

LEVEL ^{AND} CONTOUR LINES
IN
CITY PARK.

AUGUST 1887.

2

F.B. 621

621

Table 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

Handwritten notes:
 4.7 + 20
 265.30
 4.2 + 50
 1.80 263.50
 m.s.
 263.29
 7.3.25439

Level Notes To
Brick Yard Canyon

Weather Level
1/19/87

Mittler Rod

Sta	+	HI	-	Elev
B.M.				105.28
	1.04	106.32		
T.P			11.65	94.67
	0.62	95.29		
Cent.			9.77	85.52
A. I.T.P			11.06	84.23
	3.42	87.65		
A ₂			3.5	84.15
A ₃			7.1	80.55
A. 4			10.2	77.45
A. 5 T.P			9.54	78.11
	9.55	87.66		
A ₆			8.5	79.10
A ₇			7.4	80.26
A. 8			6.0	81.60
A. 9			4.3	83.30
A. 10			3.6	84.06
B.			1.08	86.58
A. 11 T.P			14.8	86.18
	10.92	97.10		
A. 12			9.00	88.10

Brick Yard Canyon

1

Remarks

S.W. cor. A. x 12th St. Sp.

Cent. 11th A. = Sta A.0.

Running thence generally northwesterly along
right bank of dry creek in Artesian Cañon
from Sta. A.6. (= Bank of creek)

Beach mark corner board of fence near
water trough

another Level 8/19/87 Mitten Rod

2

Sta	+	HI	-	Low
		97.10		
A. 13			7.00	90.10
A. 14			5.80	91.30
A. 15			2.10	95.00
A. 16 T.P.			0.14	96.96
	5.04	102.00		
A. 17			6.60	95.40
A. 18			5.00	97.00
A. 19			4.50	97.50
A. 20			3.20	98.80
A. 21			1.20	100.80
B.M. T.P.			2.16	99.84
	9.65	109.49		
A. 22			7.4	102.09
A. 23			5.5	103.99
A. 24			5.00	104.49
A. 25 T.P.			1.47	108.02
	5.22	113.24		
A. 26			7.6	105.64
A. 27			6.1	107.14
A. 28			4.7	108.54

(Remarks)

Joint of water pipe on N side of road.
opposite sta. 19.

(Lawther Level.) Miller Road

8/19/87

8/19/87.

3

85° (In the Shade.)

Remarks.

Sta + HI - Elev.

		113.24		
A. 29			4.00	109.24
A. 30			4.80	108.44
B.M.			0.00	113.24
	7.89	121.13		
A. 31			13.00	108.13
A. 32			8.70	112.43
A. 33			3.2	117.93
A. 34			0.00	121.13
T.P.			1.53	119.60
	6.72	126.32		
A. 35			7.10	119.22
A. 36			10.20	116.12
A. 37			9.00	117.32
A. 38			5.80	120.52
T.P.			4.02	122.30
	8.73	131.03		
A. 39			6.80	124.23
A. 40			6.20	124.83
A. 41			6.10	124.93
A. 42			3.70	127.33

in corner of Building near brick yard.

Leather Level

Millet Rod

Remarks

8/20/87

Sta	+	H.I	-	Elev
		131.03		
T.P			0.73	130.30
	12.22	142.52		
A. 43			10.9	131.62
A. 44			3.50	139.02
A. 45			1.90	140.62
A. 46 T.P			7.09	135.43
	5.58	141.01		
A. 47			9.30	131.71
A. 48			8.50	132.51
A. 49			4.50	136.51
A. 50			4.60	136.41
A. 51			5.80	135.21
A. 52 T.P			7.41	133.60
	9.03	142.63		
A. 53			8.20	134.43
A. 54			5.50	137.13
A. 55 B.M			0.17	142.46
A. 56			0.00	142.63
T.P			0.19	142.44
	6.46	148.90		

Bench Mark near Draw.

Lawther Level

Miller Rod

5

8/20/87

Remarks

Sta	+	H.I.	-	Elev
		148.90		
A. 57			6.20	142.70
A. 58			7.60	141.30
A. 59			4.50	144.40
A. 60			5.80	143.10
A. 61 <u>BM.T.P.</u>			1.05	147.85
	10.75	158.60		
A. 62			9.8	148.80
A. 63			11.30	157.30
A. 64			10.20	148.40
A. 65			5.70	152.90
A. 66 <u>BM</u>			2.17	156.43
A. 67 <u>T.P.</u>			0.70	157.90
	5.75	163.65		
A. 68			5.80	157.85
A. 69			4.80	158.85
A. 70			2.40	161.25
A. 71 <u>BM.T.P.</u>			0.66	162.99
	9.15	172.14		
72			9.7	162.44
73			9.3	162.84

Bench mark on top of stake near door.

" " " " " " " " " "

" " " " " " " " " "

LAWTHER Level

Miller Rod.

6

8/20/87

Remarks.

No	+	H.I.	-	Ans	Remarks.
		172.14			
A74			6.70	165.44	
A75			2.60	169.54	
A76			2.50	169.64	
A77			0.40	171.74	
T.P.			4.49	167.65	
	11.23	178.88			
A78 B.M.			3.70	175.18	opposite <u>Drain</u>
A79			4.20	174.68	
A. 80 T.R.			0.03	178.85	
	9.77	188.62			
81			9.5	179.12	
82			7.80	180.82	
83			6.70	181.92	
84			5.60	183.02	
85			4.40	184.22	
85+56.5			4.80	183.82	85+56.5 = 10 m E Line
T.P.			2.90	185.72	
	11.89	197.61			
9. B.M.			9.00	188.61	Top Stake.

93 Lautner Level. Mittler Rod

7

8/22/07

No	+	H.I	-	Obs
B.M.				86.58
	11.81	98.39		
A. 14			7.2	91.19
B. 1 T.P.			0.12	98.27
	11.95	110.22		
B. 2			3.9	106.32
T.P.			0.75	109.47
	11.94	121.51		
B. 3.			7.70	113.71
T.P.			1.99	119.42
	11.05	130.46		
B. 4			9.5	120.96
B. 5			2.37	128.09
T.P.			0.16	130.30
	11.07	141.37		
B. 6.			6.00	135.37
T.P.			0.67	140.70
	11.57	152.27		
B. 7			8.70	143.57
B. 8 T.P.			0.96	151.31
	10.56	161.87		

corner board fence near water trough

1st Canyon to the Right

Lawther Level
8/22

Miller Rod

8

Remarks.

Sta	+	HI	-	Elv
		161.87		
B. 9			2.00	159.87
T.P			0.02	161.85
	11.94	173.79		
T.P			0.95	172.84
	12.15	184.99		
B. 10			9.50	175.49
B. 10+50			2.00	182.99
			1st Canyon to Left.	
B. M.				86.58
	10.28	96.86		
A. 14			5.70	91.16
C. 1.			7.20	89.66
C. 2			2.20	94.66
T.P			0.48	96.38
	11.10	107.48		
T.P			0.79	106.69
	11.13	117.82		
C. 3			10.3	107.52
T.P.			0.76	117.06
	12.11	129.17		

End Cany B.

cor. board fence near water trough

Lawther Level

Miller Rod.

9

8/22/07

Remarks.

Sta	+	H.I	-	Obs	
		129.17			
C. 4			7.80	121.37	
T.P			0.48	128.69	
	11.73	140.42			
C. 5			6.90	133.52	
T.P			0.17	140.25	
	11.63	151.88			
C. 6			7.70	144.18	
T.P			0.34	151.56	
	11.80	163.34			
B.M.			3.71	159.63	B. M. on 8 th x Cedar S.W. 2.
					Canyon D. Right of main Canyon A.
B. M.				99.82	B. M. on joint of Pipe opposite A. 19.
	6.12	105.96			
A. 18			8.9	97.06	
D. 1			5.5	100.46	D. Line.
D. 2			1.6	104.36	
D. 3 T.P			0.23	105.73	
	10.38	116.11			
D. 4			6.00	110.11	

Lawther Level

Miller Rod

10

8/22/87

Remarks.

Sta	+	HI	-	Elev
		116.11		
D. 5			3.5	112.61
D. 6 T.P			0.26	115.85
	11.35	127.20		
D. 7			8.60	118.60
D. 8			4.90	122.30
T.P			0.6	126.59
	12.31	138.90		
D. 9			10.50	128.40
D. 10			7.34	131.56
D. 11 T.P			3.12	135.78
B.M.			4.89	134.01
D. 11 T.P				135.78
	12.25	148.03		
D. 12			10.90	137.13
D. 13			7.70	140.33
D. 14 B.M			4.43	143.60
T.P			3.35	144.68
	11.89	156.57		
D. 15			10.2	146.37
D. 16			7.8	148.77

At the base of air hole Powder Magazine

Lauther Lovel

Miller Rod.

11

8/22/87

Remarks.

Sta	+	H.I	-	Elv
		156.57		
T.P.			5.98	150.59
	11.59	162.10		
D. 17			11.00	151.18
D. 18			5.7	156.48
D. 19 T.P.			3.09	159.09
	11.33	170.42		
D. 20			7.4	163.02
D. 21			4.3	166.12
D. 22 T.P.			1.59	168.83
	11.92	180.75		
D. 23			8.50	172.25
D. 24			4.40	176.35
B.M. T.P.			1.77	178.98
	9.90	188.88		
D. 25			9.3	179.58
D. 26			5.5	183.38
D. 27 T.P.			3.72	185.16
	12.32	197.48		
D. 28			8.8	188.68
D. 29 B.M.			5.63	191.85

near sta. 2.24.

Lawther Level Mitten Rod

8/22/87

Remarks.

12

Stn	+	H.I	-	Elev.
		197.48		
B. 30			4.00	193.48
T.P.			2.00	195.48
	12.41	207.89		
B. 31			10.80	197.09
B. 32			6.2	201.69
B. 33 T.P.			1.53	206.36
	12.35	218.74		
B. 34			3.9	214.84
T.P.			0.38	218.36
	11.52	229.88		
B. 35			6.3	223.58
T.P.			1.67	228.21
	11.46	239.67		
B. 36			7.30	232.37
T.P.			0.95	238.72
	10.77	249.49		
B. 37			6.90	242.59
T.P.			0.73	248.76
	12.39	261.15		
38			10.70	250.45

Taken on E. bottom.

Another Level. Miller Rod.

Remarks.

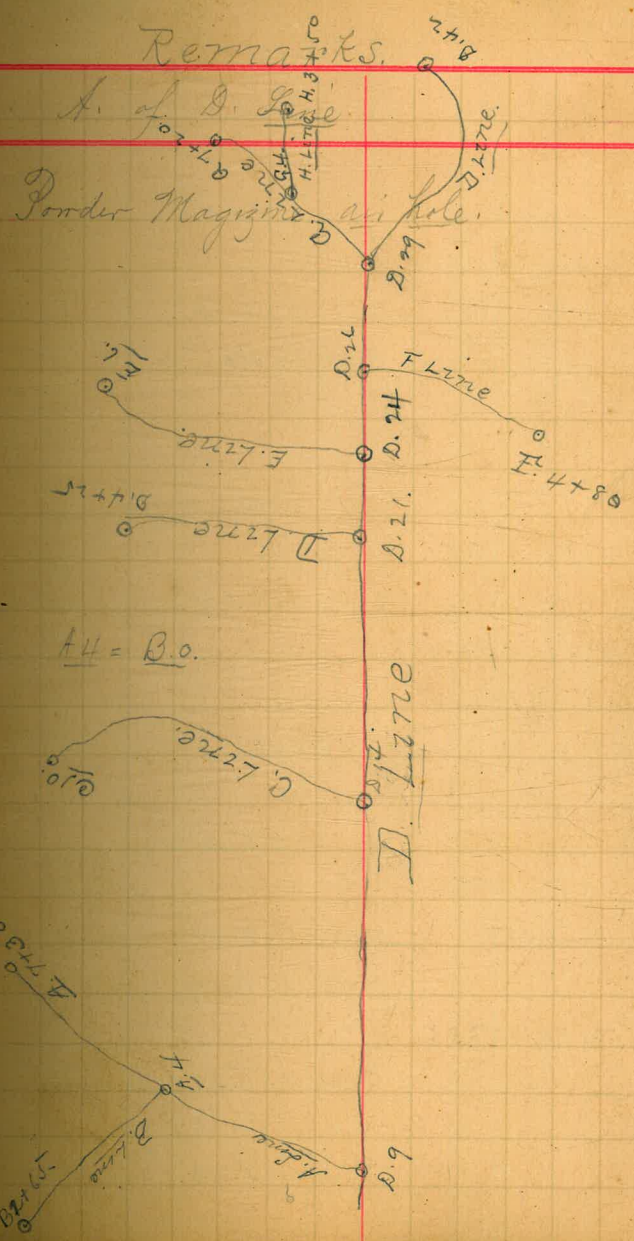
8/22/87

Sta.	+	H.I.	-	Elev.
		261.15		
D. 39			2.98	258.17
T.P.			0.30	260.85
	9.85	270.70		
D. 40			8.50	262.20
D. 41			3.30	267.40
T.P.			0.73	269.97
	7.32	277.29		
D. 42			5.72	271.57
B.M.			3.94	273.35

17 1/2' W. of station 42

Lawther Level 8/23/87 Miller Rod.

Sta	+	H.I	-	Elev.
B.M.				134.01
	4.78	138.79		
D.g			10.33	128.46
A. 1. T.P			2.47	136.32
	11.57	147.89		
A. 2 T.P			3.84	144.05
	11.58	155.63		
A. 3 T.P			3.82	151.81
	11.95	163.76		
A. 4 T.P. B.M			3.15	160.61
	12.37	172.98		
T.P			0.83	172.15
	11.73	183.88		
A. 5			10.00	173.88
T.P			.83	183.05
	11.67	194.72		
A. 6 T.P			0.99	193.73
	12.21	205.94		
T.P			0.87	205.07
	11.73	216.80		
A. 7			2.20	214.60



Lawther Level Miller Rod.

8/23/87.

Sta	+	H.I	-	Elev.
A. 7.				214.60
	11.63	226.23		
A. 7+30			4.1	222.13
<u>B.M.</u>			3.49	227.74
A. 4.				160.61
	11.39	172.00		
T.P.			2.02	169.98
	10.58	180.46		
B. 1.			5.6	174.86
B. 2+65				218.39
			C. of D Line	
D. 14 B.M.				143.60
	12.02	155.62		
C. 1			7.2	148.42
T.P.			0.63	154.99
	12.39	167.38		
C. 2			12.10	155.28
C. 3.			5.3	162.08
T.P.			1.65	165.73

Remarks.

on top of stake. A. 7+30

A. 4 = B. 0

Elev. of B. 2+65 taken from A. 7+30

D. 14 = C. 0.

(Lawther Level) 8/23/57 (Miller Rod.)

Remarks.

Sta	+	H.I	-	Elev.
<u>I.P</u>				165.73
	12.50	178.23		
C.4			8.3	169.93
<u>T.P</u>			1.53	176.70
	12.51	189.21		
C.5.			10.00	179.21
<u>T.P</u>			2.50	186.71
	10.97	197.69		
C.6			10.5	187.18
C.7 <u>T.P</u>			2.61	195.07
	12.52	207.59		
C.8.			5.8	201.79
<u>T.P.</u>			0.02	207.57
	10.65	218.22		
C.9			3.80	214.42
<u>T.P.</u>			0.54	217.68
	10.92	228.60		
<u>T.P</u>			0.47	228.13
	8.83	236.96		
C.10			4.03	232.93
<u>B.M</u>			3.48	233.48

(Larolker Level)

Mitten Rod.

17

8/23/87

Remarks.

Sta	+	H.I	-	Elev.	D. of D. Line.
B.M.				178.98	Near sta. <u>D. 24</u>
	4.20	183.18			
D. 1			5.7	177.48	
T.P			0.07	183.11	
	11.42	194.59			
D. 2. T.P			0.78	193.81	
	12.28	206.09			
T.P			0.53	205.56	
	11.93	217.49			
D. 3			4.70	212.79	
T.P			1.13	216.36	
	12.20	228.56			
T.P			0.01	228.55	
	11.72	240.27			
D. 4			2.12	238.15	
T.P			0.87	239.40	
	12.58	251.98			
D. 4 + 25			6.80	245.18	End of Canyon <u>D.</u>

(Larother Level.) Mittler Rod -

18

8/23/07

Remarks.

Sta	+	HI	-	Elev.	E of S. Line	E Canyon
B.M.				178.98		
	12.49	191.47				
E. 1			8.00	183.47		
<u>T.P.</u>			0.60	190.87		
	11.73	202.60				
E 2.			8.60	194.00		
<u>T.P.</u>			0.43	202.17		
	12.41	214.58				
E 3.			10.30	204.28		
<u>T.P.</u>			0.68	213.90		
	12.49	226.39				
E 4			5.3	221.09		
<u>T.P.</u>			0.52	225.87		
	12.30	238.17				
<u>T.P.</u>			0.30	237.87		
	12.29	250.16				
E. 5			10.00	240.16		
E 6.			1.30	248.86		

See sta. D. 24

Larother Lovell 8/24/87 (Miller Rod)

Remarks.

Sta	+	HI	-	Elev
B.M.				178.98
	12.46	191.38		
D. 26			8.00	183.38
F. 1.			3.20	188.18
T.P.			0.91	190.47
	12.05	202.52		
F. 2			7.00	195.52
T.P.			0.34	202.18
	10.07	212.25		
F. 3.			6.60	205.65
T.P.			0.61	211.66
	11.55	223.19		
T.P.			0.09	223.10
	11.38	234.48		
F. 4			6.00	228.48
T.P.			0.54	233.94
	11.82	245.76		
F. 4 + 80			0.30	245.46

Near sta. 24

D. 26 = F. 0.

LAWTHER LEVEL 8/24/87 (MILLER ROD)

Sta	+ H.I	-	Elev.
B.M. D. 29			191.85
	12.14	203.99	
A. 1.		7.80	196.19
A. 2.		4.00	199.99
<u>T.P.</u>		0.19	203.80
	10.19	213.99	
A. 3.		9.3	204.69
A 4		2.3	211.69
A. 4. B.M. & T.P.		1.72	212.27
	10.49	222.76	
A. 5		2.80	219.96
<u>T.P.</u>		0.81	221.95
	11.09	233.03	
A. 5.		2.40	230.63
<u>T.P.</u>		0.61	232.42
	11.93	244.35	
<u>T.P.</u>		0.08	244.27
<u>F</u>	10.11	254.38	
<u>T.P.</u>		0.21	254.17
	11.13	265.30	
A. 7.		8.80	256.50
A 7+20		3.70	261.60

Remarks.
G. Line of D.

D. 29 = A.O.

on top of stake.

on curb bed.

Lawther Level 18/24/87 (Miller Rod)

Remarks:

Sta.	+	HI	-	Elev.
		265.30		
B.M.			3.04	262.26
B.M. & 4.				262.27
	11.13	223.40		
H. 1.			5.4	218.00
T.P.			1.42	221.98
	10.83	232.81		
H. 2			2.70	230.11
H. 3 + 50				263.50
		E. Line		
B.M.				99.84
	9.68	109.52		
E. 1			9.2	100.32
T.P.			1.26	108.26
	10.92	119.18		
E. 2			8.90	110.28
T.P.			0.01	119.17
	11.80	130.97		
E. 3			6.6	124.37
T.P.			0.88	130.09

B.M. = Q 7+20 Top of stake.

Q. 4 = H.O.

Elev. taken from Q 7+20

Joint of water pipe.

(Wauchoer Level) 8/24/87 (Miller Rod)

Remarks.

Sta	+	H.I	-	Elev.
T.P				130.09
	11.63	141.72		
E4 T.P			0.35	141.37
	11.61	152.98		
T.P			0.32	152.66
	10.58	163.24		
E 5			8.90	154.34
T.P			0.52	162.72
	12.11	174.83		
E.6.			7.7	167.13
E.6+70			0.3	174.53
T.P			4.19	170.64
	2.00	172.64		
B.M.			13.00	159.64
"				

S. W. Aug 8th T. Cedar

Leather Level 8/24/87 (Miller Rod)

Remarks.

Sta	+	HI	-	Elev.	
B.M.				113.24	on corner building near ^{1st} brick yard
	8.59	121.83			
F. 1			13.20	108.63	
T.P.			0.22	121.61	
	11.53	133.14			
F. 2.			11.90	121.24	
T.P.			0.94	132.20	
	11.70	143.90			
F. 3.			4.40	139.50	
T.P.			0.37	143.53	
	11.17	154.70			
T.P.			0.64	154.06	
	12.06	166.12			
F. 4.			8.80	157.32	
T.P.			0.40	165.72	
	11.61	177.33			
T.P.			0.15	177.18	
	11.51	188.69			
F. 5.			8.40	180.29	
T.P.			0.36	188.33	
	11.28	199.61			

Lawther Level) 8/25/87 (Miller Rod)

Remarks:

Sta	+	HI	-	Elev
		199.61		
E 5+70			5.4	194.21
B.M.			4.92	194.69
			Q Line.	
B.M.				113.24
	11.55	124.79		
Q. 1.			6.80	117.99
T.P.			0.61	124.18
	11.02	135.20		
Q. 2			5.70	129.50
T.P.			0.28	134.92
	11.07	145.99		
Q. 3			8.20	137.79
B.M.		(8/25/87)	0.99	145.00
	10.53	155.53		
Q. 4			5.90	149.63
T.P.			0.49	155.04
	12.28	167.32		
Q. 5 T.P.			0.57	166.75
	12.17	178.92		
T.P.			0.39	178.53

on top of stake E 5+70

on corner building near 1st yard

(Lawther Level 8/25/87 (Miller Rod))

Remarks

Sta + HI - Elev.

TIP 178.53

11.04 189.57

Q.6. 3.70 185.87

TIP 0.05 189.52

11.58 201.10

TIP 0.12 200.98

11.40 212.38

Q.7 TIP 3.43 208.95

8.81 217.70

Q.8. 2.70 215.06

B.M. 2.11 215.65

on top of stake Q.8.

B.M. 113.24

on corner building near 1st yard

12.43 125.67

T₁ PHOTO 1.20 124.47H₀ = 4.36

11.65 136.12

H.1. 3.2 132.92

TIP 0.9 135.22

10.88 146.10

H.2 TIP 1.70 144.40

10.60 155.00

Leather Level 8/25/87 (Miller Rod)

Remarks.

Sta	+	HI	-	Elev.
		155.00		
T.P.			0.38	154.62
	11.70	166.32		
H.3.			11.00	155.32
T.P.			0.29	166.03
	12.92	178.95		
H.4.			8.3	170.65
T.P.			0.72	178.23
	11.96	190.19		
T.P.			0.64	189.55
	11.92	201.47		
H.5			8.90	192.57
T.P.			0.00	201.47
	12.44	213.91		
T.P.			0.11	213.80
	11.95	225.75		
H.6			5.60	220.15
T.P.			1.38	224.37
	8.13	232.50		
H.6+50			3.30	229.20
B.M.			2.82	229.68

on Top of Stake H.6+50.

Lawther Level 18/25/87 (Miller Rod)

Remarks

Sta + HI - Elev.

I. Line.

A.39 124.23

5.91 130.14

I.1. 12.50 117.64

I.2. 3.10 127.04

T.P. 11.04 129.10

11.87 140.97

I.3. 7.1 133.87

T.P. 0.49 140.48

10.72 151.20

I.4. 10.2 141.00

I.5 4.40 146.80

T.P. 0.31 150.89

9.65 160.54

I.6. 6.40 154.14

T.P. 0.18 160.36

12.52 172.88

I.7 8.2 164.68

T.P. 0.39 172.49

11.89 184.38

I.8. 10.80 173.58

T.P. 0.00 184.38

(Lawther Lerd 8/25/87 (Miller Rod.)

Remarks.

Sta	+	HI	-	Elev
T.P.				184.38
	12.28	196.66		
I.9.			11.00	185.66
T.P.			0.01	196.65
	9.79	206.44		
I.10			7.70	198.74
T.P.			0.02	206.42
	11.43	217.85		
I.11.			2.50	215.35
T.P.			0.05	217.80
	11.12	228.92		
T.P.			0.33	228.59
	11.62	240.21		
I.12.			10.50	229.71
I.13			.20	240.01

Lawther Level 8/25/87 (Miller Rod)

Sta.	+	H.I	-	Elev.
T.P.				130.30
	8.91	139.21		
A 43			7.60	131.62
J. 1			12.10	127.11
J. 2			16.00	123.21
J. 2+20			16.00	123.21
J. 2+25			4.3	134.91
T.P.			5.82	138.39
	11.41	149.80		
J. 3.			4.70	145.10
T.P.			0.49	149.31
	11.95	161.26		
J. 4. T.P.			0.01	161.25
	12.06	173.31		
T.P.			0.38	172.93
	12.10	185.03		
J. 5.			4.70	180.33
T.P.			0.02	185.01
	11.73	196.74		
T.P.			0.01	196.73
	11.96	208.69		

Remarks.

Near A. 43 Main Line. A. 43 = J.o.

A 43 = J.o.

(Lawther Level 8/25/87 (Miller Rod))

Remarks.

Sta	+	HI	-	Elev
		208.69		
J. 6.			10.20	198.49
T.P			0.02	208.67
	11.75	220.42		
J. 7			3.30	217.12
T.P			0.32	220.10
	12.36	232.46		
T.P			1.10	231.36
	8.58	239.94		
J. 8			7.00	232.94
J. 8 + 50			2.40	237.54
	9/24/87	K. Line		
T.P.				130.30
	9.31	139.61		
			8.00	131.61
K. 1 T.P			0.40	139.21
	12.49	151.70		
K. 2			4.70	147.00
T.P			0.84	150.86
	11.55	162.41		

T.P. Near A. 43.

Weather Level) 8/26/87 (Miller Rod)

Remarks

Sta	+	HI	-	Res
		162.41		
K.3.			7.60	154.81
T.P			0.00	162.41
	9.49	171.90		
K.4.			8.70	163.20
T.P			0.18	171.72
	9.85	181.57		
K.5.			8.20	173.37
T.P			0.49	181.08
	11.20	192.28		
K.6.			10.90	181.38
K.7.			3.70	188.58
T.P			0.20	192.08
	10.77	202.85		
K.8.			6.1	196.75
T.P			0.00	202.85
	12.12	214.97		
K.9			11.70	203.27
K.10			3.50	211.47
T.P			0.60	214.37
	12.49	226.86		

Lawyer Level 8/26/87 (Miller Rod)

Remarks.

Sta	+	H.I	-	Elv
		226.86		
K. 11.			7.20	219.66
<u>T.P.</u>			0.31	226.55
	11.31	237.86		
K. 12			5.70	232.16
<u>T.P.</u>			0.02	237.84
	11.10	248.94		
<u>T.P.</u>			0.12	248.82
	10.23	259.05		
K. 13.			5.60	253.45
<u>B.M.</u>			5.05	254.00
		L. Line		
<u>T.P.</u>				130.30
	12.38	142.68		
<u>T.P.</u>			0.19	142.49
	12.06	154.55		
L. 1.			2.50	152.05
<u>T.P.</u>			0.15	154.40
	11.70	166.10		
L. 2.			11.50	154.60
L2+65			6.80	159.30

on top of stake K. 13.

Larother Levels 8/26/87 (Miller Rod)

Remarks.

Sta	+	H.I	-	elv.
		166.10		
T.P			0.02	166.08
	12.49	178.57		
L2+80			9.60	168.97
L.3			8.60	169.97
T.P			0.11	178.46
	10.85	189.31		
L.4.			9.4	179.91
L.5			1.70	187.61
T.P			0.30	189.01
	12.01	201.02		
T.P			0.25	200.77
	11.68	212.45		
L.6.			8.20	204.25
T.P.			0.02	212.43
	12.07	224.50		
L.7			3.70	220.80
T.P			0.22	224.28
	11.78	236.06		
T.P			0.19	235.87
	10.95	246.82		

Lawther Level 18/26/87. (Miller Rod)

Remarks.

Sta	+	HI	-	Elev
		246.82		
<u>T.P</u>			0.19	246.63
	10.68	257.51		
<u>TP</u>			0.73	256.58
	7.11	263.69		
L.S.			4.60	259.09
			M. L ₂₇₂₀	
4.55 Bm				142.46
	5.70	148.16		
M. 1 <u>TP</u>			0.02	148.14
	10.68	158.82		
<u>T.P</u>			0.72	158.10
	10.82	168.92		
M. 2			12.20	156.72
M. 3.			1.40	167.52
<u>TP</u>			0.38	168.54
	12.49	181.03		
M. 4			2.30	178.73
<u>T.P</u>			0.08	180.95
	11.11	192.06		
<u>T.P</u>			0.19	191.87

Lawther Level 8/26/87 (Witter Rod)

Remarks.

Sta	+	H.I	-	Elev
<u>TP</u>				191.87
	12.38	204.25		
M.5.			5.80	198.45
<u>T.P</u>			0.22	204.03
	11.91	215.94		
<u>TP</u>			0.03	215.91
	12.05	227.96		
<u>TP</u>			0.12	227.84
	11.81	239.65		
M.6.			9.20	230.45
<u>T.P</u>			0.14	239.51
	12.23	251.74		
<u>T.P</u>			0.01	251.73
	11.82	263.55		
M.7			4.90	258.65
M 7+25			1.50	262.05

(Lawther Level) 8/26/87 (Miller Rod)

Remarks.

Sta	+	HI	-	Elev
A. 55 BM				142.46
	8.12	150.58		
N. 1			13.40	137.18
N. 2			10.40	140.18
N. 3			7.30	143.28
N. 4			4.80	145.78
N. 5			2.80	147.78
<u>TP</u>			1.45	149.13
	12.52	161.65		
N. 6			10.80	150.85
N. 7			7.60	154.05
N. 8			5.30	156.35
<u>TP</u>			0.28	161.37
	8.00	169.37		
N. 9.			9.4	159.97
N. 10			7.00	162.37
N. 11			5.00	164.37
<u>TP</u>			0.01	169.36
	11.39	180.75		
<u>BM</u>			10.62	170.13

on Rock oppo. sta. N. 9.

8/26/87

Remarks.

Sta	+	HI	-	Elev
		180.75		
N 12			12.80	167.95
N 13			9.3	171.45
N 14			4.2	176.55
T.P			0.01	180.74
	10.19	190.93		
N 15			11.50	179.43
N 15 BM		8/27/87	10.80	180.13
	10.92	191.05		
N 16			7.20	183.85
N 17			3.70	187.35
T.P			0.03	191.02
	8.98	200.00		
N 18			7.70	192.30
N 19			4.30	195.70
T.P			0.71	199.29
	9.98	209.27		
N 20			9.40	199.87
BM			0.00	209.27

Obs. taken near creek off sta.

Lawther Level 8/24/07 (Miller Rod)

Remarks

Sta	+	HI	-	Rev
		209.27		
N 21			5.20	204.07
TP			0.42	208.85
	1.75	217.60		
N 22			8.40	209.20
N 23			3.90	213.70
N 23 BM			3.18	214.42
TP			0.41	217.19
	11.28	228.47		
N 24			10.20	218.27
N 25			3.80	224.67
TP			0.28	228.19
	9.98	238.17		
N 26			9.20	228.97
N 27			2.10	236.07
TP			1.02	237.15
	12.39	249.54		
N 28			7.30	242.24
TP			0.48	249.06
	11.05	260.11		
N 29			8.50	

on top of stake.

Lawther Level 8/27/87 (Miller Road)

Remarks

Sta	+	HI	-	Elev
		260.11		
N 30.			2.80	257.31
TP			0.12	259.99
	11.27	271.26		
N 31			4.90	266.36
TP			0.30	270.96
	12.65	283.61		
N 32			5.00	278.61
TP			1.13	282.48
	7.99	290.47		
N 33			6.30	284.17
N 33+60			3.60	286.87
<u>BM</u>			3.00	287.47
				(B Line of II.)
<u>BM</u>				170.13
	3.90	174.93		
B 1.			16.40	157.63
B 2.			12.20	161.83
B 3			8.90	165.13
B 4.			5.40	168.63
<u>BMTTP</u>			0.03	174.00

Lawther Level) 8/27/87 (Miller Rod)

Remarks

Sta	+	HI	-	Elev
B.M.				176.00
	10.52	184.52		
B.5.			11.00	173.52
B.6.			4.60	179.92
T.P.			0.22	184.30
	12.41	196.71		
B.7.			11.10	185.61
B.8.			5.20	191.51
B.M.			4.61	192.10
T.P.			0.03	196.68
	11.70	208.38		
B.9.			11.1	197.28
B.10			4.70	203.68
T.P.			0.63	207.75
	12.19	219.94		
B.11			7.80	212.14
B.12 T.P.			0.18	219.76
	11.39	231.15		
B.13			2.40	228.75
T.P.			0.04	231.11
	10.70	241.81		

in Top of stake B.8.

Lawther Level 8/27/07 (Miller Rod)

Remarks

Sta	+	HI	-	Elv.
		241.81		
TP			0.04	241.77
	12.42	254.19		
B 14			11.60	242.59
TP			0.17	254.02
	12.36	266.38		
B 15			12.30	254.08
B 16			2.10	264.28
TP			0.15	266.23
	11.13	277.36		
B 17			0.00	277.36
		C Line		
B M				174.00
	12.40	186.40		
B 5			12.69	173.71
C 1			5.90	180.50
TP			0.62	185.78
	10.95	196.73		
C 2 TP			8.40	188.33
	8.68	197.01		
B M			0.00	197.01

B 5 = C 1

Bet C 2 & C 3

Leather Level 8/29/07 (Mittler Rod)

Remarks
C. of N. Line.

Sta.	+	HI	-	Elev
B.M				197.01
	12.49	209.50		
C. 3.			11.80	197.70
C. 4			2.70	206.80
T.P			0.17	209.33
	10.12	219.45		
C. 5			2.80	216.65
T.P			0.10	219.35
	12.40	231.75		
C. 6 T.P			0.35	231.40
	11.90	243.30		
T.P			0.63	242.67
	6.41	249.08		
C. 7			5.30	243.78
T.P			0.04	249.04
	10.30	259.34		
C. 8 T.P			0.95	258.39
	12.45	270.84		
T.P			0.04	270.80
	11.95	282.75		
C. 9			11.40	271.35
C. 10			2.50	280.25

Leather Level) 8/29/87 (Mitten Rod)

Sta + HI - Elev.

Remarks

D. Line of N.

B8 BM

192.10

on top of stake.

11.51 203.61

T.P. B1.

0.00 203.61

11.30 214.91

T.P.

0.22 214.69

11.22 225.91

D. 2.

7.80 218.11

T.P.

0.19 225.72

11.15 236.87

T.P.

0.11 236.76

12.05 248.81

D. 3.

6.10 242.71

T.P.

0.02 248.79

11.95 260.74

T.P.

0.52 260.22

8.58 268.80

D. 4

6.30 262.50

D4. BM

5.70 263.10

on top of stake.

Lawther Level 8/29/57 (Miller Rod)

Remarks

Sta + HI - Lvs.

E of D. line.

B 13. 228.75

B. 13 = E₀

12.01 240.76

T.P. 0.20 240.56

11.60 252.16

E. 1. 11.00 241.16

E₂ T.P. 0.34 251.82

11.95 263.77

T.P. 0.04 263.73

12.04 275.77

E₃ 8.40 267.37

T.P. 0.17 275.60

6.95 282.55

E. 4. 3.80 278.75

Lanther Level 8/29/87 (Miller Road)

Remarks.

Sta	+	HI	-	Elev
115 BM.				180.13
	12.59	192.72		
F.1.			8.50	184.22
F.2.			3.30	189.42
TP			0.03	192.69
	11.48	204.17		
F.3.			9.00	195.17
F.4			3.5	200.67
F.4. BM			3.20	200.97
TP			0.25	203.92
	10.76	214.08		
F.5			7.30	206.78
F.6.			0.60	213.48
TP			0.02	214.06
	12.41	226.47		
F.7			3.60	222.87
TP			0.20	226.27
	12.25	238.52		
F.8.			5.80	232.72
TP			0.15	238.39
	4.18	249.55		

on top of stake

Lawther Level 8/29/87 (Miller Road)

Remarks

Sta	+	HI	-	Elev
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		249.55		
F ⁹			5.50	244.05

Elev taken near stake by creek

TP			0.01	249.54
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11.27 260.81

F ¹⁰			2.50	258.31
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TP			0.02	260.79
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11.82 272.61

TP			0.00	272.61
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12.37 284.98

F ¹¹			8.10	276.88
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TP			0.03	284.95
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6.17 291.12

F ¹²			4.70	286.42
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F. 4. BM.				200.97
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F. 4 = R. 0

11.35 212.32

R. 1.			21.50	209.82
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TP			0.06	212.26
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11.31 220.57

TP			0.72	222.85
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12.00 234.85

(Lawther Level) 8/29/87. (Miller Rod)

Sta	+ -	H.I	-	Elev
		234.85		
G. 2.			8.00	226.85
IP			0.08	234.77
	12.06	246.83		
IP			0.06	246.77
	12.59	259.38		
G. 3			7.20	252.18
IP			0.01	259.37
	11.72	271.09		
IP			1.19	269.90
	8.74	278.64		
G. 4			6.40	272.24

Remarks.

8/30/87

Sta	+	HI	-	Elv.	H of N. Line.
B.M.				209.27	Near sta. 11.20. N ₂₀ = H ₀ .
	11.28	220.55			
H.1.			11.70	208.85	
TP			0.01	220.54	
	12.20	232.74			
H.2.			11.70	221.04	
TP			0.03	232.71	
	12.11	244.82			
H.3.			9.60	235.22	
TP			0.08	244.74	
	12.18	256.92			
H.4.			2.80	254.12	
TP			0.03	256.89	
	12.49	269.38			
TP			0.09	269.29	
	8.79	278.08			
H.5.			3.80	274.28	

5/30/87

Sta	+ HI	-	Elev
A. 55 BM			142.46
	12.50	154.96	
0.1		13.36	141.60
0.2		6.60	148.30
TP		0.09	154.87
	12.37	167.24	
0.3		2.50	164.74
TP		0.22	167.02
	11.80	178.82	
0.4 TP		0.04	178.78
	12.49	191.27	
TP		0.01	191.26
	12.29	203.55	
0.5		8.50	195.05
TP		0.18	203.37
	11.83	215.20	
0.6		5.50	209.70
TP		0.07	215.13
	12.38	227.51	
TP		0.01	227.50
	11.95	239.45	

O Line

A. 53 = 0

8/30/87

Sta	Sta	+	HI	-	Elev.
A. 53			239.45		
	0.7			6.20	233.25
	<u>IP</u>			0.90	238.55
0.1		8.01	246.56		
0.2				3.40	243.14
<u>IP</u>	07+70.				
0.3					
<u>IP</u>					
0.4					
<u>IP</u>					
0.5					
<u>IP</u>					
0.6					
<u>IP</u>					
<u>IP</u>					

72 7+30
 H.I. - 94.5
 222.54

485 | 227.59

2+65

9.2 | 218.39

4.51

13.2 | 134.96

11.39

12.62

7.03

16.10

160
 159.5 | 12.25

D. 21

from 84+25

E. 6.

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	88
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	87
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	86
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	85
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	84
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	83
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	82
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	80
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	79
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	78
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	77
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	76
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	75
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	74
15	96.59	25.88	96.48	26.30	96.35	26.72	96.25	27.14	73
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	72
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	94.83	31.73	94.69	32.14	70
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	69
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	68
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	67
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	66
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	65
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	64
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	63
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	62
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	60
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	59
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	58
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	57
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	56
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	55
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	54
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	53
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	52
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	50
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	49
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	48
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	47
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	46
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	45
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	44
45	70.71	70.71							43
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		

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