

2.

City Park  
Survey.

2

F.B. 622

622

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

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	46½	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

*City Engineer's Office.*

*Green*

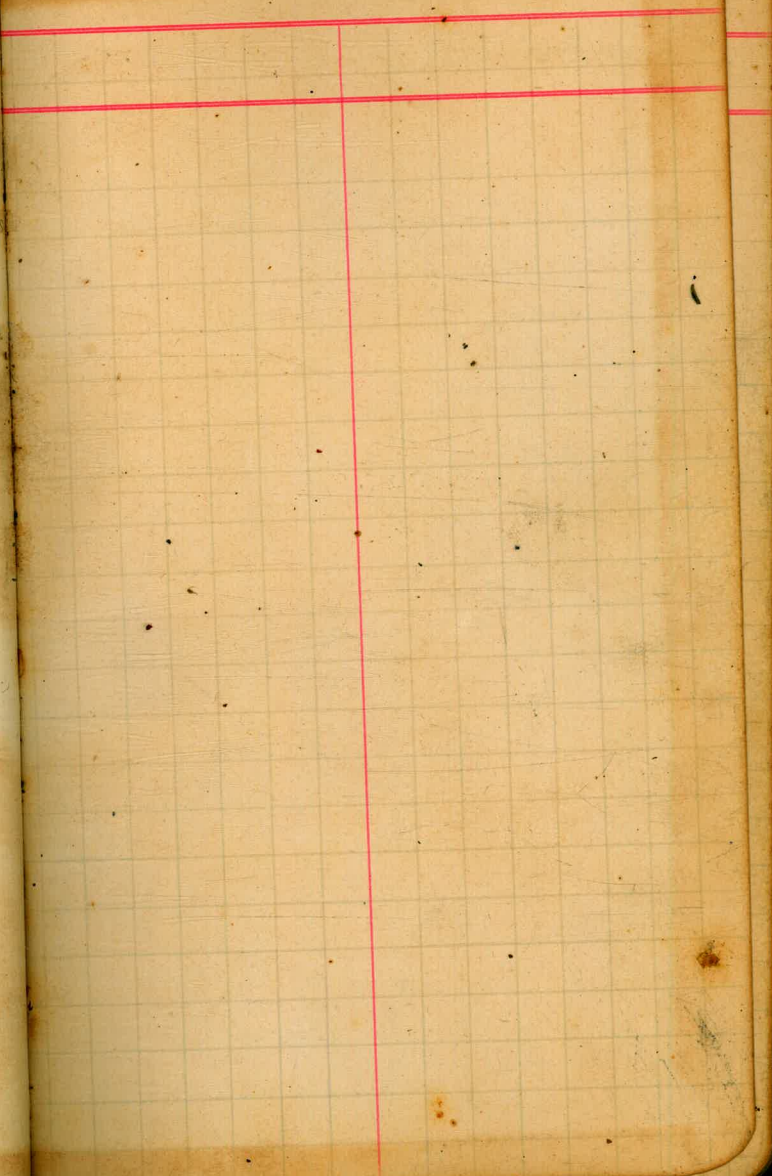
MICRO...

DRAWI

links to

Angle. (

- 4
- 5
- 6
- 7
- 8
- 9
- 10



Transverse lines on level pegs in  
Canyons in City Park.

Sta	LEFT	RIGHT	Correct Length Stations	Courses
C	2+50	77.39x	48.2	
C	2	76.11x	99.7	
C	1	74.22x	76.5	
C	0+40	71.53x	97	
A	5			
A	8+60	47.29x	58.5	N. 33° 05' W.
A	8	46.58x	99.7	N. 32° 34' W.
A	7	48.07x	99.5	N. 33° 43' W.
A	6	75.53x	100.5	N. 14° 24' E.
A	5	71.57x	99.8	N. 18° 20' E.
A	4	71.04x	99.8	N. 19° 13' E.
A	3	75.42x	97.6	N. 14° 35' E.
A	2	75.40x	99.9	N. 16° 39' E.
A	1	50.18x	101.5	N. 39° 59' E.
A	0			
X 212				S 89° 43' E

Sept 6. 87

Note 0140 was chained from A6

Sta X 212

offset from A5

righting same as below

Sta X 212 E 0° 15' in book 1

from S line of Park. Foresight on 207. &  
turned to left without reversing.

Sta	LEFT	RIGHT	Correct dist. of Stations
B 11		3°.25'	100.3
B 10	4.14x		100
B 9	7.17x		100
B 8	7.06x		99.5
B 7		10.05	99.5
B 6	16.10x		98
B 5	17.25x		100
B 4	29.04x		99.3
B 3	28.24x		99.8
B 2	21.31x		99
B 1	80.12x		100
X 201			

B 4190	95.25x		89.5
B 4	93.37x		99.2
B 3	93.56x		99.6
B 2	95.50x		99.6
B 1	93.20x		99.7
A 2			

Sta X 201  
 Effect from Sline of Park  
 Foresight on Sline of Park  
 Looking E.

Sta X 212  
 Effect from A 1  
 Foresight on X 207

Sta	LEFT	RIGHT	Correct dist. of Stations	Res. Cons
B 27		30.15x	99.4	N13-462
B 26		29.18x	99.8	N12-472
B 25		28.12x	99.5	N11-412
B 24		30.29x	99.1	N13-522
B 23		20.45x	97	N4-142
B 22		22.27x	100	N5-562
B 21		5.29x	100	N16-312
B 20		4.05x	99.7	N17-552
B 19		3.42x	99.8	N18-182
B 18		1.58x	100	N20-022
B 17	3.43x		99.8	N25-402
B 16	10.34x		100	N27-042
B 15		7.35x	99.7	N27-002
B 14		10.09x	99.8	N19-262
B 13		11.07x	100	N12-282
B 12		7.30x	99.7	N22-022

Sta	V LEFT	V RIGHT	Correct dist. of Stations	
C 4		11.38'	99.7	N57-212 ✓
C 3	42.17'		100	N47-432 ✓
C 2	47.21'		100	N42-39 ✓
C 1	57.18'		99.8	N38-42 ✓
X 196 = C0				
a 11+80	12.30'		78.7	N19-53 ✓
a 11	13.54'		98.6	N18-49 ✓
a 10	14.03'		98.7	N18-10 ✓
a 9	16.30'		99.7	N15-53 ✓
a 8	17.00'		99.6	N15-13 ✓
a 7	16.15'		100	N16-05 ✓
a 6	19.47'		100	N20-36 ✓
a 5		18.54'	99.8	N32-25 ✓
a 4		14.15'	99.3	N27-44 ✓
a 3		18.19'	100.4	N31-42 ✓
a 2	23.04'		99.6	N13-29 ✓
a 1		50.34'	99.3	N36-33 ✓
B 2+59	23.49'		2+58.5	N14-21 ✓
B 1				

Sta X 196  
 Offset from S line of Park Foresight on S line of Park  
 Looking E

Sta B 1  
 Sept 7. 57  
 Offset from B line Backsight on X 201

Sta	LEFT	RIGHT	Correct dist. of Station	
C 25		13.43'	100	N 258 E
C 24		29.44'	99.8	N 185 9 E
C 23	11.22'		99.8	N 10 - 45 W
C 22	15.16'		99.7	N 143 9 W
C 21	35.15'		100	N 00 - 37 W
C 20	32.35'		99.7	N 3 - 17 E
C 19	38.32'		99.8	N 5 - 20 E
C 18	26.50'		99.7	N 9 - 02 E
C 17	28.04'		99.8	N 12 - 48 E
C 16	30.18'		99.9	N 5 - 34 E
C 15	33.55'		99.7	N 1 - 57 E
C 14	36.16'		100	N 00 - 24 W
C 13	11.51'		99.9	N 35 - 52 E ✓
C 12	8.30'		100	N 39 - 13 E
C 11	3.59'		99.8	N 43 - 44 E
C 10		1.30'	99.8	N 49 - 10 E
C 9		6.41'	99.7	N 54 - 26 E
C 8		8.39'	99.8	N 56 - 22 E
C 7		9.53'	99.9	N 57 - 32 E
C 6		11.11'	100	N 58 - 56 E
C 5		11.43'	99.9	N 59 - 10 E



Sta	LEFT	RIGHT	Correct dist. of Station	
C 46		10.14	100	138-097
C 45		11.33	99.7	148-234
C 44		10.26	99.6	149-304
C 43	16.47		100	159-524
C 42	29.50		107.5	143-097
C 41	23.48		88.	137-074
C 40		40.47	99.5	113-197
C 39	7.18		99.2	154-064
C 38	7.00		99.6	158-054
C 37	8.24		100	155-124
C 36		5.09	100	146-394
C 35		11.55	99.9	134-534
C 34	32.57		98.	146-484
C 33	41.01		99.9	154-524
C 32	40.40		99.9	113-514
C 31		5.09	99.7	126-494
C 30		16.09	100	137-494
C 29		36.08	99.7	157-484
C 28		26.23	99.5	121-454
C 27		10.59	100	116-164
C 26		6.02	100	14-234

Sta	∨ LEFT	∨ RIGHT	Correct dist. of Stations			
C 67		10° 18' x	100	N41.42W		
C 66		6° 13' x	99.8	N45.47W		
C 65	26° 50' x		99.7	N52.00W		
C 64		6° 24' x	99.7	N25.10W		△
C 63		11° 31' x	99.8	N20.03W		△
C 62		17° 21' x	99.7	N31.34W		△
C 61	9° 22' x		99.5	N41.55W		△
C 60	4° 04' x		99.7	N43.37W		△
C 59		6° 35' x	99.7	N32.53W		
C 58		27° 48' x	99.	N11.45W		
C 57		12° 21' x	99.5	N39.33W		
C 56	5° 26' x		99.7	N57.22W		△
C 55	10° 15' x		99.9	N62.19W		
C 54	7° 10' x		99.8	N51.54W		
C 53	3° 21' x		99.7	N48.05W		△
C 52		7° 00' x	99.5	N37.44W		
C 51		14° 38' x	99.5	N30.06W		
C 50		3° 39' x	99.5	N46.44W		
C 49		5° 31' x	100	N42.57W		△
C 48		6° 29' x	88.2	N41.54W		
C 47		6° 53' x	100	N41.30W		

Sta	LEFT	RIGHT	Correct dist. of Stations	Course	
X					
				105° 45' along N line of Park B.S.M. 42 W. wards	
46+51.5	23.86x			N36.40W	△
C 46+33.7	3.11x		33.7	N35.55W	
C 86	3.44x		99.3	N36.29W	
C 85	6.06x		99.9	N38.50W	
C 84	9.11x		99.8	N41.55W	
C 83	7.31x		99.3	N40.15W	
C 82	7.18x		99.9	N40.02W	
C 81	5.51x		99.9	N38.31W	
C 80	4.07x		101	N36.51W	
C 79		17.29x	99.4	N32.44W	△
C 78		19.19x	99.1	N30.54W	
C 77		23.52x	99.6	N50.83W	△
C 76	37.05x		100	N74.15W	△
C 75	41.16x		100	N98.06W	
C 74	0.12x		99.9	N37.00W	△
C 73		11.48x	100	N25.00W	
C 72		22.48x	99.9	N12.00W	
C 71	1.57x		100	N36.48W	△
C 70		6.19x	99.8	N34.51W	△
C 69		0.59x	99.6	N40.11W	
C 68		10.50x	99.8	N41.10W	△

Sta	LEFT	RIGHT	Correct dist. of Station
D 19	00° 00'	00° 00'	100
D 18		3° 26'	99.8
D 17		00° 17'	100
D 16	1° 31'		100
D 15		6° 06'	100
D 14		17° 08'	100
D 13		21° 16'	100.1
D 12		12° 33'	100.1
D 11	18° 19'		100
D 10	31° 47'		100
D 9	16° 31'		100
D 8	7° 48'		100
D 7	8° 52'		100
D 6		16° 11'	100
D 5		20° 11'	100
D 4		26° 08'	99.9
D 3		30° 52'	100.1
D 2		41° 05'	100.1
D 1		48° 28'	100
C 12			

Effect from C line Sta C<sup>12</sup> Backsight on C 3

Sta.	Left	Right	correct dist of station
	Continued on page —		
109		56.24'	100.
108	46.15'		100.1
107	49.57'		100
106		53.28'	100.1
105		69.30'	100.
104	19.02'		100.
103	20.12'		100.3
102	19.25'		99.9
101	22.22'		100.1
1030		5.57'	100
109		13.05'	100.3
108		22.28'	100
107		10.39'	100
106		5.32'	100
105		14.05'	100.1
104	36.35'		99.9
103	3.15'		100.2
102		32.17'	99.3
101		27.06'	100.
1020		17.50'	99.4

	LEFT	RIGHT	Dist.	Count
c 7		26.45'	99.8	
c 6		25.57'	99.9	
c 5		24.55'	99.6	
c 4		25.24'	99.7	
c 3	95.42		100	
c 2	92.26		59.9	
c +40	92.01		39.9	
c 1	88.28		100	
c 0				

0134	38.13		34.	N87-40E
9	38.30		96.5	N86-57E
8		43.01	99.5	S84-33E
b 7	28.25x		98.8	N82-26E
b 6	17.18x		98.8	S69-19E
b 5		4.27x	99.7	S51-51E
b 4		6.06x	99.8	S50-12E
b 3		69.18x	99.8	S52-18E
b 2		69.41x	99.7	S55-51E
b 1		87.36x	99.7	S38-02E
c 9				N56-26E

Sta  $\odot$  C20  
Backsight on C13

Sta  $\odot$  C9  
Backsight on C3

Ch. Herold. Sept. 26

12

	LEFT	RIGHT	Correct distance
d 6		28° 56'	99.7
d 5		25° 36'	99.4
d 4		25°	97.7
d 3	86° 32'		99.4
d 2	84° 26'		98.1
d 1	93° 22'		99.9
C 27			
c 17	18.18'		100
c 16	35.07'		99.8
c 15		38.00'	99.9
c 14	11.51'		100
c 13		13.20'	100.1
c 12		11.06'	99.9
c 11		22.48'	100
c 10		19.39'	100
c 9	4.07'		100.1
c 8		26.03'	99.8

Offset from C. line Sta  $\odot$  27  
Baird on C 26



Sta.	LEFT	Right	Correct distance
f7	77° 16'		
f6	76° 44'		
f5	76° 37'		
f4	77° 03'		
f3	78° 23'		
f2	79° 35'		
f1	79° 35'		
B. 45			
e 11	7° 8'	98.9	
e 10	39° 55'	99.5	
e 9	27° 47'	99.6	
e 8	36° 20'	99.7	
e 7	6° 48'	99.8	
e 6	11° 33'	99.5	
e 5	75° 36'	99.7	
e 4	77° 22'	99.7	
e 3	78° 22'	99.8	
e 2	78° 21'	100.6	
e 1	80° 6'	100.1	
B. 33			

Offset from C. line Sta  $\odot$  45 C B.S. B. 43

Sta  $\triangle$  10

Sta  $\triangle$  8

Sta  $\triangle$  7

Sta  $\triangle$  5 B.S. on B. 33

$\triangle$

Offset from C. line Sta  $\odot$  33 B.S. on 32



Sta.	Left	Right
9 13	8° 30'	
9 12	18° 47'	
9 11	20° 25'	
9 10		15° 16'
9 9		13° 55'
9 8+75		14° 09'
9 8+23		14° 36'
9 8		15° 03'
9 7		15° 45'
9 6	1° 16'	
9 5	1° 09'	
9 4+60	0° 10'	
9 4	1° 18'	
9 3	4° 38'	
9 2	7° 38'	
9 1		75° 44'
9 17		
9 16		
9 15	7	
9 14	79° 43'	
9 13	78° 15'	

Sta A 12 B.S. 9 10.

Sta Δ 10 B.S. 9.6

Sta Δ 6 B.S. 9.1

Sta Δ 1 B.S. 6.45

Offset from C. line

Sta ○ 45 B.S. 4.3

Sta	Left	Right
g 33		8 <sup>2</sup> 12
g 32-130		6 <sup>0</sup> 25
g 32		10 <sup>0</sup> 15
g 31		8 <sup>0</sup> 28
g 30		7 <sup>0</sup> 30
g 29	1	6 <sup>0</sup> 40
g 28	7 <sup>0</sup> 23	
g 27	8 <sup>0</sup> 11	
g 26	0 <sup>0</sup> 25	
g 25		5 <sup>0</sup> 36
g 24	3 <sup>0</sup> 42	
g 23	3 <sup>0</sup> 14	
g 22	3 <sup>0</sup> 25	
g 21	3 <sup>0</sup> 13	
g 20	2 <sup>0</sup> 23	
g 19	1 <sup>0</sup> 24	
g 18	2 <sup>0</sup> 02	
g 17	27 <sup>0</sup> 04	
g 16	25 <sup>0</sup> 17	
g 15	26 <sup>0</sup> 58	
g 14	11 <sup>0</sup> 35	

Sta Δ 31 B.S. g. 28.

Sta Δ 28 B.S. g. 24

Sta Δ 27 B.S. g. 17.

Sta Δ 17 B.S. g. 14

Sta Δ 14 B.S. g. 12

Sta	Left	Right
g 51	17.8	
g 51	34° 05'	
g 50	41° 32'	
g 49	42° 48'	
g 48	11° 39'	
g 47	3° 00'	
g 46		16° 36'
g 45		14° 18'
g 44		22° 53'
g 43	8° 05'	
g 42	16° 36'	
g 41	22° 16'	
g 40	27° 24'	
g 39	23° 02'	
g 38	26	26° 41'
g 37	31° 04'	
g 36	32° 54'	
g 35		2° 46'
g 34		2° 13'

g 51 + 17.8

g 51 34° 05'

g 50 41° 32'

g 49 42° 48'

g 48 11° 39'

g 47 3° 00'

g 46 16° 36'

g 45 14° 18'

g 44 22° 53'

g 43 8° 05'

g 42 16° 36'

g 41 22° 16'

g 40 27° 24'

g 39 23° 02'

g 38 26 26° 41'

g 37 31° 04'

g 36 32° 54'

g 35 2° 46'

g 34 2° 13'

Sta Δ 48 B.S. 46.9

Sta Δ 46 B.S. 43

Sta Δ 43 B.S. 2.11

Sta Δ 41 B.S. 9.38.

Sta Δ 38 B.S. 9.37

Sta Δ 37 B.S. 9.35

Sta Δ 35 B.S. 9.31

Sta	Left	Right
i 6		41° 16'
i 5	90° 04'	
i 4		25° 15'
i 3		20° 9'
i 2+50	78° 55'	
i 2	78° 9'	
i A+50	75° 50'	
i 1	81° 54'	
i D+70	83° 43'	
g 36		
j 10+2	7° 56'	
j 10	2° 10'	
j 9	7° 00'	
j 8	15° 32'	
j 7		38° 54'
j 6		12° 30'
j 5	9° 11'	
j 4	28° 37'	7
j 3		101° 26'
j 2		101° 44'
j 1		101° 26'
g 37		

Sta A 5  
Sta A 4. B.S. 2+50

Sta A x 2+50 i B.S. 36 g.

Offset from g. line Sta O g 36. B.S. g 35.

A  
Sta A 95  
Sta A 85  
Sta A 75 B.S. 65  
Sta A 65 B.S. 55  
Sta A 55 B.S. 54  
Sta A 45 B.S. g 37 g 33  
Sta A 53 B.S. g 37

Offset from g. line, Sta O g 37 B.S. g 35

Sta	Left	right
g' 6		60° 16'
g' 5		60° 52'
g' 4+50		70° 48'
g' 4		21° 09'
g' 3+50		23° 37'
g' 3		11° 33'
g' 2		17° 52'
g' 1	94° 36'	
g 24		
h' 8		33° 12'
h' 7		25° 13'
h' 6		28° 54'
h' 5	29° 19'	
h' 4	30° 48'	
h' 3+50	30° 21'	
h' 3	28° 20'	
h' 2+50	16° 48'	
h' 2	26° 53'	
h' 1	62° 15'	
h' 0+50	66° 44'	
g. 32+50		

Sta A 3

Sta A 4

Sta A g' 3

Sta A g' 2

Sta A g' 1 B.S. g. 24.

Off from g line Sta O 24 g. B.S. 17 g.

Sta A 7. B.S. 5

Sta A 5. B.S. sta 4.

Sta. A 2+50 B.S. h' 2

Sta A 2 B.S. h' 1.

Sta A 1 B.S. g 32

Off from g line. Sta O 32+50 g. B.S. 31 g

Sta. Left Right

2' 5	39° 08
2' 4+70	43° 30
2' 4	11° 36
2' 3+60	15° 06
2' 3	13° 47
2' 2+50	15° 36
2' 2	12° 05
2' 1	82° 18
2' 0+70	87° 36

g 18

4' 4+70	72° 46
4' 4	74° 41
4' 3+50	76° 17
4' 3	76° 58
4' 2+50	78° 26
4' 2	73° 08
4' 1+50	75° 42
4' 1	67° 33
4' 0+70	66° 51

g 20

Sta. A 4, B.S. 3e

Sta. A 3, B.S. 1e.

Sta. A 1, B.S. 18g.

offset from g. line Sta. O 18g. B.S. 17g.

offset from g. line Sta. O g. 20. B.S. 17

Sta.	Left	Right
C 6	17° 38'	
C 5+50	15° 33'	
C 5	4° 31'	
C 4	4° 06'	
C 3	92° 58'	
C 2	91° 55'	
C 1	93° 34'	
C 0+50	92° 34'	
g 7+75		
d' 3+60	41°	
d' 3	46° 15'	
d' 2+50	52° 10'	
d' 2	91° 18'	
d' 1	81° 32'	
d' 0+60	85° 52'	
g 16		
A 27	21° 53'	
B 6	19° 52'	
E 5+60	40° 25'	

Offset from g line  $0+75$  F. S. g. 10

Sta. Δ 2 B.S. g. 16

Sta. O g. 16 B.S. 14

Sta. A 5+60.

Sta. Left Right.

a3+90 28°05'

a3 26°05'

a2 21°28'

a1 70°48'

a0+40 78°57'

g4+60

b.3+94 11°55'

b.3+58 5°10'

b.3 4°33'

b.2+50 7°44'

b.2 8°44'

b.1 70°45'

b.0+40 68°18'

g0+23

7+40 20°26'

7 22°13'

6+57 22°27'

Offset from 4+60 g 4+60 line B.S. g. 1

Offset from g line 8+23 F.S. g. 10



Sta.	Left	Right
n. 2	76° 11'	
n. 1	72° 53'	
C 57		
h. 11+75		23° 20'
h. 11+50		22° 31'
h. 11		20° 44'
h. 10+50		19° 49'
h. 10		20° 52'
h. 9		19° 57'
h. 8		23° 10'
h. 7		21° 19'
h. 6		16° 53'
h. 5	69° 13'	
h. 4	72° 59'	
h. 3	74° 21'	
h. 2+75	75° 02'	
h. 2	77° 58'	
h. 1	75° 19'	
C 46		

Offset from Sta. 57 C line  $\odot$  B.S. Sta. 54 C

$\triangle$  B.S. Sta. 46 C line

Offset from C line  $\odot$  Sta. 46 B.S. 45

Sta.	Left	Right
j 8+50	17° 15'	
j 8		22° 42'
j 7+70	12° 08'	
j 7	13° 53'	
j 6		9° 34'
j 5	7° 33'	
j 4		00° 01'
j 3	9° 30'	
j 2		71° 40'
j 1		70° 58'
C 57		
n 9	54° 00'	
n 8+60	57° 58'	
n 8	53° 26'	
n 7+60	55° 17'	
n 7	53° 34'	
n 6		28° 09'
n 5	74° 18'	
n 4	74° 11'	
n 3	76° 16'	

Offset from Sta 57. C line, B.S. 57

Sta.	Left	Right
K 9	103.37	
K 8	102.02	
K 7	101.32	
K 6+50	100.50	
K 6	99.46	
K 5+50	100.43	
K 5	100.39	
K 4	103.15	
K 3	106.07	
K 2+50	105.37	
K 2	103.47	
K 1	102.38	
C. 64		
J 10	3.03	
J 12	3.18	
J 11	3.57	
J 10	10.32	
J 9	8.46	

Offsets from Sta 64 @ C. line B.S. 62

Sta.	Left	Right
L. 16		25° 34'
L. 15	39° 18'	
L. 14	29° 39'	
L. 13	29° 48'	
L. 12+50	5° 28'	
L. 12	38° 18'	
L. 11		24° 28'
L. 10		33° 08'
L. 9+70		7° 20'
L. 9	14° 56'	
L. 8	20° 03'	
L. 7	16° 12'	
L. 6		18° 03'
L. 5		14° 27'
L. 4		13° 58'
L. 3		12° 47'
L. 2		23° 22'
L. 1+50		68° 37'
L. 1		60° 48'
C. 68		

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Offset from Sta. 68 @ A-line B.S. 65

Sta.	Left	Right
a 17	23° 45'	
a 16		34° 32'
a 15	29° 41'	
a 14	32° 00'	
a 13	34° 14'	
a 12+57	13° 24'	
a 12	17° 06'	
a 11	5° 24'	
a 10	6° 24'	
a 9		21° 53'
a 8+50		5° 15'
a 8		4° 20'
a 7		32° 49'
a 6		10° 00'
a 5	24° 54'	
a 4	23° 57'	
a 3	32° 50'	
a 2	22° 08'	
a 1	16° 50'	
L1+57		



Offset from Sta. 1+57 @ L. line B.S. 68 C. line

Sta.	Left	Right
------	------	-------

a 3		15° 24'
a 2		10° 53'
a 1		24° 00'
m 5+57		

m 13		22° 18'
m 12		26° 04'
m 11	39° 18'	
m 10	38° 02'	
m 9	36° 14'	
m 8+70	36° 06'	
m 8	38° 30'	
m 7	31° 11'	
m 6	21° 27'	
m 5+50	97° 01'	
m 5	97° 45'	
m 4	94° 11'	
m 3	95° 02'	
m 2	95° 18'	
m 1	108° 48'	
C 74		

Offset from 5+50 m. line B.S. 74 c. line

Offset from Sta. 74 c. line B.S. 71 c.

Sta.	Left	Right
0 6		8° 05'
0 5		11° 41'
0 4	83° 57'	
0 3	77° 49'	
0 2	89° 32'	
0 1+70	77° 22'	
0 1	91° 11'	
C 81		
n 5		88° 12'
n 4		92° 10'
n 3		90° 35'
n 2		90° 54'
n 1		88° 36'
0+81		89° 40'
C 79		
a 6	20° 13'	
a 5	27° 18'	
a 4+60		25° 28'
a 4		32° 13'

Offset from C 81 • B.S. 79 C

Offset from C 79 • B.S. 77 C

Sta.	Left	Right
P 6	33° 00'	
P 5	21° 35'	
P 4	18° 36'	
P 3	13° 51'	
P 2	15° 36'	
P 1		93° 49'
P + 60		97° 52'
C 41		
a 3	64° 47'	
a 2	46° 30'	
a 1	10° 14'	
O 10		
O 12 + 91.5		57° 20'
O 12		50° 17'
O 11 + 60		45° 33'
O 11		42° 40'
O 10		9° 46'
O 9		8° 30'
O 8		10° 34'
O 7		8° 53'

Offset from 61 C @ line B.S. 79 C.

Offset from Sta. 100 @ line B.S. 40



Sta.	Left	Right				
9 3 + 80.7	574.01					
9 3	55° 54'					
9 2	59° 00'					
9 1	68° 36'					
C 84						

9 3 + 80.7 574.01  
 9 3 55° 54'  
 9 2 59° 00'  
 9 1 68° 36'  
 C 84



Offset from Sta. 84 ○ d. line B.S. 81

Sta.	Left	Right
B 5		7° 45'
B 4		4° 55'
B 3		104° 02'
B 2		107° 28'
B 1		95° 07'
D 11		
a 7	27° 32'	
a 6+50	26° 34'	
a 6+25	26° 04'	
a 6	26° 13'	
a 5+70	29° 36'	
a 5+40	32° 51'	
a 5	26° 14'	
a 4+50	20° 15'	
a 4		30° 25'
a 3		35° 31'
a 2		36° 21'
a 1+50		57° 55'
a 1		53° 26'
D 4		

Offsets from Sta. 11.  $\odot$  D line B.S. 9

Offsets from Sta. 4 D.  $\odot$  line B.S. 12 C.

Sta.	Left	Right
------	------	-------

χ 3	111.00	
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χ 2+50	106.45	
--------	--------	--

χ 2	100.00	
-----	--------	--

χ 1	90.39	
-----	-------	--

χ 0+60	88.24	
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B 15		
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B 15+77.5	5.41	
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B 15	12.47	
------	-------	--

B 17	22.17	
------	-------	--

B 16	12.32	
------	-------	--

B 15.	17.26	
-------	-------	--

B 14	12.07	
------	-------	--

B 13.	12.14	
-------	-------	--

B 12	32.17	
------	-------	--

B 11	30.17	
------	-------	--

B 10	29.25	
------	-------	--

B 9	27.25	
-----	-------	--

B 8	35.11	
-----	-------	--

B 7	28.32	
-----	-------	--

B 6	4.34	
-----	------	--

Offset from Sta 15' line B.S. 12 B

92° 34'

Sta 176 X line of drainage

Sta.

C 3+50 42° 55'

C 3 34° 11'

C 2+70 33° 08'

C 2 84° 47'

C 1 85° 10'

B 10

d 4 77° 11'

d 3 77° 39'

d 2 75° 36'

d 1+50 74° 45'

d 1 67° 57'

d 1+50 66° 43'

B 12

e 3 90° 55'

e 2 89° 28'

e 1+50 87° 13'

e 1 86° 17'

e 0+60 87° 22'

13

Effect from B 10  $\odot$  B.S. B 6  $\triangle$

Effect from B 12  $\odot$  B.S. B 6

Effect from Sta. 13 B  $\odot$  B.S. 12 B

Sta.	Left	Right
a' 5+50		53° 53'
a' 5		44° 34'
a' 4		41° 39'
a' 3+80	29° 00'	
a' 3	64° 50'	
a' 2	61° 49'	
a' 1	66° 57'	
b 6		
b 4+30	10° 54'	
b 4	9° 51'	
b 3+00	22° 39'	
b 3		38° 38'
b 2+40	52° 59'	
b 2	57° 36'	
b 1+50	61° 48'	
b 1	63° 41'	
b 8		
c 4+00	39° 15'	
c 4	45° 55'	

Offset from 6b  B.S. 3b

Offset from b 8  B.S. b 6

Sta.	Left	Right
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C 9		5° 16'
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C 8		2° 30'
-----	--	--------

C 7		4° 58'
-----	--	--------

C 6		22° 45'
-----	--	---------

C 5		20° 47'
-----	--	---------

C 4	10° 48'	
-----	---------	--

C 3	14° 17'	
-----	---------	--

C 2	66° 57'	
-----	---------	--

C 1	53° 21'	
-----	---------	--

C 1+30	56° 30'	
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D. 18		
-------	--	--

a 2+11	25° 13'	
--------	---------	--

a 2	25° 16'	
-----	---------	--

a 1+30	35° 40'	
--------	---------	--

a 1	42° 48'	
-----	---------	--

a 0+50	63° 11'	
--------	---------	--

a' 3		
------	--	--

a' 7	68° 26'	
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a' 6	70° 58'	
------	---------	--

Offset from Sta. 18 D. B.S. D 12

Offset from Sta. 3 a B.S. b 6

Sta.	Left	Right
d 9	6° 52'	
d 8	23° 12'	
d 7	3° 43'	
d 6		27° 03'
d 5		25° 08'
d 4		18° 16'
d 3		14° 35'
d 2		53° 04'
d 1		77° 41'
D 26		
Offset from D 26		
C 16		26° 26'
C 15		19° 47'
C 14+50		18° 23'
C 14		15° 38'
C 13+50		19° 24'
C 13		12° 16'
C 12+50		14° 26'
C 12	16° 01'	
C 11		3° 13'
C 10		5° 00'

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Offset from D 26    ⊙    B.S. 24D

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△

Sta.	Left	Right
b' 3+70		24° 26'
b' 3	12° 35'	
b' 2		24° 31'
b' 1		23° 57'
b' 0+80		29° 46'
d 8.		
c' 5	26° 53'	
c' 4	11° 10'	
c' 3	4° 46'	
c' 2	6° 05'	
c' 1		59° 12'
d 11		
d 15+73	2° 39'	
d 15-	2° 55'	
d 14		18° 08'
d 13	29° 30'	
d 12	9° 13'	
d 11		21° 26'
d 10	29° 48'	

Offset from Sta 8  $\circ$  d line B.S. 7 d

Offset from Sta. 11 d  $\circ$  line B.S. 10 d line



Sta.	Left	Right
------	------	-------

a 3	76° 02'	
-----	---------	--

a 2	57° 22'	
-----	---------	--

a 1 + 50	57° 41'	
----------	---------	--

a 1 + 50	67° 44'	
----------	---------	--

a 0 + 50	83° 32'	
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a' 3		
------	--	--

a		
---	--	--

a' 5 + 60	5° 57'	
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a' 5	12° 15'	
------	---------	--

a' 4 + 50	13° 07'	
-----------	---------	--

a' 4	16° 08'	
------	---------	--

a' 3 + 50	23° 35'	
-----------	---------	--

a' 3	17° 53'	
------	---------	--

a' 2	14° 27'	
------	---------	--

a' 1	74° 33'	
------	---------	--

a' 0 + 60	78° 26'	
-----------	---------	--

a 4		
-----	--	--

t 6	31° 10'	
-----	---------	--

t 5	18° 27'	
-----	---------	--

t 4	25° 19'	
-----	---------	--

Offset from Sta. a' 3. B.S. a' 1



Offset from Sta. t 4. B.S. t 1

Sta.	Left	Right
9+60		14° 36'
9		14° 36'
7		5° 55'
7		3° 30'
6	30° 26'	
5	30° 46'	
4	8° 30'	
3		29° 47'
2	73° 14'	
1	92° 30'	
D 31		
8	70° 30'	
7	67° 45'	
6	70° 57'	
5	72° 58'	
4	73° 45'	
3	70° 30'	
2	57° 07'	
1	43° 48'	
D. 26		

Offset from Sta. 30 D. line B.S. D. 27

Offset from Sta. 26 D. line B.S. 24

Sta.	Left	Right
------	------	-------

B' 1	59° 46'	
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9+60		
------	--	--

C' 4	48° 39'	
------	---------	--

C' 3	40° 37'	
------	---------	--

C' 2	48° 03'	
------	---------	--

C' 1	55° 00'	
------	---------	--

12+40		
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7 20	24° 27'	
------	---------	--

7 19	13° 48'	
------	---------	--

7 18	13° 22'	
------	---------	--

7 17	5° 49'	
------	--------	--

7 16	21° 53'	
------	---------	--

7 15	21° 46'	
------	---------	--

7 14	25° 58'	
------	---------	--

7 13	20° 10'	
------	---------	--

7 12+40	11° 57'	
---------	---------	--

7 12	8° 08'	
------	--------	--

7 11	9° 14'	
------	--------	--

7 10	19° 53'	
------	---------	--

Offset from Sta 9+60 @ line B.S. 87

Offset from Sta. 12+40 @ line B.S. 127



Sta.	Left	Right
g 5		95° 55'
g 4		100° 09'
g 3+50		103° 27'
g 3		103° 11'
g 2		102° 00'
g 1		104° 25'
D 31		
a' 5	77° 45'	
a' 4	76° 36'	
a' 3	76° 20'	
a' 2	74° 56'	
a' 1	79° 45'	
γ 7		
z 6	45° 13'	
z 5	50° 41'	
z 4	53° 16'	
z 3+57	57° 36'	
z 3	58° 39'	
z 2	61° 14'	

Offset from Sta. 31 D  $\odot$  B.S. Sta. 30 D

Offset from Sta. 77  $\odot$  lim B.S. 67

Sta.	Left	Right
------	------	-------

n 7+28		15° 25'
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n 7		14° 26'
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n 6+50		12° 41'
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n 6		8° 34'
-----	--	--------

n 5		4° 37'
-----	--	--------

n 4+70		12° 35'
--------	--	---------

n 4		18° 52'
-----	--	---------

n 3		25° 37'
-----	--	---------

n 2		24° 08'
-----	--	---------

n 1		55° 04'
-----	--	---------

D. 37		
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h 7	114° 58'	
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h 6	112° 06'	
-----	----------	--

h 5+50	111° 16'	
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h 5	110° 24'	
-----	----------	--

h 4	111° 02'	
-----	----------	--

h 3	110° 39'	
-----	----------	--

h 2	102° 16'	
-----	----------	--

h 1	100° 31'	
-----	----------	--

D 35		
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Offset from Sta 37 D. line B.S. 36

Offset from Sta. 35 D. line B.S. 34

Sta.	Left	Right
h 3		14° 38'
h 2	55° 18'	
h 1	56° 51'	
D 50		
h 5	73° 55'	
h 4 + 50	73° 55'	
h 4	73° 55'	
h 3	72° 12'	
h 2	66° 10'	
h 1	58° 17'	
D 46		
j <sup>+67</sup>	20° 36'	
j 2	24° 38'	
j 1		49° 39'
D 41		
a 2	31° 11'	
a 1	48° 27'	
i 4 + 70		

Offset from Sta. 50 D line B.S. 46

Offset from Sta. 46 D line B.S. Sta. 43

Offset from Sta. 71 D line B.S. Sta. 38 D

Offset from Sta. 4 + 40 B.S. 3

Sta.	Left	Right
l 19		6° 44'
l 18		4° 19'
l 17	8° 41'	
l 11+70		23° 25'
l 16		27° 32'
l 15	37° 57'	
l 14	26° 53'	
l 13	24° 41'	
l 12+50	16° 26'	
l 12	19° 47'	
l 11		40° 34'
l 11+50		7° 44'
l 10	9° 56'	
l 9		37° 00'
l 8+25		37° 06'
l 8		36° 15'
l 7		36° 53'
l 6		38° 33'
l 5	15° 52'	
l 4+75	29° 56'	
l 4	20° 03'	



Sta. 17<sup>th</sup> 1907

Sta. Left Right

a 4 66° 58'

a 3 66° 57'

a 2 70° 35'

a 1 74° 36'

b 1

b 4 44° 52'

b 3 42° 24'

b 2 31° 08'

b 1 85° 23'

b 10

b 21+20 12° 57'

b 21 16° 10'

b 20 53° 48'

Offset from Sta. 5+780 B.S. Sta. 3 l

Offset from Sta. 10 l B.S. Sta. 9



at  
transit of Z. Cannon

Sta.	Left	Right
9	36°31'	
+77	40°07'	
+17	41°00'	
8	40°29'	
7	39°16'	
+59	42°30'	
6	28°57'	
+35		23°18'
5		29°42'
+42		16°46'
4		17°58'
3		17°42'
+48		15°23'
2		24°10'
+80		31°30'
+31		0°57'
1		7°21'
0+53		25°50'
02261+11		

of  
Meridian (transit)

46



Set up on 261+11 sighted to Sta 265 turned off  
25°50' to 0+53 to night without running

Sta.	Left	Right							
+27	12° 18'								
14	16° 03'								
+56	17° 68'								
+38	18° 27'								
13	18° 42'								
+19		22° 56'							
12		22° 48'							
11		42° 67'							
10		38° 30'							
9-71	56° 42'								



The image shows an open notebook with two pages. The pages are cream-colored and feature a light blue grid pattern. The left page is ruled with six vertical red lines, creating seven columns. The right page is ruled with one vertical red line, creating two columns. The number '48' is written in blue ink in the top right corner of the right page. The notebook is bound in the center, and the pages are slightly aged with some minor stains.

Continued from page

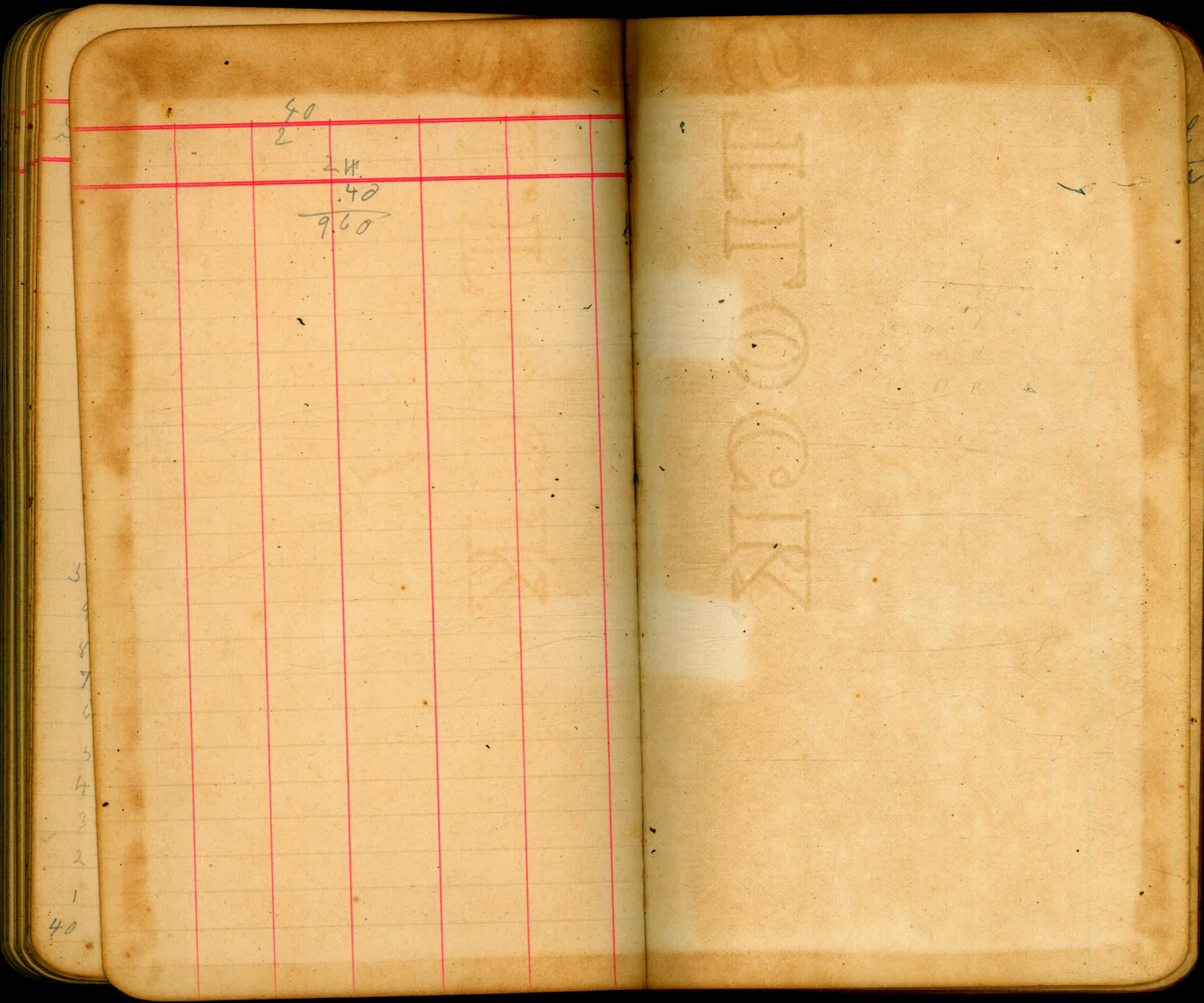
Sta. Left. Right. corrected  
distances

30		$8^{\circ} 03'$	100.
9		$6^{\circ} 14'$	100
4		$3^{\circ} 41'$	100
7		$9^{\circ} 34'$	100
6	$31^{\circ} 42'$		100.1
5	$27^{\circ} 15'$		100
4	$28^{\circ} 34'$		100
3		$9^{\circ} 20'$	100.1
2		$15^{\circ} 00'$	99.9
1		$26^{\circ} 12'$	100.1
40		$44^{\circ} 33'$	99.3

Sta. 112 old line

19.23



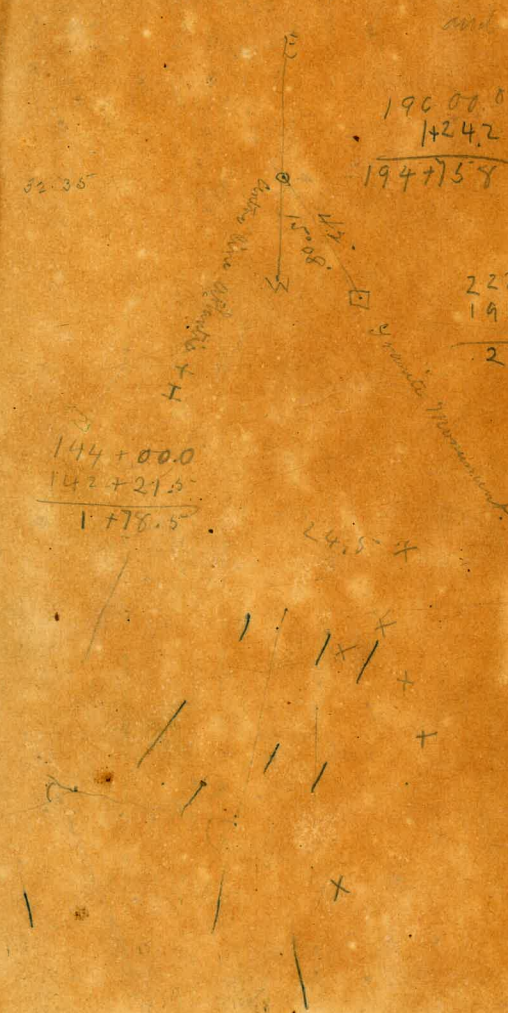


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ITTOGIR

From Center of Granite Monument to N. E. corner  
 of the same is N 74° 53' W dist 42.5  
 Granite Monument



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

Degrees.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0			100.00	0.44	100.00	0.87	99.99	1.31	81
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	81
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	81
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	81
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	81
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	81
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	81
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	81
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	81
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	81
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	71
12	97.81	20.79	97.72	21.22	97.65	21.64	97.55	22.07	71
13	97.44	22.50	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	71
15	96.59	25.88	96.48	26.30	96.36	26.72	96.25	27.14	71
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	71
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	71
18	95.11	30.90	94.97	31.32	94.85	31.73	94.69	32.14	71
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	71
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	61
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	61
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	61
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	61
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	61
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	61
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	61
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	61
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	61
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	51
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	51
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	51
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	51
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	51
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	51
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	51
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	51
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	41
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	41
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	41
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	41
45	70.71	70.71							41
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		

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