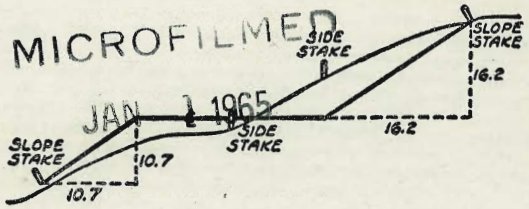
2242

STORM DRAIN



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

[1] 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.

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	.70	.81	.92	1.04	1.29	1.42	1.54	1.66
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	.711	.845	.922	1.01
70°	.080	.159	.240	.321	.403	.485	.568	.652	.735	.819	.906	.994	1.08	1.17
75°	.095	.182	.286	.383	.480	.578	.678	.777	.877	.977	1.07	1.18	1.29	1.39
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	.985	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

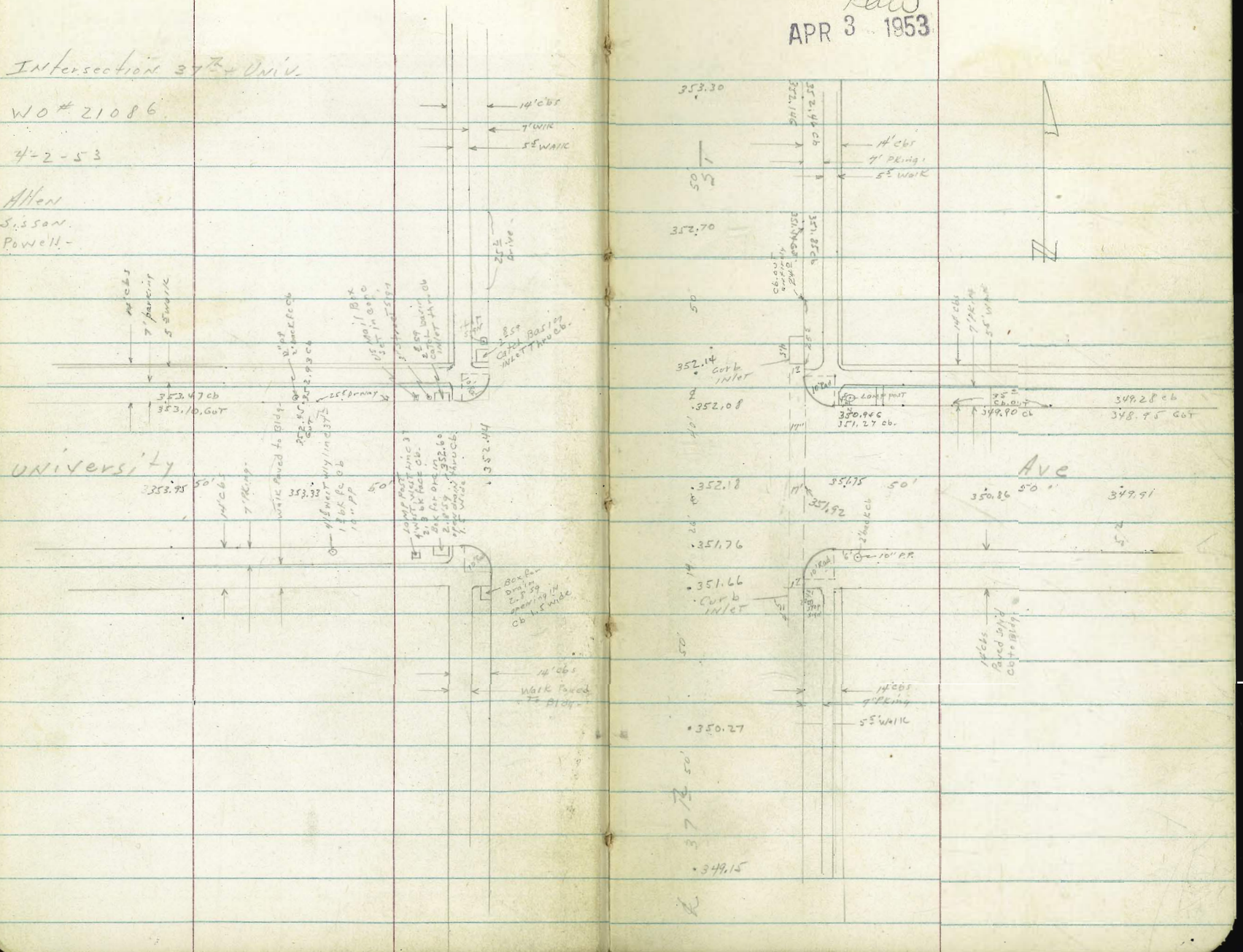
Index.

Intersection 37th + Univ.

W.O. # 21086.

4-2-53

Allen
Sisson.
Powell -



N.E. Cor 37th + Univ.

100' North of North line Univ. Ave.	352.14 Gutter	352.46 Curb
50 North of North Line Univ. Ave	351.44 Gutter	351.85 Curb
25 S. No. of No. Line Univ basin 24" broken curb		
Catch basin N.E. Cor - pipe running N & S. on 37th	350.54 Gutter I.E.	351.47 Curb
E.C. Return N.E. Cor Univ + 37th on 37th St	351.48 Gutter High	351.44 Curb
Midpoint Return N.E. Cor	351.36 Gutter	351.42 Curb
4 S. East of East Line 37th + 2 back face cb = ℄ lamp post		
B.C. Return N.E. Cor Univ + 37th - on Univ	351.14 Gutter	351.38 Curb
Length of Arc = 15.17.		
East prop line 37th on Nly curb line Univ.	350.94 Gutter.	351.27 Curb
50' East of East Line 37th on Univ.	349.90 Gutter	1" Busted out Drive Curb
100' East of East Line 37th on Univ	348.95 Gutter.	349.28 Curb

N.E. Cor. 37th + University Ave

BM = N.W. BP 37th + Univ - El. = 352.09

Levels for N.E. Cor Univ. + 37th

Direct elev. rod used

Cont. page 3

N.W. Cor Univ Ave & 37th St

Cont. on Page 4

Catch Basin on NW cor - on 37th	351.39 Gutter I.E.	352.10 Curb
E.C. N.W. Return on 37th	351.80 Gutter	352.15 Curb
Midpoint Return	352.14 Gutter	352.20 Curb
15.7 = Length of Arc.		
B.C. N.W. Return on Univ.	351.78 Gutter	352.05 Curb
West Line 37th + Nly Curb Univ. Ave	351.63 Gutter	352.09 Curb
2° West of West Line = S.W. Cor 2"x2" Box for drain	351.56 Gutter I.E. Low Point	352.11 Curb
2" West of West Line + 2' bk. fc. Curb = 3" I.P. for St. Sign. For U.S. Mail Box		
5' West of West Line + 2° back fc. cb = 4"x4" conc post		
10' West to West Line = Ely Conc Drive.		
35± West of West Line 37th = Wly begining of 25± Conc dr.		
41± West of West Line 37th + 2° back fc Cb = ¢ 10" pp.		
50' West of West Line 37th on Univ	352.45 Gutter	352.93 Curb.
100' West of West Line 37th on Univ + N. side Univ.	353.10 Gutter	353.47 Curb
N.W. Cor. 37th + Univ.	Direct elev	Rod used

Cont. on Page 5.

Cont on Page 5

B.C. S.E. Return 37th & Univ on Univ.	350.68 Gutter	350.82 Curb
East Line 37th & Sly curb line Univ	350.58 Gutter	350.81 Curb
6.0' East of East Line 37th & 2.5 back curb = ℄ 12" P.P.		
50' East of East Line 37th on Univ.	349.61 Gutter	349.92 Curb
100' East of East Line 37th on. Univ.	348.51 Gutter	348.85 Curb
S.E. Cor. 37th & Univ.		
100' North of North Line Univ on 37th	352.57 Gutter	353.00 Curb
50' North of North Line Univ on 37th	352.12 Gutter	352.44 Curb
17.3 North of North Line Univ = Sly Cor 25' Wide Conc Drive		
6.8 North of North Line Univ & 1.5 back fc cb = ℄ 4"x4" stop sign		
N.W. Cor 37th & Univ. Ave		

West Line 37th + Sly curb Line Univ	350.86 Gutter	351.48 Curb
4° West of West Line + 2³ back fc cb = ℄ Lamp post		
41.5 West of West Line 37th + 18.6k fc cb = ℄ 12" PP.		
50' West of West Line 37th on Univ Ave.	351.85 Gutter	352.20 Curb
100' West of West Line 37th on Univ. Ave	352.83 Gutter.	353.15 Curb
S.W. Cor. of 37th + University Ave		
100' South of South Line Univ on 37th	348.02 Gutter	348.60 Curb
50' South of South Line Univ. on 37th	349.08 Gutter	349.65 Curb
4³ South of South Line Univ = ℄ 4"x4" Stop Sign		
Curb Inlet S.E. Cor 37th + Univ on 37th	349.79 Gutter I.E.	350.91 Curb
E.C. S.E. Return - on 37th ℄ T	350.80 Gutter - same	350.80 Curb.
Midpoint S.E. Return 37th + Univ. L = 15.7	350.84 Gutter Higher than Curb	350.79 Curb
S.E. Cor 37th + Univ. Cont from page 4		

Direct elev. Rod used.

100' South of South line Univ. on 37th	348.63 Gutter	349.28 Curb
50' South of South line Univ. on 37th	349.55 Gutter	350.24 Curb
Curb inlet S.W. Cor. on 37th	350.81 Gutter I.E.	351.51 Curb
Sly line Univ + Wly curb line 37th	350.90 Gutter	351.53 Curb
E.C. S.W. Return on 37th	351.14 Gutter	351.56 Curb
Midpoint S.W. Return. 15.7 = length of Arc on return.	351.63 Gutter	351.69 Curb
B.C. Return S.W. Cor. on University	351.39 Gutter	351.56 Curb
Curb inlet S.W. Cor on Univ. S.W. Cor 37th + Univ. Cont from page 5	350.65 Gutter Divert elev Reduced	351.47. Curb

Location + Levels on Drainage Facilities At Upas + Georgia

WO# 21136

7-20-53

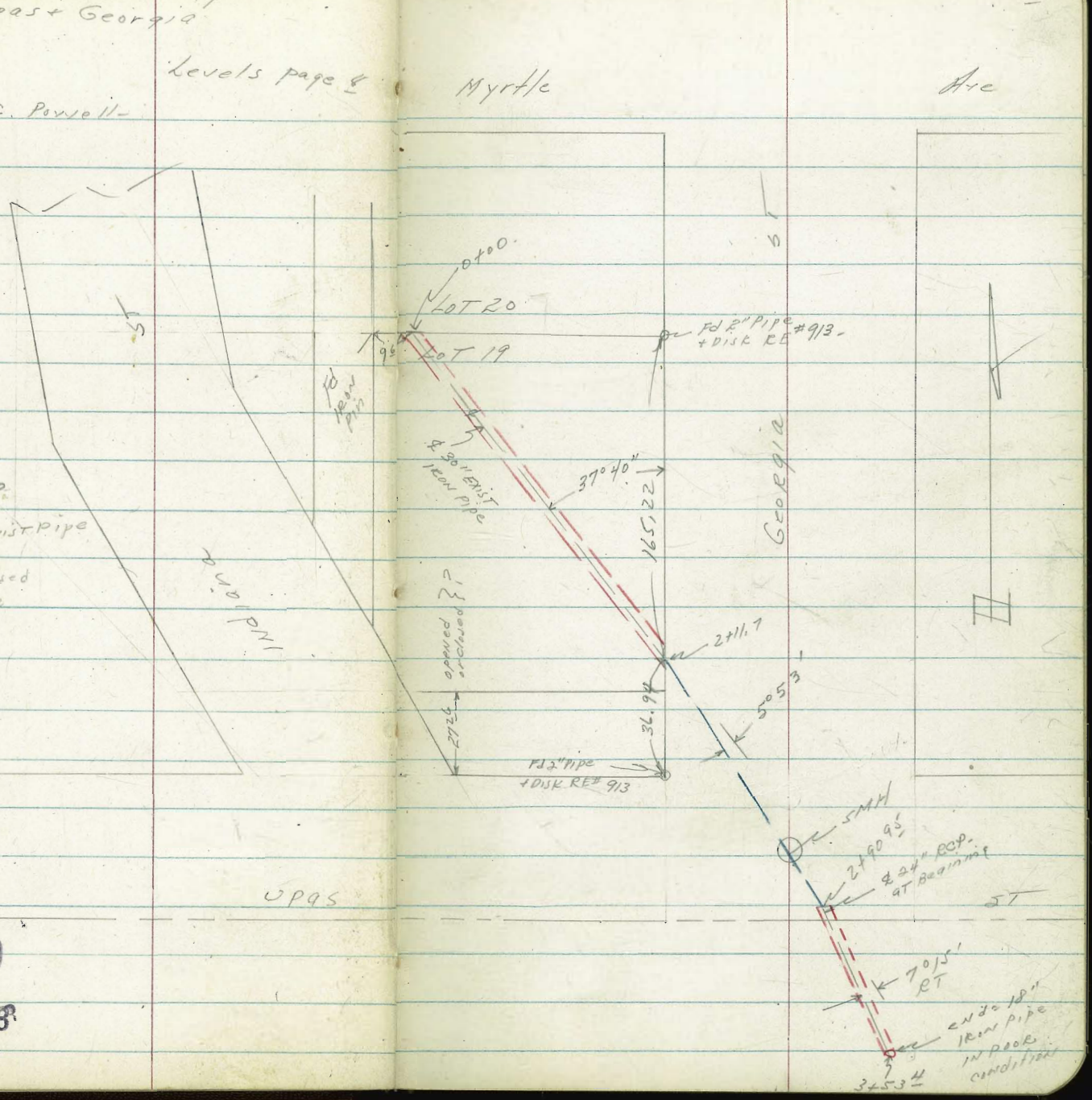
C. Allen, D. Sision, C. Powell

Levels page 4

Note - Exist 30" IP at Sta 2+11.7 in very poor condition 18" IP under Upas has collapsed at Approx Sta 3+43.

= Exist Pipe

= Proposed Pipe



Levels for existing Pipe and Proposed Drain at Upas ST + Georgia - See sketch Page 7.

1400				
0+50				
0+14 = top fill				
	9.6 Rt along lot Line = IP SW COR LOT 20 This end of pipe in good condition			
0+00 = Nly end of exist 30" RCP pipe				
TP6	2.75	238.71	1.94	235.96
TP5	3.42	237.90	13.28	234.48
TP4	0.14	247.68	13.15	247.54
TP3	0.10	260.69	13.19	260.59
TP2	0.52	273.78	13.32	273.26
TP1	0.13	286.58	12.75	286.45
BM -	3.40	299.20		295.80

LT = elv ℄ ℄ = wly - 8

233.3	232.6	232.4
5 4/10	6 1/10	6 3/10
235.4	235.0	235.8
3 6/10	3 7/10	3 7/10
236.4	236.2	236.3
2 6/10	2 5/10	2 4/10
232.1	227.88	227.7	232.8
6 5/10	10 72/15 30" RP	11 0 ℄ ground	6 7/10

238.71 ✓ x

S.W. BP. Upas ST + Park Blvd.

2+90 $\frac{PC}{}$ = N/y end 24" RCP - good Cond.

2+71 - Manhole on ℄ Proposed Drain

2+37

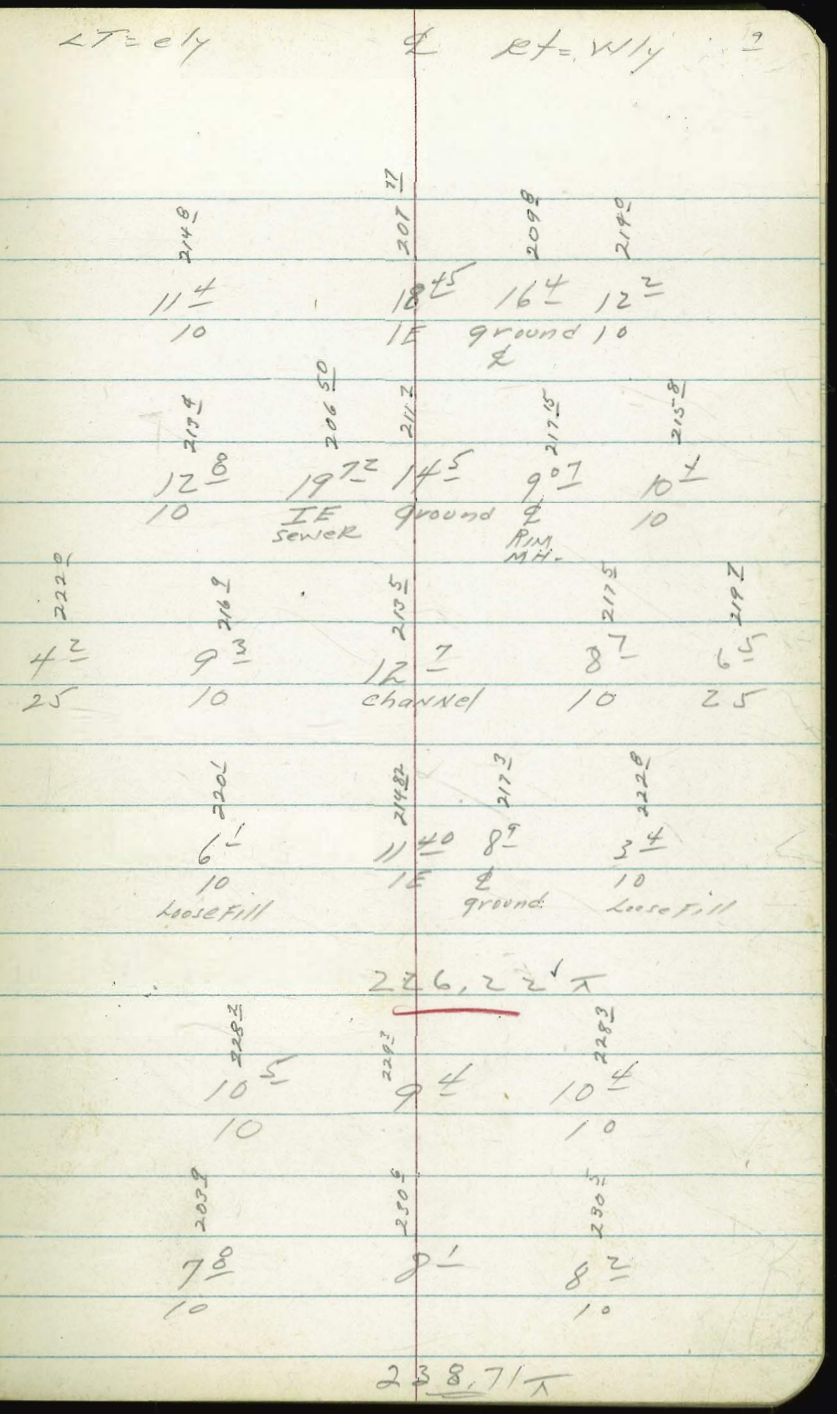
2+11 $\frac{?}{}$ = S/y end 30" RP - in poor condition

Δ = 5°58' Rt

TP7 0.83 226.22 13.32 225.39

2+02 = Top Fill

1+50



Lt = clay & Rt = Wet

	210+	206 ZZ	205+	211+
2 3+53 ± = 54 end 18" VP in poor condition	15 6/10	19 8/10	21 2/10 ± ground	15 1/10
3+45 ± Pipe has collapsed				
1 TP 8.				
2 3+38 = Top fill for Upas ST	216+8 9 4/10	217+9 8 8/10	218+3 7 9/10	
1 3+05 - Top fill for Upas ST - Not used for Moto Travel	218+1 8 1/10	218+2 8 0/10	219+2 6 3/10	

226.22 *

Map 547

Survey to tie together exist 30" RCP
Culverts under Broadway and under
E'ST between 29TH ST + 30TH ST
8-25-53- C. Allen, D. Sisson C. Powell.

Broadway

7'X7' LHT

VVO # 21167

Ref: TP Sheets 110, 122

20' Alley

15'X7' LHT on Valley side Street (29th)

℄ E

15'X7' LHT

21.05

20'

5±

chisel X = 0+00 TP

0-38'-℄ inlet

2'-5" x 2'-5" Drop inlets built for F 14' cbs

90°28'

106.57

131.17

0-87½ ℄ inlet

7'X7' Hdw

℄ 30" RCP

7+93.5

℄ 30" RCP

Broadway Paved
14' cbs
5'2' Roadway
4'? Parking
5'0" wall C

35 x 23 grates over drop inlets

377.94

chisel X = 6+89.83

11'X7' LHT

chisel X = 6+49.35

8' wings

3'3"

8'

89°59'

7'

220.15'

POT 285.48

15'X7' LHT on Valley side Street (29th)

370.94

8 STUB

ST ℄

POT 104.60

LHT CITY DISK

LHT CITY DISK

3+43.03

112°12'

Alley

Headwall

ST

9'X7' LHT

7'

11

Levels For Proposed Drain
Connecting 30" RCP Culverts
under Broadway + F ST between
30 TL + 29 TL - See Sketch Page 11

Built for 14' Cbs.

0 - 38 1/4 = ℄ 2.5 x 2.5 grate - Drop inlet

Built for 14' Curbs

0 - 87.6 = ℄ 2.5 x 2.5 Grate Drop inlet

0 - 99 = top F ST Fill.

0 - 131.17 = 3 1/4 end 30" RCP Culvert under F

TP4	2.32	143.81 ✓	12.57	141.49 ✓
TP3	0.86	154.06 ✓	13.20	153.20 ✓
TP2	1.06	166.40 ✓	10.77	165.34 ✓
TP1	0.45	176.11 ✓	12.70	175.66 ✓
BM -	0.73	188.36 ✓		187.63

LT = W ly ℄ Rt = ely - 12

1 ± 23'
1 / 5.8
grate

141.49
2 / 3.2
grate

145.61
0.8

131.78
2 2.0.3 FL 30" Pipe
18'3 ℄ T&B 8" headwall
12.5 - 6.8

1 / 143.81

NW BP - 30 TL + E sts.

Drain - Broadway to F Between 29th & 30th

Lt = VW 14 ℄ Rt = ely 13

1400 — 8 8/25 (1300) — 8 10/25 (1300) — 8 8/25 (1300)

0450 — 9 9/25 (1290) — 10 4/25 (1288 4) — 10 0/25 (1288 8)

0470 — 11 2 (1250)

0470 = 1' Rt = ℄ 8" wing wall. — 13 39/100 (1255 46) on NW conc apron

8" wing walls -

0400 = N'ly end 30" RCP Culvert under 'F' ST — 8 6/10 (1302) — 13 56/100 (1255 29) IE 30" Pipe — 9 76/100 (1249 09) Top head wall ℄ — 9 7/10 (1297)

TP5 7.10 128.85 ✓ 12.06 131.75 ✓ — 138.85 ✓ T

0-23 = N'ly top fill 'F' ST — 0 0/100 (143.81)

143.81 ✓ T

	LT = w/ ℄	℄	RT = o/ ℄
3+00	133.6 5 2 2.5	132.9 5 9	133.2 5 1.6 2.5
2+50	132.2 6 6 2.5	131.8 7 0	132.6 6 2 2.5
2+38 = N/y Bank Main channel		131.8 7 0	
Flow of water probably changed by E.S.T Fill			
2+28 = ℄ bottom Main Channel		130.2 8 2	
2+22 - S/y Bank main channel		131.8 7 2	
2+00	131.0 7 8 2.5	131.6 7 3	131.8 7 0 2.5
1+65 - 21' LT = ℄ 12" Elec free	130.4	130.6	131.4
1+50	8 0 2.5	8 2	7 5 2.5
		138 85	

Proposed Drain Broadway to E 1st between

Lt = w/y ℄ Rt = o/y. 15

4+00 -					136.9 9.5 2.5	135.0 11.4	134.6 11.8 2.5
3+73 - ℄ Crosses 3' high Chicken wire fence							
						133.6 12.8	
3+50							
TP7	13 09	146.39	7.61	ON Stub 3+43 03 133.30		146.39 T	
					134.6 6.3 2.5	133.20 7.61 ON Stub ground same	132.1 4.7 3.4 Top present E-St Fill
Sect. taken on Line of E 1st ∠ 22° 15' Lt. 3+43 03 = Intersection proposed Drain + ℄ E 1st							
TP6	7.84	140.91	5.78	133.07		140.91 T	
						138.8 2.5 T	

Proposed Drain - Broadway to F
between 29th & 30th

	℄	℄ ret=el+		16
	140.6	140.3		140±
6+00 - in Channel	5.8	6.1		6.0
	25			25
	140.2	139.3		139.7
5+50	6.2	7.1		6.7
	25			25
			138.13	141.81
Investigate possibility sewer turns sh, 46' ret=℄ MH on E&W 8" sewer in ℄ alley -			8.26	4.58
			46	46
5+33± ℄ crosses E&W 8" sewer Line			IE	Rim
5+23 - ℄ crosses poor lath fence				
	138.7	137.4		136.1
5+00	7.7	9.0		8.10
	25			25
	137.2	135.8		136.7
4+50	9.2	10.6		9.7
	25			25

146.39 ✓

166.85
1 5.2
on walk

6+87.13 = Sly edge 5' walk Sly side Broadway

166.83 166.2 166.1
1 0.7 1 7 1 9
2 5 2 5

6+85.8 = Sly top F.H. "F" St

TP9	10.97	168.00	0.03	157.03
TP8	11.19	157.06	0.52	145.87

168.00 T

144.2
1 7
10
9r

139.70
6 6.9
1E
30" pipe

143.58
2 8.1
E
Top
Headwall 8"

144.8
2 6.1
10
9r

6+49.35 = Sly end 30" RCP under Broadway.

Parallel to ℄ Pipe
begin
6+43.8 . 1.45 ℄ + 1.45 ℄T = 8" Wing Walls - NOT Flared

145.1
4 8
10

139.64
6 7.5
ON CONC
Apron

143.8
3 6.8
10

146.39 T

	Proposed	Drain from Broadway to		(187.63)
	F' S T. between $29\frac{1}{2}$	$30\frac{1}{2}$	1.5	
TP13	Starting BM.		8.21	187.64 ✓
TP12	3+5	195.85 ✓	0.53	192.10 ✓
TP11	12+21	192.63 ✓	0.11	180.42 ✓
TP10	12+98	180.53 ✓	0.45	167.55 ✓
7+93.5 = Nly end 30" RCP		N. side Broadway.		
7+63 = Nly top Broadway		fill		
7+48.83 =	$3^5 \times 2^2$ Box with 12" Drop to 30" RCP Drop inlet Face Nly Curb Broadway over			
6+96.83 =	$3^5 \times 2^2$ Box with 12" dia drop to 30" over Drop inlet Face Sly Curb Broadway.			

AT = W.I. & RT = R/W

143.6 — 147.36

24.4 LE 30" RCP

20.6 Top Headwall.

1548

2

165.70 — 162.16 — 166.74

$2^{2.2}$ grate over Box

$5^{8.4}$ Bottom Box 2

$1^{2.6}$ Top Curb

165.85 — 166.35

$2^{1.5}$ 50 CY

$1^{6.5}$ 50 CB

INDEXED
AUG 27 1953

RCP 165.24 — 165.29 — 1.35.2 — 165.28 — 161.32

$0^{2.6}$ 50 CB

$0^{7.1}$ 50 CY

Top Curb

$2^{7.5}$ 165.25

$2^{7.2}$ grate over inlet

$6^{0.8}$ Bottom Box

16 8.00 K

Cont. Next page

C. Allen
D. Sissom
C. Powell

Hartley St 50' wide

6.50
10.50
3.0
5.0
25' PK
5' walk
11°
7°
Base Line
Wly curb Line
℄ Proposed Drain
Chisel 'X' POT - 9+23.30
See page 32 for Levels Green Line
15" CI Line & Proposed Drain
5/8" Iron Pin
Base Line
Wly Curb Line
Wly Dump Bunt Conc Bridge
N 0° 00' E
Rnd Hub POT of 13.96
8'00
90° 00'
194.40
7'
Chisel 'X' POT
5/8" PK Nail
℄ Proposed Drain
L & T
26°
60° 00'
CASTANA
0+00
A 77
7'
L & T
℄ Nogal ST
7'

5/8" PK
5' walk
10' CBS
5/8" Nail 3+69.07 ℄ Perp ST

Proposed Drain in 47th ST
So. Cholla Creek Bridge (Castana ST)
To Clean out ± 100' Nly Market ST -
WO# 2106 - 10-8-52 -

32384
16.0'
18477'
Existing Cleanout
90° 00'
11°
Check Location of this point on 9477 approx 5.00' Nly of
Hub 1.0' Rt 1.37' Fly of Base Line
Sta 17+64.27
MARKET ST
Base Line
℄ Proposed Drain
47th ST
Chisel 'X' POT 13+00
Wly Curb Line
Hartley ST. 50' wide

Base Line -
Base Line Run 11° Wly of proposed Drain to avoid Heavy Traffic.

MARKET ST

Green Line Ran 11/17/52 - See page 32

See page 36 for Levels

Ref FB 1663-15 ?
Map # 2434 -

Cont from Previous Page

Levels for Proposed Drain in 47th St - See page 19-

LT = Wly

Base Line

Rt = Ely.

20

	66.7	75.70	75.60	75.06	75.26	75.40
1+50 on Bridge	13.8	4.75	4.85	5.39	5.19	5.05
	3.0 ground Wly of Bridge - Creek Bottom		4.0 CB	4.0 Gut	11.0 ℄ Drain	19.0 ℄ Pvt
	70.1	75.75	75.71	75.13	75.35	75.45
1+20.8 = ℄ LT Base Line & Wly Guard Rail Bridge begin So. Chollas Creek bridge	10.4	4.70	4.74	5.32	5.10	5.0
	3.0 ground Wly of Bridge		4.0 CB	4.0 Gut	11.0 ℄ Drain	19.0 ℄ Pvt.
1+07.5 - 5.5 LT = SW Cor Wing Wall Bridge So Chollas						
		75.63	75.50	75.09	75.37	75.45
1+00		4.02	4.95	5.36	5.08	5.0
			4.0 CB	4.0 Gut	11.0 ℄ Drain	19.0 ℄ P
		75.30	75.21	74.94	75.24	75.31
0+50		5.15	5.24	5.51	5.21	5.14
			4.0 Top. CB	4.0 Gut	11.0 ℄ Drain	19 ℄ Pvt
		75.15	75.05	74.74	74.97	75.07
0+00 = ℄ Castana St to Ely.		5.30	5.40	5.71	5.48	5.38
			40 Topso	9.0T	11.0 ℄ Prop. Drain	19 ℄ Pave
47th Paved with Portland Conc + Topped With A.C.					80.45	
BM- 5.08	80.45	75.37				

LT ℄ Nogal + ELY 7' Line 47th - FB 1673 - 15

Levels proposed Drain in 47th

changes to 18" Corg Pipe
OUTLET = 18" X 18" Conc box
15" throat - 3½ N+S X 2½ E&W. grate

3+04 - 4° Rt = face curb over Type A-2 inlet

3+00.

for inlet at 3+04
2+96.13 = Rt base line = 18" Corg out fall pipe

TP,	9.80	84.95	5.30	75.15

2+50

2+00.

1+98.5 - 5.5 LT = N'ly end Wing Wall.

1+85 - } 6 LT = ℄ guard Rail
N'ly end So. Chollas Creek Bridge

LT = w'ly

Base Line

Rt = ely

21

11° Rt = ℄ Proposed Drain

75.10	75.10	74.15	71.63	74.55
9.85	9.85	10.80	13.32	10.40
	4° cb	4° grate gutter	4° Bottom Box	11° ℄ Prop Drain
75.10	75.10	74.25	74.55	74.69
9.85	9.85	10.70	10.40	10.26
	4° cb	4° out Throat	11° ℄ Drain	19° ℄ PVT

elev = 70.36
13 ℄
IE 18"
Corg Pipe

84.95 x

75.29	75.27	74.77	74.98	75.13
5.16	5.18	5.68	5.47	5.32
	4° cb	4° out	11° ℄ Drain	19° ℄ PVT
75.42	75.46	74.96	75.21	75.37
5.03	4.99	5.49	5.24	5.08
	4° cb	4° out	11° ℄ drain	19

70.9	75.73	75.65	75.05	75.27	75.45
9.6	4.72	4.80	5.40	5.18	5.00
3° ground w'ly of Bridge Creek Bottom		4° cb	4° out	11 ℄ Drain	19 ℄ PVT

80.45 x

Proposed Drain 4773 ST

LT = W/y-

Base Line

Rt = e/y

	Base Line	Rt = e/y			
	83.46	83.40	83.07	83.23	83.31
5+25	1.49	1.55	1.88	1.72	1.64
		37 CB	37 GUT	11° ℄ Pro. Drain	19° ℄ PVT
	82.44	82.36	81.99	82.25	82.38
5+00	2.51	2.59	2.96	2.70	2.57
		4° CB	4° GUT	11° ℄ Pro. Drain	19° ℄ PVT
	79.96	79.80	79.42	79.67	79.91
4+50	4.99	5.15	5.53	5.28	5.04
		4° CB	4° GUT	11° ℄ Drain	19° ℄ PVT
	77.67	77.59	77.19	77.47	77.66
4+00	7.28	7.36	7.76	7.48	7.29
		4° CB	4° GUT	11° ℄ Drain	19° ℄ PVT
	76.57	76.48	76.02	76.34	76.52
3+75	8.38	8.47	8.93	8.61	8.43
		4° CB	4° GUT	11° ℄ Prop. Drain	19° ℄ PVT
	75.73	75.57	74.93	75.35	75.45
3+50	9.22	9.38	10.02	9.60	9.50
		4° CB	4° GUT	11° ℄ Prop Drain	19° ℄ PVT
	75.33	75.15	74.48	74.78	74.86
3+25	9.62	9.80	10.47	10.17	10.09
		4° CB	4° GUT	11° ℄ Prop Drain	19° ℄ PVT

84.95 x

Levels for Proposed Drain in 47th ST
℄ Proposed Drain is 11° Rt of Base line

7+50				
staked by Chas Mooke - Information in office				
Through Ely Curb				
7+48 — 34° Rt = ℄ 8' Wide Surface Drain				
7+00 —				
6+50				
6+00				
TP2	8.22	92.84	0.33	84.62
5+75				
5+50				

Lt = Wly

Base Line

Rt = Ely

23

86.87 86.83 86.38 86.69 86.78
5.27 6.01 6.46 6.15 6.06
4° Cb 4° GUT 11° ℄ Pro Drain 19° ℄ PVT

86.33 86.21 85.71 86.03 86.08
6.51 6.63 7.13 6.81 6.76
4° Cb 4° GUT 11° ℄ Pro Drain 19° ℄ PVT

85.51 85.46 85.00 85.28 85.37
7.33 7.38 7.84 7.56 7.47
4° Cb 4° GUT 11° ℄ Pro Drain 19° ℄ PVT

84.71 84.64 84.14 84.48 84.60
8.13 8.20 8.70 8.36 8.24
4° Cb 4° GUT 11° ℄ Pro Drain 19° ℄ PVT

92.84 T

84.45 84.35 83.87 84.11 84.19
0.50 0.60 1.08 0.84 0.76
4° Cb 4° GUT 11° ℄ Pro Drain 19° ℄ PVT

84.11 84.01 83.55 83.73 83.84
0.84 0.94 1.40 1.22 1.11
4° Cb 4° GUT 11° ℄ Pro Drain 19° ℄ PVT

84.95 T

Proposed Drain 47.72 ST

LT = wly.

Base Line

RT = ely

88.37	88.31	87.59	87.94	88.12
8+25	47	45.3	52.5	49.0	47.2
		4.0 Cb	4.0 PVT	11.0 & Pro Drain	1.9 & PVT
		88.25	87.52		
		45.9	52.2		
		4.0 Cb	4.0 PVT		
		88.08	87.33		
		47.6	55.1		
		4.0 Cb	4.0 PVT		
87.55	87.44	86.96	87.36	87.54
8+00	52.9	54.0	58.8	54.8	53.0
		4.0 Cb	4.0 PVT	11.0 & Pro Drain	1.9 & PVT
87.16	87.06	86.66	87.01	87.14
7+75	56.8	57.8	61.8	58.3	57.0
		4.0 Cb	4.0 PVT	11.0 & Pro Drain	1.9 & PVT

No grate

8+21 - 4° Rt = N/y end throat in curb

Doubtful if LT carries water
Drains into 47.72 from wly.

No grate

8+15 - 4° Rt = S/y end throat in curb

RR Underpass

8+16.5 - 1° LT = end 1.8' wide Conc Bulkhead for

Bulkhead for RR Underpass -

7+83.5 - 1.6 LT = ely edge 1.8 thick Conc

Begin

92.84

Proposed Drain in 47 12" LT = W 1/4 Base line Pt = e/y. 25

94.55 94.37 93.91 94.22 94.45
10 36 10 54 11 00 10 69 10 46
4° CB 4° PVT 1/2 Prop. Drain 19° ℄ PVT

104.91 T

TP3 12.10 104.91 0.02 92.81 Nail in Pole 2' Rt ± Sta 9+20 ±

92.64 92.56 92.12 92.42 92.52
0 20 0 28 0 72 0 42 0 32
4° CB 4° 11° ℄ Pro Drain 19° ℄ PVT

9+25

91.09 90.99 90.54 90.86 90.99
1 75 1 85 2 30 1 98 1 85
4° CB 4° PVT 11° ℄ Pro Drain 19° ℄ PVT

9+00

90.02 89.90 89.47 89.70 89.86
2 82 2 94 3 37 3 14 2 98
4° CB 4° PVT 11° ℄ Pro Drain 19° ℄ PVT

8+75

88.86 88.80 88.30 88.57 88.77
3 98 4 04 4 54 4 27 4 07
4° CB 4° PVT 11° ℄ Pro Drain 19° ℄ PVT

8+50

92.84 T

Proposed Drain 47th St.

11+50				
11+25				
11+00				
TP4	11.89	116.20	0.30	104.61
10+50				
10+00				
9+75				

LT = Way. Base Line Rt = ely 24

110.94	110.79	110.29	110.55	110.72
5.26	5.41	5.91	5.65	5.48
	4% Cb	4% GUT	11% Pro. Drain	19% PVT
109.14	109.09	108.55	108.80	108.98
7.06	7.11	7.65	7.40	7.22
	4% Cb	4% GUT	11% Pro Drain	19% PVT
107.12	106.98	106.48	106.80	107.03
9.08	9.22	9.72	9.40	9.17
	4% Cb	4% GUT	11% Pro Drain	19% PVT

116.20 T

102.84	102.70	102.27	102.54	102.61
2.07	2.21	2.64	2.37	2.30
	4% Cb	4% GUT	11% Pro. Drain	19% PVT
98.58	98.49	98.04	98.40	98.51
6.33	6.42	6.87	6.51	6.40
	4% Cb	4% GUT	11% Prof Drain	19% PVT
96.51	95.97	96.24	96.27	96.47
8.40	8.94	8.67	8.47	
		4% GUT Int Drive	11% Pro Drain	19% PVT

104.91 T

Proposed Drain in 47th ST.
Market to S. Chollas Creek

12+58 3 ± = ℄ Hartley ST

12+40 3 ± = Sly Curb Line Hartley ST

TPS 9.05 124.56 0.69 115.51

33
12+34 27 ± = Sly Line Hartley ST

12+16 2 ± = BC SW- cb Radius = 24'
Curb Return Hartley

12+00

11+75

LT = VARY

Base Line

Set = ely - 27

116.34
8 22
11 ℄ Prop Drain

118.14 117.6 116.08 115.7
6 42 7 0 8 48 8 9
50 cb 50 gut 20 cb BC 20 gut BC

115.4 115.32 115.60 115.70
9 2 9 24 8 96 8 86
4 Nocb W/Eydge Pave 11 ℄ Prop Drain 19 ℄ PVT

124.56 T

115.30
0 90
11 ℄ Prop Drain

114.72 114.6 114.16 114.48 114.56
4 48 1 59 2 04 1 72 1 64
4 cb 4 gut 11 ℄ Prop Drain 19 ℄ PVT

113.92 113.80 113.32 113.59 113.73
2 28 2 40 2 88 2 61 2 47
4 cb 4 gut 11 ℄ Prop Drain 19 ℄ PVT

112.60 111.90 112.16 112.20
3 60 4 30 4 04 4 00
4 gut in Drive 11 ℄ Drain 19 ℄ PVT

116.20 T

Proposed Drain in 47th St

LT = W'ly

Base Line

Rt = E'ly.

15+00

120.18 120.11 119.62 120.00 120.13

4.38 4.45 4.94 4.56 4.43

4.0 eb 4.0 90T 11.0 ℄ Pro. Drain 19.0 ℄ PVT

14+50

119.86 119.83 119.36 119.66 119.81

4.70 4.73 5.20 4.90 4.75

4.0 eb 4.0 90T 11.0 ℄ Pro Drain 19 ℄ PVT

14+00

119.56 119.52 119.24 119.49 119.64

5.00 5.04 5.32 5.07 4.92

4.0 eb 4.0 90T 11.0 ℄ Pro Drain 19.0 ℄ PVT

13+50

119.25 119.17 118.84 119.10 119.15

5.31 5.39 5.72 5.46 5.41

4.0 eb 4.0 90T 11.0 ℄ Pro Drain 19.0 ℄ PVT

13+00 ± 4.0 ℄ Pt = N'ly BC N'ly curb ℄ of Hartley

116.18 118.01 117.55 117.86 117.95

6.38 6.55 7.01 6.70 6.61

4.0 eb 4.0 90T 11.0 ℄ Pro Drain 19.0 ℄ PVT

117.29

7.27

11.2 ℄ Prop. Drain

12+83.3 ± = N'ly Prop Hartley St

118.71 118.2 117.52 116.9 116.6 116.74 117.14 117.18

5.85 6.4 7.04 7.7 8.0 7.82 7.42 7.38

5.0 eb 5.0 90T 20.0 eb 20.0 90T BC 4.0 W'ly edge Pave 11.0 ℄ prop. Drain 19.0 ℄ PVT

12+76.5 ± = N'ly curb Line Hartley St

124.52 ℄

Proposed Drain 47½ ST
Sly Market ST

Midpoint SW Return - L = 31.4

17+14.27 = Sly Curb Line Market

16+98.77 - INVERT ELEV. MH = 114.42
= Sly Line Market ST - 120' Curb Rod.

16+94.27 4° Rt = Sly BC, SW cb Rt Market + 47½

16+50

TP6 8.25 129.49 3.32 121.24

16+00

15+50

LT = W'ly Base Line Rt = E'ly 29

121.90 121.32
7 59 8 17
Cb Midpt GUT Midpt

125.76 125.44 122.51 122.12 121.32 121.29 121.39 121.39
3 73 4 05 6 98 7 37 8 17 8 20 8 10 8 10
50 Cb 50 GUT 16° cb EC 16° GUT EC 4° 11° ℄ Pro drain 19° ℄ PVT

121.56 121.39 120.97 121.26 121.31
7 93 8 10 8 52 8 23 8 18
4° cb BC 4° GUT BC 11° ℄ Pro drain 19° ℄ PVT

121.10 121.04 120.67 121.04 121.13
8 39 8 44 8 82 8 45 8 36
4° cb 4° GUT 11° ℄ Prop Drain 19° ℄ PVT

129.49 ℸ

121.04 120.94 120.44 120.79 120.87
3 52 3 62 4 12 3 77 3 69
4° cb 4° GUT 11° ℄ Prop Drain 19° ℄ PVT

120.59 120.56 120.06 120.41 120.53
3 97 4 00 4 50 4 15 4 03
4° cb 4° GUT 11° ℄ Prop Drain 19° ℄ PVT

124.56 ℸ

Proposed Drain #7 7th St

18+50

18+00 - Location of Portland Cmc in doubt if ANY-

17+74.27 = N'ly Prop Market St
- also end of curbing on N'ly -
- 4° Rt = Curb EC - NW Rct
- begin Rough 5' AC Walk
- E'ly end 5' Walk

Mid point 20' Rad NW Curb Rct

17+54.27 = N'ly Curb Line Market St

Cmc. to N'ly Market St is 20' wide

5' Jog in ℄ 7th at ℄ Market

17+34.27 = ℄ Market St

Lt = W'ly | Base Line | Lt = E'ly | 3°

123.3	122.24		122.47	122.89
6	7 2.5		7 0.2	6 6.0
	4° W'ly edge AC		11° ℄ Pro Drain	24° ℄ PVT
122.6	121.41		121.87	122.22
6 9	8 0.8		7 6.2	7 2.7
	4° W'ly edge AC - Nock		11° ℄ Pro drain	24° ℄ PVT ?
121.76	121.71	121.23	121.59	121.89
7 7.3	7 7.8	8 2.6	7 9.0	7 6.0
	4° Cb EC	4° ℄ VT EC	11° ℄ Pro. Drain	24° ℄ PVT ?

121.79	121.37
7 7.0	8 1.2
Mid Point Cb	Mid point ℄ VT

126.00	125.65	122.40	122.11	121.34	121.42	121.57	121.69
3 4.9	3 8.4	7 0.9	7 3.8	8 1.5	8 0.7	7 9.2	7 8.0
50 Cb	50 ℄ VT	16° Cb BC	16° ℄ VT BC		4°	11° ℄ Pro. Drain	24° ℄ PVT ?
	125.77			121.57	121.51	121.49	121.49
	3 7.2			7 9.2	7 9.8	8 0.0	8 0.0
	50				4°	11° ℄ Pro. Drain	19° ℄ PVT

129.49 ±

Proposed Drain 47th St

				(75.37)
TP12 - Start BM			8.08	75.38
TP11	5.31	80.46	11.47	75.15
TP10	0.90	86.62	9.78	85.72
TP9	0.06	95.50	13.26	95.44
TP8	1.07	108.70	13.20	107.63
TP7	0.79	120.83	9.45	120.04

18+77.5 - 16.7 LT at 90°00' = ℄ CleanOut

18+76.7 - 4.5 MANhole scaled at baseline = ℄ SMH

LT = W/y

Base Line

RT = e/y

3

115.81	12 1.00	123.7	122.68	122.98	123.49
13.68	5.49	5.8	6.81	6.51	6.00
16.07	16.07		7.0	11.0	24.0
IE CleanOut	ON Lid		W/y edge AC	& Prop Drain	PVT

122.59

6.90

7.0

RIM

117.94

INVERT ELEVATION

129.49 T

Proposed Drain Ely of 47Th St
Between Bridge & Para ST
See Green Line Sketch page 19-
11/17/53
C. Allen, D. Sisson, C. Powell

2" thick
0+28 5 = Sly edge AC. Parking Area for Trailer Court

25
0+30 - ℄ Proposed Drain Crosses 4' high Chain Link fence

0+14 - 5 = NEly Cor Wing wall Conc bridge

0+13 = Top Nly bank creek

13 7 LT = Ely side of Ely Conc Stringer of Bridge
9 LT = SE Cor Dump Bent

0+00 = Sly face of Nly Dump bent, conc. bridge over Chollas Ck.

0-10 = Sly for Chollas Creek

0-32 = ℄ Cholas creek

BM = LT ℄ Nail + Ely 7' Line 47Th Page 20

LT = Wly ℄ Rt. Ely - 32

75 4 8
7
Ely edge Walk on AC

75 4 9
AC.

75 8 4
15

76 2 3
5
Top Wing Wall

74 8
5
ground

76 2

76 4
15

75 0 5 — 15 Ely out Cb
75 1 — 15 Top Ely
74 5 4 — 9 Top Conc Pier Bottom Deck
70 8 — 9 ground
47Th

71 0

71 4
15

67 2

66 4

75.37 - Direct Elev

Rod used - all Elevs are True elev -

47TH ST Drain.

INLET page 21 (3+04)

1+21 = Low Spot in 47TH ST opposite curb

Not Rectangular -
Planter Box is Rounded off on ELy side
Filled with floral Shrubs.

7½ LT = SW cor planter Box
6½ Rt = SE cor planter Box
1+07 - Slyedge 1' high Brick planter Box

1+00.

0+75

0+53½ = Nly edge 1' high Brick planter Box
Filled with floral Shrubs.

6½ Rt = SE cor planter
8° LT = S.W. cor planter
0+33½ = Slyedge 1' high Brick planter

LT = Wly & Rt = Ely - 33

74 70 — 15 Ely Out
75 14 — 15 Top Ely Cb

75 33 — 7½ S.W. cor Box AC
75 42 — AC
75 41 — 6½ SE cor Box AC

74 69 — 15 Out
75 02 — 15 Top Cb
75 42 — AC
75 53 — 4½ AC

74 75 — 15 Out
75 11 — 15 Top Cb
75 42 — AC
75 45 — 5 AC

74 79 — 15° Ely Out
75 15 — 15° Top Ely Cb
75 47 — AC
75 55 — 15 AC

75 47 — 8° (on A, C) SW cor Planter
75 43 — AC
75 62 — 6½ (on AC) SE cor Planter

47TH ST Drain

LT = W'ly ℄ RT = E'ly

2+17.5 ± = BC curb Return to Trailer Court

Area trailer court

2+08.5 = N'ly edge AC (2" thick) parking

5° LT = E'ly end Return entrance to Trailer CT
12" R.C. Berm (E+W)

2+07.5 - ℄ proposed Drain intersects S'ly edge

2+00 -

1+71.97 = N'ly Line Fresa ST (closed)

1+46.75 = ℄ Fresa ST (closed)

5° LT = E'ly edge Portland Conc
New entrance to Trailer court

1+31.56 = E.C. old Return Fresa ST

1+27° = N'ly edge 1 thick Brick Planter Box
15° LT = B.C. Return

1+21.56 = S'ly Line Fresa ST (closed)

77.33 15-0 GUT

77.77 15-0 Top CB

77.6 ground

76.81 15° GUT

77.78 5° Top Ret Flume

77.30 5° Conc GUT

77.18

77.14 15

76.39 15 GUT Inlet

76.29 5° Flume

76.90

76.92 15

75.28 15 AC

5° Flume

75.70

75.99 15 AC

75.02 15 GUT Neck

5° N'ly Conc

75.16

75.55 15 AC

75.32 7.5 NECOR Planter

75.34

75.38 6.5 NECOR Planter

47 72 ST Drain

		Lt = Wly	℄	Rt = Ely - 35
Ck on Levels - Top curb 5+00 page 22	82.37 c 82.36			
3+69.43 - ℄ Pera ST. (closed?)		83 49 18-0 gut No cb	83 87	84 06 15 Ac
3+43.02 = Sly Line Pera ST				
= Slyedge A.C. Road to Trailer ct =				
3+34 - 5-0 Lt = Elyend cb Rct to Trailer ct.	05 32	83 30 5-0 Top cb	82 84 3-0 gut Ac	83 29 Ac
3+33 5 - Slyedge 15' wide A.C. Berm -				
3+24 ± = BC Curb Return to Trailer court		82 30 15-0 gut	82 74 15-0 Top cb	
3+00 -		81 14 15-0 Ely gut	81 52 15 Top ely cb	81 4 81 4 15-0
6° Lt = ℄ Water Meter for trailer ct - arrangement			81 10 6-0 Top Valve Inside Box	
Rt = Wly end 10' E & W Water Valve To Trailer court				
2+94 5 ℄ Proposed drain crosses 2½" Water Line				
2+50		78 80 15 gut	79 21 15 Top cb	79 4 ground 79 3 ground 15

Line Change on 47th St Drain
from 9+23.30 To 18+77.5 - see green
Line page 19-

SE Corwall- Rain

9+90.5 - 0.5 Rt = Ely face 6" Stucco wall
Nly edge Conc Drive

9+73 = Sly edge Conc Drive Way

9+73 - L in wall = 3.3 LT = L

9+71 - L in 8½" Wall - 0.6 RT - Wall L is Wly

9+50 - 0.6 Rt = Ely side 8½" Stucco wall

See page 19.

9+23.30 - 0.6' Rt = Ely edge (SE Cor) 8½" Stucco Wall

Base Line = 3' Wly of Wly edge walk.

BM - 11.79 104.60 92.81.

LT = Wly Rt = Ely

99.58	104.3	103.18	98.25 (3' Wly of Wly edge 5' Walk)	98.2	97.88
5.02	0.3	1.42	6.35	6.4	6.72
10 on Drive	10 gr. Nly Sidewall yard	@ Top Wall	Conc Drive Slyface Wall	0.5 gr at Ely Wall	3.0 Wly edge Walk

99.12	96.97	96.49
8.48	7.63	8.11
10 on Drive	Drive Way	3.0 Wly Walk

101.9	100.10	96.5
2.7	4.50	8.1
10 gr yard.	Top Wall	0.6 gr Ely Wall

101.5	99.6	99.6	97.6
3.1	5.0	5.0	10.0
10 yard	1.0 gr Wly Wall.	Top Wall	0.6 gr at Ely Wall

101.7	98.50	97.1	98.50
2.9	6.10	7.5	6.10
10 gr.	Top Wall	0.6 gr at Wall Ely Wall	0.6 Top Wall

10+1.60 π

Nail in pole - TP 3 Page 25 -

Line change 47+25T Drain

11+00

10+76 = N'lyedge Conc Drive

0.5 Rt = Ely side 6" stucco wall -

10+68 - 3.0 Rt = SECOR begin Conc Drive

TP1	12.04	116.46	0.18	104.42

10+50 - 0.5 Rt = ely side 6" stucco wall

10+00 - 0.5 Rt = Ely side stucco wall (6").

Lt = W'ly. ℄ Rt = e'ly - 37

3.1 W'lyof W'lyedge walk

109.7 | 108.0 | 107.25
6.8 | 8.5 | 9.2
10 yard sod | ON yard sod | 3.0 W'lyedge walk

107.78 | 105.82 | 105.14
8.68 | 10.64 | 11.32
10 ON Drive | | 3.0 ON Drive

107.58 | 107.46 | 105.06 | 104.6 | 104.47
8.88 | 9.00 | 11.40 | 11.9 | 11.99
10.0 Drive S'lyedge | 10 yard grass | Top Wall | 0.5 grat Ely wall S'ly Drive | 3.0 Backedge walk ON Drive

116.46 π

107.6 | 104.6 | 104.58 | 103.0
+ 3.0 | 0.0 | 0.02 | 1.6
10 Yard | 1.0 gr W'ly wall | Top Wall | 0.5 grat Ely wall

104.6 | 103.5 | 103.37 | 98.8
0.0 | 1.1 | 1.23 | 5.8
10 Yard | 1.0 grat W'ly wall | Top Wall | 0.5 grat Ely wall

104.60 π

47th St Drain

11+78 5' = N'lyedge Conc Drive

11+65 - S'lyedge Conc Drive

11+50

11+33 - 3° Rt - Ely end E&W Conc Block Wall

11+25 = N'lyedge Conc Drive.

11+17 - S'lyedge Conc Drive

Lt = wly	℄	Rt = ely.
	3' wly of W'lyedge Walk	
112.94 35 2 10 Drive	112.83 3 63 Drive	112.79 3 67 3° Drive W'lyedge Walk
112.70 37 6 10 Drive	112.24 4 22 Drive	112.03 44 3 3° edge Walk on Drive
112.0 4 5 10 yard	111.4 5 1 yard	111.05 5 41 3° W'lyedge Walk
111.62 110.9 48 4 8 2 10 Top Wall 10 or yard	111.01 110.3 8 45 6 2 Top Wall ℄ ground	110.68 109.83 5 78 6 63 3° Top Wall 3° Walk at Ely end Wall
110.42 6 04 10 Drive	109.56 6 90	109.25 72 1 30
110.20 6 26 10 Drive	109.06 7 40 116.46 π	108.66 7 80 3° or Drive W'lyedge Walk

47 TR ST Drain

13.5 LT = BC S w/ RET

(For additional cb shots see page 27

12+40.3 = Sly curb Line Hartley ST

TP2	9.58	124.95	1.09	115.37

2.5 Rt = Top curb on Return

12+30 (27) = Sly Line Hartley ST

3?

12+00

11+91 = Nly edge Conc Drive

11+83 = Sly edge Conc Drive

LT = Wly

116.09	115.7	115.3
8.6	9.3	9.7
13.5	13.5	
Topcb	DIRT CUT	DIRT

℄ 3' Wly of Wly edge Walk

Rt = ely

115.19
9.76
10.5
CUT Mech BC

124.98 T

116.1	115.6	115.4	115.0
0.4	0.9	10.4	1.5
10.	DIRT	2.5 Topcb	2.5 DIRT CUT

114.0	114.0	114.01
2.5	2.5	2.49
Yard Sod	Yard Sod	3.0 Wly edge Walk

113.61	113.56	113.54
2.85	2.90	2.92
1.0 Drive	Drive	3.0 Drive

113.28	113.21	113.13
2.18	2.25	3.33
1.0 Drive	Drive	3.5 Drive Wly edge walk

116.46 T

47 ½ ST Drain

LT = W'ly | ℄ 3' W'ly of W'ly edge Walk | RT = E'ly | 40

13+50

119.3 | 119.5 | 119.38
5 7 | 5 5 | 5 5 7
10 | | 3 0 edge walk

TP

13+00

118.7 | 118.4 | 118.25
6 3 | 6 6 | 6 7 0
1.0 | Dirt | 3 0 W'ly edge Walk

Note: Walk on W'ly side Street in Poor Condition

12+83 5 = begin W'ly edge of walk

12

12+80 ± ℄ Proposed Drain crosses Hartley ST NW Ret

117.0 | 117.52
8 0 | 4 4 3
℄ Top Cb

11

13 5 LT = BC Cb Ret Hartley - W'ly

12+76 3 = N'ly Cb Line Hartley ST

117.54 | 117.0 | 116.2 | 116.75
4 4 1 | 8 0 | 8 8 | 8 2 0
13 5 Top Cb | 13 5 Dirt 9UT | | 10 5 9UT MC

11

12+58 3 = ℄ Hartley.

116.8 | 116.3 | 116.02
8 2 | 8 7 | 8 9 3
1.0 | | 10 5 9UT MC

124.95 ft

	47 Tr ST Drain			Lt in curb Rt S W Cor Market + 47 Tr
TP3	5.84	127.54	3.25	121.70
16+50				
16+00				
15+50				
15+00				
14+50				
14+00				

Lt = wly | 3' wly of Wly edge Walk | Rt = ely

127.54 ℄

121.5	121.3	121.15
3 5/10	3 7	3 80
		3 0 wly of walk
121.2	121.2	121.17
3 8/10	3 8	3 78
		3 0 wly walk
120.6	120.8	120.67
4 4/10	4 2	4 28
		3 0 wly walk
120.1	120.4	120.23
4 9/10	4 6	4 72
		3 0 wly walk
119.8	119.9	119.92
5 2/10	5 1	5 03
		3 0 wly walk
119.5	119.7	119.63
5 5/10	5 3	5 32
		3 0 wly edge walk

124.95 ℄

95 LT = Wly BC NW RET

17+54.27 = Nly curb Line Market

17+34.27 = ℄ Market ST

95 LT = Wly BC S.W. RET 47.73 ± Market

17+14.27 = Sly curb Line Market

47.73 ± Market

17+11.3 ℄ proposed Drain Intersects S.W. RET

17+01.8 = Sly edge 5' E+W Walk Market ST

16+94.27 = Sly Line Market ST

LT = Wly ℄ S'Wly of Wly edge Walk ET = Ely 42

122.41	122.09	121.49
5 1.3	5 4.0	6 0.5
95 Cb BC	95 Gut BC	

		121.94
		5 6.0

122.44	122.02	121.53
5 1.0	5 5.2	6 0.1
95 Top Cb BC	95 Gutt BC	

122.01	121.41
5 5.3	6 1.3
Top Curb	℄ Gutter Conc

122.02
5 5.2

122.2	121.7	121.52
5 3.3	5 4.8	6 0.2
10		30 Wly Walk

1871.54 T

Proposed drain 47th St

LT = Wly ℄ Rt = Ely

47th & Market

Checked Levels Top curb B.C. N. Wy RET

18+77.5 = 9.5 LT = ℄ cleanout

for additional information on cleanout See page 31

18+50

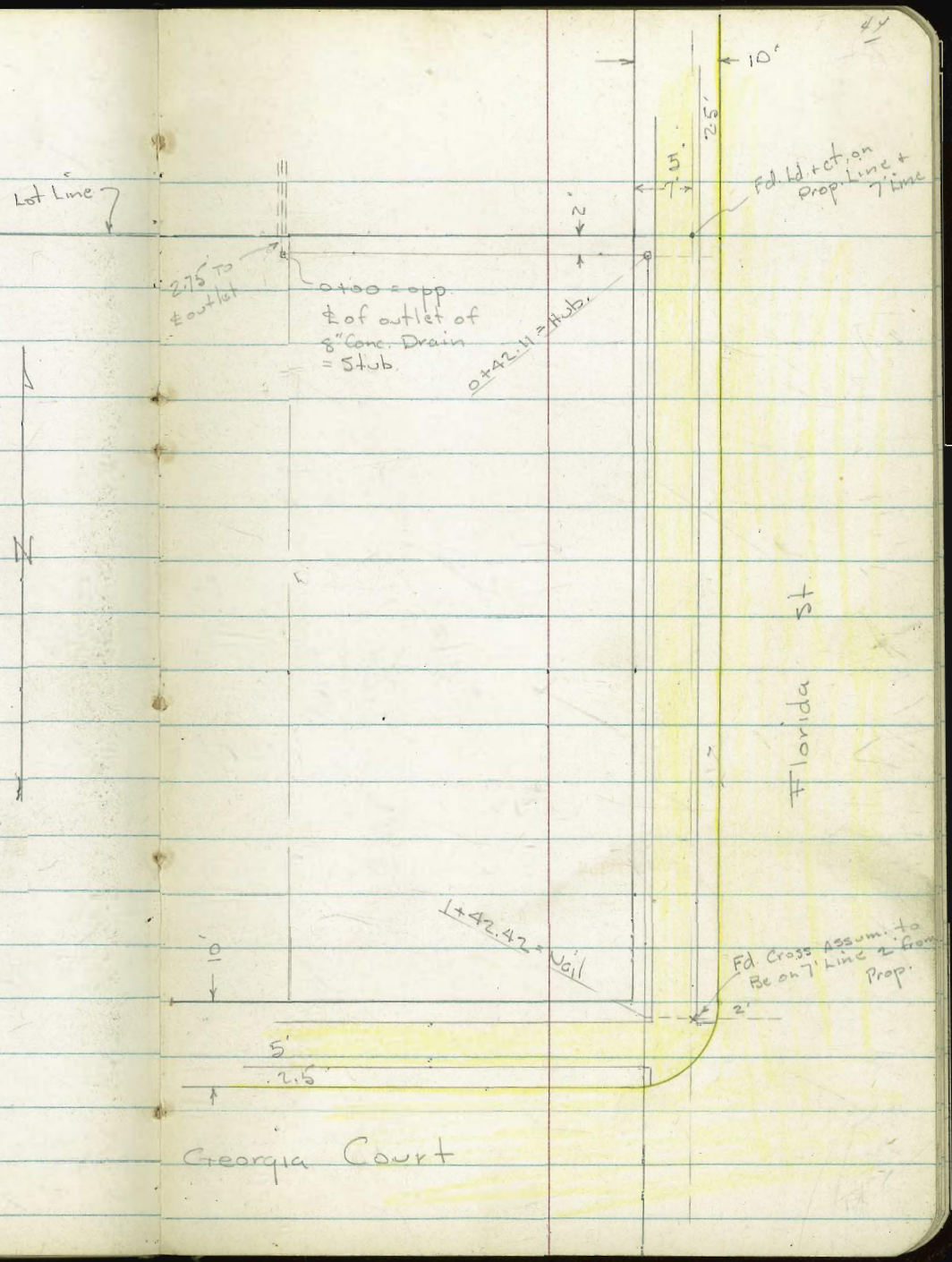
18+00

beg A.C. walk
end conc side walk on Wly
17+74.27 = Nly Line Market

Market
17+61.77 = Sly edge of E&W walk Nly side

17+36.3 ℄ proposed drain intersects N/W RET

123.9	123.8	123.74
3 6	3 7	3 8.0
9 6		3.0 edge AC walk
Top cleanout		
124.0	123.7	123.39
3.5	3 8	4 [illegible]
10		3.0 edge AC walk
123.2	122.7	122.57
4 3	4 8	4 9.7
10		3.0 wly edge AC walk
122.6	122.0	121.76
4 9	5 5	5 7.8
10		3.0 Nly end conc walk
	121.91	
	5 6.3	
	walk	
	121.90	121.53
	5 6.4	6 0.1
	Top curb	℄ out
	127.54	


Lot Line
2.75' To ℄ outlet
0+00 = opp ℄ of outlet of 8" Cone Drain = Stub
0+42.11 = Stub
N
10'
2.5'
5'
7'
Fd. ℄ of Construction Prop. Line + 7' time
Florida St
1+42.42 = Vail
0
Fd. Cross Assum. to Be on 7' Line 2' from Prop.
2'
5'
2.5'
Georgia Court

Survey for Prop. Drain - Florida
+ Georgia Court - Sketch - P 44

W.O. ~~32361~~ 21245 - 6-7-54 - 7.0

		Lt.	℄	Rt.
0+90		64.80 g.t	65.36 8.5 Top cb.	65.51 6 walk	65.61 1	65.6	66.7 9 = Top New fill
Set B.M. on Ld. + ct.	68.46			
0+42.11 = Ang. 90° 18' Rt. - Sect. 90° to Forward Tang.		67.54 g.t	68.36 8.5 Top cb.	68.36 6	68.45 1 edge walk	68.58 on H.b.
0+40 = Top bank				68.5
0+39 - 2.6' Lt. = end wall		69.33 2.6 Top wall		
0+33.5' - 0.5' Lt. = ℄ 24" Pepper				
0+31 = 2.3 Lt. = end of Bldg. + Beg. Conc. wall				
0+25		61.7 2.3 = By Bldg.	61.7	60.7 10
0+06 - 9.5' Rt. = ℄ 36" Euc. Tree		62.2 2.5 = By Bldg - Conc.	62.6	
0+02			60.8	
0+00 = 2.75' S. of ℄ of outlet 8" Conc pipe Thru Conc. wall		61.0 2.75 = ground at wall	62.73 2.75 = I.E. of outlet	61.77 on Stob
B.M. = SW. B.P. Florida + Robinson	273.90			

Actual Elev. Shown 200' f.g. Not Noted

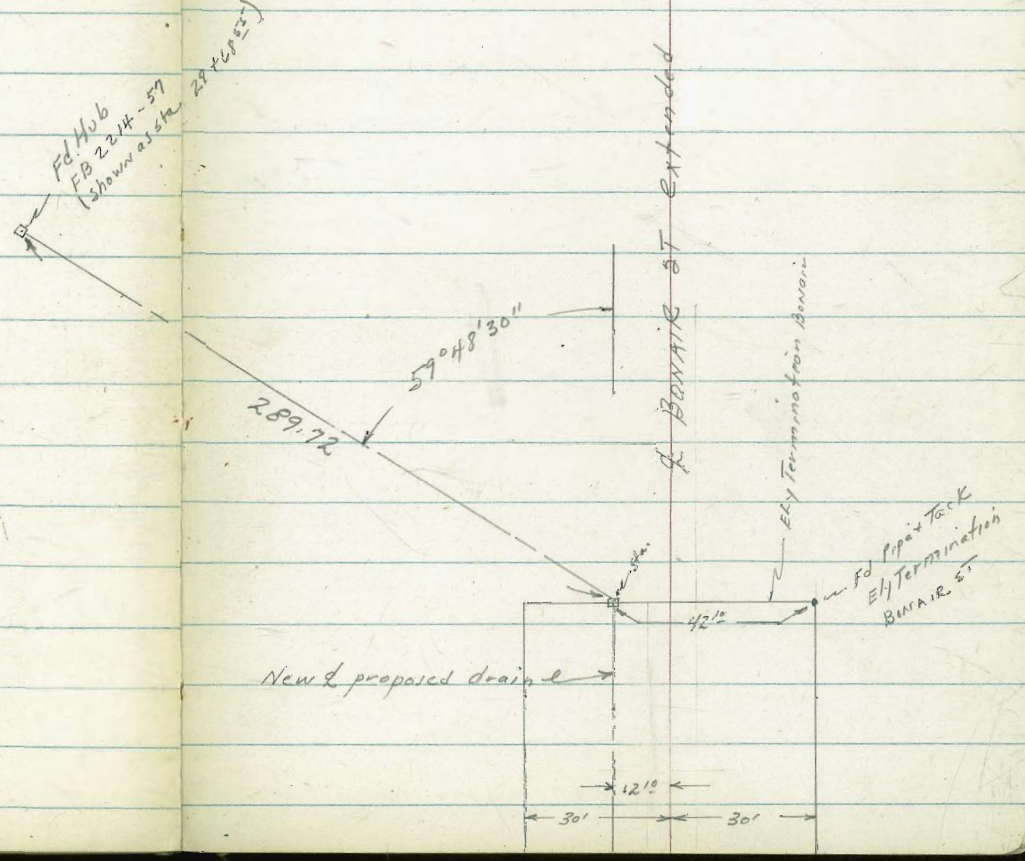
	Lt.	℄	Rt.
2+20	58.00 gut.	58.73 Top cb. 8.5'	58.99 1=walk 59.0
1+80.42 = S.L.	60.10 gut	60.80 8.5' = Top cb. = P.C.	61.02 1 walk 61.0
1+77.5' = edge walk			61.11
1+70.4 = S. cb.	60.97 Top cb.	60.68 gut	61.11 10 Top 60.28 gut.
1+60.4 = ℄			61.60
1+50.4 = N. cb.	62.91 Top	62.00 gut	63.00 10 Top 62.15 gut
1+43 = N. edge of walk		63.05' walk	63.16 10
1+40.42 = N.L Georgia ct.	62.22 gut	62.77 8.5 Top cb. = P.C.	62.85 6 walk 62.98 63.0 63.0 10

Revision of Storm Drain
Bonair ST, Nautilus ST etc
See FB 2214 - 48
WO # 20841
10/27/54
C. Allen, D. Sisson, D. Taylor, C. Powell

Void See page 48

Revised line in Bonair ST is 2' Nly of and parallel to original line per FB 2214

Void See page 48



= Lt. angle Left

See page 49

Revised Storm drain plan line in Draper

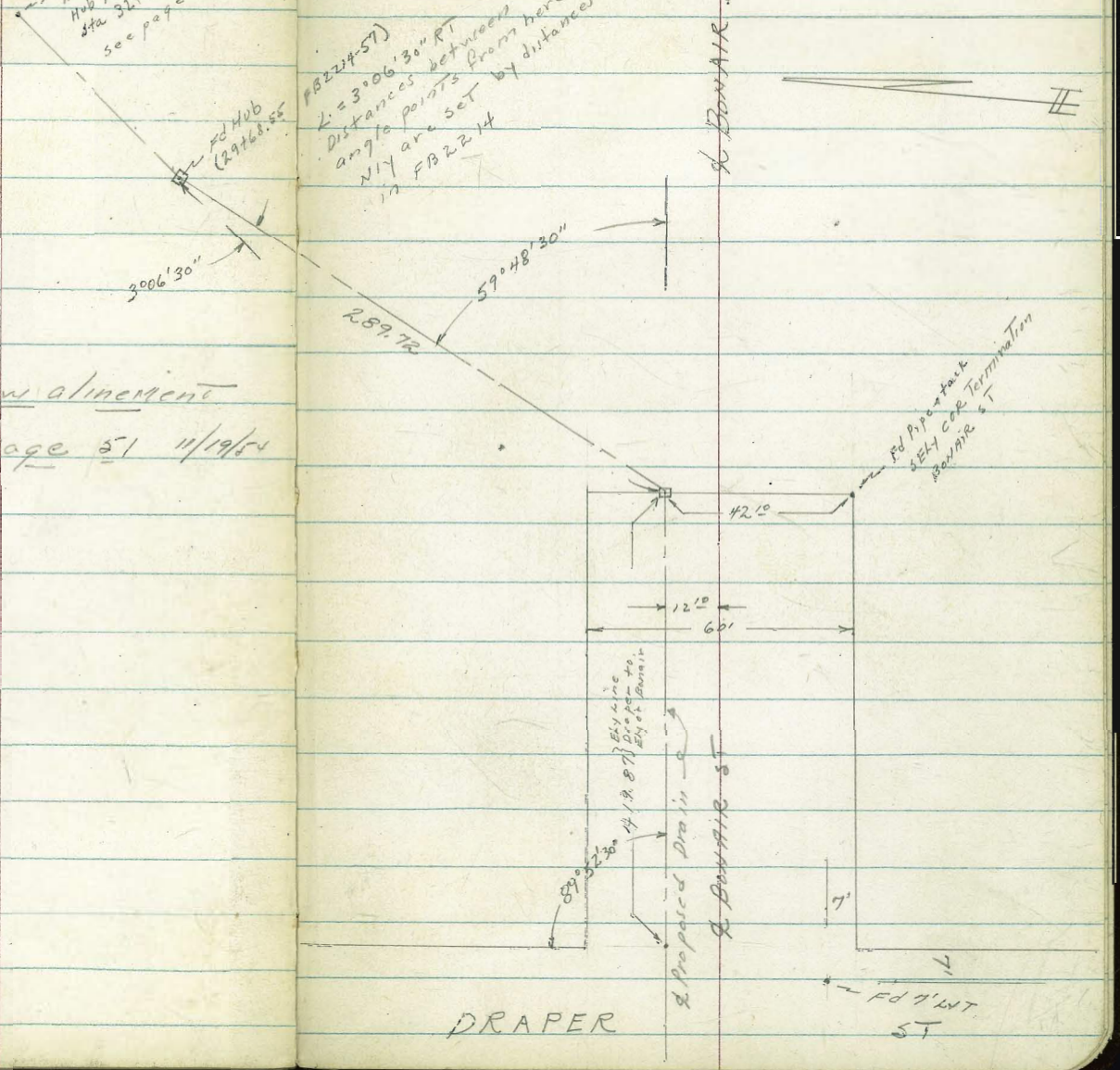
See FB 2214 - WO # 20841

Cont page 49

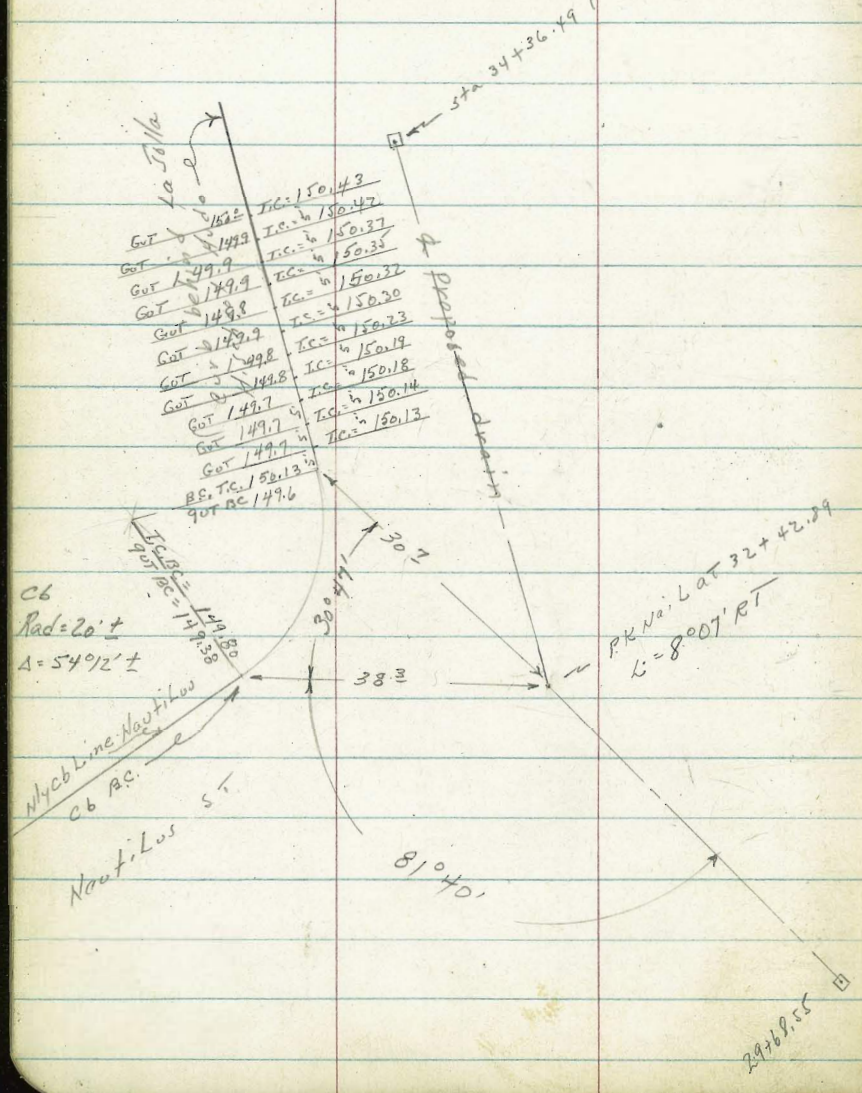
10/27/54
C. Allen
D. Sisson
D. Taylor
C. Powell

Revised line is 2.0' Nly of and parallel to original line per FB 2214

For New alinement
See page 51 11/19/54



Location and elevations of curb behind La Jolla Hi school at Nautilus ST



Berm OUT for A.C. Drive

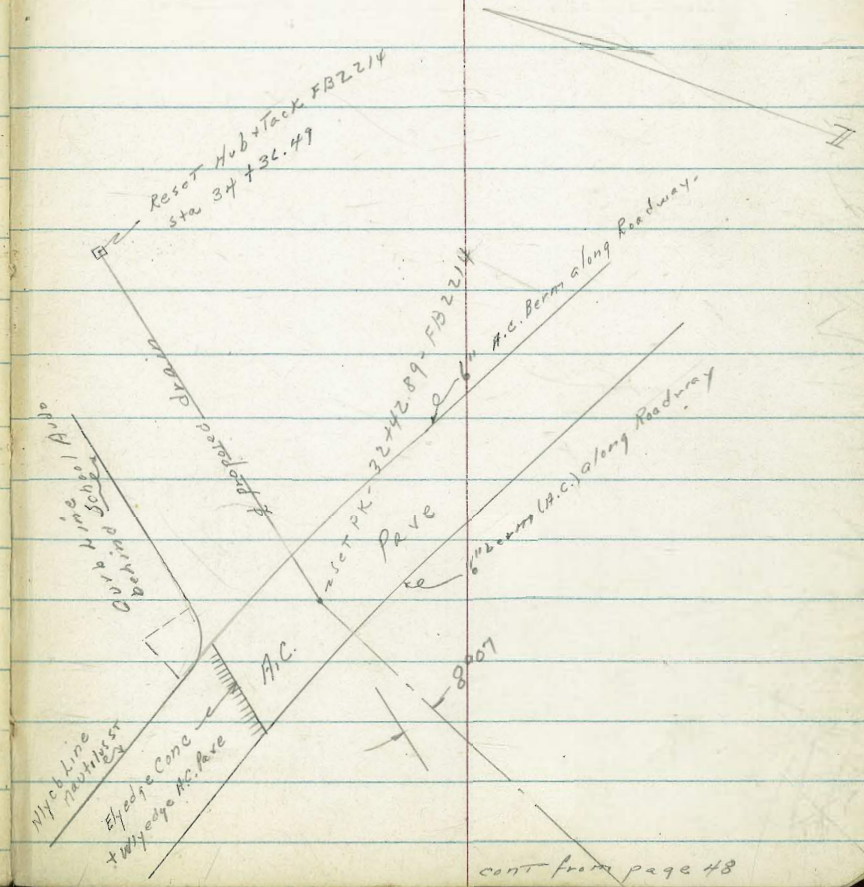
32+59 - Sly edge A.C. Pave Nautilus = 150.67

32+42.89 = L. 8°07'RT - 150.60

32+19± = Sly GOT + Sly edge A.C. Pave = 149.75

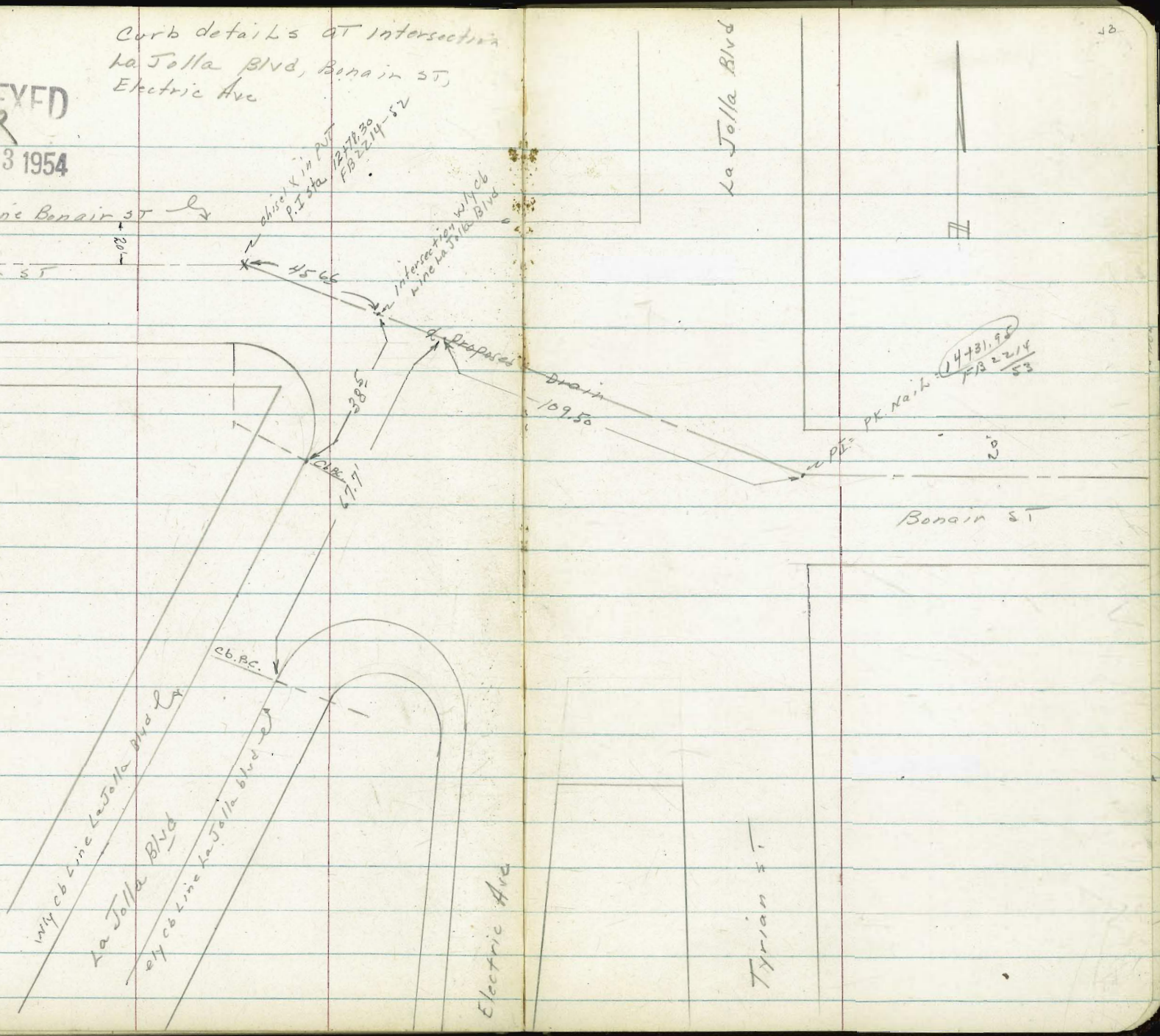
32+18.2 = Top Sly berm Nautilus ST 150.37

32+18 - Gr Sly of A.C. Berm 150.2



cont from page 48

Curb details at intersection
La Jolla Blvd, Bonair ST,
Electric Ave

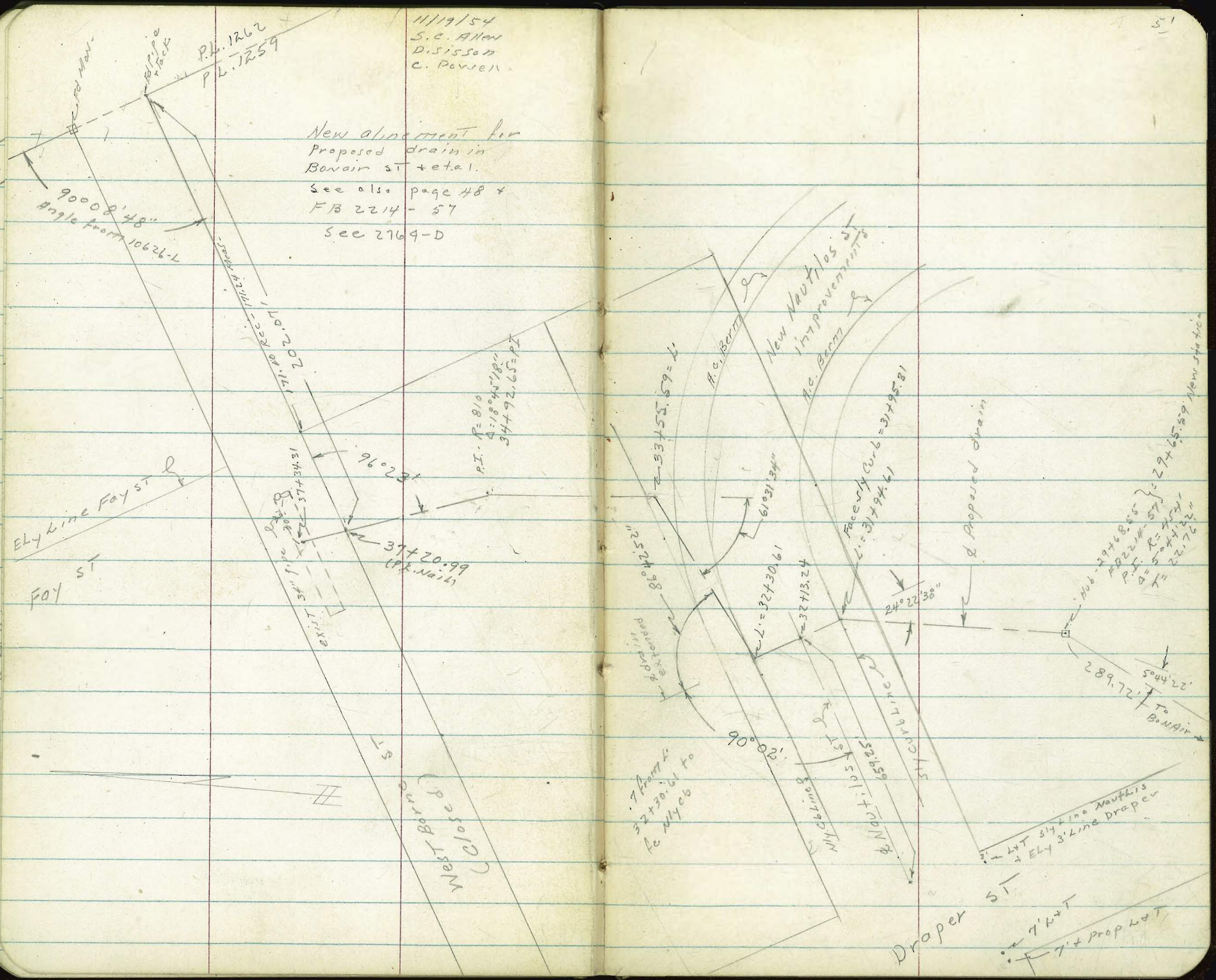


11/19/54
S.C. Allen
D. Sisson
C. Powell

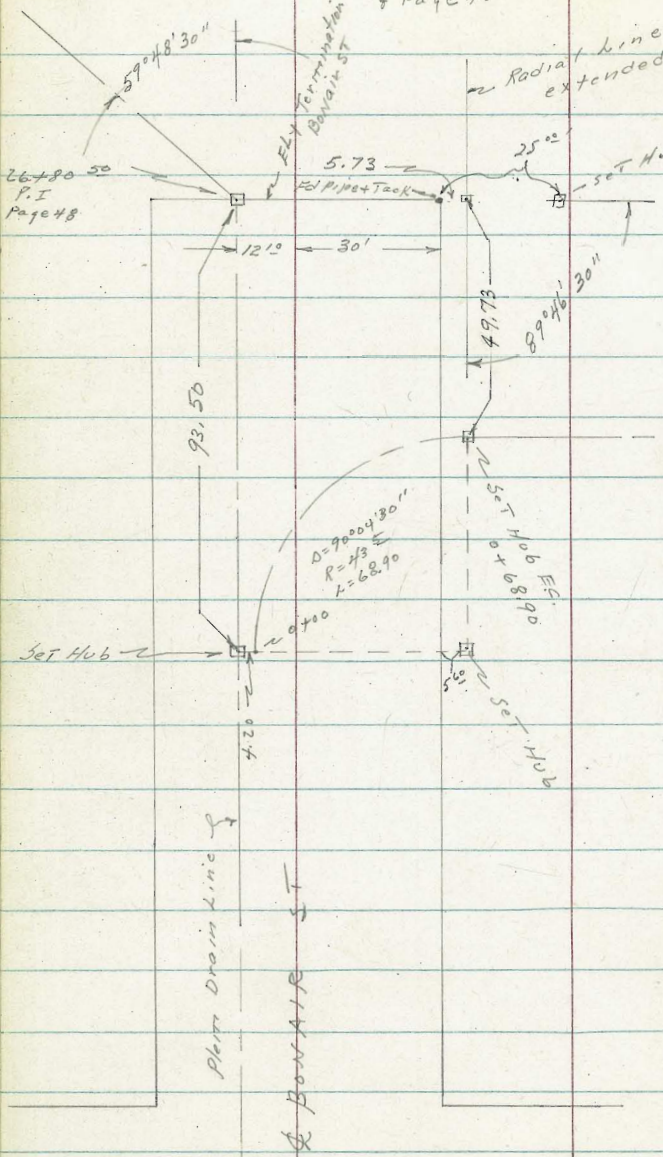
New alignment for
Proposed drain in
Bonair ST + et al.

See also page 48 +
FB 2214 - 57

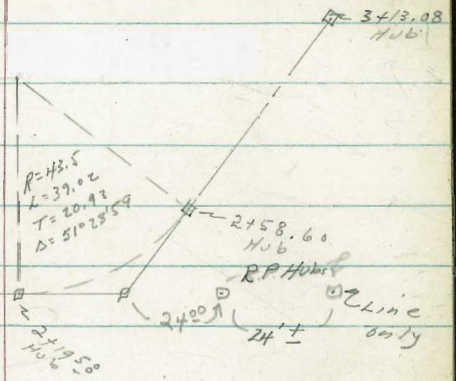
See 2769-D



Plan. Survey for Storm drain
Near Ely end Bonair St.
See 2764-D See FB 2214 - 52 & Page 48



(3+15.78)



See page 53 for levels

Levels for Branch drain
See Sketch Page 52

1+25

1+09 - 17° RT = Jog in adobe House

1+00

0+85.5 - 17° RT = NELy cor adobe House

0+68.90 = EC

= B.C.,
0+00 Branch drain = 25+87.0 Main Bonair drain

BM 6.16 145.64

LT	℄	RT
146.0	143.7	140.8
5.8	8.6	11.0
10		10
143.0	141.7	139.3
8.0	10.1	12.5
10		10
	139.3	
	12.5	12.8
		17° Floor
139.7	138.9	138.3
12.6	12.9	13.5
10		10
	133.40	
	18.1	

151.80 ⊼

ONZ"x2" hub 29+68.55 · FB 2214, Page 70

Proposed drain

LT = elv & RT = w/y

54

2+00 - 17 ± RT = ℄ wash from SEly				145.8	144.1	143.6	143.6	141.7
				7 3/10	9 0	9 5/10	9 5/12 Top wash	11 9/17 ± Bott wash
1+75				146.5	143.5	141.9		
				6 6/10	9 6/10	11 2/10		
1+65 - 4 ± RT = ℄ deadman								
1+50				147.6	144.0	141.3		
				5 5/10	9 1/10	11 8/10		
TP,	2.43	153.11	1.12	150.68	153.11 ±			
1+33 - 20 ± RT = SEly cor adobe House								
					151.80 ±			

LT = ely ℄ RT = Wly 55

TP2 - Starting B.M. - 7.47 145.64

3+13.08 = end Proposed drain

149.0 / 3.3 — Top Wash
147.0 / 6.1 — 2 & Bottom Wash
147.6 / 5.5 — IN Bottom Wash
150.8 / 2.3 / 3.5 — Top Wash

3+00 - 4° LT = Bottom SELy Wash

148.6 / 4.5 — 9 Top
146.6 / 6.5 — 4° Bottom Wash
149.1 / 4.0
150.3 / 1.8 — 5
151.9 / +1.2 — 10

2+95

150.0 / 3.1

17° LT = ℄ bottom Wash
2+58.60 = E.C. Radial

146.6 / 6.5 — 23' Ely Top Wash
143.9 / 9.2 — 17° Bottom Wash
147.0 / 6.1 — 11° Top Wash
147.3 / 5.8
147.7 / 5.4 — 10

145.1 / 8.0

2+32 - Sly top of wash

147.4 / 10.7

2+26 ℄ of wash from SELy

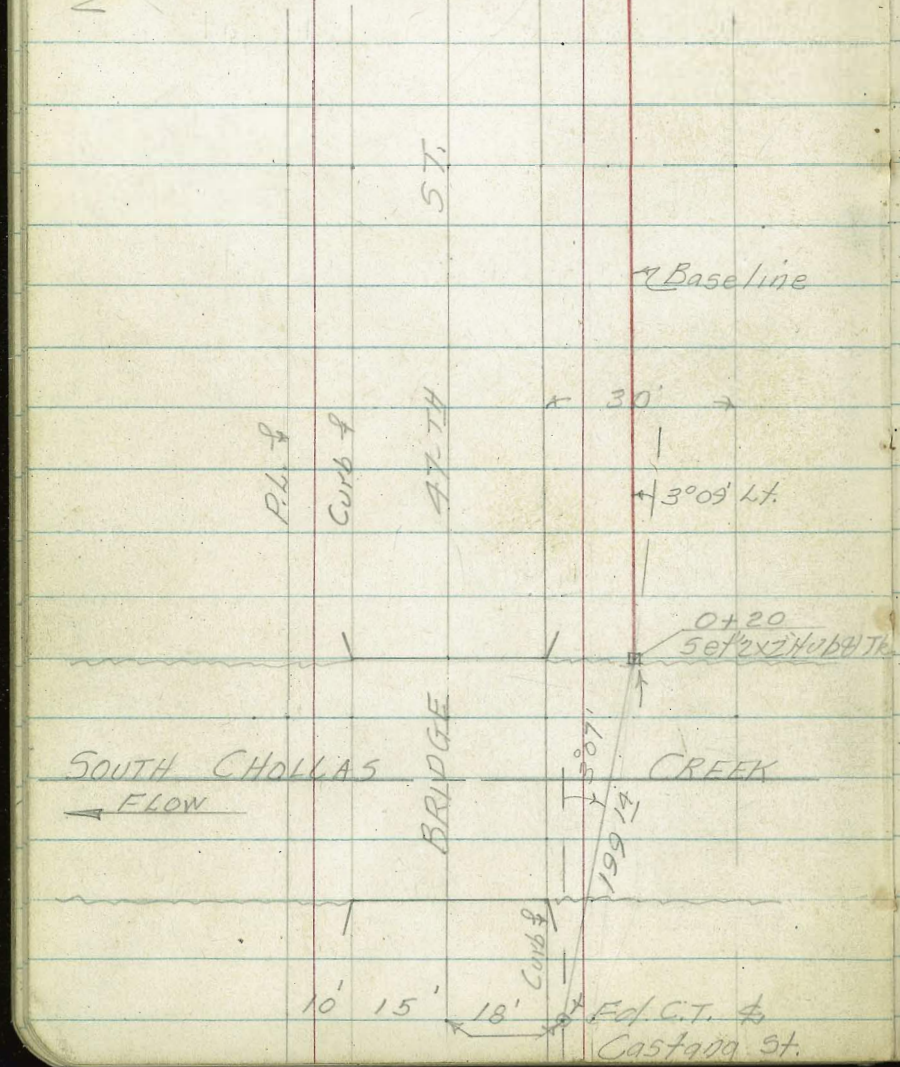
4° RT = bottom wash
2+19.58 = B.C. on Ely edge wash (Radial)

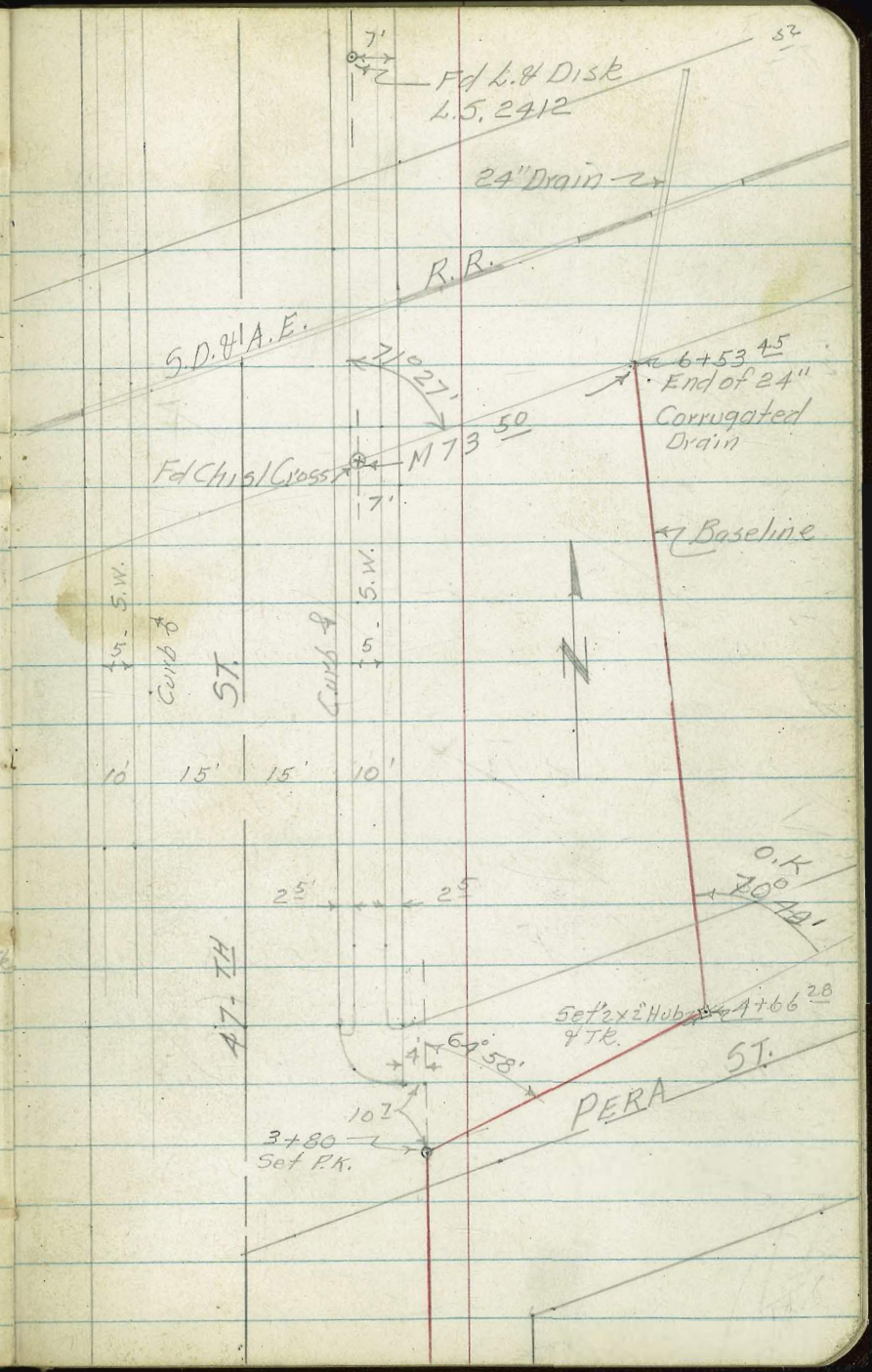
144.6 / 8.5 — 10
143.9 / 9.2 — 5
147.77 / 10.34 — on gr. Not some
141.8 / 11.3 — 4° Bottom wash
144.0 / 9.1 — 10 wly of wash

15 3.11 ↑

ADDITIONAL NOTES ON PROPOSED 47-TH ST. DRAIN FROM W.O. 20622

NOTE: (See Sketch also Pg 19)





Ref F.B. 1754.
2289-D

11-29-54

Stamper
Huffman
Nordahl

ADDITIONAL NOTES 47-7th ST. DRAIN

W.O. 20622

NOTE: Could Not find Allens Controlls (see Pg 12)
So ran New B/L. (See Pg 56) New
Improvements Checked & Cross Sec's
begin @ Sta 3+75

2° Lt. to Cor. fence
3+74 Proposed Drain Crosses 5' High Chain Link fence

3+01-3 Rt. W'ly Edge of 9'E+W; x2 wide H₂O
Riser Assembly

2° Lt. to Cor fence
2+13 Proposed Drain Crosses 5' High Chain Link Fence
(N'ly Ent. to Trailer Court)

1 Lt. to fence Cor
1+67 Fence Crosses Proposed Drain
S'ly Ent. to Trailer Court.

1 Lt. to Cor.
0+31 Begin 4' high Chain Link fence

47-TH ST. DRAIN

4+66 CB P.I. Sec on Split Angle

4+50

4+25

3+98 ± ℄ 2' A.C. Berm Sec.

3+97 Toe A.C. Berm

3+80 P.I. Sec on Split Angle

3+75 = Check Sec On Allens Notes: (see Pg 35) (see Sketch Pg 56)

NOTE: Evidently there is 0.25' difference in Elev between bench used by Allen & the one used for these levels. & to agree All Elevations Shown B.M. 84.18 (used) 84.37 Listed

Lt.	℄	Rt.
NOTE: Direct Elev Rod Used		
84.7 / 15	85.40 / 0 on Hub	856 / 15
84.7 / 15	85.3 / 0	84.7 / 15
84.8 / 15	85.0 / 0	83.2 / 15	82.93 / 25.5 Top N14 Edge A.C. Berm
84.7 / 15	84.00 / 1.0 Toe A.C. berm	84.40 / 0 Top A.C. Berm	83.98 / 1.0 Toe berm	83.66 / 15
		83.97 / 0		
83.47 / 15	83.58 / 0	83.71 / 10		
83.20 / 14 Gut	83.51 / 0	83.78 / 15		

47th St Bench Book shows 84.45

Should be Raised 0.25' (see Check Pg 60)

NEBP. Perm # 47-th. With Question Mark in Bench Book

47-TH ST. DRAIN

Lt.	℄	Rt.
	11-29-54	
6+00		
	87.5 / 15	87.8 / 0 — 91.7 / 15
5+94 - 9⁵ Lt. End 3'-High Chicken wire fence		
5+75		
	88.0 / 0	
5+50		
	86.6 / 15	87.5 / 0 — 90.1 / 15
3 ℄ Lt. Faucet.		
5+41 ℄ ½" H_2O Line E. & W. on top Ground		
5+25		
	86.5 / 0	
5+23 6" Ext. ℄ 3" Peach Tree		
5+10 - 7½ Lt. Begin 3' High Chicken wire fence		
5+00		
	85.4 / 15	85.5 / 0 — 85.8 / 15

Lt. ℄ Rt.

11-29-54

47-TH ST. DRAIN

B.M. 84.18 ± 84.18

NOTE: Checked Top Cb.
(Allens Sta 3+34 Pg 35) 83.05

83.30 (Allen) Evidently two benches differ in Elev. by 0.25
These levels Check Levels Run by Roberts 17.54
7.5

6+53 $^{25}_{-}$ End 24" Corrugated Pipe

85.63
F.L.

6+48 Toe Existing Ditch W'ly

86.8 (15) 86.6 (0) 90.4 (5) 89.3 (8)

6+37 Top Fill

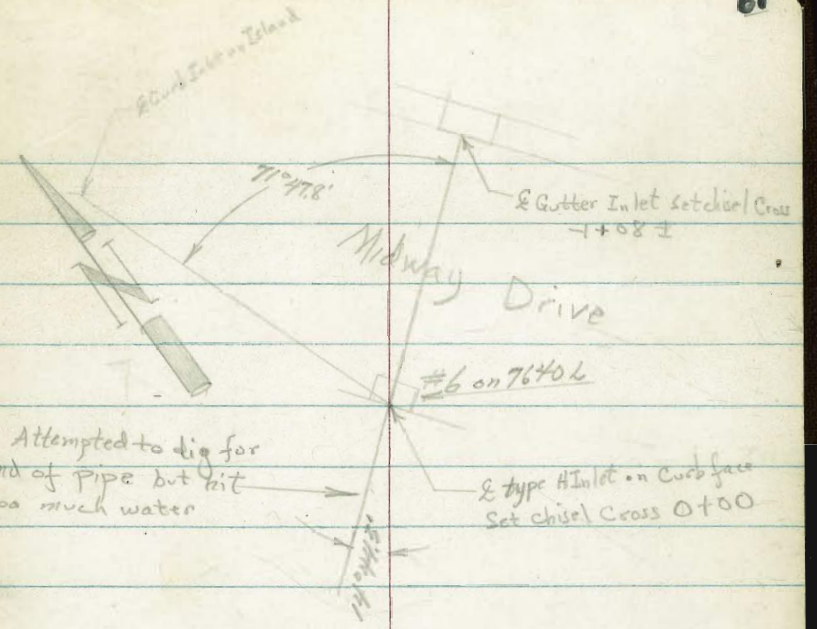
90.0 (10) 91.0 (5) 90.6 (0) 90.2 (15)

6+29 Toe bank

88.2 (10) 89.2 (5) 87.4 (0) 87.5 (5) 90.0 (10)

Roberts
Rorer
Moore
Moralez
3-4-55
W.O.# 21339

Survey to Extend Storm Drain
at Midway Drive & Ventura Blvd.
(Curb Inlet No. 6 on 76+40 L)



Ventura Blvd.

Nearest Route to Bay. checked by Stadia

Work not completed on fill as of this date!

Waters edge 7+73

Cont'd From Page 61

				Lt	℄	Rt
					2.9	
2+00					4.5	
					2.9	
1+50					4.5	
					2.4	
1+00					5.0	
					2.2	
0+50					5.2	
					2.9	
0+06					4.5	
					0.72	-2.29
0+00	Curb face Inlet Wly Side		Midway		6.63	9.64
					Grate	Invert
					7.35 ℄	
BM	6.08	7.35 ℄	1.27	Top Curb of Inlet No. 6 as shown on 7640L sheet.		

Contd From Page 62

5+00					4.0	
					4.1	
4+50					3.8	
					4.3	
T.P.	4.32	8.10	3.57	3.78	8.10	
4+00					3.4	
					4.0	
3+50					2.9	
					4.5	
3+00					2.6	
					4.8	
2+50					2.6	
					4.8	
		7.35			7.35	

Cont'd From Page 63

	Lt	℄	Rt
7+65		3.1	
		5.0	
7+58		2.7	
		5.4	
7+50		3.4	
		6.7	
7+00		2.4	
		5.7	
6+50		4.0	
		4.1	
6+00		3.3	
		4.8	
5+50		3.3	
		5.8	
	8.10 ℄		8.16 ℄

Lt · ℄ Rt 65

check 6.58 · 1.25 = 1.27

T.P. ~~5.18~~ 7.83 ~~5.45~~ 2.65

-3.15

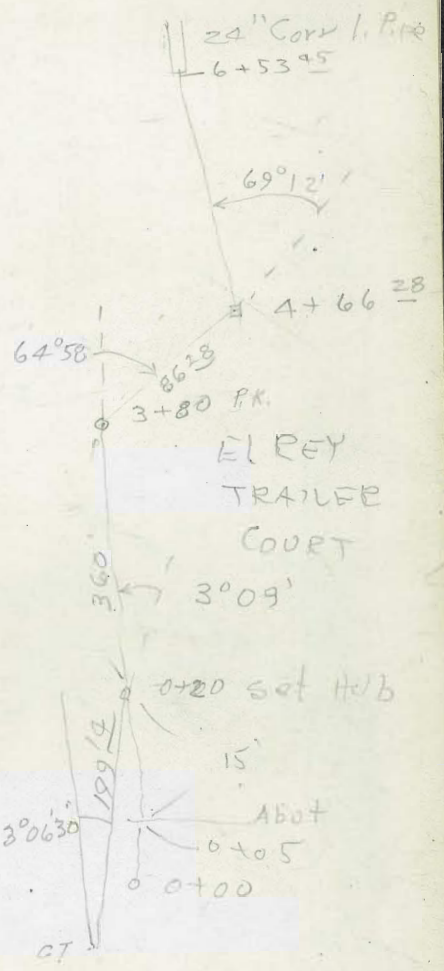
7+73 Waters edge 10.5

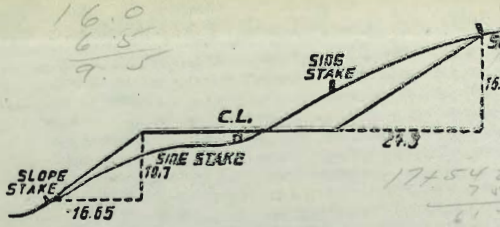
8.10 T

8.10 T

20' 0
16 5
135

16 07
6 50
9 57





DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1½ 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	71.20	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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