

W  
504



# 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.

564

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

**MICROFILMED**

JAN 13 1965

The paper stock of this book is made 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.

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be  $30.6 + (20 - 16) \div 2$  or 2 ft. added to  $30.6 = 32.6$ . For slopes of 1 on 1½ see inside of back cover.  
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Pac. Beach Pipeline - Alternate from  
Witherby St to Causeway via Pac Blvd  
& Barnett St - ✓ - 51-59

Harbor Drive Pipeline loc. 60-77 ✓  
✓ ✓ Soil Samples 78 ✓  
" " Extension 38-39 ✓

Harbor Drive Alignment, Sta 0+00 - 10+50 - 38-39 ✓  
" " " " 14+50 - 26+37 - 20+66  
Book 567-7  
" " " " 20+66 - 36+50 This book 70-71 ✓  
Soil Samples 75

Ch

H

10

11

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39

40

to b  
of rc  
exar  
30.6



Upas St. Pipe Line Ext.

2+00

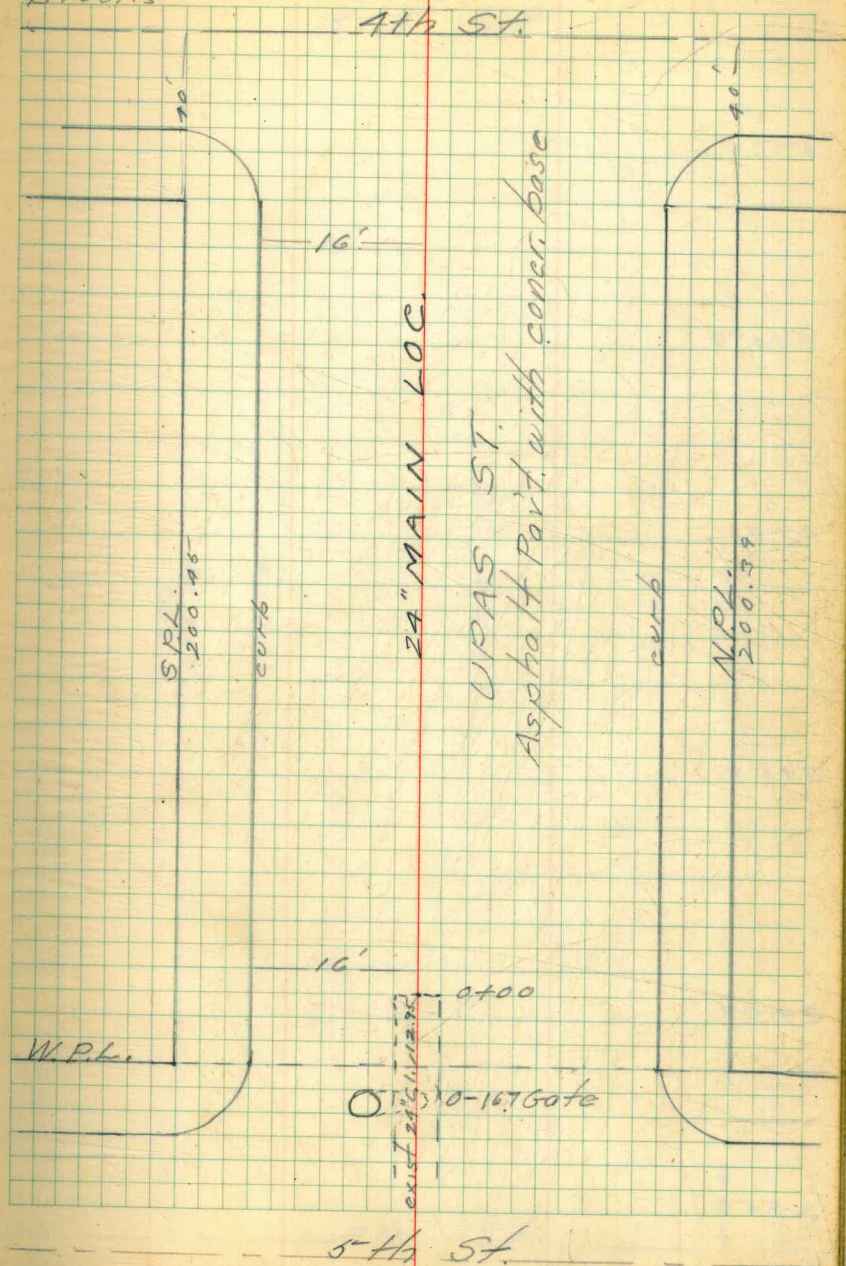
1+50

1+00

0+50

0+00 End of 24" C.I. pipe.  
 0-12.95 W.P.L. 5th St.

Hill 3/11/40 clear  
 Soper  
 Brooks



4th St.

10'

16'

S.P.L.  
200.48

curb

24" MAIN LOC.

UPAS ST.

Asphalt Pav't. with cover base

curb

N.P.L.  
200.39

10'

10'

0+00

W.P.L.

0

exist 24" W.P.L.

10-16.7 Gate

5th St.



5700

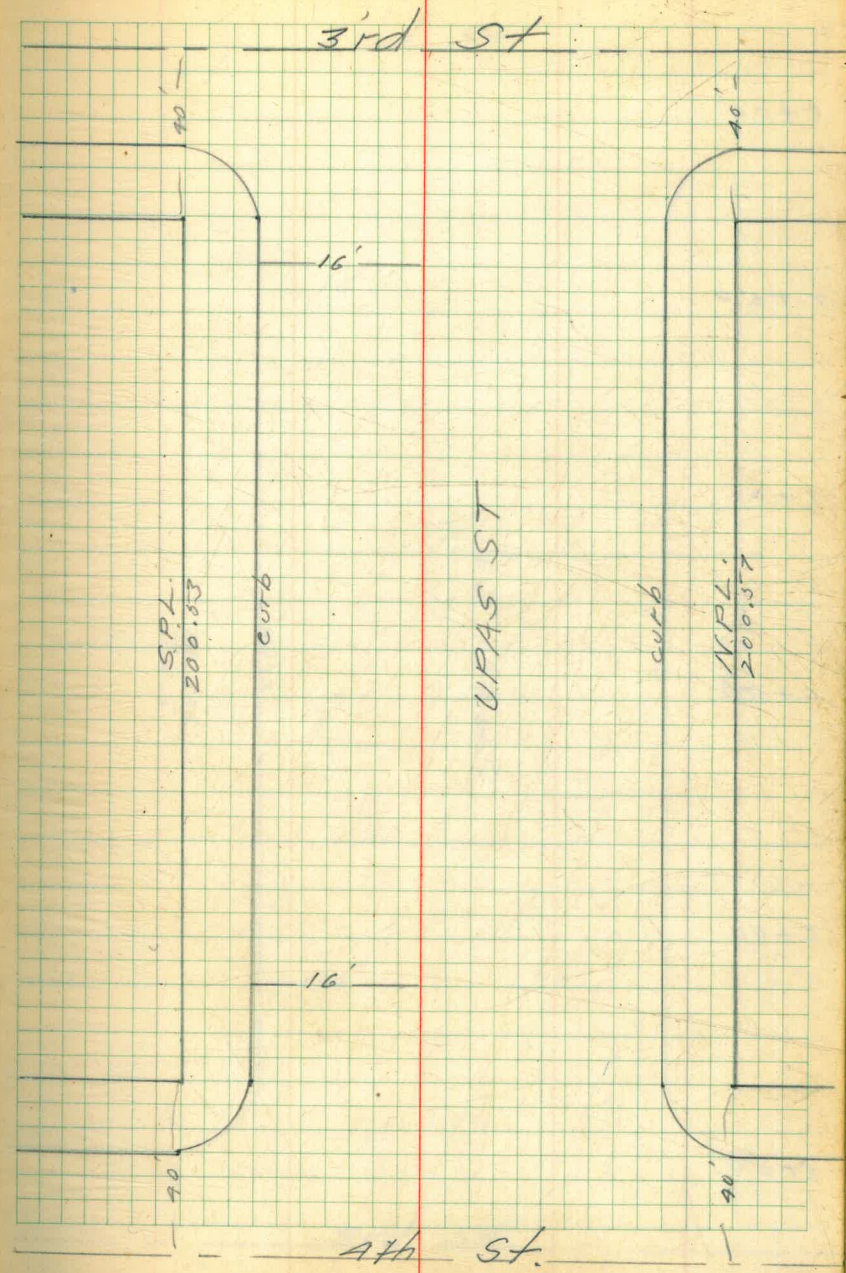
4750

4100

3750

3100

2750



3rd St

U.P.A.S. ST

4th St

40'

16'

16'

40'

40'

40'



8+00

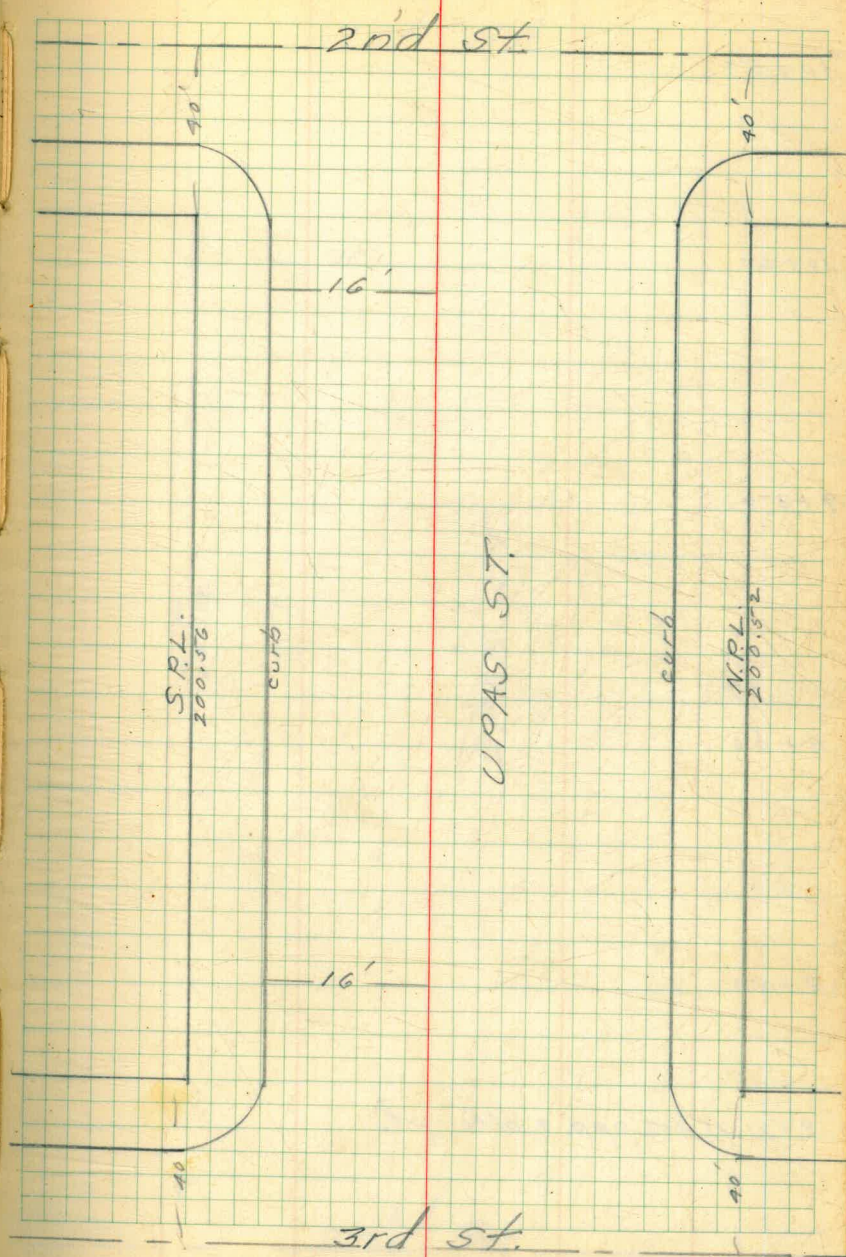
7+50

7+00

6+50

6+00

5+50





10+50

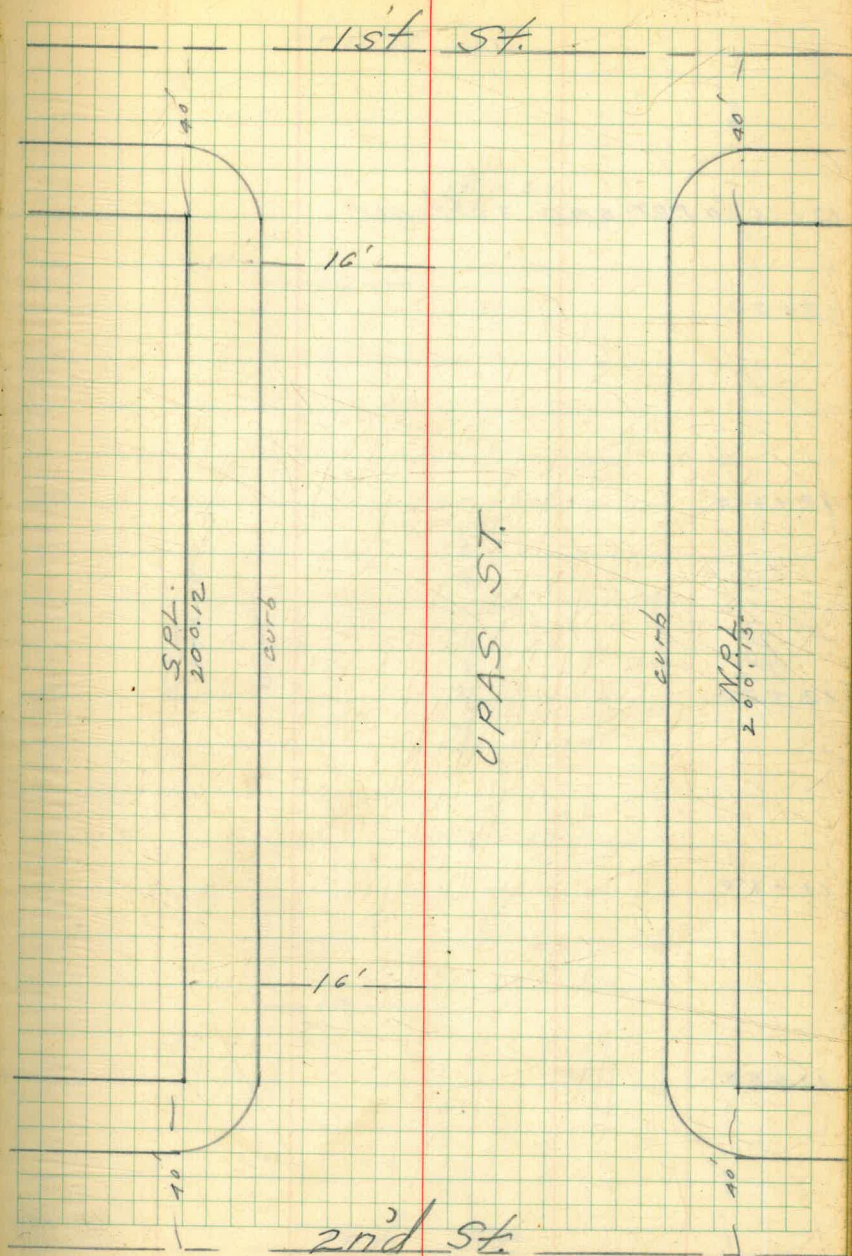
10+00

9+50

9+00

8+50

8+21.71 POT. opp. 7' offset pt.





12+16.20 P.O.T. opp. tolls. pt

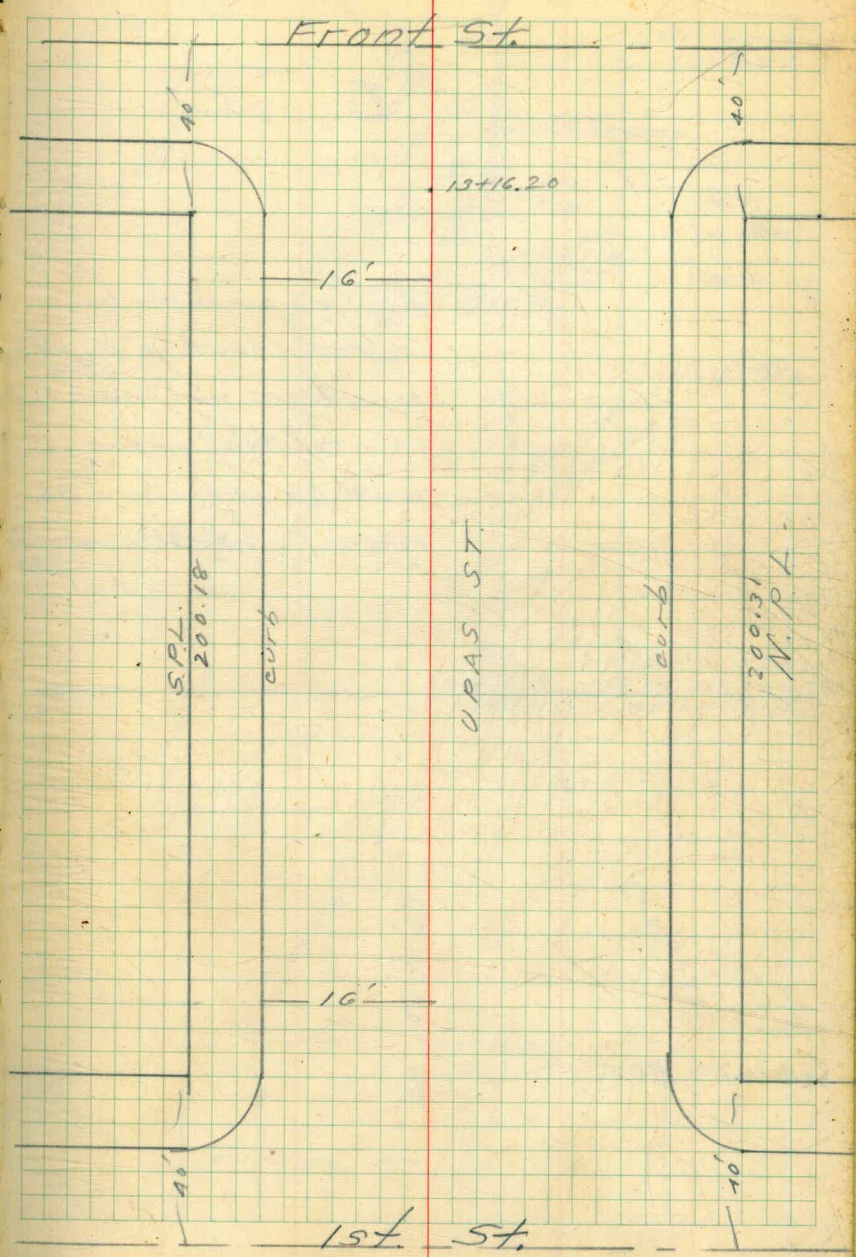
13+00

12+50

12+00

11+50

11+00

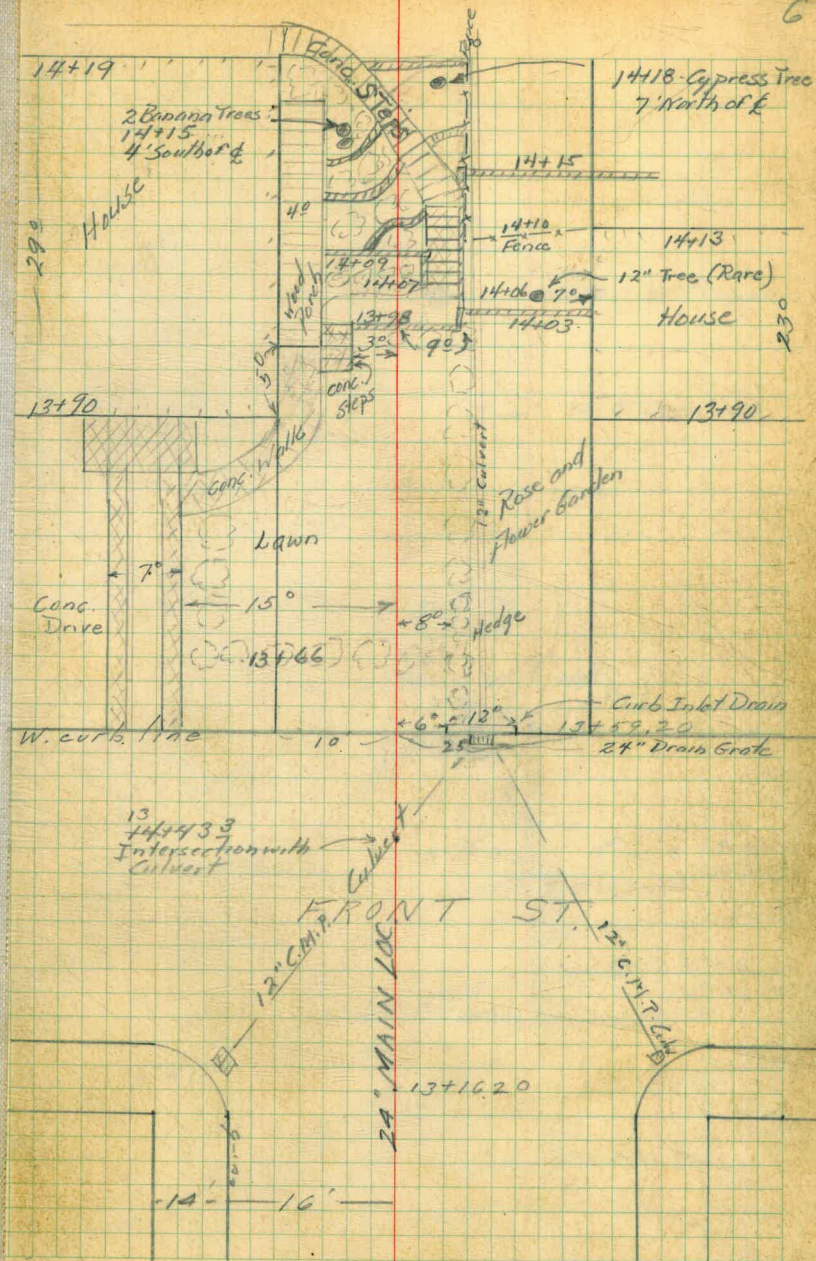




Note If line were to be shifted about 12' N, many rare trees and much ornamental landscaping could be preserved between Front & Albatross Sts  
 7/11/11

13+59.20

13+16.20 R.O.T.



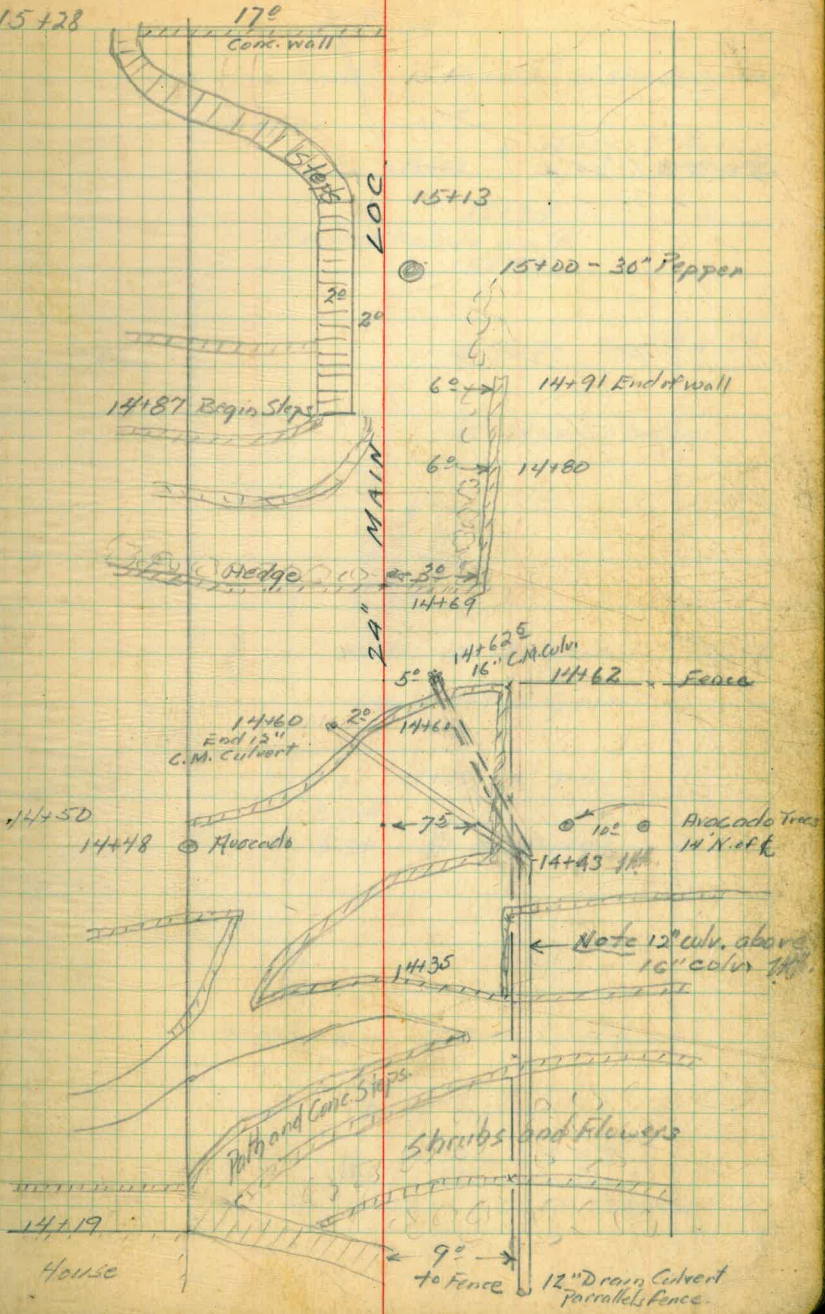


15+28

17°

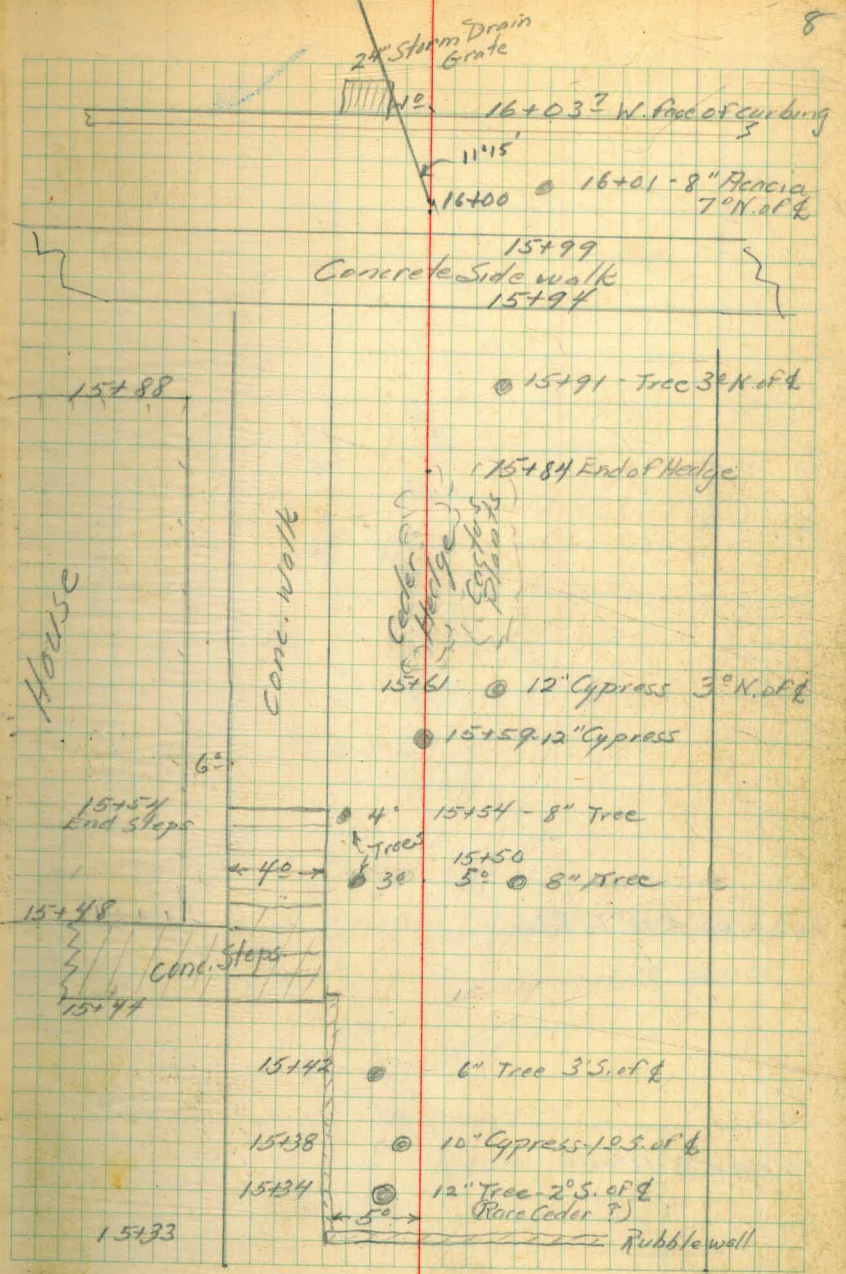
Conc. wall

7





16+00  $\Delta$  11° 15' L



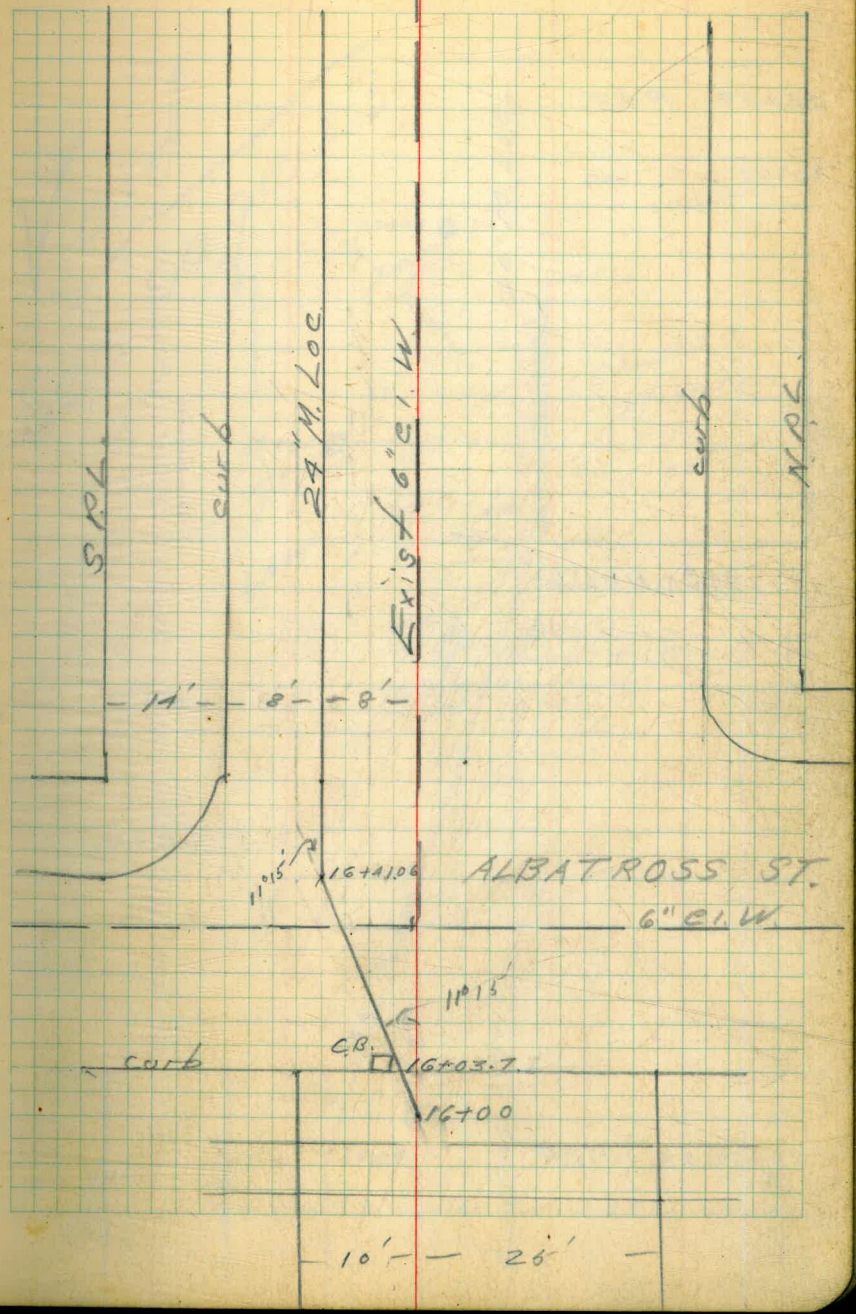


Hill  
Super  
Brookes 3/12/40 clear + warm

9.

16+41.06 Δ 11°15'R

16+00 Δ 11°15'L

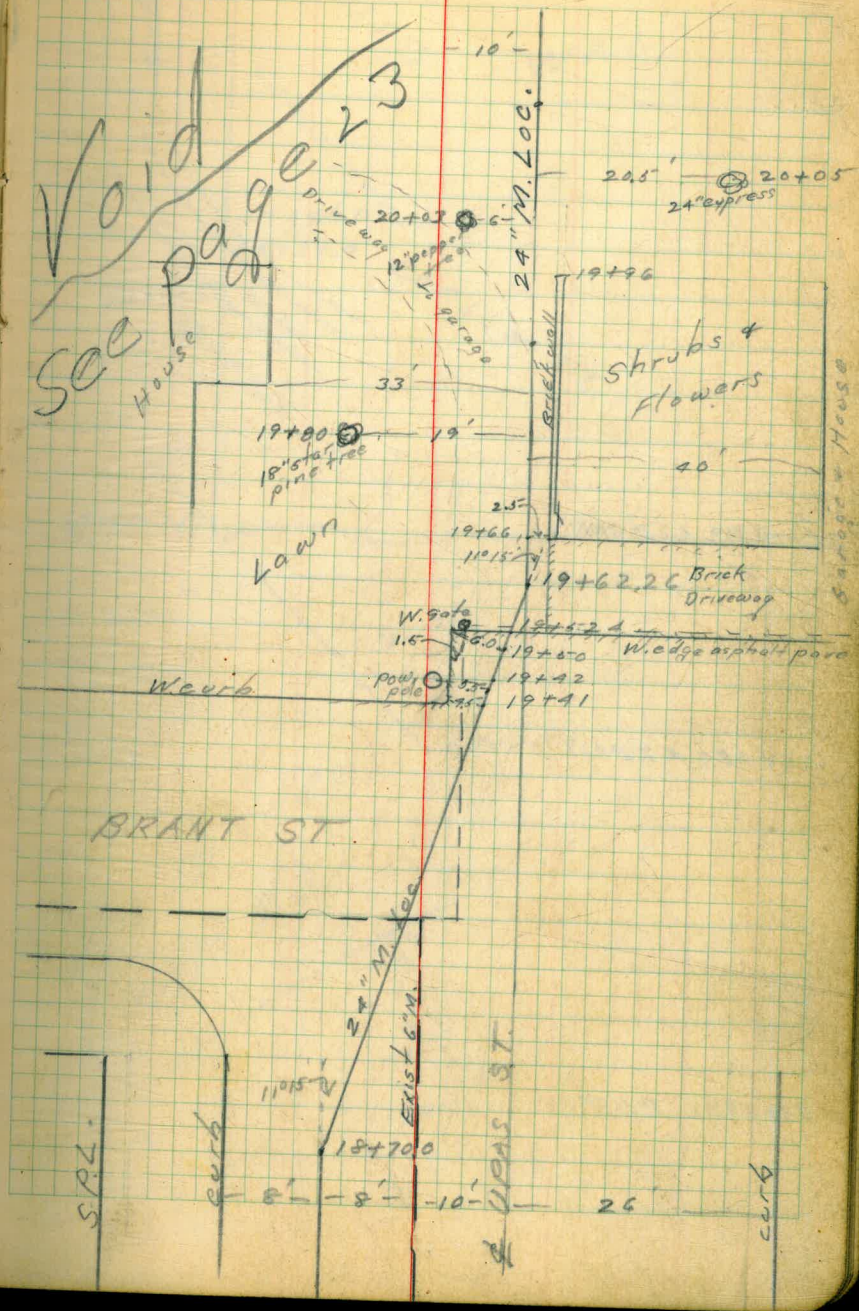




20+09 P.O.T.

19+62.26A 11°15'1

18+70.0A 11°15'R

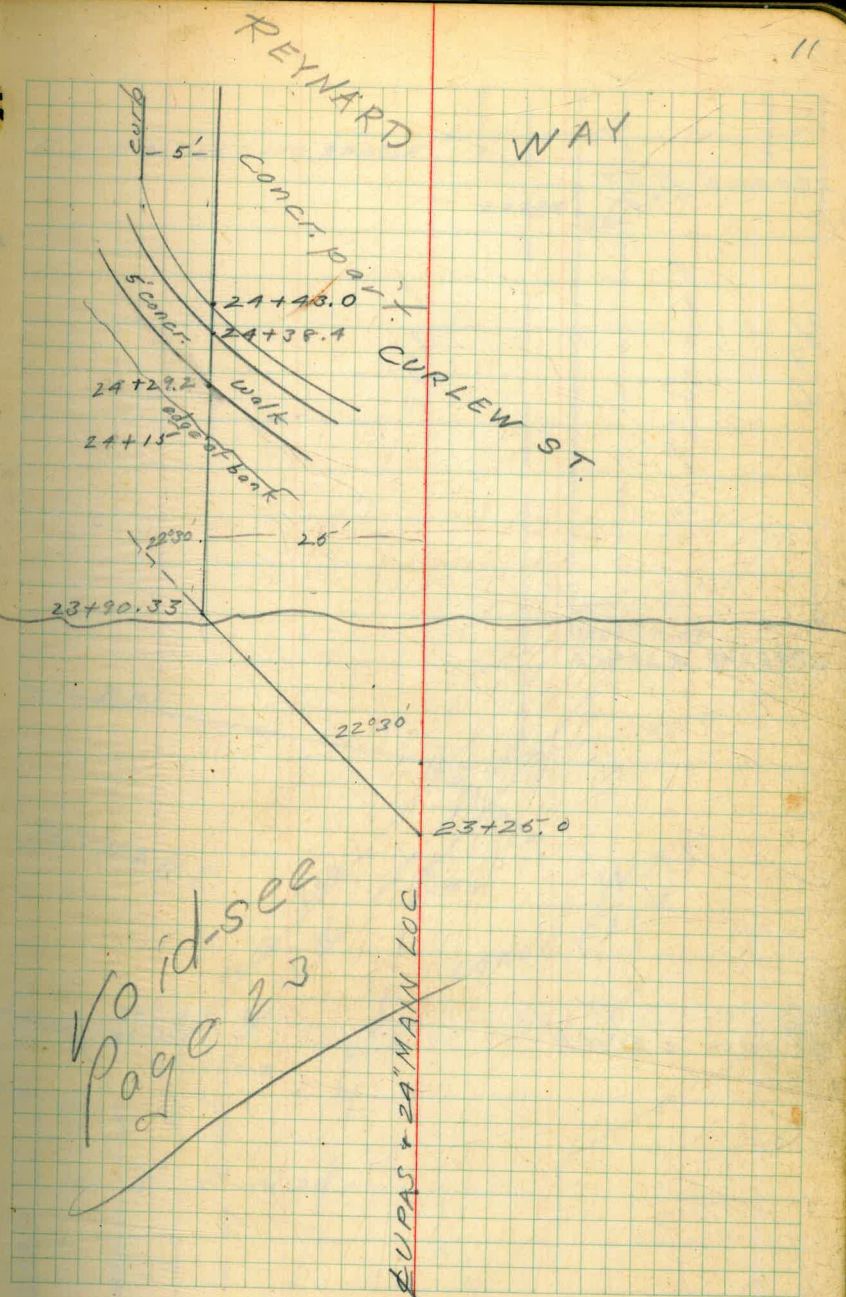




23+90.33  $\Delta$  22°30'R

23+25.0  $\Delta$  22°30'L

21+08.92 P.O.T.

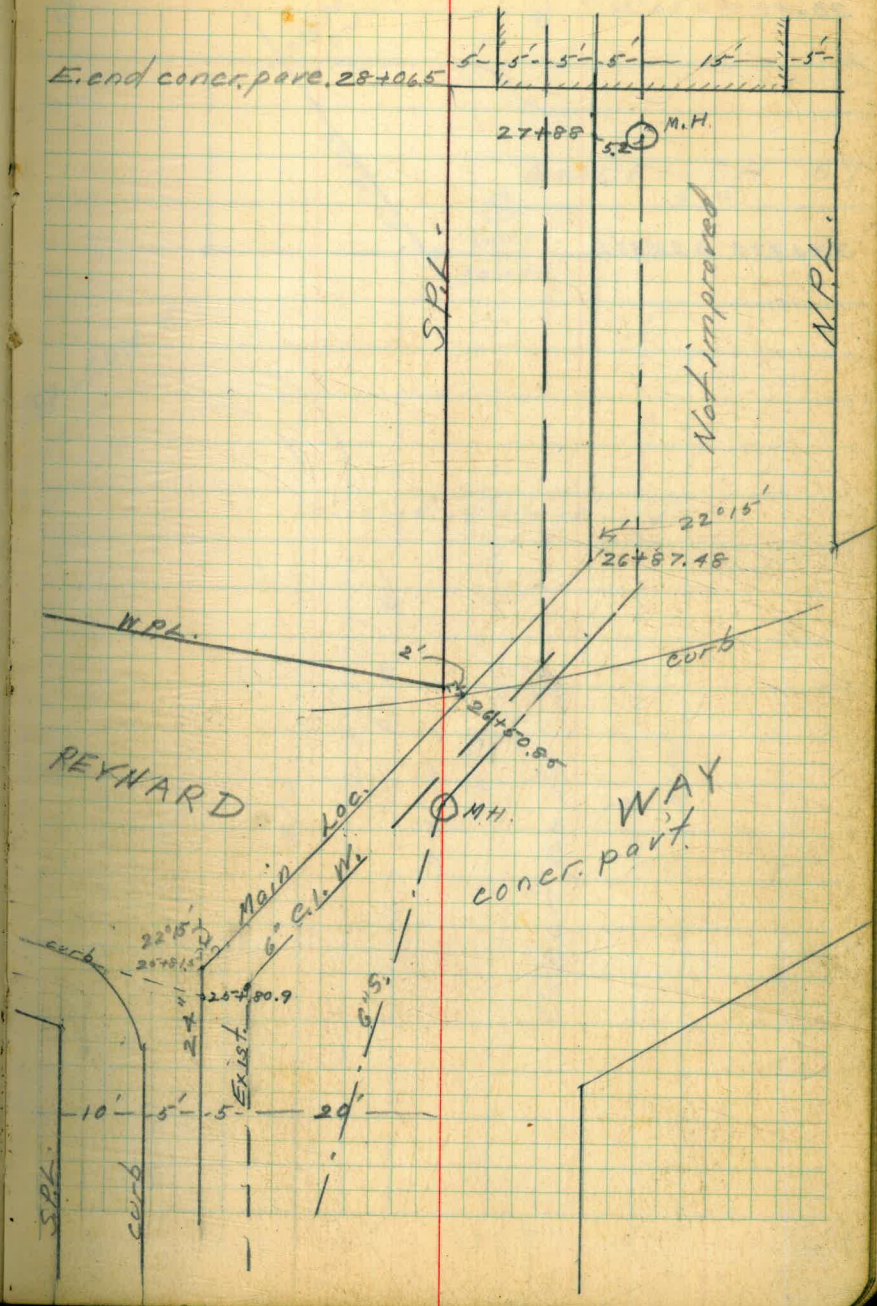




28+00.0 P.O.T.

26+87.48  $\Delta$  22°15' L

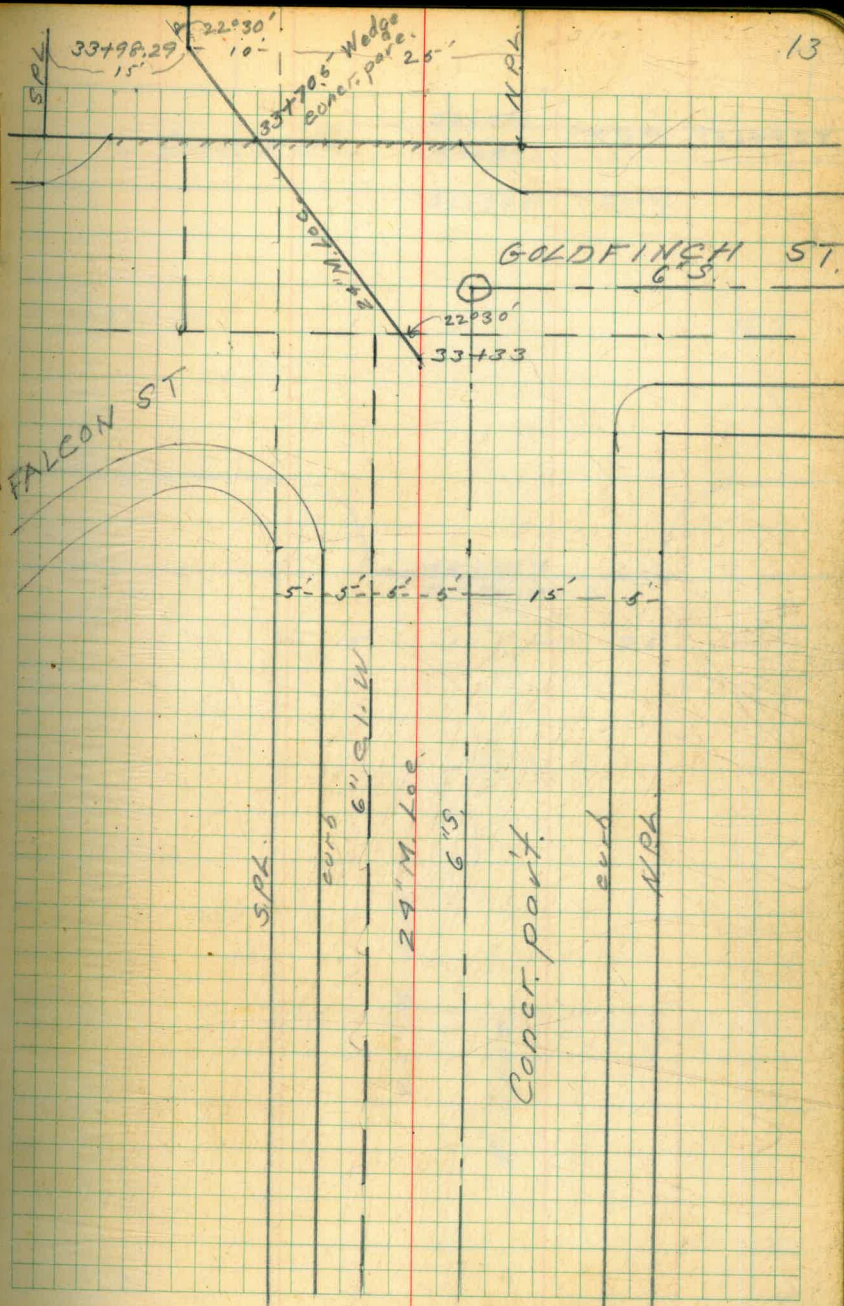
25+81.50  $\Delta$  22°15' R





33+98.29  $\Delta$  22°30' R

33+33.0  $\Delta$  22°30' L





36+46.5 P.O.T.

14

Corner Walk

36+49

36+44

36+39.5

curb

HAWK

ST

35+73.7

E. edge pave.

15'

10'

25'

24" M. Loc.

E. Upas



-10-

24" M LOC

Q URAS ST

-10-



- 10' -

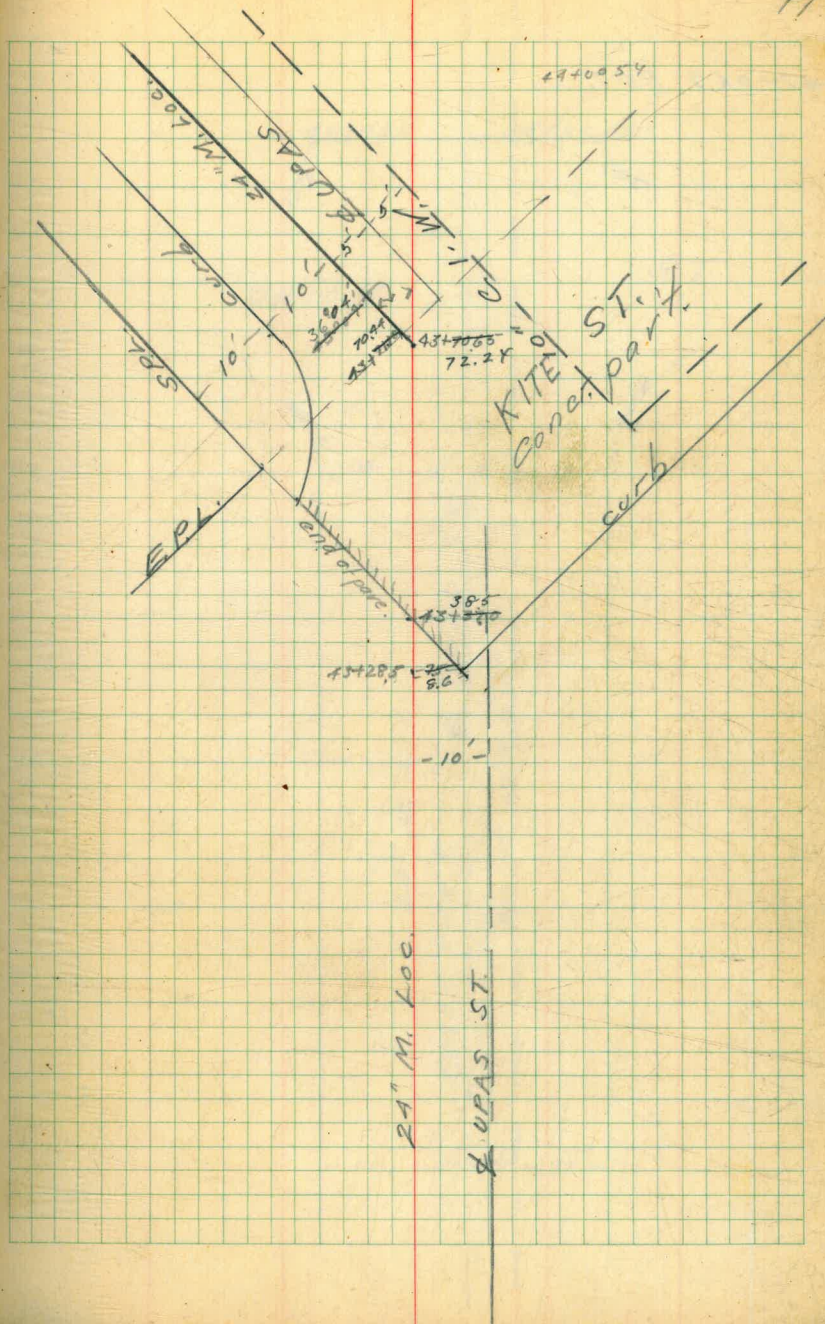
24' M. Loc.

4 UPAS ST.

- 10' -



43+70.65  $\Delta$  36°09' L





47406.9 P.O.T.

18

16+990 edge part  
curb curb

UNION

ST.

curb 10' 5' 5' 10' curb

24" M. LOC.

CONCR. PART

UPAS ST.

EXIST 10' S.C.W.

10' 5' 5' 10'



powerline  
0.8'

5'-5'



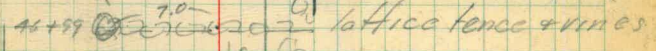
STATE ST.  
CONCR. PAVY



24" M. Loc  
UPAS ST  
EXIST 10" C.L.W



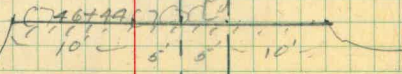
14' concrete  
Lawn



House

Flowers, shrubs  
& low rock walls

20' 46+61



UNION ST.



54+6306 P.O.T.

Note from State St. to India 24" M. loc.  
Comes at top edge of deep cut - see level notes

Peak line  
0 0'

5'-

54+98

W. curb

54+70.10

INDIA ST.

Peak line  
0 0'

53+98

E. edge part

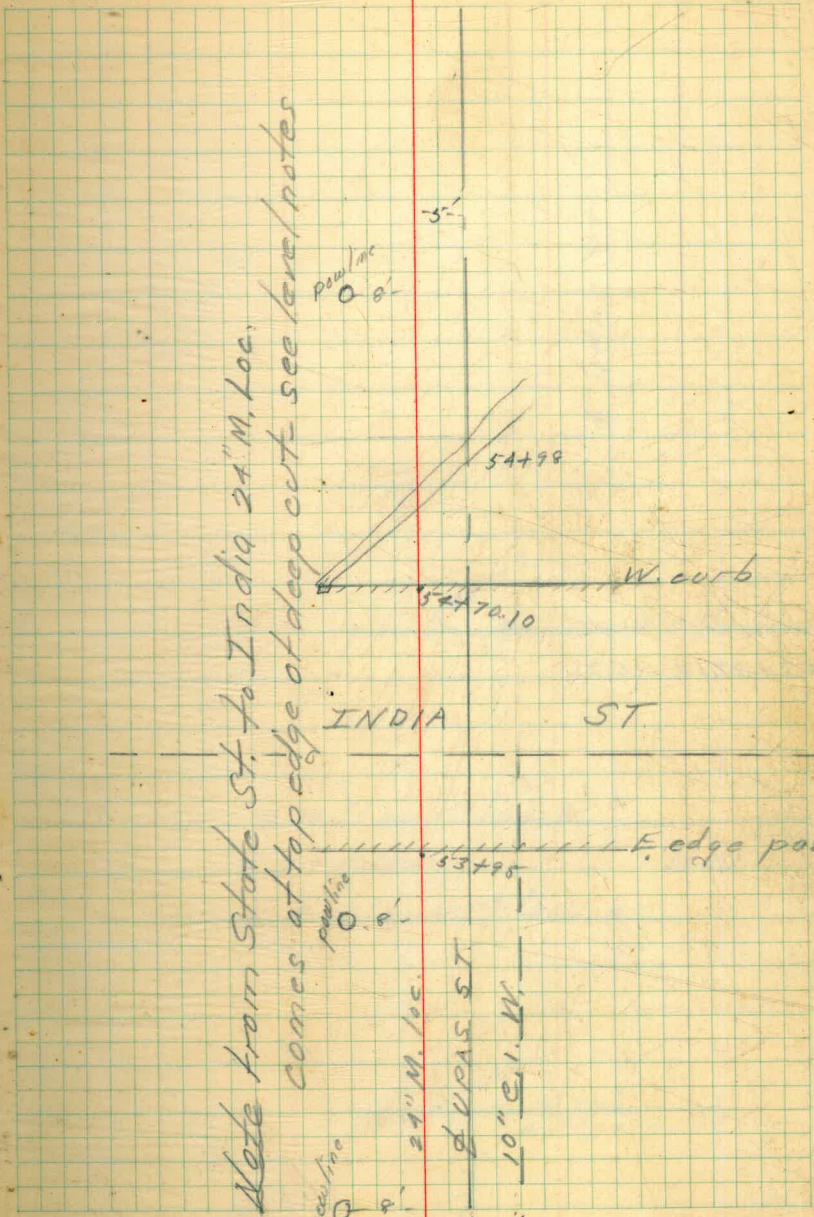
Peak line  
0 0'

24" M. loc.

24" M. loc.

10" C.I. W.

5'-





57+37.50 P.O.T.

W. St. car 57+13.12 track

KETTNER

BULD

E. St. car 57+00.12 track

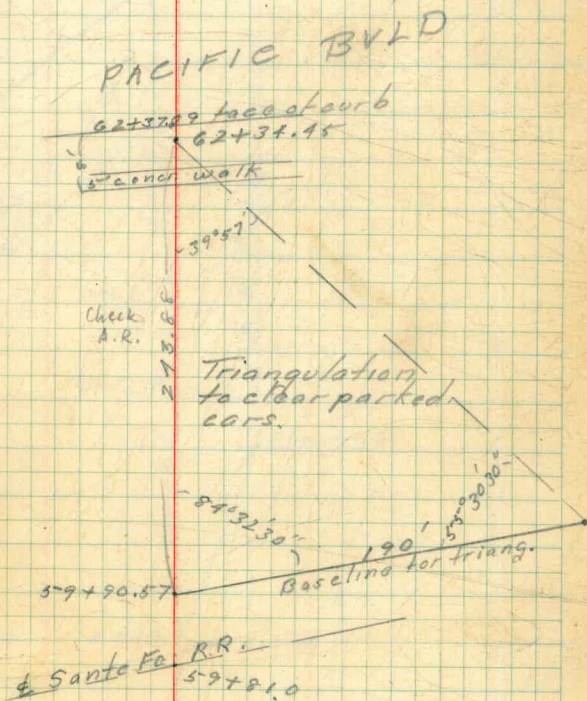
57+69.5  
10' 5' 13'  
E. edge part

E UPAS



62+34.95 P.O.T.

59+90.57 P.O.T. &amp; Triang. Pt.

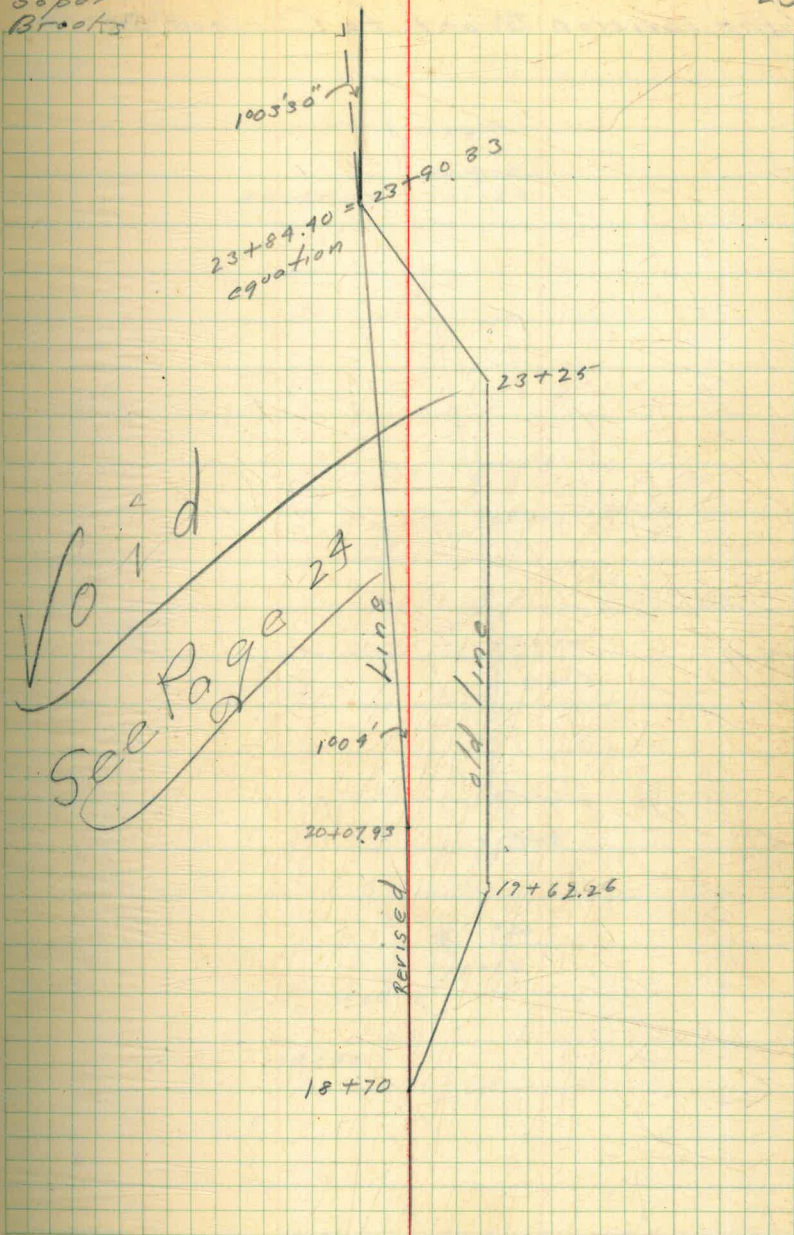




Line revision sta. 18+70 (Brant) to sta. 23+84.90

Hill 6/20/40  
Soper  
Brooks

23





Line revision Brant to Curlew St.

Hill  
Soper  
Brooks

8/5/40

24

1°41'  
24 + 13.0  
EQUATION 24 + 06.33

1°41'  
20 + 07

1°20'  
19 + 52

1°20'  
19 + 72

1°20'  
18 + 20

18 + 00



## TRENCH DEPTHS FOR YARDAGE

## CALCULATIONS

Station	Ground	Grade	Cut	End Area	Cu. Yds.
0+00	284.9	278.5	6.4		
+50	284.9	278.45	6.5		
1	x 284.8	278.4	6.4		
+30	x 284.6	278.4	6.2		
+50	x 284.6	278.0	6.6		
+70	x 284.6	277.2	7.4		
+90	x 284.3	276.8	7.5		
2+10	x 284.4	276.8	7.6		
+30	x 284.7	277.2	7.5		
+80	x 284.5	279.2	5.3		
3	x 284.5	279.6	4.9		
+50	x 284.5	279.6	4.9		

Grade change at 2nd st

Sta	Ground	Grade	Cut	End Area	Cu. Yds.
4	284.3	279.4	4.9		
+50	284.2	279.2	5.0		
5	x 284.0	279.0	5.0		
+50	x 283.5	279.0	4.5		
6	282.0	278.0	4.0		
+50	281.6	277.0	4.6		
7	280.0	276.0	4.0		
+50	279.0	275.0	4.0		
+70	279.3	274.2	5.1		
8	x 279.1	274.0	5.1		
	278.9	272.4	6.5		
+16	278.5	271.8	6.7		
+20	278.4	272.2	6.2		
32	278.0	271.5	6.5		
+40	x 277.4	272.1	5.3		
+60	x 275.5	270.2	5.3		
		270.7	4.8		



(cont.)

Sta.	Ground	Grade	Cut
8+80	272.6	268.0	4.6 ✓
	<del>273.6</del>	<del>269.0</del>	
9	271.7	267.0	4.7 ✓
+50	266.8	262.3	4.5 ✓
+90	262.8	258.2	4.6 ✓
<del>10+06</del>	<del>261.3</del>	<del>256.5</del>	<del>4.8</del>
10+30	259.2	254.4	4.8 ✓
	<del>259.2</del>	<del>255.2</del>	<del>4.5</del>
<del>150</del>	<del>258.9</del>	<del>254.4</del>	<del>4.5</del>
+50	258.7	252.5	6.2 ✓
<del>154</del>	<del>258.6</del>	<del>254.0</del>	<del>4.6</del>
+70	258.3	250.6	7.7 ✓
	<del>258.3</del>	<del>254.0</del>	<del>4.3</del>
<del>186</del>	<del>258.0</del>	<del>253.7</del>	<del>4.3</del>
11+00	257.6	250.4	7.2 ✓
<del>11+02</del>	<del>257.6</del>	<del>253.1</del>	<del>4.5</del>
11+09	257.4	250.4	7.0 ✓
<del>118</del>	<del>256.7</del>	<del>252.2</del>	<del>4.5</del>
11+25	256.1	250.3	5.8 ✓
11+31	255.0	249.9	5.1 ✓
<del>1134</del>	<del>255.4</del>	<del>251.0</del>	<del>4.4</del>
11+57	253.8	249.1	4.7 ✓

Grade change at 1st st

(cont.)

Sta.	Ground	Grade	Cut
12	250.0	245.7	4.3 ✓
+50	245.8	241.5	4.3 ✓
13	241.8	237.3	4.5 ✓
		36.4	5.4
+25	240.9	235.6	5.3 ✓
		34.4	6.5
+50	240.5	234.3	6.2 ✓
		33.5	7.0
+66	240.6	233.7	6.9 ✓
		5	7.1
+82	240.4	233.4	7.0 ✓
+98	240.3	233.4	6.9 ✓
14	237.6	233.4	4.2 ✓
+095	237.2	227.9	9.3 ✓
+11	231.3	227.0	4.3 ✓
+14	231.1	225.3	5.8 ✓
+23	224.7	220.1	4.6 ✓
+50	212.3	204.6	7.7 ✓
+65	208.0	204.6	3.4 ✓
+80	209.9	204.6	5.3 ✓
+97	217.3	214.6	5.7 ✓
14+10	223.1	217.3	5.8 ✓
+30	233.3	226.2	7.1 ✓

Grade change at 1st st



Sta	Ground	Grade	Cut
15+48	x 236.5	232.4	4.1 ✓
+64	x 241.3	236.2	5.1 ✓
+80	x 242.4	237.9	4.5 ✓
+96	x 245.0	239.1	5.9 ✓
16+12	x 244.6	239.9	4.7 ✓
+28	x 245.6	240.2	5.4 ✓
+75	x 245.5	241.0	4.5 ✓
17	x 245.5	241.0	4.5 ✓
+50	244.9	240.4	4.5 ✓
18	244.4	239.9	4.5 ✓
+20	244.1	239.6	4.5 ✓
+40	x 243.9	239.4	4.5 ✓
+56	x 243.7	238.8	4.9 ✓
+97	x 243.3	236.2	7.1 ✓
19+13	x 242.8	235.6	7.2 ✓

27

Sta	Ground	Grade	Cut
19+30	x 242.2	235.4	6.8 ✓
+70	241.9	235.4	6.5 ✓
+77	241.6	235.4	6.2 ✓
+90	239.6	235.4	4.2 ✓
20+00	239.4	235.4	4.0 ✓
+07	x 240.3	235.4	4.9 ✓
+11	240.3	233.1	7.2 ✓
+35	x 225.2	219.5	5.7 ✓
+50	x 215.0	206.2	8.8 ✓
+63	207.2	194.1	13.1 ✓
+67	193.2	190.4	2.8 ✓
+69	x 193.2	188.5	4.7 ✓
21+04	x 193.4	188.5	4.9 ✓



Sta.	Ground	Grade	Cut
21+12	193.5	183.9	9.6
+27	179.1	175.3	3.8
+50	166.2	162.1	4.1
+57	163.3	158.0	5.3
+63	161.3	158.0	3.3
+90	164.3	158.0	6.3
22+00	164.4	158.0	6.4
+16	163.1	157.6	5.5
+32	162.0	156.8	5.2
+48	160.0	155.6	4.4
+64	157.6	153.9	3.7
+80	155.5	151.8	3.7
23+00	153.1	148.7	4.4

28

Sta.	Ground	Grade	Cut
23+25	148.9	144.7	4.2
+50	145.3	140.1	5.2 <del>4.2</del>
+65	143.0	137.3	5.7
24+00	135.9	132.1	3.8
24+13 <sup>00</sup>	135.5	131.2	4.3
+30	122.7	118.1	4.6
+70	118.3	111.3	7.0
25+06	117.1	109.6	7.5
+22	115.9	108.3	7.6
+38	114.9	107.4	7.5
+54	113.8	107.0	6.8
+70	113.0	106.9	6.1
26+20	113.6	107.1 <del>108.1</del>	6.5 <del>5.5</del>



Sta.	Ground	Grade	Cut
26+55	114.4	108.0	6.4
<del>26+60</del>	<del>114.8</del>	<del>109.0</del>	<del>5.8</del>
26+80	120.5	113.4	7.1
27+00	126.2	120.0	6.2
+25	134.5	128.7	5.8
+75	151.5	147.0	4.5
+98	163.1	155.7	7.4
28+00	163.0	156.5	6.5
+06	161.8	156.5	5.3
+20	163.6	156.5	7.1
+50	167.4	160.0	7.4
29+00	173.2	165.8	7.4
+50	179.1	171.6	7.5
30+00	185.0	177.4	7.6
+25	187.9	180.3	7.6
50	190.9	183.5	7.4
<del>50</del>	<del>192.1</del>	<del>187.5</del>	<del>4.6</del>
+75	193.9	187.1	6.8
31+00	196.8	<del>192.2</del> 190.2	4.6

Sta.	Ground	Grade	Cut
31+50	202.7	<del>196.1</del> <del>198.1</del>	4.6
+67	204.7	198.1	6.6
<del>32+00</del>	<del>208.6</del>	<del>204.0</del>	<del>4.6</del>
32+17		206.2	4.5
+50	214.5	209.9	4.6
+93	219.6	215.0	4.6
33+0.9	221.4	216.5	4.9
+25	222.6	217.5	5.1
+41	223.1	218.1	5.0
+70	223.6	218.5	4.5
+90	223.8	219.1	4.7
34+10	224.7	220.0	4.7
+50	226.9	222.4	4.5
35+00	229.5	224.8	4.7
+25	230.2	225.6	4.6



Sta	Ground	Grade	Cut
35+75	x 231.0	226.4	4.6
+86	230.9	226.4	4.5
36+00	231.3	226.4	4.9
+40	x 231.5	226.4	5.1
+52	231.3	219.5	11.8
+85	204.9	200.5	4.4
37+00	x 196.2	191.8	4.4
<i>Sept Est. to here</i>			
+30	x 180.5	175.0	5.5
+50	172.4	168.2	4.2
+75	x 164.5	169.7	4.8
+92	x 161.7	157.2	4.5
38+08	x 160.0	155.3	4.7
+24	x 159.3	153.8	5.5

30

Sta	Ground	Grade	Cut
38+40	x 158.6	152.7	5.9
+57	x 158.1	152.0	6.1
39	163.2	159.1	4.1
+36	x 169.8	165.0	4.8
+56	x 168.9	164.2	4.2
+72	x 166.5	160.4	6.1
+88	x 161.2	157.0	4.2
40+0.4	x 158.7	154.1	4.6
+20	x 157.7	151.6	6.1
+40	x 154.0	149.0	5.0
+50	152.0	148.7	3.3
41+05	x 152.2	146.9	5.3
+30	155.2	151.0	4.2



Sta	Ground	Grade	Cut
41+60	x 160.6	156.0	4.6 ✓
42	175.9	171.2	4.7 ✓
+50	x 194.7	190.2	4.5 ✓
+70	x 203.1	198.2	4.9 ✓
+90	x 211.9	206.6	5.3 ✓
43+17	224.8	218.5	6.3 ✓
43+20	x 224.9	219.8	5.1 ✓
<sup>55</sup> +40	x 225.6	<del>220.2</del> 220.7	<del>5.4</del> 4.9 ✓
+72	225.3	220.7	4.6 ✓
<del>+60</del>	<del>x 225.5</del>	<del>220.3</del>	<del>5.2</del>
+90	x 224.5	220.0	4.5 ✓
44	x 224.0	219.4	4.6 ✓
+40	x 222.1	217.5	4.6 ✓
+58	x 221.2	216.5	4.7 ✓
+74	220.1	215.5	4.6 ✓

Oct Est. to here

Sta	Ground	Grade	Cut
44+90	x 218.6	214.0	4.6 ✓
45+14	x 216.3	211.1	5.2 ✓
45+46	x 213.2	206.4	6.8 ✓
+62	x 211.5	204.4	7.1 ✓
+78	x 209.9	202.9	7.0 ✓
+91	x 208.6	201.7	6.9 ✓
46+10	x 207.7	200.9	6.8 ✓
+55	x 204.5	200.9	3.6 ✓
+80	x 199.1	195.6	3.5 ✓
47	x 196.4	191.7	4.7 ✓
+20	x 194.1	188.2	5.9 ✓
+40	189.1	185.0	4.1 ✓
+60	186.7	181.8	4.9 ✓
+80	183.2	178.3	4.9 ✓



Sta. Ground Grade Cut

48+00 x 178.8 174.5 4.3 ✓

+35 x 172.9 168.0 4.4 ✓

+47 170.1 163.2 7.2 ✓

+56 162.7 159.6 3.1 ✓

+63 x 162.3 156.8 5.5 ✓

+90 x 161.8 156.8 5.0 ✓

49+03 162.1 152.3 9.8 ✓

Oct. Est. from  
here to end of work

+142 x 155.3 148.9 6.9 ✓

+180 x 148.9 142.9 6.0 ✓

+16 x 145.2 139.1 6.1 ✓

+62 x 141.5 135.7 5.8 ✓

+80 x 138.3 132.3 6.0 ✓

50 x 135.2 128.9 6.3 ✓

Sta. Ground Grade Cut

50+20 x 130.8 125.7 5.1 ✓

+40 x 128.0 123.0 5.0 ✓

+70 124.5 119.7 4.8 ✓

51 x 120.6 116.4 4.2 ✓

+30 118.1 113.7 4.4 ✓

+60 x 116.0 111.0 5.0 ✓

+80 x 113.8 108.7 5.1 ✓

52+30 x 107.3 102.5 4.8 ✓

+50 104.4 99.5 4.9 ✓

+20 96.6 92.6 4.0 ✓

53+47.1 89.0 85.0 4.0 ✓

53+46.26

+75 85.5 80.8 4.7 ✓

54 84.0 77.0 7.0 ✓



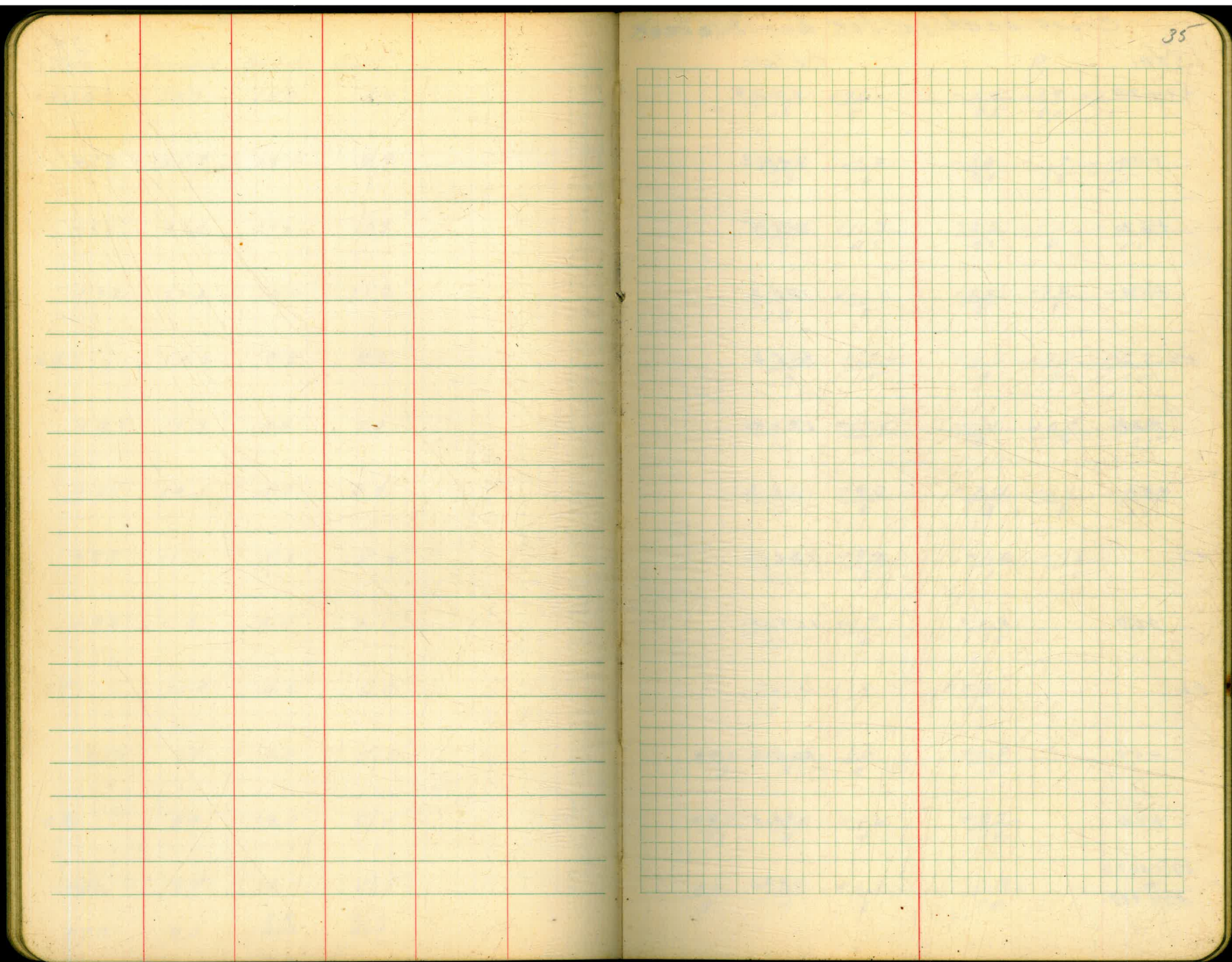
Sta	Ground	Grade	Cut
54*10	83.7	75.5	8.2
+30	83.3	75.5	7.8
+50	82.6	75.5	7.1
+70	81.7	75.5	6.4
55+04	67.1	61.6	5.5
+45	59.2	53.4	5.8
+61	56.7	50.4	6.3
+77	54.3	47.8	6.5
56	51.7	44.6	7.1
+34	47.5	39.9	7.6
+50	44.9	37.8	7.1
+66	41.9	36.1	5.8
+82	39.9	34.9	5.0

Sta	Ground	Grade	Cut
57	40.1	34.0	6.1
+20*	39.9	33.3	6.6
+40*	39.2	32.9	6.3
+56*	37.8	32.2	5.6
+72*	35.6	31.0	4.6
+88*	34.2	29.4	4.8
58	33.1	28.4	4.7
+50	28.5	24.2	4.3
59	24.7	20.0	4.7
+20*	23.5	18.0	5.5
+29	22.3	17.0	5.3
+40*	19.5	16.0	3.5
+50	18.8	15.1	3.7



Sta	Ground	Grade	cut
59+62	* 19.3	13.9	5.4
+69	21.9	13.0	8.9
+81	22.4	11.5	10.9
+92	21.2	10.0	11.2
60	* 17.7	8.8	8.9
+08	15.3	7.9	7.4
+29	14.1	5.7	8.4
+33	11.1	5.3	5.8
+40	* 11.0	4.5	6.5
61	* 10.4	4.0	6.4
+50	9.8	4.0	5.8
62	9.4	4.0	5.4
+37	9.1	4.0	5.1
+73	9.1	<del>4.0</del> 3.8	<del>5.1</del> 5.3







Cross-section for bench excar. bet. State + India St.

Sta.	Elev.
49+30	148.9
+46	145.2
+62	141.5
+80	138.3
50	135.2
+25	129.8
+50	128.2
51	121.5
+50	117.4
52	111.5
+50	109.6
+96	96.8
53+1620	
53+1701	890

L		R	
$\frac{+100}{13}$	$\frac{+76}{8}$	$\frac{-6.4}{4.5}$	$\frac{-1.9}{8.0}$
$\frac{+11.7}{13}$	$\frac{+2.8}{6}$	$\frac{-1.4}{4.5}$	$\frac{-1.7}{7.5}$
$\frac{+13.2}{13}$	$\frac{+11.3}{6.5}$	$\frac{-2.9}{4.5}$	$\frac{-1.0}{8}$
$\frac{+19.6}{13}$	$\frac{+12.2}{5}$	$\frac{-2.5}{5}$	$\frac{-1.0}{8}$
$\frac{+18.4}{13}$	$\frac{+13.0}{5}$	$\frac{-2.6}{4}$	$\frac{-0.8}{8}$
$\frac{+15.3}{13}$	$\frac{+13.5}{3}$	$\frac{-1.4}{4}$	$\frac{+0.3}{9}$
$\frac{+10.8}{13}$	$\frac{+9.0}{8}$	$\frac{-2.2}{3}$	$\frac{-1.5}{6}$
$\frac{+12.8}{13}$	$\frac{+9.2}{3}$	$\frac{-1.0}{1}$	$\frac{-1.5}{15}$
$\frac{+10.5}{13}$	$\frac{+6.7}{2}$	$\frac{-1.4}{15}$	
$\frac{+9.1}{13}$	$\frac{+4.8}{1}$	$\frac{+0.2}{15}$	
$\frac{+8.3}{13}$	$\frac{+6.0}{5}$	$\frac{0.0}{4}$	$\frac{+0.8}{10}$
$\frac{+9.5}{13}$	$\frac{+6.0}{4}$	$\frac{+0.2}{4}$	$\frac{+0.3}{10}$
$\frac{0.0}{7}$	$\frac{+2.5}{4}$	$\frac{+2.8}{1}$	$\frac{0.0}{10}$



Xsec. after benching between Stata & India Sts

10/30/40 37

Sta	Elev.
49+30	148.9
+46	144.5
+62	141.1
+80	138.2
80	137.1
+25	130.3
+50	127.3
57	120.6
+50	118.0
62	111.3
+50	104.4
+96	96.6
53+46.26	
53+47.01	89.0

L	R
$\frac{+100}{13}$ $\frac{+76}{8}$	$\frac{-6.9}{9.5}$ $\frac{-1.9}{8}$ $\frac{-1.7}{15}$
$\frac{+9.8}{6}$ $\frac{+0.0}{1}$	$\frac{0.0}{15}$
$\frac{+11.5}{7}$ $\frac{+0.8}{1}$	$\frac{0.0}{15}$
$\frac{+12.4}{8.5}$ $\frac{+0.8}{1}$	$\frac{-0.0}{15}$
$\frac{+12.5}{6}$ $\frac{+0.5}{5.5}$	$\frac{-0.0}{15}$
$\frac{+13.5}{9.5}$ $\frac{0.0}{7.5}$	$\frac{0.0}{15}$
$\frac{+10.0}{9}$ $\frac{0.0}{8}$	$\frac{0.0}{15}$
$\frac{+12.3}{7}$ $\frac{+0.3}{7}$	$\frac{0.0}{15}$
$\frac{+7.6}{7}$ $\frac{+0.3}{6.5}$	$\frac{0.0}{15}$
$\frac{+7.0}{7}$ $\frac{+0.3}{6}$	$\frac{0.0}{15}$
$\frac{+7.2}{8.0}$ $\frac{-0.4}{7.5}$	$\frac{0.0}{15}$
$\frac{+9.0}{11}$ $\frac{-0.2}{8.5}$	$\frac{0.0}{15}$
$\frac{0.0}{7}$	$\frac{0.0}{15}$



Extension to Kettner Blvd of Harbor Drive P.L.

cont. from page 69

4/28/41

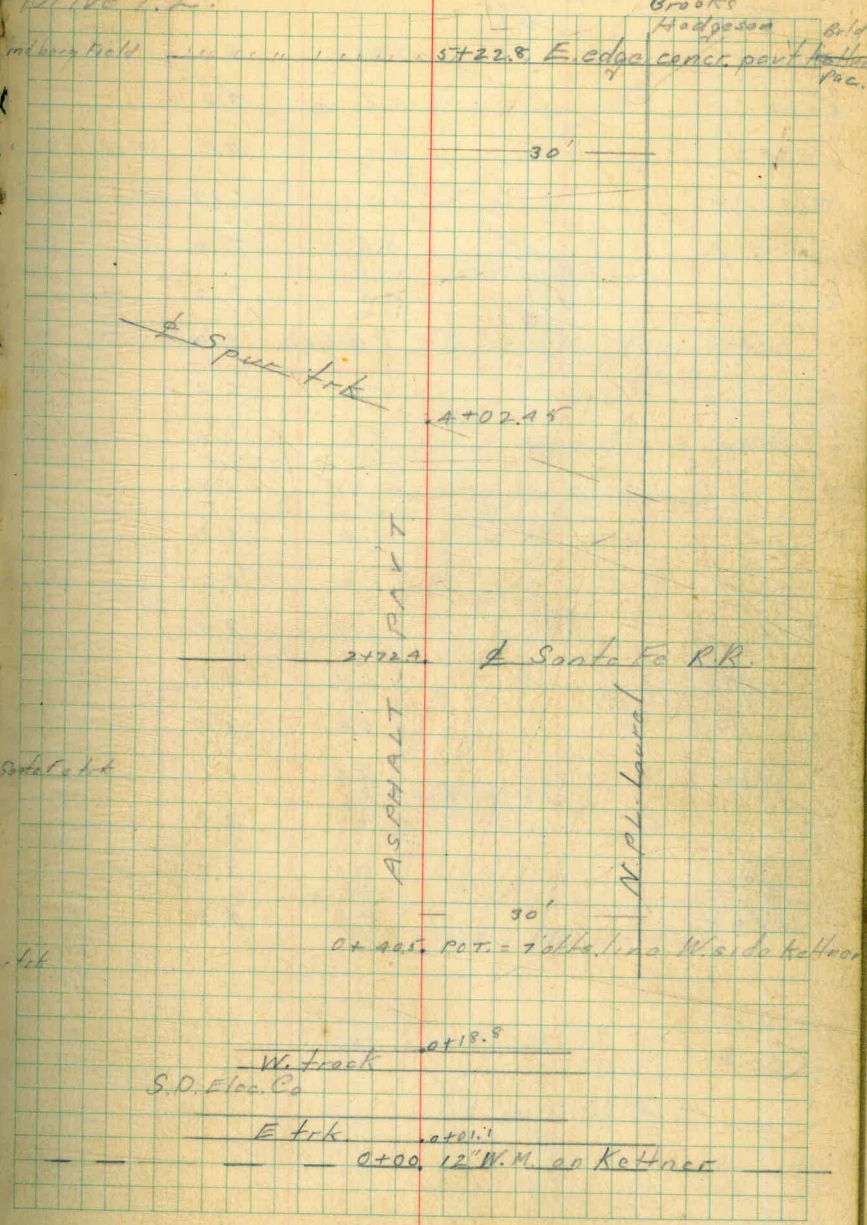
38

Hill  
Brooks

Hodgeson

Bldg  
Kettner  
Pac.

BM	8.48	20.71	12.23	13.07	Admin. Bldg. and hangar field
TP	1.78	14.85	7.64	13.07	
TP	10.84	21.25	4.44	10.91	
TP	13.05	33.68	0.62	20.63	
0+00			0.5	33.2	
0+01.1			0.54	33.14	East of E. trk
0+18.8			0.70	32.98	W. rail W. trk
0+40.5			1.6	32.1	
+50			1.6	32.1	
1			6.2	27.5	
+50			11.5	22.2	
+70			13.3	20.4	
TP	0.66	21.93	12.91	20.77	
2			2.1	19.0	
+50			1.9	16.5	
2+72.4			5.51	15.92	Top of rail W. Santa Fe trk
3			6.0	15.4	
+50			8.1	13.0	
4			10.5	10.9	
4+02.45			10.56	10.87	Top of rail spur trk
+50			11.7	9.7	
TP	1.35	11.35	11.03	10.90	
5			3.3	8.5	
+22.8			3.7	8.1	edge of cover
766.1			3.6	8.2	





11.75

5776.35	3.6	8.2	4 Pac. Blvd
6+22	4.6	7.2	
+30.3	4.0	7.8	Wedge corner
B.M.	3.76	7.99	B.P. in walk
+5.0	4.0	7.8	
7	4.5	7.3	
+5.0	5.0	6.8	
8	5.6	6.2	
+5.0	5.8	6.0	
9	6.0	5.8	
+5.0	6.0	5.8	
+66.3	6.2	5.6	corner like post
10	6.4	5.4	
+5.0	6.7	5.1	
11	6.8	5.0	
+5.0	7.2	4.6	
12	7.7	3.9	
+24.55	8.1	3.7	
+63.5	7.7	3.9	

W. side Banco N.P.H. Laurel

Cont'd in book # 567 page 7

9+66.3

concr blocks laged in mortar  
 9+66.3 pour cable  
 9+66.1 pour cable

8+58

bracket light cable

6+80.3 Wire fence

6+80.3 Wedge corner part

P.O.T. 6+28.15 (checked x import)

5+76.25 4 Pac. Blvd

5+66.3 4 exist'g W.M.

30'

N.P.H. Laurel

39

6+92.07 on gravel

12+63.5

22P10

12+240.5

14-15

30'

10+22.4

concr floor







47.07

57120	7.2	39.9	
4' H	7.2	39.9	33.3
57100	7.0	40.1	
4' H	7.0	40.1	34.0
56482	7.2	39.9	
4' H	7.2	39.9	34.9
B.M.	6.47	40.50	

B.M.	6.47	47.03	40.56
56166			5.1
6' H			4.2
56150			2.1
6' H			0.7
TP	12.87	59.15	0.75
56134			11.7
6' H			10.9
56100			7.5
6' H			7.2
55177			4.9
6' H			4.3
55161			2.5
6' H			2.5
TP	12.43	71.53	0.05
55145			12.3
6' H			11.9

$$\frac{6.1}{2.2} = 2.77$$

39.9 41

$$\frac{39.9}{3.7} = 10.76$$

6.6

6.1

5.0

B.P.S.E. Cor. Kethner &amp; Upas. El. 40.56

6.7

8.5

8.4

7.4

7.1

6.3

6.2



71.53

55704			4.4	67.1	
6'11"			4.2	67.3	61.6
P	13.76	84.02	0.27	71.26	
B.M.			0.03	83.99	
54770			2.1	81.9	
4'11"			2.1	81.9	75.5
54750			1.4	82.6	
4'11"			1.4	82.6	75.5
54710			0.3	83.7	
4'11"			0.4	83.6	75.5
54700			0.0		
4'11"			0.0	84.0	77.0

5.7'

B.P. S.R. Cor. India - Upar - El. 83.93

6.4'

7.1'

8.1'

7.0'



Profile of  $\pm$  offsets. 49+ - 53+50 (Banded off sections)

B.M.	0.45	162.96		162.51	
49+14 <sup>±</sup>			7.7	55.3	
6' RT			9.6	53.4	148.4
TP	0.47	150.51	12.92	150.04	
49+30			1.6	18.9	
6' RT				47.1	
<del>7' RT</del>			3.8	46.7	142.9
49+46			6.0	41.5	
4' LT			5.3	45.2	137.1
49+62			9.4	41.1	
4' LT			8.7	41.8	135.7
49+80			12.3	38.2	
4' LT			11.5	39.0	132.3
TP	0.00	137.54	12.97	137.54	
50+00			3.4	34.1	
4' LT			3.1	34.4	128.9
120			6.7	30.8	
6' LT			6.3	31.2	125.7
+40			9.5	28.0	
6' LT			9.3	28.2	123.0
+70			13.0	24.5	
6' LT			12.6	24.9	119.7
TP	0.30	125.28	12.56	124.98	
51+00			4.7	20.6	
6' LT			4.3	21.0	116.4

13.5 11.5 12.0

43

Nail in pow. pole S.W. Cor. State & Gas -  
LT

RT

$\pm$

Not changed

Not changed

Cut 4<sup>±</sup>  
3.8

TOP of cut

$$\begin{array}{r} +9.8 \\ \hline 6.0 \end{array} + \frac{0.6}{4.0}$$

$$\frac{0.0}{15}$$

$$\begin{array}{r} +11.5 \\ \hline 7.0 \end{array} + \frac{0.8}{4.0}$$

$$\frac{0.0}{15}$$

$$\begin{array}{r} +12.4 \\ \hline 5.5 \end{array} + \frac{0.8}{4.0}$$

$$\frac{-0.2}{15}$$

$$\begin{array}{r} +14.5 \\ \hline 6.0 \end{array} + \frac{0.5}{3.5}$$

$$\frac{+1.0}{15}$$

$$\begin{array}{r} +14.0 \\ \hline 7.5 \end{array} + \frac{0.5}{7.5}$$

$$\frac{+0.6}{15}$$

$$\begin{array}{r} +11.2 \\ \hline 9.0 \end{array} + \frac{0.0}{8.0}$$

$$\frac{-0.3}{15}$$

$$\begin{array}{r} +10.9 \\ \hline 9.0 \end{array} + \frac{0.2}{8.0}$$

$$\frac{-0.9}{15}$$

$$\begin{array}{r} +12.3 \\ \hline 7.0 \end{array} + \frac{0.3}{7.0}$$

$$\frac{-0.7}{15}$$

4.6



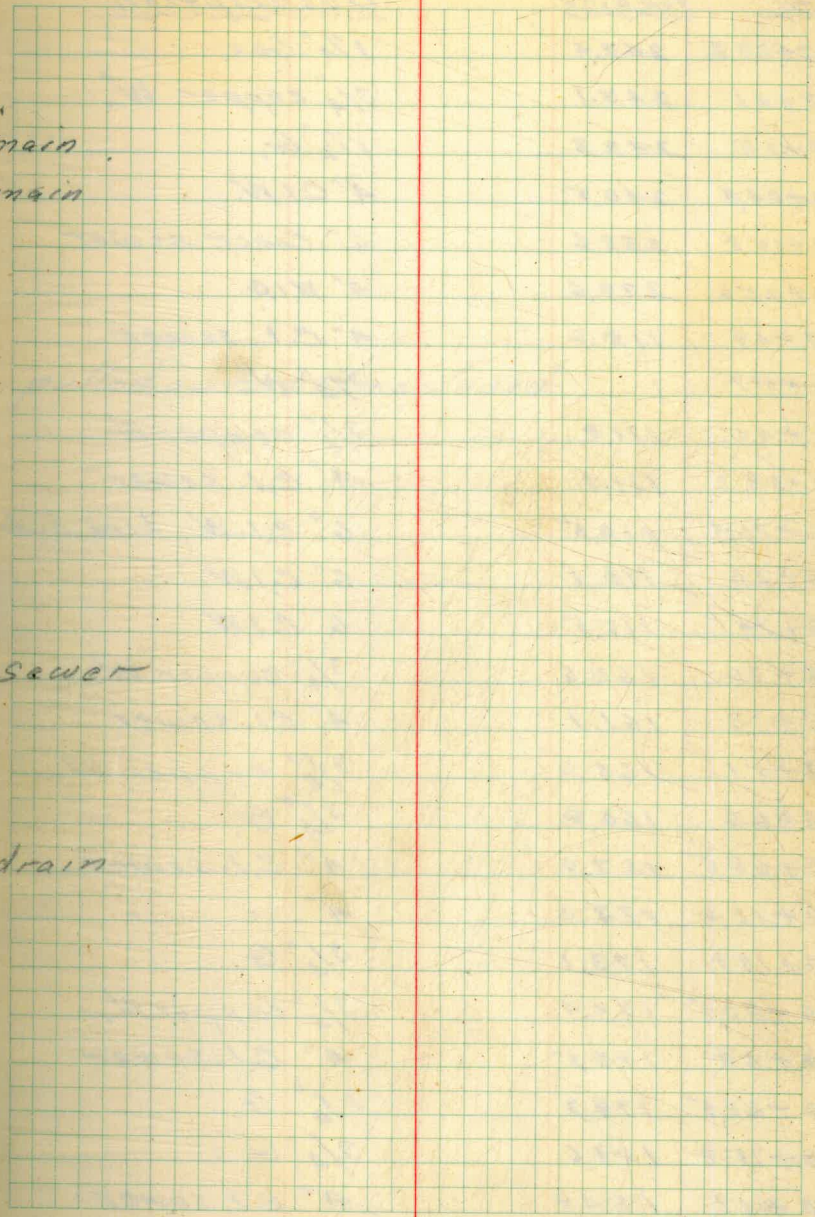
	125.28			
51+30		7.2	118.1	
4' LT		5.9	119.4	113.7
1.60		9.3	116.0	
6' LT		8.5	116.8	111.0
+80		11.5	113.8	
6' LT		10.8	114.5	108.7
TP	0.30	113.14	12.44	112.84
52+30		5.8	107.3	
6' LT		5.8	107.3	102.5
1.50		8.7	104.4	
6' LT		9.2	103.9	99.5
TP	0.26	100.41	12.77	100.15
52+96.6		3.8	96.6	
6' LT		3.8	96.6	92.6
53+47.01 = 53+46.26 L		11.4	89.0	
6' LT		11.2	89.2	85.0
TP	1.97	89.70	12.68	87.73
53+75		4.2	85.5	
6' LT		4.4	85.3	80.8
B.M.		5.83	83.87	

	LT	R+	44
	Top of cut		
	+9.8 6.0	+0.3 4.0	-0.9 15
5.7	In road cut → +2.7 8.0	+0.7 6.5	-0.5 16
5.8		+0.2 6.0	0.0 15
5.8		+6.3 6.5	-0.2 6.0
			+0.2 10
4.8		+7.2 8.0	-0.4 7.5
			+0.8 10
4.4		+9.0 11	-0.2 8.5
			0.0 10
4.0		0.0 7.0	0.0 10
4.2			
4.5			
B.P.S.R. Cor. India & Upari Elev. 83.93			



STATION & ELEV. OF MAINS, SERVICES ETC.

Sta.	Top Elev.	Description
0+68	283.1	1 1/2" gas
1+27	282.4	1 1/2" gas
1+90.5	281.2	Top at 13"x13" Vit. tile Tel. main
2+09.7	281.7	Top at 9"x16" wood box Tel. main
2+16	282.6	4" C.I.W.
2+38	281.6	8" C.I.G.
4+98.6	281.7	4" C.I.W.
7+77.4	276.9	8" C.I.W.
7+99	275.9	8" C.I.G.
10+58	256.2	6" C.I.W.
10+69	254.0	6" Concr. Pipe Sewer
10+79.8	255.6	8" C.I.G.
13+39	238.7	4" C.I.W.
13+42.8	237.6	16" Concr. Pipe storm sewer
13+47.2	237.8	8" Vit. tile sewer
13+49.1	237.9	4" C.I.G.
13+92	239.2	3" tile drain
14+57.3	211.0	12" Cor. iron storm drain
14+90.6	211.6	6" Concr. pipe sewer
15+39.5	233.9	3" tile drain
16+15.3	242.4	4" C.I. sewer
16+27.1	243.2	2" W.
16+35.3	243.4	4" W.I.G.





(cont)

Sta	Top Elev	Description
17+29.2	243.4	1 1/2" Gas
17+41	243.1	3/4" copper W.
18+30	242.3	1 1/2" G.
19+04.4	240.5	4" C.I.W.
19+15.8	238.6	6" Concr. sewer
19+25.6	239.6	4" W.I.G.
24+49	118.8	4" C.I. sewer
<del>24+57</del>		<del>3/4" W.</del>
25+45	111.8	3/4" copper W.
25+58.2	111.1	4" C.I. sewer
25+71.4	110.5	6" C.I.W. fire hydr.
26+20	110.1	6" C.I.W.
26+74	115.5	6" C.I.W.
28+00	160.6	3/4" copper W.
28+13	161.1	4" C.I. sewer
28+51	165.0	3/4" copper W.
28+66	166.8	3/4" G.
28+68.5	167.0	4" C.I. sewer
29+12.8	173.0	4" " "
29+18.8	173.1	3/4" G.
29+30.5	174.4	3/4" copper W.
29+68	178.5	4" C.I. sewer
29+68.5	178.3	3/4" G.
30+15.8	184.6	3/4" G.
30+17	184.8	4" C.I. sewer

46

pulled out - not replaced



(cont.)

Sta	Top Elev	Description
30+20.6	185.4	3/4" copper W.
30+67	189.2	4" C.I. sewer
30+67.1	190.6	3/4" G.
30+86.7	192.7	1 1/2" W.
31+08	195.4	3/4" copper W.
31+16.2	196.5	3/4" G.
31+17.4	194.8	4" C.I. sewer
31+58.5±	201.0±	3/4" copper W.
31+65±	201.0±	4" C.I. sewer
31+68±	203.0±	3/4" G.
32+08	207.6	3/4" copper W.
32+11	206.1	4" C.I. sewer
32+38±	211.0±	3/4" G.
33+38.1	220.6	6" C.I. Water
33+56.8	220.7	1 1/2" G.
36+43.7	230.2	2" G.
43+52	222.3	4" C.I. Gas
44+30	221.3	3/4" copper W.
44+67	218.3	1 1/2" G.
45+60.4	207.7	6" C.I. water F.H.
45+97.3	204.9	6" C.I. W.
46+13.6	203.5	4" C.I. G.
46+90.5	196.3	1" G.
48+70.8	159.4	6" C.I. W.
48+79.5	159.0	4" C.I. G.

backfilled before checking

Cut off & dead ended at N. side of trench.



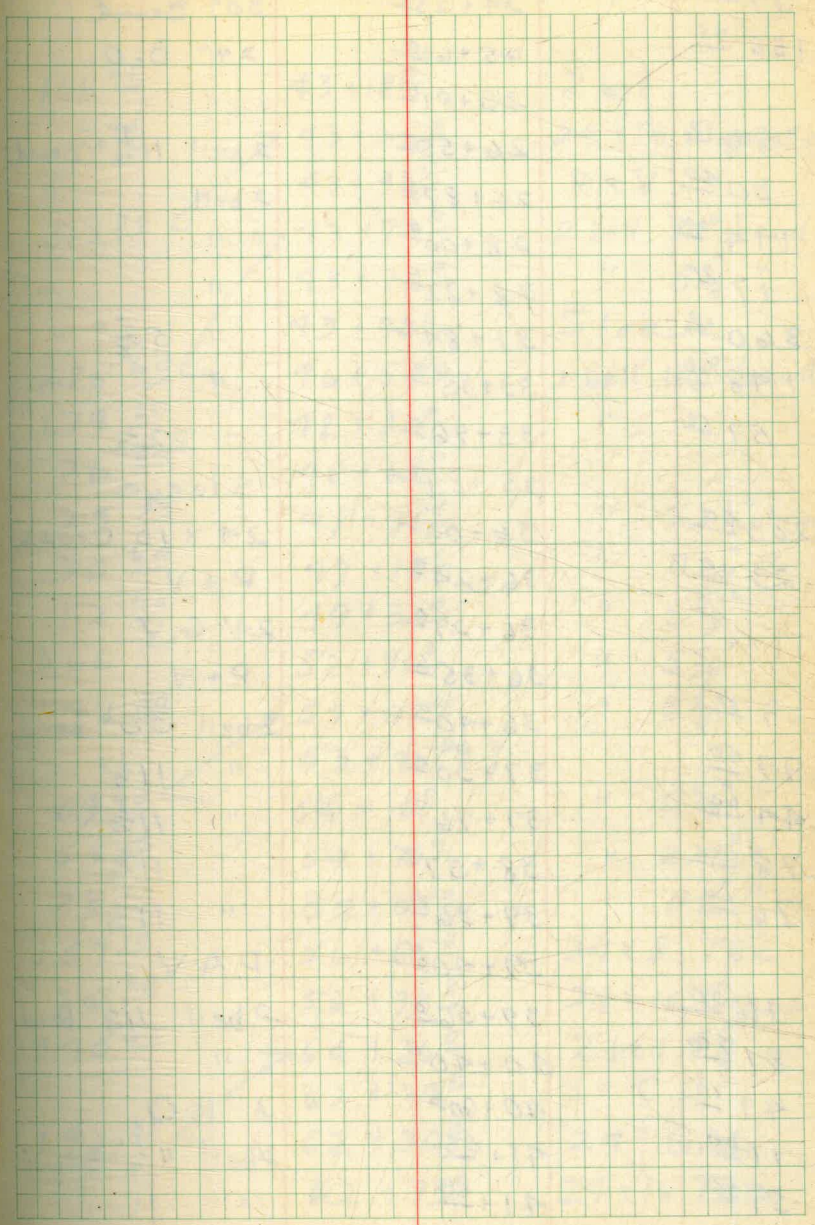
<u>Sta.</u>	<u>Top Elev</u>	<u>Description</u>
51+40		2" W
54+11.8	78.9	6" Vit. tile S
54+20.7	81.0	10" C.I. W.
54+42.5	80.2	4" W.I. G.
54+42.7	79.6	6" C.I. G.
54+72	77.6	2" G.
56+99.5	37.6	12" C.I. W.
57+27.4	35.9	6" W.I. G.
57+37	37.9	12" Trans. G.
62+36.5	6.7	3/4" lead light conduit
62+73.5	♀	12" M.



Pipe Measurements & Locations of Fittings:  
 Upas St. Extension; by Soper, copied by M.

24" C.I.P.	Station	Fittings
	0+03 $\frac{1}{2}$	2" C.C.
	3+42 $\frac{5}{8}$	2" P+V
	4+57 $^{\circ}$	24" Sleeve
777 $\frac{50}{80}$	7+79 $^{\circ}$	24 x 8 Cross
287 $\frac{20}{80}$	10+69 $^{\circ}$	2 bell 5 $\frac{5}{8}$ $^{\circ}$ Bend
232 $\frac{90}{80}$	13+04 $\frac{5}{8}$	24 x 8 Tee
90 $\frac{90}{80}$	14+00	2 bell (30 $^{\circ}$ Bend)
54 $\frac{00}{80}$	14+50	2 Bell (30 $^{\circ}$ " )
13 $\frac{40}{80}$	14+65 $\frac{5}{8}$	6" B.O, 6" G.V.
11 $\frac{80}{80}$	14+80 $^{\circ}$	2 bell (22 $\frac{1}{2}$ $^{\circ}$ Bend)
65 $\frac{90}{80}$	15+45 $^{\circ}$	2 " (11 $\frac{1}{4}$ $^{\circ}$ " )
55 $\frac{40}{80}$	16+03 $\frac{5}{8}$	2 " (11 $\frac{1}{4}$ $^{\circ}$ " )
33 $\frac{40}{80}$	16+41 $^{\circ}$	2 " (11 $\frac{1}{4}$ $^{\circ}$ " )
	16+96 $\frac{5}{8}$	24" Sleeve
162 $\frac{3}{80}$	18+06 $\frac{5}{8}$	24 x 6 Tee
124 $\frac{90}{80}$	17+10 $\frac{5}{8}$	2" P+V
	19+33 $\frac{1}{2}$	4 C.I.G.V.
	(19+46 $\frac{1}{2}$	P+V. ?)
71 $\frac{00}{80}$	20+07 $^{\circ}$	2 bell 30 $^{\circ}$ Bend
27 $\frac{30}{80}$	20+35 $^{\circ}$	2 bell 11 $\frac{1}{4}$ $^{\circ}$ "
42 $\frac{60}{80}$	20+69 $^{\circ}$	2 bell 45 $^{\circ}$ "
31 $\frac{50}{80}$	21+04 $^{\circ}$	" 30 $^{\circ}$ Bend
56 $\frac{70}{80}$	21+57 $^{\circ}$	" 30 $^{\circ}$ "
239 $\frac{50}{80}$	23+99 $^{\circ}$	30 $^{\circ}$ "

$$\left( \begin{array}{r} 27 + 13^{\circ} = 23 + 07 \\ \underline{23 + 07^{\circ}} \quad \underline{23 + 99} \end{array} \right)$$





Pipe	Sta.	Fitting
17 <sup>25</sup>	24+239	30° Bend
135 <sup>25</sup>	25+619	24" B.O.
	25+81 <sup>5</sup>	
86 <sup>10</sup>	26+559	2 bell 11 $\frac{1}{4}$ ° Bend
30 <sup>40</sup>	26+87 <sup>5</sup>	2 bell "
114 <sup>00</sup>	28+00 <sup>9</sup>	" "
17 <sup>20</sup>	28+22 <sup>9</sup>	" "
360 <sup>10</sup>	31+84 <sup>9</sup>	" 5 $\frac{5}{8}$ ° "
148 <sup>30</sup>	33+35 <sup>9</sup>	" "
57 <sup>10</sup>	33+96 <sup>9</sup>	" 22 $\frac{1}{2}$ ° "
	35+84 <sup>9</sup>	Sleeve
203 <sup>60</sup>	36+09 <sup>9</sup>	24 x 10 Cross
23 <sup>40</sup>	36+24 <sup>9</sup>	P+V
	36+29 <sup>9</sup>	24" G.V.
	36+35 <sup>9</sup>	P+V
7 <sup>20</sup>	36+40 <sup>9</sup>	2 bell 30° bend
99 <sup>50</sup>	37+30 <sup>9</sup>	" 11 $\frac{1}{4}$ ° "
44 <sup>60</sup>	37+76 <sup>9</sup>	" 11 $\frac{1}{4}$ ° "
78 <sup>50</sup>	38+57 <sup>9</sup>	" 11 $\frac{1}{4}$ ° "
76 <sup>00</sup>	39+36 <sup>9</sup>	" 11 $\frac{1}{4}$ ° "
	39+40 <sup>5</sup>	P.A.V.
16 <sup>00</sup>	39+56 <sup>9</sup>	2 bell 11 $\frac{1}{4}$ ° bend
81 <sup>20</sup>	40+40 <sup>9</sup>	"
47 <sup>20</sup>	40+90 <sup>5</sup>	6" B.O.
118 <sup>00</sup>	41+05	2 bell 11 $\frac{1}{4}$ ° bend
51 <sup>50</sup>	41+59	" " "

(Cont'd opposite page.)

166 <sup>90</sup>	43+18°	2 bell
2 <sup>90</sup>	43+25°	24 x 10 Wye, all bell.
	43+48 <sup>5</sup>	P+V
42 <sup>30</sup>	43+72°	2 bell 30° bend
	43+76°	" 5 $\frac{5}{8}$ ° "
	43+96°	Sleeve
275 <sup>60</sup>	46+55°	2 bell 11 $\frac{1}{4}$ ° bend
179 <sup>80</sup>	48+36°	"
26 <sup>30</sup>	48+63°	"
23 <sup>80</sup>	48+91°	" 22 $\frac{1}{2}$ ° bend
20 <sup>60</sup>	49+15°	" 11 $\frac{1}{4}$ ° "
12 <sup>40</sup>	49+31°	" 5 $\frac{5}{8}$ ° "
366 <sup>20</sup>	52+96°	" 5 $\frac{5}{8}$ ° "
47 <sup>50</sup>	53+47°	" 5 $\frac{5}{8}$ ° "
	53+96 <sup>26?</sup>	
59 <sup>90</sup>	54+10°	" 5 $\frac{5}{8}$ ° "
55 <sup>80</sup>	54+70°	" 22 $\frac{1}{2}$ ° "
33 <sup>10</sup>	55+05°	" 11 $\frac{1}{4}$ ° "
159 <sup>10</sup>	56+65°	24 x 8 Tee
25 <sup>30</sup>	56+93 <sup>8</sup>	24 x 16 Cross
340 <sup>80</sup>	60+36°	2 bell 5 $\frac{5}{8}$
	62+24 <sup>1</sup>	2" C.C.
192 <sup>30</sup>	62+30 <sup>4</sup>	24" G.V.
	62+73°	24 x 16 Tee



112141  
Hill  
Super  
13 Peaks  
Madgisen

Alternate line - Pacific Beach Line, from  
Wetherby & Kurtz to Causeway - Sta 51+69 - 74+66  
51+86.94  $\Delta$  830 Rt

NOTE:

For profile notes  
see Pg. 56 this book.

See F.B. 565/61  
for Line Change

52+01.63  $\Delta$  11029' Lt

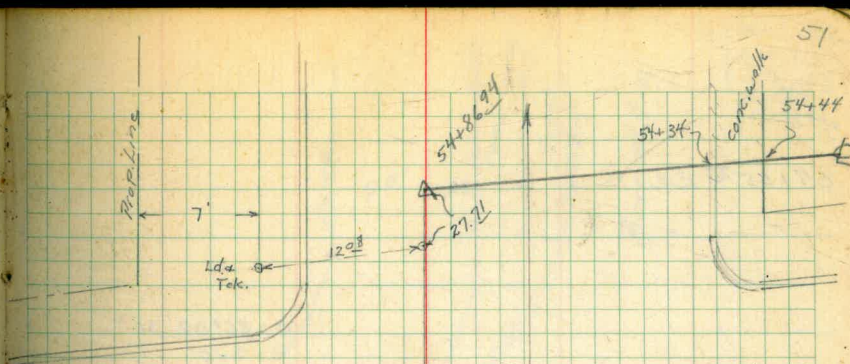
(L?)

~~Laid~~

Continued in F.B. 565/11

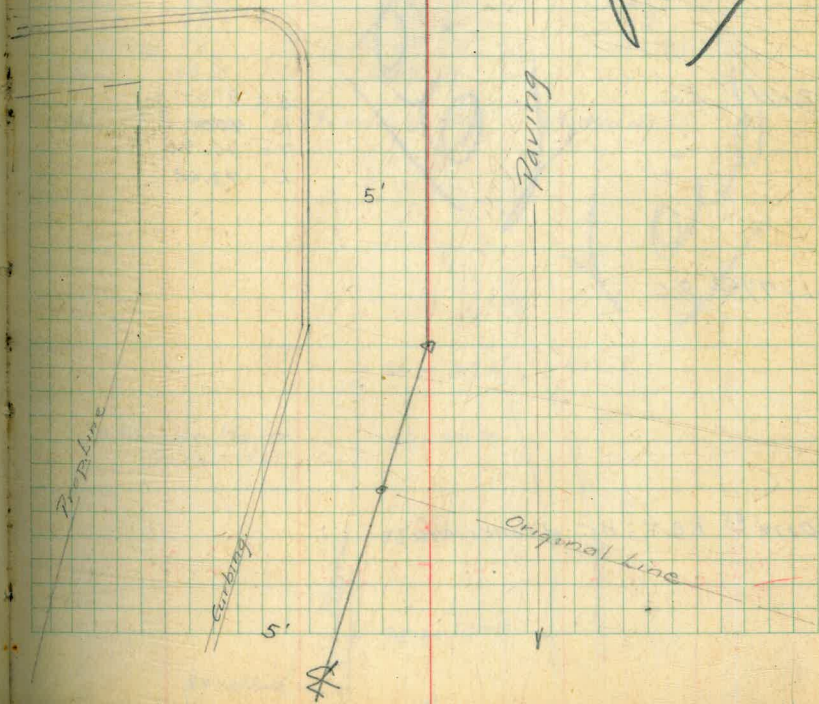
51+69

Continued from F.B. 565/11



Pacific Hwy.

~~Laid~~





64155<sup>37</sup> F.C.

$\Delta = 36^{\circ} 02' 30''$   
 $R = 270'$   
 $T = 87.84$   
 $L = 169.84$

62+85<sup>53</sup> B.C.

~~ford~~

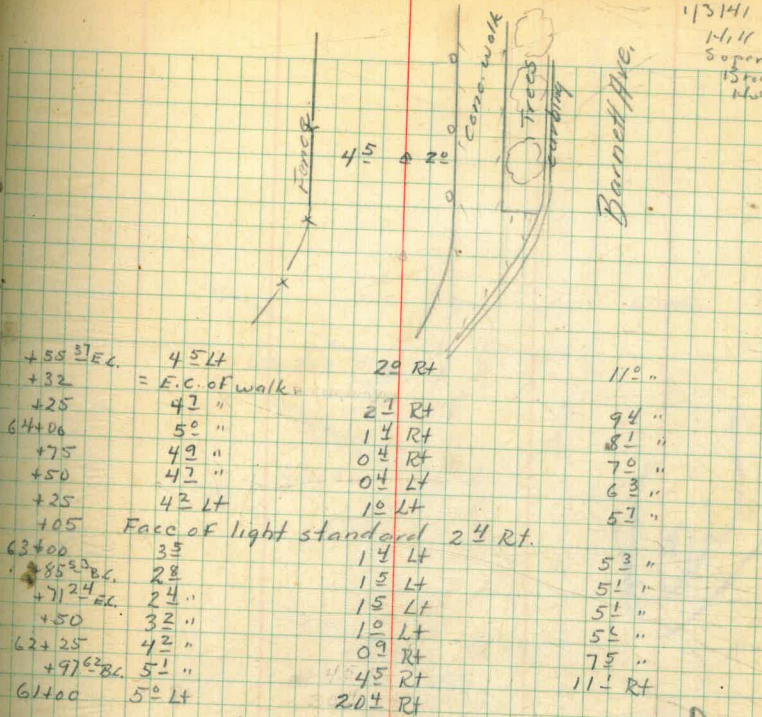
62+71<sup>34</sup> F.C.

$\Delta = 9^{\circ} 22' 30''$   
 $R = 450'$   
 $T = 36.70$   
 $L = 73.62$

61+97<sup>62</sup> B.C.

60+14<sup>68</sup> P.O.T. = B.C. of conc. walks

113141 52  
1/11  
Super  
15 strokes  
including



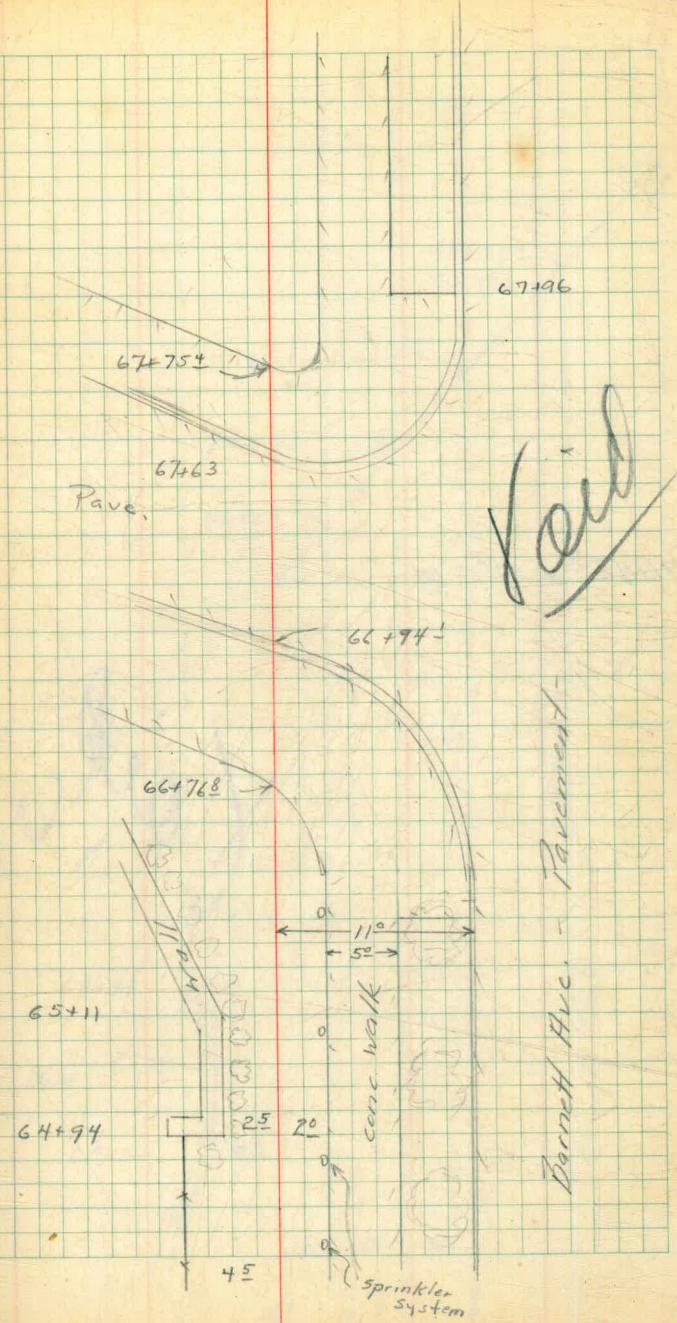
sta    to fence    to inside of walk    to face of curb

Marine Base  
Grounds.

35' setback

~~ford~~



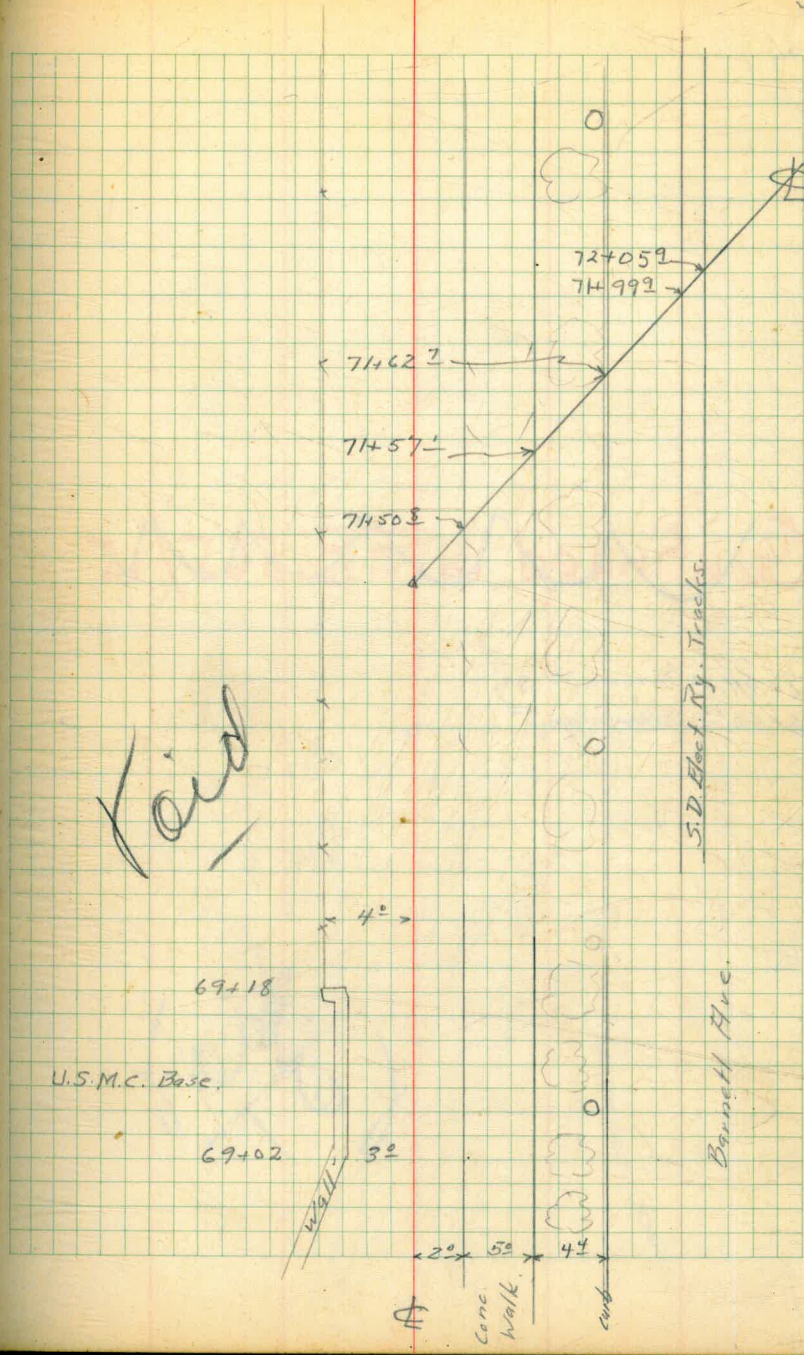




71448<sup>35</sup>  $\angle$  520'12" Rt.

Faid

54





Continued in F.B. 565/15

76 + 84 <sup>26</sup> (Original Eqn)  
73 + 66 <sup>82</sup> (After align) =

Feid

Feid

Original Line

6

8



Profile - Alternate Line.

B.M.	3.60	6.06	2.46	✓
52+01 <sup>53</sup>		4.3	1.8	✓
53		4.5	1.6	✓
+90		5.4	0.7	✓
54+20		4.8	1.3	✓
+50		5.2	0.9	✓
+8694		4.8	1.3	✓
55+06		4.6	1.5	✓
+34	Laid	5.3	0.8	✓
+39		4.7	1.4	✓
56+00		4.6	1.5	✓
57		5.1	1.0	✓
58		5.5	0.6	✓
TP	4.82	5.44	5.44	0.62 ✓

~~From~~ FB# 566/14

B.P. in Wing-wall - Kurtz & Witherby - Sta 52+30

FB# 566/14

Note:

Alignment notes on  
Page 51 this book.



5.44

59+00 4.5 0.9 ✓

60 4.6 0.8 ✓

61 3.9 1.5 ✓

+99<sup>62</sup> B.C. 4.0 1.4 ✓

62+25 4.3 1.1 ✓

+35 4.4 1.0 ✓

+50 4.4 1.0 ✓

+71<sup>24</sup> E.C. 4.3 1.1 ✓

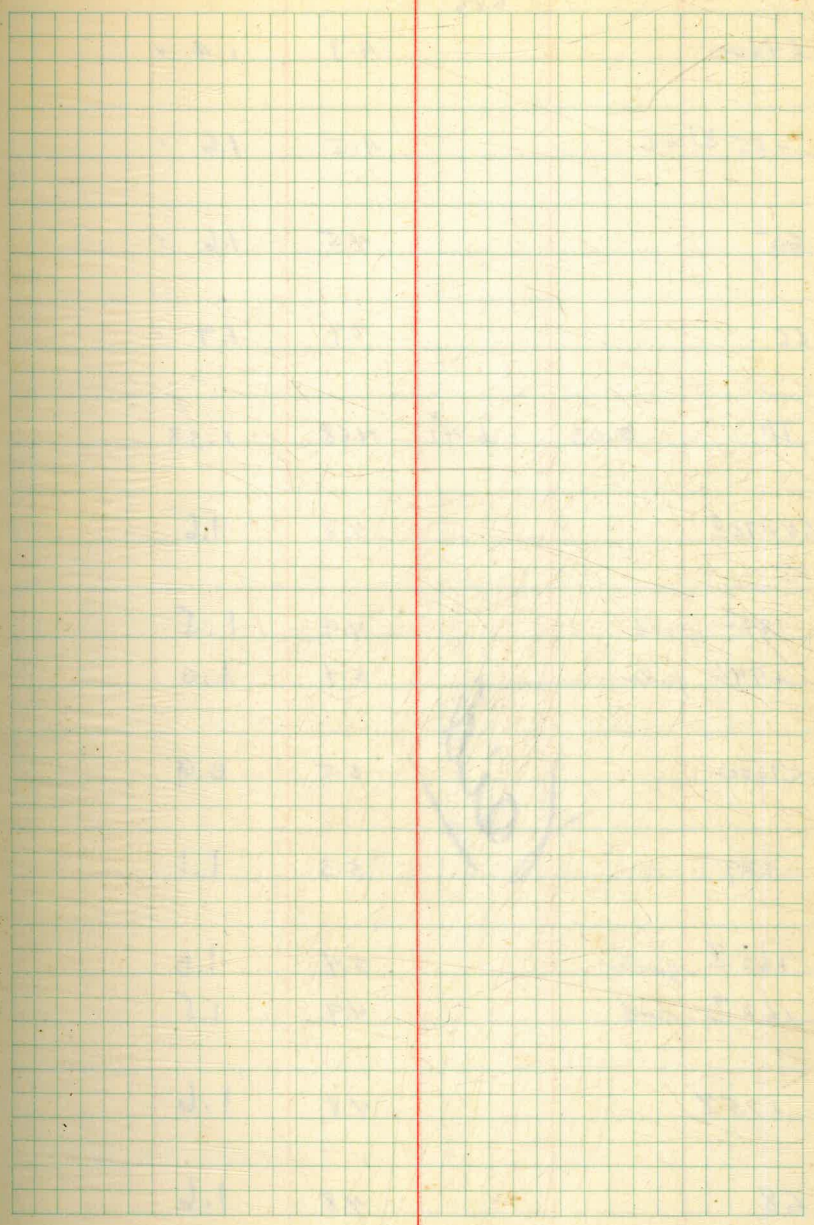
+85<sup>53</sup> B.C. 4.3 1.1 ✓

63 4.3 1.1 ✓

TP 4.96 6.06 4.34 1.10 ✓

63+50 4.9 1.2 ✓

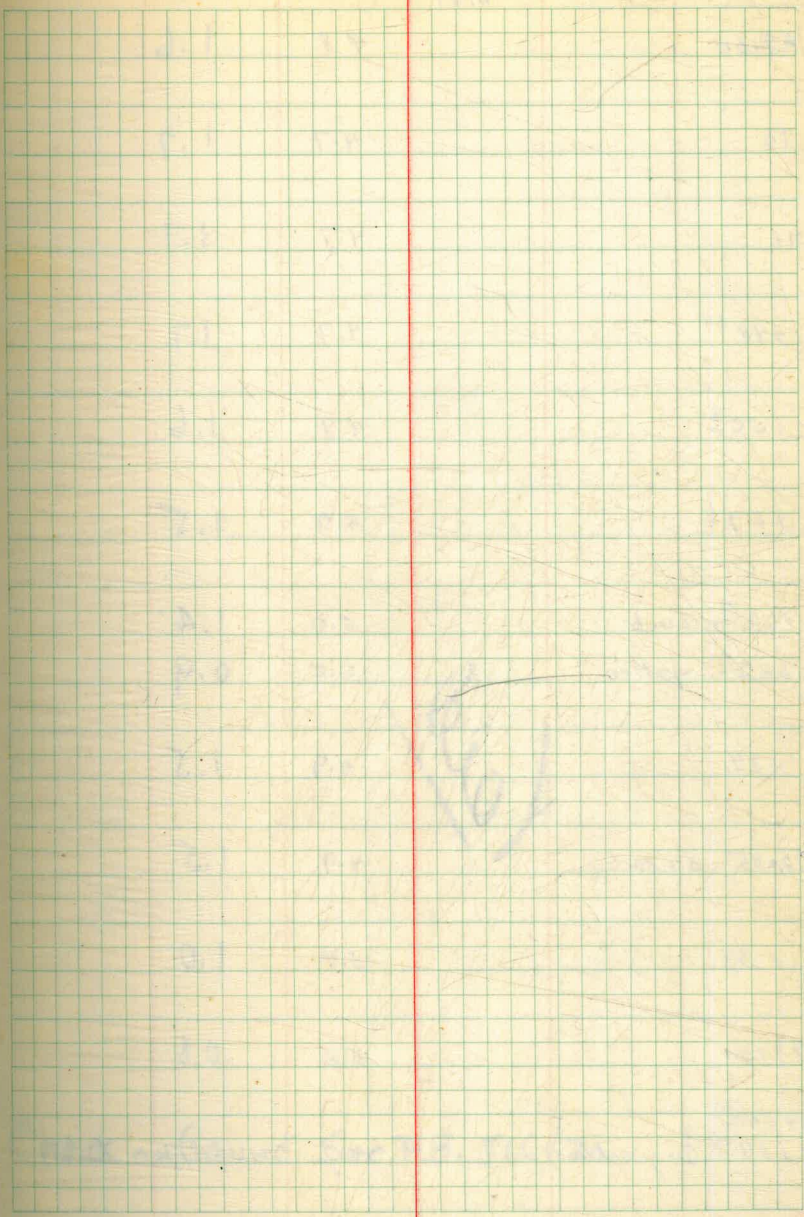
Yield





6.06

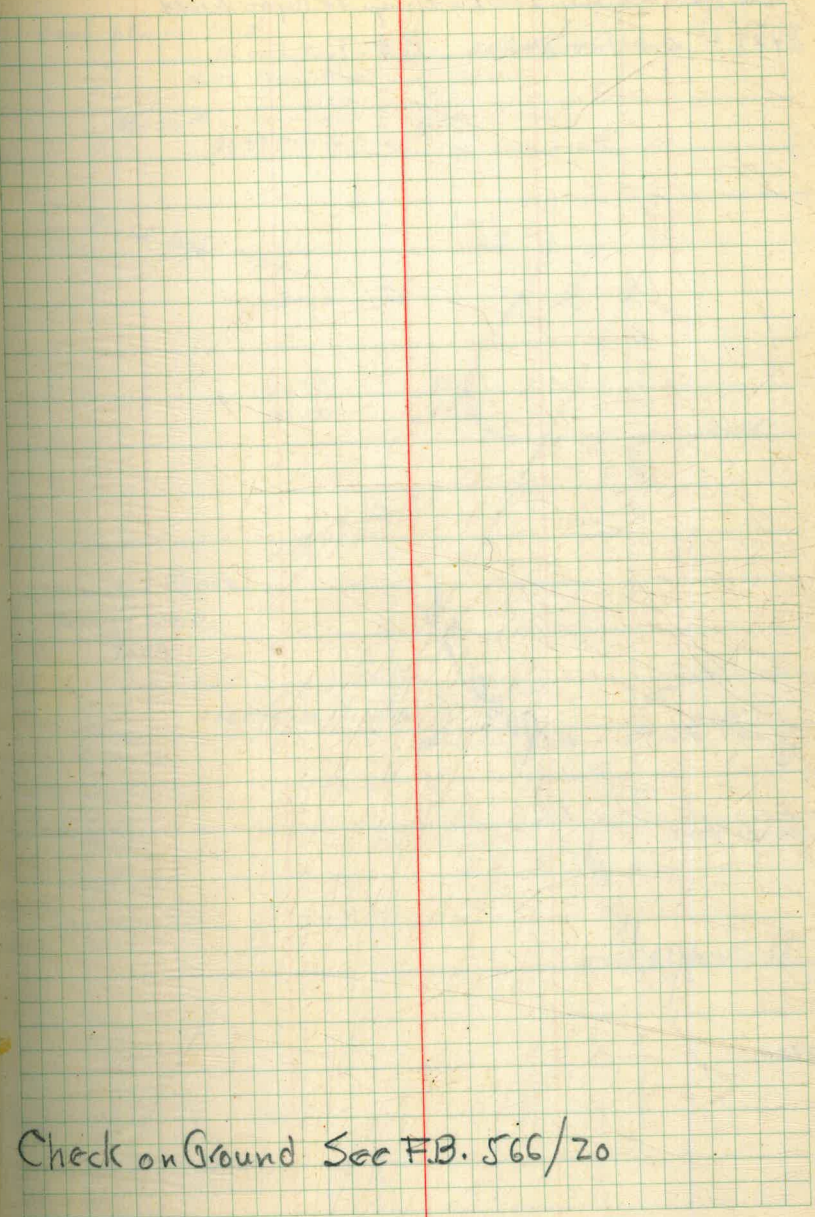
64400			4.7	1.4	✓
+55 <sup>37</sup> EC.			4.5	1.6	✓
65-			4.5	1.6	✓
66			4.4	1.7	✓
TP	5.03	6.41 <sup>✓</sup>	4.68	1.38	✓
66+76 <sup>8</sup>			4.8	1.6	
+94 <sup>L</sup> curb			4.9	1.5	
+94 <sup>L</sup> gutter			5.4	1.0	
67400		<i>void</i>	5.5	0.9	
+29			5.3	1.1	
+62 <sup>9</sup> gutter			5.4	1.0	
+62 <sup>9</sup> curb			4.9	1.5	
+75 <sup>4</sup>			4.8	1.6	
68			4.8	1.6	





6.41

69+00		4.8	1.6	
70		4.7	1.7	
71		4.7	1.7	
+48 <sup>35</sup>		4.7	1.7	
+50 <sup>8</sup>		4.8	1.6	
+57 <sup>L</sup>		4.9	1.5	
+62 <sup>7</sup> curb		5.0	1.4	
+62 <sup>2</sup> gutter		5.5	0.9	
+84	<del>Void</del>	4.9	1.5	
72+05 on rail.		4.9	1.5	
+37		5.4	1.0	
73+00		5.6	0.8	
$\frac{73+66^{82}}{76+84^{26}}$ (original line)		5.7	0.7	0.67



Check on Ground See F.B. 566/20

Continued in F.B. 566/20

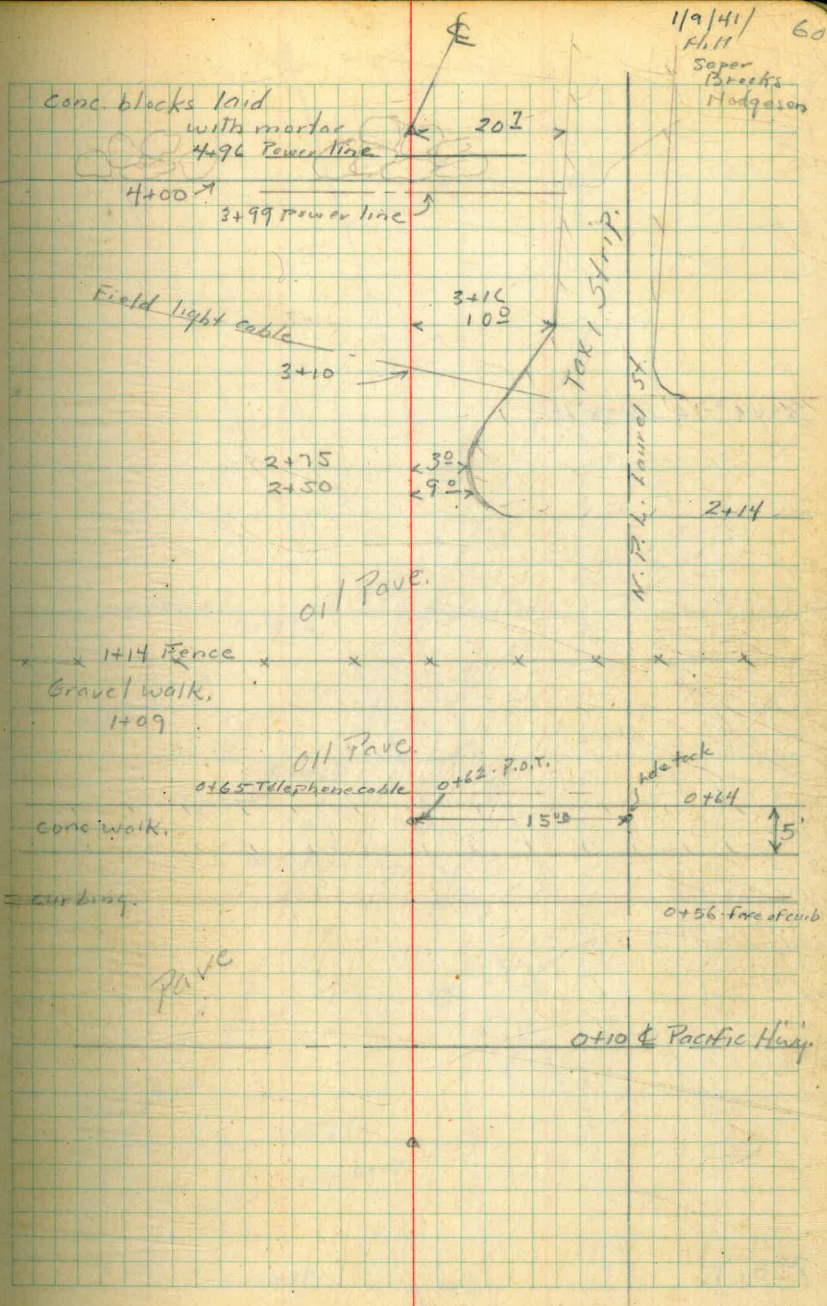


Pipe location: Pacific Hwy. to Ryan Field  
5429 38 4 21' 29" RT P.O.T

Revised - Page 28

0162 P.O.T.

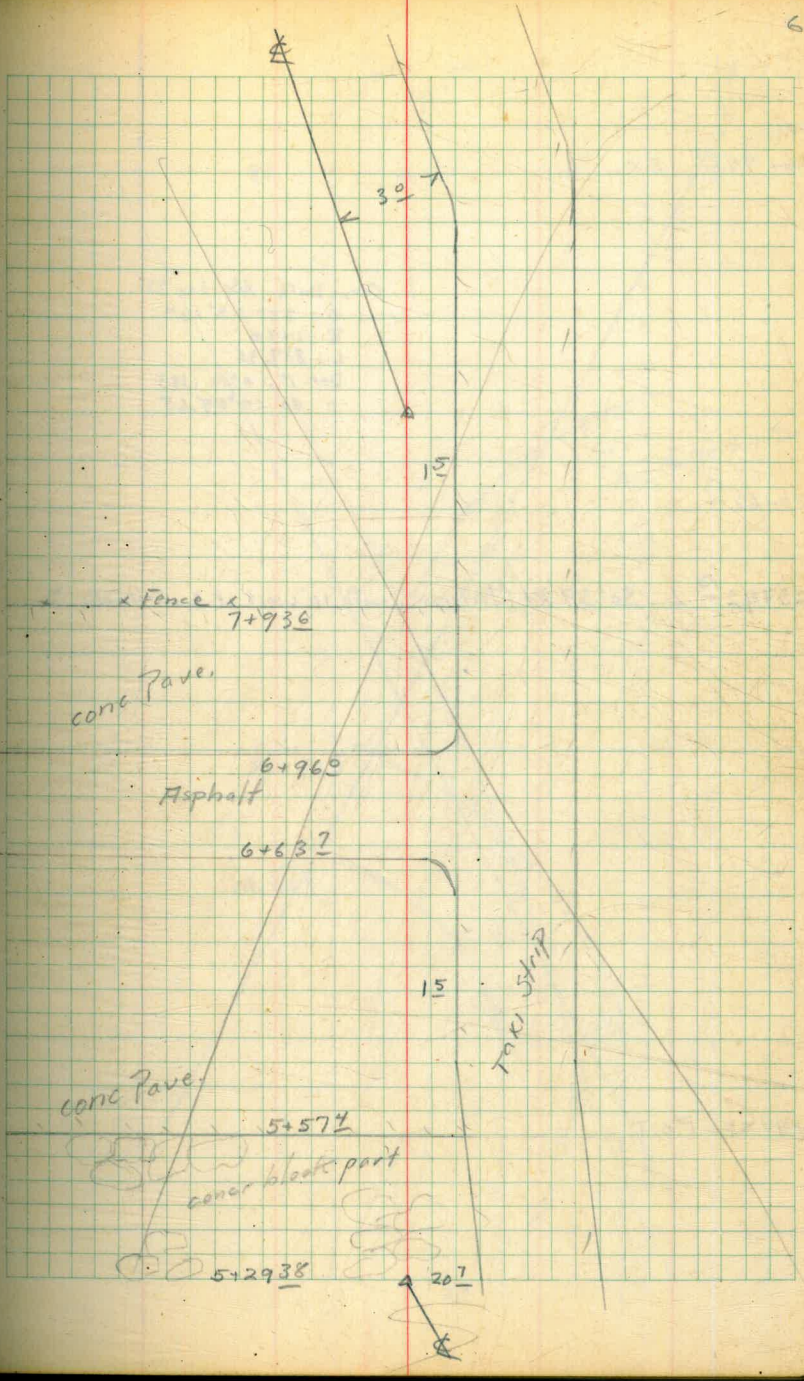
0100





8+64 <sup>52</sup> 4 23° 58' 14"

P.O.T.





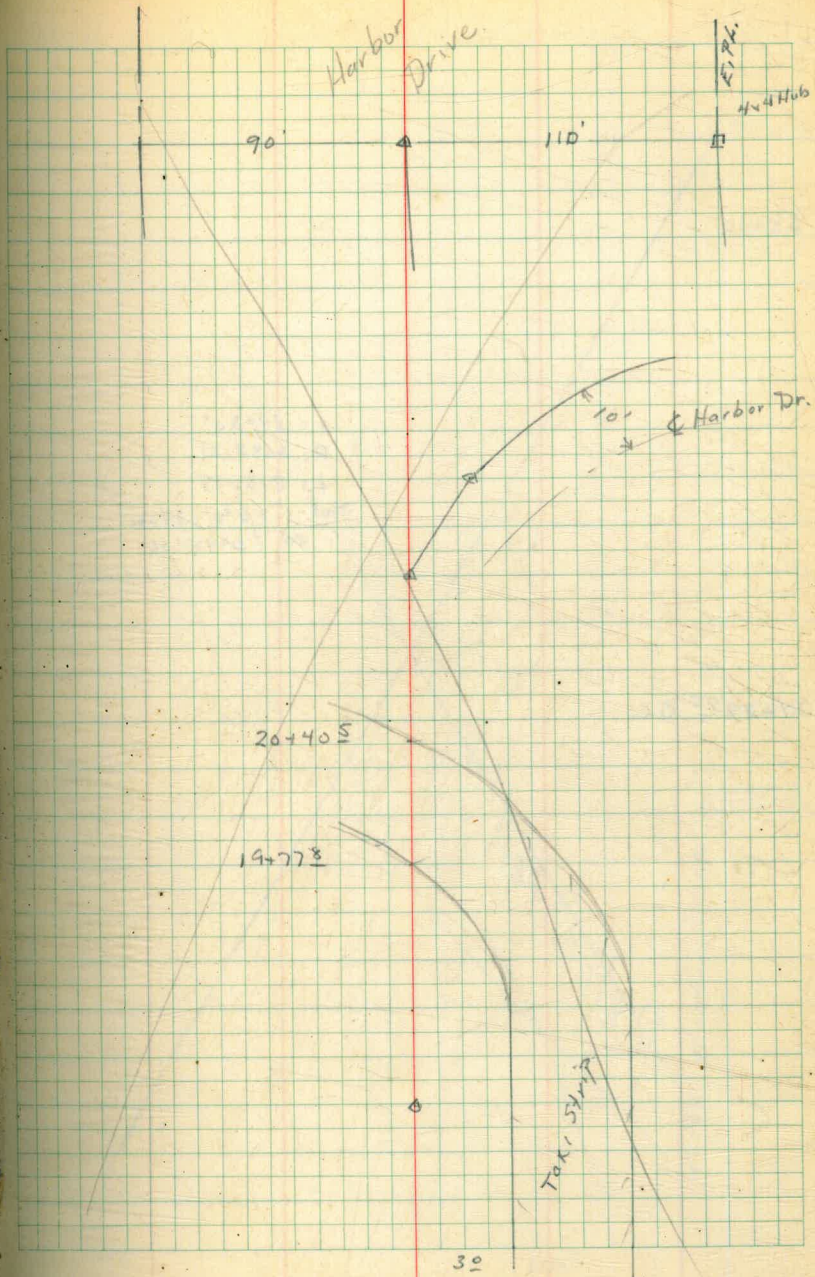
26+944<sup>5</sup> E.C.

Curve Data - Harbor Dr.  
 $\Delta = 35^{\circ} 23' 12''$   
 $R = 1440$   
 $L = 889.36$   
Def. 1' =  $0^{\circ} 01' .193$   
" 50 =  $0^{\circ} 59' .65$

20+62<sup>13</sup>

23+42<sup>13</sup>  $\Delta$   $30^{\circ} 39' RT$  (Intersect. with 10' west of E of Harbor Dr.)

19+55 P.O.V.





38400

$A = 14030'$   
 $R = 2038.51$   
 $L = 515.89$   
 $\text{Def. 1} = 0^{\circ}0'.8432$   
 $\text{" 50} = 0^{\circ}42'.16$

34+29<sup>45</sup> B.C.~~Retocet~~

E. P. L. Harbor Drive

110'

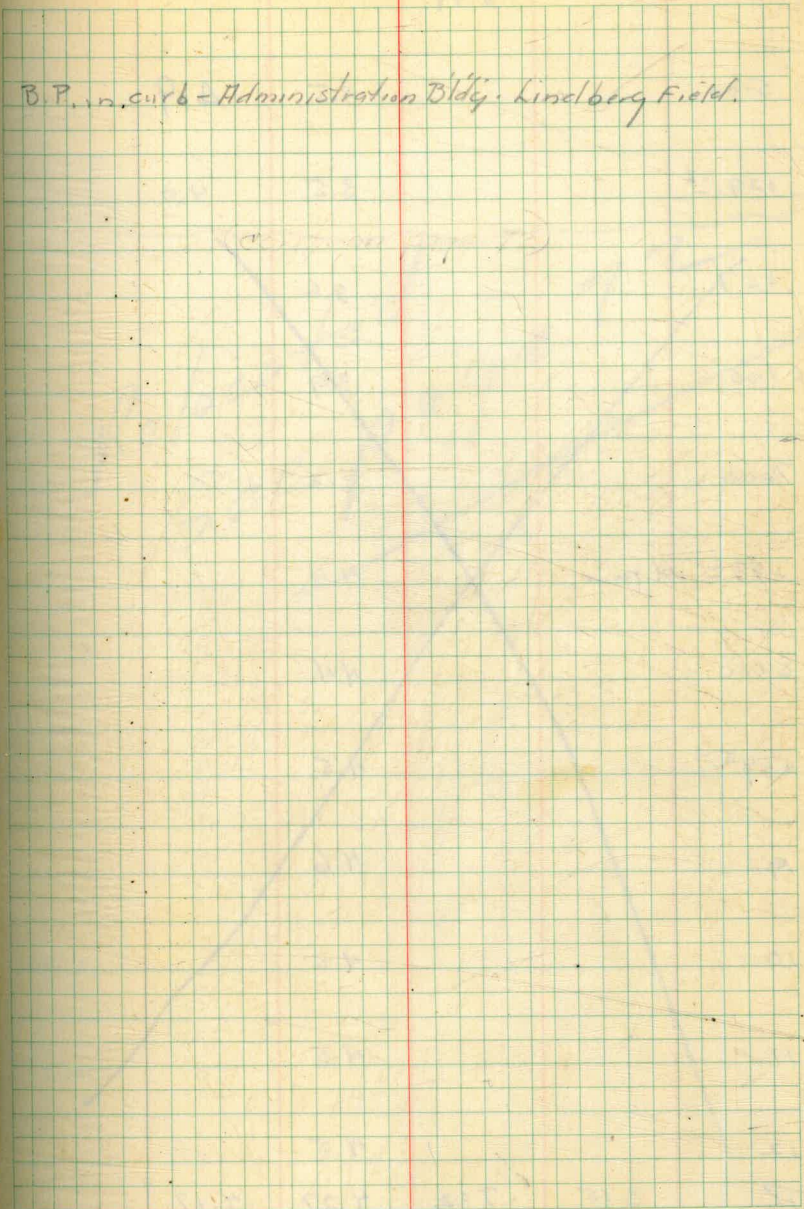


Profile - Pipe location Pacific Hwy. to Ryan Field.

B.M.	8.16	20.39	12.23
TP	1.16	12.77	8.78
0+00		4.5	8.3
0+10		4.5	8.3
0+56 gutter		5.5	7.3
0+56 curb		5.0	7.8
0+64 sidewalk		4.9	7.9
1+00		5.1	7.7
1+14		5.0	7.8
2+00		6.2	6.6
3+00		6.8	6.0
4+00		7.2	5.6
R	2.84	8.44	7.17
			5.60

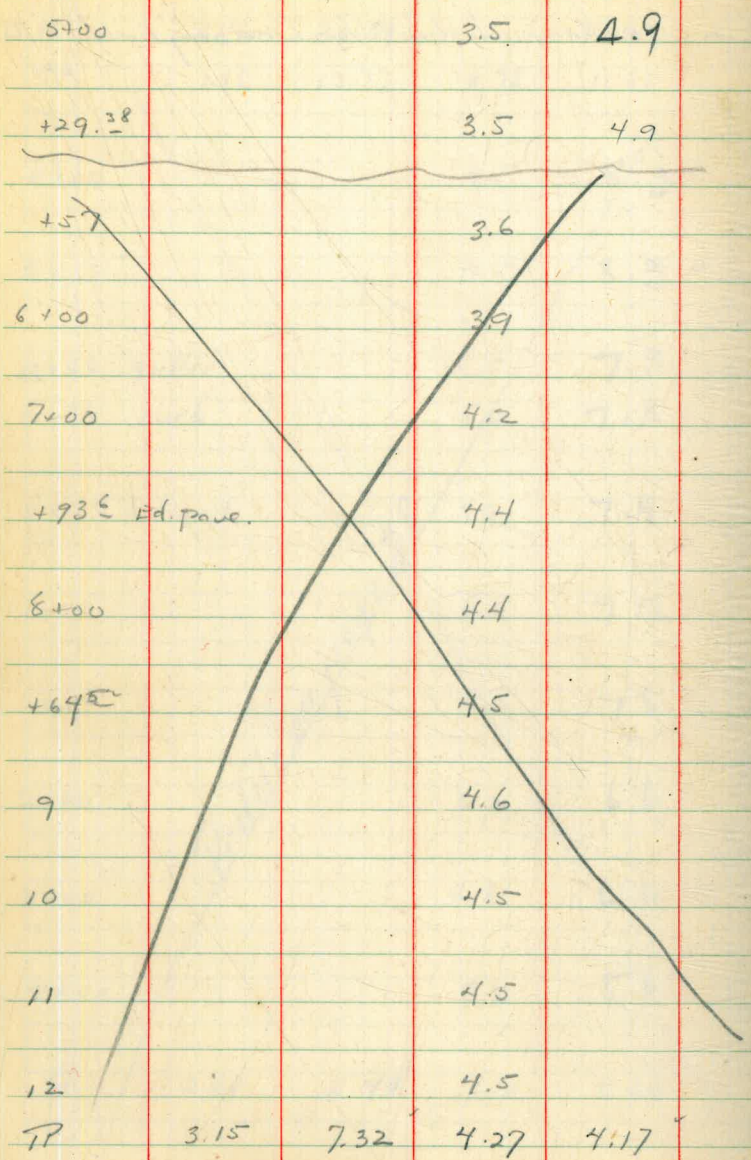
Profile on page 28

B.P. in curb - Administration Bldg. Lindberg Field.





8.44 ✓



Relocated  
See page 72



7.32

13

3.8

14

4.2

15

4.3

16

4.6

B.M

8.62 -1.30

17

4.7

18

5.0

19

4.9

20

5.1

TP

4.29

7.10

4.51

2.81

+53

3.6

+85

3.2

Tack in pipe in conc. block - N.P.L. Laurel El. + 7.776 (Mark. dept)



7.10.

20490

4.5

21

4.8

22

4.6

23

4.5

+20

5.0

+42<sup>13</sup>

5.2

+50

5.2

24

4.9

+50

5.0

25

4.7

+50

5.1

26

5.3

67



7.10

26+50

4.9

+9445

4.7

27

4.6

+54 (23'±)

14.3

28

5.1

TP

4.22

6.38

4.94

2.16

29

4.8

30

5.1

31

4.9

32

5.1

33+75

5.2

34

4.8

+29<sup>45</sup>

4.6

B.M.

1.73

4.65

35

4.7

36

4.7

37

4.8

38

4.8

Fence Cor.

4.39

P  
Fl. line Sew. M.H. Chamber (9' deep ±)

Set B.M. Top F. Hyd. 11<sup>S</sup> R+ 33+90



Relocation Ryan Field Line Sta 5+29<sup>38</sup> - 39+00

8+97<sup>20</sup>  $\angle$  24° 22' 45"

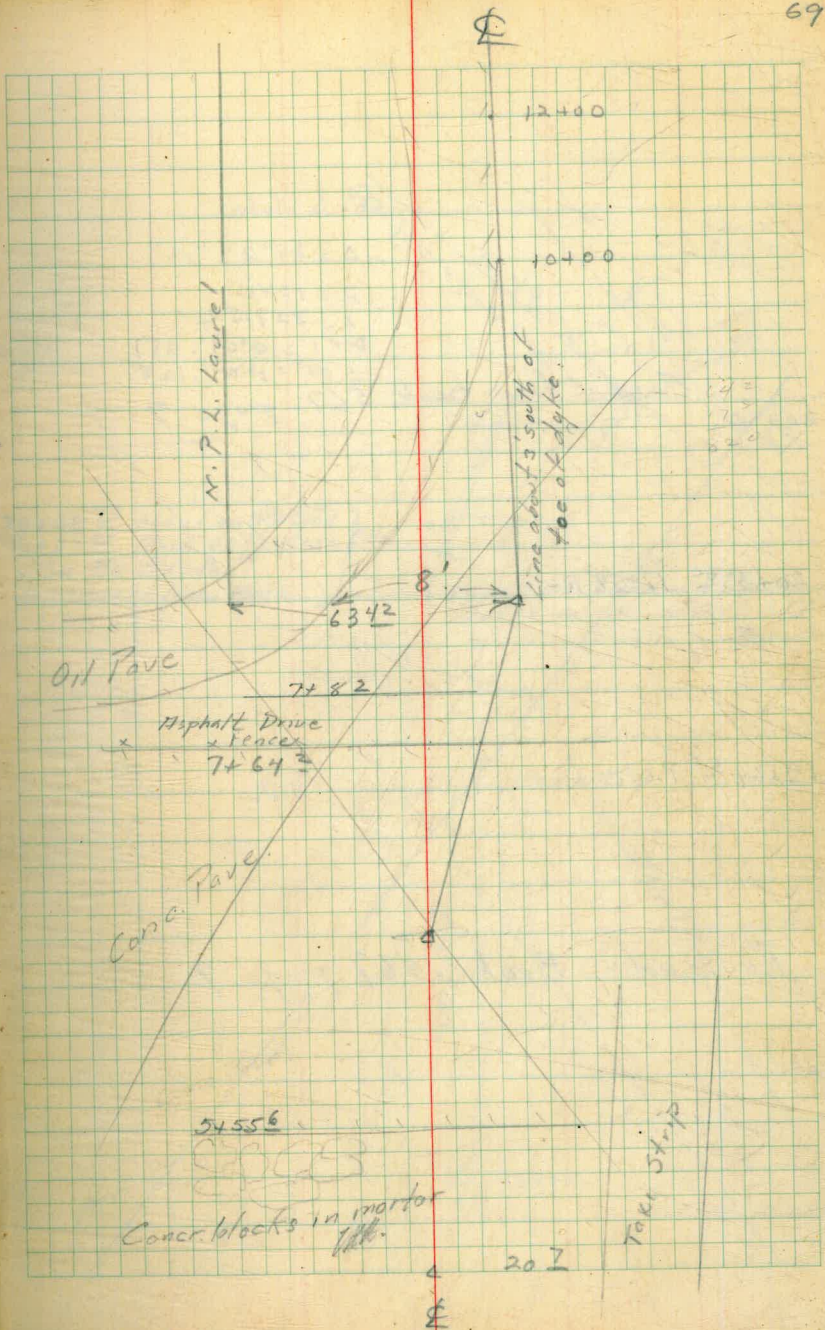
6+94<sup>07</sup>  $\angle$  22° 40' 15"

5+29<sup>38</sup> P.O.T.

Continued from Pg. 60

Revised - Page 28

Revised E. from 6+94.07





Curve data:

$$\Delta = 35^{\circ} 23' 12''$$

$$R = 1340$$

$$L = 827.52$$

$$\text{Def } 1' = 0^{\circ} 01' .287$$

$$\text{" } 50' = 10^{\circ} 04' .125$$

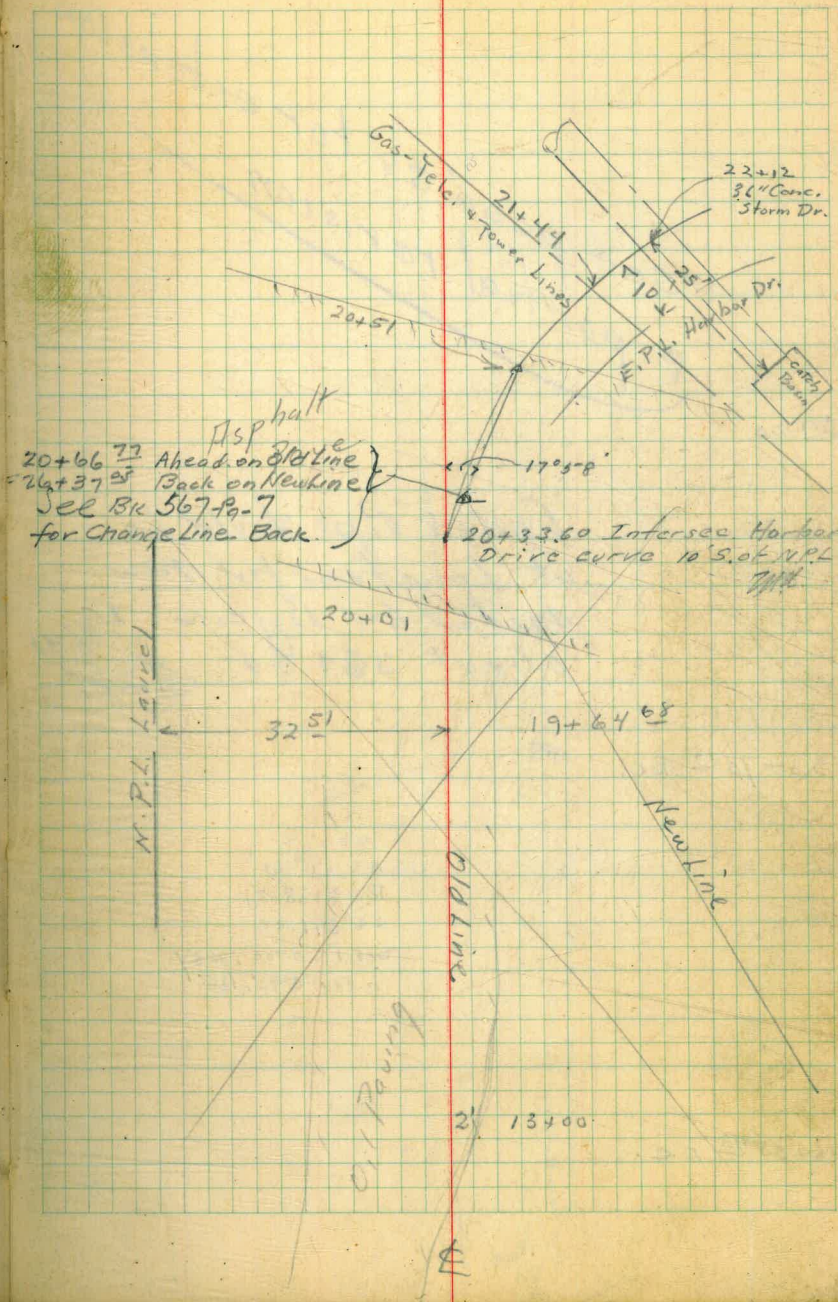
Cont'd from book 567 page 7

20+50

20+33.60  $17^{\circ} 58' R$

19+64  $68^{\circ}$  P.O.V.

Revised - Book 567 page 7.






see page 38 for extension  
& partial revision

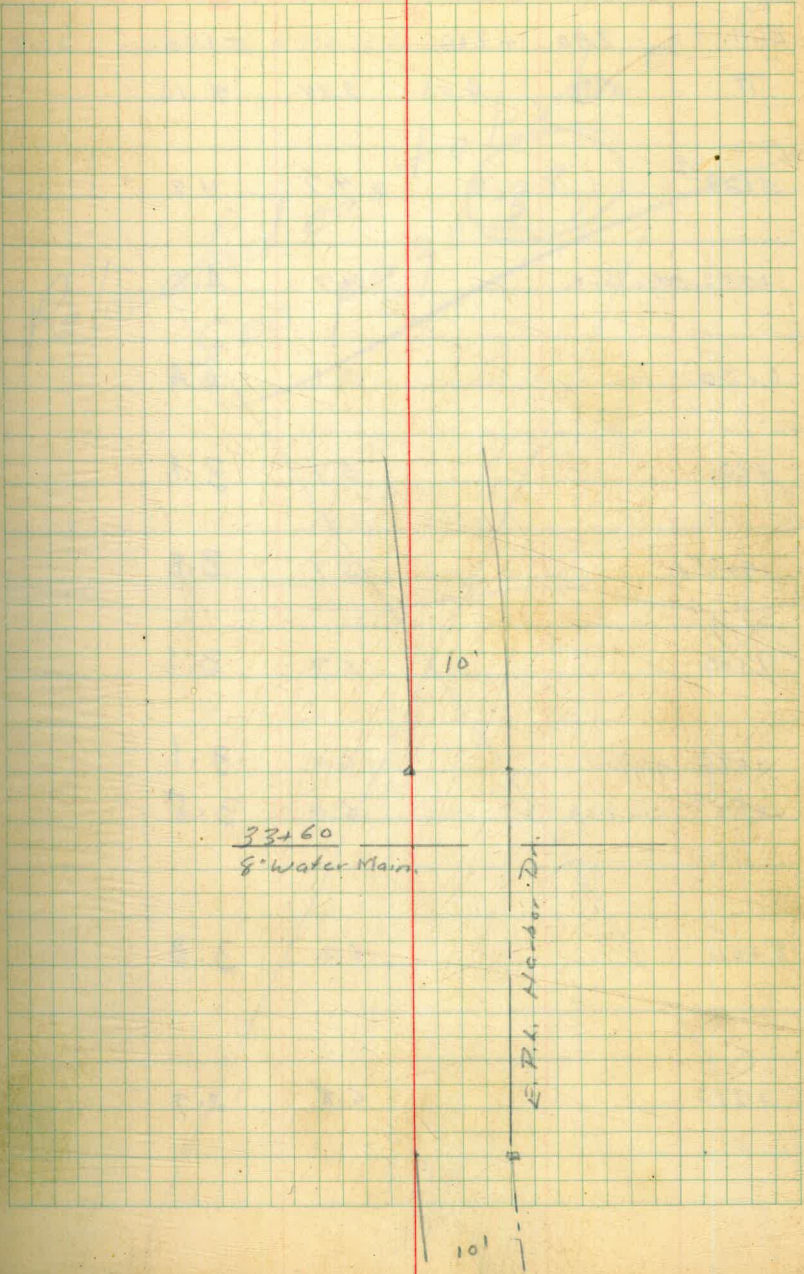
39+00

End of Pipe should be  
at Location for new  
meter for Byers 2/4/01  
about 36+60 J.D.O.

33+70 <sup>15</sup> BC, 

$\Delta = 14^{\circ} 30'$   
 $R = 2138.51$   
 $L = 541.26$   
Def 1' =  $0^{\circ} 00' .8037$   
" 50' =  $0^{\circ} 40' .185$

26+35<sup>43</sup> EC





Continued from Pg. 65

B.M.	8.90	+7.60	-1.30	-
T	5.37	9.53	3.44	4.16
5+29 <sup>38</sup>			4.7	4.8
+55 <sup>6</sup> Edge Pave.			4.7	4.8
6+00			5.1	4.4
+62			5.7	3.8
194 <sup>27</sup> L			5.7	3.8
7+00			5.7	3.8
+64 <sup>2</sup> gutter			6.4	3.1
+64 <sup>2</sup> curbing			6.0	3.5
8+00			6.2	3.3
+97 <sup>2</sup>			6.8	2.7

(see page 64)

72

Tack in conc. block N.P.h. of Laurel

Relocated east to sta. 6+94.07  
see page (38)



	9.53			
T <sub>1</sub>	5.41	8.11	6.83	2.70
9+00			5.5	2.6
10+00			6.0	2.1
11			6.0	2.1
12			6.2	1.9
13			6.2	1.9
14			6.7	1.4
15			6.9	1.2
16			6.7	1.4
B.M.			9.42	-1.31
B.M.	7.92	8.62		-1.30
17			7.4	1.2
18			7.2	1.4

Book 567-9-14

B.M. E.I. = -1.30



8.62

19

7.3

1.3

465

6.9

1.7

20+00

6.7

1.9

+3360

6.6

2.0

450

6.8

1.8

Cont'd from book 567 - 11-

21

6.7

1.9

450

6.4

2.2

22

6.2

2.4

T.P.

7.94

8.11

8.45

+0.17

22+12-25R+

7.5

0.6

22+12-4

5.7

2.4

+50

5.5

2.6

Top of 36" Conc. Storm Drain



8.11

23	5.5	2.6	-
+50	5.5	2.6	-
24	5.5	2.6	-
+50	5.7	2.4	-
25	5.4	2.7	-
+50	4.9	3.2	-
26	4.7	3.4	-
+35 <sup>43</sup> EG	4.7	3.4	-
26+92-123' H	15.3	-7.2	-
27	4.9	3.2	-
28	4.8	3.3	-
29	5.0	3.1	-

75

El. line Sewer M.H. Chamber (9' deep)



	8.11			
30		5.1	3.0	-
31		5.6	2.5	-
32		5.8	2.3	-
133		5.7	2.4	-
TP	4.51	6.92	5.70	2.41
32+90-25' RT		11.4	-3.5	
33+60		7.4	-0.5	
33+70 <sup>5</sup> B.C.		4.8	2.1	-
34+00		4.7	2.2	-
+50		4.6	2.3	-
35		4.5	2.4	-
+50		4.6	2.3	-
36		5.2	1.7	-

5.9 below TP  
2.1

5.9 deep  
4.5  
~~5.9~~  
12.4

32+90 - 76  
25' RT

Fl. line Sewer M.H. Chamber (5.9 deep)

Top of water line



6.92

36+69 17.0 - 10.1 -

37+00 5.8 1.1 -

38+00 5.7 1.2 -

39+00 5.2 1.7 -

B.M. 2.26 4.66

See page 38  
for extension to Kettner

Top F. Hyd Elev. 4.65



## Soil samples - Ryan Field Location

Sta 1+10 - As per 1<sup>st</sup> sample 0 to 2<sup>5</sup>As per 2<sup>nd</sup> sample 2<sup>5</sup> to 6<sup>0</sup>Sta 14+00 - As per sample 0 to 6<sup>0</sup>

Sta 26+00 - One foot of D.G. surfacing

As per sample 1<sup>0</sup> to 6<sup>0</sup>Water at 6<sup>0</sup>

Sta 36+50 - One foot of D.G. surfacing

Sand and clay 1<sup>0</sup> to 1<sup>5</sup>Sand - 1<sup>5</sup> to 2<sup>5</sup>As per 1<sup>st</sup> sample 2<sup>5</sup> to 4<sup>0</sup>As per 2<sup>nd</sup> sample 4<sup>0</sup> to 6<sup>0</sup>Water at 6<sup>5</sup>

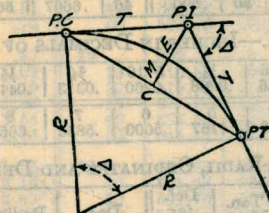


Bergon Tr. 14183 (Hark. Dept.) returned  
 " 14873 City.

14407.66 0	84917
29.76	35.25
14437.42	422085
65.65	168834
15403.07 0	422085
81.01	253251
15484.08 0	297569928
16462.63	91092
18487.07 pt at Brant	60
	546552
	455460
	51.01152

# DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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## CURVE FORMULAS

- Radius= $R = \frac{50}{\sin D/2}$  (1) Degree of Curve= $D$  and  $\sin \frac{D}{2} = \frac{50}{R}$  (2)
- Tangent= $T = R \tan \frac{\Delta}{2}$  (3) Length of Curve= $L = 100 \frac{\Delta}{D}$  (4)
- Middle ordinate= $M = R(1 - \cos \frac{\Delta}{2})$  (5)  $= R \text{vers} \frac{\Delta}{2}$  (6)
- External= $E = T \tan \frac{\Delta}{4}$  (7)  $= R \div \cos \frac{\Delta}{2} - R$  (8)  $= R \text{exsec} \frac{\Delta}{2}$  (9)
- Long Chord= $C = 2 R \sin \frac{\Delta}{2}$  (10)  $\Delta =$  Central Angle

## EXPLANATION AND USE OF TABLES

Stations.—Given P. I.—Sta. 161+60.35 to find Sta. of P. C. and P. T.  $\Delta = 62^\circ 10'$   $D = 8^\circ 20'$ . From Table IV for  $1^\circ$  curve  $T = 3454.1$  and  $+8\frac{1}{2} = 414.49$  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  $= 158 - \text{Sta. P. C.} = 54.50$ , hence offset  $= 7.27 (54.50 \div 100)^2 = 2.16$  ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus  $(54.50)^2 \div (2 \times 688.26) = 2.16$  ft.

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

Externals.—May be found in similar manner to tangents. Thus  $E$  for curve above is 91.37. For from Table IV for  $1^\circ$  curve  $E = 960.6$  for  $8^\circ 20' = 960.6 \div 8\frac{1}{2} = 91.27$  and from Table V correction  $= .10$  or  $E = 91.37$  ft. Or suppose  $\Delta = 32^\circ$  and  $E$  is measured and found to be 42 ft. What is  $D$ ? From Table IV  $E = 230.9$  and  $\div 42 = 5.5$  or  $D = 5^\circ 30'$ .




108  
16  
92

to  
of  
ble  
.9.  
A.



$24+160.0$      $23+64.90$   
 $23+90.33$      $2467$   
 $29.67$      $2409.07$   
 $2$   
 $24+07.07$

$43+72.24$   
 $78.12$   
 $44+503.1$



$278.5$   
 $2.14$   
 $250.64$

$294.9$   
 $290.7$   
 $4.2$

$279.4$   
 $2.18$   
 $281.56$

$137.5454$   
 $114.221$   
 $1.02$

$10.50$   
 $62.2845$   
 $4.2155$

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  $41.9 + (20 - 16) \cdot 2$  or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.