

1716

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

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

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

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be 30.6 + (20 - 16) ÷ 2 or 2 ft. added to 30.6 = 32.6. For slopes of 1 on 1½ see inside of back cover.
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Nordica - 40th to 43rd	3-21
Co Honwood - Earl to 41st	22-35
Marineview - 40th to Division	36-48
Osborn - Dalbergia to Birch	49-60

Osborn St. Cont. from p 61

12

5+94 1/2 6" Ac. Tree on W 8.5' in St
 6+05 " 6" " " " 10.5' " "
 6+30 " 16" " " " " 10.4' " "
 +38 " Elec. Pole " " " 10.5' " "
 +56 " 24" Ac. Tree " " 7.8' " "
 +82 " 24" " " " " 10' " "
 +86 " 30" Pop. " " E 12' " "
 7+68 " 24" " " " W 10.5' " "
 +84.6 " 12" Tree " " 9' in St
 +92 " Pole on W 10.5' " "

Walker
Hendricks
Horsley
Care
5-31-46

CROSS SECTION - NORDICA ST.
60' wide
10' cbs. 10' 1/2 s.
from 40th St. to 43rd St.

Indexed
C.S.K.

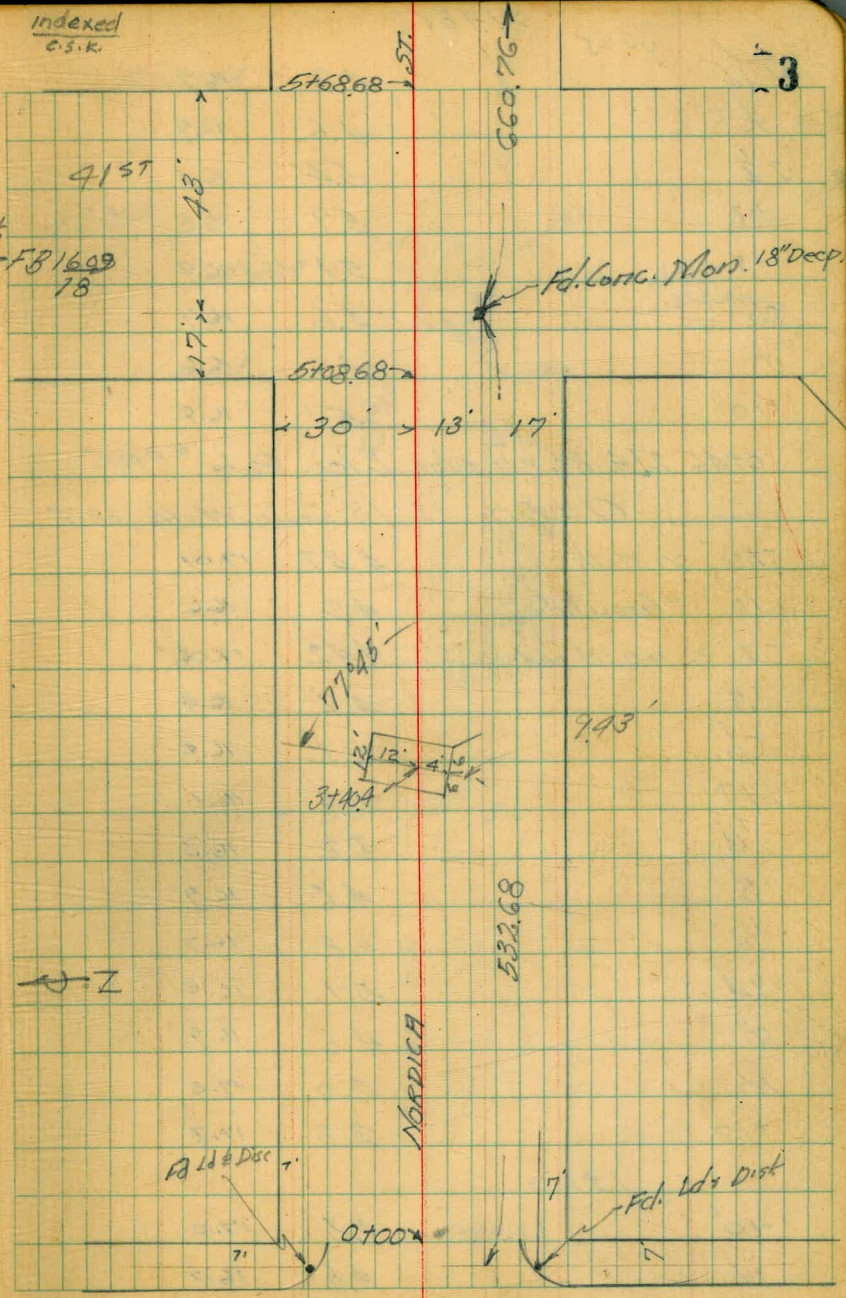
	8.63	20.56	11.23	
TP	6.71	21.48	5.79	14.77
			5.20	16.28

812 NW 7th cont
Earl
& Cottonwood
FB 1609
18

SE. 1/4 Tok
Nordica = 40th

0+00 = E.L. 40th

SL		4.8	16.7
+2 on Walk		5.22	16.26
+7 " "		5.22	16.26
cb		5.25	16.23
Gut.		5.6	15.9
1/4		5.4	16.1
2		5.0	16.5
1/4		5.0	16.5
Gut.		5.0	16.5
cb		4.73	16.75
+2.5 on Walk		4.57	16.91
+7.5 " "		4.39	17.09
N		4.2	17.3
	0+25		
-10		3.5	18.0
N		3.7	17.8
cb		4.6	16.9
+5		5.0	16.5



FB Id. Dist

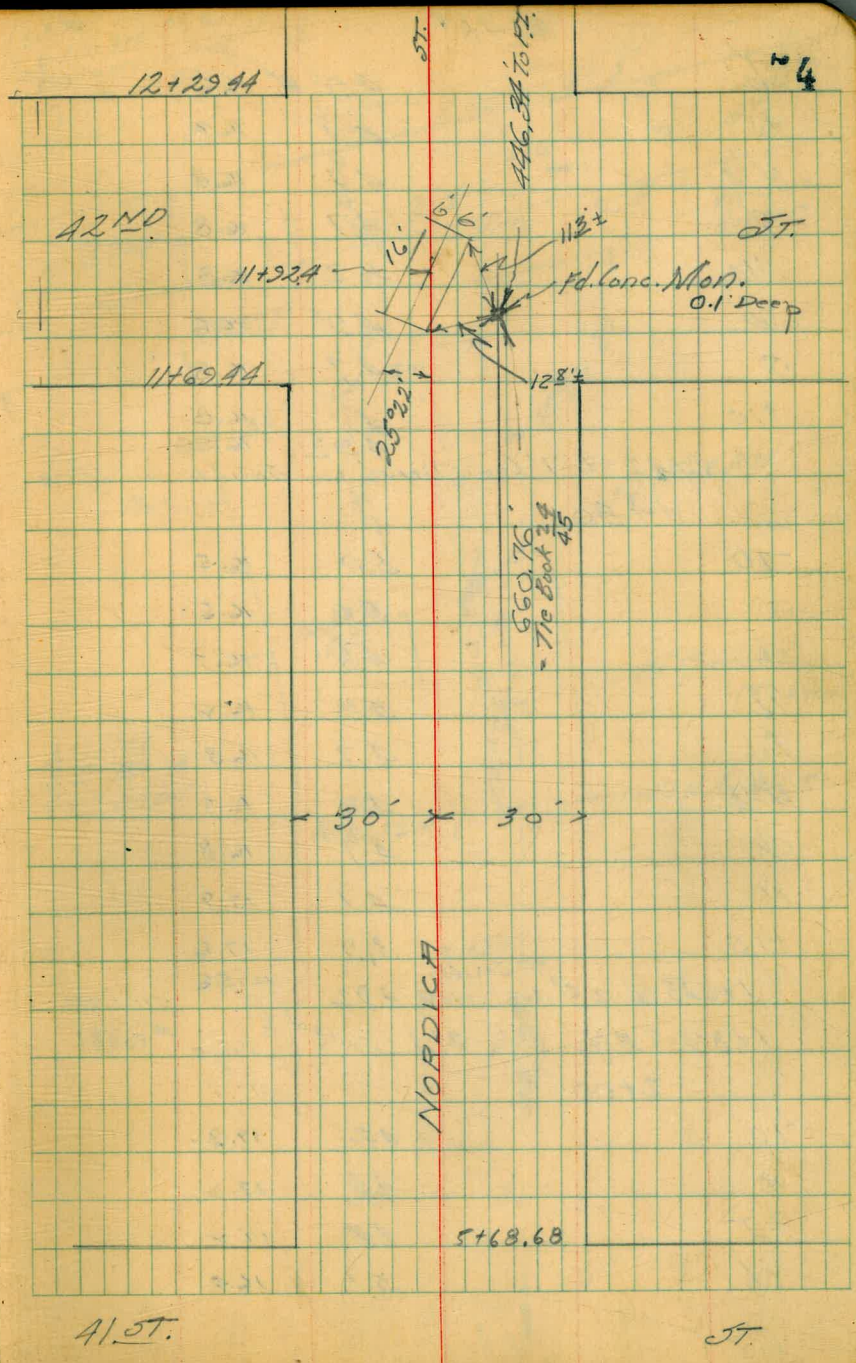
0+00

Fed. Ldy Dist

40TH

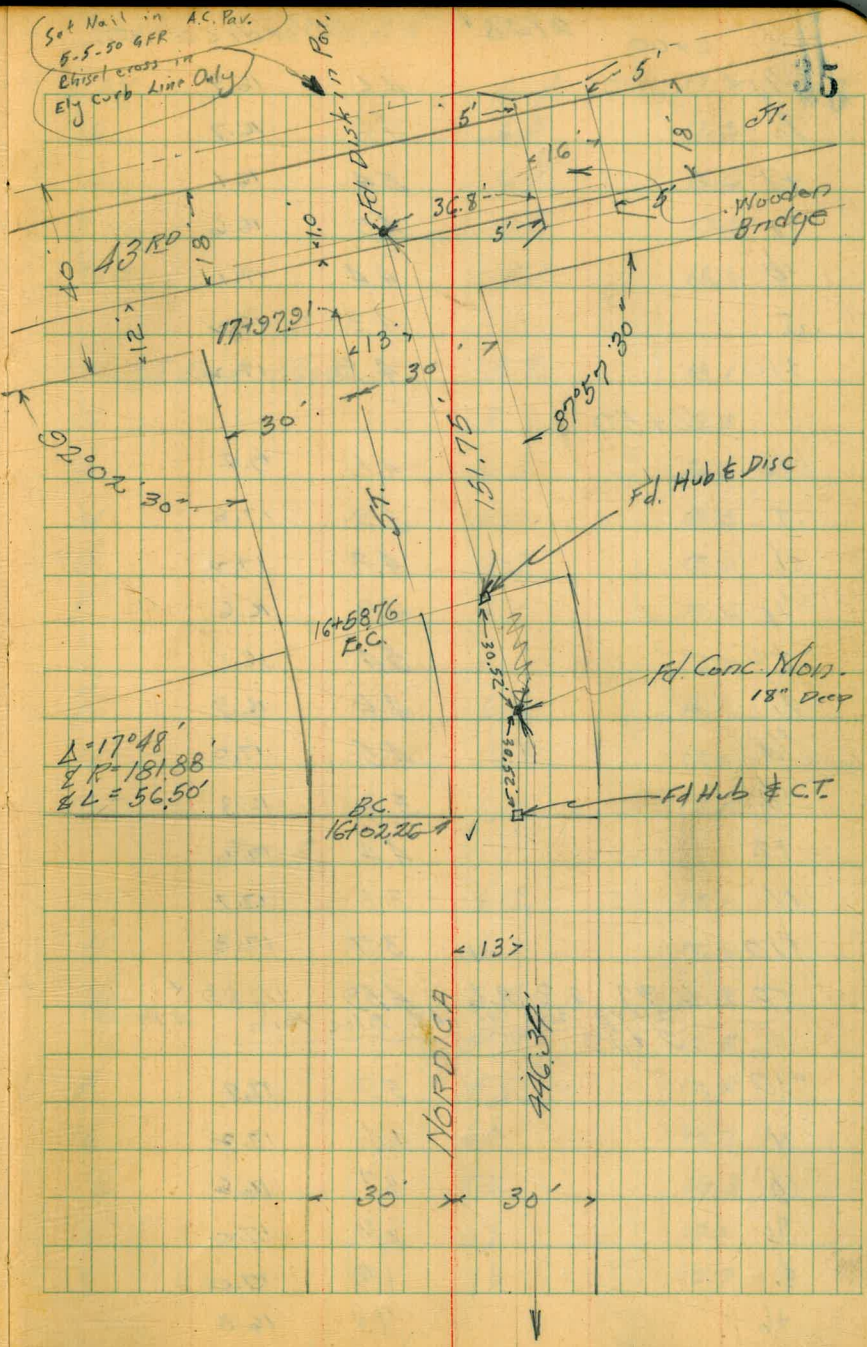
ST.

	0+25	21.481		
1/4			4.8	16.7
1/2			4.6	16.9
3/4			5.4	16.1
+3			5.7	15.8
+5			5.1	16.4
cb			4.6	16.9
5			4.9	16.6
+10			5.1	16.2
0+46 21.4 Rt. = N edge Elec. Pole # P4015				
0+50 = 18' Conc. Walk on S				
-10' on Walk			4.47	17.01
10' "Ground			4.9	16.6
-1' = on N end Walk			4.42	17.06
5			4.7	16.8
cb.			5.1	16.2
+7			5.4	16.1
1/4			5.2	16.3
1/2			4.6	16.9
3/4			4.8	16.7
+4			5.1	16.2
cb.			4.6	16.9
N			4.0	17.5
+10			3.8	17.7
1+00				
-10'			4.5	17.0
N			4.8	16.7



2148 ✓

cb	4.9	16.6
+5	5.1	16.2
N 1/4	4.7	16.8
2	4.7	16.8
1/4	5.2	16.3
cb.	4.9	16.6
5	4.7	16.8
+10	4.7	16.8
	4.92	16.56
1+42 = 7' Conc Drive on South on Line		
1+50		
-10	5.0	16.5
5	5.0	16.5
cb.	4.8	16.7
1/4	5.3	16.2
2	4.7	16.8
N 1/4	4.6	16.9
cb.	4.7	16.8
N	4.1	17.9
+10	3.9	17.6
	4.92	16.56
1+63 = 25' Conc Walk on South		
1+87 = Elec. Pole 21.1' South of N edge #94031		
2+00		
-10	4.2	17.3
N	4.3	17.2
+7	4.3	17.2
cb.	5.1	16.2



2100

2148.1

Nordica St.

23.26

H/4	4.6	16.9
L	4.8	16.7
+7	5.4	16.1
1/4	4.9	16.6
cb	4.4	17.1
S	4.3	17.2
+10	4.3	17.2

2150

-10	4.1	17.4
S	3.9	17.6
cb	4.3	17.2
1/4	4.9	16.6
+2	5.4	16.1
L	4.6	16.9
1/4	4.5	17.0
cb	5.2	16.3
+2	4.4	17.1
N	3.8	17.7
+10	3.7	17.8

T.P.

6.37

23.26

4.59

16.89

2793

204 1/4 of E Elec Pole

Pole

#P4055

-10	5.9	17.4
N	6.1	17.2
cb	6.7	16.6
1/4	6.3	17.0
L	6.3	17.0
+6	7.0	16.3

2+8	6.1	17.2
1/4	6.0	17.3
cb	6.7	16.6
S	5.8	17.5
+10	5.1	18.2

3+07

-10 = S. Bank Channel	5.2	18.1
S	3.9	19.2
cb	3.8	20.5
1/4	5.0	18.3
+5	6.3	17.0
L	6.1	17.2
1/4	6.1	17.2
S	6.6	16.7
N	6.3	17.0
+10	6.2	17.1

3+15

-10	6.2	17.1
N	6.1	17.2
cb	6.5	16.8
1/4	5.9	17.4
L	5.9	17.4
+6	6.0	17.3
1/4	5.0	18.3
cb	5.7	17.6
S	7.6	15.7

16

23.26

Nordica St

+10	in channel	10.2	13.1
+25	" "	10.3	13.0
3+344			
-25		3.5	19.8
-10		7.7	15.6
S	in channel	2.9	13.9
cb	" "	10.3	13.0
1/4	" "	10.1	13.2
+6	" "	8.4	14.9
+6'	on Deck	5.4	17.9
L		5.4	17.9
1/4		5.5	17.8
+4		6.8	16.5
cb		5.9	17.2
N		5.0	18.3
+10		6.0	17.3

3+46

-20	in ch.	10.0	13.3
N	" "	10.3	13.0
cb	" "	10.8	12.5
1/4	" "	10.8	12.5
L	" "	10.8	12.5
1/4	" "	10.4	12.9
cb	" "	10.2	13.1
S	-East South edge channel	8.2	15.1
+10		2.9	20.2

23.26

3+51

-10		0.6	22.7
S		6.6	16.7
+8		9.6	13.7
cb		8.9	14.2
1/4		6.3	17.0
L		5.4	17.9
1/4		5.4	17.9
+5		8.7	14.6
cb		8.0	15.3
N		8.3	15.0
+15		8.8	14.5

3+65

-10		6.6	16.7
N		6.6	16.7
cb		5.6	17.7
1/4		5.4	17.9
L		5.4	17.9
1/4		5.5	17.8
+5		7.5	15.8
cb		7.7	15.6
+5		8.9	14.2
S		7.7	15.6
+5		3.1	20.2
10		5.3	18.0

23.261 Nordica St.

4+00

-10	5.4	17.9
5	4.0	19.3
+3	3.2	20.1
6	5.4	17.9
+7	6.8	16.5
1/4	6.5	16.8
2	5.6	17.7
1/4	5.5	17.8
+5	5.9	17.4
6	5.4	17.9
N	5.2	18.1
+10	5.3	18.0

4+09 20.3' South of E = N edge Elec. Pole #74077

4+17 = 7' conc. Ribbon Drive 417 N

W Ribbon 4' South N Line	4.93	18.33	5' inst.
N Line on W Ribbon	4.91	18.35	
N " " E "	4.91	18.35	
4' South on E "	4.95	18.31	"

4+50

-10'	4.7	18.6
N	4.7	18.6
6	5.1	18.2
+7	5.6	17.7
1/4	5.4	17.9
6	5.3	18.0

23.264

5+4

6.0	17.3
5.4	17.9
5.4	17.9
5.4	17.9

5+00

-10	5.3	18.0
5	4.7	18.6
6	5.0	18.3
+8	5.6	17.7
1/4	5.4	17.9
2	5.0	18.3
1/4	5.3	18.0
+5	5.6	17.7
6	5.3	18.0
N	4.4	18.9
+10	4.3	19.0

5+08.68 = 142. 41st St. 60' wide 10' Cas.

-10'	4.3	19.0
N	4.4	18.9
6	5.2	18.1
+7'	5.5	17.8
1/4	5.3	18.0
2	4.9	18.2
1/4	5.4	17.9
+2	5.6	17.7
6	4.9	18.2

+8' 1' W = E Elec. Pole #74099
South. 5.2

18.1

8

2326 Nordica St
5118.68 = Wcb 41st

J	5.0	18.3
cb	4.8	18.5
+8	5.5	17.8
1/4	5.2	18.1
1/2	4.9	18.9
1/4	5.4	17.9
cb	4.9	18.9
N	4.1	18.9

5128.68

N	4.6	18.7
cb	5.2	18.1
+6	5.5	17.8
1/4	5.3	18.0
1/2	4.8	18.5
1/4	5.1	18.2
cb	4.8	18.5
J	5.1	18.2

5138.68

J	5.1	18.2
cb	4.8	18.5
1/4	5.2	18.1
1/2	4.7	18.6
1/4	5.2	18.1
cb	5.1	18.2
N	4.7	18.6

2326 ✓
5148.68

N	4.5	18.8
cb	4.6	18.7
1/4	5.2	18.1
1/2	4.7	18.6
1/4	5.0	18.3
cb	5.0	18.3
J	5.1	18.2

5158.68

J	4.6	18.7
cb	4.9	18.9
1/4	5.0	18.3
1/2	4.7	18.6
1/4	5.2	18.1
cb	4.9	18.9
N	4.4	18.9

5168.68 E.L. 41st St.

N	4.3	19.0
cb	4.8	18.5
1/4	5.1	18.2
1/2	4.6	18.7
1/4	4.9	18.4
cb	5.0	18.3
J	4.8	18.5

6100

-10	4.6	18.7
-----	-----	------

2326 Nordica St.

#15		4.5	18.8
cb		4.8	18.5
1/4		4.8	18.5
2		4.4	18.9
1/10		4.9	18.9
cb		4.9	18.9
N		4.2	19.1
+10		4.1	19.2
TP	5.96	25.17	4.05 19.21

6+18.5 20.9' S of V = Elec. Pole # 447766A

Notes: Location Trees & Poles from S St. to E Tree

6+25 23.5' Lt. 12" Acacia Tree

+27	21.2' Rt	"	"
+45	22.8' Lt	"	20"
+46	21.5' Rt	"	12"
+68	21.1' Rt	"	12"
+65	22.2' Lt	"	16"
+92	21.9' Rt	"	5"
7+13.5	21.9' Rt	"	5"
+25	22.5' Lt	"	16"
+28	21.2' Rt	E Elec Pole	# 44125
+37	22.1' Rt	E 6" A Tree	
+44	22.9' Lt	"	20"
+68	22.2' Lt	"	8"
8+24	21.9' Lt	"	12"
+33	21.7' Rt	"	9"

10

8+43	21.5' Rt	= Pole	
+65	21.1'	"	10" Tree
+90	21' Lt	"	12" "
+91	21.8' Rt	"	8" "
9+09	21.3' Lt	"	10" "
+12	21.5' Rt	"	10" "
+47	20.8' Rt	Pole	# 44175
+70	= beginning Picket Fence on Lt.	27.4'	
10+20	= End	"	25.9'
9+89	30.2' Lt	"	10" Tree
+96	30' Lt	"	"
10+22	21.7' Rt	"	18" "
+68	21.9' Rt	"	15" "
11+19	31.6' Rt	"	6" "
+60	28.6' Rt	= Pole	# 44199
12+31	22.9' Rt	"	16" Tree
+48	22.9'	"	24" "
+64	23.3'	"	16" "
13+29	23' Lt	"	18" Pop. Tree
+61	21.9' Lt	"	
+59	22.7' Rt	= Pole	
+76	21.5' Lt	= 28" Pop "	
13+81	= Beginning 10th Fence	29.7' Rt	
15+86	= End	"	29' Rt
13+96	22.5' Lt	"	8" Pop Tree
14+05	29.7' Lt	= 3' Conc. Walk	

11	14+10	22.1' H	10" Pop Tree		
	+24	21.7' H	16" " "		
	+46	21.5' H	30" " "		
	+55	21.2' H	10" " "		
	+71	21.4' H	10" " "		
	15+19	21.1' H	Pole # P4241		
	16+38	24.7' H			
	17+36	26.4' H	30" Date Palm		
	+39	23.6' H	= Pole # 4291		
	+97	31.4' H	= "		
		25.17			

6	6+40	29.4' H = 25' conc. Walk	5.75	19.22
	+54	28.1' H 2' " "	5.84	19.33
	+53	30.3' H 3' " "	5.90	19.27
		6+50		
	-10'		5.7	19.5
	N		5.8	19.9
	cb.		6.4	18.8
7	+5		6.6	18.6
	1/4		6.5	18.7
	1/2		6.0	19.2
	1/4		6.2	19.0
	cb.		6.5	18.7
	5		6.3	18.9
8	+10		6.0	19.2

7+00

-10	5.8	19.9
5	5.7	19.5
cb.	6.0	19.2
+3	6.5	18.7
1/4	5.9	19.3
1/2	5.7	19.5
1/4	6.4	18.8
cb.	5.7	19.5
N	5.4	19.8
+10	5.4	19.8

7+50

-10'	5.0	20.2
N	5.0	20.7
cb.	5.4	19.8
1/4	6.0	19.2
1/2	5.5	19.7
1/4	5.6	19.6
+7	6.2	19.0
cb.	5.5	19.7
+3	5.1	20.1
5	5.6	19.6
+10	6.0	19.2

8+00

-10	5.9	19.3
5	5.6	19.6

81cb 8+00 25.17' Nordico St

cb	5.4	19.8
+3	5.9	19.3
1/4	5.2	20.0
2	5.0	20.2
1/4	5.6	19.6
cb	5.0	20.2
N	4.7	20.5
+10	4.6	20.6
8+50		
-10	4.8	20.9
N	4.8	20.9
cb	4.8	20.4
1/4	5.1	20.1
2	4.5	20.7
1/4	4.8	20.9
+8	5.7	19.5
cb	5.0	20.2
+3	4.5	20.7
S	4.6	20.6
+10	5.2	20.0
9+00		
-10	4.0	21.2
S	3.9	21.3
+8	3.8	21.9
cb	4.2	21.0
+2	5.0	20.2

25.17' 12

1/4	4.3	20.9
2	4.1	21.1
N 1/4	4.6	20.6
cb	3.9	21.3
N	4.0	21.2
+10	3.7	21.5
8+85 = 25' Conc. Walk	3.85	21.32 29.6' Lt.
9+50		
-10'	2.8	22.4
N	3.2	22.0
cb	4.0	21.2
+5	4.5	20.7
1/4	4.0	21.2
2	3.6	21.6
1/4	3.8	21.9
+7	4.4	20.8
cb	3.9	21.3
S	4.0	21.2
+10	4.0	21.2
9+92 = 30.2' Lt. 3' Conc. Walk	2.71	22.96
10+00		
-10'	3.7	21.5
S	3.2	22.0
cb	3.6	21.6
1/4	4.0	21.2
1/4	3.6	21.6

	10+00	25.17	Nordica St.	
2			3.3	21.9
N 1/4			3.8	21.9
cb.			3.7	21.5
N			2.9	22.3
+4 = South Bank channel			2.8	22.4
+8 = 7'		"	7.2	18.0
10+43	27.8	27.8	3.29	21.88
T.P.	6.40	28.70	2.87	22.30
	10+50			
-22'			5.8	22.9
-11 = N Bank			7.2	21.5
-8 in ch.			10.2	18.50
-1 " "			10.2	18.50
N = S Bank ch			7.2	21.5
+4			5.7	23.0
cb.			6.6	22.1
1/4			7.3	21.9
4			6.6	22.1
1/4			6.9	21.8
cb			7.2	21.5
5			6.9	21.8
+10			6.9	21.8
	11+00			
-10			6.7	22.0
5			6.7	22.0
cb.			6.9	21.8
1/4			6.5	22.2

	2870			13
2			6.5	22.2
1/4			6.8	21.9
+5			6.3	22.4
cb.			3.6	25.1
+4			2.3	26.4
N = S Bank			4.1	24.6
+8 in ch.			9.3	19.9
+19 N edge ch			9.3	19.9
+23 N Bank			5.9	22.8
+30			6.2	22.5
	11+35			
-30			5.8	23.9
-16 N Bk ch.			5.6	23.1
-12 N edge "			9.5	19.7
N S " "			9.7	19.0
+9			2.7	26.0
cb.			2.7	26.0
+4			3.1	25.6
1/4			6.7	22.0
+6			7.0	21.7
4			6.6	22.1
1/4			6.4	22.3
cb.			6.8	21.9
5			6.4	22.3
+10			6.6	22.1

28.70 ✓ Nordica St.

11+69.44 - W line 42nd St.

-10		6.1	22.6
S		6.8	21.9
+2		7.0	21.7
cb		6.2	22.5
1/4		6.0	22.7
L	S. bk. ch.	5.1	23.6
+5	S edge	9.0	19.7
1/4		9.3	19.9
cb.		9.0	19.7
+5	N " "	9.1	19.6
N	N bk. ch.	5.0	23.7
+10		5.7	23.0

11+79.44 - cb

-10'		5.8	22.9
N	N bk. ch.	5.8	22.9
+8	" "	8.5	20.2
cb.	" "	8.7	20.0
1/4		9.1	19.6
L	" "	9.7	19.0
+1		5.1	23.6
1/4		5.3	23.9
cb.		5.7	23.0
S		6.3	22.9
+10		6.7	22.0

1/2 11+89.44 28.70 ✓

14

-10		6.3	22.9
S		6.0	22.7
cb		5.5	23.2
1/4		4.8	23.9
+5		4.6	24.1
+6		9.7	19.0
L		9.7	19.0
+9		9.7	19.0
1/4		4.6	24.1
cb		5.7	23.0
N		5.8	22.9
+10'		6.3	22.9

11+99.44 - 2. 12nd.

-10'		6.1	22.6
N		5.7	23.0
cb		5.2	23.5
1/4	on Riv. MH	4.9	23.8
+6		4.6	24.1
+7	inch.	9.6	19.1
L	" "	9.6	19.1
+6	" "	8.6	20.1
1/4		7.3	21.9
+4		5.8	22.9
cb.		6.1	22.6
S		6.4	22.3
+10		6.3	22.9

11+92.4 S Bridge 4.61

24.09 ✓

61

28.70

Nordica 57

12+0944 = E 1/4

-10		5.9	22.8
5		5.8	22.9
cb.		5.5	23.2
1/4		6.1	22.6
+2	inch.	8.6	20.1
+6	" "	9.4	19.3
8	" "	8.5	20.2
+6		5.3	23.9
1/4		5.3	"
cb.		5.3	"
N		5.6	23.1
+10		5.7	23.0

12+1944 - E cb 12nd

-10		5.8	22.9
N		5.7	23.0
cb.		5.5	23.2
1/4		5.8	22.9
+4	N bk ch.	5.8	"
8	in "	8.5	20.2
+4	" "	8.8	19.9
+9	" "	8.1	20.6
1/4		6.1	22.6
+5		5.4	23.3
cb.		5.6	23.1
5		5.6	"
+10		5.7	23.0

28.70 ✓

12+2944

E. LINE OF 42ND 15

-10		5.8	22.9
5		5.8	"
cb.		5.3	23.9
1/2	N bk ch.	5.6	23.1
+6		9.1	19.6
8		8.5	20.2
+7		5.6	23.1
1/4		6.0	22.7
cb.		5.6	23.1
N		5.8	22.9
+10		5.6	23.1

12+45

-10		6.1	22.6
N		5.9	22.8
cb.		5.9	"
1/4		6.1	22.6
+7		6.1	"
8	in ch.	8.5	20.2
1/4	" "	8.6	20.1
+3		5.5	23.2
cb.		5.0	23.7
5		5.7	23.0
+10		5.7	"

12+63

-10		5.6	23.1
-----	--	-----	------

	12+63	28.70	Nordica St	
015			5.3	23.9
+7			4.5	24.2
cb.			5.3	23.9
+5			6.4	22.3
+6 inch.			8.8	19.9
1/4 " "			8.7	20.0
+2 " "			8.3	20.4
+6			5.6	23.1
∫			4.5	24.2
+3			5.5	23.2
1/4			5.6	23.1
N.			5.6	"
+10			5.6	"
TR	4.43	30.78	2.38	26.34

✓
 * Corrected 5.6
 ✓ SE Top Fire Hydrant N
 12th / Nordica
 26.35 = FB 16⁰⁰ P-18

	12+82			
-10			7.8	23.0
N			7.8	"
cb.			7.5	23.3
1/4			7.6	23.2
∫			7.7	23.1
+7			7.0	23.8
1/4			8.0	22.8
+4 edge ch.			10.0	20.8
cb. -∫ "			11.3	19.5
+3			9.0	21.8
5			7.2	23.6
+10			7.7	23.1

	12+92	30.78		16
-10			7.2	23.6
-6 -5 Bk ch.			6.8	24.0
5			8.3	22.5
+4			9.3	21.5
+6 1/2 ch			11.2	19.6
cb.			10.6	20.2
+5			8.6	22.2
44			7.1	23.7
∫			7.6	23.2
1/4			7.5	23.3
cb.			7.5	"
N			7.6	23.2
+10			7.7	23.1
-10			7.8	23.0
N			7.6	23.2
cb.			7.3	23.5
1/4			7.2	23.6
∫			7.5	23.3
1/4			7.3	23.5
∫ N. Bk ch.			7.5	23.3
5 = ∫ ch			10.9	19.9
46			9.1	21.7
10			8.0	22.8

12+08

3078

Nordica st

13+25			
-25 = 5 BK ch	7.3	23.5	
-20	8.0	22.8	
-13 inch	11.1	19.7	
-7 " "	10.8	20.0	
-2 N BK ch.	7.6	23.2	
S	7.6	"	
cb.	7.3	23.5	
1/4	7.3	"	
2	6.9	23.9	
1/4	6.8	29.0	
cb.	6.5	24.3	
N	6.7	24.1	
+10	6.7	"	
13+50			
-5	4.9	25.9	
N	5.4	25.9	
cb.	5.8	25.0	
1/4	6.1	24.7	
2	6.1	"	
1/4	6.4	24.2	
cb.	7.0	23.8	
S	7.2	23.6	
+10	7.2	23.6	
	4.17	26.61	
13+67 = 2 3' Conc. Walk on N 2' 1/2 st			
14+100			
-10	5.8	25.0	

3078

17

S	5.2	25.6	
cb.	4.9	25.9	
1/4	4.4	26.2	
2	4.2	26.6	
1/4	4.1	26.7	
cb.	3.4	27.2	
N	2.9	27.9	
+5	2.6	28.2	
	2.35	28.23	
14+05 = 29.7' W. of 2' 3' Conc. Walks			
14+50			
-5	0.0	30.8	
N	0.5	30.3	
cb.	1.1	29.7	
1/4	2.2	28.6	
2	2.6	28.2	
1/4	2.0	28.8	
cb.	2.4	28.2	
S	2.6	27.2	
+10	4.3	26.5	
T.P. 729	36.33	1.74	29.04
		3.03	27.30
14+55 = 2' Conc. Walk on South		0.3' 1/2 st	
+62 " " " "		4.98	31.35
		North	0.2' 1/2 st
15+100			
-10	7.6	28.7	
S	6.9	29.9	
cb.	6.3	30.0	

36.33 ✓

Nordica of

31 1/4	5.9	30.4
L	5.8	30.5
1/4	5.5	30.8
+4	5.3	31.0
+7	4.7	31.6
cb	4.5	31.8
N	3.2	33.1
+5	2.7	33.6
15+36		
-5	0.6	35.7
N	1.1	35.2
cb	2.0	34.3
+3	2.5	33.8
+6	3.5	32.8
1/4	3.6	32.7
L	3.9	32.4
1/4	4.1	32.2
cb	4.2	32.1
5	5.0	31.3
+20	6.8	29.5
15+40		
-20	10.8	25.5
-5	10.9	26.0
5	8.0	28.3
+5	4.7	31.6
cb	4.1	32.2

36.33 ✓

18

1/4	4.1	32.2
L	3.8	32.5
1/4	3.5	32.8
+4	3.4	32.9
+7	2.3	34.0
cb	1.8	34.5
N	1.0	35.3 35.8
+5	0.5 -0.01	36.32 <small>from 4 on N 0.5 point</small>
15+34 15+65		
-5	0.0	36.3
N	0.3	36.0
cb	0.9	35.4
+3	3.4	32.9
1/4	3.9	32.4
L	4.3	32.0
1/4	4.6	31.7
cb	5.4	30.9
+7	6.1	30.2
5	14.1	26.2
+20	10.6	25.7
16+02.76 = 80 LA		
-20	10.2	26.1
5	10.2	"
+4	9.6	26.7
+7	8.5	27.8
cb	7.7	28.6

36.33 ✓

Nordica St.

1/4	6.5	29.8
2	6.0	30.3
N 1/4	5.7	30.6
+8	5.4	30.9
cb.	4.4	31.9
+5	2.6	33.7
N	2.0	34.3
+3	0.9	35.4
+5	0.8	35.5
16+30.57 = ctr Curve 1		
-5	1.8	34.5
N	4.3	32.0
cb.	6.2	30.1
+2	6.5	29.8
1/4	6.7	29.6
L	6.9	29.0
1/4	7.4	28.9
cb.	8.4	27.9
S	9.3	27.0
+20	9.7	26.6
16+58.76 = E.C.		
-30 - 1/2 Channel	14.1	22.2
-25	12.5	23.8
-22	10.2	26.1
-15	7.8	28.5
10	9.8	26.5

36.33 ✓

5	5.7	26.6	19
cb.	8.5	27.8	
1/4	7.9	28.4	
L	7.4	28.9	
1/4	7.1	29.2	
+9	6.6	29.7	
cb.	5.9	30.4	
N	4.9	31.4	
+5	3.8	32.5	
17+00			
-5	4.6	31.7	
N	4.9	31.4	
cb.	6.1	30.2	
+3	6.8	29.5	
1/4	7.1	29.2	
L	7.5	28.8	
1/4	8.0	28.3	
cb.	8.3	28.0	
S	9.1	27.2	
+13	9.8	26.5	
+16	8.6	27.7	
+25	12.4	23.9	
+30 = 1/2 Channel	14.2	22.1	
17+16 = 1/2 Curve Walk on N	5.63	30.70	5.1 in st.
17+80			
-35 = 1/2 Channel	14.1	22.2	

17+50 36.33 Nordica St.

OS -30	12.4	23.9
-15	10.8	26.3
-11	9.0	27.3
	10.1	26.2
S	9.1	27.2
cb	8.3	28.0
1/4	7.5	28.8
2	7.5	"
1/4	7.3	29.0
1/8	7.8	28.5
cb.	7.1	29.2
N	6.2	30.1
+15	5.3	31.0
17+80		
-25	5.0	31.3
-20	6.0	30.3
N	6.6	29.7
cb.	6.9	29.4
1/4	6.8	29.6
2	6.8	"
1/4	7.1	29.2
cb.	7.7	28.6
S	9.4	26.9
+10	6.0	30.3
+2.1	12.0	24.3
+2.5 of channel	14.1	22.2
chk Paving 32+10 FB 1609	492	31.41 ✓
		31.40
		0.01

36.33 ✓
 on Cop. Disk 13' South of S Nordica and 1' E. of W. edge Pav.
 TP 5.31 36.47 ✓ 5.17 31.16 20

17+97.61 = 144. 1319		
-28' - of channel	14.2	22.3
-18	11.2	25.3
-17	7.8	28.7
S	7.5	29.0
18	6.3	30.2
cb.	6.3	"
1/4	6.2	30.3
2	5.9	30.6
1/4	5.8	30.7
cb.	6.2	30.3
N	5.7	30.8
+25	4.8	31.7
18+09.6 = West edge Paving		
-75 on Paving	2.78	33.69
-50 " "	3.51	32.96
N " "	4.72	31.75
cb. " "	4.91	31.56
1/4 " "	5.02	31.45
2 " "	5.15	31.32
1/4 " "	5.29	31.18
cb " " Patch	5.45	31.02
S " " "	5.49	30.98
+10 " " "	5.65	30.82

3647 Nordica St.

18+18.6 = Conc. Porng.

-40	on Patch Por.	5.69	30.78
5	" " "	5.31	31.16
Cb.		5.32	31.15
1/2	on Conc Por.	5.23	31.29
2		5.10	31.37
1/4	" " "	4.97	31.50
Cb.	" " "	4.82	31.65
N	" " "	4.64	31.83
+50	" " "	3.38	33.09
+75		2.68	33.79

18+27.6 = E edge Por.

-75	on Conc. Por.	2.85	33.62
-50	" " "	3.46	33.01
N	" " "	4.77	31.70
Cb	" " "	4.93	31.54
1/2	" " "	5.15	31.32
2	" " "	5.22	31.25
1/4	" " "	5.36	31.11
Cb	" Patch "	5.41	31.06
5	" " "	5.45	31.02
+40	" " "	5.63	30.82
chk Por.	32+19 P-20	5.07	31.40 ✓

21

27.6
18+10.90
16.7

Walker
Hendricks
Hunkler
Carey

CROSS SECTION COTTONWOOD ST.

from Earl St. to 41st

6-3-46

80' wide 14' cbs. 13' 1/2" to 1 1/4" 40lb.

6.24 18.87

11.23

SM CT
N.W. Earl
& Cottonwood

0+00 = Edge Earl

N	6.2	12.7
cb	6.52	12.35
cut	7.3	11.6
1/4	7.0	11.9
1/2	6.7	12.2
1/4	7.1	11.8
cut	7.4	11.5
cb	6.46	12.91
+9.3 on walk	6.33	12.52
+11 at wall	6.3	12.6
S	6.0	12.9

0+42 = 10" Ag. Tree on South 12' in st.

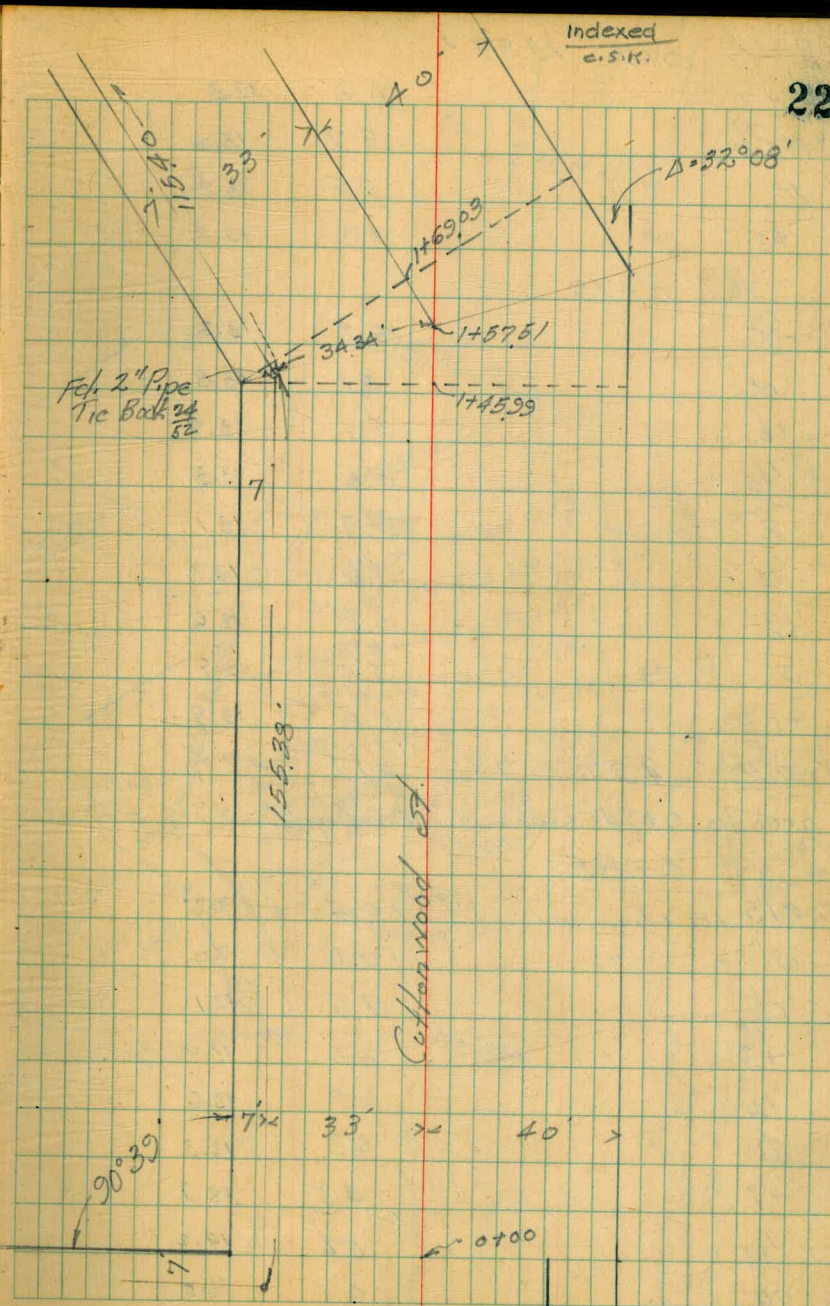
0+65 = 30" Euc. " " " "

0+50 = N edge 35' walk on South

S on walk	5.16	13.71
+3' on N edge Conc. Slab	5.58	13.29
cb	5.5	13.2
+7	6.5	12.2
1/4	6.6	12.3
1/2	6.7	12.6
1/4	6.5	12.2

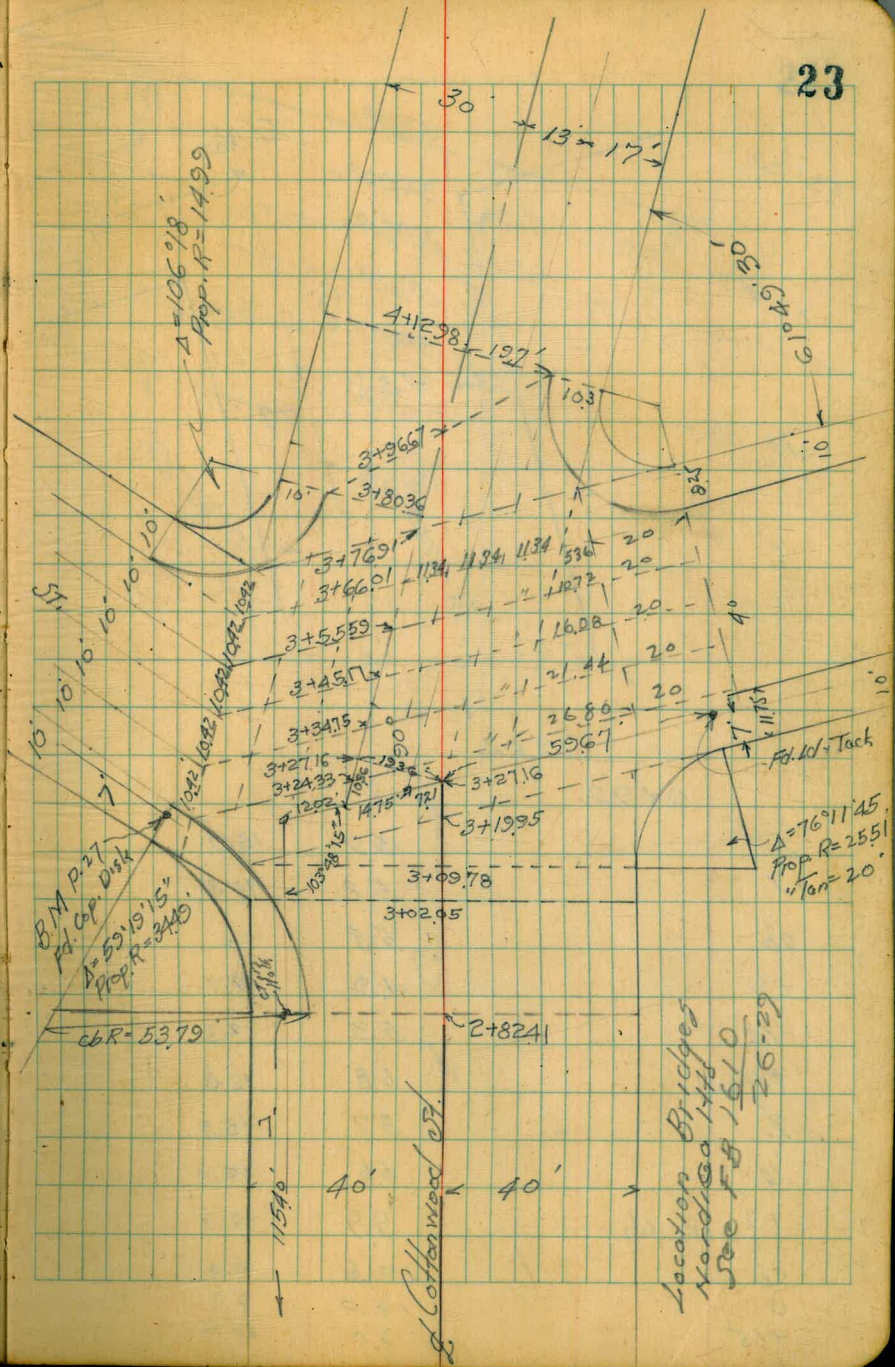
Indexed
C.S.M.

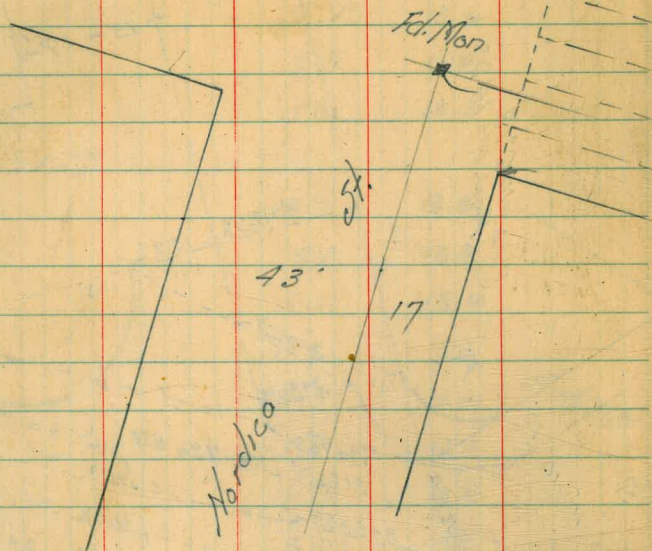
22



Earl St.

	0+50	18.87 ✓		
7		6.6	12.3	
11 cb.		5.7	13.2	
N		5.5	13.4	
+5		5.6	13.3	
	0+79			
-5		5.3	13.6	
N		5.1	13.8	
cb.		5.5	13.4	
14		5.6	13.3	
5		5.8	13.1	← SOUTH
14		5.6	13.3	
cb.		5.3	13.6	
S		5.0	13.9	
+5		5.0	13.9	
TP	4.92	19.62	4.17	14.70
0+00 to 0+74	Cobble Wall on South 3' in St.			18" high
	0+85			
-15 in channel		10.4	9.2	
5 "		10.6	9.0	
cb		7.5	12.1	
+3		6.2	13.4	
14		6.0	13.6	
5		6.3	13.3	
+7		4.5	15.1	
14		5.4	14.2	
cb		6.1	13.5	
N		5.9	13.7	
+5		5.9	13.7	

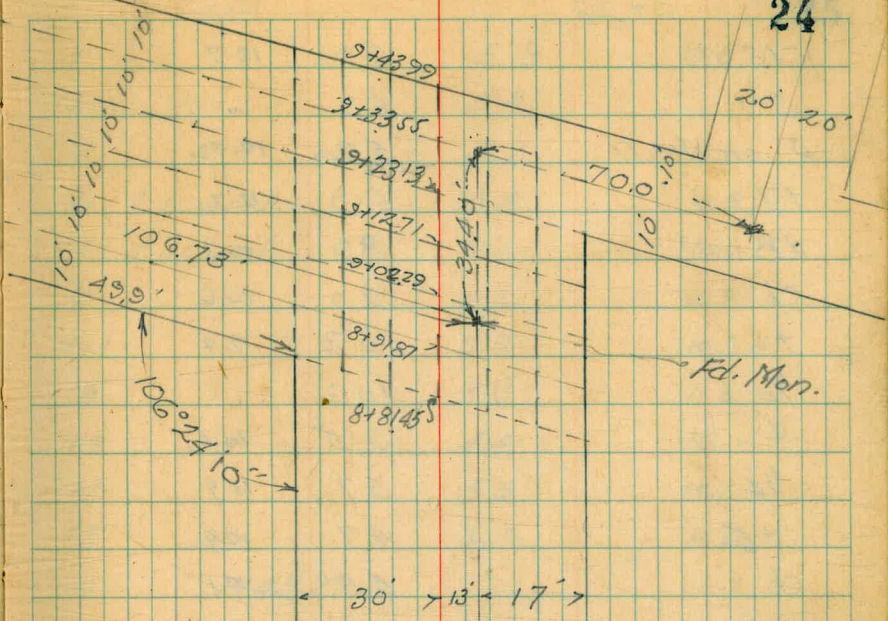




12.62

0+92

-5	59	13.7
N	58	13.8
cb.	58	"
+9	49	14.7
1/4	53	14.3
+10	68	12.8
2	57	13.9
1/4	56	14.0
+7 in ch	99	9.7
cb.	10.6	9.0
5	10.0	9.6
+15	9.0	10.6



Collarwood &

23

19.62

Cottonwood Cr.

0+94

-15		6.9	12.7
S		6.9	"
S on Wall		5.20	14.92
17		6.9	12.7
+8		8.9	10.7
cb.		9.0	10.6
+6		10.2	9.9
1/4		10.2	"
L		9.5	10.1
1/4		5.7	13.9
+5		4.7	14.9
cb.		5.5	14.1
N		5.8	13.8

1+03

N		5.9	13.7
cb.		5.0	14.6
+7		6.1	13.5
1/4		8.5	11.1
+4 in ch.		9.7	9.9
L " "		9.7	"
1/4 " "		9.0	10.6
+2 on Deck Bridge		5.5	14.1
cb.		5.8	13.8
S		6.0	13.6
S on Walk		5.19	14.43

19.62

1+13

25

S		5.8	13.8
cb		5.8	"
1/4		5.7	13.9
L = S Bank ch.		5.8	13.8
+7 S edge "		9.6	10.0
1/4		9.2	10.8
+11		9.3	10.3
cb		8.3	11.3
+8		4.4	15.2
N		5.5	14.1
+5		6.0	13.6

1+45.99

-10 - N Bank ch.		4.9	14.7
N = N edge "		9.1	10.5
+8 in "		9.2	10.8
cb		7.1	12.5
+7 S Bank "		5.1	14.5
1/4		6.6	12.0
L		6.2	13.4
1/4		5.5	14.1
cb.		5.3	14.3
S		6.0	13.6
+10		6.0	13.6

1+57.51 on Sector

-7		3.7	15.9
S		4.7	14.9

145751 1962 ✓ Cottonwood St.

1962 ✓

26

cb.		5.1	19.5
1/4		5.6	19.0
2		6.1	13.5
1/4		6.5	13.1
77		5.4	19.2
cb.		7.0	12.6
+4 in ch.		9.1	10.5
+11 " "		9.3	10.3
N		8.3	11.3
+10		4.9	19.7
	1769.03		
-10		4.9	19.7
N		8.3	11.3
+2 in ch.		9.4	10.2
+8 " "		9.2	10.8
cb.		7.8	11.8
+6		5.0	19.6
1/4		6.2	13.9
2		6.0	13.6
1/4		5.3	19.3
cb.		5.1	19.5
S		3.9	15.7
+10		2.6	17.0
	2 + 00		
-5		1.5	18.1
S		2.5	17.1

S + 10		4.3	15.3
cb.		4.5	15.1
1/4		5.0	19.6
2		5.2	19.9
+10		5.7	13.9
1/4		6.4	13.2
+5 in ch.		8.8	10.8
cb. " "		8.9	10.7
+5 " " "		8.5	11.1
N		5.1	19.5
+10		4.8	19.8
	2 + 11		
-10		5.1	19.5
N		4.3	15.3
+4		4.8	19.8
+12 in ch.		8.1	11.5
cb. " "		8.3	11.3
1/4 " "		9.1	10.5
+7		10.1	9.5
+8 on Bridge		4.8	19.8
2		4.8	"
+11		4.8	"
1/4		4.4	15.2
cb.		3.0	10.6
S		2.9	16.7
+5		0.8	19.1

1962 ✓ Cottonwood St.

	2+21		
-5		0.1	19.5
5		3.3	16.3
cb.		5.3	14.3
+9		6.4	13.2
1/4 inch.		8.8	10.8
2 " "		9.7	9.9
2 on Bridge		4.7	14.9
1/4 inch.		7.8	11.8
cb.		6.5	13.1
+5		5.7	13.9
N		4.4	15.2
+10		5.2	14.4
	2+30		
-10		5.3	14.3
N		5.5	14.1
cb.		5.9	13.7
+10		3.9	15.7
1/4		4.7	14.9
2		4.7	"
+3		4.7	"
+4 in ch.		7.3	12.3
1/4 " "		9.4	10.2
+3 " "		8.7	10.9
+9		5.3	14.3
cb.		5.3	"

2+30 1962 ✓

			27
sch+6		4.7	14.9
S.L.		2.7	16.7
+5		1.0	18.6
	2+56		
-5		2.7	16.9
5		2.7	"
+8		5.0	14.6
+12		5.4	14.2
cb.		7.1	12.5
+4 in ch.		8.4	11.2
1/4 " "		8.6	11.0
+3 " "		8.3	11.3
+8		5.4	14.2
2		4.3	15.1
1/4		4.6	15.0
cb.		5.7	13.9
N		4.8	14.8
			14.6
+10		5.0	
Cap. Disk PC NW Cottonwood St.			
TR 613	21.01	4.74	14.88
	2+8241		
N		5.9	15.1
+4.5' on N edge	Sds	6.10	14.91
Ncb Rot.		6.11	14.90
Gut.		7.0	14.0
1/4		5.9	15.1
2		6.2	14.8

14.88 = BM 21
F.B. 1609
18

218241 21.01 ✓ Cottonwood St.

5 1/4 + 6' in ch.	8.6	12.8
5 1/4 " "	9.4	11.6
+9 " "	9.4	"
cb.	7.2	13.8
+3	6.0	15.0
5	5.1	15.9
+5	5.1	"
3+02.05		
-5	5.2	15.8
5	4.9	16.1
+10	4.5	16.5
cb. in ch.	8.2	12.8
+3 " "	9.3	11.7
1/4 " "	9.3	"
+5 " "	9.2	11.8
2	5.6	15.9
1/4	6.0	15.0
cb.	6.3	14.7
+8.5 Gut at cb Ret.	6.9	14.1
" on cb. "	6.08	14.93
N on walk	6.04	14.97
3+09.78		
N on cb.	6.12	14.89
+0.4 " cb Face	6.12	"
Gut	7.0	14.0
cb.	6.2	14.8

21.01 ✓

1/4	6.0	15.0	28
2	6.1	14.9	
+3	5.5	15.5	
+8 in ch.	9.4	11.6	
1/4 " "	9.2	11.8	
cb " "	9.2	"	
+2 " "	8.3	12.7	
+6	4.7	16.3	
5	4.7	"	
+5	5.1	15.9	
3+19.95 = 14.6. 4th = diag. Section			
5	4.9	16.1	
cb. on Bridge	5.2	15.8	
+1 in ch.	10.2	10.8	
1/4 " "	9.2	11.8	
+4	8.6	12.9	
2	6.0	15.0	
1/4	6.1	14.9	
cb.	6.2	14.8	
N Gut.	7.0	14.0	
on cb.	6.12	14.89	
3+24.33 diag. Section ¹⁷ this Intersection			
N on cb.	6.15	14.86	
Gut.	6.8	14.2	
1/4	6.4	14.6	
1/4	6.1	15.0	

2101 ✓ Cottonwood St

22 to East	6.2	14.8
1/4 on oil + Rock	6.6	14.4
cb, valley East.	7.2	13.8
S	6.1	14.9
+1 on N edge Bridge	5.9	15.1
+26.8	5.6	15.4
+30.3 N end East cb	5.89	15.14
+46.8 on cb	5.40	15.61
" " East.	5.83	15.18
Σ +34.75		
-41.44	5.5	15.5
-21.44	5.6	15.4
-7	5.7	15.3
South	5.9	15.1
cb.	6.5	14.5
+9 valley	7.1	13.9
1/4	7.0	14.0
1/2	6.4	14.6
1/4	6.2	14.8
cb	6.1	14.9
N	6.3	14.7
Σ +45.17		
N	6.1	14.9
cb	6.1	"
1/4	6.3	14.7
1/2	6.7	14.3

2101 ✓

+4 valley East.	6.8	14.4	29
1/4	6.7	14.3	
cb	6.1	14.9	
SL	5.9	15.1	
+16.08	5.5	15.5	
+36.08	5.3	15.7	
Σ +55.59			
-30.72	5.2	15.8	
-10.72	5.5	15.5	
SL	5.8	15.4	
cb.	6.1	14.9	
1/4	6.4	14.6	
1/2 valley East.	6.8	14.4	
1/4	6.5	14.5	
cb.	6.2	14.8	
N	6.1	14.9	
Σ +66.01			
N	6.3	14.7	
cb.	6.4	14.6	
+6	6.7	14.3	
1/4	6.7	"	
1/2	6.5	14.5	
1/4	6.2	14.8	
cb.	6.0	15.0	
SL.	5.7	15.3	
+19.34	5.7	"	
+25.34 on Ground	4.9	15.1	
" on cb.	5.25	15.76	

21.01 ✓ Cottonwood St.

05 ctr. SE Ret. on cb	526	15.75
Gut	53	15.7
N.E. Ret. 4 Parts		
Bl. on 40th on cb	565	15.36
" Gut	64	14.6
① on cb.	568	15.33
Gut	64	14.6
② on cb.	566	15.35
" Gut.	64	14.6
③ on cb.	564	15.37
" Gut	62	14.8
④ Bl. on Cottonwood	562	15.39
3+76.91		
-20 on walk	503	15.98
SL.	5.5	15.5
cb.	5.9	15.1
'14	6.1	14.9
2	6.2	14.8
'12.	6.3	14.7
cb.	6.3	"
3+96.67 = diag. Section = 52' ±		
N cb	562	15.39
Gut.	6.0	15.0
'14	6.2	14.8
2	6.1	14.9
'14	5.6	15.4
5 cb.	5.55	15.46

21.01 ✓

4+12.98

20

J	53	15.7.
+28	546	15.55
cb.	555	15.26
Gut	576	15.4
'14	55	15.5
2	58	15.2
'14	57	15.3
cb.	57	"
N in Conc. ^{Walks} Bl 76	560	15.91 5' inst.
4+50		
-5	54	15.6
N	54	"
cb.	55	15.5
'11	55	"
2	59	15.1
'14	53	15.7
cb.	53	"
SL.	50	16.0
15	46	16.4
5+00		
5	40	17.0
SL.	49	16.1
cb.	57	15.8
'14	55	15.5
2	54	15.6

	5400	2101	Cottonwood A.	
N 1/4			56	15.9
cb.			56	"
N			53	15.7
+5			52	15.8
	5745			
-5			50	16.0
N			50	"
cb.			48	16.2
1/4			48	"
2			51	15.9
1/4			51	"
cb.			46	16.4
S.L. = N Bank ch			39	17.1
+10 in channel			92	11.8
+16			57	15.3
T.P.	7.98	22.86	6.13	14.88
	5+75			
-10			65	16.4
-3 = S. edge ch.			10.0	12.9
S.L. in 2			10.6	12.3
+5 in "			10.7	12.2
cb.			7.4	15.5
1/4			7.4	"
2			6.4	16.5
+5			5.8	17.1
1/4			6.5	16.4

	2286	
cb.	6.6	16.3
N	6.7	16.2
+10	6.8	16.1
	6+00	
-10	6.7	16.2
N	6.6	16.3
cb.	6.4	16.5
+5	6.0	16.9
1/4	4.5	18.4
+7	5.3	17.6
2	7.5	15.4
+7	7.9	15.0
1/4 in ch.	2.4	13.5
+5 1/2 ch.	10.4	12.46
cb. in "	2.9	13.0
+6	6.6	16.3
5	6.3	16.6
+10	6.7	16.2
	6+25	
-10	8.7	14.2
5	7.4	15.5
+8	7.7	15.2
cb.	8.8	14.1
+6	8.8	"
+8 in ch. Pocket	11.8	11.1
1/4 " " "	11.5	11.4
+4 " "	10.7	12.2

	6+25	22.86	Cottonwood St.
2			8.4
15			19.5
14			5.7
14			17.2
cb.			5.5
cb.			17.9
N			5.6
N			17.3
+10			6.2
			16.7
			6.3
			16.6
	6+35		
-10			5.3
-10			17.6
N			4.8
N			18.1
cb.			6.5
cb.			16.9
14			8.8
14			19.1
8 = 1/2 ch.			11.0
8 = 1/2 ch.			11.9
+7			9.0
+7			13.9
14			9.6
14			13.3
+4			8.6
+4			19.3
cb.			8.4
cb.			19.5
S			8.2
S			19.7
+10			7.5
+10			15.9
	6+50		
-10			7.3
-10			15.6
S.L.			6.9
S.L.			16.0
cb.			7.6
cb.			15.3
14			7.9
14			15.0
1/2			7.9
1/2			"
14			9.3
14			13.6
+8 = 1/2 ch.			11.0
+8 = 1/2 ch.			11.9
cb			10.7
cb			12.2

	6+50	22.86	
N			9.5
N			13.9
14			7.3
14			15.6
+10 N Bank			6.8
+10 N Bank			16.1
+20			5.1
+20			17.8
	6+62		
-25 1/2 ch.			9.5
-25 1/2 ch.			13.9
-13 " 1/2 "			10.5
-13 " 1/2 "			12.9
N			9.5
N			13.9
+2			7.1
+2			15.8
cb.			5.5
cb.			17.9
14			5.2
14			17.7
+6			7.2
+6			15.7
1/2			7.3
1/2			15.6
14			7.8
14			15.1
cb.			7.3
cb.			15.6
S			7.2
S			15.7
+10			7.3
+10			15.6
	6+72		
-10			7.3
-10			15.6
S			7.1
S			15.8
cb.			6.9
cb.			16.0
14			7.1
14			15.8
1/2			7.0
1/2			15.9
14			7.2
14			15.7
cb.			6.4
cb.			16.5
+3			5.2
+3			17.7
N			4.2
N			18.7
+12 = S. Bank ch.			6.5
+12 = S. Bank ch.			16.9

2286 ✓ Cottonwood st

	7+00		
-10		6.6	16.3
N		6.6	"
cb.		6.9	16.0
1/4		6.9	"
S		6.4	16.5
1/4		6.4	"
cb.		6.8	16.1
S		7.0	15.9
+10		7.0	"
T.P.	12.11 29.12	5.85	17.01
	7+50		
-10		9.3	19.8
S		10.6	18.5
cb.		11.4	17.7
1/4		11.9	17.2
S		12.1	17.0
1/4		12.6	16.5
cb.		12.8	16.3
N		12.5	16.6
+10		12.4	16.7
	8+00		
-15		12.3	16.8
N		12.0	17.1
cb.		11.5	17.6
1/4		10.9	18.2

2912 ✓

	10.0	19.1	33
d			
1/4	10.1	19.0	
+6	2.7	19.9	
cb.	8.9	20.2	
S	7.5	21.6	
+15	5.7	23.9	
	8+50		
-15	2.8	26.3	
S	4.9	29.2	
cb.	6.4	22.7	
1/4	7.3	21.8	
S	7.9	21.2	
1/4	9.4	19.7	
cb.	10.4	18.7	
N	10.8	18.3	
+15	11.3	17.8	
	8+81.45 = 114.415		
		This and all sections This Int. on Diag.	
-499	10.6	18.5	
-25	10.9	18.2	
N	8.6	20.5	
cb.	7.7	21.9	
1/4	6.6	22.5	
S	5.9	23.2	
1/4	5.4	23.7	
cb.	5.0	24.1	
S	3.5	25.6	
+15	1.6	27.5	

29/12

Cottonwood St.

	8+9187		
5-15		1.2	27.9
S		3.0	26.1
cb		4.3	24.8
'14		5.0	24.1
L		5.3	23.8
'14		6.4	22.7
cb		7.3	21.8
N		8.4	20.7
+24		10.8	18.3
+4696 = S.L. Nordica		11.0	18.1
9+0229 W'14			
-4402 = S.L. Nordica		11.1	18.0
-21		9.7	19.9
N		8.2	20.9
cb		7.5	21.6
'14		6.3	22.8
L		5.7	23.4
'14		4.3	24.8
cb		3.6	25.5
S		2.5	26.6
+15		0.6	28.5
9+1271 = L		4.15	
-15		0.1	29.0
S		2.4	26.7
cb		3.8	25.3
'14		5.9	23.8

29/12

	59	23.2	34
L			
'14	7.0	22.1	
cb	7.8	21.3	
N	8.6	20.5	
+21	9.2	19.9	
74/08 = S.L. Nordica	7.0	22.1	
9+2313 = E'14 41st		18.1	
-3814 = S.L. Nordica	11.0		
-1814	10.3	18.8	
N	9.2	19.9	
cb	8.5	20.6	
'14	7.7	21.4	
L	6.8	22.3	
'14	5.7	23.4	
cb	4.3	24.8	
S	2.3	26.6	
+15	0.6	28.5	
+30	2.0	27.1	
+50	+3.5	32.6	
+75	+7.0	36.1	
9+9355 = E cb 41st = A Alley to South			
-75	7.8	35.9	
-50	+3.8	32.9	
-25	+1.2	30.3	
-8	1.5	27.6	
S	3.1	26.0	

29.12

Cottonwood St

9+33.55

5 cb.	4.7	29.9
'14	6.0	23.1
ℓ	7.1	22.0
'14	7.9	21.2
cb.	8.6	20.5
N	9.3	19.8
+15.2	10.3	18.8
+35.2 = Sh. Nordica	10.6	18.5
9+43.99		
-32.26 = Sh. Nordica	10.8	18.3
-12.26	10.3	18.8
N	9.4	19.7
cb.	8.9	20.2
'14	8.2	20.9
ℓ	7.5	21.6
'14	6.1	23.0
cb.	4.6	24.5
5	3.4	25.7
+12	1.2	27.9
+30	+1.0	30.1
+52	+4.0	33.1
+71	+5.5	34.6
+78	+6.6	35.7
9+55		
-75	+6.7	35.8
-75	+5.6	34.7

Notes Reduced Pg. 106-35 - P. 7-31-86

29.12

-52	74.5	33.6	35
-40	+2.3	31.9	
-12	10	28.1	
5	3.8	25.3	
cb.	5.0	24.1	
'14	6.4	22.7	
ℓ	7.7	21.4	
'14	8.3	20.8	
cb.	9.1	20.0	
N	9.6	19.5	
+93	10.0	19.1	
+29.3 = Sh.	10.5	18.6	Rim MH
TP 368	19.75	18.05	16.07 5+20
chk BM P. 21	4.88	14.87	
488	19.76	14.88	= BM
TP 13.15	32.17	0.74	19.02
TP 13.05	44.96	0.26	31.91
TP 11.42	51.89	4.49	40.47
			NET tack to the Nurture View
			→ Cont P-36

Walker Cross SECTION - MARINE VIEW AVE.
 Hendricks 60' Wide 10' Cbs
 10' Cbs
 Care of from 40th to Division St.
 6-6-46

TP-35
 51.89'

0-37.8 This section Lts. + Rts are from 2

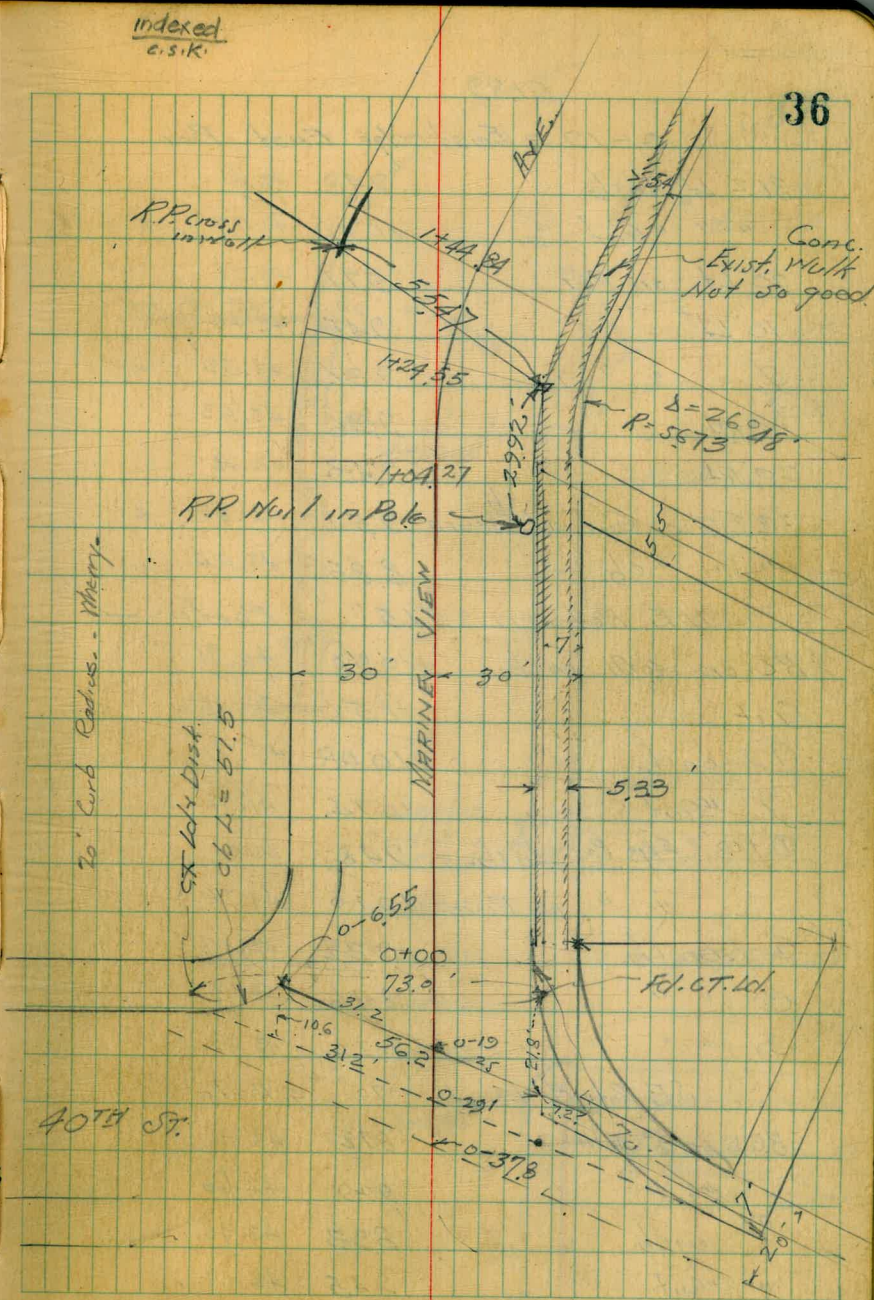
50' Lt. or Pav.	11.03	40.86
40' Lt.	10.59	41.30
30' Lt.	10.34	41.55
20' Lt.	10.10	41.79
10' Lt.	9.96	41.93
9'	9.78	42.11
10' Rt.	9.59	42.30
20' Rt.	9.42	42.47
30' Rt.	9.33	42.56
40' Rt.	9.18	42.71
50' Rt.	9.06	42.83

0-29.1% valley Gutter

50' Rt.	9.40	42.49
40' Rt.	9.53	42.36
30' Rt.	9.60	42.29
20' Rt.	9.72	42.17
10' Rt.	9.82	42.07
9'	10.05	41.84
10' Lt.	10.12	41.77
20' Lt.	10.25	41.64
30' Lt.	10.48	41.41
40' Lt.	10.71	41.18
50' Lt.	11.29	40.60

Indexed
 c.s.k.

36



51.89

0-19 = East edge East. Pav.

31.2 H. on cb	9.48	42.41
" " " Gut	10.10	41.79
20' Lt. on Pav	9.71	42.18
10' Lt	9.45	42.44
2 " "	9.36	42.53
10' Rt	9.36	42.53
20' Rt	9.43	42.46
32.2 Rt. on Gut. at Return ^{cb}	9.51	42.38
" " " cb	8.85	43.02

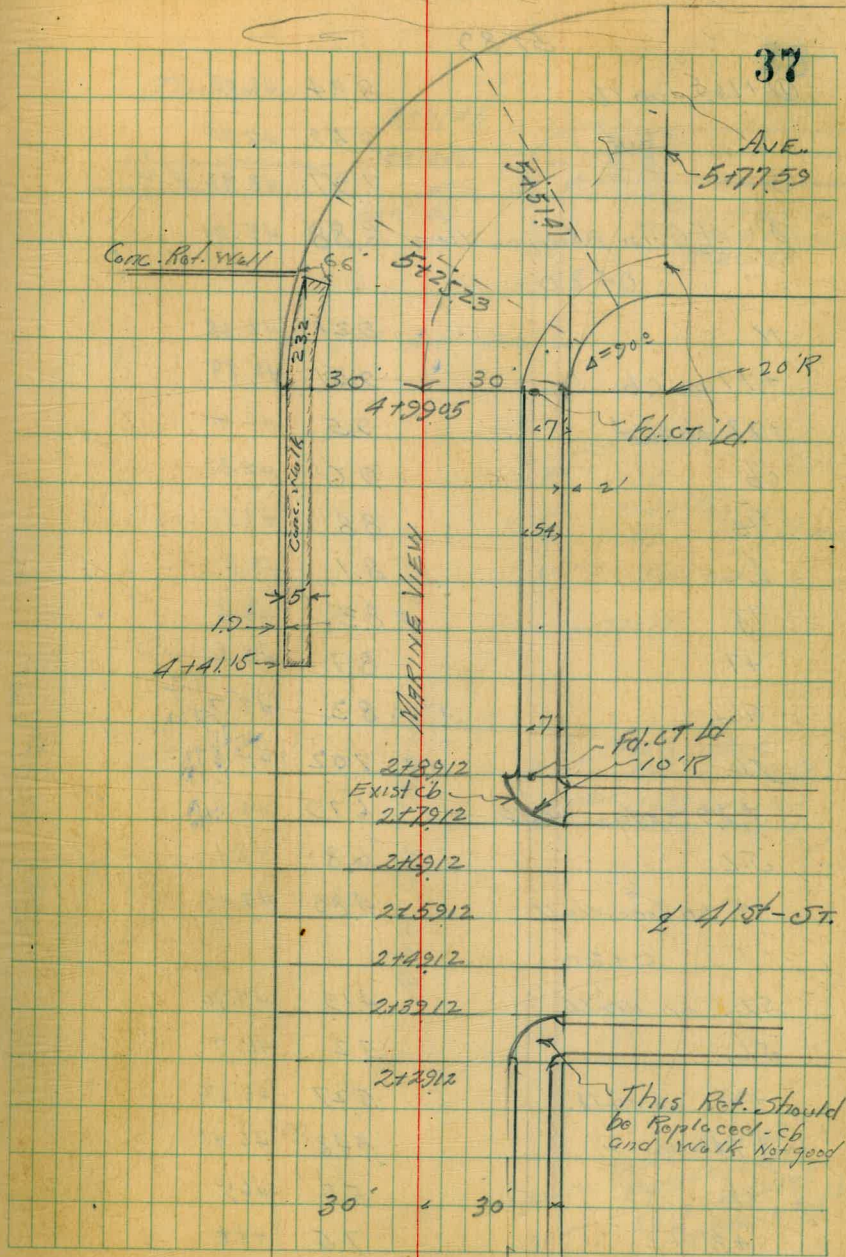
NE Return = 51.5' 4 Points

B.G. on 4th on cb	10.98	40.91
Gut	11.56	40.33
① on cb	10.08	41.81
" Gut	10.74	41.75
① + 10' = Edge Pav on cb.	9.48	42.41
" " on Pav	10.10	41.79
② on cb.	9.32	42.57
③ " "	8.76	43.13
④ " "	8.26	43.63

SE Ret cb Length = 70' 4 Points

B.G. on cb. 4th	8.72	43.17
" Gut	9.29	42.60
① on cb.	8.93	42.96
" " Gut.	9.45	42.44

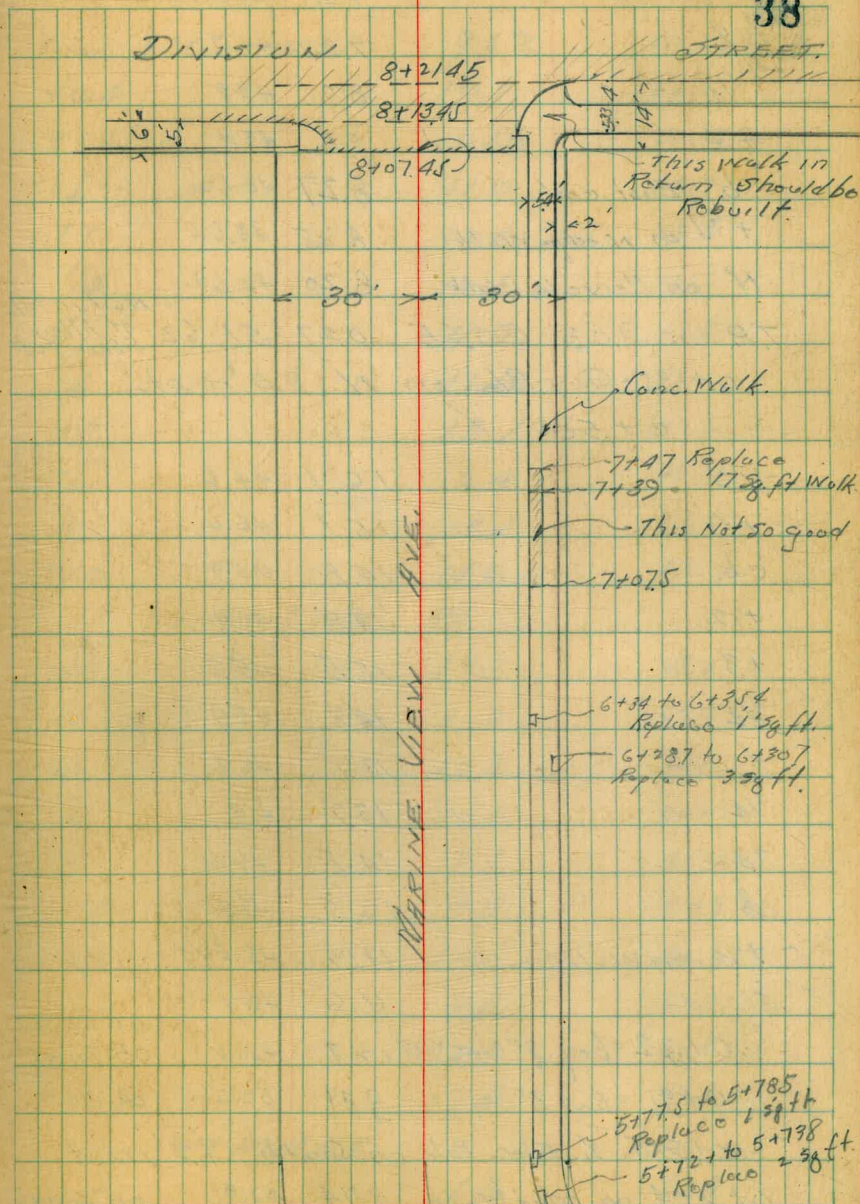
37



51.89

① +16.5 on cb	8.84	43.05
" aut.	9.52	42.37
②	7.97	43.92
③ = E.G. on Marine View	6.88	45.01
0+00		
N	9.21	42.68
+7.7 on cb.	9.01	42.88
+7.7 on aut	9.5	42.4
cb	9.6	42.3
'10	8.8	43.1
L	8.1	43.8
'10	8.3	43.6
+7	8.7	43.2
aut	8.2	43.7
cb	7.02	44.87
+7.9 = edge walk.	6.79	45.10
S.L.	6.8	45.1
" 6" on Conc. Wall	4.80	47.09
0+20		
S.L. on Wall	4.19	47.70
S.L.	5.2	46.7
+21 on walk.	5.27	46.62
+74 " "	5.48	46.41
cb.	5.5	46.4
+3	7.5	44.4

38



5189 Marine View Ave

60.65

39

1/16	7.2	44.7	
1/8	7.2	44.7	
1/4	8.0	43.9	
cut.	8.5	43.4	
cb - East end	8.27	43.64	
+7.7 on N edge Walk	8.25	43.64	
N. on Private Walk	8.20	43.69	
T.P.	9.03	60.65	0.27 51.62
Nail in Pole at All side/st.			
0+35 - Guy Pole on N. 8.5' in st.			
0+50			
-10	15.1	44.6	
N	15.1	45.6	
cb.	14.8	45.9	
+2	14.8	45.9	
+3	15.5	45.2	
1/4	14.8	45.9	
1/8	13.9	46.8	
1/4	13.9	46.8	
7/4	14.1	46.6	
cb	12.5	48.2	
+2 on Walk	12.06	48.59	
5	11.6	49.1	
0+32 = beg. 8" Conc. Wall 12.7 48.0 on South, 0.5' in st.			
0+91 = End 8" " " 9.39 52.26 on " "			
0+91.5 = Elec. Pole on South 9.3' in st.			
0+92.4 on edge Walk 8.74 51.91 on South			
0+74.3 - Guy Pole on North 7' in st			

0+75

5 on 8" Conc Wall	9.62	51.03
+0.4	10.1	50.4
+7.6 on	10.18	50.47
cb.	11.0	49.7
+7	12.4	48.3
1/4	12.1	48.6
1/8	11.9	48.8
1/4	12.6	48.1
+3	13.1	47.6
cb.	12.4	48.3
N	13.1	47.6
+10	14.6	46.1
1+04.27 - 8.6. Pt.		
-10	13.7	48.0
N	14.0	49.7
cb.	10.6	50.1
1/4	10.5	50.2
1/8	9.7	51.0
1/4	9.8	50.9
+3	10.1	50.6
cb.	8.6	52.1
5	7.9	52.8
+10	7.4	53.3
1+24.55		
-5	6.8	53.9
5	6.6	54.1

6065

S + 2.3	on S. edge Walk	6.80	53.85
+ 7.6	" N " "	6.90	53.75
cb.		7.6	53.1
+ 5		8.5	52.2
1/10		8.2	52.5
2		7.9	52.8
1/10		8.6	52.1
cb.		8.4	52.3
N		8.8	51.9
+ 0.2	on Wall	8.82	51.82
+ 1.0	" "	8.77	51.88
		7.42	53.73
1 + 3.6	= 2.3' Conc. Walk on N on Line		
1 + 4.84			
- 5	on Ground	7.9	57.8
14.5	" Wall	4.93	55.72
N	on "	4.80	55.85
N		7.5	53.7
cb.		7.0	53.7
+ 5		7.3	53.4
1/4		6.7	52.0
2		6.1	52.6
1/4		6.7	52.0
+ 5		7.2	53.5
cb.		6.4	52.3
+ 2.5	on Walk	5.98	54.67
+ 7.8	" "	5.78	52.87
S		5.9	52.8
+ 5		5.7	55.0

60,65

1 + 4.84 to 1 + 7.6	= 6" Conc. Wall on N on Line		40
1 + 8.0	= 2.8' Conc. Drive on N		
- 5		2.7	58.0
S		2.7	58.0
+ 2.3	on Walk	2.85	57.80
+ 7.6	" "	3.13	57.57
cb.		3.2	57.5
+ 9		4.7	56.0
1/4		4.3	56.4
2		3.5	57.2
1/4		3.7	57.0
cb.		4.3	56.4
N		3.43	57.22
4' W	Wedge on Drive	3.70	56.95
1' "	" 6" Wall = 1 + 7.6	3.99	56.66
5' N	on 2 Drive	3.61	57.04
1 + 8.4	on N-Edge Drive	3.20	57.45
"	on Wall	2.40	58.25
1 + 9.04	2' Conc. Ribbons	2.35	58.30 on N.L.
+ 9.52	" " "	2.27	58.38 " "
1 + 9.7.6	on N Drive	2.25	58.40
"	on 5" Wall on N	1.99	59.56
2 + 10.88 = 2.3' Conc. Walk on N			
- 5	on Walk	0.66	59.99
- 0.3	on "	0.87	59.78
- 0.2	on Walk	1.36	59.79
+ 9.1	on "	1.67	58.98
cb.		2.1	58.6

60.65

cb + 2		24	58.3		
'14		2.0	58.7		
Σ		1.9	58.8		
'14		2.3	58.4		
cb.		0.7	60.0		
+ 2.5 on walk		0.63	60.02		
+ 7.8 r r		0.43	60.22		
S		0.0	60.65		
+ 5'		+ 0.2	60.9		
T.P.	10.94	71.15	0.44	60.21	
		5"		0.3' inst.	
	2+25	Wall on N.	11.98	60.07	E. end
	2+25	beg. 5" wall on N	9.51	61.64	0.3' inst.
					W. end.
		2+29.12 = 146.415'			
- 5		2.7	61.5		
S		2.5	61.7		
+ 2.3' on walk		2.5	61.7		
+ 7.6		2.85	61.30		
cb.		2.8	61.4		
+ 8		17.2	60.0		
'14		11.2	60.0		
Σ		11.2	60.0		
'14		11.6	59.6		
+ 5		12.0	59.2		
cb.		11.5	59.7		
+ 9.7		10.9	60.3		
" on wall		9.44	61.71		

71.15

2+3912

41

N	10.36	60.79
+ 1.2	10.52	60.63
cb.	10.8	60.4
+ 5	11.3	59.9
'14	11.0	60.2
Σ	10.5	60.7
'14	10.2	61.0
cb.	10.1	61.1
SL	9.8	61.4

Note SW. cb. Rot. Not Good. Rebuilt.

2+4912

SL	9.7	61.5
cb	9.7	61.5
'14	9.7	61.5
Σ	9.9	61.3
'14	10.4	60.8
+ 4	10.6	60.6
cb.	10.1	61.1
+ 9.7	9.7	61.5
+ 9.7 on wall	9.05	62.10
2+55.5' R. ^{Cap.} on N	8.95	62.20
+ 6.0 " " "	8.78	62.37
	2+5912	
N	8.9	62.3
cb.	9.9	61.3

0.3' inst.

	2+8912	7/15		
S. cb + 6			10.0	61.15
'14			9.8	61.4
L			9.3	61.9
'14			9.2	62.0
cb.			9.2	62.0
S.L.			9.2	62.0
	2+6912			
S.L.			8.9	62.3
cb.			8.9	62.3
'14			8.9	62.3
L			8.9	62.3
'14			9.4	61.8
+3			9.6	61.6
cb.			8.9	62.3
N			8.4	62.8
	2+7912			
N			7.2	64.0
+5			7.2	64.0
cb.			8.4	62.8
+6			9.1	62.1
'14			8.8	62.4
L			8.4	62.8
'14			8.6	62.6
cb.			8.8	62.4
S			8.3	62.9
" on cb			8.05	63.10

	7/15	P11	42
S. Lb Ret.			
	2+8912 = E Line	41st St	St
S.L.	7.8		63.47
S edge Walk	7.81		63.34
on cb.	7.96		63.19
cb	8.0		63.2
+3	8.7		62.5
'14	8.3		62.9
L	8.6		63.2
'14	8.4		62.8
+4	8.7		62.5
cb.	8.3		62.9
+4	7.2		64.0
N	7.1		64.1
+5	6.6		64.6
	3+09		
S edge Walks on S	7.44		63.71
N " "	7.00		64.15
	3 + 25		64.2
-5	7.1		64.0
N.	7.1		"
cb.	7.8		63.8
+5	7.8		"
'14	7.0		64.2
L	6.7		64.9
'14	7.1		64.0
+3	7.2		64.0
+6	6.6		64.6

71.15

N edge walk	6.30	64.85
S " "	6.20	64.95
S	6.1	65.0
3+80		
S	4.9	66.7
S walk	5.05	66.10
N "	5.17	65.98
cb.	5.5	65.6
+3	5.5	"
+7	6.4	67.8
'14	6.0	65.7
2	5.5	65.6
'14	6.0	65.7
+4	6.3	67.8
cb.	5.7	65.2
N	5.7	"
+5	4.3	66.8
3+75		
-5	3.9	67.2
N	4.7	66.4
cb.	4.7	"
+6	5.3	65.8
'14	5.0	66.7
2	4.5	66.6
'14	5.0	66.7
+3	5.2	66.0

71.15 ✓

+7	4.2	67.0	43
cb.	4.2	"	
N edge walk	4.18	66.97	
S " "	4.05	67.10	
S	3.9	67.2	
3+97 = 2 Elco. Pole	88' in of		
4+00			
S	1.6	69.6	
S edge walk	3.34	67.81	
N " "	3.47	67.68	
cb.	3.2	68.0	
+5	3.6	67.6	
+9	4.5	66.6	
'14	4.3	66.8	
2	3.8	67.4	
'14	4.2	67.0	
+4	4.5	66.6	
cb.	4.0	67.2	
N	4.2	67.0	
+8	4.1	67.0	
4+04 Rim NW E. of	3.72	67.43	
4+4.15 = beg. ^{side} Walk on N			
-5 on	4.5	66.6	
N on ground	4.3	66.8	
N on wall	3.75	67.40	
+1.9' on N. edge walk	3.61	67.54	
+6.9 " S " "	3.62	67.53	

7115

cb	3.4	67.8	
+4	3.7	67.9	
1/2	3.7	"	
2/6	3.4	67.8	
1/4	3.4	"	
+4	3.7	67.9	
cb.	3.2	68.0	
N edge Walk	2.51	68.69	
S " "	2.40	68.75	
S on Walk	2.27	68.88	
4+51 2 Garage on South	1.90	69.25	on Line
+59.5 " " " "	1.96	69.19	" "
+68 " " " "	2.02	69.13	" "
	3.34	67.81	
4+86 = W. edge Conc. Drive	on N	68.21	1.9 inst.
+73 = E " " "	2.94		" "
4+75			
S	2.0	69.2	
S edge Walk	1.95	69.20	
N " "	2.04	69.11	
cb.	2.7	68.9	
+6	3.3	67.8	
1/4	3.1	68.0	
2/6	3.1	"	
1/4	3.2	68.0	
cb.	2.9	68.2	
S edge walk	2.98	68.17	
N " "	2.94	68.21	
N	2.91	68.29	
+5	2.8	68.9	

7115 ✓

4+937 = 35 Conc. Walk	2.71	68.99	on N 1.9 inst
			44
4+99.05			
N	2.7	68.9	
+1.2 N edge Walk	2.68	68.97	
S " "	2.69	68.96	
cb.	2.5	68.6	
1/4	2.8	68.9	
2/6	2.9	68.2	
1/4	3.0	68.2	
+7	2.9	68.2	
cb.	2.2	69.0	
N edge Walk	1.69	69.96	
S " "	1.63	69.52	
South	1.7	69.9	
T.P. 8.44	77.04	2.55	68.60
East-End Walk on N			
N edge Walk	8.69	68.35	
S " "	8.63	68.91	
N on Ground at Wall	12.0	68.0	
N " Wall	8.40	68.69	
+5 on Ground at Wall	14.1	62.9	
5+2523			
S	7.0	70.0	
S edge Walk	7.30	69.79	
N " "	7.46	69.58	
cb.	8.0	69.0	
+2	8.7	68.3	

77.04

5+25.23

S' 1/4	8.6	68.7
E	8.4	68.6
1/4	8.2	68.8
Cb.	9.2	67.8
N	12.6	69.9
+15	18.2	58.8
+35	23.5	53.5

5+51.41

-40	26.7	50.3
-20	22.2	59.8
-10'	18.4	58.6
N	12.6	69.9
Cb.	10.6	66.2
1/4	7.8	69.2
E	8.2	68.8
1/4	8.3	68.7
+9	8.3	"
Cb.	7.6	69.9

N edge Walk

7.23 69.81

S " "

7.12 69.92

S on walls
Perrado

7.09 70.00

5+64

5	7.0	70.0
W edge Walk	7.06	69.98
E " "	7.18	69.86

7704

Cb.	7.4	69.6	45
+2	8.3	68.7	
1/4	8.2	68.8	
E	8.1	68.9	
1/4	8.0	69.0	
Cb.	10.9	66.1	
NE	12.5	69.5	
+10	13.5	63.9	
+12	14.0	63.0	
+20	18.0	59.0	

5+77.59 = E.O.

-15	13.8	63.2
E	11.8	65.2
Cb.	9.6	67.9
1/4	8.0	69.0
E	8.0	"
1/4	8.1	68.9
+7	8.1	"
Cb.	7.4	69.6

E Walk

7.07

69.97

W " "

7.02

70.02

W

6.9

70.1

6+00

W	6.8	70.2
W edge Walk	6.70	70.34
E " "	6.79	70.25

6+00 77041

Cb.	7.2	69.8
+1	7.7	69.3
1/4	7.7	"
2	7.7	"
1/4	7.9	69.1
Cb.	8.2	68.8
E	10.4	66.6
+10	11.9	65.1
6+20		
-20	16.5	60.5
-14	16.0	61.0
E	8.2	68.8
Cb.	7.8	69.2
1/4	7.6	69.4
2	7.3	69.7
1/4	7.2	69.8
+8	7.4	69.6
Cb.	6.8	70.2
+2	6.5	70.5
E edge Walk	6.48	70.56
W " "	6.37	70.71
W	6.3	70.7
6+50		
W	5.8	71.2
W edge Walk	5.95	71.09
E " "	5.96	71.08

6+50 7704 ✓

Cb.	6.3	70.7	46
+3	6.9	70.1	
W 1/4	6.9	"	
2	6.8	70.2	
1/4	7.1	69.9	
+2	6.7	70.3	
Cb.	7.4	69.6	
+5	7.6	69.4	
E	6.5	70.5	
+4	6.9	70.1	
+10	10.3	66.7	
7+00			
-10	6.4	70.6	
E	5.7	71.3	
Cb.	6.5	70.5	
1/4	6.2	70.8	
2	6.0	71.0	
1/4	6.1	70.9	
+7	6.2	70.8	
Cb.	5.4	71.6	
E edge Walk	5.08	71.96	
W " "	4.3	72.7	
W	4.3	"	
7+50			
W	3.4	73.6	
W edge Walk	4.23	72.81	
E " "	4.29	72.75	

7704 ✓

cb.	4.4	72.6
+3	5.2	71.8
1/4	5.2	"
2	5.1	71.9
1/4	5.3	71.7
cb.	5.3	"
E. + 5'	5.4	71.6
	4.27	72.77
7+51 = beg. 5" Conc. Wall on E 3.2' in st		
7+56 = Brk in wall	3.48	73.55
7+60		
-5	3.7	73.3
E	3.5	73.5
+3.2 on 5" Wall	3.35	73.69
+7	3.6	73.4
cb.	4.7	72.3
+2	5.1	71.9
1/4	5.1	"
2	4.9	72.1
1/4	4.9	"
+7	5.0	72.0
cb.	4.2	72.8
E edge walk	4.12	72.92
W " "	4.04	73.00
W	4.0	72.0
7+90		
W	3.6	73.4
W edge walk	3.49	73.55
E " "	3.56	73.48

7704 ✓

cb.	3.6	73.4	47
+2	4.4	72.6	
1/4	4.2	72.8	
2	4.3	72.7	
1/4	4.4	72.6	
+7	4.5	72.5	
cb.	4.3	72.7	
+3	3.4	73.6	
7+68 on 5" Wall	3.25	73.79	
E	3.3	73.7	
+5	3.3	"	
8+07.45 = N Line Division			
E on Ground	3.51	73.5	
+3.2 on Wall	3.2	73.8	
" " Walk	3.4	73.6	
cb.	3.28	73.76	
Gut. on Pav.	3.84	73.20	
1/4 on Pav.	3.58	73.46	
2 " "	3.47	73.57	
1/4 " "	3.60	73.44	
Gut " "	3.83	73.21	
cb.	3.21	73.83	
E edge Walk	3.10	73.94	
W " "	3.08	73.96	
W	✓ 3.16	73.88	
TR 5.2 C	79.25	3.05	73.90

79.25 ✓

8+13.45 = N. cb. Division on East

114	5.27	73.98
cb.	5.45	73.80
Aut.	5.90	73.35
1/4	5.68	73.57
2/4	5.57	73.68
1/4	5.64	73.61
cb.	5.87	73.38
E on cb.	5.75	73.50
" " Pav.	6.27	72.98
+10 on cb.	6.16	73.09
" " Pav.	6.71	72.54

8+21.45 = N. cb Division on West.

-10	6.56	72.69
E	6.08	73.17
cb.	5.60	72.65
1/4	5.33	73.92
2/4	5.28	73.97
1/4	5.43	73.82
cb.	5.68	73.57
1/4	5.98	73.27
cb.	✓ 5.35	73.90

TR 156 68.24 12.57 66.68

Chk. NW BR DIVISION 14154 10.87 57.41 ✓

FB 16.36 57.34
43 0.07

on South Side Marine View Ave

5+04.8 to 5+06 Replace 1.28 ft Walk along N. edge 43 Walk

5+00 to 5+01.6 " " " " " "

4+70 to 4+84 Replace Walk on South 74.38 ft.

3+71.2 to 3+71.4 on South " 1.28 ft walk.

2+97.3 to 3+09 " " " 62.38 ft "

1+11 to 2+29 Walk on South Not very good

0+93 to 1+11 Walk no good across Alley.

0+00 to 0+93 Walk on South Not good.

Attention Draftsman; Inspect SE Return
40th & Marine View
for Repair or Replacement

Walter
Hendricks
Huntley
Curd
6-8-46

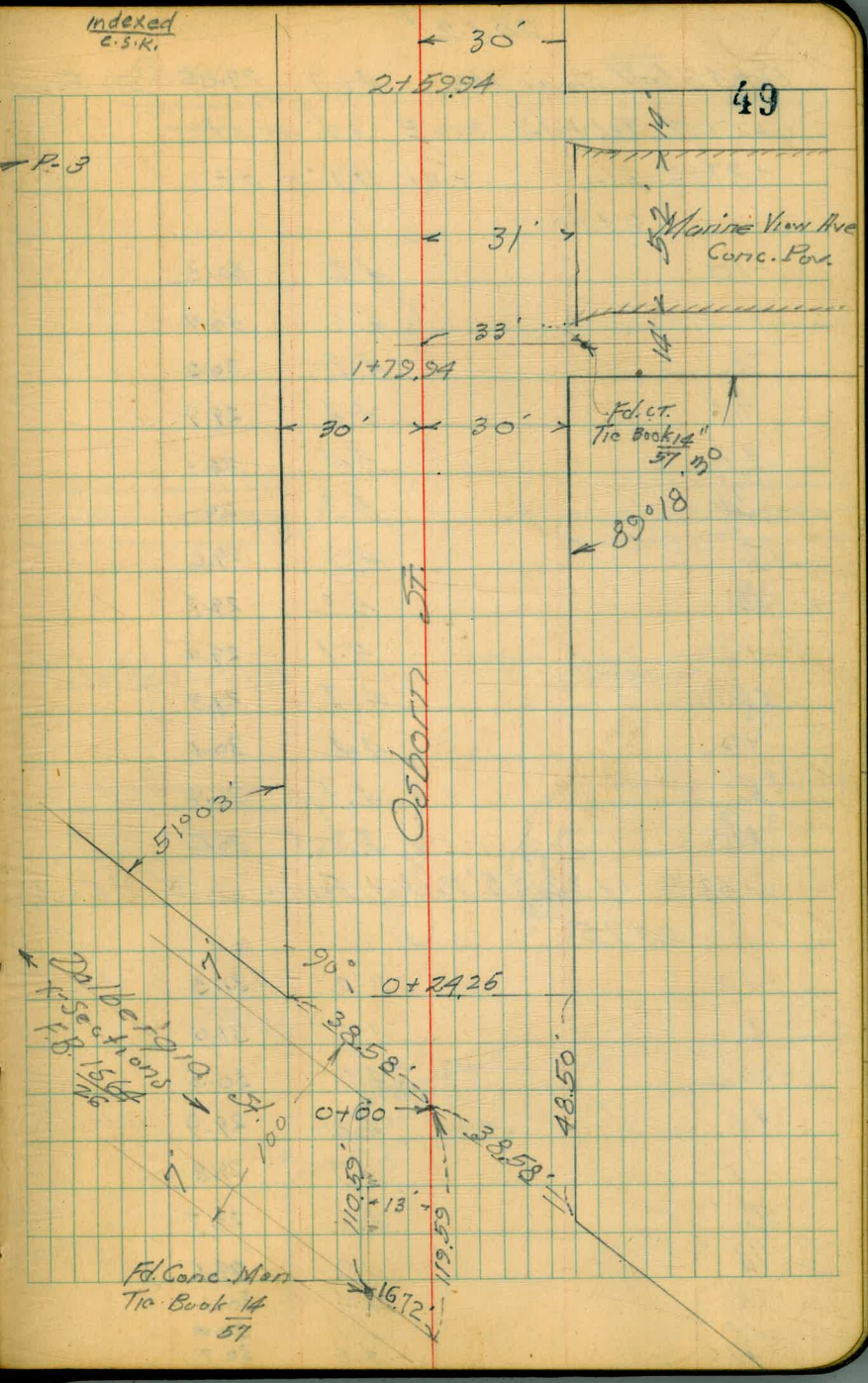
CROSS SECTION - Osborn St.
60' wide 10' cbs
from N.W. Dalbergia St 10' 1/4
To Birch St.

B.M. ST.
N.W. Cor
Cottonwood

P. 3

	2.07	14.00	11.93	
T.P.	10.21	24.14	0.07	13.23
T.P.	10.38	34.52	0.00	24.14
	0+00 = N.W. Line Dalbergia St.			
W		5.2		29.3
cb.		5.3		29.2
'14		5.4		29.1
+2		5.7		28.8
2		5.7		"
'14		6.0		28.5
cb.		6.4		28.1
E		6.6		27.9
+3		5.5		29.0
+10		5.6		28.9
	0+24.25			
E-5		4.5		30.0
E		4.8		29.7
cb.		5.0		29.5
+1		5.8		28.7
'14		5.7		28.8
2		5.4		29.1
'14		5.7		28.8
+4		4.8		29.7
cb.		4.6		29.9
W		5.2		29.3
+10		5.4		29.1

Indexed
C.S.R.



3452

0+43' = $\frac{1}{2}$ Survey MH 4.67 29.85 on Rivet
 0+27' = Tel Pole DNE 12' in st
 +37' = Elec. " " W 11.7' " st

0+50

-10	4.2	30.3
W	4.1	30.4
cb.	4.3	30.2
+5	4.6	29.9
+7	5.4	29.1
$\frac{1}{4}$	5.3	29.2
$\frac{1}{2}$	4.9	29.6
$\frac{1}{4}$	5.2	29.3
+8	5.1	29.4
cb.	4.7	29.8
+2	4.4	30.1
E.	4.1	30.4
+10	3.9	30.6

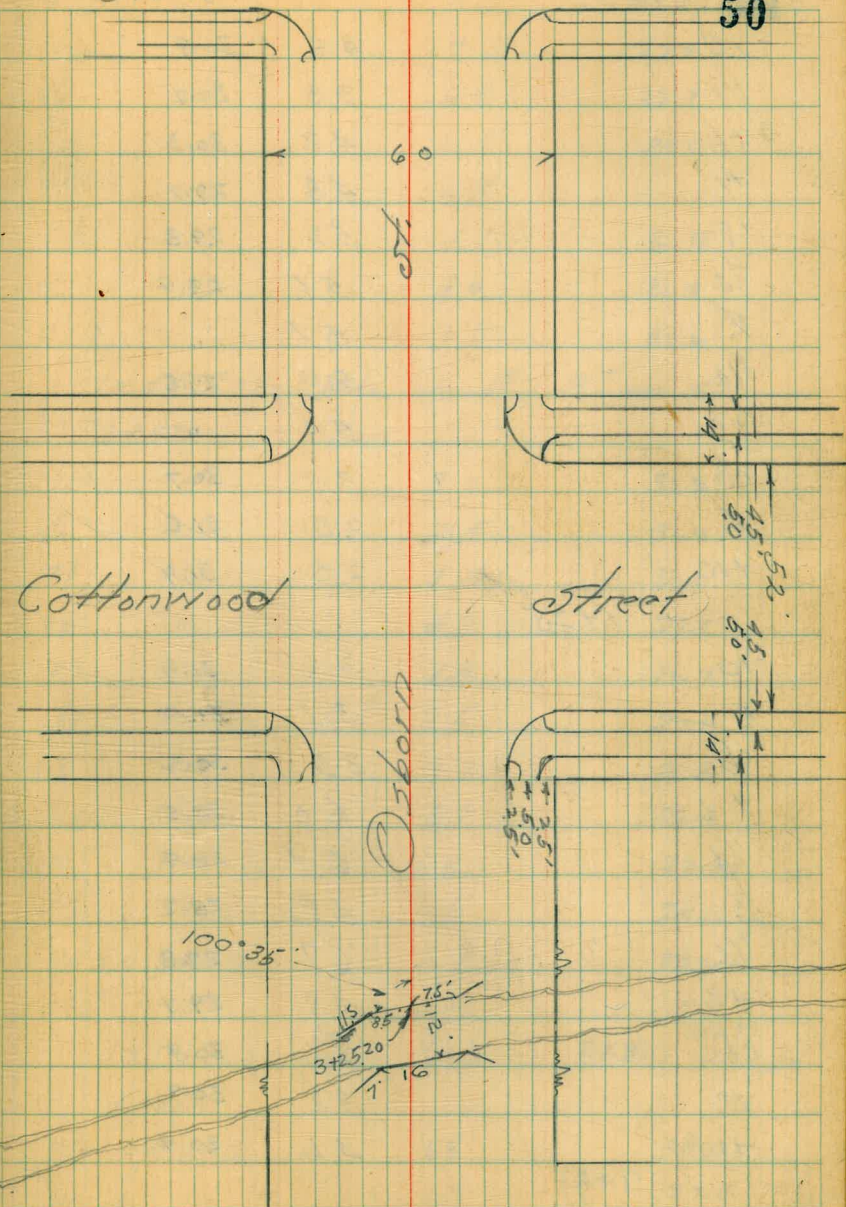
0+53 to 1+32 = 5' Picket Fence on E 1' Back
 0+75

-10	3.2	31.3
E.	3.5	31.0
cb.	4.0	30.5
+1	4.6	29.9
$\frac{1}{4}$	4.7	29.8
$\frac{1}{2}$	4.8	29.7
$\frac{1}{4}$	4.9	29.5
cb.	4.4	30.1
W	4.1	30.4
+10	3.8	30.7

Birch

St.

50



34.52

Osborn St.

1+00

-10	3.6	30.9
W	3.8	30.7
cb.	4.2	30.3
W	4.8	29.7
+9	5.2	29.3
1/4	5.1	29.9
2	5.1	"
1/10	5.0	29.5
+9	5.0	"
cb.	3.8	30.7
E	2.9	31.6
+10	2.6	31.9

1+25

-10	2.6	31.9
E	3.1	31.2
cb.	3.9	30.6
+1	6.0	28.5
1/10	6.1	28.9
2	6.3	28.2
1/4	6.7	27.8
+5	4.8	29.7
cb.	4.1	30.9
W	3.8	30.7
+10	4.1	30.9

1+33

-10	6.4	28.1
W	6.4	"

34.52

W cb.

6.5

28.0

51

1/4	7.1	27.9
2	6.8	27.7
1/4	6.5	28.0
+9	6.5	"
cb.	4.1	30.9
E	3.0	31.5
+10	2.3	32.2

1+45.5 - Tol Polo on E 8' in st.

1+50

-10	3.0	31.5
E	3.5	31.0
+1	4.5	30.0
cb.	4.9	29.6
+2	7.8	26.7
1/4	7.5	27.0
2	7.7	26.8
1/4	8.1	26.9
+5	6.8	27.7
cb. on down	6.5	28.0
W on down	6.3	28.2
+5 " "	6.3	"

1+51.6 25' Walks

1+68

W-10 on down	6.5	28.0
W on "	6.7	27.8
cb.	7.9	27.2

27.90 on W 14' in st

3452

Osborn St.

cb+8	89	25.6
1/4	97	24.8
1/2	92	25.3
1/2	90	25.5
cb.	96	24.9
+1	68	27.7
+8	61	28.2
E	52	29.3
+10	42	30.3
all sections this int. Parallel to Marine 1+79.94 = S. Marine View Ave		
-10	85	26.0
E	85	"
+6	93	25.2
+7	104	29.1
cb.	103	29.2
1/4	99	29.6
1/2	101	29.9
1/4	109	23.6
+1	98	29.7
cb.	91	25.9
W in Dirt Drive	92	25.3
+23.7 on Garage Floor	94	25.1
1+87 & Klee Pole on W 12' in st		
1+8344		
-10	94	25.1
W	92	25.3
cb.	95	25.0
+9	102	24.3

3452 ✓

1/4	11.3	23.2	52
1/2	10.5	29.0	
1/4	10.2	29.3	
cb.	10.6	23.9	
+5	10.9	23.6	
+6	10.3	24.2	
E on Side Walk	10.81	23.71	
+10 " " "	10.26	24.26	
1+93.94 = S. Marine View			
-10' on B.C. Rot. Top cb	10.45	24.07	
" " Guts	11.11	23.91	
E on " "	11.54	22.98	
2.4' South on End cb	10.98	23.59	
" " " Guts	11.54	22.98	
cb.	11.1	23.9	
1/4	11.0	23.5	
1/2	11.5	23.0	
1/4	12.2	22.3	
+13	11.3	23.2	
cb.	99	24.6	
W	11.0	23.5	
+10	12.7	21.8	
2+106.94 = S 1/4			
TR	4.39	27.55	11.36
-10		7.8	19.8
W		5.9	21.6
cb.		4.2	23.9
+2		4.0	23.6

	2755 ✓	Osborn St.
2+0694		
cb +1	5.1	22.5
1/4	6.6	21.0
2	5.9	20.6
1/4	5.3	22.2
cb	4.8	22.8
E+1 on Por.	4.53	23.02
+10 " "	4.02	23.53
2+1994 = S Marine View		
-10' on Por.	4.15	23.40
-1' " w edge Por.	4.65	22.90
E	4.8	22.8
cb.	5.6	22.0
1/4	6.6	21.0
2	7.2	20.9
1/4	8.0	19.6
+1	8.1	19.9
+9	6.4	21.2
cb.	6.5	21.0
W	8.0	19.6
+10	10.3	17.2
2+3294 = N 1/4		
-10	11.9	15.6
W	10.6	17.0
cb.	9.1	18.4
+7	8.7	18.8
+8	9.5	18.0

	2755 ✓	53
1/4	2.4	18.2
2	8.7	18.8
1/4	7.7	19.8
-cb.	7.0	20.6
+6	6.3	20.2
+7	5.2	22.4
E+1 on Por.	5.39	22.16
+10 " "	4.87	22.68
2+4594 = N cb. Marine View		
-10' on cb.	5.00	22.55
-10' " East	5.62	21.93
E+1 on Por.	6.36	21.19
2.4' N on "	6.37	21.18
" " " cb	4.90	22.65
cb.	6.7	20.8
+3	7.3	20.2
+4	9.1	18.4
1/4	9.1	"
2	10.1	17.4
1/4	10.7	16.8
+2	9.8	17.8
cb.	11.3	16.2
W	12.5	14.0
+15	15.6	12.0
2+5994 = N Marine View		
-15	17.0	10.6
W	15.5	12.0

2+5994 27.55 ✓

Osborn St

16.15 ✓

Y+6

cb.	151	12.9
18	134	19.2
'14	11.2	16.9
'14	12.0	15.6
2	11.4	16.2
'14	11.2	16.9
+3	108	16.8
+4	9.1	18.9
cb.	8.8	18.8
+4	8.5	19.0
E	6.0	21.6
+10	5.9	21.6

2+80

-10	8.0	19.6
E	8.8	18.8
+5	11.2	16.9
cb.	11.9	15.6
+9	11.8	15.8
'14	13.2	19.9
2	12.9	19.6
'14	13.4	19.2
+1	12.7	19.8
cb.	15.4	12.2
W	17.8	9.8
+15	18.4	9.2

TP 150 16.15 1290 14.65

2+83.8 = Elec. Pole on E 82 in st.

3+00

-20 in channel	8.9	7.2
W - S Bank "	6.0	10.2
cb.	4.3	11.8
'14	2.6	13.6
+3	3.0	13.2
2.	2.8	13.9
18	3.0	13.2
'14	2.2	19.0
cb.	2.7	13.9
E	3.2	13.0
+15	1.4	19.8

3+13

-15	3.8	12.9
E	4.3	11.8
+7	4.3	"
cb.	6.8	9.4
+8	4.1	12.0
'14	3.3	12.8
2	3.4	12.8
+8 on Deck Bridge	3.6	12.6
+8 in ch.	8.3	7.8
'14 " "	8.3	"
cb. " "	8.9	7.2
W	7.6	8.6
+5	6.2	10.0
+15	6.3	9.8

54

16.15 ✓

Osborn St

3+19

-15		6.4	9.8
W		6.1	10.0
cb.		7.1	9.0
+7	in ch.	8.7	7.9
'14	" "	9.0	7.2
£	" "	9.0	"
£ on Deck Bridge		3.6	12.6
'14	in ch.	8.8	7.9
cb.		7.6	8.6
+5	5 Bunt ch.	4.7	11.9
F		5.2	11.0
+15		5.4	10.8

3+25

-15		5.6	10.6
F		6.1	10.0
cb.	in ch.	8.5	6.6
'14		7.7	8.9
+2		7.8	8.9
+2	on Deck	3.5	12.6
£	" "	3.5	"
'14		3.7	12.9
cb.		5.6	10.6
+4		6.8	9.9
W		6.1	10.0
+15		6.3	9.8

3+32

16.15 ✓

55

-15		6.3	9.8
W		6.3	"
+4		5.6	10.6
+7		6.8	9.9
cb.		6.1	10.0
'14		4.0	12.2
£		4.0	"
'14		3.9	12.2
cb.		5.4	10.8
F	in ch.	8.1	8.0
+10	in "	9.3	6.8
+20		6.3	9.8

3+40

-20		8.1	8.0
-10		5.7	10.9
F		5.2	11.0
cb.		5.1	11.0
'14		4.7	11.9
£		4.7	"
'14		4.7	"
cb.		6.7	9.9
+1		6.9	9.2
+4		6.1	10.0
W		6.3	9.8
+15		6.5	9.6

16.15 ✓

Osborn st.

3765

-10	6.2	10.0
W	5.8	10.7
cb.	6.1	10.0
+6	5.7	10.7
'14	6.0	10.2
2	5.8	10.7
'14	6.1	10.0
cb.	6.2	10.0
E	6.2	"

+10
 3781 = 2 Elec Poles on W 11.3 in st.
 4100

-10	6.2	10.0
E	6.6	9.6
cb.	6.6	"
'14	6.8	9.2
2	6.6	9.6
'14	6.7	9.2
cb.	6.5	9.6
W	5.8	10.7
+10	5.9	10.2

4109 = 2 10" Pop. Tree on W 4.8' in st.

4124 = 2 8" Cypress " " " 0.3' " st

4150 = 2 42" Date Palm on W 7' in st

-5	6.4	9.8
W	6.3	9.8

16.15 ✓

cb.	6.5	9.6	56
+5	6.5	"	
+7	7.1	9.0	
'14	7.0	9.2	
2	6.8	9.4	
'14	6.9	9.2	
cb.	6.6	9.6	
E	6.3	9.8	
+10	6.4	9.8	

4180

-10	6.2	10.0
E	6.2	"
cb.	6.1	10.0
+3	7.2	9.0
'14	7.0	9.2
2	7.0	"
'14	7.2	9.0
+1	7.3	8.8
+6	6.4	9.8
W	6.4	"
+5	6.4	"

5109, 64 5 line Cottonwood

-5	6.3	9.8
W	6.3	"
+2.5 on Walk	6.31	9.89
cb.	6.42	9.73
Guts	7.3	8.8

1615

Osborn st.

1/4	7.3	8.8
E	7.0	9.2
1/4	6.9	9.2
Gut.	7.2	9.0
cb	6.03	10.12
775	5.90	10.25
E	6.0	10.2
15	6.0	"

5+23.64 = S. cb. Cottonwood st.

E on cb.	6.01	10.19
Gut.	6.94	9.21
cb.	6.9	9.2
1/4	6.7	9.9
E	6.7	"
1/4	7.0	9.2
cb.	7.4	8.8
W. Gut.	7.4	"

W on cb.	6.43	9.72
T.P. 4.68 1481	6.02	10.13

5+36.64 5 1/4

W	5.8	9.0
cb.	5.6	9.2
1/4	5.4	9.9
E	5.3	9.5
1/4	5.3	"
cb.	5.3	"
E	5.3	"

SE 7' back
Cottonwood
6056000

1481

5+82.64 = E Cottonwood

57

E	5.1	9.7
cb.	5.1	"
1/4	5.2	9.6
E	5.3	9.5
1/4	5.4	9.9
cb.	5.4	"
W	5.6	9.2

5+52.64 = N 1/4

W	5.5	9.3
cb.	5.5	"
1/4	5.5	"
E	5.4	9.9
1/4	5.3	9.5
cb.	5.2	9.6
E	5.2	"

5+65.64 = N cb.

E on cb.	4.73	10.08
E	5.6	9.2
cb.	5.4	9.9
1/4	5.2	9.6
E	5.2	"
1/4	5.3	9.5
cb.	5.5	9.3
Gut.	5.6	9.2
W on cb.	5.10	9.71

14.81
5+79.64

Osborn st

W	5.0	9.8
+25 on Walk	4.92	9.89
W cb " cb	5.00	9.81
cut	5.4	9.9
'14	5.4	"
2	5.1	9.7
'14	5.1	"
cut	5.2	9.6
cb.	4.66	10.15
+7.5 on	4.58	10.25
E	4.7	10.1
6+00		
-5	5.0	9.8
E	4.9	9.9
cb.	5.0	9.8
'14	5.1	9.7
2	5.0	9.8
'14	5.4	9.9
+8	5.5	9.3
cb.	4.8	10.0
W	4.6	10.2
+5	4.4	10.9
6+50		
-5	4.1	10.7
W	4.1	"
cb.	4.3	10.5
'14	4.9	9.9

6+50 14.81

2	4.7	10.1	
'14	4.7	"	58
cb.	4.5	10.3	
E	4.2	10.6	
6+08.5 = 2 3.5' walk on W	4.41	10.40	on little
6+15 2 3' walk on E	4.99	9.82	
6+58 = 2 3.2' " " "	4.10	10.71	0.3' in st
6+72 = 2 2.7' " " "	4.16	10.65	1.3' " "
6+72 = 2 3' Conc. Walk on W	4.28	10.53	12.6' " "
" on stop	3.98	10.83	12' " "
" on Line on Walk	4.03	10.78	
7+00			
E-5	4.1	10.7	
E	4.1	"	
cb.	4.3	10.5	
'14	4.2	10.6	
2	4.1	10.7	
'14	4.4	10.9	
+3	4.5	10.3	
+6	4.2	10.6	
cb.	4.0	10.8	
W	4.0	"	
+5	3.9	10.9	
7+04 2 3.3' ^{Corrs.} walk on W	3.88	10.93	0.4' Back
7+50			
-5	4.0	10.8	
W	3.4	11.9	

	7+50	1481 ✓		
1/2 cb			3.2	11.6
+5			3.3	11.5
+7			3.5	11.3
1/4			3.5	"
E			3.2	11.6
1/4			3.0	11.8
cb.			3.0	"
E			3.5	11.3
+5			3.6	11.7
T.P.	11.68	24.19	2.30	12.51
		conc.		
	7+75.6	4' Walk on W	12.69	11.50
	8+00			0.2' Back
-10			13.1	11.1
W			12.4	11.8
+2			11.7	12.5
cb.			11.4	12.8
1/4			10.9	13.3
E			10.7	13.5
1/4			10.9	13.3
cb.			10.8	13.9
+9			10.8	"
E			10.2	12.0
+10			9.4	14.8
	8+50			
-19	Garage	Dirt Floor	2.1	22.1
-10			2.7	21.5
E			5.7	19.0
cb.			6.8	17.4
+4			7.5	15.7

	2419 ✓		
1/4		7.2	17.0
E		7.3	16.9
1/4		7.4	16.8
cb.		8.0	16.7
W		9.1	15.1
+10		9.8	14.9
	8+75		
-10		6.5	17.7
W		6.0	18.2
cb.		5.9	18.3
+5		6.3	17.9
1/4		4.7	19.5
+2		4.6	19.6
1/4		5.7	18.5
E		5.0	19.2
1/4		4.7	19.5
+8		5.2	19.0
cb.		4.7	19.5
+7		3.9	20.3
E		0.8	23.8
+5		1.9	26.1
	8+72	3' Conc. Steps	3.66
	"	6' E ^{EL} on steps	0.11
		2419	
T.P.	11.97	34.87	12.9
	9+00		
-10		9.1	31.8

59

20.53 on E 1.2' on st

24.08

22.90

	3400	3487		
E-2			89	26.0
E			99	25.0
+2			12.5	22.9
cb.			133	21.6
'14			12.9	22.0
♀			132	21.7
+6			14.3	20.6
+9			131	21.8
'14			133	21.6
cb.			14.2	20.7
W			14.5	20.9
+10			14.7	20.2
	2+25			
-5			2.1	25.8
W			10.9	24.0
cb.			11.5	23.9
'14			10.9	24.0
+1			10.5	24.9
+3			11.8	23.1
♀			10.9	24.0
'14			10.7	24.2
+8			11.2	23.7
cb.			10.9	24.0
E			9.8	25.1
+5			9.0	25.9
+10			8.8	26.1

	3487 ✓		
	9+50		
-5		4.1	30.8
E-2		4.6	30.3
E		6.3	28.6
+3		8.5	26.9
cb.		8.8	26.1
+3		9.2	25.7
'14		8.8	26.1
♀		8.8	"
+5		9.5	25.9
+9		8.8	26.1
'14		8.6	26.3
W cb.		8.6	"
W		7.3	27.6
+10		6.5	28.9
	9+75		
-5 on lower		5.5	29.9
W " "		5.7	29.7
cb " "		6.0	28.9
+1		6.9	28.0
'14		7.3	27.6
♀		7.1	27.8
'14		7.0	27.9
+8		7.5	27.9
+9		6.6	28.3
cb.		6.6	"
+6		6.2	28.7
E		3.6	31.3
+5		3.6	"

61

34.87 Osborn St.

2+99.54 = Sta. Birch St.

E	4.9	30.0
+2.5 on Walk	5.25	29.62
E. Cb.	5.39	29.98
Gut.	5.8	29.1
1/4	5.5	29.9
2/4	5.8	29.1
3/4	6.0	28.9
Gut.	5.7	29.2
Cb.	5.22	29.65
+7.5 on Walk West side	4.99	29.88
W	4.8	30.1

10+09.54 = S. Cb. Birch St.

W on Cb.	4.83	30.09
Gut	5.6	29.3
Cb.	5.7	29.2
1/4	5.4	29.5
2/4	5.2	29.7
3/4	5.1	29.8
Cb.	5.2	29.7
Gut.	5.0	29.9
E. Cb.	4.68	30.19

T.P. 7.88 42.03 0.72 34.15

S.E.T. Tack Birch & Earl St 4.35 37.68 ✓

T.P. 0.29 30.21 12.11 29.92

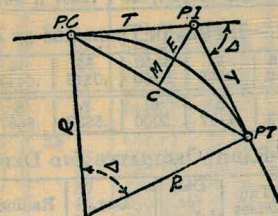
T.P. 0.48 18.09 12.60 17.61

chk. starting B.M. P49 6.16 11.93 ✓

Cont. Page 2.

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) $= R + \cos \frac{\Delta}{2} - R$ (8) $= R \text{exsec} \frac{\Delta}{2}$ (9)
 Long Chord— $C = 2 R \sin \frac{\Delta}{2}$ (10) Δ —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 115.37. For from Table IV for 1° curve $E = 960.6$ for $8^\circ 20' = 960.6 \div 8\frac{1}{2} = 115.27$ and from Table V correction = .10 or $E = 115.37$ 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 $D = 5^\circ 30'$.

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

Table with columns: Central Angle, Tangent, External. Rows include angles 31°, 32°, 33°, 34°, 35°, 36°, 37°, 38°, 39°, and 40°, each with sub-rows for 10', 20', 30', 40', and 50'.

999
4115
58.

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

Table with columns: Central Angle, Tangent, External. Rows include angles 61°, 62°, 63°, 64°, 65°, 66°, 67°, 68°, 69°, and 70°, each with sub-rows for 10', 20', 30', 40', and 50'.

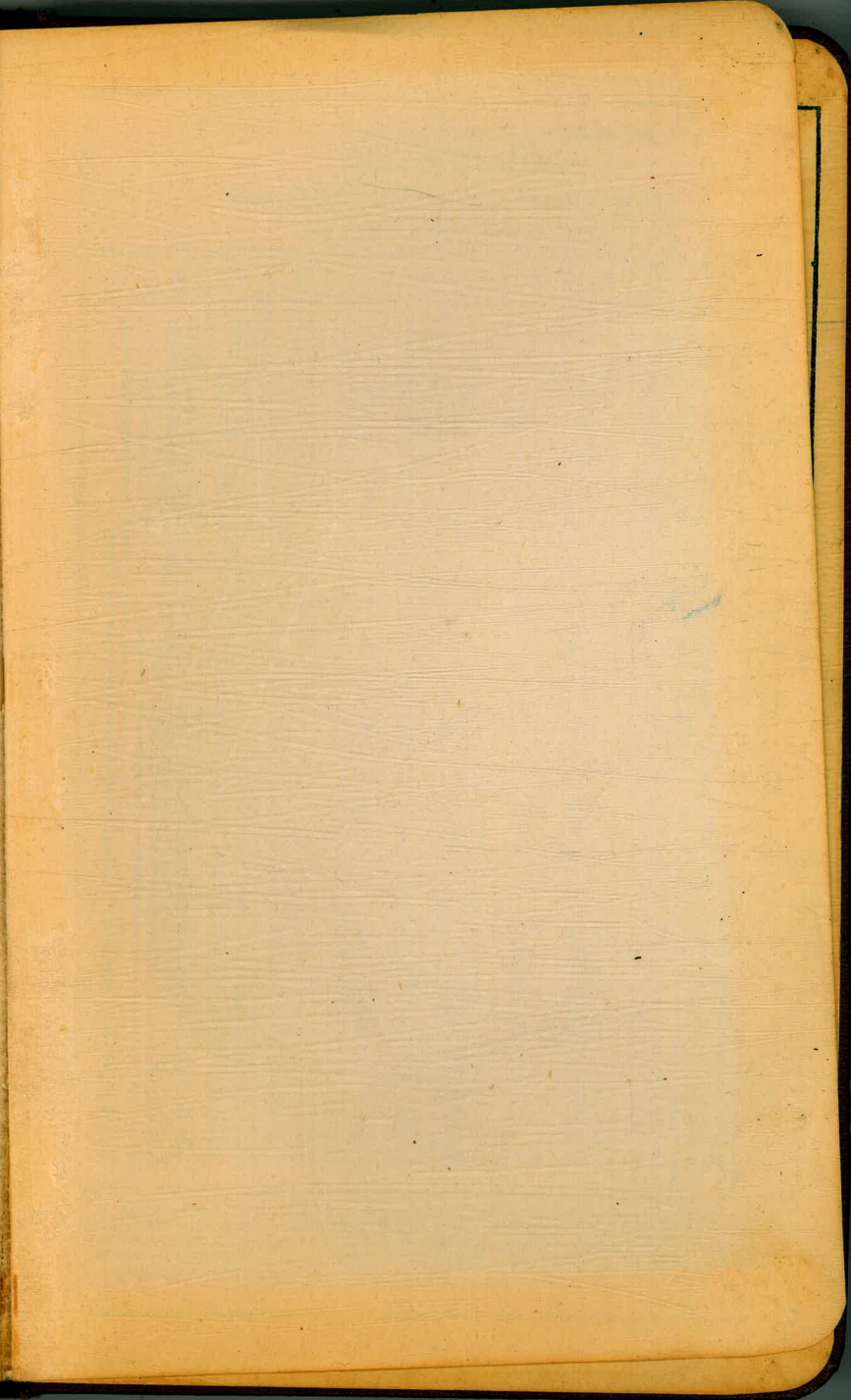
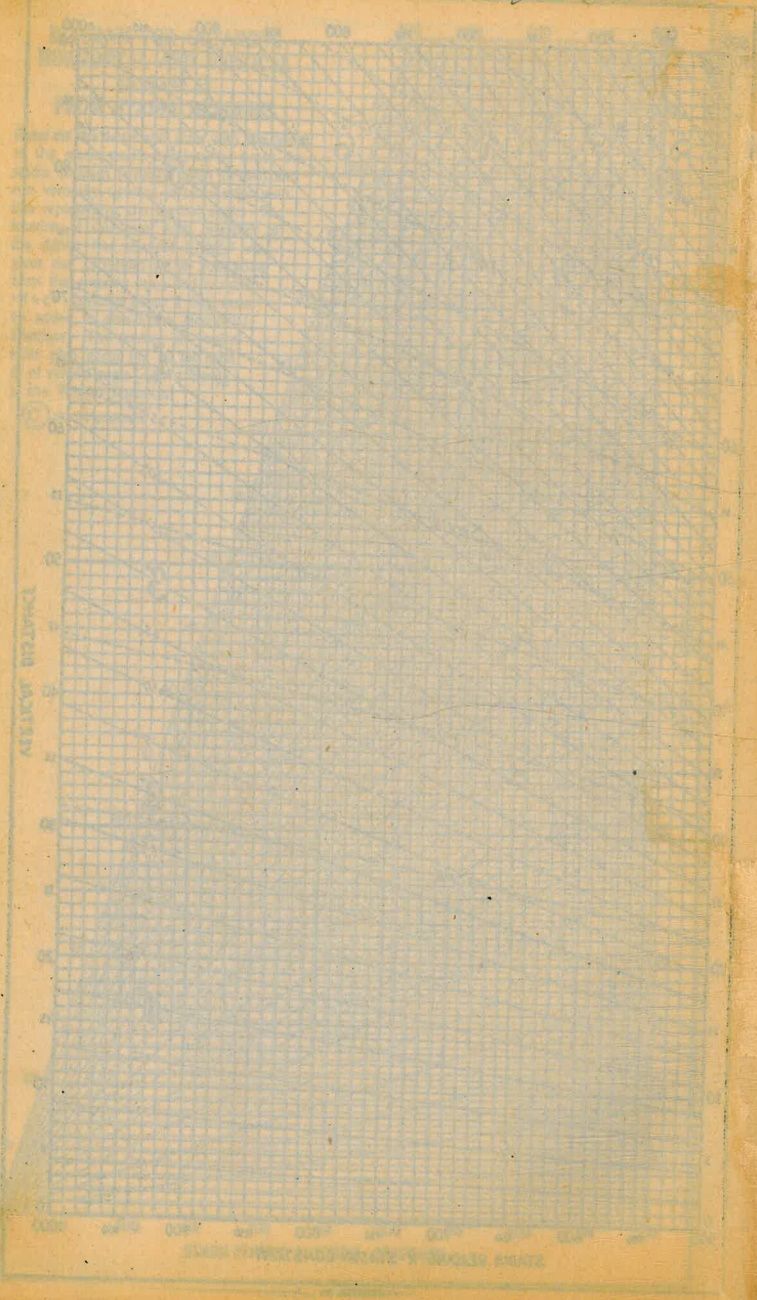
TABLE VIII.—NATURAL TRIGONOMETRICAL FUNCTIONS.

Angle	Sine.	Tan.	Cotg.	Cosin.		Angle	Sine.	Tan.	Cotg.	Cosin.	
0°	0	0	∞	1	90	8°	.1392	.1405	7.115	.99027	82
10	.0029	.0029	343.8	1	50	10	.1421	.1435	6.968	.98986	50
20	.0058	.0058	171.9	.99998	40	20	.1449	.1465	6.827	.98944	40
30	.0087	.0087	114.6	.99996	30	30	.1478	.1495	6.691	.98902	30
40	.0116	.0116	85.94	.99993	20	40	.1507	.1524	6.561	.98858	20
50	.0145	.0145	68.75	.99989	10	50	.1536	.1554	6.435	.98814	10
1°	.0175	.0175	57.29	.99985	89	9°	.1564	.1584	6.314	.98769	81
10	.0204	.0204	49.10	.99979	50	10	.1593	.1614	6.197	.98723	50
20	.0233	.0233	42.96	.99973	40	20	.1622	.1644	6.084	.98676	40
30	.0262	.0262	38.19	.99966	30	30	.1650	.1673	5.976	.98629	30
40	.0291	.0291	34.37	.99958	20	40	.1679	.1703	5.871	.98580	20
50	.0320	.0320	31.24	.99949	10	50	.1708	.1733	5.769	.98531	10
2°	.0349	.0349	26.43	.99939	88	10°	.1736	.1763	5.671	.98481	80
10	.0378	.0378	26.43	.99929	50	10	.1765	.1793	5.576	.98430	50
20	.0407	.0407	24.54	.99917	40	20	.1794	.1823	5.485	.98378	40
30	.0436	.0437	22.90	.99905	30	30	.1822	.1853	5.396	.98325	30
40	.0465	.0466	21.47	.99892	20	40	.1851	.1883	5.309	.98272	20
50	.0494	.0495	20.21	.99878	10	50	.1880	.1914	5.226	.98218	10
3°	.0523	.0524	19.08	.99863	87	11°	.1908	.1944	5.145	.98163	79
10	.0552	.0553	18.07	.99847	50	10	.1937	.1974	5.066	.98107	50
20	.0581	.0582	17.17	.99831	40	20	.1965	.2004	4.989	.98050	40
30	.0610	.0612	16.35	.99813	30	30	.1994	.2035	4.915	.97992	30
40	.0640	.0641	15.60	.99795	20	40	.2022	.2065	4.843	.97934	20
50	.0669	.0670	14.92	.99776	10	50	.2051	.2095	4.773	.97875	10
4°	.0698	.0699	14.30	.99756	86	12°	.2079	.2126	4.705	.97815	78
10	.0727	.0729	13.73	.99736	50	10	.2108	.2156	4.638	.97754	50
20	.0756	.0758	13.20	.99714	40	20	.2136	.2186	4.574	.97692	40
30	.0785	.0787	12.71	.99692	30	30	.2164	.2217	4.511	.97630	30
40	.0814	.0816	12.25	.99668	20	40	.2193	.2247	4.449	.97566	20
50	.0843	.0846	11.83	.99644	10	50	.2221	.2278	4.390	.97502	10
5°	.0872	.0875	11.43	.99619	85	13°	.2250	.2309	4.331	.97437	77
10	.0901	.0904	11.06	.99594	50	10	.2278	.2339	4.275	.97371	50
20	.0929	.0934	10.71	.99567	40	20	.2306	.2370	4.219	.97304	40
30	.0958	.0963	10.39	.99540	30	30	.2334	.2401	4.165	.97237	30
40	.0987	.0992	10.08	.99511	20	40	.2363	.2432	4.113	.97169	20
50	.1016	.1022	9.788	.99482	10	50	.2391	.2462	4.061	.97100	10
6°	.1045	.1051	9.514	.99452	84	14°	.2419	.2493	4.011	.97030	76
10	.1074	.1080	9.255	.99421	50	10	.2447	.2524	3.962	.96959	50
20	.1103	.1110	9.010	.99390	40	20	.2476	.2555	3.914	.96887	40
30	.1132	.1139	8.777	.99357	30	30	.2504	.2586	3.867	.96815	30
40	.1161	.1169	8.556	.99324	20	40	.2532	.2617	3.821	.96742	20
50	.1190	.1198	8.345	.99290	10	50	.2560	.2648	3.776	.96667	10
7°	.1219	.1228	8.144	.99255	83	15°	.2588	.2679	3.732	.96593	75
10	.1248	.1257	7.953	.99219	50	10	.2616	.2711	3.689	.96517	50
20	.1276	.1287	7.770	.99182	40	20	.2644	.2742	3.647	.96440	40
30	.1305	.1317	7.596	.99144	30	30	.2672	.2773	3.606	.96363	30
40	.1334	.1346	7.429	.99106	20	40	.2700	.2805	3.566	.96285	20
50	.1363	.1376	7.269	.99067	10	50	.2728	.2836	3.526	.96206	10

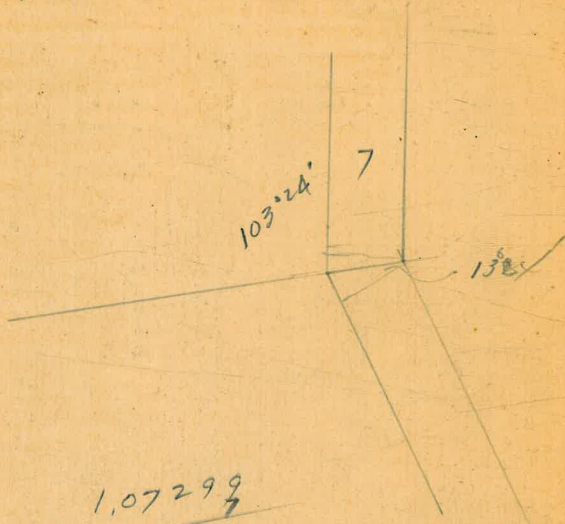
TABLE VIII.—NATURAL TRIGONOMETRICAL FUNCTIONS.

Angle	Sine.	Tan.	Cotg.	Cosin.		Angle	Sine.	Tan.	Cotg.	Cosin.	
16°	.2756	.2867	3.487	.96126	74	24°	.4067	.4452	2.246	.91355	66
10	.2784	.2899	3.450	.96046	50	10	.4094	.4487	2.220	.91236	50
20	.2812	.2931	3.412	.95964	40	20	.4120	.4522	2.211	.91116	40
30	.2840	.2962	3.376	.95882	30	30	.4147	.4557	2.194	.90996	30
40	.2868	.2994	3.340	.95799	20	40	.4173	.4592	2.177	.90875	20
50	.2896	.3026	3.305	.95715	10	50	.4200	.4628	2.161	.90753	10
17°	.2924	.3057	3.271	.95615	73	25°	.4226	.4663	2.145	.90631	65
10	.2952	.3089	3.237	.95545	50	10	.4253	.4699	2.128	.90507	50
20	.2979	.3121	3.204	.95459	40	20	.4279	.4734	2.112	.90383	40
30	.3007	.3153	3.172	.95372	30	30	.4305	.4770	2.097	.90259	30
40	.3035	.3185	3.140	.95284	20	40	.4331	.4806	2.081	.90133	20
50	.3062	.3217	3.108	.95195	10	50	.4358	.4841	2.066	.90007	10
18°	.3090	.3249	3.078	.95106	72	26°	.4384	.4877	2.050	.89879	64
10	.3118	.3281	3.048	.95015	50	10	.4410	.4913	2.035	.89752	50
20	.3145	.3314	3.018	.94924	40	20	.4436	.4950	2.020	.89623	40
30	.3173	.3346	2.989	.94832	30	30	.4462	.4986	2.006	.89493	30
40	.3201	.3378	2.960	.94740	20	40	.4488	.5022	1.991	.89363	20
50	.3228	.3411	2.932	.94646	10	50	.4514	.5059	1.977	.89232	10
19°	.3256	.3443	2.904	.94552	71	27°	.4540	.5095	1.963	.89101	63
10	.3283	.3476	2.877	.94457	50	10	.4566	.5132	1.949	.88968	50
20	.3311	.3508	2.850	.94361	40	20	.4592	.5169	1.935	.88835	40
30	.3338	.3541	2.824	.94264	30	30	.4617	.5206	1.921	.88701	30
40	.3365	.3574	2.798	.94167	20	40	.4643	.5243	1.907	.88566	20
50	.3393	.3607	2.773	.94068	10	50	.4669	.5280	1.894	.88431	10
20°	.3420	.3640	2.747	.93969	70	28°	.4695	.5317	1.881	.88295	62
10	.3448	.3673	2.723	.93869	50	10	.4720	.5354	1.868	.88158	50
20	.3475	.3706	2.699	.93769	40	20	.4746	.5392	1.855	.88020	40
30	.3502	.3739	2.675	.93667	30	30	.4772	.5430	1.842	.87882	30
40	.3529	.3772	2.651	.93565	20	40	.4797	.5467	1.829	.87743	20
50	.3557	.3805	2.628	.93462	10	50	.4823	.5505	1.816	.87603	10
21°	.3584	.3839	2.605	.93358	69	29°	.4848	.5543	1.804	.87462	61
10	.3611	.3872	2.583	.93253	50	10	.4874	.5581	1.792	.87321	50
20	.3638	.3906	2.560	.93148	40	20	.4899	.5619	1.780	.87178	40
30	.3665	.3939	2.539	.93042	30	30	.4924	.5658	1.767	.87036	30
40	.3692	.3973	2.517	.92935	20	40	.4950	.5696	1.756	.86892	20
50	.3719	.4006	2.496	.92827	10	50	.4975	.5735	1.744	.86748	10
22°	.3746	.4040	2.475	.92718	68	30°	.5000	.5774	1.732	.86603	60
10	.3773	.4074	2.455	.92609	50	10	.5025	.5812	1.720	.86457	50
20	.3800	.4108	2.434	.92499	40	20	.5050	.5851	1.709	.86310	40
30	.3827	.4142	2.414	.92388	30	30	.5075	.5890	1.698	.86163	30
40	.3854	.4176	2.394	.92276	20	40	.5100	.5930	1.686	.86015	20
50	.3881	.4210	2.375	.92164	10	50	.5125	.5969	1.675	.85866	10
23°	.3907	.4245	2.356	.92050	67	31°	.5150	.6009	1.664	.85717	59
10	.3934	.4279	2.337	.91936	50	10	.5175	.6048	1.653	.85567	50
20	.3961	.4314	2.318	.91822	40	20	.5200	.6088	1.643	.85416	40
30	.3987	.4348	2.300	.91706	30	30	.5225	.6128	1.632	.85264	30
40	.4014	.4383	2.282	.91590	20	40	.5250	.6168	1.621	.85112	20
50	.4041	.4417	2.264	.91472	10	50	.5275	.6208	1.611	.84959	10

7+32 3' Buck ONE 3'Date



0496 S



$$\begin{array}{r} 1.07299 \\ \hline 751093 \\ 107 \\ \hline 8.58 \end{array}$$

$$\begin{array}{r} 1.07299 \\ \hline 643794 \\ 429196 \\ \hline 4935754 \end{array}$$

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