

1148



---

ENGINEERS'  
LEVEL BOOK

No. 410

---

# 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  $30.6 + (20 - 16) \div 2$  or 2 ft. added to  $30.6 = 32.6$ . For slopes of 1 on 1½ see inside of back cover.

Copyright, 1914, by Eugene Dietzgen Co.

*ms. files*

28<sup>th</sup> St. X Sec of the  
 W. 50' ft of 100' St from S.  
 Line of B. to N. Line E.

1/22/26  
 Miller

198.09

1

				+40	2.2	195.9 ✓	
B.M.	0.64	207.62	206.98	N.W. 28 <sup>th</sup> + A	2.5	195.6 ✓	
T.P.	1.15	198.09	10.66		30' S		
W. Line 28 <sup>th</sup> S. ct of B St			1.20	196.89 ✓ on center		3.4	194.7 ✓
		00 = S Line B. St				3.0	195.1 ✓
W			1.0	197.1 ✓		4.5	193.6 ✓
+25' E			0.7	197.4 ✓		5.4	192.7 ✓
+50' E = 100' St = W ct of graded st			1.13	196.96 ✓ on return		6.7	191.4 ✓
		10' S				8.1	190.0 ✓
φ			2.0	196.1 ✓		11.8	186.3 ✓
+10			1.7	196.4 ✓		40' S	
+20			2.7	195.4 ✓	W	11.6	186.5 ✓
+30			2.9	195.2 ✓		9.2	188.9 ✓
+35			5.0	193.1 ✓		7.7	190.4 ✓
+50 = W			8.3	189.8 ✓		5.5	192.6 ✓
		18' S				4.9	193.2 ✓
W			10.4	187.7 ✓		3.6	194.5 ✓
+7			8.8	189.3 ✓		4.0	194.1 ✓
+20			3.9	194.2 ✓			
+35			3.0	195.1 ✓			

No trees

198.09  
50' S

φ	4.8	193.3 ✓
+12	4.3	193.8 ✓
+18	5.3	192.8 ✓
+30	5.8	192.3 ✓
+47	10.2	187.9 ✓
+50=W	12.6	185.5 ✓

60' S

W	13.1	185.0 ✓
+4	10.4	187.7 ✓
+15	8.7	189.4 ✓
+24	4.3	191.8 ✓
+39	5.3	192.8 ✓
+50=φ	5.8	192.3 ✓

70' S

φ	6.3	191.8 ✓
+12	6.2	191.9 ✓
+16	7.5	190.6 ✓
+25	8.1	190.0 ✓
+40	10.9	187.2 ✓
+50=W	15.8	182.3 ✓

198.09  
82' S

W	20.9	177.2 ✓
+20	14.1	184.0 ✓
+25	11.6	186.5 ✓
+32	11.1	187.0 ✓
+36	7.2	190.9 ✓
+50=φ	7.2	190.9 ✓

100' S

φ	8.6	189.5 ✓
+11	8.5	189.6 ✓
T.P.	2.66	188.02
+22	5.0	183.0 ✓
+27	5.5	182.5 ✓
+30	6.9	181.1 ✓
+50=W	12.3	175.7 ✓

125' S

W	15.3	172.7 ✓
+19	9.8	178.2 ✓
+22	9.5	178.5 ✓
+24	8.1	179.9 ✓
+39	0.1	187.9 ✓
+50=φ	0.4	187.6 ✓

28<sup>th</sup>

2

No. 1000

	188.02		
	150.5		
♀	2.2	185.8 ✓	
+10	2.1	185.9 ✓	
+17	5.7	182.3 ✓	
+22	7.9	180.1 ✓	
+26	10.7	177.3 ✓	
+33	13.2	174.8 ✓	
+50: W	16.8	171.2 ✓	

	175.5		
W	20.0	168.0 ✓	
+4	19.1	168.9 ✓	
+10	19.1	168.9 ✓	
+13	17.0	171.0 ✓	
+22	14.0	174.0 ✓	
+32	9.0	179.0 ✓	
+40	3.8	184.2 ✓	
	4.0	184.0	
+50: ♀	4.0	183.4 ✓	

	200.5		
♀	5.9	182.1 ✓	
+10	5.9	182.1 ✓	
+20	12.7	175.3 ✓	

	188.02		
+29	17.4	170.4 ✓	
+32	18.2	169.8 ✓	
+33	19.8	168.2 ✓	
+40	19.6	168.4 ✓	
+50: W	22.1	165.9 ✓	

	225.5		
W	23.4	164.6 ✓	
+7	22.6	165.4 ✓	
+14	21.4	166.6 ✓	
+15	20.0	168.0 ✓	
+22	19.9	168.1 ✓	
+23	18.5	169.5 ✓	
+34	12.1	175.9 ✓	
+40	7.6	180.4 ✓	
+50: ♀	7.8	180.2 ✓	

	250.5		
♀	9.7	178.3 ✓	
+10	9.7	178.3 ✓	
+19	16.3	171.7 ✓	
+20	18.9	169.1 ✓	

	188.02		
	250 S (com)		
+28	18.2	169.8 ✓	
+36	23.6	164.4 ✓	
+40	24.1	163.9 ✓	
+50=W	25.0	163.0 ✓	

268'S

W	25.0	163.0 ✓	
+14	23.9	164.1 ✓	
+24	16.4	171.6 ✓	
+33	17.2	170.8 ✓	
+40	10.9	177.1 ✓	
+50=ϕ	11.0	177.0 ✓	

278'S

ϕ	11.7	176.3 ✓	
+10	11.8	176.2 ✓	
+14	15.3	172.7 ✓	
+21	14.7	173.3 ✓	
+31	15.1	172.9 ✓	
+50=W	20.0	168.0 ✓	

287'S

W	14.3	173.7 ✓	
+17	13.8	174.2 ✓	

	188.02		28 <sup>th</sup> 4
+18	14.4	173.6 ✓	
+37	13.8	174.2 ✓	
+40	12.4	175.6 ✓	
+50=ϕ	12.3	175.7 ✓	

295'S

ϕ	12.9	175.1 ✓	
+10	12.7	175.3 ✓	
+25	13.5	174.5 ✓	
+50=W	14.0	174.0 ✓	

300'S = N. Line 1 C ST.

W	14.1	173.9 ✓	
+25	13.6	174.4 ✓	
+40	13.0	175.0 ✓	
+50=ϕ	13.1	174.9 ✓	
CHK BM	12.05	175.97 = 175.98	M.C. 28.4 e

20' wide. Alley BIK 60 City Hts 1/22/26  
 bet 35<sup>th</sup> & Wilson. Univ. To Wightman N.W. Univ  
 35<sup>th</sup>

B.M. 3.51 365.06 361.55

*Plotted*  
 00 = S. Line Univ. Ave

W	4.23	360.83	✓ sp + paving
E	4.53	360.53	✓ Paving
E	4.45	360.61	✓ cb + paving

20' S

E	4.6	360.5	✓
E	5.2	59.9	✓
W	4.5	60.6	✓

50' S = double Garage on W dirt floor 7.5 Back

-7.5	5.0	60.1	✓
W	5.3	59.8	✓
E	5.2	59.9	✓
E	5.2	59.9	✓

100' S

E	5.8	59.3	✓
E	6.0	59.1	✓
W	6.2	58.9	✓

120' S

W	6.6	58.5	✓
E	6.4	58.7	✓

365.06

5

E	6.5	58.6	✓
165' S	Garage on W cmt floor	7' Back	
"	" E dirt "	8' "	

E	7.2	57.9	✓
E	7.1	58.0	✓
W	7.2	57.9	✓

215' S garage on W cmt floor 7' Back

W	8.2	56.9	✓
E	8.0	57.1	✓
E	7.9	57.2	✓

359.95

T.P. 2.77 259.95 7.88 257.18 377.18

225' S Garage on E dirt floor 8' Back

250' S

E	3.5	56.5	✓
E	3.2	56.8	✓
W	3.7	56.3	✓

280' S garage on W cmt floor 9' Back  
 " " E dirt " 8' "

W	3.7	56.3	✓
E	3.4	56.6	✓
E	3.8	56.2	✓

259.95  
300'S

E	3.7	56.3 ✓
C	3.9	56.1 ✓
W	3.9	56.1 ✓

32.5 garage on E dirt floor 8' back

340'S double " " W " " 3' "

W-3	3.9	56.1 ✓
W	3.9	56.1 ✓
C	4.0	56.0 ✓
E	4.4	55.6 ✓

370'S

E	4.6	55.4 ✓
C	4.6	55.4 ✓
W	4.6	55.4 ✓

400'S

W	5.0	55.0 ✓
E	5.1	54.9 ✓
W	4.8	55.2 ✓
E	5.4	54.6 ✓

450'S

E	5.7	54.3 ✓
C	5.6	54.4 ✓
W	5.6	54.4 ✓

penetrish  
alley

259.95  
4.85'S

BK 60 EHVHTS

6

W	6.4	53.6 ✓
C	6.3	53.7 ✓
E	6.7	53.3 ✓

penetrish alley

510'S garage on W dirt floor 10' back

530'S " " " " 8' back

E	6.9	53.1 ✓
C	7.2	52.8 ✓
W	7.1	52.9 ✓

565'S

W	7.5	52.5 ✓
C	7.5	52.5 ✓
E	7.4	52.6 ✓

592'S

C	7.5	52.5 ✓
C	7.7	52.3 ✓
W	7.7	52.3 ✓

600'S = N. Line Wright man

W	8.20	51.75 ✓
C	8.2	51.8 ✓
E	8.50	51.45 ✓

empt ch.



40' wide GEORGIA COURT X Sec  
 From E. Line Georgia st to W. Line Florida St

1/21/26  
 Miller  
 S.W. Georgia  
 Robinson

292.42

50' E

7

E.M. 0.14 312.13 311.99

T.P. 0.49 299.77 12.85 299.28

E of Line Georgia

N 4.88 294.89 ✓ emt. d.

00 = E. Line Georgia

N 4.4 295.2 ✓

+10 5.6 294.2 ✓

+20 5.8 294.0 ✓

+30 6.3 293.5 ✓

+40 = S 6.9 292.9 ✓

T.P. 5.45 292.42 13.00 296.77 ✓

15' E

S-20 12.1 280.3 ✓

S-15 11.6 280.8 ✓

S 3.4 289.0 ✓

+2 2.6 289.8 ✓

+10 2.3 290.1 ✓

+20 1.5 290.9 ✓

+30 1.1 291.3 ✓

+40 = N 0.4 292.0 ✓

N

+10

+20

+30

+38

+40 = S

T.P. 3.21 283.34

+15

+25

S-25

S-15

S

+1

+10

+20

+30

+40 = N

7.0 285.4 ✓

7.3 285.1 ✓

8.3 284.1 ✓

9.4 283.0 ✓

9.5 282.9 ✓

10.1 282.3 ✓

12.29 280.13 ✓

8.3 275.0 ✓

9.0 274.3 ✓

70' E

11.9 271.4 ✓

10.2 273.1 ✓

4.2 279.1 ✓

3.5 279.8 ✓

3.3 280.0 ✓

2.1 281.2 ✓

1.2 282.1 ✓

0.7 282.6 ✓

283.34

100' E

N	3.9	279.4 ✓
+10	4.6	278.7 ✓
+20	5.3	278.0 ✓
+30	6.2	277.1 ✓
+40=S	6.2	277.1 ✓

150' E

S	11.6	271.7 ✓
+10	11.3	272.0 ✓
+20	10.5	272.8 ✓
+30	10.0	273.3 ✓
+40=N	9.3	274.0 ✓

T.P. 0.16 270.50 13.00 270.34 ✓

195' E

N	0.9	269.6 ✓
+10	1.8	268.7 ✓
+20	2.1	268.4 ✓
+30	3.1	267.4 ✓
+40=S	3.5	267.0 ✓

270.50

206' E Garage on S 1.0 in street

8

S	4.4	266.1 ✓
+10	4.4	266.1 ✓
+20	3.3	267.2 ✓
+30	2.8	267.7 ✓
+40=N	2.1	268.4 ✓

230' E

N	4.4	266.1 ✓
+10	4.9	265.6 ✓
+20	5.4	265.1 ✓
+30	6.4	264.1 ✓
+40=S	6.3	264.2 ✓

250' E

S	7.3	263.2 ✓
+10	7.3	263.2 ✓
+20	6.4	263.9 ✓
+30	6.2	264.3 ✓
+40=N	5.6	264.9 ✓

280' E

N	6.7	263.8 ✓
+10	7.0	263.5 ✓

270.50  
 280' E (cont)  
 +20 7.6 262.9 ✓  
 +30 8.4 262.1 ✓  
 +40=S 8.5 262.0 ✓

295' E  
 5 8.8 261.7 ✓  
 +10 8.8 261.7 ✓  
 +20 8.1 262.4 ✓  
 +30 7.7 262.8 ✓  
 +38 7.5 263.0 ✓  
 +40=N 8.5 262.0 ✓  
 +10 13.0 257.5 ✓  
 +20 14.0 256.5 ✓

310' E  
 N-20 14.7 255.8 ✓  
 -7 14.1 256.4 ✓  
 N 12.4 257.7 ✓  
 +8 11.1 259.4 ✓  
 +10 11.1 259.4 ✓  
 +20 11.6 258.9 ✓  
 +23 11.5 259.0 ✓

270.50  
 Georgia Court 9  
 +30 9.4 261.1 ✓  
 +40=S 9.2 261.3 ✓

320' E = W. Line Florida  
 +5 9.2 261.3 ✓  
 +10 8.9 261.6 ✓  
 +20 8.4 262.1 ✓  
 +30 7.9 262.6 ✓  
 +40=N 7.3 263.2 ✓

W. of Line Florida  
 N 7.62 262.88 on cont. of  
 S 9.62 260.88 " " "

90' wide  
14' els  
13' 1/2"  
B.M. 1.63 135.51  
Market St N. Sec.  
from 41<sup>st</sup> to 43<sup>rd</sup>  
2/16/26  
small  
old boundary line  
Mon  
170' N. of Market

127.33

T.P.	8.08	139.43	4.16	131.35		C	2.8	124.5
B.M. SpK T 1/2 Pole E7930T			0.61	138.82	N.W. Raven	+6	3.1	124.2
T.P.	0.95	127.33	13.05	126.38	+Market	114	3.8	123.5
B.M. SpK 8 1/2 Pole 74704			4.05	123.28	S.E. Market	+5	4.0	123.3
					+ 41 <sup>st</sup> ST.	cl	3.6	123.7

W Line 41<sup>st</sup> ST 60' wide 127.3  
10' els  
10' 1/4"

S			2.2	125.1		5	2.1	125.2
+10			2.4	124.9		5	2.7	124.6
cl			3.0	124.3		cl	4.1	123.2
114			3.5	123.8		114	4.0	123.3
+5			2.9	124.4		+7	3.2	124.1
C			2.5	124.8		C	2.8	124.5
114			2.4	124.9		114	2.5	124.8
+5			1.9	125.4		+10	2.2	125.1
cl			1.3	126.0		cl	1.5	125.8
N			0.6	126.7		N	0.8	126.5
		W. cl.						
N			0.7	126.6		N	0.9	126.4
cl			1.5	125.8		cl	1.4	125.9
114			2.5	124.8		+3	2.3	125.0

3' E. of W 14

127.33

14	2.6	124.7
C	3.0	124.3
14	4.1	123.2
d	4.5	122.8
S	3.3	124.0
	$\frac{1}{2}$	
S	4.1	123.2
d	4.7	122.6
14	4.2	123.1
C	3.0	124.3
14	2.8	124.5
cl	2.0	125.3
N	1.7	125.6
	E. 14	
N	1.9	125.4
cl	2.0	125.3
14	3.2	124.1
C	3.3	124.0
14	4.4	122.9
d	4.2	123.1
S	4.4	122.9

127.33

E. cl

Market

11

-5	5.0	122.3
S	5.0	122.3
cl	5.3	122.0
14	4.6	122.7
C	3.8	123.5
14	3.7	123.6
+7	3.6	123.7
cl	3.0	124.3
N	2.5	124.8
	00 = E. line H1 et St.	
N	3.4	123.9
cl	3.4	123.9
+3	4.4	122.9
14	4.2	123.1
C	4.3	123.0
14	4.9	122.4
cl	5.7	121.6
S	6.0	121.3
+5	5.8	121.5

	127.33		127.3
	30' E		120.0
-5		7.3	120.0
S		6.7	120.6
+5		6.5	120.8
cl		6.4	120.9
+5		6.0	121.3
+8		6.6	120.7
1/4		6.5	120.8
C		6.1	121.2
1/4		6.0	121.3
+11		5.8	121.5
cl		4.7	122.6
N		4.6	122.7

50' E

N		5.3	122.0
+12		5.2	122.1
cl		6.8	120.5
1/4		6.8	120.5
C		6.9	120.4
1/4		7.7	119.6
cl		7.7	119.6

	127.33	Mark et	
		127.3	
		119.6	
S		7.7	
+5		8.6	118.7
	65' E		
-5		9.7	117.6
S		9.5	117.8
cl		9.2	118.1
1/4		8.4	118.9
C		7.7	119.6
1/4		7.6	119.7
cl		8.0	119.3
+2		6.4	120.9
N		6.3	121.0

90' E

N		8.0	119.3
+11		7.7	119.6
cl		9.1	118.2
1/4		8.5	118.8
C		8.5	118.8
1/4		9.0	118.3
cl		10.0	117.3
S		10.5	116.8
+5		10.8	116.5

	127.33		
	112' E	<u>127.3</u>	
S-5	10.2	117.1	
S	10.1	117.2	
el	11.7	115.6	
14	10.9	116.4	
C	9.8	117.5	
14	9.8	117.5	
el	10.4	116.9	
N	10.7	116.6	
+10	11.1	116.2	
	120' E		
-10	12.9	114.4	
N	11.8	115.5	
el	10.6	116.7	
14	10.0	117.3	
C	10.2	117.1	
14	11.3	116.0	
el	12.0	115.3	
+2	11.6	115.7	
S	10.3	117.0	
+5	10.4	116.9	

	127.33	Market	
	142' E	<u>127.3</u>	13
-10	13.0	114.3	
S	13.2	114.1	
el	13.1	114.2	
14	12.5	114.8	
+5 = s. end 12" Rotten S.I. Pipe	12.5	114.8	flow line no yardage
+8	11.0	116.3	
C	10.5	116.8	
14	10.4	116.9	
+3 = N. end 12" Pipe	12.0	115.3	flow line no yardage
+3	11.2	116.1	
el	11.3	116.0	
N	11.6	115.7	
+10	11.0	116.3	
	165' E		
-5	9.4	117.5	
N	10.2	117.1	
el	11.0	116.3	
14	10.5	116.8	
C	10.9	116.4	
14	11.7	115.6	

127.33

127.3

+9	12.8	114.5
el	13.7	113.6
+9	13.9	113.4
F10	13.3	114.0
S	13.3	114.0
+10	14.1	113.2

172' E

-10	14.5	112.8
S	13.8	113.5
el	12.9	114.4
14	11.6	115.7
C	10.8	116.5
14	10.5	116.8
el	10.6	116.7
+2	9.5	117.8
N	8.8	118.5
+5	8.5	118.8

190' E

N	7.1	120.2
+10	7.6	119.7

127.33

Market

127.3

el	9.8	117.5
14	10.0	117.3
C	10.5	116.8
14	11.4	115.9
el	12.2	115.1
S	12.7	114.6
+10	13.5	113.8

210' E

-10	13.6	113.7
S	12.2	115.1
el	11.7	115.6
14	10.9	116.4
C	9.7	117.6
14	8.9	118.4
el	9.0	118.3
+4	5.9	121.4
N	5.6	121.7

230' E = W LINE MORRISON ST

50' wide  
10' cbs

N	6.1	121.2
+10	6.6	120.7



127.33

127.3

118.9

+11

8.4

119.0

8.3

cl

118.4

8.9

1/4

117.9

9.4

c

116.9

10.4

1/4

116.0

4.3

cl

114.1

13.2

s

114.3

13.0

+5

116.5

10.8

+10

3.8

116.2

11.1

-5

116.2

11.1

s

116.1

11.2

cl

116.8

10.5

1/4

117.7

9.6

c

118.5

8.8

1/4

119.0

8.3

cl

119.9

7.4

N

W. cl.

119.9

7.4

N

127.33

Market

127.3

119.1

8.2

cl

118.6

8.7

1/4

117.9

9.4

c

117.1

10.2

1/4

116.5

10.8

cl

116.7

10.6

s

116.4

10.9

+5

⊕

116.7

10.6

-5

116.8

10.5

s

116.9

10.4

cl

117.6

9.7

1/4

118.5

8.8

c

118.5

8.8

1/4

118.8

8.5

cl

119.5

7.8

N

E. cl

119.3

8.0

N

118.8

8.5

cl

118.6

8.7

1/4

127.33

		<u>127.3</u>
c	8.6	118.7
114	9.1	118.2
cl	10.0	117.3
S	10.4	116.9
75	10.4	116.9

60° E. Line Morrison

S-5	9.6	117.7
S	9.6	117.7
cl	9.2	118.1
114	8.4	118.9
c	8.2	119.1
114	8.4	118.9
cl	8.8	118.5
N	8.2	119.1

35° E.

N-5	8.4	118.9
N	8.3	119.0
cl	7.4	119.9
114	6.5	120.8
c	6.0	121.3

127.33

114	6.4	120.9
cl	6.2	121.1
+1	6.2	121.1
+4	5.6	121.7
S	5.1	122.2

60° E.

S	2.1	125.2
+8	2.3	125.0
+12	3.7	123.6
cl	3.7	123.6
114	3.7	123.6
c	4.2	123.1
114	5.0	122.3
cl	6.3	121.0
N	6.8	120.5
+10	7.3	120.0

80° E.

-5	5.2	122.1
N	5.1	122.2
cl	5.0	122.3

Market

127.3

120.9

121.1

121.1

121.7

122.2

125.2

125.0

123.6

123.6

123.6

123.1

122.3

121.0

120.5

120.0

122.1

122.2

122.3

16

127.33

136.00

Market

				<u>127.3</u>
14			3.4	123.9
c			2.3	125.0
14			2.5	124.8
cl			2.0	125.3
+3			1.0	126.3
S			0.1	127.2
T.P.	8.97	136.00	0.30	127.03
		120.1 E		<u>136.9</u>
S			5.5	130.5
cl			8.3	127.7
14			8.9	127.1
c			9.0	127.0
14			9.9	126.1
+10			10.8	125.2
cl			10.5	125.5
N			11.3	124.7
+10			13.0	123.0
		145.1 E		
-10			12.6	123.4
N			11.5	124.5

				<u>136.0</u>
cl			10.1	125.9
14			8.6	127.4
c			7.5	128.5
14			6.9	129.1
cl			6.2	129.8
S			4.9	131.1
		160.1 E		
S			4.7	131.3
cl			5.6	130.4
14			4.6	129.4
c			6.9	129.1
14			8.1	127.9
cl			9.7	126.3
N			11.4	124.6
+10			12.0	124.0
		200.1 E		
-10			10.8	125.2
N			9.8	126.2
cl			8.7	127.3
14			7.4	128.6

136.00

e	6.8	$\frac{136.0}{129.2}$
114	6.4	129.6
cl	5.6	130.4
s	4.3	131.7
R 20' E		
s	3.7	132.3
cl	4.8	131.2
114	5.5	130.5
e	5.7	130.3
114	6.6	129.4
cl	7.0	129.0
N	7.9	128.1
15	8.8	127.2
R 36' E = W. Line 4 R 2nd 54' 50' wide 10' dls		
5	128.7	7.9
N	128.4	7.6
cl	129.4	6.6
114	129.8	6.2
e	130.7	5.3
114	130.8	5.2

136.00

Market

18

cl	5.1	$\frac{136.0}{130.9}$
s	3.8	132.2
+ 20	3.0	133.0
Wcl		
s	3.9	132.1
cl	5.0	131.0
114	5.2	130.8
e	5.4	130.6
114	6.2	129.8
cl	6.7	129.3
N	7.3	128.7
+ 5	8.0	128.0
E		
- 5	7.6	128.4
N	7.0	129.0
cl	6.3	129.7
114	5.9	130.1
e	5.2	130.8
114	5.0	131.0
cl	4.6	131.4
s	3.3	132.7

136.00

E. cl.

S	3.0	$\frac{136.0}{133.0}$
cl	4.0	132.0
1/4	4.2	131.8
C	4.5	131.5
1/4	5.4	130.6
cl	5.8	130.2
N	6.4	129.6
+5	6.9	129.1
	00 = E. Line	HR <sup>rd</sup> 5T.
-20	7.4	128.6
N	6.0	130.0
cl	5.4	130.6
1/4	4.9	131.1
C	4.0	132.0
1/4	3.6	132.4
cl	3.7	132.3
S	3.2	132.8
+20	2.5	133.5
	25' E	
S	2.6	133.4

136.00

Market

19

cl	2.6	$\frac{136.0}{133.4}$
1/4	2.6	133.4
C	3.3	132.7
1/4	4.1	131.9
cl	4.6	131.4
N	5.0	131.0
	62' E.	
N-10	5.6	130.4
N	4.5	131.5
cl	4.0	132.0
1/4	3.7	132.3
C	3.3	132.7
1/4	2.8	133.2
cl	2.8	133.2
+3	2.4	133.6
S	2.2	133.8
	90' E	
S	1.8	134.2
1/4	1.9	134.1
cl	2.5	133.5

136.00

11.4	3.2	$\frac{136.0}{132.8}$
C	3.4	132.6
14	4.0	132.0
cl	3.2	130.8
N	5.4	130.6
+5	5.4	130.6

125' E

N	3.8	132.2
cl	4.3	131.7
114	3.8	132.2
C	3.4	132.6
114	3.3	132.7
cl	3.3	132.7
+2	2.8	133.2
S	2.6	133.4

140' E

S	1.6	134.4
+12	2.2	133.8
cl	2.8	133.2
14	2.6	133.4

136.00

C	2.9	$\frac{136.0}{133.1}$
111	3.7	132.3
cl	4.0	132.0
N	3.0	133.0

165' E

N-5	3.8	132.2
N	3.9	132.1
cl	3.7	132.3
114	3.3	132.7
C	2.4	133.6
114	2.0	134.0
cl	2.3	133.7
+2	1.9	134.1
S	1.1	134.9

185' E

S	2.0	134.0
+12	2.2	133.8
cl	2.8	133.2
114	2.4	133.6
C	2.7	133.3

20

136.00

		<u>136.0</u>
114	3.2	132.8
cl	3.5	132.5
N	3.4	132.6
15	3.7	132.6
	200' E	
-5	3.3	132.7
N	2.8	133.2
cl	2.9	133.1
114	3.1	132.9
c	2.6	133.4
14	2.4	133.6
cl	2.7	133.3
+2	2.2	133.8
S	2.1	133.9
	215' E	
S	2.7	133.3
+12	2.1	133.9
cl	2.6	133.4
114	2.5	133.5
c	2.6	133.4

136.00

Mar Ket

21

114	3.1	<u>136.0</u> 132.9
cl	3.2	132.8
N	3.0	133.0
		136' E = W. line Toyne
-20	2.2	133.8
N	3.2	132.8
cl	3.2	132.8
114	2.9	133.1
c	2.8	133.2
114	3.2	132.8
cl	3.8	132.2
S	4.0	132.0
+20	4.3	131.7
		W. cl
S	4.4	131.6
cl	4.0	132.0
114	3.3	132.7
c	2.8	133.2
114	2.8	133.2
cl	3.2	132.8
N	3.2	132.8

136.00

¢

N	3.3	136.0 132.7
d	3.3	132.7
"4	3.1	132.9
c	2.8	133.2
"4	3.3	132.7
d	4.3	131.7
S	4.7	131.3
E. cl		
S	4.9	131.1
d	4.6	131.4
"4	3.9	132.1
c	3.3	132.7
"4	3.5	132.5
cl	3.4	132.6
N	3.1	132.9

oo = King Toyne

-20	2.6	133.4
N	2.3	133.7
cl	3.2	132.8
"4	3.6	132.4

136.00

Market

22

C	3.7	136.0 132.3
"4	4.0	132.0
cl	5.2	130.8
S	5.8	130.2
+20	6.0	130.0
18.8		
-5	6.5	129.5
S	6.3	129.7
+10	6.3	129.7
cl	5.1	130.9
"4	4.5	131.5
c	4.3	131.0
"4	3.9	132.1
d	3.2	132.8
N	2.7	133.3
20.8		
S-5	6.6	129.4
S	6.4	129.6
+4	6.4	129.6
+7	8.3	127.7
+10	6.1	129.9
S. cl	5.3	130.7



	136.00		
	24' E		<u>136.0</u>
S-5	6.8		129.2
S	6.6		129.4
+3	8.6		127.4
+7	6.3		129.7
S cl	5.3		130.7

	27' E		
S-10	9.2		127.8
S	8.8		127.2
+5	4.2		129.8
S cl	5.3		130.7

	30' E		
N	3.4		132.6
cl	3.9		132.1
114	4.4		131.6
c	4.3		131.7
114	4.6		131.4
cl	5.1		130.9
S	6.4		129.6
+5	7.1		128.9
+15	9.7		126.3

	136.00	Mar Ket	
	45' E		<u>136.0</u>
-10	6.4		129.6
S	5.0		131.0
+10	4.2		131.8
cl	4.8		131.2
114	4.5		131.5
c	4.4		131.6
114	4.3		131.7
cl	4.0		132.0
N	3.6		132.4

	65' E		
N	2.8		133.2
cl	3.8		132.2
114	4.4		131.6
c	4.5		131.5
114	4.6		131.4
cl	5.0		131.0
+3	4.4		131.6
S	5.2		130.8
+10	6.7		129.3

136.00  
85' E  
136.0  
129.5

-10	6.5	129.5
S	6.0	130.0
+10	5.6	130.4
cl	6.1	129.9
14	5.1	130.9
C	4.6	131.4
14	4.1	131.9
cl	3.1	132.9
N	2.0	134.0

100' E

N	2.2	133.8
cl	2.9	133.1
14	4.3	131.7
C	4.6	131.4
14	5.2	130.8
cl	5.8	130.2
+2	5.4	130.6
S	6.0	130.0
+5	6.3	129.7

T.P. on Pipe Blk Cor 2.31

132.53  
5.78  
130.22

s.s. Toymc  
+ Market

132.53  
140' E  
Market  
132.5  
130.5

S	2.0	130.5
+10	1.7	130.8
+11	2.4	130.1
cl	2.0	130.5
14	1.4	131.1
C	1.3	131.2
14	1.5	131.0
+3	1.6	130.9
+5	0.6	131.9
cl	0.0	132.5
N	10.3	132.8

160' E

N	10.3	132.8
cl	0.3	132.2
16	0.9	131.6
+8	2.2	130.3
14	1.9	130.6
C	1.7	130.8
14	1.9	130.6
cl	2.5	130.0

132.53

			132.5
+3	2.7		129.8
+4	2.3		130.2
S	3.1		129.4
	180		
S	5.1		127.4
+9	4.2		128.2
cl	3.9		128.6
11	3.2		129.3
c	3.0		129.5
114	2.9		129.6
+5	2.7		129.6
+7	0.7		131.8
cl	0.6		131.9
N	0.0		132.5
	200'E		
N	0.1		132.4
cl	1.2		131.3
+6	1.5		131.0
+8	4.0		128.5
114	4.0		128.5

132.53

Market

25

			132.5
c	4.7		127.8
114	5.0		127.5
cl	5.7		126.8
S	7.3		125.2
+5	7.9		124.6
	220'E		
-10	10.9		121.6
S	9.5		128.0
cl	7.6		124.9
114	6.9		125.6
c	5.4		127.1
114	4.6		127.9
+4	4.1		128.4
+6	2.3		130.2
cl	1.4		131.1
N	0.2		132.3
	236'E = W. line Eugenia	50'S 5T. 10' els	
N	0.5		132.0
cl	2.1		130.4
+6	3.0		129.5

132.53

			132.5
+8		5.0	127.5
1/4		5.4	127.1
e		6.5	126.0
1/4		8.1	124.4
cl		9.1	123.4
S		11.4	121.1
+10		13.0	119.5
+25		13.4	119.1
	4'E. of N line		
S		11.9	120.6
cl		9.5	123.0
1/4		8.4	124.1
e		6.9	125.6
1/4		5.6	126.9
d		3.6	128.9
N		2.1	130.4
	W. cl.		
N		2.4	130.1
cl		4.2	128.3
1/4		6.1	126.4

132.53

Market

26

			132.5
e		7.4	125.1
1/4		8.8	123.7
cl		10.0	122.5
S		11.6	120.9
	⊕		
S		11.2	121.3
d		10.5	122.0
1/4		9.5	123.0
e		8.6	123.9
1/4		7.3	125.2
cl		5.3	127.2
N		3.7	128.8
	E. cl.		
N		4.4	128.1
d		7.2	125.3
1/4		9.0	123.5
e		9.8	122.7
1/4		10.1	122.4
d		11.1	121.4
S		11.8	120.7

132.53  
00 = E Line Eugenia St

S-20	13.0	<u>132.5</u> 119.5
S	12.8	119.7
cb	12.3	120.2
+5	11.1	121.4
114	10.6	121.9
E	10.2	122.3
114	9.8	122.7
+7	9.5	123.0
cb	8.4	124.1
N	5.5	127.0
+27	1.2	131.3
+50	0.0	132.5
25' E		
-5	7.7	124.8
N	8.5	124.0
cb	10.3	122.2
44	11.2	121.3
+3	11.1	121.4
+6	10.2	122.3
E	10.6	121.9

132.53

Market

27

14	10.6	<u>132.5</u> 121.7	
+7	11.6	120.9	
+9 = 5' end 12" Rotten pipe culvert	12.6	119.9	flow line no yardage
cb	12.4	120.1	
S	12.4	120.1	
+10	12.1	120.4	
61' E			
-10	10.5	122.0	
S	10.5	122.0	
cb	10.5	122.0	
44	10.5	122.0	
C	10.2	122.3	
+7	10.2	122.3	
+10 = end Pipe culvert	12.6	119.9	flow line no yardage
+11	11.4	121.1	
44	11.9	120.6	
+3	12.8	119.7	
cb	13.1	119.4	
+1	12.0	120.5	
N	10.9	121.6	
+10	9.8	122.7	

	132.53 85' E		<u>132.5</u> 121.8
-10		10.7	
N		11.6	120.9
+2		13.5	119.0
cb		13.1	119.4
+2		10.9	121.6
14		10.2	122.3
c		9.2	123.3
14		9.6	122.9
cb		9.1	123.4
S		8.4	124.1
+10		8.1	124.4
	88' E		
-10		7.7	124.8
S		8.0	124.5
cb		8.9	123.6
14		9.4	123.1
c		9.0	123.5
14		9.9	122.6
cb		11.1	121.4
+2		13.1	119.4

	132.53	Market	
		<u>132.5</u> 119.3	
N		13.2	
+4		11.4	121.1
+14		10.9	121.6
	102' E		
-18		11.2	121.3
-12		12.6	119.9
N		13.7	119.3
+2		10.4	122.1
cb		9.6	122.9
14		8.6	123.9
c		8.0	124.5
14		8.2	124.3
cb		8.0	124.5
S		7.0	125.5
+5		6.8	125.7
	108' E		
-5		6.7	125.8
S		6.9	125.6
cb		7.6	124.9
14		7.7	124.8

132.53

		<u>132.5</u>
C	7.5	125.0
114	8.2	124.3
cl	9.2	123.3
N	10.1	122.4
+3	13.0	119.5
+15	13.0	119.5

112' E = W Line H3<sup>rd</sup> St.

-20	12.9	119.6
-4	12.9	119.6
-2	10.2	124.3
N	9.5	123.0
cl	8.5	124.0
114	7.5	125.0
e	7.0	125.5
114	7.3	125.2
cl	7.1	125.4
S	6.5	126.0
+20	5.7	126.8

Chicken B.M. Book 1107 P. 28

5.38

127.15 = 127.14

132.53

Market

29

S	12' E of W Line	<u>132.5</u>
	4.7	127.8
cl	5.6	126.9
114	6.0	126.5
C	5.8	126.7
114	6.1	126.4
cl	6.0	126.5
+1	5.2	127.3
N	5.8	126.7

30' E.

N	6.0	126.5
cl	5.2	127.3
114	5.3	127.2
e	4.8	127.7
114	4.6	127.9
cl	3.7	128.8
S	2.7	129.8

132.53  
40'8

S	1.9	<u>132.5</u> 130.6
cl	3.4	129.1
14	4.2	128.3
C	4.6	127.9
14	4.9	127.7
cl	5.3	127.2
N	6.5	126.0

Market

30



Cross Section Ingraham St  
From N.L. Diamond to N.L. Berry

80' wide  
20' Cbs  
10' qts

86.77

31  
A. J. Berry  
55510  
31st  
Berkeley

North of  
Diamond & Hoare  
East Back Stop

BM	9.58	86.77	77.19
		0.10 = N.L. Diamond	
H		3.2	83.9
Cb		2.7	84.1
+2		3.7	83.1
1/4		3.2	83.6
E		2.7	84.1
1/4		2.5	84.3
Cb		2.9	83.4
+2		2.9	83.9
+4		2.0	84.8
E		1.6	85.2
		50' N	
E		1.1	85.7
+13		1.4	85.4
+17		2.2	84.6
Cb		2.3	84.5
1/4		1.8	85.0
E		2.1	84.7
1/4		2.5	84.3

+2		2.7	84.1
Cb		2.2	84.6
+7		2.4	84.4
H		2.6	84.2
		100' N	
H		1.8	85.0
Cb		1.6	85.2
+3		2.1	84.7
1/4		2.2	84.6
E		1.5	85.3
+2		1.0	85.8
1/4		1.1	85.7
Cb		1.3	85.5
1/4		1.4	85.4
TP	10.38	97.16	0.03
+9		10.6	86.5
E		10.0	87.1
		13.5' - E. Alley	
E		9.2	87.9
+4		9.4	87.5
+3		10.5	86.6

97.12

cb		11.1	86.0
1/4		11.0	86.1
2		11.3	85.8
+5		11.9	85.2
1/4		11.9	85.2
+3		11.7	85.4
cb		12.2	84.9
H		12.7	84.4
	150'H		
H		12.0	85.1
cb		11.5	85.6
1/4		11.4	85.7
+4		11.3	85.8
2		10.9	86.2
1/4		10.7	86.4
cb		10.8	86.3
+8		10.6	86.5
E		9.3	87.8
	200'H		
E		8.0	89.1
+4		9.0	88.1

97.12

32

+15		9.9	87.2
cb		9.7	87.4
1/4		9.7	87.4
2		10.0	87.1
1/4		10.4	86.7
cb		10.8	86.3
H		11.2	85.9
	250'H		
H		10.0	87.1
+14		9.3	87.8
cb		9.4	87.2
1/4		9.0	88.1
2		8.7	88.4
1/4		8.4	88.7
cb		8.3	88.8
+8		8.5	88.6
+9		8.0	89.1
E		7.2	89.9
	265'H		
E		6.8	90.3
+14		8.0	89.1

Ingraham

97.12

Cb	78	89.3
1/4	8.0	89.1
2	8.2	88.9
1/4	8.4	88.7
Cb	8.9	88.2
+4	8.4	88.7
H	8.7	88.4
	270°N = S2 Missouri	
H	7.0	90.1
+11	7.1	90.0
+17	8.1	89.0
Cb	8.3	88.8
+6	8.7	88.4
1/4	8.3	88.8
2	8.1	89.0
1/4	7.9	89.2
Gutter	8.0	89.1
Cb Top	7.20	89.92
E	7.0	90.1
	S Cb	
E	7.03	90.09

Missouri  
80' wide  
20' Cb  
10' Gts

Cb Return

on Cb Return

97.12

33

Gutter	7.8	89.3
Cb	7.7	89.4
1/4	7.4	89.8
2	7.5	89.7
1/4	7.8	89.3
+6	8.1	89.0
Cb	7.6	89.5
H	7.7	89.4
	S 1/4	
H	7.4	89.7
Cb	7.2	89.9
+5	7.9	89.2
1/4	7.5	89.6
2	7.0	90.1
1/4	7.0	90.4
Cb	7.5	89.6
E	7.0	90.1
	2 Missouri	
E	6.5	90.6
Cb	7.2	89.9
+5	7.2	89.9

1/4		67	90.4
±		68	90.3
1/4		72	89.9
+5		74	89.7
Cb		70	90.1
X		73	89.8
	N 1/4		
X		71	90.0
Cb		68	90.3
+5		72	89.9
1/4		69	90.2
±		66	90.5
1/4		68	90.3
+6		71	90.0
Cb		71	90.0
E		65	90.6
	N Cb		
E		60	91.06
Gutter		67	90.4
Cb		70	90.1
1/4		64	90.7

on Cb Ret

±		62	90.9
1/4		66	90.5
+5		69	90.2
Cb		68	90.3
X		70	90.1
	N 2 Missouri		
X		67	90.4
Cb		60	91.1
+5		62	90.9
1/4		58	91.3
±		53	91.8
77		51	92.0
1/4		54	91.7
+5		61	91.0
Gutter		65	90.6
Cb		60	91.04
E		57	91.4
	2 1/4		
E		38	93.3
Cb		50	92.1
71		57	91.4

on Cb Return

Ingraham

9712

+5		5.8	91.3
1/4		5.2	91.9
+3		5.0	92.1
2		5.2	91.9
1/4		5.1	91.5
+5		6.2	90.9
cb		6.1	91.0
H		6.6	90.5
	50' N		
H		5.4	91.7
cb		4.7	92.4
1/4		4.2	92.9
2		3.4	93.7
1/4		3.5	93.6
cb		3.4	93.7
+4		3.3	93.8
E		2.2	94.9
	100' N		
E		0.8	96.3
cb		1.8	95.3
+6		1.7	95.4

9712

35

1/4		1.7	95.4	
2		2.0	95.1	
+5		2.1	95.0	
1/4		2.7	94.4	
cb		3.0	94.1	
H	S	3.8	94.3	
	135' N - 2 Alley			
H		2.6	94.5	
cb		2.1	95.0	
+4		2.2	94.9	
1/4		1.7	95.4	
+6		1.3	95.8	
2		1.0	96.1	
1/4		0.9	96.2	
cb		1.1	96.0	
+3		1.0	96.1	
TP	1132	108.39	0.05	97.07
E		10.6	97.8	
	150' N			
E		10.2	98.2	
cb		11.7	96.7	

Ingraham

108.39

1/4	119	96.5
E	117	96.6
1/4	124	96.0
Cb	128	95.6
+5	127	95.7
H	133	96.1

205'H

H	117	96.7
+15	110	97.4
Cb	110	97.4
1/4	107	97.7
1/4	107	97.7
E	101	98.3
1/4	101	98.3
Cb	100	98.4
1/4	94	99.0
E	90	99.4

250'H

E	71	101.3
+16	74	101.0
Cb	83	100.1

108.39

1/4	84	100.0
E	82	100.2
+6	89	99.5
1/4	92	99.2
Cb	94	99.0
18	95	99.9
H	104	98.0

276'H = SL Chalcedony

H	92	99.2
+12	90	99.4
Cb	88	99.6
1/4	84	100.0
E	75	100.9
1/4	77	100.2
Gutter	82	100.2
	69	101.5
Cb Top	69	101.47
E	65	101.9

5Cb

E	67	101.67
Gutter	75	100.9
Cb	74	101.0
1/4	71	101.3

36

Chalcedony  
20' x 10'  
20' Cbs  
10' Qts

on Cb 19' x 1'

1090600

10839

Z	7.0	101.4
+5	7.1	101.3
14	7.5	100.9
Cb	7.9	100.4
H	8.8	99.6
	5 1/4	
H	8.0	100.4
Cb	7.5	100.9
14	7.1	101.3
+5	6.8	101.6
Z	6.7	101.7
14	6.8	101.6
Cb	6.9	101.5
E	6.5	101.9
	Z Chalcedony	
E	6.3	102.1
Cb	6.5	101.9
14	6.5	101.9
Z	6.5	101.9
14	6.9	101.5
Cb	7.2	101.2

10839

37

H	7.7	100.7
	H 1/4	
H	7.5	100.9
Cb	6.8	101.6
14	6.2	102.2
Z	5.9	102.5
14	6.0	102.4
Cb	6.2	102.2
E	6.2	102.2
	H Cb	
E	5.7	102.7
Cb	6.2	102.2
14	5.8	102.6
E	5.4	103.00
14	5.8	102.6
Cb	6.4	102.0
H	7.3	101.1
	H Chalcedony	
H	7.1	101.3
Cb	5.7	102.7
14	5.0	103.4

logcabam

10339

10339

38

+5	45	103.9
L	45	103.9
1/4	46	103.8
+3	45	103.9
cb	5.3	103.1
F	5.4	103.0
	3'N	
F	3.0	105.4
cb	3.8	104.6
1/4	4.5	103.9
L	4.4	104.0
1/4	4.8	103.6
cb	5.6	102.8
N	7.0	101.7
	25'N	
N	6.1	102.3
+13	4.9	103.5
cb	4.6	103.8
1/4	4.0	104.4
L	3.3	105.1
+3	3.2	105.2

1/4	3.7	104.7
cb	3.0	105.4
+11	1.7	106.7
F	1.5	106.9
	50'N	
F	0.8	107.6
cb	1.7	106.7
+6	2.3	106.1
1/4	2.9	105.5
+6	3.0	105.4
L	2.7	105.7
1/4	3.1	105.3
cb	3.6	104.8
+8	3.8	104.6
N	5.0	103.4
	100'N	
N	5.0	103.4
+4	5.0	103.4
+5	4.3	104.1
+15	3.6	104.8
cb	3.4	105.0



logrobam		18839						
1/4			3.1	105.3	7.6		14.1	104.8
7.4			3.2	105.2	cb		12.5	105.4
2			2.2	106.2	1/4		12.9	106.0
1/4			1.7	106.7	7.4		12.6	106.3
cb			1.5	106.9	7.5		12.2	106.7
E			1.0	107.4	2		12.0	106.9
TP	1237	11891 ✓	1.85	106.54	1/4		11.5	107.4
		135N = 2. E 11/4			cb		11.1	107.8
E		11.0		107.9	E		10.4	108.5
cb		11.4		107.5		200N		
7.3		12.1		106.8	E		8.6	110.3
1/4		11.9		107.0	7.5		9.6	109.3
2		12.5		106.4	cb		9.6	109.3
1/4		13.0		105.9	1/4		10.2	108.7
7.7		13.3		105.6	2		11.0	107.9
cb		14.0		104.9	7.4		11.0	107.9
7.5		14.4		104.5	7.5		11.5	107.4
7.9		13.5		105.4	1/4		11.6	107.3
1/4		14.4		104.5	cb		12.0	106.9
		150N			7.4		12.4	106.5
1/4		14.3		104.6	7.9		12.3	105.6

M	139	105.0
	250M	
M	130	105.9
cb	125	106.4
+5	113	107.6
1/4	111	107.8
E	107	108.2
1/4	100	108.9
cb	91	109.8
+7	89	110.0
E	74	111.5

270M = SL Low

E	70	111.9
+12	85	110.4
cb	89	110.0
1/4	95	109.4
E	102	108.7
1/4	105	108.4
+5	110	107.9
cb	120	106.9
M	128	106.1

Low  
80% tide  
20 cbs  
10.01s

	5 cb	
M	121	106.8
cb	113	107.6
+5	107	108.2
1/4	102	108.7
E	95	109.4
1/4	90	109.9
+5	82	110.7
cb	83	110.6
+3	81	110.8
E	66	112.3

5 1/4

E	62	112.7
+16	80	110.9
cb	78	111.1
+5	79	111.0
1/4	87	110.2
E	93	109.6
1/4	100	108.9
+5	106	108.3
cb	108	108.1

Ingraham

11891

H		119	107.0
	E 49 W		
H		116	107.3
cb		106	108.3
+5		108	108.7
1/4		98	109.1
E		90	109.9
1/4		87	110.2
+7		76	111.3
cb		71	111.3
+5		76	111.3
E		59	113.0
	H 1/4		
E		56	113.3
+15		72	111.7
cb		73	111.6
+3		74	111.5
1/4		82	110.7
E		89	110.0
1/4		94	109.5
+5		98	109.1

41

cb		103	108.6
H		112	107.7
	H cb		
H		111	107.8
cb		100	108.9
+5		94	109.5
1/4		91	109.8
E		86	110.3
1/4		76	111.3
+8		67	112.2
cb		68	112.1
+5		68	112.1
E		51	113.8
	040 - N 1/2 Lot 11		
E		41	114.4
115		61	112.4
cb		60	112.9
+3		60	112.9
1/4		70	111.9
+8		75	111.4
E		82	110.7

Ingraham

118.91

74			8.3	110.6
+5			8.8	110.1
cb			9.3	109.6
W			10.2	108.7
TP	9.41	126.36	19.6	116.95
		50'N		
W			15.5	110.9
cb			14.7	111.7
+5			14.5	111.9
+8			13.6	112.8
74			13.8	112.6
Z			13.3	113.1
+3			12.3	114.1
74			12.1	114.3
+6			11.3	115.1
cb			11.3	115.1
+5			11.3	115.1
F			9.4	116.5
		100'N		
E			6.7	119.7
+18			8.4	118.0

Walt Pelt  
 571 Cor  
 Ingraham Alley  
 bet. 20th & 30th  
 116.88  
 No 1193 Page 15

126.36

42

cb			8.4	118.0
74			9.4	117.0
Z			10.6	115.8
74			11.3	115.1
+5			11.5	114.9
cb			12.0	114.4
W			12.6	113.8
	135'N	Z 4/164		
W			10.1	116.3
cb			9.5	116.9
+5			8.5	117.9
74			8.8	117.6
Z			8.5	117.9
+3			7.4	119.0
74			7.1	119.3
+8			6.3	120.1
cb			5.9	120.5
+8			5.8	120.6
E			3.9	122.5
		150'N		
E			2.1	124.3

Ingraham

126.36

+15	45	121.9
cb	46	121.8
+5	50	121.4
1/4	56	120.8
E	68	119.6
+1	74	119.0
1/4	77	118.7
+8	77	118.7
cb	82	118.2
N	91	117.3
200' N		
N	53	121.1
cb	44	122.0
1/4	37	122.7
E	34	123.0
+2	25	123.9
1/4	22	124.2
+6	17	124.7
cb	14	125.0
+6	17	124.7
E	01	126.3

126.36

TP	13.07	138.88	0.55	125.81
250' N				
E			10.0	128.9
+15			11.4	127.5
cb			11.2	127.7
1/4			12.1	126.8
+8			12.3	126.6
cb			13.0	125.9
+2			13.4	125.5
1/4			13.4	125.5
cb			14.5	124.4
N			15.4	123.5
270' N = 52 Beryl				
N			19.2	124.7
cb			13.0	125.9
1/4			12.4	126.5
E			12.1	126.8
1/4			11.0	127.9
cb			10.4	128.5
+5			10.3	128.6
E			8.7	130.2

43

Beryl  
50' wide  
25' CB  
10' GH

logabom

138.88

SCb

E	9.3	131.6
+1.5	9.3	129.6
cb	9.3	129.6
1/4	10.1	128.5
+1.5	10.6	128.3
z	10.6	128.3
1/4	11.5	127.4
+1.5	12.0	126.9
cb	12.0	126.9
N	12.7	126.2
	5 1/4	
N	12.2	126.7
cb	11.5	127.4
+1.5	11.3	127.6
1/4	10.8	128.1
z	10.1	128.8
1/4	9.2	128.7
cb	8.4	130.5
+1.5	7.9	131.0
E	6.2	132.7

44

z. Beryt

E	5.1	133.8
+1.1	5.5	133.4
cb	6.8	132.1
1/4	8.3	130.6
z	9.1	129.8
1/4	9.9	129.0
+1.5	10.5	128.4
cb	10.5	128.4
N	11.5	127.4
	N 1/4	
N	10.7	128.2
cb	10.0	128.9
+1.5	9.8	129.1
1/4	9.2	129.7
z	8.3	130.6
+1.7	7.6	131.3
1/4	7.2	131.7
cb	5.7	133.2
+1.6	4.1	134.8
E	3.6	135.3
	N cb	

109 grams

138.88

E	2.3	136.6
+L	3.5	135.4
cb	4.5	134.4
1/4	5.7	133.2
2	7.0	131.9
1/4	8.3	130.6
cb	8.8	130.1
+L	9.0	129.9
1/4	9.9	129.0

NL 300/1

1/4	8.0	130.9
cb	6.8	132.1
+L	6.4	132.5
1/4	6.0	132.9
2	4.5	134.4
1/4	3.5	135.4
cb	1.9	137.0
E	0.0	138.9





Ingraham

8529

Z	72	78.1
1/4	66	78.7
cb	70	78.3
E	70	78.3
+5		79.6
-5	78.5	78.8
E	78	77.5
cb	77	77.6
1/4	76	77.7
Z	82	77.1
110	90	76.3
1/4	85	76.8
cb	84	76.9
H	94	75.9
H	100	75.3
cb	96	75.7
1/4	88	76.5
+2	96	75.7
Z	92	76.1
1/4	87	76.6
cb	90	76.3

470'5 - N.L. Emerald

Emerald  
80' wide  
20' chs  
10' qts

8529

47

E	91	76.2
+5		77.4
-5		76.3
E	95	75.8
cb	94	75.9
1/4	93	76.0
Z	97	75.6
+10	100	75.3
1/4	97	75.6
cb	99	75.4
H	102	75.1
H 1/4		
H	106	74.7
cb	102	75.1
1/4	100	75.3
+2	103	75.0
Z	100	75.3
1/4	95	75.8
cb	96	75.7
E	95	75.8
+5		76.0
-5		76.0
E	95	75.8
cb	98	75.5

E Emerald

Ingrabow

8529

8529

1/4	9.6	75.7
2	10.2	75.1
+10	10.5	74.8
1/4	10.2	75.1
cb	10.0	75.3
W	10.2	75.1
S 1/4		
W	10.5	74.8
cb	10.2	75.1
1/4	10.0	75.3
+3	10.8	74.5
2	10.4	74.9
1/4	9.8	75.5
cb	10.0	75.3
E +5	10.1	75.2 75.1 ✓
-5		75.3
E	10.5	75.0
cb	10.1	75.2
1/4	10.0	75.3
2	10.6	74.7
410	11.0	74.3

1/4	10.0	75.3
+2	10.2	75.0
cb	10.3	75.0
W	10.7	74.6
S. Emerald		
W	10.9	74.4
cb	10.2	75.1
+2	10.8	74.5
1/4	10.3	75.0
+2	11.3	74.0
2	10.8	74.5
1/4	10.4	74.9
cb	10.7	74.6
E +5	11.0	74.3 75.7
TP	269	7653
		11.45
		7384
		45.5
-5		72.8
E		73.5
cb	2.7	73.8
1/4	2.4	74.1
2	2.0	74.5
+10	2.2	73.2

Ingraham

76.53

14	20	74.5
cb	27	73.8
14	31	73.4
	70.5	
14	38	72.7
+10	30	73.5
cb	40	72.5
14	33	73.2
+2	44	72.1
2	40	72.5
14	33	73.2
+2	31	73.4
cb	36	72.9
E	37	72.8
+5		73.2
	125.5 = Alley	
-25		72.7
E	50	71.5
cb	47	71.8
14	42	72.3
2	51	74.4
+7	50	74.2
14	49	71.6

76.53

cb	45	72.0
11	47	71.8
	180.5	
11	53	71.2
cb	54	71.1
14	55	71.0
13	54	71.1
+5	61	70.4
2	60	70.5
14	51	71.4
cb	58	70.7
E	59	70.6
+25		71.0
	225.5	
-25		70.1
E	69	69.6
cb	66	69.9
+9	60	70.5
14	61	70.4
2	66	69.9
+7	69	69.6
+9	61	70.4
14	61	70.4

49

Ingraham

7653

7653

Cb 58 70.7

N 56 70.9

270'S - 1/4 Feldspar

feldspar  
80' N. do  
20' Cb  
10' Qts

N 66 70.3

Cb 64 70.1

1/4 65 70.0

+4 68 69.7

+6 75 69.0

E 75 69.0

1/4 70 69.5

Cb 75 69.0

E 74 68.9

+25 69.1

N. Cb

-25 E 80 68.6  
68.5

Cb 78 68.7

1/4 72 69.3

E 79 68.6

+3 81 68.4

+8 74 69.1

1/4 74 69.1

Cb 74 69.1

N 75 69.0

N 1/4

83 68.2

82 68.3

81 68.4

80 68.5

73 69.2

80 68.5

83 68.2

68.6

E Feldspar

84 68.1

81 68.4

77 69.1

83 68.2

83 68.2

79 68.6

80 68.5

82 68.3

S 1/4

80 68.5

82 68.3

199abom

76.53

76.53

51

1/4	85	68.0
2	87	67.8
1/4	78	68.7
+2	76	68.9
cb	83	68.2
F	87	67.8
+2.5		68.2
-2.5		68.1
F	88	67.7
cb	85	68.0
1/4	79	68.6
2	86	67.9
+5	90	67.5
+9	80	68.5
1/4	78	68.7
cb	79	68.6
H	79	68.6
		SL. FID SPOR
H	82	68.3
cb	83	68.2
1/4	85	68.0
+5	84	68.1

+7	95	67.0
2	91	67.4
1/4	86	67.9
+4	85	68.0
cb	90	67.5
F	95	67.0
+2.5		67.8
-2.5		66.5
F	10.5	66.0
cb	99	66.6
1/4	95	67.0
2	10.2	66.3
+5	10.5	66.8
+7	95	67.8
1/4	94	67.1
cb	92	67.3
H	92	67.3
TP	2.10	68.34
		90.5
H	21	66.2
cb	20	66.3
1/4	2.2	66.1

Ingraham

6834

+5		21	65.9
+7		22	65.1
Z		29	65.4
1A		23	66.0
+4		22	66.1
Cb		26	65.7
E		30	65.3
+25			65.1
-25	135° S - Z 11/101	47	64.7
E		43	64.0
Cb		36	64.7
+8		33	65.0
1A		34	64.9
Z		41	64.2
+5		40	64.3
+7		34	64.9
1A		34	64.9
Cb		30	65.3
11		31	65.2
	180° S		
11		43	64.0
Cb		42	64.1

6834

52

1A		46	63.7
+6		45	63.8
+8		49	63.4
Z		48	63.5
1A		47	63.6
+4		44	63.9
Cb		46	63.7
E		47	63.6
+25			63.8
-25	225° S		62.9
E		52	63.1
Cb		53	63.0
+8		51	63.2
1A		54	62.9
Z		56	62.7
+2		56	62.7
1A		56	62.7
+9		58	62.5
Cb		52	63.1
11		55	62.8
	270° S - 112 Garnet		
11		51	63.2

Garnet Pavol

Ingraham

6679

53

cb	6834	52	63.1		cb	50	61.8
+8		501	63.33	on Cb Return	1/4	51	61.7
old Gutter		57	62.6		z	52	61.6
1/4		57	62.6		1/4	47	62.1
z		58	62.5		cb	48	62.0
1/4		56	62.7		E	48	62.0
cb		55	62.8		+25		62.8
E		57	62.6		-25		63.1
+25			62.1		E	48	62.0
TP	3.49	6679	6320	5th Spk Garnet + Ingraham	cb	49	61.9
					1/4	48	62.0
-25			62.9				
E		47	62.1		z	54	61.4
cb		45	62.3		1/4	52	61.6
1/4		45	62.3		cb	49	61.9
z		46	62.2		W	50	61.8
1/4		47	61.9				
+3	old Gutter	50	61.8		W	56	61.2
		463	62.16	on Cb Return	cb	56	61.2
cb		44	62.4		1/4	55	61.3
W		43	62.5		z	54	61.4
		455			1/4	48	62.0
W		48	62.0		cb	49	61.9

90's

135 S - z Alley

lograben

6679

E		4.6	62.2
+25			63.2
	180's		
-25			64.8
E		3.5	63.3
cb		4.0	62.6
1/4		3.6	63.2
2		4.5	62.3
+10		5.3	61.5
1/4		5.0	61.8
cb		5.5	61.3
+8		4.5	62.3
N		4.6	62.2
	225's		
N		4.3	62.5
cb		3.9	62.9
1/4		3.8	63.0
+3		4.3	62.5
2		3.6	63.2
1/4		2.8	64.0
cb		3.4	63.4
+10		2.5	64.3
E		1.6	65.2
+25			65.1

6679

7-8-20

54

220's = N 2 Hornblend

			65.2
			65.0
		-2.5	
		-7	
		E	3.1
			63.7
		+4	3.6
			63.2
		cb	3.6
			63.2
		1/4	3.2
			63.6
		2	3.7
			63.1
		+8	4.3
		1/4	4.2
			62.5
			62.6
		cb	3.6
			63.2
		N	2.9
			63.9
	119	65.45	2.52
			64.26
		Ncb	
		N	2.5
			63.0
		cb	2.7
			62.8
		1/4	3.2
			62.3
		2	2.6
			62.9
		1/4	2.0
			63.5
		cb	2.5
			63.0
		E	2.8
			62.7
		N 1/4	
		E	2.1
			62.9
		cb	2.5
			63.0

Hornblend  
80's side  
20' cbs  
10' gfsHail N 2 side  
lograben x  
Hornblend



Ingraham

65.45

18	23	63.2
14	20	63.5
L	26	62.9
14	29	62.6
cb	28	62.7
H	27	62.8
L Hornblend		
H	29	62.6
cb	31	62.4
14	32	62.3
L	27	62.8
14	26	63.3
+5	25	63.0
cb	26	62.9
F	27	62.8
S 14		
F	26	62.9
cb	26	62.9
+6	26	62.9
14	28	63.3
L	28	62.7

65.45

14	30	62.5
cb	29	62.6
H	29	62.6
SCb		
H	32	62.3
cb	31	62.4
14	32	62.3
L	28	62.7
+5	26	62.9
14	22	63.3
+5	26	62.9
cb	28	62.7
F	28	62.7
S L Hornblend		
-25	22	62.9
F	26	62.9
+5	26	62.9
+7	30	62.5
cb	30	62.5
+6	30	62.5
14	25	63.0
L	28	62.7
14	30	62.5

Ingraborn

65.45

+3		25	63.0
Cb		24	63.1
H		23	63.2
	45.5		
H		21	62.9
Cb		29	62.6
H		29	62.6
T2		30	62.5
T3		35	62.0
Z		34	62.1
H		32	62.3
T5		37	61.8
Cb		39	61.6
T4		37	61.8
T7		38	62.7
E		30	62.5
+2.5			62.0
-2.5	90.5		61.8
E		46	60.9
T5		41	61.4
Cb		50	60.3
T5		48	60.7

65.45

H		43	61.2
Z		45	61.0
H		44	61.6
Cb		35	62.0
H		33	62.2
	135.5		
H		39	61.6
Cb		42	61.3
H		46	60.9
+3		52	60.1
Z		53	60.2
H		51	60.4
T7		59	59.6
Cb		58	59.7
T4		58	59.7
T7		54	60.1
E		56	59.9
+2.5			60.0
	180.5		59.4
-2.5		65	59.0
E			
+5		65	59.0
T7		70	58.5

Ingraham

65.45

Cb	69	58.6
+5	71	58.4
'14	66	58.9
+5	71	58.4
z	73	58.2
+7	72	58.3
'14	65	59.0
+7	5.4	60.1
Cb	5.0	60.5
'14	48	60.7
	225.5	
'14	56	59.9
Cb	57	59.8
+8	60	59.5
'14	82	57.3
z	83	57.2
+7	81	57.4
'14	78	57.7
+5	83	59.2
Cb	81	57.4
+5	85	57.0

65.85

57

+6	80	57.5
F	80	57.5
+25		58.5
	265.5	
-25		56.5
F	96	55.9
Cb	96	55.9
+5	95	56.0
'14	90	56.5
z	93	56.2
'14	92	56.3
+5	67	58.8
Cb	66	58.9
'14	60	59.5
	270.5 = N.L. Grand Ave.	Grand 185.11
'14	81	57.4
Cb	84	57.1
'14	91	56.4
+2	94	56.1
z	94	56.1
'14	91	56.4
'14	97	55.8
Cb	97	55.8

20 Cbs  
2125.945

Ingration

65.45

E		95	56.0
+25			56.3
	N Cb		
-25			54.9
E		101	55.4
cb		99	55.6
'/4		95	56.0
z		97	55.8
'/4		97	55.8
cb		97	55.8
'/4		98	55.7
	N '/4		
'/4		92	56.3
cb		93	56.2
'/4		96	55.9
z		96	55.9
'/4		96	55.9
cb		96	55.9
E		97	55.8
+25			55.2
	z Grand Ave		
-25			55.2
E		97	55.8
cb		94	56.1
'/4		94	56.1

65.45

58

z		98	55.7
'/4		95	56.0
cb		93	56.2
'/4		90	56.5
	S '/4		
'/4		10.0	55.5
cb		10.2	55.3
'/4		10.3	55.2
z		10.4	55.1
'/4		10.1	55.1
cb		10.4	55.1
E		10.9	54.6
+25			54.1
	S Cb		
-25			53.3
E		11.2	54.3
cb		11.0	54.5
'/4		10.9	54.6
z		10.7	54.8
'/4		10.6	54.9
cb		10.1	55.4
'/4		10.1	55.4
	S L Grand		

Ingraham

65.45

N		97	55.8	
cb		98	55.7	
+8		10.0	55.5	
+9		10.6	54.9	
1/4		10.4	55.1	
2		10.9	54.6	
+6		10.8	54.7	
1/4		10.5	55.0	
+5		10.7	54.6	
cb		11.0	54.5	
F		11.3	54.2	
+25			54.1	
-25	45's		53.9	
F		12.0	53.5	
TP	0.91	55.45	10.91	54.54
+5		2.2	53.3	
cb		1.8	53.7	
1/4		1.2	54.3	
2		1.3	54.2	
1/4		1.3	54.2	
+3		1.1	54.4	
+8		0.4	55.1	

55.45

59

N		0.2	55.2	Point
	90's			
N		1.2	54.3	
cb		1.4	54.1	100's
+8		1.8	53.7	Top Const. Stop 8' High
1/4		2.3	53.2	0.88
2		2.4	53.1	
+2		2.4	53.1	
1/4		1.9	53.6	
cb		3.0	52.5	
F		3.5	52.0	
+25			52.9	
-25	135's		51.7	
F		4.7	50.8	
cb		3.7	51.6	
1/4		3.0	52.5	
2		3.3	52.2	
1/4		2.9	52.6	
+5		3.0	52.5	
+6		2.5	53.0	
cb		2.2	53.3	
N		2.1	53.4	

Ingraham

55.45

180.5

N	3.3	52.2
cb	3.6	51.9
tl	3.8	51.7
17	4.3	51.2
14	4.0	51.5
z	4.1	51.4
14	4.0	51.5
cb	4.9	50.6
E	5.5	50.0
+25		50.7
-25		49.8
E	6.5	49.0
cb	5.5	50.0
14	4.8	50.7
z	5.0	50.5
14	5.1	50.4
+5	5.1	50.4
tl	4.6	50.9
cb	4.3	51.2
N	4.0	51.5

270's N Thomas

60

55.45

5130

TP	0.82	497	50.48
N		1.1	50.2
cb		1.2	50.1
14		1.6	49.7
z		1.6	49.7
14		1.8	50.0
cb		2.0	49.3
E		2.6	48.7
+25			48.8
-25			49.0
E		2.7	48.6
cb		2.3	49.0
14		1.5	49.8
z		1.7	49.6
14		2.0	49.3
cb		1.8	49.5
N		1.6	49.7
N 14			
N		1.6	49.7
cb		2.1	49.2
14		2.3	49.0
z		1.8	49.5

Thomas  
80' side  
20' Cbs  
10' G.L.

Ingraham

51.30

1/4		1.1	49.7
cb		2.3	49.0
E		2.6	48.7
+25			48.9
	2 Thomas		
-25			48.7
E		3.6	48.3
cb		2.1	48.7
1/4		1.6	49.7
2		2.0	49.3
1/4		2.1	48.9
cb		1.7	49.6
H		1.7	49.6
BM		2.88	48.42
	5 1/4		
H		1.7	49.6
+5		2.4	48.9
cb		2.5	48.8
1/4		2.7	48.6
2		2.1	49.2
1/4		1.7	49.6
cb		2.7	48.6
E		3.3	48.0
+25			48.5

00 H 72 Ingraham  
2 Thomas  
plan

51.30

61

5 CB

-25			48.6
E		3.6	47.7
cb		2.9	48.4
1/4		1.8	49.5
2		2.2	49.1
1/4		2.9	48.4
+10		2.8	48.5
cb		2.1	49.2
H		2.0	49.3
	5 1/4 Thomas		
H		1.2	50.1
+3		2.3	49.0
cb		2.4	48.9
17		2.6	48.7
+9		3.2	48.1
1/4		3.3	48.0
2		2.5	48.8
1/4		2.2	49.1
cb		3.2	48.1
E		4.0	47.3
+25			48.3

45.5

Ingraham

5130

-25			47.6
F	47		46.6
Cb	4.0		47.3
74	3.2		48.1
E	3.2		48.1
+3	3.2		48.1
74	4.0		47.3
+2	4.0		47.3
+8	3.2		48.1
Cb	3.1		48.2
74	2.6		48.7
	50.5		
74	3.5		47.8
Cb	3.8		47.5
+8	4.0		47.3
+10	4.7		46.9
74	4.5		46.8
+10	3.9		47.4
E	3.8		47.5
74	3.9		47.4
Cb	4.6		46.7
F	5.1		45.9
42.5			47.3

5130

62

135.5 &amp; Alley

-25			46.4
F	5.8		45.5
Cb	5.2		46.0
+8	4.5		46.8
74	4.5		46.8
E	4.6		46.7
74	5.3		46.0
+4	5.2		46.1
+6	4.4		46.9
Cb	4.1		46.9
74	4.2		47.1
	180.5		
74	4.9		46.4
Cb	5.2		46.1
+8	5.5		45.8
+11	6.0		45.5
74	5.8		45.7
E	5.5		45.0
74	5.3		46.2
Cb	6.1		45.2
E	6.5		44.8
45.0			45.8



Ingraham

5130

	225 S		
-25			
E		6.8	44.5
cb		6.2	45.1
1/4		5.8	45.5
2		5.8	45.5
1/4		6.6	44.7
1/4		6.6	44.7
+6		6.1	45.2
cb		6.0	45.3
N		5.6	45.7
	270 S	NL Reed	
N		6.0	45.3
cb		6.1	44.9
17		6.5	44.8
110		7.0	44.5
1/4		7.1	44.2
2		6.3	45.0
1/4		6.1	45.2
cb		6.2	45.1
E		6.9	44.4
385			44.0
	N CB		

Reed  
80% da  
20 Cbs  
10' 911

5130

-25			
E		7.0	44.4
		6.3	44.3
		6.3	45.0
cb		6.2	45.1
1/4		5.9	45.4
2		6.2	45.0
+5		6.8	44.5
1/4		6.9	44.4
cb		6.9	44.4
N		6.6	44.7
	N 1/4		
N		6.7	44.7
cb		7.0	44.3
1/4		6.8	44.5
+6		6.8	44.5
2		6.2	45.1
1/4		5.9	45.4
cb		6.2	45.1
E		6.2	44.5
+25			44.0
	E Reed		
-25			44.1
E		6.5	44.8
cb		6.2	45.1

Ingraham

5130

'14	6.0	45.3
z	6.2	45.0
+5	6.5	44.5
'14	6.8	44.5
cb	7.0	44.3
H	6.7	44.6
	s '14	
H	7.0	44.3
cb	7.2	44.1
'14	7.0	44.3
z	6.5	44.8
'14	6.2	45.1
cb	6.4	44.9
E	6.8	44.5
+2.5		44.0
	s cb	
-2.5		44.6
E	6.5	44.8
cb	6.1	45.2
'14	5.8	45.5
z	6.1	45.2
+5	6.7	44.6
'14	7.0	44.3

5130

64

cb	7.1	44.2
H	6.8	44.5
	s '14	
H	6.2	45.1
cb	6.5	44.8
+7	6.8	44.5
'14	7.3	44.0
z	6.5	44.8
'14	6.1	45.2
cb	6.4	44.9
E	6.6	44.7
+2.5		44.3
	7.5	
-2.5		44.5
E	6.4	44.9
cb	5.9	45.4
'14	5.6	45.7
z	5.8	45.5
+5	6.7	45.6
'14	7.0	44.3
12	7.0	44.3
7.6	6.1	45.2
cb	6.1	45.2

109.01.00		51.30		
11			58	45.5
		90.5		
11			50	46.3
cb			51	45.7
+7			56	45.7
14			65	44.8
2			51	45.9
14			50	46.3
cb			52	46.1
F			57	45.6
+2.5				45.4
		135.0		
-2.5				46.0
F			50	46.3
cb			47	46.6
14			45	45.8
2			47	45.6
14			54	45.9
+3			57	45.6
+7			50	46.0
cb			47	46.6
11			43	47.0
TP	4.54	52.51	3.53	47.77

52.31		180.5		
11			49	47.4
cb			52	47.1
+7			52	47.1
+10			59	46.4
14			57	46.6
2			49	47.5
14			48	47.8
cb			50	47.3
F			54	46.9
+2.5				47.5
		225.5		
-2.5				48.1
F			48	47.5
cb			42	48.1
14			42	48.1
2			44	47.9
14			52	47.0
+3			54	46.9
+7			46	47.7
cb			45	47.8
11			41	48.2
		270.5 = N2 Oliver		

Ingraham

5/23/31

N	28	49.5	Oliver
+3	39	48.4	80' wide 20' Cbs 10' qts
cb	40	48.3	
+5	42	48.1	
+10	50	47.3	
1/4	48	47.5	
2	40	48.3	
1/4	39	48.5	
cb	40	48.3	
F	45	47.8	
+35		48.6	
			N Cb
-25		48.6	
F	46	47.7	
cb	41	48.2	
1/4	39	48.4	
2	42	48.1	
1/4	48	47.5	
+3	49	47.4	
+7	42	48.1	
cb	40	48.3	
+9	37	48.6	
N	29	49.4	

N 1/4

5/23/31

66

N	21	50.2	
+4	35	48.8	
cb	41	48.2	
+7	42	48.1	
1/4	49	47.4	
2	42	48.1	
1/4	40	48.3	
cb	42	48.1	
F	44	47.9	
+35		48.7	
			2 Oliver
-25		48.7	
F	45	47.8	
cb	42	48.1	
1/4	41	48.2	
2	42	48.1	
1/4	49	47.4	
+7	42	48.1	
cb	39	48.4	
+9	34	48.9	
N	21	50.2	
B.N.	485	47.46	

S 1/4

No. 1772  
Ingraham  
B. Oliver.

Ingraham

5231

9/16

N	2.5	49.8
+3	3.7	48.6
Cb	4.0	48.3
+7	4.2	48.1
1/4	4.9	47.4
E	4.1	48.2
1/4	4.0	48.3
Cb	4.2	48.1
E	4.5	47.8
+2.5		48.5
-2.5		48.3
E	4.5	47.8
Cb	4.2	48.1
1/4	4.0	48.3
E	4.0	48.3
1/4	5.0	47.3
+7	4.3	48.0
Cb	4.0	48.3
+9	3.8	48.5
N	2.7	49.6
	5.2 Oliver	
N	2.3	50.0

5231

+3	3.7	48.6
Cb	4.1	48.2
+7	4.2	48.1
1/4	4.8	47.5
E	4.0	48.3
1/4	4.1	48.2
Cb	4.2	48.1
E	4.5	47.8
+2.5		48.6
-2.5		48.7
E	4.8	47.5
Cb	4.4	47.9
1/4	4.1	48.2
E	4.8	47.5
+2	5.0	47.3
+7	4.3	48.0
Cb	4.2	48.1
+9	3.7	48.6
N	2.8	49.5
	9.0's	
N	2.9	49.4

Ingram

52.31

+3		44	47.9
cb		46	47.7
+7		47	47.6
+10		53	47.0
1/4		51	47.2
2		44	47.9
1/4		44	47.9
cb		45	47.8
F		47	47.6
+25			48.0
-25	125's		47.4
F		49	47.4
cb		47	47.6
1/4		46	47.7
2		48	47.5
1/4		54	46.9
+7		49	47.4
cb		48	47.5
+9		45	47.8
1/4		36	48.7
	170's		
1/4		40	48.3

52.31

68

+3		48	47.5
cb		48	47.5
+6		48	47.5
+10		55	46.8
1/4		54	46.9
2		48	47.5
1/4		47	47.6
cb		51	47.2
F		56	46.7
+25			47.1
-25	215's		46.5
F		61	46.2
cb		55	46.8
1/4		51	47.2
2		51	47.2
1/4		57	46.6
+5		57	46.6
+8		52	47.1
cb		50	47.3
1/4		47	47.6
	250's N.L. Pacific		
1/4		57	46.6

Ingraham

5231

Cb		59	46.4
1/4		62	46.1
E		56	46.7
5/11		58	47.1
Cb		57	46.6
E		63	46.0
+2.5			46.1
B.M	3.61	49.12	45.51
		N Cb	
-2.5			46.4
E		37	45.7
Cb		30	46.1
1/4		21	47.0
E		24	46.7
1/4		29	46.2
+5		33	45.8
Cb		28	46.3
N		25	46.3
		N 1/4	
N		31	46.0
Cb		30	46.1
+8		36	45.5
1/4		33	45.8

Pacific  
149 1/2 ft. do.  
No Cbs  
27.25 9/5Mon 11 7/2  
Ingraham  
N. Pacific

49.12

69  
1-7-26

E		27	46.4
1/4		23	46.8
Cb		30	46.1
E		26	45.5
+2.5			45.8
-2.5		E Pacific	45.9
E		34	45.7
Cb		33	45.8
1/4		27	46.4
E		31	46.0
1/4		35	45.6
+5		36	45.5
Cb		31	46.0
N		32	45.9
		5 1/4	
N		35	45.6
Cb		32	45.8
+8		38	45.3
1/4		31	45.5
E		32	45.9
1/4		28	46.3
Cb		35	45.6

Ingram

49.12

E		3.5	45.6
-25			45.8
	506		45.6
-25			45.4
E		3.7	45.4
cb		3.5	45.6
1/4		3.3	45.8
2		3.3	45.8
1/4		4.0	45.1
15		4.3	44.8
cb		3.7	45.4
H		3.5	45.6
	SL Pacific		
H		3.6	45.5
cb		3.4	45.7
+3		3.4	45.7
+8		4.2	44.9
1/4		4.0	45.1
2		3.4	45.7
1/4		3.7	45.4
+5		3.7	45.4
cb		3.2	45.9
E		3.2	45.9
125			46.1

47.12

70

			50's				
				E	3.3		45.8
				cb	3.4		45.7
				1/4	4.0		45.1
				2	3.7		45.4
				1/4	3.9		45.2
				+5	4.2		44.9
				110	3.4		45.7
				cb	3.3		45.8
				H	3.1		46.0
			100's				
				H	3.4		45.7
				cb	3.5		45.6
				+8	4.6		44.5
				1/4	4.3		44.8
				2	4.2		44.9
				1/4	4.3		44.8
				cb	3.5		45.6
				E	3.3		45.8
			150's				
				E	3.5		45.6
				cb	3.6		45.5



Ingraham

49.12

+8	42	44.9
'11	41	45.0
Z	40	45.1
'11	43	44.8
+5	44	44.7
cb	37	45.4
H	36	45.5

200.5

H	36	45.5
cb	38	45.3
+3	38	45.3
+8	45	44.6
'11	42	44.9
Z	40	45.1
'11	42	44.9
+5	43	44.8
cb	38	45.3
F	36	45.5

250.5

F	38	45.3
cb	38	45.3

49.12

71

+8	41	44.7
'11	42	44.9
Z	41	45.0
'11	42	44.9
+7	44	44.7
cb	38	45.3
H	37	45.4

300.5

H	35	45.6
cb	37	45.4
+3	36	45.5
+8	44	44.7
'11	41	45.0
Z	40	45.1
'11	41	45.0
+5	42	44.9
cb	37	45.4
F	34	45.7

350.5

F	33	45.8
+5	39	45.2

Ingrams

49.12

49.12

Cb	3.9	45.2
+8	4.1	44.7
14	4.1	45.0
2	4.0	45.1
14	4.3	44.8
+5	4.5	44.6
+9	3.7	45.4
Cb	3.5	45.6
11	3.0	46.1
	400's	
11	3.1	46.0
+3	3.5	45.6
Cb	3.1	45.5
+8	4.4	44.7
14	4.6	44.5
2	4.3	44.8
14	4.5	44.6
+5	4.4	44.7
Cb	3.7	45.4
+7	3.7	45.4
E	2.4	46.7

	450's	
E	2.8	46.3
+7	3.7	45.4
Cb	4.0	45.1
+5	4.5	44.6
14	4.4	44.7
2	4.2	44.9
14	4.5	44.6
+7	4.7	44.4
+10	4.0	45.1
Cb	3.8	45.3
11	3.6	45.5
	500's	
11	3.3	45.8
+2	4.0	45.1
Cb	3.8	45.3
+3	4.0	45.1
+8	4.6	44.5
14	4.6	44.5
2	4.4	44.7
14	4.5	44.5

Ingraham

		49.12			
+5			45	44.6	
cb			41	45.0	
E			3.8	45.3	
BM	223	4590	5.45	43.67	E 1100 Sunset Ingraham
		550'S = N.L. Sunset			
E			0.9	45.5	Sunset 75' side
cb			0.9	45.0	18' cbs 1275' side
+5			1.3	44.6	
11			1.6	44.3	
2			1.2	44.7	
11			1.5	44.4	
+6			1.5	44.4	
+7			1.0	44.9	
cb			0.9	45.0	
+10			0.5	45.4	
11			0.0	45.9	
		Ncb			
11			0.0	45.9	
+2			0.9	45.0	
cb			1.0	44.9	
+6			1.7	44.2	

4590

11			1.5	44.4	
2			1.2	44.7	
11			1.5	44.4	
17			1.2	44.3	
cb			1.0	44.9	
E			0.9	45.0	
		N 1/4			
E			1.5	44.4	
cb			1.6	44.3	
11			1.5	44.4	
2			1.2	44.7	
11			1.6	44.3	
cb			1.5	44.4	
+8			1.0	44.9	
11			0.0	45.9	
		2 Sunset			
11			0.2	45.7	
cb			1.3	44.6	
+4			1.5	44.4	
11			1.5	44.4	
2			1.9	44.5	
11			1.3	44.6	

Ingraham

4590

cb	1.5	44.4
E	1.5	44.4
	5/4	
E	2.2	43.7
cb	2.0	43.9
'14	1.8	44.1
8	1.4	44.5
'14	1.5	44.4
cb	1.8	44.1
+8	1.5	44.4
H	0.0	45.9
	5cb	
H	0.0	45.9
+5	1.3	44.6
cb	1.6	44.3
+8	2.1	43.8
'14	1.8	44.1
8	1.5	44.4
'14	2.0	43.9
+9	2.0	43.9
cb	1.4	44.5

4590

74

E	1.3	44.6
	52 sunset	
E	1.3	44.6
cb	1.3	44.6
+3	1.5	44.4
+9	2.2	43.7
'14	2.1	43.8
8	1.6	44.3
'14	2.1	43.8
+5	2.2	43.7
'10	1.3	44.6
cb	1.3	44.6
+8	0.7	45.2
H	0.0	45.9
	50'S	
H	0.7	45.2
+2	1.8	44.1
cb	2.1	43.8
+3	2.1	43.8
+7	2.9	43.0
'14	2.8	43.1

Ingraham

45.90

+6	26	43.3
2	20	43.9
7/4	25	43.4
+5	27	43.2
cb	21	43.8
F	20	43.9

100's

F	27	43.2
cb	30	42.9
+8	32	42.2
7/4	35	42.4
2	31	42.8
7/4	35	42.4
+9	31	42.8
cb	28	43.1
+7	26	43.3
7/4	11	44.8

150's

7/4	28	43.7
+3	35	42.4
cb	36	42.3

45.90

75

+3	31	42.3
+7	41	41.8
7/4	44	41.5
2	38	42.1
7/4	42	41.9
+4	44	41.5
+8	37	42.2
cb	38	42.1
F	34	42.5

200's

F	38	42.1
cb	44	41.5
7/4	43	41.6
+9	51	40.8
7/4	47	41.2
2	43	41.6
7/4	48	41.1
+6	49	41.0
+10	41	41.8
cb	41	41.8
+9	40	41.7

Ingraham

1590

H	29	43.0
	250's	
H	31	42.5
+5	51	40.8
cb	52	40.7
+3	50	40.9
+8	57	40.2
1/4	56	40.3
2	48	41.1
+6	54	40.5
1/4	53	40.6
+6	58	40.1
+7	52	40.7
cb	50	40.9
F	49	41.0
	300's	
F	50	40.9
+4	58	40.1
cb	58	40.8
+4	51	40.3
+8	65	39.4
1/4	62	39.7

1590

	61	39.8
	54	40.5
	61	39.8
	62	39.7
	63	39.6
	58	40.1
	56	40.3
	55	40.4
	43	41.6
	350's	
	47	41.2
	62	39.7
	64	39.5
	64	39.5
	72	38.7
	70	38.9
	63	39.6
	66	39.3
	70	38.9
	65	39.4
	65	39.4

Ingramm

1590

+7	63	39.6
E	54	40.5
	400's	
E	62	39.7
+4	69	39.0
cb	70	38.9
+5	70	38.9
+8	77	38.2
74	74	38.5
2	68	39.1
74	75	38.4
+6	77	38.2
+9	72	38.7
cb	71	38.8
+9	69	39.0
W	55	40.4
	450's	
W	64	39.5
+3	75	38.4
cb	78	38.1
+4	80	37.0

1590

77

+8	85	37.4
74	84	37.5
2	77	38.2
74	81	37.8
+5	84	37.5
+8	76	38.3
cb	77	38.2
+8	79	38.0
E	69	39.0
	500's	
E	74	38.5
+4	83	37.6
cb	84	37.5
+4	84	37.5
+8	91	36.8
74	90	36.9
2	85	37.4
74	90	36.9
+6	91	36.8
+9	86	37.3
cb	83	37.6
+9	81	37.8

Ingram

4590

H	70	38.7	
	550's		
H	78	38.1	
+3	91	36.8	
cb	92	36.7	
+4	92	36.7	
+8	10.0	35.9	
1/4	97	36.2	
2	90	36.9	
1/4	95	36.4	
+6	98	36.1	
+8	91	36.8	
cb	91	36.8	
+8	89	37.0	
E	81	37.8	
	600's - H.L. Roosevelt		
E	91	36.8	Roosevelt
+4	94	36.5	75' wide
cb	96	36.3	12' Cb's
+3	97	36.2	12959's
+9	102	35.6	

4590

78

1/4	10.0	35.9	
2	9.7	36.2	
1/4	10.2	35.7	
+6	10.6	35.3	
+8	9.9	36.0	
cb	9.7	36.2	
+9	9.6	36.3	
H	8.3	37.6	
	H Cb		
H	8.5	37.4	
+3	9.7	36.2	
cb	9.9	36.0	
+8	10.2	35.7	
1/4	10.2	35.7	
2	9.9	36.0	
1/4	10.0	35.9	
+6	10.3	35.6	
cb	10.0	35.9	
E	9.4	36.5	
	H 1/4		
E	9.6	36.3	



Ingraham

45.90

Cb			10.2	35.7
1/4			10.1	35.8
2			9.9	36.0
1/4			10.1	35.8
Cb			10.1	35.8
+9			9.8	36.1
H			8.9	37.0
BM	338	38.18	11.10	34.80
			2 Roosevelt	
H			1.8	36.4
+4			2.2	36.0
Cb			2.5	35.7
1/4			2.6	35.6
2			2.4	35.8
1/4			2.7	35.5
Cb			2.6	35.6
F			2.3	35.9
		5 1/4		
F			2.9	35.3
Cb			3.3	34.9
1/4			3.0	35.2

2 Men  
Roosevelt +  
Ingraham

38.18

79

2			2.6	35.6
1/4			2.9	35.3
Cb			3.0	35.2
+8			2.6	35.6
H			1.7	36.5
		5 Cb		
H			1.9	36.3
+4			2.9	35.3
Cb			3.0	35.2
1/4			3.0	35.2
2			2.6	35.6
1/4			3.3	34.9
+5			3.5	34.7
+8			3.0	35.2
Cb			3.1	35.1
F			2.9	35.3
		5 Roosevelt		
F			2.8	35.4
Cb			3.2	35.0
1/4			3.2	35.0
+8			3.8	34.4

Ingraham  
75' N. of La Fram Rd. 38.18

75' wide  
17' Cbs  
12.25' x 13  
35.5

74	22	35.5
2	23	35.9
74	22	35.0
76	25	34.7
77	27	35.5
cb	29	35.3
79	26	35.6
H	22	36.0
	50.5	
H	33	34.9
cb	36	34.6
73	36	34.6
78	45	33.7
74	43	33.9
2	34	34.8
74	43	33.9
75	45	33.7
78	38	34.4
cb	27	34.5
7	36	34.6

TABLE IX.—CALCULATION OF EARTHWORK.

Width	HEIGHT														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	.02	.04	.06	.07	.09	.11	.13	.15	.17	.18	.20	.22	.24	.26	.28
2	.04	.07	.11	.15	.18	.22	.26	.30	.33	.37	.41	.44	.48	.52	.56
3	.06	.11	.17	.22	.28	.33	.39	.44	.50	.56	.61	.67	.72	.78	.83
4	.07	.15	.22	.30	.37	.44	.52	.59	.67	.74	.81	.89	.96	1.04	1.11
5	.09	.19	.28	.37	.46	.56	.65	.74	.83	.93	1.02	1.11	1.20	1.30	1.39
6	.11	.22	.33	.44	.56	.67	.78	.89	1.00	1.11	1.22	1.33	1.44	1.55	1.67
7	.13	.26	.39	.52	.65	.78	.91	1.04	1.16	1.30	1.42	1.55	1.68	1.81	1.94
8	.15	.30	.44	.59	.74	.89	1.04	1.19	1.33	1.48	1.63	1.78	1.92	2.08	2.22
9	.17	.33	.50	.67	.83	1.00	1.17	1.33	1.50	1.67	1.83	2.00	2.17	2.33	2.50
10	.18	.37	.56	.74	.93	1.11	1.30	1.48	1.67	1.85	2.04	2.22	2.41	2.59	2.78
11	.20	.41	.61	.82	1.02	1.22	1.43	1.63	1.83	2.04	2.24	2.44	2.65	2.85	3.06
12	.22	.44	.67	.89	1.11	1.33	1.56	1.78	2.00	2.22	2.44	2.67	2.89	3.11	3.33
13	.24	.48	.72	.96	1.20	1.44	1.68	1.92	2.16	2.41	2.65	2.89	3.13	3.37	3.61
14	.26	.52	.78	1.04	1.30	1.55	1.81	2.08	2.33	2.59	2.85	3.11	3.37	3.63	3.89
15	.28	.56	.83	1.11	1.39	1.67	1.94	2.22	2.50	2.78	3.06	3.33	3.61	3.89	4.17
16	.30	.59	.89	1.18	1.48	1.78	2.07	2.37	2.67	2.96	3.26	3.56	3.85	4.15	4.44
17	.31	.63	.94	1.26	1.57	1.89	2.20	2.52	2.83	3.15	3.46	3.78	4.09	4.41	4.72
18	.33	.67	1.00	1.33	1.67	2.00	2.33	2.67	3.00	3.33	3.67	4.00	4.33	4.67	5.00
19	.35	.70	1.06	1.41	1.76	2.11	2.46	2.82	3.17	3.52	3.87	4.22	4.57	4.92	5.28
20	.37	.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33	3.70	4.07	4.44	4.81	5.18	5.56
21	.39	.78	1.17	1.55	1.94	2.33	2.72	3.11	3.50	3.89	4.28	4.67	5.06	5.44	5.83
22	.41	.81	1.22	1.63	2.04	2.44	2.85	3.26	3.67	4.07	4.48	4.89	5.30	5.70	6.11
23	.43	.85	1.28	1.70	2.13	2.56	2.98	3.41	3.83	4.26	4.68	5.11	5.54	5.96	6.39
24	.44	.89	1.33	1.78	2.22	2.67	3.11	3.56	4.00	4.44	4.89	5.33	5.78	6.22	6.67
25	.46	.92	1.39	1.85	2.31	2.78	3.24	3.70	4.17	4.63	5.09	5.56	6.02	6.48	6.94
26	.48	.96	1.44	1.92	2.41	2.89	3.37	3.85	4.33	4.82	5.30	5.78	6.26	6.74	7.24
27	.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
28	.52	1.04	1.55	2.07	2.59	3.11	3.63	4.15	4.67	5.18	5.70	6.22	6.74	7.26	7.78
29	.54	1.07	1.61	2.15	2.68	3.22	3.76	4.30	4.83	5.37	5.91	6.44	6.98	7.52	8.06
30	.56	1.11	1.67	2.22	2.78	3.33	3.89	4.44	5.00	5.55	6.11	6.67	7.22	7.78	8.33
31	.57	1.15	1.72	2.30	2.87	3.44	4.02	4.59	5.17	5.74	6.32	6.89	7.46	8.04	8.61
32	.59	1.18	1.78	2.37	2.96	3.56	4.15	4.74	5.33	5.92	6.52	7.11	7.70	8.30	8.89
33	.61	1.22	1.83	2.44	3.05	3.67	4.28	4.89	5.50	6.11	6.72	7.33	7.94	8.55	9.17
34	.63	1.26	1.89	2.52	3.15	3.78	4.40	5.04	5.67	6.29	6.93	7.56	8.18	8.81	9.44
35	.65	1.30	1.94	2.59	3.24	3.89	4.53	5.18	5.83	6.48	7.13	7.78	8.42	9.08	9.72
36	.67	1.33	2.00	2.67	3.33	4.00	4.66	5.33	6.00	6.67	7.33	8.00	8.67	9.33	10.00
37	.68	1.37	2.06	2.74	3.42	4.11	4.79	5.48	6.17	6.85	7.54	8.22	8.91	9.59	10.28
38	.70	1.41	2.11	2.82	3.52	4.22	4.92	5.63	6.33	7.03	7.74	8.44	9.15	9.85	10.56
39	.72	1.44	2.17	2.89	3.61	4.33	5.05	5.78	6.50	7.22	7.95	8.67	9.39	10.11	10.83
40	.74	1.48	2.22	2.96	3.70	4.44	5.18	5.92	6.67	7.41	8.15	8.89	9.63	10.37	11.11

Table gives cu. yds. in 1 ft. of a triangle of given width and height. Corrections for tenths of width are one tenth the values found under each height considering the widths from 1 to 9 as tenths and similarly the corrections for tenths of height are one tenth the figures opposite width considering the heights from 1 to 9 as tenths. Thus if  $w=16.2$  and  $h=5.3$ , cu. yds.  $=1.48+.023+.089=1.597$  cu. yds. or practically 160 cu. yds. per 100 ft. If  $w$  exceeds 40 ft., use one half and multiply result by 2, if both  $w$  and  $h$  are large use one half of each and multiply result by 4. Any cross-section may be divided into triangles by the following rule. To the triangle of the sum of the outside cuts (or fills)  $=h$ , and  $\frac{1}{2}$  the roadbed  $=w$ , add the triangles formed by taking the distance out to each break in turn ( $=w$ 's) by the difference between the cuts (or fills) on each side of it ( $=h$ 's) always subtracting the outer from the inner.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1  $\frac{1}{2}$   
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.