

*City Park  
Survey.*

---

9  
#5

TRANSIT

F.B. 616



616 *ritense*  
 20 C. *Switzer*  
 120 C. "  
 140 C. "

# CITY PARK SURVEY

*Book 2*

MICROFILMED

DEC 1 1964

19... 44 2/3 59... 91 59... 137 2/3  
 20... 46 2/3 40... 93 1/3 60... 140

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Table for Running on Slopes.

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

Angle.	Cor. in links	Angle.	Cor. in links.	Angle.	Cor. in links.	Angle.	Cor. in links.
0		0		0		0	
4	0-24	11	1-88	18	5-14	25	10-54
5	0-38	12	2-24	19	5-76	26	11-26
6	0-55	13	2-63	20	6-42	27	12-24
7	0-76	14	3-06	21	7-11	28	13-37
8	0-98	15	3-53	22	7-85	29	14-34
9	1-24	16	4-02	23	8-64	30	15-47
10	1-55	17	4-56	24	9-47	35	22-07

*Handwritten notes and calculations:*  
 27 3/4  
 26  
 37  
 38  
 39  
 40  
 41  
 42  
 43  
 44  
 45  
 46  
 47  
 48  
 49  
 50



Hubon



Kanbon (Transit)

120 Contour west side

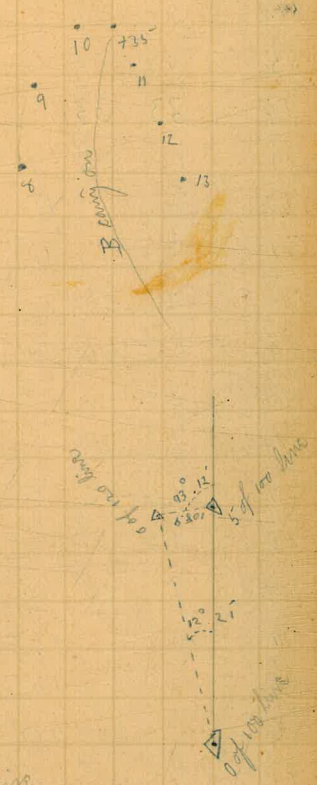
1

Sta.	Left	Right
16		57° 08'
15		43° 00'
14		37° 48'
13		35° 51'
12		29° 50'
11		26° 30'
10+35'		26° 18'
10		24° 20'
9		17° 35'
8		18° 33'
7		18° 20'
6		16° 35'
5		15° 33'
4		13° 21'
3		10° 44'
2		9° 53'
1		15° 03'

off 120 line 93° 12'  
5' of 100 line

backsight sta. 0 of  $\Delta$  100 line  
Set up at sta. 5 of 100 ft. contour backsight sta. 0  
of 100 line transd. to left to sta. 0 of 120 line  
distance 108.9 ft.

$\Delta$  1 of 100 line



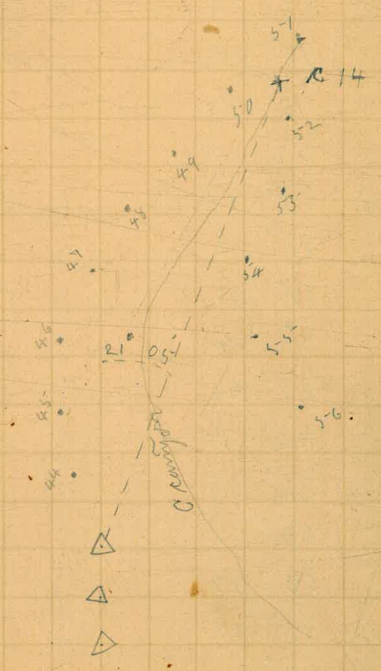


Sta	Left	Right
37	14° 49'	
36	57° 07'	
35	47° 04'	
34	33° 33'	
33	12° 22'	
32		18° 38'
31		11° 14'
30	3° 37'	
29	21° 45'	
28	39° 30'	
27+39	50° 02'	
27	52° 52'	
26	54° 41'	
25	55° 12'	
24		123° 24'
23		123° 15'
22		117° 35'
21		110° 09'
20		100° 02'
19		87° 27'
18		74° 35'
17		61° 45'





Station	Left	Right
59		98° 45'
58		85° 26'
57		65° 53'
56		43° 28'
55		27° 20'
54		23° 08'
53	2	24° 02'
52		23° 30'
51		21° 53'
50		17° 20'
49		12° 50'
48		6° 00'
47	1° 43'	
46	11° 43'	
45	17° 28'	
44	18° 17'	
43	24° 31'	
42	34° 30'	
41	15° 50'	
40	14° 54'	
39	14° 58'	
38	17° 27'	

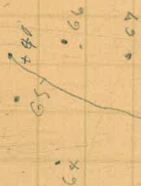




Sta	Left	Right
77		29° 41'
76+60		30° 20'
76		12° 26'
75	20° 09'	
74	31° 32'	
73+58	42° 38'	
73	41° 30'	
72	40° 35'	
71	52° 58'	
70+79	22° 49'	
70	19° 12'	
69	14° 26'	
68	3° 34'	
67	22° 40'	
66	42° 38'	
65+40	57° 18'	
65	54° 11'	
64	63° 47'	
63	53° 22'	
62	29° 12'	
61	35° 18'	
60	29° 56'	



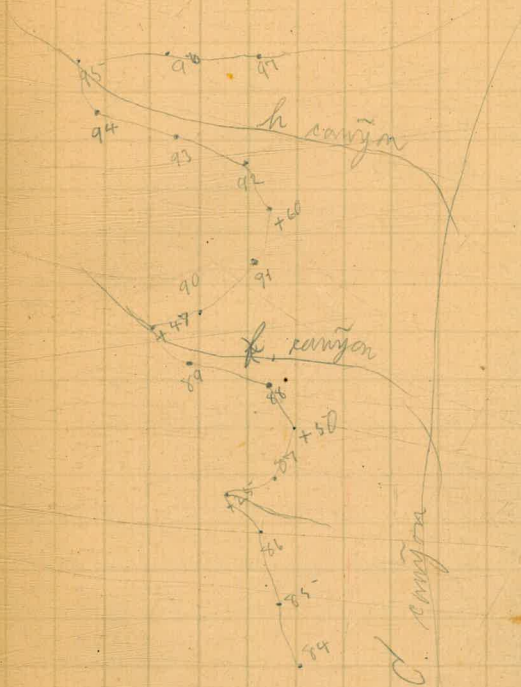
Entrance to Canyon  $\triangle$





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

95	7° 15'	
94	7° 35'	
93	3° 15'	
92		07 55'
91+60		2° 55'
91		1° 00'
90	9° 20'	
89+49	14° 45'	
89	10° 45'	
88	1° 25'	
87+50		2° 07'
87	2° 38'	
86+25	14° 24'	
86	11° 35'	
85	11° 55'	
84	23° 21'	
83	6° 58'	
82	7° 03'	
81	8° 30'	
80	7° 35'	
79	16° 07'	
78	9° 13'	





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

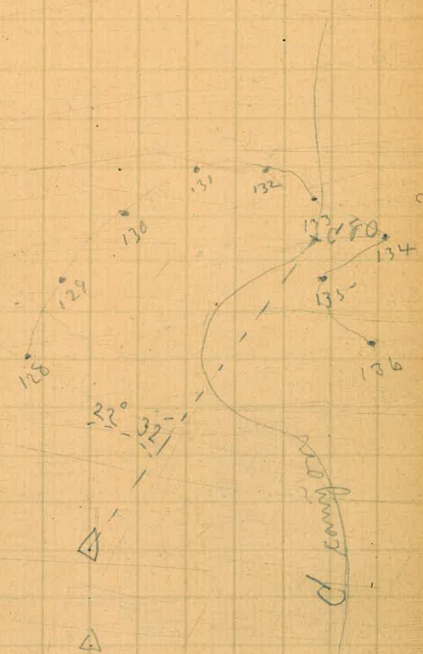
114+73		2° 46'
114		3° 35'
113		2° 53'
112		2° 06'
111	}	10° 22'
110		3° 00'
109		16° 09'
108+45		22° 08'
108		20° 20'
107		9° 16'
106		13° 27'
105		13° 25'
104		9° 20'
103		9° 02'
102		13° 26'
101		18° 12'
100		38° 10'
99		13° 12'
98+40		13° 21'
98		10° 57'
97		3° 30'
96		1° 30'





22 32

Sta	Left	Right
135		24° 28'
134		28° 15'
133		21° 54'
132		14° 17'
131		7° 14'
130		4° 34'
129	1° 13'	
128	6° 05'	
127	9° 20'	
126	10° 23'	
125	8° 13'	
124+70	14° 00'	
124	8° 47'	
123		8° 53'
122		8° 45'
121		8° 12'
120		7° 36'
119		7° 25'
118		6° 02'
117		6° 26'
116		5° 54'
115		3° 26'





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

153	23° 00'	
-----	---------	--

154	27° 46'	
-----	---------	--

153+71		30° 53'
--------	--	---------

153		30° 34'
-----	--	---------

152		13° 08'
-----	--	---------

151	14° 21'	
-----	---------	--

150	28° 33'	
-----	---------	--

149	32° 24'	
-----	---------	--

148	62° 24'	
-----	---------	--

147	86° 33'	
-----	---------	--

146+84	88° 40'	
--------	---------	--

146	73° 20'	
-----	---------	--

145	56° 50'	
-----	---------	--

144		159° 58'
-----	--	----------

143		152° 20'
-----	--	----------

142		139° 50'
-----	--	----------

141		123° 18'
-----	--	----------

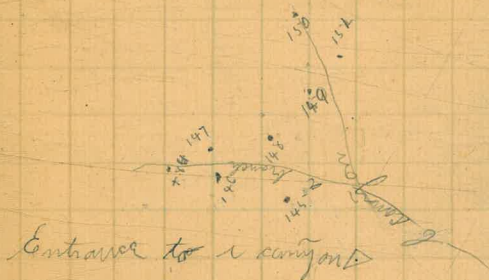
140		104° 15'
-----	--	----------

139		84° 40'
-----	--	---------

138		62° 15'
-----	--	---------

137		46° 27'
-----	--	---------

136		35° 00'
-----	--	---------





Sta Left Right

169		139° 46'
168		135° 25'
167		90° 38'
166+86		83° 20'
166		25° 15'
165	20° 24'	
164+41 <sup>2</sup>	37° 53'	
164	27° 55'	
163+64 <sup>2</sup>	74° 46'	
163	71° 52'	
162	70° 22'	
161+62	16° 20'	
161	12° 02'	
160+48 <sup>2</sup>		08° 32'
160	2° 53'	
159	7° 16'	
158		12° 10'
157+32 <sup>2</sup>		6° 15'
157	19° 25'	
156+73 <sup>2</sup>	26° 25'	
156+36 <sup>2</sup>	13° 37'	
156	15° 35'	



Entrance to canyon is





47.30

Sta Left Right

177+35		44° 40'
187		46° 45'
176		21° 05'
185	20 15	
184	46° 10'	
183	38° 45'	
182	23° 44'	
+84	28° 00'	
181	32° 06'	
180	30° 10'	
179	32° 50'	
178	50° 33'	
177	24° 40'	
176+76	1° 53'	
176	1° 13'	
175	2° 00'	
174	4° 08'	
173	6° 50'	
172	8° 45'	
171	10° 53'	
170	46° 30'	
169+72	15° 16'	

184 = 3+85° 0'



Entrance to g. canyon



Sta	Left	Right
203		101° 29'
202		50° 14'
201		6° 42'
200+29	00° 57'	
200	8° 26'	
199	23° 55'	
198	32° 22'	
197+91		12° 39'
197		8° 51'
196		6° 36'
195	14° 49'	
194+58	51° 37'	
194	40° 30'	
193+77	9° 53'	
193	26° 52'	
192	28° 06'	
191	26° 42'	
190+43	15° 61'	
190	13° 40'	
189	24° 05'	
188+57	28° 31'	
188	27° 30'	

$$200+29 = 23+20 \text{ gms}$$

$$194+58 = e' 1746$$

Entrance to e' branch





Sta	Left	Right
219+77.5	20° 57'	
219		29° 41'
218.		28° 58'
217	6° 56'	
216+47	43° 18'	
216	53° 53'	
215+58		44° 33'
215		42° 30'
214		38° 37'
214		35° 49'
213		29° 45'
212		26° 49'
211		21° 57'
210		15° 30'
209		18° 20'
208+06	25° 35'	
208	26° 27'	
207	1° 45'	
206+30		153° 57'
206		155° 38'
205		151° 58'
204		139° 07'

Entrance to a' branch  $\triangle$



210+47 = b'+94

intersection b'

Entrance to L' branch  $\triangle$

208+06 = 1+67 d'

Entrance to d' canyon  $\triangle$

d'

72°

Fig 17





Sta	Left	Right			
237	9° 18'				
236		2° 26'			△ ✓
235	2° 25'				
234	9° 06'				
233	00° 00'	00° 25'			△
232	1° 22'				
231	5° 52'				
230	11° 10'				
229	24° 58'				△
228	29° 58'				
227	32° 10'				
226	29° 53'				
225+46	27° 39'				△
225	27° 49'				
224+50	24° 12'				△
224	15° 38'				
223+76		10° 58'			△
223		11° 45'			
222	28° 43'				
221+57	44° 44'				
221	54° 47'				
220	59° 50'				

221+57 = 2+69 a' branch intersection



B M

Sta	Left	Right			
256		6° 27			
255		4° 23			
254		2° 17			
253		0° 46			
252	2° 14				
251	43° 22				△
250	41° 26				
249	7° 03				△
248	10° 02				△
247	43° 31				△
246	31° 30				
245+77	58° 03				△
245+36	37° 12				
245	28° 32				△
244+20		8° 37			△
244		9° 00			
243		7° 20			
242		3° 52			
241	1° 37				
240	4° 46				
239	1° 20				
238	10° 39				△



Pln	Left	Right
273	3° 34	
272	10° 16	
271	33° 22	
270	21° 41	
+58	35° 27	
269	28° 45	
+63	29° 44	
268		31° 00
267		30° 34
266		24° 50
265		24° 48
264	39° 55	
+44		135° 49
263		127° 04
262		89° 57
261		31° 38
260		4° 54
+89		1° 45
259	5° 52	
258		8° 30
257		7° 05

△

$4 \frac{8}{10}$

△

$5 \frac{25}{100}$

△

$4 \frac{8}{10}$

△

$4 \frac{8}{10}$



$4 \frac{8}{10}$

259 + 89 = 12 + 46 d. branch intersection

△

$3 \frac{50}{100}$



Continued on — Page

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

286	29°55'	
-----	--------	--

+79		21°19'
-----	--	--------

285	25°58'	wrong deflection
-----	--------	------------------

284	37°05'	
-----	--------	--

+53	50°51'	
-----	--------	--

283	46°08'	
-----	--------	--

282	14°05'	
-----	--------	--

281	19°00'	
-----	--------	--

+34	43°54'	
-----	--------	--

280	36°42'	
-----	--------	--

+64		30°32'
-----	--	--------

279		31°51'
-----	--	--------

278		28°55'
-----	--	--------

277		30°18'
-----	--	--------

+34		32°25'
-----	--	--------

276	10°18'	
-----	--------	--

+27	29°23'	
-----	--------	--

275	37°13'	
-----	--------	--

+39	40°22'	
-----	--------	--

274	30°03'	
-----	--------	--

273+60	7°46'	
--------	-------	--

283+53 = 2+16 a' Branch Intersection

Entrance to a' △ Canyon

Entrance for f △ Canyon

275+27 = 4+82 E. Branch Intersection

△

△

△

△

△

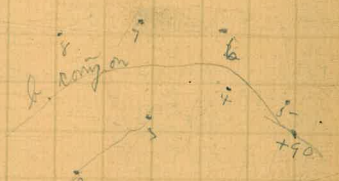
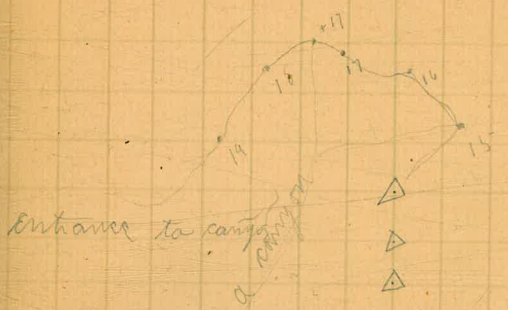


120 contour East side

Sta Left Right

17	17° 30'	
16	2° 39'	
15	27° 27'	
14	74° 47'	
13	40° 03'	
12	13° 46'	
11	11° 57'	
10	16° 50'	
9	32° 15'	
8	49° 58'	
7	63° 43'	
6	78° 45'	
5	92° 55'	
4+90	94° 41'	
4	84° 05'	
3	80° 52'	
2	79° 46'	
1	95° 26'	

185+48.5 X



from 0 to sta. 1 = 101.4 ft  
 Starting at sta. 185+48.5 =  $\odot$  for right sta 183  
 looking East.



Sta. Left. Right

36+75	1° 25'	
36	5° 25'	
35	8° 59'	
34	11° 46'	
33	12° 35'	
32	12° 04'	
31	10° 28'	
30	15° 09'	
29	2° 26'	
28	8° 10'	
27	20° 12'	
26	20° 09'	
25	32° 10'	
24	52° 01'	
23+01.7	84° 39'	
23	84° 21'	
22	79° 36'	
21	78° 12'	
20	75° 16'	
19	61° 30'	
18	40° 28'	
17+17	22° 46'	

Intersection to line



from station 23+01.7 to station 24 = 39.7 ft  
 Entrance to canyon  $\triangle$



Sta Left Right

53		32° 40
52		25° 04
51		45° 16
50+59		48° 18
50		32° 05
49		29° 25
48+70.5	140° 43	
48	138° 05	
47	122° 42	
46	122° 40	
45	101° 56	
44	97° 09	
43+94	96° 06	
42	62° 27	
42	74° 05	
41	48° 30	
40+107	41° 47	
40	40° 25	
39	20° 45	
38+92	20° 54	
38	6° 10	
37	00° 39	



from sta 48+70.5 to sta 49 = 35.2 ft





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

73		11° 8'
----	--	--------

72		9° 54'
----	--	--------

71		8° 22'
----	--	--------

<del>70</del> +60.5		65° 14'
------------------------	--	---------

69+49.3		24° 25'
---------	--	---------

69		16° 54'
----	--	---------

68		8° 51'
----	--	--------

67		0 22'
----	--	-------

66		23° 45'
----	--	---------

65		32° 25'
----	--	---------

64+68		35° 15'
-------	--	---------

64		32° 00'
----	--	---------

63		33° 15'
----	--	---------

62		33° 03'
----	--	---------

61		37° 00'
----	--	---------

60		32° 30'
----	--	---------

59		30° 26'
----	--	---------

58		10° 00'
----	--	---------

57	41° 00'	
----	---------	--

56	21° 14'	
----	---------	--

55		5° 28'
----	--	--------

54		17° 10'
----	--	---------

From Sta 69 + 49.3 to Sta 70 = 60.5

△

△

△

△

△

△

△

△

△



Mc Mully

Sta LEFT RIGHT

	Left	Right
4	55° 20'	
3	39° 20'	
2	31° 37'	
1	26° 18'	
0	28° 29'	
87+15-9	10° 35'	
87	11° 12'	
86	14° 5'	
85	13° 35'	
84	9° 5'	
83	5° 8'	
82		28° 22'
81	43° 8'	
80	34° 20'	
79	2° 15'	
78		19° 9'
77+60		25° 15'
77		21° 23'
76		19° 48'
75		4° 32'
74		8° 18'

This Sta, includes Sta, 142+21,5 on Park Boundary  
 This Sta, is 1 ft South of Sta, 144 on Park Boundary



## Sta LEFT HEIGHT

Sta	LEFT	HEIGHT
23		3° 50'
22		6° 40'
21		9° 25'
20		32° 10'
19+71		41° 8'
19		34° 20'
18		50° 10'
17		23° 32'
16	38° 43'	
15	28° 53'	
14		10° 22'
13+13		31° 3'
13		33° 8'
12		61° 47'
11		62° 35'
10		21° 35'
9		6° 30'
8	129° 27'	
7	126° 19'	
6	107° 14'	
5	80° 49'	

△

△

△

In Gaussing between

Sta 10 from Sta 16 -

Sta 7 means 10° 45'

to the right.

~~△~~

△

△



H. Wilson

Sta LEFT FLIGHT

5+50	13° 24'
5	16° 31'
4	18° 11'
3	51° 19'
2	50° 57'
1	46° 54'
0	60° 50'
35+98	18° 16'
35	25° 51'
34	66° 29'
33	61° 00'
32	25° 16'
31	9° 35'
30+76	6° 00'
30	9° 25'
29	24° 53'
28	21° 30'
27	44° 20'
26	36° 47'
25	11° 10'
24	3° 5'

Sta 5+50 = 120 + 02<sup>3</sup> Park boundary

100 of 100 contour East side  
 Sta 0 = 125 + 95.5 Park boundary East

35+98 = 126 + 37.5 East boundary park

East boundary park  
 Sta 131 = 125 + 86 X

20° 26'

△

△

△





Sta.	Left	Right
1+48	12° 07'	
1	15° 30'	
0	3° 59'	

1+49 = 118 of Park boundary

0 = 119 + 43 Park boundary





## 120' Contour west side

Franklin (Transit)

25

Sta	Left	Right
300	18° 06	
299	20° 46	
298	6° 31	
297		108° 58
296		107° 03
295		91° 41
294		10° 14
293	18° 02	
+33	25° 45	
292	29° 05	
291	32° 42	
290		73° 28
+83		76° 37
289	14° 16	
+71	23° 12	
288	16° 28	
+89	33° 16	
+34.5		15° 39
287		16° 06
+74		18° 21
286x24	37° 35	

292+33 = 12+51 f branch intersection

288+71 = 1+51 B. branch intersection

Entrance to B. canon



No	Left	Right
+86	59°40	
+31	12°30	
313	11°36	
312	14°38	
+23	12°40	
311	11°11	
310	10°56	
309	16°33	
+39	12°21	
308	12°28	
+49		22°58
307		23°12
306		19°30
+55		9°14
305	7°45	
304	30°06	
303	30°42	
302	25°33	
+54	26°46	
301	71°53	
300+53	21°12	

Entrance to k  $\Delta$  branch $\Delta$  $\Delta$  $\Delta$  $\Delta$  $\Delta$  $\Delta$ 

304 = 4+66 k" branch intersection

Entrance to k" canon  $\Delta$  $\Delta$



120' Contour west side

27

Phi. Left Right

326 34°31

+46 165°31

325 152°37

324 117°52

323 35°13

+26 2°00

322 11°18

+86 10°16

321 19°22

+35 32°26

320 32°50

+51 9°08

319 3°02

318 7°32

317 25°24

316 26°45

+45.5 2°42

+34 82°55

315 65°03

+44 6°58

314 11°03

East side of R.R. fill  $\triangle$   
West side of R.R. formation

322+26 = 4+91 L. canon intersection

Bottom of R.R. fill W. side  $\triangle$   
Bottom of R.R. fill East side. Entrance to L. branch  
Bottom of R.R. fill East side

Top of R.R. cut. West side  $\triangle$

314+44 = 2+54 R. Canon. Intersection







Stn	Left	Right
+41		5° 38
10		8° 21
9		6° 26
8		14° 27
7		11° 48
+23 <sup>5</sup>		4° 28
6		2° 46
5		11° 12
4		18° 38
3	65° 29	
2	66° 30	
1	66° 39	

0 = 191 + 70<sup>±</sup> X
$$\begin{array}{r} 191 + 70 \\ 175 + 43 \\ \hline 6 + 22 \end{array}$$

10 + 41 = 2 + 20 D. Canon    Intersession = Stn. 19  
on 20' contour line

Entrance to  $\Delta$  canon

Set up on Stn. 0 = 191 + 70<sup>±</sup> South line  
of Park boundary. Back sight to Stn.  
190 + 90 Park boundary South line looking East



Stn. Left Right

16	8°25	
+72 <sup>s</sup>	12°09	
15	22°48	
14	21°37	
13	26°16	
12	35°41	
11	4°40	
10	11°34	
9	26°39	
+26	14°53	
8	8°27	
+58		5°22
7		4°36
6		3°35
5		0°12
4	3°34	
3	7°86	
+51	50°35	
2	56°16	
1	56°58	

0 = 197+33<sup>s</sup>

$$\begin{array}{r} 197+33 \\ 191+70 \\ \hline 5+63 \end{array}$$
15+72<sup>s</sup> = 14+89 6 Canon Intersections

4 3/2

From Stn. 11 to Stn.  $\Delta$  12 = 96 ft. Entrance to  
C. canonGrade level center of R.R.  
West edge of R.R. $\Delta$  $\Delta$ Set up on Stn. 0 = 197+33<sup>s</sup> South line of  
Park boundary. Back sight to Stn. 198+90  
Park boundary South line looking East



20 Contour West side

31

Stn	Left	Right			
-----	------	-------	--	--	--

214+38  
208+90  
4+49

214+27  
213+35  
1+49

19  
18  
17

33°58'

8°45'

4°47'

Stn. 19 = 2+20 D Canon Intersection



140 contour

Station (Transit)

22

Sta Left Right

1 22° 47'

1 = 18 + 02.3

18 + 02.3 = 0 of 140 ft Δ contour

17

16

15

14

13

12 + 20 4° 30' Right

Δ

11

10

9

8

7

6

5

4

3

2

1

207 X 102° 00' Left

Starting from sta 207<sup>x</sup> south boundary  
of Park. backsight to 215<sup>x</sup> "  
turned 102° 00' left



140 contour

Sta Left Right

21		131° 02'
20		129° 50'
19		126° 15'
18		121° 14'
17		115° 25'
16		109° 40'
15		100° 15'
14		88° 41'
13		77° 20'
12		65° 37'
11		54° 10'
10		46° 53'
9		38° 02'
8		33° 08'
7+97		33° 02'
7		30° 34'
6+37		27° 28'
6		23° 38'
5		14° 42'
4		13° 14'
3		12° 56'
2		16° 58'

7+97 = 26+14.5 B canyon intersection





Hankas

Sta Left Right

38+83 6° 20'

38 4° 10'

37 10° 41'

36 21° 45'

35 23° 16'

34 39° 50'

33 25° 13'

32+58 73° 04'

32 57° 35'

31+47 4° 09'

31 3° 12'

30 11° 10'

29 22° 33'

28 35° 49'

27 48° 52'

26 61° 35'

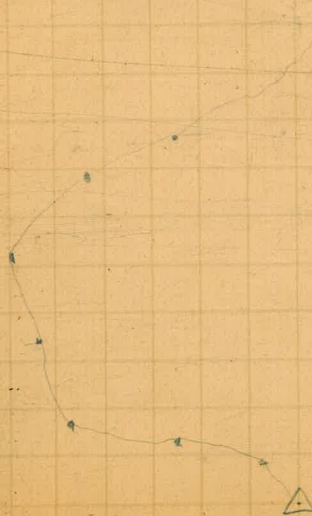
25 67° 42'

24 72° 48'

23 67° 25'

22 34° 15'

21+85 130° 32'





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

59		26° 35'
58		24° 28'
57		12° 12'
56	2° 27'	
55	12° 07'	
54	14° 55'	
53	15° 23'	
52	19° 10'	
51	19° 15'	
50	21° 20'	
49+88	21° 39'	
49	23° 10'	
48	28° 48'	
47	30° 50'	
46	35° 18'	
45	41° 38'	
44	49° 06'	
43	56° 32'	
42	62° 48'	
41	67° 48'	
40	75° 10'	
39	42° 12'	

$$49+88 = 16+16^3$$

49+88  
+16  
+168  
canyon

c. canyon

21° 43'

39+88



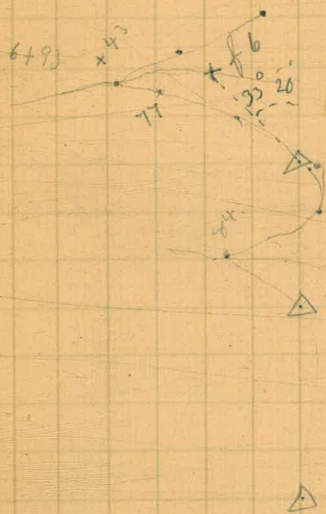




140 contour

Sta Left Right

90+40	29° 28'	
90		13° 52'
89+57		15° 35'
89		2° 14'
88	36° 05'	
87+43	53° 30'	
87	54° 32'	
86	54° 04'	
85+71		10° 40'
85		11° 17'
84	53° 02'	
83+27	16° 31'	
83	8° 43'	
82	12° 53'	
81	24° 11'	
80+61	29° 22'	
80	29° 05'	
79	29° 33'	
78	29° 57'	
77	31° 14'	
76	30° 58'	



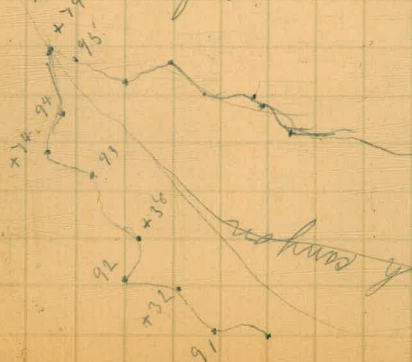


140 Mountain

Sta.	Left	Right
103	14° 59'	
102	29° 53'	
101	29° 42'	
100	31° 02'	
99		67° 33'
98		40° 42'
97+63		32° 21'
97		28° 26'
96+84		27° 16'
96+39		19° 30'
96		15° 00'
95+64		9° 10'
95		3° 44'
94+79		2° 22'
94	1° 00'	
93+74	3° 28'	
93	2° 12'	
92+38	5° 56'	
92	13° 18'	
91+32	11° 35'	
91	23° 06'	

94+79 = 97+43 hi canyon

intersection





## 140 ft Contour

Sta Left Right

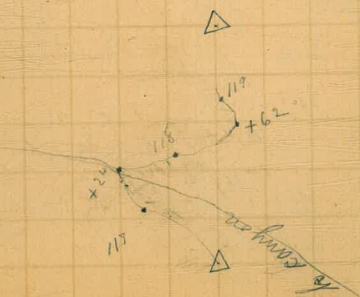
115	11° 55'	
114+52		18° 01'
114		11° 16'
113		7° 20'
112+52		15° 39'
112		14° 18'
111+54		2° 29'
111	11° 14'	
110+30	14° 24'	
110	21° 26'	
109+67	27° 55'	
109+22	37° 30'	
109	37° 03'	
108+61	32° 19'	
108	35° 48'	
107+55	41° 33'	
107	49° 33'	
106+62		2° 52'
106		00° 58'
105	3° 25'	
104	8° 18'	





140 contour

Sta.	Left	Right
131	4° 05'	
130+63	12° 03'	
130	28° 20'	
129+58	31° 10'	
129	27° 08'	
128	64° 50'	
127	66° 10'	
126+31	16° 54'	
126	9° 10'	
125	6° 52'	
124	7° 00'	
123	6° 28'	
122	8° 28'	
121	18° 00'	
120	23° 33'	
119		23° 45'
118+62		29° 20'
118		20° 16'
117+24	35° 16'	
117	36° 35'	
116+57	12° 41'	
116	11° 20'	

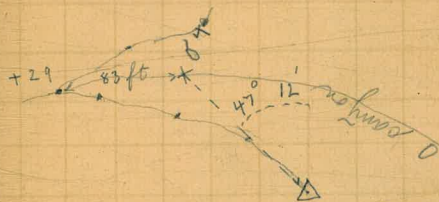




140 ft. contour

Sta. Left Right

144	8° 57'	
143	40° 33'	
142+29	53° 38'	
142	52° 00'	
141	50° 43'	
140	48° 23'	
139+92	31° 41'	
139	30° 16'	
138	34° 45'	
137+71	36° 30'	
137+17	46° 15'	
137	44° 55'	
136+56	39° 45'	
136	39° 59'	
135	39° 40'	
134+40	100° 23'	
134	101° 38'	
133	58° 08'	
132+57	30° 00'	
132	10° 07'	
131+18	1° 30'	



$$131+18 = a' 1$$



140 contour line

Sta Left Right

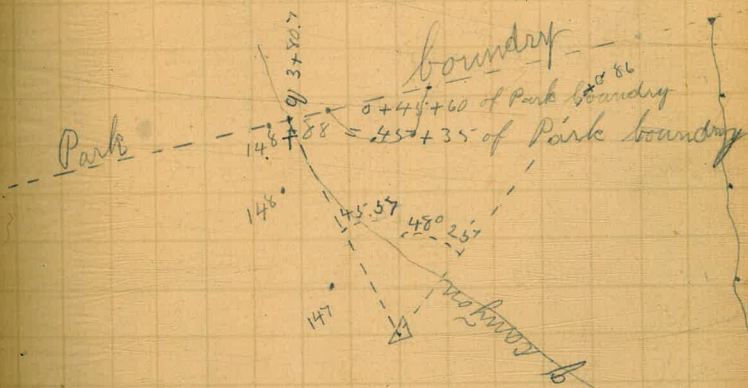
6		114° 40'
5		119° 20'
4		110° 25'
3		97° 17'
2		82° 13'
1		65° 10'
0		49° 00'
1+61		00 10'
1	15° 12'	
0+84	22° 11'	
0	40° 31'	
148+88	46° 24'	
148	48° 38'	
147	58° 35'	
146+74	12° 34'	
146	9° 21'	
145+38	3° 53'	
145	3° 39'	
144+20	2° 34'	

$6 = p 2 + 74$

Entrance to p canyon

$0 = 49 + 69$  of Park boundary

$1+61 = 46 + 92.9$  of Park boundary





Sta.	Left	Right
17+34	95° 48'	
17	80° 05'	
16+53	1° 41'	
16	2° 20'	
15	5° 05'	
14	16° 44'	
13+35	19° 10'	
13+20	30° 27'	
13	31° 52'	
12+70		148° 24'
12		146° 45'
11+28		143° 14'
11		142° 41'
10+31		141° 18'
10		138° 42'
9+56		135° 03'
9		136° 34'
8+61		136° 29'
8		133° 06'
7+46		128° 13'
7		123° 14'

9+56 = sta. 2 in canyon  
 Entrance to n canyon

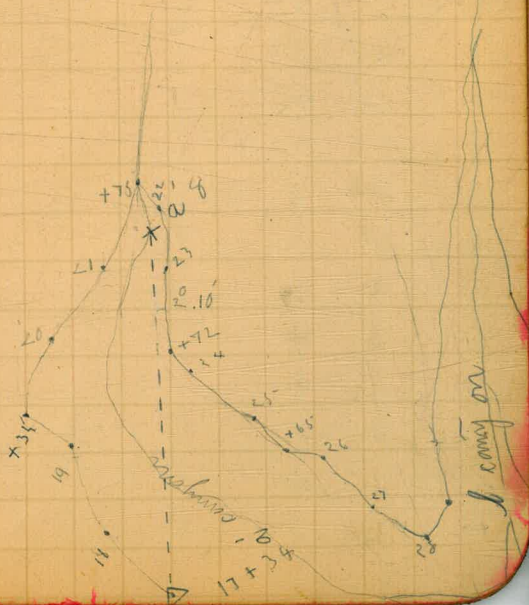


140 contour

Sta. Left Right.

31+32		3° 00'
31		1° 26'
30	5° 35'	
29+73	35° 51'	
29	22° 40'	
28+79		100° 49'
28		102° 24'
27		93° 00'
26		69° 24'
25+65		58° 01'
25		30° 45'
24		4° 39'
23+72	00° 00'	00° 00'
23	00° 45'	
22	1° 03'	
21+75	2° 54'	
21	5° 10'	
20	12° 45'	
19+35	22° 17'	
19	20° 53'	
18	28° 30'	

Entrance to canyon









140 contour line

Sta. Left Right

54	00° 03'	
53+52	14° 39'	
53+13	19° 18'	
53	26° 55'	
52+88	37° 27'	
52+29		4° 00'
52		5° 08'
51+26		5° 15'
51	5° 35'	
50+28	54° 11'	
50	54° 48'	
49+48	46° 22'	
49	38° 45'	
48+26	48° 02'	
48	34° 06'	
47+57	6° 03'	
47	6° 35'	
46	12° 02'	
45+84	18° 48'	
45+65	14° 45'	
45		13° 10'





140 *Mountain*

Sta. Left Right

68	56° 40'	
67	47° 10'	
66+49	4° 51'	
66	5° 35'	
65	2° 53'	
64	10° 43'	
63	5° 22'	
62	1° 45'	
61	57° 27'	
60+38	26° 26'	
60	17° 08'	
59+60	16° 40'	
59	16° 06'	
58	24° 36'	
57+72	28° 56'	
57	13° 34'	
56+88	135° 32'	
56	131° 10'	
55	78° 49'	
54+91	72° 10'	
54+66	63° 05'	

*Entrance to g. canyon*  $\triangle$ 



140

Contour line

Sta. Left Right

83+57 5° 57

83 5° 50

82 10° 41

81+63 27° 14

81 22° 12

80+37 30° 24

80 27° 44

79 50° 44

78 138° 21

77 134° 45

76 121° 37

75 52° 15

74 21° 05

73 16° 57

72 26° 47

71+46 31° 19

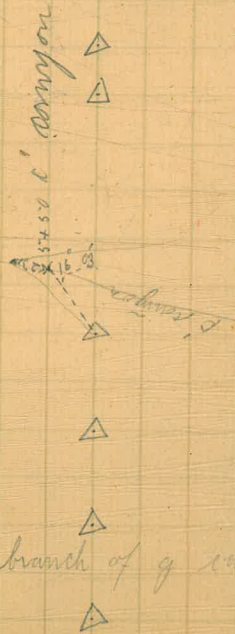
71 28° 03

70+56 27° 11

70 12° 43

69+75 27° 20

69 23° 13



Entrance to c' branch of g canyon



140 Continuation

Sta. Left Right

Continued in Book No. 3

96	21° 52'	
95+65	10° 56'	
95		7° 48'
94+49		9° 57'
94	7° 57'	
93+72	30° 40'	
93	9° 13'	
92	10° 08'	
91	11° 37'	
90	15° 15'	
89+74	14° 02'	
89		89° 50'
88+48		93° 45'
88		82° 50'
87		11° 46'
86+13	7° 35'	
86	11° 18'	
85	21° 47'	
84+52	39° 16'	
84	33° 01'	





12.30  
  .02  

---

12.28  
11.78  

---

24.06  
3.

8

90

95

93

94

95

93+

93

92

91

90

89-

89

88

88

87

86-

8

85

84

84

13+52.3 43° 53' Lexx



2+200

2.80  
 2.80  
 2.80  
 2.70  
 ---  
 11.20  
 33  
 ---  
 11.53

13.523  
 11.88  
 ---  
 1.993  
 1.731  
 ---  
 3.724

~~7.70~~  
 124.76  
 4.19  
 120.77  
 43° 43' 25"  
 4.52

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	80
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	79
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	78
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	77
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	76
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	75
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	74
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	73
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	72
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	71
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	70
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	69
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	68
14	97.03	24.19	96.92	24.62	96.81	23.94	96.70	25.46	67
15	96.59	25.88	96.48	25.30	96.36	26.72	96.25	27.14	66
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	65
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	64
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	63
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	62
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	60
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	59
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	58
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	57
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	56
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	55
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	54
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	53
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	52
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	50
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	49
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	48
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	47
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	46
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	45
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	44
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	43
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	42
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	40
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	39
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	38
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	37
45	70.71	70.71							36
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
Degrees.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.

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