

1317

Point Loma Levels
Circuit

DAST

LEVEL BOOK

No. 330

1078
17141
972
161.39

165.66
4-7
161.39

226.93 3 Nails SW
Pasadena

MICROFILMED
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ENGINEERING DEPARTMENT CITY OF SAN DIEGO, CALIFORNIA.

Our Leather Bound Engineers Note Books are

33.245
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169.46

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Mr. J. J.

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Bliss Jan 7, 1929

Bench Levels on Rosecrans Street
Lytton to Canyon Road.

				elev
BMSW B.P. Lytton	5.93	47.18		41.75 ✓
T.P.	6.39	51.70	1.87	45.31
Set BMNW				
B.P. James	9.76	58.56	2.90	48.80
Set BMNW				
B.P. Homer	0.89	52.39	7.06	51.50
Set BMNW B.P.				
Freeman	6.35	55.17	3.57	48.82
Set BMNW				
B.P. Dumas	0.15	48.65	6.67	48.50
check BMNW				
B.P. Curtis			4.31	49.34 ✓
Set BMNW B.P.				
Browning	0.55	38.04	11.16	37.49
T.P.	1.15	30.66	8.53	29.51
Set BMNW				
B.P. Zola			4.19	26.47
T.P.	2.56	26.69	6.53	24.13
check BMNW				
B.P. Xenophon	1.98	19.55	8.62	18.07
Set BMNW B.P.				
Whittier	5.99	18.26	6.78	12.77
Set BMNW B.P.				
Jdd			4.34	13.92
Set BM NW B.P.				
check BM NW B.P.				
Freeman East side	2.37	7.96	9.17	5.59
Freeman East side				
Set BM NW B.P.				
7 ² Man				
Russel	5.55		2.72	5.24
Set BMSW				
7 ² Man Poe	4.97	10.58	5.18	5.61
T.P.	6.03	15.10	1.51	9.07
Set BM NW B.P.				
check BM NW B.P.				
Freeman West side			5.08	10.02
Set BM NW B.P.				
McCauley			2.59	12.56
check BM NW B.P.				
Lowell	5.64	13.69	7.05	8.05
Set BM NW B.P.				
check BM NW B.P.				
Freeman West side	3.25	8.40	8.54	5.15
Set BM NW B.P.				
7 ² Man Hugo	5.39	6.98	6.81	1.59
check BM NW B.P.				
Garrison			5.85	1.13

		42		6.98		elev
(See 1606-73)						
Set BMSW 7 ² 7 ² Man Penelon	8.59	10.72	4.85			2.13
Set BMSW 7 ² Man Dickens	10.02	19.94	0.80			9.92
check BMSW B.P. Corleton	7.25		5.91			14.53
Set BMSW 7 ² 7 ² Man Byron	6.89	25.58	1.25			18.69
Set BMSW 7 ² Man Addison			6.02			19.56
check on BM SW Canyon Road			9.94			20.64
MACAULAY						
G-135/58						

W.E. Bliss

Duermit T
Jacobson Rod +
Kiernan Rod
1/19/19
Cloudy & Cold
showers

Bench Levels Canon Road

2

		H.I.	-	Elev	
	13.10	33.74		20.64	B.M. SW B.P. Canyon Road & Rosecrans.
T.P.	12.80	46.20	0.34	33.40	
T.P.	12.95	57.87	0.78	45.92	
			8.37	49.50	B.M. NW B.P. Approx 20' N of Evergreen Near center of large Radius return. "checked"
T.P.	11.92	49.63	0.16	57.71	
			8.93	61.20	B.M. N.W. B.P. Willow "checked"
T.P.	12.11	81.39	0.35	69.28	
			1.97	79.92	B.M. Brass Plug in Curb At Right Angles to End of curb what. Plainly Marked by Arrow cut in face of Cb. 20' from end of paving approx on East Side
T.P.	9.65	90.92	0.62	80.77	
T.P.	11.29	101.31	0.40	90.02	
T.P.	12.15	112.91	0.55	100.76	
T.P.	13.05	125.64	0.32	112.59	

	<i>t</i>	<i>HZ</i> 125.64	-	<i>Elev</i>	
T.P.	12.07	134.96	2.75	122.89	
T.P.	12.92	146.93	0.95	134.01	
T.P.	8.82	155.20	0.55	146.38	
T.P.	11.98	166.42	0.76	154.44	
T.P.	13.11	179.34 ⁶	0.17	166.23 ²⁵	
T.P.	12.99	191.98	0.37	178.99	
T.P.	12.05	203.77	0.26	191.72	
T.P.	12.92	216.35	0.39	203.93	
T.P.	12.82	228.84	0.33	216.02	
	12.39	235.56	5.67	223.17	BM
T.P.	12.90	248.21	0.25	235.31	NW - Canon Road
T.P.	12.48	260.19	0.55	247.66	RR Spike in Telephone Pole
T.P.	2.52	262.09	0.57	259.57	

+

H.I.
262.09

-

Elev

4

1.44

260.65

BM

N.W. Santa Barbara St and Catalina Blvd

260.68

0.03 6 Miles circuit

+

H.I.
262.09

-

Elev

4

1.44

260.65

BM

N.W. Santa Barbara St and Catalina Blvd

260.68

0.03 6 Mile circuit

Bliss Jan 17/1928 clear & cool.
 Duermitt A
 Jackson Rod. Bench Levels on Lytton r
 Kiernan Rod. Chatsworth Blvd
 BM SW BP + HI
 Lytton + Rosecrans 13.19 54.94
 Fair + Clear 41.75

(See-1676-73)

T.P. 10.95 69.68 1.21 53.73

check on BM SW BP ch Return
 Lytton + Evergreen 3.50 61.18

T.P. 11.65 75.22 1.11 63.57

check on BM SE
 B.P. James + Chatsworth Blvd 1.29 73.93

T.P. 9.65 83.58 1.29 73.93

T.P. 12.07 95.38 0.27 83.31

check on BM SW BP
 Homer + Chatsworth Blvd. 11.75 83.63

T.P. 11.72 106.86 0.24 95.19

T.P. 12.93 119.50 0.29 106.57

check on BM SW ch Return
 Connecting Clover - Freeman
 + Chatsworth Blvd. 10.83 108.67

T.P. 12.25 131.47 0.28 119.22

3.25 128.22 check on BM NE BP Elliot + Chatsworth Blvd

H.I. - Elev
 131.97
 Bench Levels Chatsworth Blvd

T.P. 11.69 192.64 0.52 130.95

T.P. 8.76 151.16 0.24 142.90

5.94 195.22

Check on BM N.E. BP Ch. Return Dumas + Chatsworth Blvd.

T.P. 12.91 161.16 2.41 198.75

BM S.E. BP Ch. Return Curtis + Chatsworth

T.P. 8.19 167.99 1.86 159.30

BM SW BP Alcott + Chatsworth

5.99 161.50

BM NW BP Zola + Chatsworth at Right Angle to Fire Hydrant

T.P. 0.22 162.36 5.35 162.14

T.P. 0.09 149.51 12.89 149.47

T.P. 0.57 138.17 11.91 137.60

T.P. 1.83 127.83 12.17 126.00

11.04 116.79

BM BP SW Voltaire + Chatsworth Blvd

T.P. 0.51 115.13 13.21 114.62

T.P. 0.88 103.25 12.76 102.37

+ HI - ELEV
103.25
Bench Levels Chatsworth Blvd

3.77 99.98

Set BM SE B.P. Chatsworth + Villa Drive - was 101.61

T.P. 0.45 97.2¹¹ 6.59 96.66

check on BM SW or SE B.P. Tennyson + Chatsworth

T.P. 0.4³² 89.5⁴³ 13.00 89.2¹¹

T.P. 12.83 90.4⁸⁹ 6.37 78.1⁰⁶

12.68 78.3²¹ BM SE Poe + Chatsworth B.P. in Curb.

4.44 86.5⁴⁵ BM SW B.P. Wawona + Chatsworth

T.P. 12.02 102.2¹⁰ 0.81 90.1⁰⁸

T.P. 12.76 114.4⁵¹ 0.35 101.8⁷⁵

T.P. 12.17 126.4³⁵ 0.33 114.2¹⁸

8.33 118.1⁰² BM SW B.P. La Cresta Drive + Chatsworth Blvd.

I.P. 12.49 138.5⁷⁶ 0.38 125.9⁷⁷
126.0⁷

T.P. 11.21 149.4⁰³ 0.64 137.7⁸²

10.14: 138.4⁸⁹ BM SW Top Hydrant Arlington Drive

+ 42.03
149.73
Bench Levels Chatsworth Blvd

Key

8

T.P. 12.31 161.30²⁰ 0.14 148.79⁸⁹

T.P. 12.00 172.54⁴¹ 0.79 160.54⁹¹ BMSW BP Ridge Road

T.P. 12.79 184.78 0.37 172.74⁰⁴

T.P. 12.70 196.92 0.56 184.22

T.P. 12.88 209.07 0.73 196.19

11.40 197.67 BM HWY BP Dixon

T.P. 9.03 217.90 0.20 208.87

T.P. 8.23 222.86 3.27 214.63

T.P. 0.36 210.12 13.10 209.76

T.P. 0.15 198.02 12.25 197.87

T.P. 12.60 198.88 11.74 186.28

T.P. 11.69 210.30 0.27 198.61

8.69 201.61 BM NEBP Catalina Blvd

Windy & cold.
 Bench Levels on Catalina Blvd from
 Chatsworth Blvd South to Santa Barbara Street

T.P. 12.45 222.93 0.32 209.98

T.P. 7.36 226.98 0.31 222.12

T.P. 9.96 235.13 1.31 225.17 BM SW Top Hydrant. Point Loma Ave

T.P. 12.00 246.62 0.51 234.62 BM NW B.P.

T.P. 11.96 257.62 0.96 245.66

(7.51 ^{250.77} ~~7.51~~ BM NW B.P. Varona Place checked Destroyed)

680 250.82 BM S.W. B.P. " Place Set **Good** C.S.M. 1942

T.P. 6.42 263.67 0.37 257.25

~~7.39~~ ~~273.01~~ 2.99 260.68 Set BM NW B.P. Santa Barbara Street. Near fire Hy. & PC of Returns

Bill Bliss
 Joe Due mit X
 J. Jacobs, soon red
 Feb. 9th 1929
 cloudy, windy
 & cold.

Bench Levels Voltaire Street
 from Chatsworth Blvd West to Sunset Cliffs Blvd

	+	HE	-	Elev
	0.38	117.17		116.79
TP	0.40	109.55	12.72	109.45
	0.16	96.51	8.50	96.35
TP	7.69	93.17	11.03	85.98
TP	3.91	96.27	0.81	92.36
TP	0.66	83.83	13.10	83.17
TP	5.10	76.70	12.23	71.60
			3.08	73.62
TP	1.19	67.99	9.95	66.75
			5.57	62.37
TP	9.67	72.57	5.09	62.90
TP	11.95	83.74	0.78	71.79
TP	9.24	92.15	0.83	82.91

BM SW B.P. Voltaire + Chatsworth Blvd.

Set BM SE Cr. Return Voltaire + Villa Drive Brass Plug.

Set BM SW Top Hydrant San Clemente + Voltaire

Set BM ~~55 Brass Plug~~ Voltaire + Catalina Blvd

+ HZ
92.15 - Elev

5.65 86.50 set BM

NW Brass Plug Bolinas + Voltaire

T.P. 1.10 83.55 9.70 82.45

T.P. 0.64 74.23 9.96 73.59 Set BM

SE Top Hydrant Guizot + Voltaire

T.P. 0.69 63.50 11.42 62.81

T.P. 0.83 52.68 11.65 51.85

7.00 48.68 Set BM

NW 7^e TR. Seaside + Voltaire

0.58 45.17 8.09 44.59 Reset BM

~~Destroyed~~
NW Brass Plug Froude + Voltaire

T.P. 1.69 35.56 11.30 33.87

5.44 30.12 check on

BM SWBP Ebers + Voltaire

T.P. 3.24 31.05 7.75 27.81

5.43 25.62 check on

BM SWBP Voltaire + Dejeu. Now Sunset Cliffs Blvd.

T.P. 5.84 31.13 5.74 25.31

see sunset cliffs Blvd for continuation

+

TP 1.10

TP 0.6

TP 0.6

TP 0.83

0.5

TP 1.6

TP 3.2

TP 5.8

↑

see

Bill Bliss

Joe Overmitz

J. Jacobszoon Rod

Feb 5th 1929

Cloudy, Windy,

+ Cold. Threatening

Showers.

Bench Levels Sunset Cliffs Blvd
from Voltaire South to

13

543	31.05		25.62	"B.M."	SW Brass Plug Voltaire + Sunset Cliffs Blvd
584	31.15	5.74	25.31		
		3.07	28.08	set BM	SE Top Hy. Muir
		2.11	29.04	set BM	S.E. Top Hy. Long Branch
502	30.55	5.62	25.55	T.P.	
		6.51	24.04	checked on	BM NW B.P. Cape May
4.49	29.52	5.52	25.03	" "	BM " " B.P. Saratoga
		2.55	26.97	set BM	SE Top Hydrant. Santa Monica
4.58	32.01	2.09	27.95	" "	NW Top Hydrant Newport
		5.97	26.04	checked on	BM NW B.P. Niagara
8.09	39.12	0.98	31.03	T.P.	
		7.02	32.10	checked on	BM S.E. B.P. Narragansett

	H.I.		5/ev		
	3912				
	Bench levels Sunset Cliffs Blvd (cont)				
11.27	48.36	2:03	37.09	T.P.	check Plug Del Monte B.P. Missing
11.53	59.27	0.62	47.74	T.P.	
7.16	39	5.04	59.23	check on	B.M. S.E. Santa Cruz
4.00	62.11	1.16	58.11	T.P.	
3.91	53.97	12.05	50.06	check on	B.M. NW Coronado
0.29	41.95	12.31	41.16	T.P.	
		5.26	36.19	check on	B.M. NW B.P. Del Mar
1.73	34.89	8.29	33.16	T.P.	
		2.92	32.47	Set B.M.	S.E. Top Hydrant Orchard
0.79	29.22	6.46	28.93	T.P.	
		1.09	28.13	check on	B.M. NW Pescadero
3.97	25.08	8.11	21.11	check on	B.M. NW B.P. Bermuda
		4.99	20.09	set B.M.	SW cp TX Point Loma Ave Reference Point of obs. ^{Return}

1 H.I. - Elev
Bench Levels Sunset Cliffs Blvd (cont)
25.08

9.40 31.98 3.00 22.08

5.90 25.58 Set BM SE Brass Plug Adair

3.22 28.26 ^{Noon} T.P.

Bill Bliss
 Joe Duermid X
 J. Jacobszoon rod
 Feb. 5. 1929

Bench Levels Point Loma Ave
 from Sunset cliffs Blvd to Santa Barbara St

9.21	29.30		20.09	BM SW	7° TK Point Loma Ave + Sunset Cliffs Blvd
13.01	41.19	1.12	28.18	TP	
		5.53	35.66	Set BM	S.E. Ebers
12.82	53.47	0.54	40.65	TP	
12.49	65.20	0.76	52.71	TP	
12.78	77.37	0.61	64.59	TP	
		10.83	66.54	Set BM	S.E. B.P. Froude
11.58	88.53	0.42	76.95	TP	
12.99	101.42	0.10	88.43 88.43	TP	
13.05	114.33	0.14	101.28	TP	
12.84	127.04	0.13	114.20	TP	
		6.87	120.17	Set BM	S.E. B.P. Guizot S.P.C. of curve
12.85	139.73	0.16	126.88	TP	

+ H.I. - Elev

139.73

Point Loma Ave Bench Levels (cont)

20

11.94 151.56 0.11 139.62 T.P.

12.21 163.13 0.64 150.92 T.P.

11.39 174.02 0.45 162.68 T.P.

12.84 184.51 0.35 173.67 T.P.

12.34 198.71 0.14 186.37 T.P.

10.19 188.52 set BM

S.E. B.P. Santa Barbara St and Point Loma Ave

Bill Bliss
 Joe Diermit
 J. Jacobs & Co. Red
 Feb 5th 1929

Bench Levels Santa Barbara Street
 from the S Line of Point Loma Ave South
 to Catalina Blvd

See Point
 Loma Ave
 Bench Levels
 Page 20. This
 Book

10.19	198.71		1.88.52	BM	SE B.P. Point Loma Ave + Santa Barbara St
12.96	209.17	2.50	196.21	T.P.	
		3.86	205.31	Set BM	SW B.P. Tivoli St
12.97	221.58	0.56	208.61	T.P.	
12.12	233.21	0.49	221.09	T.P.	
13.10	24 ⁶ 4 .18	0.13	233.08	T.P.	
13.17	258.91	0.94	245.24	T.P.	
12.63	270.71	0.33	258.08	T.P.	
		11.79	258.92	Set BM	NE B.P. Trieste St
6.90	277.06	0.55	270.16	T.P.	
11.85	288.59	0.32	276.74		
		4.36	289.23	Set BM	NE B.P. Mona Drive (MOANA)
0.62	288.53	0.68	287.91	T.P.	

+

H.I.
288.53

-

Elev

23

0.27 277.13 11.67 276.86 TP

1.97 267.57 11.53 265.60

6.92 260.65 260.89
0.03
P.4

Bill Bliss
 Joe Doornik
 J. Jacobszoon
 Feb 7 1928
 Cloudy, Rainy
 & Cold.

Bench Levels on Santa Barbara Street
 from Point Loma Ave North to Cape May
 + H2 Elev

24

12.92	201.44		188.52	BM SE	B.P. Santa Barbara St + Point Loma Ave
13.06	213.70	0.80	200.64		
0.48		12.87	200.83	Set BM	SW B.P. Bermuda
10.18	223.40	0.98	213.22	TP	
12.84	235.79	0.95	222.95	T.P.	
13.11	298.41	0.99	235.30		
9.87	257.64	0.64	247.77		
		7.56	250.08	set BM	S.E. B.P. Orchard
		5.40	252.24	check on	BM. NW B.P. "
		7.28	250.36	check on	BM SW B.P. Del Mar
2.43	248.25	11.82	245.82	I.P.	
		8.15	240.10	check on	B.M. S.W. Coronado
11.41	258.60	1.06	247.19	TP	

+	H.I.	-	Elev		
	258.60				
		3.19	255.41	check on	BM SW Santa Cruz
0.92	247.30	12.22	246.38	T.P.	
		9.86	237.94	check on	BM NE Del Monte
0.13	234.57	12.86	234.44	T.P.	
0.38	222.45	12.50	222.07	T.P.	
		3.78	218.67	check on	BM SW B.P. Narragansett
0.15	209.58	13.02	209.43	T.P.	
0.25	197.63	12.20	197.38	T.P.	
		3.22	194.41	set BM	SE Top Hydrant, Newport B.P. on NW corner is out
5.23	197.49	5.37	192.26	T.P.	
0.85	195.06	3.28	194.21	NW B.P.	Santa Monica
0.35	183.02	5.54 12.39	177.48 182.67	T.P.	
		6.89	176.18 176.18	check on BM	N.W B.P. Saratoga

+	H.I.	-	Elev		
	183.02				
0.38	170.90	12.50	170.52	T.P.	
1.89	159.88	12.91	157.99 157.99		
		2.61	157.27	Set BM	SE B.P. Cape Mex + Santa Barbara
2.94	159.29	8.53	151.35	Set BM	SW B.P. Brighton + Venice
0.16	141.68	12.77	141.52	I.P.	
0.43	129.60	12.51	129.17	T.P.	
0.64	117.52	12.72	116.88	T.P.	
0.38 12.45	105.42	12.48	105.09	T.P.	
0.05	92.51	12.96	92.46	T.P.	
0.68	81.04	12.15	80.36	T.P.	
0.92	71.48	10.48	70.56		
		9.15	62.33	Check on	BM SE B.P. Voltaire + Catalina
			62.37	BM	
			0.04	Error	

Bill Bliss
Joe Duermit
J. Jacobs & son
Feb 8, 1929
Cloudy, cold.
Threatening rain

Bench Levels Catalina Blvd. from
Voltaire South to Chatsworth.

27

9.15	71.52		62.37	B.M. SE	B.P. Voltaire + Catalina
10.63	81.23	0.92	70.60 70.92	T.P.	
		6.54	74.69	Set B.M.	S.E. B.P. Udal.
10.14	90.94	0.93	80.80	T.P.	
12.72	102.58	1.08	89.86	Set B.M.	S.E. B.P. Tennyson
12.56	114.71	0.93	102.15	T.P.	
		7.70	107.01	Set B.M.	S.E. B.P. Alicia Drive
12.19	126.22	0.68	114.03	T.P.	
		9.37	116.85	Set B.M.	S.E. B.P. Atascadero
10.42	135.05	1.59	124.63	Set B.M.	S.E. B.P. Bernice Drive
11.57	146.20	0.92	134.63	T.P.	
		2.78	143.42	Set B.M.	N.W. B.P. Niagara

+ H.I. - Elev
 196.20
 Catalina Blvd Bench Levels from Voltaire
 South (contd)

12.23	158.25	0.18	196.02	I.P.	
9.32	165.66	1.91	156.34	T.P.	
		8.14	157.52	checked on	BM N.E. B.P. <i>Narroyonett</i>
		5.33	160.33	checked on	BM SW B.P. <i>Del Monte</i>
9.72	171.11	4. ²⁷ 23	161. ³⁹ 43	T.P.	
		3.55	167.56	checked on	BM SW Santa Cruz
10.50	180.87	0.74	170.37	I.P.	
		7.93	172.94	Set BM SW	B.P. Coronado
11.99	192.26	0.55	180.32	T.P.	
		4.73	187.53	Set BM S	W. B.P. Del Mar
12.70	204.42	0.54	191.72	I.P.	
		7.92	196.50	Set BM	SW B.P. Orchard Ave
		2.81	201.61	check out	on BM N.E. B.P. Chatsworth + Catalina
			201.61	BM	

Bill Bliss
Joe Duermit
J Jacobs Zoon
Feb 8, 1929

Bench Levels Cape May Ave
from Santa Barbara West to Sunset
Cliffs Bldg HI - Elev.

29

7.94	165.21		157.27	B.M. 3E	B.P. Santa Barbara + Cape May
0.51	152.99	12.73	152.48	T.P.	
0.24	140.66	12.57	140.42	T.P.	
0.05	128.10	12.61	128.05		
		3.18	124.92	Set B.M.	S.W. B.P. Guizot
0.93	115.98	13.05	115.05	T.P.	
0.45	103.55	12.88	103.10	T.P.	
1.16	91.92	12.79	90.76	T.P.	
1.55	84.27	9.20	82.72		
0.77	76.75	8.29	75.98	Set B.M.	S.W. B.P. Froude
0.52	64.36	12.91	63.84	T.P.	
1.16	53.00	12.52	51.84		
1.11	41.82	12.29	40.71	T.P.	

+ HI - Elev
4/82
Cape May Bench Levels (contd)

0.34 36.76 5.40 36.42 Set BM SWBP Ebers

2.39 32.11 7.04 29.72 T.P

8.09 29.02 check out on BM NWBP Sunset Cliffs Blvd + Cape May
29.04 BM.
0.02 Error

Bill Bliss
 Joe Duermit
 J. Jacobs 2000 ft
 Feb 9, 19~9
 Fair & Warm

Newport Ave Bench Levels from

Sunset Cliffs Blvd. East

+ H.I. - Elev

9.27	36.70		27.43	BM. NW	Top Ht. Sunset Cliffs Blvd. & Newport Ave
10.29	46.37	0.62	36.08	T.P.	
		3.31	43.06	Set BM	SW B.P. Ebers
12.43	58.00	0.80	45.57	T.P.	
12.99	70.61	0.38	57.62	T.P.	
12.90	83.09	0.42	70.19	T.P.	
12.46	95.20	0.35	82.79	I.P.	
12.36	107.20	0.36	94.84	TP	
0.37	104.58	2.89	104.31	Set BM	SW B.P. Froude
10.27	117.10	0.37	106.83	TP	
13.15	129.88	0.37	116.73	TP	
13.01	142.53	0.36	129.52	T.P.	
11.87	153.82	0.58	141.95	# T.P.	

+ HI - Elev

153.82

Newport Ave Bench Levels (contd)

13.05 166.51 0.36 153.46 T.P.

2.75 163.76 Set BM

S.W. B.P. Guizot

12.78 178.68 0.61 165.90 T.P.

10.30 188.35 0.63 178.05 T.P.

10.14 196.13 2.36 185.99 T.P.

1.70 194.43 check in

B.M. S.E. TopHydroent Santa Barbara.

6.16 189.97 Set BM

N.W. B.P. Santa Barbara + Newport

Bill Bliss
Joe Duermitt
J. Jacobs 2009 Rod
Feb. 9/1949
Fair + warmer

Bench Levels Pescadero Street from
Sunset cliffs Blvd East to Santa Barbara St.

	t	H.I.	-	Elev
9.73	32.86			28.13
12.33	44.87	0.32		32.54 T.P.
12.80	57.24	0.43		44.44 T.P.
12.26	68.66	0.84		56.90 Set BM
13.10	81.41	0.35		68.31 T.P.
12.97	93.86	0.52		80.89 T.P.
12.83	106.40	0.29		93.57 T.P.
		11.80		94.60 check on
13.12	119.04	0.48		105.92 T.P.
12.44	131.24	0.24		118.80 T.P.
12.80	143.79	0.25		130.99 T.P.
12.39	155.88	0.30		143.49 T.P.
12.72	168.16	0.44		155.44 T.P.

BM N.W. B.P. Sunset Cliffs Blvd + Pescadero

N.E. B.P. Ebers

BM S.W. B.P. Froude

+	H.I.	-	Elev
Pescadero	168.16	St. Bench Levels (contd)	

	10.63	157.53	Set
--	-------	--------	-----

BM. N.W. Monument approx 7° inside Prop. line

1267	180.55	0.28	167.88 T.P.
------	--------	------	-------------

1268	192.99	0.24	180.31 T.P.
------	--------	------	-------------

12.96	205.58	0.37	192.62 T.P.
-------	--------	------	-------------

13.06	218.36	0.28	205.30 T.P.
-------	--------	------	-------------

11.91	230.05	0.22	218.14 T.P.
-------	--------	------	-------------

	3.57	226.48	check at on BM. 3 Nails SW E. ch. Pole Santa Barbara
--	------	--------	--

	5.16	224.89	Set BM SW E. ch. Light Pole Santa Barbara R.R. Spike
--	------	--------	--

13.16	242. ⁹⁸ 88	0.23	229.82 T.P.
-------	----------------------------------	------	-------------

10.85	253. ³⁹ 29	0.49	242. ⁹⁹ 39 T.P.
-------	----------------------------------	------	---------------------------------------

	3.29	250. ¹⁰ 00	check out on BM. S.E. BP Orchard + Santa Barbara
		250.08	
		0.02 error	

Bill Bliss
 Joe Duerant
 J Jacobszoon
 Feb 11, 1929
 Fair & warm

+ H L - Fly

Bench Levels Guizot St. from
 Point Loma Ave North to Del Mar. Won Del
 Mar to Froude. Non Froude to Coronado & East on Coronado
 To Santa Barbara

10.87	131.09		120.17	BM-55	B.P. Guizot & Point Loma Ave
10.00	140.54	0.50	130.54	T.P.	
		7.34	133.20	Set BM	s.w. B.P. Bermuda
13.00	153.16	0.38	140.14	T.P.	
11.15	163.88	0.93	152.73		
		6.37	157.51	check on	BM NW Mon Pescadero
			$\frac{157.53}{0.02}$	Error	
13.13	176.58	0.93	163.45	T.P.	
12.22	188.11	0.69	175.89		
		8.78	179.33	Set BM ^{NE} Mon	Orchard. Approx. 5' inside Prop. Both ways
12.83	200.59	0.35	187.76		
0.66	201. ¹⁰ 00	0.15	200.44		
0.64	188. ⁹ 86	12.78	188. ³² 22		
0.96	176. ⁴³ 33	12.99	175. ⁹ 87		

1247
74-76

+	H.I. ⁴³ 176.53	-	Elev
		8.35	168.08 167.98
11.92	184.28	4.07	172. ³⁶ 26
9.51	193.18	0.61	183.67
		9.31	183.87
12.78	205.58	0.38	192.80
13.11	218.13	0.56	205.02
12.15	230.12	0.16	217.97
10.96	240.46	0.6~	229.50
		7.30	233.16
12.57	252.63	0.40	240.06
		12.49	240.19
			240.10
			0.09 error =

Set BM N.W. Monument Del Mar + Froude Approx 5' inside Property

T.P.

Set BM B.P. in Concrete steps approx 80' South of the SW Corner of Coronado + Froude on West side Street

TP

TP

TP

TP

Set BM S.E. B.P. Guizot + Coronado

TP

check on BM-S.W. B.P. Coronado + Santa Barbara

See Page 37. Levels Perun

#2
+ Bench Levels Coronado from Santa Barbara
West to Froude. South on Froude to Del Mar
East on Del Mar to Guizot & South on Guizot to Pescadero (check levels)

12.50 252.60 240.10 B.M.

SW Santa Barbara + Coronado

0.54 241.84 11.30 241.30 T.P.

8.74 233.10 check BM

SE B.P. Coronado + Guizot

0.41 229.58 12.67 229.17 T.P.

0.44 217.24 12.78 216.80 T.P.

0.10 204.99 12.85 204.39 T.P.

0.31 192.27 12.53 191.96 T.P.

8.44 183.83 check on

B.M. B.P. in concrete steps approx 80' S. of Coronado + Froude ^{west} side of st.

1.40 184.79 8.88 183.39 T.P.

6.83 179.15 12.47 173.32 T.P.

11.10 168.05 check BM

N.W. Mon. Froude + Del Mar

7.36 181.68 4.83 174.32 T.P.

2.36 179.32 check BM

N.E. Mon Guizot + Orchard.

+

HI
18168

-

Elev

0.76 169.46 12.98 168.70 T.P.

J
11.97 167.99 check on

BM. NW Mon. Pescadero + Guizot

167.51
0.02 Error

Bill Bliss
Joe Duermit
J. Jacobszoon
Feb 11, 1909
Fair + warm

Bench Levels Venice St. from
Cape May South

39

	+	#1	-	Elev	
5.83	182.01		176.18	BM NW	B.P. Saratoga + Santa Barbara
11.46	191.63	1.78	180.23	Set BM	SW Saratoga + Venice
11.89	203.09	0.43	191.20	TP	
12.62	214.07	1.64	201.95	Set BM	SW B.P. Santa Monica
12.34	226.11	0.30	213.77	T.P.	
9.98	235.43	0.66	225.75	TP	
		5.29	230.14	Set BM	SW B.P. Newport
2.50	226.81	1.12	224.31	T.P.	
1.34	219.06	9.09	217.72	Set BM	SW B.P. Niagara
1.14	210.84	9.36	209.70	TP	
9.39	214.60	5.63	205.21	Set BM	SW Narragansett Brass Plug
10.06	222.45	2.21	212.39	Set BM	SW Del Monte
10.61	^B 233.40	0.66	¹ 222.79	Set BM	SW Top Hy Santa Cruz

f HI - Elev
 232.40
 Venice Ave Bench Levels (contd)

f	HI	-	Elev		
3.73	231.99	4.19	228.21	Set BM	SW B.P. Coronado
1.37	225.53	7.78	224.16	Set BM	S.E. Top Hydrant Del Mar
		6.80	218.73	Set BM	SW B.P. Orchard + Venice
0.27	213.17	12.63	212.90	TP	
2.11	209.09	11.19	201.98		
		7.5 ⁹	196.50	check	out on BM SW Orchard + Catalina Blvd
			196.50		
			0.00		

Check levels for
Interceptor Sewer
Fed Bldg To B.M. "B"

Moore Notes
Osborn &
Schmoe 1944 **41**

				29.64	USGS
				-6.12	
	0.25	23.77		23.52	
T.P.	4.095	20.07	7.795	15.975	
T.P.	3.00	15.523	7.527	12.523	
T.P.	6.39	14.102	7.87	7.713	
T.P.	8.19	17.088	5.165	8.938	
T.P.	7.01	19.823	4.275	12.813	
T.P.	4.152	20.055	3.92	15.903	
T.P.	4.64	17.115	7.58	12.475	
T.P.	6.167	18.362	4.92	12.195	
T.P.	5.682	20.656	3.388	14.974	
T.P.	1.582	17.702	4.536	16.122	
T.P.	0.34	10.652	7.39	10.312	
T.P.	6.102	10.036	6.718	3.934	
			5.016	5.02	
T.P.	4.641	10.01	4.667	5.369	
T.P.	3.68	8.13	5.56	4.45	
			4.57	3.56	
T.P.	3.36	7.623	3.867	4.263	
			4.198	3.425	
T.P.	4.73	9.635	2.718	4.905	
			0.31	9.325	
			3.04	6.615	

Brass disc NW face of Fed Bldg.

SWBP FT STATE

SWBP India & E

SEBP Kettner & C

NWBP Kettner & A

NWBP " & ASH

SEBP Pacific & Beech

SE Iron Bolt in Curb Pacific & Elm

NWBP Curb Pacific & Elm

SE Top FH Pacific & Grape 1423 PIS = 9.37

SEBP Curb " " " " " = 6.65
6.65 Stk.

(6195)
504 State

3.595
Stk.

1931
PIS = 9.37
" " " " " = 6.65
6.65 Stk.

9.635

T.P. 5.96 13.145 4.35 7.285

T.P. 5.585 13.865 4.865 8.28

T.P. 4.62 14.02 4.465 9.40

T.P. 3.48 12.31 5.19 8.83

T.P. 6.83 14.675 6.465 5.845

T.P. 6.84 14.775 4.74 7.935

T.P. 6.32 19.385 1.71 13.065

T.P. 4.333 19.353 4.365 15.02

T.P. 2.47 14.60 7.223 12.13

T.P. 4.08 13.055 5.625 8.975

T.P. 5.005 12.945 5.115 7.94

T.P. 4.32 12.975 4.29 8.655

T.P. 8.13 16.51 4.595 8.38

check to B.M. "B" 2.15 14.30

USGS

20.538

6.12

14,418 = CITY

0.058

NW BP Pacific + Hawthorn

NW BP " + Juniper

NW BP " + Laurel

BM BP Inner Circle Front of adm. Bldg. Lindbergh Field. 12.11 Stk?

Con. BM BP Base Flag Pole NW Pacific + Sassafras

R.R. Brass disc W. end Culvert Mile Post 222 5th R.R. Row

Check Levels From Santa Fe RR Calv. MP 266
 Bench Mark "B" Along California St. + La Jolla Ave +
 " " #19 Old Town

Feb. 11. 43
 5:30 AM
 3/11/43
 899 Rod

Clear
 Cool
 No Wind
 Andrews St
 Sideline

BM USGS	10.675	31.213		20.538	Bras Disc N End RR Calv. MP 266
TP	6.70	35.143	2.77	28.443	
TP	8.07	38.528	4.685	30.458	
TP	10.10	44.578	4.05	34.478	
TP	12.875	56.251	1.222	43.356	
TP	7.885	59.446	4.67	51.561	
TP	9.73	66.506	2.67	56.776	
TP BM	9.715	75.795	0.426	66.08	NW 8P Clayton + California
TP BM	7.65	80.87	2.575	73.22	NW 8P Sutherland La Jolla Ave
TP BM	4.68	84.85	0.71	80.16	NW 8P Hocutt + La Jolla Ave
TP BM	4.805	88.900	0.745	84.095	NW 8P Estud. Hwy La Jolla Ave
TP BM	4.90	93.070	0.73	88.170	NW 8P Hitchy La Jolla Ave
TP BM	1.51	93.780	0.90	92.170	NW 8P Gardini + La Jolla Ave
TP BM	0.565	86.645	7.70	86.080	NW 8P Cours + La Jolla Ave
TP	2.93	79.560	10.015	76.630	
BM	1.44	77.325	3.675	75.885	NW 8P Hitchby La Jolla Ave

TP	9.13	67.841	0.725	58.711	59.446 Bl. Ford
BM	6.70	74.216	0.325	67.516	
	13.10	84.116		71.016	
BM			0.06	84.056	
	60.03 ✓				
	66.15				
	67.10 ✓				
	73.37				
	74.15 ✓				
	80.27				
	78.09 ✓				
	84.27				
	82.15 ✓				
	88.27				
	86.15 ✓				
	92.27				
	80.05 ✓				
	86.17				
	69.83 ✓				
	76.75				

SE 8P
 Andrews St
 Kettner
 City 64.95
 81.25
 71.07

NW 8P
 Andrews St
 India 77.97
 84.09

77.325

TP 0.935 70.795 7.465 69.860

TP 0.185 59.120 11.85 58.945

TP BM 1.52 51.305 9.345 49.785
SE BP
Anspud 1st
La Solita Ave
43.75
6.12
49.87Curb on Fill
TP BM 2.77 45.160 9.915 41.890
SE BP
First St
La Solita Ave
35.48
6.12
41.60TP BM 5.49 43.500 7.15 38.010
SW BP
San Diego Ave
Conc
31.95
6.12
38.07TP 2.89 40.650 6.76 36.740
SW 7' x 7'
San Diego Ave
& Mar 1stTP 2.40 38.260 5.77 34.860
SW 7' x 7'
San Diego Ave
& 7th StTP 2.225 30.670 9.825 28.425
SW 7' x 7'
San Diego Ave
& MasonBM Serial #19
old Town
Grading on Bottom
of Recess 5.295 25.375
N 62.101
Mason South
of San Diego Ave

Check Levels for Interceptor Sewer

from Military Res line on front loma. to

BM at Rosecrans + Inyokham (Causeway)

BM				37.89	out N.E. McCann & Rosecrans
B.M.	0.89	42.34		41.45	N.E. Nichols & Rosecrans - 1823
T.P.	5.32	40.27	7.39	34.95	
Check BM	0.54	33.88	6.93	33.34	N.E. Rosecrans & Kellogg
T.P.	0.47	22.05	12.30	21.58	
Check BM	3.43	14.27	11.21	10.84	SW B.P. Kellogg & Santa Ana
Check BM	1.02	10.14	5.15	9.12	S.E. Top HY down near 13th St SW B.P. McCann & Santa Ana
Check BM	1.81	6.10	5.85	4.29	
T.P.	3.77	0.29	9.58	-3.48	
Set BM	2.80	0.76	2.33	-2.04	on M.H.T. Mon. Apr. 18/40 Apr. 20/40 of 2
T.P.	12.22	12.44	0.54	0.22	
Check BM	3.34	14.27	15.1	10.93	SW B.P. Owen & Santa Ana
Set BM	2.73	6.02	10.98	3.29	SW T.P. 17th St & Santa Ana
Set BM	12.17	12.18	6.01	0.01	N.E. Col. Cannon 17th St 2" Pipe - 1st Inyokham Santa Ana
Check L			11.76	0.92	2 1/2" Hole & 2" Pipe - 1st Inyokham Santa Ana
T.P.	3.68	13.03	2.83	9.35	Set BM. 4th St R.R. 1st on M.H.T. Santa Ana opp 2014 1/2 App 46 1/2 of 2.
Check L			11.14	1.89	2.67 1/2
FP	11		368	35	
T.P.	8.62	10.32	11.33	1.70	BM. 301 for W. 1st & 5th & W. 1st
Check at L			8.68	1.64	30783 29
T.P.	8.16	9.40	9.08	1.24	
Set BM	0.95	7.71	2.64	6.76	4x4" RN Post L
Check L	5.78	5.3	4.96	2.75	37714 25 on M.H.T. line

T
7-71

Set BM. T.P.	11.76	13.69	5.78	1.93	Bolt Top on Hoare pier	Approx 30' Pt of S. B.	& Bassmire St
T.P.	11.92	25.07	0.54	13.15			
T.P.	6.91	31.72	0.26	29.81			
check BM			4.13	27.59	N.W.B.P. Reservoir & Bassmire		
				27.65	F.B. 1923	- p 24. Levels by Charles Moore	
				0.06	diff		
BM	3.97	5.90		1.93	Bolton Pier & Bassmire	30' Pt. of S.	
1x1 stake T.P. on L	6.34	5.62	6.62	-0.72	46+33.85		
BM	5.88	8.94	2.56	3.06	1x1 stake	Approx 25' S. of L. 16 & Talbot on S. of Shepherd St. Products	
check L	8		6.39	2.58	49+48.18	R.H. Nail & Talbot & Slaughter	
on POT T.P.	2.48	6.39	5.03	3.91	54+13.18 Approx 50'	Southern of The Sideline of Caron Road	
Set BM	2.91	5.00	4.30	2.09	SW 70' K. Addison	+ Slaughter	
check L. & Carlton			6.51	-1.51	1x1 stake & Byron		
			3.02	1.98	62+41.37		
T.P.	11.92	16.30	0.62	4.38			
T.P.	12.17	28.21	0.26	16.04			
T.P.	5.24	33.26	0.19	28.02			
check BM			4.20	29.06	U.S.G.S	standard disk in C6	
			5.24	29.11	← According	Approx 100' W.W. line of Locust on S. C. 6. line of Byron	
				0.05	diff	to Charles Moore F.B. 1423 - p 24	

B.M. L.	7.10	9.08	-1.98	see page 97 this book	1x1" stake 6' N of the E line of Carleton
B.M.	1.64	7.74	2.98	6.10	N.W. 7 th Jack Carleton & Scott
T.P.	3.16	3.70 10.36	7.20	0.54	
check 1x1			7.62	-3.92	1x1" stake & Fenelon
Set B.M.	5.33	5.72 12.38	3.31	0.39 7.05	x in Rim Base of M.H. S. Side of M.H. & Fenelon
check stake			5.00	0.72 7.38	1x1" & Scott. + Hugo
Set B.M.	5.15	6.31	4.56	1.16	x on Rim of M.H. S. Side Base Approx 30' N of E. on E. Hugo
T.P.	4.90	4.83	6.38	-0.07	1x1" stake * 6' S of Jarvis on E. of Sower
Set B.M.	3.23	4.23	3.83	1.00	4" x 4" Harbor Dept Set on rock in Post Prop. Cor. SW. Lowell & Scott
TP on L.	11.54	11.50	4.27	-0.04	94+11.76
TP on P.O.T.	5.01	12.29	4.22	7.28	99+22.97
		Void - See page 99			
TP.			4.92	7.37	

	11.92	11.38	- 0.04	94+11 ²⁶	Note Levels re-run from L. in order to set benches in Training Station
Set BM	4.63	12.03	3.98	7.40	50' lot of P.O.T. 94+22 ⁹⁷ 2x2" Pine Stake Nail in top. 24" long
check T.P.			4.62	7.41	
check POT.			5.22	6.81	106+99 ⁹²
Set BM.	4.36	11.49	9.90	7.13	Approx 50' lot of P.O.T. 106+99 ¹³ 2x2" Oak Stake Nail in top. 24" long
Set BM.	4.10	12.69	2.90	8.59	on base of M.H. Rim. 130' lot of 4" dia 113+11 This BM. uses an "H" in Barbs plainly marked on South Side M.H.
check POT.			6.45	6.24	114+12 ⁹²
Set BM	4.06	11.10	5.65	7.04 5.65	Approx 50' lot Sta 118+00 2x2" Pine Stake 24" long Nail in Top. Surrounded by 3 Guard stakes
T.P.	4.14	11.92	3.32	7.78	
Set BM.	6.10	13.21	4.81	7.11	Top 1 1/4" pipe opp Sta 125 Sta. Approx on W. Side of Cushing Drive. pipe is 0.2 in diam. plainly marked on cb.
Set BM	2.26	13.33	2.14	11.07	E. Side Cushing Road. Top F. Hydrant 50' lot of W. side
T.P.	4.61	12.87	5.07	8.26	
Set BM	4.30	13.48	3.69	9.18	N.E. Return Cushing + Tripod on Hrs. Spot. Chiseled out of cb

T.
13.48

50

TP on L 4.96 13.48 9.96 8.52 141.00

TP 4.46 13.13 7.81 8.67

TP 12.12 24.49 0.76 12.37

TP 11.99 36.22 0.26 24.23

TP 12.03 47.93 0.82 35.90

TP 5.33 51.80 1.46 46.47

Check S.M. 3.59 48.21 NWBP
48.27 Dunast. Positions
0.06 diff

BM 5.01 14.19 9.18 NE Cushing see page 49
+ Ingraham Bottom of page

TP ²
~~3.63~~ 7.37 9.45 4.74

TP on L <sup>Foot
Station</sup>
7.40 9.57 5.20 2.17

Check B.M. 6.64 12.35 3.86 5.71 NE Top H.
Porter Road 125' East of Cushing Road

TP 4.43 12.29 4.49 7.86

X
12.29

51

T.P.	5.18	7.43	10.04	2.25	
check L			4.50	2.93	55166.80
T.P.L	5.03	8.30	4.16	3.27	
Set B.M.	5.13	8.57	4.86	3.44	B.P. in Cb. South Side of Perry Road on North End Ware house
check L			4.90	3.67	2x2" R.W. Hub
T.P.	5.88	8.11	6.34	2.23	
T.P.L	3.38	6.55	4.94	3.17	
Set B.M.	6.22	7.49	5.28	1.27	B.P. in East Cb. of Barnett Approx 30' Rt. of sta
check L			10.28	-2.79	
Set B.M.	^{3.32} 7.31	4.31	6.50	0.99	Brass Plug in Wing Wall of Tide Gate Box Approx 50' Rt. of sta
T.P.	9.56	8.98	9.89	-0.58	
check L	1		4.86	4.12	174 + 23 6/8
Set B.M.	4.05	8.45	4.58	4.40	B.P. in East Cb. of Cole Drive Approx 30' Rt. of sta

T
845

52

T.P.L. 6.09 9.58 4.96 3.49

Set BM 3.83 8.37 5.04 4.54 Brass Plug in East Cb Bradman Drive on P.C. Alley Return Approx 25' (R) of S.

Check BM 0.63 6.81 2.19 6.18 S.E. Top Hy Rosecrans + Sellers Drive
6.70
0.52

T.P. 5.10 7.90 4.01 2.80

Set BM. 8.72 7.12 9.50 -1.60 Pueblo Man

T.P. 3.88 5.20 5.80 1.32

Check BM. 4.80 0.40 SW B.P.
0.49
0.09 error

Rosecrans + Ingraham (coarse way)
- According to C Moore. FB 1423-p 25

0.53

Check Levels from BM Rosecrans &
Bessimer to Nichols & Rosecrans

12.16 39.75 27.59

T.P. 11.82 50.97 0.60 39.15

T.P. 3.67 54.38 0.26 50.71

T.P. 0.49 43.02 11.85 42.53

T.P. 8.37 41.94 9.45 33.57

T.P. 12.24 53.85 0.33 41.61

T.P. 11.94 65.66 0.13 53.72

T.P. 4.87 68.76 1.77 63.89

T.P. 10.08 57.33 11.57 57.25

check BM 186 49.58 9.61 47.72 SE

starting
check BM 8.18 41.90 NE
41.95 ← Moore

Check Levels Nichols to Owen

8.18 49.63 41.95

125 49.02 ¹⁸⁶~~261~~ 47.77

0.56 37.45 12.13 36.89

0.45 26.03 11.87 25.58

1.12 15.01 12.14 13.89

BM 3.79 14.73 4.07 10.94

10.93

0.01

T.P. 4.56 7.42 11.87 2.86

check BM 3.75 7.07 4.10 3.32

check BM 7.03 0.04

SW corner
San Antonio

SW 75° 7K
San Antonio

NE Prop
2" pipe
Qua 11' 0" up

Corrected Levels for Interceptor
 Sewer From Naval Reservation Line
 to ϕ Rosecrans + Ingraham (crossing)
 To be Used on Construction ✓

B.M.	3.43	14.27		10.84	SW.B.P.	Kellogg + San Antonio
B.M.	10.2	10.14	5.15	9.12	S.E.	Top Fire Hydrant Lawrence + San Antonio
B.M.	1.81	6.10	5.85	4.29	SW. McCall	+ San Antonio
T.P.	3.77	0.29	9.58	-3.48		
B.M.	2.80	0.76	2.33	-2.04	M.H.T. Men	opp 12+90 Approx 20' ht of ϕ .
T.P.	12.22	12.44	0.54	0.22		
B.M. check	3.79	14.73	1.51	10.93 $\frac{10.94}{0.01}$	S.W. B.P. corrected	Owen + San Antonio See page 53 Top page
T.P.	4.56	7.42	11.87	2.86		
B.M.	3.75	7.07	4.10	3.32	SW 7 th TK	Perry + San Antonio
B.M.	12.17	12.21	7.03	0.04	NE Propler	2" pipe Quatrough + San Antonio
Check L.			11.76	0.45	ϕ Quatrough	+ San Antonio 2 1/2" RW 22+90 ⁵⁸
B.M.	3.68	13.06	2.83	9.38	M.H.T.	4" x 4" Post opp L 26+91.1. Approx 40' ht of ϕ .

T
13.06

Check L 11.14 2679.64

B.M. 8.62 10.35 11.33 1.73 Top of batt

Check L 8.68 1.67 30+83.99

T.P. 8.16 9.43 9.08 1.27

B.M. 0.95 7.74 2.64 6.79 M.H.T.L.

Check L 4.96 2.78 37+14.25

B.M. 11.76 13.72 5.78 1.99 - corrected elev
1.96 Top of Bolt

T.P. 11.92 25.10 0.54 13.18

T.P. 6.91 31.75 0.26 24.84

B.M. 4.13 27.62 NW 8 P

27.65 - Moore FB 1423
0.03 errorB.M. 3.97 5.96 1.99 - corrected elev
Top of Bolt

T.P. L 6.34 5.68 6.62 - 0.66 46739.85

B.M. 5.88 9.00 2.56 3.12 11.1" 25.15
49740.18

Check L 6.36 2.64 49+98.18

T.P. on P.O.T. 2.48 6.45 5.03 3.97 54+13.18

B.M. 2.91 5.06 4.30 2.15 SW 72 PK.

on S. Side of pleasure wharf opp 30+50. Approx 10' Pt of k.

4x4" R.W. Post opp. 36+90. Approx 50' Lt of d.

pleasure pier. Approx 30' Pt of d. on the Bess. pier. plainly Marked B.M.

Rosecrans + Bessimier
page 2440+46 -
Pleasure pier. Approx 30' Pt of Sewer & on the Bessimier

approx 26's of L on the Shafter produced South

R.H. Nail & Talbot

Approx 50' South of the South line of Canon Rd.

Addison + Shafter

Check ixⁱ 6.51 1.95 Kirby

L 6 N of Center 3.02 2.04 6279.37

T.P. 11.92 16.36 0.62 4.44

12.17 28.27 0.26 16.10

524 33.32 0.19 28.08

420 29.12

29.11 ← According
0.01 error.

L 6 N of Center 7.10 9.13 2.03 ← corrected 6279.37

B.M. 1.64 7.79 2.98 6.15 N.W. 797K

T.P. 3.16 3.75 7.20 0.59

Check ixⁱ 7.62 3.87 & Fenlon

B.M. 5.33 5.77 3.31 0.44 X in Pin

Check Stake 5.00 0.77 & Scott & Hugo

B.M. 5.15 6.36 4.56 1.21 X on Rim base

T.P. 4.90 4.88 6.38 -0.02 1"x1" stake

B.M. 3.23 4.28 3.83 1.05 4"x4" Harbor

59765.41

to Charles Moore PB. 1823 p. 24

U.S.G.S. Standard Disk. Approx 100 West of the where of locust on S. ch. line of Byron.

the

Scott & Carleton ✓

Base of M.H. & Fenlon 79715.66

79755.36

of M.H. S Side 30' H of Interceptor & Nigo

& Jarvis

Dept Prop Corner Scott & Lowell. SW Corner

T.P. 07L	11.42	11.43	4.27	0.01	94+11 ⁷⁶	
B.M.	4.63	12.08	3.98	7.45	50'lt of	P.O.T. 99+22 ²⁷ 2"x2" pine stake with Nail in top - stake 29" long
Check POT			5.22	6.86	106+99 ¹³	
B.M.	4.36	11.54	4.90	7.18	50'lt of	P.O.T. 106+99 ¹³ 2"x2" Oak stake 29" long. Nail in top
B.M.	4.10	12.74	2.90	8.64	On Base of	M.H. Rim. 130' Lt. & Sta 113+11. This B.M. near "H" in North plainly marked on South Side M.H.
Check POT			6.45	6.29	114+14 ²²	
B.M.	4.06	11.15	5.65	7.03	Approx	50'lt Sta 119+00 2"x2" pine stake 29" long. 3 Guard stakes
T.P.	4.14	11.97	3.32	7.83		
B.M.	6.10	13.26	4.81	7.16	Top 1/4"	pipe opp Sta 125+92 ^{Approx} On W side of Cushing Drive pipe is 02 in paving ^{plainly} marked
B.M.	2.26	13.38	2.14	11.12	Top Fy Hyd	rant. E Side of Cushing 50' North of Worden Road
T.P.	4.61	12.92	5.07	8.31		
B.M.	4.30	13.53	3.69	9.23	N.E. Return	of Cushing & Ingraham Hi. Spot Chisled out at ch. plainly Marked
L			4.96	8.57	141+00	
T.P.	4.46	13.18	4.81	8.72		
	12.12	24.54	0.76	12.42		
	11.99	36.27	0.26	24.28		

7
36.27

58

T.P.	12.03	47.98	0.32	35.95		
T.P.	5.33	51.85	1.46	46.52		
B.M.			3.59	48.26	N.W. B.P.	Dumas + Rosecrans
				48.27	According to Moore F.B. 1423.	
				0.01 error		
B.M.	5.01	14.25		9.24	corrected	cler. N.E. Return Cushing + Ingraham H. spot checked out of cp
T.P.	2.63	7.43	9.45	4.80		
T.P. on L.	7.40	9.63	5.20	2.23	149+53 ⁵⁵	
B.M.	6.64	12.41	3.86	5.77	N.E. Top H.	Approx 30 ft off on Northline Porter Road
T.P.	4.43	12.35	4.49	7.92		
T.P.	5.18	7.49	10.04	2.31		
check L.			4.50	2.99	155+66.80	
T.P. L.	5.03	8.36	4.16	3.33	157+17	
B.M.	5.13	8.63	4.86	3.50	B.P. in cb about 30'S	S. Side of Perry Road. North End. Navy Warehouse of L.
check L.			4.90	3.73	2x2 R.W. 1166	158+33 ⁵⁴
T.P.	5.88	8.17	6.34	2.29		

7
8.17

TP. L 3.38 6.61 4.94 = 3.23 164176⁶⁰

B.M. 6.22 7.55 5.28 1.33 B.P. in East cb of Barnett Approx 30' Rt. Stg.

Check L 10.28 -2.73 167183²⁵

B.M. 3.32 4.37 6.50 1.05 B.P. in Headwall of Tide Gate Box. Approx 50' Rt of Stg 169100 APPROX.

TP 9.56 9.04 9.89 -0.52

Check L 4.86 4.18 174123⁶¹

B.M. 4.05 8.51 4.58 4.46 B.P. in East Cb. of Cole Drive approx 20' Rt of Stg.

TP. L 6.09 9.64 4.96 3.55 178132¹²

B.M. 3.83 8.43 5.04 4.60 B.P. in East Cb. of Bradman Drive on PC Alley Return approx 25' Rt of Stg.

B.M. 0.63 6.87 2.19 6.24 SE Top Hydrant Rosecrans + Sellers Drive

TP 5.10 7.96 4.01 2.86

B.M. 8.72 7.18 9.50 -1.54 Pueblo Map opp. Stg. 187+45.41 before realignment

TP 3.88 5.26 5.80 1.38

Check B.M. 4.80 0.46 S.W. B.P. Rosecrans + Ingraham (causeway)
0.49
0.03 Error

B.M. Levels, From W. PT. LOMA Blvd,
and Seaside St. to Voltaire St. and
Catalina Blvd.

r Moore Clear, Cool.
W " NOT windy
12-17-44.

60

	7.012	35.445		28.433	From Walker 14-23-	Stand disk in Mon. USGS H 60 1938 S.W. Cor. W. PT. LOMA Blvd. and Seaside
T.P.	11.55	46.945	0.05	35.395		
T.P.	3.835	46.80	3.98	42.965		
T.P.	3.365	46.24	3.925	42.875		S.W. Top F.H. Seaside & Lockspur
T.P.	4.97	46.445	4.765	41.475		
T.P.	6.615	47.225	5.835	40.61		
T.P.	7.20	50.505	3.92	43.305		
Set B.M. B.P. Con. Mon.			6.05	44.455		on N.W. Voltaire and 2' inside of E. cb. Froude 6" below top cb.
T.P.	6.68	54.235	2.95	47.555		
check to Bliss B.M.			5.69	48.545	48.68	N.W. 7' hd. 4 C.T. Voltaire + Seaside
T.P.	11.30	65.395	0.14	54.095		
T.P.	11.935	76.945	0.385	65.01		

76.945 ✓

T.P. 10.043 86.758 0.23 76.715

T.P. 3.765 90.158 0.365 86.393 86.50

Ed. Bliss BMBP _{IN CURB} N.W. Voltaire & Bolinas St.

T.P. 0.678 83.336 7.50 82.658

T.P. 1.147 74.353 10.13 73.206

T.P. 1.583 67.136 8.80 65.553

T.P. 9.13 74.911 1.355 65.781

Set BMBP in Con. Mon. 8.438 66.473

BMBP ^{Con.} 130' S. of S.W. Voltaire ^{or below grade}
_{Mon.} 2' W. E.H. Catalina Blvd. of alley return

check to Bliss BM 0.31 74.606 74.69

B.P. in Curb SE Con. Catalina Blvd. on Udal St

Cont. Levels to Rosecrans Blvd.
via Wabaska Drive

2.66 69.133 66.473

Above Con Mon. BM. 130' S. of Voltaire
on Catalina Blvd.

T.P. 6.847 73.815 2.165 66.968

T.P. 2.99 76.265 0.54 73.275

Bliss
73.67**This F. Hyd. has settled. NG.**
Top F.H. SW Con. Voltaire & San Clemente

T.P. 7.24 80.055 3.45 72.815

80.055 ✓

T.P.	8.42	86.715	1.76	78.495
T.P.	7.71	92.873	1.552	85.163
T.P.	2.83	91.328	4.375	88.498
T.P.	5.505	91.083	5.75	85.578
T.P.	2.93	87.963	6.05	85.033
T.P.	3.18	84.883	6.26	81.703
SET T.P. B.M.	3.575	81.558	6.90	77.983
check to old B.M. B.P. in Curb	4.56	76.998	77.14	
check to B. Bliss B.M.B.P. curb	3.46	78.098	78.21	
T.P.	2.47	74.708	9.32	72.238
T.P.	3.56	73.225	5.043	69.665
T.P.	2.01	69.275	5.96	67.265
T.P.	1.15	61.855	8.57	60.705

B.M. B.P. N.W.ly Cor. Chatsworth & Wabaska Dr.
 Set Cor. Mon. on wly line Chatsworth, 2' inside curb
 910 below Top Curb

old B.M.
 B.M.B.P. curb SE curb on Chatsworth NE. 12' from old CB
 R.R.

B. Bliss B.M.B.P. SE Chatsworth & Poe St.

(9.7)

C1.855 ↓

T.P.	3.035	57.57	7.32	54.535
T.P.	2.15	53.875	5.845	51.725
T.P.	1.78	48.10	7.495	46.38
T.P.	1.642	47.327	7.475	40.685
T.P.	2.61	36.09	8.847	33.48
overnight T.P.	0.805	30.715	6.18	29.91
T.P.	2.192	26.71	6.197	24.518
T.P.	1.542	20.232	8.02	18.69
T.P.	3.13	14.722	8.64	11.592
Set B.M. B.P. Con. Mon.		5.962	8.76	✓
T.P.	5.065	15.157	4.63	10.092
T.P.	3.685	13.752	5.09	10.067
check to B.M. l.d. C.T. in sdw.		4.575	9.177	9.106
check to B.M. B.P. in curb		5.47	8.282	8.39?

Ed. 3-6 nails in P.P. Sw. Cor. Macaulay & Evergreen

12-18-42. clear, cool, little wind

Sw. Cor. Rosecrans & Lowell 25' W of WL Rosecrans
6' N " " S.W. Lowell
approx. curb grade

9.177

9.106

0.071 Higher than Sw.ly Return

1938 Levels.

15.225 = USGS S. 7' Line of Newell + 3' W of WL Rosecrans
6.119
9.106 (Sec 1423-2X)

Nwly Newell + Rosecrans

This is recent B.M.
Origin?

B.M. Levels

Rosecrans & Lowell to B. Bliss line
at Hugo & Scott.
Fenelon

	4.465	13.225		2.76 ✓	
T.P.	4.30	11.035	6.49	6.735	
T.P.	4.065	9.177	5.923	5.112	
check to B.M. City Brass disk			5.95	3.227	
T.P.	1.901	5.138	5.94	3.237	
T.P.	4.703	5.61	4.231	0.907	
T.P.	4.205	2.635	7.18	-1.57	
T.P.	3.385	1.945	4.075	-1.44	
T.P.	2.855	3.42	1.38	0.565	0.44
					0.125?
T.P.	6.93	7.60	2.75	0.67	
		↓			
T.P.	6.352	9.082	4.87	2.73	
on NW 7' C.T.	?	7.83	6.254	6.15	
" " " "	which	2.94	6.142		

12-8-42

Set
Con.
Mon
S.W. Con.
Rosecrans & Lowell P. 63

chisel cross S. Base MH. Rim
Bliss P. 5C & Scott & Fenelon

Bliss P. 5C
NW 7' Id. C.T. Scott & Carleton = N. 7' Carleton
" " " " " " = C.T. NL Carleton & 7' on Scott

9.08^v

T.P. 7.495 13.917 2.66 9.422

T.P. 7.97 19.677 2.21 11.707

T.P. 7.61 23.997 3.29 16.387

T.P. 9.633 31.83 1.80 22.197

BM.
check to VSGS ^{BM.} Stand disk in curb 2.57 29.26

35.259

6.119

29.140

6.12 High

(See 1403-Part) = VSGS. 35.234 From La Playa
in S. cb. Byron approx. 100 w of Locust St

Transfer B.M. on S.W. Cor. of
Catalina Blvd. at Orchard St.
The original Mon. has been destroyed

2.885 204.495 201.61

T.P. 2.82 201.745 5.57 198.925

check to B.M.B.P. in Curb 5.21 196.535 ^{P. 28} 196.50
0.035 H

Set B.M.B.P. in ^{CITY} CON. MON. 5.13 196.615 1

Check from Bliss Circuit to old
City B.M. Con. Mon. 1908

2.15 262.83 260.68 See p. 4-9

T.P. 5.303 263.823 4.31 258.52

check to old B.M.B.P. Con Mon. 2.27 261.553

Moore
12-19-44.

67

Bliss P. 8
B.M.B.P. in Curb N.E. Cor. Chatsworth & Catalina Blvd

S.W. Catalina Blvd & Orchard. ^{Note! This curb is}
heaving up, at an
expansion joint

S.W. Cor. " " " (approx 2' N of S.W. Cor.)

B.M.B.P. in Curb NW Catalina Blvd & Santa Barbara

approx. E Talbot & 7' E of NW Catalina Blvd.

Check "Bliss" Level Line on Sewer
 on SCOTT ST. Addison
 to Fenelon ST. Moore
 12-19-44

	4.025	6.175	2.15	Bliss P.55
T.P.	3.64	6.575	3.24	2.935
T.P.	5.145	9.48	2.24	4.335
check to Ld. C.T. NW Con sdw	3.32	6.16	6.15	
" " " " " "	3.43	6.05		
T.P.	3.655	7.70	5.435	4.045
T.P.	2.215	4.045	5.87	1.83
check to Chisel Cross	3.56	0.485	P.56 0.44	

also P 47
 B.M. Ld. C.T. sdw Sw Con Addison and Shafter

This was used by Navy Dept. on Sewer Const. ^{Yellow Painted}
 C.T. W.L. Scott & N 7' line Carleton
 P.56 (2 PTS. on this Return, which was used)
 C.T. N.L. Carleton & W. 7' line SCOTT

Base of C.I. Rim M.H. on S. side of Fenelon and
 SCOTT
 (this M.H. could have been disturbed thru
 Const. of New Sewer just East of same)

75

78

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope $1\frac{1}{2}$ to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body

of table in same row and column gives distance from side stake to slope stake. If ground is not level, the side stake and slope stake, lower tangent, this amount it cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point and line of sight should cut target. If not, adjustment necessary.

IMPROVED TABLES
AND
INFORMATION

TABLE No. 2.

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections. Degree of curve with a given L may be found by dividing tangent (or external), opposite L by given tangent (or external). The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

ENGINEERING DEPARTMENT,
CITY OF CALIFORNIA,
SAN DIEGO.

25.321

#19

D

RECEIVED
SAN DIEGO
JUN 10 1902