



# 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 1½ see inside of back cover.

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# G-236

MICROFILMED

APR 13 1965

INDEXED

JUL 24 1950

*Completely*

*(except page # 17, 19, 21, 23, 25, 27, 29, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 61, 63, 65, 67, 69, 71, 73, 75, 77)*

This Field Book is manufactured of a High Grade 50% Rag Paper having a WATER RESISTING SURFACE, and is sewed with Bing Special Enamel Waterproof thread.

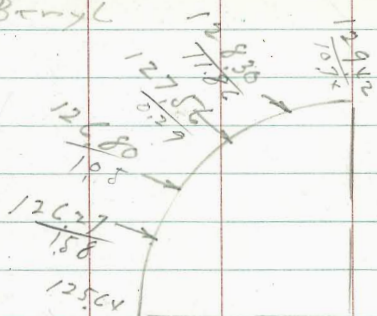
Made in U. S. A.

Ingraham  
to  
Curb sates Beryl Jewell 1-6  
Paralkey BLK 66 Univ. Hts 7-10  
Trunk sewen #2 16

curb grades E. Side Ingraham  
S of Beryl

INDEXED

WK  
DEC 7 1948



1+15.54 cb BC. 125.64

0+60.77

0+05

0+00 n. alley

0-20 = Slalley

277

127.85

125.08

10-17-47

cb  
grade

1

Moore  
Begg  
Green  
Roberts

W.O. 80023

$\frac{125.64}{2.21}$

$\frac{122.54}{5.31}$

$\frac{119.84}{8.41}$

2' Radius  $\rightarrow$   $\frac{119.27}{8.58}$

$\frac{119.28}{8.57}$   
 $\frac{8.07}{0.50}$

$\frac{118.04}{9.81}$

$\frac{118.16}{9.69}$

Propose  
9.69

Curb grades on S. side  
Beayl St.

+62

+42

+22

1+02 = B.C.V.C.

T.P. 12.80 152.62 0.34 139.82

0+51

0+00 = Curb E.C. at Ingraham

T.P. 12.60 140.16 0.29 127.56

127.85

2

14781  
4.81 ✓

14593  
6.69 ✓

14386  
8.76 ✓

14158  
11.04 ✓

13550  
4.66 ✓

129.42  
10.74 ✓

+82

+62

+42

T.P. 7.78 159.98 0.42 152.20

+22

2402

1482

152.6215474  
5.24 ✓15409  
5.89 ✓15325  
0.73 ✓15220  
0.42 ✓15094  
1.68 ✓14948  
3.14 ✓

Rock  
T.V.

189 15809

44913 BC Pot

15833  
- 1.55 ✓

44843

15822  
- 1.76 ✓

+50

15764  
- 2.34 ✓

T.

y

15681  
- 3.17 ✓

2

3450

15597  
- 4.01 ✓

14

3402 E.V.C.

15517  
- 4.81 ✓

159.98

West side Jewell St ab grades  
Beryl S. to alley

+ 79.15

158.54

150.98

7.54

0750

147.50

11.04 ✓

T.P.

12.8

149.18

11.04

147.50

0730

145.19

3.99 ✓

INDEXED  
WK  
DEC 7 1948

0710

143.07

6.11 ✓

0705

142.58

6.60 ✓

0702 = P

142.79

6.89 ✓

0700 = L alley

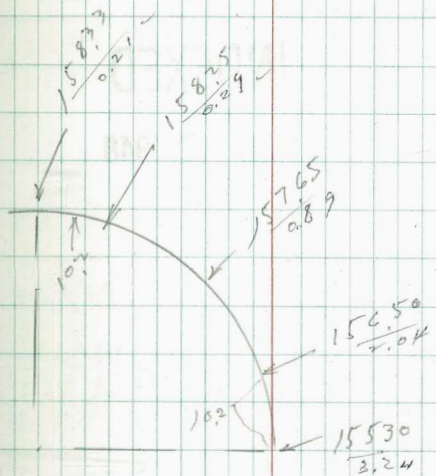
Prop Grade  
142.30  
6.88 ✓

140.63 = SL alley

8.55 ✓  
check o.k Top curb



SW Pt Beryl + Jewell



t.p. P.4    0.45    15850    15809

1715.29 = 26 B.C. L.

1708.29

15530  
3.24

154.46  
4.08

Moore  
Beggs  
Groer  
Roberts  
11-7-47

Pav. Grades in alley  
Blk 66 U.H.

W.O. 31008

INDEXED

WK

DEC 7 1948

0+98.58

(2)

367.62  
4.77 ✓  
4.80  
C 0.31 ✓

5.11 ✓  
4.82  
C 0.29 ✓

T.P. 4.99 372.73 4.05 367.74 ✓ #1

0+69.31

(1)

367.54  
4.25 ✓  
3.83  
C 0.42 ✓

4.25 ✓  
3.84  
C 0.41 ✓

0+40 Break

367.47  
4.32 ✓  
4.17  
C 0.15 ✓

367.22

367.47  
4.32 ✓  
4.05  
C 0.27 ✓

0+20

367.45  
4.34 ✓  
3.74  
C 0.60 ✓

367.17

367.34  
4.45 ✓  
3.97  
C 0.48 ✓

0+00 N.L. Meade Ave.

367.43  
4.36 ✓  
4.17  
C 0.19 ✓

367.12

367.21  
4.58 ✓  
3.76  
C 0.82 ✓

BM

5.01

371.79

36678

Meade &  
Kansas SE

371.79

2174.29 (2)

		Fl.	Fl. Conn.
2155	culv. #2 W.G. water	366.83	364.18
		<u>5.43</u>	<u>8.10</u>
		4.64	4.64
		C 0.81	C 3.46

21445 (2)

21572 (2)

TP 4.55 372.28 ✓ 5.00 367.73 ✓ +v

1186.44 (2)

1157.15 (2)

1127.87 (2)

w \$ E 8

368.06  
4.22 ✓  
 4.85  
 F 0.63 ✓

4.22 ✓  
4.73  
 F 0.51 ✓

367.98  
4.30 ✓  
 4.57  
 F 0.27 ✓

4.30 ✓  
4.86  
 F 0.56 ✓

367.91  
4.37 ✓  
 4.37  
 Set Nail on grade 0.00 ✓

4.37 ✓  
4.01  
 C 0.36 ✓

HI. 372.77  
367.24  
4.89 ✓  
 5.29  
 F 0.40 ✓

372.28  
372.28  
 HI 367.84  
4.44 ✓  
 3.63  
 C 0.81 ✓

367.76  
4.97 ✓  
5.06  
 F 0.09 ✓

4.97 ✓  
4.93  
 C 0.04 ✓

367.69  
5.04 ✓  
4.86  
 C 0.18 ✓

5.04 ✓  
4.88  
 C 0.16 ✓

372.73

4425 Coker #1

W.L.F.L.	
367.26	364.18
5.91	8.99
5.22	5.42
C 0.69	C 3.77

4420.72 (13)

368.43	
4.74	
4.64	
C 0.10	

4.74	
5.42	
F 0.68	

TP 5.28 373.17 4.39 367.89 #3  
3191.43 (17)

368.35	373.17
5.93	
3.53	
C 0.40	

3.93	
4.40	
F 0.47	

3162.15 (14)

368.28	
4.00	
4.03	
F 0.03	

4.00	
4.56	
F 0.56	

~~3185~~  
~~3155~~ Sewer Lat. #1  
ON WEST

W.L.F.L.	Falley Conn.
363.34	363.14
8.94	9.74
3.64	3.64
C 5.30	C 5.50

3132.86 (10)

368.21	
4.07	
3.92	
C 0.15	

4.07	
4.59	
F 0.52	

3103.58 (9)

368.13	
4.15	
4.58	
F 0.43	

4.15	
3.96	
C 0.19	

372.28

6+00.9 S.L. Monroe Pavedge

W/  
370.95  
5.23 ✓  
5.05 ✓  
C 0.18 ✓

370.90

E 10

371.18  
5.00 ✓  
4.94 ✓  
C 0.06 ✓

5+80 Break

370.80  
5.38 ✓  
5.08 ✓  
C 0.30 ✓

370.55

370.80  
5.38 ✓  
5.45 ✓  
F 0.07 ✓

T.P. 566 376.18 ✓  
~~509~~ 375.61 2.65 370.52 ✓ #4

376.18  
~~375.61~~

5+50 Break

369.98  
3.19 ✓  
3.19 ✓  
Grade 0.00 ✓

369.73

369.98  
3.19 ✓  
2.92 ✓  
C 0.27 ✓

5+25 Break

369.32  
3.85 ✓  
3.31 ✓  
C 0.54 ✓

369.07

369.32  
3.85 ✓  
3.76 ✓  
C 0.09 ✓

5+00 Break

368.94  
4.23 ✓  
4.25 ✓  
F 0.02 ✓

368.69

368.94  
4.23 ✓  
4.09 ✓  
C 0.14 ✓

4+75 Break

368.64  
4.53 ✓  
4.25 ✓  
C 0.28 ✓

368.39

368.64  
4.53 ✓  
4.41 ✓  
C 0.12 ✓

4+50 Break

368.50  
4.67 ✓  
4.54 ✓  
C 0.13 ✓

368.25

368.50  
4.67 ✓  
4.96 ✓  
F 0.29 ✓

373.17

+ #1 - Elev

		5.05	370.50	370.52	44
7.82	375.55	4.49	367.73	367.73	42
4.49	372.22	4.31	367.73	367.74	41
5.26	372.04			366.78	40

Check TP

	4.22	371.69	4.87	366.82	366.78	04
TP	2.46	373.01	5.54	367.47		
TP		376.18	5.63	370.55		

Prov. Elev. at Forward and Electric Ave.

	1097	85.92		74.95	Forward La Jolla St.
SW B.P.					
TP	7.41	<u>93.8</u>	0.15	85.77	

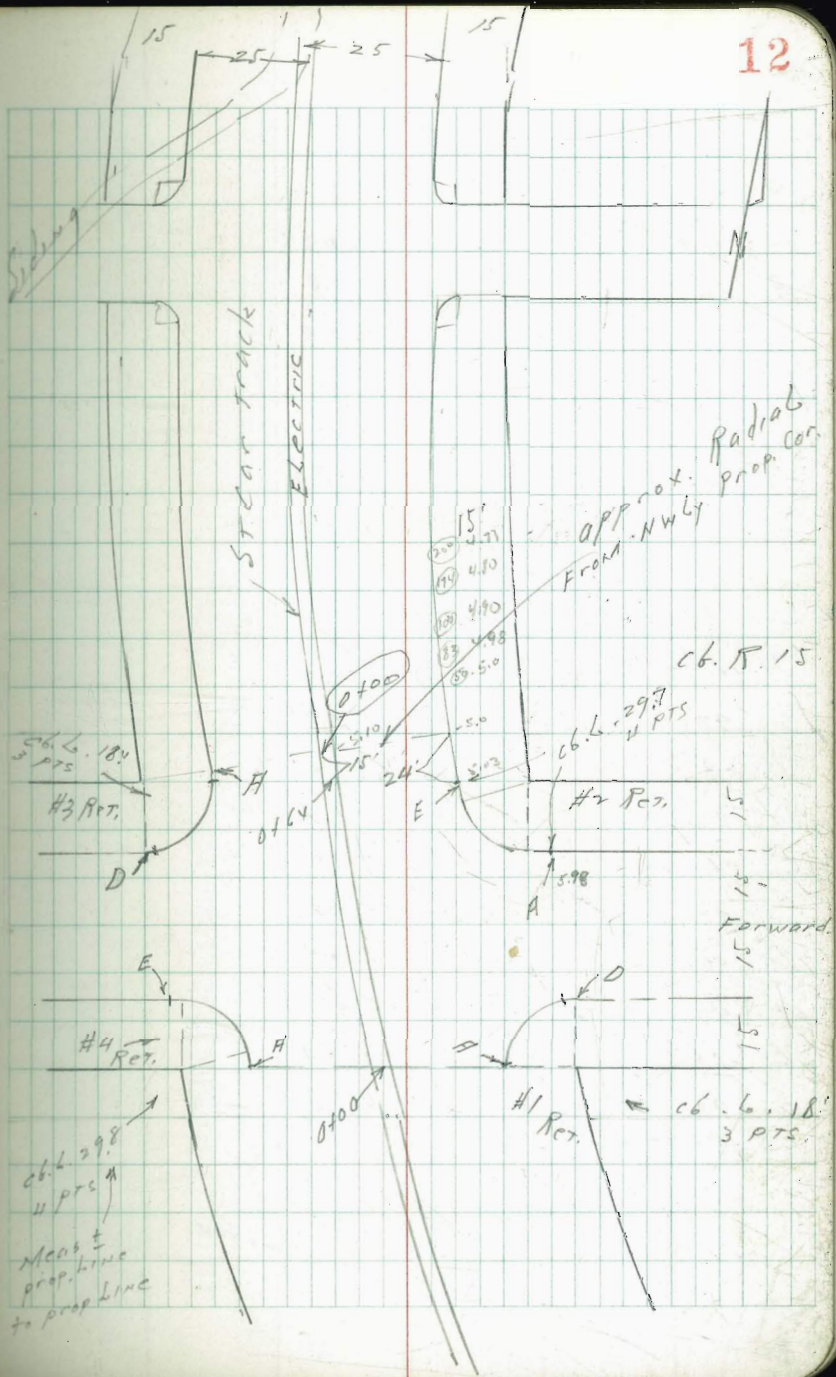
#1 Ret. 4.18' in 3 parts

A cb	4.22
" 97	4.86
B cb	4.24
" 97	4.83
C cb	4.15
" 97	4.64
D cb	3.98
" 97	4.59

INDEXED  
WK  
DEC 7 1948

#2 Ret

A cb	3.49
" 97	4.02
B cb	3.88
" 97	4.43
C cb	4.20
" 97	4.75
D cb	4.27
" 97	4.91
E cb	4.32
" 97	4.97



93.18

Ret. #3

A cb	5.36
" 97	6.03
B cb	5.49
" 97	6.09
C cb	5.61
" 97	6.11
D cb	5.69
" 97	6.25

Ret. #4

A cb	5.27
" 97	5.89
B cb	5.40
" 97	5.95
C cb	5.59
" 97	5.98
D cb	5.78
" 97	6.25
E cb	6.04
" 97	6.55

P 14

For  
Roadway  
on ELECTRIC

13



0700 see sketch Sections Radial  
approx.

5.29	5.97	5.15	4.90	4.84	5.40	4.32
25	25	12.5		12.5	25	25
cb	97				97	cb

0764 u.l. Forward End diag. Sections

5.36	6.03	5.13	4.91	4.84	4.97	4.32
28	38	14		13.2	26.4	26.4
cb	97				97	cb

0748

6.76

7.41	5.49	4.25	5.59	5.08	4.81	4.77	4.64	4.02	3.49	2.49	1.75
70	43.3	4.32	26.9	13.5	13.5	27	27	43.2	43.2	70	70
cb	cb	97						97	cb	97	cb

0732 9 Forward

7.30	6.15	5.52	5.08	4.73	4.67	4.33	3.83	2.30
70	44	27.2	13.6		13.5	27	43.7	70

0716 = sl. cb forward 7.23 7.81  
70 70  
cb 97

6.04	6.55	5.85	5.11	4.73	4.72	4.62	4.59	3.98	3.12	2.50
43.9	43.9	27.2	13.6		13.5	27	43.7	43.7	70	70
cb	97	ncb					97	cb	97	cb

Electro  
Electro

0700 sl. Forward SECTIONS II  
With Forward

5.27	5.89	5.15	4.90	4.81	4.86	4.32
26.4	26.4	13.2		14.2	28.4	28.4
cb	97				97	cb

931.8

931.8

R.P.  
Set spike on Tol. P. 300035H  
Swly Co., Forward  
and Electric

502 8816

2700

$\frac{5.42}{25}$	$\frac{5.61}{25}$	$\frac{5.27}{12.5}$	5.21	$\frac{5.10}{12.5}$	$\frac{5.23}{25}$	$\frac{4.65}{25}$
cb	97				97	cb

1774 25 LT = CTR. old rails of siding  
to oil Co.

$\frac{5.54}{25}$	$\frac{5.14}{12.5}$	5.20	$\frac{5.04}{12.5}$	$\frac{5.20}{25}$	$\frac{4.64}{25}$
97 and carb				97	cb

1728 ← = END Mud on Rt. gutter  
approx. N. alley Ret. on LT

$\frac{5.55}{25}$	$\frac{5.78}{25}$	$\frac{5.12}{12.5}$	5.10	$\frac{5.00}{12.5}$	$\frac{5.10}{25}$	$\frac{4.50}{25}$
cb, pt	97				97	cb

0783

$\frac{5.41}{25}$	$\frac{5.76}{25}$	$\frac{5.14}{12.5}$	5.00	$\frac{4.94}{12.5}$	$\frac{5.02}{25}$	$\frac{4.39}{25}$
cb	97				97	cb, old pt, cb Ret.

0750

$\frac{5.35}{25}$	$\frac{5.83}{25}$	$\frac{5.12}{12.5}$	4.99	$\frac{4.88}{12.5}$	$\frac{5.00}{25}$	same
cb	97				97	cb in drive

9318

9318

LT

←

Rt

Artukovitch Co.

TRUNK Sewer #2

Jellett ST. NLY

Contd. from FB. 1839-78

+75

**INDEXED**

WK

DEC 7 1948

±  
ELEV.

+50

+25

108

+75

107+59 3" 26 LT

M.H.  
#20

Jellett ST.

Tie 1839-1

8" STUB  
+1.70

W.D. ~~6057~~  
60208

B.M.'s P. 79 16

M.H. R.P.'s P 30

FL.

-002

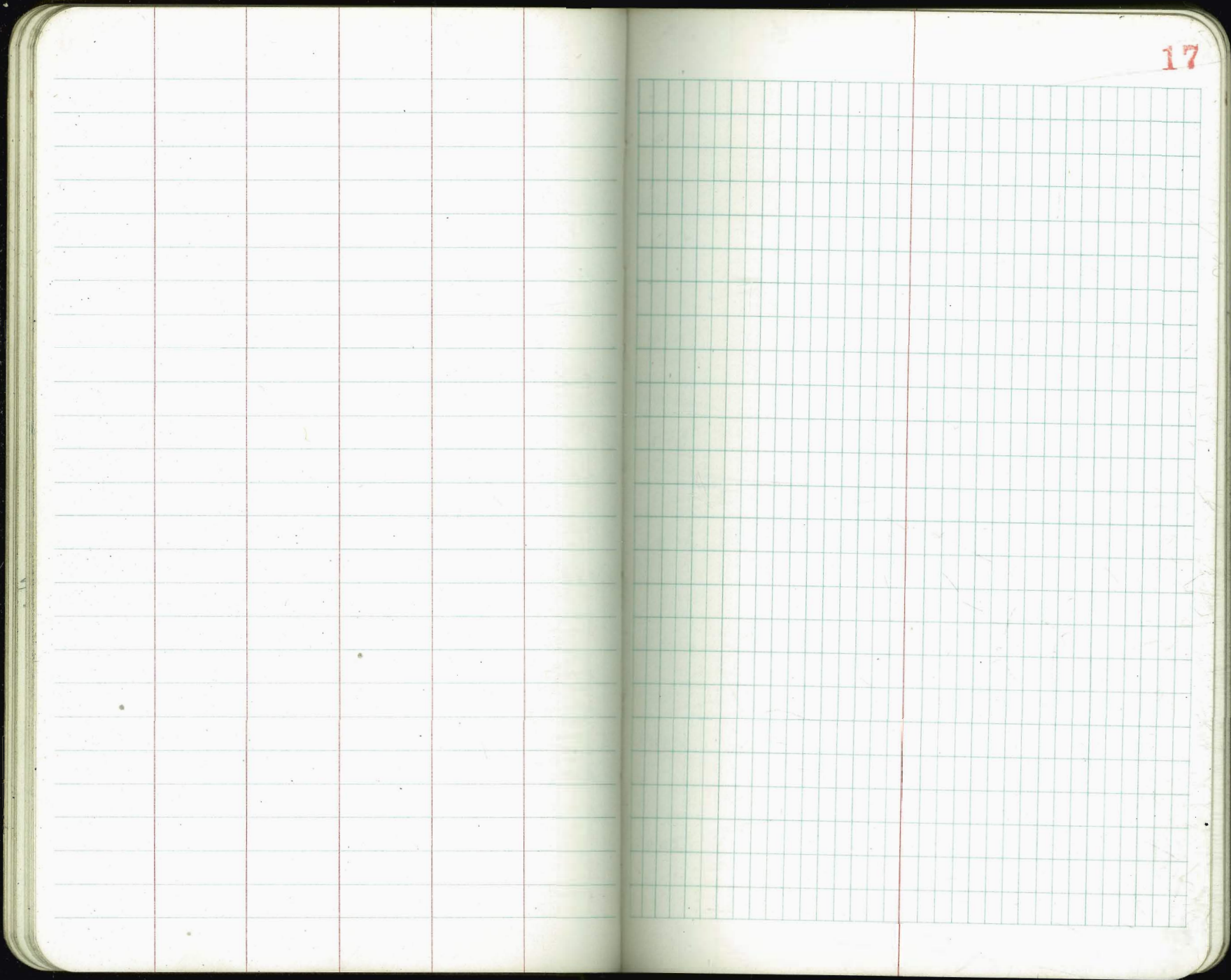
-00X

-006

-008

-0.10

-0.12



£

F.L.

18

75

0.14

50

0.12

25

0.10

110

0.08

75

1006

50

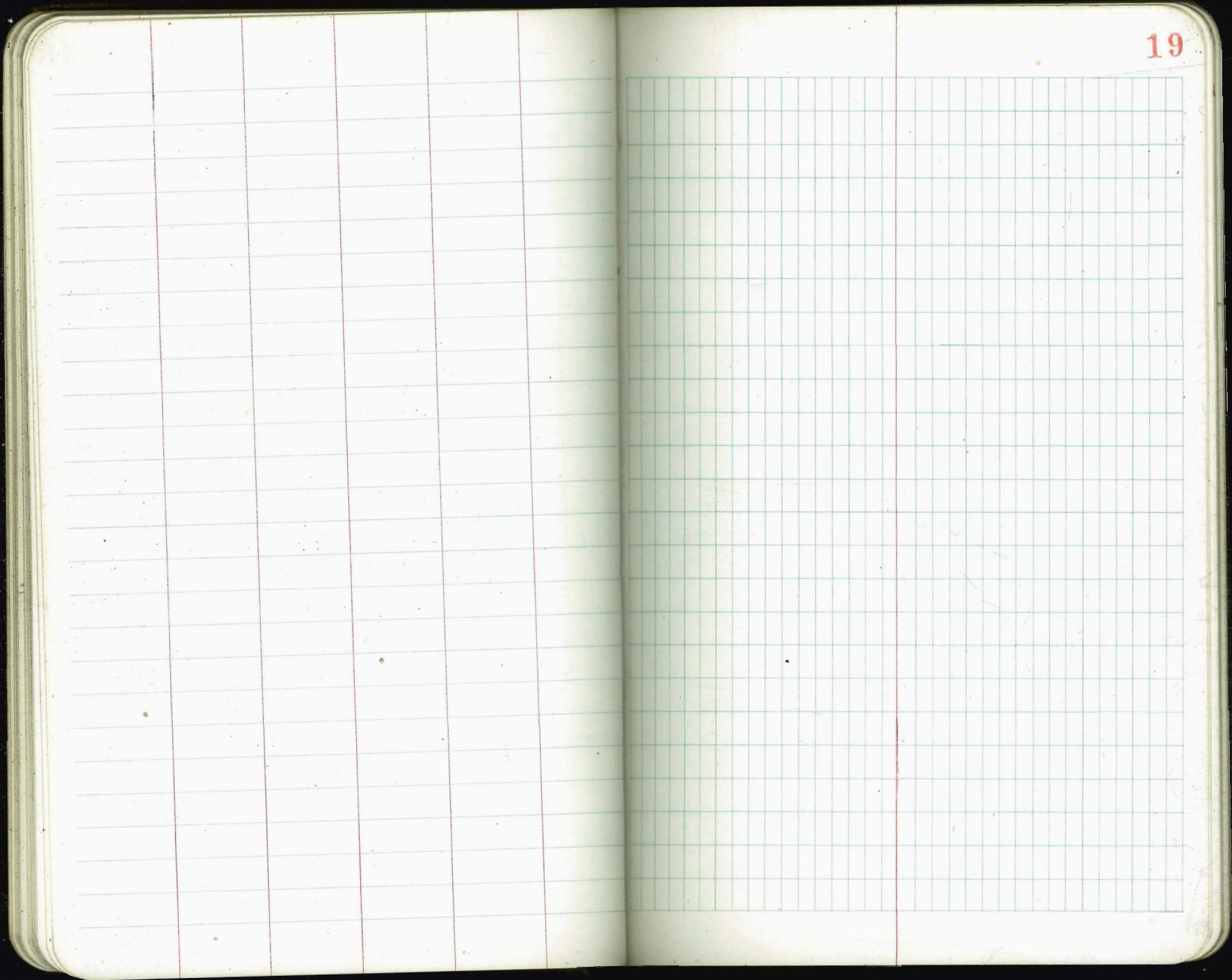
1004

25

1002

109

0.00



	£	Fl.
112+636 Spec. Joint	€ 10.60	0.28
112+58 End Jack	€ 12.06	0.28
111+86 Reg. Jack	€ 8.09	0.22
111+83.6 Spec. Joint	€ 7.03	0.22
M.H. #31		
111+65.6 A 50° 26' 30" Lt. Wg-Lt ST.	12" STUB N. E. Side 2.00 € 12.71	+0.21 - € 14.50
+50		0.20
+25		0.18
111		+0.16

See Gr. BK. #243

The image shows an open notebook with two pages. The left page is ruled with a grid of 10 columns and 20 rows. The right page is also ruled with a grid of 10 columns and 20 rows. The number 21 is printed in the top right corner of the right page. The notebook has rounded corners and a dark cover visible around the edges.



£

F.L.

+75

0.45

+50

0.43

+25

0.41

114

Cuts 114  
Gr. 243

0.39

+75

0.37

M.H. #32

113 + 46.7

44° 48' N

C 6.92

0.35

+20

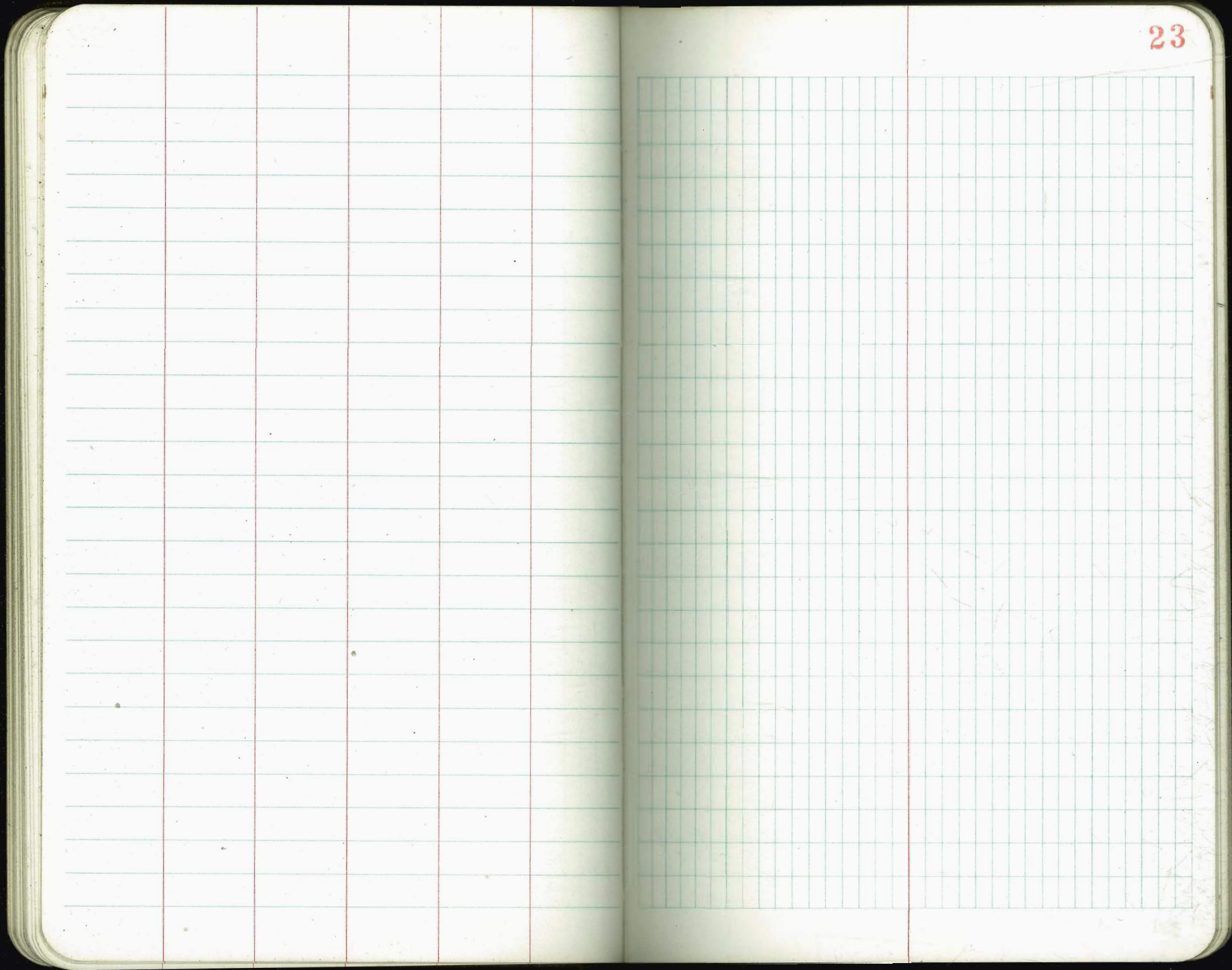
C 9.50

0.33

113

C 9.94

0.31



117

+75

+50

+25

116

+75

+50

Req. 9-21-48

+25

T.P.	424	14.44	1090	1020	
B.M.B.P.	6.78	21.10		14.32	P.79

115

Z

FL

0.63  
 1381  
 287  
 C 1094

0.61

0.59

0.57

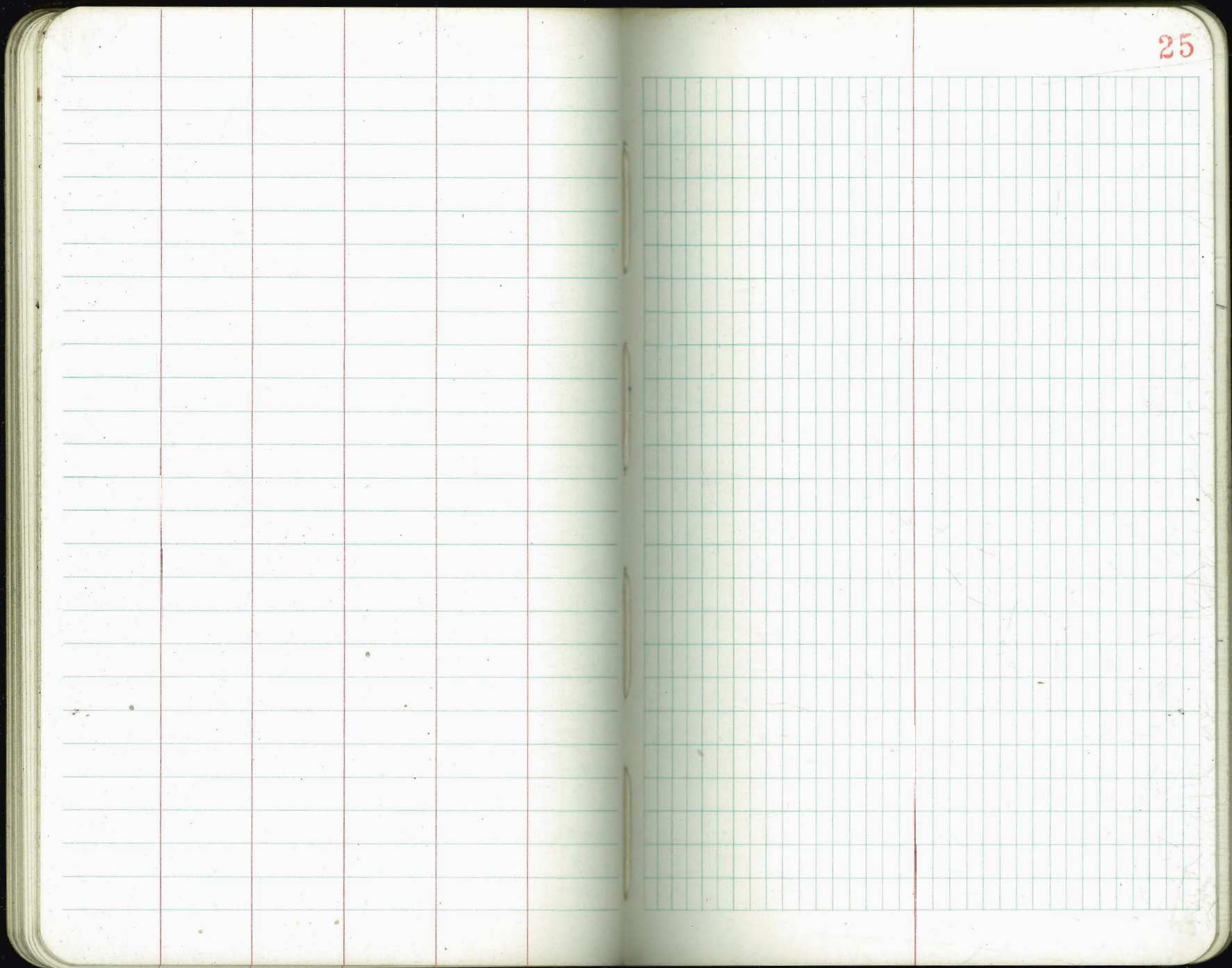
0.55

0.53

0.51

0.49

+0.47



Elev.

FL

+75 5.7 8.7

$$\begin{array}{r} 0.77 \\ 13.67 \\ 3.72 \\ \hline 19.95 \end{array}$$

+50 5.8 8.6

$$\begin{array}{r} 0.75 \\ 13.69 \\ 3.76 \\ \hline 19.93 \end{array}$$

+25 5.9 8.5

$$\begin{array}{r} 0.73 \\ 13.71 \\ 3.62 \\ \hline 19.99 \end{array}$$

118 6.1 8.3

$$\begin{array}{r} 0.71 \\ 13.73 \\ 3.74 \\ \hline 19.99 \end{array}$$

+75 5.9 8.5

$$\begin{array}{r} 0.69 \\ 13.75 \\ 3.51 \\ \hline 19.95 \end{array}$$

+50 6.0 8.4

$$\begin{array}{r} 0.67 \\ 13.77 \\ 3.55 \\ \hline 19.99 \end{array}$$

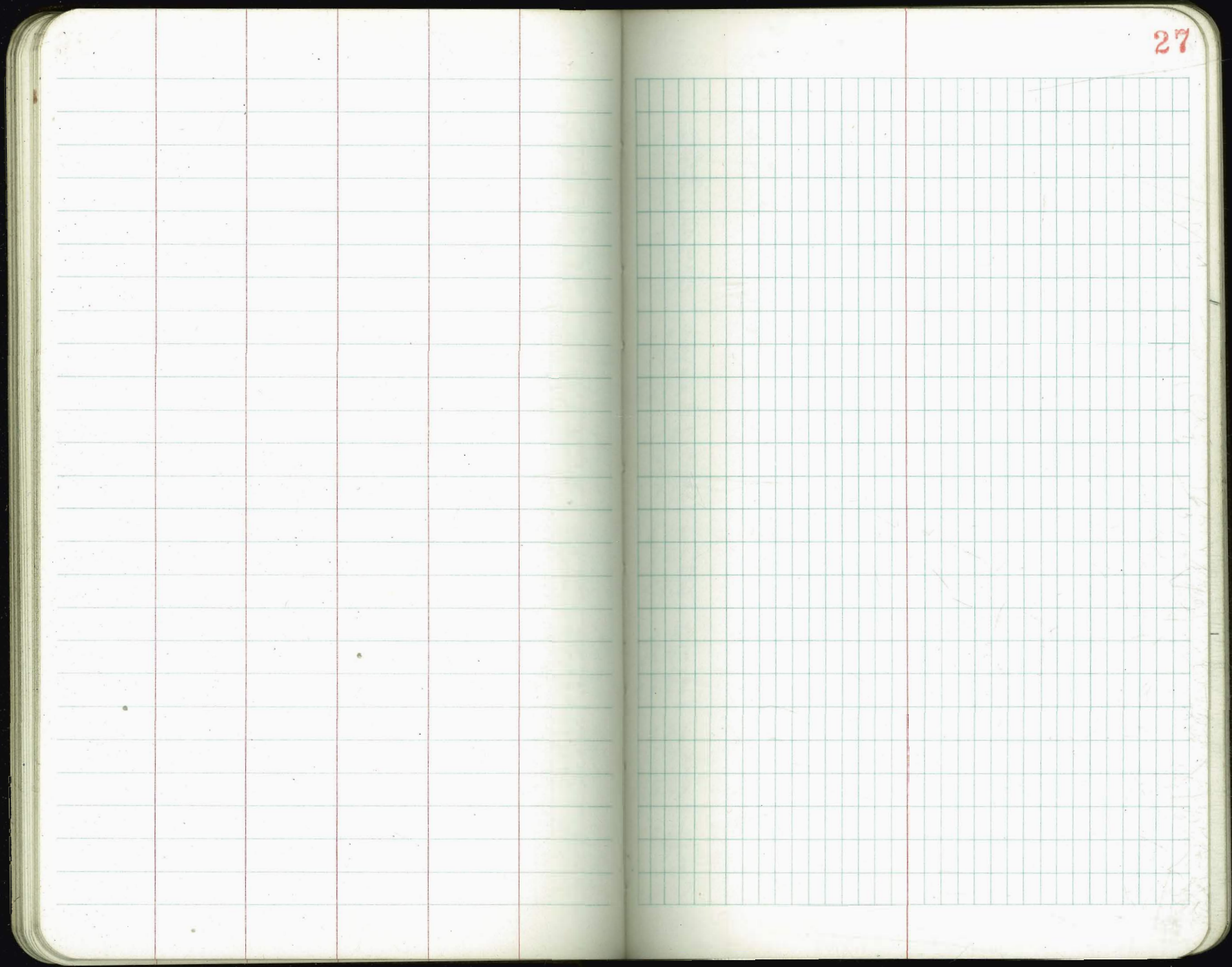
+25 5.9 9.0

$$\begin{array}{r} 0.65 \\ 13.79 \\ 3.44 \\ \hline 19.95 \end{array}$$

M.H. #33

117+08.90 5° 30' 30" LT 5.6 8.8

$$\begin{array}{r} 0.64 \\ 13.80 \\ 3.30 \\ \hline 19.90 \end{array}$$
14.44



+75			3.6	7.4	
BM	4.62	<u>11.01</u>		6.39	
check to			7.15	6.40	P.79
BM. 6 D					6.39
120 + 50			5.3	8.3	0.1

0.93
<u>10.08</u>
2.35
67.72
0.91
<u>12.64</u>
4.07
68.57

M.H. #34

120 + 19.74	2° 47' 15" Lt	5.1	8.5
-------------	---------------	-----	-----

0.89
<u>12.66</u>
2.99
69.57

120		5.0	8.6
-----	--	-----	-----

0.87
<u>12.68</u>
3.21
69.47

+75		4.8	8.8
-----	--	-----	-----

0.85
<u>12.70</u>
2.89
69.81

+50		4.6	9.0
-----	--	-----	-----

0.83
<u>12.72</u>
2.88
69.88

+25		4.8	8.8
-----	--	-----	-----

0.81
<u>12.74</u>
2.87
69.47

119		5.0	8.6
-----	--	-----	-----

0.79
<u>12.76</u>
2.69
69.07

T.P.	2.83	<u>13.55</u>	3.72	10.72
------	------	--------------	------	-------

14.44





126+36.3  
1°23'27"

M.H. 430

16" gas line

1986

M.H. 435  
123+27.25  
7°29'27"

1987

M.H. 434  
120+19.74  
2°47'52"

1987

M.H. 433  
117+08.90  
5°30'30"

1986

M.H. 440  
145+91.31  
17°05'30"

90°

M.H. 439

141+71.21  
2°46'30"

M.H. 438  
134+66.78  
5°53'27"

Island  
Hwy

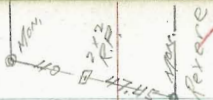
M.H. 437  
130+37.48  
P.O.T.

1986

2x2  
R.P.

90°

M.H. #45  
168+09.30 RT.  
71° 59'



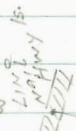
M.H. R.P.'s

Glendora ST.

M.H. #44  
165+22.90  
89° 52' 30" LT

M.H. #43

159+67.91  
19° 23' 30" RT.



164.84

Rosewood

M.H. #42

154+82.31

10 10 30  
90°

M.H. #41

150+87.11

M.H. #49  
185+00.65  
39° 04' 12" T.

31

M.H. #48  
181+73.97

M.H. #47  
178+50.16

A=19° 35' RT  
R=1878.7  
.914

176+79.82 B.C.

Bunker Hill ST.

M.H. #46  
173+51.34

123 5.4 7.6

75 5.4 7.6

150 5.6 7.4

~~114 134~~

125 5.7 7.3

122 5.7 7.3

175 6.3 6.7

T.P. 6.28 ~~13.01~~ 4.28 6.73

150 4.5 6.5

125 4.6 6.4

121 4.5 6.5

11.01

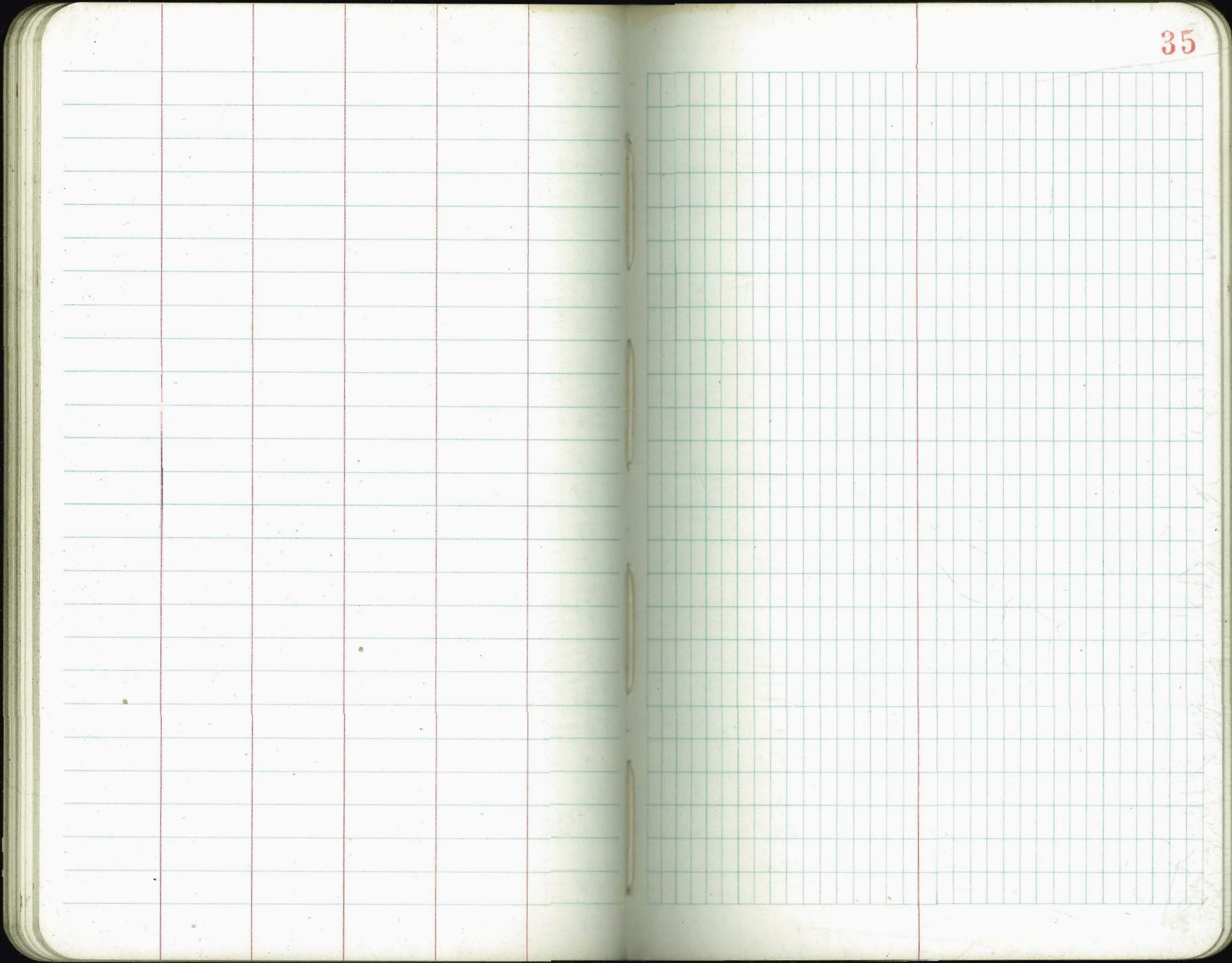
FROM  
P. 281.11  
11.90  
4.53  
C 7.371.09  
11.92  
4.90  
C 7.021.07  
11.94  
5.25  
C 6.691.05  
11.96  
5.40  
C 6.561.03  
11.98  
4.81  
C 7.171.01  
12.00  
5.17  
C 6.830.99  
10.02  
3.10  
C 6.920.97  
10.04  
2.54  
C 7.520.95  
10.06  
2.47  
C 7.59



			8	
125			7.8	8.5
125			9.2	7.1
175			9.0	7.3
150			9.6	6.7
125			8.8	7.5
T.P.	7.90	<u>16.30</u>	5.45	8.40
124			5.1	8.7
175			5.2	8.6
150			4.7	9.1
T.P. B.M.	7.46	<u>13.85</u>	6.67	6.39
M.H. #35				
123+27.05	6.29	6.7	4.5	8.5

13.01

F.L.				
			1.29	
			15.01	
			5.25	
			C 9.76	
			1.27	
			15.03	
			6.52	
			C 8.51	
			1.25	
			15.05	
			7.38	
			C 7.67	
			1.23	
			15.07	
			7.86	
			C 7.21	
			1.21	
			15.09	
			7.41	
			C 7.68	
			1.19	
			15.11	
			8.91	
			C 8.75	
			1.17	
			15.13	
			3.84	
			C 8.84	
			1.15	
			15.15	
			3.95	
			C 8.75	
			1.13	
			15.17	
			4.61	
			C 7.27	



	t	x	-	± EL.
			6.6	10.1
T.P.	3.93	<u>16.69</u>	9.35	12.76
+25			12.1	10.0
127			11.5	10.5
+75			11.5	10.5
+50			11.6	10.5
M.H. #2C				
126 + 363	1°23'47"		11.3	10.8
126			14.1	8.0
+75			12.8	9.3
T.P.	9.64	<u>22.11</u>	3.83	12.47
125 + 50			6.7	10.1
		<u>16.30</u>		

F.L.

14.7
13.22
3.69
C 11.53
1.45
20.66
9.35
C 11.31
1.43
20.68
9.28
C 11.40
1.41
20.70
8.90
C 11.80
1.39
20.72
8.48
C 12.24
1.38
20.73
7.92
C 12.81
1.35
20.76
6.38
C 14.38
1.33
20.78
7.32
C 13.46
1.31
14.79
3.83
C 11.16

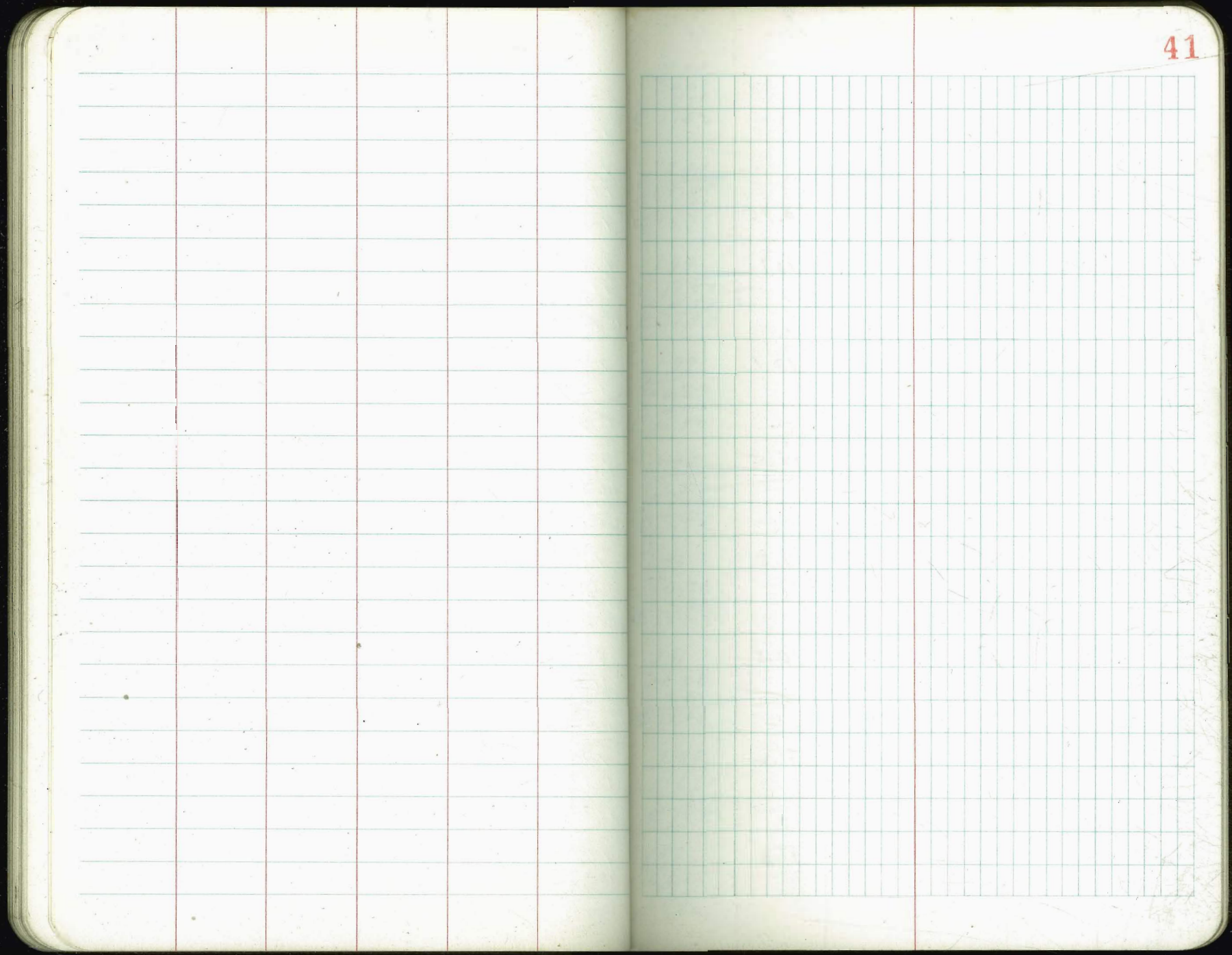




			E Elev.	F.L.
175		5.7	11.0	$\begin{array}{r} 1.65 \\ 15.04 \\ 2.75 \\ \hline C 12.29 \end{array}$
150		6.7	10.0	$\begin{array}{r} 1.63 \\ 15.06 \\ 3.01 \\ \hline C 12.05 \end{array}$
125		6.2	10.5	$\begin{array}{r} 1.61 \\ 15.08 \\ 3.17 \\ \hline C 11.89 \end{array}$
129		5.9	10.8	$\begin{array}{r} 1.59 \\ 15.10 \\ 3.17 \\ \hline C 11.93 \end{array}$
175		7.3	9.4	$\begin{array}{r} 1.57 \\ 15.12 \\ 3.34 \\ \hline C 11.78 \end{array}$
150		7.3	9.4	$\begin{array}{r} 1.55 \\ 15.14 \\ 3.39 \\ \hline C 11.85 \end{array}$
125		7.0	9.7	$\begin{array}{r} 1.53 \\ 15.16 \\ 3.57 \\ \hline C 11.59 \end{array}$
128		6.5	10.2	$\begin{array}{r} 1.51 \\ 15.18 \\ 3.54 \\ \hline C 11.64 \end{array}$
127+75		6.5	10.2	$\begin{array}{r} 1.49 \\ 15.20 \\ 3.24 \\ \hline C 11.96 \end{array}$
	16.69			



			<sup>2</sup> Elev.		F.L.
125		6.0	12.5		1.85 16.64 4.01 C 12.63
132		7.5	11.0		1.83 16.46 4.55 C 12.11
175		10.1	8.4		1.81 16.18 7.81 C 8.87
150		9.5	9.0		1.79 16.70 8.07 C 8.63
125		8.8	9.7		1.77 16.72 7.96 C 8.76
131		7.2	11.3		1.75 16.74 7.75 C 8.99
175	7.04	6.5	12.0		1.73 16.76 4.34 C 12.42
check to B.M. Page 79		10.48	3.28	T.P.	3.28 0.01
T.P.M.H. #37	3.11	5.24	11.256		
130 + 37.48	P.O.T.	5.2	11.5		1.70 14.99 3.00 C 11.99
130		5.3	11.4		1.67 15.02 2.91 C 12.11
					16.69



8  
elev.

F.L.

42

+50				
+25				
T.P.	7.10	<u>21.06</u>	4.53	13.96
134			5.8	12.7
+75			6.4	12.1
+50			6.0	12.5
+25			7.0	11.5
133			8.0	10.5
+75			7.3	11.2
132 + 50			7.2	11.3
		<u>18.49</u>		

Here only  
use  
& profile

2.03  
19.03  
7.21  
C 11.82

2.01  
19.05  
1.84  
C 12.21

1.99  
16.50  
4.53  
C 11.97

1.97  
16.52  
4.02  
C 12.50

1.95  
16.54  
4.01  
C 12.53

1.93  
16.56  
4.33  
C 12.23

1.91  
16.58  
4.52  
C 12.06

1.89  
16.60  
4.08  
C 12.52

1.87  
16.62  
3.62  
C 13.00



Elev.

F.L.

+75

221  
1885  
5.19  
C 13.66

+50

219  
1887  
3.33  
C 13.54

+25

217  
1889  
4.59  
C 14.30

136

215  
1891  
8.30  
C 10.61

+75

213  
1893  
9.62  
C 9.31

+50

211  
1895  
2.78  
C 11.17

+25

209  
1897  
6.72  
C 12.21

135

207  
1899  
5.94  
C 13.05

M.H. #32

134+66.78 5°53'17"

21.06

205  
1901  
5.47  
C 13.54





139

+75

+50

+25

138

+75

+50

+25

T.P.

137

6.32

20.42

6.96

14.10

21.06

F.L.

46

2.39  
18.03  
1.81  
C 11.22

2.37  
18.05  
1.71  
C 9.34

2.35  
18.07  
1.92  
C 11.15

2.33  
18.09  
1.58  
C 10.51

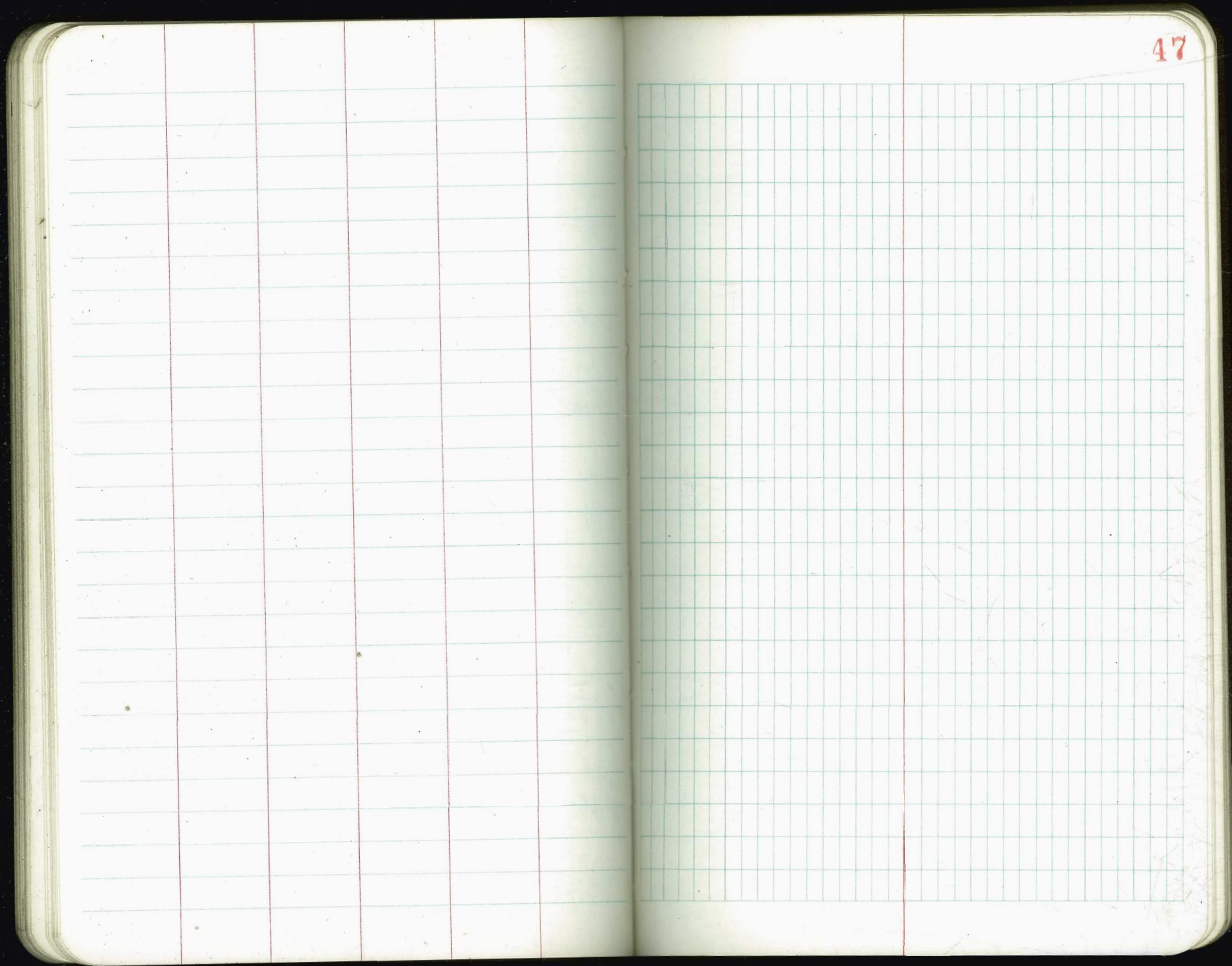
2.31  
18.11  
1.88  
C 10.73

2.29  
18.13  
1.83  
C 10.30

2.27  
18.15  
1.69  
C 10.46

2.25  
18.17  
1.38  
C 8.79

2.23  
18.19  
1.96  
C 11.87



F.L.

+25

$$\begin{array}{r} 2.57 \\ 13.17 \\ \underline{2.35} \\ C 10.82 \end{array}$$

141

$$\begin{array}{r} 2.55 \\ 13.19 \\ \underline{5.86} \\ C 7.33 \end{array}$$

+75

$$\begin{array}{r} 2.53 \\ 13.21 \\ \underline{14.5} \\ C 11.76 \end{array}$$

T.P.

3.18 15.74 7.86 12.56

+50

$$\begin{array}{r} 2.51 \\ 17.91 \\ \underline{7.86} \\ C 10.05 \end{array}$$

+25

$$\begin{array}{r} 2.49 \\ 17.93 \\ \underline{5.97} \\ C 17.96 \end{array}$$

140

$$\begin{array}{r} 2.47 \\ 17.95 \\ \underline{5.81} \\ C 13.64 \end{array}$$

+75

OUT

$$\begin{array}{r} 2.45 \\ 17.97 \\ \underline{\text{gone}} \end{array}$$

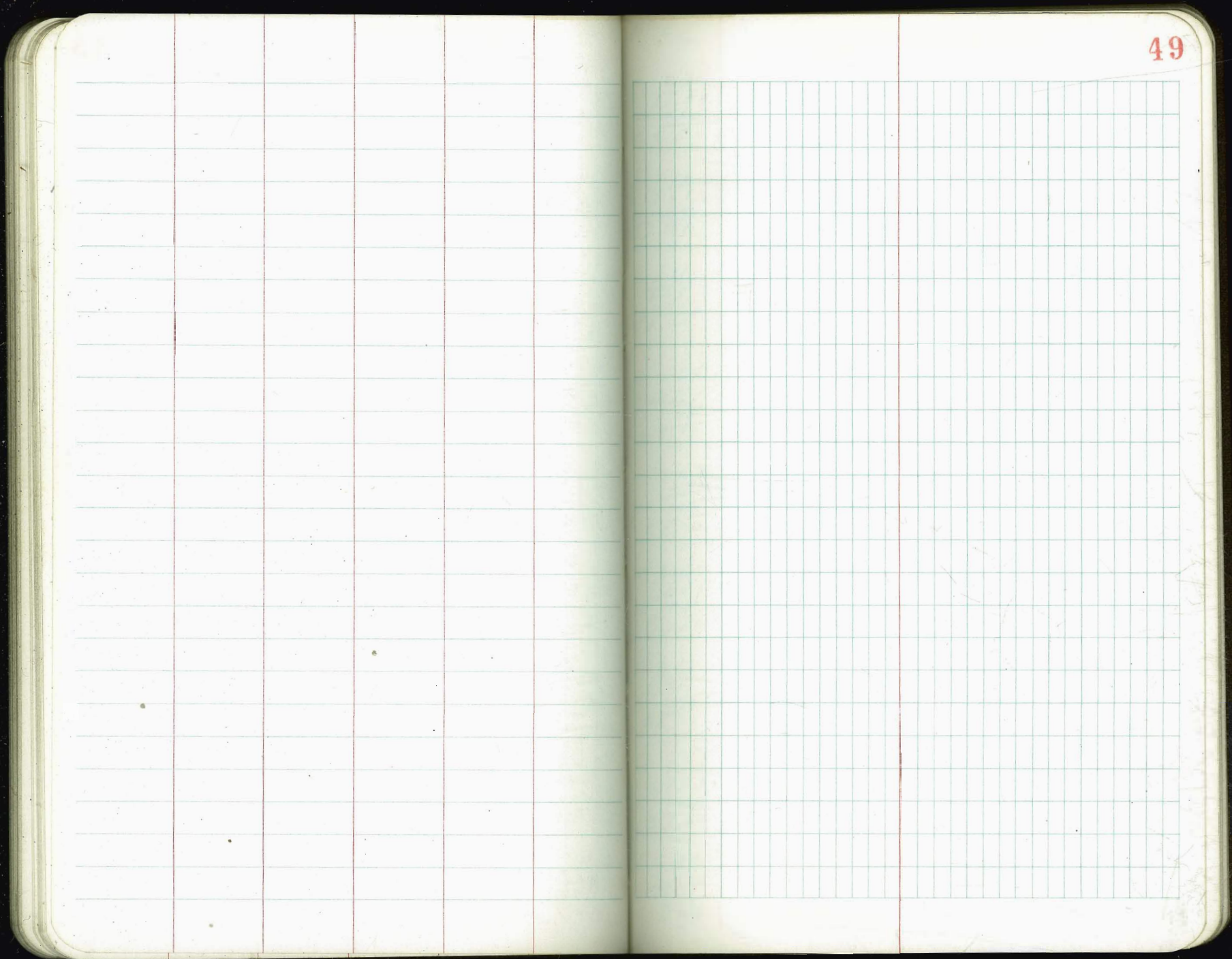
+50

$$\begin{array}{r} 2.43 \\ 17.99 \\ \underline{C 44} \\ C 11.55 \end{array}$$

139+25

20.42

$$\begin{array}{r} 2.41 \\ 18.01 \\ \underline{5.94} \\ C 12.07 \end{array}$$



F.L.

+50

$$\begin{array}{r} 2.75 \\ 13.59 \\ 4.08 \\ \hline C 9.51 \end{array}$$

+25

$$\begin{array}{r} 2.73 \\ 13.61 \\ 4.80 \\ \hline C 8.81 \end{array}$$

143

$$\begin{array}{r} 2.71 \\ 13.63 \\ 5.50 \\ \hline C 8.13 \end{array}$$

+75

$$\begin{array}{r} 2.69 \\ 13.65 \\ 5.48 \\ \hline C 8.17 \end{array}$$

T.P.

5.64

16.34

5.04

10.70

+50

$$\begin{array}{r} 2.67 \\ 13.67 \\ 5.04 \\ \hline C 8.03 \end{array}$$

+25

$$\begin{array}{r} 2.65 \\ 13.69 \\ 5.55 \\ \hline C 7.54 \end{array}$$

142

$$\begin{array}{r} 2.63 \\ 13.11 \\ 4.69 \\ \hline C 8.52 \end{array}$$

M.H. #39

141+71.31

2°46'30" Lt

$$\begin{array}{r} 2.61 \\ 13.13 \\ 5.20 \\ \hline C 7.87 \end{array}$$

141+50

15.74

$$\begin{array}{r} 2.59 \\ 13.15 \\ 3.45 \\ \hline C 9.70 \end{array}$$



F.L.

+75

$$\begin{array}{r} 2.93 \\ 13.41 \\ \underline{3.78} \\ C9.63 \end{array}$$

+50

$$\begin{array}{r} 2.91 \\ 13.43 \\ \underline{3.70} \\ C9.73 \end{array}$$

+25

$$\begin{array}{r} 2.89 \\ 13.45 \\ \underline{3.37} \\ C10.08 \end{array}$$

+125

$$\begin{array}{r} 2.87 \\ 13.47 \\ \underline{3.82} \\ C9.65 \end{array}$$

+75

$$\begin{array}{r} 2.85 \\ 13.49 \\ \underline{3.55} \\ C9.94 \end{array}$$

+50

$$\begin{array}{r} 2.83 \\ 13.51 \\ \underline{3.57} \\ C9.94 \end{array}$$

+25

$$\begin{array}{r} 2.81 \\ 13.53 \\ \underline{3.63} \\ C9.90 \end{array}$$

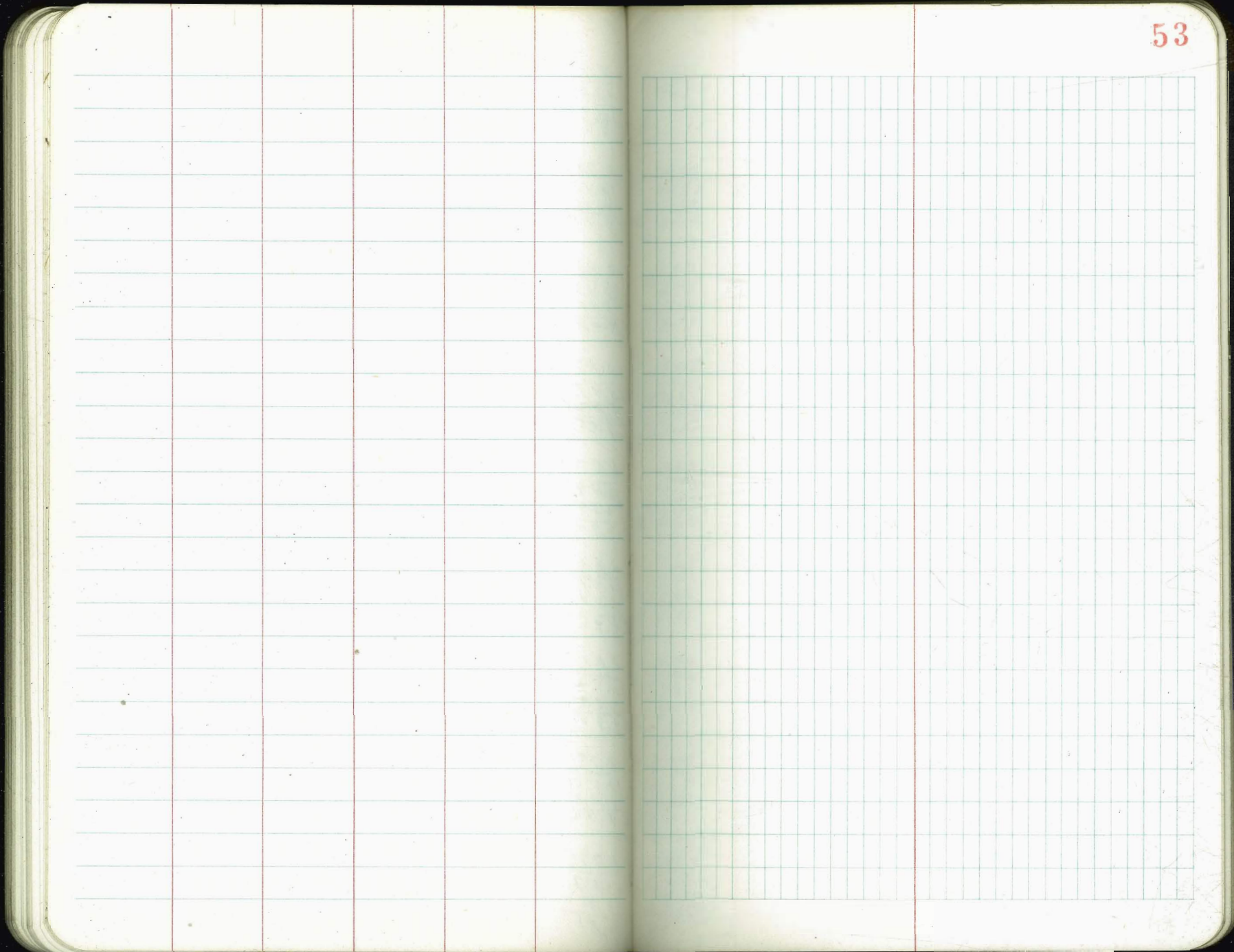
+125

$$\begin{array}{r} 2.79 \\ 13.55 \\ \underline{4.23} \\ C9.32 \end{array}$$

+123 + 75

$$\underline{16.34}$$

$$\begin{array}{r} 2.77 \\ 13.57 \\ \underline{3.70} \\ C9.81 \end{array}$$





T.P. 1014 2643 137 1629

148 ✓

+75

+50

+25

147

+75

+50

146 + 25

T.P. M.H. # 40 5.00 17.66 3.68 12.66

145 + 91.31 17° 45' 30" 67

16.34

STOB to West 4.90 11.44 3.68 C 7.76

F.L.

311 14.55 1.37 C 13.18

309 14.57 3.94 C 10.63

307 14.59 5.46 C 9.13

305 14.61 6.22 C 8.39

303 14.63 6.03 C 8.60

301 14.65 5.94 C 8.71

299 14.67 6.35 C 8.32

297 14.69 5.86 C 8.83

295 13.39 3.08 C 9.71

827

424

1246

121

1125

2.10

13.35

3.11

10.24

1335

191

11.44

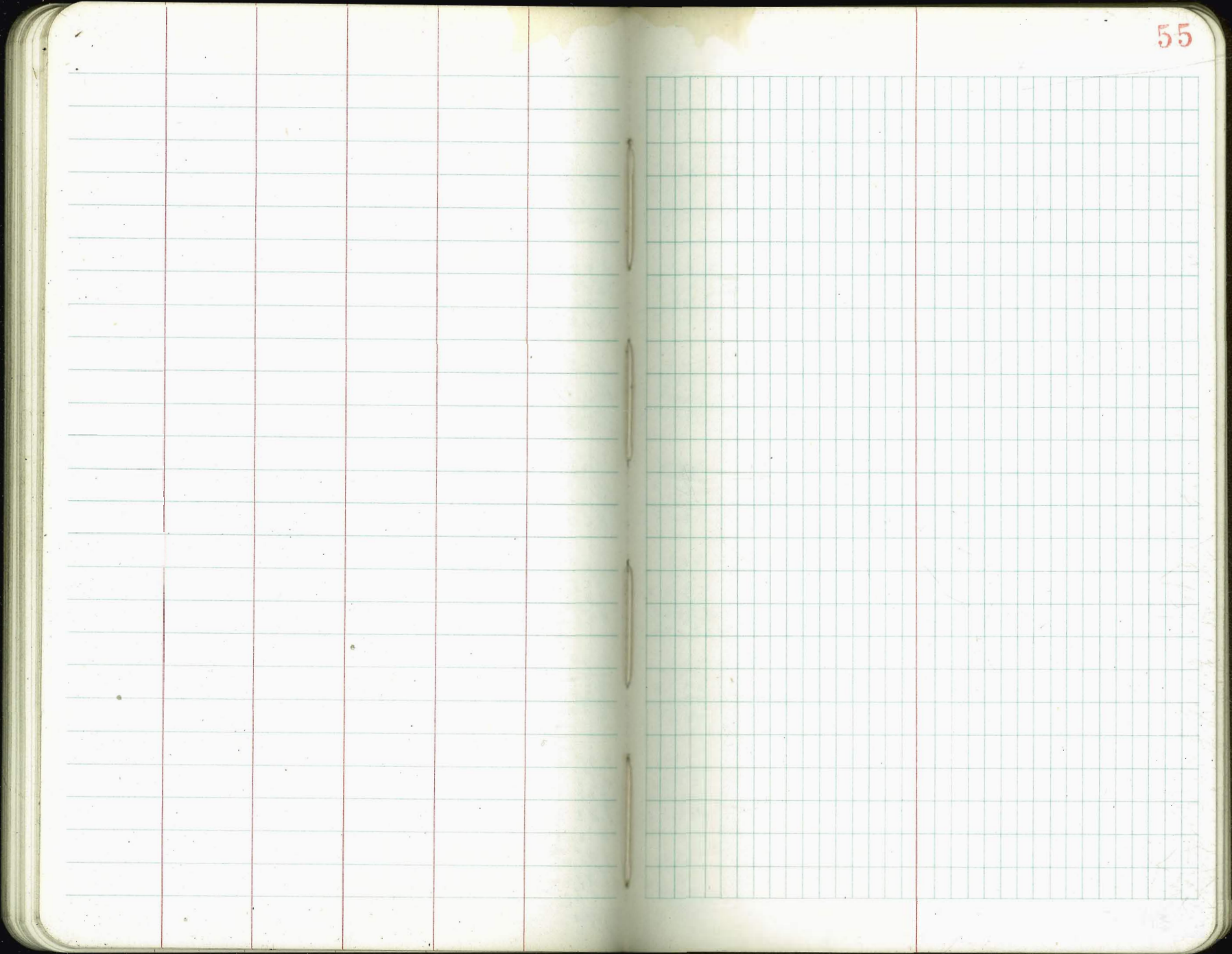
B.M. STOB

147 + 25

1144

0.50

11.94



125			6.9	20.6	
150			4.8	22.7	
175			4.0	23.5	
150			3.5	24.0	
125			2.5	25.0	
149			2.5	25.0	
T.P.	1.4x	27.55	0.32	26.11	10' STU6 148+75
274.7x					
		26.43			
		9.49			
		16.94			
		0.37			
150		17.31			
		9.09			
		8.22 = 8.23			
		BM Hwy Mon			
		Page 71			
148+25					
		26.43			

F.L.					
329					11.37
24.26					10.27
5.46					C 1.00
C 18.80					
327					11.29
24.28					10.29
4.04					C 1.00
C 20.24					10-26-48
325					T.P.
24.30					11.44 = P.5x
3.19					3.12
C 21.11					10.56
323					11.33
24.32					10.33
2.40					C 1.00
C 21.86					11.94
321					3.17
24.34					8.77
1.54					
C 22.80					
319					3.21
24.36					11.35 ✓
1.32					10.35
C 23.04					C 1.00
317					10.16 ✓
24.36					148 + 74.74. Pot
0.32					29 - 40 P.P.S
C 22.94					to RT.
315					10.18
23.28					
0.70					
C 22.58					10.20
313					
23.30					
5.09					
C 18.21					10.24



150			6.5	14.5
125			6.7	14.8
T.P.	CIC	<u>21.06</u>	12.65	14.90
150			13.1	14.5
175			12.3	15.3
150			12.8	14.8
125			11.1	14.5
151			10.4	17.2
M.H. #41				
150+874	P.O.T.		10.2	17.4
150+50			8.7	19.4
		<u>27.55</u>		

347  
 $\frac{17.59}{6.00}$   
 C 11.59

345  
 $\frac{17.61}{6.03}$   
 C 11.58

343  
 $\frac{24.13}{12.65}$   
 C 11.47

341  
 $\frac{24.14}{12.31}$   
 C 11.83

339  
 $\frac{24.16}{11.95}$   
 C 12.81

337  
 $\frac{24.18}{9.62}$   
 C 14.56

335  
 $\frac{24.20}{9.40}$   
 C 14.80

334  
 $\frac{24.21}{9.02}$   
 C 15.19

331  
 $\frac{24.24}{6.89}$   
 C 17.35

5706  
 0.21  
 EOST  
 5.20  
 $\frac{22.35}{9.02}$   
 C 13.33

11.94 \*

11.94 \*  
 3.31  
 8.63

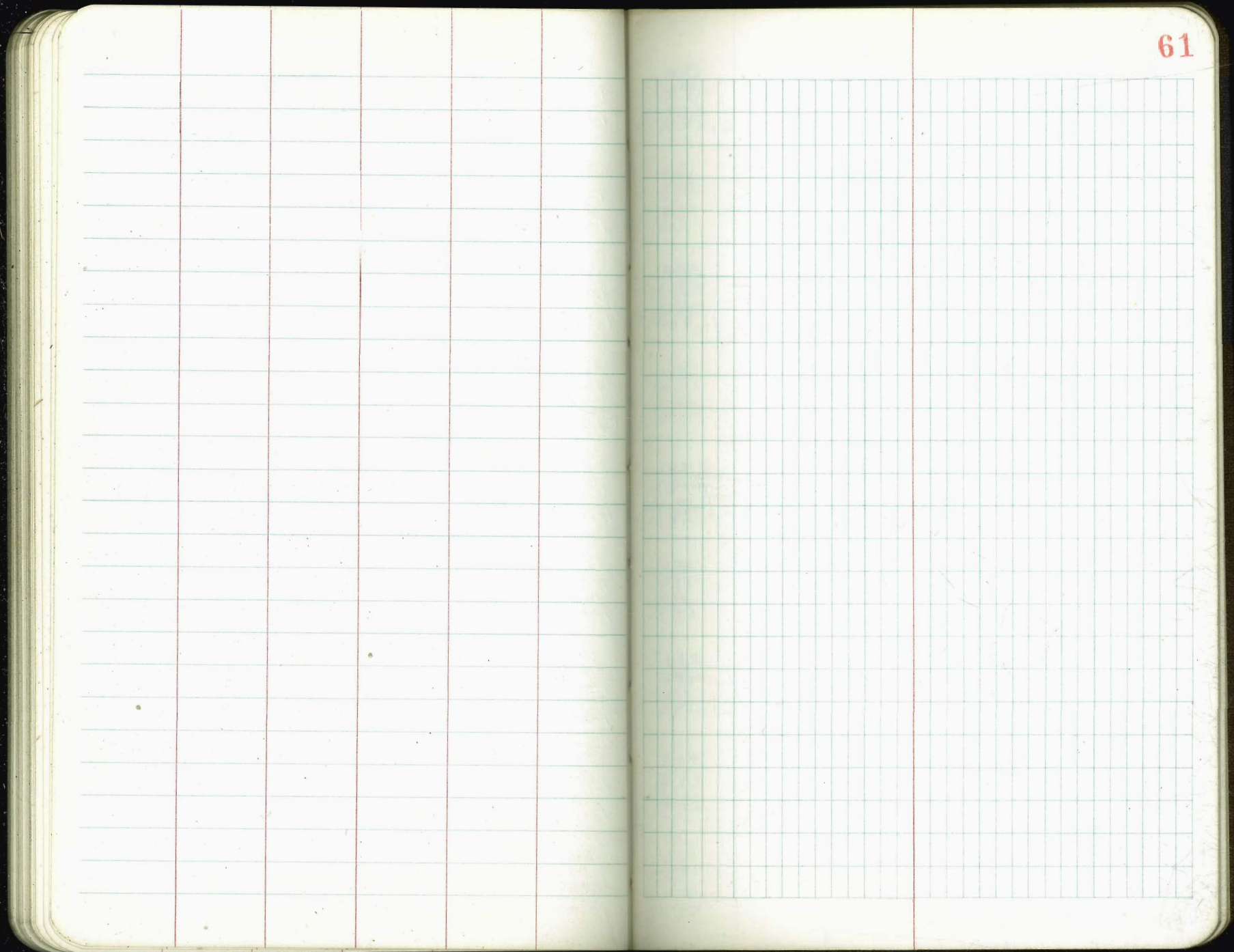
11.25  
 10.75  
 C 1.00

9.11 14.25

5.24

1st NW Wall on Rt North of Jellott St.  
B.M. Christed Square in NW Wall by State  
State Sta = 176772

M.H. #	FOT.	W. Stub // with gully 5.50	F.L.	E. Stub
154 + 8231		3.0	18.0	3.66 17.40 2.51 C 14.89
				5.50 15.56 2.51 C 13.05
+50		3.4	17.6	3.63 17.43 2.05 14.38
+25		3.8	17.2	3.61 17.45 2.39 C 14.06
15x		4.1	16.9	3.59 17.47 3.85 C 13.62
+75		4.4	16.6	3.57 17.49 3.87 C 13.62
+50		4.8	16.2	3.55 17.51 4.51 C 13.00
+25		5.0	16.0	3.53 17.53 4.42 C 13.11
153		5.5	15.5	3.51 17.55 5.33 C 12.22
152 + 75		6.1	14.9	3.49 17.57 5.85 C 12.02
	21.06			



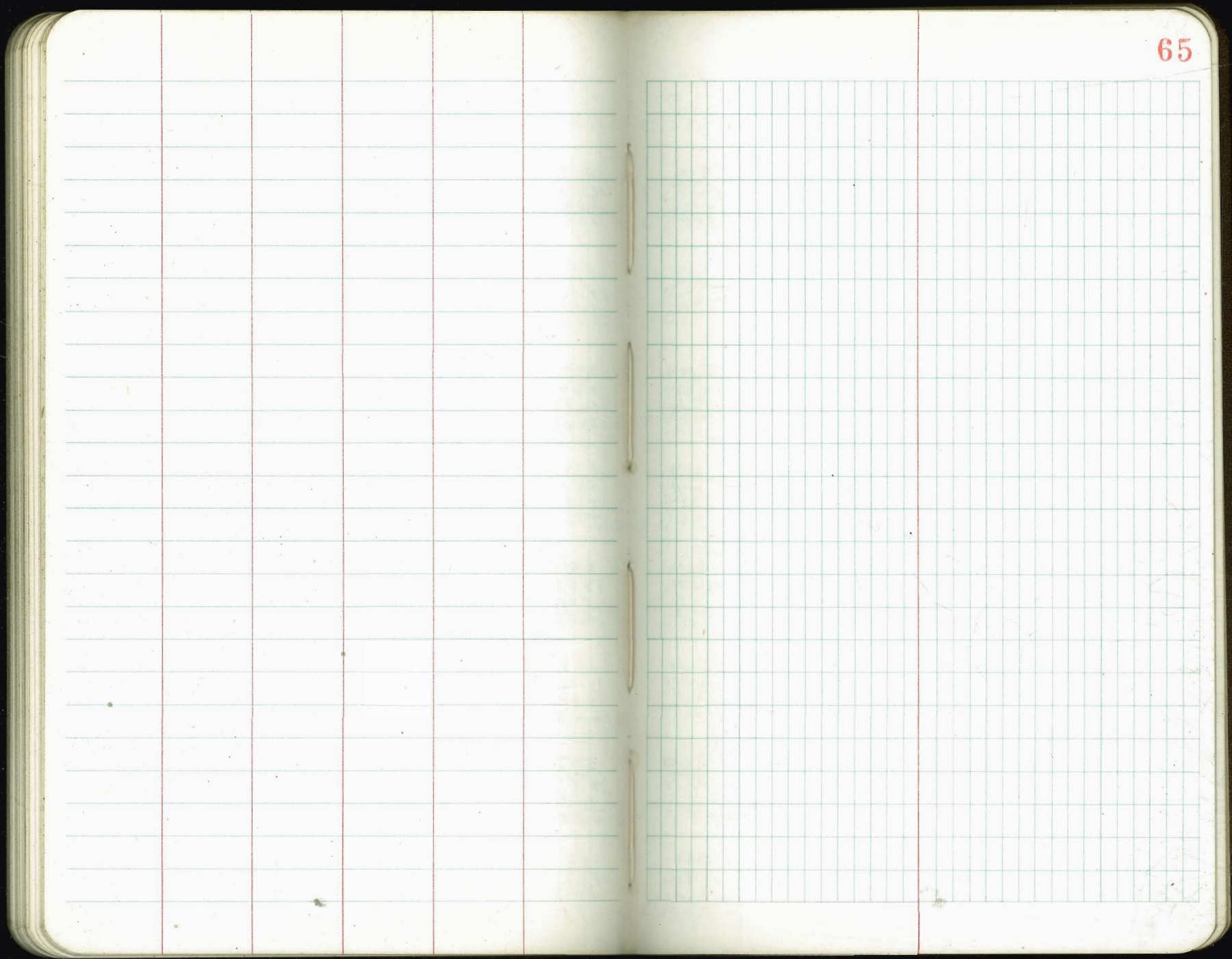


157	"T" E/W		39	19.4	570 17.64 4.42 C 13.22	3.83 19.51 4.42 C 15.09
175			37	19.6		3.81 19.53 4.42 C 15.11
150	"T" E/W		47	18.6	570 17.64 4.66 C 12.98	3.79 19.55 4.66 C 14.89
125			43	19.0		3.77 19.57 4.50 C 15.07
156	"T" E/W		35	19.8	560 17.74 4.12 C 13.62	3.75 19.59 4.12 C 15.47
175			38	19.5		3.73 19.61 4.00 C 15.61
150	"T" E/W		28	18.5	560 17.74 4.11 C 13.63	3.71 19.63 4.11 C 15.52
125			50	18.3		3.69 19.65 4.55 C 15.10
155			51	18.2		3.67 19.67 4.82 C 14.85
T.P.	479	<u>23.34</u> 21.06	251	18.55	CUT 10' 57.06 154 + 82.31	



F.L.

125		5.5	14.7		4.01 16.23 5.18 C11.95
159	"T" E+W	5.1	15.1	5.90 14.34 4.68	3.99 16.25 4.68 C11.57
T.P.	374	20.24	6.84	16.50	9.66
175		7.3	16.0		3.97 19.37 6.84 C12.53
150	"T" E+W	6.7	16.6	5.90 17.44 6.19	3.95 19.39 6.19 C13.20
125		6.0	17.3		3.93 19.41 5.68 C13.73
158	"T" E+W	5.5	17.8	5.80 17.54 5.36	3.91 19.43 5.26 C14.17
175		5.1	18.2		3.89 19.45 4.80 C14.65
150	"T" E+W	4.9	18.4	5.80 17.54 4.59	3.87 19.47 4.59 C14.88
157+25		3.7	19.6		3.85 19.49 4.52 C14.97
		23.34			

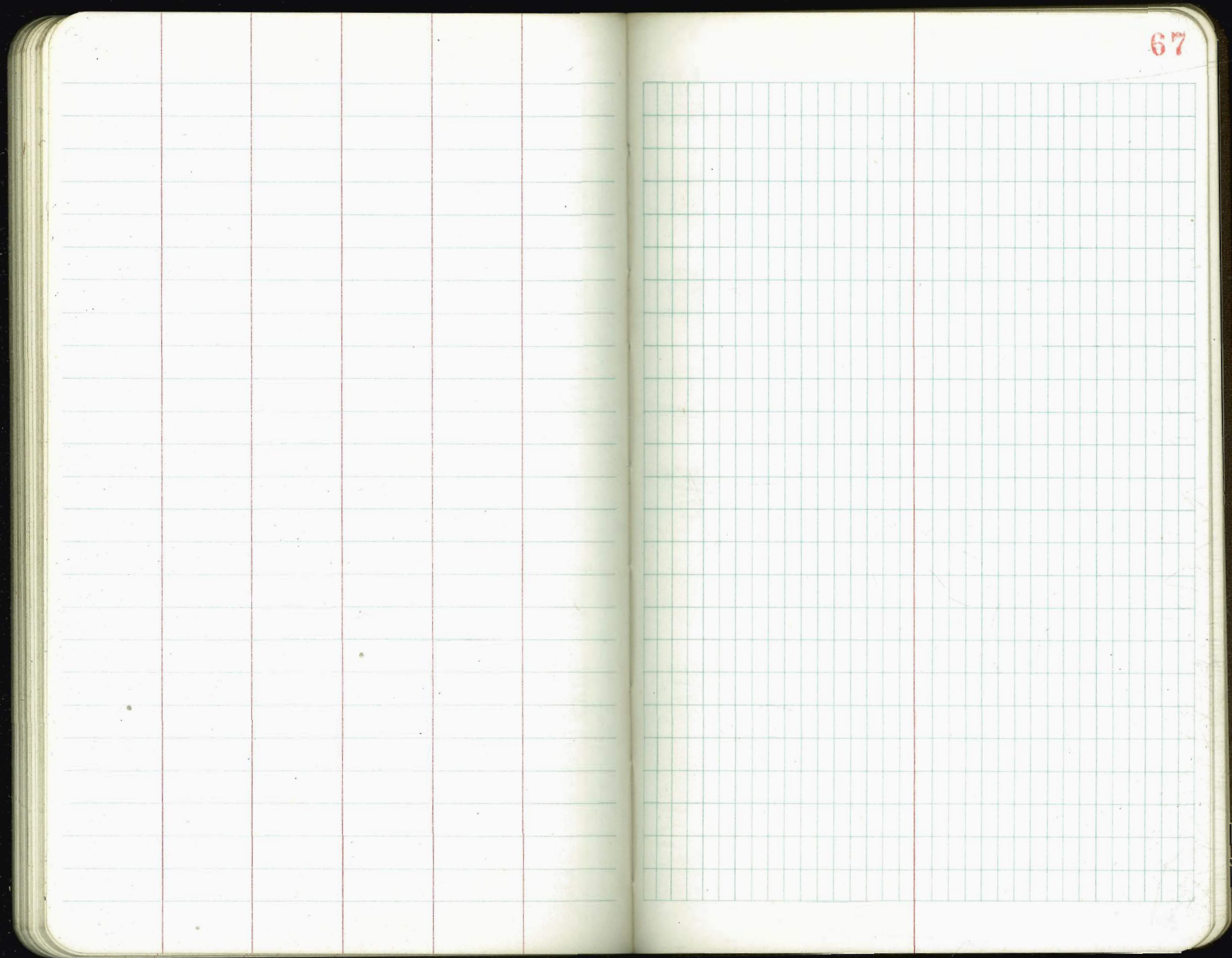


F.L.

75			4.9	15.7	
140	"T" West		4.9	15.7	6.10 14.53 4.54 C 9.99
75			4.9	15.7	
161	"T" East		5.1	15.5	6.10 14.53 4.46 C 10.07
75			5.3	15.3	
140	"T" West		5.5	15.1	6.10 14.53 5.30 C 9.23
160			5.9	14.7	
T.P.	6.10	<u>20.63</u>	5.71	14.53	
M.H. #43					
159+47.91	19° 23' 30" Pt		5.5	14.7	
	Rosewood St.				
159+40	"T" E-W		5.1	15.1	6.00 14.24 4.34 C 9.90

2024

4.21					
16.42					
4.55					
C 11.87					
4.19					
16.44					
4.54					
C 11.90					
4.17					
16.46					
4.69					
C 11.77					
4.15					
16.48					
4.46					
C 12.02					
4.13					
16.50					
5.22					
C 11.28					
4.10					
16.53					
5.30					
C 11.23					
4.07					
16.56					
5.50					
C 11.06					
4.05					
16.19					
5.71					
C 10.48					
4.03					
16.21					
4.34					
C 11.87					
20.24 = X					
6.59					
13.65					
2.19					
15.84					
5.76					
10.08					
IM. Map. N.E.					
Pacific and					
Reverse					
1647-70					



164	"T" East side	3.3	17.3	6.30 14.33 2.40 C 11.93	4.39 16.24 2.40 C 13.84
-----	---------------	-----	------	----------------------------------	----------------------------------

175		3.6	17.0		4.37 16.26 2.81 C 13.45
-----	--	-----	------	--	----------------------------------

140	"T" West side	4.1	16.5	6.20 14.43 3.62 C 10.81	4.35 16.28 3.62 C 12.42
-----	---------------	-----	------	----------------------------------	----------------------------------

125		4.3	16.3		4.33 16.30 3.69 C 12.61
-----	--	-----	------	--	----------------------------------

163	"T" East side	4.5	16.1	6.20 14.43 3.78 C 10.65	4.31 16.32 3.78 C 12.54
-----	---------------	-----	------	----------------------------------	----------------------------------

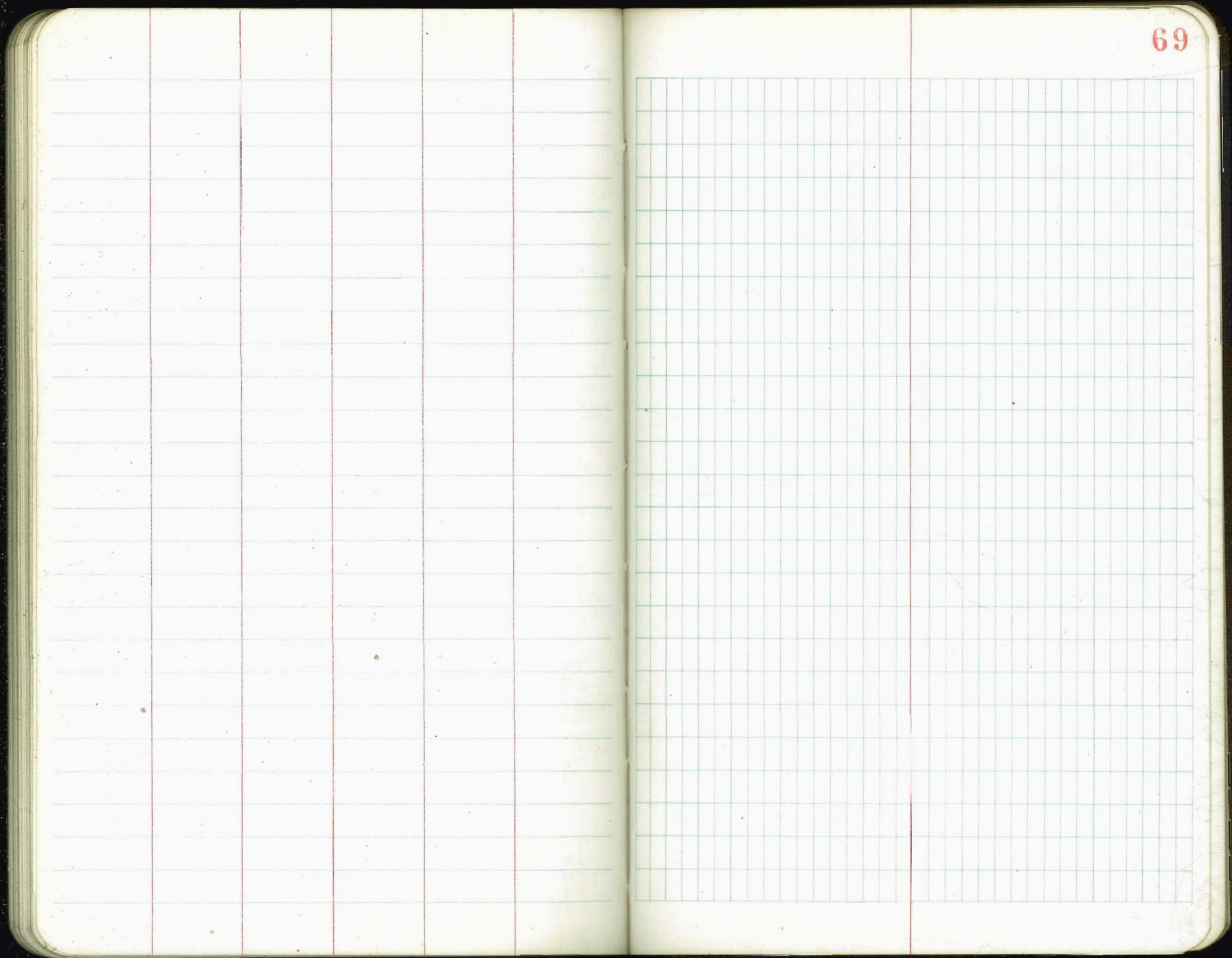
175		4.7	15.9		4.29 16.38 4.37 C 11.97
-----	--	-----	------	--	----------------------------------

162	140 "T" West side	4.9	15.7	6.10 14.53 4.76 C 9.77	4.27 16.36 4.76 C 11.60
-----	-------------------	-----	------	---------------------------------	----------------------------------

125		4.8	15.8		4.25 16.38 4.55 C 11.83
-----	--	-----	------	--	----------------------------------

162	"T" East side	4.9	15.7	6.10 14.53 4.57 C 9.92	4.23 16.40 4.57 C 11.83
-----	---------------	-----	------	---------------------------------	----------------------------------

20.63





F.L.

+25 7.3 14.9

$$\begin{array}{r} 4.57 \\ 17.61 \\ 7.16 \\ \hline C 10.45 \end{array}$$

166 6.5 15.7

$$\begin{array}{r} 4.55 \\ 17.63 \\ 5.93 \\ \hline C 11.30 \end{array}$$

+75 5.8 16.4

$$\begin{array}{r} 4.53 \\ 17.65 \\ 5.70 \\ \hline C 11.89 \end{array}$$

+50 4.9 17.3

$$\begin{array}{r} 4.51 \\ 17.67 \\ 5.12 \\ \hline C 12.55 \end{array}$$

M.H. #44  
 165+22.90 89°52'30" Lt  
 Ghendora St

8" Stub: <sup>EAST</sup>  
<sub>NORTH</sub>

3.9 16.3

$$\begin{array}{r} 6.30 \\ 15.88 \\ 3.95 \\ \hline C 11.93 \end{array}$$

$$\begin{array}{r} 4.49 \\ 17.69 \\ 3.95 \\ \hline C 13.74 \end{array}$$

165100 3.5 18.7

$$\begin{array}{r} 4.47 \\ 17.71 \\ 3.36 \\ \hline C 14.95 \end{array}$$

+75 3.8 18.4

$$\begin{array}{r} 4.45 \\ 17.73 \\ 3.50 \\ \hline C 14.18 \end{array}$$

T.P. 3.73 22.18 218" 18.45

164+40 "T" West side 2.8 17.8

$$\begin{array}{r} 6.30 \\ 14.33 \\ 2.18 \\ \hline C 12.15 \end{array}$$

$$\begin{array}{r} 4.43 \\ 16.20 \\ 2.18 \\ \hline C 14.05 \end{array}$$

164+25 3.1 17.5

$$\begin{array}{r} 4.41 \\ 16.22 \\ 2.49 \\ \hline C 13.73 \end{array}$$

2003

This page is a ledger-style sheet with 6 vertical red lines and 20 horizontal blue lines. The lines create a grid of 5 columns and 20 rows. The columns are of varying widths, with the first column being the widest and the last being the narrowest. The page is otherwise blank.

This page is a ledger-style sheet with 1 vertical red line and 20 horizontal blue lines. The red line is positioned near the left edge, creating a narrow left margin and a wide main area. The main area contains a green grid of 15 columns and 20 rows. The page is otherwise blank.

150		5.1	9.5	
162 + 25		4.7	9.9	
For stub 528	14.58	12.88	9.30	
M.H. #45				8" stub w. side 6.50
168 + 0.93	71.59	12.7	9.5	15.68 12.88 C 2.80
Glendora + Pacific				
775		12.0	10.2	
150		11.3	10.9	
725		10.5	11.7	
167	8" T north side	9.7	12.5	6.50 15.68 9.56 C 6.12
775		8.9	13.3	
166 + 50		8.1	14.1	
		22.18		

4.75  
9.83  
5.14  
C 4.69

4.73  
9.85  
4.82  
C 5.03

4.71  
17.77  
12.88  
C 4.59

4.69  
17.49  
11.80  
C 5.69

4.67  
17.51  
11.28  
C 6.23

4.65  
17.53  
10.39  
C 7.14

4.63  
17.55  
9.56  
C 7.99

4.61  
17.57  
8.75  
C 8.82

4.59  
17.59  
7.96  
C 9.63

9.30

12.88

12.88

000

TOP M.H.

9.30 = 7.9  
4.34  
13.64 = T  
3.56  
10.08  
10.08 = B.M.  
Pacific  
Revere

A table with 6 columns and 25 rows. The columns are defined by vertical red lines, and the rows are defined by horizontal blue lines. The table is currently empty.

A table with 10 columns and 25 rows. The columns are defined by vertical blue lines, and the rows are defined by horizontal blue lines. The table is currently empty.

175 4.5 10.1

150 4.8 9.8

125 4.9 9.7

170 "T" East side 4.7 9.9  
6.70  
7.88  
4.31  
C 3.57

175 4.6 10.0

150 4.8 9.8

125 5.0 9.6

169 "T" East side 5.0 9.6  
6.60  
7.98  
4.75  
C 3.23

168+75 5.0 9.6

14.58

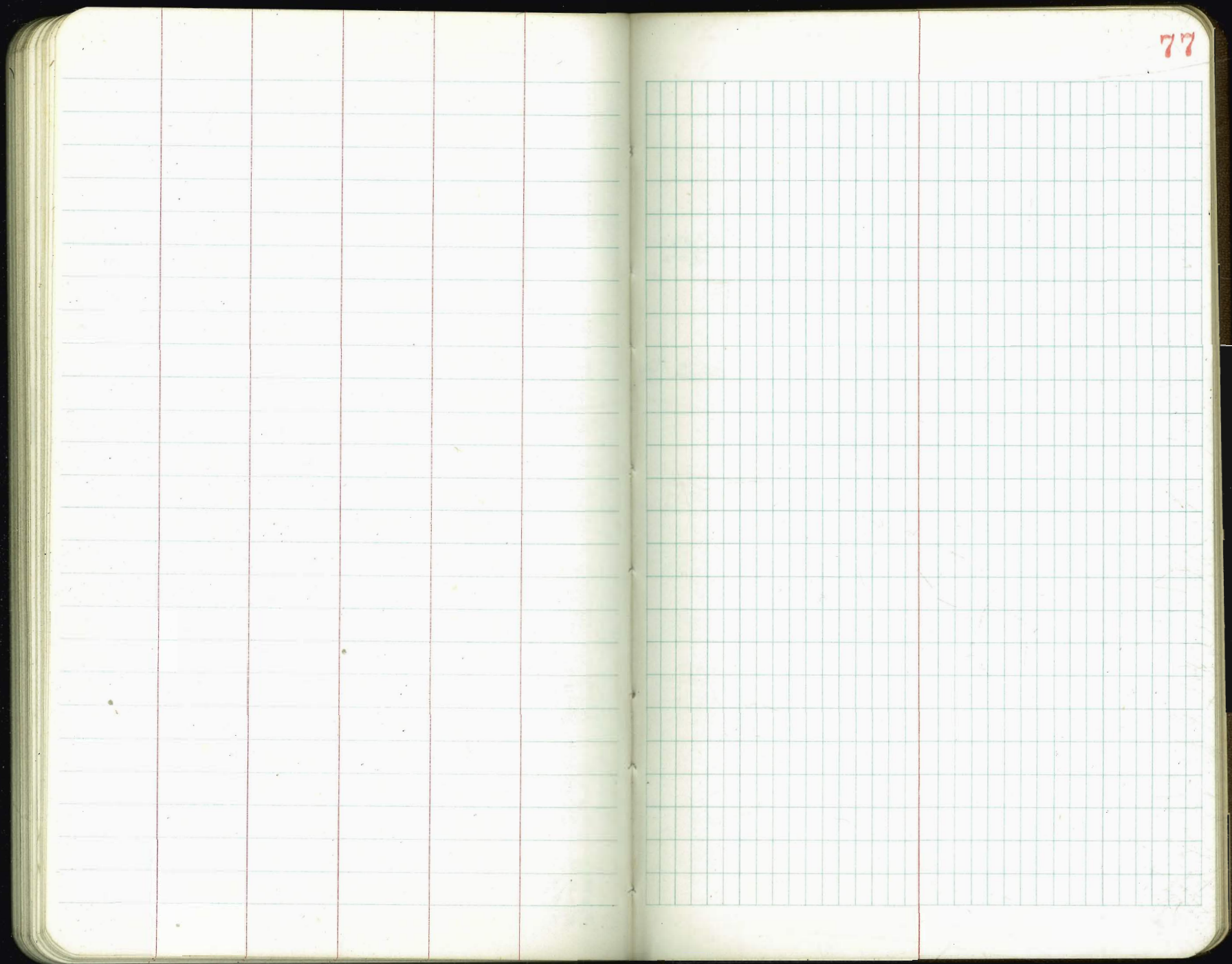
F.L.

4.93  
9.65  
4.27  
C 5.384.91  
9.67  
4.32  
C 5.354.89  
9.69  
4.28  
C 5.414.87  
9.71  
4.31  
C 5.404.85  
9.73  
4.59  
C 5.144.83  
9.75  
4.60  
C 5.074.81  
9.77  
4.67  
C 5.104.79  
9.79  
4.75  
C 5.044.77  
9.81  
4.92  
C 4.89



173			4.8	10.0	
175			4.8	10.0	
150			4.9	9.9	
172 + 20	8" T " " Alley	Eastside	4.5	10.2	6.90 7.86 4.61 C 3.25
172			4.6	10.2	
175			4.5	10.3	
150			4.3	10.5	
T.P.	4.35	<u>14.76</u>	4.7	10.41	
125			4.5	10.1	
171	" T "	East side	4.5	10.1	6.80 7.78 4.19 C 3.59
					<u>14.58</u>

5.11	
9.65	
4.72	
C 4.84	
5.09	
9.67	
4.84	
C 4.83	
5.07	
9.69	
4.88	
C 4.81	
5.05	
9.71	
4.61	
C 5.19	
5.03	
9.73	
4.68	
C 5.05	
5.01	
9.75	
4.37	
C 5.38	
4.99	
9.77	
4.24	
C 5.53	
4.97	
9.61	
4.16	
C 5.45	
4.95	
9.63	
4.19	
C 5.44	





Contd. G.B. 243-1

check to B.M. B.P. 3.40 21.04 21.02  
0.02 H

T.P. 5.70 24.44 1.75 18.7x

Set B.M. 5.97 20.49 2.43 14.52 chisel H

T.P. 4.40 16.95 3.09 12.55

T.P. 5.02 15.64 4.14 10.62

Set B.M. Chisel Sg. 4.14 10.62

173 + 5134 M.H. 446 4.7 10.1  
 Bunker Hill ST.

173 + 25 4.9 9.9

14.76

N.E. Cor. Pacific and Babboag Gas Pump Island  
 S. end Union  
 Heat waves very bad

Pacific & S.L. Magnolia ok. Island  
 Curb

S.E. Cor. Gas M.H. Bunker Hill ST.  
 10' N. of S. corner

5.15 7.00 8" STUB N.E. 10.30 TOP M.H.  
 9.61 7.76 4.46  
 4.98 4.98 4.98  
 C 4.63 C 2.78 F 0.52

5.13  
 9.63  
 4.95  
 C 4.68

Sewer B.M.<sup>s</sup>  
Jellett Nby

BM.B.P.	0.50	14.82	14.32	F.B.K. 1839-6
T.P.	4.73	11.35	8.20	6.67
T.P.	3.62	10.95	4.02	7.33
T.P.	4.25	10.64	4.56	6.39
T.P.	6.71	12.37	4.98	5.66
check to Hwy E.C. Mon			5.73	6.64
				$\frac{6.66}{0.02}$
Hwy Mon.	2.58	9.24		6.66
T.P.	3.90	7.71	5.43	3.81
T.P. BM	2.88	6.77	3.82	3.89
T.P.	3.80	6.90	3.67	3.10
T.P.	3.88	7.67	3.11	3.79
T.P. SET	4.94	8.96	3.65	4.02
T.P. BM	4.67	9.65	3.98	4.98
T.P.	2.94	8.73	3.86	5.79
check to B.M. con. Mon.			5.64	3.09
				3.08
BM. Con. Mon	6.95	10.03		3.08
Set B.M.			1.80	8.23
T.P.				

Top W. Hill Rd. P.P. Culv. N of Jellett

chisel  $\square$  on curb Hwy 15. opposite 122+10

chisel  $\square$  Hwy 15. curb at 132+00 Sewer near Spring

chisel  $\square$  Hwy 15. curb LT of 141+71.31 M.H. 200+00 STATE Hwy

F.B. (1647) n.c. Hwy on Pueblo Line (con. Mon.)

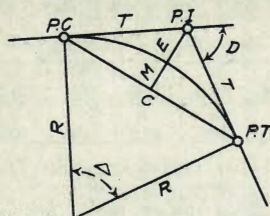
NW Cor. Top "STATE" Hwy Mon. E. 6. Hwy LT. of sewer sta 150+00

reference to this map

STATE CON. MON.

# DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

Copyright, 1914, by Eugene Dietzgen Co., New York City



## CURVE FORMULAS

$$\text{Radius} = R = \frac{50}{\sin \frac{D}{2}} \quad (1) \quad \text{Degree of Curve} = D \text{ and } \sin \frac{D}{2} = \frac{50}{R} \quad (2)$$

$$\text{Tangent} = T = R \tan \frac{\Delta}{2} \quad (3) \quad \text{Length of Curve} = L = 100 \frac{\Delta}{D} \quad (4)$$

$$\text{Middle ordinate} = M = R \left(1 - \cos \frac{\Delta}{2}\right) \quad (5) = R \text{vers } \frac{\Delta}{2} \quad (6)$$

$$\text{External} = E = T \tan \frac{\Delta}{4} \quad (7) = R \div \cos \frac{\Delta}{2} - R \quad (8) = R \text{exsec } \frac{\Delta}{2} \quad (9)$$

$$\text{Long Chord} = C = 2 R \sin \frac{\Delta}{2} \quad (10) \quad \Delta = \text{Central Angle}$$

## 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  $1^\circ$  curve  $T = 3454.1$  and  $\div 8\frac{1}{2} = 414.49$  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 - Sta. P. C. = 54.50, hence offset =  $7.27 \left(\frac{54.50}{100}\right)^2 = 2.16$  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 =  $.3 \times 54.5 \times 8\frac{1}{2} = 136.2'$  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 115.37. For from Table IV for  $1^\circ$  curve  $E = 960.6$  for  $8^\circ 20' = 960.6 \div 8\frac{1}{2} = 115.27$  and from Table V correction = .10 or  $E = 115.37$  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  $D = 5^\circ 30'$ .

$$M = \frac{C^2}{8R}$$

# 22

# 25

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 some 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.

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