

TP-00736

ORIGINAL

TP-00736

NOAA FORM 76-35	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Type of Survey .....	Shoreline
Job No. ....	CM-7311 ..... Map No. TP-00736...
Classification No. ....	Final Edition No. ..1.....
Field Edited Map	
LOCALITY	
State .....	Washington
General Locality .....	Tacoma Harbor
Locality .....	Hylebos Waterway
<hr/> 1973 TO 1974 <hr/>	
REGISTRY IN ARCHIVES	
DATE .....	

☆ U.S. GOVERNMENT PRINTING OFFICE: 1974-762-901

RES 18453 9-30-81 RL  
RES 18445-5C 9-30-81 RL  
RES 18448 9-30-81-RL

## DESCRIPTIVE REPORT - DATA RECORD

☒ ORIGINAL

MAP EDITION NO. (1)

☐ RESURVEY

MAP CLASS Final

☐ REVISEDJOB RM-CM-7311

## PHOTOGRAMMETRIC OFFICE

Coastal Mapping Division  
Atlantic Marine Center, Norfolk, VA

## OFFICER-IN-CHARGE

Jeffrey G. Carlen, Cdr., NOAA

## LAST PRECEDING MAP EDITION

TYPE OF SURVEY

JOB PH- \_\_\_\_\_

☐ ORIGINAL

MAP CLASS \_\_\_\_\_

☐ RESURVEY

SURVEY DATES:

☐ REVISED

19\_\_ TO 19\_\_

## I. INSTRUCTIONS DATED

## 1. OFFICE

## 2. FIELD

Aerotriangulation  
CompilationAug 30, 1973  
Jan 22, 1974

May 17, 1978

## 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

Polyconic

## 4. GRID(S)

STATE  
WashingtonZONE  
South

## 5. SCALE

1:5,000

STATE

ZONE

## III. HISTORY OF OFFICE OPERATIONS

OPERATIONS		NAME	DATE
1. AEROTRIANGULATION	BY	I. O. Raborn	1/74
METHOD: Analytic	LANDMARKS AND AIDS BY		
2. CONTROL AND BRIDGE POINTS	PLOTTED BY	R. Robertson	1/74
METHOD: Calcomp	CHECKED BY		
3. STEREOSCOPIC INSTRUMENT	PLANIMETRY BY	R. R. White	2/74
COMPILATION	CHECKED BY	L. O. Neterer	2/74
INSTRUMENT: Wild B-8	CONTOURS BY	NA	
SCALE: 1:7,500	CHECKED BY	NA	
4. MANUSCRIPT DELINEATION	PLANIMETRY BY	G. R. Vanderhaven	2/74
	CHECKED BY	R. R. White	2/74
METHOD:	CONTOURS BY	NA	
	CHECKED BY	NA	
SCALE: 1:5,000	HYDRO SUPPORT DATA BY	G. R. Vanderhaven	2/74
	CHECKED BY	R. R. White	2/74
5. OFFICE INSPECTION PRIOR TO FIELD EDIT	BY	R. R. White	2/74
6. APPLICATION OF FIELD EDIT DATA	BY	J. Desch	4/75
	CHECKED BY	A. L. Shands	5/75
7. COMPILATION SECTION REVIEW	BY	A. C. Rauck, Jr.	5/77
8. FINAL REVIEW	BY	A. L. Shands	Feb. 1978
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH	BY	A. L. Shands	Mar. 1978
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH	BY	J. B. Phillips	March 1978
11. MAP REGISTERED - COASTAL SURVEY SECTION	BY	R. T. Carter	May 1978

TP-00736  
COMPILATION SOURCES

## 1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-8 "E"		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE		(C) COLOR (P) PANCHROMATIC (I) INFRARED		ZONE Pacific	<input checked="" type="checkbox"/> STANDARD
<input checked="" type="checkbox"/> PREDICTED TIDES <input type="checkbox"/> REFERENCE STATION RECORDS <input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY				MERIDIAN 120th	<input type="checkbox"/> DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
73E(C) 9067 thru 9069	6/22/73	09:36	1:15,000	7.9 ft. above MLLW	
73E(C) 9088 thru 9090	6/22/73	09:55	1:15,000	7.7 ft. above MLLW	

REMARKS

## 2. SOURCE OF MEAN HIGH-WATER LINE:

The mean high water line was delineated from the above listed photography.

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

None compiled.

## 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

## 5. FINAL JUNCTIONS

NORTH No Survey	EAST No Survey	SOUTH No Survey	WEST TP-00735 TP-00733
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REMARKS

TP-00736

## HISTORY OF FIELD OPERATIONS

1. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. B. Melby	6/73
2. HORIZONTAL CONTROL	RECOVERED BY	R. B. Melby
	ESTABLISHED BY	None
	PRE-MARKED OR IDENTIFIED BY	None
3. VERTICAL CONTROL	RECOVERED BY	NA
	ESTABLISHED BY	NA
	PRE-MARKED OR IDENTIFIED BY	NA
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED ( <i>Triangulation Stations</i> ) BY	None
	LOCATED ( <i>Field Methods</i> ) BY	None
	IDENTIFIED BY	None
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY BY <input checked="" type="checkbox"/> 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  
None2. VERTICAL CONTROL IDENTIFIED  
NA

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 ☒ NONE6. 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*)

None

TP-00736

## HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	M. Fleming	3/74 - 4/74
2. HORIZONTAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	None None None
3. VERTICAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	NA NA NA
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY LOCATED (Field Methods) BY IDENTIFIED BY	None None None
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY <input checked="" type="checkbox"/> 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 NA	
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: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE		6. BOUNDARY AND LIMITS: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE	
7. SUPPLEMENTAL MAPS AND PLANS None			
8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)			

1 Original Field Edit, Ozalid and Field Edit Report

TP-00736

## HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	M. Fleming	12/74-1/75
2. HORIZONTAL CONTROL	RECOVERED BY L. Riggers - D. Eilers	12/74
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
3. VERTICAL CONTROL	RECOVERED BY NA	
	ESTABLISHED BY NA	
	PRE-MARKED OR IDENTIFIED BY NA	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY D. Eilers	12/74
	LOCATED (Field Methods) BY None	
	IDENTIFIED BY None	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE BY <input type="checkbox"/> SPECIFIC NAMES ONLY <input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY D. Eilers	12/74
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY NA	

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED		2. VERTICAL CONTROL IDENTIFIED	
None		NA	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
3. PHOTO NUMBERS (Clarification of details) A.L.S. 73E(C) 9088, <del>9089</del> , 9090			
4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED			
None			
PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
5. GEOGRAPHIC NAMES: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE		6. BOUNDARY AND LIMITS: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE	
7. SUPPLEMENTAL MAPS AND PLANS			
1 set Barge Loading Facility Plans			
8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)			
1 Original Field Edit Ozalid			
1 Addenda Field Edit Report			
1 Form 76-40			

NOAA FORM 76-36D  
(3-72)U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIONTP-00736  
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.	2/74	Class III Manuscript Superseded	3/74	3/74
Field edit applied. Compilation complete.	4/75	Class I Manuscript	5/77	
Final Review	Feb. 1978	Final	Feb. 1978	

## II. LANDMARKS AND AIDS TO NAVIGATION

## I. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
1		6/16/77	Landmarks

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: June 16, 1977
3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: \_\_\_\_\_

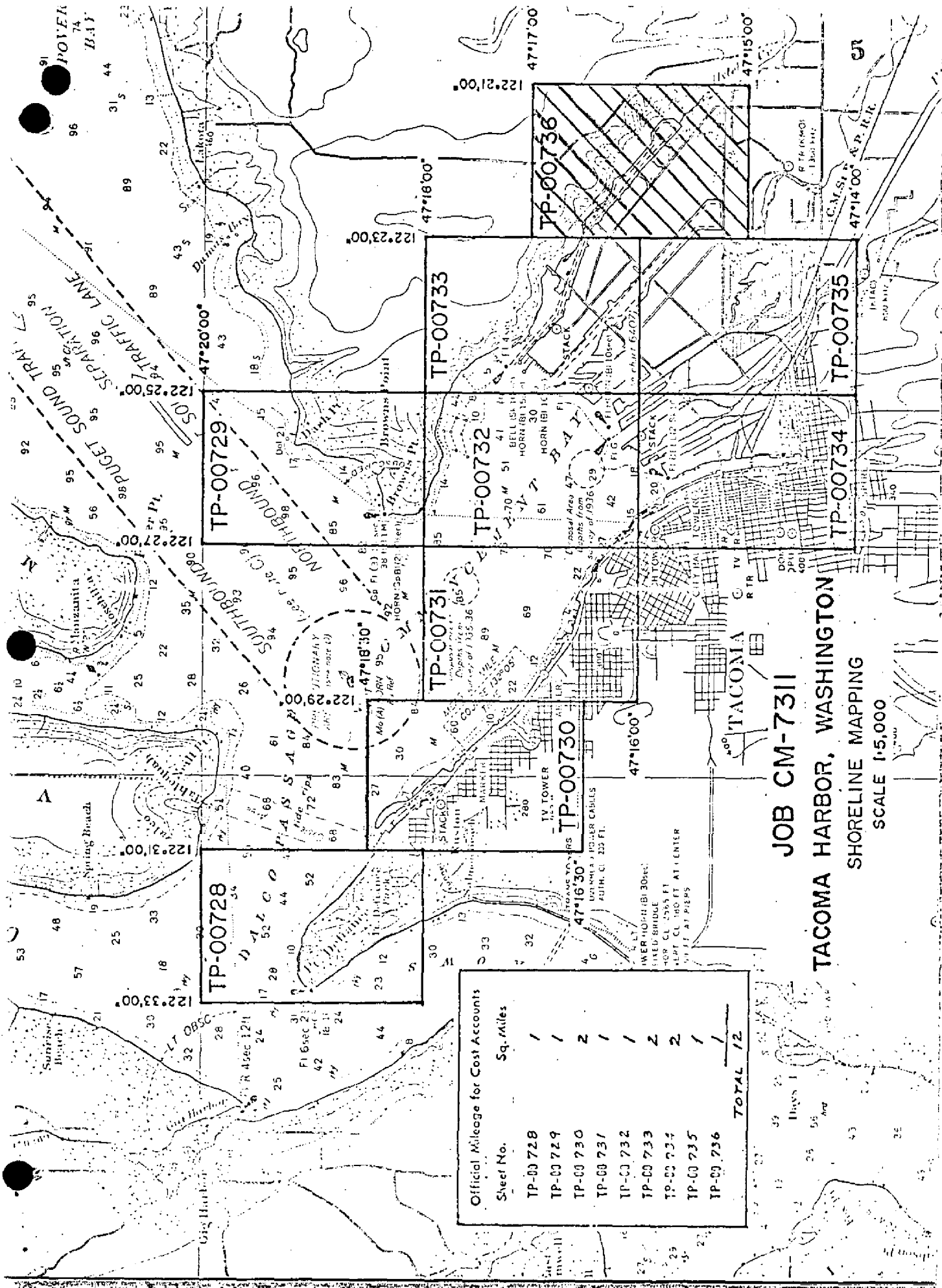
## III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☒ FORM NOS <sup>76-40</sup> ~~36~~ SUBMITTED BY FIELD PARTIES.
3. ☒ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.  
ACCOUNT FOR EXCEPTIONS:

4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: \_\_\_\_\_

## 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 <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY	
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL	
THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY	
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL	
FOURTH EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY	
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL	



Official Mileage for Cost Accounts

Sheet No.	Sq. Miles
TP-00728	1
TP-00729	1
TP-00730	2
TP-00731	1
TP-00732	1
TP-00733	2
TP-00734	2
TP-00735	1
TP-00736	1
<b>TOTAL</b>	<b>12</b>

JOB CM-7311

TACOMA HARBOR, WASHINGTON

SHORELINE MAPPING

SCALE 1:5,000



## SUMMARY TO ACCOMPANY

## DESCRIPTIVE REPORTS TP-00728 thru TP-00736

The maps covered in this summary comprise all of Project CM-7311. They are all standard shoreline maps covering Commencement Bay and including the Hylebos, Blair, Sitcum, Milwaukee, Puyallup, St. Paul, Middle and City Waterways. The purpose of the project is to provide up-to-date shoreline and alongshore delineation in support of contemporary hydrographic surveys and for nautical chart construction. All maps are 1: 5,000 scale.

Photography of the area was flown at 1:15,000 scale in June, 1973. Both onshore and offshore flights were flown. Ratios of the offshore flights were processed by the compilation office for photo-hydro support.

Field work prior to compilation was limited to the recovery and identification of horizontal control used in bridging. There was no clarification of details.

Bridging was done at the Washington Science Center in January, 1974, using the onshore flights. Analytic triangulation methods were used. Points common to the offshore flights were established to determine ratio scales.

The maps were compiled at the Atlantic Marine Center during February and March, 1974, by Wild B-8 instrument method.

Many buildings currently charted are not shown on the maps. In most cases, buildings are shown on the chart as they appear on the photographs. However, in a few instances buildings shown on the chart are not visible on the photographs. Where this is so, that fact is stated in the review report of the affected map.

Field edit was partially done in April, 1974 and completed in December, 1974. It was applied to the maps at the Atlantic Marine Center in May, 1975.

Final review was performed at the Atlantic Marine Center in January, 1978. The original base maps and all pertinent data was forwarded to the Washington Science Center for final registration.

## FIELD INSPECTION

TP-00736

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

PHOTOGRAMMETRIC PLOT REPORT

8a

Tacoma Harbor  
Washington  
Job CM-7311  
January 1974

21. Area Covered

The area covered by this report pertains to the shoreline of Commencement Bay, Tacoma, Washington. This area is covered by nine 1:5,000 scale sheets, TP-00728 thru TP-00736.

22. Method

Three strips of 1:15,000 scale color photography were bridged by analytic aerotriangulation methods. Strip No. 1 was measured on the David W. Mann Company mono comparator Model 422 and strips 2 and 3 were measured on the Wild stereo comparator. Sketch number 1 shows the flight lines of the photography and the placement of the control used in the adjustment. The three strips were controlled by field identified control paneled in 1973. Old control, which was office identified, was floated for checks. Ties were made between all bridging strips. Common points were located between the bridging photography and the offshore flights to determine the ratio scale. One cronapaque and one matte each were ordered of the offshore flights. Sketch number 2 shows the flight lines of the offshore photography. Data for ruling projections were furnished to the Coradomat to be plotted on the Washington South Plane Coordinate System.

23. Adequacy of Control

The control was adequate.

24. Supplemental Data

USGS quadrangles were used to provide vertical control for the adjustment.

25. Photography

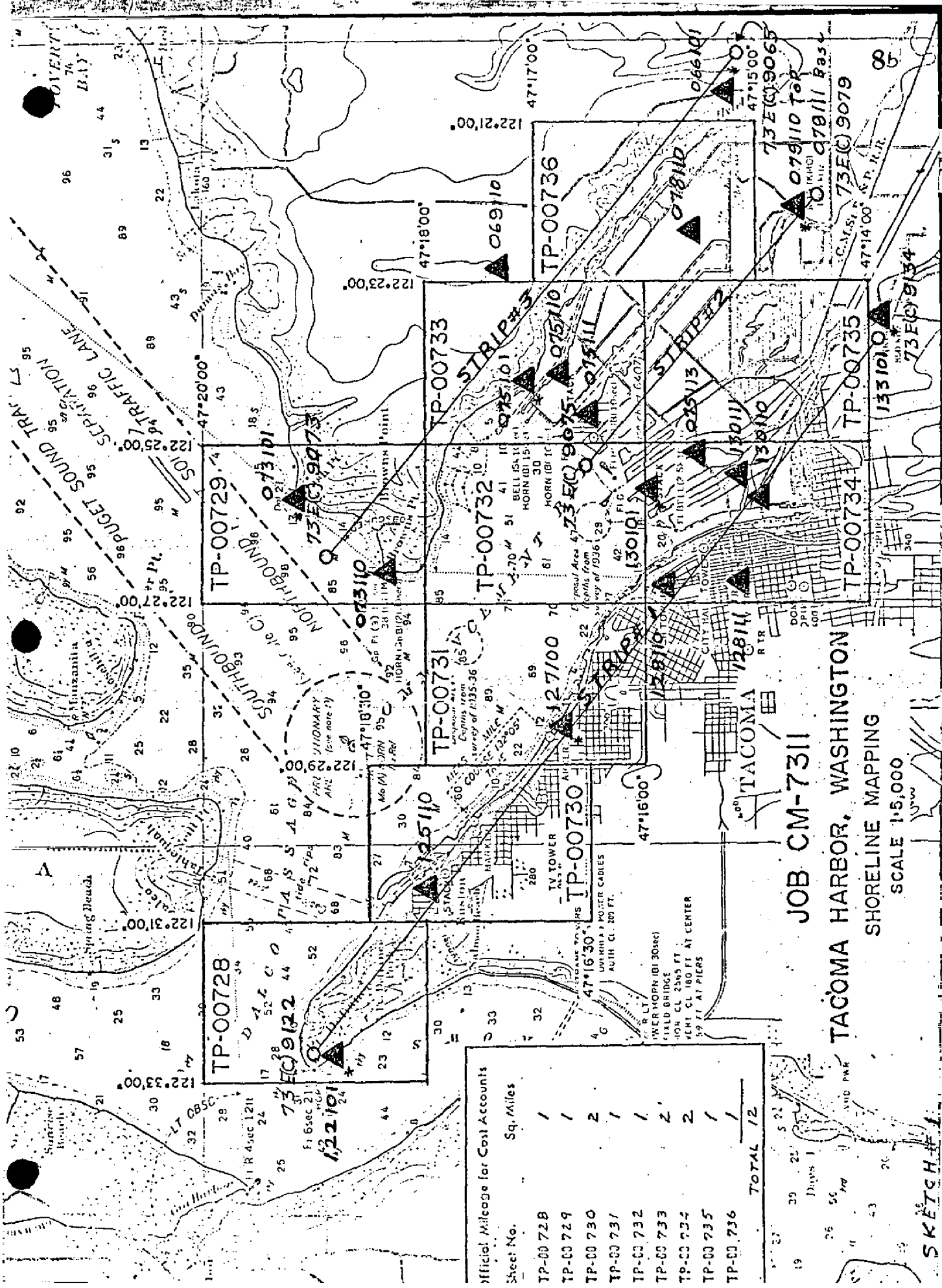
The photography was adequate.

Respectfully submitted,

*Ivey O. Raborn*  
Ivey O. Raborn

Approved and Forwarded:

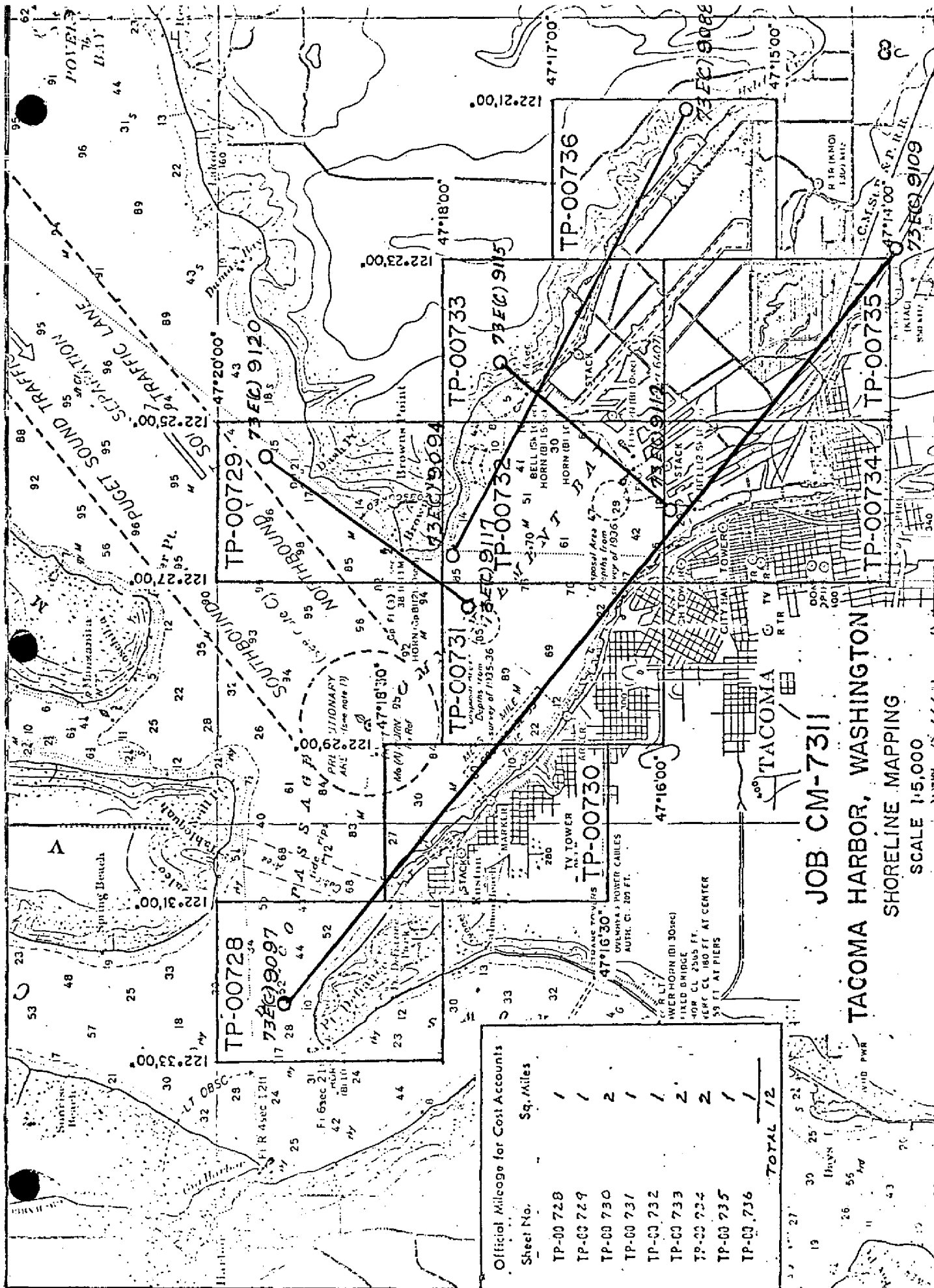
*John D. Perrow, Jr.*  
John D. Perrow, Jr.  
Chief, Aerotriangulation Section



JOB CM-7311  
 TACOMA HARBOR, WASHINGTON  
 SHORELINE MAPPING  
 SCALE 1:5,000

Official Mileage for Cost Accounts	
Sheet No.	Sq. Miles
TP-00 728	1
TP-00 729	1
TP-00 730	2
TP-00 731	1
TP-00 732	1
TP-00 733	2
TP-00 734	2
TP-00 735	1
TP-00 736	1
<b>TOTAL</b>	<b>12</b>

SKETCH



**JOB CM-7311**  
**TACOMA HARBOR, WASHINGTON**  
**SHORELINE MAPPING**

SCALE 1:5,000

**Official Mileage for Cost Accounts**

Sheet No.	Sq. Miles
TP-00 728	1
TP-00 729	1
TP-00 730	2
TP-00 731	1
TP-00 732	1
TP-00 733	2
TP-00 734	2
TP-00 735	1
TP-00 736	1
<b>TOTAL</b>	<b>12</b>

DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	STATION NAME	JOB NO.	GEODETTIC DATUM		AEROTRI- ANGULATION POINT NUMBER	COORDINATES IN FEET STATE _____ ZONE _____	GEOGRAPHIC POSITION		ORIGINATING ACTIVITY	REMARKS	
			NA	1927			$\phi$ LATITUDE	$\lambda$ LONGITUDE		FORWARD	BACK
TP-00736	TACOMA, KAISER ALUMINUM PLANT STACK, 1973	CM-7311			164		$\phi$ 47 15 35.246		Coastal Mapping Division, AMC, Norfolk, Virginia	1088.5	(764.4)
		Bridge Form 164 P. 3 of 5 conv. from PC				$\phi$	$\lambda$ 122 22 16.130			339.1	(922.4)
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## COMPILATION REPORT

TP-00736

31. DELINEATION:

Delineation was by the Wild B-8 stereoplotter, using 1:15,000 scale color photography. Photography was adequate.

32. CONTROL:

See the attached Photogrammetric Plot Report dated January 1974.

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 and the mean high water line were delineated by the Wild B-8 stereoplotter and by office interpretation of the photographs.

36. OFFSHORE DETAILS:

None.

37. LANDMARKS AND AIDS:

Compilation office prepared work copies of Forms 76-40 were forwarded to the field editor for verification, location and/or deletion.

38. CONTROL FOR FUTURE SURVEYS:

None.

39. JUNCTIONS:

See the attached Form 76-36B, Item #5 of the Descriptive Report concerning junctions.

40. HORIZONTAL AND VERTICAL ACCURACY:

No statement.

46. COMPARISON WITH EXISTING MAPS:

A comparison has been made with the following USGS Quadrangles: TACOMA NORTH, WASHINGTON, scale 1:24,000, 1961, photorevised 1968; and POVERTY BAY, WASHINGTON, scale 1:24,000, 1961, photorevised 1968.

47. COMPARISON WITH NAUTICAL CHARTS:

A comparison has been made with the following USC&GS Chart: No. 6407, scale 1:15,000, 12th edition, January 27, 1973.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY:

None.

ITEMS TO BE CARRIED FORWARD:

None.

Submitted by:

*Albert C. Rauck, Jr.* FOR  
Gary R. Vanderhaven  
Cartographer  
February 22, 1974

Approved for forwarding:

*Albert C. Rauck, Jr.*  
Albert C. Rauck, Jr.  
Chief, Coastal Mapping Section, AMC



January 11, 1978

## GEOGRAPHIC NAMES

## FINAL NAME SHEET

CM-7311 (Tacoma Harbor, Washington)

TP-00736

Blair Waterway

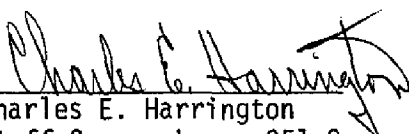
Chicago Milwaukee St. Paul &amp; Pacific (RR)

Hylebos Creek

Hylebos Waterway

Tacoma

Approved by:

  
Charles E. Harrington  
Staff Geographer - C51x2

NOAA FORM 75-74  
(7-75)U.S. DEPARTMENT OF COMMERCE  
NOAA  
NATIONAL OCEAN SURVEY

## PHOTOGRAMMETRIC OFFICE REVIEW

TP - 00736

1. PROJECTION AND GRIDS RRW		2. TITLE RRW		3. MANUSCRIPT NUMBERS RRW		4. MANUSCRIPT SIZE RRW	
<b>CONTROL STATIONS</b>							
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY RRW				6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) NA		7. PHOTO HYDRO STATIONS NA	
8. BENCH MARKS RRW		9. PLOTTING OF SEXTANT FIXES ALS		10. PHOTOGRAMMETRIC PLOT REPORT RRW		11. DETAIL POINTS RRW	
<b>ALONGSHORE AREAS (Nautical Chart Data)</b>							
12. SHORELINE RRW		13. LOW-WATER LINE RRW		14. ROCKS, SHOALS, ETC. RRW		15. BRIDGES RRW	
16. AIDS TO NAVIGATION ALS		17. LANDMARKS RRW		18. OTHER ALONGSHORE PHYSICAL FEATURES RRW		19. OTHER ALONGSHORE CULTURAL FEATURES RRW	
<b>PHYSICAL FEATURES</b>							
20. WATER FEATURES RRW				21. NATURAL GROUND COVER NA		22. PLANETABLE CONTOURS NA	
23. STEREOSCOPIC INSTRUMENT CONTOURS NA		24. CONTOURS IN GENERAL NA		25. SPOT ELEVATIONS NA		26. OTHER PHYSICAL FEATURES RRW	
<b>CULTURAL FEATURES</b>							
27. ROADS RRW		28. BUILDINGS RRW		29. RAILROADS RRW		30. OTHER CULTURAL FEATURES RRW	
<b>BOUNDARIES</b>							
31. BOUNDARY LINES NA				32. PUBLIC LAND LINES NA			
<b>MISCELLANEOUS</b>							
33. GEOGRAPHIC NAMES RRW				34. JUNCTIONS RRW		35. LEGIBILITY OF THE MANUSCRIPT RRW	
36. DISCREPANCY OVERLAY RRW		37. DESCRIPTIVE REPORT RRW		38. FIELD INSPECTION PHOTOGRAPHS ALS		39. FORMS RRW	
40. REVIEWER Richard R. White Richard R. White 2/74				SUPERVISOR, REVIEW SECTION OR UNIT Albert C. Rauck, Jr. Albert C. Rauck, Jr.			
41. REMARKS (See attached sheet)							
<b>FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT</b>							
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 J. Desch Joanne Desch 4/75				SUPERVISOR Albert C. Rauck, Jr. Albert C. Rauck, Jr.			
Reviewer A. L. Shands 5/75							
43. REMARKS A. L. Shands  Refer to Forms 76-36C, Items 7 and 8.							

## ADDENDA FIELD EDIT REPORT

Commencement Bay, Washington  
Dec 1974 - Jan 1975  
OPR-412  
Project CM-7311

This report is a follow-up and completion of the original field edit accomplished in this area in March and April of 1974. Certain deficiencies were noted in the original field edit; and this report is being submitted to correct, clarify, or alleviate any errors or misconceptions that may have been conveyed in the original report.

Although this report was not intended to be a complete re-field edit of the area, certain items from the previous report were checked to verify positions and resolve suspect features. It is suspected the original field editors did not use the photographs to their full advantage as the majority of items in question could be located by photogrammetric methods.

The majority of the landmarks were verified by computing the inverse for intersection stations and occupying marked triangulation stations and observing theodolite cuts.

The field edit copies of the manuscripts were used for the field corrections (in blue and dated) and the photographs were cross-referenced to the field edit copies.

Adequacy: The extent and accuracy of this field edit with amended items of the original field edit and completed forms 76-40 now appears complete.

Pertinent information for each individual discrepancy sheet is listed under that specific sheet.

## TP-00728

Re-field edited 12/11/74. Agreed with the original field edit except the bluff in question is considered of landmark value. It is of significant height, and distinct boundaries are clear as plotted.

For verification of Pt. Defiance Light see attached NOAA Form 76-40.

## TP-00729

Re-field edited 12/11/74. Original field edit complete. Brown Point Lighthouse recovered. See attached form 76-40.

## TP-00730

Re-field edited on 12/12/74, 12/13/74, and 1/10/75. All landmarks were recovered. Lighted aids to navigation were located by photogrammetric methods on photograph 73E9100. The triangulation station TARGET, 1952, in question was reported destroyed in 1965 by H.J.S. (page 41 of book 392) and no attempt was made to recover it.

The position of the Commencement Bay Measured Nautical Mile northwest range front marker was determined by an angle distance from reference mark of the triangulation station TARGET. The position of the northwest range rear marker was determined by an angle and distance from the reference mark of triangulation station BLUFF, 1935. Both positions are less than third order. See the enclosed computations and form 76-40.

## TP-00731

Re-field edited on 12/12/74. The positions of the Commencement Bay Measured Nautical Mile southeast markers, both front and rear, were determined by an angle and distance from RUSTON, RM NO2. Both positions are less than third order. See the enclosed computations and form 76-40.

## TP-00732

Re-field edited on 12/10/74. Nonfloating aids to navigation were triangulation stations that were recovered. The new stack considered of landmark value was located photogrammetrically.

The Grain Export Facility under construction in April, 1974, is nearing completion. The pier faces are complete with work on the tower continuing. Port authorities expect to have the facility in operation in June, 1975. The plans for this facility were obtained and are enclosed.

## TP-00733

This sheet was re-field edited on 12/10/74, 1/6/75, and 1/10/75. Two charted tanks are gone and should be deleted from the charts. See enclosed form 76-40.

Three landmarks (triangulation stations) were recovered and recovery notes submitted. The twin chimneys were located photogrammetrically on photograph 73E9091. The charted stack mentioned in the April, 1974, field edit as being of no landmark value is considered of landmark value in this report. Although poorly visible from Commencement Bay, it is quite distinguishable in the Hylebos Waterway. See photograph 73E9091.

Two large dome-shaped storage elevators depicted on the charts, but not compiled on the ozalid, should be left on the charts, as they are salient features and visible from offshore in Commencement Bay. See photograph

73E9113. Two navigation lights were recovered, and the fog signals were located photogrammetrically on photograph 73E9114.

TP-00734

The three items not previously investigated were field edited 12/12/74 and noted on the ozalid. One nonfloating aid to navigation was recovered. One tank, as noted on form 76-40, should be deleted from the chart, as it no longer exists.

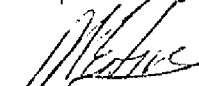
Fourteen landmarks were located. Twelve were triangulation and were recovered. Two were located photogrammetrically on photograph 73E9104.

TP-00736

Re-field edited 12/12/74. The new boat <sup>ramp A.L.S.</sup> was located on photograph 73E9090 by planetable methods. It is a private boat ramp and not maintained by the port authorities. The two stacks considered of landmark value by this field edit were located photogrammetrically on photograph 73E9089 and 73E9088.

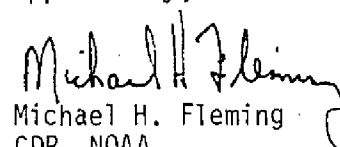
There is new construction of a barge-loading facility in the Blair Waterway turning basin. The plans for this facility were obtained from the Port authorities and are enclosed.

Respectfully submitted,



D.S. Eilers  
LTJG, NOAA

Approved by,



Michael H. Fleming  
CDR, NOAA  
Commanding Officer

## FIELD EDIT REPORT

COMMENCEMENT BAY

TACOMA, WASHINGTON

OPR-412

MARCH - APRIL 1974

INTRODUCTION

Field edit reports are attached for the following maps: TP-00728, TP-00729, TP-00730, TP-00731, TP-00732, TP-00733, TP-00734, TP-00735, and TP-00736. Copies of the Field Edit Ozalids and extra ozalids were compared in the field with actual shore features. The field edit was done before signals were built in many areas, so positions of many items were estimated relative to nearby features. In many instances these positions fell on one or more natural ranges. Some sextant fixes were possible and were recorded for future reference. Height data for all features were noted as referenced to MLLW or MHW or simply by time and date. Unless followed by a "Z" for GMT, all times are in Zone +7 (105° meridian).

All notes have been made in violet ink on the Field Edit Ozalids with the exception of TP-00733 for which another sheet was used and labeled "Smooth Ozalid." All deletions are noted or underlined with green ink.

During our work in the survey area, a great deal of new construction was observed. Shoreline construction sites were noted - as fully as possible - on the ozalids. It is suggested that any questions about new piers, etc. under construction be directed to the Property Manager, Port of Tacoma (address below).

Hugh Wild  
Property Manager  
Port of Tacoma  
P.O. Box 1837  
Tacoma, WA 98401

Compilation of the maps agreed well with actual shore features; any discrepancies are noted on the ozalids. Field edit of these manuscripts is not complete, especially for the inland. It is felt that all shore features of importance to the mariner have been adequately covered and noted.

## FIELD EDIT REPORT

MAP TP-00736

TACOMA, WASHINGTON

MARCH-APRIL, 1974

Field edit of map TP-00736 was done by Ens. Roger W. Mercer, Ens. James D. Sarb, and Ens. Joseph J. Kapler during the months of March and April. Inspection was done from small boats.

METHOD

A copy of the field Ozalid was examined in the field and mapped features verified by visual inspection. Unmapped features were located by sextant fixes or by "best guess" where visual control was inadequate.

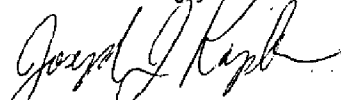
ADEQUACY OF COMPILATION

The compilation of this map compares well with the visual inspection; however, there is construction along the waterfront. For information concerning present and future construction contact Mr. Hugh Wilde, Property Manager, Port of Tacoma, P.O. Box 1837, Tacoma, Washington, 98401.

RECOMMENDATIONS

It is recommended that this map be revised in accordance with the notes on the Ozalid and then accepted as an advanced manuscript. It is also recommended that the Property Manager of the Port of Tacoma be contacted and plans of the present and future construction be applied.

Submitted by,

  
Joseph J. Kapler  
LTJG, NOAA

Submitted by,

*R. W. Mercer*

R.W. Mercer  
ENS, NOAA

Approved by,

*Michael H. Fleming*

M.H. Fleming  
CDR, NOAA  
Commanding Officer  
NOAA SHIP DAVIDSON





		RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME	ORIGINATOR	
OBJECTS INSPECTED FROM SEAWARD		<input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)	
POSITIONS DETERMINED AND/OR VERIFIED	L. L. Riggers, PMC; D. S. Eilers, Lt. (jg), NOAA J. Desch	FIELD ACTIVITY REPRESENTATIVE  OFFICE ACTIVITY REPRESENTATIVE	
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		<input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE	
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.)			
<b>OFFICE</b> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> 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>FIELD (Cont'd)</b> <b>B. Photogrammetric field positions* require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.</b> EXAMPLE: P-8-V 8-12-75 74L(C)2982	
<b>FIELD</b> <b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75		<b>II. TRIANGULATION STATION RECOVERED</b> When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75  <b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75	
*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.  **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.			

REVIEW REPORT  
TP-00736

SHORELINE

February 7, 1978

61. GENERAL STATEMENT:

See Summary, page 6 of this Descriptive Report.

Several water features shown on the map were transferred directly from the paper field edit ozalid. The approximate positions of these features were indicated on the ozalid by the field editor. They are not visible on the photographs. They are labeled "(PA)" for position approximate.

The new "Barge Loading Facility" located on the southwest shore of Blair Waterway was delineated using engineering drawings supplied by the field editor. The position of the facility was fixed by scaling distances on <sup>the</sup> drawings between features existing at the time of photography and the loading facility. Its location on the map is approximate.

The field editor's report states that photographs 73 E(C) 9088 and 9089 were used to identify two landmark stacks. Photograph 73 E(C) 9089 contains no field edit notes. A landmark tank and stack are identified on matte ratio prints 73 E(C) 9088 and 9090 respectively.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Not applicable.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

Not applicable.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

No contemporary hydrographic survey was conducted within the area bounded by this map.

65. COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with Chart 18453, 1:15,000 scale, 14th edition dated May 29, 1976.

The landmark stack charted at latitude 47 15.9', long. 122 21.9' is not visible on the photographs and was apparently not in place at the time of field edit. The field editor made no reference to it.

Piling charted just north of the "Lower Turning Basin" along each side of Hylebos Waterway are not visible on the photographs. They are probably submerged. The field editor noted on the field edit ozalid that they were not visible when he visited the area.

Marsh located along the northeast shoreline of Hylebos Waterway appears far less extensive on the photography than shown on the chart. Pier ruins were identified by the field editor to exist along the shoreline of the Lower Turning Basin. None are shown on the chart.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

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

Submitted by:

*A. L. Shands*

A. L. Shands  
Final Reviewer

Approved for forwarding:

*Albert C. Rauch, Jr. For*

Jeffrey G. Carlen, Cdr.  
Chief, Coastal Mapping Division, AMC

Approved:

*John D. Perrow Jr.*

Chief, Photogrammetric Branch

*Sam C. Allen*

Chief, Coastal Mapping Division

### RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. TP-00736

## INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

[illegible]