



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	.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	4.88	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	.032	.037	.043	.049	.053	.057	.061
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	.470	.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	.887	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	.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

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MARCH 25, 1949 LEONARD
PAYNE
CARVER 1.

FINAL X-SECTIONS

SETTLING BASIN AREA

B.M. +8.78 539.09

530.51 RIM M.H.
3177 E60

STATION	N. OR S.		
0+60 E	0	-4.5	534.6
"	10 N	-4.5	34.6
"	20 N	-4.7	34.4
"	30 N	-4.7	34.4
"	40 N	-4.8	34.0
"	50 N	-4.4	34.7
"	60 N	-3.8	35.3
"	70 N	-1.9	37.2
"	72 N	0.5	38.6
0+58	69.7 N	4.5	34.6
"	71.5 N	0.6	38.5
0+75	70 N	4.4	34.7
"	71 N	0.9	38.2
1+00	70 N	-4.7	34.4
"	72 N	-0.7	38.4
1+25	70 N	-4.7	34.4
"	72 N	-1.1	38.0

settling Basins

H.I. = 539.09

1+50E	70N	-4.8	534.3 ^v
"	71N	-1.0	38.1 ^v
1+75E	70N	-4.6	34.5 ^v
"	71.5N	-0.5	38.6 ^v
2+00	70N	-4.5	34.6 ^v
"	72N	-0.5	38.5 ^v
2+25	70N	-4.5	34.6 ^v
"	74N	+1.5	540.6 ^v
2+35	70N	-4.6	34.5 ^v
2+50	70N	-4.7	34.4 ^v
"	70.7N	-0.8	38.3 ^v
2+75	69.8N	-4.6	34.5 ^v
"	71N	-0.0	39.1 ^v
3+00	70N	-4.5	34.6 ^v
"	70.5N	+0.5	539.6 ^v
3+25	69.7N	-4.6	34.5 ^v
"	70N	-0.7	38.4 ^v
3+50	70N	-4.7	34.4 ^v
"	67N	-4.9	34.2 ^v
"	71N	-0.7	38.4 ^v

settling Basins

P.

H.I. = 539.09

0+75E	N 65	-4.8	534.3 ^v
"	N 69.5	-4.4	34.7 ^v
"	N 71	-0.5	38.6 ^v
0+50E	10S	-4.5	34.6 ^v
"	20S	-4.6	34.5 ^v
"	30S	-4.6	34.5 ^v
"	40S	-4.5	34.6 ^v
"	50S	-4.5	34.6 ^v
"	60S	-4.7	34.4 ^v
"	70S	-4.7	34.4 ^v
"	80S	-4.7	34.4 ^v
"	90S	-4.6	34.5 ^v
"	100S	-4.6	34.5 ^v
"	110S	-4.6	34.5 ^v
"	120S	-5.0	34.1 ^v
"	132S	-5.8	30.3 ^v
"	148S	-8.2	30.9 ^v
"	200S	-10.2	28.9 ^v
"	255S 0.6.	-13.2	25.9 ^v

Settling Basins

H.J. = 539.09

0+75E	2005		-10.2	528.9 ^v
"	1445		-8.5	30.6 ^v
"	1325		-4.6	34.5 ^v
"	1005		-4.4	34.7 ^v
"	505		-4.4	34.7 ^v
"	0.0		-4.5	34.6 ^v
"	50N		-4.5	34.6 ^v
1+00E	50N		-4.6	34.5 ^v
"	0+0		-4.6	34.5 ^v
"	505		-4.6	34.5 ^v
"	1005		-4.5	34.6 ^v
"	1325		-4.5	34.6 ^v
"	1445		-8.6	30.5 ^v
"	2005		-10.3	28.8 ^v
"	2295	0.6	-12.1	27.0 ^v
1+25E	2285		-12.4	26.7 ^v
"	2005		-10.5	28.6 ^v
"	1465		-8.7	30.4 ^v
"	1325		-4.6	34.5 ^v

Settling Basins

3.

H.J. = 539.09

125E	1005		-4.5	534.6 ^v
"	505		-4.7	34.4 ^v
"	0.0		-4.5	34.6 ^v
"	50N		-4.5	34.6 ^v
1+50E	50N		-4.6	34.6 ^v
"	0.0		-4.4	34.7 ^v
"	505		-4.6	34.5 ^v
"	1005		-4.5	34.6 ^v
"	1325		-4.6	34.5 ^v
"	1465		-8.9	30.2 ^v
"	2005		-10.6	28.5 ^v
"	2285	0.6	12.4	26.7 ^v
1+75E	2195	0.6	12.1	27.0 ^v
"	2005		10.5	28.6 ^v
"	1465		-8.9	30.2 ^v
"	1325		-4.7	34.4 ^v
"	1005		-4.4	34.7 ^v
"	505		-4.7	34.4 ^v
"	0+0		-4.4	34.7 ^v
"	50N		-4.5	34.6 ^v

Settling Basin

4.

HJ = 539.09

2+00E	50N	-4.5	534.6
	0+0	-4.4	34.7
	50S	-4.6	34.5
	100S	-4.5	34.6
	132S	-4.6	34.5
	146S	-8.9	30.2
	200S	-10.8	28.3
	NAT. 60. 213S	-11.6	27.5
2+25E	NAT. 60 213S	-12.0	27.1
	200S	-10.7	28.4
	146S	-9.1	30.0
	132S	-4.6	34.5
	100S	-4.5	34.6
	50S	-4.5	34.6
	0+0	-4.4	34.7
	50N	-4.4	34.7
2+50E	50N	-4.4	34.7
	0+0	-4.4	34.7
	50S	-4.5	34.6
CHECK B.M.		-8.78	530.31

HJ = 538.09

2+50E	100S	-4.6	534.5
	132S	-4.6	34.5
	146S	-8.9	30.2
	200S	-10.8	28.3
	213S	0.6	-11.9
2+75E	207S	0.6	-11.3
	200S	-10.5	28.3
	145S	-9.0	30.1
	132S	-4.6	34.5
	100S	-4.5	34.6
	50S	-4.6	34.5
	0.0	-4.4	34.7
	50N	-4.6	34.5
2+00E	50N	-4.6	34.5
	0.0	-4.5	34.6
	50S	-4.5	34.6
	100S	-4.6	34.5
	132S	-4.6	34.5
	144S	-8.9	30.2

539.09				539.09					
3+00 E	200s		-10.7	528.4 ^v	3+75 E	206s	0.6	-10.7	528.4 ^v
"	208s	0.6	-11.3	27.8 ^v	"	200s		-10.3	28.8 ^v
3+25	213s	0.6	11.2	27.9 ^v	"	144s		-8.3	30.8 ^v
"	202s		-10.5	28.6 ^v	"	132s		-4.6	34.5 ^v
"	144s		-8.6	30.5 ^v	"	100s		-4.6	34.5 ^v
"	132s		-4.6	34.5 ^v	"	60s		-4.3	34.8 ^v
"	100s		-4.5	34.6 ^v	"	0.0		-4.5	34.6 ^v
"	50s		-4.4	34.7 ^v	"	60N		-4.7	34.4 ^v
"	0.0		-4.6	34.5 ^v	E 396	70N		+1.0	540.1 ^v
"	50N		-4.6	34.5 ^v	E 388	68N		-4.2	34.9 ^v
3+50 E	50N		-4.8	34.8 ^v	E 393	60N		-4.1	35.0 ^v
"	0.0		-4.6	34.5 ^v	E 400	60N		+0.4	539.5 ^v
"	50s		-4.3	34.8 ^v	E 393	50N		-4.7	34.4 ^v
"	100s		-4.5	34.6 ^v	E 396	"		-1.3	37.8 ^v
"	132s		-4.6	34.5 ^v	E 400	"		-0.4	38.7 ^v
"	144s		-8.3	30.8 ^v	E 393	40N		-4.9	34.4 ^v
"	200s		-10.4	28.7 ^v	E 397	"		1.4	37.7 ^v
"	207s	0.6	-11.0	28.1 ^v	E 400	"		0.7	38.4 ^v
			-		E 405	"	0.6	0.0	39.1 ^v

		539.09			
E 394	30N	-4.5	534.6 [✓]		
396.5	"	-2.0	37.1 [✓]		
405	"	0.6.	38.7 [✓]		
E 394	20N	-4.4	34.7 [✓]		
396	"	-3.8	35.3 [✓]		
397	"	-2.1	37.0 [✓]		
399	"	0.6.	37.4 [✓]		
E 394	10N	-4.4	34.7 [✓]		
396	"	-3.6	35.5 [✓]		
397	"	-2.6	36.6 [✓]		
400	"	0.6.	37.3 [✓]		
E 396	0.0	-4.6	34.5 [✓]		
397	"	-2.9	36.2 [✓]		
400	"	-2.3	36.8 [✓]		
E 395	10S	-4.5	34.6 [✓]		
396.5	"	-3.5	35.6 [✓]		
400	"	0.6.	36.2 [✓]		
E 395	20S	-4.4	34.7 [✓]		
400	"	0.6.	36.0 [✓]		

		539.09		6.	
E 395	30S	-4.3	534.8 [✓]		
E 400	0.6.	"	35.7 [✓]		
E 396	40S	-4.2	34.9 [✓]		
400	0.6.	"	35.2 [✓]		
E 396	-50S	-4.4	34.7 [✓]		
400	0.6.	"	34.9 [✓]		
E 396	60S	-4.5	34.6 [✓]		
400	"	-4.4	34.7 [✓]		
E 396	70S	-4.6	34.5 [✓]		
E 400	"	-4.5	34.6 [✓]		
E 400	80S	-4.5	34.6 [✓]		
E 405	0.6.	"	34.2 [✓]		
E 400	90S	-4.5	34.6 [✓]		
405	0.6.	"	33.5 [✓]		
E 400	100S	-4.6	34.5 [✓]		
406	0.6.	"	33.0 [✓]		
E 399.5	110S	-4.5	34.6 [✓]		
407	0.6.	"	32.4 [✓]		

MARCH 28, 49

LEONARD
PAYNE
CARVER

7.

539.09

FINAL X-SECTIONS, TOP PERIMETER ZEOLITE GALLERY PIT.

E399	1205		-4.8	534.8
408.5	"	0.6.	-7.2	31.9
E399	1325		-4.6	34.5
E408	"	0.6.	-7.7	31.4
E396	148.55		-8.1	39.0
E405	149.55		-8.0	31.1
E396	1745	0.6	-9.2	29.9
CHECK	R.M.		-8.78	530.31

turns & reducing
Ckd 3-29-49 con

Plotted 3-31-49 con

R.M. + 9.36		539.67	530.31	3177 E60
COORDINATE				
N-S:	E-W:			ELEV.
12.4N	47E		3.4	536.3
13N	40E		2.8	36.9
13.5N	30E		2.5	37.2
13. N	20E		2.1	37.6
12.4N	10E		2.0	37.7
12.6 N	0.0		2.0	37.7
11.5 N	10 W		3.4	36.3
12 N	20 W		3.0	36.7
12 N	30 W		2.9	36.8
12 N	40 W		3.0	36.7
11 N	47 W		1.4	38.3
10 N	47 W		1.4	38.3
0	47 W		1.6	38.1
10.5	48 W		1.5	38.2
20.5	48 W		1.8	37.9
30.5	48 W		2.2	37.5
40.5	47 W		3.2	36.5

N-S:	E-W:	539.67	-	ELEV.
505	48W			336.3
605	48W			335.8
705	47W			34.9
805	47W			34.5
905	47W			34.2
1005	48W			33.5
1105	48W			33.0
1195	46W			32.3
1195	40W			31.4
1195	34W			30.8
1205	29W			31.6
1205	0.0			27.0
1225	0.0			32.1
1205	3. E			32.0
1215	10 E			32.3
119.55	20 E			31.9
1205	30 E			31.9
1205	38 E			31.9
1205	46 E			33.6

N-S:	E-W:	539.67	-	ELEV.
1105	47E			534.4
1005	48E			33.8
905	48E			34.0
805	48E			34.1
705	47.5E			34.4
605	47E			34.5
505	48E			34.5
405	47E			34.8
305	47E			34.6
205	47E			34.6
105	47E			34.6
0+0	47E			34.7
10N	47E			34.8
1325	0.0			31.8
"	3W			31.1
"	8W			26.9
"	15W			26.8
"	23W			27.1
"	29W			31.3

RAMP

RAMP INTO PIT.

BOTTOM OF ZEOLITE GALLERY PIT.

N-S:	E-W:	539.67	-	ELEV.
1455	0.0		8.4	531.3 [✓]
"	8W		9.2	30.5 [✓]
"	12W		10.4	29.3 [✓]
"	15W		10.4	29.3 [✓]
"	28W		9.6	30.2 [✓]
"	32W		8.4	31.3 [✓]
1555	0.0		8.6	31.1 [✓]
"	14W		9.7	31.0 [✓]
"	20W		9.7	31.0 [✓]
"	32W		8.3	31.4 [✓]
T.P.			-12.46	527.21 [✓] ROCK
N.d.	+1.19	528.40 [✓]		
1205	4W		-4.1	524.3 [✓]
"	10W		-4.0	24.4 [✓]
"	20W		-3.8	24.6 [✓]
"	22W		-3.7	24.7 [✓]
"	25W		-2.3	26.1 [✓]
"	26W		-1.0	27.4 [✓]

N-S:	E-W:	528.40	-	ELEV.
8N	40W		3.5	524.9 [✓]
6N	"		4.4	24.0 [✓]
7.5N	30W		4.3	24.1 [✓]
8N	20W		4.0	24.4 [✓]
8.3N	10W		4.6	23.9 [✓]
8.7N	0.0		4.5	23.9 [✓]
8.8N	10E		4.4	24.0 [✓]
8.7N	20E		4.5	23.9 [✓]
8.6N	30E		4.4	24.0 [✓]
9N	38E		4.1	24.8 [✓]
9N	44E		0.6	27.8 [✓]
0.0	45E		1.6	26.8 [✓]
"	42E		4.3	24.1 [✓]
"	30E		4.7	23.7 [✓]
"	20E		4.8	23.6 [✓]
"	10E		4.8	23.6 [✓]
"	0.0		4.8	23.6 [✓]
"	10W		4.6	23.8 [✓]
"	20W		4.5	23.9 [✓]

N-S:	E-W:	528.40	-	ELEV.
0.0	30W		-4.6	528.8"
"	40W		-4.8	23.6"
"	43.8W		-4.4	24.0"
10S	44.3W		-4.8	24.1"
"	40W		-4.6	23.8"
"	30W		-4.8	23.6"
"	20W		-4.7	23.7"
"	10W		-4.8	23.6"
"	0		-4.8	23.6"
"	10E		-5.0	23.4"
"	20E		-4.9	23.5"
"	30E		-4.8	23.6"
"	40E		-4.4	24.0"
"	42E		-4.8	24.1"
"	44.5E		-4.9	26.5"
20S	44.1E		-4.4	24.0"
"	40E		-4.7	23.7"
"	30E		-4.8	23.6"
"	20E		-4.9	23.5"

10.

N-S:	E-W:	528.40	-	ELEV.
20S	10E		-4.8	528.6"
"	0.0		-4.8	23.6"
"	10W		-4.8	23.6"
"	20W		-4.8	23.6"
"	30W		-4.8	23.6"
"	40W		-4.7	23.7"
"	43.6W		-4.5	23.9"
30S	43.5W		-4.4	24.0"
"	40W		-4.7	23.7"
"	30W		-4.7	23.7"
"	20W		-4.9	23.5"
"	10W		-4.7	23.7"
"	0.0		-4.9	23.5"
"	10E		-4.8	23.6"
"	20E		-4.8	23.6"
"	30E		-4.8	23.6"
"	40E		-4.7	23.7"
"	44.2E		-4.4	24.0"

N-S:	E-W:	528.40		
40S	44 E		-4.7	523.7 [✓]
"	40E		-4.8	23.6 [✓]
"	30E		-4.9	23.5 [✓]
"	20E		-4.7	23.7 [✓]
"	10E		-4.7	23.7 [✓]
"	0.0		-4.7	23.7 [✓]
"	10W		-4.6	23.8 [✓]
"	20W		-4.8	23.6 [✓]
"	30W		-4.8	23.6 [✓]
"	40W		-4.6	23.8 [✓]
"	43 W		-4.6	23.8 [✓]
50S	43.5W		-4.5	23.9 [✓]
"	40W		-4.6	23.8 [✓]
"	30W		-4.8	23.6 [✓]
"	20W		-4.7	23.7 [✓]
"	10W		-4.7	23.7 [✓]
"	0.0		-4.7	23.7 [✓]
"	10E		-4.7	23.7 [✓]
"	20E		-4.7	23.7 [✓]

N-S:	E-W:	528.40		11.
50S	30E		-4.8	523.6 [✓]
"	40E		-4.8	23.6 [✓]
"	44 E		-4.6	23.8 [✓]
60S	44 E		-4.8	23.6 [✓]
"	40E		-5.0	23.4 [✓]
"	30E		-4.9	23.5 [✓]
"	20E		-4.7	23.7 [✓]
"	10E		-4.6	23.8 [✓]
"	0.0		-4.7	23.7 [✓]
"	10W		-4.8	23.6 [✓]
"	20W		-4.7	23.7 [✓]
"	30W		-4.7	23.7 [✓]
"	40W		-4.6	23.8 [✓]
"	43.8W		-4.5	23.9 [✓]
70S	43.8 W		-4.5	23.9 [✓]
"	40 W		-4.6	23.8 [✓]
"	30W		-4.7	23.7 [✓]
"	20W		-4.7	23.7 [✓]
"	10W		-4.8	23.6 [✓]

N-S:	E-W:	528.40		
705	0.0		-4.7	523.7
"	10E		-4.6	23.8
"	20E		-4.7	23.7
"	30E		-4.9	23.5
"	40E		-5.0	23.4
"	43.7 E		-5.0	23.4
806	44.0E		-5.0	23.4
"	40E		-5.0	23.4
"	30E		-4.9	23.5
"	20E		-4.8	23.6
"	10E		-4.7	23.7
"	0.0		-4.8	23.6
"	10W		-4.9	23.5
"	20W		-4.8	23.6
"	30W		-4.7	23.7
"	40W		-4.6	23.8
"	44.2 W		-4.4	24.0
905	44.2 W		-4.6	23.8
"	40 W		-4.7	23.7

N-S:	E-W:	528.40		
905	30W		-4.8	523.6
"	20W		-4.8	23.6
"	10W		-4.9	23.5
"	0.0		-4.7	23.7
"	10E		-4.8	23.6
"	20E		-4.9	23.5
"	30E		-5.1	23.3
"	40E		-5.3	23.1
"	44E		-5.0	23.4
1005	43.5E		-4.9	23.5
"	40E		-5.2	23.2
"	30E		-5.0	23.4
"	20E		-4.9	23.5
"	10E		-4.9	23.5
"	0.0		-5.0	23.4
"	10W		-5.1	23.3
"	20W		-4.9	23.5
"	30W		-4.9	23.5
"	40W		-5.0	23.4
"	44.5W		-4.5	23.9

N-S:	E-W:	528.40	-	ELEV.	N-S:	E-W:	528.40		
110 S	43.8 W		-4.7	523.7	115 S	27 W		-3.8	524.6
"	40 W		-4.9	23.5	115.5 S	30 W		-3.7	24.7
"	30 W		-5.0	23.4	112 S	40 W		-4.8	23.6
"	20 W		-4.8	23.6	115.5	40 W		-2.9	25.5
"	10 W		-5.1	23.3	T.P.			-0.92	527.48 ROCK.
"	0.0		-5.0	23.4		+10.99	538.47		
"	10 E		-5.1	23.3	CHECK B.M.			-4.09	534.38 =
"	20 E		-5.0	23.4					RIM M.H. 534.40 SURFACE
"	30 E		-5.3	23.1	CHECK B.M.			-8.15	630.32 =
"	40 E		-5.2	23.2					RIM M.H. 530.31 SURFACE
"	43.4 E		-5.0	23.4					
117 S	40 E		-4.7	23.7					
"	45 E		-1.7	26.7					
115 S	30 E		-4.7	23.7					
117 S	"		-2.9	25.5					
115 S	20 E		4.8	23.6					
117.8 S	"		-2.5	25.9					
116 S	10 E		-5.1	23.3					
115 S	0.0		-5.2	23.2					

NOTE: SHOTS ADJACENT TO TOE OF BANKS
SHOW ELEV'S THAT GROUND WAS GRADED
TO ORIGINALLY, AND DO NOT INCLUDE
THE ACCUMULATION OF MUD THAT HAS
SINCE WASHED DOWN FROM THE FACE OF
THE BANKS. STATIONS SHOW THE
FACE OF VERTICAL BANKS AS CLOSE AS
POSSIBLE TO THE TOE.

PLOTTED by EW. ERDAHL 3/31/49

TUMS & P. 107

CHECKED 3-29-49

com

April 1, 1949

LEONARD
PAYNE
CARVER

14.

FINAL X-SECTIONS ALONG LAKE SHORE:

R.M.	+ 1.25	537.64		536.39 ^{ON DAM.}
W80	325 N	0.6	-6.6	531.0 [✓]
	330 N		-7.2	530.4 [✓]
	340 N		-8.7	28.9 [✓]
	350 N		-10.2	27.4 [✓]
W100	320 N		-4.6	33.0 [✓]
	330 N		-6.1	31.5 [✓]
	340 N		-7.7	29.9 [✓]
	350 N		-9.4	27.2 [✓]
W120	280 N		-0.5	37.1 [✓]
	300 N		-2.9	34.7 [✓]
	310 N		-4.0	32.6 [✓]
	320 N		-5.3	32.3 [✓]
	330 N		-5.8	31.8 [✓]
	340 N		-7.3	30.3 [✓]
	350 N		-9.0	28.6 [✓]
W140	280 N		-1.5	36.1 [✓]
	300 N		-3.8	33.8 [✓]
	310 N		-4.7	32.9 [✓]
	320 N	0.6	-5.4	32.2 [✓]

587.64[✓]

E 220	N 290	-3.2	584.4 [✓]
	300N	-6.9	30.7 [✓]
	310N	-10.4	27.2 [✓]
	320N	-14.1	23.5 [✓]
E 230	290N	-3.6	34.0 [✓]
	300N	-7.4	30.2 [✓]
	310 N	-9.7	27.9 [✓]
	320N	-13.6	24.0 [✓]
E 240	290N	-3.4	34.2 [✓]
	300N	-6.6	31.0 [✓]
	310N	-9.8	27.8 [✓]
	320N	-13.5	24.1 [✓]
E 250	290N	-3.0	34.6 [✓]
	300N	-6.4	31.2 [✓]
	310N	-9.8	27.8 [✓]
	320N	-13.1	24.5 [✓]
E 260	290N	-2.8	34.8 [✓]
	300N	-6.1	31.5 [✓]
	310N	-9.3	28.3 [✓]
	320N	-12.3	25.3 [✓]

587.64[✓]

E 270	290N	-2.4	535.2 [✓]
	300N	-5.6	32.0 [✓]
	310N	-8.5	29.1 [✓]
	320N	-10.9	26.7 [✓]
	327N 0.6	-13.4	24.2 [✓]
E 280	290N	-2.0	35.6 [✓]
	300N	-4.6	33.0 [✓]
	310N	-7.3	30.3 [✓]
E 290	290N	-0.5	37.1 [✓]
	300N ON PIPE	-2.5	35.1 [✓]
	310N	-5.1	32.5 [✓]
	320N	-7.2	30.4 [✓]
	330N	-8.3	29.3 [✓]
	340N	-9.6	28.0 [✓]
E 300	290N	-0.1	37.5 [✓]
	300N	-2.3	35.3 [✓]
	310N	-3.9	33.7 [✓]
	320N	-5.1	32.5 [✓]
	330N	-5.9	31.7 [✓]

April 1, 1949

LEONARD
PAYNE
CARVER

16.

587.64 ✓

E310	300N		-1.1	586.5 ✓
	310N		-2.5	85.1 ✓
	321H	0.6.	-3.7	88.9 ✓
E320	300N		-0.8	87.3 ✓
	314N	0.6.	-2.0	85.6 ✓
CHECK B.M. ON DAM.			-1.25	586.89 ✓
SET B.M. CHISELED □ CENTER OF SOUTH WALL OF 4' X 4.5' BOX ON DRAIN LINE INTO LAKE E225 ± N220 ±			-2.12	585.52 ✓
CK'd con 4-4-49				

SEE PAGE 20 ALSO.

FINAL X-SECTIONS AROUND WASH WATER TANK

B.M.	+ 8.19	544.58 ✓	586.89 ✓ ON DAM.	
WR10	140N		-4.0	540.6.
	152N		-3.9	40.7.
	158N		-5.6	39.0.
	180N		-6.4	38.2.
	200N		-6.6	38.0.
	220N		-6.9	37.7.
	240N		-7.5	37.1.
	258N	DAM	-8.5	36.1.
WR20	140N		-4.3	40.3.
	150N		-4.3	40.3.
	155N		-5.7	38.9.
	160N		-6.0	38.6.
	180N		-7.0	37.6.
	200N		-7.5	37.1.
	220N		-7.3	37.3.
	240N		-7.8	36.8.
	260N	0.6.	-9.1	35.5.

544.58

W224	176H	-7.2	537.4
	187H	-8.7	35.9
	200H	-8.7	35.9
	209H	-7.7	36.9
W230	140H	-4.6	40.0
	147H	-4.6	40.0
	152H	-5.9	38.7
	160H	-6.4	38.2
	167H	-7.0	37.6
	174H	-8.6	36.0
	176H	-8.9	36.3
	180H	-8.2	36.9
	200H	-8.0	36.6
	210H	-8.9	36.3
	213H	-9.0	35.6
	216H	-8.0	36.6
	220H	-7.7	36.9
	228H	-7.5	37.1
	240H	-8.0	36.6

17.

544.58

WR30	260N	-9.3	535.3
	280H	-11.0	33.6
WR40	140H	-5.0	39.6
	143H	-5.0	39.6
	150H	-6.0	38.6
	160H	-6.7	37.9
	166H	-8.5	36.1
	172H	-8.0	36.6
	213H	-8.0	36.6
	215H	-8.2	36.4
	220H	-9.1	35.5
	224H	-7.9	36.7
	240H	-7.7	36.9
	260H	-9.2	35.4
	280H	-11.7	32.9
W 250	137H	-5.3	39.3
	143H	-6.1	38.5
	157H	-6.9	37.7
	162H	-8.2	36.4
	168H	-7.8	36.7

544.58

W250	218N	-8.0	536.6.
	222N	-8.2	36.4.
	224N	-9.2	35.4.
	229N	-7.8	36.8.
	237H	-7.8	36.8.
	240N	-9.8	34.8.
	243N	-8.0	36.6.
	260N	-9.0	35.6.
	280N	-12.0	32.6.

CHECK B.M.

-8.19 536.39

+4.72

541.11

W260	138N	-2.1	39.0.
	136N	-2.9	38.2.
	140N	-3.0	38.1.
	159N	-3.6	37.5.
	162N	-4.8	36.3.
	167N	-4.6	36.5.
	219N	-4.7	36.4.
	223N	-4.8	36.3.

541.11

W260	225N	-5.7	535.4.
	230N	-3.8	37.8.
	240N	-4.0	37.1.
	254N	-5.7	35.4.
	256N	-6.6	34.5.
	258N	-6.0	35.1.
	263N	-6.2	34.9.
	280N	-8.6	32.5.
	300N	-11.5	29.8.
W270	124N	-2.7	38.4.
	129N	-3.5	37.6.
	140N	-3.7	37.4.
	159N	-3.5	37.6.
	164N	-5.1	36.0.
	171N	-4.6	36.5.
	215N	-4.6	36.5.
	220N	-4.8	36.3.
	222N	-5.6	35.5.
	227N	-3.2	37.9.

541.11 ✓

WR70	240N	-4.5	536.6
	260N	-6.7	34.4
	280N	-8.9	32.2
	300N	-11.8	29.8
WR80	114N	-3.1	38.0
	119N	-4.0	37.1
	140N	-4.2	36.9
	158N	-4.3	36.8
	164N	-3.4	37.7
	172N	-5.2	35.9
	174N	-4.9	36.2
	184N	-4.6	36.5
	203N	-4.7	36.4
	212N	-4.8	36.3
	214N	-5.4	35.7
	221N	-3.8	37.8
	240N	-6.6	35.5
	260N	-7.8	33.3
	280N	-9.8	31.3
	300N	-12.0	29.1

541.11 ✓

19.

WR90	140N	-4.8	536.3
	150N	-5.0	536.1
	177N	-3.3	537.8
	190N	-4.4	536.7
	210N	-3.9	537.8
	240N	-7.1	534.0
	260N	-9.2	531.9
	280N	-11.5	529.6
	300N	-13.1	528.0
WR88	173N	-3.8	37.8
	193N	-5.2	35.9
	212N	-3.4	37.7
WR99	193N	-3.4	37.7
WR00	140N	-5.5	35.6
	160N	-5.4	35.7
	180N	-4.9	36.2
	200N	-4.8	36.3
	220N	-6.4	34.7
	240N	-9.0	32.1

APRIL 6, 1949 LEONARD
PAYNE P.O.
CARVER

541.11 ✓

ADDITIONAL X-SECTION'S OF LAKE SHORE.

W300	260N	-11.0	530.1 +	R.M. +3.66	550.52	546.66	SALT TRAYS
	280N	-12.4	28.7	E348	105N	-4.7	545.6
	300N	-13.5	27.3		120N	-4.8	45.5
W310	140N	-6.0	35.1		140N	-4.8	45.5
	160N	-6.8	34.8		160N	-5.0	45.3
	180N	-6.4	34.7		172N	-5.0	45.3
	200N	-7.1	34.0		180N	-5.6	44.7
	220N	-9.1	32.0		200N	-6.2	44.1
	240N	-11.4	29.7		220N	-6.5	43.8
	260N	-12.8	28.3		224N	-6.6	43.7
	280N	-13.9	27.2		240N	-6.9	43.4
	300N	-14.4	26.7		260N	-7.4	42.9
CHECK R.M.		-4.72	536.99 ✓ on CHM.		280N	-8.3	42.0
					300N	-10.5	39.8

Notes Reduced on 4-4-49

CHECKED REDUCING BWE. 4-4-49

CHECK R.M.

SEE PAGE 14-15

N+E LEVEL 106546

APRIL 4, 1950

LEONARD
CARVER.

P. 1.

PAVING GRADES SET ON HEADERS; CONT'D FROM PAGE 5

N.D.	550.83		
N118.8 E 179.6		-4.62	546.21
" E 190		-4.62	546.22
" E 200		-4.61	546.22
" E 210		-4.61	546.22
" E 220		-4.61	546.22
" E 230		-4.61	546.22
" E 240		-4.61	546.22
" E 250		-4.61	546.22
" E 262	ON PVT	-4.62	546.21
N127.8 E 179.6		-4.67	546.16
E 190		-4.68	546.15
E 200		-4.67	546.16
E 210		-4.68	546.15
E 220		-4.67	546.16
E 230		-4.67	546.16
E 240		-4.67	546.16
E 250		-4.67	546.16
E 262	ON PVT	4.68	546.15
CHECK R.M.		-4.17	546.66

PAVING GRADES SET ON HEADER FORMS

R.M.	+3.96	550.62		546.66 SALT TANK
H. SIDE				
E 262			-4.62	546.00
E 272			-4.62	546.00
E 282			-4.62	546.00
E 292			-4.62	546.00
E 302			-4.62	546.00
E 312			-4.62	546.00
E 322			-4.62	546.00
E 332.4			-4.62	546.00
E 262			-4.62	546.00
E 272			-4.62	546.00
E 282			-4.62	546.00
E 292			-4.62	546.00
E 302			-4.62	546.00
E 312			-4.62	546.00
E 322			-4.62	546.00
E 330±			-4.62	546.00
N194.42 E 325			-4.62	546.00
" E 311			-4.62	546.00
" E 294			-4.62	546.00
S. SIDE				

PAYING HEADERS SET TO FINISH GRADE:

	550.62		
N 194.42 E 278	-4.62	546.00	
" E 260	-4.62	546.00	
→ E 262±	-4.62	546.00	
N. EDGE R.R. SPUR E 216	-4.62	546.00	
E 206	-4.62	546.00	
E 296	-4.62	546.00	
E 286	-4.62	546.00	
E 276	-4.62	546.00	
→ E 262	-4.62	546.00	
CHECK R.M.	-3.96	546.66	

R.M.	+4.17	550.83		546.66	S.E. COR. SALT TANK
N 158.9 E 180			-4.83	546.00	
" E 190			-4.83	546.00	
" E 200			-4.83	546.00	
" E 210			-4.83	546.00	
" E 220			-4.83	546.00	
" E 230			-4.83	546.00	
" E 240			-4.83	546.00	
" E 250			-4.83	546.00	
" E 262		ON P.V.M.T.	-4.84	545.99	
N 152.4 E 262			-4.83	546.00	
" E 250		SCREENED SET	-4.83	546.00	
" E 240		TO USE MOTOR	-4.83	546.00	
" E 230		VIBRATOR.	-4.83	546.00	
" E 220		NO JOINT,	-4.83	546.00	
" E 210		GRADE	-4.83	546.00	
" E 200		BREAK	-4.83	546.00	
" E 190		ONLY	-4.83	546.00	
" E 180			-4.83	546.00	

N. d.	550.85		
N167.9 E80			
" E90			
" E100			
" E110			
" E120			
" E130			
" E140			
" E150			
" E162			
N178.9 E80		-4.83	546.00
" E90		-4.83	546.00
" E100		-4.83	546.00
" E110		-4.83	546.00
" E120		-4.83	546.00
" E130		-4.83	546.00
" E140		-4.83	546.00
" E150		-4.83	546.00
" E162		-4.83	546.00

N. d.	550.85		
N187.9 E80		-4.83	546.00
" E90		-4.83	546.00
" E100		-4.83	546.00
" E110		-4.83	546.00
" E120		-4.83	546.00
" E130		-4.83	546.00
" E140		-4.83	546.00
" E150		-4.83	546.00
" E162	ON CEMENT AMT	-4.81	546.02
N194.4 E80	IN SALT TANK PAIN.	-4.85	545.98
" E90		-4.83	546.00
" E100		-4.83	546.00
" E110		-4.83	546.00
" E120		-4.83	546.00
" E130		-4.83	546.00
" E140		-4.83	546.00
" E150		-4.83	546.00
" E162	ON PVT.	-4.82	546.01

CONT'D L.H. SIDE PAGE 26.

APRIL 5, 1949.

LEONARD
PAYNE
CARYER.

24.

AREA

CU. YDS.

0.74 ✓
2.25 ✓
3.85 ✓
4.43 ✓
4.20 ✓
4.23 ✓
4.55 ✓
2.8 ✓
5.6 ✓
7.7 ✓
8.0 ✓
7.8 ✓
0.8 ✓

2.67 ✓
3.19 ✓
5.60 ✓
5.60 ✓
5.74 ✓
6.08 ✓
2.2 ✓
5.4 ✓
8.1 ✓
10.4 ✓
10.5 ✓
9.0 ✓
total 76.1 cu yd

computed by Eckdahl 3-5-49

checked by Nelson 3-5-49

SURPLUS DIRT ON SETTLING BASIN AREA.

STATION:	BOTTOM WIDTH	TOP WIDTH	MEAN HEIGHT.
0+1'	2.0'	0.1'	0.7'
0+50'	4.0'	0.5'	1.0'
1+00	5.0'	0.5'	1.4'
1+50	5.5'	0.4'	1.5'
2+00	5.5'	0.5'	1.4'
2+50	5.5'	1.0'	1.8'
2+55 END	5.0'	2.0'	1.8'
SECOND ROW:			
0+1	3.7'	0.4'	1.8'
0+50	4.4'	0.5'	1.3'
0+60	6.0'	1.0'	1.6'
1+00	6.0'	1.0'	1.6'
1+50	7.2'	1.0'	1.4'
1+91 END.	6.6'	1.0'	1.6'

NOTE: ABOVE MEASUREMENTS ARE MEAN X-SECTIONS OF DIRT
BLADED UP INTO WINDROWS, FROM THE SETTLING BASINS
AREA.

APRIL 8, 1949

LEONARD - NOTES

PAYNE - 100

CARYER - X

25.

FINAL X-SECTIONS AROUND TURNING CIRCLE.

B.M.	+ 1.71	528.85		527.14
WR00	400.5		-6.7	522.2
	409.5		-7.0	21.9
	420.5		-9.8	19.1
	428.5		-12.2	16.7
WR10	400.5		-6.9	22.0
	415.5		-7.1	21.8
	420.5		-8.4	20.5
	440.5		-11.0	17.9
WR20	400.5		-7.2	21.7
	420.5		-7.5	21.4
	435.5		-8.0	20.9
	440.5		-9.0	19.9
	455.5		-12.1	16.8
WR30	400.5		-7.5	21.4
	420.5		-7.7	21.2
	440.5		-8.1	20.8
	460.5		-13.1	15.8

		528.85		
WR40	375 5	0.6	-6.8	522.1
	377 5		-7.4	21.5
	400 5		-7.7	21.2
	420 5		-8.0	20.9
	440 5		-8.2	20.7
	449 5		-8.5	20.4
	460 5		-12.2	16.7
WR250	^{370 5} 367 5	0.6	-6.0	22.9
	374 5		-7.7	21.2
	400 5		-7.9	21.0
	420 5		-8.3	20.6
	440 5		-8.4	20.5
	450 5		-8.4	20.5
	460 5		-11.8	17.1
WR60	369 5	0.6	-5.9	23.0
	375 5		-7.8	21.1
	400 5		-8.1	20.8
	420 5		-8.4	20.5
	440 5		-8.6	20.3

		528.85		
WR260	460 5		-8.7	520.2
	460 5		-11.9	17.0
WR70	369 5	0.6	-5.6	23.3
	379 5		-8.1	20.8
	400 5		-8.4	20.5
	420 5		-8.5	20.4
	440 5		-8.8	20.1
	448 5		-9.0	19.9
	460 5		-12.4	16.5
WR80	375 5	0.6	-5.2	23.7
	387 5		-8.3	20.6
	400 5		-8.6	20.3
	420 5		-8.6	20.3
	440 5		-9.0	19.9
	443 5		-9.0	19.9
	460 5		-12.4	16.5
WR90	392 5		-6.8	22.1
	403 5		-8.8	20.1
	420 5		-8.8	20.1

528.85

WR90	4395		-9.4	519.5	
	4605		-12.1	16.8	
WR300	4205	0.6. EDGE PYMT.	-8.5	20.4	
	4405	0.6. EDGE PYMT.	-9.1	19.8	
	4475		-10.3	18.6	
	4605		-11.4	17.5	
T.P.			-13.08	515.77	SPIKE IN 6" EDC.
	+0.26	516.03			
WR200	5440		-1.0	515.0	
	4605		-4.5	11.5	
	4805	0.6.	-12.6	05.4	
WR10	4605		-3.3	12.7	
	4665		-4.1	11.9	
	4715		-6.7	09.3	
	4805		-10.0	-06.0	
WR220	4605		-0.8	15.2	
	4675		-3.6	12.4	
	4805		-8.6	07.4	

516.03

WR30	4805		-7.9	508.1	
WR40	4805		-6.9	09.1	
WR50	4805		-6.1	09.9	
	4805		-6.1		
	4955		-10.4	05.6	
	5005		-10.6	05.4	
	5135	0.6.	-11.5	04.5	
WR60	4805		-5.1	10.9	
	4965		-8.5	07.5	
	5005		-8.9	07.1	
	5105	0.6.	-9.4	06.6	
WR70	4805		-3.6	12.4	
	4965		-5.5	10.5	
	5005		-5.5	10.5	
	5075	0.6.	-5.8	10.2	
WR80	4805		-2.4	13.6	
	5005		-3.6	12.4	
	5065	0.6.	-3.8	12.2	

516.05				504.15			
WR290	4805	-1.2	514.8	WR220	5275	-8.2	496.0
	5005	o.g.	13.9		5315	o.g. DUMP	493.5
WR300	4805	-0.3	15.7	WR230	5005	-3.2	501.0
	5005	o.g.	14.6		5065	-5.4	498.8
T.P.	Rock.	-12.28	503.75		5205	-6.5	497.7
	+0.40	504.15			5305	o.g.	496.1
WR200	5005	-5.6	498.6	WR240	5005	-2.2	502.0
	5055	-7.2	497.0		5025	-2.7	501.5
	5205	-8.2	96.0		5115	-3.8	500.4
	5295	-9.0	95.2		5205	o.g.	499.3
	5315	o.g. DUMP	94.0	T.P.	Rock.	-1.21	502.94
WR210	5005	-5.7	98.5		+10.89	513.83	
	5115	-8.0	96.2	T.P.	Rock.	-0.87	512.96
	5205	-8.4	95.8		+9.81	522.77	
	5285	-9.3	94.9	T.P.	Rock.	-2.29	520.48
	5345	o.g. DUMP	92.2		+8.85	529.33	
WR220	5005	-4.7	99.5	R.I.T. CHECK.		-2.17	527.16 =
	5095	-6.7	97.5		SPIKE IN POWER		527.14
	5205	-7.4	96.8		N.W. CIR. TURNING		CIRCLE.

K.F. LEVEL 0106546
CLEAR WARM.

MARCH 8, 1950 LEONARD, NOTES + P. 00
CARVER - LEVA 29.

SUB GRADE FOR PAVEMENT, N.E. QUADRANT.

P.M. ON END OF SALT STG. TANK.				546.66
STATION	SUB GRADE	-	HUR ELEV.	CUT OR FILL
H.d. 12.89 2x4 POST + TACK	549.55			
N114.5 E 398.0	545.75	-4.60	544.95	F 0.80
E 411.0	"	-3.80	545.75	GRADE LINE ON TANK
N111.5 E 437.75	"	-4.15	545.40	F 0.35
" E 457.0	545.69	-3.93	545.62	C 0.07
" E 475.5	545.64	-3.96	545.59	F 0.05
W. END SCALES h E 493.85	545.58	-3.81	545.74	C 0.16
N123.0 E 493.85	545.58	-3.48	546.07	C 0.5
" E 517.35	545.58	-3.49	546.06	C 0.5
E. END SCALES. " E 540.85	545.58	-3.45	546.07	C 0.5
N111.5 E 540.85	545.58	-4.18	545.37	F 0.2
" E 561.0	545.58	-3.91	545.64	C 0.06
N140.50 E 561.0	545.58	-3.81	545.74	C 0.16
" E 597.0	"	-4.00	545.55	F 0.03
" E 517.0	"	-4.80	545.25	F 0.33
" E 497.0	"	-4.23	545.32	F 0.26
" E 477.0	"	-4.30	545.25	F 0.33

MARCH 8, 1930

LEONARD
CORVEE 30.

PAVEMENT SUB-GRADE, N.E. QUAR. CONT'D.

STATION	SUB. GRADE.	-	HUR ELEV.	CUT OR FILL.
H. I. Redwood Hub.	549.55			
N 140.5 E 457.0	546.58	-4.37	545.18	F 0.40
" E 437.0	"	-4.23	45.32	F 0.26
" E 417.0	"	-4.19	45.36	F 0.22
" E 397.0	"	-4.18	45.37	F 0.21
" B.C. 0.00 PINE HUB	"	-4.17	45.38	F 0.20
" E 378.0	"	-4.17	45.38	F 0.20
CURVE: 13.87	545.57	-4.11	45.44	F 0.13
" 27.75	545.56	-4.15	45.40	F 0.16
" 41.62	545.55	-4.27	45.28	F 0.27
" 55.50	545.54	-4.24	45.31	F 0.23
" 69.37	545.52	-4.37	45.19	F 0.34
E.C. 83.25 Redwood Hub	545.50	-4.31	45.24	F 0.26
N 193.50 E 325.00				
CHECK ELEV'S ON TOP OF TRUCK SCAPES				
N.W. CORNER		-3.48	546.07	
S.W. CORNER		-3.48	46.07	
N.W. CENTER		-3.49	46.06	
N.E. CORNER		-3.48	46.07	
S.E. CORNER.		-3.47	46.08	
CHECK R.M.		-2.89	546.66	

N.E. LEVEL 106346

CLEAR, 200.

MARCH 10, 1950 LEONARD
CARVER

31.

BLUE TOPS FOR PAVEMENT SUR GRADE, N.E. QUADRANT

B.M. + P. 95 N198.5 E3850	550.61	546.66	ON SALT STR. TANK
Ed. CURVE 0+83.25		-5.11	546.50
		5.11	50
CURVE 0+69.37		-5.09	546.52
		5.11	50
" 0+55.50		-5.07	46.54
		5.11	50
" 0+41.62		-5.06	46.56
		5.11	50
" 0+27.75		-5.05	46.56
		5.11	50
" 0+13.87 N140.5 E378.0		-5.04	46.54
R.C. 0+00		-5.03	46.58
N140.5 E397.0		-5.03	46.58
" E417.0		-5.03	46.58
" E437.0		-5.02	46.59
" E457.0		-5.03	46.58
" E477.0		-5.03	46.58
" E497.0		-5.03	46.58
" E517.0		-5.02	46.59
" E537.0		-5.03	46.58
" E561.0		-5.04	46.57
N111.5 E381.0		-5.03	46.57
" E475.5		-4.97	546.64
" E457.0		-4.92	546.69

N.E. QUAD SUB GRADE BLUE TOPS - CONT'D.

R.M. + 4.04	550.70		546.66	<small>9417 515. TANK.</small>
-------------	--------	--	--------	------------------------------------

N114.5

E378.0	545.75	- 4.95	546.75
--------	--------	--------	--------

E350.0	"	- 4.94	45.76
--------	---	--------	-------

E325.0	"	- 4.97	45.78
--------	---	--------	-------

E300.0	"	- 4.94	45.76
--------	---	--------	-------

E275.0	"	- 4.96	45.74
--------	---	--------	-------

E250.0	"	- 4.95	45.75
--------	---	--------	-------

E225.0	"	- 4.95	45.75
--------	---	--------	-------

E200.0	"	- 4.95	45.75
--------	---	--------	-------

E175.0	"	- 4.96	45.74
--------	---	--------	-------

E150.0	"	- 4.96	45.74
--------	---	--------	-------

E125.0	"	- 4.95	45.75
--------	---	--------	-------

E100.0	"	- 4.95	45.75
--------	---	--------	-------

N134.5 ^{.62} 545.69

E378.0	"	- 5.07	45.63
--------	---	--------	-------

E350.0	"	- 5.00	45.70
--------	---	--------	-------

E325.0	"	- 5.08	45.62
--------	---	--------	-------

E300.0	"	- 5.01	45.69
--------	---	--------	-------

N.E. QUAD. SUB-GRADE STAKES - CONTD

<u>N 184.5</u>	H.d. 550.20		
E 276.0	545. ^{.62} 67	5.07	45.63
		-5.01	545.67
E 250.0	"	-5.07	45.63
		-5.01	45.69
E 225.0	"	5.07	45.63
		-5.01	45.69
E 200.0	"	5.08	45.62
		-5.01	45.69
E 175.0	"	5.07	45.63
		-5.01	45.69
<u>N 152.42</u>			
E 180	545.50	-5.20	545.50
E 200	"	-5.19	545.51
E 225	"	-5.22	45.48
E 250	"	-5.19	45.51
E 275	"	-5.20	45.50
E 300	"	-5.20	45.50
E 325	"	-5.21	45.49
<u>N 173.42</u>			
E 300	545.50	-5.21	45.49
E 275	"	-5.22	45.48
E 250	"	-5.20	45.50
E 225	"	-5.22	45.48

N.E. QUAD. SUB-GRADE STAKES - CONT'D.

<u>N193.42</u>	H.d. 550.70		
E200	545.50	-5.20	546.50
E180	"	-5.21	45.49
<u>N194.42</u>			
E178.33	"	-5.21	45.99
E200	"	-5.20	45.50
E225	"	-5.19	45.51
E250	"	-5.20	45.50
E275	"	-5.22	45.48
E300	"	-5.20	45.50
E325	"	-5.20	45.50

CHECK ELEV. ON GUTTERS OF SALT STS. TANK.

S.E. CORNER.		-4.69	546.01
N.E. CORNER.		-4.72	545.98
S.W. CORNER.		-4.69	546.01
N.W. CORNER.		-4.70	546.00
CHECK R.M.		-4.04	546.66

MARCH 30, 1950.

LEONARD.

N.E. LEVEL 106596.

MARCH 28, 1950

LEONARD
CARYER

35.

CALCULATED GRADES FOR JOINT LINES ALONG SPUR

ALVARADO FILTRATION PLANT;
PAVING GRADES SET ON HEADERS:

R.R. TRACK BETWEEN E236 AND E360:

R.M. TOP OF CURB, W. END OF TRUCK SCALERS:

546.58

NORTH COORDINATE: FINISH GRADE:

A.S. +4.11 550.69 GRADE ROD.

N 114.5 EDGE PYMT. 546.25

N111.0 E458.0 546.25 -4.44

N118.83 S. JOINT AT E236 546.22

" E452.0 546.20 -4.49

N119 546.22

" E466.0 546.16 -4.59

N120, N121. 546.21

" E480.0 546.12 -4.57

N122 546.20

" E494.0 546.08 -4.61

N123, N124 546.19

" E541.0 546.08 -4.61

N125 546.18

" E563.0 " -4.61

N126, N127 546.17

N140.5 E563.0 " -4.61

N128 546.16

" E517.5 " -4.61

N129, N130 546.15

" E465.0 " -4.61

N131, N132 546.14

" E411.0 " -4.61

N133 546.13

" E378.0 " -4.61

N134 546.12

N152.4 E844.5 546.00 -4.69

N135 N. JOINT AT E360 546.11

N186.0 E494.0 546.08 -4.61

N152.42 GRADE BREAK 546.00

" E480.0 546.10 -4.59

N194.42 EDGE PYMT 546.00

" E466.0 546.12 -4.57

" E452.0 546.14 -4.55

MARCH 28, 1950

36.

PAVING GRADES SET ON HEADERS, CONT'D.

N. L.		550.69	
N126.0	E 408.0	546.17	-4.52
"	E 411.0	546.17	-4.52
"	E 378.0	546.17	-4.52
"	E 360.0	546.17	-4.52
N135.0	E 465.0	546.11	-4.58
"	E 411.0	546.11	-4.58
"	E 378.0	546.11	-4.58
"	E 360.0	546.11	-4.58
CHECK R.M.			-4.11

TRUCK SCALES.

546.58

SALT STE. TANK.

546.66

R.M.	+3.98	550.54	
N114.5	E 384	546.25	-4.29
N114.5	E 180.0		

ALL POINTS BETWEEN EAST STATIONS

SHOWN SET TO SAME ELEV. ON HEADER BOARDS.

MARCH 30, 1950

LEONARD-CARVER.

R.M.	+3.92	550.58		546.66
FINISH GRADE:				
N152.4	E 180 TO E 344.5		-4.58	546.00
N127.67	JOINT		-4.42	546.16
N118.67	JOINT		-4.36	546.22
N114.50	EDGE		-4.33	546.25

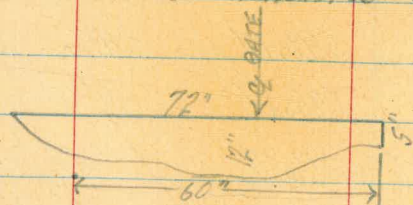
19, Leonard.
April 6, 1950.

MARCH 29, 1950
LEONARD.
CARVER.

37.

JOINTS IN PAVING, COMPUTATIONS OF AMOUNT.

NOTE: PAVING WAS NOT THICKENED AROUND CARBON TANKS.



APPROX. SECT. UNDER EAST GATE.
HOLE WAS BLADED TOO DEEP BEFORE HAND EXCAVATION.

VOLUME OF EXCAVATION AT TRUCK SCALES:

EAST END: $4" \times 28" \times 144" = 16,128 \text{ cu. in.}$

WEST END: $4" \times 39" \times 144" = 22,464 \text{ cu. in.}$

UNDER EAST GATE: $8" \times 66" \times 354" = 186,912 \text{ cu. in.}$

$225,504 \text{ cu. in.} =$

WIDE FOOTINGS: TOTAL 4.83 cu. yds.

NARROW FOOTINGS TOTAL (PAGE 44) 24.25

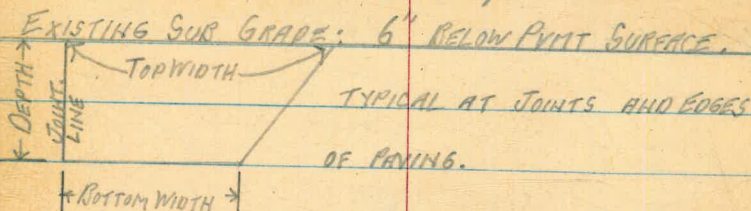
TOTAL EXCAVATION & CEMENT 29.08 cu. yds.

AT JOINTS AND EDGES BETWEEN JOINT AT 262E

AND END OF CONC. PAVING AT EAST GATE, 563E.

* MEAN DEPTH OF EXTRA CONCRETE UNDER EAST GATE, APPROXIMATE.

EXPANSION JOINTS IN PAVEMENT, EXCAVATION.



APPROX. LOCATION	DEPTH	BOTTOM W.	TOP WIDTH.
E. END TRUCK SCALE	4"	16"	40"
H III D E 550	5"	7"	16"
E. END. PAVEMENT.	5"	60"	72"
NOTE: UNDER EAST GATE CONCRETE IS ABOUT 13" THICK ON SOUTH HALF AND ABOUT 11" THICK ON NORTH HALF,			
H I R 3 E 550	4"	6"	12"
W. END TRUCK SCALE.	4"	30"	48"
H III E 485	4"	7"	13"
H III E 475	5"	6"	14"
H III F 465	5"	8"	15"
H III E 455	4 1/2"	9"	14"
H III E 445	4 1/2"	8"	14"
H III E 438 ±	5"	8"	14"

NOTE: ALL DIMENSIONS ARE BELOW OR AT SURFACE OF FINISHED SUR GRADE LEVEL. SEE SKETCH ABOVE.

EXPANSION JOINTS IN PAVING - EXCAVATION FOR - CONT'D.

EXPANSION JOINTS IN PAVEMENT - EXCAVATION FOR, CONT'D

APPROX. LOCATION	DEPTH BELOW SUR	GRADE WIDTH	
		BOTTOM	TOP
N114.5 E344.5	4"	6"	13"
N120 "	4 1/2"	6"	13"
N126.6 "	3 1/2"	8"	16"
N114.5 E355	3 1/2"	6"	12"
" E365	4"	7"	14"
" E375	4"	6"	13"
" E384	4"	7"	16"
N126 E355	4"	7"	14"
" E365	5"	10"	14"
" E375	4"	9"	14"
" E385	5"	6"	12"
" E395	5"	8"	14"
" E405	5 1/2"	7"	15"
" E411	5 1/2"	10"	16"
N119 E411	4"	7"	10"
N135 E411	3 1/2"	7"	12"
N140.5 E411	4"	7"	12"
	17-73	124	230

APPROX. LOCATION	DEPTH	BOTTOM W.		TOP WIDTH
		BOTTOM W.	TOP WIDTH	
N126 E485	4 1/2"	8"	15"	
" E475	5"	8"	15"	
" E465	5"	9"	15"	
" E455	4 1/2"	7"	13"	
" E445	4 1/2"	8"	15"	
" E435	4 1/2"	9"	15"	
" E425	4"	8"	15"	
" E415	4 1/2"	9"	17"	
" E411	4"	8"	15"	
N135 E411	3 1/2"	9"	14"	
N140.5 E411	3 1/2"	9"	14"	
N135 E425	3 1/2"	5"	12"	
" E435	4"	6"	12"	
" E445	4"	5"	12"	
" E455	4 1/2"	6"	13"	
N140.5 E425	4 1/2"	7"	12"	
" E435	5"	7"	17"	
" E445	4"	8"	14"	
" E455	4"	8"	14"	
	19-96	144	269	

MARCH 31, 1950

LEONARD
CARVER

EXPANSION JOINTS, EXCAVATION FOR - CONT'D.

APPROX LOCATION	DEPTH BELOW SURF E.O.	WIDTH	
		BOTTOM	TOP
N1246 E344.5	4"	10"	16"
N1446 "	5"	9"	13"
N152.6 "	4½"	8"	14"
N135 E355	5"	7"	14"
" E365	4½"	8"	14"
" E375	4"	7"	13"
" E385	4"	9"	15"
" E395	5"	9"	15"
" E405	5"	9"	16"
N140.5 E405	5"	8"	13"
" E395	5"	8"	14"
" E385'	4"	6"	14"
" E378 B.C.	3"	8"	17"
ON CURVE 0+10	4"	7"	17"
" 0+20	4"	9"	18"
" 0+30	4"	10" ₁₃₂	16" ₂₃₉
N123 E563	6"	48"	66"
N132 "	5"	48"	70"
N140.5 "	4"	48"	65"

EAST GATE

19-85

MARCH 31, 1950

39.

EXCAVATION FOR PAVING JOINTS, CONT'D.

APPROX. LOCATION:	DEPTH:	BOTTOM WIDTH	TOP WIDTH:
E577.5 N123	4"	6"	9"
" N133	4"	7"	12"
" N140.5	5"	10"	13"
N123 E527.5	5"	6"	13"
" E537.5	4"	7"	13"
" E547.5	4"	5"	11"
" E557.5	3"	6"	12"
N140.5 E527.5	4"	5"	13"
" E537.5	3"	8"	15"
" E547.5	3"	7"	12"
" E557.5	4"	8"	15"
N126 E411	5"	7"	13"
" E421	5"	7"	14"
" E431	3"	9"	12"
" E441	4"	10"	15"
" E451	3"	10"	13"
" E455	5"	9"	12"
N135 E455	4"	10"	14"

18-72

137

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MARCH 31, 1950

APRIL 4, 1950 LEONARD
CARYER 40.

EXCAVATION FOR PAVING JOINTS, CONT'D.

APPROX LOCATION	DEPTH BELOW SURF 60.	DEPTH		APPROX LOCATION	DEPTH	BOTTOM WIDTH	TOP WIDTH
		BOTTOM	TOP				
N135 E451	3"	8"	12"	S. EDGE RR ² E282	5"	8"	13"
" E441	3"	9"	14"	" E292	4"	5"	12"
" E481	4"	11"	16"	" E302	3"	8"	13"
" E421	3"	11"	15"	" E312	4"	7"	12"
" E411	4"	9"	12"	" E322	4"	8"	14"
N130.5 E411	4"	6"	11"	N152.4 E262	4"	6"	12"
" E455	5"	9"	14"	N142 E262	4"	5"	11"
	APRIL 4, 1950	LEONARD CARYER.		N132 E262	3½"	5"	10"
N. EDGE RR E262	4"	9"	13"	N114.5 E262	4½"	6"	12"
R.R. SPUR #1 - MAIN LINE E272	8"	10"	16"	" E272	4"	7"	11"
E282	3"	9"	14"	" E282	5"	9"	15"
E292	4"	11"	14"	" E292	5"	8"	14"
E302	4"	7"	14"	" E302	4"	8"	15"
E312	4"	8"	13"	" E312	3½"	8"	13"
E322	3"	9"	14"	" E322	4"	8"	14"
E332	4"	7"	14"	" E332	4½"	9"	15"
S. EDGE RR ² E262	4"	7"	12"	" E344.5	4½"	7"	12"
" E272	4"	9"	13"	N125 E344.5	4"	8"	14"
	17- 53	149	231		18 74½	130	232

EXCAVATION FOR PAVING JOINTS - CONT'D.

APPROX LOCATION	DEPTH	WIDTH		LOCATION	DEPTH	BOTTOM W.	TOP WIDTH
		BOTTOM	TOP				
S. EDGE E262	4"	6"	11"	N140.5 E455	5"	8"	12"
E272	3"	7"	11"	" E465	4"	6"	12"
RK. SIDE E282	4"	7"	10"	" E475	5"	6"	11"
E292	4"	7"	10"	" E485	5"	7"	11"
SPUR 1 E302	4"	9"	13"	" E495	4"	6"	12"
E312	4"	9"	11"	" E505	4"	7"	10"
E322	6"	7"	12"	" E515	5"	9"	12"
E332	5"	8"	11"	" E517.5	4"	7"	13"
N126 E455	5"	8"	12"	N131 E517.5	3"	7"	11"
E465	4"	7"	12"	N126.0 E411	6"	5"	11"
E475	3"	6"	12"	" E400	5"	4"	11"
E485	4"	7"	11"	" E390	5"	6"	11"
E494	4"	7"	12"	" E380	4"	6"	11"
TRUCK SCALGS N128 E494	6"	7"	12"	" E370	5"	6"	11"
" E504	5"	8"	12"	" E360	4"	7"	12"
" E514	5"	7"	12"	" E350	3 1/2"	8"	12"
" E517.5	5"	5"	13"	" E344.5	6"	5"	11"
N135 E455	5"	8"	11"	N135 E344.5	4"	8"	13"
18-90		127	205	18-81 1/2		115	207

EXCAVATION FOR PAVING JOINTS, CONT'D.

APPROX LOCATION	DEPTH	BOTTOM	TOP	LOCATION	DEPTH	BOTTOM WIDTH	TOP WIDTH
N135 E350	4"	7"	11"	N. EDGE R.P.'S, E282	4"	6"	10"
" E360	4"	8"	12"	" E292	4"	7"	12"
" E370	5"	6"	12"	" E302	5"	6"	11"
" E380	3"	8"	13"	" E312	4"	5"	10"
" E390	2"	7"	11"	" E326	6"	7"	11"
" E400	4"	6"	12"	S. EDGE R.P.'S, E262	5"	7"	12"
" E411	4"	6"	12"	" E272	4"	7"	10"
N130 E411	4"	6"	12"	" E282	4"	7"	10"
N130 E344.5	4"	8"	12"	" E292	4"	6"	11"
N194.42 E262	6"	6"	12"	" E302	4"	7"	11"
" E272	4"	7"	11"	" E312	5"	8"	13"
" E282	5"	7"	12"	" E322	4"	6"	10"
" E292	6"	10"	13"	ON CURB L. N190	5"	4"	9"
" E302	5"	8"	13"	" N185	4"	5"	9"
" E312	4"	7"	12"	" N191	4"	4"	10"
" E325	5"	7"	11"	" N164	4"	8"	12"
N. EDGE R.P.'S E262	5"	8"	12"	N. EDGE R.P.'S E262	4"	8"	11"
" E272	4"	6"	11"	" E272	5"	7"	13"
	18-78	127	215		18-79	115.	195

APRIL 5, 1950 LEONARD
CARYER.

43.

EXCAVATION FOR PAVING JOINTS, CONT'D.

LOCATION.	DEPTH	BOTTOM W.	TOP W.	LOCATION	DEPTH	BOTTOM W.	TOP WIDTH.
N. EDGE RR ² ; E 282	4"	5"	10"	S. SIDE RR ² ; E 312	4"	7"	11"
" E 292	5"	6"	11"	" E 302	4"	9"	12"
" E 302	5"	7"	12"	" E 292	4"	7"	11"
" E 312	3"	7"	10"	" E 282	4"	6"	10"
" E 322	3"	7"	11"	" E 272	3"	8"	11"
" E 332	3"	7"	11"	" E 262	4"	4"	9"
N. EDGE RR ² ; E 262	5"	8"	10"	N 130 E 344.5	4"	7"	10"
" E 272	4"	7"	9"	N 124.5 E 262	4"	6"	10"
" E 282	4"	7"	9"				
" E 292	4"	7"	12"				
" E 302	4"	6"	10"	S. SIDE RR ² ; E 262	3"	2"	8"
" E 312	4"	8"	11"	" E 272	4"	4"	10"
" E 322	4"	7"	12"	E 282	4"	4"	9"
" E 332	4"	6"	10"	E 292	4"	3"	11"
" E 344	4"	8"	12"	E 302	4"	10"	14"
S. EDGE RR ² ; E 344	4"	7"	11"	E 312	4"	9"	13"
" E 332	4"	9"	13"	E 322	3"	6"	12"
" E 322	4"	10"	15"	E 332	4"	6"	12"
				E 342	4"	5"	13"
	18-72	122	199		17-65	103	166

APRIL 6, 1950

LOCATION	DEPTH	BOTTOM W.	TOP WIDTH
N. SIDE R.R. E262	4"	6"	10"
" E272	3"	7"	12"
" E282	3"	6"	9"
" E292	5"	5"	9"
" E302	5"	2"	8"
" E312	4"	7"	10"
" E322	5"	9"	14"
" E332	4"	8"	14"
S. SIDE R.R. E262	4"	6"	11"
" E272	4"	7"	10"
" E282	3"	7"	12"
" E292	3"	5"	9"
" E302	4"	7"	12"
" E322	3"	4"	10"
" E330	2"	4"	10"
N. SIDE R.R. E262	5"	7"	13"
" E272	4"	7"	12"
" E282	4"	10"	16"
" E292	6"	6"	12"
	19-74	120	214

44.

	POTOMAC W.	TOP WIDTH
22		
44		
47		
35	4"	11"
6	7"	12"
53	3"	7"
299	4"	8"
180	10"	12"
83.2	6"	11"
29	7"	13"
221	7.15"	12.37"
40		
76		
122.2		
331		
141.3		
143.6		
136.4		
129.6		
63.0		
79.9		
2302.2		

R.R. #1
 R.R. #2 SOUTH
 " " NORTH
 " #3 SOUTH
 " #3 NORTH
 #194.42
 E262

2.75" = 40.95 sq. in.
 CAVATION REPRESENTED
 GREEN JOINT AT E262
 T GATE = 2,302 FT.
 = 491.4 cu inches.
 cu. in. = 24.25 cu. yds.

7-27

LOCATION	DEPTH	BOTTOM W.	TOP WIDTH	LOCATION	DEPTH	BOTTOM W.	TOP WIDTH
N. SIDE RR ² E262	4"	6"	10"	N. SIDE RR ² E302	4"	4"	11"
" E272	3"	7"	12"	E312	4"	7"	12"
" E282	3"	6"	9"	E322	3"	5"	7"
" E292	5"	5"	9"	ON CURVE 2 RR ² S	4"	4"	8"
" E302	5"	2"	8"	" " 2 RR ² S	5"	10"	12"
" E312	4"	7"	10"	E262 2 RR ² S	3"	6"	11"
" E322	5"	9"	14"	E262 2 RR ² S	4"	7"	12"
" E332	4"	8"	14"				
S. SIDE RR ² S E262	4"	6"	11"	AVERAGE DIM'S:	4.20"	7.15"	12.37"
" E272	4"	7"	10"	AVERAGE X-SECTION:	4.20" X 9.75" = 40.95 sq. in.		
" E282	3"	7"	12"	TOTAL LENGTH OF JOINT EXCAVATION REPRESENTED	BY ABOVE X-SECTION, BETWEEN JOINT AT E262		
" E292	3"	5"	9"	AND END OF PAVING AT EAST GATE = 2,302 FT.	1 linear foot = 40.95 x 12" = 491.4 cu. inches.		
" E302	4"	7"	12"	491.4 x 2302 = 1,131,203 cu. in. = 24.25 cu. yds.			
" E322	3"	4"	10"				
" E330	2"	4"	10"				
N. SIDE RR ² S E262	5"	7"	12"				
" E272	4"	7"	12"				
" E282	4"	10"	16"				
" E292	6"	6"	12"				
	19-74	120	214		7-27	41	74

Leonard
Cave

45.

Excavation For Paving Joints

Location	Depth	Bottom W.	Top W.	Location	Depth	Bottom W.	Top W.
N 194.42 E 179.6				^{178.92} 187.92 E 262	7"	8"	12
" E 182	5"	7"	12"	South Side CP 5 E 182	5"	6"	11"
" E 192	5"	6"	14"	E 192	3"	6"	15"
" E 202	6"	10"	15"	E 202	5"	6"	14"
" E 212	6"	9"	14"	E 212	4"	9"	16"
" E 222	4"	10"	14"	E 222	3"	10"	17"
" E 232	5"	7"	15"	E 232	5"	6"	15"
" E 242	5"	6"	14"	E 242	5"	7"	12"
" E 252	5"	7"	14"	E 252	4"	7"	13"
" E 262	4"	7"	12"	E 262	4"	7"	13"
N 187.92 E 179	6			N 167.92 E 182	6"	7"	15"
E 182	6"	5"	13"	North Side CP 5 E 192	5"	12"	14"
E 192	5"	8"	15"	E 202	6"	9"	14"
E 202	5"	5"	12"	E 212	6"	10"	15"
E 212	5"	9"	16"	E 222	5"	10"	13"
E 222	5"	6"	13"	E 232	5"	9"	12"
E 232	5"	7"	12"	E 242	5"	9"	12"
E 242	4"	8"	13"	E 252	5"	9"	12
E 252	5"	9"	14"	E 262	4"	7"	12"

Location	Depth	Bottom width	Top width
N 15892 E 182	8"	7"	11"
South Side R.C. #1 E192	5"	8"	12"
E202	4"	7"	11"
E212	5"	9"	13"
E222	4"	8"	12"
E232	5"	6"	11"
E242	5"	8"	13"
E252	4"	10"	14"
E262	5"	10"	13"
N 11283 E 182	6"	7"	13"
North Side R.C. #1 E192	4"	9"	12"
E202	4"	9"	14"
E212	4"	6"	11"
E222	5"	8"	13"
E232	5"	8"	14"
E242	5"	8"	12"
E252	6"	9"	13"
E262	6"	9"	12"

Location	Depth	Bottom width	Top width
N 11883 E 182	6"	7"	12"
South Side R.C. #2 E192	5"	9"	11"
E202	4"	8"	13"
E212	4"	8"	12"
E222	5"	7"	12"
E232	5"	6"	12"
E242	6"	8"	12"
E252	5"	7"	12"
E262	5"	10"	12"
N 11450 E 182	6"	9"	12
Edge of Row 4 E192	5"	9"	12"
E202	4"	7"	13"
E212	4"	9"	14"
E222	5"	8"	12"
E232	5"	7"	14"
E242	5"	8"	13"
E252	4"	6"	12"
E262	6"	6"	12"

MAY 17, 1950

LEONARD

47.

Location	Depth	width	
		Bottom	top
E112 N127.83	4"	5"	10"
" N137.83	5"	7"	11"
" N147.83	5"	6"	11"
" N158.92	5"	7"	11"
" N167.92	4"	8"	11"
" N178.92	4"	7"	11"
" N187.92	4"	5"	10"
" N194.42	4"	6"	9"
E1796 N118.83	4"	7"	12"
" N127.83	5"	6"	12"
" N137.83	4"	7"	12"
S ⁶⁰⁶²⁵⁵ N147.83	6"	6"	11"
" N158.92	6"		
" N167.92	6"	6"	12"
" N177.92	5"	5"	12"
" N187.92	6"	6"	12"
" N194.42	5"	6"	11"

Location	Depth	width	
		Bottom	Top
N194.42 E10	3"	7"	10"
" E20	3"	7"	12"
" E30	4"	7"	13"
" E40	4"	7"	13"
" E50	4"	8"	13"
" E60	3"	5"	11"
" E70	4"	8"	12"
" E80	4"	7"	12"
" E90	4"	6"	13"
N190 E92.87	3"	6"	
" E92.75	5"	8"	40"
N187.92 E10	4"	7"	11"
" E20	4"	7"	14"
" E30	3"	8"	13"
" E40	4"	8"	14"
" E50	4"	6"	12"
" E60	4"	7"	12"
" E70	4"	7"	13"

MAY 17, 1950 LEONARD

Location	Depth	Width	
		Bottom	Top
N187.92 E80	4"	4"	10"
" E90	9"	7"	
N178.92 E10	4"	8"	11"
" E90	5"	5"	11"
" E80	4"	6"	12"
" E40	4"	7"	11"
" E50	5"	8"	14"
" E60	4"	5"	12"
" E70	4"	6"	11"
" E80	5"	6"	13"
" E90	4"	5"	
H 170 E93.7	5"	4"	11"
" E92.75	5"	14"	48"
N167.92 E10	4"	8"	12"
" E20	4"	6"	11"
" E30	4"	6"	12"
" E40	5"	9"	13"
" E50	4"	6"	13"

MAY 17, 1950 LEONARD 48.

Location	Depth	Width	
		Bottom	Top
N167.92 E 60	4"	6"	12"
" E70	4"	6"	12"
" E80	4"	5"	10"
" E90	5"	6"	
MAY 19, 1950 LEONARD.			
N194.42 Axis	3"	5"	11"
" W10	4"	5"	14"
" W20	4"	8"	12"
" W30	3"	8"	14"
" W40	4"	8"	14"
" W50	4"	6"	14"
" W60	4"	5"	11"
" W70	4"	8"	13"
N191 W74	4"	8"	15"
N192.92 W70	4"	5"	12"
" W60	4"	4"	11"
" W50	4"	8"	14"
" W40	4"	9"	14"

MAY 23, 1950 LEONARD 49.

Location	Depth	width	
		Bottom	Top
N187.92 W30	4"	6"	13"
" W20	4"	7"	12"
" W10	4"	4"	12"
" AXIS	4"	6"	13"
N190 E9.37	4"	8"	13"
N178.92 AXIS	4"	5"	12"
" W10	4"	7"	14"
" W20	4"	8"	12"
" W30	4"	8"	15"
" W40	4"	6"	15"
" W50	4"	7"	12"
" W60	4"	5"	11"
" W70	4"	8"	14"
N175 W74	4"	7"	12"
N167.92 W70	4"	5"	13"
" W60	4"	7"	14"
" W50	4"	8"	13"
" W40	4"	5"	15"

Location	Depth	width	
		Bottom	Top
N167.92 W30	5"	6"	11"
" W20	4"	9"	14"
" W10	4"	5"	12"
" AXIS	4"	7"	13"
N178 E 9.37	4"	7"	11"
N158.92 E 90	4"	7"	11"
" E 80	4"	9"	12"
" E 70	4"	5"	11"
" E 60	4"	9"	12"
" E 50	5"	8"	12"
" E 40	4"	8"	13"
" E 30	4"	7"	12"
" E 20	4"	9"	13"
" E 10	3"	8"	12"
" AXIS	4"	9"	13"
" W10	4"	7"	11"
" W20	4"	6"	10"
" W30	4"	8"	13"

MAY 23, 1950 LEONARD 50.

Location	Depth	width		Location	Depth	width	
		Bottom	Top			Bottom	Top
N158.92 W40	4"	7"	12"	N178.92 E 60	4"	9"	16"
W50	4"	8"	11"	" E 50	5"	7"	12"
W60	5"	9"	11"	" E 40	4"	7"	12"
W70	5"	9"	12"	" E 30	5"	9"	13"
N168 W74	4"	6"	12"	" E 20	5"	8"	12"
N168 E 92.75	4"	12"	48"	" E 10	4"	7"	13"
N167.92 E 10	5"	5"	11"	N197.92 E 10	8"	7"	12"
E 20	3"	7"	12"	E 20	4"	9"	15"
E 30	4"	5"	9"	E 30	4"	7"	12"
E 40	4"	6"	11"	E 40	4"	9"	14"
E 50	4"	7"	11"	E 50	4"	8"	13"
E 60	3"	5"	9"	E 60	3"	7"	11"
E 70	4"	6"	11"	E 70	5"	8"	13"
E 80	4"	6"	12"	E 80	4"	9"	12"
E 90	5"	5"	12"	E 90	4"	6"	12"
N178.92 E 90	4"	7"	12"	N183 E 9.87	4"	7"	12"
E 80	4"	7"	12"	E 92.75	4"	15"	48"
E 70	5"	7"	13"				

Location	Depth	Bottom	width Top
----------	-------	--------	--------------

Location	Depth	Bottom	width Top
----------	-------	--------	--------------

Location	Depth	^{width} Bottom	Top
----------	-------	-------------------------	-----

Location	Depth	^{width} Bottom	Top
----------	-------	-------------------------	-----

Location	Depth	Bottom	Top
----------	-------	--------	-----

Location	Depth	Bottom	Top
----------	-------	--------	-----

Location	Depth	width	
		Bottom	Top

Location	Depth	width	
		Bottom	Top

K&E. LEVEL 106346.

APRIL 26, 1950 LEONARD
CARVER 61.

CHECK SUB-GRADE FOR PAVING NORTH OF HEADHOUSE

Location	Depth	Width		SUB. GRADE			DOOR SILL CHEM. HATCH
		Bottom	Top				
				B.M. +3.36	550.33	546.97	
				N194.42 W74	545.50	-5.08	545.25 F 0.25'
				" W60	"	-4.92	45.41 F 0.09'
				" W45	"	-5.03	45.30 F 0.20'
				" W30	"	-5.03	45.30 F 0.20'
				" W15	"	-5.05	45.28 F 0.22'
				" AXIS	"	-4.94	45.39 F 0.11'
				" E15	"	-4.84	45.49 GRADE
				" E30	"	-5.00	45.33 F 0.17'
				" E45	"	-4.90	45.43 F 0.07'
				" E60	"	-4.72	45.61 C 0.11'
				" E75	"	-4.47	45.86 C 0.36'
				" E92.7	"	-4.28	46.05 C 0.55'
				N173.4 E92.7	"	-4.53	45.80 C 0.30'
				" E75	"	-4.31	46.32 C 0.32'
				" E60	"	-4.38	45.95 C 0.45'
				" E45	"	-4.59	45.79 C 0.29'
				" E30	"	-4.45	45.85 C 0.38'
				" E15	"	-4.34	45.99 C 0.49'

APRIL 26, 1950.

APRIL 26, 1950.

62

SUB GRADE N. OF HENRICHSE, CONTR.

SUB GRADE FOR PAVING, SOUTH OF SALT STG. TANK.

N. d.	550.33				N. d.	550.33					
	SUB. GRADE					SUB. GRADE					
N177.94	AXIS	545.50	-4.64	545.69	C 0.19'	N177.93	F 92.75	545.66	-4.40	545.93	C 0.27
"	W15	"	-4.71	45.62	C 0.12'	"	E 107.75	"	-4.32	46.01	C 0.35
"	W30	"	-4.83	45.50	GRADE	"	E 122.75	"	-4.38	45.95	C 0.29
"	W45	"	-4.77	45.56	C 0.06'	"	E 137.75	"	-4.50	45.83	C 0.17
"	W60	"	-4.64	45.69	C 0.19'	"	E 152.75	"	-4.50	45.83	C 0.17
"	W74	"	-4.78	45.55	C 0.05'	"	E 167.75	"	-4.45	45.88	C 0.22
N152.42	W74	"	-5.02	45.51	F 0.19'	"	E 179.70	"	-4.66	45.67	GRADE
"	W60	"	-4.84	45.49	GRADE	N152.42	E 179.7	545.50	-4.83	45.50	"
"	W45	"	-4.63	45.70	C 0.20	"	E 112.25	"	-4.97	45.96	F 0.14
"	W30	"	-4.53	45.80	C 0.30	"	E 119.25	"	-5.03	45.30	F 0.20
"	W15	"	-4.48	45.85	C 0.35	"	E 122.25	"	-5.04	45.29	F 0.21
"	AXIS	"	-4.40	45.93	C 0.43'	"	E 140.25	"	-4.48	45.85	C 0.35
"	E15	"	-4.31	46.02	C 0.52'	"	E 154.0	"	-4.43	45.90	C 0.40
"	E30	"	-4.31	46.02	C 0.52'	"	E 160.2	"	-4.67	45.66	C 0.16
"	E45	"	-4.27	46.06	C 0.56'	"	E 170.0	"	-4.81	45.52	GRADE
"	E60	"	-4.31	46.02	C 0.52'	CHECK P.M. IN SALT TANK.			-3.68	546.65 =	546.66
"	E75	"	-4.22	46.11	C 0.61'						
"	E92.9	"	-4.42	45.91	C 0.41'						

Nov. 14, 1950

REATTY
LEONARD

63

PROFILE OF SUB-GRADE IN TURNING CIRCLE:

B.M. +5.99	526.06		520.67 ^{AT 0+00} SPUNK IN PAVT
0+10	C	-5.60	520.46
"	12' LT	-5.00	521.06
	12' RT	-6.47	519.59
0+20	C	-5.84	520.22
"	12' LT	-5.30	520.76
"	12' RT	-6.74	519.32
0+30	C	-6.06	520.00
"	12' LT	-5.65	520.41
"	12' RT	-6.63	519.43
0+40	C	-6.06	520.00
"	12' LT	-5.95	520.11
"	12' RT	-6.29	519.77
0+50	C	-5.82	520.24
"	12' LT	-5.81	520.25
"	12' RT	-5.92	520.14

SEE PROFILE OF COLORADO ST. IN F.R. 742 PAGE 54.

CONT'D NEXT PAGE.

526.06

0+60	CL	- 5.68	520.38'
"	12' LT	- 5.58	520.48'
	12' RT	- 5.79	520.27'
0+70	CL	- 5.47	520.59'
	12' LT	- 5.44	520.62'
	12' RT	- 5.57	520.49'
0+80	CL	- 5.20	520.86'
	12' LT	- 5.26	520.80'
	12' RT	- 5.32	520.74'
0+90	CL	- 5.02	521.04'
	12' LT	- 5.05	521.01'
	12' RT	- 5.00	521.06'
1+00	CL	- 4.71	521.35'
	12' LT	- 4.81	521.25'
	12' RT	- 4.69	521.37'
1+07.8	EDGE CONC.	- 4.35	521.71 Toe Print
	12' LT	- 4.36	521.70 "
	12' RT	- 4.35	521.71 "

Nov. 28 1950
Betty
Welker

65

GRADES SET
for GRADING
AROUND WASH WATER
TANK

BM 196 543.44 541.48

6.77 536.67

Top Conc curb around
Wash Water Storage Tank

7.11 536.33

Shoulder grade 5' out from Conc curb

SOUTH 0.0 536.33

ditch grade

SE 45° 536.08

C025

EAST 535.83

C050

NE 45° 535.58

C075

North 535.33

C10

NW 45° 535.58

C075

WEST 535.83

C050

SW 45° 536.08

GRADES RESET
FOR TURNING CIRCLE

Nov. 28 1950
Beatty
Welker

66.

BM	624	526.91	520.67		
0+00	¢	6.76	520.25	520.65	FIN GRD
	12'N	5.61	521.30	521.15	CO ¹⁵ FIN GRD (2)
	12'S	7.52	519.39	519.9	FO ⁵¹ FIN GRD (2)
0+10	¢	6.46	520.45	520.45	CO ²⁵ To Subgrd
	12'N	5.64	521.27	520.8	CO ⁴⁷ FIN GRD (2)
	12'S	7.66	519.25	519.8	FO ⁵⁵ FIN GRD (2)
0+20	¢	6.60	520.25	520.25	CO ²⁵ To SUB GRD
	12'N	6.03	520.88	520.5	CO ³⁸ FIN GRD (2)
	12'S	7.74	519.17	519.8	FO ⁶³ FIN GRD (2)
0+30	¢	6.81	520.10	520.10	CO ²⁵ Sub grd
	12'N	6.44	520.47	520.20	CO ²⁷ FIN GRD (2)
	12'S	7.55	519.36	519.9	FO ⁵⁴ FIN GRD (2)
0+40	¢	6.91	520.00	520.20	CO ⁰⁵ Sub
	12'N	6.91	520.00	520.25	Subgrade
	12'S	7.06	519.85	520.10	"

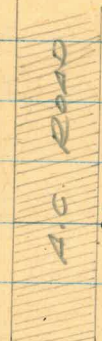
ALVARADO FILTER PLANT
LAYOUT OF PROPOSED
STORAGE BLDG
Easterly of SETTling BASINS

MAR. 27 1951
BEATTY
LEONARD
NELSON

67.

BM	188	548.46		546.58	W. Cor. Curb TRUCK SCALE
IP	2.88	540.45	10.89	537.57	
S 20	E 420		3.7	536.8	
S 40	"		4.6	35.9	
S 50	"		5.1	35.4	
S 60	"		5.6	34.9	
S 70	"		6.1	34.4	
S 80	"		6.5	34.0	
S 90	"		6.9	33.6	
S 110	E 420		7.7	32.8	
<hr/>					
S 20	E 440		3.7	36.8	
S 40	" (NW Cor. Bldg.)		4.5	36.0	
S 50	"		5.0	35.5	
S 60	"		5.4	35.1	
S 70	"		5.8	34.7	
S 80	"		6.3	34.2	
S 90	" (SW Cor. Bldg.)		6.8	33.7	
S 110	E 440		7.9	32.6	

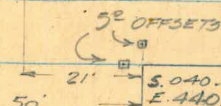
EAST WALL SETTling BASINS E 390.08



MOM
N 000
E 420

N 000
E 5832

S 020
E 419



S. 040
E 520

PROPOSED
STORAGE
BLDG.

S. 090
E 440

S 090
E 520

PRELIM. POSITION
OF BLDG.

Alvarado Filter Plant
Storage Bldg

3/27/58

68

540.45

520	E460	3.6	536.9
540	"	4.4	36.1
550	"	4.9	35.6
560	"	5.5	35.0
570	"	6.0	34.5
580	"	6.5	34.0
590	"	6.8	33.7
5110	E460	7.9	32.6

520	E480	3.8	36.7
540	"	4.6	35.9
550	"	5.1	35.4
560	"	5.8	34.7
570	"	6.2	34.3
580	"	6.8	33.7
590	"	7.2	33.3
5110	E480	7.8	32.7

Alvarado Filter Plant
Storage Bldg

3/27/58

69

	540.45		
S 20	E 500	4.1	536.4
S 40	"	4.8	35.7
S 50	"	5.3	35.2
S 60	"	5.7	34.8
S 70	"	6.3	34.2
S 80	"	6.8	33.7
S 90	"	7.3	33.2
S 110	"	7.9	32.6

S 20	E 520	3.8	36.7
S 40	" (NE Cor. Bldg)	5.1	35.4
S 50	"	5.3	35.2
S 60	"	5.7	34.8
S 70	"	6.0	34.5
S 80	"	6.5	34.0
S 90	" (SE Cor. Bldg)	7.3	33.2
S 110	E 520	8.10	32.4

CK H 2.88 537.57 = 537.58

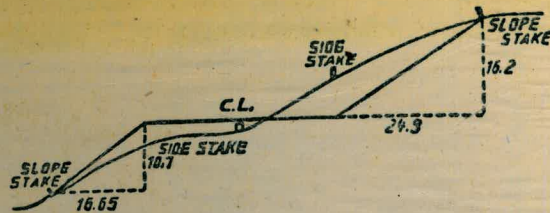
Alvarado Filter Plant
Storage Bldg.

3/27/51

70

S 20	E 540	3.2	537.3
S 40	"	5.0	35.5
S 50	"	5.5	35.0
S 60	"	5.8	34.7
S 70	"	6.2	34.3
S 80	"	6.6	33.9
S 90	"	7.2	33.3
S 110	E 540	8.2	32.3
E.	SE (3) HUB	11.22	529.23
S.	SE (3) HUB	11.57	528.88
S	SW " "	6.87	533.58
S	W SW " "	6.83	533.62
S	W NW " "	4.46	535.99
S	N NW " "	4.27	536.18
S	N NE (3) HUB	4.84	535.61
S	E NE (3) HUB	5.02	535.43

CITY OF SAN DIEGO
REED
 JUN 30 1948
 RESIDENT ENGINEER



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.
 SLOPE 1/4 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

THE NATIONAL BLANK BOOK COMPANY
 HOLYOKE MASSACHUSETTS
 NEW YORK CHICAGO BOSTON SAN FRANCISCO