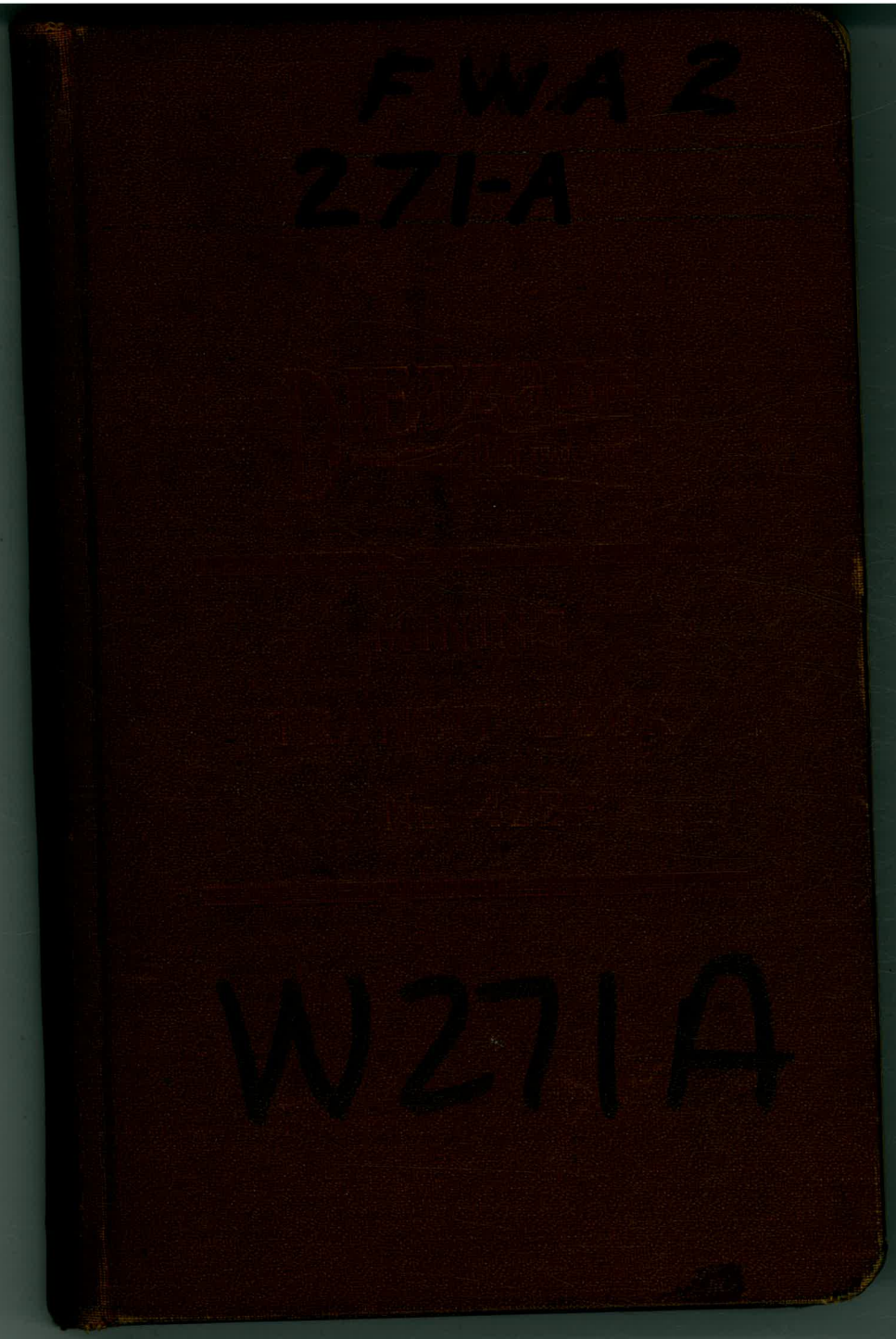
FWA 2
271-A
W271A

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and SURVEYING INSTRUMENTS
Chicago New York San Francisco New Orleans Pittsburg Toronto

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1.

For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36 0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be 30.6+(20—16)÷2 or 2 ft. added to 30.6 =32.6. For slopes of 1 on 1½ see inside of back cover.

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633

256.78
433
761.11

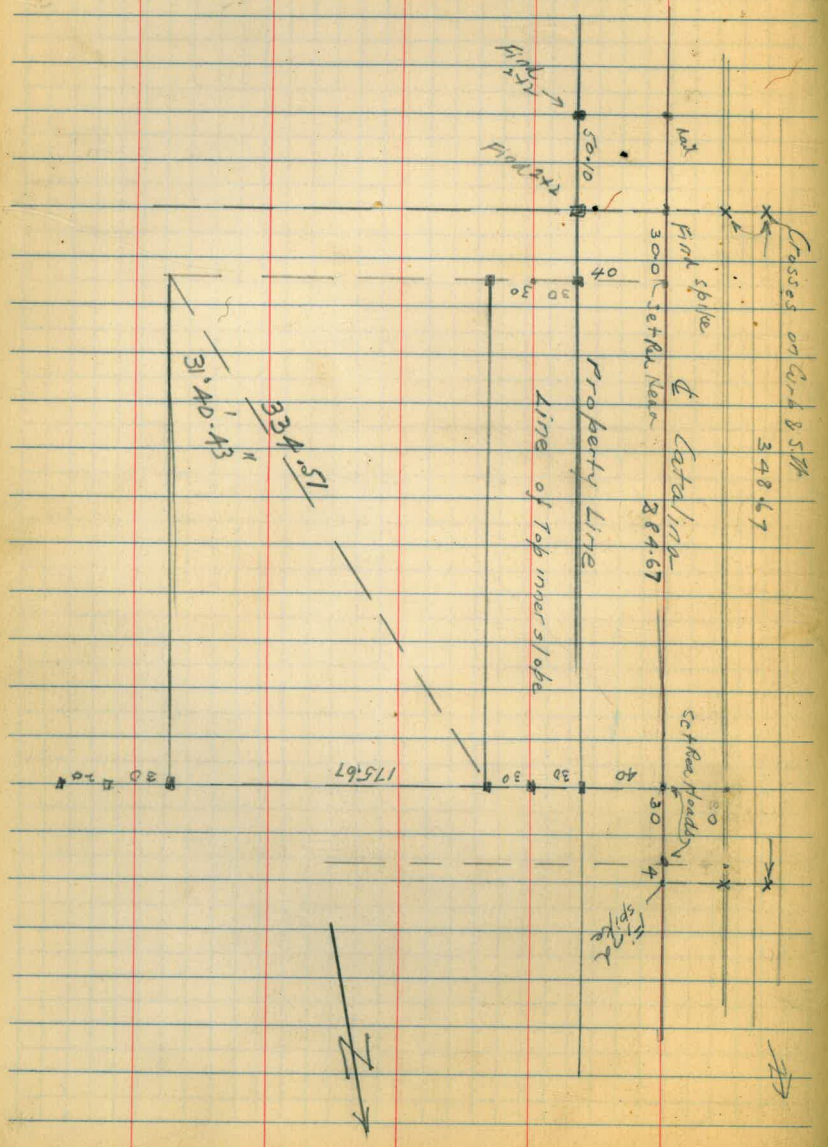
248.99
467
253.66

MICROFILMED
JAN 11 1965

2 30 May 1942

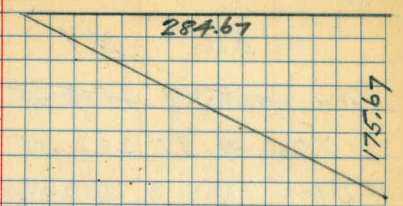
Unit No 2.

Pt Loma Res. - 10,000,000 Gal.



Ross Banks - Bostonia - Jack Shrade, Stonal

Wilcox
Sutliff
Abate
Reed



175.67	2.244680
~~28~~	
284.67	2.454335
31°41	9.790345

	2.2446976
	2.4543417
31°40'43"	9.7903559
	393
	166

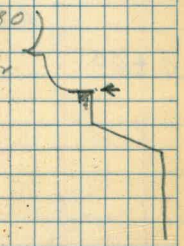
	2.4543417
	9.9299342
334.51	25244075

	BS	H.I.	F.S	Rod	Elev
BM	9.48	259.65			250.17
T.P.	4.81	262.65	1.81		257.84
BM				3.505	259.15
BM				2.00	260.65

Spikes in Curb S.W. Cor. Catalina & Varona

Nail on E side Pole S.D.G.&E.Co. # 1080

Point on N.W. Cor. Concrete Pediment N.W. Cor. Catalina & Santa Barbara

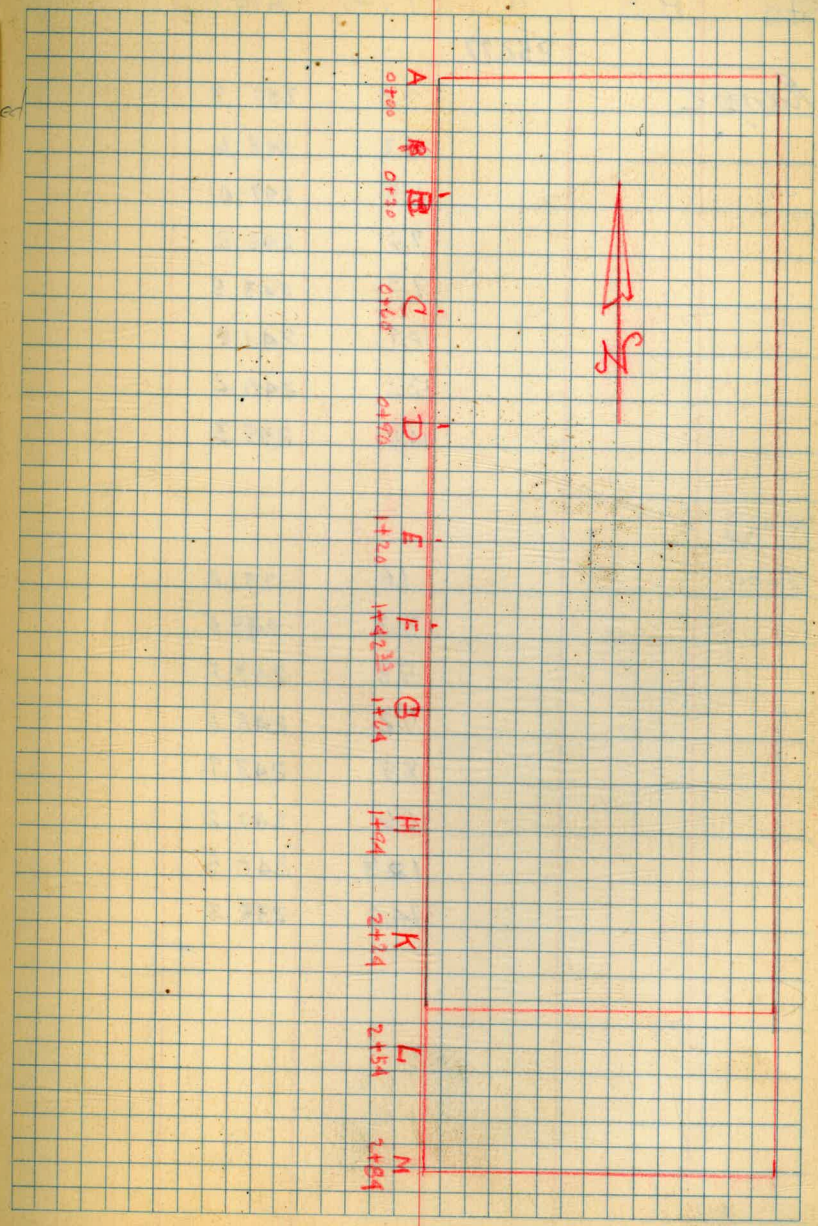


Range A June 9th

point Loma Resevoir

Sta	B.S	T	F.S.	Rod	Grids
					BM 250.17
	11.18	261,35			
T.P.			12,74		B.M Established 248,61
	4.16	252,77		248.61	
0+00			2,6	250 2	
			4,6	248 2	
			6,6	246 .2	
			8,4	244 .4	
			10.2	242 .6	
			11.7	241 .1	
			13,2	239 6	
			14,9	237.9	
Range B					
sta					
0+00			2.5	250 .3	
+25			4,3	248 .5	
+50			6,0	246 .8	
+75			7.5	245.3	
1+00			9.5	243.3	
+25			11.0	241.8	
1+50			12,8	240.0	
1+75 67			14,7	238.1	

17 2
1.7
149



Range C

Sta	B S	H I	F S	Elev
		252.77		
Range C			2.0	250.8
			4.2	248.6
			5.8	247.0
			7.6	245.2
			9.3	243.5
			10.9	241.9
			12.6	240.2
			14.5	238.3
R-D				
0+00			1.6	251.2
			3.3	249.5
			5.3	247.5
			7.2	245.6
			8.9	243.9
			10.6	242.2
			12.3	240.5
			14.0	238.8

Range
E

Sta	B.S.	I	F.S.	Elev.
0+00		252.77	1.2	251.6
			3.1	249.7
			5.1	247.6
			6.9	245.9
			8.7	244.1
			10.3	242.5
			12.0	240.8
			13.7	239.1
R-F				
Sta				
0+00			1.0	251.8
			2.8	250.0
			4.5	248.3
			6.6	246.2
			8.3	244.5
			10.1	242.7
			12.0	240.8
			14.0	238.8

TR-G

Sta	B.S	Δ	F S	
S		252.77		
0+00			1.0	251.8
			2.7	250.1
			4.5	248.3
			6.5	246.3
			8.1	244.7
			9.9	242.9
			11.7	241.1
			13.8	239.0
TR-H				
0+00			0.8	252.0
			2.6	250.2
			4.3	248.5
			6.0	246.8
			7.7	245.1
			9.2	243.6
			10.8	242.0
			12.4	240.4

TR-K

Sta	B.S.	I	F.S.	
		252.77		
0+00			0.6	252.2
			2.4	250.4
			4.0	248.8
			5.6	247.2
			7.2	245.6
			8.6	244.2
			10.2	242.6
			11.7	241.1

TR-L

0+00			0.7	252.1
			2.3	250.5
			3.8	249.0
			5.3	247.5
			6.8	246.0
			8.2	244.6
			9.6	243.2
			11.2	241.6

Range
777

Sta	B.S.	I	F.S.	
		252.77		
			0.8	252.0
			1.9	250.9
			3.5	249.3
			5.0	247.8
			6.5	246.3
			7.8	245.0
			9.2	243.6
			11.3	241.5

Range (M) — Elevs of Stakes

Sta	B.S.	Δ	F.S.	Elev.	
	2.46	257.07		248.61	
0+00					
+25			0.20	250.87	
+50			1.71		
+75			3.34		
1+00			4.83		
+25			6.09		
+50			7.49		
1+75.67			9.50		
T.P.	4.35	255.22		250.87 = Sta 0+25	
			3.05	252.17 = Sta 0+00	

Range-M
offset
slope

Sta	B.S.	Δ	F.S.	Elev

Range-A

Sta	B.S.	Δ	F.S.	Elev

Range A
offset slope

Sta	B.S.	I	F.S.	Elev

West Side

Ranges

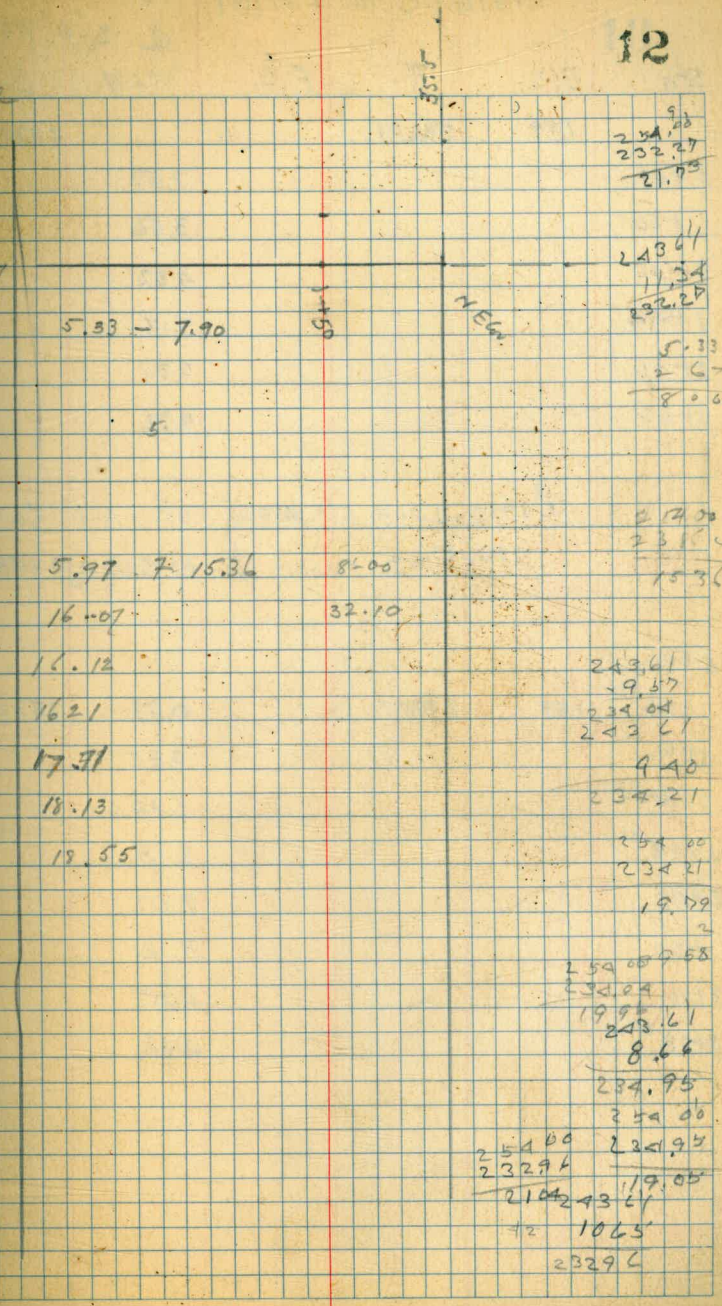
	B.S.	I	F.S.	E/E.V
A	6.60	255.21		248.61
B				
A = 0+00			5.03	250.18
B =			5.05	250.16
C			4.48	250.73
D			4.17	
E			3.73	
F			3.45	
G			3.40	
H			3.16	
K			3.01	
L			3.03	
M				

North Line of TOG

Sta	B.S.	⊼	F.S.	Rod	Elev
	10.46	260.63			250.17
	1.62	249.50	12.75		247.88
N 0+50	on line			4.63	
1+00	"			7.66	241.84
1+50				10.50	239.00
cor 67 N 1+75				11.28	238.22
(1+00)	1.77	243.61			241.84
1+50	Inner			4.97	238.64
"	Outer			5.68	237.93
"	Toe 32.10			5.73	237.88
	" 42.10			5.82	237.79
N.E Cor 1				7.32	236.29
	Outer 16'			7.74	235.87
2				8.16	235.45

Grade

233.67			
233.67	5.33 – 7.90		
233.67	5.97 – 15.36	8.00	
254.0	16.07	32.10	
	16.12		
	16.21		
	17.71		
	18.13		
	18.55		



254.00
232.27
21.73

243.61
11.34
232.27

5.33
2.67
8.00

254.00
238.64
15.36

243.61
9.57
234.04
243.61
9.40
234.21

254.00
234.21
19.79

254.00
234.04
19.96

243.61
8.66
234.95

254.00
234.95
19.05

254.00
232.96
21.04

243.61
10.65
232.96

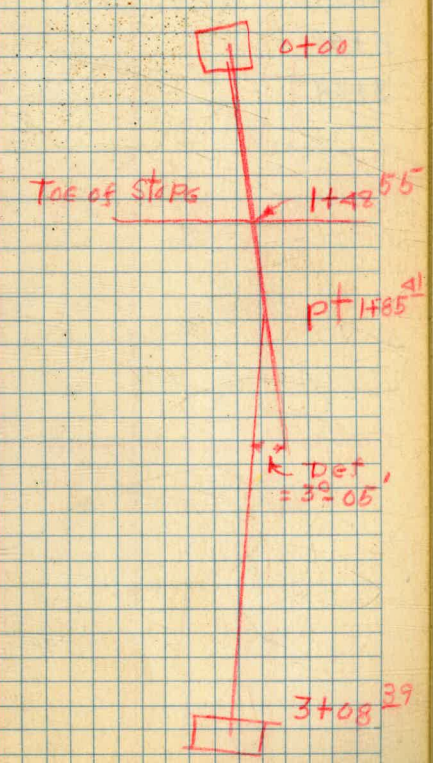
Line-C = Inlet 16" Pipe
℄ 3-0" West-N-E

Sta	B.S.	π	F.S.	Rod	Elev
	1.59	238.81			237.22
0+00				2.57	
+50				3.56	
1+00				4.52	
1+44				7.13	
1+50				7.36	
1+60				7.72	

Line-D = 11-West of N-E Cor-
starting from ℄ of sump 148.33 S

0+00					
+50 22	1.59	238.81		0.77	237.22
1+00 22				0.82	
1+48 55				1.34	
1+85 41				1.78	
2+00				2.02	
+50				3.12	
3+00				4.07	
3+08 39				4.62	

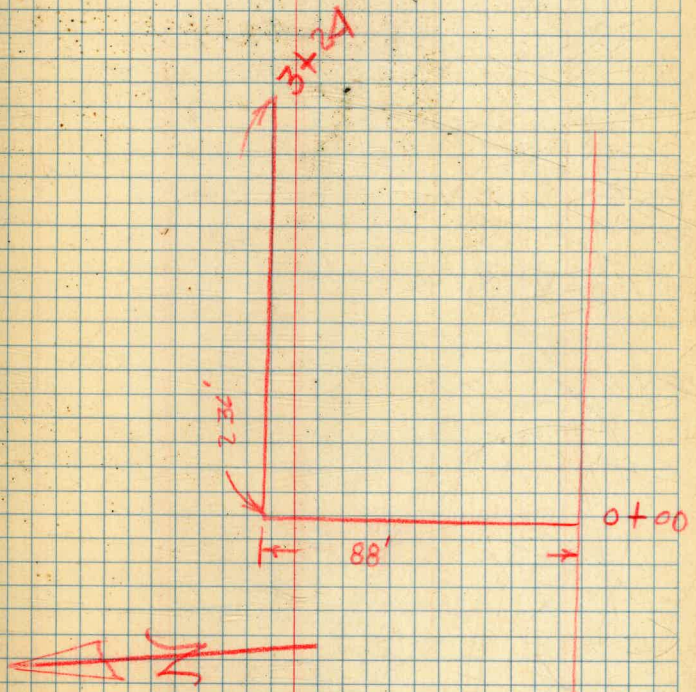
dut	flow-line
= pt	



Overflow Line 7' offset

Sta	B.S.	I	F.S.	Rod	Stake Elev
	6.29	248.13			Sta 1+00 on line 241.84
0+00				2.64	
0+50				2.88	
0+88				2.10	
1+00				3.79	
+50				7.32	
2+00				11.21	
	1.59	238.81			N.E. Hub 237.22 =
2+50				5.70	
3+00				8.61	
3+24				8.39	

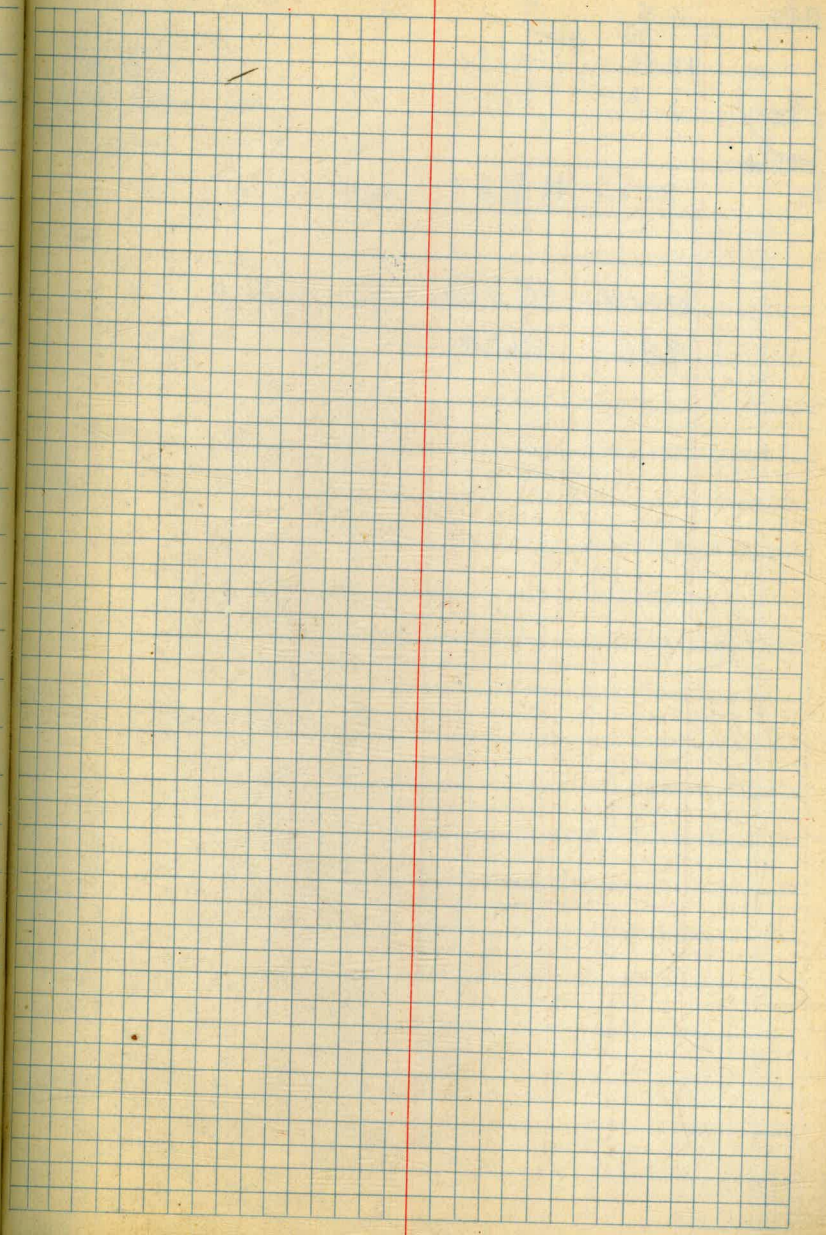
Sta 0+00 = Toe of Reservoir



Tile Drain Pipe Profile and Cuts } stakes
{Call Pipe - A

sta	B.S.	H	F.S.	rod	Elev
	4.63	241.85			= Stake 77,55. 237.22 Cut
0+00				4.30	237.55
TP	4.77	241.99			237.22
0+43				7.85	
+83				10.35	231.64
+86				10.43	231.56

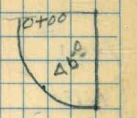
Cut	Fill	flowline
7.55		230.0
4.91		229.23
3.14		228.80
5.12		226.44 = Sub grade of Box North side



Levels for Top of inside cut

sta	B.S	I	F.S.	Rod	Elev
	13.06	254.90			241.84
nr c to o				6.44	248.46
45° Δ				5.04	249.86
				3.59	250.31
	below = 50' offsets for Road & toe of 2:1 slope				
	9.96	260.13			250.17

Cut	Fill	From Toe Dist. out	
14.79	5.54	22.39	= N & S Line
16.19	4.14	24.26	
16.64	3.69	26.47	= E & W-Line



14 June 42

Levels & Cuts Inlet Line

	B.S	H.I	F.S	Rod		Trench Grade	Cuts
1+00	0.24	242.08			241.84	Sap	12
(1+50)				3.07	239.01		
3+20				4.82	237.26	234.50	2.76
2+80				5.67	236.41	234.50	1.91
2+50				5.93	236.15	233.30	2.85
2+00				8.13	233.95	231.30	2.65
1+50				10.87	231.21	229.30	1.91

Outlet Pipe

N.E. Cor.	5.83	244.05			238.22		
4+72 Ens				7.68	236.37	231.00	5.37
" ①				6.97	237.08		6.08
+50 ①				4.69	239.36	230.94	8.42
4+00				4.73	240.32	230.80	9.52
3+50				5.42	238.63	230.65	7.98
3+00				5.92	238.13	230.50	7.63
+90.27				6.02	238.03	230.34	7.69
2+50				6.73	237.32	229.70	7.62
2+00				7.64	236.41	228.90	7.51
1+50				9.55	234.50	228.10	6.40
1+00						227.30	
0+50						226.50	
0+25						226.14	

Sap 12

272) 436 (1.605
272
1640
1632
800

4.
3

172) 500 (.291
344
1560

0262
7
.1834

436
272
1.605

32
16
492
32
810

3.01
1.22

142.33

14 June 1942

Lines from Drain Box

Sta	B.S	H.I	B.S	F.S	Elev
Bm	.153	239.75			238.22
4 Pipes ℄				389	235.86
" Ⓣ				1 22	238.53
0+43				461	235.14
0+81 Ent 4 Drain Ⓣ				710	232.65
" ℄ Box Ⓣ				718	232.57
Box Cen				783	231.92
℄ Valve Box				798	231.77
16" Drain Line 0+0					
" 0+81 Ⓣ				791	231.84
" ℄					
0+00 Ⓣ				268	237.07
" ℄				365	236.10

p.12

230.00	5.86
"	8.53
229.28	5.89
228.50	4.15
227.0	-5.57
227.0	-4.92
227.0	-4.77
227.75	4.09
228.00	9.07
228.00	8.10

Outlet Line

Overflow pipe & Box

June-14-1942

sta	B.S.	⊼	F.S.	Rod	Elev	Grade	Cut	
(1+00)	8.81	250.61			241.84	see p 12		
0+00				4.91	245.70	242.80	2.9	flow Line
"					"	242.3	3.4	Bottom Box
"					"	241.3	4.4	Subgrade Box
0+50				4.34	246.27	242.0	4.27	
0+63				4.54	246.07	240.95	5.12	
	Jun	26-1942 - Whiles						
	1.35	258.13			256.78 BM	Valve flange on water meter		
T.P.			12.36		245.77			
"	2.52	248.29			245.77 = sta 1+50			
0+63				6.12	242.17	241.90	0.27	
1+00				5.57	242.72	238.13	4.59	
1+50				9.46	238.83	234.27	4.56	
T.P.	1.26	240.09			238.83			
2+00				5.18	234.91	230.40	4.51	
2+50				7.27	232.82	227.81	5.01	
2+88				8.46	231.63	226.00	5.63	

sta 4+00 = 230.4

7.73
13
2319
773
10049 11.60 = 7.73
1.50

242.00
230.40
11.60

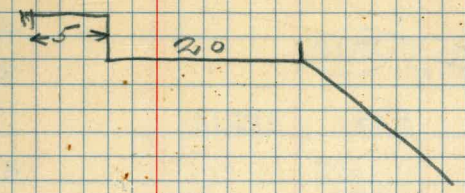
Cuts on West Line 5' & 25' offsets

Stn	B.S	H.I	F.S	Rod	Elev
Brn	4.58	263.73			259.15 ✓
0+0				5.39	258.34
0+30				5.13	258.60
0+60				5.61	258.12
0+90				5.29	258.44
1+20				4.83	258.90
1+42 33				4.95	258.78
1+64 67				5.00	258.73
1+94 67				5.91	257.82
2+24 67				6.90	256.83
2+54 67				7.20	256.53
2+84 67				7.23	256.50
T.P	12.91				250.82 = stake
		256.83	6.01		

Cut

R3	
254.0	4.34
254.0	4.60
254.0	4.12
"	4.44
	4.90
	4.78
	4.73
	3.82
	2.83
	2.53
	2.50

West on sta 0+90 on toe



263.73 4.95 258.78
263.73 5.61 258.12
263.73 5.13 258.60
263.73 4.83 258.90

West Line of Reservoir
= Line-A-on-Print

Sta	B.S.	π	F.S.	Rod	Elev = 0+90-A Line
T.P.	6.01				250.82
0+00				4.76	253.07
correction				2.12	254.71
	5.28	256.10			250.82
0+00				4.02	252.08
out 27.61					
0+30				5.59	250.51

sub.G.	Cut	Fill G.	Fill	Dist. out
233.67				
	21.04			(31.56) not used
	18.41			27.61
			1.82	2.39
233.52	16.99			25.48
			3.49	

South line of Reservoir
sta 0+00 to 1+75.67

Sta	B.S	H.I	F.S.	Rod	Elev
	2.90	254.98			sta-0+00 B.M. 252.08 =
0+00				2.90	252.08
Dividing line = D.L.				3.17	251.81
50' & 60' out				3.17	251.81
0+50				6.81	248.17
D.L.				6.21	248.77
50'-out				6.21	248.77
outside toe of slope				6.21	248.77
1+00				9.31	245.67
50' out				9.05	245.93
outside Toe				9.82	245.16
1+50				11.80	243.18
				11.12	243.86
				10.40	244.58
TP	3.06	246.24			= sta 1+50 243.18
1+75.67 = D.L. also				4.49	241.75
50' out				3.30	242.94
outside Toe				3.26	242.98
Correction from new HI 250.41				7.40	~~243.01~~

Toe of inside cut Dividing Line & toe of outside slope

24

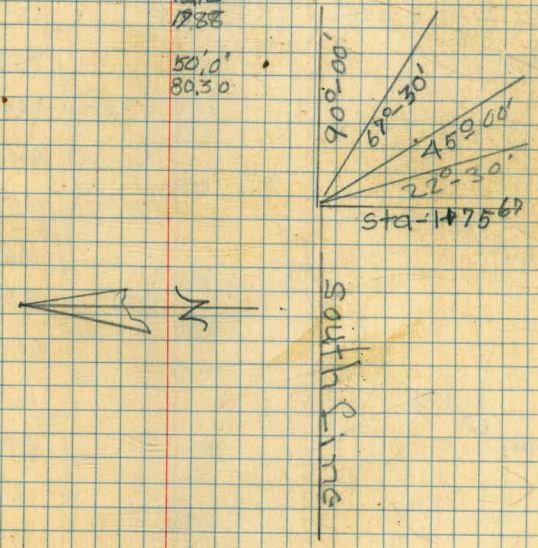
cut	Fill	Dist. out
18.41		27.61
	1.92	2.39
	2.19	50.0
	2.19	60.0
14.50		21.75
	5.83	82.5
	5.23	50'0'
		60.56 = Toe of Slope
12.00		18.00
	8.33	12.00 check this?
	8.07	50.0
	8.84	69.68 T.S.
9.51	10.82	14.26
	10.14	50'0
		71.72 = T.S.
8.08		12.12
	12.25	17.88
	11.06	50'0
		72.12 = T.S.
	19.99	71.98 = T.S.

CTC - 22°-30' Intervals
of S.E Corner

Sta	B.S.	H	F.S.	Rod	Elev
	4.40	246.15			= Sta A75 69 241.75
22°-30' = D.L.				4.40	241.75
50'-out				4.14	242.01
Outside Toe.				4.14	242.01
45°-00' = D.L.				4.40	241.75
50' out				4.99	241.16
outside toe				5.00	241.15
67°-30' = D.L.				4.40	241.75
50-out				5.62	240.53
outside Toe				6.24	239.91
90°00' = sta 0+00-on, East Line				4.40	241.75
50-out				6.16	239.99
Outside Toe				7.30	238.85

from south line left

Cut	Fill	out
8.08	11.99	12.12 50.0 73.98 = T.S.
8.08	11.99 12.84 12.85	12.12 50.0 75.68 = T.S.
8.08	11.99 11.98 13.47 14.09	12.12 12.98 50.0 78.18 = T.S.
8.08	11.99 14.01 15.15	12.12 12.88 50.0' 80.30



East Side Line of Reservoir

Sta	B.S.	I	F.S.	Rod	Elev
	4.40	246.15			241.75
0+30				5.13	241.02
				6.24	239.91
				7.58	238.57
0+60				5.88	240.27
				7.03	239.12
				8.09	238.06
0+90				6.44	239.71
			Cor.	7.00	239.15
				7.89	238.26
				7.90	238.25
1+20				7.47	238.68
			Cor.	7.60	238.55
				9.41	236.74
				10.95	235.20
1+64.67				7.60	238.65
			Cor.	8.37	237.78
				10.90	235.25
				12.10	234.05
1+94.67				8.29	237.86
				9.54	236.61
				11.74	234.41
2+24.67				8.23	237.92
				9.55	236.60
				11.10	235.05

Cut	Fill	Out	Sub Grade
			233.52
7.50	12.98	11.25	
	14.09	50.0'	
	15.43	89.86 = T.S.	
			233.37
6.90		10.35	
	13.73	19.65	
	14.88	50.0'	
	15.94	81.88 = T.S.	
			233.22
6.49			
5.93	14.85	8.84	
	15.74	50.0	
	15.75	81.48	
			1+20 = 233.07
5.61			
5.48	15.45	8.22	
	17.26	50.0	
	18.80	90.0 = T.S.	
			233.07
5.58			
4.71	16.23	7.06	
	18.75	50.0'	
	19.95	89.90	
			233.22
4.64	16.14	6.96	
	17.39	50.0	
	19.59	89.18	
4.55	16.08	6.82	233.37
		50.0	
	17.40	27.70	
	18.95	88.90	

Cont from page - 26

Sta	B.S	H	FS	Rod	Elev
2+54 [67]		246.15		8.31	237.84
				9.75	236.40
				10.66	235.49
2+84 [67]	Check		7.96		
2+24 [67]	10.06	247.98			237.92 = B.M
2+54 [67]		247.98	10.14 ←	9.77 Check →	238.21
2+84 [67]				9.79	238.19
			Correction	11.24	236.74
T.P				11.75	236.23
	4.70	242.89			238.19
				10.87	232.02
22°-30' = to Left				7.83	235.06
				9.72	233.17
45°-00'				5.68	237.41
				7.82	235.04
				9.40	233.49
67°-30'				7.55	235.34
				8.20	234.69
90°-00' = Sta 1+75 [67] m-Line				5.58	
				6.92	235.97
				7.90	234.99

Cut	Fill	Out	Grade
		6.48	233.52
4.32	16.16		
		50.00'	
	17.60		
		87.02 = T.S.	
	18.57		
4.52			
		4.90	
3.27	17.06	25.10	
		50.00	
	17.77		
	21.98	93.96 = T.S.	
	18.94	50.00	
	20.83	91.66 = T.S.	
3.74	16.59	5.61	
	18.96	50.00	
	20.51	91.02	
	18.66	50.00'	
	19.31	88.62	
3.24		5.61	
	18.03	50.00	
	19.01	88.02	

North side toe of inside slope
Dividing line & Toe of outside slope

Sta	B.S.	Λ	-F.S.	Rod	Elev
T.P.		242.89	1.46 = sta 1+00 on n-line		241.43
	8.95	250.38			2
0+00				0.25	250.13
				2.10	248.38
0+50				6.17	244.21
				5.60	244.78
				5.79	244.59
				6.15	244.23
1+00				8.95	241.43
				8.95	241.43
				9.26	241.12
				9.26	241.12
1+50				11.43	238.95
				11.80	238.58
				12.20	238.18
				12.50	237.88

Cut	Fill	Out
16.46		
	5.62	50.0" 61.24 = T.S. check ?
10.54		
11.11	9.22	16.66
10	10.92	50.00
	9.87	69.54 = T.S.
7.76		
7.76	12.57	11.64
	12.88	50.0'
	12.88	75.76 = T.S.
5.28		
4.91	15.42	7.36
	15.82	50.0
	16.12	82.24 = T.S.

254.00
237.88
16.12

82
254.00
237.88
16.12

254.00
241.12
12.88

4.91
2.45
7.36

52
37.88
16.12
82.24

Shoulder of East side of 20'-Road = 30' out from west Ring toe

Sta	B.S.	I	F.S.	Rod	Elev
	3.94	263.09			Polo #080 259.15
0+00				8.59	254.50
+30				8.54	254.55
+60				8.92	254.17
+90				8.94	254.15
1+20				9.06	254.03
1+42 33				9.21	253.88
1+64 67				9.35	253.74
1+94 67				9.69	253.40
2+24 67				9.74	253.35
2+54 67				9.60	253.49
2+84 65				9.56	253.53

= T.C. for shoulder

29

Cut	Fill	Cut	Grade
20.83		0.50	233.67
21.03		0.56	233.52
20.80		0.17	233.37
20.93		0.15	233.22
20.96		0.03	233.07
20.92	0.22		232.96
19.67	0.26		233.07
20.15	0.60		233.22
19.98	0.65		233.39
19.79	0.51		233.52
19.86	0.47		233.67

West Line Toe Elevs & Cuts.

Sta	B.S.	H.I.	F.S.	Rod	Elev.
	4.68	258.85			254.17
0+00					
0+30				8.35	250.50
+60				8.18	250.67
+90				8.03	250.82
1+20				8.60	250.25
1+42 33				8.83	250.02
1+64 47				8.72	250.13
1+94 47				8.85	250.00
2+24 47				9.50	249.35
2+54 47				9.52	249.33
2+84 47				8.74	250.11

Grade	Cut	Fill
233.52	16.98	
233.37	17.30	
233.22	17.60	
233.07	17.18	
232.96	17.06	
233.07	17.06	
233.22	16.78	
233.37	16.98	
233.52	15.81	
233.67	16.44	

Whiles

25 June = 1942

Stn	B.S	H.I	F.S	Rod	Elev
B.M	4.11	~~263.26~~			259.15
				~~2.67~~	~~260.59~~
B.M	11.31	261.48			250.17
B.M				4.70	256.78
T.P.	4.84	258.67	7.65		253.83
0+00				4.67	254.0
0+94.88				4.67	254.0
1+89.80				4.67	254.0
2+84.67				4.67	254.0

= 3.0 offset from insid face of Wall

Below = Record of Elevs & Cuts ℄ north & south

	1.43	258.21			256.78
	1.31	246.79	12.73		245.48
0+00				0.09	246.70
+60				5.86	240.93
1+42.03				9.25	237.54
2+24.66				9.34	237.45
2+84.67				8.79	238.00

= Valve flange as above

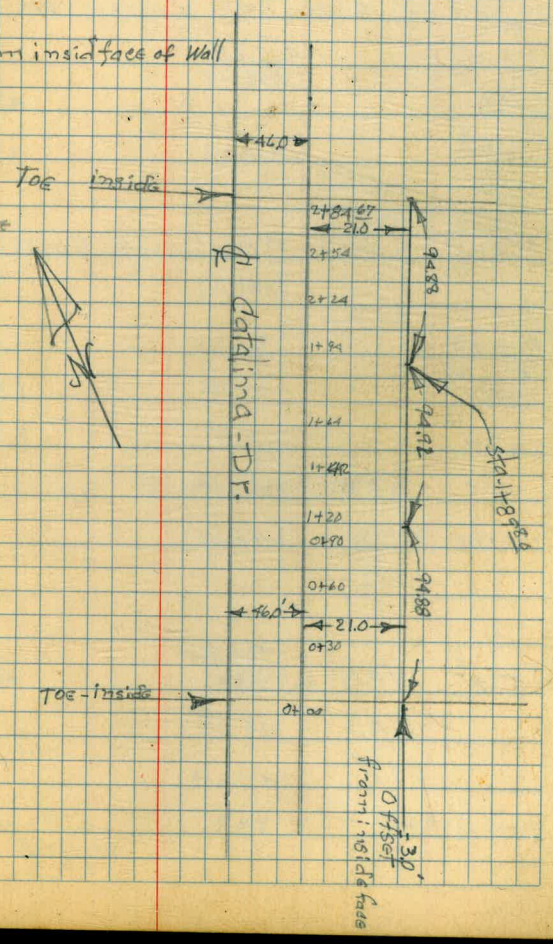
Cut	Grade
13.03	233.67
7.56	233.37
4.74	233.07
4.08	233.37
4.33	233.67

In Post 1080, See p 3 on ℄

263.26
214
9.26

261.48
214
7.48

Nail at Varona p 3
On Flange between Valve & Water Meter



Stakes set on line of Toe slope

East line Elevs & Cuts set for Contractor

Sta	B.S.	⊼	FS	Rod	Elev
	8.53	246.07			237.54
0+00				7.22	238.85
0+60				5.91	240.16
1+42 33				9.34	236.73
2+24 66				10.03	236.04
2+84 67	Was knocked out.				
South side Toe-line from west to East					
		246.07			
0+00				4.84	241.23
0+27 83				1.83	244.24
West line Toe line south to north					
		246.07			
0+60				5.47	240.60
1+42 33				6.93	239.14
2+24 66				7.13	238.94
0+60	3.52	243.68			240.16 BM
Chec 0+00	4.83	243.68			238.85 BM
	6.94				
2+84 67	West line Toe cut			4.29	239.39
	6.40	243.13			236.73
	2.98	243.14			240.16
				0.05'	

June 25-1942 - Whiles

Grade	Cut	Dist-out	Cut for slope
= Sta-142 33 ℄ of Res-north & South			
		7.77	
233.67	5.18		
233.37	6.79	10.18	
233.07	3.66	5.49	
233.37	2.67	4.00	
233.67	7.56	11.34	
" "	10.57	15.85	
233.37	7.27	10.92	
233.07	6.07	9.11	
233.37	5.57	8.35	
= Sta. on East line June-26-1942			
233.67	5.72	8.58	
note at this point had to be cut to the slope		8.58	3.69 = to slope

note - stakes were set to Grade on slope

℄ in places where Ground was to hard

Cut to slope was given

Whiles

North Line

tp		243.14		7.35	235.79
				2.24	
				5.91	237.23
				3.57	239.57

Below = 1 to 1½ Shoulder

from S.W. Cor using West Toe slope

sta	B.S.	A	FS	Rod	254
	6.62				254.00
0+00				2.11	253.51
				2.46	253.16
				5.93	254.69
clear				5.16	255.46
				5.57	255.05
				5.84	254.78
				6.75	253.87
				8.59	252.05

Grade	cut	Fill	out	cut to slope
	2.12		3.16	
	3.56		5.34	
	5.90		5.34	2.34

as Sta - 0+00

252.00		0.49		
		0.84		
	0.69			
	1.46			
	1.05			
	0.78			
		0.13		
		1.95		

June 30 - 1942

Stn	BS	H.I	F.S	Rod	Elev
BM	10.90	261.07			250.17
BM				4.32	256.75
	4.33	261.11			256.78
			12.12		248.99
	4.67	253.66			
			12.68		240.98
	0.59	241.57			
				4.35	237.22
				5.56	236.01
				7.92	
				8.08	
	10.40	246.41			236.01
			0.01		246.40
	11.88				258.28
			1.50		256.78
					~~256.78~~
	2.25	238.26			236.01

Spike at Yarma on Flange to Meter Use at 256.78 } See p 31 " " "

10.90
256.78
4.32
261.10

B.M. on flange of Meter

R. 6.63
5.90
0.73
4.75
5.48

6.65
5.92
0.73

Top of 16" Pipe NE Cor Res Inlet Pipe

23.400
.33
233.67 Sub Grade

℄ = 233.28
− .33 Sub
232.95 = Grade

← Check

232.73 ℄ both ways

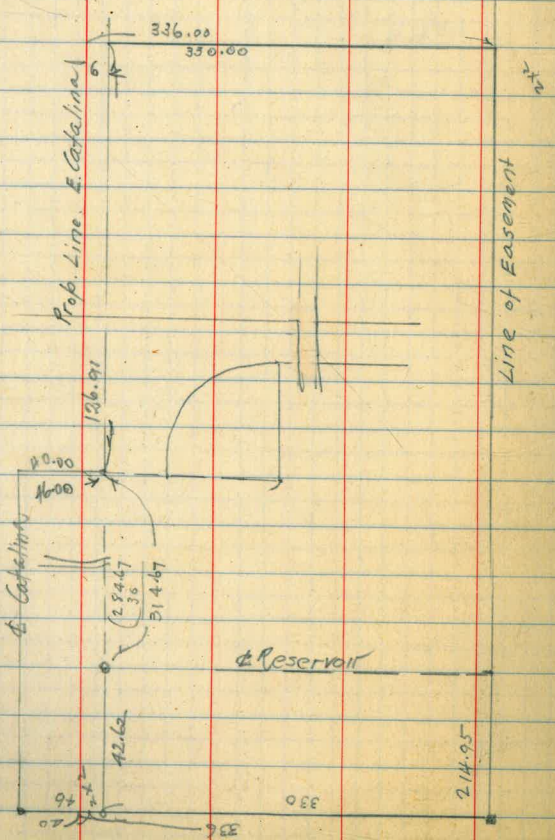
3' offset Line E side from N to So.

Sta	B.S.	H.I.	F.S.	Rod	Elv.
0	2.02	258.80			256.78
33'				4.80	
30'				4.80	
60'				4.80	
E & W ℄				4.80	
33'				4.80	
30'				4.80	
60'				4.80	

Grade = 2.54%

BM on Meter Flange Ft. Loma Res

3 July 1942



110	
22.33	
142.33	
72.62	
214.95	

Wilcox
McCombs
Banks
Johnson

194.00	87.02	+ 2°41
86.92	.10	
280.92	86.92	87.02
19.08		.0011
30.00		8702
330.00		8702
		.095722

℄ = 1+03

142.33	142.33
30	72.62
172.33	214.95
4.50	
167.83	℄ = 1+03
63	230.83
230.83	333.83

3 July

Levels on Drainage Line E of Reservoir

1+00 = Elbow out from Valve Chamber

Sta	B.S	H.I	F.S	Rod	Elev
B.M	2.69	259.47			256.78
TP	0.98	248.83	11.62		247.85
T.P	1.80	237.88 ✓	12.25		236.58
1+00 ⓣ				4.90	232.98
℄				4.35	
1+63 ⓣ				5.10	232.78
℄				4.31	
1+12 ⓣ				4.93	232.95
℄				4.09	
1+50 ⓣ				5.07	232.81
℄				4.02	
2+00 ⓣ				5.60	232.28
℄				4.23	
2+50 ⓣ				6.06	231.82
℄				5.63	
3+00 ⓣ				6.13	231.75
℄				4.71	
3+35 ⓣ				6.34	231.54
℄				7.77	
3+50 ⓣ				6.45	231.43
℄				6.67	

256.78
4.97
261.75
23.57
237.88

Grade	Cut	
		on Valve deep 34
227.45	5.53	
227.44	5.34	
227.00	5.95	
226.83	5.98	
226.61	5.67	
226.38	5.44	
226.16	5.59	
		on Rear Fill
226.00	5.54	
		on Cut
225.66	5.77	

Sta	BS	HI	FS	Rod	Elev
		237.88			
4+00 ℄				7.54	230.34
℄				7.53	
4+50 ℄				12.34	225.54
℄				11.73	
BM				7.06	230.82
T.P	3.40	228.95	12.33		225.55
5+0 ℄				7.61	221.34
℄				6.89	
5+50 ℄				9.29	219.66
℄				8.40	
BM	6.62	263.40			256.78
Hub				9.40	254.00
	6.22	263.00			256.78
			8.99		254.01
	5.12	259.13			
				5.13	
				5.13	
				5.13	

Grade	Cut
224.50	5.84
221.13	4.41
217.75	3.59
214.38	5.28

Stake

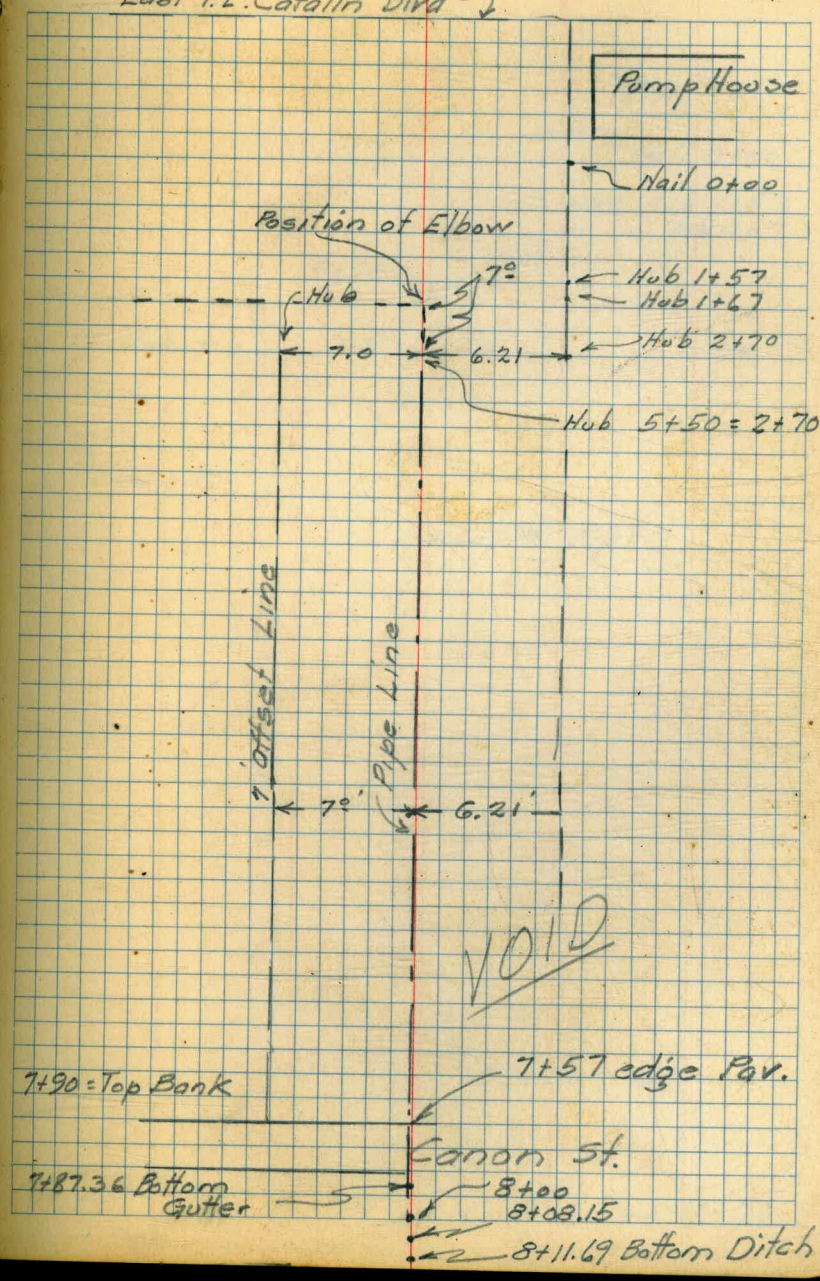
= Old Blue Top

B.M. on Meter Flange

3' offset on Inside of Rear So End.
3' do on ℄ N&S.
3' do on SW Cor on Tool Line

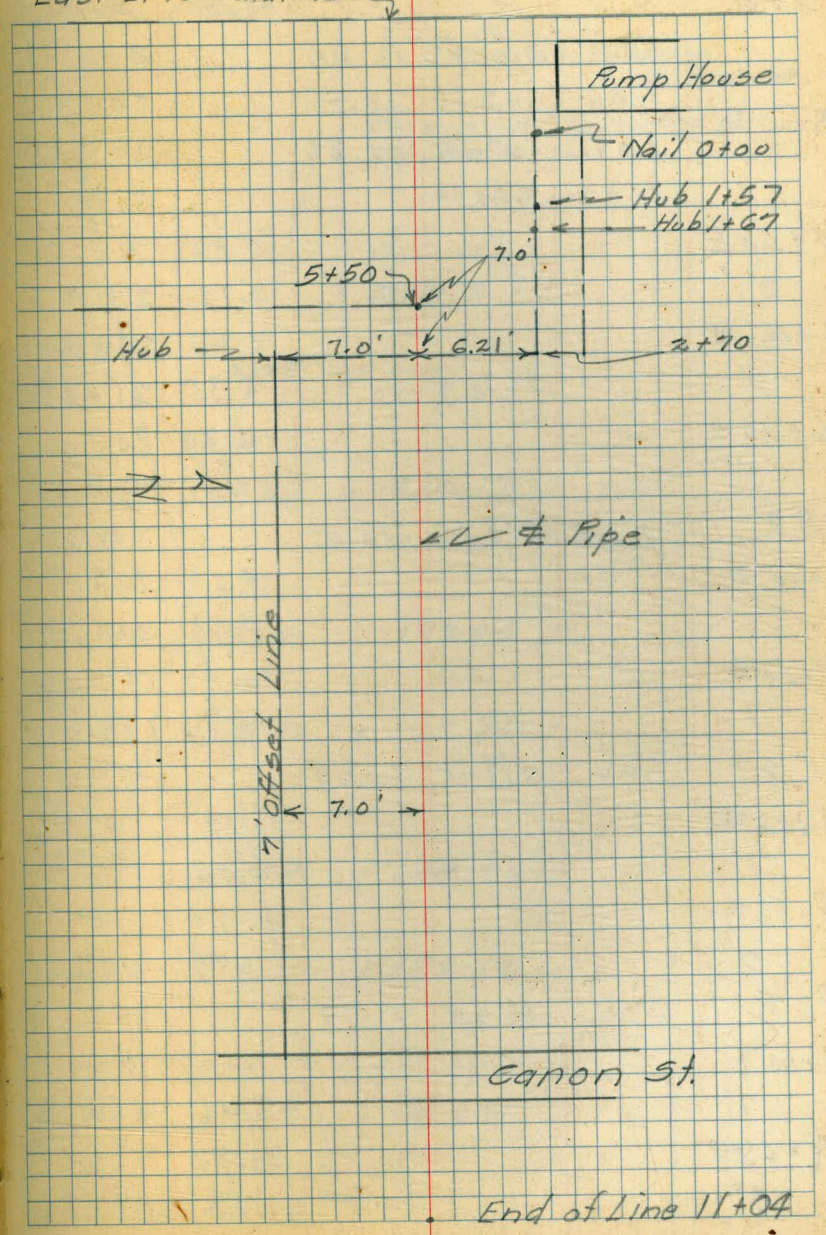
16" Pipe Line
Pt. Loma Res.

Keeler
39
July 9-42



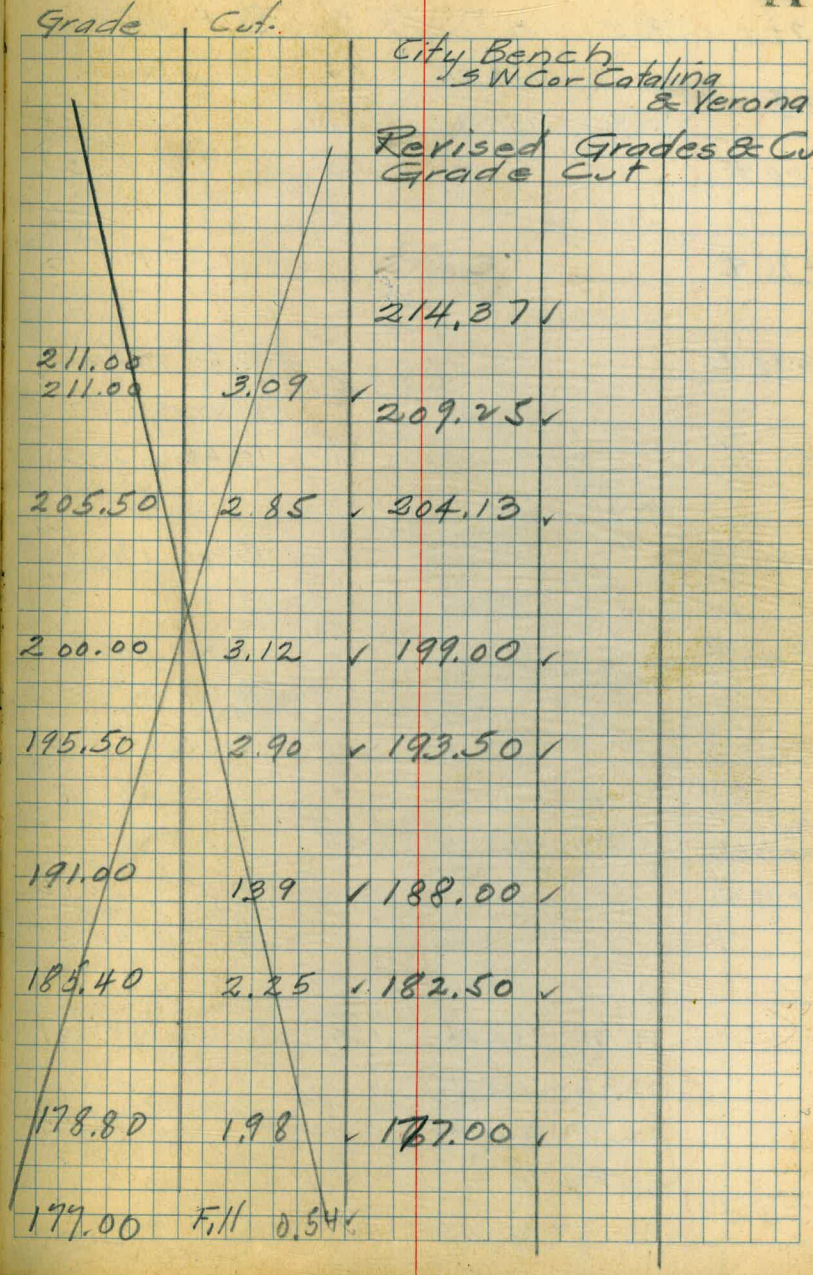
16" Pipe Line
Pt. Loma Res.

July 10-42

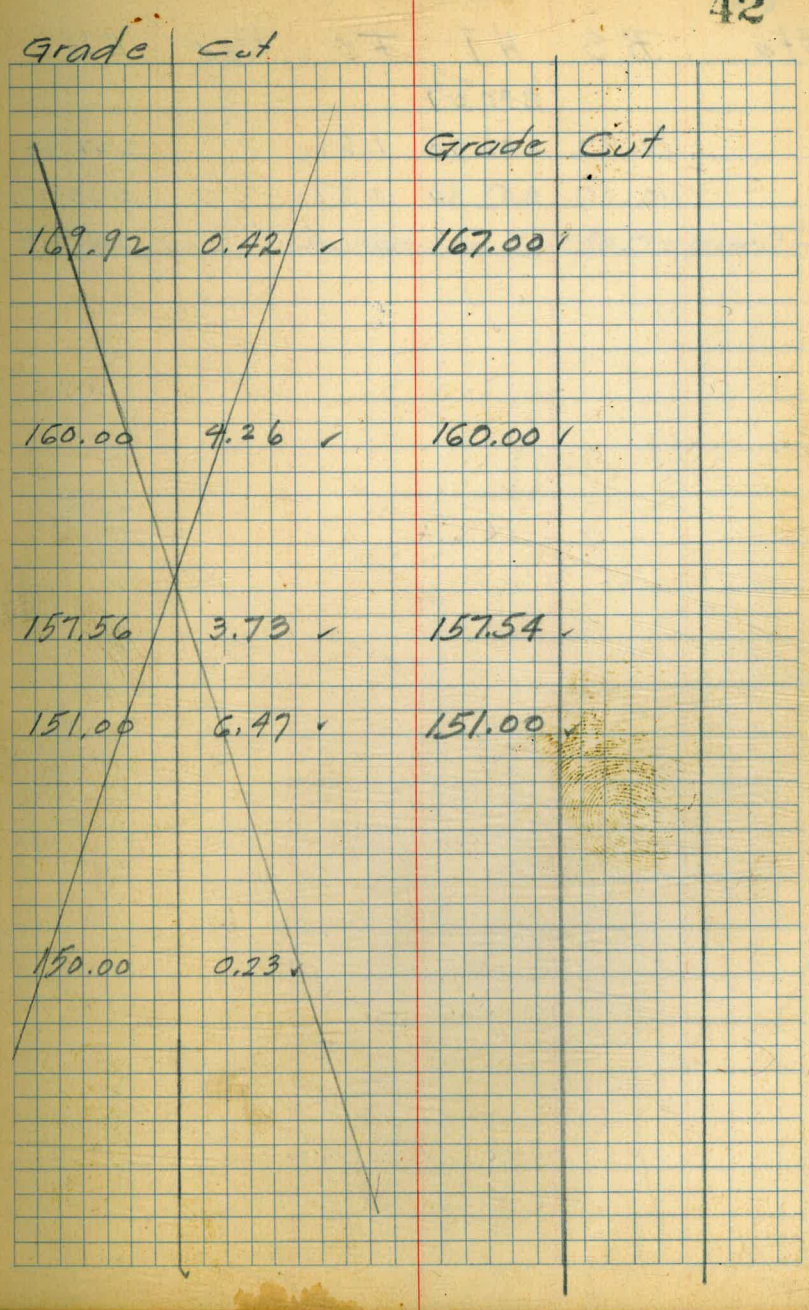


Levels on Drainage Line Pt. Loma Res — July 10-42 — Keeler

Sta	B.S.	H.I.	F.S.	Rod	Elv.
	4.25	254.42	12.84		250.17
	1.08	242.66	12.85		241.58
	1.07	230.88	10.26		229.81
	0.82	220.44			219.62'
5+50 ℄				0.82	219.62
7'				0.72	219.72
6+00 ℄				6.56	213.88
7'				6.35	214.09
6+50 ℄				12.44	208.00
7'				12.09	208.35
T.P. 7'	0.35	208.70	12.09		208.35
7+00 ℄				5.41	203.29
7'				5.58	203.12
7+50 ℄				10.26	197.44
7'				10.30	198.40
T.P. 7'	1.04	199.44	10.30		198.40
8+00 ℄				6.88	192.56
7'				7.05	192.39
8+50 ℄				11.60	187.84
7'				11.79	187.65
T.P. 7'	0.59	188.24	11.79		187.65
9+00 ℄				7.13	181.11
7'				7.46	180.78
9+25 ℄				11.33	176.91
7'				11.78	176.46



Sta	BS	HI	FS	Rod	Elv
		188.24			
9+25 T.P 7'	0.80	177.26	11.78		176.46
9+50 ℄				6.69	170.57
7'				6.92	170.34
9+75 ℄				11.16	166.10
7'				11.31	165.95
9+85 ℄				12.83	164.43
7'				13.00	164.26
T.P. 7'			12.99	12.99	164.27
	0.49	164.76			
10+00 ℄				2.97	161.79
7'				2.47	161.29
10+40 ℄				7.65	157.11
7'				7.29	157.47
10+50 ℄				7.52	157.24
7'				7.15	157.61
T.P. nail on 7' Appox 10+80	1.63	158.92	7.47		157.29
11+40 ℄				8.79	150.13
7'				8.69	150.23
	12.01	169.14	1.79		157.13
	12.61	181.48	0.27		168.87
	11.96	193.07	0.37		181.11
	12.29	204.84	0.52		192.55
	12.92	217.46	0.30		204.54
	12.72	230.07	0.11		217.35



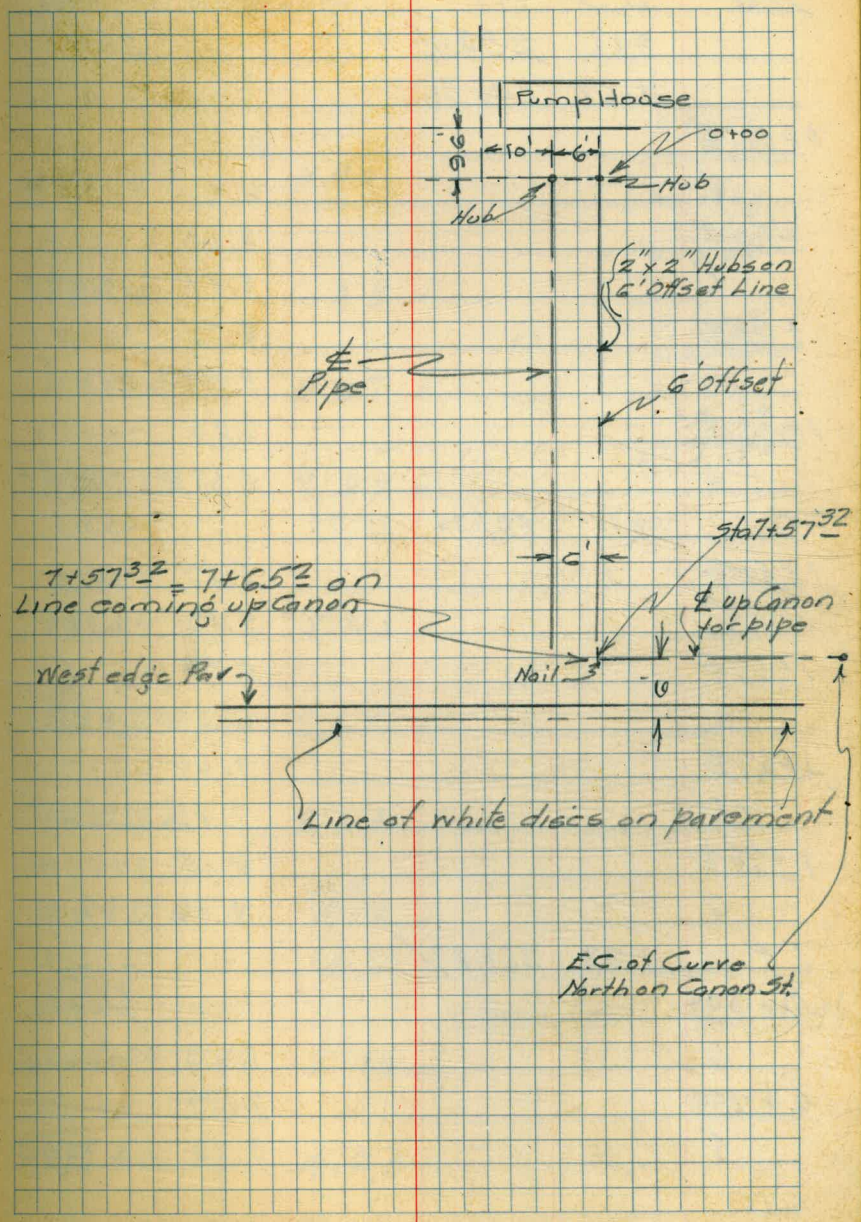
Sta	B.S.	H I	F S	Rod	Elv
		230.07			
	12.92	241.30	1.69		228.38
	12.87	253.80	0.37		240.93
			3.65		250.15

B.M. S.W. Cor Catalina & Verona Elv 250.17 = Error 0.02

Pt Lomo
Pipe Line Unit #6

Keeler
July 14-42

44



Levels on Pipe Line Pt Loma Res Unit #6

Sta	B.S.	HI	F.S.	Rod	Elv.
	3.88	254.05	9.17		250.17
	1.68	246.56			244.88
0+00 ℄				2.31	244.25
6'				2.24	244.32
+50 ℄				4.60	241.96
6'				3.81	242.75
+75 ℄				4.75	241.81
6'				3.99	242.57
1+00 ℄				6.26	240.30
6'				4.61	241.95
T.P.	1.37	235.14	12.79		233.77
1+50 ℄				5.87	229.27
6'				5.12	230.02
1+57 ℄				6.54	228.60
6'				6.32	228.82
1+67 ℄				7.60	227.54
6'				7.45	227.69
1+75 ℄				8.15	226.99
6'				8.06	227.08
T.P.	1.38	223.89 ✓	12.63		222.51
2+00 ℄					~~225.59~~ 223.96
6'				1.23	222.66
2+25 ℄				2.79	221.10
6'				3.16	220.73
	8.31		34.59		

Keeler July 14-42

45

Grade	Cut
240.40	3.92
236.47	6.28 ✓
234.50	8.07 ✓
232.13	9.82 ✓
227.4	2.62 ✓
226.14	2.68 ✓
224.34	3.35 ✓
222.90	~~4.18~~ ~~5.18~~ ✓ ?
219.00	3.66 ✓
216.50	4.23 ✓

246.56
8.31
254.87
34.59
220.28

250.17
8.31
258.48
34.59
223.89

Hand Level shot 1.30' high

Sta	B.S.	H I	F S	Rod	Elv.
		223.89 ✓			
2+50 ℄				4.34	219.55
6'				4.62	219.27
3+00 ℄				8.15	215.74
6'				8.15	215.74
—	1.96	213.13	12.72		211.17 ✓
3+50 ℄				3.17	209.96
6'				3.55	209.58
4+00 ℄				7.93	205.20
6'				8.01	205.12
4+50 ℄				12.50	200.63
6'				12.53	200.60
T.P. 6'	1.22	201.82	12.53		200.60 ✓
5+00 ℄				5.83	195.99
6'				5.78	196.04
5+50 ℄				12.48	189.34
6'				12.82	189.00
	0.59	189.59 ✓	12.82	~~12.82~~	189.00 ✓
5+75 ℄				2.60	187.00
6'				2.70	186.89
6+00 ℄				4.00	185.59
6'				4.25	185.34
6+25 ℄				9.13	180.46
6'				10.24	179.35
	3.77		38.07		

Grade	Cut
	B.S.
214.67	4.60 ✓
211.00	4.74 ✓
206.37	3.71 ✓
201.25	3.87 ✓
196.38	4.22 ✓
191.50	4.54 ✓
185.50	4.50 ✓
183.50	3.39 ✓
180.60	4.74 ✓
176.20	3.15 ✓

223.89
3.77
227.66
38.07
189.59

Sta	BS.	H.I.	F.S.	Rod	Elv.
		189.59			
	0.88	177.96	12.51	~~12.51~~	177.08 ✓
6+50 ℄				2.79	175.17
6'				1.99	175.97
6+75 ℄				7.70	170.26
6'				6.72	171.24
	1.27	166.57	12.66		165.30 ✓
7+00 ℄				3.86	162.71
6'				3.23	163.34
7+20 ℄				7.90	158.67
6'				8.30	158.27
7+38 ℄				12.05	154.52
6'				12.30	154.27
				10.02	156.55

Grade	Cut.
171.00	4.97 ✓
158.50	4.84 ✓
155.00	3.27 ✓
152.50	4.05 ✓

BS	FS
2.15	35.19
3.77	38.07
8.31	34.59
14.73	107.85

BM 250.17
− 107.85
142.32
+ 14.23
✓ 156.55

Wilkes
Bench set by Staff
157.01 — Diff = 0.46'

Levels & Cuts Pipe Line Unit #6
Harbor Drv.

Keeler
July 18-42

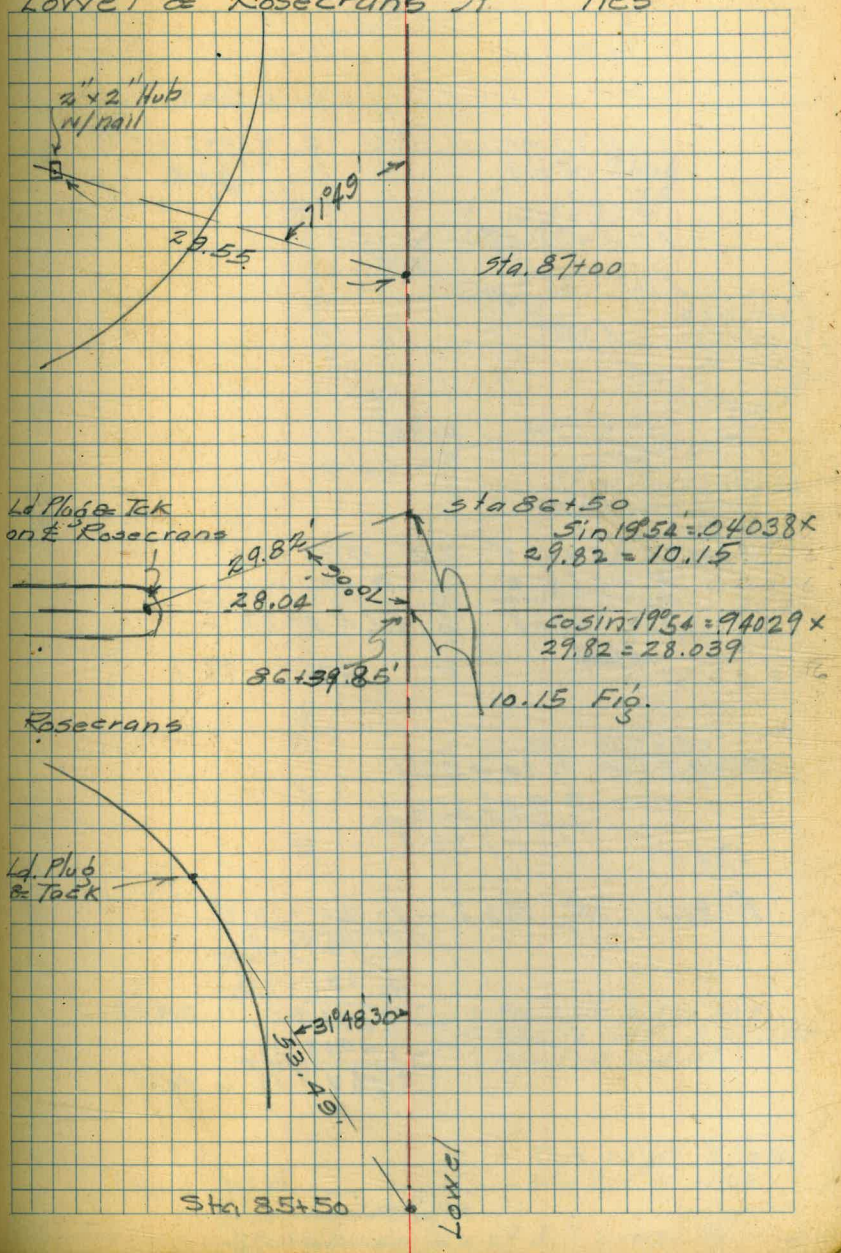
Sta	BS	HI	FS	Rod	Elv.
	3.22	253.39 ✓	~~3.22~~		250.17
	1.34	242.47	12.26		241.13
1+50 ℄				12.77	
6'				12.50	229.97
	0.60	230.57	12.50		229.97
1+75 ℄				3.50	
6'				3.62	226.95
2+00 ℄				5.97	
6'				7.26	223.31
2+25 ℄				9.50	
6'				9.87	220.70
2+50 ℄				10.85	
6'				11.33	219.24
	1.03	219.17	12.43		218.14
3+00 ℄				3.78	
6'				3.68	215.49
3+50 ℄				9.32	
6'				9.46	209.71
	0.70	208.72 ✓	11.15		208.02
4+00 ℄				3.62	
6'				3.71	205.01
4+50 ℄				8.65	
6'				8.80	199.92
			10.28		198.44
	4.89		58.62		

227.40		2.57 ✓
222.90		4.05 ✓
219.00		4.31 ✓
216.50		4.26 ✓
214.67		4.57 ✓
211.00		4.49 ✓
206.37		3.34 ✓
201.25		3.76 ✓
196.38		3.54 ✓

Sta	B.S.	H I	F S	Rod	Elv
	0.60	199.04			198.44
5+00 ℄				3.90	
6'				3.62	195.42
5+50 ℄				10.18	
6'				10.24	188.80
5+75 ℄				12.94	
6'				12.98	186.06
	0.01	186.07	12.98		186.06
6+00 ℄				3.25	
6'				3.46	182.61
6+25 ℄				6.65	
6'				6.71	180.36
6+50 ℄				11.46	
6'				11.33	174.74
	0.13	174.87	11.33		174.74
7+00 ℄				10.40	164.47
6'				10.72	164.15
	1.22	165.52	10.57		164.30
7+20 ℄				4.62	
6'				4.93	160.59
7+38 ℄				7.30	
6'				7.48	158.04
			9.00	9.00	156.52
	1.76				
	~~8.85~~		43.88		

	BS 8.85	FS 102.50
		250.17
		− 102.50
		147.67
		+ 8.85
		156.52
191.50	3.92 ✓	
185.50	3.30 ✓	
183.50	2.56 ✓	
180.60	2.01 ✓	
176.70	4.16 ✓	
171.00	3.74 ✓	
158.50	5.60 ✓	
155.00	5.59 ✓	
152.50	5.54 ✓	

Lorrel & Rosecrans St Ties



35
14.72
20

82/407 (4
32 8

10437.45
103 14 47
22

814 2.910624
2 913814
9.996810

104+37.45
103 30 32
107.13

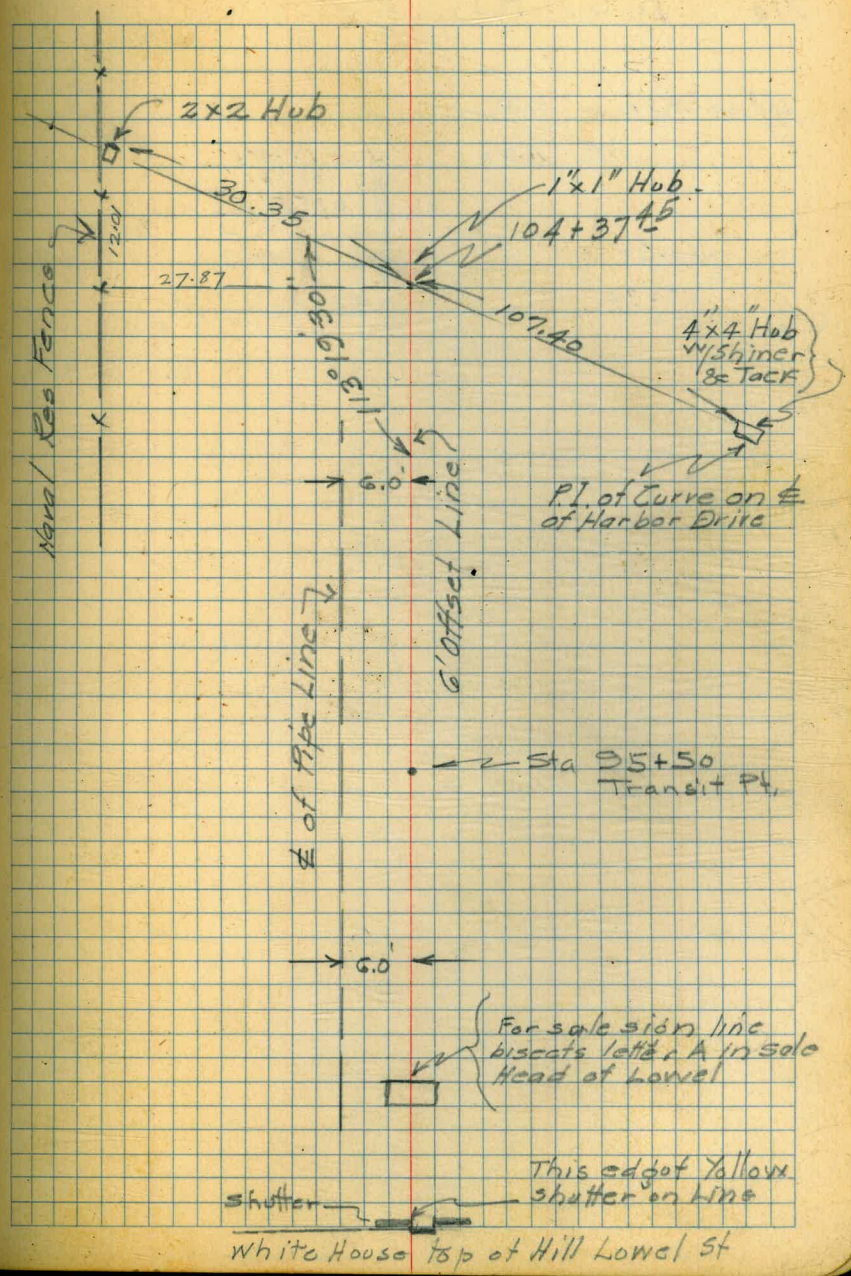
50 x 814 / 820 . 4070 / 820

30.32
1968 – 1.294025
9 996810
1.290835.
19.54

50 1698970
9996810
1.695780 –
49.63 = 50-L

13.95 – 1.144574
9996810
1385 1.141387

R 814, 2R 1628 – 3.211654 ✓
6 788346 –
4.685575
– 1.473921 29.78"
1.290835
2.764756 – 582"



Profile Levels on Lowell East to Harbor Drv. from Rosecrans

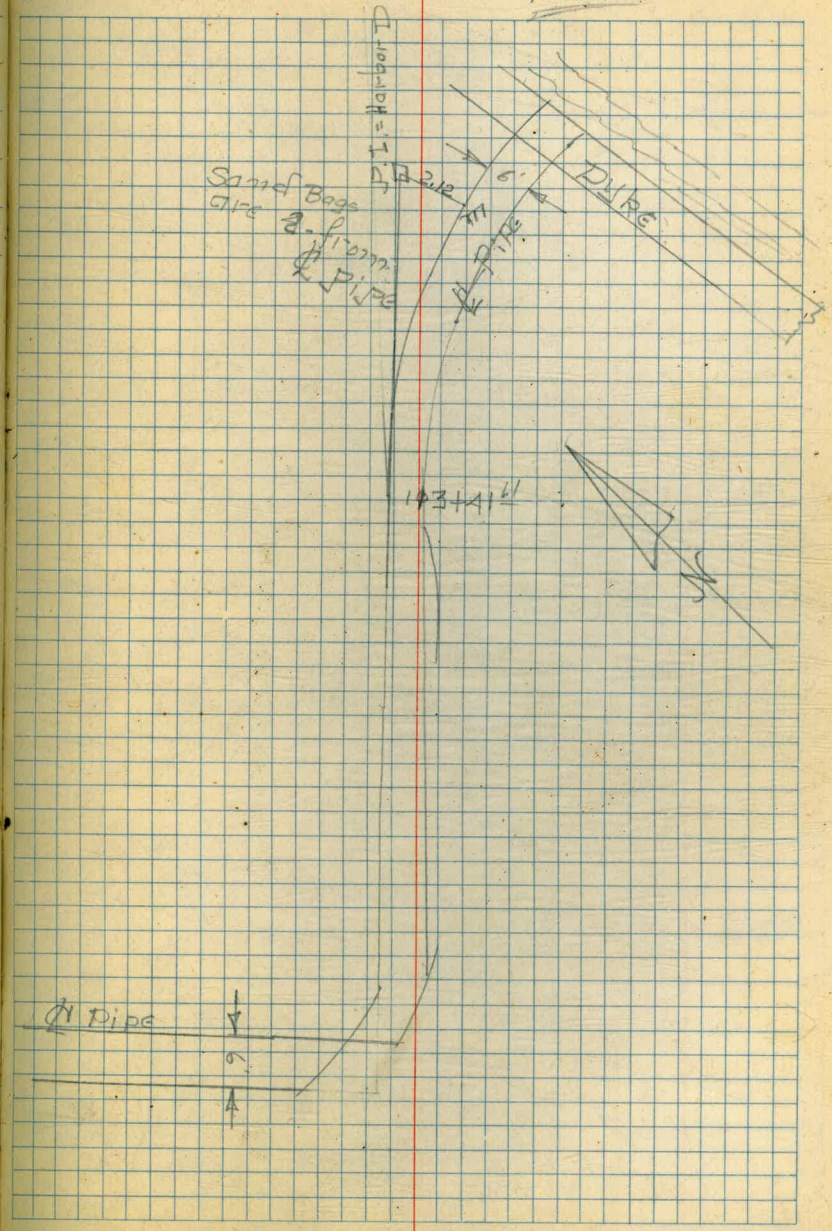
Sta	B.S.	H.I.	F.S.	
Offset Rod = 814				
	TR	1628		
			3.211654	
			6.788346	
			4.685575	
			2.102771	126.7
			2.263944	
			4.366715	
			3.556303	
			0.810412	6.462
				27.72

183.63
.23270"
36
3600

7-29-1942

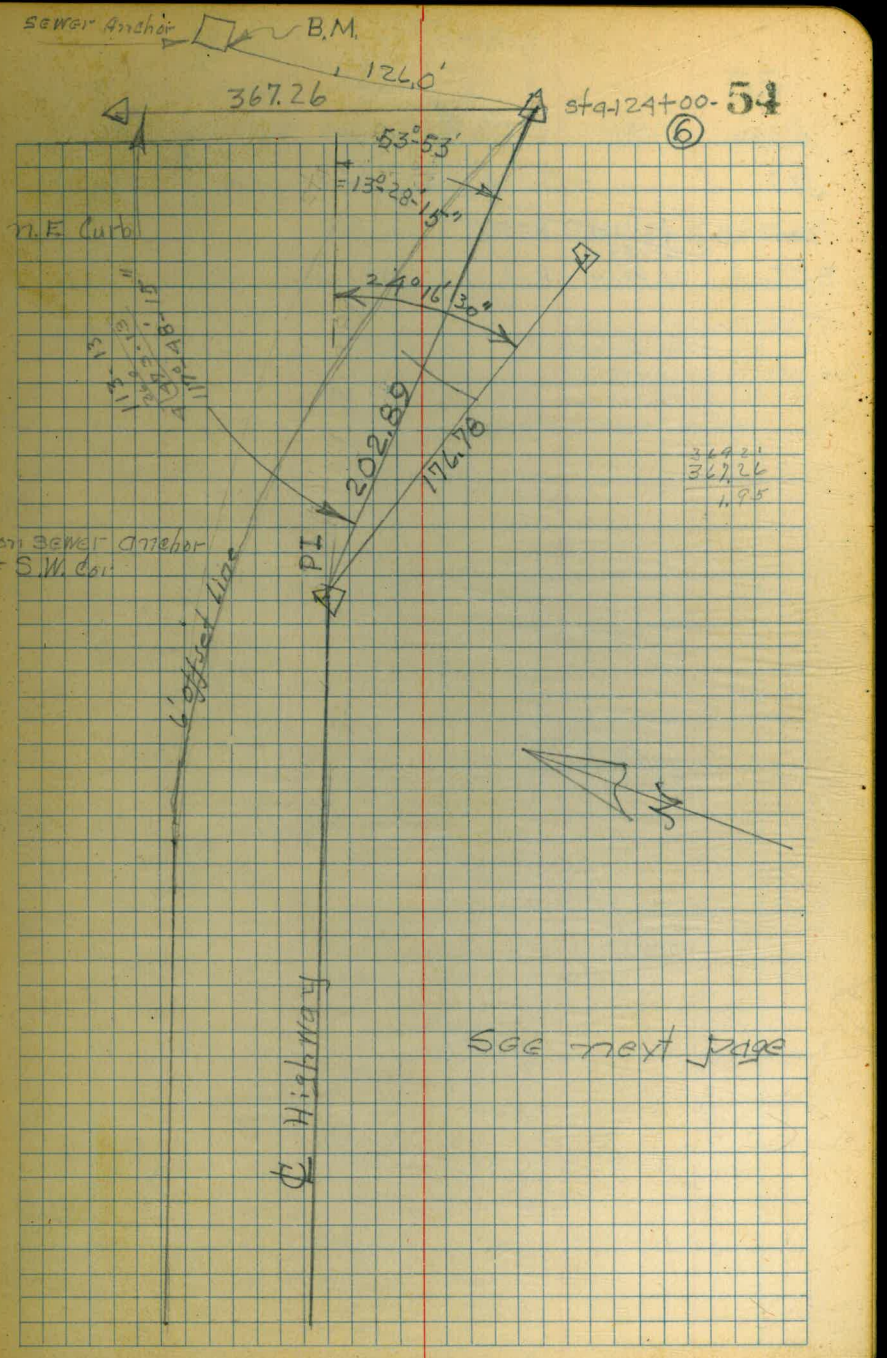
Whiles

53



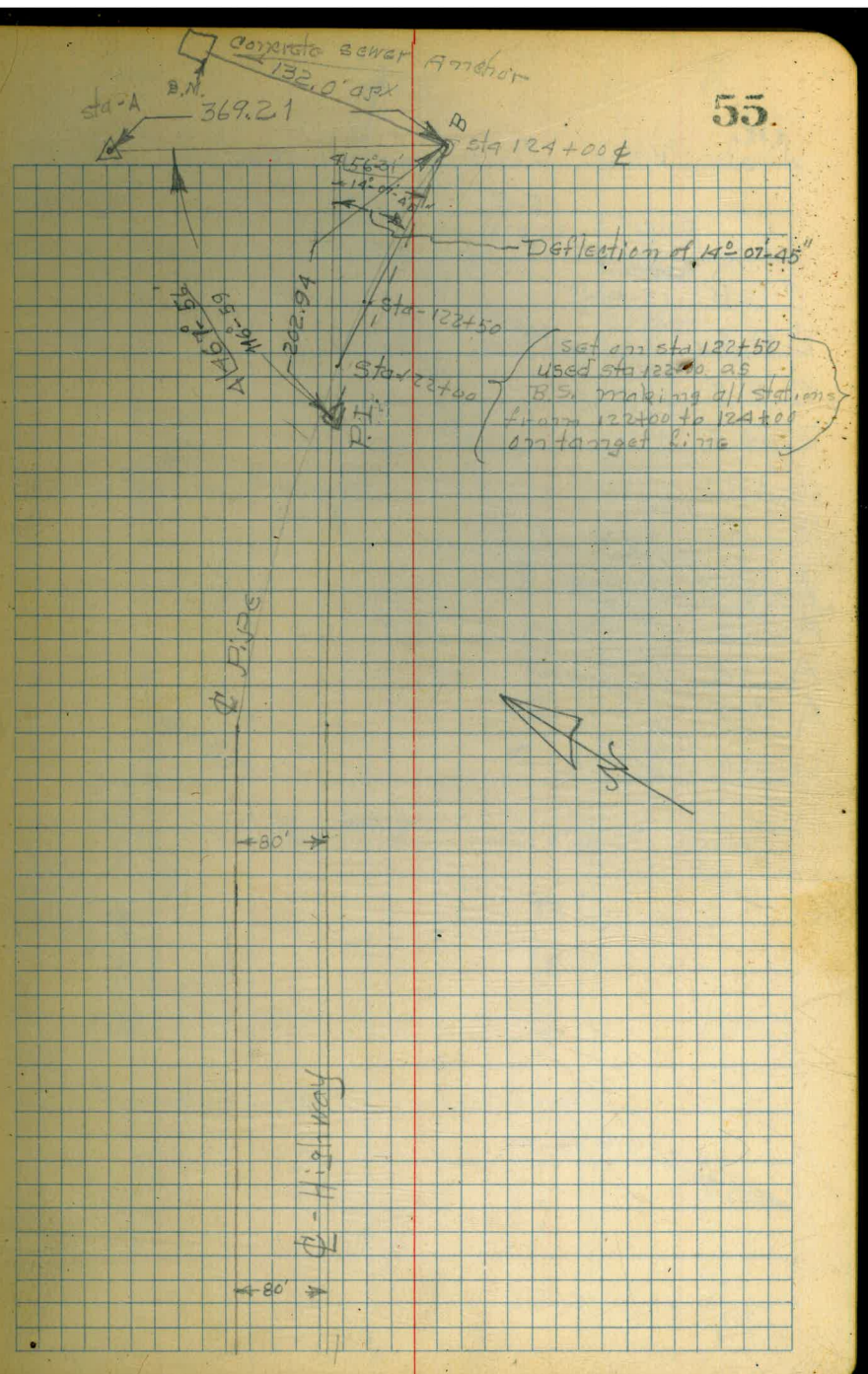
7-29-1942 - Whiles

Sta	B.S.	I	F.S.	Red	Elev
	5.71	6.45			B.M. 0.74
south #1			5.32	-	1.13 =
" #2		on Crnd of curb	4.07		2.38
" #3					
		Top of Temp pier	1.51		4.94
North side #1			1.72		4.73
" #2			1.80		4.65
" #3			2.33		4.12
			7.86		- 1.41 BM



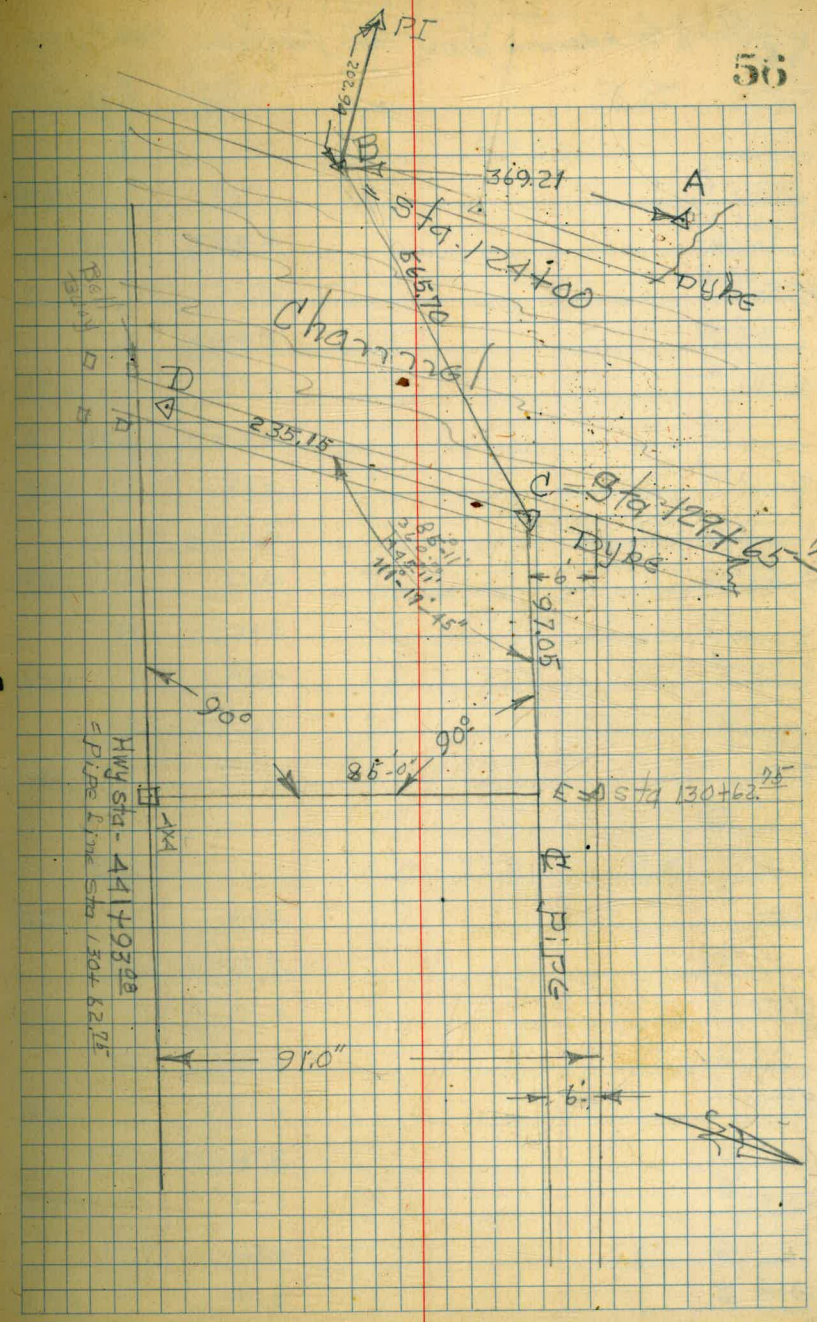
7-30-1942 — Whites

Angle	Value	Line	Length	Bearing
P.I.	from B.S. on ℄ of Highway to sta. B.			
	Ref = 14°-07'-45" / 467°-56'	B-PI	202.94	
B-PI-A	116°-59'-00"	B.A.	369.21	



7-30-1942 Whites

Angle	Value	Line	Length	Bearing
		E.C.	97.05'	
	445°-11'			
C.E.D	111°-17'-45"	C.D.	235.15'	
	254°-47'			
C.D.B.	63°-41'-45"			
	154°-37'			
C.B.A.	38°-39'-15"	B.A.	369.21'	
	367°-05'			
D.B.C.	91°-45'-00"			
	140°-21'			
D.B.A.	35°-05'-15"			
	370°-54'			
B.A.D.	92°-43'-30"			
	118°-12'-00"			
B.C.D	24°-33'-00"			
	272°-40'			
B.A.C.	68°-10'-00"			
	292°-40'			
A.C.B.	73°-10'			
	208°-43'			
A.D.B	52°-10'-45"			
	83°-56'			
A.C.D.	20°-59'-00"			
	125°-53'			
11-11-11	20°-58'-50"			



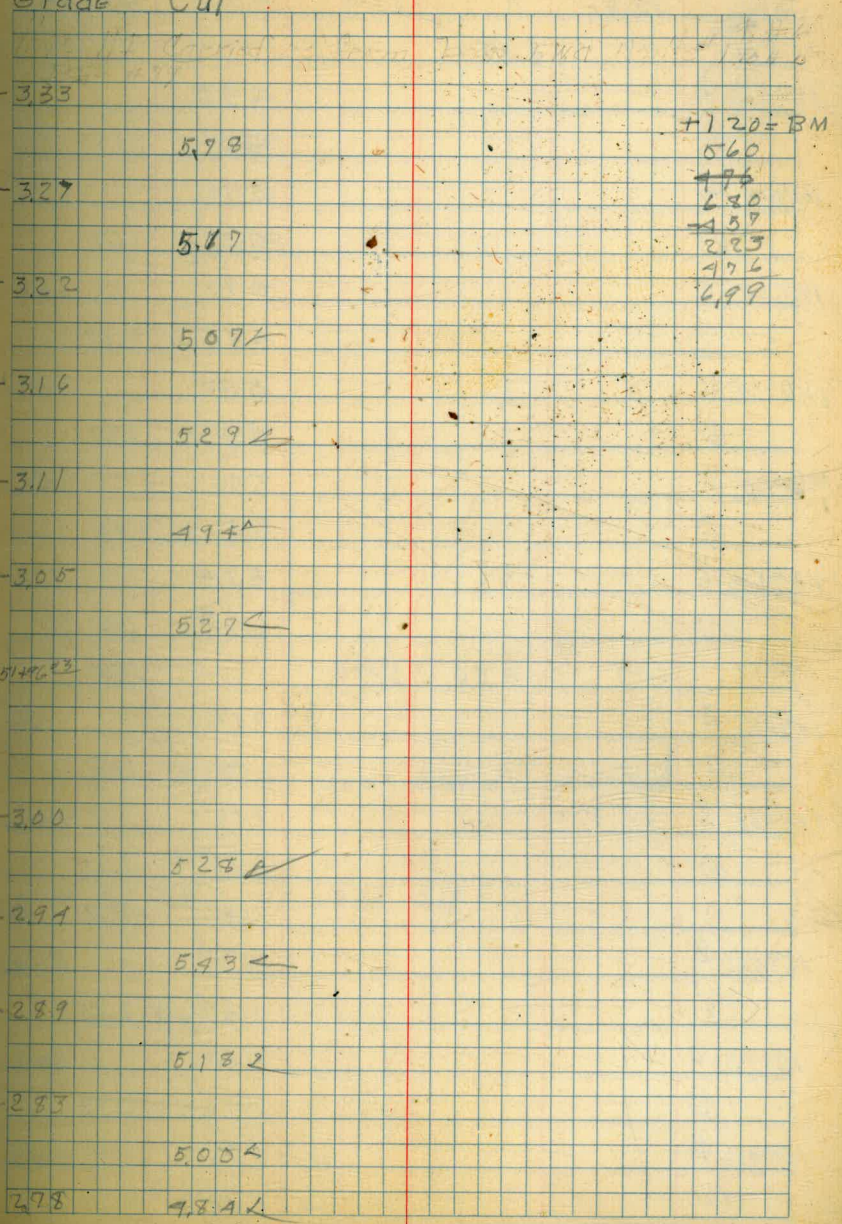
Aug-5-1942

Elev & Grades on Unit No 6 from FWA # 179

H.I. of 6.80 carried as from F.W.A Book Units 1 to 6 page #79

Sta	B.S.	Δ	F.S.	Rod	Elev	Grade	Cut
		6.80					
149+00 ℄				4.47	2.33	-3.33	
(6)				4.35	2.45		5.78
149+50 ℄				4.73	2.07	-3.27	
(6)				4.90	1.90		5.17
150+00 ℄				4.88	1.92	-3.22	
(6)				4.95	1.85		5.07
150+50 ℄				4.67	2.13	-3.16	
(6)				4.67	2.13		5.29
151+00 ℄				4.98	1.82	-3.11	
(6)				4.97	1.83		4.94
151+50 ℄				4.45	2.35	-3.05	
(6)				4.58	2.22		5.27
151+96 03 ~~152+00~~ ℄				4.47	2.33	151+96 03	
(6)				4.57	2.23		
T.P.	4.76	6.99	4.57		2.23		
152+00 ℄				4.62	2.37	-3.00	
(6)				4.71	2.28		5.28
152+50 ℄				4.40	2.59	-2.94	
(6)				4.50	2.49		5.43
153+00 ℄				4.61	2.38	-2.89	
(6)				4.70	2.29		5.18
153+50 ℄				5.02	1.97	-2.83	
(6)				4.82	2.17		5.00
154+00 ℄				4.95	2.04	-2.78	4.84
6				4.93	2.06		

+1.20 = BM
5.60
~~4.76~~
6.80
~~4.57~~
2.23
4.76
6.99



Sta	B.S.	Π	F.S.	Rod	Elev	Grade	Cut
		6.99					
154+50 ℄				4.93	2.06	-2.72	
⑥				5.36	1.63		4.35 <
155+00 ℄				4.97	2.02	-2.66	
⑥				4.32	2.67		5.33 <
155+50 ℄				4.93	2.06	-2.61	
⑥				4.72	2.27		4.88 <
156+00 ℄				5.40	1.59	-2.55	
⑥				5.38	1.61		4.16 <
156+50 ℄				5.40	1.59	-2.50	
⑥				5.37	1.62		4.12 <
157+00 ℄				5.74	1.25	-3.00	
⑥				5.43	1.56		4.56 <
T.P.	6.94	8.50	5.43		1.56		
157+50 ℄				7.12	1.38	-3.50	
⑥				6.94	1.56		5.06 < Last station marked
158+00 ℄				7.05	1.45	-3.25	
⑥				6.85	1.65		4.90 <
				7.82	=B.M. 0.68	Check on B.M. should be 0.67	
158+50 ℄				6.24	2.26	-3.00	
⑥				5.55	2.95		5.95 <
159+00 ℄				6.04	2.46	-2.96	
⑥				5.92	2.58		5.54 <
159+50 ℄				5.30	3.20	-2.92	
⑥				5.31	3.19		6.1 <

6.99
-5.43
1.56
6.94
8.50

Sta	B.S.	H.I. 850	F.S.	Rod	Elev
160+00 ℄				4.56	3.94
ⓛ				4.83	3.67
160+50 ℄				4.94	3.56
ⓛ				5.03	3.47
161+00 ℄				5.77	2.73
ⓛ				5.14	3.36
161+50 ℄				5.81	2.69
ⓛ				5.85	2.65
162+00 ℄				5.73	2.77
ⓛ				5.80	2.70
	4.82	7.52	5.80		2.70
162+50 ℄				4.85	2.67
ⓛ				5.03	2.49
163+00 ℄				4.95	2.77
ⓛ				4.90	2.62
163+50 ℄				5.52	2.00
ⓛ				5.37	2.15
164+00 ℄				5.34	2.18
ⓛ				5.38	2.14
164+50 ℄				5.43	2.09
ⓛ				5.42	2.10
165+00 ℄				5.59	1.93
ⓛ				5.54	1.98

Grade Cut

	8 5 0
	5 8 0
	2 7 0
+	9 8 2
	7 5 2

-2.88 6.55 <

-2.85 6.32 <

-2.81 6.27 < 6.17

-2.77 5.42 <

-2.73 5.43 <

-2.70 5.19 <

-2.66 5.28 <

-2.62 4.97 <

-2.58 4.72 <

-2.54 4.64 <

-2.50 4.48 <

Sta	B.S.	H	F.S.	Rod	Elev
		7.52			
165+50 ℄				5.75	1.77
ⓒ				5.45	2.07
166+00 ℄				5.95	1.57
ⓒ				5.60	1.92
166+50 ℄				5.79	1.73
ⓒ				5.34	2.18
167+00 ℄				5.45	2.07
ⓒ				4.69	2.83
T.P.	4.41	7.24	4.69		2.83
167+50 ℄				5.42	1.82
ⓒ				4.87	2.37
168+00 ℄				5.43	1.81
ⓒ				4.72	2.52
168+50 ℄				5.24	2.00
ⓒ				4.97	2.27
169+00 ℄				5.37	1.87
ⓒ				5.24	2.00
169+50 ℄				5.26	1.98
ⓒ				4.96	2.28
170+00 ℄				5.21	1.97
ⓒ				4.99	2.25
170+50 ℄				5.46	1.78
ⓒ				5.00	2.24

Grade cut

-3.67	5.74 ←
-4.84	6.76 ←
-6.00	8.18 ←
-5.00	7.83 ←
-4.00	6.37 ←
-3.00	5.52 ←
-2.93	5.20 ←
-2.86	4.86 ←
-2.79	5.07 ←
-2.71	4.96 ←
-2.64	4.88 ←

7.52
4.69
2.83
4.41
7.24

Sta	B.S.	I.A.	F.S.	Rod	Elev
171+00 ℄		7.24		4.58	2.66
ⓒ				4.44	2.80
171+50 ℄				4.55	2.69
ⓒ				3.83	3.41
172+00 ℄				4.47	2.77
ⓒ				3.99	3.25
T.P.	4.99	8.24	3.99		3.25
172+50 ℄				5.17	3.07
ⓒ				4.92	3.32
173+00 ℄				5.16	3.08
ⓒ				5.04	3.20
173+50 ℄				4.97	3.27
ⓒ				4.73	3.51
174+00 ℄				4.98	3.26
ⓒ				4.87	3.37
174+50 ℄				4.95	3.29
ⓒ				4.77	3.47
175+00 ℄				4.74	3.50
ⓒ				4.56	3.68
175+50 ℄				4.86	3.38
ⓒ				4.74	3.50
176+00 ℄				4.90	3.34
ⓒ				4.82	3.42
176+50 ℄				4.71	3.53
ⓒ				4.61	3.63
				6.11	2.13

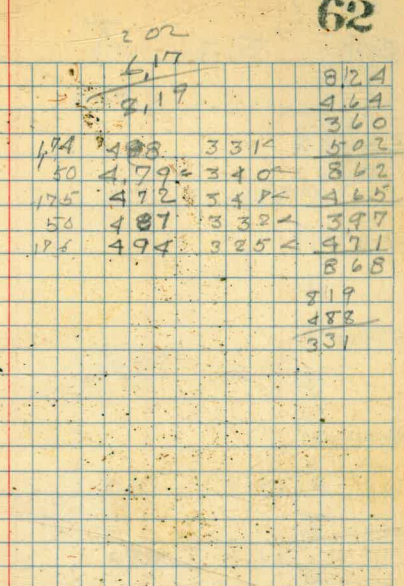
Grade	Cut
-2.57	
	5.37
-2.50	
	5.91
-2.43	
	5.68
-2.36	
	5.68
-2.28	
	5.48
-2.21	
	5.72
-2.14	
	5.51
-2.07	
	5.54
-2.00	
	5.47
-2.50	
	5.87
-3.00	
	6.25
-2.50	
	6.13

7.24
3.99
3.25
4.99
8.24

Check-on B.M.

Sta	B.S.	H.I.	F.S.	Rod	Elev
		8.24			
177+00 ℄				4.74	3.50
⑥				4.64	3.60
T.P.	5.02	8.62	4.64		3.60
177+50 ℄				5.28	3.34
⑥				5.13	3.49
178+00 ℄				5.10	3.52
⑥				4.98	3.64
178+50 ℄				5.01	3.61
⑥				4.40	4.22
179+00 ℄				5.16	3.46
⑥				5.00	3.62
179+50 ℄				4.78	3.84
⑥				4.84	3.78
180+00 ℄				4.62	4.00
⑥				4.51	4.11
180+50 ℄				4.11	4.51
⑥				4.05	4.57
181+00 ℄				4.42	4.20
⑥				4.45	4.17
181+50 ℄				4.81	3.81
⑥				4.66	3.96
182+00 ℄				4.76	3.86
⑥				4.65	3.97
T.P.	4.71	8.68	4.65		3.97

Grade	Cut
-2.00	5.60
-1.50	4.99
-1.54	5.18
-1.58	5.80
-1.62	5.24
-1.66	5.44
-1.71	5.92
-1.75	6.32
-1.79	5.96
-1.84	5.80
-1.88	5.85



Sta	B.S.	⊼	F.S.	Rod	Elev	Grade	Cut
		8.68		–			
182+50 ℄				3.97	4.71	-1.92	
⑥				3.91	4.77		6.69 ←
183+00 ℄				3.83	4.85	-1.96	
⑥				3.68	4.82 ~~5.00~~		6.78 ←
183+50 ℄				4.44	4.24	-2.00	
⑥				4.20	4.15 ~~4.48~~		6.15 ←
184+00 ℄				4.18	4.50	-3.00	
⑥				3.58	4.78 ~~5.10~~		7.78 ←
184+50 ℄				4.41	4.27	-4.00	
⑥				4.35	4.26 ~~4.33~~		8.26 ←
184+84.88 ℄				4.85	= B.C. 3.83		
⑥				4.78	3.90		
185+00 ℄				4.86	3.82	-2.75	
⑥				4.64	4.04		6.79 ←
185+50 ℄				5.02	3.66	-1.50	
⑥				5.07	3.61		5.11 ←
	5.97	9.58	5.07		3.61		
186+00 ℄				5.82	3.76	-1.55	
⑥				5.88	3.70		5.25 ←
186+50 ℄				6.30	3.28	-1.61	
⑥				6.30	3.28		4.89 ←
187+00 ℄				6.39	3.19	-1.66	
⑥				6.38	3.20		4.86 ←
187+50 ℄				6.91	2.67	-1.72	4.47 ←
⑥				6.83	2.75		

stakes changed

854 = HI

868
507
361
597
758

372 = 482

439 = 415

3.76 478

428 426

Sta	B.S.	I	F.S.	Rod	
		9.58			
188+00 ℄				6.76	2.82
(L)				6.73	2.85
188+09.06 ℄				6.97	2.61
(L)				7.05	2.53
			7.25		2.33
	7.25	9.28			2.03 BM
185+50	5.75	9.08	5.95		3.33
182+00	4.70	8.39	5.39		3.69
177+00	4.62	7.95	5.06		3.33
				6.18	1.77
172+00			5.10		2.85

August 6th - 1942

Sta	B.S.	I	F.S.	Rod	Fler
	6.06	8.09	~~4.75~~		2.03 B.M.
185+56	5.75	9.09	4.75		3.34
182+06	4.69	8.39	5.39		3.70
177+00	4.53	7.89	5.03		3.36
		7.89	6.00		1.89
172+00	4.02	7.04	4.87		3.02
167+00	4.31	6.91	4.44		2.60
162+00	5.50	7.96	4.45		2.46
158.0021		7.96	7.51		0.45
157+00	5.42	6.77	6.61		1.35
~~157+46.00~~ ~~152+00~~			5.45		1.32

Grade Cut

2.19
6.35
8.54
4.95
1.59

9.58
7.25
2.33

1.77

4.62

1.83

Should be 2.03 deducting to first circuit

note if B.M. taken as 2.19 this checks on closure

4.75	2.19
5.39	6.06
5.03	5.75
4.87	4.69
4.44	4.53
4.45	4.02
6.61	4.31
4.69	5.50
5.97	5.42
5.65	4.91
4.88	5.26
2.90	5.03
3.55	4.96
63.18	5.41
	68.04
	63.18
	4.86

Check on B.M. at Sta 172+50

B.M.

August 6 - 1942

Sta	B.S.	⊼	F.S.	Rod	Elev	
~~152+00~~		6.77				note this circuit
152+00	4.91	6.99	4.69		2.08	
147+00	5.26	6.28	5.97		1.02	
142+00	5.03	5.66	5.65		0.63	
137+00	4.96	5.74	4.88		0.78	
132+00	5.41	8.25	2.90		2.84	
			3.55		4.70 BM	should be 4.86 the starting point
	3.54	8.40			4.86	should have been 2.19
132+00	3.41	6.41	5.40		3.00	
137+00	5.31	6.26	5.46		0.95	
142+00	5.62	6.41	5.47		0.79	
147+00	5.88	7.07	5.22		1.19	
152+00	4.70	6.96	4.81		2.26	
151+96 03		6.96	5.46		1.50 BM	100 off
157+00 156+00	6.79	8.31	5.44		1.52	
158+00 91	5		7.70		0.61 BM	
162+00	4.61	7.22	5.70		2.61	
167+00	4.29	7.01	4.50		2.72	
172+00	5.08	8.23	3.86		3.15	
176+50			6.21		2.02 BM	℄ Hwy
177+00	5.02	8.52	4.73		3.50	
182+00	5.61	9.46	4.67		3.85	
185+50	4.87	8.36	5.97		3.49	
			6.17		2.19	

540	B.M. 486
546	354
547	341
522	531
481	562
544	588
570	470
450	6.79
386	461
473	429
467	508
597	502
617	561
-67.40	4.87
	+6959
	6740
	2.19

2.02
6.15
8.17
6.04
2.11

Sta	B.S.	⊼	F.S.	Rod	Elev
	6.31	7.89			1.58 ~~1.53~~ B.M
			5.73		2.11 B.M
188+50 ℄				5.19	2.70
(11)				5.22	2.67
189+00 ℄				5.39	2.50
(11)				5.06	2.83
189+50 ℄				5.40	2.49
(11)				5.32	2.57
190+00 ℄				3.82	4.07
(11)				3.65	4.24
190+50 ℄				2.77	5.12
(11)				2.78	5.11
T.P.	4.37	9.48	2.78		5.11
191+00 ℄				5.40	4.08
(11)				5.13	4.35
191+50 ℄				5.53	3.95
(11)				5.21	4.27
192+00 ℄				5.52	3.96
(11)				4.68	4.80
192+50 ℄				4.80	4.18
(11)				4.75	4.73
193+00 ℄				4.73	4.75
(11)				4.72	4.76
193+50 ℄				4.69	4.79
(11)				4.71	4.77

Grad — Cut

Should Be Elev 1.58

Note this B.M. not correct

State at 100 offset southside

= to our Sta 184+84.88

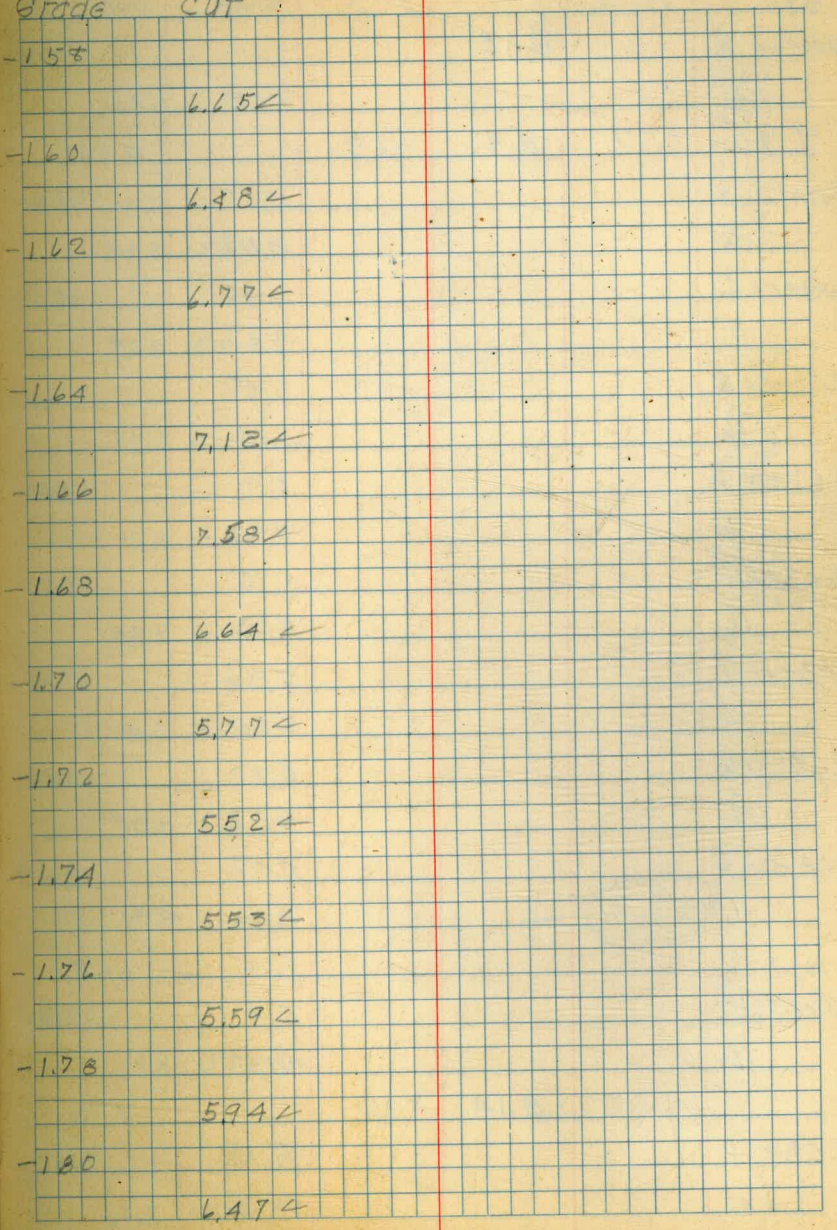
= State ~~PI~~ PI ℄ Hwy Sta 389+40.40

Was taken as Elev 2.19

-1.83	4.50 ←
-1.88	
	4.71 ←
-1.94	
	4.51 ←
-2.00	
	6.24 ←
-2.75	
	7.86 ←
-3.56	
	7.85 ←
-2.50	
	6.77 ←
-1.50	
	6.30 ←
-1.52	
	6.25 ←
-1.54	
	6.30 ←
-1.56	
	6.33 ←

1.53
6.31
4.37
+/ 2.21
- 2.78
9.43
- 5.73

Sta	B.S.	I	F.S.	Rod	Elev
194+00 ℄		9.48		4.92	4.56
(11)				4.41	5.07
194+50 ℄				4.85	4.63
(11)				4.60	4.88
195+00 ℄				4.72	4.76
(11)				4.33	5.15
T.P.	3.48	8.63	4.33		5.15
195+50 ℄				3.36	5.27
(11)				3.15	5.48
196+00 ℄				2.98	5.65
(11)				2.71	5.92
196+50 ℄				3.80	4.83
(11)				3.67	4.96
197+00 ℄				4.61	4.02
(11)				4.56	4.07
197+50 ℄				4.92	3.71
(11)				4.83	3.80
198+00 ℄				4.79	3.84
(11)				4.84	3.79
198+50 ℄				4.78	3.85
(11)				4.80	3.83
199+00 ℄				4.41	4.22
(11)				4.47	4.16
199+50 ℄				4.16	4.47
				3.96	4.67



Sta	B.S.	I	F.S.	Rod	Elev
200+00 ℄		8.63		3.83	4.80
⑪				3.69	4.94
T.P.	3.77	8.71	3.69		4.94
200+50 ℄				4.67	4.04
⑥				4.67	4.04
201+00 ℄				5.44	3.27
⑥				5.42	3.29
201+50 ℄				6.07	2.64
⑥				6.14	2.57
202+00 ℄				5.17	3.54
⑥				5.50	3.21
202+50 ℄				5.18	3.53
⑥				5.26	3.45
203+00 ℄				5.36	3.35
⑥				5.30	3.41
203+50 ℄				5.22	3.49
⑥				5.32	3.39
204+00 ℄				5.02	3.69
6				4.82	4.89 3.89
				7.12	1.59
204+50 ℄				5.13	3.58
⑥				4.95	3.76
	4.38	8.14	4.95		3.76
205+00				5.12	3.02
⑥				4.98	3.16

Grade Cut

-1.82 — 6.76

-1.84 — 5.88

-1.86 — 5.15

-1.88 — 4.45

-1.90 — 5.11

-1.92 — 5.37

-1.94 — 5.56

-1.96 — 5.35

-1.98 — 6.87 — X 3.87

-2.00 — 5.76

-2.25 — 5.41

1 2.21
3.48
3.77
4.38
4.67
+28.51
21.34
7.17
225

-2.78
4.33
3.69
4.95
5.59
21.34

28.56
21.34
7.22

Sta	B.S.	H.I.	F.S.	Rod	Elev.
205+50 ℄		8.14		4.94	3.20
ⓛ				5.12	3.02
206+00 ℄				4.63	3.51
ⓛ				4.51	3.63
206+50 ℄				5.23	2.91
ⓛ				5.08	3.06
207+00 ℄				4.91	3.23
ⓛ				4.79	3.35
207+50 ℄				5.22	2.92
ⓛ				5.07	3.07
208+00 ℄				5.38	2.76
ⓛ				5.03	3.11
208+50 ℄				5.14	3.00
ⓛ				5.17	2.97
209+00 ℄				5.69	2.45
ⓛ				5.33	2.81
209+50 ℄				5.78	2.36
ⓛ				5.59	2.55
	4.67	7.22	5.59		2.55
				5.63	1.595 B.M. 1.59
210+00 ℄				5.02	2.20
ⓛ				4.59	2.63
210+50 ℄				4.78	2.44
ⓛ				4.35	2.87

Grade cut

-2.50	
	5.52 ←
-2.43	
	6.06 ←
-2.36	
	5.42 ←
-2.29	
	5.64 ←
-2.22	
	5.29 ←
-2.14	
	5.25 ←
-2.07	
	5.04 ←
-2.00	
	4.81 ←
-1.93	
	5.05 ←

= 2.44 B.M. as there are 2 B.M. of same Elev

-3.00	
	5.63 ←
-2.94	
	5.81 ←

7.17
5.63
1.54

7.117
1.59
5.58

7.22
5.63
1.59

Sta	B.S.	I	F.S.	Rod	Elev
211+00 ℄		7.22		4.81	2.41
⑥				4.72	2.50
211+50 ℄				5.83	1.39
⑥				5.83	1.39
212+00 ℄				4.71	2.51
⑥				5.11	2.11
212+50 ℄				4.41	2.81
⑥				4.32	2.90
213+00 ℄				4.98	2.24
⑥				4.66	2.56
213+50 ℄				4.95	2.27
⑥				4.81	2.41
213+95 ℄				4.86	2.36
⑥				4.82	2.40
214+42 ℄				4.66	2.56
(7.09)				4.44	2.78
214+89 ℄				5.05	2.17
(8.18)				4.69	2.53
209+74				7.02	+0.20

Grade	cut
2.87	5.37
2.80	4.19 = 4.19
2.73	4.84
2.66	5.56
2.58	5.14
2.51	4.92
2.42	4.82
2.37	5.15
2.30	4.83

2.90

7.25
5.63
1.62

Note ground level here is at edge of telephone ditch
16" pipe which we tie to is open

= Elev of a 12" water line pipe is cast iron

8-22-1942 Whiles & Banks

These Elevs are City Datum

Sta	B.S.	H.I.	F.S.	Rod	Elev
	7.70	6.29			-1.41 B.M.
				6.29	0.00
				2.48	3.81

See Page 54-

40D Nail Drove into piling S.E. Cor of pier

top of 3/4" Bolt on S.E. Cor of pier this Bolt is on top of the Board Around top of pier 162.0' to pier 3rd Bent out from shore line

Note in addition to above Work placed Alignement flags for Dredge on ℄ of pipe

1+57 Cent of Outlet T 226.14'
1+67 do Inlet T 224.34

E to W Grade ℄ Res. 233.29 - 0.33

224.34
1+67 = ~~224.34~~ ~~226.14~~

1+57 = ~~224.34~~ 226.14
4.80

228.38
226.14
2.24

IMPROVED TABLES
AND
INFORMATION

B.M. 250.17
11.18
241.05
12.74
248.61
4.16
252.77

248.67
142.33

248.61
+ 2.46
251.07
- 9.50
241.57 = B.M. S.E. Cor of toe.

3 80
233 - 22
58. 20. 32
31 39 32
37 01 -

248.61
1.60
255.21

End of Work = Hwy Sta 211+65.39

We are now at 384+62.09
211+65.39
17296.70

214+89.5
213+95.6
83.9

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½

For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	25.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9+(20—16)÷2 or 2 ft. added to 41.9 =43.9. For slopes of 1 on 1 see inside of front cover.

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