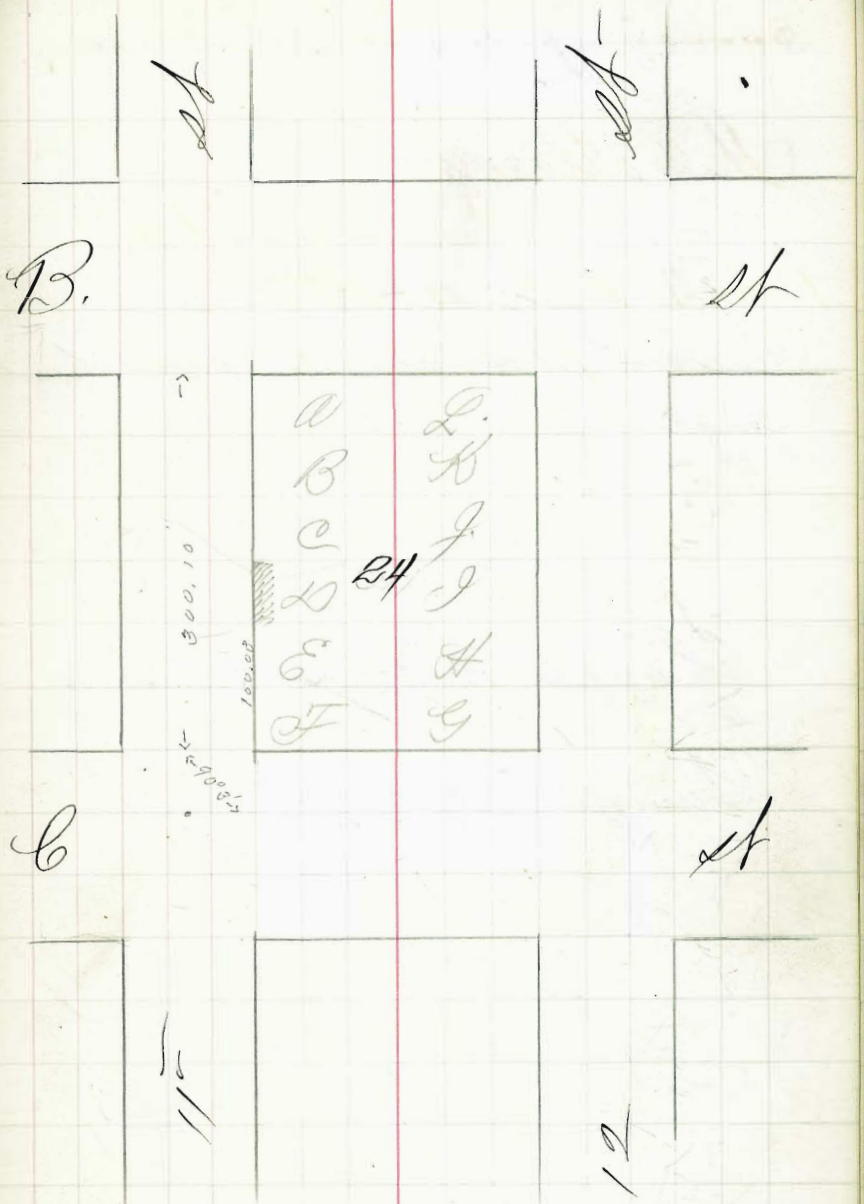
69.83
66.00
3.83



~~Survey of Pueblo Lot 210~~

H. C. Stone.

Survey of Lot "D" Block 24 Horton addition as shown upon opposite page.



3 13
3 7 9
4 1 3

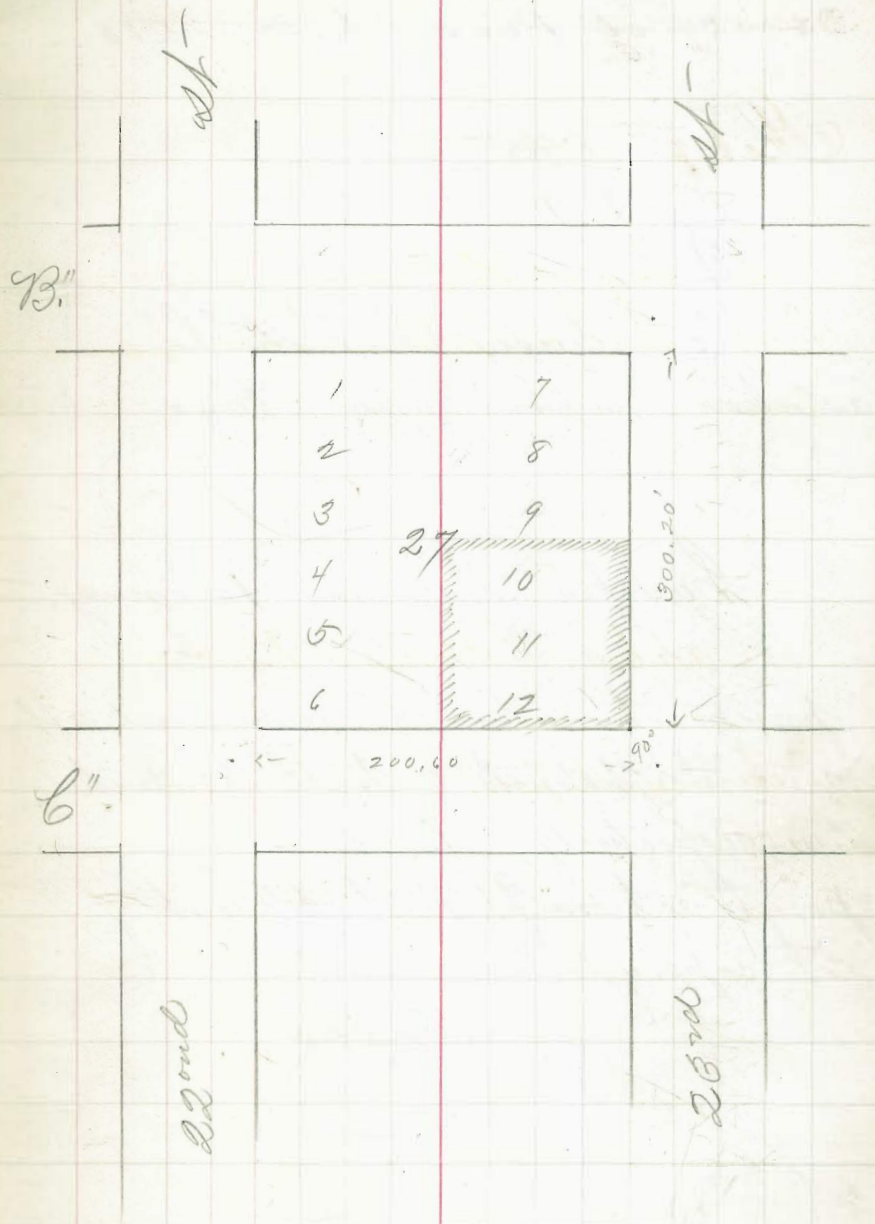
~~Survey of Pueblo Lot 210~~

Feb 6th 1895

Survey of Lots 10-11-12 B27
Calumet as shown upon opposite
page.

Capps. Williams & Ramsey

Surveyed for C. M Briggs.



~~Survey of Pueblo lot 210~~

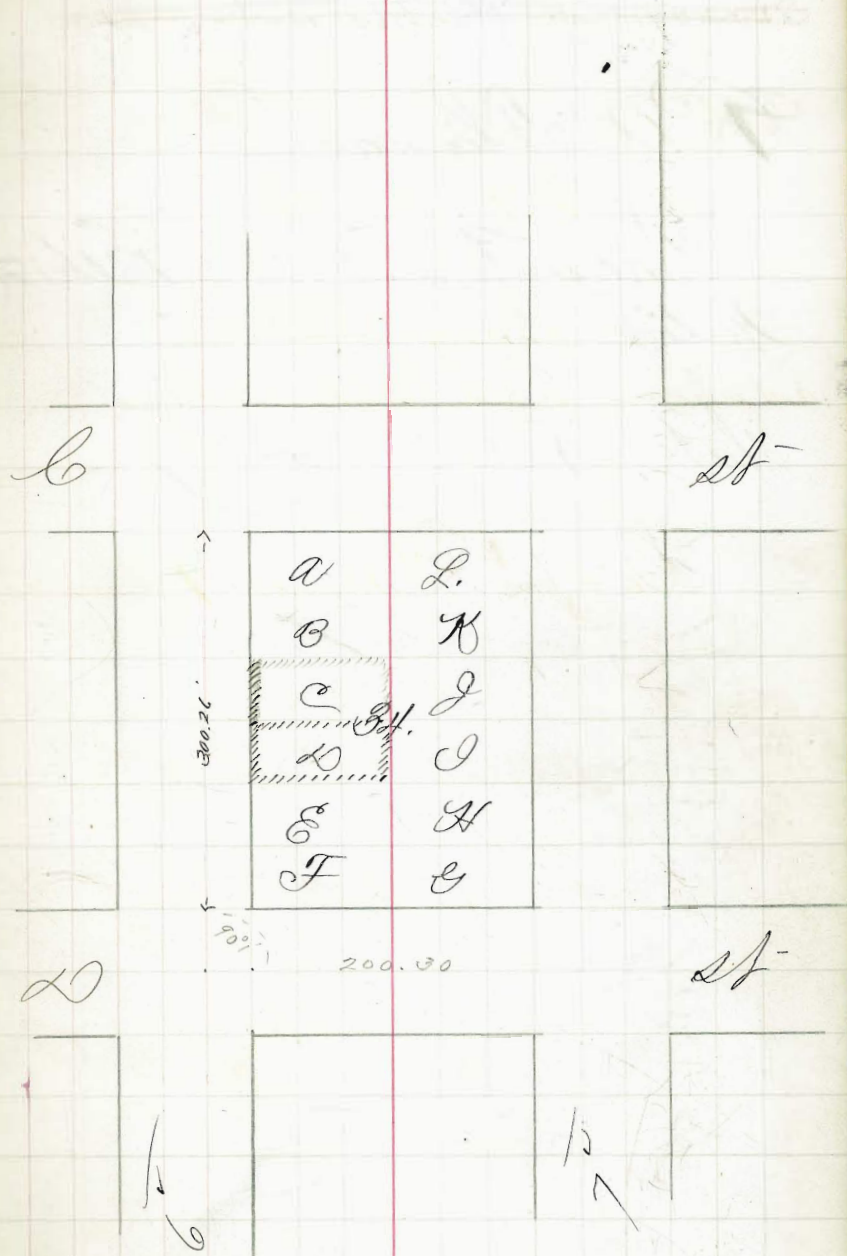
Feb 7th 1895 –
Dr H. R. Arndt –

Survey of Lot ~~2D~~ "C"
as shown upon Opposite Page.

Capps. Williams & Ramsey.

points set on line for rear, and 3 ft
north & 3 ft south of South & North
lines respectively
point set one ft West of Front of
Lot copper tack in lead.

Capps.



~~Survey of Pueblo Lot 270~~

R. A. Thomas

Graded to Lot "L" Blk 50 Horton.

Stat Rod El. H.I.

76.05
71.50
4.55

76.05
70.67
5.38

76.05
69.84
6.21

73.35 BM
2.70
76.05

76.05
69.79
6.26

Buck's grade.

76.05
69
7.05

71.50 | 73.00 | 74.00 | 72.50 | 71.50

20"

71.00 | 71.50 | 72.00 | 71.75 | 71.50 | 71.50

A	L.
B	K
C	J.
D	I
E	H
F	G

50

70.67
69.84
69.00
68.18
67.35
66.50

800.10

72.50 Bucks

67.50

E

65.00

65.00

11th

12th

~~Survey of Pueblo Lot 211~~

Feb 20th 1895

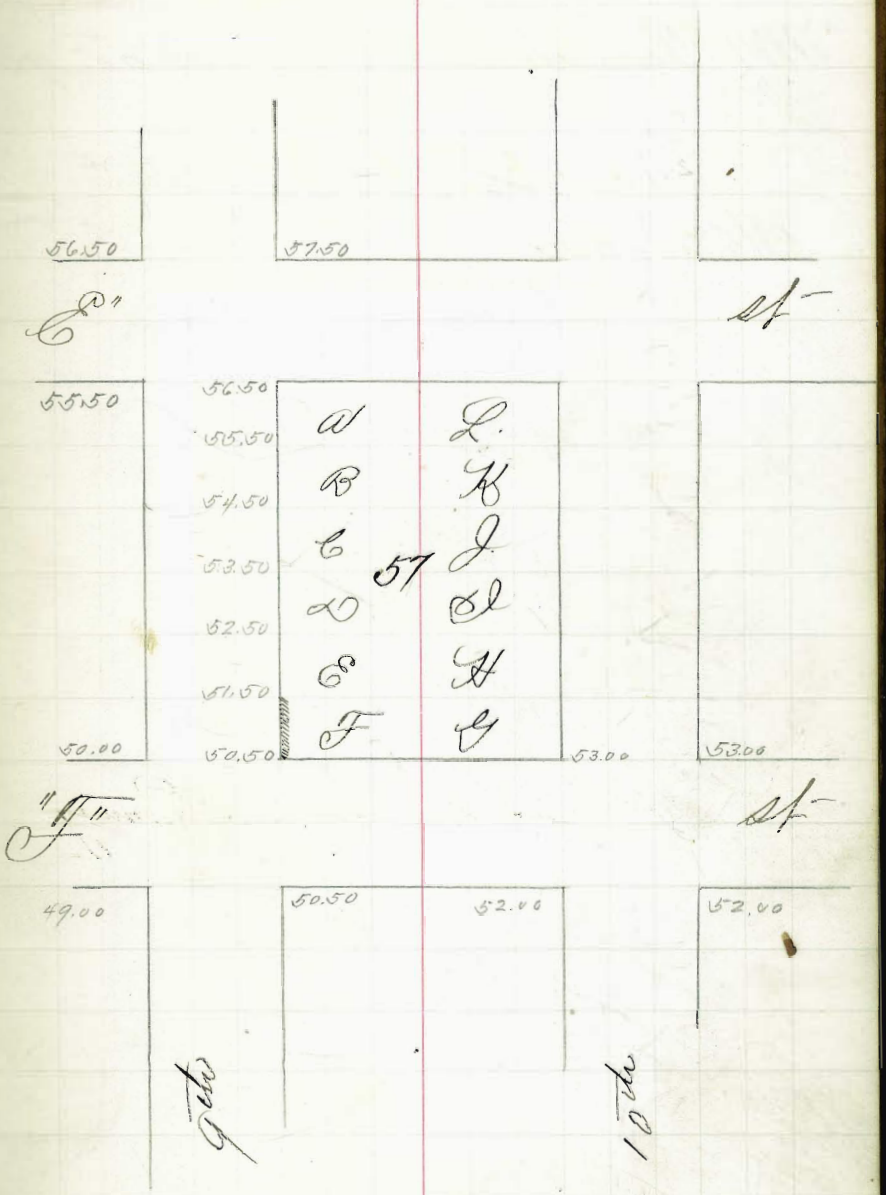
Mr Pawley.

Graded to Lot F Blk 57 Horton Add.

55.20 55.20
50 50 51.50
4.70 3.70

Capps Williams - Ramsey.

50.26 BM
4.94
55.20



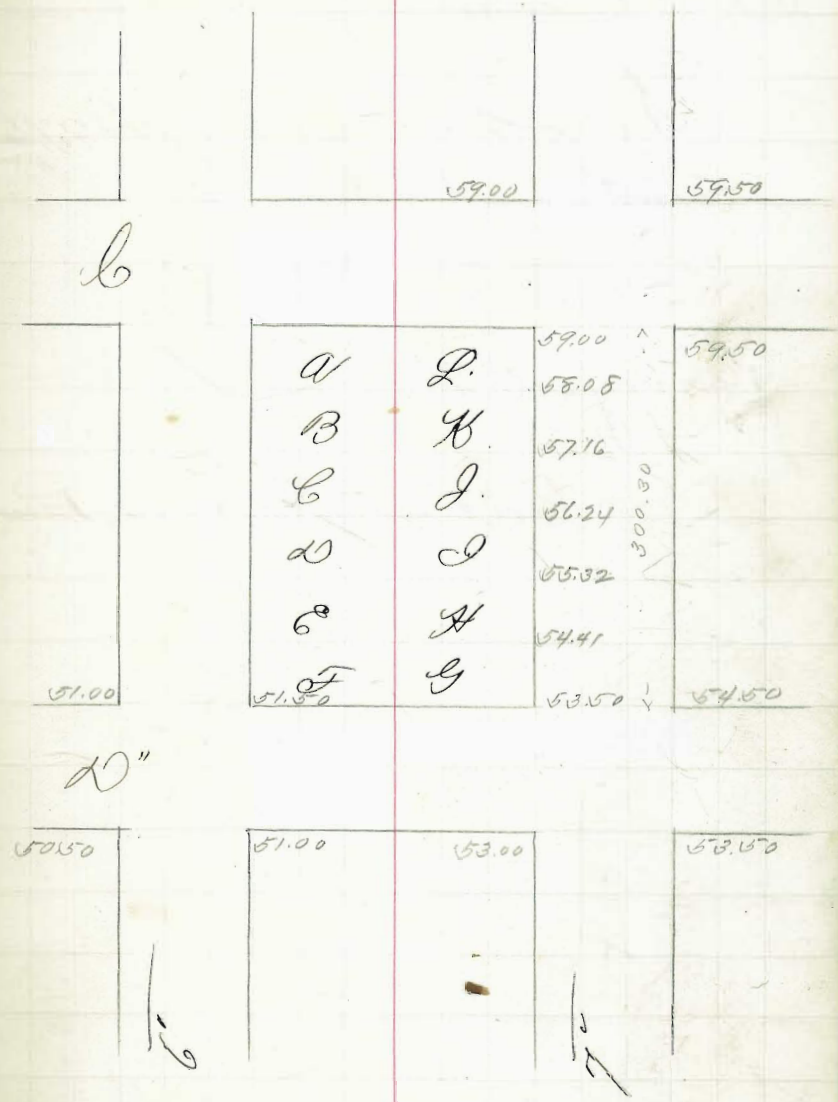
~~Survey of Pueblo Lot 211~~

Mr Turner Feb 20th 95

Graded on West side of 7th
Bet C & D St

63.75	63.75	63.75	63.75	63.75	63.75	63.75
59.00	58.08	57.16	56.24	55.32	54.41	53.50
4.75	5.67	6.59	7.51	8.43	9.34	10.25

34 BM
TH 2



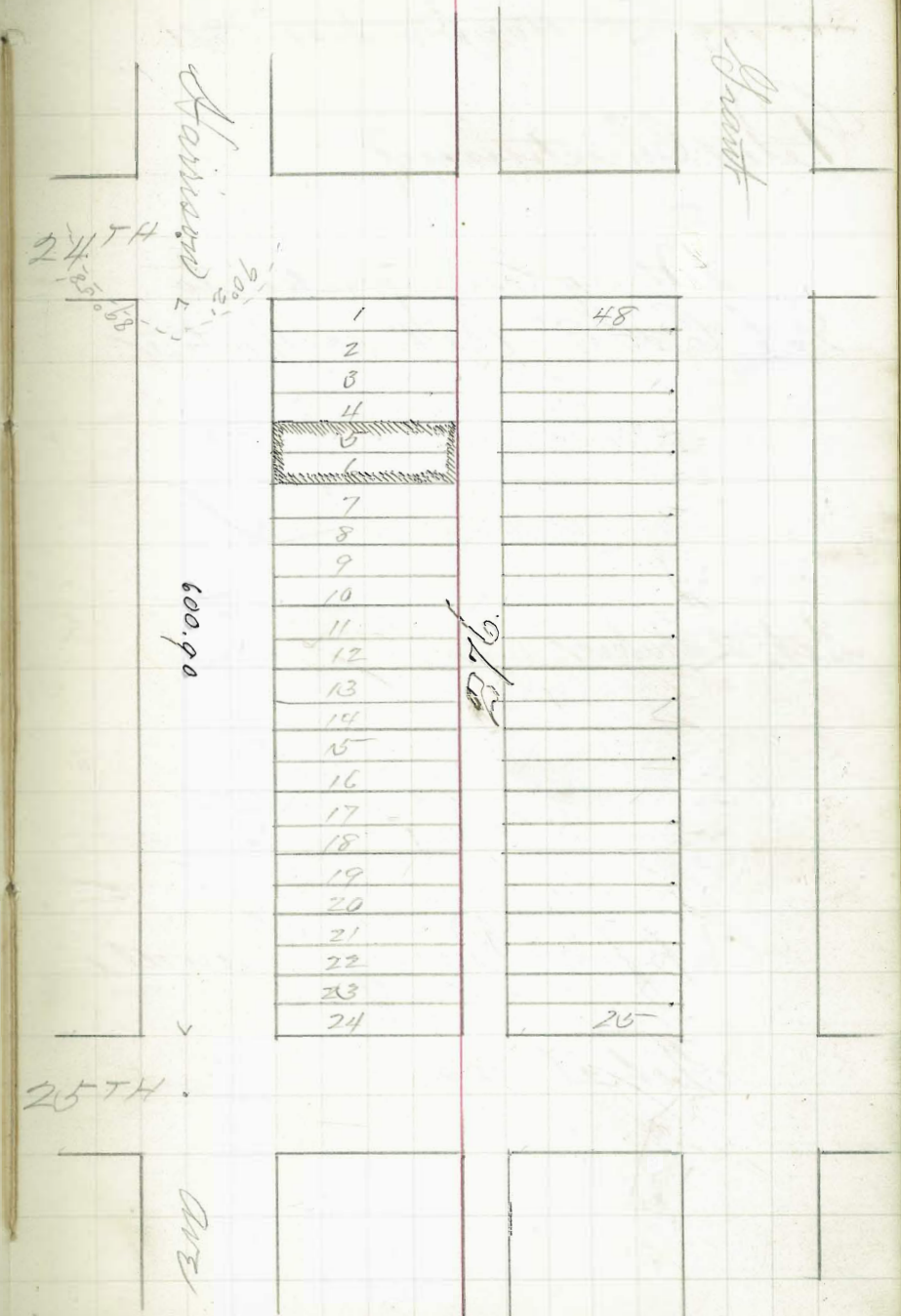
~~Survey of Pueblo Lot 211~~

E. C. Field

Survey of Lots 5-6 Block 276
Land and Town Co.

Surveyed Feb 21 1895

Capt William Ramsey.



~~Survey of Pueblo Lot 211~~

Peter Christensen

Setting Curb grades to
Lot C, D, E' Blk 57 Horton.

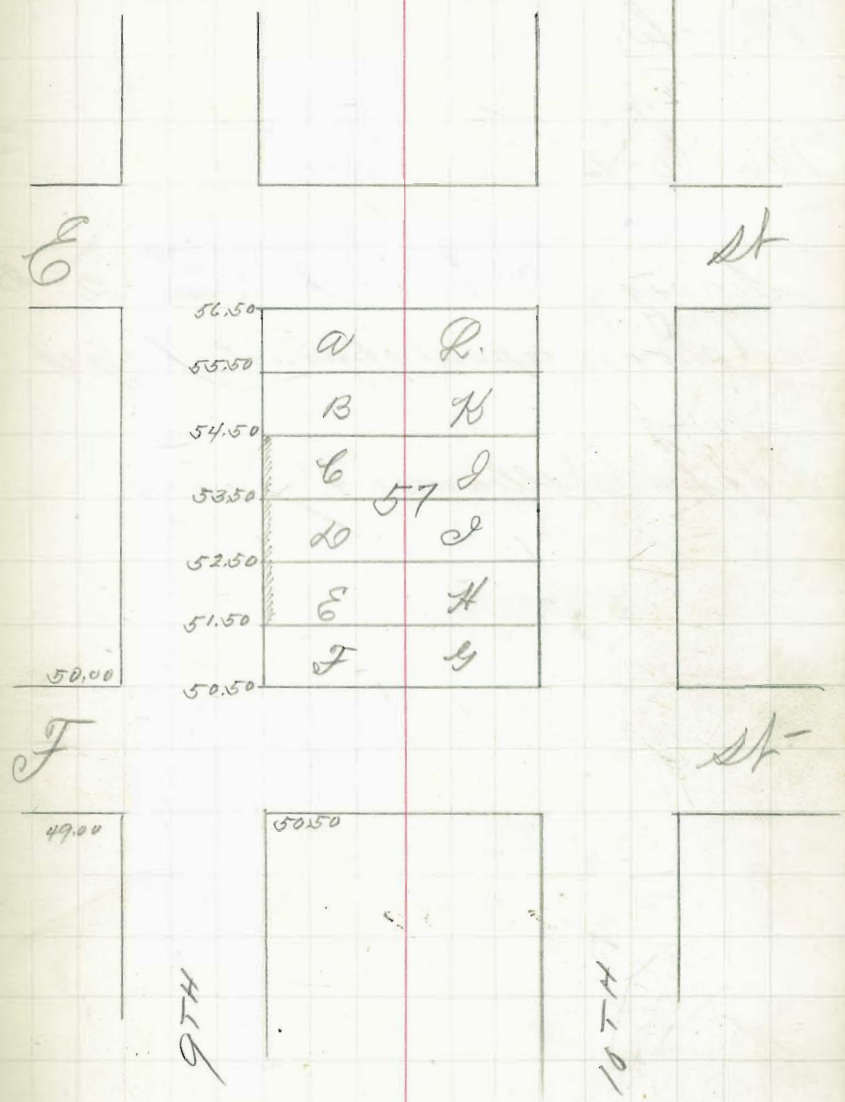
56.48	56.48	56.48	56.48	56.48
51.50	52.50	53.50	54.50	
4.98	3.98	2.98	1.98	

Set 3 stakes.

50.26 B.M.
6.22
56.48

Charles Rumsey, Crowell.

1895



~~Survey of Pueblo Lot 211~~

T

March 4th 1895

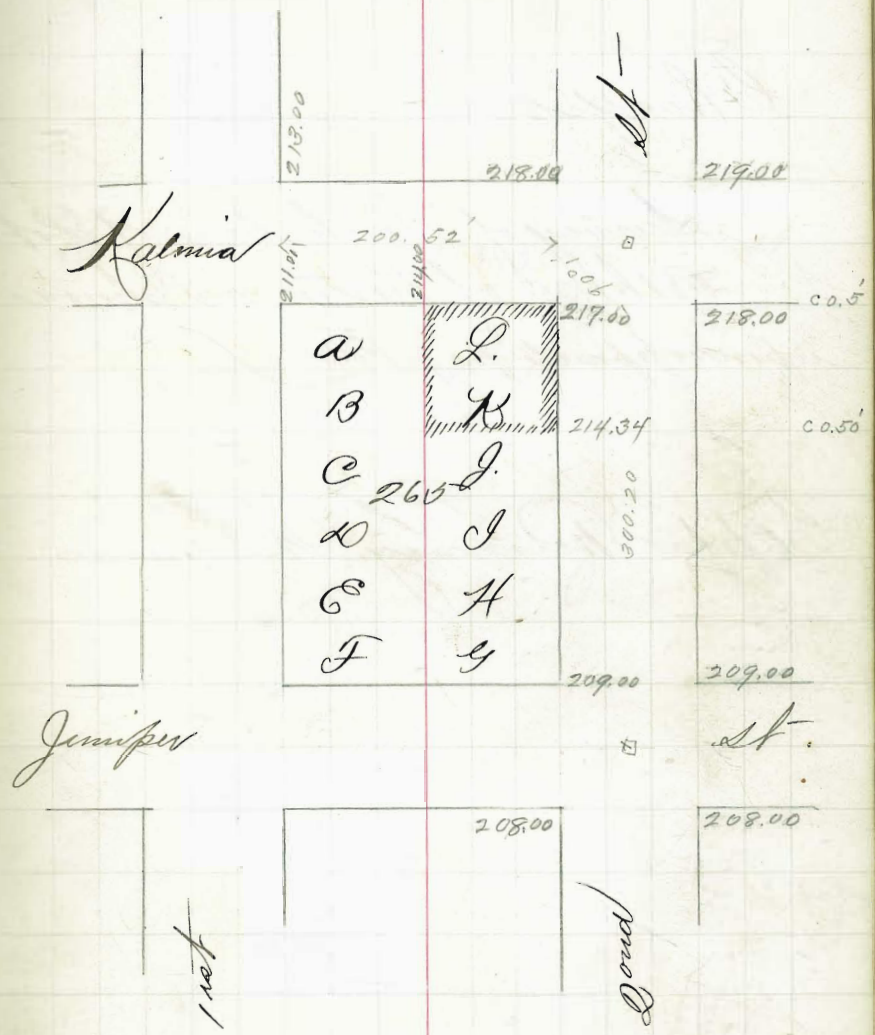
Mrs C. N. Bushnell

Survey of S. W. Cor Kalmia & 2nd as shown upon opposite page

Capps. Williams & Ramsey

221.45 B.M.
1.30

222.75	222.75	222.75
214.00	217.00	214.34
8.75	5.75	8.41
7.40		
1.35		



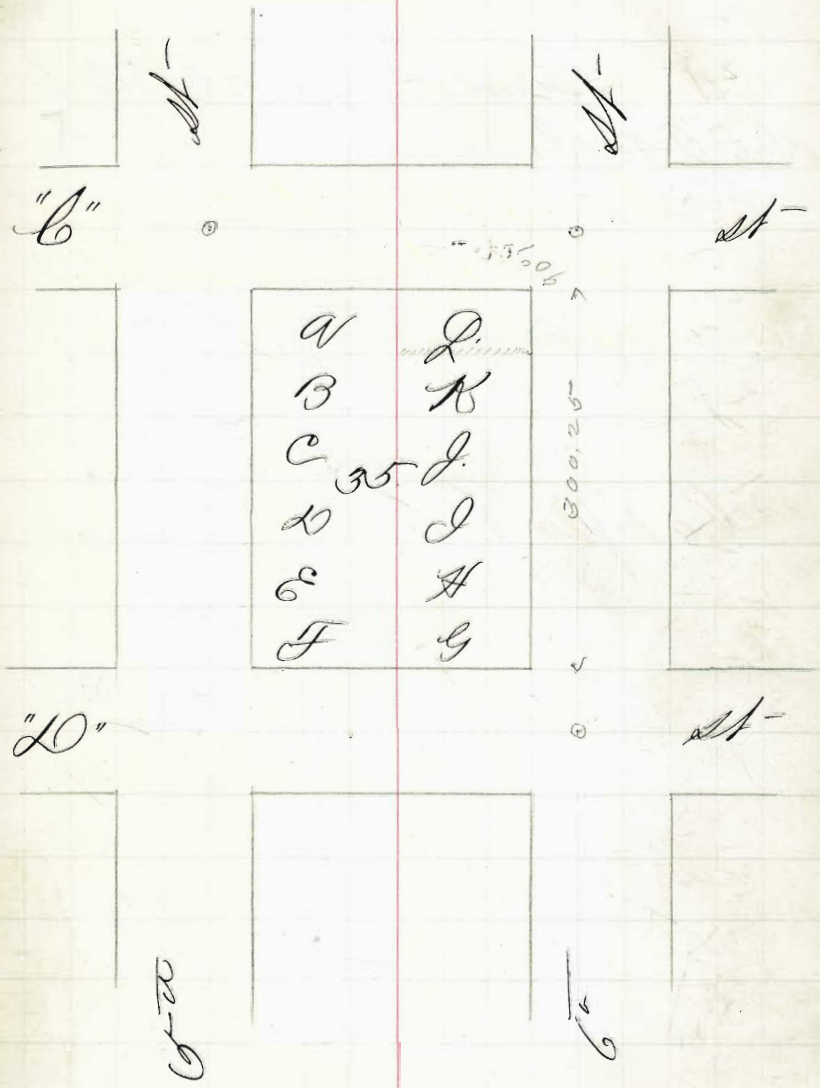
~~Survey of Pueblo Lot 24~~

March 4th 1896 —

Chas L Davis

Survey of North line of Lot K Blk 25 of Hatch as shown upon opposite page

Capps. Ramsey. Williams



~~Survey of Pueblo lot 211~~

H. B. Morris Mch 15 95

Grade stakes to Lots
D E F Blk 48 Hotchkiss.

5 stakes,

63.05	63.05	63.05	63.05	63.05
57.50	58.16	58.83	59.49	
5.55	4.89	4.22	3.56	

Capps. Ramsey. Williams

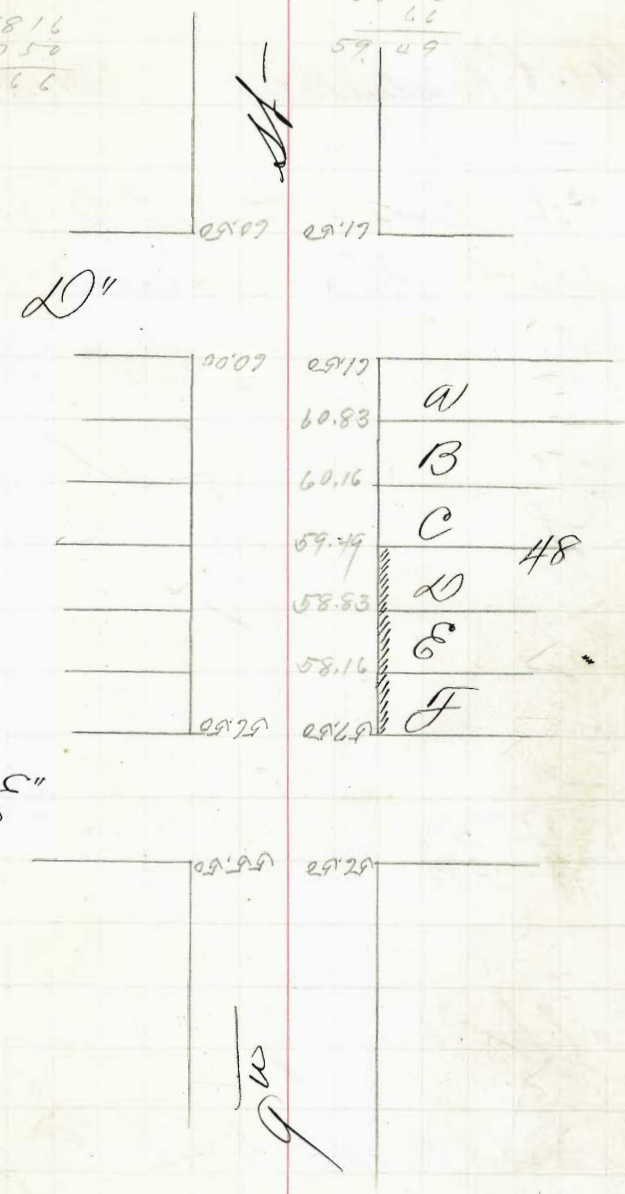
62.12 R.W.
0.93
63.05

63.05 63.05 63.05

56.50
6.55

58.16
57.50
.66

58.83
.66
59.49



~~Survey of Pueblo Lot 212~~

Peter Christensen Mch 5 95

Cut Grades to Lots G & H
Blk 58 Horton add

55.67
50.00
5.67

55.67
50.92
4.75

55.67
51.83
3.84

59.70
55.50
4.20

59.70
54.59
5.11

50.26 B.M.
5.41
55.67

50.26
9.44
59.70

Capps Ramsey & Williams

Also Cut Grades to Lots L & same
Block for Burgoine

55.67
52.75
2.92

55.67
50.50
5.17

55.67
51.92
3.75

51.83
9
51.92

56.50

57.50

E st

st

0.917 = Grade

58

L. 55.50
K 54.59
J 53.67
I 52.75
H. 51.83
G 50.92
50.00

56.50

50.50

F

st

49.00

50.50

Lot

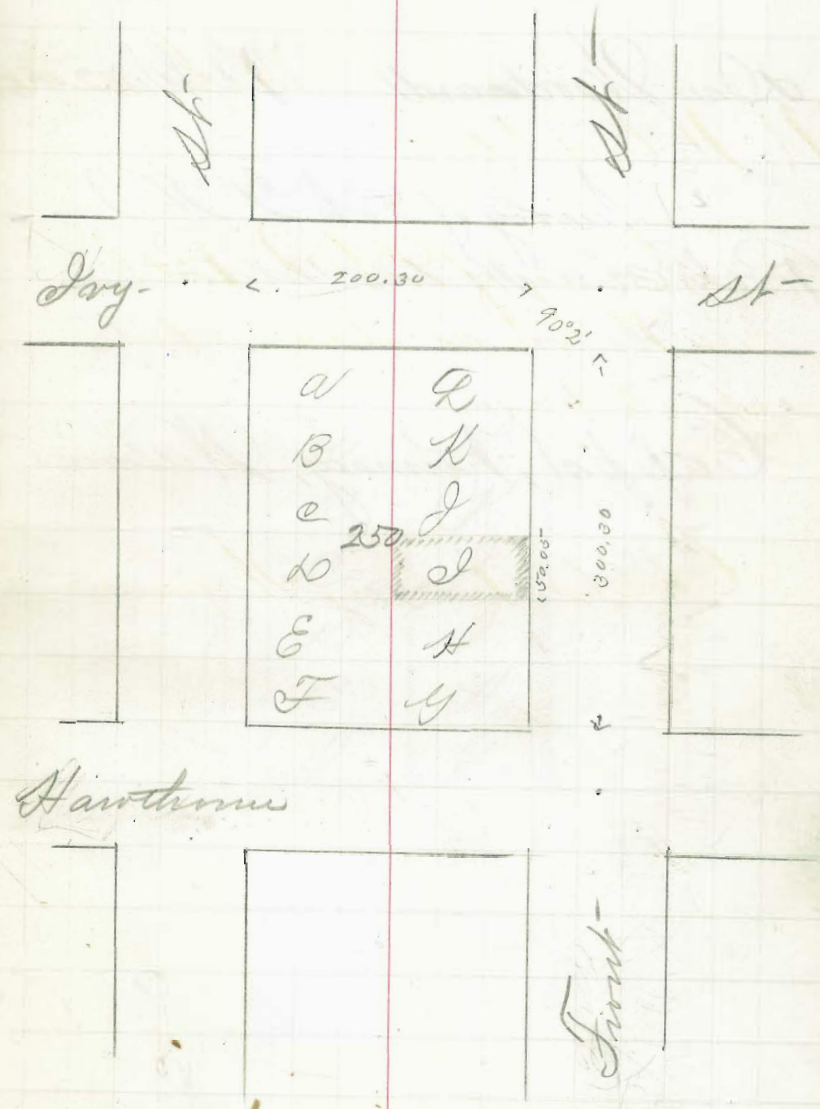
~~Survey of Pueblo Lot 212~~

Mch 14th 95

U. H. Conklin

Survey of Lot I Blk
250 ~~240~~ Hotton as shown upon
opposite page

Cappie Ramsey Williams



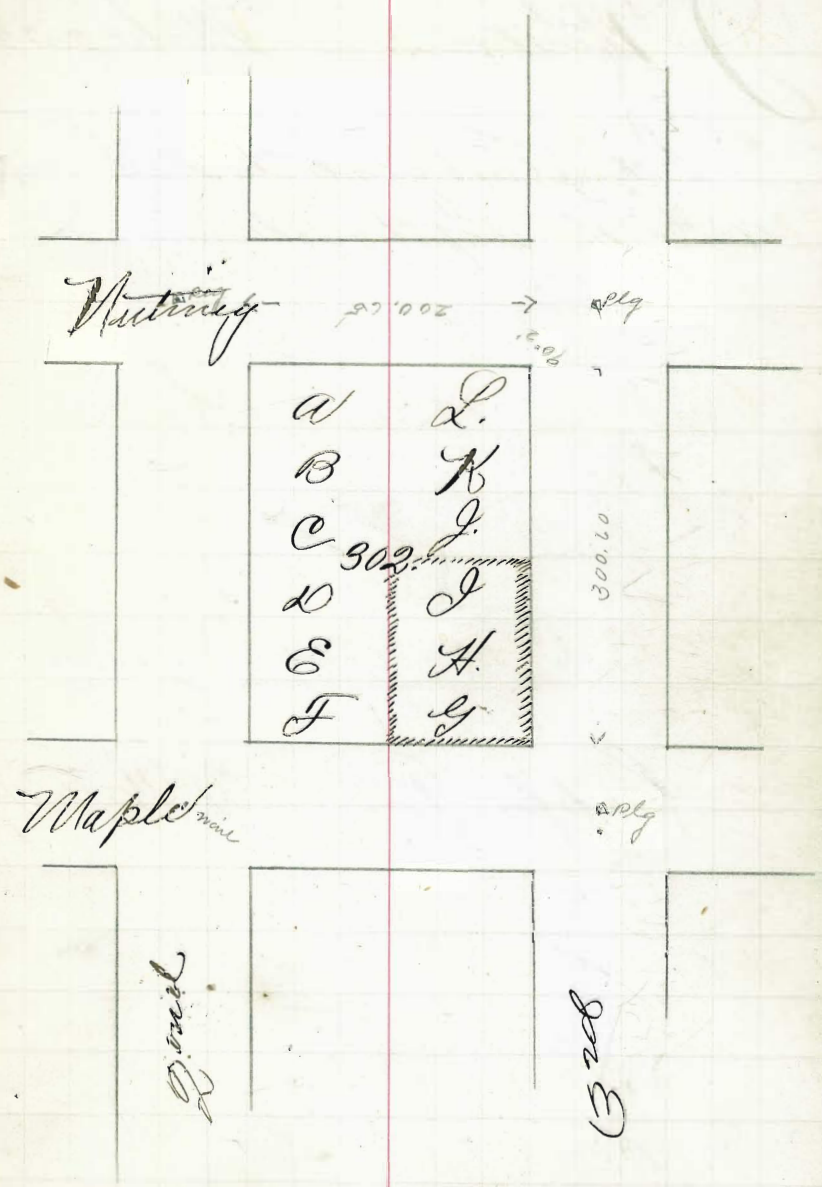
~~Survey of Pueblo Lot 212~~

Dr. Woodward Mch 22-95

Survey of Lots G. H. I.
Blk 302 Horton Add

Capps, Ramsey, Williams

200
1903
97



~~Survey of Pueblo book 212~~

J. Price Mch 25-95

Setting Curb grade to N. H. Cod
16th & H 100 feet each way —

37.61 = 13 M
1.03
38.64
34
4.64

38.64
33
5.64

38.64
32.00
6.64

38.64
34.73
3.91

38.64
35.45
3.19

38.64
31.75
6.89

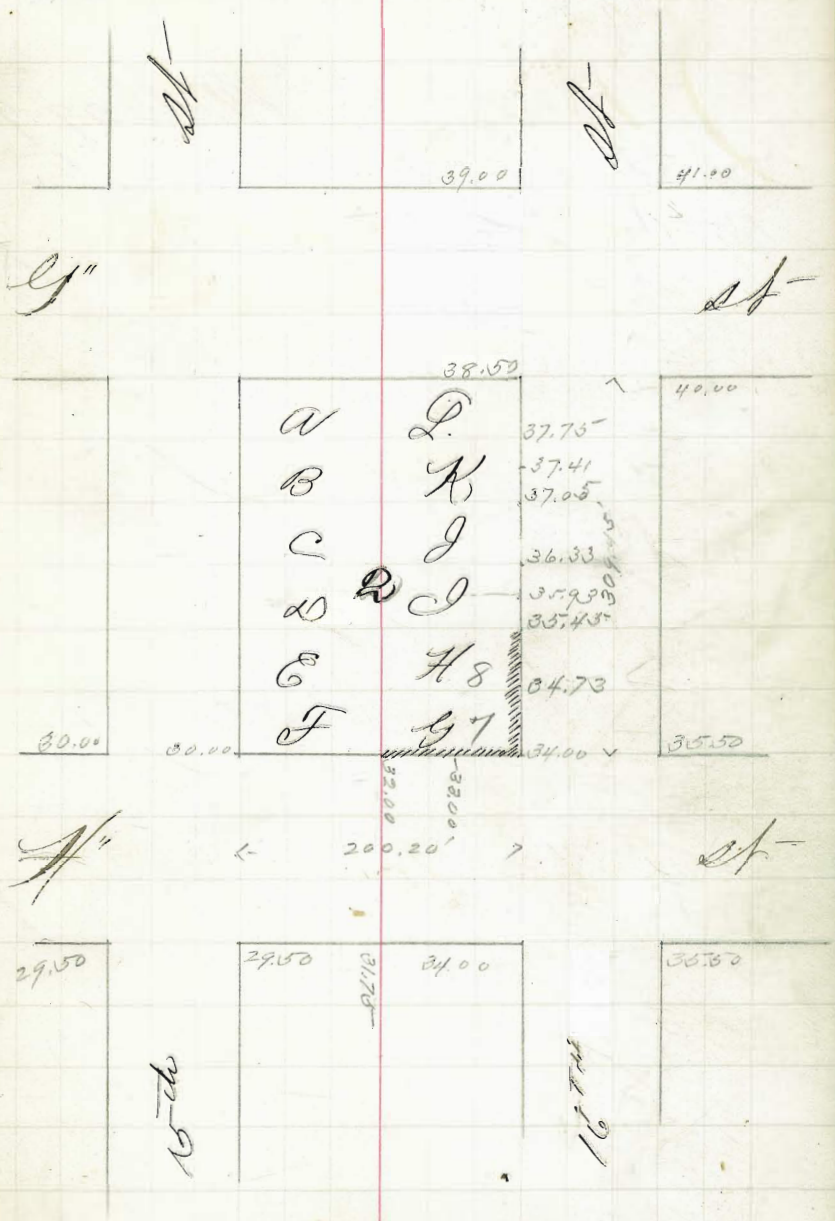
37.61
4.73
42.34
35.45
6.89

42.34
35.93
6.41

42.34
36.33
6.01

42.34
37.05
5.29

42.34
37.41
4.93



Checked up April 16th 1895
O.K.
Capps. Ramsey Williams

81.762
81.782

~~Survey of Pueblo lot 212~~

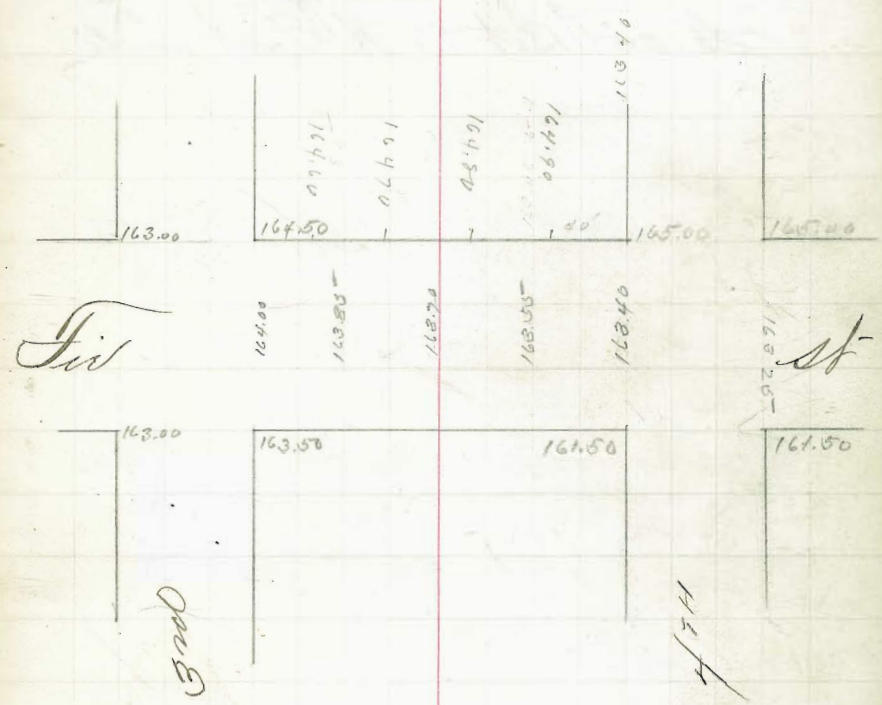
Mch 27-95

Checking Centre Grade to Fir
But 30 4"

168.85	168.85	168.85	168.85
163.40	5.82	163.40	164
5.45	163.03	5.45	4.85
168.85	168.85	168.85	168.85
163.85	163.70	163.54	163.40
5.00	5.15	5.31	5.45

168.85
164.90
3.95

161.54
7.31
168.85



~~Survey of Pueblo Lot 212~~

W. Whitney Mch 27-95

Setting Finishing stakes to 25 Set G. H. East side

177.10
.65
178.75
11.95
166.80
.66
167.46
9.44
158.02

177.10
.65
177.65 | 177.65 | 177.65 | 177.65 | 177.65 | 177.65
170 | 170.50 | 167.80 | 265.64 | 9.83
7.65 | 7.15 | 9.85 | 12.01 | 167.82
.61 | | | | .38
1.65 | | | | 169.20
C

169.20 | 169.20 | 169.20 | 169.20 | 169.20
163.50 | 161.32 | 259.16 | 157.00 | 156
5.70 | 7.88 | 10.04 | 12.20
.3 | .57 | .62
2.70 | 2.15 | 3.84

158.02 18 m H. 25
.39
161.41 | 161.41
156.00 | 157.00
5.41 | 4.41

177.10
.37
178.47 | 178.47
170.50 | 170.00
7.97 | 8.47

173.15
171.00 | 171.00 | 171.00

"G" 170.50 | 170.50 | 170.50

170.00 | 170. | 170.00

267.80

265.64

163.50

261.32

259.16

157.00 | 157.00 | 157.00

"H" 156.00 | 156.00 | 156.00

155.00 | 155.00

Post

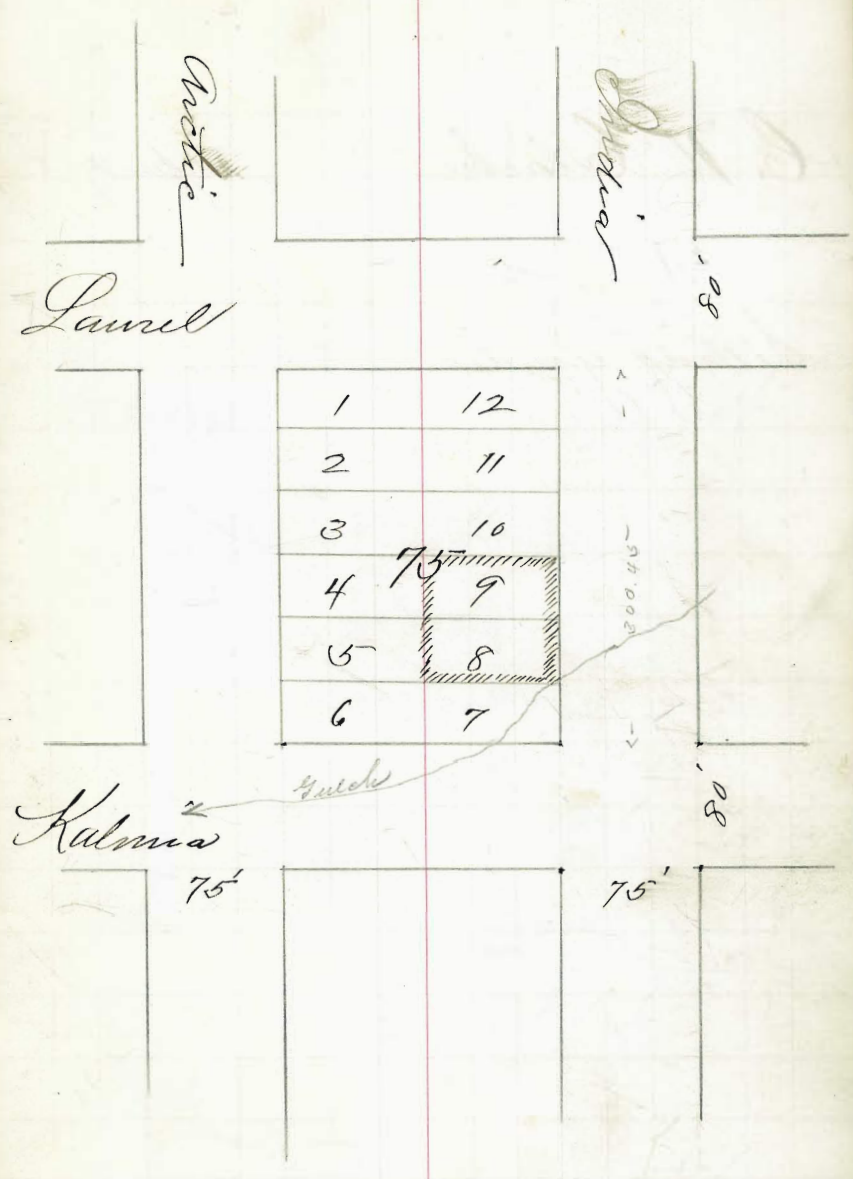
Mch 30th 1895

William Schaffer.

Survey of Lots 8-9 B 75

Middletown.

Capps. Ramsey, Williams



C. H. Clark. April 5-95

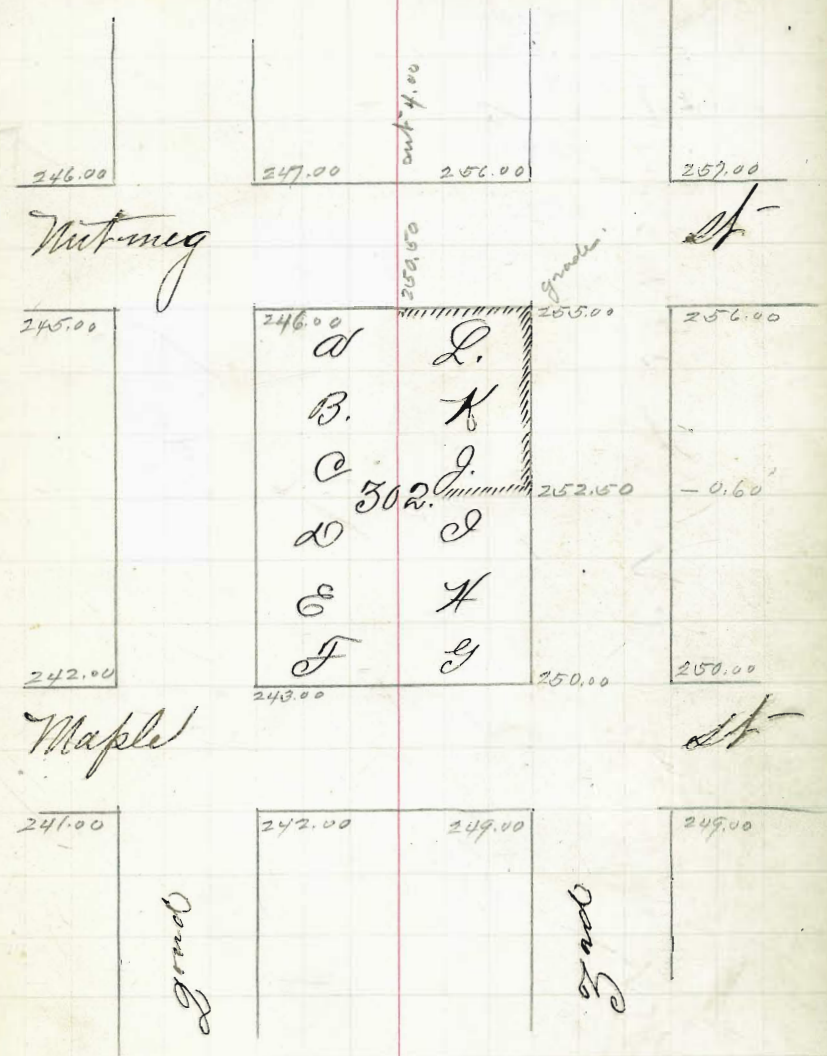
Setting grades, cut + Fill

263.81 = BM
2.46
266.27
10.24
256.03
4.66
260.69

Cut

260.69	260.69	260.69
255.00	250.50	252.50
5.69	10.19	8.19
5.28	5.70	8.00
.41	4.49	-.20
cut	cut	

260.69	260.69
255.25	252.75
5.44	7.94



"W" Street Bridge

Bent No	Rod on Centr.	
0 on top	30.25'	(32.62)
	2.37	
1	26.18'	
	6.44	
2	23.10'	
	9.52	
3	23.92'	
	8.70	
4	25.85'	
	6.77	
5		

July 17th 1894 Cappa

B. S. on B.M. at Wonderwell

No. 0 = no bent

31.37 B.M.
1.25
32.62

No 5 = Pueblo line

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

79.59 — 74.65 — 4.94 — 4.69 — .25

79.59 — 73.70 — 5.89 — 5.5 — .39

79.59 — 7.80 — 7.79

79.59 — 71 — 8.59

79.59 — 71.50 — 8.09

79.59 — 73.00 — 6.59

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

Published by KEUFFEL & ESSER, 127 Fulton and 42 Ann Streets, New York.
Designed by GEO. T. KEITH, M. Am. Soc. C. E.

Entered according to Act of Congress in the year 1883, by W. KEUFFEL and H. ESSER, in the office of the Librarian of Congress in Washington, D. C.

TABLE I.—Minutes in Decimals of a Degree.

1′	.0167	**11′**	.1833	**21′**	.3500	**31′**	.5167	**41′**	.6833	**51′**	.8500
2	.0333	**12**	.2000	**22**	.3667	**32**	.5333	**42**	.7000	**52**	.8667
3	0500	**13**	.2167	**23**	.3833	**33**	.5500	**43**	.7167	**53**	.8333
4	.0667	**14**	.2333	**24**	.4000	**34**	.5667	**44**	.7333	**54**	.9000
5	.0833	**15**	.2500	**25**	.4167	**35**	.5833	**45**	.7500	**55**	.9167
6	.1000	**16**	.2667	**26**	.4333	**36**	.6000	**46**	7667	**56**	.9333
7	.1167	**17**	.2833	**27**	.4500	**37**	.6167	**47**	.7833	**57**	.9500
8	.1333	**18**	.3000	**28**	.4667	**38**	.6333	**48**	.8000	**58**	.9667
9	.1500	**19**	.3167	**29**	.4833	**39**	.6500	**49**	.8167	**59**	.9833
10	.1667	**20**	.3333	**30**	.5000	**40**	.6667	**50**	.8333	**60**	1.0000

TABLE II.—Inches in Decimals of a Foot.

1-16	3-32	⅛	3-16	¼	5-16	⅜	½	⅝	¾	⅞
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729

1	2	3	4	5	6	7	8	9	10	11
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167

TABLE III.—Radii, Ordinates and Deflections.

Deg.	Radius	Mid. Ord.	Tan. Def.	Chd. Def.	Def. for 1 Foot	Deg.	Radius	Mid. Ord.	Tan. Def.	Chd. Def.	Def. for 1 Foot
0°10′	34377.	.036	.145	.291	0.05′	**7°**	819.0	1.528	6.105	12.21	2.10′
20	17189.	.073	.291	.582	0.10	20′	781.8	1.600	6.395	12.79	2.20
30	11459.	.109	.436	.873	0.15	30	764.5	1.637	6.540	13 08	2.25
40	8594.4	.145	.582	1.164	0.20	40	747.9	1.673	6.685	13.37	2.30
50	6875.5	.182	.727	1.454	0 25	**8**	716.8	1.746	6.976	13.95	2.40
1	5729.6	.218	.873	1.745	0.30	20	638.2	1.819	7.236	14.53	2.50
10	4911.2	.255	1.018	2.036	0 35	30	674.7	1.855	7.411	14.82	2.55
20	4297.3	.291	1.164	2.327	0.40	40	661.7	1.892	7.556	15.11	2.60
30	3819.8	.327	1 309	2 618	0.45	**9**	637.3	1.965	7.845	15.69	2.70
40	3437.9	.364	1.454	2.909	0.50	20	614.6	2.037	8.136	16.27	2.80
50	3125.4	.400	1.600	3.200	0 55	30	603.8	2.074	8.281	16.56	2 85
2	2864.9	.436	1.745	3.490	0.60	40	593.4	2.110	8.426	16.85	2.90
10	2644.6	.473	1.891	3.781	0 65	**10**	573.7	2.183	8.716	17.43	3.00
20	2455.7	.509	2.036	4 072	0.70	30	546.4	2.292	9.150	18.30	3.15
30	2292.0	.545	2.181	4.363	0.75	**11**	521.7	2.402	9.585	19.16	3.30
40	2148.8	.582	2.327	4.654	0.80	30	499.1	2.511	10.02	20.04	3 45
50	2022.4	.618	2.472	4.945	0.85	**12**	478.3	2.620	10.45	20.91	3.60
3	1910.1	.655	2.618	5.235	0 90	30	459.3	2.730	10.89	21.77	3.75
10	1809.6	.691	2.763	5.526	0.95	**13**	441.7	2.839	11.32	22.64	3.90
20	1719.1	.727	2.908	5.817	1 00	30	425.4	2.949	11.75	23.51	4.05
30	1637.3	.764	3.054	6.108	1.05	**14**	410.3	3.058	12.18	24.37	4.20
40	1562 9	.800	3.199	6.398	1.10	30	396.2	3.168	12.62	25.24	4.35
50	1495.0	.836	3.345	6.689	1.15	**15**	383.1	3.277	13.05	26.11	4.50
4	1432.7	.873	3.490	6.980	1.20	30	370.8	3 387	13.49	26.97	4.65
10	1375.4	.909	3.635	7.271	1.25	**16**	359.3	3.496	13.92	27.84	4.80
20	1322.5	.945	3 718	7 561	1.30	30	348.5	3.606	14.35	28.70	4.95
30	1273.6	.982	3.926	7.852	1.35	**17**	338.3	3.716	14.78	29.56	5.10
40	1228.1	1.018	4.071	8.143	1.40	**18**	319.6	3 935	15.64	31.29	5.40
50	1185.8	1.055	4.217	8.433	1.45	**19**	302.9	4.155	16.51	33.01	5.70
5	1146 3	1.091	4.362	8.724	1 50	**20**	287.9	4.374	17.37	34.73	6.00
10	1109.3	1.127	4.507	9.014	1 55	**21**	274.4	4.594	18.22	36.44	6.30
20	1074.7	1.164	4.653	9.305	1 60	**22**	262 0	4 814	19.08	38.16	6.60
30	1042.1	1.200	4.798	9.596	1.65	**23**	250.8	5.035	19.94	39.87	6.90
40	1011.5	1.237	4.943	9.886	1.70	**24**	240.5	5.255	20.79	41.58	7.20
50	982.6	1.273	5.088	10.18	1.75	**25**	231.0	5.476	21.64	43.28	7.50
6	955.4	1.309	5.234	10.47	1 80	**26**	222.3	5.697	22.50	44.99	7.80
10	929.6	1.346	5.379	10.76	1.85	**27**	214 2	5.918	23.35	46.69	8 10
20	905.1	1.382	5.524	11.05	1 90	**28**	206.7	6.139	24.19	48.38	8.40
30	881.9	1.418	5.669	11.34	1.95	**29**	199.7	6.360	25.04	50 07	8.70
40	859.9	1.455	5.814	11.63	2.00	**30**	193.2	6 583	25.88	51.76	9.00

Table V.—Middle Ordinates for Rails.

Deg. of Curve	LENGTH OF RAILS. 32	30	28	26	24	22	20	Deg. of Curve	LENGTH OF RAILS. 32	30	28	26	24	22	20
1°	.022	.020	.017	.015	.013	.011	.009	**16°**	.356	.313	.273	.236	.200	.170	.139
2	.045	.039	.034	.030	.025	.021	.017	**17**	.378	.333	.290	.252	.213	.180	.148
3	.067	.059	.051	.044	.038	.032	.026	**18**	.400	.351	.306	.265	.225	.190	.156
4	.089	.079	.068	.059	.050	.042	.035	**19**	.423	.371	.324	.280	.238	.201	.165
5	.112	.098	.086	.074	.063	.053	.044	**20**	.445	.392	.341	.296	.250	.212	.174
6	.134	.118	.103	.088	.075	.063	.052	**21**	.466	.410	.357	.309	.262	.222	.182
7	.156	.137	.120	.103	.088	.074	.061	**22**	.487	.430	.375	.325	.275	.233	.191
8	.179	.157	.137	.118	.100	.084	.070	**23**	.509	.450	.390	.338	.287	.243	.199
9	.201	.177	.154	.133	.113	.095	.078	**24**	.531	.469	.408	.354	.299	.253	.208
10	.223	.196	.171	.147	.126	.105	.087	**25**	.552	.486	.424	.367	.311	.263	.216
11	.245	.216	.188	.162	.138	.116	.096	**26**	.573	.506	.441	.382	.323	.274	.225
12	.268	.235	.205	.177	.151	.127	.105	**27**	.594	.524	.457	.396	.335	.284	.233
13	.290	.254	.222	.192	.163	.138	.113	**28**	.618	.545	.475	.411	.348	.294	.242
14	.312	.275	.239	.207	.175	.148	.122	**29**	.638	.564	.491	.424	.361	.303	.250
15	.334	.295	.257	.223	.188	.159	.131	**30**	.660	.583	.508	.438	.374	.313	.259

CURVE FORMULÆ.

$T = R \tan. \frac{1}{2} I$

$T = \frac{50 \tan. \frac{1}{2} I}{\text{Sin. } D}$

$\text{Sin. } D = \frac{50}{R}$

$\text{Sin. } D = \frac{50 \tan. \frac{1}{2} I}{T}$

$R = T \cot. \frac{1}{2} I$

$R = \frac{50}{\text{Sin. } D}$

$E = R \text{ ex. sec. } \frac{1}{2} I$

$E = T \tan. \frac{1}{4} I$

$\text{Chord def.} = \frac{\text{chord}^2}{R}$

$\text{No. chords} = \frac{\frac{1}{2} I}{D}$

$\text{Tan. def.} = \frac{1}{2} \text{ chord def}$

The square of any distance, divided by twice the radius, will equal the distance from tangent to curve, very nearly.

Table IV. contains Tangents and Externals to a 1° curve. Tan. and Ext. to any other radius may be found, nearly enough, by dividing the Tan. or Ext. opposite the given central angle by the given degree of curve.

To find Deg. of Curve, having the Central Angle and Tangent: Divide Tan. opposite the given Central Angle by the given Tangent.

To find Deg. of Curve, having the Central Angle and External: Divide Ext. opposite the given Central Angle by the given External.

To find Nat. Tan. and Nat. Ex. Sec. for any angle by Table IV.: Tan. or Ext. of twice the given angle divided by the radius of a 1° curve will be the Nat. Tan. or Nat. Ex. Sec.

To find angle for a given distance and deflection.

Rule 1. Multiply the given distance by .01745 (def. for 1° for 1 ft.), and divide given deflection by the product.

Rule 2. Multiply given deflection by 57.3, and divide the product by the given distance.

To find deflection for a given angle and distance: Multiply the angle by .01745, and the product by the distance.

Right Angle Triangles.—Square the altitude, divide by twice the base. Add quotient to base for hypothenuse.

Given Base 100, Alt. 10. $10^2 \div 200 = .5$. $100 + .5 = 100.5$ hyp.

Given Hyp. 100, Alt. 25. $25^2 \div 200 = 3.125$. $100 - 3.125 = 96.875 =$ Base.

Error in first example, .002; in last, .045.

To find Tons of Rail in one mile of track: multiply weight per yard by 11 and divide by 7.