

State of Hawaii
DEPARTMENT OF
TRANSPORTATION

YEAR ENDING JUNE 30

1972



PUJIO MATSUDA DIRECTOR

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STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION 869 PUNCHBOWL STREET HONOLULU, HAWAII 96813

IN REPLY REFER TO:

HONORABLE JOHN A. BURNS Governor, State of Hawaii Honolulu, Hawaii

Dear Governor Burns:

The year which ended June 30, 1972, brought setbacks and slowdowns, but also included major accomplishments -- and the birth of a new approach toward solving transportation-related problems.

Although environmental concerns continued to hold up work on the Interstate freeway, H-3, the volume of new highway construction contracts awarded reached the record-breaking total of \$46.9 million.

West Coast shipping tie-ups caused a slight drop in total harbor revenues, but greatly stimulated air cargo activities, which normally account for but a small fraction of Hawaii's freight operations.

A \$12.5-million addition to John Rodgers Terminal at Honolulu International Airport was dedicated May 16, 1972. A \$1.5-million wharf extension at Sand Island, to accommodate a third container freight operation in Honolulu Harbor, was completed on June 30.

The Director of Transportation was named ex officio chairman of the Interdepartmental Transportation Control Commission created by Act 59 of the 1972 Legislature. The Commission is directed to determine annually the number and size of "transportation units" that may be allowed within the territory of any island of the State at any one time.

Throughout the Department, every effort has been made to continue serving the public by the best means possible, as, I believe, this annual report will indicate.

Very truly yours,

FUJIO MATSUDA

Director

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AIRPORTS DIVISION

With the parting of a maile lei, a \$12.5-million ewa (westward) extension of the John Rodgers Terminal at Honolulu International Airport officially began its life of service to overseas travellers on May 16, 1972.

Other highlights of the fiscal year included Governor Burns' acceptance of the General Lyman Field master plan, a huge increase in air cargo because of maritime strikes, and intensified efforts to improve airport safety and security throughout the system.

As the fiscal year closed, the Airports Division was looking forward to starting construction in September, 1972, of the first phase of the long-awaited reef runway for Honolulu International Airport.

The first increment, scheduled for completion in mid-1974, is expected to resolve most of the air traffic noise and safety problems of present airport traffic by shifting all overseas commercial and military jet take-off operations more than a mile to seaward.

The runway will also increase the airport's capacity from 70 to 110 operations per hour.

Honolulu's reef runway is the nation's first major new runway to receive funding approval from the Federal Aviation Administration's 1970 Airport Development Aid Program and has qualified for the biggest single ADAP allocation so far approved -- \$14 million, or roughly half of the expected cost.

The newest major expansion of John Rodgers Terminal has provided another 360,000 square feet of area to serve passengers arriving from, or departing for, other American cities, or leaving for foreign destinations.

On the ground level are five 30-foot carousels for domestic baggage and inter-line and ground transportation services.

On the second level, eight overseas scheduled carriers have service counters for enplaning passengers. Facilities here include nine baggage conveyor belts for passenger check-ins, and ticket counters with back-up offices for the airlines.

New waiting rooms and consession areas are also on the second level which connects directly with the original waiting lobby in the John Rodgers Terminal via a spacious walkway overlooking the airfield.

On the third level are the mini-bus turn-arounds and transfer stations. Enplaning passengers board a mini-bus at the transfer station over the terminal, ramp down to the second level and disembark opposite the gull wing terminal holding rooms to board their aircraft.

In July, 1971, the first increment of the flight information display system board units was installed in some of the older ticket lobbies, holding rooms and baggage claim areas of the John Rodgers Terminal. The system started operation in September, 1971, and was extended to the new ewa addition as the structure neared completion.

Additional installations will extend the information system to the new International Arrivals Terminal, which was under construction as the fiscal year ended, and to some other areas not yet served.

This additional work will bring the total cost of the system to more than \$1,260,000.

The first increment of the Ewa Gull Wing Service Road was available for use August 23, 1971, at a cost of \$55,815.

February 17, 1972, saw the completion of an added standby generator for the emergency electrical power system.

In March the initial portion of the new second level roadway fronting the main terminal was opened to traffic.

Among other completed items were the second and third level roadways connecting the main terminal and the Ewa Gull Wing.

The new International Arrivals Terminal, just west of the new ewa extension and also costing about \$12 million, was scheduled for completion early in 1973.

The reef runway and the current expansion of terminal facilities are among the major elements in the Honolulu International Airport Master Plan approved by Governor John A. Burns.

At the time his approval was announced, on September 3, 1968, the cost of expanding the airport to meet the needs of new types of jet aircraft and newly certified carriers was \$100 million. The current estimate is closer to \$130 million, including projects completed and remaining work needed to carry the airport through 1985.

Additional Boeing 747 gates, a combination air-sea-land inter-island terminal fronting Keehi Lagoon, and separate air cargo facilities are among the major items yet to go under construction.

By June 30, 1972, parking at the airport had been increased to 3900 stalls, and an additional 2000 or so are to be added by 1977.

On August 4, 1971, Governor Burns announced endorsement of recommendations by the Hilo Airport Advisory Committee for the development of General Lyman Field.

A principal feature of the plan is a new \$16-million passenger terminal. The committee made no recommendation on the location of the terminal, but the Department of Transportation favors placing it on the mauka side of Runway 8-26 -- the opposite side of Runway 3-21 from the present complex.

The Airports Division expects to break ground for preliminary site work early in 1973 and to complete the relocated facilities by 1975. To meet this schedule, the Division would have to receive the Federal Aviation Administration's approval of the environmental impact statement by the end of the 1972 calendar year.

One of the major recommendations of the committee was that when new runways are needed they should be constructed to orient flights away from the populated areas of Hilo.

When a longer runway is needed, Runway 8-26, the main runway, should be extended east by 2200 feet to provide a 12,000-foot runway, the committee urged.

It also recommended that only minimum improvements be made to the existing terminal facilities pending their replacement.

A \$1,098,500 Federal-aid contract to stabilize the shoulders of the main runway and its related taxiway at General Lyman Field was awarded in March, 1972.

At the Big Island's Waimea-Kohala Airport (formerly Kamuela Airport), expansion of the terminal building and construction of a new maintenance and fire-rescue building and auto parking areas were approaching completion on June 30. The work was originally scheduled for completion during fiscal year 1972, but the maritime strike delayed arrival of some necessary materials.

Development of the new Ke-ahole Airport on the west coast of the Island of Hawaii continued with the granting of two new contracts. The first will provide roadways and utilities for a "ground transportation subdivision," where lease parcels will be established for the maintenance facilities for the ground transportation tenants. Work was expected to be completed about September, 1972. The second project, completed on June 2, 1972, accomplished miscellaneous improvements to the terminal complex and airport apron.

As the fiscal year ended, reconstruction of the aircraft apron at Kahului Airport on Maui was underway under a \$1,832,162 Federal-aid contract. The old apron, built by the Navy during World War II, had seriously deteriorated.

In all, work was underway during fiscal year 1972 on 49 airport construction contracts totaling more than \$40 million. Work at Honolulu International Airport accounted for 36 contracts, which totaled more than \$35.4 million.

Both of Hawaii's overseas airports experienced a boom in air cargo as a result of the West Coast dock strikes of July 1, 1971, to October 9, 1971, and from January 17, 1972, to February 19, 1972.

At Honolulu International Airport, incoming overseas air cargo totaled 53,939,765 pounds for the quarter July 1 to September 30, 1971 -- an increase of 262.7 per cent from the corresponding quarter of 1970. For the succeeding three quarters of fiscal year 1972, the gains were 129.9 per cent, 121.8 per cent and 38.6 per cent, respectively.

By comparison, the periods January 1 to March 31, 1971, and April 1 to June 30, 1971, showed gains of only 13.8 per cent and 9.5 per cent from corresponding quarters of the previous year.

The most spectacular quarterly increase in incoming air cargo was that experienced at General Lyman Field for July 1 to September 30, 1971, when the number of pounds received reached 1,649,250, or 485.4 per cent more than the 281,737 pounds which arrived during the same period of the year before.

For the first and second quarters of the 1972 calendar year, the Hilo increases were 153.8 and 121.2 per cent respectively.

Honolulu International Airport was the 28th busiest in the United States during the 1971 calendar year, according to figures released by the Federal Aviation Administration. The rating was based on the number of landings and take-offs by all types of

aircraft reported by the 346 airports with control towers. Honolulu's total was 294,874 aircraft movements.

For the fiscal year ending June 30, 1972, overseas passenger movements (arrivals and departures) at Honolulu International Airport totaled 5,326,495, a 9.2 per cent increase from the preceding fiscal year, and an increase of 401 per cent since the fiscal year 1962, the last full year that the old terminal on the ocean side of the field was in operation.

General Lyman Field recorded 293,539 overseas passenger movements for the 1972 fiscal year, making a total of 5,625,034 for the State.

Scheduled overseas carriers began to serve Hilo in October, 1967, but their passenger volumes have been declining since 1969. The fiscal 1972 total was 2.1 per cent smaller than that for the previous year and 16.3 per cent smaller than the total for the 1969 fiscal year.

Overseas airlines have been suspending or reducing Hilo service, and on February 1, 1972, a significant revision in air tariffs became effective through removal of the "Maui Fence." As a result of this revision, a round-trip ticket-holder no longer must arrive in Hilo and depart from Honolulu, or vice versa, in order to receive reduced fares for certain inter-island flights.

General Lyman Field continues to share the growth of interisland travel. For the 1972 fiscal year, the Hilo airport recorded 746,124 inter-island passenger movements, a gain of 20.8 per cent from the preceding year and 45.8 per cent from the 1969 fiscal year.

Honolulu International Airport had 2,869,510 inter-island passenger movements in the 1972 fiscal year, an increase of 18.1 per cent from the preceding year and a gain of 50.4 per cent from the 1969 fiscal year.

Inter-island passenger movements reported by all airports, including private airstrips like Kaanapali, totaled 7,459,218 for the fiscal year ending June 30, 1972, a gain of 18.2 per cent from the preceding year and 48.6 per cent from 1969 fiscal year.

The Department of Transportation was unable to make any progress during the year toward providing a State general aviation airport on Oahu to remove flight training operations from Honolulu International Airport.

However, the State has been able to make new and more liberal arrangements for the use of Ford Island, a Navy auxiliary landing field, which will make this field even more effective in reducing the undesirable mix of light private planes and bigger commercial aircraft at Honolulu International Airport.

The license under which the State conducts civil flight operations at Ford Island was scheduled to expire on December 31, 1971. This field was opened to take-offs and landings by students on Feburary 2, 1970, and has attracted most of the student training operations away from Honolulu International.

However, soloing of students at Ford Island was originally precluded by provisions prohibiting civilian personnel from debarking from aircraft at the field. Flight school operators asked permission for instructor pilots to leave their aircraft to allow students to accomplish solo flights.

In December, 1971, the Navy extended its permit to the Department of Transportation for the use of the air strip for civilian flight operations through calendar year 1972, and acceded to the request that students be allowed to make their first solo flights from the field.

Operations are no longer restricted to touch-and-go landings and taxi-back practice. During the 1972 fiscal year, traffic increased to 152,363 operations, a gain of 20 per cent from the 1971 fiscal year.

The Airport Certification Program established by the Federal Aviation Administration under terms of the Airport and Airways Development Act of 1970 has proved a real challenge for Hawaii's Airports Division.

It will require additional money, manpower and equipment to meet the demands of this program.

Compliance with its terms is vital, for every airport serving air carriers certified by the Civil Aeronautics Board must maintain certificates from the FAA to remain in operation. All of Hawaii's nine State commercial airports serve certified carriers.

As one of the State's first moves toward compliance, the Airports Division on May 1, 1972, awarded a contract for the acquisition of nine fire and rescue vehicles, including seven "quick-response rescue vehicles," a 1500-gallon unit for Lihue, and for General Lyman Field a unit with a carrying capacity of 3000 gallons of water and 500 gallons of foam concentrate.

General Lyman Field received its larger truck on June 23, 1972. Added to the 1500-gallon unit already in use, the new acquisition brought the Hilo airport up to the new standards for airports handling the largest of overseas air carriers.

At Honolulu, where the Air Force has the firefighting job, the capacity is already well above the minimum.

After receiving its new 1500-gallon unit, Lihue Airport will send its present 1000-gallon unit to Lanai Airport, which now has only a dry-chemical jeep unit.

The seven "quick-response rescue vehicles" will be delivered to General Lyman, Kahului, Ke-ahole, Waimea-Kohala, Molokai, Lihue and either to Hana or to Honolulu International.

These nimble machines can transport the fire chief, break-in tools, and fire-suppressant chemicals to a crash within three to four minutes, while slower equipment is still on the way. They can carry 500 gallons of water, 55 gallons of foam concentrate and 500 pounds of dry chemical.

The contract calls for completion of deliveries by March 12, 1973.

As the fiscal year 1972 ended, the Airports Division was preparing to advertise for bids for new protective clothing for its firefighters.

State engineers have also been making preparations for additional fencing, lighting, signs and surveillance devices at each airport.

In the case of Honolulu International Airport, as much as 10 miles of 6 1/2- or 7-foot-high fencing may be needed along the runways and between terminal facilities and access roads. Where aircraft park overnight, the entire area will require pervasive lighting.

With the advent of new Federal safety and security regulations, the Federal Aviation Administration has also assumed a large voice in determining how many people the Airports Division must employ. The State must prove to the FAA that sufficient personnel has been assigned to maintain and operate each airport satisfactorily or be denied the right to operate the airport for scheduled airline service.

The new daily inspections, report-making and record-keeping will add to personnel requirements.

Nevertheless, on the last day of the 1972 fiscal year, the Airports Division was facing a cutback in the number of its authorized positions. On June 30, 1972, the Division had 504.25 authorized positions (including part-time but excluding student "summer hires"). Of the total, 385 were filled. As an economy measure, the number of positions authorized was ordered to be reduced to 444.25, effective July 1, 1972.

Meeting the new Federal requirements under these circumstances will call for more ingenuity and teamwork than ever before demanded of the State's airport employees.

Following negotiations with the City and County of Honolulu District Court System, Honolulu International Airport received approval to institute a citation system for traffic violations in its operational and restricted areas. Violators are now assessed fines with provisions for bail forfeiture.

With an inaugural flight on April 19, 1972, Korean Airlines initiated thrice-weekly operations from Honolulu International Airport. The airport is now served by 17 scheduled carriers, including eight American and nine foreign airlines.

December, 1971, and April, 1972, saw the arrival of unprecedented numbers of Japanese visitors. Nearly 23,000 of them arrived in December to begin holiday tours. A new traffic system was initiated to facilitate their movement through the International Arrivals Building to their waiting busses.

During Japan's observation of "Golden Week," a traditional holiday period which began April 28, 1972, about 8,000 Japanese visitors arrived. With the cooperation of U. S. Customs, special provisions were made to expedite their exit from the International Arrivals Terminal.

Honolulu International Airport continued to play host to royalty and other distinguished guests.

Airport arrivals included President Nixon, and VIP's from about two dozen foreign countries -- and from outer space (the Apollo 16 astronauts).

But it was three visitors from Kailua who were invited to share with the State Director of Transportation the airport's

proudest moment of the year -- the lei-parting for the opening of the new ewa extension for domestic arrivals and departures.

They were Mrs. Byron J. Connell, her daughter, Mrs. Nicki Clancey, and Mrs. Clancey's son, Robert, aged 10. Mr. Connell, a Windward Oahu realtor and community leader who died on January 30, 1972, piloted the first plane crossing from the North American continent to Hawaii.

Although the Navy Seaplane PN-9 ran out of fuel and finished the crossing under sail, the 1925 exploit so stirred Hawaii's public that contributions came pouring in to a fund to establish a commercial airport on Oahu.

The airport was dedicated on March 21, 1927, as John Rodgers Airport. The Territorial Legislature changed the name to Honolulu Airport in 1947, but provided that when a new transpacific terminal building was constructed it should be designated as "John Rodgers Terminal."

This legislative mandate was carried out on August 22, 1962, when the State dedicated its "Jet Age" terminal, built on the present location to replace the "pre-Jet" terminal on the ocean side of the field.

Construction contracts awarded during the 1972 fiscal year at all State airports totaled approximately \$25.3 million. Work was also underway on about \$17.7 million worth of contracts for which contracts had been granted prior to July 1, 1971. Work completed during the 1972 fiscal year totaled about \$15 million.

The following lists show all airport construction contracts on which work was in progress during the year ending June 30, 1972.

UHAO

Honolulu International Airport

- Landscaping The Inter-Island Terminal Area. 0-90-1(5). Hoonani Landscaping & Nursery, Inc. Contract awarded June 28, 1972. \$24,517.90.
- Construction of the Diamond Head Gull Wing Interim Gates 7, 8, 9, 10 and Turnaround. 0-90-2(12)A. Thoht Construction. Contract Awarded May 15, 1972. \$630,290.00.
- Construction of the Diamond Head Connecting Link Ramp. 0-90-2(14).

 General Constructors, Inc. Contract awarded November 19, 1971. \$1,309,050.00.
- Construction of the Ewa Gull Wing Gate Positions 28, 29 and Turnaround. 0-90-2(21)A.

 Nordic Construction, Ltd. Contract awarded April 19, 1972. \$2,810,000.00.
- Construction of Pedestrian Overpasses (Connecting Parking Structure to Main Terminal). 0-90-3(5)A.
 Allied Construction, Inc. Contract awarded November 19, 1971. \$345,997.00.
- Procurement and Installation of Elevators at North Mall-Main Terminal. 0-90-3(5)B. Atlas Electric Co. Contract awarded April 5, 1972. \$147,512.00.
- Construction of Airline Offices Domestic Arrivals, Ewa Extension. 0-90-3(7)A. Thoht Construction. Contract awarded December 6, 1971. Completed May 4, 1972. \$238,704.00.
- Construction of Diamond Head Extension, Main Terminal. 0-90-3(8). Dillingham Corp. Contract awarded September 20, 1971. \$2,871,000.00.

Honolulu International Airport (cont'd)

- Construction of Waiting Lobby & Concession Area in Existing Terminal Building. 0-90-3(9)A. Nordic Construction, Ltd. Contract awarded August 31, 1971. \$1,503,209.00.
- Construction of International Arrivals Super-Structure. 0-90-3(12). General Constructors. Contract awarded January 11, 1972. \$6,670,000.00.
- Air Conditioning for Ewa Extension (International Arrivals). 0-90-3(12)B.
 Thoht Construction. Contract awarded April 10, 1972. \$424,750.00
- Procurement of Furniture and Display Fixtures for Ewa Extension. 0-90-3(17)R.

 Architectural Fiberglass Section 1, & Western Contract Furnishers Sections 2, 3, and 4, A Joint Venture.

 Contract awarded January 11, 1972. \$167,872.00.
- Enplaning-Deplaning Roadway, Diamond Head Portion and North Mall. 0-90-5(12)A.

 Hawaiian Dredging & Construction Co. Contract awarded September 14, 1971. \$3,248,921.00.
- Emergency Power Generating System Building Construction. 0-90-9(10)B.
 Thoht Construction. Contract awarded October 22, 1971. \$120,434.00.
- Public Address in Inter-Island Interfaced with Overseas Terminal, Phase III. 0-90-9(12)C. John J. Harding. Contract awarded November 2, 1971. Completed June 8, 1972. \$39,978.00.
- Transfer Switch Gear, Ewa Extension (International Arrivals). 0-90-9(15).
 Atlas Electric Co. Contract awarded September 23, 1971. \$92,368.00.
- Printing, Collating, Binding, Storing and Delivering Bid Packages & Other Material. 0-90-11(3)A. Instant Printers. Contract awarded July 6, 1971. \$28,127.00.

Honolulu International Airport (cont'd)

- Direction & Location Signs Installed Phases II & III for the Terminal Building. 0-90-12(6).

 QRS Neon Corp. Contract awarded January 24, 1972.

 \$666,000.00.
- Construction of the Intra-Airport Passenger Transportation System Facilities. 0-90-12(28). Universal Construction, Inc. Contract awarded November 18, 1971. Completed May 19, 1972. \$203,945.00.
- Demolition, Fill & Temporary Roadway for Host and IAT Facilities. 0-90-12(32). Hi-Way Transportation & Contracting Co., Ltd. Contract awarded September 20, 1971. Completed December 5, 1971. \$55,836.00.
- A. C. Pavement Addition & Drainage Improvements Aloha Maintenance Area. 0-90-12(34).
 Royal Contracting. Contract awarded April 26, 1972. \$16,100.00.

HAWAII

General Lyman Field

Shoulder Stabilization of Runway 8 - 26 and Related Taxiways. H-104
James W. Glover. Contract awarded March 15, 1972. \$1,098,050.00.

Ke-ahole Airport

- Ground Transportation Facilities and Lease Parcels. H-101. Corps Construction. Contract awarded September 22, 1971. \$139,928.00.
- Regrading Terminal Apron, Modifying Guardrails, Constructing Tie-Downs for General Aviation Aircraft and Electrical Modification and Other Improvements. H-103. Corps Construction. Contract awarded December 2, 1971. Completed June 6, 1972. \$40,448.26.

MAUI

Kahului Airport

Apron Rehabilitation and Airfield Lighting. M-95-2. Dillingham Corp. Contract awarded February 23, 1972. \$1,832,162.00.

MOLOKAI

Molokai Airport

Drainage and Other Improvements. M-97.

Moses Akiona, Ltd. Contract awarded August 23, 1971.

Completed March 9, 1972. \$210,070.00.

KAUAI

Lihue Airport

Terminal Improvements and Other Additions. K-33.

Mark Construction, Inc. Contract awarded July 8, 1971.

\$405,938.00.

OAHU

Honolulu International Airport

- Construction of Ewa Connecting Link Ramps Between Main Terminal and Gull Wing. 0-90-2(13).

 General Constructors, Inc. Contract awarded May 20, 1971. \$1,342,000.00.
- Relocating One Loading Bridge Unit from Gate Position 27C to Gate Position 28C. 0-90-2(29)A.
 Rigging International. Contract awarded June 8, 1971.
 Completed August 12, 1971. \$22,222.00.
- Construction of Service Court Areas Including Third Level Roadway. 0-90-3(6).
 Nordic Construction, Ltd. Contract awarded May 28, 1970.
 Completed June 1, 1972. \$3,311,104.00.
- Construction of Overseas Departures, Domestic Arrivals, Ewa Extension. 0-90-3(7).

 General Constructors, Inc. Contract awarded September 17, 1970. Completed May 15, 1972. \$6,763,000.00.
- Construction of Ewa Concourse and Basement, International Arrivals, Ewa Extension. 0-90-3(11).
 Urban Construction Co. & Hirano Brothers, Inc., A Joint Venture. Contract awarded May 7, 1971. Completed May 8, 1972. \$2,480,000.00.
- Furnishing, Delivering, Installing and Maintaining Elevators and Escalators at Domestic Arrivals Terminal Ewa Extension. 0-90-3(13).
 Atlas Electric Co., Inc. Contract awarded December 30, 1969. Completed May 9, 1972. \$638,660.00.
- Additions and Renovations to Interim International Arrivals Building and Domestic Arrivals Baggage Claim Area. 0-90-4(7).

 Nordic Construction, Ltd. Contract awarded April 8, 1971. Completed July 31, 1971. \$196,460.00.
- Construction of First Increment of Ewa Service Court Roadway. 0-90-5(15). Hirahara, Inc. Contract awarded April 12, 1971. Completed August 23, 1971. \$55,815.10.

Honolulu International Airport (cont'd)

- Furnishing, Delivering, Installing, Testing and Maintaining a Flight Information Display System. 0-90-9(5). Solari America, Inc. Contract awarded August 5, 1970. \$1,260,000.00.
- Procuring a Standby Generator Emergency Power System. 0-90-9(10)A.
 Holt Brothers. Contract awarded March 9, 1971.
 Completed February 17, 1972. \$65,111.00.
- Furnishing, Delivering, Installing and Testing Public Address System. 0-90-9(12)A. Hawkins Audio Engineers, Inc. Contract awarded March 17, 1971. \$137,645.00.
- Supplying, Installing and Testing Five Complete Baggage Claim System Units for Ewa Extension. 0-90-10(3). Atlas Electric Co., Inc. Contract awarded February 17, 1971. Completed October 5, 1971. \$281,670.00.
- Printing, Collating, Storing, and Delivering Bid Packages and Other Material. 0-90-11(3)B.
 Honolulu Blueprint and Supply, Inc. Contract awarded June 28, 1971. \$9,352.00.
- Furnishing, Installing and Testing Four Soluble Fertilizer Proportioning Systems. 0-90-12(2)B. Rigging International. Contract awarded February 25, 1971. Completed August 31, 1971. \$37,492.00.
- Demolition of John Rodgers Veteran Housing. 0-90-13(3). C. S. Onaga Trucking, Inc. Contract awarded October 2, 1970. Completed June 5, 1972. \$29,225.00.

HAWAII

Ke-ahole Airport

Furnishing and Installing VASI System. H-102.
Corps Construction, Ltd. Contract awarded March 29, 1971.
Completed July 9, 1971. \$27,726.00.

Waimea-Kohala Airport

Addition and Alterations to Passenger Terminal Lobby and Baggage Claim Area. H-90. Glenn Construction. Contract awarded May 13, 1971. \$413,361.35.

MAUI

Kahului Airport

Relocation of Ground Transportation Facilities, and Parking Lot Expansion. M-91-1(R).
Urban Construction. Contract awarded January 38, 1971.
\$97,793.31.

Ground Transportation Subdivision. M-91-(2).

Ige Construction. Contract awarded June 22, 1971.

Completed December 20, 1971. \$242,383.00.

MOLOKAI

Molokai Airport

Additional Terminal Improvements. M-86-2.
Ralph S. Inouye Co. Contract awarded June 28, 1971.
\$161,032.00.

LANAI

Lanai Airport

Installing new runway lights. M-83R.

Mid-Pac Electric. Contract awarded November 4, 1969.

Completed August 16, 1971. \$83,538.00.

Improvements to Terminal. M-92.
Hicks Construction Co. Contract awarded September 21, 1970.
Completed March 28, 1972. \$45,808.00.

AIRPORTS DIVISION FINANCIAL STATISTICS

Combined Balance Sheet - June 30, 1972 and 1971

	June	30
	1972	1971
ASSETS:		
Cash	\$ 70,641,293	\$ 70,705,175
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Receivables		
Accounts and Notes, Net	2,491,338	1,783,246
Interest	2,817,107	1,425,335
Aviation Fuel Tax	411,672	418,222
Recoverable Costs from U.S.	166 010	242 052
Government-Airport Aid	166,213	242,958
Due from Other Funds	19,452,739	10,806,407
Materials and Supplies, at Cost Land, at Cost or at Value Assigned	82,163	82,226
at Grant	7,175,625	5,432,002
Buildings and Improvements, at Cost	66,996,257	46,215,324
Equipment and Motor Vehicles, at Cost	3,172,382	2,058,009
Construction in Progress	116,459,700	114,924,642
Amount Available and to be Provided		
for the Retirement of Bonds and		
Payments of Interest	375,835,136	348,550,620
Bonds Authorized, Unissued	17,090,882	17,316,288
Deposits	1,500	1,500
TOTAL ASSETS	\$682,794,007 1/	\$619,961,954 1/
LIABILITIES, RESERVES, & FUND BALANCES	· •	
HIADIHITIDO, REDUKVED, & FOND DAHANCEL		
Liabilities:		
Contracts Payable	\$ 4,764,161	\$ 2,031,104
Contracts Payable -		
Retained Percentage	1,675,311	1,847,300
Due to Other Funds	19,472	156,878
Salaries & Wages Payable	8,980	28,345
Accrued Vacation	477,711	455,806
Matured Bonds Payable	2,007,961	1,326,135
Accrued Interest Payable	6,262,353	5,710,602
Matured Premium Payable	935	45,135
Due to Airport-Airline Lessees	2,742,132	1,773,158
Tenants' Deposits	208,762	151,200
Reserves:	10 242 024	17 (50 403
Bond Requirements	19,342,974	17,658,483
Encumbrances	15,451,559	9,164,994
Long-Term Debt:	106 624 203	1 <i>77 777</i> 006
Bonds Payable	196,634,383	177,777,906
Interest Payable-Future Years	179,200,753	170,772,714
Investment in Land & Fixed Assets	193,803,964	168,629,977
Fund Balances	60,192,596	62,432,217
TOTAL LIABILITIES, RESERVES,		
AND FUND BALANCES	\$682,794,007 2/	\$619,961,954 2/
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^{1/} Includes amount to be provided for the payment of interest.

^{2/} Includes interest payable in future years.

AIRPORTS DIVISION FINANCIAL STATISTICS

Combined Analysis of Changes in Fund Balances For Fiscal Years Ended June 30, 1972 and 1971

		Fisc	al Ye	ars
		1972		1971
Fund Balances, July 1, 1971 & 1970	\$	62,432,217	\$	46,179,858
Add Reserve for Encumbrances	\$	9,164,994	\$	8,087,176
Add:				
Revenues Legislative Appropriation and Authorization		25,499,026		20,978,659
General Obligation		10,333,000		10,600,000
Airport Revenue Bonds		19,774,594		44,357,172
Special Fund Transfer from Other Funds		6,700,000		1,834,000
Deferred Premium		14,903,751		19,934,452 50,512
Reimbursement HIA Fueling				30,312
System Project Cost		2,329,697	_	
	\$	79,540,068	\$	97,754,795
Deduct:		•		
Operating Expenses	\$	8,357,727	\$	6,717,496
Equipment & Motor Vehicle	•	218,819	•	229,127
Major Maintenance, Renewal				
& Replacements Construction Expenditures -		686,709		332,453
Project Funds		27,394,769		32,129,268
Works of Art		36,280		
Debt Service Charges		15,020,507		10,960,275
Transfer to Other Funds		21,603,751 1,684,491		21,768,452 6,884,114
Reserves Revenue Bonds Discounts		1,004,491		0,004,114
& Sales Expenses		471,104		1,247,855
Transfer of Appropriations to		·		•
Highways Division				20,000
Lapse of Appropriations		18,967		
Reimbursement of 1970 Excess to Airport Use Charge			_	135,578
	\$	75,493,124	\$	80,424,618
Reserve for Encumbrances	\$	15,451,559	\$	9,164,994
Fund Balances, June 30, 1972 & 1971				
Revenue Fund	\$	30,414,269	\$	19,091,469
Airport Revenue Bond Funds	_	29,778,327		43,340,748
	<u>\$</u>	60,192,596	\$	62,432,217

AIRPORTS DIVISION FINANCIAL STATISTICS

Consolidated Statement of Receipts, Expenditures and Balances For Fiscal Years Ended June 30, 1972 and 1971

		<u>Fisc</u>	al Ye	<u>ar</u> 1971
Balances, July 1, 1971 & 1970	\$	63,634,374	\$	42,089,619
Add Receipts: Airport Operating Revenues Aviation Fuel Tax Collections Reimbursement of Expenses Interest Earned on Investments Federal Grant Appropriations Accrued Interest - Revenue	\$	16,138,843 5,104,063 539,915 2,017,055 1,192,284 1,749,100	\$	13,884,487 4,534,035 323,903 2,148,645 285,073 78,000
Bonds Sold Proceeds from Revenue Bond Sales Provision to Debt Service Reserve Vacation Transfer-In Provision for Interest Expense Trust Fund Deposits Others		106,821 19,600,182 1,792,462 2,868 2,039,314 109,813	-	631,388 53,914,402 5,095,730 25,433 2,422,844 1,838,895 10
	\$	50,392,827	Ş	85,182,845
Deduct Expenditures:				
Operating Expenses Debt Service Charges Major Maintenance, Renewal	\$	9,145,655 15,092,417	Ş	7,080,107 12,071,370
and Replacement Vacation Transfer-Out Trust Fund and Other Refunds Construction in Progress Provision to Debt Service Reserve		690,709 8,815 52,250 22,506,954 1,792,462		317,726 11,719 1,763,156 34,568,069 5,095,730
Provision to Interest Expense Reserve Bond Sale Expenses Other Capital Expenditures	_	2,039,314 164,269 118,321	_	2,422,842 245,352 62,019
	\$	51,611,166	Ş	63,638,090
Cash Balances, June 30, 1972 & 1971 Encumbered Cash Unencumbered Cash	\$	21,628,713 40,787,322	<u> </u>	512,684,124 50,950,250
	\$	62,416,035	5	63,634,374

DEPARTMENTAL ADMINISTRATION

The State Department of Transportation is now participating in a new and unusual approach to transportation problems, as a result of a measure which Governor Burns signed into law on May 19, 1972, as Act 59.

This act, which took effect immediately, created an Inter-departmental Transportation Control Commission, charged with the task of determining annually "the number and size of transportation units of any kind, whether they operate on the ground or over the ground, that may be within the territory of any island of the State at any one time."

The commission consists of four members who head the Office of Environmental Quality Control, the Department of Health, the Department of Planning and Economic Development and the Department of Transportation.

The law requires the commission to submit its recommendations to the Legislature annually. The Legislature, in turn, is to "transmit to the Governor a bill to limit the number and size of transportation units of any kind that may be within the territory of any island of the State at any one time for the ensuing year."

The law appears fraught with legal complications and pitfalls, attempting as it does to control and limit what many believe is a basic right -- the right to own and use cars. As the fiscal year 1972 closed, the ITCC members were preparing to seek qualified personnel and financing for the program.

In June, 1972, the Governor asked the Director of Transportation to become the first ITCC chairman. The new commission will initially have its offices in Aliiaimoku Hale, the headquarters of the Department of Transportation at 869 Punchbowl Street, Honolulu.

It is expected that the chairmanship will rotate and that the ITCC office will not permanently remain at Aliiaimoku Hale. The commission's employees will be on the Governor's Office payroll.

The ITCC is the second agency to be lodged with the Department of Transportation, although reporting independently to the Legislature through the Office of the Governor.

The other such agency is the Hawaii State Highway Safety Council. The Deputy Director for Operations of the Department of Transportation, E. Alvey Wright, has been serving as Acting State Highway Safety Coordinator since January, 1967, under gubernatorial appointment. The employees of the Highway Safety Council are on the payroll of the Department of Transportation, and 50 per cent of their salaries are federally funded.

A major change in highway safety program funding was welcomed during fiscal year 1972. Initially, Federal approval was on a project-by-project basis. On November 15, 1971, the National Highway Traffic Safety Administration approved Hawaii's Annual Highway Safety Work Program for the period July 1, 1971, to June 30, 1972. This was the first time an entire program had been approved at one time.

The program provided for the expenditure of \$254,533 in Federal highway safety funds, divided as follows: planning and administration, \$37,650; driver education, \$60,000; driver licensing, \$7,000; alcohol counter-measures, \$11,000; traffic records, \$38,000; emergency medical services, \$74,000; and traffic control devices, \$16,833.

Two important bills from a group of highway safety measures introduced in the 1971 session of the Legislature were carried over into the 1972 session, but failed of passage, despite support by the Hawaii Highway Safety Council.

One of these bills would have required a short refresher courses and written examination for driver's license renewal. The other would have required notifying driver licensing and vehicle registration authorities of any name or address change.

The Highway Safety Council considers both of these measures essential and they will be re-introduced in the 1973 session.

Public hearings were held on the inclusion of a color photograph on the Hawaii driver's licenses, and this improvement was almost ready for introduction as the fiscal year closed.

On June 28, 1972, the State's Annual Highway Safety Work Program for fiscal year 1973 was approved by the National Highway Traffic Safety Administrator.

This program called for expenditure of \$255,000 in Federal highway safety funds, divided as follows: Planning and administration, \$62,000; driver education, \$45,000; driver licensing,

\$7,000; highway design, construction and maintenance, \$13,000; alcohol counter-measures, \$10,000; emergency medical services, \$70,000; and traffic control devices, \$45,000.

Traffic fatality totals continued to show the need for increased highway safety efforts. The number of traffic deaths for Hawaii totaled 154 in 1971, as compared with 153 in 1970, 133 in 1969, 148 in 1968, and 138 in 1967.

The position of Deputy Director for Engineering was filled by the Director on July 1, 1971, and some organizational changes ensued.

On the last day of fiscal year 1972, the titles of the Deputies and the Departmental Staff Officers reporting to each were as follows:

Deputy for Operations -- Assistant State Highway Safety Coordinator and State Transportation Planner.

Deputy for Engineering -- Programs and Contracts Officer.

Deputy for Administration -- Departmental Personnel Officer, Property Management Officer, Business Management Officer and Departmental Computer Engineer.

The State Transportation Planner heads the Advance Transportation Planning Office. Its primary function is the continuous evaluation of the statewide transportation system network which guides the Department's Capital Improvements Program.

A special function of the ATP office is the direction of the Oahu Transportation Planning Program, a cooperative effort of State, Federal and City-County agencies. This continuing program completed its third year, making major advances in the establishment of updated data banks on traffic accidents and travel times on State highways.

The master-planning of bikeways on both Honolulu City-County roads and streets and State highways on Oahu is included in the OTPP.

Through the OTPP, the ATP office has been actively involved in the planning and programming of the City and County of Honolulu's mass transit system. A separate activity of the ATP office has been the coordination of the responses of the Department of Transportation to applications for Oahu General Plan amendments and zoning changes.

The ATP continued as the Department's liaison office for compliance with State and Federal regulations regarding project environmental impact statements.

The Department's participation in the Statewide Planning, Programming and Budgeting Process (PPBS), in accordance with Act 185 of Session Laws of 1970, was again coordinated by the ATP office. This process is intended to provide for a higher degree of integration between the operating and capital improvement budgets than the former system.

The ATP office also coordinated Hawaii's participation in the 1972 National Transportation Study. The 1972 study was the first in a series of periodic reports to Congress on the state of the nation's transportation system and the plans of Federal, State and local governments for improving it. As the fiscal year 1971 closed, the ATP was engaged in the coordination of the 1974 NTS submittals.

The Programs and Contracts Office is responsible for the preparation and implementation of the Department of Transportation's Capital Improvements Program, and for reviewing and processing construction and consultant contracts.

By Act 68, the Department of Transportation received legislative appropriations of \$132,716 for its Capital Improvements Program for fiscal year 1971-1972. The amount was divided as follows: airports, \$35,598,000; harbors \$16,190,000; and highways, \$80,928,000.

In addition, the Legislature authorized an appropriation of \$7,459,000 for the Department of Transportation by Act 197, SLH 1971, known as the General Improvements Act of 1971.

Amounts under this appropriation were divided as follows: airports, \$48,000; harbors, \$1,077,000; and highways, \$6,334,000.

During fiscal year 1972, the Programs and Contracts Office processed 112 construction, purchasing and maintenance contracts, totaling about \$75.7 million. In addition, the office processed 73 formal consultant contracts totaling \$6,008,000.

The Departmental Personnel Officer reported that on June 30, 1972, the Department had 2,015.50 authorized positions in more than 300 classes, ranging from professionals to unskilled laborers. The total includes 120 crash/fire crewmen employed by personal service contracts (not civil service). Honolulu International Airport is protected by Hickam Air Force fire-

fighters under the Hickam Air Force Base/Honolulu International Airport Agreement, but all of the State's other airports provide their own emergency services.

Of the 2,015.50 authorized positions, 1,303.75 (including airport and harbor contractual hires) were paid from special funds, such as revenues from the State's motor vehicle fuel tax or assessments for use of the airports and harbors. Positions paid from project funds totaled 688.50, and 23.25 positions, chiefly administrative, were supported by the State's General Fund.

Organizationally, the positions are distributed as follows: staff offices, 80 (including 12 student hires); airports, 504.25 (51 students); harbors, 266.25 (22 students); and highways, 1,045 (61 students).

The Department of Transportation's "Certificate of Merit," issued to all employees who did not use any sick leave for a full year, was awarded to 172 employees for the calendar year 1971.

During the 1972 fiscal year, the Department's training needs were largely met through local programs, and out-of-state training was necessary in only a few instances.

During fiscal year 1971-1972, the Department announced 64 vacancies as available for filling by intra-departmental promotion. Thirty-four of these positions were filled by promotion from within the Department.

The Departmental Personnel Office continued to publish the Departmental employee newsletter "The Carrier", as well as to produce the personnel and position listing for the Department on a semi-annual basis.

The reorganization of the State Highway Safety Coordinator's Office and the Departmental Personnel Office itself were among matters pending at the close of fiscal year 1972. Departmental policies and procedures relating to the new collective bargaining act were still under review, and a revision of the Department of Transportation's handbook of personnel rules and regulations was still in the draft stage.

The Property Management Office reported that revenues from the management of the State's airports properties increased from \$15,028,617 in fiscal year 1971 to \$15,477,326 in fiscal year 1972. This gain reflected the continuing expansion and increased use of the airports.

Other airport revenues included \$5,097,513 in aviation fuel taxes and \$3,808,648 in interest from deposits of bond issue monies.

There were 105 Airports Division leases in effect on June 30, 1972, and 289 space permits. Twenty-one leases and 232 space permits were issued during the 1972 fiscal year.

Revenues from Harbors Division land and facilities during fiscal year 1972 totaled \$2,383,731, as compared with \$2,210,714 for the previous year. The Harbors Division had 105 leases and licenses in effect on June 30, 1972, and 133 revocable permits. Four new leases and 34 revocable permits were issued during the year.

Property management activities for the Highways Division are generally limited to the rental and disposition of buildings affected by highway projects. During the fiscal year 1972, 16 revocable permits were issued for use of these buildings. Thirtynine revocable permits were outstanding on June 30, 1972.

Rental realized from these permits totaled \$52,237.48. Two public auctions conducted for the sale of houses in the path of highway construction brought in \$700.

The Budget and Internal Control Office, under the Business Management Officer, inaugurated joint audits of highway activities with the Federal Highway Administration.

The new system has eliminated the need for separate State and Federal audits for federally funded projects. Audit areas covered include planning and research, preliminary engineering and the State Highway Safety Coordinator's office.

A major function of the Budget and Internal Control Office is to act as liaison between the Department of Budget and Finance and the operating divisions of the Department of Transportation in regard to expenditures from the operating budget.

The magnitude and importance of this task is indicated by the size of the appropriations for the Department's operating budget for the fiscal year ending June 30, 1973. They totaled \$51,471,218, divided as follows: Departmental Administration, \$1,316,650; Airports Division, \$27,432,147; Harbors Division, \$8,305,012; and Highways Division, \$14,417,409.

These appropriations were voted by the Legislature in 1971 and represent the second year of the biennium budget for fiscal years 1972 and 1973.

The Engineering Computer Services Office, under the Departmental Computer Engineer, extended its services to several new areas of operation. As result of this expansion, computerization is now being utilized by the Harbors Division in small boat registrations, and by the Airports Division in flashing up-to-the minute data onto its flight information display boards and furnishing "print-outs" for traffic controllers.

The Advance Transportation Planning Office has been provided with a new computer service method in projecting traffic needs, assuming various possible combinations of public transportation and private motor vehicle use. The Highways Division's Design Branch is using a new "software system" called THYSIS, an acronym for "Texas Hydraulic System," in the design of culverts. A number of less complex operations were instituted elsewhere in the Department.

At the close of fiscal year 1972, the ECS was preparing to assist in the establishment of a new accounting system for the Airports Division. Recommendations by the consulting firm of Lybrand, Ross Bros. and Montgomery will be translated into computer programs. The new system is expected to be in operation by the latter part of 1973.

The ECS has completed a study recommending replacement of the Department's present computer equipment with new and more versatile machines. The proposed new equipment would not only be less costly, but would also permit better service to offices on the Neighbor Islands.

ADMINISTRATIVE DIRECTORY JUNE 30, 1972

Director of Transportation
Staff Officers
Departmental Personnel Officer George S. Rezents (acting) Programs and Contracts Officer Vacant Property Management Officer Paul H. Arizumi Business Management Officer Noboru Hirai State Transportation Planner Ah Leong Kam Departmental Computer Engineer Carl O. Nagami Assistant State Highway Safety Coordinator Lawrence K. Hao
<u>Division Chiefs</u>
Airports
District Officers
Oahu
Airport District Superintendent William H. Kraft Harbor District Manager James B. McCormick Highway District Engineer Tit Mun Chun
Hawaii
North Hawaii Airport District Superintendent Philip A. Sykes South Hawaii Airport District Superintendent Oswald A. Byrne Harbor District Manager Dennis E. Ruthrauff Highway District Engineer Charles L. Schuster Maui
Airport District Superintendent Thomas F. Hanchett Harbor District Manager Percy A. Lilly Highway District Engineer
Kauai
Airport District Superintendent Vacant Harbor District Manager Edwin Nakano

DEPARTMENT OFFICES

Departmental Administration Offices

Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Airports District Offices

North Hawaii District
Airports Superintendent
Department of Transportation
State of Hawaii
Ke-ahole Airport
Kailua-Kona, Hawaii 96740

South Hawaii District
Airports Superintendent
Department of Transportation
State of Hawaii
General Lyman Field
Hilo, Hawaii 96720

Airport District
Superintendent, Maui
Department of Transportation
State of Hawaii
Kahului Airport
Kahului, Hawaii 96732

Airport District
Superintendent, Oahu
Department of Transportation
State of Hawaii
Honolulu International Airport
Honolulu, Hawaii 96819

Airport District
Superintendent, Kauai
Department of Transportation
State of Hawaii
Lihue Airport
Lihue, Hawaii 96766

Harbors District Offices

Harbor District Manager, Hawaii Department of Transportation State of Hawaii Pier 1, Hilo P. O. Box 1555 Hilo, Hawaii 96720

Harbor District Manager, Maui Department of Transportation State of Hawaii Pier 2, Kahului P. O. Box 201 Kahului, Hawaii 96732 Harbor District Manager, Oahu Department of Transportation State of Hawaii 700 Fort Street P. O. Box 397 Honolulu, Hawaii 96809

Harbor District Manager, Kauai Department of Transportation State of Hawaii Nawiliwili, Kauai P. O. Box 821 Lihue, Hawaii 96766

Highways District Offices

Highway District Engineer, Hawaii Department of Transportation State of Hawaii 50 Makaala Street P. O. Box 276 Hilo, Hawaii 96720

Highway District Engineer, Maui Department of Transportation State of Hawaii 962 Keaoolu Street Kahului Kai (NASKA) P. O. Box 700 Kahului, Hawaii 96732 Highway District Engineer, Oahu Department of Transportation State of Hawaii 727 Kakoi Street Honolulu, Hawaii 96819

Highway District Engineer, Kauai Department of Transportation State of Hawaii State Office Building 3060 Eiwa Street P. O. Box 1711 Lihue, Hawaii 96766

FOR FURTHER INFORMATION

The Annual Report of the State Department of Transportation is intended to provide an over-all view of the Department's activities.

The three major divisions of the Department and their various branches also issue periodical or special reports of a more technical nature.

Persons interested in a special phase of the Department's operations are invited to direct specific requests for information to the division concerned.

Copies of major reports are usually available for examination at the Public Archives, the University of Hawaii Library, the State of Hawaii Library, the Municipal Reference Library, and the County Libraries of Hawaii, Maui and Kauai.

Persons interested in details of the Department's tentative long-range construction program are referred to the Governor's Capital Improvements Program.

PHOTO DESCRIPTIONS

- Front Cover -- Diamond Head's famous profile looms above newly improved Kuhio Beach at Waikiki. A \$776,000 contract increased the sandy beach by 25 per cent along a 1500-foot stretch and doubled the promenade area. The State, Federal and City-County project was dedicated June 16, 1972.
- Page 1 -- Eight overseas scheduled carriers have service counters for enplaning passengers on the second level of the \$12.5-million ewa (westward) extension of John Rodgers Terminal, which was dedicated May 16, 1972.
- Page 23 -- Work on a \$260,000 project at Manele Bay on Lanai was underway at the end of fiscal year 1972. The contract included a silt basin, riprap diversion channel, a concrete spillway and dredging of the existing channel and inner basin.
- Page 45 -- On the Island of Hawaii, a project completed on November 30, 1971, has provided a new section of Federal-aid highway extending from Kaimu Junction toward Pahoa for 3.88 miles. A scenic buffer strip and a joint State-County landscape effort are planned for the enhancement of this new roadway.
- Back Cover -- This section of Lunalilo Freeway between Pele Street and Victoria Street won first place among 1971 entries for the category "Outstanding Highway in Its Urban Setting" in the Fourth Annual Awards competition conducted by the Federal Highway Administration. This view shows how special lighting dramatizes the landscaping in the giant planter boxes formed by the split-level retaining walls.

DESCRIPTION OF MAP

The map at right depicts the general location of the State Department of Transportation airports and harbors and the Federal-aid Highway System in Hawaii.

AIRPORTS

The nine commercial airports under the jurisdiction of the Airports Division include Lihue Airport on Kauai; Honolulu International Airport on Oahu; Molokai Airport on Molokai; Lanai Airport on Lanai; Hana and Kahului airports on Maui; and Waimea-Kohala and Ke-ahole airports and General Lyman Field (Hilo) on Hawaii.

The four general aviation airports administered by the Airports Division include Port Allen Airport on Kauai, Dillingham Field on Oahu, Kalaupapa Airport on Molokai, and Upolu Airport on Hawaii.

HARBORS

The six commercial deepwater harbors under the jurisdiction of the Harbors Division are located at Nawiliwili and Port Allen on Kauai, at Honolulu Harbor on Oahu, at Kahului on Maui, and at Hilo and Kawaihae on Hawaii.

Kewalo Basin on Oahu is a light-draft commercial harbor.

The Harbors Division administers barge landings at Kalaupapa and Kaunakakai on Molokai, and at Kawaihae and Kailua-Kona on Hawaii.

The Harbors Division's 19 small boat harbors are located as follows: at Kikiaola, Port Allen, Kukuiula and Nawiliwili on Kauai; at Haleiwa, Pokai Bay, Keehi Lagoon, Ala Wai Harbor and Heeia-Kea on Oahu; at Kaunakakai on Molokai; at Manele Bay on Lanai; at Maalaea and Lahaina on Maui; and at Kawaihae (where there are two small boat harbors), on the Wailoa River (two), at Honokohau and at Kailua-Kona, all on Hawaii.

FEDERAL-AID HIGHWAY SYSTEM

The colored lines on the map show the Federal-aid Highway Primary (including Interstate) and the Secondary systems, consisting of the designated principal network of highways on each of the major islands.

The solid colored lines show the portions which have been constructed by the State with the help of Federal funds.

The remainder of the system consists of proposed Federal-State construction, certain existing county road sections and certain National Park and military roads.