1864

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning
Roadway 16 feet wide. Side Slopes 1 on 1.
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be 30.6+(20—16)÷2 or 2 ft. added to 30.6 =32.6. For slopes of 1 on 1½ see inside of back cover.

INDEXED
to page #46

This Field Book is manufactured of a High Grade 50% Rag Paper having a WATER RESISTING SURFACE, and is sewed with Bing Special Enamel Waterproof thread.

Made in U. S. A.

7 - 11 Alley Blk 273 Pac. Beach

12 - 19 Oliver - Gresham to Ingraham

20 24 Alley Blk 125 Pacific Beach

25 - 31 - Prop. Drain - Survey - N. end of 4th

32 - 34 - Survey & Topo - Prop Fire Sta. Ebers Voltaire &

35 - 39 - " Lot Drain #4264 Menlo

50 - 56 - Cross Sec. Alley Blk 107 Mission Beach

57 - 61 Cross Sec. Alley Blk 100 Mission Beach

61 -67 Cross Sec. Alley Blk 96 Mission Beach

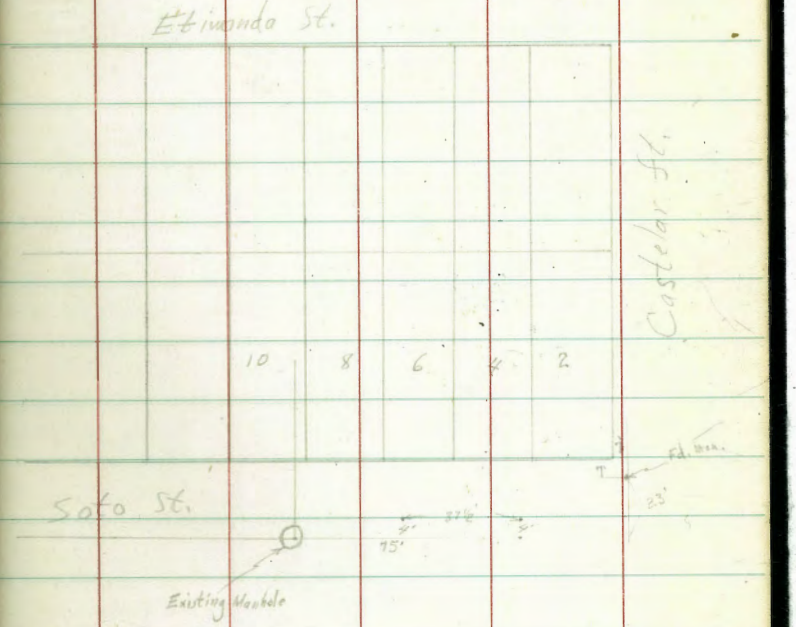
68 X-Sec Oliver - Gresham to Ingraham

Extend Sewer from Manhole on Soto St. between Castelar and Green. St. staked for Construction

6-21-48

Roberts
Greer
Rover

(0.5% Grade)



0+75

0+37.5

0+00 Center of Existing Manhole

8.01 108.01

BM Assumed Flow Line of Sewer

Note

100.80'

100.38
7.63
5.33
C-2.30

100.19
7.82
1.15
C-3.67

100.00

108.01

Block 189

3

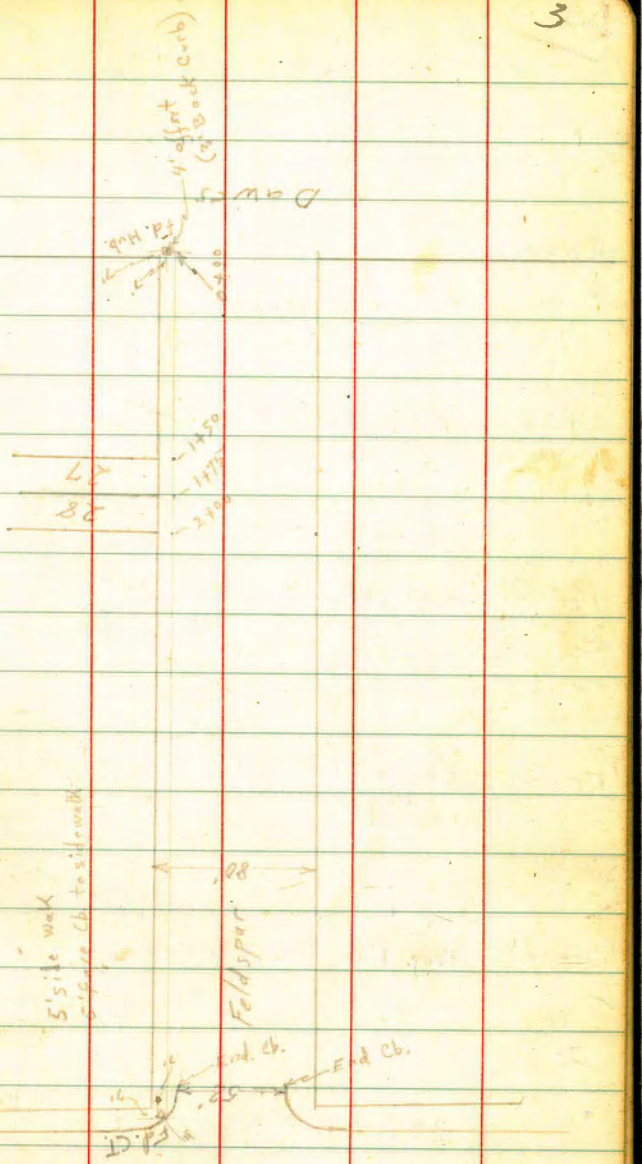
6-25-48

Set Curb grade stakes for

Lots 27 + 28 - Block 189 Pacific Beach

W.O. # 21018

Roberts
Greer
Roger



						Lt.	℄	Rt.		
					Foldspar Gd. Map #148					
Check			6.41	34.01	= 34.00					
2+00	End Lot 28							34.00 2.92 31.08 0		Creek
1+75	End Lot 27 Begin Lot 28							37.25 3.17 34.08 0		Branch of
1+50	Begin Lot 27							37.50 3.42 34.08 0		
0+00	Prop. line Dawes + Foldspar									
	2.92	40.42					40.42			
T.P.	11.11	43.65 -	6.15	37.50						
B.M.	N.W. B.P. Garnet and Dawes				32.54					

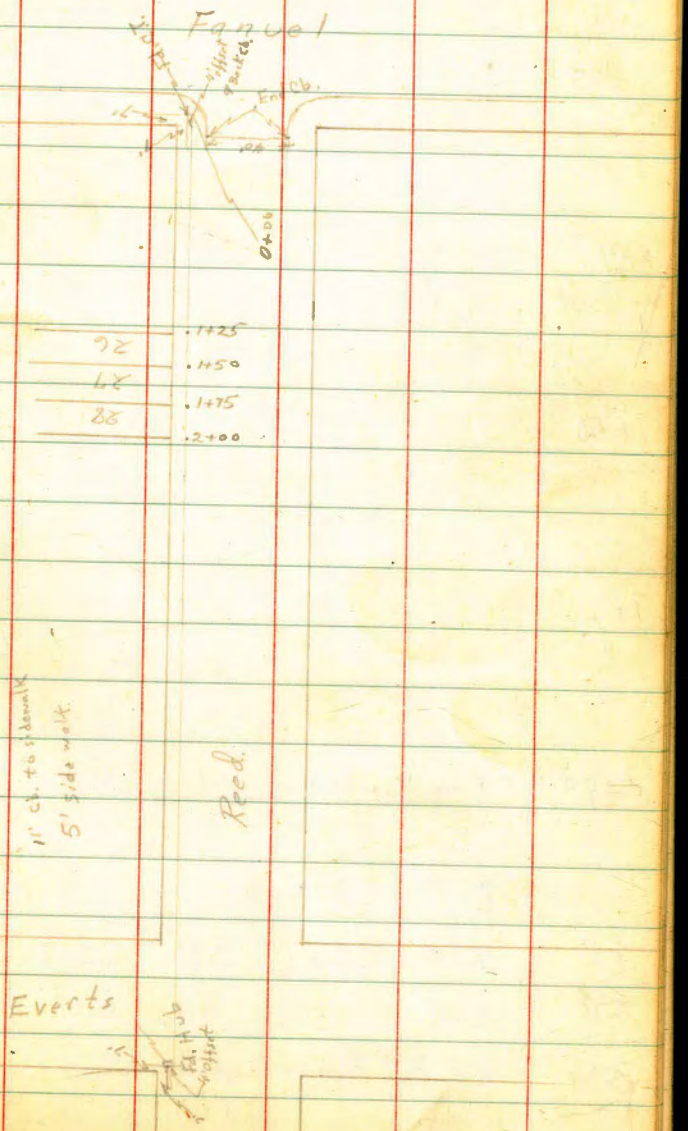
Set Curb grade stakes for

Lots 26, 27 & 28 - Block 266 Pacific Beach

W.O. # 2018

6-25-48
Roberts
Greer
Roet

INDEXED



					B.P. Pac. Bch. and Gresham
Check	6.87	23.22	2.06	21.16	= 21.19
T.P.	1.17	23.29	6.94	16.35	
T.P.			8.68	22.12	
2+00					
1+75					
1+50					
1+25					
0+00	Prop. line Fanuel and Everts				
	8.63	30.80			
T.P.	7.50	22.87	0.70	22.17	
T.P.	2.11	23.30	7.93	15.37	
BM	N.W. B.P. Pacific Beach and Gresham				21.19

Lt.	℄	Rt.
	23.08 9.72 7.02 C-0.70	9. Back of Curb
	23.42 7.38 6.66 C-0.72	
	23.76 7.04 6.49 C-0.55	
	24.10 6.70 5.85 C-0.85	
	30.80	

Cross section

Alley Blk. 273 Pac. Beach

W.O.# 25001

7-14-48

Sommermeyer
McCoy
Melton

■ = Fd. Mon
● = " L.+ Disk
○ = " L+T.
■ set 2X2 + Disk
• = " Nail in Pave.

All distances chained.

Benches From FB 1824 / 3

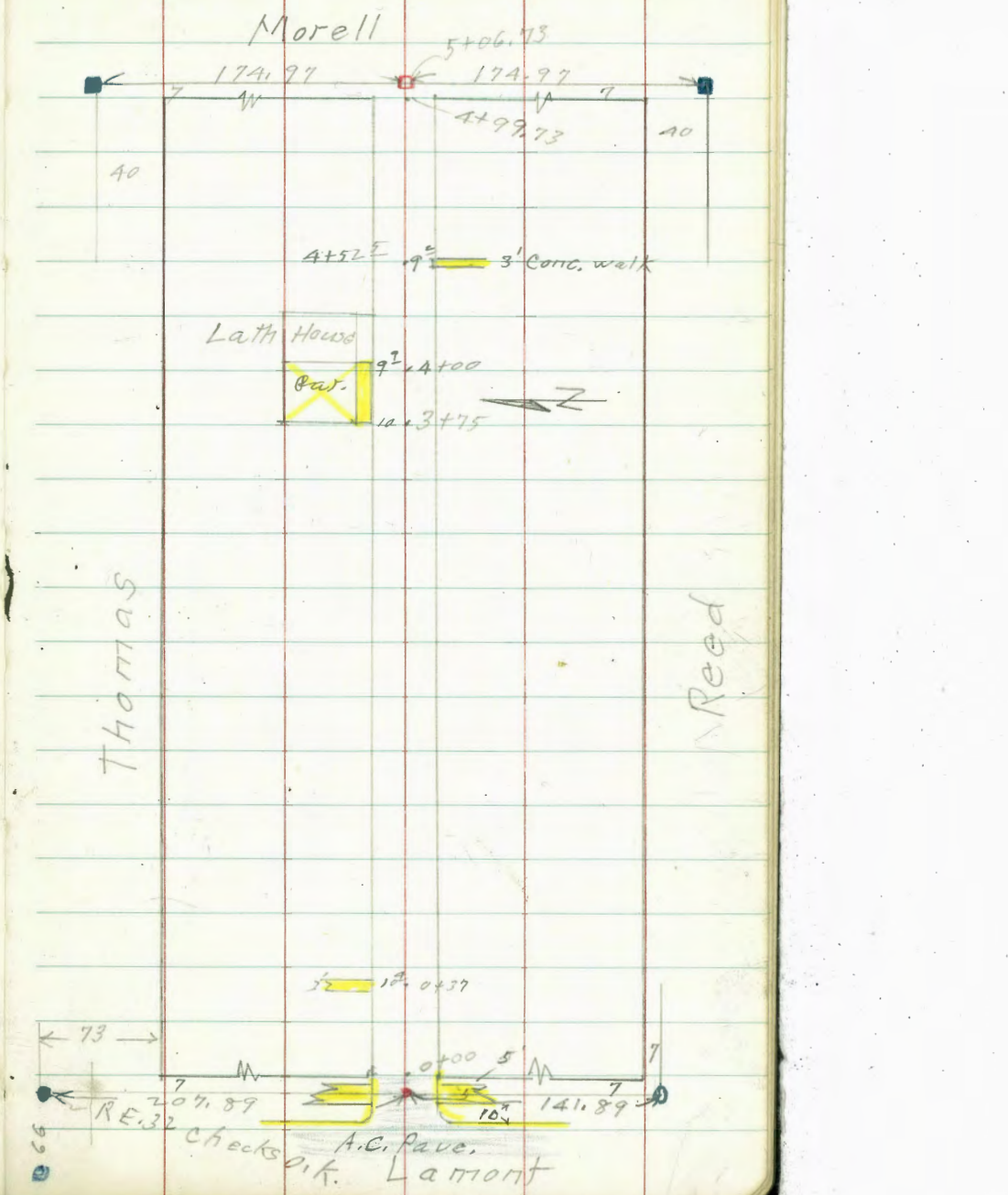
BM #1
Reed + Lamont S.E. 7' L+T = 40.37

BM #2
Chiseled □. East end of N. E Return
Thomas + Lamont = 41.76

BM. #3
Lamont + Grand N.W.B.F. 50.55

INDEXED
JUL 20 1948

7



Alley Blk. 273 Pac. Beach

INDEXED

0+37	10^{a} Lt. = ± 3' wide Conc. walk			
0+01				
0+00	= Ely. line Lamont = End pavement			
0-17	= E.C. Alley Ch Returns			
0-20	= Ely. Cb. Lamont			
0-20^{1}	= Ely gutter line Lamont			
BM#2 P.7	3.17	44.93	—	41.76

38.04	37.72	37.63	37.55	36.73	37.03		
6.87 / 20 walk	7.11 / 10a walk	7.3 / 10	8.2	8.2 / 10	7.9 / 18 At house		
	39.93	39.83	39.73	39.59			
	5.0 / 25	5.10 / 10	5.2	5.4 / 10	5.4 / 25		
40.75	40.46	40.25	39.96	40.16	40.34	39.73	
4.18 / 11 Ord.	4.47 / 10 End Cb.	4.68 / 10 C	4.97	4.77 / 10 C	4.57 / 10 End Cb.	5.2 / 11 Ord	
	40.22	39.86		39.73	40.10		
	4.71 / 10 Cb. EC	5.07 / 10 C		5.20 / 10 C	4.83 / 10 Cb. E.C.		
40.55	40.81	40.23		40.16	40.03	39.85	
4.38 / 100	4.62 / 50	4.70 / 13 Cb. B.C.		4.77 / 13 Cb. B.C.	4.90 / 50	5.08 / 100	
40.09	39.84	39.69	39.69	39.79	39.66	39.64	39.55	39.36
4.84 / 100	5.09 / 50	5.24 / 13	5.24 / 10	5.14	5.27 / 10	5.29 / 13	5.38 / 50	5.57 / 100

44.93

	Alley Blk 273	P.B.		
T.P.	5.05	39.62	2.19	34.57
3+00				
2+50				
2+00				
1+50				
T.P.	4.58	36.76	12.75	32.18
1+00				
0+75				
		44.93		

INDEXED

35.26	34.96	34.56	34.26	32.76	26.26	26.16
1.5 / 40	1.8 / 10	2.2	2.5 / 10	4.0 / 50	10.5 / 145	10.3 / 175 ℄ Reed
35.26	31.76	31.66	30.86	27.26	26.96	
1.5 / 50	5.0 / 10	5.1	5.9 / 10	9.5 / 100	9.8 / 175 ℄ Reed	
30.16	29.86	29.56	29.56	27.96	28.96	27.36
6.0 / 60	6.7 / 10	7.2	7.2 / 10	8.8 / 90	7.8 / 115	9.4 / 175 ℄ Reed
30.96	30.76	30.46	30.76	29.46		
5.8 / 60	6.0 / 10	5.7	6.0 / 10	7.3 / 60		
		36.76				
32.63	32.63	32.03	32.03	32.93		
12.3 / 60	12.3 / 10	12.9	14.9 / 10	12.0 / 60		
34.53	34.63	33.93	34.63	35.13		
10.4 / 60	10.3 / 10	11.0	10.3 / 10	9.8 / 60		
		44.93				

Alley Blk. 273 · Pac. Beach

INDEXED

T.P. 4+99.73 = W. Line Morell

3+00

T.P. 3.31 38.11 4.82 34.80

2+50 4+52.5 9.2 Rt. = ℄ 3' wide Conc. Walk

2+00 4+50

1+50 4+00 9.2 Lt. = End Conc. Apron to double Gar.

T.P.

1+00 3+75 To double Gar. Conc. Floor. 10° Lt. = Start Conc. Apron

.0+75 3+50

39.62

35.31 35.31 34.71 34.41 32.91

2.8/75 3.1/10 3.4 3.7/10 5.2/75

38.11

34.82 34.98 34.87

4.80/9.2 4.64/10.3 4.75/20

35.02 34.72 34.62

4.6/10 4.9 5.0/10

35.11 35.32 34.82 34.52 33.42

3.94/13 Gar. Floor 4.30/9.9 Apron 4.8 5.1/10 6.2/60

35.18 35.02

3.94/13 Gar. Floor 4.40/10 Apron

35.32 35.02 34.92 34.62 32.32 29.12 26.32

4.3/50 4.6/10 4.7 5.0/10 7.3/75 10.5/13.5 13.3/17.5 ℄ Reed

39.62

Alley Blk 273 - Pac. Beach

INDEXED

B.M. #1 P. 7			2.10	40.35	40.35
T.P.	11.11	42.45	0.91	31.34	
T.P.	3.19	32.25	9.05	29.06	
& More N					
		38.11			

34.81 34.11 33.91 33.61 32.01

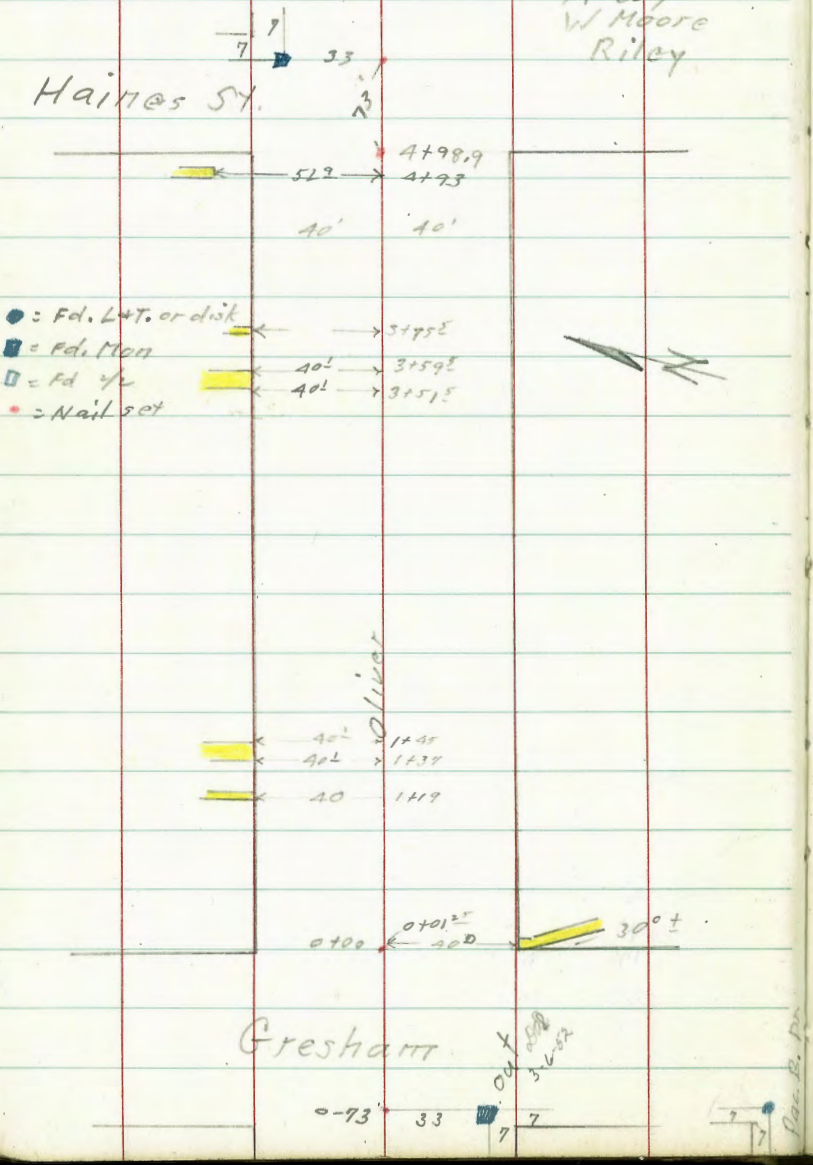
3.3/75 4.0/10 4.2 4.5/10 6.1/75

38.11

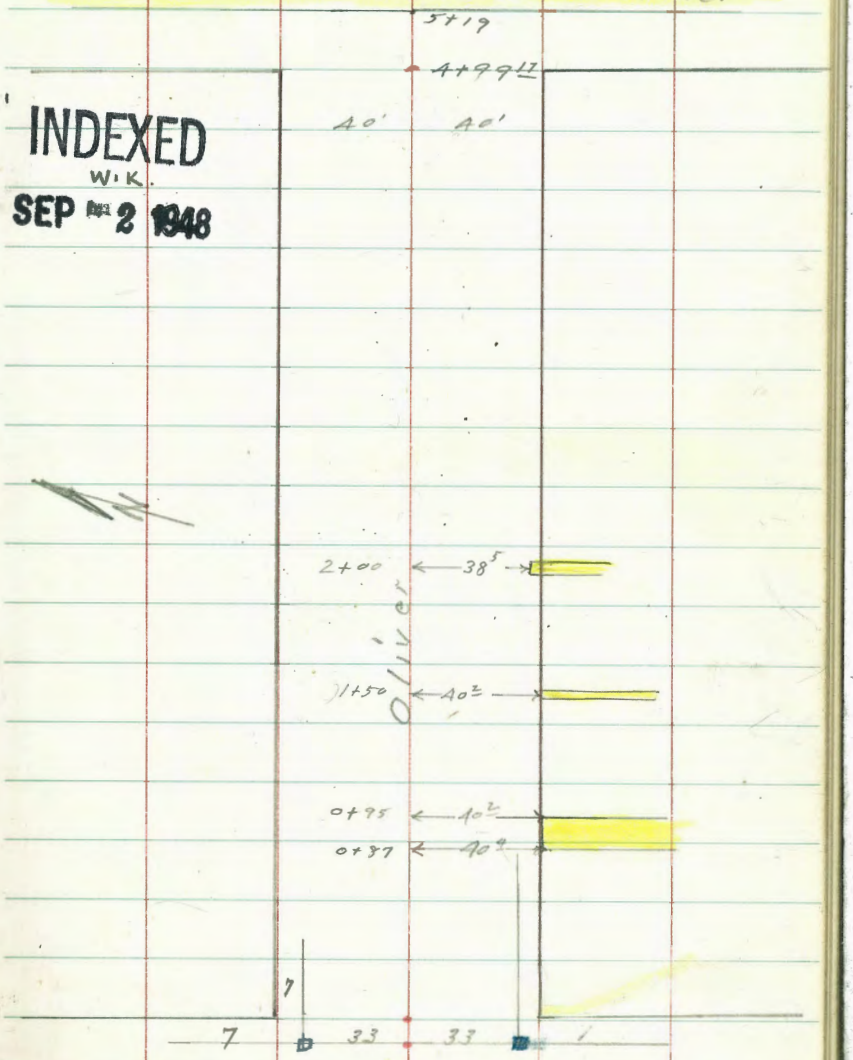
Oliver { Gresham to Ingraham

W.O. 2500-X - Sec. for grade Est.

Sommermeyer
McCoy
W Moore
Riley



5+49L Fd. L+T.
T. R sheet 1609
INGRAHAM. Conc. Pave.



Oliver X-Sec.

INDEXED

1+19 40' Lt. = ℄ 3' wide Conc. walk

1+00

0+50

0+01.25 = 40' Rt. = ℄ 2½' wide Conc. walk

0+00 = East line Gresham

0-10 = ℄ Gresham

BM #1 =
N.W.B.R 9.42 30.61 — 21.19 Pacific Beach Dr. + Gresham

℄

13

26.98 — 3.63 / 41 ± walk at steps To porch

26.61 — 4.00 / 40 ± walk

27.01 — 3.6 / 100

26.11 — 4.5 / 40

26.11 — 4.5

25.51 — 5.1 / 40

24.71 — 5.9 / 100

26.21 — 4.4 / 40

25.71 — 4.7

25.11 — 5.5 / 40

25.42 — 5.19 / 40 ± walk

25.38 — 5.23 / 42 ± walk at ∆ ∆ Aprox. 30° to East

27.31 — 3.3 / 100

26.51 — 4.1 / 40

26.01 — 4.6

25.31 — 5.3 / 40

24.71 — 5.9 / 100

27.21 — 3.4 / 100

26.21 — 4.4 / 40

25.71 — 4.9

25.11 — 5.5 / 40

24.31 — 6.3 / 100

30.61

Oliver

INDEXED

3+00				
2+50				
T.P.	12.09	42.06	0.64	29.97
2+00				
1+50				
1+45	40 L Lt.: S.E. Cor. Same			
1+37	40 L Lt.: S.W. Cor. Conc. Dr.			

30.61

34.96 35.16 35.06 34.56 34.56 34.06 35.16 34.66 34.56

7.1/100 6.9/40 7.0/20 7.5/17 7.5 8.0/13 6.9/16 7.4/40 7.7/100

31.36 31.16 30.86 30.86 30.56 31.16 30.86

10.7/40 10.9/20 11.2/16 11.2 11.5/17 10.9/17 11.2/40

42.06

29.11 28.61 28.11 28.01 28.01

1.5/100 2.0/40 2.5 2.6/40 2.6/100

27.01 26.81 26.11

3.6/40 3.8 4.5/40

27.16 26.88

3.45/58 on Dr. 3.73/40 L Drive

27.15 26.84

3.46/58 on Dr. 3.77/40 L Drive

Oliver St.

INDEXED

4+93	52 Lt. = ℄ 2.8' Wide Conc. walk			
4+50				
T.P.	8.01	49.05	1.02	41.04
4+00				
3+75	39 Lt. = ℄ 2.5' Wide Conc. walk.			
3+39.5	40 Lt. = S.E. Cor. Conc. Dr.			
		40 ± 5.0' Dr.		
3+51.5	40 Lt. = S.W. Cor. Conc. Dr.			
3+50				
		42.06		

				℄					
		44.07							
		4.98							
		52 ? walk							
		42.85		41.95	41.65	41.45	41.95	41.95	
		6.2		7.1	7.4	7.6	7.1	7.1	
		40		17	49.05	12	14	40	
41.46	41.06	41.06		40.06	39.76	40.26	40.26	39.56	
0.6	1.0	1.0		2.0	2.3	1.8	1.8	2.5	
100	40	30			11	13	40	100	
	40.19	40.03							
	1.87	2.03							
	50 on walk	37.9 walk							
40.61	39.35	39.27							
1.45	2.71	2.79							
57 At Cor.	54	40 ?							
40.59	39.18	39.04							
1.47	2.88	3.02							
67 At Cor.	54	40 ?							
38.26	38.46	38.46	37.86	37.76	39.06	38.06	37.76		
3.8	3.6	3.6	4.2	4.3	5.0	4.0	4.3		
65	40	20	17	42.06	10	15	40		

Oliver

INDEXED

1+00

0+95 $40^{\pm}$ Rt = N.E. Cor. Conc. Dr.

0+87 $40^{\pm}$ Rt. = N.W. Cor. Conc. Dr. shots on drive

0+50

=0+00

$4+78^{9}_{-}$ = E. line Haines

$4+38^{9}_{-}$ = ℄ Haines

$4+98^{9}_{-}$ = W. line Haines

49.05

44.75 44.65 44.35 44.45 44.65 45.65 47.25

4.3/100 4.4/40 4.7/20 4.6 4.4/25 3.4/40 1.8/100

45.58 45.87 46.39

3.47/40± 3.18/42 2.166/60

45.42 45.86 46.34

3.63/40± 3.19/42 2.71/60

44.65 44.05 44.25 44.15 44.85

4.4/40 5.0/20 4.8 4.9/25 4.2/40

44.35 44.05 44.15 44.05 44.25 44.85 44.75 45.85

4.7/100 5.0/40 4.9/5 5.0 4.8/25 4.2/32 4.3/40 3.7/100

44.25 43.55 43.15 43.25 44.25

4.8/100 5.5/40 5.9 5.8/40 4.8/100

44.55 43.85 42.85 42.95 42.65 43.15 43.15 43.35

4.5/100 5.2/20 6.2/12 6.1 6.4/13 5.9/15 5.9/40 5.7/100

49.05

Oliver

INDEXED

3+50				
3+00				
2+50				
2+00	Cont.			
2+00	38$^{\pm}$ Rt. = ± 3' wide Conc. walk			
T.P.	10.20	56.81	2.44	46.61
1+50	40± Rt. = ± 3' wide Conc. walk			
		49.05		

				50.71	52.01		53.01		
				6.1/40	4.8		3.8/40		
		48.01		49.41	50.71		51.01	51.91	53.81
		8.8/100		7.4/40	6.1		5.8/15	4.9/40	3.0/100
		47.51		44.91	48.51		48.71	50.61	
		9.3/40		9.1/25	8.3		8.1/13	6.1/40	
								48.67	
								8.14/50 walk	
46.71	45.31	45.81	46.01	46.71			46.71	48.01	48.12	48.20
11.1/100	11.5/70	11.0/40	10.8/40	10.1			10.1/13	8.8/38	8.65/38.5 walk	8.61/40
				56.81						
		44.95	44.85	45.35			45.65	46.45	46.72	44.39
		4.1/40	4.2/24	3.7			3.4/25	2.6/40	2.33/40± walk	1.66/56
				49.05						

INDEXED

Oliver

Cont. on P. 19

5+49 17	= L+T, on ℄	8.71	48.10	shown as 47.99 in 1721/3
5+39	= ℄ Paving			
5+19	= W. Edge paving			
5+05				
4+99 17	= W. Line Ingraham			
4+50				
4+00				

56.81

℄

47.30	48.07	48.02	48.04	48.01	47.97	47.65	
9.51/100	8.77/40	8.79/20	8.77	8.80/20	8.84/40	9.16/100	
46.71	47.42	47.42	47.44	47.38	47.35	47.09	
10.10/100	9.37/40	9.39/20	9.37	9.48/20	9.46/40	9.72/100	
46.71		47.61	47.91	48.21	47.91		
10.1/100		9.2/40	8.9	8.6/40	8.9/100		
49.31	51.11	52.11	48.31	48.51	51.91	51.51	51.81
7.5/100	5.1/40	4.7/22	8.5	8.3/17	4.9/24	5.3/40	5.0/100
	51.81	52.71	51.81	51.81	52.81	52.61	
	5.0/40	4.1/7	5.10/4	5.0	5.10/16	4.0/26	4.2/40
	49.61	51.61	52.41	52.91	53.81	54.61	
	7.2/100	5.2/40	4.4	3.9/15	3.0/40	2.2/100	

56.81

Bench check
Oliver St.

INDEXED

				0.02	
Orig B.M. P. 13			11.38	21.21	(Should be 21.19)
T.P.	0.55	32.59	12.72	32.04	
T.P.	0.48	44.76	9.90	44.28	
5+29.17 L+T. From Page 18	6.08	54.18	—	48.10	Shown as 47.99

X-Sect. 20' Alley in Block 125-

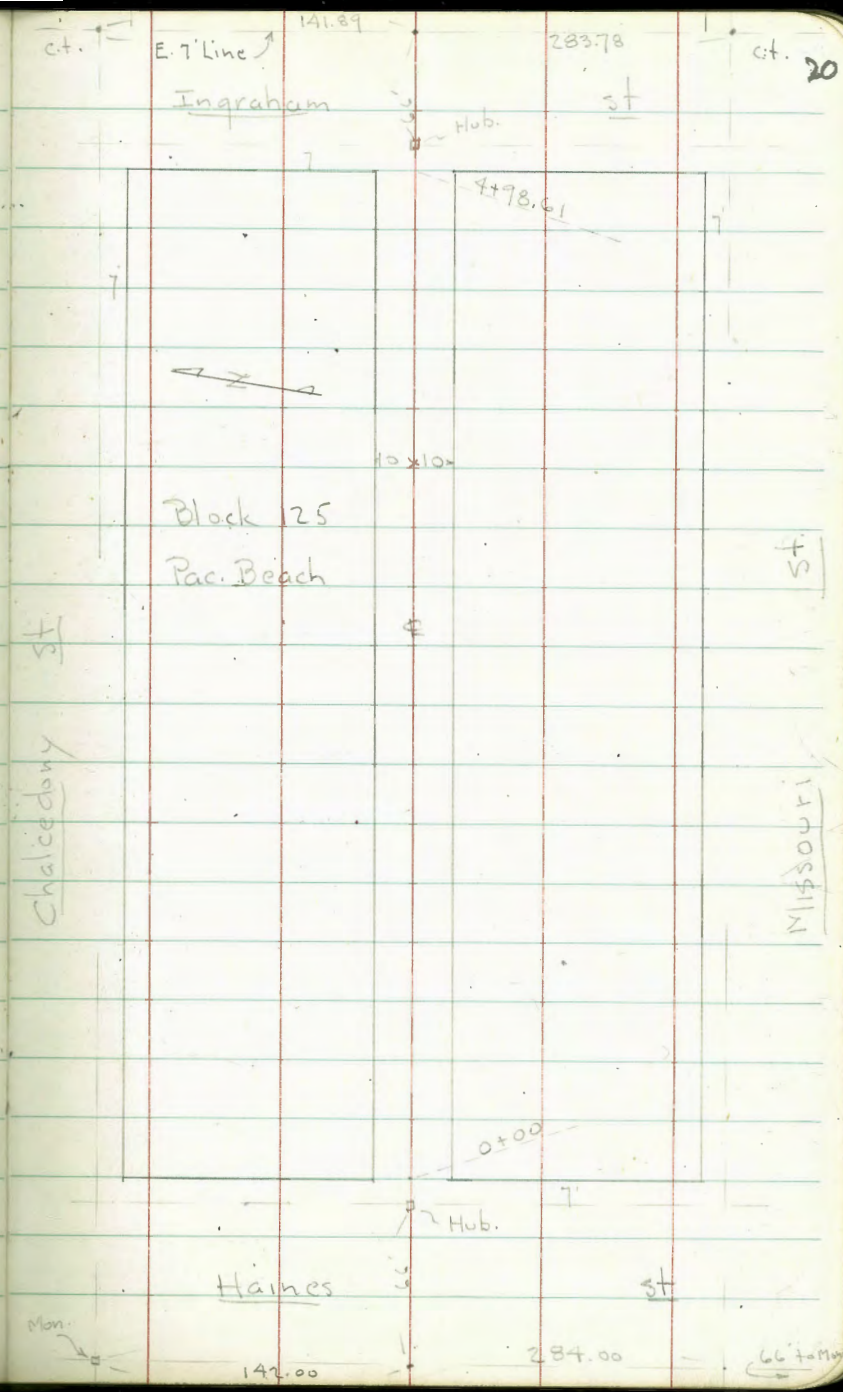
INDEXED
W. K.
OCT 1 1948

2632

W.O. 25001

9-30-48

Osborne
Hardin
Decker
Hatch



X-Sect. 20' Alley in Block 125 - Pac. Beach for Grade Est. only.

INDEXED

					Lt.	℄	Rt.
1+50					3.92 15 on Conc	4.06 4.7 4.6 4.8 10.1 10 15 edge apron	
1+00					4.00 15 on Conc	4.20 4.7 5.0 5.3 10.1 10 15 edge Conc.	
0+99	9.2' Lt. = Nly. P. pole		PA1517				
0+50					4.52 15 = ℄ Walk Bet Garages	4.65 5.3 5.5 5.6 10.1 = 10 15 edge apron	
	14.9 Lt. =	With walk Between			4.09 14.9 = floor		
0+04 =	Beg. Row of Gararges - 4 to a unit						
	along row of Gararges - Continous						
0+00 =	E.L. Haines - 10.1 Lt. = Beg. Conc. Apron				4.41 20 Wedge Conc	4.70 4.9 5.4 5.6 5.8 10.1 10 10 15 Top Conc.	
0-20 =	E. cb. Haines - Graded - Dirt.					4.1 5.0 5.4 5.6 6.4 50 10 10 50	
B.M	0.94	92.43	91.49	S.W.7' Mon chalcedony ↑Haines		92.43	

	Lt.		#		Rt	
3+52 - 14.5 Rt. = Wly. Gar.						8.26 14.5 floor.
3+50 - 10.1 Lt. = Nly. P. pole # PA. 15 51	8.5 15	8.5 10	8.8	8.9 10	3.81 10.4 edge apron	
- Conc floor						
3+49 - 10.4 Rt. = Beg. Conc. apron to Doub. Gar.					8.88 10.4 Cor.	8.94 15 = along edge
3+00	9.4 15	9.3 10	9.5	9.5 10	9.6 15	
2+99 - 10.1 Lt. = end Conc. apron	8.94 30 8.96 15 along edge	9.06 10.1 = Cor. Conc.				
2+95 = 14.7 Lt. = end of Last Gar. Unit	9.07 14.7 = floor.					
T.P. 9.87 98.61 3.69 88.74		98.61				
2+50	3.02 15 on Conc.	3.20 10.1 edge apron	3.6	4.0 10	4.2 15	
2+50 - 7.4 Lt. = Nly. P. pole # P 1541						
2+00	3.60 15 on Conc.	3.92 10.1 edge apron	4.5	4.8 10	4.8 15	
		92.43				

4+98.61 = W.L. Ingraham

4+50

4+49 - 7.4 Lt. = Wly. P. pole # P.A. 1565'
Guy.

4+47 - 9.1 Rt. = Sly. P pole # 429967 H

4+23 - 10.4 Rt. = end Conc. apron

4+21 - 14.6 Rt. = Ely. Gar.

4+00

3+81 = 14.6 Rt. = Wly. 4 Car Gar.

Gar - Conc floor

3+77 - 10.4 Rt. = Beg Conc. apron to 4 Car

3+71 - 10.5 Rt. = end apron + Gar.

Lt.		℄		Rt.	
3.4 15	3.6 10	4.2	4.6 10	4.8 15	
5.2 15	5.1 10	5.4	5.9 10	6.1 15	
			6.52 10.4 Cor	6.53 15 = along edge	
					6.56 14.6 floor
6.4 15	6.5 10	7.0	7.2 10	7.20 10.4 = edge apron	
				7.31 14.6 floor	
			7.94 10.4 Cor. apron	8.05 15 = along edge	
				8.37 10.5 = Cor.	8.24 14.5 floor.

98.61

Ingraham & Chalcedony					
check B.M. - S.E. 7 d.t.			1.02	101.56	101.56
T.P.	4.61	102.58	0.64	97.97	

5+18.61 = W. cb. & W. edge of Pave.

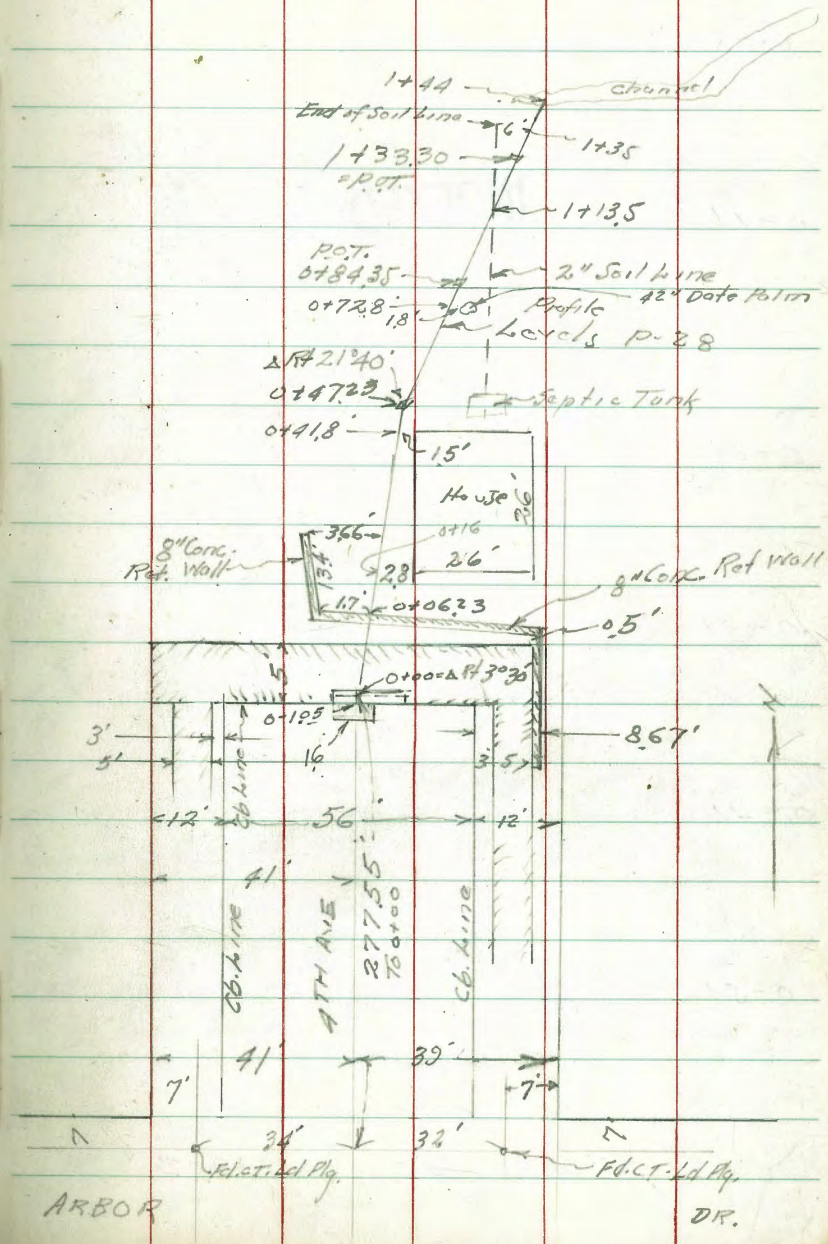
5+16.61 = Top of Gut. Roll along Ingraham Paving.

	3.37	4.15	4.50	4.84		5.56	
	30	10		1P Pave		30 = edge Pave	
	2.4	3.4	4.0	4.0		4.8	
	30	10		10		30	

Walker
Pope
Riley
1-25-49

LOCATION · PROPOSED DRAIN
North End 47TH AVE.
And Elevations

W/O 80142



Levels on Paving North end 4th Ave

0-08 - Brk in Walk on Rt

INDEXED

0-11

0-21

0-31

0-41

0-51

1.91 2.90.94 ✓ 2.89.03 ✓

57

284.47 284.57
637 637
31 36
Walk Walk

285.79 285.71 285.15 285.07 284.78 284.35 284.37 284.03 284.62 284.55 284.69
515 523 579 592 616 659 657 691 632 639 625
36 31 28 27 14 14 28 28 31 36
Cut Cb
in Walk

285.97 285.90 285.18 285.16 285.04 285.76 285.39 285.90 285.91 285.99
497 504 576 578 590 618 660 604 603 595
36 31 28 14 14 28 28 31 36
Cut Cut Cb
in Drive

286.15 286.03 285.28 285.94 285.35 285.0 285.51 285.08 285.13
479 491 566 550 559 594 613 586 581
36 31 28 14 14 28 31 36
Cut Cut in Drive
Drive

286.29 286.15 286.13 285.87 285.58 285.54 285.18 285.69 285.73 285.24 285.30
465 479 481 547 536 542 576 630 571 570 564
36 31 28 27 14 14 28 28 31 36
Walk Walk Cb Cut Cut Cb Walk

286.99 286.35 286.32 285.62 285.73 285.69 285.37 285.79 285.93 285.69 285.54
495 459 462 532 521 525 557 615 551 535 540
36 31 28 28 14 14 28 28 31 36
Walk Cb Cut Pav. Pav. Pav. Cut Cb. Walk Walk

2.90.94 ✓
5

Arbor & 4th
BM SE 7" Tree

North end 4th Ave
Levels on Paving etc.

0+04 = Medge Existing Walk			285.32 562 36	285.33 561 31	286.26 568 28 Walk	285.10 584 21	284.86 608 8.2 Walk	284.74 620 8 Walk	284.53 641 17	284.67 627 15	284.63 631 0	284.68 626 9.7	284.67 632 9.9	284.60 634 14	284.66 628 28	284.84 610 36
0-01 Cont.			285.46 548 36	285.40 554 31	285.04 590 28 Cont	284.89 605 27.5 Cont	284.64 630 23 Cont Brk Path	285.37 557 28 CB.								
0-01	284.27 667 19 Cont	284.48 646 19 on CB in drive		285.36 1658 8 Flow Inlet Box	283.64 730 0 Grating	284.59 635 CB	283.84 710 19 Cont	284.58 636 14 CB	284.03 691 28 Cont	284.37 637 28 CB	284.61 633 31	284.74 620 36				
0-06	285.06 588 28 Cont	284.89 605 26.5 Path		284.50 644 14	283.91 703	283.84 710 1	284.03 691 14	283.94 700 2.8 Cont	284.52 642 2.8 CB	284.49 645 31	284.61 633 36					

29094

Profile Levels - Proposed Drain

North End 4th Ave

Location P. 25

℄ Proposed Pipe

0+35

269.4 267.5 267.5

2.15 23.4 23.4

3 1.5

at House on Ground

0+21

276.2 273.4 272.6

18.7 17.5 18.3

3 3

Ground at House

0+16 = South edge House

276.1 277.09

10.8 13.85

2.8

Floor of Basement

0+06.23

285.01 285.50 279.6 285.5

5.93 5.44 13.3 5.44

1.7 1.7 0 Ground Top Wall

on N1 South Wall on E1 West Wall

0+05.56 = South edge 8" Conc. Ret. Wall

6.3 284.6

0+00 = ΔRt 3°36 = North Inside Edge Inlet Box.

284.60

6.34

on Walk

290.94 290.94 ✓

7 7

T.P.	0.37	255.31	12.86	254.94
0+72.8	42" Dodo Palm 12' Rt. = W. edge			
0+64				
0+56				
0+47.23 = Δ Rt. 21°40				
0+41.8				
T.P.	0.00	267.80	23.14	267.80
		290.94		

254.5 — 253.4
13.3 — 14.4
4 in Fill — Nat. Ground

259.2 — 257.0 — 257.0
8.6 — 10.3 — 10.8
3 in Fill — 4

262.9 — 260.9 — 261.1
4.0 — 6.2 — 6.7
3 in Fill — Nat. Ground — 3 Nat. Ground

264.1 — 265.01 — 264.3
0.7 — 2.79 on Hub — 3.5
3 in Fill — 3

267.7 — 266.2 — 266.1 — 265.0
0.1 — 1.6 — 1.7 — 2.8
3 — 4.5 on Ground at House — 4 on Ground

267.80
5

℄ Proposed Drain

1+40 = South Bank of channel

1+35 = End of Soil Line 6'Lt.

1+33.3 = P.O.T.

1+13.5 = Int 2" Soil Line

Place Drain under this line:- owner

T.P. 1.75 244.51 12.55 242.76

0+89

0+84.35 = P.O.T.

255.31

247.4
27.1

219.7 220.5
24.8 24.0
6 on 2" Soil Line

224.5 222.1
23.0 22.4
Not. Ground 3

232.7 232.49 232.7
11.8 12.02 11.8
3 on Pipe
Not. Ground Surface Not Ground

244.51

246.1 247.6 248.3
9.2 7.7 7.0
3 Not. Ground 3 Not. Ground
Not. Ground

249.1 249.17 248.9 249.9
6.2 6.14 6.1 5.1
4 on Hub 0 on Ground 3
in Fill

255.31

Levels Proposed Drain
North end 9th Ave

INDEXED

				007
				289 03
Chk Starting B.M.			1.90	289.01
T.P.	10.60	290.91	0.16	280.31
T.P.	12.56	280.47	0.26	267.91
T.P.	13.22	268.17	0.16	254.95
T.P.	12.53	255.11	1.93	242.58

1+44 - ℄ Channel

2.445

Notes Reduced 1-26-09

℄ Proposed Drain

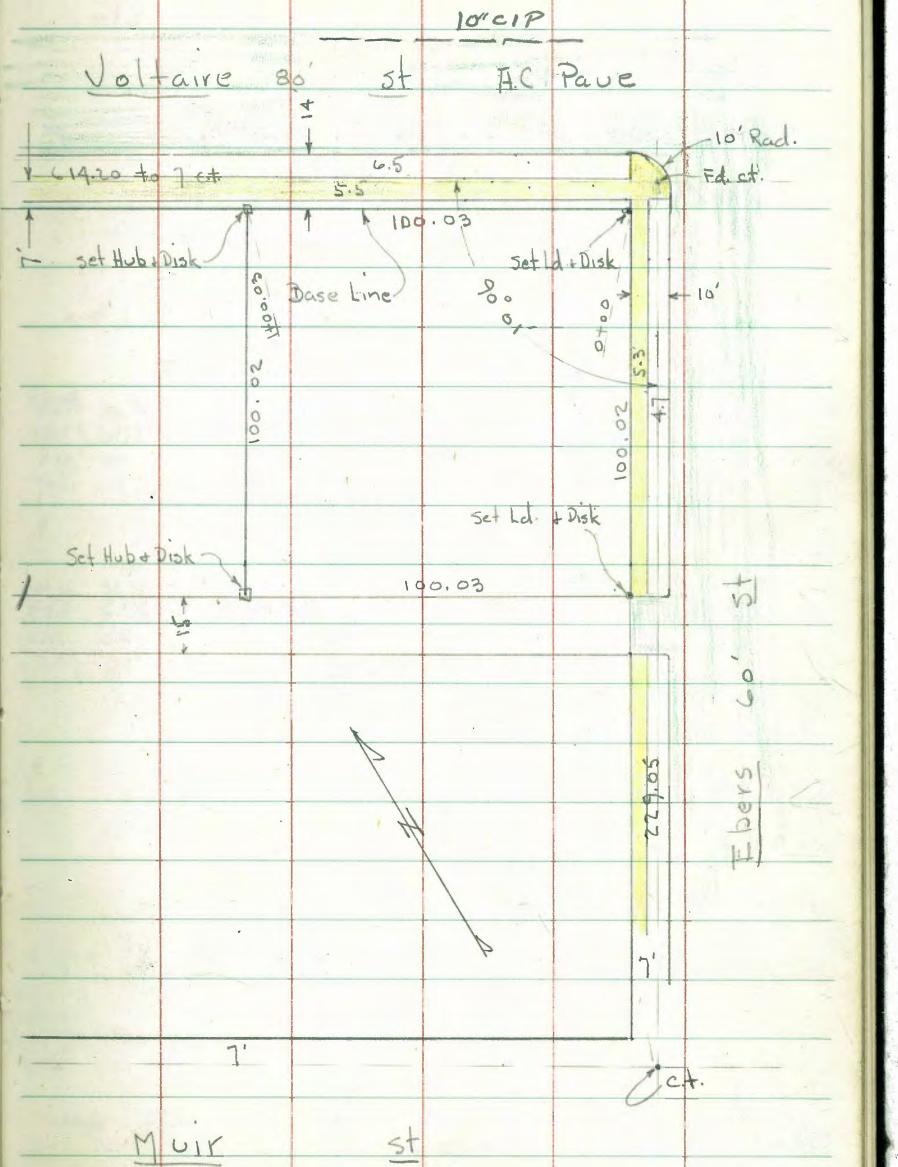
31

2+45

30.0
Bottom Channel
Not Ground

Survey + Topo. of location of
Prop. Fire Sta. - Lots 25 to 28 inc.
Block 13 - Ocean Beach Park - Map 1167
W.O. 60290

2-3-49
Osborne
Hardin
Hatch



Levels + Topo. for Prop Fire Sta.

Site - sketch P. 32

Note: Baseline is S.L. of Voltaire -

0+00 = W.L. of Ebers - Sta. to W.

0+02.4 9.5 Rt. = ℄ 4" Conc. Post for Mail box

0+01 - 12.5 Rt. = ℄ P.pole # 4701 ✓

0+00 = W.L. Ebers = along edge of Walk 30.89 5.01 11.5 Top

0-05.3 = Ely. of Walk along Ebers. 5.15 11.5 Top 5.44 11.5 gut

℄ 10' Rad. Ret.

0-08 - 76' Lt. = ℄ 20" Euc. Tree

0-08 - 50' Lt. = ℄ 16" Euc. Tree

0-04 - 3' Lt. = ℄ T.pole # D 32348T

0-10 Cont.

0-10 = W.cb. of Ebers

B.M. 5.84 35.96 30.12
SW. Cor
Ebers + Voltaire

Base Line = S.L. Voltaire

Lt. - S. Rt. - N.

WATER (3/4" leg on lot line 28-27 @ 75' W
Water Dept. Record - 2-24-49 - civic center map 1ST Fl. - gHK

30.68 5.28 115 gut
30.74 5.22 100 gut
30.92 5.04 100 Top ends
30.84 5.12 75
30.72 5.24 50
30.57 5.39 25

30.39 5.57 2
30.28 5.68 7.5 Cor. walk
30.11 5.85 14 Top
29.44 6.52 14 gut

30.46 5.50 100 gut
30.76 5.21 100 Top Alley
30.83 5.13 75
30.67 5.29 50
5.42 25

5.65 2 Cor
5.76 5.7 walk Top
6.49 5.7 gut

5.73 Top
6.41 gut

5.18 5.79 115 Top sty Alley Ret.
30.73 5.28 100 Top Alley Rel. July
30.09 5.87 100 gut
30.69 5.27 75 Top
29.86 6.01 75 gut

30.66 5.70 50 Top
29.86 6.10 50 gut
30.43 5.53 25 Top
29.72 6.24 25 gut
29.59 6.37 gut
35.96
30.19 5.77 Top

29.63 6.33 4 gut
30.16 5.80 4 Top PC 10' Rad.
29.46 6.50 14 Cross gut

Base line

Lt.

Rt.

1+25 = end

42.5 Lt. = S.E. Cor. House

1+13 = 20.4 Lt. = N.E. Cor. House

1+01 - 12.5 Rt. = ℄ P. pole # 4719

100' Lt. = end fence on Lot Line.

50' Lt. = end of Hedge + Beg. wire fence

1+00.5 - 6' Lt. = Nly. ℄ Hedge 2' wide + 4.5 High.

1+00.03 = Lot Line -

0+87 - 9.5' Rt. = ℄ 24" Palm

0+78.7 - 12.2 Rt. = ℄ Light std.

0+75

0+62.5 - 10.1 Rt. = ℄ 24" Palm

0+50

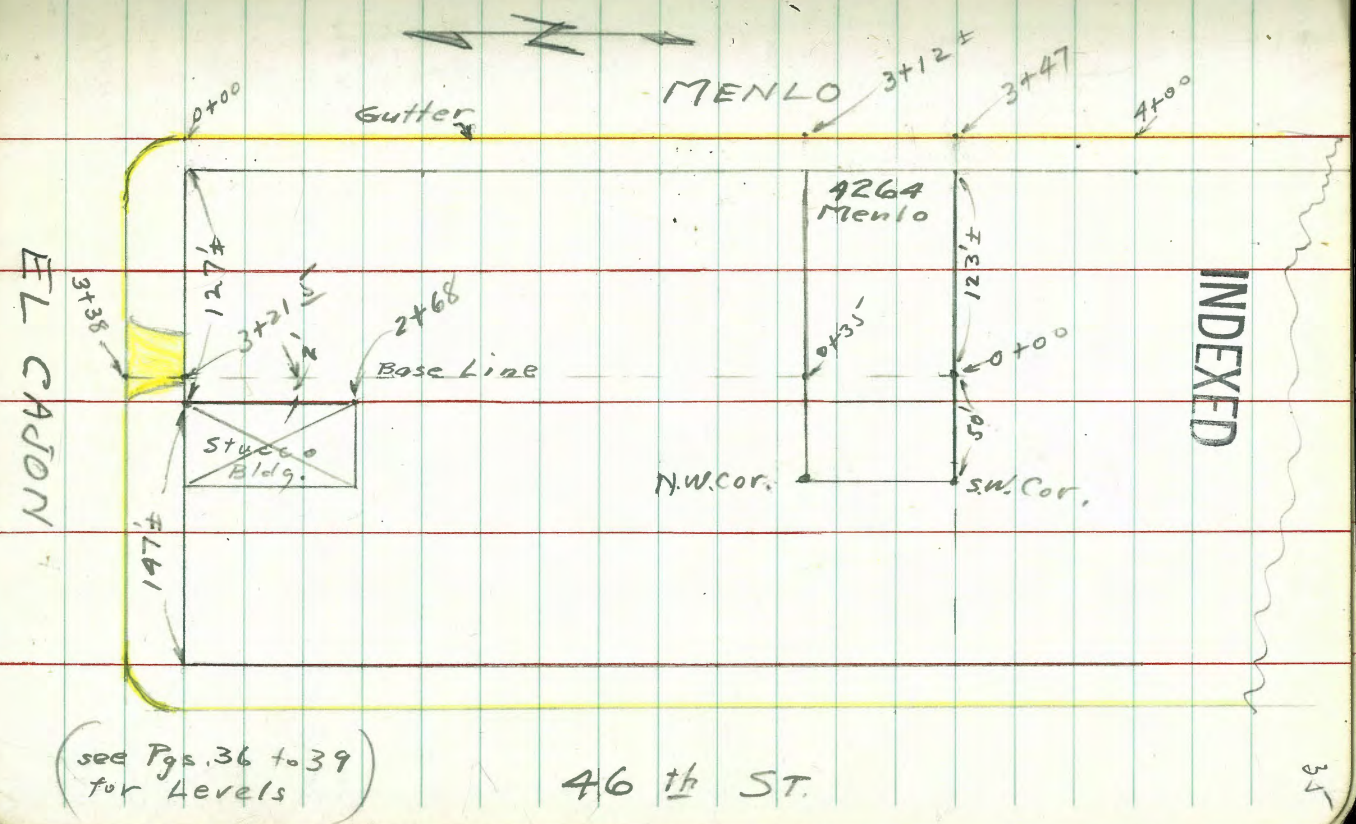
0+25

0+05 - 11.2' Rt. = ℄ 4" Bus Stop post.

0+03.4 - 12' Rt. = ℄ 2" St. sign Post.

						6.50	6.64	6.68	7.41
						2	7.5	14	14
						walk		Top	gut
		31.40		30.16					
		4.56		5.8					
		floor House		20.4 = ground					
30.16	29.86	30.06	30.06	30.16		29.61	29.52	29.41	28.73
5.8	6.1	5.9	5.9	5.8		6.35	6.44	6.55	7.23
115	100	75	50	25		2	7.5	14	14
	Cor.					walk		Top	gut
30.18	30.06	30.56	30.36	30.36		29.73	29.64	29.55	28.81
5.8	5.9	5.4	5.6	5.4		6.23	6.32	6.41	7.15
115	100	75	50	25		2	7.5	14	14
						walk		gut.	Top
30.57	30.36	31.16	31.06	30.76	30.46	29.88	29.84	29.74	29.63
5.4	5.6	4.8	4.9	5.2	5.5	6.08	6.12	6.22	6.31
115	100	75	50	25	5	2	7.5	14	14
						walk		Top	gut
	30.46	31.26	31.26	31.36	30.96			30.1	30.0	29.92	29.78
5.4	5.5	4.7	4.7	4.6	5.0			5.86	5.96	6.04	6.18
115	100	75	50	25	5			2	7.5	14	14
								walk		Top	gut

3596


N
MENLO
0+00
Gutter
3+12 ±
3+47
4+00
4264 Menlo
123' ±
0+00
50'
N.W. cor.
S.W. Cor.
INDEXED
EL CAJON
3+38
127' ±
3+21 ±
2+68
Base Line
Stucco Bldg.
147' ±
(see Pgs. 36 to 39 for Levels)
46 th ST.

Levels - Menlo - S.o. of El Cajon

Also between Menlo + ACth

See sketch P. 35

						B.L.
+2+50						353.71 5.77
2+00						354.18 5.30
1+75						354.36 5.12
1+50						354.05 5.43
1+00	west gutter					352.88 6.60
0+50	west Gutter					351.75 7.73
0+00:	Sly. El Cajon	(Rod. in west gutter)				350.71 8.77
S.W.B.P. Menlo + El. Cajon			8.30	351.18	B.M. #2	
T.P.	8.32	359.48 ✓	5.71	351.16 ✓		359.48
S.W.B.P. El Cajon + ACth	3.87	356.87	—	353.00	B.M. #1	

West gutter Menlo South from El Cajon

INDEXED

T.P.	3.06	356.85	5.69	353.79
4+00				
3+47	Aprox Sly line of 4264 Menlo			
3+12	Aprox. Nly line of 4264 Menlo			
3+00				

Rods in west gutter of Menlo

359.48

B.L.

352.33
7.15

352.78
6.70

353.22
6.26

353.22
6.26

359.48

Levels thru. Blk #

Between 46th + Menlo. South of El Cajon.

B.L.

1+00

0+60

0+35 Cont. 160' Ely. = Ely. ol. 46th St.

0+35 Aprox Nly. line 4264 Menlo

0+15

50' Ely. from S.W. Cor. Lot.

0+00 = Aprox Sly line 4264 Menlo ✓

356.85 From P. 37

352.6 4.2 / 60 — 352.5 4.3 / 51 — 352.0 4.8 / 50 — 352.3 4.5 / 25 — 352.4 4.4 — 352.7 4.1 / 25

352.3 4.5 / 50 — 352.3 4.5 / 25 — 352.3 4.5 — 352.5 4.3 / 25

352.59 4.26 / 160 quarter — 353.03 3.82 / 160 QC

353.2 3.6 / 150 — 352.7 4.1 / 100 — 352.3 4.5 / 50 — 352.2 4.6 / 25 — 352.2 4.6 — 352.3 4.5 / 25

352.4 4.4 / 25 — 352.3 4.5 — 352.3 4.5 / 25

352.5 4.3 / 50 — 352.3 4.5 / 25 — 352.4 4.4 — 352.4 4.4 / 25

356.85

Orig. B.M.			4.02	353.00
	(0.67' ot. face)			
3+38 =	S'ly gutter El. Cajon			
3+21.5	2't = N.E. Cor. stucco Bldg.			
3+00				
2+68	2't Lt. = S.E. Cor stucco Bldg.			
2+50				
2+00				
T.R.	4.11	357.02	3.74	352.91
1+60				
	356.85	~~35~~		

B.L.

351.34	351.22	351.06	
5.68	5.80	5.96	
25		25	
	352.0		
	5.0		
	351.9	351.9	
	5.1	5.1	
		25	
	352.7		
	4.3		
352.6	352.6	352.7	352.9
4.4	4.4	4.3	4.1
50	3		25
352.9	352.2	352.9	352.9
4.1	4.8	4.1	4.1
50	3		25
	357.02		
352.3	352.2	352.3	352.4
4.5	4.6	4.5	4.4
50	25		25
	356.85		

Additional Sections & Elev. on Improvements in Alley in Block 51 - City Hts.
See sketch & Orig. notes in Book 1735 - P-24
Only Elevations Noted - No Rods. 6/8/49
W.O. 25001

Plotted - McClennen 6/8/49
Sheen Profile # 3193

See 1735 - 24 for N. Cor.

2+74 - 10.3 Lt. = Beg. 8" Conc. wall - found for Cor.
2+30 - 16.7' Rt. = end Conc. Slab.

2+15 - 15.5' Rt. = Beg Conc. Slab. along House

1+75 - 11' Lt. = end fence
1+52 - 12.2 Lt. = ± 24" Euc. Tree
1+33 - 11.5 Lt. = Beg. Picket fence
0+99 - 10.6' Lt. = Cor. of wall - goes to W.

0+95 - 10.6' Lt. = Beg. 8" Conc. Block wall
0+00 = N.L. Wightman

345.59
10.3
Top Conc. Wall

342.1
10.3 = footing of wall

338.29
16.7
Cor. Conc.

334.13
23.1 - along House

334.24
15.5
Cor. Conc

334.57
23.1
along Cor of House

336.50
23.1
floor House

337.20
10.6 = Top cor.

335.59
10.6 = ground

337.36
10.6
Top wall

336.36
10.6
ground

5+69 - 9.7' Lt. = end of Ely. of 2" C.I. Pipe (rises)

5+45 - 9.7' Lt. = Beg Ely of 2" C.I Soil Pipe along Bldg

5+22 - 10' Lt. = end Conc Block Bldg

5+14 - 9.9' Rt. = end Wire fence

4+96 - 10.1' Lt = Cor. Conc Block Bldg. (under Const)

4+74 - 10.8' Rt. = end of Slab.

4+53 - 10.8' Rt. = Beg. Conc. Slab

4+51 - 9.8' Rt. = Beg. High Wire fence - Posts in Conc.

19.9' Lt = Beg. 4 car Gar. - Conc. floor

3+28 - 10' Lt = Ely. of 6" Conc. wall along Walk

3+25 - 10' Lt. = Nly. of 6" Conc. wall along 3' Conc. Walk to W.

352.85
9.7 = Top of 2" Pipe

352.90
9.7 = Top of 2" C.I. Pipe

352.3
10 = ground at Cor.

352.2
10.1 ground at Cor.

351.75
10.8 = Cor of Slab.

351.71
10.8 Cor. Slab.

351.73
24.9 = Ely of Slab.

349.76
Floor Gar.
19.9

350.50
= Top Wall
19.9 = at Gar.

348.79
10 = Top Wall

348.0
10 = ground

348.36
20
walk

348.83
20
Top wall

348.24
10
Top walk

348.69
10
Top wall

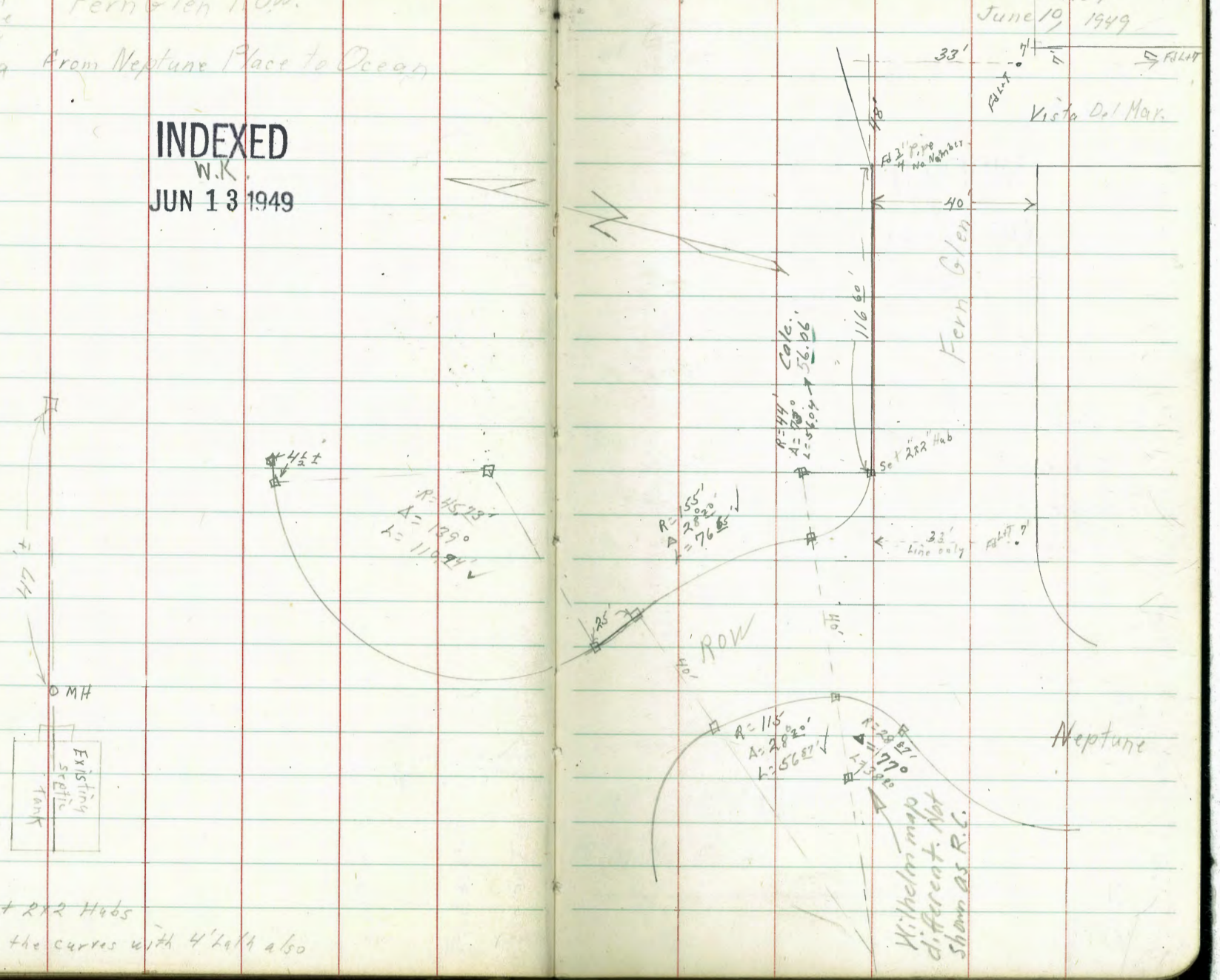
347.3
10
ground.

D. Smith
W. Moore
J. Clark
F. Acuna

Fern Glen R.O.W.

From Neptune Place to Ocean

Wo# 60207
June 10, 1949



□ = Set 2x2 Hubs
Flaged the curves with 4' Lath also

Location Storm Drain

W.O. 20584

Begg

Sommermyer

Allen

Rorer.

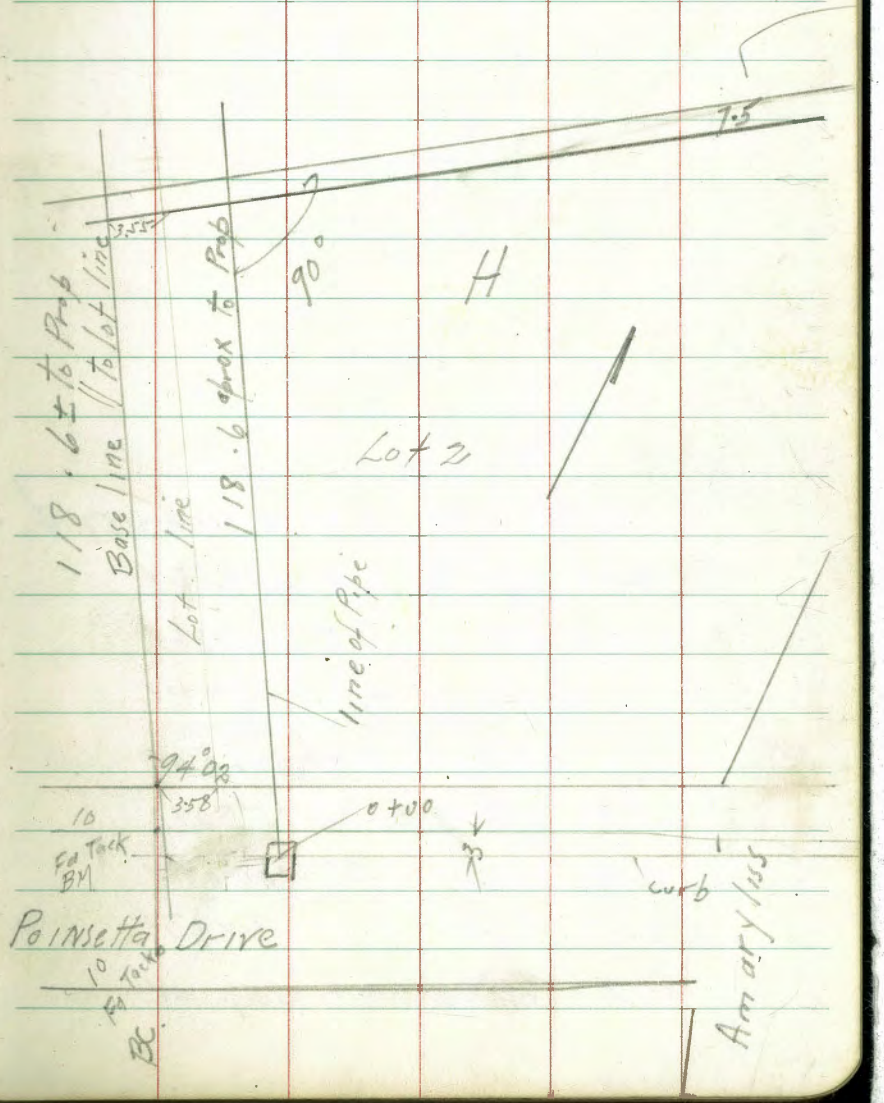
10/27/49.

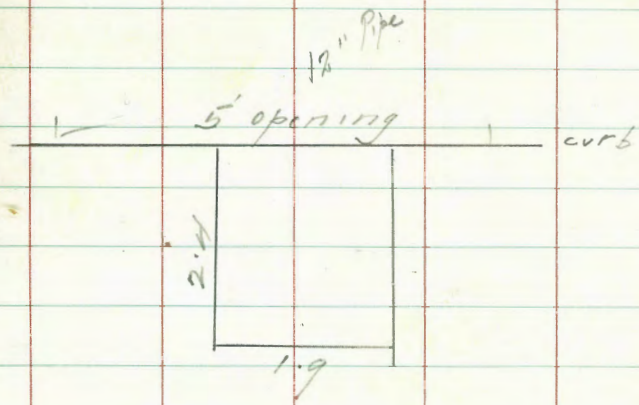
owner does not wish to have hedge removed, would prefer to have line of pipe changed

Profile 3' Rt is substantially the same as present line of pipe Begg

+ Proposed Extension at 2750 Poinsettia Dr.

Map 1820





	5.86	165.48	8.34	157.14	157.14
	6.27	168.53	8.91	159.62	
	11.08	165.11	2.85	163.26	
		154.09	0.06	154.03	
BM			7.40	146.69	
	1.00	154.09	11.58	153.09	
	4.59	164.67	6.60	160.08	
	2.75	166.68	0.15	163.93	
	6.94	164.08		157.14	

BM Narcissus

Tack on North side B.C. shown on Sketch

PP
SW Narcissus & Elliott

Location of Storm Drain

0+68	end of Pipe 6.5 Rt 8" tile				drain con cemented	134.5 4.4	132.92 5.95 6.5	134.5 4.4 10
	1.45	138.87 ✓	10.37	137.42 ✓		137.87 ✓		
0+64							135.2 12.6	
0+54	Poplar	14" 10 Rt						
0+42							143.0 4.8	
0+42	end hedge 4rt							
0+19							144.0 3.8	
0+18							145.7 2.1 5.0	
0+06	Beg Eugenia hedge 4Rt							
0+06	side walk						146.72 1.07	
0+00	Top curb				Base line	Rt 1.18	146.61	
400'	Corr iron pipe 1ort 12" Pipe					5.1 4.07	143.22 invert	
0+00	Top of grate					1.95	145.84 grate	
							5.1	
	1.10	147.79 ✓		146.69 ✓	Tack	147.79		

Location of Storm Drain

075 1467.0 ✓ 146.69

9.66 147.45 ✓ 1.08 137.79 ✓

2+08

1+18.6± Lot line

0+90

1388.7 ✓

Base Line

Tack

120.9 120.3

18.0 18.4

5

136.9

0.0

R 150

138.1 131.8 129.3 129.3 128.4 129.8 130.2

0.8 7.1 9.6 9.6 10.3 9.1 8.1

100 5 3 7 10 100

131.6 132.5 131.3 132.9

7.3 6.4 7.6 6.0

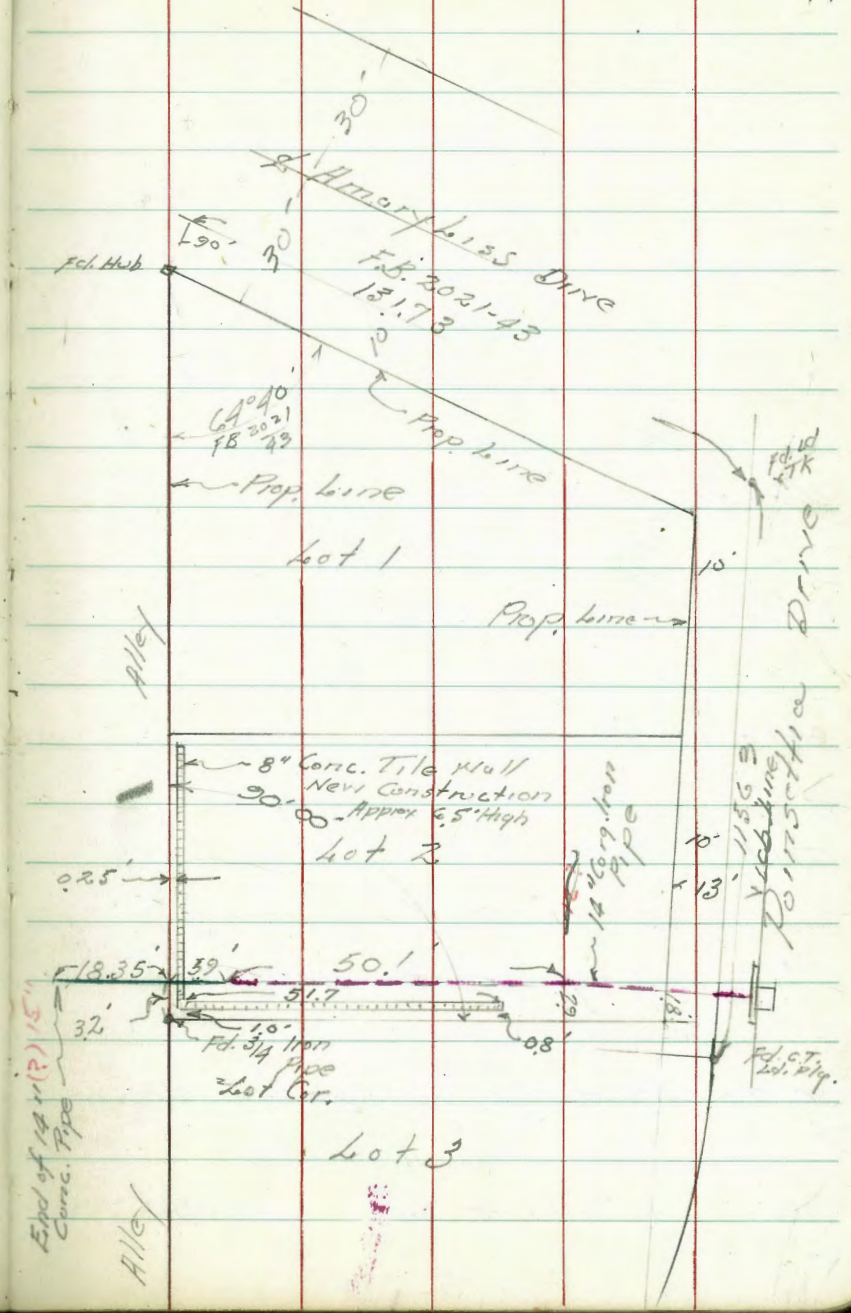
3 7 10

1388.7

Location Existing Drain
in Lot 2 Blk H Plumosa Prk.
for Purpose of Easement.

Walker (Profile P-48)
F. Gregory
K. Sission
5-16-50

— — = 14" Corrugated Iron Pipe
— — = 14" Conc. Pipe Culvert



Levels - Existing Drain

Location P-47

	Lt	℄	Rt	
0+66 = Int. 8" Conc. Tile wall		139.67 Top Wall	135.4 ℄ Ground	
0+62	136.2	134.79 Top 14" Corg. pipe	135.9 ℄	136.0 5
TP		140.83		
0+46.5		137.64 on Top Pipe	142.1 ℄ Ground	
0+43	142.9 5	142.9	142.9 5	
0+18	146.9 5	144.2	143.2 ℄ Top 14" pipe	144.2
0+17	146.8 5	145.8	145.8 5	
0+06 = Back edge Combination Walk		146.72		
0+00 = Intr. cb Line Poinsettia Dr	145.78 2.5 Gut.	146.62 2.5 cb.	146.60 cb	145.82 ℄ Grating	145.97 ℄ 18"x14" Pipe	146.61 2.5 cb	145.76 2.5 Gut.
		146.69 ✓	B.M. on Lt = 7℄ P-44				

Existing
Levels - Drain

Cont. from P-48

.09 difference
124.90
124.81 elevert.
FB 2021
41

1+37.0 = End Exist 14" Conc. Pipe

124.90 Invert 14" Conc. Pipe	127.9 & Ground	
127.11 Top 14" Conc. Pipe	129.0 & Ground	

1+24.7

1+18.6 ± 54Y Line. Alley

129.5 S	129.5	129.5 S	

T.P. 131.63

1+17.9 = Int. 8" Conc. Tile Wall

135.80 Top Wall	130.2 Ground	

1+13 = end 14" Corrugated Iron Pipe

130.3 S	128.60 Top 14" Corrug. Pipe	130.3 & Ground	130.3 S

D Smith
E. Sherman
Q. Cota

Cross Sec Alley

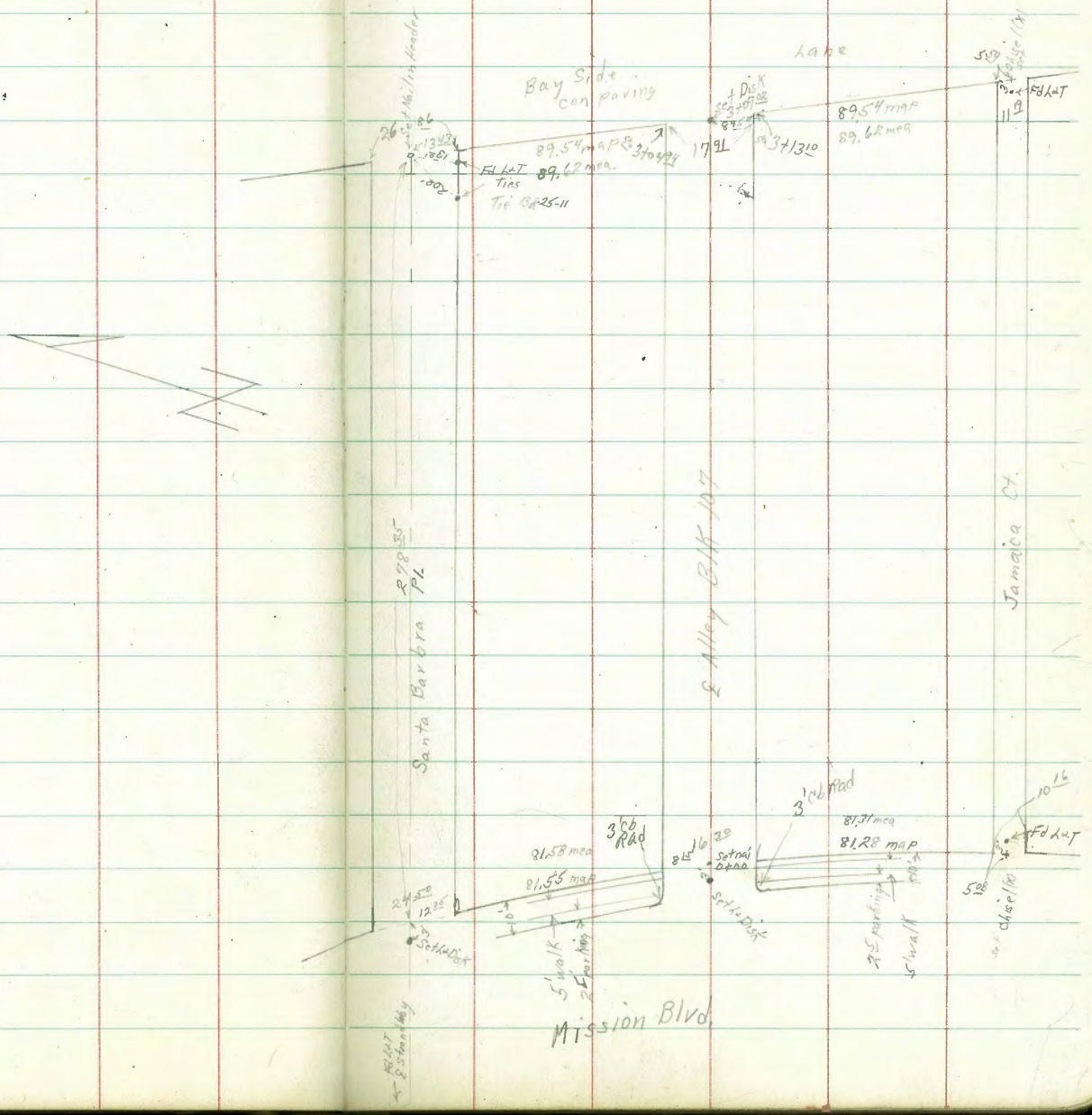
Block 107 Mission Beach

7-5-50
WO# 31690

50

INDEXED
JUL 19 1950

Reduced 7/31/50
B.L.C.



D. Smith
E. Sherman
G. Cota

X Sec Alley Blk 107

0+85 — 18° Rt End Single garage con apron + Floor

0+71 — 18° Rt Beg Single garage con apron + Floor

0+50

0+00 — East Prop line Mission Blvd (on curve)
Edge con. paving.

0-07

0-10 — East Cb line Mission Blvd (along Cb on Curve)

T.P.	3.90	3.96	7.74	0.06 ✓
B.M.	0.77	7.80		7.03

Sea Wall
Santa Barbara

7-5-50
W.O.# 3/690

Mission Beach

Lt = North ℄ Rt = South

3.961

Lt = North ℄ Rt = South

1749 10^{2} Rt Begin Board Fence 8' high

1748 9^{8} Rt End double garage con Floor & apron

1732 9^{2} Rt Begin double garage con floor & apron

1731 8^{2} Rt End 6' Board Fence

1701 8^{8} Rt Begin 6' Board Fence
End 4' Board Fence

1700

0792 7^{2} Rt ℄ 12" dia power pole PA 819

0788 8^{3} Rt Begin 4' Board Fence

0787 9^{5} Rt ℄ meter box water

-0 8
4 26
98
4 00

-0 17
4 63
11 8
Floor

-0 21
4 92
9 2
apron

-0 19
4 25
11 2
Floor

-1 2
5 2
25

-1 0
5 0
8

-1 0
5 0

-0 8
4 8
8

-0 8
4 2
25

396

2700 9° Lt & water meter box

1792 8½ Lt & Single garage con floor apron

1790 10° Rt End 4' Board fence

1781 10° Rt & 2' con walk

1775 9° Rt & water meter box

1771 9° Rt Begin 4' Board fence

1766 8° Rt & single garage con floor apron

1761 10° Rt End 6' Board & bath fence

1751 7° Rt & water meter box

1750

Lt = North

Rt = South

-0.2 -0.2 -0.2 -0.2

47 42 42 48 47

15 8 8 12

-0.3 -0.7 -0.7

5-01 5-01 5-05

8 4 8 3

apron apron

42 42 42

floor floor

-0.9 -0.7

5-05 5-01

10 8

walk apron

-0.2 -0.2

47 47

12 12

floor floor

-0.5 -1.0 -1.0 -0.5

45 5° 5° 48

25 8 8

396

					Lt. North		℄	Rt. South	
2+77	8	Rt ℄ water meter box							
2+76	8	Rt End double garage con floor & apron						11 / 4 89 8 floor	11 / 4 95 8 apron
2+51	8	Rt. Begin double garage con floor & apron also walk along side						2 / 4 90 86 floor	17 / 4 93 8 apron
2+50					4 4 12	4 2 8	4 6	4 2 8	5 0 20
2+17	7	Rt ℄ water meter box							
2+13	7	Rt ℄ 12" dia Power Pole # PA 842							
2+10	7	Rt ℄ water meter box							
2+04	8	Rt ℄ 6' wooden steps & back porch							
TP2		4 69	3 78	4 87	-0 91				

3 78

Lt = North (107) Rt = South

Begin con block wall

3+10 10° Rt end Patio

3+09 02 Lt and W Prop Boyside lane

3+04 94 Lt Prop Cor to North

Begin con patio

3+01 10° Rt End double garage.

3+00

2+91 83 Rt End apron of garage door

2+79 83 Rt Begin double garage con floor apron

				4 89 +1 09 10 Patio	5 57 +1 2 10 Footing	2 61 1 — 10 Top Wall
5 10 +1 94 8	5 13 +1 35 Edge paving	4 8 +1 0 8				
4 92 -1 14 8	4 9 -1 1	4 8 -1 0 8				
Edge paving				4 80 +1 02 10 Patio		
4 3 -1 1 12	4 2 -0 9 8	4 8 +1 0	4 8 -1 0 8	4 2 +1 1 10		
			4 86 -1 05 92 Apron	4 85 -1 07 10° Floor		
			4 87 -0 9 83 Apron	4 86 -1 05 10° Floor		

3 78

Lt = North ℄ Rt = South

BM			1 10	7 02	starting 703 Bench
TP4	8 02	8 12	4 21	0 10	
TP3	5 46	4 31	4 93	-1 15	
3+17	℄ Bayside Lane along line of				
3+13 Lt	End wall cantilock Rt South Prop Cor				

		-1 30	-1 37	-1 35	-1 40	-1 42	
		5 08 20	5 13 8	5 16	5 18 8	5 20 20	
+0 85	-1 7	+1 21	-1 15	-1 35	-1 36		
4 92 10' top wall	5 5 10' Footing	5 9 10'	4 96 8	5 14	5 14 8		

℄ Bayside

reverse notes

3+28

D. Smith
Fay
E. Sherman
G. Cota

Cross Sec Alleys

Mission Blvd.

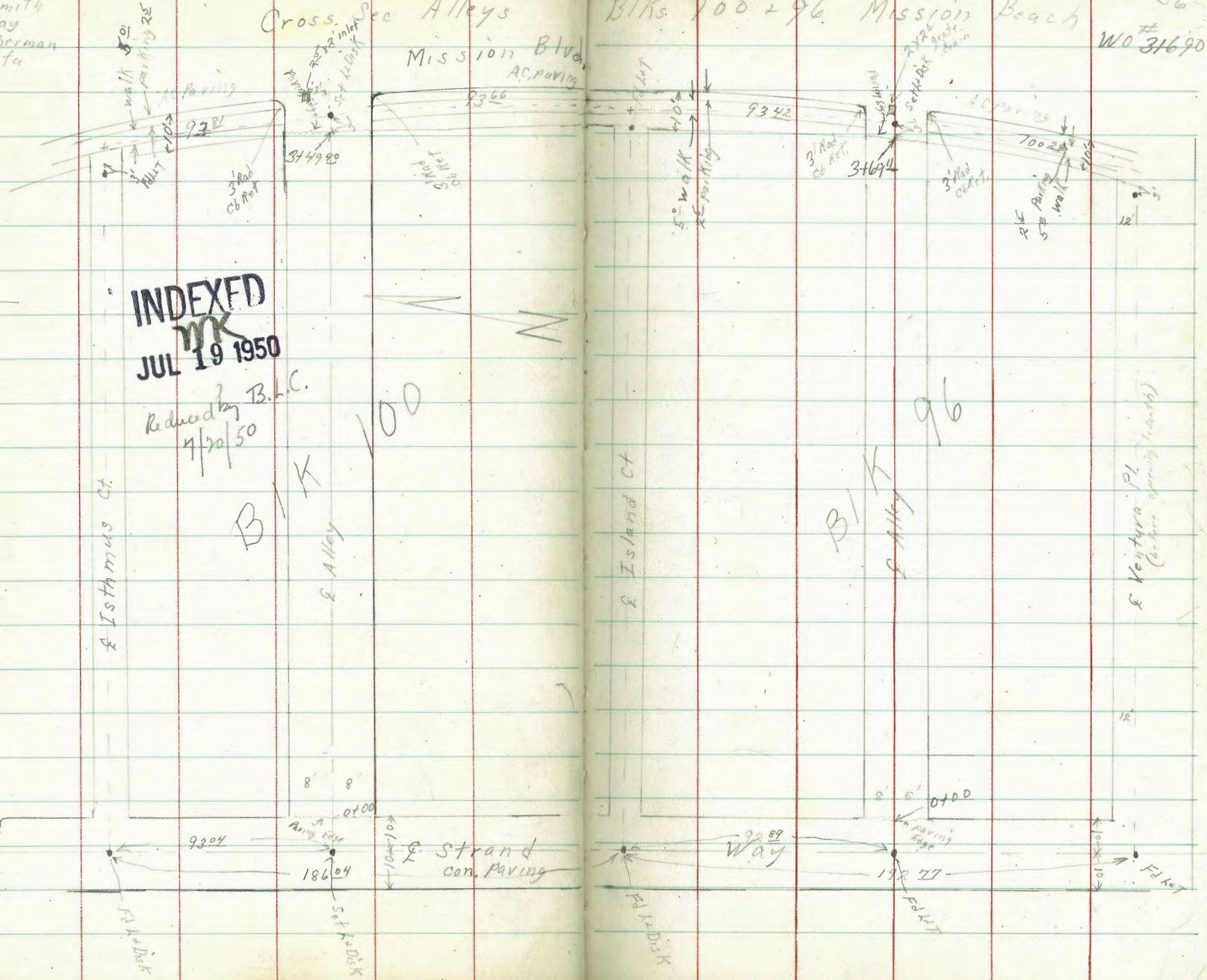
AC. paving

Blks. 100 & 96 Mission Beach

7-18-50

56

WO # 31690



D. Smith
Wm. Fay
E. Sherman
B. Cota

X Sec Alley B/K

0+56 12½ Lt & single garage dirt floor

0+

0+46 8½ Lt & water meter box

0+46 8½ Rt & single garage dirt floor

0+30

0+00 E. Edge paving Strand Way

0-10 & Strand Way

$I P_2$	5^{58}	11^{40}	5^{58}	5^{82}	
$I P_1$	4^{81}	11^{40}	4^{67}	6^{59}	
BM	4^{23}	11^{26}		7^{03}	BP. Sea wall, Santa Barbara

7-18-50
57.
WO 31690

100 Mission Beach

Lt = North & Rt = South

43
7L
12L
Floor

51
4

6
8
Floor

57 57 57 60 61 59 65
12 8 8 12 25

57 57 57 57 55 55 41
12 8 8 12 25

49 50 50 50 50 50 38
6 6 6 6 6 6 6

465 486 490 496 502
50 8 8 8 50

49 51 52 53 55
6 6 6 6 6

492 511 523 525 535
50 8 8 8 50

11 40

0+98 8.2 Rt Begin double garage con floor & apron

0+92 8.2 Rt & 3' con walk

0+90 8.3 Lt & 5.5 con walk

0+81 8.2 Lt End double garage con floor & apron

0+63 8.3 Lt Begin double garage con floor & apron

0+61 7.3 Rt & 12" power pole # A720

0+60.5 8.3 Lt End 3' con wall westerly 2.5 con walk

0+60 9.0 Rt & water meter box

Lt = North & Rt = South

10.13 10.09
8.2 9.2
apron floor

9.04
8.2

8.95
8.2
walk end

7.38 7.73 7.96
12.0 10.2 8.2
floor level door apron

7.38 7.63 7.90
12.0 10.2 8.3
floor level door apron

7.9 7.81 6.89
8.3 8.3 8.3
base wall Top wall

7.2 7.3 7.3
8 8

11.40

1+30

TP$_3$ 2$\frac{28}{}$ 3$\frac{23}{}$ 10$\frac{45}{}$ 0$\frac{25}{}$

1+29 7$\frac{4}{}$ Rt $\mathcal{E}$ 12" power pole # PA 748

1+18$\frac{5}{}$ 8$\frac{5}{}$ Lt $\mathcal{E}$ 2$\frac{5}{}$ con walk

1+18$\frac{5}{}$ 8$\frac{2}{}$ Rt $\mathcal{E}$ 2$\frac{5}{}$ con walk

1+18$\frac{5}{}$ 7$\frac{6}{}$ Rt $\mathcal{E}$ Water meter box

1+17 8$\frac{5}{}$ Lt End double garage con floor + apron

1+15 8$\frac{3}{}$ Rt End double garage con floor + apron

1+01 8$\frac{5}{}$ Lt Begin double garage con floor + apron

1+00

Lt = North $\mathcal{E}$ Rt = South

3 2 3

11+40

Lt = North ℄ Rt = South

2+50	8° Lt. begin double Gar. Conc. floor & Apron	
2+45	10.1 Rt & Single Gar. Conc. floor & Apron.	
2+38	8.4 Lt. & 2.5 Conc. Walk.	
2+10	7° Lt. & W.M. Box	
2+00		
1+75	8° Rt & W.M. Box	
1+72	9° Rt & 7' Conc. Drive	
1+70		
1+57	9.1 Rt & (Used as house) Single Garage Conc. floors, Apron.	

323

Lt = North & Rt = South

2+96	12 3 Lt. and double garage Conc floor
2+92	11 2 Rt & Single Gar. Conc floor & Apron
2+78	12 3 Lt. begin double Gar. Conc. floor
2+71	8 8 Rt & Power Pole No number
2+69	10° Rt & W.M. Box
2+68 5	8° Lt & 2 5 Conc. Walk
2+67	8° Lt. End double Gar. Conc floor & Apron
2+65	10 4 Rt & Single Gar. Conc. floor & Apron
2+55	10 4 Rt & Single Gar Conc. floor & Apron

43 -1 A 66/129

46 -1 A 69/129

30 +1 A 53/8°

13 -1 A 36 99 Floor

36 -1 A 52 8° Apron

92 -1 5 15 11 3 Apron

149 A 72 164 floor

89 +1 5 12 10 4 Apron

5 07 11° floor

89 -1 5 21 10 4 Apron

5 17 11° floor

323

Lt. = North ℄ Rt. = South

Alley: Blk 103
MH → Located on ℄ about 1.5' West of Mission Blvd. West Prop Line

elev. 0.59 rim

elev. 3.23 Fl.

Sewer - Block 103

TP4 4.40 -1.17

3+87 along E curbing on Mission Blvd.

3+59.40 West ℄ Line Mission Blvd.

3+49.40 West Prop Mission Blvd Edge planting on curve

3+48 E Sewer M.H.

3+00

elev. 1.82 Fl.

Sewer Block 100

323

X Sec Alley

0+59 8½ Rt End con trash slab

0+50 8½ Rt Begin con slab for trash cans

0+45 7½ Rt ℄ water meter box

0+32 8½ Rt ℄ 4' con steps behind walk

0+25 5½ Rt Begin 2½ con walk N to alley

0+24 7½ Rt ℄ 12" Power Pole # 493346 H

0+07 7½ Rt ℄ Anchor dead man

0+00 E line Strand Way Edge paving

0-10 ℄ Strand Way

TP 4 16 9 98 5 82

Page 57

Blk 96 Mission Beach

Lt = North ℄ Rt = South

Reduced - B.L.C.
7/21/50

9 98

Lt = North & Rt = South

1+21 7½ Lt £ water meter box

1+17 7½ Rt £ 15" power pole # gone

1+11 10½ Lt £ single garage con floor

1+03 10½ Lt £ single garage con floor

1+00

0+92 8½ Lt £ water meter box

0+91 8½ Lt £ 2' con walk

0+75

0+62 7½ Lt £ water meter box

35 2

7 10 Floor

39 2

7 10 Floor

3 2 1 2 1 7 1 2 1 2

7 10 7 8 8 3 8 8 7 15

3 2 7

7 8 walk

3 2 2 2 3 2 2 6 2 2

6 15 7 8 7 2 7 8 7 15

998

1+78 8° Rt Bldg doorway

1+69 8° Rt Bldg doorway

1+64 6½ Rt & 3' con step into House

1+58 8½ Lt & single con floor & apron

1+54 7½ Lt Begin Bldg Ching 2' con walk

1+51 7½ Lt & water meter box

1+50 5½ Rt Westerly 4' con walk

1+25 8½ Lt & 2' con walk

2+=North & Rt=South

39 0	9.59	6° walk	31 0	9.35 8° floor
45 0	9.50	6° walk	42 0	9.36 8½ Rt floor
71 0	9.54	5½ walk	80 0	9.48 6½ walk
111	8.76	6½ 5% up	124 1	8.24 8° floor level
44 0	9.55	9½ floor	35 0	9.63 8½ apron
50 0	9.2	8	51 0	9.5
77 0	9.23	5½ walk	78 0	9.20 8 walk
1 1	8.24	8½ walk		

998

2711 6' Rt ℄ water meter box

2709 6° Rt End 2' con walk

2708 7° Lt ℄ water meter box

2706 8° Lt End double garage con floor & apron

2703 8° Rt Bldg doorway

2700

1790 6° Rt Break in grade of 2' con walk

1789 8° Lt Begin double garage con floor & apron

1780 9° Lt ℄ 3' con walk

Lt = North ℄ Rt = South

22-0 / 10 20 / 6° walk

8-0 / 10 16 / 8° walk

24-0 / 10 22 / 15° floor

22-0 / 10 28 / 8° apron

22-0 / 10 23 / 6° walk

22-0 / 10 20 / 8° walk

22-0 / 9 62 / 8° floor

36-0 / 10 34 / 8 apron

22-0 / 10 5 / 10 4 / 6

22-0 / 10 22 / 6° walk

22-0 / 10 20 / 8° walk

17-0 / 10 15 / 6° walk

17-0 / 10 13 / 8° Bldg walk

22-0 / 10 30 / 10° floor

29-0 / 10 27 / 8° apron

12-0 / 9 84 / 9° walk

9 98

Lt = North & Rt = South

2+68.5 10° Lt & 8.5 conWalk

2+68.5 8.2 Lt ℄ water meter box

2+67 10.3 Lt End double garage dirt floor

2+50

2+49 10.3 Lt Begin double garage dirt floor

2+32 10.3 Lt ℄ single garage wood floor

2+20 7.3 Lt ℄ water meter box

2+18 7.4 Rt ℄ 12" power pole # PA 766

TP1 4.43 3.57 10.84 -0.86

69 - 0
4.26
10°
conWalk

8.5 - 0
4.4
10.3
floor

9 - 0 | 0 - 1 | 7 - 0 | 4 - 0
4.5 | 4.6 | 4.3 | 4.1
8 | | 8 | 15

9 - 0
4.5
10.3
floor

69 - 0
4.26
10.3
floor

3.57

Lt = North. & Rt = South

3+38 8° Lt & water meter box

3+37 7½ Rt & 12" dia power pole ± gone

3+31½ 8° Lt & 3' con walk

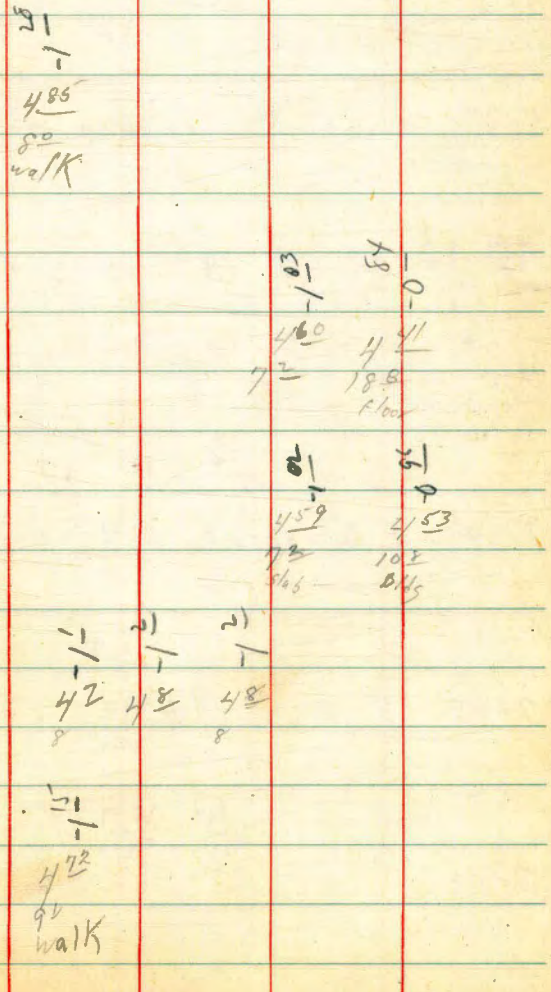
3+27 8½ Rt & water meter box

3+15 7½ Rt & door way driveway Bldg con floor slab

3+04. 7½ Rt Begin con slab along Bldg

3+00

2+98½ 9½ Lt & 3' con walk



357

BM				2.75	7.00 Sta 7+02 Lt Sta Bkp
TP4	5.32	9.75	6.22	4.43	
TP3	7.48	10.65	0.40	3.17	West
			5.33	-1.76	3' back from Mission Blvd Venture p. 67 page 61
TP4 ✓			4.72	-1.15	-1.17
TP2	4.87	3.57	4.87	-1.30	
4+07 along E curbing on Mission Blvd.					
3+79.11 E c6 Line Mission Blvd (taken on curve)					
3+69.11 E Prop Mission Blvd Edge con pavement (taken on curve)					
3+68 E Sewer MH					
3+50					

Sta Wall 1 Sta 2 Border Lt = North Rt = South

4.87 (.50) 4.85 4.97 (.50)

3.91 3.73 3.93 3.77 3.87 3.79 3.85 3.97 3.99 3.89

4.87 (.50) 5.39 (.50 C6 94T) 5.00 (.11 .11 .8 C6 BC 94T) 5.34 5.39 (.11 94T) 5.48 (2 E 2x2 drain) 5.46 (.8) 5.42 (.11 94T) 5.49 (.11 C6 Ret BC) 5.04 5.56 (.50 94T) 5.15 (.50 C6)

3.43 3.31 3.31 4.11 4.11

5.20 (.8 C6) 5.10 (.8 94T) 5.17 4.98 (.8 94T) 4.98 (.8 C6)

3.55

5.15 rim

3.07 3.12 3.13

4.92 (.8) 4.82 4.92 (.8)

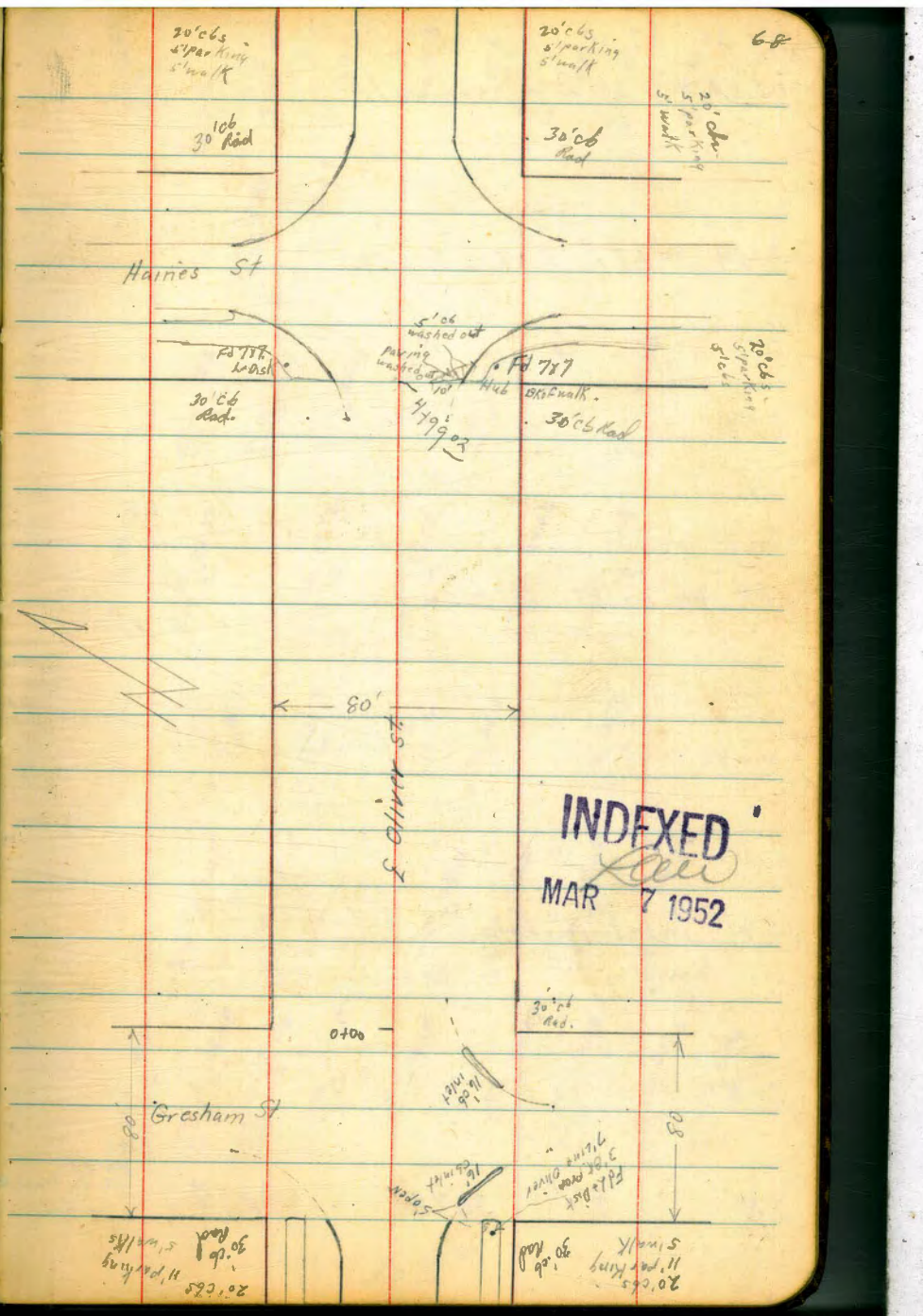
3.57

D. Smith
C. Allen
R. Taylor

"X" Sec Oliver St

W.O. # 320.38
3-6-52

Gresham to Ingraham



0+50 40.2 Lt & 2.5 con w/ IK

0+10 40.3 Lt & 8' con drive

0+00

SE c6 inlet. 16' long

0-40

SW inlet 16' long

0-80

BM 9.54 30.73 21.19

NW.R.R. Pacific Branch Gresham

Lt = North

Rt = South

2.83 3.90 50.2 walk | 3.94 40.2 | 26.79 4.12 40 | 26.81 0.00 20 | 25.7 4.9 | 25.8 5.12 10 | 25.12 5.5 13 | 25.7 5.0 16 | 25.1 5.6 40 | 69

21.84 3.89 50.2 drive | 21.69 4.04 40.2

24.1 4.1 40 | 24.1 4.6 22 | 25.85 5.2 20 | 25.61 5.1 | 24.7 6.0 19 | 25.61 5.1 21 | 25.42 5.31 40

23.68 7.05 S throat | 24.50 6.23 S c6 | 23.72 7.01 S Grate | 24.58 6.15 E c6 | 24.62 6.11 E c6 | 23.78 6.95 E Throat

24.1 4.6 40 | 25.9 4.3 20 | 25.71 5.0 | 25.55 5.2 20 | 25.3 5.4 40

24.03 6.68 S throat | 25.15 5.85 S c6 | 24.16 6.51 E Grate | 25.01 5.72 E c6 | 25.08 5.63 W c6 | 24.24 6.49 W Throat

24.31 4.42 36 walk | 24.08 4.65 21.3 c6 | 24.24 5.49 21.3 Gut | 25.15 5.58 10 | 24.95 5.78 | 24.09 6.04 10 | 24.38 6.35 21.3 Gut | 25.10 5.63 21.3 c6 | 25.26 5.47 36 walk

30.73 ✓

1+71 40± Lt ℄ 3' walk

1+50

1+41 40± Lt ℄ 8' drive

40± Rt ℄ 8' drive

1+22 40± Rt ℄ 4' walk

1+19 40± Lt ℄ 3' walk

1+00

0+95 40± Rt ℄ 8' drive

0+74 40± Lt ℄ 2± walk

Lt = North ℄ Rt = South

27.85 27.75
2 88 2 98
40± 40±
walk

24.9 24.8 24.9 24.1 24.1
3 5 3 2 3 8 4 1 4 3
40 20 20 40

26.98 26.82 26.14 26.18
3 75 3 81 4 59 4 53
50± 40± 40± 50±
drive drive

26.01 26.21
4 20 4 53
40± 50±
walk

26.91 26.60
3 82 4 13
50± 40±
walk

26.1 26.0 26.1 25.7 25.31
4 6 4 2 4 6 5 0 5 2
40 20 20 40

25.81 25.23
4 89 5 0
40± 50±
drive

26.82 26.73
3 91 4 0
50± 40±
walk

3073

3+50				
3+29	40 Lt	E	2	walk
3+00				
2+59	40 Lt	E	8'	drive
2+50				
TP	13.03	41.68	2.08	28.65
2+00				
1+91	40 Lt	E	8'	drive

Lt = North Rt = South

38.31	38.21	37.61	37.31	31.81	24.61	28.01	37.71
3.4	3.5	4.4	4.4	4.2	5.1	3.7	4.0
40	22	18		8	18	19	40
		34.15	37.14				
		5.53	4.54				
		50E	40E				
			walk				
38.21	34.81	33.9	33.91	33.91	34.11	34.51	
6.5	6.2	7.8	7.8	7.8	7.0	7.12	
40	22	19		16	19	40	
32.30	32.12						
9.38	9.56						
30E	40E						
	drive						
31.51	30.61	31.51	31.31	30.81			
10.2	11.4	10.2	10.4	10.8			
40	20		20	40			
		T 41.68					
28.41	28.31	48.61	28.71	28.41			
2.3	2.4	2.4	2.9	2.3			
40	20		20	40			
28.44	28.27						
2.29	2.46						
50E	40E						
drive							
	T 30.73						

Wly Haines

4+99.02	Paving Ac on Rt and cb end				in bad shape broken out by storm water
4+83	40 Lt ℄ 2' brick walk				
4+50					
TP2	8.28	49.62	0.34	41.34	
4+05	40 Lt ℄ 9' drive				
4+00					
3+76	40 Lt ℄ 2' walk				
3+56	40 Lt ℄ 8 drive				

Lt = North ℄ Rt = South

TR

42.57 1
7.05
30 walk OK

42.45 1
7.17
21 CB

41.78 1
7.84
21 Sut

41.86 1
7.66
10

41.90 1
7.72

41.72 1
7.80
10

41.01 1
7.61
Sut 22

41.92
8.2
22 walk

42.16
7.46
30 OK walk

41.02 1
5.60
56 walk

43.97 1
5.46
40

42.9 1
6.2
40

42.3 1
7.3
24

41.7 1
7.2
20

41.6 1
8.0

41.0 1
8.6
10

40.7 1
8.9
19

41.6 1
8.0
22

42.1 1
7.5
26

42.0 1
7.6
40

49.62

41.36 1
0.32
50 drive

41.27 1
0.41
40

41.8 1
0.9
40

40.4 1
1.3
22

39.9 1
1.8
19

39.7 1
2.0

39.9 1
1.5
9

39.2 1
2.5
13

40.0 1
1.7
16

40.2 1
1.5
40

40.15
1.53
50 walk

39.99 1
1.69
40

39.21
1.43
50 drive

39.13
2.55
40

4.68

6+10

0+00 Ely Haines edge AC paving

Mid Pt Returns

5+59.02 Ely c6 Haines

5+39.02 E Haines

5+19.03 w/y c6 Haines

Mid Pt Returns existing

Lt = Sout

49.63

3+50					
TP3	5 76	55 19	0 19	49 743	
3+00					
2+50					
2+00					
1+50					
1+00					
0+50					

Lt = North ℄ Rt = South

50.75 | 50.11 | 50.79 | 51.24
4 44 | 5 08 | 4 6 | 4 60 | 3 95
20 cs | 20 sat | | 20 sat | 20 cs

A 55-19

49.62 | 49.01 | 49.5 | 49.58 | 50.8
0 00 | 0 61 | 0 1 | 0 08 | +0 57
20 cs | 20 sat | | 20 sat | 20 cs

48.107 | 47.44 | 47.9 | 47.99 | 48.64
1 55 | 2 18 | 1 2 | 1 63 | 0 98
20 cs | 20 sat | | 20 sat | 20 cs

46.82 | 45.97 | 46.4 | 46.47 | 47.10
3 00 | 3 665 | 3 2 | 3 15 | 2 552
20 cs | 20 sat | | 20 sat | 20 cs

45.40 | 44.25 | 44.1 | 45.22 | 45.81
4 22 | 4 87 | 4 4 | 4 40 | 3 77
20 cs | 20 sat | | 20 sat | 20 cs

44.49 | 43.87 | 44.3 | 44.18 | 44.81
5 13 | 5 75 | 5 4 | 5 44 | 4 81
20 cs | 20 sat | | 20 sat | 20 cs

43.80 | 43.20 | 48.7 | 43.40 | 44.04
5 77 | 6 42 | 5 2 | 6 22 | 5 58
20 cs | 20 sat | | 20 sat | 20 cs

49 62

47.99 40.10

E L+T Ingraham & Oliver

BM			7.10	48.09	
5+99.17	Wly edge con Paving Ingraham				
		30' Rad			according to plan
End Returns	Note they end on the Line of Oliver				
Mid Pt Returns					
4+99.17	Wly Ingraham				
4+90 BC	cs Rt				
4+50					
4+00					

Lt = North Rt = South

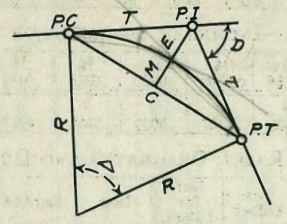
47.34	47.42	47.42	47.44	47.40	47.42	47.36
7.85	7.77	7.77	7.75	7.79	7.77	7.83
50	40	20		20	40	30
48.09		47.44			47.43	48.08
7.10		7.25			7.26	7.11
CL		Sat			Sat	CL
	North				South	
48.63		47.98			47.87	48.52
6.56		7.21			7.32	6.67
CL		Sat			Sat	CL
	North				South	
48.84	48.21	48.2	48.23		48.89	
6.35	6.98	7.0	6.26		6.30	
21.0	21.0		21.0		21.0	
CL	Sat		Sat		CL	
49.16	48.52	48.8	48.5		49.20	
6.04	6.67	6.4	6.65		5.99	
20	20		20		20	
CL	Sat		Sat		CL	
BC			BC			
49.24	49.60	50.19	48.78		50.03	
4.95	5.59	5.0	5.41		4.76	
20	20		20		20	
CL	Sat		Sat		CL	
50.99	50.33	50.0	50.64		51.28	
4.21	4.86	4.2	4.55		3.91	
20	20		20		20	
CL	Sat		Sat		CS	

55.17

Took soil		Gresham St South Rope Reed & Gresham			
Took soil sample		Oliver St 0+50 E St. Betw Haines Gresham & Haines			
BM starting			9 57	21 12	21 19
TP4	4 14	30 74	11 28	26 60	
TP5	1 42	37 88	12 57	36 44	
TP4	1 86	49 03	8 02	47 17	

55-19

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES



CURVE FORMULAS

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

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

Middle ordinate=M=R(1—cos. $\frac{\Delta}{2}$) (5)=Rvers $\frac{\Delta}{2}$ (6)

External=E=Ttan$\frac{\Delta}{4}$ (7)=R ÷ cos.$\frac{\Delta}{2}$—R (8)=Rexsec$\frac{\Delta}{2}$ (9)

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

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.=Sta. 161+60.35 to find Sta. of P. C. and P. T. △=62° 10′ D=8° 20′. From Table IV for 1° curve T=3454.1 and ÷8⅓=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÷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÷(2 x 688.26)=2.16 ft.

Deflections.—Deflection angle=½ D for 100 ft., ¼ D for 50 ft., etc. For c ft.=(in minutes) .3 x C x D° or=defl. for 1 ft. from Table III x C. For Sta. 158 of above curve=.3 x 54.5 x 8⅓=136.2′ or 2° 16.2′, or=2.50 x 54.5=136.2′ from Table III. For Sta. 159 deflection angle=2° 16.2′ +8° 20′ ÷2=6° 26.2′, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 115.37. For from Table IV for 1° curve E=960.6 for 8° 20′=960.6÷8⅓=115.27 and from Table V correction=.10 or E=115.37 ft. Or suppose △=32° and E is measured and found to be 42 ft. What is D? From Table IV E=230.9 and ÷42=5.5 or D=5° 30′.

TABLE IV.—TANGENTS AND EXTERNALS TO A 1° CURVE.

Central Angle	Tangent	External	Central Angle	Tangent	External	Central Angle	Tangent	External
31°	1589.0	216.3	**41°**	2142.2	387.4	**51°**	2732.9	618.4
10′	1598.0	218.7	10′	2151.7	390.7	10	2743.1	622.8
20	1606.9	221.1	20	2161.2	394.1	20	2753.4	627.2
30	1615.9	223.5	30	2170.8	397.4	30	2763.7	631.7
40	1624.9	226.0	40	2180.3	400.8	40	2773.9	636.2
50	1633.9	228.4	50	2189.9	404.2	50	2784.2	640.7
32	1643.0	230.9	**42**	2199.4	407.6	**52**	2794.5	645.2
10	1652.0	233.4	10	2209.0	411.1	10	2804.9	649.7
20	1661.0	235.9	20	2218.6	414.5	20	2815.2	654.3
30	1670.0	238.4	30	2228.1	418.0	30	2825.6	658.8
40	1679.1	241.0	40	2237.7	421.4	40	2835.9	663.4
50	1688.1	243.5	50	2247.3	425.0	50	2846.3	668.0
33	1697.2	246.1	**43**	2257.0	428.5	**53**	2856.7	672.7
10	1706.3	248.7	10	2266.6	432.0	10	2867.1	677.3
20	1715.3	251.3	20	2276.2	435.6	20	2877.5	682.0
30	1724.4	253.9	30	2285.9	439.2	30	2888.0	686.7
40	1733.5	256.5	40	2295.6	442.8	40	2898.4	691.4
50	1742.6	259.1	50	2305.2	446.4	50	2908.9	696.1
34	1751.7	261.8	**44**	2314.9	450.0	**54**	2919.4	700.9
10	1760.8	264.5	10	2324.6	453.6	10	2929.9	705.7
20	1770.0	267.2	20	2334.3	457.3	20	2940.4	710.5
30	1779.1	269.9	30	2344.1	461.0	30	2951.0	715.3
40	1788.2	272.6	40	2353.8	464.6	40	2961.5	720.1
50	1797.4	275.3	50	2363.5	468.4	50	2972.1	725.0
35	1806.6	278.1	**45**	2373,3	472.1	**55**	2982.7	729.9
10	1815.7	280.8	10	2383.1	475.8	10	2993.3	734.8
20	1824.9	283.6	20	2392.8	479.6	20	3003.9	739.7
30	1834.1	286.4	30	2402.6	483.8	30	3014.5	744.6
40	1843.3	289.2	40	2412.4	487.2	40	3025.2	749.6
50	1852.5	292.0	50	2422.3	491.0	50	3035.8	754.6
36	1861.7	294.9	**46**	2432.1	494.8	**56**	3046.5	759.6
10	1870.9	297.7	10	2441.9	498.7	10	3057.2	764.6
20	1880.1	300.6	20	2451.8	502.5	20	3067.9	769.7
30	1889.4	303.5	30	2461.7	506.4	30	3078.7	774.7
40	1898.6	306.4	40	2471.5	510.3	40	3089.4	779.8
50	1907.9	309.3	50	2481.4	514.3	50	3100.2	784.9
37	1917.1	312.2	**47**	2491.3	518.2	**57**	3110.9	790.1
10	1926.4	315.2	10	2501.2	522.2	10	3121.7	795.2
20	1935.7	318.1	20	2511.2	526.1	20	3132.6	800.4
30	1945.0	321.1	30	2521.1	530.1	30	3143.4	805.6
40	1954.3	324.1	40	2531.1	534.2	40	3154.2	810.9
50	1963.6	327.1	50	2541.0	538.2	50	3165.1	816.1
38	1972.9	330.2	**48**	2551.0	542.2	**58**	3176.0	821.4
10	1982.2	333.2	10	2561.0	546.3	10	3186.9	826.7
20	1991.5	336.3	20	2571.0	550.4	20	3197.8	832.0
30	2000.9	339.3	30	2581.0	554.5	30	3208.8	837.3
40	2010.2	342.4	40	2591.0	558.6	40	3219.7	842.7
50	2019.6	345.5	50	2601.1	562.8	50	3230.7	848.1
39	2029.0	348.6	**49**	2611.2	566.9	**59**	3241.7	853.5
10	2038.4	351.8	10	2621.2	571.1	10	3252.7	858.9
20	2047.8	354.9	20	2631.3	575.3	20	3263.7	864.3
30	2057.2	358.1	30	2641.4	579.5	30	3274.8	869.8
40	2066.6	361.3	40	2651.5	583.8	40	3285.8	875.3
50	2076.0	364.5	50	2661.6	588.0	50	3296.9	880.8
40	2085.4	367.7	**50**	2671.8	592.3	**60**	3308.0	886.4
10	2094.9	371.0	10	2681.9	596.6	10	3319.1	892.0
20	2104.3	374.2	20	2692.1	600.9	20	3330.3	897.5
30	2113.8	377.5	30	2702.3	605.3	30	3341.4	903.2
40	2123.3	380.8	40	2712.5	609.6	40	3352.6	908.8
50	2132.7	384.1	50	2722.7	614.0	50	3363.8	914.5

TABLE IV.—TANGENTS AND EXTERNALS TO A 1° CURVE.

Central Angle	Tangent	External	Central Angle	Tangent	External	Central Angle	Tangent	External
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	20	4112.1	1322.9	20	4922.5	1824.1
30	3408.8	937.3	30	4124.8	1330.3	30	4937.0	1833.6
40	3420.1	943.1	40	4137.4	1337.7	40	4951.5	1843.1
50	3431.4	948.9	50	4150.1	1345.1	50	4966.1	1852.6
62	3442.7	954.8	**72**	4162.8	1352.6	**82**	4980.7	1862.2
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	5010.0	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	**73**	4239.7	1398.0	**83**	5069.2	1920.5
10	3522.6	996.2	10	4252.6	1405.7	10	5084.0	1930.4
20	3534.1	1002.3	20	4265 6	1413.5	20	5099.0	1940.3
30	3545.6	1008.3	30	4278.5	1421.2	30	5113.9	1950.3
40	3557.2	1014.4	40	4291.5	1429.0	40	5128.9	1960.2
50	3568.7	1020.5	50	4304.6	1436.8	50	5143.9	1970.3
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	**75**	4396.5	1492.4	**85**	5250.3	2041.7
10	3661.9	1070.2	10	4409.8	1500.5	10	5265.6	2052.1
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	40	4449.7	1524.9	40	5311.9	2083.5
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	5389.9	2136.7
40	3768.5	1128.2	40	4530.4	1574.7	40	5405.6	2147.5
50	3780.4	1134.8	50	4544.0	1583.1	50	5421.4	2158.4
67	3792.4	1141.4	**77**	4557.6	1591.6	**87**	5437.2	2169.2
10	3804.4	1148.0	10	4571.2	1600.1	10	5453.1	2180.2
20	3816.4	1154.7	20	4584.8	1608.6	20	5469.0	2191.1
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	20	4667.4	1660.5	20	5565.4	2258.0
30	3901.2	1202.0	30	4681.3	1669.2	30	5581.6	2269.3
40	3913.4	1208.9	40	4695.2	1678.1	40	5597.8	2280.6
50	3925.6	1215.8	50	4709.2	1686.9	50	5614.2	2292.0
69	3937.9	1222.7	**79**	4723.2	1695.8	**89**	5630.5	2303.5
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	**80**	4807.7	1749.9	**90**	5729.7	2373.3
10	4024.4	1272.1	10	4822.0	1759.0	10	5746.3	2385.1
20	4036.8	1279.3	20	4836.2	1768.2	20	5763.1	2397.0
30	4049.3	1286.5	30	4850.5	1777.4	30	5779.9	2408.9
40	4061.8	1293.6	40	4864.8	1786.7	40	5796.7	2420.9
50	4074.4	1300.9	50	4879.2	1796.0	50	5813.6	2432.9

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½

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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