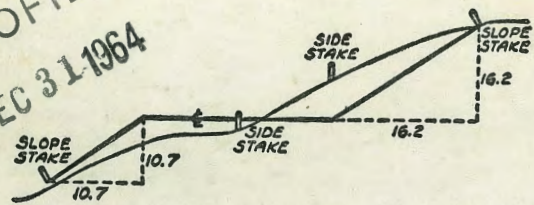


2024

BRAND NEW

MICROFILMED
DEC 31 1964



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING
SLOPE 1 TO 1, ROADWAY OF ANY WIDTH

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0
1	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	1
2	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	2
3	3.00	3.10	3.20	3.30	3.40	3.50	3.60	3.70	3.80	3.90	3
4	4.00	4.10	4.20	4.30	4.40	4.50	4.60	4.70	4.80	4.90	4
5	5.00	5.10	5.20	5.30	5.40	5.50	5.60	5.70	5.80	5.90	5
6	6.00	6.10	6.20	6.30	6.40	6.50	6.60	6.70	6.80	6.90	6
7	7.00	7.10	7.20	7.30	7.40	7.50	7.60	7.70	7.80	7.90	7
8	8.00	8.10	8.20	8.30	8.40	8.50	8.60	8.70	8.80	8.90	8
9	9.00	9.10	9.20	9.30	9.40	9.50	9.60	9.70	9.80	9.90	9
10	10.00	10.10	10.20	10.30	10.40	10.50	10.60	10.70	10.80	10.90	10
11	11.00	11.10	11.20	11.30	11.40	11.50	11.60	11.70	11.80	11.90	11
12	12.00	12.10	12.20	12.30	12.40	12.50	12.60	12.70	12.80	12.90	12
13	13.00	13.10	13.20	13.30	13.40	13.50	13.60	13.70	13.80	13.90	13
14	14.00	14.10	14.20	14.30	14.40	14.50	14.60	14.70	14.80	14.90	14
15	15.00	15.10	15.20	15.30	15.40	15.50	15.60	15.70	15.80	15.90	15
16	16.00	16.10	16.20	16.30	16.40	16.50	16.60	16.70	16.80	16.90	16
17	17.00	17.10	17.20	17.30	17.40	17.50	17.60	17.70	17.80	17.90	17
18	18.00	18.10	18.20	18.30	18.40	18.50	18.60	18.70	18.80	18.90	18
19	19.00	19.10	19.20	19.30	19.40	19.50	19.60	19.70	19.80	19.90	19
20	20.00	20.10	20.20	20.30	20.40	20.50	20.60	20.70	20.80	20.90	20
21	21.00	21.10	21.20	21.30	21.40	21.50	21.60	21.70	21.80	21.90	21
22	22.00	22.10	22.20	22.30	22.40	22.50	22.60	22.70	22.80	22.90	22
23	23.00	23.10	23.20	23.30	23.40	23.50	23.60	23.70	23.80	23.90	23
24	24.00	24.10	24.20	24.30	24.40	24.50	24.60	24.70	24.80	24.90	24
25	25.00	25.10	25.20	25.30	25.40	25.50	25.60	25.70	25.80	25.90	25
26	26.00	26.10	26.20	26.30	26.40	26.50	26.60	26.70	26.80	26.90	26
27	27.00	27.10	27.20	27.30	27.40	27.50	27.60	27.70	27.80	27.90	27
28	28.00	28.10	28.20	28.30	28.40	28.50	28.60	28.70	28.80	28.90	28
29	29.00	29.10	29.20	29.30	29.40	29.50	29.60	29.70	29.80	29.90	29
30	30.00	30.10	30.20	30.30	30.40	30.50	30.60	30.70	30.80	30.90	30
31	31.00	31.10	31.20	31.30	31.40	31.50	31.60	31.70	31.80	31.90	31
32	32.00	32.10	32.20	32.30	32.40	32.50	32.60	32.70	32.80	32.90	32
33	33.00	33.10	33.20	33.30	33.40	33.50	33.60	33.70	33.80	33.90	33
34	34.00	34.10	34.20	34.30	34.40	34.50	34.60	34.70	34.80	34.90	34
35	35.00	35.10	35.20	35.30	35.40	35.50	35.60	35.70	35.80	35.90	35
36	36.00	36.10	36.20	36.30	36.40	36.50	36.60	36.70	36.80	36.90	36
37	37.00	37.10	37.20	37.30	37.40	37.50	37.60	37.70	37.80	37.90	37
38	38.00	38.10	38.20	38.30	38.40	38.50	38.60	38.70	38.80	38.90	38
39	39.00	39.10	39.20	39.30	39.40	39.50	39.60	39.70	39.80	39.90	39
40	40.00	40.10	40.20	40.30	40.40	40.50	40.60	40.70	40.80	40.90	40
41	41.00	41.10	41.20	41.30	41.40	41.50	41.60	41.70	41.80	41.90	41
42	42.00	42.10	42.20	42.30	42.40	42.50	42.60	42.70	42.80	42.90	42
43	43.00	43.10	43.20	43.30	43.40	43.50	43.60	43.70	43.80	43.90	43
44	44.00	44.10	44.20	44.30	44.40	44.50	44.60	44.70	44.80	44.90	44
45	45.00	45.10	45.20	45.30	45.40	45.50	45.60	45.70	45.80	45.90	45
46	46.00	46.10	46.20	46.30	46.40	46.50	46.60	46.70	46.80	46.90	46
47	47.00	47.10	47.20	47.30	47.40	47.50	47.60	47.70	47.80	47.90	47
48	48.00	48.10	48.20	48.30	48.40	48.50	48.60	48.70	48.80	48.90	48
49	49.00	49.10	49.20	49.30	49.40	49.50	49.60	49.70	49.80	49.90	49
50	50.00	50.10	50.20	50.30	50.40	50.50	50.60	50.70	50.80	50.90	50

Distance of slope stake from side or shoulder stake for any width roadway, slope 1 to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

INDEXED
Completely

15+96.53 - Landis

23+02.82 - Dright

29+63.05 - Myrtle - S. 7'

DIRECTIONS FOR USE OF TABLES

TABLE No. XIV

Distance of slope stake from side or shoulder
stake for any width roadway, slope 1% to 10%
is given in this table for cut or fill at any
stake is located by the double entry method in
this table.

IMPROVED TABLES
AND
INFORMATION

cut tangent. If it does not make the right abutment necessary.

TABLE No. VIII

To find Tangent and External for curve of
any other degree, divide by degree of curve and
add correction found in column of corrections.
Figure of curve with a given L may be found
by dividing tangent (or external) opposite L by
given tangent (or external).

The distance from a point on the tangent to
the curve is very nearly the square of the tangent
length divided by twice the radius.

The length of the curve is
 $L = \frac{2R \sin \frac{\Delta}{2}}{\sin \frac{\Delta}{2}}$
The length of the tangent is
 $T = R \tan \frac{\Delta}{2}$
The length of the external is
 $E = R (\sec \frac{\Delta}{2} - 1)$

TABLE XIII—CORRECTIONS FOR TANGENTS AND EXTERNALS

These corrections are to be added to the approximate values, found by dividing the tangent, or external, for a 1° curve (Table VIII) by the degree of curve, in order to obtain the true tangents, or externals. Intermediate values may be obtained by interpolation.

FOR TANGENTS ADD

Central Angle	DEGREE OF CURVE															
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°		
10°	.03	.06	.09	.13	.16	.19	.22	.25	.28	.31	.34	.38	.42	.46		
15°	.04	.10	.14	.19	.24	.29	.34	.39	.45	.51	.53	.58	.63	.68		
20°	.06	.13	.19	.26	.32	.39	.45	.51	.58	.65	.72	.79	.84	.90		
25°	.08	.16	.24	.33	.40	.49	.58	.67	.75	.83	.90	.99	1.06	1.14		
30°	.10	.19	.29	.39	.49	.59	.69	.79	.89	.99	1.09	1.20	1.29	1.39		
35°	.11	.22	.34	.47	.58	.69	.79	.89	.99	1.09	1.20	1.29	1.42	1.54		
40°	.13	.26	.40	.53	.67	.80	.93	1.06	1.20	1.34	1.49	1.64	1.79	1.94		
45°	.15	.30	.44	.60	.76	.91	1.06	1.21	1.37	1.52	1.70	1.87	2.04	2.21		
50°	.17	.34	.51	.68	.85	1.02	1.19	1.36	1.54	1.72	1.91	2.10	2.29	2.48		
55°	.19	.38	.57	.76	.95	1.14	1.32	1.52	1.72	1.92	2.14	2.35	2.56	2.77		
60°	.21	.42	.63	.84	1.05	1.27	1.49	1.71	1.94	2.17	2.38	2.60	2.83	3.07		
65°	.23	.46	.69	.93	1.16	1.40	1.64	1.88	2.13	2.38	2.63	2.88	3.13	3.39		
70°	.25	.51	.76	1.02	1.28	1.54	1.80	2.06	2.33	2.60	2.88	3.16	3.44	3.72		
75°	.27	.56	.83	1.12	1.40	1.69	1.98	2.27	2.57	2.87	3.16	3.47	3.78	4.09		
80°	.30	.61	.91	1.22	1.53	1.84	2.15	2.46	2.78	3.10	3.44	3.78	4.12	4.46		
85°	.33	.66	1.00	1.33	1.68	2.02	2.36	2.70	3.05	3.40	3.77	4.14	4.55	4.89		
90°	.36	.72	1.09	1.45	1.83	2.20	2.57	2.94	3.32	3.70	4.10	4.50	4.91	5.32		
95°	.39	.79	1.19	1.55	2.00	2.40	2.80	3.20	3.61	4.02	4.40	4.98	5.38	5.83		
100°	.43	.86	1.30	1.74	2.18	2.62	3.06	3.50	3.95	4.40	4.88	5.37	5.85	6.34		
110°	.51	1.03	1.56	2.08	2.61	3.14	3.67	4.21	4.76	5.31	5.86	6.43	7.01	7.60		
120°	.62	1.25	1.93	2.52	3.16	3.81	4.45	5.11	5.77	6.44	7.12	7.80	8.50	9.22		

FOR EXTERNALS ADD

Central Angle	DEGREE OF CURVE															
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°		
10°	.001	.003	.004	.006	.007	.008	.009	.011	.012	.014	.015	.017	.018	.020		
15°	.003	.007	.010	.014	.018	.023	.027	.029	.032	.035	.039	.043	.047	.051		
20°	.006	.011	.017	.022	.028	.034	.038	.045	.051	.057	.063	.070	.076	.083		
25°	.009	.018	.027	.036	.046	.056	.065	.074	.083	.093	.106	.120	.127	.135		
30°	.013	.025	.038	.051	.065	.078	.090	.103	.116	.129	.149	.170	.179	.188		
35°	.018	.035	.054	.072	.086	.109	.131	.153	.175	.197	.213	.230	.247	.264		
40°	.023	.046	.070	.093	.117	.141	.172	.203	.234	.265	.277	.290	.315	.341		
45°	.030	.060	.093	.119	.153	.184	.216	.254	.289	.325	.351	.378	.411	.445		
50°	.037	.075	.116	.151	.189	.227	.266	.305	.345	.384	.425	.467	.508	.550		
55°	.046	.093	.142	.188	.236	.283	.332	.381	.420	.479	.530	.582	.641	.700		
60°	.056	.112	.168	.225	.283	.340	.398	.457	.516	.575	.636	.697	.774	.851		
65°	.067	.135	.204	.273	.343	.412	.483	.554	.625	.697	.771	.845	.922	1.01		
70°	.080	.159	.240	.321	.403	.485	.568	.652	.735	.819	.906	.994	1.08	1.17		
75°	.095	.182	.266	.353	.440	.528	.617	.707	.797	.877	.971	1.07	1.18	1.29		
80°	.110	.220	.332	.445	.558	.671	.787	.903	1.02	1.13	1.25	1.38	1.50	1.62		
85°	.128	.259	.391	.524	.657	.790	.926	1.06	1.20	1.34	1.47	1.62	1.76	1.91		
90°	.149	.299	.450	.603	.756	.910	1.07	1.22	1.38	1.54	1.70	1.87	2.03	2.20		
95°	.174	.350	.522	.706	.885	1.06	1.25	1.43	1.62	1.80	1.99	2.18	2.38	2.58		
100°	.200	.401	.604	.809	1.01	1.22	1.43	1.64	1.85	2.06	2.28	2.50	2.73	2.96		
110°	.268	.536	.806	1.08	1.35	1.63	1.91	2.20	2.48	2.76	3.05	3.35	3.66	3.96		
120°	.360	.721	1.08	1.45	1.82	2.19	2.57	2.95	3.33	3.72	4.11	4.50	4.91	5.32		

Index

X-sec alley. Blk 151 Pac. Beach

Page

1-

X-sec. Proposed easement for street 10

Thru Ocean View Gardens

X-sec. Vale Way - Trojan to 58th 11

Univ., Ray, Dwight, Grim, Myrtle, Upas 14

Redwood, Thorn

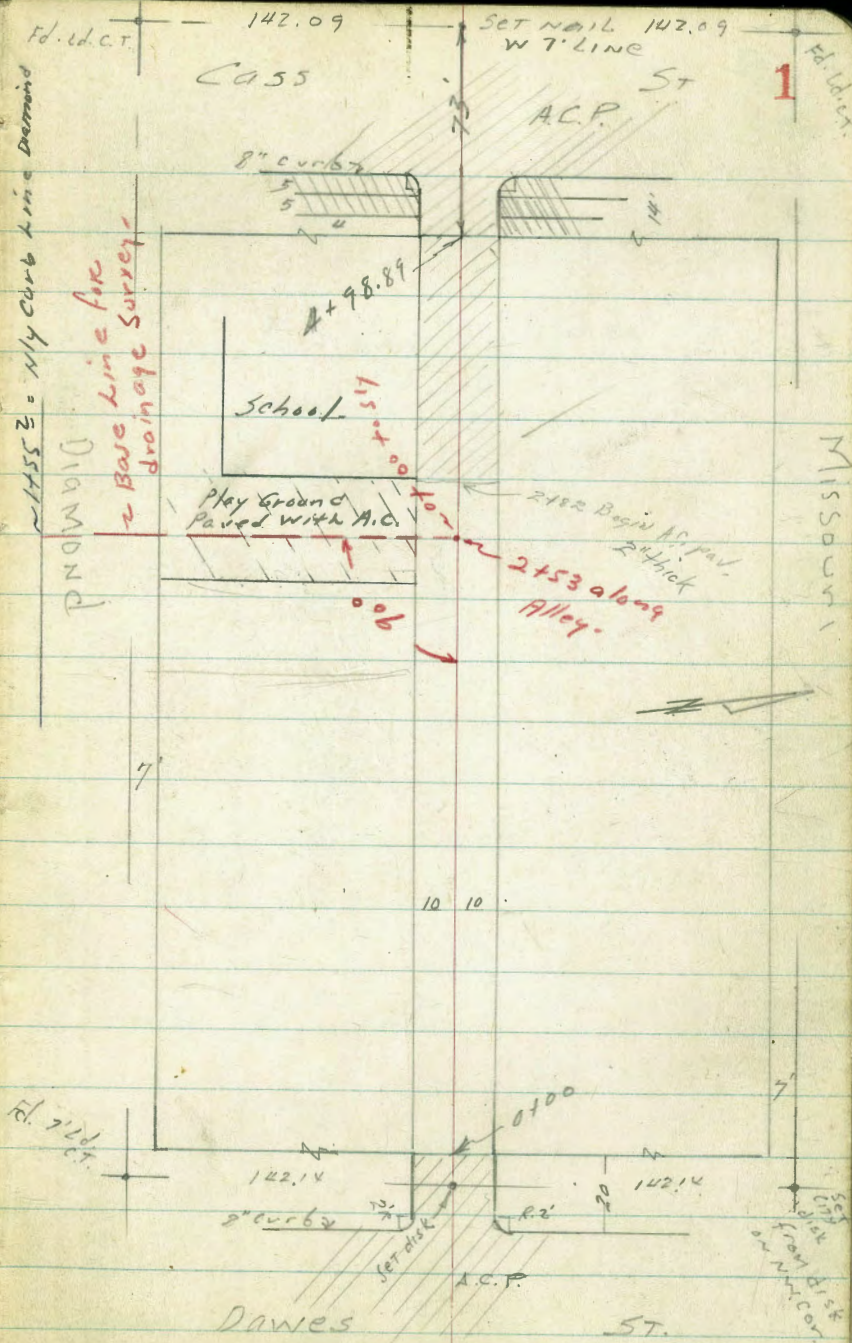
Xsec 20' ALley
Blk 151 Pacific Beach

Moore
Beag
Sheridan
D. 57590N
V-V-49

W.O. 31660

INDEXED
WK
APR 5 1949

Reduced Notes
McClaren 4-7-49
Green Profile 3556
Blk No. 7594L
Plot No. 2103



0+47 P.P. Note offsets to Poles & to CTRP pole

0+26.5 end walk on left

0+100 Beg. E of W 3' Cor Walk on left

0-20 W of DAWES

0-2010 W GUT

BM 4th spike 160 6378 6218

DAWES this BM used on Pav. of Missouri, Pawnee Chalkedony, etc

Lt = South

AT

2

J.A.P. 1081
9.1 0.8 d.

55.38	55.18	55.48	55.68	55.88
8.20	8.6	8.3	8.1	7.9
11.5	10		10	25
N. edge walk				

55.63	55.74	55.25	55.09	55.79	55.97
8.15	8.34	8.53	8.69	8.29	7.81
11.6	9.97	9.96	10.83	10.03	10.03
N. edge 3' walk		end		end	

54.10	55.17	55.80	56.28
9.68	8.61	7.98	7.00
50	12	17	50

53.70	54.70	55.02	55.24	56.34
10.08	9.08	8.76	8.44	7.44
50	12		12	50

6378

1725

$\frac{54.01}{3.95}$	$\frac{53.96}{4.00}$	$\frac{54.06}{3.9}$	$\frac{54.26}{3.7}$	$\frac{54.63}{3.33}$	$\frac{54.76}{3.20}$
16	10		10	11.4	16
99r	Apron			CON.	CON!

1715 Beg. Con. Slab on Rt

$\frac{54.04}{3.92}$	$\frac{54.01}{3.95}$	$\frac{54.16}{3.8}$	$\frac{54.56}{3.4}$	$\frac{54.87}{3.09}$	$\frac{55.01}{2.95}$
16	10		10	11.4	10
99r	Apron			CON	CON

1702 Beg. Con. Apron + 4 Car 99r on Lt.

$\frac{54.02}{3.94}$	$\frac{54.00}{3.96}$	$\frac{54.26}{3.7}$	$\frac{54.56}{3.4}$	$\frac{54.86}{3.1}$	$\frac{55.26}{2.7}$
16	10	8		10	2.5
CON.	Apron				

1700 end Bd. Fence

Fence
9.9

Should meet this
for grade at least
not above

07815 Jog in Fence Bd.

Fence 11
Fence 9.9

TP 3.10 57.96 8.92 5x.80

57.96

0749 Beg. Bd. fence 9.8 Lt

$\frac{55.08}{8.7}$	$\frac{55.08}{8.7}$	$\frac{55.39}{8.4}$	$\frac{55.78}{8.0}$	$\frac{56.28}{7.5}$
20	9.8		10	2.5
	Fence			

63.78

63.78

L

R

R

4

2138

$\frac{50.36}{7.6}$	$\frac{50.76}{7.5}$	$\frac{51.66}{6.3}$	$\frac{52.26}{5.7}$	$\frac{52.66}{4.3}$	$\frac{52.86}{5.1}$
25	14	10		10	14
CT	CT	Fence			APPROX. CT SMALL DWELLING

2112

$\frac{50.56}{7.4}$	$\frac{50.76}{7.2}$	$\frac{52.16}{5.8}$	$\frac{52.66}{5.3}$	$\frac{52.86}{5.1}$	$\frac{53.56}{4.8}$
25	14	10	10	10	25
Basket BALL CT.					

2100 Beg. 7' High Heavy wire fence

$\frac{52.26}{5.7}$	$\frac{52.56}{5.4}$	$\frac{52.86}{5.1}$	$\frac{53.16}{4.8}$	$\frac{53.46}{4.5}$
10.2	25	10	10	25
Fence				

1148 P.P. 0.8 di.

JPA 10.61
91.

1146.C end Con Apron & Car gap ON LT

$\frac{54.05}{3.91}$	$\frac{53.92}{4.04}$	$\frac{53.66}{4.3}$	$\frac{53.66}{4.3}$	$\frac{53.96}{4.0}$
16	10	10	10	10
gap	Apron	dir		

1144.C end Con slab on RT

$\frac{53.56}{3.9}$	$\frac{54.06}{3.68}$	$\frac{54.28}{3.60}$	$\frac{54.36}{3.60}$
10	11.4	20	20
	Con.	Con.	

57.96

57.96

3711 L'wide Con Porch to School

R
52.22 5
2.54 Lower
16.5 = STEP

3706 Beg. of Con. School Porch

<u>50.21</u>	<u>50.19</u>	<u>50.16</u>	<u>50.06</u>	<u>50.06</u>	<u>51.16</u>	<u>51.26</u>	<u>51.66</u>	<u>52.06</u>
4.55	4.57	4.6	4.7	4.1	2.5	3.5	3.1	2.7
CON.	CON.	dirt				8	10	17

T.P. 248 54.76 568 5228 54.76

2488

52.74
5.22
17.4 School
Con. Porch
4' wide

2481.5 end fence only

<u>50.26</u>	<u>50.26</u>	<u>50.66</u>	<u>51.56</u>	<u>51.96</u>	<u>52.46</u>
7.7	7.7 Fence	7.3	6.4	6.0	5.5
18	12	10.2	10	10	25

2473 P.P. 1.1 di.

PA. 1035
93
53.06
4.9
18.4
CON.

2451 E 9 wide Con slab.

57.96

57.96

3 + 70

50.16
 4.60
 25
 Con.
 Porch

50.13

4.63
 17.4
 Con.
 Porch

49.96

4.8
 17.4
 Con.
 dirt

49.76

5.0
 10
 Con.
 dirt

50.16

4.6
 7
 Con.
 dirt

50.46

4.3
 7
 Con.
 dirt

50.46

4.3
 7
 Con.
 dirt

50.56

4.3
 10
 Con.
 dirt

51.36

3.4
 25
 Con.
 dirt

3 + 57.5 5" C.I. Pipe drain outlet
 Storm Water

50.90
 3.86
 14.5
 Inv.
 outlet

3 + 48 4' Porch to School

52.23
 2.53
 16.6
 Top
 Lower
 step

3 + 40

50.26
 4.50
 25.4
 Con.
 Porch

50.16

4.60
 17.5
 Con.
 Porch

49.96

4.8
 17.5
 Con.
 dirt

49.76

4.9
 10
 Con.
 dirt

50.26

4.5
 7
 Con.
 dirt

50.66

4.1
 7
 Con.
 dirt

50.76

4.0
 7
 Con.
 dirt

51.16

3.6
 10
 Con.
 dirt

51.76

3.0
 18
 Con.
 dirt

3 + 25 6' wide Porch to School
 Room

52.24
 2.52
 16.5
 Top
 Lower
 step

54.76

54.76

4+47

4+45

4+34

4+26 end Apron on Rt.

4+10 Beg. Con. Apron do. gar. on fr.

3+99 P.P. 0.8 di.

5476

50.07
46.9
25.1
Porch

L+
50.07
46.9
17.3
Jog Con
Porch

50.03
47.3
13.7
Con.
Porch

49.56
51
13.7
dirt

49.46
5.3
10

49.46
5.3

49.56
5.2
10

R 7

8' Spread → Cypress 5" diam
12.9 to C+R

South edge → PALM d. 2.5
11.5

49.86
4.9
5.0
6

49.76
4.7
10

50.06
4.3x
16.4
Apron

50.42
3.7x
23.7
gar.

51.04
3.7x
23.7
Floor

50.16
4.60
25.2
Con
Porch

50.10
4.66
17.3
Con.
Porch

49.86
4.9
17.3
Con.
Porch

49.56
5.2
10
dirt

49.76
5.0
7

50.06
4.7
47

49.96
4.8
6

50.16
4.6
10

50.49
4.27
16.4
Con.
Apron

51.05
3.7
23.7
gar.
Floor

J. PA. 1017
9.5

54.76

4+79

L+

R7

8

49.16
5.6
10

49.06
5.7

49.26
5.5
10
dirt

48.56
6.7
11.6
Base

4+62

49.99
4.77

49.56
5.2

3.2 Wide
TOP
CON. P
SLAB
dirt

4+52

end School Porch on Lt.

50.16
4.6
2.5

50.02
4.74
13.6

49.66
5.1
13.6

49.46
5.3
10

49.26
5.3
10

49.26
5.3
10
dirt

49.46
5.3
11.6
dirt

48.56
6.2
11.6
Base
WALL

CON. dirt
Porch

4+98.6
11

1.5 sq. Pillar

CON.
8" Blk.
WALL

4+50.5
11

1.5 sq. CON
Blk
Pillar

5476

5476

L+

±

R+

9

Check to Sw 7'ld. 316 51.50 51.52
C.T.

FB. 1729 - P. 5
Missouri + Cass St.

F gut Cass St

46.73	47.63	47.98	48.24	49.23
7.95	7.05	6.70	6.44	5.45
50	13	P	13	50
P	P	P	P	P

F ob Cass St

47.39	48.39	47.28	49.00	49.86
7.29	6.29	6.70	5.68	4.82
50	13	P	13	50
ob	ob	P	ob	ob

T.P. 575 54.68 5.83 48.93

54.68

4+98.89 F.L. Cass St.

48.60	48.54	48.42	48.88	49.04
6.16	6.22	6.34	5.88	5.72
ob	P	P	P	ob

54.76

54.76

7-Sept Prop. Easement for St. Thru
Ocean View Gardens - Map 2211

3478
W.O. 25001

5-6-49
Osborne
Hardin
Hatch
Shepard

INDEXED

WK
MAY 10 1949

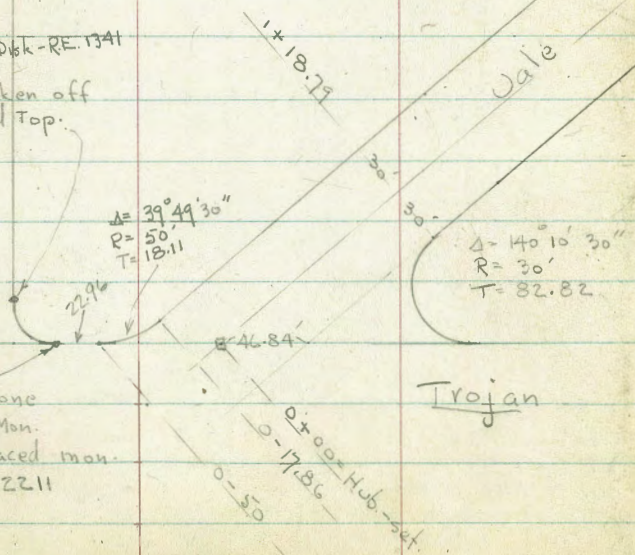
Reduced Notes
McClamroth 5-10-49

1/2

1/3

with Disk-RE 1341
Fd. Mon. - Top broken off
Carefully replaced Top.

Fd. Mon. - Top gone
checked to E of Mon.
from other replaced mon.
Per. Map Data - 2211



Meade Hue

not to scale 119.40

$\Delta = 50^{\circ} 07' 30''$
 $R = 50'$
 $T = 23.38'$

$\Delta = 129^{\circ} 52' 30''$
 $R = 30'$
 $T = 64.15'$

7' ct

St.
58±'



X-Sept. Uale Way - 60' st. - from
Trojan to 58th - See sketch. - P. 10

1+18.79 - PC. Prop. Curve on Rt.

0+80

0+40

0+00 = ± Uale & N.L. Trojan

0-17.86 = opp. PC. of Curve on Lt.

0-50 = opp. PC. on Lt.

Marked - 377.44

check B.M. on Map - No Record.

S.E. Trojan & 56th

Set B.M. - Nail in Pole

7.10 377.49

10.03 374.56

10.00 384.59 0.38 374.59

13.06 374.97 0.76 361.91

B.M. 11.00 362.67 351.67

± Ld. vct. Trojan
+ 54th

Lt.

±

Rt.

11

376.2	375.8	375.5	376.1	372.6	380.7	382.8
4.4 40	8.6 30	9.1 15	8.5 15	2.0 15	3.9 30	1.8 40
375.9	375.2	374.6	374.9	375.9	379.1	381.9
8.7 40	9.4 30	10.0 15	9.7 15	8.7 15	5.5 30	2.7 40
375.1	374.9	374.3	374.2	374.9	377.3	378.6
9.5 40	9.7 30	10.3 15	10.4 15	9.7 15	7.3 30	5.0 40
374.2	374.0	373.6	373.20	374.9	377.3	376.5
10.4 40	10.6 30	11.0 15	11.39 on Hub.	11.3 15	9.9 30	8.1 40
374.2	373.2	372.2	373.0	372.9	374.7	374.2
10.6 40	11.4 30	11.4 15	11.6 15	11.7 15	10.4 30	
375.3	373.6	373.0	372.9	372.4	374.2	
9.3 47	11.0 30	11.6 15	11.7 15	12.2 15	11.4 30	
				± wash		
			384.59			

L. H. RT

T.P. 11.15 398.78 3.01 387.63

4+20

3+80

3+50

3+00

2+91 = 3.7 RT = Sewer N.H. = 7.9

2+50

T.P. 12.95 390.64 6.90 377.69

2+00

1+60

386.8	387.6	390.4	387.9	384.6	383.5	382.6
+3.8	+3.0	+0.2	2.7	6.0	7.1	7.0
40	30	15	27	15	30	40
388.3	382.7	382.9	382.0	382.7	383.0	382.9
2.3	7.9	8.6	8.6	7.9	7.6	7.7
40	30	15	86	15	30	40
381.1	381.5	381.4	381.5	381.7	382.4	382.4
9.5	9.1	9.2	9.1	8.9	8.2	8.2
40	30	15	91	15	30	40
380.8	380.3	380.1	380.6	381.5	383.7	385.6
9.8	10.3	10.5	10.0	9.1	6.9	5.0
40	30	15	100	15	30	40
379.8	379.5	378.9	378.9	380.2	383.2	384.7
10.8	11.1	11.7	11.7	10.3	7.4	5.9
40	30	15	117	15	30	40
377.9	378.1	377.7	377.6	378.4	380.9	383.3
6.7	6.5	6.9	7.0	6.2	3.7	1.3
40	30	15	70	15	30	40
377.0	376.8	376.5	376.8	377.6	380.4	382.8
7.6	7.8	8.0	7.8	7.0	4.2	1.8
40	30	15	78	15	30	40

DN
RM

384.59

Shots on Lt. along edge of Pavc
outs from 1 ± Vale

6 + 53.7 = ± + w. edge of H.C. Pavc

check Nail in Pole
Marked 395.67 (no Record) 2.02 395.64

6 + 21.10 = ± + W.L. of 58th = 1.68' W. of Prop. PC. on Lt.

6 + 12.3 - 2.3 Lt. = outlet of 36" RC Culvert

5 + 75

5 + 31.89 = opp Prop. PC. on Rt.

T.P. 9.46 397.66 10.58 388.20

5 + 00

4 + 60

13

LT RT
 $\frac{2.59}{50}$ $\frac{4.47}{20}$
 395.2 394.2 392.8 392.52 392.49 392.22
 2.5 3.5 4.9 5.14 5.17 5.44
 40 30 15 15 30
 Pavc

395.9 395.4 395.5 394.7 390.67 390.8 392.2 392.28
 1.8 2.3 2.2 8.0 6.99 6.9 5.5 5.38
 40 30 23 11 on Hub. 15 30 38.4
 edge of Pavc

395.4 395.1 389.9 385.7 384.94 385.5 390.4 389.9 389.9 392.58
 2.3 2.6 7.4 12.0 12.72 12.2 7.3 7.8 7.8 5.08
 40 30 15 7 2.3 FL. Pipe 4 20 30 51.2
 edge of Pavc

395.5 394.8 392.3 388.0 385.5 385.6 387.6 387.6 387.8 387.8
 2.2 2.9 5.4 9.7 12.2 12.1 10.1 10.1 9.9 9.9
 40 30 15 4 wash 10 20 30 40

396.3 395.8 394.7 397.7 388.3 385.1 386.4 386.5 386.1
 1.4 1.9 4.0 8.0 9.4 12.6 11.3 11.2 11.6
 40 30 15 6 11 18 30 40
 wash

Top of 30" Pipe 397.66

396.0 395.5 394.0 387.8 386.5 385.5 384.9
 2.8 3.3 4.8 9.0 12.3 13.3 13.9
 40 30 15 15 30 40

395.8 395.6 394.0 389.8 385.2 384.3 383.8
 3.0 3.2 4.8 9.0 13.6 14.5 15.0
 40 30 15 15 30 40

398.78

P. Pole
R-39.02

Light std.

P. pole # J.R. 3002
Guy Pole

See P. 22

14 OHIO
12 Rod.

Light std.

0+00 = cross
Prop. Inlet

0+37.73 = cross
Prop. Inlet
Ang 66° 08' Rt.

Univ. Ave

0+97.22 = cross

Change Line
See Plan

Prop. Drain

26° 04'

11.64' - Ang 85° 28'

-1523.73 = Nail
Ang 66° 49' Lt
(on 7 Line)

Disk - R.E. 32

cross

cross (set) on 7 Line

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FR

30th

P.T. = 8 x 25' 00"
R = 22.5
L = 45.4
T = 31.99
16.70

6' x 5' Conc
Box Culvert
underway

66.32 = Nail
Ang 48° 57' Rt.
(on 5.7 Line)

1.85 x 1.85 opening
Iron Lid
curb outlet 14.7
opening

Ray St

20441

Line of Wightman St
See Book 2026

6+60.05 =
± Box Prop. Inlet on Lt. Cross

6+79.35 = Nail - PC
Δ = 89° 56' L = 35.31
R = 22.5 T = 22.41
EC = 6+92.26

R. into
T = 21.97
L = 54.53

6+79.35
21.97
6+57.38 BC
34.53
6+91.91 EC
6+92.35 = 6+92.26 Eg

Ray

Wightman St

± Prop. Drain

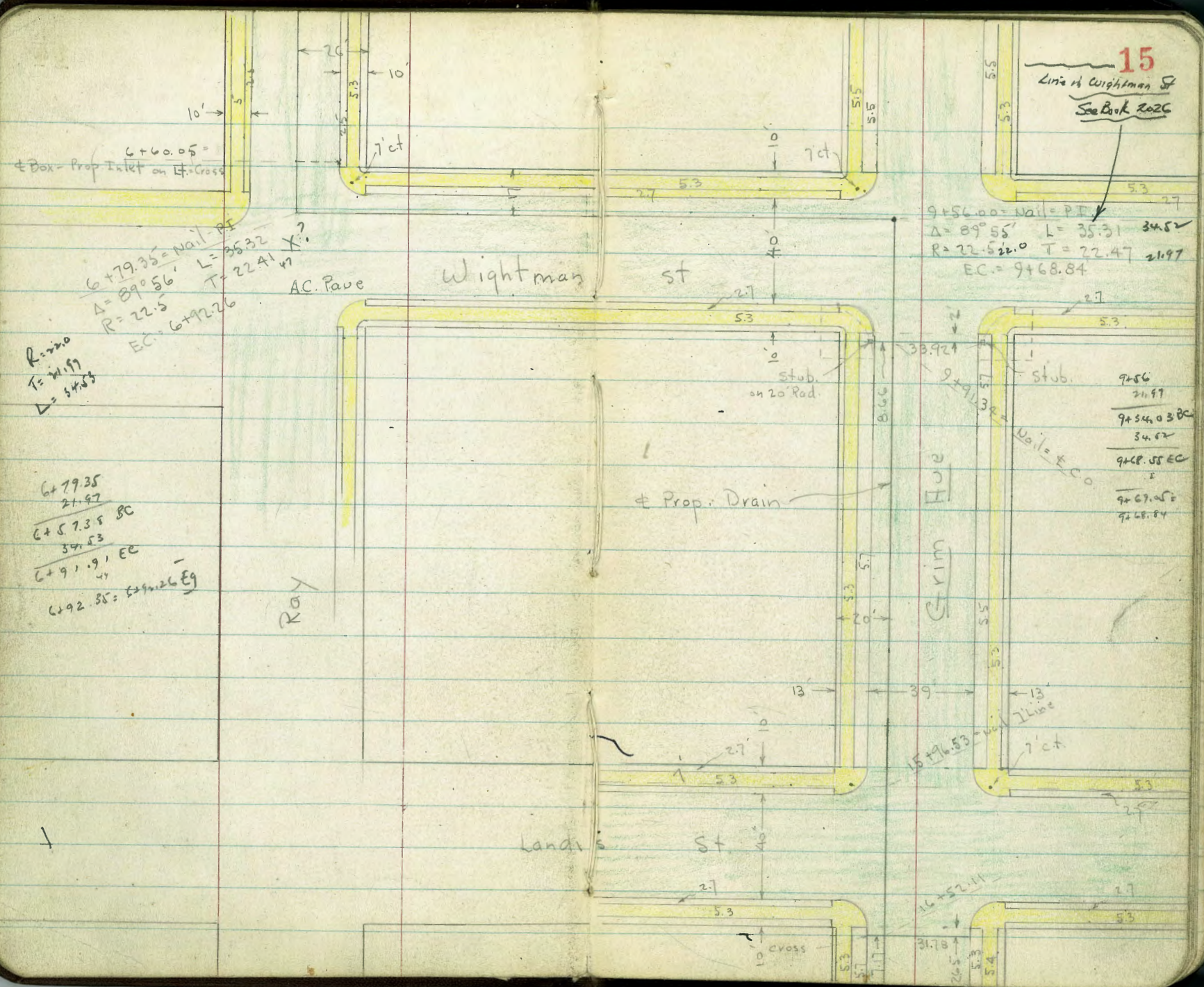
Landis St

9+56.00 = Nail = PT
Δ = 89° 56' L = 35.31 34.5
R = 22.522.0 T = 22.47 21.97
EC = 9+68.84

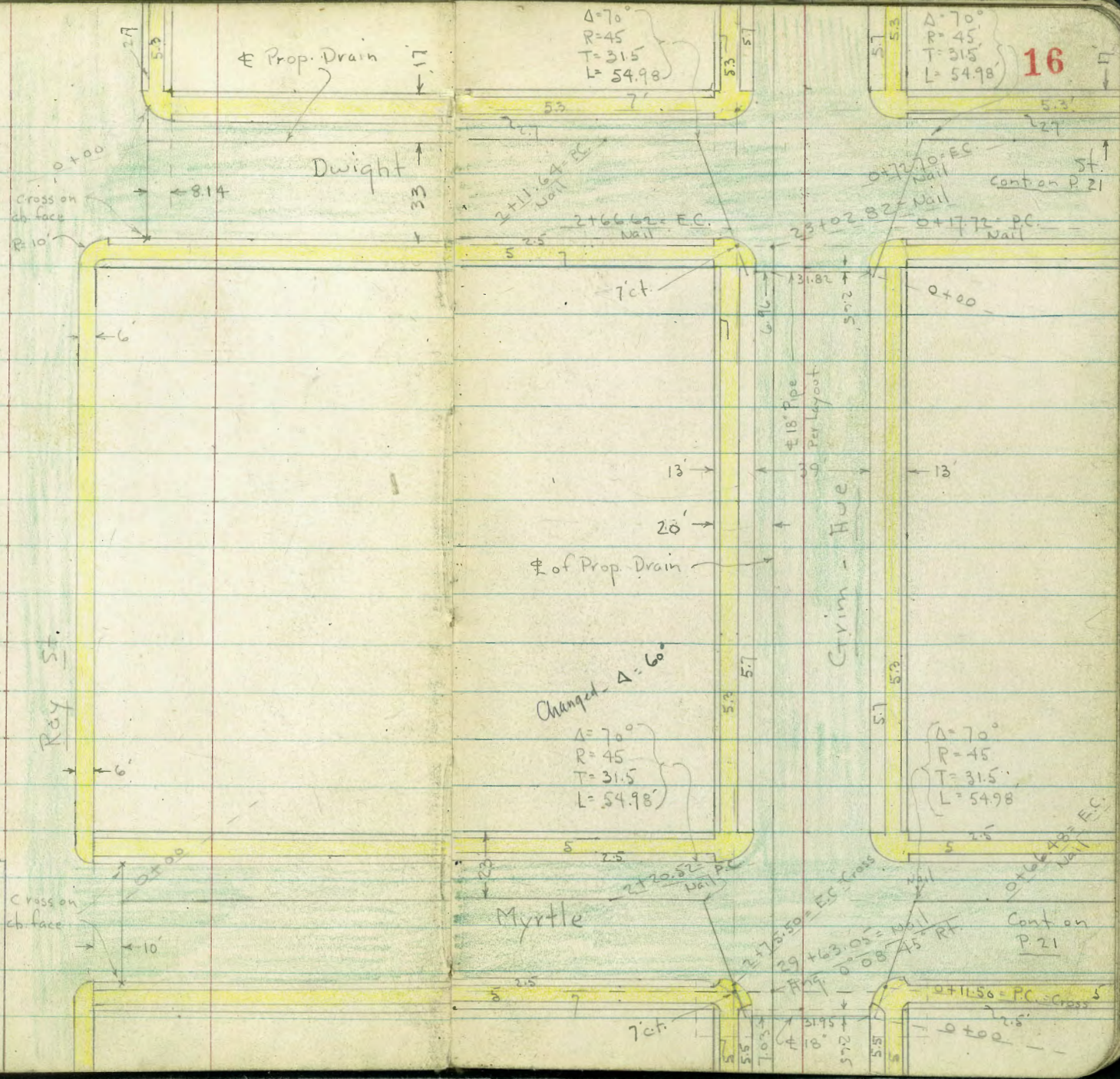
9+56
21.97
9+54.03 BC
54.52
9+69.55 EC
9+69.05
9+68.84

Nail = E.C.O.

Cr. rim



Line in Roy St. See 2026/30



$\Delta = 70^\circ$
 $R = 45$
 $T = 31.5$
 $L = 54.98$

$\Delta = 70^\circ$
 $R = 45$
 $T = 31.5$
 $L = 54.98$

16

Changed $\Delta = 60^\circ$
 $\Delta = 70^\circ$
 $R = 45$
 $T = 31.5$
 $L = 54.98$

$\Delta = 70^\circ$
 $R = 45$
 $T = 31.5$
 $L = 54.98$

Cross on
 ch. face
 $R = 10$

Cross on
 ch. face

Cont on P. 21

Cont on
 P. 21

Grimm - Hue

Dwight

Myrtle

Roy St.

18" Pipe
Per Layout

Prop. Drain

$2 + 11.64 = EC$
 Nail

$2 + 66.62 = EC$
 Nail

$23 + 02.82 = EC$
 Nail

$0 + 17.72 = PC$
 Nail

$2 + 20.52 = PC$
 Nail

$2 + 75.50 = EC$
 Cross
 $29 + 63.05 = Nail$
 $0 + 08.45 = RT$

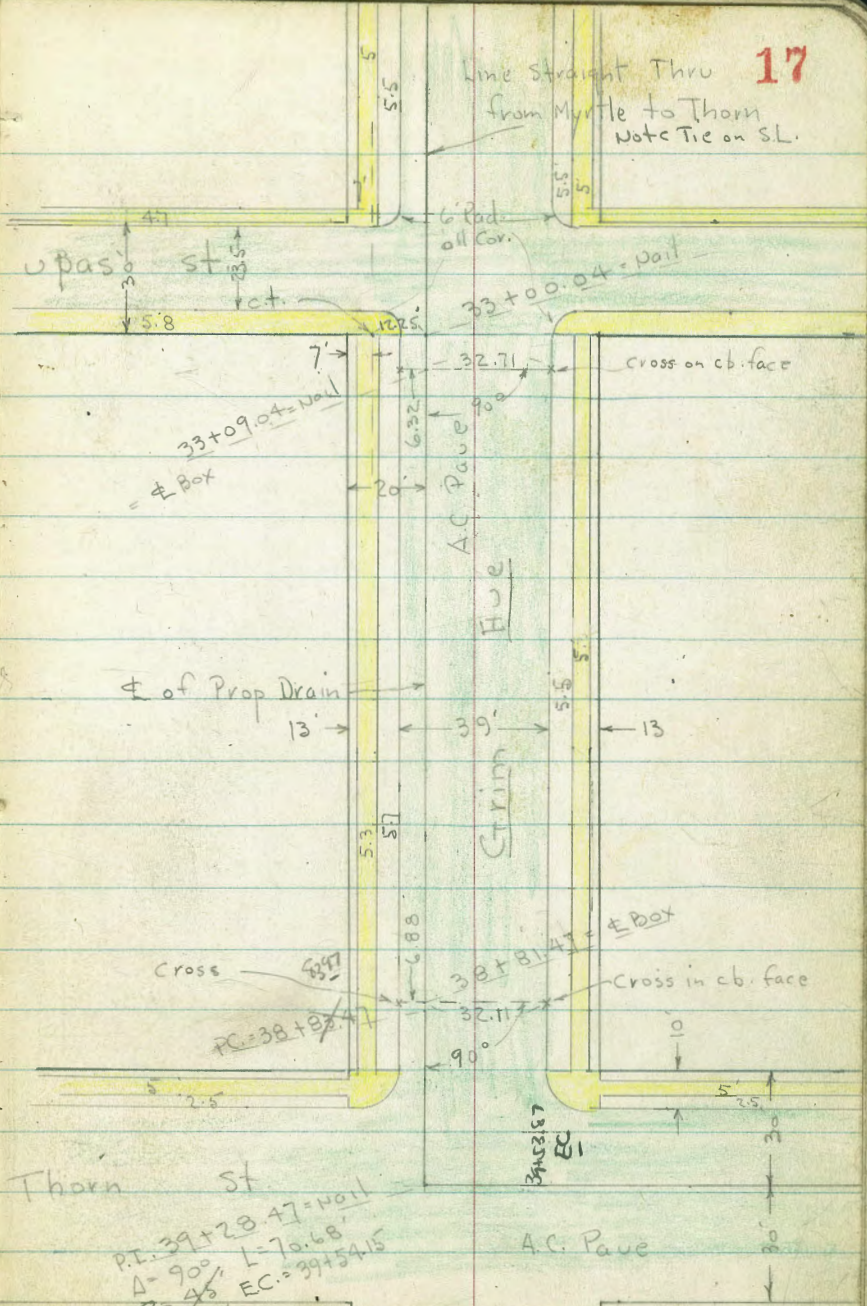
$0 + 66.48 = EC$
 Nail

$0 + 11.50 = PC$
 Cross

7'ct.

7'ct.

Line Straight Thru
from Myrtle to Thorn
Note Tie on S.L.



$PI = 39$
 $R = 43$
 $L = 70.68$
 $EC = 39 + 54.15$
 $L = 69.9$

Prop Drain
150.26

Prop Drain

40+78.6
40+83.34
40+88.08
40+92.82

Cross on curb
face = E Box

40+88.29
Ang 27° 08' Rt.

40+91.37
Cross on T Line
E of Exist 36"

Cross on N edge
of Inlet
41+73.90
Ang 15° 55' Lt

Trim

Trim

43+51.27 L LT = 6° 21' 30" (COMPUTED)

$\Delta = 45^\circ$
 $R = 45' \times 1.5$
 $T = 18.64 \times 1.5$
 $L = 25.34 \times 1.5$

Move PT
2.49 West

EC = 40+78.62

cut in s. edge of Box - 2.2 x 4.5' Grate
Box = 4' x 4'

See Detail - P. 20

Thorn St

72° 07' 30"

42+56.10 = stub
30° 17' 30" Rt.

Approx. Loc
of 36" RC

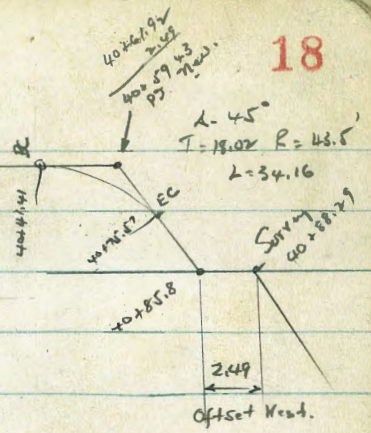
43+18.17 = stub
P.O.T.

43+51.27 = Cross on Top of Pipe = end

XX

ANGLE (?)

18



TS

PS

45 + 31.50 = stub.
Ang. 11° 11' Lt.

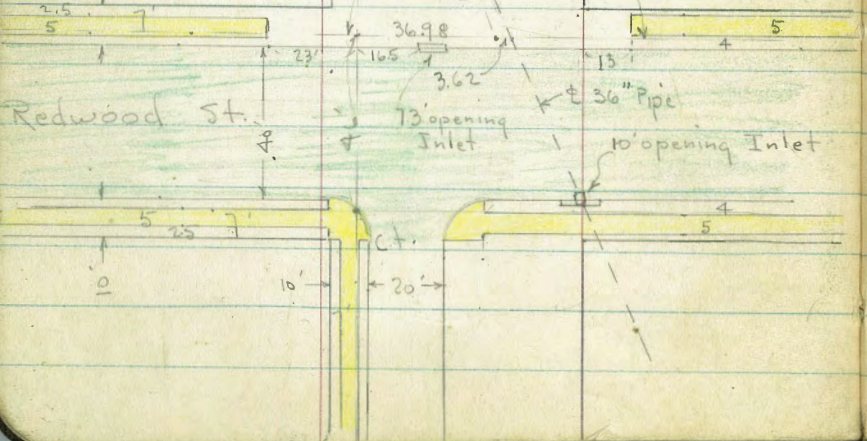
65

st

st

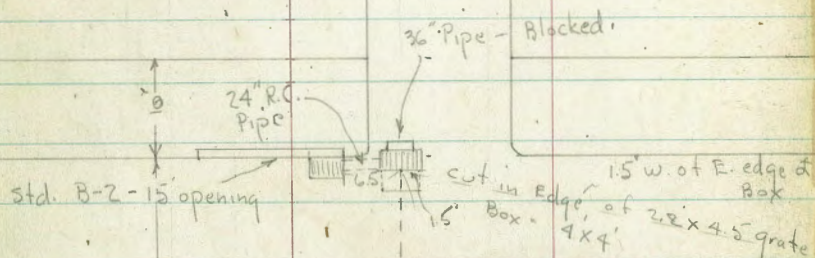
Pipe - (top)
46 + 69.60 = cross on End of
Ang. 2° 46' Lt. - 36" Pipe

68° 30'
10.05
10.05
113° 48' 30"

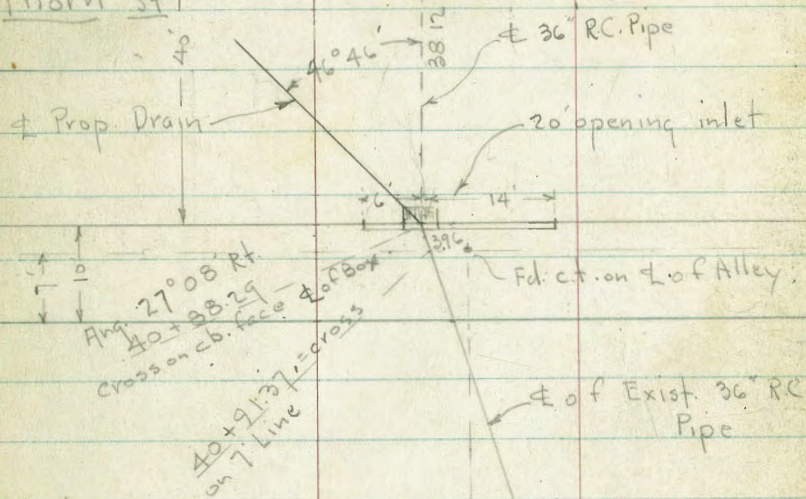


Detail of Inlets on Thorn

See P. 18

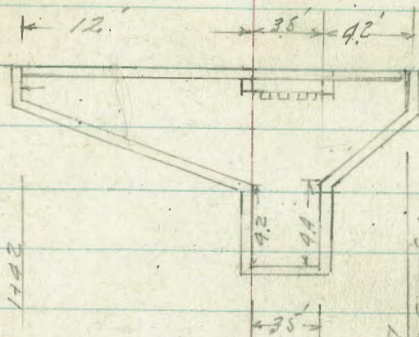


Thorn St



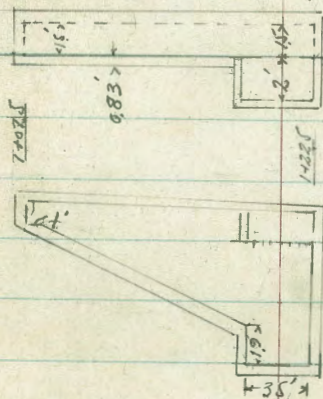
20

Plan Curb Inlet South Side Thorn



Elev. Curb Inlet South Curb Line Thorn Looking South.

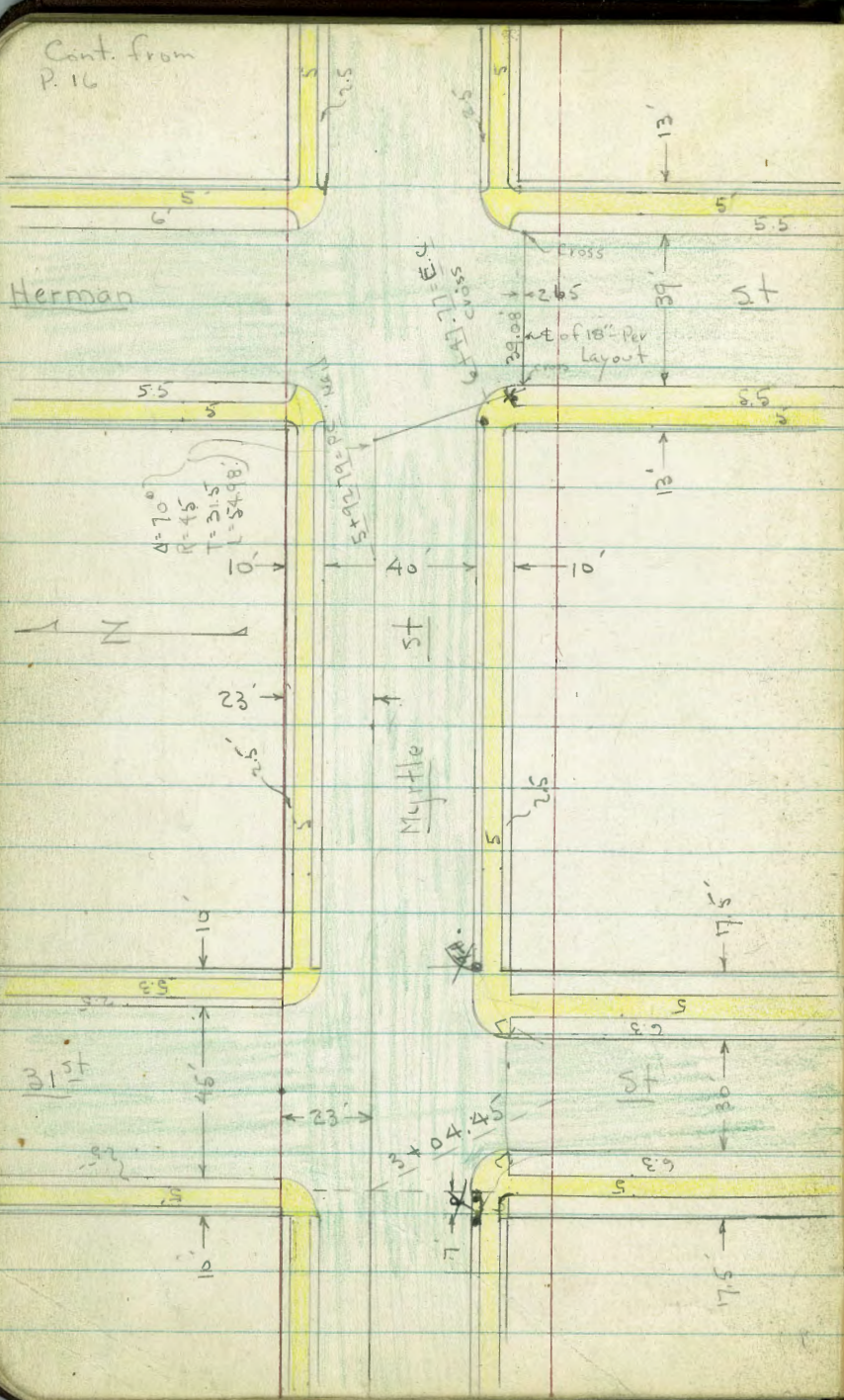
Plan Inlet N. Side Thorn



Elev. Looking North

Cont. from
P. 16

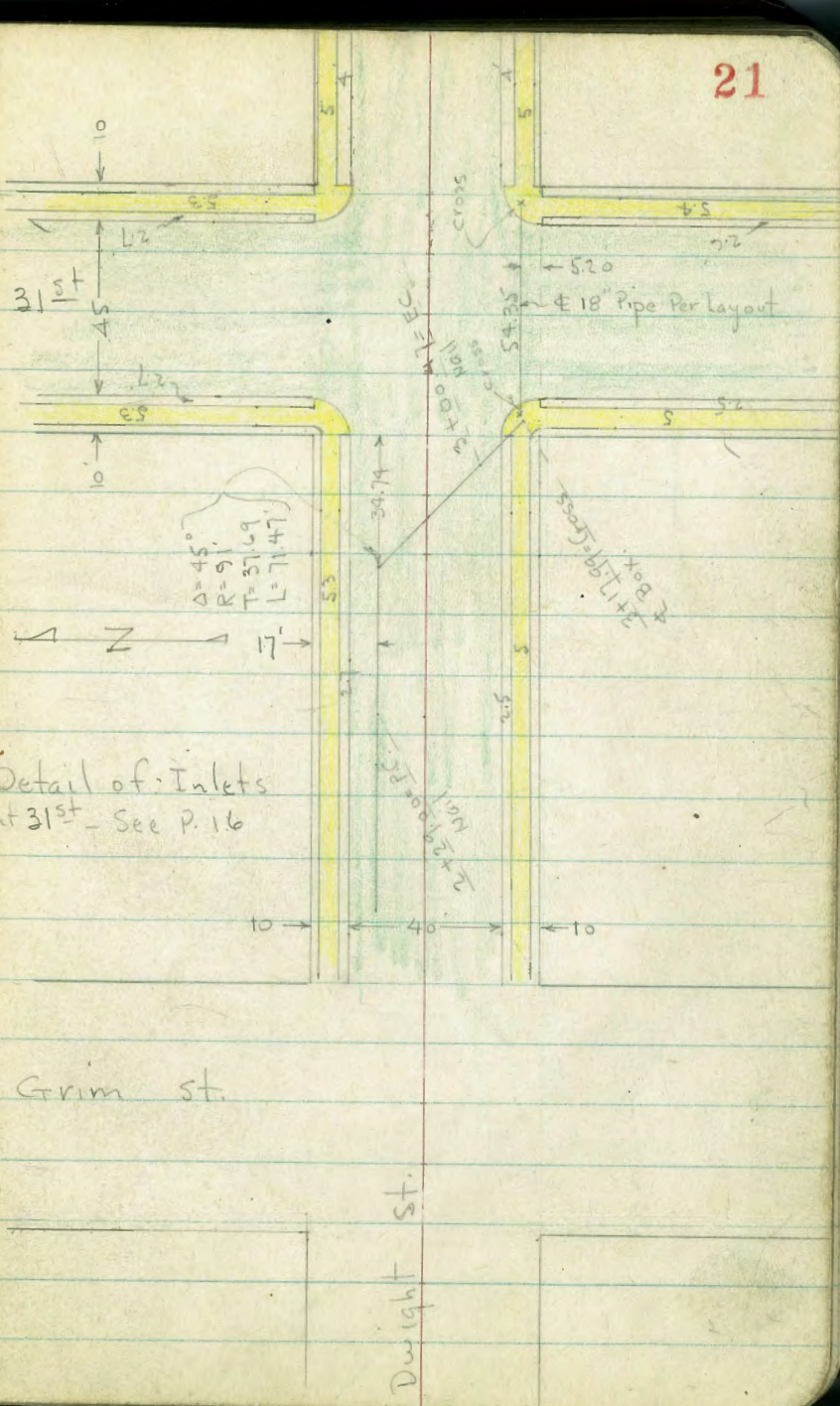
Herman



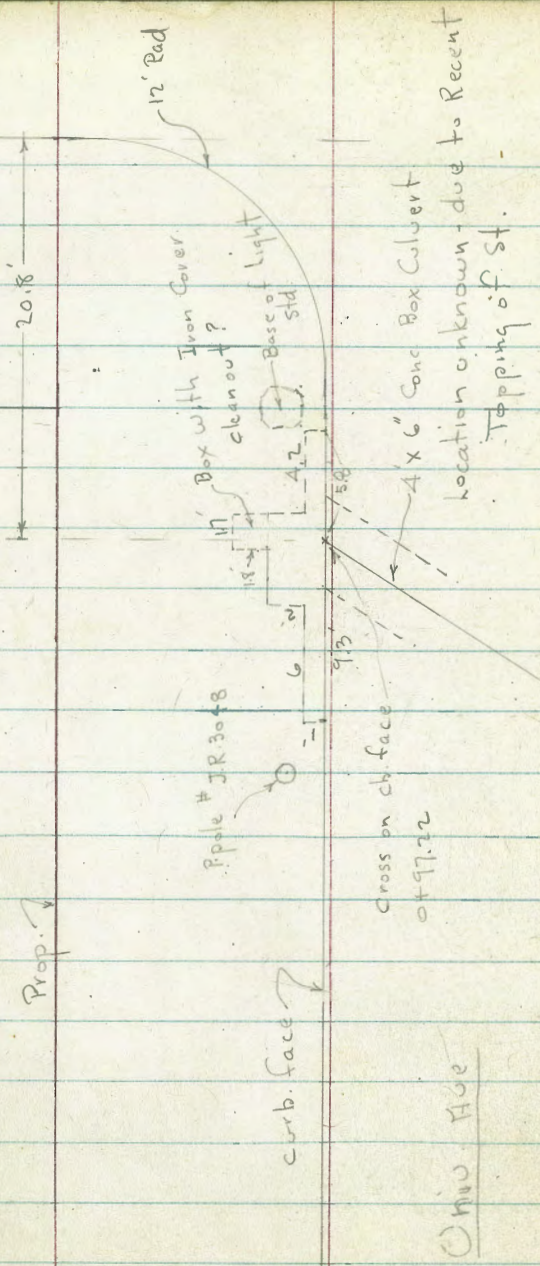
Detail of Inlets
at 31st - See P. 16

Grim St.

Dwight St.



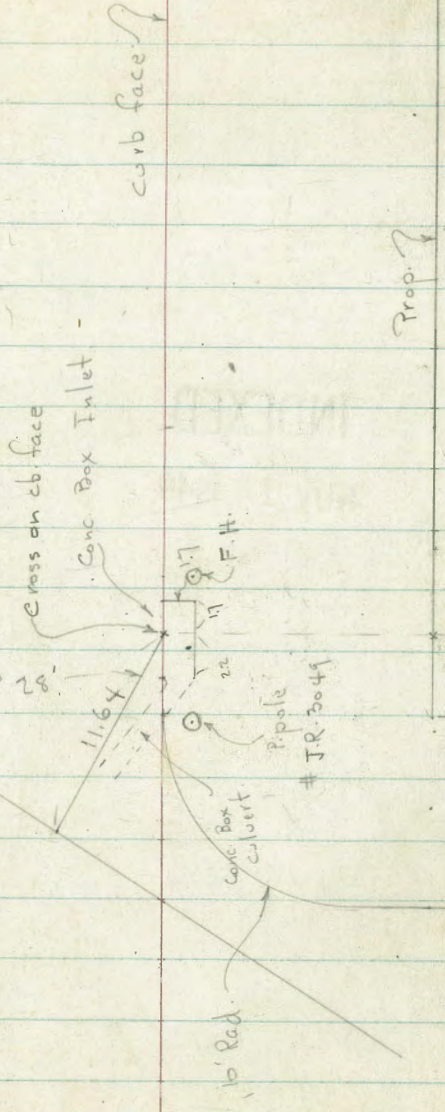
OHIO St.



OHIO Ave

Detail of Conn. to Existing Inlets - Ray & Univ. See P. 14

Prop. Draw



Scale = 1" = 10'

361.44

x
23

Beq. levels along \pm of Prop.

Drain - 30th + Univ. to South.

Sketch - P. 14 36144 = T

23.6 around - 4 parts. 5.9 apart.
Rods around N.W. Ret Univ + 30th

N.L. Univ.

20' w. of w.l. 30th

5.53 355.91 T = Top

6.3 355.13 9 - gut

6.21 355.23 5 = South 20' N.

w.l. 30th

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W.K.

NOV 10 1949

5.47 355.97 T

6.20 355.24 9

6.14 355.30 5

1/4

5.39 356.05 T

6.11 355.29 9

6.03 355.41 5

E = 0+00 - on Cross

5.35 356.09 T

6.10 355.34 9

5.90 355.54 5

N.L. Univ.

N.E. Ret 30th + Univ.

23.6 around - 4 - 5.9 each.

20' N. of N.L. Univ.

5.13 356.31 T

5.63 355.81 9

5.42 356.02 5

5.21 356.23 T

5.72 355.72 9

5.48 355.96 5

Set B.M. G.32 361.44 0.58 355.12 - S.E. 7' ct. - 30th + Univ.

4.06 355.70 351.64 = S.W. P. P. Wightman Ray

361.44 ✓

1/4	5.23	356.21	T
	5.74	355.70	9
	5.54	355.90	5
$\Phi = 0457.73 = \text{Cross}$	5.25	356.19	T
	5.75	355.69	9
	5.66	355.78	5
3/4	5.25	356.19	T
	5.80	355.64	9
	5.72	355.72	5
EL 30th	5.25	356.19	T
	5.99	355.55	9
	5.67	355.77	5
20 E	5.29	356.15	T
	5.93	355.51	9
	5.66	355.78	5

Reg. Regular Levels along \pm

Lt.

\pm

Rt. x

25

0+75

355.80
5.64
10

355.84
5.60

355.88
5.56
10

0+5773 = Cross = \pm Ret. - Ang. $67^{\circ}08'$ Rt

355.69
5.75
Top

356.19
5.25
put. X

0+50

355.93
5.51

+30

356.23
5.41

0+10

355.91
5.53

0+00

356.01
5.35
Top

355.34
6.10
put.

cross in cb.
0+00 = \pm of Ret. - N.W. 30th + Univ.

See sketch P. 14

361.44 = P. 23

Lt.

Rt

x 26

3 + 08.30 = P.C.

T.P. 4.99 359.65 6.78 354.66

3 + 00

2 + 50

2 + 00

1 + 50

1 + 23.73 = Ang 66° 49' Lt.

1 + 00

354.65
5.00

359.65 ✓

354.94
6.50
10

354.67
6.77

354.17
7.27
19
gut.

354.63
6.81
19
Top

354.86
6.58

355.22
6.22
10

355.06
6.38

354.48
6.96
19
gut.

354.99
6.47
19
Top

355.26
6.18

354.71
7.03
19
gut.

355.05
6.39
19
Top

355.50
5.94

355.92
5.52
10

355.83
5.61

355.74
5.70
10

361.44 ✓

359.65 - T

Box Line to N.W. Cor. Ohio + Ohio st.

0+00 = 3+66.32 - P. 14

0+34 = Nearest to S.E. Ret. -

± 5.11 354.54

2.2' Rt. = gut 5.13 354.52

2.2' Rt. = Top cb. 4.55 354.80

0+44.10 = Junction with Line to S.E. Ret

± 5.04 354.61

0+70 = ± 4.28 355.37

0+85 = Brk 4.48 355.17

Cont on opp. Page

N. + to W. - See sketch

Will take levels on Connecting Lines to

3+66.32 = ± Cleanout - Ang 48° 57' Rt.

3+40.29 = E.C.

3+24.3 = ± Curve

359.65 ✓

X

27

0+97.22 = Cross on cb face in Inlet - See P. 22

- gut = lip of Inlet. 5.14 354.51

Top of cb. = cross 4.37 355.28

will take outs both ways from above cross

2.4' E = Brk in Bottom of Box

Lip 5.13 354.52

Bottom 6.04 353.61

5.8' E = edge of opening

Top cb. 4.33 355.32

Lip 5.19 354.46

Bottom 5.49 354.16

Cont. on P. 28 5' out 4.80 354.85

Cont. on P. 29

5.03

naïl

5.27

5.11

359.65 ✓

359.65 = π

x

12' E around Ret.	- Top.	4.33	355.32
	gut.	5.06	354.59
	5' out	4.97	354.78

2.2' w. = Brk. in Bottom

Lip		5.14	354.51
Bottom		6.07	353.58

9.3' w. = edge of opening

Top		4.25	355.40
Lip = gut		5.13	354.52
Bottom		5.27	354.38
5' out		4.83	354.82

15' w. of

x

Top cb.		4.34	355.31
gut.		5.08	354.57
5' out		4.85	354.80

Flow line at N. edge of Box Under Iron Lid

Flow Line		5.57	354.08
Top		4.19	355.46

359.65

x

28

Beg. Short Conn. from 0444.10 to Small

Inlet on S.E. Cor.

8' E = Brk. in Pav		5.18	354.47
--------------------	--	------	--------

11.64 E = Cross on cb.

Top. cb.		4.95	354.70
----------	--	------	--------

Bottom of Box		6.38	353.27
---------------	--	------	--------

1' out from cb. - 90° = pave		6.02	353.63
------------------------------	--	------	--------

3' out		5.46	354.19
--------	--	------	--------

10' out		4.90	354.75
---------	--	------	--------

outs both ways from Cross

17' E = edge of Box

Top cb		4.94	354.71
--------	--	------	--------

gut.		6.16	353.49
------	--	------	--------

Bottom of box		6.32	353.33
---------------	--	------	--------

5' out		5.44	354.21
--------	--	------	--------

10' E along cb.	Top	4.89	354.77
-----------------	-----	------	--------

	gut	5.71	353.94
--	-----	------	--------

2.2' w. = edge of box

Top		4.95	354.70
-----	--	------	--------

gut = Top of Con. Culvert		5.17	354.48
---------------------------	--	------	--------

Bottom of Box		6.36	353.29
---------------	--	------	--------

359.65 = π

x

10' W. = Top	4.90	354.75
gut.	5.10	354.55

Levels for short line to S.W. Cor.

21.66 W. of 3+66.32 = Cross on cb. face

Top = Cross	4.76	354.89
gut.	5.50	354.15

10' W. around Ret - Top	5.00	354.65
gut.	5.63	354.02
5' out	5.46	354.19

20' W. Top	5.12	354.53
gut.	5.45	354.20
5' out	5.35	354.30

10' S. (from cross) Top	4.95	354.70
gut.	5.60	354.05
5' out	5.40	354.25

20' S Top	5.04	354.61
gut.	5.72	353.93
5' out	5.39	354.26

359.65 = π

x

29

Univ. + Ray

Set. B.M. - Disk - S.E. Cor.	4.72	354.93
S. 7' line + E.L.		

- Top + 499	#1	359.92 ✓
-------------	----	----------

Req Levels along Main \pm - will use different method to Make Rods ground Returns etc fit better.

359.92 = π

3+66.32 - See P. 27

3+98.8 - 16' Lt = \pm 185 x 185' Lid - 3' Back from cb.

\pm	5.34	354.58
-------	------	--------

16' Lt = gut	6.08	353.84
--------------	------	--------

" Top cb.	5.60	354.32
-----------	------	--------

Top of Lid	5.52	354.40
------------	------	--------

Elbow line of Box	6.96	352.96
-------------------	------	--------

see sketch - P 14

4+13.2 = opp. Ang. in E. edge of Box at Curb outlet

16' Lt = cb. - Top	5.71	354.21
--------------------	------	--------

gut = F.L. outlet	6.84	353.08
-------------------	------	--------

6' N. along cb = end of opening Top cb =	5.65	354.27
---	------	--------

gut = F.L. Outlet	6.72	353.20
-------------------	------	--------

359.92 ✓

87' S. = end of opening	- Top	5.76	354.16
	gut = F.L.	6.89	353.03
4+45.6 = opp. N. P.C. of Alley Ret.	= to show low gut.		
£		5.70	354.22
10' Lt.		6.36	353.56
16' Lt. = cb.	- gut	6.92	353.00
	Top	5.87	354.05
4+64.3 = S. P.C. Alley.			
£		5.86	354.06
10' Lt.		6.46	353.46
16' Lt.	- gut.	6.88	353.04
	Top cb.	6.24	353.68
5+00 = £		6.15	353.77
+50		6.43	353.49
6+00 = £		6.69	353.23
12' Rt.		6.86	353.06
10' Lt.		7.17	352.75
15.9' Lt.	gut.	7.70	352.27
	Top	7.03	352.89

359.92

X

30

22.5' Rad.

6+56.94 = P.C. = £		7.08	352.84
<small>P.M. - P.23</small>			
T.P. 6.34		8.28	351.64
6+60.05			
£		5.14	352.84
10' Lt.		5.47	352.51
15.6 Lt. (From Tang) = gut.		5.89	352.09
	Top = Cross	5.60	352.38
10' N. of Cross along cb.	- gut	5.88	352.10
	Top	5.48	352.50
20' N.	gut	5.86	352.12
	Top	5.42	352.56
2.4 S. = P.C. of Ret = S.L.	gut.	5.90	352.08
	Top	5.58	352.40
(from Cross)			
10' S. around Ret	gut.	5.96	352.02
	Top	5.49	352.49
	5' out	5.75	352.23
6+74.6 = £ Curve		5.37	352.61
6+92.26 = E.C.		5.77	352.21
6+96 = opp. P.C. Ret = £		5.86	352.12
6.9 Lt.	gut.	6.09	351.89
	Top	5.48	352.50

357.98 ✓

7+50 - ±	6.14	351.82
8+00	6.33	351.65
+50	6.55	351.83
9+00 - ±	6.84	351.19
C.T. Lt. = gut.	7.14	350.82
Top cb.	6.68	351.30
9+33.53 = P.C. (22.5 Rad)	7.24	350.72
9+51.18 = ± Curve	7.49	350.29
9+69.84 = E.C.	7.55	350.23
T.P. 5.60 355.67 ✓	7.91	350.07
9+91.34 = ± Cross line to Inlets		
±	5.55	350.12
6.9 Rt = gut.	5.81	349.86
Top	5.31	350.36
8.66 Rt = stub = 20' Rad-cb line	5.30	350.37
12' Lt.	5.30	350.37
22' Lt.	5.39	350.28
32' Lt. - gut.	5.90	349.77
Top	5.45	350.22
33.92 Lt. stub. - ± Cont. on P. 34	5.59	350.08

355.67 ✓

31

Rods - around - S.E. Ret. - Wightman + Grim

For Prop. 20' Rad. Returns.

Distances along Existing curbs -

20'S. of P.C. 20' Rad. - Top	5.87	349.80
gut.	6.42	349.25
P.C. 20' Rad. - S. end. Top	5.57	350.10
gut.	6.07	349.60
5' out	5.74	349.93
5.4' Rt. = Walk	5.54	350.13
10.8' Rt. = "	5.43	350.24
10' N. = P.C. 10' Rad. Top	5.41	350.26
gut.	5.86	349.81
5' out = Lt.	5.58	350.09
5.7 Rt. = Car. walk	5.36	350.31
11.0' Rt. = P.C. Back of Ret.	5.26	350.21
± of 10'+20' Rad. Curves - Top	5.36	350.31
gut.	5.77	349.90
5' out	5.60	350.07
4.5 in = Prop. cb. - 20' Rad.	5.32	350.35

Cont. on P. 33

Bench Levels for Entire Job

32

	4.83	356.47 ✓		351.64 ^{.67}	= Sw. B.P. Wight man & Ray
			4.87	351.60 ✓	- 351.63 = Book - S.E. Cor Ray & Wight man
T.P. = B.M.	0.69	351.24 ✓	5.92	350.55	= Sw. 7' ct. Wight man & Grim
	1.49	342.89 ✓	9.84	341.40	
B.M.			- 2.12	339.77 ✓	= Nail in Pole - Sw. Landis & Grim
T.P.	1.58	336.77 ✓	7.76	335.19	
			2.76	334.01 ✓	= Sw. 7' ct. - Dwight & Grim
T.P.	3.58	331.40 ✓	8.95	327.82	
B.M.			4.51	326.89 ✓	= Sw. 7' ct. - Myrtle & Grim
B.M.	2.81	328.36 ✓	5.85	325.55	Nail in Pole. Sw. Upas & Grim
	2.00	323.83 ✓	6.53	321.83	Nail in Pole - Sw. Thorn & Grim
			9.43	314.40 ✓	7' ct. - Alley - S. side
	4.43	317.14 ✓	11.12	312.71	
			5.58	311.56 ✓	P.O.T. Hub - 43 + 18.17
	0.32	306.34 ✓	11.12	306.02	
			2.93	302.41 ✓	Top Hyd. Sw 21 st + Redwood.

Cont from P. 31

355.67 ✓

S.E. Ret. Cont.

P.C. 10' Rad

10' W. of 20' Rad P.C. = Top 5.30 350.37

gut. 5.66 350.01

X
? 5' out 5.50 350.17

7' W. = E.L. Top 5.30 350.37

gut. 5.66 350.01

2.7' in = Cor. walk 5.28 350.39

8' in = P.C. Back of Ret 5.26 350.91

E. P.C. 20' Rad. Top 5.25 350.92

gut. 5.64 350.03

5' out 5.38 350.29

2.7' in = walk 5.15 350.52

8' in = " 5.22 350.45

20' E. of P.C. Top 5.05 350.62

gut. 5.44 350.23

355.67 ✓

33

S.W. Ret.

20' S. of 20' Rad. P.C. Top 5.83 349.82

gut. 6.31 349.36

20' Rad. P.C. Top 5.49 350.18

gut. 6.02 349.65

5' out 5.74 349.93

5.5' in = walk 5.33 350.32

10.8' in " 5.22 350.25

10' N. = 10' P.C. Top 5.25 350.92

gut. 5.76 349.91

5' out 5.59 350.08

5.7' in = Cor. walk 5.08 350.59

11' in = P.C. Back of Ret. 4.99 350.68

± of Ret. Top 5.26 350.91

gut. 5.66 350.01

5' out 5.56 350.11

4.5' in = 20' Rad. cb. 5.05 350.62

10' E. of 20' P.C. = 10' P.C. - Top 5.17 350.50

gut. 5.63 350.02

5' out 5.34 350.33

355.67 ✓

X

Cont. from P. 31

355.67 ✓

34

7' E. of 20' P.C. = W.L.	Top	5.16	350.51
	gut.	5.58	350.09
2.9' in = Walk		5.00	350.67
8.1' in = P.C. Back of Ret.		4.91	350.76
P.C. 20' Rad.	Top	5.14	350.53
	gut.	5.54	350.13
	5' out.	5.28	350.39
2.8 in = walk		4.95	350.72
8.1' in "		4.96	350.71
20' W. of 20' P.C.	Top	5.09	350.58
	gut.	5.44	350.23

± Levels Cont.

10+50 - ±		6.49	349.18	
11+00 - ±		7.31	348.36	
7.1' Rt. = gut.		7.72	347.95	
	Top	7.22	348.25	
10' Lt.		6.97	348.76	
11+50		8.16	347.51	
12+00		9.13	346.54	
12+50		9.93	345.74	
12+00		10.89	344.78	
6.9' Rt. = gut.		11.27	344.20	
	Top	10.72	344.95	
10' Lt.		10.60	345.07	
12+50		11.77	343.96	
14+00		12.63	343.04	
T.P. 172		345.12	12.27	343.40
14+50		2.93	342.19	
15+00		3.76	341.36	
15+50		4.62	340.50	

345.12 ✓

S.W. Ret. Cont.

343.84

35

				15.7' in = walk	Top	4.96	338.88
15 + 89.53 = N.L. Landis - E	5.30	339.82 ✓		11' in = "	gut	4.83	339.01
7 Rt = gut	5.62	339.50		10 N. = P.C. 10' Rad.	Top	4.90	338.92
	Top	5.18	339.92		gut	5.34	338.50
10' Lt.	5.08	339.02		5.7' in = walk		4.80	339.02
16 + 25' E	5.94	339.18		13 in = Cor. Ret.		4.63	339.21
16 + 52.11 = E Cross Lines to Inlets				5' out		5.09	338.75
	6.34	338.78		E of Ret.	Top	4.94	338.90
7.17' Rt = gut	6.68	338.22			gut	5.20	338.69
	Top = Cross on cb.	6.19	338.93	5' out		5.03	338.81
12' Lt.	6.10	339.02		4.5' in = Prop. 20' Rad.		4.87	338.92
31.78' Lt. = gut	6.81	338.31		10' E. of 20' P.C. = 10' Rad. P.C.	Top	4.91	338.93
S.W. Nail in Pole	Top = Cross on cb.	6.18	338.92		gut	5.20	338.62
T.P. 4.08	343.84 ✓	5.36	339.76 - (77) R.32	5' out		5.00	338.82
Cont. on P. 37				7' E. = w.l.	Top	4.94	338.90
Rods around Returns at Landis					gut	5.25	338.59
S.W. Ret.				2.7' in = walk		4.90	338.92
20' S. of P.C. of 20' Rad.	Top	5.17	338.62	8' in = "		4.64	339.16
	gut	5.76	338.09	57' E - 1.6 in - E Pole # 3067			
				20' Rad. P.C.	Top	4.49	338.95
20' P.C.	Top	5.02	338.82		gut	5.21	338.63
86' U. - 1.5 in = E W.M.	gut	5.54	338.30		5' out	4.99	338.85

		343.84 ✓	
S.W. Ret. Cont.			
2.7 in =	walk	4.92	338.92
8' in	"	4.72	339.12
20' W. of P.C.	T	4.76	339.08
	g.	5.07	338.77
S.E. Return - Landis.			
20' S. of 20' P.C.	T	5.18	338.66
	g.	5.71	338.13
20' Prop. P.C.	T	5.01	338.83
	g.	5.62	338.22
	5' out	5.21	338.63
5.3 in = walk		4.70	339.12
10.7 in = "		4.62	339.22
10' N. = 10' P.C.	T	4.83	339.01
	g.	5.51	338.33
	5' out	5.11	338.73
5.5 in = walk		4.67	339.17
10.8 in = "		4.56	339.28
13' in = Cor. Ret.		4.59	339.25
± Ret.	T	4.79	339.05
	g.	5.27	338.57

		343.84		36
		5' out	5.18	338.66
4.5' in = 20' cb		4.73	339.11	
10' W. of 20' P.C. = 10' P.C.	T	4.82	339.02	
	g.	5.14	338.70	
	5' out	4.89	338.95	
7' W. = E.L.	T	4.82	339.02	
	g.	5.08	338.76	
2.7' in = walk		4.66	339.18	
8' in = "		4.57	339.27	
20' P.C.	T	4.85	338.99	
	g.	5.21	338.63	
	5' out	4.84	339.00	
2.7 in = walk		4.63	339.21	
8' in = "		4.55	339.29	
20' E. of 20' P.C.	T	4.76	339.08	
	g.	5.01	338.83	

Cont from P. 35

343.84

339.40

37

Req. Levels along #

10' Lt.

5.05 337.35

17+00

5.56 338.28

22+80

5.45 333.95

+50

5.96 337.88

7' Rt. = gut.

5.65 333.75

18+00

6.39 337.89

23+12.47 = Cross Pipe

5.64 333.76

+50

6.78 337.06

6.96 - Rt = gut

5.99 333.21

19+00

7.06 336.78

cross = Top

5.49 333.91

+50

7.46 336.38

12' Lt. = # st.

5.49 333.91

20+00 - #

7.85 335.99

31.82' Lt. = gut

6.21 333.19

7.1 Rt. = gut

8.15 335.69

cross = Top

5.67 333.73

Top

7.68 336.16

10' Lt.

7.61 336.23

check B.M. - S.W. 7' ct.

5.40 334.00 ✓

20+50

8.32 335.54

Cont on P. 39

21+00

8.69 335.15

S.W. Ret. Dwight

T.P. 427

339.40

8.71 335.13

20' S. of 20' P.C.

T 5.79 333.61

21+50

4.62 339.78

20' P.C.

T 5.56 333.82

22+00

4.95 339.25

g 6.11 333.29

+50 - #

5.22 339.18

5' aut

5.80 333.60

7' Rt. = PC Ret. - gut

5.64 333.76

5.7 in = walk

5.50 333.90

Top

5.09 339.51

11 in = "

5.39 332.01

Sw. Ret. Cont.

339.40

5' N. of 20' P.C. - 3.2 in = \pm of 3" Palm			
10' N. = 10' P.C.	T	5.49	333.91
	q	5.96	333.92
5' out		5.70	333.70
5.7' in = walk		5.31	332.09
13 in = Cor. Ret.		5.20	332.20
\pm Ret.	T	5.52	333.88
	q	5.83	333.57
5' out		5.87	333.53
4.2' in = 20' cb.		5.32	332.08
10' E = 10' P.C.	T	5.43	333.97
	q	5.69	333.71
5' out		5.62	333.78
7' E = W.L.	T	5.37	332.03
	q	5.70	333.70
2.5' in = walk		5.29	332.11
5.5' E. - 1.3 ^{7.5} in = \pm Tel pole #D29636T		5.24	332.16
20' P.C.	T	5.43	333.97
	q	5.87	333.53
5' out		5.69	333.71

339.40

38

2.5' in = walk		5.27	332.13
7.5' in "		5.24	332.16
20' W of 20' P.C.	T	5.58	333.82
	q	6.04	333.36
S.E. Ret. Dwight			
20' S. of 20' P.C.	T	6.05	333.35
	q	6.51	332.89
20' P.C.	T	5.75	333.65
6 N. 34 in = \pm 10" Acacia	q	6.30	333.10
5' out		6.03	333.37
5.7' in = walk		5.66	333.74
11 " "		5.51	333.89
10' N. = 10' P.C.	T	5.66	333.74
	q	6.15	333.25
5' out		5.88	333.52
5.7' in = walk		5.54	333.80
13 in "		5.40	332.00
\pm Ret.	T	5.70	333.70
	q	6.00	333.40
5' out		5.98	333.42
4.2' in = 20' cb.		5.60	333.86

S.E. Ret. Cont

339.40 ✓

10' W. of 20' P.C. = 10' P.C.

T

5.69 333.71

9

6.04 333.36

5' out

5.86 333.52

7' W. = E.L.

T

5.68 333.72

9

5.99 333.21

2.5' in = walk

5.56 333.82

7.5 " "

5.48 333.92

20' P.C.

T

5.76 333.62

9

6.11 333.29

5' out

5.89 333.51

2.5' in = walk

5.62 333.78

7.5 " " "

5.49 333.91

20' F

T

5.86 333.52

9

6.24 333.16

Cont. from P. 37

339.40 ✓

39

E Levels.

23+50 - #

6.03 333.37

24+00

6.62 332.78

+50

7.15 332.25

25+00

7.74 331.66

+50

8.36 331.08

26+00 - #

8.91 330.29

7' Rt. = out.

9.29 330.11

Top

9.73 330.67

10' Lt.

8.66 330.72

26+50

9.50 329.90

27+00

10.00 329.20

T.P. 2.73 331.85 ✓

10.25 329.15

27+50

3.13 328.75

28+00

3.71 328.17

+50

4.31 327.57

29+00

4.90 326.98

7' Rt. = out

5.25 326.63

Top

4.76 327.12

331.88 ✓

10' Lt.		4.70	327.18
check B.M. - S.W. 7' ct.	Myrtle	5.00	326.88
29+40 = E		5.16	326.72
7' Rt. - Cross gut.		5.37	326.51
29+72.70 = ± Cross Pipe		5.22	326.66
7.03 Rt. - gut.		5.63	326.25
= Cross = Top		5.06	326.82
12' Lt. = E		5.08	326.80
3195' Lt. = gut.		5.94	325.92
3195' Lt. = Cross = Top		5.51	326.37

Cont on P. 42

S.W. Ret. Myrtle

20's of 20' P.C.	T	5.24	326.62
	g	5.84	326.02
20' P.C.	T	5.11	326.77
	g	5.65	326.23
	5' out	5.39	326.29
5.5' in = walk		5.04	326.82
10.5' in = "		5.01	326.87

S.W. Ret. Cont.

331.88 ✓

40

10' N. = 10' P.C.	T	5.06	326.82
3 m = ± 10' Palm	g	5.61	326.27
	5' out	5.32	326.56
5.5' in = walk		4.97	326.91
10.5' in = "		4.91	326.97
around Ret. (see sketch)			
12.4' N. = walk at cb.		5.07	326.81
± Ret.	T	5.06	326.82
	g	5.50	326.38
	5' out	5.46	326.22
4.2' in = 20' cb.		4.98	326.90
10' E. of 20' P.C. = 10' P.C.	T	5.05	326.83
	g	5.50	326.38
	5' out	5.31	326.57
7' E. = w.l. walk	T	5.05	326.83
	g	5.45	326.23
2.5' in = walk		4.96	326.92
7.5' in = "		4.91	326.97

s.w. Ret. Cont.

331.88

5' E. of 20' P.C.	- 1.7 in = ϕ P. pole	326.5	
20' P.C.	1.3 in = ϕ 4x4 Conc. Mail box Post.		
	T	5.01	326.87
	q	5.37	326.51
	5' out	5.22	326.66
	2.5	4.96	326.92
	7.5	4.96	326.92
20' W. of 20' P.C.	T	4.77	327.11
	q	5.12	326.76
S.E. Ret.			
20' S. of 20' P.C.	T	5.66	326.22
	q	6.26	325.62
20' P.C.	T	5.53	326.35
	q	6.04	325.82
	5' out	5.71	326.17
5.5' in = walk		5.41	326.87
10' 5' in "		5.38	326.50
10' N. = 10' P.C.	T	5.49	326.39
	q	5.93	325.95

SE. Ret. Cont.

331.88

41

5' out	5.61	326.27
5.5 in = walk	5.43	326.25
10.5 in = "	5.32	326.56
13' N. of 20' P.C. = walk at cb.	5.53	326.35
ϕ Ret.	T	5.58
	q	5.88
5' out	5.64	326.28
4.2 in = ϕ 20' cb.	5.44	326.82
10' W. of 20' P.C. = 10' P.C.	T	5.50
	q	5.89
5' out	5.72	326.16
9.5' W. = walk at cb.	5.49	326.39
7' W. = F.L.	T	5.50
	q	5.85
2.5 in = walk	5.40	326.88
7.5 in "	5.29	326.59
20' P.C.	T	5.49
	q	5.90
5' out	5.72	326.16
2.5 in	5.44	326.44
7.5 in	5.32	326.58

S.E. Ref. Cont

20' E. of 20' PC.	T	553	326.35
	g	582	326.06
cont from P. 40			
497	330.95	✓	B.M. 3477 Jack D. Myrtle + Grim ✓ 326.88
30+00	445		326.50
7' RT Gut.	491		326.09
" " Top cb.	481		326.69
12.5' Lt.	431		326.69
30+50 cb is 6.7' RT of this st.	470		326.25
31+00	501		325.90
31+50	527		325.68
32+00	556		325.39
6.5' R Gut. Note: Dist to cb	595		325.00
6.5' R cb.	531		325.69
12.5' Lt.	537		325.56
32+50	590		325.05
32+64.74 = opp B.C. 6' R Ret. Note: Dist. to cb	600		324.95
6.3' RT on Gut.	627		324.68
6.3' " " " cb	577		325.18
12.5' Lt. - L. Grim	585		325.10

330.95

42

32+70.74 = N cb line Upus st.	602		324.93
6.2' RT Gut.	632		324.63
12.7' RT Gut at B.C.	621		324.74
12.6' RT on cb " E.C.	579		325.16
32+94.24 = S cb line Upus int. cb lines	629		324.66
6.25' RT Gut.	651		324.44
12.25' "	648		324.47
" cb.	614		324.81
32.25' RT Gut	626		324.69
" " cb.	590		325.05
12.5' Lt.	610		324.85
32.75' Lt. = Gut. int. cb lines	685		324.10
38.75' " Gut B.C. cb	674		324.01
" " cb. " "	654		324.41
58.75' Lt. Gut.	666		324.29
" " cb. ↓	628		324.67
475 TR on B.M. Grim + Upus P-30	542	330.30 = corrected	325.55-B.M. 325.53
33+00.04 = S.L. Upus	564		324.66
12.5' Lt.	546		324.84
32.7' Lt. Gut	631		323.99

330.30 ✓

33+00.04 Cont.

32.78 Lt. on cb	591	329.39
38.2 " " Walk	575	329.55
43.2 " " "	572	329.58
58.2 " " "	553	329.77
5.3 Rt. Gut.	602	329.28
" " cb.	548	329.82
12 Rt on E edge Walk	540	329.90
17.4 Rt " W " "	520	325.10
32.0 Rt. " Walk	504	325.26
33+09.04	573	329.57
6.32 Rt Gut.	614	329.16
" " cb.	550	329.80

33+01.7 8.2 Rt. 16" Elec. Pk #3398

33+09.64 Cont.

12.5 Lt	554	329.76
32.8 Lt Gut	639	323.91
" " cb.	594	329.36
33+19.04	581	329.99
6.4 Rt Gut.	614	329.16
" " cb	555	329.75

330.30 ✓

33+19.04 Cont.

43

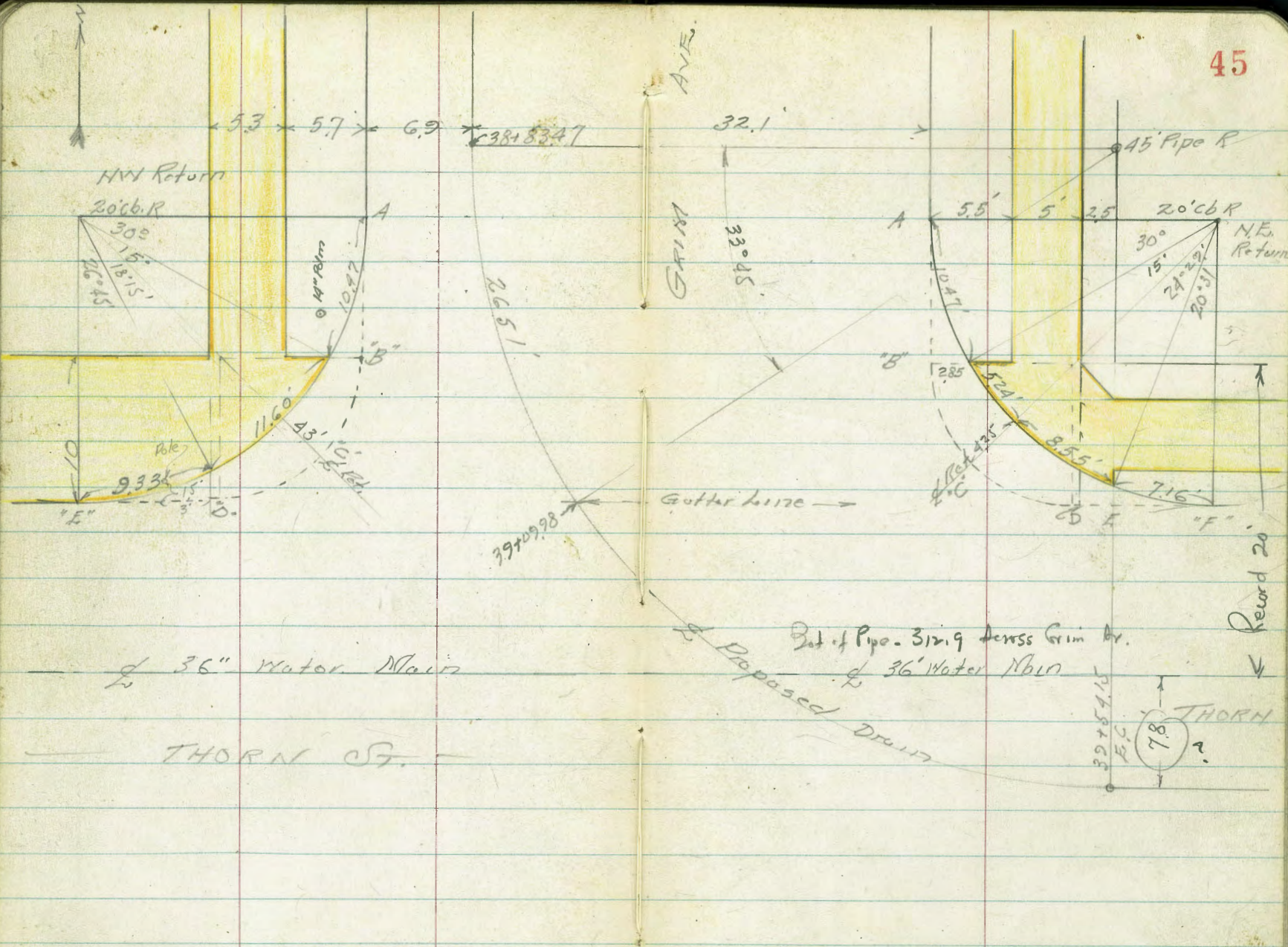
12.2 Rt. Walk	558	329.72
17.4 Rt. Walk.	537	329.93
12.5 Lt.	557	329.73
32.8 Lt. Gut.	648	323.82
" " cb.	601	329.29
38.3 Lt Walk.	589	329.91
" " Walk	578	329.52
33+50	594	329.36
6.3 Rt. Gut.	628	329.02
" " cb.	574	329.56
12.5 Lt.	576	329.52
32.7 Lt. Gut.	666	323.62
" " cb	615	329.15
34+00	624	329.06
34+50	654	323.66
35+00	676	323.52
+50	700	323.30
36+00	726	323.62
6.55 Rt. Gut.	755	322.75
" Rt. cb.	688	323.92
12.5 Lt.	707	323.23

330.30 ✓

326.06 ✓

44

TP 359	326.43	746	322.84	38+68.47-20' North of A-P45	438	321.68
36+50		365	322.78	6.9' Rt. Gut.	463	321.93
37+00		383	322.60	" " cb.	411	321.95
37+50		400	322.43	12.6' Rt. Walk	398	322.08
38+00		432	322.11	181 " "	387	322.19
6.9' Rt. Gut.		455	321.88	12.5' Lt.	427	321.79
" " cb.		388	322.55	32' Lt. Gut.	507	320.99
12.5' Lt.		409	322.39	" " cb.	458	321.88
38+50		462	321.81	37.5 " Walk	443	321.63
6.9' Rt. Gut.		488	321.55	42.5 " "	494	321.72
" " cb.		434	322.09	38+88.47	455	321.51
12.6' Rt. Walk		427	322.16	7' Rt. Gut.	479	321.27
" " "		413	322.30	" " cb.	413	321.93
12.5' Lt.		451	321.92	12.7' Rt. Walk	406	322.00
32.1' Lt. Gut.		527	321.16	18.0 " "	391	322.15
" " cb.		485	321.58	12.5' Lt.	441	321.65
37.6 " Walk.		470	321.73	32' Lt.	515	320.91
42.6 " "		453	321.90	" " cb.	468	321.38
B.M. Nail S.W. Pole Gum + Thorn			P-32			
TP 423	326.06	460	321.83	37.5 " Walk	459	321.47
				42.5 " "	443	321.63
				Cont. P-46		



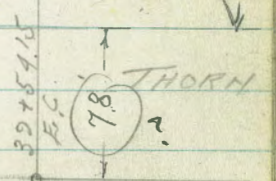
36" Water Main

Bot of Pipe - 312.9 across Grain Av.

Proposed Drain

Retard 20'

THORN ST.



326.06

NE. Return

"B" 5' E on Pav.	470	321.36
"B" on Gut	481	321.25
" " cb.	421	321.85
2.8 West on Walk	415	321.91
5.7 " " "	411	321.95
11.0 " " "	393	322.13
"C" 5' S.E. on Pav.	476	321.30
"C" on Gut	472	321.39
"C" on cb.	422	321.89
4.3 NW. on Walk	412	321.92
"D" 5' South	466	321.90
"D" on Gut	479	321.27
" " cb.	419	321.87
2.45' N on Walk	415	321.91
"E" on Gut	490	321.16
"E" " cb.	438	321.78
20' West of "E" Gut.	510	320.96
" " " " cb	445	321.61
" " " " 5' South of cb	484	321.22
NE. Return		
"B" 5' West	498	321.08
"B" Gut.	518	320.88
"B" cb	474	321.32
2.85' E on Walk	465	321.91

NE. Return

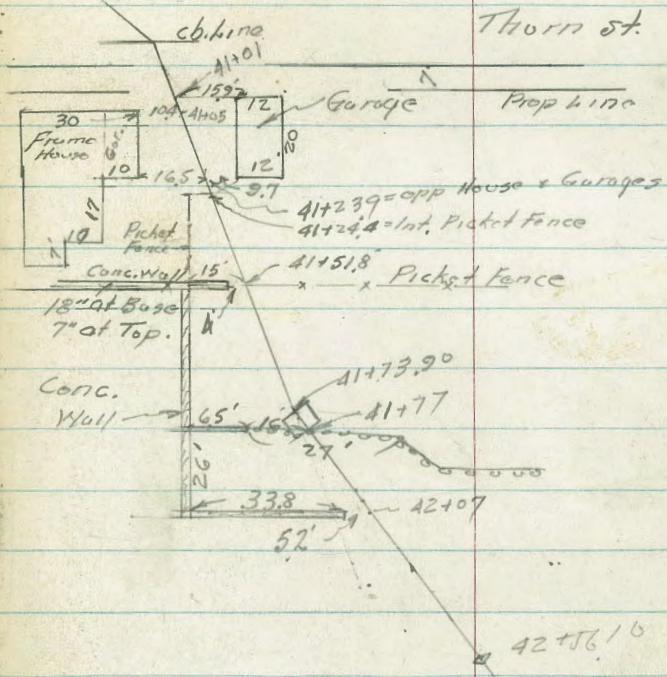
Cont. 326.06'

46

"B"		
5.6 East. on Walk	460	321.96
10.5 " " "	445	321.61
"C" 5' SW Pav.	512	320.99
"C" on Gut.	517	320.89
" " cb.	480	321.26
4.25' NE. on Walk.	461	321.95
"D" 5' South.	520	320.86
"D" Gut.	533	320.73
" " cb.	473	321.33
"D"		
2.6 N on Walk	463	321.93
"E" 5' South	530	320.76
"E" on Gut	542	320.69
" " Walk	478	321.28
2.5' N "	459	321.97
7.5' N "	442	321.69
38+8347-BC.H	451	321.55
39+0998	480	321.26
39+32	484	321.22
39+5415=E.C.	503	321.09
40+00	740	318.66
40+1328=B.C.	979	316.27
+7862=E.C.	1206	319.00
+8544=1/4th West edge grading = 0.5' S of NW Cor.	1277	313.29

326.06 ✓

40+88.29	- Δ Rt 27°08'	Gut. on Grating	12.88	313.18
40+88.29	on cb.		11.85	312.21
40+88.29	Inlet	" Floor of Box	21.56	309.50 ✓
40+91.97	on Cross R-18			
TP	0.49		314.78	11.77
40+96.2	S. edge	Wall	0.40	312.38
41+01			1.1	313.7
10' Lt.			10.2	315.0
10' Rt.			0.2	312.6
41+16			4.3	310.5
10' Lt			2.8	312.0
10' Rt			4.7	310.1
41+24			5.5	309.3
5.6' Lt		30" Euc Stump		
10' Lt			4.8	310.0
10' Rt			5.9	308.9
41+31		3.5' Lt = 3" Orange Tree		
41+49		8' Lt = 6" Fig Tree		
41+51.8			7.0	307.8
10' Lt			7.2	307.5
4' Rt		Ground at Base of Wall	6.9	307.9
4' Rt		" on wall	11.9	313.59



314.78 ✓

41+72.20	Δ 15.55' Lt. on Grating	Inlet 7.43	307.35
41+74.5	on Floor Box	Inlet 14.07	300.71
TR	8.84	316.19 ✓ 7.43	307.35

41+60 = 2" Avocado 06 Lt

473 123' Lt 2" Avocado 8.9 307.3

41+77 = Toe Cobble Wall 8.9 307.3

" Top Wall 5.6 310.6
42+56.10 P-18 on stub.TR 2.74 313.45 ✓
313.48 - P-53
0.03Thorn & Grinn
Additional Elev. H.E. Returns

326.06 T P 46

("F" sketch P. 95)	5' South	5.66	320.90
"F" Gut.		5.77	320.29
"F" Top cb		5.11	320.95
2.5' N = S edge walk		4.99	321.07
"F" 7.5' N N "	"	4.90	321.26

Walker
 M&C of. Location Proposed Drain
 Pope
 Crawford 11-2-49 Block 7 - FRARY HEIGHTS
 1+62.16 = ART 12°49'45"

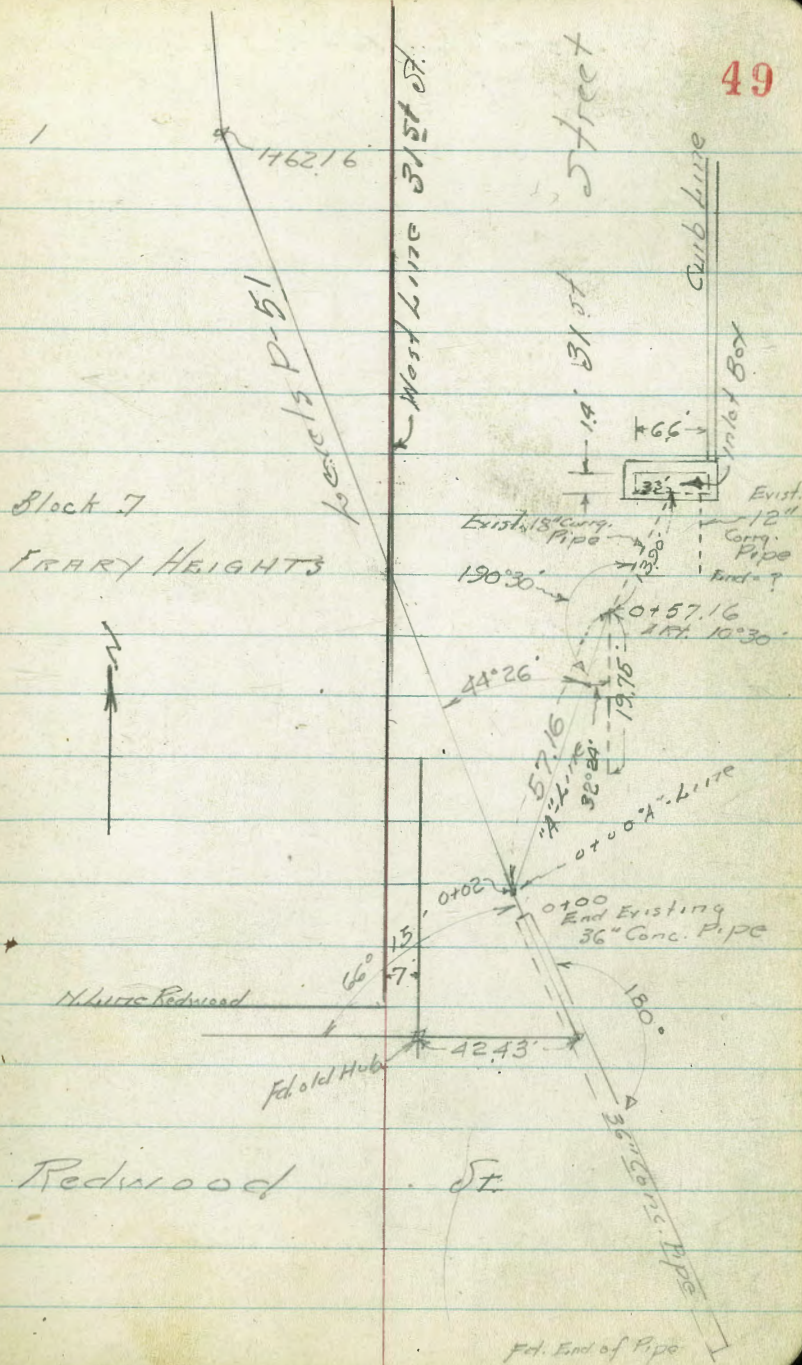
1+38.11 = P.O.T. - 45+31.50 P-19

INDEXED
 N.K.
 NOV 10 1949

0+02.0 ART 2°49'18"

Fd.

0+00 = End Existing Pipe 36" Dia.

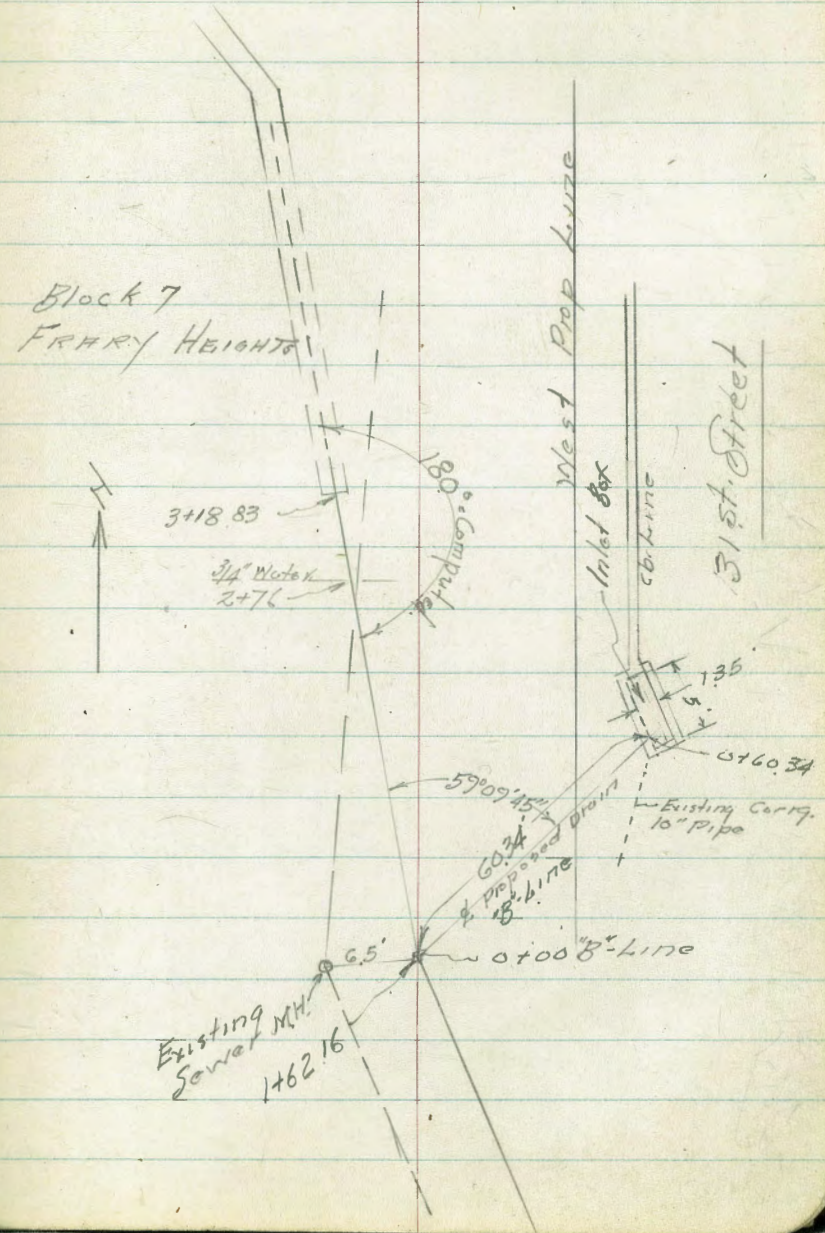


Wet
M&C
P.O.
C.P.

Proposed Culvert - Location
Block 7 - Frery Heights

3+18.83 = P.O.T. = End Existing 36" Pipe
Fd.

1+62.16 Δ Rt 12°49'45"



Walker Levels Proposed Drain
 McCof Block 7 - Frory Heights
 Crawford Location on P-49-50
 Pope #449

Lt. & # 51

0+50

288.7 281.7 284.7 279.6 279.9 282.6
 1.0 4.0 1.0 6.1 5.8 3.1
 10 on slope 10 on slope 52 West edge Ditch 4 Ditch 8 in ditch 10 on slope
 10 in Fill

0+33

286.0 281.8 278.3 277.1 277.3 280.1
 10.3 3.9 7.4 8.6 8.4 5.6
 10 Side Hill 3 Side Hill 3 Side Hill 3 Side Hill 10 in Fill
 Side Hill Fill Side Hill Fill Side Hill Fill Edge Ditch Edge Ditch on slope

0+21

283.3 278.3 278.3 275.4 275.9 280.2
 2.4 7.4 9.4 10.3 9.8 5.5
 10 in Fill 2 Side Hill 3 West edge Ditch 3 Edge Ditch 5 Edge Ditch 10 in Fill

0+10 - End Rubble Wall

282.1 278.4 274.7 274.0 274.1 277.4 279.6
 3.6 7.3 11.0 11.7 11.6 8.3 5.1
 10 Side Hill Fill 4 Top Wall 2 Toe Wall 3 Toe Wall 5 Top Wall 10 Side Hill Fill

0+02 = A.P. 2°49'15"

1267 on Hub. 273.02

0+00 = N.E. end Existing Pipe

281.5 279.6 273.4 272.77 273.3 278.5 279.5
 4.1 6.1 12.3 12.92 12.4 7.2 6.2
 10 Side Hill Fill 4 Top Rubble Wall 1.6 Toe Rubble Wall 2 Flow Line 2 Toe Rubble Wall 2.5 Top Wall 10 Side Hill Fill

T.P. 4.58 285.69 120.4 281.11
 T.P. 1.13 293.15 126.8 292.02
 2.29 304.70 302.41

P-32
 B.M. Top Fire Hydt. 514 Redwood 251st

Levels - Proposed Drains
Block 7 - Fraty Hts.

on Hub 1462.16

TP 11.19 226.10 528 284.91

1+98 4.8' Lt. = E. edge 36" Euc. Tree

1+87 5.6 Lt. = E. edge 16" Euc. Tree

1+62.16 Δ Rt. 1209.45'

1+38.11 = POT.

1+13

TP 6.12 290.19 162 284.07

1+00

0+73

285.69

Lt.

Rt.

Rt.

52

285.9 287.17 277.79 285.2 284.91 285.0 287.6
4.3 302.1240 5.0 528 52 26
10 6.5 65 5 on Hub 3 10
Kim Flow of Mt. 2 Ditch
S. Mt. Line

296.4 284.7 284.5 286.95 290.4
3.8 5.5 5.7 4.14 +0.2
10 8 4 on Hub 10
Not. 14 Ditch E Ditch in Ditch Not.
Ground Ground

1.6 285.6 6.2 284.0 6.6 283.6 6.2 284.0 4.6 285.6 2.0 287.2
10 6 5 Ditch E Ditch in Ditch 4 in Fill 10 Not.
Ground

290.19

288.5 283.09 283.6 285.7 286.5
+2.8 2.6 2.1 0.0 +0.8
10 5 E. edge 2 10
in Fill West edge Ditch Ditch in Fill

288.5 284.8 281.9 280.9 281.1 283.6 283.9
+2.8 0.9 3.8 4.8 4.6 2.1 1.8
10 5 3 2 2 6 10
on Slope on Slope W. edge Ditch in Fill in Fill
in Fill in Fill Ditch Ditch

285.69 ↓

Proposed Drains
Block 7 - Frary Hts.

Lt.

R

Ft.

53

opposite
4714.1 = 42 + 56.10 P48
P48 = $\frac{003}{31345}$
462 31348 ✓

313.48 ✓

462

3750 = Top Slope ↓

TP 1090 318.10 117 307.20

TP 1261 308.37 0.34 295.76

310.9

311.3

311.7 ✓

72
10

68
10
in Fill

69
10
in Fill

318.10 |

3418.83 = Seg. Existing 36" Conc. Pipe

1.6
10
294.5 ✓

2.9
6
293.7 ✓

57
3
290.4 ✓

735
Fly Lime 2
288.75

58
2
290.3

2.0
10
294.1 ✓

3400

4.4
10
291.7

58
5
290.3

61
2
Ditch
290.0

59
6
290.2

39
10
292.2 ✓

2450

69
10
289.7 ✓

93
7
10 Ditch
288.8

99
4
10 Ditch
288.4 ✓

88
10
289.3

36
10
in Fill
292.5

2400

7.7
10
288.4

10.3
8
288.8

10.6
4
285.5

10.3
4
285.8

96
6
286.5

91
10
287.0

296.10

296.10

Walker
Hardin
Pope
K-Sission

Cross Section - THORN ST.

from Grim to 31st.

11-6-49 Purpose = Drainage ^{study} Grim St. storm drain

1721.7 = West end cb. Inlet on South

95

INDEXED

W.K.

NOV 10 1949

172.2 N

1718.75 = West end gratung on N

1707.5 = West end cb. Inlet on N

1700

0750

0741 216 Lt. = Tel Pole # D-3511-T

0700 = E. Line GRIM

116 32299

32183

Lt.

R

17.

54

31505	31483	31409	30784	31420	31443	31447	31441	31450	31444	31441	31450	31445
794	816	890	1515	879	856	852	888	842	857	858	849	85
275	20	20	75	175	10	10	20	20	20	225	275	30
	cb	Grob	Floyd	Conc.			cb	cb	cb	Walk	Walk	

31497	31396	31406	31430	31464
802	903	893	869	837
20	20	175	16	0
cb.	Gut.	Sodgc	Conc. Box	
	Gratung			

31516	31497	31523	31554	31465	31620	31528	31498	31457	31522	31533	31548	3155
74	712	726	745	834	779	777	801	847	777	766	751	75
30	275	225	20	20	10	10	20	20	20	225	275	30
		cb	Gut									

3159	3163	31617	31604	31642	31661	31684	31671	31482	31565	31576	31586	3159
71	662	682	628	757	738	717	758	817	734	723	712	710
30	275	225	20	20	10	10	20	20	20	225	275	30
	Walk	Walk	cb	Gut			Gut	cb.	Walk	Walk	Walk	Walk

3197	31911	31889	31878	31810	31841	31841	31805	31744	31824	31834	31851	3187
78	787	410	421	482	458	458	494	555	475	465	448	43
30	275	225	20	20	10	10	10	20	20	225	275	30
	Walk	Walk	cb.	Gut.			Gut.	cb.	Walk	Walk		

3219	32163	32107	32129	32164	32191	32104	32170	32119	32183	32196	32104	3211
11	136	152	170	225	208	195	229	280	216	203	128	18
30	275	225	20	20	10	10	20	20	20	225	275	30
	Walk	Walk	cb	Gut.			Gut.	cb.	Walk	Walk		

BM SW. Nail in Pole Grim & Thorn P. 32

Thorn St. Cross Sections

Lt.

R

Rt.

55

1432.6 E Pole Etc 218' Rt # 10-3075

1+27.65 = 25' x 35' Grating South Side Thorn

West edge Conc. Box on N
1+25.9 = West edge Grating on South

1+25.9 = West edge Grating on South

1+25.3 Cont

1+25.3 = 14' W. Alley

1+25.3

TP 6.17 320.36 8.80 314.19

1+23.0 = End cb inlet on N

322.99

313.31 304.57
705 18.79
175' Flowline
Grating 20' Rt
313.14 313.56 313.30 312.20 314.22
657 6.80 7.06 7.16 6.14
14 16 17.5 20 20
N edge Box S edge Box
S edge Box
Conc. Box

814 7.16 7.06 6.80 6.57
20 20 17.5 16 14
cb Gut Node
Conc. Box

314.38
598
10

314.26
6.10
30

315.33 315.26 314.67 314.91 314.19 314.59 314.39 314.01 313.25 314.24 314.84
503 530 569 545 617 597 597 625 711 612 602
130 80 30 30 20 20 0 10 20 20 27.5
Conc. Box Conc. Box Conc. Box cb Gut on cb Gut cb

320.361

314.73 314.03 314.27 307.89 314.42
826 886 872 15.10 857
20 20 17.5 18
cb Gut Edge Flow
Conc. Box

322.99

Thorn St. Cross Sections

1+16.5 Garage on Rt. Conc. Floor
Station OK

TP 819 322.75 580 814.56

1+42 = East end Inlet on RT
cb

1+40.3 Cont.

1+40.3 = E. Line Alley on North

1+32.8 = E. Alley on North
4.2 ft.

1+32.2 = S. Sewer MH on Rim 580 314.56

1+30.9 Cont.

1+30.9

320.36

St.

2

RT.

315.30

56

7.45

36.2

320.36 ✓

315.05 314.70 313.87 314.64 314.80
531 566 649 572 556
10 20 20 27.5
Cut Cb Walk

315.56 315.30 315.06 315.54
480 506 530 482
130 80 30 30
Conc. Pav. Conc. Pav. Cut Curb

314.98 315.24 314.57 315.08 314.41 314.56 314.18 315.70 314.53 314.71 314.8
538 512 579 528 545 580 618 666 583 565 588
25 20 20 10 10 16 20 20 27.5 30
Conc. Pav. Cb Pav. Cut Cb Walk

315.19 314.93 314.65
517 543 671
130 80 30
Conc. Pav. Conc. Pav. Conc. Pav.

314.65 313.27 314.24 314.40 313.9
571 714 612 596 65
30 20 20 27.5 30
Conc. Pav. Cut Cb

314.56 314.20 314.24 314.49 313.97 314.16 313.92 313.42 313.31
580 616 610 587 583 620 644 674 705
25 20 17.5 10 10 14 16 17.5
Conc. Pav.

320.36 ✓

Thorn St. Cross Sections

Lt.

R

FF

57

2+50 Cont

318.6
41
30

318.6
414
275

318.12
463
275
Walk

318.2
45
30

2+50

318.48
427
225
Walk

318.40
435
20
Cb

317.73
502
20

318.17
458
10

318.25
450

317.95
480
10

317.32
537
20

317.93
482
20
Cb

318.01
474
225
Walk

2+00 Cont

316.63
612
275

316.6
51
30

2+00

1+97 2.5' H Tel Pole 0-35127

317.4
54
30

317.9
58

317.07
58

316.98
577
20
Cb

316.31
644
20
Cut

316.44
609
10

316.75
600

316.43
632
10

315.82
693
20

316.45
626
20

316.57
618
225

T.P. #B.M. 386
31st Thorn 322.75 3.86

Round = 318.98
318.89

322.75

1+72.5 = Garage on Rt. Conc. Floor
New Usual
as House

316.4
63
30
Walk

316.38
637
275
Walk

316.29
646
225
Walk

316.53
722
20
Cut

315.95
680
10

315.94
681

315.62
713
10

315.00
775
20
in Dr.

315.79
626
225
Walk

315.85
689
397
Conc. Floor

1+54.5 = Garage on Rt. Conc. Floor

315.99
676
30
Walk

315.91
674
275
Walk

315.82
692
225

315.71
704
20
Cb

314.99
776
20
Cut

315.38
737
10

315.47
728

315.09
767
10

314.45
890
20
Cut
in Drive

315.09
755
225
Walk

315.29
746
275
Walk

315.36
739
325
Conc. Floor

322.75

Thorp St. Cross Sections

000
 321.83 — P-32
 092 321.83

chk BM SW NW 1/4 Grassy Thorns

386 322.75

BM NW 8.P
 318.89 P-57

BM SW NW 1/4 Grassy Thorns
 Chk. R-54

001
 321.83
 193 321.82

2765.5 Cont.

X 320.84

318.7	319.09	318.60	318.6
3.6	366	418	42
	278	275	30

2765.5 = M.L. 315

2763 21.8 Rt Elec Pole
 322.78

318.93	318.96	318.99	318.59	318.69	318.36	317.85	318.35	318.50
382	389	456	416	406	439	470	440	425
275	20	20	10	10	10	20	20	245
	cb				cut	cb	cb	

322.75

Muller
Hurdin
Pape
R. Sisson
11-6-49

Levels - Proposed Drain

Myrtle Street

from Roy to Herriman

Sketch of location P16. P21

5.11	332.00	326.89
T.P.	4.64 333.57 307	328.93
0-16 = E. cb. Line Roy		
4	4.51	329.06
13' N Pav	4.89	328.68
23' N "	4.90	328.67
" " cb.	4.67	328.90
43' N "	4.56	329.01
" " Gut.	4.87	328.70
27' South Pav	4.54	329.03
37' " Gut.	4.56	329.01
" " cb.	4.13	329.99
57' " Gut.	4.54	329.03
" " cb.	4.12	329.95
0-10		
4	4.60	328.91
13' N	5.03	328.57
13' N cb.	4.63	328.94

INDEXED
W.K.
NOV 10 1949

333.57

59

0-10 Cont		
155' N = Walk	4.53	329.09
20.5' N = H edge Walk	4.39	329.18
27' S Gut	4.66	328.91
" " = cb	4.38	329.19
29.5' S = H edge Walk	4.23	329.39
34.5' S " "	4.09	329.98
0+00		
9' Proposed Drain	4.65	328.92
18' N = Gut.	5.16	328.91
" " = cb.	4.72	328.85
15.5' N = S edge Walk	4.58	328.99
20.5' = N " "	4.51	329.00
27' S Gut.	4.80	328.77
" " cb.	4.40	329.17
29.5' S Walk	4.28	329.29
34.5' S	4.16	329.91
0+10		
4	4.69	328.88
13' Lt. Gut.	5.24	328.33

33357 Myrtle St. Drains Roy to Grim

13" N cb.	479	328.78
15.5" N Walk	471	328.86
20.5" N "	462	328.95
27" S = Gut.	490	328.67
27" S = cb	452	329.05
29.5" South = Walk	436	329.21
34.5" " = Walk	423	329.32
0+50	497	328.60
1+00	534	328.23
1+19 = 2.5' x 2.5' Gas Box Cover Flow = 11.17	374 = South edge	327.90 = 327.15
1+23 7.1' R. = S. Sewer MH Rim 5.46	X 328.11	
1+50	573	327.82
2+00	606	327.51
2+20.52 = BC. 45' R	628	327.29
2+48:01 = S. Curve	650	327.07
2+73.1 Gut. at cb. Return	711	326.96
2+73.2 on cb. at "	671	326.86
2+75.50 E.C.	670	326.87
2+87 Gut.	732	326.25
2+87 cb. = Cross W. cb. Grim	674	326.83

33357 Myrtle St. - Drains
from Grim To Horrocks 60

T.P. 529	332.23	663	326.94
0+00 Cross E. cb. Grim		587	326.36
0+00 Gut.		632	325.91
0+11.5 = BC		588	326.35
+13.5 cb.		592	326.31
+13.6 Gut.		619	326.08
+41.1 S. Curve		571	326.52
0+66.8 E.C.		535	325.68
1+10		533	326.90
1+60 42' L. = South edge		25' x 25' Gas Box Cover Flow 9.75	322.98
1+68 63' R. = S. Sewer MH Rim 5.23			327.00
1+64		525	326.98
2+10		503	327.20
2+60		491	327.32
2+97.95 = MH 31st		499	327.22
3+29.95 = S. 31st		518	327.05
3+62 45' L. 31st		556	326.67
4+10		569	326.82
4+60		585	326.38
4+91.4 39' L. = South edge		25' x 25' Gas Box Cover Flow 12.47	326.27
4+93.7 S. MH 59' R.			319.76

Myrtle St. Drain

33223 ✓

T.P.	459	330.81 ✓	601	326.22
5+10			458	326.23
5+60			473	326.08
5+92.79 = E.C.			486	325.95
6+20.28 ^{27.49} Curve			508	325.73
6+45.7 Gut. at cb Ret.			588	329.93
" cb. on " "			540	325.37
6+47.77 = E.C.			544	325.37

SW Return Myrtle & Hermans Ave.

20' South of "A"

W edge Walk			556	325.25
E " "			568	325.13
cb.			595	329.86
Gut.			658	329.23
75'			625	329.56
"A"				
W edge Walk			598	325.33
E " "			564	325.17
cb.			566	325.15

33081 ✓

Carb Returns at SE+SW-

Myrtle & Grim

Levels around S.E. + S.W. Returns - 31st & Myrtle. M.O. 20441

BM = + 5.92 332.81 326.89 = S.W. 7' ct. Myrtle + Grim

S.W. Return - cb. = Base line S.E. Ret. 332.81

20' S. of 20' Rad. PC. on 31st 20' S. of 20' Rad. = 31st

Top	5.78	327.03	Top	6.23	326.58
-----	------	--------	-----	------	--------

gut.	6.33	326.98	gut	6.68	326.13
------	------	--------	-----	------	--------

20' P.C. Top	5.87	326.92	20' P.C. Top	6.40	326.91
--------------	------	--------	--------------	------	--------

gut	6.45	326.36	gut	6.87	325.92
-----	------	--------	-----	------	--------

5' out = Rt	6.27	326.52	5' out	6.54	326.27
-------------	------	--------	--------	------	--------

edge walk 6.3' in	5.74	327.03	6.3' in = walk	6.23	326.58
-------------------	------	--------	----------------	------	--------

" " 11.3	5.71	327.10	11.3 in = "	6.16	326.65
----------	------	--------	-------------	------	--------

10' N. = P.C. 10' Rad. Top	5.91	326.90	10' N. = 10' P.C. Top	6.44	326.37
----------------------------	------	--------	-----------------------	------	--------

gut	6.48	326.33	gut	6.43	325.98
-----	------	--------	-----	------	--------

5' out	6.37	326.22	5' out	6.63	326.18
--------	------	--------	--------	------	--------

6.3 in = walk	5.74	327.03	6.3 in = walk	6.29	326.52
---------------	------	--------	---------------	------	--------

17.5 in = Cor. Ret.	5.67	327.12	17.5 in = Cor. Ret.	6.19	326.62
---------------------	------	--------	---------------------	------	--------

E of 20' Rad. - Top	5.94	326.87	E of Prop. 20' Rad. Top	6.51	326.30
---------------------	------	--------	-------------------------	------	--------

gut	6.41	326.20	gut	6.85	325.96
-----	------	--------	-----	------	--------

5' out	6.47	326.32	5' out	6.76	326.05
--------	------	--------	--------	------	--------

4 in = Prop. 20' Rad.	5.84	326.97	4.2 in = Prop 20' cb.	6.38	326.23
-----------------------	------	--------	-----------------------	------	--------

10' E. of W. P.C. of 20' Rad. = 10' P.C. Top	5.88	326.93	10' W. of 20' P.C. = 10' P.C. Top	6.44	326.37
--	------	--------	-----------------------------------	------	--------

gut	6.37	326.20	gut	6.93	325.88
-----	------	--------	-----	------	--------

5' out	6.17	326.62	5' out	6.62	326.19
--------	------	--------	--------	------	--------

2.5' E. of 20' P.C. = W.L. 31 st Top	5.89	326.92	2.5 W. of 20' P.C. = E.L. 31 st Top	6.44	326.37
---	------	--------	--	------	--------

gut	6.38	326.93	gut	6.95	325.86
-----	------	--------	-----	------	--------

2.5 in = walk	5.80	327.01	2.5 in = walk	6.31	326.50
---------------	------	--------	---------------	------	--------

7.5 in = "	5.70	327.11	7.5 in = "	6.20	326.61
------------	------	--------	------------	------	--------

20' P.C. - Top	5.89	326.92	20' P.C. Top	6.45	326.36
----------------	------	--------	--------------	------	--------

gut	6.40	326.91	gut	6.94	325.87
-----	------	--------	-----	------	--------

5' out	6.15	326.66	5' out	6.66	326.15
--------	------	--------	--------	------	--------

2.5 in = walk	5.83	326.98	2.5 in = walk	6.33	326.28
---------------	------	--------	---------------	------	--------

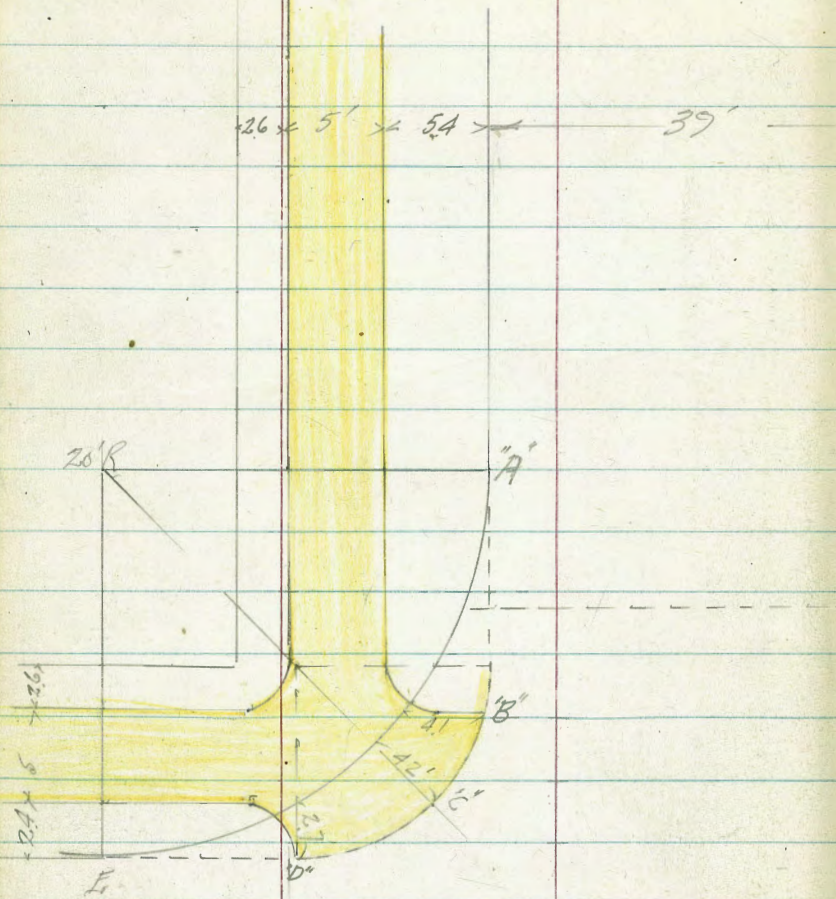
7.5 in	5.71	327.10	7.5 in = "	6.22	326.59
--------	------	--------	------------	------	--------

20 W. of P.C. Top	5.93	326.88	20 W. of P.C. Top	6.53	326.28
-------------------	------	--------	-------------------	------	--------

gut	6.42	326.39	gut	7.03	325.78
-----	------	--------	-----	------	--------

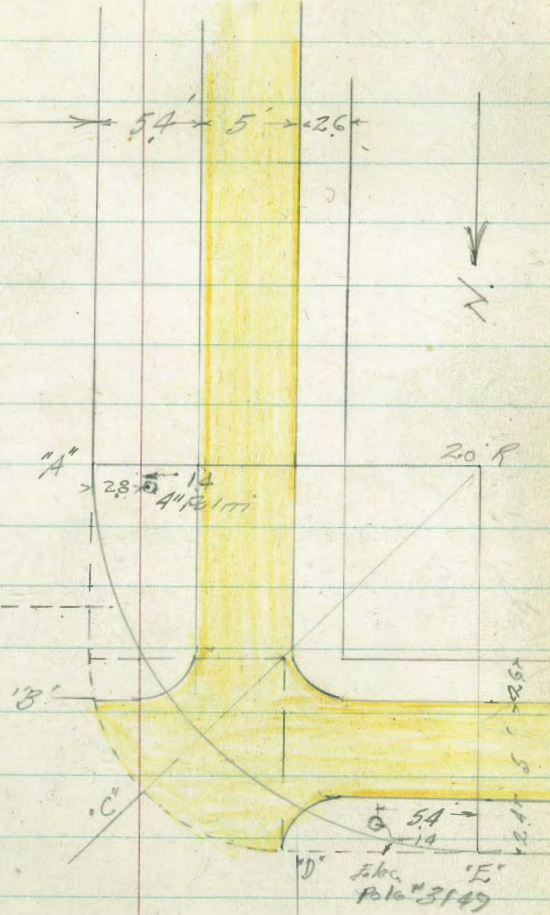
"A" Cont.

Gut.	626	328.55
+5'	596	329.85
"B"		
13'14 on S. edge wall	522	325.59
42' W " " "	539	325.92
"B" on cb	548	325.33
" " Gut.	592	328.89
5' in st.	580	325.01
"C" 99' SW on wall	525	325.56
" 44' SW " "	536	325.95
"C" on cb.	550	325.31
" " Gut.	590	328.91
+5' N.E. on Pav.	585	329.96
"D" 74' South on wall	523	325.58
" 24 " " "	530	325.51
D on cb.	546	325.41
" " Gut.	589	328.92
5' N on Pav.	567	325.18
"E" 74' South on wall	516	325.65
" 24 " "	527	325.54



HERMAN AVE.

MYRTLE



AVE.

330 81 ✓

"E" Top cb.	536	325.95
" " Gut.	590	324.91
15' N	565	325.16
20' West of E		
74' South on Walk	514	325.67
24 " " "	521	325.60
cb	530	325.51
Gut. on Pav	580	325.01
15' N on Pav	553	325.28
SW 7' track Myrtle-Harmon		
T.P. 550 330 90 ✓	541	325.40
J.E. Return Myrtle & Harmon		
"A" - 20' South E edge Walk	573	325.17
" " " W " "	583	325.07
" " on cb.	595	324.95
" " " Gut.	660	324.30
" " 5' inst.	627	324.63
"A' E edge Walk	549	325.41
W " "	562	325.28
cb	568	325.22
Gut.	624	324.66
5' inst.	600	324.90

330 90 ✓

63

"B" E. edge Walk	531	325.59
" " W " "	542	325.48
"B" on 4.1 E on Walk	544	325.46
B on cb.	556	325.34
B " Gut	602	324.88
"B" 5' W	580	325.10
"C" 4.2 S.E.	540	325.50
"C" cb.	550	325.90
"C" Gut.	588	325.02
5' NW	579	325.11
"D" ~		
South edge Walk		
East ed	532	325.58
27 South	536	325.54
"D" on cb	542	325.48
" " Gut.	582	325.08
5' N	557	325.33
"E" ~		
South edge Walk	516	325.74
N " "	525	325.65
cb.	532	325.58
Gut.	581	325.06
5' N	550	325.40

330.90 ✓

S.E. Return Cont.

20' East of "E"

S edge Walk 483 326.07

N " " 421 325.99

cb. 428 325.92

Ect. 544 325.86

S'N ✓ 511 325.79

T.P. 556 332.02 444 326.46

Chk. SW BM 7' Gm + Myrtle S'N 326.87 ✓

P-32

326.89

0.02

Levels - Dwight St. Proposed Drain
Location sketch P-16. 21

65

Station	Reading	Reduced Elevation	Station	Reading	Reduced Elevation
344	337.45		334.01		
0-22.8 = E. cb. Line Roy on South			PM. SW 7' back Dwight & Grim P-32		
ℓ	490	332.55	337.45 ↓		
7' Lt.	478	332.67	0-12.8 Cont.		
17' Lt.	458	332.87	35.5 Rt. Walk N. edge	542	332.03
37' Lt.	435	333.10	40.5 " " S. "	529	332.16
33' Rt.	553	331.92	0-1.86 = E. cb. Line Roy on North		
43' Rt. Gutz.	572	331.73	ℓ	541	332.04
43' R. cb.	545	332.00	13' R.	545	332.00
63' Rt. Gutz.	592	331.53	23' R.	542	331.96
" " cb.	559	331.86	33' R. Gutz.	568	331.77
0-16.8 = E. edge Comb. Walk on Rt.			" " cb.	539	332.06
67' Rt. on Walk	538	332.07	35.5 Rt. Walk	529	332.16
48' R. " "	526	332.19	40.5 " "	517	332.28
34' Rt. on cb. Rd.	550	331.95	7' Lt.	547	331.96
" " " Gutz. at cb. Rd.	565	331.80	17' Lt. cb.	520	332.25
0-12.8 = E. C. 10' cb. R. on Rt.			" " Gutz.	540	332.05
33' Rt. Gutz.	566	331.79	" " 5' West	512	332.33
" " cb.	550	331.95	37' Lt. Gutz.	526	332.19
			" " cb.	498	332.47
			" " 5' West	490	332.55

337.95 ✓ Dwight St
from Ray
to Green

337.95 ✓

66

0+00

0+0814 Cont.

E	INDEXED	537	332.08
13' Rt	W.K.	541	332.09
	NOV 10 1949		
23' Rt		543	332.02
38' Rt. Gut.		566	331.79
33' Rt. cb.		538	332.07
35.5' Rt. Walk		527	332.18
40.5' R "		515	332.30
7' Lt.		545	332.00
11' Lt. Gut. of cb Ret.		537	332.08
" " on cb.		524	332.21
17' Lt. " Walk		515	332.30
	on Lt		
0+0.64 = West edge	Side Walk, poor cond.		
17' Lt. on Walk		513	332.32
37' Lt. " "		487	332.58
0+0.6.0 = East edge walk			332.38
17' Lt. on Walk. poor cond.		507	
37' Lt. " " " "		478	332.67
0+08.14 = E. Line Ray on Lt.			
E		525	332.20

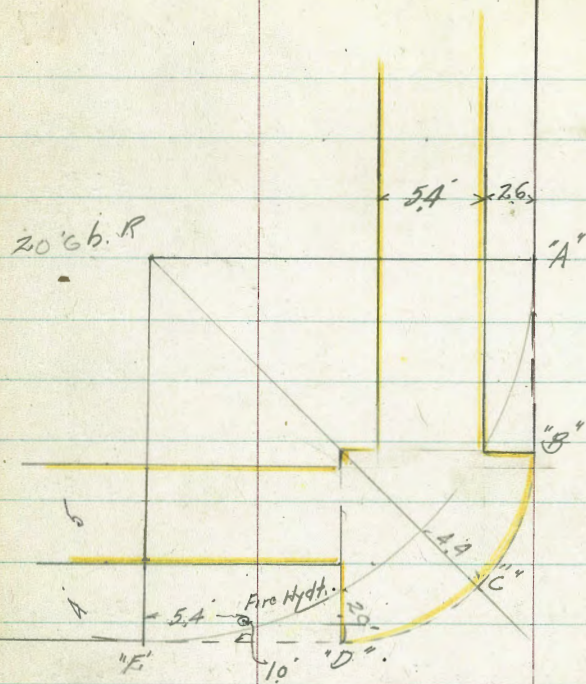
E			
13' Rt.		509	332.26
23' R		531	332.19
33' Rt. Gut.		553	331.92
33' Rt. cb.		533	332.12
35.5' Rt. Walk		516	332.29
40.5' Rt. "		506	332.39
7' Lt. Gut.		552	331.93
7' Lt. cb.		521	332.22
9.7' Lt. on Walk of Return		515	332.30
" " " " S. edge Walk		521	332.29 X
15' Lt. " " of Return		509	332.36 X
" " " " N. edge Sidewalk		514	332.31
17' Lt. on Walk of Return		506	332.39
0+12 34.3' Rt = 2 Fire Hydr.			
0+10		552	
33' Rt. Gut.		559	331.86
33' Rt. cb		533	332.12
35.5' Rt. Walk		516	332.29
40.5' Rt. "		505	332.40

Dwight St. Drain
From Roy to Grimm
337.45

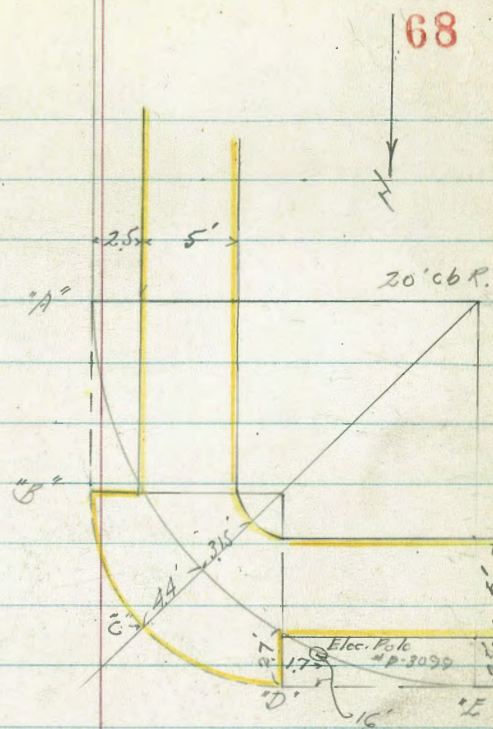
DWIGHT St Drain
from Grimm to 31st.
339.19
Location P2/67

0+50	491	332.58
1+00	452	332.93
0+18.14	Additional Sec. Proposed E.C. 20' cb R ₁	
2	516	332.29
7' Lt. Gut.	535	332.10
" " Ch.	519	332.26
9.7' Lt. Walk	508	332.37
15' Lt. Walk	506	332.39
1+16		
2	444	333.01
12.6' Rt = 1/2 Sewer MH Rim #13		333.32
" " " " " Invert 10.30		327.15
1+50	410	333.35
2+00	384	333.61
2+11.64 = B.C.		
SW 7' tack Dwight & Grimm		
T.P. 518	339.19	344
		334.01
2+11.64 = B.C. R.	546	333.73
2+39.13 1/2 Curve	522	333.97
2+66.62 = E.C.	545	333.78
for Sec. over proposed L.P.P. across Grimm Sec P. 37		

0+17.72 = B.C.	567	333.52
0+45.21 1/2 Curve	527	333.92
+72.70 E.C.	558	333.61
1+00	578	333.91
+50	604	333.15
1+69 = Int. Sewer	622	332.97
12.5' Rt. 1/2 MH Rim	596	333.23
MH sealed		
Invert Inaccessible		
2+00	640	332.79
2+29.00 = B.C.	659	332.60
+64.73 1/2	655	332.64
3+00.47 = E.C.	720	331.99
T.P. 540	337.65	694
		332.25
SW Return Dwight & 31st Sketch P. 68		
20' West of "E"		
S. edge Walk	528	332.37
N " "	533	332.32
Ch.	545	332.20
Gut.	580	331.85
5' N	557	332.08



21st Street



DWIGHT

ST

SW. Rot. Cont.

337.65 ✓

"E" ~~~~~		
S. edge walk	534	332.31
N " "	543	332.22
cb	555	332.10
Gut.	585	331.80
5' N	569	331.96
~~~~~ "D" ~~~~~		
S. edge walk	540	332.25
2.7 South of "D"	552	332.13
"D" on cb.	562	332.03
" " Gut.	599	331.66
5' N	590	331.75
~~~~~ "C" ~~~~~		
7.55 SW on walk	544	332.21
44' SW " "	552	332.13
"C" on cb.	563	332.02
"C" " Gut.	609	331.56
5' N E	608	331.57

337.65 ✓

SW Return Cont.

69

"B"	547	332.18
2.7 West on walk	556	332.09
cb.	569	331.96
Gut.	633	331.84
5' E	605	331.60
~~~~~ "A" ~~~~~		
West edge walk	558	332.07
E " "	565	332.00
cb.	576	331.89
Gut.	638	331.27
5' E	610	331.55
~~~~~ 20' South of "A" ~~~~~		
West edge walk	575	331.90
E " "	578	331.87
cb.	590	331.75
Gut.	650	331.15
5' E	621	331.84
22.5' E = 2 31st	585	331.80
Cont. P. 70		

S.E. Returns Dwight v 31st

33765 ✓

20' South of "A"		
E. edge Walk	570	331.95
W. " "	591	331.74
cb.	592	331.73
Gut.	654	331.11
5' W	626	331.39
"A"		
E. edge Walk	551	332.19
W. " "	571	331.92
cb.	579	331.86
Gut.	634	331.31
5' W	612	331.53
"B"		
10' E. on Walk	532	332.33
8' E. " "	539	332.26
26' E. " "	556	332.09
cb.	570	331.95
Gut.	620	331.95
5' W	599	331.66

S.E. Returns Cont.

33765 ✓

70

"C"

44' S.E.	556	332.09
"C" on cb.	571	331.94
Gut.	607	331.58
5' W	597	331.68
"D"		
9' South Walk of Return	533	332.32
9' " S. edge Walk	527	332.31
4' " N " "	535	332.30
4' " Walk on Return	547	332.18
29' South Walk on "	549	332.16
cb.	565	332.00
Gut.	598	331.67
5' N	582	331.83
"E"		
S. edge Walk	536	332.29
N " "	543	332.22
cb.	557	332.08
Gut.	590	331.75
5' N	563	332.02

Stn. Return Dwight 31st
Cont. from P-70

33765

2.0' East of "E"

S. edge walk	518	332.97
N " "	529	332.36
cb.	542	332.23
Gut.	560	332.05
5' N	543	332.72

Section 2.65' South of Skene Dwight.

W cb.	571	331.99
" Gut.	631	331.39
" 1/4	572	331.93
E 31st	560	332.05
E 1/4	583	331.82
E Gut	623	331.92
E cb.	569	331.96
chk. BNL SW 7' Jack	368	333.97 ✓

As. 14 to 71. Notes Reduced. 11-19-99

BNL 334.01
Error 20.04

Location Proposed Drain

GARNET ST.

from Pendleton to Balboa

Cont. on 12-73

0+73.2 = Int. End East Walk

NO 20598

0+54.28 = Int. Ch. Return

INDEXED

W.K.

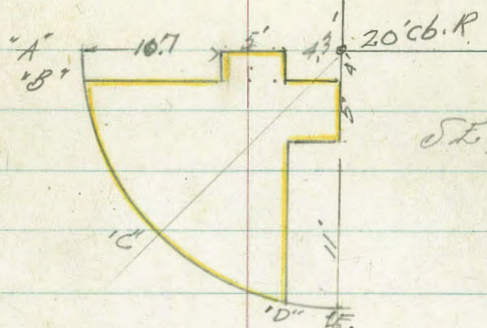
NOV 21 1949

0+11.75 = Int. Ch. Return

0+00 = S.W. 7' Tack

Walker
Gregory
Pope
REVISION
11-17-49

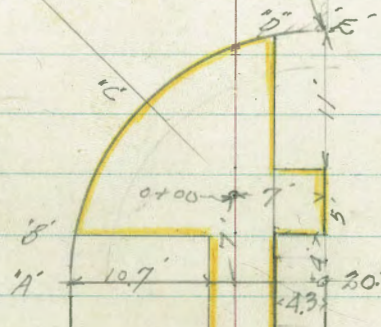
72



S.E. Return

Pendleton
St.

GARNET

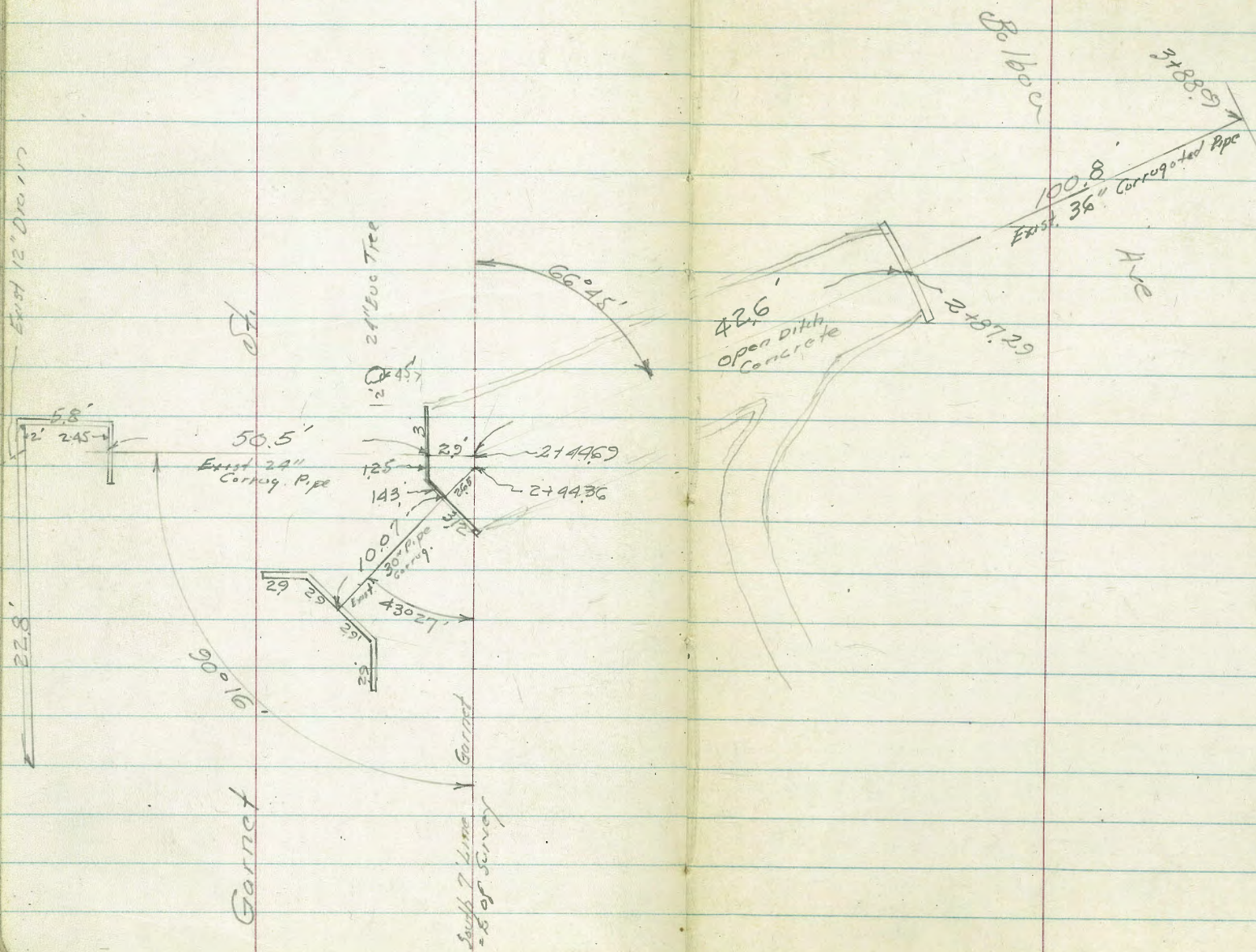


S.W. Return

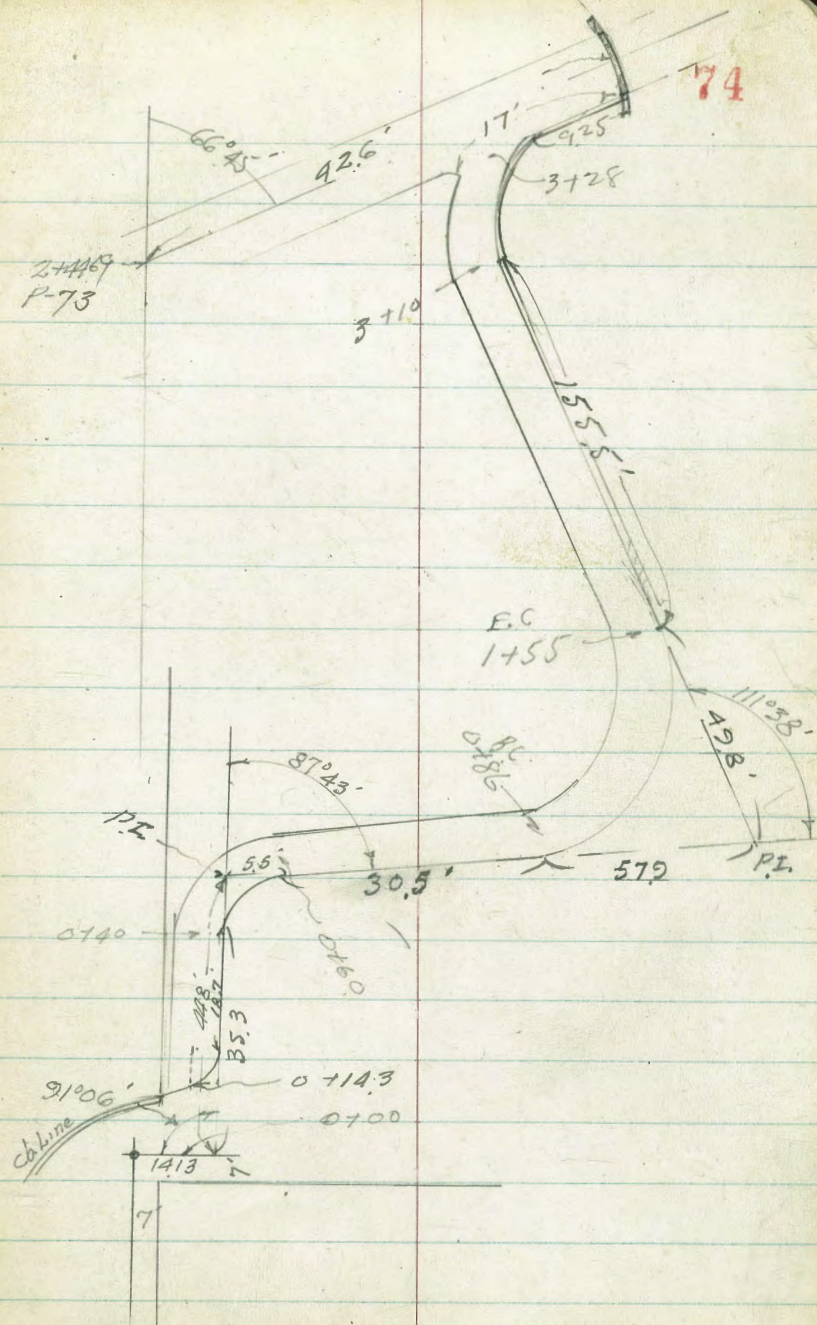
20' cb. R. Prop. Line

Location Proposed Drain
on South 7th Line Garnet
Street Cont. from P-72

73



Location Existing Drainage
Ditch - Balboa & Pendleton



Levels - Proposed Drain
on Garnet St.
Location P. 72-73

75

SW Return Sketch P-72

432	1804	1372	BM. B.P. SE. Cor. Balboa Ave Bridge	FB 1742 23
TP 528	1791	541	12.63	
TP 10.42	27.53	0.80	17.11	
TP 12.85	37.44	2.14	25.39	→ on Hd. Wall (Please Check this)
TP 4.32	39.58	2.18	35.26	BM. B.P. SE. Garnet & Pendleton NO Record in Field Bench Book

"A"

cb	352	36.06	SW Ret. Cont	39.58	
Gut	410	35.98	"E" on cb.	439	35.19
"B"			"E" "Gut	497	34.61
cb	365	35.93	J.E. Return		
Gut.	423	35.35	"E" on cb.	512	32.96
10.7 South on Walk	352	36.06	" " Gut.	562	33.96
"C" on cb.	398	35.60	"D" on cb.	487	34.71
" " Gut.	488	35.03	" " Gut.	557	39.01
"D" on cb	425	35.33	11' E. on Walk	454	35.02
" " Gut	488	34.73	"C" on cb.	459	34.99
11' W on Walk	366	35.92	" " Gut	525	34.33

S.E. Return Cont

39.58 ✓

39.58 ✓

76

8" cb.	433	35.25
" Gut	500	39.58
10.7' South on Walk	432	35.26
"A" on cb.	429	35.29
" " Gut. Pav.	494	39.69
10' N on South edge strip Pav.	470 39.88	39.88
Profile Proposed Drain		
0400	360	35.98
+11.75 cb.	416	35.92
+11.8 Gut.	472	39.85
+32.5' - 2' Pav.	461	39.97
7' Rt.	478	39.80
7' Lt.	450	35.08
0+54.28 Gut.	546	39.12
" cb. Ret.	483	39.75
0+73.7 = End of Walk	424	35.34
2.65' Rt. on Walk	426	35.37
2.35' Lt.	423	35.35
0+76'	50	39.58
5' Lt.	46	39.98
5' Rt.	4.8	39.6

0+78 11.9' Lt. & Fire Hydr.		
0+98 9' Lt. 10" Dead Tree		
-1+15 -	54	39.2
5' Rt.	60	33.6
5' Lt.	5.5	39.1
23' Lt. Edge Pav	588	33.70
33' Lt. & Pav.	575	33.83
-1+27 -	77	31.9
5' Lt.	80	31.6
5' Lt.	63	33.3
1+60	82	31.9
5' Rt.	85	31.1
5' Lt.	80	31.6
1+80 7.8' Lt. = South edge 28" Euc Tree		
2+00	97	29.9
5' R	99	29.7
5' Lt.	83	31.3
23' Lt on Pav	83.4	31.24
33' " " " &	81.7	31.91

	39.58 ✓		
~2+33~	9.4	30.2	
59' Lt. on Hd. Wall	9.29	30.29	
5' Rt.	10.2	29.9	
T.P. 290	32.86 ✓	29.96	
~2+40~	3.7	29.2	
5' Rt.	3.5	29.8	
5' Lt.	2.8	30.1	
2+40.84 on Hd. Wall	East edge 290	29.96	
~2+41~	6.3	26.6	
3' Rt. on Cons. Wall of Ditch	4.67	28.19	
~2+44.36~	6.85	26.01	
2.65' NW on Flow	6.42	26.88	
2.65' NW " Hd. Wall	291	29.95	
12.72' NW on " "	2.55	30.31	
" " " Flow	6.91	26.85	
2.17' N on & Culvert	2.8	30.1	
2+44.69 = Δ Rt.			
Δ	6.86	26.00	
2.9' on & Culvert	6.11	26.75	
" " " " on Hd. Wall	292	29.94	

	32.86 ✓		77
2+44.69 Cont.			
23' N = S. edge Pav.	2.88	29.98	
43' N = N " "	2.86	30.00	
52.9 N Ground	1.9	31.0	
53.4' on Hd. Wall	1.62	31.29	
" " Flow Line	5.59	27.27	
59.2' " Flow 12" Pipe	4.98	28.38	
59.2' " on Hd. Wall	1.64	31.22	
20.8 West of House 12" on Hd. Wall	1.03	31.83	
2+50	7.6	25.3	
2' Rt.	7.3	25.6	
2.8' Rt. on Top Cons. Wall	5.2	27.7	
2' Lt.	7.4	25.9	
3.8' Lt. " " " "	5.3	27.6	
~2+70~	9.9	23.0	
2.5' Rt.	9.8	23.1	
5' Rt. on Wall	7.0	25.9	
2.5' Lt.	9.9	23.0	
5' Lt. on W	7.0	25.9	

32.86 ✓

78

-2779.5	121	20.8
2.5' R	11.9	21.0
6.5' Rt. on Wall	7.5	25.4
2.5' Lt.	11.6	21.3
6.5' Lt. " "	7.4	25.4
2787.29 Flow ^{36"} _{30"} Pipe	12.98	19.88
" on Hd Wall	7.49	25.37
7.9' R. = West end Hd Wall	7.50	25.36
8.3' Lt. = East " "	7.43	25.23
-3788.09 - Sbx end East ^{36"} _{30"} Culvert		
on Hd Wall	11.87	20.99
" Flow Line	5.91	17.08
3.5' Rt. = West end Hd Wall	11.88	20.98
3.5' Lt East " "	11.84	21.02
2787.29 T.P. 2 Hd Wall	7.48	25.38
		25.39 P-75
		0.01
For Final check 8/15 P-80		

Levels - Existing Conc. Drainage Ditch
 for Yardage

Cont on P-80

TP 1.53 3159 6.47 30.06 ✓

1455 EC

0+86 = BC Lt

0+60 EC

0+40 BC

0+17

0+14.3

12.7 36.53 ✓

25.26 ✓

BM BP SE Gurnet & Pendleton P-75

^{30.3} 6.2 9.9 10.0 9.9 6.3
^{26.6} 2.5 1 1 1 2.5

^{32.9} 3.6 6.7 6.9 6.8 3.7
^{29.8} 3 1.5 1 1.5 3

^{33.9} 2.6 5.6 5.7 5.6 2.9
^{30.8} 4 1.5 1 1.5 4

^{34.5} 2.0 4.2 4.4 4.2 2.4
^{32.3} 4.5 on Wall 2.5 2.4 4
^{32.1}

^{34.6} 1.9 3.1 3.3 3.1 1.9
^{33.4} 4 2.5 2.5 4
^{33.4}

^{34.6} 1.9 1.9 1.5
^{34.6} 4 4
^{35.0}

36.53 ✓

80 Balboa Ave
 Levels Existing
 Concrete Drainage Ditch
 Cont. from P-79

T
 1+

0+

0+

0+

0

0

				003
check starting BM P-75	4.87	13.72	13.75	✓
TP 6.09	1862	584	12.53	
TP 5.70	1837	813	12.67	
TP 0.24	2080	1103	20.56	

3+2.8 = diag Sec

3+10 = B.C.R

31.59 ✓

~~56.07
 22.47
 9 + 33.53
 35.31
 68.84~~

~~79.35
 22.47
 56.88
 17.66
 74.60~~

~~38.93
 17.65
 51.18~~

~~ft.~~

ft.

Notes Reduced - 12-1-49

~~75.9
 5.7 92 97 10.0 63
 3.75 2 2 3.75~~

~~26.7 22.9 22.8 22.8 26.5
 4.9 8.7 8.8 8.8 5.1
 2.8 1.3 1.3 2.6
 on wall on wall~~

31.59 ✓

T
14
OT
OT
OT
O
O

7071
45
3535
2828
3781
90
3.63

1071
3535
2828
3181
90
42
175
695

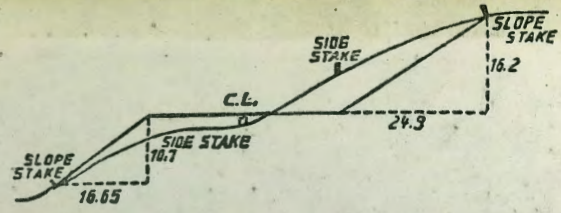
3188
92
40

5736
45
28680
25944
5162

898
632
1530

879
632
1511

883
637
2575



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.
SLOPE 1 1/2 TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.25	71.40	71.55	71.70	71.85	47
48	72.00	72.15	72.30	72.45	72.60	72.75	72.90	73.05	73.20	73.35	48
49	73.50	73.65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

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