

TP-00533

TP-00533

NOAA FORM 76-35 (3-76) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
<i>Map No.</i> TP-00533	<i>Edition No.</i> 1
<i>Job No.</i> CM-7704	
<i>Map Classification</i> FINAL, FIELD EDITED MAP	
<i>Type of Survey</i> SHORELINE	
LOCALITY	
<i>State</i> California	
<i>General Locality</i> San Francisco and San Pablo Bays	
<i>Locality</i> San Leandro Bay	
19 77 TO 1980	
REGISTRY IN ARCHIVES	
DATE	

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	
DESCRIPTIVE REPORT - DATA RECORD		TYPE OF SURVEY ☒ ORIGINAL ☐ RESURVEY ☐ REVISED	
PHOTOGRAMMETRIC OFFICE Coastal Mapping Division, Norfolk, VA OFFICER-IN-CHARGE Roy K. Matsushige, CDR		SURVEY TP-00533 MAP EDITION NO. (1) MAP CLASS Final JOB PH CM-7704	
PHOTOGRAMMETRIC OFFICE Coastal Mapping Division, Norfolk, VA OFFICER-IN-CHARGE Roy K. Matsushige, CDR		LAST PRECEDING MAP EDITION TYPE OF SURVEY ☐ ORIGINAL ☐ RESURVEY ☐ REVISED JOB PH- MAP CLASS SURVEY DATES: 19__ TO 19__	
I. INSTRUCTIONS DATED			
1. OFFICE		2. FIELD	
Aerotriangulation April 13, 1977 Compilation August 3, 1977 Amendment 1 April 20, 1978 Amendment 2 April 6, 1979 Amendment 3 July 30, 1979 Compilation July 2, 1981		Control-Premarking Feb. 7, 1977	
II. DATUMS			
1. HORIZONTAL: ☒ 1927 NORTH AMERICAN		OTHER (Specify)	
2. VERTICAL: ☒ MEAN HIGH-WATER ☐ MEAN LOW-WATER ☒ MEAN LOWER LOW-WATER ☐ MEAN SEA LEVEL		OTHER (Specify)	
3. MAP PROJECTION <u>Lambert Conformal</u>		4. GRID(S) STATE ZONE <u>California</u> <u>3</u>	
5. SCALE <u>1:10,000</u>		STATE ZONE	
III. HISTORY OF OFFICE OPERATIONS			
OPERATIONS		NAME	DATE
1. AEROTRIANGULATION BY METHOD: <u>Analytic</u> LANDMARKS AND AIDS BY		R. Kelly	July 1977
2. CONTROL AND BRIDGE POINTS PLOTTED BY METHOD: <u>Coradomat</u> CHECKED BY		S. Solbeck	July 1977
		S. Solbeck	July 1977
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY COMPILATION CHECKED BY		D. Butler	June 1978
INSTRUMENT: <u>Wild B-8</u> CONTOURS BY		J. Byrd/L. Neterer	June 1978
SCALE: <u>1:15,000</u> CHECKED BY		NA	
		NA	
4. MANUSCRIPT DELINEATION PLANIMETRY BY		D. Butler	July 1978
		J. Roderick	July 1978
		NA	

NOAA FORM 76-36B
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TP-00533

COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild R.C. 10 "B" (B = 152.74 MM)		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE ☐ PREDICTED TIDES ☒ REFERENCE STATION RECORDS ☒ TIDE CONTROLLED PHOTOGRAPHY*		(C) COLOR (P) PANCHROMATIC (I) INFRARED		ZONE Pacific	☒ STANDARD
				MERIDIAN 120th	☐ DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
77B(P)2545-2548	Mar. 4, 1977	11:21	1:30,000	Not computed	
77B(P)3705-3707	Mar. 18, 1977	13:50	"	" "	
77B(P)3508	Mar. 18, 1977	11:20	"	" "	
77B(I)3085 & 3087*	Mar. 10, 1977	11:12	"	0.01 ft. below MLLW	
77B(I)3105*	Mar. 10, 1977	11:27	"	0.15 ft. above MLLW	
77B(I)3429*	Mar. 18, 1977	10:16	"	0.37 ft. below MHW	
77B(I)2836*	Mar. 5, 1977	10:43	"	0.17 ft. below MHW	

REMARKS Photo's 77B(P)2545-2548 were used for stereoscopic instrument compilation of the interior detail and the selection of pass points common to the hydro support and tide controlled infrared photography. Photo's 77B(P)3705-3707 and 3508 were prepared for hydro support.

2. SOURCE OF MEAN HIGH-WATER LINE:

The above listed Mean High Water tide controlled infrared photography was used to graphically compile the Mean High Water Line. The photography was controlled with pass points that were selected and dropped during the stereo instrument compilation of the interior detail. Corrections and modifications to the Mean High Water Line may have resulted from the application of the field edit data listed in part II of form 76-36C.

3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE:

The Mean Lower Low Water Line was compiled graphically from the above listed Mean Lower Low Water tide controlled infrared photography and controlled with pass points selected and dropped during the stereo compilation of the interior detail. Changes to the original Mean Lower Low Water line may have resulted from the application of the field edit data listed in part II of form 76-36C.

4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

SURVEY NUMBER	DATE(S)	SURVEY COPY USED	SURVEY NUMBER	DATE(S)	SURVEY COPY USED
H-9927	1981	None; see Review Report, item #64			

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
TP-00530	No survey	TP-00535	TP-00532

REMARKS

TP-00535 is 1:20,000 scale; all others are 1:10,000 scale.

TP-00533

HISTORY OF FIELD OPERATIONS.

I. ☒ FIELD INSPECTION OPERATION (Premarking) ☐ FIELD EDIT OPERATION.

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	Feb. 1977
2. HORIZONTAL CONTROL	RECOVERED BY R. Melby ESTABLISHED BY None PRE-MARKED OR IDENTIFIED BY "	Feb. 1977
3. VERTICAL CONTROL	RECOVERED BY " ESTABLISHED BY " PRE-MARKED OR IDENTIFIED BY "	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY " LOCATED (Field Methods) BY " IDENTIFIED BY "	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION ☐ COMPLETE ☐ SPECIFIC NAMES ONLY BY ☒ NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY None	
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY NA	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED None		2. VERTICAL CONTROL IDENTIFIED None	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
3. PHOTO NUMBERS (Clarification of details) None			
4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED None			
PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE		6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE	
7. SUPPLEMENTAL MAPS AND PLANS None			
8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division) 1-Field Report			

TP-00533

HISTORY OF FIELD OPERATIONS.

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION.

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	D. Taylor	Sept. 1980
2. HORIZONTAL CONTROL	RECOVERED BY B. Lund	Sept. 1980
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
3. VERTICAL CONTROL	RECOVERED BY "	
	ESTABLISHED BY "	
	PRE-MARKED OR IDENTIFIED BY "	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY B. Lund	Sept. 1980
	LOCATED (Field Methods) BY None	
	IDENTIFIED BY B. Lund	Sept. 1980
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION	
	☐ COMPLETE	
	☒ SPECIFIC NAMES ONLY BY	
	☐ NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY B. Lund	Sept. 1980
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY NA	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

None

2. VERTICAL CONTROL IDENTIFIED

None

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

3. PHOTO NUMBERS (Clarification of details)

77B(P)3705-3708

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

See below

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
77B(P)3705	Tower(s)		
77B(P)3706	Elevator		
77B(P)3707	Aero		

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

Construction plans in San Leandro Bay and small boat harbor opposite Government Island.

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

Field edit report, Field edit ozalid, 13 field sketches, signal overlay,

NOAA FORM 76-36D
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIONTP-00533
RECORD OF SURVEY USE

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Compilation complete pending field edit	July 1978	Class III manuscript	Aug. 1978	Sept. 1978
Field edit applied Compilation complete	Dec. 1980	Class I manuscript	None	Dec. 1980
Final Review	Feb. 1982	Final Map	Mar. 1982	Mar. 1982

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
3 Pages		Mar. 1982	Appropriate forms (76-40) are attached with this Descriptive Report; no forms were for- warded prior to final review.

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: _____3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: _____

III. FEDERAL RECORDS CENTER DATA **

1. ☐ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☒ FORM NOS ~~76-40~~ SUBMITTED BY FIELD PARTIES. 76-403. ☒ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C, and ~~TP-00533~~ TP-00534
ACCOUNT FOR EXCEPTIONS: **TP-00530, TP-00531, TP-00532, and TP-00533, completes
CM-7704. Data held for completion, is being forwarded to the Federal Record
Center.4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: SEPTEMBER 14, 1982

IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
FOURTH EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORTS

TP-00533

This 1:10,000 scale final shoreline map is one of fifteen maps, TP-00524 thru TP-00538 that comprise project CM-7704, San Francisco and San Pablo Bays, California. This project consists of eight 1:20,000 maps, six 1:10,000 maps featuring San Francisco Bay entrance and one 1:10,000 inset map of the Redwood Creek area.

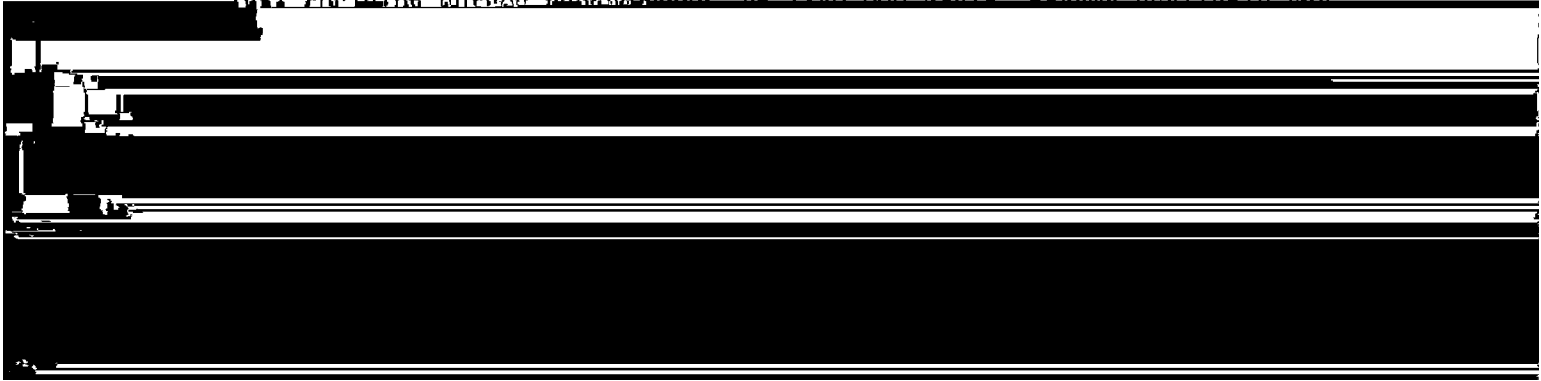
The initial purpose of this project was to provide data in support of hydrographic operations beginning in the Fall of 1978. However, due to rapid cultural coast development, field activity has been temporarily delayed. Photogrammetry memo/instruction dated July 2, 1981, has reassigned this project, in its present stage, for final review and registration. Registration will include 10 Final Maps and 5 Final Class III Maps. Immediately afterwards, a Revision Survey using 1981 photography is scheduled to facilitate hydrography that has not been accomplished and to provide Nautical Charts with current shoreline information.

Hydrographic Survey H-9927 (1981) geographically corresponds with portions of this shoreline map. At the time of final review for this map, processing of the hydrographic survey had not begun. A copy of this final map was forwarded to the Hydrographic Surveys Division.

This Final Map is a 1:10,000 scale shoreline map that portrays the southern portion of Oakland Inner Harbor, including San Leandro Bay.

Field work prior to compilation was accomplished in March 1977; this involved the establishment of horizontal control in order to meet aerotriangulation requirements. During this period, ground support was provided for obtaining tide-coordinated photography and several of the projects' navigational aids and landmarks for Charts were field determined.

Photo coverage was provided in March 1977 for aerotriangulation and compilation using panchromatic film with the "B" camera at 1:50,000 and 1:30,000 scales. Hydro support photography was taken using panchromatic film with the "B" camera at 1:30,000 scale. Tide coordinated black and white infrared photography at MHW and MLLW was supplied using the "B" camera at 1:40,000 and 1:30,000 scales. At the time of final review, the 1981 revision survey photography at 1:40,000 scale became available and



TP-00533

Compilation was performed at the Atlantic Marine Center in July 1978. The Class III manuscript was forwarded to the Pacific Marine Center for the combined field edit and hydrographic operation.

Field edit was performed in September 1980 by personnel assigned to the Pacific Hydrographic Party and personnel from the Photogrammetry Branch, Pacific Marine Center. This field edit was accomplished approximately a year before the hydrographic survey (H-9927).

Application of field edit was performed at the Pacific Marine Center in December 1980. Copies of the Class I map were released to the Hydrographic Verification Branch for smooth sheet application. However, due to reoccurring discrepancies with preceding Class I maps, processing of the hydrographic survey (H-9927) has been deferred until receipt of this final map.

Final Review, involving a complete evaluation of all office and field activities, was performed at the Atlantic Marine Center in February 1982. Approved tide data was not available for determining offshore obstruction heights at the time of field edit application. This data was acquired during final review and applied accordingly.

A Chart Maintenance Print was prepared during final review and forwarded to the Marine Charts Division. This final map will supersede the former Class III print previously submitted in August 1978. Only revisions to the former Class III map will be indicated on this final maintenance print as no Class I copy was forwarded to Marine Charts. Also a copy of the final map indicating all revisions will be forwarded to the Hydrographic Surveys Division.

The context of this Descriptive Report contains all pertinent information used to compile this Final Map except for the field records used to establish horizontal control and locate nonfloating aids to navigation. This field data was previously forwarded to the National Geodetic Survey and was not evaluated during final review. Listings of these features are attached with this report on NOAA forms 76-40 and 76-41.

The original base manuscript and all pertinent data was forwarded to the Washington Science Center for final registration and preparation for the 1981 Revision Survey.

Field Inspection Report

TP-00533

There was no field inspection prior to compilation. Field work accomplished was limited to the recovery of horizontal control necessary for the aerotriangulation of the project.



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY

Pacific Marine Center

April 4, 1977

CPM17/RBM

TO: C3415 Coastal Mapping

FROM: *Robl. B. Melby* 4/5/77
Robert B. Melby
Chief, PMC Photo Party

SUBJECT: Field Operations Project CM-7704, San Francisco and San
Pablo Bays, California

Horizontal Control:

Twenty-five horizontal control stations were paneled for aerial photography as indicated on the project diagram that was furnished to the photo-field party. A majority of the stations were paneled by the sub. pt. method as the stations did not lend themselves to being paneled direct. Distances up to about 2 miles were determined to the sub. points (panels), utilizing a Ranger III, laser distance measuring instrument. It was rapid, accurate and unaffected by electronic disturbances, normal to a high population and/or industrial area like the project encompassed.

Vandalism was a problem, in regard to panels, as several were disturbed and required relaying or substituting with photo identifiable points.

Several aids to navigation and landmarks for charts were located by third-order tirangulation intersection methods. The aids to navigation (lights) marking the channel through San Bruno shoal would have been difficult to positively photo-identify.

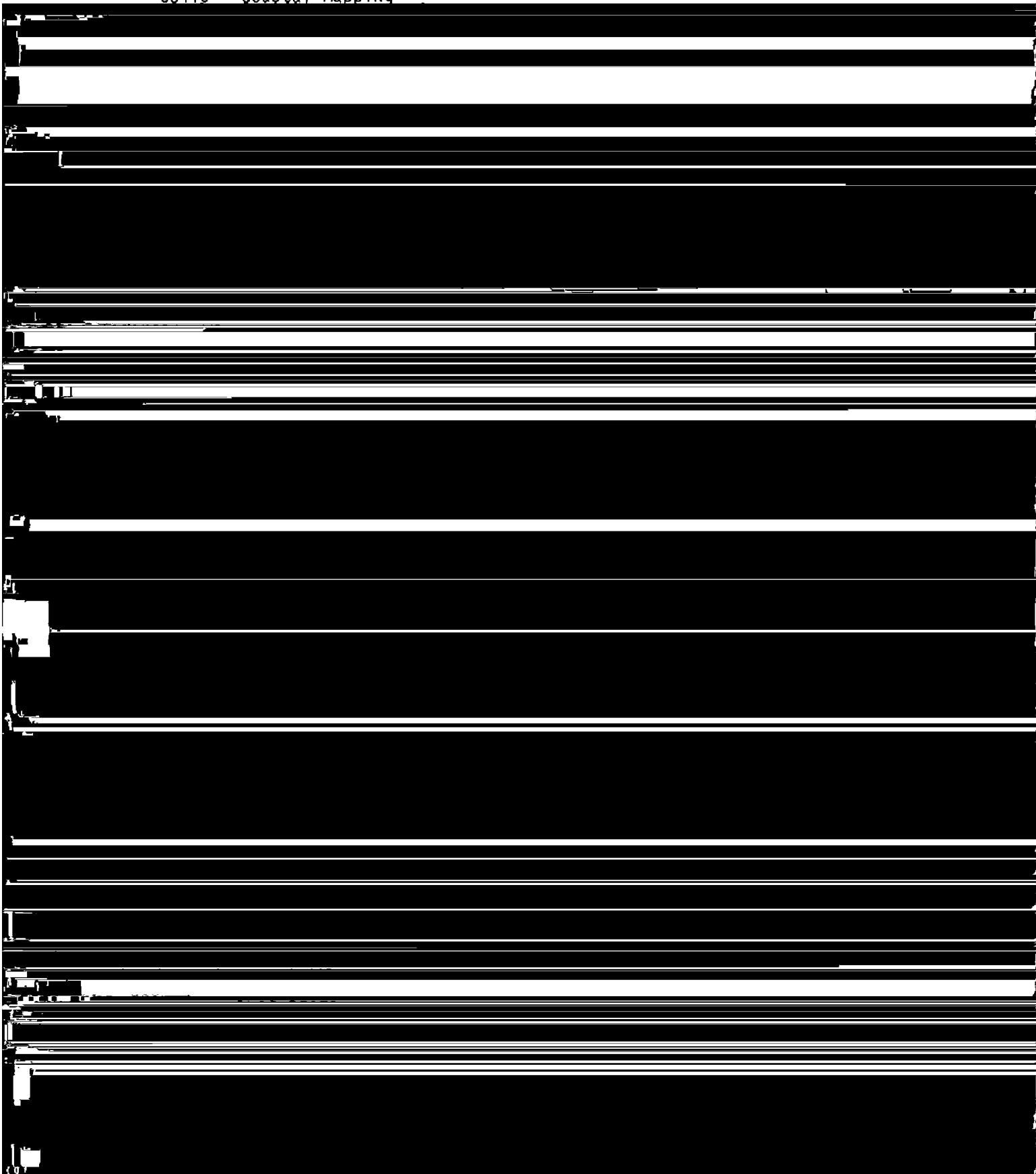
All photo-panels were removed after photography to verify their being in place at the required time and to maintain a "cleanup" policy. All panels were in place by March 1, 1977.

Tide Controlled Photography:

The South San Francisco Bay shoreline was photography and controlled by nine, preselected tide stations. With the aid of the Pacific Tide Party, California Boundary Project, all nine stations were manned at the same time. A coordination point was selected in the southeast section of the City of Oakland that was capable of direct F.M. radio communications with all the stations and the photo-mission aircraft.



C3415 Coastal Mapping



SITY OF CALIFORNIA,
1912

BLDG, FLAGPOLE, 1925

AND, MORMON TEMPLE, SPIRE

⑦ YB 4 (EBHDD), 1946

NORTH LIGHT, 1953

UNI AIRPORT VORTAC

ION SKETCH

CM-7704

CO BAY, CALIF.

EAN SURVEY-NOAA

PARTY

- Chief of Party

1977

4 5 10

iles

DAL CHANNEL LIGHT 1

DAL CHANNEL LIGHT 2

DAL CHANNEL LIGHT 4

DAL CHANNEL LIGHT 3

BAY RADAR TOWER

PHOTOGRAMMETRIC PLOT REPORT
SAN FRANCISCO & SAN PABLO BAYS
CALIFORNIA

Job CM-7704

July 22, 1977

21. Area Covered

This report covers eight 1:20,000 sheets, TP-00524, TP-00525, TP-00526, TP-00527, TP-00534, TP-00535, TP-00537, TP-00538, and seven 1:10,000 sheets TP-00528, TP-00529, TP-00530, TP-00531, TP-00532, TP-00533, and TP-00536 of San Francisco Bay and San Pablo Bay, California

22. Method

Seven strips of 1:50,000 scale panchromatic photography, taken with the "B" camera were bridged by analytic aerotriangulation methods and adjusted to ground on the California Zone 3. Common pass points were positioned between the 1:50,000 scale and 1:30,000 scale panchromatic photography, also taken with the "B" camera to provide horizontal control for compilation of the 1:10,000 and 1:20,000 scale maps.

Tide-coordinated supplemental photography, 1:30,000 and 1:40,000 scale MHW and MLLW were tied to the 1:50,000 scale bridging photography for shoreline compilation of 1:10,000 and 1:20,000 scale maps by means of positioning common points for ratio prints.

The 1:30,000 scale hydro support photography was also tied to 1:50,000 scale bridging photography by common points to determine the exact ratios. Tie points were used to augment datum between bridging strips. After running a strip adjustment on strip 5, it was found, for no apparent reason, that the control and tie points did not fit. This was resolved by running a block adjustment. Ruling of manuscripts and plotting of points was done on the Coradomat. A list was forwarded with this job, CM-7704, to AMC for selection of ratios to be ordered.

23. Adequacy of Control

The horizontal control provided was adequate except for Bench Mark H - 111, 1932 paneled substation, which did not hold in strips 5 and 7. The home station was plotted on a USGS quadrangle and did not fall in the area given in the description. All other control held within the accuracy required by National Standards of Maps at 1:10,000 and 1:20,000 scale.

24. Supplemental Data

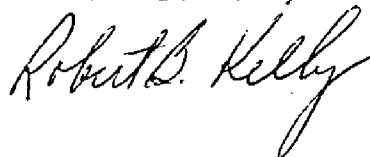
Local shoreline and USGS quadrangles were used to provide elevations for vertical adjustments of bridges.

25. Photography

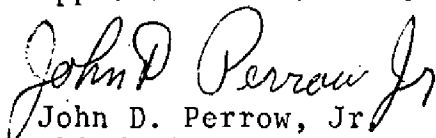
The photography was adequate as to placement of flight lines consistent quality, definition and absence of haze.

Submitted by:

Robert B. Kelly



Approved and Forwarded:



John D. Perrow, Jr.
Chief, Aerotriangulation Section

KEY TO NUMBERED CONTROL
STATIONS USED IN ADJUSTMENT
AND CLOSURES

1 LAKEVILLE, SQUARE TANK ON HILL, 1951	TANK(1.04,-3.77)
	PANEL(-.25, .23)
2 BUG (SLC), 1951	COULD NOT SEE
3 SLAUGHTERHOUSE PT. 3, 1921	(-2.22, .52)
4 MARE ISLAND SOUTHEAST=, 1952	(3.02,-.23)
5 PINOLE HERCULES POWDER CO.,TANK ,1947	(.38,-.17)
6 WILSON, 1852	(.08,-.10)
7 POINT PINOLE ATLAS DOCK, SHED E. GABLE, 1950	COULD NOT SEE
8 SAN PABLO RIDGE, 1897	(2.14,-1.21)
9 GROVE POINT 2, 1887	(-.65, .49)
10 PETALUMA CREEK, 1851	(1.70,-.24)
11 RICHARD, 1932	(-2.08, .91)
12 ALAMRDA N.A.S. E! BREAKWATER N. LT. 1953	(.00, .00)
13 CROSSING, 1955	(-.09,-.42)
14 T I C9, 1947	(.00, .00)
15 CLARK, 1948	(.45, .74)
16 BARRY, 1932	(-3.36,-.98)
17 SAN BRUNO MTN. (RADIO STA. KNBC MAST), 1899	(.03, .49)
18 POINT SAN BRUNO, 1925	(.04,-.19)
19 GUANO ISLAND, 1851	(3.33 ,-1.50)
20 DUM, 1930	(-1.31, 1.01)
21 RED HILL, 1851	(-.05, .01)
22 SAN, 1947	(.27, .20)
23 BENCH MARK H 111, 1932	DID NOT FIT ADJUSTMENT
24 COFFIN 2, 1974	(.07,-.02)
25 BALDOPRAK (EBMUD),1946	(-.15, .02)
26 BUCK, 1949	(-1.04,-.52)
27 MANZANITA (CADH), 1972	(-1.01,-1.09)

BRIDGING PHOTOGRAPHY

16

INDEX TO PHOTOGRAPHS

STRIP 1	77B 2577 - 2586
" 2	" 2629 - 2640
" 3	" 2565 - 2573
" 4	" 2598 - 2604
" 5	" 2644 - 2661
" 6	" 2619 - 2625
" 7	" 2665 - 2676
" 9	" 2501 - 2505
" 10	" 2512 - 2516
" 11	" 2529 - 2528
" 12	" 2540 - 2549
" 13	" 2554 - 2560

CM-7704
SAN FRANCISCO & SAN PABLO BAYS
CALIFORNIA
SHORELINE MAPPING
SCALE 1:10,000 & 1:20,000

HIGH & LOW WATER INFRARED PHOTOGRAPHY

1:40,000

MLLW

MHW

17

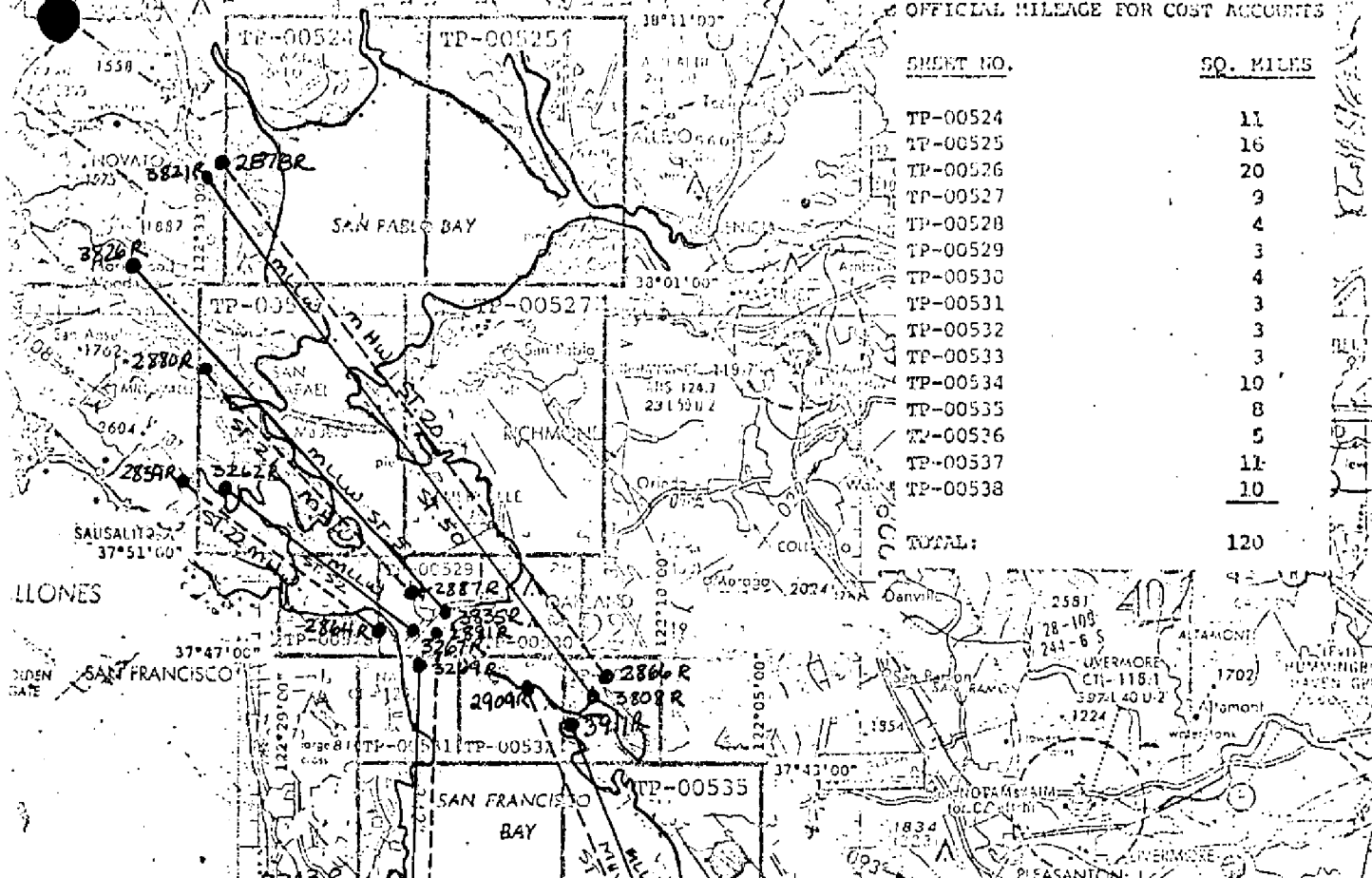
OFFICIAL MILEAGE FOR COST ACCOUNTS

SHEET NO.

SQ. MILES

TP-00524	11
TP-00525	16
TP-00526	20
TP-00527	9
TP-00528	4
TP-00529	3
TP-00530	4
TP-00531	3
TP-00532	3
TP-00533	3
TP-00534	10
TP-00535	8
TP-00536	5
TP-00537	11
TP-00538	10

TOTAL: 120



HIGH & LOW WATER INFRARED PHOTOGRAPHY

1:30,000 MLLW
MHW
MLW

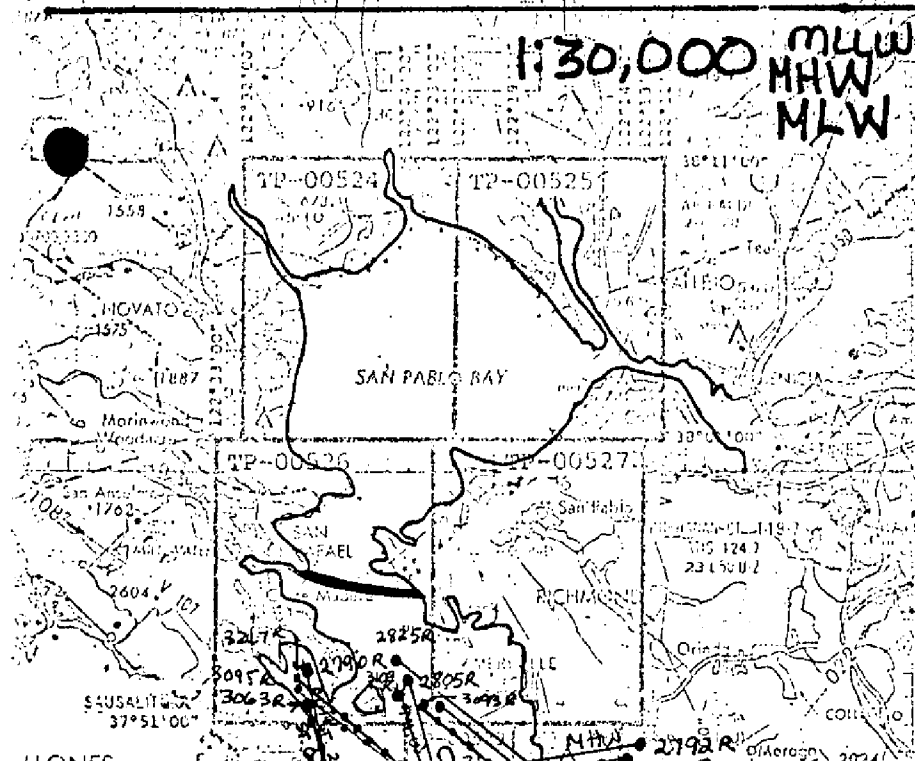
18

OFFICIAL MILEAGE FOR COST ACCOUNTS

SHEET NO.

SO. MILES

TP-00524	11
TP-00525	16
TP-00526	20
TP-00527	2
TP-00528	4
TP-00529	3
TP-00530	4
TP-00531	3
TP-00532	3
TP-00533	3
TP-00534	10
TP-00535	8
TP-00536	5
TP-00537	11
TP-00538	10
TOTAL:	120



TOTAL:

120

HYDRO-SUPPORT PHOTOGRAPHY

1:30,000

19

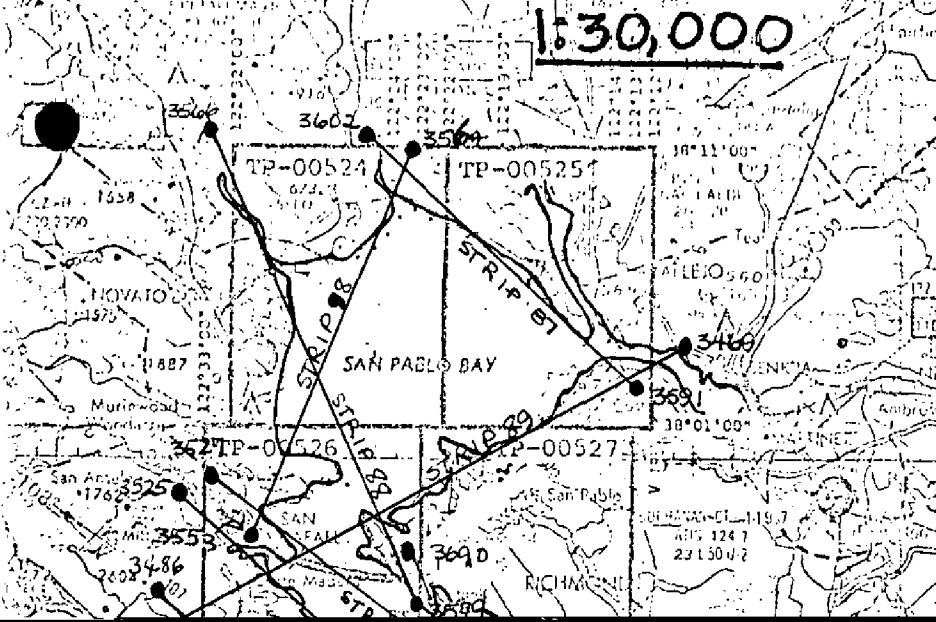
OFFICIAL MILEAGE FOR COST ACCOUNTS

SHEET NO.

SO. MILES

TP-00524
TP-00525
TP-00526
TP-00527
TP-00528
TP-00529
TP-00530
TP-00531
TP-00532
TP-00533
TP-00534
TP-00535
TP-00536
TP-00537

11
16
20
9
4
3
4
3
3
3
10
8
5
11



COMPILATION PHOTOGRAPHY

20

1:30,000

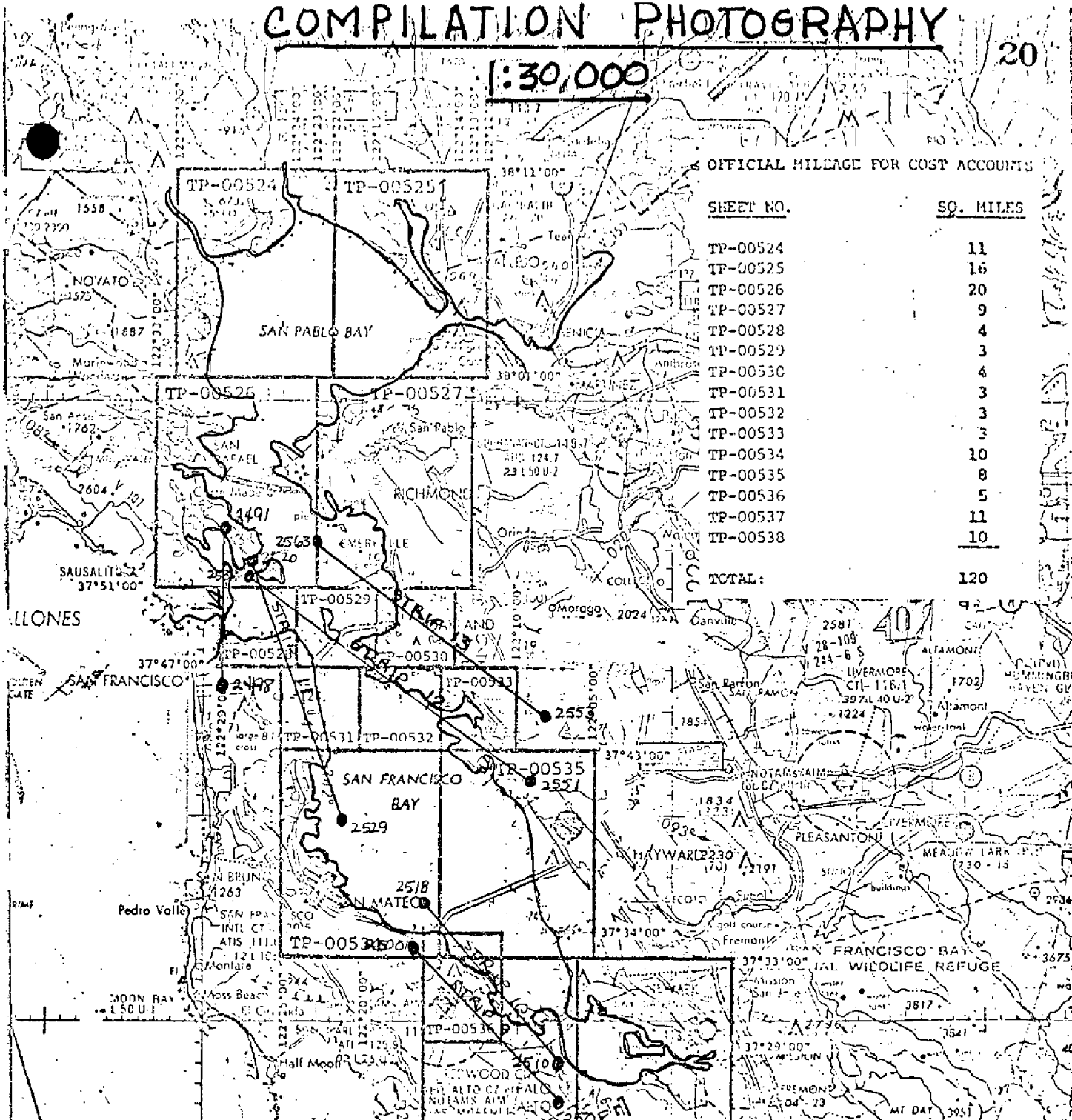
OFFICIAL MILEAGE FOR COST ACCOUNTS

SHEET NO.

SQ. MILES

TP-00524	11
TP-00525	16
TP-00526	20
TP-00527	9
TP-00528	4
TP-00529	3
TP-00530	4
TP-00531	3
TP-00532	3
TP-00533	3
TP-00534	10
TP-00535	8
TP-00536	5
TP-00537	11
TP-00538	10

TOTAL: 120



DEPARTMENT OF COMMERCE
AMERICAN ADMINISTRATION

Branch P.M.C.

Departures
REMARKS

Unit (Back)

15.7 (164.1)
5.5 (223.1)

3.2 (106.6)
0.4 (1458.2)

9.7 (350.1)
6.4 (622.2)

2.3 (1167.5)
7.8 (1131.6)

3.9 (645.9)
8.2 (521.1)

2.6 (1647.2)
0.4 (38.8)

4.4 (815.4)
4.9 (954.5)

E 01/81

E 01/81

E 01/81

COMPILATION REPORT

TP-00533

31. DELINEATION

Delineation was by instrument methods using the Wild B-8 stereoplotter. Compilation photography was adequate. The mean high water and the mean lower low water lines were compiled graphically from the tide coordinated infrared ratio photos indicated on form 76-36B.

32. CONTROL

Horizontal control was adequate. See the attached Photogrammetric Plot Report, dated July 22, 1977.

33. SUPPLEMENTAL DATA

None

34. CONTOURS AND DRAINAGE

Contours are not applicable to the project. Drainage was delineated by the Wild B-8 stereoplotter and by office interpretation of the photographs.

35. SHORELINE AND ALONGSHORE DETAILS

Alongshore details were delineated by the Wild B-8 stereoplotter and by office stereoscopic interpretation of the ratioed photographs.

See form 76-36B, items 2 and 3 for delineation of the mean high water and mean lower low water lines.

36. OFFSHORE DETAILS

No unusual problems.

37. LANDMARKS AND AIDS

Preliminary 76-40 forms consisting of 1 page of Navigational Aids and 1 page of Landmarks for charts were prepared for field edit.

38. CONTROL FOR FUTURE SURVEYS

None

TP-00533

39. JUNCTIONS

See the attached form 76-36B, item 5 of the Descriptive Report concerning junctions.

40. HORIZONTAL AND VERTICAL ACCURACY

See item #32.

46. COMPARISON WITH EXISTING MAPS

A comparison was made with the following 1:24,000 scale U.S. Geological Survey Quadrangles:

Oakland East, Calif., 1959, photorevised 1968 and 1973.

San Leandro, Calif., 1959, photorevised 1968 and 1973

47. COMPARISON WITH NAUTICAL CHARTS

A comparison was made with the following National Ocean Survey charts: No. 18649, scale 1:40,000, 44th ed. Jan. 29, 1977.

No. 18652, scale 1:20,000/1:80,000, 16th ed. Mar. 26, 1977

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Submitted by:

David P. Butler

David P. Butler

Cartographic Technician

Date: July 21, 1978

Approved:

Albert C. Rauck, Jr.

Albert C. Rauck, Jr.

Chief, Coastal Mapping Section

Addendum to the Compilation Report

Field Edit

TP - 00533

The field edit for this manuscript was applied in the Photogrammetric Branch of the Pacific Marine Center. The original compilation was accomplished in the Compilation Branch at the Atlantic Marine Center. The field edit was applied from the source data itemized in Part II 76-36C, (Field Edit). The heights of obstructions in the water were determined from tide corrected listings based on the approved hourly heights provided by the Rockville Datums and Information Branch.

Noted in the Field Edit Report, part III (Geographic Names) portion of the waterway between Alameda and Oakland are addressed; though no changes were made on the manuscript, the references made to "Tidal Canal" and "High Street Bridge Reach" are informative and appropriate.

The subm pile in fix #841 is not located where the fix plots. Such that the pile was occupied, and the observers were close to known cultural features, the field location shown southwestward of the fix location, is the proper location of the subm pile.

The manuscript is now of Class I quality.

Submitted by,

William Richter

William Richter

Cartographer

Nov. 28, 1980

Contrary to the previous remark concerning obstruction heights, approved tide data was not available at the time of field edit application. This data was acquired during final review and applied accordingly.

Although the field editor did not clearly indicate if the pipelines and cable crossings were submerged, they were compiled as submerged.

The extensive redevelopment of the marina at Lat. $37^{\circ}46.9'$, Long. $122^{\circ}14.6'$ was delineated from engineer photo-plans submitted by the field editor.

J. L. Hancock

J. L. Hancock

Final Reviewer

February 1982

NOAA FORM 75-74
(2-74)U.S. DEPARTMENT OF COMMERCE
NOAA
NATIONAL OCEAN SURVEY

PHOTOGRAMMETRIC OFFICE REVIEW

TP-00533

1. PROJECTION AND GRIDS JR	2. TITLE JR	3. MANUSCRIPT NUMBERS JR	4. MANUSCRIPT SIZE JR
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY JR		6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations)	
7. PHOTO HYDRO STATIONS			
8. BENCH MARKS NA	9. PLOTTING OF SEXTANT FIXES None	10. PHOTOGRAMMETRIC PLOT REPORT JR	11. DETAIL POINTS JR
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE JR	13. LOW-WATER LINE JR	14. ROCKS, SHOALS, ETC. JR	15. BRIDGES JR
16. AIDS TO NAVIGATION JR	17. LANDMARKS JR	18. OTHER ALONGSHORE PHYSICAL FEATURES JR	19. OTHER ALONGSHORE CULTURAL FEATURES JR
PHYSICAL FEATURES			
20. WATER FEATURES JR		21. NATURAL GROUND COVER NA	
22. PLANETABLE CONTOURS NA			
23. STEREOSCOPIC INSTRUMENT CONTOURS N.A.	24. CONTOURS IN GENERAL NA	25. SPOT ELEVATIONS N.A.	26. OTHER PHYSICAL FEATURES JR
CULTURAL FEATURES			
27. ROADS JR	28. BUILDINGS JR	29. RAILROADS JR	30. OTHER CULTURAL FEATURES JR
BOUNDARIES			
31. BOUNDARY LINES NA		32. PUBLIC LAND LINES NA	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES JR		34. JUNCTIONS JR	
35. LEGIBILITY OF THE MANUSCRIPT JR			
36. DISCREPANCY OVERLAY JR	37. DESCRIPTIVE REPORT JR	38. FIELD INSPECTION PHOTOGRAPHS None	39. FORMS JR
40. REVIEWER Joanne Roderick July 26, 1978		SUPERVISOR, REVIEW SECTION OR UNIT A. C. Rauck, Jr.	
41. REMARKS (See attached sheet)			
FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT			
42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.			
COMPILER William A. Richter, Nov. 1980		SUPERVISOR James W. Massey	
Reviewer: James W. Massey, Nov. 1980			
43. REMARKS JR			

PHOTOGRAMMETRIC OFFICE PRE-HYDRO AND FIELD EDIT REVIEW

TP-00533

PROJECTION AND GRIDS JR	TITLE JR	HORIZONTAL CONTROL JR	PHOTOGRAMMETRIC PLOT REPORT JR
DETAIL POINTS AND PASS POINTS JR	PROCESSED RATIOS JR	AIDS TO NAVIGATION JR	LANDMARKS JR
MEAN HIGH WATER LINE JR	LOW-WATER LINE JR	ROCKS, SHOALS, ETC. JR	ALONG SHORE AND OTHER PHYSICAL FEATURES JR
WATER FEATURES JR	ALONG SHORE AND OTHER CULTURAL FEATURES JR	BRIDGES JR	ROADS JR
BUILDINGS JR	RAILROADS JR	CONTOURS AND SPOT ELEVATIONS NA	GEOGRAPHIC NAMES JR
JUNCTIONS JR	LEGIBILITY OF THE MANUSCRIPT JR	COMPILATION REPORT JR	FIELD EDIT OZALID JR
COMPARISON WITH NAUTICAL CHARTS JR	COMPARISON WITH PRIOR SURVEYS NA	COMPARISON WITH EXISTING MAPS JR	FIELD PRINTS AND OTHER COPIES JR
REVIEWER Joanne Roderick	DATE July 20, 1978	SUPERVISOR A. C. Rauck	DATE July 1978

REMARKS

PHOTOGRAMMETRIC OFFICE POST-HYDRO AND FIELD EDIT REVIEW

MANUSCRIPT NUMBERS J. M., J. H.	FORMAT STICK-UP J. H.	MANUSCRIPT SIZE J. H.	HORIZONTAL CONTROL J. H.
PHOTO HYDRO STATIONS J. M.	PLOTTING OF SEXTANT FIXES J. M., J. H.	AIDS TO NAVIGATION J. M., J. H.	LANDMARKS J. M., J. H.
MEAN HIGH WATER LINE J. M., J. H.	LOW-WATER LINE J. H.	ROCKS, SHOALS, ETC. J. M., J. H.	ALONG SHORE AND OTHER PHYSICAL FEATURES J. M., J. H.
WATER FEATURES J. M.	ALONG SHORE AND OTHER CULTURAL FEATURES J. M., J. H.	PIPELINES, CABLES, ETC. J. M., J. H.	BRIDGES J. H.
ROADS J. H.	BUILDINGS J. H.	RAILROADS J. H.	CONTOURS AND SPOT ELEVATIONS NA
GEOGRAPHIC NAMES J. H.	JUNCTIONS J. H.	FIELD EDIT PHOTOGRAPHS J. M., J. H.	FIELD EDIT OZALID J. M., J. H.
GEOGRAPHIC FIX POSITIONS J. M., J. H.	FIELD FORMS J. M., J. H.	FIELD EDIT REPORT J. M., J. H.	APPROVED TIDES J. H. (Feb. 1982)
CHART MAINTENANCE PRINT AND OTHER COPIES J. H. (Feb. 1982)	PREPARATION FOR FINAL REVIEW J. M., J. H.	COMPILER William A. Richter	DATE Nov. 1980
REVIEWER James W. Massey	DATE Nov. 1980	SUPERVISOR James W. Massey	DATE Nov. 1980

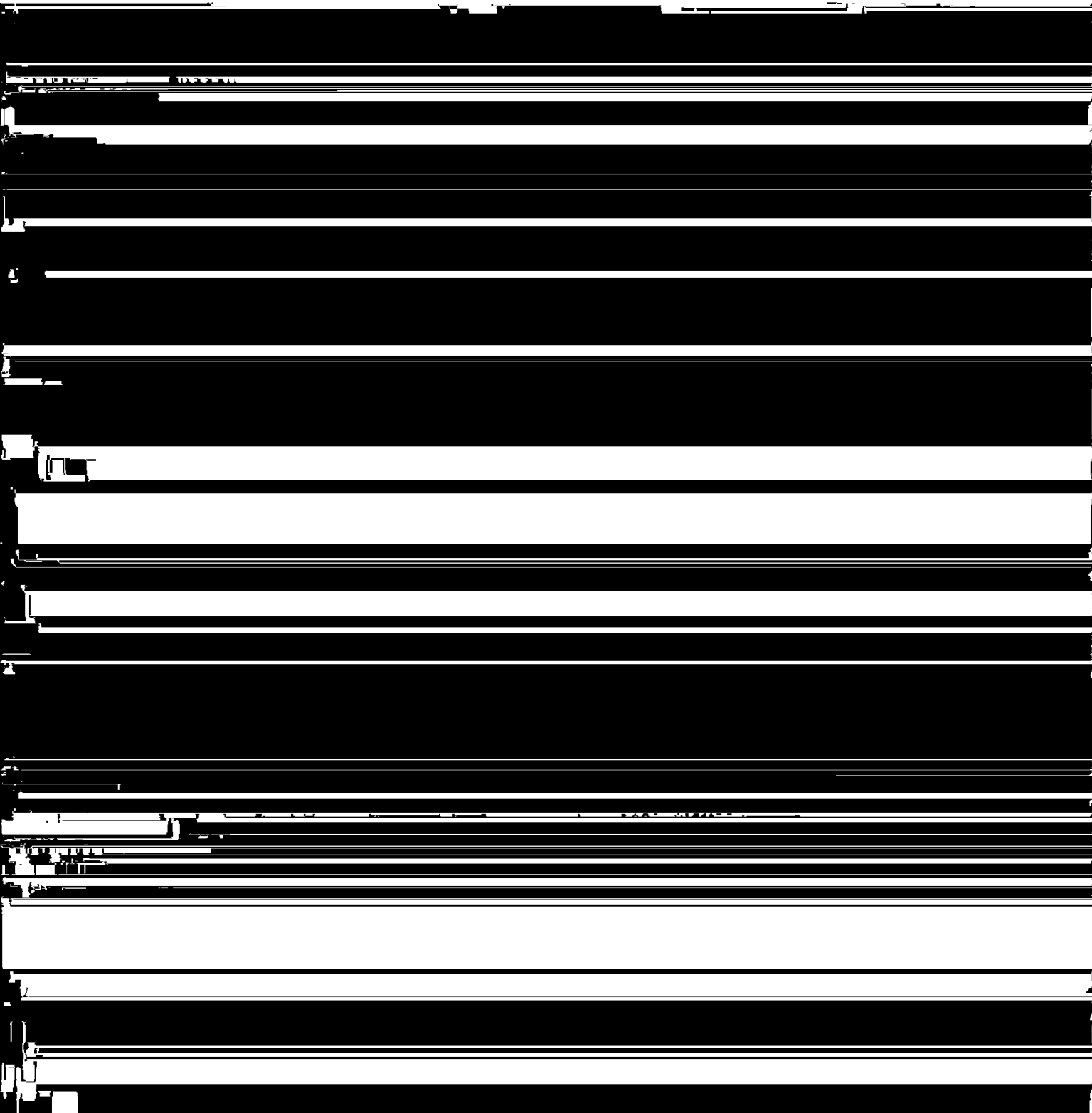
REMARKS

A complete office review after the application of field edit was not performed prior to advancing the manuscript to a Class I map. Consequently, an extensive and thorough office review was accomplished during the final review. Heights for offshore features were applied from approved tides during final review.

J. L. Hancock *JLH*
Final Reviewer
Feb. 1982

FIELD EDIT REPORTTP-00533I. METHODS

Field edit for TP-00533 was conducted in accordance with Chapter 11 of



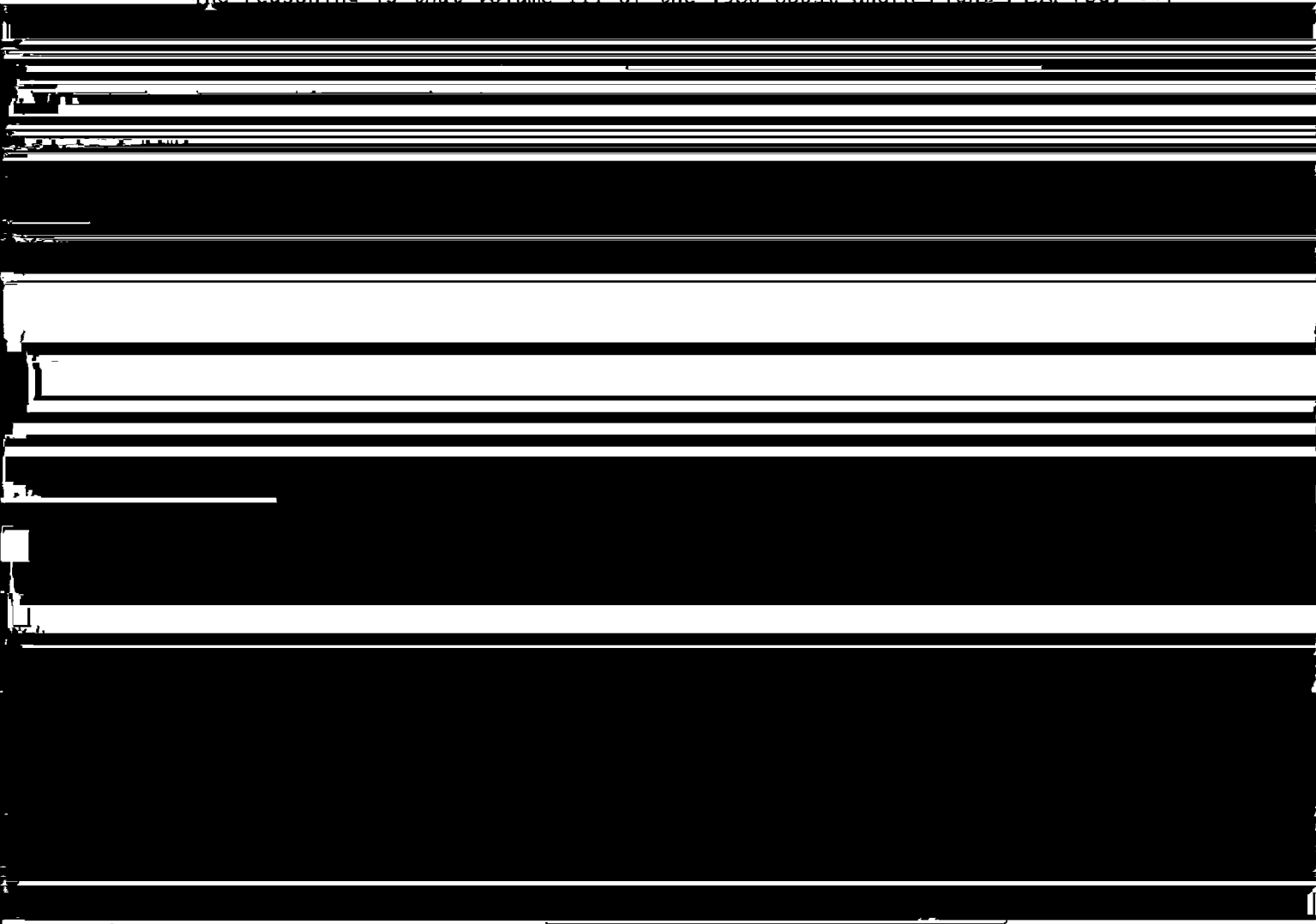
This land is held in reserve until such time as a need arises. The levees were constructed prior to airport expansion and this piece of land was simply included. It should be labeled, "Undeveloped-Reclaimed Marshland."

3) Concerning the question about two (2) submerged pipelines across the San Leandro Bay Channel (37°46'N, 122°13'30"W) between Fruitvale Avenue Bridge and the High Street Bridge, there is presently no evidence of these submarine pipelines. After extensive investigation with the City of Alameda, the various applicable public utilities, and the Army Corps of Engineers, there is no evidence of anyone operating any pipeline as shown on Chart 18652. If a pipeline does exist, it is unmarked and out of commission. All utility crossings are at or near either the Fruitvale, High Street or Park Street Bridges.

III. GEOGRAPHIC NAMES

In answer to the question relating to "Oakland/San Antonio" for the SW portion of the City of Oakland, San Antonio is not currently used and all local reference is to Oakland. San Antonio may have been a historical name prior to incorporation of these areas into the City of Oakland. This area (37°45'33"N, 122°11'50"W) should be labeled, "Oakland."

It is recommended that the geographic name, "Tidal Canal," on Chart 18652, at approximately 37°45'45"N, 122°13'20"W be changed to "San Leandro Bay Channel." The reasoning is that Volume III of the 1980 Coast Guard Light List (pg. 51)



VI. UNCHARTED DANGERS AND OBSTRUCTIONS

The following is a list of uncharted obstructions located in San Leandro Bay:

<u>Fix #</u>	<u>Object</u>	<u>Approximate Position</u>	
Fix - See Sketch #8	Groin Pile	37°45'24"N 37°45'24"N	122°13'26"W 122°13'26"W
Fix #814	Obstruction	37°45'15"N	122°13'37"W
Sketch #8	Stake	37°45'11"N	122°13'41"W
Sketch #8	Stake	37°45'08"N	122°13'44"W
Fix #813	Stake	37°45'02"N	122°13'47"W
Fix #819	Pile	37°44'58"N	122°13'30"W
Fix #817	Pile	37°44'55"N	122°13'26"W
Fix #827	Pile	37°44'53"N	122°13'20"W
Fix #828 #829	Ruins	37°44'47"N	122°13'17"W
Fix #830 thru #834 and #844	Pile Line	37°44'38"N	122°13'00"W
Fix #822 #823	Foul Area	37°44'10"N	122°12'40"W
Fix #820 "	Pipe Submerged Pipe	37°44'33"N 10' N of Fix #820	122°12'49"W
Fix #8005 #8006	Pipes	37°45'29"N	122°12'59"W
See Photo 3706	Wreck	37°45'30"N	122°13'05"W

Along the San Leandro Channel, the following are uncharted obstructions:

Fix #841	Submerged Pile	37°44'56"N	122°14'08"W
Fix #840	Rock	37°45'02"N	122°14'22"W
Fix #837	Outfall	37°44'54"N	122°14'22"W
Fix #838	Stakes	37°44'57"N	122°14'36"W
Fix #845	Outfall	37°44'53"N	122°14'46"W

Along the San Leandro Bay Channel (Tidal Canal) from Government Island to San Leandro Bay Channel Daybeacon #1, the following are uncharted obstructions:

See Photo	4 Dolphins	37°46'33"N	122°14'38"W
See F.E. for Limits	Foul Area	37°46'40"N	122°14'30"W
See F.E. for Limits	Dolphin	37°46'32"N	122°14'24"W
Sketch #6	Foul Area	37°46'14"N	122°14'08"W
Photo 3705	Dolphins	37°46'12"N	122°13'50"W
See Sketch #7 & "A" and Photo 3705	Center of Span Bridge Fender and Dolphins	37°46'10"N	122°13'45"W
See Sketch #7	Dolphins	37°46'00"N	122°13'30"W
Photo 3705	Dolphin	37°45'50"N	122°13'23"W

Information for the above lists may be obtained from the various sketches (included with this report) and fix data in the field edit notebook. Most will be readily understood; however, some may require the further explanations contained in the sketches or notebook.

LIST OF ADDITIONAL SHEETS
TO ACCOMPANY FIELD EDIT REPORT

TP-00533

ENGINEERING DRAWINGS
SUBMITTED BY EAST BAY
REGIONAL PARKS

1. Drawings Labeled:

"Phase 3C - San Leandro Bay Regional Shoreline - Oakland, CA"
(cover sheet)

2. Sheets 1 thru 3 labeled:

"Grading and Paving" San Leandro Regional Shoreline
Phase 2A

3. Sheets 1 thru 3 labeled:

"Landscaping and Paving" San Leandro Regional Shoreline
Phase 3A-2

All above drawings verified for accuracy by Field Editor.

Submitted by:

Dirk R Taylor

for Bruce H. Lund
Pacific Hydrographic Party

Approved and forwarded by:

Dirk R Taylor

Dirk R. Taylor
LCDR, NOAA
Chief, Pacific Hydrographic Party

REVIEW REPORT TP-00533

SHORELINE

61. GENERAL STATEMENT:

An extensive final review was performed for this final shoreline map. No major discrepancies were encountered; however, minor revisions were made during final review which will affect previously forwarded Class III and Class I information. For a more complete analysis of the office and field operations, refer to the Summary included in this Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Not applicable.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

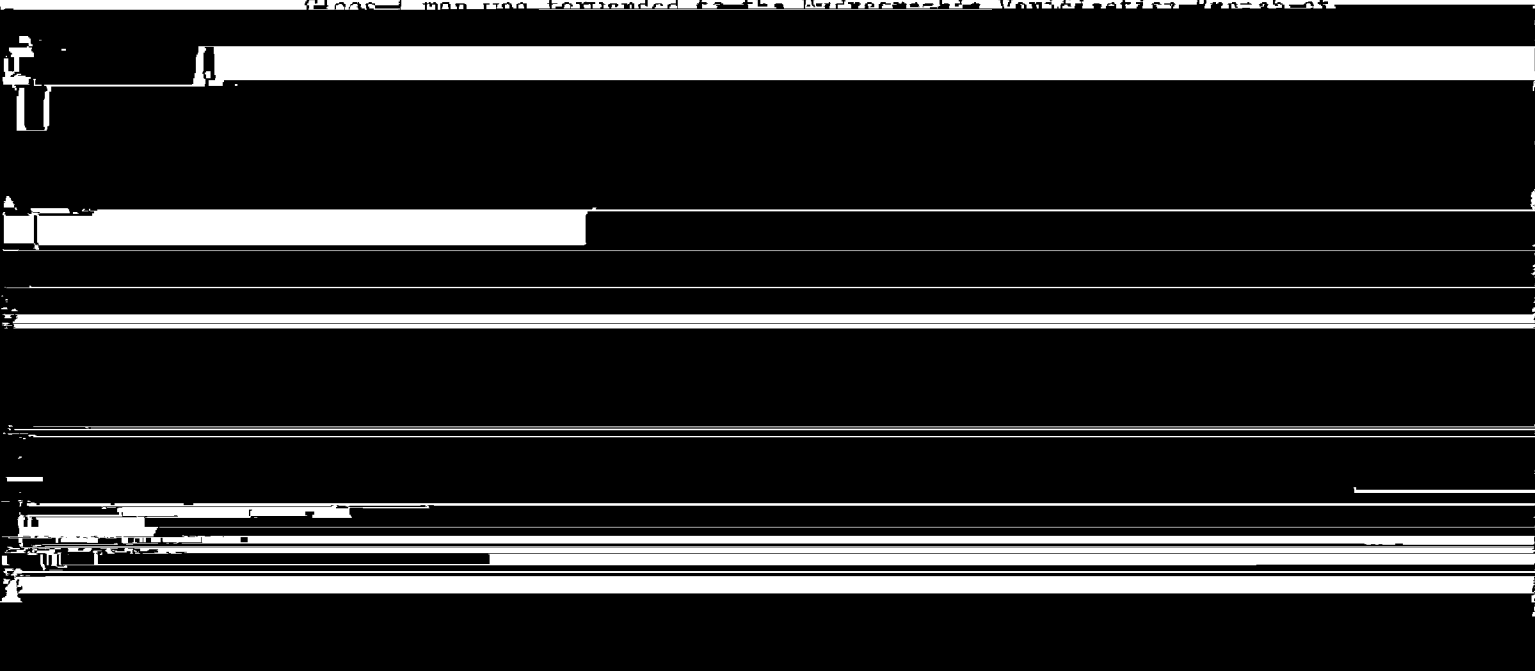
A comparison was made with the following 1:24,000 scale U.S.G.S. quadrangles:

Oakland East, Calif., 1959, photorevised 1968 and 1973
San Leandro, Calif., 1959, photorevised 1968 and 1973

No significant differences were noted.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

Geographic portions of this final shoreline map correspond with hydrographic survey H-9927 (1981). No comparison was made as the hydrographic survey has not been processed. Prior to final review, a Class I map was forwarded to the Hydrographic Verification Branch at



TP-00533

No. 18650, 36th edition, 1:20,000 scale, dated June 7, 1980
No. 18649, 48th edition, 1:40,000 scale, dated February 14, 1981
No. 18652, 20th edition, 1:20,000/1:80,000 scale, dated May 16, 1981

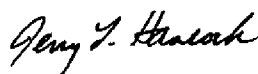
An abundance of cultural development has occurred in the waterway between Government Island and San Leandro Bay since the 1977 compilation photography. Current information was furnished by the 1980 field editor by means of numerous field sketches. However, portrayal of this information and the previous compilation was restricted due to the 1:10,000 map scale.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

This Final Map and accompanying Descriptive Report represent revised data as a result of final review and supersedes all previous map classifications.

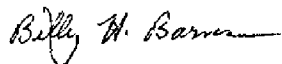
This map complies with the Project Instructions, and meets the requirements for National Standards of Map Accuracy.

Submitted by:



Jerry L. Hancock
Final Reviewer

Approved for forwarding:



Billy H. Barnes
Chief, Photogrammetric Branch, AMC

Approved:



Chief, Photogrammetric Branch, Rockville



Chief, Photogrammetry Division

October 14, 1981

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7704 (San Francisco and San Pablo Bays, California)

TP-00533

Airport Channel

Oakland Inner Harbor

Alameda

San Francisco Bay

Bay Farm Island

San Leandro Bay

Government Island

San Leandro Channel

Lion Creek

San Leandro Creek

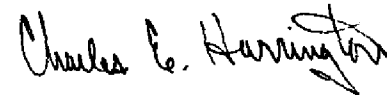
Metropolitan Oakland International Airport

Southern Pacific (RR)

Oakland

Tidal Canal

Approved by:



Charles E. Harrington
Chief Geographer, OA/C3x5

DISSEMINATION OF PROJECT MATERIAL

CM-7704

San Francisco and San Pablo Bays

NATIONAL ARCHIVES/FEDERAL RECORD

PACKAGE (BOX)

Field Edit Ozalid(s)
Engineer Plan(s)
Field Sketch(es)
NOAA Forms 76-40
Master Station Lists
Fix Vol(s) (275)
NOAA Forms 76-41
Revision Survey Photographs
Field Edit Ratio Photographs
Plot Report(s) (Duplicate copy(ies))

Project Completion Report

BUREAU ARCHIVES

Registered Copy(ies) of Map(s)
Descriptive Report(s) of Map(s)

REPRODUCTION DIVISION

8x Reduction Negative(s) of Map(s)

OFFICE OF STAFF GEOGRAPHER

Geographer Name Standard(s)

MARINE CHART DIVISION

Chart Maintenance Print(s) of Map(s)

NOAA FORM 76-40 (8-74) Replaces C&GS Form 567.										U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION									
NONFLOATING AIDS ON FOR CHARTS										ORIGINATING ACTIVITY									
										☐ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ PHOTO FIELD PARTY ☒ COMPILATION ACTIVITY ☐ FINAL REVIEWER ☐ QUALITY CONTROL & REVIEW GRP. ☐ COAST PILOT BRANCH (See reverse for responsible personnel)									
TO BE CHARTED (Field Party, Ship or Office)		REPORTING UNIT		STATE		LOCALITY		DATE											
☒ TO BE CHARTED		Photogrammetric Branch		California		San Francisco and San Pablo Bays		Nov. 1980											
☐ TO BE REVISED		P.M.C. of Seattle, WA																	
☐ TO BE DELETED																			
The following objects HAVE ☒ HAVE NOT ☐ been inspected from seaward to determine their value as landmarks.																			
OPR PROJECT NO.		JOB NUMBER		SURVEY NUMBER		DATUM		POSITION		METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED							
411		CM - 7704		TP - 00533		N.A. 1927													
CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	LATITUDE		LONGITUDE		OFFICE		FIELD		CHARTS AFFECTED									
		° /	' D.M. Meters	° /	' D.P. Meters														
DAY-BEACON	Brooklyn Basin, North Channel Dybn 1/2 (less than 3rd order position)	37	46	57.64	122	14	140.24	77B(P) 3705	F36L	18649									
DAY-BEACON	San Leandro Bay Channel Daybeacon 1	37	45	31.95	122	13	21.00	77B(P) 2546	V-Vis. 9-4-80	18650									
DAY-BEACON	San Leandro Bay Channel Daybeacon 3	37	44	56.28	122	13	19.69	77B(P) 3707	V-Vis. 9-5-80	18652									
DAY-BEACON	San Leandro Bay Channel Daybeacon 4	37	44	55.56	122	13	20.75	77B(P) 3707	V-Vis. 9-5-80	18650									
DAY-BEACON	San Leandro Bay Channel Daybeacon 5	37	44	26.82	122	12	144.52	77B(P) 3707	V-Vis. 9-5-80	18650									
DAY-BEACON	San Leandro Bay Channel Daybeacon 6	37	44	28.25	122	12	148.60	77B(P) 3707	V-Vis. 9-5-80	18650									

TYPE OF ACTION	
OBJECTS INSPECTED FROM SEAWARD	
POSITIONS DETERMINED AND/OR VERIFIED	
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	
INSTRUCTIONS FOR (CC)	
OFFICE 1. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	
FIELD 1. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection P - Photogrammetric Vis - Visually 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	
*FIELD POSITIONS are determined by field observations based entirely upon ground survey	

NOAA FORM 76-40 (8-74)										U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION									
Replaces C&GS Form 567.										LANDMARKS FOR CHARTS									
REPORTING UNIT (Field Party, Ship or Office)		STATE		LOCALITY		DATE		ORIGINATING ACTIVITY											
☒ TO BE CHARTED	☐ TO BE REVISED	☐ TO BE DELETED	Photogrammetric Branch P.M.C. Seattle, WA	California	San Francisco and San Pablo Bays	Nov. 1980	☐ HYDROGRAPHIC PARTY	☐ GEODETIC PARTY	☐ PHOTO FIELD PARTY										
The following objects HAVE ☒ BEEN INSPECTED from seaward to determine their value as landmarks.		SURVEY NUMBER		DUTY		METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED											
OPR PROJECT NO.	JOB NUMBER	CM - 7704	TP - 00533	N.A. 1927		OFFICE		FIELD											
CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	LATITUDE		LONGITUDE		POSITION													
		° /	'	° /	'	D.M. Meters	D.P. Meters												
STACK (NW of 5)		37 46	09.83	122 13	38.49			77B(P) 3706 Mar. 18, 1977	V-Vis. 9-4-80	18650 18649 18652									
TANK		37 46	08.04	122 13	36.04			77B(P) 3706 Mar. 18, 1977	V-Vis. 9-4-80	" "									
TANK		37 46	07.49	122 13	34.89			77B(P) 3706 Mar. 18, 1977	V-Vis. 9-4-80	" "									
TOWER	North 1 of 2 towers on railroad bridge new ldmk. tower recommended for charts	37 46	09.83	122 13	45.03				P-5-L 77B(P) 3705 9-15-80	" "									
TOWER	South 1 of 2 towers on railroad bridge new ldmk. tower recommended for charts	37 46	07.95	122 13	46.54				P-5-L 77B(P) 3705 9-15-80	" "									
ELEVATOR	Elevator (conveyor) replaces currently charted elevator, see pg. 3, deletion page.	37 46	27.60	122 14	20.39				P-5-L 77B(P) 3706 9-15-80	18649 18650 18652									
GAS TANK	(Oakland P.G. And E. 50th. Ave. Gas Holder, 1947)	37 45	54.676	122 12	50.885			77B(P) 3706 Mar. 18, 1977	Triang. Rec. V-Vis. 9-4-80	18650 18649 18652									
RADIO TOWER		37 44	36.33	122 13	09.07			77B(P) 3706 Mar. 18, 1977	V-Vis. 9-4-80	" "									
TANK		37 46	09.50	122 13	20.91			77B(P) 3706 Mar. 18, 1977	V-Vis. 9-4-80	" "									
AERO	Rotating G and W; New position, beacon now located on Bldg. (hangar)	37 43	49.89	122 12	36.63				P-5-L 77B(P) 3707 9-5-80	" "									

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	D. Taylor
POSITIONS DETERMINED AND/OR VERIFIED	D. Taylor
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	W. Richter
J. Hancock, Final Review, Feb. 1	
INSTRUCTIONS FOR ENTRIES UNDER METHOD AND DATE OF LOCATION	
(Consult Photogrammetric Instructions No. 64)	
OFFICE	FIELD (Cont'd)
I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	B. Photogrammetric entry of method and date of field graph used to identify and locate the object. EXAMPLE: P-2-6-L 8-12-75
FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	II. TRIANGULATION When a landman angulation station is used with data from a photograph, the triangulation must be identified by the triangulation station used. EXAMPLE: Triangulation station 1 8-12-75 III. POSITION VERIFICATION Enter 'V-Vis. EXAMPLE: V-V 8-12-75 **PHOTOGRAMMETRIC entry of method and date of field graph used to identify and locate the object. EXAMPLE: P-2-6-L 8-12-75
*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	

Replaces C&GS Form 567.

NON-FLOATING AIDS OR LANDMARKS FOR CHARTS

**U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**

ORIGINATING ACTIVITY

- ☐ HYDROGRAPHIC PARTY
☐ GEODETIC PARTY
☐ PHOTO FIELD PARTY
☒ COMPILATION ACTIVITY
☐ FINAL REVIEWER
☐ QUALITY CONTROL & REVIEW GRP.
☐ COAST PILOT BRANCH
- (See reverse for responsible personnel)

DATE Nov. 1980

LOCALITY
San Francisco and
San Pablo Bays

STATE
California

REPORTING UNIT
(Field Party, Ship or Office)
Photogrammetric Branch
P.M.C. Seattle, Wa.

The following objects HAVE ☒ HAVE NOT ☐ been inspected from seaward to determine their value as landmarks.

SURVEY NUMBER

JOB NUMBER

DATUM

N. A. 1927

N. A. 1927

N. A. 1927

METHOD AND DATE OF LOCATION

DESCRIPTION
(Record reason for deletion of landmark or aid to navigation.
Show triangulation station names, where applicable, in parentheses

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TYPE OF ACTION		RESPONSIBLE PERSON
		NAME
OBJECTS INSPECTED FROM SEAWARD		D. Taylor
POSITIONS DETERMINED AND/OR VERIFIED		D. Taylor
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		W. Richter
INSTRUCTIONS FOR ENTRIES UNDER 'METHODS' (Consult Photogrammetric Manual)		
OFFICE 1. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75		
FIELD 1. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection P - Photogrammetric Vis - Visually 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-1 8-12-75 *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.		