





# 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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Made in U. S. A.

MICROFILMED

APR 16 1965



2-23-39 Culvert Grades. Union + Ash

B.M. 5.17 46.14 40.97 N.W. (Union) + Ash

W. side N. inlet W. ch.  $\frac{40.24}{5.86}$   
 $\frac{4.70}{71.16}$

outlet  $\frac{E. ch.}{41.42}$   
 $\frac{4.72}{3.69}$   
 $\frac{39.98}{6.16}$   $\frac{W. End}{39.90}$   
 $\frac{6.24}{6.24}$

$\frac{E. ch.}{40.74}$   
 $\frac{4.72}{3.69}$   
 $\frac{4.40}{4.40}$   
 $\frac{41.03}{41.03}$

$\frac{W. ch.}{40.06}$   
 $\frac{6.08}{5.18}$   
 $\frac{0.90}{0.90}$

$\frac{42.05}{4.09}$   
 $\frac{3.09}{71.00}$   $\frac{41.68}{4.46}$

Culvert Grades. Date + state

B.M. 4.90 63.90 59.00 S.W. Date + state

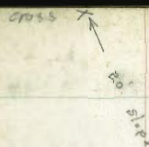
outlet  $\frac{W. End}{57.32}$   
 $\frac{2.58}{5.83}$   
 $\frac{40.75}{40.75}$   $\frac{E. End}{57.72}$   
 $\frac{6.18}{5.18}$   
 $\frac{41.00}{41.00}$

$\frac{E. state}{58.46}$   
 $\frac{5.44}{3.56}$   
 $\frac{1.88}{1.88}$

W. ch. inlet  $\frac{N. End}{58.09}$   
 $\frac{5.81}{4.81}$   
 $\frac{41.00}{41.00}$   $\frac{S. End.}{58.03}$   
 $\frac{5.81}{4.81}$   
 $\frac{41.06}{41.06}$

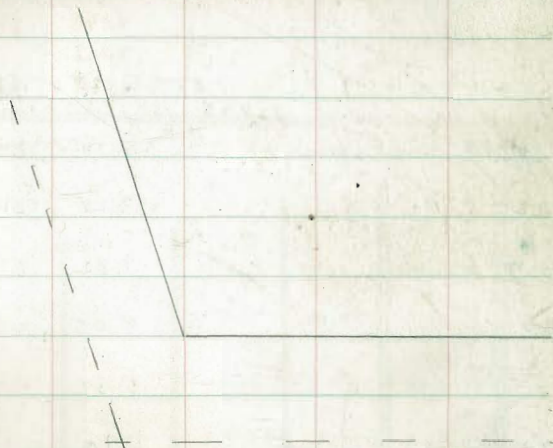
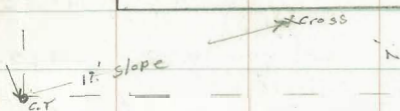
E. ch. inlet  $\frac{N. End}{60.10}$   
 $\frac{3.80}{2.83}$   
 $\frac{40.97}{40.97}$   $\frac{S. End}{58.96}$   
 $\frac{5.04}{2.82}$   
 $\frac{42.22}{42.22}$

E. End. inlet  $\frac{W. End.}{60.23}$   
 $\frac{3.27}{2.60}$   
 $\frac{41.07}{41.07}$   $\frac{E. End.}{60.64}$   
 $\frac{3.22}{2.22}$



N.E. Cor Union + Ash

Indexed





2-23-39 Chollas Valley Sewer Trunk Line  
continued from G.188 - Page 76

220.92

127+52 <sup>18</sup>	M.H. #38		210.85	204.52
128		9.25	211.67	205.25
+50		8.12	212.80	206.00
129		7.64	213.84	206.75
+50		7.00	213.92	207.50
130		7.38	213.54	208.25
+50		6.48	214.44	209.00
131		4.26	216.66	209.75
+35 <sup>14</sup>	M.H. #39	3.23	217.69	210.27
		228.35		
+70		11.74	216.61	210.90
132		10.28	218.07	211.45
+50		9.82	218.53	212.35
133		8.05	220.30	213.25
+50		6.37	221.94	214.15
134		6.10	222.25	215.05
+50		5.72	222.63	215.95
+94 <sup>28</sup>	M.H. #40	5.49	222.86	216.75
135+50		6.51	221.84	217.75
136		4.65	223.70	218.65
+50		4.30	224.05	219.55

217.52  
10.83  
228.35  
1.70  
226.65  
8.57  
235.22

Indexed  
B

2

+6.33 ✓

+6.42 ✓

+6.80 ✓

+7.13 ✓

+6.42 ✓

+5.29 ✓

+5.44 ✓

+6.91 ✓

+7.42 ✓

4 stub

217.52

+5.71 ✓

+6.62 ✓

+6.18 ✓

+7.05 ✓

+7.83 ✓

+7.20 ✓

+6.68 ✓

+6.11 ✓

+4.09 ✓

+5.05 ✓

+4.50 ✓

BM. 6 RP

M.H. 38

0+00

M.H. 38

0+40

0+80

1+20 B

1+60 E

Existing Sewer

Line from M.H. 38 to Ex. Sewer Outfall 1st stair.

15.23

226.08

210.85

210.85

205.00

+5.85

15.06

211.02

207.00

+4.02

14.48

211.60

209.00

+2.60

10.54

215.54

211.00

+4.54

0.31

225.77

223.40

+2.37

1.8 76

1.8 81



235.22

1.8%	137		8.81	226.41	220.45
	+50		7.31	227.91	221.35
	138		6.45	228.77	222.25
	+54 <sup>82</sup>	# M.H. 47	5.34	229.88	223.23
	139		6.31	228.91	224.05
	+50		6.12	229.10	224.95
	140		3.94	331.28	225.85
1.8%	+50	242.19	10.10	232.09	226.75
	141		9.28	232.91	227.65
	+50		6.67	235.52	228.55
	+80		5.34	236.85	229.10
	142+14 <sup>66</sup>	# M.H. 42 $\Delta$ 4-14-30 14 245.53	4.51	237.68	229.70
	+50		8.98	236.55	230.20
	143		9.65	235.88	230.95
1.5%	+50		9.76	235.77	231.70
	144		8.11	237.42	232.45
	+50		7.09	238.44	233.20
	145		5.91	239.62	233.95
	+50	# M.H. 43	5.04	240.49	234.73
	146		5.34	240.19	235.48

6.11 Ad

235.22

+ 5.96<sup>v</sup>+ 6.56<sup>v</sup>+ 6.52<sup>v</sup>+ 6.65<sup>v</sup>+ 4.86<sup>v</sup>+ 4.15<sup>v</sup>+ 5.43<sup>v</sup>+ 5.34<sup>v</sup>+ 5.26<sup>v</sup>+ 6.97<sup>v</sup>+ 7.75<sup>v</sup>+ 7.98<sup>v</sup>

6.11 Ad

+ 6.35<sup>v</sup>+ 4.93<sup>v</sup>+ 4.07<sup>v</sup>+ 4.97<sup>v</sup>+ 5.74<sup>v</sup>+ 5.67<sup>v</sup>+ 5.76<sup>v</sup>

6.11 Ad

+ 4.71<sup>v</sup>

3.11

232.11

10.08

242.19

5.52

236.60 = 236.60 E stub M.H. 42

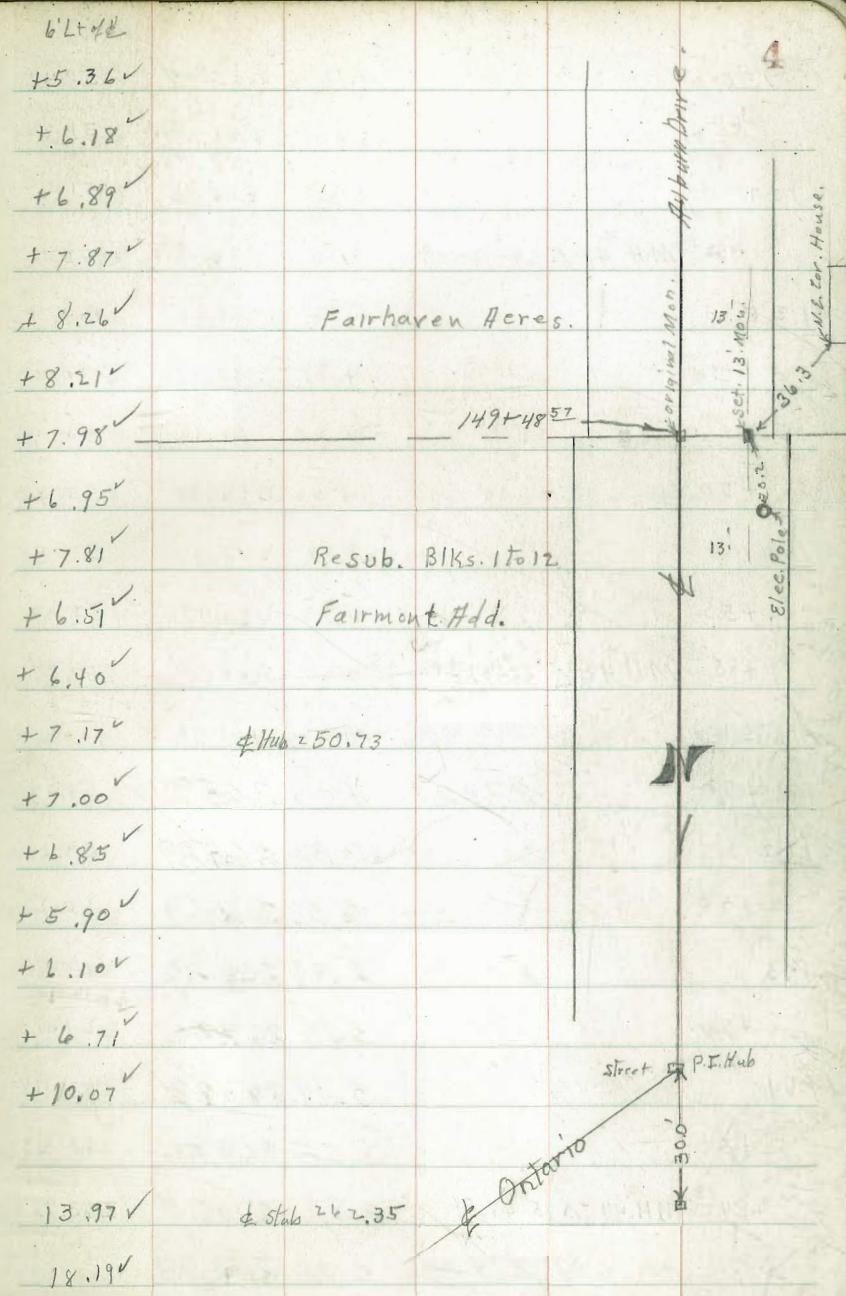
Apr 6-39

BM. Nails & loop pole 2836 15.11+144+75 239.75  
5.83  
245.53

3



			T245.53			
	+50			3.94	241.59	236.23
	147			2.37	243.16	236.98
	+50	T.P. 9.01	253.63	0.91	244.62	237.73
	148			7.28	246.35	238.48
	+50	M.H. #44		6.14	247.49	239.23 ✓
1.5%	149			5.44	248.19	39.98
	+48	57		4.95	248.68	40.70
	150			5.20	248.43	41.48
	+50			3.59	250.04	42.23
				9.6	244.0	
	151			4.14	249.49	42.98
	+25			3.87	249.76	43.36
		T.P. 13.11	263.84	2.90	250.73	= 250.73 #Hub
	+62	M.H. #45	Δ 37-47 Rt.	12.75	251.09	243.92 ✓
	152			12.37	251.47	44.47
	+50			11.77	52.07	45.22
	153			11.97	51.87	45.97
	+50			11.02	52.82	46.72
	154			9.66	54.18	47.47
	+50			5.55	58.29	48.22
1.5%	155	+12.93	M.H. #46 Δ 37° 30' - 30" Lt.	0.70	63.14	249.17
		T.P. 11.99	274.34	1.49	262.35 ✓	#Stub
	+50			4.43	67.91	49.72





156	100		11.16	263.18	50.47
	+50				
	T.P.	2.30	263.97	13.05	261.29
				12.67	261.67
157				5.62	258.35
	T.P.	7.47	265.38	6.06	257.91
	+32.36	M.H. 47	Δ 64-12-108	9.10	56.28
					252.47
158				5.96	59.42
	+50			4.91	60.47
159				5.20	60.18
	+50	T.P.	6.15	268.50	3.03
					262.35
					55.73
160				5.19	263.31
	+50			4.53	63.97
	+85.78	M.H. #	48. Δ 33-37 Lt.	4.26	64.24
					257.77
	T.P.			4.67	263.89
					End. Stub 263.89
161	+50			8.00	265.21
					58.73
162				7.32	265.89
	+50			6.52	266.69
					60.23
163				6.35	266.86
	+50			5.45	267.76
					61.73
164				5.99	267.22
	+50			3.65	269.56
					63.23
	+84.83	M.H. #	49 Δ 15-45 Rt.	2.96	270.25
					263.76
	T.P. on 8P.	6.17	279.10	0.28	272.93

+12.71 ✓

+10.07 ✓

+6.38 ✓

+3.81 ✓

+5.94 ✓

+6.24 ✓

+5.20 ✓

+6.62 ✓

+6.83 ✓

+6.74 ✓

+6.47 ✓

South side culvert P.6 B.M.B.P.

+6.48

+6.41

+6.46

+5.88

+6.03

+4.74

+6.33

+6.49

272.93

0.28+

273.21

896

264.25

269.24

0.01

chk. M.H. #48 cut stub.



165+00		279.10			
+50		7.94	271.16	264.74	
166		7.46	271.64	265.49	
+50		6.80	272.30	266.24	
167		5.62	273.48	266.99	
+50		4.85	274.25	267.74	
168+04 <sup>23</sup>	M.H. 50	4.32	274.78	268.56	
70					
+50		285.04	8.74	276.30	269.55
169		10.11	274.93	270.00	
+50		8.69	276.35	270.75	
170		7.95	277.09	271.50	
60					
+50		6.33	278.71	272.40	
171+07 <sup>36</sup>		1288.20	4.96	280.08	273.10
171+05 <sup>25</sup>	M.H. 51	Δ 46-30 Lt	8.16	280.10	273.10
+40 <sup>23</sup>			10.37	77.89	73.57
+74 <sup>80</sup>			6.31	81.95	74.04
172+13 <sup>74</sup>	S. Line Univ	299.73	1.92	97.81	74.57
172+78	N. Line Univ	294.80	1.78	97.95	75.43
173+00	Foot of Bank		11.82	82.98	75.73
173+46 <sup>43</sup>	M.H. 52		11.65	83.15	276.36

Abandoned  
See Page 23

1.35070  
University FVG Tunnel  
Equal in ↑ 150 070

+6.42	H.I. P. 5	= 279.10
+6.15		322-
+6.06		TR = 27588
+6.49		916+
+6.51		28504 = X
+6.22		496-
+6.75		28008
+4.93	chk. on 171+07 <sup>36</sup>	280.10 stub
+5.60		002 - Error
+5.59		
+6.31		
	171+03 Top conc Wall	28826 876 27950 OK.
+7.00 ✓	10.76 277.50 OK.	299.73 X 12.55 287.18 1.08 288.26 X
+4.32 ✓		
+7.91 ✓		
+23.24 ✓	172+19 <sup>24</sup> S. db. Univ. 297.50 OK	
+22.52 ✓	172+70 <sup>70</sup> N. line pay 296.37	
+7.25 ✓		3.36 OK.
+6.79 ✓		



294.80

174 11.85 82.95 77.09

+50 11.41 83.39 77.77

175 11.33 83.47 78.44

+50 11.26 83.54 79.11

175+79<sup>89</sup> MH<sup>#</sup>53 9.24 85.56 279.51

— 5-9-39 —

Change M.H. 49 to M.H. 51

164+84<sup>83</sup> M.H.<sup>#</sup>49 7.63 270.13 263.76

165+50 6.58 271.18 264.75

166+00 6.04 271.72 265.50

+50 5.42 272.34 266.25

167+00 4.84 272.92 267.00

+50 3.82 273.94 267.75

168+00 3.14 274.62 268.50

+43<sup>33</sup> M.H.<sup>#</sup>50 284.20  
15-57-30<sup>0</sup> 9.82 274.53 269.14

169+00 9.21 275.14 269.96

+50 8.32 276.03 270.70

Abandoned.

1.50  
1.50  
1.50

BM 285.32 4 stub 175+79.89

7.48

294.80

3.34

291.46

8.27

299.73

61 Rt  
+5.86

+5.62

+5.03

+4.43

+6.05

+6.37

+6.43

+6.22

+6.09

+8.92

+6.19

+6.12

+5.39

+5.18

+5.33

272.93 B.M. B.P. S. End Culvert in Wightman St.

4.83

277.76

3.08

274.68

7.67

282.35

6.60

271.16



1.47 96

170+00	<del>784.35</del>	6.95	77.40	271.44
+50	<del>Abandoned.</del>	6.55	77.80	272.18
171+00		5.07	79.28	272.92
+13 <sup>38</sup>	M.H.51. Δ 55°-36'-47"	4.25	80.10	273.10

5/15/39

1.35 070

175+79 <sup>89</sup>	M.H.53 - Page 7	293.88		
176+00		8.32	285.56	279.51
176+50 <sup>90</sup>		8.36	85.52	79.78
177		7.88	86.00	80.45
+50		7.25	86.63	81.12
178		7.15	86.73	81.80
+25 <sup>92</sup>	M.H.54	6.40	87.48	82.48
(24.01)		5.88	88.00	282.83
+50		5.12	88.76	83.15
179		4.24	89.60	83.82
+50		3.16	90.72	84.50
180 T.P.	13.36 20479	2.45	291.43	85.28
+50		11.77	294.02	85.85
+72 <sup>99</sup>	M.H.55 Δ 1°-23' 44"	12.78	92.01	286.15

Continued Page 21.

+5.96 ✓  
+5.62 ✓  
+6.36 ✓  
+7.00 ✓

285.56 Estab M.H. 53  
8.32  
293.88 π

+6.65 ✓  
+5.74 ✓  
+5.55 ✓  
+5.51 ✓  
+4.93 ✓  
+5.00 ✓  
+5.17 ✓  
+5.61 ✓  
+5.78 ✓  
+6.22 ✓  
+6.25 ✓  
+7.17 ✓  
+5.86 ✓

293.15 8.32



Bliss - Notes  
4/10/34

Sewer Construction  
Washington Ave Sewer. 6<sup>th</sup> St East

	H. T. 287.16	Elev. Stake	Elev. Grade Flow Line
0400 Existing M.H. 2 63 Washington		545 281.71	274.90
0732.5		545 281.71	274.58
M.H. 0765 #1 4 1/2' dia		517 281.99	274.25
1400 Brick		482 282.34	273.90
1440 connect concrete to 2022 pipe 1761	275.73	1008 277.08	273.50
48" dia 1766	252.54	790 267.83	264.50
170 52" dia 1556 dia		0.89 247.65	245.50
2120		6.72 245.82	242.0
2370 Brick		8.89 243.65	240.50
2770		9.21 243.33	239.00
27 5 1/2" dia 12MM			214 274 210 264 206 To Tank
04 M.H.	229.42	1002 219.40	206.70
0700		7.52 219.33	210.0
Brick		10.48 94	
0723 63		7.97 218.55	214.00
Brick	241.01	9.13 88	
0750 63		7.53 231.74	227.00
1400		6.61 40	
Brick 1429 63		5.01 234.31	230.13
connect ex. M.H. 1765 63		1.72 239.29	232.0
			237.4

BM 284.02  
3.14 +  
287.16  
12.55 TP  
274.61 62

51 X 62  
274.61  
1.12 +  
275.73  
27.20  
208.53 TP  
4.01  
252.54

- C 7.13
- C 7.74
- C 8.44
- C 2.58
- C 3.33
- C 6.15
- C 3.82
- E 0.78
- C 3.15
- C 4.33
- C 12.13
- C 9.53
- C 4.88
- C 4.79
- C 4.78
- C 7.29

13.25 -  
239.29 on 1129 6 on 7<sup>th</sup> St. Sewer  
0.13 +  
239.42  
12.92 -  
226.49 TP  
0.46 +  
226.95  
10.40  
216.46  
216.26  
0.20 Error

Levels to check. From T.P. on wall to New M.H. 6  
248.52 T.P. Nail on side of concrete plant  
4.19 +  
252.72  
12.49  
240.23 T.P.  
0.78 +  
241.01  
11.99 -  
229.02 TP  
0.90 +  
229.42  
13.00  
216.42 check on Slab of New M.H.  
216.46  
0.04 Error  
241.01

Indexed  
JB

1729.6

9



Mulker  
Bliss  
Brigandine  
4-24-39

Construction Grades Alley 113  
Univ. Hts.  
Between Illinois and Iowa  
From Skine Meade 450' South  
To Alliance of East & West Alley.

Station

1+50

1+00

T.P. 3.98 386.55 5.09 382.57

0+60 = E.V.C

0+50 = Brk.

0+40 "

0+30 "

0+20 "

0+10 "

0+0.0 = Skine Meade  
on top cb. Sh. Alley

Book 1555-35 5.37 387.66

382.29 + Alley

on stub West  
side  
1+00

S.E. top 6.  
Meade

Lot  
- E line

In de red  
*[Signature]*

Rt  
- W. line 10

5/7/39  
7345.38

Reset 5/9/39

381.47

5.08  
2.63  
+ 0.45 ✓

382.10

4.45  
3.45  
+ 1.00 ✓

382.60

5.06  
2.99  
+ 0.57 ✓

382.70

4.96  
4.80  
+ 0.16 ✓

382.70

4.96  
4.73  
+ 0.23 ✓

382.65

5.01  
4.54  
+ 0.47 ✓

382.55

5.11  
4.77  
+ 0.34 ✓

382.40

5.26  
4.14  
+ 1.12 ✓

382.10

5.56 ✓

381.27

4.11  
4.11  
0.0

381.27

5.28  
3.83  
+ 1.45 ✓

387.66 - X

381.90

5.76  
5.09  
+ 0.67 ✓

382.40

5.26  
5.27  
- 0.01 ✓

382.50

5.16  
5.03  
+ 0.13 ✓

382.50

5.16  
4.76  
+ 0.40 ✓

382.45

5.21  
2.88  
+ 0.33 ✓

382.35

5.31  
5.06  
+ 0.25 ✓

382.20

5.46  
2.78  
+ 0.68 ✓

381.88

5.78  
5.76  
+ 0.02

387.66



Alley #13 - Cont.

Station.

Book 1555-32  
 Chh. N. L. Top Hub & (1492) 5.02 377.47

0.01 = Error

377.46 - Hub. Book 1555-32

4 + 50 = N. Line + E. + W. Alley.

4 + 40

4 + 00

3 + 50

3 + 00

TP. 2.76 382.48 6.83 379.72 3 + 00

2 + 50

2 + 00

386.55

Lst.  
 = Rust Line

Rt.  
 = Rust Line

5/9/39  
 7285.38

377.80  
 4.68  
 4.46  
 + 0.22 ✓

377.80  
 4.68  
 3.66  
 + 1.02 ✓

378.31  
 4.17  
 4.04  
 + 0.13 ✓

378.95  
 3.53  
 3.28  
 + 0.25 ✓

379.58  
 2.96  
 1.85  
 + 1.05 ✓

380.21  
 6.34  
 5.30  
 + 1.04 ✓

380.84 380.84  
 5.71 4.54  
 4.22 4.34  
 + 1.47 ✓ + 0.20

382.48

386.55

377.40  
 5.08  
 4.97  
 + 0.11 ✓

377.60  
 4.88  
 3.88  
 + 1.00 ✓

378.11  
 4.37  
 3.37  
 + 1.00 ✓

378.75 - 378.75  
 6.63 3.73  
 6.82 3.72  
 - 0.18 - 0.19 ✓

Reset 5/9/39 386.55 - X  
 379.34 379.38  
 2.00 7.17  
 2.00 6.83  
 + 0.34 ✓

Reset 5-9-39  
 380.01 380.01  
 5.37 6.54  
 7.34 6.16  
 + 0.98 + 0.38 ✓

Reset 5-9-39  
 380.64 380.64  
 4.74 5.91  
 4.74 5.50  
 0.0 16.71 ✓



Cont. - Alley Blk. 113 - U. Hts.  
Sewer Laterals Const. Grades.

From Meade St. South

		Elev. Stubs	Elev. Flow Line
0+00 = Shine Meade	387.66 <sup>±</sup>	4.73	
+40 = Lot. No 1 on East. in lot 47		382.93	377.70
+43 = " No 2 " " " " 2	4.86	382.80	376.80
1+15 = " No. 3 " West lot 5	386.55 <sup>±</sup>	4.76	381.79
+65 = " No 4 " " Lot 7	5.68	380.87	375.80
+90 = " No 5 on E " 41	5.06	381.49	375.95
2+15 = " No 6 " " Lot 9	4.32	382.23	375.00
3+40 = " No. 7 " " Lot 14	382.48 <sup>±</sup>	3.75	378.73
3+90 = " No 8 " " Lot. 16	4.77	377.71	371.00

Cuts. offsets.

H.I. from P. 10-11.

+5.23 ✓	2' E. E.L.
+6.00 ✓	2' W. W.L.
+5.59 ✓	2' W. W.L.
+5.07 ✓	2' " W.L.
+5.54 ✓	2' E. E.L.
+7.23 ✓	2' W. W.L.
+6.53 ✓	2' W. W.L.
+6.71 ✓	2' W. W.L.



Walker  
Bliss  
Buzendine  
9-24-39

Construction Grades  
Alley Blk. 146 Univ. Hts.  
Bet. Louisiana & Mississippi  
From North line Polk to St. Howard St

Station

2+00

1+80 = P.V.C

1+40

1+00 = E.V.C

0+80

8.08 323.15 1.81 315.07

0+60

0+40

0+20

0+00

B.M. BR C 91 316.88

309.97  
SE. Polk  
& Miss.  
Book 1548-51

Lt.  
= West

Indexed  
JB

Rt.  
East 13

316.96  
6.19  
2.19  
+2.00 ✓

316.60  
6.55 ✓

315.80  
7.35  
7.02  
+0.33 ✓

315.00  
8.15  
7.57  
+0.58 ✓

314.44  
8.71  
8.02  
+0.69 ✓

313.56  
9.59  
8.92  
+0.67 ✓

312.36  
7.52  
2.78  
+1.74 ✓

310.85  
6.03  
3.46  
+2.57 ✓

309.18  
7.70 ✓

317.26  
5.89  
3.89  
+2.00 ✓

316.90  
6.25  
3.81  
+0.49 ✓

316.10  
7.05  
6.68  
+0.37 ✓

315.30  
7.85  
7.22  
+0.63 ✓

314.73  
8.42  
6.42  
+2.00 ✓

313.80  
3.08  
2.17  
+0.91 ✓

312.53  
4.35  
2.07  
+2.28 ✓

310.92  
5.96  
3.89  
+2.07 ✓

309.13  
7.75 ✓

316.88



Cont. Alley 146 - Univ. Hts.

Lt.  
= West.

Rt.  
= East 11

Station

4 + 80 = P.V.C

320.42

320.72

5.50  
4.81  
+ 0.69 ✓

5.20  
3.20  
+ 2.00 ✓

4 + 30

319.57

319.87

6.35  
7.14  
- 0.79 ✓

6.05  
4.05  
+ 2.00 ✓

3 + 80 = E.V.C

318.72

319.02

7.20  
7.33  
- 0.13 ✓

6.90  
5.00  
+ 1.90 ✓

3 + 60

318.41

318.71

7.51  
7.97  
- 0.46 ✓

7.21  
6.46  
+ 0.75 ✓

3 + 40

318.16

318.46

7.76  
7.49  
+ 0.27 ✓

7.46  
6.75  
+ 0.71 ✓

T.P. 7.54 325.92 4.77 318.38

325.92

3 + 20

317.96

318.26

5.19  
5.16  
+ 0.03 ✓

7.66  
7.18  
+ 0.48 ✓

3 + 00 = P.V.C

317.83

318.13

5.32  
4.53  
+ 0.79 ✓

5.02  
4.18  
+ 0.84 ✓

2 + 60 = E.V.C

317.61

317.91

5.54  
5.39  
+ 0.15 ✓

5.24  
4.71  
+ 0.53 ✓

2 + 40

317.47

317.77

5.68  
5.62  
+ 0.06 ✓

5.38  
4.52  
+ 0.86 ✓

2 + 20

317.25

317.55

5.90  
4.50  
+ 1.40 ✓

5.60  
4.60  
+ 1.00 ✓

323.15

323.15



chk. 14 top cb. 5+99.3 Book 1598-55  $\begin{matrix} 4.18 & 324.01 \\ & \underline{0.01 \text{ Error}} \\ & 324.02 \end{matrix}$

5+99.3 = S.W. Howard st.

$\begin{matrix} 323.96 \\ \underline{4.24} \end{matrix}$

$\begin{matrix} 324.86 \\ \underline{3.34} \end{matrix}$

5+80

$\begin{matrix} 323.62 \\ \underline{4.58} \\ \underline{4.24} \\ -0.36 \end{matrix}$

$\begin{matrix} 324.10 \\ \underline{4.10} \\ \underline{5.52} \\ -0.62 \end{matrix}$

5+60

$\begin{matrix} 322.90 \\ \underline{5.30} \\ \underline{5.11} \\ +4.19 \end{matrix}$

$\begin{matrix} 323.20 \\ \underline{5.00} \\ \underline{5.06} \\ -0.06 \end{matrix}$

5+40

$\begin{matrix} 322.07 \\ \underline{6.13} \\ \underline{5.91} \\ +9.22 \end{matrix}$

$\begin{matrix} 322.37 \\ \underline{5.83} \\ \underline{5.90} \\ +0.75 \end{matrix}$

T.P. 5.72 328.20 3.44 322.48

328.20

5+20

$\begin{matrix} 321.38 \\ \underline{4.54} \\ \underline{4.93} \\ -0.39 \end{matrix}$

$\begin{matrix} 321.68 \\ \underline{4.24} \\ \underline{3.11} \\ +1.13 \end{matrix}$

5+00

$\begin{matrix} 320.89 \\ \underline{5.09} \\ \underline{5.11} \\ -0.02 \end{matrix}$

$\begin{matrix} 321.13 \\ \underline{4.79} \\ \underline{4.20} \\ +0.59 \end{matrix}$

325.92

325.92



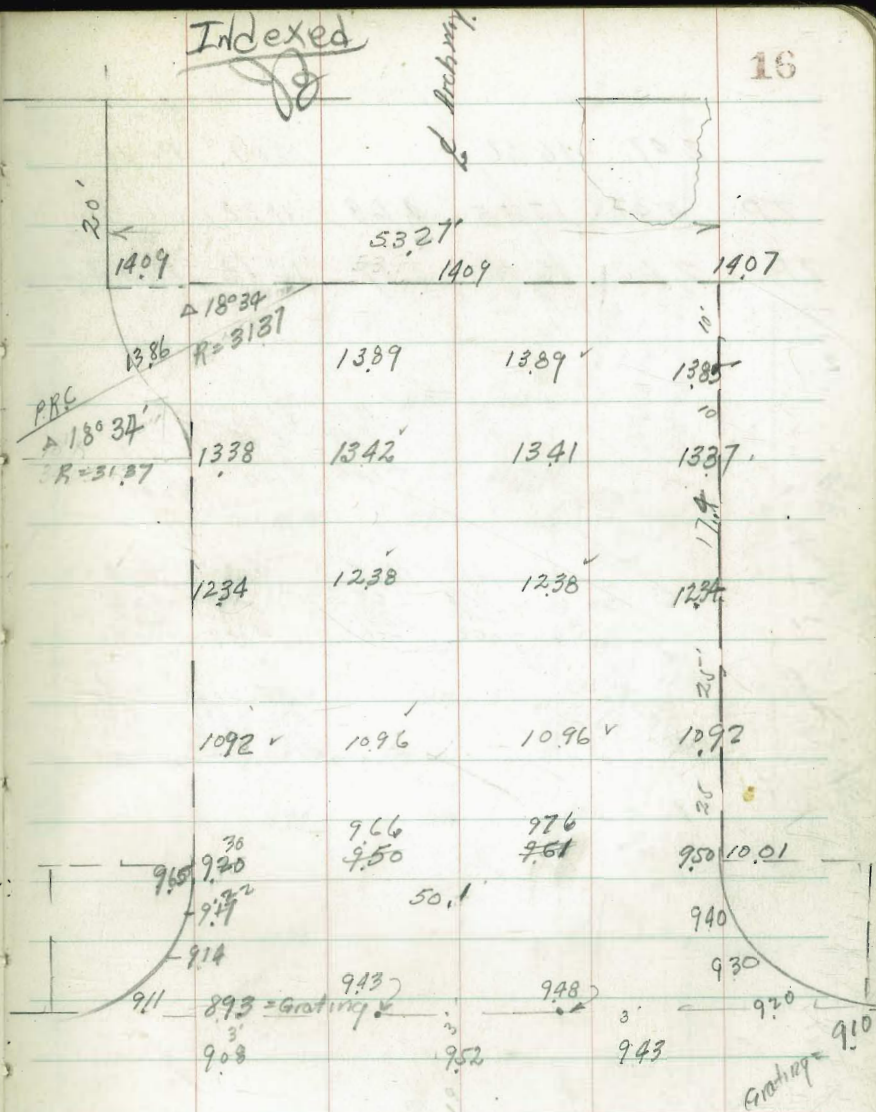
New Police Station  
 Paving Grades  
 Market St. Entrance

	696	1810		11.14
TP	595	1596	8.09	10.01

U.S. G.  
 NE 8.14  
 + Pacific

Indexed

16

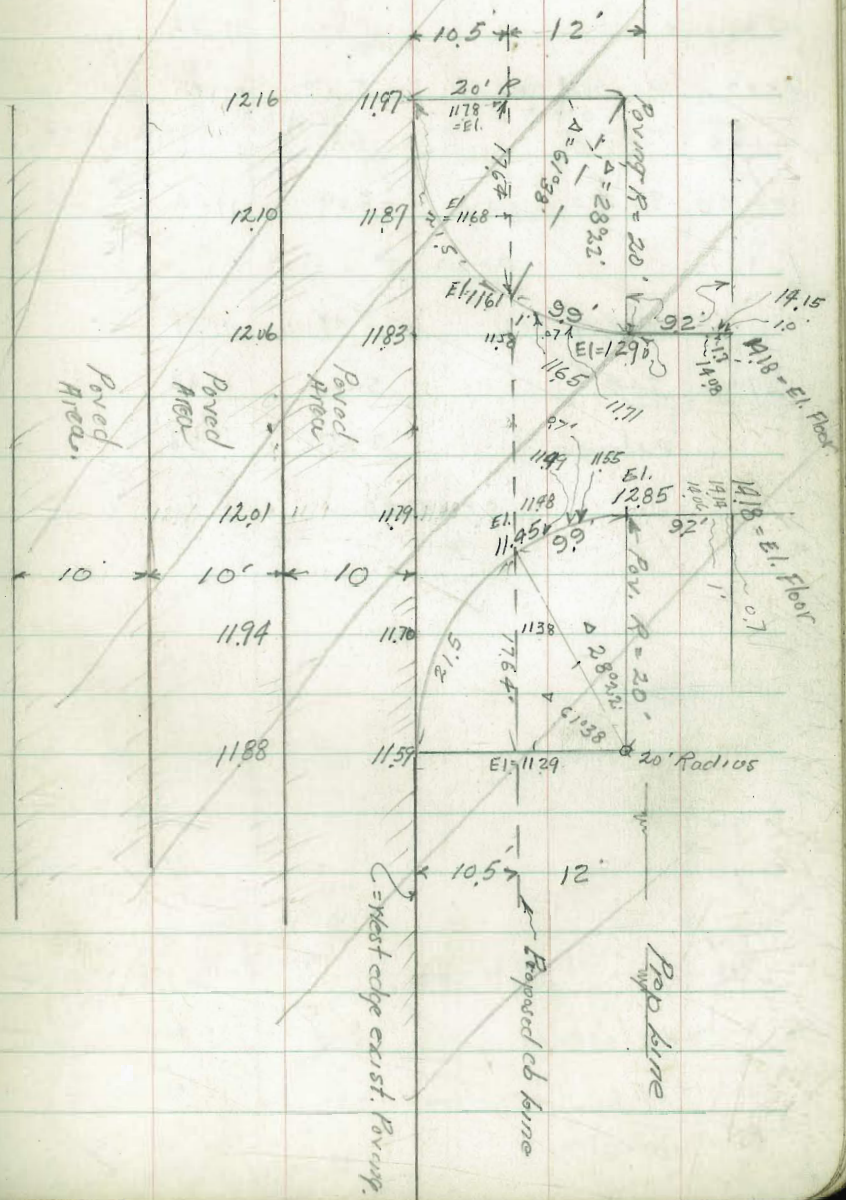




				El. top conc.
2.97	16.56		14.09	P-16
T.P.	5.97	17.35	4.68	11.88
				E. Ent.
T.P.	2.62	16.80	3.17	14.18
				Floor of garage

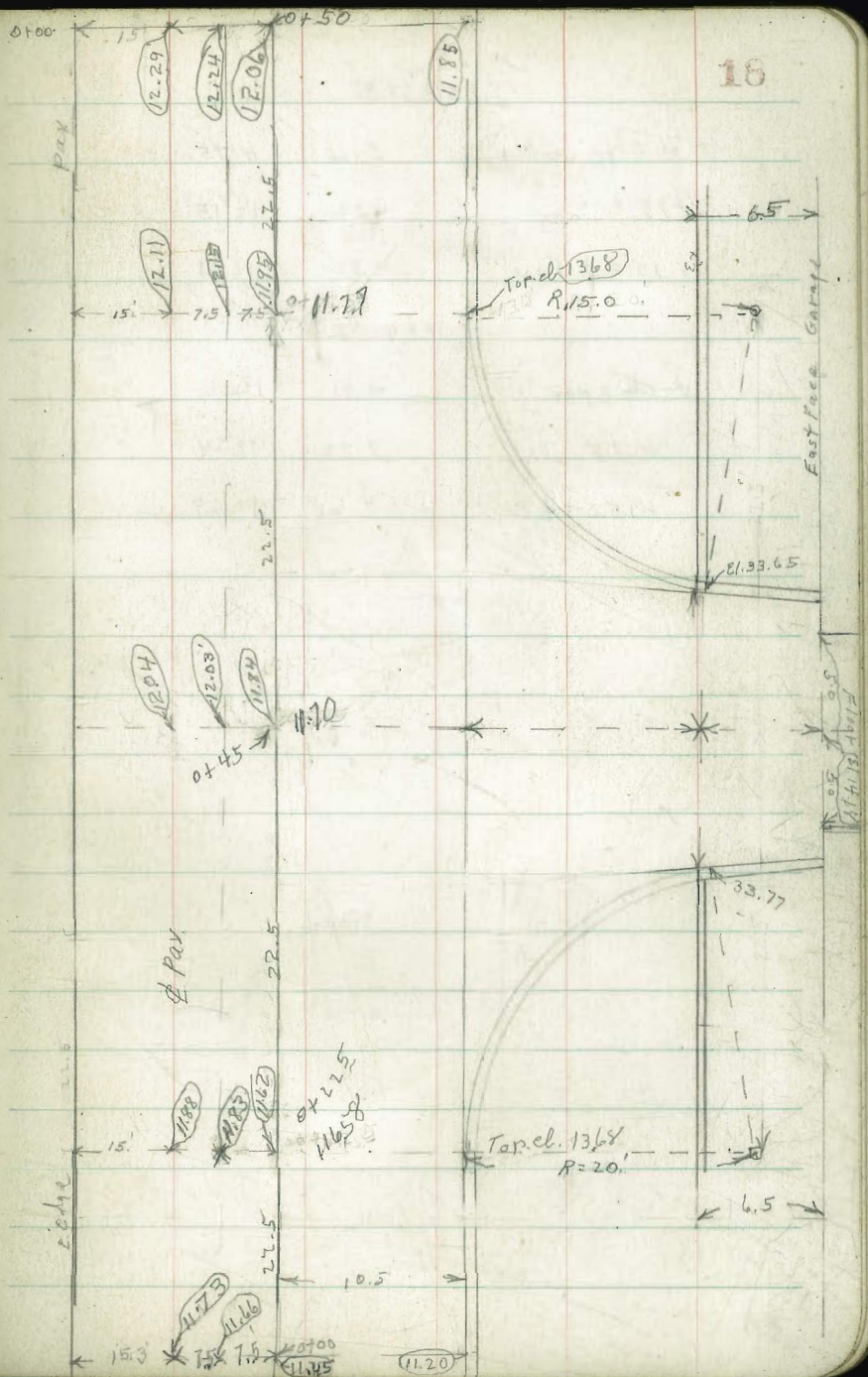
11.71	11.65	on south.
5.09	5.15	11.61
4.09	4.15	5.19
+1.00	+1.00	+0.90

Abandon ed.	14.08	14.15	14.06	14.14 = 14
	2.72	2.65	2.74	2.66
	2.88	2.75	2.77	2.69
	-0.09	-0.10	-0.03	-0.03
	11.25	11.49	11.55	
	5.35	5.31	5.25	
	5.10	5.06	5.01	
	+0.25	+0.25	+0.25	





B.M. High 2.77	16.97	14.18
△ in edge wall s.	3.32	13.65
Bottom N	3.20	13.77
0+00 W. edge pav	5.52	11.45
0+00 7.5 E. Pav	5.31	11.66
0+00 15' E = φ Pav	5.24	11.73
0+22.5		
15' E φ Pav	5.09	11.88
7.5 E	5.14	11.83
W. edge pav	5.35	11.62
0+45 φ Door		
0+75 E		
W. edge pav	5.13	11.84
+7.5 E	4.94	12.03
+15' = φ Pav	4.93	12.04





0+67.5

w. edge pav 5.02 11.75

+7.5 E 4.82 12.15

+7.5 =  $\phi$  Pav 4.84 12.11

0+90 S. End.

w. edge pav 4.91 12.06

+7.5 4.73 12.24

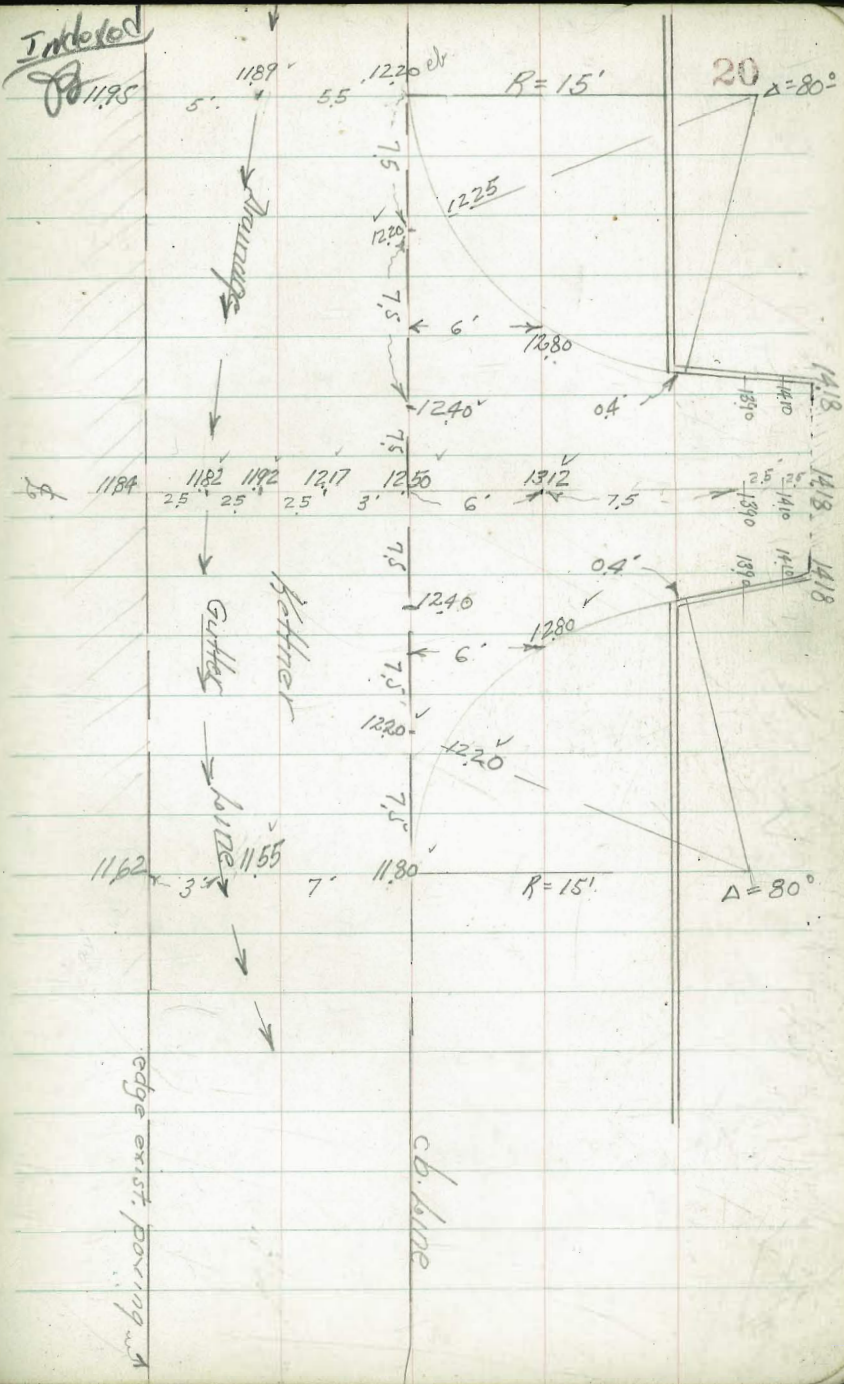
+15.0 =  $\phi$  Pav. 4.68 12.29



GRADES For Drive Way  
Police Station East End.

Temp. 8.14.

Floor Garage 2.77 16.95 14.18





Chollas Sewer Con. from Page 8

		304.79			
180+72 <sup>23</sup> 28	M.H. 55	Δ 1-23 Lt.	92.01	286.15	
181			12.40	92.39	86.60
+50			11.64	93.15	87.41
182			10.79	94.00	88.22
+50			9.38	95.41	89.03
+94 <sup>39</sup>	M.H. 56	Δ 59-17 Rt.	8.88	95.91	289.75
183+50 <sup>(55.61)</sup>			7.48	97.31	90.64
184		1308.60	9.86	98.74	91.45
+50			11.02	97.58	92.26
185			10.53	98.07	93.07
+50			9.08	99.52	93.88
+81 <sup>2</sup>	M.H. 57		8.95	99.65	294.40
186			8.03	200.57	94.70
+50			8.03	200.57	95.50
187			5.65	02.95	96.30
+50			5.65	02.95	97.12
188		1315.40	3.62	04.98	98.03
+69 <sup>40</sup>	M.H. 58	Δ 32-05 Rt.	8.06	07.34	299.07

+5.86 ✓

+5.79 ✓

+5.74 ✓

+5.78 ✓

+6.38 ✓

+6.16 ✓

+6.67 ✓

+7.29 ✓

+5.32 ✓

+5.00 ✓

+5.64 ✓

+5.25 ✓

+5.87 ✓

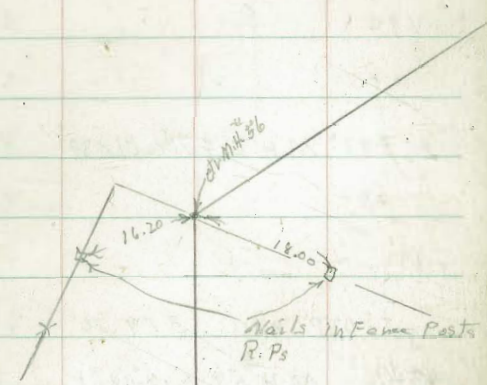
+5.07 ✓

+6.65 ✓

+5.83 ✓

+6.95 ✓

+8.27



304.79 ↑  
5.81  
298.98  
9.62  
308.60 ↑  
2.24  
306.36  
7.04  
315.40 ↑  
1.65  
313.75 = 313.81 BM Hyatt SE.  
Orange + Altadena

307.4

SE. Orange + Altadena 313.81



188+64 <sup>48</sup> M.H. 58 (30.60)	317.67	10.93	06.74	299.14	99.63
189+00		6.00	11.67		300.43
+50		5.10	12.57		301.22
190		9.57	08.10		302.01
+50		8.72	8.95		302.60
+87° M.H. B # 114 B1439		8.23	9.44		303.62
+50		7.04	10.63		304.43
192		6.02	311.65		305.24
+50 TP 8.11	319.76	8.00	11.76		306.15
193+06 <sup>59</sup> # M.H. 59 Δ 18° 00 Lt.					

Con. page 24

Change from M.H. 49 to M.H. 51

BM.	8.32	281.25	272.93	culvert in Wrightman Ave
164+24 <sup>82</sup> M.H. 49		9.95	271.30	6' offset. stubs
165+50		8.71		
166		6.04		
+46 <sup>48</sup> M.H.		3.99		
167		2.36		
+50		6.27		
168		5.11		
+50		3.45		
TP	9.84	287.23	277.39	

Abandoned

1.62 4'

6-2-34.	BM. 313.81 Hyd. S.E. Aladena + Orange	22
+8.27	3.86	
47.11 ✓	317.67	10.26
+11.24 ✓		307.41
+11.35 ✓		8.27
+6.09 ✓		309.14
+6.35 ✓		
+5.82 ✓		
+6.20 ✓		
+6.71 ✓		
+5.61 ✓		



169		7.35		
+50		4.17		
170		5.16		
+50		10.23		
171		9.52		
+50		9.42		
172+04 <sup>26</sup>	See Page 6	7.13	280.10	273.10

Abandoned

5-19-39

Final Grades. M.H. 49 to 51  
F.B. 1541-1541

BM, 665	279.58	272.93	Culvert
164+89 <sup>83</sup> M.H. 49	8.26	171.32	263.76
165+50	8.42	171.16	64.72
166	7.93	171.65	65.45
+50	7.27	172.31	66.20
167+02 <sup>84</sup> BM. 50	6.66	172.92	67.00
+50	5.66	173.92	67.70
168	5.38	174.20	68.45
+58 <sup>84</sup> M.H. "A"	7.91	171.47	69.34
169+02 <sup>80</sup> = 169+00 Page 7	4.44	275.14	69.96
169+52 <sup>80</sup> = +50		76.03	70.70
170+02 <sup>80</sup> = 170+00 " "		77.40	71.44
+52 <sup>80</sup> = +50 " "		77.80	72.18
171+02 <sup>80</sup> = 172+00 " "		79.28	72.92
		80.10	273.10

+7.00

+7.56

+6.44

+6.20

+6.11

+5.92

+6.22

+5.75

+2.13

+5.18

+5.33

+5.96

+5.62

+6.36

+7.00



193+06 <sup>59</sup>	M.H. 59, L 18-00 Lt			306.15	
+50		7.95	11.81	306.75	+5.06✓
194		6.96	12.80	307.45	+5.35✓
+50		6.28	13.48	308.15	+5.33✓
195		5.13	14.63	308.85	+5.78✓
+50		4.06	15.70	309.55	+6.15✓
196	6' Lt	3.25	16.51	310.25	+6.26✓
+28 <sup>27</sup>	M.H. 60 Δ 41-55 Rt	3.73	16.63	310.65	+5.38✓
+50	10' Rt	2.97	16.79	310.95	+5.84✓
T.P.	12.33 327.93	4.16	315.60		
197	6' Lt	10.43	17.50	311.65	+5.85✓
+50	6' Lt	8.58	19.35	312.35	+7.00
				313.03	+9.81✓
+98 <sup>45</sup>	M.H. 61 Δ 73-02 Lt	5.09	22.84	313.13	+9.71✓
198+50		8.51	19.42	13.85	+5.37✓
199		5.00	22.93	14.55	+8.38✓
	≠ Trojan + 52 <sup>nd</sup> St,			314.83	+11.30✓
+19 <sup>71</sup>	M.H. 62 Δ 89-28 Rt	1.80	26.13	314.93	+11.20✓
BM Mon S.7' Lin = Trojan	20.24 W. 52 <sup>nd</sup> St	3.93		324.00 ✓	
6-19-39					
BM Mon	8.00 332.00			324.00	Trojan + 52 <sup>nd</sup> St
199+50		7.86	324.14	25.30	+8.84✓
200		8.79	323.21	16.00	+7.21✓
+50		8.16	323.84	16.70	+7.14✓
201		7.59	24.41	17.40	+7.01✓

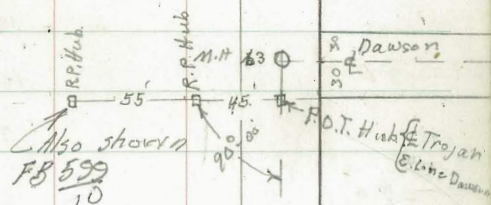


332.00

	+50		6.61	325.39	18.10	
	202		8.85	23.15	18.80	
	+38 <sup>36</sup> #		4.56	27.44	319.29	
	+68 <sup>36</sup> @ P.O.T. Hub & Line Dawson				19.50	
	+50					
	203		7.90	24.10	20.20	
	+50		7.35	24.65	20.90	
	204		5.37	26.63	21.60	
	+50 T.P.	10.89	38.88	4.01	27.99	22.30
1.40 to	205		9.30	29.58	23.00	
	+50		6.13	32.75	23.70	
	206		5.92	32.96	24.40	
	+50		6.97	31.91	25.10	
	+83 <sup>51</sup> #					
	M.H. 64					
	R.P.					
		Page 26	335.56	325.62		

25

+7.29 <sup>✓</sup>
+4.35 <sup>✓</sup>
+8.15 <sup>✓</sup>
+3.90 <sup>✓</sup>
+3.75 <sup>✓</sup>
+5.03 <sup>✓</sup>
+5.69 <sup>✓</sup>
+6.88 <sup>✓</sup>
+9.05 <sup>✓</sup>
+8.56 <sup>✓</sup>
+6.81 <sup>✓</sup>
+7.94 <sup>✓</sup>





			340.96			
206+83 <sup>51</sup>	M.H. 64	∠ 29-22 Rt	5.40	35.56	325.62	
207			10.06	30.90	25.45	
+50			10.54	30.42	24.55	
208			9.19	31.77	27.25	
+50			6.26	34.70	27.95	
209			5.63	35.33	28.65	
+50			6.46	34.50	29.35	
209+86 <sup>27</sup>	M.H. 65	∠ 13-08 Lt	4.96	36.00	329.87	
208+57 <sup>96</sup>						
209			5.71	35.25	30.65	
+50			4.53	36.48	31.58	
210			3.81	37.15	32.51	
+50			3.78	37.18	33.44	
211	T.P.	13.50	51.94	2.52	38.44	34.37
+37 <sup>96</sup>	M.H. 66			12.68	39.26	335.08
212			11.50	40.44	36.23	
+50			11.18	40.76	37.16	
213			10.31	41.63	38.09	
+50			8.10	43.84	39.02	
214+12	New Location		4.46	47.48	340.20	
214+17 <sup>96</sup>	M.H. 67	changed 5' west.			340.29	
+50			5.54	46.40	40.90	
215			3.58	48.36	41.82	

+9.94
+5.05
+3.87
+4.52
+6.75
+6.68
+5.15
+6.13
+4.60
+4.85
+4.64
+3.74
+4.07
+4.18
+4.21
+3.60
+3.54
+4.82
+7.28
+5.50
+6.54

26

206+83<sup>51</sup>  
1-67.41  
208.50.92

106.24  
61.17  
167.41

#5 Stub 331.57 M.H.

# Stub M.H. 65  
334.99  
5.97  
340.96

167.41  
147.14  
82.11  
136.05

76-24  
14'-xx 6'

213-08  
6-34

214+12 214 17.86  
213 94.90  
23.06  
214+17<sup>96</sup> stops extension of Culvert.

# Par 54 N. End Headwall E. side 546 sq  
346.83  
5.11

1.40%

1.86%



		51.94			
215+50	T.P. 8.44	53.99	4.43	47.51	42.75
216			8.17	47.82	43.68
+50			6.90	49.09	44.61
217			6.19	49.80	45.54
+50			5.11	50.88	46.47
218+01 <sup>79</sup>	# M.H.68	∠ 38°-02' Lt. 63.78	4.00	51.99	347.43
+50			10.70	53.08	48.33
219			9.53	54.25	49.26
+50			7.80	55.98	50.20
220			7.38	56.40	51.13
+50			7.65	56.13	52.06
221+11 <sup>87</sup>	# M.H.69		5.78	58.00	353.20
+50			4.82	58.96	53.91
222			4.34	59.44	54.84
+50	6' Lt.		2.72	61.06	55.77
223		72.09	10.00	62.09	56.70
+50	6' Lt.		9.53	62.56	57.63
224			9.68	63.01	58.56
+22	M.H.70	∠ 17°-22' Lt. 8.16	63.93	358.97	

1.86076

+4.76	✓
+4.14	✓
+4.48	✓
+4.26	✓
+4.41	✓
+4.56	✓
+4.75	✓
+4.99	✓
+5.78	✓
+5.27	✓
+4.07	✓
+4.89	✓
+5.05	✓
+4.60	✓
+5.29	✓
+5.39	✓
+4.93	✓
+4.45	✓
+4.96	✓

11.79  
51.99  
63.78  
1.81  
61.97  
10.12  
72.09

±  
351.9  
4.1

R.P. Nail in 3" stump Holly Bush



51.05

stake

M.H.68



224+22	M.H.70				358.97	
+50		72.09	7.55	64.54	59.60	
225	6. LT		6.06	66.03	60.80	
+50	6. LT		4.53	17.56	62.00	
226		378.97	9.82	69.15	63.20	
+50			8.27	70.70	64.40	
227	6.		6.64	72.33	65.60	
224 <sup>86</sup>	M.H.71	183-63	10.90	72.73	366.20	
+50			10.62	73.01	66.80	
228			9.96	73.67	68.00	
+50			8.86	74.77	69.20	
229			7.30	76.33	70.40	
+50			6.63	77.00	71.60	
230	T.P.	14.00	93.03	4.60	79.03	72.80
+50			12.34	80.69	74.00	
+73	M.H.72		11.58	81.45	374.60	
231			11.83	81.20	75.20	
+50			10.45	82.58	76.39	
232			9.22	83.81	77.57	
+50			3.23	89.80	78.75	
233			4.16	88.87	79.93	

2.40 4/4

E.360/6

+4.94	
+5.23	
+5.56	372.09
+5.95	3.29
+6.30	368.80
	10.17
	378.97
+6.73	
+6.53	70.70 RM
+6.21	12.93
	83.63
+5.67	
+5.57	
+5.93	
+5.40	
+6.23	
+6.69	
+6.85	
+6.00	
+6.19	
+6.24	
+11.05	
+8.94	



93.03

29

+50	6.14	86.89	81.11	+5.78 <sup>v</sup>
234	4.42	88.61	82.29	+6.32 <sup>v</sup>
+23 <sup>2</sup> ex M.H. Rim	4.65	(88.38 89.36 EB 154-56)	382.84	+5.54

2-27-39 Prop. Grades stabs 6. E of W. Line Euclid N of El Cajon.

B.M. BP 6.79 352.53

S.W. Euclid  
& El Cajon.

Indexed

30

N. Line El Cajon E. of Euclid 4.79 347.74 ✓ Profile

N. of El Cajon at W. Line Euclid 5.80 346.73

N. edgewalk. at " " 5.60 346.93

N. W. Cor El Cajon & Euclid 347.10

1+00 5.13 347.4 347.7 -0.3 3<sup>3</sup>/<sub>4</sub>"

1+60 4.83 347.7 348.1 -0.4 ✓ 4<sup>3</sup>/<sub>4</sub>"

2+00 5.23 347.3 348.6 -1.3 ✓ 1- 3<sup>3</sup>/<sub>4</sub>"

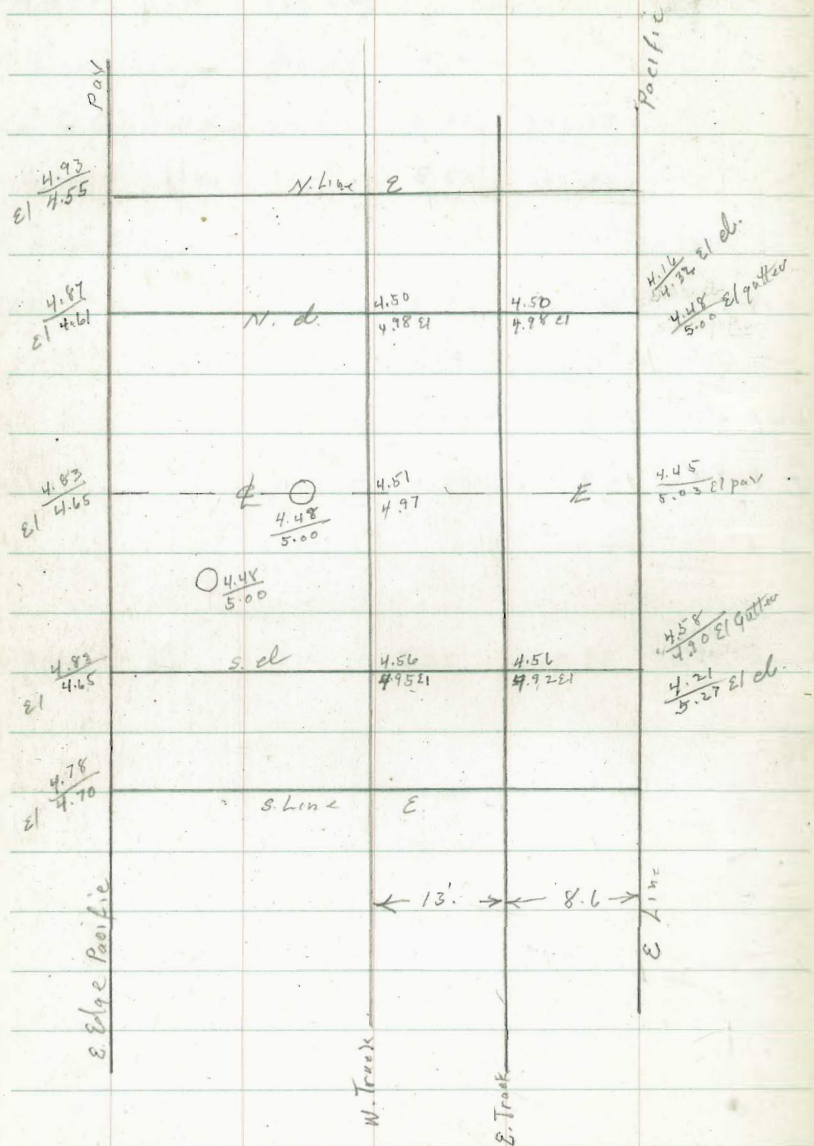
2+40 4.73 347.8 349.5 -1.7 ✓ 1- 8<sup>1</sup>/<sub>4</sub>"

2+40 c. el. 255 349.98 ch 12.  
349.98 profile



2-28-39

Grades Pacific &amp; E.



Indexed

31

7.9.48

4.93	4.87	4.83	4.78	4.76	4.74	4.72	4.70
4.55	4.61	4.65	4.70	4.72	4.74	4.76	4.78

Water washed  
Blk  
March 1899

Upas. St Extension  
Alabama to Park Blvd

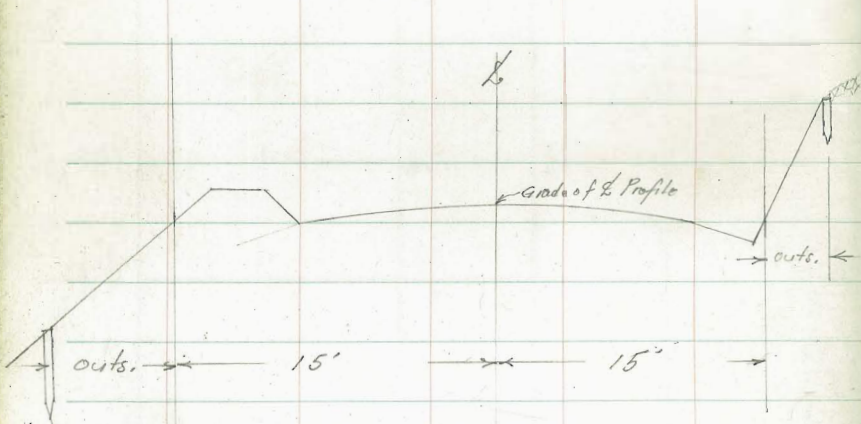
Lt.      E      Rt.  
Cant P-33

0+90      260.71      260.52      260.09  
+ 5.5' Rod.  
+ 1.1  
+ 1.4 5' offset      + 0.2  
0.1 out.

0+40      260.84      260.85      260.40  
+ 0.1  
0.1 out.      - 0.2  
0.3 out.

S. edge Div.  
of Alabama  
= 0+00

260.15



Indexed

32

Book. 1518-24  
N.W.B.P. Alabama x Upas

= 259.50  
6.72  
x 266.22

1/2:1 outs in cuts are from point 15' from E  
outs " fills " " " " " " "



Upper St. Extension Grades  
Alabama to Park Blvd.  
Cont. From P-32

	Lt.	±	Rt.
3+30 18°01.21'	251.40 0.00	250.40	249.40 +2.4 1.2 out.
3+10 16°06.62'	254.65 -1.0 1.5 out.	253.65	252.65 +0.7 0.4 out.
2+90 14°12.03'	257.12 -0.9 1.5 out.	256.12	255.12 -0.3 0.5 out.
2+70 12°17.44'	258.94 -0.7 1.0 out.	257.94	256.94 -1.0 1.5 out.
2+50 10°22.85'	260.12 -0.1 0.2 out.	259.12	258.12 -1.3 2.0 out.
2+30 8°28.26'	260.30 -0.1 0.2 out.	259.60	258.90 -1.0 1.5 out.
2+10 6°33.67'	260.16 +1.0 20' out offset.	259.73	259.30 -0.3 0.5 out.
1+90 4°39.08'	260.25 +0.6 0.3 out.	259.85	259.45 +0.2 0.1 out.
1+70 2°44.49'	260.40 +0.6 0.3 out.	260.00	259.60 +0.2 0.1 out.
1+41.29-56.	260.58 +0.4 0.2 out.	260.18	259.78 +0.5 0.3 out.

Cont. from P-32

on slope stake 1+90  
 T 266.22  
 6.60  
 T.P. 259.62  
 1.221  
 T 260.84

35' RR 44.59 5  
 Nail in  
 Exc. Tree  
 1' Above Ground

Upas St. Extension  
Alabama & Park Blvd.

Cont on P-35

Cont. from - P-33

	ht.	±	ht.
5+75 41°24.9'	209.22 +5.4 2.7 out	208.44	207.59 +11.8 5.9
5+50 39°01.6'	213.62 +6.4 3.2 out	212.72	211.79 +13.7 6.9 out
5+25 36°38.4'	217.99 +6.4 3.2 out	217.01	216.03 +14.9 7.5 out
5+00 34°15.2'	222.29 +5.8 2.9 out	221.29	220.29 +13.7 6.9 out
4+75 31°51.94'	226.58 +4.8 2.4 out	225.58	224.58 +11.6 5.8 out
4+50 29°28.7'	230.87 +4.6 2.3 out	229.87	228.87 +10.0 5.0 out
4+25 27°05.52'	235.15 +4.6 2.3 out	234.15	233.15 +8.4 4.2 out
4+00 24°42.28'	239.44 +4.3 2.2 out	238.44	237.44 +7.6 3.8 out
3+75 22°19.04'	243.72 +2.9 1.5 out	242.72	241.72 +6.0 3.0 out
3+50 19°55.8'	248.01 +1.2 0.6 out	247.01	246.01 +4.1 2.1 out

34

P-33- T = 260.84

13.01 -  
TP 247.83

0.58 +  
T = 248.41

12.89 -  
TP 235.52

0.53 +  
T 236.05

12.94 -  
TP 223.11

0.89 +  
223.94

12.51 -  
211.43

211.38 = TP  
3.08 +

T 214.46  
2.04 -

Left Temp. BM 50' RP → 212.42  
6+00 - P-35

Back 1515 - 26 = 6+00<sup>EG</sup> chk. & Hub



Lt.

S

Pt.

UPHS St. Extension

35

+25	187.7 -0.4 0.6 out	187.7	187.2 -2.2 3.3 out
-----	--------------------------	-------	--------------------------

8+00	187.2 +0.9 0.5 out	187.3	187.0 +1.7 0.9 out
------	--------------------------	-------	--------------------------

P.C. 20' Rad. +80	186.8	187.0	186.7
----------------------	-------	-------	-------

48° E.P.H.C.Rd

P.C. 20' Rad.

+14	187.72
-----	--------

7+00	188.61 +3.6 1.8 out	188.71	188.44 +1.1 0.6 out
------	---------------------------	--------	---------------------------

+75	191.57 +7.0 3.5 out	191.55	191.20 +7.3 3.7 out
-----	---------------------------	--------	---------------------------

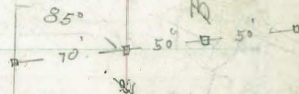
+50	195.77 +5.8 2.9 out	195.57	195.10 +8.7 4.4 out
-----	---------------------------	--------	---------------------------

+25	200.26 +6.6 3.3 out	199.86	199.26 +8.7 4.4 out
-----	---------------------------	--------	---------------------------

43° 48.6" 6+00 = E.S.	204.75 +4.6 2.3 out	204.15	203.42 +9.3 4.7 out
--------------------------	---------------------------	--------	---------------------------

Cont from P-39

P-39	-	T	= 214.46
			12.85-
TP			201.61
			0.15+
T			201.76
			12.46-
TP			189.30
			3.84+
T			193.14

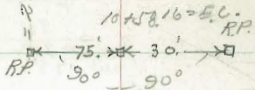


11+00	205.2 +0.6 0.3 out	205.0	204.7 +4.2 2.1 out
+75 10-52	202.9 +0.5 0.3 out	202.5	202.1 +3.2 1.6 out
+58 <sup>16</sup> F.C.			
10-24.0	200.4 +0.9 0.5 out	199.9	199.4 +3.8 1.9 out
+50			
8-58			
+25	198.2 +0.8 0.4 out	197.6	197.0 +3.4 1.7 out
7-32			
10700	196.1 +0.3 0.2 out	195.5	194.8 +0.9 0.5 out
6-02 <sup>4</sup>			
+75	194.3 -1.3 2.0 out	193.6	192.4 0.00
4-40.2			
+50	192.7 -4.4 6.6 out	192.0	191.3 -2.0 3.0 out
3-14.3			
+25	191.3 -5.2 7.8 out	190.7	190.0 -1.9 2.9 out
1048.26			
2+00	190.0 -5.4 8.1 out	189.5	188.9 -3.3 5.0 out
0-22.34			
+75	189.1 -3.7 5.6 out	188.6	188.1 -3.4 5.1 out
8+18 <sup>00</sup> BC			
+50	188.3 -2.9 4.4 out	188.0	187.5 -1.5 2.3 out

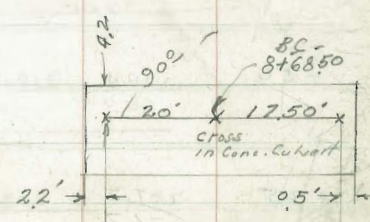
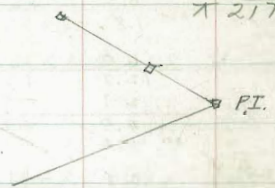
204.78 = BM on Hub 10+58.16 75' Lt 4' ✓  
 53.5+  
 210.13 -  
 12.95 -  
 197.28 = TP  
 0.56 +  
 197.84 = π  
 11.98 -  
 185.86 = TP Nail in place 35' Lt 9+10

204.78 = TP below

36



P-35 = π = 193.14  
 0.36 -  
 TP 192.78  
 12.39 +  
 π 205.17  
 0.39  
 Temp. B.M. 75' Lt. on Hub 10+58.16 = TP = 204.78  
 12.38 +  
 π 217.16





	Lt.	±	Rt.	No. Stake
	π 246.0	π 254.3	π 261.6	Up on St Cont
+ 50	252.4	252.7	252.4	263.13
	+6.4	1.6	9.2	252.4
	-11.5	-3.2	+4.9	10.7 ✓
	Top Wall To Slope out 17.5		out. 2.5	
15	247.1	247.4	247.1	297.10
	+1.1	6.9	14.5	16.0
	8.1	6.3	7.3	8.5
	-9.2	+0.6	+7.2	+7.2
	out. 13.8		out. 3.6	26 out
+ 50	241.9	242.2	241.9	241.9
	4.1	12.1	19.7	21.2
	10.7	11.6	5.0	6.5
	-6.6	+0.5	+14.7	+14.7
	out. 9.9		out. 7.3	9.3 out
	π 238.71			26.3.15-5
14	236.6	236.9	236.6	236.6
	2.1	17.4	25.0	26.5
	2.1	8.3	3.8	5.3
	0.0	+9.1	+21.2	+21.2
	out. 4.0		out. 10.6	10.6 out.
+ 50	231.3	π 238.7	231.3	
	7.4	231.6	30.3	
	7.4	7.1	15.5	
	0.0	+2.8	+14.8	
	out. 1.8		out. 7.4	
13	226.0	226.3	226.0	π 238.7
	12.7	12.4	12.7	
	12.7	9.7	8.5	
	0.0	+2.7	+4.2	
	on line		out. 2.1	
+ 50	220.8	221.1	220.8	
	-3.1	17.6	17.9	
	4.7 out	15.6	13.8	
		+2.0	+4.1	
			out. 2.0	
12+00	215.5	215.8	215.5	
	-6.2		+0.5	
	9.3 out		0.3 out	
+ 75	212.9	213.2	212.9	
	-4.3		-0.3	
	6.5 out		0.5 out	
+ 50	210.4	210.5	210.2	
	00.0		+0.4	
			0.2 out	
+ 25	207.7	207.7	207.4	
	-1.7		+1.8	
	2.6 out		0.9 out	

254.11 ± Hub 16+24 52	30' Rdw. 1/2-1 Cut. 1/2-1 Fill
0.14	37
π 254.25	254.25 π
1.22	12.50
253.03	241.75
8.54	4.23
π 261.57	245.98 π
	7.75
238.23	239.23
0.48	
π 238.71	
13.87	
224.84	

HI from P-40 = 263.13 = π

21073 = π D. 36  
243 =  
20770 = TP on Paving stake 11+25 on Lt.

P-36 - π = 217.16  
0.18 -  
TP 216.98  
13.58 +  
229.56  
- 4.72  
224.84 ✓

at L  
17' Rt. 12+50  
chk. Above stub

12+00  
Set Temp. B.M. Pav. stake 34.5 ft. at L 224.45  
11.83 +  
236.28 = π  
0.33 -  
235.95 = TP  
11.67  
247.62  
2.76 -

S.E. Cor. Ret. Wall under R.R. Bridge → 244.86  
Approx Station 15+10



2-28-39

Lt

L

At

16 <sup>0</sup> 55.6			7272.03	
+707	262.3	262.3	2772.0	10.17
+725	280.9	81.8	282.7	261.86
15-12	+18.6	+19.5	+18.7	0.43
18+15	10.4	6.9	9.1	262.29
12-20	Culvert -29.0	-26.4	19.8	
1200912	out-43.5	out-29.7	out-29.7	
18+00	278.2	79.2	280.1	
+15.9	+7.2	+8.1	+8.1	
12.7	14.4	0.6	0.6	
-28.6	-21.2	-8.7	-8.7	
out 42.9	out 13.1	out 13.1	out 13.1	
7 <sup>0</sup> 2265 <sup>7</sup> 34			261.86	
+75	275.5	76.4	274.4	12.74
2497-66ds. E	+13.2	+4.4	277.3	274.64A
	+14.3	+2.7	+2.7	
	-27.5	1.3	1.3	
	out-41.2	-4.0	-4.0	
2036.18	1522.2		out 6.0	
+5.04	62.3			
	273.0	73.7	274.3	
	+10.7	+1.7	0.3	
	15.6	5.5	1.4	
	-26.3	-7.2	-1.1	
+36	out-39.5	out 1.6	out 1.6	
+25	262.95	274.2	285.4	
	270.5	271.1	271.6	
	+7.6	4.1	13.8	
	7.0	6.6	4.1	
	-14.6	-2.5	10.4	
	out 28.9	out 1.7	out 1.7	
17+00	262.95	275.2	285.4	
	268.0	266.5	268.9	
	+5.1	6.7	16.5	
	7.1	5.8	6.3	
	-12.2	+0.9	+10.2	
	out 18.3	out 5.1	out 5.1	
+75	262.95	275.4	285.4	
	265.4	265.7	266.0	
	+2.5	9.5	19.4	
	7.8	8.5	17.4	
	-10.3	+1.0	+8.0	
	out 15.4	out 4.0	out 4.0	
+50	262.95	275.2	285.2	
	262.8	263.0	263.1	
	0.1	0.0	1.1	
	12.7	2.8	10.5	
	-12.8	-2.8	+1.8	
	out 19.2	out 0.9	out 0.9	
+25	262.95	275.2	285.2	
	260.3	260.5	260.3	
	2.6	2.8	14.9	
	18.2	3.0	17.2	
	-15.6	-1.4	-2.3	
	out 23.4	out 3.4	out 3.4	
16+00	246.0	254.3	261.6	
	257.7	258.0	257.7	257.7
	+11.7	+3.7	4.1	
	3.4	7.9	7.2	
	15.1	-11.6	-3.1	
	out 22.7	out 4.6	out 4.6	

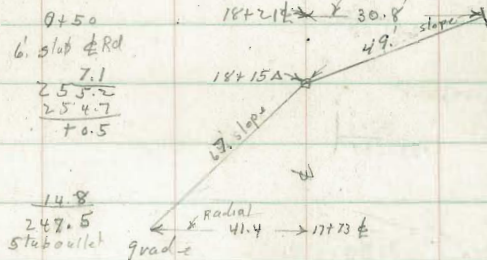
Culvert  
T2623

Inlet

244.86-8M. Red. Wall P-37 C. 1st from stub  
6024  
250.897

Radw

38

67  
49  
116

R=150'  
Set Radius  
4' x 2" x 3"  
Pine Post.



7297.15

Ton. d  
20+22  $\frac{262}{294.53}$

E.C. 40 R. only  
Pav.  
20+22  $\frac{3.18}{293.47}$

Pav  
20+05  $\frac{3.30}{293.85}$

P.C. 40 R. only  
19+84  $\frac{292.80}{4.35}{\frac{3.85}{0.50}}$

+75 292.40

41-54.30 ✓  
E.C. 155.80 78° chd.  
442.00 40° 25.03  
+77.8 291.70  
P.C. 15 R on RT  $\frac{6.0}{5.1}{\frac{10.8}{out. 0.4}}$

new 15 R.  
3.05  
P.C. 15 R  
292.6 294.10 Pav  
 $\frac{4.6}{3.7}{\frac{10.9}{out. 5.0}}$

36-13'  
360.01 47'

+25 289.70  
 $\frac{7.5}{5.5}{\frac{12.0}{out. 1.0}}$

20.6  
 $\frac{6.4}{5.4}{\frac{11.2}{out. 0.2}}$

291.4  
 $\frac{5.8}{5.7}{\frac{10.4}{out. 0.2}}$

31-26  
312.15.00  
19+00

287.90  
 $\frac{7.3}{6.3}{\frac{13.0}{out. 1.5}}$

88.4  
 $\frac{8.4}{7.3}{\frac{15.7}{out. 12.3}}$

289.7  
 $\frac{7.5}{15.7}{\frac{8.2}{out. 12.3}}$

7297.15  
 $\frac{12.71}{284.44}{\frac{0.19}{284.63}}$

26-40  
2638.43  
+75

285.80  
 $\frac{11.2}{17.4}{\frac{11.5}{out. 25.1}}$

284.63  
 $\frac{86.8}{12.2}{\frac{9.3}{-11.5}}$

287.7  
 $\frac{8.1}{2.2}{\frac{5.3}{out. 7.8}}$

284.63  
 $\frac{12.91}{271.72}{\frac{0.31}{272.03}}$

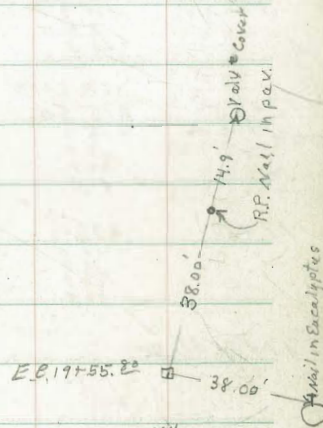
21-53  
21042.06  
18+50

272.03  
283.40  
 $\frac{11.4}{16.4}{\frac{27.8}{out. 41.7}}$

284.63  
84.40  
 $\frac{0.2}{13.0}{\frac{12.8}{out. 13.5}}$

285.4  
 $\frac{0.8}{8.2}{\frac{9.0}{out. 13.5}}$

89



18+71 → P.I. Set  
Passing Station



Ton. d  
20+22 2.62  
294.53

E.C. 40. R. only  
Pav.  
20+22 3.18  
293.47

Pav  
20+05 3.30  
293.85

P.C. 40 R. only  
19+84 <sup>30</sup> 292.80  
4.35  
3.85  
0.50

+75 292.40

41-54<sup>30</sup> ✓  
E.C. 15580 79° dhd  
41800 40° 25' 03"  
+78 291.70  
P.C. 15 R on Rt 6.0  
297-1hd 5.7  
out 0.4

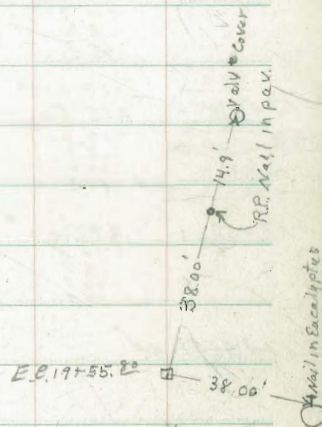
W End 15 R.  
3.05  
P.C. 15 R  
292.6  
294.10 Pav  
4.6  
3.7  
+0.9  
out 5.0

360-13'  
360-01.57'  
+25 289.70 90.6 291.4  
7.5 6.4  
5.5 5.8  
+2.0 4.2  
out 3.0 out 0.2

310-26  
31915.00  
19+00 287.90 88.8 289.7 7297.15  
9.3 7.5  
6.3 15.7  
+3.2 8.2  
out 1.5 out 12.3

26-40  
26-28.53  
+75 285.80 86.8 287.7 7272.03  
21.2 8.1  
16.2 9.3  
-17.4 -5.3  
out 25.1 out 7.8

21-53  
21-42.06 7272.03 284.63  
18+50 283.40 84.4 285.4  
+17.4 8.2  
16.4 9.3  
-27.8 -9.0  
out 41.7 out 13.5



18+71 → P.I. Set  
Facing State



Wether. Re stake Upas St.  
Bliss From Station 15+00 to Sta 20+22  
Isbell 4-24-40 Cont. on Page 56

Station	Lt.	L	Rt.
18+25	258.52 280.70 +22.4 -6.6 -29.0 out 43.5		268.90 <sup>5x</sup> 282.70 +13.75 -5.6 -19.4 out 29.1
18+00	258.52 <sup>x</sup> 278.20 +17.7 -8.6 -28.3 out 42.5		275.08 <sup>11</sup> 280.10 +5.0 -3.9 -8.9 out 15.4
17+75	258.52 <sup>x</sup> 275.50 +17.0 -9.9 -24.9 out 40.4		275.08 <sup>T</sup> 277.30 +2.2 -1.9 -4.1 out 6.1
17+50	273.0 +14.5 -11.8 -24.3 out 39.5		274.3 0.8 1.9 -0.6 out 0.9
17+36.37-80			
17+25	270.50 +12.0 -2.7 -14.7 out 22.0		275.1 <sup>11</sup> 271.6 3.5 3.3 +0.2 out 0.1
17+00	268.0 +9.5 -12.8 -14.5 out 25.2		275.1 265.90 9.2 +10.9 out 5.9
475	265.40 +5.9 -11.6 out 17.3		266.0 +9.1 +1.9 out 5.0 10.1 out 5.0
16+50	262.80 +4.3 -5.0 -15.3 out 20.0		265.10 12.0 -3.7 +2.3 1.2 out.
16+25	260.30 +4.4 -6.5 -15.4 out 23.1		263.13 260.30 2.8 3.1 -0.3 out 0.5
16+00	250.89 <sup>11</sup> 257.7 +6.8 -9.8 -14.6 out 24.9		257.70 5.4 5.6 -1.2 out 1.8

Cont. from P-36

Indexed

B

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Elev. HI on 38 → 258.89

16+50 on H. T. Pen stub  
258.89  
-0.90  
257.99  
-8.53  
258.52<sup>x</sup>  
-0.42  
258.10<sup>11</sup>  
-10.85<sup>x</sup>  
268.95<sup>x</sup>  
-0.80  
on Rock 268.15<sup>11</sup>  
-6.93<sup>x</sup>  
275.08<sup>x</sup>  
-12.22  
262.86<sup>11</sup>  
-6.27<sup>x</sup>  
263.13<sup>x</sup>

3-6-39

## Dawson Ave Grades.

	W. line	W. ct	E. ct	E. line
4+10 P.V.C.	349.00 12.9 10.1 +2.8	348.80	349.92 12.50 349.42 0.45	348.8 349.0 0.9 3.0 -2.1
3+60	345.5 16.4 14.3 +2.1	349.87 12.90 336.97 0.89 337.86	345.5 4.4 6.8 -2.4	
3+10	342.0 7.9 6.6 +1.3		342.0 7.9 9.4 -1.5	
2+60 F.V.C.	338.5 11.4 10.6 +0.8	338.30	338.30	338.5 11.4 12.0 -0.6
2+20 B	336.0 1.9 1.8 +0.1	335.75	337.86 11.28 326.58 326.59 E. Trojan E. Dawson	335.75 336.0 1.9 2.0 -0.1
1+80 B	333.9 4.0 4.8 -0.8	333.68	333.68	333.9 4.0 3.4 +0.6
1+40 P.V.C.	332.4 5.5 5.7 -0.2	332.17	332.11	332.4 5.5 4.6 +0.9
0+74	330.2 7.7 7.9 -0.2			330.2 7.7 6.6 +1.1
0+08 B	328.0 9.9 9.7 +0.2	327.75	327.75	328.0 9.9 8.1 +1.8
0+00 N. line Trojan	327.7 10.2 10.0 +0.2	327.50	327.5	327.7 10.2 8.5 +1.7

Indexed  
Jo

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8+19 <sup>3</sup> B	382.35	$\begin{array}{r} \pi 387.00 \\ 12.87 \\ \hline 374.13 \\ 6.54 \\ \hline \pi 377.67 \\ 11.76 \\ 361.91 \\ 0.01 \\ \hline \pi 361.92 \end{array}$	383.05	$\begin{array}{r} 383.3 \\ 3.7 \\ \hline 3.5 \\ \hline +0.2 \end{array}$	
8+11 <sup>2</sup> B	381.5	381.28			
7+91	$\begin{array}{r} 381.5 \\ 5.5 \\ 7.2 \\ \hline -1.7 \end{array}$			$\begin{array}{r} 380.8 \\ 4.2 \\ \hline +4.6 \\ \hline 379.9 \\ \hline \text{Not in} \end{array}$	
7+80	$\begin{array}{r} 378.8 \\ 8.2 \\ 10.3 \\ \hline -2.1 \end{array}$				
7+30	$\begin{array}{r} 374.7 \\ 12.3 \\ 14.0 \\ \hline -1.7 \end{array}$			$\begin{array}{r} 375.6 \\ 11.4 \\ 12.3 \\ \hline -0.9 \end{array}$	
6+80	$\begin{array}{r} 370.6 \\ 4.1 \\ 3.6 \\ \hline +0.5 \end{array}$	$\begin{array}{r} \pi 374.67 \\ \hline \end{array}$		$\begin{array}{r} 371.3 \\ 0.4 \\ 3.3 \\ \hline +0.1 \end{array}$	
6+30	$\begin{array}{r} 366.5 \\ 8.2 \\ 8.5 \\ \hline -0.3 \end{array}$			$\begin{array}{r} 367.0 \\ 7.7 \\ 9.6 \\ \hline -1.9 \end{array}$	
5+80	$\begin{array}{r} 362.4 \\ 12.3 \\ 10.9 \\ \hline +1.4 \end{array}$			$\begin{array}{r} 362.7 \\ +0.8 \\ 2.0 \\ \hline -2.8 \end{array}$	
5+30 RVC	358.3	358.08	$\begin{array}{r} \pi 361.92 \\ \hline \end{array}$	358.16	358.4
	$\begin{array}{r} 76.4 \\ 13.1 \\ \hline +3.3 \end{array}$				$\begin{array}{r} 3.5 \\ 6.2 \\ \hline -2.7 \end{array}$
4+90 B	355.0	354.79		354.83	355.0
	$\begin{array}{r} 6.9 \\ 2.7 \\ \hline +4.2 \end{array}$				$\begin{array}{r} 6.9 \\ 8.4 \\ \hline -1.5 \end{array}$
4+50 B	351.9	351.70		351.71	351.9
	$\begin{array}{r} 10.0 \\ 6.6 \\ \hline +3.4 \end{array}$				$\begin{array}{r} 10.0 \\ 12.5 \\ \hline -2.5 \end{array}$

old. S. line on C  
8756 <sup>15</sup>

B.M.C.T. E. Dawson  
54. Line E. Dawson

old. S. line on W  
8744 <sup>2</sup>

386.07  
0.93  
387.00

New. S. line on E  
8736 <sup>15</sup>

384.56

384.7  
2.3  
2.0  
40.3

New. S. line on W

8724 <sup>2</sup>    382.9    382.6  
4.4  
5.4  
1.8



3-10-39.

Alley BIK. 148 Univ. Hts

W. Line

E. Line

7331.32

2+40 B

$$\begin{array}{r} 26.34 \\ 4.98 \\ 3.98 \\ \hline +1.00 \end{array}$$

$$\begin{array}{r} 26.49 \\ 4.83 \\ 3.83 \\ \hline +1.00 \end{array}$$

2+20 B

$$\begin{array}{r} 26.44 \\ 4.88 \\ 4.98 \\ -0.10 \\ \hline \end{array}$$

7331.15

$$\begin{array}{r} 26.59 \\ 4.56 \\ 4.36 \\ \hline +0.20 \end{array}$$

2+00 B

$$\begin{array}{r} 26.63 \\ 4.52 \\ 2.52 \\ \hline +2.00 \end{array}$$

$$\begin{array}{r} 26.77 \\ 4.38 \\ 3.38 \\ \hline +1.00 \end{array}$$

+60

$$\begin{array}{r} 27.10 \\ 4.05 \\ 3.44 \\ \hline +0.61 \end{array}$$

$$\begin{array}{r} 27.20 \\ 3.95 \\ 2.95 \\ \hline +1.00 \end{array}$$

+10

$$\begin{array}{r} 27.57 \\ 3.58 \\ 3.13 \\ \hline +0.45 \end{array}$$

$$\begin{array}{r} 27.64 \\ 3.51 \\ 2.51 \\ \hline +1.00 \end{array}$$

+80 B

$$\begin{array}{r} 28.03 \\ 3.12 \\ 3.01 \\ \hline +0.11 \end{array}$$

$$\begin{array}{r} 28.07 \\ 3.07 \\ 2.07 \\ \hline +1.00 \end{array}$$

0+60 B

$$\begin{array}{r} 28.13 \\ 3.02 \\ 3.07 \\ \hline -0.06 \end{array}$$

$$\begin{array}{r} 28.17 \\ 2.98 \\ 1.98 \\ \hline +1.00 \end{array}$$

6+40 B

$$\begin{array}{r} 27.88 \\ 3.27 \\ 2.27 \\ \hline +4.00 \end{array}$$

$$\begin{array}{r} 27.88 \\ 3.27 \\ 2.27 \\ \hline +1.00 \end{array}$$

0+20 B

$$\begin{array}{r} 27.35 \\ 3.80 \\ 3.51 \\ \hline +0.29 \end{array}$$

$$\begin{array}{r} 27.35 \\ 3.80 \\ 1.80 \\ \hline +2.00 \end{array}$$

E. Line Polk.

0+00

$$\begin{array}{r} 321.50 \\ 4.65 \\ 3.67 \\ \hline +1.04 \end{array}$$

$$\begin{array}{r} 26.50 \\ 4.65 \\ 3.67 \\ \hline +1.47 \end{array}$$
BM S.E.  
Texas & Polk.

324.95

6.20

331.15

4.54

326.61

4.71

331.32

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Euclid Ave Grades.			
	W.C.	E.	E. d.
3-14-39	352.6	352.43	352.62
34 52.5	3.0 6.9 -3.9	0.56 ✓	0.37 0.82 -4.5
3+20	351.7	351.53	351.72
	3.9 7.6 -3.7	1.46 ✓	1.27 1.96 -0.40
2+80	50.6	350.40	350.60
	5.0 8.1 -3.1	2.59 ✓	2.40 2.90 -0.50
2+40 B X	349.5	3349.28	349.47
	6.1 6.8 -0.7	3.71 ✓	0.52 3.52 -0.0
+20 B		348.77	349.47
		4.22 ✓	6.1 6.1 0.0
2+00 B X	348.6	348.37	348.56
	7.0 7.1 -0.1	4.62 ✓	4.43 4.03 +0.40
+80 B		348.07	348.77
		4.92 ✓	6.6 +0.4
+60 B X	348.1	347.89	348.08
	7.5 7.5 0.0	5.10 ✓	4.91 4.51 +0.40
+30 X	347.9	347.70	347.9
	7.7 7.7 0.0	5.29 ✓	5.09 4.95 1.4
+00 B X	347.7	347.50	347.70
	7.9 7.9 0.0	5.49 ✓	5.29 7.9 7.8 +0.1
0+50	347.4	347.24	347.40
	8.2 8.2 0.0	5.75 ✓	5.59 5.39 +0.20
M. E. Cor			347.75
0+00			
N. W. Cor.			
00-12.5	347.10	346.85	
	8.45 8.1 -0.15	6.14 ✓	

E. d.

	W. d.	E.	E. d.
4+40 B	354.92	55.11	355.62
345.71	2.84		46
345.71	7.28	345.88	346.66
352.99			

345.71 B.M. S.W. Euclid & El Cajon  
gutter d  
3.12 6.33

*Indexed*

349.88  
349.47  
349.07  
348.77  
348.59

344.20  
347.75





3/27/29  
 Miller  
 Walker  
 Bliss

Grades for Sewer Replacement Alley Bk 180.44.

				± Vermont	
BM. Rim M.H.	3.84	294.79	290.95	± Alley	
0+00 Ex. M.H.			290.95		285.21
0+45 stub	5 offset N of d	3.70	291.09		285.66
0+90	Ex. conc. pillar cut at FL	8.68	286.11		286.11
1+10	Pier #1 Top. conc. Piers.				
1+10	Pier #1 F.L. Pipe				286.31
1+30	Pier #2 Top. conc. Piers				
1+30	Pier #2 F.L. Pipe				286.51
1+60	stub 5' N of d	5.27	289.52		286.41
2+00	D.M.H. #1	3.63	291.16		287.21 to W
"	" " " "				± to sewer ? to e
4+00	Ex. M.H. Rim	0.90	293.89		= 293.89
"	" " " " F.L.				290.91

Indexed

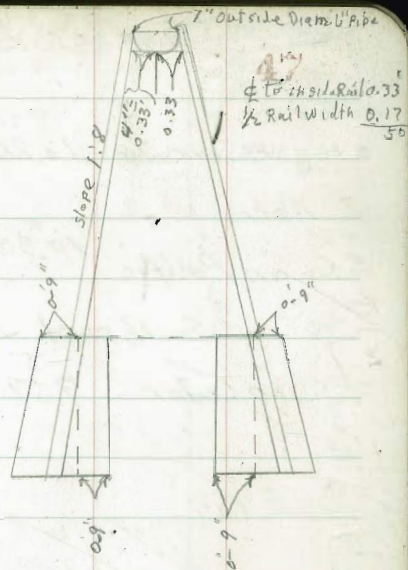
+ 5.74

5.43

0.0

+ 2.71<sup>v</sup>

3.95



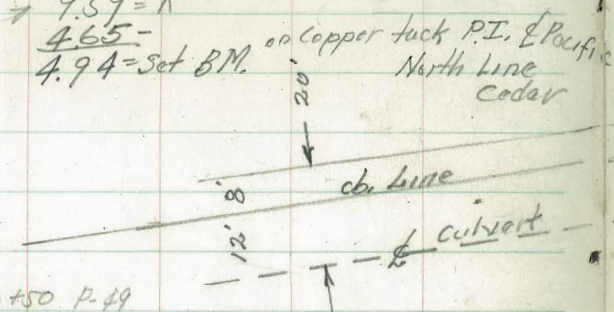


GRADES For Curb Returns

North east	$\pi = P-49$	El. Top cb.	
0 +00 = P.C. on Cedar	16.20	5.48	10.72 - Rod
		5.29	+0.59
↳ Ret.		5.12	11.08
+8'		5.06	-0.54
E.C. on Pacific	10.30	5.06	5.29 ✓

South east Ret.	$\pi$	Rod.	El. top cb	
P.C. on Cedar	9.59	4.03	5.56	5.50
①		3.83	5.76	5.31
② = ↳ Ret.		3.81	5.78	5.22
Post 986 = $\pi$		4.52	5.24	5.23
③	9.59 = $\pi$	4.20	5.39	5.23
④ = E.C. on Pacific	4.10	5.49	5.34	4.15

25.73 = B.M. B.P. NW Cedar & Kettner  
 0.26 +  
 25.99 =  $\pi$   
 12.82 -  
 13.17 = T.P.  
 0.76 +  
 13.93 =  $\pi$   
 8.53 -  
 5.38 = T.P.  
 4.21 +  
 9.59 =  $\pi$

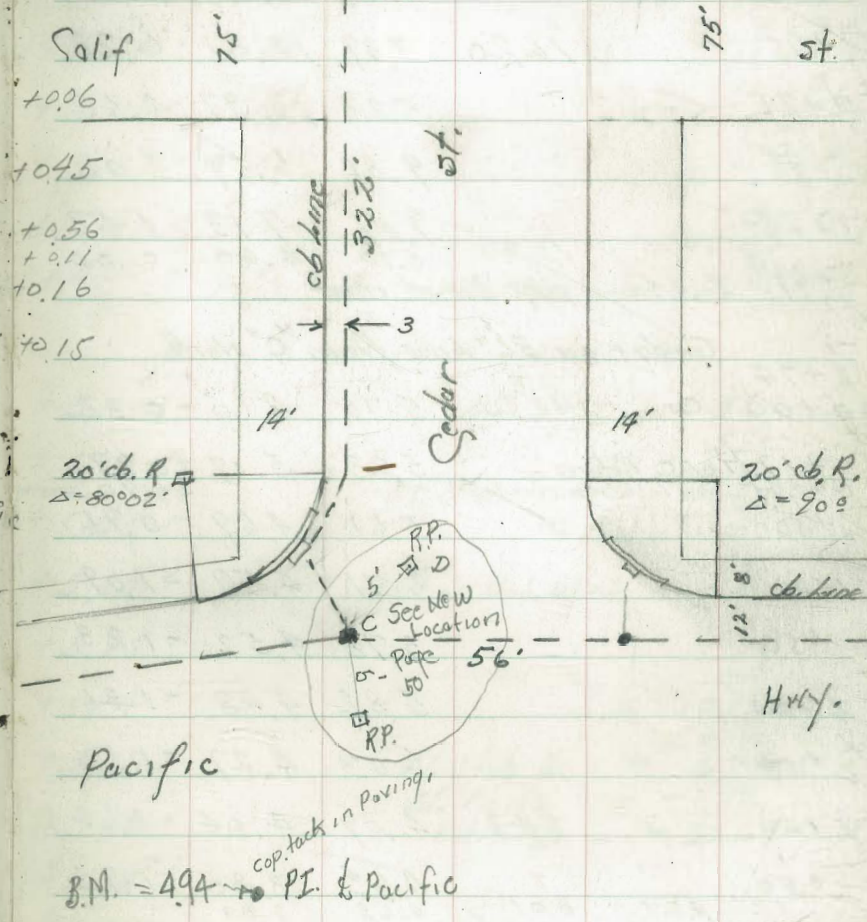


Temp. B.M.  
 469 Alex stub 0+50 P. 49  
 5.71 +  
 10.40  $\pi$  Reset North East Return.

P.C.	↳	E.C.	
5.48	5.12	5.06	↳ 5.09 = to fit new work
4.92 - Rod	5.28 - Rod	5.34	
4.39	5.00 = Road	5.31	
+0.53	+0.28	0.03	



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5-1-37  
Wulfov  
Bliss.

GRADES CEDAR ST. Culvert  
And Pacific Blvd.

"Flow line

	27.00			
0+00 = end of Pipe at A P-98	8.72	18.28	11.30	
+50 = at B	9.27	17.73	10.37	
1+25 (Additional Grades - p. 52)	12.63	14.37	7.91	
+75	16.20	3.39	12.81	6.28
2+25	5.23	10.97	4.65	
+75	9.81	6.39	3.02	
3+25	9.07	7.13	1.43	
+69 = East inside edge Box at inlet	10.30	5.70	4.60	0.00

Grades on 36" line from "C" North.

3+74				
0+100 = C	10.30	5.70	4.60	-0.82
+17.74 = P.C. Return	5.23	5.07	-0.87	
0+29.5 = New location clean out			-0.90	
+50	5.61	4.69	-0.96	
1+00	5.71	4.59	-1.09	
+50	5.78	4.52	-1.23	
2+00	5.82	4.48	-1.36	
+50	6.03	4.27	-1.50	
3+00	8.43	4.39	4.04	-1.64
+50	4.63	3.80	-1.78	
T.P. 4.21	8.01	4.63	3.80	
4+00 <sup>65</sup> = B.C. Culvert	4.19	3.82	-1.92	
	4.58	3.43		
+32.66 = intersection with 54" culvert			-2.00	

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cuts.	offsets		
+6.98	4' from c. 7' Rt.	N.W. B.P. Cedar + Kethner.	= 25.73
+7.36	7' Rt.		1.27 +
+6.46	7' Rt.		27.00 +
+6.53	7' Rt.		12.63 -
+6.32	7' Rt.		T.P. = 14.37 T.P.
+3.37	7' Rt.		1.83 +
+5.70	7' Rt.		16.20 +
+4.60	7' Rt.		11.60 -
			T.P. = 4.60
			5.70 +
			10.30 +
			5.89 -
			T.P. = 4.41
			4.02 +
			8.43 +

+5.42		Elev. 0+50 =	4.69
+5.94			5.71
+5.65	cut on P-50	Elev. Flow 0+00 = C =	10.40 = +
+5.68		Red =	-0.82
+5.75			11.22
+5.84		cut on stub D =	6.06 Reading.
+5.77			+ 5.16
+5.68			
+5.58			
+5.74			
+5.43			

10.40 = +  
6.06 = Rod.  
Elev. Stub D = 4.34  
Elev. Flow D = -0.82  
cut. To Flow = +5.16 ✓



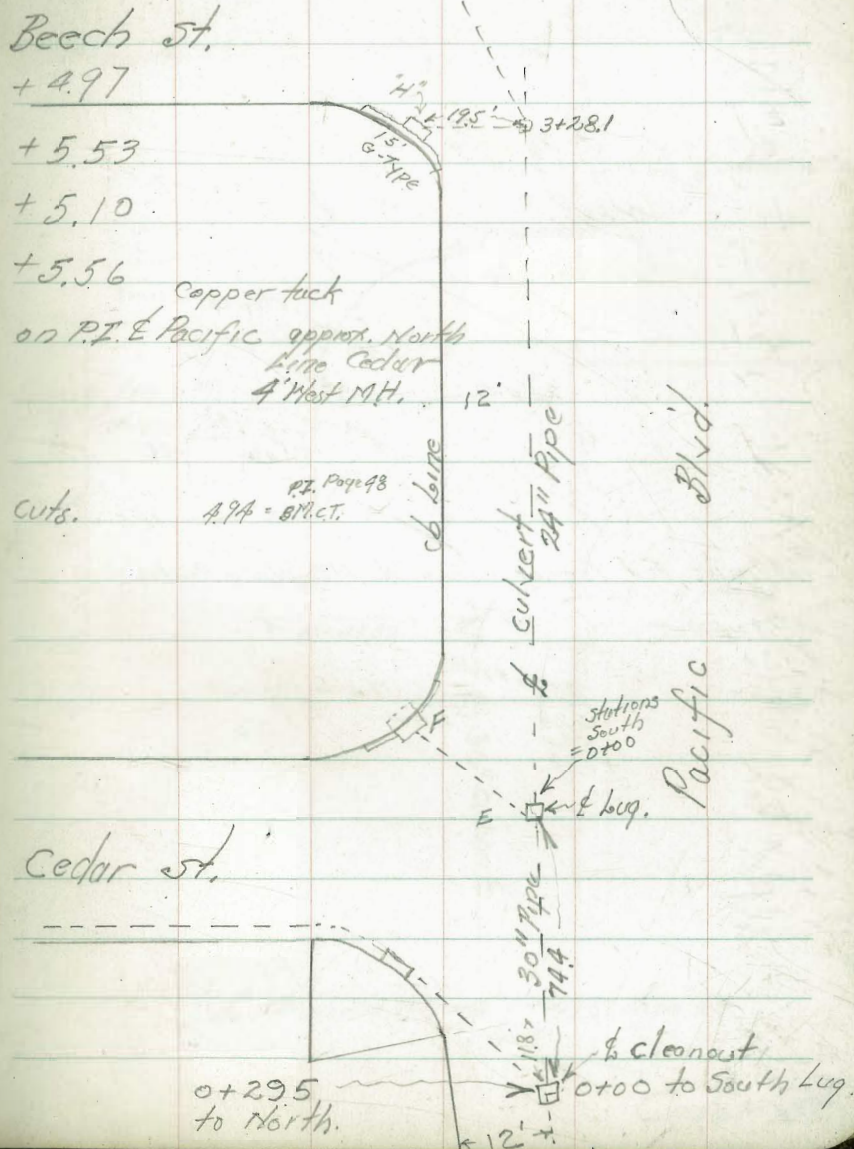
Muller  
Buss  
5-4-39

GRADES Storm Drain  
Along Pacific Blvd.  
From Cleanout 11.8' North of cb B.C.  
to Box at cb inlet South E. cb. Beech

9.59 =  $\pi$  from P. 48

Station	Sta. El.	Flow Line	Flow Line
0+00 - 0+29.5 going North.	5.52	4.07	-0.90
+362	4.81	4.78	-0.75
0+74.4 = $\frac{1}{2}$ lug = "E" in sketch	5.10	4.49	-0.61
F = at Inlet	3.81	5.78	0.22
T.P. 4.66	9.60	4.65	4.94
ch. top 8" Bell Water Main	7.36	2.24	
Line 24" Culvert Bet. Cedar and Beech Sts.			
	+ $\pi$	-	Sta. El. Flow Line
0+00 = "E" $\frac{1}{2}$ lug in sketch			-0.61
+50			
1+00			
+50			
2+00			
+50			
3+00			
+28.1 = $\frac{1}{2}$ lug at Beech St.			
3+61.5			
3+92.80 = at cb inlet.			0.50

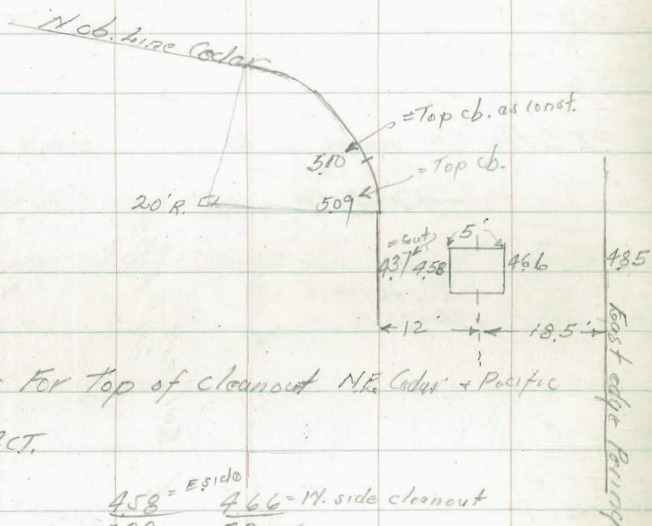
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5-5-39

Storm Drain Pacific Blvd.

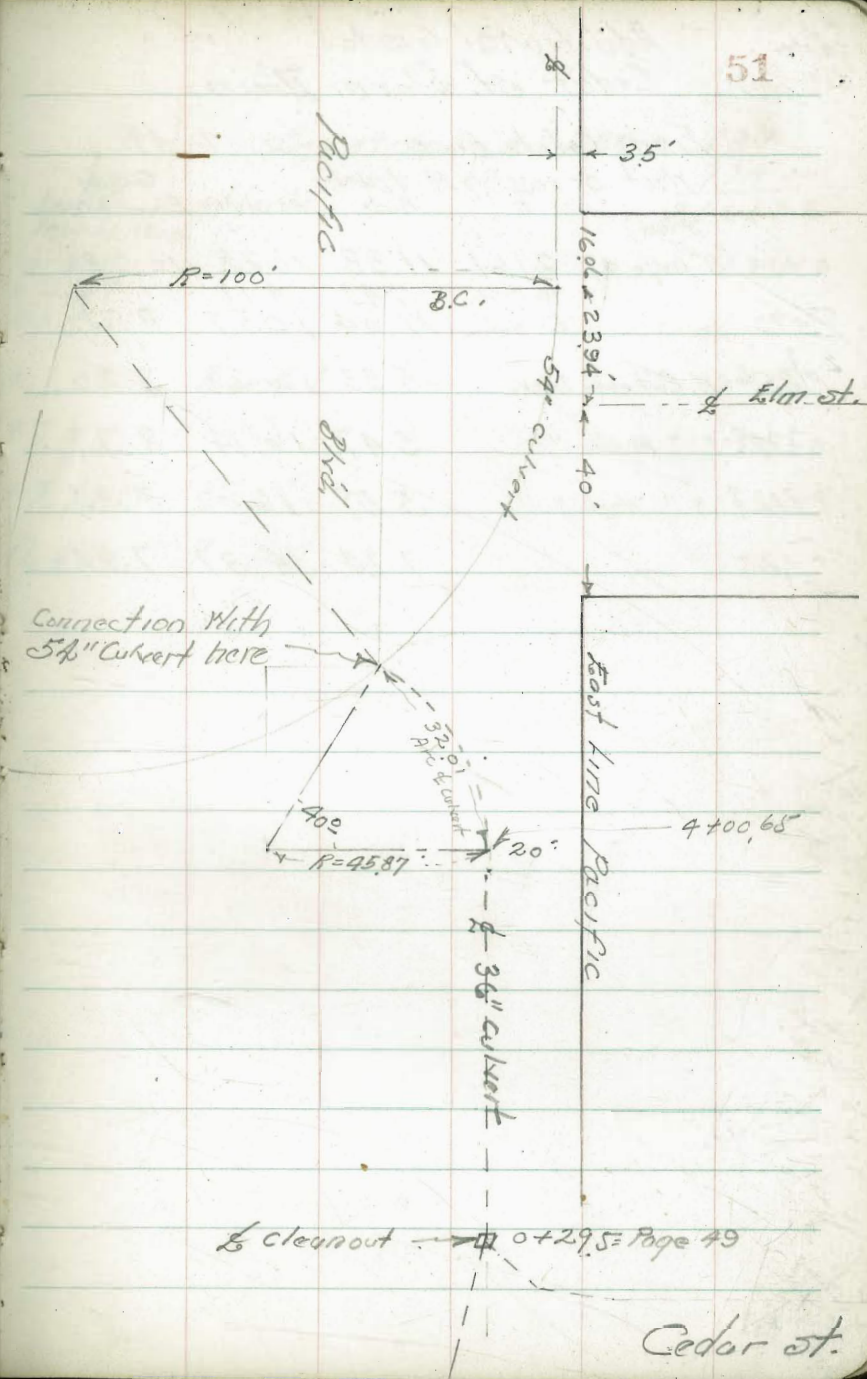
Grades Page 49



Grades For Top of Cleanout N.E. Cedar + Pacific

4.94 = B.M. CT.  
 4.92 +  
 9.86 = X

458 = Esido  
 466 = 14' side cleanout  
 5.28  
 5.20  
 + 0.08





Full box  
Miller  
Bliss 5-9-99

Additional Grades  
Cedar St. Storm Drain

From Catch Basin = 0+50 - P-49

West across B.R. tracks.

	X	Rods	El. stub.	Grade Flow line
(3' west)				
0+58 "B" page 49	21.61	11.33	10.28	10.28
	on Conc. = 7.43	14.18		
+70	on stub = 11.04	10.57	9.71	
+85.6 = W. Rail east Track.	5.33	16.28	9.20	
0+98.8 = " " Middle "	5.47	16.14	8.77	
1+12.8 = " " West "	5.59	16.02	8.31	
1+25	7.24	14.37	7.91	

Page 49 - El. cut stub 1+25 = 14.37

cuts.	offsets.
Flow as Const.	
0.00	
+4.47	
+0.86	
+7.08	2' on Rail
+7.37	" " "
+7.71	" " "
+6.46	7' North.

7.24 +  
21.61 = X

Pacific Blvd. Storm Drain  
Bet. Cedar And Elm St.

New Grades in order to clear  
Sewer Laterals

			Elev.	Elev.	
	+ π	Rods.	Stake	Flow line	
0+295 = <sup>Page 49</sup> cleanout			4.07	-0.90	+4.97
0+50			4.69	-0.99	+5.68 15' Rt.
1+00			4.59	-1.21	+5.80 " "
1+50			4.52	-1.44	+5.96 " "
2+00			4.48	-1.66	+6.14 " "
2+50			4.27	-1.88	+6.15 " "
3+00			4.04	-2.11	+6.15 " "
3+50			3.80	-2.32	+6.12 " "
3+95	8.21-π	9.97	-1.76	-2.51	+0.75 on Iron Stake in ditch
4+00 <sup>65</sup> = B.C.	8.21	4.39	3.82	-2.54	+6.36 15' Rt.
4+135					
	8.21-π	10.05	-1.84	-2.59	+0.75 on Iron Stake in ditch
+32.66 = connection 54"		4.77	3.44	-2.70	+6.14
Flow line 54"				-3.30	

Indexed

53

Elev. stub 4+00. <sup>65</sup> Page 49 = 3.82  
4.39 +  
8.21 - π



5-17-39

Miller  
Walker  
Bl. St.

Re-stake Storm Drain New Grades  
 From Station 3+84 of 36" Pipe 50  
 To " 3+92.8 " 24" " 50

54

	+	π	Rods.	El. cut Stakes	oler. Flow Line	
3+84 of 36"	9.71	12.21			-2.50 <sup>v</sup>	Exist. Pipe
+55			6.13	3.58	-2.39	+5.97 <sup>v</sup>
3+00			5.97	3.74	-2.19	+5.93 <sup>v</sup>
2+50			5.84	3.87	-2.01	+5.88 <sup>v</sup>
2+00			5.55	4.16	-1.83	+5.99 <sup>v</sup>
1+50			5.30	4.41	-1.64	+6.05 <sup>v</sup>
1+00			5.27	4.44	-1.46	+5.90 <sup>v</sup>
0+50			5.13	4.58	-1.27	+5.85 <sup>v</sup>
0+29.5			5.66	4.05	-1.20	+5.25 <sup>v</sup>
0-8.5 New location cleanout			4.80	4.91	-0.96	+5.87 <sup>v</sup>
0+50			4.78	4.93	-0.75	+5.68 <sup>v</sup>
TP 5.32 10.25'			4.78	H-93		
1+00			5.29	4.96	-0.57	+5.53 <sup>v</sup>
+50			5.18	5.07	-0.38	+5.45 <sup>v</sup>
2+00			4.98	5.27	-0.20	+5.47 <sup>v</sup>
+50			5.07	5.18	-0.01	+5.19 <sup>v</sup>
3+00			5.09	5.16	0.17	+4.99 <sup>v</sup>
+28.1 = Break in grade = 2' Lug at Beach St.			5.19	5.06	0.27	+4.79 <sup>v</sup>

4.94 = BM.

4.77 +

9.71 = π

4.78 = TP

4.93 = TP

5.32 +

10.25 = π

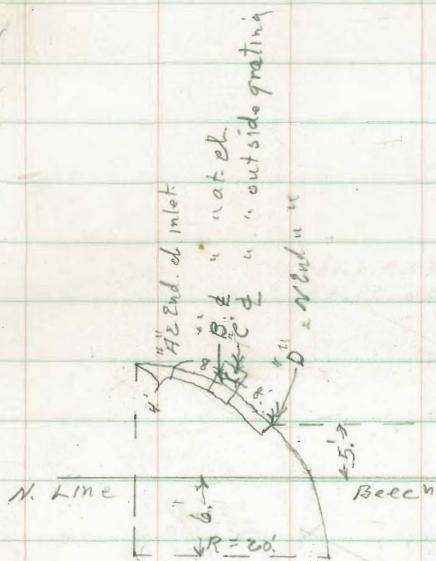
Storm Drain  
Cont. from Page 54

Station	$\pi$	Rab.	Elev. Stakes	Grade Flow Line
3+61.05	10.25	5.65	4.60	0.48 0.38
3+92.8 - at catch basin		5.17	5.08	0.70 0.50
C.B. Grades. at "H"				
BM. at J 524	(10.32)		5.04	
BM. at H 511	(10.32)	H.I. A.P.	5.21	
BM, B.P. S. E. Cor. Beech + Pacific		5.26	5.06	← New
"A" = E. End. ch. inlet.		5.01	5.31	Ex. curb Gutter Grade 4.30
"B"		5.13	5.19	4.16
"C"		5.13	5.19	
"D" N. End. ch. inlet.		5.13	5.19	4.16

+ 4.12  
+ 4.22  
4.38  
+ 4.58

+ 4.41

+ 4.38



+ 1.01

+ 1.03

+ 1.03



Upas St. Extensions Cont.

Station Lt. Rt.

20+22 293.97

20+05 293.85

+84.3  
 296.84 - T  
 292.80  
 4.04  
 3.9  
 +0.6 out 0.3

+75 292.40

19 +5580 = R.C.

opp PC. 15' Run off  
 19+48 291.7  
 5.19  
 ✓

296.84 - T  
 292.60  
 4.24

+25  
 296.84 - T  
 289.70  
 7.14  
 54  
 +1.7 out 0.9

296.84 - T  
 291.4  
 5.44  
 ✓

19+00 292.14 - T  
 287.90  
 3.2

292.14  
 289.70  
 2.4  
 ✓

+75  
 279.71  
 285.80  
 +6.1  
 2.5  
 -15.6  
 23.4 out

292.14 - T  
 287.70  
 4.4  
 2.8  
 -5.4 out 8.1

18+50 268.95  
 289.40  
 +14.45  
 12.5  
 -27.0  
 out 40.5

279.71 - T  
 285.40  
 +5.7  
 3.3  
 -9.0  
 13.5 out

Cont. from P-40

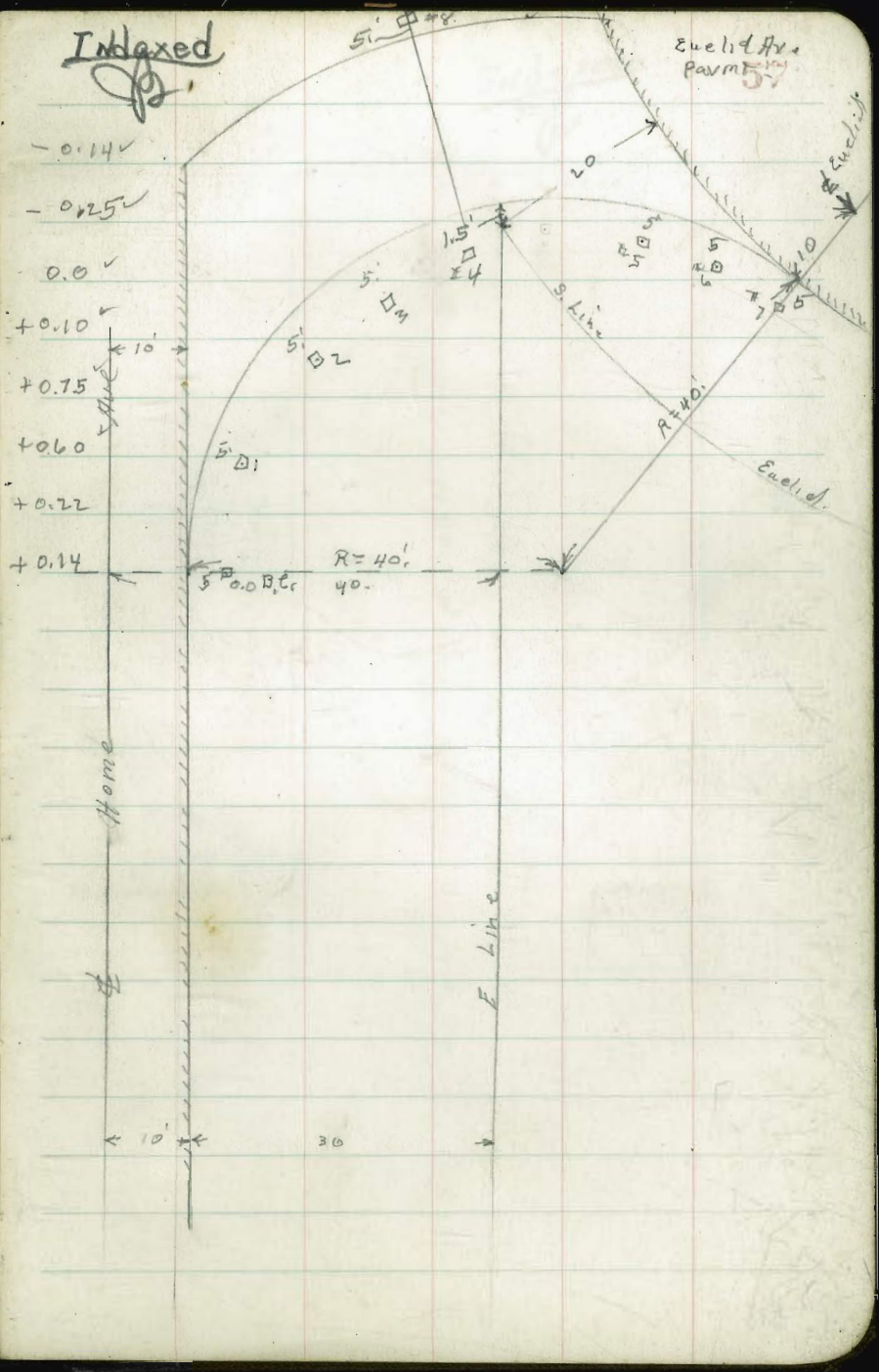
56

H.I. from P-40 = 268.95 - T  
 0.80 -  
 268.15 - TP  
 on Rock. 11.56 +  
 279.71 - T  
 0.12 -  
 279.59 TP  
 12.55 +  
 292.14 - T  
 1.96 -  
 290.18 - TP  
 6.66 +  
 296.84 - T  
 2.95 -  
 check Paving = 293.89  
 at P.C. 40' R' 293.77  
 0.06 = Error.

Grades Curve S.E. Cor. Home & Euclid.  
 T 100.00

	Rod. pos	Elev	Rod stub	Elev stub	Grades
00 B.C.	5.46	94.54	5.60	94.40	94.54
#1	4.94	95.06	5.20	94.80	95.05
#2			4.70	95.30	95.30
#3			4.40	95.60	95.50
#4			3.60	96.40	95.65
#5	3.81	96.19	3.75	96.25	95.65
#6	4.35	95.65	4.25	95.77	95.55
#7 P.R.C.	4.76	95.24	4.60	95.40	95.24

Indexed





Indexed  
B

5.02  
Ex. wall 2.87

Ground 3.3

0.57

2.9 5.02  
2.81

+ 2.15

4.70 pipe

+ 2.21  
Finish

↑  
10.25  
\*

5.02  
5.09  
- 0.07

60.90'

39.25

4.7

Ex. wall 6.27

Ex. Court 6.70

6.4

\*

\*

0.7

5.02

6.03

- 0.01  
Finish





5-23-39

Grades M<sup>E</sup> Kinley School

5+55 E. Do N wall

299.45 BM

313.81 BM. N.W. Felton + Redwood

13.72  
14.39  
17.74

BM

313.01

N.W. Felton  
+ Redwood

Wall N. Line Palm St

0+00 = E. Line Felton St

303.17

2+50 E = W. End. wall

6.93 296.24 ✓ 299.1

3+00

6.37 96.80 299.1

+50

5.90 97.27 ✓ 300.3

4+00

5.27 97.90 300.4

+50

4.70 98.47 ✓ 300.4

5+00

4.15 99.02 ✓ 299.9

+50 = W. Line M<sup>E</sup> Kinley

3.77 99.40 299.5

W. W. Line M<sup>E</sup> Kinley St

0+00 = N. Line Palm.

3.73 99.44 299.5

0+50

4.82 98.25 ✓ 299.1

1+00

307.69

6.00 97.17 298.70

+50

11.69 296.00 298.40

2+00

12.87 94.82 298.20

+50

14.12 93.57 298.10

3

14.39 93.30<sup>x</sup> 298.20

+50

13.74 93.95<sup>x</sup> 298.50

315.12  
3.72  
307.34  
0.35  
307.69  
11.68  
396.01  
7.16  
303.17

Indexed  
B

-2.86 ✓

-3.10 ✓

-3.03 ✓

-2.50 ✓

-1.93 ✓

-0.88 ✓

-0.10 ✓

-0.06 ✓

-0.75 ✓

-1.53 ✓

-2.40 ✓

-3.38 ✓

-4.53 ✓

-4.90 ✓

-4.55 ✓

60

307.69

4+00		11.69	96.00 <sup>X</sup>	299.50
+50		8.69	99.00 <sup>X</sup>	301.10
5+00		5.05	302.64 <sup>X</sup>	303.30
+50		2.19	305.50 <sup>X</sup>	305.7
5+99	s. Lin. Redwood St.			

6-13-39 Grades. M<sup>e</sup> Kinley School Grounds

BM.	9.18	308.58	299.40	5+50 E +00 X Page 60
4+50 E	1+00 N	6.67	301.91 <sup>✓</sup>	301.3
4+50 E	2+00 N	4.65	301.93 <sup>✓</sup>	301.9
4+50 E	3+00 N	6.53	302.05 <sup>✓</sup>	302.0

3+50 E	1+00' N	5.48	303.10 <sup>✓</sup>	302.6
3+50 E	2+00 N	4.28	304.30 <sup>✓</sup>	303.9
3+50 E	3+00' N.	3.32	305.26 <sup>✓</sup>	304.9
2+50 E	1+00 N	6.48	302.10 <sup>✓</sup>	302.0
2+50 E	2+00 N	3.54	305.04 <sup>✓</sup>	304.9
2+50 E	3+00 N	1.78	306.80 <sup>✓</sup>	306.4

10.10  
98.48

-3.50<sup>✓</sup>  
-2.10<sup>✓</sup>  
-0.26<sup>✓</sup>  
-0.20<sup>✓</sup>

61

+0.6  
0.0

+0.5  
+0.4  
+0.4

+0.1  
+0.1  
+0.4





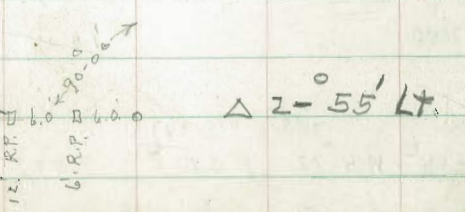
7-17-39

Chollas Trunk Line Sewer  
Branch - 50<sup>th</sup> S. of Orange to 47<sup>th</sup> + El Cajon

Indexed  
8

	303.82		0.20 High as constructed
0+00	13.87	289.95	FL EX M.H.
M.H. 56 Junction		95.91	289.75
0+50	8.92	94.90	290.75
1+00	6.68	97.14	291.75
+50	5.21	98.61	292.75
2+00	3.95	99.87	293.75
	10.78	299.14	OK 4 stub
+36 <sup>41</sup> M.H. 73 Δ 8-33 Rt.	9.44	300.48	294.48
2.00%			294.75
3+00	8.42	301.50	295.75
+50	7.10	302.82	296.75
4+00	8.23	301.69	297.75
	X312.89		
+50	9.45	303.44	298.75
5+05 <sup>10</sup> M.H. 74 Δ 17-38 Lt.	7.57	305.32	299.85
4+90			
+50	5.36	307.53	301.15
6+00	2.57	310.32	302.60
+50	4.28	308.61	304.05
	X322.10		
7+00	13.08	309.02	305.50
+50	11.98	310.12	306.95
8+10	12.80	320.46	308.70
Foot. of Bank			
		333.26	
+41 <sup>22</sup> Δ 4-18 Lt + P.O.T.	4.47	328.79	309.60
X0 Δ			

+6.16	Page 21.
4.75	✓
5.39	✓
5.86	
6.12	✓
+6.00	✓
+5.75	✓
+6.07	✓
+3.94	✓
+4.69	✓
+5.47	
+6.38	✓
+7.72	✓
+4.56	✓
+3.52	✓
+3.17	✓
+11.76	12' R.P. →
+19.19	✓





333,26

2.90 1061	(9+06.85) ⇒ Equation # M.H. 75 Δ 5'-0" x 42" Lt.	4.00	429.26	311.50	17.76 ✓
10+11.23	(Equation) M. Line Orange 3'-03"-18" Lt. 333.60	2.67	330.59	313.37	17.22 ✓
44	+56.92 E. line 49" Ex. 15" Sewer.	1.94	331.64	314.17	17.47 ✓
65	11+22.07 W " " " " "	1.50	332.10	315.34	16.76 ✓
26					
	+50	9.30	324.30	315.84 ✓	+8.46 ✓
	12+00	10.05	323.55	316.74	+6.81 ✓
	+50	10.01	323.59	317.64	+5.95 ✓
	+68.72 } M.H. 76 Δ 17'-52" Rt. } Alley BIK 35	9.52	324.04	317.99	+6.09 ✓
	13+00	8.43	325.17	318.58	+6.59 ✓
	+50	7.50	326.10	319.53	+6.57 ✓
	14+16 Foot of Bank 340.33	3.04	330.54	320.78	+9.78 ✓ 8' Lt. X on Conc. Pipe Culvert
	14+63.07 & Cross vne. d. Estrella	0.61	339.72	321.67	+18.05 ✓
	15+40	6.36	333.97	323.13	+10.84 ✓
	16+00	11.17	329.86	324.27	+4.89 ✓
	+50	10.48	329.85	325.22	+4.63 ✓
	17+04.81 } M.H. 77 P.O.T. } Alley BIK 34	9.57	330.76	326.27 ✓	+4.49 ✓

64

330.840  
Alley

6.0 R.P.  
6.0 R.P.  
90°



346.85

17+50 15.42 31.43 27.13

17+95 14.12 32.73 28.00

+40 12.25 34.60 28.84

+80 10.90 35.95 29.60

+99 & Sewer E. ch. 48<sup>ft</sup> 5.65 341.20 29.96

19+46<sup>2</sup> " " W " " 5.96 340.89 30.87

19+60 5.70 41.15 31.12

20+00 5.20 41.65 31.88

+36<sup>2</sup> M.H. #78 Δ40°-49'-30" Lt. 4.53 42.32 {332.58  
31.5 {332.70

+68<sup>2</sup> 4.40 42.45 33.08

21+00 4.24 42.61 33.46

+50 4.02 42.83 34.06

22+00 3.80 43.05 34.66

350.52

+50 7.16 43.36 35.26

+62<sup>8</sup> & Sewer E. ch. ex. dist. 343.33 35.42

+98<sup>8</sup> " " W " " 7.55 343.86 35.85

+37 08<sup>62</sup> M.H. #79 Δ90°-01'-30" Rt. 6.52 44.00 {336.00  
{336.20

+50 6.44 44.08 36.37

24 6.18 44.34 36.57

+50 5.88 44.64 36.77

1.9%

1.2%

0.4%

350.52  
7.16  
343.36  
3.49  
346.85 65

4.30 ✓

4.73 ✓

+5.76 ✓

+6.35 ✓

11.24 ✓

10.02 ✓

10.03 ✓

9.77 ✓

9.74 ✓

9.625 ✓

9.37 ✓

9.15 ✓

8.77 ✓

8.39 ✓

8.10 ✓

7.91 ✓

8.01 ✓

8.00 ✓

7.80 ✓

7.71 ✓

7.77 ✓

7.87 ✓



350.52

25		5.60	44.92	36.97
+50		5.25	45.27	37.17
26		5.01	45.51	37.37
+50		4.76	45.76	37.57
+83 <sup>14</sup>	M.H. 80 Δ 99° 44' Lt.	4.60	345.92	337.70 NS 337.90 t.M.
27+16 <sup>57</sup>		4.40	46.12	38.03
+50		4.32	46.20	38.17
27+90		4.24	46.28	38.33
+22 <sup>*</sup>	M.H. 81 ⊥ Alley Δ 43° 03' Rt	3.94	346.54	338.44 338.60
connection	⊥ El Cajon			
+91 <sup>54</sup>	⊥ M.H. 17 47° St			339.00

+7.95 ✓

B.M. B.P. S.W. {Euclid }  
El Cajon345.83  
4.69  
350.52

66

+8.10 ✓

+8.14 ✓

+8.17 ✓

+8.22 ✓

+8.02 ✓

+8.09 ✓

+8.03 ✓

+7.95 ✓

+8.08 ✓

+7.94 ✓

8/18/39 Chollas Sewer Exray Line  
 & Trojan Ave from M.H. #64 E to 54th St

7+37.40 Trojan Sec Book 599-10  
 # 343.62  
 6+00 = 2x M.H. #64 F.L. 18.24 325.34 325.62 → 327.40  
 " " " TOP 8.71 334.91  
 0+04 = B.K. Rst. grade

0+50 7.26 336.36 329.10

1+00 5.48 338.14 330.80

9+83 Trojan Sec #8  
 1+46 Δ W. line Lot 12 4.58 339.04 332.37

2+00 3.34 340.34 334.20

+50 2.47 341.15 335.90

3+00 M.H. #9 T. 354.87 11.74 343.13 337.60  
 +382 culvert crossing 338.48

+50 9.80 345.07 339.30

4+00 7.72 347.15 341.00

+50 5.72 349.15 342.70

5+00 3.82 351.05 344.40

+50 3.04 351.83 346.10

13+39 = Trojan Sec #10  
 36+02 3.31 357.56 347.80

BM. 12.75 364.42 351.67 + Trojan

5+18.3 M.H. #2 12.55 351.87 346.72 + 5.15

See. F.B. 1561 - P. 73.

Indexed

B E Grade 1st

+ 7.51

333.44

333.60

+ 7.26

+ 7.34

+ 6.67

+ 6.14

+ 5.25

+ 5.53

+ 5.77

+ 6.15

+ 6.45

+ 6.65

+ 5.73

+ 3.76

353.80

BM C.T

351.67 + Trojan #54 St

3.29

354.87

12.62

342.25

1.37

343.62

FL Culvert.  
 339.6 344.86  
 5.2 Deep



5+82 Valve  
5+09 valve  
4+37 valve  
3+52 Valve

2+58 Valve

1+67 Valve

0+84 Valve

0+00 Valve Moved.  
connection with pipe moved by County

8+01 Valve Moved  
47 connection with Pipe County Moved.

7+54 Valve  
66

6+88 Valve  
63

6+25 valve  
64

5+59 Valve  
66

4+93 Valve  
66

4+27 Valve

3+61 Valve

2+95 Valve cross Rd. 23. S. to New Location

2+29 Valve

? Valve covered.

0+97<sup>2</sup> Valve

0+34 Valve

0+00 Fence W. line. No Valve

9/28/39 - 12" Irrigation Pipe to be Replaced on  
Miller Mr. Bonds Land. <sup>side</sup> Mission  
Valley Rd. with 10" conc. Pipe

66

801.  
582.  
23  
1706 Total Lineal ft. 19 Valves.

801  
34  
767  
582  
23  
1374

See FB 1552, pg 42.







Cont. from Page 70

Profile for Footings  
176.03

0+387	7.7	168.3
+69	5.8	170.2
1+19	5.8	170.2
+77.95	5.2	170.8
2+359.5	4.5	171.5
+94.45	4.0	172.0
3+52.9	4.1	171.9
4+11.3	5.0	171.0
+69.34	5.2	170.8
5+28	5.8	170.2
+78	6.3	169.7
6+08.4	10.0	166.0

71





1458.2

$\pi$  23.52

0.92 1.12

0.80 0.10

1/2" Conc. Curbwalk

0.70

Acacia

S.T.

$\pi$  16.10

1.69

T.P. 4.41

9.11

$\pi$  23.52

$\pi$  14.58

El. 1104

El. 111.04

73

5.49 6.03

El 8.07

6.07

5.48 4.96

9.12.21

5.51

5.52

6.10

6.15

4.96

5.54

Beta St

5.69

5.10

4.94

5.55

5.55

5.50

4.90

5.45

0.00

5.13

5.64

4.92

5.50

3.36

4.91

5.40

Alley

1458.2

3.40

2.90

3

5.64

3.08

5.03

11.07.21

5.54

5.00

5.54

5.75

14.58

4.21

10.37

5.73

$\pi$  16.10

3.50

3.60

3.58

2.34

2.91

17

2.10

1.36















Assumed  
BM

4.25

104.25

100.00

250.0 to S. Line Park Ave

191.0 " " " " " "

184.1 " " " " " "

1112

E. side wall Fairmont Ave 3.80

N. End

N.W. Cor	N.E. Cor
R. 4.80	R. 5.34
Gr. R. 4.70	Gr. R. 4.70
- 0.10	- 0.64

S. End

S.W. Cor	S.E. Cor
R. 4.70	R. 5.24
Gr. R. 4.70	Gr. R. 4.70
0.00	- 0.54

Lot Line

Amer Legion Bldg.

Conc. Porch, BM. Ass. 100.00

Shrubby  
Lawn

RP 3.0

26

25

3.0' RP

10.0' overall

4.50

Club House

40'

3.0' RP

0.7

8.5'

15.0'

14.25'

3.0' RP

3.0'

Shrubby

Lawn

Stub

Stub

35.2'

42.3'

catch basin 11'0" x 11'0" outlet?



8/26/39 Grades. BIK H. Aladena  
 N of Redwood. Bet. Gregory & McKinley STs.

	W	E	
			313.01
			3.29
			316.30
			7.25
			309.05
			7.41
			316.46
			3.49
			312.97
			4.94
			1 317.91
1+80B	312.57	312.62	
	5.34	5.29	
	5.20	4.60	
	+0.24	+0.69	
1+60B	312.36	312.44	
	4.10	5.42	
	3.10	5.22	
	+1.00	0.25	
1+30	312.01	312.12	
	4.45	4.34	
	4.38	3.34	
	0.07	+1.00	
1+00 B	311.67	311.81	
	4.79	4.65	
	4.57	3.65	
	+0.22	+1.00	
0+80 B	311.39	311.55	
	5.06	4.91	
	4.10	4.31	
	+0.96	+0.60	
0+60 B	311.02	311.17	
	5.44	5.29	
	4.48	4.89	
	+1.00	+0.40	
0+40 B	310.55	310.68	
	5.71	5.78	
	4.91	4.78	
	+1.00	+1.00	
0+20 B	310.00	310.08	
	6.46	6.38	
	4.46	5.82	
	+2.00	+0.56	
0+00 N. line Redwood.	pay 309.40	pay 309.42	
	7.06 ✓	7.04 ✓	
B.M.		313.01	N. W. Felton & Redwood.

Indexed

	W	E
		317.91
4+05	312.52	312.40
	5.39	5.51
	4.59	6.27
	+1.00	-0.76
3+80	312.60	312.50
	5.31	5.41
	4.31	5.16
	+1.00	+0.25
3+55	312.67	312.60
	5.24	5.31
	4.24	5.19
	+1.00	+0.12
3+30	312.74	312.70
	5.17	5.21
	4.17	4.90
	+1.00	+0.31
3+05	312.81	312.79
	5.10	5.12
	3.50	5.51
	+1.00	-6.39
2+80 B	312.88	312.88
	5.03	5.03
	4.03	4.03
	+1.00	+1.00
High PT 2+60 B	312.96	312.96
	4.95	4.95
	3.95	3.95
	+1.00	+1.00
2+40 B	312.90	312.91
	5.01	5.00
	4.01	4.00
	+1.00	+1.00
2+20 B	312.84	312.86
	5.07	5.05
	3.07	4.62
	+2.00	+0.43
2+00 B	312.73	312.76
	5.18	5.15
	3.18	4.15
	+2.00	+1.00

9/5/39

culvert Univ &amp; Central

B.M.

514

357.07

351.93

N. Univ  
& Central

N.

S.

0+32.20 N.S. } N. Line  
0+42.7 on W } M. KimleyPay  
307.18  
10.16Pay  
307.25  
10.69

0+35 on S. only.

308.27  
9.07  
7.07  
+2.00

0+20 E.B.

310.37  
6.97  
5.97  
+1.00310.37  
6.97  
5.97  
+1.00

0+10. E.B.

311.48  
5.86  
4.86  
+1.00311.48  
5.86  
4.86  
+1.00

0+00 = E. Line Alley

317.91 X  
5.19  
312.72  
4.62  
317.34

W

E

5+20 N. Line Alley

conc. walk  
313.41  
3.93312.80  
5.04  
4.74  
+0.305+05<sup>18</sup> S. Line Alley312.20  
5.14  
3.14312.00  
5.34  
4.34  
+1.00

4+80

312.28  
5.06  
3.06  
+2.00312.70  
5.81  
5.76  
+0.05

317.91

4+55

312.36  
5.55  
4.55  
+1.00312.20  
5.71  
6.02  
-0.31

4+30

312.44  
5.47  
4.47  
+1.00312.30  
5.61  
6.29  
-0.68

N. Line Univ. - E. Ch. Central

Top. ch.

5.07 352.00

Gutter

6.10 350.97

N. ch. Line Univ. - E. Line Central

Top. ch.

5.05 352.02

Gutter

5.41 351.46

E. ch. Central - N. Rail N. Track

Top. Rail

4.92 352.15

E. ch. Central - S. Rail S. Track

Top. Rail

5.07 352.00

2's. of S. Line Univ. E. ch. Central

Top. ch.

5.32 351.75

Gutter outlet Culvert

6.38 250.69

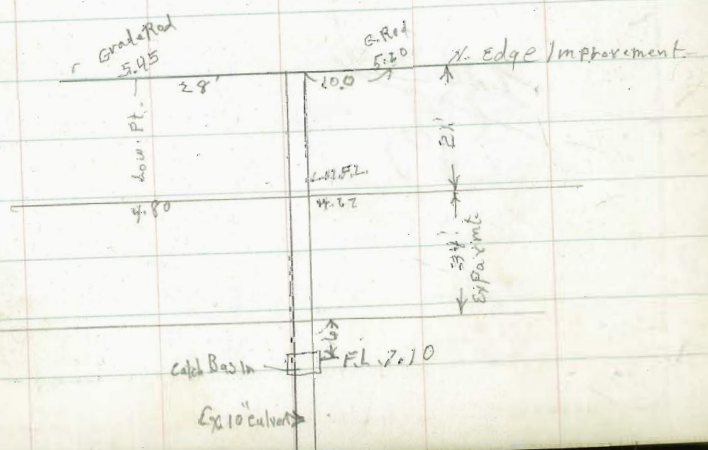
Indexed  
JG



E. of N. line Rell	5.53
Alley " " "	6.07
" " 1+50 N	4.5
" " 1+75	4.3
Garage 1+73 W	3.68
yard 1+77 W	4.6
low Pt. in Alley	5.2

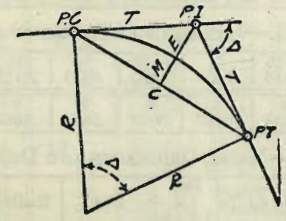
Pershing Drive Culvert. Ed of 18<sup>th</sup> St. 9-5-39

Fl. C. B. 1	Roads	7.10
		5.36
F.L. Ex 10" Pipe 2' N. of Pav		6.11
N. edge Pav. 60+00		4.67
Pav grade 0+21		5.20
N. edge Pav.		4.80
		5.45



# DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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## CURVE FORMULAS

- Radius= $R = \frac{50}{\sin \frac{D}{2}}$  (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= $M = R(1 - \cos \frac{\Delta}{2}) = R \text{vers} \frac{\Delta}{2}$  (6)
- External= $E = T \tan \frac{\Delta}{4} = R \div \cos \frac{\Delta}{2} - R$  (8) =  $R \text{exsec} \frac{\Delta}{2}$  (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.  $\Delta=62^\circ 10'$   $D=8^\circ 20'$ . From Table IV for  $1^\circ$  curve  $T=3454.1$  and  $+8\frac{1}{3}=414.49$  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)  $.3 \times C \times D^2$  or=def. 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  $+42=5.5$  or  $D=5^\circ 30'$ .



29389  
0.90  
2947.9

290.95  
3.84  
294.79

10186  
5  
0930

2.79  
14.18  
16.97

90  
45  
945  
135

22' 5  
195

263  
31.5  
37  
685  
10.08

680  
627  
53  
9490  
771  
2120

18.3  
1034  
732  
549  
6222  
34610  
34672



$x = \frac{x}{3}$   
 $\frac{2}{3}x = \frac{5}{4}$   
 $\frac{8}{12}x =$

131.4  
97.7  
229.1  
66  
295  
66  
361  
66  
427  
66  
493  
66  
559

5/017  
25 38

45  
45  
90

2/1588  
788

225  
67.5  
22.5

67.5  
22.5  
900  
1125

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1 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.

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