STATISTICAL PLANNING DATA AIR TRANSPORTATION IN HAWAII

-- JANUARY 1950 --

PREPARED BY

AIRPORTS BRANCH

CIVIL AERONAUTICS ADMINISTRATION
NINTH REGION HONOLULU, T. H.

CIVIL AERONAUTICS ADMINISTRATION STATISTICAL PLANNING DATA

NINTH REGION HONOLULU, T. H.

PREFACE

The purpose of this pamphlet is to consolidate under one cover considerable factual data, charts, graphs and tabulations which have recently been prepared and required as a result of a growing demand for additional air transportation facilities in Hawaii and the need of facts and figures to properly evaluate and plan the needed facilities on a sound and long range basis.

In addition to the general interest topics contained herein, these studies and comparisons serve most beneficially as the basic foundation upon which current and future plans may be laid for the development of aviation in Hawaii within the foreseeable future.

Such factors as population density, land use, and economic stability within the island group are mutually dependent upon two important considerations. These are abundance of potable water supply and transportation facilities.

The Territory of Hawaii is in a unique position with regard to its modes of transportation. The fact that Hawaii is a chain of islands makes impossible the flexible type of surface transportation available in mainland communities which can depend upon rail and highway transit of their residents and commodities.

For many years the only inter-island transportation service was the steamship; and thus, natural or easily modified all-weather seaports were the primary attribute to growing community centers. This has resulted in the present development of the Port of Honolulu, on the Island of Oahu, as the terminal point for transportation services between the Territory and the rest of the world. The City of Honolulu is the center of governmental administration, both territorial and federal. It is also the center of recreation and the clearing house for practically all of the island commerce. All other communities are basically agricultural trade centers, and are, under present conditions, entirely dependent upon adequate transportation service to and from Honolulu.

The many years of dependence upon water surface transportation has established the present pattern of island commerce, population distribution and general land use. The lack of efficient point-to-point transportation was the greatest limiting factor to island trade and development. Availability of air transportation in the islands has greatly alleviated this need, and today serves equally in importance with its surface predecessor.

The direct benefits resulting from available air commerce can best be shown by comparative graphs and tabulations on the following pages. These benefits can be summarized as follows:

- a. Increased and more efficient land use and resultant appreciation.
- b. Internal economic stability with less dependence upon mainland commodities.
- c. Reduced time lag involved in all inter-island and island-mainland business transactions.
- d. Reduced point-to-point transportation costs, and more efficient handling of import and export commodities.
- e. Tendency toward ultimate decentralization of congested trade and population centers which heretofore were the natural outgrowth of limited seaport facilities.

For all purposes of sound planning for the necessary development of air transportation facilities, which must in this instance augment surface water movements and completely fulfill the alternate requirements normally satisfied by rail and highway service, consideration should be given to the trends which have been developed in the following outline.

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PART ONE

AIR COMMERCE IN HAWAII

SECTION A. -- PASSENGER TRAFFIC AND RELATED STATISTICS.

1. According to the statistical data compiled from C.A.B. Form 41, Schedule B-5, for the Fiscal Year 1948, passenger travel in the Hawaiian Islands ranks with that of the following nine states:

Location	No. of enplaned passengers (Scheduled operations only)
New York	1,788,091
California	1,322,517
Illinois	1,038,683
Texas	951,167
Ohio	594,683
Florida	527,001
Missouri	445,067
Massachusetts	441,699
Michigan	435,213
TERRITORY OF HAWAII	415,179

2. Also noteworthy, is the fact that revenue passengers departing from Territorial airports were comparable in number during this period to the aggregate total passengers departing from all airports in the following states:

Maine	Arkansas	
Rhode Island	Mississippi	
New Hampshire	North Dakot	
Vermont	South Dakota	
Connecticut	Wyoming	
New Jersey	Idaho	
Delaware	Nevada	
West Virginia		

NOTE: The aggregate of recorded passenger departures from all airports in these fifteen states was 437,752. For HAWAII the total was 445,605.

3. On the basis of revenue passengers carried by scheduled airlines only, Honolulu ranks with the top fifteen cities in the United States, including Washington, D. C. A transcript of C.A.B. statistics shown below lists each of these cities according to traffic volume of enplaned passengers.

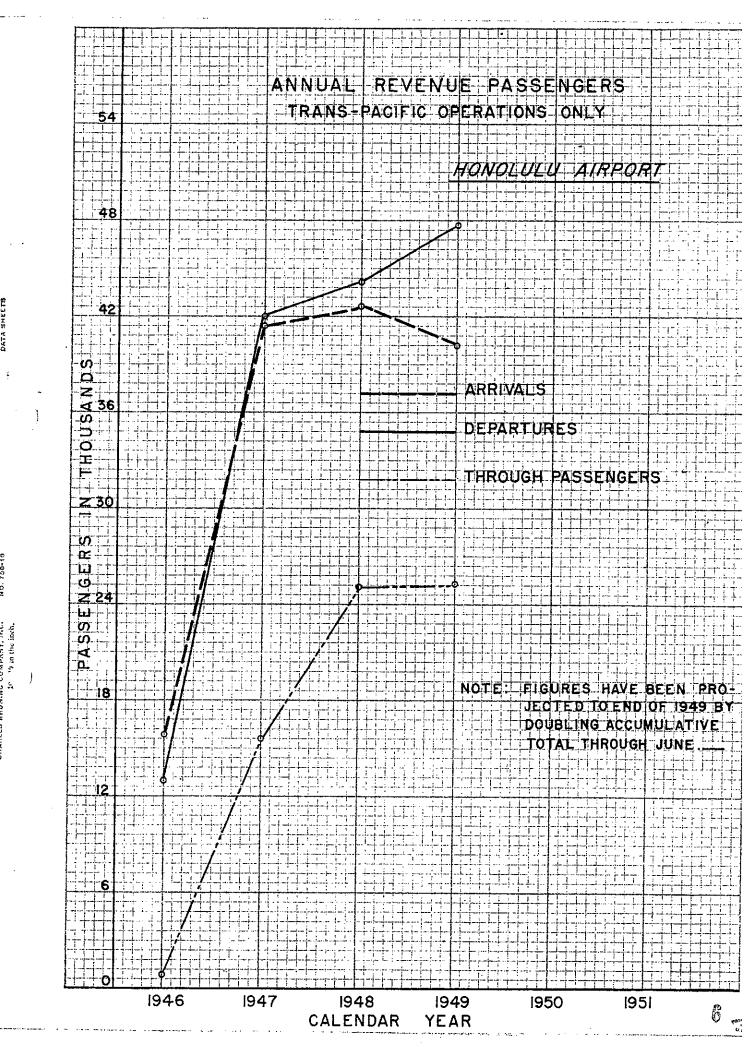
	No. of Enplaned Passengers
City and State	(For Fiscal Year 1948)
· · · · · · · · · · · · · · · · · · ·	• • • • • • • • • • • • • • • • • • • •
New York, N. Y.	1,495,664
Chicago, Illinois	1,010,910
Los Angeles, Calif.	607,139
Washington, D. C.	<i>5</i> 74 , 280
San Francisco, Calif.	509,401
Boston, Mass.	394,574
Dallas, Texas	361,030
Detroit, Mich.	349,416
Miami, Fla.	265,787
Atlanta, Ga.	250,527
Cleveland, Ohio	244,863
Seattle, Wash.	237,344
Pittsburgh, Penn.	233,513
Minneapolis, Minn.	230,934
Kansas City, Mo.	220,636
HONOLULU, T. H.	211,043

TABLE OF ENPLANED PASSENGERS (Fiscal Year 1948)

FOR HONOLULU AIRPORT	Total	Scheduled	Non-Scheduled	% of Total
Local Departures	181,728	167,316	14,412	7.930
Trans-Pacific	44,192	43,727	465	1.052
Total	225,920	211,043	14,877	6.585
Thru Passengers	32,160	24,705	7,455	2.318
Total, All Flights	258,080	235,748	22,332	8.653
ALL TERRITORIAL AIRPO	RTS			
Local Departures Trans-Pacific Total Thru Passengers Total, All Flights	401,413	371,452	29,961	7.464
	44,192	43,727	465	1.052
	445,605	415,179	30,426	6.828
	32,160	24,705	7,455	2.318
	477,765	439,884	37,881	7.928

	INTER-IS	LAND PASSENGER T	RAFFIC	
	DENSIT	Y BETWEEN AIRP	URID	
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	FOR THE F	ERIOD JAN THRU JUNE	, 1949-	
				% OF TOTAL
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			PASSENGERS	PASSENGERS
			AV. MONTH	
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		HONOLULU-GENL LYMAN	8541	29.0
	(2)	HONOLULU-MAUI	6598	22.5
	3	HONOLULU-BARKING SANDS	5306	18.0
		HONOLULU-MOLOKAL	2152	7.5
			++1±1-1	
		HONOLULU-PORT ALLEN	1525	5.0
	(6)	HONOLULU-LANAI	1126	4.0
▊				
)	(7)	GENL. LYMAN MAUL	1169	4.0
	(3)	HONOLULU - UPOLU	808	3.0
	9	MAUI + MOLOKA)	589	2.0
		MAUL-LANAL	575	2.0
25		I TAY		
		HONOLULU-KAMUELA	239	1.0
	(2)	-MOLOKAI - LANAI	156	0.5
	<u>\</u> !- - - - - - - - - - - - - - - - - - -	UPOLU-MAUI	152	0.5
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DENSITY COMPARI TROPRIA ULOQU ARTING FROM ALL TROPRIA IANAJ PASSENGERS DEPARTIN TROPALLEN MELLA TROP TROUBLE LANGIOM GENERAL LYMAN FIELD PERCENT OF TOTAL ENPLANED PASSENGER TRAFFIC



DATA SHEETS

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SECTION B. -- RATIO OF ENPLANED PASSENGERS TO POPULATION.

- 1. The Territory of Hawaii has the highest ratio of air passenger traffic per unit of population of any location in the United States and probably in the world. This fact is emphasized by the preceeding graph of Surface versus Air Travel, over the past ten year period. Air travel in Hawaii is popular because it is economical, quick and safe. The growth of inter-island air travel since 1929 has gained to such an extent, that today it has no surface competitor.
- 2. C.A.B. Statistics show that the National Average Ratio of airline passengers to population of the entire United States for the 1946 census is 1 to 11.

For the benefit of comparison, the nine states ranking ahead of the Territory in passenger traffic are shown below, followed by the population of each and the respective ratios, listed in descending order:

Location	Population (1946 Census)	Ratio (No. of Pass. to No. of Res.)
TERRITORY OF HAWAII	519,503	1 to 1.251
Florida California Texas New York Illinois Missouri Massachusetts Ohio Michigan	2,310,303 9,550,727 6,959,481 13,741,836 8,028,453 3,776,250 4,590,254 7,516,855 6,064,899	1 to 4.375 1 to 7.167 1 to 7.316 1 to 7.685 1 to 7.729 1 to 8.484 1 to 10.392 1 to 12.640 1 to 13.935
UNITED STATES, TOTAL	139,893,406	l to 11.220

SECTION C. -- POPULATION - HAWAIIAN ISLANDS

1. Current total population distribution and density by island is indicated below:

<u>Island</u>	Area (Sq.Mi.)	Av. Pop. Density (Residents/Sq.Mi.)	% of Total Pop.
Oahu	604	596	67.80
Hawaii	4,030	19	14.41
Maui	728	67	9.18
Kauai & Niihau	555	59	7.02
Molokai	260	21	1.01
Lanai	141	21	0.58

2. The following chart shows the population trend in Hawaii over a ten-year period:

POPULATION TREND

HAWAIIAN ISLANDS

<u>Year</u>	TOTAL ALL ISLANDS	TOTAL INCREASE OR DECREASE IN % PER YEAR
1939	414,991	0.00%
1940	423,330	2.01%
1941	465,339	9.92%
1942	474,351	1.94%
1943	483,361	1.90%
1944	492,379	1.87%
1945	502,122	1.98%
1946	519,503	3.46%
1947	525,477	1.15%
1948	538,443	2.47%
1949	530,891	-1.40%

Total population increase in 10 years is 115,900, representing an increase of approximately 28% over the 1939 census.

POPULATION OF MAJOR ISLAND CITIES AND TOWNS (All figures based on population as of July 1, 1949)

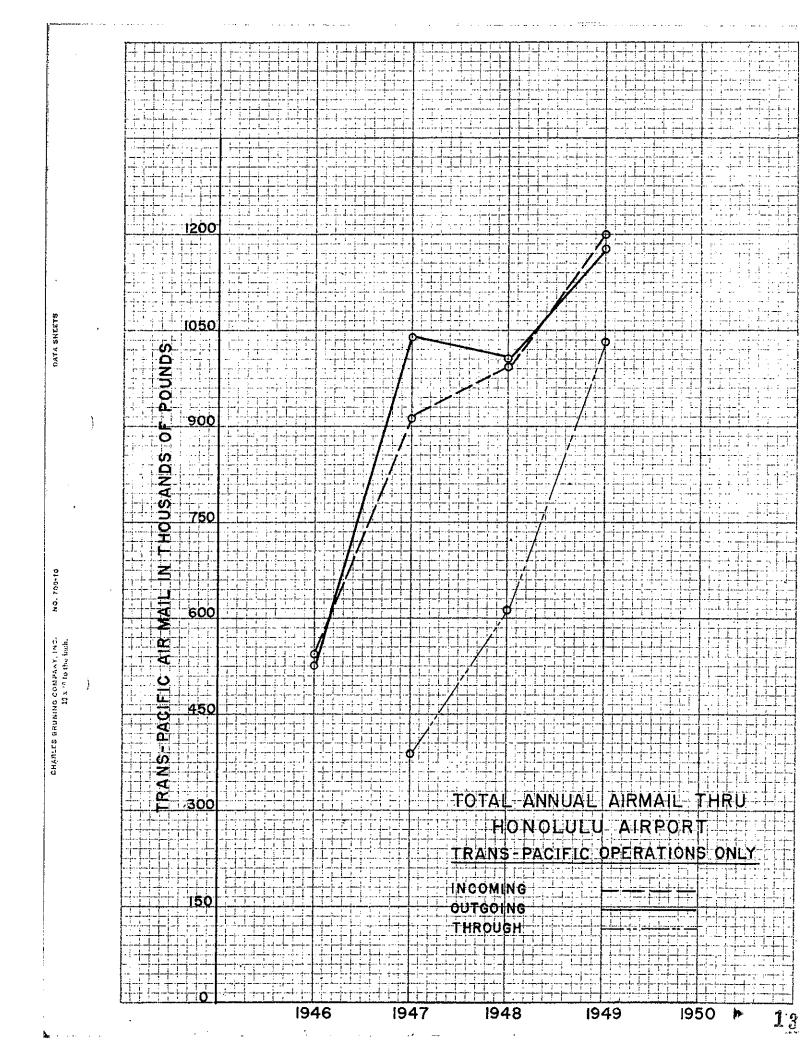
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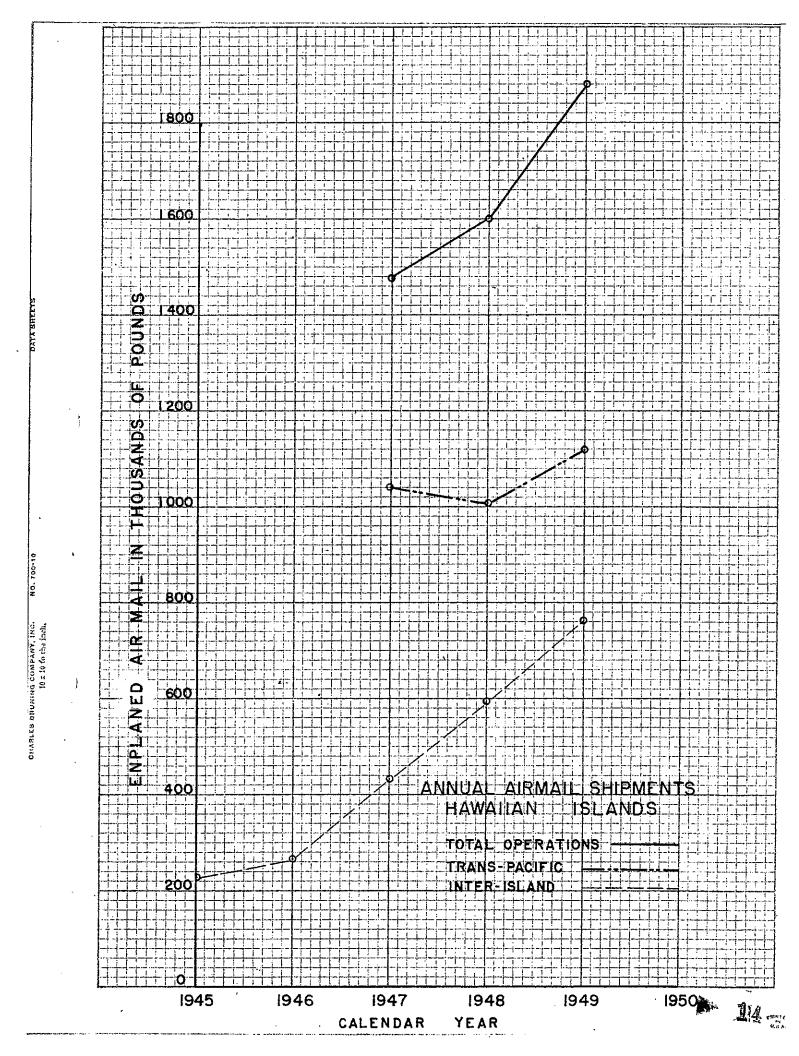
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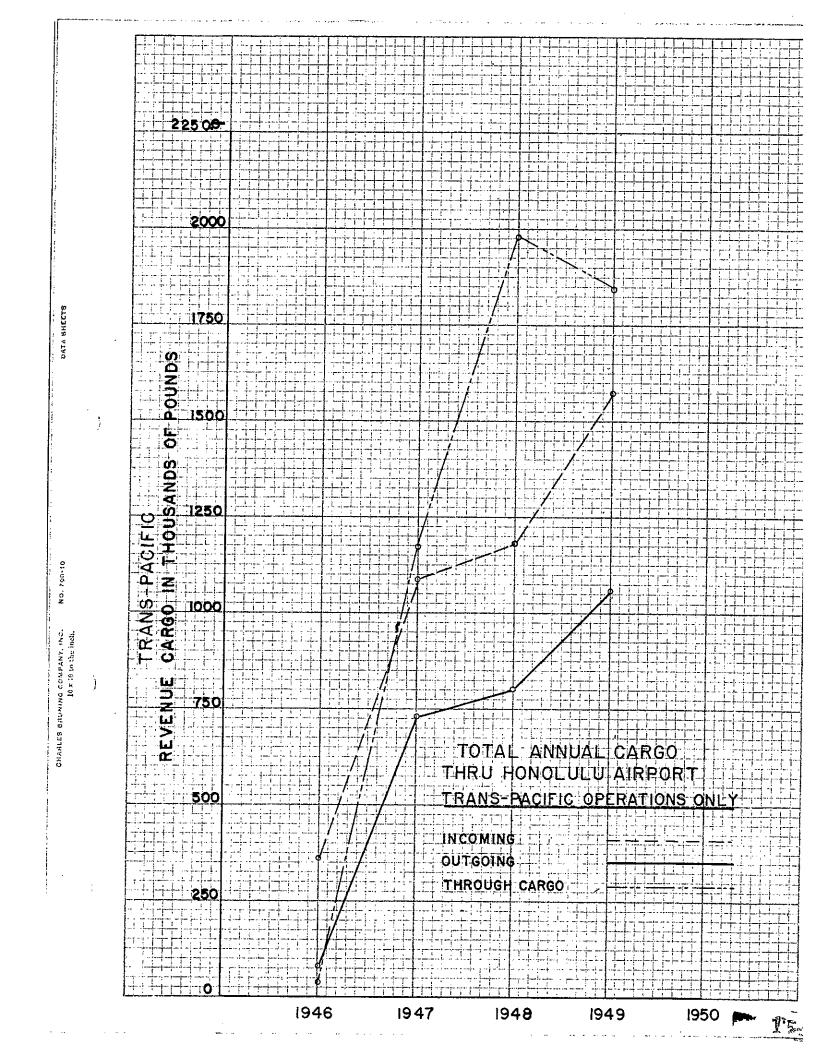
Locality	Population	Lecality	Population
Honolulu	268,774	Wailuku	22,086
Kailua-Kalama	22,482	Paia-Paholo	4,687
Waipahu	6,664	Kahului	4,616
Wahiawa	21,148	Haiku-Nakawao	4,472
Kaneohe	10,154	Lahaina	3,361
Wailua-Haleiwa	7,908	Puunene	2,918
Aiea	6,986	Waiakoa	2,368
Pearl City	4,265	Kihei-Makena	1,292
Laie	4,245	Kipahulu-Hana	1,291
Waimanalo-Lanikai	2,940	Waikapu	694
Ewa	2,156	Waihee	64 6
Nanakuli	1,568		
Waianae	798	Keanae	347
Nataliae		MOM » T	10 000
TOTAL	240 005	TOTAL	48,778
IOIAL	360,085	•	
		Vallat	•
TIALIA TT		KAUAI	_
HAWAII		# 21	מ אחר
1147 -	20. 226	Lihue-Mawiliwili	7,825
Hilo	30,226	Kapaa	5,418
Honokaa	8,258	Eleele-Hanapepe	5,206
Hawi	6,545	Kalaheo	3,859
Naalehu-Pahala	5,208	Vaimea	3,678
Kilauea-Keaau	4,997	Kekaha	3,481
Kealakekua-S. Kona	4,786	Koloa	3,451
Kailua-N. Kona	4,317	Kilauea	1,483
Waimea-Kanwela	4,129	lakaweli	1,317
Honomu	4,012	Hanalei—Wainiha	908
Lapahoehoe	3,050	Mana	212
Pahoa	<u>985</u>		•
	•	TOTAL	3 6,838
TOTAL	76,513	•	
		LANAI	
MOLOKAI			
		Lanai City	2,886
Kaunakakai	1,583	Kaumala Pau	142
Namae-Coast	1,349	Scattered	50
Hoolehua	1,278	beabber ex	
Mauna Loa	794	TOTAL	3,078
Kalaupapa	77 4 2-38€	· ·	010ور
Nateupapa	<u> </u>	NITHAU	
TOTAL	5,384	NILIMO	
TOTATI	2)204	TOTAL	215
KAHOOLAWE		TOTAL	217
NATIOOLAWE			

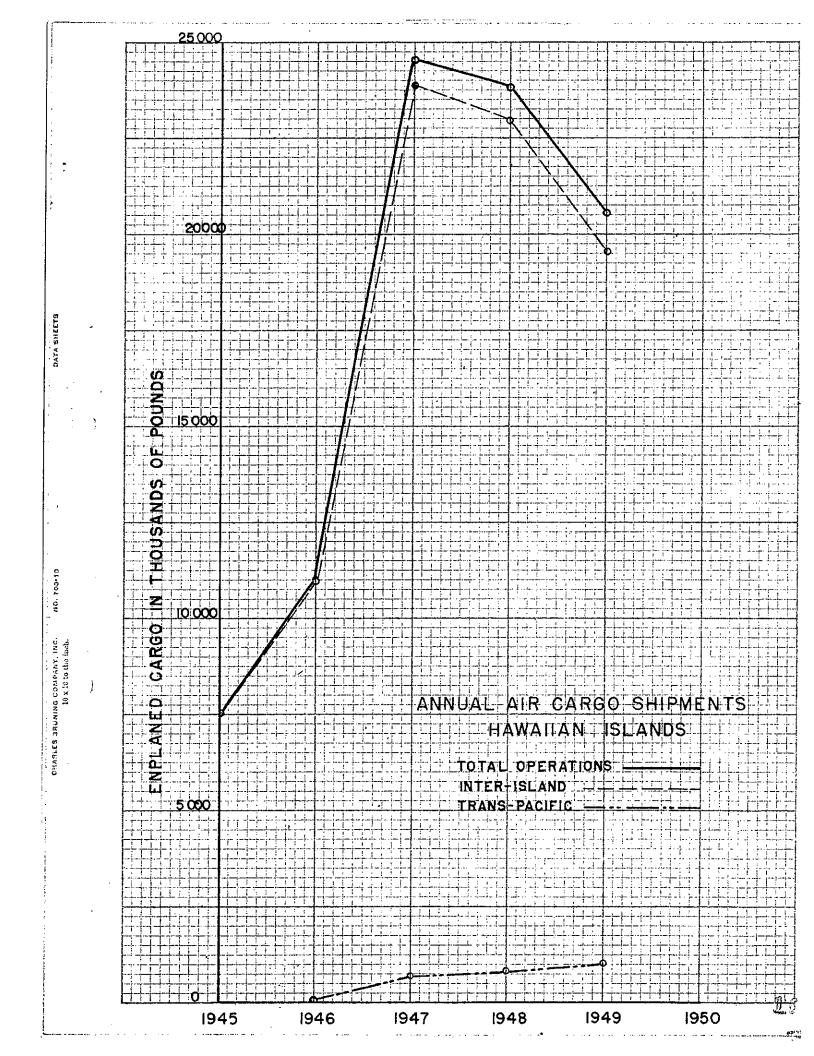
SECTION D. -- AIR MAIL AND CARGO MOVEMENTS.

Air mail and air cargo to the Hawaiian Islands is unloaded at Honolulu Airport for trans-shipment to final points of destination within the Hawaiian Group. In the same way, export commodities and outgoing air mail from the islands is first routed to Honolulu Airport for overseas shipment by air. For this reason, all figures are shown separately as either inter-island or trans-Pacific shipments in charts and graphs to follow.









SECTION E. - SUMMARY OF AIR TRANSPORTATION STATISTICS

This section is included to consolidate all post war operations on a single sheet for ready reference. (See page 18 for period 1945 thru 1948).

Pages 19 and 20 reflect status of average monthly operations during first half of 1949.

The total annual figures for 1949 have not been consolidated at the time of this writing.

AVERAGE MONTHLY
TRANS-PACIFIC REVENUE PASSENGERS, CARGO AND AIRMAIL
GARRIED BY CVERSEAS AIRLINES DURING
PERIOD JANUARY THROUGH JUNE 1949

ARRIVING Passengers Cargo Airmail	7
WG Airmail (Ths)	
DEPARTING Passengers Cargo (1.bs)	3,984 88,183
Airport Name and Location	Honolulu Airport, Oahu, T. H.

r		
ations	Airmail (The)	284,142
- A11 Oper	Cargo (The)	372,626
Grand Total - All Operations	Passengers	9,433
	Airmail (Lbs)	85,986
Thru Traffic	Cargo (Lbs.)	153,285
Thr	Passengers	2,100
Total Departing & Arriving Honolulu Airport	Passengers Cargo Airmail (Lbs)	7,333 219,341 198,156

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PART TWO

DEVELOPMENT OF AIR CARRIER FACILITIES AND AIRPORTS IN THE HAWAIIAN ISLANDS

SECTION A. -- HISTORY OF PREWAR AIR SERVICE BETWEEN THE ISLANDS.

The principal inter-island water transportation service prior to 1929 was furnished by Inter-Island Steam Navigation Company, Ltd. That company organized and incorporated the Inter-Island Airways, Ltd. on January 30, 1929.

On November 11, 1929 Inter-Island Airways inaugurated its first regular scheduled operations between Honolulu and the other islands of the Hawaiian group, using Sikorsky S-38, 8 passenger amphibians.

The schedule called for three round trips per week between Honolulu and Hilo via Maui and two round trips per week between Honolulu and Kauai.

Late in 1934, Inter-Island Airways was awarded an air mail contract by the Post Office Department to carry mail between Honolulu, Maui, Hilo and Kauai. This route was designated as Route 33.

In 1935, Inter-Island Airways added two 16 passenger Sikorsky S-34's to its operations and by 1938 two additional S-34's were added to its fleet.

On June 16, 1939, Inter-Island Airways was awarded a C.A.B. Certificate of Convenience and Necessity, in accordance with the Civil Aeronautics Act of 1938, to operate as a scheduled carrier between the then existing terminals on its route, and that Certificate has since been amended to allow operation between the major airports on all of the islands for the purpose of carrying passengers, cargo and air mail.

In August 1941, three Douglas DC-3, 24 passenger planes were placed in service by this airline to supplement the growing demand for air transportation.

On October 1, 1941, the name Inter-Island Airways was changed to Hawaiian Airlines, Limited, for better identification.

With the declaration of war, following the December 7th attack on Pearl Harbor, the military government closed down all commercial air operations and commandeered all surface steamers for military

use. Within a week, however, the Military Governor permitted Hawaiian Airlines to continue its air service as it was the only available transportation between the islands for civilian passengers, mail and cargo. Travel between the islands was restricted to a special priority system, set up by the Military Governor.

On March 20, 1942, Hawaiian Airlines started its first scheduled air freight service between the islands. During March 1945, one C-53 Douglas plane was converted to augment the Sikorsky freighters then in use by the airline.

During 1946 and 1947, after war restrictions were lifted, Hawaiian Airlines purchased six additional Douglas DC-3 planes and one 7 passenger Beechcraft for its regular passenger and cargo service, and is currently leasing an additional DC-3 plane for freight transportation service.

A second air carrier service was inaugurated, on a non-scheduled basis, during 1932, under the name of Andrew Flying Service. In addition to plying between the main airports, Andrew Flying Service provided air transportation between the smaller airports that cannot be served by the scheduled airlines. One principal service of this carrier is the transportation of passengers and cargo to and from the Kalaupapa Leper Settlement on the Island of Molokai.

SECTION B. -- POST WAR AIR SERVICE BETWEEN THE ISLANDS.

After the war years, four new operators organized small independent air carrier operations as follows:

Hawaiian Air Transport Service began its operations with Beechcraft D-18 F planes on April 2, 1946, and is presently conducting a non-scheduled service with three of those planes. This airline serves all Territorial airports in the islands and provides special tourist sight-seeing flights to the outer islands, and provides charter services as required.

Trans-Pacific Airlines started a non-scheduled operation, using DC-3 planes, on October 10, 1946 and received a C.A.B. certificate for scheduled operations on June 6, 1949. T.P.A. serves all major airports in the islands and is currently operating with 5 DC-3 planes, of 28 passenger capacity.

Trans-Air Hawaii started a non-scheduled, air freight operation between the islands on November 15, 1946 using three DC-3 converted planes. During 1948 those planes were sold and replaced by three C-46 cargo planes which have carried cargo of all types between the islands. This service has been extended beyond the Hawaiian group

of islands as far as French Frigate Shoals and Palmyra. On November 24, 1947, T.A.H. received an exemption order to its original C.A.B. Letter of Registration which entitles this airline to fly a regular freight schedule between the islands.

Cockett Airlines started its non-scheduled operations on October 21, 1946 using Beechcraft, 7 passenger planes. This service extends to all Territorial airports in the islands and is available also for charter flights.

Other operators providing non-scheduled and charter service at this time are:

Maui Flying Academy, operating from Maui Airport, provides service between Maui Airport and Hana Airport on the Island of Maui, in addition to general charter service to Lanai and Molokai with infrequent flights to Hilo and Honolulu.

Valley Isle Aviation operates from Kahului Airport, providing service on the Island of Maui, similar to that furnished by Maui Flying Academy.

Hilo Flying School provides charter and rental services from General Lyman Field to the Island of Hawaii, and Pacific Skyways, Limited, operating from Port Allen Airport, provides services for the Island of Kauai.

SECTION C. -- CHRONOLOGY OF TRANS-PACIFIC AIR CARRIERS

The first airline to provide regular service between the Hawaiian Islands and the continental United States was Pan American Airways. This airline started trans-ocean operations to Hawaii in November 1935. First trans-ocean operations used four motored Sikorsky flying boats. Those planes were replaced by Boeing flying boats which continued in use throughout the war years. At the present time, however, all commercial operations between the continental United States and the far east use four-engined land planes. Evidence of the growing demand for air travel and transportation is indicated below by a tabulation of the increased services available since the war, at Honolulu Airport.

Airline Name		1st Operation Hawaii	Current Status
Pan-American Airways	Nov.	1935	In operation
Pacific Ocean Airlines	May	1946	Operations discontinued April 1948
Matson Airlines	July	1946	Operations discontinued July 1947
Netherlands Indies Airlines (KNILM)	Dec.	1946	Operations discontinued Aug. 1947

	Date of 1st Operation	
Airline Name	to Hawaii	Current Status
Australian National Airways	April 25, 1947	Operations discon-
		tinued April 1948
United Airlines	May 1947	In Operation
Philippine Airlines	July 1947	In Operation
China National Aviation Corp.	Oct. 1947	In Operation
Trans-Ocean Airlines	Nov. 1947	In Operation
Northwest Airlines	Dec. 1948	In Operation
Canadian Pacific Airlines	July 1949	In Operation
British Commonwealth		
Pacific Airlines	May 1948	In Operation
Associated Airways	Aug. 1949	In Operation
	_	

SECTION D. -- AIR CARRIER SERVICE IN HAWAII.

1. Airlines and Operators currently serving the Hawaiian Islands:

	Trans-Pacific	Local	Total
Irregular Carriers	2	10	12
Scheduled Carriers	7	3	10
Foreign Carriers*	4	0	4

- * Included under scheduled carriers.
 - 2. Listing of Airlines and Operators:

INTER-ISLAND SCHEDULED AIRLINES

Hawaiian Airlines, Limited Trans-Pacific Airlines Trans-Air Hawaii (Freight Only)

INTER-ISLAND IRREGULAR CARRIERS:

Hawaiian Airlines, Limited
Trans-Pacific Airlines
Trans-Air Hawaii (Freight Only)
Cockett Airlines
Andrew Flying Service
Hawaiian Air Transport Service
Hawaiian School of Aeronautics
Hilo Flying School
Maui Flying Academy
Valley Isle Aviation.

TRANS-PACIFIC SCHEDULED AIRLINES:

British Commonwealth Pacific Airlines Canadian Pacific Airlines China National Aviation Corp. Northwest Airlines Pan-American World Airways Philippine Airlines United Airlines

TRANS-PACIFIC IRREGULAR CARRIERS:

Associated Airways Trans-Ocean Airlines

SECTION E. -- OTHER COMMERCIAL AVIATION ACTIVITIES.

1. Agricultural Crop Dusting and Spraying.

There are two aircraft operators in the islands who specialize in crop spraying. Both operators use conventional type planes and helicopters for this work, and provide services to all the islands. These firms are: Murray Airplane and Agricultural Company located at Honolulu Airport, and Helicopter Service of Hawaii, located at Port Allen Airport on the Island of Kauai.

2. Aerial Photography and Surveying.

There are three firms in the islands who do aerial photography and survey work. They are:

Austin & Towill Engineering Firm located in Honolulu. William P. Kraus located at Honolulu Airport Helicopter Service of Hawaii located at Port Allen Airport, Kauai.

3. C.A.A. Certificated Flying Schools.

There are three certificated flying schools on Oahu:

Andrew Flying Service Hawaiian School of Aeronautics Island Aviation, Ltd.

Other flying schools in the islands with certificated instructors are:

Pacific Skyways, Ltd., on the Island of Kauai Maui Flying Academy, on the Island of Maui Valley Isle Aviation, on the Island of Maui Hilo Flying School, on the Island of Hawaii

SECTION F. -- AIRPORT DEVELOPMENT IN THE HAWALIAN ISLANDS.

Pioneer aviation activity in the islands is indicated by Act 14 of the Session Laws of Hawaii dated March 22, 1915 and later legislation in 1917 and 1923.

The first need for airports in Hawaii came about as a result of National Defense planning and private interest as early as 1923. Much aviation enthusiasm was created here by early glider flights over the Nuuanu Pali and by the trans-Pacific flights of Commander John Rodgers, Sir Charles Kingsford-Smith, and Amelia Earhart.

Civil airports in the Hawaiian Islands were constructed by the Territorial Department of Public Works under the direction of the Superintendent of Public Works to provide the necessary facilities for the air service first offered by Inter-Island Airways, Ltd. in 1929.

Subsequent development and improvement of island airports under the Hawaii Aeronautics Commission has been a continuing process and with it has come the current development of air travel in Hawaii which today ranks with the leading communities of the United States.

Airports currently under the jurisdiction of the Hawaii Aeronautics Commission are as follows:

Airport Name	ISLAND	Approximate Date of Construction
Honolulu Airport (John Rodgers		
Airport)	Oahu	1925 - 1928
		Dedicated March 21,
		1927
General Lyman Field (Hilo	•	
Airport)	Hawaii	1927
Molokai Airport (Hoclehua		
Field)	Molokai	1927
Port Allen Airport	Kauai	1928
Upolu Airport	Hawaii	1928
South Cape Airport	Hawaii	1928
Barking Sands Airport*	Kauai	1928
Bellows Field (Waimanalo Field)	Oahu	1928
Kalaupapa Airport	Molokai	1934
Hamoa Airstrip (Old Hana Airport)	Maui	1934.
Maui Airport (Puunene)	Maui	1939
Kahului Airport	Maui	1942
Kamuela Airport	Hawaii	1943
Lanai Airport	Lanai	1946
		• • •

Airport Name	ISLAND	Approximate Date of Construction
Kona Airport (Kailua)	Hawaii	1949
Lihue Airport	Kauai	1949
Hana Airport	Maui	Under Construction

* Barking Sands Airfield, used by commercial airlines and operators under a letter of agreement with the U.S. Air Force until January 7, 1950, is not under the jurisdiction of the Hawaii Aeronautics Commission.

SECTION G. -- UTILIZATION AND FUTURE DEVELOPMENT OF ISLAND AIRPORTS

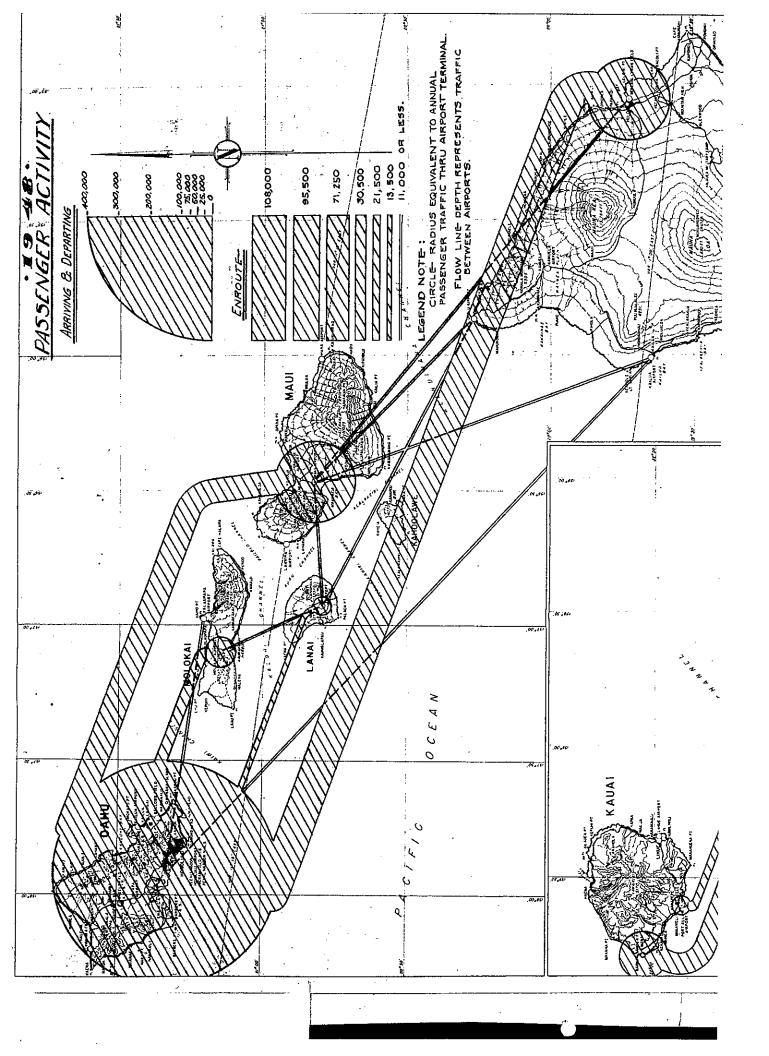
- 1. Previous graphs and charts have outlined the growth of air travel and transportation of things within the Islands. The graph of annual surface passengers plotted against annual air passengers most particularly demonstrates the importance and necessity of a well coordinated system of island airports. As previously pointed out, the Hawaiian Islands require and have one principal airport at Honolulu serving the needs of both inter-island commerce and import and export trade with the Continental United States, Australia and the Orient. This airport in turn is served by at least one feeder airport on each of the other populated islands in the group, This basic system of airports meets the current minimum requirements of island air commerce and transportation.
- 2. Plans for future airport development should be based on the following factors:
 - a. Relative use and adequacy of existing facilities.
- b. Requirements of Technical Standard Orders and other directives and bulletins outlining minimum safety standards or improved operational methods, etc.
- c. Design and performance requirements of aircraft equipment in use, and/or contemplated for use in the near future.
- d. Other economical features and developments in the Territory which, when completed, will call for additional air transportation, and possible future airport sites.

HAVAIS

			CAME OF THE		MILINI PERIOD	1945 THEO 1948		PIPTH SHIPS ADDRESS PAR	f (13 MD 770005	
			******			*1814		T	TOTAL	
TEAR	AZERTET HAVE AND EXCAPTOR	Name	83 (186)	ATE NATL (189)	PASSONCE	E (135)	AND FREEL (LEGS)	MASSAGER	CLEO S (LES)	(LES)
1945 1946 1947 1945 1949	Ceneral Lymne (Hilo) - Kawaii	27,634 43,271 44,777 42,562	1,524,710 2,190,21 1,167,711 1,765,048	70,169 101,090 146,011	29,177 17,990 64,936 61,986	1,210,079 1,639,579 4,810,011 3,235,719	5 17,012 7,983 7 93,341 5 116,115	57,000 77,145 129,129 126,144	2,734,785 3,987,610 9,277,733 7,960,763	75,713 126,153 196,151 262,160
194.5 194.6 194.7 194.8 194.9	Kampala Airport - Navali	1,399	220,310 134,726 2,508,127		1,969	1,400 37,277 322,504		3.04e 4,470	221,716 176,079 2,670,611	
1945 1946 1947 1948 1949 1949	Kons Alsport - Rewall	, 24) 14			4 32		
1945 1946 1947 1949 1949	South Caps - Haveli		87,2 51	-	•	1,94		:	e,155	
1945 1947 1947 1948 1949	Upolu Airport - Kasail	2,624 7,290 4,557	\$12,377 1,067,757 422,333	1,022 6,407	7,676 7,301 4,568	40,610 890,329 264,938	#37 7,656 13,527	j 5,314, 11,569 13,121	597,947 1,554,046 687,271	10, 878 19, 734
%5 %4 %7 %3 %3 %3 %5 %5	Surting Seeds - Loyal	17,338 26,346 30,101 35,470	596,789 343,317 302,632 546,182	24, 840 26,672 35,129 51,640	16,713 26,452 30,869 35,918	755,914 572,416 977,980 862,105	25,166 29,127 19,135 69,117	34,051 52,776 60,950 71,386	1,352,700 916,135 1,354,232 1,400,287	93,05,6 56,099 81,864 115,127
94.5 94.6 94.7 94.8 94.9 950	Pert Allen Airport - Great	3,763 18,355 10,973	42,3ml 861,421 414,408	,	3,672 18,907 11,104	677,645 1,604,280 777,229	•	7,435 16,662 22,107	517,026 2,265,701 1,191,637	
%1 %6 %7 %8 %9	French Frigule Manie		57,580 175,445 69,96e			41,465 144,247 40,121	****		94,093 319,692 210,069	• • •
N.5 N.6 N.7 ILB N.7	lamal Airport - Lanai	2,510 10,677 11,196	12,706 144,045 174,798	2,653 6,429	2,723 10,639 11,757	80,300 533,058 990,516	3,107 7,180	1,065 21,776 23,252	97,006 597,107 1,187,344	5,760 13,609
4.5 4.6 4.7 4.9 50	Kans Airport - Heui	100 84,			106			208 196	,	
65 66 67 69 50	falmini Airpoph — Baci	fi	970,676 2,310,967 1,770,84		150 127	134,240 1,207,321 1,462,516		150 172	1,113,136 1,312,286 3,242,342	_
14	Neut disport - Had	34,664 48,430 64,366 64,475	1,375,556 1,678,908 2,012,281 2,203,168	77,434 12,005 57,667 73,607	33,092 46,971 67,237 63,323	1,717,373 1,311,578 2,945,931 1,971,784	U, e91 44,067 69,718 83,483	67,556 97,621 136,603 127,798	1,092,939 2,764,066 1,539,172 6,174,952	87,527 86,872 127,405 157,090
7	Enlanjapų Aleport – Halokai	1,740	13,455 13,455		1,432 1,502	199,818 166,654 189,696		3,372 2,497	199,818 199,771 199,319	
6 7 8 9	Nolahni Airpert - Molohni	10,092 15,156 21,927 20,091	187, 840 \$22,969 \$41, 614 \$09,671	2,7)4 4,761 11,260	10,006 15,741 22,126 20,286	394,642 609,285 903,170 828,603	4,997 14,574	20,096 30,997 44,093 40,377	64,902 1,032,276 1,941,788 1,332,476	2,276 11,779 25,634
5 7 8	Hanalalu Aisport – Oshu	76,719 127,578 151,778 176,611	7,755,941 4,749,073 11,590,096 7,487,109	110,679 126,644 226,990 277,449	81,419 124,899 187,110 179,285	3,460,862 5,647,792 10,745,955 12,604,877	110,065 333,996 202,179 294,403	160,168 252,477 372,886 377,909	7,216,803 10,396,865 22,296,053 21,503,996	220,714 260,660 632,469 572,852
7	IONE - ALE AMPRICATS	170, L37 272, 513 112, 228 373, 734	7,540,866 10,910,396 23,862,877 22,970,760	286,134 264,330 433,273 776,603	177, 677 672, 533 632, 224 333, 754	7,550,864 10,994,396 23,688,637 22,974,760	226,134, 266,310 437,277 592,603	340,674 945,005 604,475 787,676	15,081,752 21,916,712 47,765,471 45,957,520 1	452,244 932,620 866,346 ,149,606

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			SPARTI	# G	1	ABRITI	ra		70711	
TEAT	PLENCES WHAT THE TOURS IN	PASSINGDAS	(US)	ATH KATA	PASSAGOU	CARGO (LBS)	AIR MAIL (LMS)	PASSENGERS	(120)	AZB HAZI (EM)
1966 1967 1968 1969 1950	Roselulu Airport - Cabe	17,976 61,960 65,172	#0,912 733,223 807,960	1,041,766	15,994 41,430 42,578	171,701 1,066,972 1,162,605	921,669 994,276	28,876 83,390 86,770	1,52,613 1,630,215 1,969,564	1,963,437 2,001,576
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	TCT+L DO	g-12100 ND 042	RSEAS PASSES	1013, C4200, AU	ATR HATE AND	MING THE DIEM	NTZNS - HOMOLOG	a Atherna		
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1946 1947 1948 1949 1950	Honolule Allejort - Culm	28, 876 83, 390 85, 770	852,613 1,420,215 1,499,565	1,963,437 2,001,576	252,477 372,868 357,909	20,398,865 22,296,053 21,503,986	260,660 431,469 591,852	261,353 454,278 444,679	10,051,478 26,116,368 2),473,551	2,794,906 2,597,424
	70	TAL OF ALL PASSES	GEOG, CARDO,	NO ATE MAIL A	t median id	PORT INCENDIN	THE THUTTE			
EAR	VINIONA NAME YND POCYALOR	OFRICIBAS AND	IITZE-ISQU	D TOTALS	20F41.	OF ALL THE	TRAFFIC		CRUMP TOTAL	
966 967 968 969 950	Manciale Misport - Cahe	£55,278 2	0,051,478 4,116,260 3,493,151	2,391,906 2,593,126	877 15,666 25,170	37,213 1,177,133 1,166,736	367,578	282,226 671,944 649,949	10,864,690 25,286,591 25,680,287	2,782,UM, 3,204,893



ROUTE DENSITY - REVENUE PASSENGERS - CARGO - AIR MAIL FOR AVERAGE MONTH (ALL INTER PRIMO DERATIONS DURING 1ST MALF 1949)

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1	PASSENCERS CARGO (LBS.) 219	, 401 , 760 , 342		1,235	1	-	10,512 16,512	13,435		15 586	·	10 12 12	,	1,853		4,930 251,093 12,524
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1,566 129 167 16	PASSENCERS CARCO (LBS.) A)R. MAIL (LBS.)	1														100
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12	PASSENGERS CARGO (LBB.) AIR MAIL (LBS.)	166,500	21,247		1,174					н №	£	. 0¢	- -1			189,572
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