

1464

~~Book 33~~



ENGINEERS
MINING
TRANSFER BOOK
No. 422

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning
Roadway 16 feet wide. Side Slopes 1 on 1.
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be $30.6 + (20 - 16) \div 2$ or 2 ft. added to $30.6 = 32.6$. For slopes of 1 on $1\frac{1}{2}$ see inside of back cover.

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897
278
370.32
376.51

1864.1
1450
1014

ENGINEERING DEPARTMENT
CITY OF SAN DIEGO,
CALIFORNIA.

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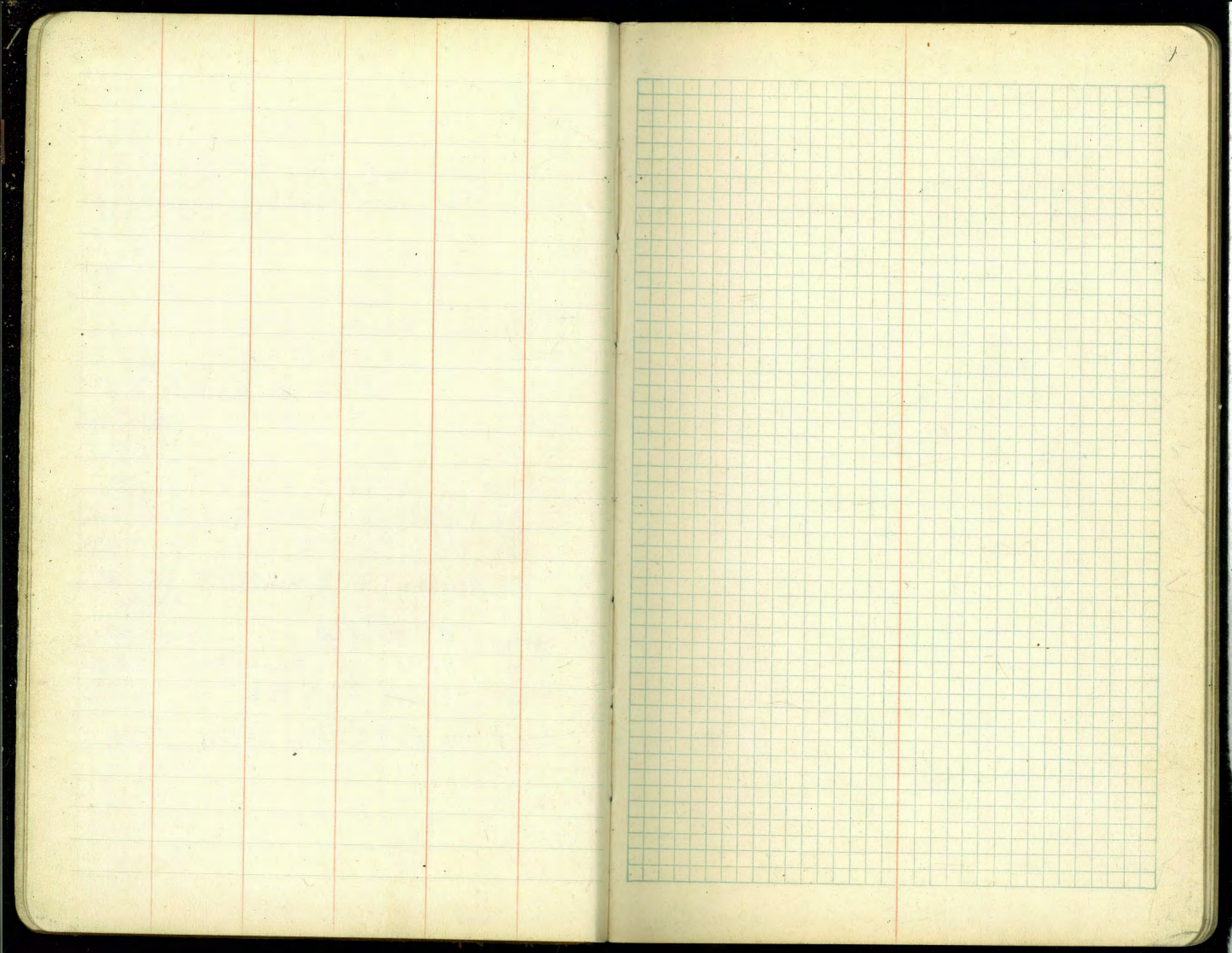
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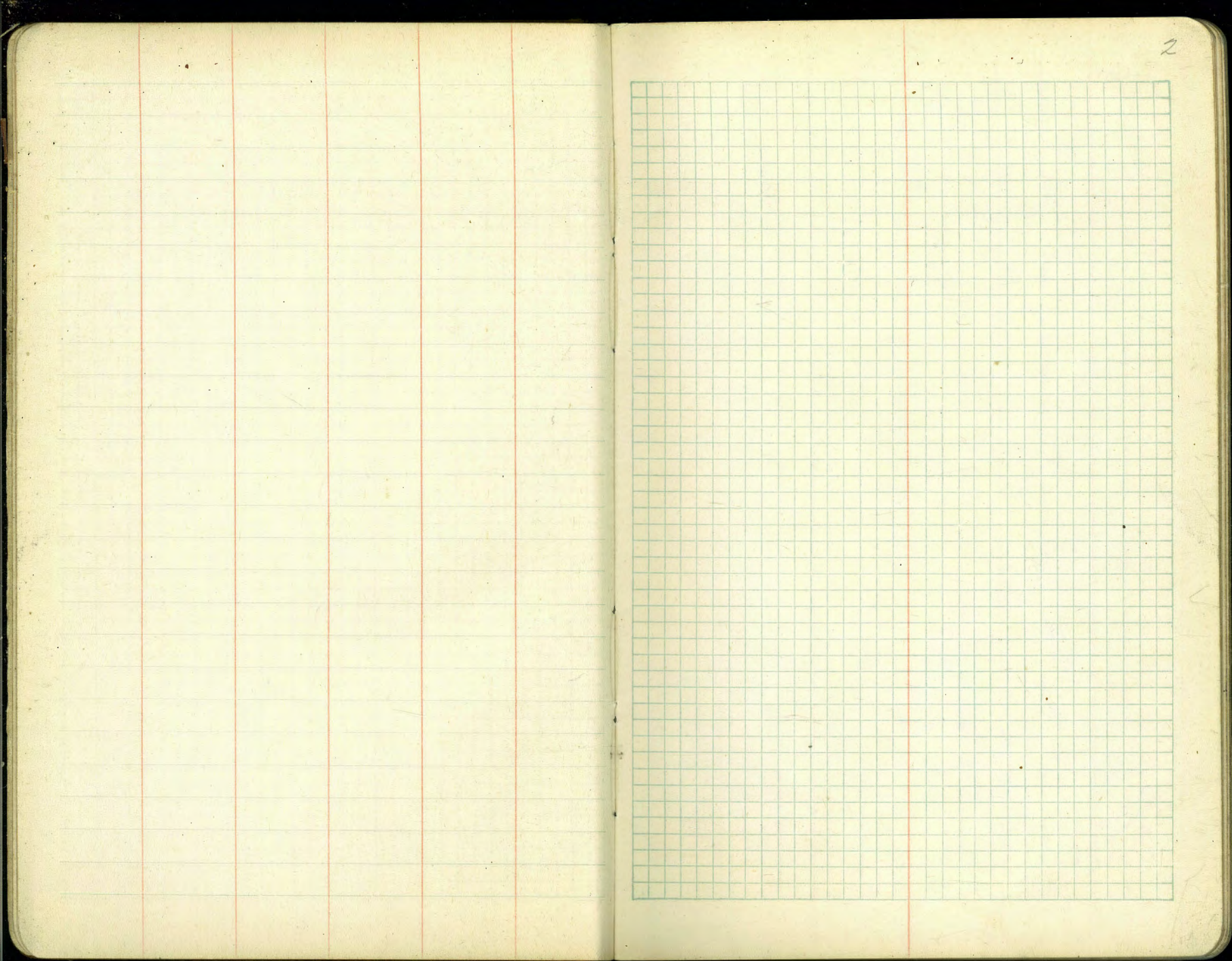
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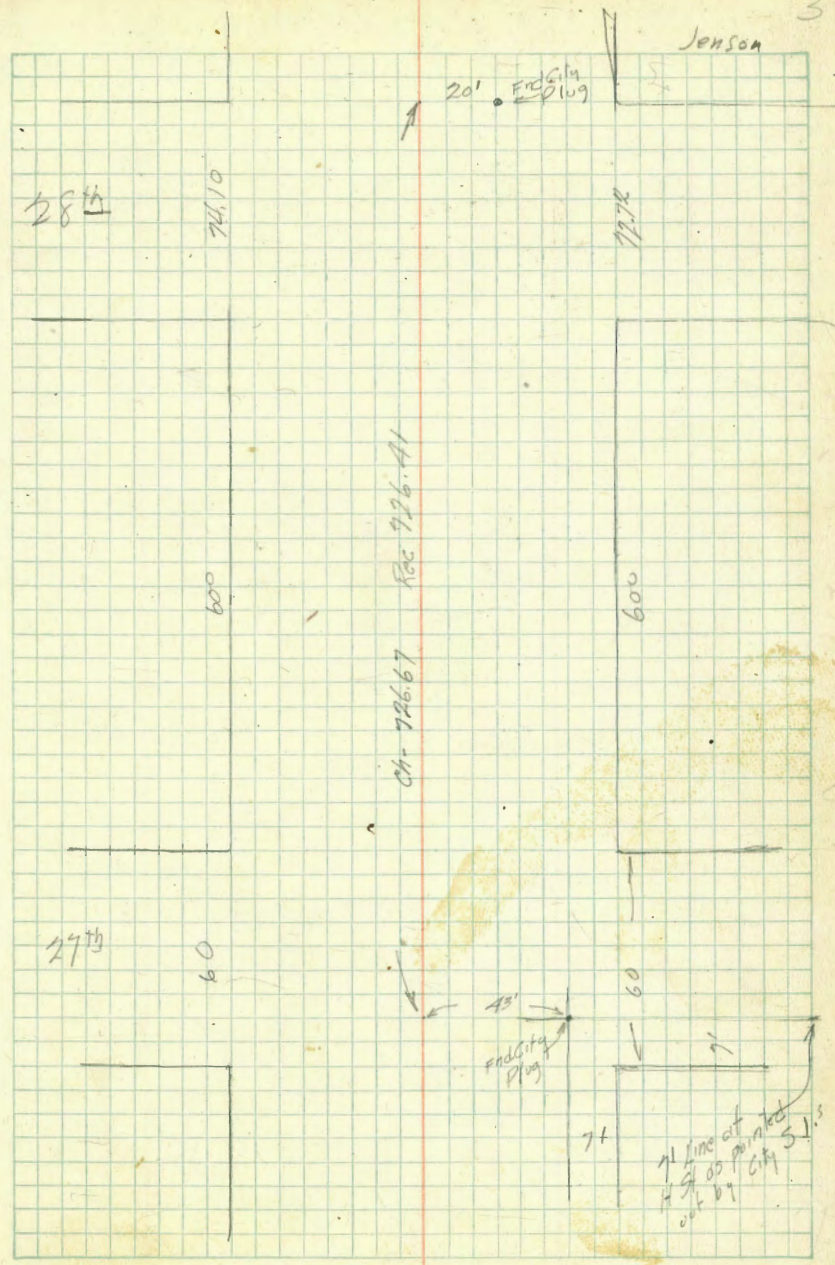
LIST OF B.M. Mkt St. Ext 74



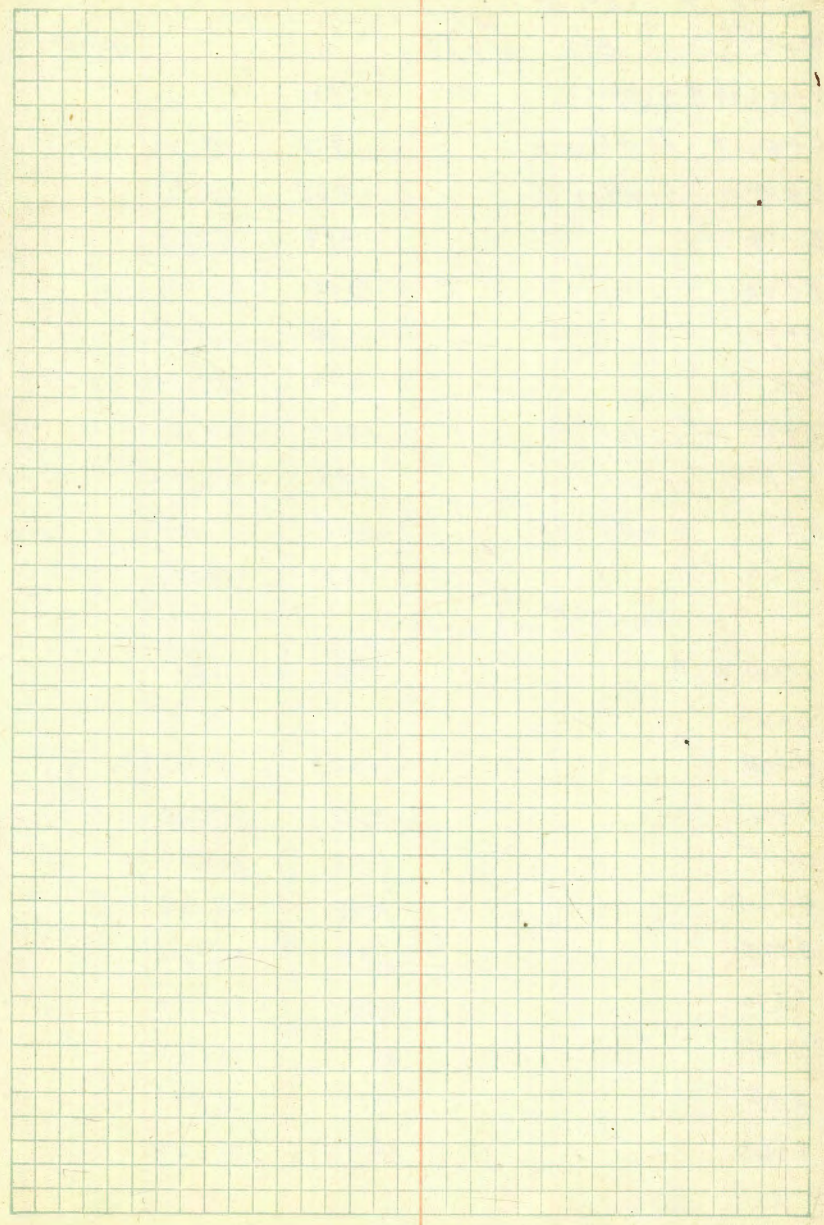


2

Jenson



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Profiles - Across 26th St at Market

6/2/28

5

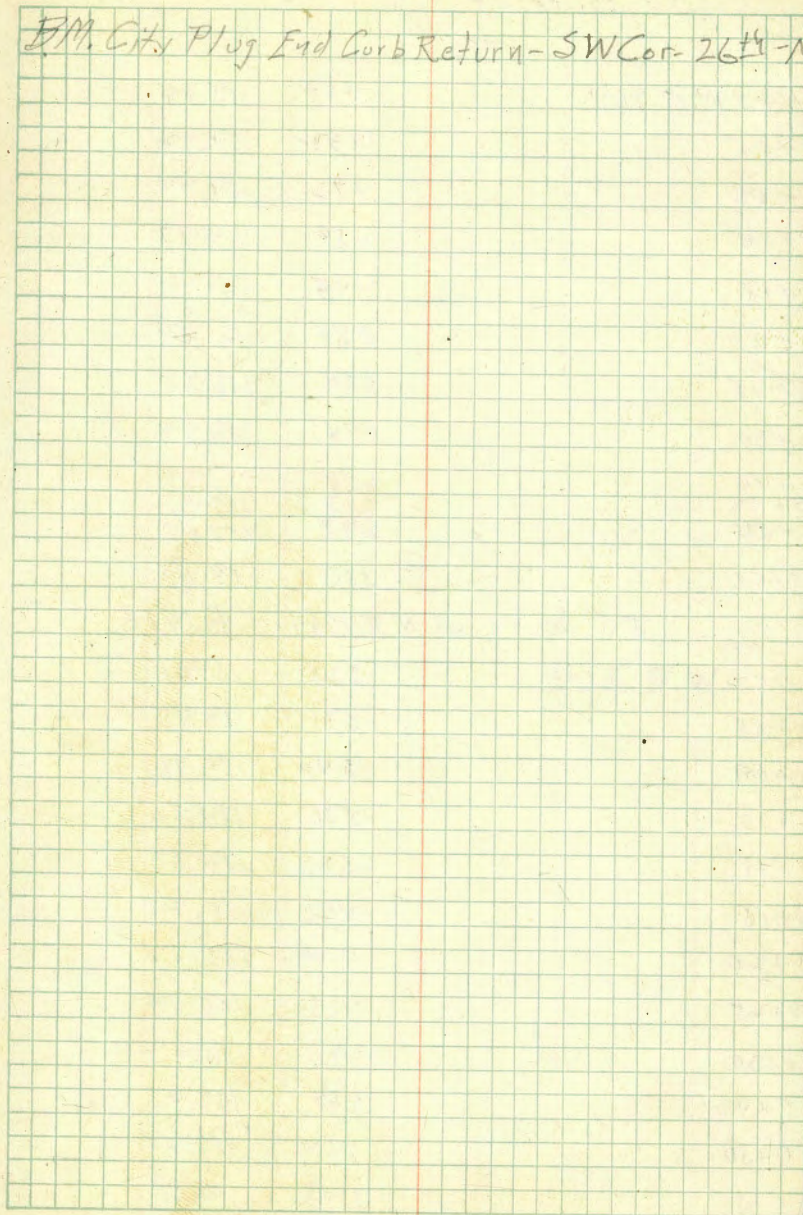
N. P. Mkt. St.

Sta	+ 6.28	H.I. 159.86	-	Elev.
0+00 = W. P. 26 th St.			3.50	156.36
0+10 - Top Curb			3.78	156.08
0+10 - Gutter			4.25	155.61
0+13			3.98	155.88
0+20			3.10	156.76
0+30			2.18	157.68
0+40			1.72	158.14
0+50 - Gutter			1.63	158.23
0+50 Top Curb			0.82	159.04
0+59 " Sidewalk			0.54	159.32
0+60 " "			0.38	159.48

North Curb Line

0+00 = W. P.	4.67	155.19
0+04	4.61	155.25
0+09	4.65	155.21
0+11	4.53	155.33
0+15	4.03	155.83
0+20	3.47	156.39
0+25	2.98	156.88
0+30	2.56	157.30
0+40	2.14	157.72
0+50	1.94	157.92
0+60	1.64	158.22

J.M. City Plug End Curb Return - SW Cor. 26th - Mkt.



Profile Across 26th St. at Market.
33' South of Nth Mkt.

159.86

0+00 = W. # 26 th	4.84	155.02
0+05	4.92	154.94
0+08	4.92	154.94
0+10	4.89	154.97
0+15	4.43	155.43
0+20	3.84	156.02
0+25	3.31	156.55
0+30	2.94	156.92
0+40	2.53	157.33
0+46	2.43	157.43
0+50	2.38	157.48
0+60	1.85	158.01

50' South of Nth Mkt. = # Mkt.

0+00 = W # 26 th	5.25	154.61
0+05	5.31	154.55
0+09	5.40	154.46
0+10	5.36	154.50
0+11	5.23	154.63
0+15	4.66	155.20
0+20	4.14	155.72
0+25	3.67	156.19
0+30	3.24	156.62
0+40	2.81	157.05
0+50	2.64	157.22
0+55	2.47	157.39
0+60	2.34	157.52

Profile Across 26th St. At Market

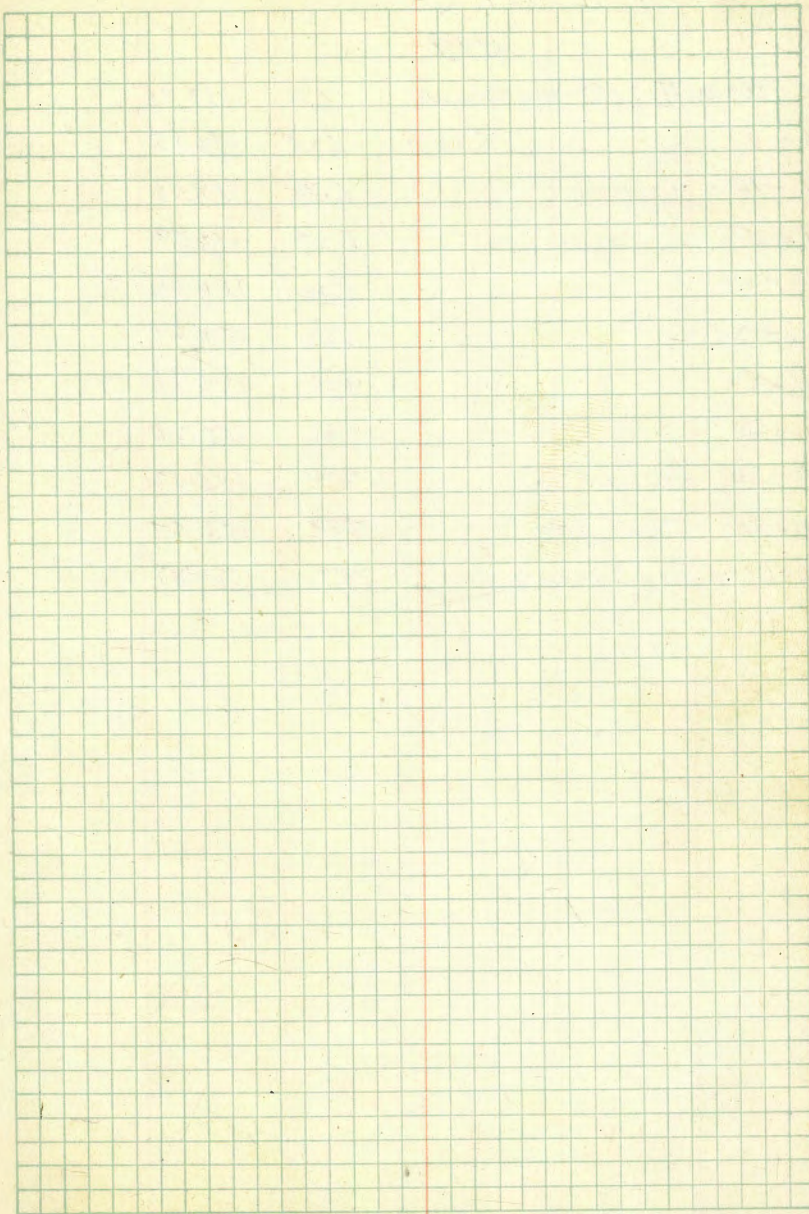
17' South of E of Mkt St.

159.86

0+00 = W. E 26 th	5.88	153.98
0+05	5.90	153.96
0+10	5.98	153.88
0+11	5.91	153.95
0+12	5.82	154.04
0+15	5.35	154.51
0+20	4.65	155.21
0+25	4.18	155.68
0+30	3.87	155.99
0+40	3.52	156.34
0+50	3.40	156.46
0+60	3.14	156.72

South Curb Line Mkt St = 16' N. of S. E. Mkt.

0+00 = W. E 26 th St.	6.88	152.98
0+05	6.68	153.18
0+08	6.56	153.30
0+10	6.59	153.27
0+15	6.00	153.86
0+20	5.35	154.51
0+25	4.79	155.07
0+30	4.45	155.41
0+40	4.21	155.65
0+50	4.33	155.53
0+55	4.21	155.65
0+60	4.14	155.72



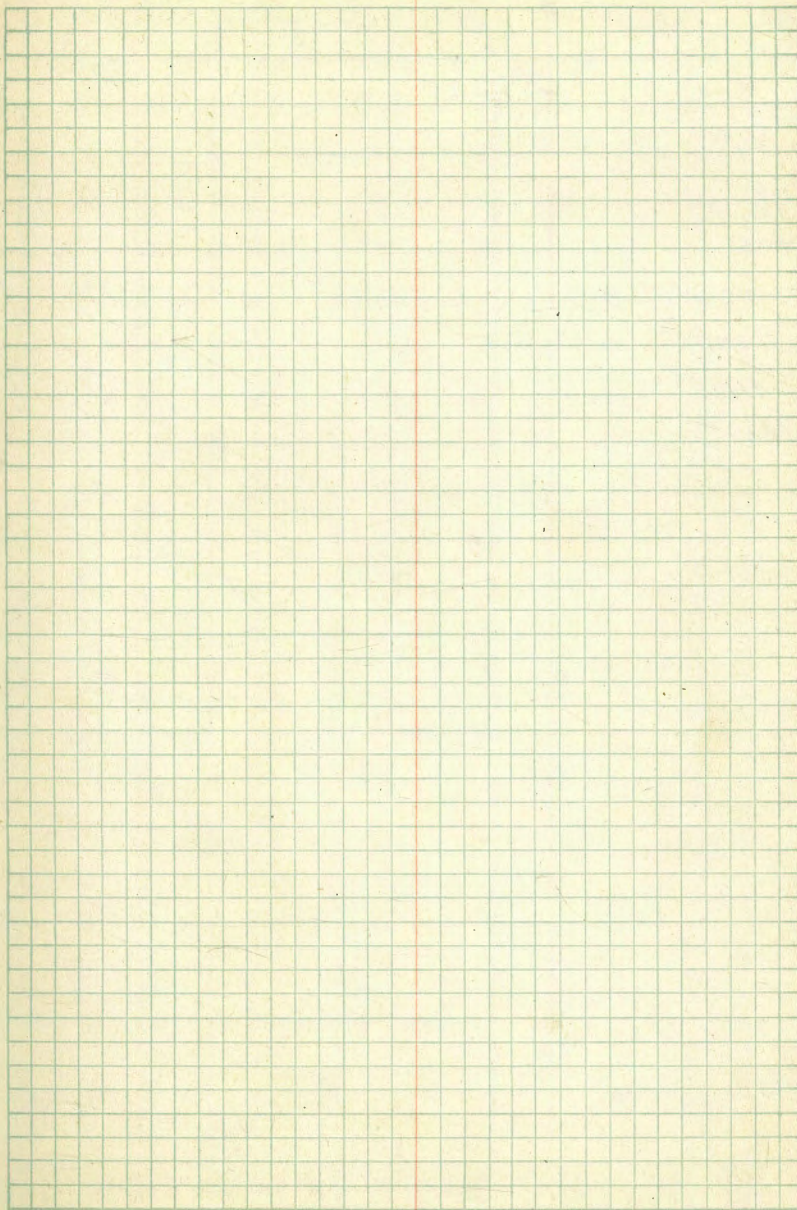
Profile Across Mkt. St. At 26th
South of Mkt. St.

159.86

0+00 = W. of 26 th Top Sidewalk	6.11	153.75
0+10 " Curb	6.28	153.58
0+10 - Gutter	6.78	153.08
0+15	6.27	153.59
0+20	5.70	154.16
0+25	5.22	154.64
0+30	4.90	154.96
0+40	4.66	155.20
0+50 Gutter	4.74	155.12
0+50 Top Curb	3.89	155.97
0+60 = Top Sidewalk.	3.59	156.27

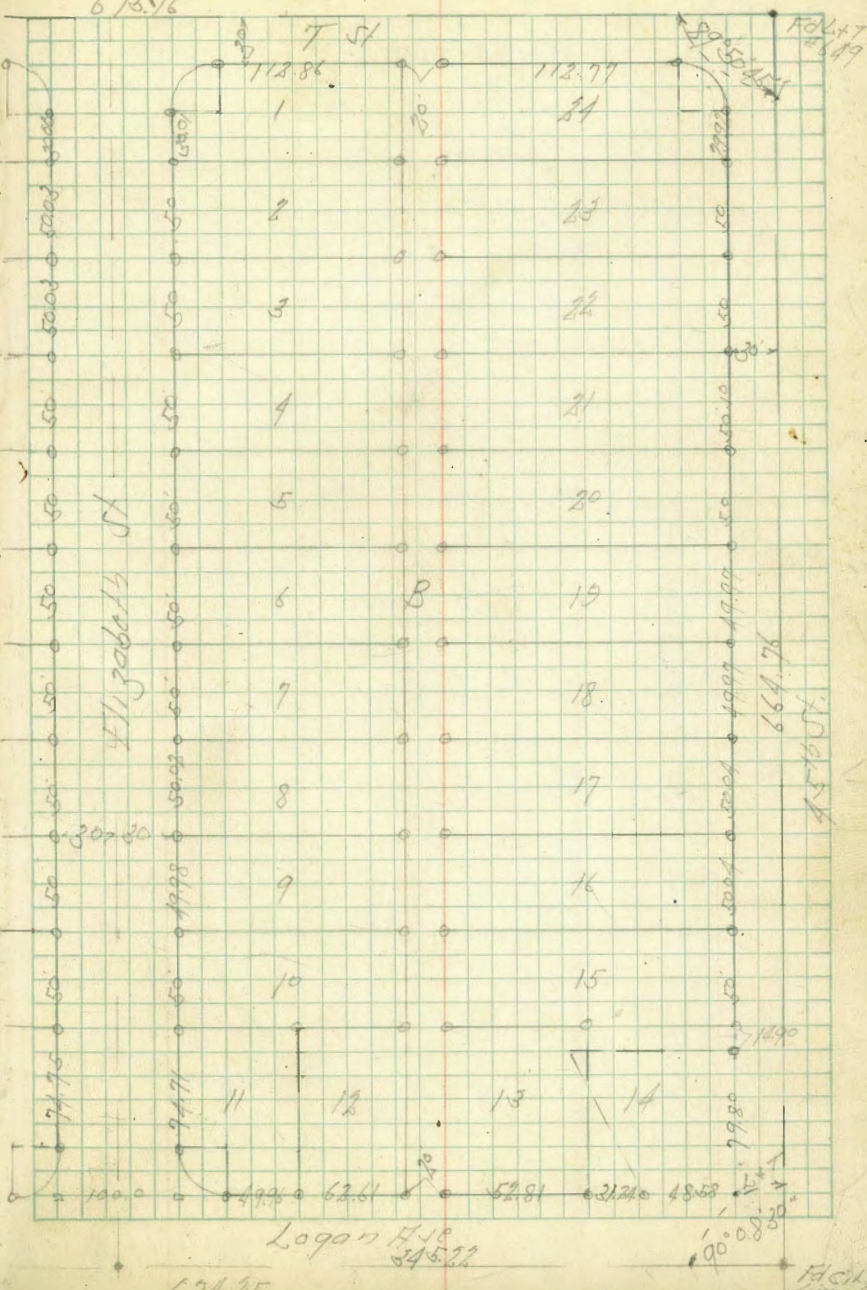
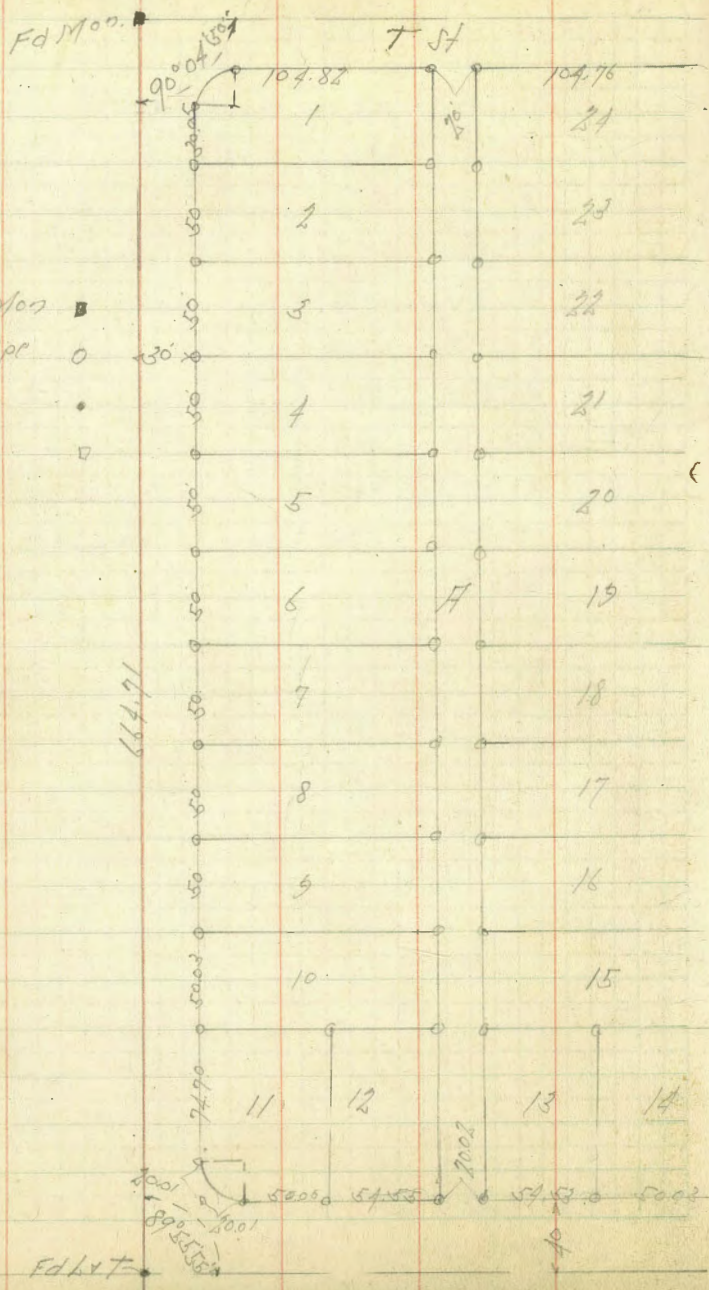
6/2/28

8



Jan. 18 48
S. 110°
North 7
W. 100°

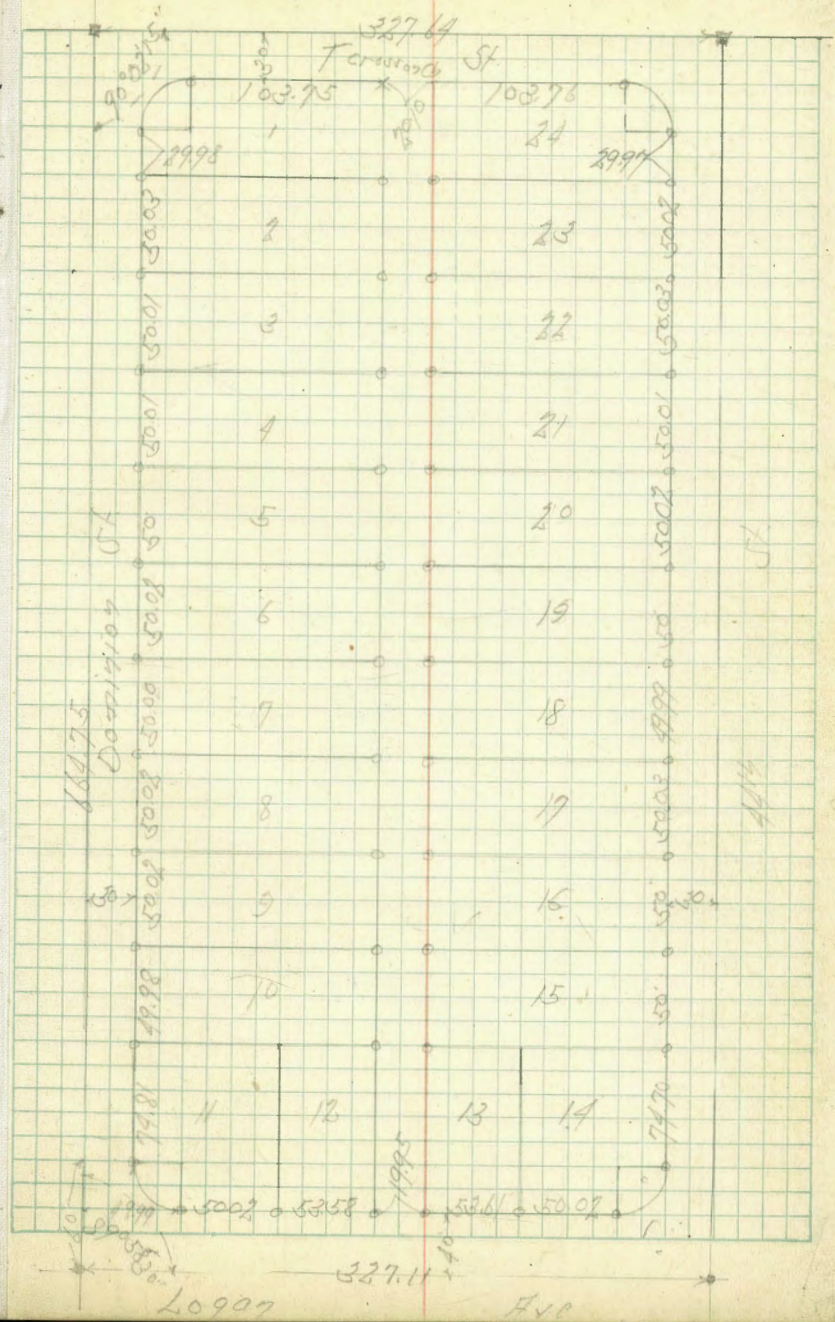
Indicates Mon
3/4" Iron Pipe
Lead & Disc
Hubs

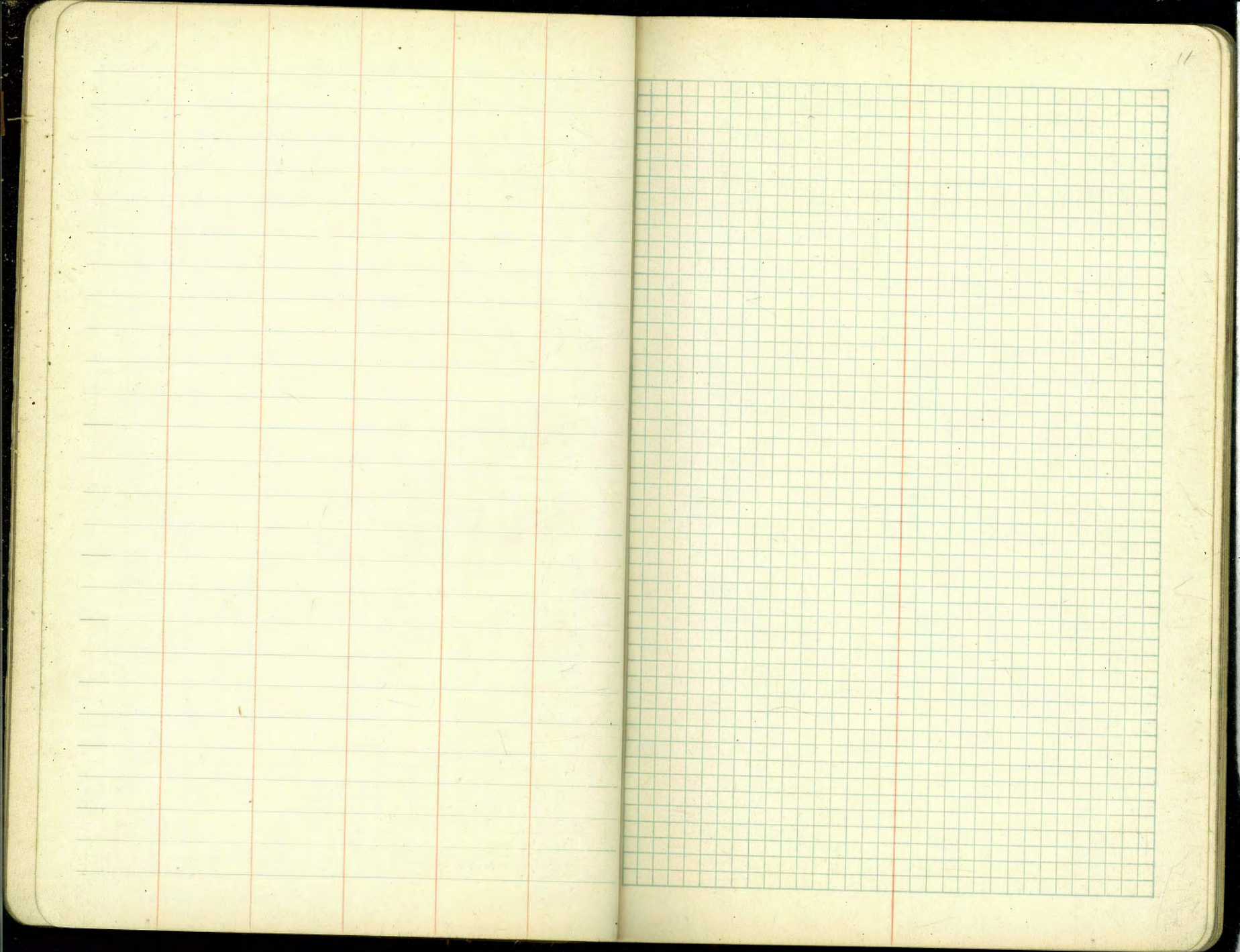


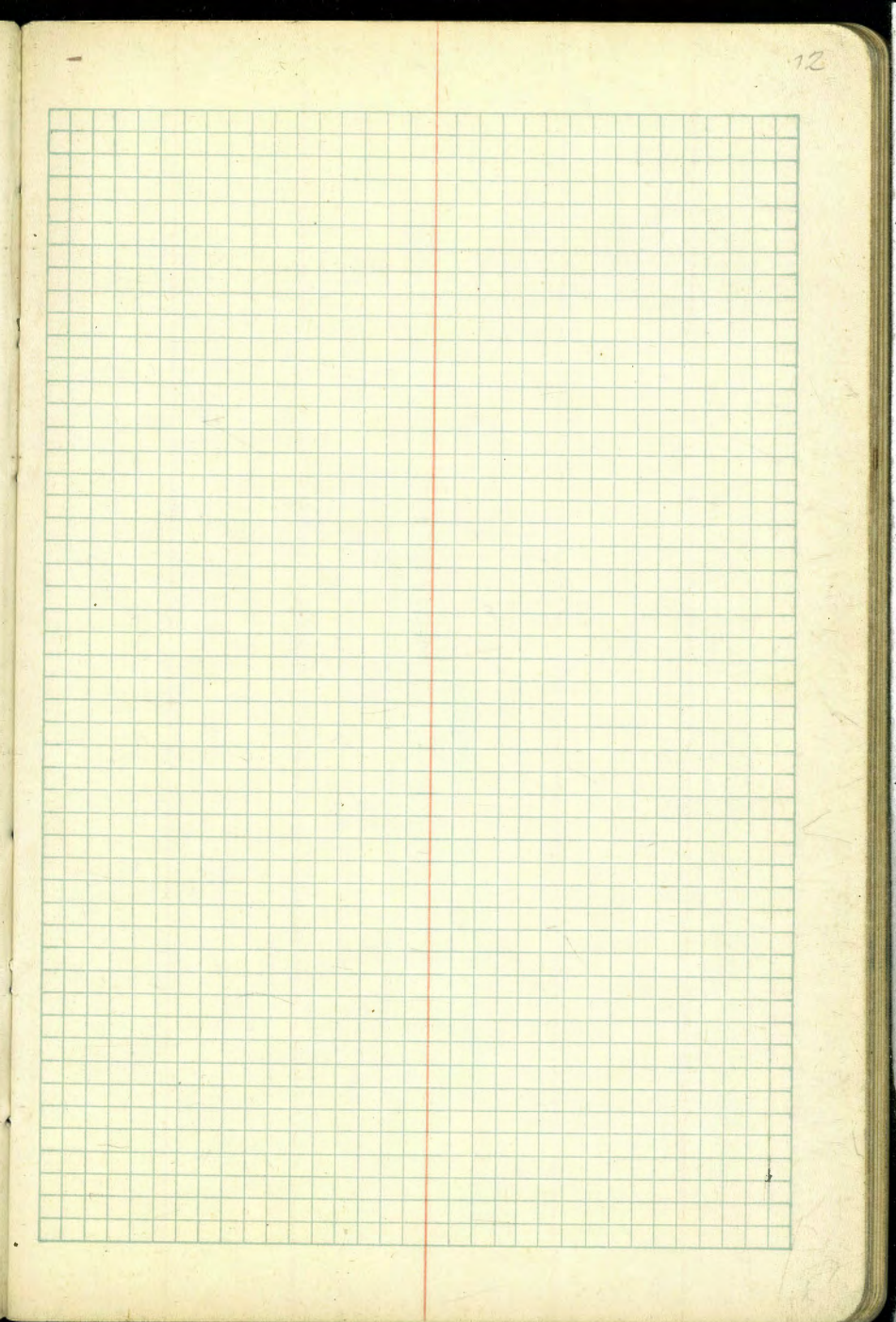
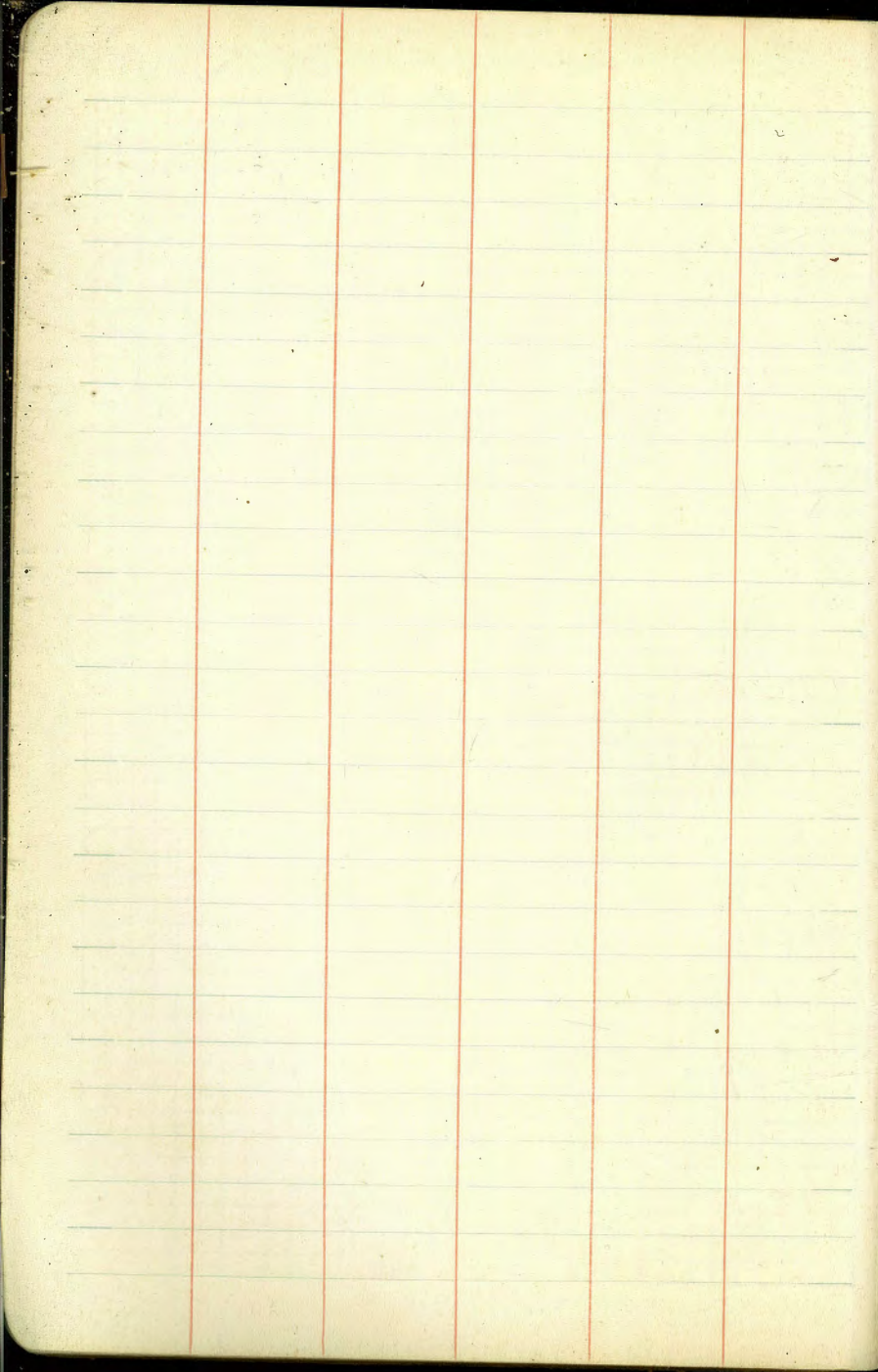
Log on H-18
245.22

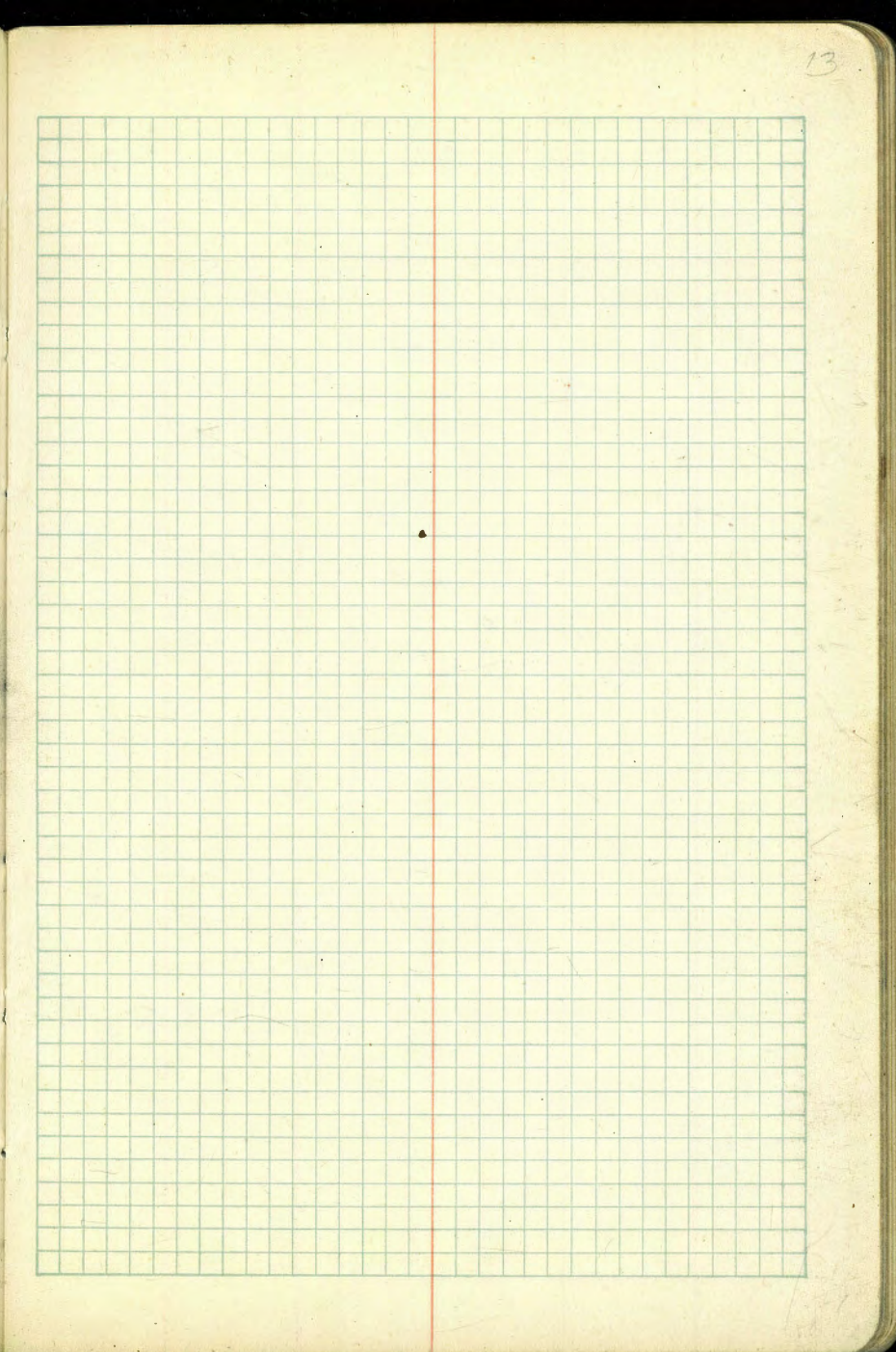
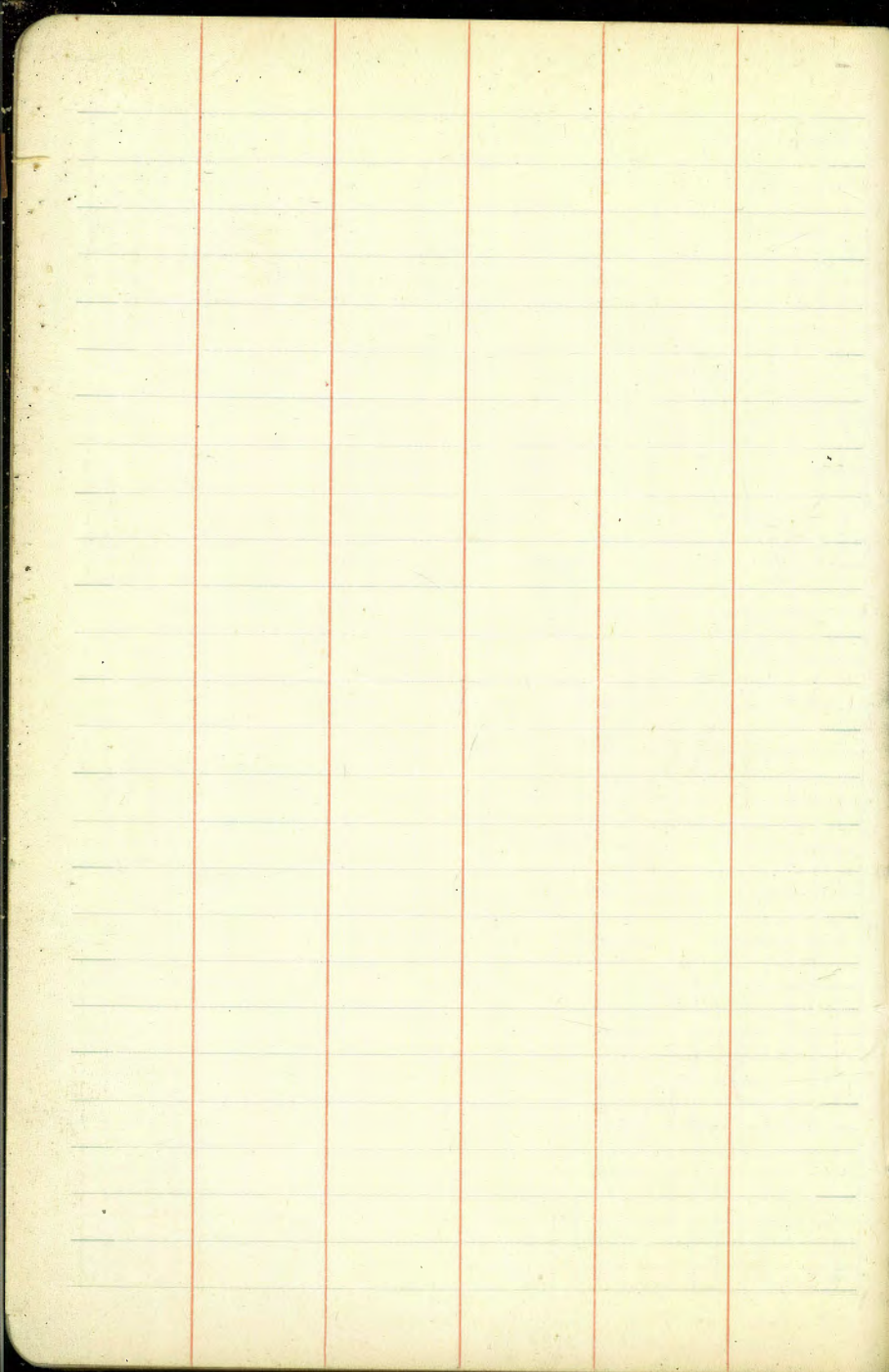
March 21-42
S. 3807
North bend
1st Moor
Hogard

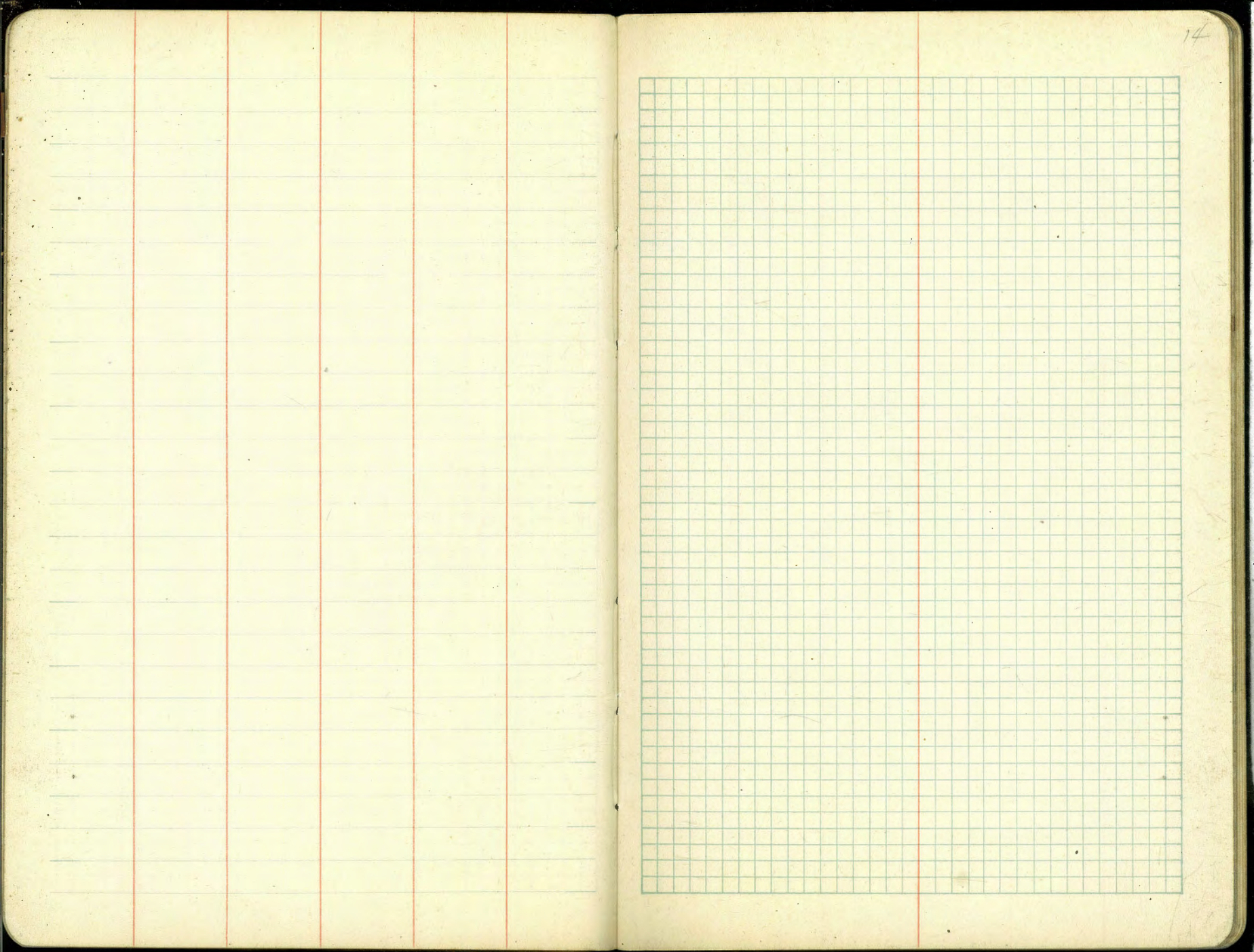
Indicates
Mo2
3/4 Iron pipe
Lead disc



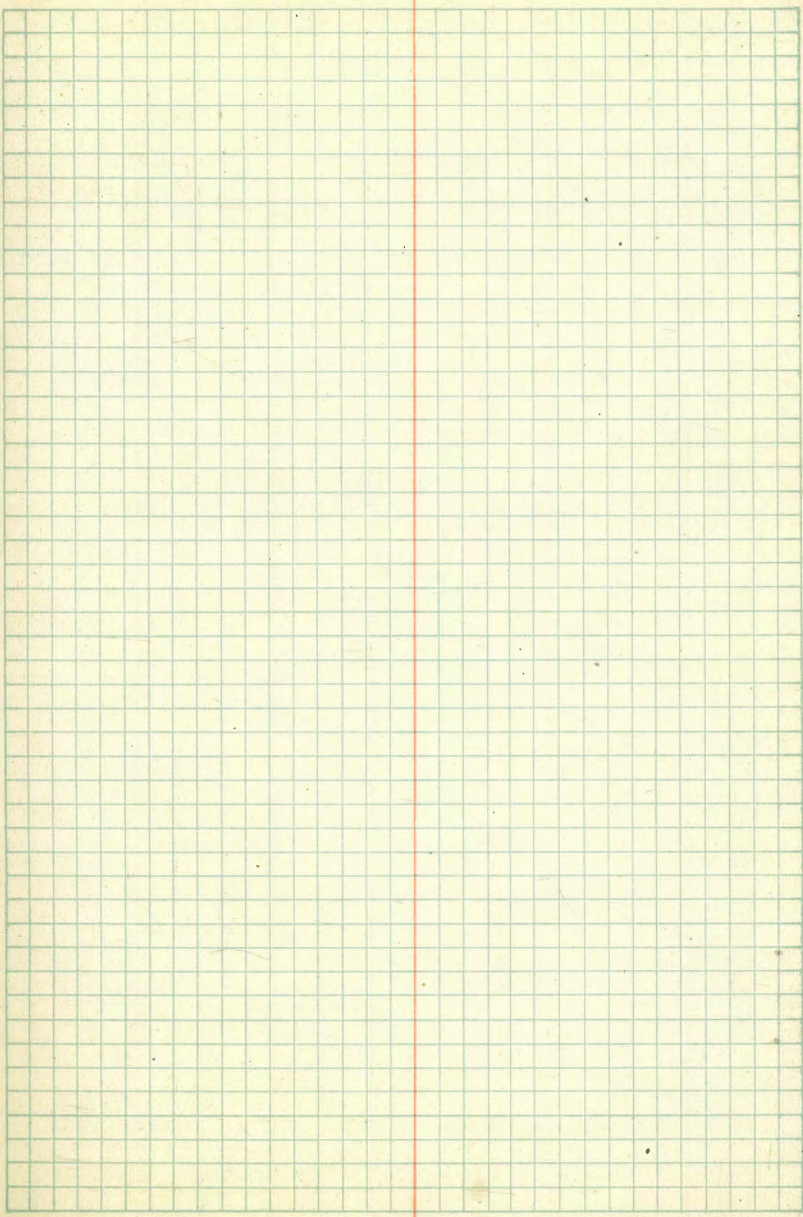


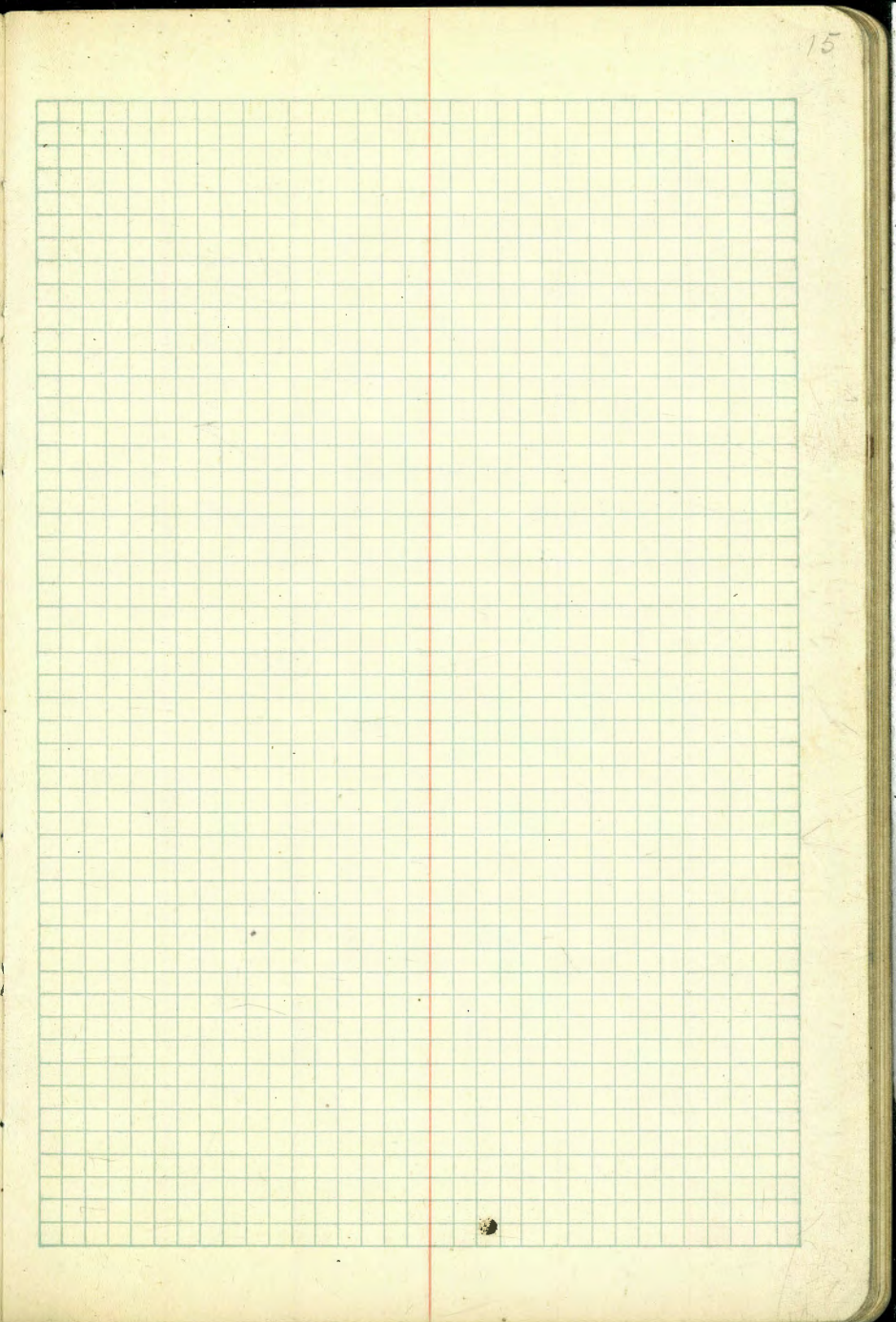
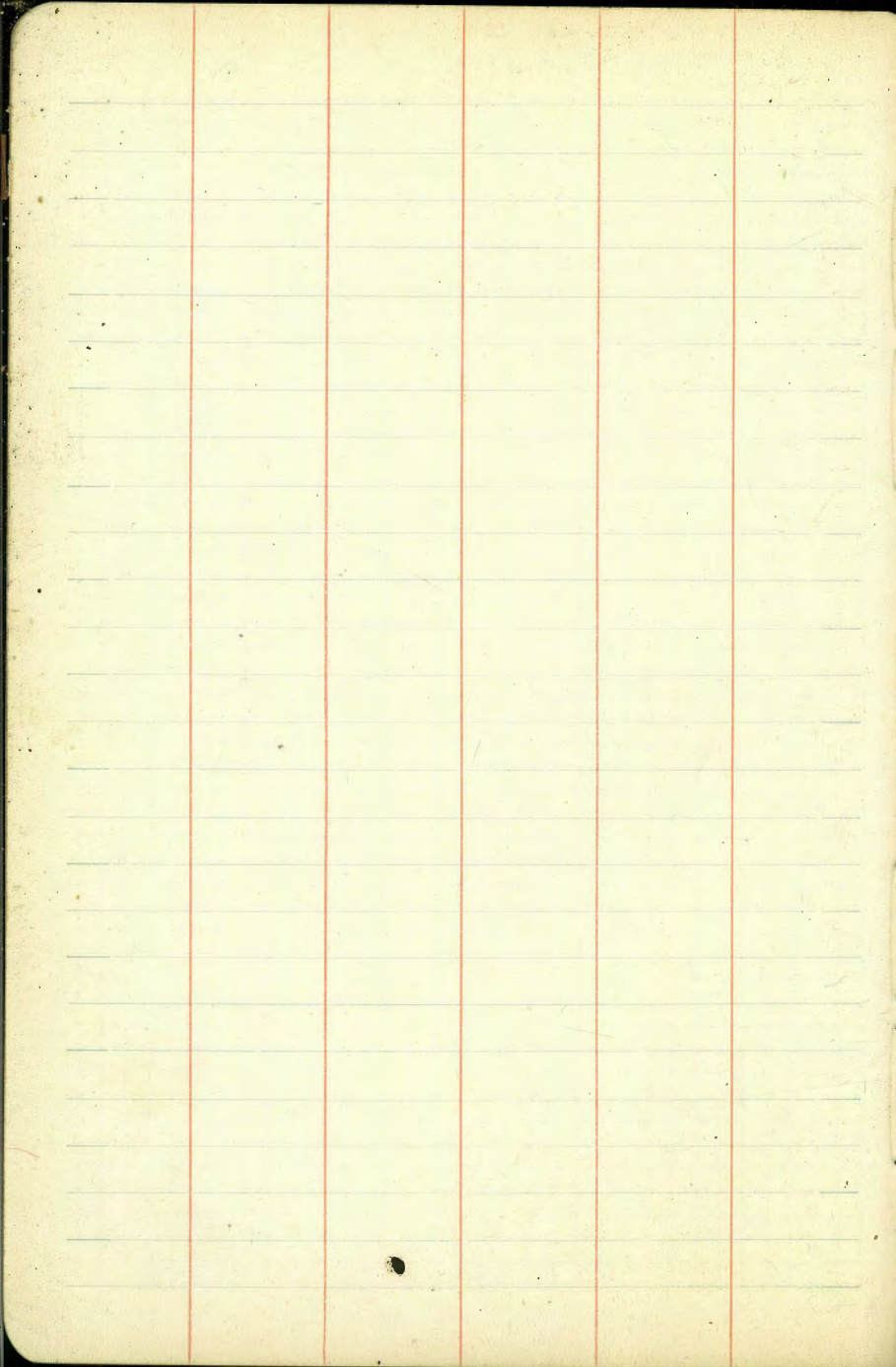


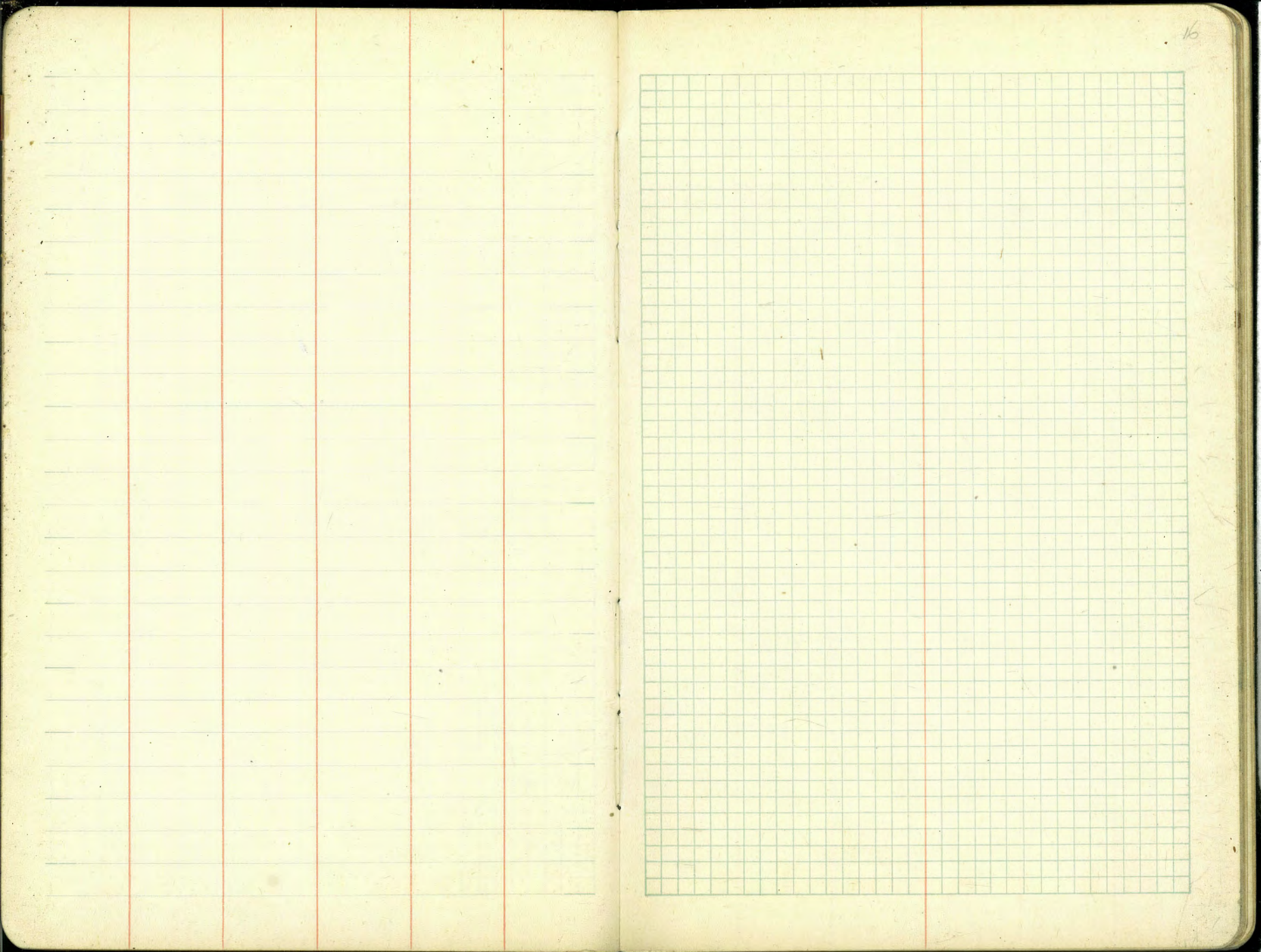


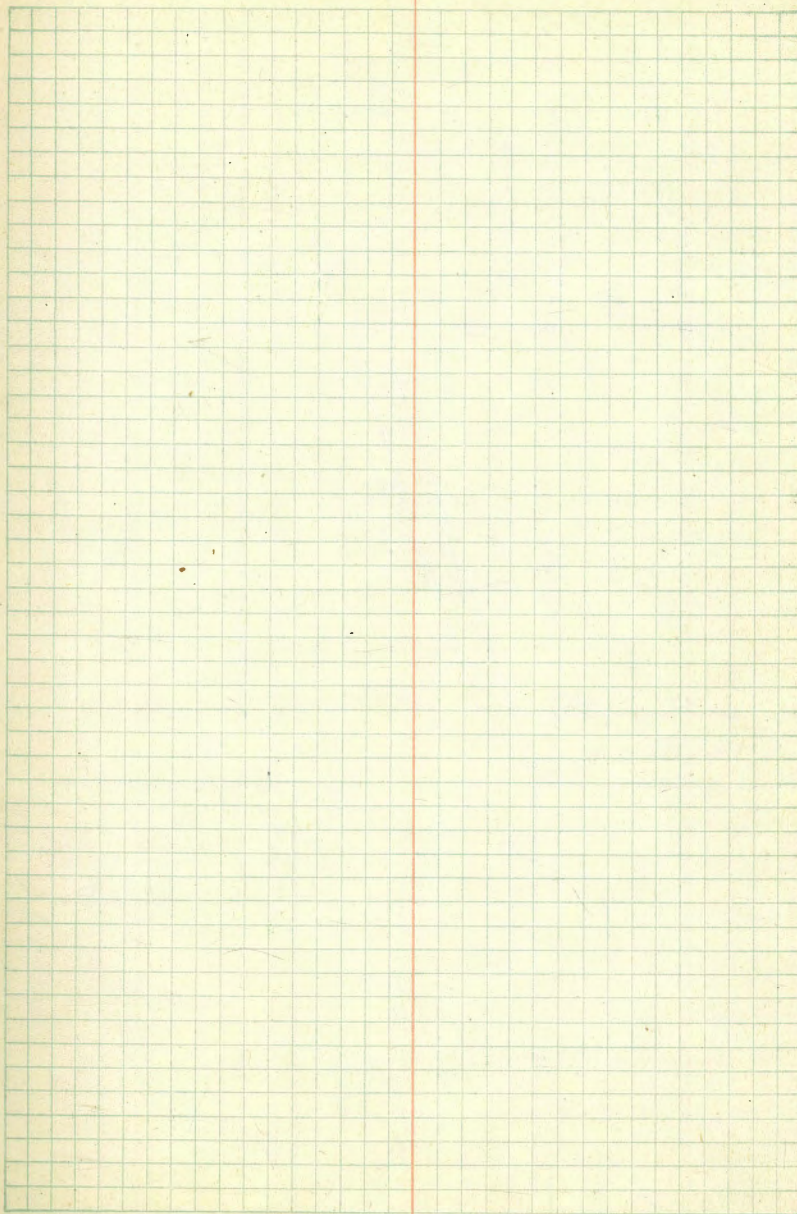
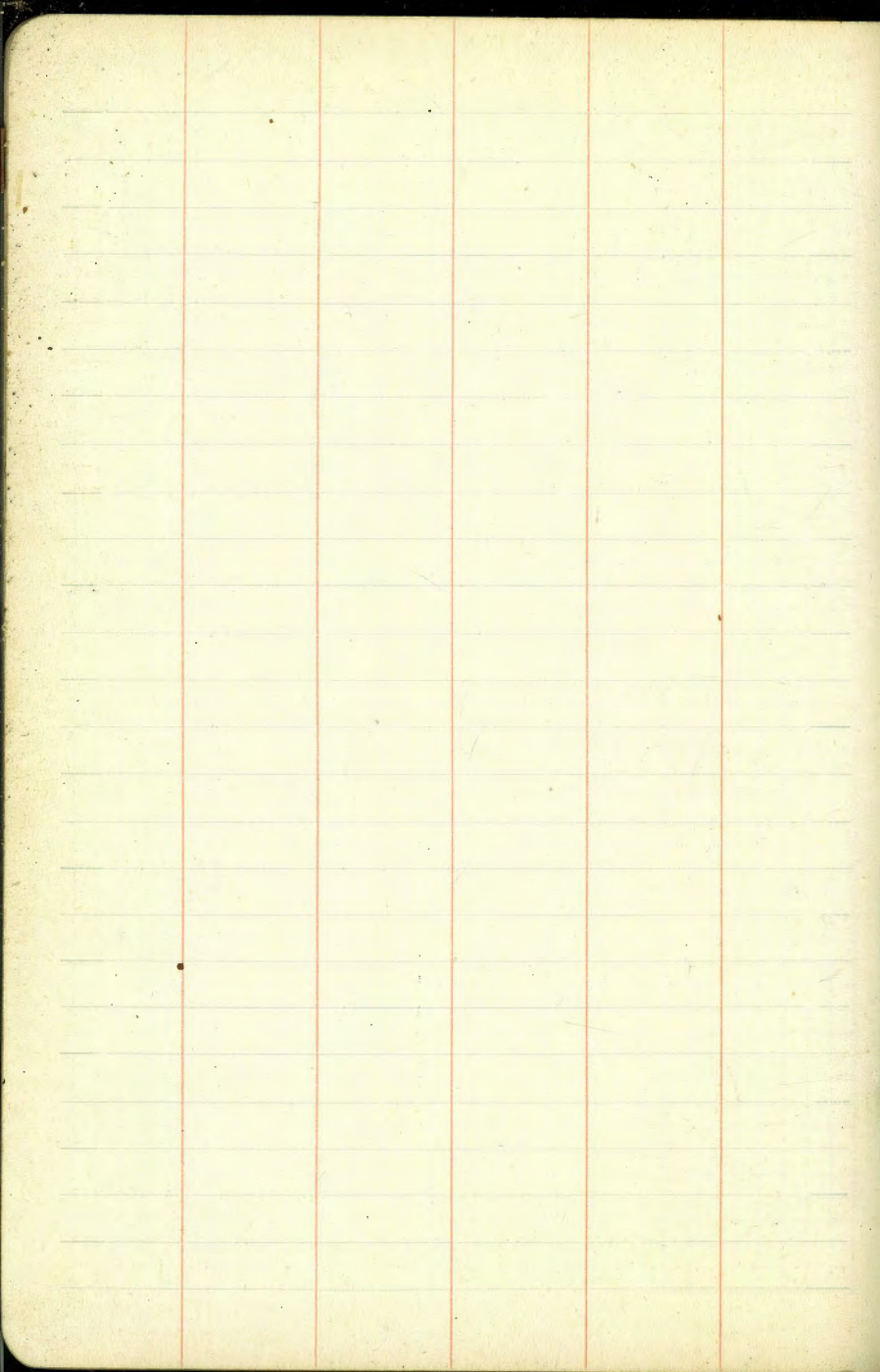


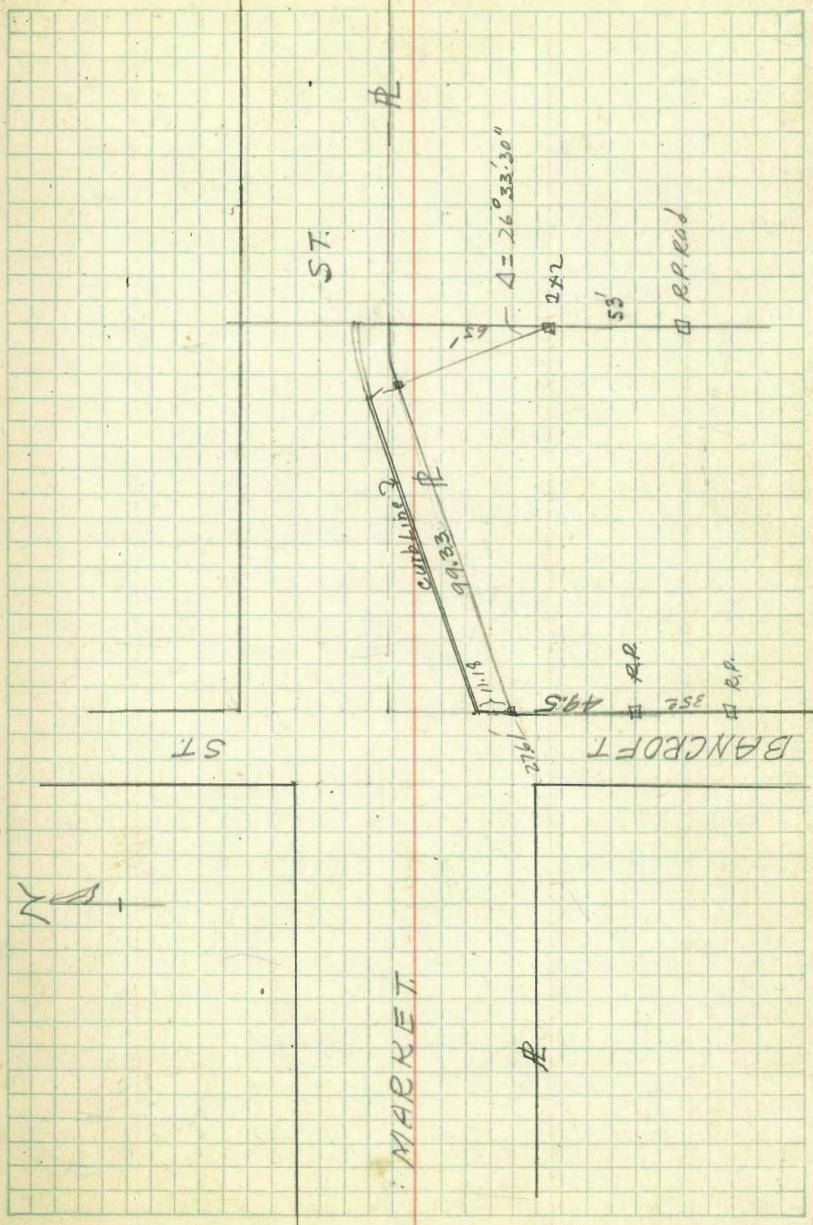
14











Feb 20, 1928
Treadwell
Party, {
Hannick
Yuke.

9

Foot Nail

see next page.

$$\frac{0+00}{6+32.54} \text{ Equation}$$

157.54

set nail

75.0

BRIDGE No 2.

set nail

400.4

ST

set nail

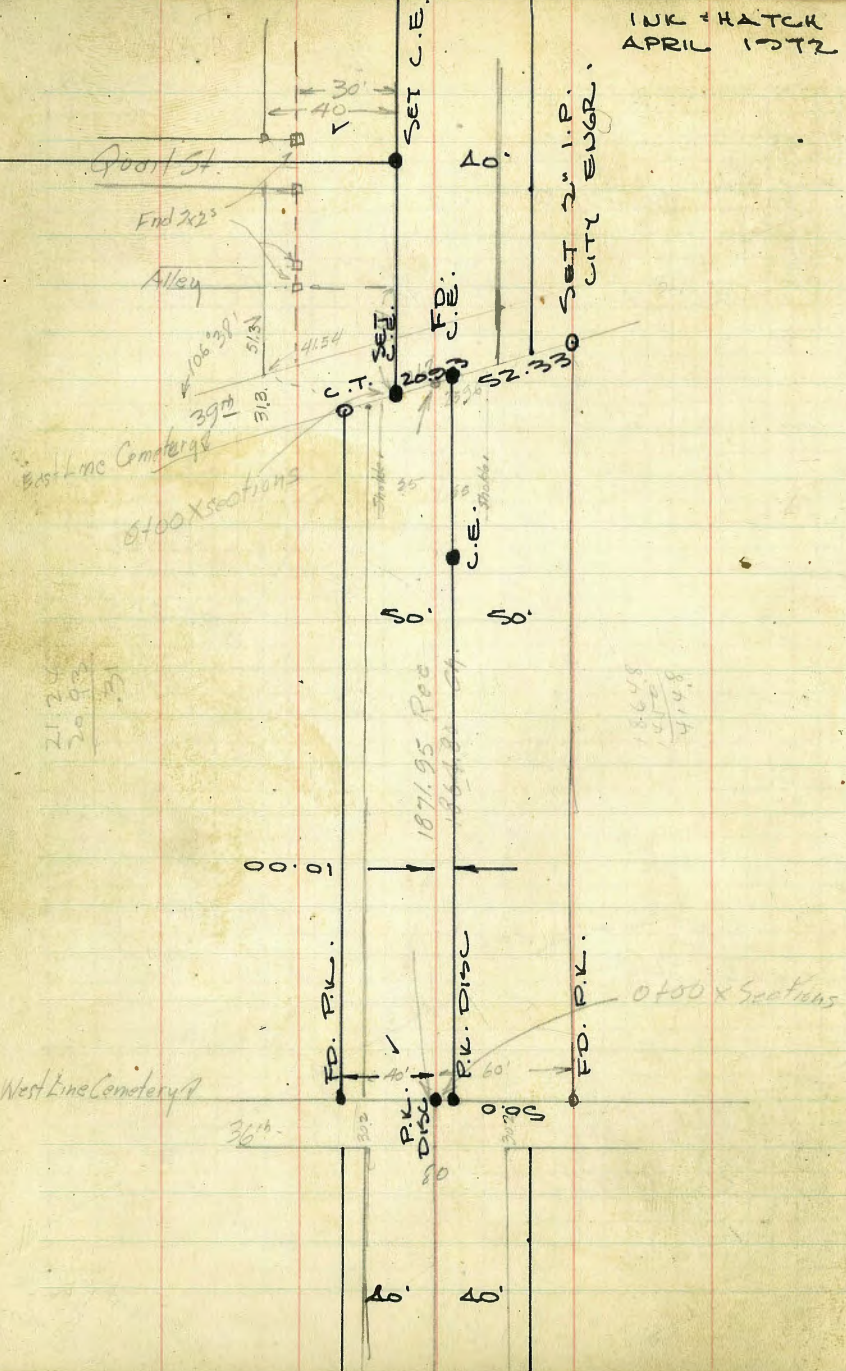
6+19

33RD ST

5+59

MARKET

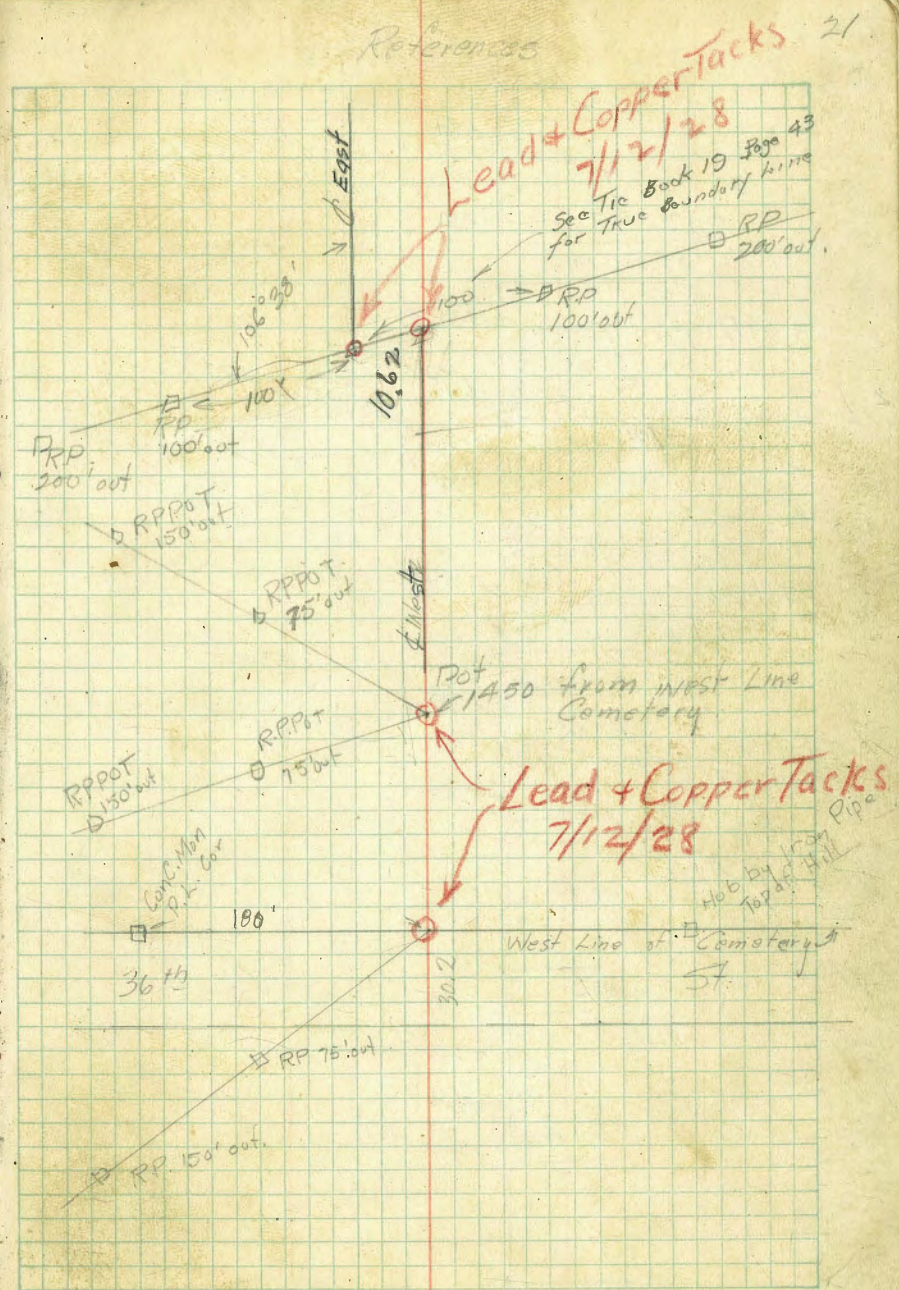
INK = HATCH
APRIL 1972



21.24
20.82
3.42

186.8
4.76
4.08

References



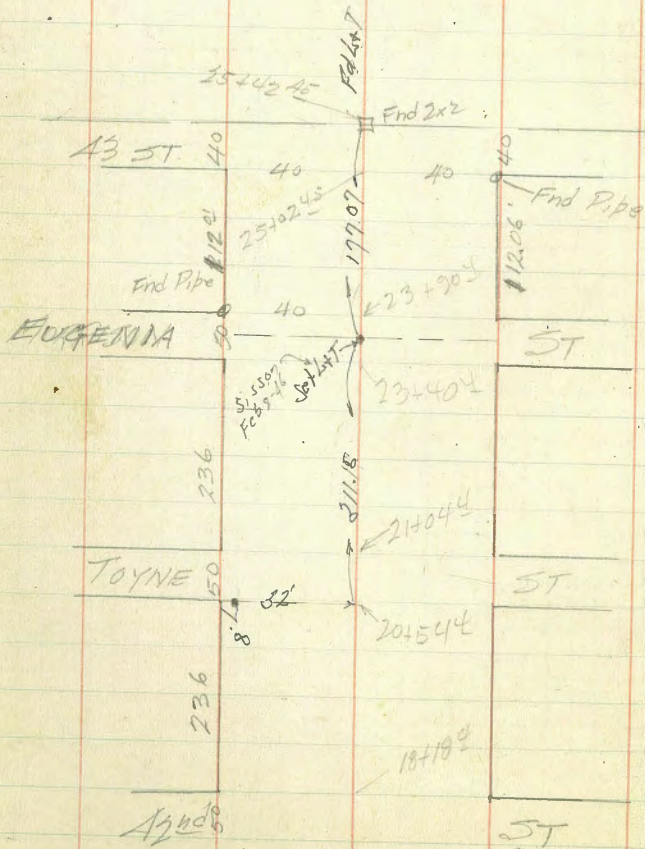
Lead + Copper Tacks
7/12/28

Lead + Copper Tacks
7/12/28

21

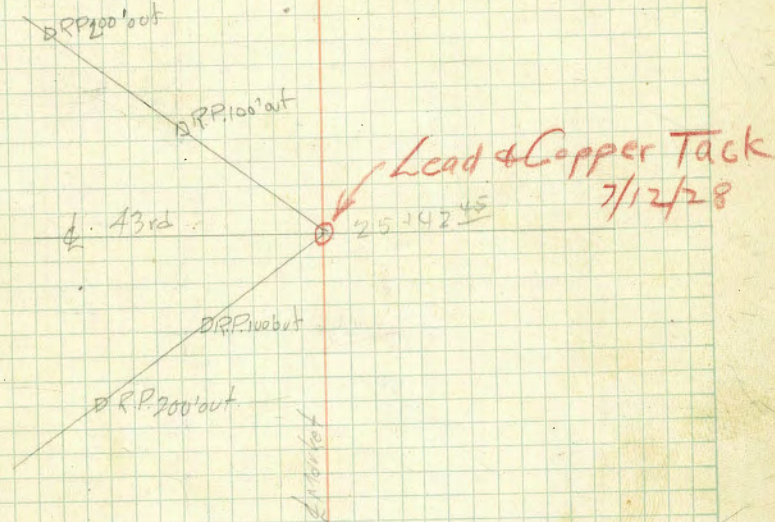
Notes on Alignment

472
473
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References

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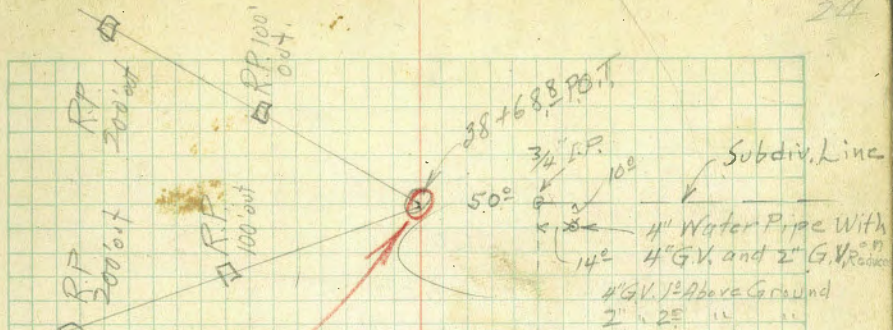
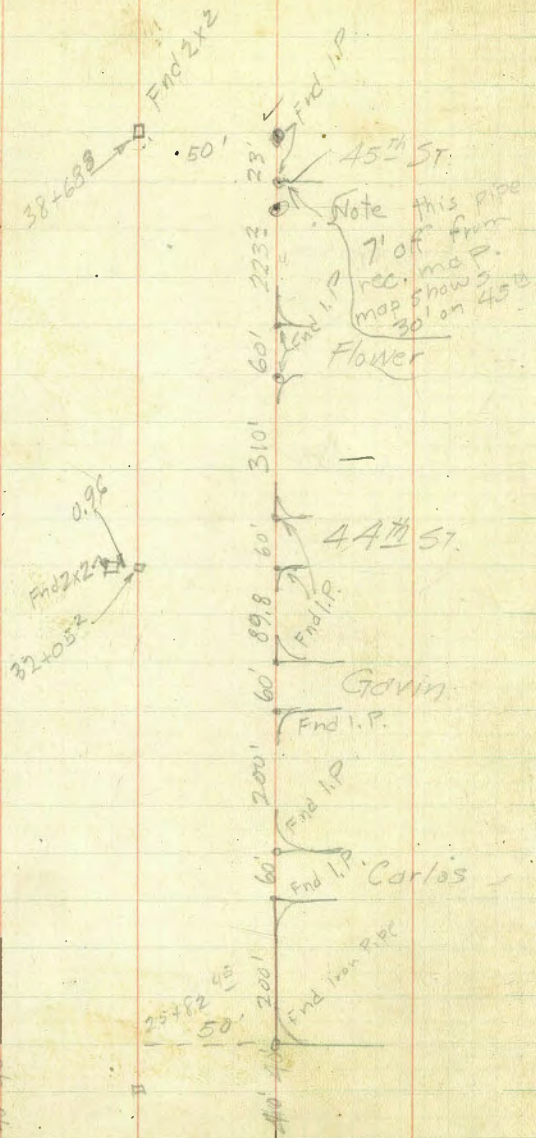


18+78.7
22+16
29+94
37
11.2

18+78.7
22+16
29+94
37
11.2

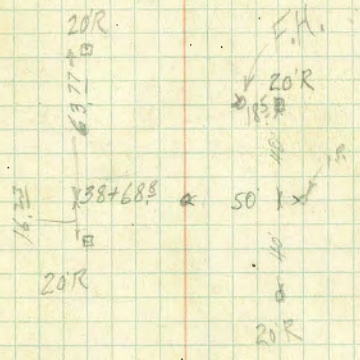
Notes on Alignment

38+68.8 P.O.T.



Lead & Copper Tack
7/12/28

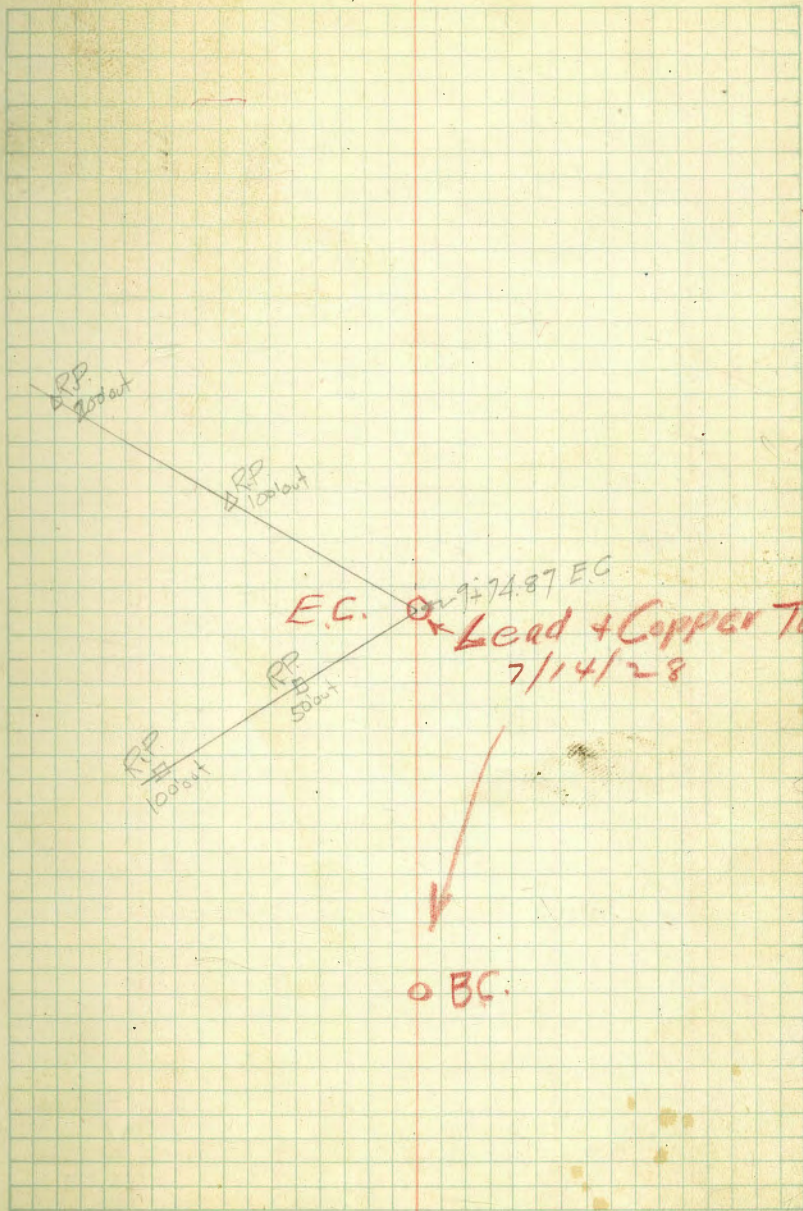
Sketch Showing Intersection
at 45th & Market
4/13/28



30+37.26 Cor.

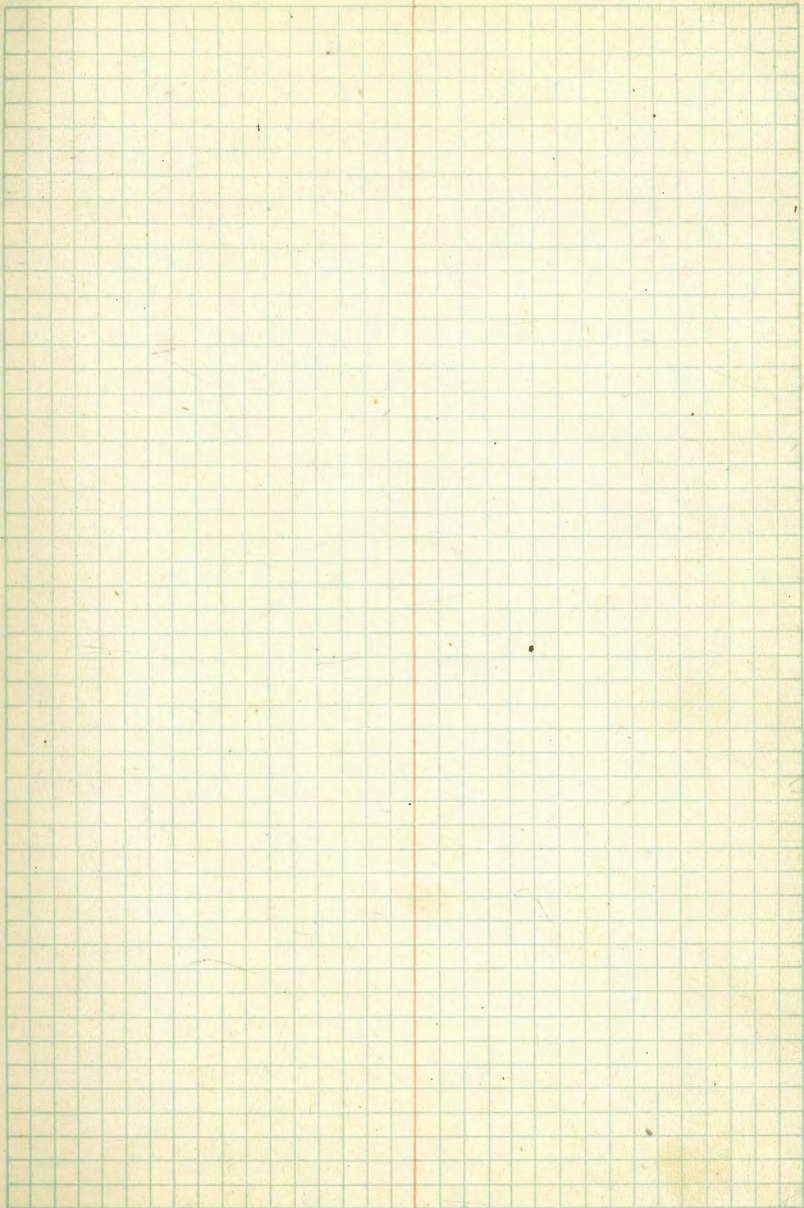
To Page 28

9+74.87 E.C. 30°43'
 9+50 29°17' ⁴⁹⁹⁸
 9 26°29' ✓ $\Delta = 61°26' \text{ Lt.}$
 8+50 23°39' ✓ $R = 500'$
 8 20°41' ✓ $T = 297.07$
 7+50 17°50' ✓ $L = 536.11'$
 7 14°58' ✓ $R.I.S. = 7+35.83$
 6+50 12°06' ✓ $\text{Def Per ft} = 3.438' \text{ in } 100'$
 6 9°14' ✓
 5+50 6°22' ✓
 5 3°30' ✓ ⁴⁹⁹⁸
 4+50 0°38' ✓
 4+3876 B.C. 0°00'



Notes on Alignment

27



28+82.65 P.O.T. Inter E Euclid Ave.

P.O.T.
24+12.65 Face of East Abut. Br #3.

P.O.T.
23+12.65 Face of West Abut Br #3.

19+34.08 E.C. 16°21'

15°28' 34.96 $\Delta = 37^\circ 42' R$

7 13°05.8 R = R = 300

10°22' 49.35 T = 88.01

18+50 8°19.3 L = 171.22

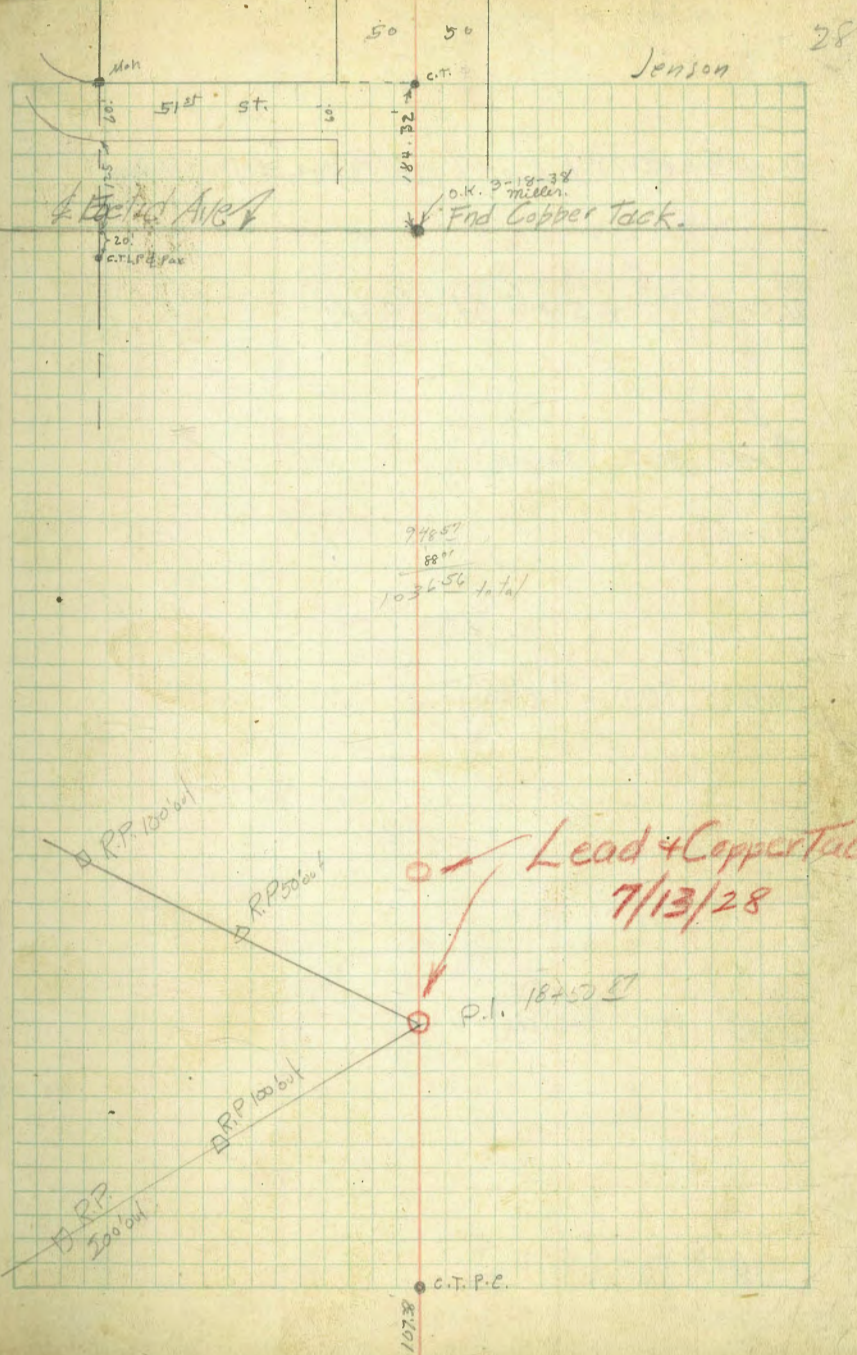
5°56' 49.5 P.I. Sta = 18+50.17

18 3°32.8' Def = 5.73 Per ft.

37.12

17+62.86 B.C. 0+00

16 55 38
1 07 48



48+94.18 P.O.T. E. Line Las Alturas # 5 - (Final)

45+32.02 E 54th St. - (Final)

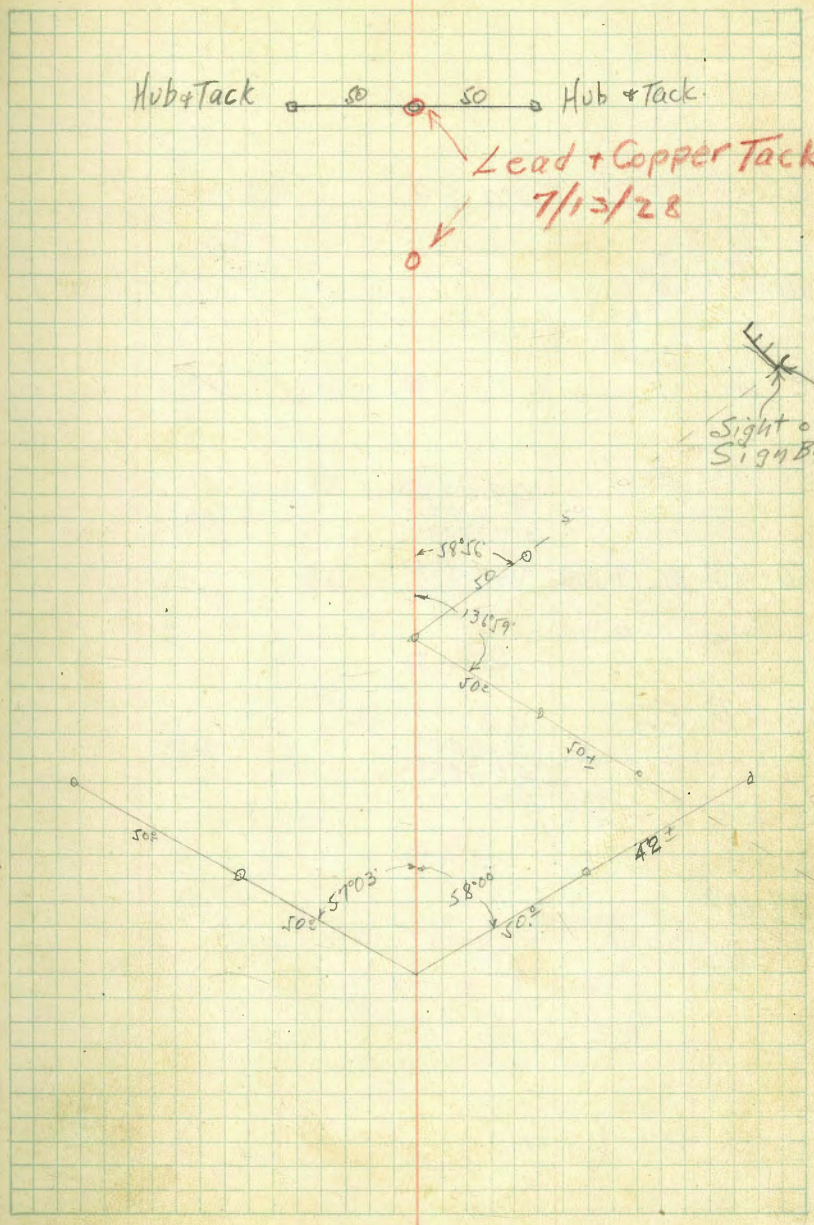
43+45⁰ P.O.T. (Prelim)

41+98.28 P.O.T. (Prelim)

35+94.28 P.O.T. (Prelim)

31+89.10 P.O.T. (Prelim)

28+82.45
3 06.45



66+81 EP Pitta St. (Final)

66+61 = W. Line W. Hollywood (Final)

58+32⁰⁶ EC. $\Delta 22^{\circ}26'$
 $R=4102$
 $S.T. 7932$ (Final)

56+75⁴⁵ BC. $14^{\circ}20'L$ Arc. = 156.61

926L

55+82⁷⁹ EC. $\Delta 22^{\circ}17'$
 $R=4002$
 $S.T. 7878$ (Final)

54+27²² BC. $14^{\circ}20'R$ Arc. = 155.57

54+09¹² Hub

49+50⁰⁰ D.O.T. (Prelim)

7932
7878
9266
25076

58+32⁰⁶

EC. ○

PI. ○

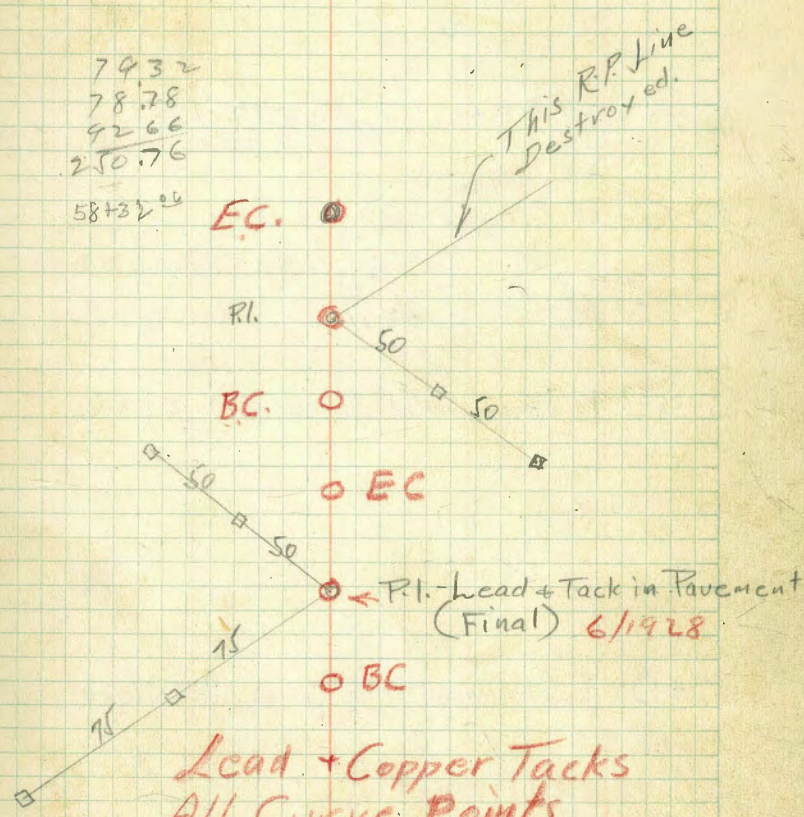
BC. ○

○ EC

○ BC

PI. Head + Tack in Pavement
(Final) 6/19/28

Lead + Copper Tacks
All Curve Points
7/13/28



100+66⁵ Int. 60th + Bach Ave.

97+139⁵ E Wunderlin - E Bet. Curbs.

92+48³⁴ P.I. E Brooklyn $\Delta = 0^{\circ}15'$ Left.

86+16¹⁹ EC. $\Delta 90^{\circ}5'$ Left.

85+05¹ BC. $R = 70^{\circ}$
 $T = 71 \frac{13}{108}$
Arc = 111⁰⁸ ✓

83+38⁸⁷ P.I. E End Hollywood (Palomar Ave.) $0^{\circ}08'$ R. ✓

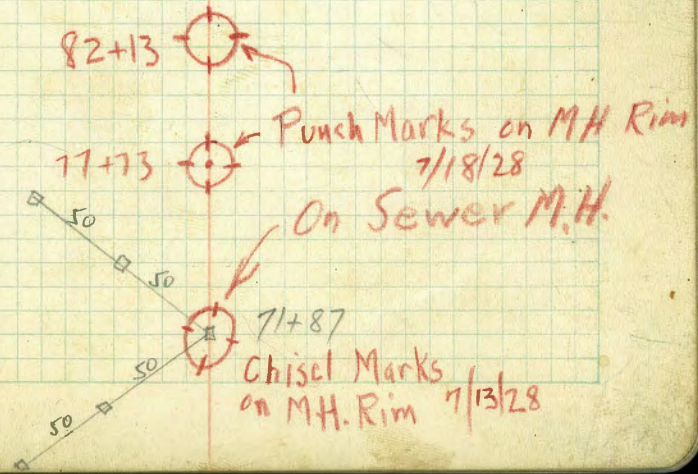
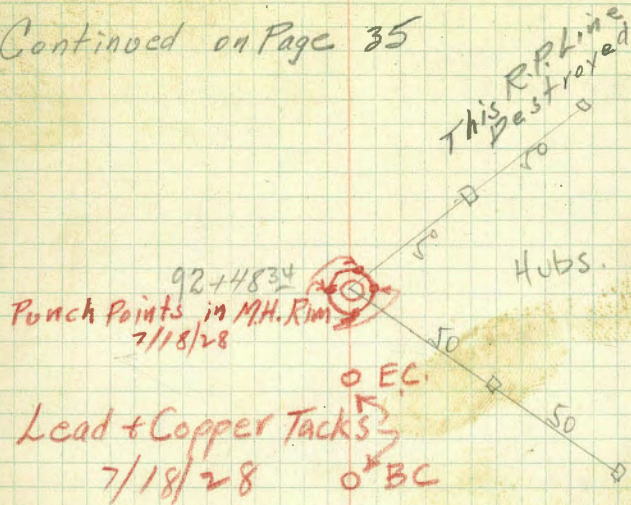
82+13 - E Kenwood - E Iona. 90° Right.

77+73 - Int. E Hollywood Drive - Iona Drive. 90° Left.

75+17 Int. E Holl. Dr. E 59th St.

71+87 - Int. E Holl. Dr. E Merlin

Continued on Page 35



HOLLYDALE

A Lignment - Rec. Map. used for Initial Points.

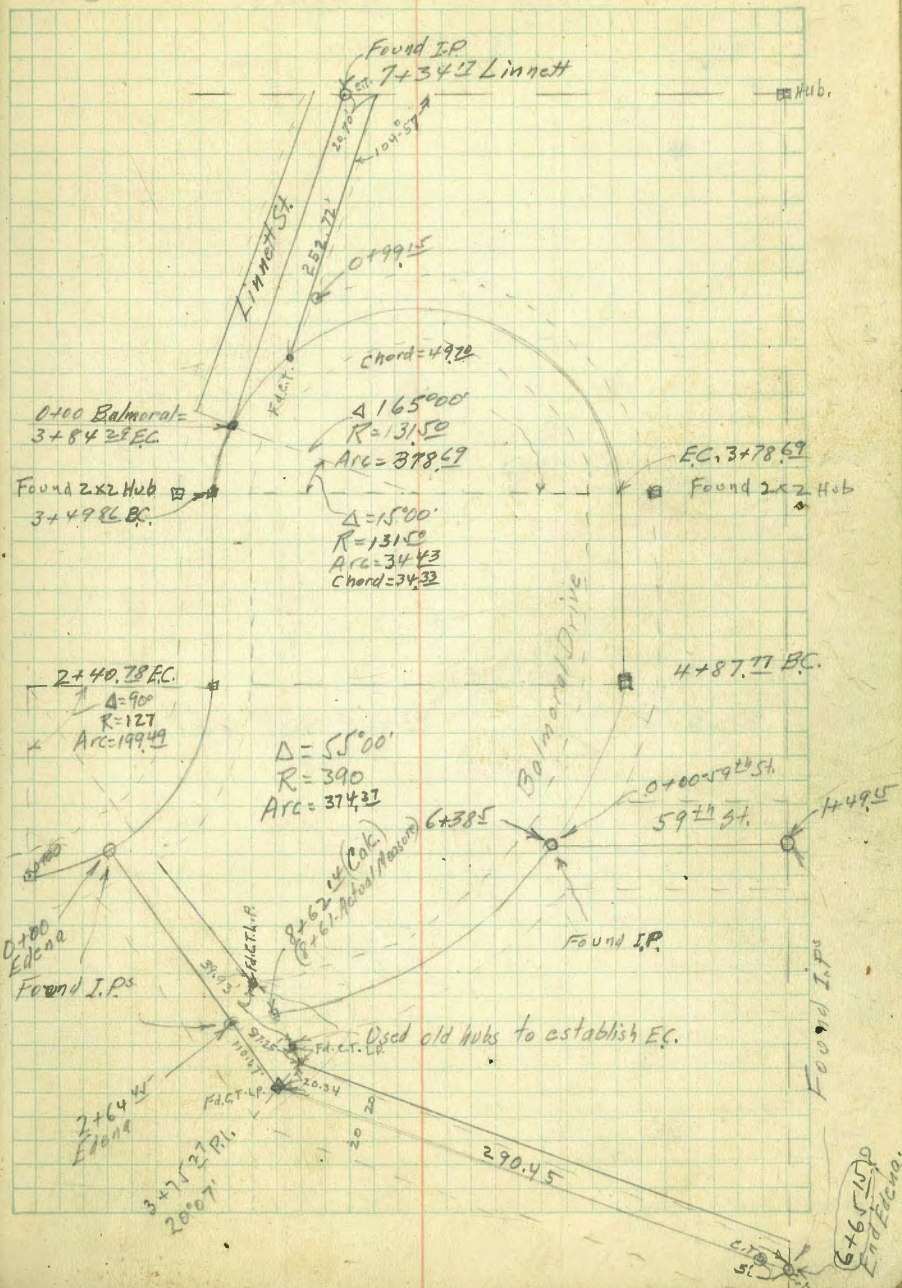
375.27
264.45
110.82

220.07
10.03.30

265.15
375.27
289.88

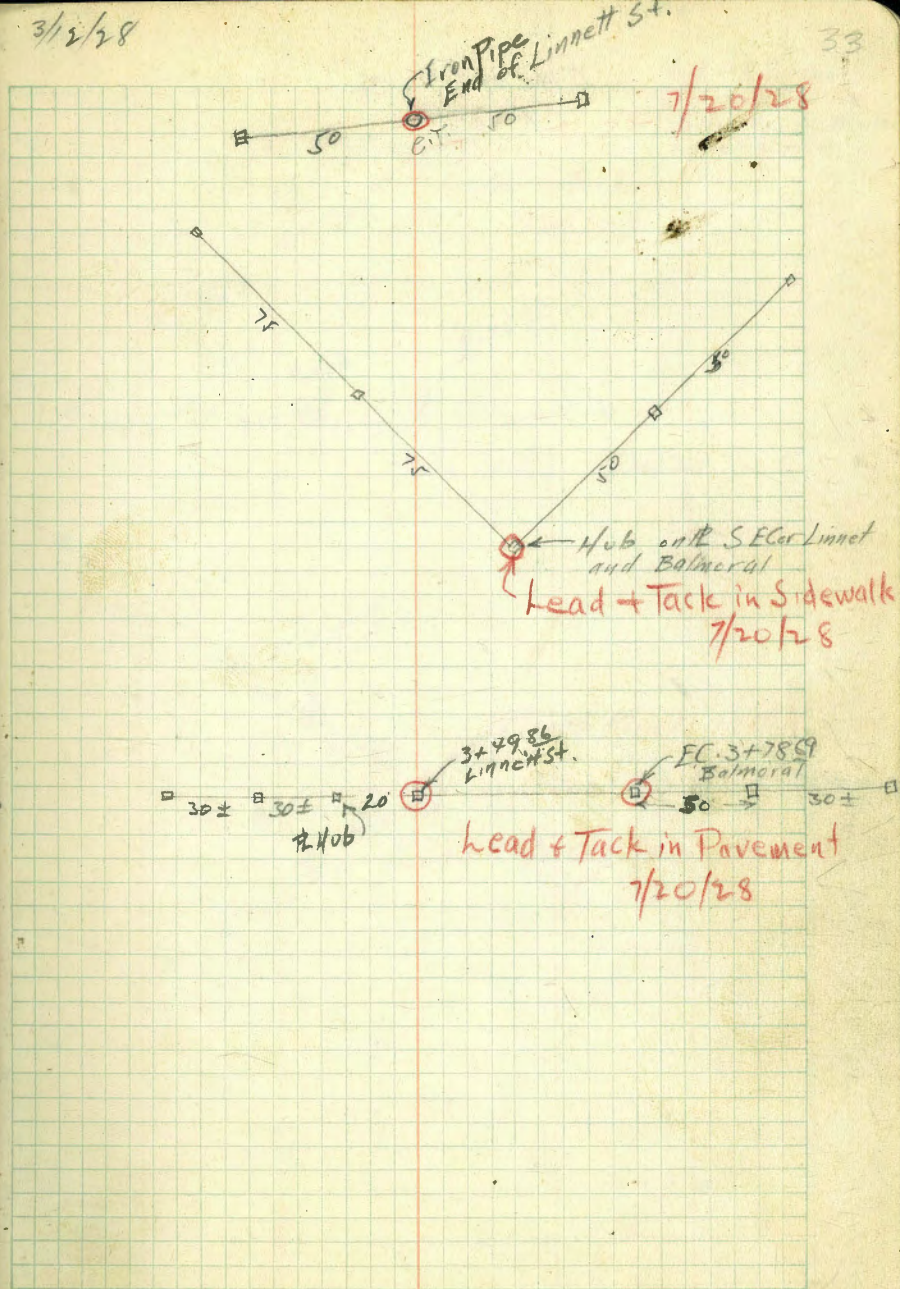
2/29/28
Stevens.

32

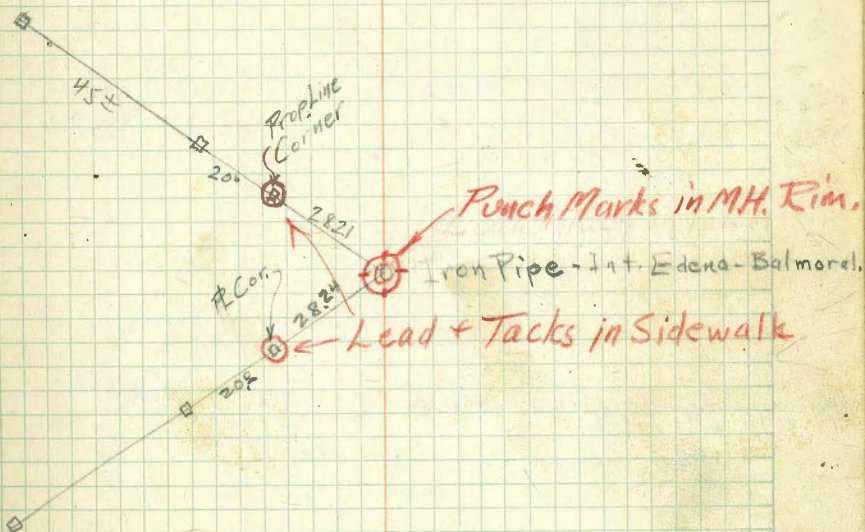
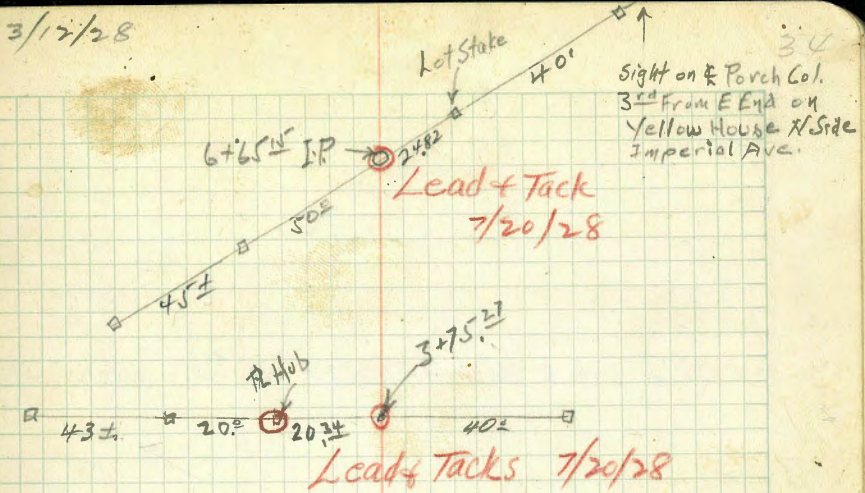


Linnett St. & Balmoral
R.P.

3/2/28



Edena Drive
R.P.s



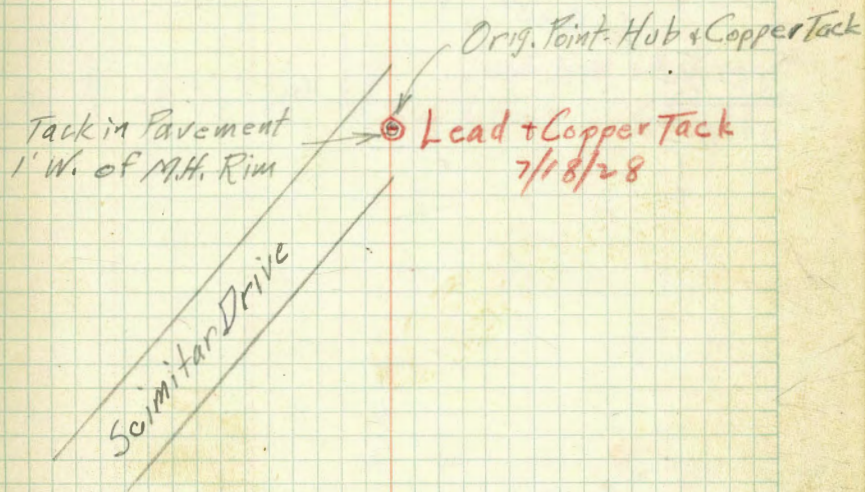
140+387 Int & Bach + Madera at P.I.

125+32⁸² West #6th

$\frac{111+483}{117+169} =$ Equation - Interscotion ~~EMkt.~~ - W. #63th

113+19 - P.I. - Bach Ave.

See Page 47- for R.P.s & Sketch.

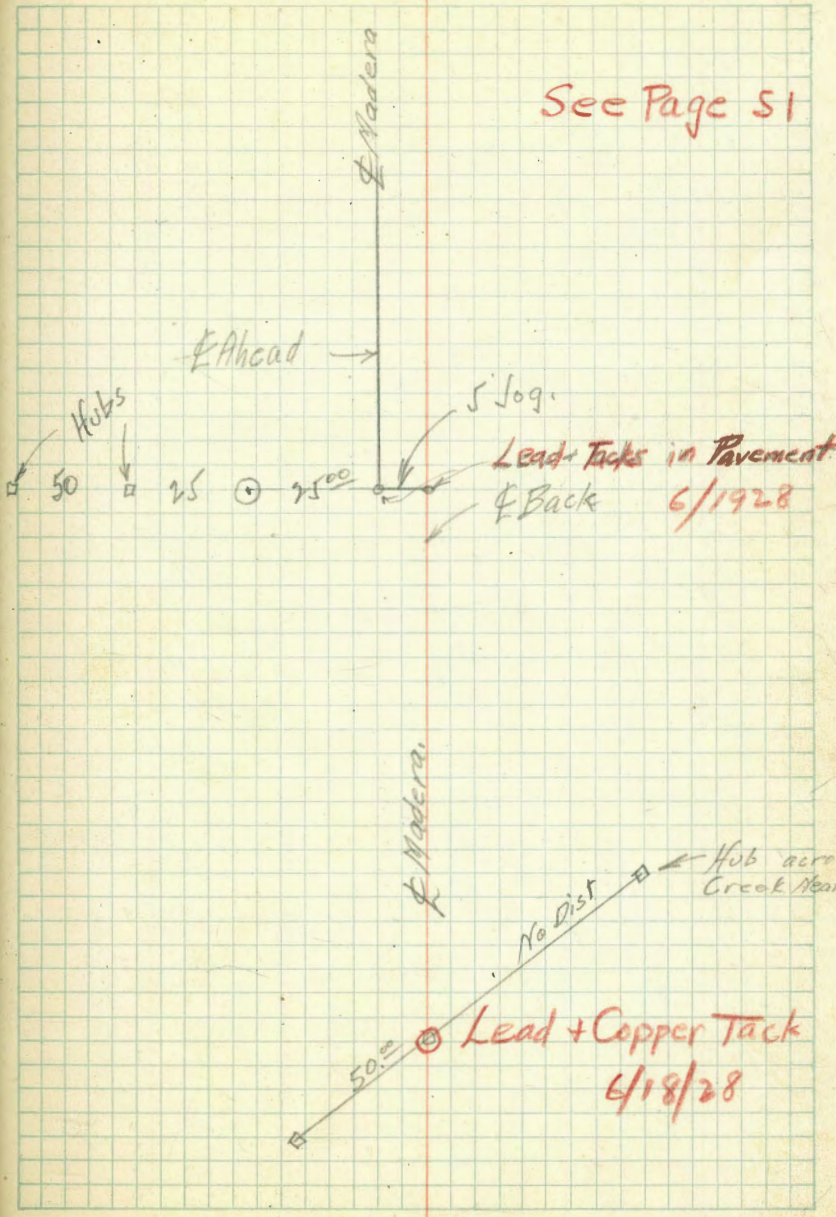


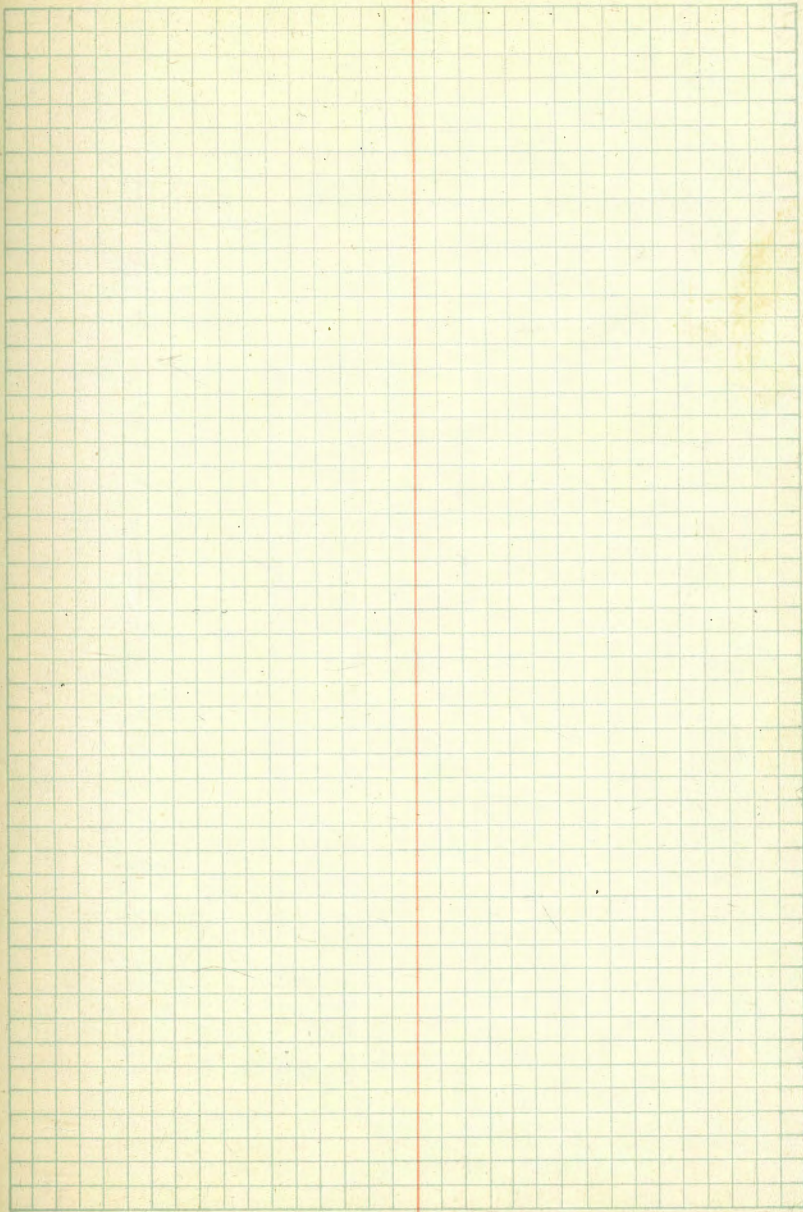
↑ See Page 51

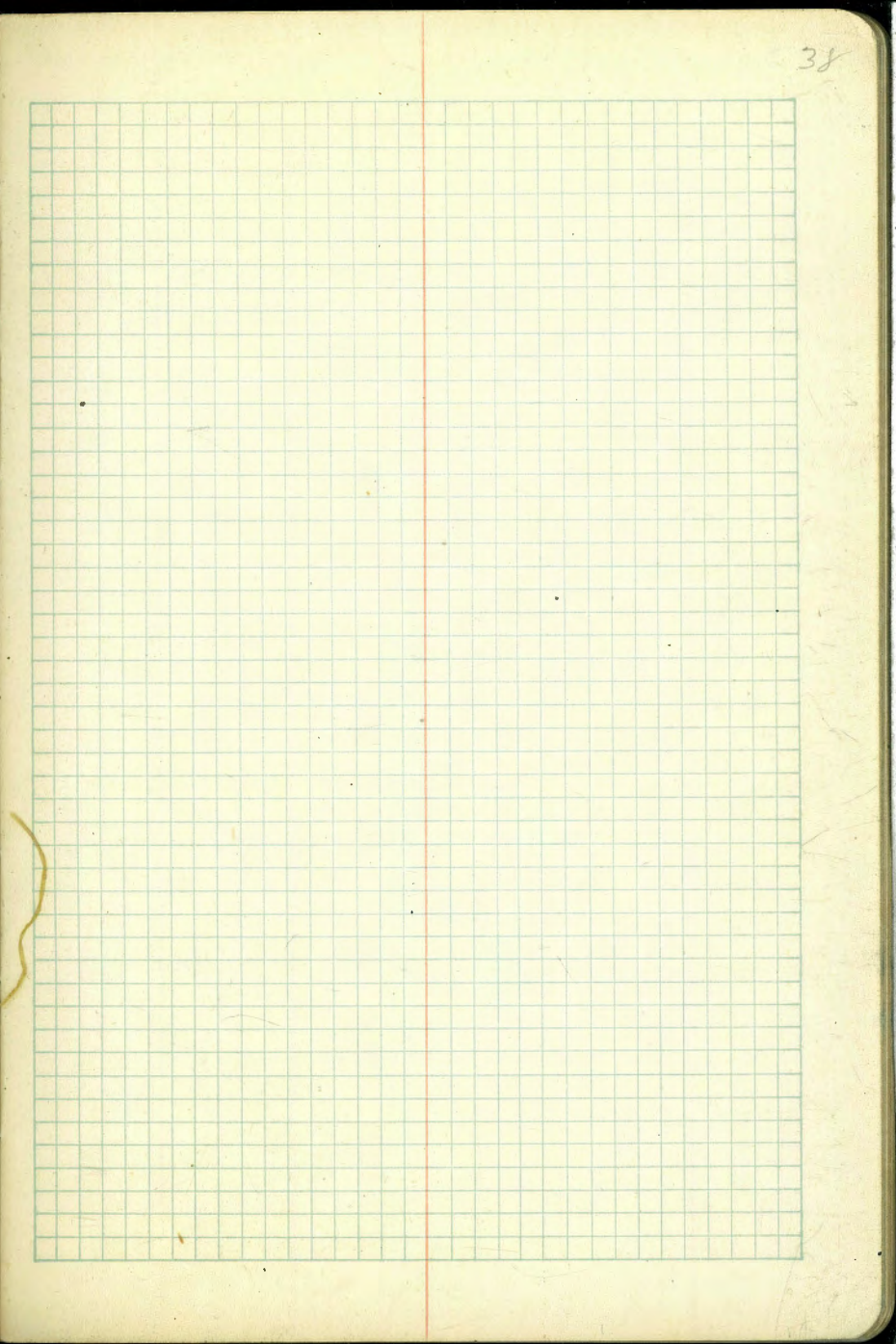
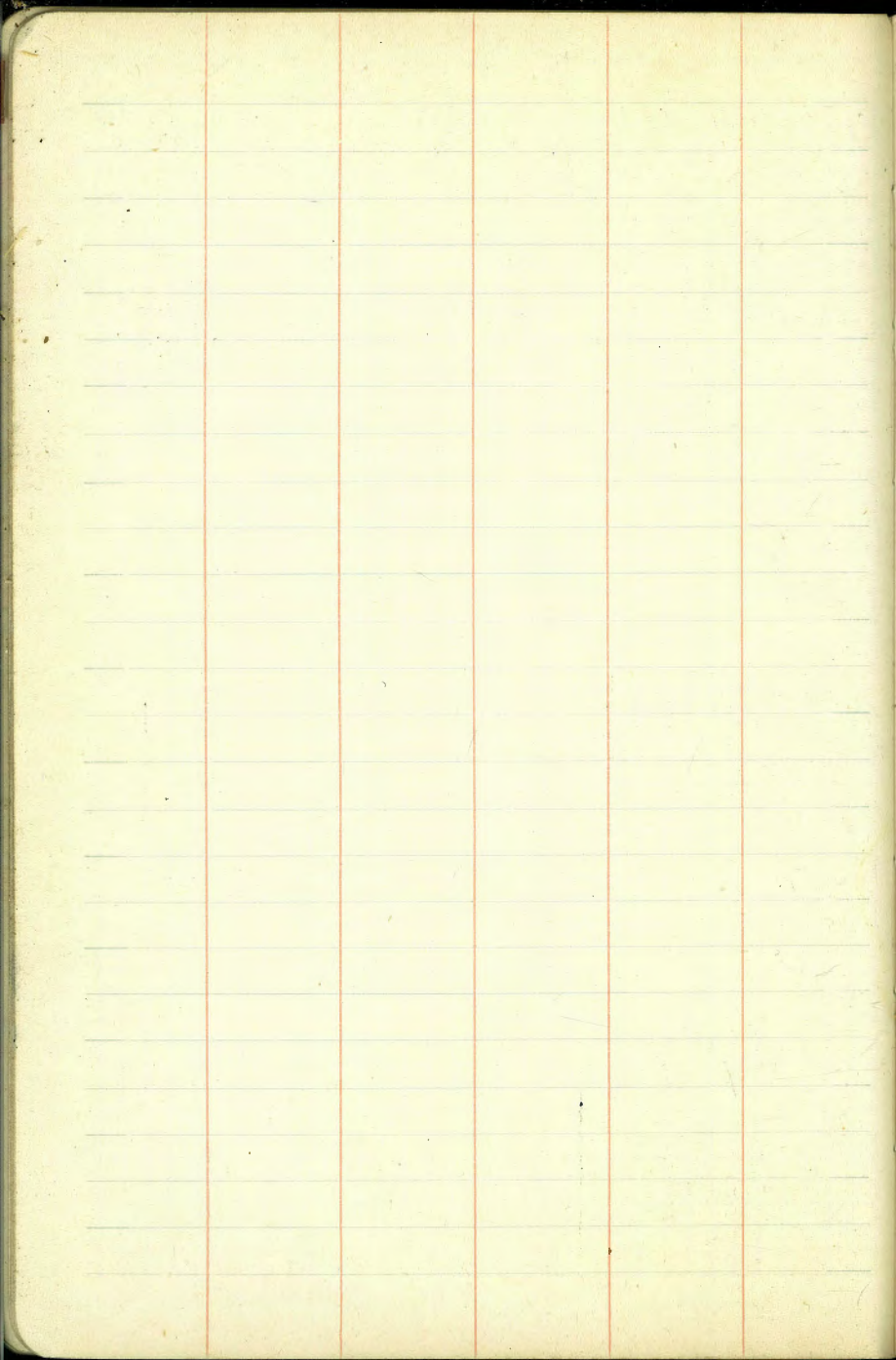
$$\frac{159+93.19}{159+91.59} =$$
 ↓

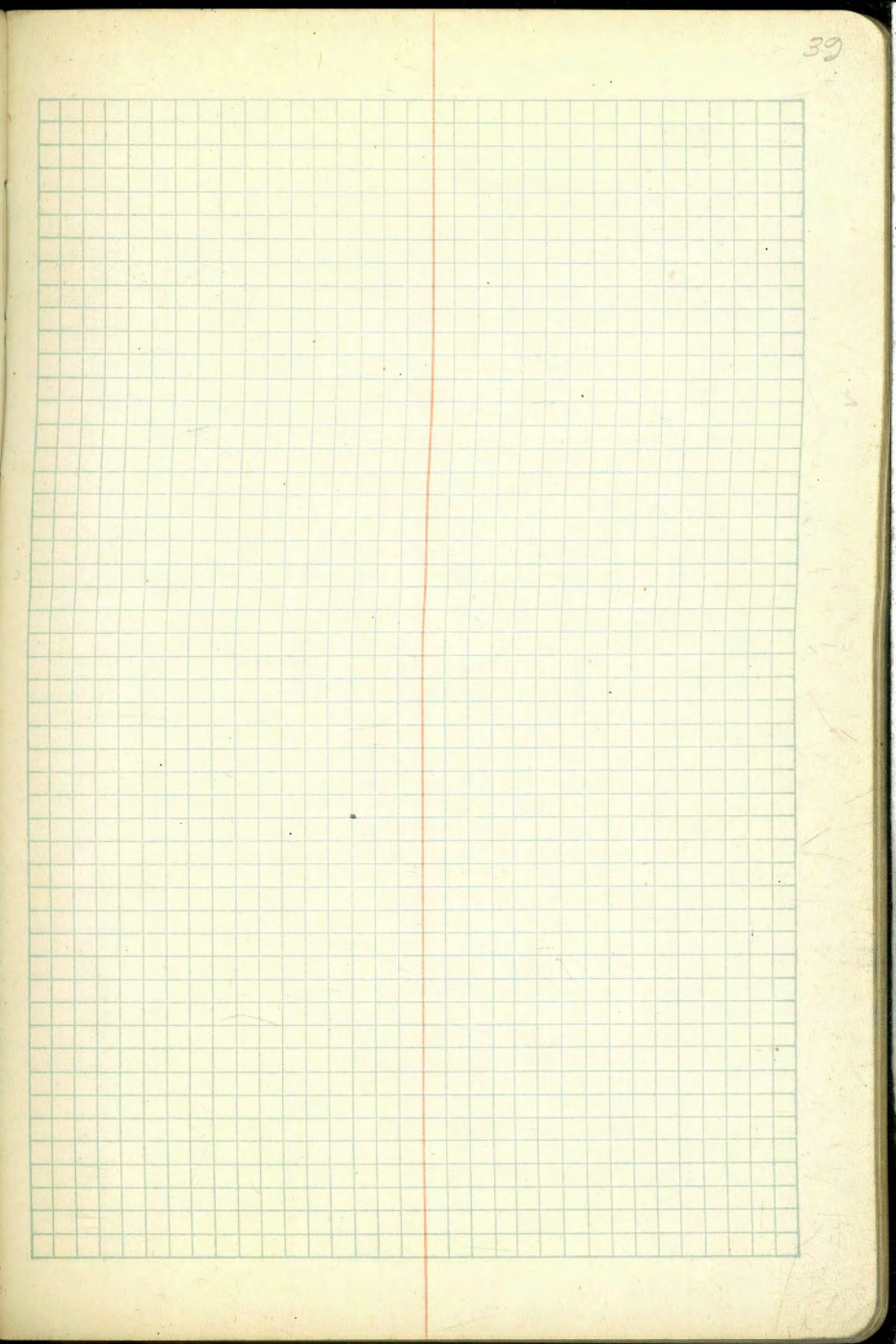
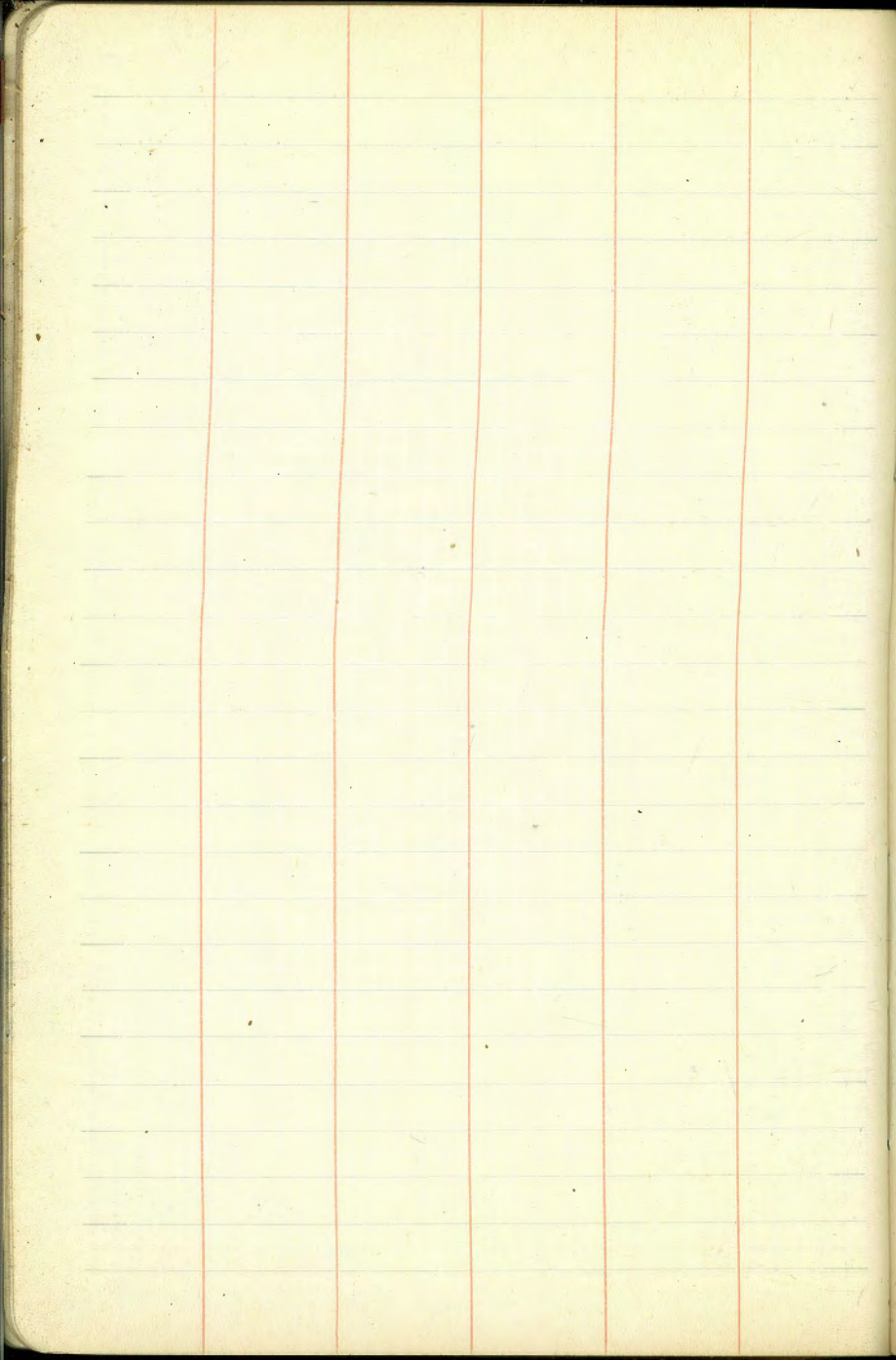
147+75¹⁰ I.P. Φ Hilger + Mkt. St.

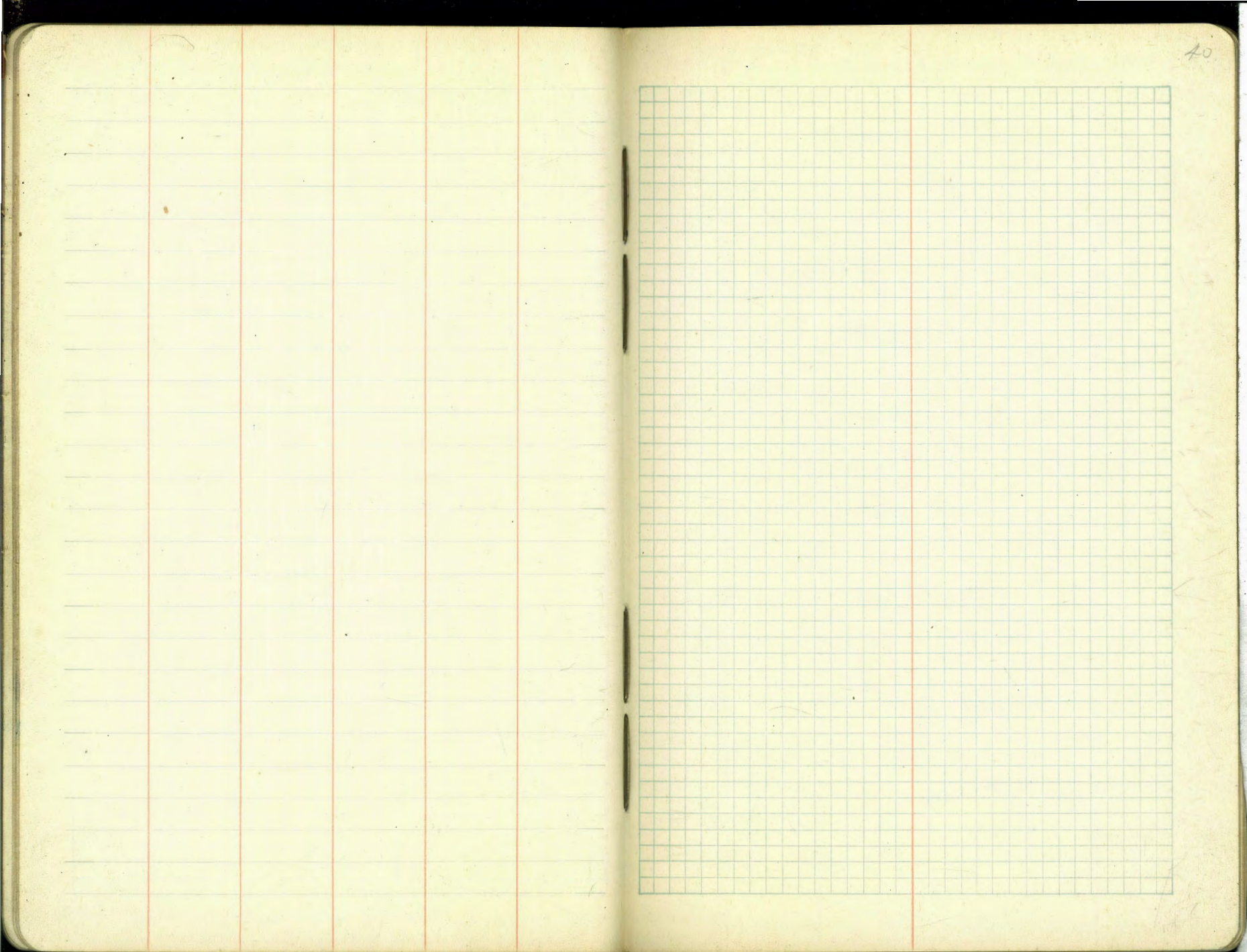
See Page 51



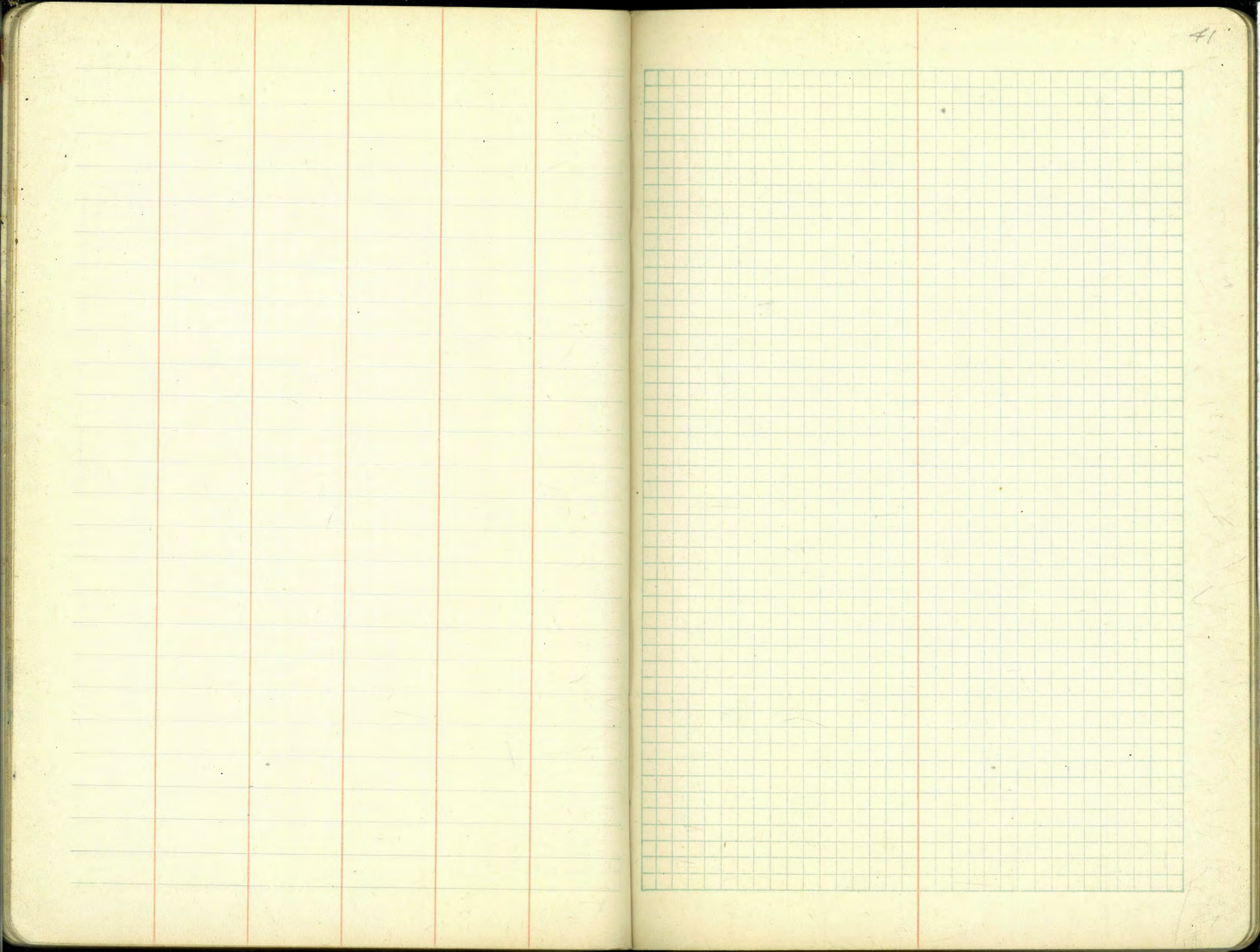


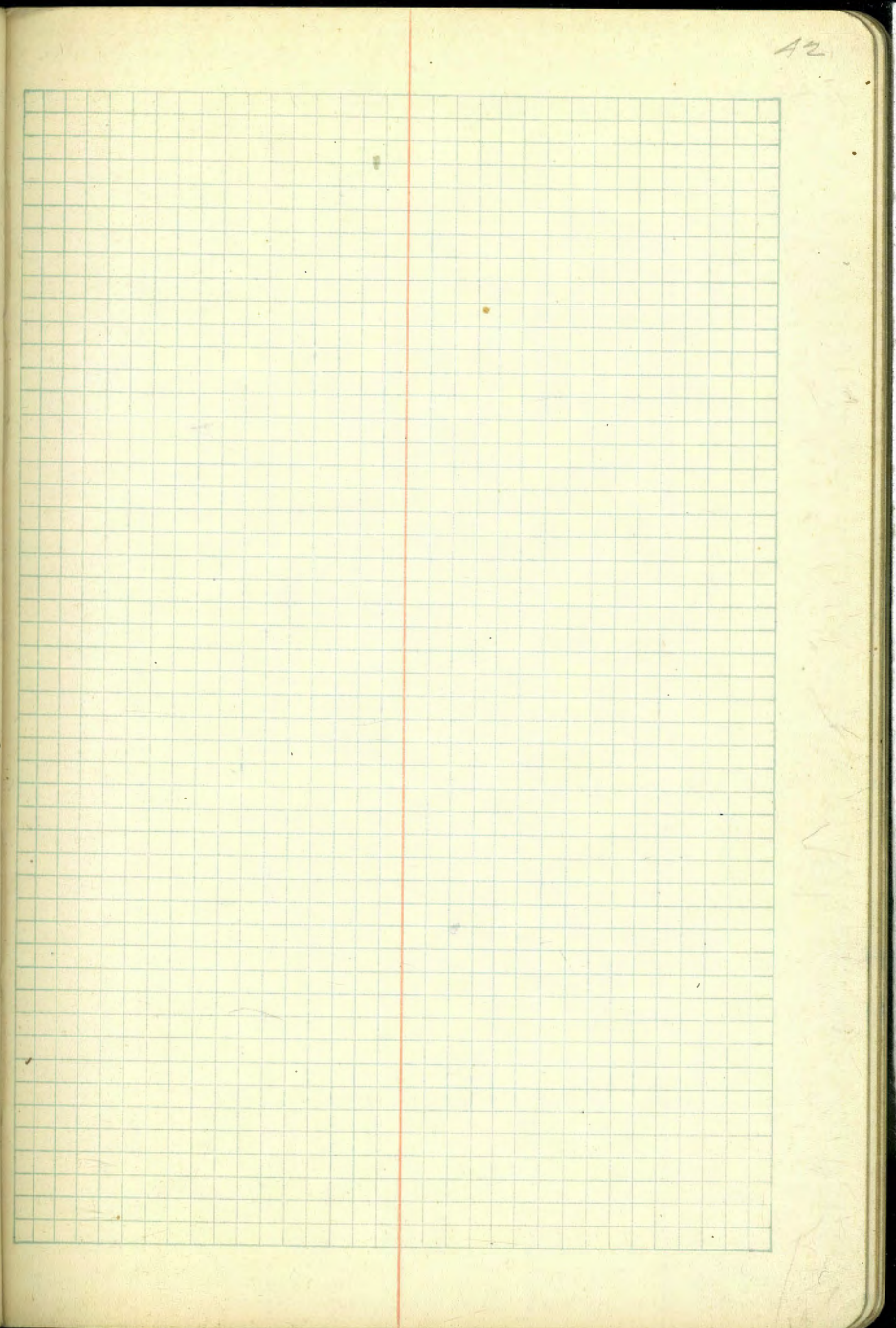
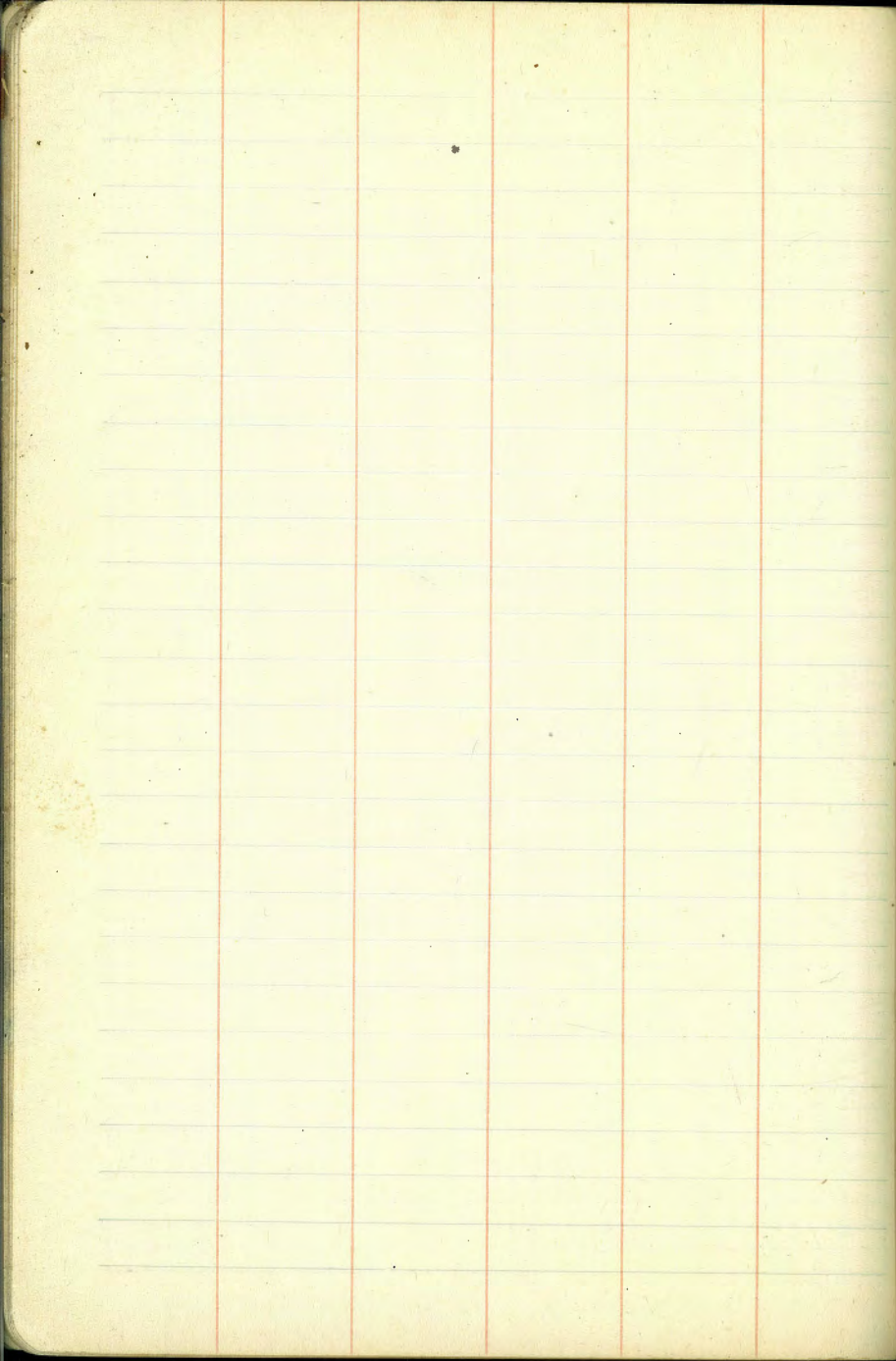


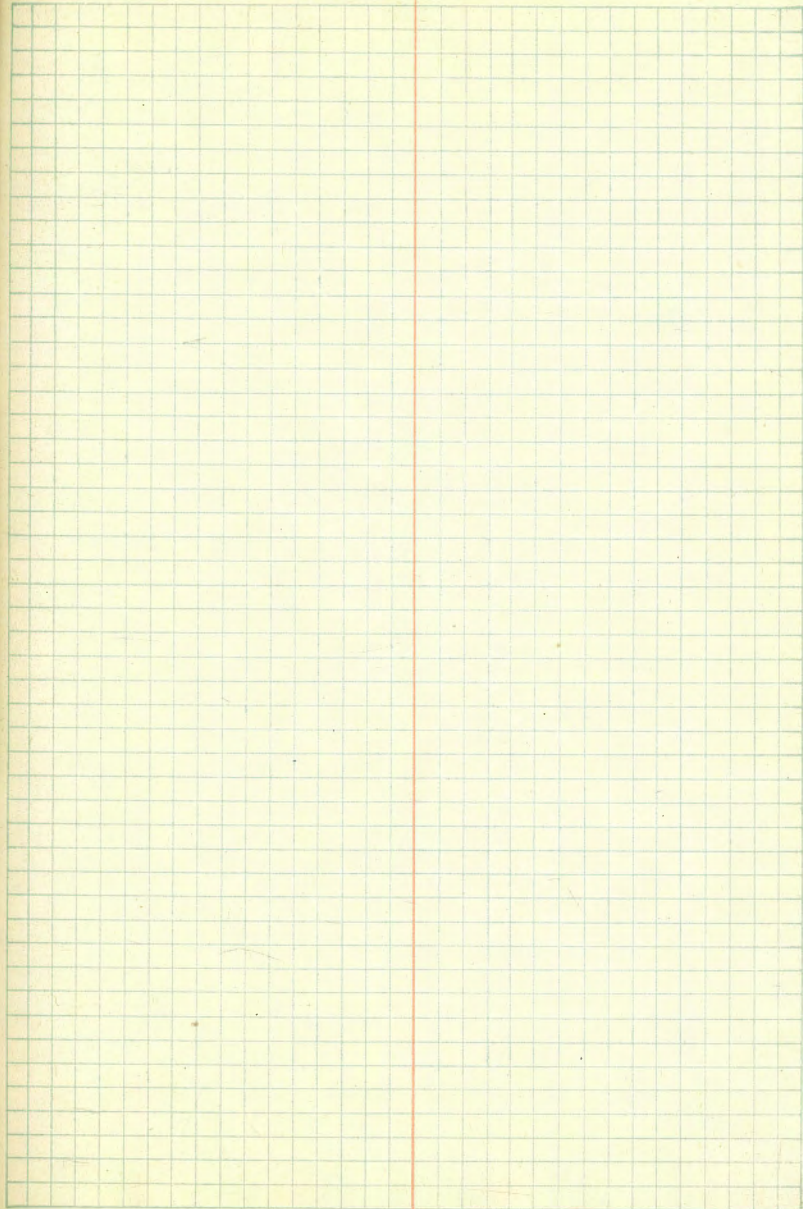


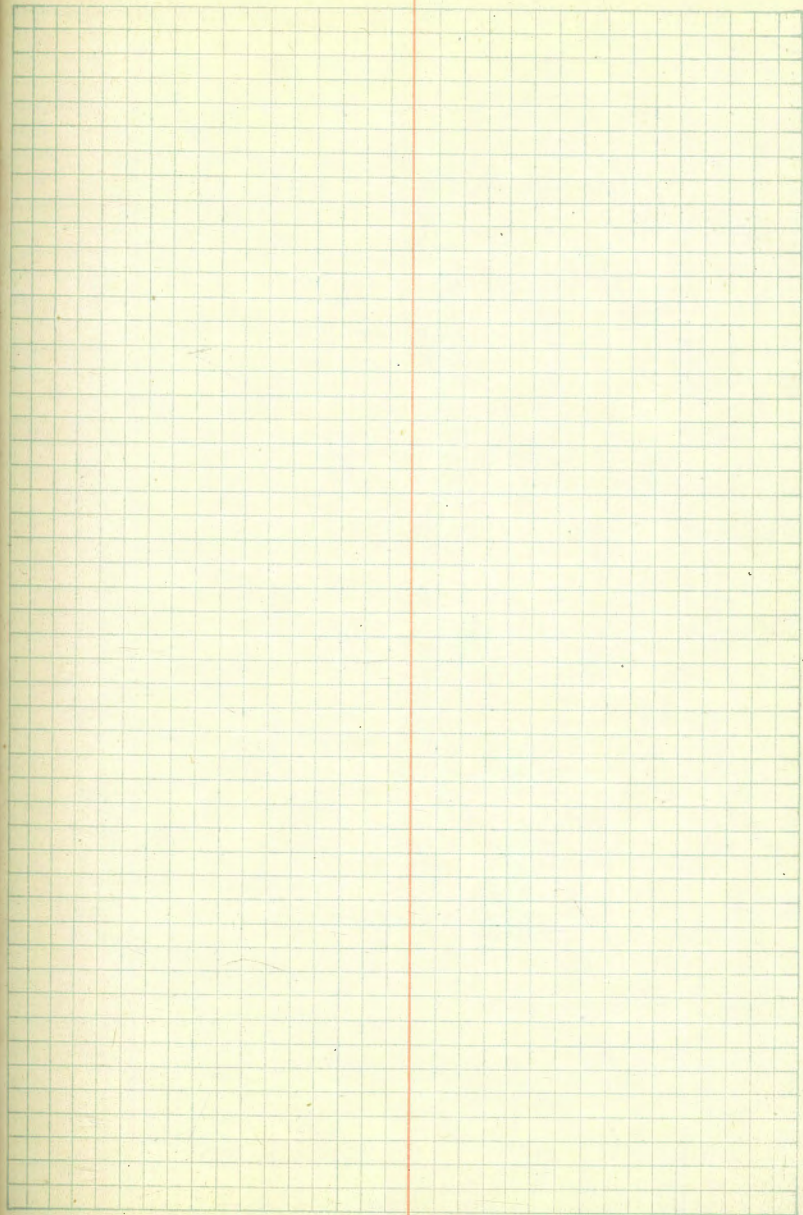


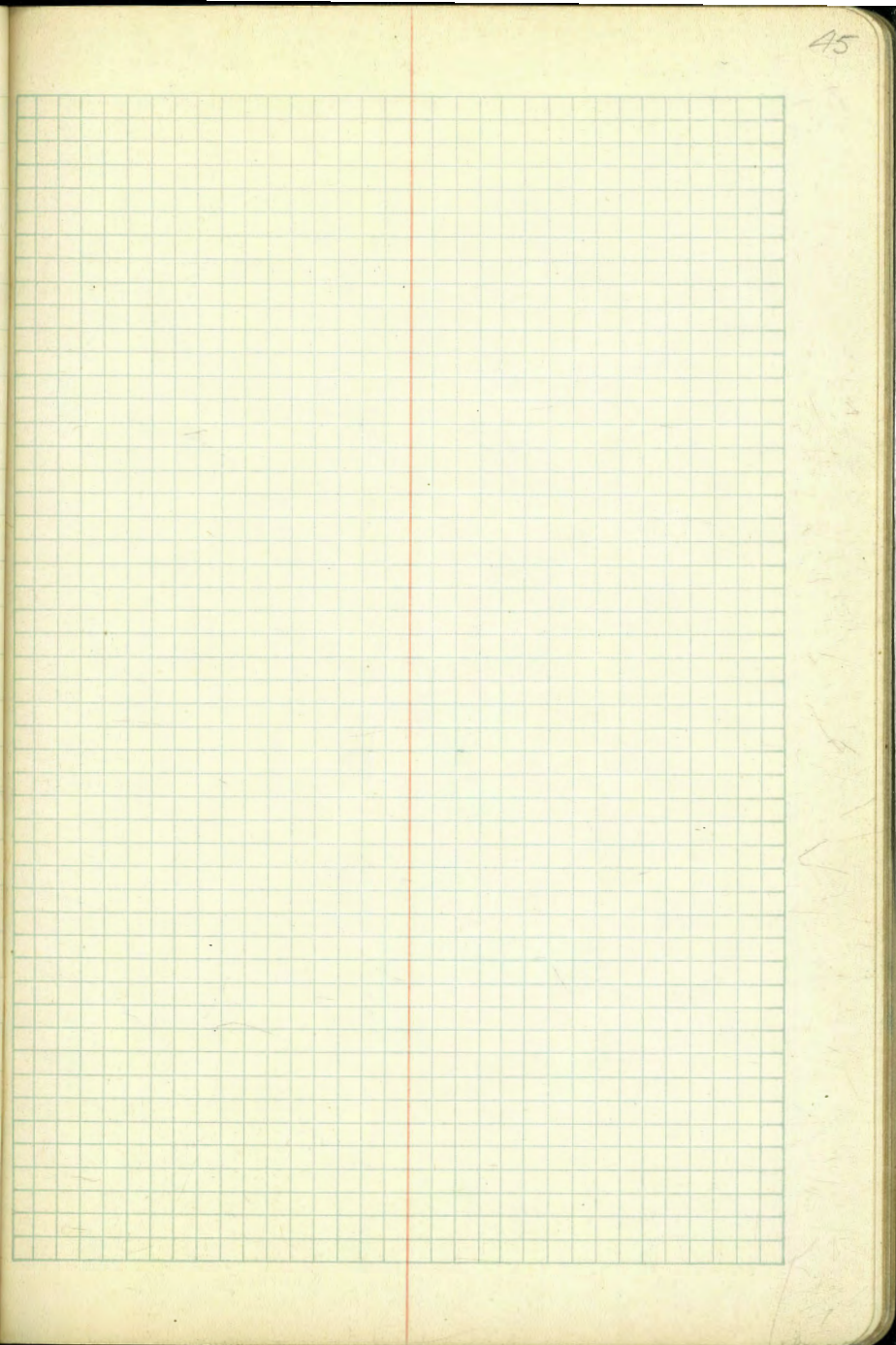
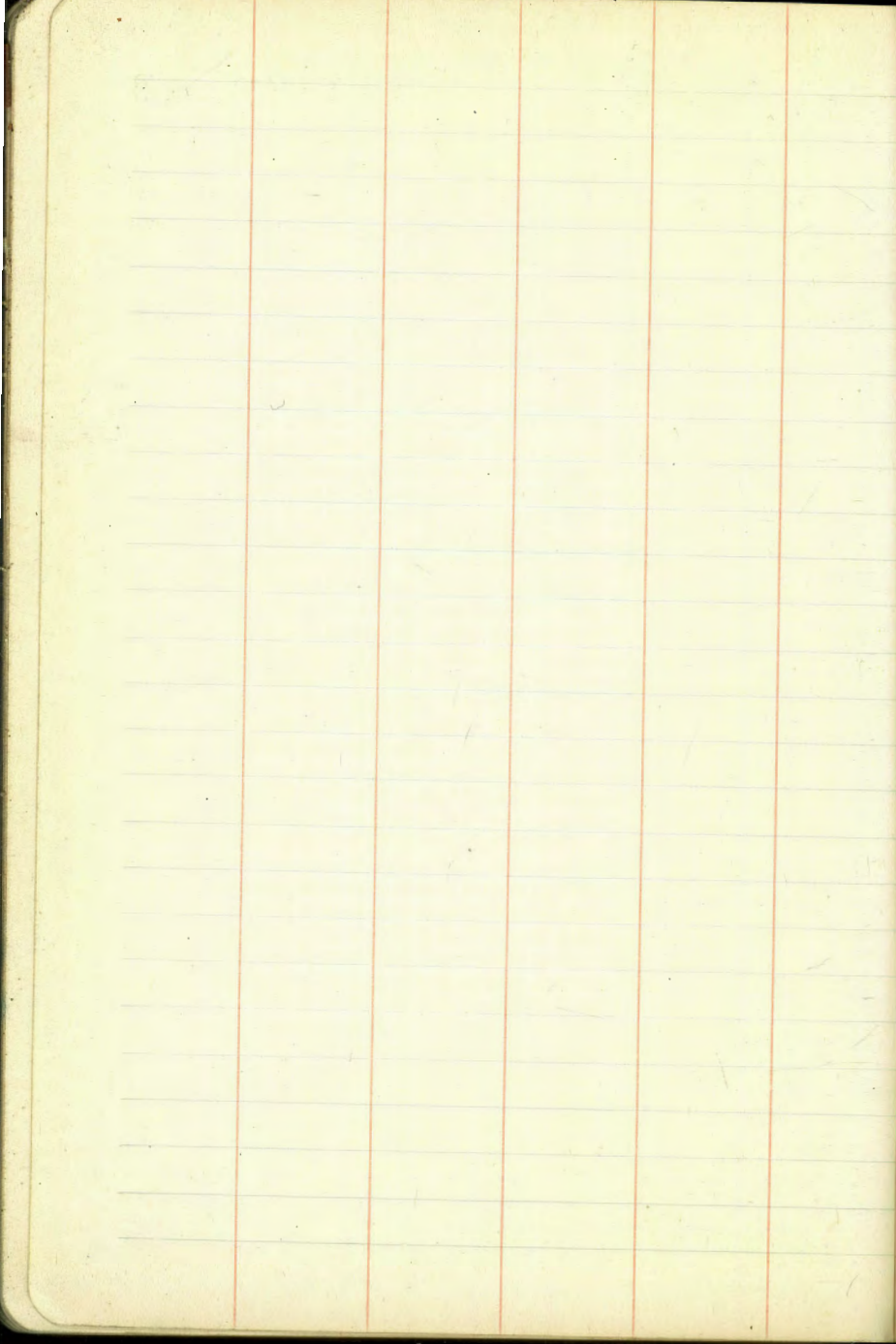
70

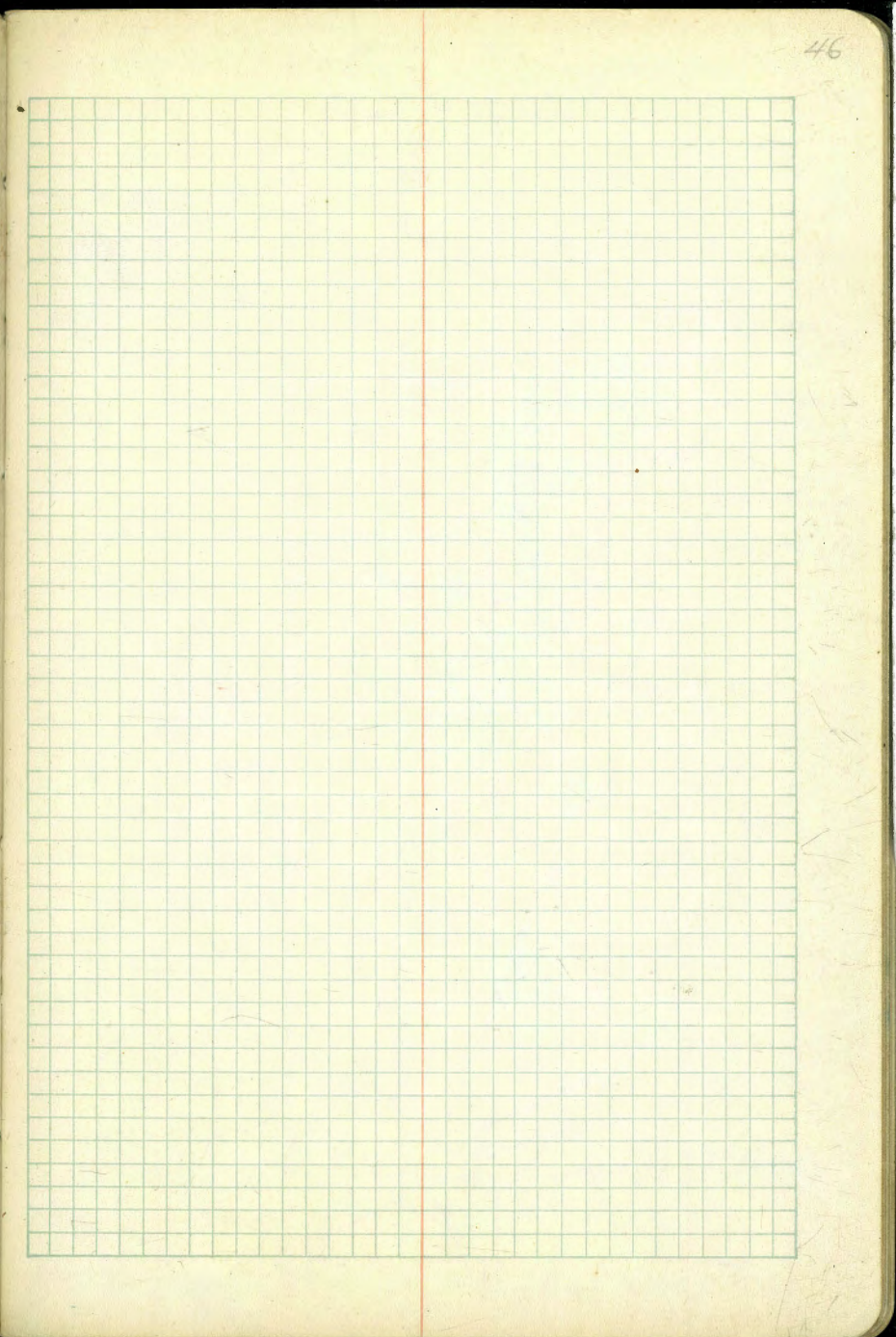
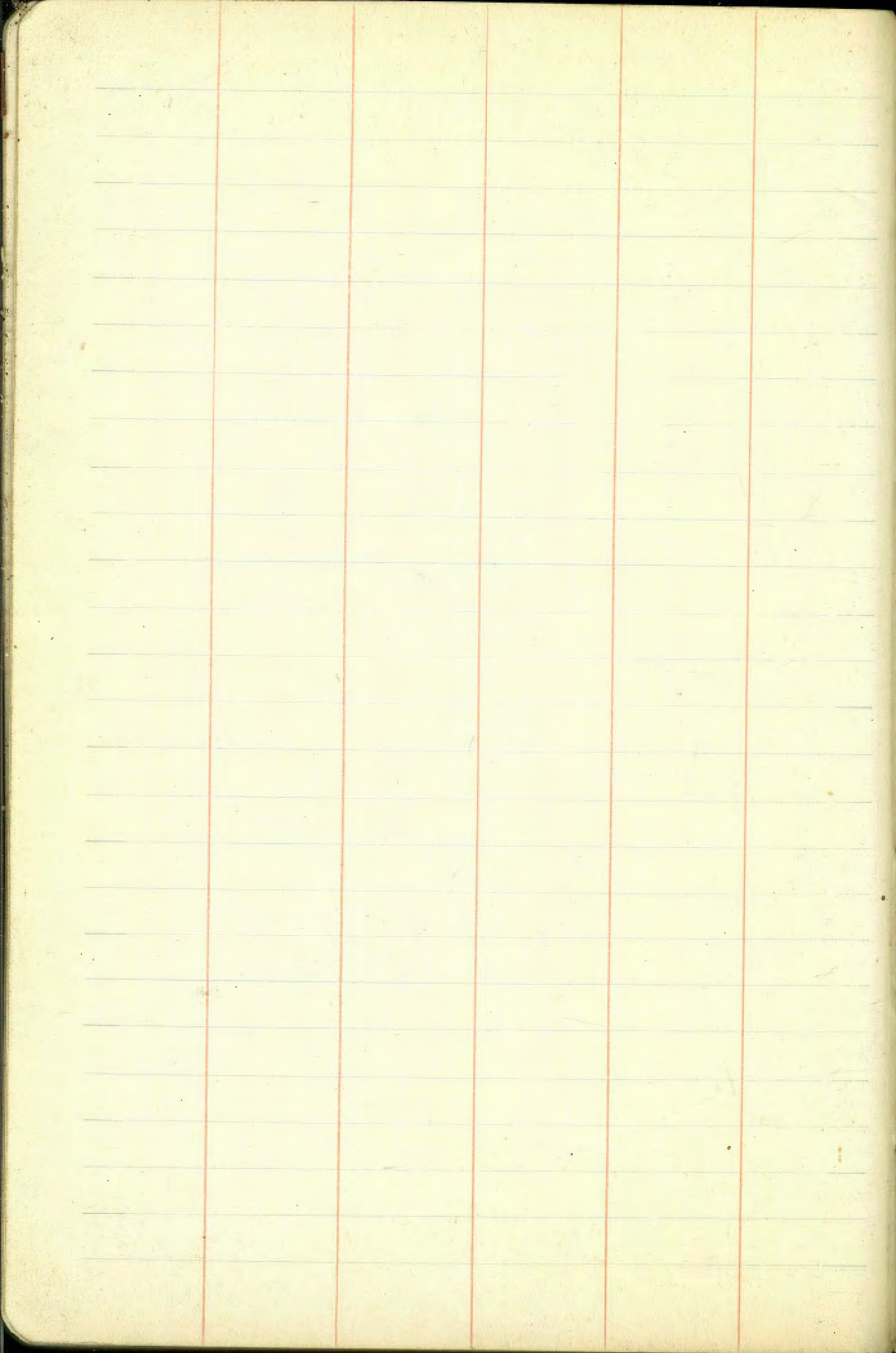


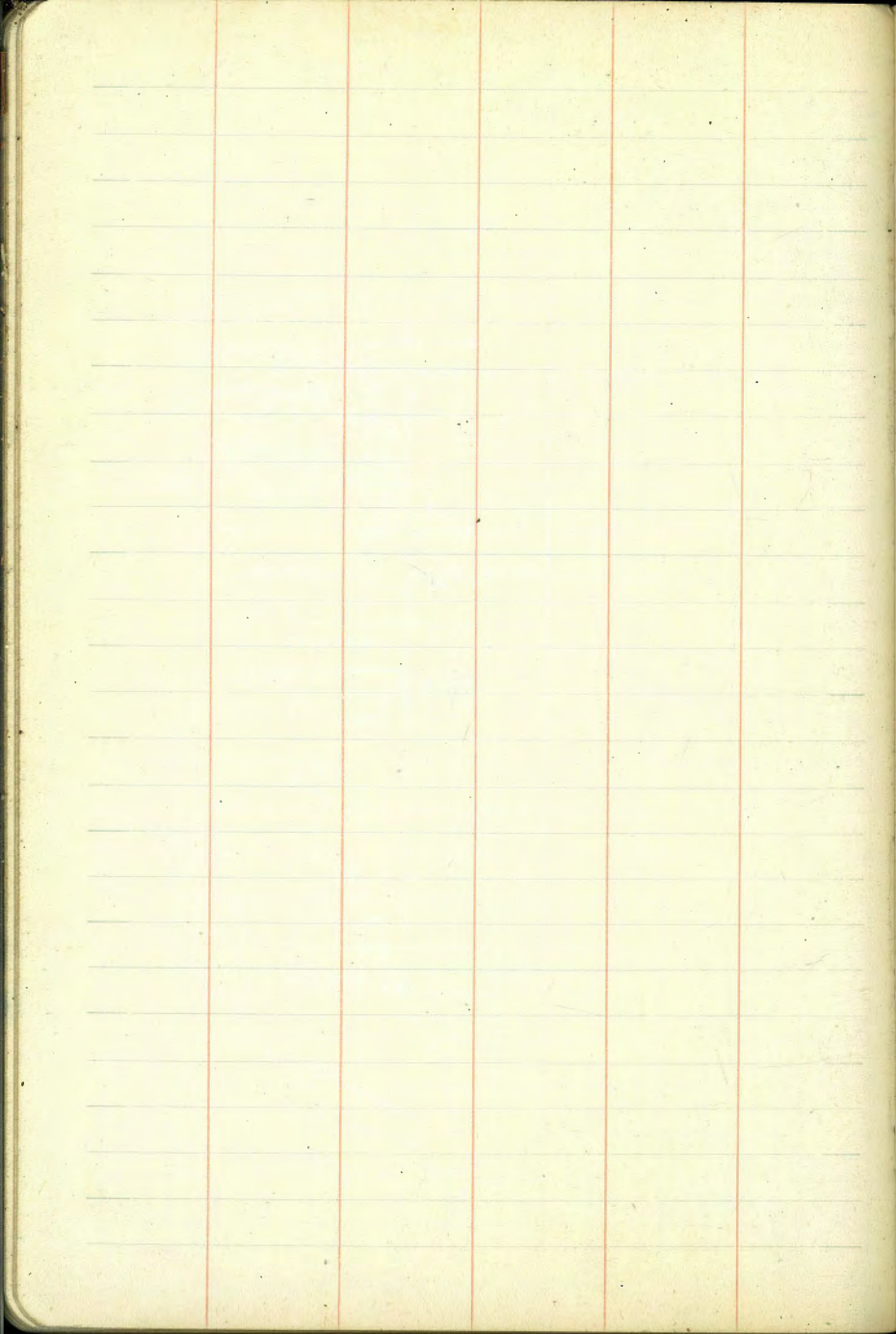
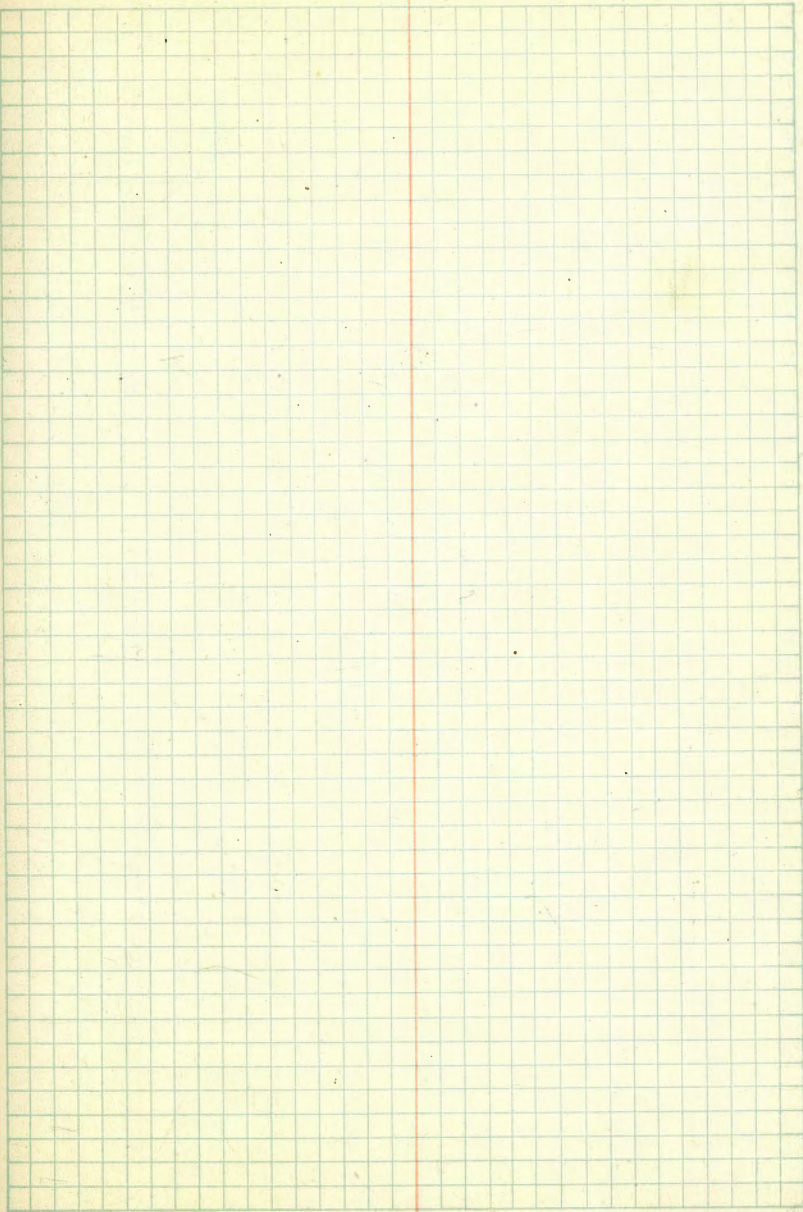


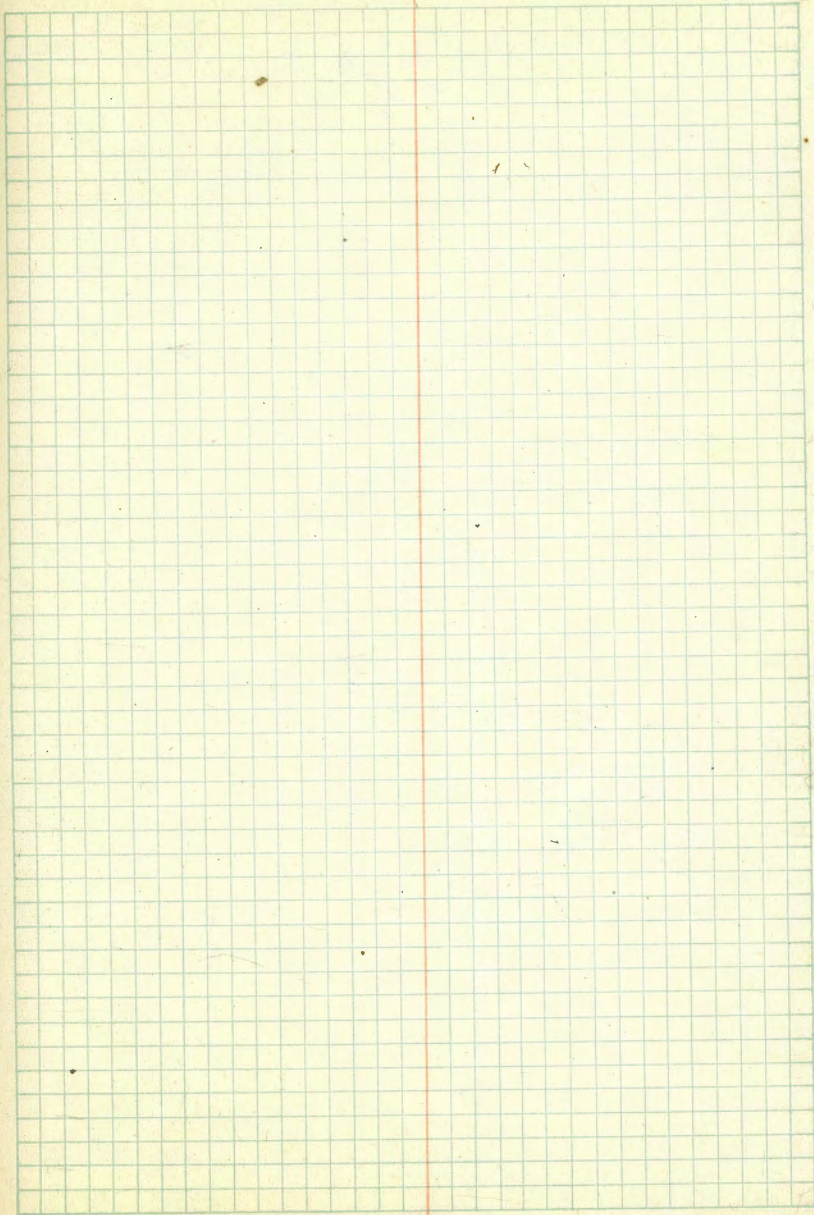








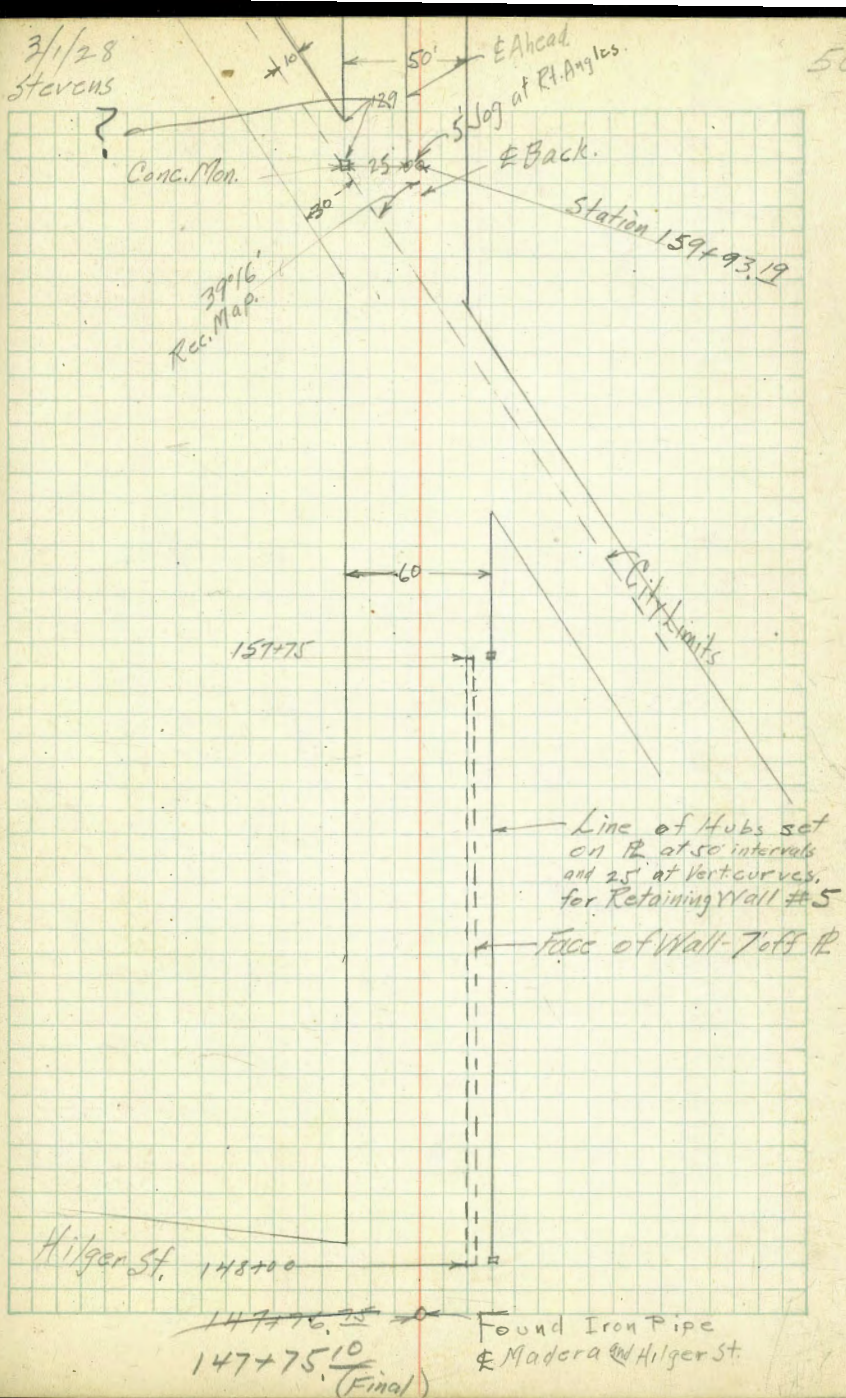




MADERA ST.
STAKE'S FOR RETAINING WALL
#5

3/1/28
Stevens

50

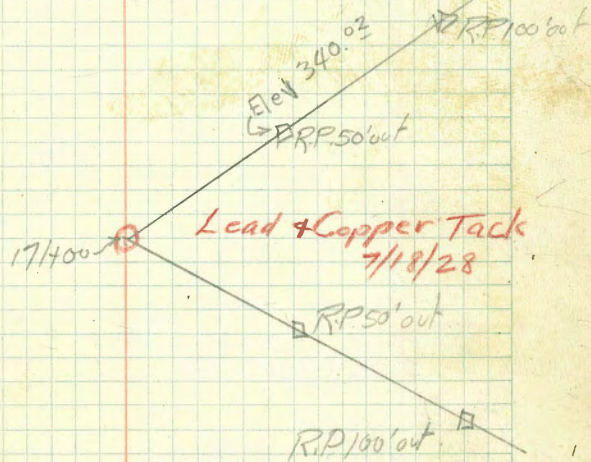
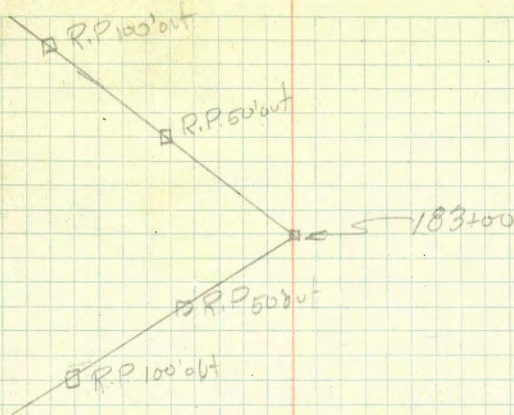


Midderd (cont)

183400 P.O.T.

171400 P.O.T.

52

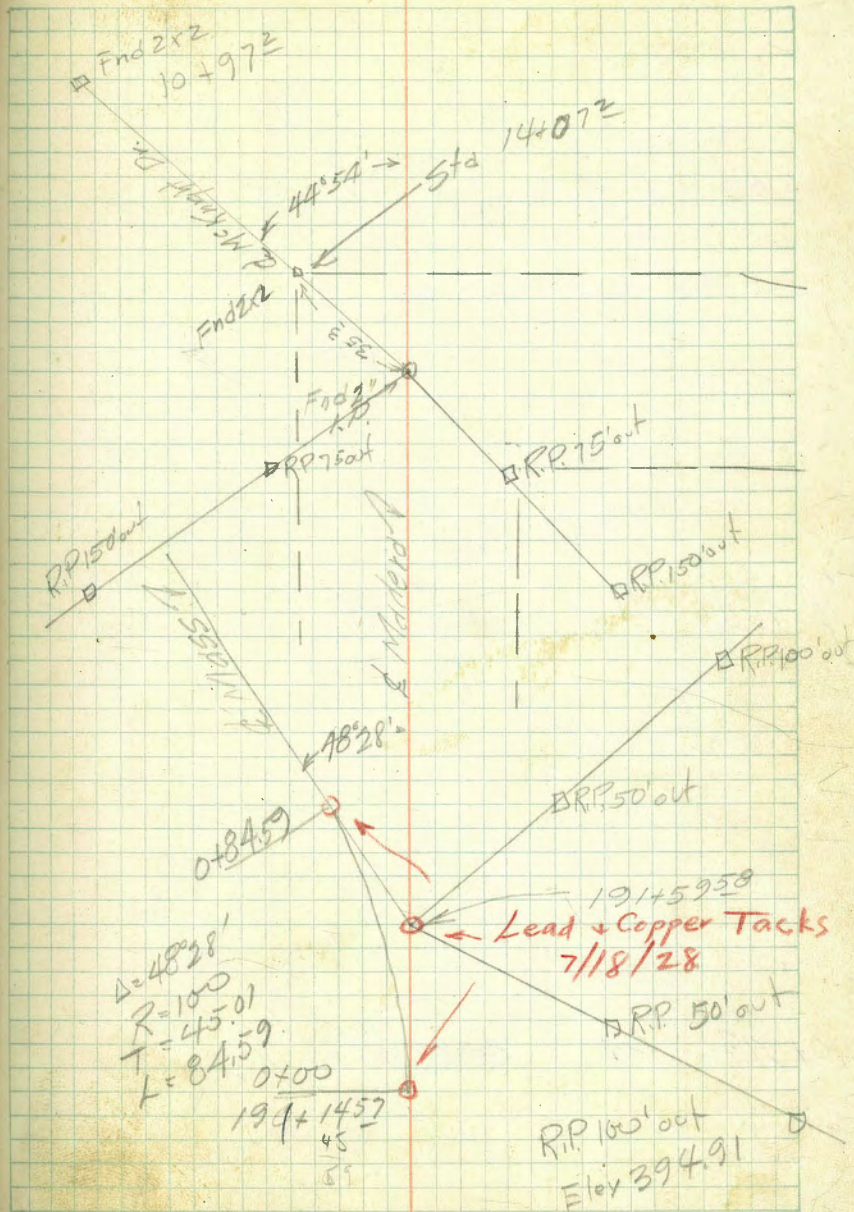


Sta Descending
 14+42 \approx McKnight (San Miguel)
 196+1259 Intersection of San Pascual St.

19145958 P.I. Madderd

0+00 Mass. or Market

199+1457 = Madderd

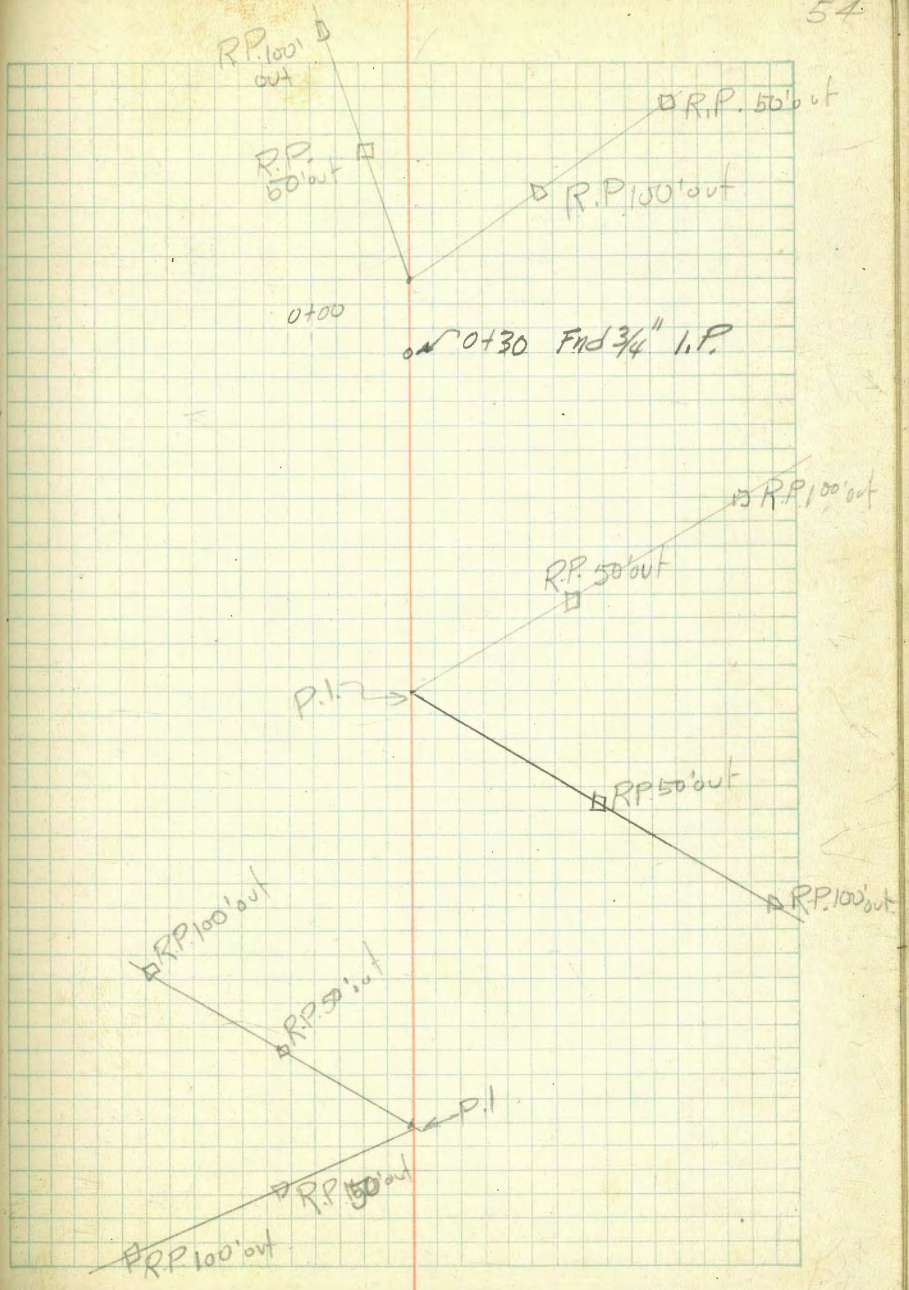


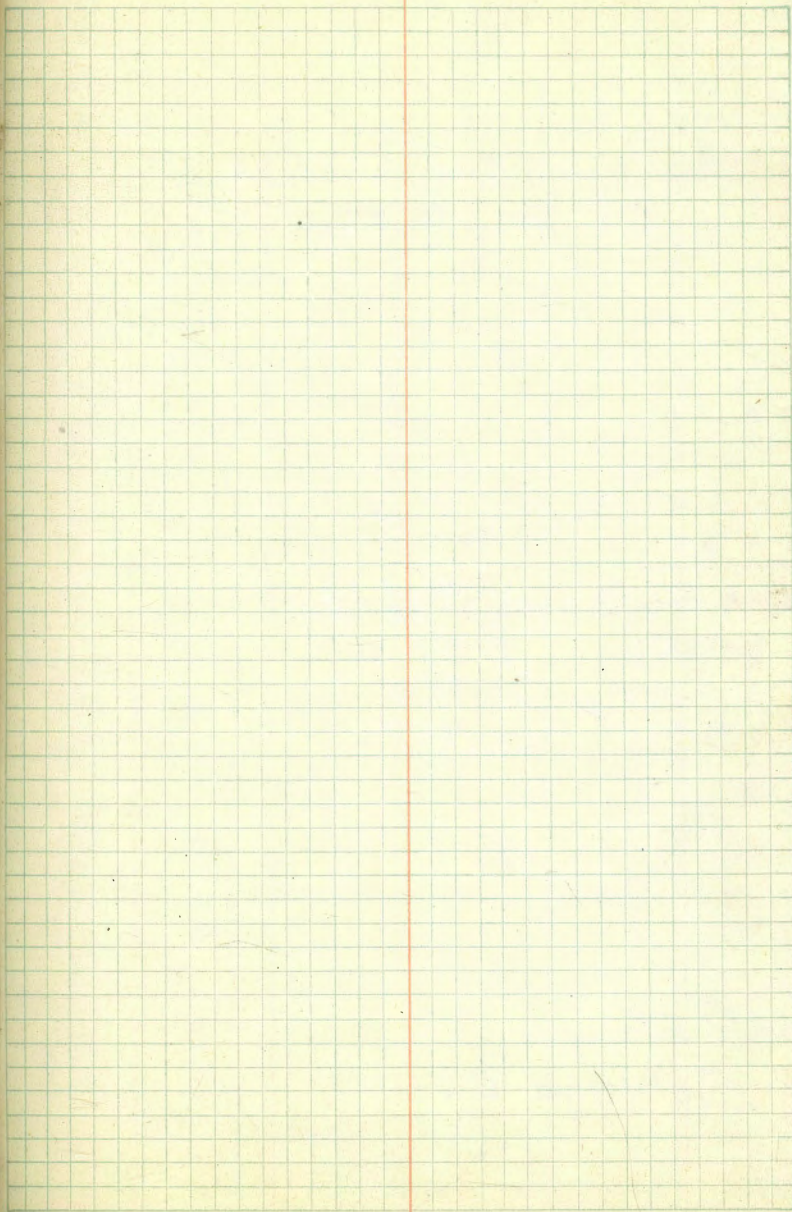
MCKNIGHT DR (Cont)

0+00 & Mallard? (10' North)

6+958 P.I. $\Delta = 60^{\circ}41'$ Rt.

10+972 P.I. $\Delta = 0^{\circ}55'$ Lt.





Notes on Alignment
Mkt. St. Thru Berryland.

20+856 South Line Mallard St.
See Pg 57.

10+27.45

7+42.07 EC. =

$\Delta = 90.09$ Rt.

$R = 100$

$T = 7.99$

7+26.10 BC

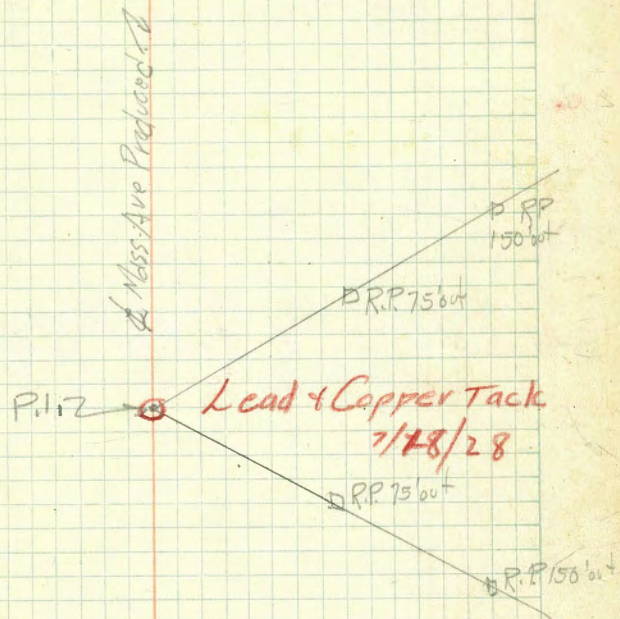
$L = 15.97$

0+84.59 EC.

See Page 53

56

Jensen



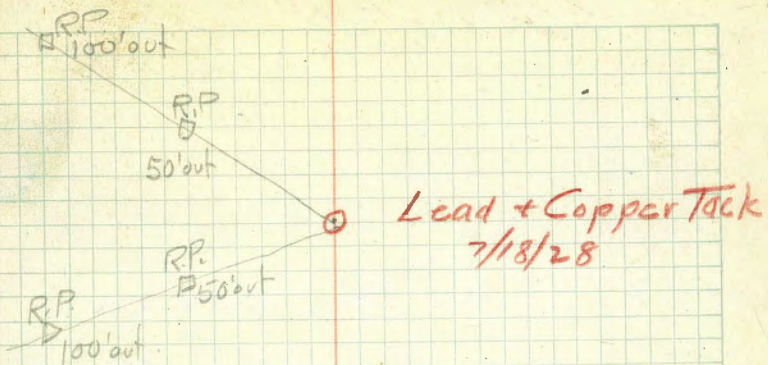
Notes on Alignment #4
MASSACHUSETTS AVE
Mallard to Broadway

41483⁰⁰ POT.

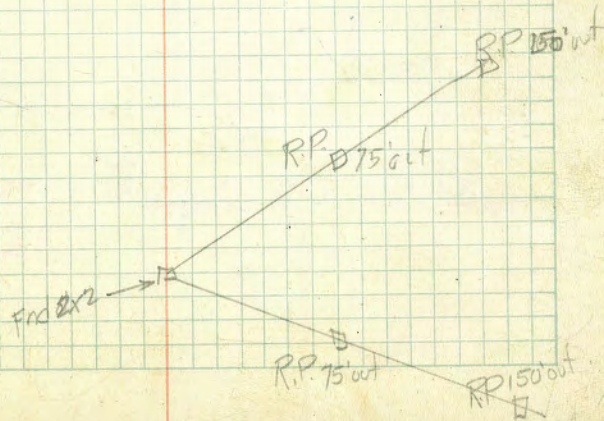
34425⁶ POT. & San Miguel

20+85⁶ POT. South Line Mallard

57



Lead + Copper Tack ~~at~~ Cross in Part.
7/18/28



MASSACHUSETTS AVE
(cont)

60+91² Center Pnt Broadway

60+73⁴ Edge of Pnt.


47+46²⁰ Center Central

18
23 34
91 30

Jenson 58

✓ Nail in Expansion
Joint.

○ Nail in Header Board.

Lead & Copper Tack  Cross in Part.
7/18/28

Curb Grades
25-26- Market
South Curb Line

BM	0.70	154.28		153.58	Curb Grade
T.P.			6.27	148.01	
	9.49	157.50	2.54	154.96	
			0.56	156.94	
0+00				155.00	
0+30			4.60	152.90	
0+50			6.00	151.50	
1+00			9.50	148.00	
T.P.	0.18	148.17	9.51	147.99	
1+50			3.67	144.50	
1+80			5.77	142.40	
2+00			6.87	141.30	
2+20			7.87	140.30	
2+40			8.47	139.70	
2+55			8.87	139.30	
2+60			8.97	139.20	
2+80			9.17	139.00	
3+00			9.27	138.90	
3+20			9.17	139.00	
3+40			8.77	139.40	
3+60			8.17	140.00	
3+80			7.27	140.90	
4+00			5.87	142.30	
T.P. 4+50	9.15	154.95	2.37	145.80	
5+00			5.65	149.30	
5+50			2.15	152.80	
5+60			1.45	153.50	

2/16/28

59

City B.M. SW Cor 26th + Market.

Top Curb - SE Cor. 25 - Market

" " NE " " "

00
300.

$\frac{-70}{7}$ $\frac{00}{6}$ $\frac{00+05}{10}$ $\frac{00}{16}$ 0+50

$\frac{-08}{6}$ $\frac{-04}{6}$ $\frac{00}{1}$ $\frac{00}{16}$ 1+00

$\frac{-14}{4}$ $\frac{-06}{6}$ $\frac{00}{2}$ $\frac{-04}{12}$ 1+50

$\frac{-06}{6}$ $\frac{-03}{6}$ $\frac{00}{12}$ 2+00

$\frac{00}{7}$ $\frac{00}{4}$ $\frac{+04}{6}$ $\frac{00}{12}$ 2+40

$\frac{00}{6}$ $\frac{00}{7}$ $\frac{+02}{6}$ $\frac{+08}{4}$ $\frac{+03}{12}$ 2+80

Set 1st High

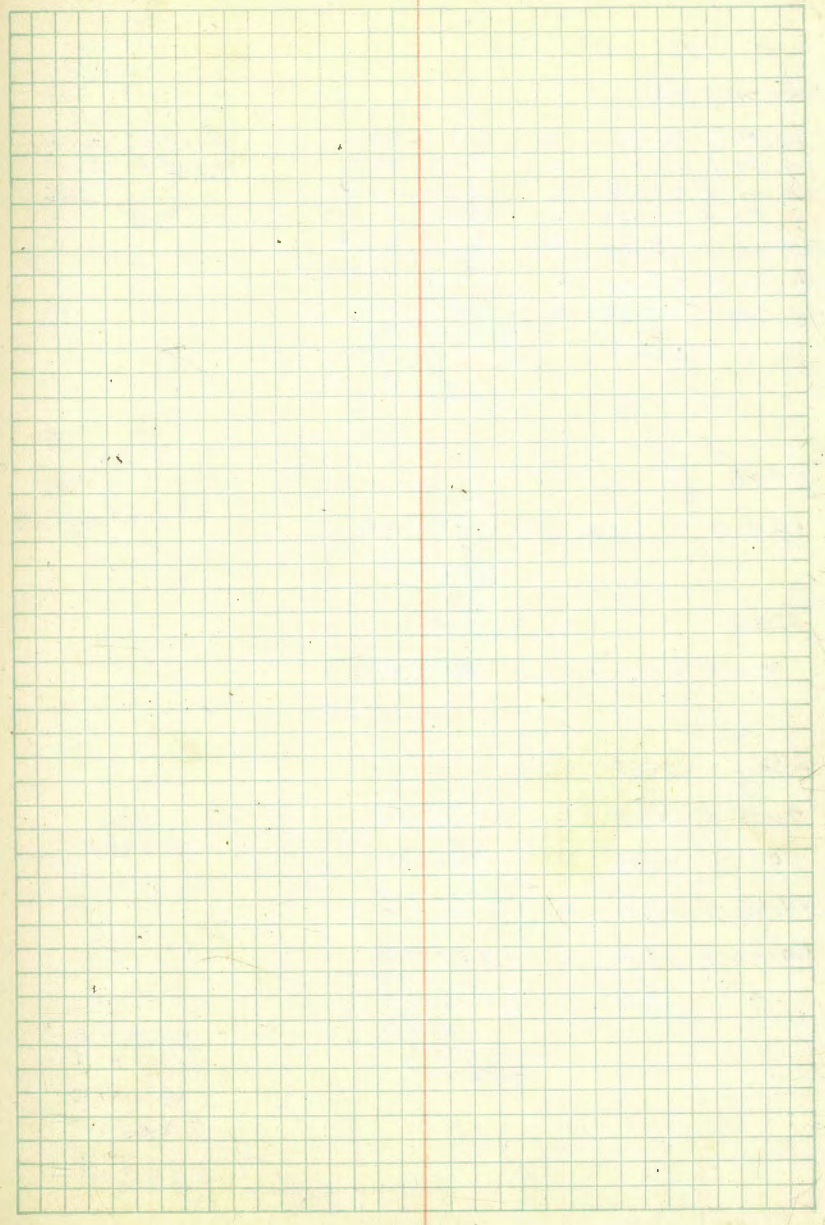
$\frac{00}{7}$ $\frac{-07}{6}$ $\frac{+05}{5}$ $\frac{+05}{16}$ 3+20

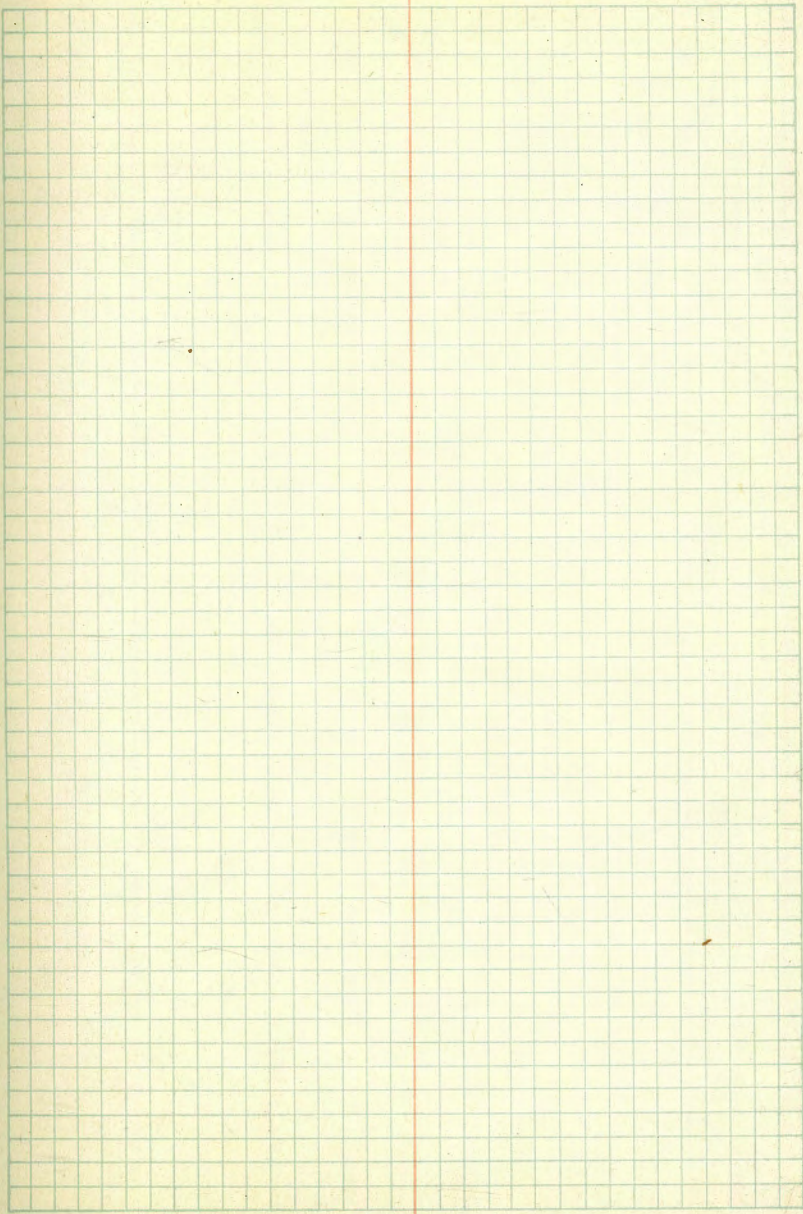
$\frac{-10}{7}$ $\frac{+07}{6}$ $\frac{-02}{16}$
 $\frac{-11}{7}$ $\frac{-03}{6}$ $\frac{+07}{16}$
 $\frac{-12}{7}$ $\frac{+00}{6}$ $\frac{+08}{16}$
 $\frac{-13}{7}$ $\frac{+01}{6}$ $\frac{+09}{16}$
 $\frac{-14}{7}$ $\frac{+02}{6}$ $\frac{+10}{16}$

Market St - 25 26
Curb Grades North Curb Line

2/16/28 stems
2/20/28

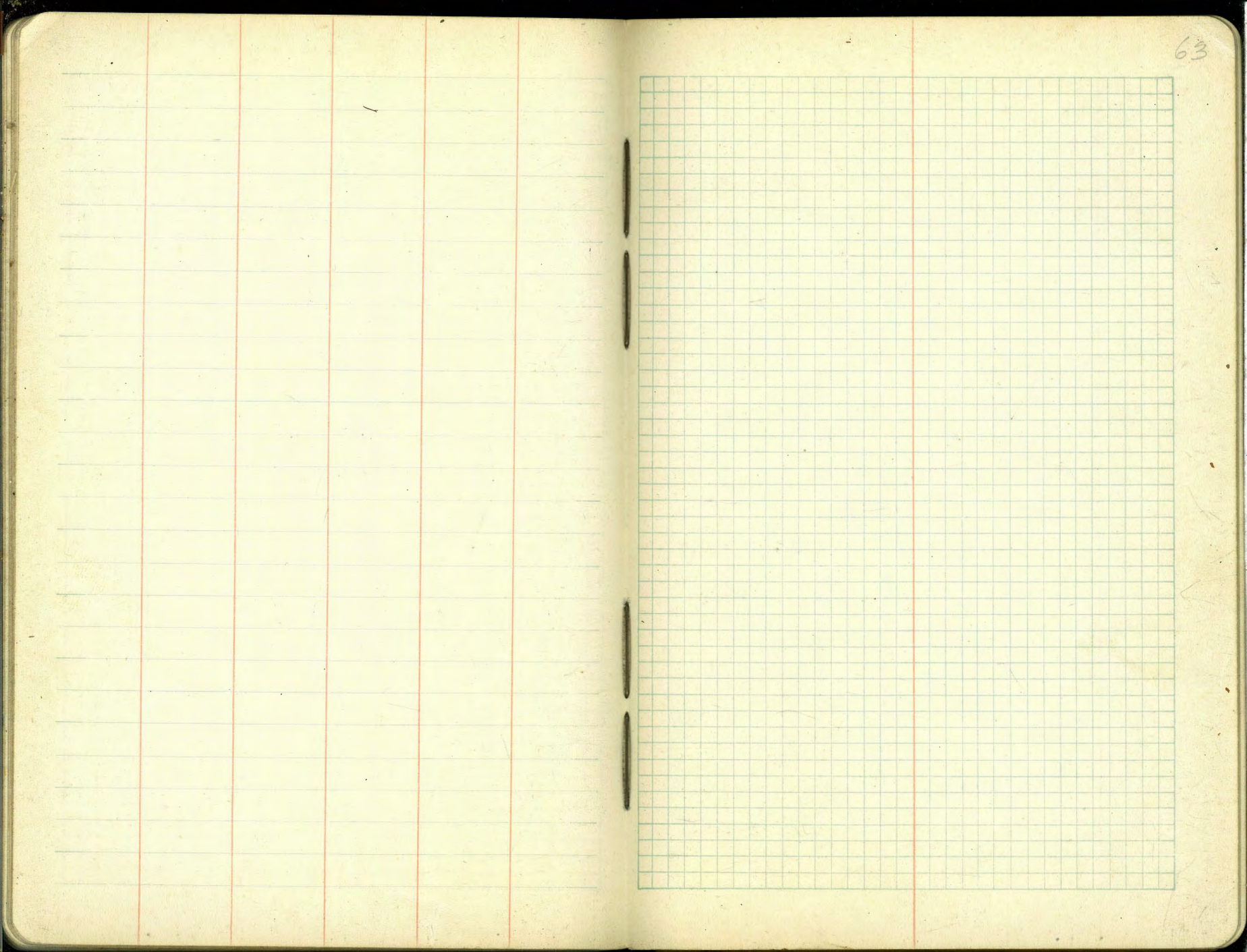
	1.37	154.95	153.58 157.54 11.42 145.73 T.P. 3.36 149.09 H.I.	
5+61				156.00
5+50				155.20
5+00			3.35	151.60
4+50			6.95	148.00
4			10.55	144.40
3+80			11.95	143.00
3+60	149.09		6.99	142.10
3+40			7.69	141.40
3+20			8.09 (C12)	141.00
3+00			8.19	140.90
2+80			8.09	141.00
2+60			7.89	141.20
2+55				141.30
2+40			7.39	141.70
2+20			6.79	142.30
2+00			5.79	143.30
1+80			4.69	144.40
1+50			2.59	146.50
T.P.	10.92	159.31	0.70	148.39
1+00			9.31	150.00
0+50			5.81	153.50
0+30			4.41	154.90
0+00			2.31	157.00





Blank lined page with three vertical red margin lines.

Blank grid page with a green grid pattern and a vertical red margin line on the left side.



This page is a blank ledger with horizontal ruling and four vertical red margin lines. The margins are located at approximately 10%, 20%, 30%, and 40% from the left edge of the page.

This page is a blank page with a green grid pattern. A vertical red margin line is located on the right side of the page, approximately 10% from the right edge.

Blank lined page with horizontal blue lines and vertical red margin lines.

Blank grid page with a green grid pattern and a vertical red margin line on the left side.

B.M. Levels - MKT. St. from Sta 58+00
to Int. MKT. St + Merlin Drive.

T.P.			160.41
	19.04	172.45	
B.M.		1.33	171.12
T.P.		6.18	166.27
	10.10	176.37	
B.M.		3.94	172.43
	10.52	182.95	
T.P.		2.07	180.88
	8.38	189.26	
B.M.		2.87	186.39
	0.85	187.24	
T.P.		11.94	175.30
	0.14	195.44	
B.M.		8.36	167.08
	5.64	172.72	
T.P.		4.92	168.00
	3.73	171.73	
B.M.		3.97	167.76
T.P.		3.22	168.51
	5.07	173.58	
B.M.		4.15	169.43

2/18/27 66

Cleaver
McCarty
Good

Stevens' T.P. - 50' to right of Sta. 58+00
Hub

Shaw's B.M. - Hub 50' to right of Sta 58+50
El. 171.18

Hub - 60' to right of 63+00

Hub 50' to left of 67+00 Shaw's
B.M. # 9 - El. 186.42

Hub - 60' to left of 69+00

Jenson's B.M. El. 167.74 cluster - 3 nails
S.W. Cor.
in S.D.C.G. & E.Co. Pole # 77922 Holly Wood + Merlin
Pole has been moved

Jenson's cluster of 3 nails S.W. corner
Holly Wood + Iowa Drive S.D.C.G. & E.Co. Pole
P. 77918 El. 169.55

BM Levels Cont. from Page 68.

TP:				286.84
	10.83	297.67		
TP			0.07	297.60
	11.65	309.25		
TP			0.11	309.14
	9.69	318.83		
BM			3.88	314.95

Jenson 67

City Bench R.R. In Pole S.W. Cor 65' Back

TP			315.28	
	1120	326.48		
Kanes BM #14			(8.30)	318.18 (318.09)
BM			(9.57)	316.91
TP			0.72	325.76
	1138	337.14		
BM			5.23	331.91 ✓
	1226	344.17		
BM			(6.53)	337.64 (337.73)
TP			0.37	343.80
	335	347.15		
TP			10.69	336.46
	012	336.58		
TP			11.98	324.60
	030	324.90		
TP			11.25	313.65
	021	313.86		
TP			11.65	302.21
	054	302.73		
TP			11.67	291.08
	054	291.62		
			12.14	279.48
	852	288.00		
Kanes BM #16			(9.80)	278.20 (278.07)
TP			1.16	286.84 ✓

Cont Pg 67

3 nails in Tel Pole #P-22979 T Bach Bot 60" ± 63" East Side St.

3 nails in SD.G+E Pole # 70823 SW Cor 63 ± Bach

8d Spike in Pole SE 63 ± Bach City Bench?

At timber trestle on Bach
Drove 2 extra nails to make BM.

W Hollywood to ^{BM Levels} Timber Trussle

	+	H.I.	-	Elev.
Co. B.M.		152.72		160.70 148.46
	4.26	164.96		152.47
T.P.		162.59	0.25	164.71
	10.12	174.83		161.73
Kanes B.M.#10			0.86	173.97
Br.#4 Stake Hub 39' South of Bridge 50' E. of Road			6.88	155.71
Br.#4 Stake Hub 39' N of Br. 50' E of Road			8.10	154.49
Br.#4 Stake Hub 50' W of Road at Bridge			7.45	155.14
Br.#4 Stake Hub 50' W of Road 39' S of Bridge			11.26	151.33
T.P.			2.36	160.23
	8.16	168.39		
B.M.			0.65	167.74
	5.93	173.67		
B.M.			4.12	169.55
	11.70	181 180.25		180
T.P.		192	0.76	179.49
	12.12	191.61		192
B.M.			0.00	191.61
	4.90	197 196.51		192
Keel'd Hub S.W. Cor Kenwood + 600			4.67	191.84
B.M.	11.74	204 203.35		192 191.61
T.P.		215	0.15	204 203.20
	10.94	214.14		214
T.P.			0.38	213.76

Co. B.M.#10 Spike in Pole # D11681 T
Imperial Ave. 15458 Co. Datum
~~161.12~~
160.70 City Datum
148.46

Br.#4 Stake 39' N of Bridge at Road

3 nails in SD G & E Co Pole # P-77922
S.W. Cor Hollywood Dr + Merlin Dr.

3 nails SD G & E pole # B77918 S.W. Cor Hollywood +
Idine

3 nails SD G & E pole # P76072 S.W. Cor Kenwood + 600

B.M. Levels (Cont)

TP			214	213.76
	1158	226 225.34		
TP			0.05	226.29
	1186	238.15 ²⁰		
B.M.			(189)	236.26
				236.31
TP			0.08	238.12
	1190	250.02		
TP			0.27	249.75
	1161	261.36		
TP			0.61	260.75
	1193	272.68		
B.M.			0.54	272.14 ^v
	1181	283.95		
			0.03	283.92
	7.83	291.75		
Kansas B.M. #2			(0.71)	291.04
B.M.			(297)	289.28
			7.17	284.58
	8.40	292.98		
TP			0.28	292.70
	1179	304.49 305.05		293.26
TP			0.51	303.98
	1196	315.94 316.50		304.54
TP			0.66	315.28
				315.84

Cont Page 68

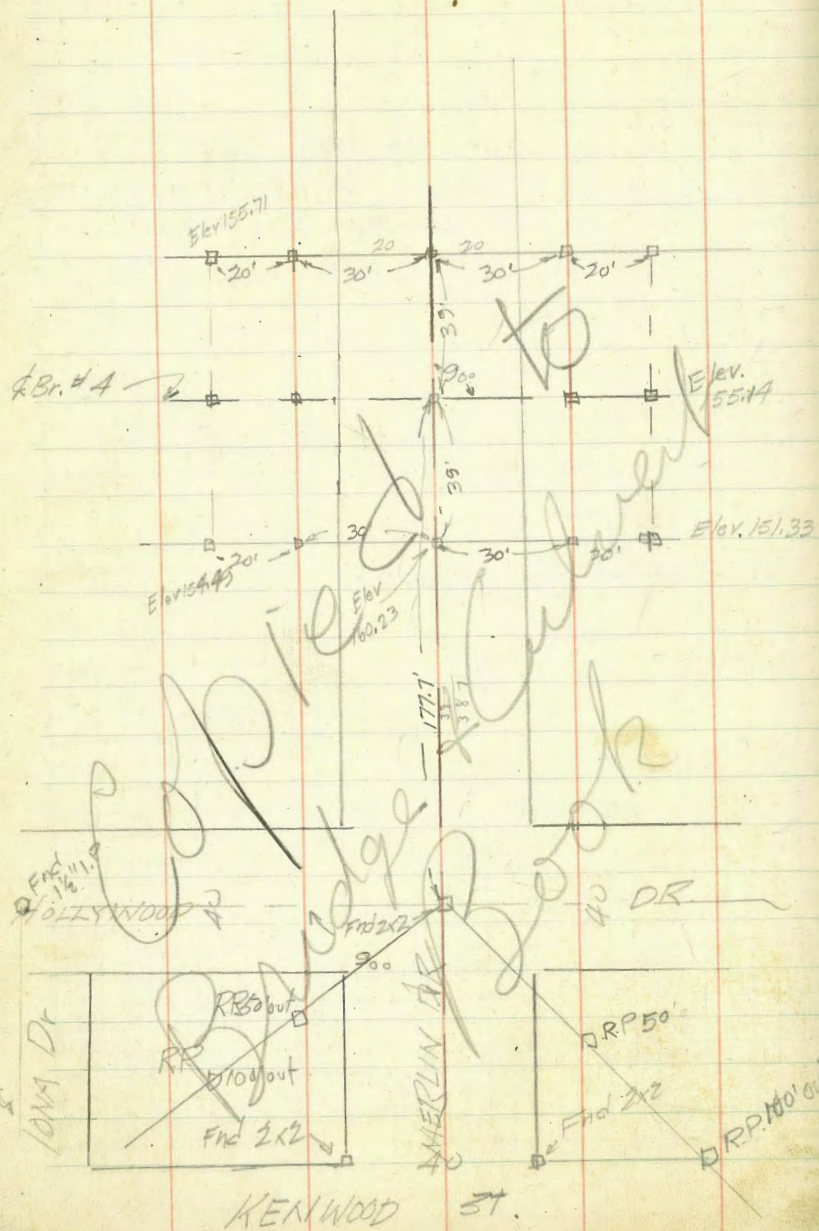
S.P.C.G.E.
8" Spike In Pole # P 70812 S.W. Cor 60th + Brooklyn.
Elev marked 236.31 City Bench?

TeI
3 nails in S.P.C.G.E. Pole # D-29408 T S.E. Cor 60th + Wundervlin

3 nails S.D.G.E. Pole # P77843 S.W. Cor 60th + Bach.

Stakes for Bridge No 4

Set Hub for sight
in Block K West Hollywood.



from Page 73 -

T.P.			134.73
	0.14	134.87	
T.P.		11.67	123.20
	0.46	123.66	
T.P.		11.38	112.28
	0.44	112.72	
B.M.		9.44	103.28
	1.32	104.60	
T.P.		12.15	92.45
	0.86	93.31	
B.M.		10.92	82.39
	0.47	82.86	
T.P.		11.24	71.62
	0.20	71.82	
T.P.		11.75	60.07
	0.66	60.73	
T.P.		12.05	48.68
	0.52	49.20	
B.M.		8.57	40.63
	7.49	48.12	
T.P.		1.12	47.00

72

S.W. Cor 31 + Mkt. 3 nails Pole # 598

N.W. Cor 32 + Mkt. Spike in Pole

S.W. Cor 33 + Mkt. 3 nails in pole # 598

S.E. Cor Chollas Ck. Bridge
Elev 4688 according to orig. plans

Levels for BM's 26th to 32nd

BM			153.58
	6.46	160.04	
TP			12.06 147.98
	0.03	148.01	
TP			12.96 135.95
	4.73	140.68	
BM			9.26 131.42
TP			0.02 140.66
	2.52	143.18	
			10.84
TP			132.34
	0.38	132 133.72	
TP			11.95 120.77
	0.58	121.35 122.35	
BM			10.22 111.13
TP			132.34
	0.58	132.92	
TP			11 131.81
	7.14	138.95	
			1.72 137.23
	8.13	145.36	
BM			2.20 143.16
TP			10.63 134.73

Cont Pg- 72

City Plug South end S.E. Return
26th & MARKET

Cluster 3 Nails Pole S.D.C. G & E Co. 598
S.W. Cor 27 & Market

N.W. Cor 26th & Mkt. 3 nail in pole. #600

S.D. G & E
S.W. Cor 30th & Mkt. 3 nails - Pole #698

LIST OF BM'S
MARKET STREET EXT.

LOCATION	DISCRIPTION	ELEV.
MKT + 26 TH S.W. Cor.	City Plug in South end curb ref	153.58
MKT + 27 TH S.W. Cor.	Cluster 3 nails S.D.G. + E Pole #598	131.28 131.42
MKT + 28 TH N.W. Cor	" " " " #600	110.40 111.75
MKT + 30 TH S.W. Cor	" " " " #598	146.16
MKT + 31 ST S.W. Cor	" " " " #598	103.28
" + 32 ND N.W. Cor	Spike in " "	82.39
" + 33 RD S.W. Cor	Cluster 3 nails " #598	42.63
" + 35 TH N.E. Cor	Ref. Hub 75' out.	96.82
" + 36 TH N.E. Cor	Hub	123.18
" " "	180' N of Mkt on West Line Cemetery Tack in Conc. P.L. Cor. ←	133.21
In Cemetery	827 East of West Line Cemetery Nail in Pole # T 3866D	119.01
North Side Market 450' West of 39 th	Hub →	146.57
Mkt + Quail N.E. Cor	Hub	123.12
Mkt Bet. Raven + 41 st	Cluster of 3 nails in S.D.C. + E.G. Pole # 76705, South Side St.	130.17
Mkt + 42 ND N.E. Cor.	N.W. Cor of Conc. Pier at S.W. Cor of Porch.	130.61
Mkt + 43 RD N.W. Cor	On Ref Hub. 100' out.	123.91
BM from Toyne to Fairmount. An		
2x2 hub	75' South sta 29+50	135.98
2x2 hub	75' South sta 39+00	157.07
2x2 hub	100' South sta 48+00	142.00

Mkt at Fairmount S.E. Cor		
Hub at back of curb South end of Return Flush with top of curb		121.22
Mkt - Hub 50' Rt. 9+60		129.50
Mkt at East Line Sunshine Gardens Sta 15 - 50' Rt Hub		125.80
Mkt Side of Hill Rt 20+00		110.69
Mkt on Hump Lt. 25+00		105.44
Mkt + Euclid S.E. Cor Nail in power pole		-112.26
On 54 th S.W. of Br. #6	Hub	121.21

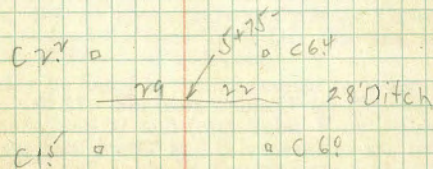
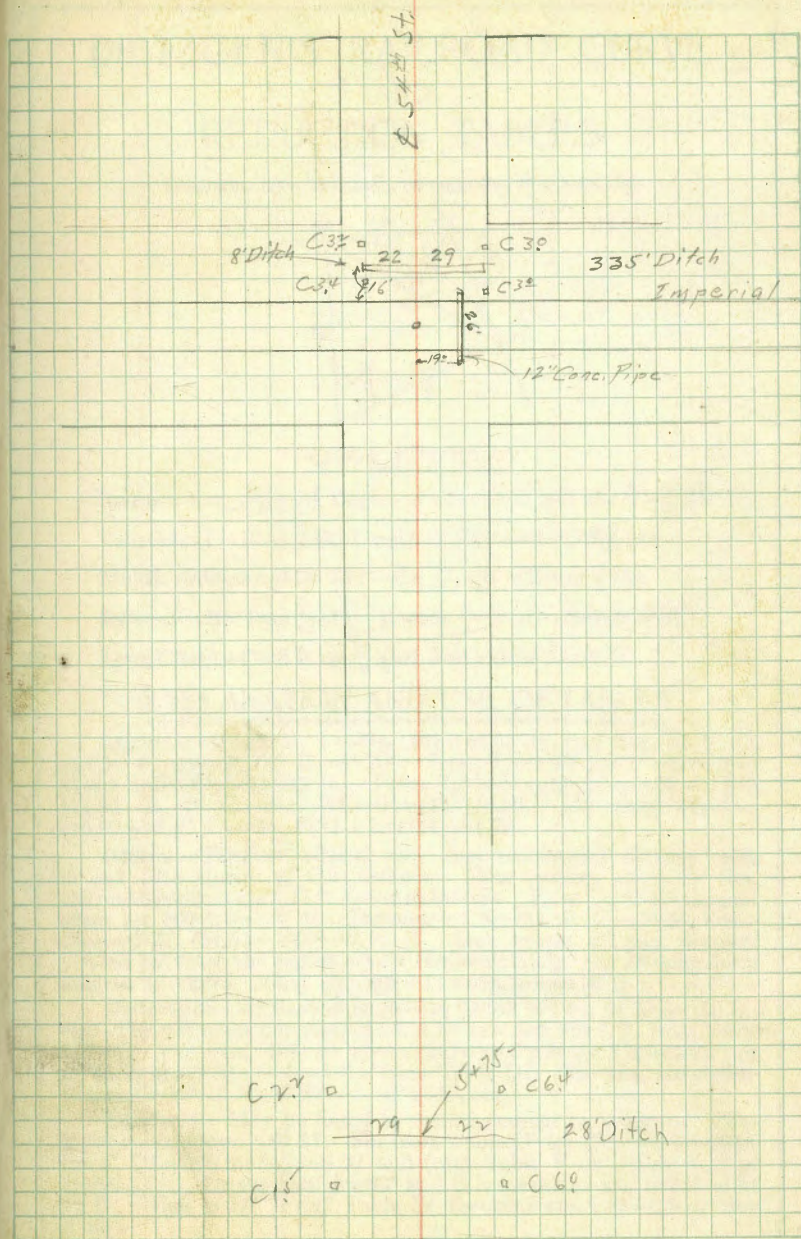
LOCATION	DESCRIPTION	ELEV.
Hollywood Dr + Berlin Dr S.W. Cor	Cluster of 3 16d nails in S.D.C.G. & E. Pole # P 77922	167.74
Hollywood Dr Lane S.W. Cor	Cluster of 3-16d nails in S.D.C.G. & E. Pole # P 77918	169.55
Kenwood + 60 th S.W. Cor	Cluster of 3-16d nails in S.D.C.G. & E. Pole # P 76072	191.61
Brooklyn + 60 th S.W. Cor	8" Spike in S.D.C.G. & E. Pole # 70812	236.31
Wanderlin + 60 th S.E. Cor	Cluster of 3-16d nails in Tel. Pole # D 29408T	272.14
Bach + 60 th S.W. Cor	Cluster of 3-16d Nails in S.D.C.G. & E. Pole # P 77843	289.28
Bach Bet 60 + 63 N. Side St	Cluster of 3-16d Nails in Tel. Pole # D 22979T	316.91
Bach + 63 S.W. Cor	Cluster 3-16d Nails in S.D.C.G. & E. Pole # 70823	331.91
Bach Bet 63 + 65 W. Side St	Cluster 3-16d Nails in S.D.C.G. & E. Pole # 76581	376.80
Bach At Timber Trestle	R.R. Spike in S.D.C.G. & E. Pole # 70868	378.20
Bach + 65 S.W. Cor		314.95
Holly Dale B.M.s -		
BM SW Cor. Imperial + Linneth		171.90
BM 50' North Sta. 4400 Linneth Dr		202.25
BM 50' North Sta 7434 Linneth Dr.		233.05
BM. Cor Balanra/Drt 59 th		210.70
BM. 50' South 4+25 Edean Dr		198.53

2 nd Pole North of 69 th + Madera Nail in Tel. Pole	299.41
On Ref Hub Rt. Side Madera Sta 171	340.02
On Ref. Hub Lt side Madera Sta 183+00	376.51
Co. Bench on 2x6 Post Lt. 187+00 Madera.	
↳ Co Elev = 379.80	
Check within .08	
On Ref Hub Lt Side Madera St 191+59.8 Pl.	394.91
At Inter. Madera + Mass -	
Mkt St Thru Berryland Hub 45 Rt. Side 14+50 -	431.26
Mass + Mallard S.E. Cor On Ref. Hub 75' out	439.65
San Miguel	
Mass. + Central S.W. Cor Nail in S.D.C.G. & E Pole 76658	453.72
Mass + Central N.W. Cor	
Bent Nail in Gum Tree	445.42
Mass + Broadway S.E. Cor	396.94
Most southerly corner Heddwall.	397.11
Madera + San Pascual S.W. Cor	434.06
Ref Hub 75' out.	
McKnight Dr + Mallard	
Ref Hub North of intersection 50' out	453.66

	0.68	165.18		164.50	
Bottom Pipe S			8.38	156.80	
" " N			8.88	156.30	
			158.7	H.B. Grade	
			7.0	158.2 ± 54.4	
			5.3	158.9 - S. Side Imp-200E	
			9.0	156.2	
			11.9	153.33 Cdn. 600' W	
East End High - H.W.			9.5	155.7	} Cdn. # 46
West End Low			9.7	155.5	
+50 W	9.8		7.2	158.0	C 2.6
1+00	9.9		7.6	157.6	C 2.3
1+50	10.0		8.2	157.0	C 1.8
2	10.1		8.8	156.4	C 1.3
+50	10.2		9.0	156.2	C 1.2
3	10.2		9.6	155.6	C 0.6
3+35-	10.3		10.3	154.9	0.0
T.P.	0.14	153.95	11.37	153.81	
	1.16	142.94	12.17	141.78	
East End Low			11.4	131.5	} Colv 45
W End. High			10.9	132.0	

37.4 33.6 C 38 45.5
39.5 36.0 C 29 3.4

35.4 grade

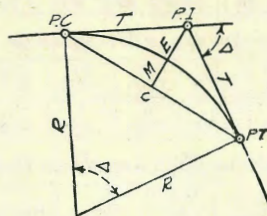


Market St BMS

	Elev.
B.M. #72 Curvature	134.72 - 6.12 128.60
B.M. Hub n	152.56
B.M. Nail in pole D 7866T	124.93 6.12 118.81
B.M. Hub NE cor 36 th & Market	129.16 6.12 123.04
B.M. Nail in pole SE Cor 33 rd & Market	147.6 6.12 38.64
B.M. Spike in pole NW Cor 32 nd & Market	88.42 6.12 82.30
26 th & Market	153.58

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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CURVE FORMULAS

- Radius= $R = \frac{50}{\sin D/2}$ (1) Degree of Curve= D and $\sin \frac{D}{2} = \frac{50}{R}$ (2)
- Tangent= $T = R \tan \frac{\Delta}{2}$ (3) Length of Curve= $L = 100 \frac{\Delta}{D}$ (4)
- Middle ordinate= $M = R(1 - \cos \frac{\Delta}{2})$ (5) $= R \text{vers} \frac{\Delta}{2}$ (6)
- External= $E = T \tan \frac{\Delta}{4}$ (7) $= R \div \cos \frac{\Delta}{2} - R$ (8) $= R \text{exsec} \frac{\Delta}{2}$ (9)
- Long Chord= $C = 2 R \sin \frac{\Delta}{2}$ (10) $\Delta =$ Central Angle

EXPLANATION AND USE OF TABLES

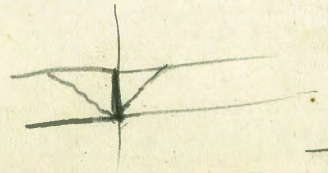
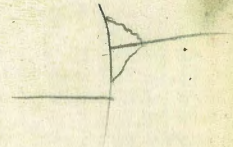
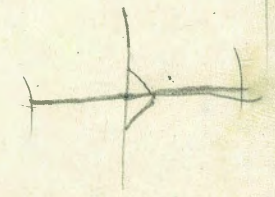
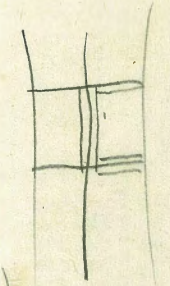
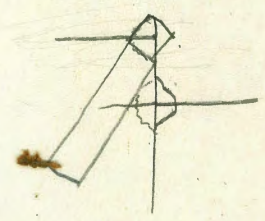
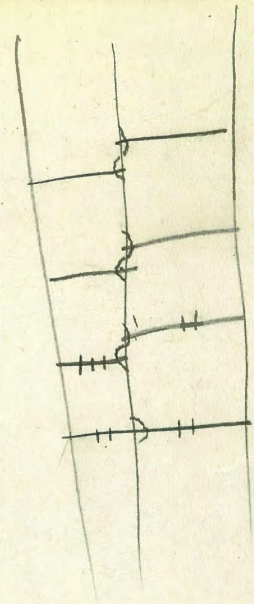
Stations.—Given P. I.—Sta. 161 + 60.35 to find Sta. of P. C. and P. T. $\Delta = 62^\circ 10'$ $D = 8^\circ 20'$. From Table IV for 1° curve $T = 3454.1$ and $\div 8\frac{1}{8} = 414.49$ ft. From Table V correction = .36 or $T = 414.85$ ft. P. C. = Sta. P. I. — $T = 157 + 45.50$. Also from (4) $L = 746.00$ and P. T. = Sta. P. C. + $L = 164 + 91.50$.

Offsets.—Tangent offsets vary (approximately) directly with D and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft. = 7.27 ft. Distance = $158 - \text{Sta. P. C.} = 54.50$, hence offset = $7.27 (54.50 \div 100)^2 = 2.16$ ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus $(54.50)^2 \div (2 \times 688.26) = 2.16$ ft.

Deflections.—Deflection angle = $\frac{1}{2} D$ for 100 ft., $\frac{1}{4} D$ for 50 ft., etc. For c ft. = (in minutes) $.3 \times C \times D^\circ$ or = defl. for 1 ft. from Table III $\times C$. For Sta. 158 of above curve = $.3 \times 54.5 \times 8\frac{1}{8} = 136.2'$ or $2^\circ 16.2'$, or = $2.50 \times 54.5 = 136.2'$ from Table III. For Sta. 159 deflection angle = $2^\circ 16.2' + 8^\circ 20' \div 2 = 6^\circ 26.2'$, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 91.37. For from Table IV for 1° curve $E = 960.6$ for $8^\circ 20' = 960.6 \div 8\frac{1}{8} = 91.27$ and from Table V correction = .10 or $E = 91.37$ ft. Or suppose $\Delta = 32^\circ$ and E is measured and found to be 42 ft. What is D ? From Table IV $E = 230.9$ and $\div 42 = 5.5$ or $D = 5^\circ 30'$.

125 + 32.8 ✓
13 + 84.5 ✓
111 + 48.3 ✓



104367
 40 38+588
 39+32.57
 417468
 1062
 31.13
 3.1416
 4125650
 31.96
 93408
 4657
 10638
 90
 1638
 8960
 73
 270
 20
 12
 302
 14333
 2099
 50
 41.42
 105.165
 224
 117
 040
 05642
 045
 47
 30330
 147
 5204+20
 708
 85
 1043
 11013
 +3208-EC
 107.48
 88.01
 85.31
 280.80
 24.55
 43
 7.32V
 9820
 215
 43
 1070
 4.3
 71
 1.59
 2.44
 1587
 10.22
 12+217
 21
 12+5

DISTANCES FROM CENTER OF ROADWAY FOR
 CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½.
 For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9 + (20 - 16) ÷ 2 or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.