1855

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning
Roadway 16 feet wide. Side Slopes 1 on 1.
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be 30.6+(20—16)÷2 or 2 ft. added to 30.6 =32.6. For slopes of 1 on 1½ see inside of back cover.

1855

1851 – Milton

CITY ENGINEER'S OFFICE

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

Made in U. S. A.

Index

1 - 16	X Sections Frankfort from Milton to South
17-37	X sec ERIE, Milton to Littlefield
38- 51	" Littlefield Blvd to Fr. ft.
52 - 66	" Denver, Napier & Ly
67-	" Goldfield

Lt = East ℄ Rt = West 1

Xsec Frankfort St.
Milton to Littlefield
See Sketch 1590-2-3
1502-48-5x

Moore
Begg
Green
Robts.
5-24-48

W.O. 31510

+09	28' Lt	24" Palm	
1+09	30' Lt	10" Pep	
1+00			
+93	28' Lt	10" Pep	
+88	26 Rt.	℄ drive way	12 wide
+85	28' Lt	24" Palm	
+71	28' Lt	12" Pep	
0+60±	EC curb ret.		
+58	28' Lt	Palm 36"	

54.3	53.0	53.5	53.2	52.9	52.59	51.99	52.63
4.2	5.5	6.0	5.3	5.6	5.90	6.50	5.86
40	26	16	14		8 P	26 gut P	26 curb

52.01	52.51	52.51	52.17
6.48	5.98	598	632
26 curb gut.	31	36	40

54.2	53.3	52.7	52.39	51.78	52.36
4.3	5.2	5.8	6.10	6.71	6.13
40	26		8 P	℄C P	26 cb BC

℄ Mon. Frankfort & Milton 4.92 58.49 53.57 53.67 Walker

58.49

Frankfort

1+50			
+49	29	12"	Popl
+42	29'	Lt	24" Palm
2+17	28'	Lt	24" Palm
2+00			
+88	28'	Lt	24" Palm
+81	29.5		tel 3071454
+62	29'	Lt	24" Palm
1+50			
+36	28	Lt	24" Palm

58.49

58.4 Lt	57.7	54.6	54.3	53.84	53.79 Rt	53.87
0.3	0.8	3.9	4.2	4.65	5.20	4.62
40	28	16		8	9	26
				P	P	

	57.9	54.9	54.1	53.5	52.84	53.44
	0.6	36	4.4	5.0	5.65	5.05
	40	11		8	9	26
				P	P	

56.7	55.4	53.8	53.4	53.04	52.44	53.06
1.8	3.3	4.7	5.1	5.45	6.05	5.43
40	27	11		8	26	26
				P	9	
					P	

58.49

Frankfort

Fd HWM RP			6:39	55.03	5.13
3+82.05 ±		curb return			
+74	38"	18" Palm			
+69	43	24" Palm			
+53	34.3	Pole	TP 3931	01/810 T	
3+50	38' Lt	6" Pep			
TP	676	61.42	3.83	54.66	
3+44	28 Lt	12" Palm			
3+16	28 Lt	13" Palm			
3+00					
+76	26 Rt	Driveway	10' wide		
2+65	38' Lt	18" Palm			
		5849			

	℄		℄		℄		℄	
BM.	Napier & Galveston							
	58.7	58.5	57.3	56.0	55.6	55.05	54.47	55.04
	3.2	2.9	4.1	5.4	5.8	6.37	6.95	6.38
	40	30	33	9		8	9	cb
						Par	Par 26	
	58.5	57.0	55.7	55.3	54.67	54.80	54.78	
	2.9	4.4	5.7	6.1	6.75	7.22	6.64	
	40	22	9		8	9	cb	
					Par	Par 26		
				61.42				
	58.1	57.8	55.1	54.9	54.33	53.81	54.34	
	0.4	0.7	3.4	3.6	4.16	4.68	4.15	
	40	26	11		8	9	cb	
					Par	Par 26		
					53.61	54.15	53.89	
					4.88	4.34	4.60	
					26	325	40	
					curb			
					gut.			
				58 49				

Frankfort

5+50

4+82 ± EC of Curb return

4+73 28.5 Lt Hydrant

4+70 ℄ Line Napier

+61 25' Lt 4333.76 H Tel

4+30 ℄ Napier

4+04 28 Lt 24" Palm

3+90 N Line of Napier

3+82.05 ±

61.42

Lt

61.0 60.8 58.0 57.6 56.3 56.0 55.67 55.09 55.73
04 0.6 3.4 3.8 5.1 5.4 5.75 6.33 5.69
40 27 20 13 12 8 26 cb
P P9

60.4
1.0
40

59.9 58.2 58.2 56.8 56.0 55.48 55.44 cb. 54.91 gut.
1.5 3.2 3.2 4.6 5.4 5.94 5.98 6.51
24 21 12 10 8 269 cb
Par Par

60.5 60.5 58.7 57.9 56.7 56.0 55.47 54.65 55.22
0.9 0.9 2.7 3.5 4.7 5.4 5.95 6.77 6.20
40 28 21 11 9 8 9 cb
Par 29

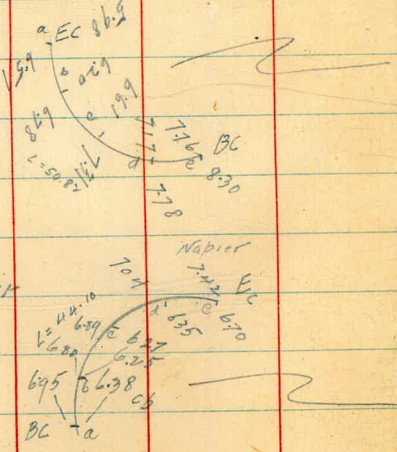
59.2 58.2 56.4 55.61 55.08 54.62
2.2 3.2 5.0 5.81 6.34 6.80
40 26 8 26 40
Par Par Par

55.44 54.81 55.24 54.64 54.81 54.11 54.25 53.64 53.66 53.12
5.98 6.81 6.20 6.78 6.61 7.31 7.17 7.78 7.76 8.30
c a 9 c b 9 c c 9 c d 9 c e 9

58.3 58.5 57.1 56.2 55.7 55.16 54.62 55.16
3.1 2.9 4.3 5.2 5.7 6.26 6.80 6.26
40 30 21 10 8 9 26.7 cb
Par

55.04 54.47 55.17 54.62 55.16 54.53 55.07 54.38 54.72 54.00
6.38 6.95 6.25 6.86 6.27 6.89 6.35 7.04 6.70 7.42
c a 9 c b 9 c c 9 a d 9 a e 9

61.42



Frankfort

7+50				
+12		Driveway	11.5 Rt	
T.P.	6.10	62.55	4.97	56.45
7+00				
6+50				
6+00				
5+86		℄ Drive conc	11.5 Rt	

61.42

59.6 3.0 40 | 58.4 4.2 24 | 57.5 5.1 11 | 58.9 5.7 9 | 56.6 6.0 | 56.49 6.06 8P 6.8 26 | 55.85 6.70 9 6.25 33 | 56.55 6.00 C 56.30 55.30. 7.25 40

62.55

59.7 1.7 40 | 58.6 2.8 24 | 57.8 3.6 20 | 57.4 4.0 12 | 56.5 4.9 10 | 56.2 5.2 | 56.35 5.17 8 P | 55.58 5.84 9 P 26 | 56.22 5.20 C

60.0 1.4 40 | 58.8 2.6 25 | 57.8 3.6 20 | 56.7 4.7 9 | 56.2 5.2 | 56.08 5.34 8 P | 55.54 5.88 9 P 26 | 56.09 5.33 C

60.4 1.0 40 | 60.2 1.2 26 | 57.9 3.5 21 | 57.3 4.1 12 | 56.2 5.2 10 | 56.1 5.3 | 56.20 - ? 5.22 8 Par | 55.36 6.06 9 Par 26 | 55.94 5.48 CB

55.35 6.07 26 curb in gut | 55.94 5.48 31 | 55.99 5.43 35 | 55.20 6.22 40

61.42

Frankfort

Station	Offset	Remarks
10+0		
9+50		
+10	26 R	Driveway 9' op
9+00		
8+90	26 Rt	Driveway 7' op
8+50		
+16	27 Lt	2-4" Fig
8+00		
+78	27 Lt	4" Fig
7+59	26 Rt	Driveway 11' wide
+58	27 Lt	8" Fig

62.55

Lt ℄ Rt

Station	Readings (elev. / rod / dist.)
10+0	60.6 / 2.0 / 40; 60.4 / 2.2 / 35; 57.6 / 5.0; 57.33 / 5.22 / 8 P; 56.70 / 5.85 / 9 26; 57.27 / 5.28 / C
9+50	60.5 / 2.1 / 40; 60.0 / 2.6 / 25; 58.5 / 4.1 / 20; 58.1 / 4.5 / 11; 57.4 / 5.2; 57.17 / 5.38 / 8 P; 56.70 / 5.85 / 9 26; 57.26 / 5.29 / c
+10	56.64 / 5.91; 57.01 / 5.54 / 33; 56.53 / 6.02 / 40
9+00	60.2 / 2.4 / 40; 58.4 / 4.2 / 15; 57.1 / 5.5; 57.13 / 5.42 / 8 P; 56.61 / 5.94 / 9 26; 57.15 / 5.40 / C
8+90	56.7 / 5.9 / 26 curb gut; 57.10 / 5.45 / 32; 56.65 / 5.90 / 40
8+50	59.9 / 2.7 / 40; 59.3 / 3.3 / 26; 57.8 / 4.8 / 11; 57.3 / 5.3; 57.03 / 5.52 / 8 P; 56.33 / 6.22 / 9 26; 56.97 / 5.58 / C
8+00	59.4 / 3.2 / 40; 58.2 / 4.4 / 23; 57.4 / 5.2 / 11; 56.6 / 6.0 / 8; 56.7 / 5.9; 56.70 / 5.85 / 8 P; 56.14 / 6.41 / 9 26; 56.74 / 5.81 / C
7+59	56.00 / 6.55 / 26; 56.55 / 6.00 / 32; 56.53 / 6.02 / 40

62.55

Frankfort

+04	21.2 Lt	Fence	bd.	lg
T.P.	3.21.	61.01	4.75	57.80
11+00				
10+50				
+45	40 Lt	Drive 9 wide		
+29	26 Rt	Driveway 8° op		
10+09	26 Rt	Driveway 11' op		

67.55

nail on Pole 61.01

58.5	58.5	57.0	57.10	56.45 ? 57.45	57.10	
4.1	4.1	5.6	5.45	5.10	5.45	
40	26		8	9	C	
			P	26		
59.1	59.0	57.3	57.20	56.63	57.20	
3.5	3.6	5.3	5.35	5.92	5.35	
40	26		8	9	C	
			P	26		
	59.64					
	2.91					
	40					
			56.71	57.35	57.29	
			5.84	5.20	5.26	
			26	33	40	
			56.76	57.28	57.15	
			5.79	5.27	5.40	
			26	35	40	

67.55

Frankfort

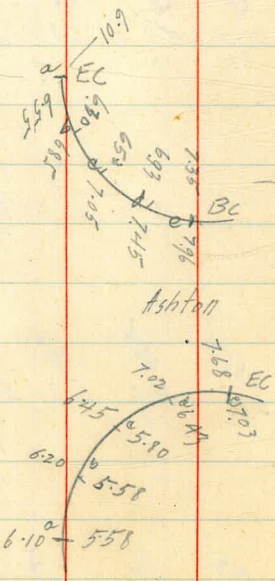
			Lt			℄			Rt	
13 + 0			57.5 3.5 40	56.3 4.7 22	56.5 4.5 13	56.0 5.0 12	56.2 4.8	56.29 4.72 8 P	55.72 5.29 9 26	56.35 4.66 c
12 + 50				57.4 3.6 40	57.5 3.5 28	56.3 4.7 13	56.3 4.7	56.51 4.50 8 P	55.87 5.14 9	56.51 4.50 c 26
12 + 00	31.6 Lt	24" Evc			58.2 2.8 40	56.6 4.4 15	56.4 4.6	56.71 4.30 8 P	56.13 4.88 9 26 P	56.71 4.30 c
+92	26 Rt	Driveway 11' op						56.29 4.72 26	56.67 4.34 32.6	56.21 4.80 40
+87	21.5 L	24" Evc								
+59	22.6 Lt	Driveway 8' op						57.11 3.90 22.6	57.51 3.50 26	58.21 2.80 40
+50					58.0 3.0 40	57.1 3.9 22	56.9 4.1	56.94 4.07 8 P	56.29 4.72 9 P 26	56.93 4.08 c
+39	23 Lt	end bd Fence								
11 + 29	26 Rt	Driveway 11' op						56.50 4.51 26	56.82 4.19 32.5	56.51 4.50 40
		61.01					61 01			

Frankfort

			Lt			℄			R
14 +99.41	N Line	Ashton	58.9 2.1 40	58.4 2.6 26	57.V 3.8 21	56.V 4.8 18	55.7 5.3	55.50 5.51 8 P	54.86 6.15 9 285	55.43 5.58 C
14 +88.4	BC	Curb return	58.9 2.1 40	58.6 2.4 27	57.V 3.8 25	56.9 4.1 19	56.V 4.8 18	55.7 5.3	55.51 5.50 8 P	54.91 6.10 9 26	55.56 5.45 C
+50			59.7 1.3 40	59.V 1.8 26	57.6 3.4 25	56.8 4.2 21	56.V 4.8 18	55.9 5.1	55.69 5.32 8 P	55.V 5.79 9 26	55.77 5.24 C
+29	26'	Rt Driveway 8' op							55.31 5.70 26	56.00 5.01 33	56.05 4.96 40
14 +00			61.V 0.2 40	60.8 0.2 27	58.8 3.2 26	57.V 3.8 22	56.4 4.6 16	56.0 5.0	55.90 5.11 8 P	55.36 5.65 9 26	55.94 5.07 C
13 +50			59.6 1.4 40	59.1 1.9 29	57.0 4.0 24	56.3 4.7 15	56.V 4.8		56.07 4.94 8 P	55.51 5.50 9 26	56.14 4.87 C
		61 01				61 01					

Frankfort

16+50					
TP	7.35	62.90	5.46	55.55	Walker 55.63 .08
15+88±	EC				
+83					
15+88±					
15+79.41	℄ Line Ashton				
15+39.41±	℄ Ashton				
14+88±					



61.01

L ℄ R

59.2 57.9 57.5 56.1 56.1 56.09 55.49 56.12
3.7 5.0 5.4 6.8 6.8 6.81 7.41 6.78
4.0 3.7 2.3 2.0 8 p 9 26 c

BP NW Ashton 62.90

58.4 57.3 56.9 56.1 55.5 55.09 54.46 55.00
2.6 3.7 4.1 4.9 5.5 5.92 6.55 6.01
4.0 3.7 2.3 2.0 8 p 9 26 c

27.2 Hydrant

℄ Line Ashton 57.7 56.8 56.1 55.5 55.16 54.21 54.79
3.3 4.2 4.9 5.5 5.86 6.80 6.22
4.0 2.3 1.9 8 p 9 27 c 27

57.4 55.7 55.29 54.77 64.24
3.6 5.3 5.72 6.24 6.77
4.0 8 p 26 40 p

54.46 55.00 54.16 54.71 53.96 54.49 53.56 54.08 53.05 53.66
6.55 6.01 6.85 6.30 7.05 6.52 7.45 6.93 7.96 7.35
9 c 9 c 9 c 9 c 9 c
a b c d e

54.91 55.43 54.81 55.43 54.56 55.71 53.99 54.58 53.33 53.98
6.10 5.58 6.20 5.58 6.45 5.80 7.07 6.43 7.68 7.03
9 c 9 c 9 c 9 c 9 c
a b c d e

61.01

Frankfort

+50			
18+00			
+95	40.5 Lt	Driveway	6.5 wide
+75	26 Rt	Driveway	8' op
17+50			
17+00			
16+53	26 Rt	Driveway	7' op

62.90

L

64.0
+1.1 40

62.0
0.9 38

60.7
2.2 33

60.6
2.3 24

59.9
3.0 20

60.0
2.9

60.04
2.86 8 P

59.32
3.58 9 26

59.99
2.91 C

61.30
1.7 40

58.7
4.2 20

59.0
3.9

58.96
3.94 8 P

58.65
4.25 9 26

59.09
3.81 C

61.10
1.80 40

58.09
4.82 26

58.76
4.14 34

58.75
4.15 40

60.1
2.8 40

59.1
3.8 36

58.8
4.1 26

57.9
5.0 21

57.8
5.1

58.00
4.90 8 P

57.54
5.38 9 26

58.18
4.72 C

59.X
3.7 40

57.0
5.9 19

56.9
6.0

57.0V
5.88 8 P

56.51
6.39 9 26

57.11
5.79 C

55.60
7.30 26

56.50
6.40 33

56.0V
6.88 40

62.90

R

Frankfort'

+55	26 Rt		Driveway 9' op	
19+50	36' Lt	Driveway 7' wide		
19+25				
TP	7.70	68.69	1.91	60.99
19+0				
+68	26 Rt		Driveway 7' op	
		67.90		

			61.63	63.72	64.16	
			7.06	4.97	4.53	
			26	36	40	
64.49	63.59	62.3	61.9	61.89	61.41	62.01
4.20	5.10	6.4	6.8	6.80	7.28	6.68
40	36	24		8 P	9 26	C
64.8	61.7	61.8	61.0	61.4	61.46	60.88	61.54
3.9	7.0	6.9	7.7	7.3	7.24	7.81	7.15
40	33	26	19		8 P	9	C 26
				68.69			
65.00	61.60	61.4	60.5	60.9	61.00	60.30	61.00
+2.1	1.3	1.5	2.4	2.0	1.90	2.60	1.90
40	33	22	19		8 P	9	C 26
			59.70	60.88	60.95	
			3.20	2.07	1.95	
			26	35	40	
			62.90			

Frankfort

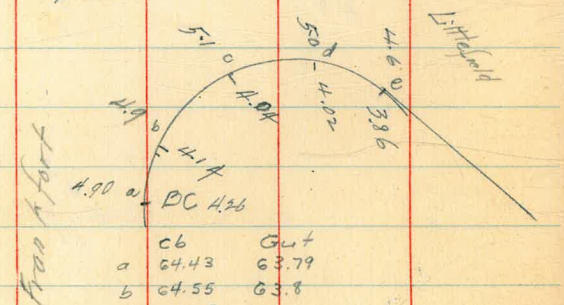
+75				
+49	36' Lt	Driveway 8' wide		
+25				
+22	26 Rt	Driveway 8' opening		
20 + 00	36 Lt	Driveway 7' wide	64.56 4.13 40	
19+75				
		68-69		

4		5				9
		62.4 6.3 40	62.8 5.9 18	63.4 5.3	63.64 5.05 8 P	63.73 5.46 9 26	63.82 4.87 C
62.94 5.75 40	63.14 5.55 36 conc	63.3 5.4 21	62.8 5.9 17	63.3 5.4	63.47 5.27 8 P	62.96 5.73 9 26	63.56 5.13 C
	64.0 4.7 40	63.5 5.2 21	62.9 5.8 17	63.1 5.6	63.10 5.59 8 P	62.81 5.88 9 26	63.39 5.40 C
				62.86 5.83 26	64.47 4.22 34	65.09 3.60 40	
64.54 4.17 36	63.8 4.9 31	63.6 5.1 23	62.9 5.8 17	62.8 5.9	62.79 5.90 8 P	62.31 6.38 9	62.97 5.75 C 26
65.3 3.4 40	63.1 5.5 32	62.9 5.8 22	62.5 6.2 18	62.3 6.4 68 69	62.39 6.30 8	61.88 6.81 9 26	62.54 6.15 C

Frankfort

					L	℄	R
22+50					61.6 7.1 40	61.7 7.0 11	63.3 5.4	64.37 4.32 8 P	63.75 4.94 9	64.47 4.27 C 26
+34	39.94	end of fence								
21+8885	5 Line	Gardina	beg Picket fence	40.6' Lt	60.3 8.4 40	61.5 7.2 10	63.1 5.5	64.28 4.41 8 P	63.73 4.96 9	64.33 4.36 C 26
			fence 40.6							
21+48 85	℄	Gardina			60.7 8.0 40		63.3 5.4	64.09 4.60 8 P	63.71 4.98 9	64.27 4.42 C 26
21+24	26 Rt	Driveway	9' op.				63.59 5.10 26		64.69 4.00 31	65.13 3.56 40
21+0885	N Line	Gardina			61.4 7.3 40	61.8 6.9 16	63.3 5.4	63.94 4.75 8 P	63.49 5.20 9	64.11 4.58 C 26
			68.69			68.69				

						L		Z		R	
+30	38.3 L	Drive	Ribon 2	2' wide	Overall		64.68 4.95				
23+0							6.2 63.4 40	6.4 63.5	5.7 63.9 6	6.1 63.5 28	4.94 64.69 28
TP	5.53	69.63	4.59	64.10	64.12		BP NW Gardena		69.63		
22+78 6±		BC curb return		end of oil Par			6.5 62.2 40	6.6 62.1 9	5.4 63.3	4.21 64.48 8 P	4.90 63.79 9 24	4.26 64.43 c
		68.69							68.69		



	c6	Gut
a	64.43	63.79
b	64.55	63.8
c	64.65	63.6
d	64.67	63.7
e	64.83	64.1

Frankfort

BM			5.53	64.10	64.12
24+56					
+90	X sections of Rt angles to Frankfort.				
+67	17.5 L		P Plc	c 2530	
23+55.8	℄ Littlefield along ℄				
		69.63			

NW
BP. gardena

℄	Rt	Lt
	59.9	
	9.7	
	50	
	60.7	
	8.9	
		61.7
		7.9
		50
65.4	66.0	66.1
4.2	3.6	3.5
50		30
		64.9
		4.7
		60
65.5	65.7	66.2
4.1	3.9	3.4
50	30	
		64.9
		4.7
		30
		64.3
		5.3
		50
69.63		

Xsec of Erie St. curb To Curb
Milton to Littlefield W.O. 31510

Lt = E | ℄ | Rt = W

					Lt = E		℄		Rt = W
1+60	EVC	184 Drive 10'			45.22 / 3.69 / 30 · 44.51 / 4.40 / 25.4	43.71 / 5.20 / 9 / 18	43.6 / 5.3	43.1 / 5.8 / 9 / 18	43.57 / 5.34 / c
1+50					43.93 / 4.98 / c / 18	43.4 / 5.5 / 9	43.4 / 5.5	43.1 / 5.8 / 9 / 18	43.41 / 5.50 / c
1+00					43.00 / 5.91 / c / 18	42.41 / 6.50 / 9	42.7 / 6.2	42.11 / 6.80 / 9 / 18	42.61 / 6.30 / c
+62 93 BC curb Lt. (+63)					42.31 / 6.60 / c · 18	41.76 / 7.15 / 9	42.0 / 6.9	41.54 / 7.37 / 9 / 18	42.10 / 6.81 / c
0+54	BC on Rt.								
0+0	℄ Milton								
BM S.W.B.P. Milton and Erie	6.88	48.91		42.03			48.91		

2+44	18 Lt	Driveway 8'op			
2+35					
2+15	18 Lt	Driveway 9'op			
2+10					
2+08	18 Rt	Drive	8'op		
1+85					
		48.91			

L

46.57
2.3.4
30

45.77
3.14
25

44.74
4.17
18

45.06
3.85
C

44.5
4.4
9
18

44.7
4.2

44.0
4.9
9
18

44.54
4.37
C

46.30
3.61
30

44.38
4.53
18

44.7
A.7
9
18
no curb

44.5
4.4

43.44
5.47
9
18
no curb

43.84
5.07
18

44.30
4.61
24

44.11
4.80
30

44.47
4.44
C
18

43.9
5.8
9

44.0
4.9

48.91

43.5
5.4
9
18

44.08
4.91
C

R

		Entire	
3+29	18 Lt	Drive 8' op	
3+10			
2+96	18 Rt	Driveway 9' wide	
2+85			
2+67	18 Rt	Driveway 8' op	
2+60			
		48.91	

L

46.11	45.26	44.67			
2.80	3.65	4.74			
30	24	18			
45.19	44.6	44.5	44.1	44.65	
3.74	4.3	4.41	4.8	4.26	
9	C		9	C	
18			18		
		44.71	44.65	44.41	
		4.70	4.26	4.50	
		18	25	30	
45.28	44.7	44.7	44.V	44.77	
3.63	4.2	4.2	4.7	4.14	
C	9		9	C	
18			18		
		44.25	44.73	44.54	
		4.66	4.18	4.37	
		18	24	30	
45.24	44.7	44.8	44.V	44.74	
3.67	4.2	4.1	4.7	4.17	
C	9		9	C	
18			18		
		48.91			

R

4+50					
4+00					
3+91	18 Lt	Driveway 7' op			
3+86	18 Rt	Driveway 8' op			
TP	5.18	49.24	48.5	44.06	
3+60	EVC				
3+35					
		48.91			

4

43.61 43.1 43.1 47.6 43.07
5.63 6.0 6.0 6.6 6.17
C 9 9 C
18 18

44.21 43.6 43.7 43.3 43.78
5.03 5.6 5.5 5.9 5.46
C 9 9 C
18 18

45.98 43.95
3.26 5.29
30 18

43.58 44.00 43.83
5.66 5.24 5.41
18 24 30

49.24

44.8 44.3 44.2 43.7 44.25
4.09 4.6 4.7 5.2 4.66
C 9 9 C
18 18

45.04 44.5 44.3 43.9 44.46
3.87 4.4 4.6 5.0 4.45
C 9 9 C
18 18

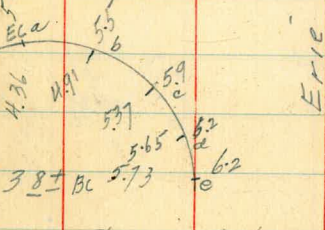
48.91

Erie

5+63' BC return

5+91 4 Napier at Rt Ls to Erie

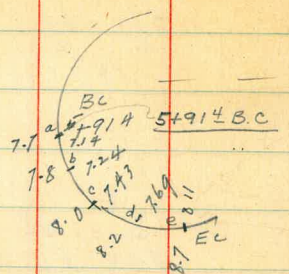
	Cb.	Gut.
a	41.9	42.39
b	42.59	42.1
c	42.87	42.3
d	43.34	42.7
e	43.7V	43.0



	Cb.	Gut
a	44.88	44.V
b	44.33	43.7
c	43.87	43.3
d	43.59	43.0
e	43.51	43.0

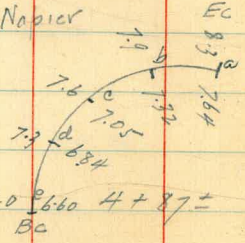
49.24

Erie



5+91± B.C

	Cb.	Gut
a	42.10	41.5
b	42.00	41.4
c	41.81	41.V
d	41.55	41.0
e	41.13	40.5



4+87±

	Cb.	Gut
a	41.30	40.9
b	41.97	41.3
c	42.19	41.6
d	42.40	41.9
e	42.64	42.V

L R

BC on Left

5+63'±

42.39	41.9	41.8	41.5
6.85	7.3	7.4	7.7
c	9		18
18			

5+50

42.64	42.V	41.9	41.7
6.60	7.0	7.3	7.5
cb	21		18
24			

43.V	43.0	42.5	42.1	41.5
6.0	6.2	6.7	7.1	7.7
30	18		18	30

4+87±

	43.0	42.6	41.9	42.40
	6.2	6.6	7.3	6.84
	18		9	c
			18	

4+63.8±

43.51	43.0	43.1	42.4	42.94
5.73	6.2	6.1	6.8	6.30
c	9		9	c
18			18	

49.24

48 91

		Erie				L				R
6+70	18 Lt	Driveway 7' op					43.74 4.19 30	42.97 4.96 18		
6+50							43.33 4.60 c 18	42.7 5.2 9	42.7 5.2	42.2 5.7 9 18	42.75 5.18 c
6+46	18 Lt	Driveway 7' op					43.49 4.44 30	42.90 5.03 18	42.7 5.2 9 18		
6+00.							42.78 5.15 c 18	42.3 56 9	42.2 5.7	41.6 6.3 9 18	42.15 5.78 c
5+70	20 Lt	Hydrant								
BM.	4.99	47.93	6.30	42.94	walker 43.04 .10	□ chis sq	S.E. N.E. Napier & Erie	41.93		
BC on Rt. 5+91 4±		~~48.91~~					42.61 6.63 c 18	42.1 7.1 9	42.1 7.1 49.24″ ~~48.91~~	42.5 7.7 9 18	42.10 7.14 c

ERIE

			L			R
8+00			44.85 3.08 C	44.3 3.6 9	44.7 3.2	43.8 4.1 9 / 18 — 44.40 3.53 C
7+76	18 Rt	Driveway 9' op			43.63 4.30 18	44.10 3.83 24 — 43.94 3.99 30
7+68	18' Lt	Driveway 8' op	45.08 2.85 30	44.77 2.16 23	44.18 3.75 18	
7+50			44.41 3.52 C 18	43.6 4.1 9	43.9 4.0	43.1 4.7 9 / 18 — 43.77 4.16 C
7+15	18 Rt	Driveway 9' op			42.96 4.97 18	43.30 4.63 23 — 43.21 4.72 30
7+00			43.84 4.09 C 18	43.3 4.6 9	43.2 4.7	42.7 5.2 9 / 18 — 43.76 4.68 C
		47.93			47.93	

Erie

8+86	18 Lt	Driveway 9' op.		
8+80	B.V.C			
TP.	5.63	50.71	2.85	45.08
8+50				
8+37	18 Rt	Driveway 9' op		
8+24.45	BC	18 Lt	Drive way 10' op	
Δ 6°07	R=2500			
		47.93		

L

46.95
3.76
30

45.36
5.35
18

45.68
5.03
C
18

45.2
5.5
9

45.3
5.4

44.8
5.9
9
18

46.70
5.51
C

50.71

45.37
2.56
C
18

44.9
3.0
9

45.1
2.8

44.53
3.40
9
18

44.95
2.98
C

44.50
3.43
18

44.90
3.07
27

44.84
3.09
30

45.90
2.03
30

45.39
2.54
23

44.79
3.14
18

44.8
3.1

44.4
3.7
9

41.7
3.22
C

47.93

R

Eric

			L		R
9+55			46.37 45.9 45.8 45.44 4.34 4.8 4.9 5.27 none C 9 9 C 18		
9+53	20' Lt	Hydrant			
9+35	18 Lt	Driveway 10' off	47.69 45.78 3.02 4.93 30 18		
9+30			46.16 45.6 45.6 45.7 45.71 4.55 5.1 5.1 5.5 5.00 C 9 9 C 18 18		
9+05			45.97 45.5 45.5 45.1 45.50 4.74 5.2 5.2 5.6 5.21 C 9 9 C 18 18		
8+93	18 R	Driveway 10' off	44.98 45.43 45.40 5.73 5.28 5.31 18 28 30		
		50.71	50.71		

		Erie			L					R
10 + 30						46.68 4.03 9; 46.7 4.5 18 c	46.1 4.6		45.7 5.0 9; 46.16 4.55 18 c	
10 + 24	18 Rt	Driveway 8' op						45.81 4.90 18	46.00 4.71 27	45.86 4.85 30
10 + 05						none c; 46.71 4.50 18 9	46.1 4.6		45.7 5.0 9; 46.09 4.62 18 c	
10 + 02	18 Lt	Driveway 13' op				47.69 3.02 30	46.75 4.46 18			
9 + 80						46.50 4.21 c 18; 46.0 4.7 9	45.9 4.8		45.5 5.2 9 18; 46.02 4.69 c	
9 + 57	18' Rt	Driveway	10' op					45.43 5.28 18	45.71 5.00 28	45.66 5.05 30
		50.71						50.71		

11.05			
10+91 3/4	EC		
10+81	18 Lt	Driveway 8' op	
10+80			
10+68	18 Lt	Driveway 9' op	
10+55			
10+48	18 Rt	Drive 9' op	
		50.71	

	46.66 4.65 C 18	46.7 45 9	46.1 4.6	45.6 5.1 9 18 / 46.08 4.63 C
	48.56 2.15 30		46.28 4.43 18	
	none C 18	46.28 4.43 9	46.2 4.5	45.7 5.0 9 18 / 46.15 4.56 C
	48.51 2.20 30		46.27 4.44 18	
	46.71 4.00 C 18	46.7 4.5 9	46.1 4.6	45.7 5.0 9 18 / 46.18 4.53 C
			45.77 4.94 18	46.17 4.54 28 / 46.05 4.66 30
			50.71	

Erie

12+00				
11+84	18 Lt	Driveway 10 ob		
11+70	18 R	Driveway 10 ob		
ont TP 11+60	3.83	49.69	44.85	45.86
11+50				
11+25	EVC			
11+10	18 R	Driveway 9' ob		
		50.71		

46.17 45.8
3.52 3.9
C 18 9

45.6
4.1

45.1 45.59
4.6 4.10
9 C 18

47.56
2.13
30

45.92
3.77
18

45.39
4.30
18

44.81
4.88
28

45.67
40.2
30

49.69

46.45 46.0
4.26 4.7
C 18 9

45.9
4.8

45.5 45.91
5.2 4.80
9 C

46.56 46.1
4.45 4.6
C 18 9

46.0
4.7

45.5 46.07
5.2 4.69
9 18 C

45.67
5.04
18

46.14
4.57
28

45.99
4.72
30

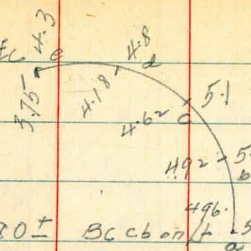
50.71

Erie

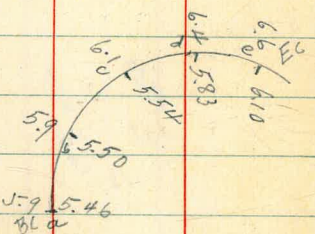
			L				R
+63	18 Lt	Driveway 8' op	45.70 3.99 30	44.85 4.84 18			
+51	18 R	Driveway 9 op			44.44 5.27 18	44.98 4.71 28.5	44.87 4.82 30
13 + 50			45.33 4.36 c 18	44.8 4.9 9	44.7 5.0	44.39 5.30 9	none c
13+00			45.53 4.16 c 18	45.1 4.6 9	45.0 4.7	44.6 5.1 9 18	45.08 4.61 c
12+90	18 R	Driveway 9' op			44.76 4.93 18	45.04 4.65 22.5	44.87 4.82 30
12 + 50			45.81 3.88 c 18	45.4 4.3 9	45.4 4.5	44.8 4.9 9 18	45.33 4.36 c
12 + 30	18 Rt	Driveway 8°			44.97 4.72 18	45.55 4.14 28	45.35 4.34 30

49.69

49.69



14 +80± BC cb on Lt



14 +6.6 ± BC curb on Rt

14 +50

14+33 18 Lt Driveway 9 op

14 +00

49.69

44.73	44.4	44.77	44.4	45.09	44.6	45.51	44.9	45.94	45.4
4.96	5.3	4.92	5.3	4.67	5.1	4.18	4.8	3.75	4.3
c	a 9	c	b 9	c	c 9	e	d 9	c	e 9

43.8	44.23	43.8	44.2	43.6	44.15	43.3	43.86	43.1	43.59
5.9	5.46	5.9	5.50	6.1	5.54	6.4	5.83	6.6	6.10
9	a c	9	b c	9	c c	9	d c	9	e c

44.83	44.5		44.5				43.8	44.26	
4.86	5.2		5.2				5.9	5.43	
c 18	9						9 18	c	

45.80	45.70		44.63						
3.89	3.99		5.06						
30	28		18						

45.13	44.7		44.6				44.1	44.56	
4.56	5.0		5.1				5.6	5.13	
c 18	9						9 18	c	

49.69

15 + 84 ± Curb BC on Lt

44.48 5.21 5.8 43.9

44.45 5.24 5.9 - 43.91

45.75 45.30 44.78 4.91 5.5 - 44.2

3.9 4.39 5.1 - 44.6

EC 4.6 45.1

43.6 6.1 5.60 - 44.09

BC curb 15 + 62 ± ℄

43.5 6.2 5.71 43.98

5.89 - 43.80

43.4 6.3 6.02 43.67

6.4 43.4

43.1 6.6 6.9

42.8

15 + 65 ± BC curb rct on Rt

Ashton

15 + 35

15 + 26.99 ℄ Ashton Δ 4° 31 Lt in line with Ashton

15 + 06

TP	2.60	50.99	1.32	48.37
		49.69		

45.76 45.2 45.4 45.0 45.55

5.21 5.8 5.6 6.0 5.42

C 18 9 9 18 C

45.92 45.4 45.0 44.9 45.37

5.05 5.6 6.0 6.1 5.60

C 26 9 9 18 C

45.9 45.1 44.4

5.1 5.9 6.6

30 30

45.9 45.1 44.4

5.1 5.9 6.6

30 30

44.8 44.4 43.9

6.2 6.6 7.1

25 25

Hyd Ashton Erie 50.97

49.69

17+09	18 R	Driveway 10 %				
17+0						
16+52	18 Lt	Driveway 13 %				
16 +50						
+49	18 R	Driveway 10 %				
16.+0						
15+88	20 Lt	Hydrant				
		50.97				

			46.35 4.62 18	46.84 4.13 28.5	46.80 4.17 30	
47.14 3.83 C 18	46.8 4.2 9		46.8 4.2	46.3 4.7 9	46.69 4.28 C 18	
47.27 3.70 30	46.99 3.98 26	46.21 4.76 18				
None C	46.21 4.76 9		46.1 4.9	45.7 V 5.25 9	None C	
			45.7 V 5.2 V 18	47.00 3.97 30		
45.93 5.04 C 18	45.4 5.6 9		45.6 5.4	45.3 5.7 9 18	45.69 5.28 C	
			50.97			

Erie

TP	10.40	59.28	2.09	48.88
18 + 33	18 Lt	Driveway	9 op	
18 + 30				
18 + 05	18 Lt	Drive	10 op	
17 + 80	BVC			
17 + 50				
17 + 48	18 Lt	Driveway	8 op	
		50.97		

59.28

48.40 — 2.57 — 18

48.93 — 2.04 — 24

48.97 — 2.00 — 30

48.43 — none — 2.54 — C — 9 — 18

48.6 — 2.4

47.7 — 3.3 — 9

48.17 — 2.80 — C — 18

48.65 — 2.32 — 30

48.43 — 2.54 — 205

48.05 — 2.92 — 9 — 18

48.1 — 2.9

47.4 — 3.6 — 9

47.77 — 3.20 — C

48.0 — 2.95 — C — 18

47.6 — 3.4 — 9

47.7 — 3.3

47.0 — 40 — 9

47.44 — 3.57 — C — 18

47.39 — none — 3.58 — C — 18 — 9

47.4 — 3.6

46.7 — 4.3 — 9

47.17 — 3.85 — C — 18

47.88 — 3.09 — 30

47.33 — 3.62 — 18

50.97

Erie

L | R

Station		Remarks						
+ 60	18 Lt	Driveway 8 op.	53.89 5.39 30	53.76 5.52 26.5	55.9✓ 3.36 18			
17 + 55				52.10 7.18 c	51.6 7.7 9	51.8 7.5	51.1 8.2 9 18	51.50 7.78 c
19 + 30				51.30 7.98 c 18	50.8 8.5 9	50.9 8.4	50.3 9.0 9 18	50.75 8.53 c
19 + 22.97 BC.								
19 + 05				50.5✓ 8.76 c 18	50.0 9.3 9	50.1 9.2	49.5 9.8 9 18	49.95 9.33 c
18 + 80	Evc			49.91 9.37 c 18	49.4 9.9 9	49.5 9.8	48.8 10.5 9 18	49.78 10.00 c
18 + 55				49.39 9.89 c	49.1 10.2 9	49.0 10.3	48.✓ 11.1 9 18	48.70 10.58 c

59.28

59.28
∧

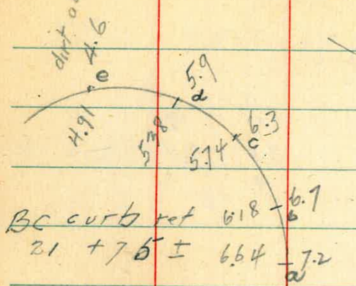
T.P.	956	67.24	1.60	57.68
21 + 00				
20 + 50				
20 + 47	18 Rt	Driveway 12 of		
+ 21	18 Lt	Driveway 10' of		
20 + 00				
19 + 80	EVC			
		59.28		

L C R

67.24

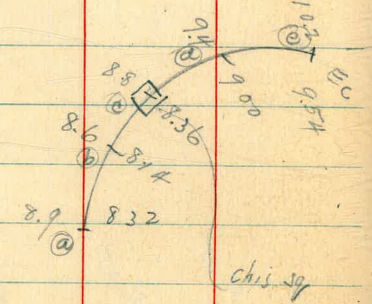
57.63 57.1 1.65 2.2 C 18 9	57.0 2.3	56.3 56.84 3.0 2.44 9 18 C
55.68 55.3 3.60 4.0 C 18 9	55.3 4.0	54.6 4.7 more 9 18 C
54.41 4.86 18	55.10 4.18 25	55.89 3.39 30
56.75 56.75 2.53 3.03 30 27	54.71 5.07 18	
53.79 53.4 5.49 6.1 C 18 9	53.3 6.0	52.7 53.17 6.6 6.11 9 18 C
57.93 57.5 6.35 6.8 C 18 9	53.5 6.8 59.28	51.9 57.41 7.4 6.87 9 18 C

22 + 11.91 ℄ Littlefield + in line of Littlefield



BC curb ret
21 + 75 ±

21+76.25 EC.



21+57± BC curb Rt

21+50

21 +21 18 Lt Driveway

67.24

Station	ⓐ		ⓑ		ⓒ		ⓓ		ⓔ	
22 + 11.91	63.1 / 4.1 / 30				60.7 / 6.5		58.9 / 8.3 / 30			
	60.60 / 6.64 c	60.0 / 7.2 g	61.06 / 6.18 c	60.5 / 6.7 g	61.50 / 5.74 c	60.9 / 6.3 g	61.86 / 5.38 c	61.3 / 5.9 g	62.33 / 4.91 c	62.6 / 4.6 g
21 + 75 ±	60.60 / 6.64 c	60.00 / 7.2 g			59.6 / 7.6		58.5 / 8.7 g	58.95 / 8.29 c	25.5	
21+76.25 EC	58.94 / 8.32 c	58.3 / 8.9 g	59.10 / 8.14 c	58.6 / 8.6 g	58.88 / 8.36 c	58.4 / 8.8 g	58.24 / 9.00 c	57.8 / 9.4 g	57.70 / 9.54 c	57.0 / 10.2 g
21+57±	59.93 / 7.31 c / 18	59.4 / 7.8 g			59.0 / 8.2		58.3 / 8.9 g / 18	58.92 / 8.32 c		
21+50	59.65 / 7.59 c	59.1 / 8.1 g			58.8 / 8.4		58.1 / 9.1 g / 18	58.66 / 8.58 c		
21 +21	61.03 / 6.21 / 30		58.03 / 9.21 / 18							

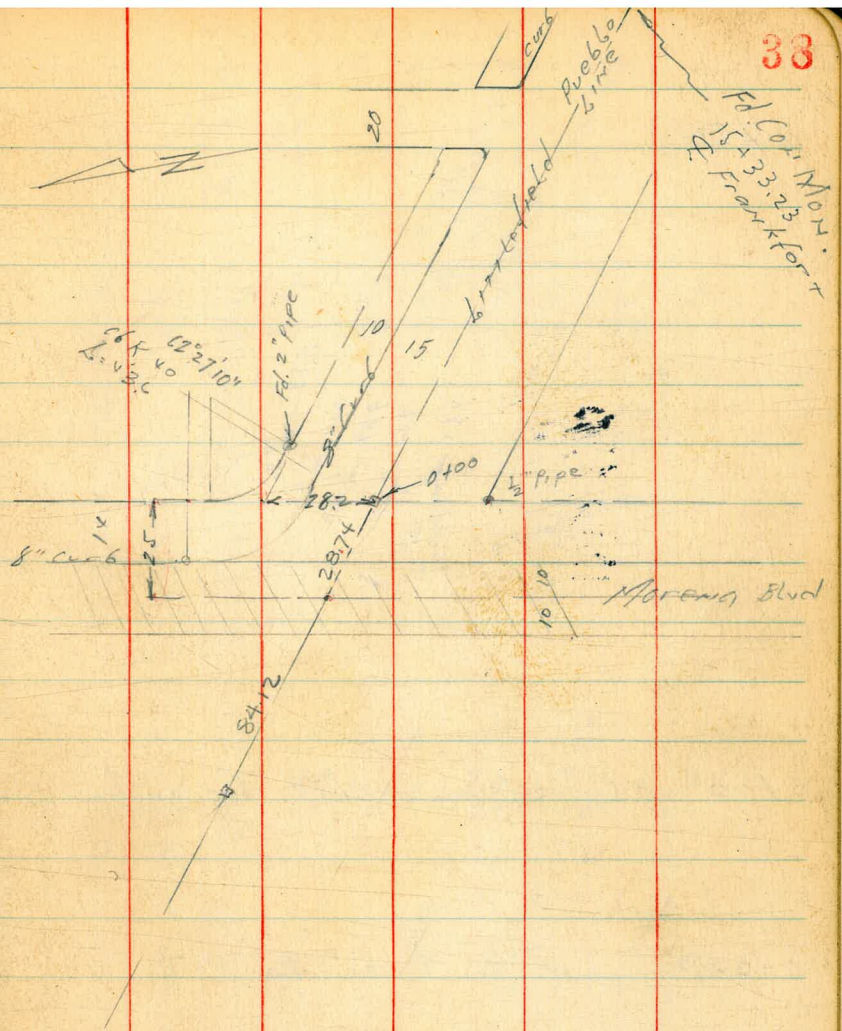
67.24

Erie

			6.92	64.04	64.10 .06	
TP	3.82	70.96	0.10	67.14		
set BM.		67.24	8.36	58.88	set chis ☐ center of Retura NW	W Lillefield & Erie
		67.24				67.24

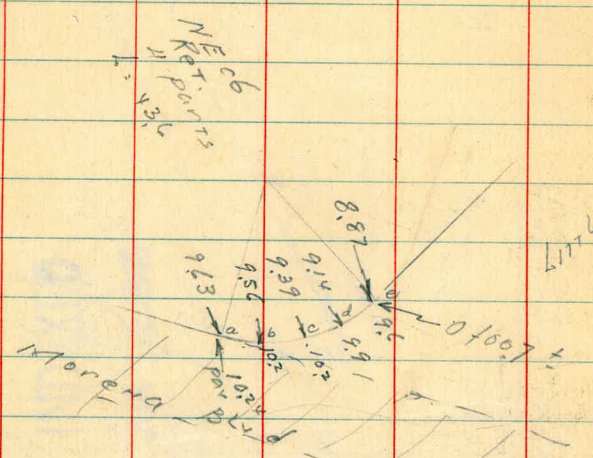
Xsec Littlefield St.
Morena Blvd to Frankfort

W O 31570



1 sec Littlefield St
Morena Blvd to Frontage

0+50



0+00 Ely Morena Blvd Sec. on Line Blvd

0-28.2 Sec. on ℄ 20' Pav.

+P	9.24	23.98	3.10	14.74
Chiseled B.M. 58. Top RK. Blk. 519. Base 150' WLy from Littlefield and Morena F.B. 1839	5.91	17.84		11.93

Lt ℄ Rt

17.0 16.86 16.7 16.5 16.7 15.8
7.0 7.12 7.8 7.5 7.8 8.2
25 15 15 25 35
c6

14.35 13.74 14.4 13.8 14.59 13.8 14.84 14.1 15.11 14.4
9.63 10.34 9.56 10.2 9.39 10.2 9.14 9.9 8.87 9.6
c 9 c 9 c 9 c 9 c 9
a b c d e

0+24 F.H. 17.7

16.0 14.87 14.1 14.3 14.6 14.9 14.6
8.0 9.11 9.9 9.7 9.4 9.1 9.4
28.7 19 19 20 28 40
dirt c6

13.44 13.77 13.97 14.1 14.38
10.54 10.26 10.01 9.76 9.60
100 50 50 100

23.98

Littlefield

1+85 ℄ 2.5' Conc. walk

1+50

1+39.6±

1+35.6± 18.5 Rt P.P. 394 9

1+14.4±

1+10±

1+00

23.98

Lt ℄ Rt

21.25
2.73
22.3

20.3
3.7
25

20.25
3.73
15
06

19.3
4.7
15

19.8
4.2

20.0
4.0
25

19.91
4.07
15
C6. Rt.

20.03
3.95
25
C6. end

18.95
5.03
15
C6. Rt.

19.08
4.90
25
C6. end

18.6
5.4
25

18.55
5.43
15
06

17.7
6.3
15

18.1
5.9

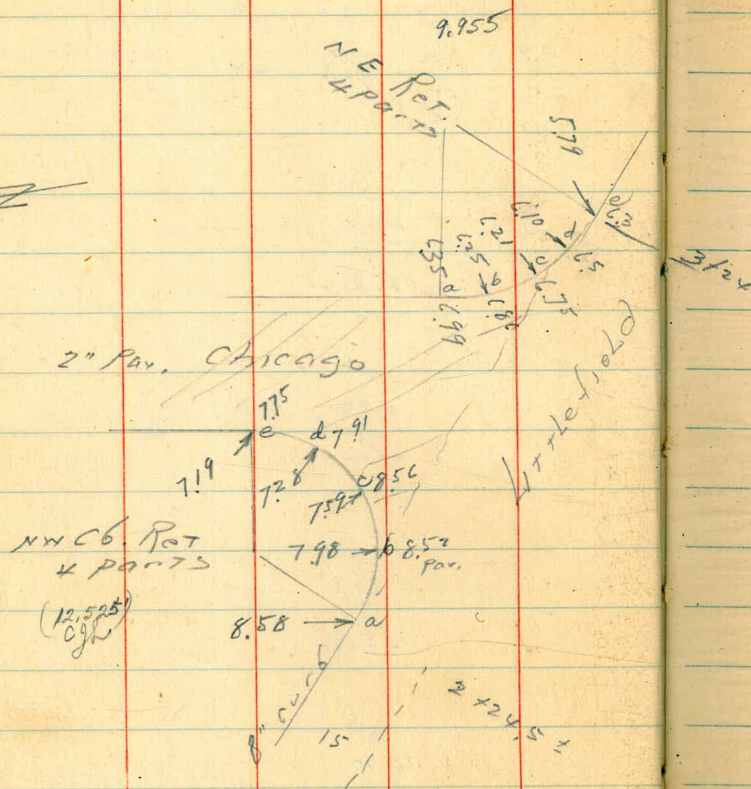
17.7
6.3
25

17.5
6.5
25

23.98

Littlefield

2+24.5±



T.P.	8.20	31.38	0.80	23.18
2+00				
		23.98		

Lt ℄ Rt

23.0 / 8.4 / 25	22.80 / 8.58 / 15 / c6 / B.C.	22.1 / 9.3 / 15	22.3 / 9.1	22.5 / 8.9 / 25

25.03 24.39 / 6.35 6.99 / c g / a	25.13 24.52 / 6.25 6.86 / c g / b	25.17 24.63 / 6.21 6.75 / c g / c	25.28 24.9 / 6.10 6.5 / c g / d	25.59 / 5.79 6.3 / c g / e
22.80 / 8.58 / c g / a	23.40 22.86 / 7.98 8.52 / c g / b	23.79 22.82 / 7.59 8.56 / c g / c	24.10 23.47 / 7.28 7.91 / c g / d	24.19 23.63 / 7.19 7.75 / c g / e

31.38

22.4 / 1.6 / 25	21.98 / 2.00 / 15 / c6	21.1 / 2.9 / 15	21.5 / 2.5	21.7 / 2.3 / 25

23.98

Littlefield

3+65.8 Ely Goldfield to Rt.

3+40.8 ℄ Goldfield to Rt.

Set. BM. Nail P.P. 8901 — 5.51 — 25.87 — S.W. Cor Goldfield and Chicago

3+24 ± curb end on Lt.

3+21 17.5 Rt P.P. 8901

3+15.8 Wl Goldfield to So. End wire Fence

2+90 ℄ Chicago to W.

2+78.8 ℄ 16' Con. dr. Level

2+50

31.38

42

Lt: 27.4 / 4.0 / 25 — 27.2 / 4.2 / 16 — 26.8 / 4.6 / 15 — 26.5 / 4.9 — 26.0 / 5.4 / 10 — 26.6 / 4.8 / 12 — Rt 26.6 / 4.8 / 25 — 24.2 / 7.2 / 125

* Beg. wire fence

26.6 / 4.8 / 25 — 26 / 5.2 / 15 — 25.7 / 5.7 / 14 — 25.6 / 5.8 — 25.3 / 6.1 / 10 — 25.6 / 5.8 / 13 — 25.3 / 6.1 / 25 — 23.4 / 8.0 / 125

5.8 / 6.1 / 10 — 5.8 / 6.1 / 13 / 25 — 125

26.1 / 5.3 / 25 — 25.59 / 5.79 / 15 end Curb — 25.1 / 6.3 / 15 — 25.0 / 6.4 — 24.9 / 6.5 / 10 — 25.3 / 6.1 / 25

24.7 / 6.7 — 24.6 / 6.8 / 10 — 25.1 / 6.3 / 12 — 25.4 / 6.0 / 25 — 23.6 / 7.8 / 125

24.46 / 6.92 / 25 P — 24.43 / 6.95 / 16 P — 24.0 / 7.4 — 24.0 / 7.4 / 10 — 24.7 / 6.7 / 16 — 24.8 / 6.6 / 25 — Beg. Wire fence

23.94 / 7.1 x / 25

23.33 / 8.05 / 25 — 23.3 / 8.1 / 16 P — 23.0 / 8.4 — 23.1 / 8.3 / 25

31.38

5

4+75

T.P. P.P. NAIL 10.30 40.18 1.50 29.88 ✓
4 P 4050

4+50 = W.L. Con drive 10' wide on Rt

4+27 17.4 Lt P.P. #P 4050

3+91 E.L. Con drive

3+72.1 W.L Con drive

3+68.8 16.8 Rt F.H.

31.38

Lt Cl Rt

31.0 30.8 30.3 30.7 30.8
9.2 9.4 9.9 9.5 9.4
25 12 13 25

30.3 30.1 30.0 29.6 29.9 29.6
9.9 10.1 10.2 10.5 10.3 10.6
25 14 12 13 25

40.18

29.8 29.6 29.4 28.3 29.0 29.4 29.15
1.6 1.8 2.0 2.1 2.4 2.0 2.23
25 15 13 11 14 25 Con drive

28.22 27.6 27.5 27.2 28.0 28.4
3.16 3.8 3.9 4.2 3.4 3.0
25 14 11 13 25
Con

27.66
3.72
25
Con

F.H.
16.8

31.38

Moore
Begg
Sherman
Bynch

6-8-48

Littlefield

5+80 ℄ Goldfield to N

5+50

35.04	34.50	35.05	34.54	35.33	34.9	35.69	35.3	36.13	36.1
5.14	5.68	5.13	5.64	4.85	5.3	4.49	4.9	4.05	4.1
c	g	c	g	c	g	c	g	c	g
ⓐ		ⓑ		ⓒ		ⓓ		ⓔ	

Goldfield

32.97		33.43	32.98	33.84	33.38	34.18	33.68	34.15	33.68
7.21		6.75	7.20	6.34	6.80	6.00	6.50	6.03	6.50
c	g	c	g	c	g	c	g	c	g
a		b		c		d		e	

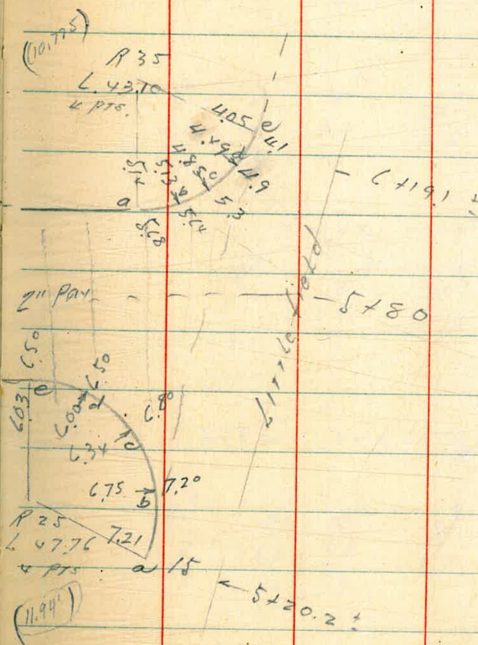
5+20.2± Beg. 8" cb Ret on Lt.

4018

Lt ℄ Rt

34.68	34.7	34.5	34.3	34.8	34.9
5.50	5.5	5.7	5.9	5.4	5.3
25	16		12	13	25

33.9	33.9	33.3	33.0	33.6	33.7
6.3	6.3	6.9	7.2	6.6	6.5
25	16		11	12	25



32.8	32.97	32.3	31.8	31.4	31.8	32.0
7.4	7.21	7.9	8.4	8.8	8.4	8.2
25	15 cb	15		11	13	25

4018

8+21.5 ℄ do. Con. Rib. do.

8+00

+92 end fence 24.7 Lt
+77 3" tree 17.7 Lt.
+55 3" tree 17.5 Lt.

+50

7+29 Beg. Picket fence 2x Lt.

7

T.P. 11.46 51.21 0.43 39.75

6+50

6+19.1

40.18

Lt ℄ Rt

Con. 45.17 6.0x 17

44.6 6.6 25 | 44.6 6.6 15 | 44.7 7.0 14 | 44.1 7.1 | 44.1 7.1 11 | 44.6 6.6 14 | 44.7 7.0 25

43.1 8.1 25 | 43.1 8.1 17 | 42.7 8.5 14 | 42.6 8.6 | 42.7 9.0 12 | 42.6 8.6 14 | 42.6 8.6 25

41.6 9.6 25 | 41.7 10.0 14 | 40.9 10.3 | 40.8 10.4 12 | 41.5 9.7 14 | 41.0 10.2 25

51.21

39.4 0.8 25 | 39.4 0.8 14 | 38.4 1.8 12 | 38.5 1.7 | 38.5 1.7 11 | 39.7 1.0 13 | 39.0 1.2 25

37.9 2.3 25 | 36.9 3.3 18 | 36.13 4.05 15 end 06 | 36.1 4.1 15 | 36.4 3.8 | 36.4 3.8 11 | 37.7 3.0 13 | 37.7 3.0 25

40.18

Littlefield

8+60 25' Rt end wire fence

8+45.2± c6 B.C.

8+26.5± Beg. 8" curb on Lt.

46.77	46.28	47.06	46.68	47.46	47.06	47.93	47.4	48.51	
4.44	4.93	4.15	4.53	3.75	4.15	3.28	3.8	2.70	—
c	g	c	g	c	g	c	g	c	g
(a)		(b)		(c)		(d)		(e)	

45.21		45.41	45.2	45.68	45.2	45.72?	45.2	45.5	45.07
6.00	—	5.80	6.0	5.53	6.0	5.94	6.0	5.70	6.14
c	g	c	g	c	g	c	g	c	g
(a)		(b)		(c)		(d)		(e)	

Transposed 5.49 / 45.72

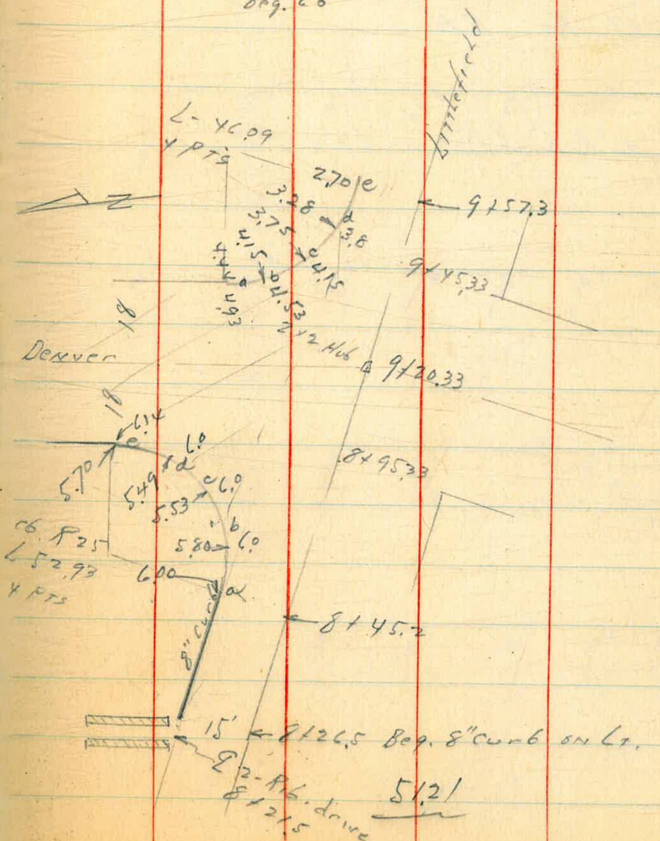
check P 51

51.21

Lt			℄			Rt
45.6	45.49	45.2	45.7	45.9	46.8	47.3
5.6	5.72	6.0	5.5	5.3	4.4	3.9
25	19.7 c6	19.7		10	12	25

45.5	45.2	45.0	45.3	45.4	46.3	46.5
5.7	6.00	6.2	5.9	5.8	4.9	4.7
25	15 c6	15		11	13	25

45.2	44.98	44.8	44.8	45.8	45.5
6.0	6.23	6.4	6.4	5.4	5.7
25	15 Beg. c6		11	13	25



Littlefield

10+00

9+97 23.4 Lt end fence 20.7 2" Tree

9+71 23.2 Lt Beg Picket Fence

Fd. N. BBP on curb Littlefield and ~~Denver~~ 4.47 4C.74 P 80

9+59 17 Rt F.H.

9+57.3 ± end 6" cb. Rot. on Lt.

9+45.33

9+20.33 ℄ Denver to South & N.

8+95.33

51.21

Lt ℄ Rt

50.4	50.0	49.6	49.4	50.1	49.4
0.8	1.2	1.4	1.8	1.1	1.8
25	15		9	11	25

49.1	48.51	47.9	48.3	48.3	48.7	48.9
2.1	2.70	3.3	2.9	2.9	2.5	2.3
25	15 cb	15		9	11	25

48.5	47.89	47.4	47.9	48.0	48.6	48.7	47.7
2.7	3.32	3.8	3.3	3.2	2.6	2.5	3.5
25	15.5 cb	15		10	12	25	125

46.7	47.1	47.1	47.2	48.3	48.0	47.9
4.5	4.1	4.1	4.0	2.9	3.2	3.3
25	15		9	11	25	125

46.1	46.3	46.5	46.7	47.6	47.7	48.1	47.2
5.1	4.9	4.7	4.5	3.6	3.5	3.1	4.0
25	16		8	11	25	75	125

51.21

(Ret. Levels on Erie X sec.)

Station	Remarks	Readings (Lt → ℄ → Rt): elev. rod/dist.
11+53	Beg. c6 Ret. W Side Erie	57.9 4.3/25; 57.82 4.34/15 c6 B.C.; 57.3 4.9/15; 57.3 4.9 (℄); 57.3 4.9/10; 57.7 4.5/12; 57.2 5.0/25
48.5	25 Lt end Bd. fence	
11+25		55.6 6.6/25; 55.1 7.1/15; 55.2 7.0 (℄); 54.9 7.3/10; 55.2 7.0/13; 54.6 7.6/25
+89.4	E.L. Con. drive + Beg. Bd. fence 25' Lt.	53.96 8.20/35 ←; 53.55 8.61/25; 53.21 8.95/16.5 Com. drive; 53.2 9.0/10; 53.0 9.2 (℄); 52.7 9.5/10; 52.3 9.9/25
+71.5	end Bd. fence + W.L. Con. drive	53.96 8.20/35 ←; 53.55 8.61/25; 52.90 9.26/16.4 Con. dr.; 52.4 9.8/10; 52.2 10.0 (℄); 51.9 10.3/10; 52.1 10.1/16; 51.8 10.4/25
10+50		51.5 10.7/25; 51.5 10.7/15; 51.4 10.8 (℄); 51.1 11.1/10; 51.5 10.7/12; 50.7 11.5/25
TP.	11.65 62.16 0.70 50.51	62.16
+22.0	25 Lt Beg Bd fence	
10+13.8	℄ of 8' Con drive 24.9 Lt	51.02 0.19/24.9
	51.21	51.21

+71 ℄ Con 8' wide apron + Gar. on Lt

+49.3± cb E.C. on Lt

12+35.3

12+10.33 ℄ Erie

11+85.33

T.P.	11.29	70.29	3.16	59.00'	
check to BM chi sq NW Littlefield and Erie			3.16	59.00	P. 37 58.88 Begg Robt.

62.16

Lt ℄ Rt

67.97 / 2.32 / 35 gar. — 67.78 / 2.51 / 31 apron — 68.0 / 2.3 / 25 — 66.9 / 3.4 / 18 — 66.3 / 4.0 — 66.2 / 4.1 / 15 — 66.1 / 4.2 / 25

65.7 / 4.6 / 25 — 64.5 / 5.8 / 22 — 62.47 / 7.82 / 15 cb — 62.8 / 7.5 / 15 — 63.6 / 6.8 / 13 — 63.9 / 6.4 — 64.6 / 5.7 / 22 — 65.1 / 5.2 / 25

62.7 / 7.6 / 25 — 61.79 / 8.50 / 18 cb — 61.4 / 8.9 / 18 — 62.6 / 7.7 — 63.0 / 7.3 / 22 — 63.4 / 6.9 / 25 — 59.6 / 10.7 / 125

60.4 / 9.9 / 25 — 60.5 / 9.8 / 16 — 60.8 / 9.5 — 61.1 / 9.2 / 10 — 60.8 / 9.5 / 25 — 58.5 / 11.8 / 125

59.3 / 11.0 / 25 — 59.4 / 10.9 / 16 — 59.3 / 11.0 — 59.2 / 11.1 / 11 — 59.6 / 10.7 / 13 — 59.8 / 10.5 / 25 — 57.6 / 12.7 / 125

70.29

62.16

Littlefield

+25

14

+75

+61 15 Lt T-L.P. 46 900L H

+50

+25

T.P. 5.43 73.27 2.45 67.84

13400

70.29

Lt & Rt

64.4 64.3 64.3 63.7
9.1 9.0 9.0 9.6
25 15 25

66.4 65.9 65.5 65.3 65.6 65.5
6.9 7.4 7.8 8.0 7.7 7.8
25 13 11 18 25

69.4 67.9 68.9 68.7 68.7 67.7
3.9 5.4 6.4 6.6 6.6 5.6
25 13 11 18 25

71.9 71.1 68.3 67.9 67.4 68.5
1.4 1.6 5.0 5.4 5.9 4.8
25 18 9 18 25

72.0 71.5 69.1 68.6 67.8 68.8
1.3 1.8 4.2 4.7 5.5 4.5
25 16 9 19 25

73.27

70.9 70.9 68.9 68.3 67.6
+0.6 +0.6 1.4 2.0 2.7
25 18 10 25

70.29

Check NW Return
Littlefield and Denver
See P. 46

N.E. BP Littlefield ~~Denver~~	5.20	51.94		v 67 4	P 47
Check to NWBP Frankfort + Gardena			4.14	64.13	P 37 64.10 / 0.03

14+88.15 WL Frankfort

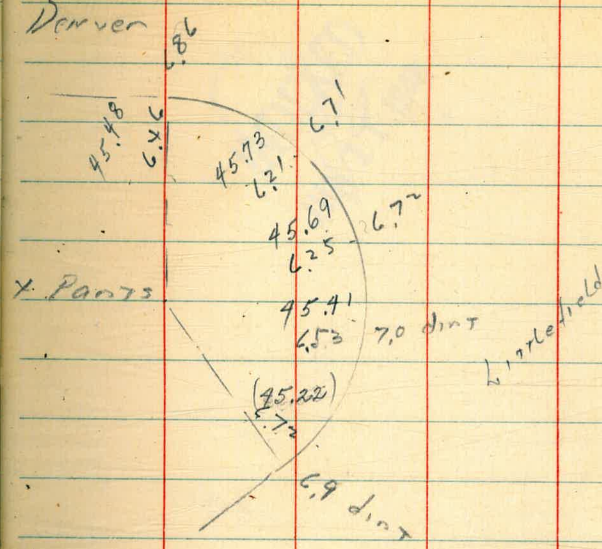
See other Book for N.W. Ret. on Frankfort

14+47± c6 BC on Lt. Tel. 176 164469 007 / P

7.3.27

.Lt   ℄   Rt

Denver



64.12 = Walker
0.01

64.1	64.1	64.3	64.6	64.7
9.2	9.2	9.0	8.7	8.6
25	15		14	25

64.3	64.97	64.1	63.9	63.8	63.1
9.0	8.35	9.2	9.4	9.5	10.2
25	15	15		10	25
	c6 8.6				

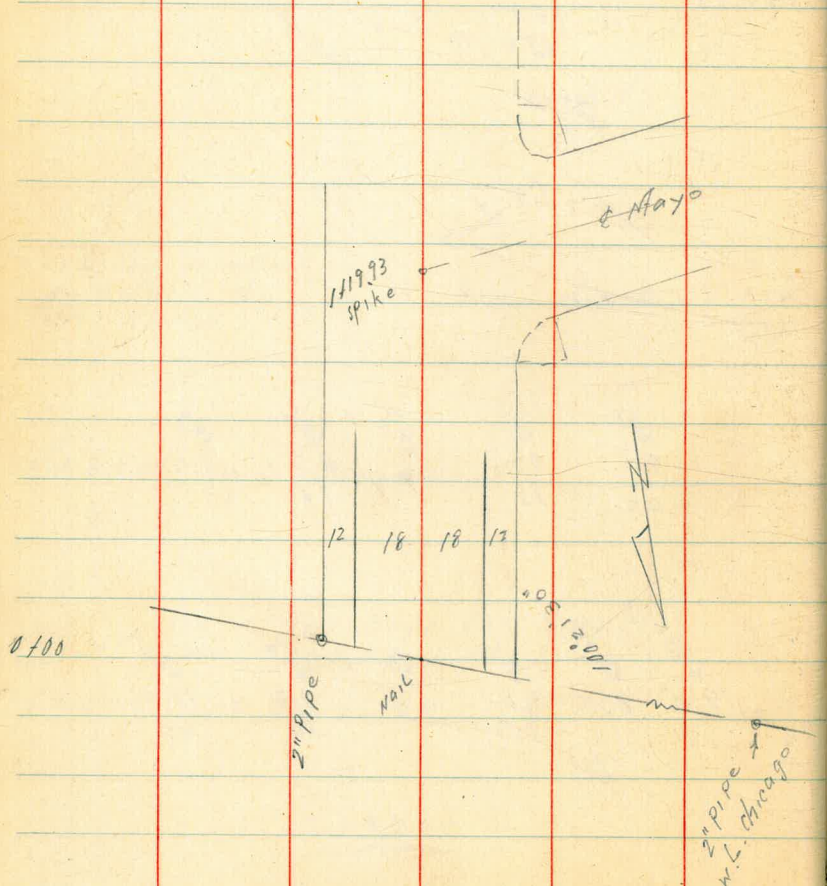
7.3.27

Xsec Denver St curb to curb

S.L. Anchor St to Littlefield

W.O. 31510

Moore
BS99 ℄
Sherman
Bunch
6-9-48.



Denver St

					Lt	Lt	℄		Rt	
0+92	℄ 8' Con dr. thru cb				33.93 3.42 30	32.59 4.76 18 Pt.				
0+66.7	cb B.C. on Pt				33.07 4.28 18 cb	32.5 4.8 18	32.70 4.65	32.1 5.2 18	32.64 4.71 18	
+50					33.15 4.20 18 cb	32.6 4.7 18	32.7 4.6	32.1 5.2 18 9+	32.61 4.74 18	
+25	℄ 8' Con dr. thru cb.							32.24 5.11 18 9+	32.60 4.75 23.5	32.35 5.00 30
+19	℄ 13' Con dr. thru cb				34.30 3.05 30	32.8 4.50 18 9+				
0+00	Line sec		Beg 2½" Pav.		33.33 4.02 18.3 Beg. cb	32.8 4.5 18.3 9+	32.9 4.4	32.4 5.1 18.3	32.83 4.52 18.3	
T.P.	5.14	37.35	1.52	32.21			37.35			
BM. Chisel □ ℄ S.E. Return Napier and Goldfield.	7.30	33.73		26.43						

2

1+61.9 c6 BC Pt

1+19.93 ℄ Mayo

1+00

37.35

Lt		℄		Rt
32.83	32.25	32.4	31.8	32.29
4.52	5.1	4.9	5.5	5.06
18	18		18	18
c6	97			c6
32.91	32.3	32.5	32.0	32.45
4.44	5.0	4.8	5.3	4.90
18	18		18	18
33.04	32.5	32.6	32.4	31.9
4.31	4.8	4.7	5.1	5.4
18	18		18 P	30 P
c6	97			

1+61.9 32.0 5.3 | 4.90 32.45

SW Ret. L = 45.88 4 Pts

4.87 32.48

31.9 5.4 — 4.95 32.40

31.8 5.5 — 5.24 32.11

5.61 31.74

31.6 5.7

31.2 6.1

Denver

Mayo

31.0 6.3

31.3 6.0

5.85 31.50

31.7 5.6 — 5.51 31.84

5.11 32.24

31.9 5.4 — 4.87 32.48

0+66.7 32.1 5.2 | 4.71 32.64

NW Ret. L = 46.90 4 Pts.

33.08	32.5	32.6	32.1	31.8
4.27	4.8	4.7	5.2	5.5
18	16		18	30
c6	97		P	P

37.35

Denver

2+50

2+44.9 c6 BC on Rt

33.75		33.38		33.10		33.05		33.02	
3.60	4.3	3.97	4.5	4.25	4.7	4.30	4.7	4.33	4.7
c	9	c	9	c	9	c	9	c	9
a		b		c		d		e	

S.E. Ret.

33.93		33.56		33.15		32.86		32.74	
3.42	3.9	3.79	4.4	4.20	4.7	4.49	4.9	4.61	5.0
c	9	c	9	c	9	c	9	c	9
e		d		c		b		a	

N.E. Ret

	32.50		32.44		32.31		32.10		31.79
5.3	4.85	5.4	4.91	5.6	5.04	5.9	5.25	6.2	5.56
9	c	9	c	9	c	9	c	9	c
e		d		c		b		a	

S.W. Ret

	32.20		32.13		32.11	31.42	31.99		31.81
5.6	5.15	5.8	5.22	5.9	5.24	5.93	5.36	6.2	5.54
9	c	9	c	9	c	9	c	9	c
a		b		c		d		e	

N.W. Ret

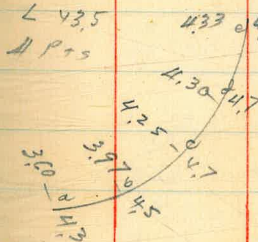
2+26.9 c6 BC on Lt

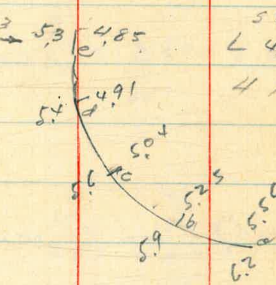
37.35

32.8	32.6	32.2	31.7	32.17
4.6	4.8	5.2	5.7	5.18
30	18		18.7	18.7
p	p		9+	c6

33.06	32.6	32.6	32.1	31.8	32.20
4.29	4.8	4.8	5.3	5.6	5.15
25	25	18		18	18
c6	9+	P			BC

SE Ret
L 43.5
4 Pts

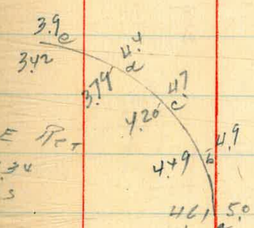




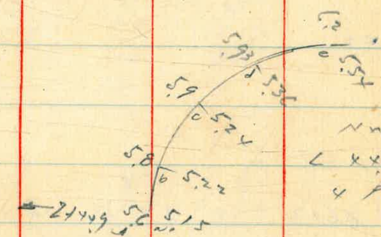
SW Ret
L 47.88
4 Parts

Napier

2+86.13 Spike



NE Ret
L 41.34
4 Pts



NW Ret
L 44.51
4 Pts

32.74	32.4	32.4	31.8	32.24
4.61	5.0	5.0	5.6	5.11
18	18		18	18
c6				c6

37.35

4+00

T.P. 6.9 39.23 4.41 32.94

+65 ℄ Conc. thrust c6 13 wide

3+49.3 c6 EC on ℄

3+26.3 c6 EC on ℄

3+00

2+86.3 2° 34' Rt ℄ Napier Sec. on line ST

2+70

37.35

33.51 33.0 32.9 32.3 32.83
5.72 6.2 6.3 6.9 6.40
18 18 18 18 18
c6 c6

39.23

34.40 33.15 32.94
2.95 4.20 4.43
30 22 18
9+

33.15 32.8 32.8 32.1 32.50
4.20 4.6 4.6 5.3 4.85
18 18 18 18 18
c6. 9+ c6

33.0+ 32.7 32.5 31.8 32.30
4.33 4.7 4.9 5.6 5.05
18 18 28.7 28.7
c6
EC c6

33.30 32.8 32.8 32.6 32.1 31.7
4.05 4.6 4.6 4.8 5.3 5.7
30 30 18 18 P P
c6

33.3 33.0 32.5 32.0 31.7
4.1 4.4 4.9 5.4 5.7
32 20 20 35

33.4 32.9 32.5 31.9 31.5
4.2 4.5 4.9 5.5 5.9
30 18 18 30

37.35

Denvers

Station / Notes		L		℄		Rt
Δ 9°07' Rt, R 1500, T 119.59						
+84 ℄ 8' Con drive	36.77 / 2.46 / 30	34.4 / 4.8 / 18 / 9r				
5+45.88 BC Rt	34.56 / 4.67 / 18 / c6	34.1 / 5.1 / 18 / 9r	34.1 / 5.1	33.5 / 5.7 / 18	33.78 / 5.45 / 18 / c6	
5+25 ℄ 8' Con dr. thru c6	36.13 / 3.10 / 30	34.13 / 5.10 / 18 / 9r				
5+20 ℄ 6' Con dr. thru c6				33.32 / 5.91 / 18 / 9r	33.88 / 5.35 / 26	33.78 / 5.45 / 30
5	34.22 / 5.01 / 18 / c6	33.8 / 5.4 / 18	33.7 / 5.5	33.2 / 6.0 / 18	33.57 / 5.66 / 18 / c6	
4+50	33.78 / 5.45 / 18 / c6	33.3 / 5.9 / 18	33.2 / 6.0	32.6 / 6.6 / 18	33.17 / 6.06 / 18 / c6	
4+32 ℄ 8' Con dr. thru c6	34.79 / 4.44 / 30	34.61 / 4.62 / 27	33.32 / 5.91 / 18 / 9r			

39.23

39.23

Lt ℄

7+08 ℄ 8' Con dr.
34.53 / 4.70 / 18 / 9T — 35.31 / 3.92 / 30

7+00
35.59 / 3.64 / 18 / c6 — 35.0 / 4.2 / 18 — 35.0 / 4.2 — 34.3 / 4.9 / 18 — 34.90 / 4.33 / 18 / c6

+63 ℄ 12' Con dr.
37.13 / 2.10 / 30 — 36.18 / 3.05 / 25 — 35.01 / 4.22 / 18 / 9T

+50
35.23 / 4.00 / 18 / c6 — 34.8 / 4.4 / 18 — 34.7 / 4.5 — 34.1 / 5.1 / 18 — 34.51 / 4.72 / 18 / c6

+43 ℄ 8' Con dr.
34.08 / 5.15 / 18 / 9T — 35.25 / 3.98 / 25 — 35.17 / 4.06 / 30

6+41 ℄ 8' Con dr.
37.15 / 2.08 / 30 — 36.47 / 2.76 / 25 — 34.76 / 4.47 / 18 / 9T

6+00
34.78 / 4.45 / 18 / c6 — 34.4 / 4.8 / 18 — 34.5 / 4.7 — 33.9 / 5.3 / 18 — 34.20 / 5.03 / 18 / c6

39.23

39.23

8+21 ℄ 11' dirt Con drive

T.P. 6.40 42.09 3.54 35.69

8

7+89 ℄ 12' Con dr.

7+84.55 E.C.

157 ℄ 12' Con dr.

150

7+23 ℄ 10' Con dr.

39.23

Lt ℄ Rt

36.9 35.75
5.2 6.34
30 18
dirt drive 97

42.09

36.33 35.88 35.7 35.1 35.54
2.90 3.35 3.5 4.1 3.69
18 18 18 18
C6 C6

34.94 35.43 35.39
4.29 3.80 3.84
18 22 30
97

36.23 35.7 35.6 34.93 35.47 35.38
3.00 3.5 3.6 4.30 3.76 3.85
18 18 18 22 30
C6 97 drive
IN drive

38.14 36.21 35.73
1.09 3.02 3.80
30 21 18
97

35.99 35.6 35.5 34.7 35.19
3.24 3.6 3.7 4.5 4.04
18 18 18 18
C6 C6

34.67 35.23
4.56 4.00
18 30
97

39.23

+97 ℄ 9 to Con drive

9+50

9+10

9+04 ℄ Brick Loose Lay dr. 12' wide

+89 ℄ 8 Con dr

+77 ℄ 8' Con dr.

8+50

42.09

38.11 37.73 37.21
3.98 4.36 4.88
30 22 18
97

37.29 36.9 36.6 36.0 36.47
4.80 5.2 5.5 6.1 5.62
18 18 18 18
c6 c6

37.04 36.7 36.3 35.7 36.19
5.05 5.4 5.8 6.4 5.90
18 18 18 18
c6 c6

36.99 36.33 36.5
5.10 5.76 5.6
30 18.7 18
Brick Brick 97
Pav.

35.64 36.04
6.45 6.05
18 30
97

36.99 36.53
5.10 5.56
30 18
97

36.58 36.1 36.0 35.4 35.89
5.51 5.9 6.1 6.7 6.20
18 18 18 18
c6 c6

42.09

Denver

Pt	c elev	c rod	g elev	g rod
a	37.09	6.78	36.37	7.50
b	37.40	6.47	36.7	7.2
c	37.70	6.17	37.1	6.8
d	37.88	5.99	37.5	6.4
e	38.05	5.82	37.4	6.2

S.W. Ret

Pt	c elev	c rod	g elev	g rod
a	39.82	4.05	39.3	4.6
b	39.53	4.34	38.9	5.0
c	39.29	4.59	38.8	5.1
d	39.05	4.82	38.7	5.2
e	39.12	4.75	38.7	5.2

S.E. Ret.

Pt	c elev	c rod	g elev	g rod
a	37.15	6.72	36.7	7.2
b	37.12	6.75	36.7	7.2
c	37.15	6.72	36.6	7.3
d	36.87	7.00	36.3	7.6
e	36.50	7.37	36.0	7.9

N.W. Ret.

Pt	c elev	c rod	g elev	g rod
a	37.97	5.90	37.57	6.30
b	38.18	5.69	37.7	6.2
c	38.49	5.38	38.0	5.9
d	38.83	5.04	38.4	5.5
e	39.13	4.74	38.7	5.2

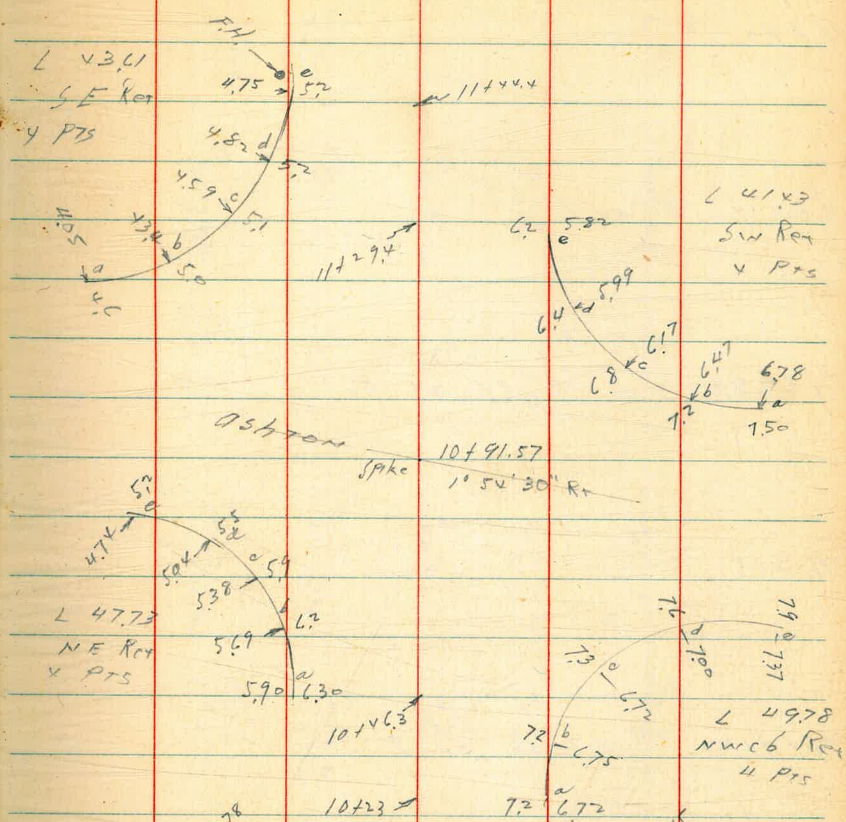
N.E. Ret.

10+23 c6. BC on Rt

please use this ↓ P 79½

T.P. Top F.H. 2.10 ~~43.82~~ [43.87] 0.37 ~~41.72~~ [41.77] S.E. Denver Ashton

10+05 42.09



37.78	37.4	37.2	36.7	37.15
6.09	6.5	6.7	7.2	6.72
18 c6	18		18	18 c6

~~43.82~~ 43.87

37.69	37.29	37.1	36.4	36.96
4.40	4.80	5.0	5.7	5.13
18 c6	18		18	18 c6

42.09

Denver

		Lt		℄		Rt
11+80		39.57	39.17	39.1	38.4	38.82
		4.30	4.70	4.7	5.5	5.05
		18	18		18	18
		c6				c6
11+44.4	c6 BC on Lt	39.12	38.7	38.6	37.9	38.32
		4.75	5.2	5.3	6.0	5.55
		18	18		18	18
		c6				c6
11+29.4	c6 EC on Rt	39.11	38.7	38.4	37.7	38.05
		4.76	5.2	5.5	6.2	5.82
		22.4	22.4		18	18
		c6				c6
11+05		38.8	38.4	37.9	37.4	36.7
		5.1	5.5	6.0	6.7	7.2
		30	18		18	30
		p	p		p	p
10+91.57	T station sec. on ℄ St.	38.9	38.4	37.8	37.3	36.9
		5.0	5.5	6.1	6.6	7.0
		32	19		19	32
10+70		38.69	38.1	37.9	37.6	37.1	36.9
		5.18	5.7	6.0	6.3	6.8	7.0
		31	31	18		18	30
		c6	97	p			p
10+46.3	c6 BC on Lt.	37.97	37.6	37.4	36.9	36.5	37.00
		5.90	6.3	6.7	7.0	7.4	6.87
		18	18		18	35	35
					p	91	c6
	43.87			43.87			

Station	Description		Lt		℄	Rt	
178	℄ 10' Con dr				39.79 / 4.08 / 18 / 9+	40.41 / 3.46 / 24	40.39 / 3.48 / 30
+73	℄ 8' Con dr. thru c6	42.20 / 1.67 / 30	40.45 / 3.42 / 18 / Con Lip	40.57 / 3.30 / 18 / 9+ / Par			
+63	℄ 11 Con dr		42.35 / 1.52 / 30	40.60 / 3.27 / 18 / 9+			
+59	℄ 8' Con dr.				39.62 / 4.25 / 18 / 9+	40.05 / 3.82 / 24	39.73 / 4.14 / 30
+50			40.60 / 3.27 / 18 / c6	40.3 / 3.6 / 18	40.2 / 3.7	39.5 / 4.4 / 18	39.92 / 3.95 / 18
12+05			39.99 / 3.88 / 18 / c6	39.7 / 4.2 / 18	39.5 / 4.4	38.9 / 5.0 / 18	39.23 / 4.64 / 18 / c6
12+05							
11+99	℄ 8' Con dr. thru c6				38.71 / 5.16 / 18 / 9+	39.17 / 4.70 / 24	38.73 / 5.14 / 30

43.82

43.87

Denver

14 E 8 Con. dr.

+93 E 10 Con dr.

+75 E 7 Con dr. thru '06 Δ 6°58'30" LT
QR 2000

13+50

T.P. 7.29 48.CC 2.45 41.37

+38 E 7 Con dr.

13+19.97 B.C. LT

13

43.87

42.84 42.75 42.27
5.82 5.91 6.39
30 24 18
97

41.37 41.70 41.56
7.34 6.96 7.10
18 21 30
97

41.26 41.66 41.46
7.40 7.00 7.20
18 24 30
97

41.95 41.5 41.6 40.9 41.28
6.71 7.2 7.1 7.8 7.38
18 18 18 18
C6 C6

48.CC

42.37 42.05 41.45
1.50 1.82 2.42
30 24 18
97

41.61 41.1 41.4 40.5 40.89
2.26 2.8 2.7 3.4 2.93
18 18 18 18
C6

41.35 41.1 41.0 40.4 40.61
2.52 2.8 2.9 3.7 3.20
18 18 18 18
C6

43.87

Station	Description							
15+45			∠+	44.85 3.81 18 06	44.3 4.4 18	℄ 44.3 4.4	43.7 5.0 18	44.11 ℞+ 4.55 18
+23	℄ 7' Con dr.		44.54 4.12 30	44.54 4.12 24	43.97 4.69 18 97			
15+05	℄ 10 Con dr.		44.26 4.40 30	44.21 4.45 23	43.63 5.03 18 97			
14+95				44.06 4.60 18 06	43.6 5.1 18 97	43.6 5.1	43.0 5.7 18 97	43.48 5.18 18 06
14+88	℄ 8' ~~Con~~ Loose Brick dr.						42.68 5.98 18 97	43.04 5.62 20
								43.18 5.48 30
14+50				43.46 5.20 18 06	43.0 5.7 18 97	42.9 5.8	42.3 6.4 18 97	42.74 5.92 18 06
14+05				42.82 5.84 18 06	42.36 6.30 18	42.3 6.4	41.7 7.0 18	42.11 6.55 18 06
		48.66				48.66		

NEBP Littlefield Denver | 2.02 | 46.64 | 46.74 / 0.10 → check levels for BM chis. D Goldfield & Denver P. 79½

Station	Description	Lt		℄		Rt	
17+00.6	℄ Littlefield						
16+68.6	BC on Lt at Littlefield	46.64 / 2.02 / 18 / CG	46.2 / 2.5 / 18 / gr	46.3 / 2.4	46.1 / 2.6 / 18 / dirt	45.8 / 2.9 / 30 / dirt	
16+27.8	CG BC on Rt ″	46.06 / 2.60 / 18 / CG	45.6 / 3.1 / 18	45.6 / 3.1	44.96 / 3.70 / 18	45.41 / 3.25 / 18 / CG	
16		45.65 / 3.01 / 18 / CG	45.1 / 3.6 / 18	45.1 / 3.6	44.6 / 4.1 / 18	44.97 / 3.69 / 18 / CG	
+85	℄ 10 Con dr.	46.36 / 2.30 / 30	44.84 / 3.82 / 18 / gr				
15+63.44	E.C.	45.08 / 3.58 / 18 / CG	44.5 / 4.2 / 18	44.6 / 4.1	44.0 / 4.7 / 18	44.39 / 4.27 / 18 / CG	
15+53	℄ 9 Con dr thru cb				43.80 / 4.86 / 18 / gr	44.21 / 4.45 / 24	44.19 / 4.47 / 30

48.66

48.66

1 sec Goldfield
Napier to Littlefield

Moore
Begg *
Sherman 6-10-48
Bunch

1+00

0+63.6 c6 BC Rt

24.23	23.6	24.56	23.98	24.98	24.4	25.33	24.9	25.46	25.08
6.86	7.5	6.52	7.10	6.10	6.7	5.75	6.2	5.62	6.00
c	g	c	g	c	g	c	g	c	g
	a		b		c		d		e

S.W. Ret.

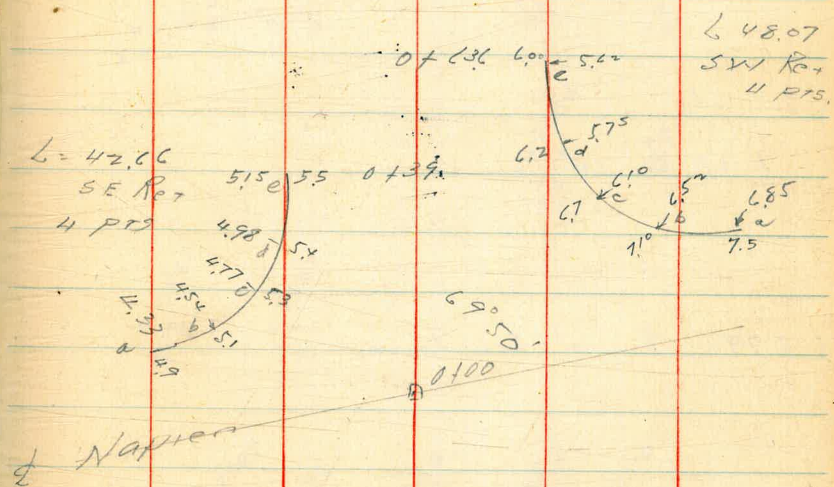
26.75	26.2	26.54	26.0	26.31	25.8	26.10	25.7	25.93	25.6
4.33	4.9	4.54	5.1	4.77	5.3	4.98	5.4	5.15	5.5
c	g	c	g	c	g	c	g	c	g
	a		b		c		d		e

S.E. Ret.

0+39 c6 BC on Lt

S.E. Chisel Square Napier and Goldfield 4.65 31.08 26.43

Lt		℄		Rt
26.60	26.2	26.1	25.4	25.80
4.48	4.9	5.0	5.7	5.28
18	18		18	18
c6				c6
26.23	25.8	25.6	25.1	25.46
4.85	5.3	5.5	6.0	5.62
18	18		18	18
c6				



25.93	25.6	25.4	25.0	24.4
5.15	5.5	5.7	6.1	6.7
18	18		18	30
c6			P	P

31.08

2 + 50

2 + 05 ℄ 8' Con dr.

1 + 98 Δ 1° 59' Rt
℄ R 2000
T 122.03

1 + 91 ℄ 10' Con dr.

1 + 79 ℄ 10' Con drive

1 + 54.53 BC Rt

1 + 24 ℄ 8' Con dr. thru 6

31.08

L 27.86 | 27.3 | ℄ 27.5 | 26.9 | R 27.28
3.22 | 3.8 | 3.6 | 4.2 | 3.80
18 | 18 | | 18 | 18
C6 | | | | C6

29.16 | 26.95
1.92 | 4.13
30 | 18
9+

27.45 | 26.9 | 27.0 | 26.4 | 26.78
3.63 | 4.2 | 4.1 | 4.7 | 4.30
18 | 18 | | 18 | 18
C6 | 9+ | | 9+ | C6

26.34 | 27.68
4.74 | 3.40
18 | 30
9+

28.68 | 26.67
2.40 | 4.41
30 | 18
9+

27.09 | 26.6 | 26.6 | 25.9 | 26.32
3.99 | 4.5 | 4.5 | 5.2 | 4.76
18 | 18 | | 18 | 18
C6 | | | | C6

28.06 | 26.32
3.02 | 4.76
30 | 18
9+

31.08

3+98.29 E.C.

+69 ℄ 17' Con da.

3+50

3+14 ℄ 12' Con da.

T.P. 6.51 34.36 3.23 27.85

3

2+59 ℄ 11' Con da.

31.08

Lt ℄ Rt

29.18 28.7 28.8 28.2 28.60
5.18 5.7 5.C 6.2 5.76
1.8 1.8 1.8
C6 9T C6

27.92 28.26 28.07
6.44 6.10 6.29
1.8 2.2 3.0
9T

28.74 28.2 28.4 27.8 28.15
5.62 6.2 6.0 6.6 6.21
1.8 1.8 1.8 1.8
C6 C6

29.44 27.82
4.94 6.54
3.0 1.8
9T

34.36

28.30 27.8 27.9 27.3 27.67
2.78 3.3 3.7 3.8 3.41
1.8 1.8 1.8 1.8
C6 C6

28.49 27.39
2.59 3.69
3.0 1.8
9T

31.08

4+77 ℄ 14 Con dr.

4+68 ℄ BC on Rt

29.26	28.66	29.44	28.8	29.66	29.1	29.76	29.4	29.80	29.5
5.10	5.70	4.92	5.6	4.70	5.3	4.60	5.0	4.56	4.9
c a	g	c b	g	c c	g	c d	g	c e	g

S.W. Ret

31.58	30.96	31.21	30.7	30.85	30.4	30.60	30.2	30.62	30.4
2.78	3.40	3.15	3.7	3.51	4.0	3.76	4.2	3.74	4.0
c a	g	c b	g	c c	g	c d	g	c e	g

S.E. Ret.

29.30	28.9	29.04	28.6	28.67	28.16	28.17	27.6	27.81	27.16
5.06	5.5	5.32	5.8	5.69	6.20	6.19	6.8	6.55	7.20
c a	g	c b	g	c c	g	c d	g	c e	g

N.W. Ret

30.20	29.8	30.29	29.9	30.54	30.0	30.82	30.2	31.06	30.5
4.16	4.6	4.07	4.5	3.82	4.4	3.54	4.2	3.30	3.9
c a	g	c b	g	c c	g	c d	g	c e	g

N.E Ret

4+50

4+13 ℄ 12' Con dr.

34.36

	Lt		℄		Rt
30.30	30.20	29.3			
4.06	4.16	5.1			
30	26	18 / 9+			
	29.77	29.4	29.3	28.9	29.30
	4.59	5.0	5.1	5.5	5.06
	18 / c6	18		18	18 / c6

L = 49.12
S.E Ret.
4 Pts.

3.74 e 4.0
3.76 d 4.2
3.51 c 4.0
3.15 b 3.7
2.78 a 3.4

← 6+21.6

5+85.9 →

L 35.04
SW Ret
4 Pts.

4.9 e 4.56
5.0 d 4.60
5.3 c 4.70
5.6 b 4.92
5.7 a 5.10

5+54.78 Spike
3°12' Rt

Ashton

3.9 e 3.30
4.2 d 3.54
4.4 c 3.82
4.5 b 4.07
4.6 a 4.16

L 39.24
N.E Ret
4 Pts

F.H.

5+19.7

4+68

6.8 / 7.2 e 6.55
6.20 c 5.69
5.8 b 5.32
5.5 a 5.06

L 54.91
N.W Ret
4 Pts.

29.60	29.2	29.2	28.7	29.10
4.76	5.2	5.2	5.7	5.26
18 / c6	18		18	18 / c6

30.22	30.04	28.76
4.14	4.32	5.60
36	25	18 / 9+

34.36

Station	Remarks		Lt		℄		Rt
6+21.6	c6 B.C. on Lt		30.62 3.74/18 c6	30.4 4.0/18	30.3 4.1	29.7 4.7/18 gr	30.10 4.26/18 c6
6+05	1r E Con dip in c6, drive					29.38 4.98/18 gr	4.5/30 dirt
5+85.9	c6 BC on Rt		30.36 4.00/30 P	29.9 4.5/18 P	29.7 4.7	29.5 4.9/18	29.80 4.56/18 c6
+75			30.4 4.0/30	29.9 4.5/18	29.6 4.8	29.3 5.1/19.5	29.74 4.62/19.5 c6
5+54.78	Sec. on E Ashton		30.56 3.80/35	30.2 4.2/20	29.7 4.7	29.2 5.2/20	28.9 5.5/35
5+32		30.45 3.91/22 c6	30.0 4.4/22	29.9 4.6/18	29.6 4.8	29.0 5.4/18 P	28.7 5.7/30
5+19.7	c6 BC Lt.		30.20 4.16/18 c6	29.8 4.6/18 gr	29.5 4.9	28.9 5.5/18 P	28.5 5.9/30 P

34.36

34.36

Goldfield

7+50

+44 & 8' Con dr.

+26 & 12' Con dr.

7+00

+63 & 10 Con dr.

6+50

T.P. 6+44 36.90 3.90 30.46

34.36

Lt & Rt

31.80 31.3 31.20 30.7 31.16
5.10 5.6 5.7 6.2 5.74
18 18 18 18 18
06 06

31.85 31.75 31.25
5.05 5.15 5.65
30 23 18
97

30.40 30.9 30.86
6.50 6.0 6.0x
18 22 30
97

31.37 30.9 30.8 30.3 30.75
5.58 6.0 6.1 6.6 6.15
18 18 18 18

30.67 30.16
6.88 6.74
18 30
97

30.88 30.4 30.4 29.9 30.34
6.07 6.5 6.5 7.0 6.56
18 18 18 06
06

36.90

8+50 — ℄ 32.67 4.23 18 06 · 32.3 4.6 18 9T · ℄ 32.3 4.6 · 31.7 5.2 18 · 32.10 4.80 18 06

+45 ℄ 7' Con dr. — 31.70 5.20 18 9T · 32.08 4.82 23 · 32.1 4.8 30

+32 ℄ 10 Con dr. — 33.1 3.8 30 · 32.69 4.21 23 · 32.09 4.81 18 9T

+25 ℄ 7' Con dr. — 31.46 5.44 18 9T · 31.90 5.0 23 · 32.00 4.90 30

+07 ℄ 12 Con dr. — 32.72 4.18 30 · 32.48 4.42 25 · 31.85 5.05 18 9T

8 — 32.22 4.68 18 06 · 31.9 5.0 18 · 31.8 5.1 · 31.2 5.7 18 · 31.69 5.21 06

7+62.81 BC Rt Δ 5°16'30" Rt ℄ R 2500 T 115.16 — 31.94 4.96 18 06 · 31.50 5.4 18 · 31.4 5.5 · 30.8 6.1 18 · 31.31 5.59 18 06

3690

36.90

Station		Lt		℄		Rt	
9+92.98 E.C.		33.98 / 2.92 / 18	33.6 / 3.3 / 18	33.5 / 3.4	32.0 / 4.9 / 18 ?	32.38 / 4.52 / 18	
+84 ℄ 8 Corr. dr.	34.50 / 2.40 / 30	34.06 / 2.84 / 23	33.57 / 3.33 / 18 / 9T				
+50		33.57 / 3.33 / 18	33.1 / 3.8 / 18	33.1 / 3.8	32.60 / 4.30 / 18	33.01 / 3.89 / 18	
9+42 ℄ 8' Corr. dr.					32.57 / 4.33 / 18 / 9T	33.0 / 3.90 / 24	32.88 / 4.02 / 30
9+00		33.17 / 3.73 / 18 / c6	32.8 / 4.1 / 18	32.7 / 4.2	32.10 / 4.80 / 18	32.54 / 4.36 / 18	
8+85 ℄ 8' Corr. dr.	33.79 / 3.11 / 30	33.37 / 3.53 / 23	32.56 / 4.34 / 19	32.60 / 4.30 / 18 / 9T			

36.90

36.90

Check to Nail P.S. P. 43			9.16	29.85	29.88
11+28.58	& Littlefield	Returns United Littlefield xsec.			
10+94.2	BC C6	Lt.			
10+71	B.C.	on Rt			
+54	℄ 8' Contr.				
10+40					
T.P.	L.O.C	39.51 / 36.90	3.45	33.45	

Lt ℄ Rt

35.00 / 4.51 / 18 / C6 — 34.15 / 5.0 / 18 / P — 34.5 / 5.0 — 34.0 / 5.1 / 18 / P — 33.3 / 5.7 / 30 / P

34.78 / 4.73 / 18 / C6 — 34.3 / 5.2 / 18 — 34.3 / 5.2 — 33.6 / 5.9 / 18 — 34.13 / 5.38 / 18

35.98 / 3.53 / 30 — 34.71 / 5.30 / 18 / P

34.51 / 5.00 / 18 / C6 — 34.11 / 5.46 / 18 — 33.9 / 5.6 — 33.4 / 6.1 / 18 — 33.79 / 5.72 / 18 / C6

39.51

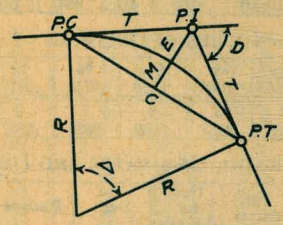
Check Levels to Goldfield BM.

BM BP W. bd wall RR C-L-y	8.88	15.63		6.75	150' S of Ashton Moreng
T.P.	9.44	23.23	18.4	13.79	
Set BM. B.P. & Rec. NW. Cor. Napier and Chicago			5.53	17.70	✓
T.P.	8.95	26.65	5.53	17.70	
T.P. Chisel ☐ SE. Napier Goldfield			0.23	26.47	P.53 26.43
Above BM.	10.74	37.17		26.43	
T.P.	6.45	40.09	3.53	33.64	
T.P.	6.45	42.84	3.70	36.39	P.I.
Check to TP. Top F.H. S.E. Ashton + Denver			1.07	41.77 ✓	41.72 0.05
T.P.	5.01	46.78	1.07	41.77	
TP	5.82	50.27	2.33	44.45	
Check to NE BP Littlefield Denver			3.56	46.71	46.74 0.03

80

I

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES



CURVE FORMULAS

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

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

Middle ordinate=M=R(1—cos. $\frac{\Delta}{2}$) (5)=Rvers $\frac{\Delta}{2}$ (6)

External=E=Ttan$\frac{\Delta}{4}$-(7)=R ÷ cos.$\frac{\Delta}{2}$—R(8)=Rexsec$\frac{\Delta}{2}$(9)

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

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.=Sta. 161+60.35 to find Sta. of P. C. and P. T. △=62° 10′ D=8° 20′. From Table IV for 1° curve T=3454.1 and ÷8⅓=414.49 ft. From Table V correction=.36 or T=414.85 ft. P. C.=Sta. P.I.—T=157 +45.50. Also from (4) L=746.00 and P. T.=Sta. P. C.+L=164+91.50.

Offsets.—Tangent offsets vary (approximately) directly with D and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft.=7.27 ft. Distance=158—Sta. P. C.=54.50, hence offset=7.27 $(54.50 \div 100)^2$=2.16 ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus $(54.50)^2 \div (2 \times 688.26)$=2.16 ft.

Deflections.—Deflection angle=½ D for 100 ft., ¼ D for 50 ft., etc. For c ft.=(in minutes) .3 x C x D° or=defl. for 1 ft. from Table III x C. For Sta. 158 of above curve=.3 x 54.5 x 8⅓=136.2′ or 2° 16.2′, or=2.50 x 54.5=136.2′ from Table III. For Sta. 159 deflection angle=2° 16.2′ +8° 20′ ÷2=6° 26.2′, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 115.37. For from Table IV for 1° curve E=960.6 for 8° 20′=960.6 ÷8⅓=115.27 and from Table V correction=.10 or E=115.37 ft. Or suppose △=32° and E is measured and found to be 42 ft. What is D? From Table IV E=230.9 and ÷42=5.5 or D=5° 30′.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½

For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9+(20—16)÷2 or 2 ft. added to 41.9 =43.9. For slopes of 1 on 1 see inside of front cover.