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U. S. COAST & GEODETIC SURVEY  
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DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

\_\_\_\_\_, Director

State: CALIFORNIA

DESCRIPTIVE REPORT

Topographic  
~~Hydrographic~~

Sheet No.

LOCALITY

SAN FRANCISCO-OAKLAND BAY

BRIDGE.

SAN FRANCISCO BAY.

1938  
~~192~~

CHIEF OF PARTY

F. H. Hardy, O. W. Swainson, and  
E. W. Eickelberg.

GOVERNMENT PRINTING OFFICE

6666

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO.

## TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field Letter .....

REGISTER NO.

**T6666**State CALIFORNIAGeneral locality SAN FRANCISCO BAYLocality SAN FRANCISCO-OAKLAND BAY BRIDGEScale 1:20,000 Date of survey March 1936 to Dec, 1938  
(winters)Vessel GUIDEChief of Party F. H. Hardy, O. W. Swainson and E. W. Eickelberg.Surveyed by L. W. Swanson, H. G. Conerly and C. A. Schoene.Inked by H. G. Conerly

Heights in feet above ..... to ground to tops of trees

Contour Approximate contour Form line interval ..... feet

Instructions dated Apr. 11, 1936, Dec. 24, 1936 & Aug. 3, 1938

Remarks: .....

DESCRIPTIVE REPORT  
to accompany  
TOPOGRAPHIC SHEET OF THE SAN FRANCISCO - OAKLAND  
BAY BRIDGE AND ITS APPROACHES.  
U.S.C. & G.S.S. GUIDE.

INSTRUCTIONS: Instructions for this survey were contained in a letter from the Director, dated April 11, 1936, No. 22 - AB - 1995, GU 4, and supplemental letters dated December 24, 1936, No. 22/MEK, 1995 and August 3, 1938.

JUNCTIONS AND LOCALITY: This sheet was primarily for the location of the bridge, its approaches and Treasure Island. It includes the approaches on both the sides of the bay for approximately one mile from the shore. A sheet of the Berkeley Yacht Harbor and the highway in the vicinity joins this sheet on the north. No other sheets join this one.

The scale of this sheet is 1:20,000.

DATUM: This sheet is on the Final Adjusted North American Datum of 1927.

CONTROL: Triangulation completed in the following years was used for control: 1909, 1910, 1913, 1916, 1917, 1919, 1929, 1932 and 1938.

SURVEY METHODS: The topography on this sheet was done almost entirely from three point fixes and resection positions with a third station as a check. There are several tanks and stacks that were located by at least three intersections from well located positions and then used for control. Standard methods of topography were used throughout.

GENERAL INFORMATION AND DISCREPANCIES: The dock shown on the chart at the east end of Yerba Buena Island should be removed from the chart. It was torn away for the construction of the bridge and a new one constructed near by, as shown on this sheet. No old piles from the old dock was seen, but it is possible that there are still submerged piles where the old dock was.

The lighted beacon shown at Latitude  $37^{\circ} 48.55'$ , Longitude  $122^{\circ} 20.6'$ , was rebuilt in 1929 and was apparently rebuilt in a slightly different position. Four cuts from four different directions intersected in a point shown on the sheet, which varies approximately twenty meters from that shown on the chart. The new position should be accepted.

The tanks and stacks shown on the Oakland side of this sheet are all visible from the bay but are not very prominent. They would furnish good control for any work to be done in the bay, but are not of special importance for landmarks.

The piling shown on the chart near the shore at Latitude  $37^{\circ} 50.5'$  was looked for and only two were seen. They were the two inshore ones and were visible at a tide of minus one-half foot, making them awash at M.L.L.W. There is no proof that the others are not still there, but submerged.

The projection of land inshore from the piles is in the process of construction. The Pabco Company is working on the offshore side and it seems with no definite plan of construction.

The aquatic park and lake shown on the northeast corner of the sheet are still under construction and in some areas may be different before it is completed.

The railroads near the ends of the bridge are still being changed and are not shown on the sheet.

Since the construction on Treasure Island is of temporary nature and is only there for the duration of the Fair, no detail survey of the island was made. Most of the buildings are to be destroyed, when the fair is over, to make way for an airport.

There are several duck blinds shown on the mud flats north of the east end of the bridge. During the time of this survey more were being constructed. Some are being built almost as far north as the pipe line shown west of Pabco tank. They are not in the way of navigation for they are in very shoal water or on the mud flats.

The sign shown on the chart near Triangulation Station GOAT has been moved to make way for the road from the bridge to Treasure Island, and should be removed from the chart.

Some of the tanks and stacks shown on the northeast corner of the sheet do not agree with the charted position. It is thought that the present survey is sufficiently accurate to use the new positions as correct.

Respectfully submitted,

*Horace G. Conerly*  
Horace G. Conerly,  
Aid, C. & G. Survey.

Approved and forwarded:

*E. W. Eickelberg*

E. W. Eickelberg,  
Chief of Party, C. & G. S.,  
Commanding Ship GUIDE from October 3, 1938,  
Preceded by Captain F. H. Hardy from 6-15-38 to 10-3-38;  
Preceded by Comdr. O. W. Swainson from 5-1-38 to 6-15-38.  
*Preceded by Captain F.H. Hardy from March 1936 to 5-1-38*

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# GEOGRAPHIC NAMES

Survey No. T-6666

GEOGRAPHIC NAMES										
Survey No.T-6666										
Name on Survey	<div>On Chart No.    On previous survey No.    On U. S. quadrangle Maps    From local information    On local Maps    P. O. Guide or Map    Rand McNally Atlas    U. S. Light List</div>									
	A.	B.	C.	D.	E.	F.	G.	H.	K.	
<u>San Francisco</u>										1
<u>Oakland</u>										2
<u>Yerba Buena Island</u>										3
<u>Treasure Island</u>										4
<u>San Francisco Bay</u>										5
<u>San Francisco-Oakland Bay Bridge</u>										6
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Names underlined in red approved by L. Heck on 7/28/39

M 234

Names underlined in red approved  
by L. Heck on 7/28/39

## Remarks

## Decisions

1		U S G B
2		U S G B 378222
3		U S G B 378223
4		"
5	For title	"
6	See blue prints 29819/20	
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M 234		

Section of Field Records

REVIEW OF GRAPHIC CONTROL SURVEY T-6666

San Francisco-Oakland Bay Bridge, San Francisco Bay, California.  
Surveyed Mar. 1936 to Dec. 1938 (winters) Scale 1:20,000.  
Instructions dated April 11, 1936; December 24, 1936  
and August 3, 1938.

Plane Table Survey (Graphic Control)

Aluminum Mounted.

Chiefs of Party - F. H. Hardy, O. W. Swainson and E.W.Eickelberg.  
Surveyed by - L. W. Swanson, H. G. Conerly and C.A.Schoene.  
Inked by - H. G. Conerly.

1. Condition of Records.

The records are legible, sufficiently neat, and conform to the requirements of the Topographic Manual.

2. Compliance with Instructions for the Project.

The scale, character and extent of the survey satisfy the instructions for the project.

3. Junctions with Contemporary Surveys.

The only contemporary survey is T-6665 (1938) and the junction is satisfactory.

4. Comparison with Prior Surveys.

- a. T-4671 (1933), 1:10,000 and supplementals.  
T-4670b (1932), 1:10,000 and supplementals.

The present survey T-6666 is on a 1:20,000 scale, whereas the prior surveys (air phototopographic) are on 1:10,000. There are a few differences in the position of objects located; several of these differences are 10 m. and one is 13 m. (stack at lat 37° 51.2', long. 122° 17.2'). Most of the topographic detail shown on the present survey is new information, but there are a few cases of difference between the present and previous surveys in the location of former features. Because the present survey is more recent and has already been applied to the charts with precedence over previous surveys, the present survey should be accepted in preference to prior surveys in each case of difference.

- b. T-4670 and T-4671 <sup>were</sup> ~~are considered to have been~~ compared to, and made to supersede, all previous surveys at the time of their review. Because of this, and because of the limited amount of detail which

is shown on the present survey, it is considered unnecessary to compare it to any surveys previous to T-4670 and T-4671.

5. Comparison to Charts Nos. 5535 and 5532.

At the present date, the above charts are being corrected for the new information contained in the above surveys.

6. Magnetic Declination.

No information obtained.

7. Landmarks and Aids to Navigation.

Landmarks are discussed in the descriptive report, pages 1 and 2.

8. Comparison with Contemporary Hydrographic Surveys.

Comparison of the present survey with the contemporary hydrographic survey has been made by the reviewer of the hydrographic survey concerned.

9. Field Drafting.

Satisfactory.

10. Additional Field Work Recommended.

None.

11. Superseded Old Surveys.

For the details shown, the present survey supersedes all prior topographic surveys for charting purposes.

12. Corrections Applied to Existing Phototopographic Maps.

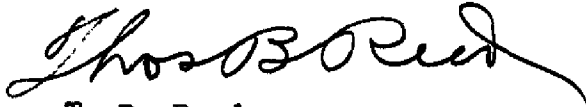
No changes will be made to the existing phototopographic maps from the information contained in this survey, except where the new survey shows that an error was made in the previous surveys. The new shoreline and other information will not be applied to the supplementals for the phototopographic surveys but will be noted on the supplementals as a matter of record.

13. Reviewed by - T. M. Price, Jr., July 21, 1939.



Inspected by - B. G. Jones.

Examined and approved:



T. B. Reed,  
Chief, Section of Field Records.



Fred. L. Peacock  
Chief, Section of Field Work.



K.T. Adams  
Chief, Division of Charts.



G. Thiele  
Chief, Division of H. & T.

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
~~PHOTOSTAT OF~~

~~Narrative~~  
No. T -6666

{ received Mar. 13, 1939  
registered Mar. 14, 1939  
verified  
reviewed  
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
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83	✓		Pages 1 + 2
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RETURN TO

82	T. B. Reed
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