

SEWERAGE
Division C
GRADE BOOK

657

9

TRANSIT

F.B. 657

657

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

104

10

Minutes.	Lks.	Minutes.	Lks.	Minutes.	Lks.
1	2½	21	49	41	95½
2	4½	22	51½	42	98
3	7	23	53½	43	100½
4	9½	24	56	44	102½
5	11½	25	58½	45	105
6	14	26	60½	46	107½
7	16½	27	63	47	109½
8	18½	28	65½	48	112
9	21	29	67½	49	114½
10	23½	30	70	50	116½
11	25½	31	72½	51	119
12	28	32	74½	52	121½
13	30½	33	77	53	123½
14	32½	34	79½	54	126
15	35	35	81½	55	128½
16	37½	36	84	56	130½
17	39½	37	86½	57	133
18	42	38	88½	58	135½
19	44½	39	91	59	137½
20	47	40	93½	60	140

MICROFILMED

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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

1081

1022

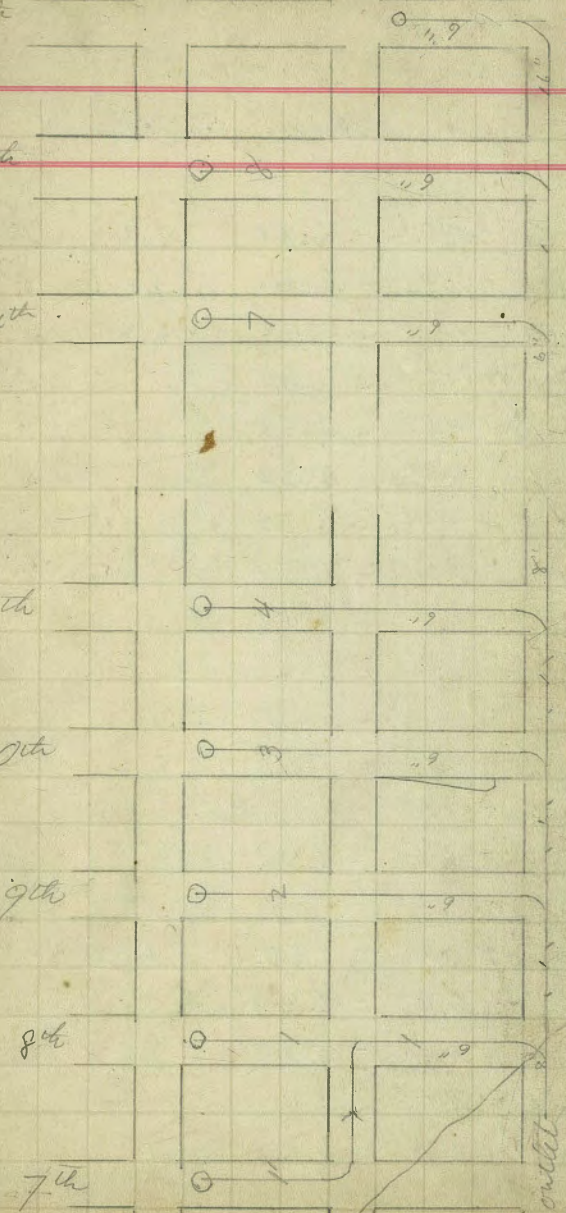
18

Division of the Sewerage
of San Diego comprises the
territory bounded on the North
by I Street, on the East by 16th
Street, on the South by N Street, on
the West by 7th Street and the
bay of San Diego

Street	Location	Page
N St	E. of 8 th	1-7
	8 7 th	2
16 th St	From N to 16	8
9 th Street	Branch 2	13-14
10 th St	N to L	15-16
11 th St	N of N St	17-18
12 St	N of N St	19-20
14 St	N of N St	23-24
15 St	N of N St	25-26
8 St	N of N St	27-28
13 St	N of N St	30-32
10 St		

Sta	Elev	Grade	Lev		
0	-7.24	-6.82	0.42	0' 5"	Fill
+25	-6.79	-6.70	0.09	0' 1/8	Fill
+50	-6.04	-6.54	0.54	0' 6 1/2	Lev
+75	-5.73	-6.46	0.73	0' 8 3/4	Lev
1	-4.70	-6.34	1.64	1' 7 3/4	Lev
+25	-3.54	-6.22	2.68	2' 8 1/8	Lev

Main line is of 8" pipe to 12th and from there is 6" pipe to end



N St - E of 8

Sta	Elev	Grade	Dist
0	-5.92	-6.50	.58 0' 7"
+3	-5.76	-6.44	.72 0' 8 ⁵ / ₈ "
+14	-5.59	-6.42	.83 0' 10"
+25	-5.20	-6.35	1.15 1' 1 ⁷ / ₈ "
+36	-4.60	-6.29	1.69 1' 8 ¹ / ₄ "
+47	-4.06	-6.22	2.16 2' 2"
+58	-3.53	-6.15	2.62 2' 7 ¹ / ₂ "
+69	-2.83	-6.09	3.26 3' 3 ³ / ₈ "
+80	-1.92	-6.02	4.10 4' 1 ¹ / ₄ "
+91	-2.65	-6.96	3.31 3' 3 ³ / ₄ "
+02	-3.16	-5.89	2.73 2' 8 ³ / ₄ "
+13	-3.55	-5.83	2.28 2' 3 ³ / ₈ "
+24	-3.11	-5.76	2.65 2' 7 ¹ / ₂ "
+36	-2.14	-5.69	3.55 3' 6 ⁵ / ₈ " x
+61	+1.59	-5.60	7.19 7' 2 ¹ / ₄ "
+76	-0.23	-5.55	5.32 5' 3 ³ / ₈ "
2+11	-2.15	-5.42	3.27 3' 3 ¹ / ₄ "
+36	+0.93	-5.33	6.26 6' 3 ¹ / ₈ "
2+36 = 2+20			

$$\frac{5965}{100}$$

1.361, 100

P.C.

0+62 8x6 Y for 8¹/₂ ft1+12 E. Line 8¹/₂ ft.P.T. 13' E of 8¹/₂ ft.

End of Pipe near Land

End of Pipe near Land

W St 8th to 16th

3

Sta El. End Cut

Sta	El.	End	Cut	
2+90	0.95	-5.33	6.28	6' 3 $\frac{3}{8}$ "
+55	1.21	-5.26	6.47	6' 5 $\frac{1}{2}$ "
+80	1.48	-5.19	6.67	6' 8"
2+98		Y Branch 8x6		
3	1.75	-5.13	6.86	6' 10 $\frac{1}{2}$ "
+20	1.68	-5.07	6.75	6' 9"
+40	2.22	-5.01	7.23	7' 2 $\frac{3}{4}$ "
+60	2.14	-4.95	7.09	7' 1 $\frac{1}{8}$ "
+85	2.13	-4.88	7.01	7' 0 $\frac{1}{4}$ "
4+10	2.38	-4.81	7.19	7' 2 $\frac{1}{4}$ "
+35	2.76	-4.74	7.50	7' 6"

to Sth 8th

8x6 Y at (0+18)

P.T.

E line 9th

Y South

Y North

Y South

W line 9th Grade 2.80

E line 9th

Y South

W Street 8th to 16th

4

STA	EL	GR	CUT	
4+60	3.29	-4.66	7.95	7' 11 $\frac{3}{8}$ "
+85	3.84	-4.59	8.43	8' 5 $\frac{1}{2}$ "
5+10	3.24	-4.52	7.86	7' 10 $\frac{3}{8}$ "
+35	3.90	-4.44	8.34	8' 4 $\frac{1}{8}$ "
+60	9.91	-4.37	13.68	13' 8 $\frac{1}{8}$ "
+78		8x6	Y Branch	
+80	3.38	-4.31	7.69	7' 8 $\frac{1}{8}$ "
6	3.98	-4.26	8.24	8' 2 $\frac{3}{8}$ "
+20	3.93	-4.20	8.13	8' 1 $\frac{3}{8}$ "
+40	3.97	-4.14	8.11	8' 1 $\frac{3}{8}$ "
+65	3.89	-4.07	7.96	7' 11 $\frac{1}{2}$ "
+90	4.42	-3.99	8.41	8' 4 $\frac{3}{8}$ "
7+15	5.00	-3.92	8.92	8' 11"
+40	5.37	-3.85	9.22	9' 2 $\frac{5}{8}$ "
+65	5.35	-3.78	9.13	9' 1 $\frac{5}{8}$ "
+90	5.91	-3.70	9.61	9' 7 $\frac{3}{8}$ "
8+15	6.19	-3.63	9.82	9' 7 $\frac{3}{8}$ "
+40	6.13	-3.56	9.69	9' 8 $\frac{1}{8}$ "
+58	8x6	Y Branch		
+60	6.62	-3.50	10.12	10' 1 $\frac{1}{2}$ "

Y North

Y South

W line 10th Grade 3.50

E line 10th

Y S

Y N

Y S

W line 11th St Grade 4.80

N Street 8th to 16

Sta	Elev	Grade	Elev	
8+80	5.95	-3.44	9.39	9' 4 1/2"
9	6.05	-3.38	9.43	9' 5 1/4"
+20	5.96	-3.33	9.29	9' 5 1/2"
+45	4.29	-3.25	7.54	7' 6 1/2"
+70	1.76	-3.18	4.94	4' 11 1/4"
+95	-1.24	-3.11	1.87	1' 10 1/2"
10+20	-2.94	-3.04	0.10	0' 1 1/4"
+45	-1.55	-2.96	1.61	1' 7 3/8"
+70	-1.47	-2.89	1.42	1' 5"
+95	-4.03	-2.82	-1.21	-1' 2 1/2"
11+20	0.80	-2.74	3.54	3' 6 1/2"
+38	8x6	Y Branch		
+40	1.56	-2.69	4.05	4' 0 5/8"
+60	2.10	-2.55	4.65	4' 7 3/4"
+80	1.82	-2.49	4.31	4' 3 5/8"
12	1.44	-2.43	3.87	3' 10 1/2"
+25	-0.55	-2.36	1.81	1' 9 3/4"
+50	-0.44	-2.29	1.85	1' 10 1/4"
+75	-0.25	-2.21	1.96	1' 11 1/2"
13	+0.45	-2.14	2.59	2' 7 1/8"

E line 11th

Y South

Y North

Y South

W line 12 grade. 2.35

11+70 Redman change from 8' to 6'
E line of 12th

Y South

Y North

N Street 8th to 16th

6

Sta	Clev	Grade	cut	
13+25	0.69	-2.07	2.76	2' 9 1/4"
+50	0.52	-2.00	2.52	2' 6 1/4"
+75	0.66	-1.92	2.58	2' 7"
14 X	0.67	-1.85	2.52	2' 6 1/4"
+18	6x6	Y Branch		
+20	1.40	-1.77	3.19	3' 2 1/2"
X +40	1.70	-1.73	3.43	3' 5 1/8"
+65	1.64	-1.65	3.29	3' 3 1/2"
+90	0.87	-1.57	2.44	2' 5 1/4"
15+15	0.71	-1.49	2.20	2' 2 3/8"
+40	0.22	-1.42	1.64	1' 7 3/4"
+65	-0.48	-1.34	0.86	0' 10 3/4"
+90	0.73	-1.26	1.99	1' 11 3/4"
16+15	1.33	-1.18	2.51	2' 6 1/4"
+40	0.87	-1.11	1.98	1' 11 3/4"
+65	0.84	-1.03	1.87	1' 10 1/2"
X +90	0.67	-0.95	1.62	1' 7 3/8"
17+15	-0.02	-0.88	0.86	0' 10 3/4"
+40	0.05	-0.80	0.45	0' 10 1/4"
+65	0.21	-0.72	0.93	0' 11 1/4"

Y South

W line 13th Grade 3.00 ✓
Drift 2.50

14+80 E of 13

Y south

Y north

Y south

near E 11th Grade 3.50 ✓
Drift 3.00

17+20
14+80

N Street 8th to 16

7

St	Elev	Grade	but		
+90	-0.03	-0.64	0.61	0 7 $\frac{3}{4}$ "	"
18+15	-0.04	-0.57	0.55	0 6 $\frac{3}{4}$ "	"
+40	0.50	-0.49	0.99	0 11 $\frac{3}{4}$ "	"
+65	0.77	-0.41	1.18	1' 2 $\frac{1}{4}$ "	"
+90	0.59	-0.33	0.9	2 0 11"	"
19+15	0.61	-0.25	0.86	0 10 $\frac{3}{4}$ "	"
+40	0.80	-0.18	0.98	0 11 $\frac{3}{4}$ "	"
+65	0.66	-1.0	0.76	0 9 $\frac{3}{4}$ "	"
+90	0.49	-0.02	0.51	0 6 $\frac{3}{4}$ "	"
20+15	0.53	0.05	0.48	0 5 $\frac{3}{4}$ "	"
+40	0.89	0.13	0.56	0 6 $\frac{3}{4}$ "	"
+65	0.43	0.21	0.22	0 2 $\frac{3}{4}$ "	"
+90	-0.30	0.28	-0.58	0 7"	"
21+15	0.11	0.36	-0.25	0 3"	"
+40	0.53	0.44	0.09	0 1 $\frac{1}{4}$ "	"
+65	0.49	0.51	-0.03	-0.1 $\frac{3}{4}$ "	"
+90	0.85	0.59	0.26	0.5 $\frac{1}{4}$ "	"
22+15	1.90	0.67	1.23	1' 2 $\frac{3}{4}$ "	"
+40	2.09	0.75	1.34	1' 4"	"
+65	2.31	1.16	1.15	1' 7 $\frac{3}{4}$ "	"

Y double

Y

Y

Y

Y

Y

Y

Y

I 15 grade 4.80 W 0.45
 Druff 4.30 C 11-05

22.70 E.L 15 est.

Line of Plugs 12.3 No 7 C of Nat 16th

N St to 16
16th Street N to M

Sta	Elev	Grade	Cont.	
22+90	2.59	1.56	1.03	1' 0 ³ / ₄ "
23+15	3.23	1.97	1.76	1' 9 ¹ / ₂ "
+40	5.11	2.37	2.74	2' 8 ³ / ₄ "
+65	6.60	2.78	3.82	3' 9 ³ / ₄ "
+90	7.60	3.19	4.41	4' 4 ³ / ₄ "
23+94	8.12	3.20	4.92	4' 11"
24+46	9.64	3.34	6.31	6' 3 ³ / ₄ "
+14.92	10.69	3.50	7.19	7' 2 ¹ / ₄ "
+25.38	10.97	3.65	7.32	7' 3 ³ / ₄ "
+36.84	10.94	3.80	7.14	7' 1 ⁵ / ₈ "
+46.30	10.25	3.95	6.30	6' 3 ³ / ₄ "
+56.76	10.02	4.11	6.92	6' 11"
+67.22	10.96	4.25	6.71	6' 8 ¹ / ₂ "
+77.68	11.41	4.41	7.00	7' 0"
+88.14	11.12	4.55	6.57	6' 6 ³ / ₄ "
+98.50	11.44	4.75	6.73	6' 8 ³ / ₄ "
15+9.06	11.90	4.85	7.05	7' 0 ⁵ / ₈ "
27+11.81	11.90	4.90		
+37	12.62	5.26	7.36	7' 4 ³ / ₈ "
+62	12.74	5.62	7.12	7' 1 ¹ / ₂ "

BC

E.B.

25+78
26
37
N

Y South

Y North

Y South

5.80
3.80
4.9
2.5

Total length of pipe 25+78
24+62 N 2 N 31- 16 N to M

25+43

6

16th St from 11 to 270

Sta	Elev.	Grade	Levt	=
25+87	12.94	5.94	6.96	6' 11 ³ / ₄ "
26+12	12.96	6.84	6.62	6' 7 ¹ / ₂ "
+ 57	13.55	6.70	6.85	6' 10 ¹ / ₄ "
+ 62	13.76	7.06	6.70	6' 8 ³ / ₈ "
+ 87	14.20	7.42	6.78	6' 9 ³ / ₈ "
27+18	14.30	7.78	6.52	6' 6 ¹ / ₄ "
+ 37	14.75	8.14	6.61	6' 7 ³ / ₈ "
+ 62	14.99	8.50	6.49	6' 5 ⁷ / ₈ "

Total length of pipe 3100

DJ M St. Grade 15.50 ✓
Drops 15.00

BRANCH 1
8th Street N to L

0	-5.76	8 th St - Stationing Changed N to L in the Later Part of the Book Curve N to S
+10.46	-5.69	
+20.92	-5.61	
+31.38	-5.54	
+41.84	-5.46	
+52.30	-5.39	
+58.90	-5.34	
+84	-5.16	
+109	-4.99	
+134	-4.79	
+159	-4.62	
+184	-4.44	
+209	-4.26	
+234	-4.08	
+259	-3.89	
+284	-3.72	
+309	-3.54	
+334	-3.36	
+359	-3.17	
+384	-3.00	
6X6 Y-3.14		

= Sta 0+18 on N Street

3+86
M St

BRANCH 1
8th St NTL

11

3 + 84 -3.00 X

4 + 09 -2.88

+ 34 -2.77

+ 59 -2.65

+ 84 -2.54

5 + 09 -2.43

+ 34 -2.31

+ 59 -2.19

+ 84 -2.08

6 + 09 -1.96

+ 34 -1.84

+ 59 -1.73

+ 84 -1.61

7 + 09 1.50 X

7 + 26 = S line of L

BRANCH 1
MST 8th to 7th

12

0	-2.72
+10.46	-2.68
+20.92	-2.65
+31.38	-2.61
+41.84	-2.58
+52.30	-2.54
+58.9	-2.52
+84.	-2.43
1+09.	-2.34
+34	-2.26
+59	-2.18
+84	-2.09
2+09	-2.006
2+11	-2.00
+21.46	-1.95
+31.92	-1.91
+42.38	-1.87
+52.84	-1.82
+63.30	-1.78
+73.76	-1.74

Curve 8th to 7th M

MST

Curve

= 4 + 23 on Branch 1

BRANCH 1'

2+84.22	-1.70
7 94.68	-1.65
3+5.14	-1.61
+15.60	-1.57
+26.06	-1.53
+28.81	-1.52
+54	-1.42
+79	-1.31
4+104	-1.21
+29	-1.11
+54	-1.01
4 +79	-0.90
5+04	-0.80
+29	-0.70
" +54	-0.60
+79	-0.50
+94 =	S. line L. Street

Curve from 10 to 7th

+32

BRANCH 2
9TH Street

Sta	Elev	Grade	
0	1.03	-4.80	5.835' 10
+1046	1.60	-4.68	6.286' 3 ³ / ₈
+2092	2.27	-4.55	6.826' 9 ⁷ / ₈
+3138	2.70	-4.43	7.137' 1 ⁷ / ₈
+4184	2.85	-4.31	7.167' 2
+5230	2.89	-4.19	7.087' 1
+5889	3.00	-4.11	7.117' 1 ³ / ₈
+84	3.20	-3.82	7.027' 6 ¹ / ₄
+109	3.52	-3.53	7.057' 0 ³ / ₈
+34	3.66	-3.23	6.896' 10 ³ / ₄
+59	3.32	-2.94	6.266' 3 ¹ / ₂
+84	2.91	-2.65	5.565' 6 ³ / ₄
+209	4.27	-2.35	6.626' 7 ¹ / ₂
+34	4.35	-2.06	6.416' 4 ⁷ / ₈
+59	4.44	-1.77	6.216' 2 ¹ / ₂
+84	4.55	-1.48	6.036' 0 ³ / ₈
+3409	4.81	-1.18	5.995' 11 ⁷ / ₈
+34	5.02	-0.89	5.915' 10 ⁷ / ₈
+59	5.47	-0.60	6.076' 0 ⁷ / ₈
+84	5.63	-0.31	5.945' 11 ¹ / ₄
			3+86
			MSE

0746 ✓
+71
+96
+21
+46
+71
+96
2+21
+46
+71
+96
3+21
+46
4+26
+51
+76
5+01

b.I.M.H.
m.H.
N.L.M.

Grade 5.30 ✓
Drops 4.80

BRANCH 2
9TH STREET

4+09	6.04	-0.01	6.05	6'0 ⁷ / ₈
+34	6.60	+0.28	6.32	6'3 ⁷ / ₈
+59	6.82	0.57	6.25	6'3
+84	7.08	-0.86	6.22	6'2 ⁵ / ₈
5+09	7.37	1.15	6.22	6'2 ⁵ / ₈
+34	7.75	1.45	6.30	6'3 ⁷ / ₈
+59	8.15	1.74	6.41	6'4 ⁷ / ₈
+84	8.50	2.03	6.47	6'5 ⁷ / ₈
6+09	9.00	2.32	6.68	6'8 ⁷ / ₈
+34	9.38	2.62	6.76	6'9 ⁷ / ₈
+59	9.78	2.91	6.87	6'10 ¹ / ₂
+84	9.99	3.20	6.79	6'9 ¹ / ₂
7+09	10.38	3.50	6.88	6'10 ⁵ / ₈
+34	10.74			

Total length of pipe 7+14

5+26	Y
+51	
+76	
6+01	
+26	
+51	
+76	
7+01	

Flurry 2¹/₂ ft. Ker grade 11.00 ✓
7+26 d.L.L. set. 10.50

BRANCH 3

10TH STREET

Sta	Elev	Grade	cut	inches
0	3.95	-4.00	7.39	7' 4 ³ / ₄ "
+1046	3.50	-3.85	7.35	7' 4 ¹ / ₄ "
+2092	2.54	-3.70	7.24	7' 2 ⁷ / ₈ "
+3138	3.75	-3.56	7.31	7' 3 ³ / ₄ "
+4184	3.94	-3.41	7.45	7' 5 ³ / ₄ "
+5230	3.96	-3.26	7.22	7' 2 ⁵ / ₈ "
+58.90	3.96	-3.17	7.13	7' 1 ⁵ / ₈ "
+84	4.17	-2.82	6.99	6' 11 ⁷ / ₈ "
1+09	4.18	-2.46	6.64	6' 7 ⁷ / ₈ "
+34	4.17	-2.11	6.28	6' 3 ³ / ₄ "
+59	4.36	-1.76	6.12	6' 1 ¹ / ₂ "
+84	4.63	-1.41	6.04	6' 0 ¹ / ₂ "
2+09	5.08	-1.05	6.19	6' 1 ⁷ / ₂ "
+34	5.35	-0.70	6.05	6' 0 ⁵ / ₈ "
+59	5.39	-0.35	5.74	5' 9 ¹ / ₄ "
+84	5.81	-0.00	5.81	5' 9 ³ / ₄ "
3+09	5.95	+0.36	5.59	5' 7 ¹ / ₄ "
+34	6.48	0.71	5.77	5' 9 ¹ / ₄ "
+59	6.87	1.06	5.41	5' 9 ³ / ₄ "
+84	7.30	1.42	5.44	5' 10 ³ / ₈ "

0+46 N2N

S.L.M.

3+86
M.S.T.

10th STREET N 202

Sta	Elv	Grade	cm		
4+09	7.59	1.77	5.82	5' 9 1/8	
+34	7.93	2.12	5.81	5' 9 3/4	
+59	8.47	2.47	6.00	6' 00	101.100
+84	8.93	2.83	6.10	6' 1 1/4	
5+09	9.40	3.18	6.22	6' 2 5/8	101.100
+34	9.64	3.53	6.11	6' 1 3/8	
+59	10.09	3.88	6.15	6' 1 3/4	
+84	10.38	4.24	6.14	6' 1 5/8	
6+09	11.03	4.59	6.44	6' 5 1/4	
+34	11.42	4.94	6.48	6' 5 1/4	
+59	11.95	5.29	6.66	6' 8	
+84	12.37	5.65	6.92	6' 9 1/8	
7+09	12.65	6.00	6.65	6' 7 1/8	
+26 = South line S Street					
Total length of pipe 7+14					

4+26 N.I.M.

Lush tank grade 12.80 ✓
 7+26 south I. I. 12.30

BRANCH 9

11th Street

18

0	5.83	-3.20	9.03	9' 0 ³ / ₄
+10.46	6.35	-2.99	9.34	9' 1 ¹ / ₄
+20.92	6.50	-2.77	9.27	9' 3 ¹ / ₄
+31.38	6.49	-2.56	9.05	9' 0 ⁵ / ₄
+41.84	6.79	-2.35	9.14	9' 1 ⁵ / ₄
+52.30	6.80	-2.14	8.94	8' 1 ¹ / ₄
+58.90	6.81	-2.00	8.61	8' 7 ³ / ₄
+84	6.63	-1.86	8.59	8' 7 ¹ / ₄
+109	6.90	-1.71	8.61	8' 7 ³ / ₄
+34	6.99	-1.57	8.56	8' 6 ³ / ₄
+59	6.73	-1.43	8.16	8' 1 ¹ / ₄
+84	6.62	-1.28	7.90	7' 10 ³ / ₄
+209	6.47	-1.14	7.61	7' 7 ³ / ₄
+34	6.25	-1.00	7.25	7' 3
+59	5.99	-0.86	6.85	6' 10 ¹ / ₄
+84	5.67	-0.71	6.38	6' 4 ⁵ / ₄
+309	5.41	-0.57	5.98	5' 11 ³ / ₄
+34	5.39	-0.43	5.82	5' 9 ¹ / ₄
+59	5.48	-0.29	5.77	5' 9 ¹ / ₄
+84	5.56	-0.14	5.70	5' 8 ³ / ₄

0+46 N2N

0.07100

S.I.M 3+216

3+86
MISE

11th Street

4+09	5.73	0.00	5.73	5' 8 ³ / ₄	x
+34	5.94	0.54	5.36	5' 4 ³ / ₄	
+59	6.22	1.16	5.06	5' 0 ³ / ₄	
+84	6.73	1.75	4.98	4' 11 ³ / ₄	
5+09	7.51	2.33	5.18	5' 2 ¹ / ₄	
+34	8.13	2.92	5.21	5' 2 ¹ / ₂	
+59	9.83	3.51	6.33	6' 4	
+84	10.71	4.08	6.63	6' 7 ⁵ / ₈	
6+09	10.20	4.66	5.54	5' 6 ¹ / ₂	
+34	11.34	5.25	6.09	6' 1 ¹ / ₈	
+59	11.75	5.83	5.92	5' 11	
+84	12.50	6.41	6.39	6' 1 ³ / ₄	
7+09	13.44	7.00	6.44	6' 3 ³ / ₄	x

+26 S. line L Street

Total length of pipe 71' 14"

NZAL W+2P

Grate 13.80 ✓
 Flush Joint Grade 13.30
 71' 2 1/4"

BRANCH 5

12th Street

0	1.24	-2.40	3.64	3' 7 ⁵ / ₈
+10.46	1.35	-2.34	3.69	3' 8 ¹ / ₄
+20.92	1.45	-2.28	3.76	3' 9 ¹ / ₈
+31.38	1.69	-2.23	3.92	3' 11
+41.84	1.86	-2.17	4.03	4' 0 ³ / ₈
+52.30	1.82	-2.11	3.93	3' 11 ³ / ₈
+58.90	1.76	-2.07	3.83	3' 10"
+84	1.97	-1.94	3.91	3' 10 ⁷ / ₈
1+09	2.25	-1.80	4.05	4' 1 ¹ / ₈
+34	2.16	-1.66	3.82	3' 9 ⁷ / ₈
+59	2.43	-1.52	3.95	3' 11 ³ / ₄
+84	2.56	-1.39	3.95	3' 11 ³ / ₈
2+09	2.12	-1.25	4.37	4' 4 ¹ / ₂
+34	3.24	-1.11	4.35	4' 4 ¹ / ₄
+59	3.27	-0.97	4.24	4' 2 ⁷ / ₈
+84	3.70	-0.84	4.54	4' 6 ¹ / ₂
3+09	4.04	-0.70	4.74	4' 8 ¹ / ₈
+34	4.05	-0.56	4.61	4' 7 ³ / ₈
+59	4.09	-0.42	4.51	4' 6 ³ / ₈
+84	4.20	-0.29	4.49	4' 5 ⁷ / ₈ 3+86

20

+46 M.L.N

P.T.

3+2.6 S.Z.M

M.S.

12th Street

4+09	4.160	-0.15	4.75	4'9"
+34	4.76	-0.01	4.77	4'9 1/4"
+59	5.16	+0.13	5.03	5'0 3/8"
+84	5.141	0.26 ³	5.15	5'1 3/4"
5+09	5.50	0.40	5.10	5'1 1/4"
+34	6.16	0.54	5.62	5'7 1/2"
+59	6.35	0.68	5.67	5'8"
+84	6.53	0.81	5.72	5'8 3/4"
6+09	7.08	0.95	6.13	6'1 1/2"
+34	7.41	1.09	6.32	6'2 1/8"
+59	7.67	1.23	6.45	6'5 1/4"
+84	8.02	1.36	6.66	6'7 1/8"
7+09	8.21	1.50	6.71	6'8 1/2"
+26	= St. Louis To Street			

0.55 100

4+26 N.I.M.

Finish Tank Grade 8.20 ✓
 Sit. 7.70

BRANCH 6

13th Street

0	-1.55
+10.46	-1.51
+20.92	-1.47
+37.38	-1.44
+41.84	-1.40
+52.30	-1.36
+58.90	-1.34
+84	-1.25
1+09	-1.16
+34	-1.07
+59	-0.98
+84	-0.89
2+09	-0.80
+34	-0.71
+59	-0.62
+84	-0.53
3+09	-0.44
+34	-0.35
+59	-0.26
+84	-0.17

3 86
 40
 3.46
 1
 2.46

3+86
 MISE

13th Street

23

4+09	-0.08
+34	+0.01
+59	+0.10
+84	0.19
5+09	0.28
+34	0.37
+59	0.46
+84	0.55
6+09	0.64
+34	0.73
+59	0.82
+84	0.91
7+09	1.00
+26	S ^r line L Street

Finish Tank Grade 6.00

BRANCH 7

14th Street

Sta	Elev	Grade	cut.	
0	0.27	-0.70	0.97	0' 11 ⁵ / ₈
+1046	0.22	-0.65	0.87	0' 10 ¹ / ₂
+2092	0.17	-0.61	0.78	0' 9 ³ / ₄
+3138	0.39	-0.56	0.94	0' 11 ¹ / ₄
+4184	0.57	-0.51	1.02	1' 0 ¹ / ₄
+5230	0.73	-0.47	1.20	1' 2 ³ / ₄
+5890	0.96	-0.43	1.39	1' 4 ³ / ₄
+84	1.69	-0.32	1.91	1' 10 ⁷ / ₈
1+09	1.79	-0.21	2.00	2' 0
+34	2.00	-0.09	2.39	2' 4 ³ / ₄
+59	2.79	0.02	2.77	2' 9 ¹ / ₄
+84	3.34	0.13	3.21	3' 2 ¹ / ₂
2+09	3.74	0.24	3.50	3' 6"
+34	3.67	0.35	3.32	3' 3 ⁷ / ₈
+59	4.17	0.47	3.70	3' 8 ³ / ₄
+84	4.21	0.58	3.63	3' 7 ⁵ / ₈
3+09	4.34	0.69	3.65	3' 7 ³ / ₄
+34	4.55	0.81	3.74	3' 8 ⁷ / ₈
+59	4.62	0.91	3.61	3' 7 ³ / ₈
+84	4.66	1.03	3.63	3' 7 ⁵ / ₈

0+116

11' 5 1/2
0.21

L.M. 3.46

3+86
M.S+

14th Street

Sta	Elev	Grade	cut.
-----	------	-------	------

4+09	5.14	1.14	4.07 4'00"
------	------	------	------------

+34	5.83	1.26	4.57 4'6 1/2"
-----	------	------	---------------

+59		1.37	Total length
-----	--	------	--------------

+84		1.48	
-----	--	------	--

5+09		1.59	
------	--	------	--

+34		1.71	
-----	--	------	--

+59		1.82	
-----	--	------	--

+84		1.93	
-----	--	------	--

6+09		2.05	
------	--	------	--

+34		2.16	
-----	--	------	--

+59		2.27	
-----	--	------	--

+84		2.38	
-----	--	------	--

7+09		2.50	
------	--	------	--

+26	S Line T. S.T.		
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N.I.M. 4.26
of pipe 4+39

0.01
11.547 1/2

Flush Tank Grade 9.50

BRANCH 8

15th Street

No	Elev	Grade	cur	
0	0.54	0.80	-0.26	-0.3 ^{1/2}
+10.46	0.42	.86	-0.44	-0.5 ^{1/4}
+20.92	0.45	.93	-0.48	-0.5 ^{3/4}
+31.38	0.61	.99	-0.38	-0.4 ^{5/8}
+41.84	0.57	1.06	-0.49	-0.5 ^{7/8}
+52.30	0.74	1.12	-0.38	-0.4 ^{3/4}
+58.90	0.91	1.16	-0.25	-0.3
+84	1.27	1.31	-0.04	-0.0 ^{1/2}
+109	1.45	1.47	-0.02	-0.0 ^{1/4}
+34	2.42	1.62	+0.40	+0.4 ^{5/8}
+59	2.37	1.77	+0.60	0.7 ^{1/4}
+84	2.47	1.93	0.54	0.6 ^{1/2}
2+09	2.66	2.08	0.58	0.7 ⁵
+34	2.94	2.23	0.71	0.4 ^{1/2}
+59	3.00	2.39	0.61	0.7 ^{1/2}
+84	3.14	2.54	0.60	0.7 ^{3/4}
3+09	3.21	2.69	0.42	0.5 ⁵
+34	4.02	2.85	1.17	1.2
+59	3.99	3.00	0.91	0.10 ^{7/8}
+84	4.59	3.39	1.20	1.1 ^{3/8}

0.6125
100

0.416 N. 3.5 N.

Sym 3+46

MST

15th Street

27

4+09	4.92	3.79	1.13	1' 15/8"
+34	5.34	4.18	1.16	1' 17/8"
+59	5.65	4.57	1.08	1' 1"
+84	6.07	4.96	1.11	1' 13/8"
5+09	6.23	5.36	0.87	0' 10 1/2"
+34	7.17	5.75	1.42	1' 5"
+59	7.58	6.14	1.44	1' 5 1/4"
+84	8.33	6.54	1.79	1' 9 1/2"
6+09	8.63	6.93	1.70	1' 8 3/4"
+34	9.37	7.32	2.05	2' 0 5/8"
+59	9.61	7.71	1.90	1' 10 3/4"
+84	10.84	8.11	2.73	2' 8 3/4"
7+09	12.47	8.50	3.97	3' 11 5/8"
Total length of pipe				7+14

11.20.11

NLN H+26

A to 6+59

Flush tank Grade 13.30

7+26

247

9th St N of N
Sta Elev Grad cut-

0	-3.27	-5.70	2.43	2' 5/8	
+20	-2.05	-5.57	3.52	3' 6 1/4	
+41	-3.71	-5.43	1.72	1' 8 5/8	
+60	-3.19	-5.30	2.11	2' 1 3/4	x
+85	-10.50	-4.99	5.79	5' 9 1/2	
+110	0.82	-4.69	5.40	5' 4 3/4	x
+35	-0.93	-3.50	4.43	4' 5 1/4	x
+60	0.62	-3.25	3.47	3' 10 1/2	
+85	-0.67	-3.00	3.67	3' 8	
2+10	1.13	-2.76	3.89	3' 10 5/8	
+35	1.49	-2.51	4.00	4' 0	
+60	1.75	-2.26	4.01	4' 0 1/4	
+85	2.16	-2.01	4.17	4' 2	
3+10	2.83	-1.77	4.60	4' 7 1/4	
+35	3.66	-1.52	5.18	5' 2	
+60	3.83	-1.27	5.10	5' 1 1/4	
+80	3.23	-1.07	4.30	4' 3 5/8	
4	3.66	-0.87	4.53	4' 6 3/8	
+20	3.97	-0.67	4.64	4' 7 3/4	
+40	3.69	-0.48	4.17	4' 2	

N L N St

Just 4.00 ✓
J M. ST. Grade 4.50
3+78 6" X for M St - West -
M ST

N L M ST

8th St N + N

Sta	Elev	bread	cm-	
4+65	4.23	-0.23	4.46	4' 5 1/2
+90	5.25	+0.02	5.23	5' 2 3/4
5+15	5.48	+0.27	5.21	5' 2 1/2
+40	5.56	+0.52	5.04	5' 0 1/2
+65	6.00	0.76	5.24	5' 2 3/4
+90	6.61	1.01	5.60	5' 7 1/4
6+15	6.75	1.26	5.49	5' 5 7/8
+40	6.83	1.61	5.32	5' 3 3/4
+65	6.96	1.75	5.21	5' 2 1/2
+90	7.37	2.00	5.37	5' 4 3/4
7+15	7.69	2.25	5.44	5' 5 1/4
+40	8.05	2.50	5.55	5' 6 3/4
+60	8.16	2.65	5.48	5' 5 3/4
+80	7.99	2.85	5.14	5' 1 5/8
8	8.65	3.03	5.62	5' 7 5/8
+20	8.94	3.20	5.74	5' 8 7/8

N.I. L M - Flush Tank
 L M -
 N.I. L M

The image shows an open notebook with two pages. The pages are cream-colored and feature a grid of light blue horizontal lines. The left page has a vertical red margin line on the left side and a horizontal red line near the top. The right page has a horizontal red line near the top. The number '30' is printed in the top right corner of the right page. The notebook is placed on a white surface against a dark background.

13th M-N 6 N

Sta	Elev	Grade	em-
0	2.69	-1.20	3.89 3' 10 ³ / ₄
+10	1.75	-1.17	2.92 2' 11
+20	1.98	-1.13	3.11 3' 1 ³ / ₈
+30	1.89	-1.10	2.99 2' 11 ⁷ / ₈
+40	0.57	-1.06	1.63 1' 7 ⁷ / ₈
+50	0.35	-1.03	1.38 1' 4 ⁵ / ₈
+56	0.47	-1.10	1.47 1' 5 ⁵ / ₈
+68	0.59	-0.96	1.55 1' 6 ⁷ / ₈
+93	0.40	-0.87	1.27 1' 3 ¹ / ₄
+118	-0.42	-0.79	-0.37 -0' 4 ¹ / ₂ ⁵ / ₈ ₁₀
+43	0.48	-0.70	1.18 1' 2 ¹ / ₂
+68	0.06	-0.61	0.67 0' 8
+93	0.43	-0.52	0.95 0' 11 ³ / ₄
+118	0.52	-0.44	0.96 0' 11 ¹ / ₂
+43	0.89	-0.35	1.24 1' 2 ⁷ / ₈
+68	1.94	-0.26	2.20 2' 2 ³ / ₈
+93	2.44	-0.17	2.61 2' 7 ³ / ₈
+118	0.89	-0.08	0.97 0' 11 ¹ / ₂
+43	0.75	+0.00	0.75 0' 9
+68	0.80	0.07	0.73 0' 8 ³ / ₄

= V 22' West of center of 13th 4 N

+118 N 2 N.

P.T.

S L. M ST. Grade 3.60 ✓
 Insp. 3.00

13th St-N to L

Sta	Elev	Grade	em-
3+83	0.69	0.14	0.55 0' 6 ⁵ / ₈
4+03	0.67	0.21	0.46 0' 5 ¹ / ₂
+23	0.44	0.28	0.16 0' 2
+48	0.41	0.37	0.04 0' 0 ¹ / ₂
+73	0.89	0.46	0.43 0' 5 ¹ / ₈
+98	0.99	0.55	0.44 0' 5 ¹ / ₄
5+28	1.48	0.63	0.85 0' 10 ³ / ₈
+48	2.15	0.72	1.43 1' 5 ¹ / ₈
+73	2.38	0.81	1.57 1' 6 ³ / ₈
+98	2.54	0.90	1.64 1' 7 ³ / ₄
6+23	2.86	0.99	1.87 1' 10 ¹ / ₄
+48	3.04	1.07	1.97 1' 11 ¹ / ₈
+73	3.32	1.16	2.16 2' 2 ¹ / ₄
+98	3.55	1.25	2.30 2' 3 ¹ / ₈
7+23	3.91	+1.33	2.58 2' 7'
Total length of pipe 7+28			

NL M S1-

L L L St - Jelnish Tank. 6.00 ✓

13th St Box

No	Elev R/s	Elev Below Plug	M.S.	+	
3+18	-0.08	-0.39	5.45	5.84	✓
+43	+0.00	-0.31	5.45	5.76	✓
+63	+0.07	-0.24	5.45	5.69	✓
+83	0.14	-0.17	5.45	5.62	✓
4+03	0.21	-0.10	5.45	5.55	✓
+23	0.28	-0.03	5.45	5.48	✓
+48	0.37	+0.06	5.20	5.14	✓
+73	0.46	+0.15	5.20	5.05	✓
+98	0.55	+0.24	5.20	4.96	✓
6+23	0.63	+0.32	5.20	4.88	✓
+4.8	0.72	+0.41	5.20	4.79	✓
			M.S.	+	
1+18	-0.79	-1.10	5.40	6.50	✓
+43	-0.70	-1.01	5.40	6.41	✓
+68	-0.61	-0.92	5.40	6.32	✓
+78	-0.54	-0.89	5.40	6.29	✓

S L M S 5.29

M S

N L M S

57.41

	0+65	✓		
N	END WIRE FENCE			
	0+65.4			
N-0.4	Ely Con. apron	4.4N	52.99	✓
	0+75			
N-6	E Sm. gar. Cem. fl.	4.33	53.08	✓
N-0.4	apron	4.4N	52.99	
C		4.1	53.3	
S		3.9	53.5	
	0+81			
N-0.1	wly com. apron	4.39	53.07	✓
N	Beq. wire fence	✓		
	0+92			
N	END WIRE FENCE	✓		
	0+97			
-50		2.3	55.1	
S		4.0	53.4	
C		4.3	53.0	
N		4.4	53.2	
+5.5	Ely Con apron	4.44	52.97	✓
+9	" do. gar.	4.34	52.07	✓

52.97 ✓

53.07 ✓

Cem. fl.

57.41

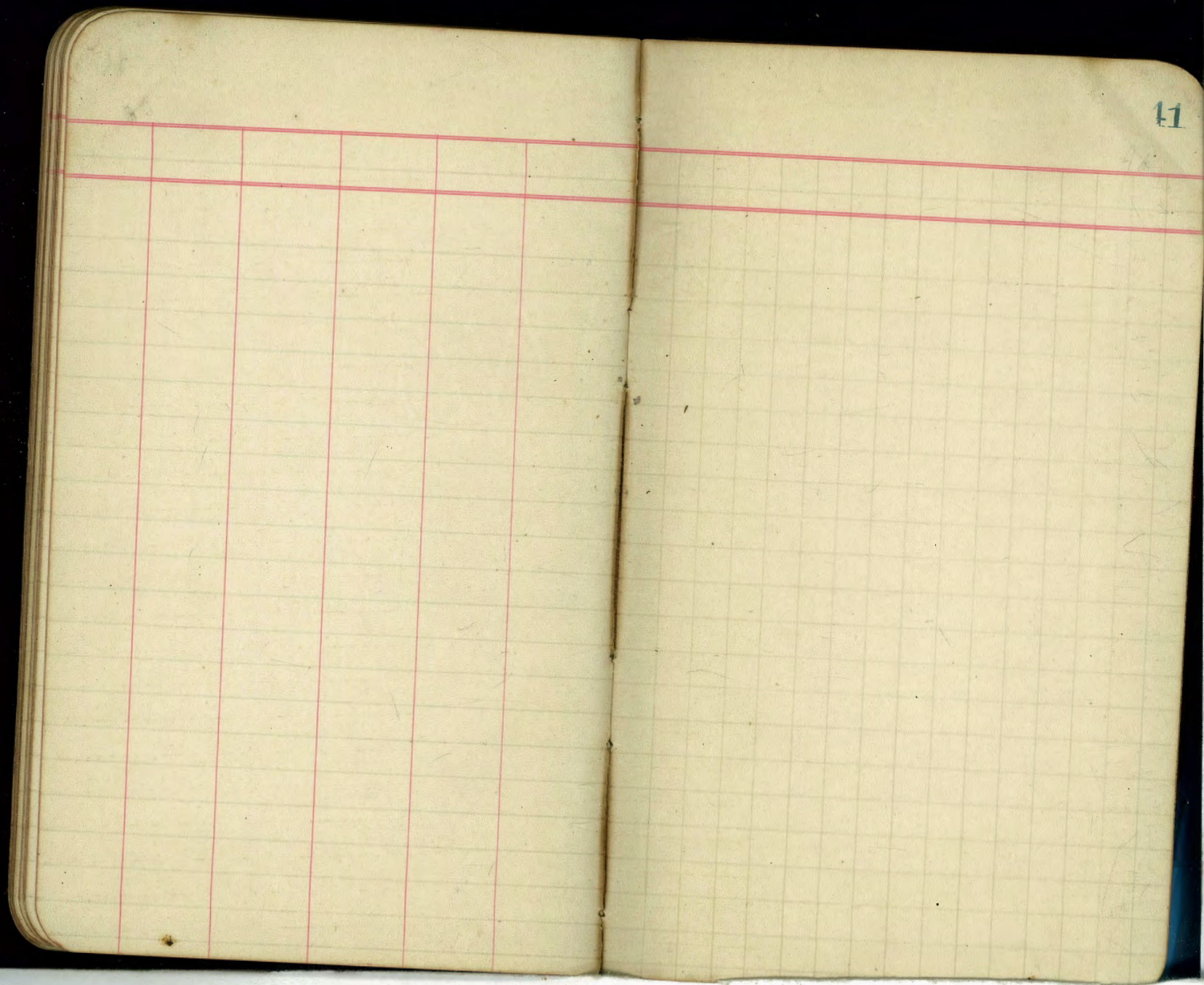
1717

N-9.3	wly do. gar.	4.30	53.11	✓	Cem. fl.
N-5.7	" " Con. apron	4.41	53.0	✓	
	1+10				
N-5.7	E S' Cem. vnk.	4.4N	52.99	✓	
	1+33				
S-14.5	I do. gar.	3.4	54.0	✓	dirt fl.
	1+58				
-50		7.5	49.9		
N		4.5	52.9		
C		4.4	53.0		
S		4.1	53.3		
+15.1	Ely 3 ^{cor gar.} Con. fl.	3.44	53.99	✓	
	1+81				
S-15.1	wly ^{about} gar.	3.4N	53.99	✓	
T.P.	0.46	52.65	50.1	52.39	✓
	0+00				
-50		+1.6	54.3		
S		+0.1	52.9		

	52.65		
C	0.2	52.5	
N	0.2	52.5	
+50	3.4	49.3	
2+63			
- wd. 9 do. 900	3.4	49.5	dirt ✓
N	2.2	50.5	
C	1.8	50.9	
S	1.4	51.3	
+50	0.0	52.7	
2+75			
S + 0.5 P.P. ✓			
2+80			
S - 0.5 Beg. Cypress trees ✓			
2+94			
S + 10 Dead man Bay ✓			
2+97			
S - 2.6 Beg. Hawth fence ✓			
3+00			
-50	1.0	51.7	
S	3.0	49.7	
C	3.6	49.1	

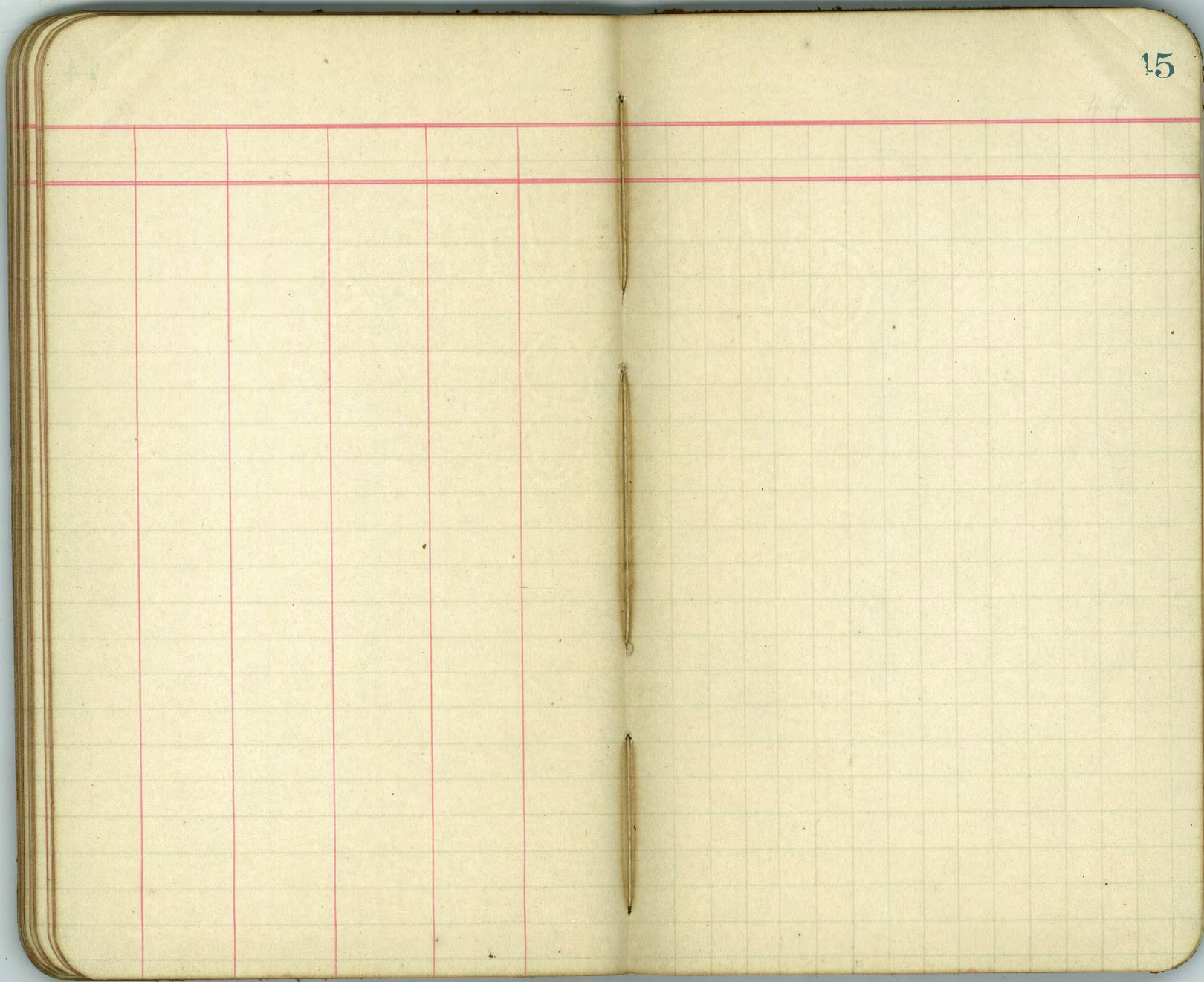
	52.65		
N	3.7	49.0	
+50	8.6	44.1	
3+41.3			
-50	12.0	40.7	
N	6.8	45.9	
C	6.4	46.3	
S	5.7	47.0	
+57 Sim. 900	4.95	47.70	Wood floor
T.P. 007	44.55	817	44.48
3+33			End Cypress on back of S.H.
3+70			
-50	4.0	46.6	
S	0.7	43.9	
C	1.0	43.6	
N	1.6	43.0	
+50	7.1	37.5	

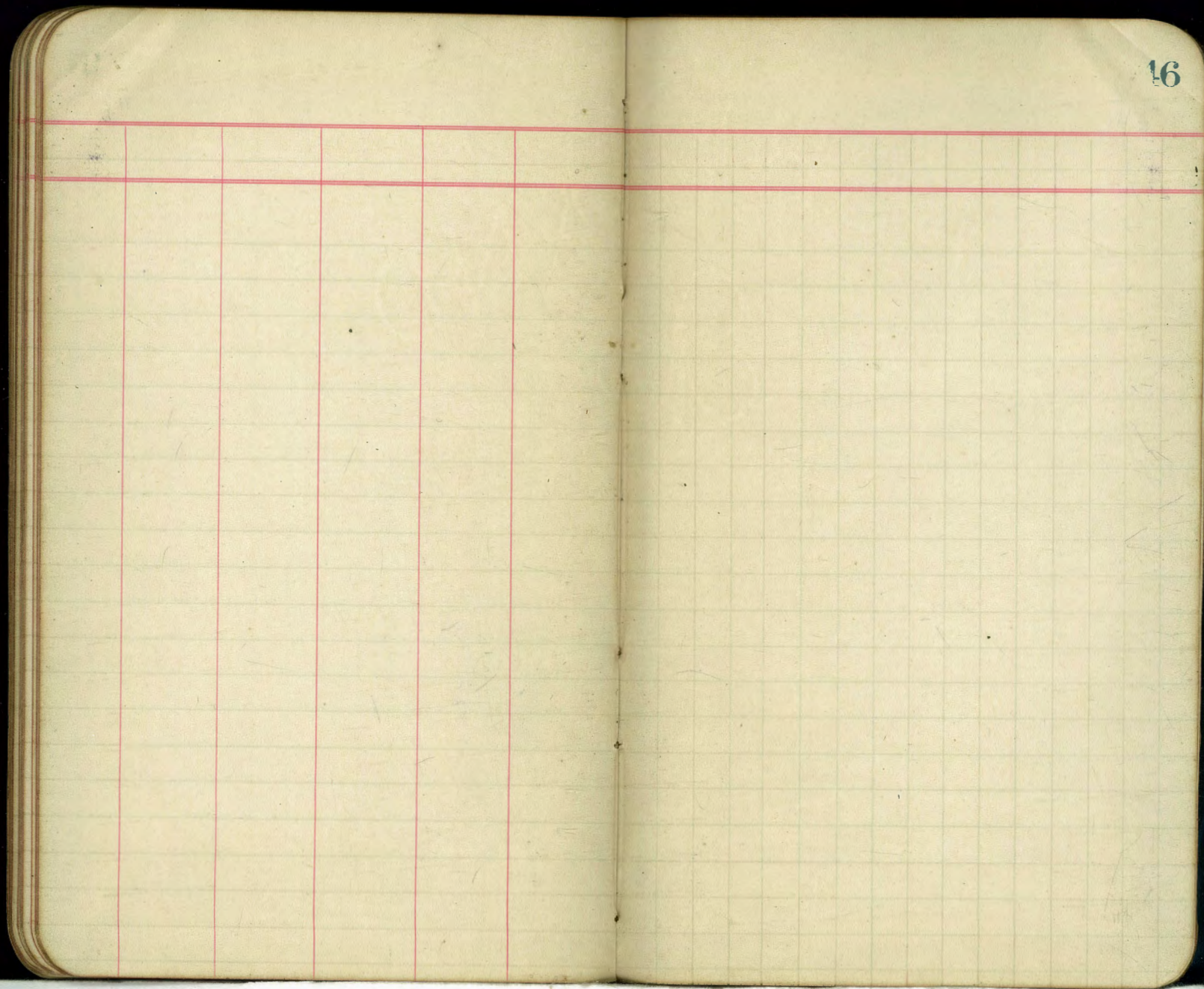
		44.55			37.91	
4400					4787	
-50			10.5	34.1	-20	1.6 31.3
N			5.5	39.1	S	3.8 29.1
C			5.1	39.5	C	7.2 25.7
S			4.2	40.5	N	7.8 25.1
+50			1.6	43.0	+2	5.8 27.1
4440					4788	
-50			5.3	39.3	-10	11.9 21.0
S			9.5	35.1	-3	8.3 23.6
C			10.3	34.3	N	8.3 23.6
N			10.9	33.7	C	7.6 25.3
+44			15.3	29.3	S	7.9 25.0
T.P.	0.27	37.91	11.91	37.64	+14.5	do. gar. 28' wide 9.0 23.9 floor under CONST.
4463					4794.7	
-20			5.7	28.2	S	10.3 22.6
N			3.0	29.9	C	10.1 22.8
C			2.0	30.9	N	10.7 22.2
S			1.2	31.7	5+03.20	
+30			+2.1	35.0	C	11.0 21.9
					S on sh. Blvd.	10.7 22.2
					check to nail pole on 43	10.47 22.44

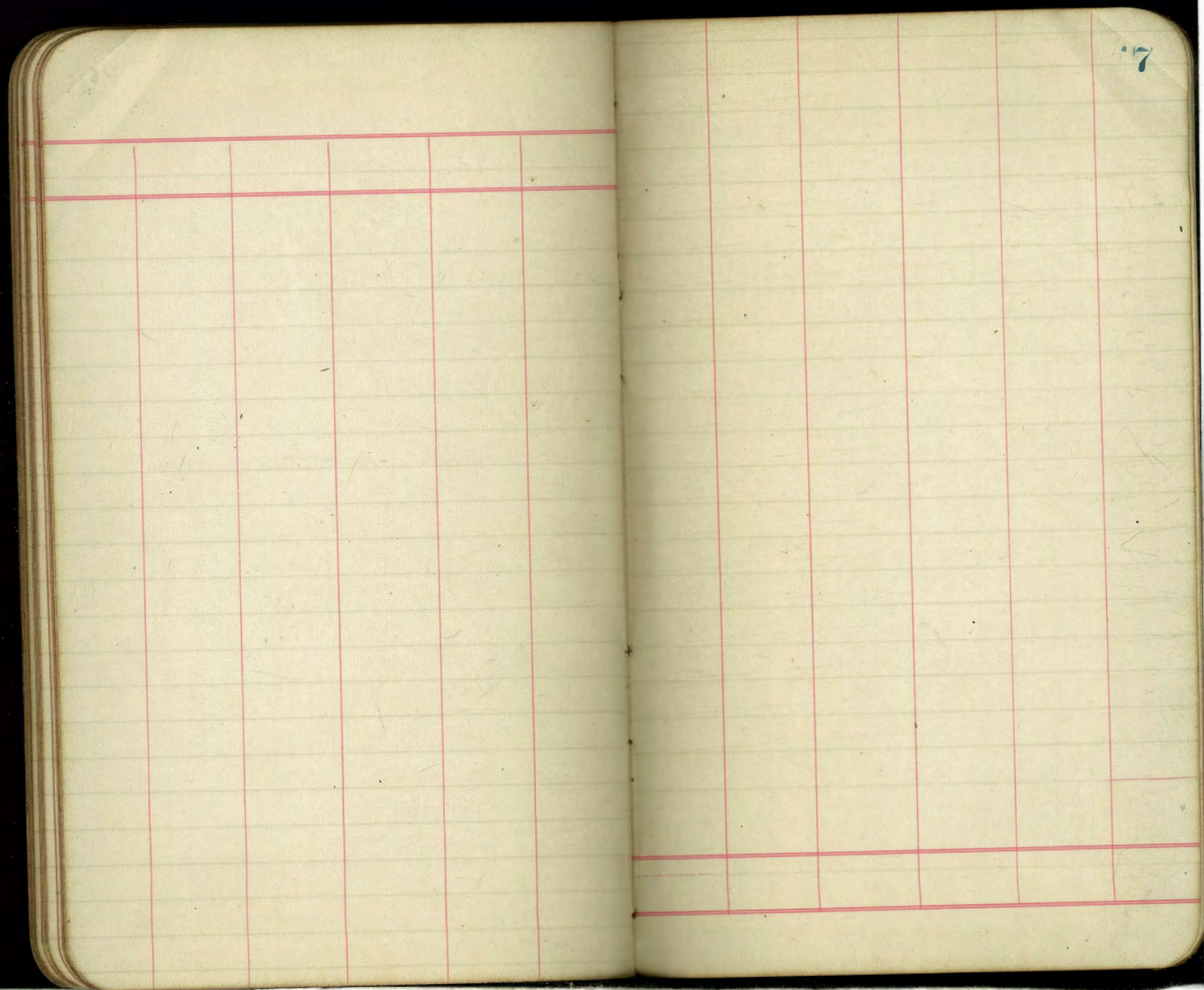


11

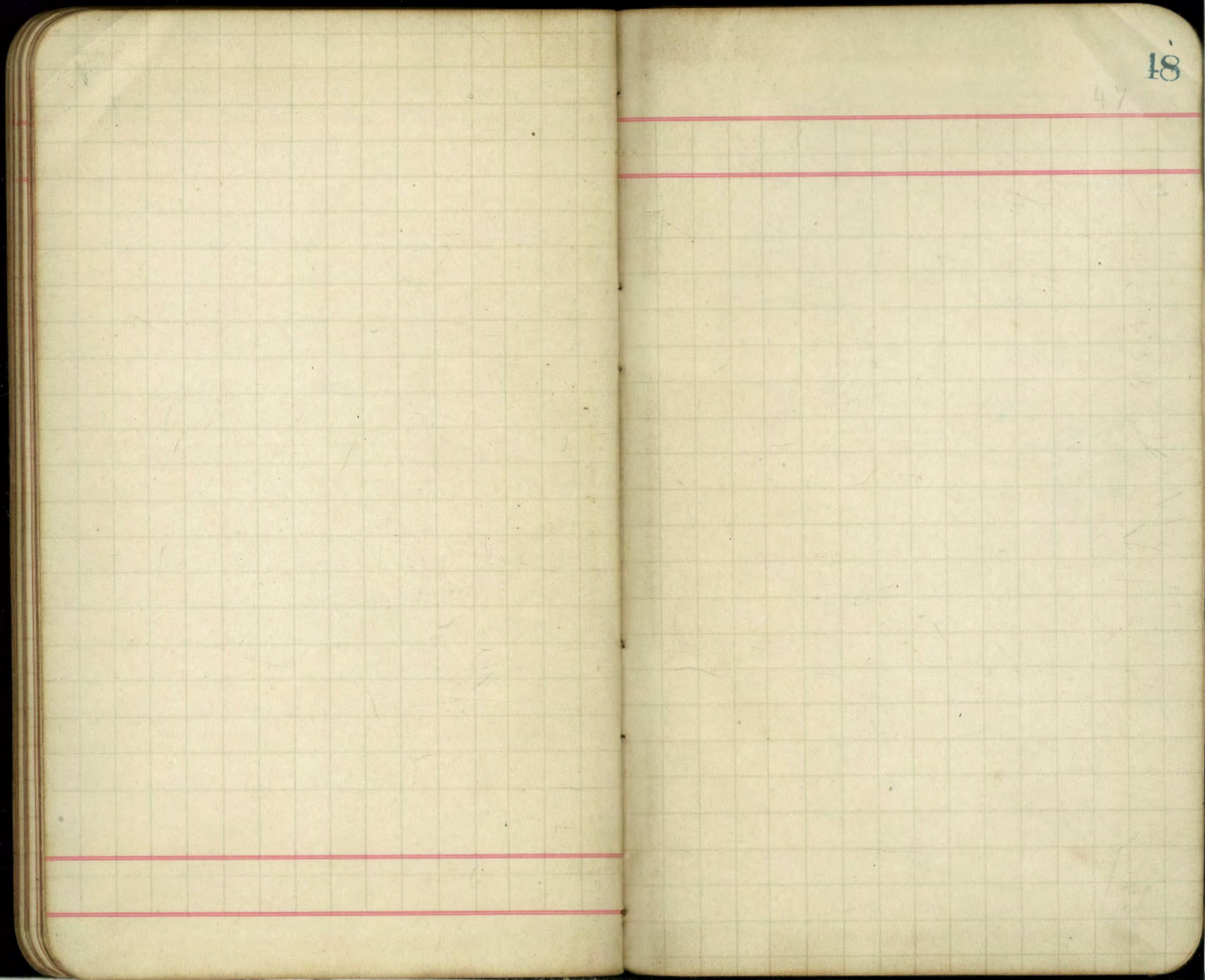
42







7



18

10.46

76

6276

7332

795.96

773.64

10.46

329

10.46

79

9414

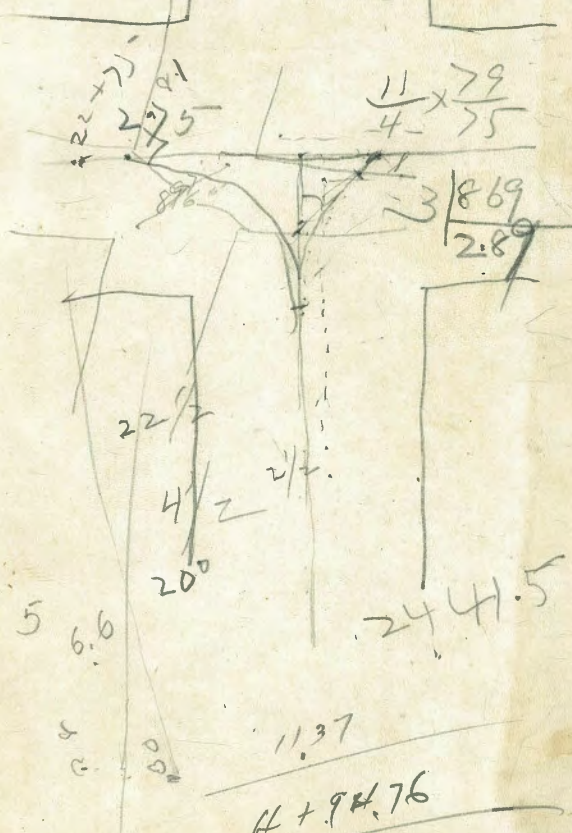
7322

83 | 82634

27545

4

11.0180



5 6.6

22 1/2

4 1/2

200

11.37

4 + 94.76

854

2441.5

3 | 869

2.89

11 x 79

4 - 75

22 + 27

27 1/2

8 000

Handwritten notes and calculations on the left page of the notebook. The notes include:

- 4.16
- 2
- 440
- 45.5
- 3
- 2996
- 36709
- 236
- 160
- 76
- 43
- 22015
- 240
- 24415
- 39
- 2402
- 35
- 126
- 14200
- 32600
- 346
- 2240
- 2431
- 2443
- 390
- 127
- 38
- 127
- 62
- 95
- 36
- 78
- 89
- 71
- 62
- 36
- 16
- 32
- 58
- 5
- 58

6.22
31
4125
06
23
6
31

TRAVERSE TABLE FOR TRANSIT BOOK,
From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		¼ DEGREE.		¼ DEGREE.		¼ 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	84
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	83
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	82
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	81
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	80
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	79
6	99.46	10.45	99.41	10.89	99.36	11.32	99.31	11.75	78
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	77
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	76
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	75
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	74
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	73
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	72
13	97.44	22.90	97.34	22.92	97.24	23.34	97.13	23.77	71
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	70
15	96.59	25.88	96.48	25.80	96.36	26.72	96.25	27.14	69
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	68
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	67
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	66
19	94.55	32.55	94.41	32.97	94.26	33.38	94.12	33.79	65
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	64
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	63
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	62
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	61
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	60
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	59
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	58
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	57
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	56
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	55
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.18	54
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	53
32	84.80	52.99	84.57	53.86	84.34	53.73	84.10	54.10	52
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	51
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	50
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	49
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	48
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	47
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	46
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	45
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	44
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	43
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	42
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	41
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	40
45	70.71	70.71							39

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