

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 $30.6 + (20 - 16) \div 2$ or 2 ft. added to $30.6 = 32.6$. For slopes of 1 on $1\frac{1}{2}$ see inside of back cover.
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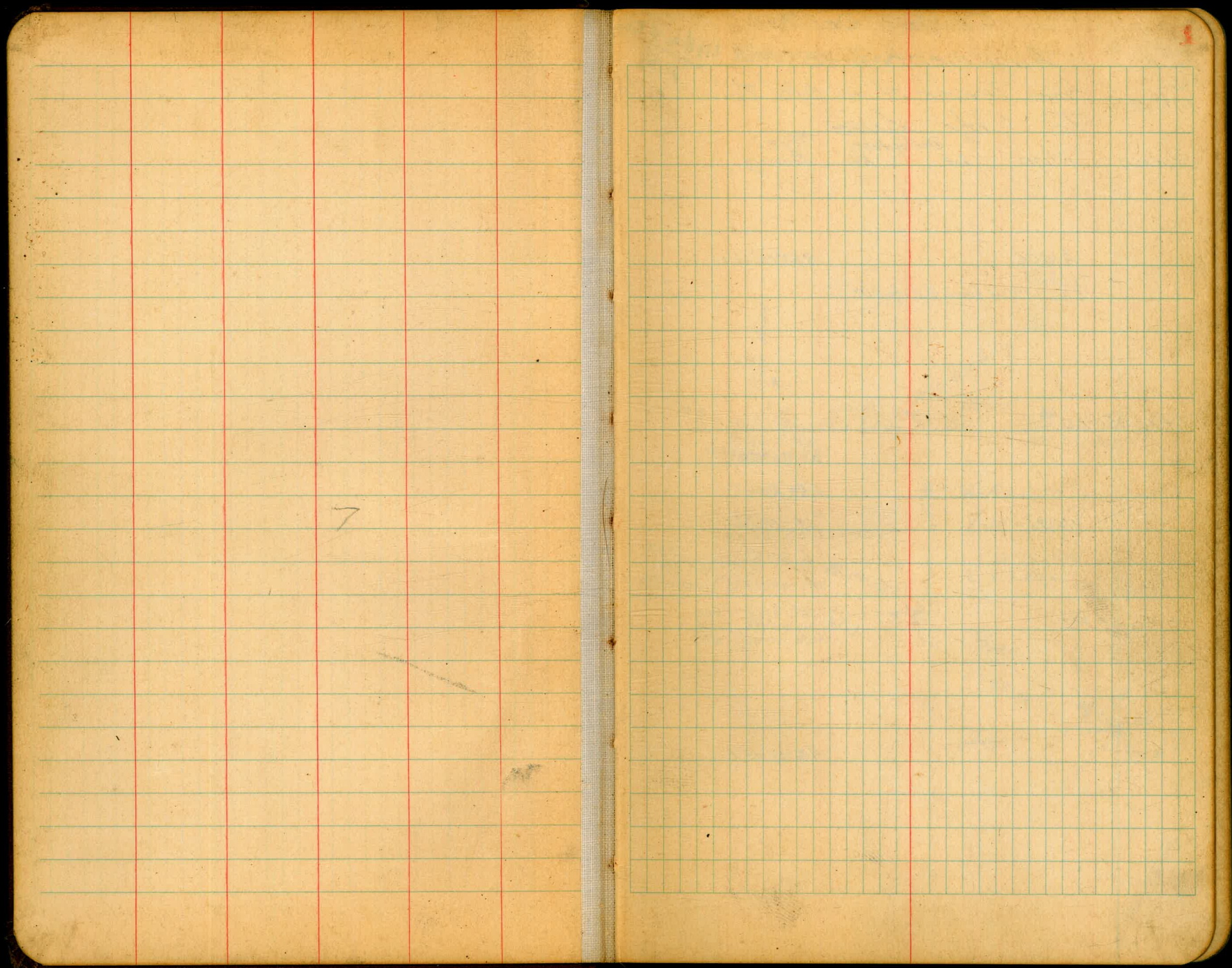
1588

ENGINEERING DEPARTMENT
CITY OF SAN DIEGO,
CALIFORNIA.

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.

4105
258
4363
3206
45.67



7

Walker
Bliss
Isbell
Hale

9-10-40

CAMINO DEL RIO

Alignment Ties
from TAYLOR St in Old Town
To City Line

made rec
2 AM

Plotted T.P.S. 508

Station	Align	Deflection Lt.	Rt.	True Searing.
---------	-------	-------------------	-----	------------------

814.66				S 83° 12' 15" E
-116.95				
697.71	Dist. from E.C. to P.O.T.			

1 + 116.95 = E.C.

$\Delta = 60^{\circ} 38'$

$R = 200'$

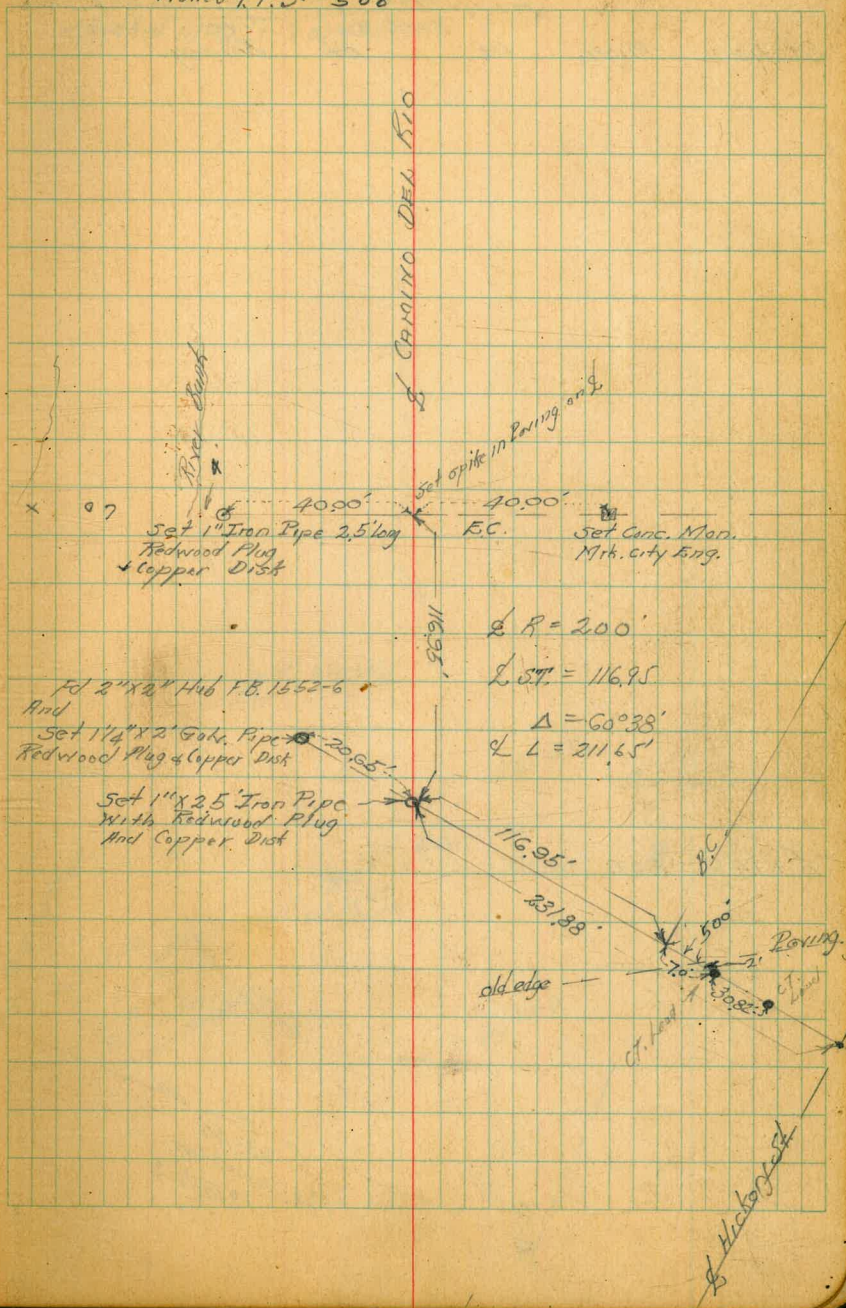
116.95'

"ST. = 116.95'

"L. = 211.65'

0 + 00 = P.T.

N 36° 09' 45" E



CAMINO DEL RIO

Alignment ties. Cont. from P-2

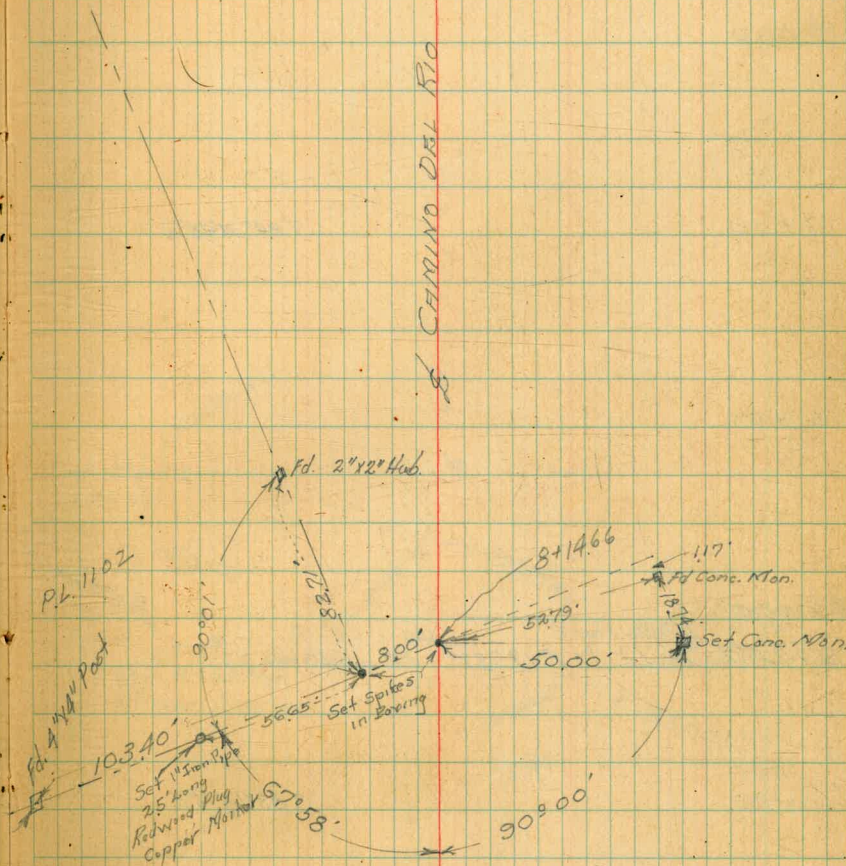
Station	Align.	Deflection Lst	True Rt	Bearing.
---------	--------	-------------------	------------	----------

8+14.66 = P.O.T.



Plotted T.P.S. 508-509

Checked M.C. 1-20-48



CAMINO DEL RIO

Alignment Ties Cont. from P-3

Station	Align	Lt.	Deflection Rt	True Bearing
---------	-------	-----	------------------	-----------------

18+00

17+00

S 84° 31' 48" E

16+00

15+00

Angle Point

14+74.57 = Δ Lt. P 19' 33" FB. 1528-80

S 83° 12' 16" E

Fence

FB 1528-72
Fd R.P. Hub

160.00

80° 40' 14"

90° 39' 46"

50'

Set 1" x 2.5' Iron Pipe
With Redwood Plug
& Copper Disk CE.

Set 2" x 6' Galv. Pipe
with Redwood Hub
Bisector
and Copper Disk S.E.

90° 30' 46"

95.00

73° 45'

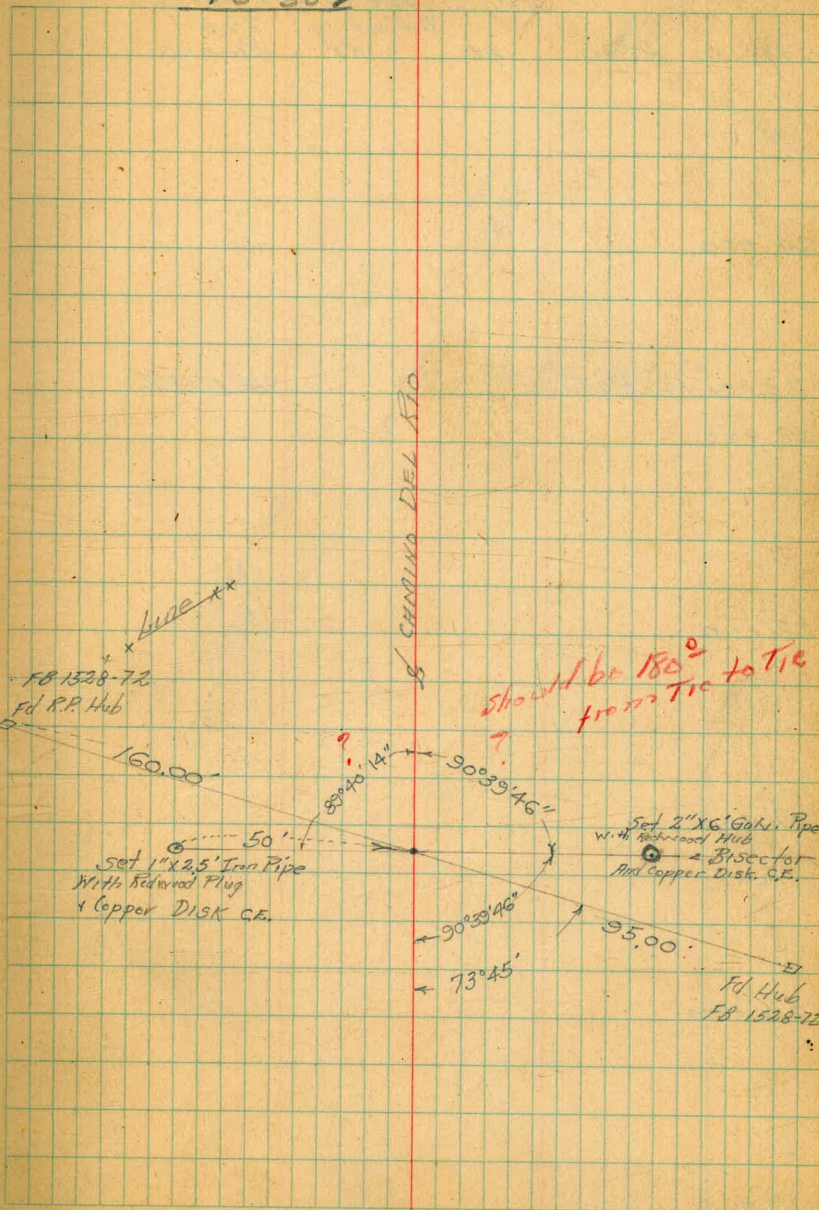
Fd Hub
FB 1528-72

TPS-507

§

CAMINO DEL RIO

Should be 180°
from Tie



CAMINO DEL RIO

Station	Align.	Ties		Cont. from P-1
		Deflection	True	
		Lt	Rt	Bearing

24+00

23+01.10 P.O.T.

58°31'48"E

23+00

22+00

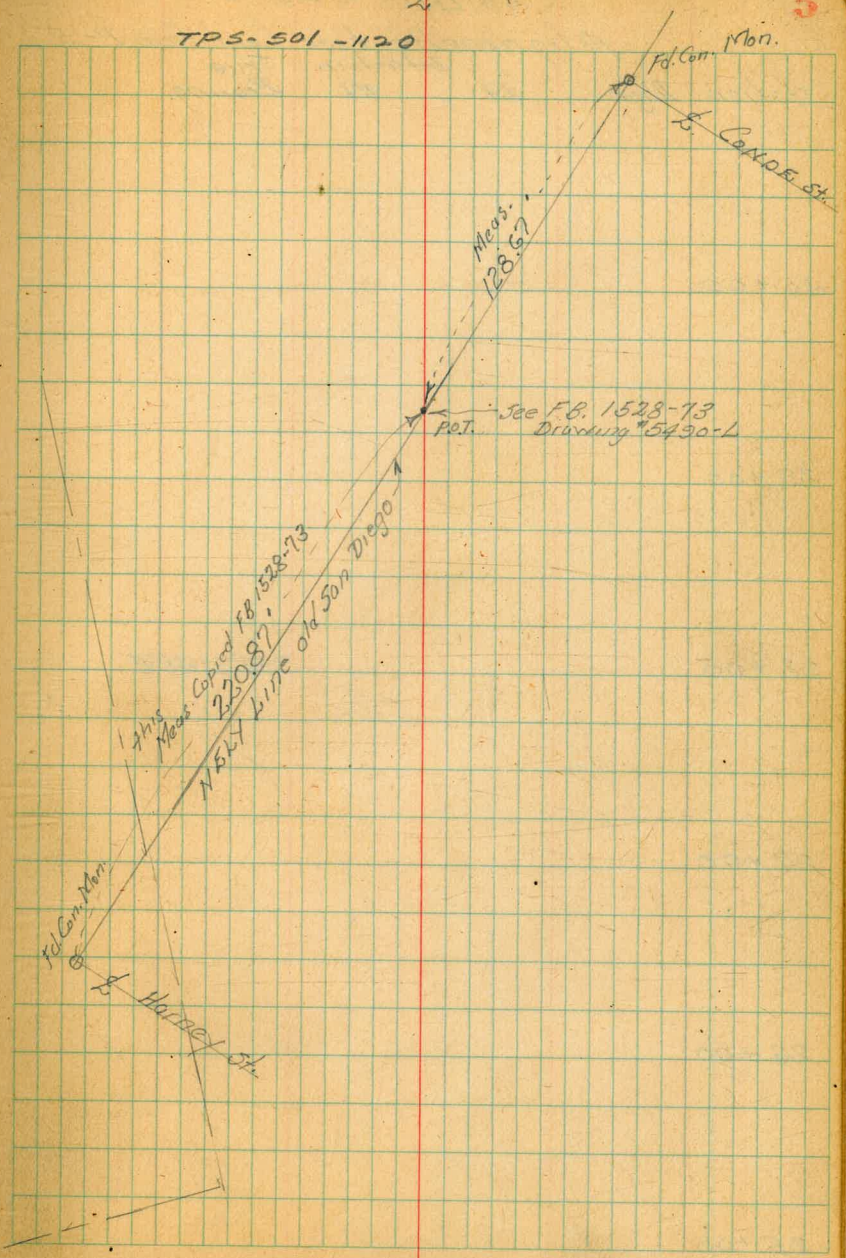
21+00

20+00

19+00

TPS-501-1120

5



CAMINO DEL RIO

Alignment ties Cont. from P-5

Station	Align	Deflection		True Bearing
		Lt.	Rt.	

30+00

29+00

28+00

S84°31'48"E

27+00

26+00

25+00

2

6

CAMINO DEL RIO

Alignment ties Cont. from P. 6
 Deflection True

Station Align Lt. Rt. Bearing

36+00

486.48'

S 88° 20' E

35+00

34+96.39 = E.C.

A 3° 48' 12"

$\Delta R = 2000'$

34+00

$\Delta T = 66.40$

$\Delta L = 132.76'$

33+63.63 = B.C. Lt

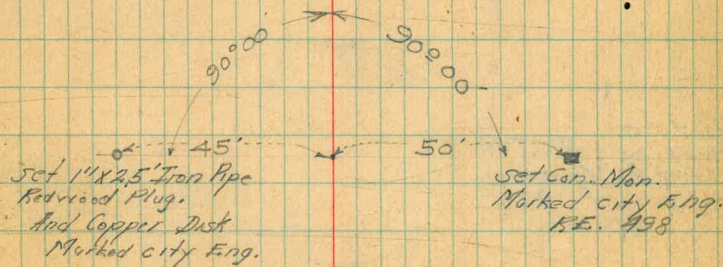
33+00

S 84° 31' 48" E

32+00

31+00

TPS-1110



CAMINO DEL RIO

Alignment ties Cont. from p. 7

Station	Align.	H.	Deflection	Rt.	True	Setting
---------	--------	----	------------	-----	------	---------

883.51'

42+00

change

S 88° 20' E

41+00

= 39+81.99
= 39+82.87

P.O.T. Equations

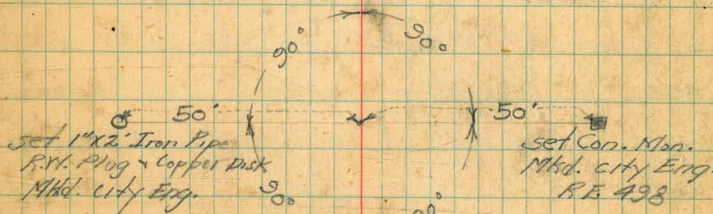
S 88° 20' E

486.48'

39+00

38+00

37+00



CAMINO DEL RIO

Alignment Ties - Cont. from P-8

49+00

Deflection
Lt. Rt.

$\Delta = 5^{\circ}15'30''$
 $R = 2000'$
 $E.T. = 91.84$
 $E.L. = 183.55$

48+65.52 = BC

Rt.

48+00

Meas.
883.51

588°20'E

47+00

46+00

45+00

44+00

43+00

2

9



Note; The above curve was changed as per data to fit the tangent and ties^{ns} found from station 61+37.08 to 73+39.11 P.B. 1528-7-11 = original line and maintaining original E. from Sta 34+96.89 to station 48+65.52 as per request H.V. Jorgensen C.E.

CAMINO DEL RIO

Alignment Ties - Cont. from P-9

Station	Align.	Deflection L ^{ts}	Rt	True Bearing.
---------	--------	-------------------------------	----	------------------

55+00

54+00

53+00

554.28'

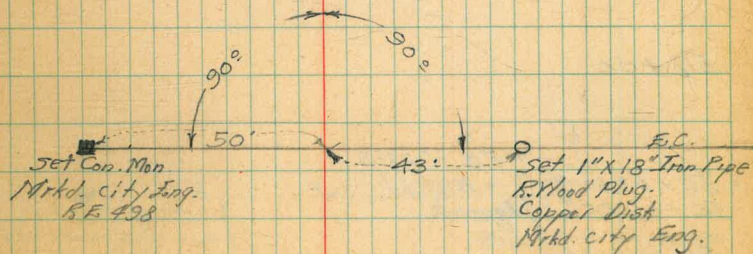
S83°04'30"E

52+00

51+00

50+49.07 = E.C.

50+00



CAMINO DEL RIO
Alignment Ties - Cont. from P10

Station	Align.	Lt.	Deflection Rt.	True Bearing.
---------	--------	-----	-------------------	------------------

61+37.08 = E.G.

61+00

60+00

$$\Delta = 21^{\circ}49'30''$$

$$LR = 1400'$$

$$LT = 269.89'$$

59+00

$$LL = 533.28'$$

58+00

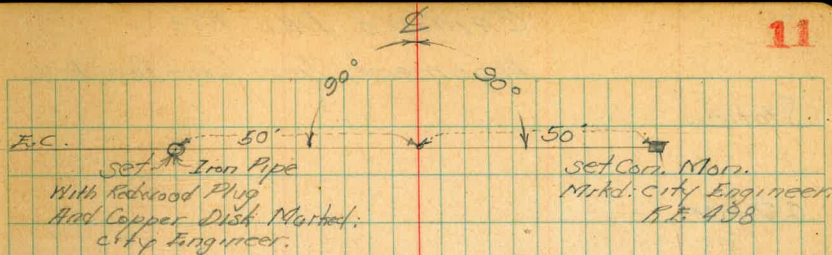
57+00

$\left. \begin{array}{l} \text{FB. 1528-9} \\ = 56+03.80 \text{ } \leftarrow \text{Plan} \\ = 56+03.35 \end{array} \right\} = \text{B.C. Lt. Equation.}$

56+00

554.28

S 83°04'38"E



CAMINO DEL RIO
Alignment Ties Cont. from P-11

Station

67+00

66+00

65+00

64+00

63+00

62+00

CAMINO DEL RIO

2

Station	Align.	Alignment		Ties	Cont. temp. - 12
		Lt.	Rt.		

73+00

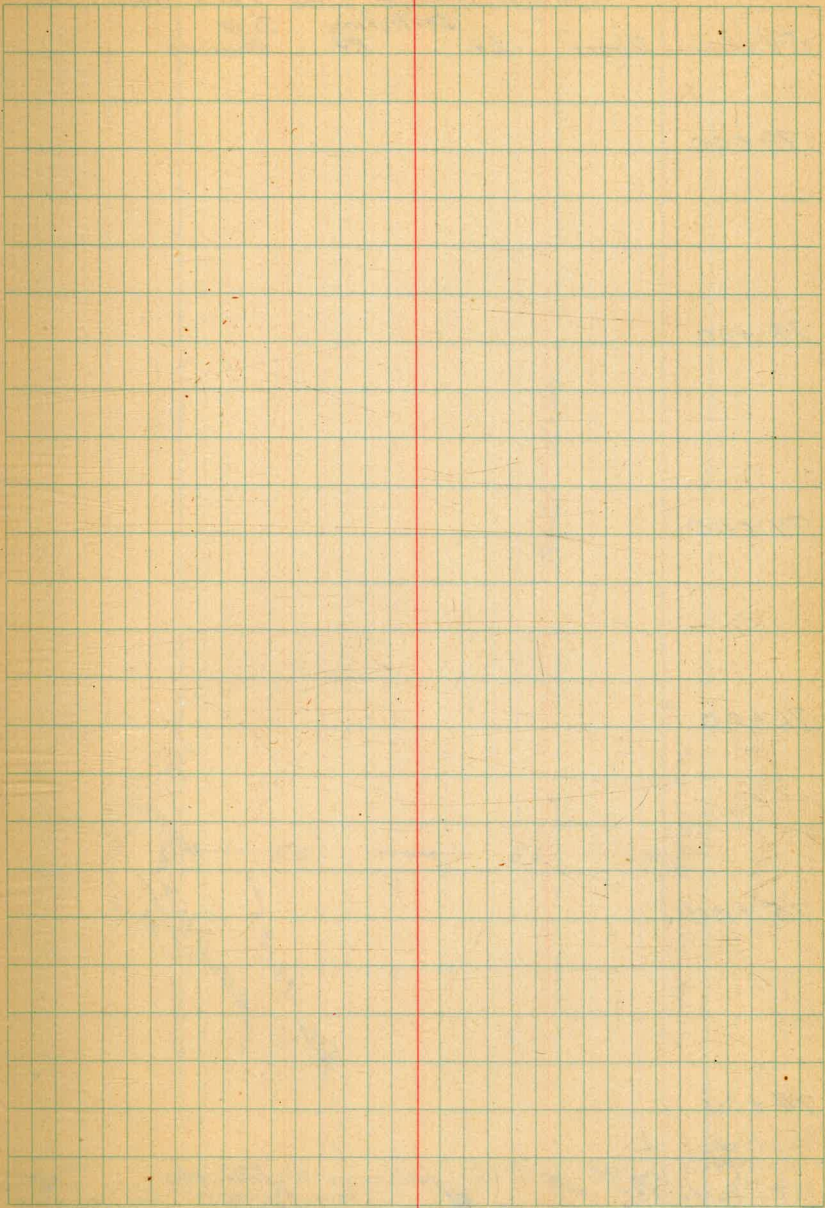
72+00

71+00

70+00

69+00

68+00



CAMINO DEL RIO

Alignment Ties - Cont. from P. 13

Station Align Lt. Deflection Rt. True Bearing

79+00

78+00

77+00

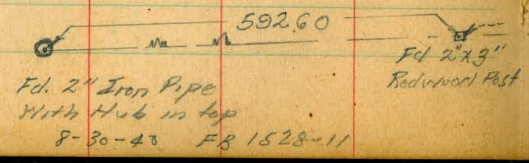
76+00

75+00

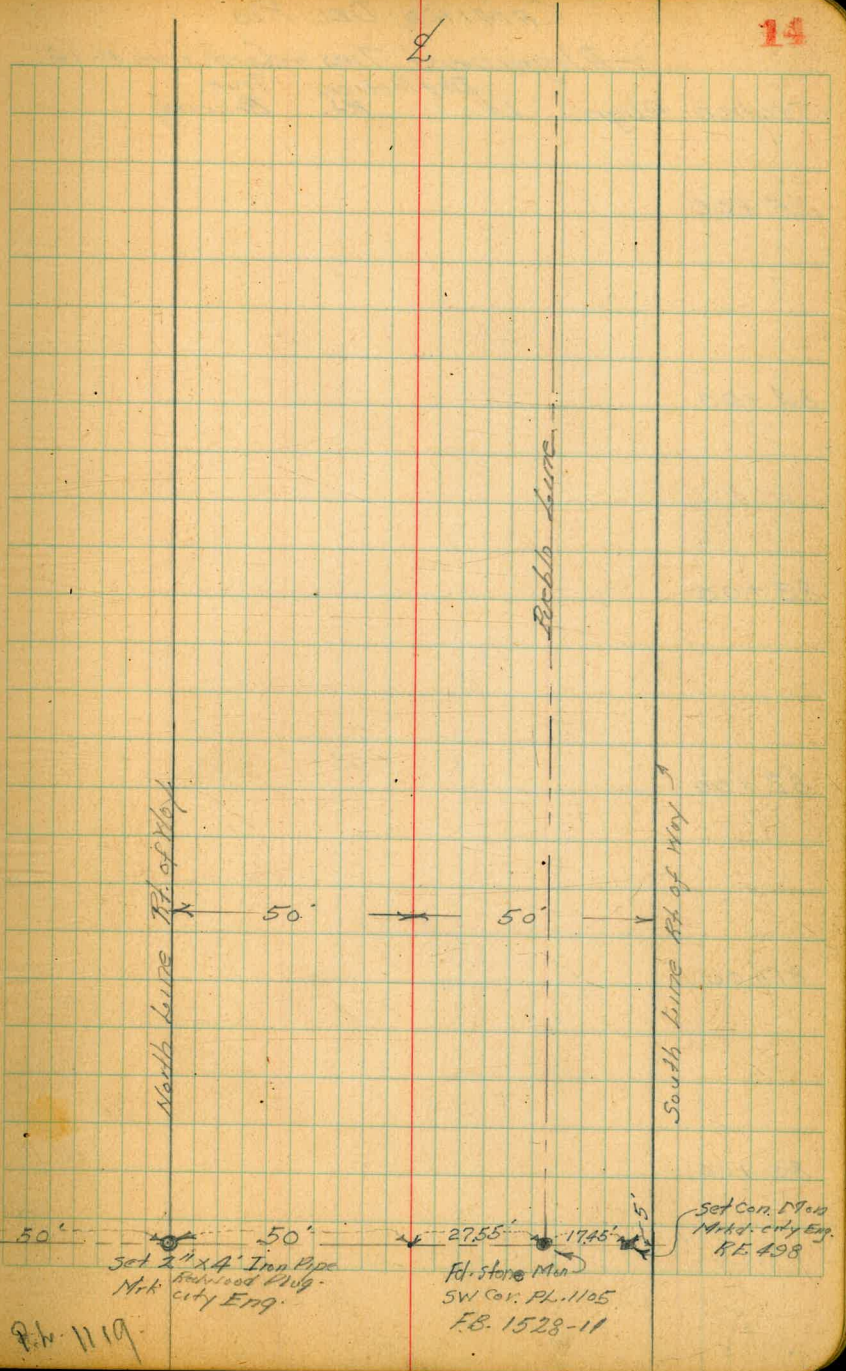
74+00

73+39.11 = POT.

PL 1105
see
1528/11



P.L. 1119



CAMINO DEL RIO

- Alignment Ties - Cont. from P. 14.

Station	Align	Lt.	Deflection Pt.	True Bearing
---------	-------	-----	-------------------	-----------------

85+00

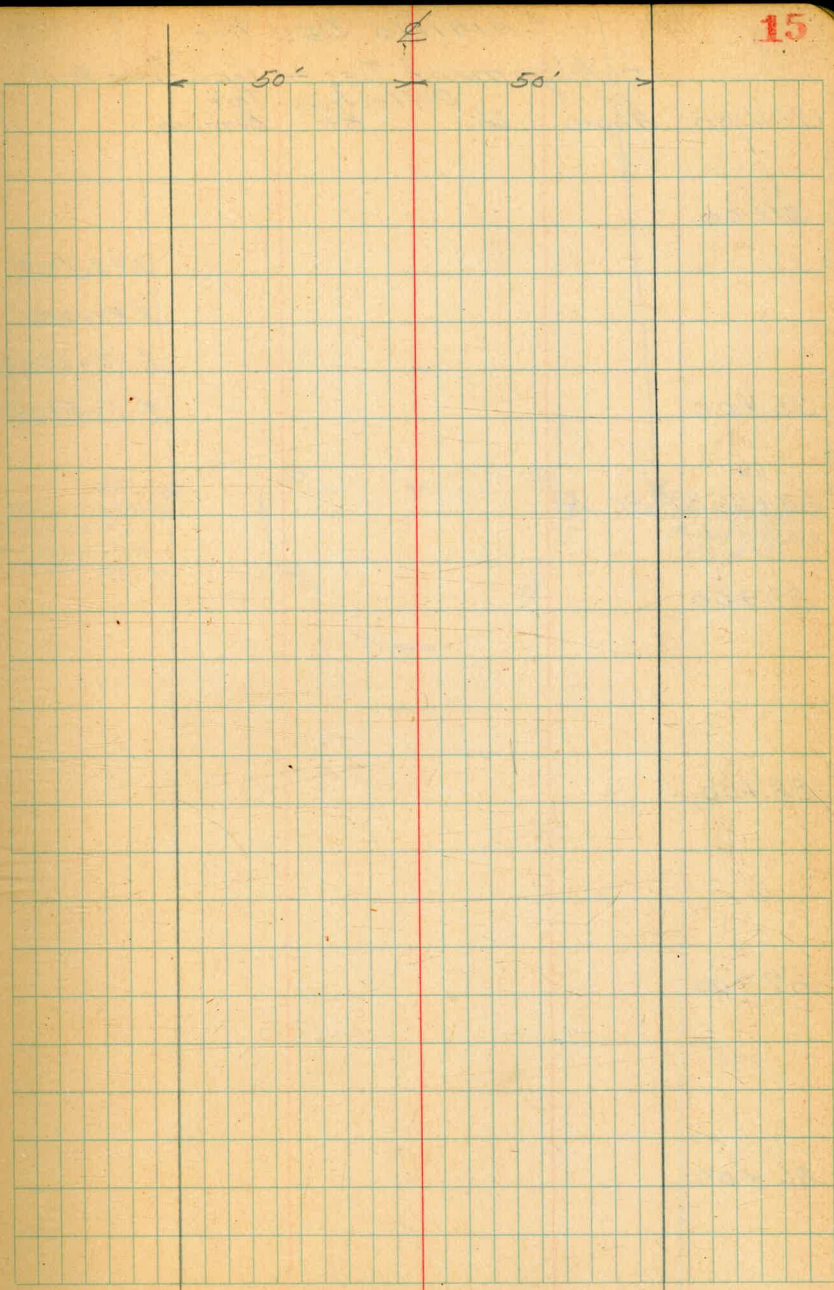
84+00

83+00

82+00

81+00

80+00



CAMINO DEL RIO

~ Alignment Ties - Cont. from P-15

Station	Align.	Lt.	Deflection	Rt.	True Bearing
---------	--------	-----	------------	-----	--------------

91+00

$\Delta = 28^{\circ}05'$

$R = 1000'$

$L_{ST} = 250.10'$

90+00

$L = 490.15'$

89+66.89 = B.C. Lt.

89+00

88+00

87+00

86+00



Set Redwood Hub PP. 1428-14

CAMINO DEL RIO

Alignment Ties - Cont. from P. 16

Station	Align.	Lt.	Deflections	Rt.	True Bearing
---------	--------	-----	-------------	-----	--------------

+24.4 = B.C. Rt. See Notes as to description P. 18

97+00

267.00'

96+00

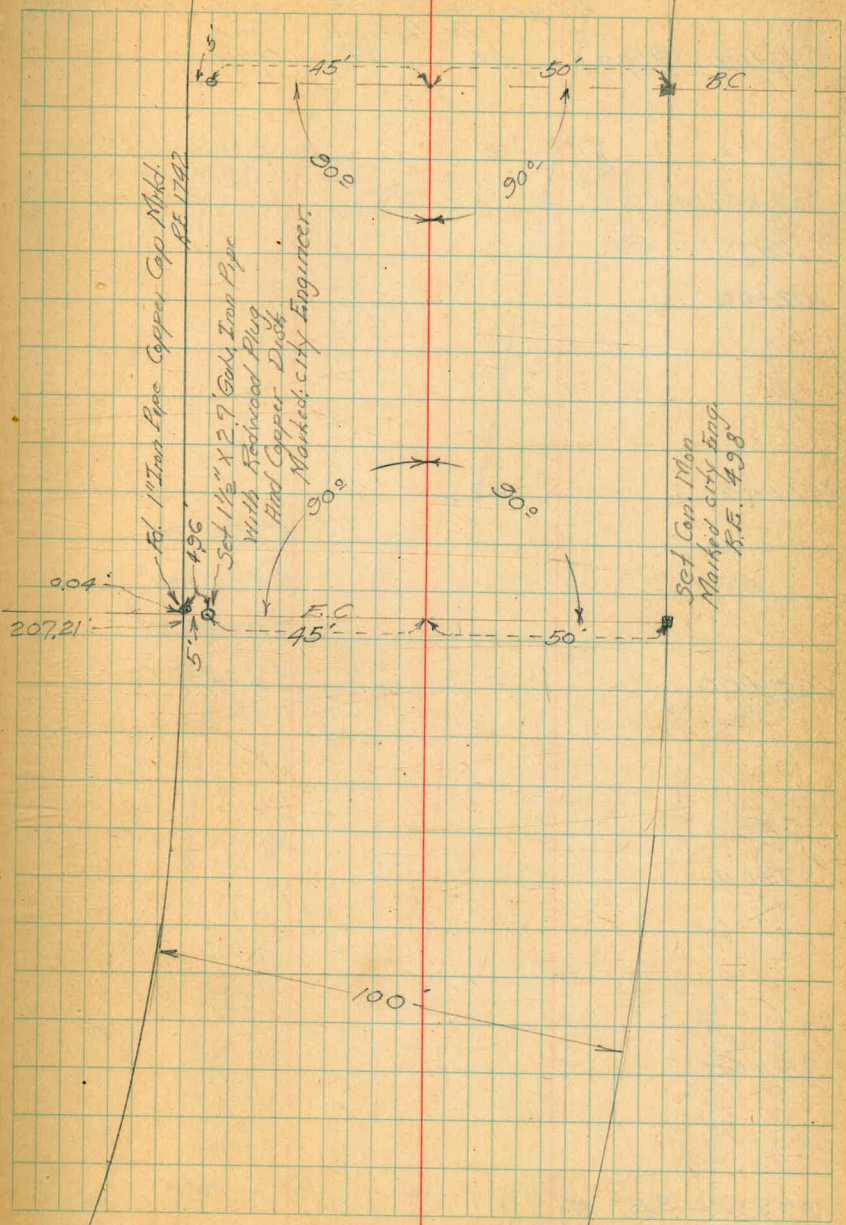
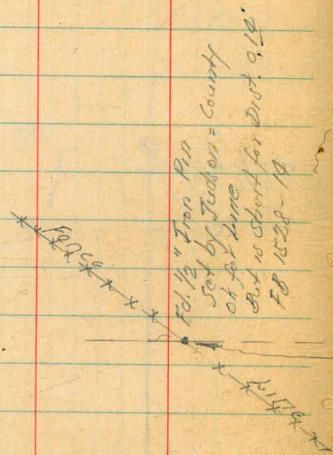
95+00

94+57.04 = E.C.

94+00

93+00

92+00



CAMINO DEL RIO

Alignment Ties Cont. from P. 17

Station	Align	Deflection		True Bearing
		Lt	Rt	
102+07.62	K.C.			
102+00				
101+00				
100+00				
99+00				
98+00				
97+29.04	B.C. Rt			

102+07.62 = K.C.

102+00

102+00

101+00

$A = 2742'30"$

$G.R. = 1000'$

$L.T. = 246.61'$

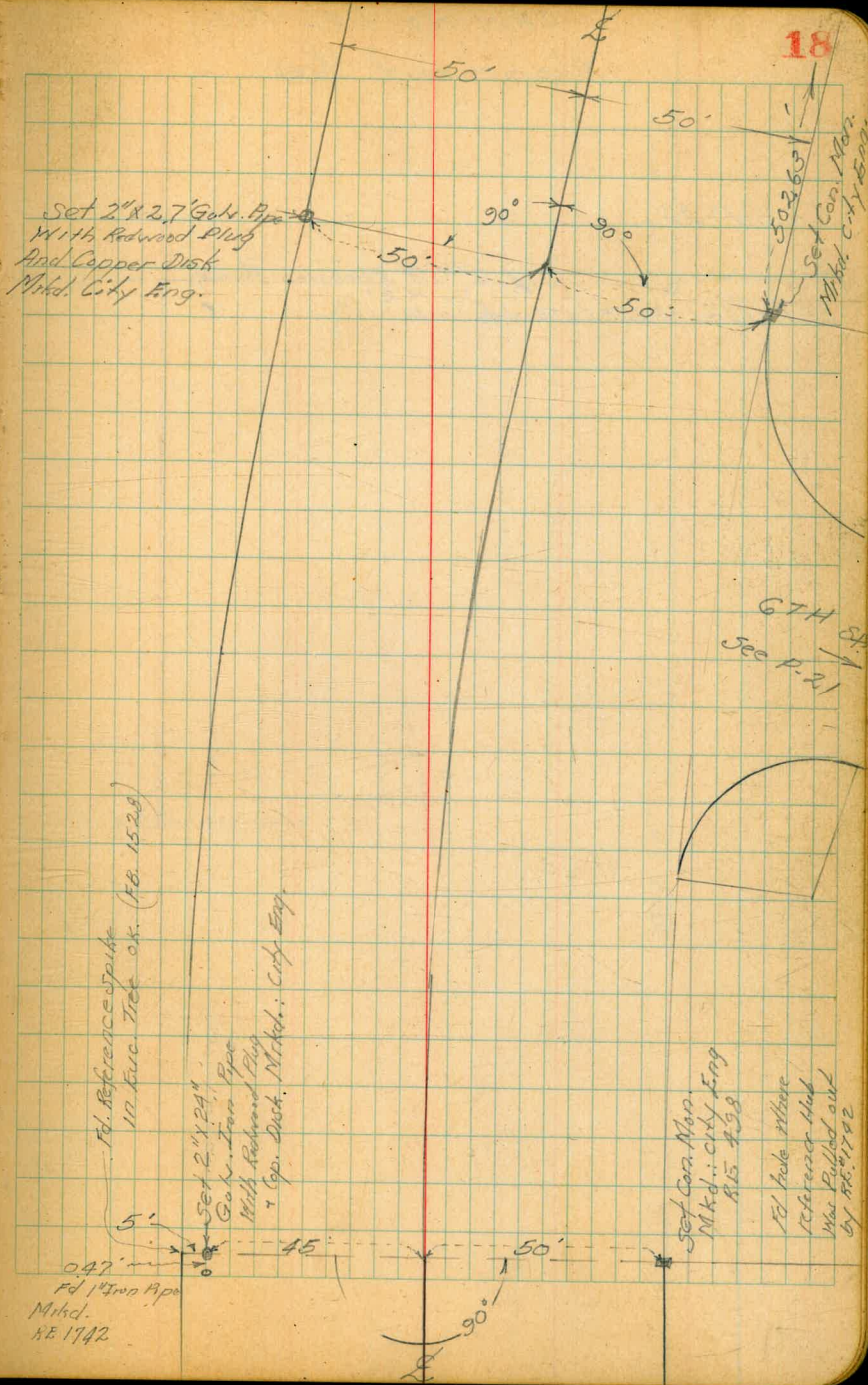
100+00

$L.L. = 483.53'$

99+00

98+00

97+29.04 = B.C. Rt



Set 2" x 2.7" Gal. Pipe
With Redwood Plug
And Copper Disk
Michl. City Eng.

18

6TH ST
See P. 21

Ft. Reference Spike
17. Enc. Trct. ok. (FB 1528)

Set 2" x 2.7" Gal. Pipe
With Redwood Plug
With Copper Disk
Michl. City Eng.

Set Con. Mon.
MKd.: City Eng.
8/5 4:33

Ft. hole where
reference spike
was pulled out
by RR 1/192

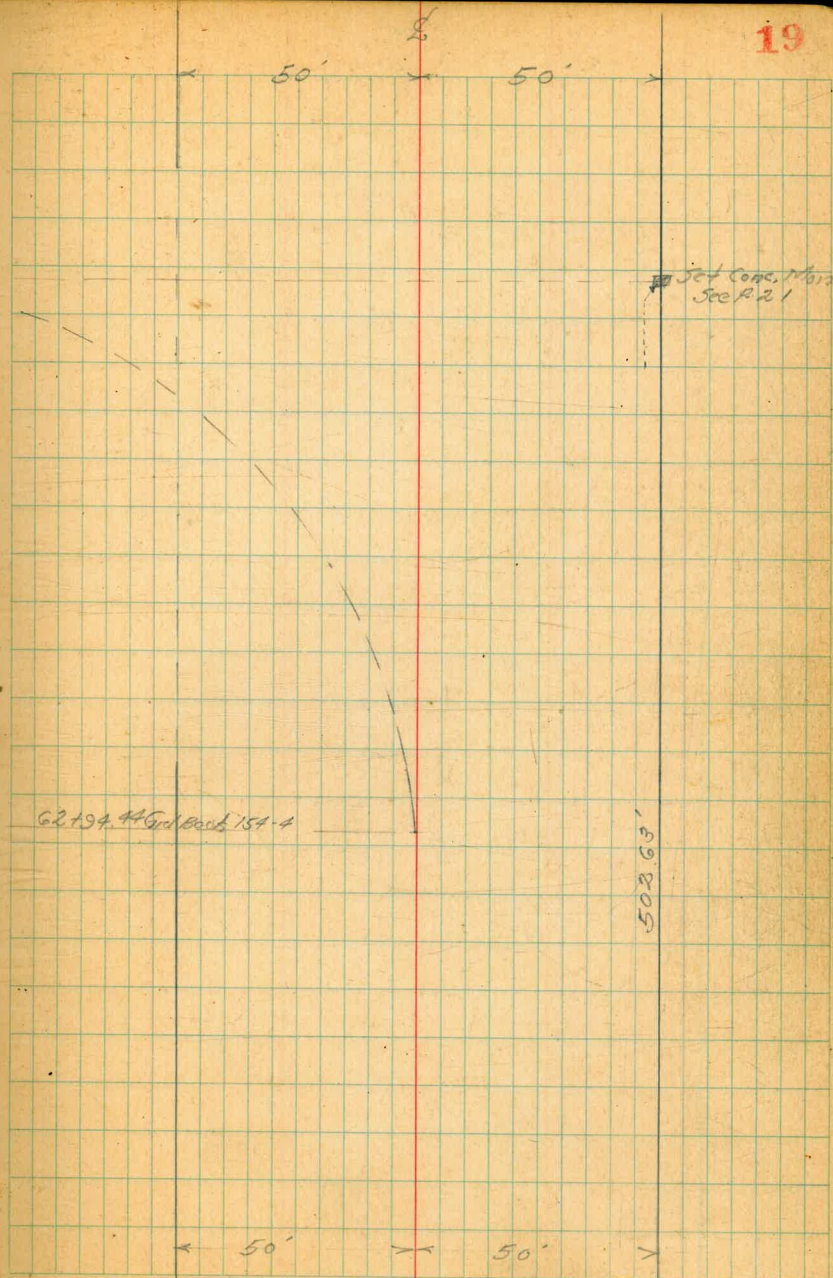
047'
Ft. 1 1/2" Iron Pipe
Michl.
NE 1742'

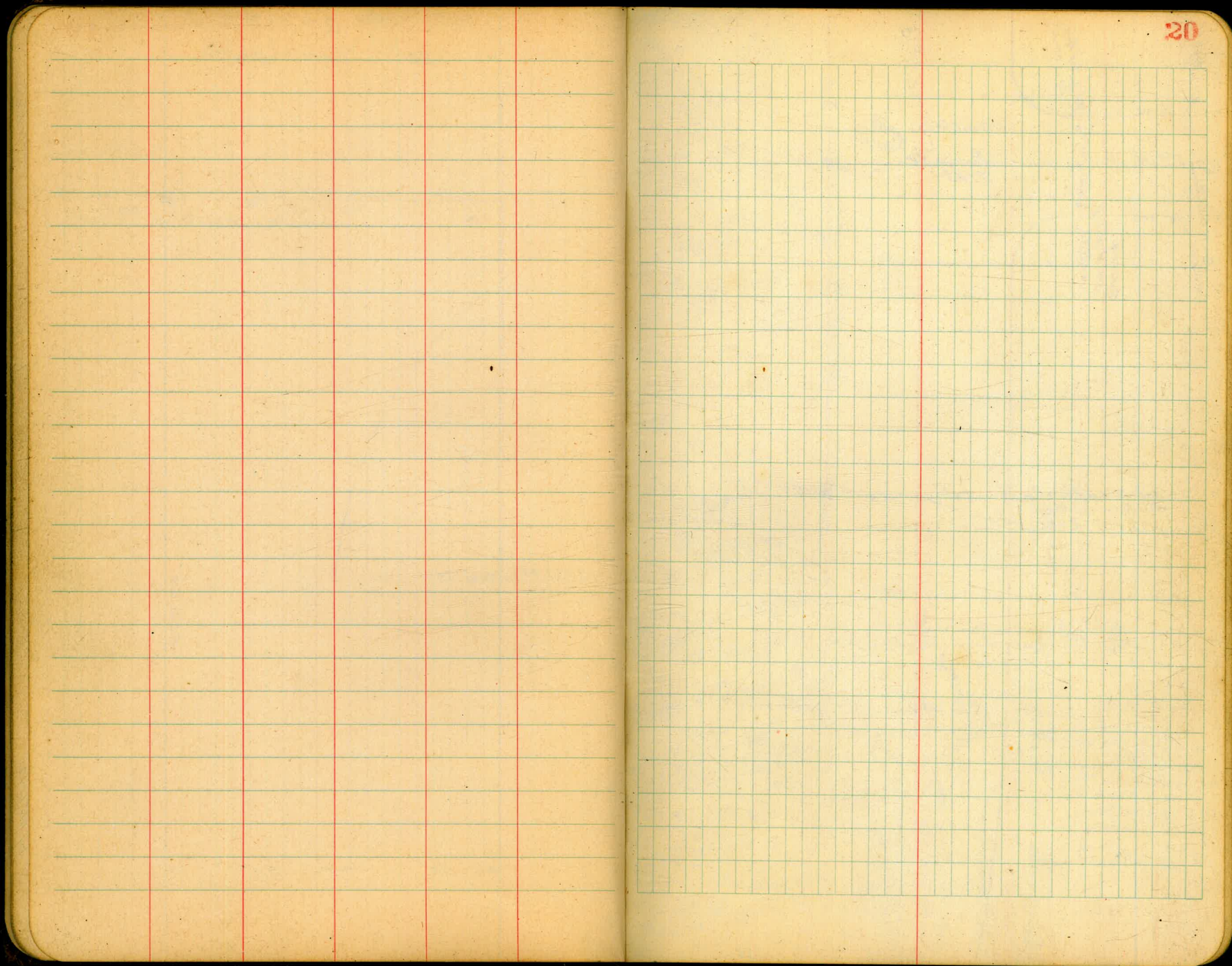
CAMINO DEL RIO
Alignment Ties.

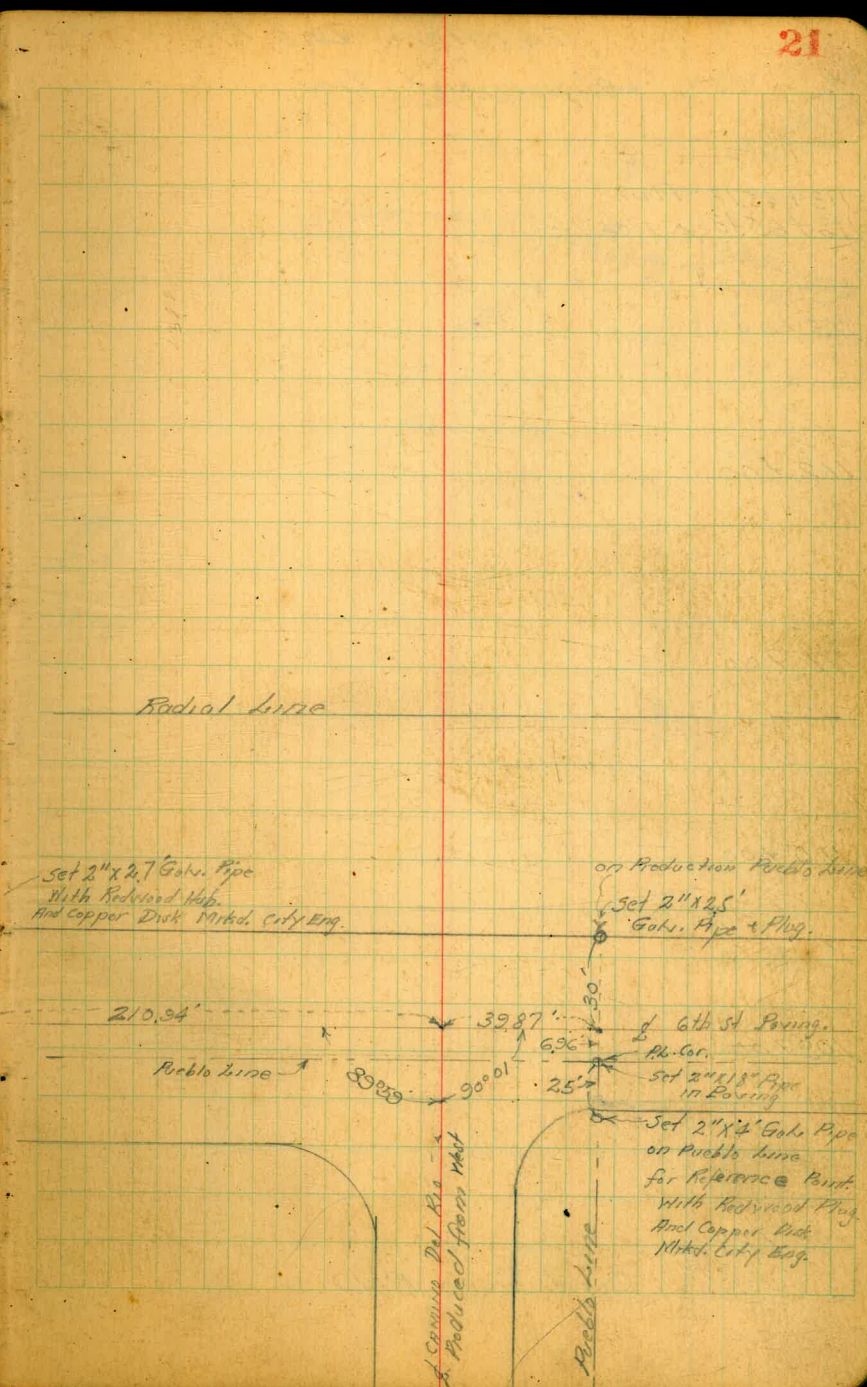
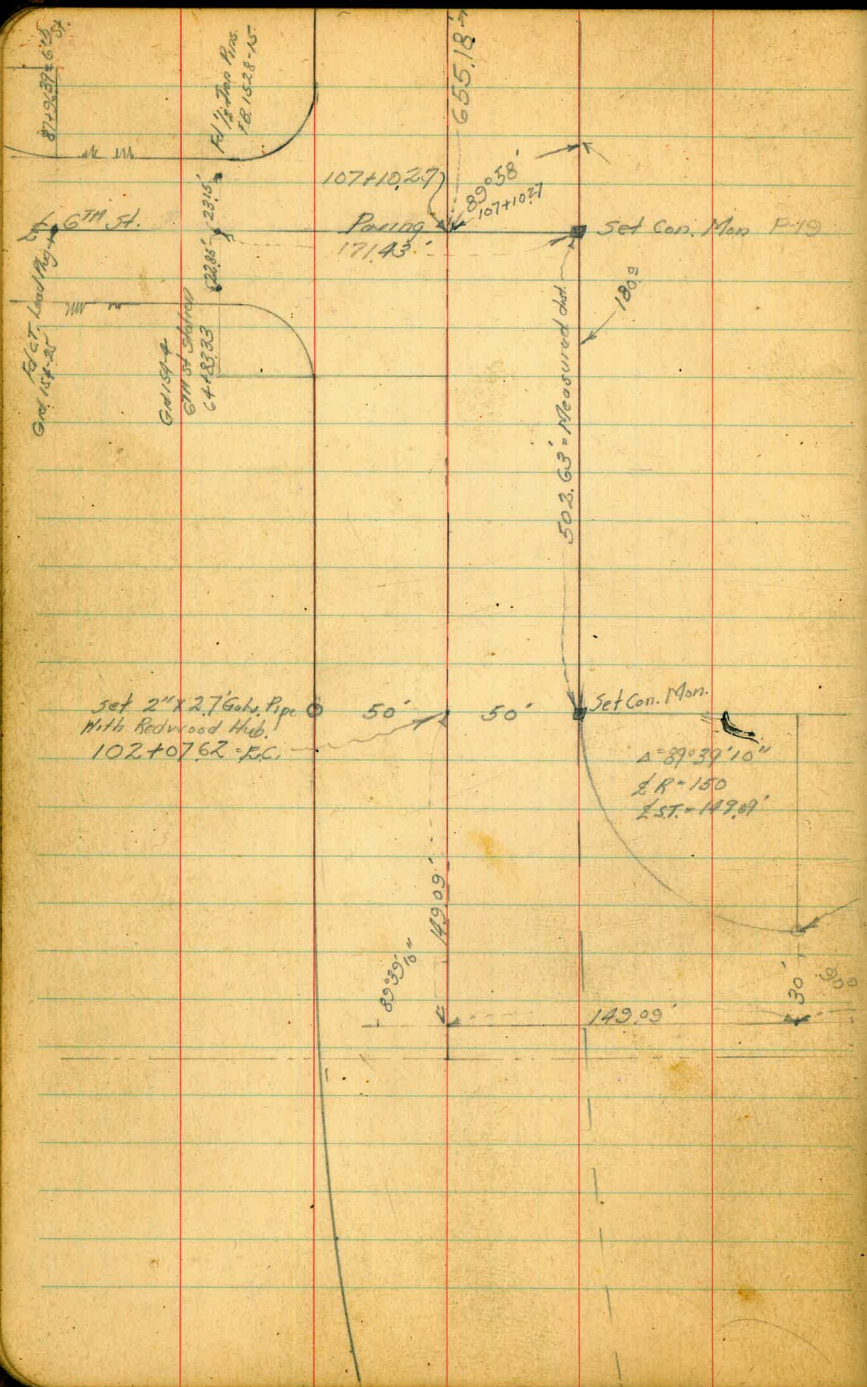
Cont. P. 22

6th St. Extension Permag.
Sec R 21
107+10.27 = POT = 4.6th St. to N.H.

19







CA MINCO DEL RIO
Alignment Ties

= 713 + 65.18 = Plan
113 + 65.45 = Δ 1°04' 4"

113 + 00

112 + 00

111 + 00

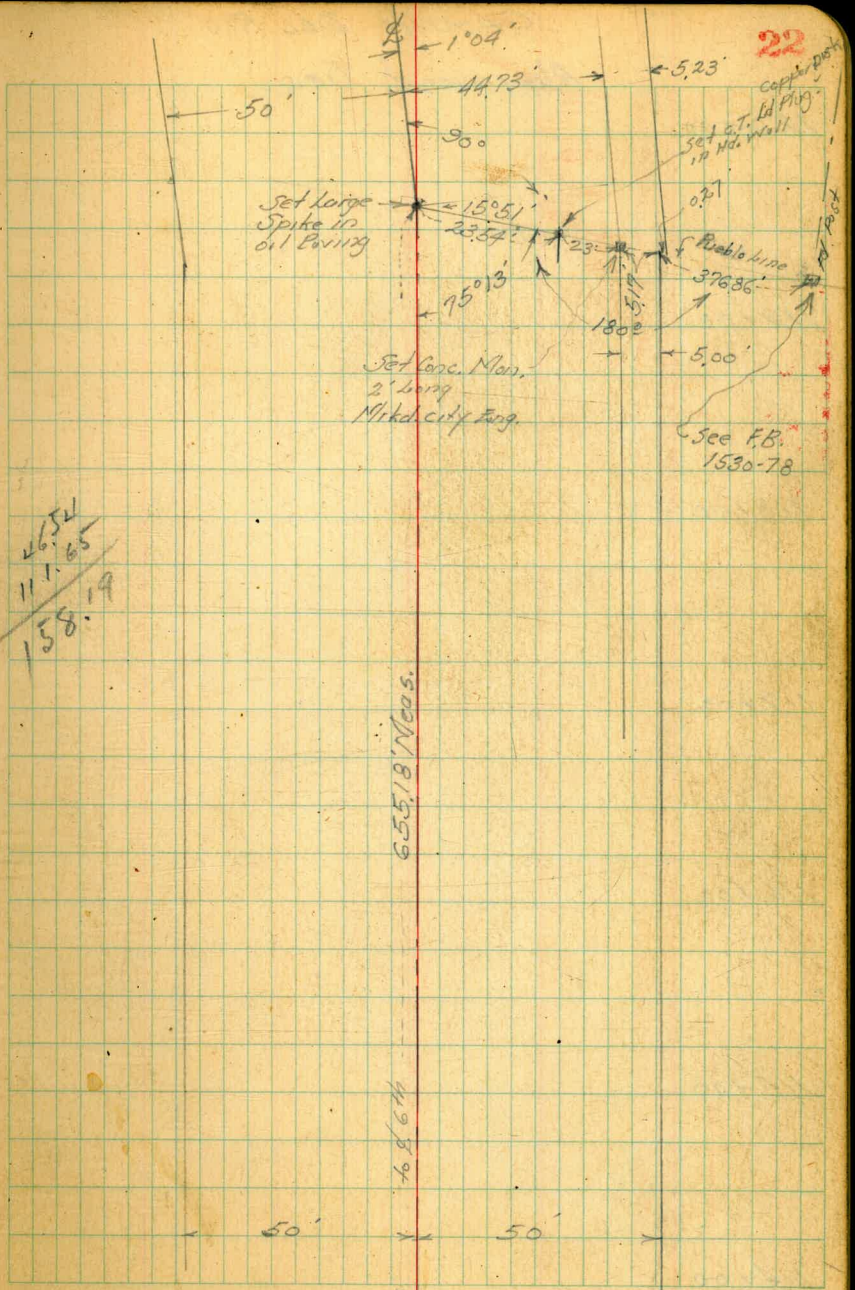
110 + 00

109 + 00

108 + 00

Cont. from P-19

46.54
111.65
158.19



CAMINO DEL RIO
Alignment Ties

120+00

119+00

118+00

117+00

116+00

115+00

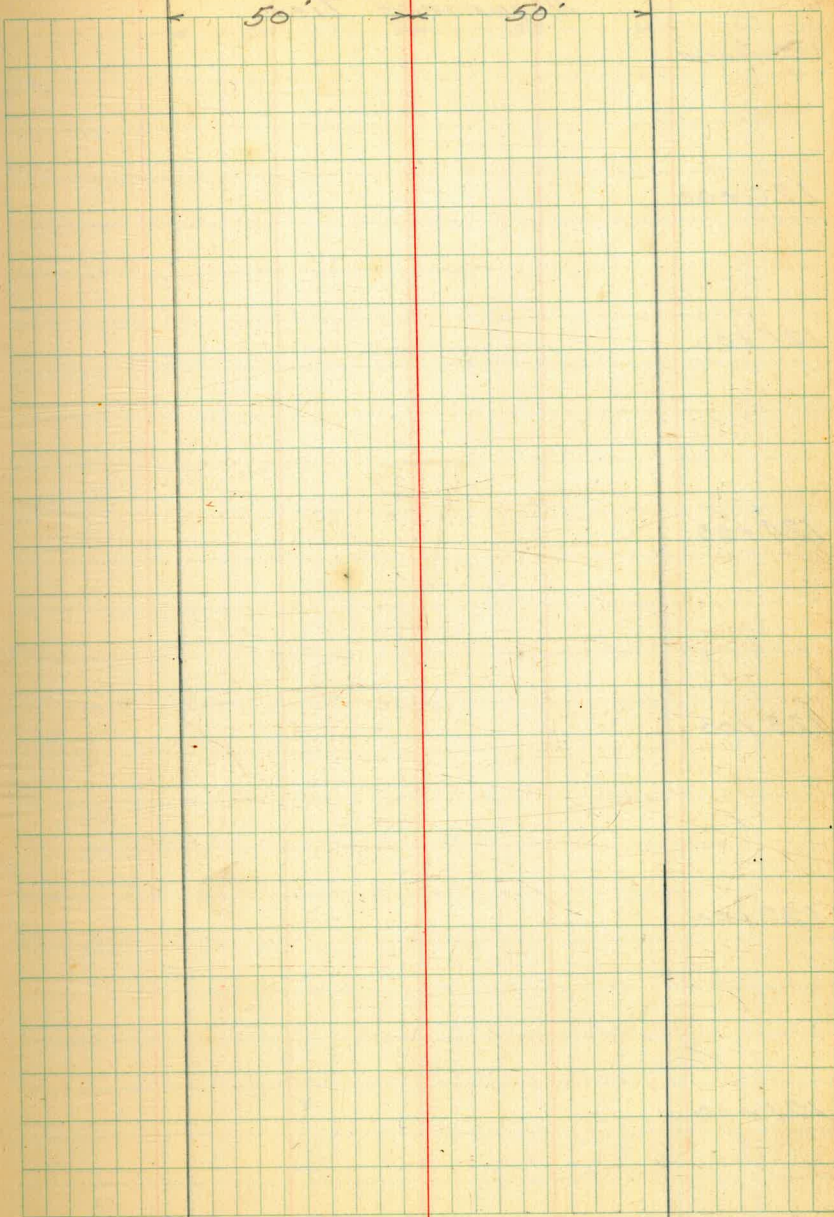
114+00

23

E

50'

50'



CAMINO DEL RIO
Alignment Ties

Stations

126+00

125+00

124+00

123+00

122+00

121+00

24

£

50'

50'

CAMINO DEL RIO

Alignment Ties

132+85.88 = Map.
132+85.86 = Meas.

132+00

131+00

= 130+12.52 = FB 1530
130+12.42 = B.C. Pt.

130+00
87.74 = Map #5649-L
87.85 = Meas.

+25.7 = F.G.

129+00

$\Delta = 14^{\circ}35'30''$

L.R. = 1000'

L.T. = 128.03'

128+00

L.L. = 254.67'

127+00

126+70.40 = B.C. Pt.

Set 2" x 3' Galv. Iron Pipe
With Redwood Hub
& Copper Disk
Mithel City Eng.

132+85.88 = Map.
132+85.86 = Meas.

27.944' Length
 $\Delta = 15^{\circ}40'$ Turned
L.T. = 187.58'
L.R. = 1000'

Set 2" x 2.7' Galv. Pipe
With Redwood Hub
& Copper Disk.

130+12.44 = Map.
130+12.42 = Meas.
Set 2" Long Conc. Man.
Mithel City Eng.
R.E. 498

129+25.97
Set 2" x 2' Galv. Iron Pipe
With Redwood Hub
& Copper Disk.

Set Conc. Man.
2' Long.
Mithel City Eng.
R.E. 498

For Ties to Pueblo Cor.
See FB 1530-6

126+70.40 B.C. Pt.
Set 2" x 3.5' Galv. I. Pipe
With Redwood Plug
& Copper Disk
Mithel City Eng.

Set Conc. Man.
Mithel City Eng.
R.E. 498
Iron Fence Post

CAMINO DEL RIO

Alignment Ties

Station

138+00

137+00

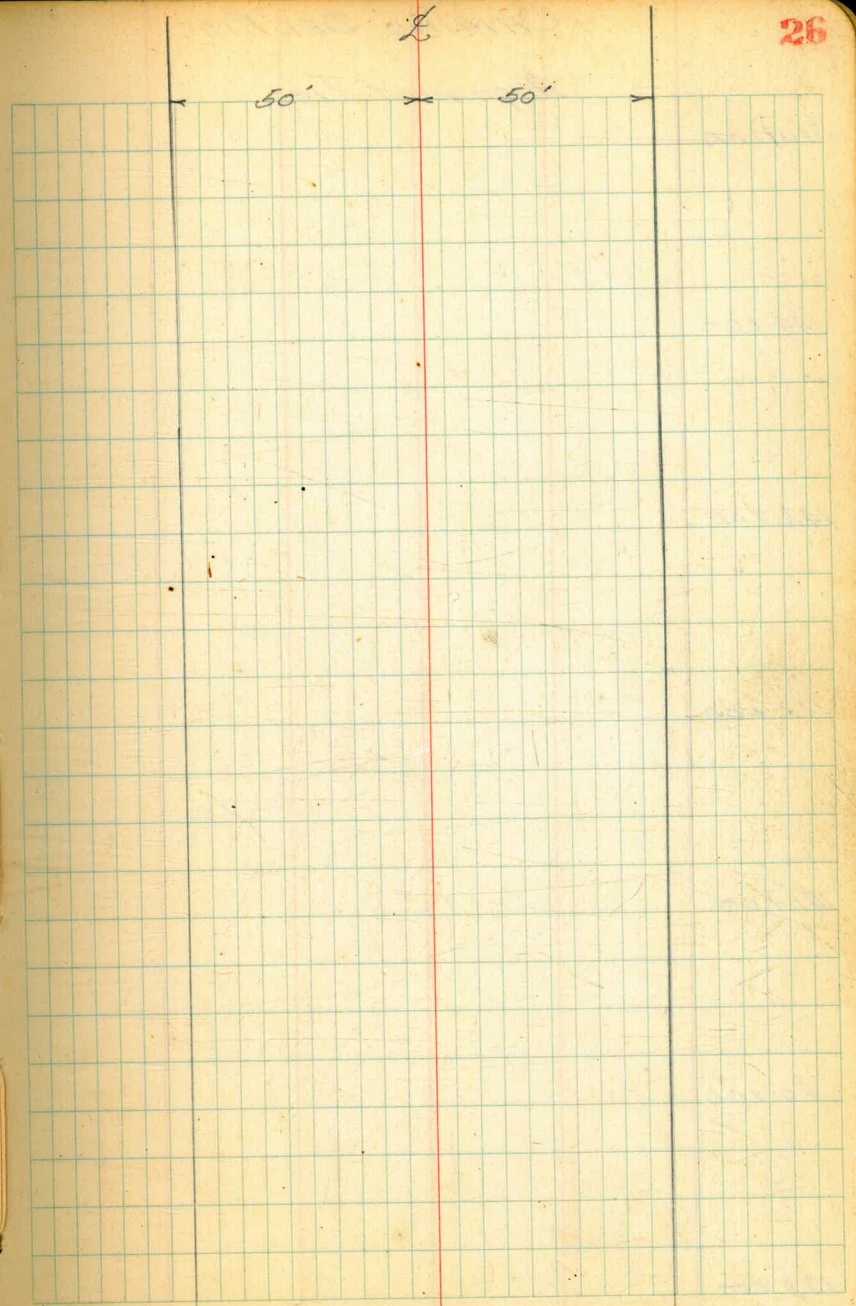
136+00

135+00

134+00

133+00

L



CAMINO DEL RIO

Alignment Tics.

Station

144+00

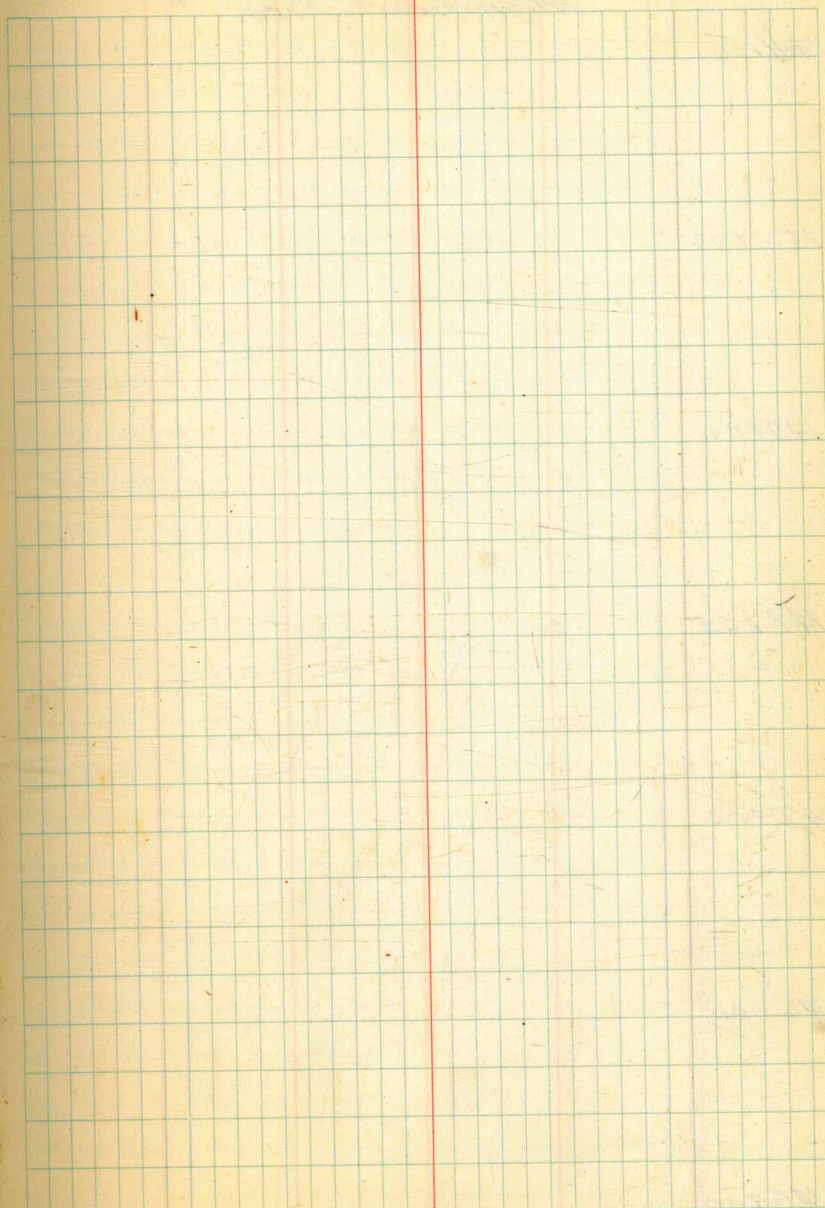
143+00

142+00

141+00

140+00

139+00



CARRINO DEL RIO

Alignment Ties.

Station

150+00

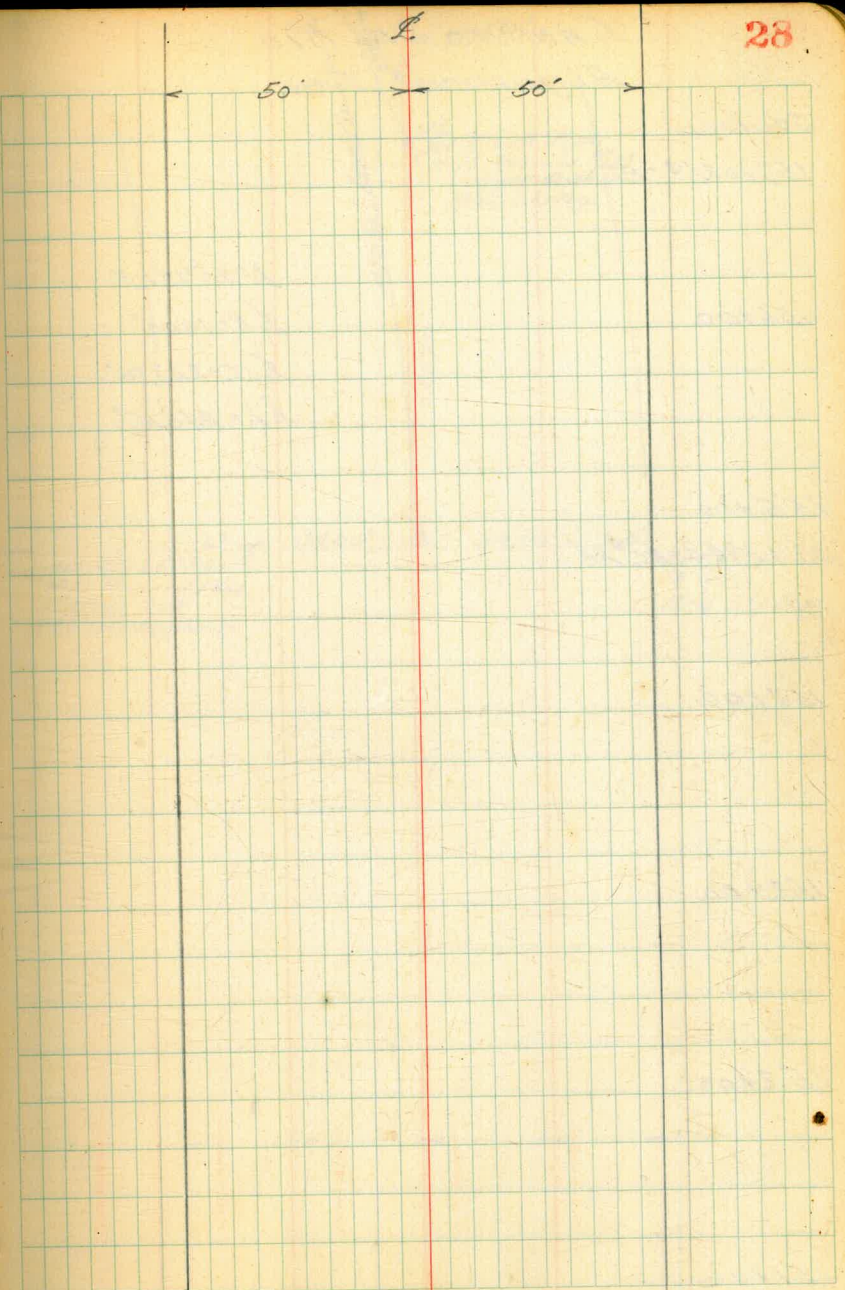
149+00

148+00

147+00

146+00

145+00



CAMINO DEL RIO
Alignment Ties

Station

157+02.13 = P.I.

156+00

$$\Delta = 25^{\circ}13'10''$$

$$L.R. = 1000'$$

$$L.S.T. = 223.70'$$

$$L.L. = 440.16'$$

155+00

17843 = B.C. Lt.

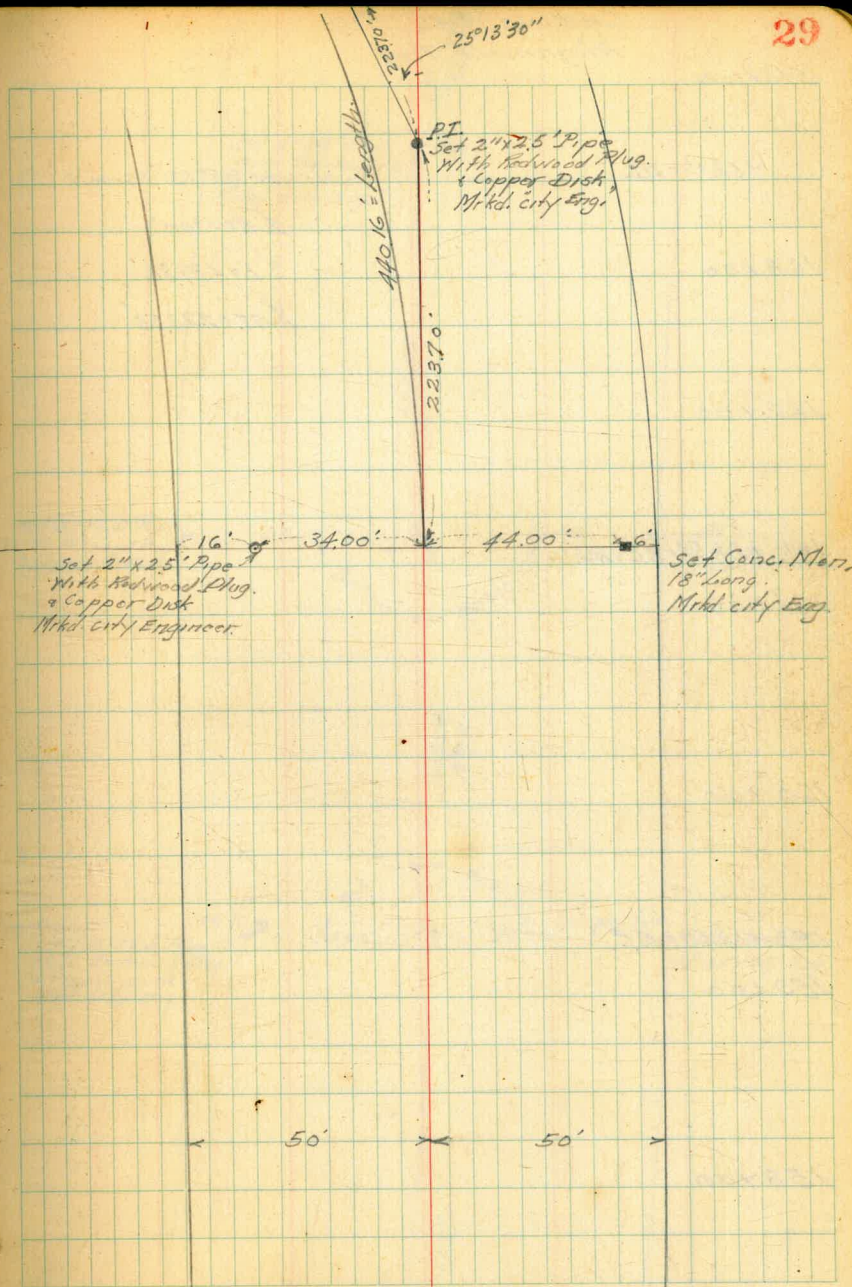
154+00

153+00

152+00

151+00

29



CAMINO DEL RIO
Alignment Ties

Station

+52.06 = P.I.

$\Delta = 2.5^\circ / 2 = \text{Turned}$

$R = 1000'$

163+00

$L = 439.82'$

$L_{ST} = 223.53'$

162+00

161+28.53 = B.C. Pt.

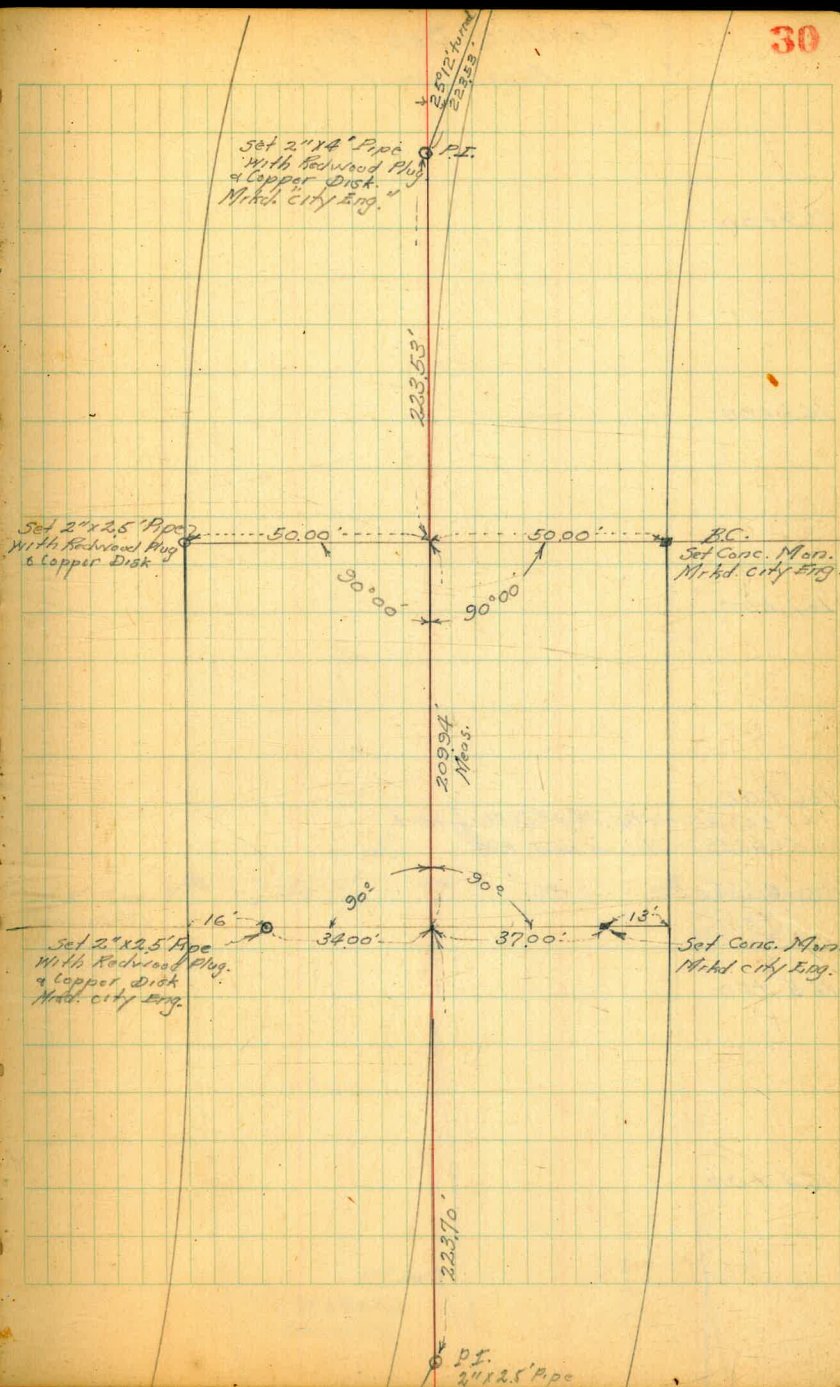
161+00

160+00

159+18.59 = E.C.

159+00

158+00



CAMINO DEL RIO
Alignment Ties.

169+00

168+00

167+00

166+00

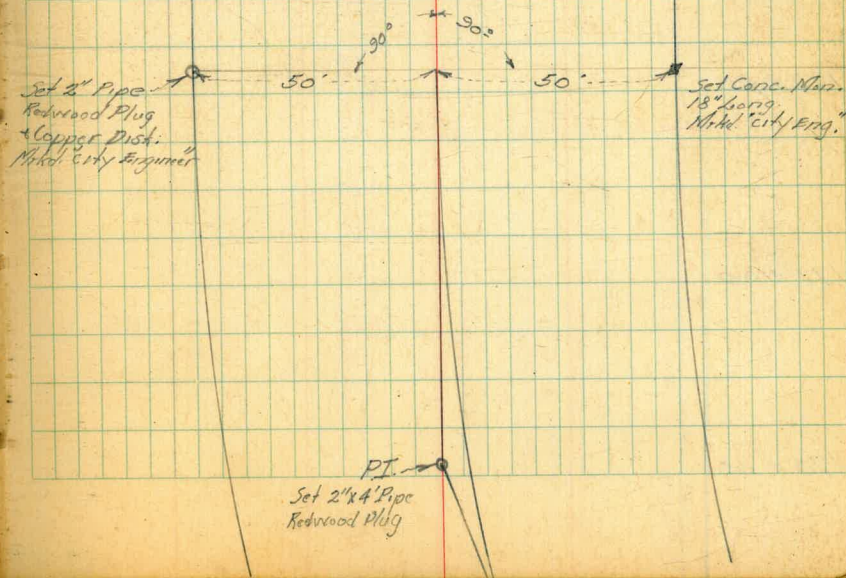
= 165+68.35 = old E.C. Map #5650 - L Street
165+68.53 } = This is new P.O.T.

165+68.35 = E.C.

165+00

164+00

31



CAMINO DEL RIO

Alignment Tie

176+00

175+00

174+00

173+00

172+00

171+00

170+00



Walker
8115
1st bill 1-7-41

CAMINO DEL RIO

Alignment Ties

+32.4 = FC

182+00

181+00

+41.48 = P.I.

$\Delta = 22^{\circ} 07'$

$R = 1000'$

180+00

$LST = 195.44'$

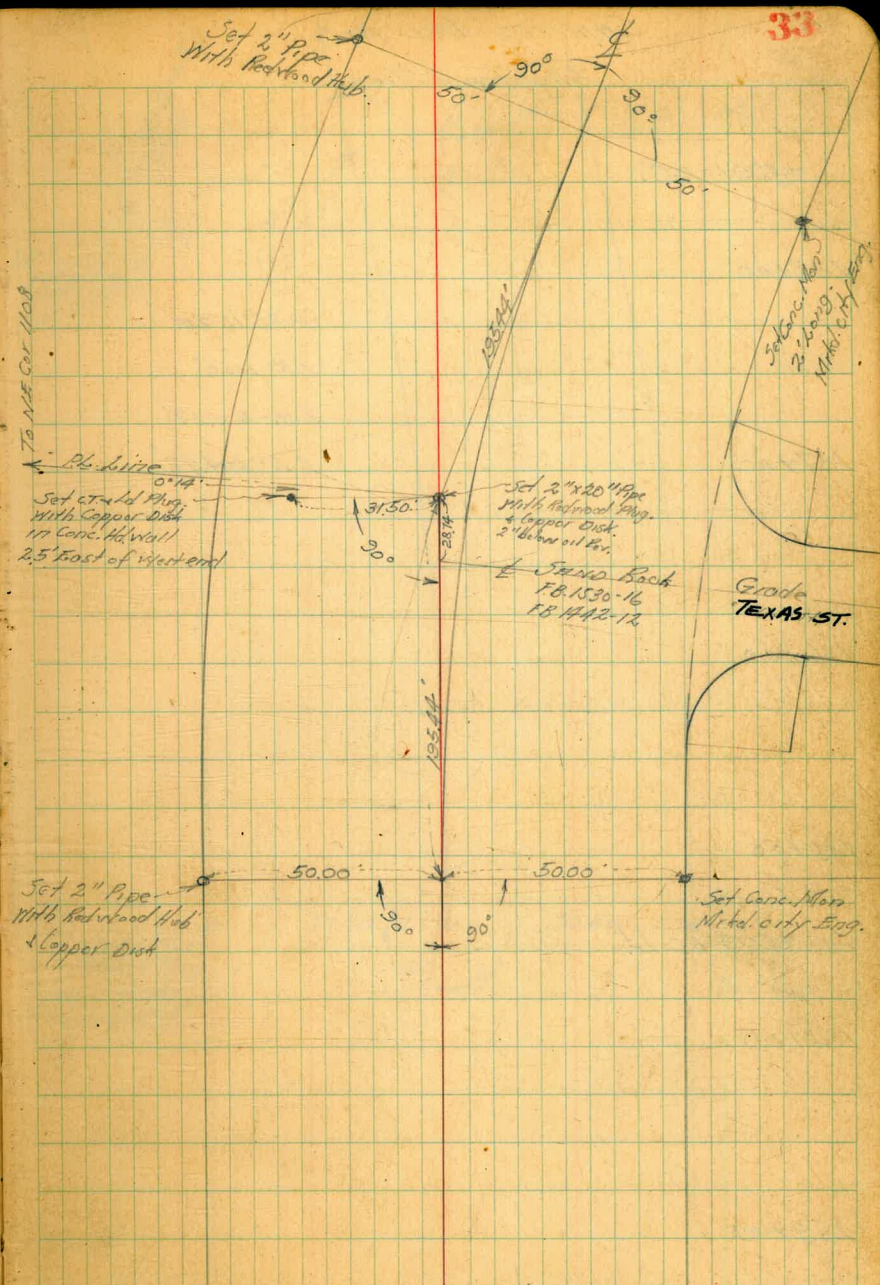
$SL = 386.00'$

179+00

+46.4 = P.C. RT

178+00

177+00



CAMINO DEL RIO

Alignment Ties

74291-B.C.

188+00

$\Delta = 23^{\circ}11'20''$

$R = 1000'$

$L = 205.17'$

187+00

$L = 404.72'$

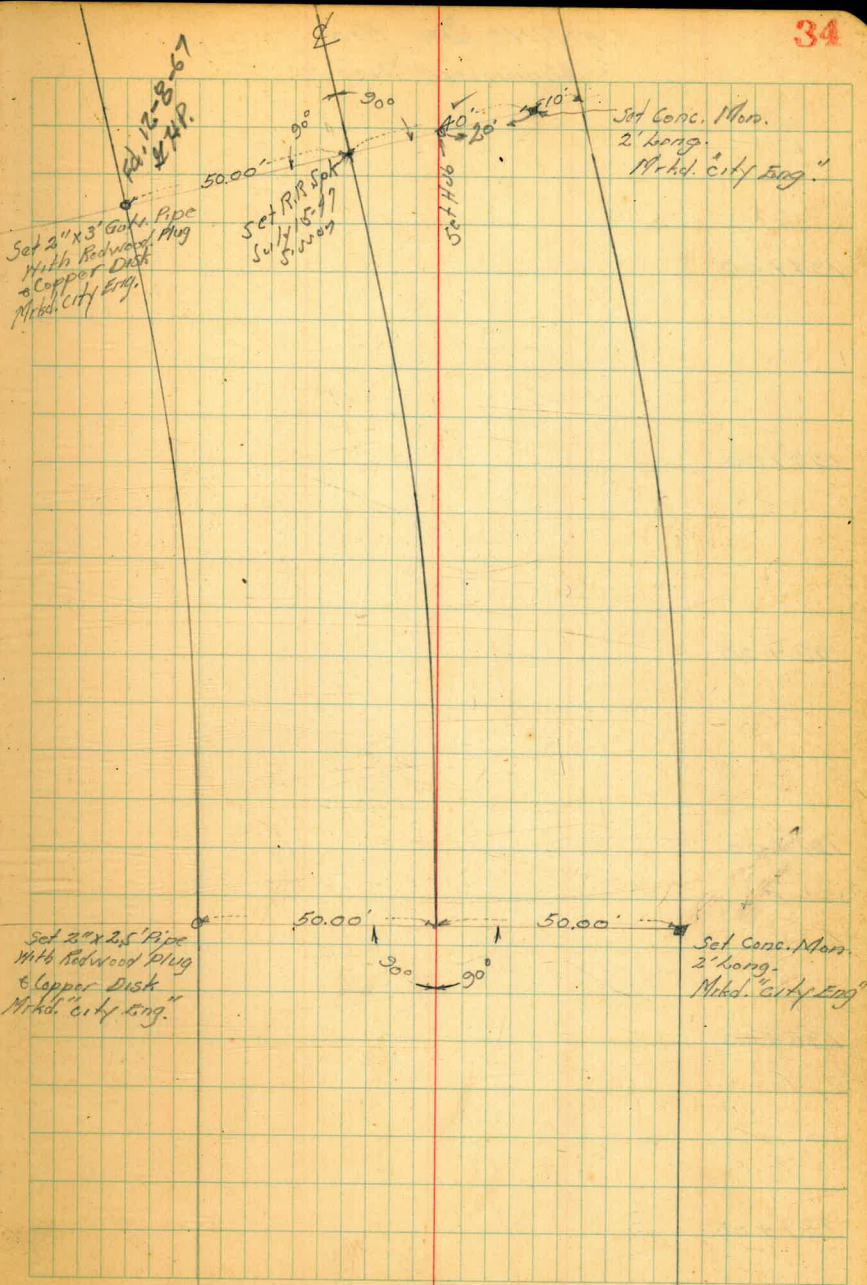
186+00

185+00

74519-B.C. Lt.

184+00

183+00



CAMINO DEL RIO
Alignment Ties

194+00

193+00

192+00

191+00

190+00

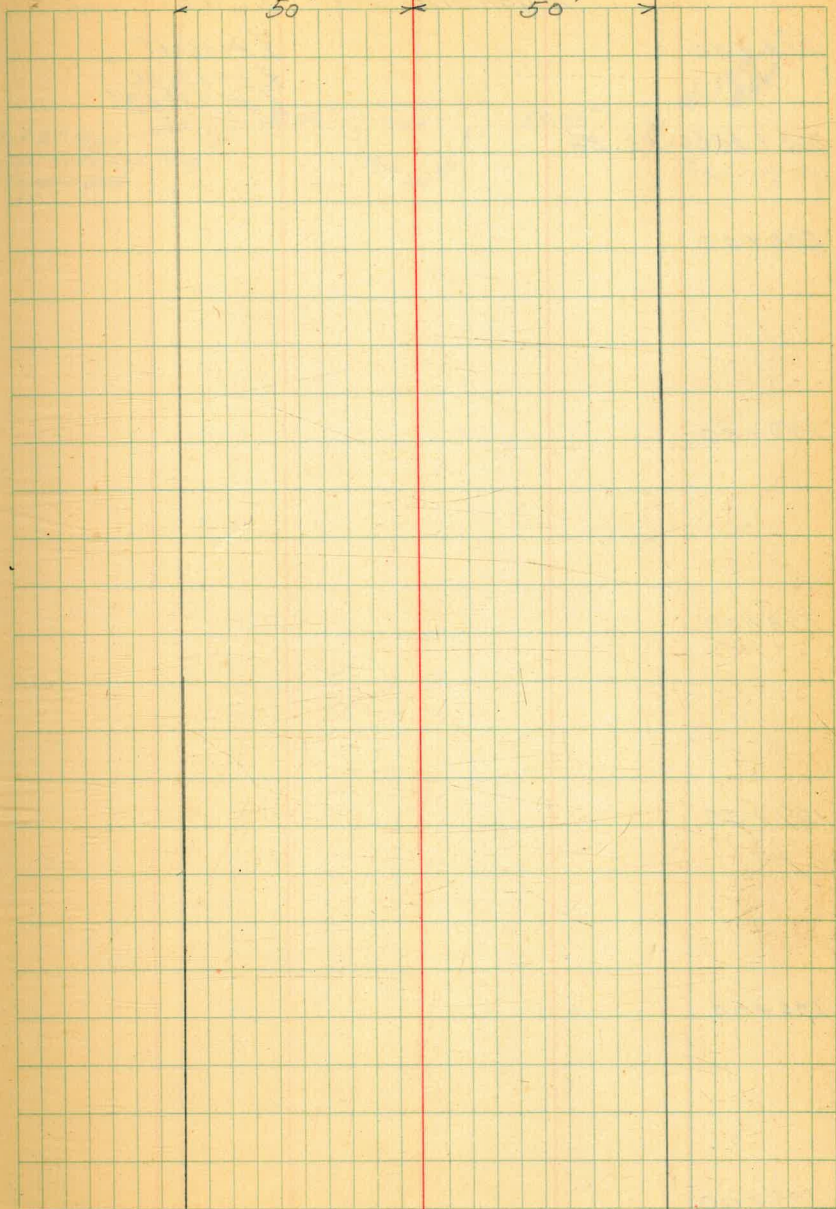
189+00

E

35

50'

50'



CAMINO DEL RIO

Alignment Ties $\Delta 6^{\circ}20'$ Turned

201+00

$L.R. = 1600'$

$L.L. = 176.86'$

$L.ST. = 88.52'$

200+44.80 = P.C. Pt.

200+00

199+00

198+00

197+00

196+00

195+00

Set 2" Pipe
with Redwood Plug
& Copper Dist.

50.00'

20° 90°

50.00'

Set Conc. Mark.
Mchd. City Eng.

pd. 12-8-67
BHP

Walker
Bliss
Isbell
1-7-41

CAMINO DEL RIO

Alignment Ties
Cont P. 38

71+00
+25
+50
+75
72+00
72+25
72+50
72+75

Stations are from East
from this B.C. to agree with
original ties etc.
18. 1530. 73
Country = 18. 727. (9. 2. 3)
Road Survey 219. 13

Station Backed up from
here to city Line East

(20° 08' Map)
 $\Delta = 20^{\circ} 09'$ turned
 $L.R. = 1869.74$
 $L.T. = 332.21'$
 $L.L. = 657.56'$

Use this station East (stations decreasing to East)
 $205 + 35.51 = \text{Mop.}$
 $205 + 35.44 = \text{B.C.}$
 $73+00.77$ from East. (Back 1530 - P. 73 - 72199.62)

205+00

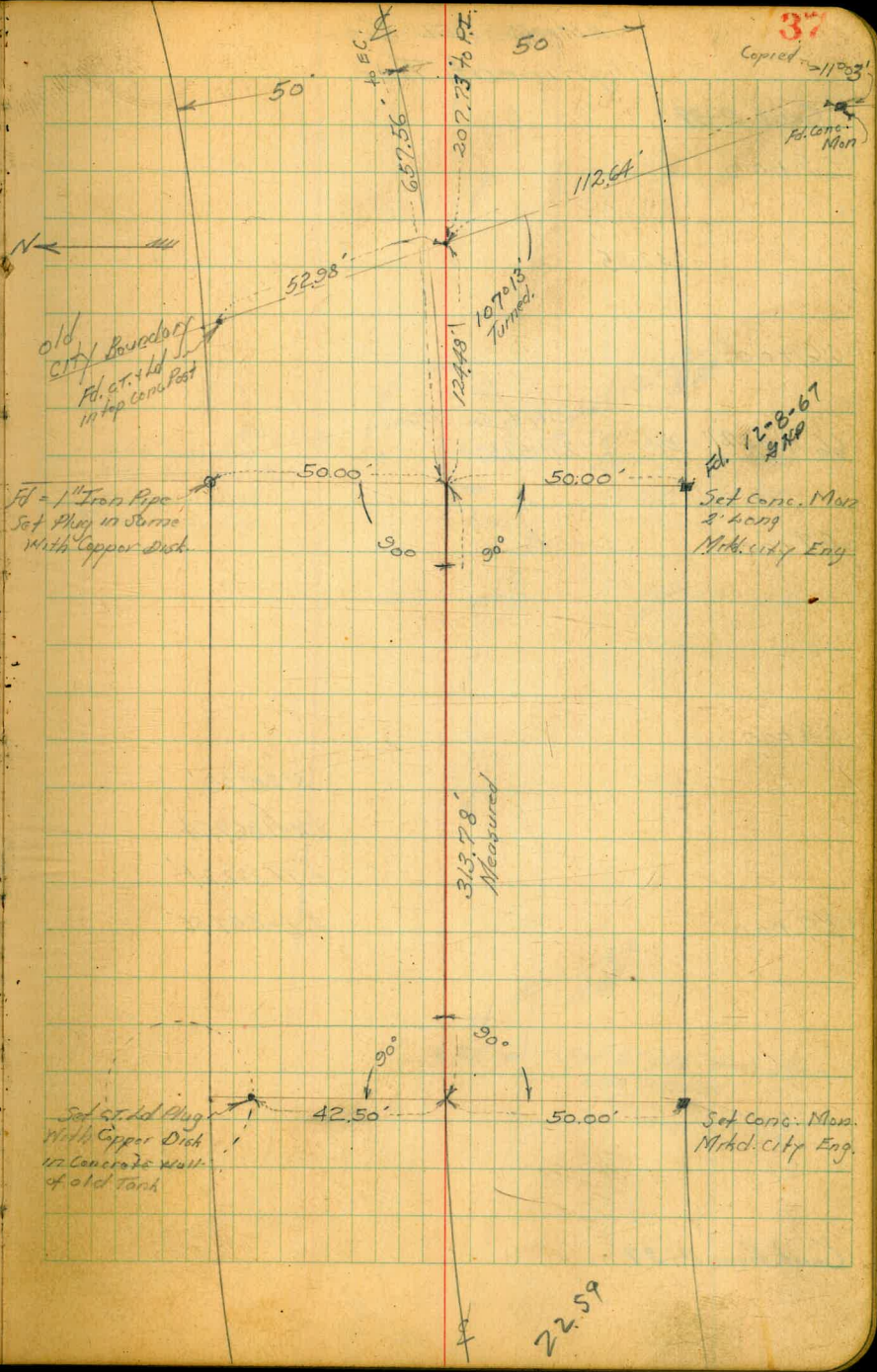
204+00

203+00

202+21.66 = E.C.

202+00

$\Delta = 6^{\circ} 20'$
 $L.R. = 1600'$
 $L.L. = 176.86'$
 $L.ST. = 88.52'$



CAMINO DEL RIO
Alignment Ties.

Cont P-39

65+00

242.85'

66+00

66+43.21 = B.C. city Sta. from old town.
211+93.00

67+00

68+00

$\Delta = 20^{\circ}09'$

$R = 1869.74'$

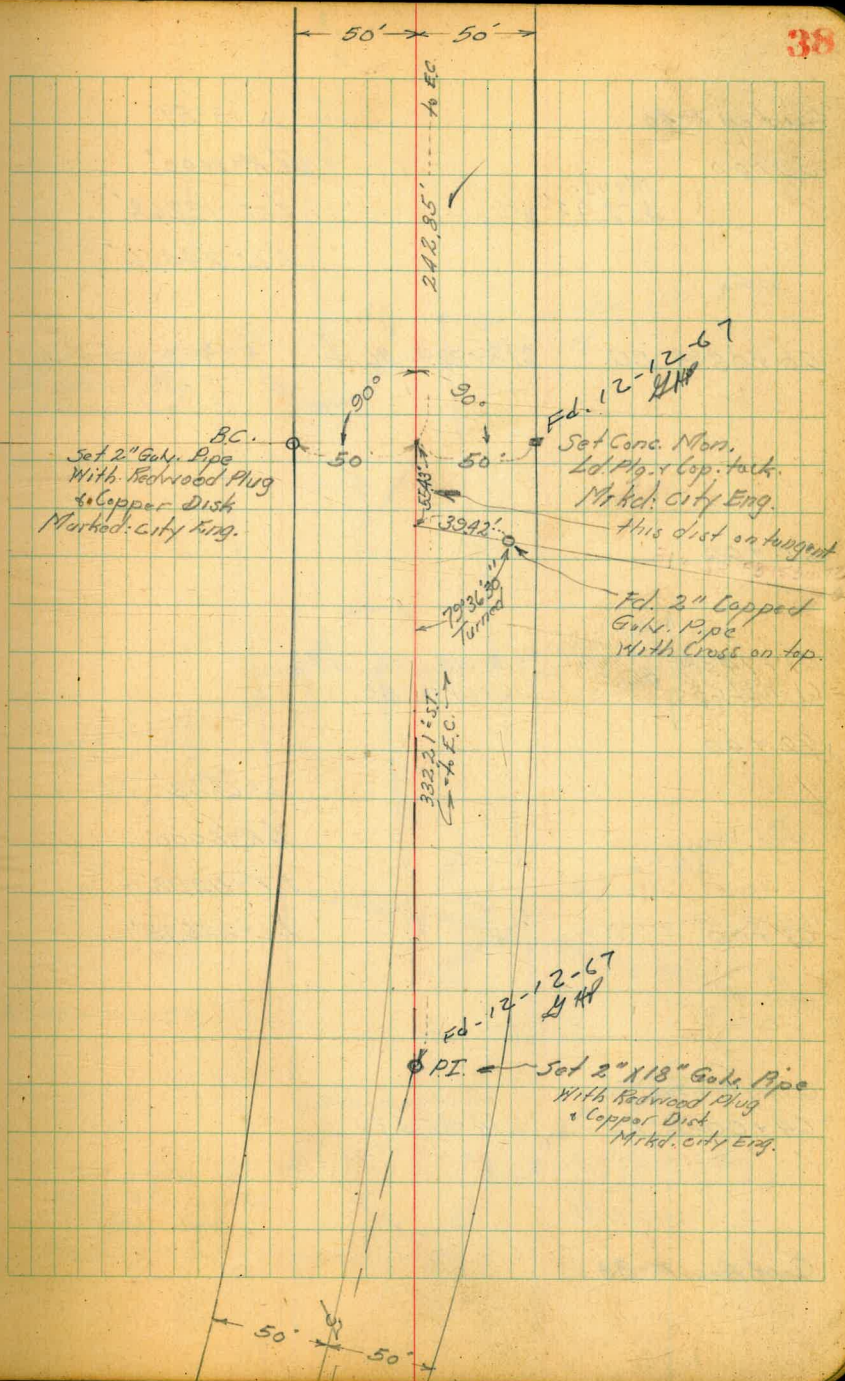
$LT = 332.21'$

69+00

$L = 657.56'$

70+00

Cont. from P-37



Cont on P-40

59+00

Maas.
452.93' V

$\Delta 13^{\circ} 59'$

$L R = 1000'$

$L T = 122.68'$

$L L = 244.06'$

60+03.94 = E.C.

218+32.02 = B.C.

61+00

61+74.38 = B.C.
= 61+74.63

city station from old town.
216+61.58 = E.C.

62+00

$\Delta = 6^{\circ} 28'$

$L R = 2000'$

$L T = 112.98'$

63+00

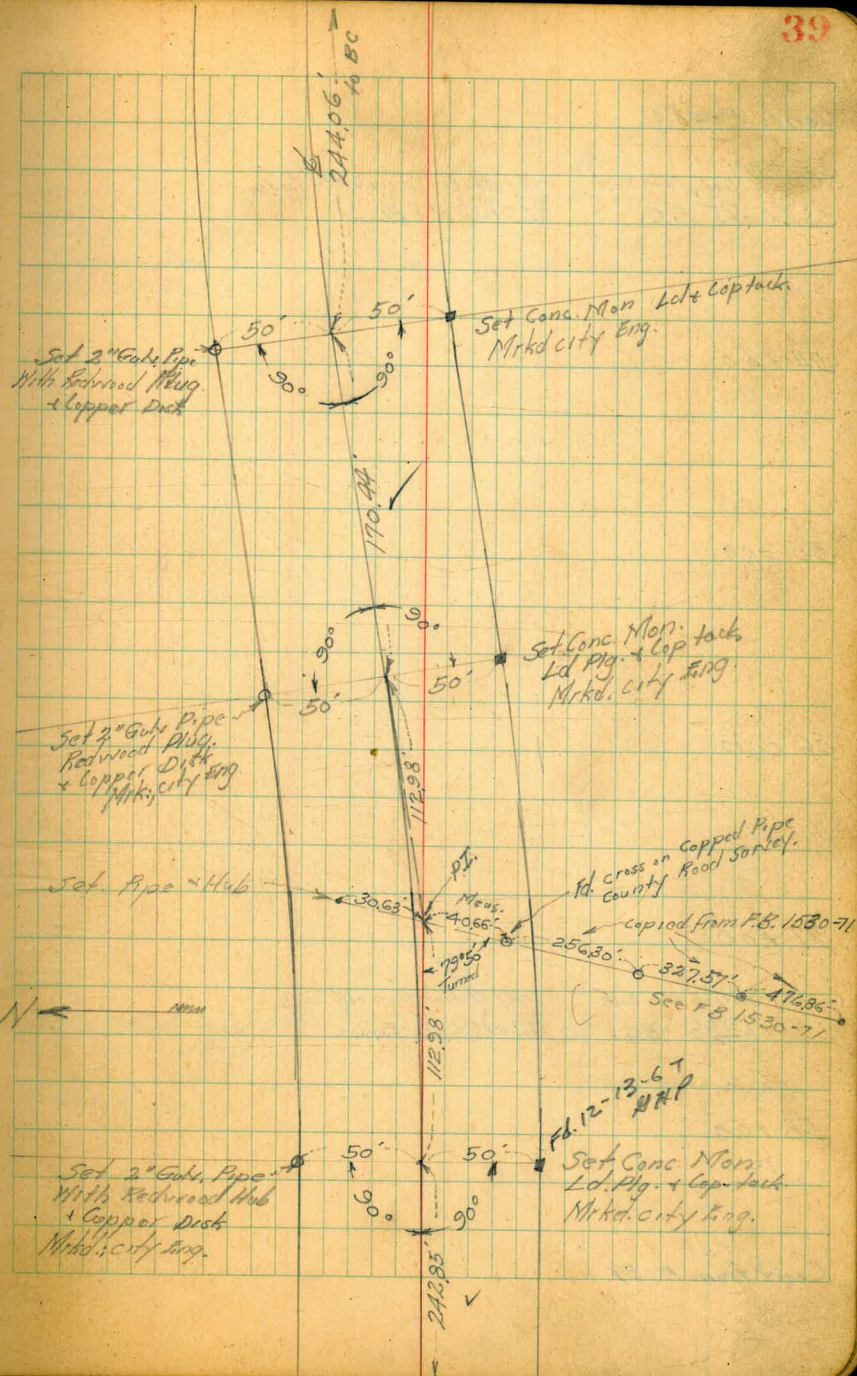
$L L = 225.79'$

County from east

= 64+00.36 = E.C.

city station from old town.
214+35.88 = B.C.

Cont. from P-38



Cont. P-41

53+00

County Station from East

53+06.95 = E.C.

City Station from old town

225+29.01 = B.C. Lt

54+00

55+00

56+00

57+00

County Station from East

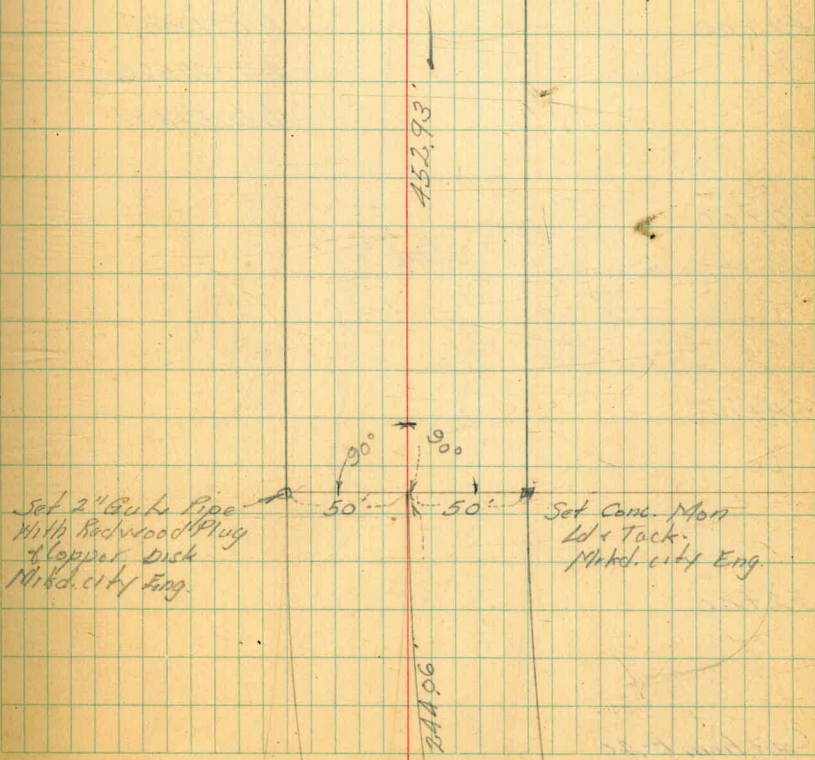
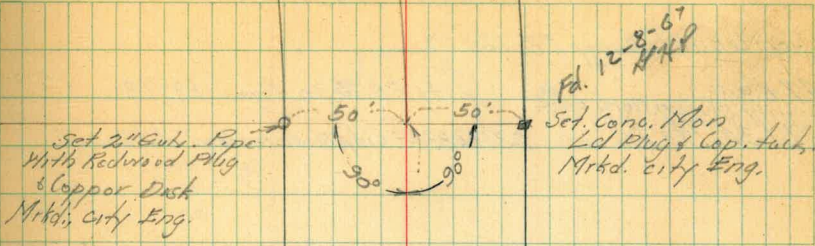
57+69.88 = B.C.

City Station from old town

220+76.08 = E.C.

58+00

Cont from P-39



50' 50'

CAMINO DEL RIO

Alignment ties

Continued County F&B 727-9

47+00 County Station from East City F&B 1530 Pages 69-73
 47+32.74 = B.C. 231+03.22 = city station from old town

48+00

49+00

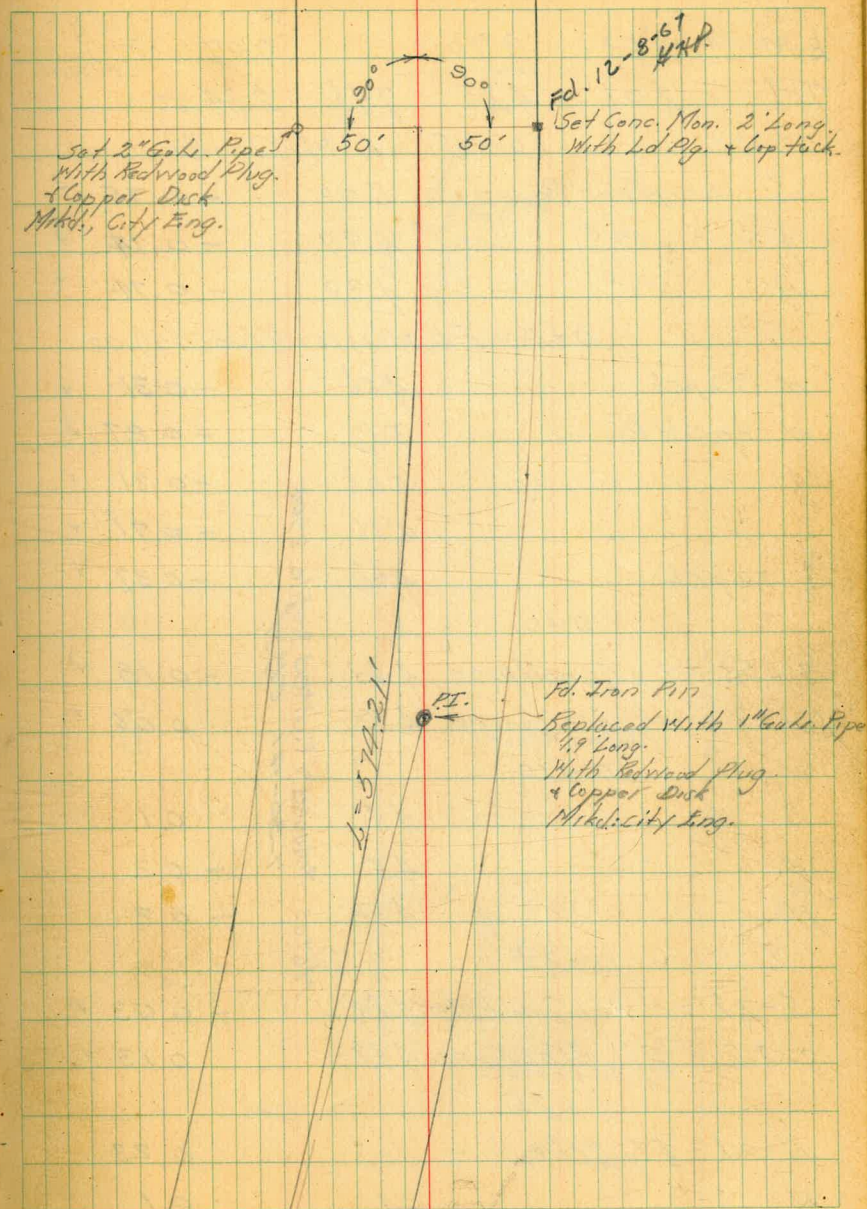
$\Delta = 32.54'$
 $L.R = 1000'$
 $L.T = 295.26'$
 $L.L = 574.21'$

50+00

51+00

52+00

Cont. from P. 40



Set 2" Galv. Pipe
 With Redwood Plug
 & Copper Disk
 M.H.S., City Eng.

Ed. 12-8-67
 Set Conc. Mon. 2' Long.
 With L.d. Pig. & Cap tack.

L = 574.21'

Ed. Iron Pin
 Replaced with 1" Galv. Pipe
 1.9' Long.
 With Redwood Plug
 & Copper Disk
 M.H.S., City Eng.

Cross Section Alley Block 163 Mission Beach
From Mission Blvd to Bayside Lane

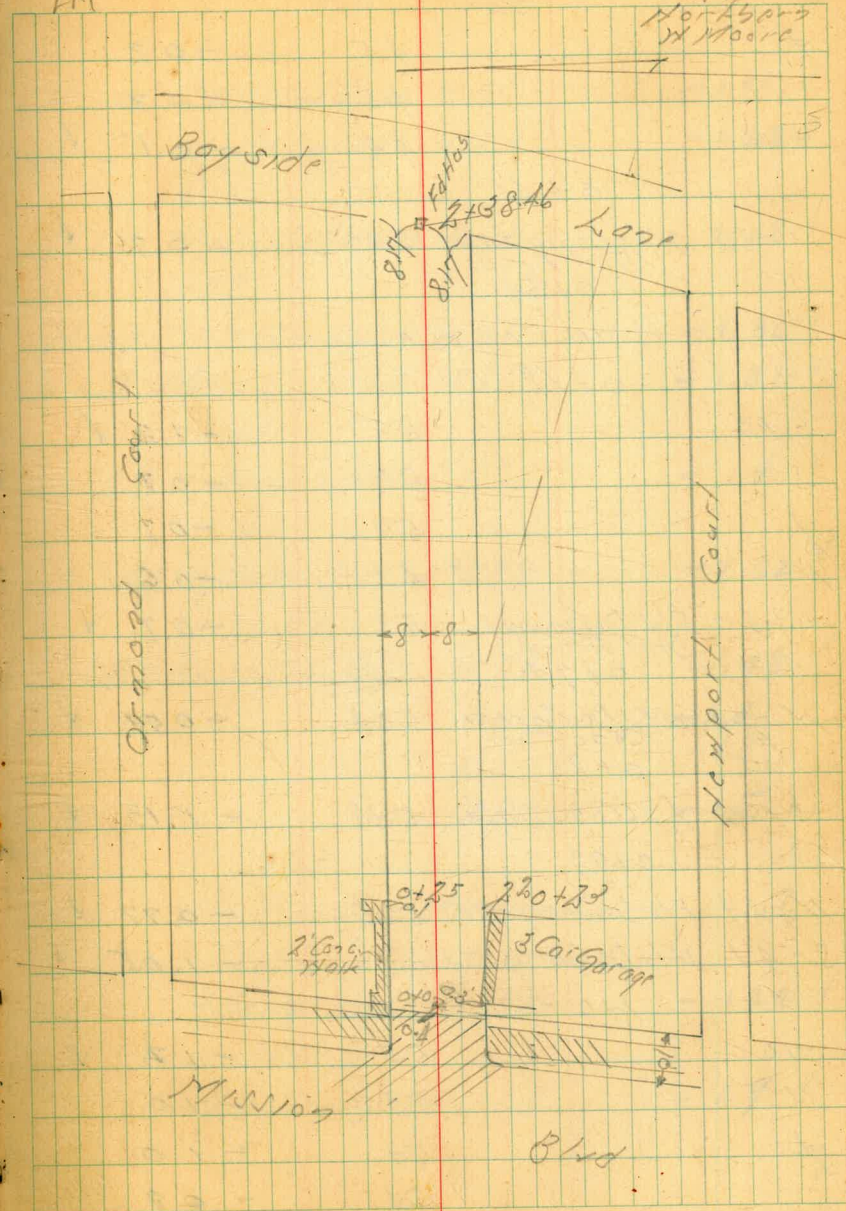
B.M.	2.63	9.70	7.07	SW BP San Juan Seawall
TP	2.01	4.25	7.46	2.24
0+10 = FCB Mission Blvd				
S	0.9	4.99	5.00	-0.75 ✓
L	"	"	"	4.99 -0.74 ✓
H	"	"	"	4.99 -0.74 ✓
0+0 = FL Mission Blvd 0.9109				
H Topcb		4.56		-0.31 ✓
H on Old Pavng		5.12		-0.87 ✓
L		5.06		-0.81 ✓
S		5.16		-0.91 ✓
S Topcb		4.62		-0.37 ✓
0+0				
S +0.3 = Hly Conc Appro		4.43		-0.18 ✓
S -0.8 = Hly 3 Car Garage Conc Floor		4.19		0.06 ✓
0+10				
S		4.2		0.1
L		4.5		-0.2
H		4.5		-0.2
0+23				
S -2.2 = H Fly Conc Appro		4.28		-0.03 ✓
S -2.2 = Fly 3 Car Garage Conc Floor		4.12		0.13 ✓
0+25				
H -0.1 = Fly 2 Conc Walk		4.02		0.23
H		4.4		-0.1

Notes Reduced & Plotted Profile 2904
7-30-41 C.B.H.

Indexed
LM

July 28-41 42

S. J. 02
North Beach
Mission



Cross of Mission
& Streetway

425

Z	4.5	-0.2
S	4.5	-0.2
+10	4.4	-0.1 ✓
0+41		
H-3.2 = H 1/4 Do Garage	5.0	-0.7 ✓
Dirt Floor		
0+54		
S = Fly Power + Tel. Pole		
0+62		
-10	5.5	-1.2 ✓
S	5.0	-0.7
Z	5.0	-0.7
H	4.9	-0.6
+3.4 = Fly Do Garage	5.0	-0.7 ✓
Dirt Floor		
0+74		
H-2.4 = H 1/4 Do Garage	5.04	-0.79 ✓
Conc Floor		
0+85		
S-0.3 = 1/2 16 Conc Walk	5.38	-1.13 ✓
0+92		
H-2.4 = Fly Do Garage C.F.	5.02	-0.77 ✓
S-4.1 = H 1/4 Do Garage C.F.	5.30	-1.05 ✓
1+0		
-10	5.5	-1.2 ✓
H	5.3	-1.0
Z	5.3	-1.0
S	5.4	-0.9

425

1+06		
H-0.2 = S 1/4 Conc Floor	5.56	-1.31 ✓
H-2.8 = H 1/4 Do Garage	5.53	-1.28 ✓
Conc Floor		
1+10		
S-4.1 = Fly Do Garage C.F.	5.33	-1.08 ✓
1+22		
H-0.2 = S Fly Conc Floor	5.61	-1.36 ✓
H-2.8 = Fly Do Garage C.F.	5.56	-1.31 ✓
1+32		
H-2.8 = Z Garage Dirt Floor	5.7	-1.4 ✓
1+43		
H-4.2 = Z Garage Conc Floor	5.87	-1.62 ✓
1+51		
-5.2 = Z Garage Conc Floor	5.73	-1.48 ✓
S	5.8	-1.5
Z	5.8	-1.5
H	5.8	-1.5
1+73		
S+0.4 = Fly Power + Tel Pole		
1+78		
H-3.2 = Z Garage Wood Floor	5.49	-1.24 ✓
1+82		
S-6.2 = Z Garage Dirt Floor	6.2	-1.9 ✓

425

210

-10		5.9	-1.6	✓
H		5.8	-1.5	
$\frac{1}{2}$		6.0	-1.7	
S		6.0	-1.7	
+10		6.0	-1.7	✓

2+21

-10		6.3	-2.0	✓
S		5.9	-1.6	
$\frac{1}{2}$		5.9	-1.6	
H	= 5 Fly Conc Apron	5.96	-1.71	✓
+10	= Fly DuGarop C.F.	5.69	-1.44	✓

2+36

H	5 Fly Conc Apron	5.88	-1.63	✓
H	-1.0 = Fly DuGarop Conc Floor	5.68	-1.43	✓

2+38.46 = Fly Bay side Lane on Diag.

H		5.6	-1.3	
$\frac{1}{2}$		5.8	-1.5	
S		5.8	-1.5	
+10		6.0	-1.7	✓

X sec FELTON ST = 60' wide Indexed
 10' curbs LM
 10' 1/2 S
 3' CON GUT, S

191.67 = H.T. from P. 45

R STA. = N.L. A ST = 0+10

F	6.6	185.1
cb	7.2	184.5
1/2	7.6	184.1
c	7.8	183.9
1/2	8.2	183.5
+8	8.7	183.0
cb	8.2	183.5
w	8.4	183.3

0+58.26 = Pueblo line R STA.

w	4.4	187.3
cb Top end cb	4.69	186.98
gut	5.26	186.41
+3 edge con. gut	5.12	186.55
1/2	4.9	186.8
c	4.4	187.3
1/2	4.4	187.3
+7	4.22	187.45
gut	4.39	187.28
cb Top end curb	3.58	188.09
E	3.2	188.5

1+02.26 R STA

F	0.4	191.3
---	-----	-------

191.67

46

cb Top cem.	0.63	191.04
gut	1.40	190.27
+3 edge con. gut	1.20	190.47
1/2	1.6	190.1
c	1.6	190.1
1/2	2.10	189.7
+7	2.36	189.31
gut	2.55	189.12
cb Top cem	1.91	189.76
w	1.7	190.0

186.11

INAPPTS on A ST.

	0 + 28.5		
N		6.2	179.9
N	- 7.6 ♀ 3' ^{CEM.} WALK	5.57	180.57
	0 + 46.5		
N		5.3	180.8
N	- 20.7 ♀ apron ^{CEM.}	4.20	181.91
N	- 24.7 ♀ Sid. gar	3.71	182.41 ^{CEM. floor}
	0 + 72.5		
N		4.0	182.1
N	- 7.6 ♀ 3' ^{CEM.} WALK	3.08	183.03
	0 + 90.5		
N		3.0	183.1
N	- 20.7 ♀ ^{CEM.} apron	1.80	184.31
N	- 24.7 ♀ Sid. gar	1.43	184.68 ^{CEM. floor}
	0 + 65		
	Cont. x sec of A St. from P45		
N		4.3	181.8
cb		5.1	181.0
1/4		5.6	180.5
+9		5.6	180.5
c		7.3	178.8
1/4		15.4	170.7
cb		16.4	169.7
S		18.5	167.6
+20		21.1	165.0

186.11

47

	0 + 75		
- 2.5		23.4	162.7
S		21.9	164.2
cb		18.9	167.2
1/4		12.0	174.1
c		5.5	180.6
	0 + 85		
- 20		19.1	167.0
S		15.4	170.7
cb		17.6	168.5
1/4		8.1	178.0
+8		4.0	182.1
+10		4.2	181.9
c		4.2	181.9
1/4		5.1	181.0
cb		4.4	181.7
N		3.1	183.0
	1 + 03.55		
	w/ k FELTON to north		
N		2.8	183.3
cb		4.0	182.1
1/4		4.6	181.5
c		4.9	181.2
+10		5.1	181.0
1/4		4.4	181.7
+9		9.4	176.7
cb		9.8	176.3
S		11.2	174.9
+20		14.2	171.9

186.11

1 + 33.55 2 Felton

-10	7.4	178.7
S	4.9	179.2
cb	6.0	180.1
1/4	5.0	181.1
c	4.3	181.8
1/4	3.8	182.3
cb	3.1	183.0
N	2.2	183.9

1 + 63.55 E L Felton to North

1/4	0.9	185.2
cb	2.2	183.9
1/2	2.9	183.2
c	3.6	182.5
1/4	3.8	182.3
cb	3.5	182.6
S	3.0	183.1

T.P. 6.88 191.59 1.40 184.71

2 + 00

S	5.7	185.9
cb	5.5	186.1
1/4	5.5	186.1
c	5.6	186.0

191.59

48

1/4	5.2	186.4
cb	5.2	186.4
+5	4.9	186.7
+10	2.5	189.1
N	1.9	189.7
2 + 25		
N	0.5	191.1
+4	0.6	191.0
+10	2.6	189.0
cb	2.7	188.9
1/4	3.0	188.6
c	3.1	188.5
1/4	2.6	189.0
cb	2.8	188.8
S	3.5	188.1
2 + 50		
S	2.8	188.8
cb	2.3	189.3
1/4	2.0	189.6
c	2.3	189.3
1/4	1.6	190.0
cb	1.0	190.6
N	+ 0.2	191.8
2 + 75		
N	1.2	190.4

191.59

cb	2.0	189.6
1/4	2.6	189.0
c	2.7	188.9
1/4	2.7	188.9
cb	2.7	188.9
S	2.8	188.8

3 + 00

S	5.2	186.4
cb	5.4	186.2
1/4	5.7	185.9
c	5.5	186.1
1/4	5.6	186.0
cb	4.6	187.0
N	4.5	187.1

3 + 50

N	10.8	180.8
cb	11.5	180.1
1/4	12.0	179.6
c	12.3	179.3
1/4	12.4	179.2
cb	11.9	179.7
S	10.9	180.7

T.P. 0.87 180.03 12.43 179.16

180.03

49

4 + 00		
S	4.9	175.1
cb	5.8	174.2
1/4	6.7	173.3
c	7.3	172.7
1/4	7.6	172.4
cb	6.7	173.3
N	5.8	174.2

4 + 25

-10	9.7	170.3
N	10.8	169.2
cb	12.0	168.0
1/4	12.7	167.3
c	12.3	167.7
1/4	10.9	169.1
cb	10.6	169.4
S	8.0	172.0

4 + 50

S	8.1	171.9
cb	11.0	169.0
1/4	13.6	166.4
c	14.1	163.9
1/4	18.4	161.4
cb	21.1	158.9
N	17.5	162.5
+10	13.0	167.0

180.03

5+00		
-15	26.4	153.6
N	29.8	150.2
cb	27.6	152.4
1/4	23.6	156.4
c	18.8	161.2
1/4	15.7	164.3
cb	12.2	167.8
S	8.7	171.3

5+50

S	11.1	168.9
cb	14.8	165.2
1/4	18.0	162.0
c	21.4	158.6
1/4	27.5	152.5
cb	32.6	147.4
N	37.8	142.2
+4	38.7	141.3
+20	33.2	146.8

6+00.6 w.k. 34th ST to South

-20	41.2	138.8
-7	46.6	133.4
N	45.4	134.6
cb	37.4	142.6
1/4	37.5	147.5

180.03

50

c	27.3	152.7
1/4	21.2	158.8
cb	17.6	162.4
S	14.0	166.0

T.P. 12.62 191.78 0.87 179.16

T.P. 12.94 202.27 2.25 189.33

T.P. 4.30 205.20 1.37 200.90

check to Orig. B.M. 3.20 202.00 204.99
0.01

170.10

0+00 = E.L. Fanuel - on pave.

S	10.1	160.0
cb. - top cb.	10.12	159.98
gut on pave	10.73	159.37
1/4 " "	10.30	159.80
E " "	9.89	160.21
1/4 " "	9.78	160.32
cb. - gut " "	9.76	160.34
top cb.	9.06	161.04
N.	8.9	161.2

0+05

N	7.4	162.7
cb	7.6	162.5
1/4	7.8	162.3
E	8.0	162.1
1/4	8.7	161.4
cb	8.6	161.5
S	8.4	161.7

0+50

S	7.1	163.0
cb	7.0	163.1
1/4	6.7	163.4
E	6.2	163.9
1/4	6.1	164.0
cb	6.1	164.0
N	6.1	164.0

170.10

1+00

N	3.9	166.2
cb	4.2	165.9
1/4	4.6	165.5
E	4.6	165.5
1/4	4.7	165.4
cb	5.2	164.9
S	5.2	164.9

1+20 = opp. W.L. Alley to N.

S	4.5	165.6
cb	4.4	165.7
1/4	4.0	166.1
E	3.9	166.2
1/4	3.6	166.5
cb	3.3	166.8
N. = W.L. Alley N.L. Tour.	3.1	167.0

1+40 = E.L. Alley. on N

N	2.3	167.8	
cb	2.4	167.7	
1/4	2.7	167.4	
E	2.9	167.2	
1/4	3.1	167.0	
cb	3.7	166.4	
S.	3.9	166.2	
T.P. 949	177.54	2.05	168.05

52

177.54

2+00

S	9.4	168.1
cb	9.3	168.2
1/4	8.9	168.6
⊕	8.7	168.8
1/4	8.5	169.0
cb	8.0	169.5
N	7.5	170.0

2+50

N	6.0	171.5
cb	6.6	170.9
1/4	6.8	170.7
⊕	6.9	170.6
1/4	7.4	170.1
cb	7.6	169.9
S	7.9	169.6

2+91.8 = w.l. of large lot in st. (see sketch)

S	6.9	170.6
cb	6.4	171.1
+5 = S.L. lot.	6.3	171.2
1/4	6.1	171.4
⊕	5.7	171.8
1/4	5.2	172.3
cb	4.9	172.6
N	4.5	173.0

177.54

2+95

N	4.1	173.4
cb	4.4	173.1
1/4	4.5	173.0
⊕	4.8	172.7
1/4	4.8	172.7
+5	5.0	172.5
+8	6.3	171.2
cb	6.4	171.1
S	6.6	170.9

3+50

S	5.3	172.2
cb	4.8	172.7
1/4	4.5	173.0
⊕	3.8	173.7
1/4	3.5	174.0
cb	3.1	174.4
N	2.6	174.9

4+00

N	1.3	176.2
cb	2.0	175.5
1/4	2.3	175.2
⊕	2.7	174.8
1/4	3.0	174.5
cb	4.0	173.5
S	4.6	172.9

53

✓
177.54

4+23.8 = E.L. large lot in st.

s	4.9	172.6
cb	4.2	173.3
+5 = sE, cor lot.	3.3	174.2
1/4	3.0	174.5
⊖	2.7	174.8
1/4	1.9	175.6
cb	1.5	176.0
N.	0.8	176.7
T.P.	3.79	173.75

11.48 185.23

4+50

N	9.0	176.2
cb	10.0	175.2
1/4	10.5	174.7
⊖	11.1	174.1
1/4	11.9	173.3
cb	12.7	172.5
s	12.7	172.5

4+96.78 = W.L. Gresham

s	11.0	174.2
cb.	10.7	174.5
1/4	10.5	174.7
⊖	10.0	175.2
1/4	9.9	175.3
cb	9.5	175.7
N	9.2	176.0

✓
185.23

54

5+16.78 = W.cb. Gresham

N	9.0	176.2
cb	9.4	175.8
1/4	9.5	175.7
⊖	9.8	175.4
1/4	10.2	175.0
cb	10.4	174.8
s	11.0	174.2

5+36.78 = ⊖ Gresham

s	11.7	173.5
cb	10.9	174.3
1/4	10.8	174.4
⊖	10.4	174.8
1/4	9.7	175.5
cb	9.2	176.0
N.	8.9	176.3

5+56.78 E.cb.

N.	8.9	176.3
cb	9.2	176.0
1/4	9.9	175.3
⊖	10.2	175.0
1/4	10.6	174.6
cb.	10.6	174.6
s	10.7	174.5

185.23

5+75.78 = 1' W. of E.L. to show dirt on pave.

s	11.7	173.5
cb	11.7	173.5
1/4	11.7	173.5
E	11.5	173.7
1/4	11.3	173.9
cb	11.4	173.8
N.	11.2	174.0

5+76.78 = E.L. Gresham

N	11.2	174.0
Note: 0.9' W. of E.L. Gresham.		
+ 12.8 = end of cb. top	12.26	172.97
gut. on pave.	12.80	172.43
cb. " "	12.76	172.47
1/4	12.50	172.73
E	12.48	172.75
1/4	12.72	172.51
cb	13.13	172.10
+ 1.4 = gut	13.16	172.07
End. cb + pave. 0.24' E. of E.L. top cb.	12.55	172.68
s	11.7	173.5

5+86.78 approx. p.c. of Ret. 30' R. =

S. cb. top cb	12.35	172.88
gut.	12.97	172.26
E	12.32	172.91
N. cb gut	12.45	172.78
Top cb.	11.92	173.31
6+40 - N. gut	11.01	174.22
S gut to show drainage	12.56	172.67

Gresham st. Tourmaline to Foothill Blvd.

80' st. 20' cbs 10' 1/4'

Indexed

55

LM

← See other page 185.23 →

0+00 = N.L. Tourmaline

E	11.2	174.0
cb	8.9	176.3
1/4	8.8	176.4
E	8.9	176.3
1/4	8.8	176.4
cb	9.0	176.2
w	9.2	176.0

0+05

E	7.8	177.4
cb	8.6	176.6
1/4	8.6	176.6
E	8.7	176.5

0+50

w	6.6	178.6
cb	7.1	178.1
1/4	7.3	177.9
E	7.3	177.9
1/4	7.3	177.9
cb	7.1	178.1
E	6.6	178.6

1+00

E	4.1	181.1
cb	4.4	180.8

Ret. Y Plotted 9-26-41 Profile 2554
CDH

185.23

1/4	4.4	180.8
E	4.5	180.7
1/4	4.4	180.8
cb	4.4	180.8
w.	4.3	180.9

1+28.43 = E.L. Gresham + S.L. Foothill

w.	2.6	182.6
cb	2.7	182.5
1/4	3.0	182.2
E	3.3	181.9
1/4	3.3	181.9
cb	3.0	182.2
E	3.0	182.2

1+28.43 on diagonal at edge of pav.

E	3.0	182.2
+21.25 = end cb. top cb.	3.09	182.16
gut on pav	3.68	181.55
+12.87 w = 1/4 "	3.26	181.97
+12.87 w = E	2.89	182.34
" " " 1/4	2.75	182.48
" " " gut on pav	2.83	182.40
end cb. top cb.	2.20	183.03
+22.1 w. = S.L. Foothill	0.7	184.5

1+39.2 = End of cb. + pav. on E. See dia. sect. for elev.

1+53.9 = Gresham
S.L. Foothill

w.	1.3	183.9
----	-----	-------

56

185.23

cb	1.8	183.4
1/4	2.4	182.8
E on edge of pave.	2.89	182.34
T.P.	1.20	184.03

2.51 186.54

1+67.6 = End cb. + pav. on W. See dia. for elev.

1+79.4 = W.L. Gresham + S.L. Foothill

w.	2.0	184.5
----	-----	-------

Cb. Return on W. 33 around - 4 parts

S. end on S.L. Foothill

Top cb	3.51	183.03
gut	4.14	182.40
1/4		

Top cb	3.33	183.21
gut	3.90	182.64

E

Top cb	3.12	183.42
gut	3.71	182.83

1/4

Top cb	2.91	183.63
gut.	3.50	183.04

N. end = pc. on S. cb. line of Foothill

Top cb	2.84	183.70
gut.	3.38	183.16

186.54

cb. Return on E. 31.8' around - 4 parts

S. end - on S.L. Foothill

Top cb 4.38 182.16

gut. 4.99 181.55

1/4

Top. cb. 4.38 182.16

gut. 4.97 181.57

E

Top 4.45 182.09

gut 5.06 181.48

1/4

Top 4.52 182.02

gut 5.18 181.36

N. end - on p.c. on S. cb. line of Foothill

Top 4.70 181.84

gut 5.30 181.24

T.P. 3.97 182.57

1.35	183.92	12.02	171.90
1.85	173.75	6.76	166.99

See p. 51 check
Alley pipe

Sapphire St. - Fanuel to Foothill Blvd.

70' st 15' cbs 10' 1/4's

Indexed 57
LM

See other page

173.75

0-20 = E. cb. Fanuel - paved Conc.

S-5 = pc. Ret. 20' Rad. Top cb. 10.28 163.47

gut 10.89 162.86

S 10.85 162.90

cb. 10.79 162.96

E 10.56 163.19

cb 10.54 163.21

N 10.45 163.30

N+5 = gut 10.37 163.38

P.C. Ret. 20' R. top cb. 9.66 164.09

Half way around Ret.

N. - Top cb 9.26 164.49

gut 10.00 163.75

S - Top cb 9.45 164.30

gut 10.16 163.59

0+00 = E.L. Fanuel - on edge of pav.

S 9.3 164.5

cb top 8.29 165.46

gut 8.93 164.82

1/4 8.71 165.04

E 8.57 165.18

1/4 8.75 165.00

cb. gut 8.95 164.80

top cb. 8.33 165.42

N. 8.7 165.1

Red. Plot 9-24-41
C.D.H.

173.75

0+10

N	6.9	166.9
cb	6.8	167.0
1/4	7.1	166.7
E	7.2	166.5
1/4	7.4	166.4
cb	7.3	166.5
S	7.4	166.4

0+50

S	5.7	168.1
cb	5.6	168.2
1/4	5.2	168.6
E	5.0	168.8
1/4	5.0	168.8
cb	5.1	168.7
N	5.1	168.7

1+00

N	3.4	170.4
cb	3.5	170.3
1/4	3.4	170.4
E	3.5	170.3
1/4	3.7	170.1
cb	3.6	170.2
S	3.6	170.2

173.75

58

1+20 = W.L. Alley on S.

S	2.9	170.9
cb	2.8	171.0
1/4	2.6	171.2
E	2.6	171.2
1/4	2.6	171.2
cb	2.7	171.1
N	2.6	171.2

1+40 = E.L. Alley on S.

N	1.4	172.4
cb	1.6	172.2
1/4	1.8	172.0
E	1.8	172.0
1/4	1.7	172.1
cb	1.8	172.0
S	2.1	171.7

T.P.

2.08 171.67

12.02 183.69

1+70

S	10.7	173.0
cb	10.6	173.1
1/4	10.3	173.4
E	9.8	173.9
1/4	9.5	174.2
cb	9.5	174.2
N	9.8	173.9

2+00		
N	8.3	175.4
cb	8.1	175.6
1/4	8.1	175.6
E	8.0	175.7
1/4	8.1	175.6
cb	8.3	175.4
S	9.7	175.0
2+24.3 = End of cb + pav. on W. See drag Sect. for Elev.		
2+48.9 = N.L. Sapphire + S.L. Foothill		
S	5.8	177.9
cb	6.1	177.6
1/4	5.9	177.8
E	5.8	177.9
1/4	5.9	177.8
cb	6.1	177.6
+10	6.4	177.3
N. on edge of pav.	7.80	176.89
291.85 = W.L. Large lot on S.		
S - N.W. Cor. Lot.	4.7	179.0
cb	4.3	179.4
1/4	4.2	179.5
E	4.5	179.3
+7 = edge of pave	5.77	177.92
1/4 on pav.	5.79	177.90

3+04.7 = S Sapphire + S.L. Foothill		
S	4.2	179.5
cb	4.1	179.6
1/4	3.9	179.8
E on edge of pav.	5.50	178.19
3+34 = End of cb + pav. on E.		
S	2.6	181.1
+11	2.6	181.1
cb	4.2	179.5
+0.7 = edge of pav.	4.58	179.11
3+60.5 = S.L. Sapphire + S.L. Foothill		
S	1.8	181.9
Diagonal Sect. along edge of pav. - S.L. Foothill		
E = ^{S.L. Sapp} S.L. Foothill	1.8	181.9
+31.2 W. = End. cb. Top	4.27	179.42
cut	4.58	179.11
Roadway into 6 parts - 21.6		
+21.6 = 1/6 on edge of pav.	5.10	178.59
+21.6 = 1/6 " " " "	5.64	178.05
+21.6 = E	6.26	177.43
+21.6 = 1/6	7.15	176.54
+21.6 = 1/6 on W.	8.13	175.56
+21.6 = End of cb. + pav. cut	9.02	174.67
top cb.	8.49	175.20

183.69

Curb Return on W. 41' around - 4 parts

S. end - 1.2 S. of S.L. Foothill - See sketch

Top cb 8.49 175.20

gut 9.02 174.67

1/4

Top 8.49 175.20

gut 9.01 174.68

E

Top 8.55 175.14

gut 9.09 174.60

1/4

Top 8.74 174.95

gut 9.30 174.39

N. end^{P.C.} on S. cb line Foothill

Top 9.06 174.63

gut 9.61 174.08

Curb Return on E. 51' around - 4 parts

S. end - 0.9 S. of S.L. Foothill

Top 4.27 179.42

gut 4.58 179.11

1/4

Top 3.51 180.18

gut 4.04 179.65

E

Top 2.76 180.93

gut 3.44 180.25

183.69

00

1/4

Top 2.15 181.54

gut 2.85 180.84

N. end - P.C. on S. cb line Foothill

Top 1.77 181.92

gut 2.38 181.31

check T.P. see p. 57 1.12 182.57

X-Section of N+S. Alley in Fanuel Square 20' wide

From N.L. Tourmaline to S.L. Sapphire

pipe - w.L. Alley + N.L. Tour. 166.99

1203 179.02

0+00 = N.L. Tourmaline

W 12.0 167.0

C 11.6 167.4

E 11.1 167.9

0+50

E 10.3 168.7

C 10.6 168.4

W 11.0 168.0

1+00

W 9.7 169.3

C 9.3 169.7

E 8.8 170.2

1+05.06 = P.C. of 20' prop. Rad. on E.

E 8.8 170.2

C 9.1 169.9

W 9.6 169.4

1+25.06 = S.L. 15' Alley on E.

W. 9.5 169.5

C 8.9 170.1

E 8.4 170.6

1+40.06 = N.L. 15' Alley on E.

E 8.4 170.6

C 8.9 170.1

W 9.3 169.7

Red X Plot 9-26-91 SRA

Indexed
LM

179.02

61

1+60.06 = P.C. of 20' Prop. Rad. on E.

W 9.1 169.9

C 8.7 170.3

E 8.1 170.9

2+00

E 8.0 171.0

C 8.6 170.4

W 8.9 170.1

2+32

W 8.7 170.3

C 8.2 170.8

E 7.7 171.3

2+65.12 = S.L. Sapphire

E 7.4 171.6

C 7.9 171.1

W 8.2 170.8

Carry Same H.I. to next page for E & W. Alley

X- Sect. of E+W. Alley in Faniel Square 15' wide

From E.L. of N.+S. Alley to W.L. Gresham

Excluding portion occupied by large lot. (see sketch P. 51.)

From p. 61. - 179.02 ✓

0+00 = E.L. of N.+S. Alley

N-20 = P.C. 20 Prop. R. 8.1 170.9

N 8.4 170.6

C 8.5 170.5

S 8.4 170.6

S+20 = P.C. 20 Prop. R. 8.8 170.2

0+20 = P.C. 20 " "

S 7.6 171.4

C 7.4 171.6

N 7.4 171.6

0+50

N 6.1 172.9

C 6.1 172.9

S 6.2 172.8

1+00

S 4.1 174.9

C 4.0 175.0

N 3.9 175.1

1+45

N 1.9 177.1

C 1.9 177.1

S 2.1 176.9

Indexed
LM

179.02

62

1+51.31 = W.L. of large lot

S 1.6 177.4

C 1.6 177.4

N 1.3 177.7

T.P. 7.13 185.52 0.63 178.39

1+86.4 = W. edge of house

on E 6.5 179.0

2+16.4 = E. " " "

E 5.4 180.1

Floor elev. of house ^{see sketch} 5.64 179.88

2+50

E 4.5 181.0

T.P. 3.17 182.35

6.17 188.52

2+83.43 = E.L. lot - start of open Alley

S 6.7 181.8

C 6.6 181.9

N 6.1 182.4

3+20

N 5.5 183.0

C 5.9 182.6

S 4.4 184.1

3+55.97 = W.L. Gresham

S 6.1 182.4

C 5.7 182.8

N 5.1 183.4

check on T.P. 4.52 $\frac{184.00}{184.03} = 184.00$

Jeeps. Rd. Curb & Gutter levels Tourmaline St. from

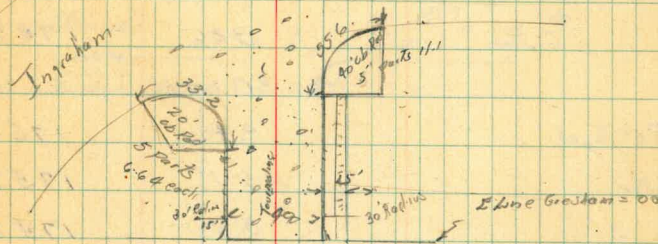
10/3/91 Gresham to Ingraham or Foothill Blvd.

BM.	7.45	180.39	172.94	BM. 5E 7 th TR. Tourmaline
		0400		
S Top cb.		8.34	172.05	
" Gutter		7.74	172.65	
£		7.67	172.72	
N Gutter		8.01	172.38	
" Top cb		7.44	172.95	
		0410		
N Top cb		7.10	173.29	
Gutter		7.63	172.76	
£		7.51	172.88	
S Gutter		8.14	172.25	
" Top cb		7.53	172.86	
		0425		
S Top cb		7.46	172.93	
" Gutter		8.05	172.34	
£		7.26	173.13	
N Gutter		7.22	173.17	
N Top cb		6.62	173.77	
		0450		
N Top cb		5.98	174.41	
" Gutter		6.62	173.77	
£		6.85	173.54	
S Gutter		7.84	172.55	
S Top cb		7.36	173.03	

T
180.39

63

St. or Foothill Blvd



0475

S Top cb	7.09	173.30
" Gutter	7.66	172.73
£	6.35	174.04
N Gutter	5.85	174.54
N Top cb	5.24	175.15
	0487.5 P.C. cb on South	5 parts 11.1
PC Top cb	6.97	173.42
" Gutter	7.51	172.88
#1 Top cb	6.89	173.50
" Gutter	7.53	172.86
#2 Top cb	6.85	173.54
" Gutter	7.57	172.82
#3 Top cb	7.07	173.32
" Gutter	7.71	172.68
#4 Top cb	7.36	173.06
#4 Gutter	7.91	172.48

#5. E.C.	7.77	172.62
" Gutter	8.29	172.10
25' S. of E.C. Topcb	8.85	171.54
" " Gutter	9.46	170.93
	1100 BC on N.	R 20 L 33.7 5 for B 6.64
B.C. Topcb	9.42	175.97
Gutter	5.11	175.28
L. St.	5.82	174.57
#1 Topcb	4.16	176.23
" Gutter	4.86	175.53
#2 Topcb	3.89	176.50
" Gutter	4.56	175.83
#3 Topcb	3.63	176.76
" Gutter	4.25	176.14
#4	3.38	177.01
Gutter	4.02	176.37
#5 E.C.	3.19	177.25
Gutter	3.81	176.58
25' N of E.C.	2.69	177.70
Gutter	3.24	177.15



Everts

St 80'

Dawes

0+91 071 Corridorway
0+20 5 Walk
0+00

80'
St

L. \uparrow 125.74 \downarrow R.

2100
 $\frac{125.0}{0.7} \quad \frac{124.7}{1.0} \quad \frac{124.1}{1.6} \quad \frac{123.5}{2.2} \quad \frac{123.6}{2.1} \quad \frac{123.7}{2.0} \quad \frac{123.5}{2.2} \quad \frac{123.7}{2.0} \quad \frac{123.4}{2.3}$
 35 25 20 15 10 20 20 35

T.P. 10.65 136.04 0.35 125.39

$\frac{126.8}{92} \quad \frac{126.6}{94} \quad \frac{125.9}{101} \quad \frac{125.5}{105} \quad \frac{125.6}{10.4} \quad \frac{125.6}{10.4} \quad \frac{125.5}{105} \quad \frac{126.0}{10.0} \quad \frac{125.3}{10.7}$
 35 25 20 15 10 10 10 20 35

$\frac{128.8}{72} \quad \frac{128.1}{79} \quad \frac{127.0}{90} \quad \frac{127.4}{86} \quad \frac{127.3}{87} \quad \frac{127.1}{89} \quad \frac{127.2}{88} \quad \frac{126.9}{91}$
 35 25 20 10 10 10 20 35

$\frac{130.4}{56} \quad \frac{129.9}{61} \quad \frac{128.9}{71} \quad \frac{129.2}{68} \quad \frac{129.1}{69} \quad \frac{128.8}{72} \quad \frac{129.1}{69} \quad \frac{128.8}{72}$
 35 25 20 10 10 20 20 35

L. \uparrow 136.04 \downarrow R. 66

$\frac{132.2}{38} \quad \frac{131.4}{41} \quad \frac{130.6}{54} \quad \frac{130.9}{51} \quad \frac{130.7}{53} \quad \frac{130.5}{56} \quad \frac{130.9}{51} \quad \frac{130.8}{52} \quad \frac{130.3}{57}$
 35 25 20 10 10 8 10 20 35

$\frac{133.7}{2.3} \quad \frac{133.1}{29} \quad \frac{132.1}{39} \quad \frac{132.5}{35} \quad \frac{132.4}{36} \quad \frac{132.1}{39} \quad \frac{131.8}{42} \quad \frac{131.6}{44}$
 35 25 20 10 10 10 20 35

$\frac{134.8}{12} \quad \frac{134.6}{19} \quad \frac{134.0}{20} \quad \frac{134.0}{20} \quad \frac{133.8}{22} \quad \frac{133.5}{25} \quad \frac{133.2}{28} \quad \frac{133.0}{30}$
 35 25 20 10 10 10 20 35

T.P. 10.10 144.02 2.12 133.92
 Sol. 8 M. 5 W 7 Mon Ever 1st Op 11.04 132.98

$\frac{135.5}{85} \quad \frac{134.6}{94} \quad \frac{134.6}{94} \quad \frac{134.1}{99} \quad \frac{133.9}{101} \quad \frac{133.5}{105}$
 35 20 10 10 20 35

$\frac{135.8}{82} \quad \frac{134.9}{91} \quad \frac{135.0}{90} \quad \frac{134.9}{91} \quad \frac{134.4}{96} \quad \frac{134.0}{100} \quad \frac{133.5}{105}$
 35 20 10 10 10 20 35

$\frac{136.3}{77} \quad \frac{135.4}{86} \quad \frac{135.5}{85} \quad \frac{134.2}{86} \quad \frac{134.5}{95} \quad \frac{134.2}{98} \quad \frac{133.8}{102}$
 35 20 10 10 10 20 35

L $\overline{144.02}$ £

R

136.5

 $\frac{7.5}{35}$

135.9

 $\frac{8.1}{20}$

135.9

 $\frac{8.1}{10}$

E. Lynch v. 200

 $\frac{8.1}{10}$

135.9

 $\frac{8.1}{10}$

135.9

 $\frac{8.6}{10}$

135.9

 $\frac{9.0}{20}$

136.4

 $\frac{9.6}{35}$

138.0

 $\frac{6.0}{35}$

136.9

 $\frac{7.1}{20}$

137.0

 $\frac{7.0}{10}$

0.50

 $\frac{7.0}{10}$

136.4

 $\frac{7.6}{10}$

136.2

 $\frac{7.8}{20}$

135.6

 $\frac{8.4}{35}$

138.2

 $\frac{5.8}{35}$

137.7

 $\frac{6.3}{20}$

138.0

 $\frac{6.0}{10}$

0.90

 $\frac{6.0}{10}$

138.0

 $\frac{6.7}{10}$

137.2

 $\frac{6.8}{20}$

136.8

 $\frac{7.2}{35}$

140.3

 $\frac{3.7}{35}$

140.0

 $\frac{4.0}{20}$

139.2

 $\frac{4.8}{15}$

139.7

 $\frac{4.3}{10}$

145.9

 $\frac{4.3}{10}$

139.7

 $\frac{4.9}{10}$

139.1

 $\frac{5.1}{20}$

138.9

 $\frac{5.6}{35}$

138.4

 $\frac{5.6}{35}$

142.2

 $\frac{1.8}{35}$

141.5

 $\frac{2.5}{20}$

141.0

 $\frac{3.0}{15}$

141.3

 $\frac{2.7}{10}$

2.00

 $\frac{2.7}{10}$

141.3

 $\frac{3.1}{10}$

140.9

 $\frac{3.3}{20}$

140.7

 $\frac{4.1}{20}$

139.9

 $\frac{4.1}{35}$

T.P.

9.60

153.09

0.53

143.49

L

 $\overline{153.09}$ £

R

67

144.0

 $\frac{9.1}{35}$

143.1

 $\frac{10.0}{20}$

142.7

 $\frac{10.4}{10}$

2.50

 $\frac{10.3}{10}$

142.9

 $\frac{10.7}{10}$

142.2

 $\frac{10.9}{20}$

141.5

 $\frac{11.6}{35}$

145.3

 $\frac{7.8}{35}$

144.7

 $\frac{8.4}{20}$

142.2

 $\frac{8.9}{10}$

3.00

 $\frac{8.9}{10}$

143.8

 $\frac{9.3}{10}$

143.5

 $\frac{9.6}{20}$

143.2

 $\frac{9.9}{35}$

146.1

 $\frac{7.0}{35}$

146.8

 $\frac{7.3}{20}$

146.6

 $\frac{7.5}{10}$

3.50

 $\frac{7.5}{10}$

145.7

 $\frac{8.0}{10}$

145.5

 $\frac{8.6}{20}$

144.0

 $\frac{9.1}{35}$

147.8

 $\frac{5.3}{35}$

147.4

 $\frac{5.7}{20}$

147.1

 $\frac{6.0}{10}$

4.00

 $\frac{6.1}{10}$

146.7

 $\frac{6.4}{10}$

146.8

 $\frac{6.3}{20}$

145.8

 $\frac{7.3}{35}$

149.4

 $\frac{5.7}{35}$

149.1

 $\frac{4.0}{20}$

148.5

 $\frac{4.6}{10}$

4.50

 $\frac{4.4}{10}$

148.7

 $\frac{4.8}{10}$

148.6

 $\frac{4.5}{20}$

148.1

 $\frac{5.0}{35}$

L \uparrow 153.09 £ R

150.8	150.1	149.4	480.1	148.9	149.1	148.5
$\frac{2.3}{35}$	$\frac{3.0}{20}$	$\frac{3.7}{10}$	$\frac{4.0}{90}$	$\frac{4.2}{10}$	$\frac{4.0}{20}$	$\frac{4.6}{35}$

149.8	149.02 ✓	148.90 ✓	148.43	W. Line of fence / 4139	147.89	147.86 ✓	148.01 ✓	147.7
$\frac{3.3}{35}$	$\frac{4.07}{20 \text{ top } 6}$	$\frac{4.69}{20 \text{ gutter}}$	$\frac{4.66}{10}$	$\frac{4.78}{10}$	$\frac{5.20}{10}$	$\frac{5.63}{20 \text{ top } 6}$	$\frac{5.08}{20}$	$\frac{3.9}{35}$

T.P. 9.64 158.72 ✓ 4.01 149.08
 Set BM. 7.75 150.97 *Fanwall's Opal SE Top H4*

151.8	151.54 ✓	150.92 ✓	150.60	E. Line Fence / 0700	150.25 ✓	149.63	148.96 ✓	149.48 ✓	149.1
$\frac{6.9}{35}$	$\frac{7.19}{20 \text{ top } 6}$	$\frac{7.80}{20 \text{ gutter}}$	$\frac{8.12}{10}$	$\frac{8.77}{10}$	$\frac{9.09}{10 \text{ gutter}}$	$\frac{9.76}{20 \text{ top } 6}$	$\frac{9.24}{20}$	$\frac{9.6}{35}$	

152.1	151.7	151.0	150.8	0705	151.1	150.7	150.7	150.4
$\frac{6.0}{35}$	$\frac{7.0}{20}$	$\frac{7.7}{19}$	$\frac{7.9}{10}$	$\frac{7.9}{10}$	$\frac{7.6}{10}$	$\frac{8.0}{20}$	$\frac{8.0}{35}$	$\frac{8.3}{50}$

\uparrow 158.72

68

153.5	153.5	152.0	151.9	0720	152.1	152.4	151.6	150.8	150.3
$\frac{5.2}{35}$	$\frac{5.2}{30}$	$\frac{6.7}{20}$	$\frac{6.8}{10}$	6.6	$\frac{6.3}{10}$	$\frac{7.1}{20}$	$\frac{7.9}{35}$	$\frac{8.4}{50}$	

153.9	153.2	152.9	0760	153.1	153.0	152.7	152.1	151.6
$\frac{4.8}{35}$	$\frac{5.5}{20}$	$\frac{5.8}{10}$	5.6	$\frac{5.7}{10}$	$\frac{6.0}{20}$	$\frac{6.6}{35}$	$\frac{7.1}{50}$	

155.0	153.9	154.1	1400	154.2	154.1	153.5	153.2	152.6
$\frac{3.7}{35}$	$\frac{4.8}{20}$	$\frac{4.6}{10}$	4.5	$\frac{4.6}{10}$	$\frac{5.2}{20}$	$\frac{5.5}{35}$	$\frac{6.1}{50}$	

156.18	156.02 ✓	155.0	155.3	1435	155.3	155.3	154.7	154.6	154.1
$\frac{2.54}{35}$	$\frac{2.70}{33.1}$	$\frac{3.7}{20}$	$\frac{3.4}{10}$	3.4	$\frac{3.4}{10}$	$\frac{4.0}{20}$	$\frac{4.1}{35}$	$\frac{4.6}{50}$	

154.5	156.3	156.5	1470	156.4	156.3	155.9	153.6	153.3
$\frac{1.2}{35}$	$\frac{2.0}{20}$	$\frac{2.2}{10}$	2.3	$\frac{2.4}{10}$	$\frac{2.8}{20}$	$\frac{3.1}{35}$	$\frac{3.4}{50}$	

L. $\overset{T}{1587} \text{ } \&$ R.

158.3	157.3	154.7	2789.6	157.1	156.7	156.6	156.2
$\frac{0.4}{35}$	$\frac{1.4}{20}$	$\frac{1.0}{10}$	$\frac{1.1}{10}$	$\frac{1.0}{10}$	$\frac{2.0}{20}$	$\frac{2.1}{35}$	$\frac{2.5}{50}$

TP. 988 166.22 238 156.34

159.7	159.0	159.6	2750.2	159.2	158.2	157.7	157.2
$\frac{6.5}{35}$	$\frac{7.2}{20}$	$\frac{6.6}{10}$	$\frac{7.0}{10}$	$\frac{7.0}{10}$	$\frac{8.0}{20}$	$\frac{8.5}{35}$	$\frac{9.0}{50}$

161.6	160.5	160.5	3700.3	159.9	159.1	159.5	158.0
$\frac{7.5}{35}$	$\frac{5.7}{20}$	$\frac{5.7}{10}$	$\frac{5.9}{10}$	$\frac{6.3}{10}$	$\frac{7.1}{20}$	$\frac{7.7}{35}$	$\frac{8.2}{50}$

161.4	161.1	160.9	3715.8	160.1	159.2	158.4	157.9
$\frac{7.8}{35}$	$\frac{5.1}{20}$	$\frac{5.3}{10}$	$\frac{5.4}{10}$	$\frac{6.1}{10}$	$\frac{7.0}{20}$	$\frac{7.8}{35}$	$\frac{8.3}{50}$

L. 166.22 $\&$ R. $\overset{89}{45} \text{ } \&$

161.9	161.2	161.2	3750.6	160.1	159.3	158.8	158.2
$\frac{4.3}{35}$	$\frac{5.0}{20}$	$\frac{5.0}{10}$	$\frac{5.7}{10}$	$\frac{6.1}{10}$	$\frac{6.9}{20}$	$\frac{7.4}{35}$	$\frac{8.0}{50}$

162.5	161.7	161.8	4700	160.6	159.8	158.8	158.4
$\frac{3.7}{35}$	$\frac{4.5}{20}$	$\frac{4.4}{10}$	$\frac{5.1}{10}$	$\frac{5.6}{10}$	$\frac{6.4}{20}$	$\frac{7.4}{35}$	$\frac{7.8}{50}$

163.0	162.4	162.3	4750	161.0	160.5	160.1	159.8	158.9
$\frac{3.2}{35}$	$\frac{3.8}{20}$	$\frac{3.9}{10}$	$\frac{4.5}{10}$	$\frac{5.2}{10}$	$\frac{5.7}{20}$	$\frac{6.1}{35}$	$\frac{6.4}{39}$	$\frac{8.2}{41}$

163.1	162.7	162.5		162.1	161.1	160.7	160.3	157.6	157.6	159.8
$\frac{3.7}{35}$	$\frac{3.5}{20}$	$\frac{3.7}{10}$		$\frac{4.1}{10}$	$\frac{5.1}{10}$	$\frac{5.5}{20}$	$\frac{5.9}{26}$	$\frac{8.6}{30}$	$\frac{8.6}{35}$	$\frac{6.4}{47}$

L 166.22 ♀ R

163.0	162.7	162.5	4.80	1.04	1.574	1.52	1.575	1.606	1.59.8	1.57.2
$\frac{32}{35}$	$\frac{35}{20}$	$\frac{37}{10}$	4.1	5.8	8.8	10.0	8.7	5.6	6.4	7.0
			2	10	20	24	25	35	50	

TP. 6.26 167.89 459 161.63 ^{ENE}
 Graham's Opal
 used as BN
 89 & Sec of
 Graham

4+90

163.4	162.3	159.7	158.7	156.6	161.0	159.9	159.4
$\frac{45}{35}$	$\frac{5.6}{20}$	$\frac{8.2}{10}$	9.2	$\frac{11.3}{10}$	$\frac{6.9}{20}$	$\frac{8.0}{35}$	$\frac{8.5}{50}$

161.3 162.8 161.8 160.2 160.8 4197.25
 160.9 158.9 159.2 161.2 160.9 160.3 159.7
 6.6 5.1 6.1 7.7 7.1 7.0 9.0 8.7 6.7 7.0 7.6 8.2
 14 March 45 $\frac{35}{28}$ $\frac{20}{10}$ $\frac{10}{5}$ $\frac{10}{15}$ $\frac{20}{20}$ $\frac{35}{35}$ $\frac{50}{50}$

163.3 162.1 161.5 W. Line
 161.6 161.1 160.9 160.1 159.8
 4.6 5.8 6.4 6.3 6.8 7.0 7.8 8.1
 $\frac{35}{20}$ $\frac{10}{10}$ $\frac{20}{20}$ $\frac{35}{35}$ $\frac{50}{50}$

L T 167.89 ♀ R 10

162.4	162.5	161.9	Web Gr.	161.7	161.3	160.9	160.6
$\frac{55}{35}$	$\frac{58}{20}$	$\frac{60}{10}$	6.2	$\frac{66}{10}$	$\frac{70}{20}$	$\frac{73}{35}$	

162.8	162.1	161.9	161.8	161.4	161.3	160.9
$\frac{51}{35}$	$\frac{58}{20}$	$\frac{60}{10}$	6.1	$\frac{65}{10}$	$\frac{66}{20}$	$\frac{70}{35}$

163.1	162.3	162.4	161.9	161.4	161.0	160.7
$\frac{48}{35}$	$\frac{56}{20}$	$\frac{55}{10}$	6.0	$\frac{65}{10}$	$\frac{69}{20}$	$\frac{72}{35}$

162.7	162.6	162.5	161.8	161.3	160.7	160.5
$\frac{52}{35}$	$\frac{53}{20}$	$\frac{58}{10}$	6.1	$\frac{66}{10}$	$\frac{72}{20}$	$\frac{74}{35}$

162.6	162.4	162.1	506	161.7	161.3	160.6	160.4
$\frac{53}{35}$	$\frac{55}{20}$	$\frac{58}{10}$	6.2	$\frac{66}{10}$	$\frac{73}{20}$	$\frac{75}{35}$	

For E. Line Graham See Next Page

T
167.89

E line Grestom = 00

S Prop on ground = 00	7.2	160.7
" " on Edgewalk	7.71	160.19
+8.9 N Edgewalk	7.76	160.13
cb	7.81	160.18 ↓
Gutter	8.45	159.44 ✓
" Ground	7.8	160.1
1/4 " Same	7.68	160.21
£ " "	7.22	160.67 ✓
1/4	7.05	160.84
Ncb Gutter Groundsone	6.98	160.91 ↓
" Top cb	6.42	161.47 ✓
S Edgewalk	6.38	161.51
N Edgewalk	6.26	161.63
N line	6.2	161.7
	0.10	
N Edgewalk	6.90	161.5
S " "	6.46	161.43
N Top cb	6.52	161.37 ✓
Gutter	7.19	160.70 ↓
N 1/4	7.14	160.75
£	7.29	160.60 ↓
S 1/4	7.70	160.19
S Gutter	8.25	159.64 ✓
S cb	7.72	160.17 ↓
N Edgewalk	7.58	160.31
S " "	7.54	160.35

T
167.89

8.3

71

0.25

S Topcb	7.64	160.25 ✓
" Gutter	8.24	159.85 ✓
S 1/4	7.74	160.15
£	7.40	160.49 ✓
N 1/4	7.26	160.63
N Gutter	7.29	160.60 ✓
N cb	6.64	161.25 ✓
	0.50	
N cb	6.85	161.04
Gutter	7.47	160.42
1/4	7.45	160.44
£	7.55	160.34
1/4	7.90	159.99
S Gutter	8.42	159.47
S Topcb	7.79	160.10
	0.25	
S Topcb	7.96	159.93 ✓
Gutter	8.58	159.31 ✓
1/4	8.09	159.85
£	7.69	160.20 ✓
1/4	7.62	160.27
N Gutter	7.44	160.23 ✓
Topcb	7.01	160.88 ✓
	1.00	
	7.26	160.63

T
16789

Gutter	7.91	159.98 ✓
1/4	7.82	160.07
£	7.95	159.94 ✓
1/4	8.31	159.58
Gutter	8.87	159.02
S Topcb	8.19	159.70
	1+20 ⁵⁵ B.C. on N	2 arc 76° R 90' 5 parts 15.29
S Topcb	8.95	159.44 ✓
Gutter	9.10	158.79 ✓
1/4	8.53	159.36
£	8.15	159.74 ✓
1/4	7.98	159.91
Gutter	7.95	159.94 ✓
N Topcb	7.40	160.49 ✓
+ 6' E door walk	7.36	160.53
+ 11' N " "	7.27	160.62
	#1	
Topcb	7.27	160.62
Gutter	7.93	159.96
	#2	
Topcb	6.89	161.00
Gutter	7.46	160.43
	#3	
Topcb	6.21	161.68
Gutter	6.90	160.99

T
16789

72

	#4	
Topcb	5.47	162.42
Gutter	6.10	161.89
	#5 E.C.	
Topcb	4.77	163.12
Gutter	5.90	162.49
	25' N. of E.C.	
Topcb	3.66	164.23
Gutter	4.23	163.66
	1+62 ¹ B.C. on S.	2. of Arc 48° Rad- 90 5 parts 970
S. Edge walk	8.56	159.33
N " "	8.75	159.14
Topcb	8.80	159.09
Gutter	9.43	158.46
S/4	8.94	158.95
£	8.57	159.32
	#1	
Topcb	8.96	158.93
Gutter	9.55	158.34
+ 10 Radially	9.16	158.73
	#2	
Topcb	9.17	158.72
Gutter	9.83	158.06
+ 10 Radially	9.54	158.35

7
16789

#3

Topcb	9.52	158	37
Gutter	10.22	157	67
+10 Radially	9.87	158	02

#4

Topcb	10.04	157	85
Gutter	10.65	157	24

#5 E.C.

Topcb	10.95	157	44
Gutter	11.15	156	74

25's of E.C.

Topcb	11.71	156	18
Gutter	12.25	155	64

check starting B.M. or ^{7P} N.E. corner 6.25 16163

73

X Section Gresham from the North
Line of Loring to the South line of Tourmaline

137	163.00	161.63	TPNE Opal + Gresham
3.67	159.51	12.16	150.84

- Sec on NCB Loring Paved

E-10 cb 80	9.27	145.24
Gutter	9.88	144.63
E	10.00	144.51
cb	10.07	144.44
¢	10.08	144.43
cb	10.18	144.33
N	10.18	144.33
+10 Topcs 80	9.59	144.97
" " Gutter	10.24	144.27
+35 Gutter	10.43	144.08
W	8.9	145.6
W Topcb	8.92	145.59 ✓
Gutter	9.49	145.02
1/4	9.21	145.30
¢	9.18	145.33 ✓
1/4	9.28	145.23
Gutter	9.59	144.92
Top cb	8.91	145.60 ✓
+11 W Edge wall	8.81	145.70
+16 E " "	8.76	145.75
E	8.2	146.3

Reduced Plotted on Profile # 2554 - 10-14-41 CBN

0700

1255

15951

74

0703

E	6.7	147.8
cb	8.1	146.4
7	9.5	145.0
1/4	9.2	145.3
¢	9.1	145.4
1/4	8.9	145.6
+8	8.8	145.7
cb	8.2	146.3
W	8.6	145.9

+05

K	6.6	147.9
+17	6.5	148.0
cb	7.4	147.1
7	8.8	145.7
1/4	8.8	145.7
¢	8.9	145.6
1/4	9.1	145.4
+5	9.3	145.2
cb	7.9	146.6
+10	6.6	147.9
E	6.2	148.3

+17

E	5.5	149.0
cb	5.1	149.4
+9	5.9	148.6
1/4	7.6	146.9

15451

2	8.6	145.9
13	8.5	146.0
14	6.3	148.2
cb	5.6	148.9
W	6.2	148.3

of 22

W	6.0	148.5
cb	5.7	148.8
14	5.3	149.2
2	4.9	149.6
14	5.0	149.5
cb	5.2	149.3
E	5.4	149.1

140

E	3.9	150.6
cb	3.8	150.7
14	3.6	150.9
2	3.6	150.9
14	3.8	150.7
cb	4.1	150.4
W	4.5	150.0

1400

W	2.5	152.0
cb	2.2	152.3
14	2.1	152.4
2	2.1	152.4

15451

75

14	2.1	152.4	
cb	2.0	152.5	
E	1.9	152.6	
TP 12.74	167.17	0.08	159.43
	1400		

E	12.7	154.5
cb	12.7	154.5
14	12.5	154.7
2 Top Mid. Cover	12.6	154.6
14	12.7	154.5
cb	12.1	155.1
W	12.7	154.5

1750

W	10.5	156.7
cb	10.9	156.8
14	10.9	156.8
2	10.5	156.7
14	10.5	156.7
cb	10.6	156.6
E	10.5	156.7

2400

E	8.4	158.8
cb	8.4	158.8
14	8.3	158.9
2	8.0	158.2
14	8.1	158.1

167.17

cb	8.0	158.8
W	8.9	158.8
	2+8.3 ⁵ +	
W	7.0	160.2
+10	7.9	159.8
cb	6.6	160.6
1/4	6.5	160.7
+	6.5	160.7
1/4	6.6	160.6
cb	6.8	160.4
E	6.5	160.7

0100 N. line Opal

E	5.6	161.6
cb	4.7	162.5
1/4	4.6	162.6
E	4.1	163.1 41
1/4	4.4	162.8 40
cb	4.7	162.5 46
+10	5.1	162.1 51
W		5.6

0110

W	5.4	161.8
+10	5.8	161.4
+13	7.0	163.2
cb	3.7	163.5

167.17

76

1/4	4.6	162.6
E	4.1	163.1
1/4	4.2	163.0
cb	4.1	163.1
E	4.2	163.0
	0+2.5	
E	3.8	163.4
cb	3.5	163.7
1/4	3.6	163.6
E	3.4	163.8
1/4	3.6	163.6
+2	3.5	163.6
cb	4.9	162.3
+5	4.9	162.3
+6	3.3	163.9
W	3.3	163.9
	0+5.0	
W	2.1	165.1
cb	1.8	165.4
1/4	2.2	165.0
E	2.5	164.7
+2	3.5	163.7
+5	3.5	163.7
+6	2.7	164.5
1/4	2.7	164.5
cb	3.0	164.2
+10	2.5	164.7

π
167.17

E 3.1 164.1
T.P. 13.09 177.66 2.60 164.57

0790

E-10 12.1 165.6
E 12.2 165.5
76 13.1 164.6
+10 11.6 166.1
cb 11.2 166.5
1/4 11.1 166.6
E 11.3 166.4
1/2 11.1 166.6
cb 10.3 167.4
W 10.7 167.0

1717

W 9.5 168.2
cb 9.4 167.3
1/4 10.0 167.7
E 9.9 167.8
1/4 10.0 167.7
cb 10.7 167.0
+15 12.5 165.2
K ^{14.0704} 13.4 164.3
+10 " " 14.6 163.1
+20 13.1 164.6

1728

E-20 13.0 164.7
E-12 14.4 163.3

π
177.66

777

E 13.8 163.9
+9 12.2 165.5
+10 10.5 167.2
cb 10.2 167.5
1/4 9.6 168.1
E 9.4 168.3
1/2 8.9 168.8
cb 8.6 169.1
W 8.6 169.1

1735

W 8.5 169.2
cb 8.6 169.1
1/4 8.6 169.1
E 8.8 168.9
1/4 9.1 168.6
cb 9.8 167.9
+08 10.4 167.3
+10 12.5 165.2
+17 12.9 164.8
+18 10.6 167.1
E 10.6 167.1
E+5 10.9 166.8
E+6 13.3 164.4
E+15 14.1 163.6

177-66

143

E-13	9.6	168.1
E	9.6	168.1
+5	10.0	167.7
+6	13.0	164.7
+13	13.2	164.5
+14	10.0	167.7
cb	9.4	168.3
1/4	8.9	168.8
2	8.7	169.0
1/4	8.5	169.2
cb	8.2	169.5
W	8.2	169.5

146

W	8.2	169.5
cb	8.1	169.6
1/4	8.3	169.4
2	8.4	169.3
1/4	8.6	169.1
cb	9.2	168.5
E	9.3	168.4
E+15	9.3	168.4

147

E-10	7.1	170.6
E	8.6	169.1
cb	8.1	169.6
1/4	8.7	169.0

177-66

78

2	8.5	169.2
1/4	7.8	169.9
cb	7.4	170.3
W	7.2	170.5

147

W	6.8	170.9
cb	6.8	170.9
1/4	7.2	170.5
2	7.8	169.9
1/4	8.2	169.5
cb	8.2	169.5
+5	8.3	169.4
E	6.4	171.3
E+10	6.6	171.7

200

E	4.8	172.9
+10	5.3	172.4
cb	7.0	170.7
1/4	7.0	170.7
2	7.0	170.7
1/4	6.5	171.2
cb	6.3	171.4
W	6.0	171.7

209

W	3.4	174.3
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177-66

cb	3.8	173 9
1/4	4.2	173 5
2	4.6	173 1
1/4	4.2	173 5
cb	3.4	174 3
E	2.8	174 9
	2.63 6	
E	4.1	173 6
cb	3.2	174 5
1/4	3.7	174 0
2	4.3	173 4
1/4	3.6	174 1
cb	3.5	174 2
N	3.5	174 2
check B.M. SW 2 nd TR	4.72	172.94

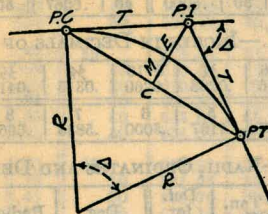
Graham
+ 700m line

See
Osborn's
Notes page
57. This
Book

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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= $E = T \tan \frac{\Delta}{4}$ (7) $= R \div \cos \frac{\Delta}{2} - R$ (8) $= R \text{exsec} \frac{\Delta}{2}$ (9)

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

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.—Sta. 161 + 60.35 to find Sta. of P. C. and P. T. $\Delta = 62^\circ 10'$ $D = 8^\circ 20'$. 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 $D = 5^\circ 30'$.

276.83
55.43

332.26

79 39 10
29 36 30

0 2 40

105.51

104
100.47

33d & A NEMon 16243

12°-12'-45"

56.65
26.5
30.66

48-

12°-14'-15"

359 5960
793 630
280 2330

56.7
18
38.7

2726 / 272.60 12 12
4 / 48-51-15
75

750 / 15.40 3 7195
16
35

1363
200
272.6000

1363
2100
1363 00
2726
208.2300

7122
4066
3056

10-33-30 Δ N S

72+26.26 L.H 0°50'00" = 7.44 ft
89-32-30 179-54-5711 89-51 from

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.