





2678

192

# 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 20.6. 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 24.6, added to 30.6 = 55.2. For slopes of 1 on 1 1/2 see inside of back cover.

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Pacific Highway d. Stakes				
7/24/39				4.26
3+12 E. Line Pacific	on ex. walk	4.20	3.77	4.26
3+00	S. Line Ash St			4.20 ✓
	π 8.67			
2+94	B.C. R.O. Rad Return	4.71	3.96	4.17
2+50		4.76	3.91	3.95
2+01		5.30	3.37	3.70
+50		5.26	3.41	3.50 ✓
1+00		5.63	3.04	3.27
0+60		6.00	2.67	3.10
0+00	B.C. Ex. d. Return.	5.85	2.82	2.83
0+00	N. Line A. St.			2.80 ✓
	π 9.19			
3+40	S. Line A. St.			3.00 ✓
3+34	B.C. Ex. d. Return.	6.18	3.01	3.03
44.				
2+90		5.72	3.47	3.33
2+40		5.09	4.10	3.67
1+90 B		5.30	3.89	4.00 ✓
1+40		5.03	4.16	4.33
0+90		4.89	4.30	4.67
0+40	N. Line B. St.	5.02	4.17	5.00 ✓
0+00	φ B. St. S. End.	4.19	5.00	5.00 ✓

Index	C.S.K.		
-0.49			
	5.84 B.M. B.P. S. d. Ash.	69	E. Atlantic
	2.83		
-0.21 ✓	π 8.67		
	5.85		
-0.04 ✓	2.82		
	6.37		
	π 9.19		
-0.33 ✓			
		1796	Heard Lcans across walk
-0.09 ✓			
-0.23 ✓			
-0.43 ✓			
0.15.		0+09	Cocospalm E. Edge 3.2 E. of d.
-0.2K.			
+0.14			
+0.43 ✓		2+06	N. End. Conc. steps
-0.11 ✓		1796	S. End. Conc. steps 1.5 m S.
-0.17 ✓		1+29	N. End. conc. steps 1.5 m S.
-0.37 ✓		1+19.5	" " " "
-0.83 ✓			
0.00 ✓			



10.06

2+10 Brk	5.72	4.34	4.38 <sup>v</sup>
1+57 <sup>5</sup>	5.51	4.55	4.55
1+05	5.50	4.56	4.72
0+52 <sup>5</sup>	5.27	4.79	4.89
0+00 B.C. 20' Rad. Ret. N. Side Cedar	5.00	5.06	5.06 <sup>v</sup>

π 9.93

3+00 = Shina Cedar St			5.32 <sup>v</sup>
2+94 = B.C. 20' R. Ret. ex. d	4.58	5.35	5.35
2+44 <sup>4</sup> B	4.59	5.34	5.48
2+00	4.02	5.91	5.53
1+50 B	4.55	5.38	5.35
1+00 = S. End. ex. d + walk.	5.15	4.78	5.27
0+00 = N. Line Beech St.			5.10 <sup>v</sup>

π 9.42

3+00 = S. Line Beech St	4.36	5.06	4.90 est <sup>v</sup>
2+03 = N. End. ex. walk + d.	5.05	4.37	4.76
1+50 B	5.25	4.17	4.61
1+00 N. End. ex. walk + d.	4.96	4.46	4.46
0+00 = N. Line Ash St	5.10	4.32	4.40 <sup>v</sup>

-0.04 <sup>v</sup>	5.84 BM.	
	3.58	
0.00 <sup>v</sup>	17.42	
	4.36	
	5.06 BM. S.E. Beech OK.	
-0.16 <sup>v</sup>	4.87	
	19.93	
-0.10 <sup>v</sup>	4.58	4.70
	5.35	5.13
	4.70	
	10.05	
OK.	4.94 P.I. CT. at Cedar	
	5.12	
	10.06	

2+20 Water Meter 7.0 E from d.

2

1+76 water Meter 6.5 from d.  
 1+60 water Meter 7.1 from d.  
 1+24 Fence at Back  
 1+17 S. End. Fence 0.3 in st.

0+18 Water Meter 6.7 from d.

0.00
-0.34 <sup>v</sup>
+0.38 <sup>v</sup>
+0.03 <sup>v</sup>
-0.49 <sup>v</sup>
0.00 <sup>v</sup>
-0.39 <sup>v</sup>
-0.44 <sup>v</sup>
0.00 <sup>v</sup> d.
-0.08 <sup>v</sup> d.



	11.12			
3+00 = S. Line Hawthorn St				8.90 ✓
1+50 N. End. Walk. To be Cons	3.30	7.81	7.70	
1+15 N. End. Cl.	3.70	7.42	7.42	
1+00	3.72	7.40	7.30	
0+50	4.22	6.90	6.90	
0+06 = P.C. 20' Radius	4.67	6.45	6.55	
0+00 = N. Line Grape St.	4.56	6.56	6.50	
	4.77	6.35	6.50	
	4.54	6.56	6.50	
2+10. Bk	8.18		4.95 ✓	
1+48 <sup>5</sup> / <sub>11.5</sub> S. End. Ex. cl.	3.59	4.59	4.59	
1+06	4.12	4.06	4.30	
4°				
0+66	4.31	3.87	4.07	
4°				
0+26 N. End. cl.	4.34	3.74	3.74	
0+00 N. Line Elm St.			3.70 ✓	
	10.06			
4+13 End. End. Pottery at Elm St.	6.48	3.58	3.70 ✓	
3+60	6.15	3.91	3.87	
3+10	6.20	3.86	4.04	
2+60	5.75	4.31	4.21	

	BM 6.64 S.E. Grape	3.
	4.48	
	11.12 chx BM.	
	10.06	4.60
	6.48	
	3.58	
	4.60	
	8.18	
	2.51	
	5.67	
	5.45	
	11.12	
70.11 ✓		
0.00 ✓		
+0.10 ✓		
0.00 ✓		
-0.10 ✓		
+0.06 ✓		
-0.15 ✓		
+0.06 ✓ on walk.		
	1+31 Meter Box o.k.	
OK		
-0.24 ✓		
-0.20 ✓		
0.12 low		
	0+23 Meter Box 4.20 into sidewalk.	
	4+14 Meter Box 7.7 E. of cl.	
+0.04 ✓		
-0.18 ✓		
+0.10 ✓		
	3+11 Meter Box 7.0 E. of cl.	



6780 5.1	Lawrel	12.08									513
5730	End. Conc. walk M.H.T.L		4.70	7.38	8.10						33
5718	B.K.		4.78	7.30	7.30		+0.08				546
5713	End. ch. M.H.T.L		4.80	7.28	7.30	8.8					
					7.37		-0.09				530
4770			4.28	7.20	7.54		+0.26				164
4730	N. End. Ex. ch.		4.34	7.70	7.70						674
3780	{S. End. Ex. ch.}										
	{M. Line. Kalmia} (closed)		4.02	8.06	7.97	8.06					
3740			4.16	7.92	8.16		-0.24				
3700	S. Line Kalmia (closed)		3.86	8.26	8.35		-0.13				
2758		13.80	5.57	8.23	8.56		-0.33				
2717			5.28	8.52	8.77		-0.25				
1775			5.25	8.55	8.96		-0.41				
1737			4.48	9.32	9.14		+0.18				
1704	N. End. Ex. ch.		4.48	9.32	9.32		OK				
1704											
1701	N. End. Ex. walk.										
0700	N. Line Juniper.				9.80						
		13.85									
3712	End. ch. E. Line										
3700	S. Line Juniper St.		3.95	9.90	9.90						
2794	P.C. 20' Red Ret.				9.92						
2754	S. End. ch. M.H.T. Line		4.07	9.78	10.04		-0.26				
2735	S. End. walk M.H.T. Line		4.05	9.80	10.10		-0.30				
1740	B.K.				10.38						
0700	N. Line Ivy St										

3740 w. meter 4' E. of E. ch.

$\times 13.80$   
 $\frac{6.20}{7.60}$   
 $\frac{4.48}{12.08}$



0+00 = N. Line Emory St.

9.70 ✓

-17.27 S.E. End. ch. walk.

H1

-

E1

Grade

15.85

+17.27 N.E. End. Retard

6.13

9.72

9.50 ✓

+0.22

5.32

10.53

9.80

10.73

2+97<sup>B</sup> = S. Line Emory St

9.40 ✓

9.70 ✓

2+91<sup>B</sup> P.C.

6.41

9.44

9.38

+0.06 ✓

5.39

10.46

9.68

+0.74 ✓

2+50

6.95

8.90

9.20

-0.30 ✓

6.00

9.85

9.50

+0.35 ✓

2+23<sup>B</sup> B

2+00

↑  
9.47  
↓

9.00

5.98

9.87

9.30

+0.57 ✓

1+50

7.40

8.45

8.80

-0.35 ✓

6.30

9.55

9.10

+0.45 ✓

1+00 S. End. ch. W

7.90

7.95

8.60

-0.65 ✓

6.76

9.08

8.90

+0.19 ✓

0+50

7.25  
7.66

8.46

5.92  
9.09  
14.91  
5.88  
9.04  
14.92  
8.56  
6.40

6.81

9.04

8.70

+0.34 ✓

0+06 B.C. 20' d. Road

8.2

6.70

9.15

8.52

+0.63 ✓

0+00 = N. Line Bean St

8.20 ✓

8.50

0.00  
Restak

11.78 = S.E. Line walk. + ch. on E

8.20

8.60  
6.32

6.77

9.08

8.60 ✓

+0.48 ✓

7.35

8.50

11.5.85

5

10.0 ✓

10.00

4.91  
0.78  
5.69  
0.12  
5.57  
5.45  
+0.12  
Restak

↓



2+41 N. End Fence on W. line  
 2+21 M. Box 38 E. of W  
 1+72 Acacia Tree W. side 4.8' E. of W  
 1+62 M. Box. W. side 3.5' E. of W.  
 1+49 S. End Fence on W. line  
 1+49 Elec. Pole W. side 4.5' E. of W.  
 1+40 Elec Light W. side 3.9' E. of W.  
 1+08 Palm W. side 4.5' E. of W.  
 1+00 N. End. above Fence 0.2' E. of W.  
 0+82 Meter Box W. edge 4.7' E. of W.  
 0+62 Palm W. side 4.6' E. of W.  
  
 0+51 Elec Pole W. side 4.6' E. of W.  
 0+49 S. End. Fence 0.1' E. of W.  
 0+27 Guy Dead Man W. side 4.8' E. of W.  
 0+22 Meter 1' W. of W  
 0+10 Light. W. edge 4' E. of W.  
 0+00 = N. Line Emory Palm W. edge 4.1' E. of W

(2+63 Elec Guy Dead  
 Man 4.7' E. of W)  
 2+70 Palm 4.7' E. of W  
 2+80 Light Post W. edge  
 4.0' E. of W.  
 2+84 S.W. side Fire Play  
 5.0' E. of W  
 2+89 Elec Pole W. edge  
 5.0' E. of W.

W. side Pacific  
 N.W. of Emory

3+00	S. Line Harasthy	115.85	10.00
2+89	B.C. on W. end d.	5.98	9.87
2+50		5.85	10.00 10.25
2+00	B.K	5.61	10.24 10.50
1+50		5.50	10.35 10.30
1+00	N. End of well on E		
1+00 W		5.64	10.21 10.10
0+50		5.81	10.04 9.90
0+06	P.C. 20' R	5.83	10.02 9.70
0+00	N. Line Emory st.	5.98	9.87 9.70
00 - 5.6		5.98	9.87 9.75
00 - 11.17	E. End. of Ret	5.55	10.30 9.80

B.M. 10.00 N. W. Harasthy.  
 5.85  
 15.85

6.45  
 9.40

E side Pacific N. of Emory

1+00 End. of d  
 0+80 Palm E. side 5.0' W. of E.  
 0+75 Tel Pole E. side 4.8' W. of E  
 0+61 Palm E. side 5.4' W. of E  
 0+54 R.R. warning sign E. side 4.3' W. of E  
 0+10 Light Post E. Edge 4' W. of E  
 0+00 = N. Line Emory E

115.85	E. Pacific of Harasthy			
-0.25				
-0.26			10.90	
+0.05			10.67	
1+00 S	5.48	10.37	10.45	-0.08
0+50	5.49	10.36	10.22	+0.14
0+06 E.C.	5.65	10.20	10.0	+0.20
-11.17	E. Prop	5.31	10.54	10.00 (+0.54)

5.14  
 5.37  
 0.179 - Restate



0700 = s. line Bean  
 0798 S Light post E. side 4.6 W. of E. Line  
 0728 S water Meter " " 4.8 " " " "  
 1730 S Light Post, " " 4.8 " " " "  
 2750 S " " " " 4.8 " " " "

E. side Pacific N. of Bean

Palm East Edge W of E. Line  
 2729 " " " 4.6 " " " "  
 2711 " " " 4.7 " " " "  
 1791 " " " 5.0 " " " "  
 1773 " " " 5.0 " " " "  
 1753 " " " 4.9 " " " "  
 1743 Light Post. " " 4.0 " " " "  
 1713 Palm " " 4.7 " " " "  
 0794 " " " 4.8 " " " "  
 0772 " " " 4.9 " " " "  
 0756 Tel Pole " " 4.8 " " " "  
 0738<sup>5</sup> Guy wire Deadman " " 4.8 " " " "  
 0727<sup>5</sup> Palm " " 5.0 " " " "  
 0718 Light Post " " 4.9 " " " "  
 078<sup>5</sup> Palm E. side " " 4.9 " " " "  
 0700 N. Line Bean st

W. side of Pacific N. of Bean

7

3756 Palm W. side 4.5' E of W. Line  
 3733 " " " 4.7 " " " "  
 3711 " " " 4.8 " " " "  
 2776 Light Post. " " 4.0 " " " "  
 2768 Palm " " 4.9 " " " "  
 1743 Light Post. " " 4.1 " " " "  
 1700 w. edge 40' Conc. Pav. 15.0' E. of W. Cr.

E. side Pacific N. of Bean (con)

3734 Palm East Edge 5.0 W of E. Line  
 3710 Palm " " 4.8 " " " "  
 2798 s. Line Emory  
 2789 " " " 4.7 " " " "  
 2779 Light Post. " " 4.1 " " " "  
 2751 Tel Pole " " 4.4 " " " "  
 2747 Palm " " 4.9 " " " "  
 2730 Guy wire Deadman " " 4.5 " " " "



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Pacific Hwy. ch. + walk. OK.

- ↓ from E.B. to P.C. 65' of s. line A. = Ex. d. Return 332.6 ch
- ↓ B. to A. Walk. OK.
- ↓ from N. End. Ex. 20' Rad. Ret. at A. to P.C. Ash 248. ch
- ↓ " " " " 18.55 ch
- A to Ash Walk. OK.
- ↓ from Ex. d. to Ex. commercial/G. Her Ash to Beech 102. "
- ↓ Ash to Beech. Walk. OK. 103' length.
- ↓ from Beech to Cedar 194' ch. Return Built 194.
- ↓ curb Beech to Cedar 200' OK
- ↓ from Exch. Ret. to d. Ret. Cedar to Elm, OK. 411.1
- ↓ Walk " " " OK
- ↓ from Ex. ch to Ex. ch. 122.5 OK. Elm N. 622.5
- ↓ Walk. OK. " "
- ↓ ch. Ret. N.E. Grape 14.5
- ↓ from " " at " North. 110.0
- ↓ from N. line Grape Walk. OK. 150'

- ↓ from s. end Ex. ch. Return Juniper south
- ↓ " " line Juniper 65' Walk OK.
- ↓ New. ch. on Ret. S.E. Juniper 10'
- Extrag Walk. S. Side Juniper E. of E. line
- Pacific 5.0 wide E. 20' long.
- ↓ from N. line Juniper 100.4 = Ex. walk + ch
- ↓ " Ex. d. to Ex. ch. N. line Kalmia 279.6
- ↓ " N. end Ex. ch. N. of Kalmia to N. End. New. ch 83.7
- Walk from 100' N. of Juniper N. 429' OK.
- from S. line Bean S. to Ex. walk. OK. 289.
- N.E. Bean Return OK.
- ↓ P.C. " to P.C. Emory ch. + Walk OK 285.80
- S.E. Emory Return OK
- ↓ N.E. Emory Return OK.
- ↓ from N. line Emory 100' to Ex. ch. New. d. out of line
- OK. at. Ex. ch. OK. at. N. line Emory
- 0.5 W. at. P.C. 6' N. of N. line Emory chet. O. son.
- Notified will be OK. Tues. 29<sup>th</sup>



W. side Pacific

N.P.C. Emory to Ex. Ret. Harasthy curb 284.3

284.3 18. Ret

↓

walk. O.K. Emory to Harasthy

44.6 50.4

S/4 11' of NW. Return from 0 to 0.5 out.

S.W. Return Emory O.K.

↓

S. of P.C. 44' elv 44.0

" " " 45' cone. walk.

S. of Ex. Commercial Gutter. 50' 50.0

↓

" " " " 51.5' walk.



9-13-39

Montclair Sewers.

B.M. Rim Ex M.H.	12.45	124.13	111.68		
27+68 <sup>54</sup> Ex. M.H.		12.45	111.68	106.25	
37.					
27+31 <sup>54</sup>		12.50	111.63	104.21	
37.					
26+94 <sup>54</sup> End. C.I. Pipe		14.11	110.02	110.17	
24.					
24+70 <sup>54</sup> " " "		10.70	113.43	111.44	
59.					
26+11 <sup>54</sup>		2.49	121.64	114.56	
59 <sup>55</sup> T.P. 10.91	134.02	1.02	123.11		
25+51 <sup>69</sup> Δ		9.70	124.32	117.64	
50.					
25+01 <sup>69</sup>		7.98	126.04	120.30	
55.99					
24+45 <sup>70</sup> M.H.#		3.62	130.40	123.38	

ground at old Δ.

5.6

Indexed

10

+ 5.43 ✓

+ 3.42 ✓

- 0.15 ✓

+ 1.99 ✓

+ 7.08 ✓

+ 6.64 ✓

+ 5.74 ✓

+ 7.02 ✓

12.94

2.17

14.11







BM $\frac{1}{2}$ Slip	8.34	<u>280.14</u>	271.80	5+40	
0+20	S. of $\frac{1}{2}$ Maple	8.05	272.09	268.64	+3.45 <sup>v</sup>
0+70		6.78	273.36	268.29	+5.07 <sup>v</sup>
1+20		5.84	274.30	267.94	+6.36 <sup>v</sup>
1+60	M.H. <sup>#</sup> 18			267.66	
0+20	$\frac{1}{2}$ Maple	3.70	276.44	268.64	+7.80 <sup>v</sup>
0+70		3.73	276.41	268.29	+8.12 <sup>v</sup>
1+20		4.35	275.79	267.94	+7.85 <sup>v</sup>
1+60	M.H. <sup>#</sup> 18 $\Delta$ 90°-00'	4.84	275.30	267.66	+7.64 <sup>v</sup>
2+00		5.59	274.55	267.38	+7.17 <sup>v</sup>
2+50		6.27	273.87	267.03	+6.84 <sup>v</sup>
3+00		6.98	273.16	266.68	+6.48 <sup>v</sup>
3+50		8.02	272.12	266.33	+5.79 <sup>v</sup>
4+00		9.97	270.17	265.98	+4.19 <sup>v</sup>
4+50		10.54	269.60	265.63	+3.97 <sup>v</sup>
5+00		9.24	270.90	265.28	+5.62 <sup>v</sup>
5+40	M.H. <sup>#</sup> 17			265.00	+6.92



BM. #	Stab					
5+40	M.H. 17	3.17	374.97	371.80	Mapla + Van Couv.	
5+40	M.H. 17	2.90	290.00	271.92		265.00
5+90				3.70		271.27
6+40				5.12		269.85
6+90				6.27		268.70
7+40				6.94		268.03
7+90				6.50		268.47
8+40				6.74		269.23
8+80	M.H. 16			5.74		269.23
9+30				4.25		270.62
9+80				4.12		270.85
10+30				4.87		270.10
10+60				7.46		267.51
10+88	Pier					257.63
11+00	Pier					256.92
11+30				7.92		267.05
11+80				5.83		269.14
12+20	M.H. 15 @ Kalmia			6.53		268.44

0.70

12+20 @ stab		268.37		13
		6.60		
		274.97		
+6.92	l. North			
+6.62	l. E.			
+5.55	"			
+4.75	"			
+4.43	"			
+5.22	l. W.			
+6.33	l. E.			
+6.61	"			
+8.35	"			
+8.93	"			
+8.53	"			
+6.15	"			
-3.53	stab 4. No Pier			
-4.16	" " " "			
+6.18	"			
+8.62	"			
+8.20	"			



275.80

266.47  
3.70  
T.P. 262.77  
8.24  
271.01

100. W	M.H. 15 = DE	3.72	272.08	264.00	+8.08
50. W	M.H. 15.	5.34	270.42	262.12	+8.30
12+20	M.H. 15		268.44	260.24	+8.20
				.21	
12+50		9.50	266.30	260.03	+6.27
13+00		11.77	264.03	259.68	+4.35
13+50		11.77	264.03	259.33	+4.70
				.35	
14+00		9.80	266.00	259.98	+7.02
				.20	
14+28	M.H. # 14	4.63	266.38	258.78	+7.60
				.14	
14+50		5.09	266.00	258.62	+7.38
15+00		5.60	265.41	259.27	+7.14
15+50		5.64	265.37	257.92	+7.45
16+00		5.09	265.92	257.57	+8.35
				.35	
16+50		4.68	266.33	257.22	+9.11
				.32	
16+96	M.H. # 13	4.73	266.28	256.90	+9.38
				.37	
17+50		5.44	265.57	256.53	+9.04
18+00		7.42	263.59	256.18	+7.41
18+50		3.70	262.77	255.83	+6.94
19+00		4.42	262.05	255.48	+6.57
				.35	
19+50		4.16	261.31	255.13	+7.18
20+12	M.H. # 12	3.74	262.73	254.70	+8.03
				.43	

268.37 # slab

266.17 # slab  
9.63

275.80

266.26 # slab



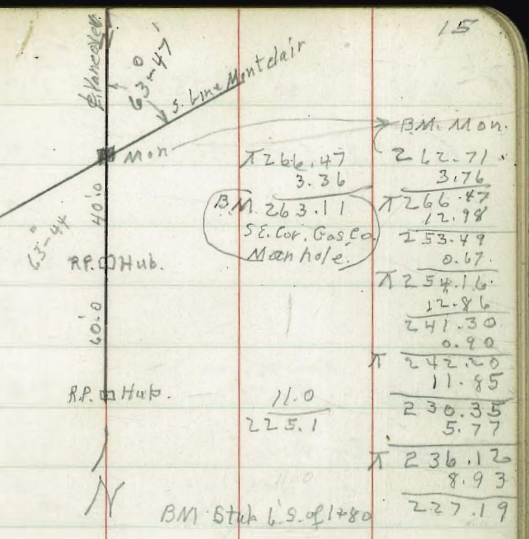
$\left\{ \begin{array}{l} 20+11 \frac{76}{0+00} \\ \text{M.H. 12} \end{array} \right\}$	$\pi 266.47$	3.74	262.73	254.70
0+50		4.07	262.40	253.35
1+00 Bk		11.83	254.64	252.00
1+40 Bk	$\pi 254.16$	11.57	242.59	240.00
1+80	$\pi 236.12$	8.93	227.19	221.00
2+20 Bk	$\pi P-17$	2.09	207.07	202.00
2+48.8 MH <sup>4</sup> <sub>10</sub>	209.16	11.94	197.22	191.53

Cont. Page 21

7+35 <sup>4</sup> M.H. 9 ♀ Montclair				229.07
7+75 <sup>4</sup> B. c				220.94
8+15 <sup>4</sup> B. c				206.94
8+47 <sup>4</sup> M.H. 10				191.53

+ 8.03 ✓  
 + 9.05 ✓  
 + 2.64 ✓  
 + 2.59 ✓  
 + 7.19 ✓  
 + 5.07 ✓  
 + 5.69 ✓

See P-17





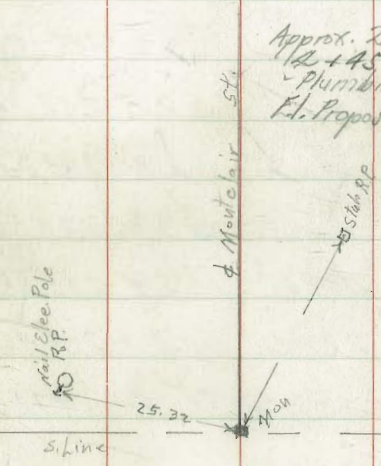
Kalmia St.

BM. B.P.	6.33	275.83		269.50	N.E. Kalmia + Montclair Flow Line		
0100 D.F. E. of Montclair			2.02	73.81	267.90		+5.71
+35			1.83	74.00	266.85		+7.15
+70			2.130	73.53	265.80		+7.73
3.90 1+20			3.52	72.31	264.30		+8.01
1+70 E. line Montclair			7.60	68.23	262.80		+5.43
2+00 Ex. M.H.					262.20		
+30 connection S. Line Kalmia			9.00	66.83	261.00		+5.83
S. on Montclair St.							
+7.5 T.P.	0.33	264.70	10.18 11.46	65.65 264.37	259.54		+6.11
3+20			1.37	63.33	258.08		+5.25
+70			2.40	62.30	256.45		+5.85
325.00 4+20			2.60	62.10	254.82		+7.28
+70			4.08	60.62	253.20		+7.42
5+20 M.H. #			5.87	58.83	251.53		+7.30
53.8 +73.8			8.28	56.42	245.91		+10.51
10.50 6+27.6 T.P.	0.27	252.40	12.57	252.13	240.30		+11.83
53.8 +81.5			8.85	43.55	234.68		+8.87
7+35.4 M.H. #			16.44	35.96	229.07		+6.89
chks. B.M. 3. Nails in Pole			10.94	241.46	w. d.		

267.86  
8.04

side shots to determine Elev. Plumbing  
at 2392 Montclair St.  
Elev cut stake #470 = 260.62  
5.40  
Approx. 70' W of E 266.02 - 5.40  
Sta. = 4160 - 12.57  
Elev landing of Rear = 253.45

Approx. 200' E. of E 266.02 - 11.5  
Plumbing  
E. Proposed (house) 254.5



(Con.) Page 15.



Wilkes  
Bliss  
Isbell  
11-27-39  
Grade Change, JEWEL  
ON MONTCLAIR ST. - See Profile 909-D  
From Station 2+30 Page 16  
to " 5+94.31

Station	These Sta. agree with Profile	El. Stake	El. Flow Curse	
2+30	14+10.7 on Profile	2.83	266.83	2.61.00 +5.83 ✓
+75	269.66	4.00	265.66	2.58.89 +6.77
3+20	6.30	263.36	256.78	+6.58
3+70	7.35	262.31	254.43	+7.88
4+20	7.52	262.14	252.08	+10.06
+70	9.01	260.65	249.73	+10.92
5+20 = MH #8	10.81	258.85	247.37	+11.48
5+57.15	12.42	257.24	245.63	+11.61
+94.31 = 8th	257.37	29.2	255.35	243.88 +11.47
6+27.6	5.23	252.14	240.38	+11.76
6+81.41	246.95	3.38	243.57	234.73 +8.84
7+35.4 = MH #9	10.99	235.96	229.07	+6.89 ✓
7+75.4 = 8th	234.17	10.29	223.88	220.94 +2.94
8+15.4 = 8th	221.67	12.21	209.46	206.94 +2.52
+45.88 = MH #10	209.16	11.94	197.22	191.53 +5.69

RM. Fil. cut stub 2+30 P-16 = 266.83

2.83 +

269.66 - x

2.83 -

TP = 257.24

0.13 +

257.37 - x

12.76 -

TP = 244.61

2.34 +

x 246.95

13.04 -

TP = 233.91

0.26 +

x = 234.17 - x

12.66 -

TP = 221.51

0.16 +

x = 221.67

12.88 -

TP = 208.79

0.37 +

x = 209.16

12.82 -

TP = 196.34

1.73 +

x 198.07

14.92 -

TP = 183.15

1.80 +

184.95

MH #4 = 13.44 -

TP = 171.51

171.68

0.17 = diff.

on 2. MH #11 stub

RP

7'

MH #10

(Book 1191-P.25)

21180



Walker  
Bliss  
Isbell  
12-5-39

Montclair Sewer Const.  
South of Vancouver + West.  
Plan 907-D Profile 908-D

Cont. from Page 10

Station		El. stakes	El. Flow line	
24+45.7 = MH #7		12.96	130.24	123.38 + 6.86 + 7.02 Page 10
24+00		12.70	130.50	125.43 + 5.07
23+50		<sup>10.66</sup> 10.66	132.54	127.68 + 4.86 6' RT. Page 10
23+00		5.14	138.06	129.93 + 8.13
22+50		4.15	139.05	132.18 + 6.87
22+00		3.37	139.83	134.43 + 5.40
21+50	T.P. 1.82 143.20	12.63	141.38	136.70 + 4.68
21+186.1 = MH #6		10.61	143.40	138.14 + 5.26 6' RT.
21+00		9.24	144.77	138.98 + 5.79 6' RT.
20+50		5.76	148.25	141.23 + 7.02 6' RT.
20+00		5.47	148.54	143.48 + 5.06
19+50		3.82	150.19	145.73 + 4.46
19+00	154.01	1.84	152.17	147.98 + 4.19
18+50		10.57	154.69	150.23 + 4.46
18+00			152.48	Left out.
17+91.52 = MH #5		8.71	156.55	152.90 + 3.65
17+50	165.26	5.02	160.24	154.77 + 5.47

Page 19

18  
- π - 165.26  
12.46 -  
T.P. 152.80  
1.21 +  
π 154.01  
12.63 -  
T.P. 141.38  
1.82 +  
π 143.20  
12.96  
130.24  
130.40  
0.16 = diff.



Montclair Sewer Const.

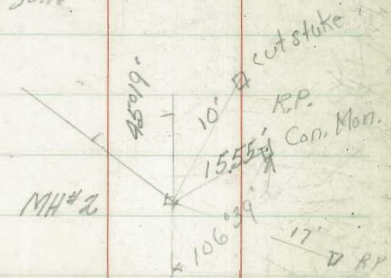
Cont. from P-18

Station	$\pi$	El. Stakes	El. Flow Line	Cuts.	Offsets.
17+00		1.92 163.34	157.02	+6.32	
TP					
16+50	1.09	165.26 12.38	164.17 159.27	+4.90	6' Rt.
16+00		10.34 166.21	161.47	+4.74	
15+50		4.98 171.57	163.72	+7.85	
15+00			165.98	+Left out	
14+91.52 = MH#4		4.93 171.62			
TP	2.48	176.55 12.84	174.07 166.40	+5.22	12' Lt.
14+50		12.28 174.63	168.90	+5.73	6' Rt.
14+00		10.85 176.06	171.90	+4.16	7' Lt.
13+50		4.14 182.77	174.90	+7.87	6' Rt.
13+00		3.85 183.06	177.90	+5.16	6' Lt.
TP	3.09	186.91 13.01	183.32 = TP		
12+50		8.30 188.53	180.90	+7.63	6' Rt.
12+00		5.98 190.85	183.90	+6.95	6' Rt.
11+81.52 = MH#3		4.97 191.86	185.00	+6.86	10' Rt.
11+50		1.63 195.20	186.90	+8.30	6' Rt.
TP	0.63	196.83 13.05	196.20 = TP		
11+00		12.12 197.13	189.90	+7.23	6' Rt.
10+50		11.27 197.98	192.90	+5.08	6' Rt.
10+32.85 = MH#2		7.32 201.93	193.92	+8.01	10' Rt.
10+00		6.72 208.87	202.10	+6.77	
9+80 = Brk		2.2126 other page	214.54 207.10	+7.44	
TP	0.05	232.77 12.93	232.72 = TP		
9+20 = "		9.51 236.14	231.10	+5.04	
		245.65			

For Branch line see P. 21

176.55 =  $\pi$   
 12.38 -  
 TP 164.17  
 1.09  
 $\pi$  165.26

chks E stub MH#4 page 17  
 This stub is old and the 0.17 diff  
 on page 17 is probably due  
 to part of stub gone.



$\pi$	245.65
	12.93 -
TP	232.72
	0.05 +
$\pi$	232.77
	12.73 -
TP	220.04
	1.22 +
$\pi$	221.26
	12.39 -
TP	208.87
	0.38 +
$\pi$	209.25
	13.05 -
TP	196.20
	0.63 +
$\pi$	196.83
	13.01 -
TP	183.82
	3.09 +
$\pi$	186.91
	12.84 -
TP	174.07
	2.48 +
$\pi$	176.55
	5.02
	171.53
	171.51 - diff.
	0.02 - diff.



Montclair Sewer Const.

Cont. from Page 19

Station		E.I. Stakes	E.I. Flow line	Cuts	Offsets
8+67.5		10.83	247.62	240.55	+ 7.07
8+15 = Brk.		0.81	257.64	250.00	+ 7.64
TP	0.07	258.45	1290	258.38 - TP	
7+65		4.94	266.34	256.50	+ 9.84
TP					
7+15 = Brk.	0.31	271.28	12.68	270.97	263.00
					+ 7.97
6+65		8.29	275.36	267.75	+ 7.61
6+15 = Brk.		5.14	278.51	272.50	+ 6.01
5+65		2.36	281.29	274.25	+ 7.04
5+25 = D.S. 70' NN Line Kalmia		283.65	118	282.47	276.00
					+ 6.47

Levels run up the page

B.M. SE BR. Maple + Bdry → 295.12  
 066 +  
 295.78  
 12.77 -  
 TP 283.01  
 064 +  
 283.65  
 12.68 -  
 TP 270.97  
 031 +  
 271.28  
 12.90 -  
 TP 258.38  
 007 +  
 258.45  
 18.00 -  
 TP 245.45  
 020 +  
 245.65 -



Walker  
Bliss  
Isbell

Branch line  
Between MH#4 + 10  
Cont. from Page 15

2+48.8 = MH#10	3.01	197.23	191.53
3+00	7.00	193.24	188.15
+50	200.24	11.37	188.87
4+00	0.94	187.00	181.65
760 = MH#11	2.02	185.92	177.75
5+00	7.62	180.32	175.15
+50	187.94	7.12	180.82
6+00	3.51	173.04	168.65
+34.69 = MH#4	176.55	4.93	171.62
			166.40

+ 5.70 + 569 Page 19

+ 5.09

+ 3.97

+ 5.35

+ 8.17

+ 5.17

+ 8.92 6' Rt

+ 4.39

+ 5.22

Page 19  $\pi = 176.55$

0.30

TP 176.25

11.69

$\pi$  187.94

0.13

TP 187.81

12.43

$\pi$  200.24

3.01

197.23

$\pi$  192.22

0.01 diff.

chk. cut stub p-17  
MH 10



Walker  
Bliss  
Isbell  
1-26-40  
Sewer Const. in Gregory St.  
Between Gate & Beech Streets  
And Across Blk 59 - Chotas Add.  
And in Beech St. bet 34th & Whaley St.  
As Per Drawing No 5634-L

Station			Elev. Stakes	Elev. Flow Line		
40' N N Line Beech St. = 0+00 = D. End	223.52	9.66	213.86	205.40	+8.46	6' Rt
+50	211.09	2.23	208.86	200.40	+8.46	" "
1+00		8.96	202.13	195.40	+6.73	" "
1+54 = Blk.	198.74	4.73	194.01	190.00	+4.01	" "
2+04	186.30	5.41	180.89	176.00	+4.89	6' Lt.
2+54 = M.H. No 1	179.21	7.22	171.99	162.00	+9.99	10' H. - N.E.
3+04 = Blk	201.99	11.30	190.69	185.00	+5.69	6' Lt.
+50		6.25	195.74	189.60	+6.14	" "
4+00		1.75	200.24	194.60	+5.64	" "
+50	214.84	7.34	207.50	199.60	+7.90	" "
5+00		0.61	214.23	204.60	+9.63	" "
+50	226.59	5.45	221.14	209.60	+11.54	" "
6+00 = Dk.		1.25	225.34	214.60	+10.74	" "

2+54 Line in Blk. 59 **Grade change from 0+00 to 6+00 in Red.**  
= 0+00 = M.H. #1 179.21 7.22 171.99 162.00 ✓  
+50 166.19 0.78 165.41 **154.75**  
155.83 +10.66  
Cont. P. 23

Indexed  
3 M. B. P. NW Con Man. Beech & Felton 222.32  
1.20  
223.52  
NW. Beech & Felton. -7.56  
12.49  
Set. 8 M. 8 P. -215.96  
TP 211.03  
606 +  
π 211.09  
12.93 -  
TP 198.16  
0.58 +  
π 198.74  
12.74  
TP 186.00  
0.30 +  
π 186.30  
7.31  
TP 178.99  
6.32 +  
π 179.21  
0.32 -  
TP 178.99  
+10.66 +  
π 189.65  
6.60 -  
TP 189.05  
12.94 +  
π 201.99  
6.20 -  
TP 201.79  
13.05 +  
π 214.84  
0.61 -  
TP 214.23  
12.36 +  
π 226.59  
12.73  
213.86 ✓

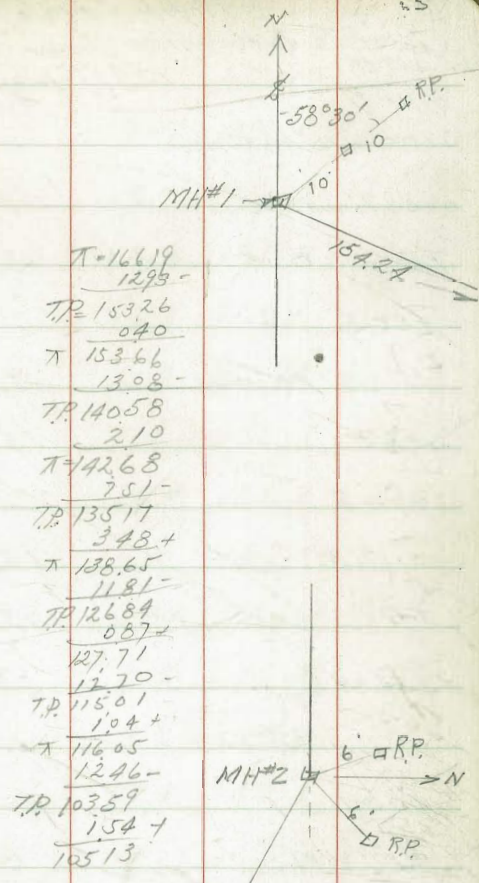
Cuts.	Offsets	
+8.46	6' Rt	
+8.46	" "	
+6.73	" "	
+4.01	" "	Cedar & Gregory Nail in SW. Pole
+4.89	6' Lt.	
+9.99	10' H. - N.E.	
+5.69	6' Lt.	
+6.14	" "	
+5.64	" "	
+7.90	" "	
+9.63	" "	
+11.54	" "	
+10.74	" "	OK. 0+00

179.21  
13.16 -  
166.05  
0.10 +  
166.19 - π

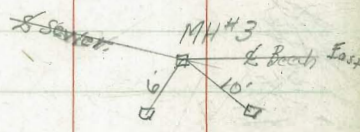


Sewer Const. Cont. from P-22

Station		Stakes	Flow base	Cuts	Offsets
1+00	$\pi P-22$ $\Delta = 15^{\circ} 03' 45''$ Drop $+54.24 = MH \# 2$	6.72	159.47 <b>147.50</b> 149.65 <b>139.64</b> 140.78 <b>136.11</b>	+11.97 +12.63 +9.71	
2+00		7.84	145.82 <b>132.26</b> 133.12	+6.07	
3+00		0.08	138.57 <b>128.40</b> 129.12	+10.17	6' Rt
4+00		7.29	131.36 <b>124.55</b> 125.12	+6.81	6' Lt
5+00		8.69	129.96 <b>120.69</b> 121.12	+9.27	6' "
6+00		9.36	129.29 <b>116.84</b> 117.12	+12.45	6' "
7+00		6.79	120.92 <b>112.98</b> 113.12	+7.94	" "
8+00	$\Delta 38^{\circ} 28' Lt$ $+51.54 = MH \# 3$	6.72	120.99 <b>109.00</b>	+11.99	6' Rt
9+00		10.51	117.20 <b>105.12</b>	+12.08	" "
10+00		4.30	111.75 <b>101.12</b>	+10.63	
11+00		8.16	107.89 <b>97.12</b>	+10.77	
12+00		1.34	103.79 <b>93.12</b>	+10.67	
13+84.34	Existing MH. Drop. 5.97	9.916	90.38	+8.78	on Rim
14+84.34	Existing Flow		89.23	+9.93	



$\pi = 166.19$
$12.95 -$
$T.P. = 153.26$
$0.40$
$\pi = 153.66$
$13.08 -$
$T.P. = 140.58$
$2.10$
$\pi = 142.68$
$7.51 -$
$T.P. = 135.17$
$3.48 +$
$\pi = 138.65$
$11.81 -$
$T.P. = 126.84$
$0.87 -$
$127.71$
$12.70 -$
$T.P. = 115.01$
$1.04 +$
$\pi = 116.05$
$12.46 -$
$T.P. = 103.59$
$1.54 +$
$105.13$





Wolter,  
Miss  
Jebell 1-27-40

Profile Levels From MH#1- to 7+84.34  
To Determine change of Ground From original Notes.

		179.21	from Page 22 Rod	St. Ground
MH#1				
= 0+00	10' Rt. = ditch.	16.3		162.9
0+00 1/2	on stub.	11.43		167.78
T.P.	0.14	166.19	13.16	166.05
0+50 1/2		3.5		162.7
" "	5' Rt. = ditch.	9.6		156.6
0+87		15.3		150.9
1+00 1/2		11.5		154.7
" "	7' Rt. = "	17.2		149.0
T.P.	0.40	153.66	12.93	153.26
1+54 1/4 1/2		3.2		150.5
" "	12' Rt. = ditch.	12.5		141.2
2+00		10.9		142.8
" "	6' Rt. "	16.3		137.4
T.P.	2.10	142.68	13.08	140.58
2+18 1/2 1/2	in ditch.	6.8		135.9
2+30 1/2		3.8		138.9
+50	" " "	8.9		133.8
+80	4' Lt. in "	10.6		132.1
+80 1/2		8.1		134.6
3+00 1/2		8.4		134.3
" "	4' Lt. in ditch.	13.3		129.4

142.68 Original notes in book-135/  
Pages 23-24-79

T.P.	3.48	138.65	7.51	135.17
3+40 1/2			9.1	129.5
" "	3' Lt. in ditch.		12.4	126.2
3+50 1/2	" "		12.8	125.8
+65	" "		10.3	128.3
+85	" "		15.2	123.4
4+00 1/2			11.9	126.7
" "	5' Rt. in ditch.		16.4	122.2
4+50 1/2			11.6	127.0
T.P.	0.87	127.71	11.81	126.84
4+50-15	15' Lt. in ditch.		9.3	118.4
5+00 1/2			9.6	118.1
" "	5' Rt. in ditch.		13.4	114.3
5+20 1/2	in Bottom ditch.		15.0	112.7
+25 1/2			11.9	115.8
5+51.54	= MH#3		8.56	119.15
5+51.54			-	119.21
177	Book 1351 - Page 73			0.6 = Error
6+00 1/2			13.1	114.6
T.P.	1.04	116.05	12.70	115.01
6+00	13' Lt. in ditch.		9.5	106.5
+50 1/2			7.7	108.3
" "	5' Lt. "		12.6	103.4

Cont. Page 25



Profile Levels Cont. from Page 24

116.05

7+00	4		10.4	105.6
11' ditch			14.8	101.2
TP	154	105.13	12.46	103.59
7+50	4		3.3	101.8
13' ditch			6.7	98.4
7+84.34	on Run	M.H.	5.97	99.16



Walters  
Bliss  
Jubell  
3-29-40

# Change Grades

## WABASH CANYON SEWER

To Match Pipe that was Raised by Baker  
in order to clear existing Sewer

Bed. stations 132+36 And 132+00

Station	End of Existing Pipe	El.	Flw Line
---------	----------------------	-----	----------

127+90.68 = MH#39	75.20	3.13	64.70 ✓
128+50	4.90	70.30	64.06 ✓
129+00	5.49	69.71	63.50 ✓
+50	7.23	67.97	63.00 ✓
130+00	7.17	68.03	62.40 ✓
+50	6.47	68.73	61.86 ✓
+85.78 = MH#35	9.10	66.10	61.93 ✓
131+00	7.43	67.77	61.47 ✓
+41 = End Pipe Existing	14.31	9	61.55 ✓
132+36 = MH#36			61.32 ✓
			61.40 ✓
			60.86 ✓
			60.96 ✓
			60.17 ✓

1.0943%

0.76%  
Change by Baker Inspector

1.7%  
Grade changed by Baker Inspector

135+64.56 } equation  
= 135+64.74 } MH#37

see p. 29

~~Indexed~~

Elev. Stake 131+50.27 = 67.99  
 30.97  
 71.08 - X  
 332 -  
 67.76 = TP  
 7.94 +  
 75.70 = X



Walker,  
Bliss  
Isbell  
3-40

Re-stake Wabash Canyon Sewer

From station 127+90.68 To 135+64.36

Grades taken from Page 43-44

Station	Stakes	Elev.	Flow line	
127+90.68 = M.H. #34	77.44	5.38	72.06	64.64 + 7.42
128+50		7.14	70.30	63.96 + 6.34
129+00		7.74	69.70	63.38 + 6.32
+50		9.48	67.96	62.81 + 5.15
130+00		9.42	68.02	62.23 + 5.79
+50		11.55	65.89	61.66 + 4.23
+85.78 = M.H. #35		11.37	66.07	61.25 + 4.82
131+00		10.11	67.33	61.09 + 6.24
+50		9.45	67.99	60.52 + 7.47
132+00		11.54	65.90	59.94 + 5.96
+36 = M.H. #36		11.44	66.00	59.52 + 6.48
132+60		12.36	65.08	59.16 + 5.92
133+00		12.70	64.74	58.56 + 6.18
+50	66.50	3.24	63.26	57.81 + 5.45
134+00		4.84	61.66	57.06 + 4.60
+50		4.99	61.51	56.31 + 5.20
135+00		4.01	62.49	55.56 + 6.93
+64.36 } M.H. 37				
+64.76 } Equation			54.58	

See p. 29  
Change of grade

B.M. Rim, M.H. 127+99.2 P. 43 = 71.71

5.73  
7-77.44  
12.89 -  
T.P. 64.55  
1.95 +  
7-66.50  
6.63  
59.87

chk. cut stake  
135+88 P. 44

59.92  
0.05 Error



Bliss  
Isbell  
Chapman  
12-19-39

Paving Grades on Beardstey  
Logan to Kearney

B.P.  
B.M. S.E. Kearney Station 183

47.87 - 46.04

2.30 45.57

2.44 45.43

6.34 41.53

6.95 41.42

2.84 45.03

6.74 41.13

6.87 41.00

7.20 40.67

Elev. stake  
10' S of Kearney & Beardstey

Elev. Stake 20.5  
of Kearney on E  
Beardstey

Elev. Stake 30' N  
of Logan & Beardstey

Elev. Stake 10' N  
of Logan on E  
Beardstey

Elev. 66.04  
20.5 on Beardstey  
E. side

66.04 20' N  
of Logan on  
Beardstey

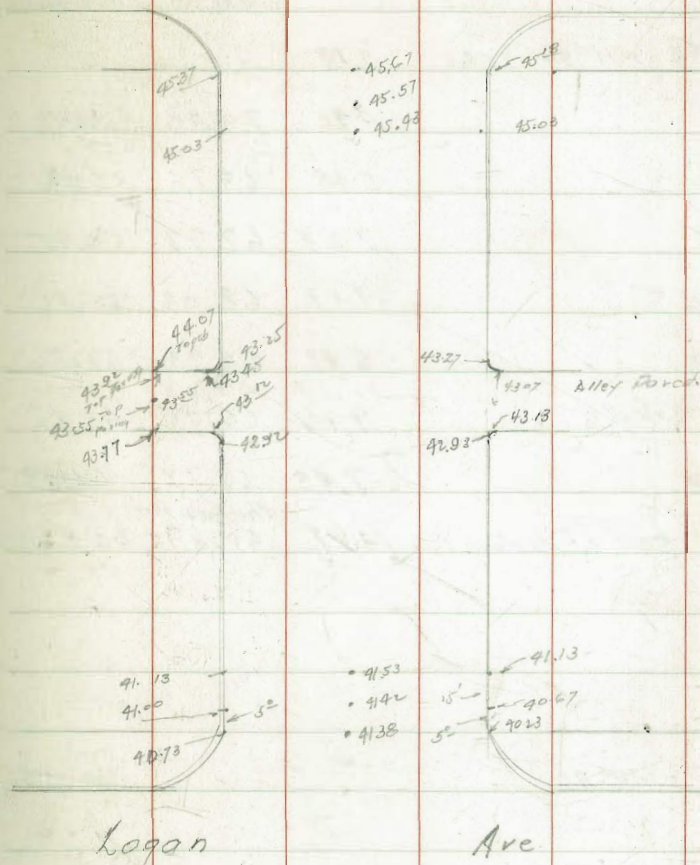
52' N of Logan  
on West side  
Beardstey

50' N of Logan  
on East side  
of Beardstey

Indexed

Kearney

Street





GRADE CHANGE.

WABASH CANYON SEWER.

Copied From P. 26

Station.	El. Stake	El. Flow Line	Cuts.	Offsets
127+90 68 = MH#34 75.20	3.13			
128+50	4.90	70.30 64.04	+6.26	
129+00	5.49	69.71 63.50	+6.21	
+50	7.23	67.97 62.95	+5.02	
130+00	7.17	68.03 62.40	+5.63 ✓	
+50	6.47	68.73 61.86	+6.87 ✓	
	11.17	64.03	+2.56	
+85.78 = MH#35	9.10	66.10 61.47	+4.63 ✓	13.73
131+00	7.93	67.77 61.32	+6.45 ✓	
X 741 end of existing pipe	14.31	thickest Part 60.89 60.86 = True Floor		
X 132+36 = MH#36		60.14		
135+64.36 } MH#37 +64.76 } Equation		59.58		

1.0943 96

0.76%

1.70%

Grade changed by Baker.

Grade was changed by Inspector Baker.



10-9-39

## Wabash Ave Sewers

30

	BM	0.97	342.45		341.48	S. Edge M.H E Lincoln	
	0+00 Ex Sewer	(E. Alley E Lincoln Ave				336.93	
	+50			1.45	41.00	34.93	+6.07✓
	1			2.14	40.31	32.93	+7.38✓
	+50			3.39	39.06	30.93	+8.13✓
	2			5.24	37.21	28.93	+8.28✓
	+50			7.58	34.87	26.93	+7.94✓
	3			9.80	32.65	24.93	+7.72✓
	+40 M.H. T.P.	# 2.01	331.78	11.30 12.68	31.15 329.77	323.33✓	+7.82✓
	4			3.40	328.38	320.93	+7.45✓
	+54	1' N of Pav.		5.85	25.93	318.77	+7.16✓
	+86	2' N of N Rail		4.96	26.82	317.49	+9.33✓
	5+04	2 S of S Rail		4.96	26.82	316.77	+10.05✓
	+36	1 S of Pav		5.58	26.20	315.48	+10.72✓
	+50			2.64	25.53	314.93	+10.60✓
	6			6.41	21.76	312.93	+8.83✓
	+40			8.73	19.44	311.33	+8.71✓
	+80 M.H.2		319.31	1.70	17.61	309.73	+7.88✓
	7+30			4.60	14.71	304.98	+9.73✓
	7+80			7.72	11.59	300.23	+11.36✓
	8+30		306.76	2.60	04.16	295.48	+8.68✓
	8+61 <sup>1/2</sup>	Brk.		6.16	300.60	292.50	+8.10✓
	9+20			13.16	93.60	290.75	+8.85✓

7 level is  
stay water level

306.76  
0.45  
306.31  
13.06  
319.31  
0.75  
318.56  
7.61  
328.17  
1.16

BM 327.01 S. side  
E. cb. Alley

BM 341.48 S. side  
M.H. 114  
E. Lincoln



306.76

Florida

31

3070

28190

Equation

2.55%

9+80		9.26	97.50	288.95	+ 8.55 ✓	
10+17 <sup>26</sup> M.H.3 Δ 75° 08' 20" Lt.		0.51	306.25	287.81	+ 18.44 ✓	
10+50		9.00	94.22	286.85	+ 7.37 ✓	
11+00		13.04	90.14	285.35	+ 4.83 ✓	
11+33 <sup>33</sup>		8.52	94.70	284.35	+ 10.35 ✓	
11+73 <sup>40</sup> M.H.4 Δ 63° 16' - 20" Rt		0.12	03.10	283.15	+ 19.95 ✓	
12+20		2.00	01.22	81.83	19.39 ✓	
12+70		1.66	01.56	80.43	21.13 ✓	
13+20		1.72	92.64	79.02	+ 13.62 ✓	
13+70		5.50	88.86	77.62	+ 11.24 ✓	
14+20		8.86	85.50	76.21	+ 9.24 ✓	
+70		9.77	84.59	74.81	+ 9.78 ✓	
15+20		8.90	85.46	73.40	+ 12.06 ✓	
15+70 <sup>23</sup> M.H.5						
14+91 Δ 12° - 26" R.		12.08	82.28	272.00	+ 10.28 ✓	
15+50		281.65	4.89	276.76	270.50	+ 6.26 C'LT
16+00		7.79	273.86	269.23	+ 4.63 "	
+50		7.57	274.08	267.95	+ 6.13 C'RT	
16+97.67 <sup>35</sup> M.H.#6 (changed)				266.78		
17+03 = 8 M.H.#6 = New location.		9.65	272.00	266.60	+ 5.40 C'LT	

303.22

294.36

+ 8.55 ✓  
+ 18.44 ✓  
+ 7.37 ✓  
+ 4.83 ✓  
+ 10.35 ✓  
+ 19.95 ✓  
19.39 ✓  
21.13 ✓  
+ 13.62 ✓  
+ 11.24 ✓  
+ 9.24 ✓  
+ 9.78 ✓  
+ 12.06 ✓  
+ 10.28 ✓  
+ 6.26 C'LT  
+ 4.63 "  
+ 6.13 C'RT  
+ 5.40 C'LT

BM. 281.41  
12.25  
294.36  
0.41  
293.95  
9.27  
303.22  
3.48  
299.74  
7.02  
306.76

M.H. Rim  
303.22  
3.45  
299.77

Book 1570 - P-2 = 281.41 BM. Rim M.H.  
+ 0.24  
281.65 - π

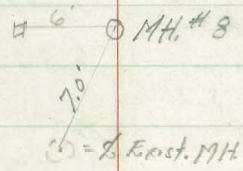
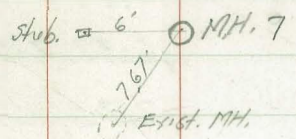


10-11-39  
Walker  
Bliss  
2.55%  
2.55%  
2.81%  
3.25%  
3.74%  
3.74%

WABASH CANYON Sewer Const.  
Continued

	Grade	Flow	Line	Cuts	Offsets
17+50	281.65	11.32	270.33	265.40	+ 4.93
18+00		12.07	269.58	264.13	+ 5.45
+50		12.33	269.32	262.85	+ 6.47
TP	268.95				
19+00		1.51	267.44	261.58	+ 5.86
+50		3.02	265.93	260.31	+ 5.62
20+00		5.33	263.62	259.03	+ 4.59
+50		8.03	260.92	257.75	+ 3.17
21+18.6 = MH # 7	$\Delta R.H. 0^{\circ}07'$	9.11	259.84	256.00	+ 3.84
21+50				254.98	out
22+00		10.47	258.48	253.35	+ 5.13
+50		10.45	258.50	251.73	+ 6.77
23+00		10.90	258.05	250.10	+ 7.95
TP	257.61				
+50		4.37	253.24	248.48	4.76
24+00		3.85	253.76	246.85	+ 6.91
+50		5.01	252.60	245.22	7.38
25+00		9.00	248.61	243.60	+ 5.01
25+49.3 = MH # 8	$\Delta$	8.97	248.64	242.00	+ 6.64
	257.66 = corrected H.S.				
26+00		10.79	246.87	240.85	+ 6.02
+50		9.00	248.66	239.71	+ 8.95
27+00		9.22	248.44	238.57	+ 9.87
+50	TP 247.66	2.04	245.62	237.44	+ 8.18

281.65 = R-P-31  
 12.98 -  
 268.67 = TP  
 6.28 +  
 268.95 =  $\pi$   
 12.81 -  
 256.14 = TP  
 1.47 +  
 257.61 =  $\pi$   
 8.21  
 249.40 ch. Rim MH.  
 8.M.  $\rightarrow$  249.45 = Rim MH.  
 8.21  
 257.66 =  $\pi$   
 12.57 -  
 245.09 = TP  
 2.57 +  
 247.66 =  $\pi$





10-11-39

Wabash Canyon Sewer Const.

Walker  
Bliss

Continued-

Grade  
Flow Line

Cuts.    offsets.

28+13.16 MH #9

$\pi$  247.66 5.09 242.57 236.00

+6.57' 6' Lt.

$\pi$  = 247.66

+50

5.51 242.15 235.16

+6.99' "

TP = 237.92

29+00

7.29 240.37 234.02

+6.35' "

$\pi$  = 241.48

+50

7.65 240.01 232.88

+7.13' "

TP = 229.22

TP

241.48

30+00

3.03 238.45 231.75

+6.70' "

$\pi$  = 231.87

+40

4.22 237.26 230.84

+6.42' "

TP = 223.48

30+77.6 MH #10

4.99 236.49 230.00

+6.49' "

$\pi$  = 230.47

31+135

6.32 235.16 229.05

+6.11' "

31+50

7.79 233.69 228.10

+5.59' "

32+00

8.63 232.85 226.80

+6.05' 6' Rt.

+50

9.48 232.00 225.50

+6.50' 6' Lt.

33+00

11.09 230.39 224.20

+6.19' " "

+50

12.15 229.33 222.90

+6.43' " "

34+00

13.19 228.29 221.60

+6.69' " "

TP

231.87

+50

5.20 226.67 220.30

+6.37' " "

35+03.68 MH #11

7.57 224.30 218.91

+5.39' " Rt.

TP

230.97

35+50

6.30 224.17 217.70

+6.47' " Lt.

36+10

6.80 223.67 216.14

+7.53' " "

+60

7.93 222.54 214.84

+7.70' " "

37+00

9.26 221.21 213.80

+7.41' 6' Rt.

227.49

236.96

$\pi$  = 247.66  
- 9.74  
TP = 237.92  
356 +  
 $\pi$  = 241.48  
12.26 -  
TP = 229.22  
2.65 +  
 $\pi$  = 231.87  
8.39 -  
TP = 223.48  
6.99 +  
 $\pi$  = 230.47



Wabash Canyon Sewer Const. Continued  
Grade Flow Line

2.6%

1.7%

3.3%

Station	Const.	Grade	Flow Line
37+50	230.47	10.35	220.12
38+00		11.59	218.88
+50		12.71	217.76
39+00	221.03	4.29	216.74
+30		5.21	215.82
39+50	220.97	6.13	214.84
40+00		8.73	212.24
+50		8.73	212.24
41+00		10.79	210.18
+50		10.52	210.45
+87		14.26	206.71
42+50		12.11	208.86
43+00		12.79	208.18
+50		13.36	207.61
43+50		3.58	207.55
44+00		4.46	206.67
+50		5.66	205.57
45+00		6.92	204.21
+50		8.26	202.87
46+00		9.98	201.15
+50		11.13	200.00

Cuts offsets

+ 7.62	6' Lt.
+ 7.68	"
+ 7.86	"
+ 8.14	"
+ 8.00	"
+ 7.36	"
+ 5.61	"
+ 6.46	"
+ 5.25	"
+ 6.37	" Rt.
+ 3.50	" Lt.
+ 6.48	" Lt.
+ 6.65	" "
+ 6.49	" "
+ 7.02	" "
+ 7.29	" "
+ 7.24	" "
+ 7.34	" "
+ 7.13	" "
+ 6.94	" "
+ 6.37	" Rt.
+ 6.37	10' Rt.

$\pi = 230.47$
12.71 -
TP = 217.76
3.27 +
$\pi = 221.03$
5.29 -
215.74
Rim = 215.68
0.06 Error
BA. Rim Above MH = 215.68
5.29 +
$\pi = 220.97$
13.36 -
TP 207.61
3.52 +
$\pi 211.13$
3.61 -
207.52 ✓
$\pi 211.13$
11.13 -
TP = 200.00
3.78 +
$\pi 203.78$

39+29  
Chk. Rim MH Back 1570-6

Back 1570-6  
Chk. Rim MH

$\Delta 1^{\circ}58' Lt.$

$\Delta 30.75 = MH \# 12$

Corrected  $\pi$

BA. Rim Above MH = 215.68

TP

$\pi$

Back 1570-6  
Chk. Rim MH

$\pi$

TP

$\pi$



Wabash Canyon Sewer Const.

2.3%  
2.0%  
1.9%

	T	Elev. Stakes	Grade Flow Line
47+00	20378		192.48
	$\Delta = 34.46$ ft.		192.06
	$\Delta = 1.14$ = D.M.H. 14	3.31	191.81
	T corrected.		
47+50	203.81	5.06	198.75
48+00		7.65	196.16
+60		7.41	196.40
49+00		7.87	195.94
+50		9.51	194.30
50+00		11.37	192.44
+50		12.28	191.53
51+00	T.P. 194.26	4.80	189.46
+50		5.18	189.08
	$\Delta = 15.20$ ft.		181.81
52+18.6 = M.H. #15		7.62	186.64
52+50	190.66	3.74	186.92
53+00		5.90	184.76
53+50		5.42	185.24
54+00		7.60	183.06
+50		8.03	182.63
55+00		9.13	181.53
+50		11.74	178.97
56+00		12.63	178.03
+50	180.45	3.74	176.71

cuts.		
Left		
Out.	Flat To N.	T = 20378
+8.41 = North	} on Rim Exist. MH. ch. on % stub	564
+8.66 = South		198.14
	offsets	198.17
+7.57 = 6' Lt.		0.03 Error
	Books 1570-7	
+5.98 = 6' Lt.	B.M. L. stub. 47+18.67	198.17
		564+
+7.42 = 6' Lt.		T = 203.81
		12.28 =
+7.76 = " "		T.P. 191.53
		273+
+7.12 = " "		T = 194.26
		4.96
+6.26 = " "		189.30
	Existing ch. & Rim MH. Book 1570-8	189.34
+6.35 = " Rt.		0.04 = Error
+5.28 = " "	Existing B.M. Rim MH	189.34
		1.32+
+5.90 = " Lt.		T = 190.66
		8.07
+4.83 = " "	ch. rim exist MH	182.57
		T 190.66
+5.71 = " "		11.45 =
+4.50 = " "		T.P. = 179.21
		1.24+
+5.93 = " "		T 180.45
+4.70 = " "		
+5.22 = " "		
+5.07 = " "		
+3.41 = " "		
+3.47 = " "	Reset see P. 78	
+3.10 = " "		



10-30-39

## Wabash Canyon Sewer Const

36

	$\pi$		Elev. Stakes	Elev. Flow line	Cuts	offsets	
56+85.6 = MH #16	180.45	4.02	176.43	172.94	+3.49	6' Lt.	on Rim East MH. 172.95
57+00		3.91	176.54	172.66	+3.88	" "	
+50		4.01	176.44	171.71	+4.73	" "	(reset sec P. 78) 180.45
58+00		6.33	174.12	170.76	+3.36	" "	T.P. = 168.20
+50		5.05	175.40	169.81	+5.59	" "	2.88+
59+00		5.49	174.96	168.86	+6.10	" "	$\pi$ 171.08
+50		6.66	173.79	167.91	+5.88	" "	1.52-
60+00		8.35	172.10	166.96	+5.14	" "	chk. Rim East MH = 169.56
+50		10.25	170.20	166.01	+4.19	" "	Lost Sec P. 78 Reset .65+ T.P. Rim East MH. 163.63
61+00		9.80	170.65	165.06	+5.59	" "	0.50+
+50		10.48	169.97	164.11	+5.86	" "	$\pi$ 164.13
62+00		12.25	168.20	163.16	+5.04	" "	
62+44 = MH #17	171.08	3.38	167.70	162.33	+5.37	" "	
63+00		4.55	166.53	161.27	+5.26	" "	
+50		5.34	165.74	160.32	+5.42	" "	
64+00		6.53	164.55	159.37	+5.18	" "	
+50		7.02	164.06	158.42	+5.64	" "	
65+00		8.30	162.78	157.47	+5.31	" "	
+50		8.89	162.19	156.52	+5.67	" "	
65+68.65 = MH #18		8.62	162.46	156.16	+6.30	" "	
T.P. Rim Easting MH.	164.13	7.45	163.63				

1.9 2/10



10-30-39

Wabash Canyon

Sewer Const.  
Elev. Stake Elev. Flow line

37

Stations

Cuts. offsets

Stations			Sewer Elev. Stake	Const. Elev. Flow line	Cuts.	offsets		
66+00	*	164.13	2.36	161.77	155.69	+6.08	6' Lt.	164.13 = T. from P-35
+50			3.88	160.25	154.94	+5.31	"	70+15 Chk. Rim MH 9.72 - 154.41
67+00			4.49	159.64	154.19	+5.45	"	154.46 = Rim MH 0.05 diff.
+50			4.62	159.51	153.44	+6.07	"	164.13 T 10.97 -
68+00			5.60	158.53	152.69	+5.84	"	153.16 = T.P.
+50			6.82	157.31	151.94	+5.37	"	5.43 + 158.59 = T
69+00			8.20	155.93	151.19	+4.74	"	4.45 - dit. 154.14 = Rim MH
+50 = MH #19			9.50	154.63	150.44	+4.19	"	154.20 = Rim 4.45 +
70+00			10.28	153.85	149.69	+4.16	"	158.65 = T corrected. 8.43 -
+50			9.71	154.42	148.94	+5.48	"	Con. Mon. & Estrella Pt. 150.22 Chk. R.M. ✓
71+00			10.33	153.80	148.19	+5.61	"	158.65 = T
TP			10.97	153.16				8.85 -
+50 543		158.59	5.48	153.11	147.44	+5.67	"	149.80 = T.P.
72+00			4.53	154.06	146.69	+7.37		5.91 + 155.71 = T
+50			7.04	151.55	145.94	+5.61		
73+00			6.04	152.55	145.19	+7.36		
Δ = 28°43'			4.67	153.92	144.72 = 15°	+9.20		
+31.5 = MH. 20					144.47 = 18°	+9.45		
Drop in Flow line Change in size of pipe								
73+50		158.65	4.84	153.81	144.05	+9.76		
74+00			5.50	153.15	142.93	+10.22		
TP								
+50		155.71	3.83	151.88	141.80	+10.08		
75+00			5.06	150.65	140.68	+9.97		

150%

22.5%

18" pipe



11-1-39  
Walker  
Buss, J. Bell

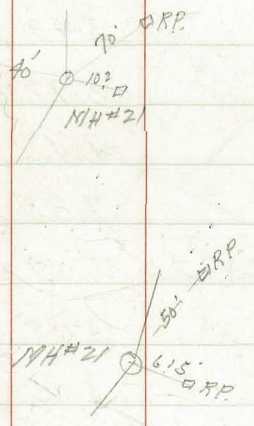
Wobash Canyon Sewer Const.

Station	El. Stake	Fl. Flow line	Cuts.	offsets		
75+50	155.71	8.92 146.79	139.55	+7.24	6' Lt.	155.71 = T - P. 37 11.37 -
76+00		9.74 145.97	138.43	+7.54	" "	1443.4 = T.P. 3.63 +
T.P. +50	147.97	5.69 142.28	137.30	+4.98	" "	147.97 = T 5.26 -
77+00		5.94 142.03	136.18	+5.85	chk. Rim Const. MH 77+57.5	142.71 = T.P. 0.85 +
+50 = MH#21		5.34 142.63	135.06	+7.57	6' Lt. RP	143.56 = T 5.99 -
78+00	143.56	2.98 140.58	134.51	+6.07 +6.08	6' Lt.	138.07 = Ch. Rim MH 80+53
+50		4.13 139.43	133.96	+5.47	" "	143.56 = T 6.50 - 80+53.92
79+00		3.82 139.74	133.41	+6.33	" "	137.06 Ch. & hub. 137.05 = "
+50		4.12 139.44	132.86	+6.58	" "	0.01 = diff.
80+00		4.63 138.93	132.31	+6.62	" "	143.56 = T 879 - 83+29.8
+53.92 = MH#22		6.17 137.39	131.72	+5.67	8 "	134.77 Ch. Rim MH 134.78 = MH 0.01 = diff.
81+00		6.03 137.53	131.21	+6.32	6 "	
+50		6.30 137.26	130.66	+6.60	" "	143.56 = T 895 - 84+12.1
82+00		7.60 135.96	130.11	+5.85	" "	134.61 = Ch. Rim MH 134.62 = MH 0.01 = diff.
+60		7.89 135.67	129.42	+6.25	" "	143.56 = T
83+00		8.37 135.19	129.01	+6.18	" "	
+30 = MH#23		9.40 134.16	128.68	+5.48	" "	
83+50		10.43 133.13	128.40	+4.73	10' Lt.	
84+00		8.31 135.25	127.70	+7.55	6 "	
+50		9.18 134.38	127.00	+7.38	" "	

2.25%

1.1%

1.4%





11-1-39

Wobash Canyon Sewer Const  
Cont. from P-38  
Elev. Flow line

1.40%

1.55% to 1.60%

Station	Cont. from	P-38	Elev. Flow line	Cuts.	Offsets	
85+00	143.56	9.94	133.62	126.30	+7.32	6 Lt.
+50	135.74	3.36	132.38	125.60	+6.78	" "
86+00		4.02	131.72	124.90	+6.82	" "
+50		4.52	131.22	124.20	+7.02	" "
87+00		5.43	130.31	123.50	+6.81	" "
+50		5.97	129.77	122.80	+6.97	" "
88+00	128.62	7.12	128.62	122.05	+6.57	" "
			121.33		+6.56	" "
88+50		7.85	127.89	121.30	+6.59	" "
+50			120.55		+6.65	" "
89+00	129.21	2.01	127.20	120.50	+6.70	" "
+50		3.08	126.13	119.70	+6.35	" "
			119.00		+6.43	" "
90+00		3.86	125.35	118.90	+6.35	" "
+50		4.76	124.45	118.10	+6.35	" "
			117.45		+6.63	" "
91+00		5.13	124.08	117.30	+6.78	" "
+50		6.02	123.19	116.68	+6.51	" "
			115.90		+6.69	" "
92+00		7.16	122.05	115.70	+6.15	" "
+50		8.29	120.92	114.98	+5.72	" "
			114.35		+5.94	" "
93+00		13.03	116.18	114.10	+1.83	" "
+50			113.84		+2.08	" "
			113.57		+4.41	" "
93+50		11.39	117.82	113.30	+4.68	" "
+50			113.58		+4.24	" "
			112.80		+4.52	" "
94+00	121.97	5.41	116.56	112.50	+3.76	" "
					+4.06	" "



Grade changed to go over old line  
at station 104+16  
from station 88+03.93  
to " 104+38.26 - MH # 27  
See sheet 904-D

143.56 - T - P 38  
9.80 -  
133.76 - T.P.  
1.98 +  
135.74 - T  
7.64 88+07  
128.10 = old M.H. Rim  
128.11 - MH  
0.01 = diff.  
135.74 - T  
8.89 -  
126.85 = T.P.  
2.36 +  
129.21 = T  
10.90 = 93+52  
118.31 = T.P. Prim. MH  
118.34 = Prelim. Elev.  
3.63 +  
121.97 = T

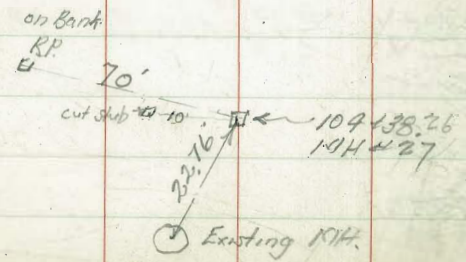


11-1-39

Wabash Canyon Sewer Const.  
Const. from '39

	π	Est. Stake	Fluv. Flow Line	Cuts	Offsets	
94+50	121.97	5.41	116.56	112.03 +4.86	6' Lt.	121.97 - π - P-39 10.25 ✓ OK. 111.72 = T.P.
95+00		4.79	117.18	111.25 +6.28	" "	3.93 +
+50		5.68	116.29	110.48 +6.19	" "	115.65 - π
96+00		6.15	115.82	110.10 109.70 +6.52	" "	12.03 = OK. dts. 103.62 = T.P.
+50		6.93	115.04	108.93 108.50 +6.54	" "	1.68 +
97+00		8.03	113.94	108.15 107.70 +6.24	" "	105.30
+50		10.93	111.04	107.38 106.90 +4.14	" "	
98+00		9.24	112.73	106.60 106.10 +6.63	" "	
+50		11.08	110.89	105.83 105.62 +5.06 = 100	" "	
X 63.43 = MH #26		11.67	110.30	105.09 105.05 +4.78 = MH	" "	
TP				105.05 +5.17	" "	
99+00	115.65	5.93	110.22	104.42 104.28 +5.80	" "	
+50		6.24	109.41	103.59 103.50 +5.91	" "	
100+00		8.00	107.65	102.58 102.73 +5.07	" "	
+50		4.61	111.04	101.66 101.95 +8.31	" "	
101+00		5.75	109.90	101.74 101.18 +7.95	" "	
+50		7.50	108.15	99.82 100.41 +6.97	" "	
102+00		8.54	107.11	98.90 99.63 +6.70	" "	
+50		9.38	106.27	97.98 98.86 +6.64	" "	
103+00		10.62	105.03	97.06 98.08 +6.17	" "	
+50		11.39	104.26	96.74 97.13 +6.18	" "	
104+448 = P.O.T.		12.10	103.55	95.00 95.00 +6.42	6' "	
104+3826 = MH #27 = DMA.	105.30	4.65	100.65	94.71 95.71 +3.94	10' Lt.	
				95.71 +4.94		

Grade changed see notation P. 39



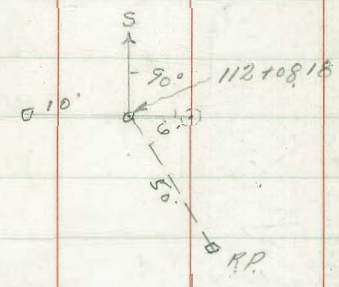


Wabash Canyon Sewer Const.

Station		Elev. Station	Flow Line	Cuts	Offsets
104+50	x 105.30		95.53	out	
105+00		5.51	99.79	94.76	+5.03 6' Lt.
+50		5.65	99.65	93.99	+5.66
106+00		6.55	98.75	93.22	+5.53
+50		8.55	96.75	92.45	+4.30
107+00		5.43	99.87	91.68	+8.19
+50		6.67	98.63	90.91	+7.72
108+00		7.11	98.19	90.14	+8.05
+50 = MH. 28		8.16	97.14	89.38	+7.72
109+00		8.45	96.85	88.60	+8.25
+50		8.71	96.59	87.83	+8.76
110+00	x 101.21	9.50	95.80	87.06	+8.74
+50		6.34	94.87	86.29	+8.58
111+00		7.54	93.67	85.52	+8.15
+50		7.65	93.56	84.75	+8.81
112+00		7.98	<del>93.23</del>	<del>83.98</del>	+9.25 left out
+50 = MH# 29	101.19	7.98	93.21	83.86	+9.35
112+50		8.83	92.36	83.22	+9.14
113+00		11.73	89.46	82.45	+7.01
+50		13.68	87.51	81.68	+5.83

105.30  
 10.19 -  
 TP 95.11  
 6107  
 101.21  
 7.87  
 chg. Rim MH 93.34  
 112+08.2 93.37  
 BA 1570-29 101.21  
 7.91  
 93.30  
 93.28  
 7.91  
 Corrected HZ  $\pi = 101.19$

1.54%





Wabash Canyon Sewer  
Const. Cont. from -41

1.54%

X

1.54%

Station

$\Sigma$   
101.19

El. Stakes El. Flow Line

Cuts

Offsets

$\Sigma$  = 101.19

TP = 900.8

3.46 +

$\Sigma$  93.54

5.35 -

88.19

88.17

5.35 +

93.52

114+00

9.42 91.77 80.91

+10.86

Left out.

+03.8 = MH#30

9.42 91.77 80.85

+10.92

4.5 ft. Cross on Rim. Exist. MH

1570' 117+838 Chk on Rim MH

El. in box 1570-30

+50

9.63 91.56 80.32

+11.24

6' Lt.

115+00

9.32 91.87 79.75

+12.12

Corrected HF -  $\Sigma$

+50

11.15 90.04 79.17

+10.87

116+00

$\Sigma$   
93.54

3.87 89.67 78.60

+11.07

+50

5.62 87.92 78.02

+9.90

117+00

5.19 88.35 77.45

+10.90

+50

4.16 89.38 76.87

+12.51

117+78.4 = MH.31

4.08 89.46 76.34

+12.92

118+00

$\Sigma$   
93.52

5.77 87.75 76.29

+11.46

+50

9.94 83.58 75.72

+7.86

119+00

10.38 83.14 75.14

+8.00

+50

11.75 81.77 74.57

+7.20

120+00

11.77 81.75 74.00

+7.75

+50

12.60 80.92 73.42

+7.50

+67.87 = MH#32

12.63 80.89 73.21

+7.68

121+00

13.50 80.02 72.84

+7.18

+50

12.23 81.29 72.27

+9.02



Wabash Canyon Sewer  
Const. Cont from P. 42

Station	Fl. Stakes	Li.	Flow Line	Cuts.	offsets.
122+00	93.52	12.87	80.65	71.70	+8.95
+50		13.73	79.79	71.12	+8.67
123+00	82.91	3.54	79.37	70.54	+8.83
+50		4.05	78.86	69.96	+8.90
124+00		5.38	77.53	69.39	8.14
+53.6 = MH 33		4.13	78.78	68.77-N 68.52-S	+10.01-N 10.26-S
125+00		5.90	77.01	68.00	+9.01
+50		7.68	75.23	67.42	+7.81
126+00		8.67	74.24	66.85	+7.39
+50		10.26	72.65	66.27	+6.38
127+00		10.41	72.50	65.70	+6.80
+50		10.65	72.26	65.12	+7.14
+90.68 = MH 34		10.84	72.07	64.64	+7.43
128+50		12.62	70.29	63.96	+6.33
129+00	74.37	4.67	69.70	63.38	+6.32
+60		6.41	67.96	62.81	+5.15
130+00		6.34	68.03	62.23	+5.80
+50		8.92	65.45	61.66	+3.79
+85.78 = MH 35		8.28	66.09	61.25	+4.84

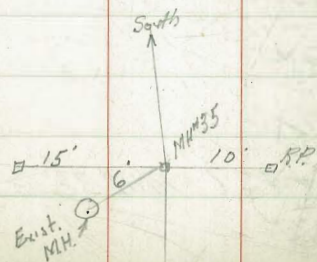
1.15%

Δ 12° 43' 81"

Δ 9° 02' 30" Lt.

Revised P. 27

$\pi = 93.52$   
 $12.50$   
 $TP 81.02$   
 $1.89 +$   
 $\pi 82.91$   
 $2.11$   
 Chk. Rim MH  $78.80$   
 opp MH 33  $78.81$   
 $0.01 diff$   
 $\pi 82.91$   
 $11.21$   
 $127+99.2: Back 1570 - 20$   
 Chk. Rim MH  $71.70$   
 $71.71$   
 $0.01 diff$   
 $\pi 82.91$   
 $12.62$   
 $TP 70.29$   
 $4.08 +$   
 $74.37 \pi$   
 $7.65$   
 Chk. Rim MH Back 1570-31  $66.72$   
 $66.73$   
 $7.65$   
 corrected  $\pi = 74.38$

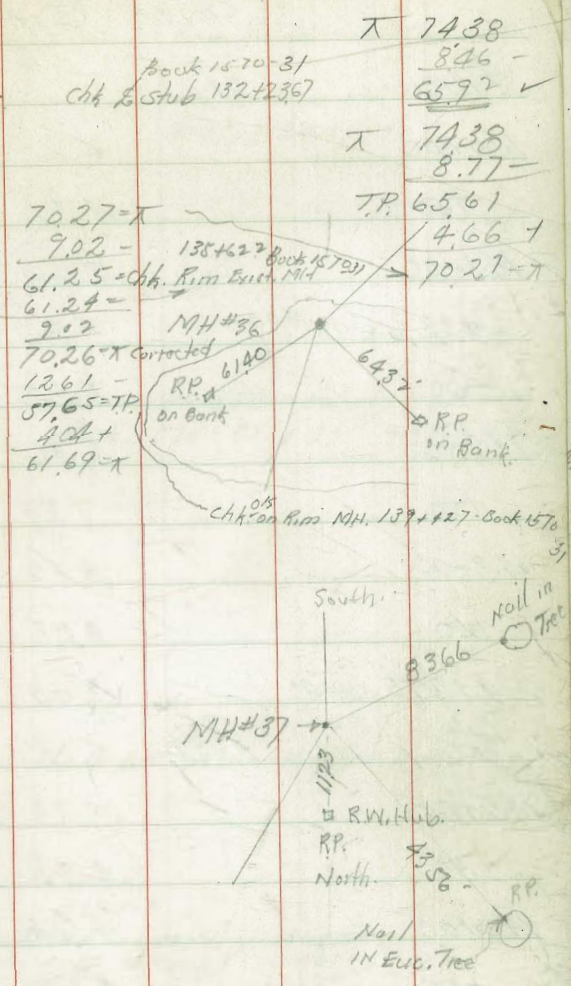




Wobash Canyon Sewer  
Const. Cont. from P. 43

Station	El. Stake	El.	Flow Line	Cuts	Offsets
131+00	7438	9.35	65.03	64.09	+3.94
+50		9.85	64.53	60.52	+4.01
132+00		8.47	65.91	59.94	+5.97
+36 = MH # 36		8.37	66.01	59.52	+6.49
132+50		9.35	65.03	59.16	+5.87
133+00	70.27	6.06	64.21	58.56	+5.65
+50		7.46	62.81	57.81	+5.00
134+00		7.71	62.56	57.06	+5.50
+50		8.68	61.59	56.31	+5.38
135+00		8.83	61.44	55.56	+5.88
+64.26 } equation = MH # 37		8.93	61.34	54.58	+6.76
= 64.76					
135+88		70.26	59.92	54.34	+5.58
136+00				54.16	out
+50		12.39	57.87	53.56	+4.31
137+00		11.29	58.97	52.96	+6.01
+50		9.69	60.57	52.36	+8.21
138+00		11.09	59.17	51.76	+7.41
+50		10.06	60.20	51.16	+9.04
139+00		11.00	59.26	50.56	+8.70
+427 = MH # 38		12.35	57.91	50.04	+7.87
TP					

Re-stated P. 37





Wabash Canyon Sewer  
Const. Cont. from P. 44

Station	Const. Cont. from P. 44	E./h. Stake	E./l. Flow line	Cuts	Offsets
	61.69				
140+00		4.20	57.49	49.36	+ 8.13
+50		4.51	57.18	48.76	+ 8.42
141+00		4.62	57.07	48.16	+ 8.91
+32.3 = MH #39		5.86	55.83	47.76	+ 8.07
+50		5.83	55.86	47.56	+ 8.30
142+00		6.36	55.33	46.96	+ 8.37
+50		7.39	54.30	46.36	+ 7.94
143+00		8.10	53.59	45.76	+ 7.83
+50		8.85	52.84	45.16	+ 7.68
144+0.75 = MH.40		9.00	52.69	44.47	+ 8.22
+50	56.99	4.19	52.80	43.67	+ 9.13
145+00		4.78	52.21	42.73	+ 9.48
+50		5.31	51.68	41.79	+ 9.89
146+00		4.70	52.29	40.85	+ 11.44
+50		5.35	51.64	39.91	+ 11.73
+98.1 = Connection to cholla line		5.02	51.97	39.00	+ 12.97
Set Extra Stake at Portal Tunnel 3' North of Hedge Paving					
146+31	56.91	4.94	51.97	40.27	+ 11.70

from P. 44 →  $\pi = 61.69$   
 $\frac{546}{56.23}$   
 Chk. on Run MH, 141+32.3 Book 1570-92

$\pi = 61.69$   
 $\frac{9.00}{52.69}$   
 $\frac{4301}{56.99}$

chk. NW 8P 35th + Federal  
 Book 1570 - Page 32 =  $\frac{52.01}{52.03}$   
 0.02 diff.

Above B.M. as run from North =  $\frac{52.01}{490}$   
 $\frac{56.91}{\pi}$

chk stubs  
 $\frac{56.91 - \pi}{146+00 \quad 146+31 \quad 146+50}$   
 $\frac{40.85 \quad 40.27 \quad 39.91}{16.06 \quad 16.64 \quad 17.00}$   
 $\frac{46.0 \quad 4.96 \quad 5.26}{+11.46 \quad +11.70 \quad +11.74}$



Walker  
Bliss  
Isbell  
1940  
Station

TRUNK LINE SEWER GRADES.  
CHOLLA VALLEY -  
FROM FEDERAL BLVD. TO BAY.  
Cont from P-64

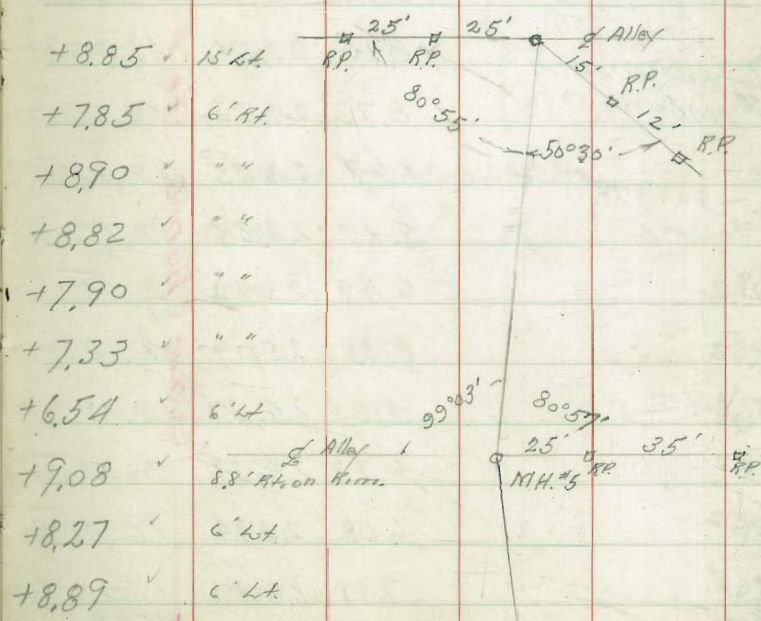
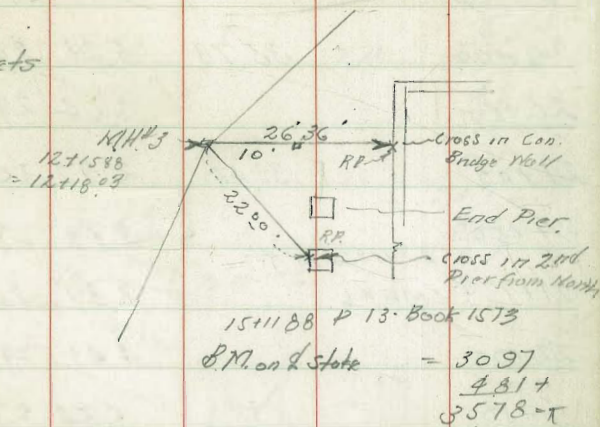
Station	El. Stake	El. Flow line	Cuts	Offsets
11+50		27.51		
12+00		27.01		
12+15.38 =12+18.02	MH#3 Equation	26.86		
+50		26.54		
13+00		26.04		
+50		25.54		
13+90		25.04		
14+00		24.54		
+50		24.04		
15+00	$\Delta = 36.019$ Lt. $35.78 = \pi$ End 29"	27.301	32.77	23.92
15+11.88	MH#4 = Beginning Cont P-57	27.301	32.77	23.92
+50		35.78	4.23	31.55
16+00		3.48	32.30	23.40
+50		3.86	31.92	23.10
17+00		5.08	30.70	22.80
17+50		5.95	29.83	22.50
18+00		7.04	28.74	22.20
+46.17	$\Delta 14.35$ Lt. MH#5	4.79	30.99	21.91
19+00		5.92	29.86	21.59
19+50		5.60	30.18	21.29

Cont. P-47

Indexed  
B

Check Levels Book 1573-47

46

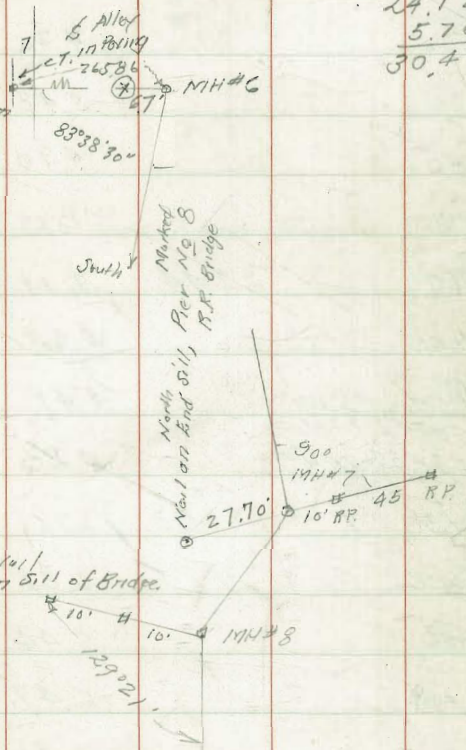




Cholla Valley Sewer Const.  
Cont from p 46

Station		El. Stake	El. Flow line	Cuts.	offsets.
20+00	35.78	5.21	30.57	20.99	+9.58 ✓ 6' Lt.
20+50		6.64	29.14	20.69	+8.45 ✓ " "
21+00	33.44	2.97	30.47	20.39	+10.08 ✓ 6' Rt.
21+50		3.99	29.45	20.09	+9.36 ✓ " "
21+72.54	MH#6	2.39	31.05	19.95	+11.10 ✓ 6.7' Flow line
22+00		4.41	29.03	19.79	+9.24 ✓ 6' Rt.
+50		5.54	27.90	19.49	+8.41 ✓ " "
23+00		7.70	25.74	19.19	+6.55 ✓ " "
+50		8.78	24.66	18.89	+5.77 ✓ " "
24+00		8.25	25.19	18.59	+6.60 ✓ " "
24+50		8.10	25.34	18.29	+7.05 ✓ 6' Lt.
24+70.54	MH#7	8.72	24.72	18.16	+6.56 ✓ 10' Lt.
25+00	30.42	1.67	28.75	17.98	+10.77 ✓ 7' Rt.
+42.87	MH#8	5.17	25.25	17.73	+7.52 ✓ 10' Rt.
25+93.62		6.49	23.93	17.42	+6.51 ✓ 6' Rt.
26+43.62		5.33	25.09	17.12	+7.97 ✓ " "
+93.62		5.60	24.82	16.82	+8.00 ✓ " "
27+43.62		6.13	24.29	16.52	+7.77 ✓ " "
+93.62		6.08	24.34	16.22	+8.12 ✓ " "
28+43.62		7.11	23.31	15.92	+7.39 ✓ 7' Rt.
+93.62				15.62	(out)

35.78 = T  
 6.64 =  
 T.P. = 29.14  
 4.30 =  
 33.44 = T  
 8.72 =  
 24.72 = T.P.  
 5.70 =  
 30.42 = T



Grade Change See P-57-58

Cont. P-48



Walker  
Bliss  
Isbell  
3-15-40

Cholla Valley Sewer Grades  
Bet. 6-St. And Ocean View Blvd.  
Cont. from P-47

Drawing No 921-D

Station	$\pi$	Rods	El. Stakes	Flow Line El.	Cuts	Offsets	
$29+06.82$ $= 29+13.3 = MH \#9$	$21^{\circ}14'10''$ R.P. $30.42 = P-47$ Equation. 7.95		22.49	15.55	+6.94	10' Rt.	
+50	27.05	4.70	22.35	15.33	+7.02	6' Rt.	
30+00		5.48	21.57	15.03	+6.54	" "	
+50		4.90	22.15	14.73	+7.42	" "	
31+00		8.13	18.92	14.43	+4.49	6' Lt.	
+50	22.44	3.11	19.33	14.13	+5.20	6' Rt.	
32+00		3.68	18.76	13.83	+4.93	" "	
+50		4.41	18.03	13.53	+4.50	6' Lt.	
32+88.35 = MH #10	$\Delta = 30^{\circ}54' Lt.$		4.20	18.24	13.30	4.94	10' Lt.
33+50	$\pi$ 26.38	6.95	19.43	12.93	+6.50	6' Lt.	
34+00		6.33	20.05	12.63	+7.42	" "	
+50		6.44	19.94	12.33	+7.61	" Rt.	
35+00		6.47	19.91	12.03	+7.88	" "	
+50		6.60	19.78	11.73	+8.05	" "	
36+12.96 = MH #11	$\Delta = 31^{\circ}04' Rt.$		6.87	19.51	11.10	+8.41	10' Lt.
+50		8.41	17.97	10.92	+7.05	10' Lt.	
37+00		10.03	16.35	10.67	+5.68	" "	
+30		10.18	16.20	10.52	+5.68	" "	

Cont. P-49

Check levels Book 1573-47+48 48  
from stu 15+11.88 To 32+88.35

B.M. on E Stake 44+53.86 Book 1573 = 14.54



$\pi$  22.93  
6.24 -  
T.P. 16.69  
9.69 +  
 $\pi = 26.38$

30.42  $\pi$   
5.08

22.34  
4.71 +  
27.05  $\pi$   
8.13 -

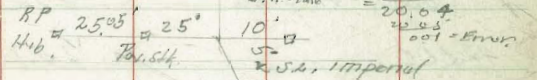
on cut stake 31+00

18.92 = T.P.  
3.52 +

22.44 =  $\pi$   
3.01 -

chk stake 33+00 19.43  $\checkmark$

22.44  $\pi$   
2.40 -



chk stake 34+00 20.04  $\checkmark$   
12.05 -  
8.01 - Error

R.P. 10' 10' M.H. #11

9.00

South

0.6%

0.5%

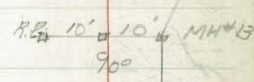


Walker  
Bliss  
Febell 2-15-40

Cholla Valley Sewer Grades  
Cont. from Page 48

Station	$\pi$	Rods.	El. Stakes	El. Flow line	Cuts.	Offsets.
38+00	26.38	10.79	15.59	10.17	+5.42	6' RT.
+50		10.68	15.70	9.92	+5.78	6' RT.
39+00		10.47	15.91	9.67	+6.24	6' RT.
+50				9.42		Left. out.
+68.33 = MH#12		11.31	15.07	9.32	+5.75	15' RT.
40+00		11.15	15.23	9.15	+6.08	10' "
+50	22.00	6.24	15.76	8.90	+6.86	6' "
41+00		6.32	15.68	8.65	+7.03	" "
+55.97 = 41+5.986		6.17	15.83	8.38	+7.45	10' "
42+00		7.21	14.79	8.15	+6.64	6' LT.
+50		7.83	14.17	7.90	+6.27	6' RT.
43+00		6.99	15.01	7.65	+7.36	6' LT.
+50		6.27	15.73	7.40	+8.33	" "
44+00		6.98	15.02	7.15	+7.87	" "
+50		6.47	15.53	6.90	+8.63	" "
+83.56 = $\Delta 0^{\circ} 01' 30''$ RT.		7.10	14.90	6.73	+8.17	" "
45+00	17.63	2.98	14.65	6.65	+8.00	" "
+50		5.11	12.52	6.40	+6.12	12' RT.
46+00		5.53	12.10	6.15	+5.95	10' RT.

26.38 - T  
11.15 -  
15.23 = TP  
6.77 +  
22.00 X  
7.46 ✓  
14.54 = TP  
3.09 +  
17.63 - T



0.5%

Cont. P. 50

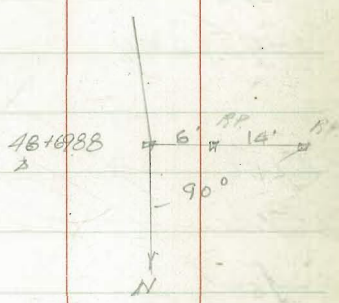


Walker  
Bliss  
Isbell 2-15-40

Cholla Valley Sewer Grades.  
Cont. from Page 49

Station	$\pi$	Rods.	Elev. Stakes	Elev. Flow Side	Cuts.	Offsets
46+50 POT	17.63	5.72	11.91	5.90	+6.01	8' RT
+73.68 = MH #14		5.25	12.38	5.78	+6.60	7' RT
47+00		6.10	11.53	5.65	+5.88	6' RT
+50		3.89	13.74	5.40	+8.34	" "
48+00		3.49	14.14	5.15	+8.99	" "
+50		4.40	13.23	4.90	+8.33	" "
48+69.88 = $\Delta$ 0239.30'		5.05	12.58	4.80	+7.78	" "
49+00		7.20	10.43	4.65	+5.78	6' LT.
+50		3.60	14.03	4.40	+9.63	" "
50+00	23.11	7.42	15.69	4.15	+11.54	" "
+50		6.92	16.19	3.90	+12.29	" "
51+00		7.04	16.07	3.65	+12.42	" "
+50		7.11	16.00	3.40	+12.60	" "
52+00		6.27	16.84	3.15	+13.69	" "
+50		4.56	18.55	2.90	+15.65	" "
53+00		3.96	19.15	2.65	+16.50	" " Cross in pav.
		3.89	19.22	2.54	+16.68 = +16.70	6' RT " " "

17.63 =  $\pi$   
 $\frac{1.83}{15.80} = T.P.$   
 $\frac{7.31}{23.11} =$   
 $\frac{0.95}{22.16}$  Chk Top Hyd. Ocean View  
 $\frac{22.18}{0.02} =$  Orig. Elev. + 34 1/2  
 0.02 = Error.



0.5%

Cont. Page 51



Walker  
Bliss  
Tschell  
Jan 1940

CHOLLA VALLEY TRUNK LINE  
SEWER GRADES  
South of Federal Blvd. Drawing 922-D

B.M. To Top. Hydr. Ocean View #344 = 22.18  
Book 1573-15

Station	$\Delta$	El. Stake	El. Flow line	Cuts	offsets		
53+2.361 = M.H.	2.258 0°41'54"	334 Blvd 19.24	2.54	+16.70	6' Rt. Cross in Pav.	TP = 22.58 0.40 + 7.13 = 15.45	
+64		3.50	19.08	2.42	+16.66	6' Rt. = stub. TP = 17.76 2.31 + 7.22 =	
54+00		5.07	17.51	2.30	+15.21	" " TP = 10.54 6.04	
+50		6.28	16.30	2.15	+14.15	" " TP = 16.60	
+93.9 = M.H.		6.58	16.00	2.03	+13.97	" "	
55+50		6.75	15.83	1.86	+13.97	" "	
56+00	17.76	2.46	15.30	1.71	+13.59	" "	
+50		3.40	14.36	1.56	+12.30	" "	
57+00		3.95	13.81	1.41	+12.40	" "	
+50		4.99	12.77	1.26	+11.51	" "	
58+00		5.66	12.10	1.11	+10.99	" "	
+14 = M.H.	$\Delta$ 0°21'30" Lt.	6.09	11.67	1.07	+10.60	" "	
+50		6.26	11.50	0.96	+10.54	" Lt.	
59+00		6.75	11.01	0.81	+10.20	" "	
+50		7.18	10.58	0.66	+9.92	" "	
60+00		7.09	10.67	0.51	+10.16	" "	
TP							
+50	6.04	16.60	7.22	10.54	0.36	+10.18	" "
61+00	16.60	6.28	10.32	0.21	+10.11	" "	

Cont. p. 52

0.3%



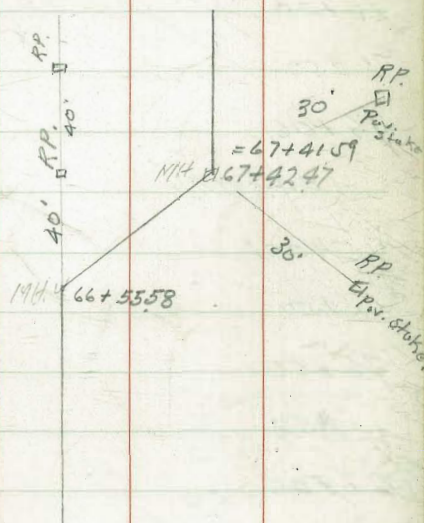
CHOLLA VALLEY SEWER  
Cont. from P-51

Station			Elev. Stakes	Elev. Flow Line	Cuts	Offsets
	$\Delta 0^\circ 21' 30'' \text{ Rt.}$					
61+344 = M.H.	16.60	618	10.42	0.11	+10.31	6' Lt.
+50		656	10.04	0.06	+9.98	" "
62+00		669	9.91	-0.09	+10.00	" "
+50		678	9.82	-0.24	+10.06	" "
63+00		667	9.93	-0.39	+10.32	" "
+50		641	10.19	-0.54	+10.73	" "
64+00		578	10.82	-0.69	+11.51	" "
+50		477	11.83	-0.84	+12.67	" "
65+00		457	12.03	-0.99	+13.02	" "
65+50		669	9.91	-1.14	+11.05	" "
66+00		628	10.32	-1.29	+11.61	" "
	$\Delta 47^\circ 16' 36'' \text{ Rt.}$					
+55.58 = M.H.	18.07	138	16.69	-1.45	+18.14	" "
67+00		411	13.96	-1.59	+15.55	" "
	$\Delta 47^\circ 21' 30'' \text{ Lt.}$					
+42.97	} Equations = M.H.	9.00	9.07	-1.71	+10.78	10' Lt.
= +41.59						
68+00		740	10.67	-1.89	+12.56	9' Lt.
+50		1053	7.54	-3.04	+9.58	6' Rt.
69+00		1013	7.94	-2.19	+10.13	" "
+50		1117	6.90	-2.34	+9.24	15' Rt.
70+00		1112	6.95	-2.49	+9.44	" "

Cont. P-53

52

$\Sigma = 16.60$   
0.86 -  
T.P. = 15.74  
2.33 +  
 $\Sigma = 18.07$





CHOLLA VALLEY JEWEL  
Cont. from Page 52

53

Station		Elev. Stake	Elev. Flow Line	Cuts	Offsets	T.P. SEBB No. 11239 <sup>th</sup>	1807 1126 681 143 824
70+50	18.07	11.28	6.79	-2.64	+9.43 ✓	15' RL	π
+64.2-M.H.		11.31	6.76	-2.68	+9.44 ✓	20 "	
71+00		11.37	6.70	-2.79	+9.49 ✓	15' RL	
+50		11.49	6.58	-2.94	+9.52 ✓	" "	
72+00		11.58	6.49	-3.09	+9.58 ✓	" "	
+50		11.81	6.26	-3.24	+9.50 ✓	6 "	
73+00	8.24	2.33	5.91	-3.39	+9.30 ✓ +9.20 ✓	10' RL	
+50		2.30	5.94	-3.54	+9.28 ✓	6 "	
74+00		4.88	3.36	-3.69	+7.05 ✓	" "	
+44.4-M.H.		5.92	2.32	-3.82	+6.14 ✓	" "	
75+00		6.49	1.75	-3.99	+5.74 ✓	" "	
+50		4.94	3.30	-4.14	+7.44 ✓	" "	
76+00		6.47	1.77	-4.29	+6.06 ✓	" " Cross in Pav.	
+50		6.37	1.87	-4.44	+6.31 ✓	" "	
77+00		5.80	2.44	-4.59	+7.03 ✓	" "	
+50		7.80	0.44	-4.74	+5.18 ✓	" "	
78+00		6.28	1.96	-4.89	+6.85 ✓	" "	
+50		6.26	1.98	-5.04	+7.02 ✓	" Lt.	
79+00		9.26	-1.02	-5.19	+4.17 ✓	" "	

Cont. p. 54

0.50%



CHOLLA VALLEY SEWER  
Cont. from P-53

-0.3%

Station	$\pi$	Elev. Stake	Fl. H. 100
79+50	8.74	9.37	-1.13
+81.8 = NH		9.35	-1.11

$\Delta 38^{\circ}36'30''$  Rt.

Cont. in Grade Book 195-32-37

Cuts	Offsets
+4.21 ✓	6' Lt
+4.33 ✓	10 "

Est. stake  $79+81.8 - TP = -1.17$



$\pi$  8.74  
9.41



Walker  
Bliss  
Isbell  
5-23-40

GRADE CHANGE

CHOLLA VALLEY SEWER CONSTRUCTION

From Station 0+00 to 29+06.92

DRAWING NO 320-D Alignment Book 1573

2.43' East of Existing NH  
= 4' East of E 25th and 31.05' South E of Federal  
El Staker. 51. Floor

Station	Offset	Station	Offset	Station	Offset
0+00	53.42	167	51.75	38.73	
0+50		399	49.43	38.21	
1+00		569	47.73	37.69	
1+50		572	47.70	37.17	
1+95		645	46.94	36.70	
2+50		726	46.16	36.13	
3+00	49.63	366	45.97	35.61	
+50		369	45.94	35.09	
4+00		586	43.77	34.57	
+50		783	41.80	34.05	
4+95		791	41.72	33.58	
5+39.5 = NH #1		11.37	38.26	33.12	
6+00	48.78	10.96	37.82	32.49	
+50		9.00	39.78	31.97	
7+00		8.71	40.07	31.45	
+50		9.50	39.28	30.93	
8+04.5 = NH #2		12.34	36.44	30.36	
+50		8.67	40.11	29.89	

Cont. Page 56

N.W. C.P. 35th + Federal = 51.87

1.55+

53.42 = π

1.48 -

Book 1573-12

Ch. R.M. NH = 51.94

51.95

0.01 = 0.94

53.42 = π

7.26 =

46.16 = TP

3.47 +

49.63 = π

7.24 -

42.39 = TP

6.39 +

48.78 = π

11.55 -

37.23 = TP

7.78 +

45.01 = π

4+87.78



104.0%

Δ 35°04' RT

Δ 37°30' RT



Cholla Sewer  
Cont from Page 55

Station	Elev.	Fl. Stakes	Flori Line
9+00	45.01	6.12	38.89 29.37 ✓
+50		7.77	37.24 28.85 ✓
10+00		11.23	33.78 28.33 ✓
+50		10.83	34.18 27.81 ✓
11+00		9.40	35.61 27.29 ✓
+50		12.14	32.87 26.77 ✓
12+00	37.18		out.
12+15 <sup>38</sup>	} $\Delta = 27^{\circ}07' \text{ Lt.}$ } $\text{N11H\#3}$ } Equation.	3.99	33.19 26.09 ✓
= 12+18 <sup>02</sup>			
12+50		5.24	31.94 25.76 ✓
13+00		5.21	31.97 25.24 ✓
+50		4.61	32.57 24.72 ✓
13+90	37.40	5.39	32.01 24.30 ✓
14+50		4.41	32.99 23.68 ✓
15+00			out.
15+11.88	} $\Delta 36^{\circ}19' \text{ Lt.}$ } $\text{N11H\#4}$	4.60	32.80 23.03 ✓
"			
		N11H = 32.76 = Elev from South 0.04 difference	

cont. p 57

Cuts	Offsets
+9.52 ✓	8' Rt.
+8.39 ✓	" "
+5.45 ✓	" "
+6.37 ✓	" "
+8.32 ✓	8' Lt.
+6.10 ✓	8' Rt.
	10' Lt.
+7.10 ✓	10' Lt.
+6.18 ✓	8' Lt.
+6.73 ✓	"
+7.85 ✓	"
+7.71 ✓	"
+9.31 ✓	"
+9.77	- North } sec P 57
+9.84	- South }

from P. 55 -  $\pi = 45.01$   
 $12.13 -$   
 $32.88 = TP$   
 $+30 +$   
 $37.18 = \pi$   
 $4.60 -$   
 $32.58 = TP$   
 $4.82 +$   
 $37.40 = \pi$   
 $6.39 -$   
 $31.01$   
 Chk. Stake  $30.97$   
 $18+11.88 \text{ P. 57}$   $0.04 = \text{error}$   
 $37.40$   
 $4.60$   
 $32.80$   
 $12+15.88$   
 For R.P. See P. 46

96.401



Walker  
Bliss  
Isbell  
5-21-40

Grade change - Cholla Trunk Sewer

Between MH #4 and MH #9

Cont. from Page 46

Station		P. 56	Stakes	Flow line
15+11.88 = MH #4	35.70	2.94	32.76	23.53 - N 22.82 - South
+50		4.05	31.65	22.62 22.60
16+00		3.52	32.18	22.36 22.18
+50		3.92	31.78	22.10 22.75
17+00		4.77	30.93	21.84 22.33
+50		5.44	30.26	21.58 21.90
18+00		7.46	28.24	21.32 21.48
+46.17 = MH #5		4.72	30.98	21.08
19+00		7.15	28.55	20.80
+50		6.08	29.62	20.54
20+00		5.62	30.08	20.28
+50	33.10	2.72	30.38	20.02
21+00		2.73	30.37	19.76
+50		3.24	29.86	19.50
+72.56 = MH #6		3.60	29.50	19.38
22+00		4.23	28.87	19.24
+50		5.64	27.46	18.98
23+00		7.36	25.74	18.72

0.25%  
0.521%

$\Delta = 14^{\circ}35'44''$

$\Delta = 11^{\circ}50'30''$  RT

Cont. P. 58

Book 1573-47  
Elev. & Slide 15711.88

Cuts	Offsets
+ 9.73 North	changed to 9.77 see P-56
+ 9.94 South	12' lat.
9.03	
+ 8.05	8' RT
+ 9.82	
+ 9.00	
9.68	
+ 9.03	"
9.09	
+ 8.60	"
+ 8.68	
+ 8.36	"
6.92	
+ 6.76	"
+ 9.90	8.8' RT on Run
+ 7.75	8' RT
+ 9.08	"
+ 9.80	"
+ 10.36	"
+ 10.61	"
+ 10.36	"
+ 10.12	20' RT
+ 9.63	8' RT
+ 8.48	"
+ 7.02	"

30.97  
473  
35.70  
562-  
TP 30.08  
3.02-  
33.10-



Grade Change Chella Sewer Line

Cont. from P-57

Station	± P-57	El.	Stake	Flow Line	Cuts	Offsets
23+50	33.10	8.07	25.03	18.46	+6.57	8' Rt.
24+00		8.09	25.01	18.20	+6.81	"
+50		7.15	25.95	17.94	+8.01	"
		3.57	29.53		+11.70	27.70 Rt. Nail on Sill bridge
+70.54 = NH#7		8.07	25.03	17.83	+7.20	8' Rt.
25+00			P-47 2 28.75	17.68	+11.07	7' Rt. on Sill on Nail
			28.75		+11.29	Some offset on Above mentioned Nail
+42.87 = NH#8			25.25	17.46	+7.79	8' Rt. on Stake
+93.62				17.19		
0.521 2/10 26+43.62				16.93		
+93.62				16.67		
27+43.62				16.41		
+93.62				16.15		
28+43.62				15.89		
29+06.92 = NH#9				15.55		
Y = 29+13.8 Equation						

Cont. Page 48

Station for Change Grad  
 Set by H.P.A. Party.



Walker  
Isbell  
Hale  
10-14-40

~ Rough Grade stakes ~

Upas St. - From Villa Terrace to Arnold.  
60' wide  
Restaking - Original staking P. 65

Indexed  
of

Note: Grades are Property Line 59.  
And are 0.2 higher than shown  
on Profile #874

H

L

Rt.

Stations

Cont P. 60

0+10

287.80 - 33  
50 out.

288.35 + 4.1  
4.8 out.

0+00 = W.L. Villa Terrace

288.95 - 29  
44 out.

TP 3.51 290.88 12.89 287.37

0-10

289.80 - 2.3  
3.5 out.

0-20

290.50 - 1.5  
2.3 out.

0-30

291.90 - 0.5  
0.3 out.

0-40

292.30 + 0.1  
0.0

0-50

293.60 + 0.6  
0.6 out.

0-65 = 15' E. EL Villa Terrace

295.67 + 0.6  
0.6 out.

0.25 300.26

300.01

N.Y. S.P.  
M. 1/2  
- Villa Terrace

300.26



Upas St. Grades

Cont. from P-59

N.E. cb. Arnold  
End cb = E.L.

Upas  
Arnold

Stations chs 7.03 262.09  
2+72 = F.L. Arnold 262.00 = profile  
0.09 difference

261.70 - 5.0  
7.5 out

262.20 = 2+72

2+22

263.30  $\frac{0.00}{0.00}$

264.00 Grid ✓

1+72

264.90  $\frac{1.03}{0.3 out}$

265.80 - 0.5  
0.8 out

1+52

265.80  $\frac{+0.5}{0.5 out}$

266.80 - 0.6  
0.9 out

T.P. 2.86 269.12 12.20 266.26

269.12

1+32

267.60 - 0.1  
0.2 out

268.60 - 1.4  
2.1 out

1+12

269.90 - 0.8  
1.2 out

270.90 - 2.6  
3.9 out

0+92 = Bk

273.10 - 1.7  
2.6 out

274.00 Grid ✓

0+61

279.03 - 2.9  
4.8 out

279.50 Grid ✓

T.P. 0.41 278.46 12.83 278.05

278.46

0+30

284.97 - 4.2  
6.3 out

285.00 + 1.3  
7.3 out

0+20

286.55 - 3.5  
5.3 out

290.88











(LINE  
backed  
in)

Trunk Line Sewer Construction  
From Federal Blvd. to 8th  
Cont. from P-46

Station	El. Stake	El. Flow Line	Cuts	Offsets
0+00 = Existing M.H. at Federal	↑	38.73		
+50		38.26		
1+00		37.79		
+50		37.31		
2+00		36.84		
+50		36.37		
3+00		35.90		
+50		35.42		
4+00		34.95		
+50		34.48		
5+00		34.00		
+39.5 = N.H.#1		33.62		
6+00		33.01		
+50		32.51		
7+00		32.01		
+50		31.51		
8+04.5 = N.H.#2		30.97		
+50		30.51		
9+00		30.01		

0.9472%

$\Delta 35^{\circ}04' R.$

$\Delta 37^{\circ}30' R.$

Grade Change  
See Page 55





Cholla Valley Trunk Sewer Const.

64

Cont. from p-63

Station	EI. Stake	EI. Flow Line
9+50		29.51
10+00		29.01
750		28.51
11+00		28.01

Grade Change  
See Page 56

Cont. p-46



Walker  
Biss  
Zobell 1-640

Rough Grades - slope stakes.

UPAS St. From Villa Terrace

to Arnold St.

Note: Grades are for Property line and  
are from Bottom to Top of Page  
are 0.2' higher than the cb. Grades  
shown on profile # 874

0+20 cont. P-66

0+10

TP 0.38 270.84 12.65 270.46

0+00 = White Villa Terrace

0-10

0-20

TP 2.65 283.11 12.32 280.46

0-30

0-40

0-50

0-65 = 15' E. White Villa Terrace

TP 4.76 292.78 12.87 288.02 NW 1/4 B.P.  
0.88 300.89 300.01 Myrtle Villa Terrace

Prop. Grd.

St.

Indexed  
OB

Prop. Grd. 65

St.

286.55

out

287.80

270.84

288.35 - P.C. of Road

288.95

+5.8

-15.3 out 289

283.11

289.80

290.50

291.30

+1.88

-9.5 out 14.2

292.30

293.60

+0.8

-11.8 out 17.7

295.57

+2.8

out.

292.78



Upas St. Grades  
Cont. from P. 65

Station

2+72 = E.L. Arnold on N.

2+22

1+72 Bk.

1+52 "

1+32 "

1+12 "

0+92 Bk.

0+61

0+30 = E.V.C. on South.

Prop. Grid.  
Mt.

261.70

9.14  
18.2  
-5.6 out 8.4

263.30

7.84  
3.7  
-2.1 out 36  
5' offset.

264.90

5.94  
8.8  
-2.9 out 43  
5' offset.

265.80

5.04  
8.2  
-3.2 out 48  
5' offset.

267.60

3.24  
8.2  
-5.0 out 12.5  
5' offset.

269.90

0.94  
7.9  
-6.0 9.7 out  
5' offset.

273.10

+2.26  
6.4  
-8.7 out 19.0

279.03

+8.2  
4.3  
-12.5 out 18.3

284.97

+14.13  
1.8  
-15.9 out 23.8

Prop. Grid. 66  
Pt.

262.20

8.64  
8.73  
-0.09

264.00

6.84

265.80

5.04  
5.4  
-0.3 out 3.5

266.80

4.04  
4.6  
-0.5 out 0.7

268.60

2.24  
3.6  
-1.4 out 0.1

270.90

+0.06  
3.5  
-2.6 out 2.8

274.00

9.1  
13.4  
-4.3 out 6.4

279.50

13.6  
10.6  
-7.0

285.00

7.8  
5.8  
-7.0

270.84  
7

283.1  
7

292.78







Walker  
Bliss  
Isbell  
Nov. 28-1939

Trojan Ave. Curb Grades

Dawson to 54th  
see sketch page 73

~~Indexed~~  
ID

Stations	Grades cb. S.L.	Grades cb. N.L.
3+21.61 - E.L. Dawson Ave	327.05	327.70
+29.61 - P.C. cb. Ret on North		327.68
+61.61 - P.V.C	327.48	328.00
+81.61 - B.M.	327.72	328.23
4+01.61 "	328.02	328.53
+21.61 "	328.38	328.88
+41.61 " - E.V.C	328.80	329.30
5+00	330.05	330.55
+7.50	331.12	331.62
6+00	332.20	332.70
+7.50	333.27	333.77
7+00	334.35	334.85
+7.50	335.42	335.92
8+00	336.50	337.00
+30.8	337.14	337.64
+61.61 - P.V.C	337.78	338.28
+81.61 - B.M.	338.23	338.73
9+01.61 "	338.72	339.22
+21.61 "	339.24	339.74

351.67 - E.N. C.T. & Trojan 45416 Book 1572-30

Station	Grades	Grades	Grades	Grades	Grades	Grades
351.67	327.05	327.48	327.72	328.02	328.38	328.80
12.45 - S	811	768	744	714	678	634
342.04 - TP	1057	1004	936	960	970	984
047 +	-2.46	-7.34	-2.52	-2.46	-3.00	-3.5
342.51 - X						E.V.C
11.90 - N	327.70	328.00	328.23	328.53	328.88	329.30
331.11 - TP	746	716	673	663	63	586
4.05 +	7.5	7.19	6.8	6.4	6.0	5.40
335.16 - X	0.0	0.0	1.01	1.02	1.03	1.045
0.56 -						
334.60 - TP S	330.05	331.12	332.20	333.27	334.35	335.42
8.90 +	5.11	4.4	2.96	1.9	0.8	8.1
343.50 - X	3.0	8.4	6.8	5.2	5.8	19.3
0.50 -	-3.7	-4.9	-3.84	-3.3	-5.0	-6.2
343.00 - TP						
12.71 +						
335.71 - X N	330.55	331.62	332.70	333.77	334.85	335.92
4.6	3.54	2.46	1.4	0.3	7.6	
5.9	2.93	1.87	0.8	7.0		
10.7	1.6	1.06	1.06	1.04	1.06	
S	336.50	337.14	337.78	338.23	338.72	339.24
7.0		5.7		4.8		
12.0		6.9		3.2		
-5.0		-0.2		11.4		
N	337.00	337.64	338.28	338.73	339.22	339.74
6.50	0.81	5.2		4.3		
6.0		6.4		3.8		
10.5		1.98		1.05		

68



## Trojan Ave Curb Grades

Cont. from P. 68

Station	cb. Gr. S.L.	cb. Gr. N.L.
9+41.61 = 8th.	339.80	340.30
+61.61 "	340.20	340.90
+81.61 "	341.02	341.52
10+01.61 "	341.72	342.22
+21.61 " = E.V.C.	342.44	342.94
10+50	343.48	343.98
11+00	345.31	345.81
+50	347.15	347.65
12+00	348.98	349.48
+41.61 = P.V.C.	350.50	351.00
+61.61 = 8th	351.75	351.60
+81.61 = 8th	351.75	352.14
13+01.96 P.C. 15' cb. R. on N.L.	352.10	352.50 = P.P.
13+16.46 = 8th on South	352.20	352.76 = 4th
13+33.53 = cb. P.C. Ret. on South.	352.13	352.96 = E.C. Sta.
E.C. 15' cb. Ret. " "	351.91	353.36 <sup>22.06</sup> N of E.C.
int. of Prop line with cb.		
1.66 = South of E.C. on South ✓	351.90	

343.50 = T - P. 68

69

	E.V.C.					
S 339.80	340.40	341.02	341.72	342.44	343.48	
370	71	25		106	0.00	
33	33	82		50	3.9	
-91	7	-7.9		-4.0	-3.9	
N 340.30	340.90	341.52	342.22	342.94	343.98	
3.2	20			0.6	11.73	
3.0	21			-0.7	12.1	
10.2	-0.1			-0.1	-0.4	
355.71 = T - P. 68						
204	Station 8th P. 68					
351.67 = T	S 345.81	347.15	348.98	350.50	351.25	351.75
983 ±	104	856	673	1100	10.25	9.75
	13.6	873	235	5	3.55	3.17
361.50 = T	3.2	-0.2	14.4	+6.0	+6.7	+6.6
N 345.81	347.65	349.48	351.00	351.60	352.14	
9.9	70.6	623	4.71	4.11	3.57	
10.5	7.6	5.3	2.08	2.55	2.05	
-0.6	+0.8	+0.7	+0.6	+4.56	+0.5	
S 352.10	352.20	352.13	351.91	351.90		
0.07	9.30	9.37	9.59	9.6		
	2.8	3.36	3.6			
	6.5	1.60	+2.0			
N 352.50	352.76	352.96	353.36			
3.21	7.95	8.54				
3.08	3.03	3.07				
+0.1	-0.08	+0.5				



Grades For Curbs  
Trojan Ave, Dawson to 59th.

Stations	cb. Grades N. Line	cb. Grades S. Line
3+21.61 = E.L. Dawson.	327.70	327.05
+29.61 = P.C. Ret. on North	327.68	
3+50	328.00	327.50
4+00	328.78	328.28
+50	329.57	329.07
5+00	330.35	329.85
+50	331.14	330.64
6+00	331.92	331.42
+50	332.71	332.21
+81.61 = P.V.C.	333.21	332.71
7+01.61 = Bk	333.55	333.05
+21.61 = "	333.96	333.46
+41.61 = "	334.43	333.93
+61.61 = "	334.95	334.45
+81.61 = "	335.54	335.04
8+01.61 = " = E.V.C.	336.19	335.69
+50	337.84	337.34
+83.88 = Δ Rk 1003'	339.00	338.50
9+00	339.54	339.04
+50	341.24	340.74
10+00	342.94	342.44

FINAL GRADE CHANGE PAGE 68

I Hope

351.67 = 8 M. CT. & Trojan & 59th Book 1572-30 70

	<sup>= 3+29.61 = 3+50</sup>					
N	327.68	328.00	328.78	329.57	330.35	331.14
	<sup>3+21.61</sup>					
S	327.05	327.50	328.28	329.07	329.85	330.64
			<sup>= P.V.C.</sup>			
N	331.92	332.71	333.21	333.55	333.96	334.43
			<sup>P.V.C.</sup>			
S	331.42	332.21	332.71	333.05	333.46	333.93
			<sup>= E.V.C.</sup>			
N	335.54	336.19	337.84	339.00	339.54	341.24
S	335.04	335.69	337.34	338.50	339.04	340.74



## Trojan Ave Grades.

Cont.

Station	cb. Grades	cb. Grades
	N.L.	S. Side
10+50	344.64	344.14
11+00	346.34	345.84
+50	348.04	347.54
12+00	349.74	349.24
+21.61-PVC	350.47	349.97

71

N 344.64 346.34 348.04 349.74 350.47

S 344.14 345.84 347.54 349.24 349.97



TROJAN AVE. CURB GRADES.  
From 54th to Dowson.

Station	Curb Grades	
	South Line	N. Side
Δ 61'45"		
P.C. cb. on 54th Street	351.68	
E. of Rd. " "	351.79	
E.C. cb. Ret. " "	351.90	353.21
30.92 West of cb. E.C.	352.10	352.90 - Rt.
40.83 " = opp. cb. E.C. on North side	352.05	352.60 - E.C.
21.78 " West of A " - Bk. = 0+00	351.64	352.14
+20 " "	351.16	351.66
+40 " "	350.61	351.11
+60 " = E.V.C.	349.97	350.47
+100	348.61	349.11
+150	346.91	347.41
+200	345.21	345.71
+250	343.51	344.01
+300	341.81	342.31
+350	340.11	340.61
+400	338.41	338.91
+450	336.71	337.21
+480 = P.V.C.	335.69	336.19
+500 - Bk.	335.04	335.54

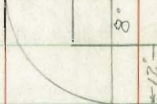
See Page 70 Next Section.  
 " " 68 - for Final Grade Change

Cont. p. 74

P.C. 54th		E.C.		0+00		0+20	
S	351.68	351.79	351.90	352.10	352.05	351.64	351.16
P.C. on 54th		E.C.		0+00		0+20	
N	353.21	352.90	352.60			352.14	351.66
0+20		0+40		1+00		3+00	
S	350.61	349.97	348.61	346.91	345.21	343.51	341.81
0+20		0+40		1+00		3+00	
N	351.11	350.47	349.11	347.41	345.71	344.01	342.31
0+20		0+40		1+00		3+00	
S	340.11	338.41	336.71	335.69	335.04		
0+20		0+40		1+00		3+00	
N	340.61	338.91	337.21	336.19	335.54		



12' 8" 20' cb R.



36' Dawson



12' ← 18' → 18' → 12'

cb. line

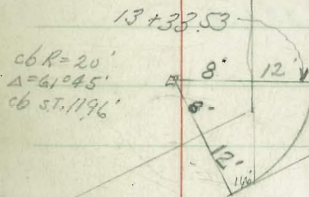
cb. line

A

A

73

← 12' \* 18' \* 18' \* 12' →



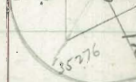
cb R = 20'  
Δ = 61° 45'  
cb st. 1196'

13+01.06

32.47

31.07

12' 3" 15'



Δ = 118° 15'  
cb R = 15'  
cb st. = 25.09'

18'

10'

10'

B.M. 351.67  
C.T. lead Plug.

13+67.60

d. paving



Trojan Ave Curb Grades  
 Cont. from P-72

Sta.	S. cb. Grade	N. cb. Grade
5+20 = 8th	334.45	334.95
+40 = "	333.93	334.43
+60 = "	333.46	333.96
+80 = "	333.05	333.55
6+00 = E.V.C.	332.71	333.21
+50	331.93	332.43
7+00	331.14	331.64
+50	330.36	330.86
8+00	329.57	330.07
+50	328.79	329.29
9+00	328.00	328.50
+52 = P.C. 20' cb Rad. on N.A. Co. Division = spine sta.		327.68
9+60 = F.L. Division Produced to S.L.	327.05	

See Page 70 New Stations

<sup>5+20</sup>  
 S 334.45 333.93 333.46 333.05 <sup>6+00</sup> 332.71 331.93

<sup>5+70</sup>  
 N 334.95 334.43 333.96 333.55 <sup>6+00</sup> 333.21 332.43

S 331.14 330.36 329.57 328.79 328.00 <sup>9+60</sup> 327.05

N 331.64 330.86 330.07 329.29 328.50 <sup>P.C. 20'  
9+52</sup> 327.68



Mulkat.  
Blus  
Isbell  
Nov. 16-39

Cross Sections  
17 Becks  
5'93" ESD

Grades For Paving Alley  
Block 78 - Park Villas 5698-L  
Between Arnold & Arizona  
From N line Landis to S line Nighthawk

28531 = SE. B.P. Landis & Arizona 50 = E.S.D. 81.585 75

Stations	Indexed Joy	Grade of Pav W Line	Grade Pav. East Line
0+00 = N. Landis		288.60	288.90
0+30 = Brk.		287.95	288.00
+50 = Brk		287.50	287.50
+70 = "		287.10	287.20
+90 = "		286.70	287.00
1+10 = "		286.95	287.05
+30 = "		287.10	287.10
+50 = "		287.25	287.25
1+70 = " = E.V.C.		287.44	287.44
2+10		287.95	287.95
+50		288.47	288.47
2+90		288.98	288.98
3+30 = Brk.		289.50	289.50
3+71		290.40	290.40
4+12		291.30	291.30
+53		292.20	292.20
+94		293.10	293.10
5+35 = P.V.C.		294.00	294.00

29302 = TP	-0100	288.60	287.95	287.50	287.10	286.70	286.95
603 =	4.42	5.07	5.57	5.92	6.19	5.99	
28697 = TP	4.55		4.82	4.42	4.26	3.94	
590 =	-0.13		+1.00	+1.50	+1.79	+2.00	
29289 = TP	-0100	288.90	288.00	287.50	287.20	287.00	287.05
347 = F.	4.12	5.02	5.52	5.82	6.02	5.84	
28942 = TP	4.13	5.27	5.18	3.87	5.24	4.84	
748 =	-0.26	0.25	+0.34	+2.00	+0.78	+1.00	
29690 = TP	1+30		E.V.C.				
255 =	+1.70						
29435 = TP W	287.10	287.25	287.44	287.95	288.47	288.98	
546 =	5.79	5.64	5.45	4.94	4.42	3.91	
29981 = TP	4.79	5.38	5.75	4.44	4.27	3.91	
	+1.00	+0.26	-0.30	+0.50	+0.15	0.00	
E 287.10	287.25	287.44	287.95	288.47	288.98		
	5.79	5.64	5.45	4.94	4.42	3.91	
	5.72	5.64	4.25	4.54	3.81	3.74	
	+0.07	+2.00	+1.00	+0.40	+0.61	+0.77	
W 289.50	290.40	291.30	292.20	293.10	294.00		
	7.40	6.50	5.60	4.70	3.80	5.81	
	7.73	6.01	5.50	3.20	3.88	5.68	
	-0.33	+0.49	+0.10	+1.50	-0.08	+0.13	
E 289.50	290.40	291.30	292.20	293.10	294.00		
	3.39	6.50	5.60	4.70	3.80	5.81	
	3.44	5.50	5.15	4.16	3.48	3.91	
	-0.05	+1.00	+0.45	+0.54	+0.32	+0.36	
29981 = TP	546 =						
29435 = TP	1674 =	295.76					
29596 = TP	899 =	289.42	chk. TP				
28697 = TP	602 =						
29299 =	761 =						
28530 =							
chk. starting B.M. SE. Arizona							
Reset stakes 3+30 on E & W							
290.40 =	E.V.C.						
0.49 =	chk.						
29089 =	E.V.C.						
244 =							
29333 =							
Reset stakes 3+30 on E & W							
290.40 =	E.V.C.						
0.49 =	chk.						
29089 =	E.V.C.						
244 =							
29333 =							

Reset 0+90 on West  
" 0+70 "  
E.V. Stake 0+90 on E = 287.78  
3.40  
T = 291.18  
0+90 on West = 286.70  
Red = 4.48  
3.98  
+ 1.00  
on West  
Grade 0+70 = T 291.18  
287.10  
Red = 4.08  
on Pole = 3.08  
on Pole = +1.00

cont. 76



Alley Grades  
Cont. from P. 75

Station	Grade Pos.	Gr. Pos.
5+60 Bk.	29440	29440
+80 "	29442	29450
6+00 - S. Wightman	29421	29440

Grades For Sewer Lateral No 1

3+10 = N. of N. Landis	296.90	7.45	289.45	Flow Line at E. Line A Clay	284.36
------------------------	--------	------	--------	--------------------------------	--------

29481 = T 75<sup>2</sup> chk on Moores B.M. S.E. Arizona Land 76

29987 = W	29440	29442	29421
28979 = Kboe	5.41	5.39	5.60
008 = H	5.14	4.35	5.50
	+0.27 ✓	+1.04 ✓	+0.10 = existing Paving.
E	29440	29450	29440
	5.41	5.31	5.41
	4.63	4.01	5.32
	+0.78 ✓	+1.30 ✓	+0.09 = Existing Paving.

299.81 = T See Page 75 for chk back. to starting pt.

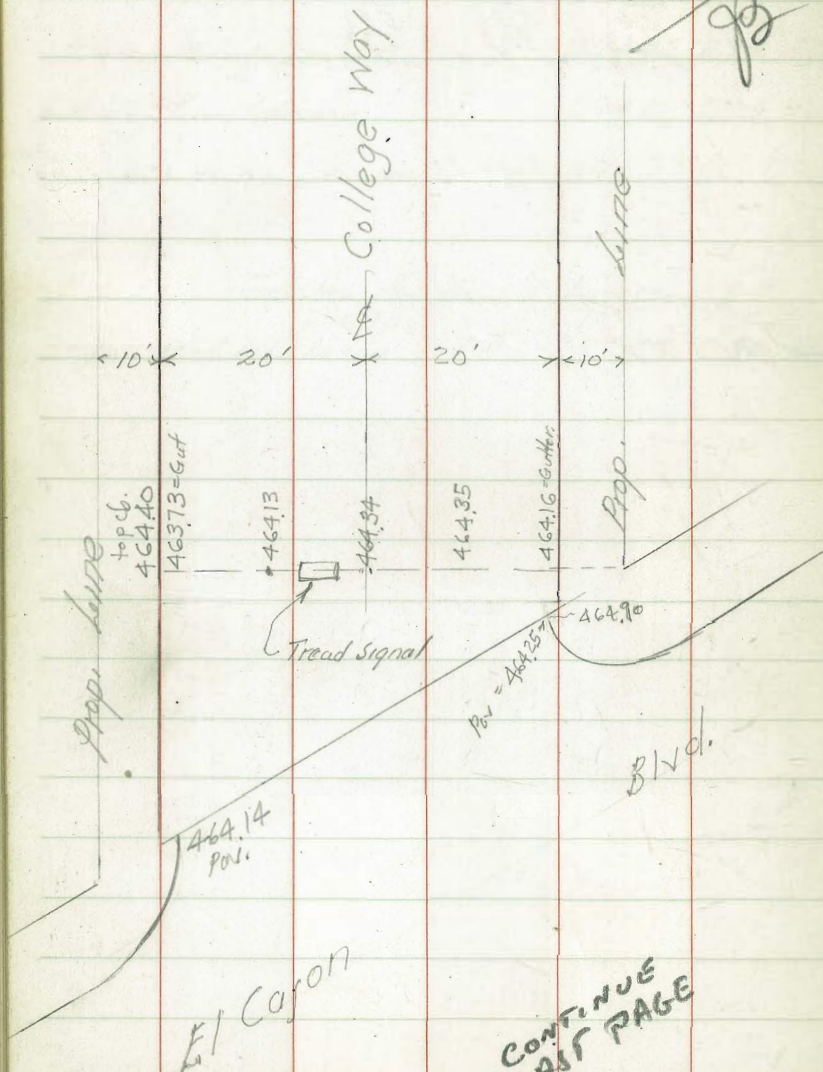
offset  
-15.09 3'E



Walker  
Bliss  
Isbell  
11-18-39

# Grades - Traffic Signal on College Way

Indexed  
js



CONTINUE  
LAST PAGE



Nov. 39

Walker  
Glass  
LabelStakes Reset, Wabash Canyon Sewer  
(Were lost by construction crew.)

Stations

177.63

Flow Time

60+50

5.84 171.79 166.01

60+00

10.67 166.96 166.96

57+00

181.19 4.55 176.54 172.66

150

4.85 176.34 171.71

56+00

184.09 4.96 179.13 174.56

55+50

175.51

55+00

2.55 181.54 176.46

INDEXED

W.K.

OCT 21 1948

78

Elev. Stake 60+00 P-36 = 172.10

553+

177.63-T

+5.78

0.00 in. Bottom of ditch

Elev. Stake 56+55 P-36 = 176.43

476+

181.19-T

+4.63

+4.57

56+ = B.M. on Rim MH = 182.59

150+

184.09-T

255

15.08 in. ok for ch. Elev. Stake 55+00 = 181.54

INDEXED



Walker  
Bliss  
Zsbell  
11-17-39

GRADES Alley Bk. 66 - Univ. Hts.  
Bet. Kansas + Utah Streets.  
From N. Line Meade - 125' N  
- for Surfacing by city.

Station	W.L. Grade	E.L. Grade
0 + 00 = N. Line Meade	367.43	367.21
+ 41.67	367.55	367.33
+ 83.33	367.68	367.46
142.500 = End of Improvement	367.80	367.58

INDEXED

W.K.

OCT 21 1948

79

366.78 = S.E. & P. Meade + Kansas

577 +	= 0100			
372.55 = W	367.43	367.55	367.68	367.80
	5.12	5.00	4.87	4.75
	✓	4.93	4.74	4.87
		+ 0.07	4.13	- 0.12
	= 0100			
E	367.21	367.33	367.46	367.58
	5.34	5.22	5.09	4.97
	✓	4.63	5.25	5.60
		+ 0.59	- 0.76	- 0.63

INDEXED

OCT 21 1948



SEE PAGE 77

Paving Grades For Traffic Signal  
College Way

291 468.18

465.27

NW. 8P.  
College  
+ E1 Cajon

Void see P-77

Proposed opening

Proposed prop line

College Way

30'  
80'  
40' 40'

+pcb=46440

46313	46413	46434	46456
13'	13'	20'	
705	384		
421	210		
215	126		

= Pav  
46456  
14490 ch  
100' 144.35

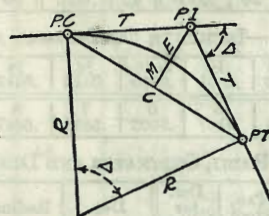
Proposed cb

+14'

to 100' 07.0

# DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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



29133.0  
1906.92  
6.38

## 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= $M = R(1 - \cos \frac{\Delta}{2})$  (5)  $= R \text{vers } \frac{\Delta}{2}$  (6)
- External= $E = T \tan \frac{\Delta}{4}$  (7)  $= R \div \cos \frac{\Delta}{2} - R$  (8)  $= R \text{exsec } \frac{\Delta}{2}$  (9)
- Long Chord= $C = 2 R \sin \frac{\Delta}{2}$  (10)  $\Delta = \text{Central Angle}$

## 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  $D = 5^\circ 30'$ .



TABLE VIII.—NATURAL TRIGONOMETRICAL FUNCTIONS.

Table with columns for Angle, Sine, Tan., Cotg., Cosin. and rows for angles 0 to 90 degrees.

17960  
9903  
2087

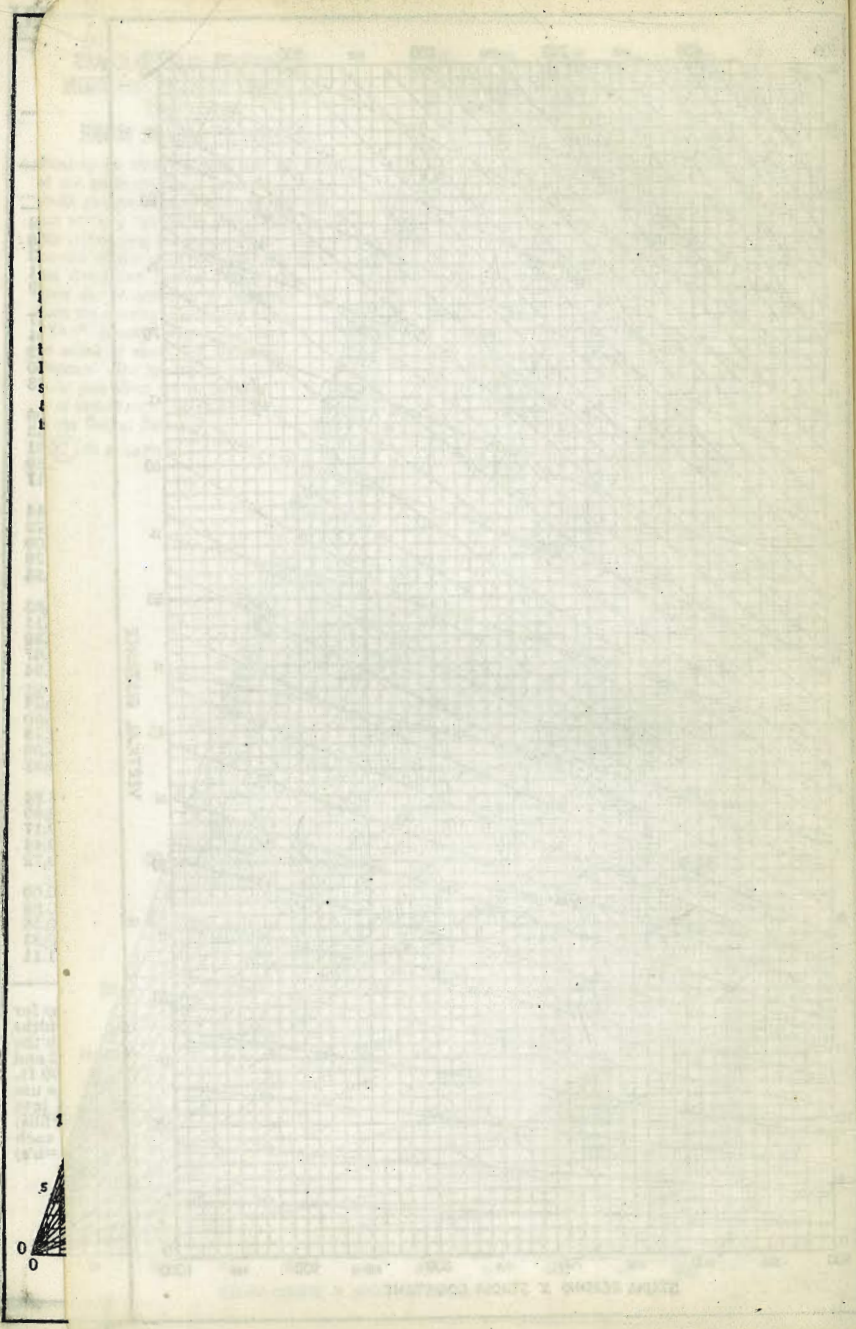
TABLE VIII.—NATURAL TRIGONOMETRICAL FUNCTIONS.

Table with columns for Angle, Sine, Tan., Cotg., Cosin. and rows for angles 0 to 90 degrees.



.94  
1  
92

1250  
117  
1373





210 122.5 101 75 350 15.1070 0047 0047  
 24 26 429 14 280 6035 0047 0047  
 148.5 530 61 70 10035 0047 0047  
 10.75 S.7 Line Hawthorn 2250  
 300 249 2843  
 100 6  
 293  
 36+10 29165  
 36+60 27278  
 1356  
 63  
 13.19 799  
 1142  
 286  
 1426  
 18939 = 52+13  
 1236  
 198  
 1431

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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