

TP-01295

TP-01295

NOAA FORM 76-35  
(6-80)U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

## DESCRIPTIVE REPORT

THIS MAP EDITION WILL NOT BE FIELD EDITED

Map No.

TP-01295

Edition No.

1

Job No.

CM-8317

Map Classification

CLASS III FINAL

Type of Survey

SHORELINE

## LOCALITY

State

HAWAII

General Locality

BARBERS POINT TO MAKAPUU POINT

Locality

SAND ISLAND

1986 TO 19

REGISTERED IN ARCHIVES

DATE

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.					
<b>DESCRIPTIVE REPORT - DATA RECORD</b>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">           TYPE OF SURVEY  <input checked="" type="checkbox"/> ORIGINAL  <input type="checkbox"/> RESURVEY  <input type="checkbox"/> REVISED         </td> <td style="width: 50%;">           SURVEY TP. <u>01295</u>             MAP EDITION NO. <u>(1)</u>            MAP CLASS <u>III Final</u>            JOB <u>CM-8317</u> </td> </tr> </table>		TYPE OF SURVEY <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	SURVEY TP. <u>01295</u>  MAP EDITION NO. <u>(1)</u> MAP CLASS <u>III Final</u> JOB <u>CM-8317</u>		
TYPE OF SURVEY <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	SURVEY TP. <u>01295</u>  MAP EDITION NO. <u>(1)</u> MAP CLASS <u>III Final</u> JOB <u>CM-8317</u>						
PHOTOGRAMMETRIC OFFICE Coastal Mapping Unit Atlantic Marine Center, Norfolk, VA OFFICER-IN-CHARGE C. Dale North, Jr.		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;"> <b>LAST PRECEDING MAP EDITION</b> </td> </tr> <tr> <td style="width: 50%;">           TYPE OF SURVEY  <input type="checkbox"/> ORIGINAL  <input type="checkbox"/> RESURVEY  <input type="checkbox"/> REVISED         </td> <td style="width: 50%;">           JOB PH. _____            MAP CLASS _____            SURVEY DATES:            19__ TO 19__         </td> </tr> </table>		<b>LAST PRECEDING MAP EDITION</b>		TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	JOB PH. _____ MAP CLASS _____ SURVEY DATES: 19__ TO 19__
<b>LAST PRECEDING MAP EDITION</b>							
TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	JOB PH. _____ MAP CLASS _____ SURVEY DATES: 19__ TO 19__						
<b>I. INSTRUCTIONS DATED</b>							
<b>1. OFFICE</b>		<b>2. FIELD</b>					
Aerotriangulation                      April 3, 1987 Compilation                              October 2, 1987		Control                                      May 17, 1987					
<b>II. DATUMS</b>							
1. HORIZONTAL: <input type="checkbox"/> 1927 NORTH AMERICAN		OTHER (Specify) Old Hawaiian Datum					
2. VERTICAL: <input checked="" type="checkbox"/> MEAN HIGH-WATER <input type="checkbox"/> MEAN LOW-WATER <input type="checkbox"/> MEAN LOWER LOW-WATER <input type="checkbox"/> MEAN SEA LEVEL		OTHER (Specify)					
3. MAP PROJECTION Transverse Mercator Projection		4. GRID(S) <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">STATE Hawaii</td> <td style="width: 50%;">ZONE 3</td> </tr> </table>		STATE Hawaii	ZONE 3		
STATE Hawaii	ZONE 3						
5. SCALE 1:5,000		STATE                                      ZONE					
<b>III. HISTORY OF OFFICE OPERATIONS</b>							
<b>OPERATIONS</b>		<b>NAME</b>	<b>DATE</b>				
1. AEROTRIANGULATION                      BY METHOD: Analytic                      LANDMARKS AND AIDS BY		B. Thornton	Apr. 1987				
2. CONTROL AND BRIDGE POINTS                      PLOTTED BY METHOD: Kongsburg Plotter                      CHECKED BY		B. Thornton D. Norman	Apr. 1987 Apr. 1987				
3. STEREOSCOPIC INSTRUMENT                      PLANIMETRY BY COMPILATION                      CHECKED BY INSTRUMENT: Wild B-8                      CONTOURS BY SCALE: 1:5,000                      CHECKED BY		R. Kravitz F. Mauldin N.A. N.A.	Oct. 1987 Oct. 1987  				
4. MANUSCRIPT DELINEATION                      PLANIMETRY BY CHECKED BY METHOD: Smooth Drafted                      CONTOURS BY CHECKED BY SCALE: 1:5,000                      HYDRO SUPPORT DATA BY CHECKED BY		R. Kravitz F. Mauldin N.A. N.A. R. Kravitz F. Mauldin	Nov. 1987 Dec. 1987   Nov. 1987 Dec. 1987				
5. OFFICE INSPECTION PRIOR TO Final Review                      BY		F. Mauldin	Dec. 1987				
6. APPLICATION OF FIELD EDIT DATA                      BY CHECKED BY		N.A. N.A.	 				
7. COMPILATION SECTION REVIEW      Class III                      BY		F. Mauldin	Dec. 1987				
8. FINAL REVIEW                      Class III                      BY		L. O. Neterer, Jr.	Feb. 1989				
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH                      BY		L. O. Neterer, Jr.					
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH                      BY		P. Dempsey	June 1989				
11. MAP REGISTERED - COASTAL SURVEY SECTION                      BY							

## COMPILATION SOURCES

## 1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC 10 (B) (B = 152.21mm)		TYPES OF PHOTOGRAPHY LEGEND (C) COLOR (P) PANCHROMATIC (I) INFRARED		TIME REFERENCE ZONE 7th Hawaii-Aleutian MERIDIAN 150° W	
TIDE STAGE REFERENCE <input type="checkbox"/> PREDICTED TIDES <input checked="" type="checkbox"/> REFERENCE STATION RECORDS <input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY				<input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> DAYLIGHT	
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
86 B(C) C113-C116	03-09-86	03:59	1:15,000	1.3 ft. above MLLW	
86 B(C) C132-C136	03-09-86	04:18	1:15,000	1.3 ft. above MLLW	
Mean Tide Range = 1.5 ft.					

## REMARKS

Stage of tide for all photographs was based on reference station records for the staff at Honolulu, Hawaii.

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

The mean high-water line was compiled from office interpretation of the above listed compilation/bridging photographs using stereo instrument methods.

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

There was no mean lower low-water line compiled on this map.

## 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	EAST	SOUTH	WEST
No Survey	TP-01301	No Survey	TP-01298 1:10,000

## REMARKS

NOAA FORM 76-36C  
(3-72)

U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

TP-01295

HISTORY OF FIELD OPERATIONS

FIELD OPERATIONS

FIELD OPERATIONS

[REDACTED]



JOB CM-8317

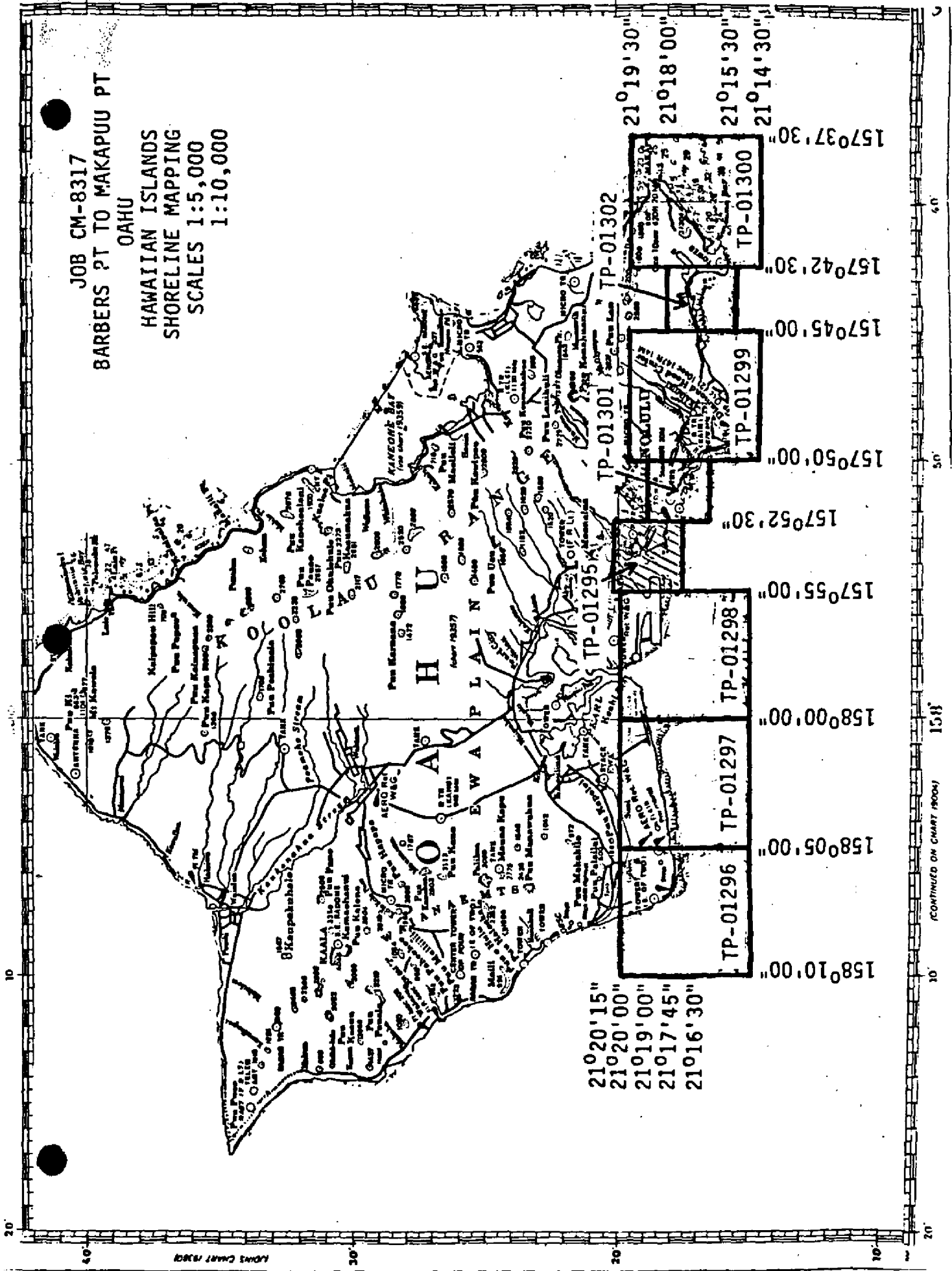
BARBERS PT TO MAKAPUU PT

OAHU

HAWAIIAN ISLANDS  
SHORELINE MAPPING

SCALE 1:5,000

1:10,000



SUMMARY TO ACCOMPANY  
DESCRIPTIVE REPORT

TP-01295

This 1:5,000 scale map is one of eight maps in Project CM-8317, Barbers Point to Makapuu Point, Oahu, Hawaii. The project extends from longitude 157° 37' 30" to longitude 158° 10' 00" along the southern coastline of the island of Oahu.

Photographic coverage was provided in March 1986 with color film at 1:15,000 scale using a Wild RC 8 "B" camera (focal length 152.21 millimeters).

Field work prior to compilation was accomplished during November 1986. It consisted of photoidentification of the horizontal control stations to satisfy aerotriangulation requirements.

Analytic aerotriangulation was performed at the Washington Science Center in April 1987.

Compilation was performed at the Atlantic Marine Center, from office interpretation of the 1:30,000 scale color photography in December 1987.

Final review was accomplished at the Atlantic Marine Center in February 1989. A Chart Maintenance Print for the Marine Chart Branch and Notes to the Hydrographer Print for the Hydrographic Branch were prepared and forwarded.

This map is to be registered as a Class III, Final Map.

The original base manuscript and all pertinent data were forwarded to the Washington Science Center for final registration.

AEROTRIANGULATION REPORT  
CM-8317  
BARBERS PT. TO MAKAPUU PT.  
OAHU, HAWAII

APRIL 1987

21. AREA COVERED

This shoreline mapping project covers the southern part of the island of Oahu, Hawaii, from Barbers Pt. to Makapuu Pt. There are five sheets at 1:10,000 scale and three sheets at 1:5,000 scale that cover the job area. The sheets are numbered TP-01295 through TP-01302.

22. METHOD

Two strips of 1:30,000-scale photographs: 86-B-C052 to C063, 86-B-C092 to C100, and two strips of 1:15,000-scale photographs: 86-B-C113 to C122, 86-B-C131 to C141 were bridged by analytical aerotriangulation methods and adjusted to ground using photo-identified field control. Office identified intersection stations were used as checks.

Compilation points were placed on four additional strips of photographs not used for bridging:

86-A-C002 to C004	1:30,000 scale
86-B-C103 to C105	1:30,000 scale
86-B-C072 to C077	1:15,000 scale
86-B-C084 to C086	1:15,000 scale

Tie points were used to ensure adequate junctions of all strips and were used as supplemental control.

Ratio values were determined for the bridging, and where needed, compilation photographs.

A magnetic tape was generated for plotting base manuscripts on the Kongsburg plotter. Bridged points were based on the Hawaiian Islands, Zone 3 Coordinate System and referenced to the Transverse Mercator projection.

Two each of the eight base manuscripts have been ruled as per Aerotriangulation Instructions.



23. ADEQUACY OF CONTROL

The control for this project is adequate for the job and meets the National Ocean Service's requirements. A listing of closures to control is attached.

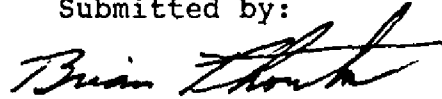
24. SUPPLEMENTAL DATA

USGS topographic quadrangles were used to obtain vertical control for bridging.

25. PHOTOGRAPHY

The coverage, overlap, and quality of the photographs were adequate for the job.

Submitted by:



Brian Thornton

Approved and Forwarded:

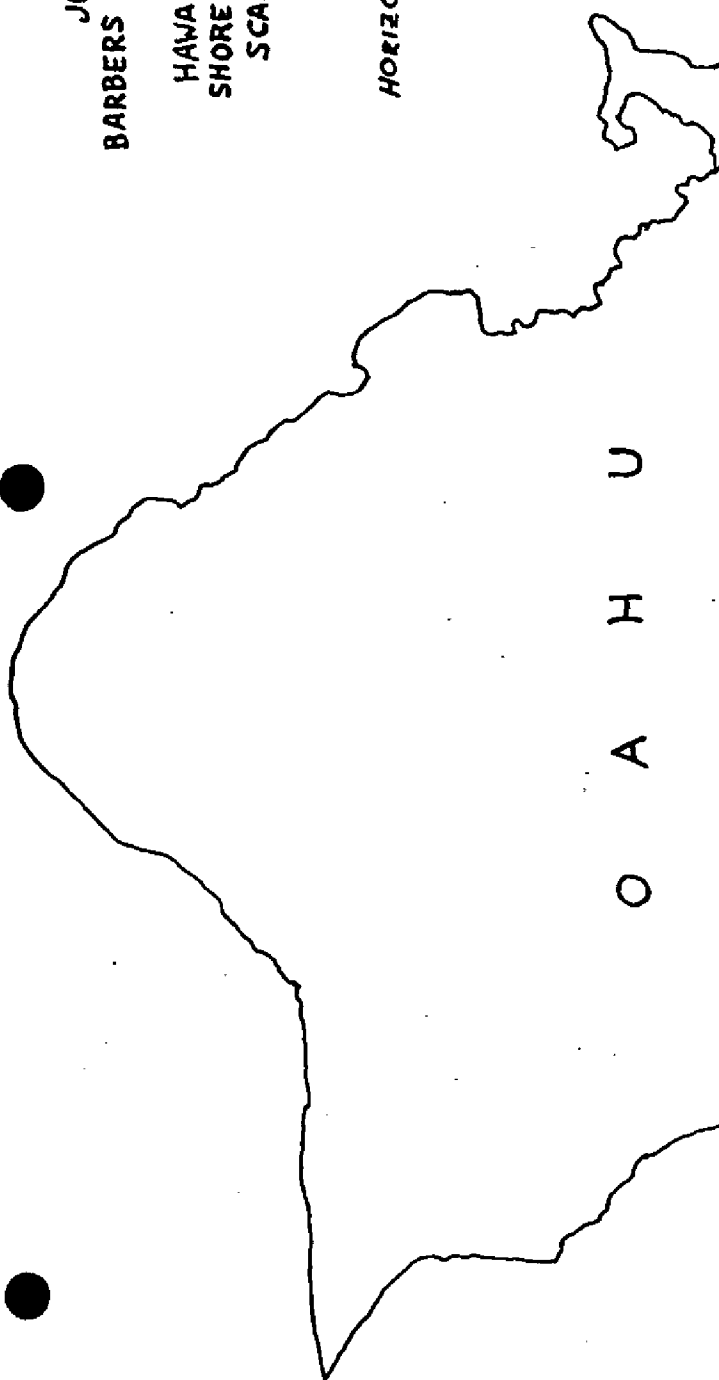


Don O. Norman  
Chief, Aerotriangulation Unit

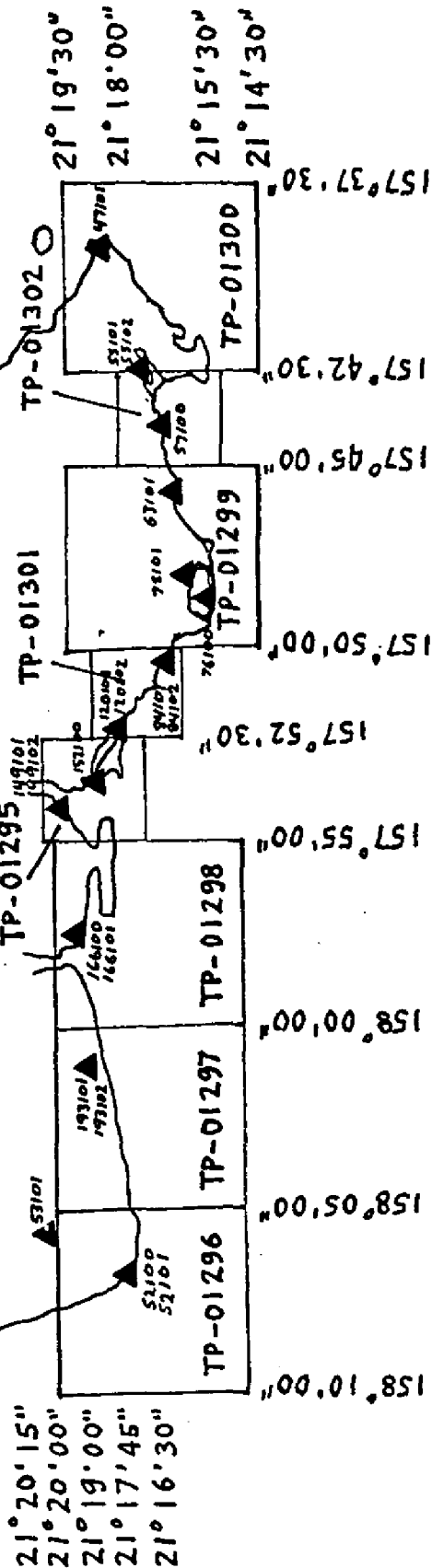
JOB CM-8317  
 BARBERS PT TO MAKAPUU PT

OAHU  
 HAWAIIAN ISLANDS  
 SHORELINE MAPPING  
 SCALES 1:5,000  
 1:10,000

HORIZONTAL CONTROL



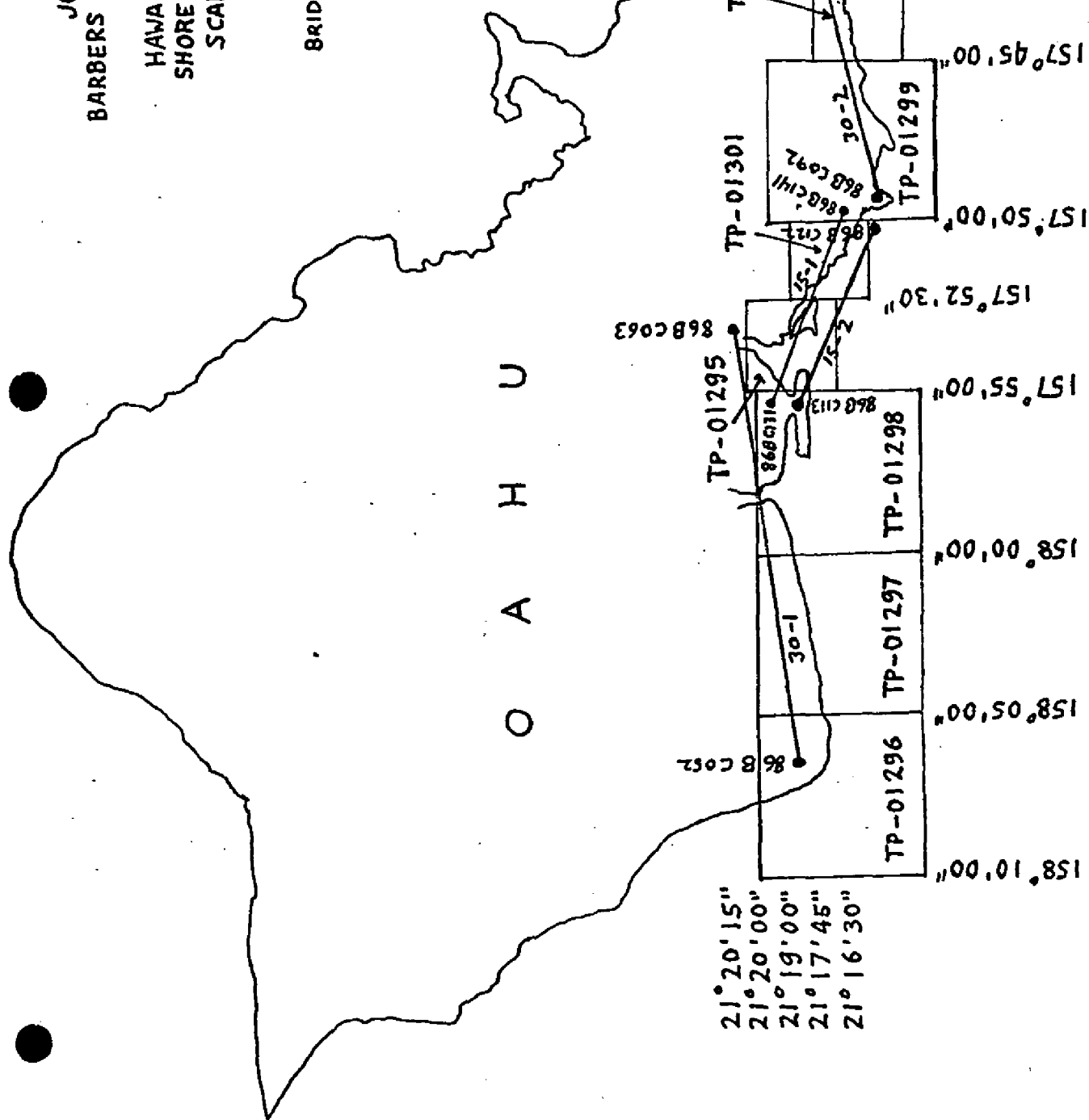
O A H U



JOB CM-8317  
BARBERS PT TO MAKAPUU PT

OAHU  
HAWAIIAN ISLANDS  
SHORELINE MAPPING  
SCALES 1:5,000  
1:10,000

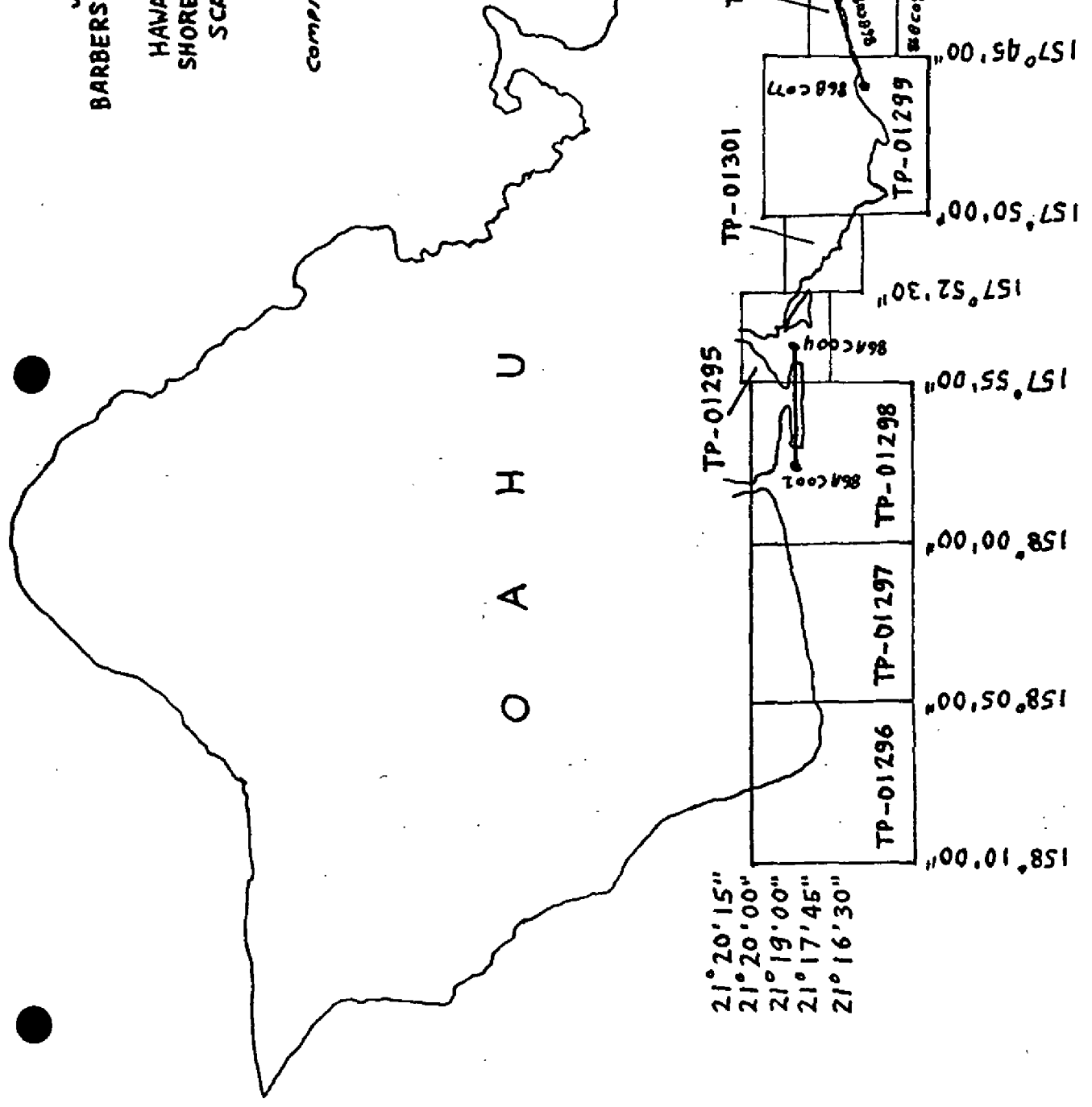
BRIDGING PHOTOGRAPHS



JOB CM-8317  
 BARBERS PT TO MAKAPUU PT

OAHU  
 HAWAIIAN ISLANDS  
 SHORELINE MAPPING  
 SCALES 1:5,000  
 1:10,000

COMPILATION PHOTOGRAPHS



## FIT TO CONTROL

△ = Control point held in adjustment

□ = Tie point held in adjustment

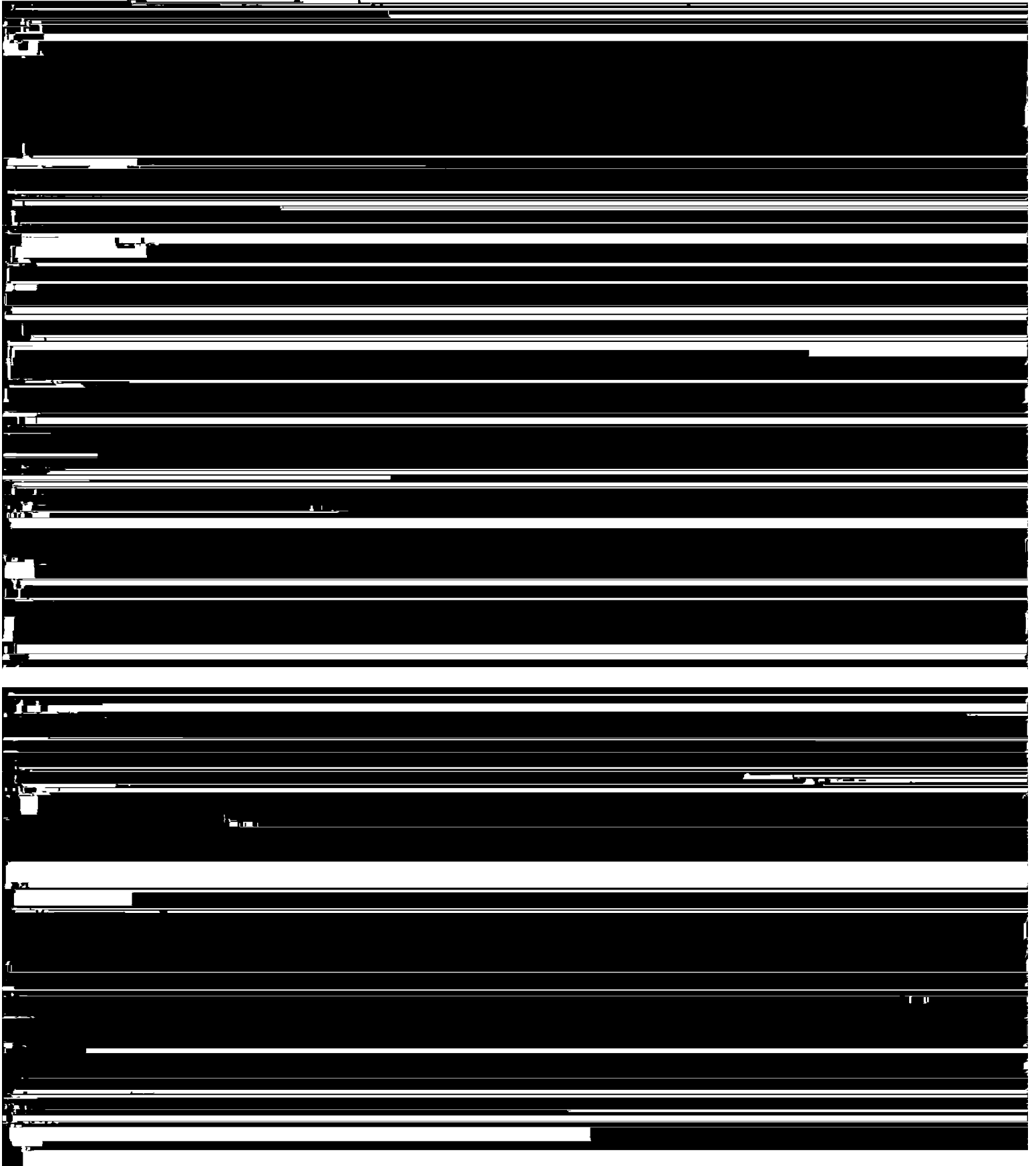
STRIP #30-1

	<u>STATION NAME</u>	<u>POINT NO.</u>	<u>VALUES IN FEET</u>	
			X	Y
	Barbers Pt. Lighthouse New, 1933	52100	-0.9	-1.6
△	Barbers Pt. Lighthouse Sub			
	Pt. 1A	52101	-1.0	0.6
△	State Survey 9-3, 1969 Sub			
	Pt. 1B	53101	1.1	-1.1
	Barbers Pt. NAS Base Control			
	Twr. Beacon	226110	-2.2	0.2
	30188, 1973 Sub Pt. 2A	193101	-4.6	-5.2
△	30188, 1973 Sub Pt. 2B	193102	-1.1	-1.7
	Ft. Kamehameha Flagstaff, 1925	166100	2.0	1.0
	Ft. Kamehameha Flagstaff Sub			
	Pt. 3A	166101	1.3	3.4
	Pearl Harbor Water Tank B,			
	1925	188110	-1.4	-0.2
	Pearl Harbor Escape Training			
	Tower	181110	-0.7	4.7
	Honolulu Inter. Airport			
	Control Twr. Beacon '64	158110	-1.0	0
	Honolulu Moanalua Water Tank,			
	1957	183110	-1.7	2.2
	Aliamanu Honolulu Board of			
	Water Supply Tank, '69	184110	-0.7	-0.7
△	State Survey 1-13, 1969 Sub			
	Pt. 4A	149101	1.7	0.4
△	State Survey 1-13, 1969 Sub			
	Pt. 4B	149102	-2.0	-1.6

STRIP #30-2

△	State Survey 3-5, 1969 Sub			
	Pt. 7A	75101	2.8	-2.0
	Diamond Head Lighthouse, 1925	76100	3.8	-8.5
	Honolulu Sac. Heart Acad. Cross	89110	-3.0	1.7
	Tie from Strip #15-1	140801	-3.2	2.5
□	Tie from Strip #15-1	140802	-2.0	2.5
	Tie from Strip #15-1	140803	-1.8	2.6

△ State Survey 3-6, 1969



RATIO VALUES  
CM-8317

1:30,000-scale color bridging photographs:

86-B-C052 to C063 Ratio 3.118  
86-B-C092 to C100 Ratio 3.132

1:15,000-scale color bridging photographs:

86-B-C131 to C141 Ratio 3.112  
86-B-C113 to C122 Ratio 3.104

1:30,000-scale color compilation photographs:

86-A-C002 to C004 Ratio 3.100

1:15,000-scale color compilation photographs:

86-B-C072 to C077 Ratio 3.100  
86-B-C084 to C086 Ratio 3.100





## COMPILATION REPORT

TP-01295

31. DELINEATION:

Delineation was accomplished using Wild B-8 stereo instrument compilation methods. Instrument compilation was used to delineate shoreline, alongshore, and interior detail based upon office interpretation of the 1:15,000 scale bridging/compilation color photographs.

All photographs used to compile this map are listed on NOAA form 76-36B. The photography was adequate. There were no mean lower low water infrared photographs for this project.

32. CONTROL:

The horizontal control was adequate. Refer to the Aerotriangulation Report, dated April 1987.

33. SUPPLEMENTAL DATA:

None.

34. CONTOURS AND DRAINAGE:

Contours are not applicable to this project. Drainage was compiled from office interpretation of the photographs.

35. SHORELINE AND ALONGSHORE DETAILS:

The mean high water line was compiled from office interpretation of the bridging/compilation photographs. The shoreline compiled was the visible line of contact between land features and the water surface at the time of photography.

There was no mean lower low water line compiled on this map.

36. OFFSHORE DETAILS:

Offshore detail was compiled by instrument methods using the 1:15,000 scale bridging/compilation color photographs as described in item #31.

TP-01295

37. LANDMARKS AND AIDS:

There are five charted landmarks and fourteen charted aids to navigation within the limits of this map. Among these, two landmarks and thirteen aids were located/verified photogrammetrically.

38. CONTROL FOR FUTURE SURVEYS:

None.

39. JUNCTIONS:

Refer to the Data Record Form 76-36B, item 5, of the Descriptive Report.

40. HORIZONTAL AND VERTICAL ACCURACY:

See item #32.

46. COMPARISON WITH EXISTING MAPS:

A comparison was made with the following U.S. Geological Survey Quadrangles:

Pearl Harbor, Hawaii; dated 1983; scale 1:24,000  
Honolulu, Hawaii; dated 1983; scale 1:24,000

47. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with the following National Ocean Service charts:

19013; 13th edition; dated February 12, 1983; scale 1:675,000  
19357; 17th edition; dated October 15, 1983; scale 1:80,000  
19364; 20th edition; dated January 12, 1985; scale 1:20,000  
19367; 33rd edition; dated April 12, 1986; scale 1:5,000

TP-01295

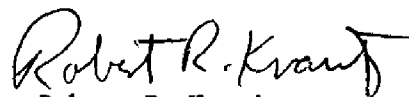
ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY:

None.

ITEMS TO BE CARRIED FORWARD:

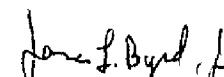
None.

Submitted by:



Robert R. Kravitz  
Cartographic Technician  
November 13, 1987

Approved:



James L. Byrd, Jr.  
Chief, Coastal Mapping Unit

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-8317 (Oahu, Hawaii)

TP-01295

Honolulu

Honolulu International Airport

Iwilei

Kahakaaulana Island

Kalihi Channel

Kalihi Kai

Kalihi Stream

Kapalama

Kapalama Basin

Kapalama Drainage Canal

Keehi Lagoon

Mamala Bay

Moanalua Stream

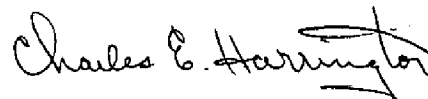
Mokauea Island

Mokuoee Island

Oahu

Sand Island

Approved:



Charles E. Harrington  
Chief Geographer  
Nautical Charting

Division

REVIEW REPORT  
SHORELINE

TP-01295

61. GENERAL STATEMENT

See Summary included with this Descriptive Report.

The Office Instructions were executed as indicated in paragraph 2.1 with reference to the Old Hawaiian horizontal datum. Reference to the horizontal North American Datum 1927 in paragraphs 4.5 and 4.6 of the Aerotriangulation Instructions and paragraphs 2.6 and 5.2.3 of the Office Instructions were inapplicable and were ignored.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Not applicable.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

A comparison was made with the following USGS quadrangles:

HONOLULU, HAWAII, dated 1983, scale 1:24,000 and  
PEARL HARBOR, HAWAII, dated 1983, scale 1:24,000.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

There is no contemporary hydrographic survey within the limits of this map.

65. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with the following nautical charts:

19013, 13th edition, dated February 12, 1983, scale  
1:675,000  
19357, 17th edition, dated October 15, 1983, scale  
1:80,000  
19364, 20th edition, dated January 12, 1985, scale  
1:20,000  
19367, 33rd edition, dated April 12, 1986, scale  
1:5,000.

TP-01295

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

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

Submitted by:

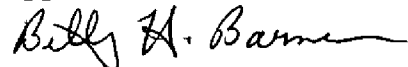


Lowell O. Neterer, Jr.

Final Reviewer

February 1989

Approved for Forwarding:



Billy H. Barnes

Chief, Quality Assurance Group

Approved:

Chief, Photogrammetric  
Production Section

Chief, Photogrammetry Branch

# CARTOGRAPHIC FEATURES OF POSSIBLE LANDMARK VALUE LISTING

Page 1 of 2

PROJECT: CM-8317

MAP NUMBER (Scale); Locality: TP-01295; 1:10,000; Barbers Point  
to Makapuu Point, Oahu, Hawaii

GEODETIC DATUM: Old Hawaiian Datum

The following cartographic features have been identified as being of possible landmark value. These features have been identified and measured during photogrammetric operations. Refer to Nautical Charting Division Standard Digital Data Exchange Format documentation for quality code (QC) criteria and clarification of cartographic codes (CC).

FEATURE DESCRIPTION	NCD CC	GEOGRAPHIC POSITION°-'-"		NCD Q.C.	DATE OF LOCATION
		LATITUDE	LONGITUDE		
KALIHU CHANNEL					
ARTICULATED LIGHT 5	200	21 18 09.76	157 53 59.57	4	03-09-86
LIGHT 6	200	21 18 08.61	157 53 54.91	4	03-09-86
LIGHT 8	200	21 18 27.59	157 53 52.41	4	03-09-86
LIGHT 7	200	21 18 28.66	157 53 57.27	4	03-09-86
LIGHT 12	200	21 18 40.72	157 53 47.10	4	03-09-86
LIGHT 13	200	21 18 43.99	157 53 51.23	4	03-09-86
RANGE FRONT LIGHT	208	21 18 43.85	157 53 52.82	4	03-09-86
RANGE REAR LIGHT	209	21 19 03.88	157 53 50.18	4	03-09-86
LIGHT 16	200	21 18 48.61	157 53 41.71	4	03-09-86
LIGHT 17	200	21 18 58.91	157 53 46.99	4	03-09-86
LIGHT 20	200	21 18 57.42	157 53 33.11	4	03-09-86
LIGHT 19	200	21 19 02.67	157 53 36.24	4	03-09-86
KECHI LAGOON BARGE CHANNEL					
RANGE FRONT LIGHT	208	21 19 59.20	157 54 07.80	7	03-09-86

Listing approved by:

*Lowell A. Heter*  
FINAL REVIEWER

*April 4, 1989*  
DATE

## TP-01295

[illegible]

Listing approved by:

FINAL REVIEWER

DATE \_\_\_\_\_



