

1388

Torrey Road Align

PASTS

LEVEL BOOK

No. 300E

ENGINEERING DEPARTMENT,
CITY C
SAN DIEGO, CALIFORNIA
MICHELMED
DEC 2 1964

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Pd.

1 2 3

1 0 1

Torrey Pine Road

11+48.52 = E.C.

$\Delta = 14^{\circ} 26'$

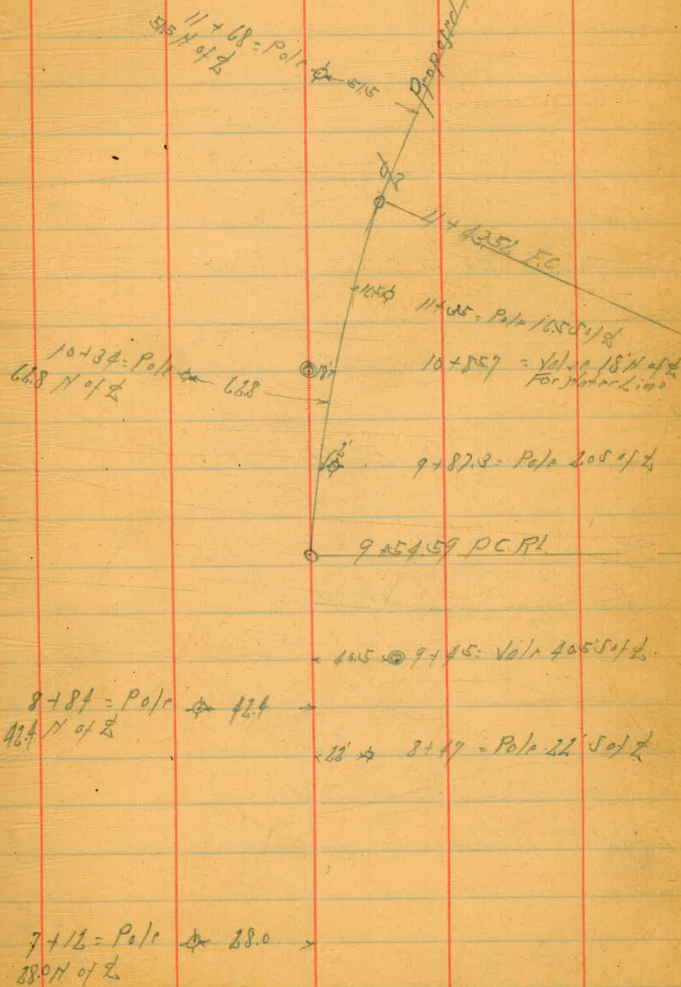
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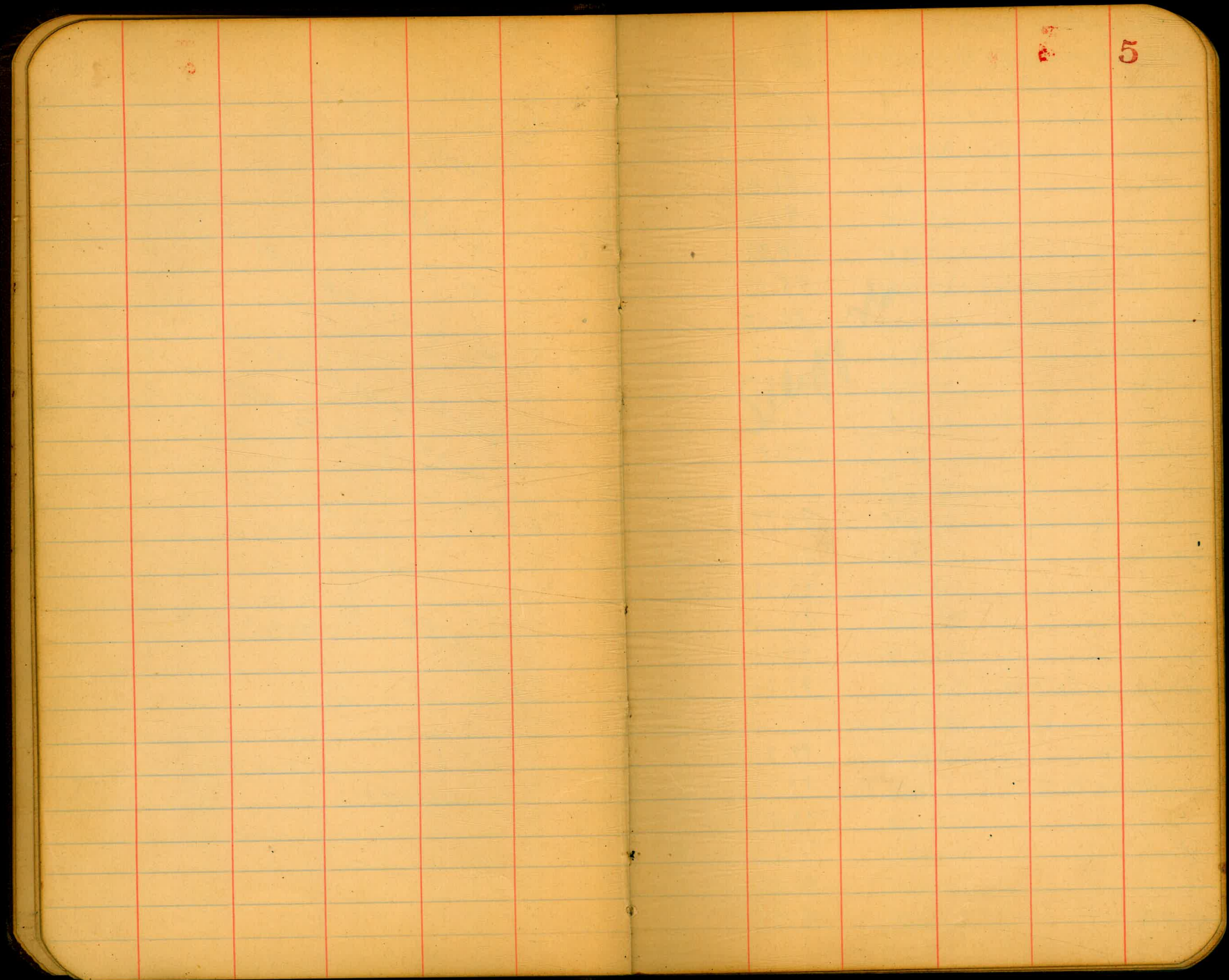
T = 94.97

L = 188.93

9+54.59 P.C.R.

3





5

Terry Road

Hillside Drive to La Solla Canyon Drive

50 ft side
10 Cb
70 qts

Stationing

BM 10.67 108.65 97.98

0+0 = PCP

-5 10.3 98.3
 S 11.4 97.2
 +10 = Top Cb 12.28 96.37
 Gutter on Paving 12.80 95.85
 Gutter " " 12.48 96.17
 Gutter " " 12.80 95.85
 Top Cb 12.28 96.37
 H 12.4 96.2
 +5 12.8 95.8

0+25

-5 on Paving 12.88 95.77
 H " " 12.48 96.17
 Cb " " 11.69 96.96
 S " " 11.32 97.33
 Cb " " 11.38 97.27
 S on Grating 10.80 97.85

0+546 = F Cb of Hillside Dr

S Top Cb 9.41 99.21
 Gutter on Paving 10.50 98.15
 Cb " " 10.24 98.41
 S " " 9.97 98.68
 Cb " " 10.30 98.35
 Gutter " " 11.48 96.97

108.65

Netr Sec 3-17-30
 Page 26
 For Change 0+57 to 0+546 + 5887

6

H Top Cb 11.17
 0+75

H 9.8
 +6.5 = Top Existing 8.92
 Gutter on Paving 9.50
 Cb " " 9.39
 S " " 9.83
 +5.3 = Edge Paving 9.52
 Cb " " 9.4
 S " " 8.0
 +5 " " 7.5

See off

1+0

-5 5.6
 S 6.7
 Cb 8.1
 +1.88 = Edge Paving 9.00
 S on " 8.88
 Cb " " 8.57
 H " " 9.29
 +2.8 Gutter 9.50
 Top Cb 8.85

1+25

H on Paving 8.73
 Cb " " 8.40
 +1.81 = Edge Paving 8.85
 S " " 8.6

Torrey Pines Road
108.65

+9	8.1
cb	6.9
S	4.6
+10	2.4
1+50	
-10	10
S	1.8
+8	9.2
cb	4.9
+10	7.0
+11	8.4
1/2	8.9
+6.8 - Edge Paving	9.13
1/4 " "	9.12
cb " "	8.86
" " "	8.40
1+75	
6 - Edge Paving	8.66
" " "	8.96
cb " "	9.47
+3.2 - Edge "	9.60
1/4	9.6
+5	9.3
1/2	6.5
1/4	4.2
cb	3.0

See page 26
For Change

108.65

7

S	1.3
+10	0.3
2+0	
-10	0.0
S	1.1
cb	2.6
1/4	4.0
1/2	6.0
+5	8.1
+6	10.3
1/4	10.6
cb	10.4
+1.3 - Edge Paving	10.26
" " "	9.89
+11.8 - Edge "	9.20
2+2.5	
-11.3 - Edge Paving	10.95
" " "	10.90
+7.3 - Edge "	11.26
cb	11.3
1/4	11.5
+2	8.3
1/2	6.3
1/4	4.6
cb	2.8
S	1.2

See page 27

Torrey Pines Road
108.65

710		0.0	
TP	8.82	111.89	5.58
		2450	103.07
-10		3.9	
S		5.3	
Cb		6.6	
1/4		8.4	
1/2		10.9	
3/4		11.9	
1/4		15.4	
Cb		15.5	
+2.9 - Edge Pairing		15.56	
N 0.7 "		15.15	
+14.6 - Edge "		14.80	
	2475		
-18.0 - Edge Pairing		15.38	
N 0.7 "		16.04	
+8.2 - Edge "		11.55	
Cb		16.6	
1/4		16.7	
+3		16.4	
+4		14.4	
1/2		13.8	
1/4		10.2	
Cb		8.6	
S		6.1	

Sec Page 28

111.89

8

710		3.0	
	370		
-10		1.4	
S		4.1	
Cb		8.2	
1/4		10.8	
1/2		15.1	
3/4		16.7	
1/4		17.4	
+6.2 - Edge Pairing		17.49	
Cb 0.7 "		17.33	
N " "		16.69	
+6.5 - Edge "		16.29	
	2425		
-7		17.1	
-0.6 - Edge Pairing		17.34	
N 0.7 "		17.37	
Cb " "		17.79	
1/4 - Edge "		18.23	
1/2		17.7	
+5		17.1	
1/4		14.9	
Cb		10.1	
S		5.2	
710		0.0	
	3150		
-10		2.1	

Sec Page 28

Torrey
111.89
12.88
98.01
99.14

Torrey Pine Road
111.89

S		74	104.5
cb		126	99.3
+5		179	94.0
1/4		183	93.7
1/2		184	92.5
+3.5	Edge Paving	1864	93.25
1/4	on "	1845	93.44
cb	" "	1817	93.72
+6	Edge	1801	93.88
H		181	93.8
+3		183	93.6
+20		26.6	85.3
		317.5	
-2.5		315	80.4
H		200	91.9
+2		190	97.9
+7.5	Edge Paving	1854	93.35
cb	" "	1858	93.37
1/4	" "	1868	93.21
1/2	" "	1895	92.94
+0.5	Edge	1897	92.92
4		187	93.2
cb		185	93.4
S		129	99.0
+10		80	103.9
TP	223	103.34	1076
			10113

10336

9

471376-EC

-10		26	100.8
S		86	94.8
+4		101	93.3
cb		104	93.0
1/4		104	93.0
+3	Edge Paving	1062	92.74
1/2	on "	1056	92.80
1/4	" "	1054	92.82
+6	Edge	1053	92.83
cb		105	92.8
+5		108	92.6
H		141	89.3
+20		242	79.2
130		245	78.9
		4+50	
-30		247	78.7
-15		238	79.6
-13		208	82.6
H		156	87.8
+7		112	92.2
cb		111	92.3
+34	Edge Pav	1094	92.40
1/4	on "	1081	92.55
1/2	" "	1076	92.60
+6.4	Edge	1078	92.58

Transit
10336
92.83
92.83
92.83
92.83

Torrey Pines Road

103.36

1/4		107	92.7
cb		107	92.7
+8		103	93.1
S		98	94.2
+10		24	101.0
	4175		
-10		61	97.3
-5		103	93.1
S		104	93.0
cb		118	92.9
+6.8	= Edge Paving	110.6	92.30
1/4	on "	110.4	92.37
1/2	" "	110.2	92.34
1/4	" "	11.10	92.26
+2.4	= Edge "	11.15	92.21
cb		111	92.3
H		167	86.7
+10		196	83.8
+15		239	79.5
+30		278	78.56
	510		
-30		230	80.4
-12		228	80.6
H		180	85.4
cb		116	91.8
+6.5	= Edge Paving	113.3	92.03

103.36

10

1/4 on Paving		1130	92.06
1/2 " "		11.18	92.18
1/4 " "		11.19	92.17
+2.3	= Edge Pav	11.20	92.16
cb		11.4	92.00
S		11.6	91.8
+10		11.1	92.3
TP	4.15	96.56	10.99
	5125		2337
-10		51	91.4
S		4.9	91.6
cb		4.6	91.9
+3.6	= Edge Pav	4.55	91.97
1/4 on "		4.99	92.03
1/2 " "		4.51	92.01
+6.5	= Edge "	4.62	91.90
1/4		4.5	92.0
1/4		4.6	91.9
cb		5.9	90.6
H		12.3	84.2
+20		15.5	81.0
	5150		
-20		14.4	82.1
H		16.8	83.7
cb		6.7	89.8
1/4		4.6	91.9
1/4		1.6	91.9

+27 = Edge Paving	470	91.82
1/2 02	466	91.90
1/4 02	460	91.92
+55 = Edge	464	91.89
Cb	46	91.9
S	49	91.6
+10	53	91.22
	54.75	
-10	5.1	91.4
S	49	91.6
Cb = Edge Paving	472	91.80
1/4 02	474	91.78
1/2 " "	470	91.82
+30 = Edge	470	91.82
1/4	45	92.0
+3	50	91.5
Cb	79	88.6
N	122	84.3
+20	140	82.5

Proposed Drain

See Sketch Page 2

0+0 = ^{20' S of S End} of ^{of} 21' 21" C.I. Pipe	52	91.2
+7	5.6	90.9
+9	8.7	87.8
+30 = S End of Existing ^{21' 21" C.I. Pipe}	11.19	85.33
+27	52	91.3
+40	5.0	91.5
+62.5 = ^{1/2} on Paving	484	91.68
+70	47	91.8
+80	10.5	86.0
+90.6 = N End of Existing ^{21' 21" C.I. Pipe}	13.13	83.39
+110	12.9	83.6
	6+0	
-15	12.9	83.6
N	12.3	84.2
Cb	9.8	86.7
1/4	4.7	91.8
+59 = Edge Paving	490	91.62
1/2 02	486	91.66
1/4 " "	475	91.77
Cb " "	476	91.80
+20 = Edge	478	91.80
S	48	91.7
+10	50	91.52

Torrey Pine Road
9652

-10		47	91.8
S		49	91.6
+6.6 = Edge Pav		461	91.91
Cb 07 "		464	91.88
1/4 " "		480	91.72
1/2 = Edge Pav		515	91.37
1/2		49	91.6
Cb		99	86.6
N		111	85.4
+15		115	85.0

6450

-15		10.4	86.1
N		9.4	87.1
Cb		85	88.1
1/4		64	90.1
+3		50	91.5
1/2		48	91.7
+1.7 = Edge Paving		503	91.49
1/4 07 "		489	91.63
Cb " "		470	91.82
+2.2 = Edge "		467	91.87
S		48	91.7
+10		47	91.8

6475

-10		49	91.6
S		48	91.7

9653

12

+4.6 = Edge Pav		476	91.80
Cb 07 "		474	91.78
1/4 " "		487	91.65
+5.8 = Edge "		503	91.49
1/2		52	91.35
1/4		65	90.0
Cb		74	89.1
N		83	88.2
+15		94	87.1

710

-15		82	88.3
N		74	89.1
Cb		67	89.8
1/4		61	90.4
1/2		55	91.0
+2.5 = Edge Pav 191		534	91.18
1/4 07 "		516	91.36
Cb " "		508	91.50
+3.5 = Edge "		498	91.54
S		50	91.5
+10		50	91.5

BM 240 9643 2.50 91.02

7125

-10		52	91.2
S		52	91.2
+5.3 = Edge Pav		512	91.00

S.W. of 31st Ave
Plot 6470

9642

Cb on Paving	5.45	90.97
1/4 " "	5.61	90.81
+ 5.6 = Edge "	5.80	90.62
1/2	5.8	90.6
1/4	6.2	90.2
Cb	6.6	89.8
H	7.0	89.3
+10	7.9	88.5
	7+50	
-10	8.7	87.7
H	9.7	88.7
Cb	7.0	89.4
1/4	6.6	89.8
1/2	6.6	89.8
+0.5 = Edge Pav	6.38	90.04
1/4 " "	6.74	90.28
Cb " "	6.01	90.41
+2.4 = Edge "	5.96	90.46
S	5.9	90.5
+10	5.6	90.8
	7+75	
-10	6.3	90.1
S	6.4	90.0
+8.8 = Edge Pav	6.56	89.86
Cb on "	6.58	89.84
1/4 " "	6.67	89.75

9642

13

5-18-30

1/2 on Paving	6.88	89.54
+1.6 = Edge "	6.94	89.48
1/4	7.2	89.2
Cb	7.9	88.5
H	8.8	87.6
+10	9.8	86.6
	8+0	
-10	11.2	85.1
H	9.7	86.7
Cb	8.4	88.0
1/4	7.5	88.9
+2.7 = Edge Paving	7.44	88.98
1/2 on "	7.27	89.15
1/4 " "	7.15	89.27
+5.6 = Edge "	7.15	89.27
Cb ^{1.5}	7.1	89.3
S	7.4	89.0
+10	7.4	89.0
	8+25	
-10	7.3	89.1
S	8.0	88.4
Cb	7.9	88.5
+3.4 = Edge Paving	7.18	88.74
1/4 on "	7.68	88.74
1/2 " "	7.79	88.63
1/4 " "	8.10	88.32

Torrey Pinnac Road
9642

14

+0.6 = Edge Paving	816	88.26
Cb	87	88.0
H	10.5	85.90
+1.5	130	83.4
8+50		
-20	151	81.3
-10	174	79.0
H	121	84.3
Cb	88	87.6
+2.0 = Edge Paving	858	87.84
1/4 " "	855	87.87
1/2 " "	828	88.14
+5 = Edge	880	88.22
1/4	88	88.2
Cb	81	88.3
S	77	89.0
+10	67	89.7
8+75		
-10	82	88.2
S	87	88.0
Cb	82	88.2
1/4	86	87.8
1/2 = Edge Paving	882	87.60
1/4 " "	888	87.54
Cb	914	87.48
+3.3 = Edge	962	87.20

H	94	87.0
+30	187	77.7
9+0		
-20	203	76.1
-20	192	77.2
-1	96	86.8
H	97	86.7
+1.3 = Edge Paving	920	86.62
Cb " "	953	86.89
1/4 " "	940	87.02
+1.5 = Edge	940	87.02
1/2	95	86.9
1/4	96	87.2
Cb	96	86.8
S	94	87.0
+10	93	87.1
9+25		
-15	02	96.2
-7	31	93.3
-4	96	86.8
S	100	86.4
Cb	101	86.3
1/4	99	86.5
1/2	100	86.4
1/4	100	86.4
+3.3 = Edge Paving	1000	86.42

		9643		
Cb	0.2 Pm	9.99	86.43	
H	" "	10.15	86.27	
+3.5	- Edge "	10.25	86.17	
+10		10.6	85.82	
		9+54.59 - PCR		
-15		10.9	85.5	
-9.4	- Edge Pm 199	10.76	85.70	
H	0.2 "	10.96	85.66	
+8.5	- Edge "	10.88	85.60	
Cb		10.7	85.7	
1/4		10.8	85.62	
1/2		11.3	85.1	
1/4		9.2	87.2	
Cb		9.2	87.2	
+5		8.9	93.5	
S		1.2	95.2	
TP	9.01	10443	95.42	
+15		4.2	100.2	
		9+75		
-15		2.0	102.4	
S		5.6	98.8	
+7		7.9	96.5	
Cb		10.8	94.2	
+4		11.8	92.6	
1/4		18.8	85.6	
1/2		19.6	82.84	

		10443		
1/4		19.3	85.1	
Cb		19.3	85.1	
+5.5	- Edge Pm 199	19.31	85.12	
H	0.2 "	19.69	85.14	Transit
+130	- Edge "	19.04	85.39	10443
+20		19.3	85.1	89.13
		1040		
-21.0	- Edge Pm 199	19.49	84.94	
-12	" "	20.2	84.23	
H		20.2	84.2	
Cb		20.0	84.4	
1/4		20.2	84.2	
1/2		19.5	84.9	
+4		13.8	91.6	
1/4		11.9	92.5	
Cb		8.9	95.5	
+3		5.4	99.0	
S		4.2	100.2	
+15		0.5	103.9	
		10125		
-15		0.0	104.4	
S		2.9	101.5	
Cb		5.1	99.3	
1/4		11.1	93.3	
1/2		18.6	85.8	
1/4		20.7	83.7	

Tortoy Pipes Road
104.43

Cb	20.2	84.2
H	20.9	83.5
+3.8 = Edge Paving	21.14	83.29
+25.3 = " "	19.77	84.66
104.50		
-26.6 = Edge Paving	20.34	84.09
-4.3 = " "	21.80	82.63
H	21.5	82.9
Cb	21.3	83.1
1/4	21.3	83.1
1/2	20.9	83.5
+3	13.2	91.2
1/4	12.6	91.8
Cb	6.9	97.5
S	4.3	100.1
+15	11	103.3
104.75		
-15	4.2	100.2
S	1.8	97.6
Cb	9.7	94.7
+6	11.0	93.4
1/4	11.7	92.7
1/2	21.3	83.3
1/4	22.1	82.3
Cb	21.7	82.7
H	22.2	82.2

104.43

16

+2.9 = Edge Paving	22.39	82.04
+23.6 = " "	20.85	83.59
114.0		
-18.7 = Edge Paving	21.48	82.95
H = 0.7	23.04	82.29
+0.6 = Edge " "	23.08	82.35
Cb	22.7	81.7
1/4	22.9	81.5
1/2	23.5	80.9
1/4	22.1	82.3
Cb	11.7	92.7
S	9.9	94.5
+15	6.9	97.5
114.25		
-15	8.0	96.4
S	13.0	91.4
Cb	21.3	83.1
1/4	21.4	80.03
1/2	23.1	80.8
1/4	22.5	80.9
Cb	23.6	80.8
+3.3 = Edge Paving	23.66	80.77
H = 0.7	23.28	81.15
+11.8 = Edge " "	22.60	81.83
114.50 - 20		
-13	23.3	81.13

10443

-6.8 = Edge Parings		2351	80.89	
N 0.7 "		23.73	80.70	
Cb " "		23.99	80.44	
+1.7 = Edge "		24.04	80.39	
1/4		24.1	80.3	
2		24.3	80.1	
1/4		24.5	79.9	
Cb		24.0	80.4	
S		16.6	87.8	
+3		13.4	91.0	
+1.5		10.0	94.4	
	11+7.5			
-15		12.1	92.3	
-7		14.6	89.8	
TP	317	95.61	11.99	96.44
TP	1.03	84.23	12.41	83.20
-4		3.3	80.9	
S		4.6	79.6	
Cb		5.2	79.0	
1/4		5.4	78.8	
2		5.0	79.2	
+5.8 = Edge Parings		4.70	79.53	
1/4 0.7 "		4.68	79.55	
Cb " "		4.69	79.54	
+8.9 = Edge "		4.64	79.59	
N		4.7	79.5	

8123

+6		4.7	79.5
+30		19.6	64.6
+40		21.1	61.1
	12+10		
-40		25.6	58.6
-25		31.3	62.9
N		6.1	78.1
+6.8 = Edge Parings		5.59	78.64
Cb 0.7 "		5.52	78.71
1/4 " "		5.49	78.74
2 Edge		5.39	78.84
1/4		5.5	78.7
Cb		5.8	78.4
S		6.1	78.1
+10		4.2	80.0
	12+12.5		
-10		6.2	78.0
S		6.5	77.7
Cb		6.4	77.8
1/4		6.2	78.0
+1.7 = Edge Parings		6.15	78.06
2 0.7 "		6.28	77.95
1/4 " "		6.48	77.75
+4.8 = Edge "		6.72	77.57
Cb		6.5	77.7
+3		6.7	77.5

17

Transit
11.8 On do-

Torrey Pines Road
8423

N		10.0	742
+25		25.0	592
+40		27.6	566
	12+50		
-40		30.3	539
-15		33.1	61.1
N		16.0	68.2
Cb		9.3	749
1/4		7.1	771
1/4		7.3	769
+0.8	Edge Paving	75.8	7665
1/2	on "	72.9	7694
1/4	" "	69.7	7726
+3.7	Edge "	68.7	7733
Cb		6.7	775
S		7.4	768
+10		7.0	772
	12+75		
-10		7.5	765
S		7.2	770
Cb		7.3	769
+0.5	Edge Paving	73.6	7687
1/4	on "	71.6	7657
1/2	" "	70.8	7625
+3.7	Edge "	8.13	7610
1/4		8.0	762

8423

18

+3		8.0	762
Cb		10.1	741
N		11.8	674
12.0		21.3	579
+40		19.6	546
	13+0		
-10		29.6	546
-15		26.3	579
N		30.6	636
Cb		14.0	702
1/4		9.6	750
1/2		9.5	74.1
11.0	Edge Paving	94.0	7483
1/4	on "	9.04	7519
Cb	" "	8.63	7561
+4.1	Edge "	8.50	7573
S		8.2	760
+10		9.2	75.0
	13+25		
-10		10.3	739
S		9.2	750
+3.5	Edge Paving	92.6	7497
Cb	on "	94.5	7478
1/4	" "	93.3	7440
+4.0	Edge "	102.0	7403
1/2		10.5	73.7

8423

+1	10.5	73.7
1/4	11.9	72.3
Cb	16.6	67.6
N	23.3	60.9
+15	27.0	57.2
+40	28.3	55.9

13750

-40	27.0	57.2
N	24.1	60.1
Cb	19.0	65.2
1/4	13.8	70.4
7/4	11.3	72.9
1/2	11.2	73.0
+4.9 = Edge Pairing	11.13	73.10
1/4 02 "	10.88	73.35
Cb " "	10.26	73.97
+8.0 = Edge "	10.01	74.22
S	9.9	74.3
+10	10.4	73.8

13770

-10	11.0	73.2
S	10.6	73.7
+15 = Edge Pairing	10.70	73.53
Cb 02 "	11.22	73.01
1/4 " "	11.77	72.46
+3.0 = Edge "	12.00	72.23

8423

19

1/2	12.0	72.2
1/4	12.3	71.9
1/4	12.8	70.4
Cb	18.9	65.3
N	23.6	60.6
+40	25.8	58.4

1410

-40	24.7	59.5
N	22.2	62.0
Cb	20.3	63.9
1/4	14.4	69.8
7/4	12.9	71.3
1/2	12.5	71.7
+5.3 = Edge Pairing	12.52	71.71
1/4 02 "	12.31	71.92
Cb " "	11.72	72.51
+8.0 Edge "	11.17	73.06
S	11.0	73.2
+10	11.5	72.7

145 74.07 11.61 72.62

14 12.5

-10	1.7	72.3
S	1.4	72.6
+3.4 = Edge Pairing	1.57	72.50
Cb 02 "	1.96	72.11
1/4 " "	2.50	71.57

Torrey Pine Road
7407

+3.7 = Edge Paving	2.78	71 29
L	2.6	71 5
+5	2.7	71 4
1/4	2.7	70 4
cb	8.8	65 3
N	10.6	63 5
+30	12.6	61 5
14+50		
-30	10.7	63 4
N	6.6	67 5
cb	4.7	69 4
1/4	3.6	70 5
L	2.3	70 8
+12 = Edge Paving	3.27	70 80
1/4 " "	2.90	71 17
cb " "	2.45	71 62
+23 = Edge " "	2.30	71 87
S	2.0	72 1
+10	2.1	72 0
14+75		
-10	1.9	72 2
S	2.3	71 8
+88 = Edge Paving	2.74	71 31
cb " "	2.84	71 23
1/4 " "	3.39	70 78
L " "	2.70	70 37

7407

20

+1.8 = Edge Paving	3.83	70 24
1/4	3.7	70 4
cb	4.7	69 4
N	5.8	68 3
+30	9.3	64 8
15+0		
-30	7.1	67 0
N	5.4	68 7
cb	4.5	69 6
1/4	4.2	69 9
+24 = Edge Paving	4.32	69 75
L " "	4.06	70 01
1/4 " "	3.62	70 45
+51 = Edge " "	3.43	70 64
cb	3.2	70 9
S	3.4	71 7
+10	1.8	72 3
15+25		
-10	3.2	70 9
S	3.7	70 4
cb	4.2	69 9
+44 = Edge Paving	4.21	69 86
1/4 " "	4.32	69 75
L " "	4.52	69 55
1/4 = Edge " "	4.84	69 23
cb	4.8	69 3

74.07

N		5.3	68.8
+30		6.2	67.9
	15+50		
-30		6.7	67.4
N		6.1	68.0
Cb		5.5	68.6
+6.4	Edge Parings	5.40	68.67
1/4	"	5.38	68.69
1/2	"	5.21	68.86
1/4	"	5.18	68.89
+1.8	Edge	5.23	68.84
Cb		4.6	69.5
S		5.2	68.9
+1.0		6.9	67.2
	15+77.82	5.0	
-1.0		8.1	72.0
-5		8.2	65.9
S		6.1	68.0
Cb		5.8	68.3
+6.5	Edge Parings	6.22	67.85
1/4	"	6.19	67.87
1/2	"	6.15	67.92
1/4	"	6.25	67.82
+1.7	Edge	6.28	67.79
Cb		6.4	67.7
N		7.0	67.1

74.07

3/19-30
21
opp 15425

130		8.0	66.1
TP	1.42	6.03	67.61
	16.70		
-15		5.6	63.4
-5		4.7	64.3
N		2.9	66.1
Cb		6.0	67.0
+5.5	Edge Parings	2.00	67.03
1/4	"	1.96	67.07
1/2	"	1.85	67.18
1/4	"	1.87	67.16
+1.6	Edge	1.90	67.13
Cb		1.5	67.5
S		2.2	66.8
1.2		1.4	64.6
1.0		4.4	64.6
+1.3		0.0	62.0
	16+25		
-15		0.9	68.1
-1.0		5.2	63.8
S		4.0	65.0
Cb		2.5	66.5
+6.5	Edge Par	2.79	66.24
1/4	"	2.78	66.25
1/2	"	2.75	66.28
1/4	"	2.84	66.17

Torrey Pines Road
69.03

+1.7 = Edge Paving	2.90	6613
cb	2.6	664
N	5.6	634
+5	8.1	609
+15	9.7	593
16+50		
-20	11.0	580
-5	9.8	592
N	7.9	611
cb	3.8	652
+55 = Edge Pav	3.74	6529
1/4 " " "	3.69	6534
1/2 " " "	3.55	6548
1/4 " " "	3.61	6542
+10 = Edge "	3.63	6540
cb	3.3	657
S	4.9	641
+10	5.6	634
+20	0.1	689
16+75		
-20	1.1	679
-10	1.5	625
S	6.2	628
cb	1.3	647
+65 = Edge Paving	4.43	6460
1/4 " " "	4.40	6463

69.03

1/2 " " "	4.36	6467
1/4 " " "	4.46	6457
+1.7 = Edge "	4.50	6453
cb	4.5	645
N	7.5	615
+15	10.0	59.0
17+0		
-10	7.9	61.1
N	7.6	614
cb	5.5	635
+55 = Edge Paving	5.34	6369
1/4 " " "	5.30	6373
1/2 " " "	5.20	6383
1/4 " " "	5.27	6376
+1.7 = Edge "	5.28	6375
cb	5.3	637
S	7.1	619
+10	7.4	616
+20	3.8	652
17+25		
-20	7.8	612
S	8.3	607
1/4	6.3	627
cb	6.1	629
+65 = Edge Pav	6.09	6294
1/4 " " "	6.08	6295

22

6903

L	02	Passing	6.03	63 00
1/4	"	"	6.11	62 92
+19	=	Edge	6.12	62 91
cb			6.2	62 8
H			7.6	61 4
+10			7.6	61 4

17+5°

-10			8.5	60 5
H			8.0	61 0
cb			6.9	62 1
+5.5	=	Edge Passing	6.99	62 04
1/4	02	"	6.97	62 06
L	"	"	6.90	62 13
1/4	"	"	6.91	62 12
+10	=	Edge	6.96	62 09
cb			6.8	62 2
+4			6.9	62 1
S			9.0	60 0
+15			9.1	59 9

17+7.5

-15			10.0	59 0
S			9.7	59 3
+6			7.9	61 1
cb			7.6	61 4
+6.5	=	Edge Passing	7.28	61 25
1/4	02	"	7.26	61 27
L	"	"	7.22	61 31

6903

23

1/4	02	Passing	7.82	61 21
+17	=	Edge	7.89	61 14
cb			8.1	60 9
H			9.1	59 9
+10			9.9	59 1

18+0

-10			10.7	58 3
H			10.0	59 0
cb			9.1	59 9
+5.5	=	Edge Passing	8.80	60 23
1/4	02	"	8.76	60 27
L	"	"	8.60	60 43
1/4	"	"	8.70	60 33
+10	=	Edge	8.73	60 30
cb			8.5	60 5
+4			8.8	60 2
S			10.4	58 6
+15			10.8	58 2

18+2.5

-15			11.3	57 7
S			10.9	58 1
+6			9.4	59 6
cb			9.3	59 7
+6.5	=	Edge Passing	9.48	59 58 ⁵⁵
1/4	02	"	9.45	59 57
L	"	"	9.40	59 63

Torrey Pines Road 1903

1/4 on Paving	9.55	59.47
+17 Edge "	9.62	59.41
cb	10.0	59.0
H	10.6	58.4
+10	11.2	57.7

18+50

+10 on Paving	11.25	57.28
H " "	11.18	57.85
cb " "	10.76	58.27
1/4 " "	10.38	58.65
1/2 " "	10.25	58.78
1/4 " "	10.20	58.83
+10 Edge "	10.20	58.83
cb	10.1	58.9
+4	10.3	58.8
S	11.5	57.5
+15	10.8	58.2

18+75

-20	7.1	61.9
-10	11.5	57.4
S	13.4	56.6
+6	10.9	58.1
cb	10.9	58.1
+15 Edge Paving	10.90	58.13
1/4 on "	10.90	58.13
1/2 " "	11.00	58.03

19.03

24

1/4 on Paving	11.20	57.83	
cb " "	11.48	57.55	
H " "	11.91	57.12	
+10 " "	12.36	56.67	
TP 2.91	59.53	12.41	56.67

19+0

-10 on Paving	3.78	55.81
H " "	3.32	56.21
cb " "	2.85	56.68
1/4 " "	2.59	56.94
1/2 " "	2.22	57.31
1/4 " "	2.11	57.42
+10 Edge "	2.09	57.44
cb	2.0	57.5
S	1.8	56.7
+6	1.6	54.9
+12	0.0	58.5

19+25

-10	0.0	59.5
-5	5.4	54.1
S	3.2	56.3
cb	2.7	56.8
+5.4 Edge Paving	2.90	56.63
1/4 on "	2.96	56.57
1/2 " "	3.18	56.35
1/4 " "	3.48	56.05

59.53

Cb	09 Paring	3.80	55 73
H	" "	4.18	55 35
+10	" "	4.53	55 00
		19+50	
-10		5.4	54 1
H		5.0	54 5
Cb		4.8	54 7
+5.0	Edge Paring	4.57	54 96
1/4	" "	4.45	55 08
1/2	" "	4.16	55 39
1/4	" "	3.97	55 56
+2.1	Edge "	3.88	55 65
Cb		3.9	55 6
S		4.2	55 3
+5		5.9	53 6
+10		3.3	56 2
		19+75	
-10		6.0	53 5
-5		7.2	52 3
S		5.8	53 7
+5		4.6	54 9
Cb		5.0	54 5
+5.4	Edge Paring	4.88	54 65
1/4	" "	4.86	54 67
1/2	" "	5.00	54 53
1/4	" "	5.31	54 22

59.53

25

+4.6	Edge Paring	5.58	53 95
Cb		5.6	53 9
H		5.9	53 6
+10		6.4	53 1
		20+02.60 = 20+12.06	Att. H.L. Stationing
-10		7.3	52 2
H		6.9	52 6
+9.7	Edge Paring	6.76	52 77
Cb	0.7 "	6.73	52 80
1/4	" "	6.40	53 13
1/2	" "	6.11	53 42
1/4	" "	6.03	53 50
+1.8	Edge "	6.01	53 52
Cb		5.8	53 7
S		6.9	52 6
+10		7.4	52 1
8H		4.85	54.68

NEBR. Rd. 4
Cully Data Plate
54.69

Torrey Pines Road

Line Charge

See Page 2

Stations

56.44
10.06
75.04

at Hillside
+ Torrey Rd

11032

3-21-30

26

BM	1234	11032	97.98	
				0+57.33 PC of 500 P
-10		10.0	100.3	
S		10.8	99.5	
+9.7 = Foot Curb		11.4	99.18	
Gutter on Paving		11.70	98.62	
Cb		11.70	98.62	
1/4		11.45	98.87	
1/2		11.38	98.94	
1/4		11.44	98.88	
Cb		12.28	98.04	
+10 = Gutter		12.43	97.89	
Top Curb		12.29	98.03	
H		12.9	97.4	
				0+75
-10		12.9	97.4	
H		12.1	98.2	
Cb		10.42	99.90	
+0.3 = Existing Cb		10.42	99.90	
Gutter on Paving		11.02	99.31	
1/4		10.78	99.54	
1/2		10.80	99.52	
1/4		11.02	99.30	
+1.4 = Edge		11.16	99.20	
Cb		11.1	99.2	

S		9.9	100.4
+10		9.0	101.3
			17.0
-10		6.4	103.9
S		9.2	101.1
Cb		10.5	99.8
1/4 = Edge Paving		10.61	99.71
1/2		10.40	99.92
1/4		10.23	100.09
Cb		10.60	99.72
+7.5 = Gutter		11.18	99.14
Top Existing Cb		10.56	99.76
H on Walk		10.60	99.72
+10		12.2	98.0
			17.25
-10 on Paving		11.68	98.64
H		10.89	99.43
Cb		10.08	100.24
1/4		10.10	100.22
1/2		10.27	99.95
+1.7 = Edge		10.54	99.78
1/4		10.2	100.0
Cb		9.2	101.1
S		7.7	102.6
+10		4.7	105.6
			17.50

110.32

-10		31	107 2
S		49	105 4
Cb		78	102 5
74		86	101 7
1/4		105	99 8
+6.8 = Edge Paving		10.86	99 46
1/2 .02 "		10.84	99 48
1/4 " "		10.55	99 77
Cb " "		10.19	100 13
H " "		10.42	99 90
+10 " "		11.14	99 18

1.75

-10		10.9	99 4
H .02 Pav. 129		10.42	99 90
Cb " "		10.77	99 55
1/4 " "		11.15	99 17
+3.8 = Edge		11.33	98 99
1/2		11.3	99 0
+6		11.1	99 2
1/4		88	101 5
Cb		59	104 4
S		44	105 9
+10		28	107 5

2+0

-10		24	107 9
S		42	106 1

110.32

27

Cb		57	104 6
1/4		8.2	102 1
78		98	100 5
14		12.1	98 2
1/2		12.3	98 0
1/4 = Edge Paving		12.00	98 32
Cb .02 "		11.68	98 64
H " "		11.06	99 26
+3.2 = Edge		10.95	99 47
+10		10.9	99 4

2.125

-10		11.9	98 4
-5.8 = Edge Paving		11.80	98 52
H .02 "		12.18	98 12
Cb " "		12.68	97 64
+5.8 = Edge		12.77	97 35
1/4		73.0	97 3
1/2		13.3	97 0
72		13.0	97 3
75		96	100 7
1/4		88	101 5
Cb		64	103 9
S		40	106 3
+10		25	107 8

2.50

-10		36	106 7
-----	--	----	-------

Torrey Pine Road.

110.32

S		4.5	105.8
Cb		7.0	103.3
1/4		9.4	100.9
+2		10.9	99.4 ^{Transd}
2		14.1	96.2 ^{110.32}
1/4		14.1	96.2 ^{11.32}
+2.1	= Edge Pav 109	14.21	96.11
Cb	on "	13.85	96.47
H	" "	13.21	97.11
+6	= Edge "	12.89	97.43
	2+7.5		
-10		13.8	96.5
-3.6	= Edge Pav 101	13.95	96.37
H	on "	14.19	96.13
Cb	" "	14.97	95.35
+6.0	= Edge "	15.11	95.21
1/4		15.1	95.2
2		15.2	95.1
+3		14.9	95.4
+5		12.8	97.5
1/4		12.1	98.2
Cb		8.4	101.9
S		6.8	103.5
+10		3.9	106.4
	3+0		
-10		1.5	108.8

110.32

28

S		4.8	105.5
Cb		8.1	102.2
1/4		13.3	97.0
+2		15.2	95.1
2		15.8	94.5
+6.2	= Edge Pav	15.97	94.35
1/4	on "	15.93	94.39
Cb	" "	15.49	94.83
+9.3	= Edge "	14.99	95.33
H		15.0	95.3
+7		15.1	95.2
+15		18.9	91.4
	3+7.5		
-15		22.7	87.6
H		15.8	94.5
+4.4	= Edge Pav	15.81	94.51
Cb	on "	16.07	94.25
1/4	" "	16.49	93.83
+4.8	= Edge "	16.71	93.61
2		16.4	93.9
1/4		15.9	94.4
+4		13.9	96.4
Cb		11.3	99.0
S		5.8	104.5
+10		1.4	108.9
	3+5.87 EC of 500 P		

110.32

29

-10		16	108 7
S		71	103 2
cb		128	97 5
+1		16.3	94 0
1/4		16.8	93 5
1/2	Edge Paving	17.13	93 19
1/2	on "	16.83	93 49
cb	" "	16.61	93 71
+88	Edge "	16.57	93 75
N		16.6	93 7
+15		25.9	84.4

See page 9

X Sec Coast Blvd. From E.C. 5. W. Return
to Prospect. - See sketch on P. 30

Book 1300 112
(Walker)
On Hy. B
Torrey Rd. at
Coast Blvd

B.M.	0.19	116.75	116.56
0+00			
L		1.7	114.8
15R		4.2	112.5
30R		4.9	111.8
50R		4.7	112.1
57R		3.9	112.8
0+46 ⁶²			
135R	edg. Bluff	12.3	104.4
100R		7.6	109.2
50R		6.6	110.2
25R		5.8	111.0
L		6.2	110.6
0+93 ³⁹			
L		7.8	109.0
25R		11.2	105.5
50R		11.5	105.3
60R	Bluff	11.5	105.3
T.P.	0.68	104.56	12.87
1+41 ² E.C.			103.88
55R	Bluff	5.5	99.1
25R		4.8	99.8
L		3.9	100.7

Note: Sections at angle points normal to
preceding course

31

1+68 ³³ B.C.	104.56	
L	7.7	96.9
25R	8.0	96.6
55R	Bluff	9.4
2+23 ²⁰ E.C.		
100R	Bluff	17.3
60R		15.9
45R		15.8
30R		14.6
L		12.8
T.P.	0.12	91.82
12.86		91.70
2+50		
L		3.2
20R		4.3
25R		5.5
50R		6.2
75R		5.9
83R	Bluff	7.7
3+00		
50R		10.6
25R		9.8
L		7.9
3+15		
L	Walk ft. Horse.	8.56
		83.26

3+50	91.82		
L (wall to st.)	11.79	80.03	
20R	13.5	78.3	
TP	1.02	80.42	79.40
40R	2.6	77.8	
50R	4.7	75.7	
100R	6.0	74.4	
130R Bluff	8.2	72.2	
3+76 ^{el} (cond closing)			
50R	7.5	72.9	
30R	6.7	73.7	
15R	7.9	72.5	
L	4.0	76.4	
4+06			
L	8.2	72.2	
18R	11.0	69.4	
40R	19.5	60.9	
85R	14.0	66.4	
4+26 ⁸⁴			
60R Bluff	22.4	58.0	
35R	16.2	64.2	
L	9.5	70.9	
4+52			
L	6.7	73.7	
30R	10.6	69.8	
50R	14.7	65.7	
70R Bluff	21.9	58.5	

4+76 ⁸⁵	80.42		
7.49	74.96	12.95	67.47
70R		25.2	49.7
45R		17.9	57.0
25R		13.6	61.3
L		8.2	66.7
4+92			
L		5.3	69.6
25R		4.2	70.7
40R		3.1	71.8
60R		11.6	63.3
TP	12.57	87.53	0.00
74.96			
5+29 ⁸²			
87R Bluff		18.2	69.3
60R		15.3	72.2
44R		14.2	73.3
30R		14.0	76.5
18R		11.4	76.1
L		12.7	74.8
TP	8.49	94.15	1.87
85.66			
5+79 ⁸⁴			
L		10.7	83.4
25R		13.2	80.9
40R		14.7	79.4
65R		19.7	74.4
70R Bluff		22.0	72.1

6+31 ⁰⁸		94.15	
50R	Bluff.	19.5	746
30R	"	12.8	813
12R		5.8	883
L		5.4	887

6+48

L		2.9	912
12R		10.0	841
35R		17.3	768
45R		22.4	717
55R		32.0	621

6+83⁰⁸

60R		31.0	631
50R		35.0	591
42R		28.8	653
20R		22.4	717
L		15.6	785
10L		8.2	860
12L		5.2	880
22L	Level of House	0.0	942
T.P.	4.63 97.80	0.98	93.17

97.80

33

7+14			
22L	House	1.3	965
12L		1.5	963
L		9.4	884
15R		15.1	827
30R		21.0	768
45R		28.0	698
50R		24.7	731
60R		20.0	77.8

7+35¹²

70R		6.2	91.6
57R		11.7	861
43R		23.5	743
30R		14.5	833
L		4.8	93.0

TP	12.15	109.04	0.91	96.89
TP	12.48	121.36	0.16	108.88

7+85¹⁴

L		11.0	110.4
20R		19.5	101.9
43R		28.8	92.6
75R		15.4	106.0

8+03²⁵ (on baseline - section normal to base)

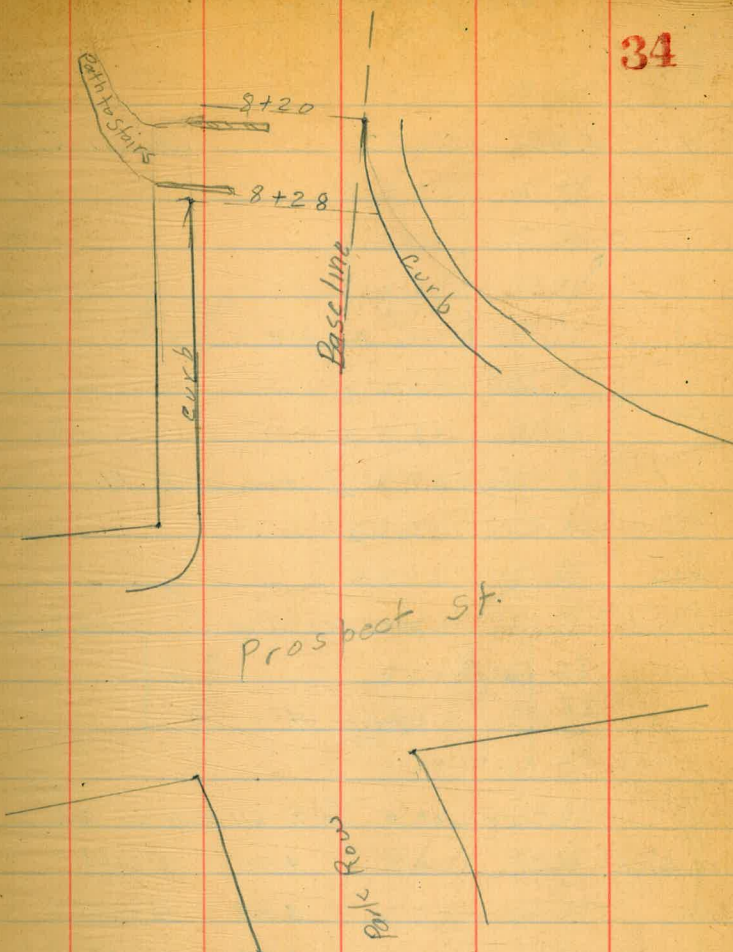
80R		10.0	111.4
57R		17.1	104.3
40R		17.4	104.0
25R		14.8	106.6

8+03 ²⁵		121 36	
15R		9.2	112.2
Baseline		4.1	117.3
HL (approx P.)		0.4	121.0
T.P.	12.85	133.44	0.77 120.59
8+20 baseline meets end of North curb of Prospect			
Taken normal to base.			
Line to curb		7.0	114.4
35R		6.4	115.0
50R		14.2	107.2
57R		14.8	106.6
65R		12.7	108.7
8+28			
48R	Park Row end of Westeb	7.12	114.24
30R		5.6	115.8
15R		4.6	116.8
Line		4.5	116.9
7L on Nch Prospect		5.36	116.00
B.M.	12.84 144.59	1.69	131.75
T.P.	8.73 153.06	0.26	144.33
7' back	S.E. Prospect & Torrey	0.86	152.20

S.W. Prospect
x Park Row

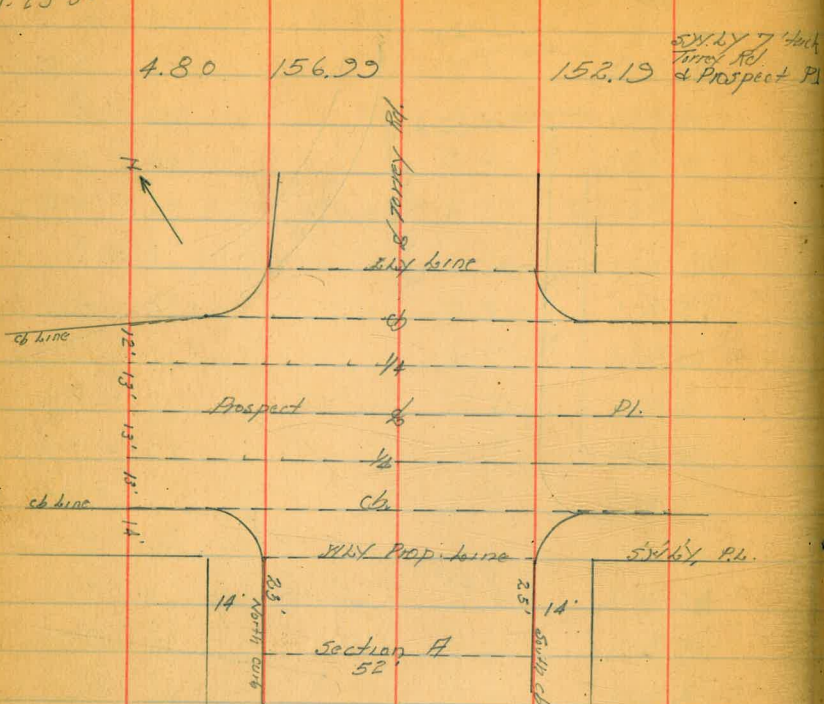
Book 1360 P. 1.
(152.19)

34



Walker
Drebert
McHoon.
7-23-30

CROSS SECTION Intersection
Torry Aves Rd. And Prospect Pl.



SECTION A (Note All shots on Pavng)

South top cb.	4.30	152.69
Gut. Pav.	4.84	152.15
1/2 on Pavng	4.83	152.16
1/2	5.09	151.90
1/2	5.89	151.10
Gut.	6.77	150.22
N. cb.	6.30	150.69
N.W. Prop. line		
N. cb.	7.00	149.99
N. Gut.	7.42	149.57

156.99
70

N 1/2	6.54	150.45
1/2	5.88	151.11
S 1/2	5.50	151.49
S Gut.	5.45	151.54
S. cb. Return	4.94	152.05
3" on cb From West	4.84	152.15
N. cb.		152.15
- 25' on cb.	1.77	155.22
- 25' Pav.	2.33	154.66
- 45' Beginning Patch. on Pav.	4.96	152.03
5 on cb.	4.96	152.03
" " Pav.	5.16	151.83
cb. "	5.48	151.51
1/2	5.61	151.38
1/2	6.01	150.98
1/2	6.56	150.43
cb. on Pav.	7.31	149.68
" " "	7.61	149.38
N " cb.	6.99	150.00
9' N on Pav.	8.19	148.80
9' " " cb.	7.73	149.26
25' N " "	9.10	147.89
25' " " Pav.	9.61	147.38
N 1/2		
25' N	9.50	147.49
9' N	8.00	148.99
N	7.50	149.49

cb. on Paving	7.00	149.99
½	6.53	150.46
½	6.10	150.89
¾	5.67	151.32
+7'	5.48	151.51
cb. on Pav.	5.35	151.64
South	4.85	152.14
2.5' South	2.09	154.96
½ Prospect		
25' "	1.93	155.06
S	4.62	152.37
+7'	5.12	151.87
cb.	5.31	151.68
¾	5.77	151.22
E Rim MH.	6.19	150.80
¾	6.61	150.38
cb.	7.04	149.95
N	7.55	149.44
+9'	8.21	148.78
25' N	9.58	147.41
E ½		
25' N	10.06	146.93
9' N	8.67	148.32
N	8.08	148.91
cb.	7.27	149.72
¾	6.75	150.24

½	6.26	150.73
+7'	6.07	150.92
¾	5.84	151.15
cb.	5.51	151.48
South	4.95	152.04
25' "	2.16	154.83
E cb.		
25' South top cb.	2.08	154.91
25' " Gut	2.78	154.21
S "	5.54	151.45
S top cb.	4.95	152.04
cb. on Pav.	5.70	151.29
¾	5.92	151.07
¾	6.31	150.68
¾	7.05	149.94
cb.	8.11	148.88
+5'	8.35	148.64
N on cb.	7.92	149.07
" " Pav.	8.41	148.58
25' N on cb.	10.26	146.73
25' " Pav.	10.76	146.28
E Prop. to me		
N top cb. = 15.2' South to me	7.93	149.06
" Gut. on Pav.	8.46	148.53
¾	7.42	149.57
½	6.52	150.47

156.39

1/2			6.26	150.73
Gut			6.00	150.99
S. top cb.			4.91	152.08
T.P.	0.10	144.11	12.98	144.01
T.P.	0.23	131.46	12.88	131.23

TORREY PINES Road Line "A"
New Alignment and Cross Sections
From Base Line Station 3+67.57 to Sta. 3+02.58

Station	Align.	Deflin.	True Bearing	Curve Data
+40				
1+20				
+09.98 = P.C.		6°21.9'		$\Delta = 1243'30''$
1+00		5°47.25'		$R = 495.0'$
				$qL = 109.98'$
+80		4°37.8'		$PT = 55.22'$
+60		3°28.35'		
+40		2°18.9'		
+20		1°09.45'		
= 0+00 = B.C.		15'		
3+67.57 = Base line Sta.				

Torrey Pines Road Align.
Cont.

Station	Align.	Deflin.	True Bearing	Curve Data	37
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Note: For Cross Sections this Alignment see P-38

+36.19 = 9+02.46 = Base Line Sta. in Book 1360

+20				
5+00				
+80				
+60				
+40				
+20				
4+00				
+80				
+60				
+40				
+20				
+07.48 = $\Delta 17-30'19.50''$ Hub.				
3+00				
+80				
+60				
+40				
+20				
2+00				
+80				
1+60				

TORREY ROAD Cross Section 7 1/2' 45
 5' cbs.
 40' wide
 30' Roadway

131.46

38

Base line
 Sta. 3+67.57 = 0+00 = B.C.

131.46 = x P. 37

Rt.	8.6	122.9
cb. on top	8.64	122.82
Gut. on Pav.	9.13	122.33
1/2 " "	8.99	122.47
1/2 " "	8.77	122.69
1/2 " "	8.71	122.75
14.8 " "	8.69	122.77
Gut. " "	8.77	122.69
cb.	8.33	122.13
Lt.	8.3	122.16
0+20		
Lt.	9.4	122.1
cb. on top	9.49	121.97
Gut. on Pav.	9.93	121.53
+3.15	9.87	121.59
1/4 on "	9.85	121.61
1/2 " "	9.89	121.57
1/2 " "	10.03	121.43
Gut. " "	10.28	121.18
on cb.	9.79	121.67
Rt.	9.7	121.8
0+40		
Rt.	10.8	120.7

on cb.	10.92	120.54
Gut. on Pav.	11.39	120.07
+6.4 " "	11.24	120.22
1/2 " "	11.24	120.22
1/2 " "	11.05	120.41
1/2 " "	11.02	120.44
+4.2 " "	11.03	120.43
Gut. " "	11.09	120.37
on cb.	10.65	120.81
Lt.	10.6	120.9
0+60		
Lt.	11.5	120.0
on cb.	11.52	119.94
Gut. on Pav.	11.91	119.55
+4 " "	11.80	119.66
1/2 " "	11.78	119.68
1/2 " "	11.84	119.62
1/2 " "	12.08	119.38
+1.4 " "	12.11	119.35
Gut. " "	12.33	119.13
on cb.	11.86	119.60
Rt.	11.8	119.7
0+80		
Rt.	12.4	119.1
on cb.	12.47	118.99
Gut. on Pav.	12.95	118.51

131.46

"A" Line

+5.6' on Pav.		12.81	118.65
$\frac{1}{4}$ " "		12.77	118.69
$\frac{1}{2}$ " "		12.61	118.85
$\frac{3}{4}$ " "		12.52	118.94
+3' " "		12.57	118.89
Gut. " "		12.70	118.76
on cb.		12.21	119.75
Lt.		12.2	119.3
	1+00		
Lt.		12.7	118.8
on cb.		12.86	118.60
T.P.	0.13	118.80	12.79 118.67 ✓
Gut. on Pav.		0.62	118.18
+4.7' " "		0.60	118.20
$\frac{1}{4}$ " "		0.58	118.22
$\frac{1}{2}$ " "		0.62	118.18
$\frac{3}{4}$ " "		0.77	118.03
+2.10' " "		0.80	118.00
Gut. " "		0.91	117.89
on cb.		0.43	118.37
Rt.		0.4	118.4
	1+09.38 - E.C.		
Rt.		0.6	118.2
on cb.		0.74	118.06
Gut. on Pav.		1.21	117.59
+5.10' " "		1.17	117.68

118.80

"A" Line

39

$\frac{1}{4}$ on Pav.		1.08	117.72
$\frac{1}{2}$ " "		0.95	117.85
$\frac{3}{4}$ " "		0.91	117.89
+2.7' " "		0.93	117.87
Gut. " "		0.95	117.85
on cb.		0.52	118.78
Lt.		0.4	118.4
	1+20		
Lt.		0.7	118.1
cb. on top.		0.83	117.97
Gut. " Pav.		1.28	117.52
+4.9' " "		1.27	117.53
$\frac{1}{4}$ " "		1.26	117.54
$\frac{1}{2}$ " "		1.27	117.53
$\frac{3}{4}$ " "		1.41	117.39
+2.4' " "		1.42	117.38
Gut. " "		1.50	117.30
+0.1' on cb.		1.07	117.73
Rt.		1.0	117.8
	1+20		
Rt.		1.7	117.1
+4.1' on cb.		1.79	117.01
Gut. at "		2.29	116.51
cb. on Pav.		2.27	116.53
+4.1' " "		2.17	116.63
$\frac{1}{4}$ " "		2.08	116.72

L on Pav.	1.89	116.91
$\frac{1}{2}$ " "	1.84	116.96
+17' " "	1.83	116.97
+6.6 = Gut. on Pav. at cb.	1.87	116.93
+6.6 on cb.	1.46	117.34
cb. " Walk.	1.45	117.35
Lt.	1.4	117.4
	1+60	
-5'	3.3	115.5
Lt.	2.2	116.6
cb. on Walk.	1.96	116.84
+2.6 on Exist. cb.	2.01	116.79
+2.6 " Gut. on Pav.	2.45	116.35
$\frac{1}{2}$ " "	2.48	116.32
L " "	2.58	116.22
$\frac{1}{2}$ " "	2.73	116.07
+5' " "	2.86	115.94
cb. " "	2.93	115.87
+2.6 on Gut. of cb.	3.0	115.8
+2.6 " cb.	2.32	115.28
Rt.	2.5	116.3
	1+80	
-5'	3.1	115.7
Rt. = Face cb.	3.19	115.61
Rt. on Exist. cb.	3.66	114.14
Rt. on Gut. of Exist. cb.	3.66	114.14
cb. on Pav.	3.55	114.25

$\frac{1}{2}$ on Pav.	3.40	115.46
L " "	3.34	115.46
+5'	3.33	114.47
cb. on Parking	3.30	115.50
+2.7 = Gut. on "	3.27	115.53
+2.7 = on Gd. DRIVE Way.	3.18	115.62
cb. on Walk.	2.70	116.10
Lt. " DRIVE "	2.87	115.93
+5' " " "	3.10	115.70
	2+00	
-5'	2.0	116.8
Lt.	1.5	117.3
cb. on Ground.	3.1	115.7
+3.3 " Mudge. Walk.	3.52	115.28
$\frac{1}{2}$ on cb.	3.68	115.12
+2.5 " cb. Face on top cb.	3.68	115.12
+0.5 " Gut. on Pav.	4.16	114.64
+5.4' " "	4.13	114.67
L " "	4.11	114.69
$\frac{1}{2}$ " "	4.04	114.76
cb. " "	4.09	114.71
+3.2 " "	4.10	114.70
Rt. " "	4.16	114.64
+3.3' " " at cb.	4.27	114.53
+3.3 on " "	3.80	115.00
+8 on Walk.	3.76	115.04

2+20

-11.4 on Walk	4.37	114.43
-6.7 " top ch.	4.45	114.35
-6.7 " Gut. on Pav.	4.89	114.01
-1.6 " "	4.75	114.05
Rt. " "	4.75	114.05
cb. " "	4.76	114.04
1/4 " "	4.81	113.99
+6.2 " "	4.92	113.88
1/2 " "	4.95	113.85
1/4 " "	5.24	113.56
+0.6 on Gut at cb. Return.	5.35	113.55
+0.6 " cb. "	4.73	114.07
+5.7 - N edge Walk.	4.67	114.13
cb. on Ground.	4.3	114.5
+3	2.9	115.9
Lt.	2.6	116.2
+5	1.7	117.1

2+40

Lt. - 0.3 - N edge Parking	6.02	112.78
Lt. on Pav.	6.02	112.78
cb. " "	6.03	112.77
1/4 " "	6.13	112.67
1/2 " "	6.06	112.74
+5 " "	5.85	112.95
1/4 " "	5.72	113.08

cb. on Pav.	5.50	113.70
Rt. " "	5.41	113.39
+5 " "	5.33	113.47
-10.10 " " Gut. at cb.	5.50	113.70
+10.10' on cl.	5.03	113.77
+14.8 " S edge Walk.	5.0	113.80
chk. 817 on top Hyd. Page 31	2.22	116.58
		116.56 - B.M.
		0.02 - Error.
	2.22	118.78
		116.56 - Above B.M.

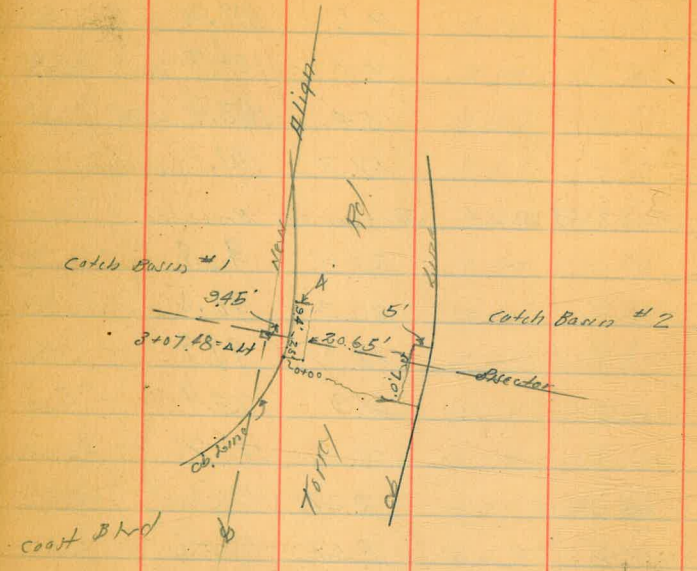
2+60

18.10 Rt. on Walk	5.62	113.16
13.4 " " Drive Way at cb. Lane	6.05	112.73
13.4' " " Gut. at cb.	6.17	112.61
8.4 " on Pav.	6.01	112.77
Rt. " "	6.13	112.65
cb. " "	6.30	112.48
+6.7 " "	6.62	112.16
1/4 " "	6.64	112.14
1/2 " "	7.00	111.78
+1.8' " "	7.05	111.73
1/4 " "	6.87	111.91
+5.9 " " N. edge.	6.68	112.10
cb.	6.8	112.0
Lt.	6.8	112.0.
		2+80
Lt.	6.6	112.2

cb.	6.6	112.2
+6.5 on N. edge Walk.	7.27	111.51
2 " Walk	7.30	111.48
+6.5 " cb.	7.53	111.25
+6.5 " Gut. on Pav.	7.87	110.91
2 on Pav.	7.89	110.89
+1.5 " "	7.87	110.91
4 " "	7.53	111.25
cb. " "	7.14	111.64
15.4 " "	6.89	111.89
+5 " "	6.72	112.06
+11.5 " "	6.64	112.14
+17.00 " " at cb.	6.81	111.97
+17.00 " on cb.	6.29	112.49
+22	6.1	112.7
3+0.0		
-24'	6.9	111.9
-19' on cb.	7.02	111.76
-19' " Gut. on Pav.	7.49	110.79
-13.6' " Pav.	7.41	111.37
-7 " "	7.53	111.25
15.4 " "	7.86	110.92
cb. " "	8.27	110.51
+6.00 at cb. on Pav.	8.63	110.15
+6.00' on cb.	8.13	110.63
4 " Walk.	8.09	110.69

+3.2 on N. edge Walk.	7.91	110.87
2	8.3	110.5
2	11.6	107.2
cb.	14.1	104.7
4.	15.4	103.4
+15'	17.7	101.1
3+07.48 = Δ Lt. Section on S. sector.		
-20	22.0	96.8
4.	20.3	98.5
cb.	18.9	99.9
2	14.9	103.9
2	10.6	108.2
+4.8 on N. edge Walk.	8.27	110.51
2 " Walk.	8.37	110.41
+1.9 on cb.	8.44	110.34
+1.9 " Gut. at catch Basin.	9.17	109.61
cb. on Pav.	8.64	110.14
15.4 " "	8.21	110.57
+15' " "	7.91	110.87
+13.8 " "	7.70	111.08
+12.10 Gut.	8.04	110.74
+10.10 on cb.	7.35	111.43
+24	7.3	111.5
Levels on catch Basin #1		
0+00		
top cb.	8.54	110.44

Gut.	8.85	109.93
4' R.	8.67	110.11



0+7.2		
4' R.	8.93	109.85
Gut.	9.59	109.19
cb.	8.60	110.18
0+9.4		
cb.	8.62	110.16
Gut.	9.51	109.27
4' R.	8.99	109.79
0+11.9		
4' R.	9.06	109.72
Gut.	9.10	109.68
cb.	8.67	110.11

LEVELS Catch Basin #2

0+00		
cb.	7.06	111.72
Gut.	7.54	111.24
5' L.	7.47	111.31
0+1.70		
5' L.	7.54	111.24
Gut.	7.80	110.98
cb.	7.23	111.65
0+2.50		
cb.	7.46	111.32
Gut.	8.11	110.67
5' L.	7.79	110.99
0+10.5		
5' L.	7.85	110.93
Gut.	8.01	110.77
cb.	7.52	111.26
3+20		
-24'	7.6	111.2
-13.15 = top cb.	7.79	110.99
-13.15 = Gut.	8.27	110.51
-14' on Pav.	8.17	110.61
-7' " "	8.31	110.47
Rt. " "	8.68	110.10
cb. " "	9.02	109.76
+5.35 = Gut.	9.23	109.63

118.78

"A" Line

+5.35 on cb.	8.75	110.03
$\frac{1}{4}$ " Walk.	8.75	110.03
+2.5 = N edge Walk.	8.73	110.05
$\frac{1}{2}$	12.3	106.5
$\frac{1}{2}$	17.8	101.1
cb.	22.3	96.5
Lt.	25.5	93.3
+30'	32.3	86.5
+40'	32.5	86.3
3+40		
-40'	35.7	83.1
-28'	39.0	79.8
-22'	38.8	80.0
-12'	33.6	85.2
Lt.	27.7	91.1
cb.	25.1	93.7
$\frac{1}{2}$	18.1	100.7
$\frac{1}{2}$	11.6	107.2
+2.7 = N edge Walk.	8.93	109.85
+7.35 = top cb.	9.02	109.76
+7.35 = Gut.	9.45	109.33
$\frac{1}{4}$ on Pav.	9.45	109.33
+4' " "	9.33	109.45
cb. " "	9.16	109.52
Rt. " "	8.91	109.87
+5' " "	8.74	110.04

118.78

44

+12' on Pav.	8.64	110.14
+17.2' " "	8.77	110.01
+17.20' " cb.	8.29	110.49
+22.2	8.1	110.68
3+60		
-18.1	9.1	109.68
-13.10 = top cb.	9.06	109.72
-13.10 = Gut. on Pav.	9.49	109.29
-8.4' on " "	9.35	109.43
Rt. " "	9.37	109.41
cb. " "	9.45	109.33
+17.0' " "	9.80	108.98
$\frac{1}{4}$ " "	9.82	108.96
+4.3 Gut. at cb.	9.95	108.83
+4.30' on cb.	9.46	109.32
$\frac{1}{2}$	9.36	109.42
+1.6 = N edge Walk	9.31	109.47
$\frac{1}{2}$	12.9	105.9
cb.	18.5	100.3
Lt.	22.6	96.2
+13'	31.5	87.3
+20'	36.0	82.8
+31'	42.5	76.3
+38'	44.0	74.8
+46'	41.2	77.6
3+80		

118.78

7th Line

- 20'	25.6	93.2
Lt.	17.6	101.2
cb.	14.3	104.5
+ 5	10.5	108.3
$\frac{1}{4}$	10.2	108.6
+ 1.7' on Walks.	9.90	108.88
+ 6.50" cb.	9.99	108.79
Gut. on Pav.	10.45	108.33
Lt. " "	10.40	108.38
+ 4.1' " "	10.13	108.65
$\frac{1}{4}$ " "	10.08	108.70
cb. " "	10.08	108.70
Rt. " "	10.13	108.65
+ 4.3' " "	10.21	108.57
+ 9.15' Gut. at cb.	10.27	108.51
+ 9.15' on " "	9.77	109.01
+ 14'	9.6	109.2
	4+00	
- 11'	10.4	108.4
- 6' on cb.	10.53	108.75
- 6.00' Gut at cb.	10.98	107.80
- 1.2' Pav.	10.88	107.90
Rt. " "	10.86	107.92
cb. " "	10.75	108.03
$\frac{1}{4}$ " "	10.71	108.07
+ 6.5' " "	10.75	108.03

118.78

45

Lt. on Pav.	10.78	108.00
+ 4.15' Gut at cb.	10.95	107.83
+ 4.15' on cb.	10.47	108.31
$\frac{1}{4}$ " Walk.	10.40	108.38
+ 1.3' " Kedge Walk.	10.37	108.41
cb.	10.6	108.2
Lt.	10.9	107.9
+ 5.0	13.4	105.4
	4+30	
- 5'	11.8	107.0
Lt.	11.4	107.4
cb.	11.1	107.7
+ 3.4' on Walk.	11.08	107.70
$\frac{1}{4}$ " "	11.18	107.60
+ 0.6' " cb.	11.19	107.59
+ 0.6' Gut.	11.64	107.14
+ 3.7' on Pav.	11.41	107.37
Lt. " "	11.40	107.38
$\frac{1}{4}$ " "	11.42	107.36
cb. " "	11.57	107.21
+ 3.0' " "	11.63	107.15
Rt. " "	11.69	107.09
+ 3.15' Gut at cb.	11.77	107.01
+ 3.15' on cb.	11.33	107.45
+ 8.2	11.5	107.3
T.P.	1.89	108.62
	12.05	106.73

108.62

7" Line

4+40

-5	2.1	106.5
-0.50 = top cb.	2.05	106.57
-0.50 = Gut.	2.48	106.14
Rt. on Paring	2.47	106.15
+4.4 " "	2.24	106.38
cb. " "	2.23	106.39
7 " "	2.11	106.51
2.0 " "	2.13	106.49
+4.3 " "	2.17	106.45
7 " "	2.32	106.30
+1.9 = Gut at cb.	2.41	106.21
+1.9 = cb.	1.89	106.73
+6.6 = N edge walk	1.82	106.80
cb.	1.9	106.7
Lt.	2.0	106.6
+5'	1.9	106.7

4+60

-5'	2.9	105.7
Lt.	2.7	105.9
+4' on walk	2.82	105.80
cb. " "	2.83	105.79
+3.50 = top cb.	2.89	105.73
+3.50 = Gut at cb.	3.37	105.25
7 on Par.	3.15	105.47
+1.2 " "	3.11	105.51

108.62

46

2 on Par.	3.05	105.57
7 " "	3.09	105.53
+6.2 " "	3.26	105.36
cb. " "	3.28	105.34
+3.60 = Gut at cb.	3.37	105.25
+3.60 on cb.	3.88	105.74
Rt.	3.1	105.5
+5	2.7	105.9

4+80

-5'	4.0	104.6
Rt.	4.1	104.5
+3.10 on cb.	3.90	104.72
+3.10 = Gut at cb.	4.41	104.21
cb. on Paring	4.33	104.29
+2.9 " "	4.20	104.42
7 " "	4.09	104.53
2 " "	4.05	104.57
7 " "	4.11	104.51
+0.5 " "	4.12	104.50
+5.50 = Gut at cb.	4.42	104.20
+5.50 on cb.	3.89	104.73
cb. " walk	3.85	104.77
+5.0 " " N edge.	3.77	104.85
Lt.	3.9	104.72
+5	4.3	104.3

5+00

108.62

7" Line

- 5' on Drive Way	5.55	103.07
Lt. " " "	5.25	103.37
+ 1.2 " " " + Walk	5.06	103.56
cb. " Walk	5.50	103.17
+ 0.9 = cb. in Drive Way	5.59	103.03
Ent. also " " "	5.39	103.03
cb + 5.8 on Pav.	5.34	103.78
$\frac{1}{4}$ " "	5.32	103.30
$\frac{1}{2}$ " "	5.27	103.35
$\frac{1}{2}$ " "	5.35	103.27
$\frac{1}{2}$ " "	5.39	103.23
cb. " "	5.54	103.08
+ 0.7 = Ent. of cb.	5.55	103.07
+ 0.7 on cb.	5.02	103.60
Rt.	5.0	103.17
5+30		
Rt.	6.0	102.6
+ 4.9 on cb.	6.35	102.27
+ 4.9 = Ent. of lb.	6.88	101.74
cb. on Pav.	6.88	101.74
+ 5 " "	6.62	102.00
$\frac{1}{4}$ " "	6.58	102.04
$\frac{1}{2}$ " "	6.49	102.13
$\frac{1}{2}$ " "	6.53	102.09
+ 2.2 " "	6.55	102.07
+ 1.8 " "	6.77	101.85
+ 1.2 " cb in Driveway	6.77	101.85

108.62

cb. in Drive Way	6.74	101.88
Lt.	6.24	102.38
+ 5 " " "	6.55	102.07
5+36.19 = 9+02.46 = Base line Sta. Book 1360		
Lt.	7.3	101.3
cb.	7.31	101.31
Ent.	7.76	100.86
+ 5 on Pav.	7.55	101.07
$\frac{1}{4}$ " "	7.55	101.07
$\frac{1}{2}$ " "	7.60	101.02
$\frac{1}{4}$ " "	7.74	100.89
+ 2.5 " "	7.82	100.80
Ent. " "	7.94	100.68
cb.	7.43	101.19
Rt.	6.7	101.9
cbk. on Pav. & Sta. 8+50 Base line	4.27	104.35

See Book
1360-136
for cbk.
104.33 = Elev.
0.02 = Error.

1/11/01
 8115
 2-25-10

TORREY ROAD Alignment "B" Line

Station	Align	Deflin.	True Bearing	Curve Data
+10		2° 50.87'		$\Delta = 12° 14.30'$
+20		2° 13.02'		$L.R = 908.16'$
+100		1° 35.17'		$L.L = 194.04'$
+80		0° 57.32'		$L.S.T. = 97.39'$
3+60		0° 19.47'		
		0° 00.00'		
+43.71 = P.R.C.		12° 33.00'		
+140		10° 42.15'		$\Delta = 25° 06'$
+20		6° 53.79'		$L.R = 150.54'$
3+00		3° 05.43'		$L.L = 65.95'$
+83.76 = B.C.		Lt.		
+60				
+140	91.50'			
+20				
2+00				
+92.26 = E.C.				
+80				
+60				
+40				
+20 = Beginning Next Cross Sections See P. 49				
1+00				
+80				
+60				
+40				
+20				
= 0+00 = "B" Line				
0+00 Page 37 "A" Line				

Alignment "B" Line

Station	Align.	Deflin.	True Bearing	Curve Data
+43.75 = E.C.		6° 07.25'		
+20		5° 22.27'		
5+100		4° 44.42'		
+80		4° 16.57'		
4+60		3° 28.72'		

Note: For Cross Sections See Page 49

W. H. Key
Bliss
Dredged
Mo. Hwy.
7-25-30

TORREY PINES ROAD
Cross Section Roadway 30' wide 7.5' ds.
"B" line
Location on Page 48

Note: For Cross Sections from 0+00 to sta 1+03.98 see P. 38 & 39
B.M. Top Hyatt
Sec 1-41

1.72 118.28 116.56
1+20

Rt. cb. on top. 0.55 117.73

Rt. Gut. 1.00 117.78

+ 5' 0.95 117.33

1/2 0.91 117.37

1/2 0.79 117.49

1/2 0.77 117.51

+ 2.7 0.79 117.49

Gut 0.81 117.47

Lt. cb. 0.36 117.92

1+40

Lt. cb. 0.98 117.30

Gut. 1.39 116.89

+ 4.8 1.34 116.94

1/2 1.35 116.93

1/2 1.42 116.86

1/2 1.60 116.68

+ 1.65 116.63

Gut. 1.76 116.52

Rt. cb. 1.27 117.01

1+60

Rt. cb. 1.96 116.32

Gut. 2.42 115.86

118.28

"B" LINE

49

+ 4.9

2.31 115.97

1/2

2.27 116.01

1/2

2.13 116.15

1/2

2.06 116.22

+ 2.4

2.02 116.26

Gut.

2.02 116.26

Lt. cb.

1.57 116.71

1+80

Lt. cb. in Drive Way

2.77 115.51

Gut.

2.85 115.43

+ 5.1

2.88 115.40

1/2

2.89 115.39

1/2

2.86 115.42

1/2

2.97 115.31

+ 2.7

2.99 115.29

Gut

3.10 115.18

Rt. cb.

2.61 115.67

2+00

Rt. cb.

2.22 116.06

Gut

2.69 114.59

+ 4.9

2.56 114.72

1/2

3.56 114.72

1/2

3.54 114.74

1/2

3.64 114.64

+ 2.6

3.70 114.58

Gut.

3.75 114.53

118.28

Lt cb.	3.28	115.00
2+20		
-6.00 top cb.	4.40	113.88
Gut	4.90	113.38
cb. on Paving	4.69	113.59
+4.9	4.45	113.83
$\frac{1}{4}$	4.42	113.86
$\frac{1}{2}$	4.25	114.03
$\frac{1}{4}$	4.19	114.09
+2.5'	4.16	114.12
Gut.	4.29	113.99
cb.	3.85	114.48
2+40		
cb.	4.43	113.85
Gut.	4.92	113.36
+5.0'	4.76	113.52
$\frac{1}{4}$	4.80	113.48
$\frac{1}{2}$	4.86	113.42
$\frac{1}{4}$	5.22	113.06
+2.5	5.28	112.90
cb. on Pav.	5.65	112.63
+5 " "	5.77	112.51
+10 " "	5.73	112.55
+19.2 = N edge Paving	5.57	112.71
2+60		
cb.		
-15.8 = N edge Pav.	6.35	111.93

118.28

"B" Line

50

cb - 5'	6.63	111.65
cb. on Pav.	6.36	111.92
+5	6.13	112.15
$\frac{1}{4}$	6.00	112.28
$\frac{1}{2}$	5.65	112.63
$\frac{1}{4}$	5.46	112.82
+2.4'	5.42	112.86
Gut.	5.54	112.74
cb. in Drive Way	5.45	112.83
2+83.76 = B.C. Lt.		
cb.	5.78	112.50
Gut.	6.29	111.99
+5.15	6.17	112.11
$\frac{1}{4}$	6.18	112.10
$\frac{1}{2}$	6.39	111.89
$\frac{1}{4}$	6.88	111.40
+3'	7.15	111.13
cb. on Pav.	7.41	110.87
+4.05 = Gut. at cb Return	7.70	110.58
+4.05 on cb. "	7.30	110.98
3+00		
cb. on cb.	7.65	110.63
Gut.	8.10	110.18
+4.4'	7.88	110.40
$\frac{1}{4}$	7.60	110.68
$\frac{1}{2}$	7.05	111.23

118.28

"B" Line

1/2	6.84	111.44
+2.25	6.83	111.45
Gut.	6.86	111.42
cb.	6.37	111.91

Note: 0+00 Catch Basin #2 = 3+04.60 } See P. 45.
 " 0+00 " " #1 = 3+06.00

3+20

cb.	7.23	111.05
Gut.	7.73	110.55
+5	7.59	110.69
1/4	7.63	110.65
1/2	7.86	110.42
3/4	8.34	109.94
+2.8	8.55	109.73
+7.10 = Gut at cb.	8.61	109.67
+7.10 on cb.	8.18	110.10
3+40		
cb+0.45 = top cb.	8.45	109.83
Gut.	8.90	109.38
+4.5	8.75	109.53
1/2	8.60	109.68
1/4	8.26	110.02
1/2	8.13	110.15
+2.3	8.12	110.16
Gut.	8.25	110.03
cb.	7.77	110.51

118.28

"B" Line

51

3+49.71 = P.R.C

cb.	8.14	110.14
Gut.	8.61	109.67
+4.8	8.41	109.87
1/2	8.42	109.86
1/4	8.52	109.76
1/2	8.88	109.40
+2.6	8.99	109.29
+6.85 = Gut at cb.	9.01	109.27
+6.85 " "	8.57	109.71
3+60		
cb+0.65 = top Exist cb.	8.80	109.48
Gut.	9.30	108.98
+5.3	9.23	109.05
1/2	9.15	109.13
1/4	8.80	109.48
1/2	8.81	109.47
+2.8	8.80	109.48
Gut.	9.00	109.28
cb.	8.55	109.73
3+80		
cb.	9.20	109.08
Gut.	9.70	108.58
+4.7	9.60	108.68
1/2	9.56	108.72
1/4	9.43	108.85
1/2	9.48	108.80

118.28

"B" LINE

+2.4		9.48	108.80
cb. ^{Gut} o.k. line		9.71	108.57
cb. " "		9.31	108.97
	4+00		
cb.		9.80	108.48
Gut.		10.30	107.98
+5'		10.11	108.17
$\frac{1}{4}$		10.10	108.18
L		10.10	108.18
$\frac{1}{4}$		10.23	108.05
+2.6		10.27	108.01
Gut		10.42	107.86
cb.		9.95	108.33
	4+20		
cb.		10.73	107.55
Gut.		11.20	107.08
+4.8		11.00	107.28
$\frac{1}{4}$		10.95	107.33
L		10.77	107.51
$\frac{1}{4}$		10.67	107.61
+2.3		10.67	107.61
Gut.		10.85	107.43
cb.		10.40	107.88
J.P.	2.24 109.57	10.95	107.33
	4+40		
cb.		2.57	107.00

109.57

"B" LINE

52

Gut.		3.06	106.51
+5'		2.90	106.67
$\frac{1}{2}$		2.90	106.67
L		2.87	106.70
$\frac{1}{4}$		3.01	106.56
+2.45		3.07	106.50
Gut.		3.30	106.27
cb.		2.88	106.69
	4+60		
cb.		3.68	105.89
Gut		4.16	105.41
+4.9		4.05	105.52
$\frac{1}{2}$		3.96	105.71
L		3.79	105.78
$\frac{1}{4}$		3.77	105.80
+2.5		3.79	105.78
Gut.		4.04	105.53
cb.		3.53	106.04
	4+80		
cb.		4.54	105.03
Gut.		5.00	104.57
+5'		4.79	104.78
$\frac{1}{2}$		4.77	104.80
L		4.80	104.77
$\frac{1}{2}$		4.89	104.68
+2.8'		5.00	104.57

10957

"B" Line

Gut	5.14	104.43
cb.	4.65	104.92
(5+00)		
cb.	5.74	103.83
Gut.	6.27	103.30
+4.8'	6.04	103.53
$\frac{1}{2}$	6.01	103.56
$\frac{1}{2}$	5.92	103.65
$\frac{1}{2}$	5.97	103.60
+2.5	5.93	103.58
Gut.	6.27	103.30
cb. in DRIVE WAY	6.21	103.36
(5+20)		
cb. in DRIVE WAY	7.45	102.12
Gut.	7.45	102.12
+5.2	7.22	102.35
$\frac{1}{2}$	7.18	102.39
$\frac{1}{2}$	7.15	102.42
$\frac{1}{2}$	7.23	102.32
+2.5	7.28	102.29
Gut.	7.56	102.01
cb.	7.01	102.56
5+4375 = 5.C = 9+05.27 Base Line Book 1360		
cb.	8.58	100.99
Gut.	9.05	100.52
+4.8	9.04	100.53

10957

$\frac{1}{2}$	8.91	100.66
$\frac{1}{2}$	8.77	100.80
$\frac{1}{2}$	8.72	100.85
+2.5	8.71	100.86
Gut.	8.93	100.64
cb.	8.43	101.12
chk. & Par. 5+36.19 Page 47	8.57	101.00
		101.02 - Elev. on P. 47
		0.02 = Error.

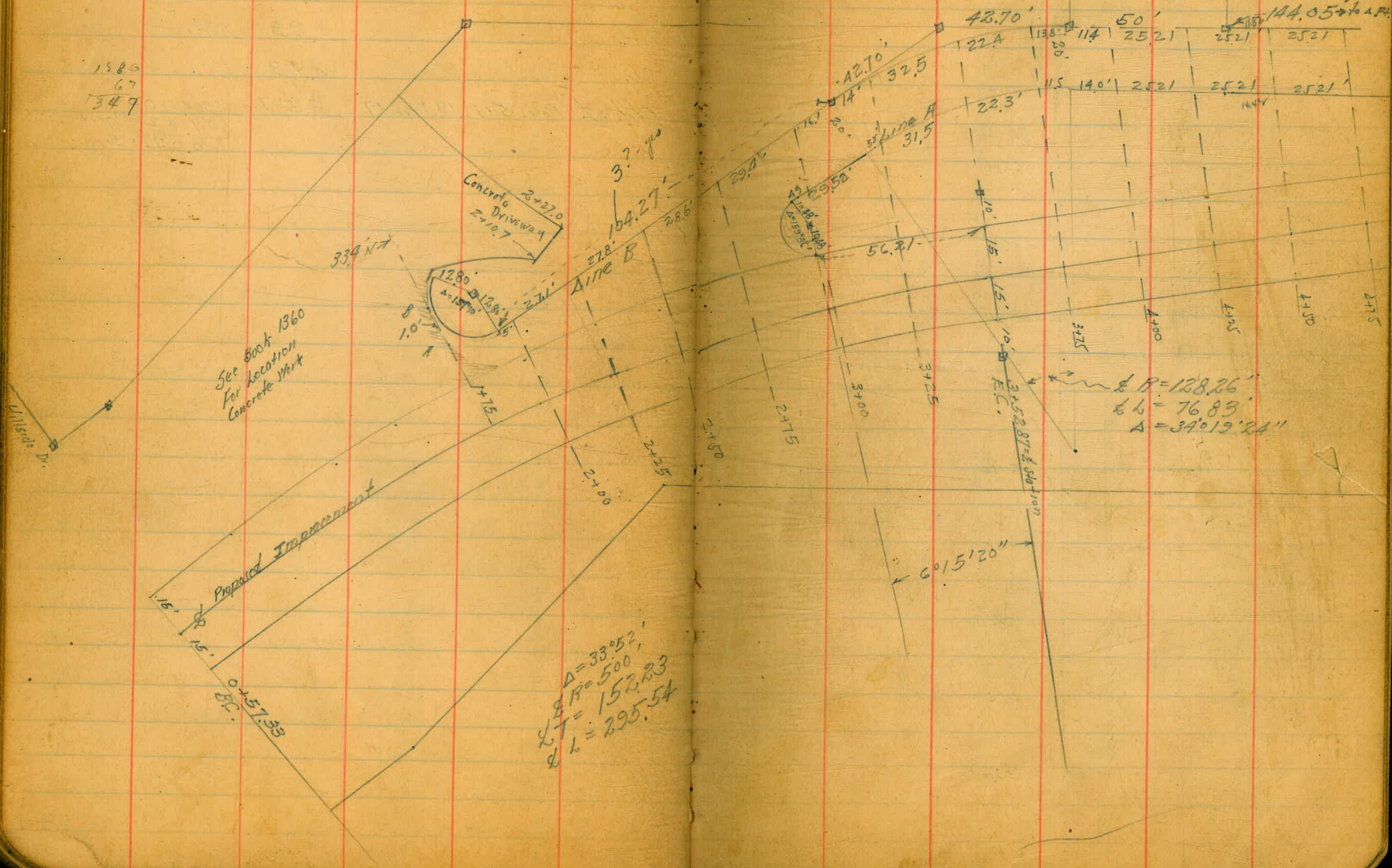
53

Walker
 Bliss
 M. P. Co.
 Detroit
 7-25-30

TORREY ROAD CROSS SECTION 175 -
 Projected From Sessions Notes in this Book
 50' Wide 10' C&S 7.5' H/S
 South = 35° 18' of Proposed & Improvement
 North = 25° 42'
 See Page 57 for Cross Section 175.

Stations are E of Proposed Imp.

1380
 67
 1347



See Book 1360
 For location
 Concrete Mark

$\Delta = 33^\circ 52'$
 $R = 500$
 $L = 152.23$
 $L = 295.54$

NEW PART TERRACE

$R = 128.26'$
 $b = 76.83'$
 $\Delta = 34^\circ 19' 24''$

0+57.33 = B.C. Pt. 50' E. Paving

St. & N. / Edge
Talley Road
Page 6

8M.	6.15	104.13	37.98
N on Walk			6.59 97.54
+35 " "			9.37 94.76
	0+75		
-35' N			8.9 95.2
-30 "			8.0 96.1
-15 "			7.1 97.1
N			5.8 98.3
	1+00		
N on Walk			4.41 99.72
+10			6.0 98.1
+35			7.4 96.7
	1+25		
-35'			6.8 97.3
-13' on edge Pav.			6.28 97.85
-17.3 " "			6.12 98.01
N " "			4.69 99.44
	1+50		
N on Paving			4.22 99.91
+3			4.32 99.81
+20.4'			5.67 98.46
35' N			6.8 97.3
	1+75		
35' N			6.8 97.3
33.4' N on edge Pav.			6.25 97.68

14.8' N on Pav. at B	5.25	98.68
6.3' " " "	4.39	99.74
N " "	4.24	99.89
	3+00	
N on Pav.	4.92	99.21
+3.2' edge Pav.	4.70	99.33
+4.4' - Side B	4.7	99.4
+13	4.9	99.2
+17'	4.4	99.7
21.5' N on edge Paving	6.32	97.81
35' N " "	7.16	96.97
50' " "	8.60	95.53
	3+10.7	
-18.3' on edge Drive Way	4.89	99.74
33' N " " "	7.01	97.12
	3+25	
35' N	7.4	96.7
30' N	6.2	97.9
25.2' N on Drive Way	5.75	98.38
33' " " " " edge	5.56	98.57
25' N = B Line	5.7	98.4
5.8' N on edge Pav.	5.63	98.50
N " "	5.35	98.18
	3+50	
15.9' N = B Line	7.3	96.8
30' N	8.0	96.1

	2+75			
24' N = 8 line		10.1	94.0	
35' N		10.7	93.4	
	3+00			
T.P.	0.46	92.65	11.94	92.19
40' N		2.3	90.4	
32.5' N = line 8		2.3	90.4	
20' N		1.9	90.8	
13.2' N = " A		10.2	92.9	
	3+25			
18' N		5.2	87.5	
19' N		6.6	86.1	
22.5' N = line 8		6.6	86.1	
44.4' N = " 8		5.7	87.0	
50' N		4.5	88.2	
	3+52.87 = E.C. of Improvement			
57' N		9.5	83.2	
51.8' N = line 8		9.1	83.6	
38' N		10.7	82.0	
31.4' N = line 8		10.6	82.1	
18' N		10.3	82.4	
	3+75			
T.P.	4.89	86.25	11.29	81.56
58' N		6.3	80.0	
52.6' N = 8 line		5.8	80.5	
47' N		5.9	80.4	
40' N		6.9	79.4	

32.8' N = " A line	6.5	79.8	58
18' N	5.8	10.5	
	4+13.76 see P. 9		
28.5' N = " A line	7.8	78.4	
48.5' N = 8 line	8.7	77.6	
	4+50		
49' N	8.5	77.8	
43.6' N = 8 line	8.2	78.1	
23.3' N = " A line	7.6	78.7	
	4+75		
20.1' N = " A line	6.8	79.5	
38' N	7.4	78.9	
40.3' N = 8 "	6.9	79.4	
43' N	7.2	79.1	
	5+00		
42' N	6.0	80.3	
36.9' N = 8 line	5.9	80.4	
34' N	6.2	80.1	
16.8' N = " A line	6.2	80.1	
	5+25		
13.6' N = " A line	5.3	81.0	
23' N	5.6	80.7	
33.6' N = 8 line	4.9	81.4	
39' N	5.2	81.1	
	5+50		
35' N	4.1	82.2	
30.3' N = 8 line	4.0	82.8	

	86.25	TORREY ROAD
10.4' N = "A" Line 5+75	4.4	81.9
7.9' N = "A" Line	3.3	83.0
20' N	3.8	82.5
27.2' N = "B" Line	3.0	83.3
32' N 6+00	3.1	83.2
31' N	2.1	83.2
25.9' N = "B" Line	2.8	84.3
5.9' N = "A" "	2.2	84.1
T.P. 3.09 6+25	94.69	0.65 85.60
5.7' N = "A" Line	3.4	85.3
19' N	2.9	84.8
21' N	2.2	85.5
25.7' N = "B" Line	2.5	85.2
29' N	2.7	85.0
33' N 6+50	13.1	81.6
35' N	12.1	82.6
30' N	11.7	83.0
25.1' N = "B" Line	8.7	86.0
5.1' N = "A" Line 6+75	8.0	86.7
4.7' N = "A" Line	6.7	89.0
15' N	7.3	87.4

	94.69	TORREY ROAD	59
24.7' N = "B" Line	7.5	87.2	
35' N 7+00	7.9	86.8	
35' N	4.1	90.6	
24.5' N = "B" Line	4.1	90.6	
23' N	4.1	90.6	
20' N	5.9	88.8	
12' N	6.6	88.1	
4.5' N = "A" Line 7+11.64	5.8	88.9	
10' South	3.3	91.4	
5	3.3	91.4	
+4.8' = edge Poring	3.41	91.28	
cb. on "	3.41	91.28	
1/4 " "	3.54	91.15	
+5 " edge "	3.70	90.99	
1/2	3.8	90.9	
1/4	4.4	90.3	
1/6	4.9	89.9	
1/11	5.1	89.6	
+4.2' = Line "A"	5.3	89.4	
1/11'	6.2	88.5	
+1.9'	5.3	89.4	
+2.3	2.4	92.3	
+24.2' = Line "B"	2.4	92.3	
+3.5	2.3	92.4	

94.69

TOKREY ROAD

7+20.5A

35' N	1.6	93.1
24' N = "B" Line	1.5	93.2
23' N	1.6	93.1
20' N	5.0	89.7
11' N	5.8	89.9
4' N = "A" Line	5.3	89.4
N	5.2	89.5
cb.	4.8	89.9
1/2	4.5	90.2
2/3	4.0	90.7
+2.1 = edge Paving	3.95	90.74
1/4 on "	3.76	90.93
cb " "	3.59	91.10
+5 = 5 edge Pav	3.57	91.12
S	3.4	91.3

7+25 See P-13

20' N	5.1	89.6
24' N = "B" Line	1.1	93.6
30' N	1.1	93.6

7+50

28' x 1	1.5	93.2
23.4' N = "B" Line	1.8	92.9
20' N	5.9	88.8
12' N	7.0	87.7
N	5.9	88.8

94.69

TOKREY ROAD

60

7.9' S ^{outh} = cb.	3.9	90.8
13' South sk.	3.7	91.0
7+75		
40' S	+3.6	98.3
34.5' S = Line D	+0.3	95.0
29.5' S = cb Line "	1.6	93.1
24' S	3.0	92.7
18' S	4.5	90.2
South.	4.7	90.0
20' N. N. L.	7.7	87.0
23.1' N = "B" Line	4.7	90.0
28' N	4.2	90.5

8+00

35' N	7.8	86.9
31' N	10.4	84.3
22.7' N = "B" Line	9.9	84.8
24' South sk.	4.3	90.4
30' " "	0.7	94.0
40' "	+0.7	95.4
42.2' = cb Line "D" line	+1.8	96.5
47.3' South = " "	+6.1	100.8
53' "	+7.9	102.6

8+25

59' South sk.	+11.4	106.1
53.6' " " = "D" line	+9.5	104.2
48.6' " " cb. " "	+7.6	102.3

2469

TORREY ROAD

8+25 Cont.

41' South	+1.6	96.3
37' "	+0.5	95.2
32' "	+0.5	95.2
25' "	3.9	90.8
23.1' North side "B" Line	12.0	82.7
35' "	13.1	81.6

8+43.55

21.2' North side "B" Line	13.4	81.3
5' N	14.3	80.4
N	11.0	83.7
cb.	6.9	87.8
+33' N edge Pav.	6.76	87.93
4' on "	6.61	88.08
6' " "	6.41	88.28
+68.5' " "	6.29	88.40
7'	6.3	87.4
cb.	6.6	88.0
5	5.8	88.9
+20 = "C" Line	5.1	88.6
+25	2.4	91.3
+30	+1.0	95.7
+40	+1.4	96.1
+45'	+6.2	100.9
+50	+8.0	102.7
+55	+9.9	104.6

2469

TORREY ROAD

+11.7 106.4 61

5+60

8+50

60'S	+11.7	106.4
55'S	+9.9	104.6
50'S	+8.0	102.7
45'S	+6.2	100.9
40'S	+1.4	96.1
30'S	+1.0	95.7
25'S	2.4	92.3
20'S = "C" Line	5.1	89.6

8+64.28

35' North	16.0	78.7
22' " = "B" Line	17.0	77.7
10' "	15.7	79.0
N	9.3	85.4
+5	7.2	87.5
+9.3' N edge Pav.	7.26	87.43
cb on "	7.21	87.48
4' " "	7.07	87.62
6' " "	6.97	87.72
+19.5' " "	6.23	87.76
4	7.2	87.5
cb	6.4	88.2
5	5.6	89.1
+20 = "C" Line	4.6	90.1
+22	3.9	90.8
+25	1.7	93.0

9469

TOPREY BRAD

+30	+20	96.7
+42	+25	97.2
+45	+50	99.7
+97	+69	101.6
+50	+80	102.7
+55	+10.2	104.9
+60	+12.0	106.7

8+75

60' South SL.	+120	106.7
55' "	+98	104.5
50' "	+80	102.7
47' " "	+69	101.6
45' " "	+60	100.7
42' " "	+29	97.6
30' " "	+20	96.7
25' " "	23	92.4
20' " "	63	88.4

9+00

13' South SL.	5.9	88.8
16' " "	1.0	93.7
20' " " " = "C" line	+10	95.7
25' " " "	+40	98.7
41' " " "	+45	99.2
45' " " "	+70	101.7
50' " " " = "D" line	+10.1	104.8
55' " " "	+13.4	108.1

9469

60' South SL.	+15.4	110.1
3+25		
60' South SL.	+17.6	112.3
55' " " "	+16.7	111.4
50' " " "	+14.8	109.5
45' " " "	+11.9	106.6
39' " " "	+6.0	100.7
25' " " "	+6.0	100.7
20' " " "	+4.0	98.7

9+54.59 = P.C. BT

60' " " "	+18.0	112.7
55' " " "	+16.9	111.6
50' " " "	+15.7	110.4
45' " " "	+12.8	107.5
43' " " "	+8.7	103.4
26' " " "	+9.0	103.7
25' " " "	+8.0	102.7
20' " " "	+6.0	100.7

Chk. on top Pipe Page 12

0.65

94.04
94.02 = STATIONS B.M.
0.02 = difference

11.92 105.94 34.02 = Above B.M.

9+75 See P-15

20.3' South SL = "C" line	3.0	
T.P.	9.27	114.84
25.3'S = "C" line db.	9.4	105.4
45' South SL.	9.6	105.2

62

114.84

TERRY ROAD

50.3 South	4.4	110.4
55.3' " = D Line	3.1	111.7
60'S	1.1	113.7
10+00		
20'S Sk	9.6	105.2
28' " "	7.2	107.6
47' " " = 9+ Section #	7.2	107.6
SECTION # 45.80		
-5'	0.3	114.5
5	3.0	111.8
+5	7.3	107.5
+24	7.1	107.7
+45.8 = N line	11.6	103.2
SEC. B 32.15		
N-10'	11.6	103.2
N	9.6	105.2
+16'	16.2	108.6
+20	4.3	110.5
+37.15 = S line	4.8	110.0
Sk. +4'	4.4	110.4
+11	0.1	114.7
+15'	+1.0	115.8
Sec. D = 30'		
-15'	+1.5	116.3
-10'	+0.4	115.2
5-5'	2.8	112.0

114.84

63

5	2.4	112.4
+11'	2.2	112.6
+19'	6.7	108.1
+30' = N.L.	9.6	105.2
14+20	14.6	114.2
Rough check 10+25 on Sk. 2.15	13.4	101.4
		101.5 = Sissons Note
		0.1 = diff.
Sections Projected from Sissons Note		
11.65	79.26	67.61
14+50		
30' N	15.9	63.4
32' N	15.9	63.4
40' N	16.4	62.9
14+75		
42' N	14.6	64.7
37' N = Approx. Line Imp. ^{Proposed}	14.6	64.7
20' South Sk.	8.2	71.1
25' " " "	7.8	71.5
15+00		
41' S	6.1	73.2
36' S = Approx. Line Proposed Imp.	6.9	72.4
27' South	7.3	72.0
22' "	6.2	73.1
40' North = Approx. Line Imp. ^{Proposed}	12.3	67.0
45' "	12.3	67.0
15+25		

Page 20 and 21
S. M. on 11/17
Pipe 15+25 on 11/17
Page 21

58.17

Torrey Road.

+25 = Girt. on Pav. at East. cb.	4.15	54.02
cb.	3.46	54.71

19+50

-24.2 on cb.	4.11	54.06
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Girt.	4.6	53.6
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N	3.6	54.6
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cb.	3.4	54.8
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+5' = Nedge Pav.	3.07	55.10
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$\frac{1}{2}$ " " "	2.98	55.19
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$\frac{1}{2}$ " " "	2.70	55.47
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$\frac{1}{2}$	2.49	55.68
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+0.5 " " " Biolq.	2.49	55.68
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+24.0 " " Lapolla Cañon	2.45	55.72
-------------------------	------	-------

cb.	2.7	55.5
-----	-----	------

+1	2.8	55.4
----	-----	------

+2	2.2	56.0
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5	2.8	55.4
---	-----	------

+4	3.6	54.6
----	-----	------

+5	5.4	52.8
----	-----	------

+7	5.2	53.0
----	-----	------

+10	4.0	54.2
-----	-----	------

19+75

-10	5.4	52.8
-----	-----	------

-6	5.7	52.5
----	-----	------

5	4.4	53.8
---	-----	------

+5	2.8	55.4
----	-----	------

58.17

+8	3.7	54.5
----	-----	------

cb.	3.5	54.7
-----	-----	------

+3.6 edge Pav. Lapolla Cañon	3.48	54.69
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+7 " " Biolq. Road.	3.44	54.73
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$\frac{1}{2}$ " " "	3.42	54.75
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$\frac{1}{2}$ " " "	3.64	54.53
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$\frac{1}{2}$ " " "	3.94	54.23
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+2.5 " " " "	4.10	54.07
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cb.	4.3	53.9
-----	-----	------

N	4.5	53.7
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+27.8 = Girt. at cb.	5.7	52.5
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+22.8 on cb.	5.01	53.16
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20+00

-20.4' on cb.	5.92	52.25
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Girt. at "	6.4	51.8
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N	5.5	52.7
---	-----	------

cb.	5.1	53.1
-----	-----	------

+5' on edge Pav. Biolq.	5.15	53.02
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$\frac{1}{2}$ " " "	5.04	53.13
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$\frac{1}{2}$ " " "	4.74	53.43
---------------------	------	-------

$\frac{1}{4}$ " " "	4.53	53.64
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+0.5 " " " "	4.51	53.66
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+6.8 " " " Lapolla Cañon	4.54	53.63
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cb.	4.4	53.8
-----	-----	------

+5'	4.4	53.8
-----	-----	------

+7'	3.6	54.6
-----	-----	------

65

5825
17

TORREY ROAD

5	4.3	53.9
+6'	5.8	52.4
+10'	6.1	52.1
	20+25	
-10'	6.7	51.5
-4'	6.6	51.6
3	5.0	53.2
+2	5.3	52.9
+7.2 = edge Par. Lapolla Canyon	5.40	52.77
cb. on "	5.41	52.76
+7 edge " Biolog.	5.42	52.75
7 on "	5.43	52.74
6 " "	5.67	52.50
7 " "	6.05	52.12
+25 " edge Par. "	6.18	51.99
cb.	6.3	51.9
N	6.9	51.3
+20.1 = out at cb	7.5	50.7
+20.1 = top cb.	6.77	51.40
	20+50	
-21.2 on cb.	7.71	50.46
Grnt. qt "	8.7	49.5
N	8.0	50.2
cb.	7.3	50.9
+5 on edge Par. Biolog.	7.23	50.94
7 " "	7.06	51.11

5825
17

66

2 on Par.	6.72	51.45
7 "	6.49	51.68
7.5 " edge Par. Biolog.	6.50	51.67
cb. on "	6.33	51.84
+6.8' edge " Lapolla Canyon	6.28	51.89
5	6.2	52.0
+3	5.8	52.4
+6	7.3	50.9
+10	6.7	51.5
	20+75	
-10	7.8	50.4
-7	6.9	51.3
-7.2 = edge Par. Lapolla Canyon	7.07	51.10
5 on "	7.10	51.07
+8 = 6 " " "	7.10	51.07
cb. on "	7.13	51.04
+7 " "	7.32	50.84
7 " "	7.35	50.82
2 " "	7.45	50.72
7 " "	7.87	50.30
+25 " " Biolog.	8.03	50.14
cb.	8.1	50.1
N	8.9	49.3
+21.6	9.0	49.7
-21.6 on cb.	8.52	49.65
	21+00	

58.25
58.17

TORREY ROAD

-21.5' on cb.	9.46	49.71
Gut.	10.0	48.2
N	9.4	48.8
cb.	8.9	49.3
+5 on edge Par. Biolog.	8.84	49.33
1/2 " "	8.66	49.51
1/2 " "	8.34	49.83
1/2 " "	8.18	49.99
+0.5 " " " "	8.13	50.04
+5.5 " " " Lapolla Cañon	7.86	50.31
cb. " " " "	7.83	50.34
+7.7 = 1/2 " " " "	7.72	50.45
5 on " " " "	7.69	50.48
+8.2	7.62	50.55
+10 " " edge " " "	7.6	50.6
21+25		
-15.1 edge Lapolla Cañon	7.92	50.25
-10 1/2 Par. " " "	8.01	50.16
5	8.08	50.09
+5.2 edge " " " "	8.19	49.98
cb. " " " "	8.41	49.76
+7 edge Par. Biolog.	8.92	49.25
1/2	8.99	49.23
1/2	9.11	49.08
1/2 " " " "	9.45	48.72
+2.5 " " " "	9.59	48.58

58.25
58.17

67

cb.	9.6	48.6
N	10.3	47.9
+20.5 = Gut	11.3	46.9
+20.5 on cb.	10.45	47.72
21+50		
-21.8 on cb.	11.31	46.86
-21.8 Gut.	11.8	46.4
N	10.9	47.3
cb.	10.1	48.1
+5 on edge Par. Biolog.	10.10	48.07
1/2 " " " "	9.97	48.20
1/2 " " " "	9.66	48.51
1/2 " " " "	9.50	48.67
+0.5 " " " " "	9.48	48.69
cb. " " " "	8.83	49.34
5 " " " "	8.08	50.09
+2.5 " " " Lapolla Cañon	7.98	50.19
+12.6 = 1/2 " " " "	7.77	50.40
+23.2 edge " " " "	7.75	50.42
21+75		
-31.8 - edge Par. Lapolla Cañon	7.60	50.57
-21.2 = 1/2 " " " "	7.63	50.52
-10.8 = edge " " " "	7.82	50.35
5 on " " " "	8.50	49.67
cb. on " " " "	9.39	48.78
+7' - edge " Biolog.	9.99	48.18

58.25
58.17
10.08
47.17

TORREY ROAD

1/2 on Pav.	9.99	48.18
2 "	10.11	48.06
1/2 " "	10.25	47.92
+25" edge Pav. Biolog	10.61	47.56
cb.	10.8	47.4
N	11.4	46.8
+25.0 Gut	12.4	45.8
+25.0 on cb.	12.00	46.17
22+00		
-27.5 on cb.	12.78	45.39
Gut. at "	13.1	45.1
N	12.0	46.2
cb.	11.2	47.0
+5 on edge Pav. Biolog.	11.24	46.93
1/2 " "	11.10	47.07
2 " "	10.77	47.40
1/2 " "	10.63	47.54
+0.5 " " " "	10.60	47.57
cb. on Grading	9.8	48.4
S	8.8	49.4
+10	8.0	50.2
22+09.33 = P.R.C. on Rt edge Pav.		
-3' on Radius Hub.	10.40	47.77
South	9.8	48.4
cb.	10.4	47.8
F7 on edge Pav. Biolog.	10.86	47.31

58.25
58.17

68

1/2 on Pav.	10.86	47.31
2 " "	11.00	47.17
1/2 " "	11.31	46.86
+25" edge Pav. Biolog.	11.42	46.75
cb.	11.6	46.6
N	12.2	46.0
+28.3 Gut at cb.	13.6	44.6
+28.3 on	13.00	45.17
7.12 5.04 52.81	10.40	47.77
22+25		
-29.2 = top cb.	8.04	44.77
-29.2 = Gut. at cb.	8.7	44.1
N	7.3	45.5
cb.	6.8	46.0
+5 on edge Pav. Biolog. Road.	6.44	46.37
1/2 " "	6.31	46.50
2 " "	5.99	46.82
1/2 " "	5.86	46.95
+0.5 " " " "	5.87	46.94
cb.	5.6	47.2
S	6.4	46.4
+10	6.4	46.4
22+50		
-10	7.2	45.6
S	7.4	45.4
cb.	6.4	46.4

on no. Radius
Hub. 22+09.33

+7 on edge Pav.	6.45	46.36
7 " "	6.45	46.36
L " "	6.60	46.21
7 " "	6.95	45.86
125 " " "	7.08	45.73
cb.	7.1	45.7
N	7.7	45.1
+30.2' cut at cb.	9.3	43.5
+30.2' on cb.	8.77	44.04
33+00		
-29.7 on cb.	10.28	42.53
cut	10.4	42.4
-20	10.3	42.5
N	9.1	43.7
cb.	8.7	44.1
+5 on edge Pav.	8.69	44.12
7 " "	8.57	44.27
L " "	8.25	44.56
7 " "	8.08	44.73
+05 " " "	8.08	44.73
cb.	7.9	44.9
5	9.6	43.2
+10	8.4	44.4

LEVELS on A.B.C Page 56

A	4.81	48.50
B	3.67	49.20
C	2.51	50.30

SECTION D Sketch P-56

N edge Paving	2.02	50.79
10' L " "	2.00	50.81
5 " "	2.11	50.70

SECTION E

5 " Pot.	2.55	50.26
L " "	2.23	50.58
N " "	2.01	50.80

SECTION F

N " "	2.13	50.68
L " "	2.35	50.46
5 " "	2.73	50.08

cht. L 20+26 on Pav.

T.P. 3.21 55.60 0.42 52.39

cht. L 20+26 on Pav.

T.P. 0.92 54.68

T.P. 3.76 71.37

T.P. 0.81 59.80 12.28 58.99

cht. B.M. BP - Page 64

5.15 54.65

54.68

0.03 - Error.

Page 64

Page 64

0.00 - Error.

B.M. on Iron

Pipe Page 63

N.E. S.P.

52.81
972
4.56

9219

F Cb Top 752 84.61

N°3

F Cb 761 84.58

Gutter on Pav 808 84.11

" " 794 84.25

" " 791 84.28

" " 804 84.15

Gutter " " 834 83.85

H Cb Top 794 84.25

N°4

H Cb Top 783 84.37

Gutter on Pav 827 83.92

" " 789 84.30

" " 773 84.46

" " 774 84.45

Gutter " " 788 84.31

F Cb Top 737 84.82

N°5

F Cb 784 84.95

Gutter on Pav 773 84.46

" " 759 84.60

" " 760 84.59

" " 775 84.42

Cb " " 828 83.91

+12 = Gutter 840 83.79

Top Cb 798 84.21

9219

N°6

-10 on Pav 8.61 83.58

Cb " " 787 84.32

" " 750 84.69

" " 733 84.86

" " 722 84.97

Gutter " " 745 84.74

F Cb Top 697 85.22

N°7

F Cb 648 85.71

Gutter on Pav 697 85.22

" " 673 85.32

" " 684 85.35

" " 708 85.11

Cb " " 734 84.83

+10 " " 8.08 84.11

N°8 = Cb Pc. on H

H Cb Top 604 86.15

Gutter on Pav 656 85.63

" " 688 85.91

" " 609 86.10

" " 609 86.10

Gutter " " 629 85.90

F Cb Top 579 86.40

N°8 + 2575 = J End of Cb 1st of on F

F Top Cb 515 87.04

Gutter on Pav 580 86.39

71

9219

N°8 +2875 = N End of 1st lot on East
on Pav 129 571 86.48

N°8 +2183 = S End of 1st lot on N
on Pav 129 643 85.76

N°8 +2433 = N End of 1st lot on N
on Pav 129 637 85.82
on Cb Top 550 86.69

N°9

F Cb Top 502 87.17

Gutter on Pav 564 86.55

1/4 " " 533 86.86

1/2 " " 542 86.77

1/4 " " 563 86.56

Gutter " " 581 86.38

F Cb Top 521 86.95

N°10

N Cb Top 386 88.33

Gutter on Pav 442 87.77

1/2 " " 414 88.05

1/4 " " 395 88.24

1/4 " " 398 88.21

Gutter " " 423 87.96

F Cb Top 377 88.42

N°11

F Cb Top 213 90.06

Gutter on Pav 260 89.59

9219

1/4 on Pav 129 2.33 89.86

1/2 " " 2.33 89.86

1/4 " " 2.44 89.75

Gutter " " 2.75 89.44

N Cb 2.20 89.99

N°12 = F.C. 17+8327

N Cb 0.64 91.55

Gutter on Pav 1.16 91.03

1/4 " " 0.81 91.38

1/2 " " 0.72 91.47

1/4 " " 0.80 91.39

Gutter " " 1.07 91.12

F Cb Top 0.66 91.53

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Torrey Road
Location and Levels on 16" Wood Pipe

Note: - Pipe Located By Soundings

BM	2.71	96.73	9402	5 ft of 3 P.P.M. Ht of 6.96 Page 13 27' up of Spot of Valve	
			4+73 Sta. of Proposed Improvement		
11.0'	East of 1/2 of Prop Imp = Cast Iron Pipe	5.35			
		4+88			
14.4'	East = Cast Iron Pipe	7.64	on Pipe		
		5+20			
33.0'	East of 1/2 of Prop Imp = 16" Wood Pipe	7.31	on 16" Wood Pipe		
		5+95			
40.0'	East of 1/2 = Wood Pipe	7.84	on 16" Wood Pipe		
		6+46			
41.5'	East = Wood Pipe	7.73	on Wood Pipe		
		6+96			
43.0'	East = Valve	7.80	on Wood Pipe		
		3+95	Top Valve		
		7+76			
45.0'	East = W.P.	9.00	on Wood Pipe		
		8+37			
30.0'	East = W.P.	9.79			
		8+82			
18.0'	East = W.P.	11.18	on Wood Pipe		
		9+35			
4.8'	East = W.P.	13.05	on Wood Pipe		
		9+54.59 PCR			
2.5'	East = W.P.	14.27			
TP	3.17	88.37	11.52	8520	on 1/2 Hub 9+54.59

Dec 1939
Sisson
McHugh
Northey
Pearce
73

				88.37	
			9+96 P.O.C.		
16.1'	W of 1/2 = Wood Pipe	6.55			on Wood Pipe
			10+10 P.O.C.		
20.3'	W of 1/2 = W.P.	7.38			on Wood Pipe
			10+31 P.O.C.		
23.4'	W of 1/2 = W.P.	7.92			
			10+85.7 P.O.C.		
18.6'	W of 1/2 = Valve	8.40			on W Pipe
		4.28			on Top Valve
			11+33 P.O.C.		
6.5'	W of 1/2 = W.P.	10.14			on Wood Pipe
					Nail Pole
TP	0.17	82.94	5.60	82.77	Plot No. 14,535
			12+37		
18.1'	S.E. of 1/2 = Wood Pipe	8.15			on Wood Pipe
			13+86 P.O.C.		
27.5'	S.E. of 1/2 = W.P.	8.82			on Wood Pipe
			13+42 P.O.C.		
35.3'	S.E. of 1/2 = W.P.	11.59			on Wood Pipe
			13+67 P.O.C.		
36.6'	S.E. of 1/2 = W.P.	13.02			on Wood Pipe
			13+95 P.O.C.		
39.0'	S.E. of 1/2 = W.P.	13.33			on Wood Pipe
			14+36 P.O.C.		
36.8'	S.E. of 1/2 = W.P.	14.22			

		8294			
TP	1.04	71.05	1293	70.01	
		15+40	P.O.C		
23.4 SE of $\frac{1}{2}$		Wood Pipe	4.00		07 W.P.
		15+95			
22.8 SE of $\frac{1}{2}$		Wood Pipe	5.65		Uncovered 07 W.P.
		16+56			
23.2 SE of $\frac{1}{2}$		W.P.	8.56		
		17+20			
23.0 SE of $\frac{1}{2}$		W.P.	11.73		
		18+08			
22.6 SE of $\frac{1}{2}$		W.P.	14.15		
TP	599	6078	16.26	5479	HEB.P. Torrill M. Calladilla Plate 5419 1925
		19+328			
23.0 SE of $\frac{1}{2}$		Valve	6.20		07 Pipe
			1.90		07 Tap Valve
		19+69			
24.1 SE of $\frac{1}{2}$		W.P.	7.87		
		20+31			
4.0 SE of SE Edge of Pix 129		Wood Pipe	11.50		07 Wood Pipe

Torry Pinn Road
 Cross Section Portion East of Boulevard Place

BM 1210 104.73 926.3 35 Tins 11743525

Sec 1 - 50' East of A on S.L. Torrey Pinn Road

27'S = N.L. Porch = N.E. Cor.	2.7	102.0
174.5 = S.L. Torrey Road	3.5	101.2
152.5	4.0	100.7
1'S	11.3	93.4
2	12.0	92.7
5.11	12.9	91.8
10.11	19.6	85.1
16.11	23.8	80.9
25.11 = E of Imp	23.2	81.5 ✓

Sec 2 - 40' E of A

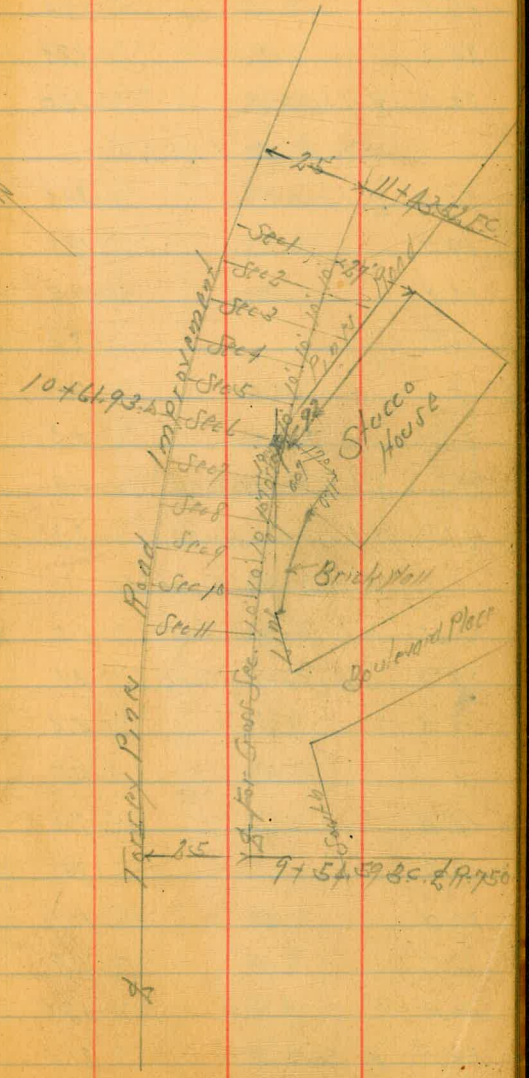
25.11 = E of Imp	23.2	81.5
18.11	23.7	81.0
16.11	22.7	82.0
9.11	12.7	92.0
2	10.7	94.0
2.5	10.2	94.5
12.5	2.9	100.8
14.5 = S.L. Torrey Road	3.8	100.9
23.7.5 = N.L. Porch	2.9	101.8

Sec 3 - 30' E of A

20.3.5 = N.L. Porch	2.1	101.6
10.8.5 = S.L. Torrey Road	3.7	101.0
8.5	4.0	100.7

Plotted FEB 9-25-31

Sept 24/31
 75
 Walker
 Dist
 11743525



104.73

8	9.3	95.4
11H	12.0	92.7
16H	18.3	86.4
24H	22.3	82.4
25H = 2 1/2 imp	22.0	82.7
Sec 4 = 20 E of A		
25H = 2 1/2 imp	23.6	81.1
19H	19.0	85.7
14H	11.5	93.2
3H	8.4	96.3
8	7.1	97.6
4.5	4.3	100.4
7.2.5 = S.L. Torrey Road	3.9	100.8
16.6.5 = H.L. Stucco House	3.3	101.4
Sec 5 = 10 E of A		
13.2.5 = H.L. Stucco House	3.5	101.2
3.9.5 = S.L. Torrey Road	4.1	100.6
7.5	4.4	100.3
8	5.0	99.7
4H	7.4	97.3
8H	8.5	96.2
10H	10.7	94.0
16H	11.9	92.8
31H	18.3	86.4
25H = 2 1/2 imp.	21.4	83.3

104.73

Sec 6 = Δ on S.L. Torrey Pine Road		
25H = 2 1/2 imp.	21.8	82.9
22H	12.8	91.9
16H	12.1	92.6
12H	10.7	94.0
8.5H	7.8	96.9
3H	5.2	99.5
0.09H = S.L. Torrey Road	4.78	99.95
9.2.5 = H.L. House in Cor	4.3	100.4
Sec 7 = 15 H of A		
24 = H.L. House		104.8
15.5	1.1	103.6
2.9.5 = S.L. Torrey Road	3.8	100.9
8	4.2	100.4
4H	4.6	100.1
9H	7.2	97.5
12H	10.1	94.6
18H	13.2	91.5
23H	13.1	91.6
25H = 2 1/2 imp.	20.7	84.0
27H	21.2	83.5
Sec 8 = 20 H of A		
25H = 2 1/2 imp	22.0	82.7
23H	13.9	90.8
18H	13.3	91.4
13H	9.7	95.0
9.5H	6.6	96.1

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104.73

3 1/2	4.0	100.7
4	3.4	101.3
4 1/2	3.0	101.7
5 1/2 = S.L. Torrey Road	2.5	102.2
14 1/2 = Brick Wall Bottom	0.2	104.5
20 1/2 = Top Brick Wall		105.7 = Bottom Brick Wall
Sec 9 = 30' W of A		109.25 = Top
16.25 = Brick Wall Bottom		108.4 = Ground in Drive
17 1/2	0.3	102.9 = Bottom Wall
		104.4 = 108.25 Top Wall
77.5 = S.L. Torrey Road	1.6	103.1
4	3.2	101.5
97 1/2	5.8	98.9
12 1/2	8.7	96.0
17 1/2	12.6	92.1
20 1/2	13.7	91.0
25 1/2 = 1/2 Imp	20.2	84.5
27 1/2	20.4	84.3
Sec 10 = 40' W of A		
27 1/2	20.4	84.3
25 1/2 = 1/2 Imp	19.2	85.5
21 1/2	13.9	90.8
16 1/2	12.5	92.2
11 1/2	8.6	96.1
9 1/2	5.4	99.3
4	3.2	101.5
10 1/2 = S.L. Torrey	1.3	103.4
14.75 = 1/2 Brick Wall Bottom	0.4	104.3
" " Top		106.95

Sec 11 = 50' W of A 104.73

16 1/2	Ground in Drive	105.75
15 1/2	Brick Wall Top	106.25
15 1/2	Brick Wall Bottom	104.7
14 1/2 = S.L. Torrey	0.5	104.2
4	3.5	101.2
8 1/2	5.4	99.3
10 1/2	7.2	97.5
16 1/2	12.4	92.3
21 1/2	13.1	91.6
25 1/2	19.0	85.7
27 1/2	20.5	84.2

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DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope $1\frac{1}{2}$ to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body

IMPROVED TABLES
AND
INFORMATION

TABLE No. 2.

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections. Degree of curve with a given T may be found by dividing tangent (or external), opposite T by given tangent (or external).

The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope $1\frac{1}{2}$ to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

TABLE No. 9.

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections.

Degree of curve with a given I may be found by dividing tangent, (or external), opposite I by given tangent, (or external).

The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

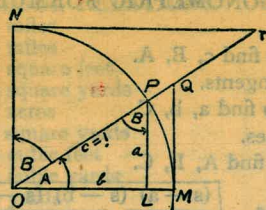


TABLE II

TRIGONOMETRIC FORMULAE.

$$\angle A = \angle MOP \quad \angle B = \angle PON = \angle OPL$$

$$R = OB = c = 1$$

$$\sin A = \frac{a}{c} = \frac{a}{1} = a = \cos B = LP$$

$$\cos A = \frac{b}{c} = \frac{b}{1} = b = \sin B = OL$$

$$\tan A = \frac{a}{b} = \frac{MQ}{OM} = \frac{MQ}{1} = MQ = \cot B = MQ$$

$$\cot A = \frac{NT}{ON} = \frac{NT}{1} = NT = \tan B = NT$$

$$\sec A = \frac{OQ}{OM} = \frac{OQ}{1} = OQ = \csc B = OQ$$

$$\csc A = \frac{OT}{ON} = \frac{OT}{1} = OT = \sec B = OT$$

$$\text{vers } A = \frac{LM}{OP} = LM = \text{covers } B \#$$

$$\text{covers } A = \frac{OP - LP}{OP} = OP - LP = \text{vers } B$$

$$\text{exsec } A = PQ = \text{coexsec } B$$

$$\text{coexsec } A = PT = \text{exsec } B$$

$$\sin \frac{1}{2} A = \sqrt{\frac{1 - \cos A}{2}} \quad \cos \frac{1}{2} A = \sqrt{\frac{1 + \cos A}{2}}$$

$$\sin 2A = 2 \sin A \cos A \quad \cos 2A = \cos^2 A - \sin^2 A$$

$$\text{Law of Sines} \quad \frac{\sin A}{a} = \frac{\sin B}{B} = \frac{\sin C}{C}$$

$$\text{Law of Cosines} \quad c^2 = a^2 + b^2 - 2ab \cos C$$

$$\text{Law of Tangents} \quad \frac{a+b}{a-b} = \frac{\tan \frac{1}{2}(A+B)}{\tan \frac{1}{2}(A-B)}$$

0	1	2	3	4	5	6	7	8	9
0.0000	0.0174	0.0349	0.0521	0.0690	0.0857	0.1021	0.1183	0.1343	0.1500
0.1571	0.1736	0.1908	0.2077	0.2243	0.2406	0.2566	0.2723	0.2877	0.3029
0.3178	0.3324	0.3467	0.3607	0.3745	0.3880	0.4013	0.4143	0.4271	0.4396
0.4519	0.4640	0.4759	0.4876	0.4990	0.5101	0.5209	0.5314	0.5417	0.5517
0.5615	0.5711	0.5805	0.5897	0.5987	0.6075	0.6161	0.6245	0.6327	0.6407
0.6485	0.6561	0.6636	0.6709	0.6780	0.6849	0.6916	0.6981	0.7044	0.7105
0.7164	0.7221	0.7276	0.7329	0.7380	0.7429	0.7476	0.7521	0.7564	0.7605
0.7645	0.7683	0.7719	0.7754	0.7787	0.7819	0.7849	0.7878	0.7905	0.7931
0.7956	0.7980	0.8003	0.8025	0.8046	0.8066	0.8084	0.8101	0.8117	0.8132
0.8146	0.8159	0.8171	0.8182	0.8192	0.8201	0.8209	0.8216	0.8222	0.8227
0.8231	0.8235	0.8238	0.8241	0.8243	0.8245	0.8246	0.8247	0.8247	0.8247
0.8247	0.8246	0.8245	0.8243	0.8241	0.8238	0.8235	0.8231	0.8227	0.8222
0.8216	0.8210	0.8204	0.8197	0.8190	0.8182	0.8174	0.8165	0.8156	0.8146
0.8135	0.8124	0.8112	0.8100	0.8087	0.8074	0.8060	0.8046	0.8032	0.8017
0.8002	0.7987	0.7971	0.7955	0.7938	0.7921	0.7904	0.7887	0.7869	0.7851
0.7833	0.7814	0.7795	0.7776	0.7756	0.7736	0.7715	0.7694	0.7673	0.7651
0.7629	0.7607	0.7584	0.7561	0.7538	0.7514	0.7490	0.7466	0.7441	0.7416
0.7391	0.7365	0.7339	0.7313	0.7286	0.7259	0.7231	0.7203	0.7175	0.7146
0.7117	0.7088	0.7058	0.7028	0.6997	0.6966	0.6934	0.6902	0.6869	0.6836
0.6803	0.6769	0.6735	0.6701	0.6666	0.6631	0.6595	0.6559	0.6523	0.6486
0.6450	0.6413	0.6376	0.6338	0.6300	0.6261	0.6222	0.6183	0.6143	0.6103
0.6063	0.6022	0.5981	0.5940	0.5898	0.5856	0.5814	0.5771	0.5728	0.5685
0.5642	0.5598	0.5554	0.5510	0.5465	0.5420	0.5375	0.5329	0.5283	0.5237
0.5191	0.5144	0.5097	0.5050	0.5002	0.4954	0.4905	0.4856	0.4807	0.4757
0.4707	0.4657	0.4606	0.4555	0.4503	0.4451	0.4399	0.4346	0.4293	0.4240
0.4186	0.4133	0.4079	0.4025	0.3970	0.3915	0.3859	0.3803	0.3747	0.3691
0.3634	0.3577	0.3520	0.3462	0.3404	0.3345	0.3286	0.3226	0.3166	0.3105
0.3044	0.2983	0.2921	0.2859	0.2796	0.2733	0.2669	0.2605	0.2541	0.2476
0.2411	0.2346	0.2281	0.2215	0.2149	0.2082	0.2015	0.1947	0.1879	0.1811
0.1742	0.1673	0.1604	0.1534	0.1464	0.1393	0.1322	0.1250	0.1178	0.1105
0.1032	0.0958	0.0884	0.0809	0.0733	0.0657	0.0580	0.0503	0.0425	0.0347
0.0268	0.0189	0.0109	0.0028	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE II—Continued
TRIGONOMETRIC FORMULAE (continued)

In any triangle:

Given a, b, C; to find c, B, A.

Use Law of Tangents.

Given A, B, c; to find a, b, C.

Use Law of Sines.

Given a, b, c; to find A, B, C.

$$\text{Let } \frac{a+b+c}{2} = s, \sqrt{\frac{(s-a)(s-b)(s-c)}{s}} = r$$

$$\cos \frac{1}{2} A = \sqrt{\frac{s(s-a)}{bc}}$$

$$\tan \frac{1}{2} A = \frac{r}{s-a}$$

$$\tan \frac{1}{2} B = \frac{r}{s-b}$$

$$\tan \frac{1}{2} C = \frac{r}{s-c}$$

Area of a triangle:

$$\text{Area} = \frac{1}{2} ab \sin C$$

$$\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}$$

PRISMOIDAL FORMULA.

$$\text{Vol} = \frac{h}{6} (E+b+4M)$$

h = altitude; b, B = bases; M = midsection

TABLE III

INCHES AND FRACTIONS OF AN INCH IN DECIMALS OF A FOOT

	0	1	2	3	4	5	6	7	8	9	10	11
$\frac{1}{16}$	.0052	.0885	.1719	.2552	.3385	.4219	.5052	.5885	.6719	.7552	.8385	.9219
$\frac{2}{16}$	.0104	.0938	.1771	.2604	.3438	.4271	.5104	.5938	.6771	.7604	.8438	.9271
$\frac{3}{16}$	.0156	.0990	.1823	.2656	.3490	.4323	.5156	.5990	.6823	.7656	.8490	.9323
$\frac{4}{16}$	.0208	.1042	.1875	.2708	.3542	.4375	.5208	.6042	.6875	.7708	.8542	.9375
$\frac{5}{16}$	.0260	.1094	.1927	.2760	.3594	.4427	.5260	.6094	.6927	.7760	.8594	.9427
$\frac{6}{16}$	.0313	.1146	.1979	.2813	.3646	.4479	.5313	.6146	.6979	.7813	.8646	.9479
$\frac{7}{16}$	.0365	.1198	.2031	.2865	.3698	.4531	.5365	.6198	.7031	.7865	.8698	.9531
$\frac{8}{16}$	.0417	.1250	.2083	.2917	.3750	.4583	.5417	.6250	.7083	.7917	.8750	.9583
$\frac{9}{16}$	.0469	.1302	.2135	.2969	.3803	.4635	.5469	.6302	.7135	.7969	.8802	.9635
$\frac{10}{16}$	.0521	.1354	.2188	.3021	.3854	.4688	.5521	.6354	.7188	.8021	.8854	.9688
$\frac{11}{16}$	.0573	.1406	.2240	.3073	.3906	.4740	.5573	.6406	.7240	.8073	.8906	.9740
$\frac{3}{8}$	.0625	.1458	.2292	.3125	.3958	.4792	.5625	.6458	.7292	.8125	.8958	.9792
$\frac{5}{8}$	.0677	.1510	.2344	.3177	.4010	.4844	.5677	.6510	.7344	.8177	.9010	.9844
$\frac{7}{8}$	.0729	.1563	.2396	.3229	.4063	.4896	.5729	.6563	.7396	.8229	.9063	.9896
$\frac{15}{16}$	.0781	.1615	.2448	.3281	.4115	.4948	.5781	.6615	.7448	.8281	.9115	.9948
1	.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167	1.0000
	0	1	2	3	4	5	6	7	8	9	10	11

TABLE IV
USEFUL RELATIONS

Lineal feet	×.00019	= miles
Lineal yards	×.0006	= miles
Square inches	×.007	= square feet
Square feet	×.111	= square yards
Square yards	×.0002067	= acres
Acres	×4840	= square yards
Cubic inches	×.00058	= cubic feet
Cubic feet	×.03704	= cubic yards
Links	×.22	= yards
Links	×.66	= feet
Feet	×1.5	= links

$$360^\circ = 21600' = 1296000''$$

$$\text{Radius} = \text{arc of } 57.2957790^\circ$$

$$\text{Arc of } 1^\circ (\text{radius} = 1) = .017453292$$

$$\text{Arc of } 1' (\text{radius} = 1) = .000290888$$

$$\text{Arc of } 1'' (\text{radius} = 1) = .000004848$$

$$\pi = 3.141592654 \quad \sqrt{\frac{1}{4}} = 0.564190$$

$$\frac{\pi}{4} = 0.785398163 \quad \sqrt{\frac{6}{\pi}} = 1.240700982$$

$$\frac{\pi}{6} = 0.523598776 \quad \pi^2 = 9.869604401$$

$$\sqrt{\frac{4}{\pi}} = 1.128379167 \quad \frac{1}{\pi^2} = 0.101321184$$

$$\frac{\pi}{6} = 0.523598776 \quad \sqrt{\pi} = 1.772453851$$

$$\frac{4\pi}{3} = 4.188790205 \quad \frac{1}{\pi} = 0.3183099$$

Curvature of Earth's surface = about 0.7 feet in 1 mile

Curvature in feet = $0.667 (\text{Dist. in miles})^2$

Difference between arc and chord length, 0.05 feet in $11\frac{1}{2}$ miles

$$\text{Probable error of a single observation} = 0.6754 \sqrt{\frac{Mv^2}{n-1}}$$

Error in chaining of 0.01 feet in 100 feet:

Due to—

1. Length of tape error of 0.01 feet
2. Alignment. One end 1.4 feet out of line
3. Sag of tape at centre of 0.61 feet.
4. Temperature difference of 15°
5. Difference of pull of 15 lbs.

STADIA REDUCTION FORMULÆ.

$$\text{Horizontal Distance} = R - R \sin^2 a + C \cos a$$

$$\text{Vertical Distance} = R \frac{1}{2} \sin 2a + C \sin a$$

$$R = \text{Reading} \times \frac{\text{distance from Object glass to cross hairs}}{\text{distance between cross hairs}}$$

C = distance from Object glass to cross hairs + distance from Object glass to center of instrument.

a = angle of elevation for mid Reading

90 50
179 60
9 06

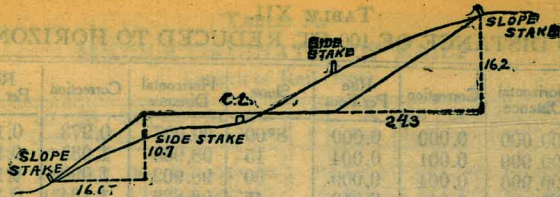
TABLE IX. TANGENTS AND EXTERNALS TO A 1° CURVE

I	T	E	I=70°	I	T	E	I=80°	I	T	E	I=90°
61°	3375.0	920.2	+	71°	4086.9	1308.2	+	81°	4893.6	1805.3	+
10'	3386.3	925.9		10'	4099.5	1315.6		10'	4908.0	1814.7	
20'	3397.5	931.6	5° C.	20'	4112.1	1322.9	5° C.	20'	4922.5	1824.1	5° C.
30'	3408.8	937.3	T	30'	4124.8	1330.3	T	30'	4937.0	1833.6	T
40'	3420.1	943.1	.25	40'	4137.4	1337.7	.30	40'	4951.5	1843.1	.36
50'	3431.4	948.9	E	50'	4150.1	1345.1	E	50'	4966.1	1852.6	E
62°	3442.7	954.8	.080	72°	4162.8	1352.6	.110	82°	4980.7	1862.2	.149
10'	3454.1	960.6		10'	4175.6	1360.1		10'	4995.4	1871.8	
20'	3465.4	966.5		20'	4188.5	1367.6		20'	5010.1	1881.5	
30'	3476.8	972.4		30'	4201.2	1375.2		30'	5024.8	1891.2	
40'	3488.3	978.3		40'	4214.0	1382.8		40'	5039.5	1900.9	
50'	3499.7	984.3		50'	4226.8	1390.4		50'	5054.3	1910.7	
63°	3511.1	990.2	10° C.	73°	4239.7	1398.0	10° C.	83°	5069.2	1920.5	10° C.
10'	3522.6	996.2	T	10'	4252.6	1405.7	T	10'	5084.0	1930.4	T
20'	3534.1	1002.3		20'	4265.6	1413.5		20'	5099.0	1940.3	
30'	3545.6	1008.3	.51	30'	4278.5	1421.2	.61	30'	5113.9	1950.3	.72
40'	3557.2	1014.4	E	40'	4291.5	1429.0	E	40'	5128.9	1960.2	E
50'	3568.7	1020.5	.159	50'	4304.6	1436.8	.220	50'	5143.9	1970.3	.299
64°	3580.3	1026.6		74°	4317.6	1444.6		84°	5159.0	1980.4	
10'	3591.9	1032.8		10'	4330.7	1452.5		10'	5174.1	1990.5	
20'	3603.5	1039.0		20'	4343.8	1460.4		20'	5189.3	2000.6	
30'	3615.1	1045.2		30'	4356.9	1468.4		30'	5204.4	2010.8	
40'	3626.8	1051.4		40'	4370.1	1476.4		40'	5219.7	2021.1	
50'	3638.5	1057.7		50'	4383.3	1484.4		50'	5234.9	2031.4	
65°	3650.2	1063.9	T	75°	4396.5	1492.4	T	85°	5250.3	2041.7	T
10'	3661.9	1070.2	.76	10'	4409.8	1500.5	.91	10'	5265.6	2052.1	1.09
20'	3673.7	1076.6		20'	4423.1	1508.6		20'	5281.0	2062.5	
30'	3685.4	1082.9		30'	4436.4	1516.7		30'	5296.4	2073.0	
40'	3697.2	1089.3	.240	40'	4449.7	1524.9	.332	40'	5311.9	2083.5	.450
50'	3709.0	1095.7		50'	4463.1	1533.1		50'	5327.4	2094.1	
66°	3720.9	1102.2		76°	4476.5	1541.4		86°	5343.0	2104.7	
10'	3732.7	1108.6		10'	4489.9	1549.7		10'	5358.6	2115.3	
20'	3744.6	1115.1		20'	4503.4	1558.0		20'	5374.2	2126.0	
30'	3756.5	1121.7		30'	4516.9	1566.3		30'	5389.8	2136.7	
40'	3768.5	1128.2	20° C.	40'	4530.4	1574.7	20° C.	40'	5405.6	2147.5	20° C.
50'	3780.4	1134.8	T	50'	4544.0	1583.1	T	50'	5421.4	2158.4	T
67°	3792.4	1141.4	1.02	77°	4557.6	1591.6	1.22	87°	5437.2	2169.2	1.45
10'	3804.4	1148.0	E	10'	4571.2	1600.1	E	10'	5453.1	2180.2	E
20'	3816.4	1154.7	.321	20'	4584.8	1608.6	.445	20'	5469.0	2191.1	.603
30'	3828.4	1161.3		30'	4598.5	1617.1		30'	5484.9	2202.2	
40'	3840.5	1168.1		40'	4612.2	1625.7		40'	5500.9	2213.2	
50'	3852.6	1174.8		50'	4626.0	1634.4		50'	5517.0	2224.3	
68°	3864.7	1181.6		78°	4639.8	1643.0		88°	5533.1	2235.5	
10'	3876.8	1188.4		10'	4653.6	1651.7		10'	5549.2	2246.7	
20'	3889.0	1195.2	25° C.	20'	4667.4	1660.5	25° C.	20'	5565.4	2258.0	25° C.
30'	3901.2	1202.0	T	30'	4681.3	1669.2	T	30'	5581.6	2269.3	T
40'	3913.4	1208.9	1.28	40'	4695.2	1678.1	1.53	40'	5597.8	2280.6	1.83
50'	3925.6	1215.8	E	50'	4709.2	1686.9	E	50'	5614.2	2292.0	E
69°	3937.9	1222.7	.403	79°	4723.2	1695.8	.558	89°	5630.5	2303.5	.756
10'	3950.2	1229.7		10'	4737.2	1704.7		10'	5646.9	2315.0	
20'	3962.5	1236.7		20'	4751.2	1713.7		20'	5663.4	2326.6	
30'	3974.8	1243.7		30'	4765.3	1722.7		30'	5679.9	2338.2	
40'	3987.2	1250.8		40'	4779.4	1731.7		40'	5696.4	2349.8	
50'	3999.5	1257.9		50'	4793.6	1740.8		50'	5713.0	2361.5	
70°	4011.9	1265.0	30° C.	80°	4807.7	1749.9	30° C.	90°	5729.7	2373.3	30° C.
10'	4024.4	1272.1	T	10'	4822.0	1759.0	T	10'	5746.3	2385.1	T
20'	4036.8	1279.3	1.54	20'	4836.2	1768.2	1.84	20'	5763.1	2397.0	2.20
30'	4049.3	1286.5	E	30'	4850.5	1777.4	E	30'	5779.9	2408.9	E
40'	4061.8	1293.6		40'	4864.8	1786.7		40'	5796.7	2420.9	
50'	4074.4	1300.9	.485	50'	4879.2	1796.0	.671	50'	5813.6	2432.9	.910

T = R tan 1/2 I E = R exsec 1/2 I

TABLE IX. TANGENTS AND EXTERNALS TO A 1° CURVE

I	T	E	I=100°	I	T	E	I=110°	I	T	E	I=120°
91°	5830.5	2444.9	+	101°	6950.6	3278.1	+	111°	8336.7	4386.1	+
10'	5847.5	2457.1		10'	6971.3	3294.1		10'	8362.7	4407.6	
20'	5864.6	2469.3	5° C.	20'	6992.0	3310.1	5° C.	20'	8388.9	4429.2	5° C.
30'	5881.7	2481.5	T	30'	7012.7	3326.1	T	30'	8415.1	4450.9	T
40'	5898.8	2493.8	.43	40'	7033.6	3342.3	.51	40'	8441.5	4472.7	.62
50'	5916.0	2506.1	E	50'	7054.5	3358.5	E	50'	8468.0	4494.6	E
92°	5933.2	2518.5	.200	102°	7075.5	3374.9	.268	112°	8494.6	4516.6	.360
10'	5950.5	2531.0		10'	7096.6	3391.2		10'	8521.3	4538.8	
20'	5967.9	2543.5		20'	7117.8	3407.7		20'	8548.1	4561.1	
30'	5985.3	2556.0		30'	7139.0	3424.3		30'	8575.0	4583.4	
40'	6002.7	2568.6		40'	7160.3	3440.9		40'	8602.1	4606.0	
50'	6020.2	2581.3		50'	7181.7	3457.6		50'	8629.3	4628.6	
93°	6037.8	2594.0	10° C.	103°	7203.2	3474.4	10° C.	113°	8656.6	4651.3	10° C.
10'	6055.4	2606.8	T	10'	7224.7	3491.3	T	10'	8684.0	4674.2	T
20'	6073.1	2619.7	.36	20'	7246.3	3508.2	.43	20'	8711.5	4697.2	.51
30'	6090.8	2632.6	E	30'	7268.0	3525.2	E	30'	8739.2	4720.3	E
40'	6108.6	2645.5	.401	40'	7289.8	3542.4	.51	40'	8767.0	4743.3	.62
50'	6126.4	2658.5		50'	7311.7	3559.6	.536	50'	8794.9	4766.9	.721
94°	6144.3	2671.6		104°	7333.6	3576.8		114°	8822.9	4790.4	
10'	6162.2	2684.7		10'	7355.6	3594.2		10'	8851.0	4814.1	
20'	6180.2	2697.9		20'	7377.8	3611.7		20'	8879.3	4837.8	
30'	6198.3	2711.2		30'	7399.9	3629.2		30'	8907.7	4861.7	
40'	6216.4	2724.5		40'	7422.2	3646.8		40'	8936.3	4885.7	
50'	6234.6	2737.9	15° C.	50'	7444.6	3664.5	15° C.	50'	8965.0	4909.9	15° C.
95°	6252.8	2751.3	T	105°	7467.0	3682.3	T	115°	8993.8	4934.1	T
10'	6271.1	2764.8	1.30	10'	7489.6	3700.2	1.56	10'	9022.7	4958.6	1.93
20'	6289.4	2778.3	E	20'	7512.2	3718.2	E	20'	9051.7	4983.1	E
30'	6307.9	2792.0	.604	30'	7534.9	3736.2	.806	30'	9080.9	5007.8	1.09
40'	6326.3	2805.6		40'	7557.7	3754.4		40'	9110.3	5032.6	
50'	6344.8	2819.4		50'	7580.5	3772.6		50'	9139.8	5057.6	
96°	6363.4	2833.2		106°	7603.5	3791.0		116°	9169.4	5082.7	
10'	6382.1	2847.0		10'	7626.6	3809.4		10'	9199.1	5107.9	
20'	6400.8	2861.0		20'	7649.7	3827.9		20'	9229.0	5133.3	
30'	6419.5	2875.0	20° C.	30'	7672.9	3846.5	20° C.	30'	9259.0	5158.8	20° C.
40'	6438.4	2889.0	T	40'	7696.3	3865.2	T	40'	9289.2	5184.5	T
50'	6457.3	2903.1		50'	7719.7	3884.0		50'	9319.5	5210.3	
97°	6476.2	2917.3	1.74	107°	7743.2	3902.9	2.08	117°	9349.9	5236.2	2.52
10'	6495.2	2931.6	E	10'	7766.8	3921.9	E	10'	9380.5	5262.3	E
20'	6514.3	2945.9	.809	20'	7790.5	3940.9	1.08	20'	9411.3	5288.6	1.46
30'	6533.4	2960.3		30'	7814.3	3960.1		30'	9442.2	5315.0	
40'	6552.6	2974.7		40'	7838.1	3979.4		40'	9473.2	5341.5	
50'	6571.9	2989.2		50'	7862.1	3998.7		50'	9504.4	5368.2	
98°	6591.2	3003.8		108°	7886.2	4018.2		118°	9535.7	5395.1	
10'	6610.6	3018.4		10'	7910.4	4037.8		10'	9567.2	5422.1	
20'	6630.1	3033.1	25° C.	20'	7934.6	4057.4	25° C.	20'	9598.9	5449.2	25° C.
30'	6649.6	3047.9	T	30'	7959.0	4077.2	T	30'	9630.7	5476.5	T
40'	6669.2	3062.8	2.18	40'	7983.5	4097.1	2.61	40'	9662.6		



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1 1/2 TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0 00	0 15	0 30	0 45	0 60	0 75	0 90	1 05	1 20	1 35	0
1	1 50	1 65	1 80	1 95	2 10	2 25	2 40	2 55	2 70	2 85	1
2	3 00	3 15	3 30	3 45	3 60	3 75	3 90	4 05	4 20	4 35	2
3	4 50	4 65	4 80	4 95	5 10	5 25	5 40	5 55	5 70	5 85	3
4	6 00	6 15	6 30	6 45	6 60	6 75	6 90	7 05	7 20	7 35	4
5	7 50	7 65	7 80	7 95	8 10	8 25	8 40	8 55	8 70	8 85	5
6	9 00	9 15	9 30	9 45	9 60	9 75	9 90	10 05	10 20	10 35	6
7	10 50	10 65	10 80	10 95	11 10	11 25	11 40	11 55	11 70	11 85	7
8	12 00	12 15	12 30	12 45	12 60	12 75	12 90	13 05	13 20	13 35	8
9	13 50	13 65	13 80	13 95	14 10	14 25	14 40	14 55	14 70	14 85	9
10	15 00	15 15	15 30	15 45	15 60	15 75	15 90	16 05	16 20	16 35	10
11	16 50	16 65	16 80	16 95	17 10	17 25	17 40	17 55	17 70	17 85	11
12	18 00	18 15	18 30	18 45	18 60	18 75	18 90	19 05	19 20	19 35	12
13	19 50	19 65	19 80	19 95	20 10	20 25	20 40	20 55	20 70	20 85	13
14	21 00	21 15	21 30	21 45	21 60	21 75	21 90	22 05	22 20	22 35	14
15	22 50	22 65	22 80	22 95	23 10	23 25	23 40	23 55	23 70	23 85	15
16	24 00	24 15	24 30	24 45	24 60	24 75	24 90	25 05	25 20	25 35	16
17	25 50	25 65	25 80	25 95	26 10	26 25	26 40	26 55	26 70	26 85	17
18	27 00	27 15	27 30	27 45	27 60	27 75	27 90	28 05	28 20	28 35	18
19	28 50	28 65	28 80	28 95	29 10	29 25	29 40	29 55	29 70	29 85	19
20	30 00	30 15	30 30	30 45	30 60	30 75	30 90	31 05	31 20	31 35	20
21	31 50	31 65	31 80	31 95	32 10	32 25	32 40	32 55	32 70	32 85	21
22	33 00	33 15	33 30	33 45	33 60	33 75	33 90	34 05	34 20	34 35	22
23	34 50	34 65	34 80	34 95	35 10	35 25	35 40	35 55	35 70	35 85	23
24	36 00	36 15	36 30	36 45	36 60	36 75	36 90	37 05	37 20	37 35	24
25	37 50	37 65	37 80	37 95	38 10	38 25	38 40	38 55	38 70	38 85	25
26	39 00	39 15	39 30	39 45	39 60	39 75	39 90	40 05	40 20	40 35	26
27	40 50	40 65	40 80	40 95	41 10	41 25	41 40	41 55	41 70	41 85	27
28	42 00	42 15	42 30	42 45	42 60	42 75	42 90	43 05	43 20	43 35	28
29	43 50	43 65	43 80	43 95	44 10	44 25	44 40	44 55	44 70	44 85	29
30	45 00	45 15	45 30	45 45	45 60	45 75	45 90	46 05	46 20	46 35	30
31	46 50	46 65	46 80	46 95	47 10	47 25	47 40	47 55	47 70	47 85	31
32	48 00	48 15	48 30	48 45	48 60	48 75	48 90	49 05	49 20	49 35	32
33	49 50	49 65	49 80	49 95	50 10	50 25	50 40	50 55	50 70	50 85	33
34	51 00	51 15	51 30	51 45	51 60	51 75	51 90	52 05	52 20	52 35	34
35	52 50	52 65	52 80	52 95	53 10	53 25	53 40	53 55	53 70	53 85	35
36	54 00	54 15	54 30	54 45	54 60	54 75	54 90	55 05	55 20	55 35	36
37	55 50	55 65	55 80	55 95	56 10	56 25	56 40	56 55	56 70	56 85	37
38	57 00	57 15	57 30	57 45	57 60	57 75	57 90	58 05	58 20	58 35	38
39	58 50	58 65	58 80	58 95	59 10	59 25	59 40	59 55	59 70	59 85	39
40	60 00	60 15	60 30	60 45	60 60	60 75	60 90	61 05	61 20	61 35	40
41	61 50	61 65	61 80	61 95	62 10	62 25	62 40	62 55	62 70	62 85	41
42	63 00	63 15	63 30	63 45	63 60	63 75	63 90	64 05	64 20	64 35	42
43	64 50	64 65	64 80	64 95	65 10	65 25	65 40	65 55	65 70	65 85	43
44	66 00	66 15	66 30	66 45	66 60	66 75	66 90	67 05	67 20	67 35	44
45	67 50	67 65	67 80	67 95	68 10	68 25	68 40	68 55	68 70	68 85	45
46	69 00	69 15	69 30	69 45	69 60	69 75	69 90	70 05	70 20	70 35	46
47	70 50	70 65	70 80	70 95	71 10	71 25	71 40	71 55	71 70	71 85	47
48	72 00	72 15	72 30	72 45	72 60	72 75	72 90	73 05	73 20	73 35	48
49	73 50	73 65	73 80	73 95	74 10	74 25	74 40	74 55	74 70	74 85	49
50	75 00	75 15	75 30	75 45	75 60	75 75	75 90	76 05	76 20	76 35	50

Computed by L. Leland Locke.

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