

P 101

G 101

DIETZGEN  
TRADE-MARK

---

ENGINEERS'  
FIELD BOOK  
No. 403

---



# 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.  
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Handwritten calculations and notes on the right page, including numbers like 12083, 10367, and various arithmetic operations.

ADOLF FRESE OPTICAL CO.  
Engineering and Drafting Supplies  
Scientific Instruments and Repairing  
546 SOUTH SPRING STREET  
MILWAUKEE WIS.

APR 7 1965



INDEX

Union + Albatross	paring - x	1
Juniper	✓ x	11
Macizo	x	13
Ray St	paring ✓	14
Granada	✓ x	15
Alley Blk 5 Hilcrest	✓ x	18
Girard St	✓ x	19
Alley Blk 103 V.H.	✓	21
Hendricks Ave. 10 <sup>th</sup> St E -		22
3 <sup>rd</sup> St	paring Thorn to Dnight ✓	23
Texas St	paring ✓	25
Swacket + St James	✓ ✓	30
1 <sup>st</sup> St 30 <sup>th</sup> E	grading ✓	39
Alley Blk 3 Notts	paring ✓	40
32 <sup>nd</sup> St	grading ✓	42
Martin Ave	grading ✓	44
Alley Blk 5 Broad + Chase	paring ✓	45

Included  
M

C

H

0  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
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23  
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30  
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32  
33  
34  
35  
36  
37  
38  
39  
40

Exam  
to be a sl  
of roadbed  
e mple al  
3 4 = 32.6.















10593	$\frac{446}{732}$	$\frac{518}{1066}$	$\frac{642}{536}$	10593
$\frac{584}{1178}$				$\frac{371}{10964}$

10593	$\frac{310}{542}$	$\frac{10617}{625}$	$\frac{10614}{626}$	10593	10550	488
$\frac{459}{11287}$				689	702	769

10593	$\frac{583}{464}$	$\frac{654}{891}$	$\frac{70}{346}$	$\frac{723}{342}$
$\frac{459}{11046}$				

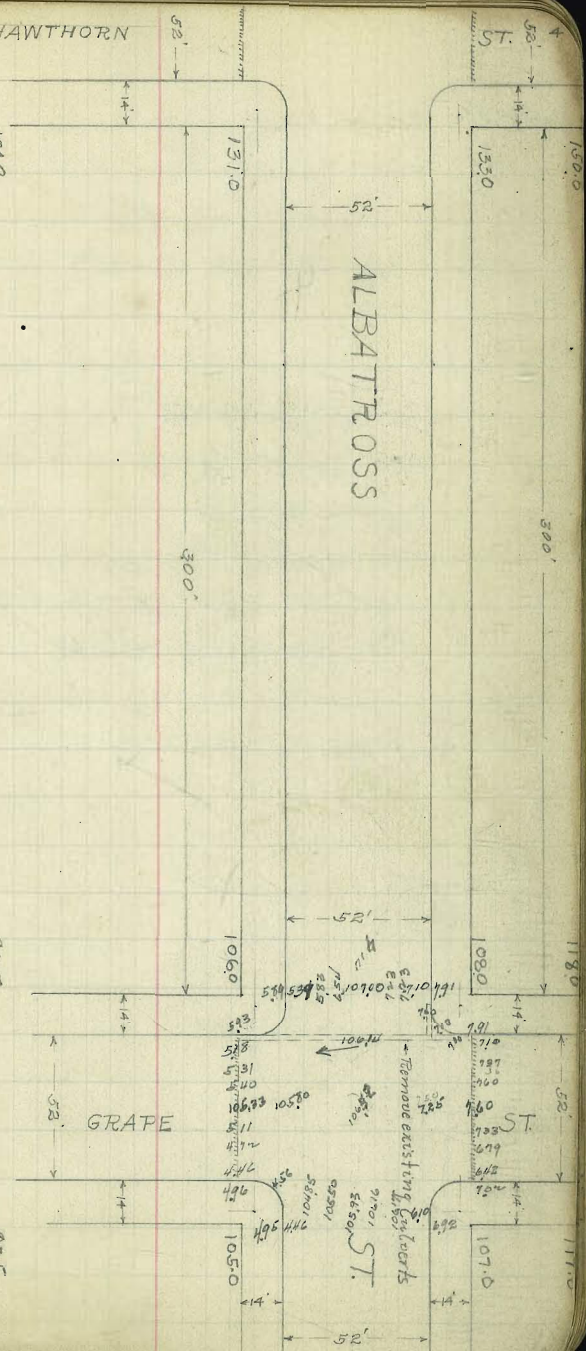
10593	$\frac{531}{524}$	$\frac{540}{513}$	$\frac{533}{50}$	$\frac{511}{554}$	$\frac{472}{58}$	$\frac{580}{54}$	$\frac{555}{88}$	$\frac{614}{489}$	$\frac{702}{35}$	$\frac{557}{489}$	$\frac{676}{377}$
$\frac{460}{11033}$											
	$\frac{237}{316}$	$\frac{760}{293}$	$\frac{183}{320}$	$\frac{176}{374}$	$\frac{643}{410}$	$\frac{726}{828}$	$\frac{652}{401}$				

HAWTHORN

B.M. Twp N.W. Cor Albattross & Grape: 105.93

94.5

93.5









366061

175.49  
 6.69  
 176.18  
 1.57  
 163.61  
 123.77  
 1305  
 157.77  
 158.77  
 1302  
 137.74  
 96  
 138.70

154.75  
 119  
 159.94

5330  
 158

151.91  
 7.23  
 159.89

5391 5459 5501 5543 5601  
 596 528 483 489 455

151.92  
 7.11  
 159.02

5401 5441 55.51 5531 5416  
 499 3.64 3.51 3.29 4.11

517 525 525 527 537  
 2.8 4.4 4.5 4.2 4.5

5357 5422 5481  
 5.15 4.83 4.18

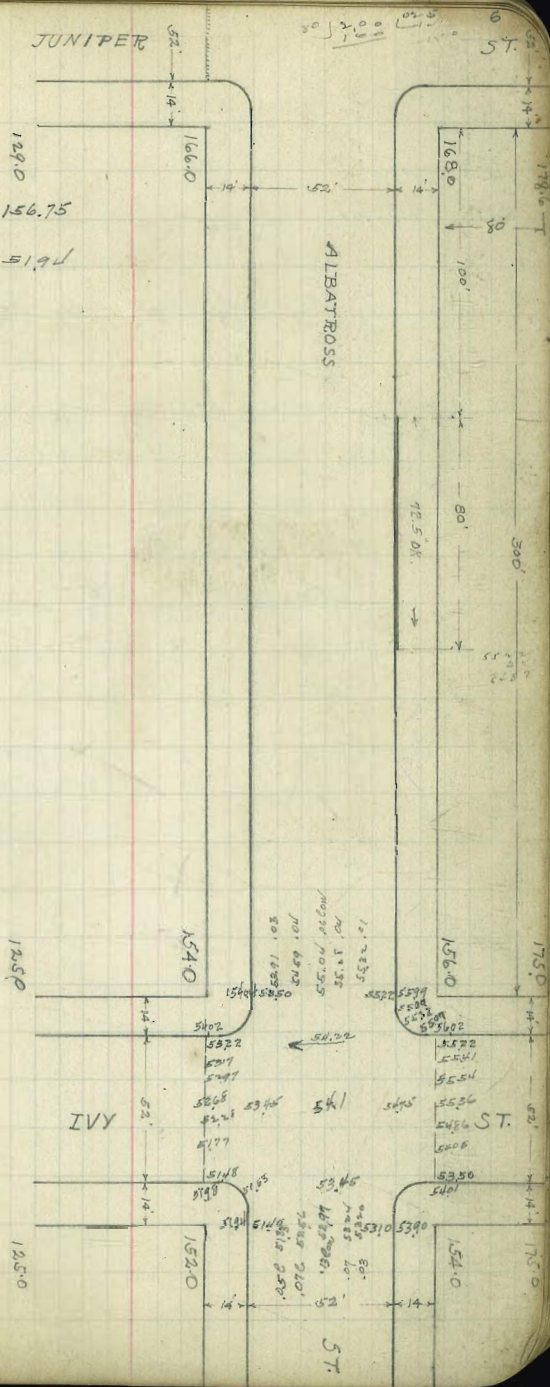
12.20  
 2.05  
 2.05

JUNIPER

50 12.00 10.00  
 6 ST.

nails in pole NE WY. 156.75  
 BP. SW. WY. 151.92

E. M. Ring NW. Cor Front & Juniper 185.90









177.49  
16.75  
184.24  
78.65

755  
1065    7714  
901    7750  
8.65

1803  
822  
17104

7515  
870

7530  
575

17813

1507    7515    7509    7540  
598    584    576    575  
7720    7715    7672    7649    7688  
93    98    101    101    103  
M.H. 69

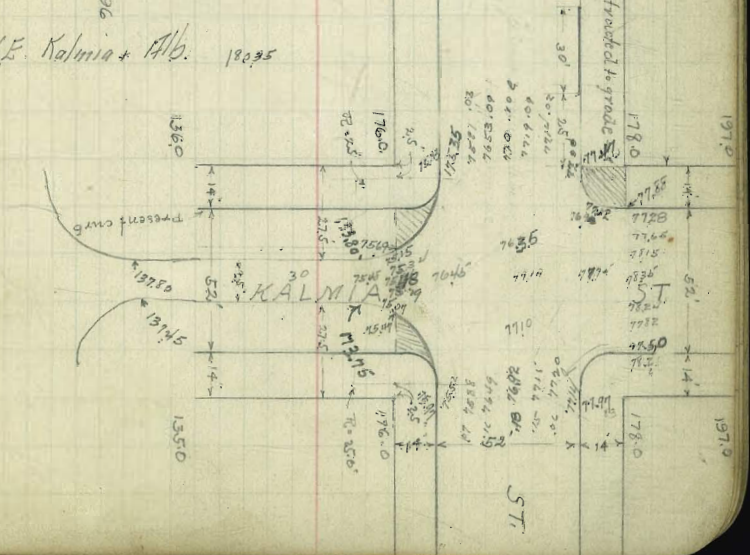
17035  
1300  
19125

7750    7720    7715    7710    7761  
372    381    370    370    390  
7690    7715    7721    7775    7781    7750  
403    410    411    420    418    396  
7710    7635    7524    7548    7524    7641  
474    500    621    607    626    570  
7581    7653    7719    7711  
574    503    436    471

LAUREL ST.    ALBATROSS ST.    ST.

B.M. Flag N.W. Cor Front of Laurel 200396

100  
B.M. N. 1/4 S.E. Kalmia + Alb. 19035





20376  
 43  
 2037  
 1303  
 171.32  
 0.91  
 177.27  
 11.30  
 180.57  
 372  
 184.85

2250 7.7 7950 7960  
 1277 1267  
 2205 224  
 1022 9.87

17991  
 477  
 18468  
 8001 802  
 467 582  
 3150 311  
 318 1.1  
 8211 1.2

1797 7729 7963 7971 796 7927  
 103 753 721 712 703 704  
 1784 7152 80 8023 803 8021 7997 7977  
 1684 704 694 691 693 693 687 704

8030 803 816 8003 8005  
 644 581 504 478 479  
 6.84 8097 8209 5

2211 219 215 2056 2001  
 413 493 504 528 653

2224 222 224 2284 2260 2242  
 4 24 24 42 51 57

8292 828 836 827 823  
 409 381 354 357 401

2404 219 216 2104 213  
 113 104 104 104 11

8228 8225 8220 8225 8227 8227 8224  
 116 131 114 109 113 114 114

7860 7800  
 114 11

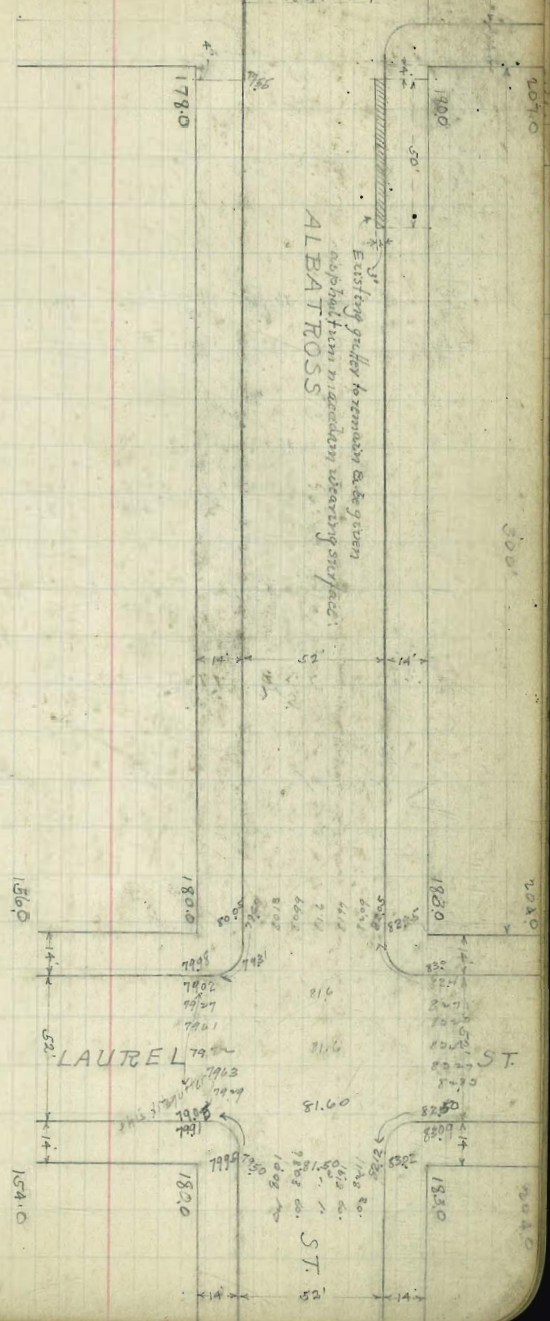
17995 103 8099 816 817 8209  
 103 488 397 336 114 484

MAPLE

R. 44.37

ST 80

E. M. Flug NW Cor Front & Laurel 20396  
 BP SW Laurel 179.41





200.37  
 1303  
 171.36  
 192.17  
 11.84  
 184.80  
 392  
 184.80

1840 Hd:

$\frac{7930}{550} - \frac{7790}{7.08}$

180.04

$\frac{7924}{568}$      $\frac{7925}{560}$      $\frac{791}{582}$      $\frac{7865}{630}$      $\frac{7797}{638}$

18007

$\frac{17881}{519}$      $\frac{1785}{55}$      $\frac{17835}{566}$   
 $\frac{7884}{516}$      $\frac{7959}{441}$      $\frac{7899}{401}$      $\frac{8002}{398}$      $\frac{7969}{431}$   
 $\frac{7931}{466}$      $\frac{7947}{453}$      $\frac{7831}{464}$      $\frac{7597}{503}$      $\frac{7824}{566}$   
 $\frac{7944}{440}$      $\frac{7950}{450}$      $\frac{7915}{482}$      $\frac{7862}{538}$

$\frac{7972}{428}$      $\frac{8007}{393}$      $\frac{8002}{395}$      $\frac{7915}{435}$      $\frac{7886}{514}$

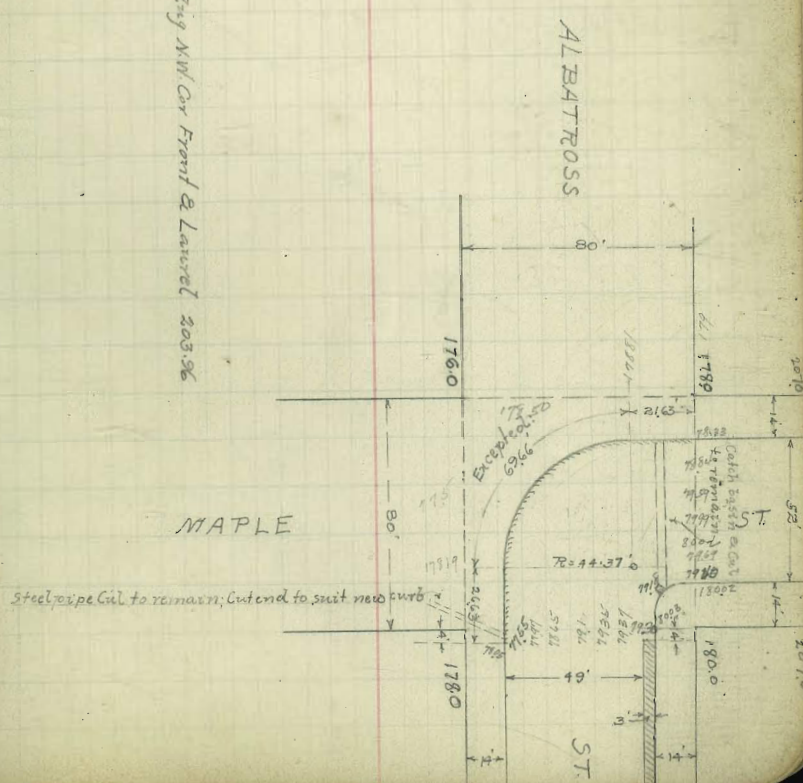
$\frac{7906}{440}$      $\frac{7946}{550}$      $\frac{7814}{584}$      $\frac{7851}{519}$      $\frac{7922}{478}$      $\frac{7941}{459}$

18007

$\frac{7743}{656}$      $\frac{7737}{642}$      $\frac{7754}{603}$      $\frac{7814}{565}$      $\frac{7853}{544}$   
 615 609 583 549 574 591

180.07 nail SE.

F.M. Ring NW Cor Front & Laurel 203.96





168  
1502  
18182  
003  
18025  
231  
18200

7991 7400 750  
1037 906 306  
7462 7174 7930 8143  
046 728 333 128 602

1590  
411  
19401

166  
18024  
072  
17952  
725  
18617

7852 784 7862 7829  
1.12 1.54 1.62 1.97

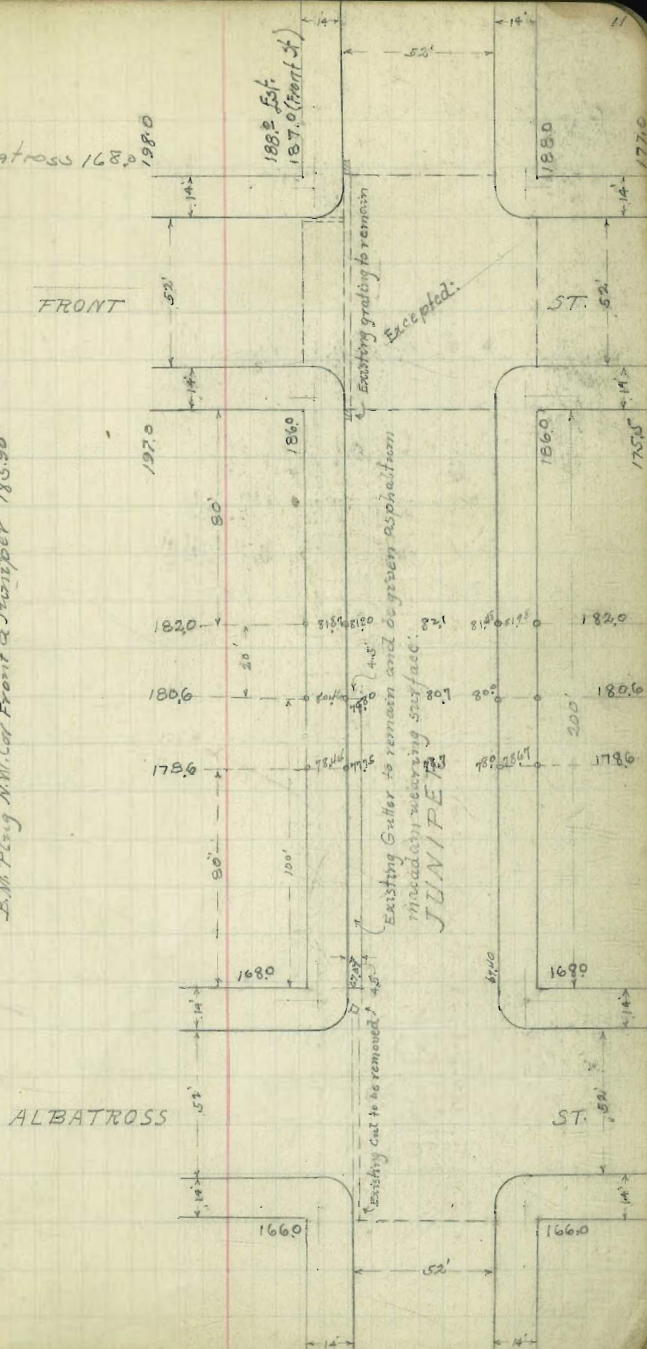
8011 8053 807 8061 8077  
666 624 609 616 650

8150 8173 821 8204 8173  
527 484 467 473 502

8511 8546 856 8547 8509  
166 129 1.17 1.90 1.8

RTX Juniper & Albatross 1680 1980

B.M. Ting N.W. Cor Front & Juniper 18590

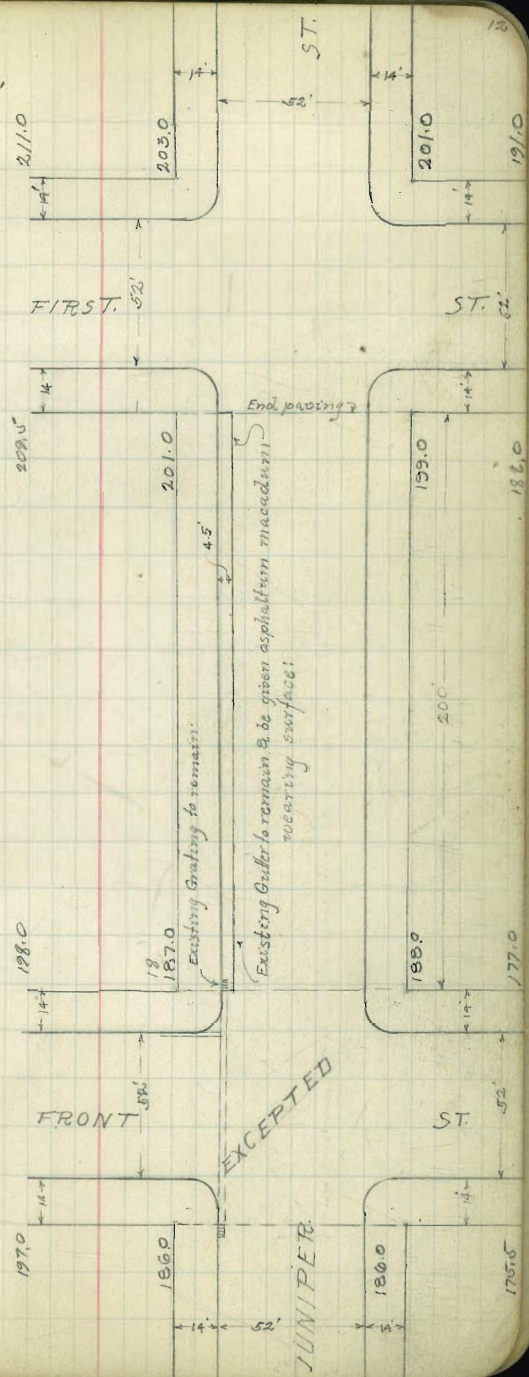




18500  
687  
19277

20090  
116  
20206

B.M. Flying MW. Co. 1st & Juniper 200.90





LA JOLLA

BLVD.

68.5	20'	68.5
66.75	57'	66.75
64.0		64.0
61.75	1.1997 2.1641	61.75
59.5	2.1 2.1	59.5
OLIVETAS ↓		
59.0	3.104	59.0
57.0	5.17	57.0
MARINE		
51.0	60'	51.0

old hub  
x 00  
x 40  
x 80  
x 120

→ To Old hub at Seaside

S.W. rd. out too far  
crack in walk on H.  
lvt. burn. gutters need  
shaping up - moving  
nearer Prop Line

7445 Top Guard 205 H/d. 3E Marine

7445	N	66.50	64.25	62.0	59.75	59.25
762		8.16	4.14	6.39	5.14	9.14
6704		F 0.7	-0.3	+0.3	+0.2	-0.7
135						
6739		16.76	64.25	62.0	59.75	9.14
		2.11	7.14	6.29	5.04	
		0.0	+0.4	+0.4	+0.7	-1.0

7445	68.5	66.75	64.0	61.75	61.75	59.5
7445	2.11	8.17	10.72	13.27	16.18	14.65
						11.11

3/2 stakes 7/5/21  
larger  
17000  
11.11

Order OK 8/8/21 RSM Gregory



RAY ST GRADES

331.54  
4.31  
336.81

333.8

332.5

14

325.22 NE 30° W  
6.32  
332.25  
40.3  
328.27  
6.37  
334.29  
47.5  
338.6  
331.53  
335.77  
329.0

331.24  
4.29  
335.53  
9.77  
331.56  
5.11  
336.67

257.5  
6.75  
68.3  
6.7  
6.5

29.29

2705  
5.88

2860  
6.93

3155  
4.05  
303  
3.77  
3183  
4.06  
316  
3.71  
3128  
3.56  
3152  
3.52

3192  
3.88

3122  
4.65  
316  
4.11  
3110  
4.77  
3084  
5.01

315  
2.07  
3102  
4.34  
3093  
4.77  
3074  
5.13

332.8

300.3

3199

3165

332.0

DWIGHT.

31.24  
2.27  
33.31

2940  
3.91  
2895  
4.36

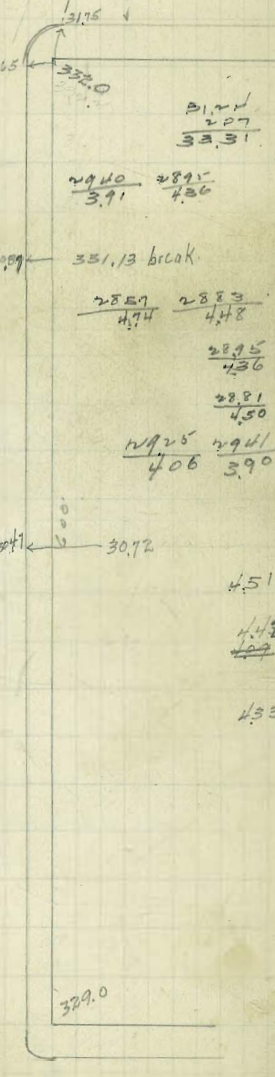
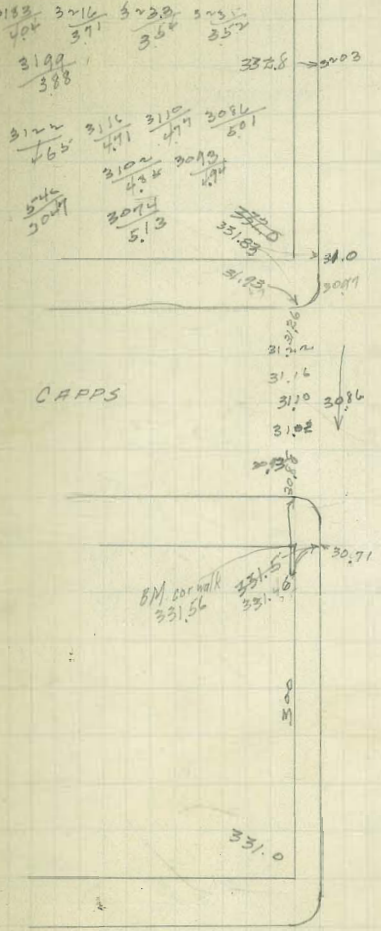
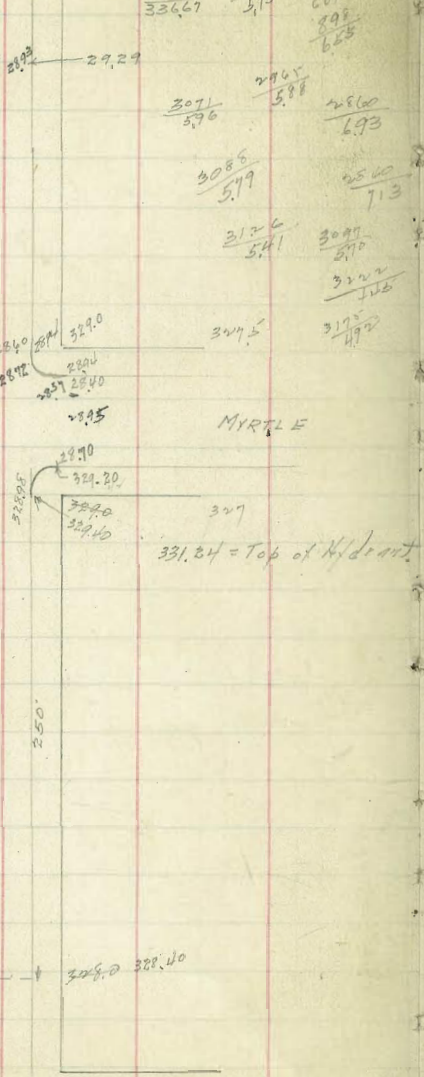
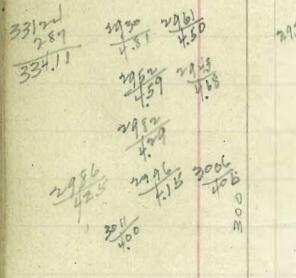
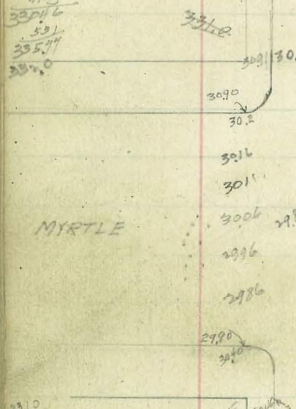
351.13 break

2857  
4.74  
2883  
4.48

2895  
4.36

2881  
4.50

2925  
4.06  
2941  
3.90



331.24 = Top of H/d cart.

BM cor walk  
331.56  
331.26

UPAS

MYRTLE

329.0

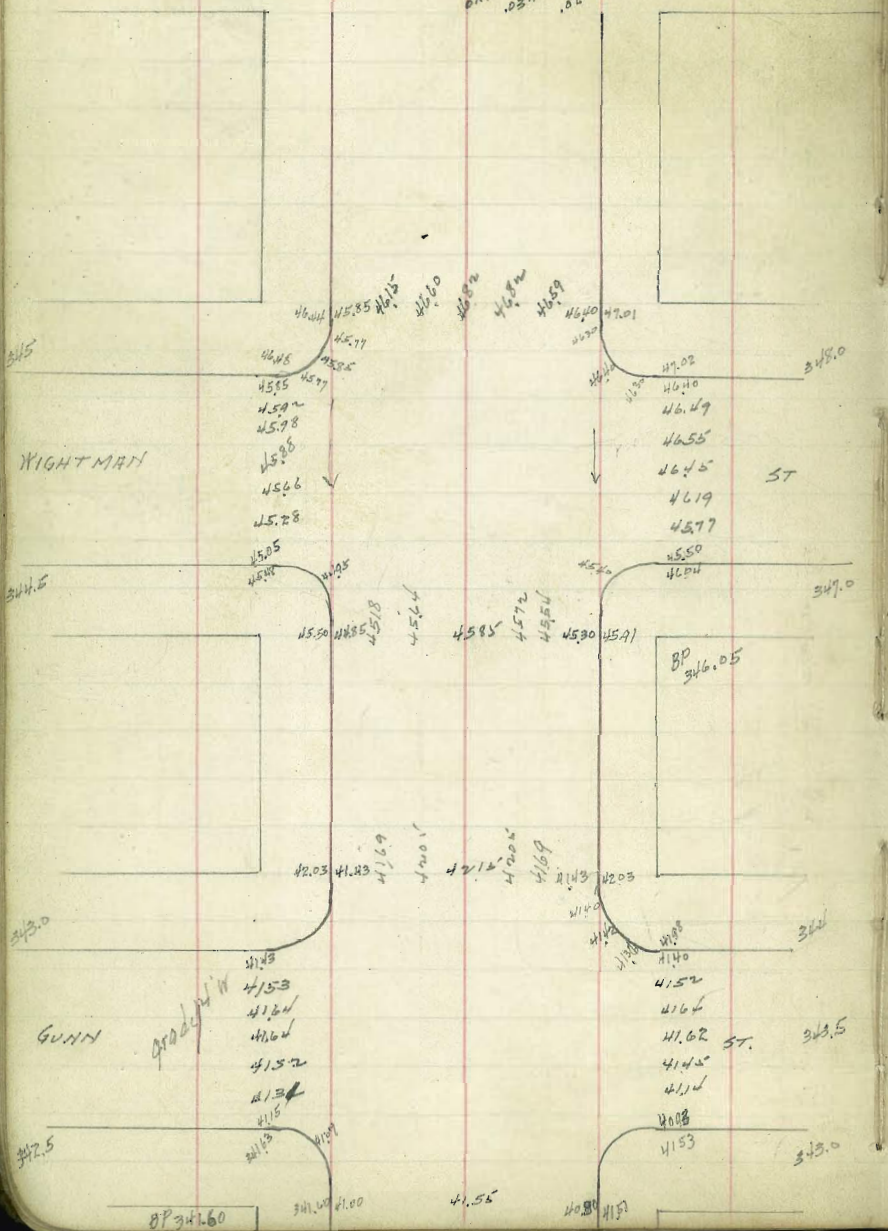


GRANADA AVE.  
PAVING GRADES.

UNIV.

AVE

OK .02 H .02 C



5.21 5.19 4.78 346.05 3.67  
 4.58 4.84 4.50 4.53 4.40  
 341.60 4.15 4.12 4.12 4.12 4.12 4.12  
 4.78 5.23 2.03 4.92 4.19 4.15 4.15

0.125  
 1.0  
 2.0  
 3.0  
 4.0  
 5.0  
 6.0  
 7.0  
 8.0  
 9.0  
 10.0

0.125  
 1.0  
 2.0  
 3.0  
 4.0  
 5.0  
 6.0  
 7.0  
 8.0  
 9.0  
 10.0

341.60 4.12 4.12 4.12 4.12 4.12 4.12  
 4.78 5.23 2.03 4.92 4.19 4.15 4.15  
 346.05 4.59 4.62 4.60 4.61  
 5.81 5.01 4.78 5.00 5.02

44.60 4.16 4.20 4.21 4.21  
 6.14 6.10 5.74 5.66  
 47.79

46.00 4.54 4.57 4.58 4.54 4.51  
 4.00 4.53 4.37 4.24 4.42 4.91  
 50.09

46.00 4.57 4.61 4.65 4.60 4.59 4.58 4.58 4.58 4.58 4.58  
 3.10 3.93 3.51 3.22 3.21 3.78 3.72 4.22 3.52 4.00 4.00

45.00 41.31 4.15 4.16 4.15  
 3.93 3.72 3.60 3.71  
 41.14 4.15 4.16 4.15 4.15  
 4.10 3.99 3.62 3.6 3.72



GUNN  
40.2

ST 40.0

410.5  
414  
416.6  
411.1  
410.5  
408

340.0

LANDIS

357.5

spk 338.13

337

DWIGHT

336.5

BP 335.55

355.3 349.5

36.07  
35.50  
25.58  
35.66  
36.63  
35.50  
35.26  
35.10  
35.10

6.95  
15.45  
6.95  
17.58  
17.58  
17.58  
17.58  
17.58  
17.58  
17.58

36.00  
69.58  
17.58  
35.40  
36.0

37.93  
38.43  
38.40  
38.40  
35.40  
35.50  
35.63  
35.63  
35.51  
35.26  
35.10  
35.66

ST

ST

39.44  
39.50  
38.90  
38.96  
38.97  
38.86  
38.61  
38.24  
38.0  
38.50  
40.0

337  
336.0

$$\begin{array}{r} 388.13 \\ .537 \\ \hline 388.667 \end{array}$$

$$\begin{array}{r} 37.93 \\ 38.43 \\ \hline 38.50 \end{array}$$

$$\begin{array}{r} 355 \\ 40.0 \\ \hline 355.0 \end{array}$$

$$\begin{array}{r} 355 \\ 49.2 \\ \hline 40.47 \end{array}$$

$$\begin{array}{r} 355 \\ 49.2 \\ \hline 40.83 \end{array}$$

$$\begin{array}{r} 341.60 \\ 2.60 \\ \hline 345.20 \end{array}$$

$$\begin{array}{r} 41.2 \\ 4.0 \\ \hline 45.2 \end{array}$$

$$\begin{array}{r} 41.4 \\ 3.8 \\ \hline 45.2 \end{array}$$

$$\begin{array}{r} 41.5 \\ 3.8 \\ \hline 45.3 \end{array}$$

$$\begin{array}{r} 41.4 \\ 3.8 \\ \hline 45.2 \end{array}$$

$$\begin{array}{r} 41.0 \\ 4.0 \\ \hline 45.0 \end{array}$$

$$\begin{array}{r} 390.5 \\ 6.19 \\ \hline 396.69 \end{array}$$

$$\begin{array}{r} 392.0 \\ 6.04 \\ \hline 398.04 \end{array}$$

$$\begin{array}{r} 391.9 \\ 6.05 \\ \hline 397.95 \end{array}$$

$$\begin{array}{r} 390.1 \\ 6.23 \\ \hline 396.33 \end{array}$$

$$\begin{array}{r} 386.1 \\ 6.59 \\ \hline 392.69 \end{array}$$

$$\begin{array}{r} 388.13 \\ 4.93 \\ \hline 393.06 \end{array}$$

$$\begin{array}{r} 38 \\ 4.51 \\ \hline 42.51 \end{array}$$

$$\begin{array}{r} 382.0 \\ 4.31 \\ \hline 42.51 \end{array}$$

$$\begin{array}{r} 379.9 \\ 4.52 \\ \hline 42.42 \end{array}$$

$$\begin{array}{r} 375.8 \\ 4.93 \\ \hline 42.87 \end{array}$$

$$\begin{array}{r} 385.1 \\ 4.00 \\ \hline 42.9 \end{array}$$

$$\begin{array}{r} 382.2 \\ 4.27 \\ \hline 42.9 \end{array}$$

$$\begin{array}{r} 386.1 \\ 3.90 \\ \hline 42.9 \end{array}$$

$$\begin{array}{r} 388.6 \\ 3.66 \\ \hline 42.9 \end{array}$$

$$\begin{array}{r} 389.7 \\ 3.54 \\ \hline 42.9 \end{array}$$

$$\begin{array}{r} 389.6 \\ 3.55 \\ \hline 42.9 \end{array}$$

$$\begin{array}{r} 355.5 \\ 5.01 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 351.5 \\ 5.41 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 354.1 \\ 5.16 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 358.0 \\ 5.04 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 352.6 \\ 5.30 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 355.0 \\ 5.06 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 356.3 \\ 4.93 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 356.3 \\ 4.93 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 359.9 \\ 4.87 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 354.3 \\ 4.63 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 36 \\ 4.66 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 358.9 \\ 4.67 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 356.1 \\ 4.95 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 355.0 \\ 5.06 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 356.3 \\ 4.93 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 355.1 \\ 5.00 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 354.6 \\ 5.00 \\ \hline 40.56 \end{array}$$

$$\begin{array}{r} 32.6 \\ 1.67 \\ \hline 34.27 \end{array}$$

$$\begin{array}{r} 32.4 \\ 1.70 \\ \hline 34.10 \end{array}$$

$$\begin{array}{r} 32.4 \\ 1.70 \\ \hline 34.10 \end{array}$$

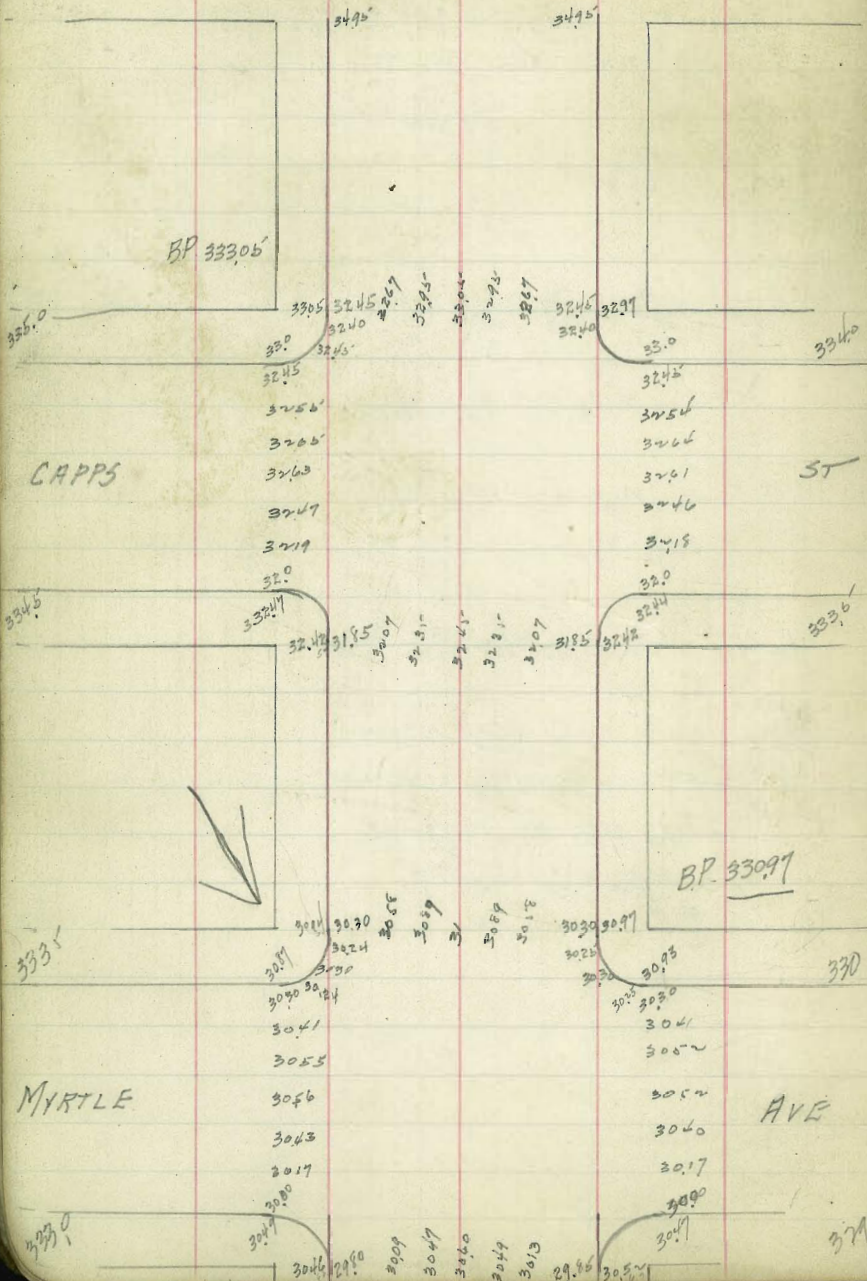
$$\begin{array}{r} 32.4 \\ 1.70 \\ \hline 34.10 \end{array}$$

$$\begin{array}{r} 32.4 \\ 1.70 \\ \hline 34.10 \end{array}$$



DWIGHT

ST.



$200 \frac{3}{4} \times 100 = 237.5$   
 $237.5 \times 2 = 475$   
 $475 \times 1.1 = 522.5$   
 $522.5 \times 1.1 = 574.75$   
 $574.75 \times 1.1 = 627.225$   
 $627.225 \times 1.1 = 689.9475$

33306  
 $\frac{432}{33740}$   
 33097  
 $\frac{476}{33573}$   
 33097  
 $\frac{392}{33792}$   
 33097  
 $\frac{481}{33578}$   
 33097  
 $\frac{512}{33607}$   
 3041  
 $\frac{596}{596}$   
 3058  
 $\frac{579}{579}$   
 3088  
 $\frac{518}{518}$   
 31

3306  
 $\frac{439}{3743}$   
 3041  
 $\frac{445}{493}$   
 3043  
 $\frac{443}{443}$   
 3052  
 $\frac{424}{437}$   
 3049  
 $\frac{426}{430}$   
 3040  
 $\frac{426}{431}$   
 3047  
 $\frac{437}{437}$   
 3041  
 $\frac{445}{445}$   
 3049  
 $\frac{445}{445}$   
 3047  
 $\frac{437}{437}$   
 3049  
 $\frac{447}{447}$   
 3009  
 $\frac{447}{447}$   
 3003  
 $\frac{445}{445}$

Myrtle.



33097  
 $\frac{382}{33486}$   
 3041  
 $\frac{445}{493}$   
 3043  
 $\frac{443}{443}$   
 3052  
 $\frac{424}{430}$   
 3049  
 $\frac{426}{431}$   
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 $\frac{426}{445}$   
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 $\frac{437}{437}$   
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 3049  
 $\frac{447}{447}$   
 3009  
 $\frac{447}{447}$   
 3003  
 $\frac{445}{445}$



Lewis

ST

Grades in Alley  
Blk 5 H/croast

290.79

291.08

291.5

291.7

1/2 concrete  
no top.

00733  
300

01196  
240

286.43

Washington

286.56

Ave

287.50 NW 3rd + Wash.  
294  
277.44

18

E	+ 29.5	+ 80	1+20	1+50	2+00	2+40
	<u>286.91</u>	<u>287.51</u>	<u>287.98</u>	<u>288.33</u>	<u>288.93</u>	<u>289.4</u>
	5.53	4.93	4.46	4.11	3.51	3.04

W	+ 35.0	+ 82.0	1+47.5	2+00	2+40
	<u>286.85</u>	<u>287.42</u>	<u>288.13</u>	<u>288.82</u>	<u>289.5</u>
	5.59	5.02	4.31	3.62	3.14

292.44  
267  
289.77  
5.03  
294.80

E	2+90	3+40	3+95.5	4+40	4+88	5+37
	<u>289.98</u>	<u>290.17</u>	<u>290.60</u>	<u>290.94</u>	<u>291.31</u>	<u>291.68</u>
	5.02	4.63	4.20	3.86	3.47	3.12

W	2+90	3+40	3+88	4+40	4+90	5+40
	<u>289.67</u>	<u>290.03</u>	<u>290.38</u>	<u>290.76</u>	<u>291.13</u>	<u>291.5</u>
	5.13	4.77	4.42	4.04	3.67	3.3

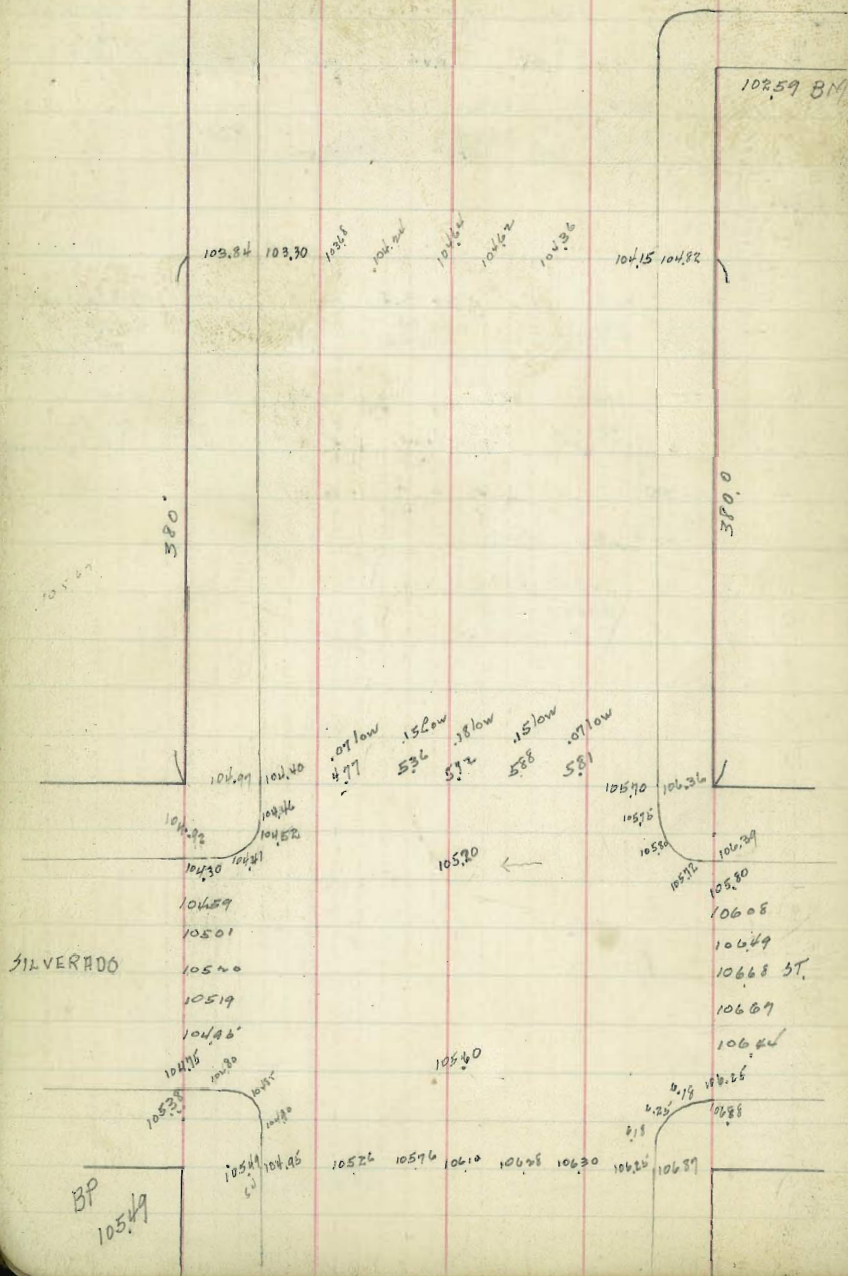
E  
5+75  
291.25  
3.55

W  
6+90  
291.39  
3.21



GIRARD AVE.  
Paving grades

WALL  
ST.



SILVERADO

BP  
105.49

10549  
543  
11092

38  
10687

453  
639  
26

597  
297

10587

10580  
522  
10630  
662

10572  
528

10627  
467

10615  
474

10491  
597

10549  
420  
10967

10549  
341  
10890

10368  
527  
477  
413

10422  
466  
536  
354

10402  
476  
572  
318

10402  
476  
588  
302

10402  
476  
581  
307

10549  
373  
10922

10546  
376

10489  
468

10501  
481

10520  
402

10518  
403

10491  
421

10526  
396

10576  
346

10610  
312

10628  
294

10630  
292

10644  
278

10667  
256

10668  
252

10642  
275

10608  
314

10620  
402

10471  
451

10535  
387

10575  
347

10416  
307

10574  
10436  
138

10462  
112

10464  
110

10424  
156

10368  
204

10549  
409  
10956

477  
479

536  
420

572  
384

588  
368

581  
374

10489  
487

10501  
465

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436

10518  
437

10491  
461

10526  
430

10576  
380

10610  
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10668  
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10520  
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30 2407

← 6.8 low  
17 low  
.12 low  
.55 low  
OK  
low  
OK  
OK

133W

102.3 11.50

11.4

11.56

100.95

100.94

100.93

100.92

100.91

100.90

100.89

100.88

100.87

100.86

100.85

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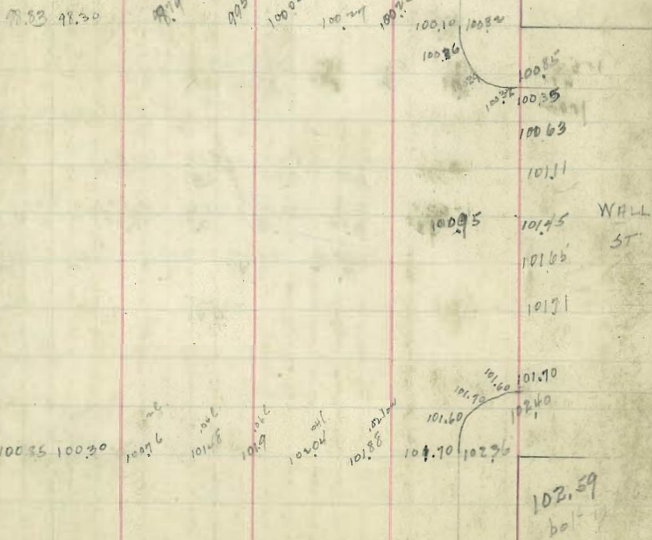
100.96

100.97

100.98

100.99

101.00



70 100  
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101.44  
101.45  
101.46  
101.47  
101.48  
101.49  
101.50



12/10/21

GRADES ON  
ALLOY BLK 203  
UNIV. HIGHTS

LINCOLN

AVE

357.45

357.03

355.74

355.74

354.29

354.29

352.76

352.76

351.23

351.23

BLOCK 349.7

349.7 203

349.9

346.10

345.38

345.00

344.29

344.09

344.36

344.01

343.70

UNIV.

343.76 343.38  
344.00

AVE

346.00  
2.00  
348.00  
0.60  
347.40  
10.50  
357.90  
E

34376  
474  
200

34989  
467  
+04

34346  
454  
00

34405  
472  
+0.1

44277  
423  
-0.9

44471  
379  
-1.1

46078  
327  
00

46  
450  
+0.1

W

+0.5

-0.2

-0.7

-1.7

-1.7

-0.2

+0.1

478  
10.14  
+0.5

496  
8.89  
-0.1

5112  
736  
+0.6

5246  
583  
0.0

5419  
430  
-0.1

5572  
2.77  
+0.2

5742  
2.86

E

W

0.0

-0.3

+0.2

-0.4

-0.4

+0.8

346.00  
5.04  
348.04  
17  
344.87  
10.50  
355.37

34326  
424  
308

34290  
419  
308

34411  
328  
376

34441  
376  
319

34520  
319

34442  
344  
315

34444  
315

34528  
481

366  
2.09

3478  
2.29

3478  
10.07  
344.6

3486  
8.89  
351.3

3513  
734

35066  
581

35419  
426

35572  
4.73



GRADES ON  
HENDRICKS AVE 60' wide  
from S.L. 10<sup>th</sup> St to 250<sup>th</sup> E

H.C.B.

S.C.B.

350	280.0	281.0
300		
250	280.59	281.54
200	280.86	281.81
150	281.14	282.08
100	281.43	282.35
50	281.71	282.62
E.L. 10 <sup>th</sup>	282.0	282.90

282.90  
283.0

284.74  
81.74

282.0 SW 10<sup>th</sup> Univ  

$$\begin{array}{r} 289.71 \\ 6.65 \\ \hline 283.06 \\ 4.19 \\ \hline 287.46 \end{array}$$

282.02  
81.5  

$$\begin{array}{r} 290.17 \\ 7.22 \\ \hline 282.95 \\ 5.13 \\ \hline 288.08 \\ 2.20 \end{array}$$

282.76  
1.89

280.0

281.0 break

$$\begin{array}{r} 282.22 \\ 4.27 \\ \hline 287.62 \end{array}$$

$$\begin{array}{r} 283.72 \\ 1.00 \\ \hline 284.72 \end{array}$$

$$\begin{array}{r} 284.43 \\ 3.19 \\ \hline 288.41 \end{array}$$

$$\begin{array}{r} 283.68 \\ 5.74 \\ \hline 289.92 \\ 4.20 \\ \hline 294.12 \end{array}$$

$$\begin{array}{r} 285.39 \\ 4.73 \\ \hline 290.51 \\ 5.08 \\ \hline 295.71 \end{array}$$

$$\begin{array}{r} 287.11 \\ 4.81 \\ \hline 291.92 \\ 5.24 \\ \hline 297.16 \end{array}$$

282.75  
5.70

$$\begin{array}{r} 282.84 \\ 4.58 \\ \hline 287.42 \\ +0.25 \\ \hline 287.67 \end{array}$$

$$\begin{array}{r} 282.60 \\ 4.85 \\ \hline 287.45 \\ +0.71 \\ \hline 288.16 \end{array}$$

$$\begin{array}{r} 282.33 \\ 5.12 \\ \hline 287.45 \\ +1.00 \\ \hline 288.45 \end{array}$$

$$\begin{array}{r} 281.96 \\ 5.14 \\ \hline 287.10 \\ 5.77 \\ \hline 292.87 \end{array}$$

$$\begin{array}{r} 281.68 \\ 5.77 \\ \hline 287.45 \\ 6.06 \\ \hline 293.51 \end{array}$$

$$\begin{array}{r} 281.30 \\ 6.06 \\ \hline 287.36 \\ 6.04 \\ \hline 293.40 \end{array}$$

360 / 2000 / 555  

$$\begin{array}{r} 2000 \\ 1500 \\ \hline 500 \end{array}$$

540  

$$\begin{array}{r} 282.54 \\ 282.16 \\ 281.77 \end{array}$$

$$\begin{array}{r} 554 \\ 592 \\ 631 \end{array}$$

281.38  
281.00

282

0077.00  
4620

9' - 7.5' - 7.5'

250

HENDRICKS

$$\begin{array}{r} 8155 \\ 653 \\ \hline 8184 \\ 624 \\ \hline 8213 \\ 595 \\ \hline 8272 \\ 566 \\ \hline 8838 \\ 537 \\ \hline 9375 \end{array}$$

$$\begin{array}{r} 282.06 \\ 5.39 \\ \hline 287.45 \\ +2.3 \\ \hline 289.75 \end{array}$$

$$\begin{array}{r} 281.79 \\ 5.66 \\ \hline 287.45 \\ +3.0 \\ \hline 290.45 \end{array}$$

$$\begin{array}{r} 286.11 \\ 6.34 \\ \hline 292.45 \\ +2.4 \\ \hline 294.85 \end{array}$$

$$\begin{array}{r} 280.22 \\ 6.63 \\ \hline 286.85 \\ +2.10 \\ \hline 288.95 \end{array}$$

283.0

$$\begin{array}{r} 282.91 \\ 282.71 \\ 282.42 \\ 282.13 \\ 281.84 \\ 281.56 \end{array}$$

$$\begin{array}{r} 282.0 \\ 282.67 \\ 282.40 \\ 282.07 \\ 281.74 \\ 281.41 \end{array}$$

$$\begin{array}{r} 5.41 \\ 5.68 \\ 6.01 \\ 6.34 \\ 6.67 \end{array}$$



1/20 v. Gregory

GRADES FOR PAVING 31st St Thorn to Myrtle

see page 41 for  
Dwight St Int.

327	327.5	27.30	27.26	27.1	327.0	326
	27.1	27.3	27.4	27.5	27.6	
	27.1	27.15	27.2	27.25	27.3	
	27.1	27.15	27.2	27.25	27.3	
	27.1	27.15	27.2	27.25	27.3	
	27.1	27.15	27.2	27.25	27.3	
	27.1	27.15	27.2	27.25	27.3	
	27.1	27.15	27.2	27.25	27.3	
	27.1	27.15	27.2	27.25	27.3	
	27.1	27.15	27.2	27.25	27.3	

326.5	327.0	27.35	27.4	27.45	27.5	326.5
27.5	27.5	27.5	27.5	27.5	27.5	
27.5	27.5	27.5	27.5	27.5	27.5	
27.5	27.5	27.5	27.5	27.5	27.5	
27.5	27.5	27.5	27.5	27.5	27.5	
27.5	27.5	27.5	27.5	27.5	27.5	
27.5	27.5	27.5	27.5	27.5	27.5	
27.5	27.5	27.5	27.5	27.5	27.5	
27.5	27.5	27.5	27.5	27.5	27.5	
27.5	27.5	27.5	27.5	27.5	27.5	

Upas

3/20

51

330.90 BP SE Thorn & Grind

330.01 2pk NW Upas 23

334.01

E	5.0	4.3	4.1	4.3	5.7	6.9
W	329.0	329.7	329.9	329.7	328.8	327.1
	4.0	3.6	3.3	3.2	3.0	2.8
	300	304	307	308	310	311

330.01	327	27.33	27.66	28.2	28.38	28.66	29
334.01	27.4	27.9	28.4	28.9	29.4	29.9	30.4
	27.5	27.9	28.3	28.7	29.1	29.5	29.9
	27.5	27.9	28.3	28.7	29.1	29.5	29.9
	27.5	27.9	28.3	28.7	29.1	29.5	29.9
	27.5	27.9	28.3	28.7	29.1	29.5	29.9
	27.5	27.9	28.3	28.7	29.1	29.5	29.9
	27.5	27.9	28.3	28.7	29.1	29.5	29.9
	27.5	27.9	28.3	28.7	29.1	29.5	29.9
	27.5	27.9	28.3	28.7	29.1	29.5	29.9

328.77 Top Hydrant Myrtle

333.14	26.40	26.9	27.17	27.6	27.10	26.70	26.49	26.66
	6.74	6.19	6.00	5.5	5.07	5.47	5.68	5.51
	26.4	26.9	27.4	27.9	28.4	28.9	29.4	29.9
	26.4	26.9	27.4	27.9	28.4	28.9	29.4	29.9
	26.4	26.9	27.4	27.9	28.4	28.9	29.4	29.9
	26.4	26.9	27.4	27.9	28.4	28.9	29.4	29.9
	26.4	26.9	27.4	27.9	28.4	28.9	29.4	29.9
	26.4	26.9	27.4	27.9	28.4	28.9	29.4	29.9
	26.4	26.9	27.4	27.9	28.4	28.9	29.4	29.9
	26.4	26.9	27.4	27.9	28.4	28.9	29.4	29.9

328.77

331.55



-0.1 324.9  
 Ticks 10  
 329.0  
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 329 710  
 321.5  
 -0.2

-0.1 324.6  
 -0.3 328.2  
 -0.500 327.58  
 326.78  
 325.41  
 325.08  
 324.76  
 323.42  
 322.58  
 321.75  
 320.96  
 320.08  
 319.25  
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 2840  
 2879  
 2845  
 329.0  
 328.50  
 321.0 +0.1  
 500 327.95 +0.5  
 327.0 +1.1  
 326.41 +1.4  
 325.6 +1.1  
 324.76 +1.1  
 324 +1.6  
 323.25 +1.4  
 322.50 +1.4  
 321.76 +1.7  
 321.0 +1.7  
 320.0 +1.7

318.5  
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 18.05  
 18.33  
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 1883  
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 1952  
 1976  
 1890  
 1945

320.90  
 8.67  
 329.57

W 1032 9.49 8.66 7.82 7.00 6.15 5.32 4.5 3.66 2.8  
 E 8.54 7.82 7.01 6.32 5.5 4.72 4.1 3.3 2.6 1.8  
 191  
 327.66  
 330.01

33001  
 4.57  
 332.58  
 329 355  
 329 358  
 2845 428  
 2750 508  
 2645 583  
 26 658  
 27921 441  
 27211 524  
 2650 608  
 2566 692

340.90 318.5 1973 2000 2150 2233 2317 240 2473 2567  
 770 10.20 8.71 8.04 7.20 6.37 5.53 4.70 3.87 3.03  
 328.70  
 20 20.75 21.50 2225 23 2375 245 2525 2600  
 8.7 7.75 7.20 6.75 5.70 4.95 4.20 3.45 2.70

3400 319  
 32313  
 32306  
 318.98 515  
 324.6  
 33001 313  
 333.44  
 2845 4.69  
 328.99 NW Vpas + 31st

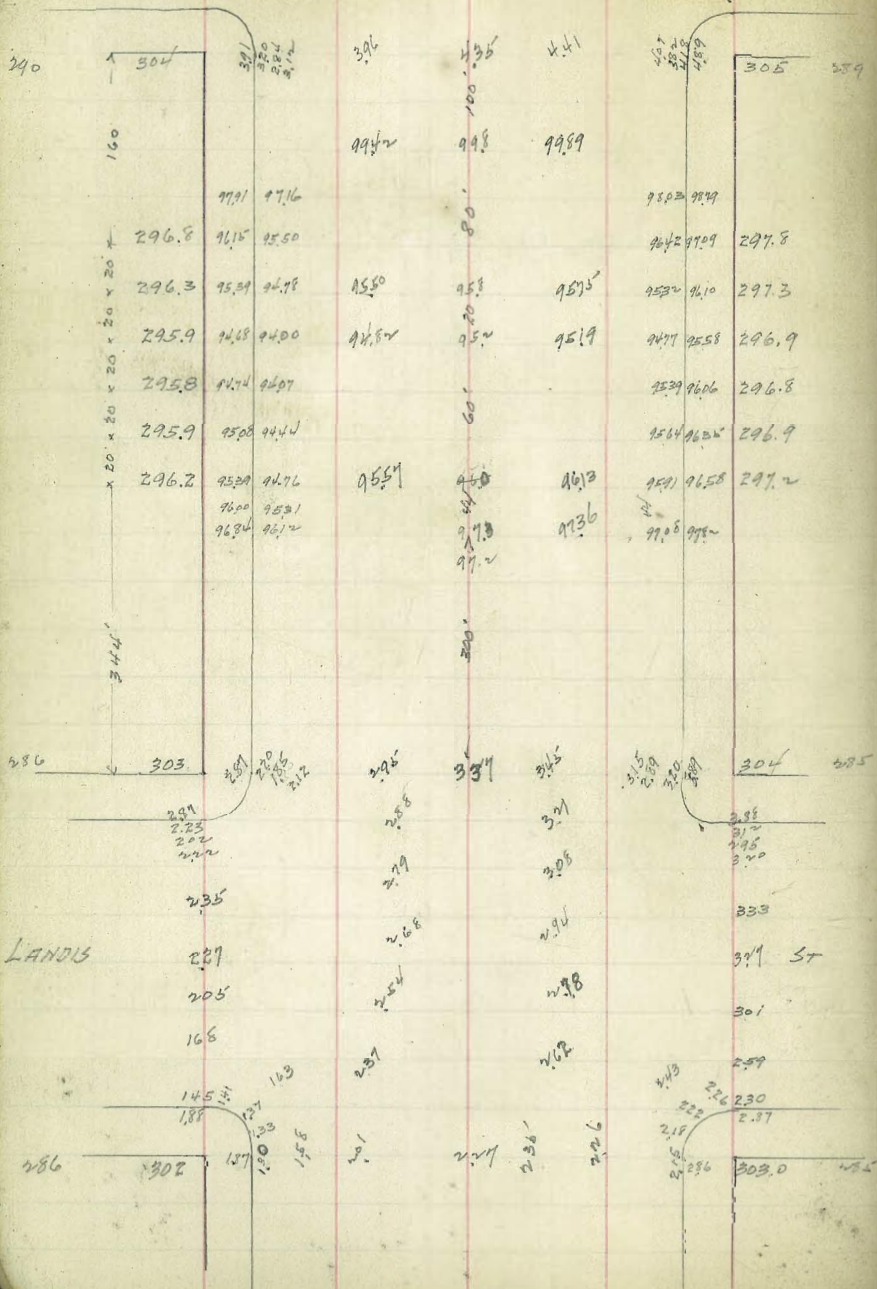
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 4.56 1849 1873 1875 1887 1817  
 313.54 5.35 5.11 5.09 5.27 5.69  
 1833 7274 1898 1904 1893  
 5.51 5.10 4.86 4.80 4.90  
 1916 1923 1970 1968 1948  
 4.63 4.32 4.14 4.16 4.36  
 1944 1985 1904  
 4.20 4.49 4.30  
 1930 1920 1922 1904 1840  
 5.04 4.64 4.20 4.80 5.44  
 328.49 2879 28.90 2845  
 3.17 337 3.26 3.71  
 332.16

11000 233  
 23 129.75  
 24









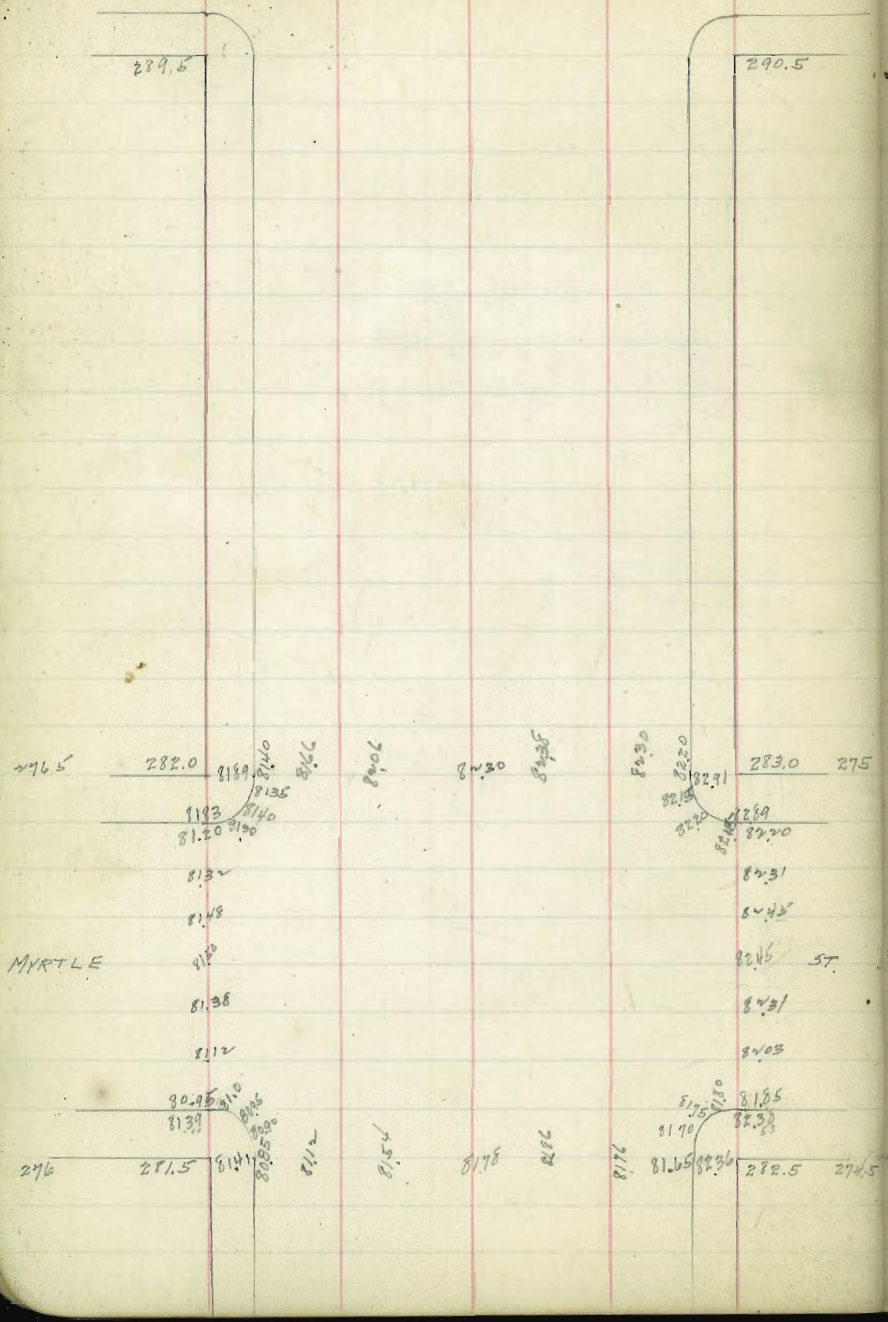
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 99.47  
 97.91  
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 296.3  
 295.9  
 295.8  
 295.9  
 296.2  
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 399  
 400

302.87  
 3.61  
 306.48  
  
 322.87    304.76    302.87    340    302.87  
           0.16        372      30319      448  
           304.92      306.59      222      309.36  
   .92      7  
  
 305.76    96.976    952    982    998  
   1036    906    596  
  
 30476    998    435  
 150      686      191  
 30626  
  
 302.87    222    302.87    508    302.87  
 306.15      359      360      388      414    158  
   4.87  
  
 304.87    226    235    227    333    327    301    259  
 552      6.11    6.02    6.10    5.04    5.70    5.36    5.78  
 308.37      342      337      296      235      227      205    168  
   4.92      3.00    5.42      6.02    6.10    6.32    6.69  
  
 213    163  
 594    674  
  
 543    569    237    251    265    279    288  
 2944    468    600    553    569    558    549  
  
 321    305    275    262  
 516    529    559    575  
  
 302.87    222    212    213    260  
 189      95.57    746    960  
 304.80      273      861    786  
  
 1612 T.P.  
 276  
 302.87  
  
 9519    9575    9550  
 1020    10.14    1039  
  
 9289    998    994  
 600      609      647  
  
 1070    9482    952  
 1039    10.82    10.13  
 1008    10.57    10.17  
 872  
  
 441    436    396  
 178    154    193









$$\begin{array}{r} 282.38 \\ 4.81 \\ \hline 287.19 \end{array}$$

$$\begin{array}{r} 282.35 \\ 4.73 \\ \hline 287.08 \end{array}$$

$$\begin{array}{r} 282.38 \\ 4.51 \\ \hline 286.87 \end{array}$$

$$550$$

$$\begin{array}{r} 8573 \\ 4.15 \\ \hline 8579 \end{array}$$

$$\begin{array}{r} 8230 \\ 3.63 \\ \hline 8234 \end{array}$$

$$\begin{array}{r} 8230 \\ 4.89 \\ \hline 8235 \end{array}$$

$$\begin{array}{r} 8230 \\ 4.89 \\ \hline 8235 \end{array}$$

$$\begin{array}{r} 8206 \\ 5.13 \\ \hline 8211 \end{array}$$

$$\begin{array}{r} 8166 \\ 5.53 \\ \hline 8171 \end{array}$$

$$\begin{array}{r} 8176 \\ 4.75 \\ \hline 8181 \end{array}$$

$$\begin{array}{r} 8186 \\ 4.65 \\ \hline 8191 \end{array}$$

$$\begin{array}{r} 8178 \\ 4.73 \\ \hline 8183 \end{array}$$

$$\begin{array}{r} 8154 \\ 4.97 \\ \hline 8159 \end{array}$$

$$\begin{array}{r} 8112 \\ 5.39 \\ \hline 8117 \end{array}$$

$$\begin{array}{r} 8203 \\ 4.66 \\ \hline 8208 \end{array}$$

$$\begin{array}{r} 8201 \\ 4.58 \\ \hline 8206 \end{array}$$

$$\begin{array}{r} 8245 \\ 4.44 \\ \hline 8250 \end{array}$$

$$\begin{array}{r} 8231 \\ 4.58 \\ \hline 8236 \end{array}$$

$$\begin{array}{r} 8172 \\ 4.68 \\ \hline 8177 \end{array}$$

$$\begin{array}{r} 8138 \\ 4.22 \\ \hline 8143 \end{array}$$

$$\begin{array}{r} 8150 \\ 4.30 \\ \hline 8155 \end{array}$$

$$\begin{array}{r} 8165 \\ 4.32 \\ \hline 8170 \end{array}$$

$$\begin{array}{r} 8132 \\ 4.58 \\ \hline 8137 \end{array}$$



Myrtle

281.5

8178

282.6

ST

8129

8070

180.0

799.2

79.5

79.6

4008

8032

17.0

78.2

8020

8074

281.0

BALBOA

PARK

8629 6.94 8020  
6.09

8593 8076 8032 8129  
517 5.60 466

8442 8041 8033 8007 7964  
4.71 4.09 3.85 4.76

340.00	337.76
370	
<u>349.70</u>	338.00
443	
336.09	339.47
	1.20
	<u>357.31</u>
	1.20
	<u>358.51</u>
	35.07
	39.01
	3830
	567
	<u>38.23</u>

2.30	32.13	53
<u>330.01</u>	38.20	

3775

2.48

349.83

2.66

38.40

42.29

10.77

341.74



Paving Grades  
St James Place.

3" Asph. Conc Base  
1/2" Top.

268.28 SW Hamden St.  
277.45

275.49 Top of Hyd SE Sunset.

275.49  
2.46  
273.03

200ft 1200 7336 7255  
570 515 1179 560

348  
275.49  
273.01  
2.48  
270.53  
6.07  
276.60

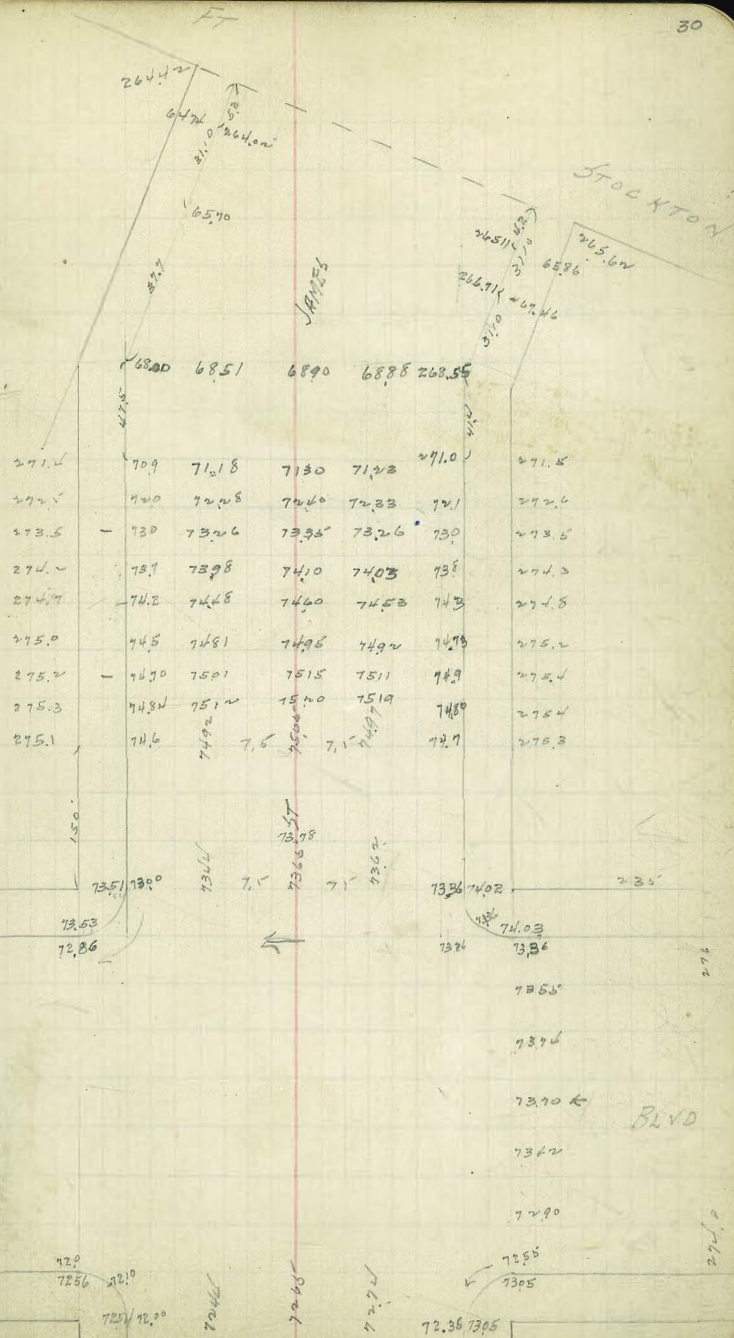
746 437	745.4 413	747 420	745 417	742 417	737 427	73 497	720 697	709 807
6801 248	659 1076	6647 975	6855 791	710 446	73 346	721 136		
728 366	743 416	7473 173	749 156	748 166	176 366198			

275.49  
32  
278.81  
723  
271.18  
65  
276.73

726 537	736 516	736 516	742 389	750 376	747 384
751 364	7520 361	7519 362	7451 400	386	339
6851 321	6890 282	6886 284			
6486 688		6530 673			

275.49  
0.46  
275.94

277.4  
3.00



SUNSET

BLVD

276.0

276.0



27549  
0.74  
276.23

H.S. 27549

7044  
579

7022  
591

7095  
496

6920  
310  
7732

682  
6720

6934  
298  
7006  
236

6888  
344  
7051  
181

6848  
384  
6982  
250

7003  
239  
7011  
217

6994  
238  
6955  
277

6997  
235

6998  
234

6977  
255

7065  
167

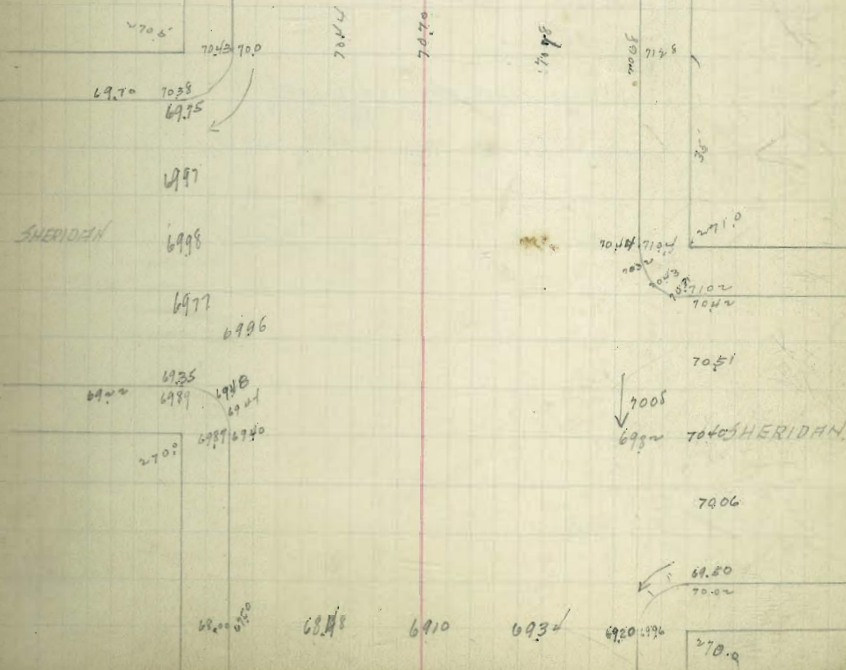
SUNSET

BLVD

31

JAMES

ST





JANES

751.10  
9.04  
754.14

5045  
3.67

5043  
3.71

5700  
6.00  
58.02

5751 3.59  
5.51

5048  
5.81

5130  
4.84  
435  
10.79  
5211  
5.91

4500  
0.69  
45.71

5145  
1.26  
5140  
1.31  
5108  
1.23

1036  
4.33  
1063  
4.20  
1143  
4.28  
826  
4.45

4222  
10.49  
4456  
8.15  
4505  
7.66  
11h

4184  
10.87  
4440  
8.31  
4540  
7.31  
1.2h

4214  
10.57  
44  
8.11  
4546  
9.25  
4.2h

4228  
10.63

4310  
9.61  
5097  
1.74

4361  
9.10  
4130  
1.51

4400  
8.71  
5141  
1.30

4433  
8.38  
5097  
1.74

4454  
8.14  
5159  
1.12  
5194  
0.94  
5195  
0.73

5309 5230 5251 5241 5211 5150  
5100 5050 5120 5120

5198 5197 5159 5097 5130 LYNDON  
5097

BP-NS200

5202 5120 5141 5140 5108 5045 5104  
5066 5043 5101 5000

ST

4699 4520  
4509 4496  
4500 4483  
4488 4488  
4488 4488  
4454  
102  
4432  
101  
4400  
105  
4361  
85  
4310  
107  
4274 4235 4208  
4208 4214 4184  
4160 4120  
4130

4163 = 2.5 Nox Hand ex 46



B.M. N.W. Sunset + Stockton 262.48  
B.M. S.E. Lewis 265.44

~~262.48~~ 265.44  
266.58

$\frac{6290}{368} \quad \frac{6447}{217} \quad 234$

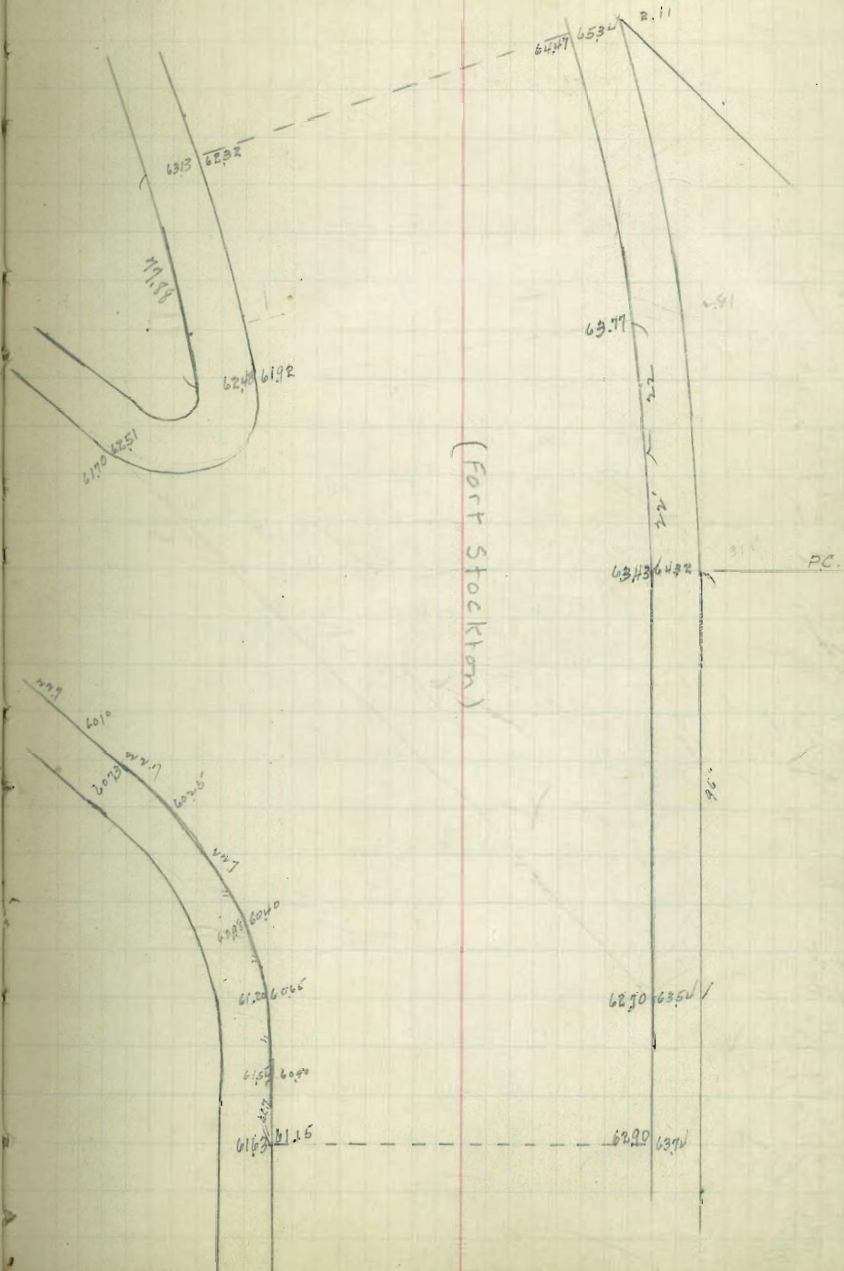
$\frac{6232}{426} \quad 439 \quad 452 \quad 466$

45991  
6.56  
266.47

$\frac{6090}{567}$	5.64	$\frac{6065}{582}$	$\frac{6042}{607}$	$\frac{6022}{622}$	$\frac{6010}{637}$	$\frac{5995}{652}$
--------------------	------	--------------------	--------------------	--------------------	--------------------	--------------------

$\frac{26504}{210}$   
267.14

ct.  
B.M. 25991  
2652.5995





76647

6010

6188  
59

79

51320

7650d BM SW Sheridan + Sunset  
1246  
277.50

57.95  
9.14

375

7650d  
129  
766.33

5966	5620	5725	5751	58	709	526	6170
678	943	908	882	833			463
5979	5770	5630	5515	5585	4620	275	5926
654	863	1003	1058	1048	1013	763	638

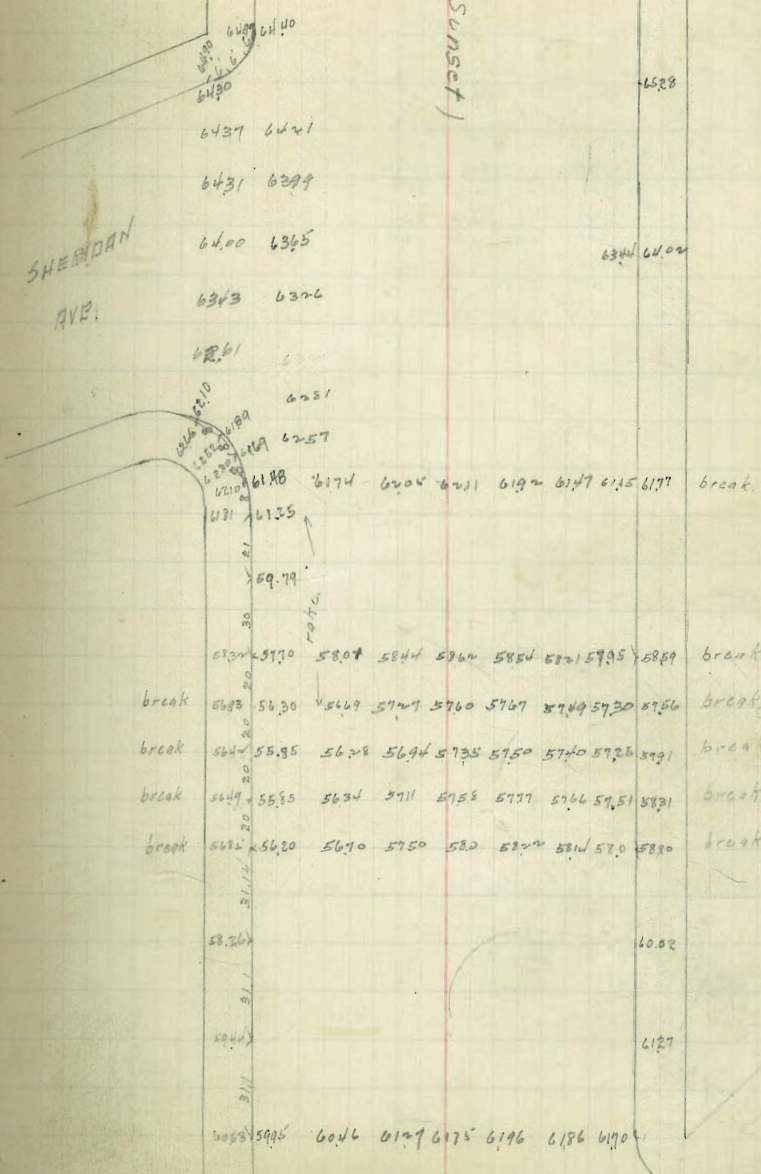
765.0d  
166  
766.69

6346	64	6421	6437				
326	209	238	232				
5740	5750	5725	5694	5625			
929	919	934	975	1011			
5669	5747	5760	5767	5749			
1000	944	909	902	920			
5801	5844	5862	5852	5821			
868	822	807	812	848			
6174	6205	6211	6192	6167			
495	464	458	477	522			
6257	6281	6326	6365	6399	6421		
412	388	343	304	270	248		
606	6127	6175	6186	6150			
634	573	495	474	484			
	5670	5750	5822	5814			
	1000	920	870	856			
	5634	5711	5758	5777	5766		
	1026	981	914	893	904		

759A1  
679  
766.70

SHERIDAN  
AVE.

(Sunset)



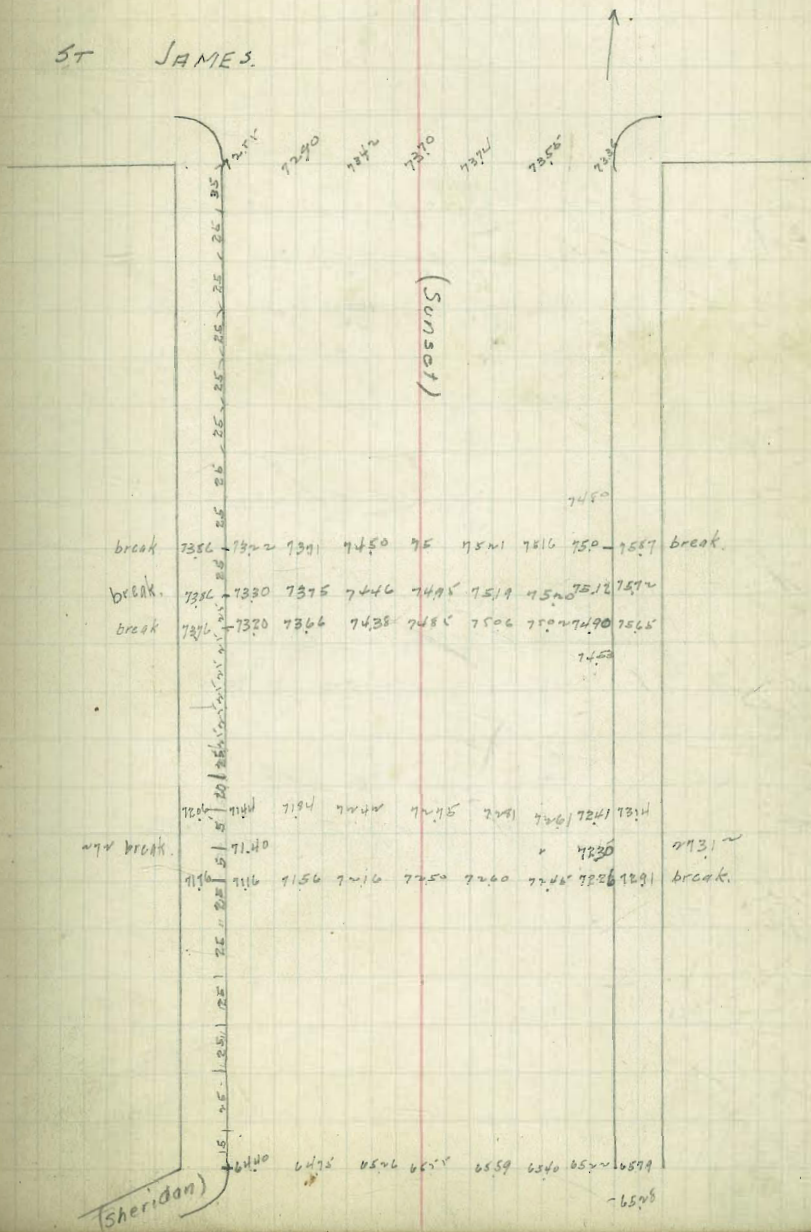


W 77750

76500 1200 577.86	6540 1206	6554 1187	6558 1191	6526 1220	6473 1271
7248 591	7260 486	7255 496	7216 530	7156 590	
7184 624	7222 594	7225 471	7281 462	7206 458	
7366 580	7438 308	7485 261	7506 240	7502 244	
7376 371	7446 300	7491 251	7519 227	7520 226	
7374 375	7450 296	7500 246	7521 225	7516 220	
7290	7342	7370 427	7374 412	7358 412	
7549 450 66.64	7220 509	7342 457			

66669

ST JAMES.









268.44 BP NW. 55. + Arguello

1.84  
270.28

6410 6680 6475 6375 6560  
6.18 3.48 5.50 6.53 4.0 5.67 4.82

6270  
8.09

268.28  
1.07  
269.25

6263 6329 6370 6387 6379  
7.32 6.66 6.25 6.08 6.16

268.44  
1.99  
269.43

6777 6827 6842 6836 6806  
1.66 1.21 1.01 1.07 1.33  
6412 6406 6369 6309 6215 6137  
5.31 5.38 5.74 6.34 7.28 8.11  
6387 6320  
5.56 5.93  
6597 6598 6575 6546 6489  
3.46 3.45 3.68 3.97 4.00

6393 6419 6420 6406 6366  
5.50 5.24 5.03 5.37 5.77

6332 6351 6341 6326 6278  
6.26

6328 6358 6303 6288 6217  
6.15 6.55 7.26

6336 6354 6332 6302 6228  
6.07 5.92 6.10 6.41 7.15

278.16

ARDEN

LOMA

(Sunset)

6750 ARGUELLO

6805 6745 6777 6822 6812 6836 6825 6770  
6745 6630  
6774 6624  
6598 6513  
6475 6410  
6412 6402  
6327 6309  
6215 6137  
6180 6120 6098  
6041 6072  
6033 6102  
6289 6250

6262 6329 6370 6387 6379

6345 6391 6463 6510 6531 6527 6515

6476 6473 6549 66 6625 6624 6614

6504 6552 6625 6650 6700 6705 6699

6644 6585

6780 6845  
6770 66745  
6795

6595 6058

6584 6651  
20 6585  
20

6370 6421  
5 6373

6379 6373  
3 6377

6375 6437  
6474

6513 6563  
6588

6570

ARDEN

6610  
6603  
6600



26844  
11.67  
280.11

8016

7350  
661

7680  
831

7750  
64

16.1  
78.46

60  
500.6650  
60  
20  
281.63

0133  
10

28290  
290  
28380

2823  
1.6

28396

28170  
2.26

8051  
341

8117  
2.84

8040  
3.66

8064  
3.32

8080  
3.46

8101  
2.91

8010  
3.50

8117  
2.74

8120  
2.36

8170  
2.20

8120  
2.66

8080  
3.10

26844  
942  
278.16

7391  
4.75

7456  
3.60

75  
3.16

75.22  
2.94

75.21  
2.95

7539  
2.27

7652  
1.64

7600  
1.26

7704  
1.12

7694  
1.22

7639  
5.39

7675  
5.03

7691  
4.87

7689  
4.89

7816  
3.60

7870  
3.08

7867  
3.11

7844  
3.34

28290  
280  
28576

8200  
3.71

8107  
4.04

8092  
3.83

8124  
4.52

8137  
4.39

8151  
4.25

8177  
3.99

8185  
3.91

8192  
3.78

8192  
3.34

8219  
3.67

8228  
3.48

8189  
3.89

8211  
3.59

8206  
3.50

8194  
3.44

8111  
3.83

8067  
3.89

8116  
3.60

8146  
3.10

8151  
3.93

8201  
3.68

8215  
3.58

8063  
5.13

7994  
4.62

8106  
4.70

8100  
4.76

8095  
5.01

8511

7911  
6.26

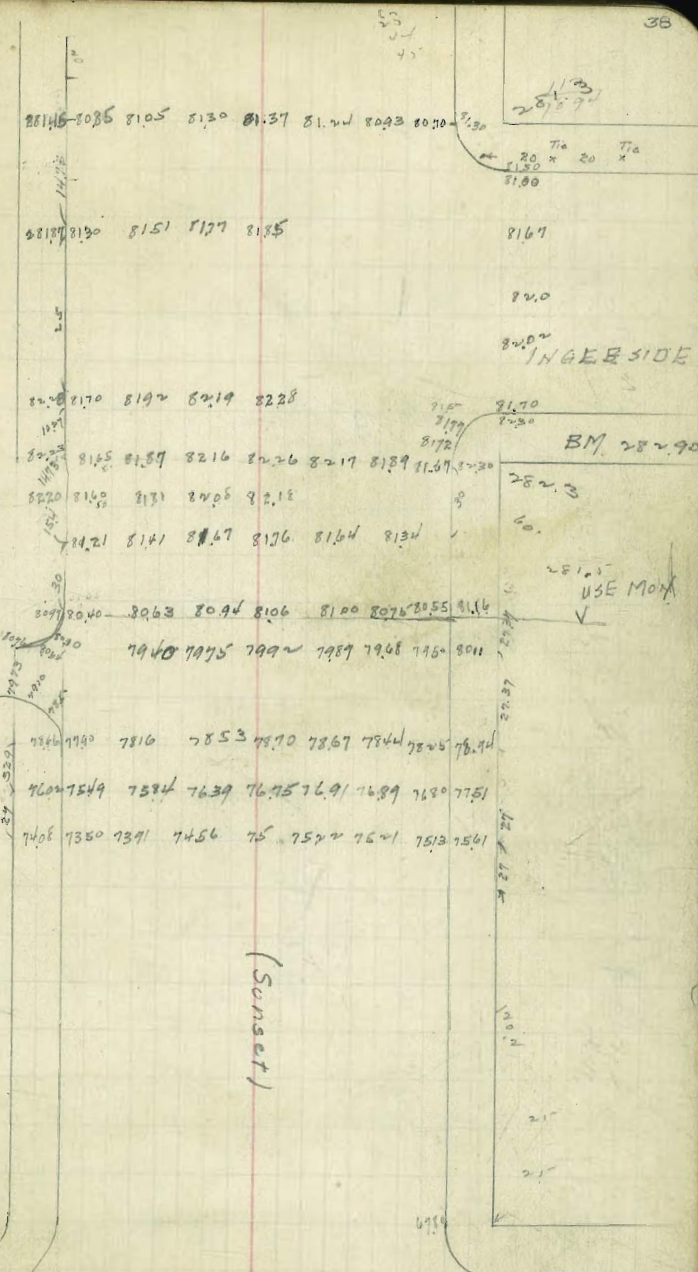
7940  
6.31

7975  
5.90

7992  
5.77

7997  
5.32

7968  
5.03



(SUNSET)

(Ardeny way)







Grades on I St  
30th St. to a point 432 ft

FL 30th	115.0	116.0	N
+50	109.81	111.0	
1	104.63	106.0	
+50	99.45	101.0	
+92.6 = Angles	94.44	96.74	
2	94.29	96.0	
break +40	90.0	92.0	
+60	89.25	90.5	
+62.6 = Angles	89.12	90.34	
break +80	88.25	89.25	
3	87.5	88.5	
+20	87.0	88.0	
+50	86.53	87.49	
4	85.74	86.64	
31.600 N +32.015	85.22	86.10	

changed to these grades R.M. too much fall or otherwise

01695  
1201  
33700  
1695  
203400

10367  
229360  
10367  
74  
41468  
72839  
76858

30th



01377  
360  
3220  
1131  
495720  
795  
8226

01377  
360  
3304  
3360

01377  
170  
46390  
1377  
234090

113.83 B.P. SW 30th + I

363	117.46	13.0	104.25	99.25	95.0	95.1	89.37	87.25
13.0	104.25	104.25	1.9	6.9	1.1	2.45	8.1	10.2
104.25	17.2	17.2	-4.8	-5.1		-33	-3.1	-1.9
106.14	12	6.3	101.25	96.25	92.25	89.50	88.25	
106.14	116.3	111.2	102.2	4.9	9.9	5.2	8.0	9.2
97.48	0.0	111.2	-4.0	-3.0	-0.1	+1.4	+2.9	+2.2
86.75	85.99	85.47						
16.7	11.5	12.0						
-2.1	-1.1	+0.4						
87.74	86.89	86.35						
9.72	10.6	11.2						
+1.7	8.5	9.7						
	7.8	2.2						

113.83  
214  
116.14

114  
214  
114  
61

104.63  
1151  
106  
1014

109.81  
633  
11  
514

(116.14  
1290  
1032.4  
109  
104.33)

89.45  
488  
101  
333

88.5  
928  
96  
8.33

104.58  
1235  
91.88  
92.90

88.5  
89.25  
2.40  
3.65

Tried to put in finish 120' w/ broyer  
Muller  
Shaw



4/25/22

Gregory  
maoro  
myler  
Shaw.

Grades in Alley  
Bik 3 Nutts  
445 - Univ + Robn

3.2 Univ Ave.	288.88	288.97
45'	290.25	290.25
50	290.15	
76	290.05	
1	289.96	
+21'	289.86	
1+50	289.76	
+75	289.66	
	289.56	
	289.47	
+50	289.37	
+75	289.27	
3	289.17	
216		
3+25 +3000E	289.08	
3+50	288.98	
3+75	288.88	
4+00	288.79	
416.53 = NL Robn.	288.73	288.72

= 00587

289.94 R.P. NW. 5+6 + Univ.

289.94	
4.54	
294.48	
5.20	
289.28	
4.54	
293.82	
4.16	
289.66	
8.90	
94.56	
290.21	
4.23	
+ 1.0	
290.21	
4.23	
+ 1.0	

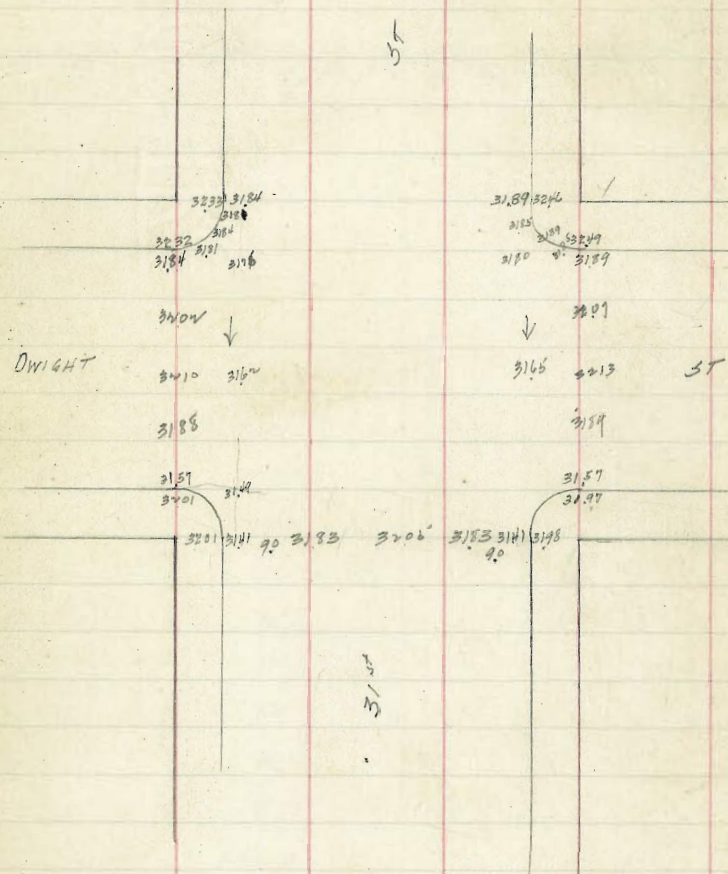
290.21	8926	8956	8976	8966	8956	8947	8937	8927	8917	8908	28898	28895	28895	28879
4.23	380	376	406	416	426	437	445	455	465	474	484	494	503	
+ 1.0														

9015	9045
4.41	4.51
+ 1.0	



Paving Grades DWIGHT + 31<sup>st</sup>  
continued from page 23



334.40  
146  
336.36  
337.52 BR. NE 31<sup>st</sup> - Dwight St

336.36     $\frac{3184}{4.52}$      $\frac{3159}{4.79}$      $\frac{3141}{4.95}$

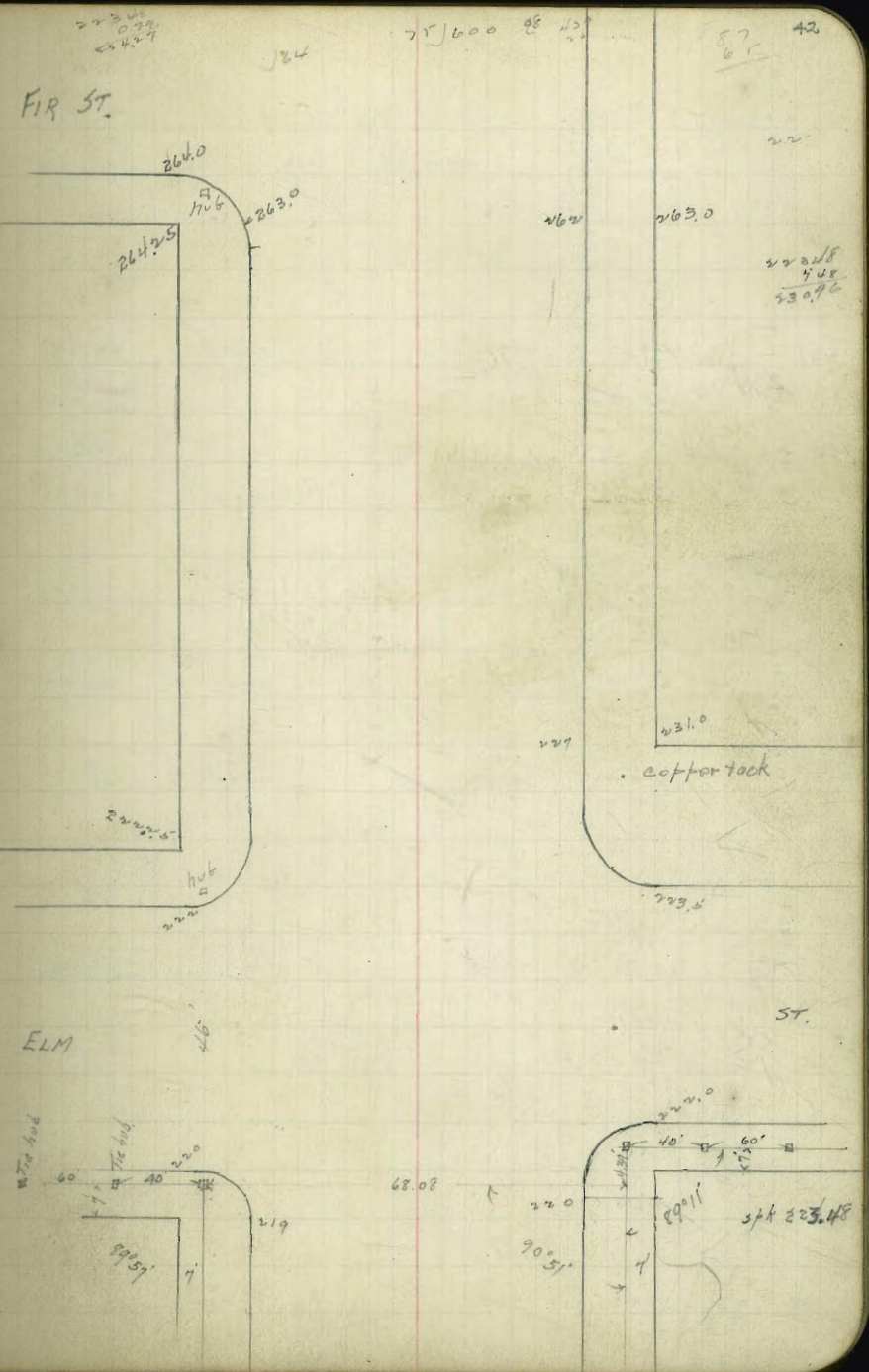
337.52  
421  
336.73     $\frac{3176}{4.97}$      $\frac{3202}{4.71}$      $\frac{3210}{4.63}$      $\frac{3188}{4.85}$      $\frac{3162}{5.11}$      $\frac{3149}{5.24}$

$\frac{3193}{4.90}$      $\frac{3205}{4.68}$      $\frac{3183}{4.90}$      $\frac{3182}{4.84}$      $\frac{3212}{4.60}$      $\frac{3207}{4.66}$      $\frac{3161}{5.05}$      $\frac{3182}{4.92}$



32nd ST GRADES

	Prop	Curb	Prop	Curb
274.9 = 54 Fir	264.25	263.0	263.0	622
264.9	262.07			
250 N	241.83	243	260.67	608.6
200 N	257.0	237	256.0	566
170	253.17			
150 N	250.62	241	250.0	518
125	244.84		247.0	460
100 N	244.25	241	244.0	410
50 N	235.38	249	235.5	376
N.L. Elm on E	227.50	227	227.0	231.0
N.E. on W	222.75	222	222.75	231.0
1				
N.C. on W	222.0			
S. C. on E	222.0			
S.L. on E	222.75			
End of grading on N	219.50		219.0	2150





27696  
392  
28088  
1283  
268.3

Prop

CB

CB

Prop

27696	27788	27567	2786	2738	2776	2689	2685
152	188	271	348	518	688	958	842
27838							
2668	2668	26563	2708	2706	2679	2679	2679
2679	2679	312	518	988	1558		

5L GRAPE 77.0

277.25 277.0

277.0 277.25 77.0

10' S 77.4

276.53 276.86

276.86 276.53 77.1

100' S 77.2

275.82 275.99

275.82 275.82 76.7

140' S 77.1

275.26 275.0

275.0 275.25 76.5

200' S 77.3

273.55 273.3

272.8 273.05 76.2

260' S 76.5

271.85 271.6

270.6 270.85 77.0

300' S 76.5

270.0 269.9

268.47 269.0 76.3

355.132

265.63

365.132

265.0

NL FIR 67.6

267.0 264.5

265.0 263.5 266.0 65.8

N. CB

265

5 CB

264.0

3L FIR

264.25 263.0

262.0 263.0

105) 560 (5233  
5233  
320  
311

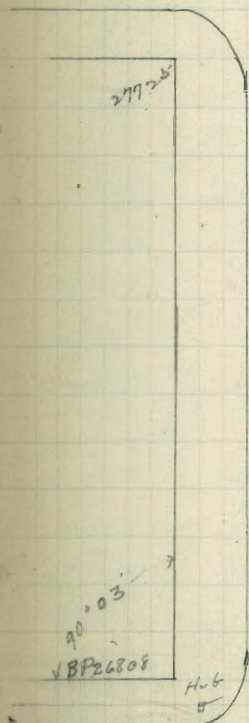
0628  
3120  
3768  
4082  
26280  
27120

45

140) 200 (141428  
2828  
600  
560  
400  
57120

105) 560 (5233  
5233  
320  
2760  
2980  
165) 560 (5233  
5233  
320  
31260  
26513

GRAPE



70' To Tie hub

70' 20' Tie

FIR

Hub







GRADES IN ALLEY  
BLK 5 BREED + CHASE  
Broadway + E  
24th To 25th

	N	S
N.L. 25th St.	186.04	185.92
55' W break	189.32	189.28
80' W break	190.25	190.25
105' W break	190.07	190.07
150' W	188.76	188.76
200' W break	187.30	187.30
250'	186.53	186.53
300'	185.77	185.77
350' break	185.00	185.00
400	183.29	183.29
450	181.58	181.58
500		
518' break	179.36	179.36
540	178.20	178.18
565	176.47	176.37
600 EL W	173.62	173.38

18703 SW W6  
4.00  
191.03  
20.00  
190.41  
2.10  
192.51  
1.25  
185.92  
2.11  
179.24  
1.46  
181.10

	N	S	N	S	N	S	N	S
18703 SW W6	189.32	190.25	190.07	187.76	187.30	186.53	185.77	185.00
	3.17	2.76	2.44	3.75	5.21	5.98	6.74	7.51
	1.22	2.10	2.63	3.54	4.43	5.22	6.33	6.61
	+1.97	+0.16	-0.19	+0.21	+0.78	+0.76	+0.41	+1.00
	naïl	naïl	naïl	naïl	naïl	naïl	naïl	naïl
18703 SW W6	187.28	190.25	190.07	187.76	187.30	186.53	185.77	185.00
	3.23	2.26	2.44	3.46	5.27	5.98	6.74	7.51
	1.13	2.06	2.44	3.45	5.21	4.98	5.74	7.78
	+1.80	+0.2	0.0	0.0	0.0	+1.0	+1.6	-0.27
	naïl	naïl	naïl	naïl	naïl	naïl	naïl	naïl
18703 SW W6	183.29	181.58	179.36	178.20	176.47	173.62		
	9.22	10.93	1.74	2.98	4.63	7.46		
	3.83	11.20	2.04	3.28	4.29	6.92		
	+0.39	-0.27	-0.30	-0.38	+0.34	+0.54		
18703 SW W6	183.29	181.58	179.36	178.20	176.47	173.62		
	9.22	10.93	1.74	2.92	4.73	7.72		
	3.22	10.87	1.74	1.92	4.73	7.72		
	+1.0	0.0	0.0	+1.0	0.0	0.0		
	naïl	naïl	naïl	naïl	naïl	naïl		

Sewer stakes

Prop. Lat. # 7	1255
	7.01
	1.70
	+5.31
# 6	184
	8.51
	3.55
	+4.96
# 5	182.0
	10.81
	5.42
	+5.09
# 4	180.0
	12.51
	4.51
	+5.00
# 3	176.5
	16.01
	12.93
	5.08
break # 3	176
	10.51
	11.77
	17.23
prop # 2	160.1
	11.0
break # 2	176.491
	16.5
	11.37
	+3.74
prop # 1	172.6
	17.40
	3.50
	+5.10
break # 1	172
	2.10
	2.02
	+5.08

185.92  
189.28  
190.25  
190.07  
188.76  
187.30  
186.53  
185.77  
185.00  
183.29  
181.58  
179.36  
178.20  
176.37  
173.38

185.92  
189.28  
190.25  
190.07  
188.76  
187.30  
186.53  
185.77  
185.00  
183.29  
181.58  
179.36  
178.20  
176.37  
173.38

185.92  
189.28  
190.25  
190.07  
188.76  
187.30  
186.53  
185.77  
185.00  
183.29  
181.58  
179.36  
178.20  
176.37  
173.38

185.92  
189.28  
190.25  
190.07  
188.76  
187.30  
186.53  
185.77  
185.00  
183.29  
181.58  
179.36  
178.20  
176.37  
173.38



Grades on Knightman St.  
Grim to Herman

3525  
478  
357.28

4952  
775

5050  
678

3525  
478  
357.28

4967  
781

7.51

4937  
811

50.08  
770

5044  
706

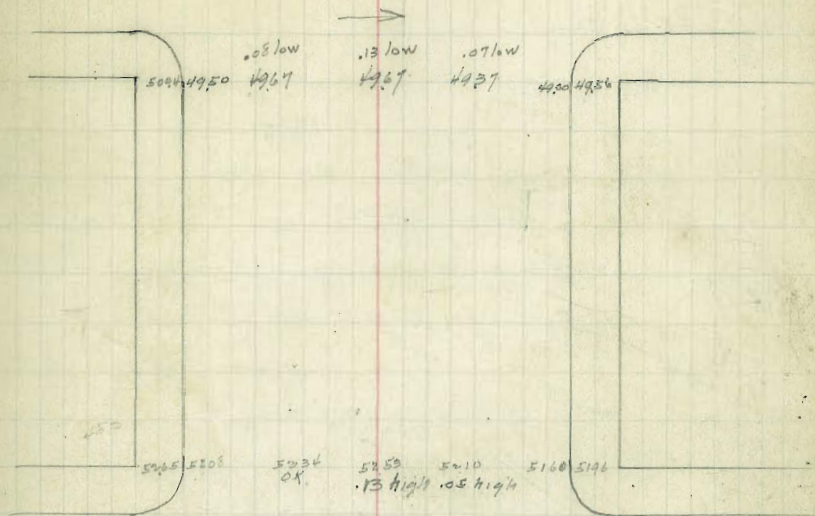
50.70  
678

50.67  
681

50.50  
698

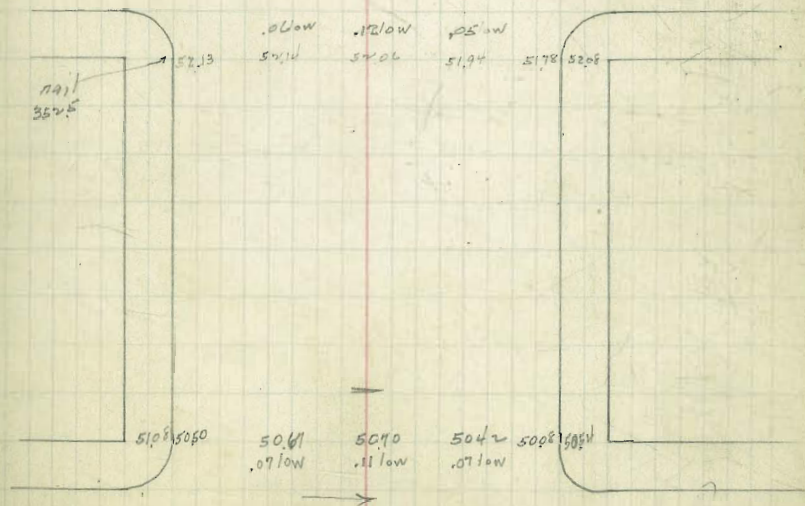
HERMAN

AVE



3/5

ST



GRIM

AVE



GRADES ON GRIM AVE  
FOR PAVING

370.00 B.P. SE Thorn.

1.90  
342.50

850  
1430  
2.55

830  
1630

45 550

13  
117

1896  
884

1377  
83

2030  
2.50

2073  
2.07

196

2094  
1.86

2130  
1.50

2094  
1.88

370.90  
0.29  
371.19

2110  
0.9

2113  
0.86

2076  
1.43

1642  
4.77

1655  
4.64

1624  
4.95

869  
12.50

895  
12.24

881  
12.38

2090  
5.29  
262.9

2102  
5.28

2129

2148  
4.81

217

2150  
4.69

2118  
5.11

2101  
5.28

2127  
4.97

2087  
4.44

2104  
5.24

2116  
5.13

2079  
5.52

2143  
4.86

2157  
4.72

THORN

2171

2143

2129

2116

ST.

2148

2079

2092  
2147

2150  
2090

2110

2113

2076

2030  
2090

2090

321.5

321.0

316.75

1648

1630

1622

1650

1624

15.80

1637

316.0

309.0

204830

869

895

881

250

903

309.0

REDWOOD

ST.



378.99 BP NW 3 1/2 + 1/2  
876  
37975

246  
4.95 246  
5.16

200

2007

370.90  
521  
376.11

2163  
4.48

2175  
4.36

2142  
4.69

2200  
5.71

2430  
452  
2883

2462  
414

2487  
398

245  
432

600 | 3100.00  
3000

2180

2157

2160

21

293

2452  
473

2500  
415

2492  
4.23

2442

2466  
4.79

2462  
4.73

2449  
4.86

2406  
5.09

2492  
470

2510  
472

2507  
480

2495  
480  
65

UPPS

376.4 252 24.6  
2538  
24.5

2512

2500

2492

2430

2438

2449

2554

2512

2512

2492

2460

2430

373

2429

2430

2469

2482

2451

2460

2415

2416

374.6

370

2194

2130

2163

2175

2142

2094

2164

THORN

5T



328.77  
300  
331.81

2640  
5.41

25 95  
86

2675  
3.06

2635  
5.43

300

360

20541  
1950  
1500  
1400  
200

20541  
32460

360 1900  
1000  
7200

360 2100  
2800  
3000

20528  
31680

2018  
3480

20 450

448  
455  
2933

2640  
570  
3210

2675  
5.32

2700  
5.05

2696  
5.14

2661  
5.15

2652  
5.16

2664  
5.14

2700  
5.05

2681  
5.29

2643  
5.14

2652  
5.15

2663  
5.16

2678  
5.17

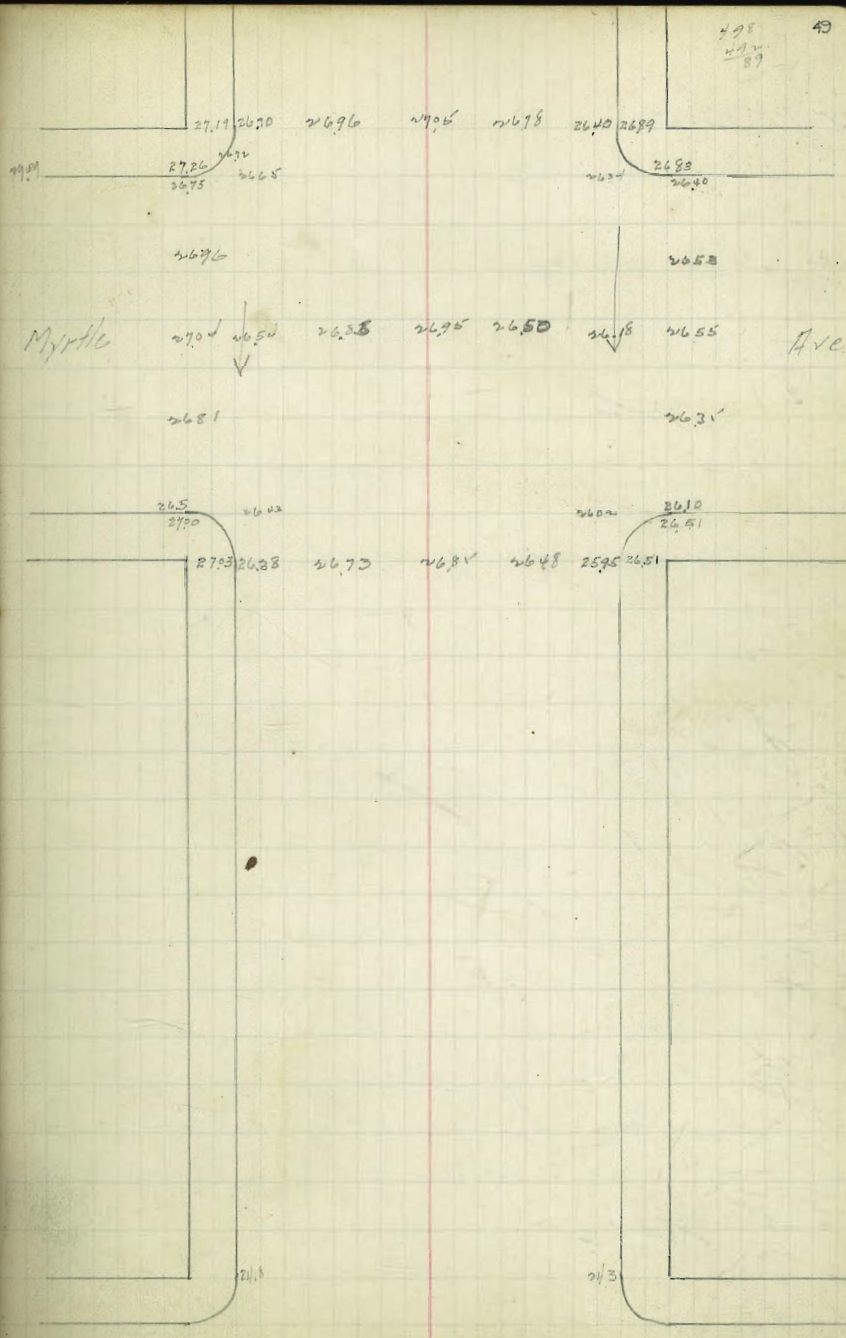
2602  
6.08

2636  
5.70

2652  
5.55

2653  
5.57

498  
498  
87





337.5m NE 51<sup>st</sup> & Dwight  
E 46  
337.8

$\frac{3366}{432}$   $\frac{3370}{178}$

$\frac{3430}{3430}$

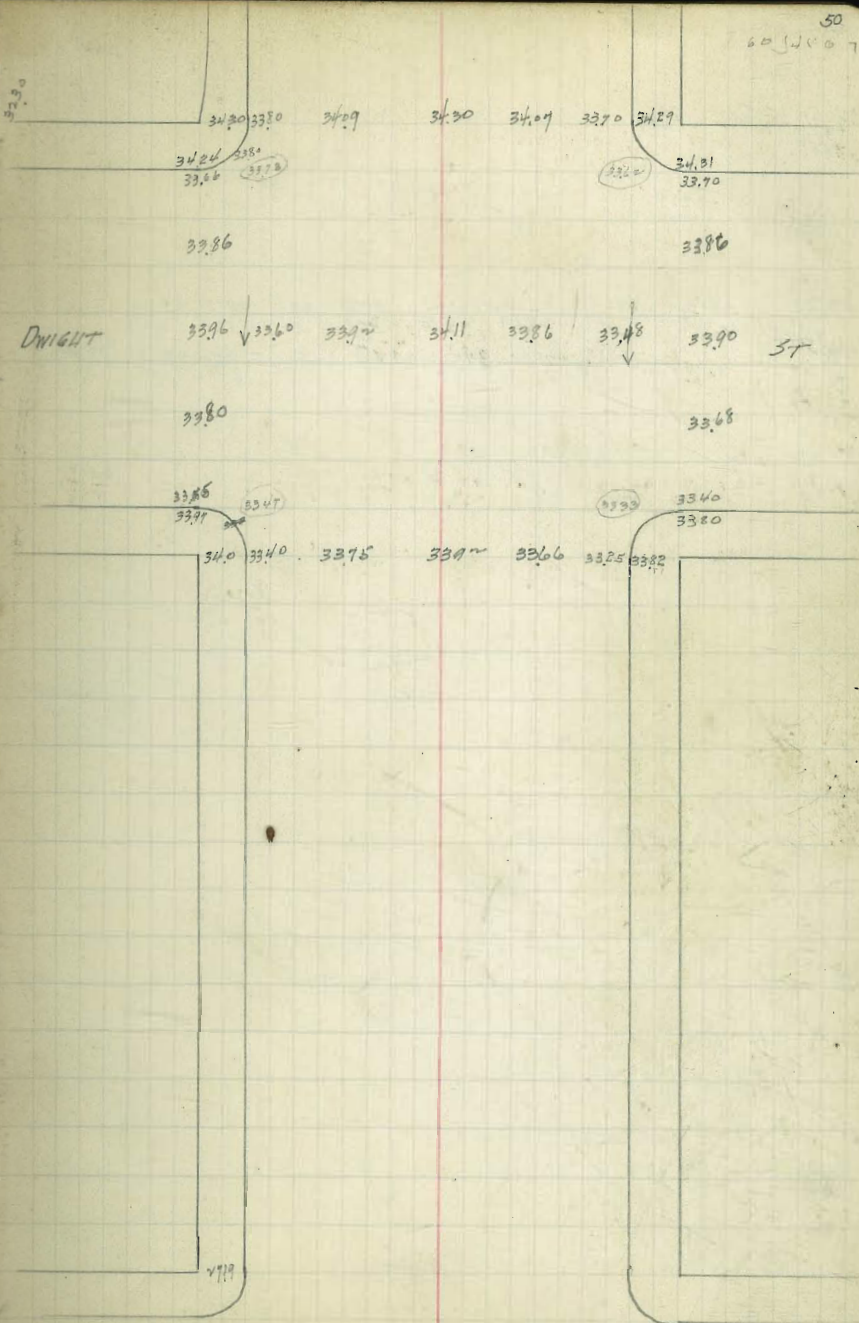
$\frac{3371}{545}$   $\frac{3366}{504}$   $\frac{3392}{478}$   $\frac{3371}{475}$

$\frac{3380}{474}$   $\frac{3409}{445}$   $\frac{3430}{424}$   $\frac{3407}{247}$   $\frac{3370}{484}$   
38.54

$\frac{30.80}{5.00}$  N9 N4 0 S4  
 $\frac{33.73}{5.07}$   $\frac{33.86}{4.94}$   $\frac{33.96}{4.84}$   $\frac{33.80}{5.00}$   $\frac{33.47}{5.33}$   $\frac{33.60}{5.20}$   $\frac{33.56}{4.94}$   $\frac{34.1}{4.69}$

$\frac{3360}{518}$   $\frac{3386}{494}$   $\frac{3390}{490}$   $\frac{3368}{5.12}$   $\frac{3348}{5.32}$   $\frac{3333}{5.47}$   $\frac{33.97}{4.88}$

40 f. 400. 2006  
474 0067  
267 200 17  
1560



MYRTLE

AVE



34091 SE Ray.  $\frac{3245}{251}$

$\frac{3835}{5.7}$   
4352

$\frac{3875}{4.77}$

$\frac{38.99}{4.53}$

$\frac{38.87}{4.71}$

$\frac{38.45}{5.07}$

60 J 125<sup>L7</sup>  
110  
60

$\frac{3915}{5.39}$   
4482

$\frac{3933}{4.99}$

$\frac{4007}{4.77}$   
3889  
593

$\frac{3983}{4.99}$   
3930  
552

$\frac{3928}{5.54}$   
3949  
535

$\frac{3953}{5.29}$   
3928  
592

$\frac{3941}{5.41}$   
3690  
592

$\frac{3902}{5.80}$   
3925  
564

$\frac{3852}{6.30}$   
3952  
530

3920  
562

108  
5.5 10"

60 J 100 51  
100 L7

$\frac{4007}{3920}$   
 $\frac{3975}{3945}$

3983

4095

3983

3945

4005

3920

4006

3945

3947

3953

LANDIS

3970

3890

3920

3952

3920

3941

ST

5889

3902

$\frac{3850}{3894}$

$\frac{3952}{3925}$

3894

3925

3895

3899

3881

$\frac{3952}{3945}$

$\frac{3960}{3906}$

3945

3906



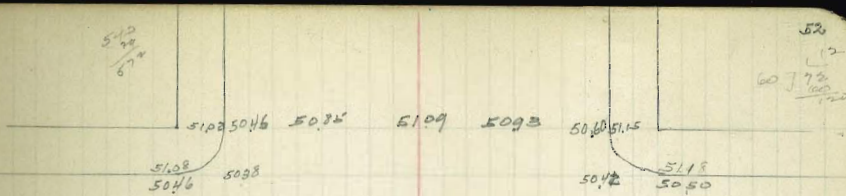
156 449 437 397 337  
89 0.50 0.68 1.08 1.0

5005 5016 5016 5016 5016  
497 489 489 489 489  
5503 5503 5503 5503 5503

5016 5049 5073 5069 5088 5095 5109 5093 5088 5071 5071  
489 489 432 432 467 467 376 412 463 484 484  
5505 5505 5505 5505 5505 5505 5505 5505 5505 5505 5505

510  
48  
6

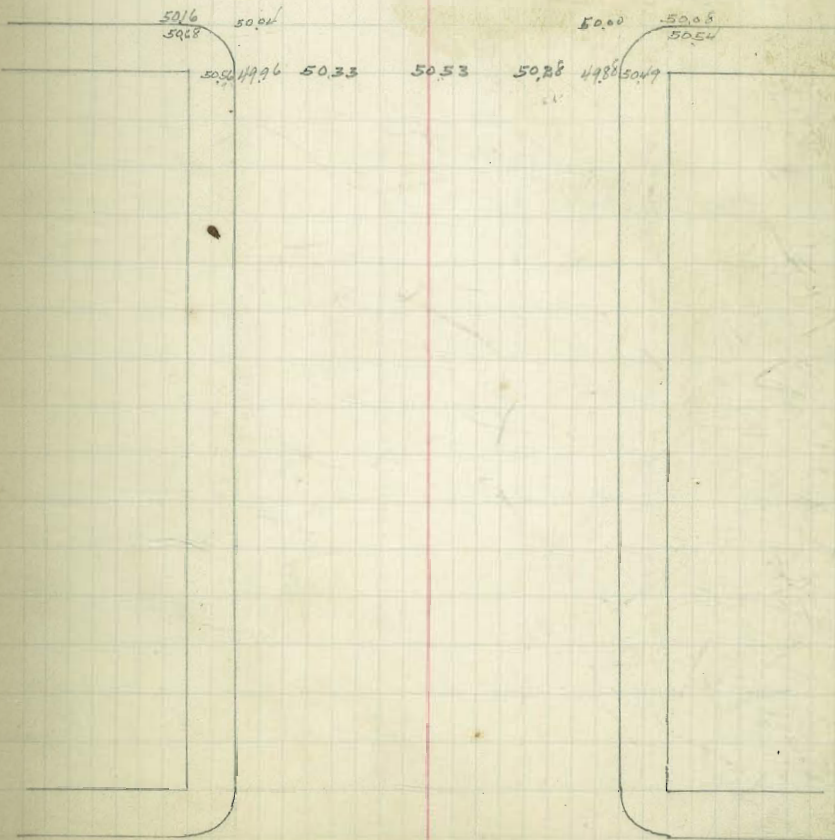
52  
60  
72  
100



5047

Right man 5073 5071 5087 5081 5081 5071 5071 5071

5049









PAVING GRADES

4th ST

135.53	28.46	31.50	31.57	31.43
1.34	8.47	5.57	5.30	5.44
738.87	24.50	24.40	31.0	31.50
	2.37	2.77	5.87	5.27

98.27  
39.2  
102.19

135.53  
5.21  
135.74

97.40	91.9	98.80	95.61	94.5	93.65	99.70	92.75
4.79	4.89	6.29	6.58	6.64	8.54	8.79	8.74

461  
130

31.40	31.20	31.20	31.0	31.00
5.7	5.7	5.67	5.77	5.79

3089	3043	2979	2892
464	5.10	5.74	6.61

135.53  
8.72  
136.75

34.61	34.56	34.7	34.4	34.28	34.38
0.2	0.97	1.36	2.08	2.12	3.12

3172  
251

34.44	33.9	33.46	32.9	31.89	31.37
1.09	1.37	2.08	2.74	3.64	4.18

98.27	97.56	97.68	97.57	97.20
2.78	3.29	3.37	3.48	3.85
101.08	152	92	91.8	91.0

98.27  
8.12  
106.46

28.70	30.55	31.26	31.58	31.44
6.83	1.09	1.27	3.97	4.02

96.8	96.2	96.1	95.8	95.7
1.48	1.48	1.48	1.48	1.48

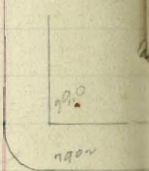
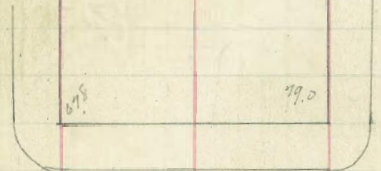
28.70	30.55	31.26	31.58	31.44
6.83	1.09	1.27	3.97	4.02

95.4	95.9	96.72	97.2	97.3
5.3	5.08	1.33	3.83	3.6
97.35	37.0			

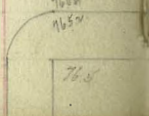
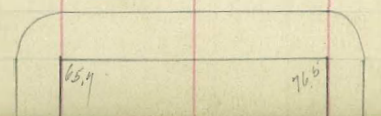
26.52  
6.37  
32.89

97.67	97.9	97.9	97.5	97.5
5.79	5.57	5.64	6.1	7.06

96.8	96.2	96.1	95.8	95.7
1.48	1.48	1.48	1.48	1.48



A



44.5

132.0	32.14	31.72	32.38	33.45	34.17	34.56	34.61	34.50	34.43
	32.15	31.30	31.45	31.35	31.87	32.79	33.46	33.39	34.10
	30.97								
	30.60								
	30.10	30.03							
	29.44								
	29.02								

H3H

H1H

5" concrete  
1" BINDER  
2" ASPHALT

4" base conc  
1/2" Top

96.36	95.80	96.40	97.30	97.8	97.74	97.67	97.40	97.23	97.10
96.8	95.5	95.9	96.7	97.2	97.43	97.35			
17	95.50								97.56
41	96.28								97.68
39	94.96	96.01	96.61	96.85	96.90	96.85			97.57
41	94.52								97.20
31	95.97								96.60
96.8	96.2	96.1	95.8	95.7					
96.8	96.2	96.1	95.8	95.7					

BM 135.53 54

BM 98.27







Paving Grades

3rd St

Walnut to Univ

$284.52$   
 $\underline{5.23}$   
 $289.85$   
 $\left\{ \begin{array}{l} 5.10 = 284.75 \text{ cut} \\ 4.60 = 285.25 \text{ ct} \end{array} \right.$

$284.52$   
 $\underline{5.01}$   
 $289.53$  ✓

$285.17$   
 $\underline{4.36}$   
 $289.84$

$285.58$   
 $\underline{3.95}$   
 $289.53$

$285.40$   
 $\underline{4.3}$   
 $289.70$

$\left\{ \begin{array}{l} 4.07 \text{ cut} = 285.18 \\ 4.14 \text{ ct} = 285.71 \end{array} \right.$

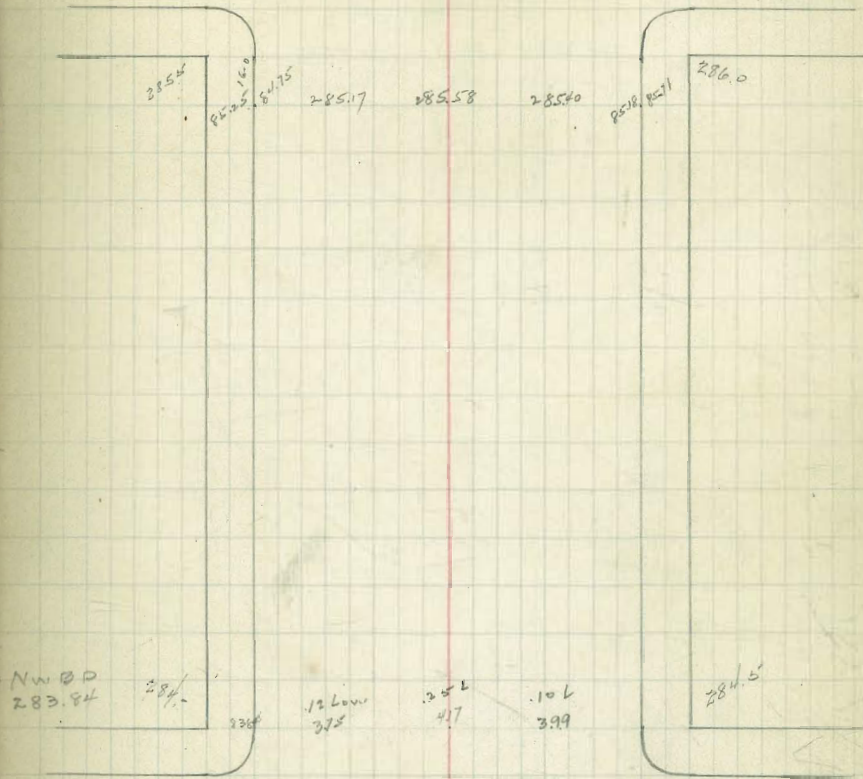
NW 20 284.52

2 1/2" Base } Asphalt  
1 1/2" Top

56

Univ.

Ave



NW 20  
283.84

Robinson

AVC

283.5

284.0







277.27  
5.21  
282.48

277.27  
10.

77.34  
12.60  
89.94  
78.33  
76.8  
53

77.90  
10.04  
97.9

77.31  
4.87

77.36  
4.82

77.15  
7.23  
12.25  
75.10

77.27  
4.86  
82.13

76.94  
5.19

77.38  
4.75

77.36  
4.77

78.10  
4.08

28.2  
7.06

77.15  
7.76  
15.49  
77.35

277.27  
4.91  
282.18

76.80  
5.38

76.74  
5.42

76.72  
5.46

76.68  
5.50

76.65  
5.53

77.92  
4.26

78.01  
4.17

78.10  
4.09

77.45  
4.73

77.01  
5.17

76.65  
7.80  
15.49  
77.01  
1.70

77.90  
4.28

77.86  
4.32

77.82  
4.36

77.18  
4.70

4.44

77.76  
4.42

78.25  
3.93

78.21  
3.97

77.81  
4.27

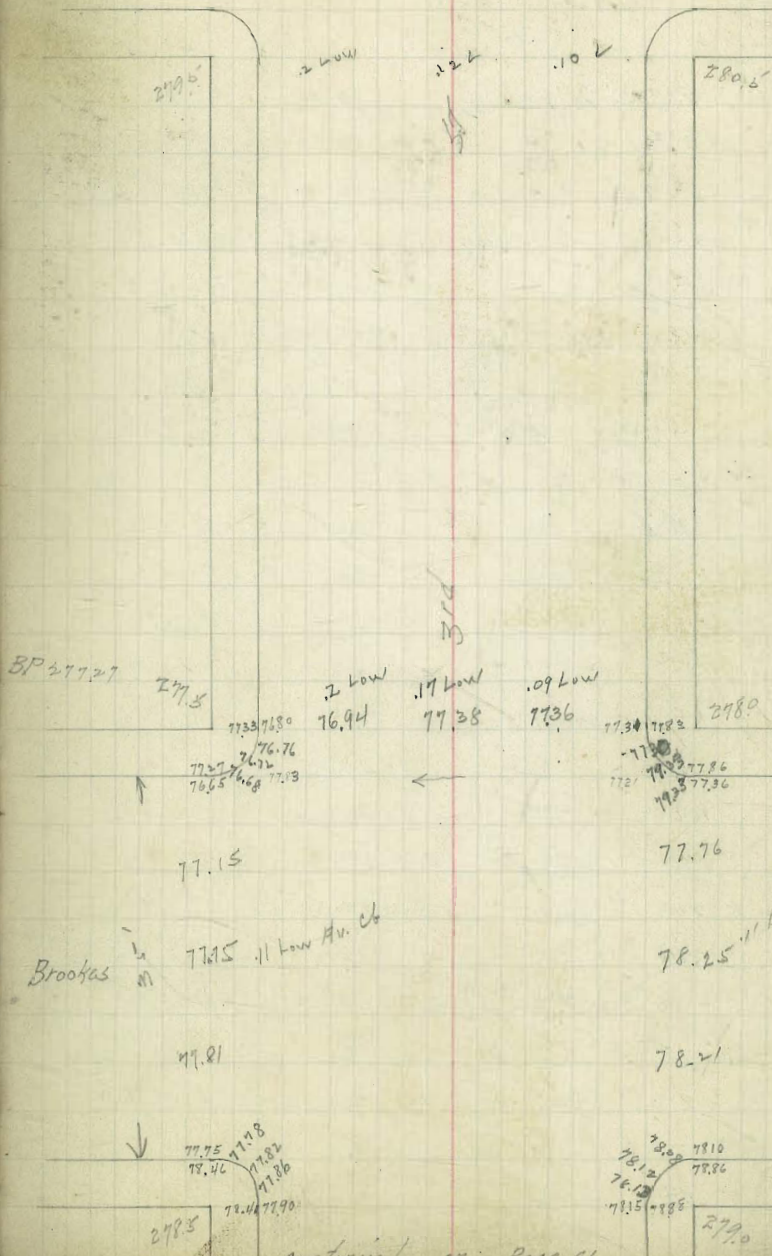
77.35  
4.43

77.15  
5.03

Pennsyl.

58

Ave



continued on page 61



5/24/47

Contours for Park Board  
at Torrey Pines Park  
for Comfort Station

	8.50	H.I. assumed 100.00	
134+77.60 P.C. of Highway + E. Edge of paving	13.8	86.2	
--- + 3' E of ---	13.9	86.1	
50' S. of P.C. + E. Edge	12.2	87.7	
--- + 4' ---	12.2	87.7	
100' --- E ---	10.8	89.1	
--- 6' E ---	10.8	89.1	
150' --- 4' ---	9.7	90.3	
--- 7' ---	9.7	90.3	
400' --- 4' ---	9.1	90.9	
--- 10' E ---	9.0	91.0	
250' --- E Edge	8.6	91.4	
300' --- ---	8.2	91.8	
--- 11' ---	8.2	91.8	
--- 25' W of paving Wedge	9.5	90.5	
--- 50' ---	10.1	89.9	
--- 100' ---	11.1	88.9	
--- 150' ---	12.2	87.8	
--- 200' ---	12.5	87.5	
--- 230' ---	12.7	87.5	= edge block
150' --- + 10' E of E Edge paving	9.1	90.9	
100' --- ---	9.2	90.8	
50' --- ---	9.2	90.8	
00' = P.C. ---	9.4	92.6	
50' N of --- 13' ---	4.3	95.7	

75' N of P.C. + 13' E of E. Edge paving	3.3	96.7	✓
90' --- ---	3.8	96.2	✓
100' --- ---	11.0	89.0	✓
85' --- 20' ---	2.1	97.9	✓
--- 35' ---	3.7	96.3	✓
100' --- 55' ---	1.3	98.7	✓
--- 20' ---	11.2	88.8	✓
104' --- 50' ---	2.0	98.0	✓
110' --- ---	13.8	86.2	✓
81.5' --- 37' ---	3.3	96.7	✓ = state mark
50' --- 50' ---	5.4	94.6	✓
40' --- 35' ---	5.5	94.5	✓ = state mark
--- P.C. --- 50' ---	7.5	92.5	
50' S of --- 50' ---	8.3	91.7	✓
100' --- ---	8.2	91.8	✓
150' --- ---	8.2	91.8	✓
200' --- ---	8.0	92.0	✓
250' --- ---	8.1	91.9	✓
300' --- ---	7.2	92.8	✓
--- 100' ---	5.7	94.3	✓
250' do.	6.0	94.0	✓
200' do.	6.4	93.6	✓
150' do.	6.4	93.6	✓
100' do.	6.6	93.4	✓
50' do.	7.1	92.9	✓
P.C. ✓	6.9	93.1	✓
T.P. 195	6.50	93.50	

102.25



41  
102.25

50' N. of PC and 100' E. of E. Edge Paring	8.1	94.2	✓
65' do.	7.6	94.6	✓
95' do.	6.5	95.8	✓
100' do.	26.5	75.8	✓
90' N. of PC and 135' E. of E. Edge Paring	6.8	95.5	✓
47' " " " " " 125' " " " "	8.0	94.3	✓
47' " " " " " 150' " " " "	8.0	94.3	✓
PC. ✓ 150' " " " "	7.7	94.6	
50' S. of ✓ ✓ 150' " " " "	7.2	95.1	
100' do.	7.5	94.8	
150' do.	7.5	94.8	
200' do.	8.2	94.1	
250' do.	9.4	92.9	
300' do.	10.5	91.8	✓
300' S. of PC and 120' E. of E. Edge par.	8.0	94.3	
50' N. of last above.	7.8	94.5	
300' S. of PC and 160' E. of E. Edge par.	10.0	90.3	brink
250' " " " " " 175' " " " "	11.0	91.3	✓
200' " " " " " 175' " " " "	10.3	92.0	✓
200' " " " " " 200' " " " "	11.6	90.7	brink
150' do.	9.2	93.1	✓
25' W. of last above	7.0	95.3	
150' S. of PC and 245' E. of E. Edge paring	10.2	92.1	brink
100' " " " " " 200' " " " "	6.0	96.3	✓
100' " " " " " 225' " " " "	6.8	95.5	
10' S. of last above	8.4	93.9	

102.3

60

150' S. of PC and 250' E. of E. Edge paring	8.0	94.3	✓
85' " " " " " " " " " "	6.5	95.7	✓
100' " " " " " 285' " " " "	8.8	93.5	brink
50' " " " " " 200' " " " "	5.8	96.5	
50' " " " " " 225' " " " "	5.0	97.3	✓
PC. and 200' " " " "	6.0	96.3	✓
25' N. of " " 200' " " " "	5.7	96.6	✓
30' do.	8.3	94.0	✓
60' do.	10.5	91.8	brink
PC. and 250' E. of E. Edge paring	4.7	97.9	✓
5' N. of " " 250' " " " "	7.7	94.6	✓
43' " " " " " " " " " "	9.3	93.0	brink
PC. and 257' E. of E. Edge Paring	7.8	94.5	✓
✓ ✓ 307' " " " "	9.0	93.8	brink
15' N. of " " 300' " " " "	9.1	93.2	brink
PC. ✓ 465' " " " "	7.8	94.5	
15' S. of " " " " " " " " "	7.6	94.7	✓
25' " " " " " " " " " "	5.0	97.0	✓
25' " " " " " 270' " " " "	7.8	94.5	✓
50' " " " " " 265' " " " "	6.0	96.3	✓
50' " " " " " 250' " " " "	5.0	97.3	✓
50' " " " " " 275' " " " "	7.7	94.6	



28087  
506  
28791

28287  
575  
28862

8405  
457

8445  
417

844  
422

Brk.

8282  
5.80

8302  
5.60

8299  
5.63

NL Walnut

28287  
597  
28884

8415  
469

8445  
487

8442  
476

Brk

27727  
785  
28512

780

7820  
689

7846  
666

7833  
679

7815  
697

400 Rd

Brookings

61

Ave

2785

7841

7790

7825  
Low

7846  
186

7838  
11L

7815

7800

2790

371

2845

8436

8370

8425  
Low

8445  
Low

8446  
Low

8430

849

2850

8028287

2830

8282

Low

8302

Low

8299

Low

2835

Walnut

Ave



Moore  
7/25/20

Upas St Daving

.15 fall across 567 Small  
S. Side of upas

30th to 33d

NL Upas 30th to 31st 32899 BP 21st 1.20 330.19	328.0	327.36 +83 +0.7	326.87 3.32 +2.0	326.38 3.81 +1.9	325.89 4.30 0.0	325.4 +4.9 0.0
SL " " "	327.66 3.19 0.0	326.66 3.53 +1.2	326.20 3.89 +1.8	325.94 4.25 +1.7	325.61 4.58 +0.3	325.25 +3.2 0.0
NL GRIM 31st	324.9 5.29	325.9 +0.9 -1.8	326.67 3.52 -1.3	327.44 2.75 -0.1	328.21 1.98 +0.2	329.0 1.17 0.0
SL " " "	324.75 5.44	325.83 4.26 -1.8	326.66 3.53 -2.2	327.44 2.70 -1.0	328.20 1.87 -0.8	329.15 1.04 0.0

32899  
16.2  
33061

NL 32nd - Bancroft Hermand 322.26 NW 3/16 7.30 327.59 1.20 TP	325.0 4.59 +1.1	+50 324.53 5.06 +1.5	1+00 324.06 5.53 +1.1	1+50 323.59 6.00 +1.8	2+00 323.12 6.47 +1.3	2+65 322.5 7.09 -0.5
SL " " "	325.15 4.44 -0.2	324.60 3.99 +0.9	324.04 5.55 +1.1	323.49 6.10 +1.2	322.65 6.94 +0.9	
NL Bancroft - 33d	322.0 7.59 +0.5	321.34 3.78 +1.17	320.68 4.44 +1.2	320.02 5.10 +1.1	319.36 5.82 +1.0	318.50 6.52 +0.9
SL " " "	321.15 8.74 +1.1	320.55 4.59 +0.9	319.95 5.19 +0.7	319.15 5.97 +0.6	317.76 4.36 +1.1	
NL 31st Hermand	329.0	+50 327.59 3.1 +0.9	1+00 326.97 4.4 +0.2	1+50 324.76 6.9 -0.1	2+00 323.35 7.3 -0.2	2+65 321.5 9.1 +0.3
SL " " "	329.15	327.65 3.0 +0.6	326.15 4.5 +0.9	324.65 6.0 +0.2	323.14 7.5 +0.2	321.15 9.5 +0.1
NL Hermand - 32nd	321.5 9.1 -0.2	+50 322.06 8.6 +1.0	1+00 322.62 8.0 +1.1	1+50 322.18 7.4 +0.6	2+00 323.74 6.9 +0.5	2+65 324.5 6.1 +0.5
SL " " "	321.15 9.5 -0.1	321.71 8.9 -0.9	322.27 8.3 -0.2	322.83 7.8 +0.4	323.39 7.2 +0.1	324.15 6.5 0.0
32494 3.78 32865	323.5 5.45	324.0 4.65	324.5 4.35	324.6 6.05		
322.0 6.65	321.5 7.15	320.5 8.15				



Drain on Thorn St. stakes set 5' W of  
Herman to 32nd. E. of Drain

0+00 = 14' W. of EL Herman

Grade.

317.5

+50

1

+50

2

+50

3

+







17899  
544  
18043

17999 H.S.

17899  
608  
18507

7966  
5.36

7961  
5.41

7955  
5.47

7926  
5.76

7964  
6.18

8169  
3.33

8141  
3.61

8114  
3.88

8043  
4.59

7970  
5.32

17899  
567  
18466

7961  
5.26

7968  
4.88

7978  
4.88

7970  
4.96

7946  
5.21

7961  
5.01

7980  
4.86

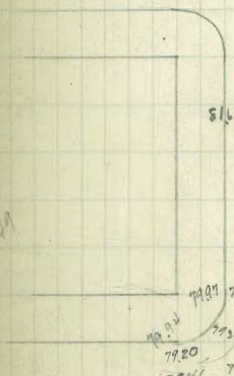
ST4

ST.



ST4

ST.



3RD

ST.

7920 7921 7922 7923 7924 7925 7926 7927 7928 7929 7930 7931 7932 7933 7934 7935 7936 7937 7938 7939 7940 7941 7942 7943 7944 7945 7946 7947 7948 7949 7950 7951 7952 7953 7954 7955 7956 7957 7958 7959 7960 7961 7962 7963 7964 7965 7966 7967 7968 7969 7970 7971 7972 7973 7974 7975 7976 7977 7978 7979 7980 7981 7982 7983 7984 7985 7986 7987 7988 7989 7990 7991 7992 7993 7994 7995 7996 7997 7998 7999 8000

BM 17800







105.83  
7.04  
112.87

506	5	1/1	0	1/1	4	
107.11	562	538	533	545	628	653
	107.85	107.51	107.64	107.32	106.72	106.44

116.85  
4.16  
121.01

361	344	353	386	426
1740	1754	1748	1715	1665

1st

ST

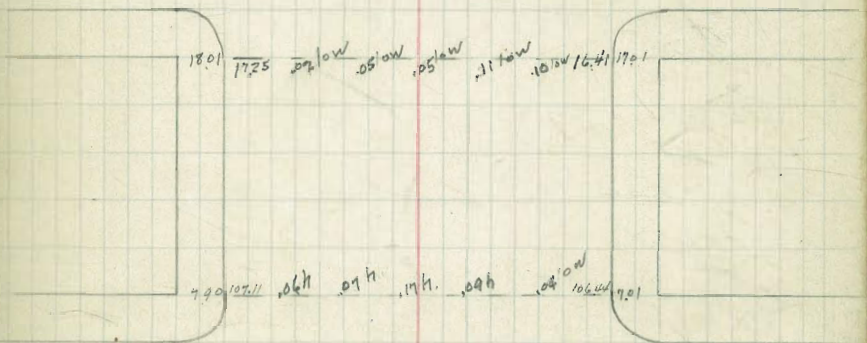
67



Front

PAVED

ST



Albatross

PAVED

ST



9142  
64  
9783

9142  
630  
9772

9142  
630  
9772

575 668 648 611 605 low 608 611  
7863 7790 7710 7640 7550 7556 7850 7847

9085 9090 9089 9083 9080  
687 682 685 689 692

9170  
604 595 588 581

9320  
392 9420 9772  
239

10543  
231  
10824

10520 10533 10543

9119 9177 9208 9213 9191  
653 595 562 559 581

9225 9287 9335 9363 9377  
547 485 437 409 395

9406 9426 9420 9358 9330  
366 346 352 384 442

10546 10514 10474 10450 10498

5.17  
9142  
9659

9270 9365 9185  
389 0.94 4.74

29  
179  
60

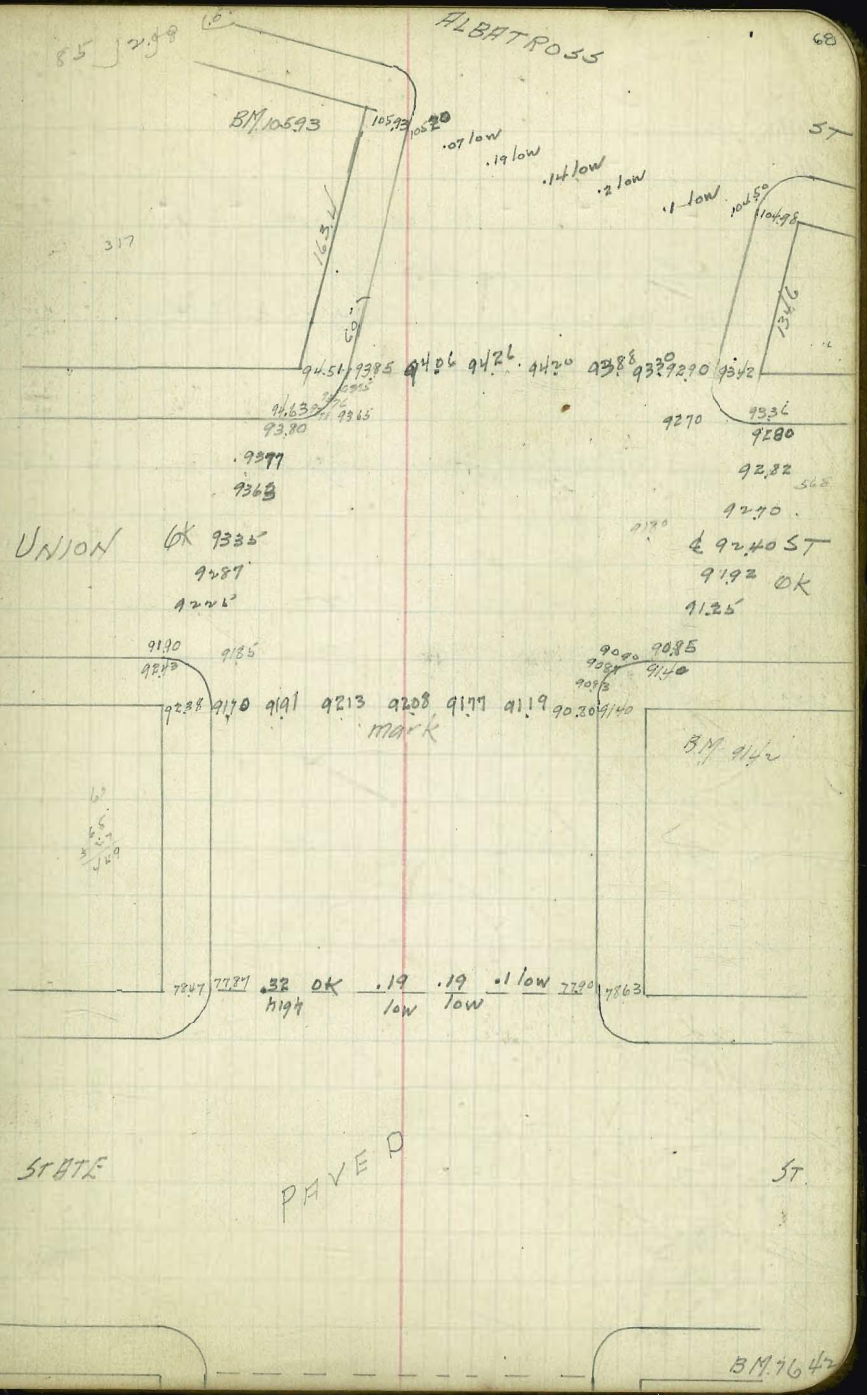
637  
575  
62

279  
30  
71

55 2198

ALBATROSS

68





5899  
581  
6730

58 no  
441  
6261

5846 416	5882 379	5892 369	5886 375	5853 408
6055 286	6091 170	6102 159	6096 165	6063 198
6016 247	6003 258	5976 286	5933 328	5875 386

5880 381	5939 322	5952 279	6009 252	6020 241
-------------	-------------	-------------	-------------	-------------

STATE

75 J 210  
1230  
332

ST.

69

389 349 335 341 371

6098 6010 6063 6096 6102 6001 6055 6030 6090  
6020 6010 6005 6090  
6020 6010 6003 6015

COLUMBIA 5982 5978

5991 5986 5920 5971

5939 5433

5870 5871

5845 5845 5835 5840

5845 5873

5996 5830 5823 5886 5897 5882 5845 5820 5855

BM 5899

9 .02 25  
7 7

INDIA.



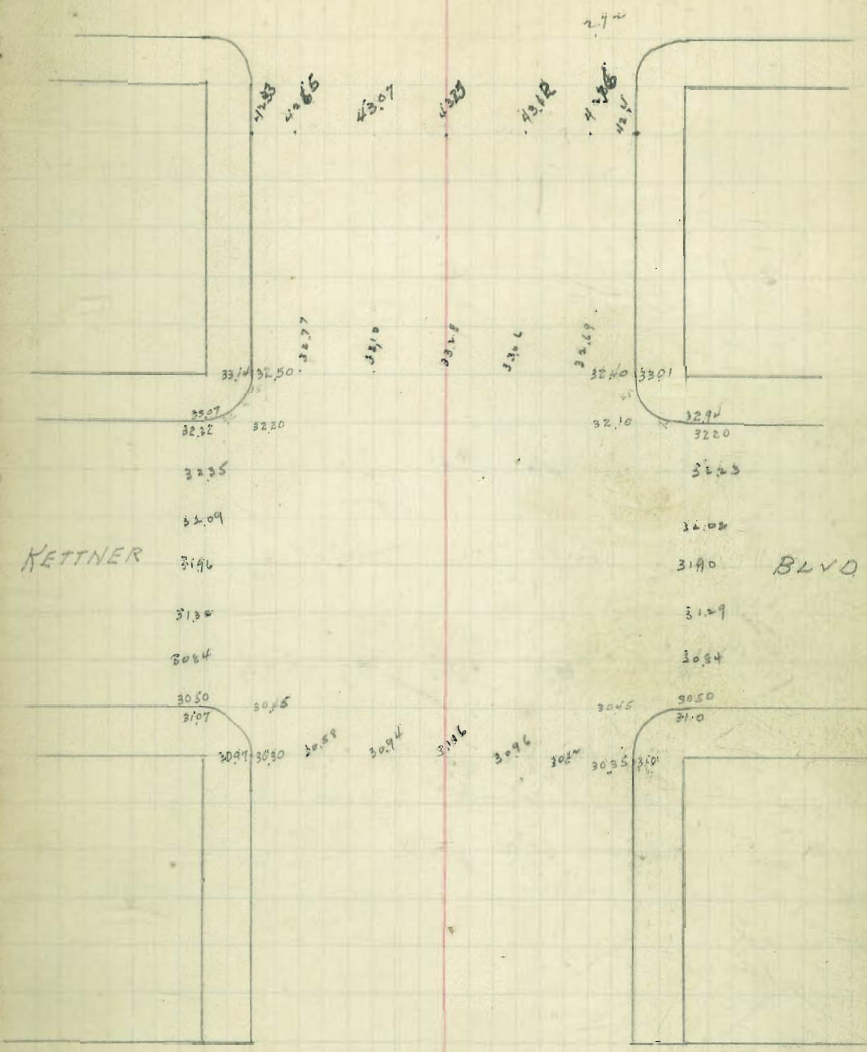
10,64 H.D.

60' E of Atlantic = 7.78 2.86  
 50 - - - = 7.21 3.43  
 40 - - - = 6.94 3.70  
 EL - - - = 6.50 4.14

31.00 4.70 26.30								
44.02 8.89 35.13	42.64 3.47	45.04 3.07	49.17 3.94	42.93 3.18	42.56 3.55	30.42 6.70	32.20 4.95	30.6 2.59
37.15								
E	32.77 4.38	33.10 4.05	33.28 3.87	33.02 4.00	32.69 4.46			
S Kettner	30.84 6.31	31.29 5.86	31.90 5.25	32.02 5.13	32.23 4.92			
N "	30.84 6.21	31.32 5.83	31.96 5.19	32.09 5.06	32.35 4.90			
W "	30.62 6.53	30.86 6.19	31.16 5.99	30.94 6.21	30.56 6.57			

INDIA

15.55



CHL

ST.



1134  
 1100  
 1083  
 ---  
 1183

CAL

ST.

ATLANTIC

ST.







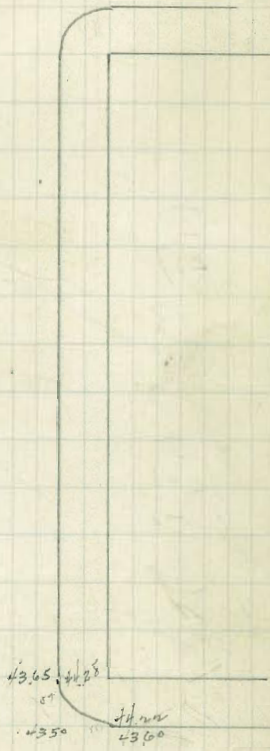
31.85  
684  
348.72

WIGHTMAN

ST

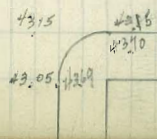
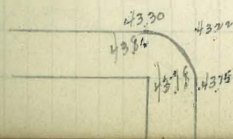
23

HERMAN



LANDIS

ST





NE. 30 31<sup>st</sup> Dwight

337.52  
6.71  
338.73

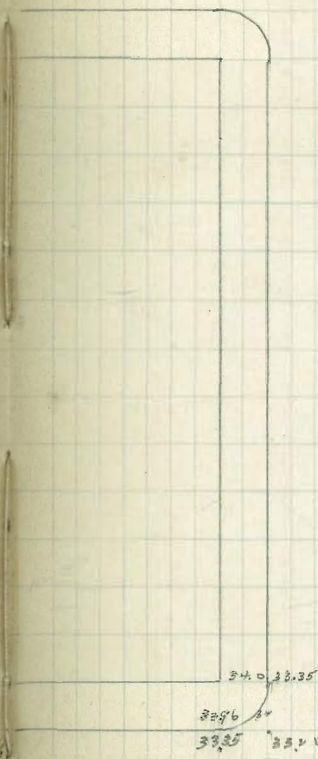
32.90  
5.83

LANDIS

56

57

74



DWIGHT

32.95  
33.47  
32.44 32.90

HERMAN



57

32.95  
33.48  
32.80 33.35

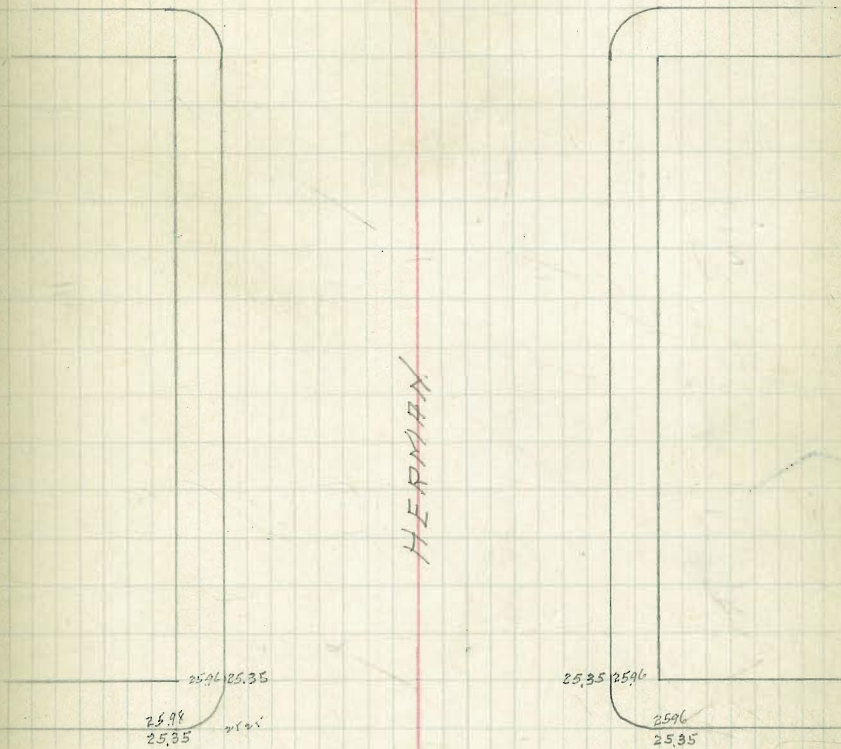


378.80  
1.71  
330.09

30.61

DWIGHT

ST 75



MYRTLE

AVE

24.95 24.35  
25.45  
25.39 24.75

24.95 24.35  
25.44  
24.75 25.40



327.02  
327.17

MYRTLE

15) 25' LT

AVE

76

2151 2090  
2145  
2085

2100 2112  
2093

UPAS

Excepted

ST.

2085  
2096  
2095 2025

2040  
2085  
2098  
2025 2093

323 21 Top R-10



31936 Spk N.W.  
306  
3222

515  
1724  
76

UPAS

ST. 77

471  
1771

18.17 17.50  
18.55  
17.85

17.40 18.00  
18.00  
17.85

THORN

ST

14.50  
18.00  
18.00 17.35

17.10 17.50  
17.50  
17.00 17.50



Culvert 2nd & Grape St

How high 0+00 Culvert	2.05	172.04	168.99	on curb
+60		11.72	160.22	
+75		6.0	166.0	on curb
+87		5.7		
+87		9.7		
+40		11.8		
+60		12.5		
TD	3.55	162.63	12.96	159.08
+93		6.80		on curb
+93		7.42	155.21	= outlet

# 57 Curbs

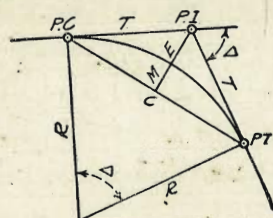
70.

N side 684 West of State to 80.7 put 2' radius for tree  
 - - curb on Union 1' out in st. OK at front  
 - - 68' W of 2<sup>nd</sup> to 130' W to be rebuilt  
 S V from 142' 2<sup>nd</sup> to 33' W - - -



# DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

Copyright, 1914, by Eugene Dietzgen Co., New York City



659033

Barnett

E 4136

## CURVE FORMULAS

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

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

Middle ordinate= $M = R(1 - \cos. \frac{\Delta}{2}) = R \text{vers} \frac{\Delta}{2}$  (5) (6)

External= $E = T \tan \frac{\Delta}{4} = R \cos \frac{\Delta}{2} (1 - \cos. \frac{\Delta}{2}) = R \text{exsec} \frac{\Delta}{2}$  (7) (8) (9)

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

## EXPLANATION AND USE OF TABLES

**Stations.**—Given P. I.=Sta. 161+60.35 to find Sta. of P. C. and P. T.  $\Delta=32^\circ 10'$   $D=8^\circ 20'$ . From Table IV for  $1^\circ$  curve  $T=3454.1$  and  $\div 8\frac{1}{3}=414.49$  ft. From Table V correction=.36 or  $T=414.85$  ft. P. C.=Sta. P.I.— $T=157+45.50$ . Also from (4)  $L=746.00$  and P. T.=Sta. P. C. + $L=164+91.50$ .

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

**Deflections.**—Deflection angle= $\frac{1}{2} D$  for 100 ft.,  $\frac{1}{4} D$  for 50 ft., etc. For  $c$  ft.=(in minutes)  $.3 \times C \times D^\circ$  or=defl. for 1 ft. from Table III  $\times C$ . For Sta. 158 of above curve= $.3 \times 54.5 \times 8\frac{1}{3}=136.2'$  or  $2^\circ 16.2'$ , or= $2.50 \times 54.5=136.2'$  from Table III. For Sta. 159 deflection angle= $2^\circ 16.2' + 8^\circ 20' \div 2=6^\circ 26.2'$ , etc.

**Externals.**—May be found in similar manner to tangents. Thus  $E$  for curve above is 91.37. For from Table IV for  $1^\circ$  curve  $E=960.6$  for  $8^\circ 20'=960.6 \div 8\frac{1}{3}=91.27$  and from Table V correction=.10 or  $E=91.37$  ft. Or suppose  $\Delta=32^\circ$  and  $E$  is measured and found to be 42 ft. What is  $D$ ? From Table IV  $E=230.9$  and  $\div 42=5.5$  or  $D=5^\circ 30'$ .



$$\begin{array}{r} 6.5 \\ 13.6 \\ \hline 20.4 \\ 34.6 \\ 13.6 \\ \hline 47.6 \\ 13.6 \\ \hline 61.2 \end{array}$$

$$\begin{array}{r} 6.8 \\ 13.6 \\ \hline 20.4 \\ 34.6 \\ 13.6 \\ \hline 47.6 \\ 13.6 \\ \hline 61.2 \end{array}$$

$$\begin{array}{r} 437 \\ 53 \\ \hline 386 \\ 86 \\ \hline 472 \end{array}$$

$$\begin{array}{r} 09804 \\ 37 \\ \hline 68628 \\ 24412 \\ \hline 362748 \end{array}$$

$$\begin{array}{r} 1275 \\ 637 \\ \hline 33.8 \end{array}$$

$$\begin{array}{r} 09332 \\ 50 \\ \hline 46650 \end{array}$$

$$\begin{array}{r} 01128 \\ 71.00 \\ \hline 57120 \end{array}$$

$$\begin{array}{r} 340 \\ 1800 \\ \hline 19800 \end{array}$$

$$\begin{array}{r} 02817 \\ 60 \\ \hline 175020 \end{array}$$

$$\begin{array}{r} 09332 \\ 50 \\ \hline 46650 \end{array}$$

$$\begin{array}{r} 0766 \\ 50 \\ \hline 28300 \end{array}$$

$$\begin{array}{r} 120 \\ 1200 \\ \hline 14400 \end{array}$$

$$\begin{array}{r} 04619 \\ 65 \\ \hline 23095 \end{array}$$

$$\begin{array}{r} 27714 \\ 300233 \end{array}$$

$$\begin{array}{r} 0676 \\ 65 \\ \hline 33810 \end{array}$$

$$\begin{array}{r} 40572 \\ 439530 \end{array}$$

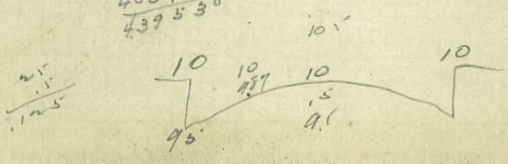
$$\begin{array}{r} 143 \\ 17 \\ \hline 1601 \\ 243 \\ \hline 1844 \\ 131 \\ \hline 22257 \end{array}$$

$$\begin{array}{r} 04619 \\ 65 \\ \hline 23095 \end{array}$$

$$\begin{array}{r} 27714 \\ 300233 \end{array}$$

$$\begin{array}{r} 0676 \\ 65 \\ \hline 33810 \end{array}$$

$$\begin{array}{r} 40572 \\ 439530 \end{array}$$



333.97 on nails Dwight

$$\begin{array}{r} 124 \\ 124 \\ \hline 860 \\ 868 \end{array}$$

$$\begin{array}{r} 627 \\ 10 \\ \hline 637 \end{array}$$

$$\begin{array}{r} 124 \\ 124 \\ \hline 960 \\ 968 \end{array}$$

$$\begin{array}{r} 250 \\ 1156.02 \\ \hline 1801 \end{array}$$

$$\begin{array}{r} 17.74 \\ 7096 \\ \hline 3548 \\ 42576 \\ \hline 1774 \end{array}$$

$$\begin{array}{r} 192 \\ 27 \\ \hline 45047 \\ 33 \\ \hline 81 \end{array}$$

$$\begin{array}{r} 51 \\ 42 \\ \hline 308 \\ 170 \end{array}$$

$$\begin{array}{r} 053 \\ 22 \\ \hline 352 \\ 166 \\ \hline 1992 \end{array}$$

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