

279

369
TRANSIT.

F.B. 279

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

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

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

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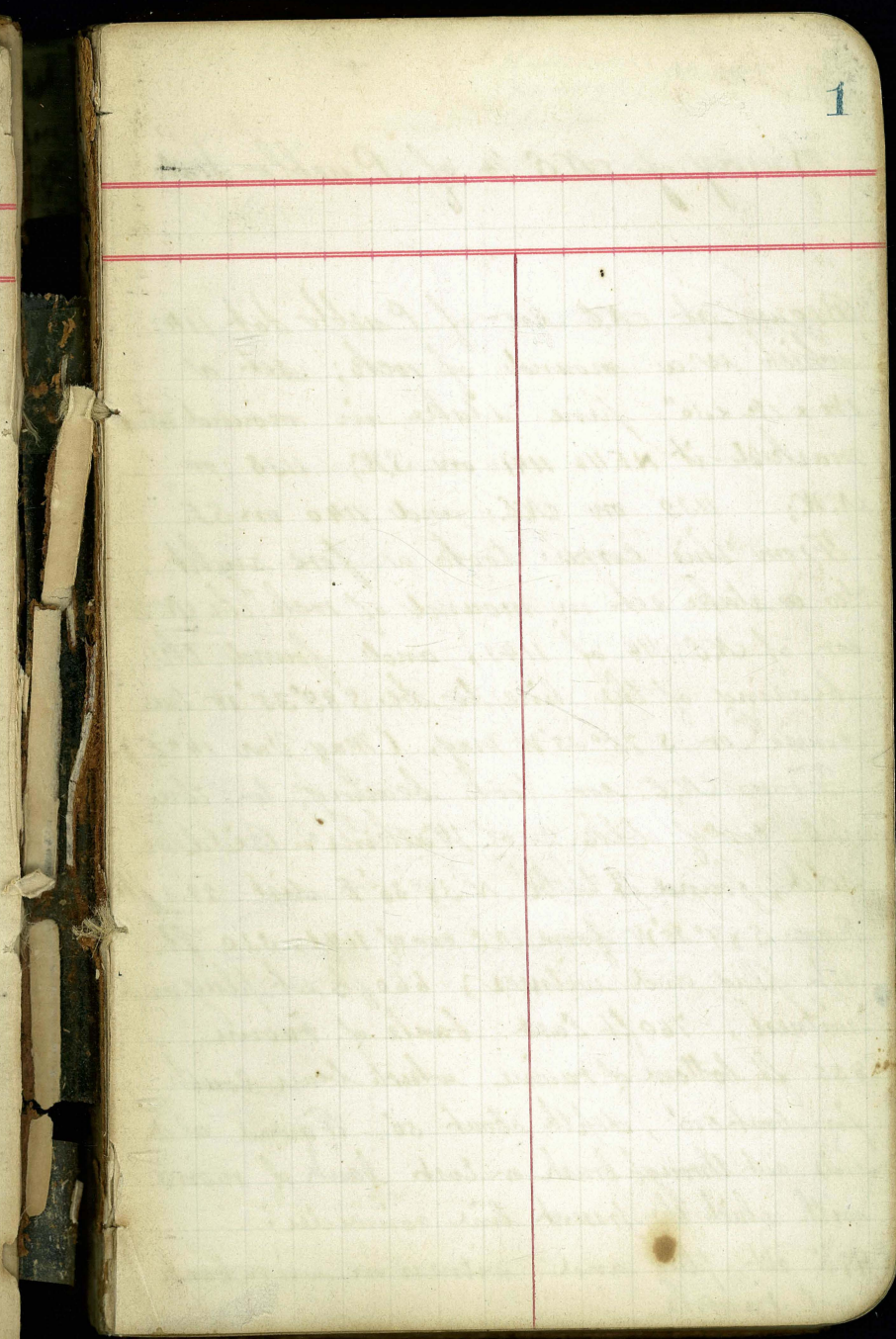
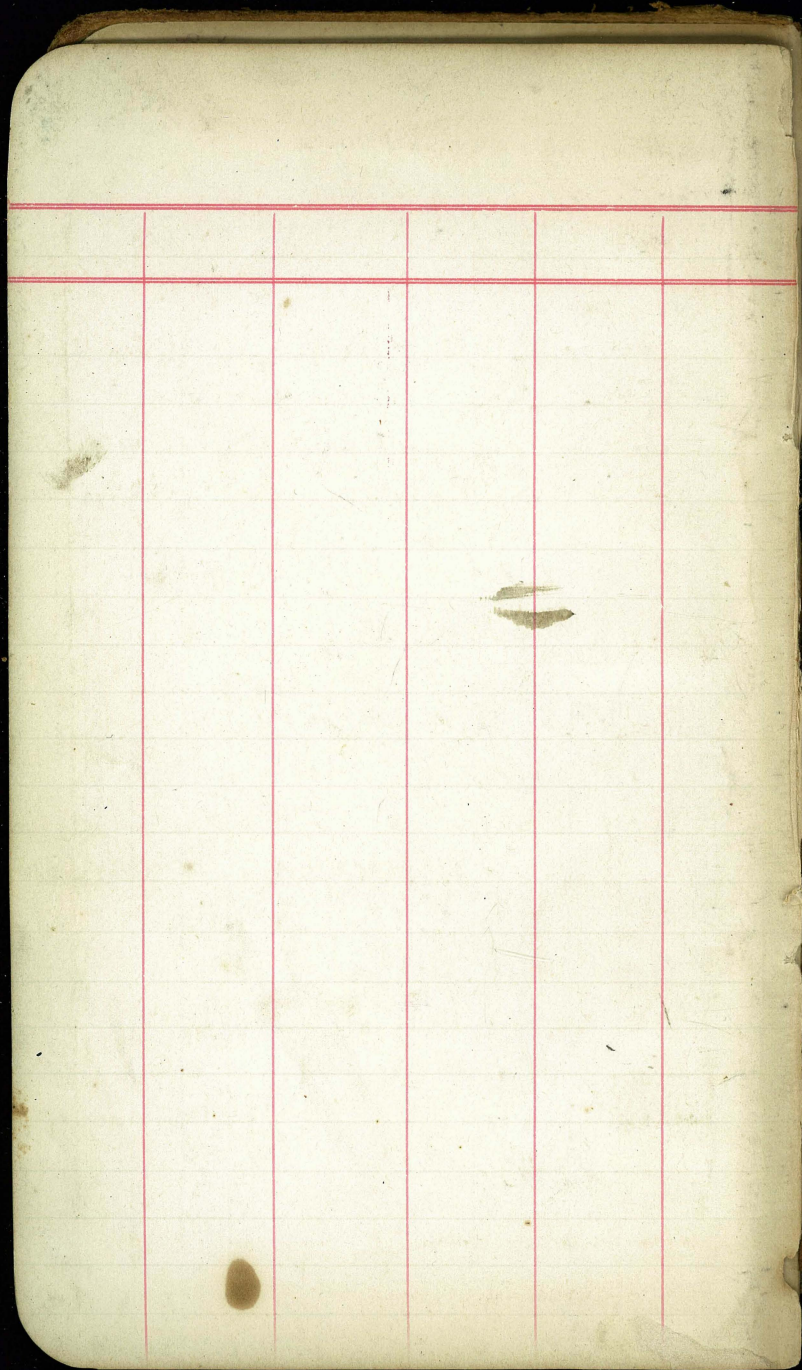
TABLE FOR RUNNING ON SLOPES.

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

Angle.	Cor. in Links.	Angle.	Cor. in Links.	Angle.	Cor. in Links.	Angle.	Cor. in Links.
0		0		0		0	
4	0.24	11	1.88	18	5.14	25	10.54
5	0.38	12	2.24	19	5.76	26	11.26
6	0.55	13	2.63	20	6.42	27	12.24
7	0.76	14	3.06	21	7.11	28	13.37
8	0.98	15	3.53	22	7.85	29	14.34
9	1.24	16	4.02	23	8.64	30	15.47
10	1.55	17	4.56	24	9.47	35	22.07

279

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Survey of NC 14 of Pueblo Lot.

Begun at N.E. cor of Pueblo Lot 1141
which is a mound of rock; set a
 $1\frac{1}{2} \times 1\frac{1}{2} \times 30$ " pine stake in mound and
marked it N.E. 114 1141 on S.W.; 1138 on
N.W.; 1139 on N.E.; and 1140 on S.E.

From this corner took a fore-sight.
to a stake set in mound of rock the N.W.
cor of N.E. 14 of 1141, and found the
bearing of the line to be $S 89^{\circ} 35' W$ true
course or $S 75^{\circ} 25' W$ Mag. (Mag Var $14^{\circ} E$)

From N.E. cor took bearing to the
S.E. cor of blk 2 of Watkins & Biddler
add, found it to be $N 38^{\circ} 35' E$ dist 29.3 ft
Ran $S 89^{\circ} 35' W$ from N.E. cor of 1141, 330 ft.
set plug and witness, 660 ft. set plug and
witness, 760 ft East bank of ravine
855 ft bottom of ravine which bears south
for about 500', depth about 50'. Found old
line cut through brush on East bank of ravine
with which the present line coincides.

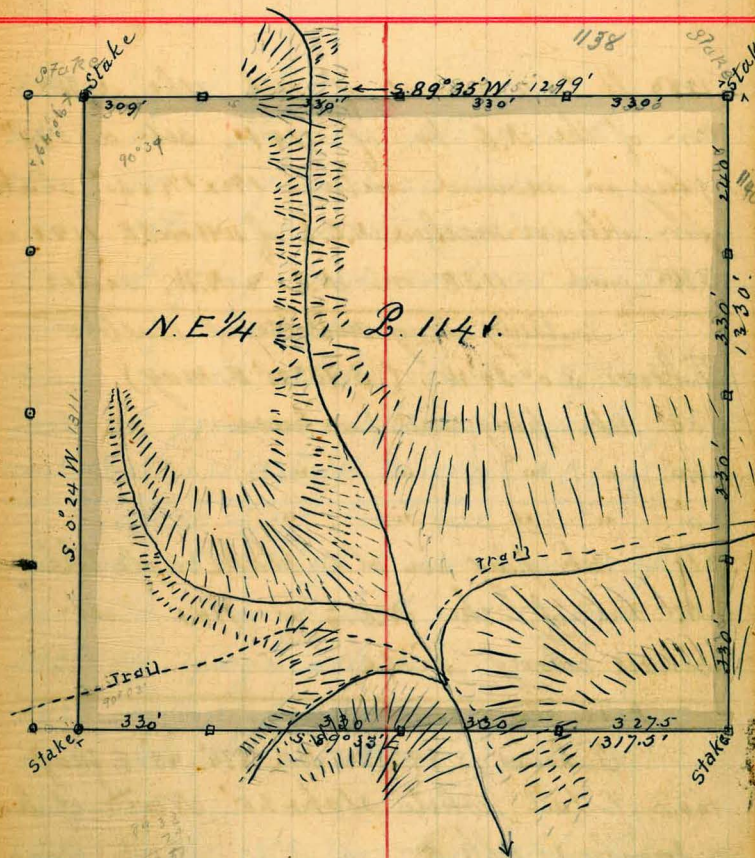
990' str plug and witness on west bank
of ravine

Jan 24th 1893

Hamlin transit
William } chain
Cummings }
Shaw.

2

1141 for H. N. Clark (order 1088)



1299 ft to a mound of rock the N.W.
 cor of the N.E. $\frac{1}{4}$ of 1141, set a 2x2"
 plug in mound with a $1\frac{1}{2} \times 1\frac{1}{2} \times 30$ " stake
 for witness marked N.E. $\frac{1}{4}$ of 1141 on S.E. 1141 or
 S.W. and 1138 on N.E. & N.W. sides

Southerly along middle of Pueblo

Thence $S 0^{\circ} 24' W$ ($S 13^{\circ} 25' E$ mag.)

330' set plug and witness

660' " " " "

990' " " " "

1311 set plug in old stake hole the
 S.W. corner of the N.E. $\frac{1}{4}$ of 1141 set
 witness along side

East along South line

Thence $S 89^{\circ} 33' E$ ($N 76^{\circ} 45' E$ mag.)

104.5 to tall white stake 1.5' North of line
 marked Blk 5

152. crossed water pipe line

330' set plug and witness

390 west bank of small ravine

430 bottom of small ravine

575 top of spur
 610 line plug in pile of rock
 660 set plug and witness
 790' bottom of main ravine
 990 set plug and witness on East
 bank of main ravine

1317.5 to old stake broken off at sur-
 face of ground, replaced with plug
 and $1\frac{1}{2} \times 1\frac{1}{2} \times 30$ " witness marked N.E. $\frac{1}{4}$ of 1141

North along East line

Thence $N 0^{\circ} 24' W$ ($N 14^{\circ} 15' W$ mag.)

100' to brow of hill

330' set plug & witness

365 bottom of ravine

660 set plug & witness

990 " " " "

1330 to the N.E. cor of Pueblo lot 1141
 the place of beginning.

DIST	Bearing	Latitude		Departure	
		N.	S.	E.	W.
1299.1	588°35'W		9.9		1298.9
1311.	30°24'W		1310.9		9.2
1317.5	588°33'E		10.3	1317.4	
1330.0	N0°24'W	1329.9			9.3
		1329.9	1331.1	1317.4	1317.4
			1322.9		
			1.2		

Jan 25 1883

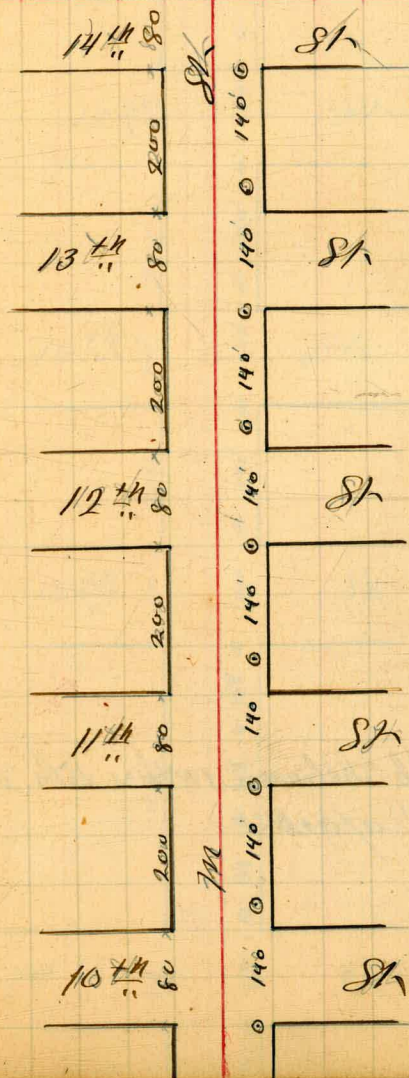
Hampden transish
William } Char
Cummings }
Shaw.

5

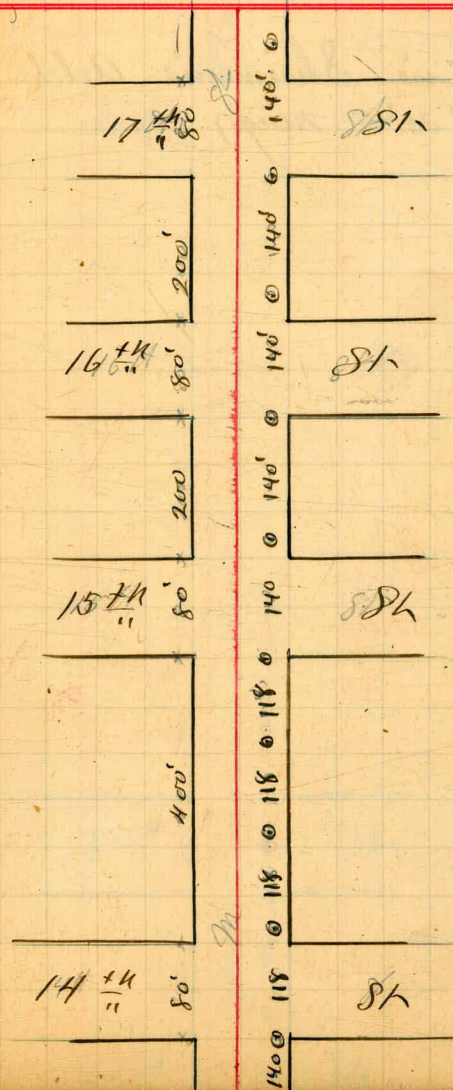
Lines for Poles on "M" St- for

Stb. Elec Light Co

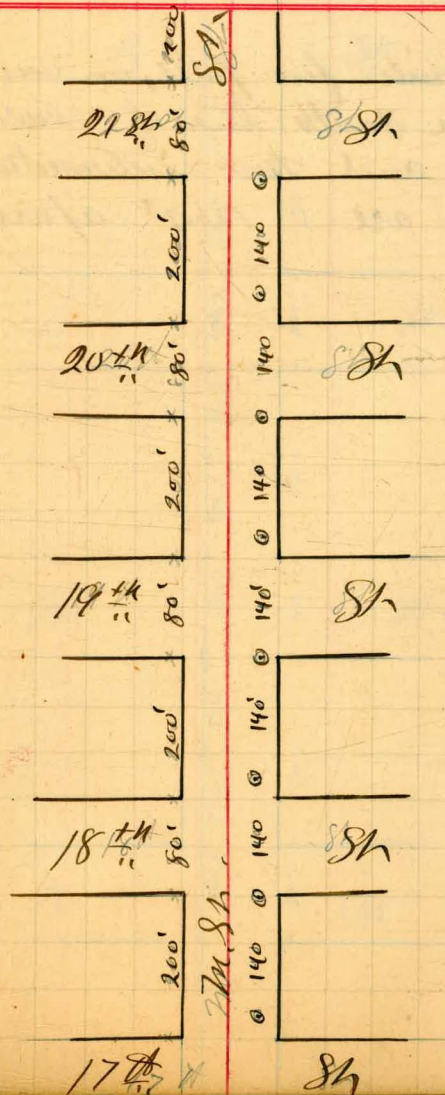
Set flags on the curb line on South
side of M St. at the west line of
each cross street and one mid-
way between, which places all the
poles 140' ft apart when the
blocks are 200' and the streets 80'
(M St in Horton added bears N 76° 25' E
mag)



In blk between 14th & 15th the poles
are 118 ft apart



"Msh" in Sherman's Adck. Bear
(N 75° 35' E mag.)

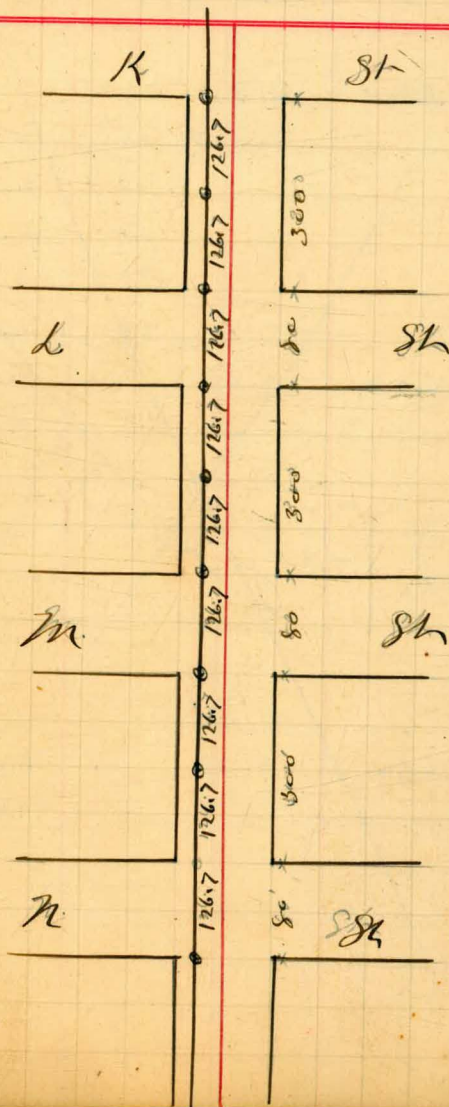


Limits for Poles on 16th St.

Set points for poles, on each line
at the south line of each cross
street and two intermediate ones
which are 126.7' apart

Jan 25 1893

for Stb. Elec. Light & Car Co.



Grades on L. St bet 5th & 6th
for E.S. Babcock

St 6	+	42	Grade	Prop	Elev
B.M.	3.85	6.35			2.50
0			1.33'	5.02	
+50			1.42	4.93	
1			1.57	4.84	
+50			1.59	4.76	
2			1.68	4.67	
#	5.47	6.80		5.02	1.33
				4.91	2.39
See Page 10					
#	5.54	9.33		3.01	3.79
				1.88	7.38
					7.45

5th & 6th { N.E. 2.3
S.E. 1.5

6th & 7th { N.W. 2.5
S.W. 2.0 9

7.41

cut NW. cor of L. St

East line of 5th St 1.97

West line of 6th St

+ truck on 5th & 2nd rdne .19 high

Set 1 1/2" square stakes to grade

chalker then on top

set on a line 4' north of north

Rail

Dec, 1893

William

Shaw

Grades on 6th St bet. 5th & 6th
ordered by E. D. Babcock

Feb 1 1883

H. Hamlin
S. Shaw
Cummings

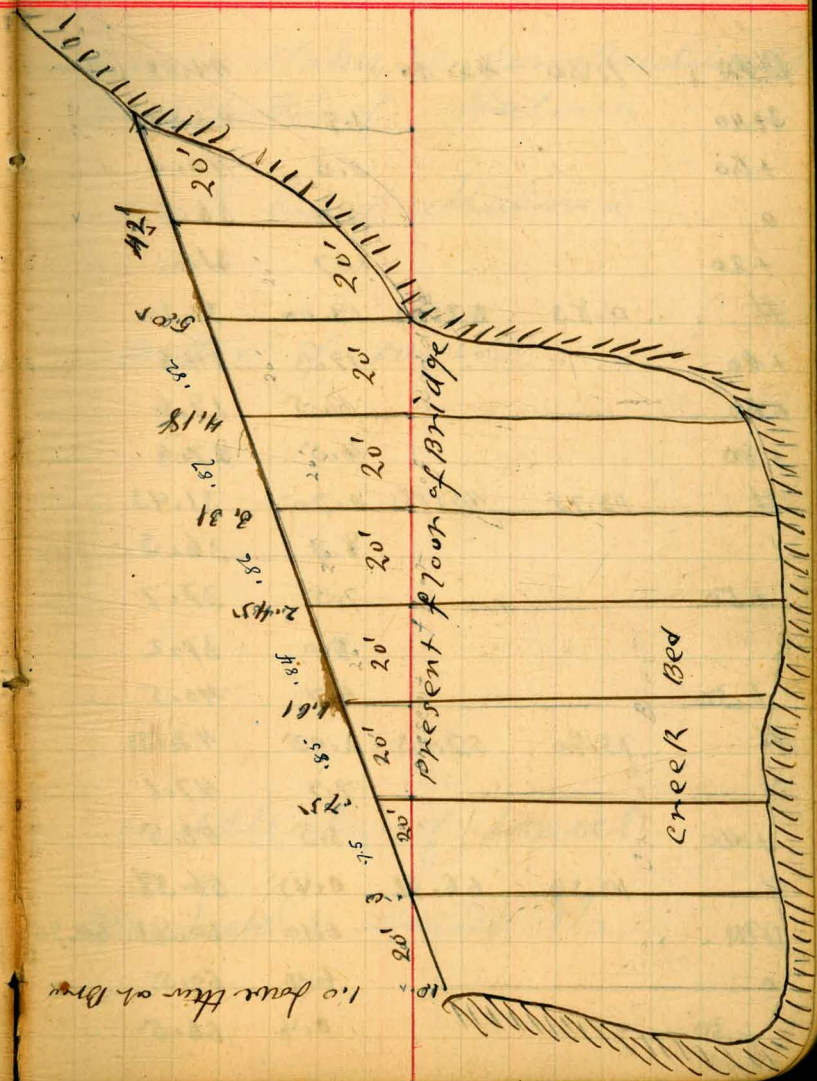
10

Sta	+	HD	Grade	Post	Elev
B.M.	2.39	6.39			3.91
				3.78	2.52
0			1.66	4.64	
+50			1.75	4.55	
1			1.84	4.46	
+50			1.92	4.38	
2			2.01	4.29	

6th St St
cut NW cor. (checked)
East line of 5th St

West line 6th St
Set 1 1/2" square stake 4' N of north
Rail chalked there on top
Set grade 2.5' lower than centre grade
because track is 10' South of centre of
street, and it will be easier to
raise track than lower it. The street
is paved on 5th St is bet 11th & 12th
otherwise the grade is 0.12.

Bents 20' cent. to Cent.
Bridge 20' wide in the clear



Level over the center line of
India St from Hal to Laurel

Feb. 10 1883

Hamlin
Shaw
William

12

Bent ...

Sta	+	HD	=	Elev
B.M.	1.30	45.39		44.09
+40			1.9	43.4
+60			5.3	40.9
0			8.4	36.9
+20			13.7	31.66
#	0.83	32.13	14.00	31.30
+40			17.3	14.8
+60			12.5	19.6
+80			4.5	27.6
#	13.75	45.18	0.70	31.43
1			8.9	36.3
+50			7.5	37.7
2			8.0	37.2
+50			4.7	40.5
#	13.60	55.70	2.05	43.13
3			7.9	47.1
+40			3.5	53.5
#	10.33	66.91	0.45	56.58
B.M.			6.10	60.81
0			6.4	60.55
+50			0.4	66.5

← grade staker S.E. cor India & Hal
middle line of Halmin

North line of Halmin

Bottom of ravine

middle line of Laurel

B.M. Laurel & India St

60.90

Levels for India Street Bridge

Station	Rod	Instr.	Rod	Elev.	Grade
	+				
N	1.53	45.53		44.00	
0 = 0+10			10.40	35.10	40.00
Bent 1.			7.9	37.60	
Turnpt 0.10	34.08	11.55	33.98		
Bent 1.		6.6	27.5	40.0	
" 4		12.0	22.10		
" 4		5.8	28.3		
Bent 5		1.2	32.9		
" 5		2.2	31.9	40.0	
" 5		1.1	33.0	40.00	
Turnpt 2.42	24.75	11.75	22.33		
Bent		3.7	19.4	40.00	
		5.7	19.0		
Bent 3		10.7	14.0	40.0	
" 3		9.1	15.6		
" 3		9.0	15.7		
Bent 2		3.2	21.5		
" 2		9.6	15.2	40	
		5.6	19.1		
Turnpt 2.03	36.047	- 0.31	24.41		
		5.04	31.43		
Blaxl.		0.2	36.27		

Mar 11 1892 H. Sedgwick
Hampden
Cummings
March 11. 1893 Williams

13

B.M. peg S.E. Corner India & Kalmia.
Center of Bent no. 1.
25' east on bent no. 1.
Peg.
14.0 20' W on bent no. 1.
Center of Bent 4.
22' East of Bent no. 4.
25' East of Bent no. 5.
10.0 25' west " 5.
Center of Bent 5.
Peg.
21.0 For bottom of Bent 4.
22' west end of Bent 4.
26.0 26' west end of Bent 3.
Center of Bent " 3.
25' east on Bent 3.
25' east on Bent no. 2.
25.0 Center of Bent no. 2.
25' west on Bent no. 2.

Old line. See page 12. Sta. 1.

ca. yds.

2 x 5' x 25'

10.0

20 x 5' x 4'

+ 5' angle

20.0

7.5'

12.0

5.0

Bent No 3

2

"

4

1

5' (Set will 5' below grade)

Cross Sections of road work in main St bet 31st & angle

Sta Cubic Yards End Area

Cross Section

Sta 0 east line of 31st St

0			27.0	0.0
+50	53.9 [✓]	0.0	31.1	0.0
1	56.3 [✓]	0.0	29.7	0.0
+50	55.0 [✓]	0.0	29.7	0.0
2	62.2 [✓]	0.0	37.4	0.0
+50	74.7 [✓]	0.0	43.2	0.0
3	67.6 [✓]	0.0	29.7	0.0
+50	37.6 [✓]	0.0	10.8	0.0
+76	5.2 [✓]		0.0	0.0
	412.5			

$$\frac{+1.0}{13.5} \times \frac{+1.0}{13.5}$$

$$\frac{+1.3}{13.5} \times \frac{+1.0}{13.5}$$

$$\frac{+1.2}{13.5} \times \frac{+1.0}{13.5}$$

$$\frac{+1.2}{13.5} \times \frac{+2.0}{13.5}$$

$$\frac{+1.5}{13.5} \times \frac{+1.3}{13.5}$$

$$\frac{+1.5}{13.5} \times \frac{+1.7}{13.5}$$

$$\frac{+0.8}{13.5} \times \frac{+1.4}{13.5}$$

$$\frac{0.0}{13.5} \times \frac{+0.8}{13.5}$$

0.0

June 24 1893.

Humbler

& Party

16

Cheek level over Main St from 0

to Bridge

cut on
Fill +

Remarks

Sta	+	HS	-	Elev	Grade
B.M.	2.0	47.92		45.92	
0			3.9	44.0	44.0
+50			5.7	42.2	41.9
1			8.0	39.9	39.7
+50			9.8	38.1	37.5
2			11.8	36.1	35.4
+50			13.6	34.3	33.3
#	0.28	35.12	13.08	34.84	
3			2.9	32.2	31.1
+50			4.8	30.3	28.9
4			7.2	27.9	26.8
+50			9.9	25.2	24.6
5			12.3	22.8	22.5
+50			14.8	20.3	20.4
#	0.22	22.26	13.08	22.04	
6			4.2	18.1	18.2
+50			6.0	16.3	16.1
7			8.2	14.1	13.9
+50			10.5	11.8	11.7
8			13.0	9.3	9.6
#	1.74	11.97	12.13	10.13	

spl'ted full of angle of 31st & Main

26.0' wide

26.0' "

25.0' "

25.0' "

25.0' "

26.0' "

25.0' "

26.0' "

27.0' "

26.0' "

26.0' "

26.0' "

26.0' "

25.0' "

26.0' "

27.0' "

27.0' "

26.0' "

26.0' "

Add 10.5' ew of angle over 24' wide.

Subtract 20.8' ew of angle over taken down to grade

20.8' 10.5' 183' not taken out, but work is paid for in fill

Sta	+	hd	-	Elw	Grade	cut	
		11.87					
8+50			4.9	7.0	7.4	-0.4	26.0
9			6.5	5.3	5.3	0.0	24.0
B.M.			8.82	3.05			

Check of slopes on main str. lch

Sta 9.	cu yds	End area		
	+	-	+	-
7+80	← slopes 1 1/2 to 1	O.K.		
Sta 8+15	5.0	23.0	0.0	53.1
8+50	5.0	55.0	0.0	30.0
9		53.7	0.0	27.9
108	Bridge	131.7		0.0
		deduct		

add for fill around bridge see

Book 2 77 page 53

22.0	cu yds	
8.0	" "	Extra under bridge and
15.0	" "	around wings
37.0		
72.0		

June 24 1892 Hamlin & Party

18

Sta 8+0 and 9+08

Dist. to toe of slope	x	Dist. to top of grade	x	Dist. to top of grade	x	Dist. to toe of slope
-12.2		-12.				-10.4
7.0	x	18.0	x	17.0	x	2.0
-10.3						-9.4
4.0	x	18.0	x	17.0	x	2.0
-8.8						-7.3
5.0	x	14.0	x	17.0	x	1.6

Loose ^{sand} rock thrown in at N.E. cor of Bridge triangular fill

20 x 20 area = 200 sq ft 5' deep
= 500 = 37.0 cu yards

June 29, 1893

19

Humboldt & Party

from Sta 10 to 18 + 90

Measure of slopes in main st

Sta	cubic + yards	End area +	
10		2.5	
+ 50		2.0	
11		4.0	
+ 50		5.0	
12		3.7	
+ 50		0.0	
13		5.0	
+ 50		5.0	
14		3.5	
+ 50		3.7	
15		5.0	
	68.0	3.7 mean area	

thick to toe of slope	x	thick to top of bank	x	thick to top of bank	x	thick to toe of slope
11.2 -5.1		<u>10.2</u> 11.2	x	0.0		
-4.6		<u>8.0</u> 9.0	x	0.0		
-4.0		<u>8.0</u> 8.0	x	2.0		
-4.2		<u>8.4</u> 10.1	x	0.8		
-4.6		<u>9.2</u> 10	x	0.8		
-5.2		<u>10.4</u> 10	x	0.0		
-5.3		<u>10.6</u> 11.	x	1.0		
-5.0		<u>10.0</u> 11.0	x	1.0		
-3.6		<u>7.0</u> 8.0	x	1.0		
-3.4		<u>7.2</u> 8.0	x	1.0		
-3.6		<u>7.2</u> 9.0	x	1.0		

	cable grade + -	End area + -	
15 + 60		6.0	2.0 4.0
16		30.0	3.5
+ 60		6.6	3.6
17		0.0	0.8
+ 50		30.0	2.5
18		6.0	3.5
	38.0	avg 12	2.7
+ 50	7.2	0.0	4.3
+ 40	12.3	0.0	18.0
	124.0		

Beyond bridge slopes 1 1/2 to 1
road way full width 24'

to be deducted from fill between bridge & Rail road.

-3.3	7.7 8.0	x	1.0
-3.5	7.0 8.0	x	1.0
-3.3	6.6 8.0	x	0.8
-3.5	7.0 7.5	x	0.0
-3.1	6.2 7.0	x	0.8
-3.5	7.0 7.0	x	2.0
-4.3	8.6 8.0	x	2.0
-6.0	12.0 12.0	x	6.0

Width of roadway beyond bridge

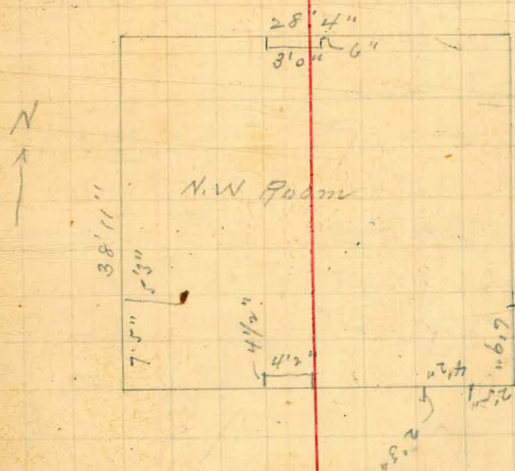
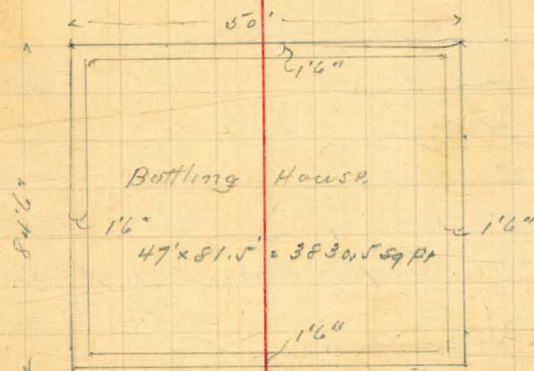
at End of Bridge	20.0
Sta 10	22.0
11	25.0
12	25.0
13	24.0
14	22.5
15	24.0
16	24.5
17	24.0
18	24.0

9.0 to slope slope

From East side of 29th St 248.0
 South along curve to B.C. of curve
 no. 3 2° curve to left

Measured from west side of 28th St
 up track 469 to P.T. (?) Park end
 615.5 to East line of 27th St
 697.0 to East end

Los Angeles Packing Co.
Room 432 Broadway Block



Adel	2'3" x 4'2"	9.37	
"	1'3" x 6'0"	13.50	
"	28'4" x 38'11"	1102.64	1125.51
Sub-trunk	4'2" x 0'4 1/2"	1.56	
"	3'0" x 0'6"	1.50	
"	7'5" x 5'3"	39.80	
"	8'00" x 1'6"	12.00	53.86
			1071.65

$\begin{array}{r} 6.75 \\ 1.75 \\ \hline 33.75 \\ 47.25 \\ \hline 5.0625 \end{array}$
 $\begin{array}{r} 30.0 \\ 30.75 \\ \hline 27.25 \\ 197.5 \\ 11.65 \\ \hline 1412.12 \end{array}$
 $\begin{array}{r} .83 \\ .83 \\ 24.9 \\ 78.89 \\ 78.89 \\ 35.1556 \\ 63.712 \\ \hline 522.3 \\ 192.0206 \end{array}$

$\begin{array}{r} 1412.12 \\ 11.68 \\ \hline 1400.44 \end{array}$

Wash House

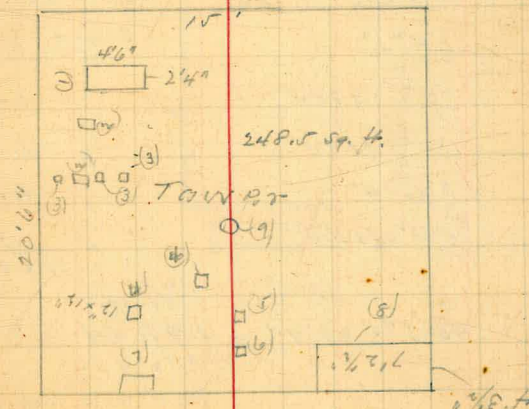
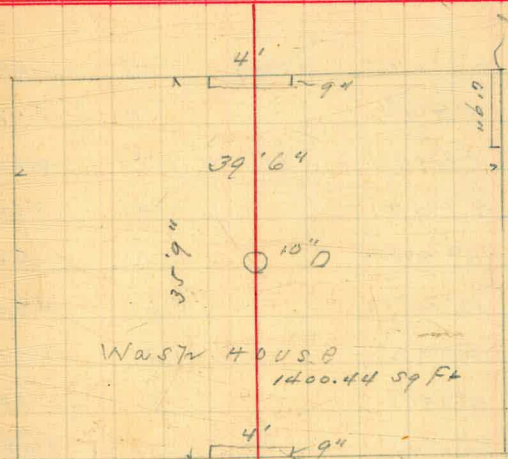
$39'6" \times 35'9"$ 1412.125
 Loss $(4' \times 9")$ 2 = 3×2 6.0
 " $6'9" \times 9"$ 5.062
 " $10' \times 7'8"$.62 11.68
 $1412.12 - 11.68 = 1400.44 \text{ Sq. Ft.}$

Tower

$20'6" \times 15'$ 307.5 sq. ft.
 Loss $4'6" \times 2'4"$ (1) 10.5
 " $(1'1" \times 10")$ 2 (2) 11.8
 " $(7\frac{1}{2}" \times 9\frac{1}{2}")$ 3 (3) 1.48
 " $(12" \times 12")$ 2 (4) 2.00
 $8' \times 8\frac{1}{2}"$ (5) 1.88
 $8' \times 7\frac{1}{2}"$ (6) }
 $1'3" \times 1'10\frac{1}{2}"$ (7) 2.34
 $4'3\frac{1}{2}" \times 7'2\frac{1}{2}"$ (8) 39.35
 $10' \times 7'8"$ (9) .65
 $\begin{array}{r} 307.5 \\ 59.00 \\ \hline 248.5 \end{array}$

$\begin{array}{r} 3.14 \\ 2.670 \\ \hline 2.512 \\ 15.80 \end{array}$

25



2170 6
1884

$$3.14 \overline{) 4.250} \quad (13$$
$$\begin{array}{r} 1110 \\ 942 \\ \hline 168 \end{array}$$

4 7/2 Fluor

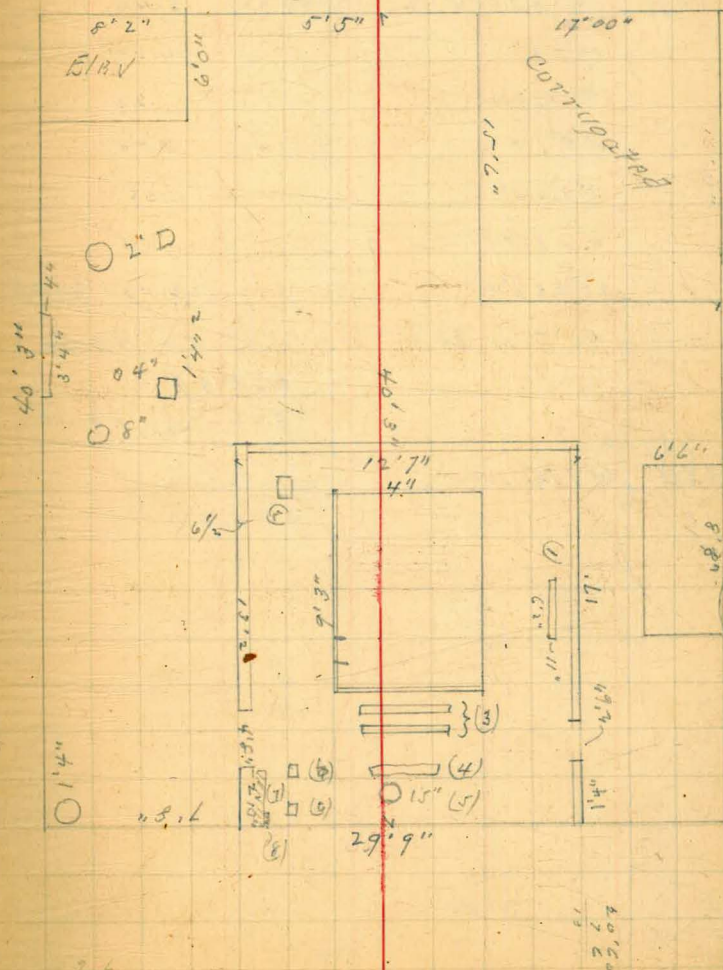
1ST Floor under Tower "West Room"

Lot	Dimensions	Notes	Area
1	6'2" x 11"	Scal B	5.65
2	(1'4") ²		1.77
3	(5'3" x 11") 2	(481 x 2)	9.62
4	4'1" x 11"		3.74
5	15' x 7.854		1.22
6	(12" x 6") ²		1.00
7	2'9" x 12"		2.75
8	12' x 4"		.33
9	26'6" x 3"	Sills for interior	6.63
10	8'2" x 6'		49.00
11	17' x 15'6"		263.50
12	(1'4") ²		1.77
13	(1'4") ² x 7.854		1.40
14	(2') ² x 7.854		3.14
15	3'4" x 4"		1.11
16	(8") ² x 7.854		.34
			<u>352.97</u>

40'5" x 29'9" = 1197.44
352.97
844.47 sq. ft

$$\begin{array}{r} 9^{\circ} 34' \\ 2 \\ \hline 18^{\circ} 68' \\ 2 \\ \hline 36^{\circ} 68' \times 2 \end{array} \quad \begin{array}{r} 4 \\ 2 \\ \hline 8 \end{array}$$
$$\begin{array}{r} 8'2 \\ \sqrt{5} \\ 164 \\ \hline 306 \end{array} \quad \begin{array}{r} 3.14 \end{array} \quad \begin{array}{r} 6.33 \\ 6.26 \end{array} \quad \begin{array}{r} (2) \\ 13 \\ 14 \end{array}$$

26



1597.5
655
1606.5

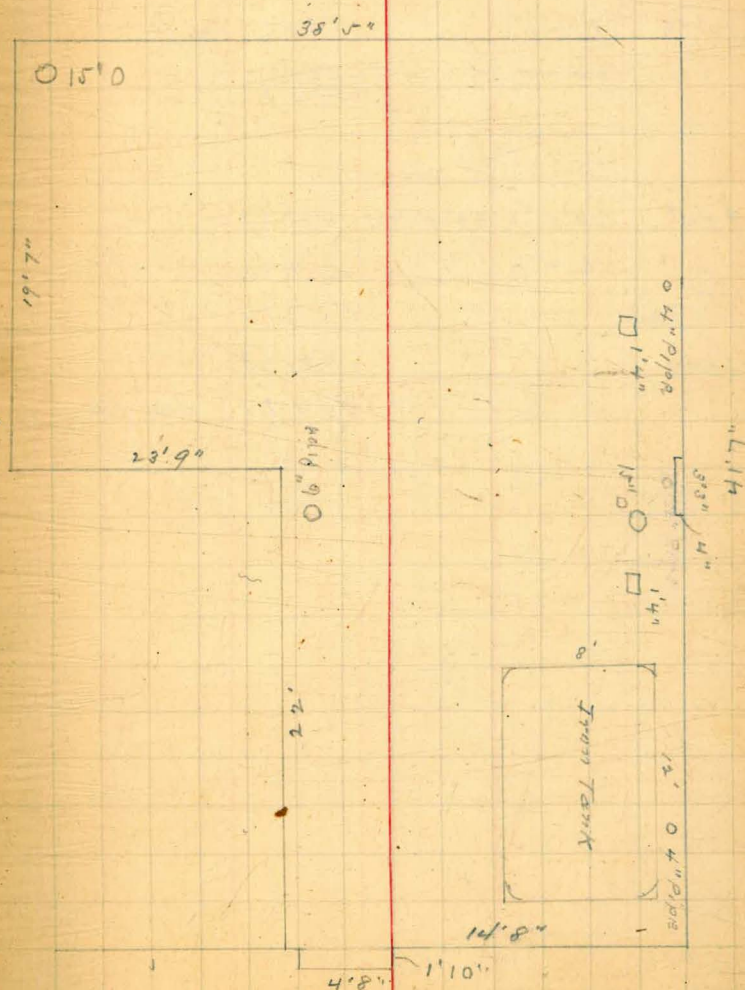
41.7

27

4th Floor

1st Floor under Tower East Room

LASS	(15" x 7854) 2	(1.22 x 2)	2.44	
	12' x 8'		96.00	
	4" x 7854) 2		.20	
	(1'4") x 2	(1.77 x 2)	3.55	
	3'3" x 4"		1.08	
	6" x 7854		.20	
	22' x 23'9"		522.50	625.97
	41'7" x 38'5"		1597.50	89.44
			625.97	
			971.53	89.44
Add	4'8" x 1'10"		6.55	
			980.08	



7th Floor1st Floor under tower Middle North roomLess (1'11")² 3.67 Sq. ft." 6'4" x 8'7" 54.36
58.03 " "

Add 20'8" x 22'5" = 463.27

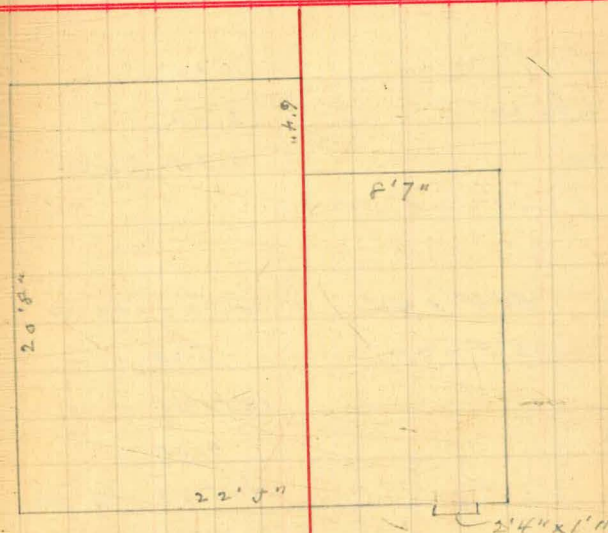
" 2'4" x 1'11" = 4.47

Total 467.74

less 58.03

409.71 Sq. ft.

Sitting Tub Room



Fermenting Room 3rd Floor

Less $(1'11")^2 \times 2$
2 sq ft

7.35

2.00

Less

9.35 sq ft

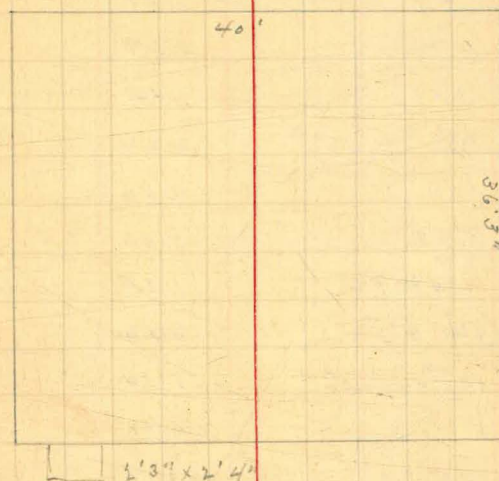
Add 36'3" x 40' = 1450.0 sq ft

" 2'3" x 2'4" 5.25 " "

1455.25 " "

9.35

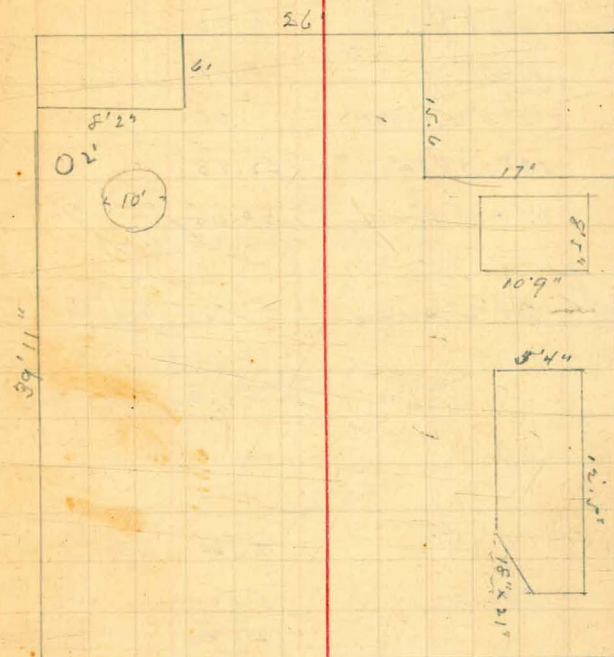
1445.90 sq ft



Tank room 3rd Floor

Less	$(1'4")^2$	1.77
	$(11" \times 9")$	1.37
	$(12" \times 8")$	1.44
	$(15")^2 + (12")^2$	2.22
	$3' \times 3'$	9.00
	$9' \times 1'$	9.00
	$(12" \times 8")/2$	1.33
	$(12" \times 9")$	1.50
	$(10')^2 \times .7854$	78.54
	$8'2" \times 6'$	49.00
	$14' \times 15'6"$	263.50
	$10'9" \times 8'5"$	90.48
	$(13'5" \times 5'4") - (1' \times 2')$	63.60
		<u>572.75</u>

Add	$39'11" \times 26'$	1038.2
Less		<u>572.75</u>
		465.45

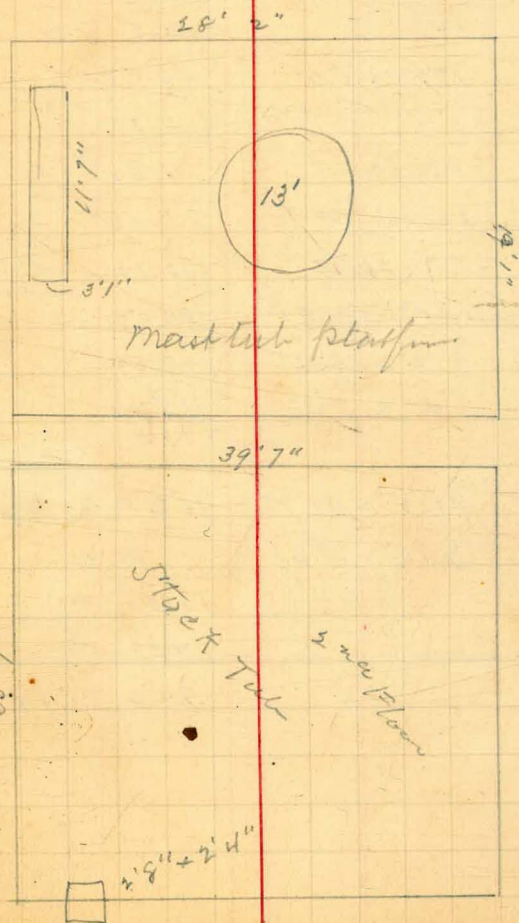


Less	$(12" \times 8") \times 4$	2.66
"	$(1'4")^2$	1.77
"	$(12")^2 \times .7854$	.78
"	$13" \times .7854$	1.32.73
"	$11' \times 3'1"$	<u>38.30</u>
		176.24

Add	$28'2" \times 19'1" = 537.5$	Sq. ft.
Less	<u>176.24</u>	
	361.26	Sq. ft.

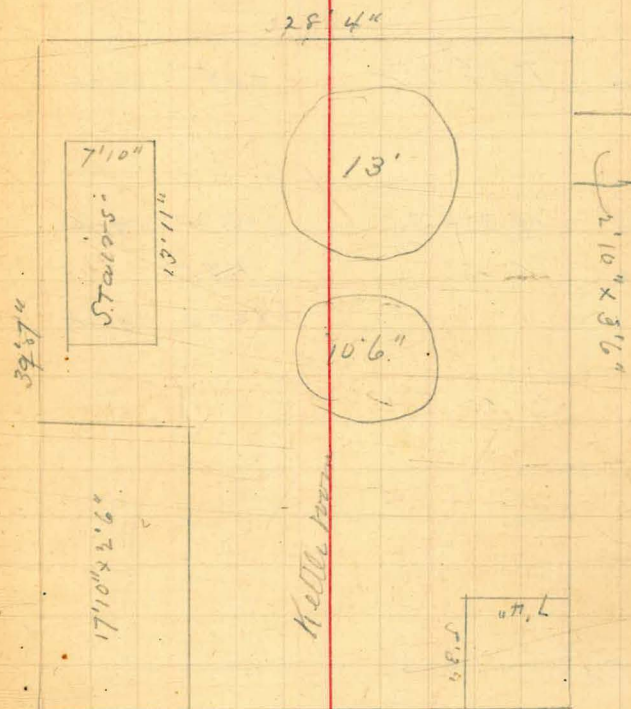
Less	$(1'11")^2 \times 2$	7.34	Sq. ft.
"	589. ft	<u>5.00</u>	" "
		12.34	" "

Add	$39'7" \times 35'7"$	1408.5	Sq. ft.
"	$2'8" \times 2'4"$	<u>6.22</u>	
		1414.72	
Less		<u>12.34</u>	
		1402.38	



Kettle Room 2nd Floor

Less	(10' x 13') 2	1.8	Sq Ft
	12 1/2' □	12.5	" "
	17'10" x 2'6"	44.58	" "
	(1'4") 2	1.77	
	1 Sq Ft	1.00	
	(1'6" x 6") 4	3.00	
	(13' x 7'6 1/2")	132.73	
	10.5' x 7'6 1/2"	86.59	
	7'10" x 13'11"	109.00	
	7'4" x 5'3"	38.50	
		431.47	
Add	28'4" x 39'7" =	1121.6	Sq Ft
	2'10" x 3'6" =	9.9	" "
		1131.5	
Less		431.5	
		700.0	Sq Ft

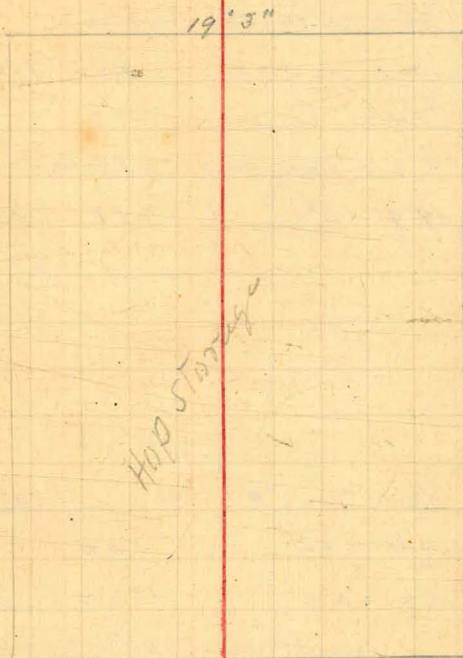


Hop Storage 2nd Floor

Less	$(1'4")^2$	1.77	Sq ft
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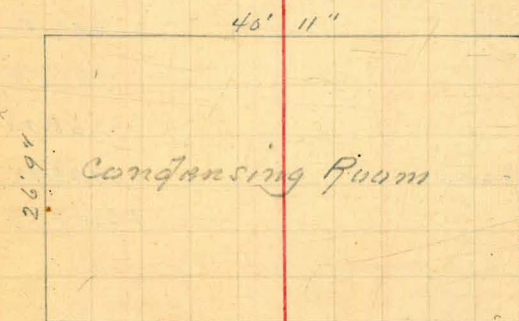
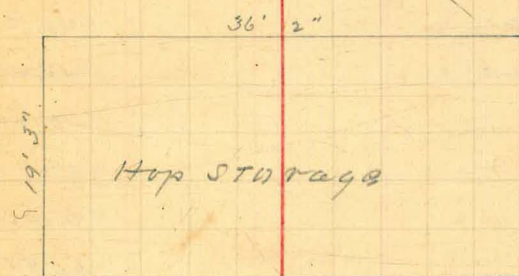
Add	$19'3" \times 35'$	673.75	Sq ft
-----	--------------------	--------	-------

Less		1.75	
		672.00	Sq ft



Add	36' 2" x 19' 3"	696.2	89. ft
"	2' 3" x 3' 10"	8.62	704.82
Less	(1' 4") ²	1.77	
	(9" x 15") ²	1.87	
	19' 9" x 6"	9.88	- 13.42
			691.40

Add	40' 11" x 26' 9"		1094.5
Less	(1' 4") ² x 3	5.30	
"	6' 2" x 6' 9"	41.62	46.92
			1047.58



	Net Sq. Ft
Tower	248.5
4 th Floor	844.47
" "	980.08
" "	409.71
5 th " "	1445.90
" "	465.45
Platform	361.26
Structures	1402.38
	700.00
	672.00
	691.40
	1047.56
	9268.73
Wash House	1400.44
	10669.17

1.39

46.57

45.18

3.47

43.10

23⁰⁰

5.37

2.44

44.13

PM

2.85

34.64

31.79

5.14

29.5

E

6.14

0

6.00

122.15

116.15

116.25

5.90

118.5

3.65

Willow

Oak

Shrub

Cedar

Alum

187

135.55

132.68

5.55

130.00

4.55

137.00

Data

140.68

140.5

142.0

Elm

July 19th 1899

Well No	+	41	-	Elev.	Grade	Slope - 08:40 = 12:100
A				50.51	50.16	Assumed Elev. 2' above water at Sta "1"
0				50.17	50.08	
1	7.90	55.90		49.72	50.00	
2					49.92	
3			4.53	51.57	49.84	1.53
4			4.36	51.54	49.76	1.78
5			3.92	51.98	49.68	2.30
6			3.89	52.01	49.60	2.41
7			3.88	52.02	49.52	2.50
8			3.85	52.05	49.44	2.61
9	45°00' R		4.15	51.75	49.36	2.39
10			4.34	51.56	49.28	2.28
11			4.33	51.57	49.20	2.37
12			4.43	51.47	49.12	2.35
13			4.50	51.40	49.04	2.36
14			4.07	51.83	48.96	2.87
15			4.03	51.87	48.88	2.99
16			4.03	51.87	48.80	3.07
17			4.23	51.67	48.72	2.95
18			4.13	51.77	48.66	3.11

Abandoned

See Page 40

Sta	+	HI	-	Elav.	
4	5.11	56.65		51.54	50.00
I			6.93	49.72	Top of Pipe
O			6.48	50.17	50.08
A			6.14	50.51	50.16
B.M.			5.65	51.00	B.M.
B			4.25	52.40	50.08
C			4.41	52.24	50.00
D			4.13	52.52	49.92
E			4.02	52.63	49.84
F			3.80	52.85	49.76
G			3.63	53.02	49.68
H TP	4.41	57.55	3.51	53.14	49.60
J			4.25	53.30	49.52
K			4.06	53.49	49.41
L			4.05	53.50	49.36
M			4.16	53.39	49.28
N			4.13	53.42	49.20
O			4.23	53.32	49.12
P			4.05	53.50	49.04
R			3.87	53.68	48.96
S			3.90	53.65	48.88
T			4.23	53.32	48.80
U			3.97	53.58	48.72

$\Delta 25^\circ R$ (Back sight on Sta 4g)

0.09

0.35

55' West Sta O - near N Bank

Abandon

[illegible]

Sta	+	HT	—	Elev
	3.11	54.86		5
9	45°00'R			51.75
10			3.00	51.86
11			3.31	51.55
12			3.28	51.58
13			3.37	51.49
14			3.30	51.56
15			3.80	51.06
16			3.91	50.95
17			3.93	50.93
18			4.01	50.85
19	29°00'R		4.30	50.56
20			3.98	50.88
21			4.17	50.69
22			4.10	50.76
23			4.22	50.64
24			4.21	50.65
25			4.35	50.51
26	3.90	54.23	4.53	50.33
27			4.17	50.06
28			4.33	49.90
29			4.37	49.86

x Engine

S/a	+	H1	-	E/100
		54.23		
30			4.12	50.11
31			4.21	50.02
32			4.25	49.98
33			4.24	49.99
34			4.24	49.99
35			4.47	49.76
36			4.50	49.73
37			4.65	49.58
38			4.87	49.36
39			4.90	
40			4.98	

	+	H1	-	Elev
+50			3.60	49.58
TP 9	3.94	53.18	5.11	49.24
+50			5.03	49.32
8			5.10	49.25
+50			4.87	49.48
7			5.11	49.24
+50			5.03	49.32
6			4.71	49.64
+50			4.69	49.66
5			4.85	49.50
+50 $\Delta 15^\circ R$			4.67	49.68
4			4.88	49.47
+50			4.30	50.05
3			4.67	49.68
+50			4.29	50.06
2			4.13	50.22
+50			4.30	50.05
1			4.16	50.19
+50			4.35	50.00
0			3.82	50.53
	3.50	54.35		50.85

S 57° 45' W
(mag)

S 57° 45' W
(mag)

18°30' L

45° L - 36°

	+	H1	-	ELUV
20			4.37	48.03
+50	21°30' L		4.56	47.84
19			4.49	47.91
+50			4.17	48.23
18			4.12	48.28
TR +50	4.05	52.40	4.83	48.35
17			4.73	48.45
+50			4.63	48.55
16			4.74	48.44
+50			5.02	48.16
15			4.92	48.26
+50			4.99	48.19
14			4.76	48.42
+50			4.75	48.43
13	10°00' R		4.63	48.55
+50			4.45	48.63
12			4.57	48.61
+50			4.56	48.62
11			4.44	48.74
+50			4.30	48.88
10			3.77	49.41
		53.18		

53.18

5053
4728
3.25

44

	+	#1	-	E/100
+36	45.000.2		3.53	47.28
24	4.68	50.81	6.27	46.13
+50			5.98	46.42
23			6.20	46.20
+50			5.14	47.26
22			5.02	47.38
+50			5.00	47.40
21			5.16	47.24
20+50			4.75	47.65
		52.40		

on grade top lower plank in Flume
52.40

	+	HI	-	FIRO.
B.M.	9.23	16.83		7.60
T.P.	5.63	21.44	1.02	15.81
	3.14	19.31	5.27	16.17
0 B			2.6	16.7
0 C			3.0	16.3
0 D			3.4	15.9
0 E			3.8	15.5
0 F			4.0	15.3
0 G			4.4	14.9
0 H			5.0	14.3
0 I			5.7	13.6
0 J			6.1	13.2
0 K			7.0	12.3
0 L			7.4	11.9
0 M			7.9	11.4
24 M			8.1	11.2
24 L			7.4	11.9
24 K			6.9	12.4
24 J			6.3	13.0
24 I			5.7	13.6
24 H			4.7	14.6

Ling Cal. South. B.R. and Brewery Road.

Gas pipe near Ling Road, N. of N. Rail.

Gas pipe N.W. Cor.

	+	H 1	-	Elev
		19.31		
24 G			4.8	14.5
24 F			4.3	15.0
24 E			3.0	16.3
24 D			3.3	16.0
24 C			2.2	17.1
24 B			2.0	17.3
0-24			2.0	17.3
0-23			1.8	17.5
23-13			2.1	17.2
C			2.8	16.5
D			3.4	15.9
E			3.9	15.4
F			4.2	15.1
G			4.6	14.7
H			5.1	14.2
I			5.6	13.7
J			6.3	13.0
K			7.0	12.3
L			7.5	11.8
23-M			8.4	10.9
21-M			7.6	11.7

	+	H.I	-	E/H.W
		19.31		
21-L			7.4	11.9
K			6.7	12.6
J			6.3	13.0
I			6.2	13.1
H			6.5	12.8
G			7.2	12.1
F			7.1	12.2
E			7.0	12.3
D			6.9	12.4
C			6.8	12.5
B			7.6	11.7
0-21			9.0	10.3
0-19	x		10.7	8.6
19-B			11.1	8.2
C			11.1	8.2
D			10.9	8.4
E			11.1	8.2
F			10.8	8.5
G			10.8	8.5
H			10.6	8.7
I			10.3	9.0

	+	41	-	Elm. 2.
19-J		19.31	9.1	10.2
K			8.1	11.2
L			8.3	11.0
M			8.9	10.4
T.P.	9.06	16.46	11.91	7.40
17.M			10.5	6.0
L			10.6	5.9
K			10.2	6.3
J			11.0	5.5
I			10.4	6.1
H			9.7	6.8
G			9.1	7.4
F			9.2	7.3
E			8.6	7.9
D			8.3	8.2
C			8.0	8.5
B			7.7	8.8
0-17			6.1	10.4
0-15			8.2	8.3
15-B			6.5	10.0
C			7.1	9.4

	+	141	-	E/122
		16.46		
15-D			7.7	8.8
E			8.1	8.4
F			8.3	8.2
G			9.0	7.5
H			9.3	7.2
I			9.3	7.2
J			9.7	6.8
K			10.9	5.6
L			11.5	5.0
15-M			11.7	4.8
13-M			11.0	5.5
L			10.4	6.1
K			9.7	6.8
J			9.0	7.5
I			8.6	7.9
H			8.1	8.4
G			8.1	8.4
F			7.4	9.1
E			7.4	9.1
D			7.0	9.5
C			6.2	10.3

	+	H1	-	E1B2
		16.46		
13-B			7.4	9.1
0-13			7.1	9.4
Track			7.0	9.5
0-11			4.9	11.6
11-13			4.6	11.9
C			4.2	12.3
D			5.6	10.9
E			6.5	10.0
F			7.0	9.5
G			7.1	9.4
H			7.0	9.5
I			7.2	9.3
J			7.9	8.6
K			9.0	7.5
L			9.5	7.0
11-M			9.8	6.7
9-M			9.0	7.5
L			8.5	8.0
K			7.4	9.1
J			7.4	9.1
I			6.9	9.6

	+	H1	-	Elev
		16.46		
9-H			6.7	9.8
G			6.2	10.3
F			6.2	10.3
E			5.8	10.7
D			5.4	11.1
Tract C			5.6	10.9
B			3.6	12.9
0-9			1.8	14.7
0-7			0.0	16.5
7-B			2.8	13.7
C			3.7	13.8
D			4.8	11.7
Tract E			5.1	11.4
E			4.5	12.0
F			5.2	11.3
G			5.1	11.4
H			4.8	11.7
I			6.1	10.4
J			7.0	9.5
K			7.0	9.5
L			7.4	9.1
9-M			7.4	9.1

	+	H 1	-	E/H 2
		16.46		
5-M			6.1	10.4
L			5.1	11.4
K			5.1	11.4
J			4.8	11.7
I			4.2	12.3
H			4.9	11.6
G			3.7	12.8
Tract F			4.5	12.0
E			3.1	13.4
D			3.8	12.7
C			3.9	12.6
B			2.3	14.2
0-5			0.5	16.0
0-3			2.4	14.1
3-B			3.1	13.4
C			2.3	14.2
D			2.0	14.5
E			2.3	14.2
F			2.5	14.0
G			2.5	14.0
Track			4.2	12.3

	+	H ¹	-	E/H ²
		16.46		
3-H			2.2	14.3
I			2.5	14.0
J			2.9	13.6
K			3.3	13.2
L			3.5	13.0
3-M			5.0	11.5
1-M			6.1	10.4
L			4.4	12.1
K			3.7	12.8
J			4.0	12.5
I			4.4	12.1
H			4.4	12.1
G			4.6	11.9
F			5.3	11.2
E			5.2	11.3
D			4.8	11.7
C			5.2	11.3
B			5.0	11.5
0-1			4.2	12.3
T.P.	6.88	16.20	6.64	9.82
N.E. Cor.			1.70	14.5

N.E. Cor

	+	H I	-	E/D.V.
		16.20		
B			3.9	12.3
C			3.4	12.8
D			3.7	12.5
E			4.3	11.9
F			4.9	11.3
G			5.4	10.8
H			6.0	10.2
I			6.2	10.0
J			6.9	9.3
¹⁰ T.M. K			4.3	11.9
L			7.0	9.2
M			7.0	9.20
T.P.	3.72	13.54		9.82
N			3.6	9.9
O			3.3	10.2
P			3.0	10.5
Q			2.6	10.9
R			2.7	10.8
S			1.8	11.7
T			3.1	10.4
U			3.1	10.4

	+	H1	-	E/130
		13.54		
V			4.0	9.5
W			6.5	7.0
X			6.5	7.0
Y			5.4	8.1
Z			4.7	8.8
S.E. Car			4.2	9.3
x-1			5.0	8.5
1-2			5.5	8.6
Y			7.8	5.7
x			7.1	5.4
W			6.3	7.2
V			5.0	8.5
U			3.7	9.8
T			4.0	9.5
S			2.3	11.2
R			3.3	10.2
Q			2.1	11.4
P			1.0	12.5
O			1.0	12.5
1-N			1.7	11.8
3-N			3.0	10.5

	+	H I	-	E I H U,
		13.54		
J-O			2.9	10.6
P			3.3	10.2
Q			4.0	9.5
R			3.8	9.7
S			3.8	9.7
T			4.3	9.2
U			5.3	8.2
V			5.7	7.8
W			6.0	7.5
X			7.2	6.3
Y			8.0	5.5
Z			6.8	6.7
X-3			6.3	7.2
X-5			7.5	6.0
5-Z			7.6	5.9
Y			8.8	4.7
X			8.0	5.5
W			7.3	6.2
V			6.1	7.4
U			6.8	6.7
T			6.3	7.2

	+	H I	-	ELMU
		13.54		
5-S			5.4	8.1
R			4.3	9.2
Q			4.7	8.8
P			4.0	9.5
O			3.8	9.7
5-N			4.2	9.3
7-N			5.2	8.3
O			4.9	8.6
P			4.9	8.6
Q			5.6	7.9
R			4.0	9.5
S			5.9	7.6
T			6.3	7.2
U			6.6	6.9
V			7.9	5.6
W			7.5	6.0
X			6.8	6.7
Y			8.5	5.0
Z			8.5	5.0
7-X			8.2	5.3
9-X			3.8	9.7

	+	H I	-	E/nu,
		13.54		
9-Z			3.9	9.6
Y			5.3	8.2
X			5.8	7.7
W			4.8	8.7
V			6.8	6.7
U			6.8	6.7
T			6.0	7.5
S			6.0	7.5
R			6.0	7.5
Q			6.0	7.5
P			6.2	7.3
O			6.2	7.3
TPg-N	5.50	13.60	5.44	8.10
11-N			7.1	6.5
O			7.0	6.6
P			6.6	7.0
Q			6.9	6.7
R			6.6	7.0
S			7.2	6.4
T			6.8	6.8
U			6.9	6.7

	+	H I	-	E I H U
		13.60		
11-V			5.8	7.8
W			6.5	7.1
X			6.0	7.6
Y			5.2	8.4
Z			6.6	7.0
X-11			5.3	8.3
X-13			7.0	6.6
13-Z			7.7	5.9
Y			8.3	5.3
X			7.7	5.9
W			8.0	5.6
V			7.8	5.8
U			7.7	5.9
T			8.1	5.5
S			8.7	4.9
R			8.5	5.1
Q			8.5	5.1
P			8.7	4.9
O			8.7	4.9
13-N			8.6	5.0
15-N			8.7	4.9

	+	H1	-	E/100
		13.60		
N-O			8-8	4.8
P			8.7	4.9
Q			8.8	4.8
R			8.4	5.2
S			7-3	6.3
T			5-8	7.8
U			5.6	8.0
V			6.1	7.5
W			5.5	8.1
X			4.9	8.7
Y			5.1	8.5
Z			5.9	7.7
X N			5.7	7.9
X 17			6.8	6.8
17 Z			6.6	7.0
Y			6.0	7.6
X			5.0	8.6
W			4.0	9.6
V			3.8	9.8
U			3.4	10.2
T			3.0	10.6

	+	H1	-	E12.0.
		13.60		
17-S			2.9	10.7
R			3.9	9.7
Q			5.5	8.1
P			6.7	6.9
O			8.5	5.1
17-N			8.3	5.3
19-N			4.6	9.0
O			5.8	7.8
P			6.6	7.0
Q			5.2	8.4
R			5.8	7.8
S			5.3	8.3
T			5.1	8.5
U			5.6	8.0
V			6.7	6.9
W			7.0	6.6
X			7.0	6.6
Y			7.1	6.5
19-Z			7.9	5.7
X-19			8.3	5.3
X-21			9.2	4.4

	+	H I	-	E/R.V.
		13.60		
21-Z			8.5	5.1
Y			8.6	5.0
X			9.3	4.3
W			8.8	4.8
V			8.2	5.4
U			8.0	5.6
T			7.4	6.2
S			6.5	7.1
R			7.2	6.4
Q			6.7	6.9
P			5.7	7.9
O			3.8	9.8
TP. 21-N	1.83	12.57	2.86	10.74
23-N			2.3	10.3
O			2.2	10.4
P			3.0	9.6
Q			3.9	8.7
R			4.8	7.8
S			5.5	7.1
T			6.5	6.1
U			7.5	5.4

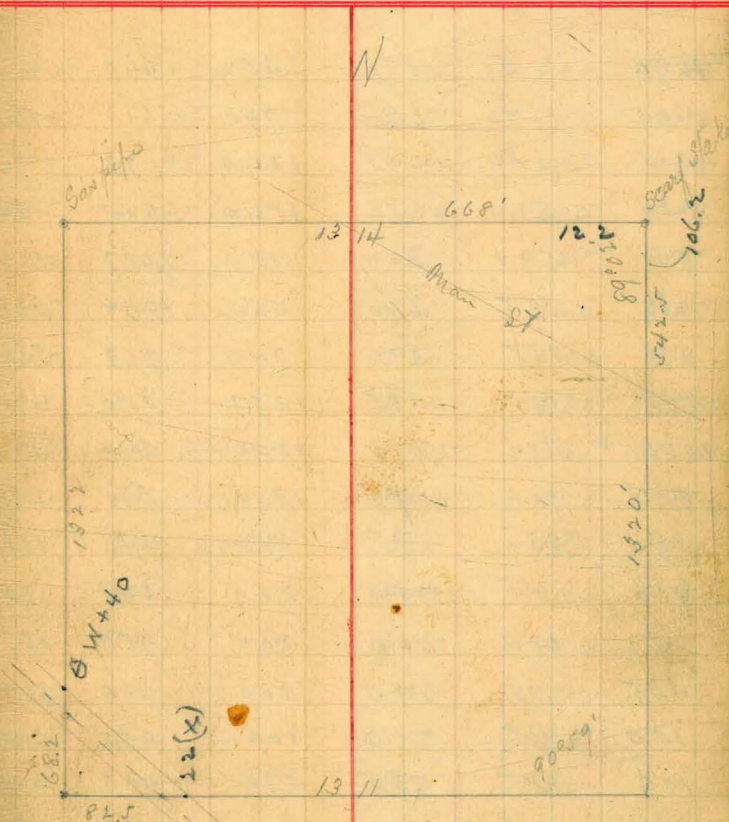
	+	H1	-	E134
		12.6		
V			7.6	5.0
W			8.0	4.6
X			8.5	4.1
23-Y			9.0	3.6
24-X			8.5	4.1
W			7.8	4.8
V			7.6	5.0
U			7.0	5.6
T			6.1	6.5
S			5.6	7.0
R			4.8	7.8
Q			4.1	8.5
P			3.5	9.1
O			2.5	10.1
24-N			2.0	10.6
8-N			2.2	10.4
O			2.8	9.8
P			3.5	9.1
Q			4.2	8.4
R			4.5	8.1
8 S			5.6	7.0

B.97 17p 13

S.E. 1/4 1167

	+	H/	-	ELMU.
		12.6		
θ T			6.3	6.3
U			7.1	5.5
V			7.7	4.9
W			8.2	4.4

1312
1321
1312



Cuts cu yds			Fills			Cut			Fill		
1670	50	170	352	690	620	35	300		45	300	185
1490	40	130	790	610	160	110	75		55	300	240
1315	32	245	1200	73	75	150	95		45	245	285
1280	520	1150	1500	925	75	355	35		55	110	555
927	590	500	150	1037	110	520	75		185	25	815
666	355	370	500	1000	335	665	580		425	520	845
270	155	370	740	963	530	740			520	500	710
890	555	335	1037	850	470	445			620	630	560
1000	670	170	1200	520	370	500	Cut 37845		40	365	120
900	710	90	1300	540	240	370	Fill 52771		260	460	90
880	230	75	850	740	115	265	Exp 16926		300	580	90
910	45	750	820	225	70	100			450	690	4495
750	610	600	200	955	185	155			640	900	
435	75	690	580	690	300	110			110	1150	
150	35	710	100	855	300	300			100	1185	
100	335	785	370	963	220	390			130	1000	
140	775	610	520	1136	160	380			480	690	
450	1055	410	220	1240	310	185			630	80	
630	480	150	380	1300	185	75			295	140	
450	185	110	470	1150	80	170			295	75	
1530.3	7502	8420	13279	16462	4910	6040			5680	9945	
	(31225)		*	(34651)							

Sec 1

N.W

+		+	-
1670			850
1530			600
1330		35	390
1160		105	225
922		310	85
800		10937	925
895		11387	1040
845			1000
860			940
925			855
10937			6910

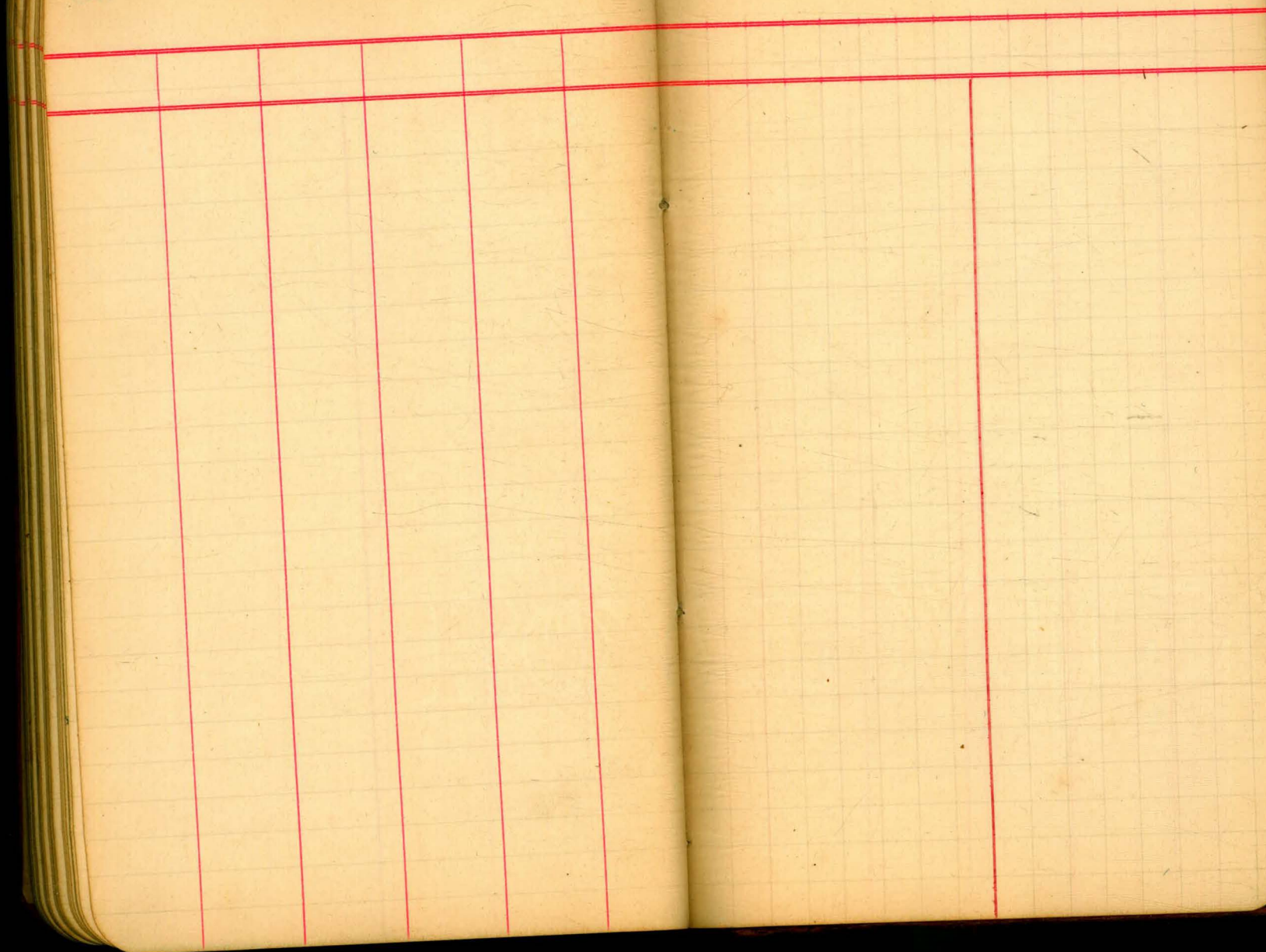
66

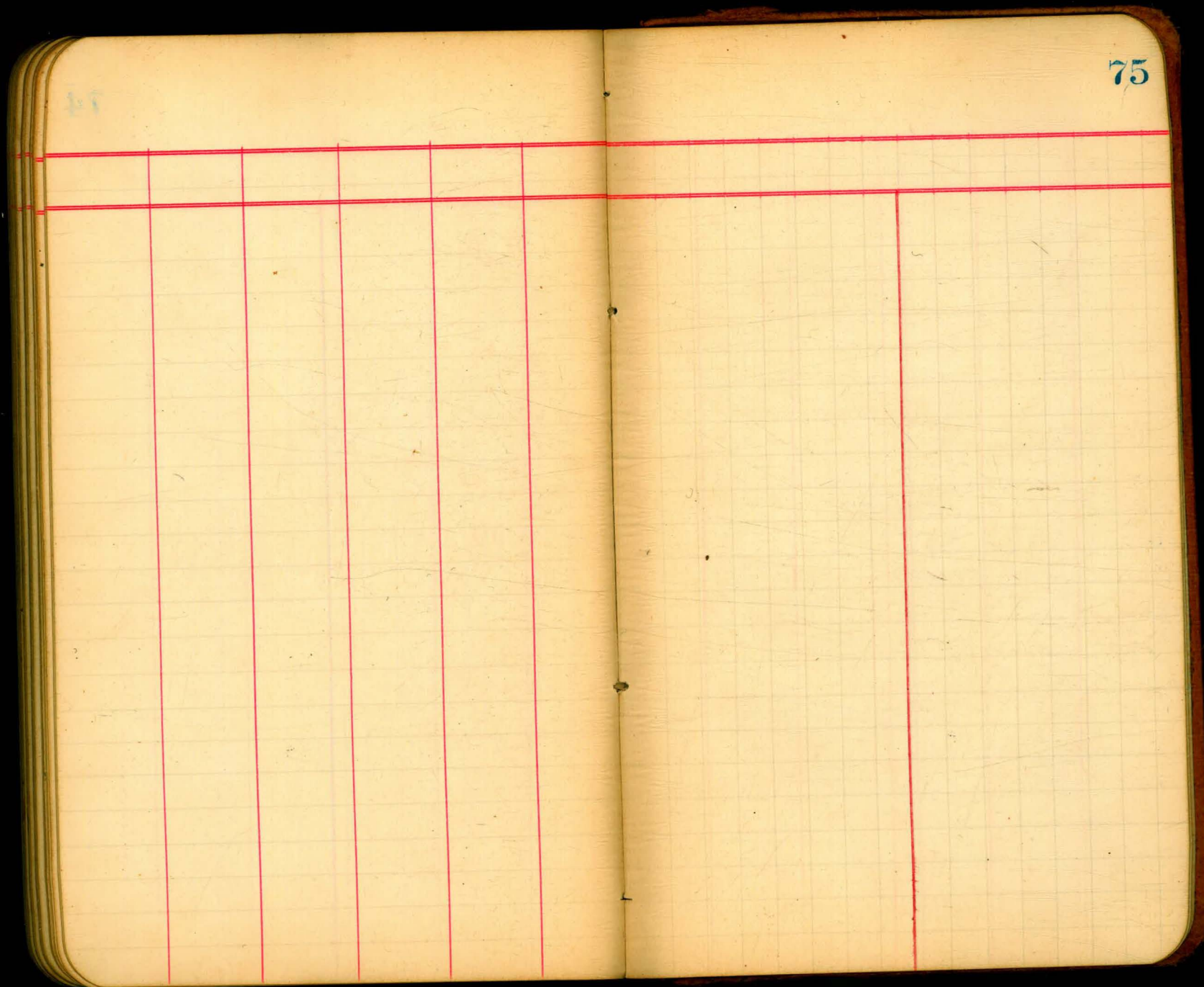
Sec - 2

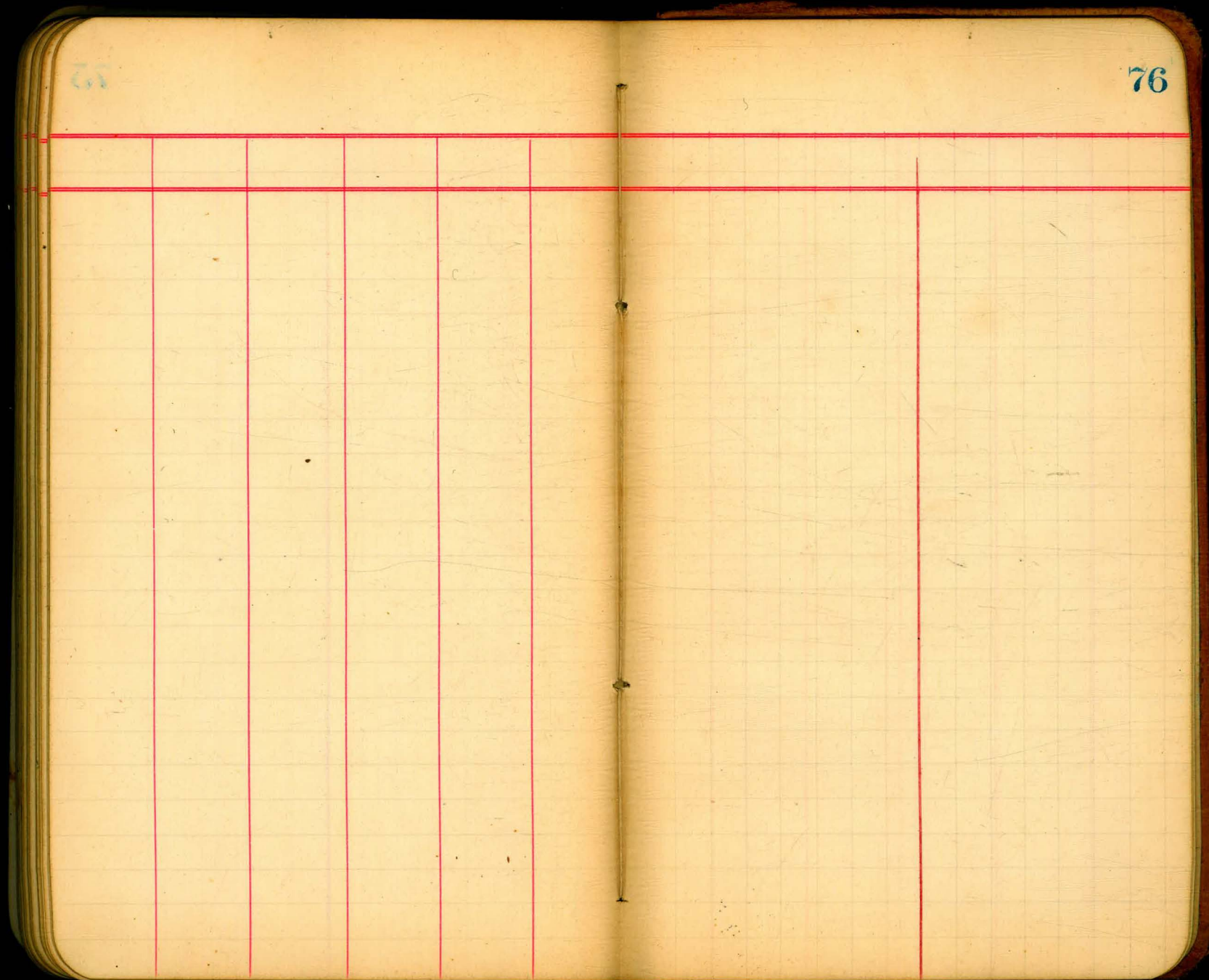
Sec. 3

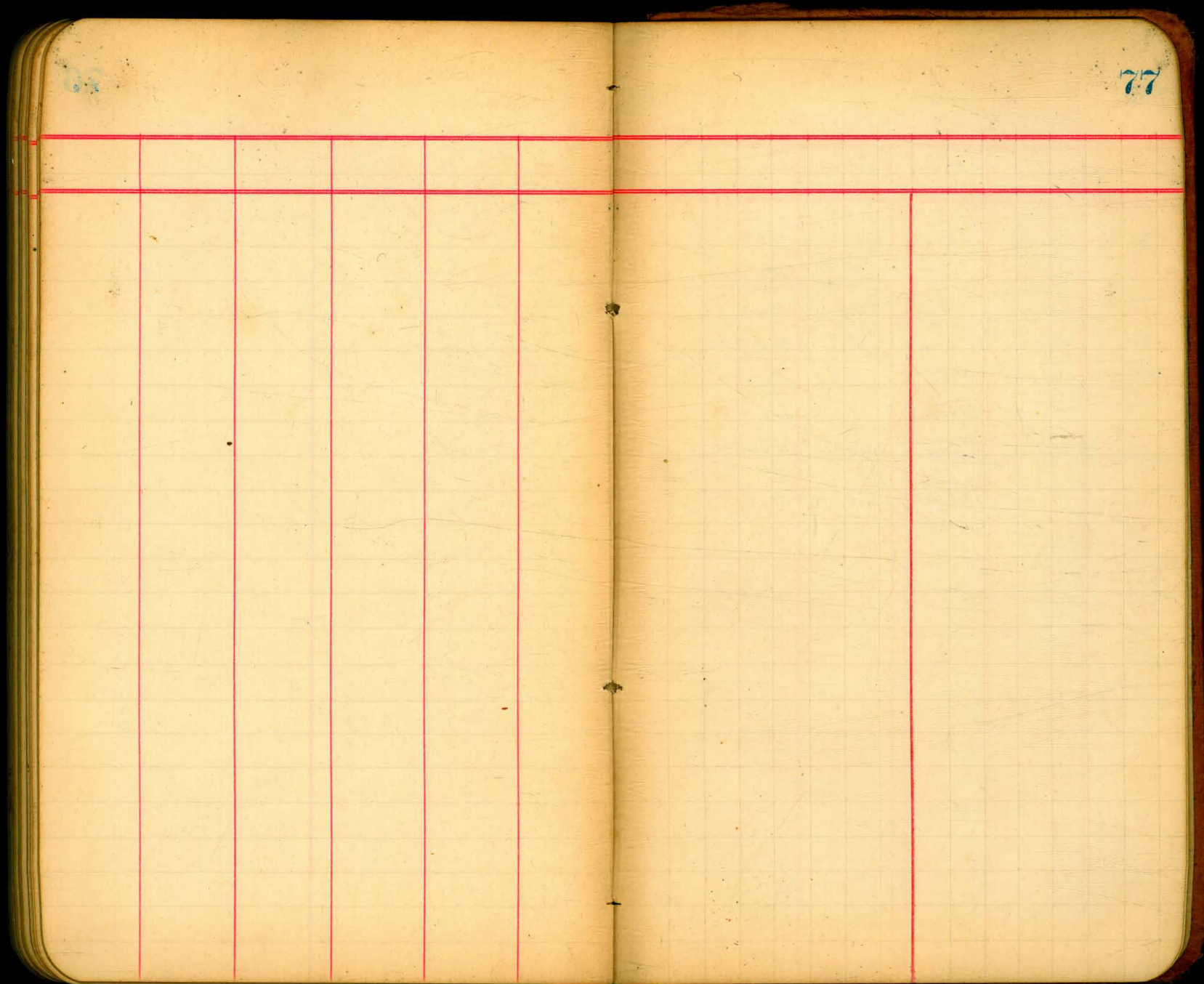
+	-	+	-
240		185	
335		185	
470		110	50
600		150	
765		370	
180		330	
80		295	
150		780	
225		530	
320		40	
110		2975	50
185			
400			
300			
260			
335			
480			
300			
260			
2520		3575	

	+ See	-
1	600	
1) 680		
345	150	
X	150	
1060		
2) 820		
340		
X	220	
980		
3) 830		
295	65	
X	300	
185	460	
90	340	
	410	
X 185	185	
T	T	









77

	+	H I	-	Elev
Sta 9	4.33	56.08		51.75
"			5.53	50.55
T.P.	5.00	55.26	5.82	50.26
TP	3.89	53.61	5.54	49.72
TP	2.83	53.09	3.35	50.26
T.P.	3.14	50.98	5.25	47.84
			3.60	47.38

Near fence post

Root

Top Bottom plants in Flume #4 Eng House

$$\begin{array}{r} 22.5 \\ 15 \\ \hline 13.5 \\ 33.75 \\ \hline 47.25 \\ 49.5 \\ \hline 630 \end{array}$$

$$\begin{array}{r} 7.5 \\ 600 \\ \hline 60.0 \\ 1200 \\ \hline 1200 \end{array}$$

$$\begin{array}{r} 2.5 \\ 60.0 \\ 1200 \\ \hline 1200 \end{array}$$

$$\begin{array}{r} 20.5 \\ 15 \\ \hline 102.5 \\ 105 \\ \hline 307.5 \end{array}$$

79

$$\begin{array}{r} 54 \\ 28 \\ \hline 432 \\ 108 \\ \hline 1512 \\ 144 \\ \hline 720 \end{array}$$

84.5

$$\begin{array}{r} 10.5 \\ 1.8 \\ 1.46 \\ 2.00 \\ 2.84 \\ 39.35 \\ \hline 59.99 \end{array}$$

10.5

$$\begin{array}{r} 7.5 \\ 9.5 \\ \hline 37.5 \\ 71.25 \\ \hline 213.75 \\ 148.75 \\ \hline 697 \\ 1215 \end{array}$$

148

29.75

40.25

148.75

59.50

1190.0

1197.4375



$$\begin{array}{r} 13 \\ 130 \\ \hline 130 \\ 260 \\ \hline 1160 \\ 1152 \end{array}$$

144

41.312

51.5

86.5

257.5

3090

4120

4474.75

432

1347

1296

535

230

59.55

52.05

1944

1.61

Loop's ranch East of Pueblo

Sept 1840

Wreck ranch in mouth of Canon
 Tractional north of ¹³⁶⁰ 1358 acca
 said by McPherson & Cassidy



BOOK.

GREE.	Degrees.
Dep.	
1.31	89
3.05	88
4.80	87
6.54	86
8.28	85
10.02	84
11.75	83
13.49	82
15.21	81
16.93	80
18.65	79
20.36	78
22.07	77
23.77	76
25.46	75
27.14	74
28.82	73
30.49	72
32.14	71
33.79	70
35.43	69
37.06	68
38.67	67
40.27	66
41.87	65
43.44	64
45.01	63
46.56	62
48.10	61
49.62	60
51.13	59
52.62	58
54.10	57
55.56	56
57.00	55
58.42	54
59.83	53
1.22	52
2.59	51
3.94	50
5.28	49
6.59	48
7.88	47
9.15	46
10.40	45
at.	Degrees.
E.	

erials,

From 2 of 37 1/2 to 3 1/4, Cor
 279
 of Mason's Cement 73.5

50.16
 48.66
 1.50

1259
 1111 1111 1111 1111

1299
 1311.3

2.3
 14.5

1935
 24
 89.11

1 - 0
 2 - 0.75
 3 - 1.61

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

5 - 3.31
 6 - 4.18
 7 - 5.1

210000
 5000 1800
 27
 230
 2100

Return to City Engineers Office
 City Hall, San Diego, Cal.
 TRAVERSE TABLE FOR TRANSIT BOOK.

From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		1/4 DEGREE.		1/2 DEGREE.		3/4 DEGREE.		Degrees.
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0	99.98	1.75	100.00	0.44	100.00	0.87	99.99	1.31	89
1	99.94	3.49	99.98	2.18	99.97	2.62	99.95	3.05	88
2	99.94	5.23	99.92	3.93	99.91	4.36	99.88	4.80	87
3	99.86	6.98	99.84	5.67	99.81	6.10	99.79	6.54	86
4	99.76	8.72	99.73	7.41	99.69	7.85	99.66	8.28	85
5	99.62	10.45	99.58	9.15	99.54	9.58	99.50	10.02	84
6	99.45	12.19	99.20	10.89	99.36	11.32	99.31	11.75	83
7	99.25	13.92	98.97	12.62	99.14	13.05	99.09	13.49	82
8	99.03	15.64	98.70	14.35	98.90	14.78	98.84	15.21	81
9	98.77	17.36	98.40	16.07	98.63	16.50	98.56	16.93	80
10	98.48	19.08	98.08	17.79	98.33	18.22	98.25	18.65	79
11	98.16	20.79	97.72	19.51	97.99	19.94	97.90	20.36	78
12	97.81	22.50	97.34	21.22	97.63	21.64	97.53	22.07	77
13	97.44	24.19	96.92	22.92	97.24	23.34	97.13	23.77	76
14	97.03	25.88	96.48	24.62	96.81	25.04	96.70	25.46	75
15	96.59	27.56	96.00	26.30	96.36	26.72	96.25	27.14	74
16	96.13	29.24	95.50	27.98	95.88	28.40	95.76	28.52	73
17	95.63	30.90	94.97	29.65	95.37	30.07	95.24	30.49	72
18	95.11	32.56	94.41	31.32	94.83	31.73	94.69	32.14	71
19	94.55	34.20	93.82	32.97	94.26	33.38	94.12	33.79	70
20	93.97	35.84	93.20	34.61	93.67	35.02	93.51	35.43	69
21	93.36	37.46	92.55	36.24	93.04	36.65	92.88	37.06	68
22	92.72	39.07	91.88	37.86	92.39	38.27	92.22	38.67	67
23	92.05	40.67	91.18	39.47	91.71	39.87	91.53	40.27	66
24	91.35	42.26	90.45	41.07	91.00	41.47	90.81	41.87	65
25	90.63	43.84	89.69	42.66	90.26	43.05	90.07	43.44	64
26	89.88	45.40	88.90	44.23	89.49	44.62	89.30	45.01	63
27	89.10	46.95	88.09	45.79	88.70	46.17	88.50	46.55	62
28	88.29	48.48	87.25	47.33	87.88	47.72	87.67	48.10	61
29	87.46	49.99	86.38	48.86	87.04	49.24	86.82	49.62	60
30	86.60	51.50	85.49	50.38	86.16	50.75	85.94	51.13	59
31	85.72	52.99	84.57	51.88	85.26	52.25	85.04	52.62	58
32	84.80	54.46	83.63	53.36	84.34	53.73	84.10	54.10	57
33	83.87	55.92	82.66	54.83	83.39	55.19	83.15	55.56	56
34	82.90	57.36	81.66	56.28	82.41	56.64	82.16	57.00	55
35	81.92	58.78	80.64	57.71	81.41	58.07	81.16	58.42	54
36	80.90	60.18	79.60	59.13	80.39	59.48	80.13	59.83	53
37	79.86	61.57	78.53	60.53	79.34	60.88	79.07	61.22	52
38	78.80	62.93	77.44	61.91	78.26	62.25	77.99	62.59	51
39	77.71	64.28	76.32	63.27	77.16	63.61	76.88	63.94	50
40	76.60	65.61	75.18	64.61	76.04	64.94	75.76	65.28	49
41	75.47	66.91	74.02	65.93	74.90	66.26	74.61	66.59	48
42	74.31	68.20	72.84	67.24	73.73	67.56	73.43	67.88	47
43	73.14	69.47	71.63	68.52	72.54	68.84	72.24	69.15	46
44	71.93	70.71	70.39	69.78	71.33	70.09	71.02	70.40	45
45	70.71								
Degrees.	DEGREES.		1/4 DEGREE.		1/2 DEGREE.		3/4 DEGREE.		Degrees.
	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	