

16

Gauge Readings

Lower Otay Reservoir

LEVEL BOOK

370

W117



# KEUFFEL & ESSER CO.

DRAWING MATERIALS

AND

SURVEYING INSTRUMENTS.

NEW YORK.

CHICAGO. ST. LOUIS. SAN FRANCISCO, MONTREAL.

## Tables for Excavations and Embankments.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.  
ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.  
FOR SINGLE TRACK EXCAVATION.

"Copyright, 1895, by Keuffel & Esser Co."

**MICROFILMED**

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

Calculated by Julien A. Hall, M. Am. Soc. C. E.

C. H. Simpson  
 LOD 1918-20



Setting Reservoir Feb 24-19  
Gauge M.J.B.

433 394.40 90.07

Set pencil mark 394.4 on gauge  
at M.I. of inst.

Water  
Surface 10.62 83.78

Setting Reservoir Gauge

Bob-Johnson Mar 26-19

Tunnel  
0.75 407.96 407.21

Sawyer  
valve 1.93 406.03

12.36 395.60

WS { 13.12 94.84  
13.11 94.85

13.70 42.6

TP 11.63 96.33

357 99.90

557 94.33



Date	Time	Elevation of Gauge	Elevation on Old Gauge	Storage in Acre Feet	Storage in Million Gallons	Runoff in Cubic Feet per Second 24-hours	Date Elevation
2/15/19							
2/11/19	A.M. 10-30	376.86	2906	233.6	7537	64.4	New Datum USGS 486.57 Old Datum = 139.40
2/11/19	5 P.M.	377.16	2996	268.5	8749	70.0	
2/12/19	7 A.M.	379.66	3446	375.8	12245	80.0	Diff. for Corr. 347.17
2/12/19	5 P.M.	380.46	3326	431.3	14054	66.6	
2/13/19	10 A.M.	381.66	3446	505.7	16478	53.0	1 Acre ft = 325,851 gallons
2/14/19	10 A.M.	382.64	3547	572.2	18645	33.3	1 sec. ft = 2 Acre ft in 2 hrs
2/15/19	7 A.M.	383.00	3583	597.8	194.79	14.6	
2/16/19	9 A.M.	383.10	3593	604.9	197.11	3.3	
2/19/19	6 P.M.	383.50	36.33	635.0	206.92	4.4	
2/20/19	6 P.M.	383.50	36.33	635.0	206.92	00.0	
2/24/19	7 A.M.	383.78	36.61	656.4	213.89	3.0	
2/25/19	7 A.M.	384.2	3703	688.5	224.35	16.0	
2/26/19	7 A.M.	384.35	3718	700.8	228.36	6.2	
2/27/19	7 A.M.	384.44	3727	708.2	230.77	3.7	
2/28/19	7 A.M.	384.64	3747	724.7	236.14	8.2	
3/1/19	7 A.M.	385.00	3783	754.3	245.79	14.8	
3/3/19	7 A.M.	385.10	37.93	761.9	248.18 250.80	3.8	



Date	Time	Elevation of New Gauge	Equivalent Elevation on Old Gauge	Storage Acres ft.	Storage in Million Gallons	Runoff in Cubic Feet per Second per 24 hrs
3/4/19	7AM	38510	3793	761.9	248.18	00
3/5/19	7AM	38520	3803	770.6	251.10	4.4
3/5/19	7AM	38525	3808	775.0	252.53	4.7
3/6/19	7AM	38526	3809	776.0	252.86	0.5
3/7/19	7AM	38530	3813	779.5	254.00	1.7
3/10/19	7AM	38536	3819	784.9	255.73	2.7
3/11/19	7AM	38540	3823	788.26	256.86	1.7
3/12/19	7AM	38540	3823	788.26	256.86	—
3/13/19	12AM	38540	3823	788.26	256.86	—
3/14/19	7AM	38600	3883	840.94	274.12	33.3
3/14/19	5PM	38650	3933	886.49	288.86	54.6
3/15/19	7AM	38770	4053	1001.5	326.34	98.6
3/16/19	7AM	38875	4158	1109.3	381.93	53.9
3/17/19	7AM	38950	4233	1190.5	387.93	40.6
3/18/19	7AM	38970	4253	1213.0	395.26	11.5
3/19/19	7AM	38975	4258	1218.6	397.08	2.8



Date	Time	Elevation New Gauge	Elevation Old Gauge	Storage Acres ft.	Storage in M. Gallons	Run off in Cubic Feet per Second per 24 hrs
3/20/19	7 AM	390.10	42.93	1257.8	409.86	19.6
3/20/19	3-30 PM	390.60	43.43	1316.4	428.95	82.7
3/21/19	7 AM	391.10	43.93	1375.7	448.27	45.9
3/22/19	7 AM	392.50 <sup>2</sup>	45.33	1551.8	505.66	88.0
3/23/19		1310 396				
3/24/19	7 AM	394.00	46.83	1753.9	571.51	50.5
3/25/19	7 AM	394.45	47.28	1817.4	592.20	31.7
3/26/19	7 AM	394.60 394.85	47.43	1839.0	599.24	10.8
3/27/19	7 AM	394.70	47.53	1853.4	603.93	7.5
3/28/19	7 AM	395.02	47.85	1899.5	618.95	23.1
3/29/19	7 AM	395.12	47.95	1913.9	623.65	7.2
3/30/19	7 AM	395.18	48.01	1922.5	626.45	4.3
3/31/19	6 AM (7 AM)	395.20	48.03	1925.4	627.39	
4/1/19	7 AM	395.20	48.03	1925.4	627.39	—
4/2/19	7 AM	395.20	48.03	1925.4	627.39	—
4/3/19	7 AM	395.20	48.03	1925.4	627.39	—



Date	Time	Elevation New Gauge	Elevation Old Gauge	Storage Acres Feet	Storage in M. Gallons	Run off in Cubic feet per Second per 24 hrs.
4/4/19	7 AM.	39520	4803	19254	62739	—
4/5/19	7 AM.	39519	4802	1923.9	62691	—
4/6/19	12 AM	39519	4802	—	—	—
4/7/19	7 AM.	39519	4802	—	—	—
4/8/19	7 AM.	39531	4814	19419	63277	—
4/9/19	7 AM.	39551	4834	19720	64258	150
4/10/19	7 AM.	39555	4838	19780	64453	30
4/11/19	7 AM.	39558	4841	19826	64603	23
4/12/19	7 AM.	39558	4841	19826	64603	—
4/13/19	10 AM.	39558	4841			
4/14/19	7 AM.	39558	4841			
4/15/19	7 AM.	39558	4841			
4/16/19	7 AM.	39557	4840			
4/17/19	7 AM.	39556	4839			
4/18/19	7 AM.	39555	4838			
4/19/19	7 AM.	39555	4838			
4/20/19	7 AM.	39555	4838			



		Elevation New	Elevation Old.	Storage AcreFeet	Storage in M Gallons	Run off in cubic feet per second Per 24 hrs.
4/21/19	7 AM	395.55	48.38			
4/22/19	7 AM	395.55	48.38			
4/23/19	7 AM	395.55	48.38			
4/24/19	7 AM	395.55	48.38			
4/25/19	7 AM	395.55	48.38			
4/26/19	7 AM	395.55	48.38			
4/27/19	7 AM	395.60	48.43	1985.6	647.00	3.8
4/28/19	7 AM	395.65	48.48	1993.08	649.45	3.74
4/29/19	7 AM	395.65	48.48			
4/30/19	7 AM	395.65	48.48			
5/1/19	7 AM	395.65	48.48			
5/2/19	7 AM	395.65	48.48			
5/3/19	7 AM	395.65	48.48			
5/4/19	7 AM	395.65	48.48			
5/5/19	7 AM	395.65	48.48			
5/6/19	7 AM	395.65	48.48			
5/7/19	7 AM	395.62	48.48			
5/8/19	7 AM	395.60	48.43			



		Elevation New.	Elevation old.	Storage in Acre feet.	Storage in M. gallons.	Run off in cu ft. per sec. per 24. hours.				
5/9/19	7 A.M.	395.58	48.39							
5/10/19	7 A.M.	395.50	48.33							
5/11/19	7 A.M.	395.48	48.31							
5/12/19	7 A.M.	395.46	48.29							
5/13/19	7 A.M.	395.45	48.28							
5/14/19	7 A.M.	395.43	48.26							
5/15/19	7 A.M.	395.42	48.26							
5/16/19	7 A.M.	395.41	48.24							
5/17/19	7 A.M.	395.40	48.23							
5/18/19	7 A.M.	395.39	48.22							
5/19/19	7 A.M.	395.37	48.20							
5/20/19	7 A.M.	395.36	48.19							
5/21/19	7 A.M.	395.34	48.17							
5/22/19	7 A.M.	395.35	48.18							
5/23/19	7 A.M.	395.35	48.18							
5/24/19	7 A.M.	395.35	48.18							
5/25/19	7 A.M.	395.35	48.18							
5/26/19	7 A.M.	395.35	48.18							



Date	Time	Gauge New	Gauge Old	Storage in Acres Ft	Storage in Kil. Gallons	Runoff in C. Ft PSI Per 24 hrs.
5/27/19	7AM.	395.36	48.19			
5/28/19	7AM.	395.35	48.18			
5/29/19	7AM.	395.35	48.18			
5/30/19	7AM.	395.33	48.16			
5/31/19	7AM.	395.33	48.16			
6/1/19	7AM.	395.33	48.16			
6/2/19	7AM.	395.33	48.16			
6/3/19	7AM.	395.34	48.15			
6/4/19	7AM.	395.34	48.15			
6/5/19	7AM.	395.38	48.21			
6/6/19	7AM.	395.40	48.23			
6/7/19	7AM.	395.41	48.24			
6/8/19	7AM.	395.41	48.24			
6/9/19	7AM.	395.42	48.25			
6/10/19	7AM.	395.43	48.26			
6/11/19	7AM.	395.43	48.26			
6/12/19	7AM.	395.43	48.26			



DATE	Time	New Gauge	Old Gauge	Storage in Acreft M. Gallons	Runoff in Cubic ft per second in 24 hrs
6/13/19	7AM	395.44	48.27		
6/14/19	7AM	395.44	48.27		
6/15/19	7AM	395.43	48.28		
6/16/19	7AM	395.45	48.28		
6/17/19	7AM	395.44	48.27		
6/18/19	7AM	395.42	48.25		
6/19/19	7AM	395.41	48.24		
6/20/19	7AM	395.40	48.23		
6/21/19	7AM	395.39	48.22		
6/22/19	7AM	395.37	48.20		
6/23/19	7AM	395.35	48.18		
6/24/19	7AM	395.34	48.17		
6/25/19	7AM	395.33	48.16		
6/26/19	7AM	395.32	48.15		
6/27/19	7AM	395.30	48.13		
6/28/19	7AM	395.28	48.11		
6/29/19	7AM	395.26	48.09		



DATE	TIME	NEW GAUGE	OLD GAUGE	Acres ft	Storage 17 M. Gallons	Runoff in Cubic ft 29 per Second. 1/25
6/30/19	7 AM	395.25	490.8			
7/1/19	7 AM	95.24	48.07			
7/2/19	7 AM	95.22	48.05			
7/3/19	7 AM	95.20	48.03			
7/4/19	7 AM	95.18	48.01			
7/5/19	7 AM	95.16	47.99			
7/6/19	7 AM	95.14	47.97			
7/7/19	7 AM	95.13	47.96			
7/8/19	7 AM	95.12	47.95			
7/9/19	7 AM	95.10	47.93			
7/10/19	7 AM	95.08	47.91			
7/11/19	7 AM	95.05	47.88			
7/12/19	7 AM	95.03	47.86			
7/13/19	7 AM	95.00	47.83			
7/14/19	7 AM	94.98	47.81			
7/15/19	7 AM	94.97	47.80			
7/16/19	7 AM	94.95	47.78			



DATE	TIME	NEW GAUGE	OLD GAUGE	Acres ft	Storage in M-gallons	Runoff in Cubic ft per second every 24 hrs
7/17/19	7 A.M.	394.93	47.76			
7/18/19	7 A.M.	94.91	47.74			
7/19/19	7 A.M.	94.89	47.72			
7/20/19	7 A.M.	94.87	47.70			
7/21/19	7 A.M.	94.86	47.69			
7/22/19	7 A.M.	94.85	47.68			
7/23/19	7 A.M.	94.84	47.67			
7/24/19	7 A.M.	94.81	47.64			
7/25/19	7 A.M.	94.80	47.63			
7/26/19	7 A.M.	94.78	47.61			
7/27/19	7 A.M.	94.76	47.59			
7/28/19	7 A.M.	94.74	47.57			
7/29/19	7 A.M.	94.73	47.56			
7/30/19	7 A.M.	94.70	47.53			
7/31/19	7 A.M.	94.69	47.52			
8/1/19	7 A.M.	94.67	47.50			
8/2/19	7 A.M.	94.66	47.49			



DATE	Time	New Guage	Old Guage	Acre ft.	Storage in M. Gallon
8/3/19	7 AM.	94.63	47.46		
8/4/19	7 AM.	94.61	47.44		
8/5/19	7 AM	94.58	47.41		
8/6/19	7 AM	94.56	47.39		
8/7/19	7 AM	94.54	47.37		
8/8/19	7 AM.	94.52	47.35		
8/9/19	7 AM.	94.51	47.34		
8/10/19	7 AM.	94.49	47.32		
8/11/19	7 AM.	94.47	47.30		
8/12/19	7 AM.	94.45	47.28		
8/13/19	7 AM.	94.43	47.26		
8/14/19	7 AM.	94.41	47.24		
8/15/19	7 AM.	94.39	47.22		
8/16/19	7 AM.	94.38	47.21		
8/17/19	7 AM.	94.36	47.19		
8/18/19	7 AM.	94.35	47.18		
8/19/19	7 AM.	94.34	47.17		



DATE	TIME	New Gauge	Old Gauge	Acres Ft.	Storage Millions Gallons
8/20/19	7AM	39431	4719		
8/21/19	7AM	39429	4712		
8/22/19	7AM	39427	4710		
8/23/19	7AM	39425	4708		
8/24/19	7AM	39423	4706		58,315,939
8/25/19	7AM	39422	4705	1784.3	58,315,939
8/26/19	7AM	39421			
8/27/19	7AM	39420			
8/28/19	7AM	39418			
8/29/19	7AM	39416			
8/30/19	7AM	39414			
8/31/19	7AM	39412	4695	1760.4	576
9/1/19	7AM	39410	4693		57363
9/2/19	7AM	39409	4692		
9/3/19	7AM	39407	4690		
9/4/19	7AM	39405			
9/5/19	7AM	39404			
9/6/19	7AM	39403			



DATE	TIME	NEW GUAGE	OLD GUAGE	ACRE FEET	STORAGE Million Galons
9/7/19	7 AM	39400			
9/8/19	7 AM	93.98			
9/9/19	7 AM	93.96			
9/10/19	7 AM	93.94	46.73	1745.6	568,806
9/11/19	7 AM	93.92			
9/12/19	7 AM	93.90			
9/13/19	7 AM		46.72		
9/14/19	7 A.M.				
9/15/19	7 A.M.				
9/16/19	7 A.M.	93.84	46.67		
9/17/19	7 A.M.	93.84	46.67		
9/18/19	7 A.M.	93.82			
9/19/19		93.80			
9/20/19		93.78			
9/21/19		93.75			
9/22/19		93.73			
9/23/19		93.73			
9/30/19		93.67			



347.17

Date	Time	New Gauge	Old gauge	acre ft	Storage
10/9/1919	7 AM.	393.53	46.36	1688.81	550,297,000
10/20/1919	7 AM.	393.42	46.25	1674.00	545,473,000
10/31/1919	7 am	393.35	46.18	1664.30	542,000,000
11/10/1919	"	393.26	46.08	1652.0	538,000,000
11/20/1919	"	393.16	45.99	1638.4	532,000,000
11/28/19	12 M.	393.77	46.60	1722.2	560,000,000
11/30/19	7 am	393.89	46.72	1738.7	565,000,000
12/10/19	7 am	394.20	47.03	1781.4	580,500,000
12/20/19	7 am	394.48	47.31	1821.52	
12/31/19	7 am	394.46	47.29		
1/10/20	7 am	395.20	48.03	1925.40	627,394,000
1/20/20	7 am	395.16	47.99	1919.60	625,000,000
1/31/20	7 am	395.24	48.07	1931.40	629,349,000
2/9/20	"	395.55	48.38	1978.0	644,530,000
2/10/20	"	395.80	48.63	2015.6	657,000,000
2/20/20	"	396.09	48.92	2058.26	669,652,000
2/22/20	8 am	399.55	50.38	2290.0	746,148,120
2/23/20	7 am	400.45	53.28	2795.35	910,819,591



Equation 0 gauge - 347.17 El.

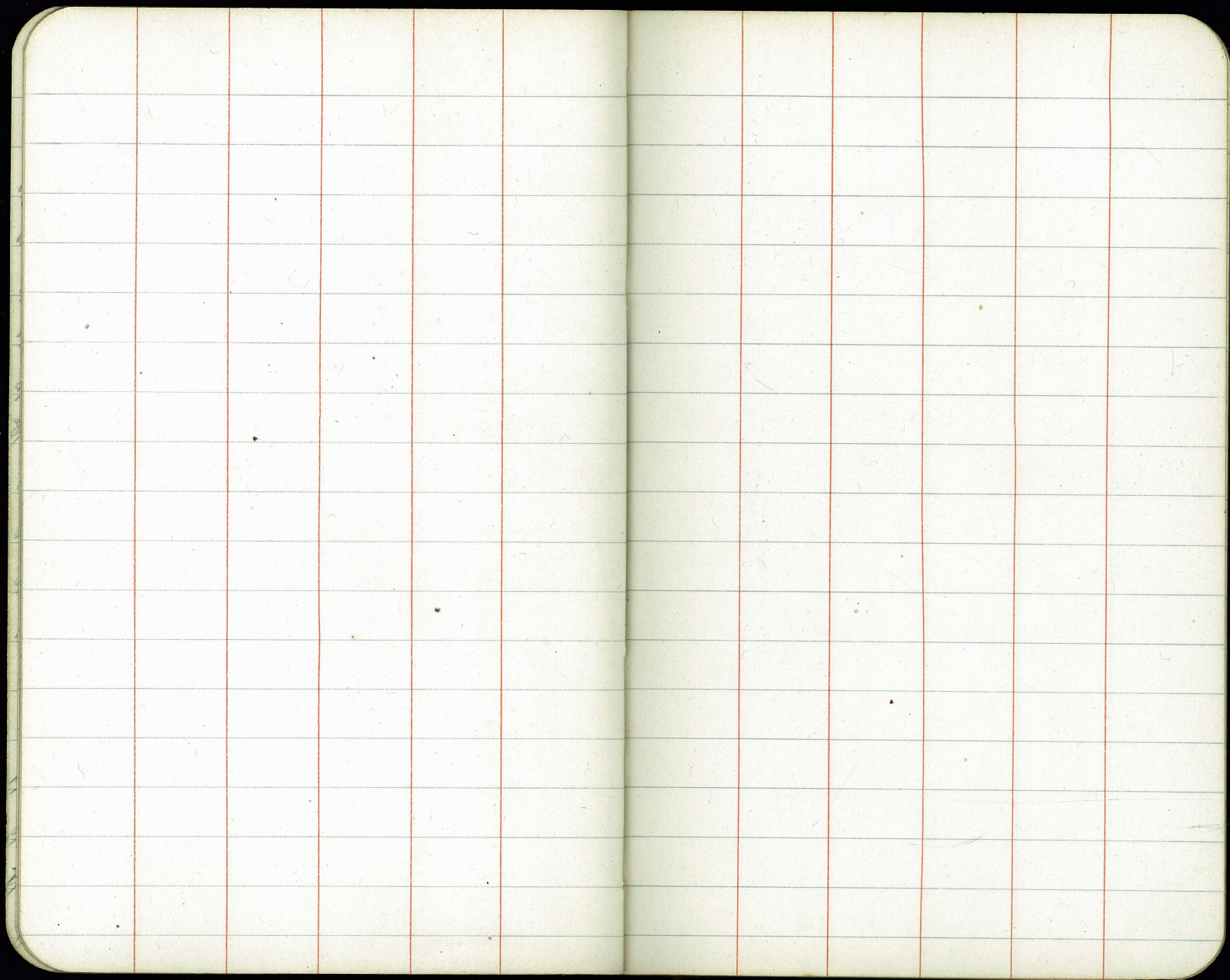
Date	Time	Elev.	Gauge	Acre feet	Storage
2/23/20	2.00 PM	401.00	53.83	2958.6	964,393,000
2/24/20	7.00 AM	401.64	54.47	3022.35	984,836,000
2/25/20	7.00 AM	402.38	55.21	3168.67	1,032,514,000
2/26/20	7.00 AM	402.98	55.81	3290.90	1,072,343,000
2/27/20	7.00 AM	403.45	56.28	3388.60	1,104,178,000
2/28/20	7.00 AM	403.82	56.65	3466.90	1,129,692,000
2/29/20	7.00 AM	404.02	56.85	3509.20	1,143,476,000
3/2/20	7.00 AM	404.18	57.01	3543.07	
3/4/20	11.00 AM	405.07	57.90	3738.35	1,218,145,000
3/6/20	8.30 AM	405.36	58.29	3803.32	1,239,309,000
3/10/20	7.00 AM	405.67	58.50	3873.9	1,262,314,000
3/12/20	7.00 AM	406.71	59.54		
3/16/20	7.00 AM	407.31	60.14		
3/20/20	7.00 AM	408.12	60.95	4514.7	1,471,120,000
3/23/20	7.00 AM	410.55	63.38	5053.2	1,646,590,000
3/24/20	7.00 AM	413.09	65.92	5704.43	1,848,794,000
3/25/20	7.00 AM	414.35	67.18	6036.45	1,966,983,000
3/26/20	7.00 AM	415.20	68.03	6263.40	2,040,935,000



Equation Overage = 347.17 El. Gallons

Date	Time	Elev.	Gauge	Acres Feet	Storage
3/27/00	7:00 AM	417.62	70.45	6925.30	2,256,616.00
3/28/00	8:00 AM	418.95	71.78	7296.50	2,377,571.00
3/29/00	7:00 AM	419.72	72.55	7513.76	2,448,366.00
3/30/00	8:00 AM	420.40	73.23	7706.72	2,511,236.00
3/31/00	7:00 AM	420.91	73.74	7852.38	2,558,900.00
4/1/00	7:00 AM	421.34	74.17	7975.56	2,598,844.00
4/7/00	7:00 AM	423.28	76.11	<del>8538.00</del> 8832.40	2,782,115.83
4/10/00	7:00 AM	423.69	76.52	8721.16	2,841,798.00
4/20/00	7:00 AM	425.96	78.79	9331.74	3,040,738.00
4/30/00	7:00 AM	426.85	79.68	9599.54	3,128,019.00







396.00  
208  

---

393.42



96.00  
229

93.81

96.00  
258

93.42

96  
222

93.78

396  
275

393.25

96.00

233

93.67

96.00

247

93.53

96.00

265

393.35

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE SIDE SLOPES 1½ TO 1.

FOR SINGLE TRACK EMBANKMENT.

	0	1	2	3	4	5	6	7	8	9	
0	7.0	7.2	7.3	7.5	7.6	7.8	7.9	8.1	8.2	8.4	0
1	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.6	9.7	9.9	1
2	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.1	11.2	11.4	2
3	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	3
4	13.0	13.2	13.3	13.5	13.6	13.8	13.9	14.1	14.2	14.4	4
5	14.5	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	5
6	16.0	16.2	16.3	16.5	16.6	16.8	16.9	17.1	17.2	17.4	6
7	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7	18.9	7
8	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	8
9	20.5	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	9
10	22.0	22.2	22.3	22.5	22.6	22.8	22.9	23.1	23.2	23.4	10
11	23.5	23.7	23.8	24.0	24.1	24.3	24.4	24.6	24.7	24.9	11
12	25.0	25.2	25.3	25.5	25.6	25.8	25.9	26.1	26.2	26.4	12
13	26.5	26.7	26.8	27.0	27.1	27.3	27.4	27.6	27.7	27.9	13
14	28.0	28.2	28.3	28.5	28.6	28.8	28.9	29.1	29.2	29.4	14
15	29.5	29.7	29.8	30.0	30.1	30.3	30.4	30.6	30.7	30.9	15
16	31.0	31.2	31.3	31.5	31.6	31.8	31.9	32.1	32.2	32.4	16
17	32.5	32.7	32.8	33.0	33.1	33.3	33.4	33.6	33.7	33.9	17
18	34.0	34.2	34.3	34.5	34.6	34.8	34.9	35.1	35.2	35.4	18
19	35.5	35.7	35.8	36.0	36.1	36.3	36.4	36.6	36.7	36.9	19
20	37.0	37.2	37.3	37.5	37.6	37.8	37.9	38.1	38.2	38.4	20
21	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
22	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
23	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
24	43.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44.2	44.4	24
25	44.5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
26	46.0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
27	47.5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
28	49.0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
29	50.5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
30	52.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
31	53.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
32	55.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
33	56.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
34	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
35	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
36	61.0	61.2	61.3	61.5	61.6	61.8	61.9	62.1	62.2	62.4	36

Calculated by Julien A. Hall, M. Am. Soc. C. E.