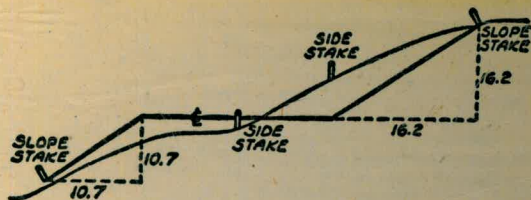


W 866



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.

Please Return to
City of San Diego Water Dept.
Room 903 Civic Center

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	.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	.78	.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	.88	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	.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

University Heights Res. (North) ELEV'S of ROOF 2-3
AT LOAD TEST AREA - 6/25/54 ✓

University Heights Res. (North) ELEV'S of ROOF 4-5
AT LOAD TEST AREA 7/7/54 ✓

Univ. Heights Res. (North) Elev. of Roof 6-11 ✓
DURING LOAD TESTS 7/9/53 alicc

UNIV. HEIGHTS RES. (E. PROFILE OF PROPOSED) ✓
30" MAIN 12-16 alicc

Univ. Hts Res elevation at 24" ci. 17 ✓
alicc

UNIV. HIGHT'S RES. DETAIL & ELEV'S ON PIPELINES 19-21 ✓
alicc

Univ Hgts Res Elev + Location of 24" ci Tee 24 ✓
alicc

UNIVERSITY HEIGHTS RESERVOIR
(NORTH)
ELEV. S OF ROOF AT
LOAD TEST AREA

May 25, 1954
Beatty, T
Shorey, T
Martell, G

2

Time 1:30 to 2:30 pm.

B.M.	4.100	391.368	387.268
Pt. 1		4.209	386.459 ✓
Pt. 2		4.215	386.453 ✓
Pt. 3		4.223	386.445 ✓
Pt. 4		4.238	386.430 ✓
Pt. 5		4.260	386.408 ✓
Pt. 6		4.267	386.401 ✓
Pt. 7		4.281	386.387 ✓
Pt. 8		4.291	386.377 ✓
Pt. 9		4.260	386.408 ✓
Pt. 10		4.261	386.407 ✓
Pt. 11		4.283	386.385 ✓
Pt. 12		4.266	386.402 ✓
Pt. 13		4.227	386.367 ✓
Pt. 14		5.028	386.340 ✓
Pt. 15		5.025	386.343 ✓
Pt. 16		5.064	386.304 ✓
Pt. 17		5.070	386.228 ✓
Pt. 18		5.065	386.303 ✓

Cor curb

Air

72° with light wind
14" Gauge on RES.

Ref. Dwg. 6408-W

UNIV. HEIGHTS RES.
Roof Elev. 5
(Cont'd)

6/25/54

3.

391.368

Pt. 19	5.069	386.299	\
Pt. 20	5.071	386.297	\
Pt. 21	5.067	386.301	\
Pt. 22	5.092	386.276	\
Pt. 23	5.077	386.291	\
Pt. 24	5.075	386.273	\
Pt. 25	5.079	386.289	\
Pt. 26	5.095	386.273	\
Pt. 27	5.090	386.278	\
Pt. 1 (Check	4.908	386.460	\
Pt. 5 "	4.258	386.910	\
Pt. 11 "	4.283	386.385	\
Pt. 13 "	4.999	386.369	\
Pt. 16 "	5.065	386.303	\
Pt. 19 "	5.070	386.298	\
Pt. 23 "	5.077	386.291	\
Pt. 27 "	5.090	386.278	\
	4.100	387.268	\

Notes checked by Jefferies
7/9/54

UNIVERSITY HEIGHTS RESERVOIR
(NORTH)
ELEV. S OF ROOF AT
LOAD TEST AREA

July 7 1954

Bailey X
Shelby
Alexander 4

4.

BM.		4098	391.366	387.268
1.	(.04 depth of water.)	4.905	386.461	✓
2.	(.06 " " ")	4.912	386.454	✓
3.	(.04 " " ")	4.921	386.445	✓
4.	(.06 " " ")	4.935	386.431	✓
5.	(.07 " " ")	4.953	386.413	✓
6.	(.09 " " ")	4.963	386.403	✓
7.	(.10 " " ")	4.977	386.389	✓
8.	(.11 " " ")	4.986	386.380	✓
9.	(.08 " " ")	4.953	386.413	✓
10.	(.08 " " ")	4.953	386.413	✓
11.	(.11 " " ")	4.977	386.389	✓
12.	(.109 " " ")	4.965	386.361	Y
13.	(.12 " " ")	4.996	386.370	✓
14.	(.15 " " ")	5.024	386.342	✓
15.	(.15 " " ")	5.022	386.344	✓
16.	(.19 " " ")	5.061	386.305	✓
17.	(.19 " " ")	5.064	386.300	✓
18.	(.19 " " ")	5.062	386.304	✓

Time 1:15 to 2:15 pm.

Ar, 92°, very light breeze

Roof { Water 90°, west side.
Water 94°, east side.

14" GAUGE ON RES.

At an identical position
35 first readings
pgs. 2

386.401

UNIVERSITY HEIGHTS RES.
ROOF ELEVS
(Cont'd.)

7/7/52

5

391.366

19.	(0.19 depth of water)	5.067	386.299
20.	(0.19 " " ")	5.068	386.298
21.	(0.18 " " ")	5.061	386.305
22.	(0.21 " " ")	5.072	386.274
23.	(0.20 " " ")	5.073	386.293
24.	(0.21 " " ")	5.093	386.273
25.	(0.18 " " ")	5.074	386.292
26.	(0.20 " " ")	5.090	386.276
27.	(0.19 " " ")	5.085	386.281

E. side at depth gauge.) 5.005 386.361

Elev. 386.450 # 2
Elev. 386.276 # 26.

.178
89

386.365 Mean elev. & load test area x/5

9⁵/₈" depth to be filled =
1-2³/₈" " " "
1-7¹/₄" " " "

+ .80 = rod 4.201
Elev. 387.165

+ 1.20 = rod 3.801
Elev. 387.565

+ 1.60 = rod 3.401
387.965

} marked on board
for fill gauge

OK BM

1.098 387.268

Notes checked by Letteries
7/9/63

NORTH UNIVERSITY HEIGHTS RESERVOIR
ELEV. S OF ROOF AT
LOAD TEST AREA

TEST N° 1.

BM	4098	391.366	387.268	Diff
1.		4.905	386.461	00
2.		4.913	386.453	-0.001
3.	① WATER AT ELEV. 387.165 (SEE PG 5) 9 5/8" Av. Depth	4.919	386.447	+0.003
4.		4.937	386.429	-0.002
5.		4.951	386.412	-0.001
6.		4.965	386.401	-0.002
7.		4.978	386.388	-0.001
8.		4.987	386.379	-0.001
9.		4.955	386.411	-0.002
10.		4.955	386.411	-0.002
11.		4.981	386.385	-0.004
12.		4.963	386.403	+0.002
13.		4.995	386.371	+0.001
14.		5.024	386.342	0.0
15.		5.023	386.343	-0.001
16.		5.062	386.304	-0.001
17.		5.064	386.302	+0.002
18.		5.064	386.302	-0.002

July 9 1954
BEATTY
SHREY
ALEXANDER

"T"-Day

6.

Time 9:30-10:10 am

Air 72° Light Breeze

Roof Water 74°

+0.002

NOR. UNIV. HEIGHTS RES.
Cont'd

7/9/54

7.

add

	361.366		
19	5.068	386.298	-0.001
20	5.070	386.296	-0.002
21. ①	5.062	386.304	-0.001
22.	5.093	386.273	-0.001
23.	5.079	386.287	-0.006
24.	5.097	386.269	-0.004
25.	5.077	386.289	-0.003
26.	5.092	386.274	-0.003
27.	5.089	386.277	-0.004
OK BM	4.098	387.268	

Time 10:10 am

Water Elev. at 387.135 (.03 lower)

Notes Checked by Letteries
7/9/54

NORTH UNIVERSITY HEIGHTS RES
ELEV. S OF ROOF AT
LOAD TEST AREA

July 9 1956

8.

TEST N° 2.

Time 10:55-11:30 am

BM	4.098	391.366	387.268	127 2.00	Diff
1.			4.907	386.459	-0.002 -0.002
2.	(2)		4.913	386.453	-0.001 0.0
3.			4.919	386.447	+0.002 0.0
4.			4.938	386.428	-0.003 -0.001
5.			4.956	386.410	-0.003 -0.002
6.			4.966	386.400	-0.003 -0.001
7.			4.978	386.388	-0.001 0.0
8.			4.988	386.378	-0.002 -0.001
9.			4.956	386.410	-0.003 -0.001
10.			4.956	386.410	-0.003 -0.001
11.			4.979	386.387	-0.002 +0.002
12.			4.965	386.401	0.0 -0.002
13.			4.996	386.370	0.0 -0.001
14.			5.023	386.343	+0.001 -0.001
15.			5.022	386.344	0.0 +0.001
16.			5.061	386.305	0.0 +0.001
17.			5.067	386.299	-0.001 -0.002
18.			5.063	386.303	-0.001 +0.001

Air 72° Hardly any breeze

Roof Water 72°

WATER AT
ELEV. 387.565
(See pg 5)

1-2 3/8" Aver. Depth

NOR. UNIV. HEIGHTS RES.
(Cont'd.)

7/9/52

9.

391.366

Diff
12" 2.00

19. 5.067 386.299 0.0 +.001

20. 5.068 386.298 0.0 +.002

21. (2) 5.060 386.306 +.001 +.002

22. 5.094 386.272 -.002 -.001

23. 5.078 386.288 -.005 +.001

24. 5.097 386.269 -.004 0.0

25. 5.076 386.290 -.002 +.001

26. 5.092 386.274 -.002 0.0

27. 5.087 386.279 -.002 +.002

CK BM. 4.098 387.268

Time 11:30 am

Water Elev 387.535 (.03 lower)

NORTH UNIVERSITY HEIGHTS RES
ELEV. OF ROOF AT
LOAD TEST AREA

July 9, 1954

10.

TEST N°3

Time 12:30 -

BM	4.098	391.366	387.268	^{1st} ^{3rd} Diff.
1.			4.906	386.460
2.			4.914	386.452
3.			4.918	386.428
4.			4.938	386.428
5.			4.958	386.408
6.			4.966	386.400
7.			4.978	386.388
8.			4.988	386.378
9.			4.957	386.409
10.			4.957	386.409
11.			4.979	386.387
12.			4.963	386.403
13.			4.996	386.370
14.			5.027	386.339
15.			5.023	386.343
16.			5.061	386.305
17.			5.067	386.299
18.			5.063	386.303

Air 78° Light Breeze

Roof Water 73°

(3)

WATER AT
ELEV. 387.945

(.02 lower)
(see pgs)

1'-7" AVE. Depth

UNIV. HEIGHTS. Nor. RES.
(Cont'd.)

7/9/54

11.

391.366

19	5.068	386.298
20	5.069	386.297
21	5.060	386.306
22	5.095	386.271
23	5.079	386.287
24	5.098	386.268
25	5.075	386.291
26	5.091	386.275
27	5.086	386.280
CK BM.	4.098	387.26

Time 1:05 pm

Water Elev. 388.000 (.035 Higher)

Notes checked by Jefferies 7/12/54

NORTH UNIVERSITY HEIGHTS RES.
ELEVATIONS OF ROOF AT
NO LOAD

Betty
Shorey
Alexander

7-12-54 (42)

Time 11:30

Air Temp 78°F

Ref. Diag. 6408 W

B.M.			1st	3rd
	4099	391.367	387.268	diff
1.		4.908	386.459	
2.		4.915	386.452	
3.		4.921	386.446	
4.		4.934	386.433	
5.		4.955	386.412	
6.		4.963	386.404	
7.		4.979	386.388	
8.		4.990	386.377	
9.		4.960	386.407	
10.		4.960	386.407	
11.		4.982	386.385	
12.		4.968	386.399	
13.		4.995	386.372	
14.		5.023	386.344	
15.		5.023	386.344	
16.		5.061	386.306	
17.		5.066	386.301	
18.		5.064	386.303	

UNIVERSITY HEIGHTS NORTH RES

(Continued)

(13)

391.367

19. 5.066 386.301

20. 5.067 386.300

21. 5.061 386.306

22. 5.088 386.279

23. 5.071 386.296

24. 5.092 386.275

25. 5.074 386.293

26. 5.091 386.276

27. 5.087 386.280

UNIVERSITY HEIGHTS RES.
 & Profile & Details of
 Valve Chambers & Elev.

6/8/55
 SHUREY
 MARTEL
 KELLHOFER

0+00 - WEST PROP. LINE OREGON ST.
 0+09²⁰ N.W. LINE OF CURB.
 0+14 S.W. " " "

0+37 ? LINE
 0+45 CHAMBER 29' LT.
 0+46 6" C.I. MAIN
 0+50 36" C.I. MAIN
 0+51²⁰ N.E. FACE OF CURB
 0+55 F.H. G.V. 28' RT.
 0+65⁵ S.E. FACE OF CURB

0+67 F.H. 27³ RT.
 0+76⁵⁰ CHAIN LINK FENCE ON PLAYGROUND 21' LT. TO COE. POST ✓
 0+78 DRAIN CHAMBER 24' LT.
 0+80 END CURB 11⁸ RT, 25' LT. ✓
 1+02 CHAMBER 32' LT.

2+27⁵⁰ CHAMBER 16' RT.

2+34⁵⁰ CHAMBER 0⁵ LT.

2+40 CHAMBER 17' LT.
 2+50 CYCLONE FENCE ON BALL FIELD 10' LT.
 2+65 FLOOD LIGHT POST 11' RT.

3+24 WIRE FENCE DUGOUT FOR BALL FIELD 5' LT.
 3+42 FLOOD LIGHT POST 11' LT.
 3+25⁵ END WIRE FENCE DUGOUT 5' LT.
 3+48 WIRE FENCE ENCLOSURE OF HOME PLATE 5' LT. - 20 HIGH

3+56⁵⁰ CHAMBER 12' LT. 3+66 G.V. COE. 28' LT. ✓
 3+59³⁰ CHAMBER 28' LT.
 3+74 WIRE FENCE ENCLOSURE COE. POSTS 4⁵ LT. & 6³ RT.

3+76 FLOOD LIGHT POST 20⁵ RT.
 3+78²⁰ BEGIN WOOD BLEACHERS - EDGE 6' LT.

3+87 END WOOD BLEACHERS - EDGE 6' LT.
 3+87⁵ CHAIN LINK FENCE
 3+88 2" ELEC. CONDUIT KING 7' ABOVE GROUND
 P.P. 7' RT. # 4098

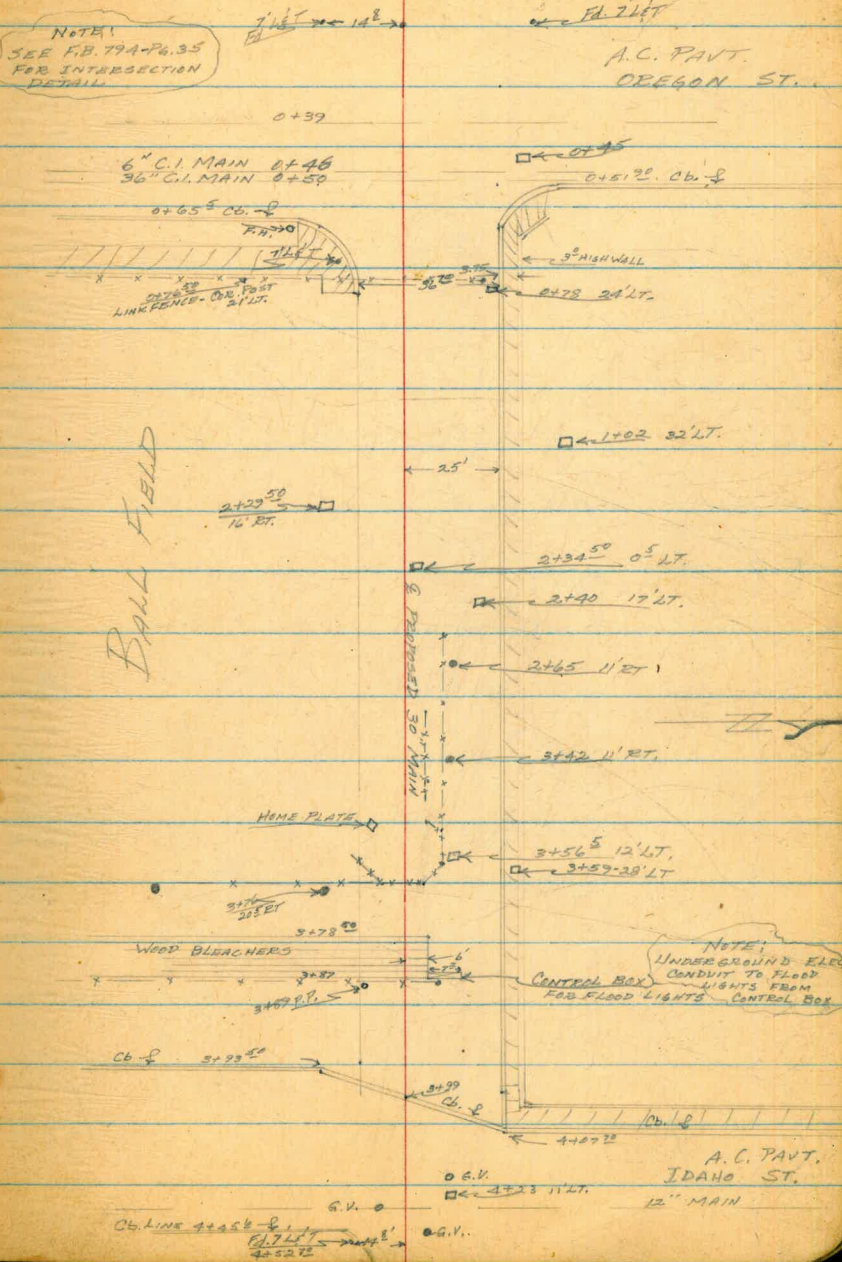
3+93⁵ CURB LINES - SO. 22' RT.
 3+99 CURB ON S

4+07²⁰ CURB LINE - NORTH

4+17 G.V. 11⁰ LT.
 4+23 CHAMBER 11' LT.
 4+31 12" MAIN & G.V. 7' RT.
 4+41 G.V. 4⁵ LT.

4+50²⁰ 7' LT. 14⁵⁰ RT.

NOTE!
 SEE FB. 79A-P6.35
 FOR INTERSECTION
 DETAIL



A.C. PAVT.
 OREGON ST.

A.C. PAVT.
 IDAHO ST.
 12" MAIN

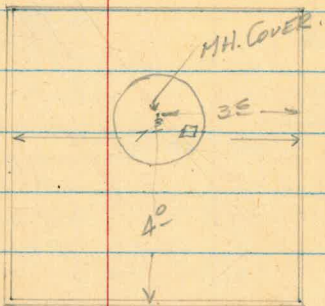
LINIV. HEIGHTS RES.
 (CONT'D)
 PROFILE & DETAILS
 OF PROPOSED 30" MAIN

6/8/55
 SHOREY
 MARTEL
 KELLHOFER

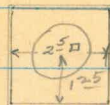
15

CHAMBER # 1

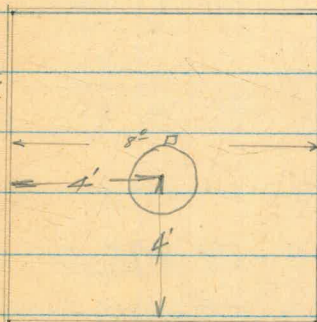
0+45 29' LT.



CHAMBER # 5
 2+34.5 0.5 LT.



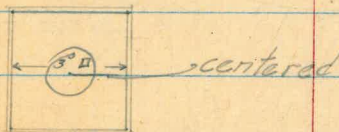
CHAMBER # 6
 2+40 11' LT.



CHAMBER # 2
 0+78 24' LT.



CHAMBER # 7
 3+56.5 12' LT.



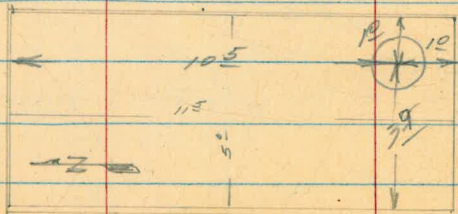
CHAMBER # 3
 1+02 32' LT.



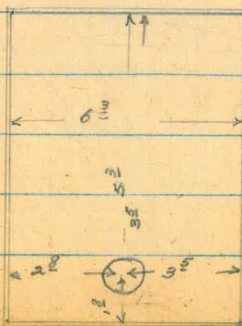
CHAMBER # 8
 3+59 28' LT.



CHAMBER # 4
 2+29.5 16' RT.



CHAMBER # 9
 4+23 11' LT.



UNIV. HEIGHTS RES.
(CONT'D)
2 PROFILE PROPOSED 30" MAIN

6/8/55
SHOREY
MARTEL
KELLHOFER

(16)

B.M. 5.24 378.25 373.01
TP 8.15 374.36 12.07 366.18

S.E. B.P. HOWARD & IDAHO ST.

0+07 10.43 363.91

0+50 8.52 365.84

{ 7.83 366.53
12.1 362.26

1+00 7.40 366.96

{ 3.91 370.45
12.71 361.65
6.60 367.76

1+50 6.60 367.76

2+00 5.80 368.56

{ 6.36 368.06
10.46 363.90

{ 5.33 368.81
7.10 367.26

{ 5.63 368.73
10.43 369.93

2+50 5.30 369.06

3+00 4.90 369.56

3+50 4.40 369.96

{ 4.61 369.75
9.71 364.65

TP 5.29 375.44
8.03 370.33
08.00 364.36
4.16 370.20

3+99 TOP OF CURB 5.24 370.25

3+99 GUTTER 5.81 369.68

4+00 5.80 369.69
8.22 370.07
10.12 365.37

4+46 GUTTER LINE 50, 5.97 369.52

4+50 6.80 369.69

2.45 373.04 = 373.01

TOP OF CHAMBER 1+45 29' LT.
& OF SIDE OPERATED G.V. 1' (#1)

TOP OF CHAMBER 1+62 32' LT.
& OF SIDE OPERATED VALVE (#3)

TOP OF CHAMBER 2+22^S 16' RT
& OF SIDE OPERATED G.V. 24" (#4)

"AIR VALVE" 2+32^S 0^S LT. (#5)
TOP OF AIR VALVE

" " " 2+40 17' LT. (#6)
& SIDE OPERATED G.V. 36"

TOP OF CHAMBER 3+56^S 12' LT. (#7)
& SIDE OPERATED G.V. "

" " " 3+59 28' LT. (#8)
& SIDE OPERATED G.V. 30"

TOP OF CHAMBER 4+23 11' LT. (#9)
& SIDE OPERATED G.V. 24"

ABOVE

Univ Hts Res
Elev's Top 24" Pipe

West
Varonfakis
Marshall
Kellhofer

17

6/16/03

BM Park + Idaho

5.45 375.41 369.96

4.10 372.78 6.73 368.68

2+27 10.85 361.93

Top 24" Pipe 7² Lt

2+43 ✓ 10.43 362.35

Top 24" pipe 7¹⁵ Lt

0+50 6.98 365.80

20' Lt Top paving

0+50 7.23 365.55

20' Rt " "

0+75 6.78 366.00

end of paving

0+75 6.61 366.17

20' Lt Top of paving

0+75 7.17 365.61

11' Rt bottom of curb

0+75 6.76 366.02

11' Rt Top of curb

2+34^e 4.03 368.75 = 368.81

Top Air Valve 0⁵ Lt

6.67 375.35 4.10 369.68

5.39 369.96 = 369.96

4.19 373.00 368.81

Top Air Valve

1+00 10.01 362.99

19⁵ Lt Top 36" OD pipe ci

1+17 9.99 363.01

16⁵ Lt Top 36" OD pipe

+72 8.68 364.32

3² Lt Top 30" OD pipe ci

3+64 7.20 365.80

15' Lt Top 30" OD pipe ci

3+64 6.1 366.90

12' Lt 12" elect cables

3+64 4.5 368.50

4⁵ Lt 3 elect cables

pipe looks new
Top has concrete on it

#8

3x3 VAULT $1^{\circ} \text{So.}, 2^{\circ} \text{N.}, 1^{\circ} \text{E.}, 1^{\circ} \text{W.}$

6" CENTER SIDE OPERATED
30" GATE

4⁷⁰ #19

24" SIDE OPERATED G.U.

6x8 = $1^{\circ} \text{So.}, 2^{\circ} \text{W.}, 3^{\circ} \text{E.}, 3^{\circ} \text{N.}$

6/10/55

CALL IN TO
DRAUGHTSMAN

4+19 24" LINE N & S

3+64 30" " N & S

2+34⁵ ? " N & S

2+29⁵ 24" LINE ~~#~~ 8' RT.

1+89 30" LINE ~~24"?~~ CROSSES G.U.

1+50 LINE XING DIA.

0+98 LINE N & S.

0+91 LINE XING ?

0+88 LINE XING ?

LINE RUNS PARALLEL 25' N.
4+82

CHAMBER #1

$3^{\circ} \text{E.} \& \text{W.}$

4°So.

CHAMBER #2 IN THE CENTER

CHAMBER #3 " " "

(?) " #4 $1^{\circ} \text{So.}, 10^{\circ} \text{N.}, 1^{\circ} \text{E.}, 3^{\circ} \text{W.}$

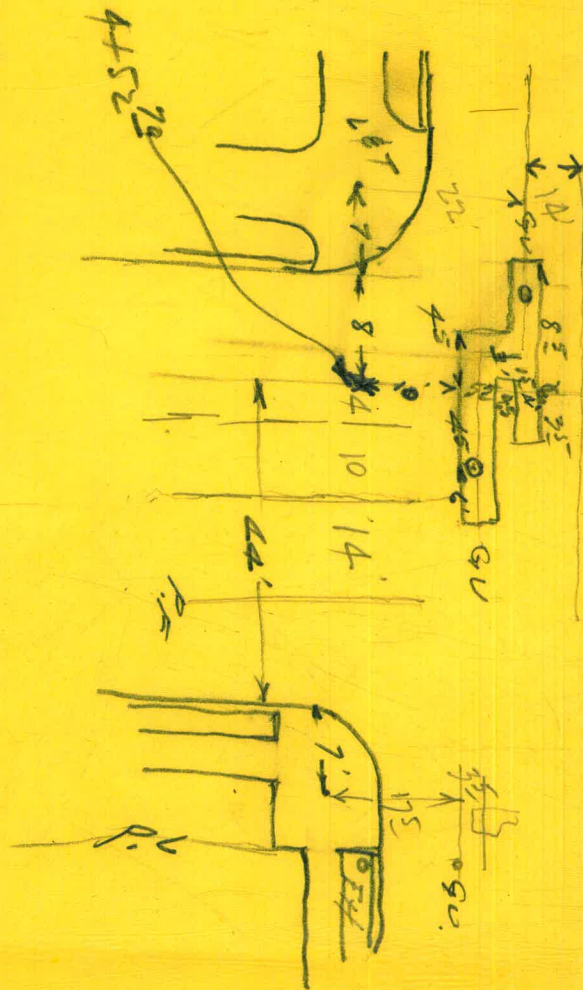
" #5 IN THE CENTER

" #6 " " "

" #7 " " "

" #8 $1^{\circ} \text{So.}, 2^{\circ} \text{N.}, 1^{\circ} \text{E.} \& \text{W.}$

(?) #9 $1^{\circ} \text{So.}, 3^{\circ} \text{N.}, 3^{\circ} \text{E.}, 2^{\circ} \text{W.}$



373.00

5.27 375.52 2.75 370.25

3+94 8.88 366.64

12.49 381.35 6.66 368.86

2+00 12.91 368.54

282.24 bottom of ret wall

2+00 12.73 368.62

283.24 top ret wall

7+00 10.75 370.60

52.24

2+00 0.85 380.50

56.24

2+00 0.6 380.75

58' at bott of ret wall

2+00 0.6 380.75

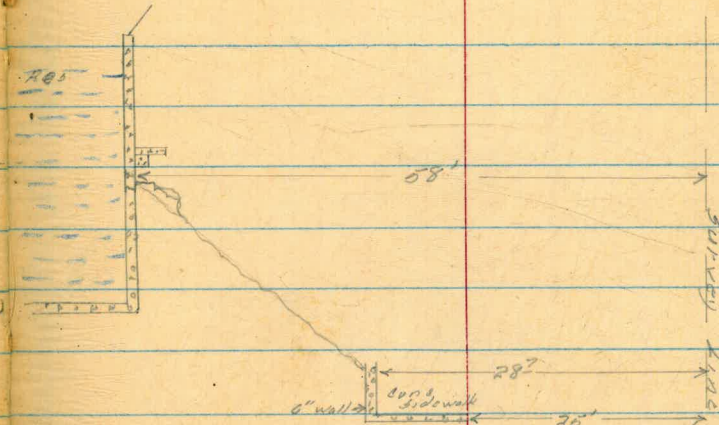
Top Ret wall

2+00 + 2.7 384.05

Top 100 wall

2+00 + 8.6 389.95

12.57 368.83 = 368.81



28.7
 23.5
 57.2
 1.8
 0

28.7
 27.5
 56.2

72 ft Top 30" OD of pipe

SURVEY LINE

8/15/56

SHOREY
KEMP
SMITH

20

S.E.B.P. IDAHO & HOWARD

BM	7.44	380.45	373.01
0+15	16 ⁵ LT.		7.65 372.80
0+22	⁵⁰ 20' LT.		18.25 362.20
"	34 ⁴ LT.		18.15 362.30
0+31	20' LT. #1	CHAMB.	18.25 362.20
"	34 ⁴ LT.		18.15 362.30
0+26	⁴ 32 ⁴ LT.		13.20 367.25
0+19	34 ⁴ LT.		17.97 362.48
"	50 ³ LT.	CHAMB.	17.85 362.60
0+29	34 ⁴ LT. #2		17.94 362.51
"	50 ² LT.		17.83 362.62
	TOP 30" TEE		13.91 366.54
0+23	43 ⁵ LT.		10.14 370.31
0+23	45 ⁹ LT.		10.19 370.26
0+60	16 ⁵ LT.		7.35 373.10
0+85	43' LT.		8.12 372.33
0+89	48 ¹ LT.		7.84 372.61
0+99	52' LT.		8.47 371.98
1+20	² 45 ⁵ LT.		9.80 370.65
1+20	² 54' LT.		9.87 370.58
1+12	³ 45 ⁵ LT.		10.07 370.38

Edge A.C. PAVT IN GUTTER.

BOTTOM CONC. CHAMBER S.E. COR.

" " " S.W. "

" " " N.E. COR.

" " " N.W. COR.

TOP 36" OTAY PIPE - W.O.F. COLLAR AT REDUCER JOINT

BOTTOM CONC. CHAMBER S.E. COR.

" " " S.W. COR.

BOTTOM CONC. CHAMBER N.E. COR.

" " " N.W. COR.

TOP 30" TEE IN CHAMBER #2 (SEE PG. 21)

W.O.F. 30" G.L.

TOP OF 30" MAIN GOING N. & S.

Edge A.C. PAVT. IN GUTTER.

TOP 24" MAIN

TOP 24" MAIN

TOP 12" MAIN

TOP 30" "Y"

TOP 30" MAIN W.O.F. CHAPMAN VALVE

TOP 30" MAIN S. OF CHAPMAN VALVE

(CONT'D)

380.45

1+28⁸ 64² LT.

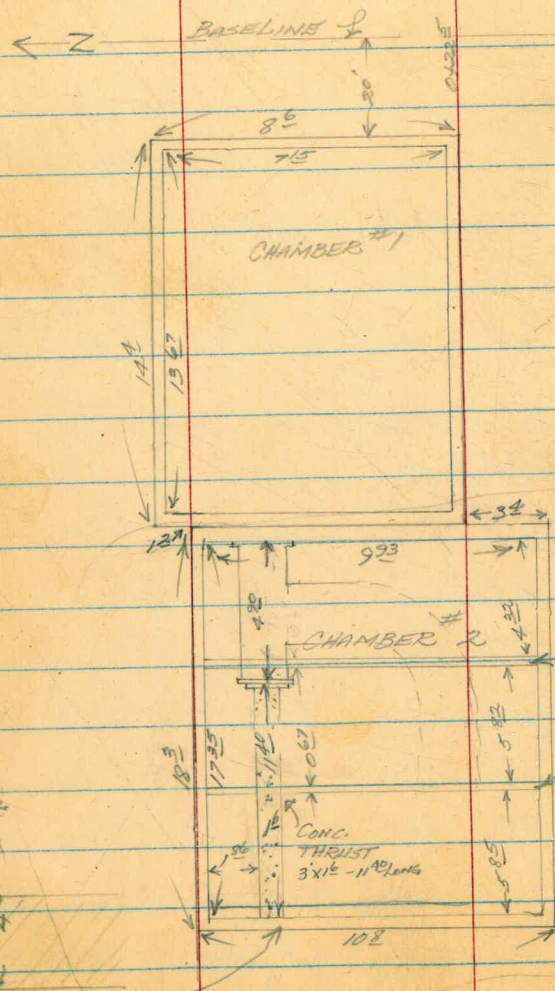
9.13 371.32

1+32 66⁴ LT.

9.21 371.24

OK. BM

7.44 373.01 = 373.01



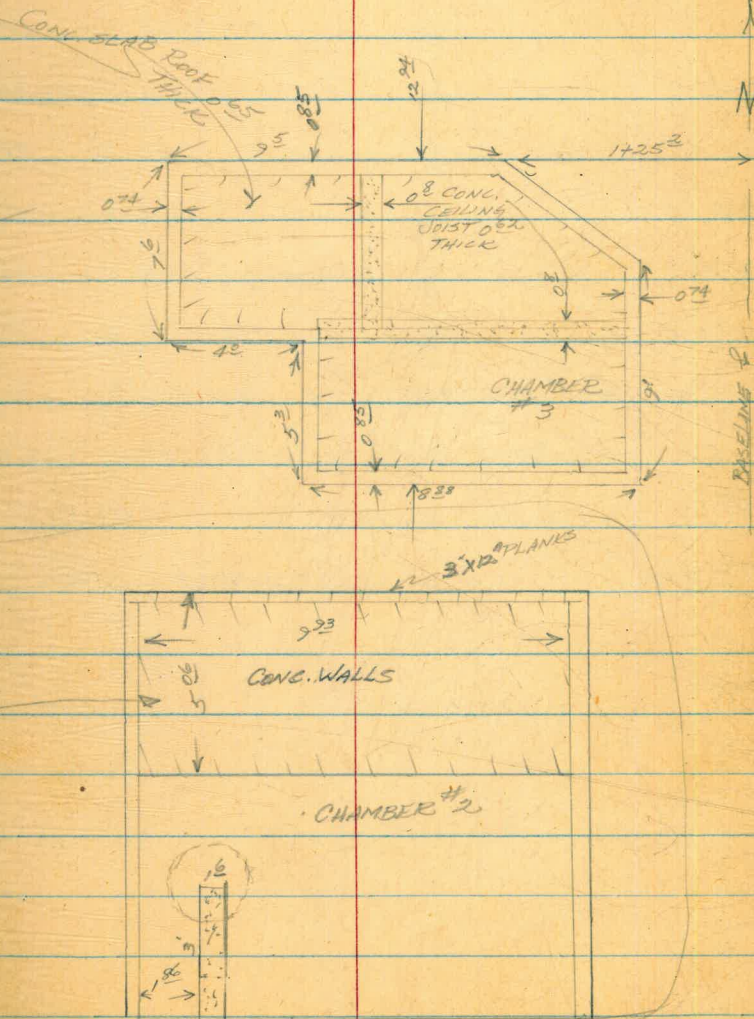
SEE PAGE 19

8/15/56
SHOREY
KEMP
SMITH

21

TOP 42" STEEL PIPE

" " " "



ELEV'S & DETAIL CONC. CHAMBER
#3 (SEE PAGES 19 & 21)

BM	8.07	381.08	373.01
TOP S.E. COR.	4.74		376.34
BOTTOM " "	13.85	9.11	371.97* 367.23
TOP N.E. COR.	4.72		376.36
BOTTOM " COR.	13.99	9.27	371.81* 367.09
TOP N.W. COR.	4.71		376.37
BOTTOM " "	13.79	9.08	372.00* 367.29
TOP N.W. COR.	4.72		376.36
BOTTOM " " "	13.68	8.96	372.12* 367.40
TOP S.W. COR.	4.70		376.38
BOTTOM " " "	13.87	9.17	371.91* 367.21
TOP S.W.E. COR.	4.76		376.32
BOTTOM " " "	14.07	9.31	371.77* 367.01
TOP S.E. COR.	4.76		376.32
BOTTOM S.E. COR.	13.91	9.15	371.93* 367.17
TOP OF PIPE	11.06		370.02
TOP OF PIPE	10.64		370.44
CK. BM.	8.07		373.01 = 373.01

* corrected 8-23-56

RLH
as per Beatty

8/21/56

SHOREY
KEMP
SMITH

23

S.E.B.P. HOWARD & IDAHO

TOP CONC. CHAMBER #3

TOP OF PIPE W. OF FLANGE W. END OF 30" X 24"
PELTON

TOP " " N.E. WALL, WYE CHAMBER, (SEE Pg. 19-21)

UNIVERSITY HTS RESERVOIR

Elev + Location of 24" CI Tee

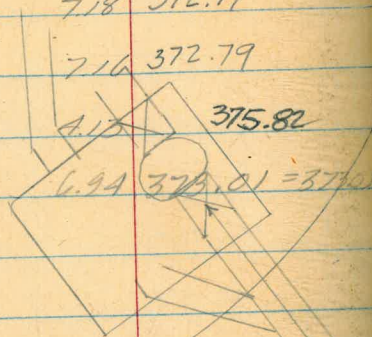
6.94 379.95 373.01

7.18 372.77

7.16 372.79

4.17 375.82

6.94 373.01 = 373.01



West
Williams
Paulson

2A

10/5/56

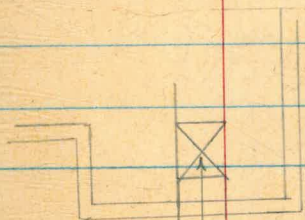
SE BP Howard + Idaho

Top 24" Tee NW side

" " " SE side

Top of Ground

24" CI
32.00'



20" Steel

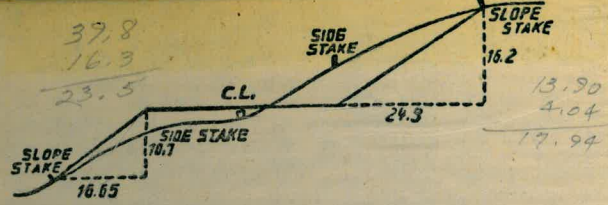
28.55'

11.78'

86.1'

PARADE





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

4.51
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