

1423

Coast M. H. Tide.

POSTS

LEVEL BOOK

No. 330



MICROFILMED

DEC 23 1964

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.



BM. check Levels  
 Fed. Bldg. N/4 Via 51" Sewer line

				29.64 = USGS
				6.119
Brass disc	-0.201	23.32	23.521 = CITY DATUM	
T.P.	2.71	18.362	7.668	15.652
T.P.	3.883	12.774	9.471	8.891
T.P.	6.89	15.217	4.447	8.327
			6.266	8.851
T.P.	6.591	19.31	2.498	12.719
T.P.	1.725	17.51	3.525	15.785
			5.114	12.37
T.P.	5.03	17.34	5.20	12.31
T.P.	6.73	20.41	3.66	13.68
			5.535	14.875
T.P.	1.06	17.08	4.39	16.02
T.P.	2.679	9.429	10.33	6.75
check to B.M.		4.502	4.927	4.947
			error	0.02

5-20-41.

	5.139	10.066		4.927
T.P.	3.725	8.396	5.395	4.671
T.P.	6.151	9.49	5.057	3.339
T.P.	2.435	11.665	0.26	9.23
			5.245	6.52 (6.64)
T.P.	5.445	13.63	2.48	8.185
T.P.	11.545	13.958	4.197	9.433
T.P.	4.234	14.974	5.20	8.738

cont. P. 10

Moore  
 Osborne  
 Covert  
 5-19-41

1

NW face of Fed. Bldg Serial #24

SWBP E and India 2.98 - CITY

SWBP Bdwy. India 12.881 "

Set BM. BP SE Cor. curb C + KETTNER

NEBP A + KETTNER 15.00 City

NWBP Ash + KOTTNER 15.15 "

fd. S.E. BP Beech + Pac. NOT original

S.E. BP Beech + Pac.

Set BM. BP NW curb Elm + Pacific

S.E. BP curb Grape + Pacific

Set BM. BP curb NW Hawthorn + Pacific

Set BM. BP curb NW Juniper + Pacific



~~~~~ BENCH MARKS ~~~~~

U.S. COAST AND GEODETIC DATUM

From Rose Canyon and Balboa Ave  
 To U.S. Govt. Reservation Line South  
 of Sunset cliffs. Via - Crown Point, and  
 North end Mission Beach Sea Wall, thence  
 South along Sea Wall to Mission Beach Bridge  
 and thru. ocean beach to Ladera St. and  
 thence back to Mission Bridge and along  
 S.D.E. R.R. to U.S. Govt Dyke thence "  
 U.S. Govt Dyke to SANTA FE R.R. Bridge at  
 SAN DIEGO RIVER thence North along  
 SANTA FE R.R. Tracks to Point of beginning

Walker  
 Blas  
 Drebit  
 9-30

2

Gurley Level  
 and Umbrella

~~~~~ Location ~~~~~

~~~~~ Description ~~~~~

~~~~~ Elev. ~~~~~

| Location                        |
|---------------------------------|
| S.W. ROSE CANYON AND BALBOA AVE |
| N.W. GARNET ST. " PENDLETON ST. |
| " " " " OLNEY "                 |
| " " " " NOYES "                 |
| " " " " MORRELL "               |
| S.W. " " " LAMONT "             |
| N.W. HORN BLEND " " "           |
| S.W. " " " " "                  |
| N.W. GRAND AVE " " "            |
| S.E. REED " " "                 |
| S.E. OLIVER " " "               |
| N.E. PACIFIC " " "              |

| Description   | Elev.  |
|---|--|
| U.S. Govt. BM. #25 <sup>Cross 112</sup> Brass Disc. Riveted on 3" Iron Pipe | 28.340<br><small>U.S.C. &amp; G. datum</small> |
| Brass Plug in Curb  | 45.935   |
| " " " "   | 54.315   |
| " " " "   | 71.220   |
| " " " "   | 75.530   |
| " " " "   | 75.060   |
| 7' tack " Walk  | 69.150   |
| Brass Plug " cb.  | 69.040   |
| " " " "   | 59.570   |
| 7' tack " Walk  | 40.37 49.380                                   |
| 7' " " "  | 40.34 49.350                                   |
| 7' " " "  | 35.28 44.290                                   |



Location

S.W. ✓ MOORLAND PLACE <sup>AND CROWN POINT DRIVE</sup>

S.W. ✓ LAMANCHA DRIVE " " " "

S.W. ✓ LACIMA " " " " "

N.E. ✓ Corner CAUSEWAY BRIDGE " " " "

N.W. ✓ " " <sup>AND THE RIVIERA</sup>

S.E. ✓ LACIMA DRIVE " " " "

S.E. ✓ MOORLAND " " " "

N.E. ✓ FRONTERA " LA PLYA St.

N.W. ✓ " " ESTRELLA "

N.W. ✓ PACIFIC AVE. <sup>AND GRESHAM ST.</sup>

N.W. ✓ " " " EVERTS "

West cb. East BRAIRFIELD DRIVE <sup>AND MISSION BAY</sup>

S.E. ✓ PACIFIC AVE. <sup>AND BAYARD ST.</sup>

N.E. ✓ " " " MISSION BLVD.

⊙ ✓ ON TOP North end Mission Beach Sea Wall

S.W. ✓ YORK COURT <sup>AND</sup> " " " "

S.W. ✓ SAN RAFAEL PL. " " " "

S.W. Cor. ✓ SAN JOSE COURT " " " "

S.W. ✓ SANTA CLARA PL. " " " "

S.W. ✓ SAN JUAN " " " "

S.W. ✓ EL CARMEL " " " "

S.W. ✓ SAN LUIS OBISPO " " " "

S.W. ✓ SANTA BARBARA " " " "

S.W. ✓ VENTURA PL. <sup>AND</sup> " " " "

IN E. Subway at Amusement Center

3

Description

Brass Plug in curb 21.68 <sup>U.S.C. + G</sup> 30.690

" " " " 18.15 27.160

" " " " 16.18 25.190

~~These two " " of end of Bridge 28.24 37.350~~

~~BP are gone → by lamp Post 28.40 37.410~~

" " " " 17.905 26.915

" " " " (Gone) 17.92 26.930

" " " " 19.45 28.460

" " " " 10.225 19.235

" " " " 21.185 30.195

" " " " 7.40 16.410

" " " " 0.56 9.570

" " " " 2.045 11.055

" " " " -1.73 7.280

" " " " 6.995 16.005

" " " " Top of Sea Wall 7.077 16.087

" " " " " 7.127 16.137

" " " " " 7.082 16.092

" " " " " 7.19 16.200

" " " " " 7.072 16.082

" " " " " 7.07 16.100

" " " " " 6.98 15.990

" " " " " 7.03 16.040

" " " " " 7.51 16.520

" " " " " 7.49 16.500



BENCH MARKS

| Location |  |
|----------|--|
| S.M.     | SAN FERNANDO PL. <sup>AND</sup> MISSION BEACH SEA WALL |
| S.M.     | SAN GABRIEL " " " " " "                                |
|          | South end " " " " " "                                  |
| N.E.     | MISSION BLYD. " SAN LUIS REY PL.                       |
| N.E.     | " " " SAN DIEGO PL.                                    |
|          | 9' South of South end Mission Bridge                   |
| N.E.     | VOLTAIRE ST. <sup>AND</sup> West Point LOMA BLYD.      |
| N.Y.     | BRIGHTON AVE " ABBOT St.                               |
| N.E.     | LONG BRANCH " " " "                                    |
| N.Y.     | CAPE MAY AVE " " " "                                   |
| N.Y.     | SARATOGA " " " " " "                                   |
| N.E.     | NEWPORT " " " " " "                                    |
| N.E.     | " " " BACON " " "                                      |
| N.Y.     | NIAGARA " " " " " "                                    |
| N.Y.     | NARAGANSETT " " " " " "                                |
|          | " at end st near ocean                                 |
| N.Y.     | DEL MONTE AVE <sup>AND</sup> BALON St.                 |
| N.Y.     | SANTA CRUZ " " " " " "                                 |
| N.E.     | CORONADO " " " " " "                                   |
| S.E.     | " " " CABLE " " "                                      |
| S.E.     | DEL MAR " " " " " "                                    |
| N.Y.     | ORCHARD " " " " " "                                    |
| N.Y.     | ORCHARD " " SUNSET CLIFFS BLYD.                        |
| N.Y.     | Pescadero " " " " " "                                  |
| N.Y.     | BERMUDA " " " " " "                                    |

See 1317-60

| Description                   | Elev.         |
|-------------------------------|---------------|
| Brass Plug in top of Sea Wall | 16.580        |
| " " " " " " "                 | 16.000        |
| " " " " " " "                 | 16.140        |
| " " " " Curb                  | 8.160         |
| " " " " " " "                 | 7.800         |
| " " " " " " "                 | 12.235        |
| " " " " " " "                 | 10.530        |
| " " " " " " "                 | 10.036 19.046 |
| " " " " " " "                 | 3.216 12.286  |
| " " " " " " "                 | 8.802 17.812  |
| 7' tack " " Walk              | 5.037 14.047  |
| Brass Plug " " Curb           | 6.433 15.443  |
| " " " " " " "                 | 8.984 17.994  |
| " " " " " " "                 | 12.915 21.925 |
| " " " " " " "                 | 19.005 28.015 |
| " " " " " " "                 | 36.327 45.337 |
| " " " " " " "                 | 23.955 32.965 |
| " " " " " " "                 | 28.886 37.896 |
| " " " " " " "                 | 45.417 54.427 |
| " " " " " " "                 | 28.505 37.515 |
| " " " " " " "                 | 33.046 42.056 |
| 7' tack " " Walk              | 42.131 51.141 |
| 7' " " " "                    | 30.07 39.08   |
| Brass Plug " " cb.            | 27.975 36.985 |
| " " " " " "                   | 20.907 29.917 |



BENCH MARKS

| Location   |                                   |
|--|-----------------------------------|
| S.E.   | ADAIR AVE AND SUNSET CLIFFS BLVD. |
| S.E.   | OSPREY " " " "                    |
| S.E.   | FROUDE " " " "                    |
| S.E.   | GUIZOT " " " "                    |
| S.E.   | HILL ST. " " " "                  |
| S.E.   | MONACO " " " "                    |
| S.E.   | CARMELO " " " "                   |
| N.E.   | LADERA " " " "                    |
| <hr/>  |                                   |
| N.W.   | DEL MAR AVE " " " "               |
| N.W.   | CORONADO " " " "                  |
| S.E.   | SANTA CRUZ " " " "                |
| S.E.   | DEL MONTE " " " "                 |
| S.E.   | NARAGANSETT " " " "               |
| N.W.   | NIAGARA " " " "                   |
| N.W.   | NEWPORT " " " "                   |
| S.E.   | SANTA MONICA " " " "              |
| N.W.   | SARATOGA " " " "                  |
| N.W.   | CAPE MAY " " " "                  |
| N.E.   | BRIGHTON " " " "                  |
| S.W.   | VOLTAIRE " " " "                  |
| S.W.   | West Pt. Lomo Blvd " " " "        |
| N.E.   | " " " " AND LOTUS ST.             |
| 115' south Cor. line on Bulon on N.W. cb M. Pt. Lomo Blvd. |                                   |

| Description                        | Elev. <sup>5</sup><br>USCG |
|------------------------------------|----------------------------|
| Brass Plug in top of curb          | 34.415                     |
| " " " " " "                        | 42.155                     |
| " " " " " "                        | 46.035                     |
| " " " " " "                        | 65.415                     |
| " " " " " "                        | 50.415                     |
| " " " " " "                        | 46.030                     |
| " " " " " "                        | 63.425                     |
| " " " " " "                        | 68.890                     |
| <hr/>                              |                            |
| " " " " " "                        | 45.040                     |
| " " " " " "                        | 58.925                     |
| " " " " " "                        | 63.035                     |
| " " " " " "                        | 45.950                     |
| " " " " " "                        | 40.980                     |
| " " " " " "                        | 34.945                     |
| " " " " " "                        | 33.975                     |
| " " " " " "                        | 33.375                     |
| " " " " " "                        | 33.920                     |
| " " " " " "                        | 32.940                     |
| Track "cb Return" on T-Line Sunset | 34.375                     |
| Brass Plug in top of curb          | 34.510                     |
| " " " " " "                        | 33.245                     |
| " " " " " "                        | 28.445                     |
| " " " " " "                        | 15.470                     |







# BENCH MARKS

| Location   | Description   | Elev.             |
|--|---|-------------------|
| B.M. SANTA FE R.R. BRIDGE <sup>And</sup> U.S. Govt. Dyke                     | Brass Plug S.W. Cor. Conc. Abutment                       | CITY USC&G 21.710 |
| " " " " Culvert #A-263 <sup>Approx. 900' N Kennedy's Pool House</sup>        | " " in top Hd. Wall on West end                           | 12.70 6.83 15.845 |
| " " " " "  | " " " " "   | " " " "           |
| S.W. Cor. MORENA BLVD. <sup>And</sup> JELLETT ST. inside Santa Fe Pl. of Way | " " " " Conc. Man.  | 11.51 20.52       |
| B.M. SANTA FE R.R. CULVERT #D-262 <sup>Approx. 400' N Jellet St.</sup>       | Brass Plug in E Hd Wall <sup>West end</sup>               | 23.435            |
| " " " " " #C-262   | 225' N Gesner St. Brass Plug S.W. Cor. Wing Wall          | 23.525            |
| " " " " " #A-262   | Nail in paving slab driven in 1 1/2" Iron Pipe E Hd. Wall | 44.945            |
| " " " " " #B-262   | Brass Plug N.W. Cor. Wing Wall                            | 31.490            |
| " " " " " #A-262   | " " " " " "   | 37.080            |
| " " " " " #F-261 <sup>Approx. 150' North Mile Post #261 + 262</sup>          | Brass Plug in top E Hd. Wall                              | 43.965            |
| " " " " " #E-261 <sup>300' " " " " " "</sup>                                 | Brass Plug S.W. Cor. Wing Wall                            | 46.355            |
| " " <sup>Approx. 5' East E.L. Atlantic St. Ext. opp sta 234 00</sup>         | Brass Plug in Conc. Man.                                  | 19.160            |
| S.W. Rose Canyon <sup>And</sup> Balboa Ave. U.S. Govt. B.M.                  | Brass Disc. Riveted on Iron Pipe                          | 28.340            |

Now destroyed.



~~~~~ BENCH MARKS ~~~~~

ALONG CAUSEWAY

~~~~~ Location ~~~~~

Approx. 100 N. West Pt. Loma Blvd. on West side CAUSEWAY

↘ S.E. Wing Mail 2nd Bridge South Crown Point Drive

↘ N.E. " " " " " " " "

↘ S.E. " " 1st " " " " "

N.E. Cor. CAUSEWAY " at " " " "

FB. 1423

Sec FB. 1649  
" " 1317-60

~~~~~ Description ~~~~~

|                                         |      | Elev. ~~~~~ |                   |
|-----------------------------------------|------|-------------|-------------------|
|                                         |      | USC49       | 8                 |
| Brass Plug in top Hd. Mail & Triple Box | curb | 12.007      | <del>11.777</del> |
| " " " " Conc. Wing Mail                 |      | 1.815       | 10.825            |
| " " " " " " "                           |      | 1.767       | 10.777            |
| " " " " " " "                           |      | 2.620       | 11.650            |
| " " " " Curb                            |      | 28.340      | 37.350            |



BENCH MARKS  
 Along the Pacific Ocean  
 From North end Mission Beach Sea Wall  
 to Scripps Institution of Oceanography

See FB. 1649

Description  
 Location

|                                  |                                         |
|----------------------------------|-----------------------------------------|
| North end Mission Beach Sea Wall | And Pacific Ave                         |
| N.E. Thomas St.                  | And Ocean Blvd                          |
| N.E. Garnett                     | " " "                                   |
| N.E. Diamond                     | " " "                                   |
| N.E. Lory                        | " " "                                   |
| J.E. LORING                      | " " "                                   |
| C.T. in cb E.C. on West side     | Lojolla Blvd.                           |
| S.W. COLIMA ST.                  | And Lojolla Blvd.                       |
| N.E. MIDWAY                      | " " "                                   |
| S.W. FORWARD                     | " " "                                   |
| S.W. BIRD ROCK AVE.              | " " "                                   |
| on West cb. Lojolla Blvd         | Approx 125' S Camino -<br>- De La Costa |
| N.W. VIA DEL NORTE ST.           | And Lojolla Blvd.                       |
| N.E. LA CANADA                   | " " "                                   |
| N.E. PALOMAR                     | " " "                                   |
| S.W. KOLMAR                      | " " "                                   |
| S.E. GRAVILLA                    | " " "                                   |
| S.W. BON AIR                     | " " "                                   |
| S.E. WESTBOURNE ST.              | " " "                                   |
| N.W. ARENAS ST.                  | " " "                                   |
| N.E. GENTER ST.                  | " " "                                   |
| S.W. PEARL                       | " " "                                   |

Location  
 Description  
 Elev.

|                                 |        |        |
|---------------------------------|--------|--------|
| Bross PLUG in top of sea wall   | 16.995 | 16.005 |
| " " " " " Curb                  | 5.085  | 14.095 |
| " " " " " "                     | 16.155 | 25.165 |
| " " " " " "                     | 37.405 | 41.415 |
| " " " " " "                     | 33.815 | 42.825 |
| " " " " " "                     | 46.195 | 55.205 |
| C.Tack in top of cb approx 400' | 73.175 | 82.185 |
| Bross plug in top of curb       | 78.32  | 87.330 |
| " " " " " "                     | 72.063 | 81.073 |
| " " " " " "                     | 75.328 | 84.338 |
| " " " " " "                     | 79.388 | 88.398 |
| " " " " " "                     | 76.18  | 85.19  |
| " " " " " "                     | 79.87  | 88.88  |
| " " " " " "                     | 76.780 | 85.793 |
| " " " " " "                     | 78.832 | 87.842 |
| " " " " " "                     | 75.272 | 84.282 |
| " " " " " "                     | 71.79  | 80.800 |
| " " " " " "                     | 72.358 | 81.368 |
| " " " " " "                     | 79.383 | 88.393 |
| " " " " " "                     | 68.123 | 77.133 |
| " " " " " "                     | 70.17  | 79.188 |
| 7' tack. in wall                | 64.553 | 73.563 |

for Elev. on NW 2



BENCH MARKS

Along Pacific Ocean From  
N. end Mission Beach Sea Wall  
to Scripps Institution Cont. from p. 9

See F.B. 1649

10

Location

S.E. RAVINA And OLIVETAS St.  
N.E. " " Prospect "  
N.E. COAST Blvd. And Coast Blvd South.  
S.E. " " " " "  
S.E. " " " CUVIER  
N.E. " " " JENNER  
S.W. " " " GIRARD  
West end Concrete Wall at Bathing Cove <sup>And Coast Blvd</sup>  
in E CAVE St. on N.Y. cb line " "  
B.M. in cb. Return on CAVE St. at Most easterly Cor. Tyrolean <sup>Tavern</sup>  
N.W. CAVE St And Prospect Pl.  
S.W. PARK BOY " " "  
S.E. TORREY Rd. " "  
S.W. " " " COAST Blvd.  
East cb. " " " PRINCESS  
S.W. PRINCESS ST <sup>And SPINDRIFT ST.</sup>  
S.E. NEWPORT TERRACE " "  
S.E. EL PASO GRANDE " "  
LASOLLA SHORES SEA WALL <sup>And Avenida De La Playa St.</sup>  
" " " " 2<sup>nd</sup> St. North " " "  
" " " " 4<sup>th</sup> St. " " "  
N.E. U.S. COAST <sup>And Geodetic B.M. #4</sup> of Scripps Institution

Description <sup>City Datum</sup> Elev.

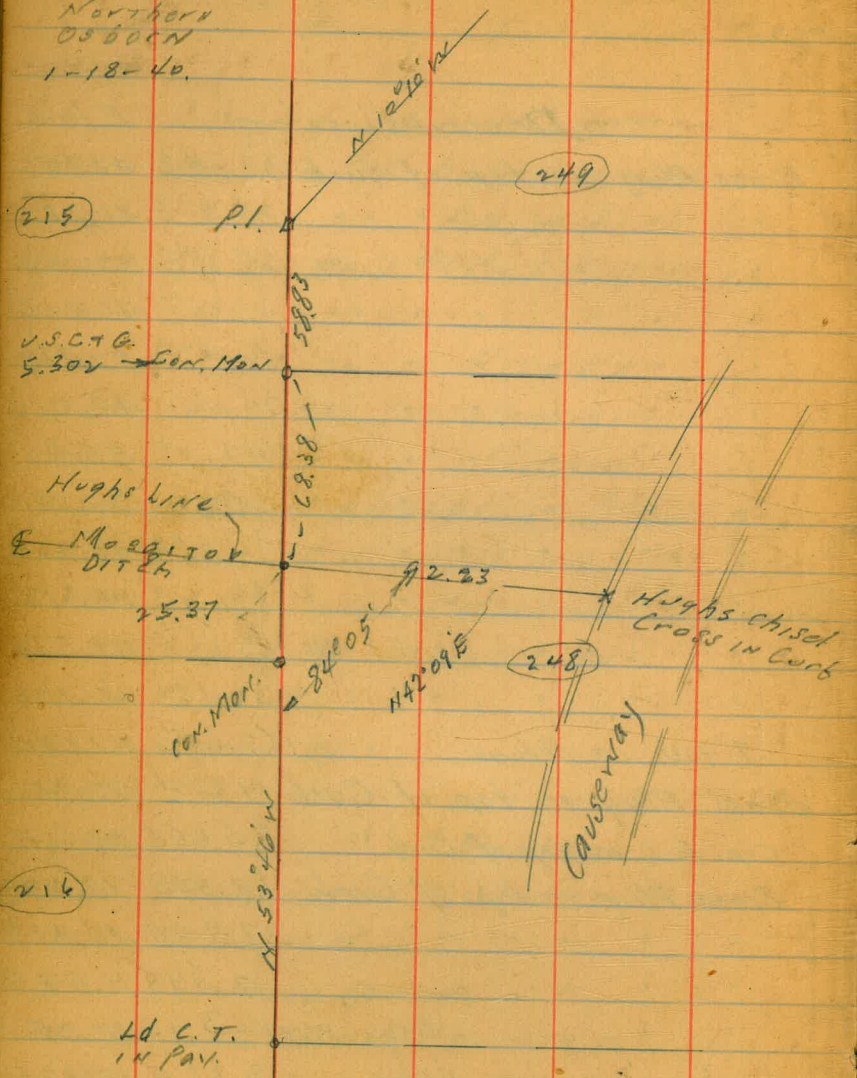
Brass Plug in top of curb 38.743 47.753  
" " " " " " 32.373 41.383  
" " " " " " 20.153 29.163  
" " " " " " 31.708 40.218  
" " " " " " 50.473 59.483  
" " " " " " 35.000 44.010  
" " " " " " 47.39 56.40  
" " " " " " 27.770 36.780  
" " " " " " 74.358 83.368  
" " " " " " 89.663 98.673  
" " " " " " 113.268 122.578  
" " " " " " 132.188 141.198  
7' hcht. in Return 152.646 161.656  
Brass Plug in top of Curb 113.94 122.95  
cop. hcht. in top of Curb 85.655 94.665  
Brass Plug in top of Curb 69.323 78.333  
" " " " " " 37.800 46.810  
" " " " " " 2.565 11.575  
" " " " " Sea Wall 3.94 12.95  
Calle "Frescota" N/Cb " 3.815 12.825  
" " " " " " 3.893 12.903  
32.01 41.02  
6.74 15.25



F.B. 1423  
Pg. 11

# Location of Hughes Line See P 57.

Moore  
518804  
Northern  
05600N  
1-18-40.



(215)

(249)

U.S.C.T.G.  
5.302

Gen. Mon.

Hughes Line

MOSQUITO  
DITCH

25.37

Gen. Mon.

N 42° 05' E

2.23

(248)

Hughes chisel  
cross in curb

Causeway

(216)

N 53° 40' W

Ld C.T.  
in Pav.

(247)



F.B.  
Pg. 11

check Levels  
R v to Q 8v

|     |      |       |      |       |
|-----|------|-------|------|-------|
|     | 1.38 | 9.482 |      | 5.302 |
| T.P | 3.18 | 8.882 | 1.98 | 5.702 |

|            |  |  |      |       |
|------------|--|--|------|-------|
| R v = 0400 |  |  | 3.80 | 5.082 |
| +36        |  |  | 3.95 | 4.932 |
| +40        |  |  | 3.95 | 4.932 |
| +47 = Q 8v |  |  | 3.85 | 5.032 |

|             |  |  |      |       |
|-------------|--|--|------|-------|
| Q 8v = 0400 |  |  | 3.85 | 5.032 |
| +80         |  |  | 3.64 | 5.242 |
| +50         |  |  | 3.67 | 5.212 |
| 1+00        |  |  | 3.48 | 5.402 |
| +50         |  |  | 3.36 | 5.522 |
| 20          |  |  | 3.53 | 5.352 |

|                          |       |       |       |
|--------------------------|-------|-------|-------|
| check to Top Lath at R v | 1.882 | 7.000 | 6.99  |
| " " " " " Q 83           | 2.20  | 6.682 | 6.697 |

Williams 10-21-39  
Lewis  
Moore F.B. 1423  
Sisson  
Northorn **12**

B.M. on Mod. Sky Con. P. 4 v 49

P 47



Check Levels USGS Datum  
 From B.M. Serial #21 N. of Federal Bldg  
 To Walker's B.M. So. End Spit at 8:30 + 5:00 D. 1935

|                 |        |        |       |        | USGS                                                            |
|-----------------|--------|--------|-------|--------|-----------------------------------------------------------------|
| B.M.            | 0.693  | 30.333 |       | 29.640 | Brown Disc                                                      |
| B.M.            |        |        | 8.235 | 22.098 | Set in<br>S.W. of 1935<br>22.07                                 |
| TP #1           | 0.365  | 21.693 | 9.005 | 21.328 |                                                                 |
| TP 2            | 3.05   | 16.105 | 8.629 | 13.055 |                                                                 |
| TP 3            | 2.455  | 15.415 | 4.145 | 11.96  |                                                                 |
| TP 4            | 2.533  | 15.348 | 2.60  | 12.815 | S.W. Top of<br>F. Harbor                                        |
| TP 5            | 1.258  | 16.076 | 0.53  | 14.818 | S.E. Top<br>Broadway Harbor                                     |
| B.M. Serial #21 |        |        | 1.48  | 14.596 | S. of Car<br>S. of G. G. G.<br>S. of Spit at 1935               |
| TP 6            | 4.265  | 16.331 | 4.41  | 11.666 |                                                                 |
| TP 7            | 3.477  | 15.455 | 4.253 | 11.978 |                                                                 |
| TP 8            | 2.637  | 15.434 | 2.658 | 12.797 |                                                                 |
| TP 9            | 5.113  | 16.802 | 3.741 | 11.690 |                                                                 |
| TP 10           | 3.478  | 18.968 | 1.313 | 15.49  | S.E. Top of<br>Graves Island                                    |
| TP 11           | 4.55   | 20.163 | 2.355 | 15.613 |                                                                 |
| B.M.            |        |        | 4.018 | 16.145 | W. B.P.<br>Sunset Hill                                          |
| TP 12           | 5.785  | 19.275 | 6.173 | 13.490 |                                                                 |
| TP 13           | 8.99   | 26.150 | 2.115 | 17.162 |                                                                 |
| TP 14           | 2.535  | 23.66  | 5.025 | 21.125 |                                                                 |
| TP 15           | 2.148  | 18.435 | 7.813 | 15.847 |                                                                 |
| TP 16           | 3.535  | 17.81  | 4.22  | 14.275 |                                                                 |
| TP 17           | 14.053 | 24.173 | 4.19  | 13.62  |                                                                 |
| B.M. 18         |        |        | 5.055 | 19.618 | Mon. Mon.<br>High tide 3:00<br>Low tide 7:00<br>100' S. of 1935 |

USGS datum

Corrected page 15

Serial #21 West Entrance of East of West face of Federal Bldg

Oct 1935  
 1100  
 518  
 100  
 FB. 1423  
 13

1159 USGS

10.10 City OUT

USCG 19.618  
 22.50 - 2.882 = 19.628

has been changed by Harbor WPA 1935  
 OUT  
 0.008 error 100' S. of Vene Mark  
 Schuler  
 by Nick Dawson City Harbor Engr.



USGS

Mon  
02 Mon  
Tide gauge  
100 ft

60T

|                           |        |        |       |        |
|---------------------------|--------|--------|-------|--------|
| BM #18                    | 12.13  | 31.748 |       | 19.618 |
| TP 19                     | 2.735  | 32.598 | 1.855 | 29.863 |
| TP 20                     | 3.85   | 32.231 | 4.217 | 28.381 |
| TP 21                     | 3.077  | 28.918 | 6.39  | 25.841 |
| TP 22                     | 1.92   | 24.925 | 5.913 | 23.005 |
| TP 23                     | 4.097  | 24.197 | 4.825 | 20.10  |
| TP 24                     | 4.693  | 20.61  | 8.28  | 15.917 |
| TP 25                     | 4.563  | 20.946 | 4.227 | 16.383 |
| TP 26                     | 2.58   | 18.791 | 4.725 | 16.211 |
| TP 27                     | 2.18   | 16.076 | 4.895 | 13.896 |
| TP 28                     | 4.523  | 15.082 | 5.517 | 10.559 |
| TP 29                     | 3.387  | 14.899 | 3.57  | 11.512 |
| TP 30                     | 2.618  | 15.167 | 3.35  | 11.549 |
| TP 31                     | 11.653 | 23.765 | 3.055 | 12.112 |
| Tide to old Town          | 8.975  | 32.655 | 0.085 | 23.68  |
| check " "                 |        |        | 7.21  | 25.445 |
| TP #31                    | 2.843  | 14.955 |       | 12.112 |
| TP 32                     | 3.08   | 14.80  | 3.235 | 11.72  |
| TP 33                     | 3.263  | 14.88  | 3.183 | 11.617 |
| TP #34<br>N.W. Prop. Mon. | 4.20   | 15.487 | 3.593 | 11.287 |
| TP #35                    | 6.01   | 18.882 | 2.615 | 12.872 |
| TP #36                    | 4.508  | 20.465 | 2.965 | 15.917 |
| TP #37                    | 4.40   | 23.095 | 1.73  | 18.695 |
| Point to BP               |        |        | 4.255 | 18.84  |

Subst. 4 Govt. Date

Serial #19  
old Town  
25.44

Taylor Klaw Drope ave.

= 0.005 error (This Elev. has been corrected by  
USCG. 5-17-34)  
(25.321 U.S.G.S.)

11.287  
- 6.12  
5.157 = City

1.884  
2.89  
27.73

21.70 = USCG. by Walker. See p 7 this book

0.03 error

21.73  
4.01  
17.72



Bench Marks  
Atlantic St.  
Broadway North

U.S.G.S. DATUM

-6.13 = CITY "

Correction

|            |       |        |             |        |                  |
|------------|-------|--------|-------------|--------|------------------|
| T.P. #10   | 0.16  | 15.65  |             | 15.49  |                  |
| check      |       |        | 2.99        | 12.66  | <del>12.66</del> |
| T.P. #1    | 2657  | 15.07  | 3.237       | 12.413 | 12.411           |
| T.P. #2    | 1597  | 15.869 | 0.728       | 14.342 | 14.337           |
| T.P. #3    | 4655  | 15.729 | 4.795       | 11.074 | 11.066           |
| T.P. #4    | 3.525 | 13.647 | 5.607       | 10.124 | 10.112           |
| T.P. #5    | 5.423 | 14.555 | 4.525       | 9.124  | 9.109            |
| T.P. #6    | 4.15  | 14.395 | 4.31        | 10.245 | 10.230           |
| T.P. #7    | 6.36  | 17.743 | 3.014       | 11.383 | 11.365           |
| T.P. #8    | 4.07  | 15.513 | 6.30        | 11.443 | 11.423           |
| #9, Serial |       |        | 0.90        | 14.613 | 14.590           |
| #21        |       |        | 3.453       | 12.04  | 12.037           |
| check      |       |        |             |        |                  |
| T.P. #70   | 4.64  | 16.005 |             | 11.365 |                  |
| N.W.B.P.   |       |        | 5.197       | 10.808 | 10.808           |
| T.P. #11   | 4.85  | 20.098 |             | 15.613 |                  |
| SEBP       |       |        | 4.057       | 16.041 | 16.041           |
|            |       |        | see page 13 | 16.145 |                  |
| T.P. #15   | 6.15  | 18.367 |             | 15.847 |                  |
|            |       |        | 3.63        | 18.367 | 18.365           |
|            |       |        |             | 19.615 |                  |
| T.P. #21   | 4.785 | 30.626 |             | 25.841 |                  |
| T.P.       | 4.077 | 23.873 | 10.83       | 19.796 |                  |
|            |       |        | 7.74        | 16.133 | 16.13            |

F.B. 1423

Oct. 20, 34  
Moore  
Sisson  
Northard

15

|                                   |                                                       |
|-----------------------------------|-------------------------------------------------------|
| T.P. SE Top Hyd. Grape & Atlantic | see p. 13                                             |
| SEBP                              |                                                       |
| RESET acct. of New Ret. Const.    |                                                       |
| SEBP                              | Beech & Atlantic 11.066                               |
| NEBP                              | Flak " " OUT 6.13                                     |
|                                   | 4.936                                                 |
| N.W. Cor. Bldg.                   |                                                       |
| 1.590                             | 0.023 error                                           |
| U.S.G.S. Serial #21               | Naval Warehouse foot Bldg.                            |
| Brass Plug                        | So. Auto Bumper foot Bldg front of Municipal Bldg.    |
| N.W.B.P.                          | Broadway & Atlantic                                   |
| SEBP                              | Hawthorn & Atlantic                                   |
| NEBP                              | Juniper " "                                           |
| Brass Plug                        | east inside curb. Front of Lindbergh Field Adm. Bldg. |
| Grav. Max                         | Scholar Base line, 100' S Vre St. = 11.22.505         |
| OUT                               | " " 13.485 CITY                                       |
| NEBP                              | Harasthy & Atlantic 10.00 = CITY DATUM                |



Bench Marks U.S.G.S. DATUM.

-613 = CITY DATUM

CORRECTION

|          |       |        |        |       |
|----------|-------|--------|--------|-------|
| T.P. #26 | 0847  | 17.058 | 16.211 |       |
| T.P.     | P.343 | N.436  | 9.975  | 7.083 |
| Mon.     |       |        | 9.483  | 5.953 |

see page 14. 11.287 11.284

" " " chas. walker 18.24

F.B. 1423

16

Mon. in curb: Wt. S.L. Barnert + W.L. Atlantic  
" in inverted pipe in curb CITY DATUM = -0.18

Mon. W.L. Taylor + N.L. Rosecrans CITY DATUM = 5.15

B.P. So. Av. S.F. RR bridge } U.S. C + G. DATUM = 2171

} CITY " = 14.69



Tide Gauge Causeway  
East of 2nd Bridge South Crown Point Drive

F.B. 1423

Dec 19, 1932  
Time 9:50 AM  
Moore  
Sisson  
Horsberg 17

|            |      |       |        |                                                                      |
|------------|------|-------|--------|----------------------------------------------------------------------|
| BM         | 3935 | 14710 | 10.825 | BPSE 11/19/32<br>2nd Br. S. Crown Point Drive Causeway USC46. Datum. |
| TP         | 4112 | 9.360 | 9.512  | 5.218                                                                |
| Tide Gauge |      | 9.360 | 0.00   |                                                                      |

Dec 29 - 1932 3-40 P.M.

Tide Gauge Set

South End Mission Beach Bridge

4<sup>th</sup> Bent North of So. End of Bridge on East Side.

|            |       |        |        |                                                       |
|------------|-------|--------|--------|-------------------------------------------------------|
| BM         | 4.515 | 16.750 | 12.235 | BP 9/5/32<br>End Mission<br>Bridge<br>East Side in 06 |
| TP         | 3.809 | 9.504  | 11.055 | 5.695                                                 |
| Tide Gauge |       | 9.504  | 0.00   |                                                       |

Checked  
4 P.M. 5.233  
Moore  
Sisson  
Horsberg



Tide Gauge Causeway  
East of 2nd Bridge South Crown Point Drive

U.S.C. & G. Datum

|    |       |        |        |       |
|----|-------|--------|--------|-------|
| BM | 5.098 | 15.923 | 10.825 |       |
| TP | 2.442 | 7.800  | 10.565 | 5.358 |

Reading  
on Tide Gauge

7.800 0.000

F.B. 1423

BPSE King Hill  
2nd Bridge South Crown Point Dr.

6-20-23  
18  
Moore  
Jill  
Mortimer  
9-15 AM



Tide Gauge South End Mission Beach Bridge  
 1/4 Beat N of S End of Bridge on East Side

U.S.C. 49 Datum

|                                       |       |                       |        |                                                       |
|---------------------------------------|-------|-----------------------|--------|-------------------------------------------------------|
| #                                     | H 185 | Julian P Friez + Sons |        |                                                       |
| B.M.                                  | 1663  | 13.898                | 12.235 | B.P. in E. Curb<br>9' S of S End<br>Mission Beach Br. |
| T.P.                                  | 2.720 | 7.308                 | 9.310  | 4.588                                                 |
| Reading of<br>Tide Gauge              |       |                       | 7.310  | -0.002                                                |
| B.M.                                  | 5.042 | 17.277                | 12.235 |                                                       |
| on Center of Spindle<br>of Chart Drum |       | 0.276                 | 17.001 |                                                       |
| on Center of Spindle<br>of Cable Drum |       | 0.356                 | 16.921 |                                                       |

Check Tide Staff 1-11-38.  
 SET 12-29-38.

Moore  
Giles  
Partners

|      |       |        |        |           |
|------|-------|--------|--------|-----------|
|      | 0.64  | 14.875 | 12.235 | U.S.C. 46 |
| T.P. | 2.781 | 7.536  | 8.14   | 4.755     |
|      |       | 7.516  | 0.020  |           |

1-11-38.

Check of U.S.C. 46. Elev. at  
 Mission Beach Bridge

|      |       |        |        |             |
|------|-------|--------|--------|-------------|
|      | 4.53  | 20.00  | 15.47  | B.M.B.P. in |
| T.P. | 3.513 | 16.124 | 7.389  | 12.611      |
|      |       | 3.922  | 12.202 | 12.235 ✓    |
|      |       |        |        | 0.033       |

1/4 Beat N of W. Pt. Loma Blvd 115' S. of Car Line on Bacon St.

B.M.B.P. 9' S. of S. end Mission Beach Bridge  
 on E. curb ✓

6-30-33

10-00 AM

Moore  
Giles  
Partners



Check ~~El. 504~~  
Bay  $\Delta$  STA. from U.S.C. + G.

|          |       |        |             |       |          |
|----------|-------|--------|-------------|-------|----------|
| BM. B.P. | 5.393 | 42.743 | U.S.C. + G. | 37.35 | TOP Curb |
|----------|-------|--------|-------------|-------|----------|

|                                      |       |       |  |  |  |
|--------------------------------------|-------|-------|--|--|--|
| Brass<br>on Exp. disc. in Conc. Mon. | 4.043 | 38.70 |  |  |  |
|--------------------------------------|-------|-------|--|--|--|

March  
12-7-37.

Check of above Levels of 9-3-37  
Using new level rod

|       |        |       |             |  |  |
|-------|--------|-------|-------------|--|--|
|       |        |       | U.S.C. + G. |  |  |
| 4.530 | 41.880 |       | 37.350      |  |  |
|       |        | 3.178 | 38.702      |  |  |

March  
12-7-37  
North Hill  
9-3-37

FB. 1423

20

NE. Cor. of Causeway Bridge & Crown Pt. Drive

|                         |                      |
|-------------------------|----------------------|
| $\Delta$ Pt. Bay Pt. #1 | $\frac{1.933}{1887}$ |
|-------------------------|----------------------|

BM. B.P. at Cor. Causeway Bridge & Crown Pt. Drive

|                                               |                      |
|-----------------------------------------------|----------------------|
| Brass disc Conc. Mon. $\Delta$ Pt. Bay Pt. #1 | $\frac{1.933}{1887}$ |
|-----------------------------------------------|----------------------|



Check Levels Mission Bay  
BM. Triple Box Culv. to 12" x 12" Mon. F 61-1927

U.S.C. & G  
DATUM

BM. BP 7.320 19.327

12.007

BM. Mon.

4.125

15.202

F.B. 1423

MISSION level  
Northern Rod  
12-7-37.

21

approx. 100' N. of W. Pt. Loma Blvd. W. side Causeway Triple Box Culv.  
Top head wall  
BM. B. disc in 12" x 12" <sup>LOW.</sup> Mon. U.S.C. & G F 61-1927  
approx. 65' Ely of E Causeway & Pr. Loma R.R. intersects.



Check Levels Mission Bay  
B.M. BP N.E. Wing wall 2<sup>nd</sup> Bridge S. of  
Crown Pt. Drive to  
U.S.G. B.M. #1 - 1934.

F.B. 1423

17000 20000  
S. 10000 Level  
Northern Rod  
12-7-27

22

B.M. BP 4.634 15.411

U.S.G. 46  
Datum

10.777

B.M. U.S.G. 46 #1 - 1934 4.404

11.007

11.040

11.007

diff = 0.033

11.04 according to State Park

N.E. Wing wall of 2<sup>nd</sup> Bridge S. of Crown Pt. Dr.

2<sup>nd</sup> Disc. in E. curb causeway approx. 75' N of above B.M. Curb outlet



check Levels of  
Tidal B.M.'s of Calif.

More Notes  
Station Int.  
Northern Red  
1-3-38

U.S. Quarantine Sta.

Using Spec. Publication #141, 1928 U.S.G.S. Mean Sea Level

|                          |       |        |       |       |
|--------------------------|-------|--------|-------|-------|
|                          | 4.155 | 10.755 |       | 6.60  |
| T.P.                     | 7.01  | 14.562 | 3.203 | 7.552 |
| check to B.M. 1 (C.G.S.) |       | 5.893  | 8.669 | 8.72  |

Quarantine Sta. to Old Town Serial #19

|          |        |                                        |       |                             |
|----------|--------|----------------------------------------|-------|-----------------------------|
|          | 8.327  | 12.907                                 |       | 6.58                        |
| T.P. #1  | 5.549  | 15.789                                 | 4.667 | 10.240                      |
| T.P. #2  | 3.610  | 10.821                                 | 8.578 | 7.211                       |
|          |        |                                        | 4.28  | 6.541                       |
| T.P. #3  | 5.492  | 11.967                                 | 4.346 | 6.475                       |
|          |        |                                        | 3.35  | 8.617 8.72                  |
| T.P. #4  | 10.164 | 22.011                                 | 0.12  | 11.847                      |
| T.P. #5  | 11.754 | 33.723                                 | 0.042 | 21.969                      |
| T.P. #6  | 9.722  | 41.413                                 | 2.032 | 31.691                      |
|          |        |                                        | 0.879 | 40.531                      |
| T.P. #7  | 4.692  | <del>40.147</del><br>39.288            | 5.938 | 35.475<br><del>34.576</del> |
| T.P. #8  | 6.335  | <del>42.137</del><br><del>41.258</del> | 4.365 | 35.802<br><del>34.923</del> |
| T.P. #9  | 3.474  | 45.018<br><del>44.139</del>            | 0.593 | 41.544<br><del>40.665</del> |
| T.P. #10 | 5.923  | 46.740<br><del>45.861</del>            | 4.201 | 40.817<br><del>39.938</del> |
| T.P. #11 | 7.820  | 51.926                                 | 2.634 | 44.106                      |
| T.P. #12 | 11.294 | 58.868                                 | 4.352 | 47.574                      |

F.B. 1423

B.M. Serial #9

B.M. " #2

B.M. " #18 Spec. Pub. #141

B.M. " #9

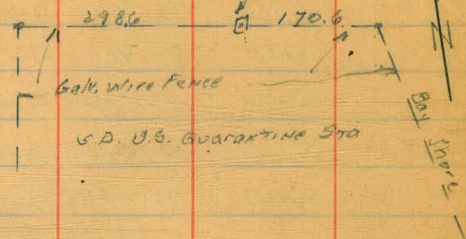
B.M. 1 (C.G.S.) Serial #4 (Bul. #141 = Bl. 8.62)

B.M. Serial #11

B.M. " #12

error correction

-612  
37.986 BM, B.P. City NW Cor Rosecrans + M'Call  
-617  
41.434 " " " NE. Cor " " Nichols





|          |        |        |        |        |
|----------|--------|--------|--------|--------|
|          |        | 58.868 |        |        |
| T.P. #13 | 12.845 | 71.383 | 0.330  | 58.538 |
| T.P. #14 | 1.888  | 71.718 | 1.553  | 69.830 |
| T.P. #15 | 0.178  | 58.988 | 12.908 | 58.810 |
| T.P. #16 | 0.418  | 46.544 | 12.962 | 46.126 |
| T.P. #17 | 6.65   | 52.572 | 0.622  | 45.952 |
| T.P. #18 | 2.468  | 42.444 | 12.596 | 39.976 |
| T.P. #19 | 1.972  | 35.746 | 8.67   | 33.774 |
| T.P. #20 | 0.322  | 30.516 | 7.552  | 28.194 |
| T.P. #21 | 1.825  | 28.466 | 0.875  | 26.641 |
| T.P. #22 |        |        | 10.393 | 18.073 |

Levels to U.S.G.S. BM. Byron &amp; Locust

|          |        |        |       |        |
|----------|--------|--------|-------|--------|
| T.P.     | 9.988  | 37.384 | 1.07  | 27.396 |
|          |        |        | 2.15  | 35.234 |
| T.P. #22 | 0.178  | 18.251 |       | 18.073 |
| T.P. #23 | 2.377  | 10.945 | 9.683 | 8.568  |
| T.P. #24 | 5.822  | 13.427 | 3.34  | 7.605  |
| T.P. #25 | 8.198  | 19.102 | 2.523 | 10.904 |
| T.P. #26 | 3.46   | 19.498 | 3.064 | 16.038 |
| T.P. #27 | 0.96   | 16.185 | 4.273 | 15.225 |
| T.P. #28 | 4.452  | 14.807 | 5.830 | 10.355 |
| T.P. #29 | 5.90   | 14.700 | 6.007 | 8.800  |
| T.P. #30 | 8.49   | 23.107 | 0.083 | 14.617 |
| T.P. #31 | 11.323 | 29.511 | 4.919 | 18.188 |

-6.12  
37.654CITY  
2805 NW BR. Rosecrans & Besserman35.259 W.G.S. BM. Stand. Disc in S. cb. Byron W. of Locust <sup>approx. 100</sup>

0.025

35.234  
6.119  
29.115

Ld. C.T. S. 7' Line Newell. 3' W. of WL Rosecrans ✓



|          |        |        |        |        |
|----------|--------|--------|--------|--------|
|          |        | 29.511 |        |        |
| T.P. #32 | 7.817  | 37.293 | 0.035  | 29.476 |
| T.P. #33 | 12.13  | 47.191 | 2.232  | 35.061 |
| T.P. #34 | 9.678  | 56.626 | 0.243  | 46.948 |
| T.P. #35 | 5.572  | 61.066 | 1.132  | 55.494 |
|          |        |        | 5.413  | 55.653 |
|          |        |        | 6.385  | 54.731 |
| T.P. #36 | 7.122  | 60.730 | 7.468  | 53.598 |
| T.P. #37 | 2.262  | 62.719 | 0.273  | 60.457 |
| T.P. #38 | 1.10   | 52.334 | 11.485 | 51.234 |
| T.P. #39 | 0.266  | 39.942 | 12.658 | 39.676 |
| T.P. #40 | 0.678  | 27.578 | 13.042 | 26.900 |
| T.P. #41 | 0.528  | 15.651 | 12.455 | 15.123 |
| T.P. #42 | 4.412  | 10.269 | 9.794  | 5.857  |
| T.P. #43 | 4.687  | 10.472 | 4.484  | 5.785  |
| T.P. #44 | 4.58   | 11.187 | 3.865  | 6.607  |
| T.P. #45 | 4.759  | 11.951 | 3.995  | 7.192  |
| T.P. #46 | 4.80   | 12.733 | 4.018  | 7.933  |
| T.P. #47 | 3.913  | 13.434 | 3.212  | 9.521  |
| T.P. #48 | 10.853 | 19.227 | 5.06   | 8.374  |
| T.P. #49 | 10.643 | 29.259 | 0.611  | 18.616 |
| T.P. #50 |        |        | 3.976  | 25.283 |

1926 in Conn. Mon. E Side Reservoir  
 U.S.G.S. Datum L 57 Stand. Disc. 50' of Freeman  
 -6.14  
 48.411 NWBP CITY Reservoir & Freeman 48.82

6.007  
 6.119  
 -6.14  
 0.488  
 0.487 0.56 City B.M. B.P. in curb Sully Cor. Reservoirs  
 0.53 Correction, checked by Bliss Ingraham  
 0.46 " " " " 1317-59  
 0.49 was corrected elev. agreed upon by  
 C.S.M. - H.W.J. for sewer levels by Bliss  
 on La Playa Trunk Sewer

U.S.G.S.  
 25.44 Old Town Serial #19  
 25.321 Correction USC & G. 1934 = 1929 P.

Transferred  
 F.B. 1452-7



|                       |       |        |        |        |
|-----------------------|-------|--------|--------|--------|
| T.P. #50              | 2.348 | 27.631 |        | 25.283 |
| T.P. #51              | 0.042 | 17.281 | 10.292 | 17.339 |
| T.P. #52              | 3.951 | 15.088 | 6.244  | 11.137 |
| T.P. #53              | 5.770 | 16.763 | 4.095  | 10.993 |
| T.P. #54              | 5.415 | 20.081 | 2.097  | 14.666 |
| T.P. #55              | 4.332 | 22.645 | 1.768  | 18.313 |
|                       |       |        | 3.95   | 18.695 |
|                       |       |        | 3.932  | 18.713 |
| T.P. #56              | 9.196 | 24.530 | 7.311  | 15.334 |
| T.P. #57              | 4.258 | 23.795 | 4.993  | 19.537 |
| T.P. #58              | 3.466 | 23.239 | 4.022  | 19.773 |
| T.P. #59              | 4.605 | 22.859 | 4.985  | 18.254 |
| T.P. #60              | 3.37  | 21.988 | 4.241  | 18.618 |
| T.P. #61              | 4.426 | 21.759 | 4.655  | 17.333 |
| T.P. #62              | 2.908 | 20.364 | 4.303  | 17.456 |
| T.P. #63              | 3.71  | 19.859 | 4.215  | 16.149 |
| T.P. #64              | 4.204 | 19.400 | 4.663  | 15.196 |
| T.P. #65              | 4.168 | 19.023 | 4.545  | 14.855 |
| T.P. #66              | 3.522 | 18.059 | 4.486  | 14.537 |
| T.P. #67              | 2.965 | 15.059 | 5.965  | 12.094 |
|                       |       |        | 6.17   | 8.887  |
| A 2 on mud at 4' loth |       |        | 13.12  |        |
| A 3                   |       |        | 13.05  |        |
| A 4                   |       |        | 13.10  |        |
| T.P. #68              | 2.447 | 12.199 | 5.307  | 9.752  |

8.887  
2.89  
11.777

Old Town Serial #19

18.695  
2.89  
21.585

18.707 BM. B.P. SW Conc. about S.F. RR. Bridge + Court Dyke.

E 132 1933 Stand. disc " " " " " "  
 cpack flat 1929 - first order leveling  
 Piv

18.695  
6.19  
12.576  
 21.585  
9.01  
12.575  
 12.588 vs 65

NOT Recovered  
12-15-47.  
CSME

F 61 1927 BM. Stand. Disc. Con. Max. 75' Ely. of E Ingraham  
 100' N. of W. P. L. 20 Blvd. W. side " Causeway  
 12.007 BM. B.P. Top Ad. Wall Triple Box Culv.  
 USCAG = Walker

Bet. O.B. RR. tracks approx.



|          |       |        |       |       |
|----------|-------|--------|-------|-------|
|          |       | 12.199 |       |       |
| T.P. #69 | 5.045 | 12.55  | 4.694 | 7.505 |
| T.P. #70 | 5.381 | 12.245 | 5.686 | 6.864 |
| T.P. #71 | 4.732 | 12.409 | 4.568 | 7.677 |

ON MUD 10.50

|          |       |        |       |       |
|----------|-------|--------|-------|-------|
| T.P. #72 | 5.378 | 12.652 | 5.135 | 7.274 |
| T.P. #73 | 5.007 | 12.464 | 5.195 | 7.457 |

ON MUD 10.50

|          |       |        |       |       |
|----------|-------|--------|-------|-------|
| T.P. #74 | 5.327 | 12.994 | 4.797 | 7.667 |
| T.P. #75 | 3.39  | 12.174 | 4.21  | 8.784 |
| T.P. #76 | 4.65  | 12.219 | 4.605 | 7.569 |
| T.P. #77 | 4.528 | 12.624 | 4.223 | 7.996 |
| T.P. #78 | 5.108 | 12.613 | 5.119 | 7.505 |
| T.P. #79 | 5.582 | 13.365 | 4.83  | 7.783 |
| T.P. #80 | 5.083 | 13.004 | 5.444 | 7.921 |

7.921  
2.89  
10.811

5.105 7.899

7.899  
2.89  
10.789

4.872 8.132

NEW 4' Lath Marked 336 AT END 2<sup>nd</sup> Hooper Av. S. of Causeway

" " " 372 " " " " " "

USC 20  
10.825 B.M. B.P. TOP S.E. WING WALL OF 2<sup>nd</sup> BRIDGE S. of Crown Pt. Drive

10.777 " " " NE " " " " "

B.M. #1934  
STAND. DISC. ON E.C.K. CAUSEWAY BRIDGE S. of Crown Pt. Drive



Check to Glover Lath, E. of Causeway  
Bait House, 2<sup>nd</sup> bridge S. of Crown Pt.

5.12 13.041 7.921 8M.8P

S.E. wing wall 2<sup>nd</sup> Causeway bridge S of Crown Pt. Dr.

|         |     |        |      |       |                  |
|---------|-----|--------|------|-------|------------------|
| L. Lath | F5  | ON MUD | 11.0 | 2.041 | 2.041            |
| "       | F4  | " "    | 10.9 |       | 0.89             |
|         | F3  | " "    | 10.9 |       | <del>7.931</del> |
|         | FV  | " "    | 11.0 |       | Tide book        |
|         | F1  | " "    | 11.0 |       |                  |
|         | F18 | " "    | 11.0 |       |                  |



Check Levels  
Walker B.M. to stand. disc D 132

Morena Blvd. & Jolley St.

6.351      26.871      20.52      Walker Levels

6.62      20.851  
20.851  
2.89  
17.961

Moore      1-11-58.  
S. 1/2 on  
Northern

F.B. 1423

29

USC. AG.      <sup>CONC.</sup> B.M. BR. IN MON.      SW Morena Blvd. & Jolley St

17.792      stand disc  
USGS, D 132 IN MON.



Set Tidal Staffs on N.E. Wing wall  
of 2nd. Causeway Bridge S. of Crown  
Pt. Dr.

State Park Tidal Staff

2.891 12.701 9.81 above  
M.L.W.

State Park Staff 2.891 9.81 on staff

also set Municipal Pier staff and

V.S.C. 46. "

M.L.W. set level with M.L.W.  
of State Park staff.

WILLIAMS, Spec. Engr  
SCHWARTZ, ASST.  
Moore, notes 1-11-38  
Sisson, level  
Northern Rod

F.B. 1423

30

B.M. #1 Stand. disc. 1/1934, east curb Mission

Bay Causeway 100' N of N. Abut. S. bridge

Storm drain Culv. 2 S of B.M. 1.

Estab. by State Park Com.



Willard, Sp. Supr.  
Schwartz " Ass.  
Sisson 1st Lt. 1-12-38  
Northern Rod.

Field Triangulation of S.D. River Survey by  
Lt. Weedin 1875

Letter to Letter = 500. "W" = Wye end Weedin Base Line.

"V" + 340 = E Causeway

"U" SET 2xx

"T" " "

"S" " "

"S" + 225.5 = Glover " spike 1.15 S of B.L.

+ 200 = RAT. High Pt. on Island

+ 25.4 = Glover Lark on Line

"R" SET 2xx

+ 25.76 Glover 2xx 1' N of B.L.

"Q" SET 2xx

+ 25.6 Glover " 2.8 N "

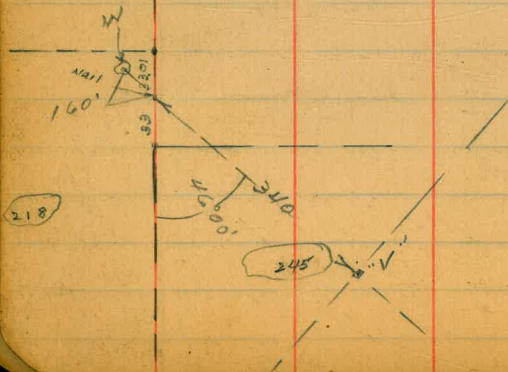
"P" SET 2xx

Ingram St.  
Causeway



217

246



218

245

F.B. 1423

O = CON. MARK  
B = 1/2 R.V.  
• = 2 D. & C.T. IN PAN

31

273  
CITY Gardens  
Subd.

134.33

170

280

305

306

274

279

"P" SET 2xx

+ 25.5 Glover 2xx 4.5 N of B.L.

"O" SET 2xx

"N" in slough S.D. River of 1905

+ 25.4 Glover 2xx 7.8 N of B.L.

"M" SET 2xx

"L" " "

"K" " "

"J" " "

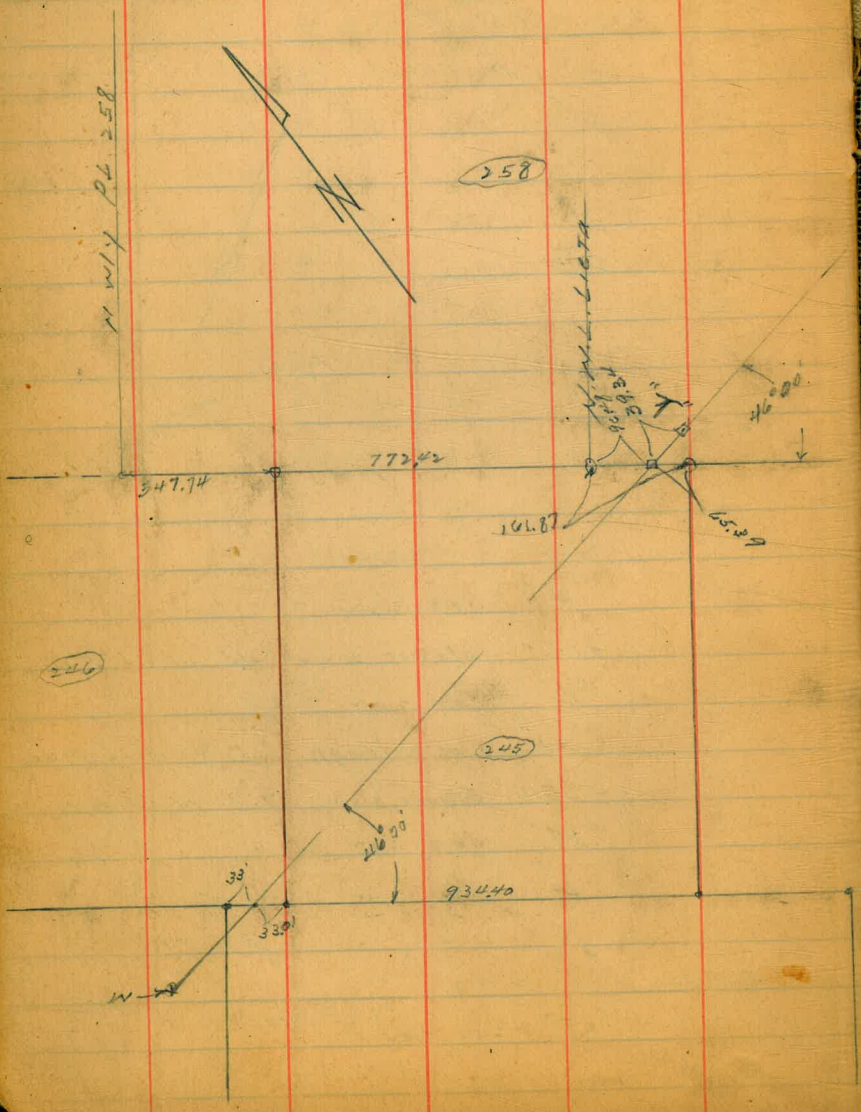
164.54

2xx Hub



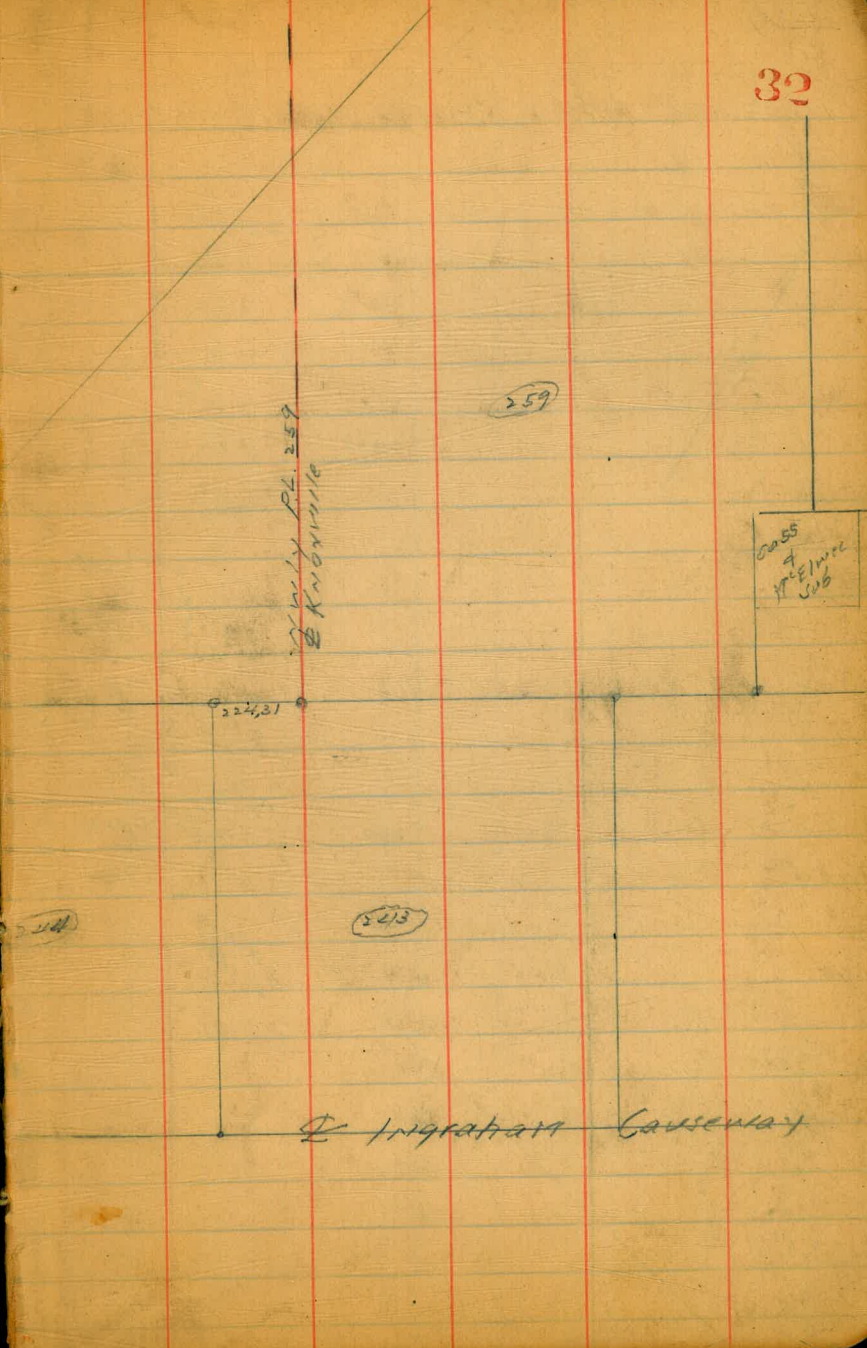


LT. Woodin Survey 1876



F. B. 1423

32



Case of  
M. F. L. W. C. B.

Ingraham Causeway







Sec. R + 200 Lt. Weedon Sec.

|          |            |        |       |        |          |
|----------|------------|--------|-------|--------|----------|
|          |            |        |       | 14.855 | T.P. #65 |
|          |            |        |       | 2.29   | P. 28    |
|          | 6.50       | 24.245 |       | 17.745 |          |
| 7        | LT         |        | 13.8  | 10.45  |          |
| 6        | "          |        | 5.5   | 18.95  |          |
| 5        | "          |        | 5.9   | 18.35  |          |
| 4        | Barrow Pit |        |       |        |          |
| 3        | "          |        | 7.8   | 16.45  |          |
| 2        | "          |        | 8.3   | 15.85  |          |
| 1        | LT.        |        | 7.7   | 16.55  |          |
| 00 = BL. |            |        | 7.3   | 16.95  |          |
| T.P.     | 2.54       | 19.51  | 7.275 | 16.97  |          |

Sec "R" + 200

|      |    |  |     |       |
|------|----|--|-----|-------|
| 1    | RT |  | 5.8 | 13.71 |
| 1+50 | "  |  | 9.6 | 9.91  |

|              |               |  |      |       |
|--------------|---------------|--|------|-------|
| Glover Spike | "R" + 200     |  | 2.8  | 16.71 |
| "            | BL. "R"       |  | 10.1 | 9.4   |
| "            | 100 LT of "R" |  | 9.3  | 10.21 |
| "            | 200 " " "     |  | 2.1  | 17.41 |
| "            | 300 " " "     |  | 2.1  | 17.41 |
| "            | 400 " " "     |  | 2.8  | 16.71 |

19.51

F.B. 1423

34

Glover Sec "R"

|                 |      |       |
|-----------------|------|-------|
| 100 RT BL.      | 9.0  | 10.51 |
| 1+50 RT channel | 12.6 | 6.91  |
| 200 RT          | 8.9  | 10.61 |
| 300 RT          | 8.8  | 10.71 |
| 400 RT          | 8.8  | 10.71 |

5.183 15.75

"W" BL.

8.5 7.25

"V"

8.5 7.25

Weedon 6.6

7.677  
2.89  
10.547

T.P. #71 P. 27



Levels on Glovers line R+200

|                         | 5.33 | 22.04  | 16.71 |
|-------------------------|------|--------|-------|
| 1+00 South of Base line | 5.90 | 16.1 ✓ |       |
| 2+00 s "                | 6.24 | 15.8 ✓ |       |
| 3+00 s "                | 5.6  | 16.4 ✓ |       |
| 3+25 s "                | 5.54 | 16.5   |       |
| 4+62 s "                | 3.84 | 18.2   |       |
| 5+00 s "                | 4.2  | 17.8   |       |
| 6+00 s "                | 2.8  | 19.2   |       |
| 6+25 s "                | 2.7  | 19.3   |       |
| T.P.                    | 2.77 | 19.27  |       |
|                         | 0.93 | 20.20  |       |
| 7+00 s Glover           | 9.9  | 10.3   |       |
| 7+00 Williams           | 9.7  | 10.5   |       |

Glovers Spk. R+200

X Edge of Borrow Pit.

s. " " " Pit.

Levels on Glovers "R" Line South

|                    | 4.30 | 21.01 | 16.71 |
|--------------------|------|-------|-------|
| R.0                | 11.7 | 9.3   |       |
| R1 <sup>s</sup>    | 10.5 | 19.5  |       |
| R2 <sup>s</sup>    | 6.4  | 14.6  |       |
| R3 <sup>s</sup>    | 3.5  | 17.5  |       |
| R4 <sup>s</sup>    | 3.9  | 17.1  |       |
| R5 <sup>s</sup>    | 2.9  | 18.1  |       |
| R.6 <sup>s</sup>   | 2.9  | 18.1  |       |
| T.P.               | 3.00 | 18.01 |       |
|                    | 1.89 | 19.90 |       |
| R6+16 1"x1" Hub G1 | 3.1  | 16.8  |       |
| R7 <sup>s</sup>    | 9.8  | 10.1  |       |
| R+200 "7"          | 9.35 | 10.55 |       |

Glover's Spk R+200

Williams  
Coote  
Schwartz  
Ch.  
Inst  
Rod. Jan 18, 1938

Check on Ch. Moore



Levels on Glovers "R" Line going North

|                     |      |       |      |       |
|---------------------|------|-------|------|-------|
|                     | 0.80 | 17.51 |      | 16.71 |
| "R" 0               |      |       | 8.2  | 9.3   |
| "R" 1 <sup>N</sup>  |      |       | 7.1  | 10.4  |
| "R" 2 <sup>N</sup>  |      |       | 7.1  | 10.4  |
| "R" 3 <sup>N</sup>  |      |       | 6.8  | 10.7  |
| "R" 4 <sup>N</sup>  |      |       | 6.7  | 10.8  |
| "R" 5 <sup>N</sup>  |      |       | 7.0  | 10.5  |
| "R" 6 <sup>N</sup>  |      |       | 8.3  | 9.2   |
| "R" 7 <sup>N</sup>  |      |       | 7.7  | 9.8   |
| "R" 8 <sup>N</sup>  |      |       | 7.9  | 9.6   |
| "R" 9 <sup>N</sup>  |      |       | 5.8  | 11.7  |
| "R" 10 <sup>N</sup> |      |       | 5.7  | 11.8  |
| "R" 11 <sup>N</sup> |      |       | 4.0  | 13.5  |
| "R" 12 <sup>N</sup> |      |       | 5.1  | 12.4  |
|                     |      |       | 0.81 | 16.70 |

Williams J.W.

Cooté N.

Schwartz R.G.

F.B. 1423

Jan 18, 1938

36

Glovers Spk. "R" + 200 on Base Line 200' West of "R"

check on B.M. Glover Spk "R" + 200 on Base Line 200' West of "R"







Moore  
Pisgah  
Northern  
1-25-38

F.B. 1423

38

Check Glover "R" Line to South

| Sta. backed up |           |      | 14.855<br>2.89<br>17.745 | T.P. # 65<br>V.S.C. 96. | T.P.          | 4.00 | 18.09<br>20.79 | 1.36 | 16.73  |
|----------------|-----------|------|--------------------------|-------------------------|---------------|------|----------------|------|--------|
| 0.345          | 18.09     |      |                          |                         |               |      |                |      |        |
| 17. +50        | South     | 8.5  | 9.6                      |                         | 6             |      |                | 2.7  | 18.1 ✓ |
| 17             | S         | 8.4  | 9.7                      |                         | 5             |      |                | 2.7  | 18.1 ✓ |
| 16             | S         | 9.2  | 8.9                      |                         | 4             |      |                | 3.6  | 17.2   |
| +55            | S         | 8.5  | 8.6                      |                         | 3             |      |                | 3.3  | 17.5   |
| +35            | S         | 11.7 | 6.4                      |                         | +50           |      |                | 3.4  | 17.4   |
| 15             | S         | 8.6  | 9.5                      |                         | 2             |      |                | 6.2  | 14.6 - |
| 14             | S         | 9.1  | 9.0                      |                         | +60           |      |                | 10.4 | 10.4   |
| +10            | S         | 8.4  | 9.7                      |                         | 1             |      |                | 10.2 | 10.6   |
| 13             | S         | 2.9  | 15.2 ✓                   |                         | 00 = Baseline |      |                | 11.6 | 9.2    |
| +95            | Dyke      | 0.8  | 17.3                     |                         |               |      |                |      |        |
| +80            | "         | 0.8  | 17.3                     |                         |               |      |                |      |        |
| +60            |           | 8.3  | 9.8                      |                         | T.P.          | 6.18 | 17.58          | 9.39 | 11.40  |
| +25            |           | 9.9  | 8.2                      |                         |               |      |                |      |        |
| 12             |           | 8.1  | 10.0                     |                         |               |      |                |      |        |
| +50            |           | 6.7  | 11.4                     |                         |               |      |                |      |        |
| 11             |           | 7.7  | 10.4 -                   |                         |               |      |                |      |        |
| +30            | old river | 11.3 | 6.8                      |                         |               |      |                |      |        |
| 10             | " " "     | 10.8 | 7.3                      |                         |               |      |                |      |        |
| +85            |           | 6.5  | 11.6                     |                         |               |      |                |      |        |
| 9              |           | 6.8  | 11.3                     |                         |               |      |                |      |        |
| 8              |           | 7.6  | 10.5                     |                         |               |      |                |      |        |
| 7              |           | 7.9  | 10.2                     |                         |               |      |                |      |        |
| +50            |           | 4.7  | 13.4                     |                         |               |      |                |      |        |



Check Glover "P" Line to South

Hl. 17.58 fwd. from p 28

|                         |      | 17.6 "P" |                                |       |
|-------------------------|------|----------|--------------------------------|-------|
| 0 to on Baseline at "P" |      | 6.0      | 11.6                           |       |
| 1 South                 |      | 5.5      | 12.1                           |       |
| 2                       |      | 4.2      | 13.2                           |       |
| 3                       |      | 4.8      | 12.8                           |       |
| 4                       |      | 5.0      | 12.6                           |       |
| 5                       |      | 6.1      | 11.5                           |       |
| T.P.                    | 8.19 | 20.07    | 5.70                           | 11.88 |
| 6                       |      | 8.3      | 11.8                           |       |
| 7                       |      | 9.2      | 10.9                           |       |
| 8                       |      | 6.9      | 13.2                           |       |
| +50                     |      | 7.7      | 12.4                           |       |
| +75                     |      | 8.9      | 11.2                           |       |
| 9                       |      | 11.0     | 9.1                            |       |
| +25 Dyke                |      | 8.4      | 11.7                           |       |
| +41 "                   |      | 1.8      | 18.3                           |       |
| +58 "                   |      | 1.5      | 18.6                           |       |
| T.P. #63 p 26           |      | 1.03     | 19.04<br>2.87 = 16.15 = 16.149 |       |
| +75                     |      | 9.6      | 10.5                           |       |
| 10 + 00                 |      | 10.0     | 10.1                           |       |

20.07

|      |                  |       |      |
|------|------------------|-------|------|
| 11   |                  | 10.1  | 10.0 |
| 12   |                  | 10.0  | 10.1 |
| 13   |                  | 10.2  | 9.9  |
| 14   |                  | 10.2  | 9.9  |
| 15   |                  | 9.8   | 10.3 |
| T.P. | 5.05             | 16.03 | 9.09 |
| 16   |                  | 5.4   | 10.6 |
| 17   |                  | 5.3   | 10.7 |
| 18   |                  | 5.5   | 10.5 |
| 19   |                  | 4.8   | 11.2 |
| 20   |                  | 6.8   | 9.2  |
|      | +15              | 7.9   | 8.1  |
|      | +40              | 4.4   | 11.6 |
| 21   |                  | 5.1   | 10.9 |
| 22   | Top O.B. PP Emb. | 4.0   | 12.0 |
| 23   |                  | 5.3   | 10.7 |
| 24   |                  | 5.4   | 10.6 |
| 25   |                  | 5.0   | 11.0 |
| 26   |                  | 4.9   | 11.1 |
| 27   |                  | 5.5   | 10.5 |
| 28   |                  | 4.9   | 11.1 |
| 29   |                  | 5.0   | 11.0 |
| 30   |                  | 5.2   | 10.8 |



FB. 1423  
Pg. 40

Check Glover "D" Line

5/20/00  
J. J. J. J.  
North  
2-9-00

40

T.P. #23

RAIN.

16.149 p 26  
2.89  
19.039 = U.S.C. 46.

From P.I.

12.972

T.P. 11.615 11.935 5.652 7.32

T.P. 7.595 15.445 4.085 7.85

check to T.P. 3.295 12.115 12.168

T.P. 6.438 19.399 2.484 12.961

T.P. 3.253 18.194 4.458 14.941

T.P. 613 12.064

6-10-41

B.M.  
"C"

5.002 22.357

23.474 = U.S.G.S  
6.119  
17.355 = CITY

T.P. 0.367 17.951 4.773 17.584

check to B.M. BP curb 11.270 6.681

Set BM NW BP Laurel & Pacific  
F.B. 1604-P 28 SW Top Iron Bolt

This BM is N.G. M.H. Rim loose  
chisel  w. edge M.H. Rim Calif & FIR

SE Cor Pacific & Grape



Xsec of Teocotate Slough  
on "Glover's" so called Hayes Line

|             |       |        | U.S.C.G.<br>DATUM | CITY NET    |
|-------------|-------|--------|-------------------|-------------|
| B.M.        | 3.375 | 19.220 | 15.845            | S.F. AR CO. |
| T.P. #1     | 2.254 | 15.791 | 5.683             | 13.537      |
| T.P. #2     | 5.903 | 18.251 | 3.443             | 12.348      |
| T.P. #3     | 1.245 | 17.268 | 2.228             | 16.023      |
| T.P. #4     | 4.344 | 11.977 | 9.633             | 7.635       |
| T.P. #5     | 4.662 | 13.054 | 3.585             | 8.892       |
| T.P. #6     | 3.952 | 13.339 | 3.667             | 9.387       |
| T.P. #7     | 4.018 | 13.547 | 3.81              | 9.529       |
| T.P. #8     | 5.564 | 12.826 | 6.285             | 7.262       |
| T.P. #9     | 3.987 | 11.890 | 4.923             | 7.903       |
| 0+00 = #55  |       | 11.89  | 5.4               | 6.49        |
| 2+00        |       |        | 5.0               | 6.89        |
| 3+63 S edge |       |        | 5.7               | 6.69        |
| 3+65        |       |        | 10.7              | 1.69        |
| 4+00        |       |        | 10.7              | 1.69        |
| 4+01 N "    |       |        | 5.1               | 6.79        |
| 5+51 S "    |       |        | 4.8               | 7.09        |
| 5+56        |       |        | 9.3               | 2.09        |
| 6+15        |       |        | 10.0              | 1.89        |
| 6+19 N "    |       |        | 4.4               | 7.49        |
| 7+72 S "    |       |        | 4.8               | 7.09        |
| 7+75        |       |        | 10.0              | 1.89        |
| 8+07 N "    |       |        | 10.0              | 1.89        |
| 8+09        |       |        | 4.7               | 7.19        |

Moore 2010  
Sisson Instr. 2-10-38  
Northern Red  
Schwartz

F.D. 1423

41

W.V. # H = 43, B.P. Top hd. wall West end of Kennedy's Road House

approx. 900 ft  
of Kennedy's  
Road House

# 406 = 56

1300' 30"

0+00 = #55

Hayes B.L.

# 54



|                             |          |        |                |       |
|-----------------------------|----------|--------|----------------|-------|
|                             |          | 11.890 | swd. from p 21 |       |
| T.P.                        | 4.858    | 12.761 | 3.987          | 7.903 |
| Mud at Lath #               | # 1142   |        | 7.3            | 5.46  |
| " "                         | " # 1143 |        | 3.7            | 9.06  |
| " "                         | " # 1144 |        | 7.4            | 5.36  |
| " "                         | " # 1145 |        | 6.1            | 6.66  |
| " "                         | " # 1148 |        | 6.8            | 5.96  |
| " "                         | " # 1154 |        | 4.8            | 7.96  |
| " "                         | " # 1155 |        | 5.0            | 7.7   |
| T.P.                        | 4.045    | 13.555 | 3.25           | 9.510 |
| Lath                        | # 1156   |        | 4.8            | 8.75  |
| "                           | # 1157   |        | 5.2            | 8.35  |
| "                           | # 1158   |        | 5.4            | 8.15  |
| "                           | # 1159   |        | 5.5            | 8.05  |
| "                           | # 1162   |        | 7.0            | 6.55  |
| "                           | # 1169   |        | 4.8            | 8.75  |
| "                           | # 1168   |        | 5.1            | 8.45  |
| T.P.                        | 5.17     | 14.57  | 4.22           | 9.335 |
| T.P.                        | 9.16     | 18.93  | 4.74           | 9.77  |
| T.P.                        | 5.63     | 21.31  | 3.25           | 15.68 |
| check to B.M. B.P. Tecolote |          |        | 2.20           | 19.11 |
|                             |          |        |                | 21.31 |

19.11  
9.01  
10.10 =

CITY EL. 10.04 CITY DATUM  
0.04 diff.

ditch dug by Mosquito Control

" " " "

" " " "

" " " "

Branch Slough of Tecolote Main Sloughs

Sly edge of Main Tecolote "

" " " " "

" " " " "

" " " " "

" " " " "

" " " " "

" " " " "

1/4 " " " "

" " " " "







41

check Levels  
Rose Cañon Level net  
to S. Park Stand. disc.  
at Lamont & Ingraham

Moore  
listed  
Northern

2-26-28

Geo. 13' Rod N+E

U.S. &amp; G. DATUM

V. 492 80.552

75.06

T.P. 3.888 81.130 2.310

77.242

T.P. 1.915 81.107 1.938

79.192

check to B.M. 9.283

71.824

936

71.747

SW B.P. Garnet & Lamont Rose Cañon Level net. PV

State Park Stand. disc. in 06. S.E. Cor. <sup>Garnet & Lamont</sup> Ingraham

B.M. B.P.



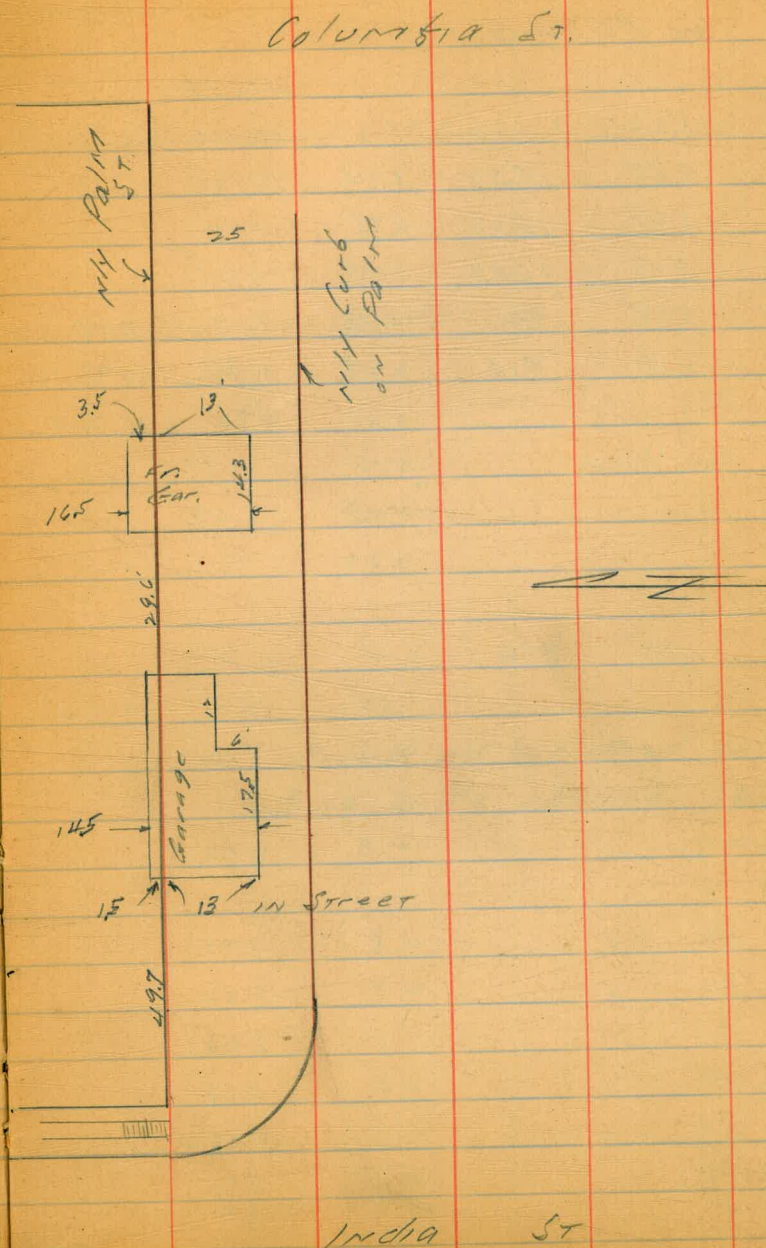




Location of 2 Garages  
on Nly side of Palm St  
Between India & Columbia Sts

Moore

10-17-38.





Level Check of  
Glover's "R" & "Q" Lines

IN P.L. 215.

4-7-39,  
Moore  
Sisson  
Northern

|          |        |       |       | U.S.C.G. |          |
|----------|--------|-------|-------|----------|----------|
|          | 5.235  | 14.06 |       | 10.825   |          |
| T.P.     | 4.80   | 15.52 | 5.32  | 10.72    |          |
| T.P.     | 5.67   | 16.22 | 4.97  | 10.55    |          |
| T.P.     | 5.29   | 16.03 | 5.48  | 10.72    |          |
| T.P.     | 4.02   | 9.27  | 10.78 | 5.25     | B.M.     |
| T.P.     | 2.14   | 9.13  | 2.28  | 6.99     | Lath     |
|          |        |       | 4.21  | 4.92     | = M.H.T. |
| Fd. R 3  | on mud |       | 4.15  | 4.98     |          |
| " R 2    | " "    |       | 4.05  | 5.08     |          |
| " R 1    | " "    |       | 4.02  | 5.11     |          |
| T.P.     | 2.77   | 9.76  | 2.14  | 6.99     |          |
|          |        |       | 4.84  | 4.92     | = M.H.T. |
| Fd. R 23 | mud    |       | 4.6   | 5.16     |          |
| " R 22   | "      |       | 4.6   | 5.16     |          |
| " R 21   | "      |       | 4.8   | 4.96     |          |
| " Q 87   | "      |       | 4.8   | 4.96     |          |
| " Q 86   | "      |       | 4.7   | 5.06     |          |
| " Q 85   | "      |       | 4.7   | 5.06     |          |
| " Q 84   | "      |       | 4.6   | 5.16     |          |
| " Q 83   | "      |       | 4.7   | 5.06     |          |
| " Q 82   | "      |       | 4.8   | 4.96     |          |
| " Q 81   | "      |       | 4.7   | 5.06     |          |
| " Q 80   | "      |       | 4.7   | 5.06     |          |

R = White Flags  
Q = Red "

F.B. 1423

47

B.M.B.P. S.E. Wing Wall 2<sup>nd</sup> Bridge So. of Crown Pt. Dr.

on Conc. Mon. S.W. Cor. Pt 249

at R 2 ✓

Note! Found all but R 24  
R 23 to R 1 chained 139.2



F.B. 1423  
Pg. 48

x sec of Glover "Slough"

4-7-39  
Moore  
& Parry

Rv to Q 82

1.5.46

9.76 H.I. fwd. front P 47

18

Rv = 0400 MUD

4.68 5.08

+5 "

4.68 5.08

+10

4.69 5.07

+15

4.69 5.07

+20

4.69 5.07

+25

4.70 5.06

+30

4.70 5.06

+35

4.84 4.94

+40

4.87 4.89

Q 82 = + 47.2

4.80 4.96



X Sec of Glover "Sloagh"  
R1 to Q83

|                     |      |      | U.S.C. 96. |        |
|---------------------|------|------|------------|--------|
|                     | 4855 | 1568 |            | 10.825 |
| T.P.                | 404  | 1520 | 4.50       | 11.18  |
| T.P.                | 479  | 1566 | 4.35       | 10.85  |
| T.P.                | 335  | 989  | 9.10       | 6.54   |
| check to B.M. P. 27 |      |      | 4.64       | 5.35   |
| T.P.                | 374  | 9.61 | 4.00       | 5.89   |

|               |  |     |      |
|---------------|--|-----|------|
| R1 = 0 + 00   |  | 4.5 | 5.1  |
| R1 45         |  | 4.6 | 5.01 |
| + 10          |  | 4.6 | 5.01 |
| + 15          |  | 4.6 | 5.01 |
| + 20          |  | 4.6 | 5.01 |
| + 25          |  | 4.6 | 5.01 |
| + 30          |  | 4.6 | 5.01 |
| + 35          |  | 4.6 | 5.01 |
| + 40          |  | 4.6 | 5.01 |
| + 45          |  | 4.6 | 5.01 |
| + 50.3 = Q 83 |  | 4.6 | 5.01 |

F. 6. 1423

Moore  
4-10-39.

19

B.M. BP SE wing wall 2<sup>nd</sup> Bridge S. of Crown Pt. Drive

check B.M. Con. Men. Swly Cor Pt. 249



x sec Glover Slough  
R 23 to Q 84

Moore  
6-10-39

F.B. 1423

50

9.61 H.I. fwd. El.

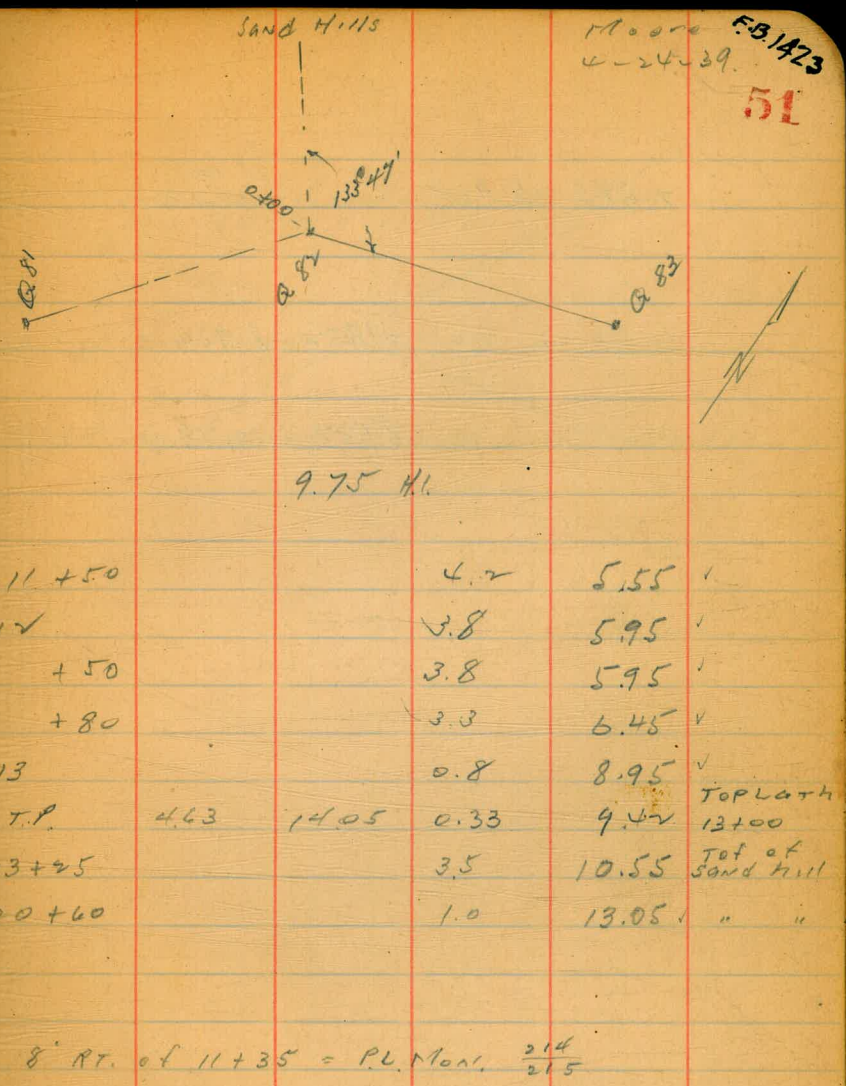
|               |     |     |
|---------------|-----|-----|
| R 23 20+00    | 4.5 | 5.1 |
| 0+10          | 4.8 | 4.8 |
| 0+20          | 4.8 | 4.8 |
| 0+30          | 4.8 | 4.8 |
| 0+40          | 4.8 | 4.8 |
| 0+50          | 4.8 | 4.8 |
| 0+60          | 4.8 | 4.8 |
| 0+69.1 = Q 84 | 4.5 | 5.1 |

Slight Depression which has been  
drained by C.W.M. Mosquito Control ditch



Levels from Glover's Q 8v  
w/ly to Sand Hills

| T.P. | PL7 | 2.50 | 9.49 | 6.99 | LATH RV |   |
|------|-----|------|------|------|---------|---|
| 0    | +50 |      | 5.3  | 5.19 | ✓       |   |
| 1    |     |      | 4.1  | 5.39 | ✓       |   |
|      | +50 |      | 4.1  | 5.39 | ✓       |   |
| ✓    |     |      | 4.2  | 5.29 | ✓       |   |
|      | +50 |      | 4.1  | 5.39 | ✓       |   |
| 3    |     |      | 4.0  | 5.49 | ✓       |   |
|      | +50 |      | 3.9  | 5.59 | ✓       |   |
| 4    |     |      | 3.9  | 5.59 | ✓       |   |
|      | +50 |      | 3.9  | 5.59 | ✓       |   |
| 5    |     |      | 4.0  | 5.49 | ✓       |   |
|      | +50 |      | 4.0  | 5.49 | ✓       |   |
| 6    |     |      | 4.0  | 5.49 | ✓       |   |
|      | +50 |      | 4.0  | 5.49 | ✓       |   |
| 7    |     |      | 3.9  | 5.59 | ✓       |   |
| T.P. |     | 3.75 | 9.75 | 3.49 | 6.00    | ✓ |
|      | +50 |      |      | 4.3  | 5.45    | ✓ |
| 8    |     |      |      | 3.8  | 5.95    | ✓ |
|      | +50 |      |      | 3.9  | 5.85    | ✓ |
| 9    |     |      |      | 3.9  | 5.85    | ✓ |
|      | +50 |      |      | 3.8  | 5.95    | ✓ |
| 10   |     |      |      | 4.0  | 5.75    | ✓ |
|      | +50 |      |      | 4.1  | 5.65    | ✓ |
| 11   |     |      |      | 4.1  | 5.65    | ✓ |





~~7.888 18.918~~

~~11.04  
USC+G~~

~~9.934 8.986~~

~~8.122 10.796~~

52  
~~1934  
BM #1 Brass die in curb of Causeway approx 100' N  
of 2nd Bridge S of Crown Pt~~

~~nail on tidal Staff USC+G La Playa~~

~~BM BP NE wing wall 2<sup>nd</sup> Bridge S. of Crown Pt~~



MISSION BAY M.H.T. Levels  
 4.93 Predicted Tide El.  
 U.S.G. & C. DATUM

Moore  
 Sisson  
 Northern  
 7-24-29

FB. 1423

R to Q and thence  
 NWly

7.887 18.927

US 646.  
 11.04

8.114 10.811

9.932 8.995

T.P. 9.33 27.925 0.332 18.595

T.P. 10.118 37.759 0.284 27.641

T.P. 0.64 26.209 12.19 25.569

T.P. 2.01 16.637 11.582 14.627

5.775 10.862

T.P. 4.23 16.037 5.223 11.414

T.P. 4.266 15.611 4.892 11.145

T.P. 4.607 15.58 4.638 10.973

T.P. 4.085 15.713 3.952 11.428

T.P. 4.545 15.935 4.323 11.39

T.P. 3.76 9.062 10.633 5.362

4.132 4.93 M.H.T.

T.P. 2.84 9.537 2.365 6.697

= 8.114 → 1929 USC & C. adj.

= 9.81 → State Park Datum

BM 41 1924 Brass disc in E.C.C. Causeway approx 100  
 N of N end of 2<sup>nd</sup> Bridge S. of Crown Pt.

BM B.P. N.E. Wing Wall 2<sup>nd</sup> Bridge S. of Crown Pt.  
 Walker = 10.777

Nail in Tidal Staff N end 2<sup>nd</sup> Bridge S. of Crown Pt.  
 USC & C. from La Playa

11.06  
 981  
 1.33

53

Walker P 27  
 10.825 10.862  
 10.777 10.811  
 0.088 0.051  
 -0.003

10.862  
 0.023  
 10.879

BM B.P. S.E. Wing Wall 2<sup>nd</sup> Bridge S. of Crown Pt.  
 Walker = 10.825

\* Top Cor. Mon. SWly Cor Pl. 249 ✓

on LATH near Glover Q. 83



|      |       |       |       |       |      |
|------|-------|-------|-------|-------|------|
|      |       | H.I.  |       |       |      |
|      |       | 9.537 |       |       |      |
| T.P. | 3.50  | 9.207 | 4.607 | 4.93  | MHT. |
|      |       |       | 3.83  | 5.707 |      |
|      |       |       | 4.277 | 4.93  | "    |
| T.P. | 3.103 | 8.838 | 3.472 | 5.735 |      |
|      |       |       | 3.908 | 4.93  | "    |
|      |       |       | 3.93  | 4.908 | B.M. |
| T.P. |       |       | 3.45  | 5.388 |      |

7-26-39

|      |      |       |      |       |      |
|------|------|-------|------|-------|------|
|      | L.OO | 8.908 |      | 4.908 |      |
|      |      |       | 3.77 | 5.138 | Mud  |
|      |      |       | 3.98 | 4.93  | MHT  |
| T.P. | 2.84 | 8.468 | 3.26 | 5.648 |      |
|      |      |       | 4.31 | 4.758 | B.M. |
|      |      |       | 3.40 | 5.028 |      |
|      |      |       | 34   |       |      |

check to T.P. at A10 4.675 5.793

1/2 x 3 near #23

Latb approx 300 SW of Con. Mon P.L. Cor.  
 Con. Mon. NE 315 SE 214 on Wly 250 <sup>Koro!</sup> Mon. in  
 Latb 450 Wly of NE Cor P.L. 315 0.15 Depr.

Mon NE 315 + SE 214  
 at Con. Mon. SWly Cor P.L. 250 (NWly 249)  
 on Conc. Mon. SWly Cor P.L. 251. <sup>Mon. Hole</sup>  
 " Mud at " " " "  
 " " Hooped 1 1/2 x 1 1/2 approx. 250 S of A8

5.78 P. 56  
 0.013 d.f.



|               |       |       |       |                         |
|---------------|-------|-------|-------|-------------------------|
| BM            | 410   | 9.467 | 5307  | CON. Man                |
| T.P.          | 4.24  | 9.587 | 410   | 5.367                   |
|               |       | 4.657 | 4.93  | M.H.T.                  |
| T.P.          | 6.508 | 11.94 | 4.15  | 5.437                   |
|               |       | 7.01  | 4.93  | M.H.T.                  |
| T.P.          | 6.07  | 14.07 | 3.89  | 8.05                    |
|               |       | 9.14  | 4.93  | 1/2 x 2"                |
| B.M.          |       | 6.26  | 7.81  |                         |
| check to T.P. |       | 5.998 | 8.077 | 8.037<br>5.047<br>diff. |
|               | 4.90  | 12.71 | 7.81  |                         |
|               |       | 7.78  | 4.93  | M.H.T.                  |

this to Swly to meet  
Swly Cor. PL 249

Top Ld + C.T. 3"x3" Con. Man, NELY Cor. PL 274  
and 5 " " " 213  
c.i.H.

300' NLY of H 30 B.M. 8.05  
8.008 - Correction

π #3 for Slough A-D  
1/2 x 3" Ho. El. of H-C 4 P. 56



Sly Bay Shore Line = "A"  
Causeway Wly

|      | +    | M.I.   | -      | U.S.C. 46 |        |
|------|------|--------|--------|-----------|--------|
|      | 4.68 | 15.542 |        | 10.862    |        |
|      |      |        | 10.617 | 4.93      | M.H.T. |
| T.P. | 4.75 | 9.867  | 10.43  | 5.112     |        |
|      |      |        | 4.934  | 4.930     | M.H.T. |
| T.P. | 4.36 | 9.514  | 4.71   | 5.152     |        |
|      |      |        | 4.582  | 4.93      | M.H.T. |
| T.P. | 4.84 | 10.60  | 3.733  | 5.78      |        |
|      |      |        | 5.67   | 4.93      | M.H.T. |
|      |      |        | 4.47   | 5.98      |        |
| T.P. | 3.31 | 10.13  | 3.78   | 6.84      |        |
|      |      |        | 5.20   | 4.93      | M.H.T. |
| T.P. | 3.80 | 10.80  | 3.13   | 7.00      |        |
|      |      |        | 5.87   | 4.93      | "      |
| T.P. | 3.29 | 10.79  | 3.30   | 7.50      |        |
|      |      |        | 5.84   | 4.93      | "      |
| T.P. | 4.43 | 11.11  | 4.11   | 6.68      |        |
|      |      |        | 6.18   | 4.93      | "      |
| T.P. | 4.00 | 11.36  | 3.75   | 7.36      |        |
|      |      |        | 6.43   | 4.93      | "      |
| T.P. | 4.89 | 15.68  | 2.57   | 8.79      |        |
|      |      |        | 10.75  | 4.93      | "      |
| T.P. |      |        | 7.65   | 8.03      |        |

See ~~Section~~  
~~P 5~~

~~8.79~~  
~~6.83~~

F.B. 1423

7-25-39

See P 53

56

B.M. B.P. SEWING Wall 2<sup>nd</sup> Bridge S. of CROWN POINT

1x1 at A 4

1x2 at A 7

1x3 at A 10

1x4 approx B.M. 200' S of A 11

1x2 at A 14

1x1 15' Fly of A 17

1x3 40' Wly of Mudier Camp.

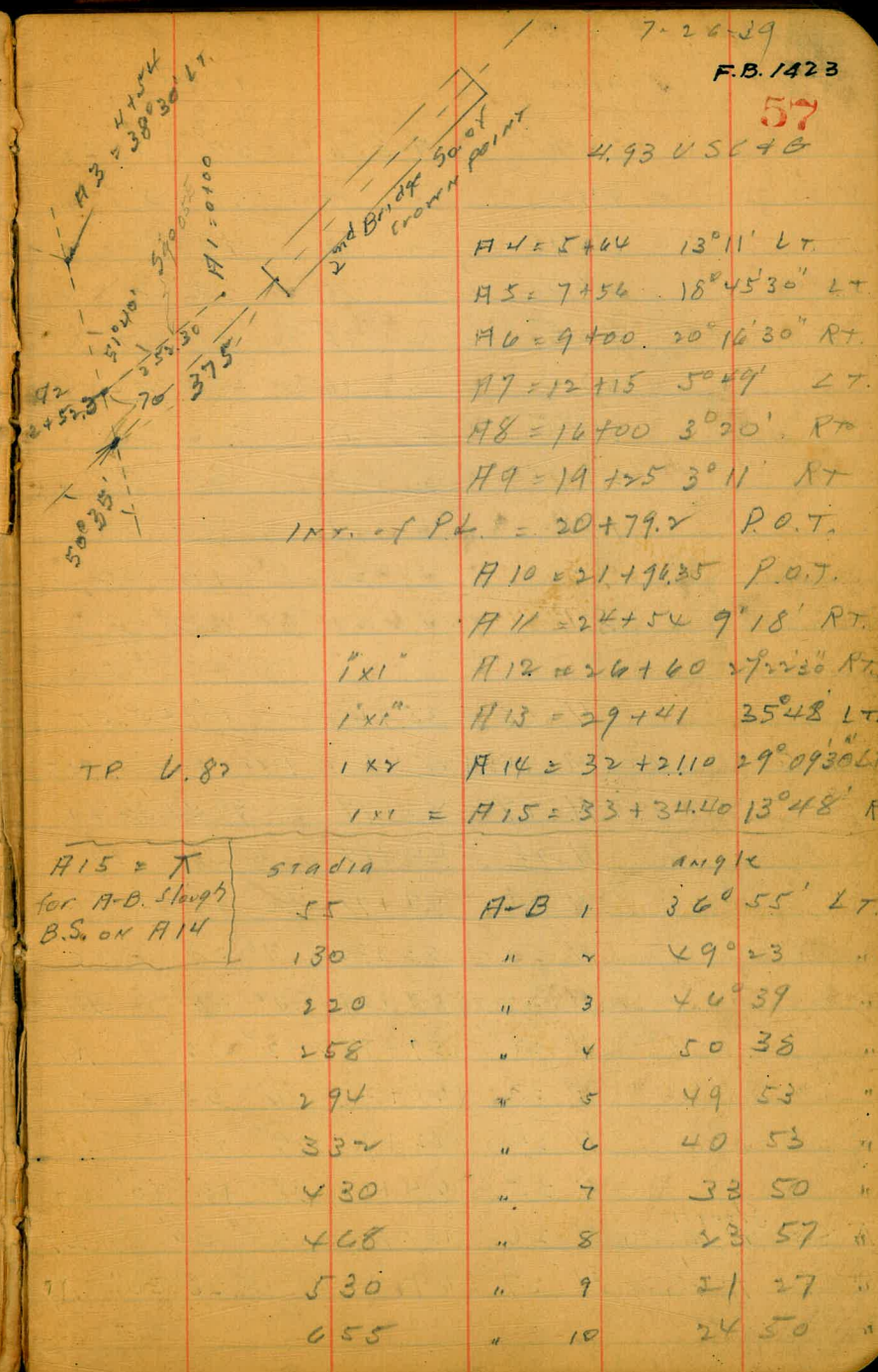
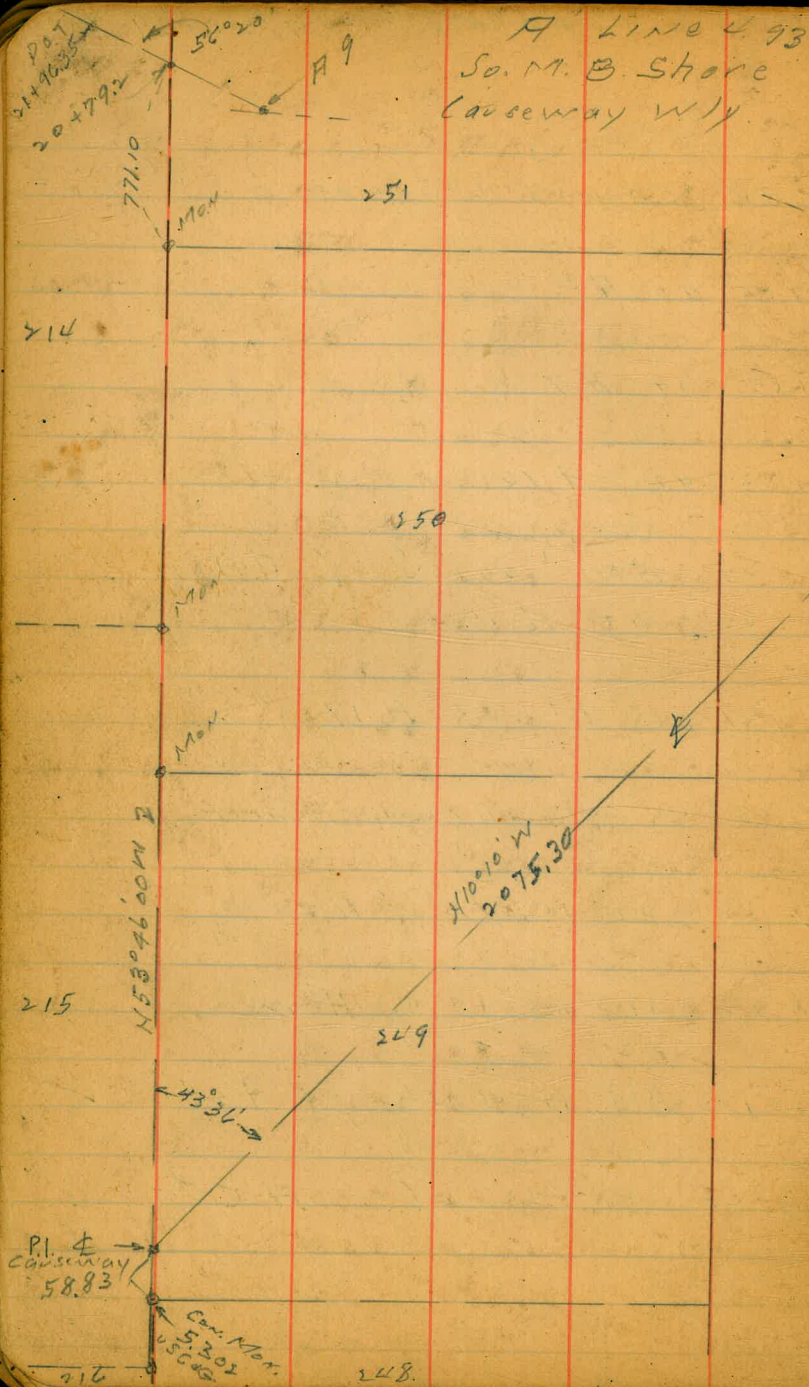
1/2 x 2 at 15' Fly of A 20

1/2 x 2 at " " " A 22

Set 1x2 B.M. at 40' Fly of A 25 ✓

1/2 x 3 40' Fly of A-C #







| stadia |       | angle      |
|--------|-------|------------|
| 730    | A-B " | 24° 50' LT |
| 640    | " "   | 23 10 "    |
| 520    | " 13  | 19 19 "    |
| 460    | " 14  | 22 28 "    |
| 425    | " 15  | 30 07 "    |
| 320    | " 16  | 38 22 "    |
| 285    | " 17  | 46 06 "    |
| 210    | " 18  | 38 58 "    |
| 148    | " 19  | 39 10 "    |
| 83     | " 20  | 13 42 "    |
| 81     | " 21  | 0 00 "     |

A 16 = 35+40 10° 45' LT

Int. Pueblo Line (A 16) + 45.49 = 1 x 1/2 Pine Root 35+85.49

A 17 40+77 90° 41' 30" LT

A 18 44+82 4° 50' LT

A 19 49+99 12° 03' 30" RT

A 20 53+32 7° 28' LT

A 21 57+09 1° 44' LT

A 22 59+74 12° 16' RT

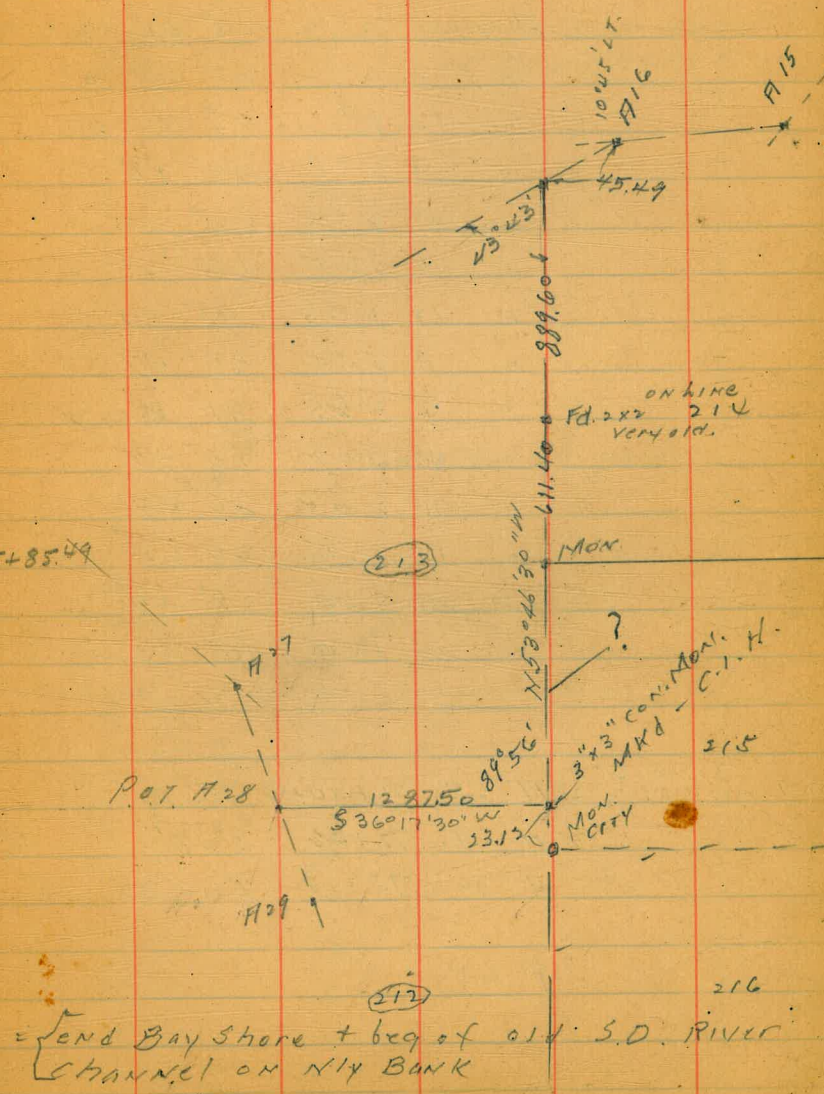
A 23 61+28 6° 08' RT

A 24 62+90 29° 43' LT

A 25 64+20 38° 10' 30" LT

N for Slough A.C. = A 26 47+60 44° 36' LT

A 27 69+60.60 18° 26' 30" RT



End Bay Shore + beg of old S.D. RIVER CHANNEL ON NLY BANK



Slough A.C.

$\pi = A 26$  F.S. ON  $A 27$   
stadia angle

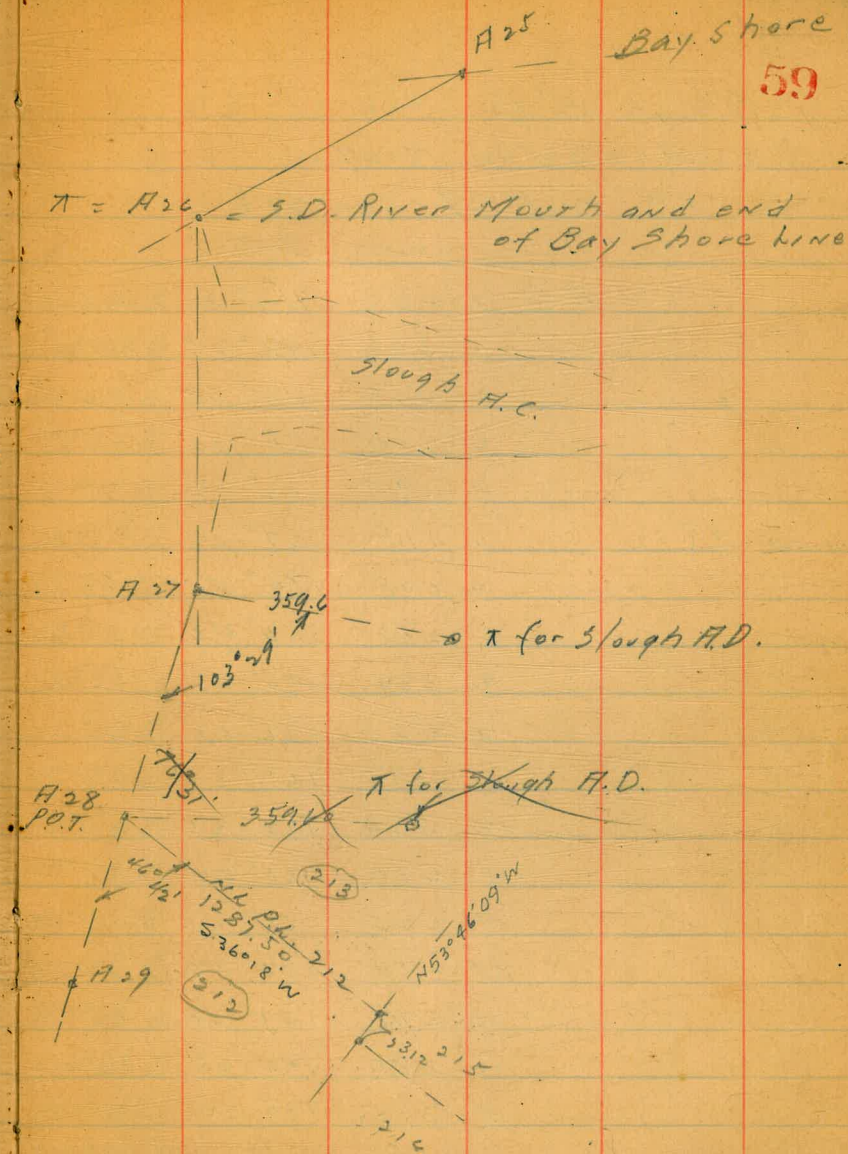
| A.C. | 1  | 35  | $13^{\circ} 32'$  | LT. |
|------|----|-----|-------------------|-----|
| "    | 2  | 64  | $21^{\circ} 00'$  | LT  |
| "    | 3  | 69  | $72^{\circ} 10'$  | LT  |
| "    | 4  | 198 | $109^{\circ} 18'$ | "   |
| "    | 5  | 252 | $120^{\circ} 02'$ | "   |
| "    | 6  | 325 | $105^{\circ} 24'$ | "   |
| "    | 7  | 423 | $98^{\circ} 00'$  | "   |
| "    | 8  | 555 | $97^{\circ} 47'$  | "   |
| "    | 9  | 462 | $91^{\circ} 30'$  | "   |
| "    | 10 | 307 | $86^{\circ} 36'$  | "   |
| "    | 11 | 205 | $86^{\circ} 57'$  | "   |
| "    | 12 | 124 | $60^{\circ} 02'$  | "   |
| "    | 13 | 160 | $28^{\circ} 54'$  | "   |
| "    | 14 | 154 | $10^{\circ} 53'$  | "   |

INT. WITH <sup>N. 6</sup> P.L. 212  $A 28$  71+1446 P.O.T.  
 $A 29$  72+46  $3^{\circ} 08'$  RT.  
 $A 30$  75+13  $7^{\circ} 14' 30''$  RT.  
 P 61

FB. 1423

Bay Shore

59





Slough F.D.

T=359.6 N.E. of F. 27

F.S. ON F. 27  $520^{\circ} 29' E$ 

stadia angle

| F.D.        | stadia | angle             | LT. |                     |
|-------------|--------|-------------------|-----|---------------------|
| 1           | 435    | $23^{\circ} 31'$  | LT. | $S44^{\circ} 01' E$ |
| "           | 306    | $34^{\circ} 15'$  | "   | $S54^{\circ} 44' E$ |
| "           | 228    | $40^{\circ} 25'$  | "   | $S60^{\circ} 54' E$ |
| "           | 214    | $58^{\circ} 30'$  | "   | $S78^{\circ} 59' E$ |
| "           | 195    | $102^{\circ} 12'$ | "   | $N57^{\circ} 19' E$ |
| Glover Q? = | 4      | $118^{\circ} 04'$ | "   | $N32^{\circ} 27' E$ |
| "           | 7      | $308^{\circ} 53'$ | "   | $N4^{\circ} 38' E$  |
| "           | 8      | $286^{\circ} 43'$ | "   | $N4^{\circ} 12' W$  |
| "           | 9      | $330^{\circ} 23'$ | "   | $N10^{\circ} 52' W$ |
| "           | 10     | $400^{\circ} 37'$ | "   | $N12^{\circ} 06' W$ |
| "           | 11     | $495^{\circ} 25'$ | "   | $N7^{\circ} 54' W$  |
| "           | 12     | $520^{\circ} 25'$ | "   | $N12^{\circ} 54' W$ |
| "           | 13     | $430^{\circ} 50'$ | "   | $N7^{\circ} 19' W$  |
| "           | 14     | $625^{\circ} 00'$ | "   | $N5^{\circ} 31' E$  |
| "           | 15     | $450^{\circ} 46'$ | "   | $N3^{\circ} 45' E$  |
| "           | 16     | $370^{\circ} 28'$ | "   | $N0^{\circ} 03' E$  |
| "           | 17     | $386^{\circ} 33'$ | "   | $N18^{\circ} 58' E$ |
| "           | 18     | $310^{\circ} 24'$ | "   | $N29^{\circ} 07' E$ |
| "           | 19     | $226^{\circ} 10'$ | "   | $N38^{\circ} 21' E$ |
| "           | 20     | $303^{\circ} 58'$ | "   | $N56^{\circ} 33' E$ |
| "           | 21     | $313^{\circ} 17'$ | "   | $N83^{\circ} 14' E$ |
| "           | 22     | $315^{\circ} 52'$ | "   | $S79^{\circ} 21' E$ |

|      |    |     |                  |     |                     |
|------|----|-----|------------------|-----|---------------------|
| F.D. | 23 | 374 | $53^{\circ} 06'$ | LT. | $S73^{\circ} 35' E$ |
| "    | 24 | 415 | $42^{\circ} 08'$ | "   | $S62^{\circ} 37' E$ |
| "    | 25 | 510 | $33^{\circ} 05'$ | "   | $S53^{\circ} 34' E$ |



3' wide slough from

North approx. 400 Long 77 + 63

from P. 59 A 31 78+43 28° 33' LT.

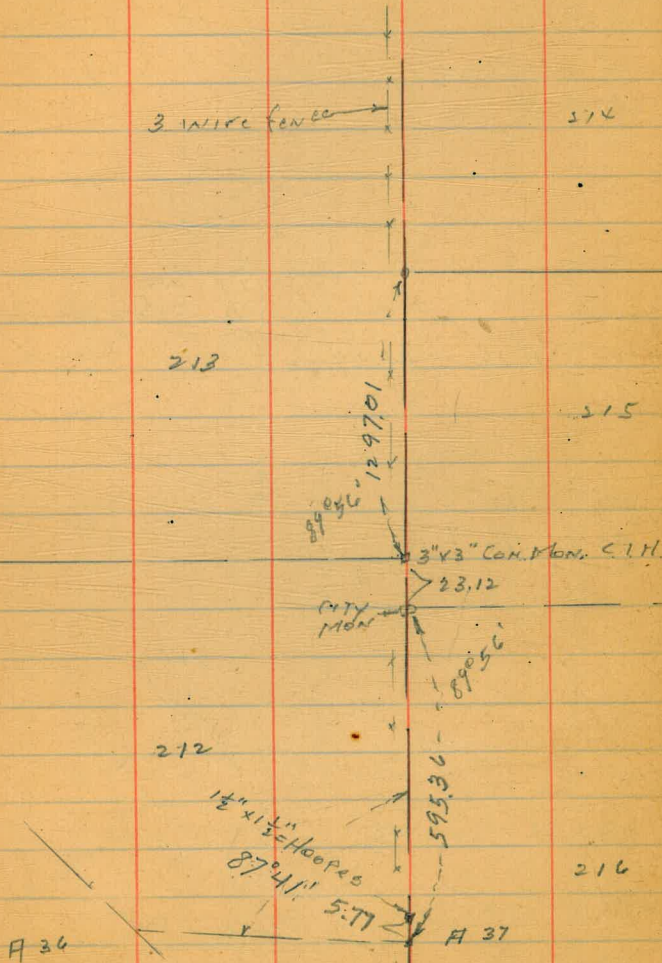
A 32 80+41 29° 08' LT.

Hoopes 1 1/2 x 1 1/2 A 33 81+41.74 27° 31' LT.

A 34 83+51.32 29° 26' 30" RT

El. 584 TP. A 35 84+90 15° 34' 30" RT

A 36 86+24 14° 43' LT.

INT. OF <sup>Pueblo</sup> wire A 37 87+44.02



MISSION BAY  
ANGLE NET  
Murky day &  
Heat waves

Moore  
8-5-39

F.B. 1423

62

99° 23' 30"  
16° 33' 55"  
320° 51' 30"  
53° 28' 35"

COASTOR N 75° 45' 4"  
W 19143.8

33° 34' 21.01  
201° 25'  
33° 33' 40"



342° 08' 30"  
48° 52' 38.57"

7 700° 38'  
122° 16' 20"

8 169° 20'  
21° 10'

7 150° 26'  
21 29 30

8 75° 32' 30"  
11° 56' 34"

11° 56' 34"

21° 59' 26"







Levels USC + G. DATUM  
 Jellet +  
 Morera Bldg to 92 + 71.03 Asher Clover  
 Leaf Terr.

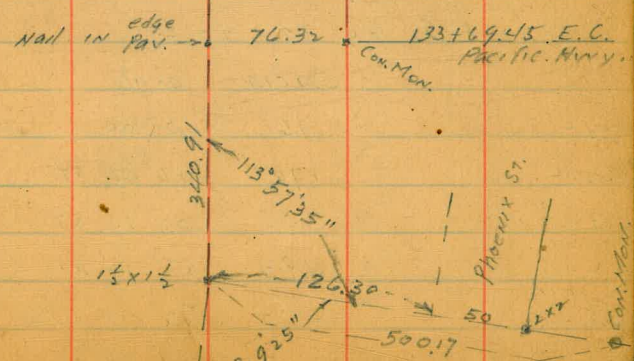
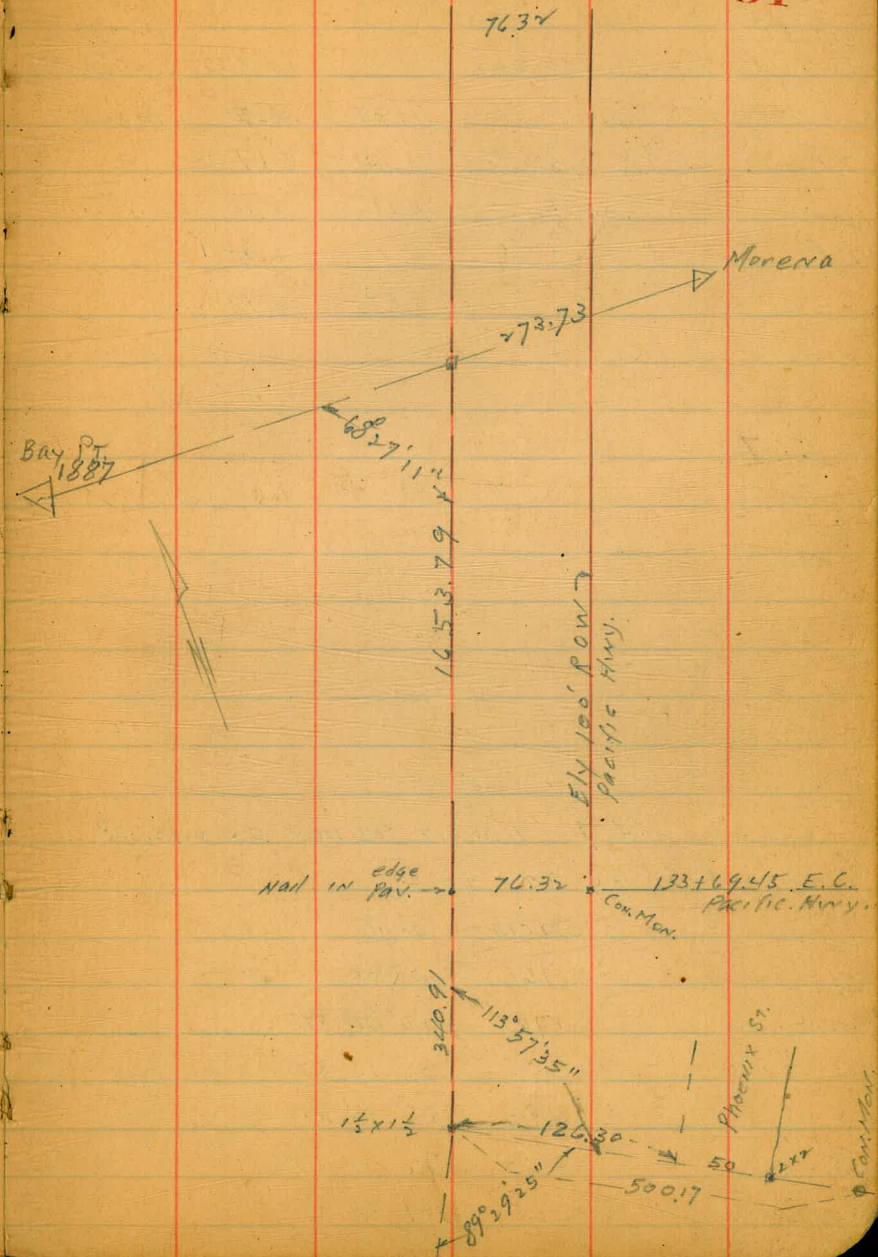
| BM. B.P.<br>MON. | 3.007      | 23.527 | USC + G.<br>20.52 | Jellett<br>Morera Bldg. |
|------------------|------------|--------|-------------------|-------------------------|
| T.P.             | 1.755      | 14.249 | 11.013            | 12.514                  |
| T.P.             | 5.615      | 15.491 | 4.193             | 10.076                  |
| T.P.             | 4.523      | 16.604 | 3.610             | 12.081                  |
| T.P.             | 3.678      | 15.244 | 5.038             | 11.566                  |
| T.P.             | 4.395      | 14.829 | 4.810             | 10.234                  |
| T.P.             | 5.730      | 17.244 | 3.315             | 11.514                  |
| ON 1 1/2 x 1 1/2 | 92 + 71.03 |        | 4.125             | 13.119                  |

Walker's USC + G Levels  
 Federal Bldg, La Playa + Rose Canon.  
 Heartcore checked this from  
 Causeway by 0.04  
 See his field book.

92 + 71.03 Int. of Sly. Line Asher's Clover Leaf Terr.

Moore  
 8-21-39

FBI423  
 64





Stadia Survey of  
Sly Bank of old Cutoff Slough  
to Duckville from Main Channel

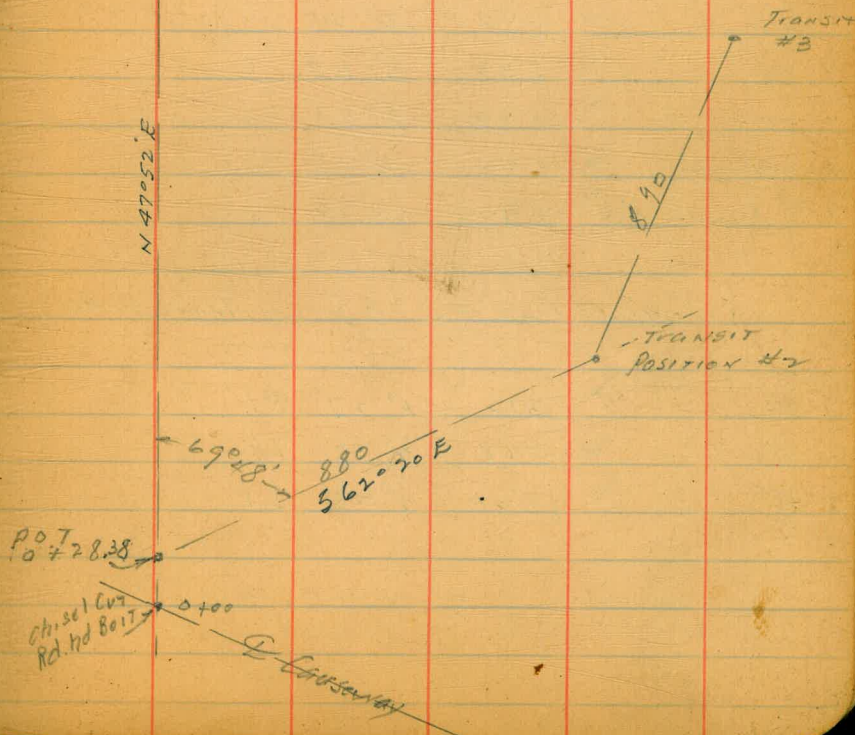
|                           |      |        |        |                                       |
|---------------------------|------|--------|--------|---------------------------------------|
| BM B.P.<br>SEWING<br>WALL | 5.44 | 16.30v | 10.86v | 2 <sup>m</sup> Bridge<br>S of Cr. Pt. |
|                           |      | 11.37  | 4.93   | M.H.T.                                |
| T.P.                      | 3.87 | 9.04   | 11.13  | 5.17                                  |
|                           |      | 4.11   | 4.93   | " "                                   |
| T.P.                      | 4.59 | 9.54   | 4.11   | 4.93                                  |
|                           |      | 4.59   | 4.93   |                                       |

"D" Line

#1 TRANSIT POSITION ON 0+28.38

F.S. ON 30+20.37

|      | STADIA | angle       |
|------|--------|-------------|
| D 1- | 16     | 0° 00'      |
| D 2- | 170    | 116° 08' RT |
| D 3- | 355    | 102° 55' RT |
| D 4- | 483    | 85° 10' RT  |
| D 5- | 493    | 91° 08' RT  |
| D 6- | 635    | 101° 34' RT |





F.B. 1423  
Pg. 66

|                   |   | STADIA | Angle   |    |
|-------------------|---|--------|---------|----|
| D 7-              | ✓ | 460    | 96° 43' | RT |
| D 8-              | ✓ | 528    | 87° 53' | "  |
| D 9-              | ✓ | 578    | 82° 35' | "  |
| D 10-             | ✓ | 805    | 84° 30' | "  |
| D 11-             | ✓ | 835    | 79° 42' | "  |
| D 12-             | ✓ | 630    | 75° 00' | "  |
| D 13 = TRANSIT #2 | ✓ | 880    | 69° 48' | "  |

TRANSIT Pos. #2 B.S. on 0728.38

|                    |   |     |         |     |
|--------------------|---|-----|---------|-----|
| 1-D14              | ✓ | 206 | 31° 29' | LT. |
| ✓-D15              | ✓ | 340 | 26° 25' | "   |
| 3-D16              | ✓ | 543 | 8° 09'  | "   |
| ✓-D17              | ✓ | 540 | 13° 47' | "   |
| 5-D18              | ✓ | 422 | 26° 15' | "   |
| 6-D19 = TRANSIT #3 | ✓ | 890 | 24° 14' | "   |

TRANSIT Pos. #3 B.S. on TRANSIT #4

|       |   |      |        |     |
|-------|---|------|--------|-----|
| 1-D20 | ✓ | 316  | 1° 27' | RT. |
| ✓-D21 | ✓ | 768  | 0° 37' | LT. |
| 3-D22 | ✓ | 1320 | 6° 28' | LT. |

66



Moore  
1-9-39

Location of Slough #1  
Bet. Causeway & J.D. River

8+00 = TRANSIT. F.S. 30 + 20.37

|                 | Stadia                  | Δ        |     |
|-----------------|-------------------------|----------|-----|
| 1               | 58                      | 73° 10'  | Rt. |
| 2               | 153                     | 127° 10' | "   |
| 3               | 330                     | 125° 22' | "   |
| 4               | 473                     | 124° 53' | "   |
| 5               | Sly Shore of Island 620 | 120° 42' | "   |
| 6               | " " 650                 | 111° 35' | "   |
| 7               | 538                     | 116° 48' | "   |
| 8               | 282                     | 107° 40' | "   |
| 9               | 212                     | 90° 27'  | "   |
| 10              | 442                     | 96° 33'  | "   |
| 11              | 609                     | 99° 35'  | "   |
| 12 = TRANSIT #2 | 540                     | 91° 30'  | "   |

12 = TRANSIT #2 B.S. on 8+00

|   |     |          |     |
|---|-----|----------|-----|
| 1 | 240 | 29° 30'  | LT. |
| 2 | 478 | 27° 42'  | "   |
| 3 | 545 | 31° 42'  | "   |
| 4 | 296 | 39° 05'  | "   |
| 5 | 146 | 57° 45'  | "   |
| 6 | 170 | 162° 50' | "   |

FB. 1423

67

|              | Stadia | Δ        |           |
|--------------|--------|----------|-----------|
| 7            | 248    | 159° 57' | LT. 20-03 |
| 8            | 204    | 133° 53' | " 46-07   |
| 9            | 288    | 159° 05' | " 20-55   |
| 10           | 363    | 162° 20' | " 17-40   |
| 11           | 508    | 160° 10' | " 19-50   |
| 12 = approx. | 601    | 156° 01' | " 23-59   |

10 + 45 on Baseline

Note!

See FB. 1404 p 20  
for fence location on  
so called Island



F.B. 1423  
Tg. 68.

TRANSIT ON 16+00  
F.S. ON 30+20.37

Moore  
7-2-39.

68

Island Slough #2 bet. Causeway & River

|    | Stadia | $\Delta$ |    |
|----|--------|----------|----|
| 1  | ✓ 90   | 28° 30'  | Rt |
| 2  | ✓ 148  | 49° 52'  | "  |
| 3  | ✓ 304  | 56° 03'  | "  |
| 4  | ✓ 412  | 67° 10'  | "  |
| 5  | ✓ 487  | 73° 35'  | "  |
| 6  | ✓ 427  | 87° 10'  | "  |
| 7  | ✓ 465  | 94° 20'  | "  |
| 8  | ✓ 470  | 82° 17'  | "  |
| 9  | ✓ 495  | 72° 30'  | "  |
| 10 | ✓ 422  | 65° 50'  | "  |
| 11 | ✓ 401  | 59° 48'  | "  |
| 12 | ✓ 305  | 51° 30'  | "  |
| 13 | ✓ 148  | 41° 05'  | "  |
| 14 | ✓ 91   | 11° 30'  | "  |



TRANSIT ON 19+00 Baseline  
F.S. on 30+20.37

Island Slough #3 bet. Causeway & River  
Stadia  $\Delta$

|   |   |            |         |         |
|---|---|------------|---------|---------|
| 1 | ✓ | 48         | 22° 04' | RT      |
| 2 | ✓ | 213        | 68° 37' | "       |
| 3 | ✓ | 364        | 73° 10' | "       |
| 4 | ✓ | TRANSIT #2 | 508     | 73° 18' |

#2 TRANSIT ON 4

B.S. ON 19+00 Baseline

|   |   |            |         |         |
|---|---|------------|---------|---------|
| 1 | ✓ | 217        | 15° 40' | RT      |
| 2 | ✓ | 427        | 22° 58' | "       |
| 3 | ✓ | TRANSIT #3 | 505     | 24° 49' |

#3 TRANSIT ON 3 B.S. ON TRANSIT #2

|   |   |     |          |    |
|---|---|-----|----------|----|
| 1 | ✓ | 195 | 1° 21'   | RT |
| 2 | ✓ | 383 | 4° 07'   | LT |
| 3 | ✓ | 501 | 4° 58'   | LT |
| 4 | ✓ | 334 | 11° 24'  | LT |
| 5 | ✓ | 227 | 20° 52'  | "  |
| 6 | ✓ | 312 | 33° 30'  | "  |
| 7 | ✓ | 204 | 26° 55'  | "  |
| 8 | ✓ | 77  | 75° 25'  | "  |
| 9 | ✓ | 368 | 158° 50' | "  |

Moore  
9-2-39.

Moved TRANSIT back to TRANSIT #7  
B.S. ON 19+00 Baseline

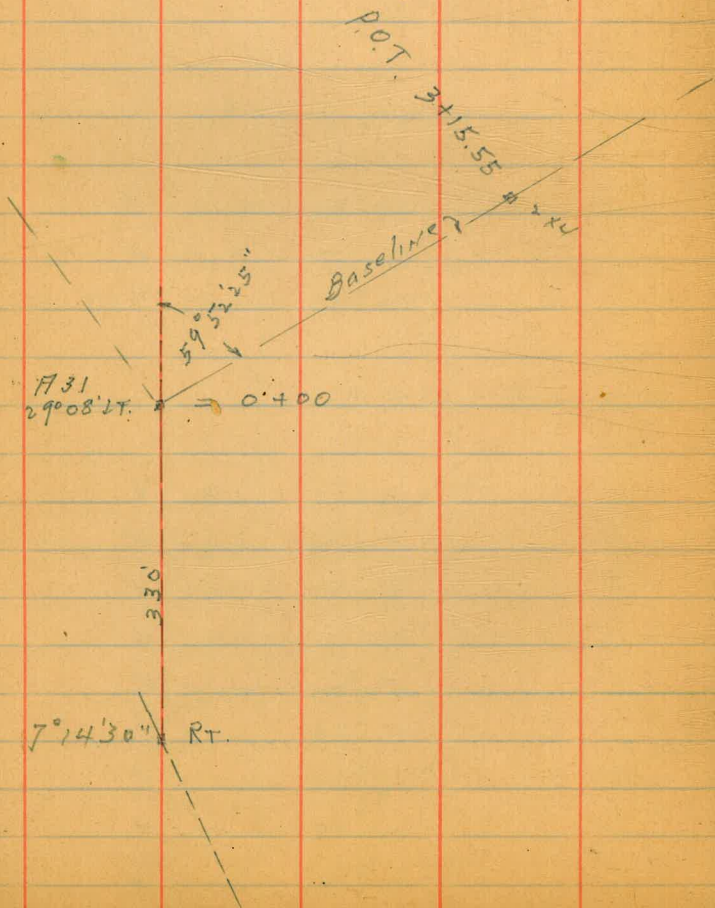
Stadia  $\Delta$

|   |   |     |          |           |
|---|---|-----|----------|-----------|
| 1 | ✓ | 80  | 82° 03'  | LT. 35-30 |
| 2 | ✓ | 174 | 144° 40' | "         |
| 3 | ✓ | 421 | 143° 18' | " 16-42   |



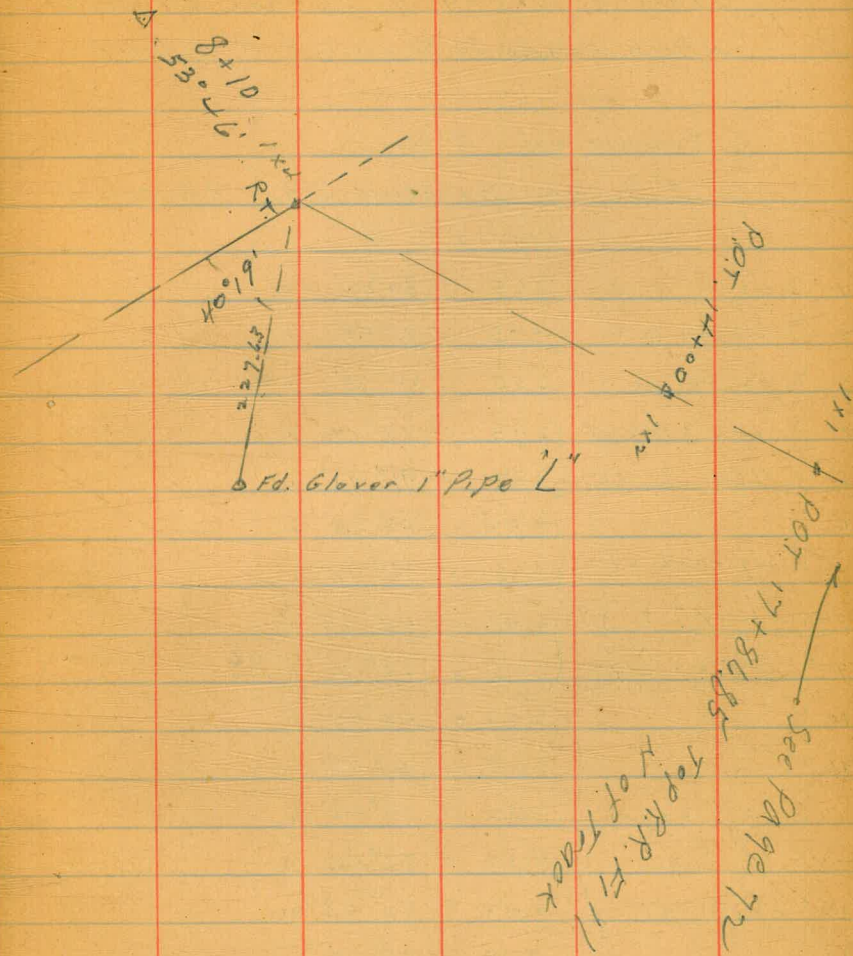
Moore  
9-6-39.

M.H.T. Baseline bet A 31 +  
West Pt. Loma Blvd. + ALISO ST. ALTA #2



FB. 1423

70





9-6-39

Stadia Survey of Sly bank of Slough  
which heads to so called "R" Island

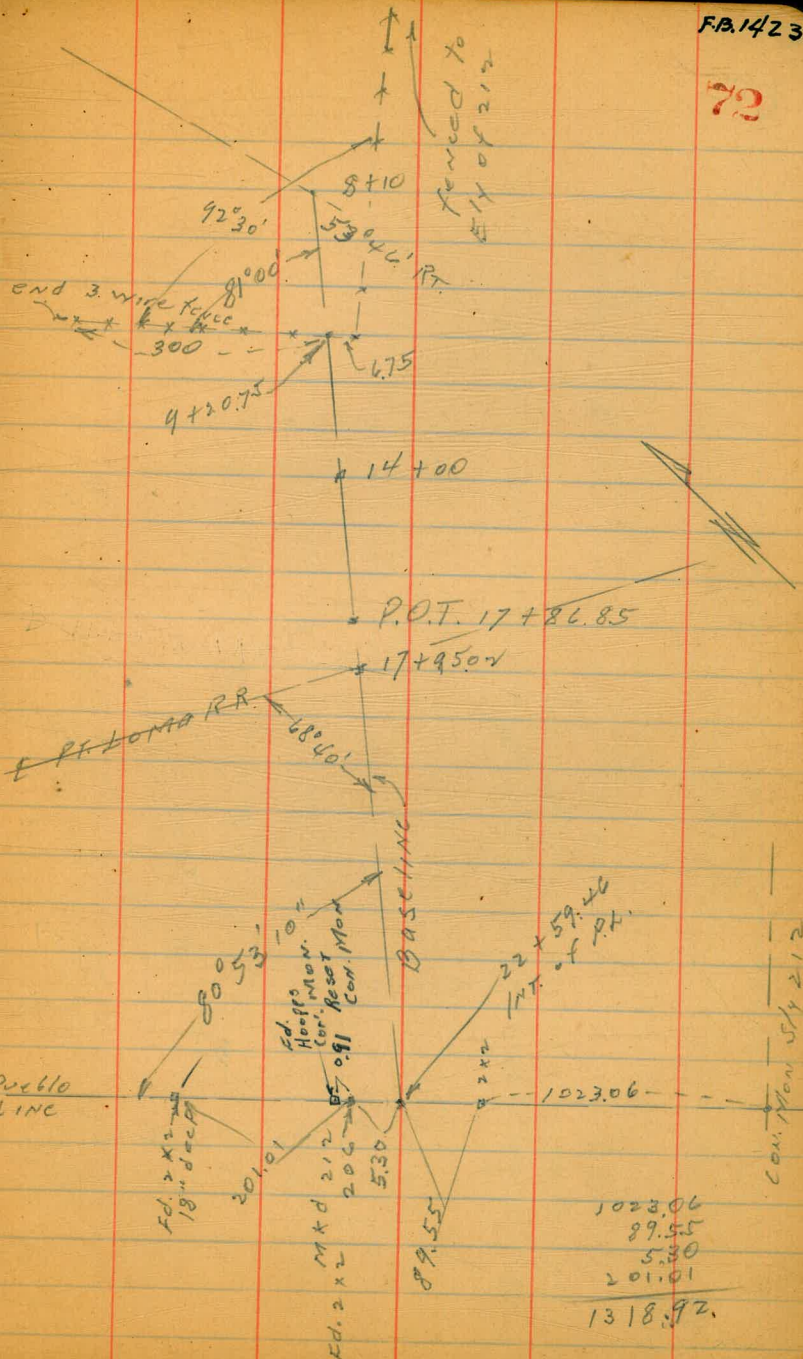
TRANSIT ON H 31

F.S. ON BASELINE STA. 8+10

STADIA Δ

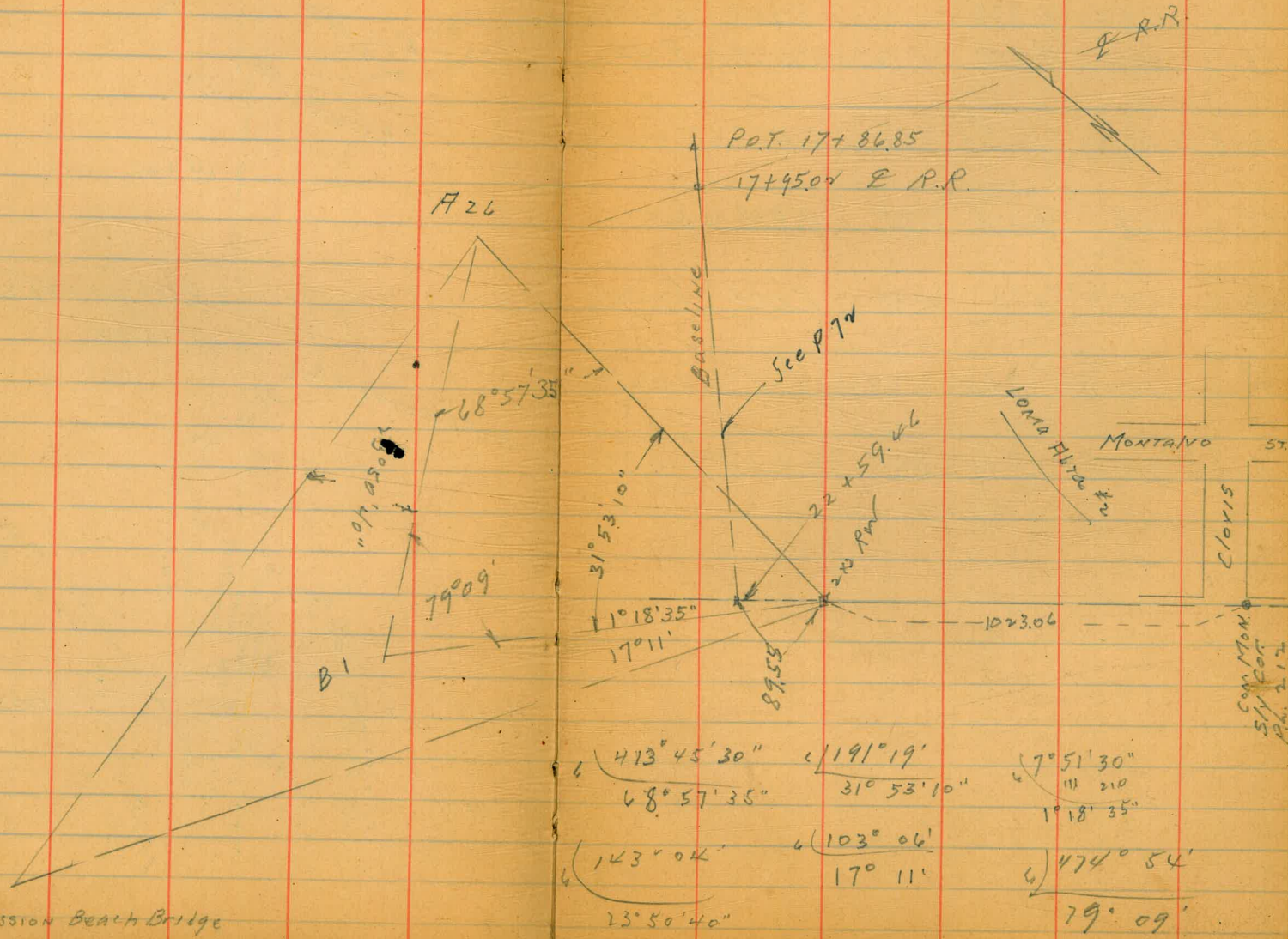
|    |                                                     |                      |
|----|-----------------------------------------------------|----------------------|
| 1  | ✓ Sly bank of                                       | { 365 · 80° 02' LT.  |
| 2  | ✓ Slough to "R"                                     | { 305 · 71° 40' "    |
| 3  | ✓ ON POINT                                          | { 255 · 64° 53' " 0  |
| 4  | ✓ Sly bank of                                       | { 293 · 77° 10' "    |
| 5  | ✓ Small Slough                                      | { 337 · 91° 01' "    |
| 6  | ✓ Sly bank of                                       | { 352 · 59° 45' "    |
| 7  | ✓ Slough to "R"                                     | { 310 · 54° 10' "    |
| 8  | ✓ Slough to "R"                                     | { 240 · 48° 15' "    |
| 9  | ✓ ON POINT <sup>NLY</sup> edge <sub>OLD RIVER</sub> | { 146 · 28° 12' " 02 |
| 10 | ✓                                                   | { 209 · 40° 42' "    |
| 11 | ✓                                                   | { 268 · 45° 48' "    |
| 12 | ✓ NLY bank                                          | { 347 · 54° 44' "    |
| 13 | ✓ of old                                            | { 437 · 57° 45' "    |
| 14 | ✓ S.D. River                                        | { 442 · 52° 08' "    |
| 15 | ✓                                                   | { 517 · 58° 10' "    |
| 16 | ✓                                                   | { 595 · 63° 30' "    |







Ld. C.T.  
E 66  
S. end Mission Beach Bridge



|                                          |                                     |                                        |
|------------------------------------------|-------------------------------------|----------------------------------------|
| $\sphericalangle$ $413^{\circ} 45' 30''$ | $\sphericalangle$ $191^{\circ} 19'$ | $\sphericalangle$ $7^{\circ} 51' 30''$ |
| $68^{\circ} 57' 35''$                    | $31^{\circ} 53' 10''$               | $11^{\circ} 21'$                       |
|                                          |                                     | $1^{\circ} 18' 35''$                   |
| $\sphericalangle$ $143^{\circ} 04''$     | $\sphericalangle$ $103^{\circ} 06'$ | $\sphericalangle$ $474^{\circ} 54'$    |
|                                          | $17^{\circ} 11'$                    | $79^{\circ} 09'$                       |
| $23^{\circ} 50' 40''$                    |                                     |                                        |

E.R.R.  
 LOMA FLORA ST.  
 MONTANA ST.  
 CLORIS  
 Capt. Mon.  
 S.V. Cor.  
 Feb. 21, 17

P.O.T. 17+86.85  
 17+95.04 E.P.R.

Baseline

Sec P 7w

22+59.46

240 RM

89.55

1023.06

A26

B1

107.4506

79° 09'

68° 57' 35"

31° 53' 10"

1° 18' 35"

17° 11'



Levels from F 31 to  
W. B. LOMA Blvd

9-11-39

FB 1423

71

VSC46

|      |      |       |      |       |                                |
|------|------|-------|------|-------|--------------------------------|
|      | 1.87 | 9.878 |      | 8.008 | 8.05<br>0.0042<br><u>8.008</u> |
| T.P. | 344  | 9.288 | 4.21 | 5.668 | P.O.T.                         |

Correction of B.M. P 55

3+15.55 2x4

|                          |     |       |
|--------------------------|-----|-------|
| check to Glover Pipe "L" | 383 | 5.458 |
|--------------------------|-----|-------|

Glover Pipe B.M. "L" =

4.23 = Mission Bay Datum  
1.23  
5.46 VSC46  
0.002

|      |     |       |      |       |   |
|------|-----|-------|------|-------|---|
| T.P. | 384 | 9.358 | 3.75 | 5.538 | Δ |
|------|-----|-------|------|-------|---|

8+10 1x4

|      |      |      |      |       |        |
|------|------|------|------|-------|--------|
| T.P. | 4064 | 9.09 | 4.31 | 5.048 | P.O.T. |
|------|------|------|------|-------|--------|

14+00 1x2

Note this as evidence?

|      |       |       |      |      |
|------|-------|-------|------|------|
| T.P. | 10.28 | 17.43 | 1.74 | 7.35 |
|------|-------|-------|------|------|

Lump con Rip Rap N edge RR Hill CRT. of 17+75 P 79

|                      |     |       |
|----------------------|-----|-------|
| check to BM RR spike | 305 | 14.58 |
|----------------------|-----|-------|

VSC46  
14.565  
0.015

Pole # 612 R P. 6.



Stadia Survey. 9-11-39  
 Main Shore line. River Sly  
 to W. Pt. Loma Blvd.

TRANSIT ON P.O.T. 3 + 15.55

B.S. ON 0 + 00

4.184 9.85 5.668  
 4.92 4.93 M.H.T.

|    | PT. of Slough  | Stadia            |  |
|----|----------------|-------------------|--|
| 1  | Se. bank River | 80° 18' Lt. 322 ✓ |  |
| 2  | "              | 85° 12' " 173 ✓   |  |
| 3  | "              | 77° 40' " 66 ✓    |  |
| 4  | "              | 180° 00' " 23 ✓   |  |
| 5  | "              | 217° 42' " 56 ✓   |  |
| 6  | "              | 224° 28' " 306 ✓  |  |
| 7  | "              | 227° 57' " 447 ✓  |  |
| 8  | "              | 239° 08' " 393 ✓  |  |
| 9  | "              | 253° 13' " 347 ✓  |  |
| 10 | "              | 266° 15' " 297 ✓  |  |
| 11 | "              | 273° 00' " 144 ✓  |  |
| 12 | "              | 289° 11' " 113 ✓  |  |
| 13 | "              | 0° 00' " 41 ✓     |  |
| 14 | "              | 41° 45' " 72 ✓    |  |
| 15 | "              | 0° 00' " 59 ✓     |  |
| 16 | "              | 302° 25' " 132 ✓  |  |
| 17 | "              | 312° 32' " 171 ✓  |  |
| 18 | "              | 325° 40' " 149 ✓  |  |
| 19 | "              | 337° 07' " 240 ✓  |  |
| 20 | "              | 349° 53' " 238 ✓  |  |
| 21 | "              | 344° 20' " 294 ✓  |  |

F.B. 1423

75

|      | Stadia           |
|------|------------------|
| 22   | 0° 00' 320 ✓     |
| 23   | 9° 14' Lt. 362 ✓ |
| 24   | 1° 38' " 371 ✓   |
| 25   | 5° 40' " 481 ✓   |
| 26   | 8° 17' " 532 ✓   |
| 27   | 17° 47' " 577 ✓  |
| # 28 | 25° 45' " 601 ✓  |

Resume from  
 here to #29  
 NEXT Page

TRANSIT ON Δ 8 + 10

B.S. ON 0 + 00

Stadia on 3 fingered Slough = Main Shore Line

|    | 4.334                | 9.87               | 5.538       |
|----|----------------------|--------------------|-------------|
|    |                      | 4.94               | 4.93 M.H.T. |
| 1  | 1st. So. of #1 above | 147° 33' Lt. 368 ✓ |             |
| 2  | "                    | 138° 30' " 323 ✓   |             |
| 3  | "                    | 128° 38' " 245 ✓   |             |
| 4  | "                    | 133° 58' " 327 ✓   |             |
| 5  | "                    | 120° 30' " 305 ✓   |             |
| 6  | "                    | 129° 40' " 346 ✓   |             |
| 7  | "                    | 117° 20' " 360 ✓   |             |
| 8  | "                    | 127° 50' " 380 ✓   |             |
| 9  | "                    | 132° 42' " 338 ✓   |             |
| 10 | "                    | 145° 47' " 394 ✓   |             |
| 11 | So. bank of River    | 141° 10' " 554 ✓   |             |



Main Shore line Stadia  
 TRANSIT ON 8+10 B.S. ON 0+00  
 Δ Stadia

|    |                     |     |
|----|---------------------|-----|
| 29 | ✓ 86° 37' LT        | 362 |
| 30 | ✓ 86° 54' "         | 586 |
| 31 | ✓ 85° 57' "         | 475 |
| 32 | ✓ 80° 30' "         | 350 |
| 33 | ✓ 70° 38' "         | 268 |
| 34 | ✓ 62° 13' "         | 195 |
| 35 | ✓ 41° 17' "         | 238 |
| 36 | ✓ 26° 50' "         | 189 |
| 37 | ✓ 2° 32' "          | 177 |
| 38 | 19-02R 358° 58' "   | 264 |
| 39 | ✓ 6-25R 353° 35' "  | 318 |
| 40 | ✓ 19-10R 340° 46' " | 428 |
| 41 | ✓ 19-09R 340° 11' " | 570 |
| 42 | from STA 14+00      |     |

Glover "J" Island

TRANSIT ON 8+10 B.S. ON 0+00

|   |                      |     |
|---|----------------------|-----|
| 1 | ✓ 0° 00'             | 70  |
| 2 | ✓ 42° 07' LT         | 102 |
| 3 | ✓ 55° 42' "          | 161 |
| 4 | ✓ 42° 00' "          | 193 |
| 5 | ✓ 0° 00' "           | 135 |
| 6 | ✓ 29° 20' 330° 40' " | 141 |
| 7 | ✓ 40° 03' 313° 57' " | 131 |
| 8 | ✓ 28° 22' 331° 40' " | 87  |

SAME as  
#7 P78

"I" Island

9-11-39 76

F.B. 1423

TRANSIT ON Glover Pipe "L"

F.S. ON 8+10

4.362 9.82 5.458

4.89 4.93 MHT

Δ Stadia

|    |                    |     |
|----|--------------------|-----|
| 1  | ✓ 4° 30' RT        | 252 |
| 2  | ✓ 16° 14' "        | 218 |
| 3  | ✓ 41° 15' "        | 250 |
| 4  | ✓ 51° 33' "        | 326 |
| 5  | ✓ 61° 00' "        | 284 |
| 6  | ✓ 81° 24' "        | 368 |
| 7  | ✓ 98° 40' "        | 365 |
| 8  | ✓ 108° 54' "       | 301 |
| 9  | ✓ 118° 28' "       | 212 |
| 10 | ✓ 134° 20' "       | 154 |
| 11 | ✓ 171° 40' "       | 181 |
| 12 | ✓ 197° 47' "       | 307 |
| 13 | ✓ 222° 30' "       | 273 |
| 14 | ✓ 221° 18' "       | 189 |
| 15 | ✓ 234° 35' "       | 180 |
| 16 | ✓ 241° 51' "       | 66  |
| 17 | ✓ 79-08 280° 52' " | 42  |
| 18 | ✓ 86-00 303° 30' " | 80  |
| 19 | ✓ 26-02 333° 38' " | 134 |
| 20 | ✓ 4-38 355° 32' "  | 262 |



Main Shore Line 9-11-39

FB 1423

TRANSIT ON 14400 B.S. ON 8+10

4.20 9.45 5.08  
4.52 4.93 M.H.T.

Δ Stadia

|         |                     |           |                                 |
|---------|---------------------|-----------|---------------------------------|
| #42     | 128° 50' LT         | 442       |                                 |
| 43      | 132° 30' "          | 608       |                                 |
| 44      | 127° 30' "          | 475       |                                 |
| 45      | 112° 20' "          | 259       |                                 |
| 46      | 80° 45' "           | 263       | 1 1/2 x 1/2<br>Fd. Hoopes Stake |
| 47      | 96° 35' "           | 283       |                                 |
| 48      | 109° 32' "          | 393       |                                 |
| #49     | 118° 43' "          | 513       |                                 |
| T.P. 49 | 4.80 9.80 4.45 5.00 | Lath T.P. |                                 |
|         | 4.87 4.93           | M.H.T.    |                                 |

Moore 9-12-39

TRANSIT ON #49 B.S. ON 14400

|     |           |     |   |
|-----|-----------|-----|---|
| #50 | 8° 55' LT | 93  |   |
| 51  | 17° 17' " | 233 |   |
| 52  | 19° 45' " | 358 | ↓ |
| x53 | 21° 15' " | 442 |   |
| 54  | 23° 56' " | 618 |   |
| 55  | 25° 50' " | 915 |   |
| 56  | 23° 53' " | 926 |   |

|     | Δ          | Stadia |
|-----|------------|--------|
| #57 | 21° 51' LT | 783    |
| 58  | 19° 08' "  | 567    |
| 59  | 13° 20' "  | 425    |
| 60  | 5° 42' "   | 323    |
| 61  | 6° 07' RT  | 201    |
| 62  | 34° 42' RT | 108    |
| 63  | 57° 08' "  | 109    |
| 64  | 29° 47' "  | 152    |
| 65  | 7° 23' "   | 253    |
| 66  | 11° 30' LT | 375    |
| 67  | 9° 35' RT  | 277    |
| 68  | 44° 37' RT | 159    |
| 69  | 29° 15' "  | 171    |
| 70  | 65° 01' "  | 207    |
| 71  | 43° 27' "  | 290    |
| 72  | 39° 10' "  | 352    |
| 73  | 27° 15' "  | 320    |
| 74  | 25° 18' "  | 383    |
| 75  | 27° 20' "  | 474    |
| 76  | 25° 03' "  | 625    |
| 77  | 24° 50' "  | 712    |
| 78  | 32° 20' "  | 695    |
| 79  | 42° 16' "  | 562    |
| 80  | 51° 40' "  | 411    |
| 81  | 61° 13' "  | 267    |
| 84  | 89° 12' "  | 178    |

1 1/2 x 1/2  
Fd. Hoopes Stake

Jumped  
3' Slough



MAIN Shore

F.B. 1423

78

|      | Δ                          | stadia |                 |
|------|----------------------------|--------|-----------------|
| # 83 | ✓ 102° 00' RT              | 203    |                 |
| 84   | ✓ 109° 18' "               | 255    |                 |
| 85   | ✓ 122° 35' "               | 314    |                 |
| 86   | ✓ 135° 25' "               | 394    |                 |
| 87   | ✓ 136° 52' "               | 528    | M. Toe RR Fill. |
| 88   | ✓ 150° 36' "               | 678    | " " "           |
| 89   | ✓ 152° 15' "               | 638    |                 |
| 90   | ✓ 157° 40' "               | 683    |                 |
| 91   | ✓ 156° 53' "               | 725    |                 |
| # 92 | FROM STA. 17 + 86.85 P. 79 |        |                 |

Stadia Survey of  
Glover "K" Island

TRANSIT ON STA. 14+00  
B.S. ON " 8+10

|       |      |      |            |
|-------|------|------|------------|
| 4.042 | 9.09 | 5048 |            |
|       |      | 4.16 | 493 M.H.T. |

|   | Δ             | stadia |
|---|---------------|--------|
| 1 | ✓ 14° 00' LT. | 253    |
| 2 | ✓ 24° 12' "   | 287    |
| 3 | ✓ 83° 24' "   | 237    |
| 4 | ✓ 89° 30' "   | 222    |
| 5 | ✓ 116° 12' "  | 254    |

Δ stadia

|    |                |     |
|----|----------------|-----|
| 4  | ✓ 123° 27' LT. | 325 |
| 7  | ✓ 126° 57' "   | 329 |
| 8  | ✓ 153° 43' "   | 382 |
| 9  | ✓ 151° 30' "   | 313 |
| 10 | ✓ 144° 54' "   | 202 |
| "  | ✓ 125° 43' "   | 101 |
| 14 | ✓ 65° 03' "    | 75  |
| 13 | ✓ 7° 20' RT.   | 131 |
| 12 | ✓ 17° 50' LT.  | 193 |

same as # 41  
p 76

joins  
with main  
shore line  
here

"M" Island

TRANSIT ON 14+00 B.S. ON 8+10  
Rod #16

|   |              |     |
|---|--------------|-----|
| 1 | ✓ 9° 46' LT. | 243 |
| 2 | ✓ 5° 06' RT. | 283 |
| 3 | ✓ 7° 00' RT. | 352 |
| 4 | ✓ 18° 04' "  | 408 |
| 5 | ✓ 21° 18' "  | 463 |
| 6 | ✓ 14° 50' "  | 321 |
| 7 | ✓ 40° 54' "  | 517 |
| 8 | ✓ 41° 25' "  | 444 |
| 9 | ✓ 47° 26' "  | 420 |



|    |               | stadia |
|----|---------------|--------|
| 10 | ∠ 45° 12' RT. | 337    |
| 11 | ∠ 50° 14' "   | 257    |
| 12 | ∠ 45° 10' "   | 198    |
| 13 | ∠ 14° 50' "   | 151    |
| 14 | ∠ 0° 52' "    | 207    |
| 15 | ∠ 11° 46' LT. | 201    |

probably 60% of Marsh is  
 4.93 or higher and 25% of  
 Marsh would average about  
 El. 4.75 USC + C.

approx. 30 or 40 acres lying NWly  
 and Baseline  
 of "M" island is covered with small  
 islands of approx. 30' to 100' diam.

|      | 9.09. |       |       |      |                       |
|------|-------|-------|-------|------|-----------------------|
| T.P. | 10.38 | 17.63 | 17.4  | 7.35 | CON. LUMP<br>R.P. RAD |
|      |       |       | 12.70 | 4.93 | M.H.T.                |

This may be part  
 of "M" island  
 according to Glover

Shore Line, Transit on 17 + 86.85  
 B.S. on 3 + 10

|      |       | stadia |       |                       |
|------|-------|--------|-------|-----------------------|
| T.P. | 10.30 | 17.65  | 7.35  | CON. LUMP<br>R.P. RAD |
|      |       |        | 12.72 | 4.93 M.H.T.           |

|    |                       |     |  |                |
|----|-----------------------|-----|--|----------------|
| 92 | ∠ 119° 42' RT         | 21  |  | N. Toe RR Hill |
| 93 | ELY end of (74° 50' " | 113 |  | " " "          |
| 94 | RR Bridge (52° 54' "  | 122 |  | " " "          |
| 95 | ∠ 43° 16' "           | 163 |  |                |
| 96 | ∠ 40° 30' "           | 217 |  |                |
| 97 | ∠ 40° 08' "           | 282 |  |                |
| 98 | ∠ 46° 20' "           | 374 |  |                |
| 99 | ∠ 47° 42' "           | 448 |  |                |

|      |               | stadia |
|------|---------------|--------|
| 100  | ∠ 46° 05' RT. | 543    |
| 101  | ∠ 46° 18' "   | 637    |
| 102  | ∠ 47° 58' "   | 715    |
| 103  | ∠ 46° 21' "   | 787    |
| 104  | ∠ 43° 12' "   | 755    |
| 105  | ∠ 39° 13' "   | 785    |
| 106  | ∠ 37° 24' "   | 677    |
| 107  | ∠ 33° 17' "   | 497    |
| 108  | ∠ 31° 32' "   | 421    |
| 109  | ∠ 32° 12' "   | 335    |
| 110  | ∠ 26° 08' "   | 236    |
| 111  | ∠ 9° 00' "    | 120    |
| 112  | ∠ 75° 18' LT. | 56     |
| 113  | ∠ 102° 40' "  | 255    |
| 114  | ∠ 85° 40' "   | 233    |
| 115  | ∠ 100° 32' "  | 370    |
| 116  | ∠ 106° 53' "  | 473    |
| 117  | ∠ 99° 35' "   | 418    |
| 118  | ∠ 86° 23' "   | 320    |
| 119  | ∠ 77° 43' "   | 267    |
| 120  | ∠ 70° 36' "   | 240    |
| 121  | ∠ 53° 53' "   | 188    |
| 122  | ∠ 8° 00' "    | 240    |
| #103 | ∠ 2° 25' "    | 297    |

S. Toe RR Hill

HOOPS 1 1/2 1 1/2

HOOPS 1 1/2

|                  |           |       |       |          |
|------------------|-----------|-------|-------|----------|
| TRANSIT POINT #2 | 3° 47' LT | 348   |       |          |
| T.P.             | 5.07      | 10.77 | 11.95 | 5.70     |
|                  |           |       | 5.84  | 4.93 MHT |



Shoreline contd.

TRANSIT #2 B.S. ON STA 1748685

|       |              |     |                                                 |
|-------|--------------|-----|-------------------------------------------------|
| # 124 | ↘ 4° 27' LT. | 10  | = Hoopes & Glover STAKES                        |
| 125   | ↘ 10° 42' "  | 104 |                                                 |
| 126   | ↘ 16° 37' RT | 192 | = Double outlet of con. P.P. C.W. Tac B.W. (11) |
| 127   | ↘ 30° 16' "  | 355 |                                                 |
| 128   | ↘ 49° 06' "  | 368 | = on Hoopes                                     |
| 129   | ↘ 53° 32' "  | 422 |                                                 |

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope 1% 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

from side stake to slope stake. If ground is not

**IMPROVED TABLES AND INFORMATION**

To find Tangent and External for curve of any other degree, divide by degree of curve and add connection found in column of connections. 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.



## 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 estimate the difference in elevation between the side stake and slope stake, lower target by this amount if 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 it does not make the slight adjustment necessary.

TABLE No. 9.

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 I may be found by dividing tangent, (or external), opposite I 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.

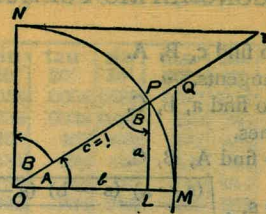


TABLE II  
TRIGONOMETRIC FORMULÆ

$$\angle A = \angle MOP \quad \angle B = \angle PON = \angle OPL$$

$$R = OB = c = 1$$

$$\sin A = \frac{a}{c} = \frac{a}{1} = a = \cos B = LP$$

$$\cos A = \frac{b}{c} = \frac{b}{1} = b = \sin B = OL$$

$$\tan A = \frac{a}{b} = \frac{MQ}{OM} = \frac{MQ}{1} = MQ = \cot B = MQ$$

$$\cot A = \frac{NT}{ON} = \frac{NT}{1} = NT = \tan B = NT$$

$$\sec A = \frac{OQ}{OM} = \frac{OQ}{1} = OQ = \csc B = OQ$$

$$\csc A = \frac{OT}{ON} = \frac{OT}{1} = OT = \sec B = OT$$

$$\text{vers } A = \frac{LM}{OP} = LM = \text{covers } B \#$$

$$\text{covers } A = \frac{OP - LP}{OP} = OP - LP = \text{vers } B$$

$$\text{exsec } A = PQ = \text{coexsec } B$$

$$\text{coexsec } A = PT = \text{exsec } B$$

$$\sin \frac{1}{2} A = \sqrt{\frac{1 - \cos A}{2}} \quad \cos \frac{1}{2} A = \sqrt{\frac{1 + \cos A}{2}}$$

$$\sin 2A = 2 \sin A \cos A \quad \cos 2A = \cos^2 A - \sin^2 A$$

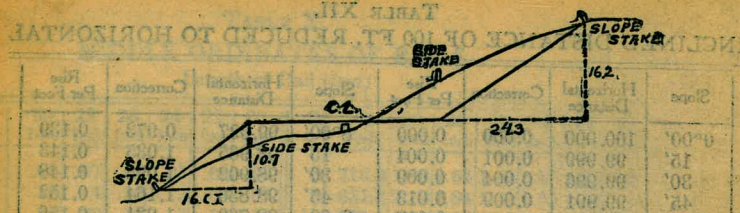
$$\text{Law of Sines} \quad \frac{\sin A}{a} = \frac{\sin B}{B} = \frac{\sin C}{C}$$

$$\text{Law of Cosines} \quad c^2 = a^2 + b^2 - 2ab \cos C$$

$$\text{Law of Tangents} \quad \frac{a+b}{a-b} = \frac{\tan \frac{1}{2}(A+B)}{\tan \frac{1}{2}(A-B)}$$



| C    | R    |
|------|------|
| o /  | Feet |
| 0-20 | 1718 |
| 0-40 | 859  |
| 1-0  | 573  |
| 1-20 | 429  |
| 1-40 | 343  |
| 2-0  | 286  |
| 2-20 | 245  |
| 2-40 | 214  |
| 3-0  | 191  |
| 3-20 | 171  |
| 3-40 | 156  |
| 4-0  | 143  |
| 4-20 | 132  |
| 4-40 | 122  |
| 5    | 114  |
| 6    | 955  |
| 7    | 819  |



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1 1/2 TO 1. ROADWAY OF ANY WIDTH.

|    | 0     | .1    | .2    | .3    | .4    | .5    | .6    | .7    | .8    | .9    |    |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| 0  | 0.00  | 0.15  | 0.30  | 0.45  | 0.60  | 0.75  | 0.90  | 1.05  | 1.20  | 1.35  | 0  |
| 1  | 1.50  | 1.65  | 1.80  | 1.95  | 2.10  | 2.25  | 2.40  | 2.55  | 2.70  | 2.85  | 1  |
| 2  | 3.00  | 3.15  | 3.30  | 3.45  | 3.60  | 3.75  | 3.90  | 4.05  | 4.20  | 4.35  | 2  |
| 3  | 4.50  | 4.65  | 4.80  | 4.95  | 5.10  | 5.25  | 5.40  | 5.55  | 5.70  | 5.85  | 3  |
| 4  | 6.00  | 6.15  | 6.30  | 6.45  | 6.60  | 6.75  | 6.90  | 7.05  | 7.20  | 7.35  | 4  |
| 5  | 7.50  | 7.65  | 7.80  | 7.95  | 8.10  | 8.25  | 8.40  | 8.55  | 8.70  | 8.85  | 5  |
| 6  | 9.00  | 9.15  | 9.30  | 9.45  | 9.60  | 9.75  | 9.90  | 10.05 | 10.20 | 10.35 | 6  |
| 7  | 10.50 | 10.65 | 10.80 | 10.95 | 11.10 | 11.25 | 11.40 | 11.55 | 11.70 | 11.85 | 7  |
| 8  | 12.00 | 12.15 | 12.30 | 12.45 | 12.60 | 12.75 | 12.90 | 13.05 | 13.20 | 13.35 | 8  |
| 9  | 13.50 | 13.65 | 13.80 | 13.95 | 14.10 | 14.25 | 14.40 | 14.55 | 14.70 | 14.85 | 9  |
| 10 | 15.00 | 15.15 | 15.30 | 15.45 | 15.60 | 15.75 | 15.90 | 16.05 | 16.20 | 16.35 | 10 |
| 11 | 16.50 | 16.65 | 16.80 | 16.95 | 17.10 | 17.25 | 17.40 | 17.55 | 17.70 | 17.85 | 11 |
| 12 | 18.00 | 18.15 | 18.30 | 18.45 | 18.60 | 18.75 | 18.90 | 19.05 | 19.20 | 19.35 | 12 |
| 13 | 19.50 | 19.65 | 19.80 | 19.95 | 20.10 | 20.25 | 20.40 | 20.55 | 20.70 | 20.85 | 13 |
| 14 | 21.00 | 21.15 | 21.30 | 21.45 | 21.60 | 21.75 | 21.90 | 22.05 | 22.20 | 22.35 | 14 |
| 15 | 22.50 | 22.65 | 22.80 | 22.95 | 23.10 | 23.25 | 23.40 | 23.55 | 23.70 | 23.85 | 15 |
| 16 | 24.00 | 24.15 | 24.30 | 24.45 | 24.60 | 24.75 | 24.90 | 25.05 | 25.20 | 25.35 | 16 |
| 17 | 25.50 | 25.65 | 25.80 | 25.95 | 26.10 | 26.25 | 26.40 | 26.55 | 26.70 | 26.85 | 17 |
| 18 | 27.00 | 27.15 | 27.30 | 27.45 | 27.60 | 27.75 | 27.90 | 28.05 | 28.20 | 28.35 | 18 |
| 19 | 28.50 | 28.65 | 28.80 | 28.95 | 29.10 | 29.25 | 29.40 | 29.55 | 29.70 | 29.85 | 19 |
| 20 | 30.00 | 30.15 | 30.30 | 30.45 | 30.60 | 30.75 | 30.90 | 31.05 | 31.20 | 31.35 | 20 |
| 21 | 31.50 | 31.65 | 31.80 | 31.95 | 32.10 | 32.25 | 32.40 | 32.55 | 32.70 | 32.85 | 21 |
| 22 | 33.00 | 33.15 | 33.30 | 33.45 | 33.60 | 33.75 | 33.90 | 34.05 | 34.20 | 34.35 | 22 |
| 23 | 34.50 | 34.65 | 34.80 | 34.95 | 35.10 | 35.25 | 35.40 | 35.55 | 35.70 | 35.85 | 23 |
| 24 | 36.00 | 36.15 | 36.30 | 36.45 | 36.60 | 36.75 | 36.90 | 37.05 | 37.20 | 37.35 | 24 |
| 25 | 37.50 | 37.65 | 37.80 | 37.95 | 38.10 | 38.25 | 38.40 | 38.55 | 38.70 | 38.85 | 25 |
| 26 | 39.00 | 39.15 | 39.30 | 39.45 | 39.60 | 39.75 | 39.90 | 40.05 | 40.20 | 40.35 | 26 |
| 27 | 40.50 | 40.65 | 40.80 | 40.95 | 41.10 | 41.25 | 41.40 | 41.55 | 41.70 | 41.85 | 27 |
| 28 | 42.00 | 42.15 | 42.30 | 42.45 | 42.60 | 42.75 | 42.90 | 43.05 | 43.20 | 43.35 | 28 |
| 29 | 43.50 | 43.65 | 43.80 | 43.95 | 44.10 | 44.25 | 44.40 | 44.55 | 44.70 | 44.85 | 29 |
| 30 | 45.00 | 45.15 | 45.30 | 45.45 | 45.60 | 45.75 | 45.90 | 46.05 | 46.20 | 46.35 | 30 |
| 31 | 46.50 | 46.65 | 46.80 | 46.95 | 47.10 | 47.25 | 47.40 | 47.55 | 47.70 | 47.85 | 31 |
| 32 | 48.00 | 48.15 | 48.30 | 48.45 | 48.60 | 48.75 | 48.90 | 49.05 | 49.20 | 49.35 | 32 |
| 33 | 49.50 | 49.65 | 49.80 | 49.95 | 50.10 | 50.25 | 50.40 | 50.55 | 50.70 | 50.85 | 33 |
| 34 | 51.00 | 51.15 | 51.30 | 51.45 | 51.60 | 51.75 | 51.90 | 52.05 | 52.20 | 52.35 | 34 |
| 35 | 52.50 | 52.65 | 52.80 | 52.95 | 53.10 | 53.25 | 53.40 | 53.55 | 53.70 | 53.85 | 35 |
| 36 | 54.00 | 54.15 | 54.30 | 54.45 | 54.60 | 54.75 | 54.90 | 55.05 | 55.20 | 55.35 | 36 |
| 37 | 55.50 | 55.65 | 55.80 | 55.95 | 56.10 | 56.25 | 56.40 | 56.55 | 56.70 | 56.85 | 37 |
| 38 | 57.00 | 57.15 | 57.30 | 57.45 | 57.60 | 57.75 | 57.90 | 58.05 | 58.20 | 58.35 | 38 |
| 39 | 58.50 | 58.65 | 58.80 | 58.95 | 59.10 | 59.25 | 59.40 | 59.55 | 59.70 | 59.85 | 39 |
| 40 | 60.00 | 60.15 | 60.30 | 60.45 | 60.60 | 60.75 | 60.90 | 61.05 | 61.20 | 61.35 | 40 |
| 41 | 61.50 | 61.65 | 61.80 | 61.95 | 62.10 | 62.25 | 62.40 | 62.55 | 62.70 | 62.85 | 41 |
| 42 | 63.00 | 63.15 | 63.30 | 63.45 | 63.60 | 63.75 | 63.90 | 64.05 | 64.20 | 64.35 | 42 |
| 43 | 64.50 | 64.65 | 64.80 | 64.95 | 65.10 | 65.25 | 65.40 | 65.55 | 65.70 | 65.85 | 43 |
| 44 | 66.00 | 66.15 | 66.30 | 66.45 | 66.60 | 66.75 | 66.90 | 67.05 | 67.20 | 67.35 | 44 |
| 45 | 67.50 | 67.65 | 67.80 | 67.95 | 68.10 | 68.25 | 68.40 | 68.55 | 68.70 | 68.85 | 45 |
| 46 | 69.00 | 69.15 | 69.30 | 69.45 | 69.60 | 69.75 | 69.90 | 70.05 | 70.20 | 70.35 | 46 |
| 47 | 70.50 | 70.65 | 70.80 | 70.95 | 71.10 | 71.25 | 71.40 | 71.55 | 71.70 | 71.85 | 47 |
| 48 | 72.00 | 72.15 | 72.30 | 72.45 | 72.60 | 72.75 | 72.90 | 73.05 | 73.20 | 73.35 | 48 |
| 49 | 73.50 | 73.65 | 73.80 | 73.95 | 74.10 | 74.25 | 74.40 | 74.55 | 74.70 | 74.85 | 49 |
| 50 | 75.00 | 75.15 | 75.30 | 75.45 | 75.60 | 75.75 | 75.90 | 76.05 | 76.20 | 76.35 | 50 |

Computed by L. Leland Locke.

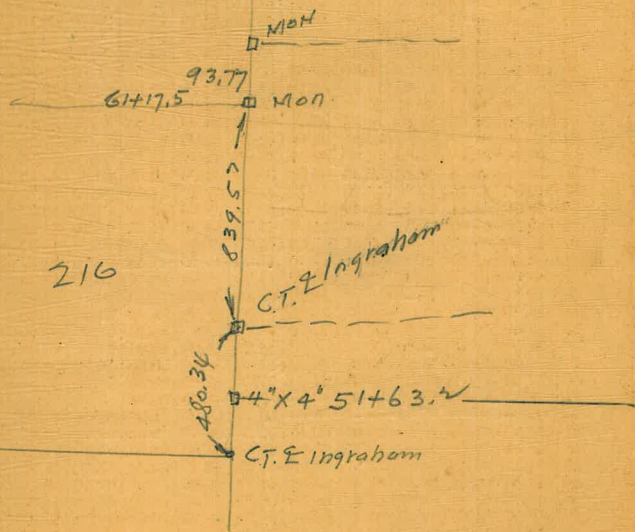
90+70  
Edge of Channel

214

74+64 4"x4"

215

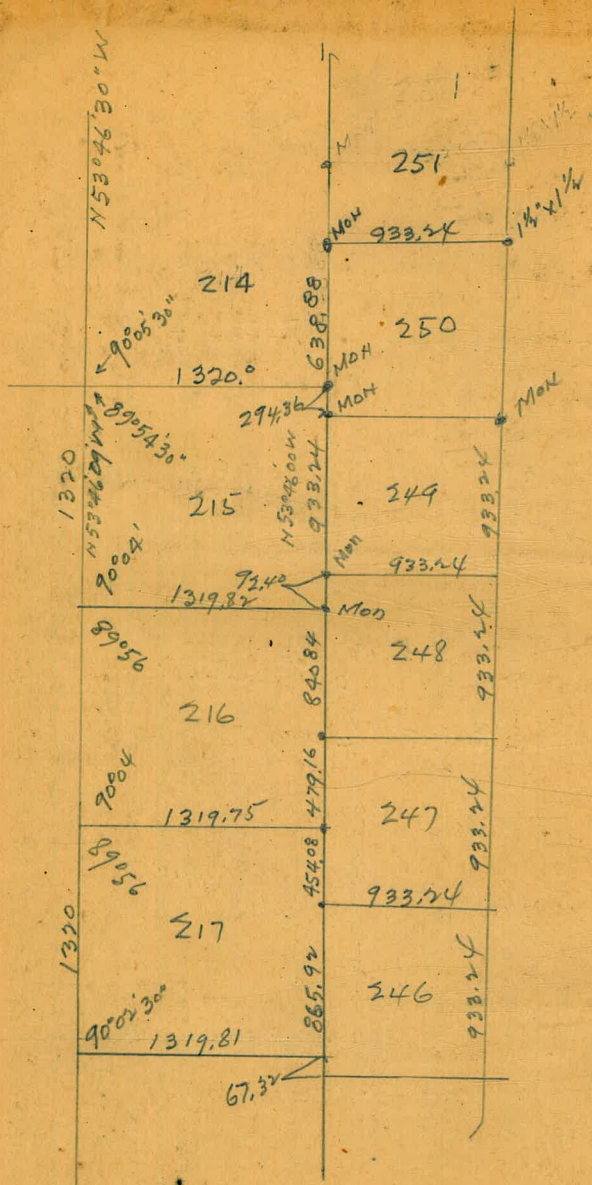
64+69 4"x4"



216

To find len





93° 07' 30"

14 418  
 14 36  
 0058

5.45  
 6.88

Missouri out  
 Land "