481

400

EVEL

IND

F.B.481

Published by H. S. CROCKER COMPANY, Stationers, Drawi
Materials, and Mathematical Instruments, San Francisco.

Table showing the difference of latitude and departure in running 80 chains at any course from 1 to

MINUTES.	LKS.	MINUTES.	LKS.	MINU	
1	$2\frac{1}{3}$	2	49	41	$95\frac{2}{3}$
2	$4\frac{2}{3}$	22	$51\frac{1}{3}$	42	98
3	7	23	$53\frac{2}{3}$	43	$100\frac{1}{3}$
4	$9\frac{1}{3}$	24	56	44	$102\frac{2}{3}$
5	$11\frac{2}{3}$	25	$58\frac{1}{3}$	45	105
6	14	26	$60\frac{2}{3}$	46	$107\frac{1}{3}$
7	$16\frac{1}{3}$	27	63	47	$109\frac{2}{3}$
8	$18\frac{2}{3}$	28	$65\frac{1}{3}$	48	112
9	21	29	$67\frac{2}{3}$	49	$114\frac{1}{3}$
10	$23\frac{1}{3}$	30	70	50	$116\frac{2}{3}$
11	$25\frac{2}{3}$	31	$72\frac{1}{3}$	51	119
12	28	32	$74\frac{2}{3}$	52	$121\frac{1}{3}$
13	$30\frac{1}{3}$	33	77	53	$123\frac{2}{3}$
14	$32\frac{2}{3}$	34	$79\frac{1}{3}$	54	
15	35	35	$81\frac{2}{3}$	55	
16	$37\frac{1}{3}$	36	84	56	
17	$39\frac{2}{3}$	37	$86\frac{1}{3}$	57	
18	42	38	$88\frac{2}{3}$	58	
19	$44\frac{1}{3}$	39	91	59	
20	$46\frac{2}{3}$	40	$93\frac{1}{3}$	60	

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DEC 1 1964

TABLE FOR RUNNING ON SLOPES.

In the following table the first column shows the angle, the second the number of links to be added to a chain on the slopes, to make one chain, horizontal measurement.

ANGLE	COR. IN LINKS	ANGLE	COR. IN LINKS	ANGLE	COR. IN LINKS	ANGLE	COR. IN LINKS
°		°		°		°	
4	0.24	11	1.88	18	5.14	25	10.54
5	0.38	12	2.24	19	5.76	26	11.40
6	0.55	13	2.63	20	6.42	27	12.24
7	0.76	14	3.06	21	7.11	28	13.37
8	0.98	15	3.53	22	7.85	29	14.31
9	1.24	16	4.02	23	8.64	30	15.47
10	1.55	17	4.56	24	9.47	31	16.45

FROM
Loring's Book Store

July 27/09 { Childs
Barber
Taylor

1

University Hts.
preliminary sewer
so. of University ave
& East of Arizona
street

alley bet. Arnold & Walker
Park line to University ave.

Sta.		H.I.	Rod	Elev.
0+00	5' so. park line	272.52	6.07	266.45
+50	about 8' deep		4.4	268.1
1+00	1046.15	281.45	11.2	270.3
+50			9.5	272.0
2+00	not less than 7' deep.		6.6	274.9
+50			3.8	277.7
3+00	13.04 279.70 J.P. 1.75 281.45 ✓	292.74	13.1	279.6
+50	12.43 269.02 J.P. 3.50 272.52 ✓		10.7	282.0
4+00			7.5	285.2
+50	about 7' deep.		6.2	286.5
5+00			5.1	287.6
+50			4.7	288.0
6+00			6.0	286.7
+50			6.9	285.8
7+00		298.70	12.8	285.9
+50			11.8	286.9

Platted.
Profile platted
Sheet 1

from 5' so. of
July 27/09 { Childs, Barber, Taylor

Sta.		H.I.	Rod	Elev.
8+00		298.70	10.7	288.0
+50			10.0	288.7
9+00			8.7	290.0
+50			8.2	290.5
10+00			8.9	289.8
+46.15	Center Dwight		8.09	290.66
+50			8.0	290.7
11+00	about 5' deep.		6.9	291.8
+50	10.96 295.84 J.P. 2.86 298.70 ✓		6.0	292.7
12+00	12.57 286.13 J.P. 6.61 292.74 ✓		4.4	294.3
+50		306.80	10.6	296.2
13+00			9.5	297.3
+50			7.9	298.9
14+00			8.0	298.8
+50	not less than 6' deep.		6.5	300.3
15+00			7.9	298.9

Cont. from page 2

Sta.		H.I.	Rod	Elev.
15+50		306.80	6.9	299.9
16+00			6.8	300.0
+50			6.2	300.6
17+00			4.9	301.9
+06.15	Center Landis		4.82	301.98
+50	not less than 5' deep.		5.5	301.3
18+00			5.0	301.8
+50			3.9	302.9
19+00			3.7	303.1
+50			5.0	301.8
20+00		311.62	9.2	302.4
+50	not less than 8' deep		7.0	304.6
21+00	311.51		7.4	304.2
+50	8.11 311.62 8.72 302.90 S.P.		8.0	303.6
22+00	3.90 306.80		7.5	304.1
+50	2.86		7.6	304.0

July 27/09 { Shields, Barber, Taylor

Sta		H.I.	Rod	Elev.
23+00	not less than 6' deep.	311.62	6.1	305.5
+50			6.1	305.5
24+00			5.8	305.8
+50			6.7	304.9
25+00			6.5	305.1
+50			4.9	306.7
26+00			3.1	308.5
+25	F.J.		2.2	309.4

Line on Walker street from to center university ave.

Sta.		H.I.	Rod	Elev.
0+00	5' so. of Parkline	288.91	3.41	285.50
+50		300.50	10.5	290.0
1+00			7.1	293.4
+50		309.37	12.1	297.3
2+00			8.6	300.8
+50			6.5	302.9
3+00			5.1	304.3
+50			4.6	304.8
4+00			4.8	304.6
+50			4.6	304.8
5+00			6.0	303.4
+50			7.8	301.6
6+00	4.18 298.98 J.P. 10.39 309.37 ✓	303.16	4.5	298.7
+50	12.09 297.28 J.P.		4.2	299.0
7+00	3.22 300.50 ✓		4.3	298.9
+50	12.54 287.96 J.P. 0.95 288.91 ✓		5.8	297.4

Platted Profile Tallied Sheet 1

5' so. of Parkline

July 29/09 Childs Barber Taylor

Sta		H.I.	Rod	Elev.
8+00		303.16	6.4	296.8
+50			7.4	295.8
9+00			6.7	296.5
+50			5.5	297.7
10+00			5.4	297.8
+47.84	Center Dwight		4.54	298.62
+50			4.6	298.6
11+00			4.5	298.7
+50	11.83 301.24 J.P.	313.07	12.3	300.8
12+00	1.92 303.16 ✓		10.3	302.8
+50			8.4	304.7
13+00			6.6	306.5
+50			5.7	307.4
14+00			5.8	307.3
+50			4.6	308.5
15+00			4.1	309.0

Cont. — from page 4

July 29/09 { Childs, Barber, Taylor

Sta.		H.I.	Rod	Elev
15+50		313.07	2.4	310.7
16+00			0.4	312.7
+50		325.89	11.2	314.7
17+00			8.9	317.0
+38	No. line Landis		9.0	316.9
+50	12.96 312.93 J.P. 0.14 313.07 ✓		8.4	317.5
18+00			7.7	318.2
+50			7.0	318.9
19+00			4.8	321.1
+50			3.6	322.3
20+00			2.4	323.5
+50	Platted		2.0	323.9
21+00			2.4	323.5
+50			2.6	323.3
22+00			3.7	322.2
+50			3.9	322.0

Sta		H.I.	Rod	Elev.
23+00		323.59	2.6	321.0
+50			4.7	318.9
23+98.1	No. line Wightman		8.9	314.7
24+00	M.H. 1°12' about 3' deep.		9.1	314.5
+50	311.54 B.M. 12.08 323.59 ✓		11.1	312.5
25+00	0.60 322.99 J.P. 2.90 325.89 ✓		9.5	314.1
+50			7.1	316.5
26+00			4.8	318.8
+50			2.8	320.8
+88.4	about 11.4 deep Center University ave. and Alleyvet, Hamilton & Oregon 6'		1.9	321.7

7.2
1.2
8.4
3
11.4

alley line bet. Walker & Oregon
to center University ave.

Sta.		H.I.	Rod	Elev.
0+00	5' So. of park line	325.14	10.55	314.59
+50		328.81	12.6	316.2
1+00			11.1	317.7
+50			9.3	319.5
2+00			7.6	321.2
+50			7.0	321.8
3+00			6.2	322.6
+50	4.57 ~~310.81~~ 323.15 J.P. 5.66 328.81 12.07 316.74 J.P. 8.40 325.14 ✓		5.4	323.4
4+00			5.4	323.4
+50		327.72	4.6	323.1
5+00			5.9	321.8
+50			8.6	319.1
6+00			8.5	319.2
+50			9.8	317.9
7+00			11.1	316.6
+50			12.9	314.8

Plotted
Profile Plotted
Sheet 1

from 5' So. of park line
July 29/09 {Shields, Barber, Taylor}

Sta.		H.I.	Rod	Elev.
8+00	about 6' deep	316.87	4.0	312.9
+50			6.3	310.6
9+00	12.34 315.38 J.P. 1.49 316.87 ✓		10.6	306.3
+10			12.4	304.5
+50			5.3	311.6
10+00			2.5	314.4
+49.7	center Dwight	327.72	11.69	316.03
11+00	about 10' deep		10.0	317.7
+50			7.5	320.2
12+00			6.6	321.1
+50			5.3	322.4
13+00			4.2	323.5
+50			3.8	323.9
14+00			2.7	325.0
+50			2.2	325.5
15+00			2.7	325.0

Cont. from page 6.

Sta.		H.I.	Rod	Elev.
15+50		338.21	11.5	326.7
16+00			10.6	327.6
+50	11.10 327.11 T.P. 0.61 327.72 ✓		8.3	329.9
17+00			7.7	330.5
+50			7.9	330.3
18+00			8.0	330.2
+50			6.7	331.5
19+00			6.0	332.2
+50			5.1	333.1
20+00			4.5	333.7
+50			3.1	335.1
21+00			1.9	336.3
+50	0.59 335.78 T.P. ~~2.91~~ 2.93 338.21 ✓		1.3	336.9
22+00			1.7	336.5
+50			2.2	336.0
23+00		336.37	1.2	335.2

July 30/09 { Childs, Taylor, Edmonds

7

Sta		H.I.	Rod	Elev.
23+50		336.37	2.9	333.5
24+00	about 6' deep		5.9	330.5
+50			11.5	324.9
+95		326.77	8.2	318.6
25+00	335.21 B.M. 1.16 336.37 ✓ 12.55 323.82 T.P.		7.0	319.8
+50		336.37	9.9	326.5
26+00	2.95 326.77 ✓		6.7	329.7
+50			2.7	333.7
+89.85	about .11' deep Center University ave.		2.0	334.4

Alley line bet. Oregon & Idaho line to center University ave.

Sta		H.I.	Rod	Elev.
0+00	about 7' deep 5' so. park line	336.35	7.00	329.35
+50			7.8	328.6
1+00	0.4% grade		8.2	328.1
+50			8.1	328.3
2+00			6.6	330.8
+50			6.0	330.4
3+00	5.42 / 330.06 J.P. / 6.29 / 336.35		6.1	330.3
+50			5.5	330.9
4+00		335.48	5.0	331.4
+50			3.5	332.0
5+00			5.1	330.4
+50			5.7	329.8
6+00			5.7	329.8
+50			4.8	330.7
7+00			5.5	330.0
+50			4.7	330.8

Platted Profile platted Sheet 2.

from 5' so. of park

July 30/09 { Childs, Taylor, Eckenrode

8

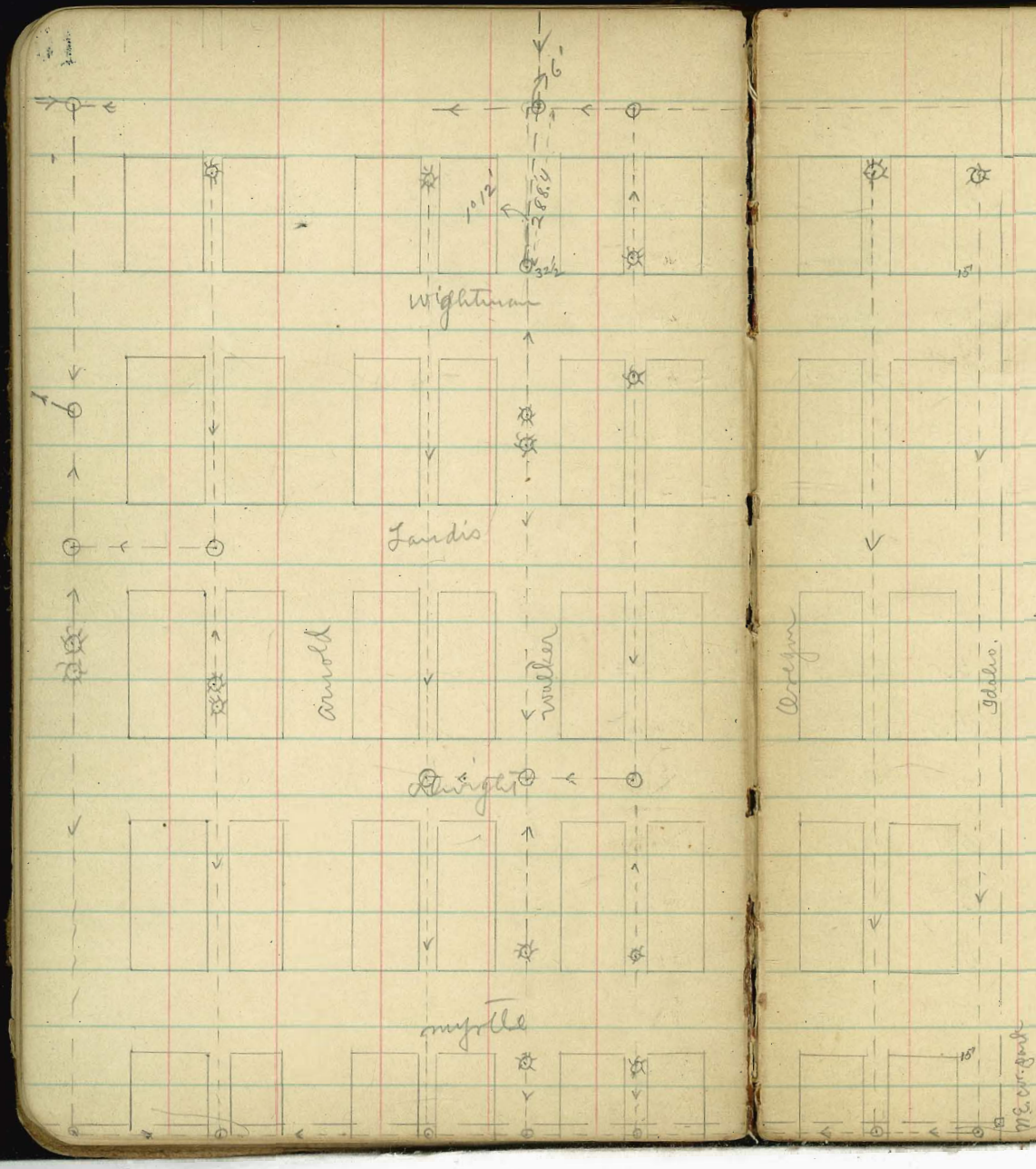
Sta.		H.I.	Rod	Elev.
8+00		335.48	5.8	329.7
+50			6.1	329.4
9+00			6.7	328.8
+50	about 2' deep		7.2	328.3
10+00			6.3	329.2
+50	about 5' deep 12.95 / 333.57 J.P. / 1.91 / 335.48		4.5	331.0
11+00			4.1	331.4
+50		346.52	12.4	334.1
12+00			11.9	334.6
+50			11.0	335.5
13+00			10.6	335.9
+50	about 5.0 deep		7.9	338.6
14+00			7.2	339.3
+50			6.3	340.2
15+00			4.8	341.7

Cont. – from page 8

Sta		H.I.	Rod	Elev.
15+50		346.52	4.7	341.8
16+00			3.7	342.8
+50	6.78 343.01 S.S. 3.51 346.52 ✓		3.5	343.0
17+00			3.5	343.0
+50		349.79	6.9	342.9
18+00			6.7	343.1
+50			6.5	343.3
19+00			6.4	343.4
+50			6.4	343.4
20+00	0.4%		6.2	343.6
+50			6.1	343.7
21+00			5.6	344.2
+50			5.4	344.4
22+00			5.9	343.9
+50			5.7	344.1
23+00			5.8	344.0

Aug 3/09 { Shields, Barber, Taylor

Sta.		H.I.	Rod	Elev.
23+50		349.79	5.3	344.5
24+00	347.37 B.M. 2.42 349.79 ✓		5.5	344.3
+50			5.7	344.1
25+00			6.2	343.6
+50			5.7	344.1
26+00			6.0	343.8
+50			5.5	344.3
+94.6	center Univ. ave.		5.6	344.2


6'
1°12'
288.4
32½
Wightman
Landis
Arnold
walker
Wright
myrtle
15'
Oregon
Idaho
15'
NE cor. park
5'

Idaho street from 5' so. park line to University ave.

Aug. 3/09 { Childs, Barber, Taylor

Sta.		H.I.	Rod	Elev.
0+00	5' so. of park line (about 3' deep)	339.06	10.10	328.96
+50			9.0	330.1
1+00			8.1	331.0
+50			6.4	332.7
2+00			6.3	332.8
+50			6.7	332.4
3+00	0.4% grade		6.6	332.5
+50			6.2	332.9
4+00			6.0	333.1
+50			5.5	333.6
5+00			4.1	335.0
+50			5.1	334.0
6+00			5.7	333.4
+50			4.3	334.8
7+00			5.4	333.7
+50			5.7	333.4
8+00		339.06	4.6	334.5
+50			5.1	334.0
9+00	10.67 / 334.48 S.P. / 4.58 / 339.06		6.0	333.1
+50			5.0	334.1
10+00		345.15	11.1	334.1
+50			10.0	335.2
11+00			11.0	334.2
+50			10.3	334.9
12+00			9.8	335.4
+50			9.1	336.1
13+00			8.3	336.9
+50			7.3	337.9
14+00			6.5	338.7
+50			5.7	339.5
15+00			4.8	340.4
+50			4.5	340.7

Plotted Profile plotted Sheet 3.

Cont. – from page 11

Aug 3. 1909 { Childs, Barber, Taylor

Sta.		H.I.	Rod	Elev.
16+00		345.15	3.4	341.8
+50			2.3	342.9
17+00			2.2	343.0
+50	6.75 343.92 T.P. 1.23 345.15		1.9	343.3
18+00			1.9	343.3
+50		350.67	6.9	343.8
19+00			6.9	343.8
+50			7.2	343.5
20+00			6.7	344.0
+50			6.7	344.0
21+00			6.7	344.0
+50			5.9	344.8
22+00	347.37 B.M. 3.30 350.67		5.4	345.3
+50			6.4	344.3
23+00			6.1	344.6
+50			6.1	344.6

Sta.		H.I.	Rod	Elev.
24+00		350.67	5.9	344.8
+50			5.2	345.5
25+00			5.1	345.6
+50			5.7	345.0
26+00			4.2	346.5
+25	T.J.		3.4	347.3

Park sewer line 5' so. of north line line of Idaho to center arizona. from 15' East of west

Aug. 6/09

Childs
Barber
Taylor

Sta.		H.I.	Rod	Elev.
0+00	15' East of west line of Idaho	332.57	3.61	328.96
+50			2.7	329.9
1+00			2.8	329.8
+47.35	Center alley bet. Oregon + Idaho.		3.22	329.35
+50			3.5	329.1
2+00			5.3	327.3
+50			6.8	325.8
3+00			7.8	324.8
+50	12.94 319.63 T.P. 0.46 320.09		9.7	322.9
4+00			11.6	321.0
+50		320.09	3.8	316.3
+77.75	Center alley bet. Oregon + Walker		5.50	314.59
5+00			7.3	312.8
+50	12.95 307.14 T.P. 0.44 307.58	307.58	2.6	305.0
6+00	12.70 294.88 T.P. 293.41		11.7	295.9
+42.75	Center walker	295.41	9.91	285.50

Platted profile platted sheet 3

Sta.		H.I.	Rod	Elev.
6+50		295.41	11.9	283.5
7+00	12.83 282.58 T.P. -0.03 282.55	282.55	9.2	273.4
+50	13.03 269.52 T.P. 2.06 271.58	271.58	2.9	268.7
8+00			4.8	266.8
+07.53	Center alley bet. walker + arnold		5.13	266.45
+50			7.0	264.6
9+00			10.0	261.6
+38			13.3	258.3
+50			11.7	259.9
10+00			8.8	262.8
+50			8.5	263.1
11+00			10.0	261.6
+36.7	Center alley bet. arnold + arizona		12.55	259.03
+50			12.5	259.1
+53			13.5	258.1
+55			13.0	258.6

See 466/77

Cont. – from page 13

Sta.		H.I.	Rod	Elev.
11+65		271.58	10.7	260.9
12+00			7.9	263.7
+50			5.0	266.6
13+00			2.2	269.4
+10.2	center arizona		1.42	270.16

Aug. 6/09 { Childs, Barber, Taylor

13102
1136.7
173.3
20

Sewer line in Dwight from alley bet. Arnold & Walker

to alley bet. Walker & Oregon

Aug 6/09

{Childs
Barber
Taylor

Sta.		H.I.	Rod	Elev.
0+00	center alley bet. Arnold & Walker	303.48	12.87	290.61
+50			10.6	2929
1+00	12.87		9.4	294.1
+50			5.8	2977
+64.75	center Walker		4.86	298.62
2+00			2.9	300.6
+50	0.08 / 303.40 T.P.	316.22	9.6	306.6
3+00	12.82 / 316.22		3.7	312.5
+30	center alley bet. Walker & Oregon		0.2	316.03

Platted
Profile platted
Sheet 2

Main sewer from sta. 42+00 on Brooklin Hts main (Book 010 page 68) to Sta 6+35 on Canyon line west of Florida st. near Upas. Elev. 189.67

Sept. 8/10

Childs
Barr
Taylor

Sta.		H.I.	Rod	Elev.
0+00	41° 12' L M.H. Sta 42+00 on Brooklin Hts. main	92.05	10.62	81.43
+50			9.8	82.3
+70			9.3	82.8
1+00	on boulevard.		6.0	86.1
+50			9.1	83.0
2+00			8.3	83.8
+50			7.2	84.9
3+00			6.6	85.5
+20			6.4	85.7
+23			8.6	83.5
+50			9.0	83.1
+80			7.6	84.5
4+00			4.6	87.5
+50			3.2	88.9
5+00			3.8	88.3
+50			2.9	89.2

Profile plotted

Sta.			H.I.	Rod	Elev.
6+00			92.05	1.8	90.3
+50				1.2	90.9
T.P.		9.12	100.13	1.04	91.01
7+00				8.6	91.5
+50	10° 45' L M.H. angle.			8.17	92.0
8+00				7.4	92.7
+50				6.7	93.4
9+00				6.1	94.0
+50				5.3	94.8
10+00				5.1	95.0
+50				4.7	95.4
11+00				3.9	96.2
T.P.		10.34	106.62	3.85	96.28
+50				9.1	97.5
12+00				8.3	98.3
+50				7.4	99.2
13+00				6.5	100.1
+50	13° 21' R M.H. angle.			5.40	101.2

Cont. from page 16

Sta.			H.I.	Rod	Elev.
			106.62		
14+00				6.4	100.2
+24				6.5	100.1
+37				9.2	97.4
+50				8.1	98.5
+85				8.2	98.4
+89				5.2	101.4
15+00				5.2	101.4
+50				3.8	102.8
T.P.		9.33	111.99	3.96	102.66
16+00				8.1	103.9
+23				7.3	104.7
+28				10.3	101.7
+46				10.2	101.8
+50				9.1	102.9
17+00				7.0	105.0
+50				6.8	105.2
18+00	7° 14' L M.H. angle			5.63	106.4

Sept. 8/10 { Shields, Barber, Taylor

Sta.			H.I.	Rod	Elev.
			111.99		
18+50				4.7	107.3
19+00				4.3	107.7
+20				4.4	107.6
+23				6.3	105.7
+50				5.8	106.2
+60				7.1	104.9
+82				3.7	108.3
20+00				2.6	109.4
T.P.		8.51	118.70	1.80	110.19
+50				7.5	111.2
21+00				9.0	109.7
+50				7.7	111.0
+88				7.4	111.3
+90				9.8	108.9
22+00				9.3	109.4
+14				9.9	108.8
+23				6.9	111.8

Cont. from page 17

Sta		H.I.	Rod	Elev.
22+50	9° 56' L M.H. angle. 10.37	118.70 / 123.59	5.48	113.22
23+00			9.1	114.5
+50			8.7	114.9
24+00			7.7	115.9
+50			6.7	116.9
25+00			6.7	116.9
+30			10.4	113.2
+45	5.40		8.0	115.6
+50			7.8	115.8
26+00	hub		5.5	118.1
+50			4.7	118.9
+68			5.0	118.6
+71			7.5	116.1
+82			7.1	116.5
+91			4.2	119.4
27+00			6.4	117.2

Sept. 8/10 { Childs Barber Taylor

Sta.		H.I.	Rod	Elev.
27+06		123.59	6.5	117.1
+12			3.9	119.7
+50			2.8	120.8
J.P.	15° 24' R 10.40	131.13	2.86	120.73
+90	M.H. Junction with canyon from original		9.13	122.00
28+00			9.0	122.1
+15			9.3	121.8
+19			10.5	120.6
+30			8.9	122.2
+50			8.2	122.9
29+00	6.6		7.7	123.4
+50			7.1	124.0
30+00			6.2	124.9
+50			5.6	125.5
31+00	hub.		4.6	126.5
+15			7.1	124.0
+50			5.7	125.4

Cont. from page 18

Sta		H.I.	Rod	Elev.
		131.13		
32+00			4.9	126.2
+50			3.4	127.7
J.P.	8.44	136.67	2.90	128.23
33+00			7.9	128.8
+50			7.4	129.3
34+00			7.3	129.4
+38			8.2	128.5
+50			6.3	130.4
+58	21° 00' L M.H. angle		5.77	130.90
J.P.	11.89	142.79		
35+00			11.1	131.7
+31			11.9	130.9
+37			12.7	130.1
+50			10.9	131.9
+95			9.2	133.6
36+00			11.8	131.0
+50			9.2	133.6
37+00			7.9	134.9

Sept 10/10 { Childs, Barber, Taylor

Sta.		H.I.	Rod	Elev.
		142.79		
37+50			7.6	135.2
+65			7.3	135.5
+74			9.7	133.1
38+00			9.5	133.3
+10			9.4	133.4
+28			6.4	136.4
+50			5.6	137.2
39+00			4.7	138.1
+50			3.6	139.2
40+00	20° 25' R M.H. angle		1.97	140.82
J.P.	11.44	152.26		
+50			10.2	142.1
41+00			9.7	142.6
+50			9.7	142.6
+90			12.5	139.8
42+00			11.7	140.6
+50			7.8	144.5

Cont. from page 19

Sta.		H.I.	Rod	Elev.
		152.26		
43+00			6.4	145.9
+50			4.5	147.8
44+00			5.0	147.3
+18	550.0		6.1	146.2
+20			7.2	145.1
+45			6.4	145.9
+50			5.0	147.3
45+00			3.3	149.0
+50	14° 04' R M.H. angle.		2.33	149.93
T.P.	12.65	162.58		
46+00			11.7	150.9
+50			10.0	152.6
47+00			10.5	152.1
+50	700.0		9.9	152.7
48+00			8.9	153.7
+25			9.5	153.1
+40	26° 22' L M.H. angle.		6.17	156.4

Sept. 12/10. { Schield, Barber, Taylor

Sta.		H.I.	Rod	Elev.
		162.58		
48+50			5.5	157.1
49+00			4.4	158.2
+50			4.4	158.2
50+00			3.9	158.5
T.P.	10.18	169.63	3.13	159.45
+50			10.1	159.5
51+00	600.0		9.1	160.5
+50			8.2	161.4
+70			8.0	161.6
+83			10.0	159.6
+87			9.1	160.5
52+00	20° 32' R M.H. angle.		8.39	161.2
+50			6.9	162.7
53+00			5.6	164.0
+50	300.0		5.2	164.4
54+00			5.1	164.5
+50			5.2	164.4

Cont. from page 20

Sta.		H.I.	Rod	Elev.
	14° 37' L	169.63		
55+00	m.H. angle,		4.06	165.57
T.P.	12.67	178.24		
+50			15.6	162.6
+60			15.7	162.5
56+00			12.8	165.4
+50			9.6	168.6
57+00			8.0	170.2
+23			7.2	171.0
+27			10.6	167.6
+50			10.0	168.2
58+00			9.0	169.2
	28° 00' L			
+50	m.H. angle,		7.31	170.9
59+00			6.6	171.6
+50			6.0	172.2
60+00			5.0	173.2
T.P.	11.22	184.68	4.78	173.46
+50			10.3	174.4
+85			11.4	173.3

Sept. 12/10 {Schields, Barber, Tayer}

Sta.		H.I.	Rod	Elev.
		184.68		
61+00			12.5	172.2
+17			11.0	173.7
+50			10.1	174.6
62+00			9.1	175.6
+35			9.7	175.0
+43			5.4	179.3
	44° 33' R			
+50	m.H. angle		4.94	179.7
63+00			5.5	179.2
+50			4.6	180.1
64+00			2.1	182.6
T.P.	9.67	193.31	1.04	183.64
+50			9.3	184.0
+65			9.4	183.9
+85			13.0	180.3
+95			11.9	181.4
65+00			11.4	181.9
+10			10.6	182.7

Cont. from page 21

Sta.		H.I. 193.31	Rod	Elev.
65+15	300.0		12.8	180.5
+24			13.0	180.3
+27			11.8	181.5
+50	19° 28' L M.H. angle.		10.38	182.9
66+00			9.2	184.1
+19			9.0	184.3
+25			11.0	182.3
+50			8.8	184.5
67+00	352.8		7.8	185.5
+50			7.1	186.2
68+00			5.5	187.8
+50			3.9	189.4
69+00			3.5	189.8
+02.8	42° 01' R M.H. Sta. 6+35 on Camp line west of Florida		3.63	189.68

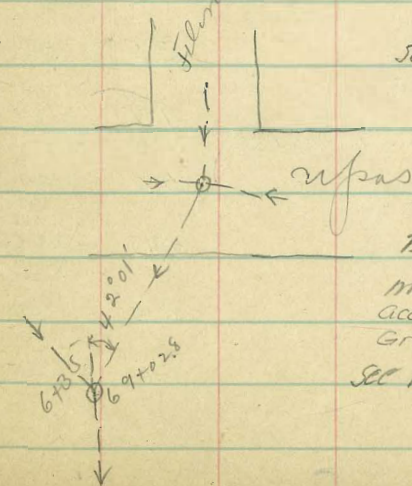
2800
2618
5418

193.31
189.67
3.64

Sept. 12/10 { Childs Barber Taylor

22

Profile Placed



See Book 466 P 72
" " 812 P 2

This MH Later moved about 10' South acct storm drain Grade changed.
See F.B. 820 P 67.

Main canyon from Sta. 27+90 on Sta. 0+00 on alley bet. Arizona & Florida St. Canyon to Arnold. Sept. 13/10 Childs Barber Tayeur

Sta.		H.I.	Rod	Elev.
0+00	56° 42' R backsight on 26+00 Sta. M.H. Sta. 27+90 on Florida St. Canyon	132.37	10.37	122.00
+50			9.4	123.0
1+00			8.6	123.8
+15			10.1	122.3
+50			8.1	124.3
2+00			6.5	125.9
+29			6.5	125.9
+42			7.2	125.2
+50			6.1	126.3
3+00			3.8	128.6
+50			1.7	130.7
J.P.	8.77	139.41	1.73	130.64
4+00			6.9	132.5
+40	21° 12' R M.H. angle.		5.41	135.0
+50			5.0	134.4
5+00			5.0	134.4
+13			7.1	132.3

440.0

See book 820 P40

Sta.		H.I.	Rod	Elev.
5+36		139.41	5.1	134.3
+50			4.5	134.9
6+00			3.4	136.0
+18			4.8	134.6
+35			3.2	136.2
+50			2.6	136.8
J.P.	11.04	148.30	2.15	137.26
7+00			7.4	140.9
+50	14° 16' R M.H. angle.		5.16	143.1
8+00			5.4	142.9
+39			6.0	142.3
+50			7.0	141.3
9+00			4.6	143.7
+23			4.2	144.1
+35			5.5	142.8
+42			3.8	144.5
+50			3.0	145.3

310.0

400.0

Cont. from page 23

Sta.			H.I.	Rod	Elev.
J.P.		8.17	154.02	2.45	145.85
9+78				7.7	146.3
+85				9.3	144.7
10+00				7.5	146.5
+27				6.1	147.9
+34				8.2	145.8
+50				6.2	147.8
11+00				3.4	150.6
+50	16° 56' L M.H. angle.			1.45	152.57
J.P.		10.87	163.44		
+72				13.7	149.7
+88				11.4	152.0
12+00				10.7	152.7
+50				8.8	154.6
13+00	335.0			8.6	154.8
+15				10.6	152.8
+30				8.3	155.1
+50				6.6	156.8

1485
1150
335

Sept. 13/10 { Childs, Barlow, Taylor

Sta.			H.I.	Rod	Elev.
14+00			163.44	4.9	158.5
+16				6.3	157.1
+21				8.1	155.3
+50				4.6	158.8
+85	32° 20' L M.H. angle.			2.81	160.63
J.P.		11.87	172.50		
15+00				11.5	161.0
+12				13.2	159.3
+16				14.4	158.1
+22				13.3	159.2
+36	315.0			12.2	160.3
+40				13.2	159.3
+50				12.1	160.4
16+00				10.6	161.9
+10				11.8	160.7
+17				10.6	161.9
+50				8.7	163.8

Cont. from page 24

Sta.			H.I.	Rod	Elev.
17+00			172.50	9.3	163.2
+08				9.9	162.6
+15				7.3	165.2
+50				5.6	166.9
18+00	9° 04' L M.H. angle.			5.12	167.38
T.P.		12.51	179.89		
+20				14.5	165.4
+30				13.8	166.1
+50				12.4	167.5
+78				12.4	167.5
19+00				12.8	167.1
+50	7500			10.0	169.9
20+00				7.1	172.8
+50				6.1	173.8
+56				7.0	172.9
+60				8.6	171.3
+70				6.7	173.2

1800
14.85
3.15

Sept. 15/10 { Childs, Barber, Taylor

Sta.			H.I.	Rod	Elev.
21+00			179.89	3.7	176.2
+19				4.9	175.0
+27				6.4	173.5
T.P.		12.74	189.07	3.56	176.33
+38				12.8	176.3
+50				12.2	176.9
22+00				10.7	178.4
+50				7.6	181.5
+66				7.5	181.6
+75				10.3	178.8
+81				7.7	181.4
23+00				8.0	181.1
+50				6.3	182.8
24+00				5.3	183.8
+50				4.2	184.9
+57				5.8	183.3
+62				4.2	185.9
25+00				1.0	188.1

Cont. from page 25

Sta.			H.I.	Rod	Elev.
J.P.	7° 37' L	11.74	200.75	0.06	189.01
25+50	m.H. angle			10.08	190.7
26+00				12.8	187.9
+45				12.3	188.4
+50				10.9	189.8
27+00				8.5	192.2
+50				7.5	193.2
28+00				7.0	193.7
+40	500°			7.4	193.3
+46				5.8	194.9
+50				5.6	195.1
29+00				3.9	196.8
+50				3.0	197.7
J.P.		12.89	211.07	2.57	198.18
+77				13.3	197.8
+93				14.2	196.9
30+00				13.7	197.4
+07				12.7	198.4

Sta			H.I	Rod	Elev.
	11° 16' R		211.07		
30+50	m.H. angle.			11.55	199.6
31+00				11.3	199.8
+50				10.6	200.5
32+00				8.8	202.3
+50				7.8	203.3
33+00	500°			8.1	203.0
+50				7.3	203.8
34+00				6.7	204.4
+50				4.0	207.1
35+00				4.0	207.1
+08				4.5	206.6
	15° 19' L				
+50	m.H. angle.			0.87	210.20
J.P.		12.54	222.74		
+65				12.5	210.2
+71				14.0	208.7
36+00				12.0	210.7
+50				9.1	213.6

Cont. from page 26

Sta.			H.I.	Rod	Elev.
			222.74		
36+68				5.6	217.1
+88				5.9	216.8
37+00				8.0	214.7
+03				9.2	213.5
+10				8.3	214.4
+50				5.1	217.6
38+00				0.5	222.2
J.P.		10.73	233.04	0.43	222.31
+50				11.2	221.8
+58				14.0	219.0
+70				12.4	220.6
39+00	15° 48' L m.H. angle.			11.63	221.4
+50				9.9	223.1
40+00				10.9	222.1
+50				9.0	224.0
+90				8.9	224.1
41+00				8.0	225.0

Sta.			H.I.	Rod	Elev.
			233.04		
41+50				5.2	227.8
42+00				5.1	227.9
+50				0.0	233.0
S.P.		12.85	245.72	0.17	232.87
+80				12.5	233.2
43+00				16.0	229.7
+50	7° 04' R m.H. angle.			13.14	232.6
44+00				10.9	234.8
+50				9.6	236.1
+81				8.8	236.9
+90				11.4	234.3
45+00				10.1	235.6
+50				9.3	236.4
46+00				8.3	237.4
+50				5.0	240.7
47+00	limb.			4.10	241.62
S.P.		13.94	254.56		
+50				12.1	242.5

Cont. from page 27

Sta.		H.I.	Rod	Elev.
48+00		254.56	8.5	246.1
+15	548.0		6.1	248.5
+50			8.8	245.8
+56			9.8	244.8
+98	39° 24' L M.H. angle		6.42	248.1
49+00			6.6	248.0
+15			7.0	247.6
+35			3.7	250.9
+50			2.6	252.0
T.P.	11.34	263.27	2.63	251.93
50+00			8.9	254.4
+40			9.2	254.1
+50	328.0		11.6	251.7
+80			7.6	255.7
51+00			6.6	256.7
+50			6.8	256.5
+69			6.4	256.9

Sept. 15/10 { Childs Barber Taylor

Sta		H.I.	Rod	Elev.
51+72		263.27	7.3	256.0
52+00			5.2	258.1
+26	51° 38' L. to hub at arizona. M.H. Sta. 0+00 on alley bet. arizona & arnold.		4.05	259.22

Cut off line on outfall for Min Hts. & Brooklin Hts. Sept. 16/10 {Childs, Barber, Taylor}

from Sta. 67+09.2 to Sta. 77+00.65

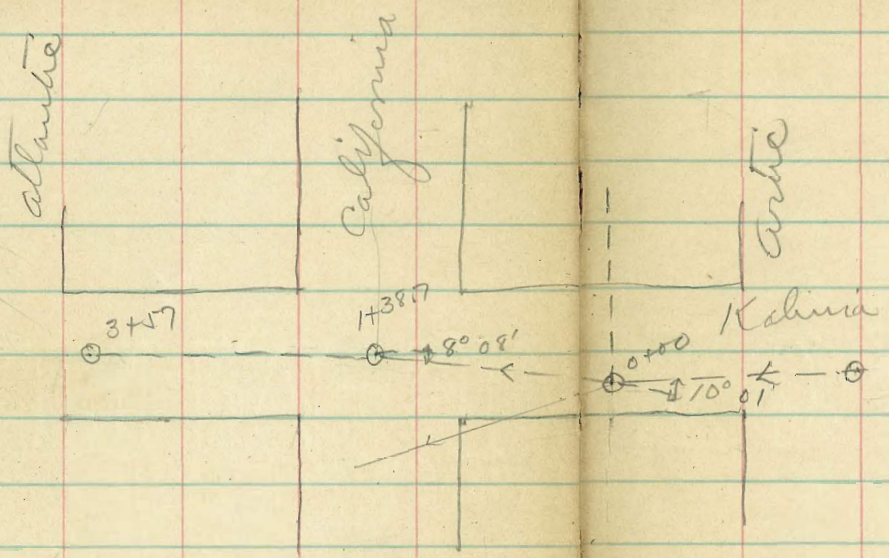
Sta.		H.I.	Rod	Elev.
J.P.	31°58' L 3.16	63.70		60.54
0+00	M.H. = Sta 67+09.2 on outfall on C.St. 17.5' west of west line of 19th 16' so. of center.		5.80	57.9
+50			5.8	57.9
1+00			4.3	59.4
+36			4.2	59.5
+44			1.2	62.5
+50			0.9	62.8
2+00			1.7	62.0
+12			2.1	61.6
+43			13.1	50.6
+50			12.8	50.9
3+00			14.0	49.7
+40			13.0	50.7
+50			8.0	55.7
J.P.	1.65	62.53	2.82	60.88
+60			1.4	61.1
4+00			1.3	61.2
+50			1.0	61.5

Sta		H.I.	Rod	Elev.
		62.53		
4+52			1.0	61.5
+77			14.1	48.4
+92			14.3	48.2
5+00			15.8	46.7
+17			17.5	45.0
+23	top of conduit about 0.6 lower		15.1	47.4
+50			14.8	47.7
+75			14.5	48.0
6+00			11.6	50.9
+07			11.4	51.1
+10			4.8	57.7
+50			5.7	56.8
7+00			6.1	56.4
+17.7	M.H. = Sta 77+00.65 on main outfall. 16' so. + East of center of 16th + D.		6.59	55.9

Change in line from Sta. on lot line bet. California & Artic. to outfall at foot of Kalmia. Sept. 16/10 {Childs, Barber, Tayler

Sta.		H.I.	Rod	Elev.
0+00	10° 0.1' R M.H. Sta on lot line bet. Artic & California	17.09	11.93	5.16
+08			12.7	4.4
+15			14.4	2.7
+27			5.9	11.2
+42			0.7	16.4
J.P.	7.18	22.80	1.47	15.62
+47			0.4	22.4
+50			3.2	19.6
+72			8.7	14.1
1+00			9.0	13.8
+09			7.6	15.2
+38.7	8° 08' L M.H. Center Kalmia & California as 75' street		8.80	14.0
+50			9.5	14.3
+86			9.8	14.0
+88			11.4	11.4
2+00			12.5	10.3
+30			13.2	9.6

Sta.		H.I.	Rod	Elev.
2+40		22.80	11.7	11.1
+50			11.9	10.9
3+00			12.9	9.9
J.P.	8.24	18.57	12.47	10.33
+50			9.3	9.3
+57	M.H. Center of Kalmia		9.92	8.65


Atlantic
California
Pacific
Kahuna
3+57
1+38.7
8° 08'
0+00
10° 01'

Sewer line from Sta 0+86.5 on Thom St. Outfall
Center of Thom. to center of Calif. & Nutmeg.

Sta.		H.I.	Rod	Elev.
0+00	89° 28' M.H. Sta. 0+86.5 on Thom St. outfall Center of Thom.	21.91	7.81	14.10
+50			7.7	14.2
1+00			7.4	14.5
+50			7.3	14.6
2+00			7.2	14.7
+05			17.9	4.0
+11			7.2	14.7
+43			7.1	14.8
+48			14.5	7.4
+50			7.3	14.6
3+00			7.9	14.0
+50			6.4	15.5
4+00			6.4	15.5
+50			6.1	15.8
5+00			5.8	16.1
+50			5.2	16.7
6+00			4.4	17.5
+50			4.6	17.3

Sta.		H.I.	Rod	Elev.
7+00		21.91	5.8	16.1
+50			6.0	15.9
+94			5.8	16.1
8+00			12.3	9.6
+11			15.8	6.1
+13			7.0	14.9
+50			5.5	16.4
9+00			5.4	16.5
+50			6.4	15.5
+94			5.6	16.3
10+00			10.6	11.3
+04			5.2	16.7
+45	1° 14' R M.H. angle.		4.37	17.54
+50		21.91	5.2	16.7
+61			5.5	16.4
+74			14.5	7.4
+81			8.2	13.7
11+00			5.9	16.0

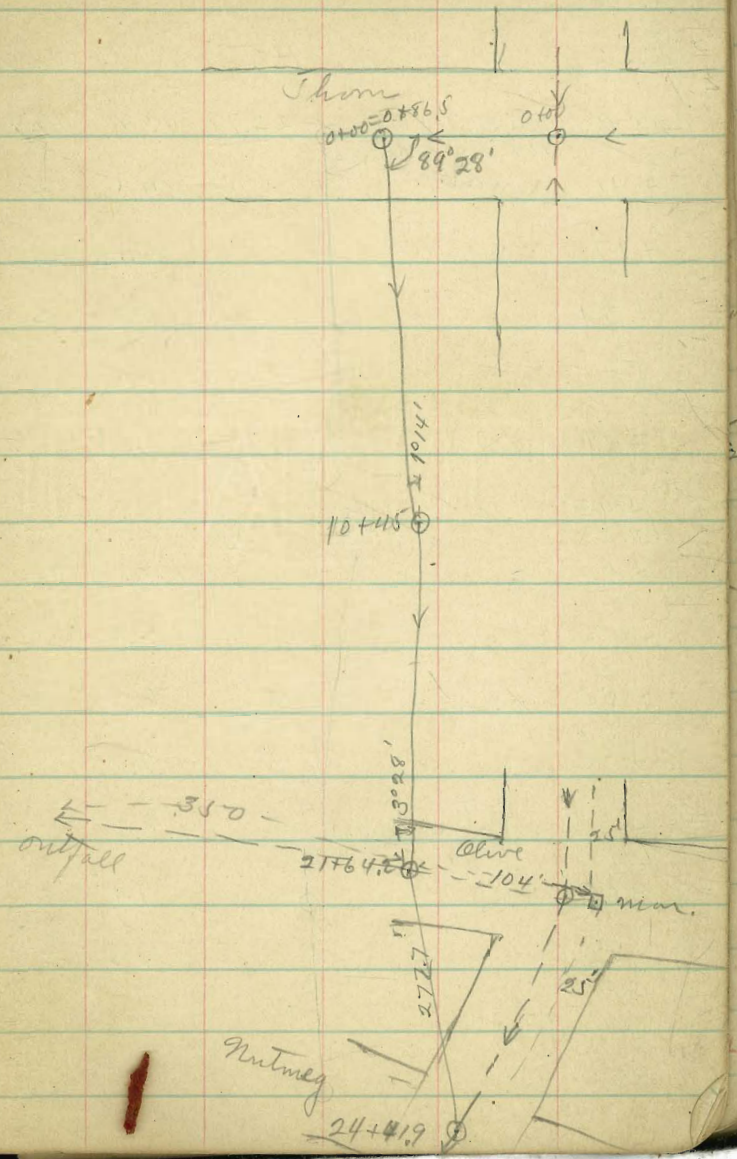
Cont. from page 32

Sta.			H.I.	Rod	Elev.
11+50			21.91	6.2	15.7
+81				7.5	14.4
+93				20.1	1.8
12+00				10.0	11.9
+50				5.7	16.2
+72				5.1	16.8
+82				8.3	13.6
13+00				5.9 4.6	17.3
J.P.		6.51	23.99	4.43	17.48
+50				4.9	19.1
14+00				5.3	18.7
+50				7.2	16.8
15+00				5.6	18.4
+50				5.0	19.0
16+00				5.2	18.8
+50				6.6	17.4
17+00				7.8	16.2

Sta.			H.I.	Rod	Elev.
17+50			23.99	5.1	18.9
18+00				4.7	19.3
+50				4.4	19.6
19+00				4.8	19.2
+50				5.5	19.5
20+00				6.4	17.6
+50				7.3	16.7
21+00				6.1	17.9
+50				5.9	18.1
+64.2	3° 28' L M.H. center olive			6.04	17.95
22+00	9.80 +104' west of mon. 12½' east		27.75	10.9	16.8
+45	of center of calif			10.3	17.4
+50				6.9	20.8
+54				5.0	22.7
23+00				6.1	21.6
+50				6.5	21.2

Sta.		H.I.	Rod	Elev.
		27.75		
24+00			9.1	18.6
+41.9	M.H. Center of Nutmeg & California		9.60	18.15

11.77
22.98 hyp at center cal. & olive



Olive St. outfall ~~flow~~ on center of olive produced

Sta.		H.I.	Rod	Elev.
0+00	M.H. center of Olive 104' west of mon. at Calif	22.79	4.84	17.95
+11			4.5	18.3
+17			6.8	16.0
+31			6.2	16.6
+35			0.8	22.0
+41			1.1	21.7
T.P.	1.05	11.09	12.75	10.04
+43			13.3	-2.2
T.P.	0.10	-1.54	12.73	-1.64
+50			2.1	-3.6
1+00			5.2	-6.7
+50			6.2	-7.7
2+00			7.7	-9.2
+55	water level at 3:45 P.m. Dec. 1/10		8.3	-9.8
3+00			9.1	-10.6
+50			10.2	-11.7

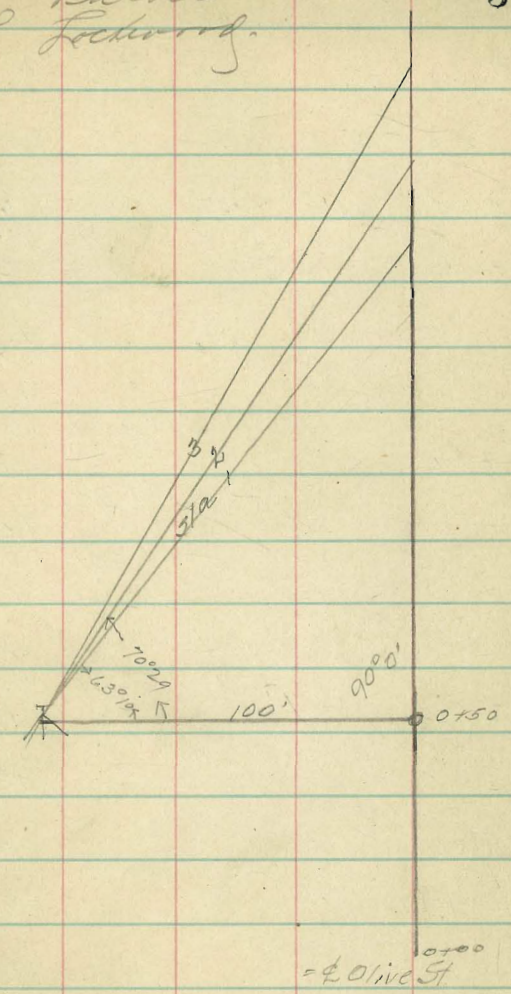
Olive St. Outfall

Soundings taken off Olive St.

Sta.	Δ	Dist.		rod.	
1	63°10'	197.68	-0.03	10.3	-10.3
2	70°29'	282.13		12.0	-12.0
3 ✓	75°04'	374.95		12.3	-12.3
4 ✓	77°12'	440.15		13.0	-13.0
5 ✓	78°51'	507.36		12.6	-12.6
6 ✓	79°53'	560.45		12.6	-12.6
7	80°25'	592.28		13.0'	-13.0
				B.M.	
	1.61		-0.03	-1.64	

Dec. 5th 1910

Harper
Barber
Lockwood.



Sewer line from M.H. 16' so. & East of center of 16th
I & D to Sta. 6+89.6 209 west of 19th & C +219 west of M.H. at 19th & C Jan 7/11.— Childs Taylor Bunker

Sta.			Hat.	Rod	Ground	Grade	Cut
J.P.		5.33	61.22		55.89 B	M.	
0+00	M.H. 16' so. &			5.7	55.5	43.0	12.5
+50	east of center of 16th & D.			4.5	56.7	43.50	13.2
1+00				3.5	57.7	44.01	13.7
+05.77	}			11.7	49.5	44.07	5.4
+13						44	
+50				13.1	48.1	44.51	3.6
J.P.		4.13	52.67	12.68	48.54		
2+00				7.6	45.1	45.02	0.1
			61.22				
+50				10.2	51.0	45.52	5.5
+67			62.75	1.4	61.3	45.69	15.6
+75							
3+00			61.22	0.2	61.0	46.03	15.0
+50				0.0	61.2	46.53	14.7
J.P.		1.79	62.75	0.26	60.96		
+59				1.70	61.05	46.62	14.4
+77						46.80	
4+00				13.14	49.61	47.03	2.6
+50				12.6	50.1	47.54	2.6
+76						47.80	
+81.7				8.7	54.0	47.86	6.1
+91.7				6.9	55.8	47.96	7.8
5+01.7				1.9	60.8	48.08	12.7
J.P.		2.76	64.82	0.69	62.06		
+50				1.84	62.98	48.59	14.4

55.89
3.21
59.10 H.I.
10.99
48.11 J.P.
4.25
52.36 H.I.
44.51
7.85
37
8.22

55.89

45.02
7.34

45.50
6.86

61.05
1.12
62.17 H.I.
12.56
49.61
4.88
54.49 H.I.
47.03
7.46

47.54
6.95

46.80
7.69

47.80
6.69

61.05
4.67
65.72 H.I.
12.99
52.73
45.66
7.07

49.61
5.41
55.02 H.I.
46.65
8.37
7.08
7.29

7.08

7.57
16
7.41

47.86
7.16

48.08
6.94

45.50
7.34
52.84
45.66
7.18

Jan. 14/11 — Childs Taylor Bunker

grades.

55.89
4.29 H.I.
60.18
3.5
56.7

4.7
55.5

4.5
55.7 elev 25 south M.H.
42.8
4.2 " 50 " "
56.0
42.7
13.3

129

55.89
5.08 H.I.
60.97
4.05
56.92
43.46
13.46

5.77
57.20
43.72
13.48

cont. from page 37

Jan 9/11 { Childs
Taylor
Bunker

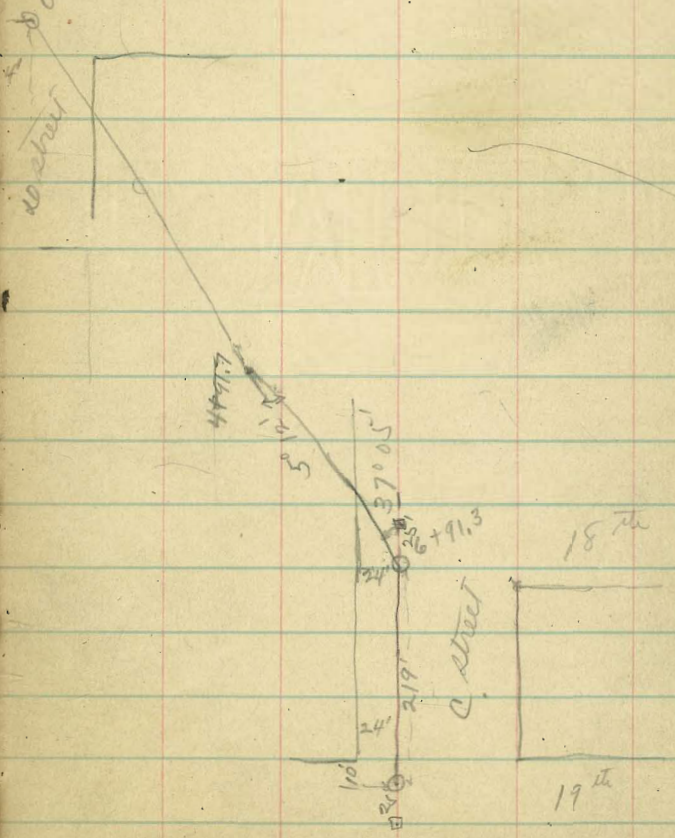
Sta.		H.I.	Rod	Ground	Grade	cut
		64.82				
6+00			6.0	58.8	✓49.09	9.7
+50			7.79	57.03	✓49.59	7.4
+91.3	M.H in C Street 16' so. of center + 209' west of 19th Street		7.8	57.0	✓50.0	7.0

57.03
3.75
60.78 H.I.
49.09
11.69 ✓

49.59
11.19 ✓

16th
0.67 % grade.

42.67 50' so.
42.83 25' so.



to 820 Page 8.

691.3

Extension Outfall from Septic Tank at La Jolla

Westcott
Lockwood 1-23-11

				BM	Grade						
0+00	3.90	103.90		100.00	100.00	Cut .00					
1+36	5.		5.85	98.05							
0+25			0.67	103.23	99.64	3.6					
0+50			1.16	102.74	99.28	3.4					
0+75			3.75	100.15	98.92	1.2					
1+00			4.50	99.40	98.57	0.8					
1+25			4.78	99.12	98.21	0.9					
1+36			5.85	98.05	98.05	00					

1.95
136
590
540
460
408
52

136
1.434
19
1434
1434
1577

1434
.3585

100
9.77
109.77 H.I.
99.64
10.13
7.76
2.37

99.28
10.49
7.87
2.62

98.92
10.85
9.79
1.06

9805
158
98.208
.358
98.566
98.924
99.282
99.640
99.998

Elev. at Opas & Albatross

N.W. cor. Walnut & 1st B.P. 250.90

1.83 252.73 250.90

N.W. House at S.E. cor. St. 3.50

87
174

100.00

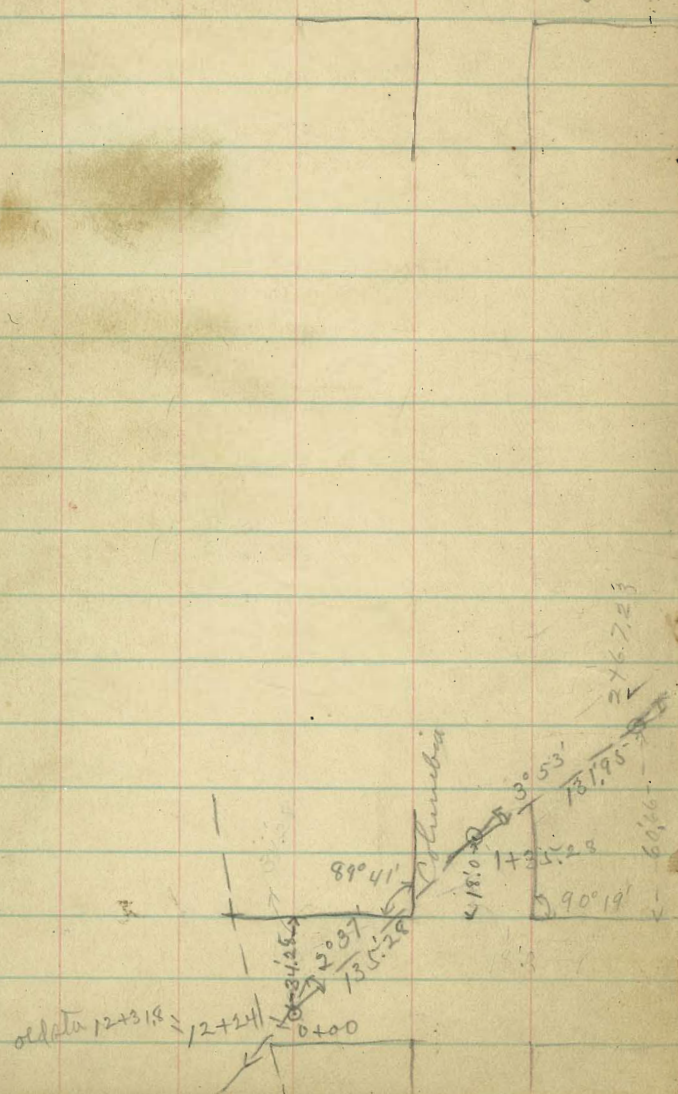
7.98 107.98

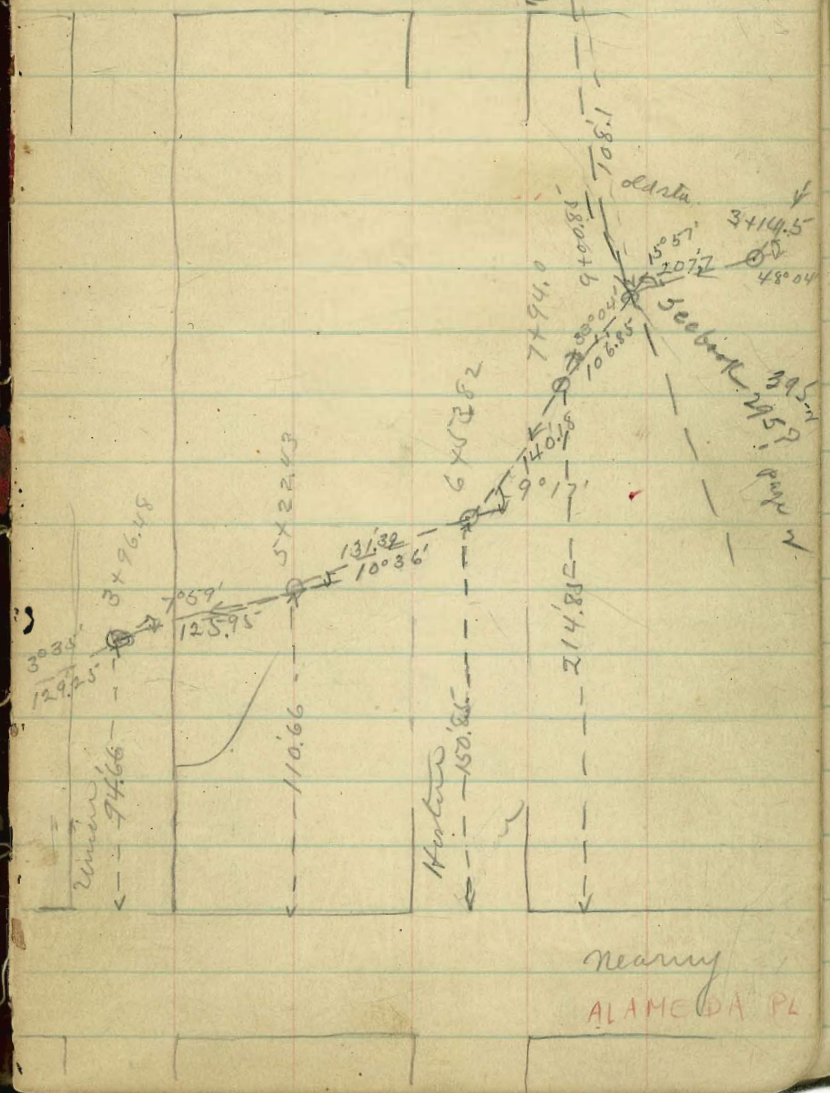
6.53 101.45

Change in Man Holes on Sewer line in Loma pass canyon.

Apr. 3/11.

Childs
Taylor
Bunker

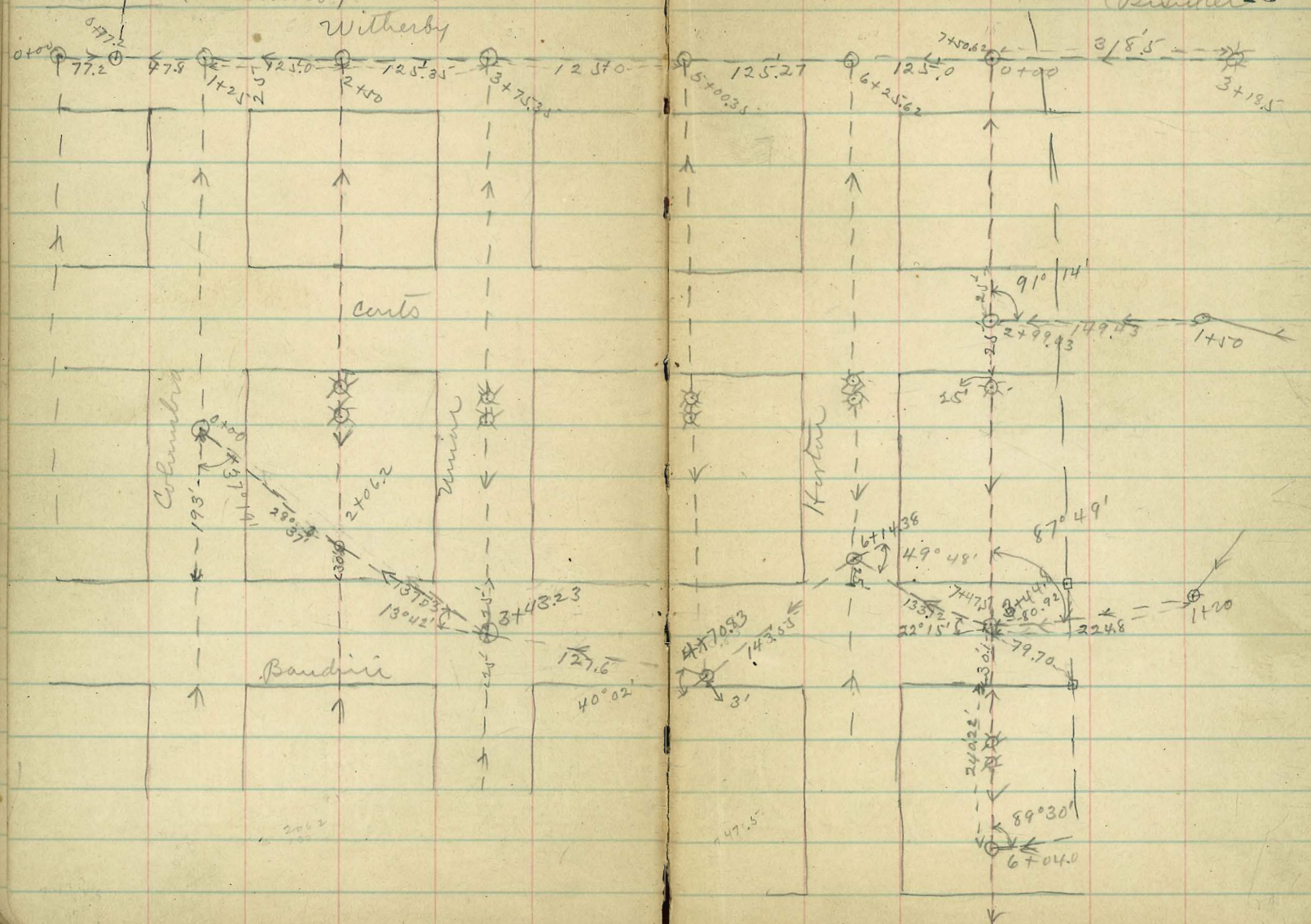


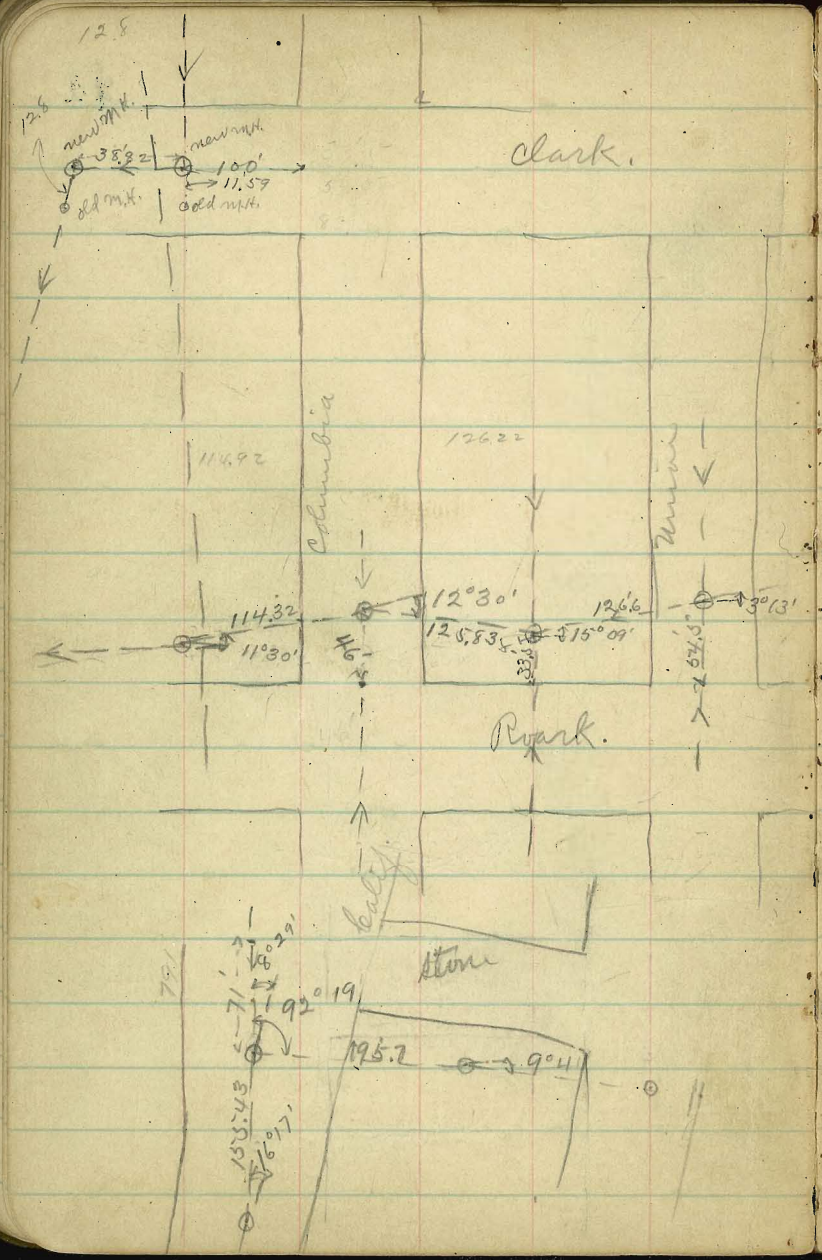


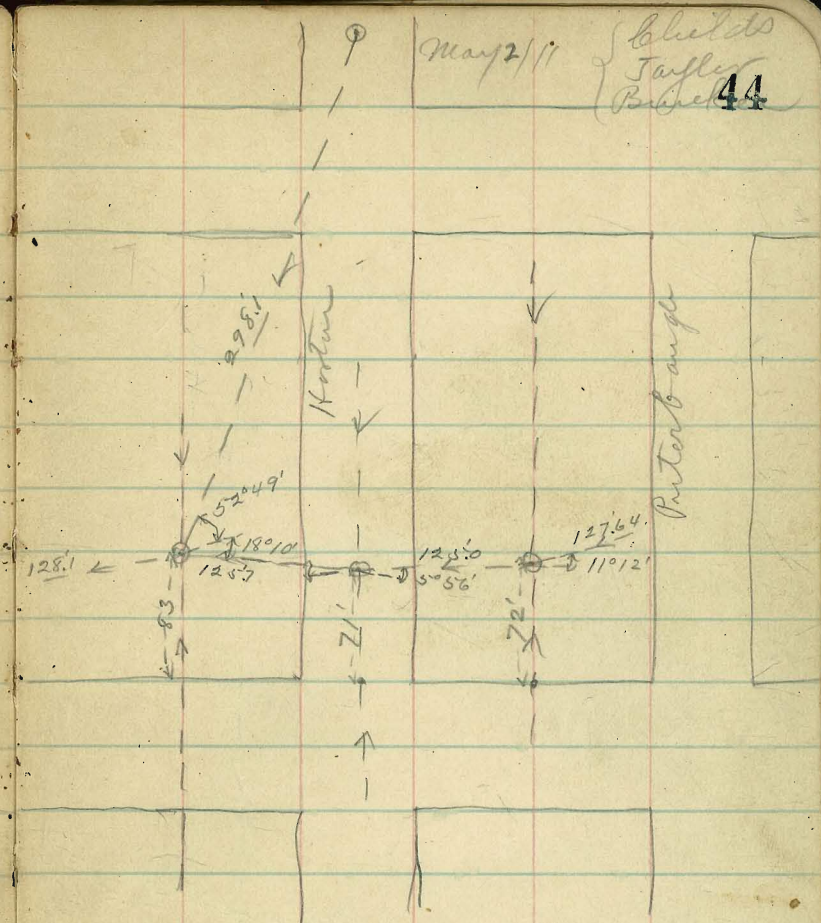
Change in Manholes in Bandini Canyon & on Witherby street.

Apr. 11/16

Childs
Taylor
Bunker

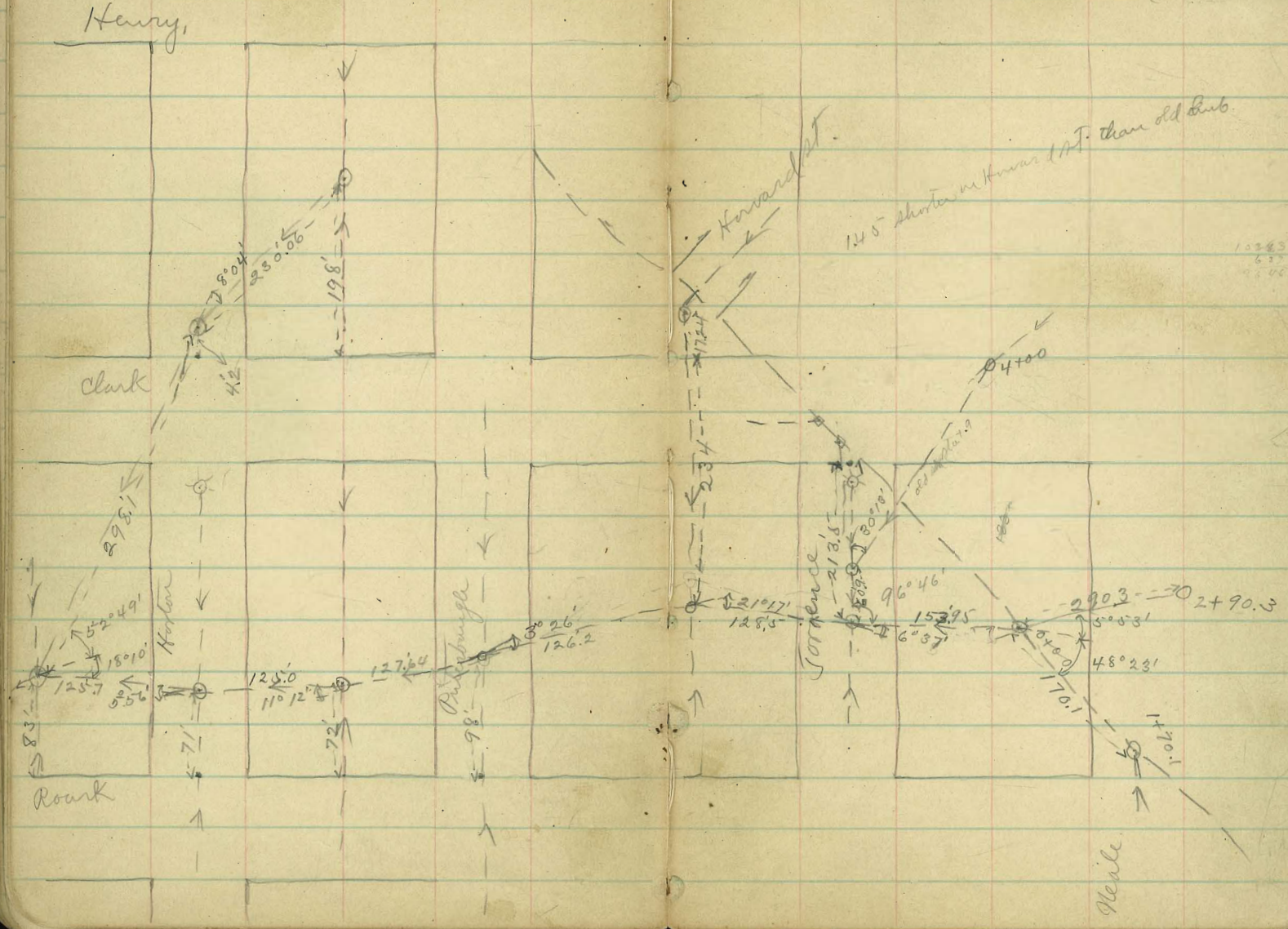






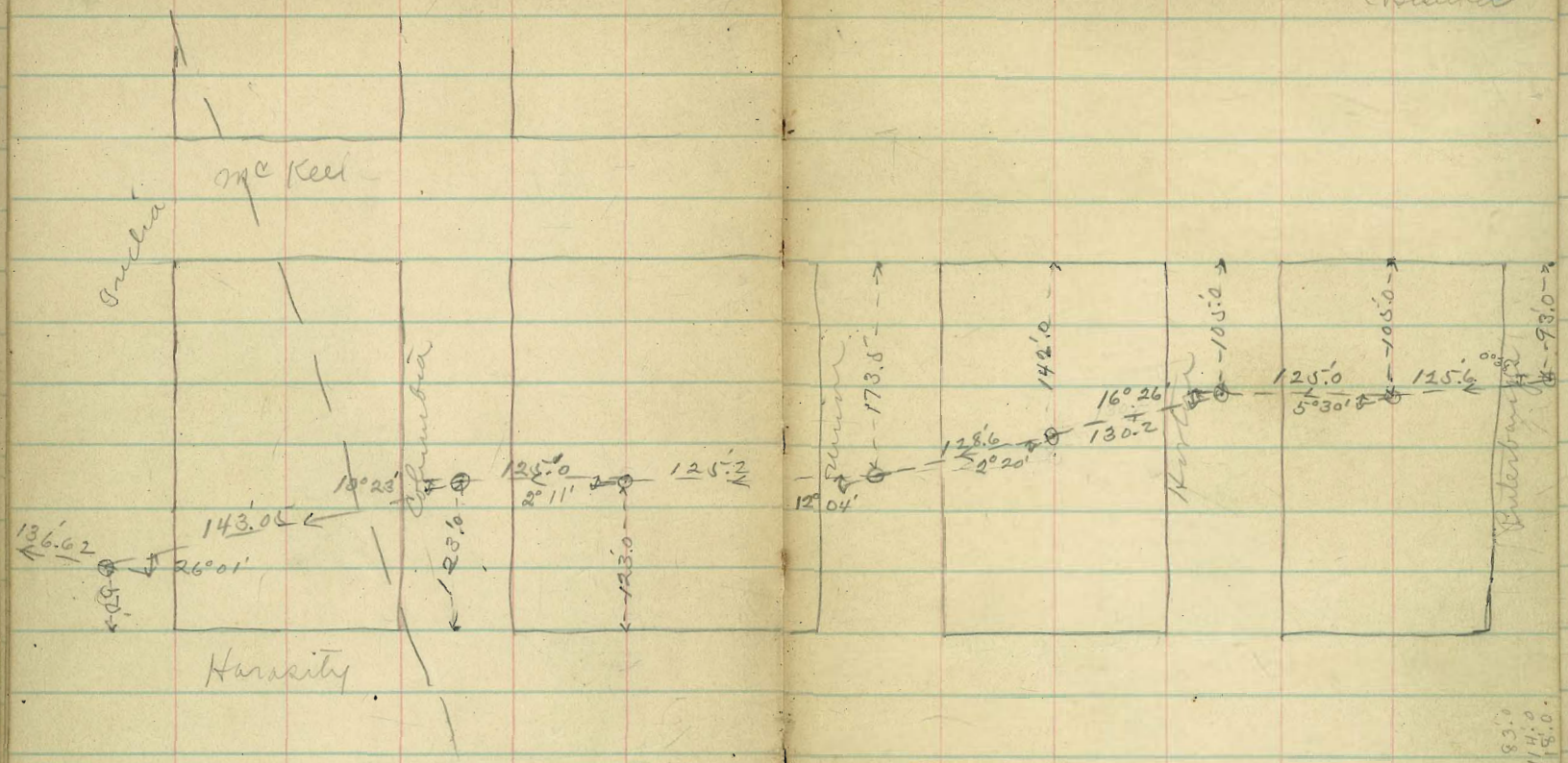
See F.B. No. 824, p. 12

May 6/11 Childs Taylor Bank



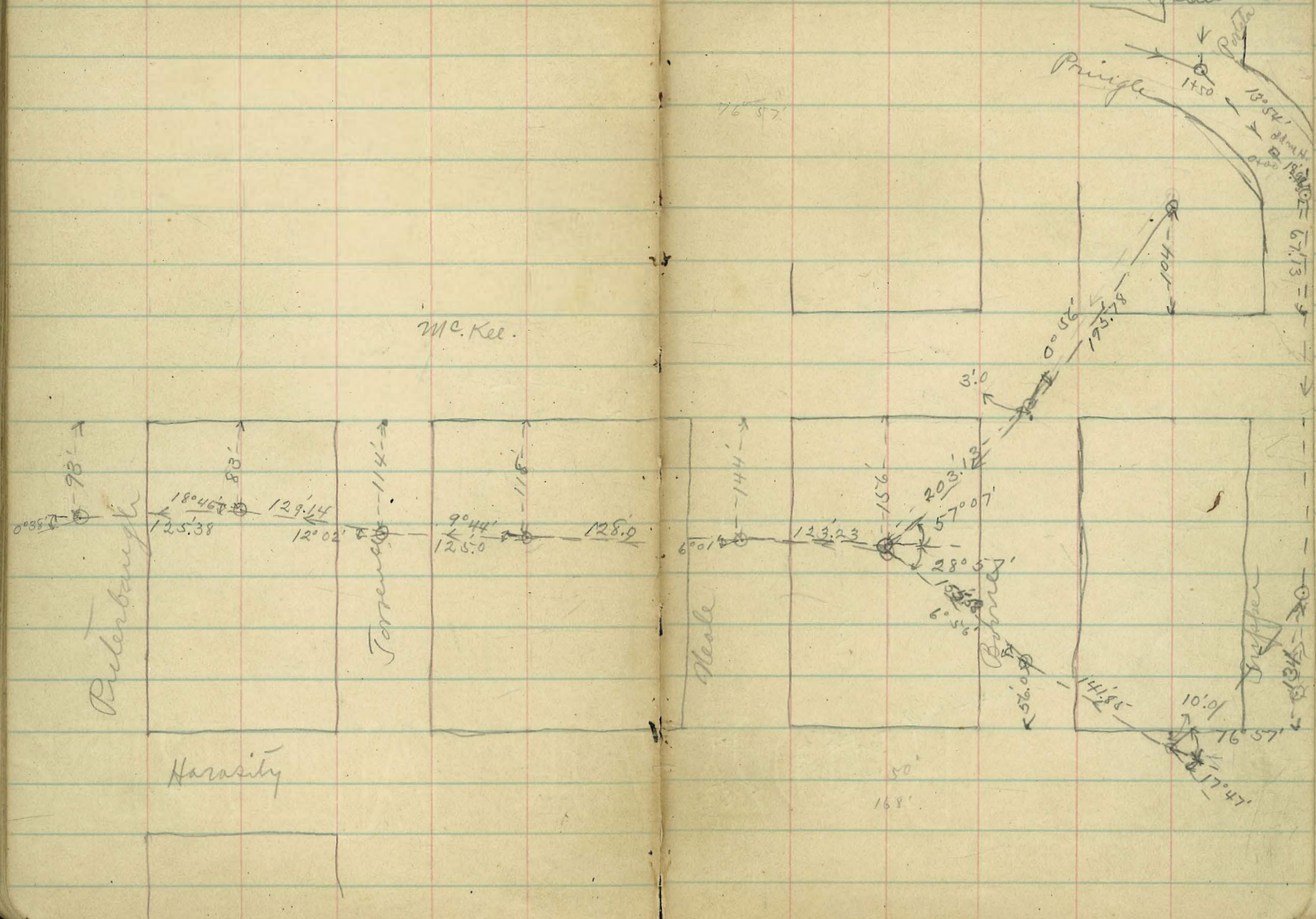
May 19/11

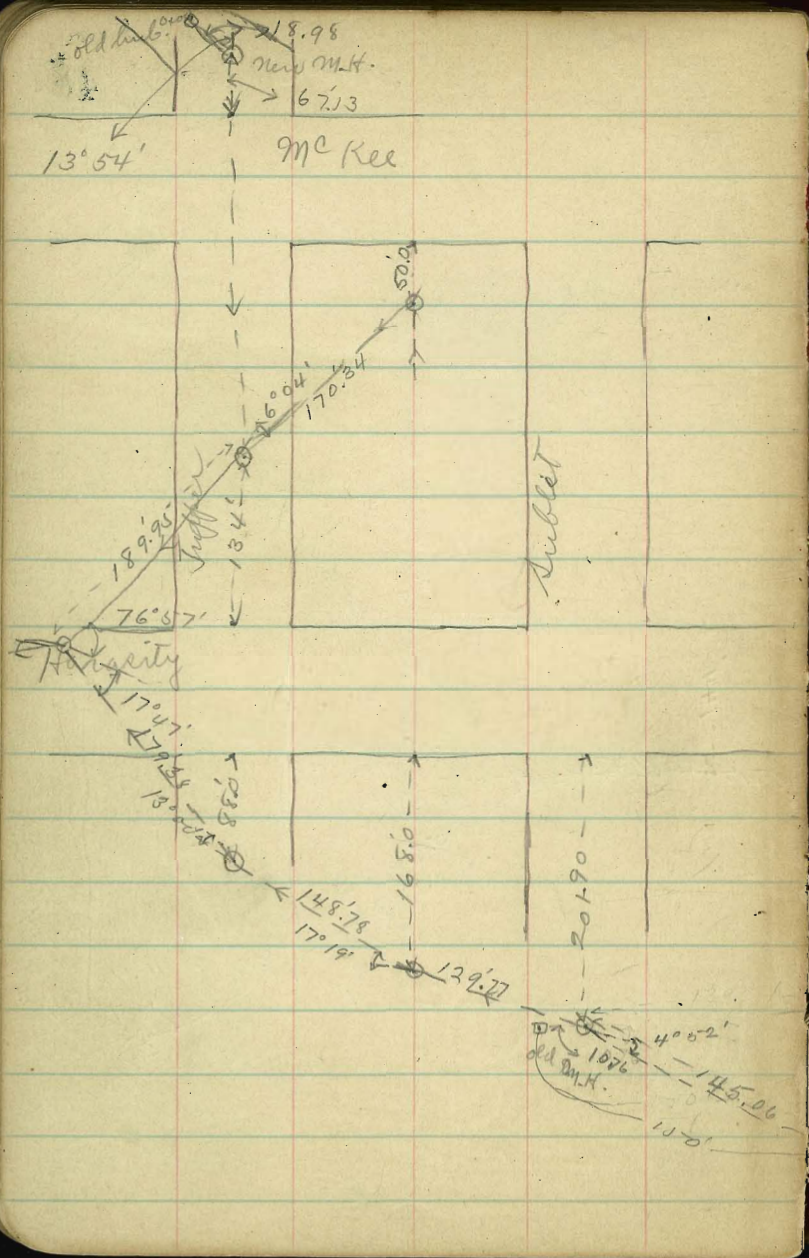
Childs
Taylor
Bisuhe



83.0
114.0
118.0

June 1/11 { Childs, Taylor, Bunker





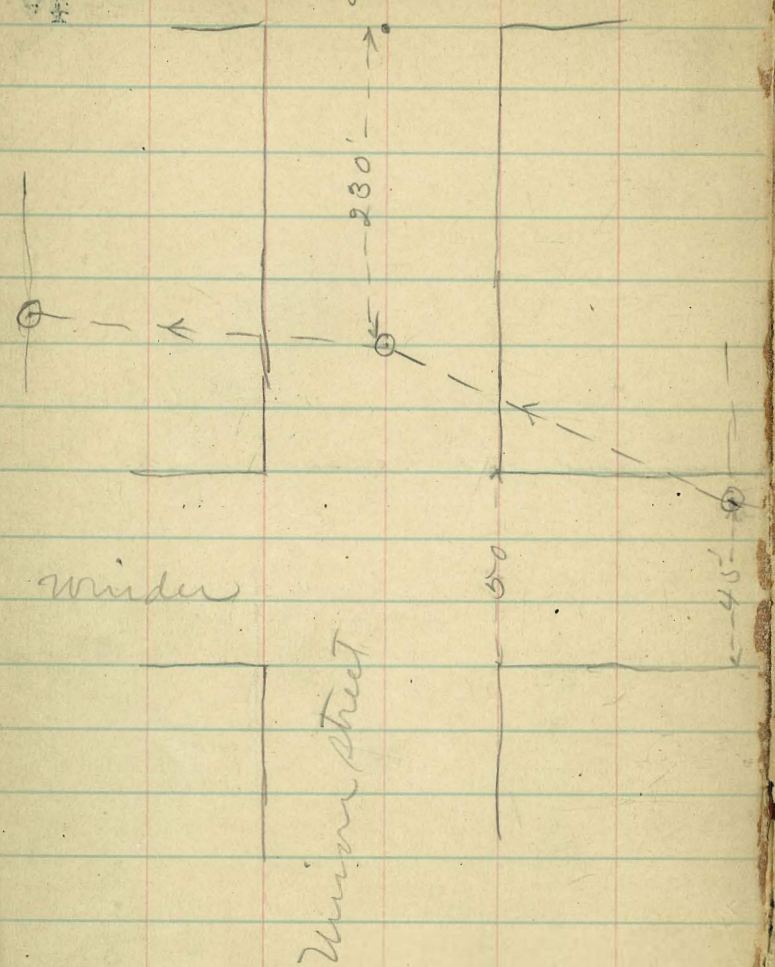
18.98

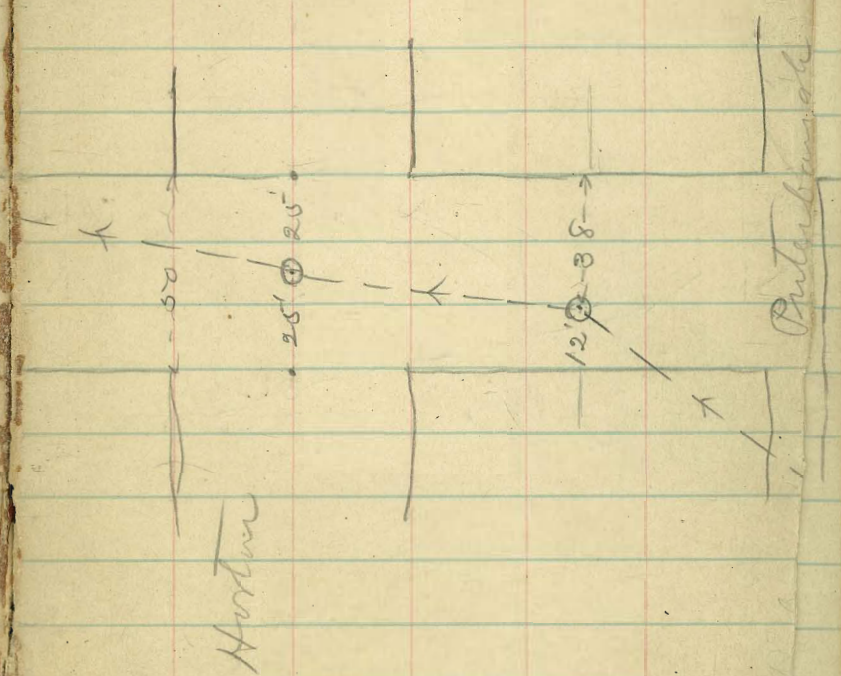
June 12/11

105.13
38
67.13

Childs
Taylor
Bunker

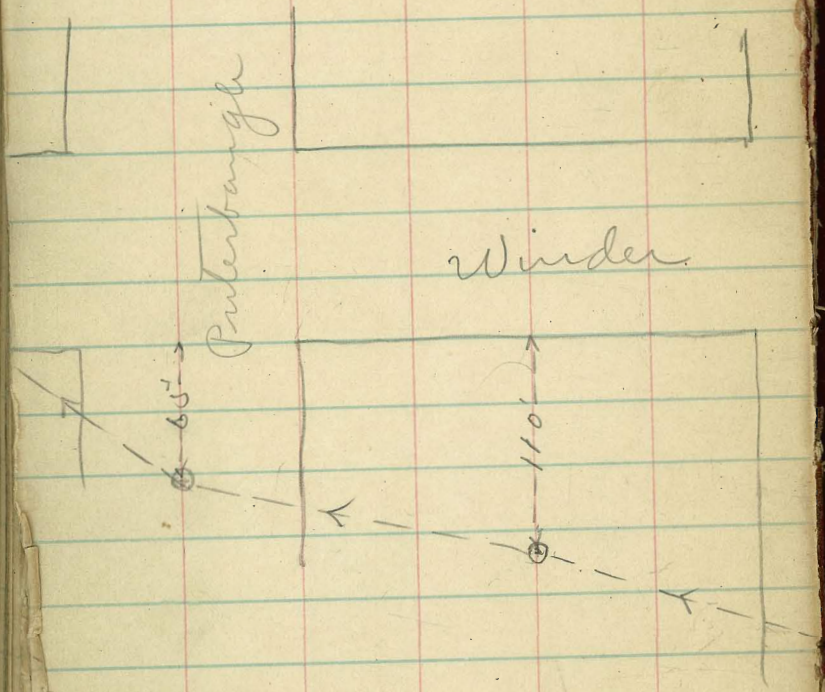
Changing sewer
Man Holes. Jan 24/13 { Childs, Taylor, Allen

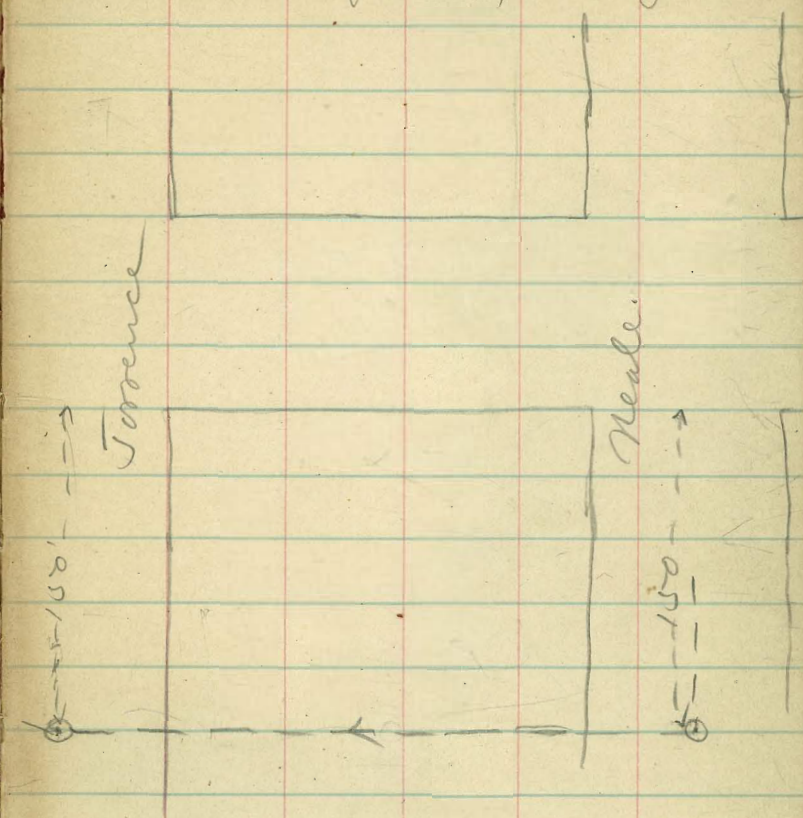




See book 829/66

Jan 24/13 { Childs, Taylor, Otten





Oct. 10/13 { Childs, Allen, Bunker

See levels next page

Main line

B.M. Mon.	Center Chalmers + State	12.91	122.56		109.65
Sta.			Hott	Rod	Elev.
0+00	center State		122.56	14.1	108.5
+50	+34.4 north Center of Chalmers.			10.0	112.6
1+00				7.0	115.6
+17.4	M.H. center Union			5.65	116.91
+50				1.9	120.7
J.P.		12.60	134.75	0.41	122.15
2+00				11.8	123.0
+45.5	M.H. lot line bet. Union + Horton			7.74	127.01
3+00				0.5	134.2
J.P.		12.61	147.36	0.00	134.75
+50				8.4	139.0
+73.75	M.H. center of Horton			7.38	139.98
4+00				5.1	142.3
+30				2.9	144.5
J.P.		12.55	159.36	0.55	146.81
+50				11.3	148.1
+99	M.H. lot line bet. Horton + Puterbaugh			6.93	152.43
5+50				1.8	157.6

Oct. 10/13 { Childs, Otter, Bunker

Sta.			Hott.	Rod	Elev.
			159.36		
5+55				2.8	156.6
J.P.		12.52	171.87	0.01	159.35
+85				3.1	168.8
6+00				0.4	171.5
J.P.		12.69	184.54	0.02	171.85
+24.47	M.H. center of Puterbaugh			8.61	175.93
+50				2.4	182.1
J.P.		13.05	197.29	0.30	184.24
7+00				1.5	183.0
J.P.		12.62	209.93	0.02	197.31
J.P.		10.64	219.88	0.69	209.24
+49.57	M.H. lot line bet. Puterbaugh + Torrence			3.17	216.71

Union Street Sewer levels.

~~12.55~~ Oct 21/13 { Childs, Otten, Bunker

Sta.		H.I.	Rod	Elev.
		165.93		
0+00	dead end about		8.1	157.8
	40' north of Benson.	153.87		
+50			1.9	152.0
		142.13		
1+00			3.0	139.1
		129.46		
+50			0.1	129.4
+85	M.H. bottom of		12.55	116.91
2+00	canyon 75 So. of Freemont		12.3	117.2
+12			6.6	122.9
T.P.	12.85	142.13	0.18	129.28
+50			9.4	132.7
T.P.	11.76	153.87	0.02	142.11
3+00			3.7	149.2
T.P.	12.42	165.93	0.36	153.51
+25			8.9	157.0
+50			4.7	161.2
+85	dead end north of Freemont		1.6	164.3

Lot, line bet. Union & Horton

Sta.			H.I.	Rod	Elev.
			176.92		
0+00	about 40' north			0.1	175.8
+50	of Benson St. dead end.			3.9	173.0
1+00				10.8	166.1
			152.95		
+50				1.3	151.6
			139.89		
2+00				12.6	127.3
+13	M.H. bottom of			12.88	127.01
J.P.		13.06	152.95	0.00	139.89
+50	carryn 47' so. of Freemont			10.4	142.5
J.P.		11.85	164.44	0.36	152.59
J.P.		13.03	176.92	0.55	163.89
3+00				13.1	163.8
+50				3.5	173.4
J.P.		7.23	182.69	1.46	175.46
4+00				3.2	179.5
+10	dead end.			2.5	180.2

Oct. 21/13 { Childs Otter Bunker

Horton Street Sewer levels.

Sta.			H.I.	Rod	Elev.
0+00	dead end about 40' no. Bacon		201.71	3.5	198.2
+50				9.1	192.6
1+00			189.98	5.8	184.2
+50			178.52	6.5	172.0
+74			165.65	2.1	163.5
2+00			153.18	5.1	148.0
+20				13.2	139.9
+41	M.H. 19' so. of Freemont St.			13.20	139.98
+50				11.3	141.9
J.P.		12.86	165.65	0.39	152.79
J.P.		13.17	178.52	0.30	165.35
3+00				3.9	174.6
J.P.		11.73	189.98	0.27	178.25
+50				2.6	187.4
J.P.		12.44	201.71	0.71	189.27
4+00				8.2	193.5
+50	dead end no. of Freemont.			6.1	195.6

Lot line bet. Horton and Peterbaugh

Oct. 22/13 { Childs Otten Brucker

Sta.			H.I.	Rod	Elev.
0+00	dead end 40' No. of Benson		222.93	0.2	222.7
+50				5.3	217.6
1+00			215.04	9.8	205.2
+50			202.90	10.9	192.0
2+00			177.50	8.3	169.2
+32	M.H. 28' So. of Freemont		164.87	12.44	152.43
+50				14.6	150.3
+61				14.7	150.2
T.P.		13.07	177.50	0.44	164.43
3+00				9.7	167.8
T.P.		12.87	190.28	0.09	177.41
T.P.		12.98	202.90	0.36	189.92
+38				7.1	195.8
+50				3.1	199.8
T.P.		12.97	215.04	0.83	202.07
4+00				6.4	208.6
+10	dead end No. of Freemont			5.4	209.6
T.P.		8.45	222.93	0.56	214.48

Tot. line bet. Peterborough +

Sta.		H.I.	Rod	Elev.
		221.78		
0+00	M.H. 30' So. of Freemont.		5.07	216.71
		234.59		
+17			8.3	226.3
+29			7.6	227.0
+50			9.2	225.4
+57			7.5	227.1
		247.30		
+89			1.5	245.8
1+00			1.2	246.1
		260.19	~~0.0~~	
+44			9.8	250.4
+50			7.3	252.9
+70	dead end. So. Freemont.		0.4	259.8

Fence.

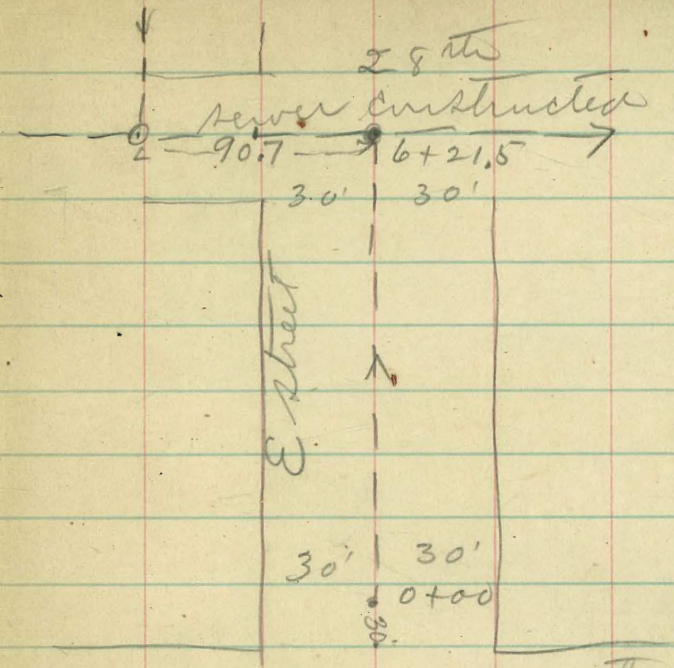
Puterbaugh Street Sewer

Sta.					
0+00	dead end No. of Freemont.		221.78	5.2	216.6
+10				7.8	214.0
+50			196.32	8.3	188.0
+85			183.76	12.3	171.5
1+00				10.5	173.3
+25	hub.			9.1	174.7
+50				2.8	181.0
2+00				6.0	177.8
+20	M.H. bottom of canyon 37' So. of Freemont.			7.83	175.93
+42				12.9	170.9
+50				8.9	174.9
J.P.		12.83	196.32	0.27	183.49
J.P.		12.93	209.24	0.01	196.31
3+00				9.4	199.8
J.P.		13.07	221.78	0.53	208.71
+25				10.6	211.2
J.P.		13.08	234.59	0.27	221.51
+44				5.8	228.8
+50				3.6	231.0
J.P.		13.12	247.30	0.41	234.18
4+00				6.8	240.5

Levels. Oct. 22/13 { Childs, Otter, Bunker

~~Sta.~~			H.I.	Rod	Elev.
4+31			247.30	4.0	243.0
J.P.		12.91	260.19	0.02	247.28
+50				12.0	248.2
+63.2	M.H. angle.			9.85	250.3
5+00	Marine View add. line.			7.7	252.5
+50				4.6	255.6
6+00	F.S.			1.4	258.8

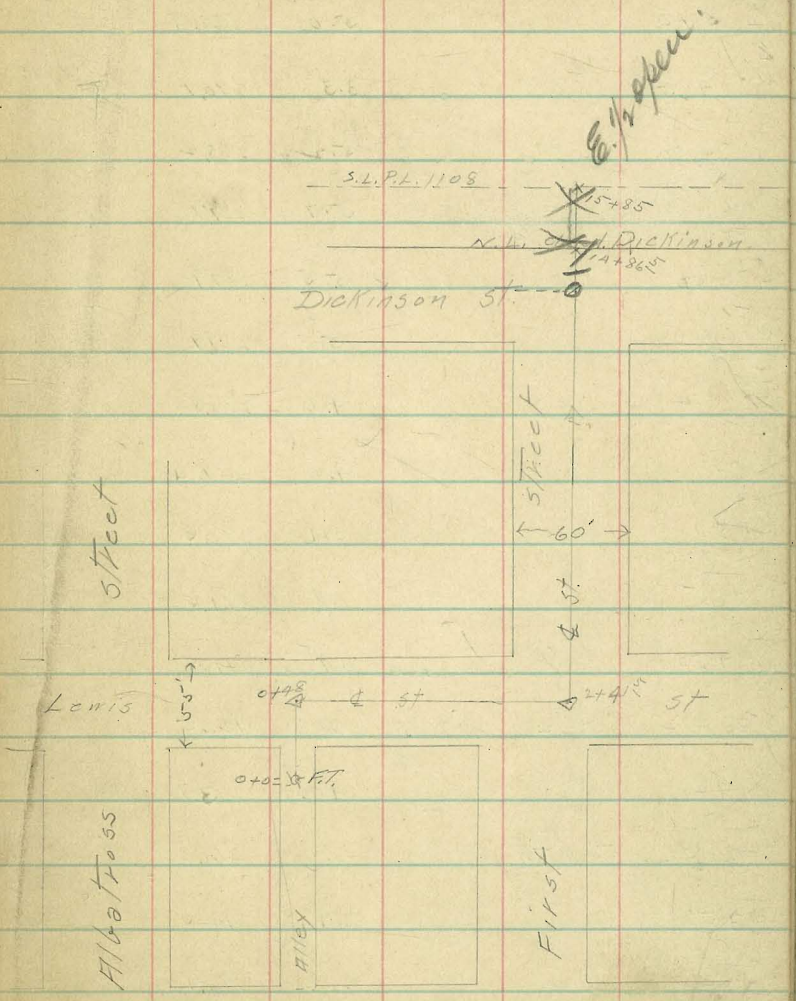
Sta.			H.I.	Rod	Eled.
J.P.		4.07	187.65		183.58
0+00	30' east of			4.7	183.0
	last line of 27th				
+50				2.5	185.2
1+00				0.8	186.8
+20	break			0.6	187.0
+50				2.3	185.3
2+00				6.5	181.1
+50				12.0	175.6
J.P.		0.17	174.80	13.02	174.63
3+00				5.4	169.4
+50				12.0	167.8
J.P.		0.11	161.87	13.04	161.76
4+00				5.5	156.4
+50				11.0	150.9
5+00				13.4	148.5
+20	break			13.3	148.6
+50				11.9	150.0
6+00				7.3	153.6
+21.5	Sewer constructed in 28th			3.6	158.3



Levels for Sewer on opp. Page

1/23/14 Dunkle Shaw Kerr

B.M. Brass plg 3rd & Lewis				291.99	
B.M.	1.36	293.35			
0+0 = top F.T.			6.7	286.7	279.7
+25			7.7	285.7	
+48 = △			7.0	286.4	
+65			7.2	286.2	
+80			5.7	287.7	
1+0			5.8	287.6	
+50			5.9	287.5	
2+0			5.8	287.6	
+41.5			5.2	288.2	
+50			5.0	288.4	
3+0			4.7	288.7	
+50			4.5	288.9	
4+0			4.3	289.1	
+50			3.9	289.5	
+65			4.1	289.3	
+80			3.2	290.2	



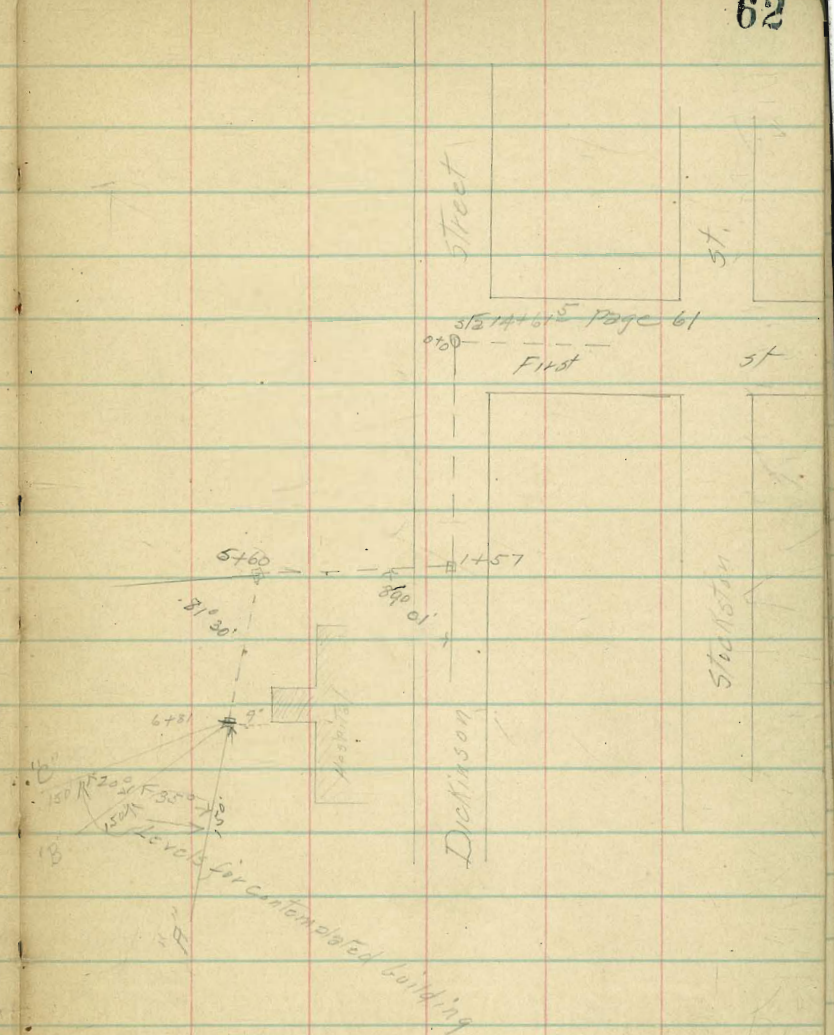
		293.35		
5+0			5.0	288.4
+25			3.3	290.1
+50			5.2	288.2
6+0			5.7	287.7
+50			5.5	287.9
7+0			5.5	287.9
+50			4.6	288.8
8+0			4.0	289.4
+20			3.1	290.3
+35			1.8	291.6
+50			1.9	291.5
T.P.	5.22	297.87	0.70	292.65
9+0			4.2	293.7
9+16 = S.L. Stockton			3.6	294.3
+35			3.9	294.0
+60			2.2	295.7
+75			3.9	294.0

		297.87		
10+0			4.0	293.9
+50			4.2	293.7
11+0			4.3	293.6
+50			7.0	290.9
+75			8.4	289.5
12+05			14.6	283.3
+25			21.8	276.1
+54			31.1	266.8
+65			26.8	271.1
+85			18.8	279.1
13+10			12.2	285.7
+50			11.3	286.6
14+0			10.6	287.3
+50			9.2	288.7
14+61.5 = ℄ Dickinson				
14+86.5 = M.L. Dickinson			7.0	290.9
15+0			6.1	291.8
+50			4.6	293.3
15+85 = S.L. P.L. 1108 1118?			4.1	293.8
T.P.	3.92	298.81	2.98	294.89
			5.6	293.2

293.2 = Elev. floor Lowest room in Basement County Hospital
430' from Sta 15+85 to where present sewer leaves building at N. side of Bldg
295' " " " " E side of building

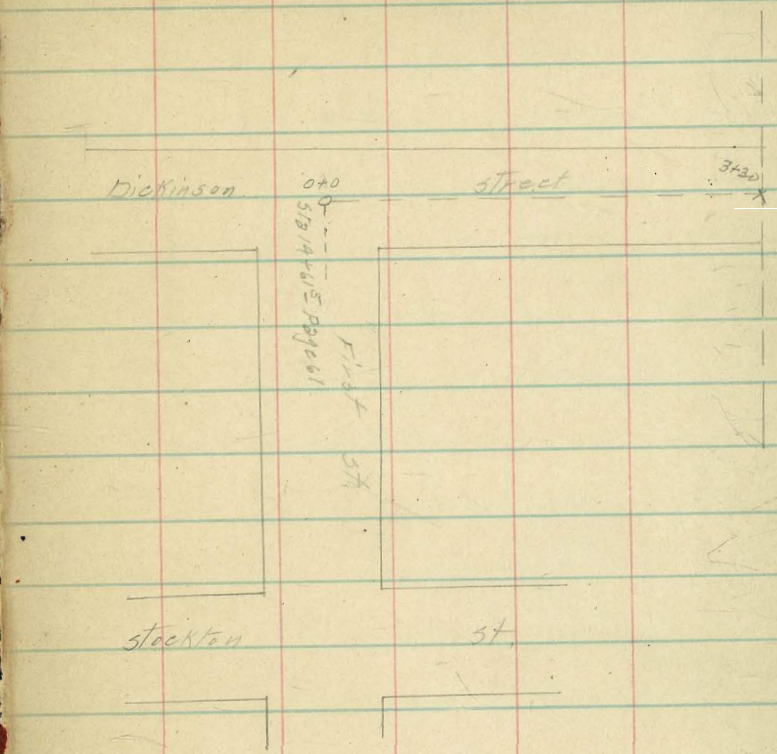
Survey & Levels for proposed Sewer County Hospital

B.M. ℄				294.89	
	0.28	295.17			
0+02 ℄ Dickinson & First St			6.2	289.0	
+35			6.0	289.2	
+50			5.2	290.0	
1+0			5.7	289.5	
+10			4.8	290.4	
+35			4.8	290.4	
1+57 89° 01' R			5.4	289.8	
2+0			3.4	291.8	
T.P.	9.03	300.53	3.67	291.50	
+50			7.1	293.4	
3+0			5.8	294.7	
+50			5.3	295.2	
4+0			4.5	296.0	
+50			4.5	296.0	
5+0			4.7	295.8	
+60 81° 30' L			5.0	295.5	
6+0			4.3	296.2	



88		300.53			
6+50			4.3	296.2	
6+81			4.20	296.33	curb elev
T.P.	4.64	300.23	4.94	295.59	
	Levels on Lines "A" "B" & "C"				
		Line "A"			
0+0 = 2/3 6+81			3.9	296.3	
+50			4.7	295.5	
1+0			5.4	294.8	
+50			7.6	292.6	
		Line "B"			
0+0			3.9	296.3	
+50			5.9	294.3	
1+0			6.4	293.8	
+50			8.0	292.2	
		Line "C"			
0+0			3.9	296.3	
+50			6.4	293.8	
1+0			7.3	292.9	
+50			9.6	290.6	

Levels for	proposed	sewer	Dickinson	St	2/26/14	Quinta Shaw Kerr
B.M.	⊻			294.89		
	0.28	295.17				
0+0 = ℄ First	2 Dickinson		6.2	289.0		
+50			5.1	290.1		
1+0			4.8	290.4		
1+50	4' deep		4.7	290.5		
2+0			5.0	290.2		
+50			5.1	290.1		
3+0			5.0	290.2		
3+30			5.0	290.2		

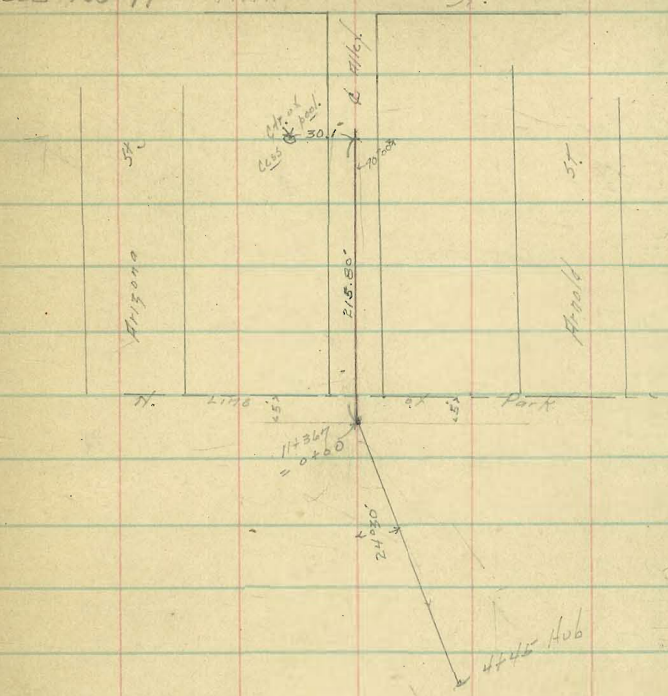


10/6/20
Gregory
Miller
Shaw

Sewer Line in Park
from Sta 11+36.7 page 13 this book
to a "tentative" Tank Site

B.M.	2.61 0.40	275.99 263.31	13.08	273.38 262.91	d #13 BP SE Myrtle
0+00 = 11+36.7 page 13			4.8	259.03	
0+34			5.8		
0+36			6.9		
0+41			6.7		
0+48			5.2		
0+50			5.2		
1+00			6.4		
1+25			7.2		
1+50			7.5		
1+63			5.5		
2+00			5.8		
2+50			7.6		
T.P.	1.41	256.96	7.80	255.51	
3+00			2.4		
3+16 = NE edge of road			3.1		
3+16 = S " " "			4.1		

Sec 466-77 Myrtle St.



3+50	4.0	
3+60	3.9	
4+00	5.7	
4+45	9.33	on hub.

over.

Cross Section of Proposed Tank Site
25696

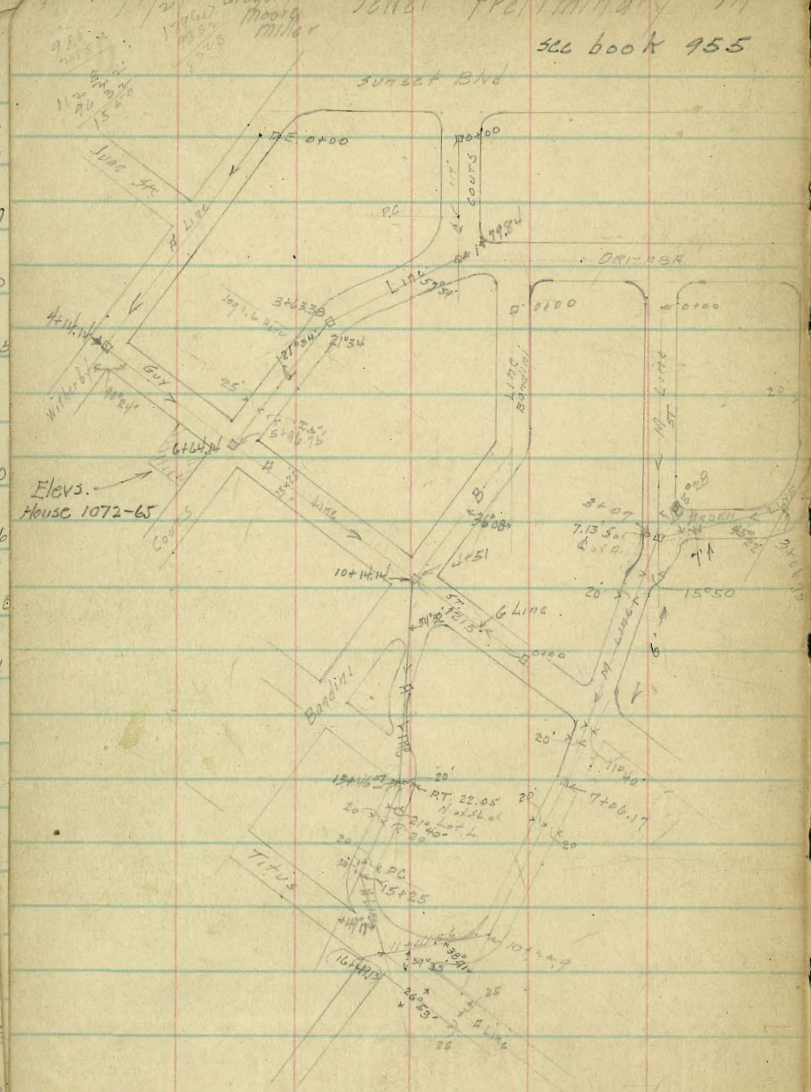
10' W. of 4+45		8.1
10' E. " 4+45		11.8
20' " " 4+45		14.3
25 " " "	center creek.	15.4
4+60 on ℄		11.6
10' W. of "		9.8
6' E " "		14.1
10' " " "		15.1
12 " " "	creek.	16.4
4+73		15.1
4' W. of "		13.9
7' " " "		11.5
10 " " "		11.0
3' E " "		15.4
4' " " "	creek	16.6
7' " " " "		16.6
10' " " "		15.2

4+85	creek.	17.0
3' W. of "		16.2
5' " " "		15.0
10' " " "		13.2
15' " " "		10.9

12/9/21 Gregory Moore Miller

Sewer Preliminary in Inspiration Hghts

see book 955



Xor construction	C 4.08	266.65		262.57	Mon Old Town Line
Prelim sewer		℄ Witherby "A" Line	℄ Guy		
0+00			1.95	264.70	on Stub
+50			3.3	263.4	
1			5.7	261.0	
+50			9.4	257.3	
2			12.8	253.9	
T.P.	0.58	254.48	12.75	253.90	
+29 = ℄ Juan			2.8	251.7	
+57			6.4	248.1	
3			9.7	244.8	
+50			12.8	241.7	
T.P.	7.20	248.98	12.70	241.78	
4			8.0	241.0	
+14.14 = M.H. ℄ Guy + Witherby			9.28	239.70	on stub
+50			6.1	242.9	
5			3.6	245.4	
+25			3.3	245.7	
+50			4.2	244.8	

		248.98			
6			5.8	243.2	605 = 4.5 lower
+50			6.6	242.4	
+64.14 = M.H. & Coots			6.62	242.36	on Stub
+80			6.6	242.4	
7			5.1	243.9	
+30			4.0	245.0	
+60			4.0	245.0	
8			5.0	244.0	
+56			8.4	240.6	
+59			10.6	238.4	
+64			10.9	238.1	
T.P.	3.22	240.11	12.09	236.89	
+73			8.2	231.9	
+96			12.5	227.6	
9			11.1	229.0	
+08.0			7.4	232.7	
+50			8.5	231.6	
+81			9.7	230.4	

		240.11			
+93			12.4	227.7	
10			10.4	229.7	
+02.0 = 10" cement pipe Δ 54°32' R.			8.6	231.5	= Flow Line
+14.14 M.H. & Bardini			3.37	236.94	on Stub
+50			4.1	236.0	
11			7.4	232.7	
+50			9.8	230.3	
+73 = 10" cement pipe under street.			13.7	226.4	Flow Line
12			10.4	229.7	
+50			9.7	230.4	
13			9.0	231.1	
+46.07 M.H. Δ 21°40' R.			9.43	230.68	on Stub
14			11.3	228.8	
T.P.	1.03	228.39	12.75	227.36	
+50			2.8	225.6	
15			7.2	221.2	
+25 M.H. Δ 49°17' L.	1.16	220.04	9.51	218.88	
+50			1.4	218.6	
16			1.3	218.7	
+15			1.4	218.6	

		220.0			
+49.13	M.H Δ	26°53'L	3.18	216.86	on stub
17			3.0	217.0	
+40			7.0	213.0	
T.P.	0.34	207.41	12.97	207.07	
+85			4.4	203.0	
18			12.1	195.3	
T.P.	0.35	194.95	12.81	194.60	
+25			12.30	182.7	
T.P.	0.65	182.78	12.82	182.13	
+50			13.2	169.6	
T.P.	0.59	170.42	12.95	169.83	
T.P.	0.37	158.27	12.52	157.90	
+75			2.9	155.4	
19			13.0	145.3	
T.P.	0.75	146.11	12.91	145.36	
+15			7.9	138.2	
T.P.	0.45	133.58	12.98	133.13	
+35	= creek		8.4	125.7	

		133.58		155.7	
+44	M.H.		8.8	124.8	
+56.8	9 center = Top of M.H.		7.20	126.38	= Sta 1+35.3 Book 892-32 Elev. = 120.00 on construction
	= Flow Line		13.25	120.33	

1148
1685
2834

12/12/21 Gregory C Line
℄ Couts from 50' S of Sunset
To Guy St

	580	274.89		26909	
0+00			2.54	272.35	on stub
+50			4.2	270.7	
1			5.6	269.3	
+50			7.5	267.4	
+79.84 MH ℄ Orizaba	Δ 57°39 R.		8.18	266.71	on stub
2			9.8	265.1	
+50			12.4	262.5	
3			12.8	262.1	
T.P.	0.72	262.74	12.87	26202	
+50			2.3	260.4	
+63.38 MH Δ 21°34' L			2.53	260.21	on stub
4			4.4	258.3	
+50			7.5	255.2	
5			11.7	251.0	
T.P.	0.68	250.63	12.79	249.95	
+50			4.4	246.2	

25063

+96.75 = on A Line 6+64.14 Page 68 8.27 242.36 on stub

12/12/21

"B Line"
℄ Bandina St.
from 50' S. of Arizaba to Gov't St

	3.71	272.80		269.09	spk Arizaba + Coutts
0+00			4.31	268.49	on stub
0+50			7.1	265.7	
1			9.9	262.9	
+50			12.7	260.1	
T.P.	0.27	260.27	12.80	260.0	
2			2.9	257.4	
+43.15	M.H. Δ 36°08' R		5.46	254.81	on stub
3			10.8	249.5	
T.P.	0.10	247.76	12.61	247.66	
+50			2.8	245.0	
4			7.5	240.3	
+30			10.20	237.6	
+51 = ℄ Gov't 10+14.12		on page 68	11.06	236.70	

12/12/21 Gregory

G Line
& Guy St from
215 E of ℄ of Bandini
to ℄ of Bandini.
247.76

0+00		2.1	245.35	on Stub
+50		2.9	244.9	
1		5.2	242.6	
+50		8.8	239.0	
+85		11.1	236.7	
2		11.1	236.7	
+15 = M.H. ℄ Bandini	10+14.34 page 68	11.06	236.70	

12/ 12/14/21 Gregory
Moers Sewer & Miller St
Miller
"M" Line
from 50' S. X Orizaba
To View Point Drive

0	7.83	276.32		268.49	0+00 on B Line
0+00			3.28	273.04	on stub
+50			6.8	269.5	
1			10.5	265.8	
T.P.	0.17	263.77	12.72	263.60	
+50			1.7	262.1	
2			5.1	258.7	
+50			8.5	255.3	
3			12.1	251.7	
+070 M.H. Δ 15°50' R	0.30	251.56	12.51	251.26	
+50			4.0	247.6	
+85 = 10" pipe			9.4	242.16	= Flow Line
4			6.5	245.1	
+50			8.0	243.6	
5			8.4	243.2	
+50			9.2	242.4	
+85 = 10" pipe			13.6	237.96	Flow Line
6			10.5	241.1	
+32 = 10" pipe			15.1	236.46	Flow Line

		251.56			
+50			12.3	239.3	
T.P.	0.39	238.91	13.04	238.52	
7			1.5	237.4	20' E 3.4' lower
+06.17 MH Δ 11°40' R			1.49	237.42	on stub
+50			2.2	236.7	
8			3.2	235.7	
+50			4.4	234.5	20' E = 3' lower
9			7.6	231.3	
+50			11.5	227.4	20' E = 6' lower
T.P.	0.53	226.69	12.75	226.16	
10			3.5	223.2	
+22.9 MH Δ 38°41 R			5.36	221.33	on stub
+50			5.9	220.8	
11			5.8	220.9	
+19			6.6	220.1	
+41.56 MH = 16+49.13 on A line			9.90	216.79	

12/14/21 Gregory Moore Miller "W" Line. ℄ of Arden Way from 50' S. of Orizaba To ℄ Miller

	0.51	260.94		260.43	
0+00	0		0.51	260.43	on stub
0+50			1.7	259.2	
1			2.8	258.1	
+50			4.2	256.7	
2			5.3	255.6	
+09.95 M.H. △ 37°58 R.			5.57	255.37	on stub
+50			6.8	254.1	
3			7.4	253.5	
3+06.75 M.H. △ 45°22' R.			7.52	253.42	on stub
+50			8.0	252.9	
4			8.5	252.4	
+50			9.0	251.9	
+93.24 M.H. = 3+07 on M Line			9.68	251.26	on stub

55.37
8.96
44.33

12/8/22 Gregory Moore Ellis Shaw

Levels from M.H. Ctr of Arbor Dr. + Randolph N + W to serve Block

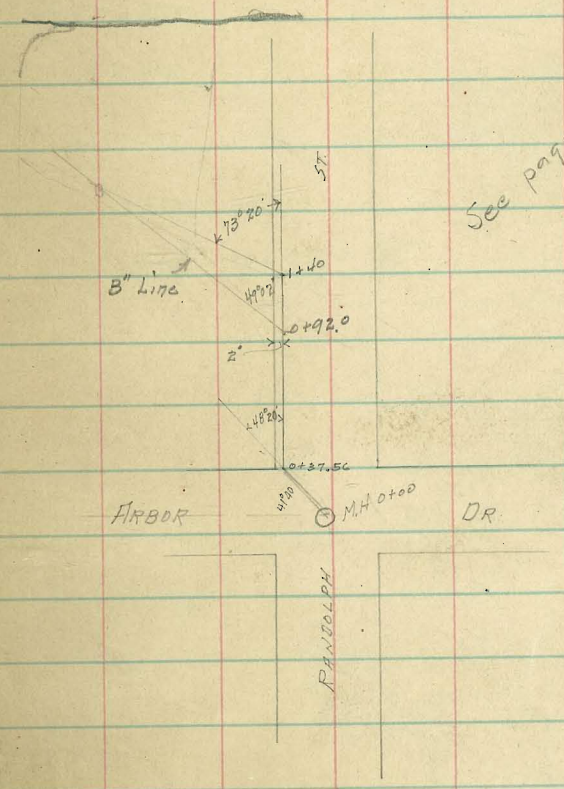
	0.70	279.71		279.01	BP. SE. Palmer & Arbor
			8.68	271.03	Bottom MH
M.H. ctr Randolph + Arbor = 0+00			3.5	276.2	Top "
0+37.56 △ 48°20' R.			3.7	276.0	
0+50'			4.2	275.5	
1			6.4	273.3	
T.P.	5.50	276.86	8.35	271.36	
+40 △ 73°20 L			5.1	271.8	
2			4.0	272.9	
+55			4.5	272.4	10' R = 1.7' lower 10' L = 0.6 higher

"B" Line

	2.40	278.6		276.2	Top M.H
0+92 △ 49°02			4.9	273.7	
1+0			3.3	275.3	
+16			3.3	275.3	porch is 5' Left.
+50			4.2	274.4	= center peach Tree
2			5.6	273.0	
+38.0			8.4	270.2	

3756
5244
9200

8960
4155
4820

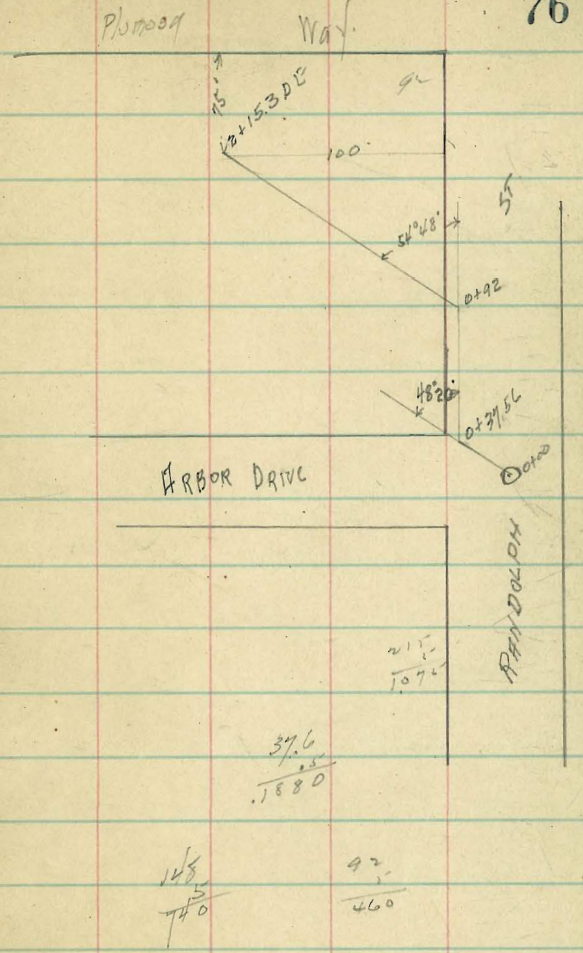


See page 76

3/12/23 Gregory, Moore, Miller, Shaw

Sewer Construction
from M.H. ctr Arbor Drive & Randolph
to ctr Blk 1 N. Flor. Hghts

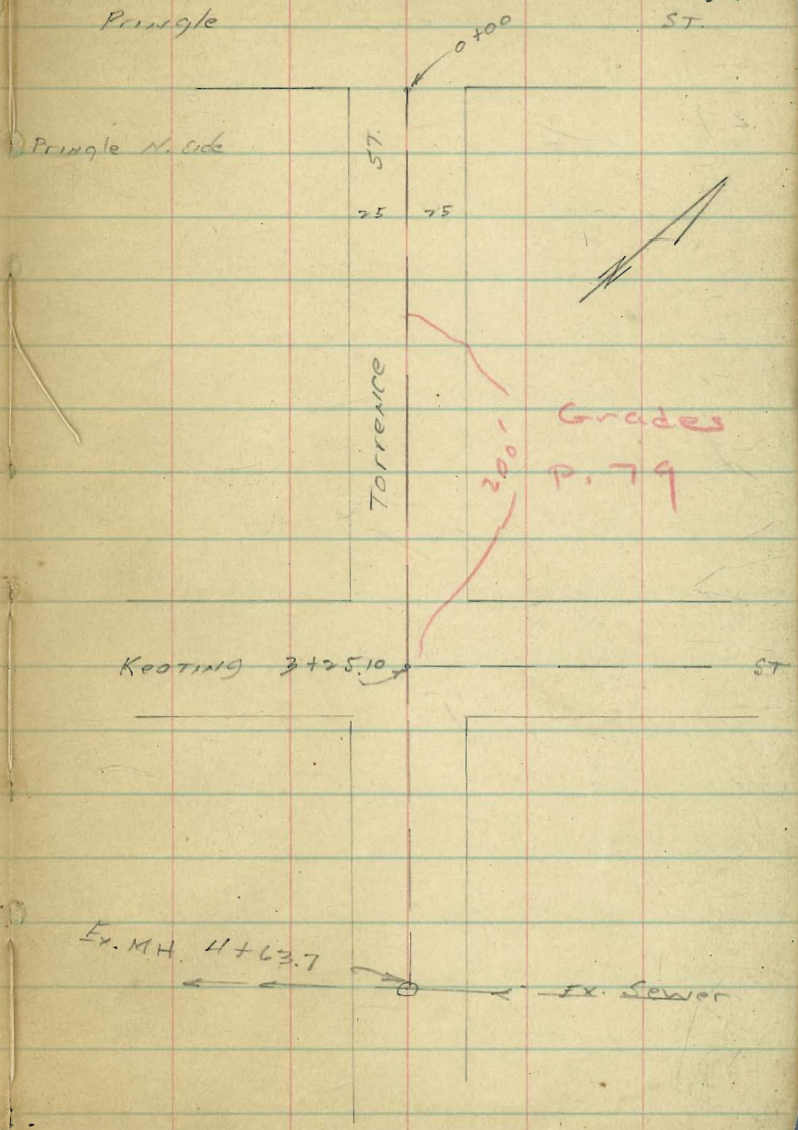
	7.45	278.48		271.03	Bottom M.H. Arbor Dr & Randolph	
0+00 = M.H.					271.03	
+37.56	△		2.44	276.04	271.32	+ 4.82
+92.0	△		3.84	274.64	271.49	+ 3.15
1+40	2.74	277.26	3.96	274.52	271.73	+ 2.79
1+80			2.85	274.41	271.93	+ 2.48
2+15.3 End.			4.36	272.90	272.11	+ 0.79



Prelim. Sewer Levels on Torrence

S.Ely from Pringle ST.

					Neale ST 60' W of
B.M. E.R. in Curb	1.26	253.86		252.60	
T.P.	0.20	241.27	12.79	241.07	
Sw Top F.H. Pringle Torrence			3.90	237.47	237.37 0.10
0+00 S/y of Pringle			5.57	235.80	Pav.
0+25			6.4	235.0	
0+50			8.6	232.8	
0+58			9.6	231.8	
T.P.	0.83	229.28	12.90	228.45	
0+68			3.9	225.4	
0+75			4.9	224.4	
1+00			12.4	216.9	
T.P.	0.51	217.25	12.54	216.74	
1+25			8.0	209.3	
T.P.	0.69	205.10	12.84	204.41	



		205.10			
1+50			3.4	201.7	
1+75			10.2	194.9	
T.P.	1.22	193.66	12.66	192.44	
2+00			5.4	188.3	
2+25			10.0	183.7	
T.P.	0.51	181.64	12.53	181.13	
2+50			2.3	179.3	
2+75			7.7	173.9	
3+00			13.0	168.6	
T.P.	1.07	169.65	13.06	168.58	Lath in of 3+00
3+06			3.1	166.6	
3+09			6.8	162.9	
3+25.10	℄ Torrence Keating		5.7	164.0	0+00
3+38.10	2x2 hub		12.2	157.5	+13
T.P.	0.63	157.51	12.77	156.88	
3+50			5.9	151.6	+24.9

		157.51			
T.P.	0.40	144.98	12.93	144.58	
3+75			2.5	142.5	0+49.9
4+00			12.3	132.7	+74.9
T.P.	0.39	132.57	12.80	132.18	
4+25			9.8	122.8	+99.9
4+50			13.0	119.6	1+24.9
4+52	in wash		16.4	116.2	+26.9
4+60			16.1	116.5	+34.9
4+63.7	Rim	M.H.	12.59	119.98	+38.6
"	F.L.		19.21	113.36	

Levels ℄ Keating, Torrence N.Ely

T.P. Lath 3+00	12.61	181.19		168.58	
25' N.E. of ℄ Torrence Keating			14.1	167.1	
50 " " "			10.8	170.4	
75 " " "			7.1	174.1	
90 " " "			7.2	174.0	= Shoulder of fill
100 " " "			4.1	177.1	Rod 17.2 15'
125			0.9	180.3	S. of 90'E Toe fill

C. Moore
Sanitary Sewer
Begg,
I-9-46.

200' Sewer grades
on Torrence St.

℄ Keating Hwly,
For Prall
Sewer Supt.

℄ Keating = 0+00 = Ex. D.E. 156.00
21.08
13.18
C 7.90

0+50 = Break ← ℄ ground
177.08
3.18
173.90
173.9 = P.77

163.00
14.08
2.58
C 11.50

175.37
14.41
7.11
C 7.30

+50 187.73
14.29
7.7
C 7.52

214.99
5.79
209.2 = ℄ ground
209.3 = P.77

200.10
14.89
5.13
C 9.76

indexed
C.S.K.

Sin Top F.H.	1.15	238.62		237.47	Pringle Torrence
check Pavement 0+00		P.77	2.83	235.79	235.80
T.P.	0.90	226.69	12.83	225.79	
T.P.	1.35	214.99	13.05	213.64	
T.P.	0.29	202.42	12.86	202.13	
T.P.	0.18	189.78	12.82	189.60	
T.P.	0.20	177.08	12.90	176.88	

Installation completed 5-26-46

Note - This line was constructed by Prall but he did not follow the cuts as staked, but used a shallower trench.
We have no record of his grade.
GPH. 9-30-46

III

7700.65
6709.2
991.45
1777
273.75

#400

III

300.53
3.9
296.6

46.87 Sulicer ju
& Ind

5.16