T-13151

T-13151

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey: Shoreline

Field No. PH-6712 Office No. T-13151

FINAL Field Edited Map Edition 1 *

LOCALITY

State: Washington

General locality: Elliott Bay

Locality: Harbor Island

[redacted]

FORM C&GS-181a
(12-61)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

T - 13151

PROJECT NO. (II):

PH-6712, Elliott Bay, Washington

FIELD OFFICE (II):	CHIEF OF PARTY
PHOTOGRAMMETRIC OFFICE (III):	**OFFICER-IN-CHARGE**
Rockville, Maryland	V. Ralph Sobieralski

INSTRUCTIONS DATED (II) (III):

No written instructions

METHOD OF COMPILATION (III):

Graphic

MANUSCRIPT SCALE (III):	STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):
1:5,000	----
DATE RECEIVED IN WASHINGTON OFFICE (IV):	**DATE REPORTED TO NAUTICAL CHART BRANCH (IV):**

APPLIED TO CHART NO.	DATE:	DATE REGISTERED (IV):
		SEPT. 1976

GEOGRAPHIC DATUM (III):	VERTICAL DATUM (III):
N.A. 1927	MEAN SEA LEVEL EXCEPT AS FOLLOWS: *Elevations shown as (25) refer to mean high water* *Elevations shown as (5) refer to sounding datum* *i.e., mean low water or mean lower low water*

REFERENCE STATION (III):

BRONSON, 1963

LAT.:	LONG.:	
47° 35' 11.1784"	122° 22' 28.5744"	[X] ADJUSTED [ ] UNADJUSTED

PLANE COORDINATES (IV):		STATE	ZONE
Y = 217,723.01	X = 1,619,658.84	Washington	North

ROMAN NUMERALS INDICATE WHETHER THE ITEM IS TO BE ENTERED BY (II) FIELD PARTY, (III) PHOTOGRAMMETRIC OFFICE, OR (IV) WASHINGTON OFFICE.
WHEN ENTERING NAMES OF PERSONNEL ON THIS RECORD GIVE THE SURNAME AND INITIALS, NOT INITIALS ONLY.

USCOMM-DC 16276A-P61

FORM C&GS-181b
(12-61)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

T-13151

FIELD INSPECTION BY (III):	DATE:

MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):

photography taken:
July 26, 1966 Office Interpretation of photography
and
Sept. 1970

PROJECTION AND GRIDS RULED BY (IV):	DATE
A. E. Roundtree	March 15, 1967
PROJECTION AND GRIDS CHECKED BY (IV):	**DATE**
R. Glaser	March 20, 1967
CONTROL PLOTTED BY (III):	**DATE**
J. C. Richter	April 1967
CONTROL CHECKED BY (III):	**DATE**
H. Lucas	April 1967
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III): See Photogrammetric Plot Report for T-12519 (Chart 6442) December 1963, J. T. Gerlach	**DATE**

STEREOSCOPIC INSTRUMENT COMPILATION (III):	PLANIMETRY	DATE
Inapplicable	CONTOURS	DATE

MANUSCRIPT DELINEATED BY (III):	DATE
J. C. Richter	May 1967
SCRIBING BY (III):	**DATE**
PHOTOGRAMMETRIC OFFICE REVIEW BY (III):	**DATE**

REMARKS: Field edit by Allan F. Davis Sept. & Oct. 1970

FORM C&GS-181c
(12-61)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

T-13151

CAMERA (KIND OR SOURCE) (III):

"S" 6" Focal Length

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
66-S-3192A 3193A	7/26/66	12:36	1:15,000	8.8 above MLW
66-S-3206A 3207A	7/26/66	12:45	1:15,000	8.8 above MLW
Corps of Engrs. S-7026-48-5 thru S-7026-48-12	9-11-70	unknown	1:12,000	unknown

TIDE (III)

	RATIO OF RANGES	MEAN RANGE	SPRING RANGE
REFERENCE STATION: Seattle, Washington		7.6	Diurnal 11.3
SUBORDINATE STATION:			
SUBORDINATE STATION:			

WASHINGTON OFFICE REVIEW BY (IV): J. B. Phillips — DATE: July 1976

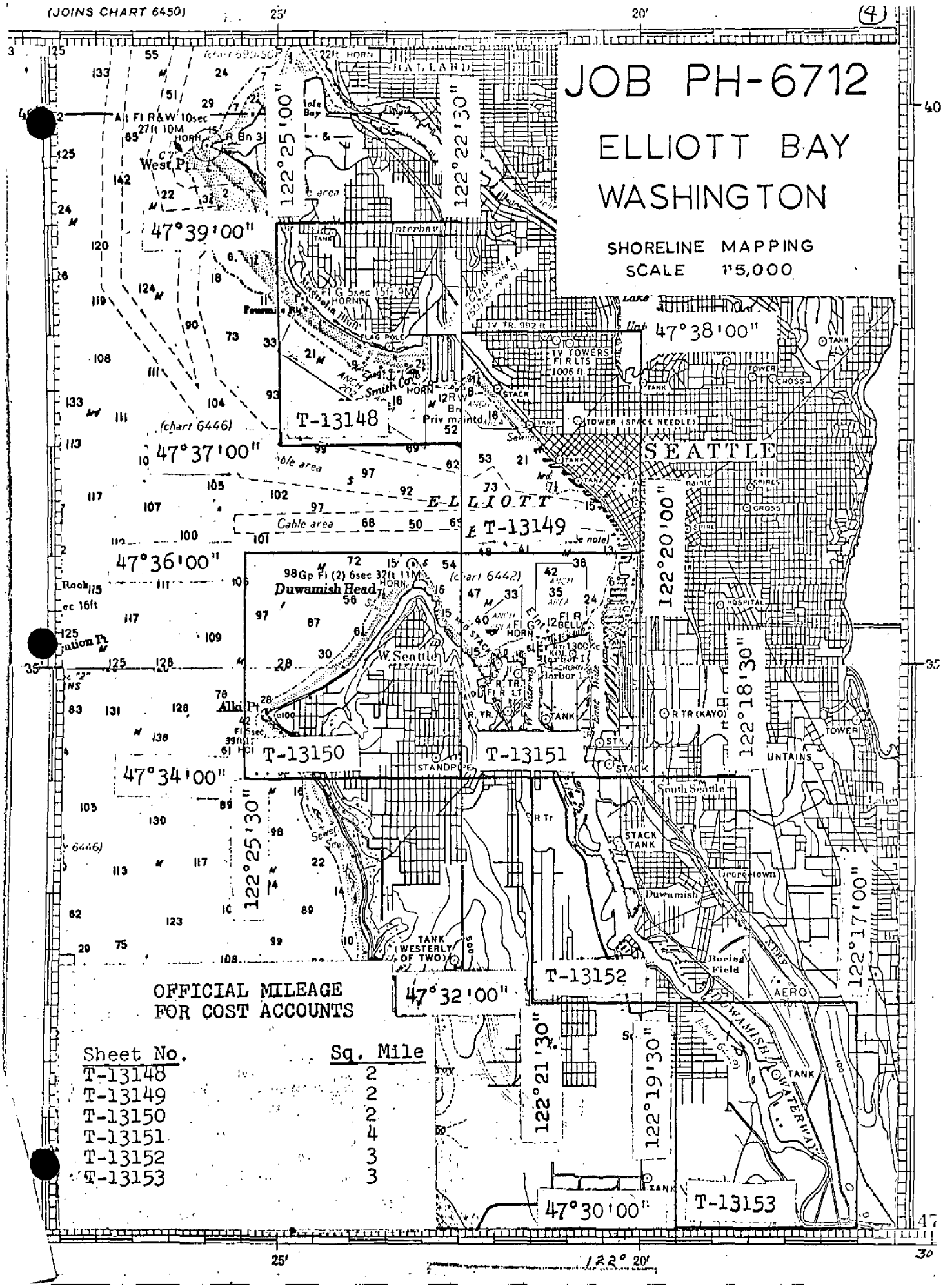
PROOF EDIT BY (IV): — DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):	RECOVERED:	IDENTIFIED:
NUMBER OF BM(S) SEARCHED FOR (II):	RECOVERED:	IDENTIFIED

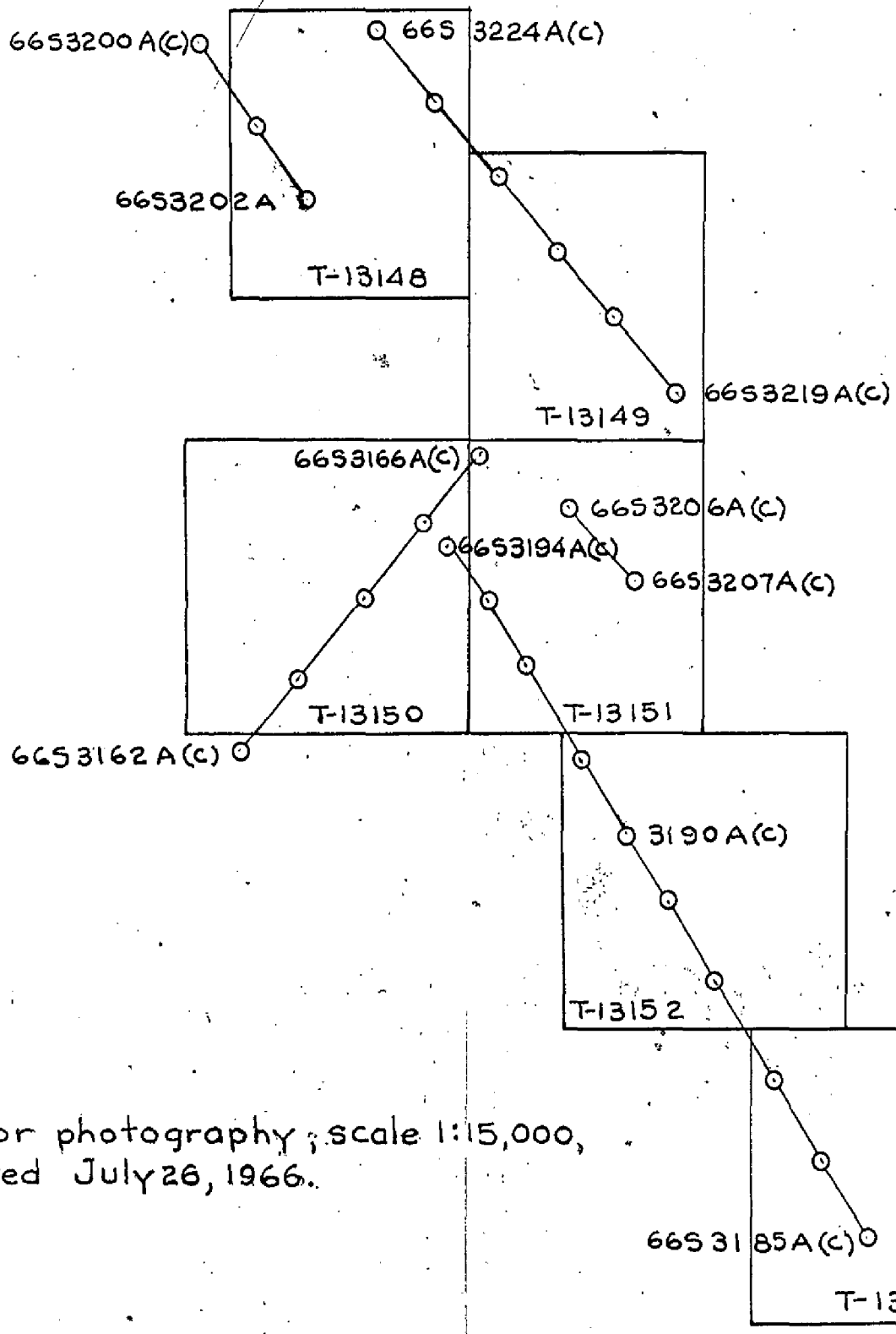
NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):

NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):

REMARKS:


JOB PH-6712
ELLIOTT BAY
WASHINGTON
SHORELINE MAPPING
SCALE 1"=5,000
(JOINS CHART 6450)
(4)
47°39'00"
47°38'00"
47°37'00"
47°36'00"
47°34'00"
47°32'00"
47°30'00"
122°25'00"
122°22'30"
122°20'00"
122°18'30"
122°25'30"
122°21'30"
122°19'30"
122°17'00"
T-13148
T-13149
T-13150
T-13151
T-13152
T-13153
SEATTLE
ELLIOTT
Duwamish Head
West Pt.
Alki Pt.
W. Seattle
South Seattle
Duwamish
Boeing Field
OFFICIAL MILEAGE
FOR COST ACCOUNTS
Sheet No. Sq. Mile
T-13148 2
T-13149 2
T-13150 2
T-13151 4
T-13152 3
T-13153 3

PH-6712
ELLIOTT BAY, WASH
Photo Coverage



Color photography; scale 1:15,000, dated July 26, 1966.

T-13151

COMPILATION RECORD	COMPLETION DATE	REMARKS
[illegible]		
* (See below)		
Field edit applied	May 1971	Superseded
Field edit application revised	July 1975	

* Field inspection and field edit completed in 1964 for T-12519 (chart 6442) 1:10,000 scale. Cronaflex copies enlarged 2X were paneled on this manuscript and details revised with 1966 "S" photography in June 1967.

(7)

Summary (PH-6712)

T-13151 is one of six 1:5,000 scale shoreline manuscripts prepared for photo-hydro support. These manuscripts orginated with PH-21411 (T-12519) compiled in April 1964 and field edited in September 1964.

PH-21411 was compiled at 1:10,000 scale and served as the base for [redacted]

COMPILATION REPORT
T-13151

This manuscript was compiled from a 2X enlargement of T-12519 (chart 6442) which was compiled in April 1964 and field edited in September 1964.

The enlargement on cronaflex was brought up to date graphically with 1:5,000 scale black and white cronapaque ratios of color photographs taken in July 1966. After corrections the cronaflex enlargement was paneled on 1:5,000 scale manuscripts and photographs were prepared for hydro support.

Refer to Descriptive Report for Chart Compilation of T-12519 (Chart 6442) of June 1963-September 1964.

31. Delineation

Graphic methods were used.

32. Control

There is an abundance of triangulation stations in the area of this manuscript.

33. Supplemental Data

None

34. Contours and Drainage

None

35. Shoreline and Alongshore Detail

The northeast corner of Harbor Island is still under construction and should be field edited. There was no field inspection of the 1966 photography. No low water or shoal lines were visible on the photographs.

36. Offshore Detail

No comment

37. Landmarks and Aids

Nine landmarks and 5 aids were abstracted from Form 567

of T-12519 (chart 6442) and listed on Form 567 for this manuscript.

38. Control for Future Surveys

None

39. Junctions

To the north with T-13149 in agreement. To the west with T-13150 in agreement. To the south with T-13152 in agreement. To the east with T-12519 (1:10,000) chart 6442 in agreement.

40. Horizontal and Vertical Accuracy

No comment

41. thru 45.

Inapplicable

46. Comparison with Existing Charts

Comparison was made with USGS quadrangle, Seattle North, 1949, 1:24,000 scale.

47. Comparison with Nautical Charts

A comparison was made with nautical chart No. 6442, scale 1:10,000, 2nd edition, August 8, 1966, corrected to Jan. 14, 1967.

Items to be applied to nautical charts immediately:
None

Items to be carried forward:
None

Submitted by:

Approved by:

J. C. Richter

K. N. Maki, Chief
Compilation Section

FIELD EDIT REPORT

MAP T-13151

Harbor Island

Field edit of map T-13151 was accomplished during September and October 1970 from a skiff in conjunction with photogrammetric signal location and from a launch during hydrography.

METHOD

Field photographs and a paper ozalid copy of the manuscripts were employed in the field in place of Field Edit Ozalids which were not provided. The mean high water line and shoreline detail were verified by visual comparison of the shore area to field photographs and ozalid manuscripts. Army Corps of Engineers 1:12,000 scale photographs of 19 September 1970 were also used during field edit. Notes have been made in violet ink on the field edit ozalid and cross referenced where necessary to matte ratio prints 66 S 3191A and 66 S 3192A and Army Corps of Engineers contact print S 7026-48-9. Unless otherwise indicated, all shoreline features are verified correct as interpreted.

ADEQUACY OF COMPILATION

Compilation of the map is inadequate. Considerable changes have been made in the area covered by the map as noted on the field edit ozalid and referenced photographs. Field inspection of the map is complete.

RECOMMENDATIONS

It is recommended that the map be revised in accordance with the field edit notes and be recompiled from Army Corps of Engineers photographs where significant changes in shoreline detail have occurred. It is recommended that the revised map be accepted as an advance manuscript.

Respectfully submitted,

Allan F. Divis

Allan F. Divis
LTJG, NOAA

Review Report T-13151
Shoreline Survey

July 1976

62. Comparison with Registered Topographic Surveys

T-12519 1:10,000 1964

Refer to memorandum page 12.

63. Comparison with Maps of Other Agencies

Refer to the Compilation Report, item 46.

64. Comparison with Contemporary Hydrographic Surveys

H-9167 1:5,000 1970
H-9169 1:5,000 1970

Comparison with H-9169 shows the surveys are in agreement except for one shoreline difference. This change is indicated in pencil on the smooth sheet. Comparison has been made with H-9167 and the surveys are in agreement.

65. Comparison with Nautical Charts

6442 1:10,000 1964

Refer to memorandum page 12.

66. Adequacy of Results and Future Surveys

This map meets horizontal accuracy standards but does not meet NOS requirements for use in nautical chart maintenance. Refer to page 12 of this Descriptive Report concerning the inadequacies of this map.

Submitted by:

JBPhillips

J. B. Phillips

Approved and Forwarded:

Chief, Photogrammetric Branch

Chief, Coastal Mapping Division

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

(12)

C3421

July 22, 1976

TO: Chief, Coastal Mapping Division

FROM: Quality Control Group

SUBJECT: Recommendation for New Mapping, Elliott Bay, Washington

1. Purpose

The memo outlines the need for a 2nd Edition of Map T-12519 (PH-21411), date 1964.

2. Background

Map T-12519, scale 1:10,000, was used in hydro operations in 1970. Six 1:5,000 scale maps (PH-6712), 2X enlargements of portions of the 1:10,000 scale map, were processed and revised with 1966 photography. Hydrography and field edit were accomplished in 1970.

3. Map Adequacy

For reasons outlined under Section 4, the six 1:5,000 scale maps do not meet NOS requirements for use in nautical chart maintenance. The inadequacies do not affect the basic hydrographic (sounding) information on the contemporary hydrographic surveys.

4. Map Deficiencies

Field edit of the 1:5,000 scale maps was inadequate. The field edit reports state that after revision of the maps with 1970 Corps of Engineers photography in areas indicated (by the editor) they will meet requirements. Many changes in shoreline and alongshore features, apparent on the photographs, were not noted by the editor. The photographs were generally poor for interpreting details and little clarification was done by the editor. Although the hydrographer corrected some photogrammetric survey details on the boat sheet, many changes, apparent on the 1970 photographs, were accepted as compiled from the 1966 photographs.

5. Disposition of 1:5,000 Scale Maps

The six 1:5,000 scale maps were reviewed in July 1976. Changes required in hydrographic survey details were called to the attention of the hydro survey reviewer by notes on the reviewed smooth sheet or by memo, as applicable.

6. Recommended Procedures

New bridging and basic compilation is recommended for the 2nd map

NOTE: The last complete investigation of landmarks and aids was done in 1963

SB

48. Geographic Names List

East Waterway
Elliott Bay
Harbor Island
West Waterway
Youngstown

Form 567
(10-15-56)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

T-13151

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED
~~TO BE DELETED~~ } STRIKE OUT TWO

Seattle, Washington July 19 67

I recommend that the following objects which have ~~not~~ been inspected from seaward to determine their value as landmarks be charted on ~~(deleted from)~~ the charts indicated.

The positions given have been checked after listing by Robert B. Melby October 11, 1963

Fred Natella, Capt., C&GS
Chief of Party.

STATE WASHINGTON

CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION LATITUDE* ° ′	LATITUDE* ″ D.M. METERS	LONGITUDE* ° ′	LONGITUDE* ″ D.P. METERS	DATUM	METHOD OF LOCATION AND SURVEY NO.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
TANK ✓	Fishers Mill Tall Tank,			31.626		20.023	N.A.			x			6449 6442
(elevated)	1917 Ht.=220 (232)		47 34	976.7	122 21	418.5	1927	Triang	9/20/63	x			6460 6446
TANK	Albers Tank, 1934			17.900		23.174	N.A.			x			6449 6460
(elevated)	Ht.=163 (166)		47 35	552.8	122 20	484.2	1927	Triang	9/27/63	x			6446 6450
(KJR)	Seattle, Radio Station KJR			55.981		41.827	N.A.			x	✓		6449 6442
R. TR.	Tower, 1936 Ht.=570(573)		47 34	1728.9	122 21	874.1	1927	Triang	9/27/63	x			6446 6460
(KOL) ✓	KOL Radio Tower, 1934			08.302		55.862	N.A.			x			6449 6450
R. TR.	Ht.=413 (420)		47 35	256.4	122 20	1167.2	1927	Triang	9/20/63	x			6446 6460
	Seattle, Elliott Bay Lumber			19.90		34.81	N.A.			x			6449 6442
STACK	Co. Stack, 1955 Ht=203 (208)		47 34	614.6	122 20	727.6	1927	Triang	9/27/63	x			6446 6460
KNBX ✓	Seattle, Radio Station KNBX			36.329		53.400	N.A.			x			6449 6442
R. TR.	1963 Skeleton Steel Ht=266 (273)		47 34	1122.0	122 21	1116.0	1927	Triang	10/9/63	x			6446 6460
STACK ✓	Diamond Cement, Stack 1929			06.355		27.100	N.A.			x			6449 6442
	Ht=202 (207)		47 34	196.3	122 20	566.4	1927	Triang	10/1/63	x			6446 6460
✓	Spokane Bridge, Red Lt. on			18.808		15.457	N.A.			x			6449 6442
W. TOWER	High West Power Tower, 1934		47 34	580.9	122 21	823.1	1927	Triang	9/20/63	x			6446 6460
	Ht=244 (256)												
✓	Spokane Bridge, Red Lt. on			18.803		06.150	N.A.			x			6449 6442
E. TOWER	High East Power Tower, 1934		47 34	580.7	122 21	128.5	1927	Triang	9/20/63	x			6446 6460
	Ht=244 (256)												

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

* TABULATE SECONDS AND METERS

USCOMM-DC 27126

(51)

Form 567
(10-15-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

T-13151

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED
[redacted]
TO [redacted]
} STRIKE OUT TWO

Seattle, Washington July 1967

I recommend that the following objects which have (~~have not~~) been inspected from seaward to determine their value as landmarks be charted on (~~deleted from~~) the charts indicated.

The positions given have been checked after listing by Robert B. Melby October 10, 1963

Fred Natella, Capt., C&GS
Chief of Party.

STATE Washington Lt. List No.

CHARTING NAME	DESCRIPTION	~~SIGNAL~~ NO.	POSITION LATITUDE* ° ′	″ D.M. METERS	LONGITUDE* ° ′	″ D.P. METERS	DATUM	METHOD OF LOCATION AND SURVEY NO.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
LIGHT	Todd Dock Light, 1963	2292	47 35	19.604 605.4	122 21	19.468 406.8	N.A. 1927	Triang	9/24/63	x x			6449 6450 6446 6460 6442
LIGHT	West Waterway Light, 1963	2293	47 35	17.127 529.0	122 21	25.443 631.6	N.A. 1927	Triang	9/24/63	x x			6449 6450 6446 6460 6442
*LIGHT	East Waterway Light, ?	2290	47 35	697.5	122 00	869.4	N.A. 1927						
**LIGHT	West Waterway Control Lts. (Spokane Bridge, Red Lt. on High West Power Tower, '34	2294	47 35 4/5	18.808 580.9	122 21	15.457 323.1	N.A. 1927	Triang	9/20/63	x x			6449 6442 6446 6460
HORN	East Waterway Ferry Slip Fog Signal	2291	47 35	22.811 74.05	122 20	41.466 866.4	N.A. 1927	Photo	9/23/63	x x			6449 6450 6446 6460

* Check for new position

**Also listed as landmark

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

* TABULATE SECONDS AND METERS

USCOMM-DC 27126

(91)

ORM 164
4-23-54)

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

DESCRIPTIVE REPORT — CONTROL RECORD

MAP T- 13151 PROJECT NO. PH-6712 SCALE OF MAP 1:5,000 SCALE FACTOR 1.0

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE / LONGITUDE OR x-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD	(BACK)	DATUM CORRECTION	N.A. 1927 - DATUM - DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD	(BACK)
PIER 42, 1944	pg.201		220,514.42						13,4425.9	
			1,629,426.28						99,3300.2	
*EAST WATERWAY LIGHT 1963			47° 35'	Hand Plot GPs			682.0			
			122° 20'				869.0			
ALBERS TANK 1934	pg. 53		218,233.77						13,3035.6	
			1,628,266.93						99,2593.5	
KOL RADIO TOWER 1934			217,305.45						13,2469.7	
			1,626,007.46						99,1216.1	
WEST WATERWAY LIGHT 1963	pg.388 Vol.11		218,239.49						13,3039.1	
			1,623,997.62						98,9990.9	
TODD DOCK LIGHT 1963	pg.388 Vol.11		218,482.01						13,3186.9	
			1,624,412.22						99,0243.6	
SEATTLE, RADIO STA. KJR TOWER 1936	pg.337		216,119.60						13,1746.8	
			1,622,832.24						98,9288.5	
SEATTLE, RADIO STA. KNBX TOWER 1963	pg.389 Vol.11		214,144.16						13,0542.5	
			1,621,999.01						98,8772.5	
SEATTLE, ELLIOTT BAY LUMBER CO. STACK 1955-63	pg.389 Vol.11		212,374.08						12,9463.5	
			1,627,354.44						99,2037.2	
SPOKANE BRIDGE R.LT. HIGH W. POWER TOWER '34	pg. 55		212,318.03						12,9429.3	
			1,624,565.31						99,0337.0	
*HIGH EAST (RED LT) POWER TOWER 1934	pg. 55		212,304.92						12,9421.3	
			1,625,203.37						99,0725.9	
STACY STREET TANK 1917	pg.127		215,578						13,1416.6	
			1,628,391						99,2669.1	

1 FT. = .3048006 METER

COMPUTED BY: J. Richter DATE April 1967 CHECKED BY: H. Lucas DATE April 1967

COMM-DC-57843

ORM 164
4-23-54)

U.S. DEPARTMENT OF COMMERCE
DESCRIPTIVE REPORT
COAST AND GEODETIC SURVEY
CONTROL RECORD

MAP T- 13151 PROJECT NO. PH-6712 SCALE OF MAP 1:5,000 SCALE FACTOR 1.0

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE / LONGITUDE OR x-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
FISHERS MILL TANK 1917	pg. 54		213,622.73				13,0224.7
			1,624,277.97				99,0161.8
DIAMOND CEMENT CO. STACK 1929	pg. 55		210,991.25				12,8620.5
			1,627,855.86				99,2342.9
W. SEATTLE STANDPIPE 1929	pg. 56		211,808.80	on T-13150			12,9118.9
			1,618,032.69				98,6354.7
BRONSON, 1963	pg.384 Vol.11		217,723.01				13,2724.2
			1,619,658.84				98,7356.0

1 FT. = .3048006 METER

COMPUTED BY J. Richter DATE April 1967 CHECKED BY H. Lucas DATE April 1967

COMM-DC-57843

FORM 163
(4-27-54)

TIDE COMPUTATION

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

PROJECT NO. Ph- 6712 T-13151

Time and date of exposure 7/26/66 12:36 Reference station Seattle, Washington Mean range 7.6 Diurnal

Date of field inspection ______ Subordinate station ______ Ratio of ranges 11.3

	Time h. m.
High tide	13:24
Low tide	6:12
Duration of rise or fall	7:12

	Height feet	Height x Ratio of ranges
High tide	9.0	
Low tide	0.2	
Range of tide	8.8	

	Time h. m.
High tide at Ref. Sta.	13:24
Time difference	0
Corrected time at Subordinate station	13:24

	Time h. m.
Low tide at Ref. Sta.	6:12
Time difference	0
Corrected time at Subordinate station	6:12

	h. m.		feet		feet	Photo. No.
Time H. T. or L. T.	13:24	Ht. H. T. or L. T.	9.0	Feature bares		
Required time	12:36	Tabular correction	0.2	Stage of tide above MLW		
Interval	:48	Stage of tide above MLW	8.8	Feature above MLW		66-S-3193A
Time H. T. or L. T.	13:24	Ht. H. T. or L. T.	9.0	Feature bares		
Required time	12:45	Tabular correction	0.2	Stage of tide above MLW		
Interval	:39	Stage of tide above MLW	8.8	Feature above MLW		66-S-3206A
Time H. T. or L. T.		Ht. H. T. or L. T.		Feature bares		
Required time		Tabular correction		Stage of tide above MLW		
Interval		Stage of tide above MLW		Feature above MLW		
Time H. T. or L. T.		Ht. H. T. or L. T.		Feature bares		
Required time		Tabular correction		Stage of tide above MLW		
Interval		Stage of tide above MLW		Feature above MLW		
Time H. T. or L. T.		Ht. H. T. or L. T.		Feature bares		
Required time		Tabular correction		Stage of tide above MLW		
Interval		Stage of tide above MLW		Feature above MLW		
Time H. T. or L. T.		Ht. H. T. or L. T.		Feature bares		
Required time		Tabular correction		Stage of tide above MLW		
Interval		Stage of tide above MLW		Feature above MLW		

COMM-DC-57848

Computed by J. C. Richter Checked by ______

19