Our Leather Bound Engineers Note Books are carried in the following rulings:

No. 380 LEVEL BOOK. Left and Right Hand Page the same as Left Hand Page of this Book.

No. 382 FIELD BOOK. Left Hand Page as in this Book, Right Hand Page 4 x 4 to the inch, Center Line Red.

No. 384 MINING TRANSIT BOOK. Left Hand Page as in this Book, Right Hand Page 8x8 to the inch, Center Line Red.

No. 385 FIELD BOOK. Left Hand Page as in this Book, Right Hand Page 8 vertical and 4 horizontal lines to the inch, Center Line Red.

We also carry the Note Books listed above, bound in extra strong Fabri-Hide (otherwise the same quality of book), which can be furnished at a somewhat lower price.

In ordering Fabri-Hide covered books, add the letter *"F"* to catalog number.

THE FREDERICK POST CO.

ENGINEERING and DRAFTING SUPPLIES

IRVING PARK STATION

CHICAGO, ILL.

7 53-57 Indexed 11/10/98 mw

O.R.-S.D. 2nd. Main Pipe Line

INDEX

C line - not used

Sta. Deflec Bear.

Use Line as Shown in Book #270. Page 53.

10'
N 10° ~~W~~ E

606+84.59 P.T.

Δ 8°-39' L
D 8°
R 716.78
T 54.21
L 108.13

606+30.67 17°-18'
8°-39' L

+84.59 4°-19½'
+75 3°-56½'
+50 2°-56½'
+25 1°-56½'
606+00 0°-56½'

605+76.46 P.C.

31'
N 1° ~~W~~ E

604+37.23 P.T.

Δ 5°-58' R
D 8°
R 716.78
T 37.35
L 74.58

604+00 11°-56'
5°-58' R

603+62.65 P.C.

29'
N 7° ~~W~~ E

See Book 270 Page 52

original running line ~~Stay~~ to & not Ranahan

601+27.18

Parker
Converse
Hill
Simpson

8/22/29

608+38 ← 15'

608+15

Trestle

607+95 Draw

Span

607+88 ← 15'

607+80

607+16

Span

Draw

607+00

P.I. ← 15'

605+85

Span

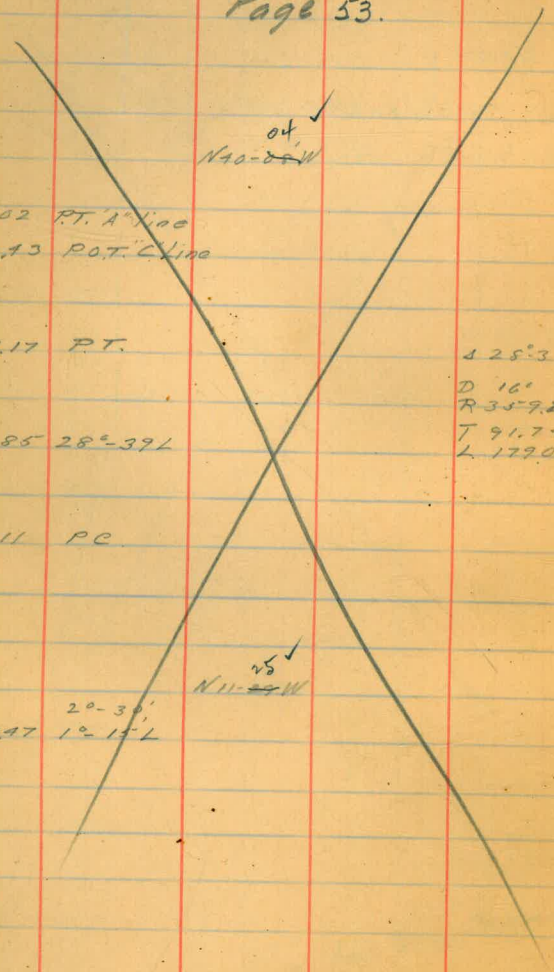
605+73 Draw

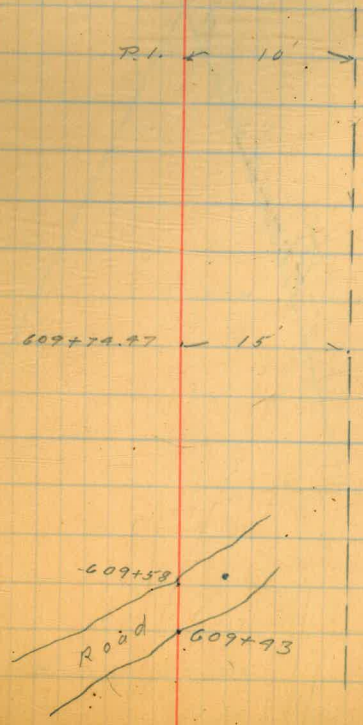
605+61

601+27.18 ← 5°9.5'

Sta. Detlec. Bear.

Use Line as shown in Book #270 Page 53.





B.M.	0.11	381.64		381.53
			12.91	368.73
	0.05	368.75		
603+62.04			4.7	64.7
604			8.3	60.5
+15			9.7	59.1
+37			12.6	56.2
T.P.			12.80	355.95
	0.63	356.58		
+50			1.8	54.8
+70			5.0	51.6
T.P.			12.61	343.97
	0.58	344.55		
603			2.3	42.3
+20			6.6	38.0
+40			10.2	34.4
+50			13.1	31.5
T.P.	11.10	342.62	13.03	331.52

Abandoned

Air val.ve at 603+00

i/L 604+37 pcg

pcg 604+93

pcg 603+50

	342.62		
605+65		12.2	330.4
+73		15.0	27.6
+85		10.2	32.4
606		6.2	36.4
+15		5.9	36.7
+27		3.7	38.9
+50		3.8	38.8
+75		3.5	39.1
+85		2.5	40.1
607		7.2	35.4
+10		12.7	29.9
+24		6.6	36.0
+37		6.4	36.2

Abandoned

	342.62		
607+85		10.6	332.0
+67		9.2	333.4
+78		10.1	325
+93		15.0	276
608+03		5	281
+17		7.5	351
+30		4.3	383
T.P.		0.33	342.29
	12.70	354.99	
+60		7.1	479
T.P.		0.15	354.84
	13.12	367.96	
609		9.8	582
+15		4.4	636
TP		0.32	367.64
	11.80	379.44	
+35		9.3	701

Abandoned

pcg 608+43

pcg 608+91

pcg 3R 609+35

		372.41		
609+44			8.4	71.0
+65			7.2	75.2
+69			2.0	77.4
+75			1.1	78.3
T.P			1.1	378.25
	10.99	389.24		
+87			8.4	80.8
610			7.1	82.1
+25			4.3	81.9
+50			2.7	86.5
+75			1.8	87.4
611			2.4	86.8
+18			3.8	85.4
+25			4.9	84.3

Abandoned

Hub 609+74.47

	389.24		
C11+50		11.6	377.6
+65		15.2	374.0
+76		18.9	370.3
+86		22.6	366.6
C11+89.93 = C11+90.02		24.0	365.2
B.M.		7.70	381.84

Abandoned

Air valve C10+85

D' Line (Alternate)
Chollas to Lantana

805+43.56 D Line
808+59.82 4°39½ R

Abandoned

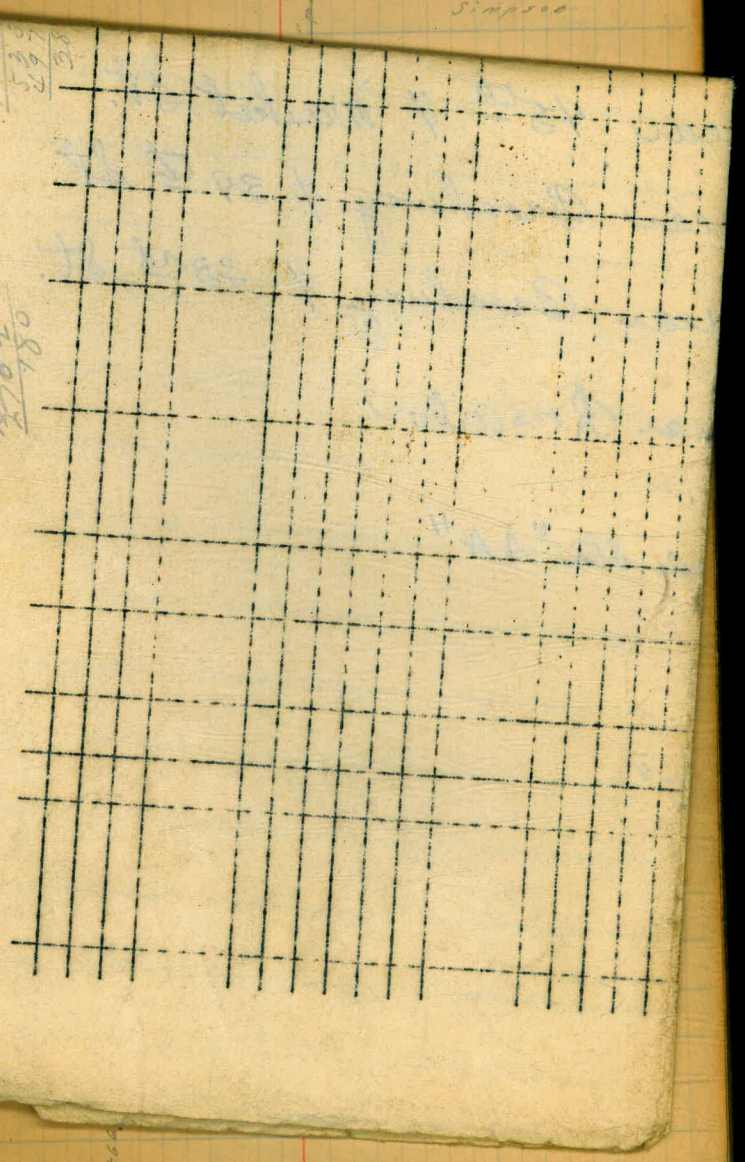
9-24-30
801+96.96 4°-42 L

800+89.34 P.I.

Clear

7/22/29
Parker
Converse
Hill
Simpson

8



F.B. 778
274
76

File 2100
5091
3554
2853-3, 14C
2853-2, 14C
3296-14C
3513
2853-5, 14C
2853-6
2853

Bonita P.L. Lining
List of Additional field Info Req'd

11/16/50
R.M.

1. At Bonita Wye Sta 0+00 — F.B. 778 pg 30 F.B. 274 pg 58 ✓

~~(1) Sta on Otay 2nd P.L. of Bonita Outlet~~ ✓ ✓

~~(2) Otay Sta & Bonita Sta of X-ing 0+60± Bonita~~ ✓

~~(3) Sta & contents of Venturi chamber ? dimensions~~ ✓

~~(4) Elev of top of Otay P.L. at Bonita outlet~~ ✓

~~(5) Elev of top of Bonita P.L. at Otay X-ing~~ ✓

~~(6) Is venturi on slope or level ? elev.~~ ✓

~~2. ? Sta of 30" Nord. P.V. Sta 1+45± F.B. 778 pg 30~~ ✓

~~3. ? Sta of elev 355.7 on top pipe 1+22± FB 274 pg 58 (1+21± ?)~~

~~4. Should be cathodic Sta near Glen Abbey Chapel need sta of (Sta 22+00±) rectifier pole and sta of cable connection~~ FB 778 pg 31 ~~File No 3554~~ ✓

~~5. Tel Pole 46600211 shown Sta 23+64 would be in middle of Glen Abbey Rd~~ F.B. 778 pg 31 ~~chge Sta~~ Sta 26+36 ✓

~~6. ? angle of roads in Glen Abbey 31+66 FB 778 pg 32~~

~~7. ? Sta & angle of B.W. fence Sta 41+00± FB 778 pg 33~~ ✓

~~8. ? Sta of intersection of prop line and existing Pipe Sta 46+67.50~~ FB 778 pg 33 ?

~~Is 46+67.50 intersection or at right angles to 1½" I.P. 5.90' rt.?~~ RT ✓ ✓

~~9. Sta of cathodic cable connection Sta 50+88±~~ File 2853-3, 14C FB 778 pg 34 ✓

~~10. Sta 67+19.35 is AVA 2" or 4" FB 778 pg 35~~ — 67+19.35 is 30. Edge of VAL CHAMBER

~~11. ? Sta of new 4" B.O. Sta 95+30± FB 778 pg 37~~ 67+21.5± is 0.4" AVA ✓

~~95+33.5~~ ✓

~~12. ? Sta of 2, 8" on. shade trees FB 778 pg 38~~ 110+30± File 2853-2, 14C

13. ~~? Sta cathodic cable connection Sta 105+50± FB 778 pg 38~~ 105+59 ✓

14. Sta. 118+50± ~~? Sta. of beginning & end of oil berm.~~ 2' RT 118+25± ✓

15. Sta. 120+00± ? any evidence of Seaville St. FB 778 pg 40 None ✓

16. Sta ~~121+00~~ 120 ? 30' ℄ 29± from P.L. or from curb FB 778 pg 40 from P.L.

17. Sta ~~121+44.5~~ 120+44.5 ? 2" B.O. on what FB 778 pg 40 or 7.6" Dist MAIN End

~~18. Need elev. of top of pipe Sta 124+20 F.B. 274 pg 45~~ See pg 48

19. ~~Sta 124+00~~ Sta. 124+00 ~~Is Roanoke open?~~ To EAST - Nor. ½ St is graded only. ~~YES paved?~~ No! FB778 pg 40 ✓

20. ~~Sta 134+00~~ ? ~~paving of Cumberland FB778 pg 40~~ Concrete 40'

21. Sta 141+00 ? " " " Albemarle FB778 pg 40 " 40'

22. Sta 149+00 ± Plans show 4" B.O. check in field FB778 pg 41. YES

23. Sta 148+00 ? paving of Potomac FB778 pg 41 Concrete 40 (Also Rolivar 30' Conc Pav't

~~24. Sta 165+87 ? Sta of cable connection FB778 pg 43~~ Catholic "C", File 3296-14C ✓

25. Sta 178+65 ± angle pt. should be tied down for ahead stationing FB 789 FB778 pg 42 ✓

26. Sta 208+55 ? Sta of cathodic cable connection File 3513 ✓

27. Sta 230+00 " " " " " " FB 76 File 2853-5, 14C ✓

28. Sta 253+56 " " " " " " FB File 2853-6 ✓

29. Sta 318+50 " " " " " " FB File 2853 ✓

30. Sta 407+20 " " " " " " FB File FB 778 pg 11 ✓ check gas line before field check

F.B. 778
27
71

5-10

Bonita P.L. Replacement & Lining
Cathodic Protection Sta.

2-10-50
RM

Station	Pipe Line Station	Morrow 10-23-44 Cathodic Control	Location -
"A"	50+00	50+00	In Lemon Grove near Sweetwater River
"B"	105+50	105+50	South & East of the south end of double pavt. (Reo Drive ?)
"C"	166+00	165+63	South of Paradise Valley Road near decomposed granite quarry
"D"	208+55	208+55	North of Division Street
"E"	230+00		near Santa Isabel & Olvera Streets in Valencia Park
"F"	253+63	253+56	South of Churchward & east of Euclid
"G"	276+00	276+62	Imperial Ave. east of 47th St.
"H"	318+50	319+40	Near 45th & Market St.
"I"	371+00	376+88	Near Broadway & 39th St.
"J"	417+20	417+20	Near Broadway & 33rd St.
"AA"	approx 22+00		So. near Rancho

no find 10.50 11-10-50 RM

1. Have Progress verify. ok add Sta "AA"
2. Have Field Party locate.
3. Put on drawings.

all accounted for except Sta "I"

Form 313

CITY WATER LABORATORY
Bacteriological Work Sheet

Date

Hr.	No.	SOURCE *With $Na_2S_2O_3$	Taste	Free Cl_2	Total Cl_2 (OT)	pH	Lactose Broth Inoculation 10	1	0.1	Confirmatory Media BGB	EMB	GS	LB	Coli-form Group
		El Cap P L; Alv P P												
		Murray P L, Alv P P												
		Murray resv, surf.												
		Chollas resv, surf.												
		L O resv, surf. Harv. A												
		L O F P, unfilt, unchl.												
		L O F P, filt, unchl.												
		San Dieguito resv, weir												
		*Univ. Hts. resv effl.												
		49th & Imperial												
		Lantana Drive, steel												
		*T P resv effluent												
		*Murray E P, 69th & mohk.												
		*Alvarado E P, Ft. Texas												
		*T P resv, influent												
		31st & Broadway												
		*Marine Rifle Range												
		*66th & El Cajon												
		T P Housing												
		3974 Goldfinch												
		2870 Fifth Ave.												
		El Capitan Camp-P l												
		Morena - well												
		Barrett - resv												
		San Dgto - S F I D												

D' Line (Alternate)
Chollas to Lantana

805+43.66 D Line
=
805+59.82 4°39½' R

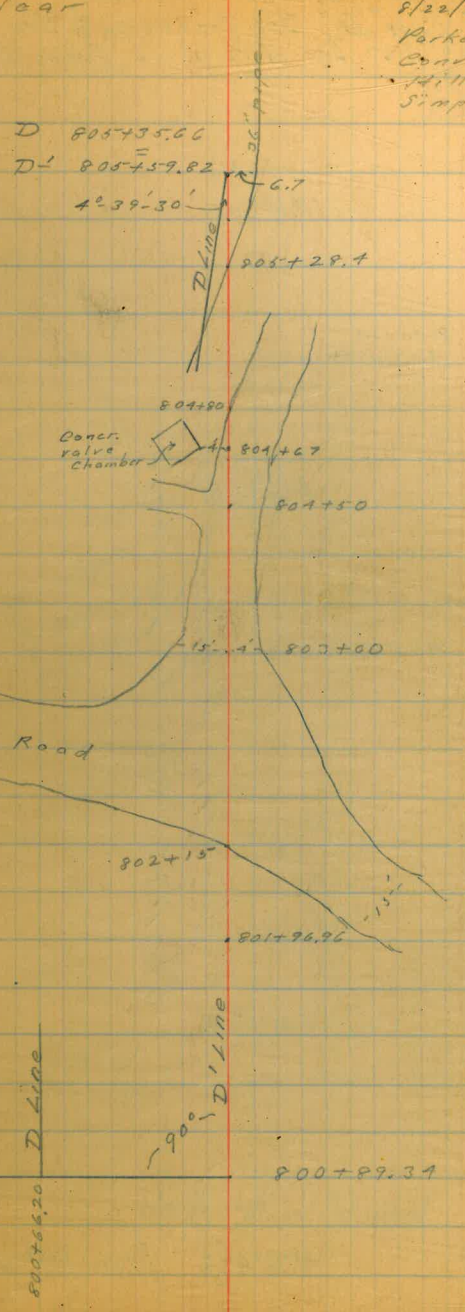
Abandoned

9-24-30
801+96.96 4°-42½' L

800+89.34 P.I.

Clear

8/22/29
Parker
Converse
Hill
Simpson



O.R.-S.D. 2nd. Main Pipe Line.
Alignment Line "D" Sta. 800+66.20 to Sta. 856+06.23.
See F.B.# 273. P. 37 for divergence from A" Line.
Along old 24" pipe line

N 61° 20 W

802+14.62 — 9-11-30 — 4°-5-2 R

N 66° 12' W

801+41.26 — 4°-35-6" L

N 61° 17' W

Use this Alignment from Challis Hts. to Lamtama.

800+66.20 — Angle 90° L per R.O.W.
N 28° 43' E from Bk.# 273/37

9
8/23/29

Parker
Converse
Hill
Simpson

Road 802+25

802+85

Road

802+14.62

802+01

pump House

12' 12'

801+61

rein. Concr. box

801+62.3

3.5

801+5.6

801+52.3 — 2.5

7.9 — 801+51.8

15'

R. Concr. box

801+49.7

25'

6.6 — 801+41.26

24" pipe

801+30.5 — 6.2

6.3

40° 10' 23"

801+22 — 13.7

800+93

Wood box

800+82.0

13.5 — 1.2

9°

24" pipe

800+66.20

6.6

24"

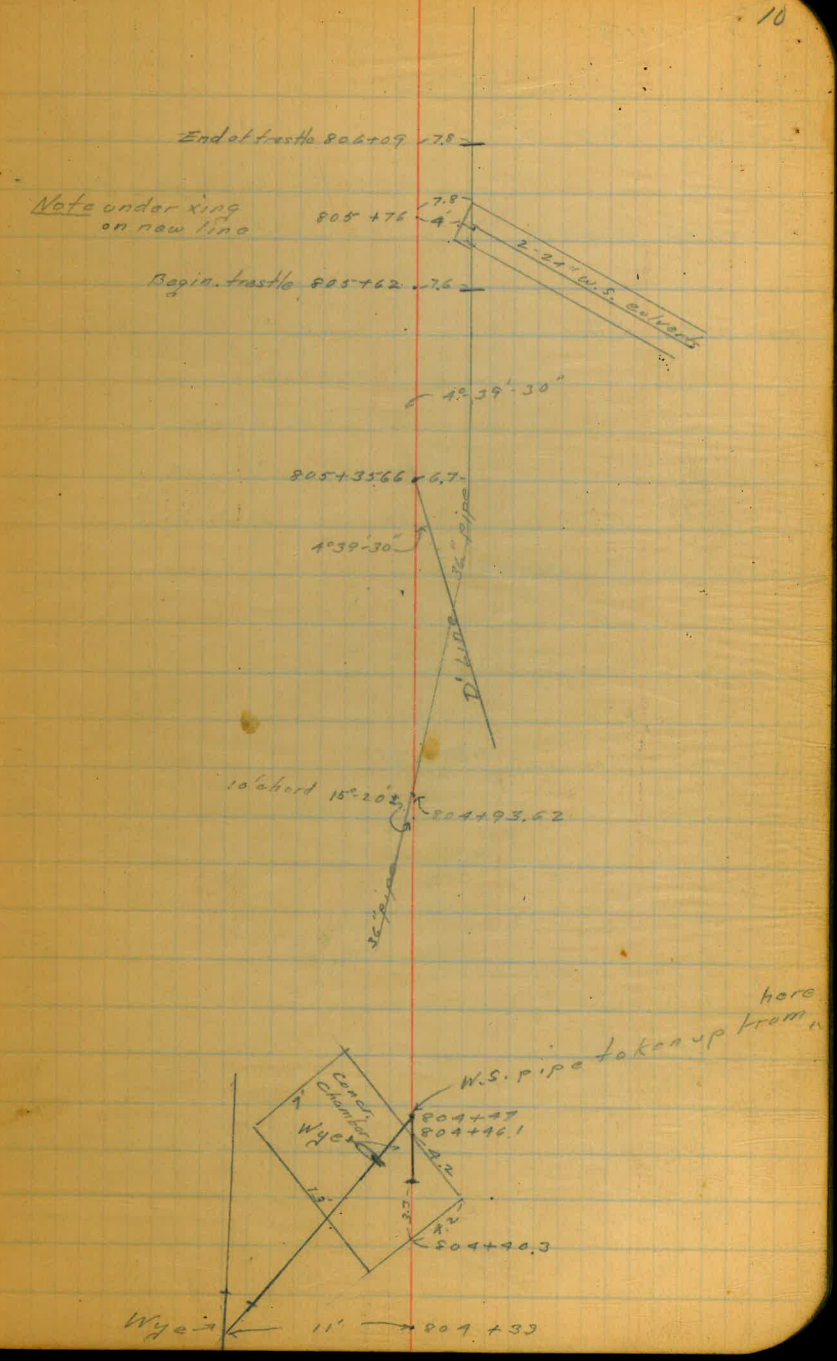
soil wood

"D" Line

805+35.66 P.O.T.

N61°20W

804+37.39 P.O.T.



"D" Line

N55°14'W

825+43.19 P.T.

825+05.13 6°-06' R

824+66.94 P.C.

817+47.08 P.O.T.

N61°20'W

Δ 6-06R
D 8°
R 716.78
L 76.25
T 38.19

826+22 - 7.9 - Gate valve

Begin. of pipe 825+27

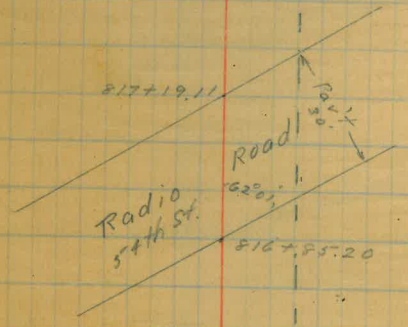
End of pipe 824+60

Begin of pipe 823+58

End of pipe 820+90

817+47.08

817+35 begin. 24" pipe



813+00 - 7.8

Line

24" pipe

36" pipe

"D" Line

12

837+13.78 P.O.T.

N55°47'W

828+57.61 P.O.T.

834+15 – 84

832+05 – 87 –

831+15
edge of wash

829+70 edge of wash

829+25 road 10'

road 36'

"D" Line

N 67°53' W

818+80.60 P.T.

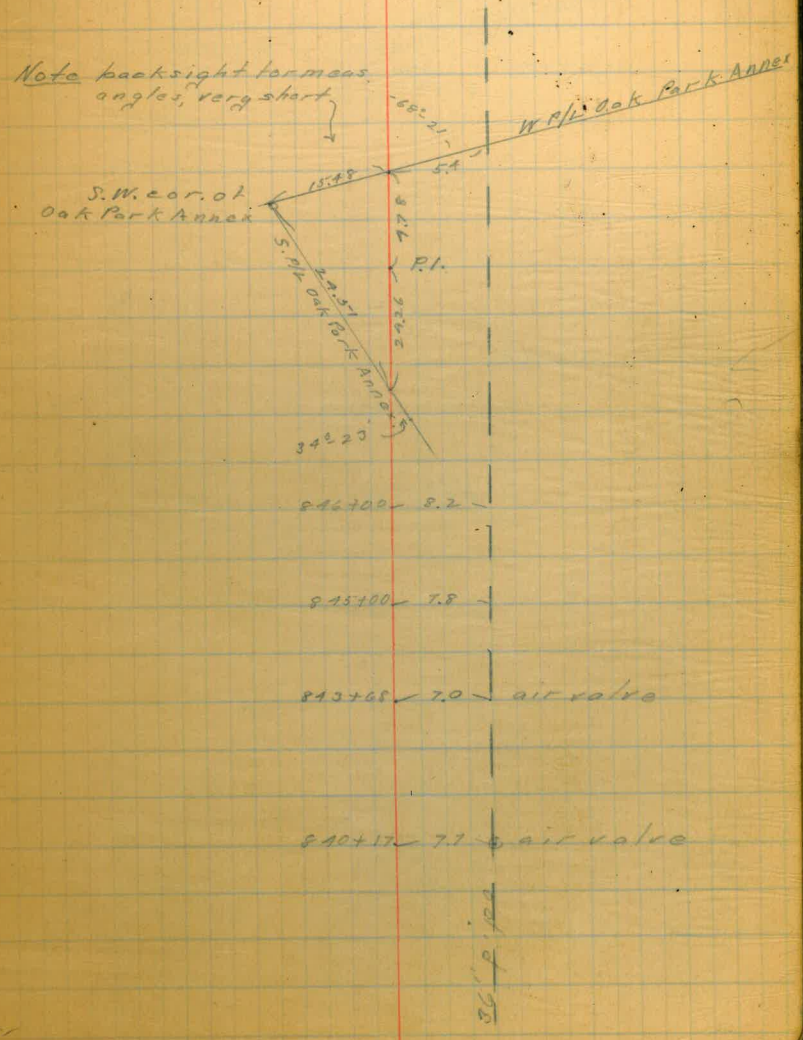
25°-18'
818+16.46 12°-39' L

Δ 12°-39'
D 16°
T 39.82
R 359.26
L 79.06

817+76.64 P.C.

N 55°14' W

810+03.64 P.O.T.



"D" Line.

Contd. on Page 31 Book # 272.

Equation —

855+13.62 A line
= 855+06.23 D "

N34°29'W

(Map # 1347 shows N35°00'W)

66°-48'

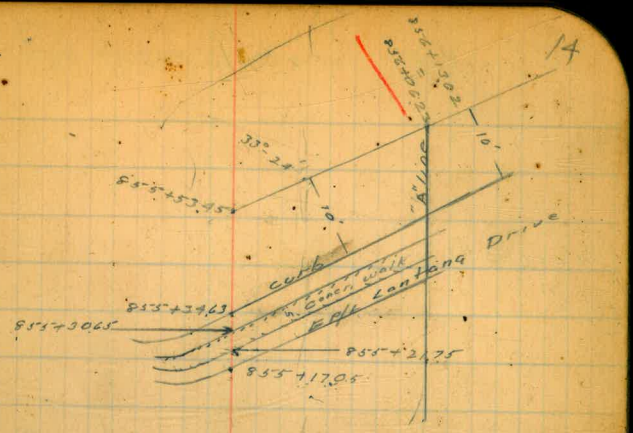
855+53.45 33°-24' R

855+91.75 P.O.T.

N67°53'W

849+00 P.O.T.

14



853+21 ℄ A

852+00 ℄ 33°

End at 31 pipe 851+87

860+60

Road

850+31

℄ 36" pipe

Pipe line location from 45th & Hilltop to Otay 2nd. main pipe line

1/20/41
Hill
Soper
Brooks
Hodgeson

15.

Mag.

9+36.65 P.O.T.

10°

E Hilltop Dr.

Pipe Line Loc.

0+55 Edge Asphalt Pave.

0+11 - edge Asp. Pave

Pow pole

123.0

Air Valve

Air Valve

0+00

10'

180.0

Hydrant

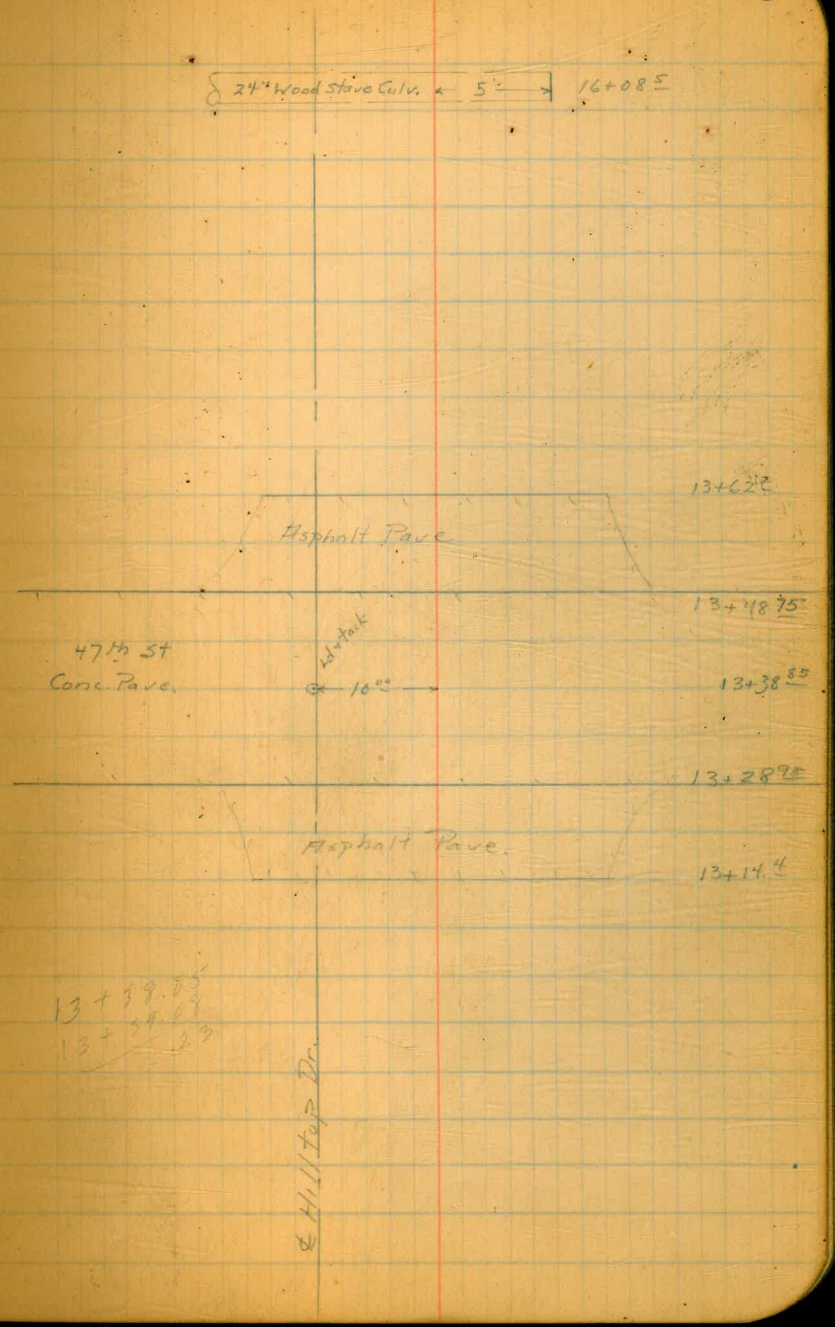
Bond to Pipe Line

N. 74° 30' E (Not corrected)

45th St.

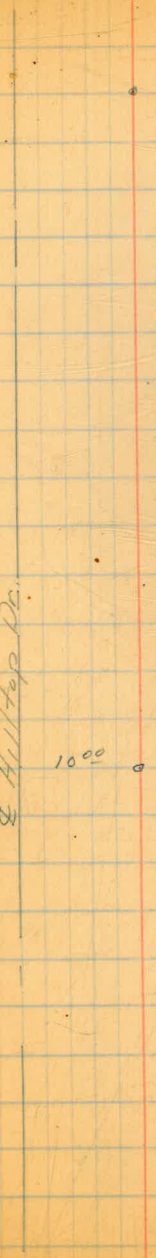
0+00

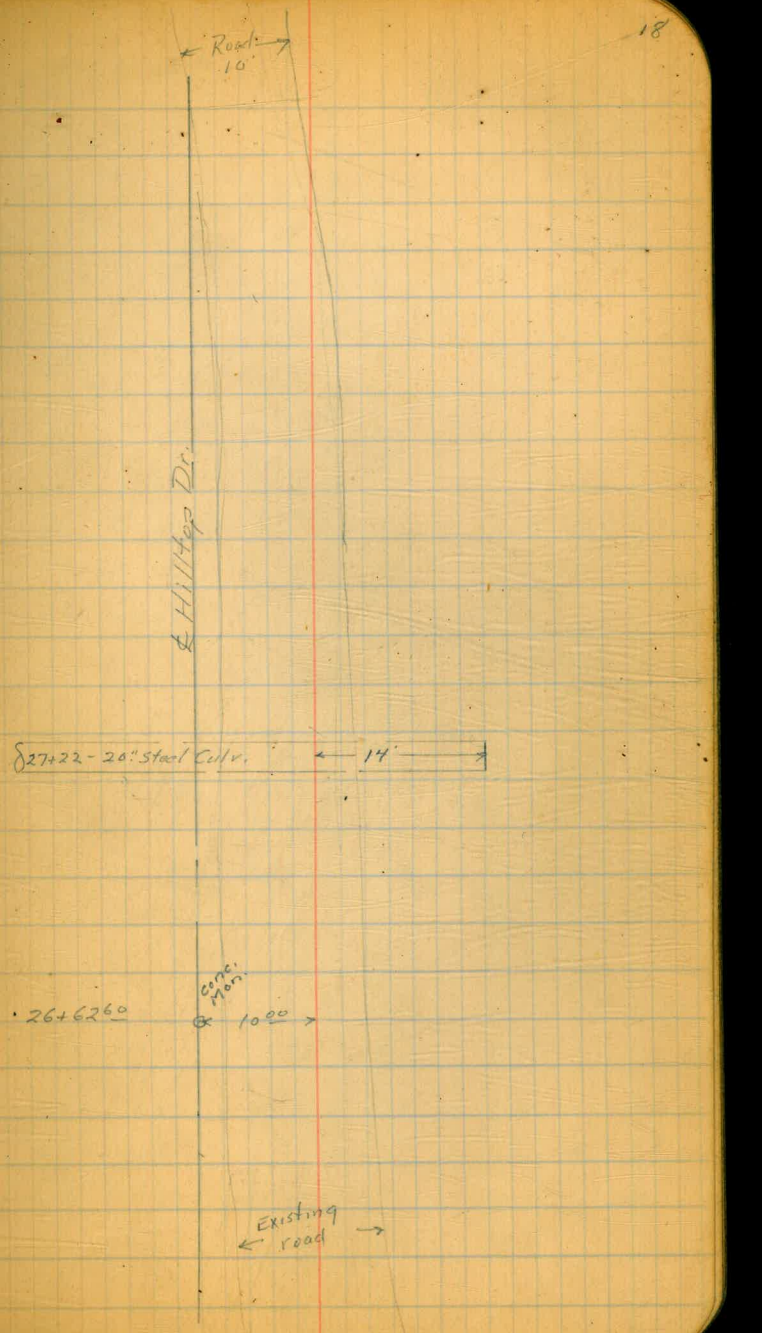
14+00 P.O.T.


24" Wood Stave Culv.
5'
16+08.5
13+62.2
Asphalt Pave
13+48.75
47th St
Conc. Pave.
Hydrant
10'
13+38.85
13+28.95
Asphalt Pave.
13+14.4
13+39.83
13+34.09
13+23
E Hill Top Dr.

24+00 P.O.T.

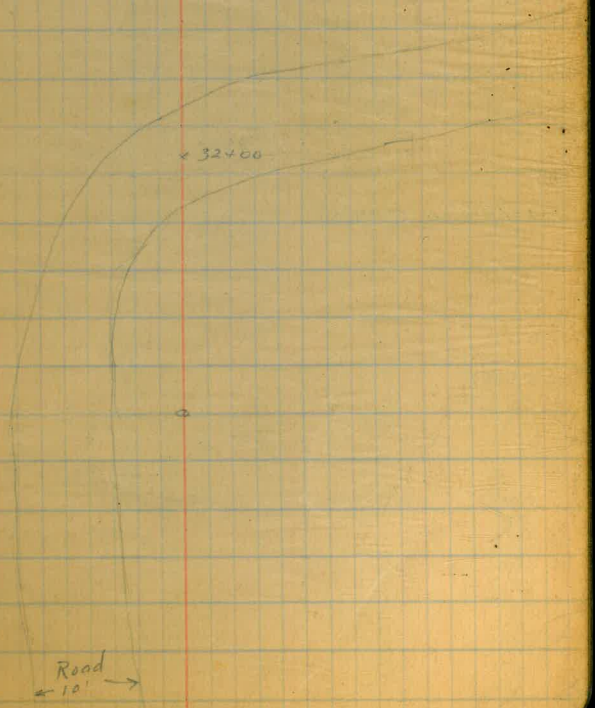
19+24.07 P.O.T.




Road
10'
℄ Hilltop Dr.
℄ 27+22 - 20" Steel Culv.
14'
26+62.60
conc. mon.
10.00
Existing road

31+07.2 + P.I. = 5

31+01.20 P.O.T.

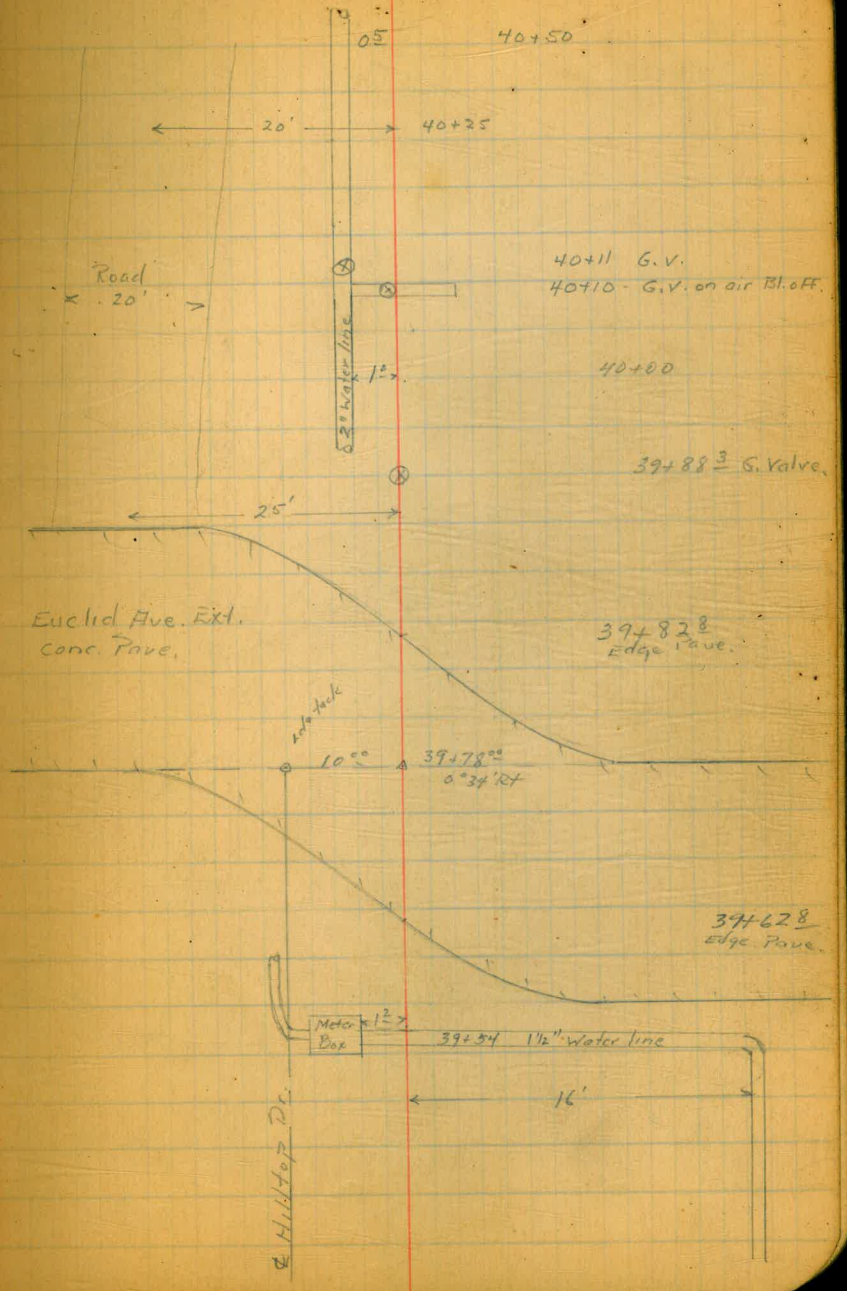


May

40+24.75 P.O.T.

N 75° E (Crest Carrollton)

39+78.00 ∠ 0°34' Rt



1/21/41
Hill
Soper
Brooks
Hodgeson

2" l/mc

43+45

42+30 - Edge of wash

0.7
2" l/mc

43+14

42+50

43+10 - Edge of wash

2" l/mc
0.3

41+25

Road

2" l/mc

41+00

48+25 — 2" line — 27

48+00 — 2" line — 15

2" line

47+72

07 — 47+40

13 — 47+00

2 3 — 2" line — 46+60

46+30

Line revision on Hilltop Drive

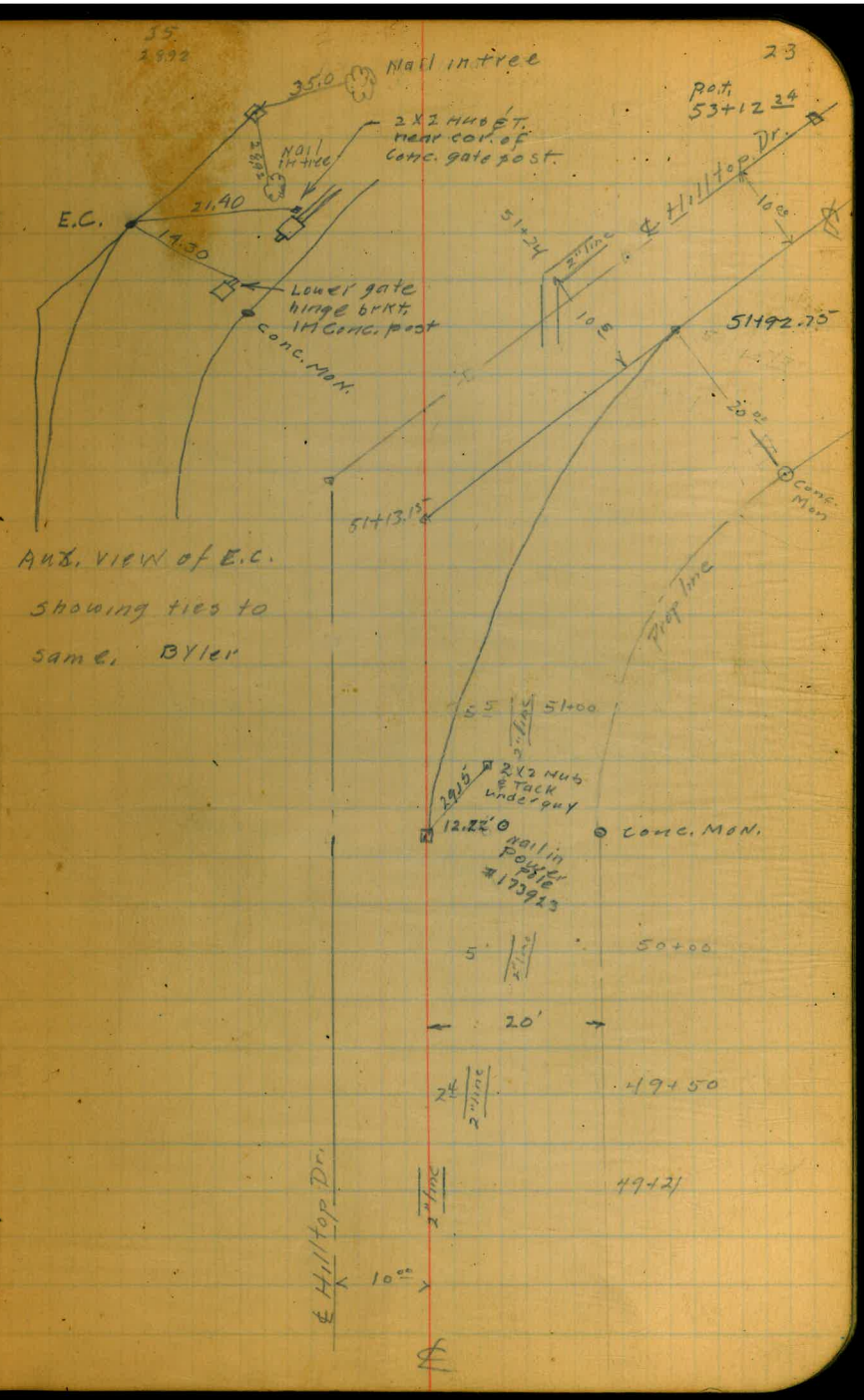
Curve Run in 2-3-44 by Byler King Otten.

Mag

		Defl.	
51+92 84	Ahead		
51+76 58	E.C.	31°17'30"	
51+50		25°30.2'	
		S 42°15' E Not corrected	
51+13.15	L 62°35' Rt		
			Δ = 62°35'
51+00		14°33.7'	T = 79.69'
			L = 143.09'
			Δ/1 per ft. = 13.13'
50+60		3°37.2'	R 131.2'
50+33 46	P.C. Rt.		

(See Pg 53)

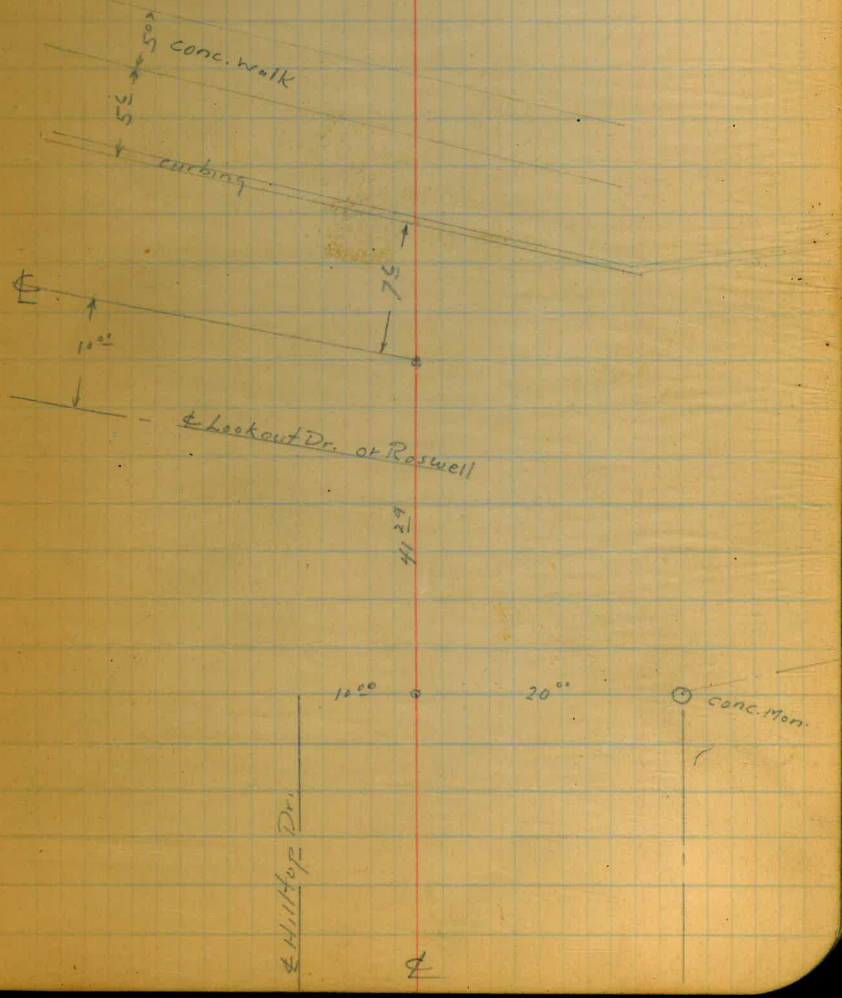
35
2892



N 51° E

55+29 $^{0}_{14}$ ∠ 86° 29' Lt

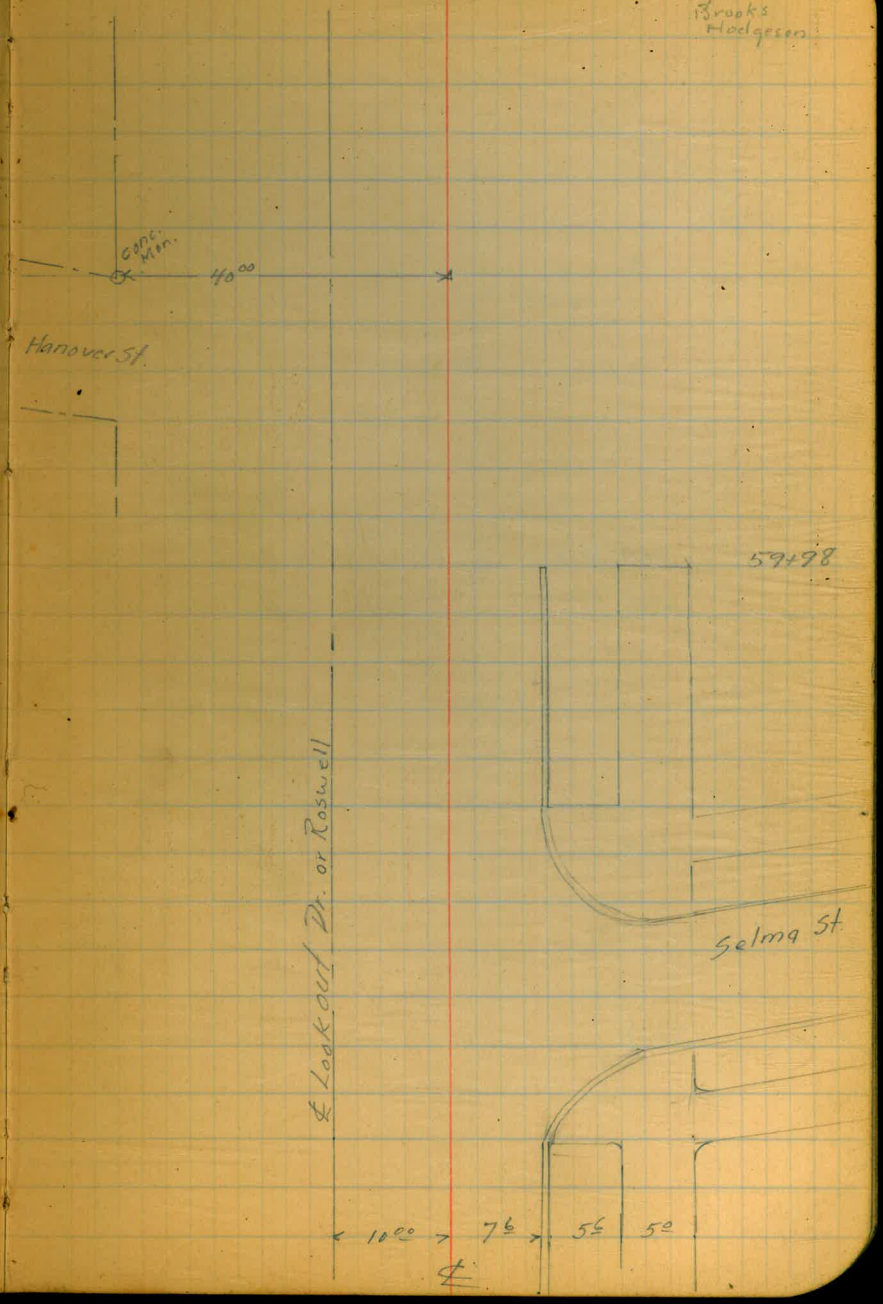
54+87 ^{75} P.O.T.



1/23/41
Hill
Soper
Brooks
Hodgeson

25

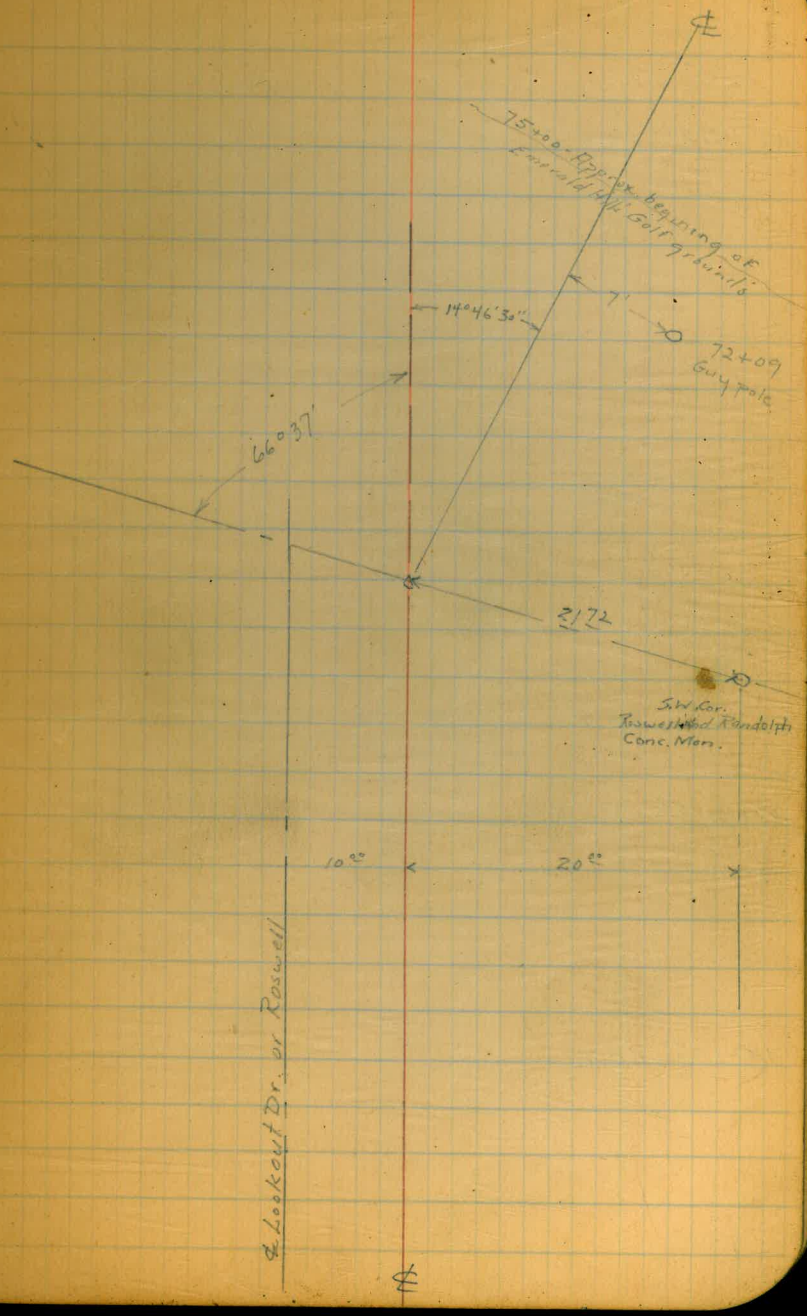
62+32 $\frac{35}{}$ ℄ 0°03'Lt



N65°40E

71+55.72 14°46'30" Rt

66+00 P.O.T.



1/25/41
Hill
Soper
Brooks
Hodgeson

93+11 27 P.O.T.

87+00 P.O.T.

88+35 58 P.O.T.

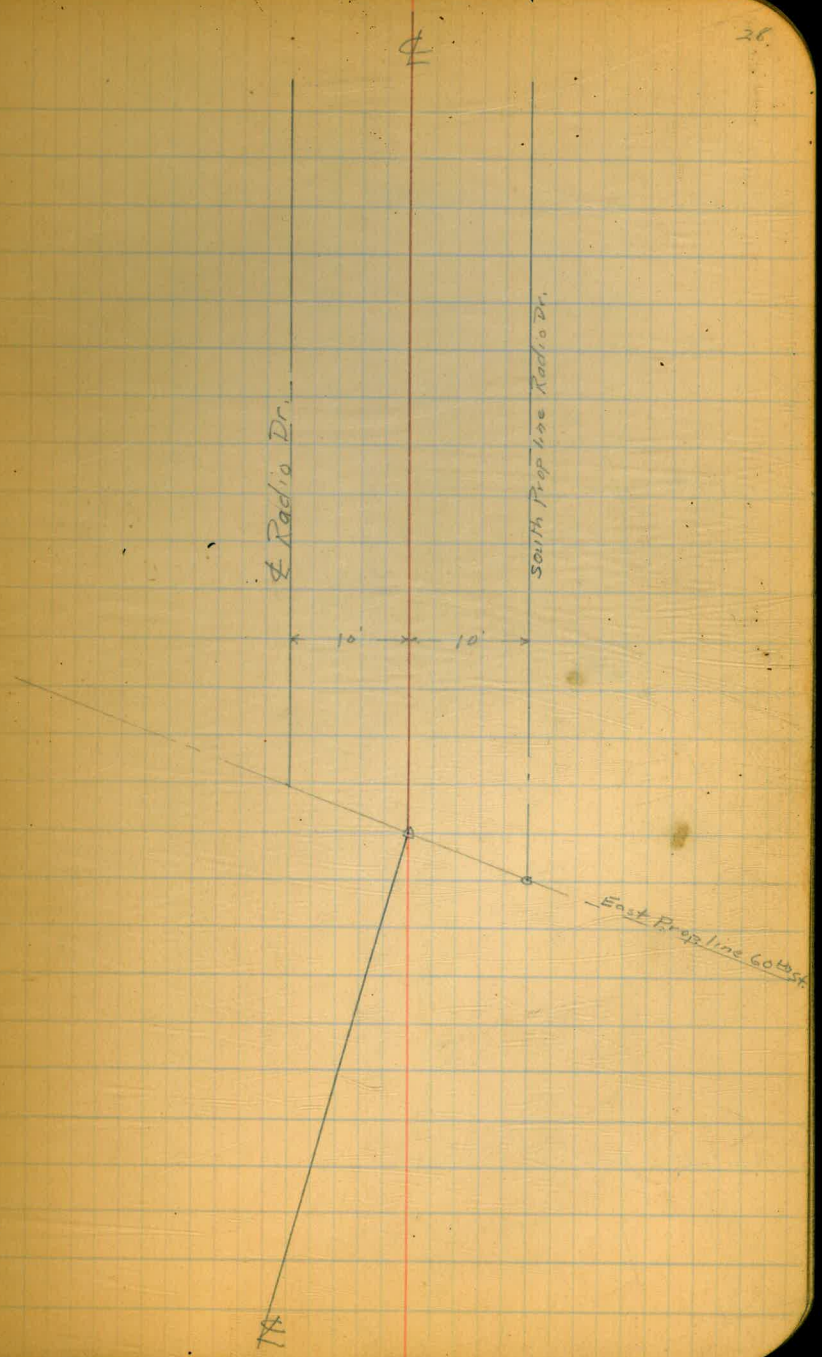
79+63 00 P.O.T.

90+50
Bottom of draw

88+50 - Approx edge of
Emerald Hills Golf Course

N 44°30' E

96+20.65 ∠ 20°57' Lt

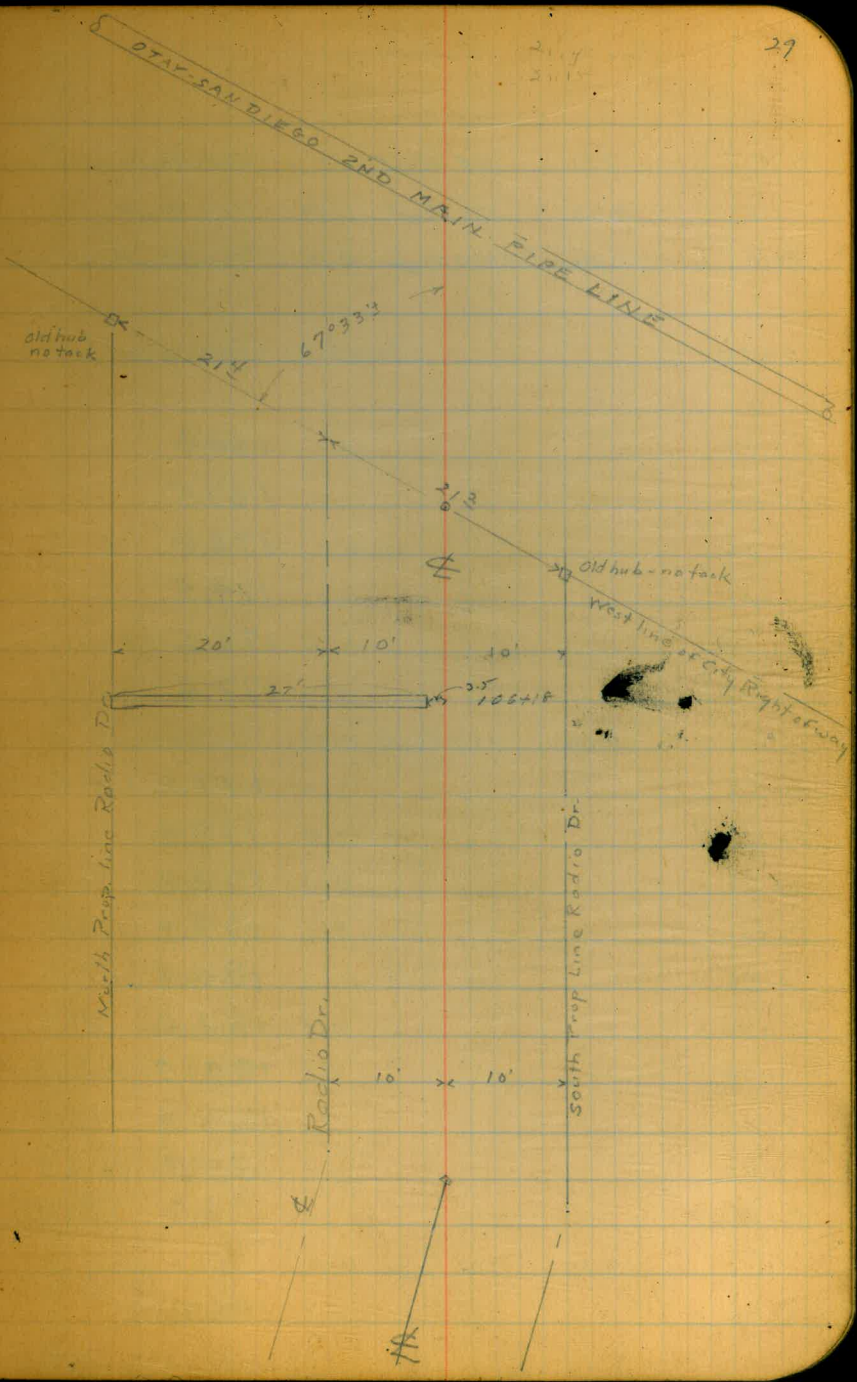


107+37.6 = ℄ 36" - 2nd main line

107+19.2 = P.O.T. on West line of City R/w.

N 33° E

99+21.8 L. 11°40' Lt



11/22/41
H. H.
Soper
Brooks
Hodgson

Profile levels over Pipe Line.

					Loc.
B.M.	9.23	168.08 ✓		158.85	B.P. N.W. Cor. of 45th & Market.
TP	9.09	170.68 ✓	6.49	161.59 ✓	
B.M.	11.59	178.54 ✓	3.73	166.95 ✓	Bolt head in Power Pole S.W. Cor. of 45th & Hilltop.
0+00			15.9	162.6 ✓	-1.8 to top of 20° bend
0+60			14.1	164.4 ✓	
1+00			11.0	167.5 ✓	
+50			6.1	172.4 ✓	
2+00			4.0	174.5 ✓	
+50			1.9	176.6 ✓	
3+00			0.9	177.6 ✓	
TP	9.64	187.86 ✓	0.32	178.22 ✓	
+50			9.9	~~177.9~~	178.0 ✓
4+00			9.4	~~178.4~~	178.5 ✓
+50			9.0	~~178.8~~	178.9 ✓
5+00			8.5	~~179.3~~	179.4 ✓
+50			7.7	~~180.1~~	180.2 ✓
6+00			6.8	~~181.8~~	181.1 ✓
+50			5.6	~~182.2~~	182.3 ✓
7+00			4.0	~~183.8~~	183.9 ✓
+50			2.4	~~185.4~~	185.5 ✓
8+00			0.9	~~186.9~~	187.0 ✓
TP	9.35	196.71 ✓	0.50	187.36 ✓	
8+50			8.1	188.6	

		196.71			
9+00			6.2	190.5	
+50			4.9	191.8	
10			4.4	192.3	
+50			3.6	193.1	
11			3.2	193.5	
+50			3.8	192.9	
12			5.3	191.4	
+50			7.0	189.7	
13			9.0	187.7	
+24			10.2	186.5	
+29			10.0	186.7	Edge Conc. Pave.
+49			9.9	186.8	Edge Conc. Pave.
+53			10.1	186.6	
14			8.9	187.8	
+50			9.8	186.9	
TP	0.18	184.06 ✓	12.83	183.88 ✓	
15+00			0.7	183.4	
+50			6.8	177.3	
+83			10.0	174.1	
16+00			14.0	170.1	
+06			14.2	169.9	
+08.5			17.8	166.3	Fl. line 24" W. ed Steel Culvert 5' Rt.
+08.5			14.6	169.5	" " " " " " 39' Lt.

		184.06		
16+50			10.2	173.9
17+00			5.7	178.4
+50			2.2	181.9
TP	7.66	191.32 ✓	0.40	183.66 ✓
18+00			6.0	185.3
+50			3.7	187.6
19+00			2.0	189.3
+25			1.7	189.6
+50			1.9	189.4
20			3.2	188.1
+50			5.0	186.3
21			7.2	184.1
+25			8.2	183.1
+50			9.7	181.6
22			12.7	178.6
TP-B.M.	1.00	179.42 ✓	12.90	178.42 ✓
+50			2.1	177.0
23			3.9	175.5
+50			5.2	174.2
24			6.8	172.6
+50			8.8	170.6
25			13.0	~~176.4~~ 166.4
T.P.	0.08	166.73 ✓	12.77	166.65 ✓
+50			4.6	162.1
26			9.5	157.2

Set B.M. Nail in Power pole 15' Rt 22+50

		166.73		
T.P.	0.60	154.58 ✓	12.75	153.98 ✓
26+50			3.3	151.3
+85			7.6	147.0
27			8.5	146.1
+22			9.3	145.3
"			14.4	140.2
"			13.3	141.3
+50			8.5	146.1
28			3.2	151.4
+50			1.2	153.4
T.P.	12.58	166.89 ✓	0.27	154.31 ✓
29			9.3	157.6
+50			3.5	163.4
30			0.9	166.0
T.P.	4.39	171.95 ✓	0.33	166.56 ✓
+15			4.0	168.0
+50			2.4	169.6
31			1.5	170.5
+50			3.4	168.6
32			5.4	166.6
+28			5.7	166.3
+50			7.7	164.3
+90			10.3	161.7
33			11.7	160.3
T.P.	4.74	164.03 ✓	12.66	159.29 ✓

F.L. 20" steel culv. 14' R
" " " " 17' L

		164.03		
33+50			7.9	156.1
+65			12.3	151.7
34			9.4	154.6
+19			8.3	155.7
+50			11.0	153.0
+66			6.4	157.6
35			2.3	161.7
+50			2.0	162.0
36			2.3	161.7
+10			3.8	160.2
+45			3.0	161.0
+60			5.1	158.9
37			11.6	152.4
T.P.	1.01	152.97	12.57	151.46
+25			5.4	147.1
+53			15.6	136.9
+90			17.6	134.9
+95			19.3	133.2
38			15.7	136.8
+23			5.8	146.7
+41			0.2	152.3
T.P.	13.01	165.21	0.30	152.17
+65			4.6	160.6
39			3.1	162.1
+22			1.5	163.7

		165.21			
+5.4			3.0	162.2	
39+62.8			5.1	159.8	W. edge part Euclid Ave
+82.8			5.5	159.7	E. " " " "
+88			5.1	160.1	ground at valve chamber
"			5.6	156.6	Top of gate valve stem
+94			2.3	162.9	
40			2.6	162.6	
B.M.			5.13	160.08	Copper tack in lead plug 10' L. of 39+78 sta. 51+13
40 - 1' L			3.2	162.0	top of 2" water pipe N.B. pipe close to surface to
40 - 10 L			1.8	160.4	S. edge of graded road
40+25			3.1	162.1	
" 8' L			5.2	160.0	S. " " " "
+50			5.9	159.3	
" 8' L			7.7	157.5	S " " " "
+75			8.6	156.6	
" 5' L			11.1	154.1	S. " " "
41			10.9	154.3	
" 5' L			19.2	151.0	S " " "
T.P.	0.40	152.52 ✓	13.09	152.12 ✓	
+15			0.5	152.0	
" 5' L			4.2	148.3	S. " " " "
+39			7.0	145.5	S. Edge of road
T.P.	0.12	139.66 ✓	12.98	139.54 ✓	
42			3.6	136.1	
+50			10.0	129.7	

		139.66			
TP - BM	6.17	134.01 ✓	12.09	127.57 ✓	Nail in tel. pole 10' R 43+18
43+00			8.5	125.5 ✓	
+10			8.8	125.2 ✓	
+11			10.0	124.0 ✓	creek
+30			10.6	123.4 ✓	"
+30			9.3	124.7 ✓	
+30			9.7	124.3 ✓	Top 2" W. pipe 0.6 R
+50			8.8	125.2 ✓	
44			8.1	125.9 ✓	
+50			6.3	127.7 ✓	
45			5.2	128.8 ✓	
+50			4.4	129.6 ✓	
46			3.1	130.9 ✓	
+40			1.3	132.7 ✓	
T.P.	13.01	146.65 ✓	0.40	133.64 ✓	
+60			10.1	136.6 ✓	
"			9.8	136.9 ✓	Top 2" W. pipe 2.2' R.
T.P.	12.90	159.20 ✓	0.35	146.30 ✓	
47			11.3	147.9 ✓	
+28			2.6	156.6 ✓	
T.P.	12.53	171.35 ✓	0.28	158.82 ✓	
+50			4.7	166.7 ✓	
T.P.	12.97	184.25 ✓	0.07	171.28 ✓	
+72			10.4	173.9 ✓	Top 2" W. pipe at ground surface on ℄
48			5.5	178.8 ✓	

		184.25		
48+20			2.9	181.9
T.P.	12.59	196.63	0.21	184.04
+31			10.2	186.9
+83			7.3	189.3
49			4.9	191.7
"			4.7	191.9
T.P.	12.76	208.94	0.45	196.18
+50.			8.9	200.0
T.P.	12.91	221.62	0.23	208.71
50			12.4	209.2
+50			6.1	215.5
T.P.	12.54	233.83	0.33	221.29
51			11.1	222.7
+13.5			9.2	224.6
+50			5.4	228.4
52			0.4	233.4
T.P.	9.31	242.76	0.38	233.45
+50			6.6	236.2
53			4.6	238.2
+50			3.3	239.5
54			2.7	240.1
+50			2.6	240.2
+87.5			3.6	239.2
55			3.8	239.0

Top 2" W pipe 1.4 L.

		242.76 ✓			
55+29.04			4.4	238.4 ✓	
B.M.			2.65	240.11 ✓	Set B.M. Nail in power pole 8' Rt 55+30
55+50			4.9	237.9 ✓	
56			5.8	237.0 ✓	
+50			6.3	236.5 ✓	
57			6.3	236.5 ✓	
+50			6.1	236.7 ✓	
58			5.2	237.6 ✓	
+50			3.3	239.5 ✓	
59			1.4	241.4 ✓	
TP	13.00	255.43 ✓	0.33	242.43 ✓	
+50			12.1	243.3 ✓	
60			9.6	245.8 ✓	
+50			7.0	248.4 ✓	
61			4.9	250.5 ✓	
+50			2.7	252.7 ✓	
62			0.5	254.9 ✓	
TP	12.82	268.16 ✓	0.09	255.34 ✓	
+50			10.9	257.3 ✓	
63			8.8	259.4 ✓	
+50			6.8	261.4 ✓	
64			4.6	263.6 ✓	
+50			2.3	265.9 ✓	

		268.16 ✓		
65			0.5	267.7 ✓
TP	3.67	271.57 ✓	0.26	267.90 ✓
+50			2.2	269.4 ✓
66			1.2	270.4 ✓
+50			0.9	270.7 ✓
67			3.4	268.2 ✓
+50			6.8	264.8 ✓
68			8.5	263.1 ✓
+50			9.1	262.5 ✓
69			9.3	262.3 ✓
+50			9.5	262.1 ✓
70			9.7	261.9 ✓
+50			9.8	261.8 ✓
71			10.1	261.5 ✓
+55 72 ✓			9.8	261.8 ✓
B.M.	12.85	274.98 ✓	9.44	262.13 ✓
72			12.2	262.8 ✓
+50			10.0	265.0 ✓
73			7.7	267.3 ✓
+50			5.4	269.6 ✓
74+00			3.5	271.5 ✓
+50			3.3	271.7 ✓
75			2.7	272.3 ✓
+50			1.8	273.2 ✓
76			1.2	273.8 ✓

Set B.M.: Nail in pole 10' Rt 71+50

		274.98 ✓		
TP	12.60	287.21 ✓	0.37	274.61 ✓
76+60			11.6	275.6 ✓
+70			8.9	278.3 ✓
+90			8.9	278.3 ✓
77			11.0	276.2 ✓
+50			8.6	278.6 ✓
+80			6.1	281.1 ✓
78			6.7	280.5 ✓
+50			3.6	~~281.6~~ 283.60 ? ✓
79			1.5	285.7
TP	1.86	288.82 ✓	0.25	286.96 ✓
+63			1.4	287.4 ✓
80			1.8	287.0 ✓
+50			2.9	285.9 ✓
81			5.0	283.8 ✓
+50			8.4	280.4 ✓
82			13.2	275.6 ✓
TP	0.66	276.49 ✓	12.99	275.83 ✓
+50			3.5	273.0 ✓
83			3.4	273.1 ✓
+50			4.3	272.2 ✓
84			4.5	272.0 ✓
+50			6.7	269.8 ✓
+70			9.0	267.5 ✓
85			16.2	260.3 ✓

		276.49		
85+05			17.1	259.4 ✓
+50			12.8	263.7 ✓
86			8.1	268.4 ✓
+50			7.4	269.1 ✓
87			6.1	270.4 ✓
+50			4.0	272.5 ✓
+65			3.4	~~272.7~~ 273.1 ✓
88			6.3	270.2 ✓
+35 58			9.9	266.6 ✓
+50			11.4	265.1 ✓
TP	0.85	265.77 ✓	11.57	264.92 ✓
+75			4.2	261.6 ✓
89			8.6	257.2 ✓
TP	0.24	253.10 ✓	12.91	252.86 ✓
+25			2.8	250.3 ✓
+50			11.0	242.1 ✓
TP	0.20	240.57 ✓	12.73	240.37 ✓
+75			5.3	235.3 ✓
90			10.9	229.7 ✓
TP	2.12	229.76 ✓	12.93	227.64 ✓
+35			7.6	222.2 ✓
+42			13.3	216.5 ✓
+60			13.2	216.6 ✓
+84			0.2	229.6 ✓
TP	13.68	242.62 ✓	0.22	229.54 ✓

Bottom of draw
" "

		242.62		
91+00			13.1	229.5
+20			7.2	235.4
+50			1.1	241.5
TP	13.05	255.37	0.36	242.32
92			4.8	250.6
TP	9.30	264.31	0.36	263.01
			0.00	264.31
+50			4.4	259.9
+75			1.5	262.8
93			0.5	263.8
+25			0.7	263.6
+50			3.6	260.7
94			12.1	252.2
TP	0.49	251.86	12.89	251.42
+50			4.1	247.8
95			7.4	244.5
+32			8.5	243.4
+44			10.4	241.5
T.P.	12.08	250.89	13.05	238.81
+38			14.8	236.1
96			14.0	236.9
+26.6			13.9	237.0
+50			12.9	238.0
97			12.4	238.5
B.M.			7.60	243.29

Set turn on opposite side of canyon

Bisec Δ

$\frac{+5.6}{32}$ $\frac{+2.0}{28}$ $\frac{+0.4}{12}$ $\frac{8.0}{6}$ $-\frac{3.1}{11}$

$\frac{+1.9}{30}$ $\frac{+0.3}{28}$ $\frac{0.0}{18}$ $-\frac{0.5}{7}$ $-\frac{1.3}{10}$

$\frac{+2.5}{30}$ $\frac{+1.0}{27}$ $\frac{+1.1}{19}$ $\frac{+0.9}{9}$ $-\frac{1.0}{10}$

Nail in tel. pole N.E. cor. 60th + Radio Drive

Rain

						L	R
		250.89					
97+50			9.0	241.9	✓	+4.5/30 +0.8/26 +1.0/16 +0.8/6	-1.1/10
98			5.6	245.3	✓	+3.1/30 +3.6/23 0.0/20 +1.2/11 +1.7/2	-0.5/3 -2.3/10
+50			3.6	247.3	✓	+3.0/30 +2.0/20 -1.0/18 +0.5/10 +0.8/2	-2.4/6 -3.3/10
99			2.1	248.8	✓	+3.1/30 +3.2/22 0.0/18 +5.0/11 +1.2/3	-1.4/4 -2.7/10
T.P.	10.77	261.49	0.17	250.72	✓		
+21.5			11.8	249.7	✓	+3.0/30 +3.3/29 +0.5/21 +1.7/10 +1.8/4	-2.1/10
+50			10.5	251.0	✓	+4.8/30 +4.1/27 0.0/20 +1.0/10 +0.9/2	-1.2/2 -2.6/10
100			8.3	253.2	✓	+4.1/30 +3.2/25 -0.6/18 +0.1/10	-2.4/4 -3.5/10
+50			7.4	254.1	✓	+4.2/30 +0.7/19 +0.2/10	-2.2/5 -3.6/10
101			5.5	256.0	✓	+4.3/30 +3.7/26 -0.6/20 0.0/10	-1.6/3 -3.1/10
+50			3.8	257.7	✓	+4.3/30 -0.2/20 0.0/10	-2.3/4 -3.3/10
102			2.9	258.6	✓	+4.5/30 +2.8/21 -0.4/17	-2.5/4 -4.1/10
+50			3.8	257.7	✓	+3.9/30 +2.0/20 +0.5/19	-2.2/4 -3.2/10
103			4.3	257.2	✓	+4.2/30 +2.4/21 +1.2/20 +0.9/2	-1.7/3 -3.2/10

		261.49		
103+5-0			3.4	258.1
T.P.	10.33	271.62 ✓	0.20	261.29 ✓
104			10.3	261.3 ✓
+5-0			6.6	265.0 ✓
105			5-0	266.6 ✓
+5-0			6.0	265.6 ✓
106			6.9	264.7 ✓
+18			7.9	263.7 ✓
"			6.6	265.0 ✓
+5-0			4.3	267.3
107			0.4	271.2 ✓
T.P.	7.86	279.10 ✓	0.38	271.24 ✓
+19.6			6.2	272.9
+37.6			5-6	273.5 ✓
B.M.			0.86	278.24 ✓
T.P.	0.27	268.83	13.06	268.56
			10.06	258.77 ✓

L			R	
+33/30	+1.1/21	+1.0/2	-1.6/3	-2.8/10
+36/30	+1.8/23	-0.1/20	+0.1/2	-1.8/4	-2.6/10
+3.3/30	+1.5/23	-1.0/20	-0.3/11	-1.7/4	-2.9/10
+2.5/30	0.0/20	+0.3/2	-1.6/3	-2.9/10
+1.2/30	+1.1/22	+0.8/1	-1.9/3	-2.4/10
+2.6/30	+2.7/17	+2.0/8 rd	-1.3/10

FL. 24" steel pipe culv. 3.5' L.

" " " " " 30' L.

+2.3/30	+0.6/23 rd	+1.0/4 rd	-1.3/6	-2.1/10
+1.8/30	+2.1/21 rd	-1.7/16	-1.0/14 rd.	-0.2/6	1.7/10
+1.3/30	+2.6/26 rd	-2.0/19	-0.6/12 rd	-2.4/10

-5.4 to top of 36" main = Elev. 268.1

Nail in Euc. tree N.W. cor. Radio Drive & city R.W.

Top of N. pier E. side - 0 for 2nd main P.L.

Check levels to 65th & Bach

	12.76	277.07		264.31
TP	12.37	289.15	0.29	276.78
	12.70	301.71	0.14	289.01
	12.96	314.47	0.20	301.51
	12.36	326.79	0.01	314.43
	12.08	338.74	0.13	326.66
BM.			4.61	334.13

Hub set across canyon from about sta. 92

Top of fire hydr. S.W. cor 65th & Bach St El. 334.13

N.B. This elev. from 2nd Otay pipeline constr. notes Starting B.M. at 45th & Market from City Engr. Office

(Note P.B. phoned Gas Co for soil Indices. 12/28/43. copied in Bk. by T.H.)

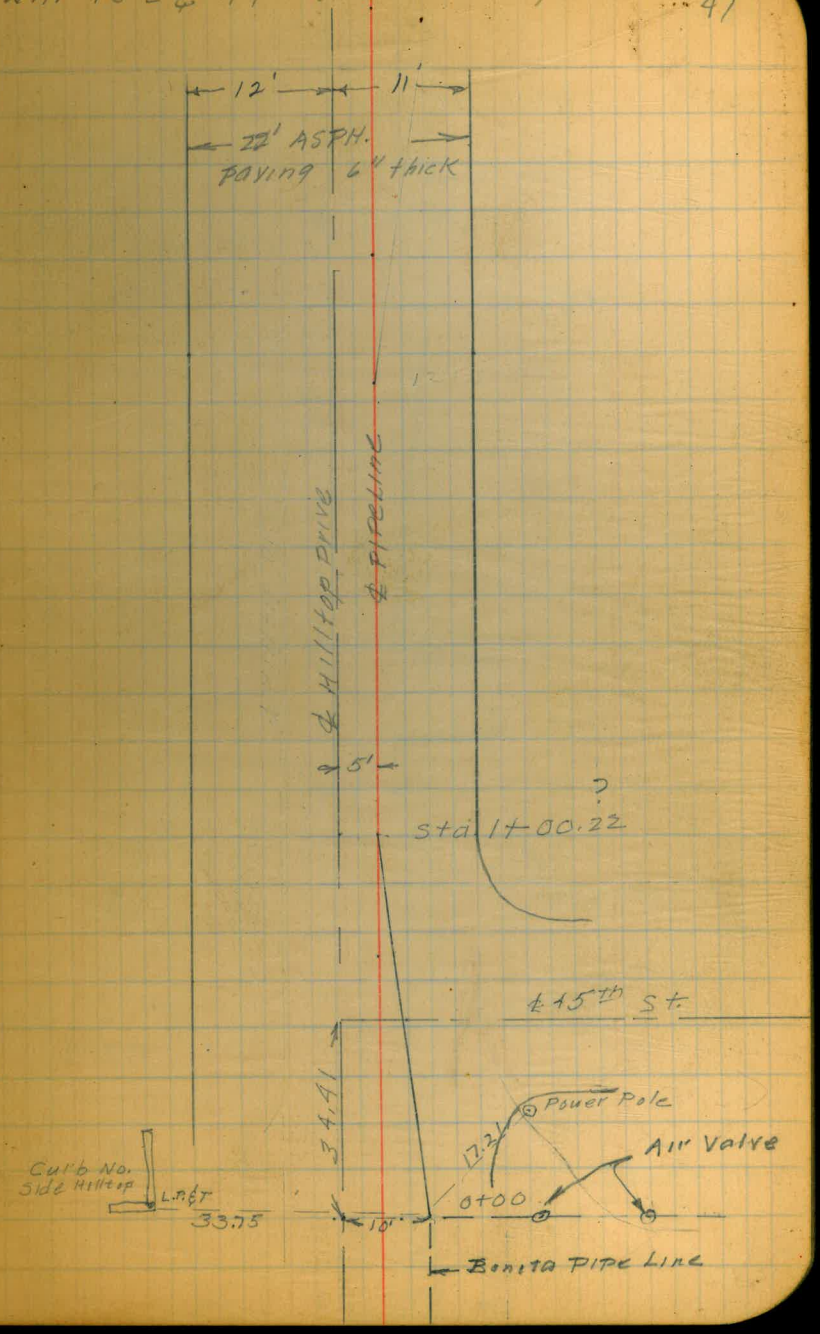
Log of test holes on Hilltop - Otay 2nd Main Pipe Line Loc.

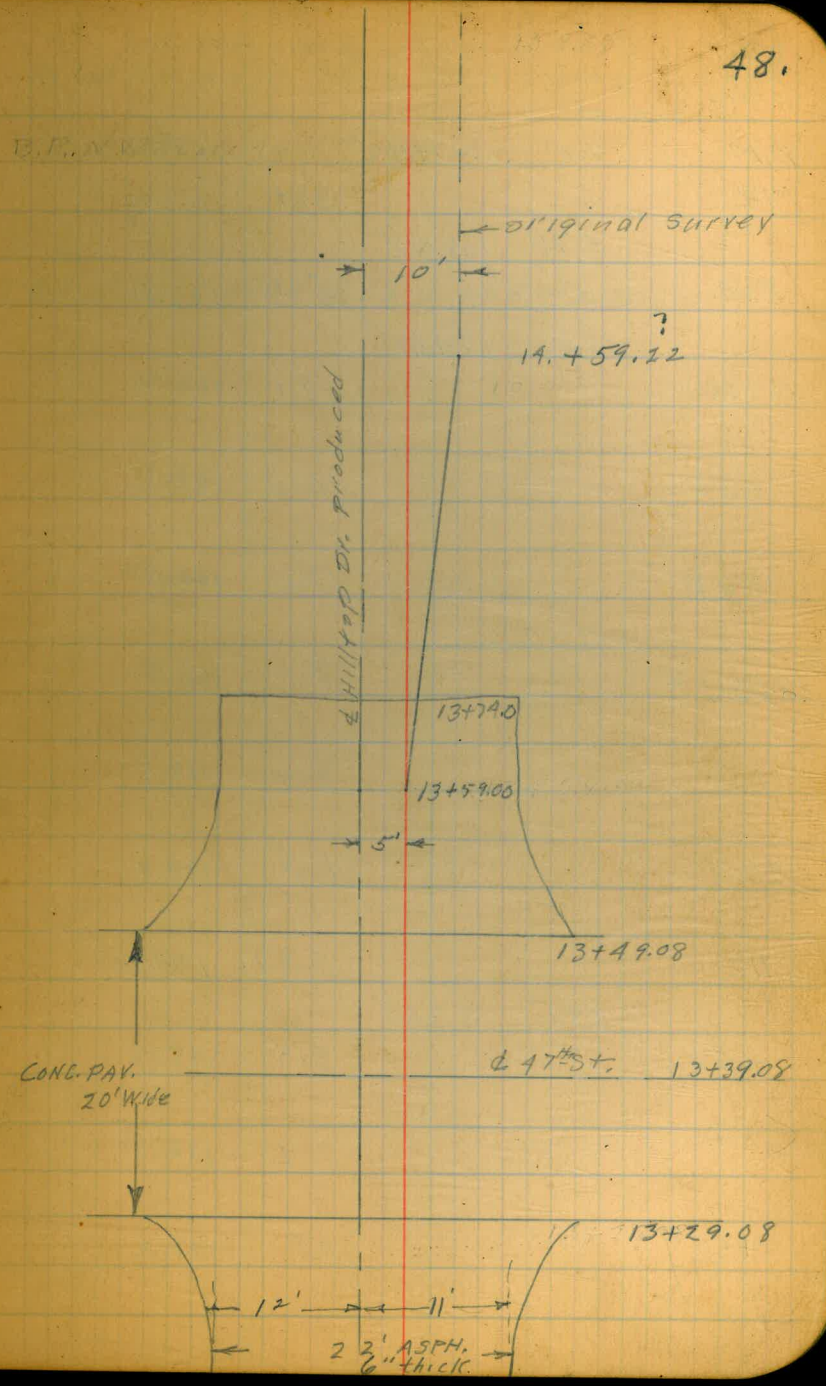
		Index
Sta. 12+00	Sample #1 Depth 2'	7.28
	" 2 " 6'	8.26
	Surface to 3' same as sample #1	
	3' to 6' " " " #2	
Sta. 22+50	Sample #1 Depth 3'	4.95
	" 2 " 6'	10.82
	Surface to 3.8' same as sample #1	
	3.8 to 6' " " " 2	
	2.5 to 3.5 strata of gravel	
Sta. 39+00	Sample #1 Depth 2'	6.59
	" 2 " 6'	5.10
	Reddish adobe & gravel from surface to 1.5 Remainder as per samples.	
Sta. 46+50	Sample #1 Depth 3'	0.85
	" 2 " 6'	2.79
	Surface to 4' same as sample #1	
	4' to 6' " " " 2	
	Sta. 46+50 is on E. side of draw of about 400' in width.	

2/13/41 46.

		Index
Sta. 55+29	Sample #1 Depth 3'	3.20
	" 2 " 6'	2.27
	Surface to 1' adobe. Remainder as per samples.	
Sta. 76+00	Sample #1 Depth 3'	1.07
	" 2 " 6'	3.40
	Surface to 2' adobe. Remainder as per samples.	
Sta. 91+50	Sample #1 Depth 3'	3.20
	" 2 " 6'	2.38
	Surface to 1' sandy adobe	
	1' to 5' same as sample #1	
	5' to 6' " " " 2	
Sta 99+10	Sample #1 Depth 3'	5.45
	" 2 " 6'	7.36
	Surface to 3' same as sample #1	
	3' to 5' gradual change	
	5' to 6' same as sample #2	

Change in Alignment of OTAY Pipe line betwin. 45th & 47th ST. ON Hilltop Dr. ...47




original survey
10'
?
14.+59.22
℄ Hilyard Dr. Produced
13+79.0
13+59.00
5'
13+49.08
CONC. PAV.
20' Wide
℄ 47th St.
13+39.08
13+29.08
12'
11'
2 3' ASPH.
6" thick

Byler
King
Otten

Profile betwn. Levels over pipeline. 45th & 47th St. on Hilltop Dr.

2-2-44

B.M.	8.21	167.06 ✓		158.85
TP.			3.84	163.22 ✓
	5.70.	168.92 ✓		
B.M.			5.11	163.81 ✓
	10.66.	174.47 ✓		
0+00			12.1	162.4
+50			10.6	163.9
+66			10.0	164.5
△ 1+00.22			8.0	166.5
+50			4.6	169.9
2			1.5	173.0
TP.			0.27	174.20 ✓
	9.45	183.65 ✓		
+50			8.4	175.3
3			7.2	176.5
+50			6.5	177.2

B.P. N.W.I. Cor. 45th & Mkt. Sts.

X on curb at 0+20 & 33' N. of ℄ of pipe

F.H. 7'50.

Profiles (cont.)

		183,65 ✓		
4+00			5.8	177.9
+02			5.8	177.9
+50			5.0	178.7
5			4.3	179.4
+50			3.3	180.4
TP.			0.34	183.31 ✓
	11.21	194,52 ✓		
6+00			12.9	181.6
+50			11.6	182.9
7			10.4	184.1
+50			9.6	185.5
+55			8.9	185.6
8			7.8	186.7

F.H. 9' SO.

F.H. 11' SO.

Profiles (Cont.)

		194.52		
8+50			6.4	188.1
9+00			5.3	189.2
+50			3.8	190.7
10+00			2.5	192.0
+50			1.7	192.8
10+97			1.7	192.8
11+00			2.0	192.5
+50			2.6	191.9
12+00			3.9	190.6
TP.			3.90	190.62 ✓
	2.57	193.19 ✓		
12+50			4.6	188.6
13+00			5.6	187.6

F.H. 9' SO.

Profiles (Cont.)

	193.19		
13+29.08		6.58	186.61 ✓
13+49.08		6.54	186.65 ✓
△ 13+59.00		6.8	186.4
13+74		5.6	187.6
14+00		5.5	187.7
△ 14+59.22		7.0	186.2
B.M.		6.74	186.45 ✓

End of asphalt paving

Red Head in power pole S.W. cor. Hilltop & 47th St.

Byler
King
Otten
2-3-11

Profile over Curve Near Hilltop & Lookout

B.M.	2.87	242.98 ✓		240.11
TP.			13.06	229.92 ✓
	1.16	231.08 ✓		
50+33 96	B.C. Curve Rt.		17.9	213.2
+50			15.8	215.3
51			7.9	223.2
+50			0.6	230.5
TP.			0.37	230.71 ✓
	12.25	242.96		
51+92 84	E.C.		9.9	233.1
51+76 56				
			2.83	240.13 ✓

Nail in power Pole on line at Sta. 55+30

(See Pg. 13)

ON B.M. check

Xsections Bonita Pipeline
Sheets 44+00 to 55+00

S.E. Cor Int. Sweetwater Bridge

B.M. spike in Pepper tree				63.50		
	4.41	67.91				
T.P. #1			6.54	61.37		
	4.40	65.77				
T.P. #2			1.57	64.20		
	4.01	68.21				
T.P. #3			10.34	57.87		
	0.00	57.87				
T.P. #4			5.11	52.76		
	2.71	55.47				
43+80						
44+00						
44+50						
44+85						
44+95						
45+00			4.8	50.7	43.5	7.2
45+10						

Nov. 9, 1948 — Nov 48 — 54

West — Ramey
East — King
Lt — Baker
Rt — Adams
Rogers

52.27 — Grnd. — 52.27
3.2 — 3.2 — 3.2 ✓
10 — 10

52.17 — 51.97 Grnd — 52.47
3.3 — 3.5 — 3.0 ✓
10 — 10

51.47
51.87 — Grnd. — 51.87
3.6 — 4.0 — 3.6 ✓
10 — 10

50.87
Pipe
4.6 ✓

50.77
50.87 — Pipe — 51.27
4.6 — 4.7 — 4.2 ✓
10 — 10

50.67
49.47 — 49.87 — Pipe — 50.2 — 51.0
6.0 — 5.6 — 4.8 — 5.2 — 4.4 ✓
10 — 1.2 — 1.2 — 10

49.3 — 50.5 — 50.2 — 50.1 — 49.7
6.1 — 4.9 — 5.2 — 5.3 — 5.7 ✓
4.2 — 1.2 — 4.0 — 10

			55.47							
45+16										
45+50					50.1	43.5				
46+00					50.3	43.5				
46+50					50.8	43.5				
47+00					51.1	43.5				
T.P.				3.84	51.63					
	10.54	62.17								
47+50					51.6	43.5				
48+00					52.3	43.5				
48+25										
48+34										
48+43										
48+50					53.1	43.5				

Lt West			Rt East		
	47.5	50.5	47.4	47.9	
	7.9	11.9	8.0	11.5	✓
	1.2		1.2	10	
6.6	48.4	50.1	48.1	48.6	
	7.0	5.3	7.3	6.8	✓
	1.2		1.2	10	
6.8	48.1	50.3	47.8	48.5	
	7.3	5.1	7.6	6.9	✓
	1.2		1.2	10	
7.3	48.4	50.8	48.4	49.7	
	7.0	4.6	7.0	5.7	✓
	1.2		1.2	10	
7.6	48.6	51.1	48.4	48.5	
	6.8	4.3	7.0	6.9	✓
	1.2		1.2	10	
8.1	49.0	51.6	49.1	48.9	
	13.1	10.5	13.0	13.2	✓
	1.2		1.2	10	
8.8	49.5	52.3	49.5	50.0	
	12.6	9.8	12.6	12.1	✓
	1.2		1.2	10	
	47.5	52.6	49.1	49.6	
	14.6	9.5	13.0	12.5	✓
	1.2		1.2	10	
	45.8	52.8	46.1	49.9	
	16.3	9.3	16.0	12.2	✓
	1.2		1.2	10	
	46.9	53.0	47.3	51.3	51.1
	15.2	9.1	14.8	10.8	11.0
	1.2		1.2	8	10
9.6	49.3	53.1	49.6	51.9	51.7
	12.8	9.0	12.5	10.2	10.4
	1.2		1.2	9	10

		62.17			
			54.		
49+00			54.2	43.5	10.7
49+50			55.7	43.5	11.2
49+67					
49+80	÷50+16 Rt & Lt.				
50+28					
50+50					
T.P.			0.60	61.57	
	9.65	71.22			
51+00					
Orange trees 12' to Rt + Lt. start 51+23					
51+50					
52+00					
52+50					

Lt. West — Rt. East

Pipe

52.1	54.2	52.2	52.3	
10.0	7.9	9.9	9.8	✓
1.2		1.2	10	

Pipe

53.8	55.7	53.5	53.6	
8.3	6.4	8.6	8.5	✓
1.2		1.2	10	

Gr. pipe & Ground

56.2	56.3	
5.9	5.8	✓
	10	

Ground

57.5	57.9	
4.6	4.2	✓
	10	

59.3 Ground	59.5	
2.8	2.6	✓
	10	

60.5	60.3	
1.6	1.8	✓
	10	

63.0	62.7	
8.2	8.5	✓
	10	

63.5	63.2	
7.7	8.0	✓
	10	

64.4	64.6	
6.6	6.6	✓
	10	

65.5	65.6	
5.7	5.6	✓
	10	

		71.22		
53+00				
53+50				
54+00				
54+50				
55+00				
T.P.	5.28	76.17	0.33	70.89
AV. Sta.	54+98		3.36	72.81
Top AV.			2.53	73.64

ADDITIONAL WORK — HAND LEVEL 8 DEC 48 — SAUNDERS Mc HUGH

B.M. Sta	45+00			50.67 Top Pile
T.P. 1	5.6			
		56.27		50.73
		~~45.1~~	5.54	~~45.73~~
		56.08		
T.P. 2	5.35	~~51.08~~		
				52.48
40+31			3.60	~~47.48~~
				47.16
39+32			8.92	42.16
39+38				51.58
			4.50	~~46.58~~
39+38				53.58
			2.50	~~48.58~~
40+12				

Lt West — Rt. East — 57

66.7	67.0	✓
4.5	4.2	
	10	
68.0	68.1	✓
3.2	3.1	
	10	
69.5	69.4	✓
1.7	1.8	
	10	
70.3	70.3	✓
0.9	0.9	
	10	
70.8		
0.4		

C.F. McHugh 12-7-48

Elbow Down	40+31	
Pipe in Open Ditch.	39+32	
Man Hole Cover	5' E of ℄	39+38
Top Bank ℄ of Pipe		39+38
Blow off	40+12	.8 I.D.

JULY 28, 1950
BEATTY
LEONARD
BAKER
N. TAPE
I
Ø

& PROFILE BONITA P.L. – From Wye Northerly.

BM.	0.66	371.11		370.45	NE Cor 30" GV. Box
0-04.50	& PT	Wye	3.2	367.9	
0+00			3.4	367.7	
+03.			3.0	368.1	
+03.			0.66	370.45	Top Conc WALL of VAL CHAMBER
+05E			8.19	362.9	Top pipe NEB. G. VAL
+09Z			0.65	370.5	Top of Conc. Wall of VAL CHAMB.
+09Z			1.8	369.3	
+21Z	& PT		2.5	368.6	Near Air Val
+28.			1.5	369.6	
+33			2.5	368.6	
+33+			4.13	367.0	Top 28" pipe
+41L			5.45	365.7	Top 14" pipe (Venturi Tube)
+42			3.2	367.9	
+50			4.0	367.1	
1+00	(P.O.T.)		9.4	361.7	
+08.65			10.5	360.6	
+08.65			7.59	363.5	Top Conc Wall Val Chamber
+09.40			13.14	358.0	Top 28" pipe
1+21C			15.43	355.7	Top 28" pipe.
1+22Z			7.65	363.5	Top Conc Wall Val. Chamber
TP	0.00	356.78	14.33	356.78	
1+22Z			1.1	355.7	Nat Grd at door
+29			1.2	355.6	AT AIR VAL.
+38			1.7	355.1	

℄ Profile – BONITA R.L.

		356.78		
1+50			4.3	352.5
+60			4.7	352.1
+94			13.0	343.8
TP (ROCK)	2.48	346.79	12.47	344.31
+97			6.1	340.7
2+00			6.4	340.4
+20 E			10.7	336.1
+23 E			12.4	334.4
TP (ROCK)	0.78	335.50	12.07	334.72
+50			7.3	328.2
+71.8			11.32	324.2
TP (ROCK)	0.64	323.70	12.44	323.06
3+00			4.0	319.7
+50			3.9	319.8
+78			4.8	318.9
4+00			3.5	320.2
+30			2.4	321.3
+50			3.7	320.0
+73.93	POT		3.8	319.9
5+00			5.8	317.9
+50			10.6	313.1
+67			11.0	312.7
TP ROCK	0.14	310.98	12.86	310.84
+81			2.5	308.5
6+00			5.7	305.3

× 12.38 / 1.0 Top 28" pipe

× 6.77 / 1.0 Top 28" pipe

℄ Profile 310.98 — BONITA PIPELINE

6 +12			7.9	303.1
+35.5			11.9	299.1
+50			12.8	298.2
+66			9.9	301.1
7+00			5.95	305.0
+43			2.5	308.5
+50			3.0	308.0
+74.5			4.9	306.1
SET TBM.			1.42	309.6
+80			4.7	306.3
8+00			7.5	303.5
+22			10.6	300.4
P ROCK	0.16	298.23	12.91	298.07
+31			1.8	296.4
+39			3.0	295.2
+43			1.3	296.9
+50			3.3	294.9
P (ROCK)	0.20	286.84	11.59	286.64
9+00			5.7	281.1
P (ROCK)	0.32	274.26	12.90	273.94
+50			2.5	271.8
+94			12.2	262.1
P (ROCK)	1.17	262.96	12.47	261.79
10+00			4.8	258.2
+29			8.9	254.1

Vert. ℄ pipe

7.60 / 1.0 — Top 28" Pipe

10.24 / 1.2 — " " "

9.73 / 1.2 — " " "

9.11 / 1.0 — " " "

At Air Val. Vert ℄

4.73 / 0.8 — " " "

Top 4" GVAL. Flange, at Air Valve

Local Repair Hole, Only.

℄ PROFILE — BONITA P.L.

		262.96		
10+50			13.5	249.5
+51			14.15	248.8
P	0.35	251.33	11.98	250.98
+69			7.3	244.0
+76			11.4	239.9
P	0.28	239.17	12.44	238.89
+93			2.78	236.4
11+00			3.7	235.5
+13			6.9	232.3
+34			9.0	230.2
+35			8.0	231.2
+45			10.5	228.7
P	0.61	227.28	12.50	226.67
+50			2.8	224.5
+72			8.9	218.4
+84			9.6	217.7
+93			13.37	213.91
12+00			13.43	213.85
+07			13.65	213.63
+07			18.8	208.48
+23			13.67	213.61
+23			26.1	201.2
+40			13.65	213.63
+40			36.3	191.0
+50			13.64	213.64

Top 28" Pipe

(2' South of fence)

7.4 / 6.5 × 6.4 / 4.5

Top. 28" pipe

+0.8 / 4. × +1.9 / 6.

+2.2 / 3. × +1.2 / 7.

Top 28" Pipe

Top 28" Pipe 17.5 / 1.2 ×

" " "

" " "

" " "

" " "

7/28/50

	℄ Profile +	— 227.28	Bonita −	P.L	
12+50			36.1	191.2	
+62			13.62	213.66	Top 28" pipe
+62			31.9	195.4	
+89.90			13.45	213.83	"Vert." ℄ in pipe
+89.90			20.2	207.1	
13+00			10.2	217.1	
13+00			16.1	211.2	
Set TBM			6.01	221.27	☐ on pier 15 LT - 13+18
P. (rock)	-12.07	238.55	0.80	226.48	
+33			10.71	227.8	Top 28" pipe
+55			1.5	237.1	
P. (rock)	11.97	249.65	0.87	237.68	
+73			-7.5	242.2	
14+00			-4.1	245.6	
T.P. Rock	+11.45	260.82	-0.28	249.37	
14+33			-10.1	250.7	
+38			-7.9	252.9	Berm, shldr road.
+47			-8.8	252.0	℄ Road
+51			8.8	252.0	Edge road
+61			6.4	254.4	
P.	11.61	272.33	0.10	260.72	
15+00			12.0	260.3	
+50			4.6	267.7	
P.	11.77	283.91	0.19	272.14	
16+00			9.6	274.3	

24.72
11
213.72

℄ PROFILE — BONITA P.L

		283.91		
16+50			4.1	279.8
+65.5			3.8	280.1
SET. TBM			1.48	282.43
+72.8			3.0	280.9
17+00			2.6	281.3
+50	(P.O.T.)		5.9	278.0
IP	0.65	272.50	12.06	271.85
18+00			2.3	270.2
+50			10.2	262.3
IP (Rock)	0.18	259.99	12.69	259.81
+66			+0.6	260.59
19+00			7.1	252.9
+21.5			10.08	249.9
+41			11.89	248.1
+50			12.3	247.7
IP (Rock)	0.85	247.79	13.05	246.94
+86			2.3	245.5
20+00			4.68	243.1
+08.6			5.30	242.5
+50			6.7	241.1
+78			7.4	240.4
21+00			8.8	239.0
+50			13.0	234.8
IP (Rock)	0.00	235.05	12.74	235.05
+70			2.8	232.3

Near Air Val.

Top 4" G.Val Flange on Air Valve 16+65.5

" " "

Top 28" pipe

" " "

Top 28" pipe

"

℄ Profile Bonita P.L.

		235.05		
22+00			8.1	227.0
+07			9.3	225.8
+18			12.1	223.0
SET TBM	0.25	223.93	11.37	223.68
+50			2.1	221.8
+52			2.3	221.6
+61			5.1	218.8
+85	(POT)		6.3	217.6
23+00			8.8	115.1
+27			12.5	211.4
℄	0.02	211.04	12.91	211.02
23+50			5.7	205.3
T.P.	0.79	203.28	8.55	202.49
24+00			4.3	199.0
24+25			9.8	193.5
24+25			8.6	194.7
T.P.	0.06	193.17	10.17	193.11
Δ 24+57 70			3.0	190.2
25+00			8.5	184.7
+50			14.4	178.8
T.P.	2.63	182.34	12.86	180.31
26+00			8.3	174.0
26+50			13.8	168.5
~~26+~~ T.P.	0.77	170.57	12.54	169.80

King Leonard ↗ Baker

8-3-50

C.T.S.

NAIL IN CATHODIC RECTIFIER STATION POLE

Top of Stake 23+30 (rear ℄)

Top 28" Pipe - ground level

Top 20" Pipe

		E. Profile	Bonita P.L.		
		170.57			
26+86			5.6	165.0	Top Curb
26+92			6.7	163.9	Gutter
27+00			6.6	164.0	
27+25 OP			7.3	163.3	
27+25 OB			6.8	163.8	Gutter
27+50			8.9	161.9	Top curb
28+00			13.8	156.8	
T.P.	0.13	157.77	12.93	157.64	
28+50			5.4	152.4	
29+00			9.3	148 5	
T.P.	0.92	145.78	12.91	144.86	
29+50			1.8	144.0	
30+00			6.8	139.0	
30+50			9.6	136.2	
31+00			17.5	134.3	
T.P.	3.04	135.82	13.00	132.78	
31+50			2.8	133.0	
31+67 OP			4.1	131.7	Top curb
31+67 OB			4.6	131.2	Gutter
32+00			4.1	131.7	
32+28 OP			4.7	131.1	Gutter
32+28 OB			4.2	131.6	Top curb
32+34			6.7	129.1	
T.P	0.66	125.81	10.67	125.15	

℄ Profile · Bonita Pl.

		125.81		
33+00			7.1	118.7
T.P.	0.10	113.09	12.82	112.99
33+50			4.8	108.3
T.P.	1.23	101.27	13.05	100.04
34+00			9.2	92.1
34+07			1.4	89.9
T.P. (Rock	0.45	89.08	12.64	88.63
34+21			6.3	82.8
34+30			6.2	82.9
T.P. (Rock	0.49	77.11	12.46	76.62
34+50			3.1	74.0
34+84			7.6	69.5
35+00			7.6	69.5
35+10			5.5	71.6
35+50			7.4	69.7
35+65			7.6	69.5
35+90			4.2	72.9
36+00			3.9	73.2
36+36			2.6	75.1
36+51			5.2	71.9
T.P.	1.30	66.47	11.94	65.17
36+58			4.8	61.7
+61			4.2	62.3
+84			4.7	61.8
+91			4.5	62.0

Stake on ℄ in side of bank to of Rd

		B Probe 66.47	Density Pt.	
T.P.	2.25	56.76	11.96	54.51
37+11			5.3	51.5
37+16			6.4	50.2
37+50			7.5	49.3
38+00			7.6	49.2
+50			6.6	50.2
39+00			5.7	51.1
+50			3.5	53.3
40+00			5.0	51.8
40+35			3.8	53.0
+50			4.3	52.5
41+00			3.7	53.1
+50			3.9	52.9
42+00			4.3	52.5
+50			3.9	52.9
43+00			4.0	52.8
T.P.	1.90	55.21	3.45	53.31
+50			2.2	53.0
44			2.8	52.4
+50			3.0	52.2
45			5.7	49.5
+50			6.6	48.6
46+00			7.2	48.0
+50			6.2	49.0
47+00			6.3	48.9

& Profile - Bonito P.L.

		55.21			
47+50			6.1	49.1	
48+00			5.1	50.1	
+50			3.7	51.5	
TP.	12.36	63.29	4.28	59.93	
49+00			11.1	52.2	
49+54			9.5	53.8	
+74			7.0	56.3	
49+85.36	50+16.		5.9	57.4	
~~49~~ 50			3.10	60.19	Top rim A.V. 49+74
49+58			2.3	61.0	
51+00			0.4	62.9	
TP.	12.02	74.47	0.84	62.45	
51+50			11.0	63.5	
52+00			10.0	64.5	
+50			9.0	65.5	
53+00			7.7	66.8	
+50			6.4	68.1	
54+00			5.1	69.4	
+30			4.3	70.2	
55+00			3.3	71.2	
TBM	1.77	75.41	0.87	73.60	73.64 Top rim A.V. 55+03 - See page 57
+50			4.7	70.7	
56+00			4.7	70.7	
+50			5.1	70.3	
57+00			5.6	69.8	

& Profile - Bonita P.L

		75.41			
57+50			5.9	69.5	
58+00			6.1	69.3	
+50			5.6	69.8	
58+93			4.9	70.5	Edge of oil pavement
59+00			4.6	70.8	ON pavement & of Rd. (oil)
59+09			4.8	70.6	Edge of oil pavement
T.P.	10.48	81.26	4.63	70.78	T.P. on spike 59+00 & of oil Rd.
59+50			9.5	71.8	
60+00			8.2	73.1	
+50			6.6	74.7	
61+00			4.4	76.9	
+50			1.9	79.4	
T.P.	12.11	92.90	0.47	80.79	ON P. Bob. driven into ground
62+00			10.5	82.4	
+50			6.7	86.2	
63+00			2.8	90.1	
T.P.	12.21	104.93	0.18	92.72	ON P. Bob driven into ground
63+50			11.9	93.0	
64+00			7.7	97.2	
+50			3.6	101.3	
T.P.	8:03	112.16	0.80	104.13	ON Rock
65+00			6.7	105.5	
+51.8			1.1	111.1	Toe of Highway fill.
T.P.	12.54	124.22	0.48	111.68	ON Rock
T.P.	10.52	134.57	0.17	124.05	ON Rock
65+77			7.1	127.5	Highway Shoulder

King - Chief 8-10-50
Leonard - T
Baker - notes
West - Rod

Clear warm to Hot

13.9
37.9
51.8

King 8-10-50 Clear-Hot 70
Leonard – T
Baker – Notes
West – Rod.

		134.57			
65+86			6.9	127.7	Edge of oil
66+00			6.5	128.1	
66+05			6.7	127.9	Edge of oil
66+15			6.5	128.1	Edge of Highway Shoulder
+27			10.7	123.9	Toe of Highway fill
+29			10.2	124.4	
+36			5.9	128.7	
+50			5.2	129.4	
+67			5.6	129.0	
+75			7.1	127.5	
67+00			6.4	128.2	
+10			3.6	131.0	
67+21.15			6.28	128.3	Top of Pipe inside Pipe
67+21.15			2.92	131.7	Top of Air Valve inside Box
T.P.	12.22	146.29	0.50	134.07	ON Air Valve 67+15.75
67+15			11.07	135.22	Top of Air Valve 67+15.75
67+55 52 X Pt.			9.6	136.7	
67+64			9.2	137.1	
67+68 LO			6.6	139.7	
68+00			5.0	141.3	
+50			1.1	145.2	ON Rock
T.P.	12.85	158.30	0.84	145.45	
69+00			8.4	149.9	
+50			1.5	156.8	
T.P.	11.32	169.30	032	157.98	ON P. Bob driven into ground

E Profile - Bonito P.L.

		169.30		
70+00			4.5	164.8
T.P.	13.15	182.15	0.30	169.00
70+50			8.9	173.3
71+00			3.4	178.8
71+21.85			+0.12	182.27
71+23.85			+0.14	182.29
71+40			2.2	179.0
71+40			2.9	179.3
71+54			3.0	179.2
72+00			8.9	173 3
T.P.	0.23	169.42	12.96	169.19
72+50			4.2	165.2
73+00			12.0	157.4
T.P	0.50	157.38	12.54	156.88
73+50			9.1	148.3
T.P.	0.10	144.50	12.98	144.40
74+00			6.1	138.4
TP	0.01	131.67	12.84	131.66
74+50			1.3	130.4
74+96			7.6	129.1
75+05			10.3	121.4
△75+18.90			11.75	119.92
T.P.	0.80	120.72	11.75	119.92
75+50			5.1	115.6
76+00			6.9	113.8

King Chief 8/10/50 Clear - Hot

Leonard T.
Baker notes
West - Rod

ON Rock

Top Rim Air Valve
" " " "

ON ℄ Spike △

Profile - Bonita Pl.

7-10-50 Hot

		120.72			
76+50			8.4	112.3	
T.P.	0.75	108.46	13.01	187.71	Top stake - 77+00
77+00			1.4	107.1	
+31			6.3	102.2	
+50			7.8	100.7	
78+00			11.3	97.2	
T.P.	5.84	103.02	11.28	97.18	Top 8' offset stake - 78+00
78+50			9.7	93.3	
79+00			11.9	91.1	
79+50			11.8	91.2	
80+00			11.6	91.4	
80+50			12.3	90.7	
81+00			13.1	89.9	
81+50			12.1	90.9	
T.B.M.	3.82	99.84	7.00	96.02	Nail in Co. Rd. 1.00' East
81+73.10			9.46	90.3	Ginney
+82			11.2	88.6	
+95			10.7	89.1	
82+13			5.3	94.5	
82+16			5.1	94.7	Oil Par
82+32.10			4.9	94.9	" "
82+44			5.7	94.1	
TP 82+88.01	9.38	105.68	3.54	96.30	ON Ginney
83+00			10.0	95.7	
83+22			10.9	94.8	

7-14-50
King
Leonard F
Webb

Very Hot

Top-24" Steel P.pe Cal. Water

Top -2" W. Hyd. -25' Lt. 84+00

	@ Profile	Bench Mk	
		105.68	
83+45		7.9	97.8
83+50		6.8	98.9
84+00		5.1	100.6
T.P.	7.10	111.78	1.00	104.68
84+50		9.6	102.2
85+00		8.3	103.5
85+50		4.1	107.7
86+00		2.3	109.5
T.P.	10.65	121.83	0.60	111.18
86+50		10.7	111.1
87+00		6.3	115.5
87+50		2.7	119.1
T.P.	13.16	134.68	0.31	121.52
88+00		11.1	123.6
+50		4.6	130.1
T.P.	12.69	147.30	0.07	134.61
89+00		9.4	137.9
89+50		0.9	146.4
TP	13.20	160.48	0.02	147.28
90+00		8.4	152.1
90+50		3.0	157.5
TP	10.67	171.12	0.03	160.45
91+00		9.6	161.5
91+50		6.5	164.6
T.P.	6.57	173.72	3.97	167.15

		173.72		
T.B.M.			1.89	171.83
92+00			- 4.9	168.8
+50			- 7.2	166.5
T.P.	+1.32	164.62	-10.32	163.40
94+00			6.0	158.6
T.P.	0.25	151.68	13.19	151.43
94+50			4.3	147.4
95+00			9.2	142,5
T.P.	4.11	147,13	8.66	143,02
T.B.M.	3.54	148.90	1.77	145,36
			11.64	137.3
			6.50	142,4
95+30			6.7	142 2
+50			5.1	143.8
+58			3.7	145.2
+59			4.3	144,6
			7.4	141.5
			6.7	142.2
+90			3.8	145.1
96+00			3.3	145.6
P.I. (grnx)	12.77	161.25	0.42	148.48
+50			10.0	151.3
97+00			4.7	156.6
+50			2.4	158.9
98+00			2.0	159.3
P.I. (Rock)	12.62	173.02	0.85	160.40

Top rim Air valve

X - East End Conc Hdwll - 50.5 c/e Co. Rd.
℄ of Horiz. G.V. 95+30
Top of rim (W. side) M.H. Val. Chamber 95+30

Outlet ℄ 30" Cross DR 5± LT 95+57.
Inlet ℄ " " " 10± RT 95+89

August 21 1950
Beatty N.
King T.
Leonard T
West ∅

		℄ PROFILE 173.02	BONITA P.L.	
98+50			11.3	161.7
99+00			5.6	167.4
TP (Rock)	13.00	185.79	0.23	172.79
+50			9.3	176.5
100+00			0.2	185.6
TP (℄ NAIL)	12.02	197.60	0.21	185.58
+34			5.8	191.8
+37			3.7	193.9
+50			3.8	193.8
SET TBM.			3.44	194.16
TP	13.15	210.20	0.55	197.05
101			9.1	201.1
+50			2.3	207.9
T.P. - (Rock)	13.25	223.28	0.17	210.03
102			10.2	213.1
+50			7.0	216.3
103			4.2	219.1
+50			1.9	221.4
T.P (Rock)	10.65	233.52	0.41	222.87
104			9.2	224.3
+50			7.3	226.2
105+00			4.5	229.0
+50			3.7	229.8
+54			4.6	228.9
+57			5.0	228.5

NE Conc. Wall around Rose garden 15' LT 100+37

8/24/50

& PROFILE BONITA RL.

		233.52			
105+61			1.67	232.8	
105+63			4.5	229.0	
106+00			5.1	228.4	
106+50			7.3	226.2	
+75			10.6	222.9	
T.P.	0.10	220.76	12.86	220.66	
107			2.8	118.0	
+20			5.3	115.5	
+25			7.3	113.5	
T.P.	0.05	207.50	13.31	207.45	
107+50			0.4	207.1	
107+80			8.7	198.8	
+87			10.2	197.3	
T.P.	0.71	195.38	12.83	194.67	
108+00			3.8	191.6	
108+07			8.0	187.4	
108+21			12.8	182.6	
T.P.	4.87	187.22	13.03	182.35	
108+29					
+50			5.2	182.0	Top. pipe
+59					
+89					
109+00			5.2	182.0	Top. Pipe

Lt. Rt

Top Rim P & Y. 4'

Top Rivett g.t. St. 108+32.78 11.0

7.8 / 5 × 7.7 / 5

166.5

20.4 / 15 20.4 / 5 20.7 × 19.9 / 5 22.3 / 15

165.5

22.8 / 15 20.4 / 5 21.7 × 20.0 / 5 18.0 / 15

Checked pg. 58-77 9/15/50 RM

8/24/50

E PROFILE BONITA P.L.

187.22

109+19					
109+31			5.1	182.1	Top Pipe
P Rock	10.43	196.59	1.06	186.16	
+50			8.6	188.0	
+93			2.7	193.9	
110+00			6.0	190.6	
+50			11.8	184.8	
+50					
+80.6	Begin 30" Sect		13.8	182.8	Top pipe
111+00			13.8	182.8	Top pipe
+05	End 30" Sect				
+50			13.4	183.2	Top pipe
112+00			12.5	184.1	"
+50			11.0	185.6	"
+64.7			10.8	185.8	"
+65			7.4	189.2	
113+00			3.5	193.1	
SET TBM			0.27	196.32	Top of A.V.
+28.70	AT A.V.		4.0	192.6	
+36			3.0	193.6	
+38			9.6	187.0	Top pipe
P (Top plug)	1.03	~~188.19~~ 187.77	~~9.57~~ 9.85	~~187.02~~ 186.74	Rod Slipped
+50			0.9	186.9	Top.
+55.5	(at Vert ℄)		1.0	186.8	Top pipe

8.2 9.8 8.6 6.8
9 3 × 3.5 8

192.4 192.4
4.2 4.2
4 × 5

191.8 191.8
4.8 4.8
4 × 5

188.9 185.4 188.7
7.7 11.2 8.2
11.5 5 × 6

185.2 185.2
11.4 11.4
2 × 2

192.2 191.6
4.4 5.0
3 × 3

193.2 192.3
3.4 4.3
4 × 3

2.8 2.0
3 × 4

+5.5 +6.4
4 × 5

8/24/50

℄ PROFILE BONITA PL

114+00		2.3	185.5	
+10.55	at Vert ℄	10.4	177.4	Top pipe
+27	Proposed new Pier			
+50		~~7.2~~	~~180.6~~	" "
+57	" " "			
+87	" " "			
115+00		10.8	177.0	Top pipe
+17	" " "			
+29	PIPE ENTERS GROUND.	10.8	177.0	" "
+38		7.5	180.3	
+50		5.9	181.9	
+64		5.8	182.0	
T.P.	4.54	186.11 +4.53	181.57 ~~+9.9~~	
115+88		6.4	179.7	
+93		9.0	177.1	" "
116+00		9.0	177.1	" "
116+20		11.15	174.96	
116+20		14.3	171.8	NAT GRD
116+37		9.2	176.9	TOP PIPE
116+37		19.0	167.1	NAT GRD
116+37		15.85	170.26	
116+53		9.25	176.86	TOP PIPE
116+53		20.8	165.3	NAT GRD
116+53		18.1	168.0	" "
116+62		21.2	164.9	NAT GRD
116+6		9.2	176.9	TOP PIPE
116+79		20.3	165.2	NAT GRD
		19.09	167.02	

131 78.

Lt. Rt.

166.5

23.9/15 21.9/5 21.3 × 20.1/5 17.8/15

156.0

32.5/15 31.9/5 31.8 × 30.8/5 28.8/15

157.5

28.0/15 29.5/5 30.3 × 30.7/5 31.1/15

171.8

14²/15 14⁰/10 15⁹/5 16/0 17⁰/5 17⁴/15

East Rim - G.V. Box - Sta 115+80

Top ? pipe

Top Conc. Collar - Side of pipe

" " Pier

116+47 ?
116+74 } Sections of NEW PIERS BK 778 pg. 4-7

8/24/50

℄ PROFILE BONITA P.L.

		184.53			
		186.11			
116+84			9.15	176.96	Top Pipe
116+84			18.5	167.6	NAT. GRD.
116+84			16.83	169.28	
117+01			9.15	176.96	" "
117+01			15.2	170.9	NAT GRD
117+01			11.0	175.1	
117+08			9.1	177.0	" "
117+08			11.05	175.06	
117+16			9.1	177.0	" "
117+16			11.00	175.11	
117+24			9.0	177.1	
P (ROCK)	10.29	196.27 194.69	0.13	185.98 184.40	
+50			11.8	184.5	
P (on pave)	13.06	209.06 207.48	0.27	196.00 194.42	
118+00			12.2	196.9	
+09			10.8	198.3	
+22			11.4	197.7	on oil Curb
+25			11.8	197.4	on Conc pav
+50			9.90	199.16	" " "
119+00			6.14	202.92	" " "
+49			2.73	206.33	" " "
+50			2.26	206.80	Top Curb
P	11.17	219.59 218.01	0.64	208.42 206.84	
120+00			9.6	210.0	
~~+30~~	30		8.90	210.7	Top Curb
~~+30~~	30		9.3	210.3	
+50			8.9	210.7	

(CONTINUED ON PAGE 45 BK 778)

Top Conc. Pier

Top Conc. Collar - side of Pipe

" " " " "

" " " " "

Pipe meets ground

Ck. & Reduced Pg. 77-79
RM 8/31/50

Prof. le Trestle #1 - 7-23-5-1
Bonita P.L.

B.M. Page 62	3.45		221.27
11+92.4	J.T. & ground	10.8	
11+98	Conc. Pier Top	13.2	
	gr.	13.2	
12+05	J.T. - top Pipe	10.88	
12+14.9	Pier - Wood on Conc. base		
12+17	J.T.	10.99	
	gr.		
12+29.7	J.T. top pipe	11.03	
12+30.9	Pier Wood on Conc. base		
	gr.		
12+41.9	J.T. Top pipe	11.03	
12+47	Pier Wood on Conc base		
	gr.		
12+49.8	B.O. Top Pipe	11.08	
12+54.5	J.T. Top pipe	11.05	
12+63	Pier - Wood on Conc. Wall		
	Top Wall		
	gr.		
12+66.7	J.T.	10.99	
12+72	J.T. & Pier - Wood on Conc. Wall	10.92	
	gr.		
12+90	J.T. - V. Angle	10.88	
12+95.7	Conc. Piers - gr.	13.9	
13+01.6	J.T.	11.12	
13+08	Conc Piers - gr.	9.55	
13+13.2	J.T.	3.29	

IMPROVED TABLES
AND
INFORMATION

13+18.5 - Top Conc. Pier & gr. 3.52

1295
29
1324+43.6

N 10-35' W
8 39
N 10-44 W
+ 1-15-4
N 1 29 W
28 39
N 40-08 W

80+40.3
+46.1

99+53
5384

10.42
6.70
3.72

10.06
10.03
10.02
10.03

54+87.75
5 1+92 75
295.00

64

5.89

5510
25

3 0.8

61.6
2.5
64.1

679+30.31
64.1
678+66.2

50.7
47.0

16+75 AV.
7+50
400
100
300

17.32
√300.
1
27 200
189
343 1100
1029
3460 7100