

W

565

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

MICROFILMED

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

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

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

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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.

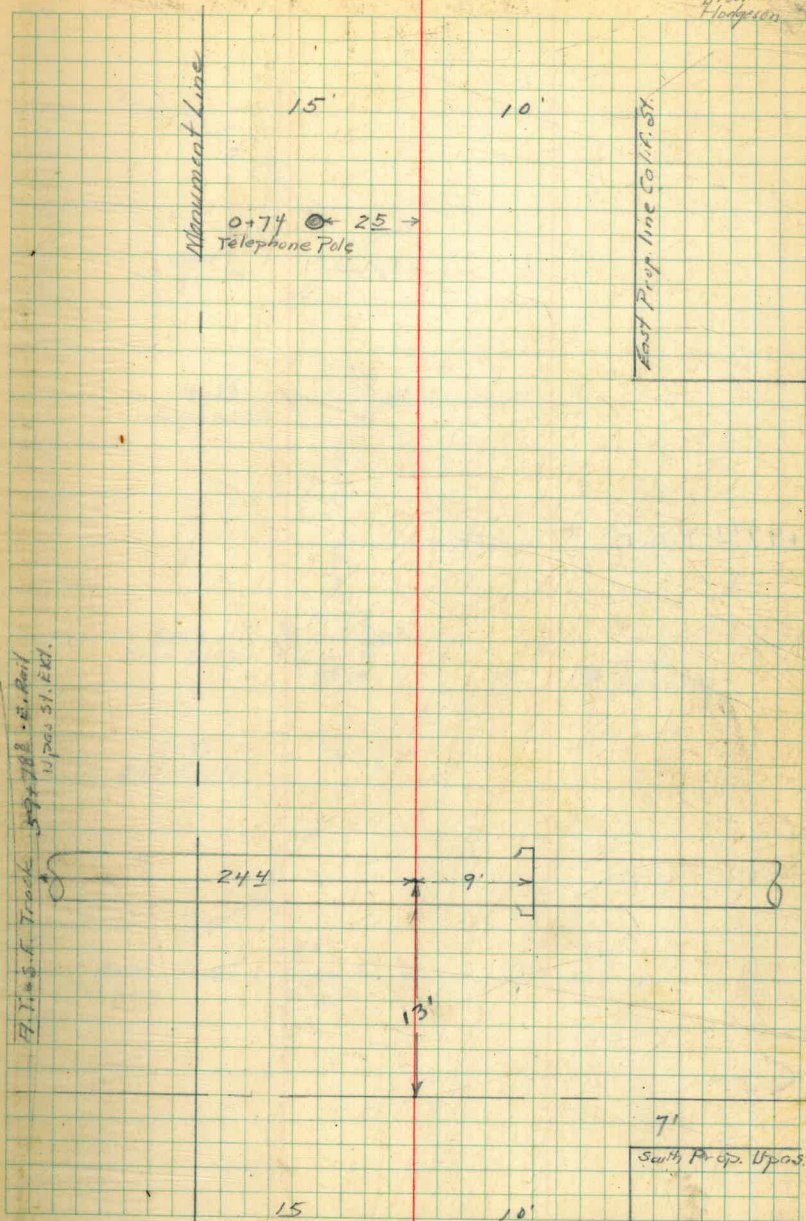
Index

PACIFIC BEACH P.L	
Alignment	1-58
Line Revision Wilburby to Pac Blvd.	61-65
" " near Harasthy St.	66-70
Causeway Bridge	60
± Profile Sta 52+00 to 76+94	78-80
± Revision near Harasthy St.	66-68
± Profile of above - - - - -	69-70
Soil Samples - - - - -	71-73
Ground Water Elevations - - - - -	75
Cuts for Lacking Pipe under Pacific.	77
± Profile 52+00 to 76+94	78-81

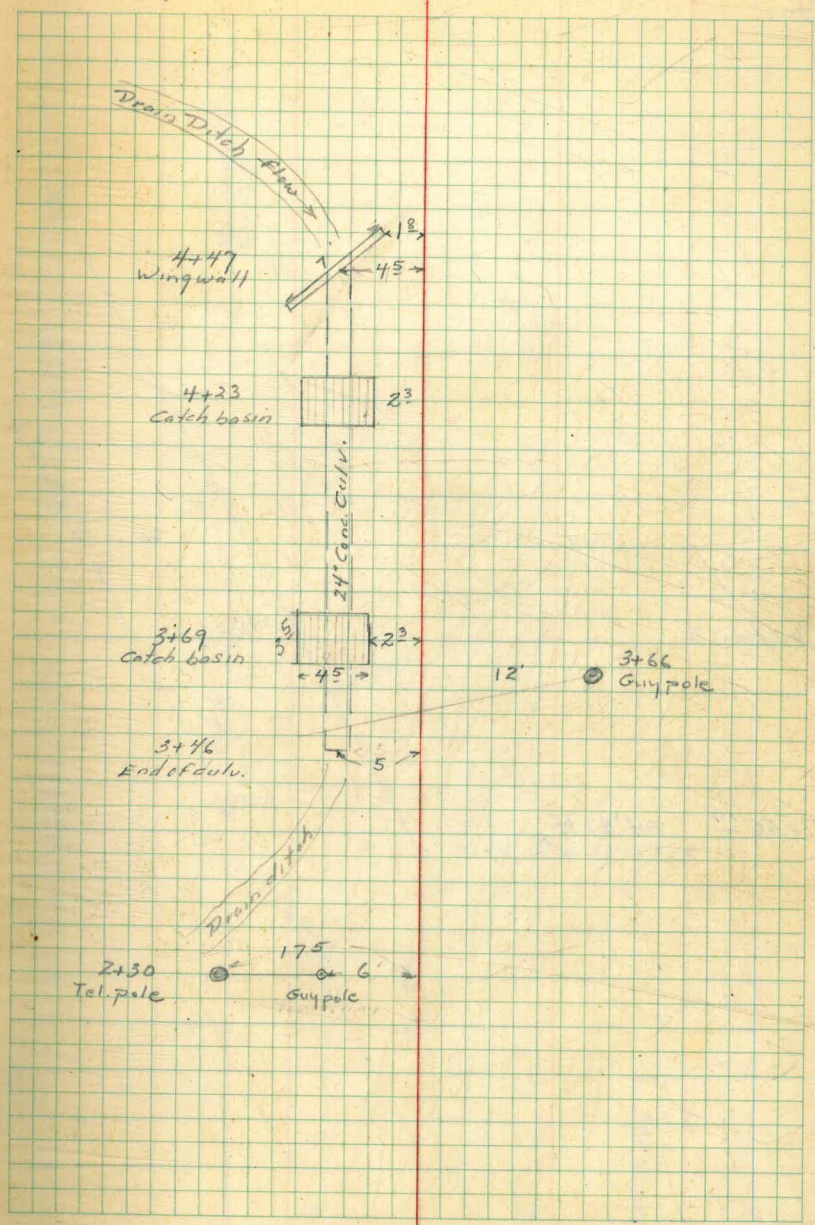
Upas - Pac. Beach Pipe Line Loc.

0+00 = Center of 24" C.I.P. Upas St. Ext.

H. J. S. F. Trunk
3077 788 - E. Rail
Upas St. Ext.

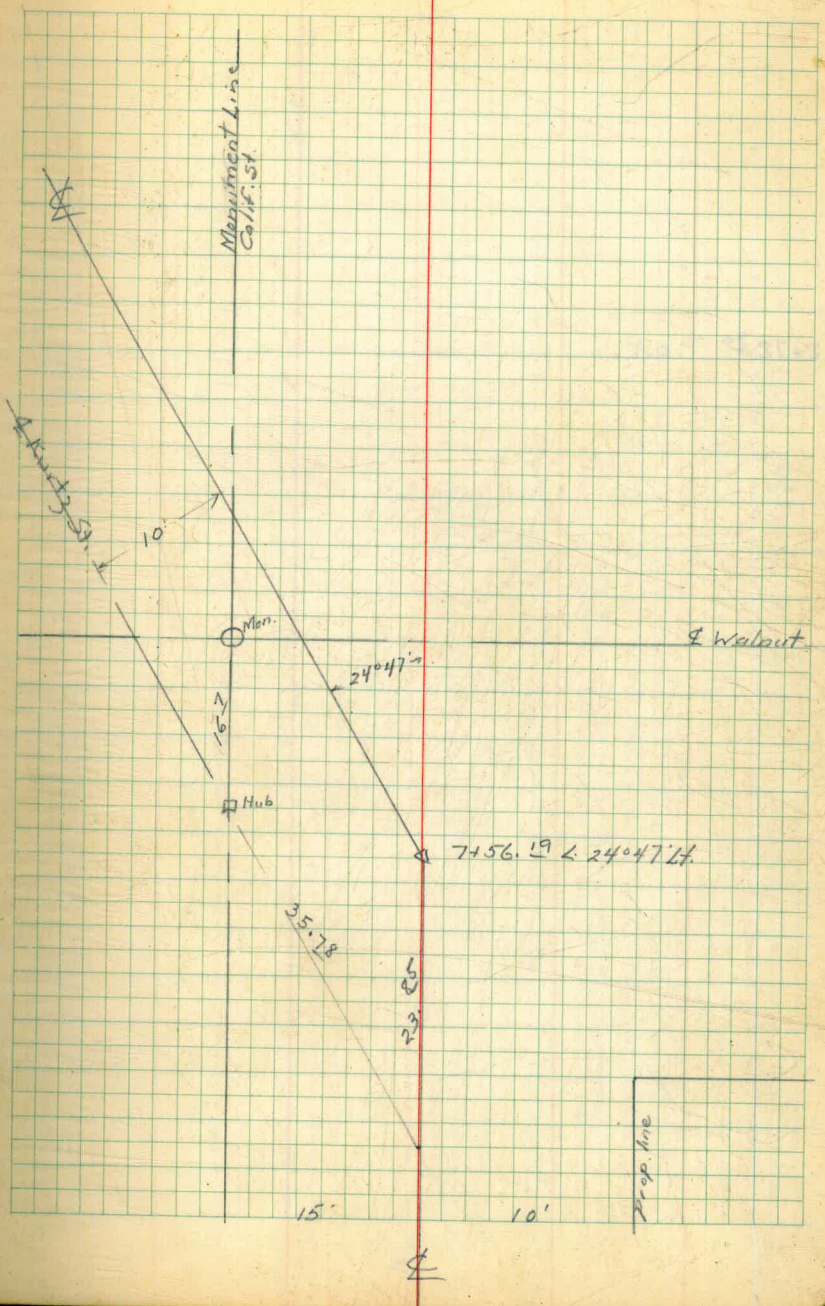


3+97⁶⁷ P.O.T.



⊕

7456.19 $24^{\circ}47'14''$



12472³⁰ P.O.T.

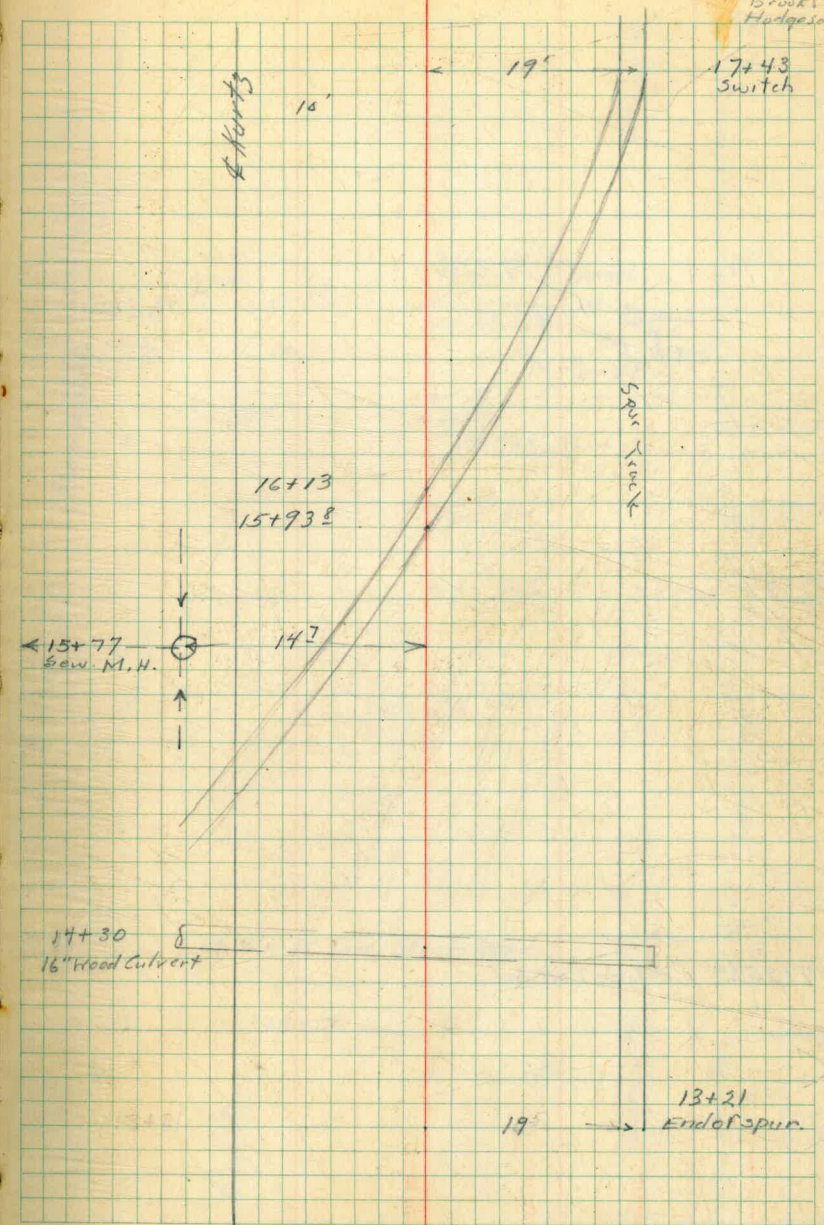
Sketch

10'

27

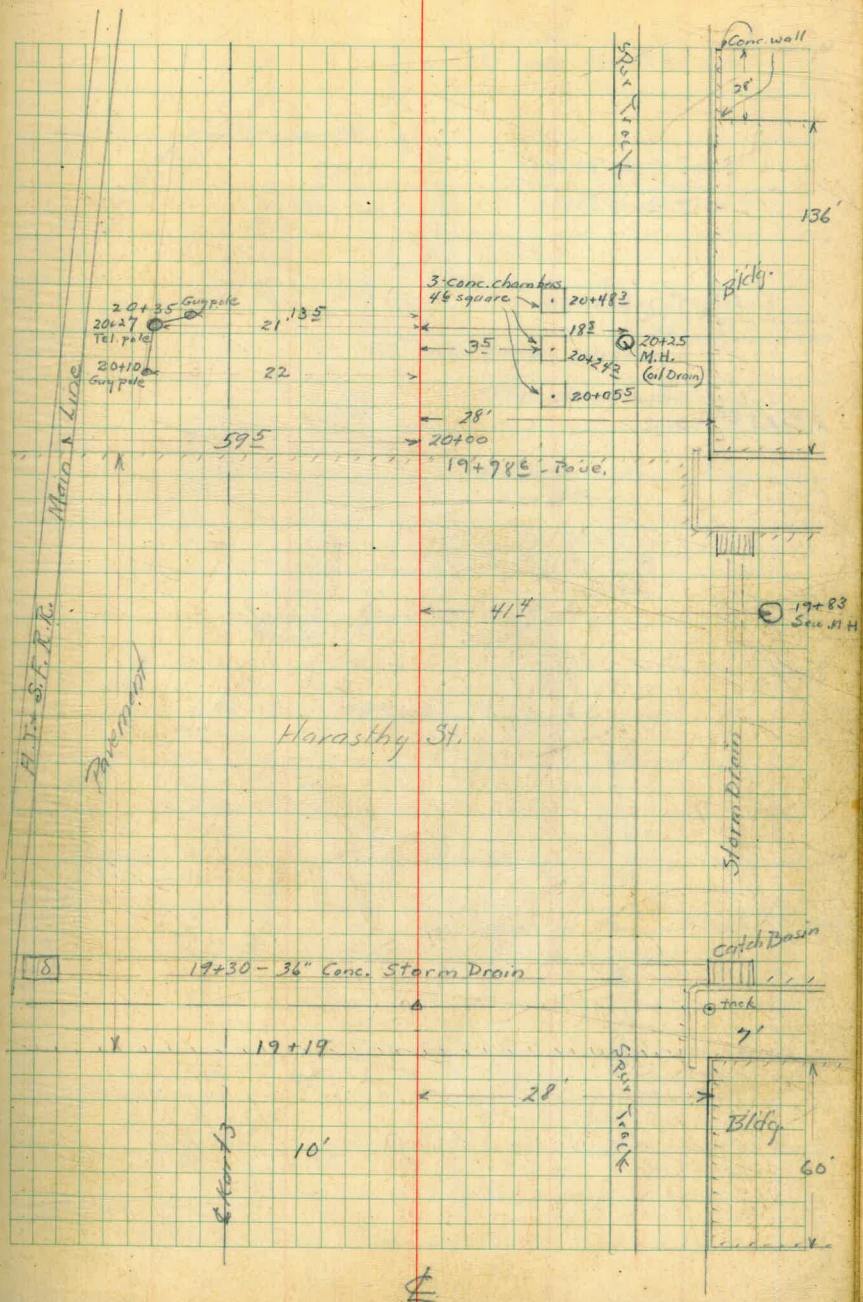
12/6/40
Bill
30700
15700's
Hudgerson

5

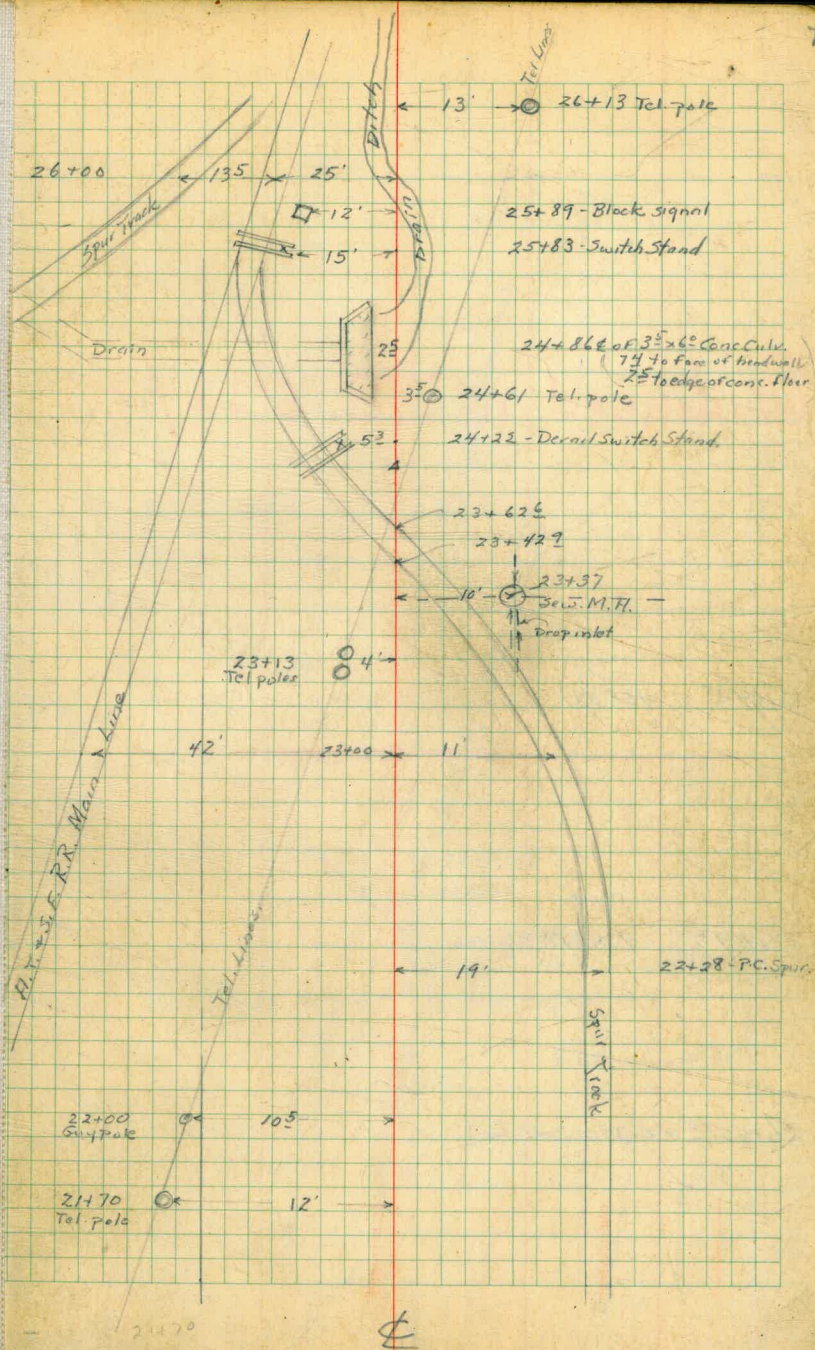


⊕

19+25⁸⁰ P.O.T. on 7' off. line



23+83⁵⁵ P.O.T.

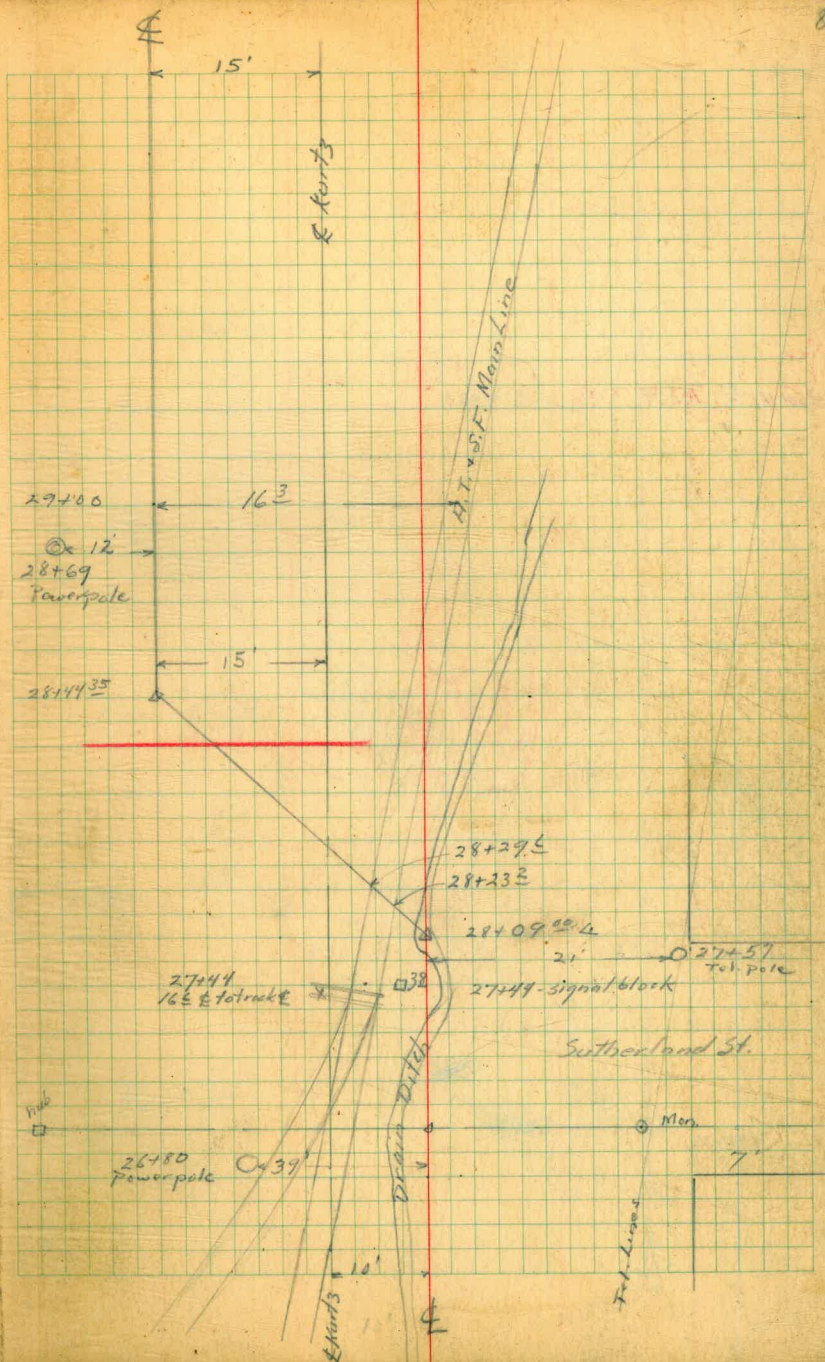


Continued in F.B. 572/21

28+44³⁵ 45° Rd.

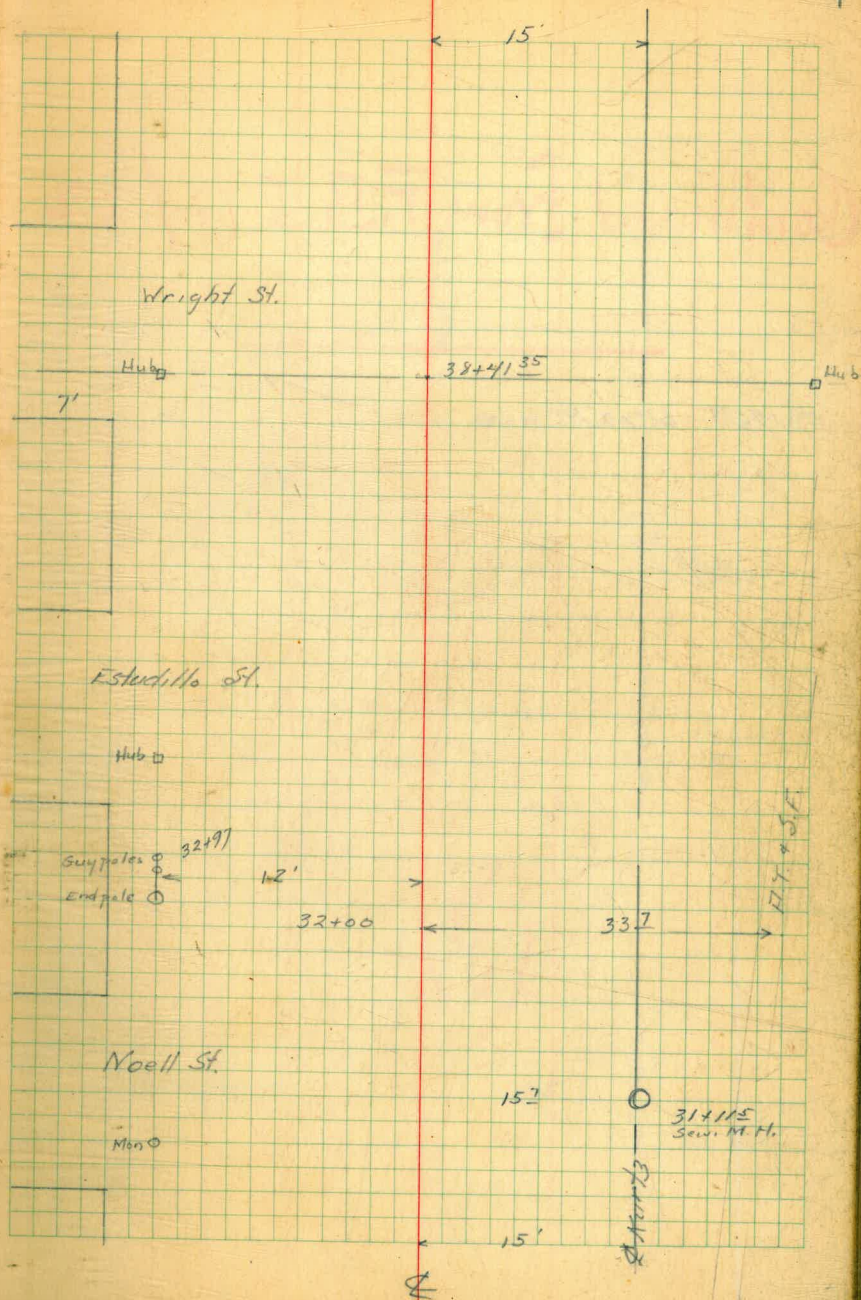
28+09⁰⁰ 45° Lt.

26+85⁸⁰ P.O.T. (on 7° off. line)



38+41.35 P.O.T.

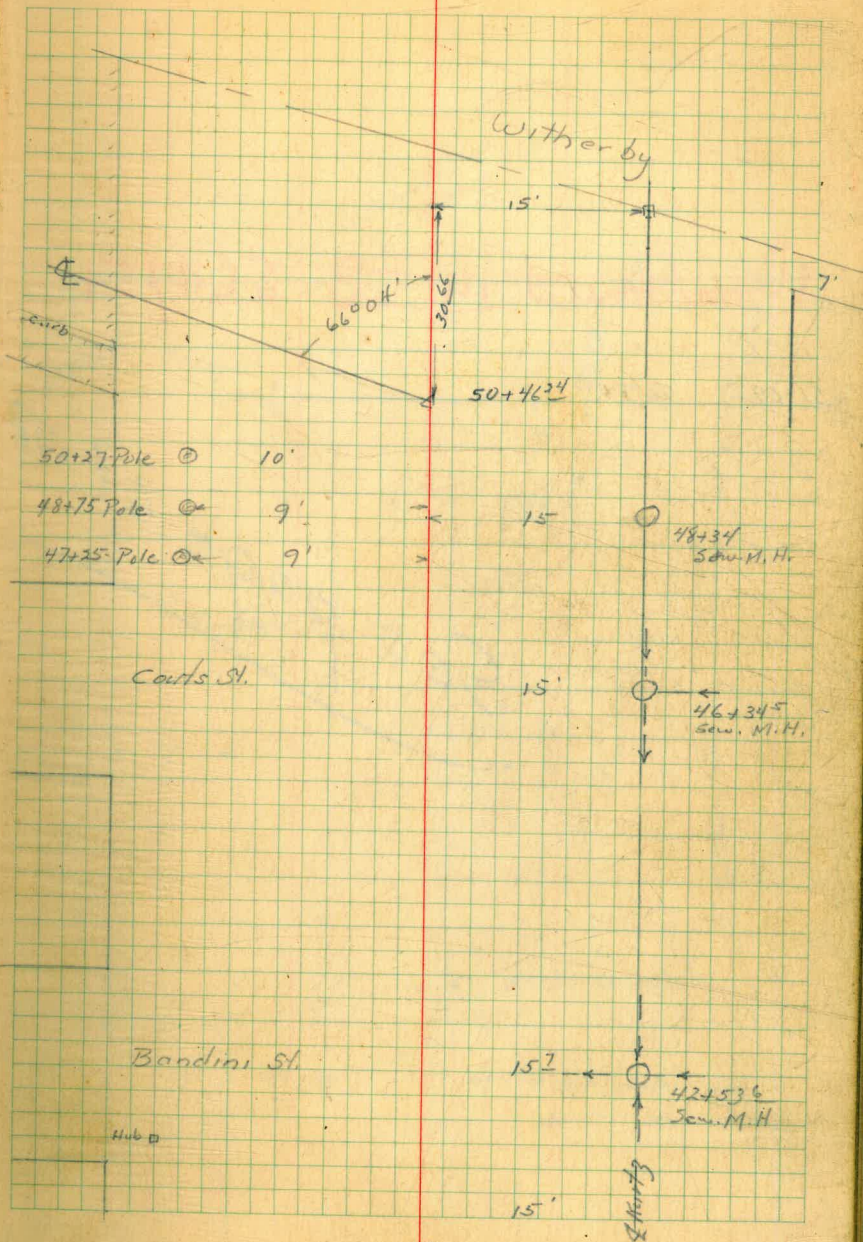
Field



Continued from F.B. 572/22

50+46.34 66°04'H

Lead

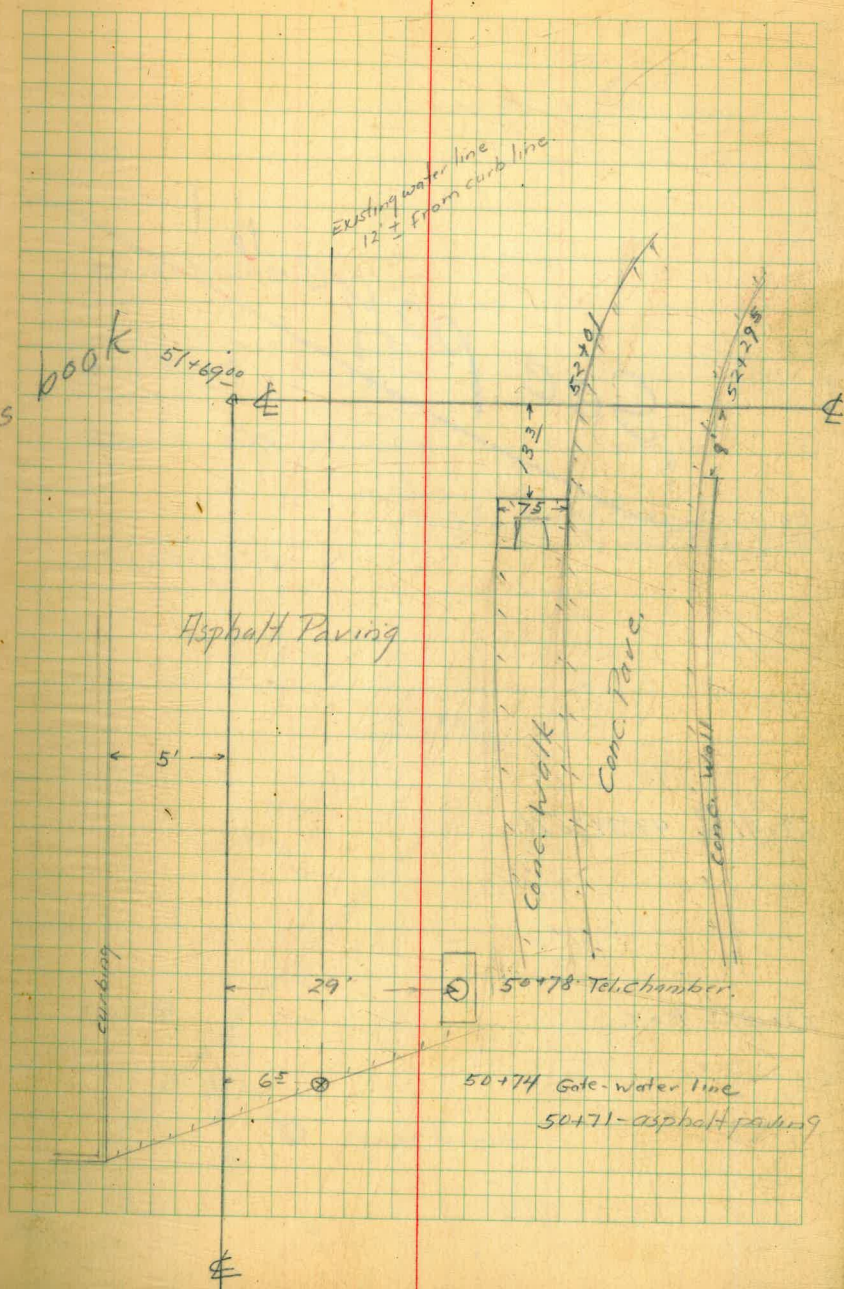


~~Continued in F.B. 564/51~~

51+69⁰⁰ 90°Rt.

See page 61 ~~Th~~s

Continued from F.B. 564/51



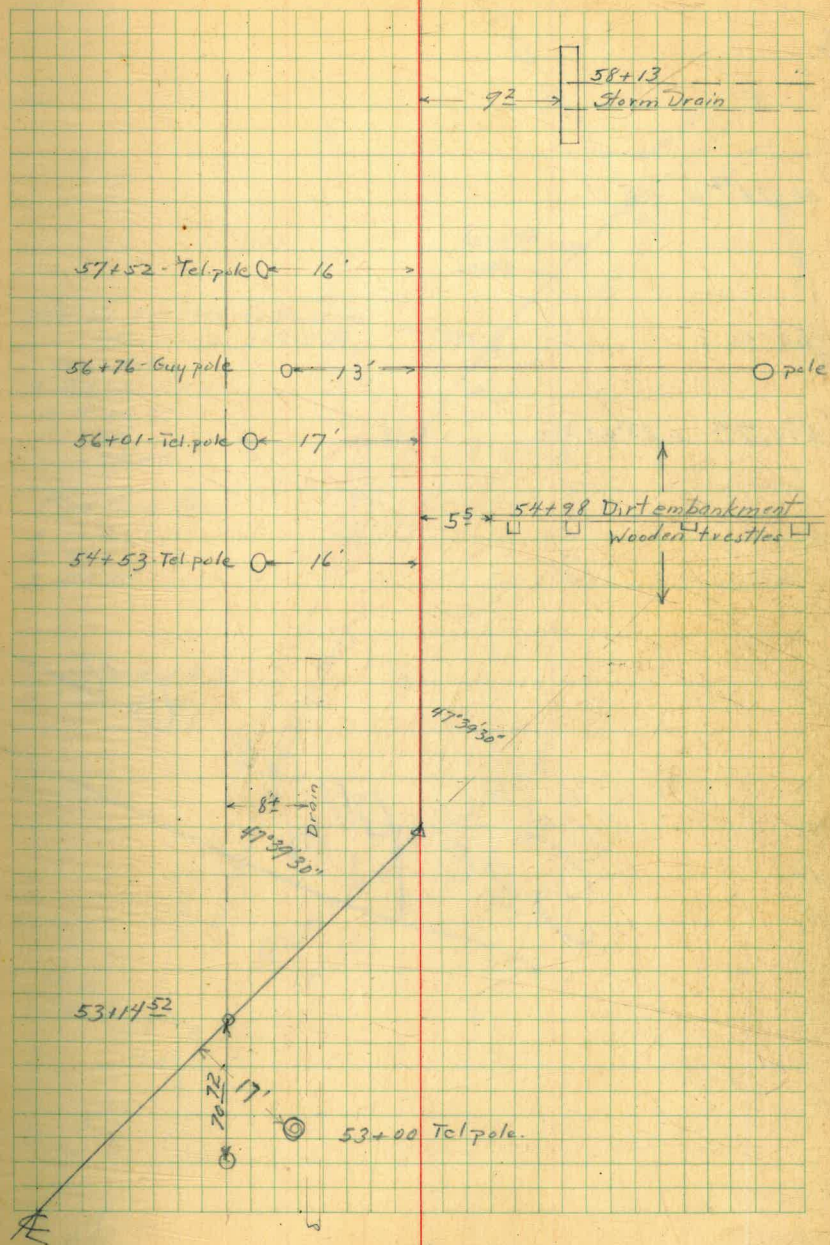
See page 61

53+41⁵¹ 47°39'30" Lt.

53+14⁵² P.O.T.

⊕

12



60174²² L

60+00 L

59+77.4 L 28°03' Rt

Word

See page 62

Note: Sta. 59+77.4 to Sta. 60+00
deflect angle: 28°03' Rt

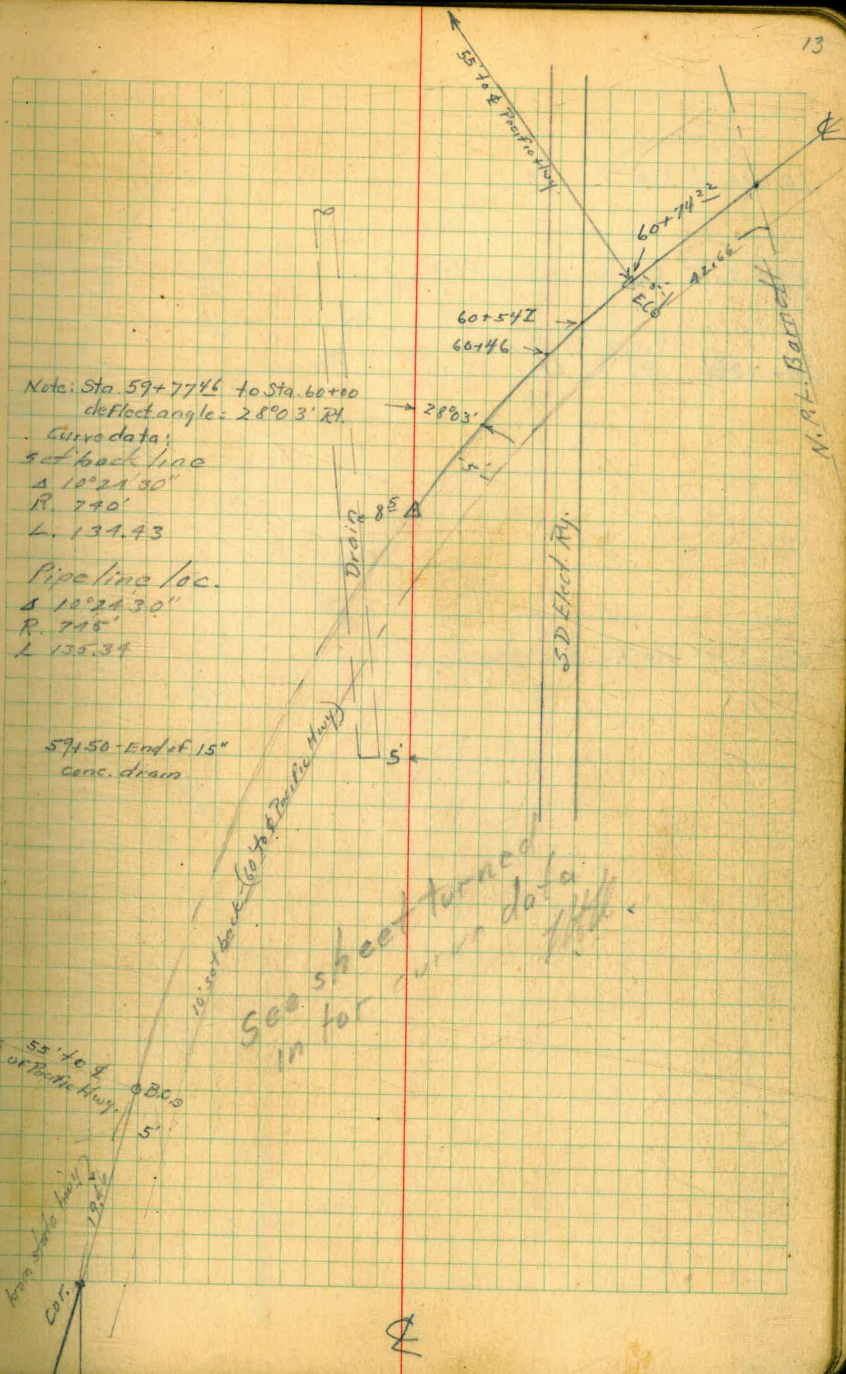
Curve data:
set back 100'
 Δ 10°21'30"
R. 790'
L. 134.43

Pipeline loc.
 Δ 10°21'30"
R. 790'
L. 134.43

59+50 - End of 15"
conc. drain

55+40 of
or Pacific Hwy

from state highway
20 ft



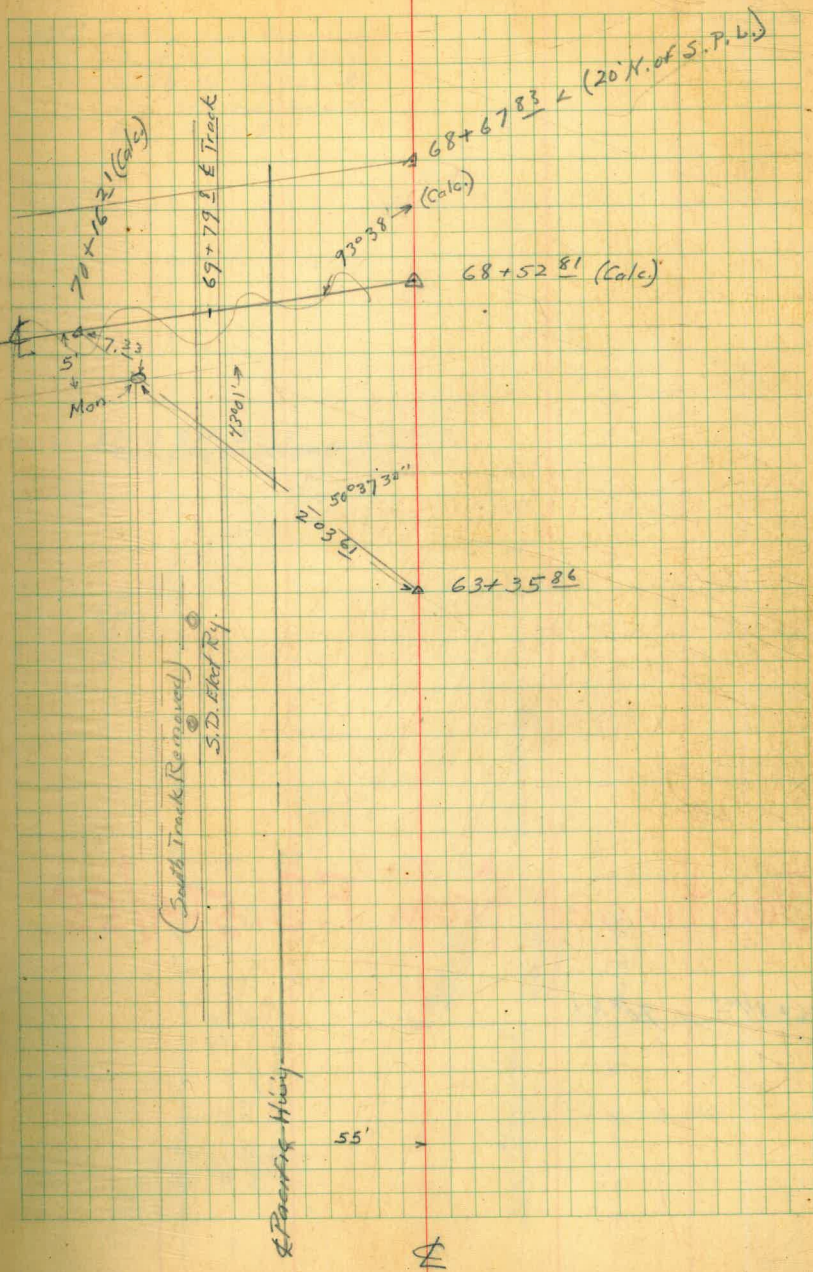
70+162' P.O.T.

69+229' & Pac. Hwy.

68+528' 93°38' Lt.

63+358' P.O.T.

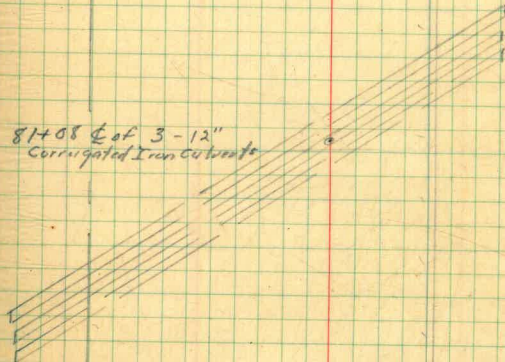
Void



Continued from F.B. 564/55

76+84²⁶ @ 90° Rt.

Note: Electric light standards
about 150' apart from
Sta 77 to Sta 261+83
are one foot back of
face of curb.



81408 @ of 3-12"
Corrugated Iron Curbs

← Impediment or Midway Drive

← C.C. Stone Pavement base
with Asphalt Top, to
Sta. 265+05.3

22'

6'

76+78²⁶ face of curb

76+84²⁶
Paving Point

76+77²¹
Curb on curb

76+71²⁶

5'

⊙ Con. Man

← Curb

12/7/48 Hill 15
Soper
Bracks
Hedgkoon

Oil Driveway

92+09



90+00

89+66

89+26

Golf Driveway

88+67

87+65

87+45

Ingraham St

22'

6'

Curbing

4

96+63

Dirt Drive

96+43

6'

8'

Conc. walk

Mar. box

30'

93+58

93+50

93+35

Blkg

93+23

93+07

Market

75'

Oil Driveway

Blkg 5

92+65

92+49

22'

6'

92+09

⊕

$L = 35^{\circ} 51' 35''$
 $R = 1022$
 $L = 639.67$

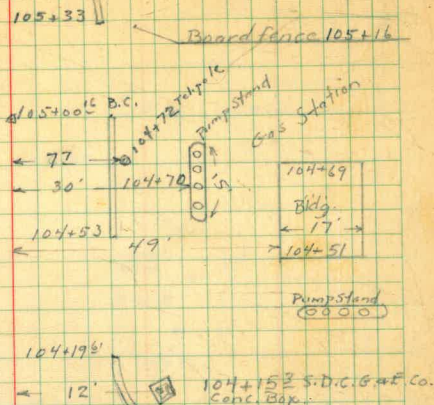
105+00.6 D.C.

103+19.6

12/9/40 Hill
Super
8 tracks
Madagascar
cloudy - Rain

18

Note: Telephone poles, 17' +
back of face of curb
from Sta 104+72 to Sta.
104+70, spaced
about 170' apart.



Rosecrans St.

103+59

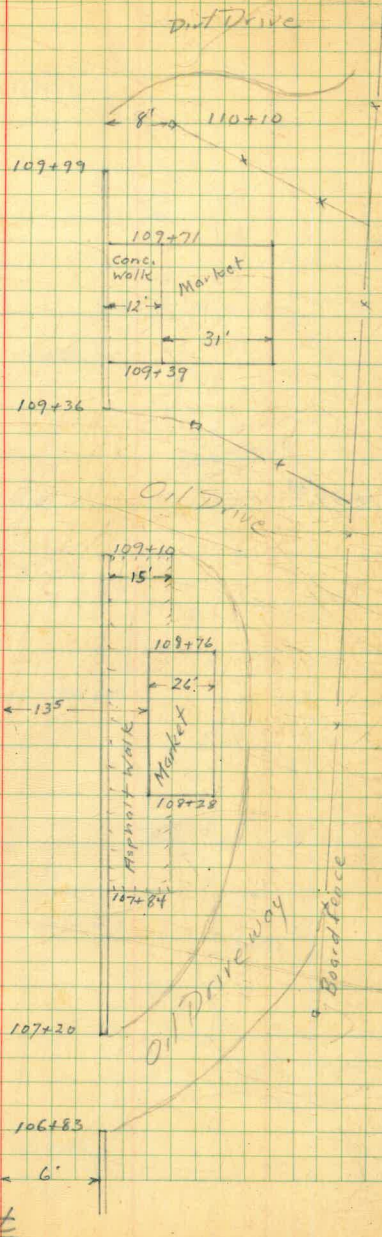
Ingraham at Midway Dr.

103+19.6 (Truck in curb)
(50' Prop. line)

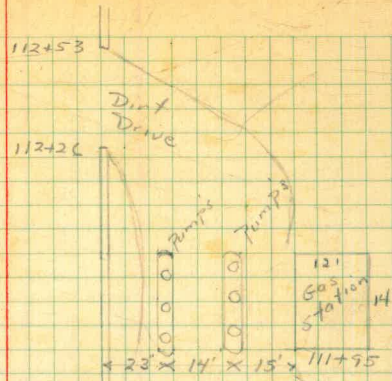
22' 6'

4

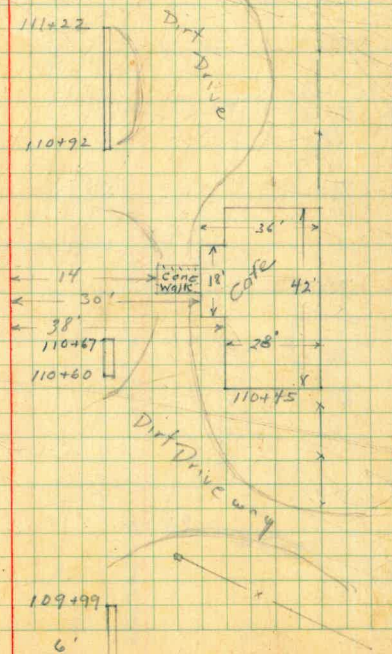
Note: curbing on this page
shown straight - but
is all on curve.



111+39⁸⁰ E.C.



111+39⁸⁰ E.C.

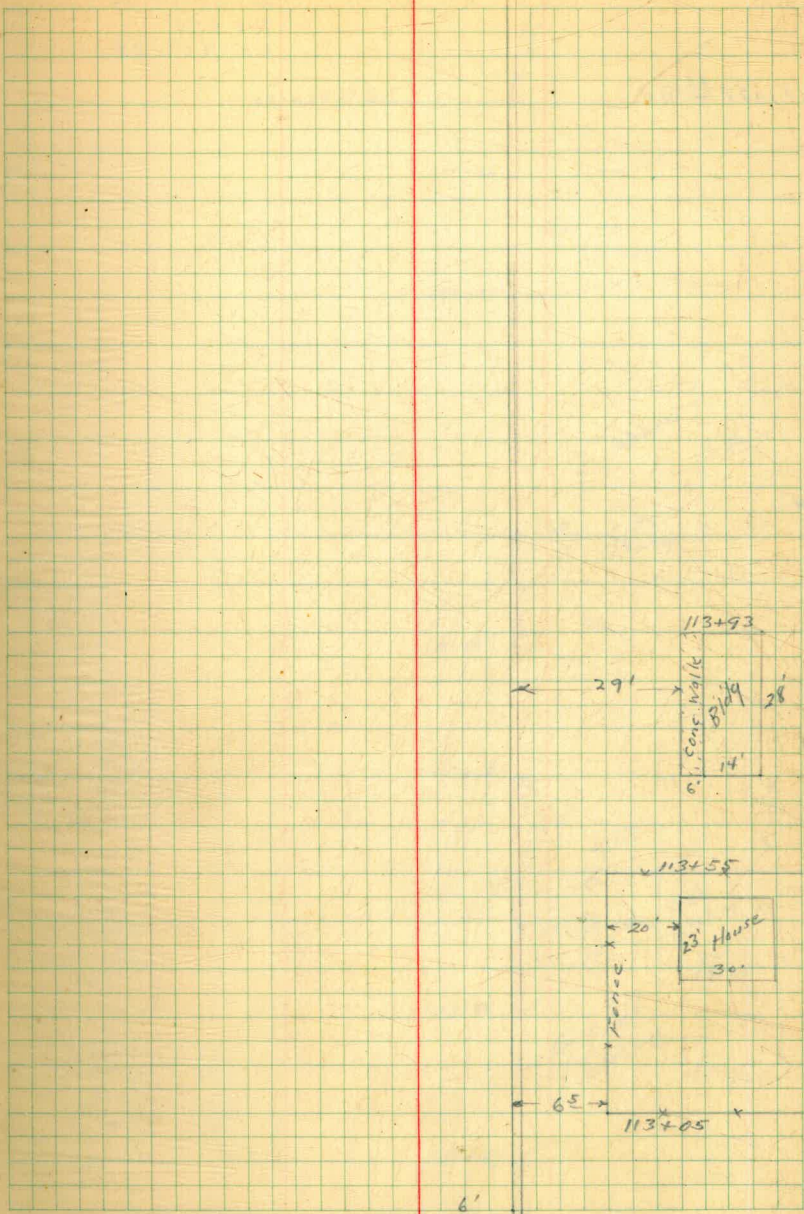


4 Inglewood

22'

109+99

6'



Σ

121+28³³ B.C.

$\Delta = 36^{\circ}04'26''$
 $R = 658'$
 $L = 414.28$

22

121+28³³ B.C.

120+26

Gravel
Drive

120+05

House 26'

145' 32'
119+74

119+45

119+05

Turn

20' 15'

Gas
Station 10'

12'
118+64

118+44

Gravel
Drive

118+07

fence

⊕

125+42⁶¹ E.C.

125+42⁶¹ E.C.

Dirt Drive

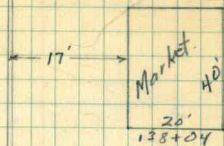
124+79

124+80

Dirt Drive

124+35

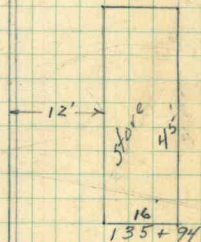
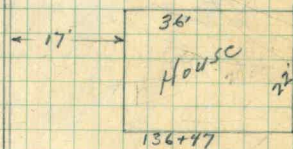
⊕



136+88

Dirt Drive

136+74

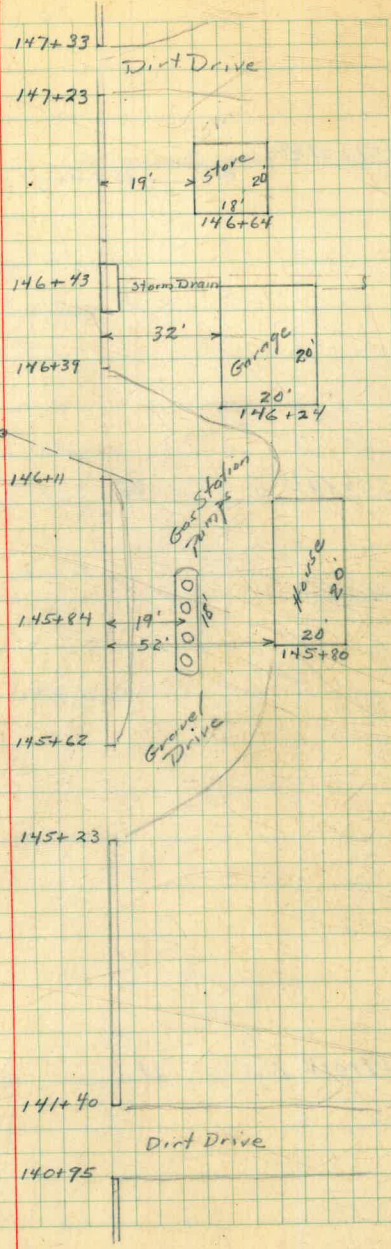


135+73

Dirt Drive

135+54

⊕

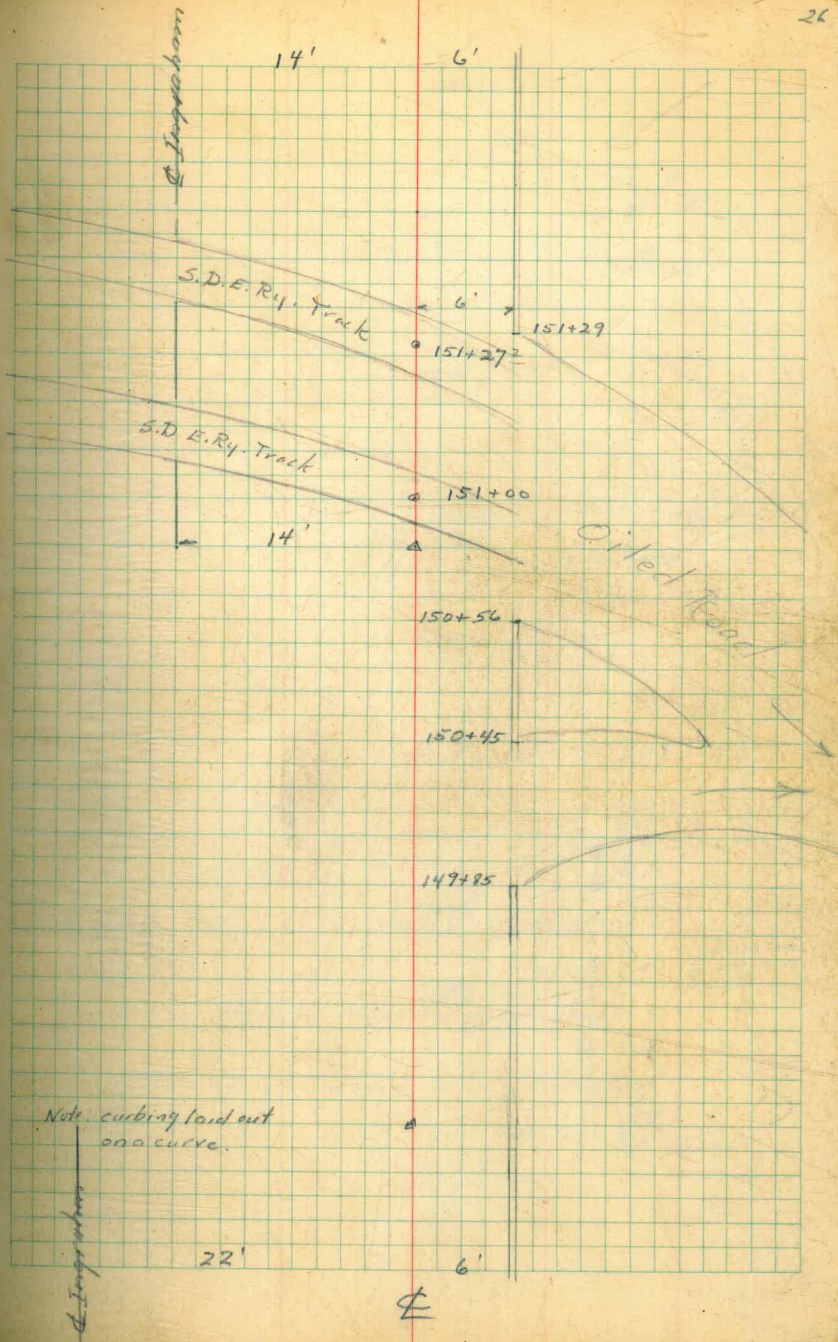


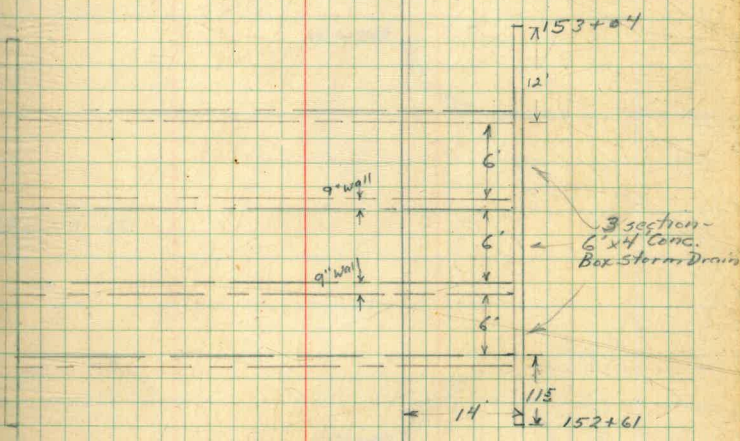
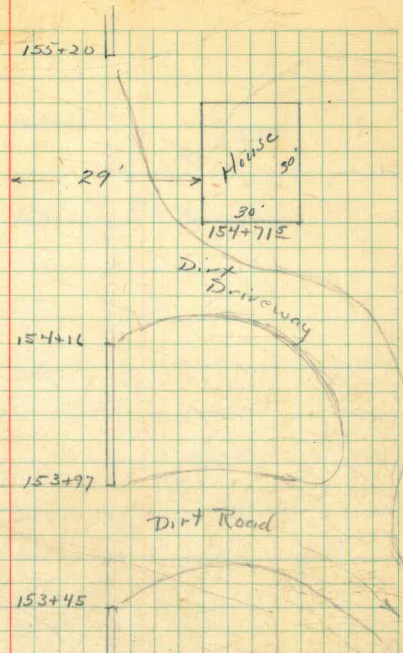
⊕

151+31.64 (0+00 Causeway Sta.
Beginning 45' Roadway)

150+84.21 L RT

149+01.21 L LT





⊕

165+66

Dirt Road.

165+30

Barricade

157+94²

Nashville St.

157+480
Curb Return

⊕

187+30[±]



174+33



166+20



Concave inlet
Storm Drain

Con. Iron Pipe

⊕

207+84²² E.C.

192+73⁵¹ B.C.

$\angle = 43^{\circ} 36'$
 $R = 178'$
 $L = 1511.26$

213+27²



207+84.77 E.C. Δ

200+30⁶

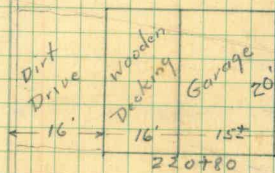
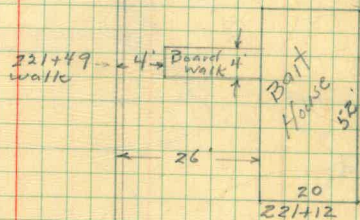


192+73⁵¹ B.C. Δ

Φ



I Ingsaborn



225+73.6

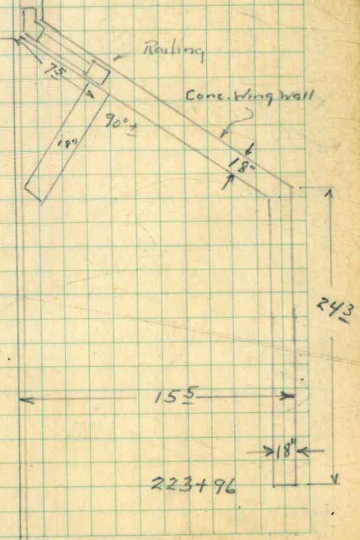
225+38.6

Abutment 225+03.6

Abutment 224+68.6

Approach (Highway)
 Conc. Floor of bridge

224+33.6



⊕

£ of A/bur's 231+51

" 231+16

" 230+81

" 230+46

" 230+11

" 229+759

" 229+409

" 229+059

" 228+7020

" 228+3590

" 523
↑
↓ 227+835

" 227+485

" 227+135

" 226+785

" 226+435

£ of A/bur's 226+085

£

Center Line Bridge approach
at bridge (Aph. Top)

231+86.4

232+93.5

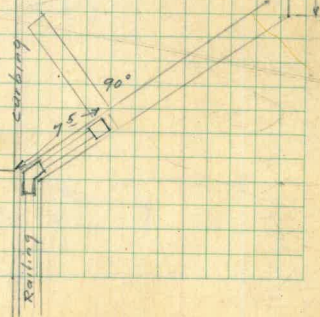


232+23.8

15'

15'

24.2

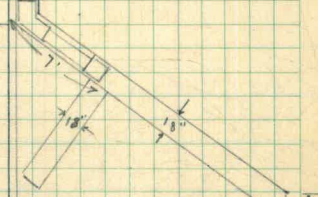


≡

Bridge approach Conc. Floor of bridge

Abutment 25540125

254+66.95



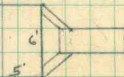
26.7

132

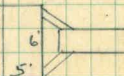
18'

254+29

254+019



244+336



⊥

$$266 + 79^{\circ 00}$$

$$260 + 44^{\circ 05}$$

$$260 + 09^{\circ 15}$$

$$257 + 74^{\circ 15}$$

↑
52°

$$↓ 259 + 21^{\circ 25}$$

$$258 + 86^{\circ 75}$$

$$258 + 57^{\circ 75}$$

$$258 + 16^{\circ 75}$$

$$257 + 81^{\circ 75}$$

$$257 + 46^{\circ 75}$$

$$257 + 11^{\circ 75}$$

$$256 + 76^{\circ 75}$$

$$256 + 41^{\circ 75}$$

$$256 + 06^{\circ 75}$$

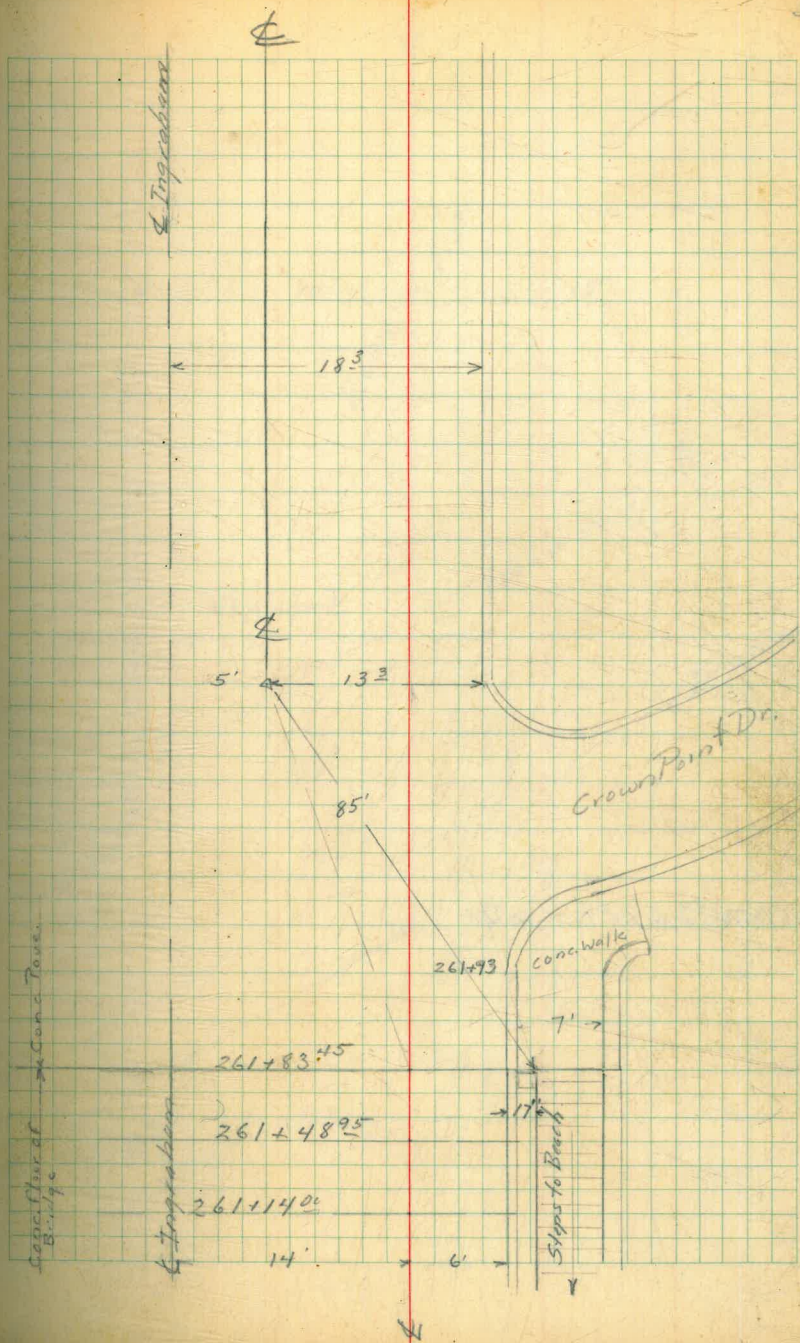
$$255 + 71^{\circ 75}$$

$$255 + 36^{\circ 75}$$

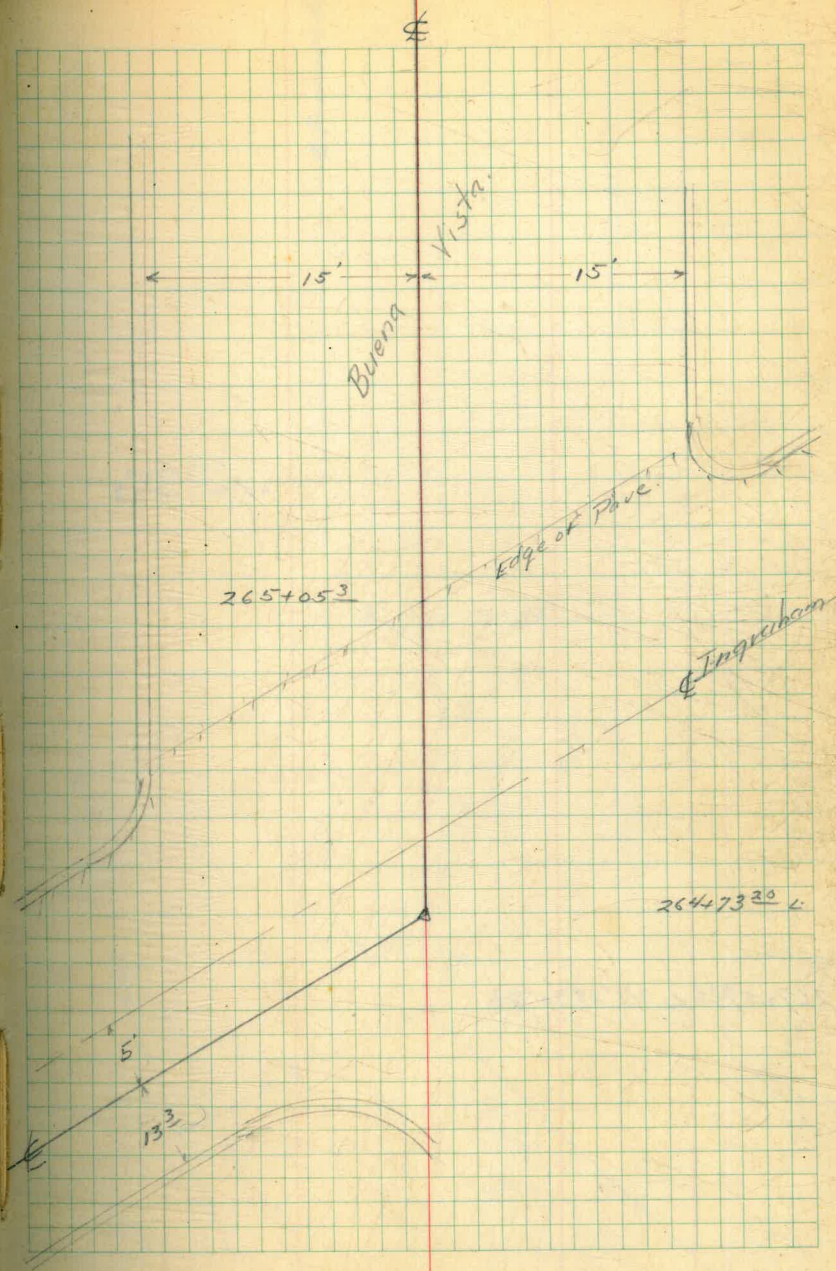
⊕

262+68⁵ L

261+83⁴⁵ L

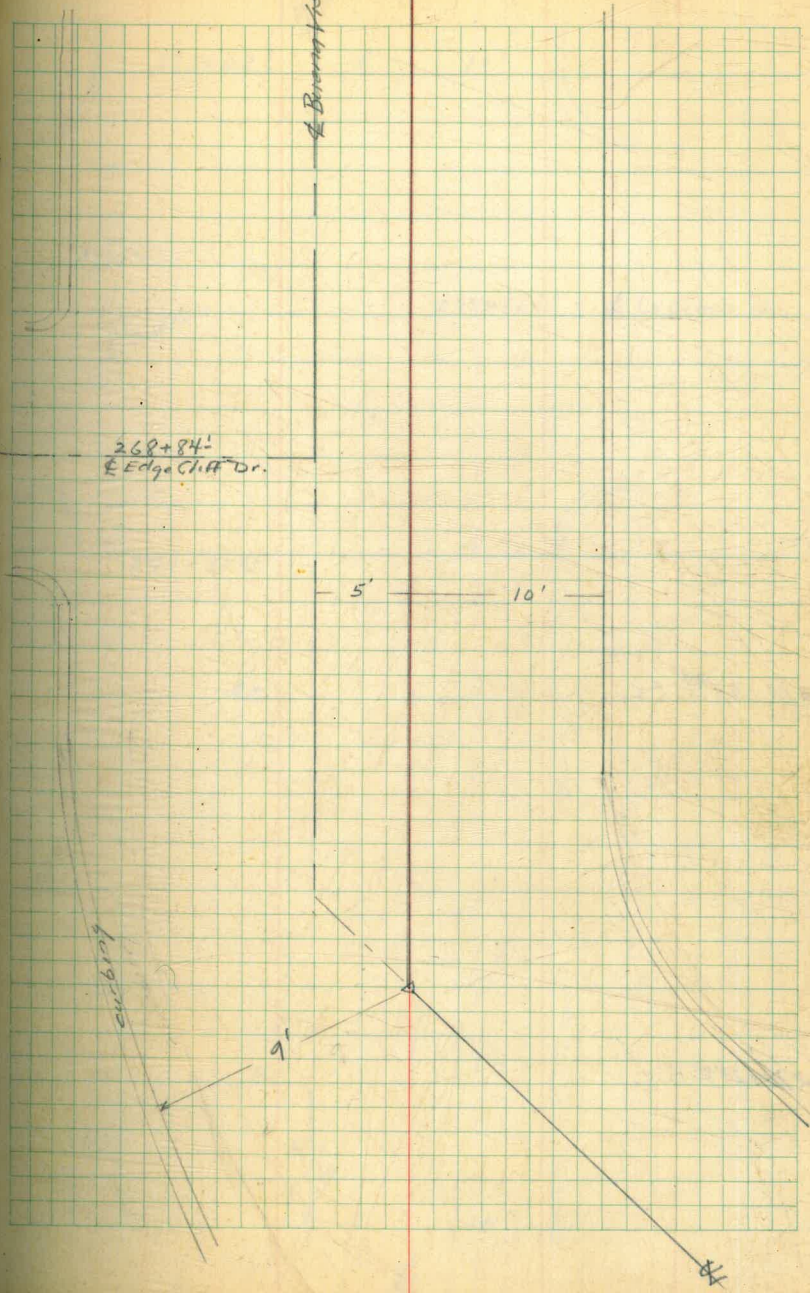


26473²⁰ L 65°22'30" L



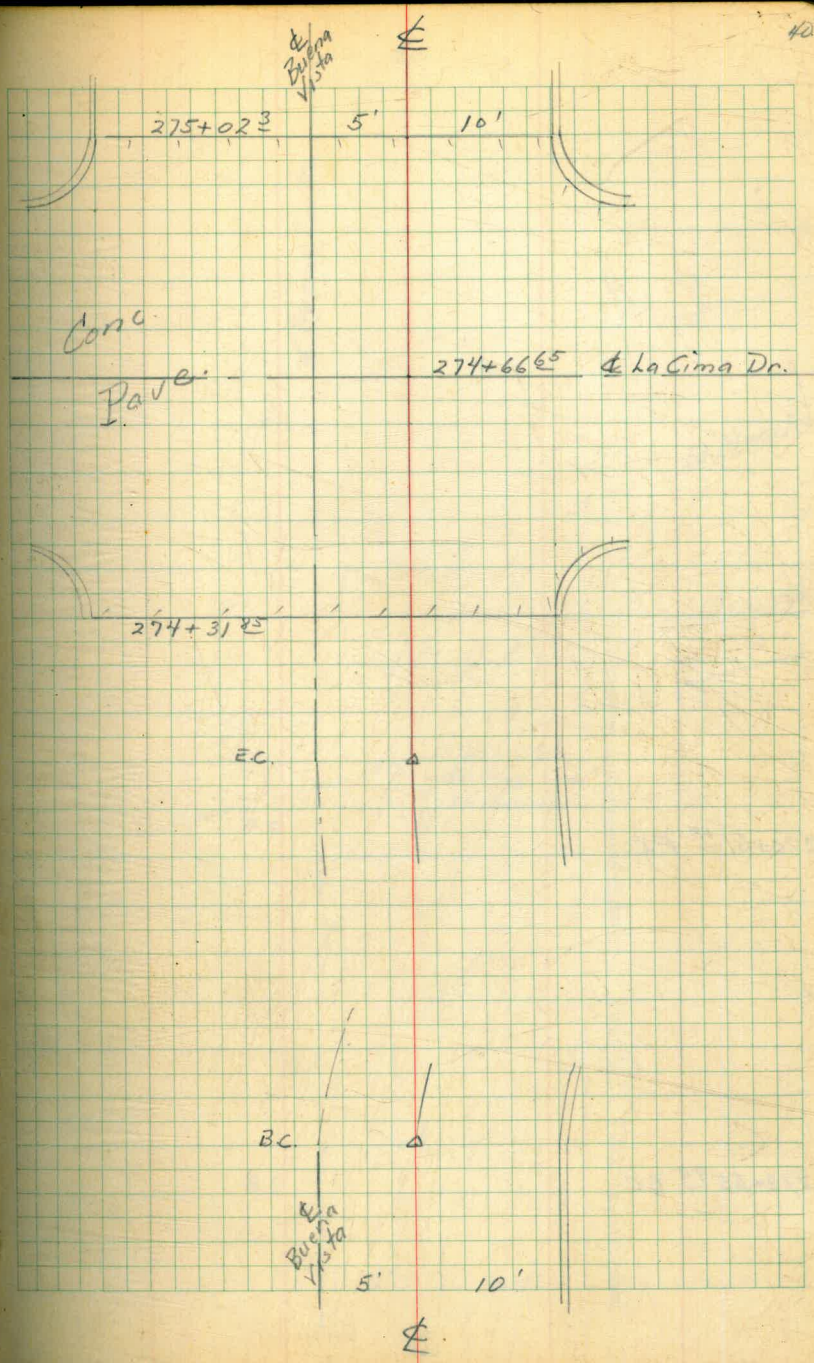
267+59.38 L. 41°28'30" RT

268+84'
E Edge Cliff Dr.



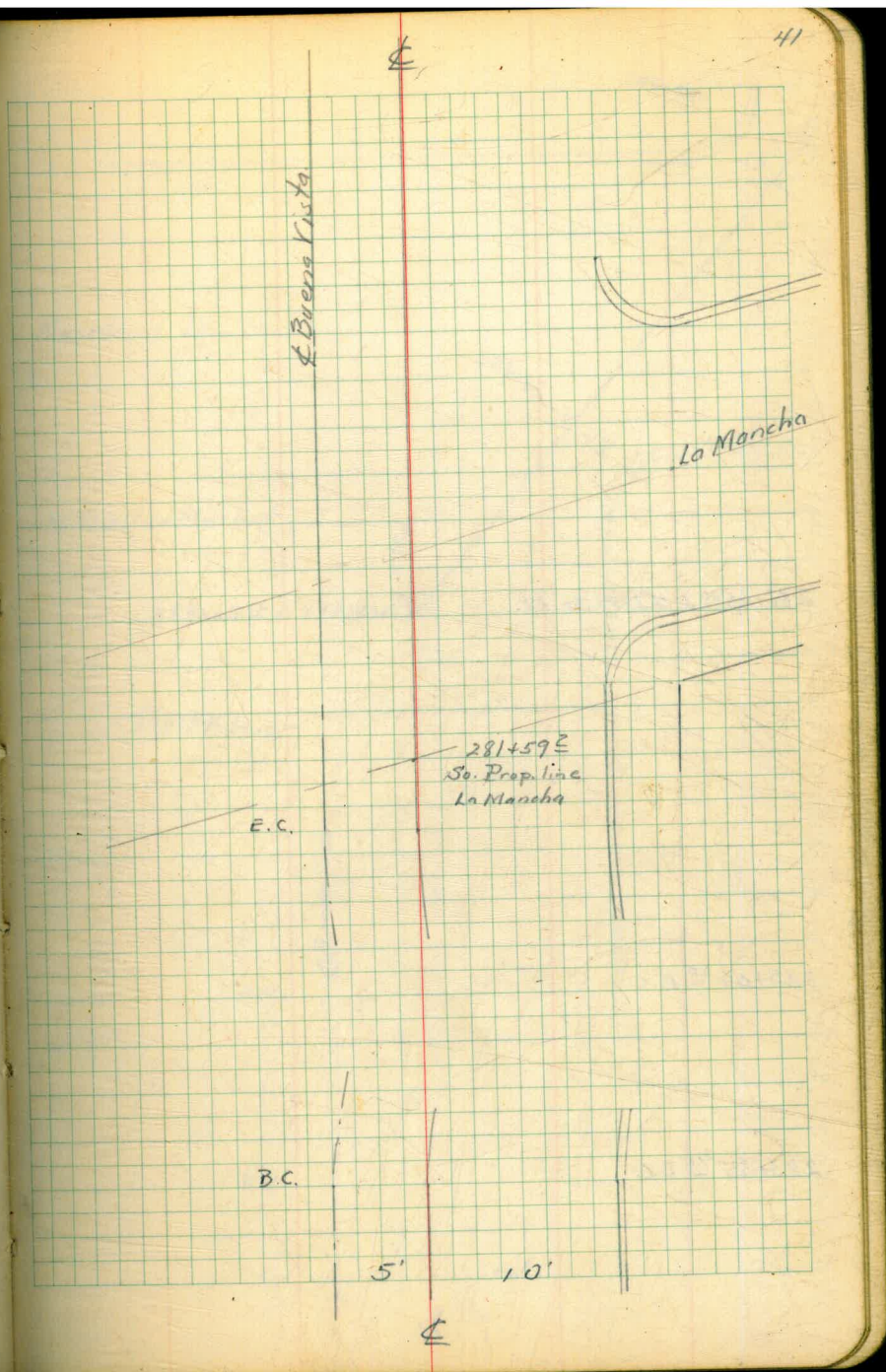
272+53⁹⁴ E.C.

271+28⁰⁰ B.C.



280+61¹⁵ F.C.

278+65⁹⁰ B.C.



288+65⁰⁰ $\angle 47^{\circ}19'30''$ Pt.

285+06⁶⁰ F.C.

283+35⁹⁰ B.C.

Moorland Dr.

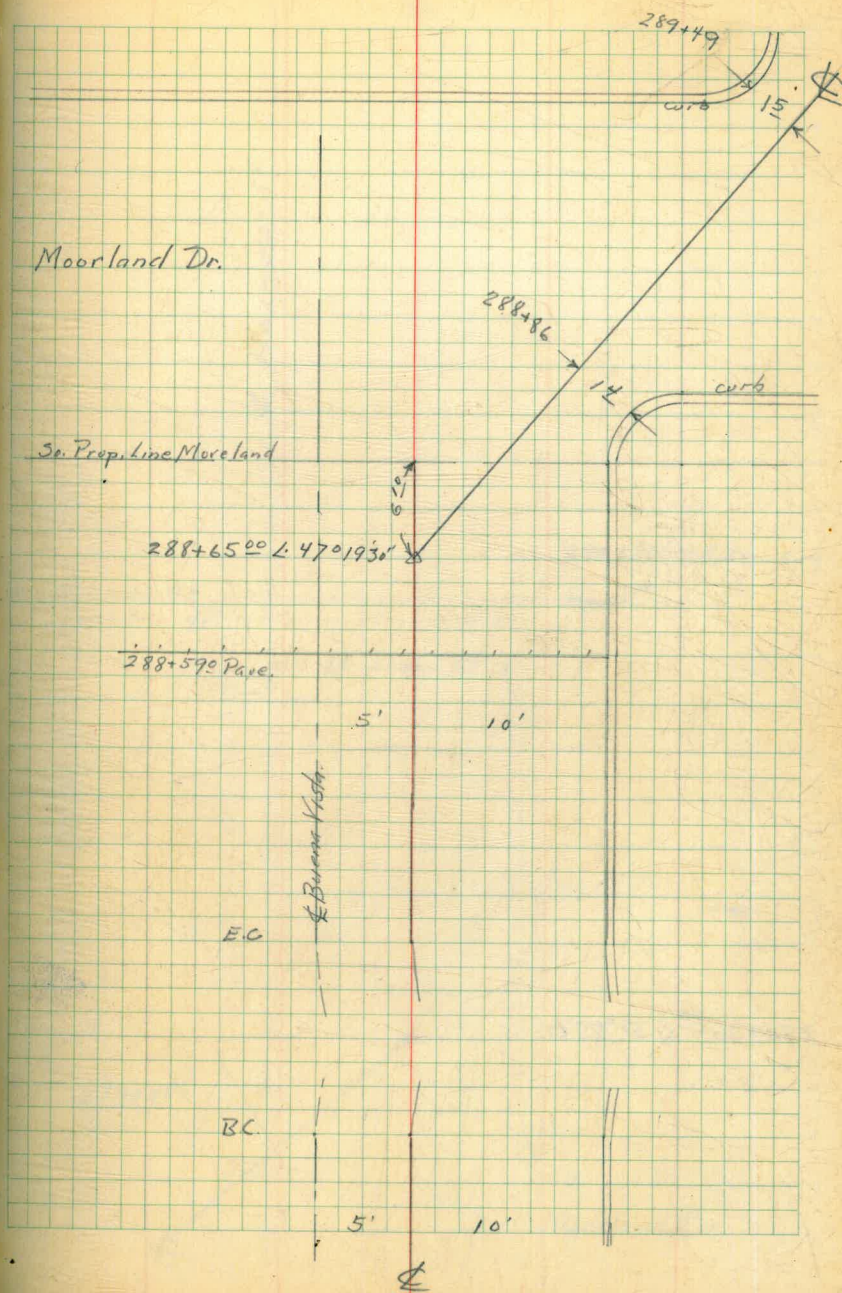
So. Prop. Line Moorland

288+59⁰⁰ Pave.

EC

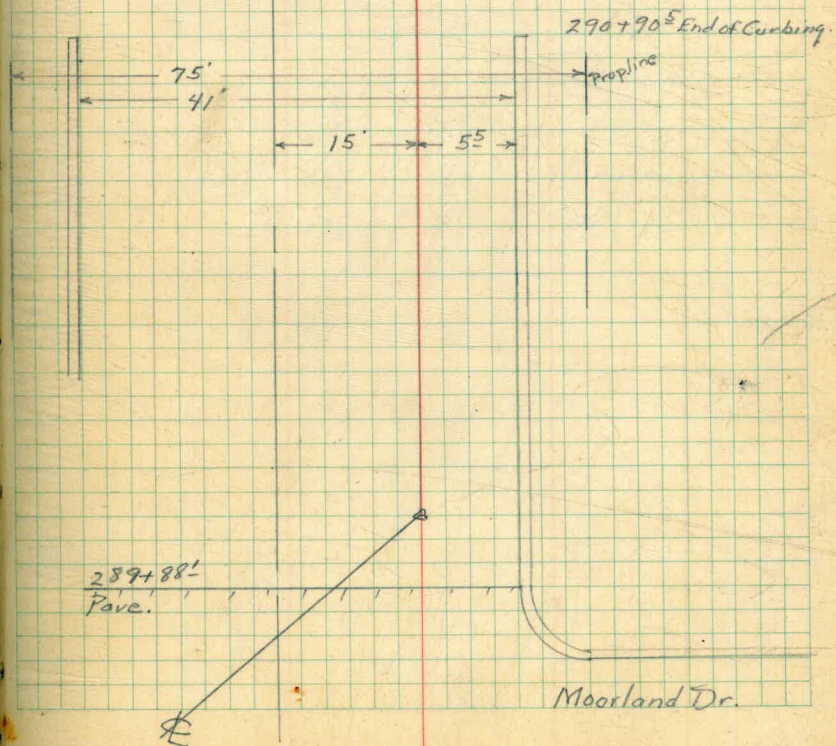
BC

← Bureau Vista



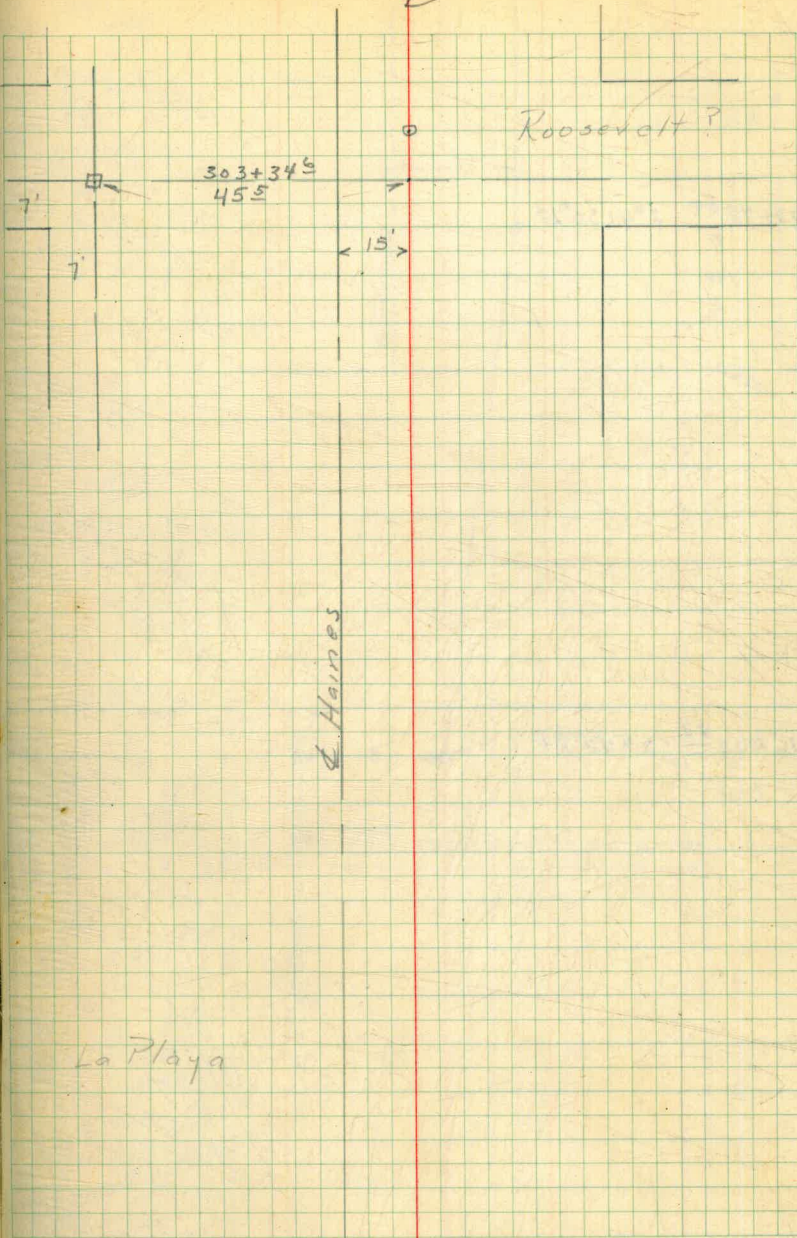
⊕

Haines St

290+06⁹³ \angle 51°55' LT

303+36¹⁵ P.O.T.

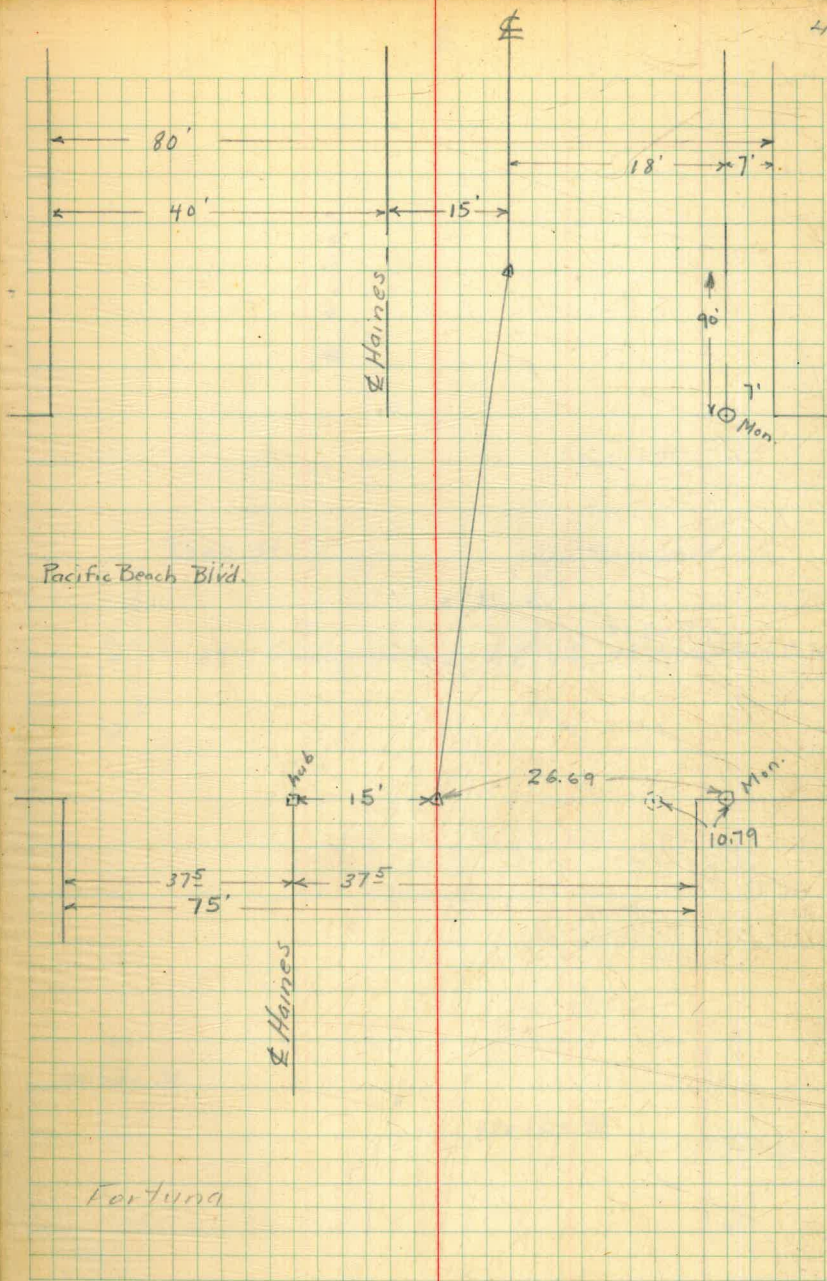
114

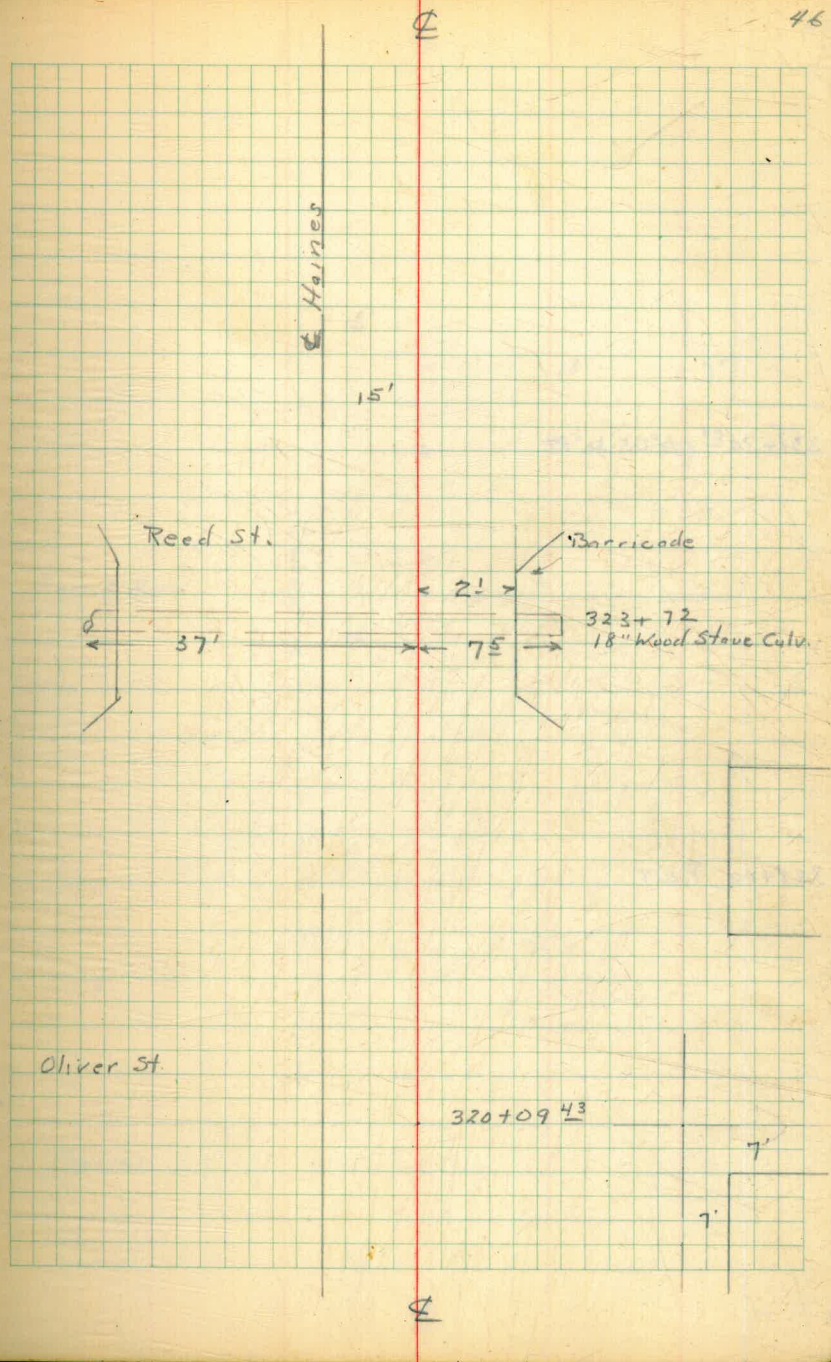


⊕

317+78⁰⁵ 2°41'30" Lt

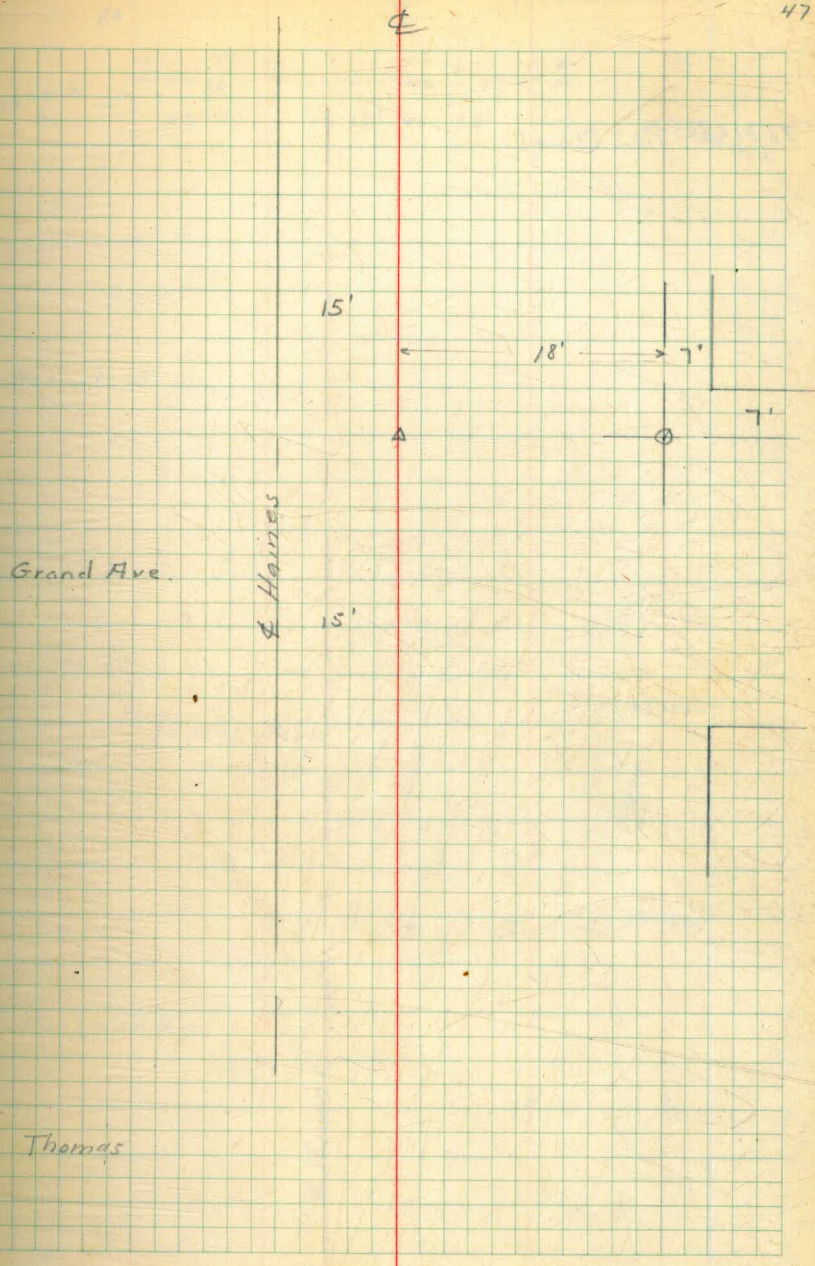
316+02⁸³ 2°42' Rt





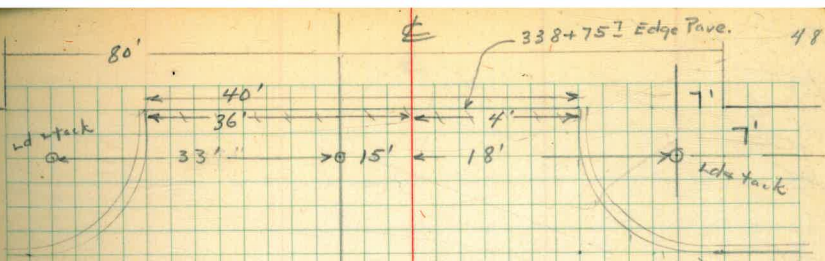
331+70⁰⁸ 0°05'30" RT

328+00 P.O.T.



Thomas

33 8+68⁸⁵ P.O.I. (7' line)



Garnet st.



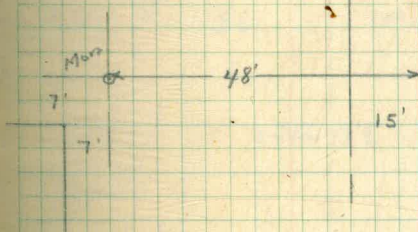
Hornblend Ave.

Haines



Emerald

Felspar



Haines

95
 ○ 339+78
 ○ Trees
 ○ 338+97

349+18³⁹ P.O.Y.

Missouri

Haines



348+95⁹

Diamond St.

Pave.

348+75⁸



4

Law

C. Hoines

15

Chalcedony

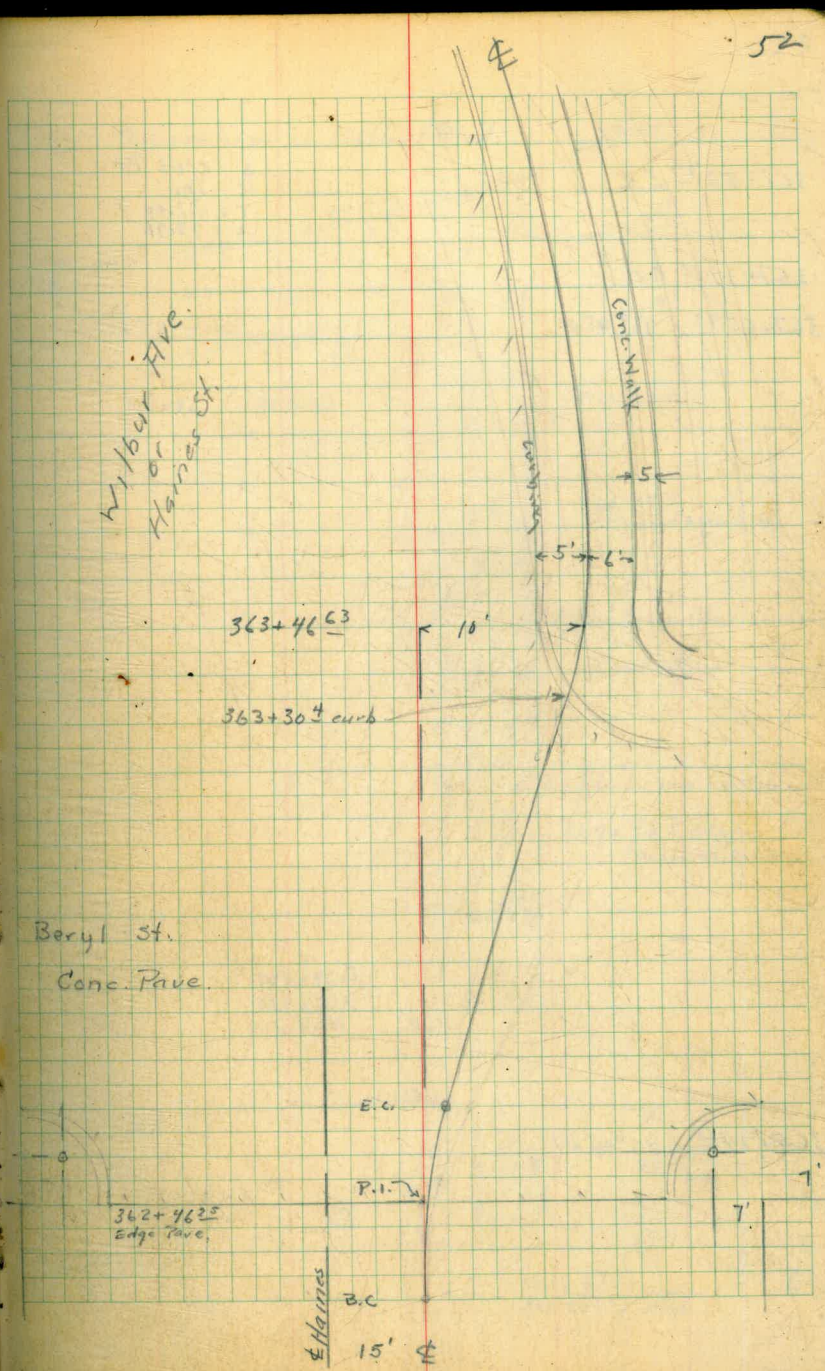
5

362+86²⁴ E.C.

362+46²⁵ P.I.

362+06¹⁹ B.C.

$\Delta = 5^{\circ}44'RT$
 $R = 800'$
 $T = 40.06$
 $L = 80.05$
 $Ext = 10$



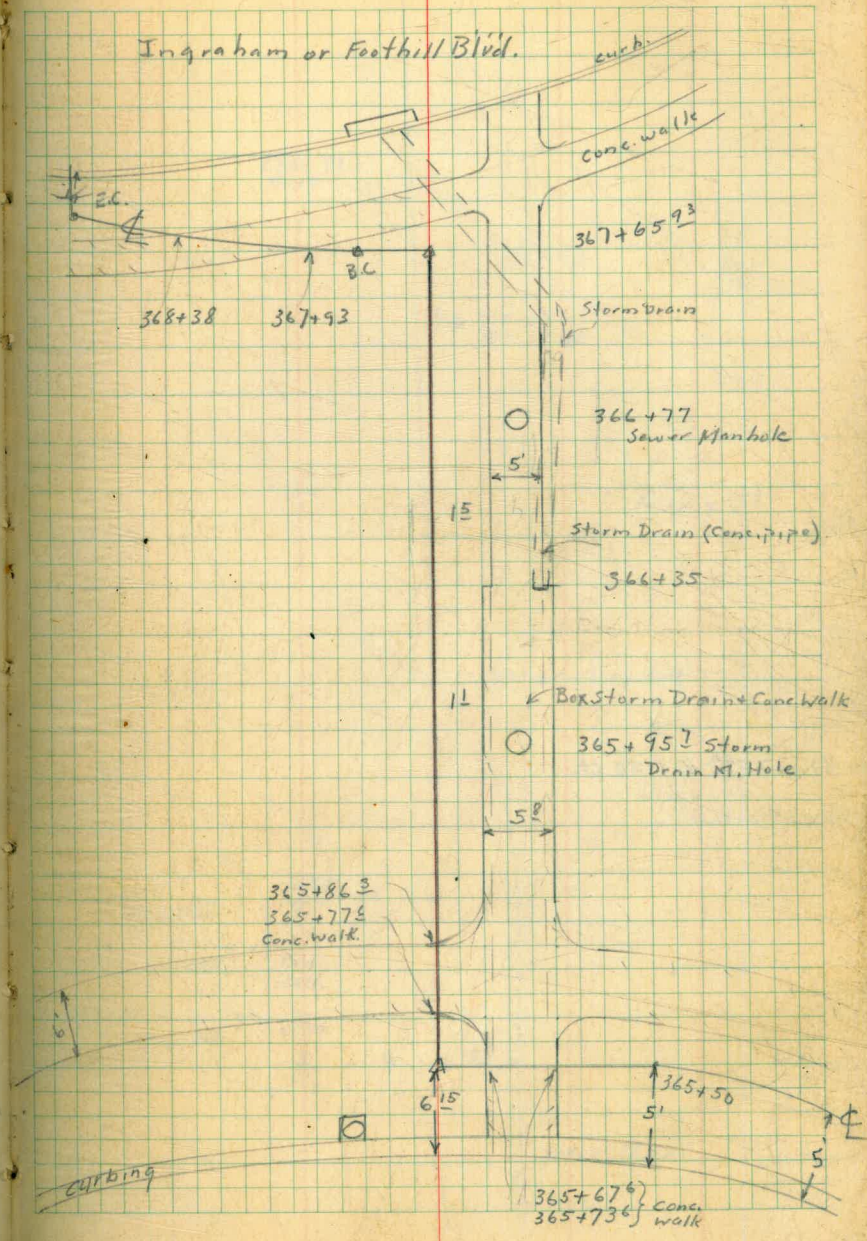
368+53.79 E.C.

$\Delta = 6^{\circ}03'24''$
 $R = 700'$
 $T = 37.00$
 $L = 73.91$

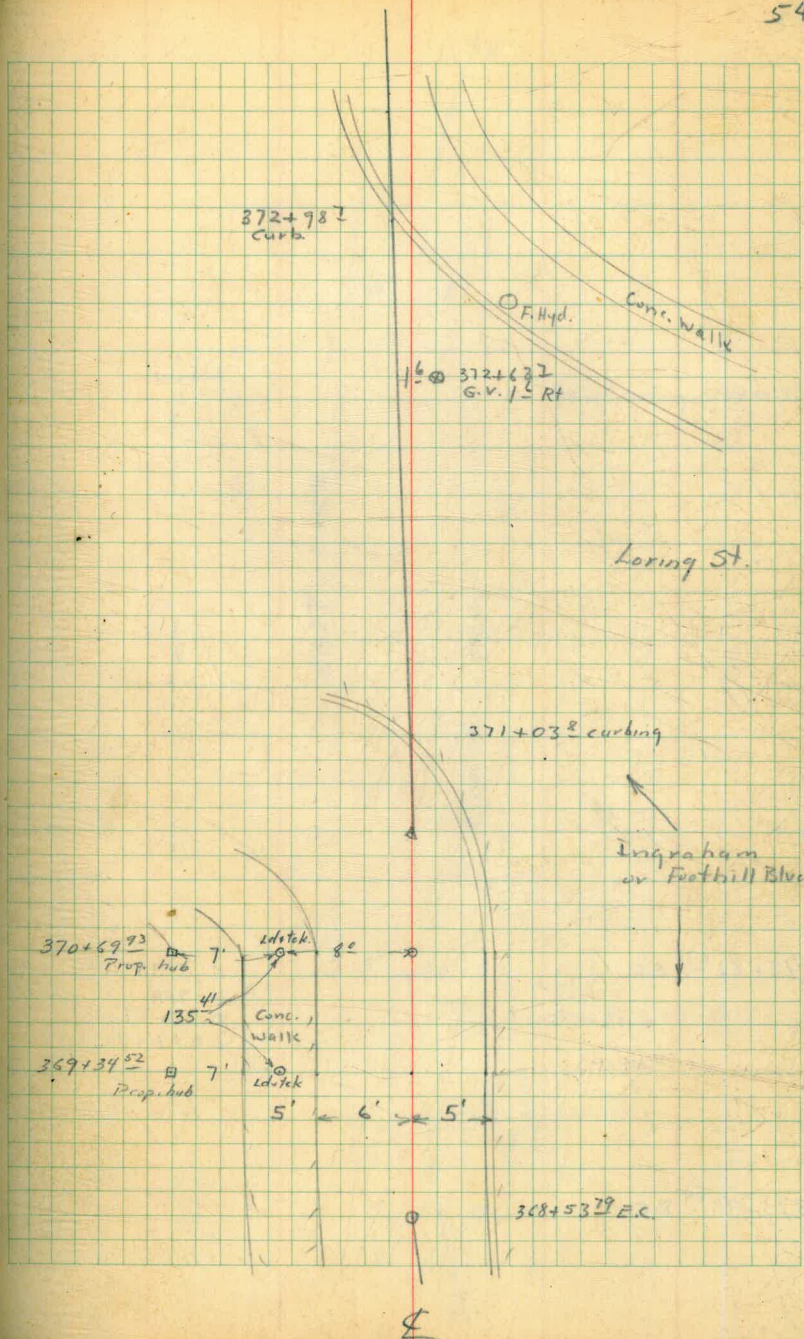
367+79.88 B.C.

367+65.93 $\angle 90^{\circ}$ Lt

365+74.65 $\angle 90^{\circ}$ Rt



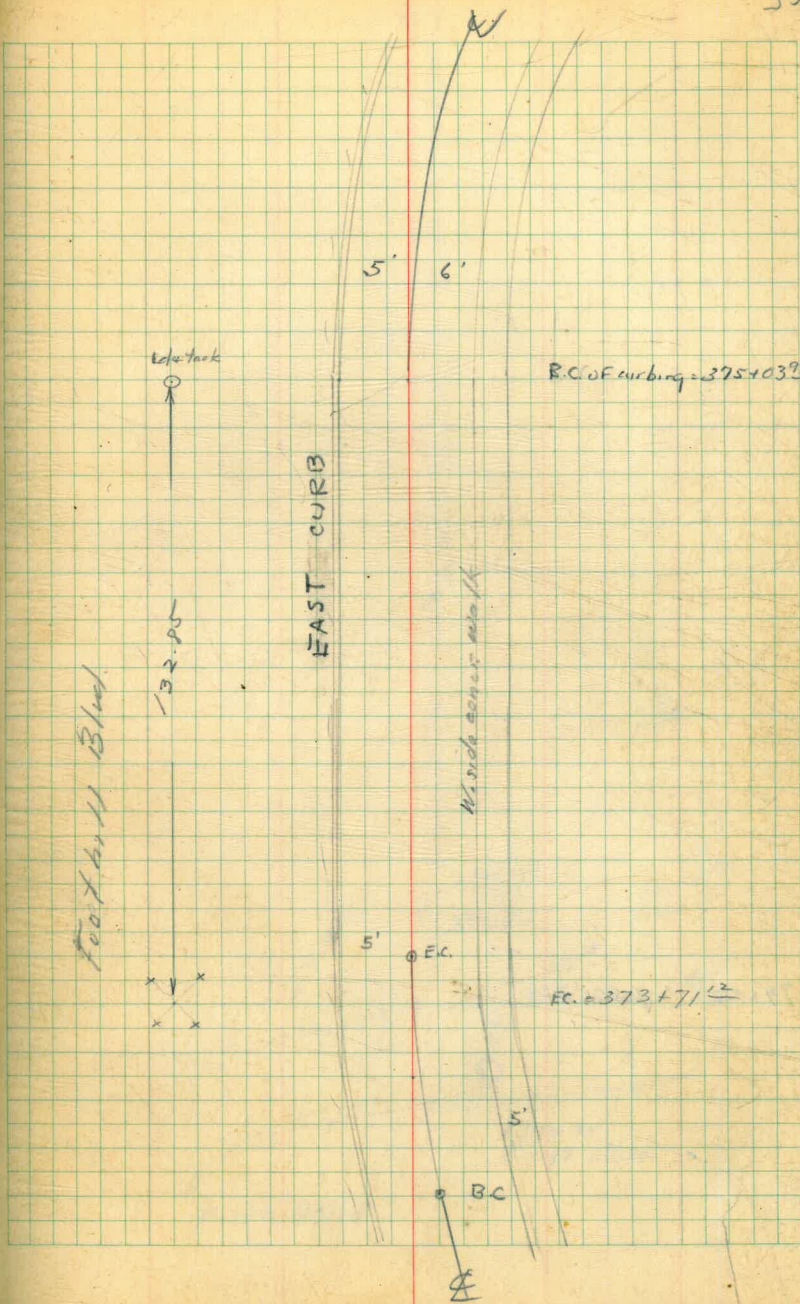
370+75⁵⁰ L. 1°50' Lt.



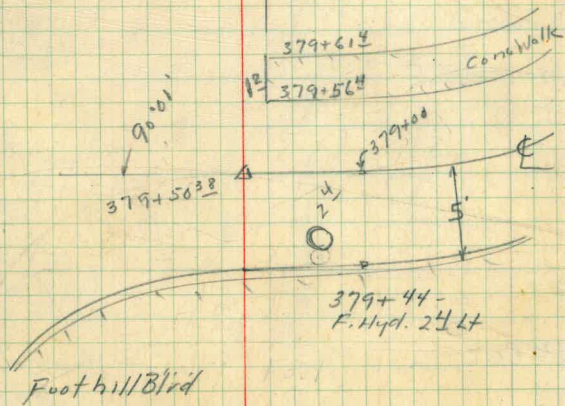
373+82.67 E.C.

$\Delta = 5^\circ 39' 12''$
 $R = 700$
 $T = 34.54$
 $L = 69.03$

373+13.64 B.C.



379+50³⁸ L. 90°01' Rt



384+99²⁴ P.O.T.

Existing line → ♀

57

P.O.T. ○ □ 2x2 hub cor 6911 ?

10

⊗ 383+558 G.V. - 0 ZRT. ↑

383+473

g to 7ave.

Windsor Dr.

30'

g. 2nd main line

10

383+92²⁵ P.O.T.

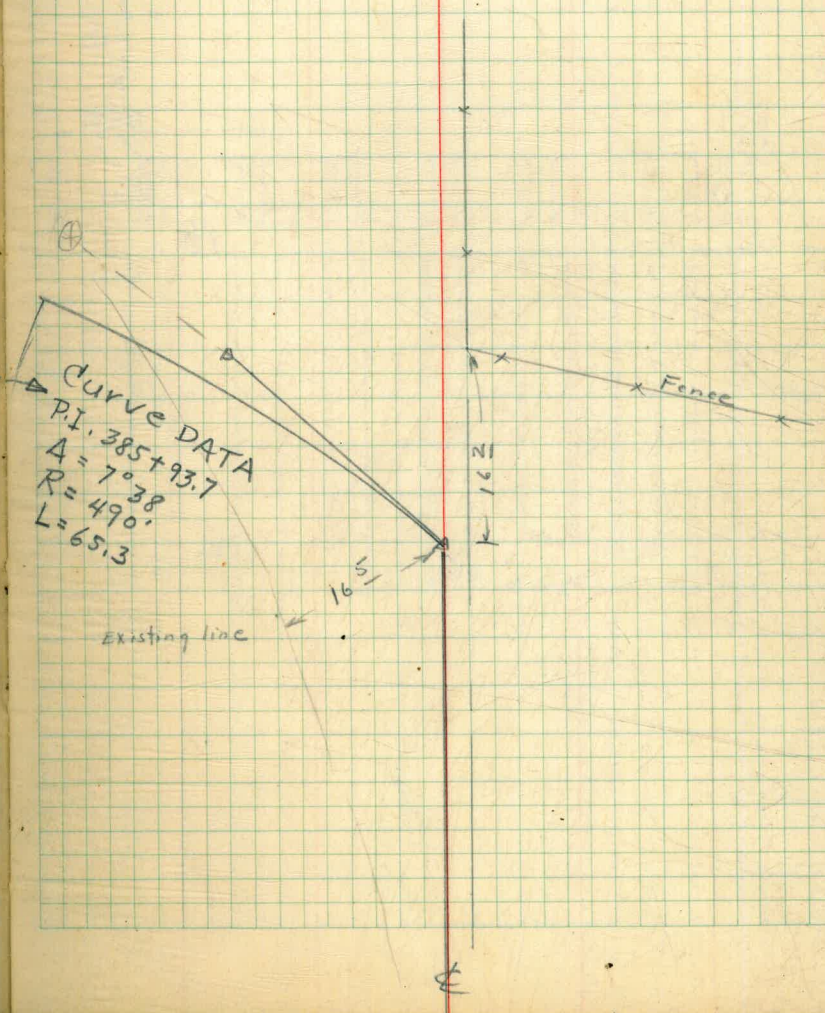
386+27 - Approx. location of 16" G.V.
to be placed.

385+93.70 \angle 8°40' \pm to Res. Excav.

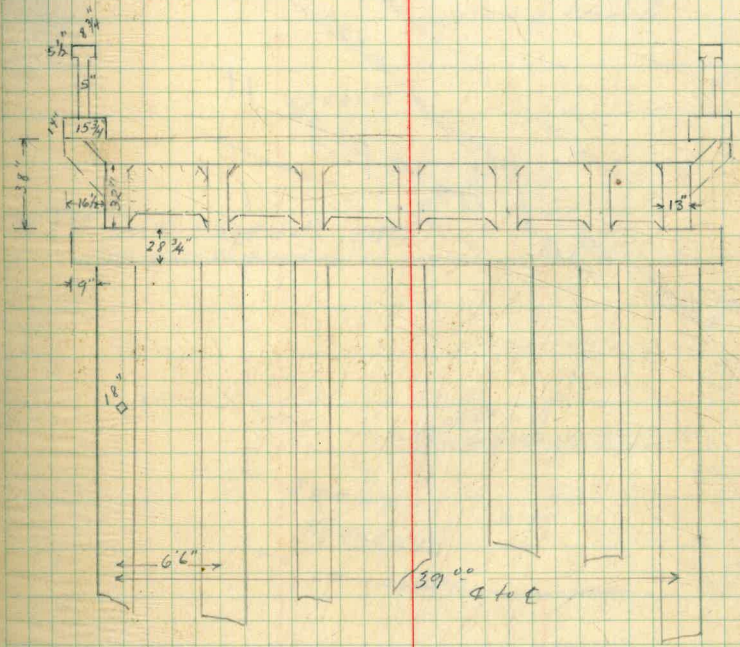
385+61.00 \angle 45°00' Lt.

Information
by Hill 1/17/41

Curve DATA
P.I. 385+93.7
 $A = 7^{\circ}38'$
 $R = 490'$
 $L = 65.3$



2



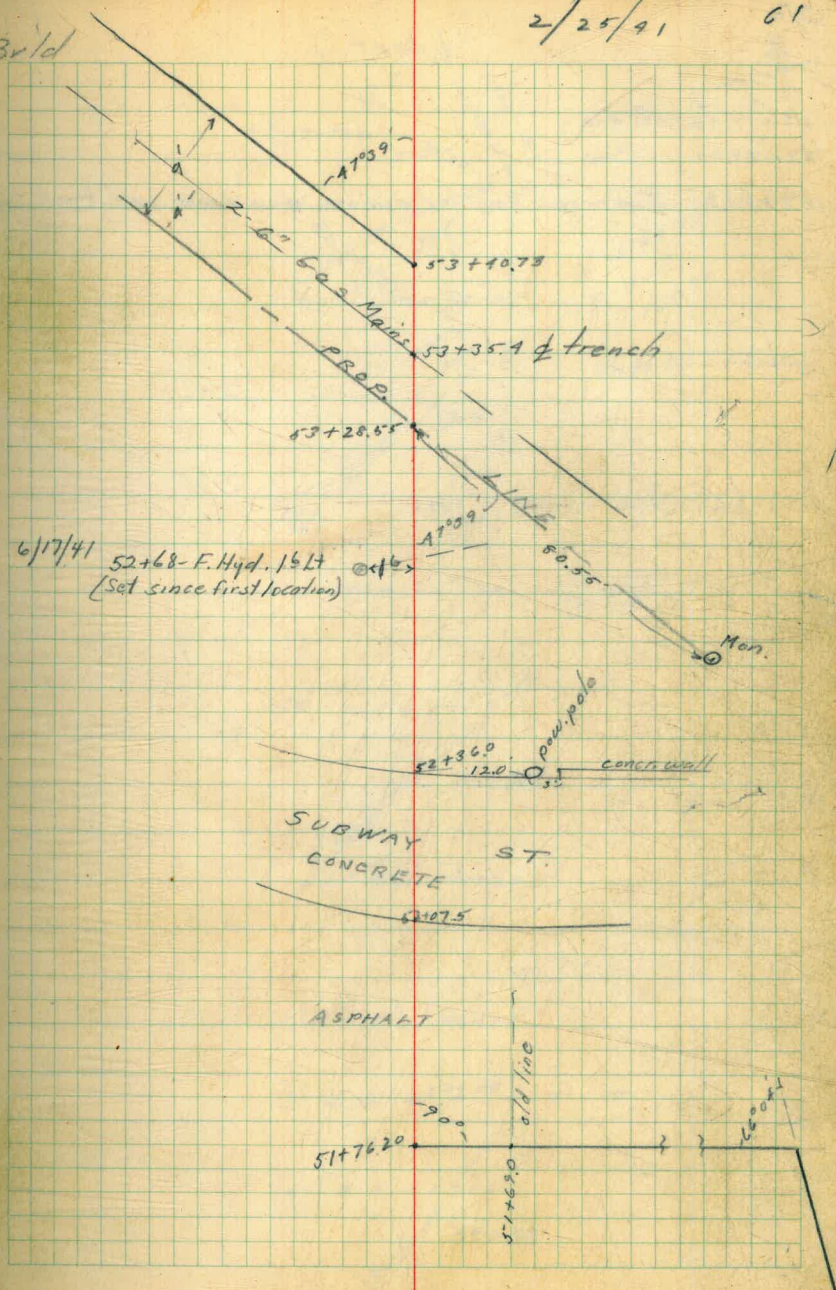
Line Revision from Witherby to Pac. Blvd

2/25/91 61

53+40.73 $\Delta 47^{\circ}39' L$

Cont. from page 11

51+76.20 $\Delta 90^{\circ} R$



Levels over line revision.

B.M.	5.21	7.67	2.46
51+76 ²⁰ L		5.9	1.8
52+00		6.0	1.7
+35 ²⁵		6.8	0.9
+40		7.4	0.3
+45		6.0	1.7
53		5.0	2.7
+35 ⁴		5.2	2.5
+40 ²⁹		4.2	3.5
54		5.2	2.5
+79		5.8	1.9
+94		7.4	0.3
17	2.59	5.58	4.68 2.99

Void

2/26/41 63

Hill
Saper
Brooks
Hodgeson

B.P. in conc. wall

	1.4	1.3	1.07	3.4	3.7	4.8	7.3	8.4
Edge of Pavc.	+0.5	+0.4	-1.6	-4.3	-4.6	-5.7	-8.2	-8.8
Subway st.	100	50	50	100	128	150	200	241
	shade + or - from elev.							

Top of double, 6" gas lines

5.58

54+98

7.3 -1.7 ✓

55+06

6.0 - .4 ✓

+ 15

8.3 -2.7 ✓

+ 50

8.7 -3.1 ✓

56+00

9.0 -3.4 ✓

+ 50

9.0 -3.4 ✓

57

7.0 -1.4 ✓

+ 50

8.4 -2.8 ✓

58

5.8 -0.2 ✓

+ 50

4.8 +0.8 ✓

59

4.9 +0.7 ✓

TP

6.61

7.28

4.91

0.67 ✓

Flowline 16" sewer line (concr pipe)

7.28

~~59+54²⁷~~~~8.0 -0.7 ✓~~~~+62~~~~9.5 -2.2 ✓~~~~+77⁴⁶~~~~5.0 +2.3 ✓~~~~58~~~~2.6 4.7 ✓~~~~61~~~~3.0 4.3 ✓~~

IT

7.03

7.85

6.46 +0.82 ✓

~~68+52~~~~5.3 2.6 ✓~~~~70+16~~~~5.5 2.4 ✓~~~~+50~~~~4.6 3.3 ✓~~~~72~~~~4.7 3.2 ✓~~~~74~~~~5.8 2.1 ✓~~~~76+75~~~~6.7 1.2 ✓~~~~76+84²⁶~~~~7.1 0.7 ✓~~

65

(Cont)
H. line 15" Drain, 80 Rt 59+50These elevs. are on Consolidated, filled ground.
Fill on & not completed.

Check on Pave (0.67)

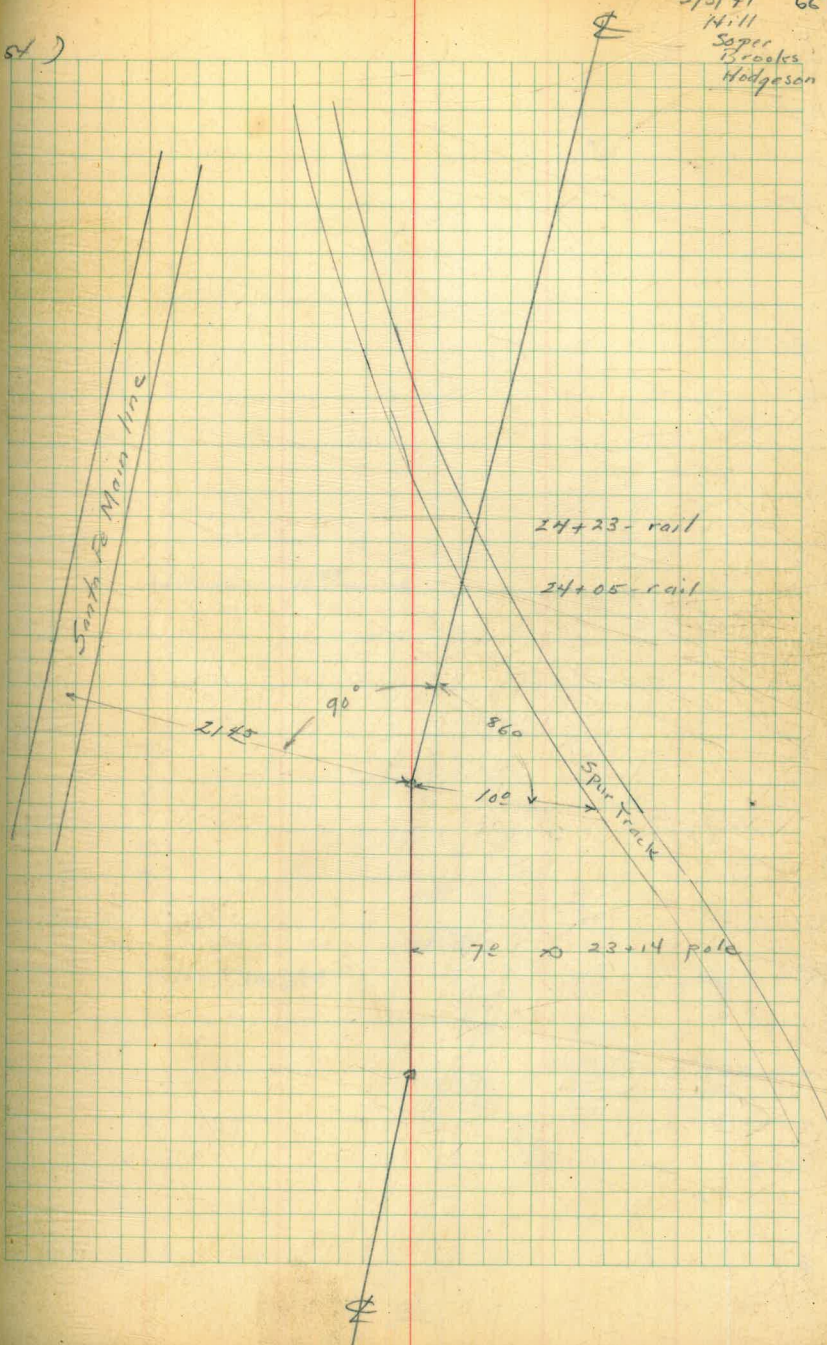
Line revision - Sta 21+70 - 28+50 (near Horrocks St)

23+73.95 L 8°05' Rt.

21+70.00 L 4°45' Lt.

3/3/41 66

Hill
Soper
Brooks
Hodgeson



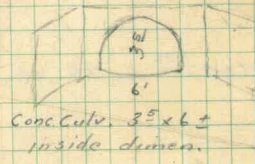
21' 4 1/2"

S.F. Main line

conc. Culvert. 24+87 1/2

3' 0"

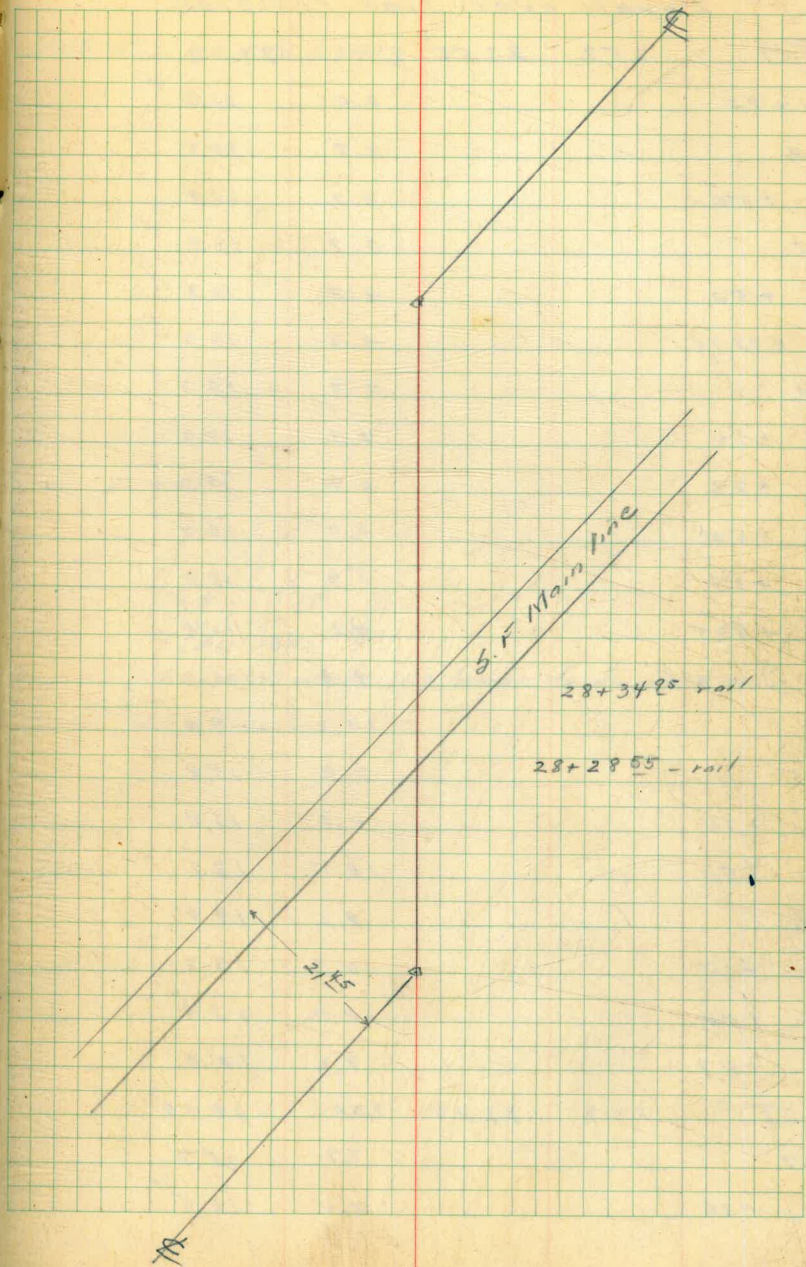
1' 0"



⊕

28+46²³ Ahead
28+50³⁵ Back L. 43°22' RT

28+02²⁵ L. 46°40' LT



Lerale over line revision

B.M.	3.52	23.55	20.03	
21+70		2.0	21.6	
22		2.7	20.9	
+50		3.2	20.4	
23		3.7	19.9	
+50		4.3	19.3	
+73.95		4.3	19.3	
24		4.3	19.3	
+05		3.7	19.9	
+23		3.8	19.8	
+50		4.9	18.7	
+59		4.9	18.7	
+87.5		7.8	15.8	
" 3'R		8.4	15.2	
" "		14.2	9.4	
25		7.8	15.8	
+25		10.6	13.0	
+50		10.5	13.1	
26		9.2	14.4	
+15		10.3	13.3	
+50		10.2	13.4	
+57		9.2	14.4	
T.P	8.17	22.95	20.9	14.46
27		7.7	15.3	
+39		7.5	15.5	

Hub 5' L of sta. 23+13

top W. rail

" E. rail

19.8	19.5	18.6
+3.6	+3.7	+2.8
23.8L	12.8L	7L

Top of parapet wall 1.8 lower to top of culv.

Flow line of culv.

22.95

27+12	8.8	14.2
+15	7.6	15.4
+65	7.3	16.7
+69	8.1	19.9
+73	7.1	15.9
28	5.3	17.7
+02.25	5.2	17.8
+06	5.5	17.5
+12	7.8	15.2
+25	5.7	17.3
+28.5	5.0	18.0
+35	5.0	18.0
+40	5.7	17.3
28+50.35 back	7.3	15.7
28+46.23 ahead		
B.M.	7.47	15.48

drain ditch

drain ditch

drain ditch

E rail M.L. trk.

W. " " "

P. pole 12' 30+69

Soil Samples, Pacific Beach Loc.

Sta 12+50 - As per 1st sample 0° to 35

" " 2nd " 35 to 6°

Sta 24+25 - As per 1st sample 0° to 5°

" " 2nd " 5° to 6°

Sta 38+25 Dark, sandy adobe, similar to 1st sample, 0° to 2°

As per 1st sample 2° to 5°

" " 2nd " 5° to 6°

Sta 50+55 As per sample 0° to 5°

Water at 5°

Water Elev's Pacific Beach Loc.

Sta 54+00 Sandy loam & clay 0° to 4°

Water at 4° 11.12 A.M. 3/19/41

Sta 59+75+ Sandy loam & clay 0° to 4°

Black sand at 4°

Water at 4° 10.55 A.M. 3/19/41

Sta 67485+ Sandy loam & clay 0° to 3°
Black sand at 3°
Water at 3° 10.18 A.M. 3/19/41

Sta 67485+ Sandy loam & clay 0° to 2°
Black sand 2° to 3 1/2
Water at 3 1/2 10 A.M. 3/19/41

76298 Sandy loam & clay 0° to 2 1/2
Black sand 2 1/2 to 2 5/8
Water at 2 5/8 9 45 A.M. 3/19/41

83400 Black sand 0° to 2 1/2
Water at 2 1/2 7.33 A.M. 3/19/41

93400 Black sand 0° to 1 1/2
Water at 1 1/2 7.20 A.M. 3/19/41

103400 Black sand 0° to 2°
Water at 1 1/2 7 A.M. 3/19/41

114400 Sandy loam 0° to 1°
Black sand 1° to 4 1/2
Water at 4 1/2 8.47 A.M. 3/19/41

Sta 123400 Sandy loam 0° to 1 1/2
Black sand 1 1/2 to 2 1/2
Black slough mud 2 1/2 to 5 1/2
Water at 5° 8.30 A.M. 3/19/41

Sta 133400 Black sandy loam 0° to 4°
Black slough mud 4° to 5 1/2
Water at 5 1/2 4.16 P.M. 3/18/41

Sta 139400 Sandy loam 0° to 2°
Black sand at 2°
Water at 2° 3.53 P.M. 3/18/41

Sta 143400 Water at 0° 3.40 P.M. 3/18/41
(Water standing on surface)

From Sta 154400 to 203400 is filled ground. (Causeway)
From Sta 213420 to 253486 is dredged material

Sta 154400 Sandy loam 0° to 4°
Black sand 4° to 6°
Sand at 6°
Water at 5° 3.35 P.M. 3/18/41

Sta 162495 Sandy loam 0° to 3°
Black sand 3 1/2 to 4 1/2
Water at 4 1/2 2.20 P.M. 3/18/41

Sta 173+00 Sandy loam 0° to 6°
 Black slough mud 6° to 7°
 Water at 6° 1.40 P.M. 3/18/41

Sta 183+00 Sandy loam 0° to 7°
 Black slough mud 7° to 8°
 Water at 8° 11.10 A.M. 3/18/41

Sta 192+90 Sandy loam 0° to 6°
 Black slough mud 6° to 8°
 Water at 8° 4.30 P.M. 3/17/41

203+00 Sandy loam 0° to 5°
 Water at 5° 3.35 P.M. 3/17/41

Sta 213+30 Beach sand 0° to 5°
 Water at 5° 2.55 P.M. 3/17/41

Sta 223+40 Sandy adobe 0° to 1°
 Beach sand 1° to 7°
 Water at 7° 2.10 P.M. 3/17/41

Sta 233+75 Beach sand 0° to 7°
 Water at 7° 1.35 P.M. 3/17/41

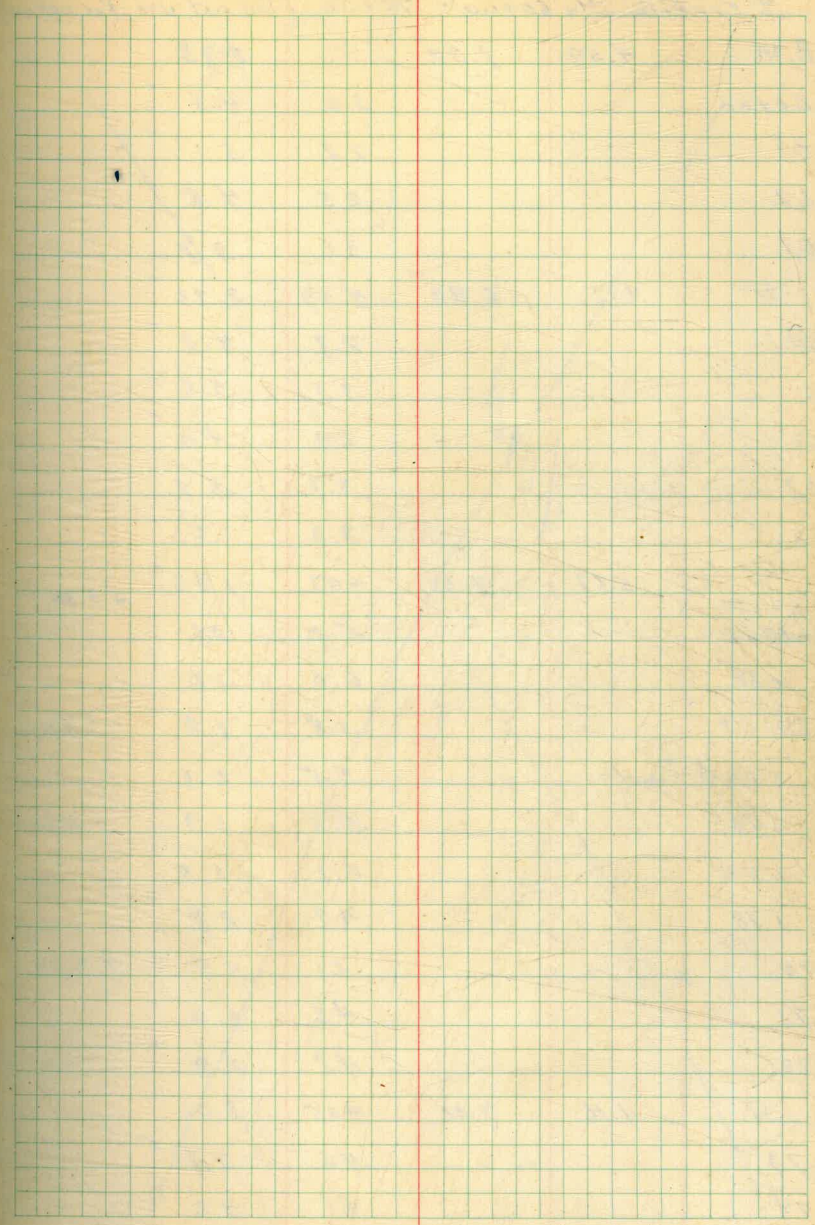
Sta 243+00 Beach sand 0° to 6°
 Water at 6° 1.15 P.M. 3/17/41

Sta 253+86 D.G. and adobe surfacing 0° to 1°
 Beach sand 1° to 8°
 Water at 8° 11.30 A.M. 3/17/41

Sta.	Water Dist to water	Elev. s	Pac. Beach Loc.	Time	Date
54+00	Dry	-			
59+75	3.4	-			
67+85	Damp at 3 ³	-			
69+85	3.1	-			
76+98	2.1	-			
83+00	Damp at 2 ²	-			
93+00	1.7	-			
103+00	0.9	-			
114	2.8	-			
123	3.9	-			
133	4.0	-			
139	2.0	-			
143	0.5	-			
154	5.5	9.40 A.M.	3/24/41		
162+95	3.8	9.42 A.M.	"		
173	5.8	9.47 A.M.	"		
183	6.5	9.51 A.M.	"		
192+90	5.8	9.53 "	"		
203	5.2	9.56 "	"		
213+20	5.6	9.58 "	"		
223+40	6.7	10.03 "	"		
233+75	6.7	10.08 "	"		
243+00	6.8	10.16 "	"		
253+86	7.4	10.19 "	"		

Water Elevs. Pacific Beach Loc.

Sta	Distance to water	Time	Date
54+00		Test hole filled in	
59+75		" " " "	
67+85		Test hole filled in	
69+85		Test hole filled in	
76+98	1.9	-	
83	1.7	-	
93	1.4	-	
103		water on surface	
114	2.5		
123	3.7		
133	3.9		
139	1.4		
143	0.2		
154	5.7	10.43	4/2/41
162+95	3.3	10.38	"
173	5.6	10.31	"
183	6.2	10.28	"
192+90	5.6	10.25	"
203	5.1	10.21	"
213+20	Damp sand 5.6	10.16	"
223+40	6.6	10.13	"
233+75	6.6	10.10 P.M.	"
243+00	Damp sand at 6.5	10. A.M.	"
253+86	Damp sand at 7.4	9.55 A.M.	"

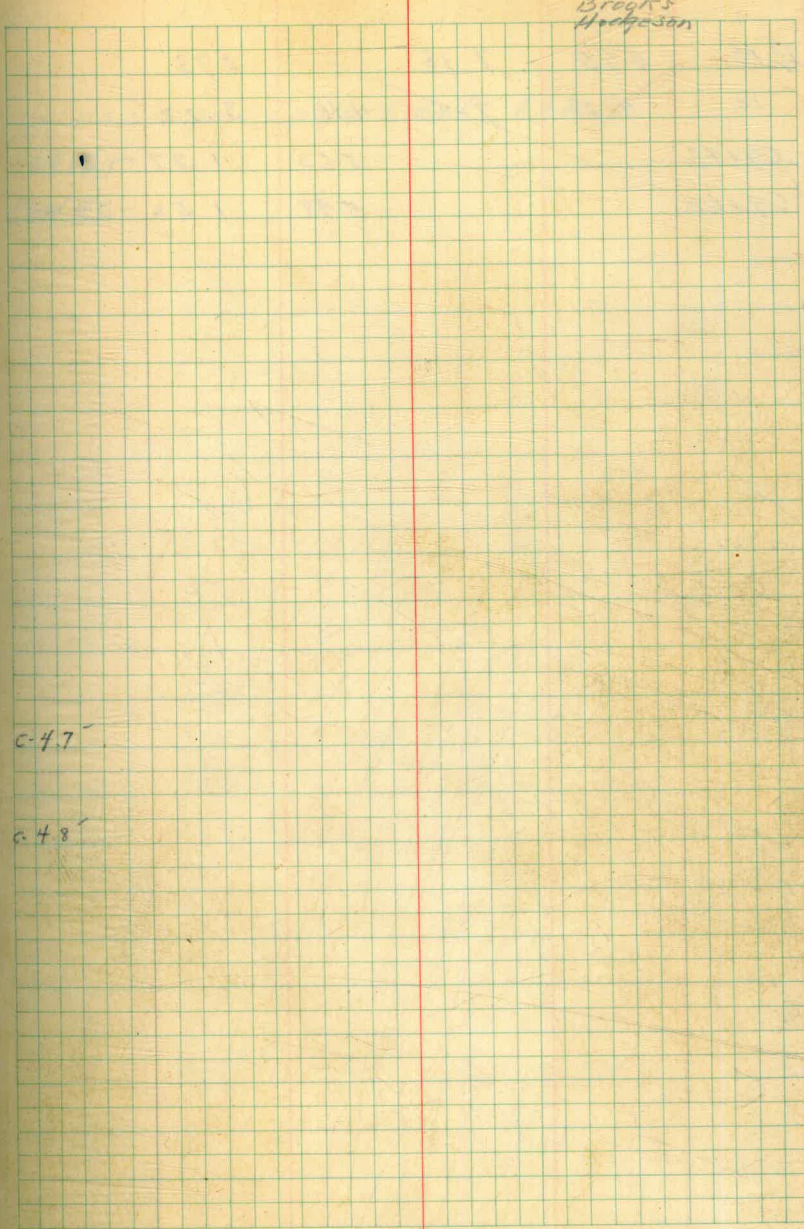


4/7/41
Super
Brooks
Hedgeman 76

± Profile Sta 60+00 - 75+50 (Do not use for estimate)

B.M.	4.59	7.32	2.73		
60+00			3.0	4.3	
61			2.2	5.1	
62			2.5	4.8	
63			3.6	3.7	
TP	4.17	6.90	4.59	2.73	
64			2.7	4.2	
65			3.3	3.6	
66			2.9	4.0	
67			3.7	3.2	
68			3.3	3.6	
TP	5.68	7.61	4.97	1.93	-2.80
68+50 X			5.0	2.6	
68+68			6.0	1.6	
+88			5.8	1.8	-2.87
69+03			5.5	2.1	
+23 ± Pacific			5.7	1.9	-2.92
+43			6.1	1.5	
+53			4.9	2.7	
+78			5.1	2.5	-3.00
70 X			4.6	3.0	
71			4.7	2.9	
72			4.55	3.06	
TP	4.26	7.32	4.6	2.7	
73			4.1	3.2	
74			5.0	2.3	
75			5.6	2.3	
75+50 (End of fill)			5.91	1.41	
B.M.					Rec. L1, R39

Road



Cuts for jacking pipe under Pacific Hwy.

B.M.	4.65	7.38		2.73
TP	4.28	7.50	4.16	3.22
69+43			5.63	1.87 - 2.92
69+60			5.98	1.52 - 2.94

77

Set nail in power pole 50' N 69+70

C-4.79

C-4.46

Profile, Sta 52+00 to Sta 76+94			
B.M.	6.31	8.77	2.46
52+00		7.1	1.7
+36		7.9	0.9
+50		7.1	1.7
53+00		5.7	3.1
53+40 ³ A		5.0	3.8
+50		4.9	3.9
54		6.0	2.8
+50		6.0	2.8
IT	6.98	8.87	6.88
55+00		6.8	2.1
23' RT		5.7	3.2
55+50		7.2	1.7
18' RT		5.3	3.6
56+00		8.5	0.4
10' RT		4.8	4.1
56+50		7.6	1.3
9' RT		4.8	4.1
56+96.5		6.3	2.6
57+00		7.4	1.5
11' RT		5.0	3.9
57+50		8.2	0.7
15' RT		4.6	4.3
58+00		8.3	0.6
12' RT		4.5	4.4

Comp. *
Check

78

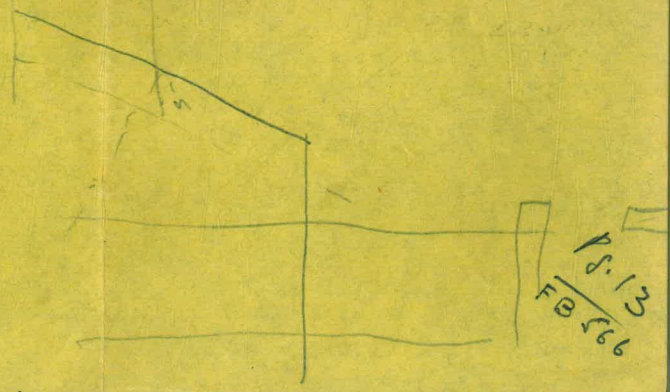
B.P. in Conc. wall Kurtz & Witherby

Edge of Pav.

Elev's taken to RT are approx. finished subgrade of
Consolidated grounds.

Top of 6" water line

B.M.	5.44	7.90	2.46	B.P. in Conc. wall + 52+30
			5.3 + 2.6	Top of 6" C.I. Pipe 52+70 ± (F.Hyd)
			16.3 - 8.7	Top of 24" C.I.P. 45' 45" 53+85 ±



P.S. 13
 FB 566

	8.10		
64+50		4.3	3.8
65		4.3	3.8
+50		4.3	3.8
66		4.6	3.5
+50		4.9	3.2
67		4.5	3.6
+50		4.7	3.4
68		5.2	2.9
+50		5.5	2.6
68+67 ^B A		5.5	2.6
69+00		6.5	1.6
69+03		6.3	1.8
+23		6.0	2.1
+43		6.2	1.9
+50		6.1	2.0
B.M.		4.89	3.21
70		5.7	2.4
+50		5.5	2.6
71		5.2	2.9
+50		5.1	3.0
72		5.2	2.9
+50		5.6	2.5
73		5.5	2.6
+50		4.9	3.2
77	4.16	7.30	4.96
			3.14

$$\begin{array}{r} \text{Pave.} \\ -1.1 \\ \hline 3.5 \end{array}$$

$$\begin{array}{r} \text{gutter} \\ -2.3 \\ \hline 2.2 \end{array}$$

$$\begin{array}{r} \text{Pave.} \\ -1.2 \\ \hline 3.5 \end{array}$$

$$\begin{array}{r} \text{gutter} \\ -2.1 \\ \hline 2.3 \end{array}$$

Edge of Pave
 & Pacific Hwy
 Edge of Pave

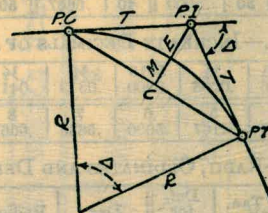
Nail in pole 50' Lt 69170 - Elev. 3.22

7.30

74+00	4.1	3.2	
+50	4.5	2.8	
75	4.8	2.5	
+50	4.9	2.4	
76+86	5.6	1.7	
76+94	6.2	1.1	
B.M.	5.90	1.40	Rec. elev 1.39

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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CURVE FORMULAS

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

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

Middle ordinate= $M = R(1 - \cos \frac{\Delta}{2})$ (5) $= R \text{vers} \frac{\Delta}{2}$ (6)

External= $E = T \tan \frac{\Delta}{4} = R \div \cos \frac{\Delta}{2} - R$ (8) $= R \text{exsec} \frac{\Delta}{2}$ (9)

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

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.—Sta. 161+60.35 to find Sta. of P. C. and P. T. $\Delta = 62^\circ 10'$ $D = 8^\circ 20'$. From Table IV for 1° curve $T = 3454.1$ and $\div 8\frac{1}{2} = 414.49$ 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—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° 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 $D = 5^\circ 30'$.

13' 6 7/8"

20 2

12' 6 7/8"

12' 7"

13' 6 3/4"

52 5 1/2

76.98

261 + 83.45

18

262 + 01 45

76 98

54.5 B. side Grand

262 + 78 43

55.0 N. "

2.72

4.55

7.27 H.I.

995 12" C.I.P.

995

- 2.68 Top 12"

727

- 2.68

174 + 60.59

15.2
4.4
19.6

12.0
4.8
7.2

7.8
4.1
3.7

21.45
23.5
23.9

52+36.0 N. edge port subway

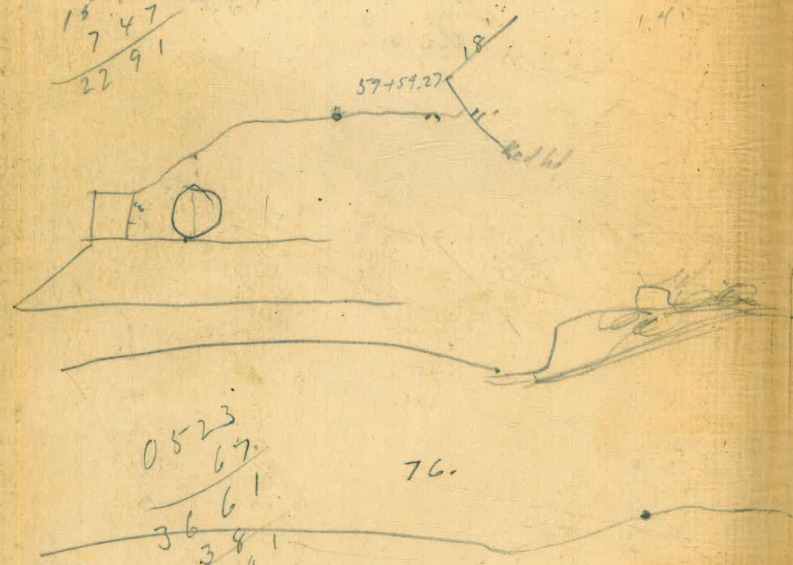
76
59+76.75

15.44

80.7 tie to Man on Subway

15.44
7.47
22.91

7.3
3.9
1.4



0523
67
3661
31381
3504

76.

76-78.24
1.5
76-93.24

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1 1/2
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9+(20-16)÷2 or 2 ft. added to 41.9=43.9. For slopes of 1 on 1 see inside of front cover.

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