

*Return to City Engineers Office
City Hall, San Diego, Cal.*

RETURN TO CITY ENGINEER'S OFFICE
CITY HALL, SAN DIEGO, CAL.

400

LEVEL

F.B. 497

*Return to City Engineers Office
City Hall, San Diego, Cal.*

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

MICROFILMED
DEC 11 1984

MINUTES.	LKS.	MINUTES.	LKS.
1.....	2½	21.....	49
2.....	4½	22.....	51½
3.....	7	23.....	53½
4.....	9½	24.....	56
5.....	11½	25.....	58½
6.....	14	26.....	60½
7.....	16½	27.....	63
8.....	18½	28.....	65½
9.....	21	29.....	67½
10.....	23½	30.....	70
11.....	25½	31.....	72½
12.....	28	32.....	74½
13.....	30½	33.....	77
14.....	32½	34.....	79½
15.....	35	35.....	81½
16.....	37½	36.....	84
17.....	39½	37.....	86½
18.....	42	38.....	88½
19.....	44½	39.....	91
20.....	46½	40.....	93½
41.....	95½	59.....	137½
42.....	98	60.....	140
43.....	100½		
44.....	102½		
45.....	105		
46.....	107½		
47.....	109½		
48.....	112		
49.....	114½		
50.....	116½		
51.....	119		
52.....	121½		
53.....	123½		
54.....	126		
55.....	128½		
56.....	130½		
57.....	133		
58.....	135½		

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
°		°		°		°	
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

RETURN TO CITY ENGINEER'S OFFICE
CITY HALL, SAN DIEGO, CAL.

FROM
Loring's Book Store

X-section 13' 5"
continued from book 476

10/6
/09

Dunell
Shaw 1

1798

17255 of "G" 5'

W. side	4.6	13.4
gtw	5.3	12.7
1/4	4.7	13.3
M	4.8	13.2
+10.5	4.8	13.2
+12.5	4.9	13.1
+14.5	4.9	13.1
1/4	5.2	12.5
1/4	5.8	12.2
E. side	5.4	12.6

1750

E. side	5.6	12.4
gtw	6.1	11.9
1/4	5.3	12.7
+13.5	5.1	12.9
+10.5	5.1	12.9
+12.5	4.9	13.1
M	4.9	13.1
1/4	5.0	13.0
gtw	5.6	12.4
W. L.	4.8	13.2

1798
1775

W. Cal	5.0	13.0
gt	5.8	12.2
"	5.3	12.7
M	5.1	12.9
+0.5	5.1	12.9
+2.5	5.4	12.6
+9.5	5.3	12.7
"	5.4	12.6
gt	5.7	12.6
E. Cal	6.3	11.7

270

E. Cal	5.9	12.1
gt	6.4	11.6
"	5.6	12.4
+3.5	5.5	12.5
+10.5	5.5	12.5
+12.5	5.3	12.7
M	5.3	12.7
"	5.4	12.6
gt	5.9	12.1
W. Cal	5.2	12.8

2725

W. Cal	5.5	12.5
gt	6.2	11.8
"	5.6	12.4
M	5.6	12.4
+0.5	5.6	12.4
+2.5	5.7	12.3
+9.5	5.6	12.4
"	5.7	12.3
gt	6.6	11.4
E. Cal	6.0	12.0

2750

E. Cal	6.2	11.6
gt	6.6	11.4
"	6.0	12.0
+3.5	5.8	12.2
+10.5	5.9	12.1
+12.5	5.8	12.2
M	5.5	12.2
"	5.8	12.2
gt	6.5	11.5
W. Cal	5.7	12.3

17.98

2+75

W. cab	5.9	12.1
gtu	6.6	11.4
"4	6.0	12.0
"1	6.1	11.9
+0.5 = 2' W of W rail	6.1	11.9
+2.5 = W rail	6.1	11.8
+9.5 = 2' E of E rail	6.2	11.8
"4	6.2	11.8
gtu	6.8	11.2
E. cab	6.3	11.7

+10 = N. L. H. 5'

E. cab	6.5	11.5
gtu	7.3	10.7
"4	6.4	11.6
+3.5 = 2' E of E rail	6.3	11.7
+10.5 = E rail	6.3	11.7
+12.5 = 2' W of W rail	6.3	11.7
"1	6.3	11.7
"4	6.2	11.8
gtu	7.1	10.9
W. cab	6.1	11.9

x-section Cedar at 312 to Morse
 " 80' wide
 B.M. 58K A.E. 30th & Cedar 30th 22407
 10/ Dunkle
 10/ Shaco
 10/ Dupil

22398
 W "A

B.M. 8.69 232.76
 T.P. 5.02 236.05 1.13 231.03
 T.P. 0.75 223.98 12.82 223.23

S 7.5 212.5

erb 8.2 212.8

" 9.0 213.4

" 10.3 211.7

" 14.7 209.3

erb 15.8 208.2

N 17.1 206.9

W.L. 312' 80' wide

S 5.4 224.5
 erb 3.7 220.3
 " 1.5 218.9
 " 0.9 218.0
 " 2.3 216.7
 erb 2.7 215.8
 N 2.9 214.1

POSTED

POSTED

W. curb

Center

N 13.9 210.1

N 20.5 203.5

erb 12.7 211.3

erb 18.7 205.3

" 11.0 213.0

" 17.9 206.7

" 9.0 215.0

" 15.4 208.6

" 7.5 216.5

" 14.2 209.8

erb 6.7 217.3

erb 12.5 211.5

S 4.7 219.3

S 10.8 213.2

T.P. 0.05 211.43 12.60 211.38

211.43

E 1/4

S	3.1	208.3
Crk	4.5	206.9
1/4	5.3	206.1
M	7.1	204.3
1/4	8.8	202.6
Crk	10.2	201.2
N	11.6	199.8

E. Crk

N	15.1	196.3
Crk	13.6	197.8
1/4	11.7	199.7
M	10.3	201.1
1/4	8.6	202.8
Crk	7.8	204.1
S	6.4	205.0
T.P.	2.61	201.93
	12.11	199.32

~~211.43~~

20193

E.L. 31st ST

6

S	2.6	208.8	199.3
Crk	5.3	206.1	196.6
1/4	6.7	204.7	195.2
M	8.3	203.1	193.6
1/4	8.2	203.2	193.7
Crk	8.6	201.8	193.3
N	10.4	201.0	191.5

T.P. 172 190.82 12.33 189.10

0+25 E

N	11.3	179.5
Crk	9.3	181.5
1/4	9.1	181.7
M	8.8	182.0
1/4	8.2	182.6
Crk	7.2	183.6
S	5.0	185.8

T.P. 0.81 179.39 12.24 178.58

		179.37	
	1450		
- 30		16.2	163.2
S		16.1	163.3
erb		13.2	166.2
"A		11.9	167.5
"A		11.2	168.2
"A		9.0	170.4
erb		6.6	172.8
N		2.9	176.5
T.P.	1108 190.09	0.38	179.01
	1475		
N		+ 2.1	198.2
erb		3.6	186.5
"A		7.0	183.1
M		10.2	179.9
"A		13.3	176.8
erb		16.3	173.8
S		21.2	168.9
+ 30		25.7	164.4

		190.09		8
		2+0=N.L. Ida st 80' wide		
- 30		22.6	167.5	
S		14.1	176.0	
erb		8.3	181.8	
"A		3.6	186.5	
T.P.	1280 202.57	0.32	189.77	
M		11.2	191.4	
"A		8.0	194.6	
erb		5.7	196.9	
N		2.8	199.8	
		W. CURB		
N		+ 1.6	204.2	
erb		1.6	201.0	
"A		4.3	98.3	
M		7.0	195.6	
"A		10.8	91.8	
erb		15.1	87.5	
S		20.6	182.0	

		202.57	
		W 1/4	
S		16.0	186.6
cut		10.5	192.1
1/4		6.1	96.5
M		4.0	198.6
T.P.	12.49	214.68	0.38 202.19
1/4		12.4	202.3
cut		9.7	205.0
N		6.7	207.8
Center			
N		3.3	211.4
cut		6.3	208.4
1/4		2.7	205.5
M		12.3	207.4
1/4		15.8	98.9
cut		19.4	95.5
S		25.3	189.4
+15		31.0	183.7

		214.68	
		E 1/4	
S		23.2	191.5
cut		17.0	97.7
1/4		12.6	202.1
M		9.1	205.6
1/4		5.9	208.8
cut		2.7	212.0
N		70.5	215.2
T.P.	10.73	225.20	0.21 214.47
E. CORN			
N		6.9	218.3
cut		9.5	215.7
1/4		12.5	212.7
M		16.1	209.1
1/4		19.6	205.6
cut		23.9	201.3
S		31.9	193.3

	225.20	
	E. of Ida St	
-15	33.5	191.7
S	28.1	197.1
Crk	21.1	206.1
"4	16.6	208.6
M	12.7	212.5
"4	8.9	216.3
Crk	6.0	219.2
N	3.5	221.7
	0+75' E of Ida	
N	1.1	226.3
Crk	1.9	223.3
"4	4.7	220.5
M	7.6	217.6
"4	10.8	214.4
Crk	13.9	211.3
S	20.6	204.6
+15	26.3	198.9

	225.20	
	0+50	
S	12.9	217.3
Crk	8.7	216.5
"4	5.9	219.3
M	3.3	221.9
"4	0.3	226.9
T.P.	12.12	237.04 - 0.28 = 224.92
Crk	9.6	227.4
N	7.1	229.9
	0+75'	
N	5.3	231.7
Crk	6.9	230.1
"4	8.4	228.6
M	10.6	226.4
"4	12.6	224.4
Crk	17.2	219.8
S	20.9	216.1

23704

120

S	18.2	218.5
erb	12.9	224.1
"A	10.8	226.2
N	8.2	228.8
"A	6.8	230.2
erb	5.8	231.2
N	4.7	232.3

1225

N	5.4	231.6
erb	6.4	230.6
"A	7.2	229.8
N	8.2	228.8
"A	9.9	227.1
erb	12.9	224.1
S	16.6	220.4
+15	21.1	216.9

23704

1450

11

S	19.1	217.9
erb	15.5	221.5
"A	13.1	223.9
N	11.2	225.8
"A	10.1	226.9
erb	9.1	227.9
N	7.9	229.1

1475

N	10.2	226.8
erb	12.2	224.8
"A	13.6	223.4
N	15.6	221.4
"A	17.3	219.7
erb	19.9	217.1
S	22.9	214.6

	237.09		
-15	210	34.3	202.7
S		22.2	207.8
crb		30.0	207.0
"4		27.6	209.4
M		23.3	213.7
"4		17.1	219.9
crb		14.0	223.0
N		11.2	225.8
	2125		
N		10.0	227.0
crb		12.7	224.3
"4		1.5	235.5
M		18.2	218.8
"4		22.7	214.6
crb		28.8	208.2
S		33.5	203.5
+30		46.2	190.8

	237.04		12
-30	2150	37.3	197.7
S		25.9	211.1
+10		24.1	212.9
+11		21.1	215.9
crb		20.5	216.5
"4		16.9	220.1
M		14.3	222.7
"4		12.1	224.9
crb		9.4	227.6
N		7.2	229.8
	2175		
N		3.6	233.4
crb		5.5	231.5
"4		8.1	228.9
M		10.3	226.7
"4		12.9	224.1
crb		15.1	221.9
+9		23.9	213.1
+10		25.9	211.1
S		26.2	210.8

237.04
2190 = W.L. 32nd St, 56' wide

S	25.8	211.2
+3	25.4	211.6
+A	23.1	213.9
crk	19.1	217.9
+8	11.1	225.9
"A	10.1	226.9
M	7.6	229.4
"A	4.7	232.3
crk	3.2	233.8
N	1.8	235.2
T.P.	623 241.20	227 239.77
W. Crk.		
N	5.2	236.0
crk	6.9	234.3
"A	8.7	232.5
M	11.0	230.2
"A	13.5	227.4
+3	13.2	228.0
crk	21.6	219.6
S	29.1	212.1
+15	28.8	212.4

241.20

W "A

13

-15	22.1	219.1
S	23.9	217.3
+9	24.4	216.8
crk	22.0	219.2
"A	14.7	226.5
+4	12.0	229.2
M	10.6	231.2
"A	7.7	233.5
crk	6.2	235.0
N	4.3	236.9
center		
N	3.8	237.4
crk	5.7	235.5
"A	7.2	234.0
M	9.4	231.8
+7	11.2	230.0
"A	14.4	226.8
crk	19.6	221.6
S	18.7	214.5

241.20

E "4

S	14.5	226.7
crk	14.5	226.7
"4	13.9	227.3
+ 5	10.6	230.6
M	8.8	232.4
"4	6.7	234.5
crk	5.0	236.2
N	3.1	238.1

E curb

N	2.5	238.4
crk	4.2	237.0
"4	6.4	234.8
M	8.1	233.1
"4	10.1	231.1
crk	11.4	229.8
S	13.7	227.5

241.20

E. L. 32nd St

14

S	12.2	229.0
crk	10.5	230.7
"4	8.9	232.3
M	7.2	234.0
"4	5.7	235.5
crk	4.0	237.2
N	2.7	238.5

0 + 25 E of 32nd St

N	1.9	239.3
crk	3.2	238.0
"4	4.0	237.2
M	4.7	236.5
"4	6.1	235.1
crk	7.5	233.7
S	8.9	232.3

	241.20		
	0+50		
S	6.4	234.8	
crk	4.9	236.3	
"A	3.8	237.4	
M	3.0	238.2	
"A	2.3	238.9	
crk	1.4	239.8	
N	0.6	240.6	

T.P 10.14 249.39 11.95 239.25

	0+75		
N	7.3	242.1	
crk	8.2	241.2	
"A	8.9	240.5	
M	9.5	239.9	
"A	10.3	239.1	
crk	11.4	238.0	
S	12.7	236.7	

249.39

1+0

S	10.9	238.5	
crk	9.6	239.8	
"A	8.6	240.8	
M	7.9	241.5	
"A	7.2	242.2	
crk	6.6	242.8	
N	6.0	243.4	

1+25

N	4.8	244.6	
crk	5.3	246.1	
"A	5.8	243.6	
M	6.4	243.0	
"A	7.1	242.3	
crk	8.0	241.4	
S	9.1	240.3	

249.39

1750

S	7.3	242.1
erb	6.5	242.9
"	6.0	243.4
M	5.3	244.1
"	5.0	244.4
erb	4.4	245.0
N	4.2	245.2

1775

N	4.5	244.9
erb	4.6	244.8
"	4.6	244.8
M	5.0	244.4
"	5.4	244.0
erb	5.9	243.5
S	6.5	242.6

249.39

16

2+0 = W.L. Bancroft St 80' wide

S	7.0	242.4
erb	6.4	243.0
"	6.1	243.0
M	5.9	243.5
"	5.9	243.5
erb	6.0	243.4
N	6.0	243.4

W. C. erb

N	7.0	242.4
erb	6.9	242.5
"	6.9	242.5
M	6.9	242.5
"	7.1	242.3
erb	7.4	242.0
S	7.9	241.5

249.39

W "4

S	8.5	240.9
crk	8.3	241.1
"4	8.0	241.5
M	8.0	241.5
"4	7.8	241.6
crk	7.6	241.8
N	7.7	241.7

Center

N	8.6	240.8
crk	8.4	241.0
"4	8.9	240.5
M	9.0	240.4
"4	9.0	240.4
crk	9.4	240.0
S	9.7	239.7

249.39

E "4

17

S	10.7	238.7
crk	10.3	239.1
"4	9.9	239.5
M	9.9	239.5
"4	9.6	239.8
crk	9.3	240.1
N	9.7	239.7

E Crk

N	10.6	238.8
crk	10.4	239.0
"4	10.2	239.2
M	10.3	239.1
"4	10.5	238.9
crk	10.6	238.8
S	10.8	238.6

35

249.39

E.L. BARCLOFT

S		10.7	238.7
Crk		10.8	238.6
"A		11.0	238.4
M		10.9	238.5
"A		10.8	238.6
Crk		11.0	238.4
N		11.3	238.1
T.P.	606	242.90	12.55 236.84
		0+25	E
N		6.0	236.9
Crk		5.5	237.4
"A		5.3	237.6
M		4.9	238.0
"A		4.7	238.2
Crk		4.7	238.2
S		4.8	238.1

242.90

0+50

18

S		5.1	237.8
Crk		5.4	237.5
"A		5.7	237.2
M		6.2	236.7
"A		6.3	236.6
Crk		6.7	236.2
N		7.2	235.7
		0+75	
N		7.4	235.5
Crk		7.6	235.0
"A		7.0	235.9
M		6.8	236.1
"A		7.4	235.5
Crk		7.2	235.7
S		6.6	236.3

242.90

1+0

S	7.8	235.1
erb	7.8	235.1
"	8.1	234.8
N	7.3	235.6
"	7.5	235.2
erb	8.3	234.6
N	8.3	234.6

1+25

N	8.2	234.7
erb	8.3	234.4
"	8.7	234.2
N	8.7	234.2
"	8.6	234.3
erb	8.7	234.2
S	8.7	234.2

242.90

1+50

19

S	8.1	234.8
erb	8.7	234.2
"	8.9	234.0
N	9.1	233.8
"	8.6	234.3
erb	8.9	234.5
N	8.5	234.4

1+75

N	8.6	234.3
erb	8.5	234.4
"	8.6	234.3
N	9.1	233.8
"	8.9	234.0
erb	9.1	233.8
S	9.4	233.5

242.90

2+0 = W.L. 33rd St 80' wide

S	9.2	233.7
erb	8.8	234.1
"	8.6	234.3
"	8.4	234.5
"	8.2	234.7
erb	8.2	234.7
N	8.1	234.8

N curb

N	7.7	235.2
erb	8.0	234.9
"	7.9	235.0
"	8.1	234.8
"	8.1	234.8
erb	8.3	234.6
S	8.7	234.2

242.90

N "

20

S	8.3	234.6
erb	7.8	235.1
"	8.0	234.9
"	8.0	234.9
"	7.8	235.1
erb	7.8	235.1
N	7.6	235.3

center

N	7.4	235.5
erb	7.5	235.4
"	7.7	235.2
"	7.9	235.0
"	7.9	235.0
erb	8.0	234.9
S	8.3	234.6

20

242.90

E 1/4

S	8.3	234.6
crk	8.0	234.9
1/4	7.9	235.0
M	7.9	235.0
1/4	7.7	235.2
crk	7.5	235.4
N	7.3	235.6

E. curk

N	7.4	235.5
crk	7.4	235.5
1/4	7.6	235.3
M	7.9	235.0
1/4	8.1	234.8
crk	8.1	234.8
S	8.2	234.7

242.90

E. 33rd St

21

S	8.2	234.7
crk	8.2	234.7
1/4	8.2	234.7
M	7.7	235.2
1/4	7.6	235.3
crk	7.4	235.5
N	7.4	235.5

0+25 E of 33rd

N	7.2	235.7
crk	7.2	235.7
1/4	7.6	235.3
M	7.7	235.2
1/4	8.0	234.9
crk	8.0	234.9
S	8.3	234.6

21

242.40

0450

S	8.5	234.4
crb	8.3	234.6
"A	8.3	234.6
M	7.9	235.0
"A	7.6	234.3
crb	7.6	234.3
N	7.9	235.5

0475

N	8.0	234.9
crb	8.0	234.9
"A	8.3	234.6
M	8.4	234.5
"A	8.4	234.5
crb	8.5	234.4
S	9.0	233.9

242.90

140

22

S	9.6	233.3
crb	9.2	233.7
"A	9.1	233.8
M	9.3	233.6
"A	8.8	234.1
crb	8.6	234.3
N	8.7	234.2

1425

N	9.3	233.6
crb	9.7	233.2
"A	9.9	233.0
M	10.2	232.7
"A	10.4	232.5
crb	10.5	232.4
S	10.6	232.3
T.P.	3.33	235.61
	10.62	232.28

22

235.61

1450

S	6.6	229.0
crib	6.2	229.4
"	5.2	230.4
M	4.2	231.4
"	4.3	231.3
crib	4.5	231.1
N	3.7	231.9

1475

"	8.6	227.0
crib	9.1	226.5
"	9.1	226.5
M	9.4	226.2
"	9.9	225.7
crib	10.7	224.9
S	11.6	224.0

235.61

210 = W.L. Felton St 80 wide

23

S	15.2	220.4
crib	14.5	211.1
"	13.7	221.9
M	12.8	222.8
"	12.9	223.2
crib	11.7	223.9
N	10.5	225.1

T.P. 206 226.11 11.66 223.95

W. Curb

N	2.1	224.0
crib	3.2	222.9
"	3.8	222.3
M	4.6	221.5
"	6.0	220.1
crib	7.2	218.9
S	8.0	218.1

226.11

W "4

S	11.2	215.9
orb	9.7	216.4
"4	7.6	218.5
M	6.3	219.8
"4	5.0	221.1
orb	4.1	222.0
N	3.0	223.1

Center

N	3.6	222.5
orb	5.0	221.1
"4	6.8	219.3
M	8.0	218.1
"4	11.6	214.5
orb	14.3	211.9
S	15.7	211.0

226.11

E "4

S	20.8	205.3
orb	20.1	206.0
"4	17.4	208.7
M	14.5	211.6
"4	11.4	214.7
orb	8.7	217.4
N	4.2	221.9

E CORK

N	4.0	222.1
orb	6.3	219.8
"4	8.9	217.2
M	12.1	214.0
"4	15.4	210.7
orb	18.8	207.3
S	23.3	202.8

226.11

E.L. Felton 54

5		20.8	205.3
cb		16.2	209.9
"		11.8	214.3
N		9.5	216.6
"		7.5	218.6
cb		5.7	220.4
N		4.0	222.1

T.P.	1.29	223.77	3.63	222.48
------	------	--------	------	--------

0+75 E of Felton

N		3.1	220.7
cb		5.1	218.7
"		7.0	216.8
N		8.5	215.3
"		11.0	212.8
cb		13.0	210.8
5		15.5	208.3
+ 35		32.5	191.8

223.77

0+50

- 40		35.1	188.7
- 15		21.1	202.7
5		18.8	205.0
cb		15.8	208.0
"		14.1	209.7
N		12.0	211.8
"		9.9	213.9
cb		8.2	215.6
N		6.4	217.4

0+75

N		9.6	214.2	
cb		11.9	211.9	
"		13.6	210.2	
N		16.1	207.7	
"		17.8	205.9	
cb		20.0	203.8	
5		22.9	200.9	
+ 12		26.4	197.4	
+ 36		39.2	184.6	
T.P.	0.08	210.87	12.98	210.79

10/ sample
15/ 1/2
19/ 25
Wegul

	210.87		
	140		
- 38	20.1	190.8	
- 23	28.5	182.4	
5	16.4	194.5	
erb	9.1	201.8	
"4	7.7	203.2	
M	6.0	204.9	
"4	4.4	206.5	
erb	3.1	207.8	
N	20.5	211.4	
	142.5		
N	3.2	207.7	
erb	4.7	206.2	
"4	6.1	204.8	
M	8.0	202.9	
"4	10.2	200.5	
+ 8	13.1	199.8	
erb	15.2	195.7	
5	21.7	189.2	
+ 17	32.0	178.9	
+ 32	22.9	188.0	

	210.87		26
	145.0		
- 27	26.7	184.2	
- 12	33.7	177.2	
5	28.2	182.7	
erb	24.4	186.5	
"4	13.5	197.4	
M	11.1	199.8	
"4	9.0	201.9	
erb	7.3	203.6	
N	5.8	205.6	
	147.5		
N	7.8	203.1	
erb	10.0	200.9	
"4	11.9	199.0	
M	14.7	196.2	
"4	20.1	190.8	
erb	26.6	184.3	
5	33.2	177.7	
+ 1.0	34.7	176.2	
+ 10	29.9	181.0	

210.87

210 = W.L. Gregory St 80' wide

- 15	33.0	177.9
S	36.4	174.5
cb	33.5	177.4
"A	28.2	188.7
M	22.1	188.8
"A	15.5	195.4
cb	13.5	197.4
N	11.7	199.2

T.P. 0.74 198.94 12.67 198.20

W. C. Park

N	1.7	197.2
cb	2.4	196.5
"A	4.6	194.3
+ 5	5.8	193.1
M	11.3	187.0
"A	17.0	181.9
cb	23.2	175.7
+ 5	25.0	173.9
S	26.1	172.8

198.94

W "A

27

S	27.2	171.7
+ 10	26.0	172.9
cb	24.2	174.7
"A	19.5	179.4
M	13.1	185.8
"A	6.4	192.5
cb	3.7	195.2
N	2.5	196.4

Center

N	4.6	194.3
cb	6.0	192.9
"A	7.7	191.2
+ 5	8.8	
M	13.2	185.7
"A	18.3	180.6
cb	23.9	175.0
S	28.8	170.1
+ 15	27.1	171.8

193.94
E "4

S	22.1	169.8
crk	23.9	175.5
"4	13.9	180.0
M	14.0	184.9
+3	12.0	186.9
"4	10.3	188.6
crk	8.9	190.0
N	7.8	191.1
T.P.	6.0	187.60
12.94		186.00

E. Crk

N	2.7	184.9
crk	0.6	187.0
"4	1.1	186.5
M	3.4	184.2
+10	5.1	182.5
"4	6.6	181.0
crk	11.3	176.0
S	16.6	171.0

197.60
E. L. Gregory St. 28

-35	17.1	170.5
-20	24.9	162.7
S	15.9	171.7
crk	11.6	176.0
"4	7.5	180.1
M	6.0	181.6
"4	6.7	180.9
crk	7.9	179.7
N	9.0	178.6
+20	8.3	179.3

0.125' E of Gregory

-20	6.7	180.9
N	9.8	178.8
crk	13.7	175.9
"4	15.5	172.1
M	16.8	170.8
"4	13.5	169.1
crk	20.2	167.4
S	23.0	164.6
+25	28.3	159.3

197.60
0+50

-25	29.3	
5	17.2	170.4
orb	11.8	175.8
"14	5.0	179.6
"14	6.4	181.2
"14	6.3	181.3
orb	8.2	179.4
N	6.0	181.6
+ 15	0.9	186.7
T.P.	11.82	198.74
	0.68	186.92

0+75

N	7.5	190.9
orb	7.5	191.2
"14	9.0	189.7
N	11.5	187.2
"14	13.4	185.3
orb	15.2	183.5
+ 5	17.4	181.3
5	21.2	177.5
+ 22	26.1	172.6

198.74
1+0

-30	27.4	171.3
-13	19.1	184.6
5	16.0	182.7
orb	14.0	184.7
"14	11.6	182.1
"14	9.0	189.7
"14	6.4	192.3
orb	4.9	194.0
N	1.5	197.2
T.P.	9.72	207.69
	0.77	197.97

1+25

N	6.8	200.9
orb	9.3	198.4
"14	11.7	196.0
N	14.5	193.2
"14	16.9	190.8
orb	20.0	187.7
5	23.1	184.6
+ 25	36.1	171.6

207.69

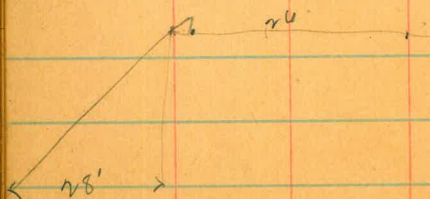
88

1460 = E.L. PROPERTY Union

- 15	21.6	186.1
5	17.9	189.8
erb	15.0	192.7
11/4	11.3	196.4
N	8.4	199.3
11/4	6.5	201.2
erb	3.6	204.1
N	1.1	206.6

108 Redwood stakes

POSTED

Ketch
Trent
Thomson

Univ Lts Res. fill (check)

30

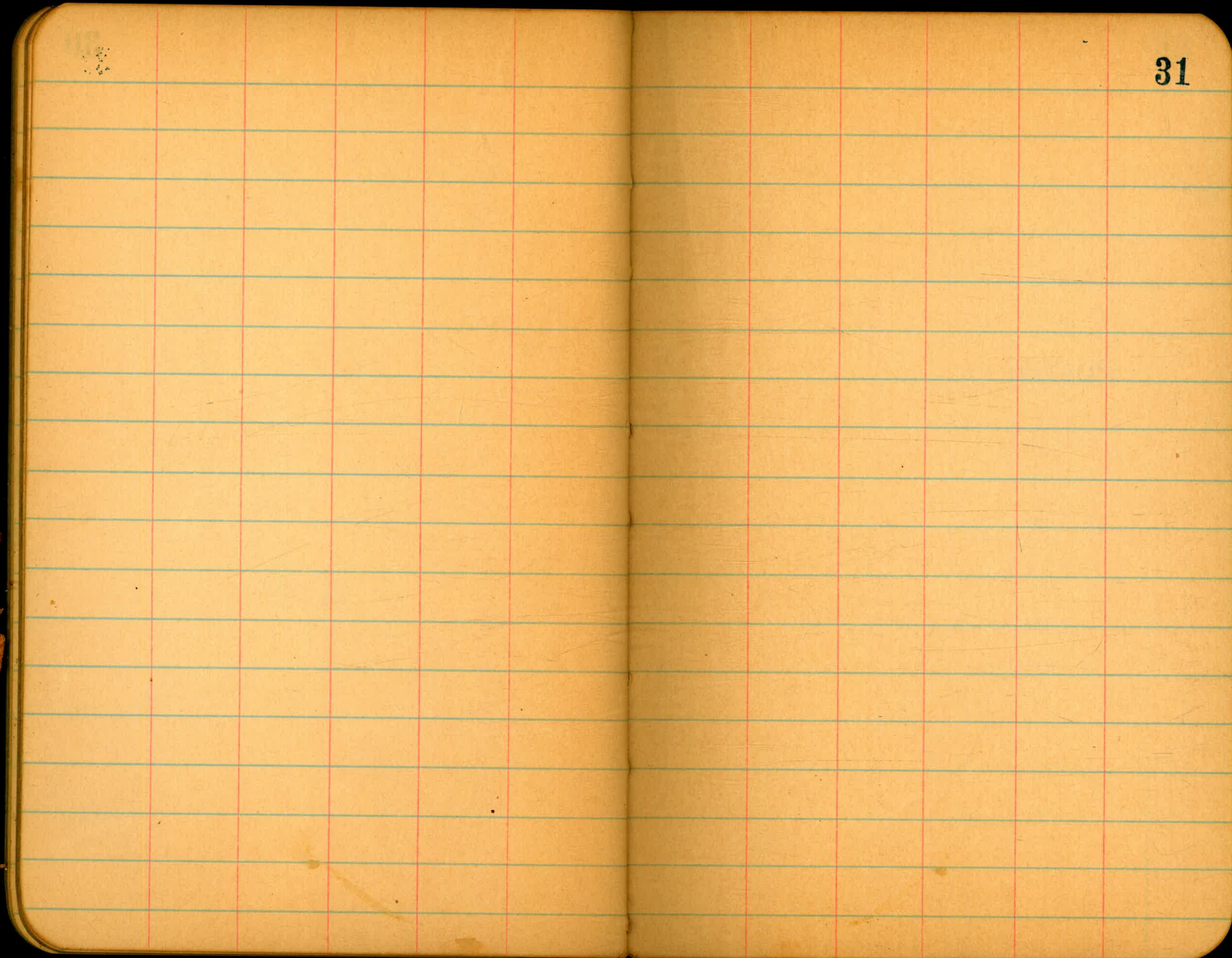
107M.	1224	387.93	375.69	
	11.53	393.19	1.27	386.66
		Edge of fill 4.4		393.8
		out from stakes set at 26'		Radius
25'		1'	4.4	393.5
N		1'	4.2	394.0
20° R		2	4.4	393.5
20		1	4.8	393.4
60		1	4.6	393.6
80		1	4.9	393.5
100		0	4.4	393.8
120		0	4.5	393.7
140		0	4.5	393.7
160	25° R		4.5	393.7
180	25° R		4.7	393.5
200	25° R		4.5	393.7
220		1	4.5	393.7
240		2	4.6	393.6
260		4	4.6	393.6
280		4	4.6	393.6
300		4	4.7	393.5
320		4	4.7	393.5
340		3	4.8	393.4

Fill 60' wide from old res. wall to main fill
as below top of old wall

40 ca. yds 11' runway to above fill

runway 135' long

11' wide



1-section Elm St. Ida to 32nd

" 60' wide.

B.M. Brass by 400 S.E. Elm St 30th St.

109 Dwyer
109 Shaw
109 Dwyer

257.23

228.33
0+50

B.M.	299	262.22		
T.P.	124	250.96	12.50	249.72
T.P.	114	239.40	12.70	238.26
T.P.	183	228.33	12.90	226.50

E.L. Ida St

N		3.4	224.9
cut		4.9	223.0
"	POSTED	6.4	221.9
"		7.9	220.2
"		8.9	219.4
cut		10.1	218.2
S		11.3	217.0

0+25 E of Ida

S		11.2	217.1
cut		9.2	219.1
"		8.3	220.0
"		7.2	221.1
"		6.0	222.3
cut		4.9	223.9
N		3.1	225.2

N		2.9	225.4
cut		4.3	226.0
"		5.7	222.6
"		6.8	221.5
"		7.9	220.4
cut		9.1	219.2
S		10.4	217.9
			0+75
S		9.8	218.5
cut		8.8	219.5
"		7.9	220.4
"		6.6	221.7
"		5.7	222.6
cut		4.5	223.8
N		3.1	225.2

POSTED

228, 33

81

170

N	3.7	224.6
T		
T	4.8	228.5
T		
"	5.8	222.5
M	6.9	221.4
"	7.9	220.4
crk	8.7	219.6
S	9.6	218.7

175

S	11.6	216.7
crk	10.8	217.5
"	9.8	218.5
M	8.8	219.5
"	7.7	220.6
crk	6.7	221.6
N	5.8	222.5

22833

33

1750

N	11.0	217.3
crk	11.6	216.7
"	12.1	216.2
M	12.7	215.6
"	13.5	214.8
crk	14.1	214.2
S	14.7	213.6

175

S	16.0	212.3
crk	15.6	212.7
"	15.0	213.3
M	14.6	213.7
"	11.3	217.0
crk	15.4	212.9
N	13.9	214.4

228.33

270

N	8.4	219.9
crk	9.4	218.9
"	10.3	218.0
"	11.4	216.9
"	12.8	215.5
crk	15.5	212.8
S	17.6	210.7

272.5

S	13.2	215.1
crk	12.2	216.1
"	11.2	217.1
N	10.1	218.2
"	8.8	219.5
crk	7.4	220.9
N	6.2	222.1

228.33

276.5 = W.L. 32nd st

N	4.1	224.2
crk	5.7	222.6
"	7.1	221.2
N	8.5	219.8
"	9.8	218.5
crk	11.1	217.2
S	12.9	215.4

34

x-section Grove St Cedar to Elm
" " 80' wide

107 Sample
109 Shavo

232.79

36

B.M. P.A. Sta 30 $\frac{1}{2}$ Cedar

224.07 Digital

0+50

B.M. 8.72 232.79

W 13.7 219.1

N. 61 Cedar St

cut 10.9 221.9

W 10.3 222.5

" 10.2 222.6

cut 9.2 219.1

M 9.3 223.5

" 8.4 219.9

" 8.6 224.2

M 7.7 225.1

cut 7.8 225.0

" 7.0 221.3

E 6.6 226.2

cut 6.5 221.8

0+75

E 5.7 227.1

E 7.2 225.6

0+75 N of Cedar

cut 8.2 224.6

E 6.2 226.6

" 9.2 223.6

cut 7.1 225.7

M 10.1 222.7

" 7.4 225.4

" 11.3 221.5

M 8.4 224.4

" 9.3 223.5

cut 13.8 219.0

cut 10.0 222.8

W 17.0 215.8

W 11.4 221.4

232.79
1+0

W	12.6	214.2
erb	16.7	216.1
"4	13.9	218.9
M	11.7	221.1
"4	10.2	222.6
erb	9.0	223.8
E	7.9	224.9
T.P.	4.91	225.00
	9.70	223.09

1+25

F	1.6	223.4
erb	2.6	222.4
"4	4.1	220.9
M	6.0	219.0
"4	9.4	215.6
erb	12.5	212.5
+ 1	14.3	210.9
W	10.7	214.3

225.00
1+50

37

W	8.6	216.4
erb	13.9	211.1
+ 3	14.9	210.1
+ 4	16.9	208.1
+ 12	16.5	208.5
"4	15.3	209.7
M	11.3	213.7
"4	8.2	216.8
erb	5.4	219.6
E	4.1	220.9

1+75

F	10.7	214.3
erb	13.0	212.0
"4	16.8	208.2
+ 6	13.8	206.2
+ 7	20.8	204.2
M	20.5	204.5
+ 3	19.6	205.4
+ 5	17.4	207.6
"4	12.8	212.2
erb	8.9	216.1
W	5.8	219.2

225.00
South Park T.L. 13 182 No. of Cedar St.
2+0

W	3.7	221.3
Wk	5.2	219.8
1/4	8.6	216.4
M	13.8	211.2
1/4	18.5	206.5
+8	22.2	202.8
Wk	22.7	202.3
+10	23.2	201.8
E	22.3	202.7
+15	20.3	204.7

2+25

- 45	27.1	197.9
- 30	26.2	198.8
E	17.2	207.8
Wk	12.7	212.3
1/4	8.8	216.2
+5	7.5	217.5
M	7.3	217.7
1/4	5.9	219.1
Wk	4.8	220.2
W	2.6	222.4

22500

38

2+50

W	2.6	222.4
Wk	4.6	220.4
1/4	5.2	219.8
M	6.1	218.9
1/4	6.7	218.3
Wk	7.4	217.6
E	8.4	216.6

2+75

E	7.9	217.1
Wk	7.1	217.9
1/4	6.3	218.7
M	5.4	219.6
1/4	4.8	220.2
Wk	4.1	220.9
W	2.9	222.1

	225.00		
	3+0		
W	4.8	222.2	
orb	3.5	221.5	
"4	4.1	220.9	
M	5.0	220.0	
"4	5.1	219.9	
orb	5.7	219.3	
E	6.5	218.5	

3+25

E	5.0	220.0	
orb	3.7	221.3	
"4	3.6	221.4	
M	2.5	222.5	
"4	2.7	222.3	
orb	2.3	222.7	
W	1.3	223.7	
T.P.	2.30	230.36	1.94 223.06

230.36

3+50

W	4.6	225.8	
orb	5.7	224.7	
"4	5.6	224.8	
M	6.0	224.4	
"4	6.8	223.6	
orb	7.1	223.3	
E	8.6	221.8	

3+75

E	8.0	222.4	
orb	6.2	224.2	
"4	5.4	225.0	
M	4.2	226.2	
"4	4.0	226.4	
orb	3.7	226.7	
W	2.5	227.9	

10/19/09

Dunkle
Shrub 39
Sipuel

220.36

4+0

W	2.6	227.8
crk	3.5	226.9
1/4	3.9	226.5
M	4.6	225.8
1/4	5.8	224.6
crk	6.9	223.5
E	8.9	221.5

4+2.5

E	11.0	219.4
crk	9.5	220.9
1/4	8.0	222.4
M	6.6	223.8
1/4	5.6	224.8
crk	4.8	225.6
W	3.8	226.6

230.36

4+5.0

40

W	7.1	223.3
crk	8.3	222.1
1/4	9.2	221.2
M	10.5	219.9
1/4	12.3	218.4
crk	13.8	216.6
E	15.8	214.6

T.P. 11.03 219.36 12.03 218.33

4+7.5

-20	15.4	204.0
E	13.1	206.3
crk	12.1	207.3
1/4	9.8	209.6
M	8.0	211.4
1/4	5.6	213.8
crk	3.3	216.1
W	1.2	218.2

219.36

- 15	5+0	7.5	214.9
W		6.8	212.6
Crk		9.0	210.4
"		12.7	206.7
M		15.4	204.0
"		18.2	201.2
Crk		21.4	198.0
E		23.8	195.6
+ 25		25.7	193.7

5+25

- 25		15.2	204.2
E		14.5	202.9
Crk		13.1	206.3
"		17.2	205.2
M		17.2	202.2
"		18.7	200.7
Crk		18.6	200.8
W		17.9	200.0
+ 15		18.1	201.3

219.36

- 15	5+50	11.7	207.7
W		8.5	210.9
Crk		7.0	212.4
"		7.0	212.4
M		5.9	213.5
"		5.3	214.1
Crk		6.2	213.2
E		8.2	211.2
+ 25		12.4	207.0

5+15

- 25		9.9	209.5	
E		4.1	215.3	
Crk		1.3	218.1	
T.P.	12.49	231.15	0.70	218.66
"			11.6	219.6
M			10.8	220.4
"			10.4	220.8
Crk			10.4	220.8
W			10.7	220.5
+ 15			12.8	218.4

		231.15		
		6+0		
W		3.4	227.8	
orb		3.4	227.8	
"A		3.8	227.4	
M		4.7	226.5	
"A		6.5	224.7	
orb		9.5	221.7	
E		12.4	218.8	
+25		21.4	209.8	
		6-25		
-15		18.0	213.2	
E		11.6	219.6	
orb		6.6	224.6	
"A		3.5	227.7	
M		0.4	230.8	
T.P.	10.75	241.40	10.50	230.65
"A		8.4	233.0	
orb		6.9	234.5	
W		6.0	235.4	

		241.40		
		6+50		
W		2.9	238.5	
orb		4.1	237.3	
"A		6.6	234.8	
M		9.0	232.4	
"A		12.6	228.8	
orb	POST	15.8	225.6	
E		20.9	220.5	
+20		30.0	211.4	
		6+85 on W	6+85	6-27 E = 5.1 E/M ST
-20		32.5	208.9	
E		24.9	216.5	
orb		17.5	223.9	
"A		13.4	228.0	
M		8.7	232.7	
"A		5.7	235.7	
orb		2.8	238.6	
W		1.3	240.1	

43

section 7th St. University to 100' N. of Brinkley
 7th St. 66' wide 12.5' sidewalks as petitioned for 189
 B.M. P. N. W. 6th St. University 283.91 *Reynolds*
Shaw
Reynolds

B.M. 3.90 287.81
 0+35⁵ N of S.L. Univ. Arc = N. rail of S track.
 E.L. 7th on rail 3.93 283.88
 center " " 3.88 283.93
 W.L. 7th " " 3.89 283.92

S.L. University

W 4.9 282.9
 +10 5.0 282.8
 Cbk 5.3 282.5
 " 4.9 282.9
 M 4.6 283.2
 " 4.5 283.3
 Cbk 4.3 283.5
 E 4.1 283.7

287.81

44

0+25 S. of Univ

F 4.5 283.3
 Cbk 4.8 283.0
 " 4.7 283.1
 M 4.9 282.9
 " 5.2 282.6
 Cbk 5.6 282.2
 +2 4.9 282.9
 W 4.8 283.0
 0+50
 W 5.2 282.6
 +10 5.3 282.5
 Cbk 5.8 282.0
 " 5.5 282.3
 M 5.4 282.4
 " 5.3 282.5
 Cbk 5.0 282.8
 E 4.9 282.9

POSTED

44

287.81

0475

E	5.1	282.7
Crk	5.5	282.3
"A	5.5	282.3
M	5.7	282.1
"A	5.9	281.9
Crk	5.9	281.9
+ 2	5.5	282.3
W	5.5	282.3

110

W	5.8	282.0
+ 10	6.0	281.8
Crk	6.3	281.5
"A	6.0	281.8
M	5.5	282.3
"A	5.8	282.0
Crk	5.8	282.0
E	5.6	282.2

287.81

1125

45

E	5.9	281.9
Crk	5.9	281.9
"A	6.1	281.7
M	6.2	281.6
"A	6.5	281.3
Crk	6.5	281.3
+ 2	6.1	281.7
W	6.1	281.7

1150

W	6.3	281.5
Crk	6.6	281.2
"A	6.5	281.3
M	6.3	281.5
"A	6.2	281.6
Crk	6.2	281.6
E	6.2	281.6

287.81

1+75

E	6.3	281.5
Crk	6.4	281.4
"A	6.5	281.3
M	6.6	281.2
"A	6.6	281.2
Crk	6.7	281.1
W	6.6	281.2
2+0		
W	6.8	281.0
Crk	6.5	281.3
"A	6.5	281.3
M	6.3	281.5
"A	6.6	281.2
Crk	6.5	281.3
E	6.2	281.6

287.81

2+25

46

E	6.7	281.1
Crk	6.6	281.2
"A	6.8	281.0
M	6.4	281.4
"A	6.9	280.9
Crk	7.0	280.8
W	7.2	280.6
2+50		
W	8.0	279.8
Crk	7.5	280.3
"A	7.6	280.2
M	7.4	280.4
"A	7.0	280.8
Crk	6.9	280.9
E	7.3	280.5

287.81

2+75

E	7.6	280.2
erb	7.2	280.6
"A	7.1	280.7
M	7.5	280.3
"A	8.4	279.4
erb	7.9	279.9
W	7.7	280.1

3+0

W	7.9	279.9		
erb	8.3	279.5		
"A	8.7	279.1		
M	7.9	279.9		
"A	7.8	280.0		
erb	7.6	280.2		
E	7.6	280.3		
T. P.	1.76	281.88	7.69	280.12

281.88

3+25

47

E	2.1	279.8
erb	2.2	279.7
"A	2.4	279.5
M	2.3	279.6
"A	3.2	278.7
erb	2.8	279.1
W	2.4	279.5

3+50

W	2.9	279.0
erb	2.9	279.0
+2 "A	3.6	278.3
"A	3.8	278.1
M	3.2	278.7
"A	2.8	279.1
erb	2.3	279.6
E	1.9	280.0

281.88

377.5

E	2.6	279.3
erb	2.6	279.3
1/4	3.0	278.9
M	3.7	278.2
1/4	3.9	278.0
erb	4.2	277.7
+2	3.6	278.3
W	3.3	278.6

470

W	3.9	278.0
erb	4.5	277.4
1/4	4.5	277.4
M	4.0	277.9
1/4	3.4	278.5
erb	3.4	278.5
+10	3.3	278.6
F	2.7	279.2

281.88

472.5

48

F	3.3	278.6
+3	4.3	277.6
erb	4.5	277.4
1/4	4.3	277.6
M	4.7	277.2
1/4	4.9	277.0
erb	4.7	277.2
W	4.2	277.7

472.5 on W 291.99 on F = N. L. Robinson Graded

W	4.6	277.3
+10	5.0	276.9
erb	5.7	276.2
1/4	5.5	276.4
M	5.2	276.7
1/4	5.2	276.7
erb	4.9	277.0
+9	4.7	277.2
F	3.9	278.0

Note - All four returns in for 10' sidewalk
on 7th St.

87

281.88

S. of Robinson

E	4.8	277.1
erb	5.9	276.0
"	6.1	275.8
M	5.6	276.3
"	6.0	275.9
erb	5.7	276.2
W	5.3	276.6

0+75 S. of Robinson

W	5.0	276.9
erb	4.0	277.9
"	3.7	278.2
M	4.2	277.7
"	4.1	277.8
erb	3.3	278.6
E	4.4	277.5

281.88

0+50

49

E	4.6	277.3
erb	7.7	274.2
"	8.9	273.0
M	7.8	274.1
"	5.2	276.7
erb	4.6	277.3
W	5.6	276.3

0+75

W	6.3	275.6
erb	6.7	275.2
"	6.9	275.0
M	8.0	272.9
"	12.2	269.7
erb	13.2	268.7
E	10.6	271.3
+15	5.9	276.0

POSTED

	281.88		
	140		
- 15	8.5	273.4	
E	14.9	267.0	
Crk	12.4	269.5	
"A	8.8	273.6	
M	6.4	275.5	
"A	5.6	276.3	
Crk	5.8	276.6	
W	5.6	276.3	
	1425		
W	6.8	275.1	
Crk	6.7	275.2	
"A	7.0	274.9	
M	7.8	274.6	
"A	10.4	271.5	
Crk	12.8	269.1	
E	16.7	265.2	
+ 15	14.3	267.6	

	281.88		109 - Dampden 109 Sta 50 Signal
	1450		
- 15	14.3	267.6	
E	14.3	267.6	
Crk	10.6	271.3	
"A	10.3	271.6	
M	7.2	274.7	
"A	7.6	274.3	POSTED
Crk	7.0	274.9	
W	6.0	275.9	
T.P.	4.50	279.93	
	1475		
W	4.3	275.6	
Crk	5.1	274.8	
"A	5.4	274.5	
M	4.8	275.1	
"A	5.1	274.8	
Crk	5.9	274.0	
E	8.8	271.1	
+ 15	13.2	266.7	

279.93

270

-15	10.3	269.6
E	6.6	273.3
erb	6.1	273.8
"4	6.1	273.8
N	5.0	274.9
"4	5.1	274.8
erb	4.9	275.0
W	4.5	275.4

272.5

W	3.8	276.1
erb	4.7	275.2
"4	5.2	274.7
N	5.3	274.6
"4	6.4	273.5
erb	7.6	272.3
E	8.9	271.0
+15	10.5	269.4

279.93

275.0

-15	8.4	271.5
E	9.3	270.6
erb	7.0	272.9
"4	5.8	274.1
N	4.7	275.2
"4	4.4	275.5
erb	4.1	275.8
W	3.3	276.6

277.5

W	4.7	275.2
erb	5.1	274.8
"4	5.3	274.6
N	4.8	275.1
"4	6.2	273.7
erb	6.1	273.8
E	6.3	273.6

51

278

278.93

340

E	5.1	274.8
Crk	5.0	274.9
"	4.3	275.6
M	4.0	275.9
"	5.0	274.9
Crk	5.0	274.9
W	3.2	276.7

3425

W	4.2	275.7
Crk	4.1	275.8
"	3.9	276.0
M	3.5	276.4
"	4.0	275.9
Crk	4.3	275.6
E	4.5	275.4

279.93

3450

52

E	3.2	276.7
Crk	3.2	276.7
"	3.7	276.2
M	3.1	276.8
"	2.7	277.2
Crk	2.7	277.2
W	2.7	277.2

POSTED

T.P. 3.28 279.36 2.55 277.32

3475

W	3.9	277.5
Crk	4.1	277.3
"	4.3	277.1
M	4.6	276.8
"	5.2	276.2
Crk	5.2	276.2
E	5.2	276.2

281.36

4+0

E	5.7	275.7
W	4.9	276.5
"	4.4	277.0
N	4.0	277.4
"	4.1	277.3
W	4.0	277.4
N	3.6	277.8

4+25

W	3.9	277.5
W	4.4	277.0
"	4.4	277.0
N	4.2	277.2
"	4.6	276.8
W	5.1	276.3
E	5.8	275.6

281.36

4+50

58

E	5.7	275.7
W	5.5	275.9
"	4.9	276.5
N	4.7	276.7
"	4.4	277.0
W	4.0	277.4
N	3.5	277.9

4+75

W	3.4	278.0
W	4.0	277.4
"	4.5	276.9
N	4.7	276.7
"	5.4	276.0
W	5.6	275.8
E	5.8	275.6

281.36

5+0

E	5.5	275.9
cb	5.5	275.9
"A	5.1	276.3
M	4.6	276.8
"A	4.3	277.1
cb	3.9	277.5
W	3.4	278.0

5+25

W	3.2	278.2
+10 Blank Curb	3.3	278.1
+10	3.6	277.8
cb	3.8	277.6
"A	4.4	277.0
M	4.3	277.1
"A	4.9	276.7
cb	5.3	276.1
E	5.8	275.6

281.36

5+50

E	5.9	275.5
cb	5.8	275.6
"A	5.4	276.0
M	4.5	276.9
"A	4.6	276.8
cb	3.9	277.5
+2.5	3.7	277.7
+2.5	3.5	278.3
W	3.0	278.4

5+75

W	2.8	278.6
+10	2.8	278.6
+10	3.4	278.0
cb	3.7	277.7
"A	4.3	277.1
M	3.8	277.6
"A	5.1	276.3
cb	5.6	275.8
E	5.9	275.5

640 - N.L. Pennsylvania HRC Graded

F	5.1	276.3
crk	4.7	276.7
"A	4.5	276.9
M	4.0	277.4
"A	3.7	277.7
crk	3.3	278.1
+ 2.5	2.8	278.6
W	2.2	279.2

N. creek

W	2.1	279.3
crk	3.1	278.3
"A	3.3	278.1
M	3.5	277.6
"A	4.2	277.2
crk	4.4	277.0
E	5.3	276.1

+ 12 N gutter Penn

F	5.8	275.6
crk	4.9	276.5
"A	4.5	276.9
M	4.3	277.1
"A	3.7	277.7
crk	3.4	278.0
W	2.6	278.8

N "A

W	1.9	279.5
crk	2.5	278.9
"A	3.0	278.4
M	3.6	277.8
"A	4.0	277.4
crk	4.3	277.1
E	5.0	276.4

281.36

Center

E	5.0	276.4
crk	4.2	277.2
"4	3.7	277.7
M	3.2	278.2
"4	2.7	278.7
crk	2.2	279.2
W	1.6	279.8

S "4

W	1.7	279.7
crk	2.2	279.2
"4	2.9	278.5
M	3.4	278.0
"4	4.1	277.3
crk	4.3	277.1
E	4.9	276.5

281.36

+ 9' = S. Gutter

56

E	5.6	275.8
crk	5.0	276.4
"4	4.3	277.1
M	4.0	277.4
"4	3.5	277.9
crk	3.1	278.3
W	2.2	279.2

S crk

W	1.4	280.0
crk	2.6	278.8
"4	3.2	278.2
M	3.7	277.7
"4	3.8	277.6
crk	4.2	277.2
E	5.1	276.3

281.36

S. L. Penna Ave

E		5.0	276.4
crk		4.2	277.2
"		3.7	277.7
M		3.6	277.8
"		3.2	278.2
crk		2.9	278.5
W		1.8	279.6
T.P.	413	283.99	1.50 279.86
		0+25'	
W		4.3	279.7
crk		5.3	278.7
"		5.7	278.3
M		6.0	278.0
"		6.5	277.5
crk		6.9	277.1
E		7.4	276.6

283.99

0+50

57

E		7.2	276.8
crk		7.0	277.0
"		6.4	277.6
M		5.8	278.2
"		5.6	278.4
crk		4.9	279.1
W		4.0	280.0
		0+75	
W		3.9	280.1
crk		4.7	279.3
"		5.4	278.6
M		5.6	278.4
"		6.1	277.9
crk		6.8	277.2
E		7.1	276.9

283.99

140

E	7.0	277.0
Crk	6.3	277.7
"4	5.3	278.7
M	5.3	278.7
"4	4.9	279.1
Crk	4.4	279.6
W	3.4	280.6

1425

W	3.1	280.9
Crk	4.5	279.5
"4	4.6	279.4
M	5.5	278.5
"4	5.9	278.1
Crk	6.5	277.5
E	7.0	277.0

283.99

1450

58

E	6.9	277.1
Crk	6.3	277.7
"4	5.6	278.4
M	5.3	278.7
"4	4.7	279.3
Crk	4.3	279.7
W	3.2	280.8

1475

W	3.9	280.1
Crk	4.8	279.2
"4	5.1	278.9
M	5.4	278.6
"4	5.9	278.1
Crk	6.4	277.6
E	6.8	277.2

283.99

2+0

E	7.0	277.0
Crk	6.5	277.5
"A	6.2	277.8
M	5.7	278.7
"A	5.4	278.6
Crk	5.4	278.6
W	4.9	279.1

2+25

W	6.0	278.0
Crk	6.5	277.5
"A	6.5	277.5
M	6.5	277.5
"A	6.5	277.5
Crk	6.8	277.2
E	6.9	277.1

383.99

2+50

59

E	7.8	276.2
Crk	7.8	276.2
"A	7.7	276.3
M	7.4	276.6
"A	7.2	276.8
Crk	7.2	276.8
W	6.7	277.3

2+75

W	7.1	276.9
Crk	7.5	276.5
"A	7.7	276.3
M	7.9	276.1
"A	8.0	276.0
Crk	8.1	275.9
E	8.3	275.7

66

283.99

3+0

E	8.4	275.6
crk	8.3	275.7
1/4	8.1	275.9
M	8.1	275.9
1/4	7.8	276.2
crk	8.1	275.9
W	7.4	276.6

3+25

W	8.0	276.0
crk	8.3	275.7
1/4	8.4	275.6
M	8.6	275.4
1/4	8.8	275.2
crk	8.8	275.2
E	8.8	275.2

283.99

3+50

60

E	9.7	274.3
crk	9.3	274.7
1/4	9.3	274.7
M	9.1	274.9
1/4	9.0	275.0
crk	9.1	274.9
W	8.6	275.4

3+75

W	9.1	274.9
crk	9.6	274.4
1/4	9.6	274.4
M	9.9	274.1
1/4	10.4	273.6
crk	10.6	273.4
E	11.6	272.4

283.99

A+0

E		12.4	271.6
erb		11.8	272.2
"A		11.3	272.7
M		10.9	273.1
"A		10.8	273.2
erb		10.6	273.4
W		9.7	274.3
T.P.	3.80	275.65	12.14 271.85
		4+25	
W		2.1	273.6
erb		3.0	272.7
"A		3.2	272.5
M		3.7	272.0
"A		4.2	271.5
erb		4.5	271.2
E		5.1	270.6

275.65

A+50

E		6.6	269.1
erb		5.8	269.9
"A		5.1	270.6
M		4.7	271.0
"A		4.2	271.5
erb		4.0	271.7
W		3.6	272.1
		4+75	
W		5.6	270.1
erb		5.7	270.0
"A		6.0	269.7
M		6.6	269.1
"A		7.2	268.5
erb		7.6	268.1
E		7.9	267.8

275.65

540 = 100 N of Brooks

E	12.7	263.0
Crk	11.6	264.1
"A	11.5	264.2
N	12.5	263.2
"A	11.6	264.1
Crk	10.6	265.1
W	11.7	264.0

POSTED

58

62

Section Hooker St. Lewis to Broadway 107
 " 80' wide sec 14' side walk 109
 B.M. S. N. P. 200 Hooker & Lewis 277.08
 Dunkle
 Shaw
 Royal

282.27

63

0 + 50

B.M. 5.19 282.27

N. L. Lewis

E 4.4 277.9

W 4.8 277.5

" 4.8 277.5

POSTED

" 5.0 277.3

" 5.2 277.1

W 5.5 276.8

" 5.3 277.0

0 + 25 W

" 6.0 276.3

W 5.7 276.6

" 5.7 276.6

" 5.3 277.0

" 5.1 277.2

W 5.1 277.2

E 4.8 277.5

E 5.3 277.0

W 5.5 276.8

" 5.5 276.8

" 5.8 276.5

" 5.8 276.5

W 6.1 276.2

" 6.2 276.1

0 + 75

" 6.7 275.6

W 6.5 275.8

" 6.4 275.9

" 6.3 276.0

" 6.1 276.2

W 6.2 276.1

E 6.1 276.2

50

282.27

140

E	6.6	275.7
col	16.8	275.5
"4	6.7	275.6
M	7.0	275.3
"4	6.8	275.5
col	7.0	275.3
W	7.1	275.2

1425

W	7.6	274.7
col	7.3	275.4
"4	7.3	275.0
M	7.6	274.7
"4	7.5	274.8
col	7.6	274.7
E	7.9	274.9

292.27

1750

64

E	8.3	274.0
col	8.3	274.0
"4	8.2	274.1
M	8.2	274.1
"4	8.0	274.3
col	7.9	274.4
W	8.0	274.3
T.P.	3.72	277.28
	8.71	273.56

1475

W	3.6	273.7
col	3.5	273.8
"4	3.6	273.7
M	4.0	273.3
"4	4.0	273.3
col	4.2	273.1
E	4.0	273.3

277.28

270

E	5.1	272.2
erb	5.2	272.1
"4	5.0	272.3
M	4.8	272.5
"4	4.5	272.8
erb	4.3	273.0
W	4.3	273.0

2725

W	4.8	272.5
erb	5.1	272.2
"4	5.3	272.0
M	5.6	271.7
"4	5.9	271.4
erb	6.9	270.9
E	6.2	271.1

277.28

2750

E	7.4	269.9
erb	7.6	269.7
"4	7.2	270.1
M	6.9	270.4
"4	6.3	271.0
erb	5.9	271.4
W	5.4	271.9

2725

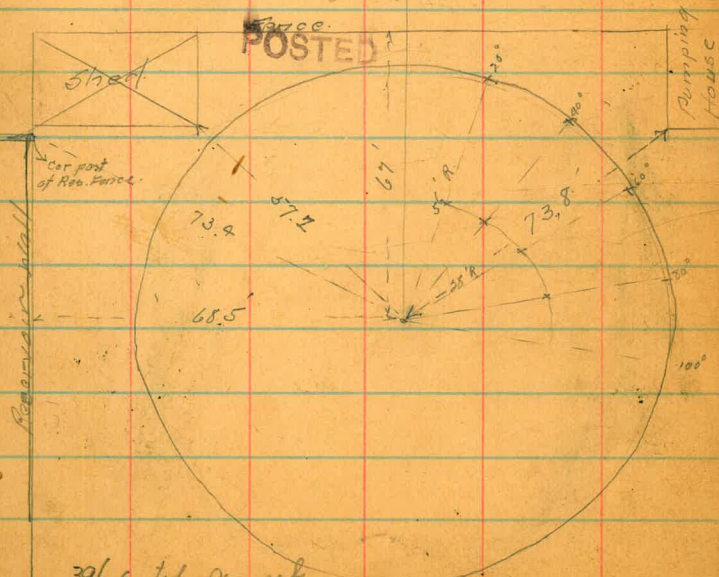
W	5.8	271.5
erb	6.5	270.6
"4	6.9	270.4
M	7.2	270.1
"4	7.6	269.7
erb	8.7	268.6
E	9.3	268.0

277.28

3402 S.L. Roadway

E	10.5	266.8
erb	9.3	268.0
14	8.8	268.5
M	8.2	269.1
11	7.5	269.8
erb	6.7	270.6
N	6.0	271.3

63°55' N to Ridge of roof.



396.6 top corner
10" concrete

395.17

3/18 - station X-sections for foundation of Water Tower
18 Moore at Univ Hts Reservoir

66

137m Tower	4.22	379.91	375.687	N.W. Dakota - D. Cajon.
North	56' Radius	4.5	375.4	
20° Right (or East)		4.9	375.0	
40		4.6	375.3	
60		4.7	375.2	
80		5.3	374.6	
100		5.4	374.5	
120		4.7	375.2	
140		5.0	374.9	
160		5.2	374.7	
170		5.1	374.8	
200		5.2	374.7	
230		5.2	374.7	
240		4.9	375.0	
260		4.0	376.9	
270		4.1	375.8	
300		4.3	375.6	

137m Tower and Dakota

375.687
386.797
385.824
390.4
397.417
395.17
22.5



111
134
134
134
134
134
134
134

	37991	
320	4.3	375.6
340	4.5	375.4
28' Radius		
74	4.8	375.1
20° Right (or East)	4.7	375.2
40	4.9	375.0
60	5.1	374.8
80	5.1	374.8
100	5.2	374.7
120	5.2	374.7
140	5.1	374.8
160	5.3	374.6
180	5.3	374.6
200	5.1	374.8
220	5.1	374.8
240	5.2	374.7
260	5.0	374.9

	37991	
280	5.1	374.8
300	4.9	375.0
320	4.9	375.0
340	4.8	375.1
Centre of Circle		
	5.0	374.9
260 - 3' toward Centre from 56' Radius station		
	4.8	375.1
380	4.7	375.2
TP	460	383.97
	0.54	379.37
Top of embankment W. of Cr.		
	1.6	382.4
" " Concrete above point		
	0.8	383.5

$\frac{2}{18}$ label
 $\frac{18}{12}$ from
Home

Cut stake on ground
from Idaho one block east

Bm	491	380.60		375.69					
TP	510	378.76	6.94	372.66					
		Rod	Elev.	Grade	F	Rod	Elev.	Grade	F
50' E of Idaho.	4.7	374.1	373.17	+ 0.93		54	373.4	373.17	+ 0.23
100		54	373.4	373.33	+ 0.07	55	373.0	373.33	- 0.33
150		49	373.9	373.50	+ 0.40	57	373.1	373.50	- 0.40
200		53	373.5	373.67	- 0.17	59	372.9	373.67	- 0.77
250		53	373.5	373.83	- 0.33	57	373.2	373.83	- 0.63
300		4.2	374.6	374.00	+ 0.60	59	372.8	374.00	- 1.10

Bm 1075 386.44 375.687

977 396.02 0.19 386.25

Hatch 102 395.0

$\frac{5}{27}$ More 144 394.58
110 Talgo truck

160 394.42

top of
Concrete
div of top
of Concrete

* section New Jersey bet. arch

Mar. 25/10

Calculus

Bar 69

H.I.

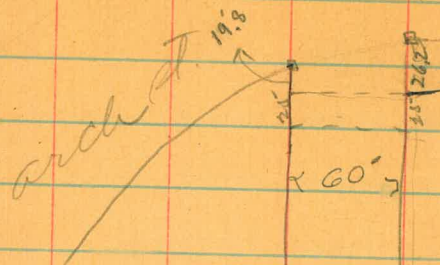
Taylor

B.M.

J.P.

0.01 344.97

344.96



mmmm

(So. line arch) (at mmmmm)

White

6.6 331.4

6.8 327.7

6.2 388

C

6.4 338.6

5.8 392

5.6 394

So. line

5.6 339.4

5-75' No arch. at meade

Ed line

5.1 339.9

5.3 397

5.6 394

C

6.2 338.8

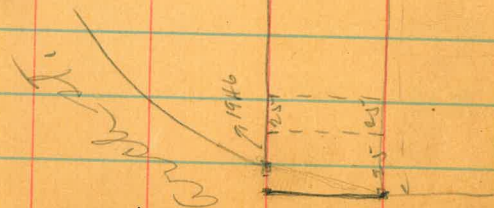
5.9 391

6.6 384

meade

W. line

6.5 338.5



550 North

Wline	6.8	389.2
	6.4	386
	5.8	392
C	6.1	389.9
	5.4	396
	5.2	398
Eline	5.0	340.0
	525' No.	
Eline	5.3	389.7
	5.5	391.5
	5.8	392
C	6.3	389.7
	6.0	390
	6.6	384
Wline	7.0	386.0

500' No.

Wline	7.6	387.4
	7.0	380
	6.4	386
C	6.7	389.3
	6.2	388
	5.8	392
Eline	5.4	389.6
	475' No.	
Eline	5.9	389.1
	6.3	387
	6.7	383
C	7.4	387.6
	7.3	377
	7.9	37.1
Wline	8.8	386.2

344.97

450

450' no.

White	10.0	335.0
	9.2	358
	8.5	36.5
C	8.3	336.7
	7.6	374
	7.2	378
Elise	6.8	339.2
		425' no.
Elise	7.7	337.3
	8.4	366
	8.8	362
C	9.8	335.2
	9.8	352
	10.7	343
White	11.1	333.9

344.97

400' no.

71

White	12.3	332.7
	11.5	33.5
	11.1	33.9
C	11.4	333.6
	10.1	34.9
	9.6	35.4
Elise	9.0	336.0
		375' no.
Elise	10.3	334.7
	10.9	34.1
	11.7	33.3
C	12.8	339.2
	12.5	32.5
	12.7	32.3
White	13.7	331.3

344.97

H.J.

JP

152 333.57 1292 332.05

350' No.

W

White

34 330.2

32 304

24 313

28 330.8

C

C+M

3.2 30.4

1.8 31.8

14 322

Eline

0.9 332.9

325' No.

Eline

2.6 331.0

3.1 305

3.5 30.1

4.9 29.7

4.1 329.5

3.8 29.8

4.7 28.9

White

4.8 228.8

333.57

72

300' No.

White

5.9 327.7

4.7 28.9

4.9 28.7

5.4 328.2

C

C+M

6.4 27.2

4.9 28.7

4.5 29.1

4.4 329.2

Eline

275' No.

Eline

5.9 327.7

6.3 27.3

6.5 27.1

7.7

C+M

C

6.4 327.2

6.3 27.3

6.8 24.8

7.0 326.6

White

333.57

250' No.

White	8.2	325.4
	8.2	324
	7.6	320
$\frac{1}{4} + \frac{5}{7}$	8.0	325.6
	8.6	325.0
	7.7	329
	7.6	325.0
	7.5	321
Elms	7.4	322.2

225' No.

Elms	8.9	324.7
	9.0	324
	9.1	324.5
$\frac{1}{4} + \frac{5}{7}$ C	9.8	
	9.6	324.0
	9.2	324.4
	9.6	324.0
White	9.3	324.4

333.57

73

200' No.

White	11.0	322.6
	10.6	323.0
	10.4	323.2
@	11.1	322.5
	10.3	323.4
	10.1	323.5
Elms	10.0	323.6

175' No.

Elms	11.3	322.3
	11.4	322.3
	11.4	322.3
C	12.2	321.4
	12.1	321.5
	12.2	321.4
White	12.2	321.4

	H.I.		
J.P.	0.00	320.83	12.74 320.83
	1.50'	No.	
White		1.3	319.5
		1.6	19.2
		1.0	19.8
C		1.2	319.6
		0.3	20.5
		0.1	20.7
Eline		0.0	320.8
	1.25'	No.	
Eline		1.4	319.4
		1.8	19.0
		2.2	18.6
C		2.9	319.9
		2.9	17.9
		3.7	17.1
White		3.9	316.9

	100'	No.	
White		5.9	314.9
		5.1	15.4
		4.6	16.3
		#	
C ₊₂		4.7	316.1
		5.6	15.2
		4.6	16.3
		3.5	17.3
Eline		2.9	317.9
	75'	No.	
Eline		4.4	316.4
		5.4	15.4
		6.3	14.5
C		6.8	314.0
		6.0	14.3
		7.5	13.3
White		7.6	313.2

50' 010.

White

9.2 311.6

8.7 12.1

8.1 12.7

8.0 3128

9.1 11.7

7.9 12.9

7.2 13.6

Eline

6.2 314.6

25' 010.

Eline

8.2 312.6

9.4 11.4

9.3 11.0

C

10.1 310.7

10.1 10.7

11.1 9.7

White

11.0 309.8

No. line arch (in eads)

White

12.6 308.2

12.6 8.3

12.1 8.7

C

11.9 308.9

11.4 9.4

10.3 10.5

Eline

9.5 311.3

$\frac{4}{5}$ Kates
 $\frac{3}{8}$ Moore
 $\frac{1}{10}$ Thomas
 sections for estimate on full
 for base of water tower at
 Wm. H. Reservoir.

387.88

76

Topogral	Waste	Ca.	387.88		388.5					
N.				5.7	382.2		380	46	5.6	382.3
20° R (crest)	47'			5.6	384.3				4.8	383.1
40°	47'			5.6	382.3					
60°	44'			5.5	382.4				5.1	382.6
80°	44'			5.2	382.7		20		5.2	382.7
100°	45'			5.1	382.5		40		5.1	382.8
120°	43'			4.8	383.1		60		5.1	382.8
140°	41'			4.5	383.4		80		4.9	383.0
160°	41'			4.7	382.2		100		4.8	383.1
180	41'			4.4	383.5		120		4.7	383.2
200	42'			4.4	383.5		140		4.6	383.3
220	44'			4.8	383.1		160		4.6	383.3
240	45'			5.1	382.8		180		4.4	383.5
260	47'			5.1	382.8		200		4.2	383.7
280	46'			5.2	382.7		220		4.5	383.4
300	48'			5.4	382.5		240		4.5	383.4

28 Rodina

387.86

260	4.5	383.4
270	4.7	383.2
300	4.7	383.2
320	4.8	383.1
340	5.0	382.9

 57 Hated
 27 more
 10 total
 8

 Cut stakes for stairs
 at 17th and

77

B7m 292 72.29 69.874

5.04 67.25

13.21 83.05 69.87

11.75 94.15 82.40

E 17.61 77.54

W 17.61 77.54

E 4.11 90.04

W 4.11 90.04

SW Cor-

18" E

C 0.4 W ^{top}C 1.4 E ^{off}add 4" for base ^{off}cut marked ^{off}1.7 ^{top} 0.7

N C 14.5

S C 13.7

N C 15.0

S C 14.1

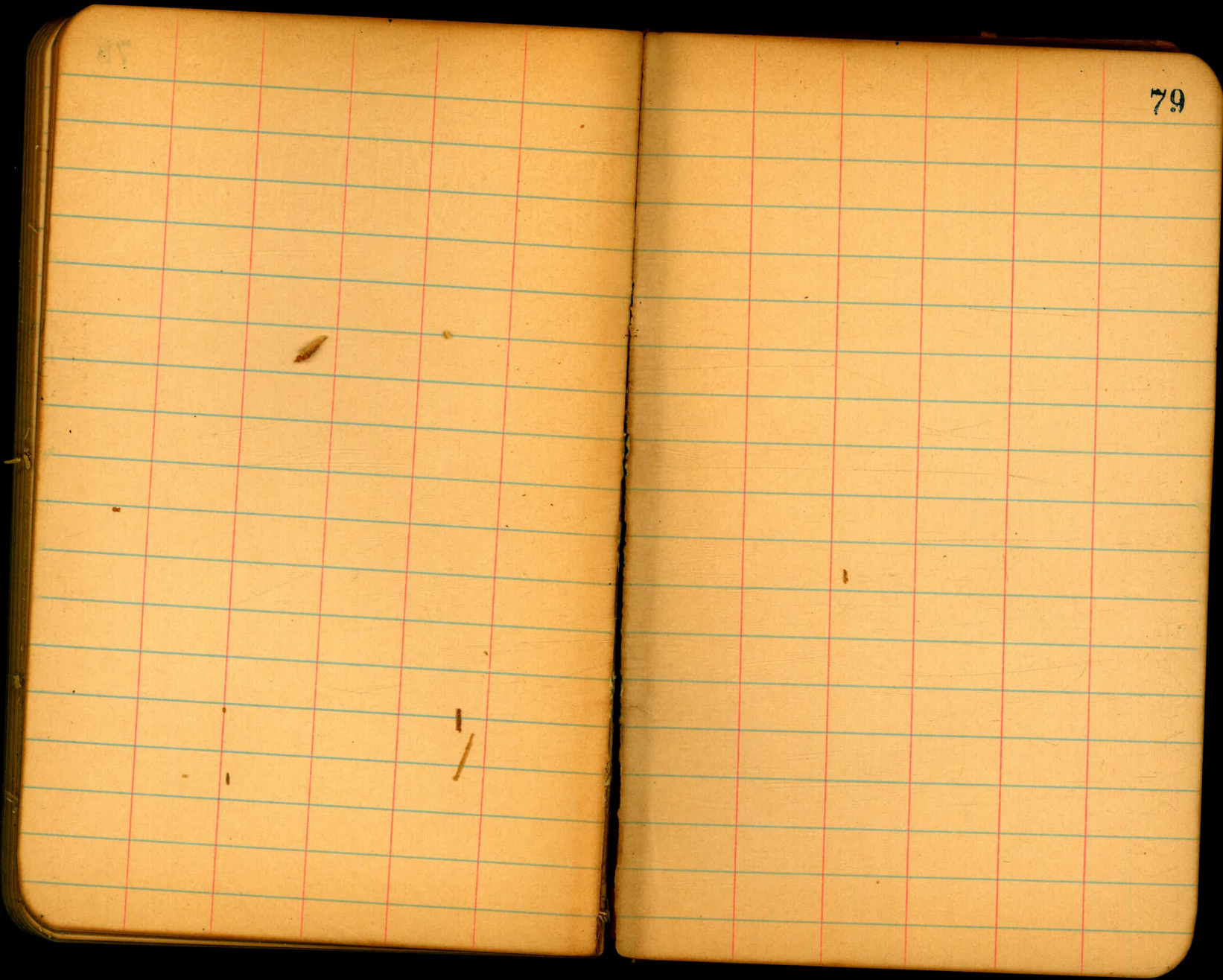
N C 0.5

S C 0.6

N C 1.2

S C 1.1

All cuts marked for bottom of concrete



79

#400

44.63
25
89.26

60.4

589.26

601.2

500.1
44.63

501
89.26
590.26

1.2

26.2

44.63
25
89.26

50p

501

501.05

45.78

45.70
25
20.7

501

19.8
19.86
39.76
501
589.26

19.5

18.5
20.7
500
589.2

500

44.63
25
19.68

