

DEPARTMENT OF TRANSPORTATION'S
REPORT TO LEGISLATURE
OF
THE STATE OF HAWAII
ON
ACT 214

SESSION LAWS OF HAWAII 2008
(HOUSE BILL NO. 2531, HD1, SD2, CD1)

Interim Report Relating to the West Hawaii Transportation Access Plan.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
NOVEMBER 2008



WEST MAUI TRANSPORTATION ACCESS PLAN

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INTRODUCTION

The West Maui Transportation Access Plan is mandated by Act 214. This plan is deemed necessary by the Twenty Fourth Legislature because of the vulnerability of Honoapiilani Highway, West Maui's principle arterial, to road closures. These closures severely complicate and restrict travel to and from West Maui.

Like many of Hawaii's communities, West Maui is dependent on limited roadways for commuting, enterprise and recreation. West Kauai (Kalaheo through Kekaha), North Kauai (Kapaa through Hanalei), West Oahu (Kalaeloa through Makaha), Molokai, East Hawaii (Pahoa through Kalapana) are linked to their islands' central business districts via singular roadways and are thus even more susceptible to principle arterial closures. A clear delineation between West Maui and these other communities, however, is the volume of visitor accommodations within the area. The number of visitors traveling on West Maui's principal arterial, Honoapiilani Highway (Route 30), often causes congestion and extended travel times between West and Central Maui. Closures of Honoapiilani Highway, which occur more frequently than other arterials, are traumatic. Families are separated for hours, sometimes days. Visitors miss their flights and are stranded. Business suffers as clients are unable to access the desired services.

Honoapiilani Highway is the principal arterial accessing West Maui. Traffic accidents, high ocean surges crossing portions of the roadway, fires and smoke hazards along the route, etc., have resulted in disruptions to the traffic flow and/or complete road closures. The road closures have made it difficult, requiring additional hours, to travel between Central and West Maui. Tourists have missed their flights; the numerous hotels, resorts, and other visitor attractions in Lahaina and Kaanapali have been inaccessible; and commuters and residents have been left stranded.

Honoapiilani Highway

West Maui is served by a belt roadway which follows the general alignment of the shoreline for most of its route. Honoapiilani Highway (Route 30) is a State Highway, which begins at Main Street in Wailuku and continues for 41.65 miles, ending at Kahekili Highway. The route transitions to the county portion of Kahekili Highway, a narrow, winding, single-lane road, which mainly services the local traffic in Kahakuloa. The county road eventually connects to the State portion of Kahekili Highway (Route 340) which continues for 4.29 miles until it ties into Waiehu Beach Road and Market Street.

The segment of Honoapiilani Highway along the mountainous terrain known as the Pali, between Olowalu and Central Maui, is the solitary route through this area. This portion of the route consists of a 12-foot wide lane in each direction, with no passing lanes and limited opportunities for turn-arounds.

The segment of Honoapiilani Highway between Olowalu and Kaanapali is laced with cane haul roads which access the lands mauka of the highway. While these roads were intended to service the sugar plantation operations, these cane haul roads also serve as

emergency alternate routes in the event of road closures occurring within this segment of Honoapiilani Highway.

The portions of Honoapiilani Highway through Lahania and between Kaanapali and Kapalua, include various parallel county roads such as Front Street and Lower Honoapiilani, which serve as alternate routes through the area. The traffic volumes through this segment are higher than other portions of Honoapiilani Highway due to the local circulation within the area.

The segment from Kapalua through Honokaohau and onto Kahakuloa services local traffic, with significantly lower traffic volumes.

Kahekili Highway

A single-lane country road connects the end of Honoapiilani Highway and Kahekili Highway. This is a winding one-lane road that is not up to current standards. In times of emergency, this road has been used to direct traffic out of West Maui through Kahekili Highway during daylight hours, and reversed at night. Contra-flow operations are necessary because the road can only accommodate one-directional traffic.

Other Modal Links

While West Maui does include both airport and harbor facilities, neither would be capable of providing the equivalent capacity should a road closure occur.

Kapalua Airport in West Maui operates only during daylight hours. Its ability to transfer passengers to Kahului Airport or airports on the other islands is limited. In 1999, the airport accommodated roughly 16 daily flights or 8 roundtrips provided by Aloha Air using DeHavilland Dash-8's, for a maximum daily total of 592 passengers. Helicopters are permitted use of the facility only during emergencies such as to fight fires.

Lanai Airport on the island of Lanai would also serve as an alternative transportation link to Maui's Central Business District. Use of Lanai Airport requires an ocean transport link between West Maui and Lanai via small boat operators.

Lahaina Small Boat Harbor with one pier, 21 berths, and 79 moorings, is the main boating facility in West Maui. There are additional small anchorages, mooring areas, and boat ramps at Kaanapali, Lahaina Roadstead, and Mala. Boating provides an alternative transportation link between Central and West Maui. For example, when fires caused road closures on Honoapiilani Highway, approximately 100 passengers were shuttled by boats between Lahaina and Maalaea Small Boat Harbors.

There are also some private shuttle buses which run between the resorts on West Maui and the shopping malls and Kahului Airport.

Finally, the Kaanapali and Pacific Railroad is a private operation running between Lahaina and Kaanapali. This facility mainly serves as a tourist attraction, although it also provides a link between the resort area in Kaanapali and the historic town of Lahaina.

EMERGENCY PLANS

Maui County Police Department – Highway Closures (Special Order 99-12)

Special Order 99-12 establishes guidelines for closing portions of major highways on Maui due to a critical incident. A critical incident is defined as any natural or manmade emergency which has or may cause major property damage, serious bodily injury or death.

The Chief of Police or ranking field supervisor on duty will determine whether a road closure is required.

Honoapiilani Highway is specifically addressed in Special Order 99-12. If any portion of Honoapiilani Highway, between Kuihelani Highway and Honolua, is closed, then Kahekili Highway traffic flow is only allowed one-way from Lahaina to Kahului. Private roads may be used in accordance with a separate general order, which deal with the emergency use of private property. This applies to cane haul roads whenever they permit bypassing any portion of the main highway that is closed during emergency operations.

Strategies to Link Central & West Maui (2002)

Under the efforts of then State Senator Jan Yagi-Buen, a task force of public and private sector representatives was convened in 1999 to investigate the situation and recommend possible permanent solutions. The Task Force identified two long-term alternatives: (1) the addition of lanes to the Honoapiilani Highway Corridor from Maalaea Road to Puamana; and (2) a transit plan utilizing a ferry system; and four short-term alternatives: (1) emergency use of cane haul roads; (2) the use of a northern route via Kahakuloa; (3) improving communications during closures; and (4) utilizing service patrols to assist in incident management.

The impact of road closures are magnified by communication barriers or the lack of systematic public notification, delays in clearing the accident scenes, and the poor condition of the alternate emergency routes. An effort is underway to amend the emergency plans, with special procedures to address the Pali Road closures. While a separate committee has been convened to improve the emergency procedures, the related comments which surfaced at the West Maui Connector Task Force meetings are presented.

- a. There are currently no road signs along the roads leading to the Pali area to notify motorists whenever there is a road closure. Unless they happen to find out through a radio broadcast or by word of mouth, drivers have no means of

foretelling a closure until they have traversed into the congested area.

- b. Traffic accidents require the police to gather evidence through procedures acceptable in court. This requires sophisticated data gathering and records completion, which in the past have taken about 5 or 6 hours to complete. This procedure has since been expedited to about 3.5 hours, but still results in a delay in clearing the accident scene.
- c. The emergency routes, formerly old cane haul roads, are in poor condition. They have potholes and other surface discrepancies, and lack signage, lighting, and striping or other lane division.

Identification of Alternatives, Short Term

Emergency Use of Cane Haul Roads

A 10-mile segment of Honoapiilani Highway, in the vicinity between Olowalu and Puamana, is interfaced by cane haul roads. In times of emergency, these roads have been used as alternate routes.

More effective use of the cane haul roads were discussed. There have been occasions when the supervising officer on duty had determined that the condition of the cane haul road was such that it should not be used even as a temporary route. To prevent this from happening, the Task Force discussed general spot maintenance of the roads.

Also, to improve the traffic flow when the roads are used, it was suggested that coning be considered.

Northern Route via Kahukuloa

A narrow, single-lane, county dirt road links the end of Honoapiilani Highway, Route 30, with Kahekili Highway, Route 340. This road primarily services the local residents in the area.

When road closures occur in the Pali section, this northern route becomes the emergency alternate to get out of West Maui. Traffic is allowed in one direction, out of Lahaina, with personnel stationed at key locations to direct the motorists. The command post at Waihee School reverses the flow of traffic at night, allowing motorists into Lahaina.

The condition of this segment of the road was described as being below standards. Spot improvements to the road would be highly desirable.

Improving Communications

The lack of advance warning of road closures was cited as further exasperating the situation. If motorists could be alerted to road closures before traversing the route to West Maui, they could be deterred from adding to the congestion. Besides establishing communication networks with the broadcast media, which would be addressed in the effort to amend the emergency plans, it was suggested that variable message signs along the routes leading to West Maui would mitigate the problem. These would be permanently installed, programmable signs controlled from the highways district office. Approximately six roadside signs would be required. These signs could be placed on North Kihei Road; on Kuihelani Highway, near Kahului; and at various locations on Honoapiilani Highway.

Service Patrols

Service patrols could be implemented which would assist in incident management and expedite restoring the roadway to normal operations.

ASSESSMENT OF ALTERNATIVES

Cane Haul Roads

The emergency use of the cane haul roads is provided through G.O. 401.11, "Emergency Use of Private Property."

These roads, however, are not intended for the general public and are thus not well maintained. Spot improvements to fix potholes or other minor maintenance work have been suggested. Coning of the cane haul roads would improve the traffic flow during emergency use.

As these are private, sub-standard roads, the roads are not eligible for federal funds. Improvements to the cane haul roads, including signage, pot-hole filling and access improvements require funds. These improvements must satisfy Federal (AASHTO) standards to qualify for FHWA funds. In the absence of FHWA funds, funding from other sources is required. Jurisdictional responsibility for the improvements (i.e., designation of the expending agency) must also be determined; and roles during times of emergency would need to be defined (e.g., which agency would be responsible for coning).

Estimated cost for minimal spot improvements: \$250,000 (one time).

Northern Route via Kahakuloa

The county portion of the northern route is substandard. Spot improvements along the route are desired. Improvements to the northern belt road via Kahakuloa require funds. These improvements must satisfy Federal (AASHTO) standards to qualify for FHWA funds.

Federal funds could be used if it were determined that the road would be built to standards. This has not been pursued as a viable project in the past because of the environmental and social impacts. It is anticipated that an improved roadway would open the region to more traffic, a scenario discouraged by the local community. Efforts to improve the road to standards should be pursued during the development of the long-range highway plan.

Estimated cost for minimal spot improvements: \$250,00/year.

Estimated cost for improvement to standards: \$100+ million (includes improving to 2 lanes)

Improving Communications

Federal funding to provide for variable message signs along state routes could be secured as part of ongoing highway projects. The installation of the signs, however, would be tied into the construction schedule of the projects, which may span a period of years. If local funding were available, the signage could be undertaken as a project by itself and completed within a year.

Estimated cost for variable message signs and control center: \$500,000

Service Patrols

Service patrols would aid in incident management, accident or debris clearance, containment of minor oil or gasoline spills, on-the-spot assistance for disabled vehicles, etc. The program could be eligible for federal funds.

Estimated costs: \$220,000/year (assumes extended hours of service, but not 24-hour coverage; patrol including vehicle and equipment; dispatcher).

RECOMMENDATIONS

While various alternatives are identified by the Task Force, improvements for the different portions of the West Maui routes would solve different problems and could be pursued concurrently. It was therefore, unnecessary to select a “preferred” alternative. As such, the Task Force’s recommendations are as follows:

- a. **A feasibility/planning study for Honoapiilani Highway, Maalaea Road to Puamana, should be initiated.** This would address the need for a permanent alternate route through the corridor, the imminent shoreline erosion situation, and as the first step in the project development process, expedite potential

right-of-way acquisitions.

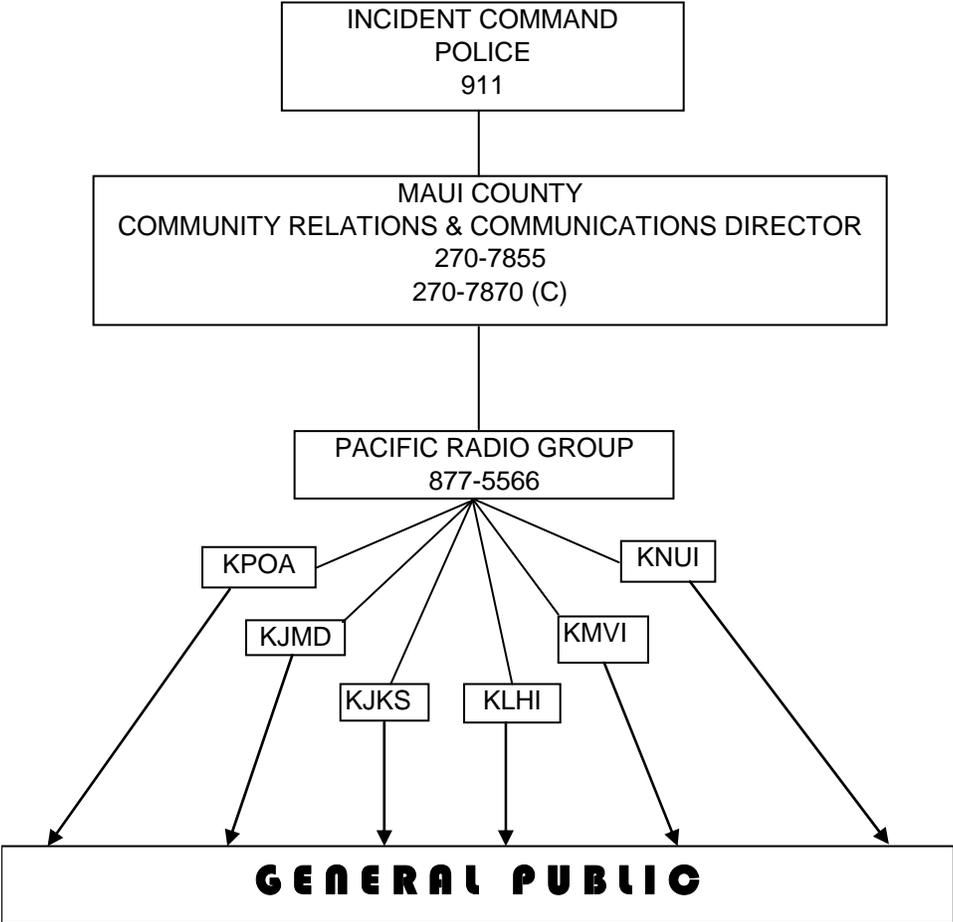
- b. **Minimal, spot improvements should be provided for the cane haul roads to improve their use as emergency alternate routes. Also, coning during emergency operations should be implemented.** The affected state and county agencies (e.g. HDOT, County Public Works, County Police) and the affected landowners should meet to determine the specific improvements which should be undertaken, as well as the associated roles and responsibilities. This would include addressing resurfacing requirements, access and signage improvements, lighting, operational roles during the emergency, etc.
- c. **Minimal, spot improvements along the northern route should be continued.** Repairs to this sub-standard county route have been ongoing. It would be desirable to continue and possibly upgrade these improvements to improve its use as an emergency alternate route.
- d. **Programmable signs should be installed on the major roads leading to Honoapiilani Highway to notify motorists of road closures.** This should be expedited, subject to the availability of funds.
- e. **Service patrols should be investigated and if warranted, implemented.** This program is as yet unproven in the State of Hawaii, but has the potential of minimizing the impact of traffic incidents and reducing the duration of road closures, especially those involving minor accidents.

THE WEST MAUI TRANSPORTATION ACCESS PLAN

COMMUNICATIONS PLAN FOR GENERAL PUBLIC NOTIFICATION

The Working Group focused on the problems encountered by the lack of information provided to the general public. The Working Group believes that public notification would ease the number of motorists on Honoapiilani Highway when the closure would remain in effect for extended periods of time. Information disseminated to the general public would include details on the nature of the closure, estimated length of the closure, alternate routes available, alternate modes of transportation services available, the locations, schedule and prices of these services, instructions for accessing these services, procedures for parking/turnover of rental cars, emergency medical services, shelter locations, child and pet care service providers. The Communications Plan for General Public Notification is presented as a diagram in keeping with the Working Group's desires for a short, simple plan.

**COMMUNICATIONS PLAN
GENERAL PUBLIC NOTIFICATION**



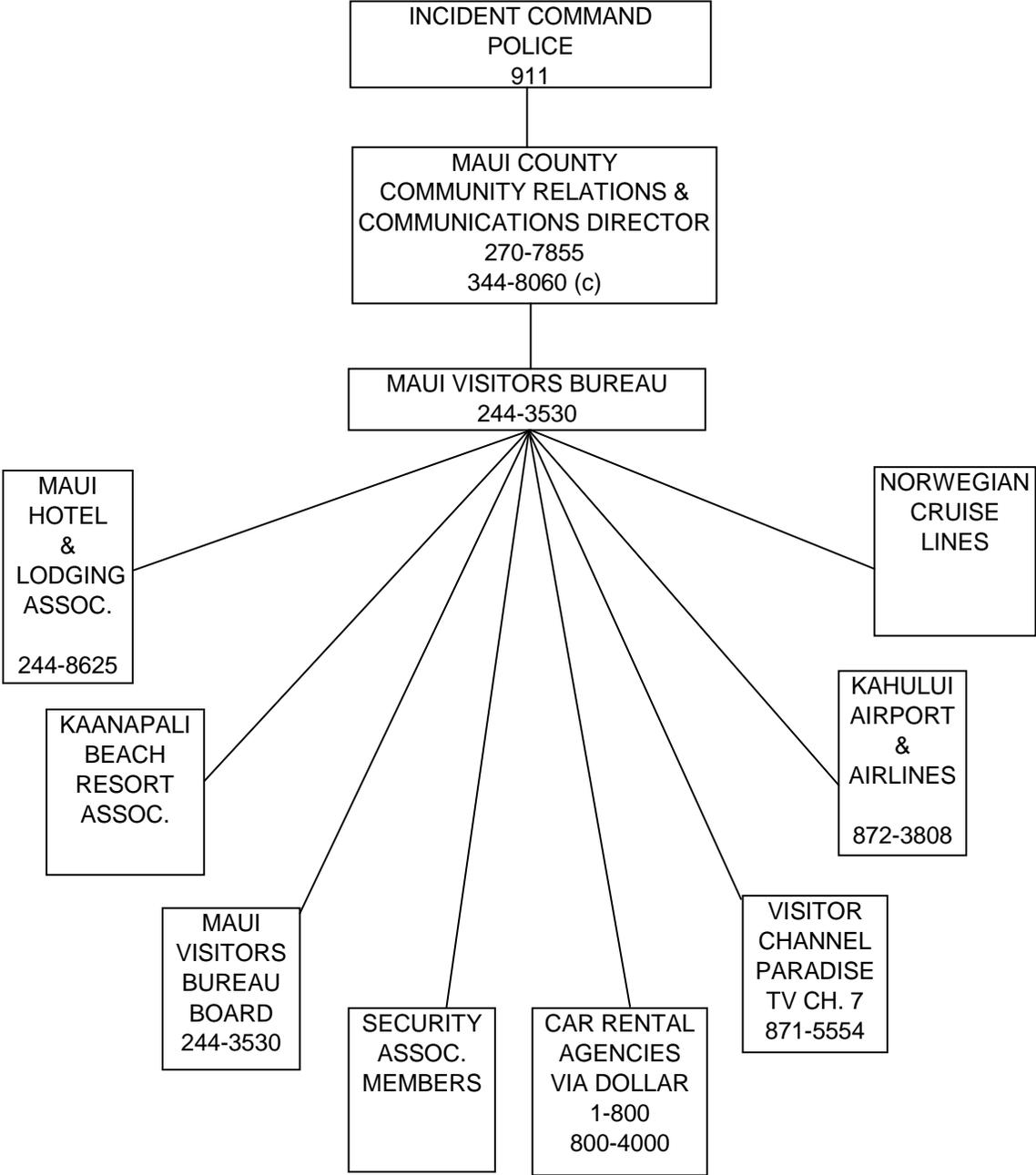
COMMUNICATIONS PLAN FOR VISITOR NOTIFICATION

West Maui's visitor accommodations and attractions provide significant economic benefits. Maui is thus mindful of the concerns of its visitor industry. The West Maui Transportation Access Plan is an effort to minimize any visitor inconveniences, which include the inability to get to Kahului Airport as well as the inability to access their accommodations in West Maui.

The Maui Visitors Bureau plays an integral role in the dissemination of information for West Maui's visitor population. The Maui Visitors Bureau communicates with the various organizations via an extensive e-mail "tree". There are hundreds of individuals/agencies within this e-mail "tree". The primary organizations that forward the Honoapiilani Highway closure information to their affiliates are the Maui Hotel & Lodging Association, The Kaanapali Beach Resort Association, the Maui Visitors Bureau Board, the Security Association, the Kahului Airport District Office, the car rental agencies, visitor channel Paradise TV – Channel 7, Norwegian Cruise Lines (and the DLNR Lahaina Harbor Agent for the foreign cruise lines).

The Communications Plan for Visitor Notification was developed with the assistance of the Maui Visitors Bureau. The plan is presented in diagram form in keeping with the Working Group's desires for a short, simple plan.

**COMMUNICATIONS PLAN
VISITOR NOTIFICATION**



COMMUNICATIONS PLAN FOR GOVERNMENT SERVICES

The State Department of Defense Civil Defense Division, under the authority of Hawaii Revised Statutes Chapter 128, “Civil Defense and Emergency Act”, will direct the services of the agencies identified in the “State Plan for Emergency Preparedness, Volume III, Disaster Preparedness and Assistance,” during emergency situations proclaimed by the Governor of the State of Hawaii or declared by the President of the United States. Although HRS 128 specifies civil defense actions as being pertinent to response to attacks, civil defense agencies have expanded their responsibilities during natural and technological disasters in general. Maui County’s Maui Civil Defense Agency is directed by the Mayor, who is an appointed Deputy Director of Civil Defense. On occasion, county civil defense agencies have activated and assumed command and control of first responder (police, fire, emergency medical, etc.) agency actions in response to fires, lava flows, storms, tsunamis and hazardous materials incidents without benefit of Gubernatorial or Presidential decree.

The West Maui Transportation Access Plan’s Communications Plan for Government Services is intended for use by County officials regardless of the severity of the emergency situation. It does not supersede or replace any Civil Defense contingency plans, which are likely to be more comprehensive and in consonance with established procedures and emergency management protocol.

**COMMUNICATIONS PLAN
GOVERNMENT SERVICES NOTIFICATION**

INCIDENT COMMAND - POLICE - 911

MAUI COUNTY
COMMUNITY RELATIONS & COMMUNICATIONS DIRECTOR
270-7855 344-8060 (c)

MAUI CIVIL DEFENSE AGENCY
270-7285

COUNTY
AGENCIES

STATE
AGENCIES

POLICE
244-6300

FIRE
270-7561

PUBLIC
WORKS
270-7845

PARKS
270-7230

WATER
270-7816

TRANSPORTATION
270-7511

CIVIL
DEFENSE
734-3400

TRANSPORTATION

HIGHWAYS
DIVISION
873-3535

AIRPORTS
DIVISION

LAND &
NATURAL
RESOURCES
DIVISION OF
BOATING &
OCEAN
RECREATION
243-5824

KAHULUI
HARBOR
873-3350

KAHULUI
AIRPORT
872-3830

KAPALUA
AIRPORT
669-0623

LAHAINA
HARBOR
662-4060

MAALAEA
HARBOR
243-5818

LANAI
AIRPORT
565-6757

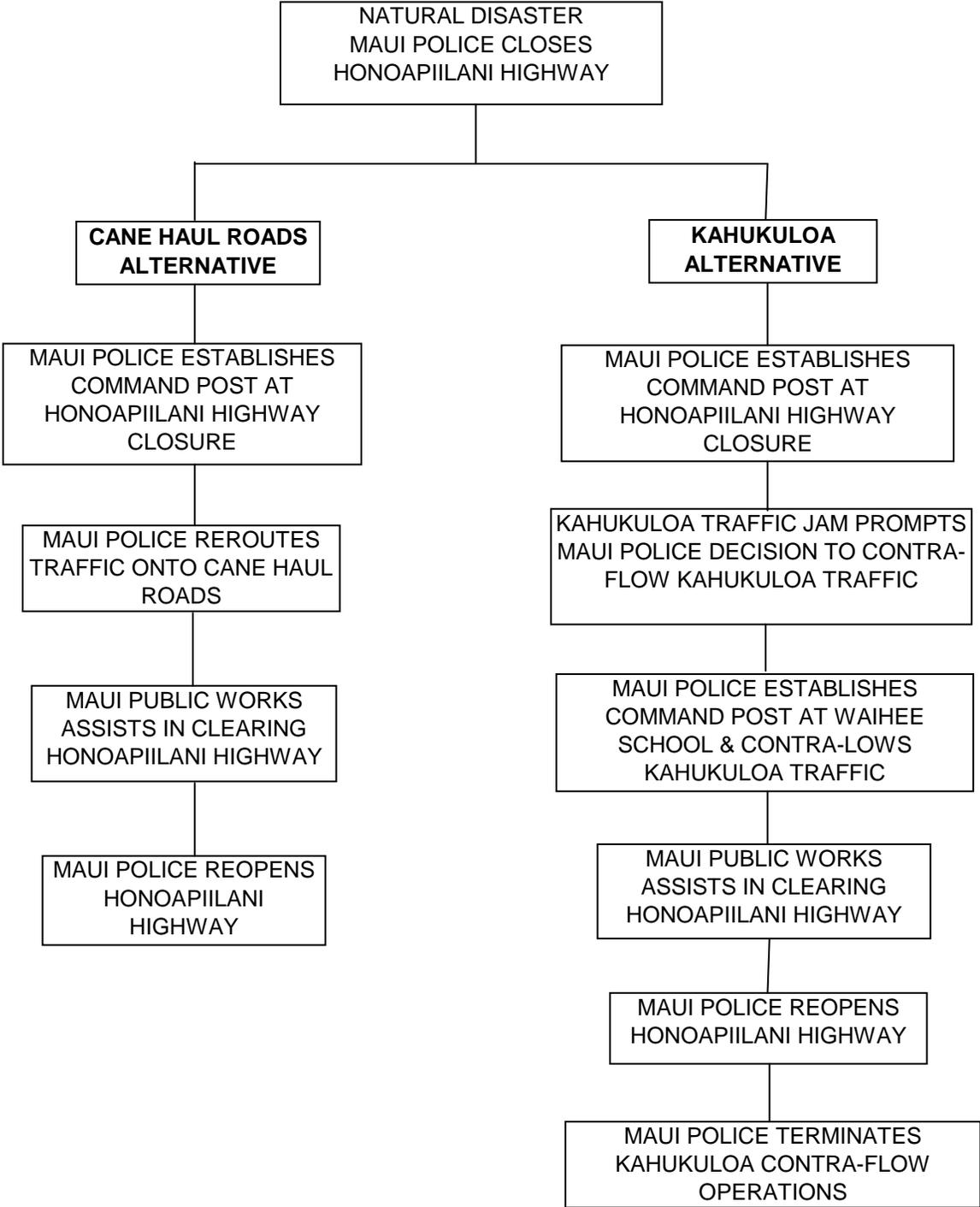
ALTERNATE ROUTES AND PUBLIC SERVICES PLAN

There are only two roadway alternatives for motorists when Honoapiilani Highway is closed. The cane haul roads are privately-owned. The Maui Police Department invokes Special Order 99-12 to enable use of these cane haul roads.

The northern route that links West Maui to Maui's Central Business District takes motorists from Lahaina to Waihee via Kahakuloa. The County roads in this route are sub-standard and narrow, requiring the Maui Police Department to contra-flow traffic when vehicular traffic increases in response to Honoapiilani Highway closures.

The Alternate Routes and Public Services Plan is depicted in diagram format in keeping with the Working Group's desires for a short, simple plan.

ALTERNATE ROUTES & PUBLIC SERVICES PLAN



ALTERNATE MODES PLAN

During severe, lengthy closures of Honoapiilani Highway, the County of Maui may decide to broadcast the availability of alternative modes of travel for residents' and visitors' desiring West Maui access or departure.

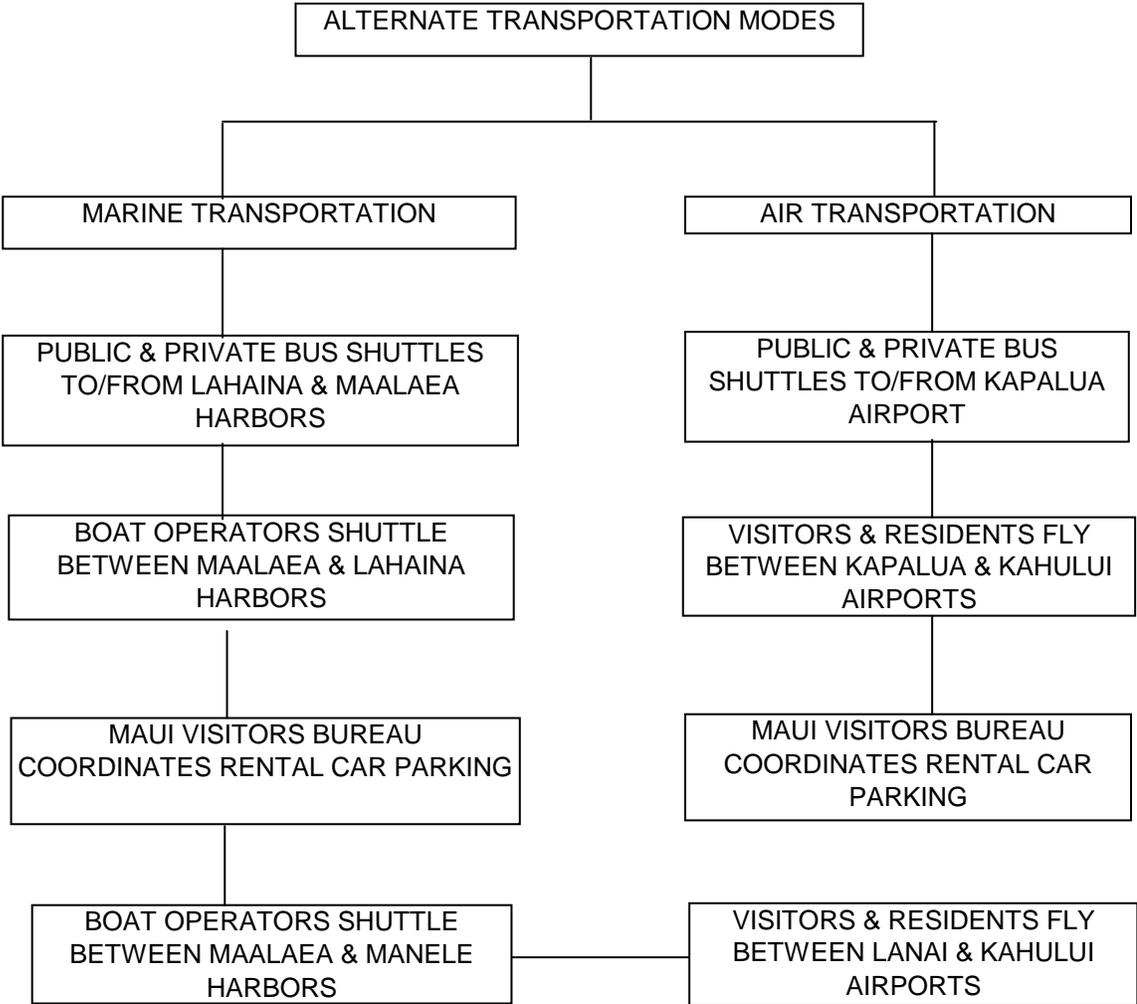
Boat operators could ferry passengers between Lahaina and Maalaea Small Boat Harbors. County and private buses would shuttle these boat passengers between the boat harbors, the hotels and Maui's Central Business District.

General aircraft operators could fly their passengers between Kahului and Kapalua Airports. County and private buses would shuttle these aircraft passengers between the airports and their hotels. Lanai Airport could also avail itself as an alternative mode. Passengers would have to be ferried by boat from Lahaina or Maalaea to Manele Small Boat Harbor, shuttled to Lanai Airport, then flown to Kahului or Kapalua Airports.

Activation of this plan will require extensive coordination between the Maui County Communications Relations and Communications Director, the Maui County Transportation Department, the Maui County Department of Public Works, the Maui Visitors Bureau, the State Department of Land & Natural Resources Division of Boating & Ocean Recreation and the State Department of Transportation Airports Division.

The Alternate Modes Plan is also presented in diagram format.

ALTERNATE MODES PLAN



WEST MAUI TRANSPORTATION ACCESS PLAN

APPENDICES

APPENDICES

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APPENDIX A

ACT 214

ACT 214



GOV. MSG. NO. 859

EXECUTIVE CHAMBERS
HONOLULU

LINDA LINGLE
GOVERNOR

July 7, 2008

The Honorable Colleen Hanabusa, President
and Members of the Senate
Twenty-Fourth State Legislature
State Capitol, Room 409
Honolulu, Hawaii 96813

Dear Madam President and Members of the Senate:

This is to inform you that on July 7, 2008, the following bill was signed into law:

HB2531 HD1 SD2 CD1

A BILL FOR AN ACT RELATING TO THE WEST
MAUI TRANSPORTATION ACCESS PLAN.
(ACT 214)

Sincerely,

A handwritten signature in black ink, appearing to read "L. Lingle".

LINDA LINGLE

Approved by the Governor

On July 7, 2008

HOUSE OF REPRESENTATIVES
TWENTY-FOURTH LEGISLATURE, 2008
STATE OF HAWAII

ACT 214

H.B. NO. 2531

H.D. 1

S.D. 2

C.D. 1

A BILL FOR AN ACT

RELATING TO THE WEST MAUI TRANSPORTATION ACCESS PLAN.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

SECTION 1. The legislature finds that West Maui is one of the largest generators of state and county revenues and is one of the largest visitor destinations outside of Waikiki. Yet access in and out of the region is served by only one major highway that may be closed for days at a moment's notice, which occurred in the past two years due to wildfires. In West Maui, unlike in other areas where a full-blown natural disaster is the cause for a total shutdown of transportation access, events and accidents that do not rise to the level of an emergency have closed the highway for days. Because of the non-emergency status of these incidents, the State has no coordinated plan to transport people into and out of West Maui during road closures. Because there is no hospital in West Maui, such road closures put people's lives at risk. They also divide families, as many Maui residents work in West Maui but reside in other parts of Maui county. The booming industry in West Maui is also jeopardized.

During July of 2007 when a fire closed the highway for several days, a task force was created by the department of land and natural resources to address transportation access to West Maui. However, because no official support was mandated for this group's work, the task force has dispersed. The legislature finds that a West Maui transportation access plan is critical.

The purpose of this Act is to require the department of transportation to develop a West Maui transportation access plan, which can serve as a model for developing plans in other areas having similar problems, such as West Kauai, Wainee, and the Kealahou area.

SECTION 2. (a) There is created the informal, temporary West Maui transportation access plan working group within the department of transportation to develop a West Maui transportation access plan to address road closures in West Maui. The working group may elect from among its members a chairperson. The working group shall consist of the following member:

- (1) The director of transportation;
- (2) The state senator representing district 5 in West Maui;
- (3) The state representative representing district 10 in West Maui;
- (4) The member of the Maui county council representing West Maui;
- (5) The chief of the highway division of the department of transportation;
- (6) A staff member of the department of land and natural resources representing the Lahaina small boat harbor;
- (7) The mayor of Maui county;
- (8) The director of the department of transportation of Maui county;
- (9) The police chief of Maui county;
- (10) The fire chief of Maui county;
- (11) The administrator of the civil defense agency of Maui county;
- (12) A representative of Lahaina Bypass Now;
- (13) A representative of the Kaanapali Beach Resort Association;
- (14) A representative of the Maui Visitors Bureau;
- (15) A Maui-based representative of Island Air;
- (16) A Maui-based representative of the Car and Truck Renting and Leasing Association;
- (17) A representative of the Maui Hotel and Lodging Association;
- (18) A Maui-based representative of the Hawaii Transportation Association;
- (19) A representative of the Pacific Radio Group;
- (20) A representative of Expeditions Lanai Ferry;
- (21) A representative of Molokai Princess Ferry; and
- (22) A Maui-based representative of Cruise Lines International Association.

- (b) The temporary working group shall develop a West Maui transportation access plan to address road closures in West Maui and may contract with a consultant to develop the plan without regard to chapter 103D, Hawaii Revised Statutes.
- (c) The temporary working group shall submit a written report including findings, recommendations, the finalized West Maui transportation access plan, and any necessary proposed legislation to the legislature no later than twenty days prior to the convening of the regular session of 2009.
- (d) The temporary working group shall terminate on June 30, 2009.

SECTION 3. There is appropriated out of the general revenues of the State of Hawaii the sum of \$0 or so much thereof as may be necessary for fiscal year 2008-2009 for the West Maui transportation access plan temporary working group to develop a West Maui transportation access plan, including the hiring of a technical consultant.

The sum appropriated shall be expended by the department of transportation for the purposes of this Act.

SECTION 4. This Act shall take effect upon its approval, except that section 3 shall take effect on July 1, 2008.

APPROVED this 7 day of JUL , 2008



GOVERNOR OF THE STATE OF HAWAII

APPENDIX B

PARTICIPANTS

OF THE

WEST MAUI TRANSPORTATION

ACCESS PLAN

WORKING GROUP

WEST MAUI TRANSPORTATION ACCESS PLAN WORKING GROUP

SEPTEMBER 25, 2008 MEETING PARTICIPANTS

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Kahului, Hawaii 96732

Ms. Charlene Shibuya
Assistant District Engineer
Highways Division
Department of Transportation
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Mr. Stan Zitnick, Executive Assistant
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County of Maui
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Wailuku, Hawaii 96793-2155

Mr. Lawrence Kauhaahaa
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55 Mahalani Street
Wailuku, Hawaii 96793-2155

Mr. Ricky Uedoi
Police Department
County of Maui
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Wailuku, Hawaii 96793-2155

Mr. Gen Iinuma, Administrator
Maui Civil Defense Agency
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Wailuku, Hawaii 96793-2155

Mr. Don Medeiros, Director
Department of Transportation
County of Maui
2145 Kaohu Street, Suite 102
Wailuku, Hawaii 96793

Mr. Michael Miyamoto, Deputy Director
Department of Public Works
County of Maui
200 S. High Street
Wailuku, Hawaii 96793

The Honorable Rosalyn Baker, Senator
5th Senatorial District
Hawaii State Capitol, Room 210
415 South Beretania Street
Honolulu, Hawaii 96813

The Honorable Angus McKelvey, Representative
10th Representative District
Hawaii State Capitol, Room 315
Honolulu, Hawaii 96813

The Honorable Jo Anne Johnson, County Councilperson
Maui County Council
Kalana O Maui Building, 8th Floor
200 South High Street
Wailuku, Hawaii 96793

Mr. Hal Silva, Harbor Agent
Lahaina Boat Harbor
675 Wharf Street
Lahaina, Hawaii 96793

Ms. Leilani Puomano
Mr. Bob Pure
Ms. Stacie Thorlakson
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1000 Kapalua Drive
Lahaina, Hawaii 96761

Ms. Janet Kuwahara
Maui Visitor's Bureau
1727 Wili Pa Loop
Wailuku, Hawaii 96793

Mr. Bill Caldwell
Expeditions Lanai Ferry
658 Front Street, Suite 127
Lahaina, Hawaii 96761

NOVEMBER 13, 2008 MEETING PARTICIPANTS

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Honolulu, Hawaii 96813

Mr. Glenn Yasui
Administrator, Highways Division
State Department of Transportation
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Highways Division
Department of Transportation
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Highways Division
Department of Transportation
650 Palapala Drive
Kahului, Hawaii 96732

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Maui District Manager
Airports Division
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Kahului, Hawaii 96732-2327

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Community Relations and
Communications Director
Office of the Mayor
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Wailuku, Hawaii 96793

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Police Department
County of Maui
55 Mahalani Street
Wailuku, Hawaii 96793-2155

Mr. Ricky Uedoi
Police Department
County of Maui
55 Mahalani Street
Wailuku, Hawaii 96793-2155

Mr. Charles Hirata
Police Department
County of Maui
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Mr. Michael Miyamoto, Deputy Director
Department of Public Works
County of Maui
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Wailuku, Hawaii 96793

The Honorable Rosalyn Baker, Senator
5th Senatorial District
Hawaii State Capitol, Room 210
415 South Beretania Street
Honolulu, Hawaii 96813

Ms. McKelvey, for
Representative Angus McKelvey
10th Representative District
Hawaii State Capitol, Room 315
Honolulu, Hawaii 96813

Mr. Bob Pure
Ms. Stacie Thorlakson
Lahaina Bypass Now
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Expeditions Lanai Ferry
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Lahaina, Hawaii 96761

Ms Carol Reimann
Maui Hotel and Lodging Association
1727 Wili Pa Loop, Suite B
Wailuku, Hawaii 96797

Ms. Joy Yokouchi
Kahului Trucking & Storage
140 Hobron Avenue
Kahului, Hawaii 96732

APPENDIX C

**TRANSPORTATION
FACILITIES & OPERATIONS**

SURFACE TRANSPORTATION

Honoapiilani Highway

Honoapiilani Highway is a belt roadway that follows the general alignment of the shoreline for most of its route. Honoapiilani Highway (Route 30) is a State Highway, beginning at Main Street in Wailuku, continuing for 41.65 miles and ending at the narrow, winding, single-lane county portion of Kahekili Highway, which services Kahakuloa local traffic. The county road eventually connects to the State portion of Kahekili Highway (Route 340), which continues for 4.29 miles until it connects to Waiehu Beach Road and Market Street.

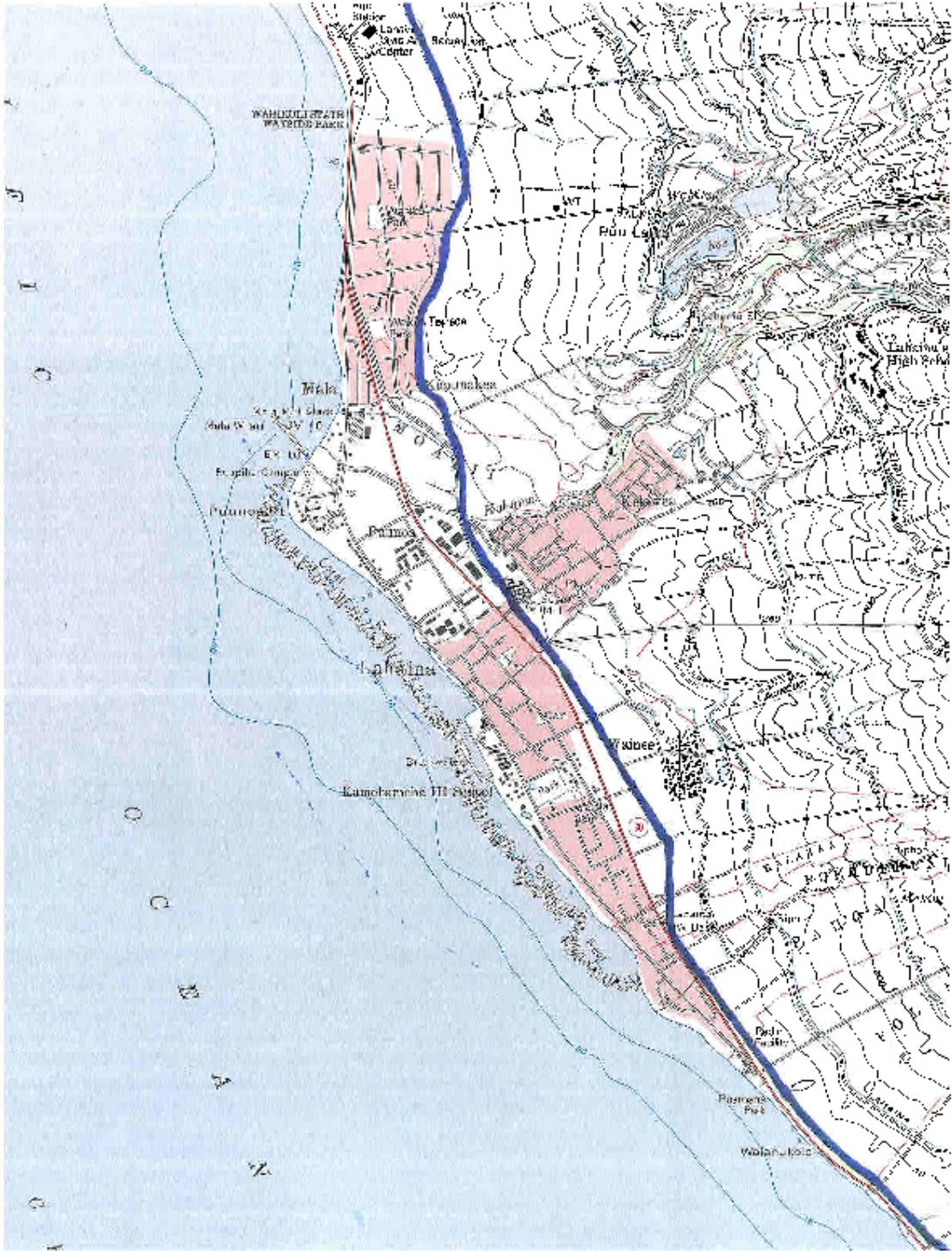
Honoapiilani Highway is the only route between Central Maui and Olowalu along the mountainous terrain known as the Pali,. Honoapiilani Highway in this area is a 12-foot wide lane in each direction, with no passing lanes and with limited opportunities for turn-arounds.

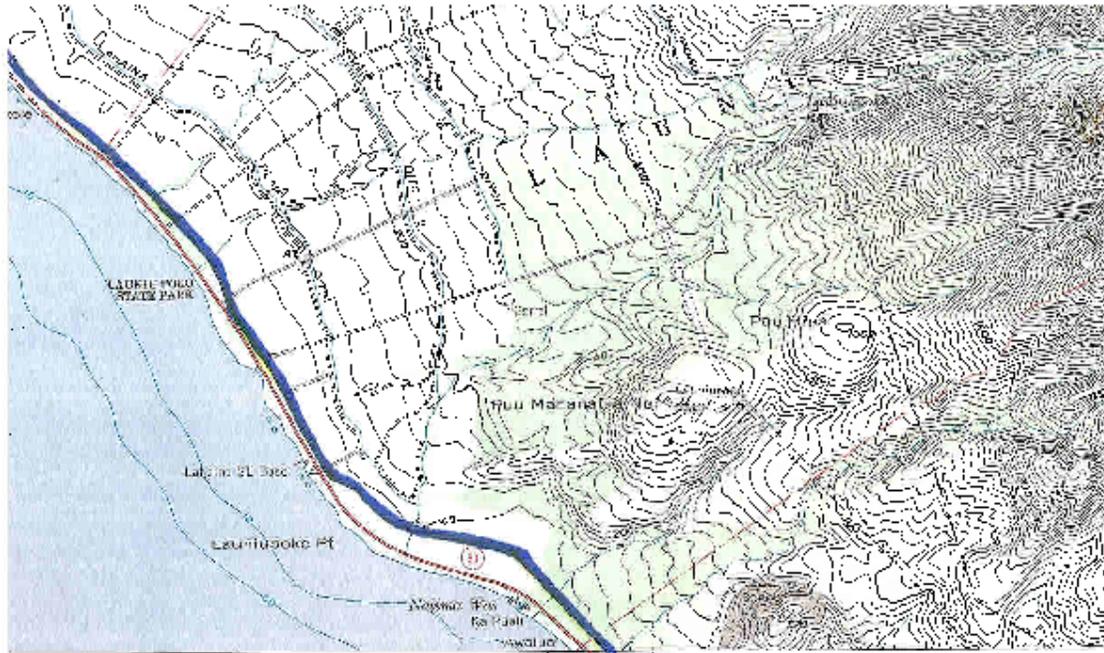
Between Olowalu and Kaanapali, Honoapiilani Highway adjoins many cane haul roads that access and service the sugar plantation lands mauka of the highway. These roads could be used as emergency bypass routes to circumvent the highway closures within this segment of Honoapiilani Highway.

Honoapiilani Highway in the Lahaina area and in the area between Kaanapali and Kapalua connects to various parallel county roads such as Front Street and Lower Honoapiilani. These county roads would serve as alternate or bypass routes in these areas. Traffic volumes in these areas are higher than in other segments of Honoapiilani Highway, due to the local traffic circulation routes.

Honoapiilani Highway between Kapalua and Kahakuloa is used mainly by local traffic, with significantly lower traffic volumes.

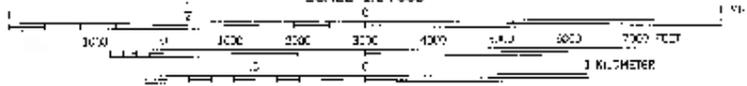
Bypasses – Cane Haul and County Roads





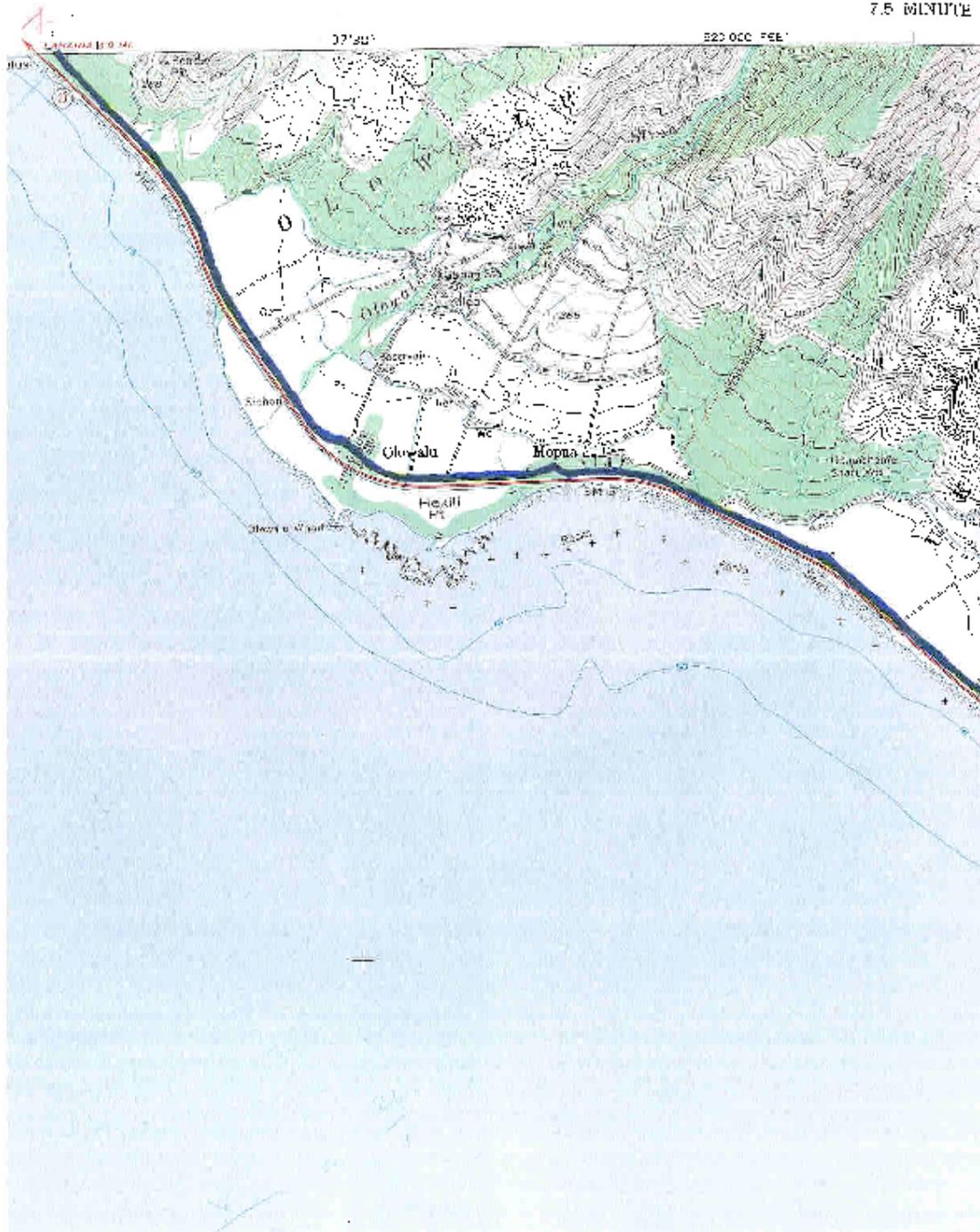
GLOWALD 17 40 11
 WAKALABA 10 41
Match Point A

SCALE 1:24 000

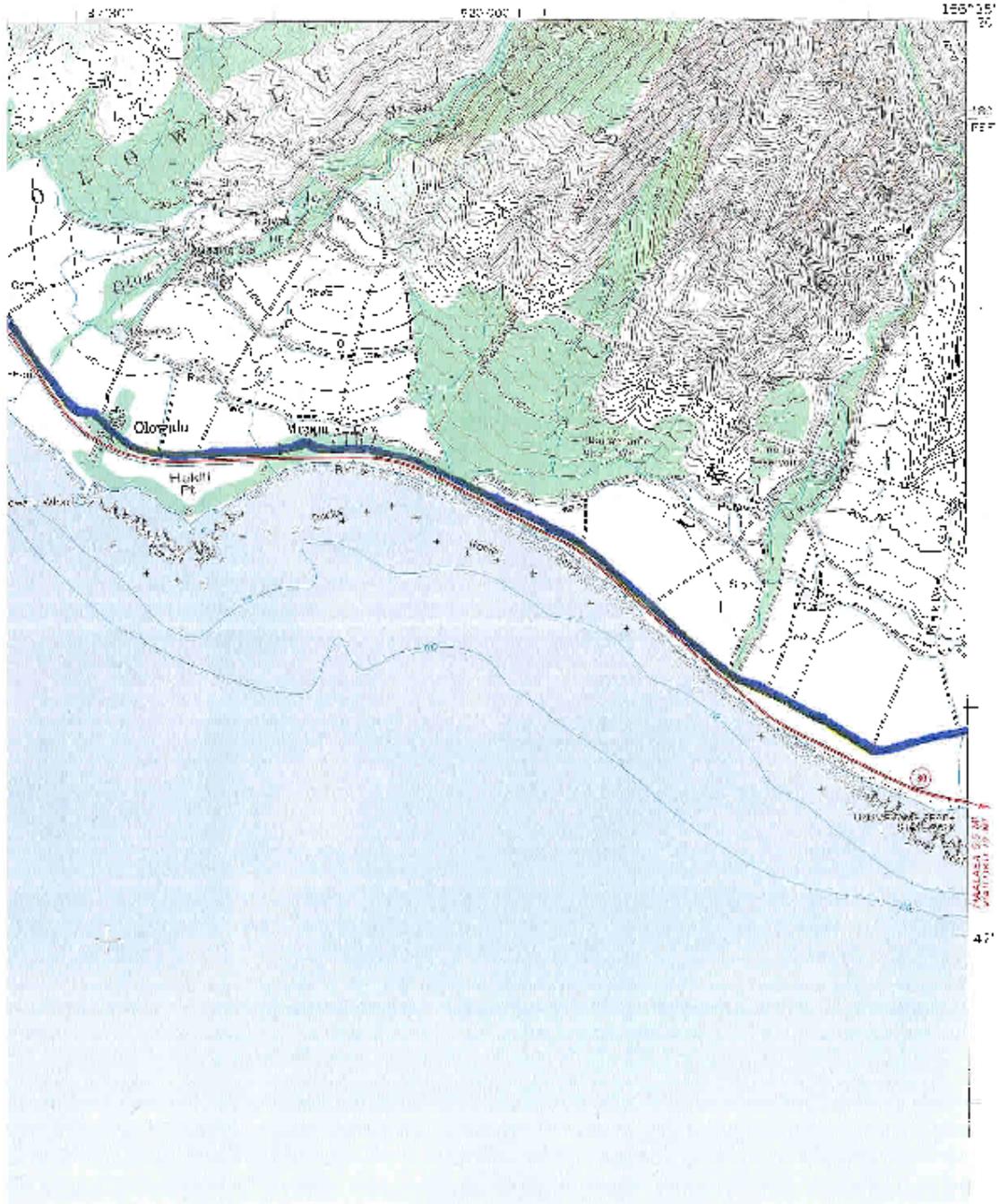


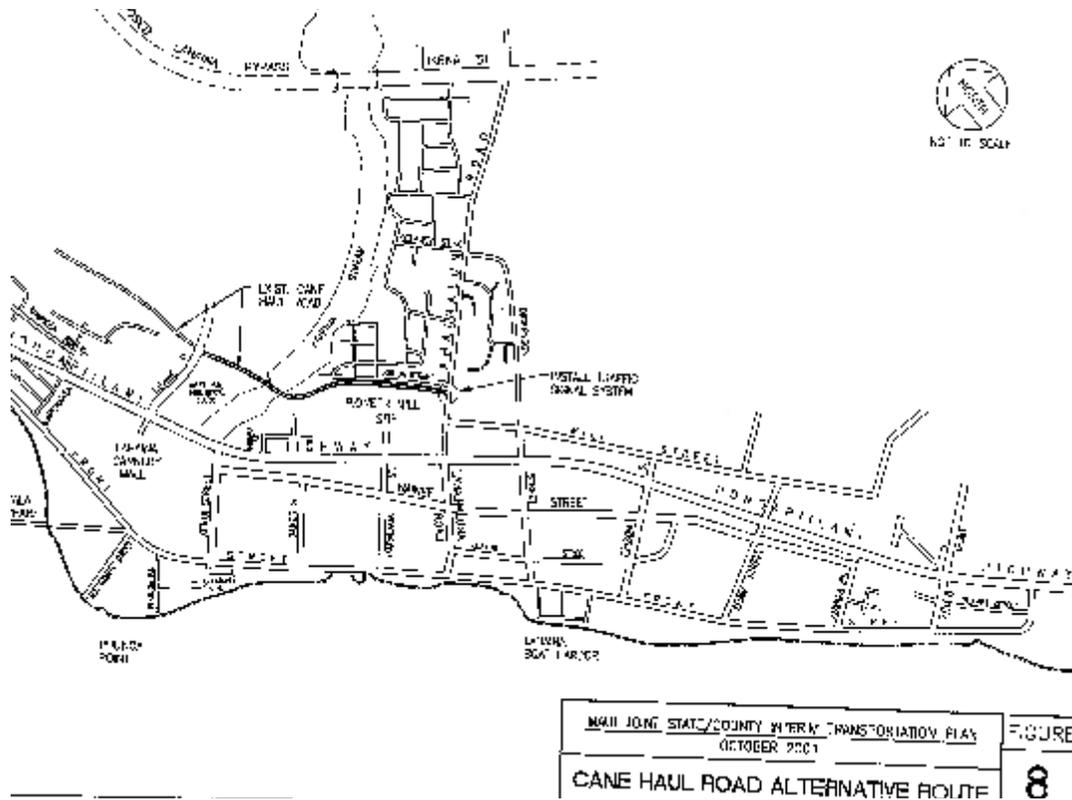
CONTOUR INTERVAL 40 FEET
 DATUM IS KECKAN SEA LEVEL
 ELEVATIONS ARE IN FEET UNLESS OTHERWISE NOTED
 SHADINGS SHOW ALTITUDE THE SHADINGS ARE OF NEAR HIGH WATER
 THE POINTS BETWEEN THE LINES ARE VARIABLE
 IF ANY RANGE OF THIS IS APPROXIMATELY 1000

FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRG 22093
 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



LOWALU QUADRANGLE
HAWAII—MAUI CO.
ISLAND OF MAUI—LAINA DISTRICT
7.5 MINUTE SERIES (TOPOGRAPHIC)





Kahekili Highway Connection

A winding, single-lane country road connects Honoapiilani Highway and Kahekili Highway. This road, which is not up to current standards, has been used for traffic out of West Maui during emergencies. Because the road is a one-lane roadway, this roadway is restricted to use as an egress route during these emergency operations.

MARINE TRANSPORTATION

Kahului Commercial Harbor

Maui is served by one deep-draft commercial harbor located in Kahului. Kahului Commercial Harbor is the island's major commercial, industrial and transportation center. It is also the busiest neighbor island port and the only commercial harbor that provides sea borne cargo transit to and from Maui. Kahului Harbor is located on the north shore of the isthmus connecting East and West Maui and is centrally positioned in Kahului Bay. The bay is bordered to the south and east by Maui's principal towns of Kahului and Wailuku.

Kahului Commercial Harbor is one of nine, State-managed, commercial harbors in Hawaii. It is located along the northern slope or the windward side of Maui and is the island's only commercial harbor. The State Department of Transportation Harbors Division's jurisdiction over commercial harbor facilities is primarily directed at the movement of cargo, passenger, and fishing vessels entering, leaving or traveling within Hawaii, and the facilities and supporting services for loading, off-loading and handling of these vessels, their cargo and passengers.

Kahului Commercial Harbor is a manmade port, dredged from naturally formed Kahului Bay. The harbor basin is 2,050 feet wide by 2,400 feet long with a project depth of 35 feet. The entrance channel is 660 feet wide and 40 feet deep. There are three piers in Kahului Commercial Harbor.

Kahului Commercial Harbor's Pier 1 is utilized by:

1. Matson's overseas container operations.
2. Norwegian Cruise Lines' domestic cruise ship operations and various foreign cruise ship operations.
3. Maui Electric Company's coal ship.
4. Maui Land & Pineapple Company's tin plate ship.
5. Kahului Trucking & Storage's sugar/molasses ship.

Pier 2 is utilized by:

1. Young Brothers' inter-island barge cargo operations.
2. Horizon Lines' overseas container shipments.
3. The Gas Company's liquid bulk cargo shipments.
4. The Hawaii Superferry' passenger and vehicle operations.

Pier 3 services:

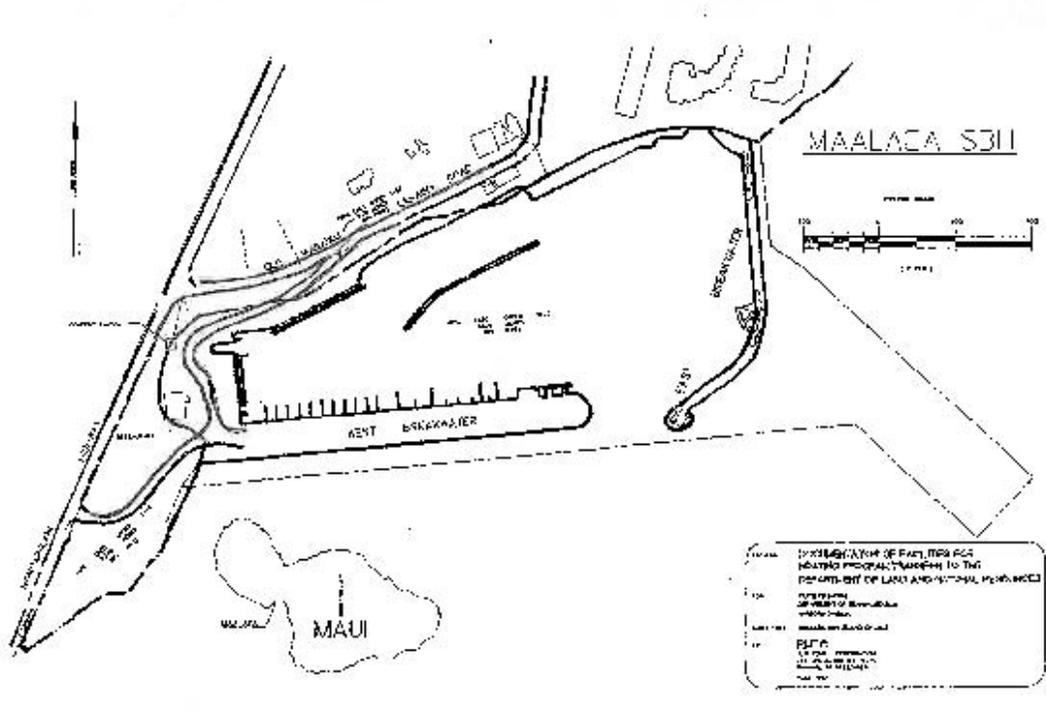
1. The liquid bulk cargo operations of Tesoro, Chevron and the Maui Electric Company.
2. The dry bulk cargo operations of Hawaiian Cement and Ameron Hawaii.



MA'ALAEA SMALL BOAT HARBOR

Ma'alaea Small Boat Harbor is located on the west coast of Maui, approximately 7 miles south of Kahului, 16 miles southeast of Lahaina and 9.5 miles north of Molokini Island. The harbor is protected by breakwaters and marked by a lighted range and buoys within the harbor. Depths in the harbor are about 7 feet at best, but because of the construction adjacent to the harbor, some silting/shoating problems are occurring. A pair of buoys mark the channel into the harbor, with range marks behind the entrance. The berths and moorings are permanently assigned. There are no anchorage areas. The harbor includes: 89 berths/moorings; 1 ramp; loading dock; drydock; fuel delivered by truck; vessel washdown; restrooms and shower; restaurant and boat club; U.S. Coast Guard Station; and the harbor office.

Ma'alaea Small Boat Harbor is under the State of Hawaii Department of Land & Natural Resources Division of Boating & Ocean Resources. This harbor services recreational and commercial boaters. Ma'alaea Small Boat Harbor covers approximately 29.51 acres. Ma'alaea Small Boat Harbor is being improved to accommodate the ferry service between Maui and Lanai, *Expeditions*.



Lahaina Small Boat Harbor

The Lahaina Small Boat Harbor is located on the northwestern coast of Maui in Lahaina town, 23 miles northeast of Cape Hanamanioa and 22 road miles from Wailuku. The Lahaina Small Boat Harbor covers approximately 11.556 acres. The harbor's access channel opens to the southwest. The Lahaina Small Boat Harbor includes 16 berths; 83 moorings; loading docks; fuel facility, restrooms; and the harbor office.

The Lahaina Small Boat Harbor is under the jurisdiction of the State of Hawaii Department of Land & Natural Resources (DLNR) Division of Boating & Ocean Resources.

DLNR is building a new pier to provide a dedicated facility for the existing inter-island ferries that serve the residents of Maui, Moloka'i and Lana'i. This new pier will serve the Lahaina-Kaunakakai commuter ferry service and the Lahaina-Manele ferry service to Lana'i. The new pier will be approximately 60 feet to the north of the existing pier, approximately 115 feet long and 35 feet wide, and constructed as pier-on-piles. A low-rise, open-sided structure on the deck of the new pier will provide shade and shelter for pier users. The Lahaina Small Boat Harbor Ferry Pier Project includes:

- dredging to widen the entrance channel to Lahaina Small Boat Harbor;
- development of a berthing area to the north of the new pier;
- construction of two sewage pump-out stations;
- construction of a concrete pedestrian walkway measuring 16 feet by 60 feet to connect the existing pier with the new pier structure; replacement of the existing - administration office and ferry ticket booth;
- construction of passenger loading and drop off area;
- relocation and expansion of on-site parking stalls;
- construction of sidewalk expansion along the northwestern portion of Hotel Street;
- resurfacing of a portion of Wharf Street.

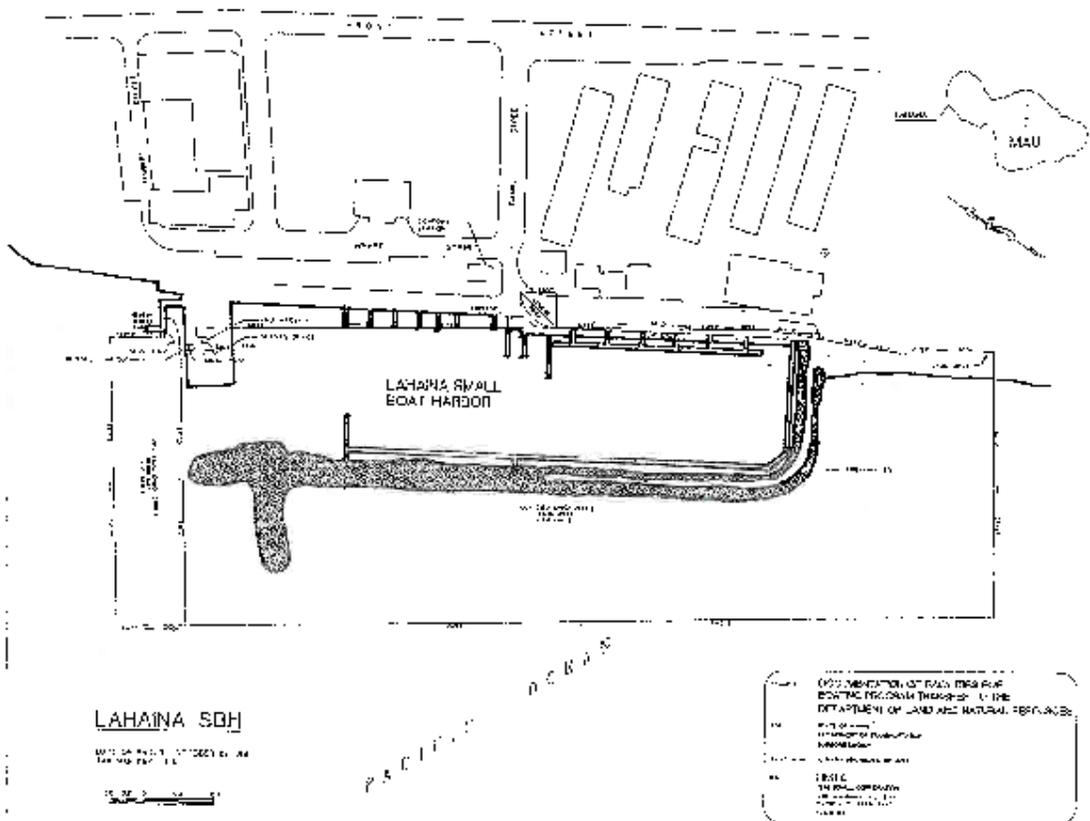
This project is supported by the U.S. Department of Transportation, Federal Transit Administration and the State of Hawai'i, Department of Transportation.

Commercial Vessel Information					
Permittee Name	Vessel Name	Vessel Size	Vessel Cap.	Berth No.	People Loading/Unloading No. of Times₁
Alihilani Yacht Chtrs, Inc.	Paragon	47	24		1
Big Blue Boat Corp.	Napali Explorer	51	44	11	1
C. Chase Sailing Co., Inc.	Man-O-War	28	29	63	2
C.R. Rose Consultants, Ltd.	Kaiakua	31	6	14	
Finest Kind, Inc.	Finest Kind	37	6	7	
Hinatea, Inc.	Hinatea	41	6	27	
Hone Heke Corp.	Lanai Ferry Expedition IV	65	130		6
Hood Marine, Ltd.	Express	45	49	13	2
Hudson, David	Exact	31	6		
Iconoclast, Ltd.	Great White	28	25		1
Islander Industries, Inc.	Atlantis IX	50	48	18	
Kahili Charters, Inc.	Expeditions (Lanai Ferry)	38	36		
Kamehameha Sails, inc.	Kamehameha	36	6	67	
Kanoa Charters, Inc.	Kanoa	30	6	51	
Kaulana of Maui, Inc.	Kaulana	65	149		2
Kolea Chtrrs of Lahaina, Inc.	Reef Dancer (Semi-sub)	56.5	35	6	
Lahaina Charter Boats, Inc.	Judy Ann II	43	13	8	
Lahaina Divers, Inc.	Dauntless	46	49	22/23	
Lahaina Divers, Inc.	Dominion	46	49	24	
Lahaina Maritime, Inc.	Start Me Up La-Dat	42	6		
Lahaina Water Taxi Service	Holokai	55	70	19	
Lin Wa Cruises, Inc.	Lahaina Princess	65	149	3	1
Linnline Marine, Inc.	Wahine Ra	45	6	15	
Luakini Marine, Inc.	Wiki Wahine	30	24	17	
Luckey Strike Chtrs., Inc.	Luckey Strike II	50	27	50	
Mareva, Inc.	Start Me Up Again	42	6	12	
Maui Navigation	Trilogy III	50	49	97	1
Michelle Marine, Ltd.	Atlantis IX (TS-9)	65	48	5	
Moore, Carol	America II	65	24		1
P.S. I Love You, Inc.	Reel Hooker	35	6		
Pardner, Inc.	Expeditions 2 Lanai Ferry	50	64	21	
Ranger Boat Charters, Inc.	Start Me Up Too	42	6	88	
Rose Marine, Inc.	No Problem	35	6	9	

Commercial Vessel Information					
Permittee Name	Vessel Name	Vessel Size	Vessel Cap.	Berth No.	People Loading/ Unloading No. of Times₁
Rose Marine, Inc.	Scotchmist II	50	25	2	
Seabern Yachts, Inc.	Hookela	36	6	35	
Seabird Charters, Inc.	Spirit of Lahaina	65	149	3	
Seabird Cruises	Ihe Kai	51	49		2
Seafoam, Inc.	Iwalele	42	6	72	1
Seven Seas Cruises, Inc.	Maui Princess Molokai Ferry	118	149		
Slip 10, Inc.	Ocean Explorer	55	49	10	
Sumner H. Bates, Inc.	Napali Explorer	51	49		
Trilogy Corp.	Trilogy	65	92		1
Trilogy Corp.	Trilogy II	55	49	98	2
Unicorn Tours	Manutea	52	49		
Absolute Charters, Inc.	Absolute	31	6		3
Alihilani Yacht Chtrs. Inc.	Start Me Up Again	42	6		
Crystal Seahorse, Ltd.	Shangri La	65	49		
Diver Dan's Specialty	Diver Dan	31	6		
Diver Dan's Specialty	Desperado	31	6		
Fun Charters, Inc.		14	6		
Green Water, Inc.	Zip Purr	16	49		
K.B.T.S. Inc.	UFO 4	28	6		
K.M.B.S., Inc.	Casey Ann	28	12		
Kaanapali Kai Charters, Inc.	Teralani	51	47		
Kaanapali Queen, Inc.	Trilogy IV	51	49		
Kaanapali Sails, Inc.	Teralani II	65	49		
Kapalua Kai Sailing, Inc.	Kapalua Kai	53	49		
Kellam, Terry	Tail Walker	31	6		
Lahaina Parasail, Inc.	Nordic I (Red Nordic)	25	6		
Maui Boat Co.	Kiele V	51	49		
Maui Navigation	Trilogy III	51	49		
Sailing Shipps, Ltd	Gemini	51	49		
Sramek, Milos	Parasail Kaanapali	30	6		
UFO Chuting of Hawaii, Inc.	UFO I	28	6		
West Maui Parasail	Nordic (Blue Nordic)	25	6		
Sea Links of Hawaii	Molokai Princess	118	149		3
Four Island Adventure	Ocean Quest	65			3
Various	Cruise ship tenders				

Notes:

1. People (passenger) loading = 30 minutes
2. Sewer Pumpout use = 45 minutes (large vessels) and 30 minutes (small vessels); projected usage based on the assumption that vessel owners/captains will utilize the sewer pumpout if it is readily available.
3. Fuel pump use = 30 minutes
4. Fish Hoist use = 30 minutes: used only to unload large fish that are unable to be unloaded at the assigned berths
5. Cruise Ship Tenders continuous use from 6:00 AM to 10:00 PM
6. Other Uses include vessel maintenance involving fork lifts, boom trucks, crane, etc.

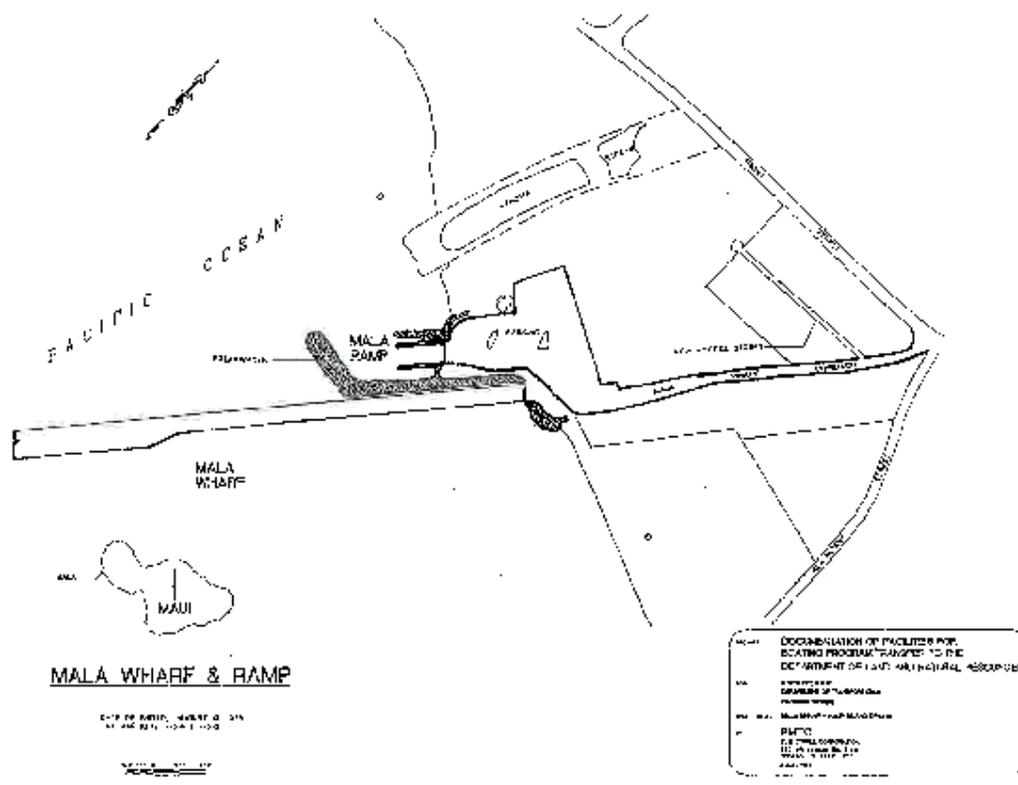


Mala Boat Ramp and Wharf

The Mala Boat Ramp and Wharf are located approximately 1 mile north of Lahaina on the west coast of Maui. The facility includes: 2 ramps; 2 loading docks; a vessel washdown area; restrooms and showers.

The boat ramp is double-laned and located adjacent to the abandoned wharf. The wharf was originally constructed to berth large passenger steamships. However, due to swells and current, these ships were unable to berth, and the wharf was left to be used by small recreational craft, fishing boats and small inter-island ferries. This facility is currently not used due to disrepair.

Mala Boat Ramp and Wharf occupy approximately 0.35 acres, and offers paved car and trailer parking. The Mala Boat Ramp and Wharf are under the jurisdiction of the State of Hawaii Department of Land & Natural Resources Division of Boating & Ocean Recreation.



KAPALUA WEST MAUI AIRPORT

Final Statewide Airport System Plan: Vol. I. June 17, 1998. Airports Division.

Department of Transportation. State of Hawaii.

Acquired by the State in 1992.

Daily flights and type of aircraft will continue to be constrained by Administrative Rules for the airport agreed upon between Hawaiian Airlines (the former operator), Maui county and Maui Land and Pineapple Company (the landowner). These limitations preclude major airport development at Kapalua.

Terminal Area: 15,000 sq. ft.

Runway Length/Width: 3000 x 100

Runway classification: general utility, large aircraft runways; short haul, less than 500 miles

Airport classification: non-hub; primary commercial

Airfield rescue and fire fighting: yes

Fuel storage capacity: none

FY 1997-2003: plan for fuel station enlargement

Air traffic control tower: none

Number of rent-a-car agencies: 0

Terminal curb length: 250 ft.

Public parking spaces: 75

Employee parking spaces: 0

Number of operations 1992: 18,794

Interisland Passengers 1997: 177,929

1997 Helicopter Operations: No

1997 Civil Air Patrol Unit: No

The Kapalua Airport is a commercial service airport that is served by commercial propeller air carriers and commuter/air taxi aircraft only. This facility started as a private facility until its acquisition by the State. The facility consists of a single runway, terminal facilities, and support facilities. There are no air cargo facilities at this airport. Access to this airport is provided from a two-lane road off of Honoapiilani Highway. Improvements to this airport are limited to certain upgrades only. The runway, apron and other facilities cannot be expanded without changes to the existing agreement with the County of Maui. Operations are limited to daytime hours only.

FAA INFORMATION EFFECTIVE 05 JUNE 2008

Location

FAA Identifier: JHM

Lat/Long: 20-57-46.5710N / 156-40-22.9140W
20-57.776183N / 156-40.381900W
20.9629364 / -156.6730317
(estimated)

Elevation: 256 ft. / 78.0 m (surveyed)

Variation: 11E (1990)

From city: 5 miles NW of LAHAINA, HI
Time zone: UTC -10 (year round; does not observe DST)
Zip code: 96761

Airport Operations

Airport use: Private use. Permission required prior to landing
Activation date: 04/1987
Sectional chart: [HAWAIIAN ISLANDS](#)
Control tower: no
ARTCC: HONOLULU CONTROL FACILITY CENTER
FSS: HONOLULU FLIGHT SERVICE STATION
Attendance: 0615-1815
Wind indicator: yes
Segmented circle: yes
Fire and rescue: ARFF index A
Airline operations: ARFF HRS: 0615-1815

Airport Communications

CTAF/UNICOM: 122.7
WX AWOS-3: 118.525 (808-665-6101)
WX ASOS at OGG (14 nm E): PHONE 808-877-6282
WX ASOS at LNY (19 nm SW): 118.375 (808-565-6586)
UNICOM OPN 0600-1800 DAILY. TSNT ACFT MAL CALL FOR TFC ADVYS.

Nearby radio navigation aids

VOR radial/distance	VOR name	Freq
OGG r272/14.5	MAUI VORTAC	115.1011E
LNY r043/20.4	LANAI VORTAC	117.7011E
MKK r100/29.6	MOLOKAI VORTAC	116.1011E

NDB name	Hdg/Dist	Freq
VALLEY ISLAND	280/13.8	327 11EVYI . . . -
LANAI	045/20.4	353 11ELLD

Airport Services

Runway Information

Runway 2/20
Dimensions: 3000 x 100 ft. / 914 x 30 m
Surface: asphalt, in fair condition
Weight bearing capacity: Double wheel: 44.0
RUNWAY 2 RUNWAY 20

Latitude: 20-57.557400N 20-57.994950N
Longitude: 156-40.505733W 156-40.258067W

Elevation:	240.7 ft.	255.8 ft.
Traffic pattern:	left	right
Runway heading:	017 magnetic, 028 true	197 magnetic, 208 true
Markings:	nonprecision, in fair condition	nonprecision, in fair condition
Touchdown point:	yes, no lights	yes, no lights
Obstructions:	none	90 ft. tree, 3500 ft. from runway, 700 ft. left of centerline, 39:1 slope to clear

Airport Ownership and Management from official FAA records

Ownership: Publicly-owned

Owner: HAWAII STATE AIRPORTS DIV
HONOLULU INTL ARPT
HONOLULU, HI 96819
Phone 808-838-8701

Manager: DALE TSUBAKI
KAHULUI, HI 96732
LAHAINA, HI 96761
Phone 808-372-3830
ARPT OPNS/MAINT MGR/ADM MR. ROBERT M. FLOREK - PHONE
KAPALUA 808-669-0623.

Airport Operational Statistics

Aircraft operations: avg 27/day *

51% commercial

49% air taxi

* for 12-month period ending 31 December 2004

Additional Remarks

- ARPT RESTRICTED TO PART 121 & 135 FAR OPERATORS WITH PPR CTC KAHULUI ARPT OPNS 808-872-3880 (24 HRS).
- NO HELICOPTER OPNS PERMITTED.
- NO JET POWERED ACFT ALLOWED.
- NO PRACTICE & TRAINING FLTS PERMITTED.
- SPECIAL NOISE LEVEL STANDARDS FOR ACFT OPER AT ARPT.
- RESTRICTION ON NUMBER OF DAILY FLTS DEPENDING ON ACFT CAPACITY & SIZE.
- RAPIDLY RISING TERRAIN UP TO 300 FT MSL ALONG THE FULL LENGTH OF RWY 02/20 APPROX 160 FT EAST OF CENTERLINE.

Instrument Procedures

There are no published instrument procedures at PHJH.

Kapalua Airport Planning Study

BACKGROUND

Kapalua Airport (airport identifier, JHM) is located on property in Kahana and Mahinahina, Lahaina, Maui on the western side of the Island of Maui. The Airport encompasses 57.3 acres of land and is owned and operated by the State of Hawaii, Department of Transportation, Airports Division.

The site is about .03 mile uphill above Honoapiilani Highway. The Airport consists of a single runway, terminal facilities and support facilities. Access to the Airport is provided from a two-lane road off of Honoapiilani Highway.

The Airport is classified as a commercial service airport. The National Plan of Integrated Airport Systems (NPIAS) classifies Kapalua Airport as a Commercial Service, Primary, Short Haul, which typically serves short-haul air carrier routes of less than 500 miles.

Kapalua Airport is served by commercial propeller air carriers and commuter/air taxi aircraft between West Maui and Honolulu. Presently, Aloha Island Air (DH-6 and DH-8 airplanes) provides scheduled service to Kapalua. Pacific Wings and Maui Air operating C402 and PA31 aircraft provide "on demand" air transportation service. Other air carriers who provide air tours from Kapalua are Maui Air, Air Ambulance and Paragon Air. Federal Express provides five days a week, twice-a-day cargo service into Kapalua.

AIR OPERATIONS AND RESTRICTIONS

Air operations at Kapalua Airport are governed by the Maui County Ordinance 1535 and the State of Hawaii Administrative Rules 19-39. Operations are limited to daylight hours only. No jet powered aircraft and helicopters are allowed. The number of flights permitted each day are limited to 70 flights. Aircraft noise levels for takeoff, sideline and approach are limited. Parking aircraft at the airport is limited to no more than 45 minutes. No practice or training flights are allowed. Parking or storage of rental cars on the Airport is not permitted.

EXISTING AIRPORT FACILITIES

Runways

Kapalua Airport has a single runway configuration: Runway 2-20. The runway is non-precision and visual. In normal trade wind conditions, aircraft land and takeoff on Runway 2. The paved portion of Runway 2-20 is approximately 3,000 feet long and 100 feet wide. Runway 2-20 is oriented in a northeast-southwest direction. The airport runway elevation is surveyed at approximately 256 feet above MSL. Runway 2-20 has a pavement design strength, in terms of maximum gross weight of 44,000 pounds. Runway 2-20 is a non-precision runway with no visual approach aids.

Taxiways

Two taxiways serve as an entrance and exit to and from Runway 2-20 to the aircraft parking apron. The aircraft enter the parking apron via the north taxiway. This taxiway is approximately 363 feet by 50 feet or 18,170 square feet. The aircraft exit to the runway using the south taxiway which is approximately 263 feet by 50 feet or 13,150 square feet. The taxiways are aligned perpendicular to the runway. Aircraft landing on Runway 2 must back-taxi along the runway to exit onto the taxiway.

Aircraft Parking Apron

The terminal apron provides the connection between the terminal buildings and the airfield. It includes parking areas for airplanes and aircraft circulation, and taxiing areas for access to these parking areas. The aircraft park in areas designated as gates. The total paved apron area is 120,162 square feet. Three aircraft parking positions of 20,300 square feet each are included in the apron area. Parking of aircraft on the apron may not exceed 45 minutes in duration.

Runway Protection Zones, Approach Areas And Obstructions

Publicly owned airports such as Kapalua Airport are required to conform to certain Federal Aviation Administration (FAA) design standards. These airports must meet certain geometric design criteria regarding runway protection zones (RPZ), runway approach and departure areas and obstructions may be hazardous to air navigation.

The FAA classifies airports based upon an airport reference code (ARC). The ARC consists of two components that are directly related to a specific design aircraft. The first component, depicted by a letter, is the airport approach category and relates to aircraft approach speed. The second component, depicted by a Roman numeral, is the airplane design group and relates to airplane wingspan. Generally, aircraft approach speed applies to runways and runway related facilities. Airplane wingspan primarily relates to separation criteria involving taxiways and taxilanes. The ARC for Kapalua Airport is A III.

Runway protection zones (RPZ) dimensions are based on Federal Aviation Regulation (FAR) Part 77 approach surface dimensions out to where the surface is 50-feet above the runway threshold or 50-feet above the underlying terrain. At Kapalua Airport the approach surface and the RPZ start 200 feet beyond the runway threshold. The RPZ dimensions are an inner width of 250 feet, a length of 1,000 feet and an outer width of 450 feet. The RPZs are centered on the extended runway centerline.

The Federal Aviation Administration (FAA) in their annual Airport Letter of Certification inspection of Kapalua Airport states that the runway safety areas are not within the dimensional standards of the Advisory Circular 150/5300-13. The corrective action stated is “the airport would need to relocate the perimeter fencing and grade the runway safety areas (grade the north end, fill the south end and grade the mauka side of the runway) to achieve proper safety area and dimensions. Evaluation of wind cone locations should be conducted to ensure their proximity outside of the runway safety areas while maintaining their visibility to aircraft on approach.” The perimeter fence should be 250 feet from the runway centerline, but is only 150 feet from runway centerline.

Navigational Facilities and Lighting

The VORTAC at Molokai Airport (identification call sign letters MKK) is used for the approach to Kapalua Airport. A VORTAC is a facility consisting of two components, VOR and TACAN, which provides three individual services: VOR azimuth, TACAN azimuth and TACAN distance at one site. VORTAC is considered to be a unified navigational aid.

The Airport has no runway lights, precision approach indicator (PAPI), or runway end identifier lights (REIL).

Meteorological Conditions

There are 3 wind socks and two wind sensors at the Airport. They are utilized by the Contract Tower air traffic controllers to relay wind conditions to the incoming aircraft.

The wind is generally from a northeasterly direction at 10-20 knots. In winter conditions, the wind is 35-40 knots and 15-20 knots in the summer.

The Automated Weather Observing System (AWOS) is located in close proximity to the Contract Tower. The AWOS sensors measure, collect and disseminate weather data to help meteorologists, pilots and flight dispatchers prepare and monitor weather forecasts, plan flight routes and provide necessary information for correct takeoffs and landings. AWOS provide a minute-to-minute update that is usually provided to pilots by a VHF radio. The sensors measure weather parameters, such as wind speed and direction, temperature and dew point, visibility, cloud heights and types, precipitation and barometric pressure.

Passenger Terminal Complex

The Kapalua Airport Passenger Terminal Complex consists of the two-story terminal building, a crash/fire and communication building, an automobile parking area, tenant concession areas and an aircraft parking apron. Passengers enplane and deplane at the ground level. A restaurant was planned for the second level of the terminal, but was never constructed.

The passenger terminal provides space for commuter airline operations, passenger services, baggage claim, passenger waiting lobby, public telephones, restrooms, and terminal support facilities. The terminal has four gates, two holding rooms, a food concession and eating area, one food kiosk, and 64 seats in the lobby area for waiting passengers. The United States Department of Agriculture performs inspection of baggage with interline connections to the mainland United States.

Island Air operates as a commuter airline operating under Code of Federal Regulations, Title 14, Part 121 (Commercial Operator). They average 39 scheduled flights per week to/from Honolulu International Airport per day. Island Air utilizes the DeHavilland (DHC) Dash 8 aircraft in its operations at the airport. Pacific Wings did provide scheduled daily trips between Kapalua and Lanai City and offered "city hopper service" between Kapalua and Kahului.

The Main Terminal Building 300 has a total area of 10,840 square feet on the ground level. The second level of the terminal building has a total of 4,626 square feet. The second level is largely vacant except for a small area utilized for offices. A restaurant with views to the ocean was envisioned for the second level, but was never constructed.

Air Cargo

The Airport does not have any air cargo facilities. However, Federal Express transports cargo to Kapalua Airport. They average two trips a day on weekdays only, Monday through Friday. Federal Express operates a Cessna 208 Caravan turbo prop aircraft at Kapalua.

General Aviation

General aviation activity is minimal, since aircraft are prohibited to park at the airport apron area for longer than 45 minutes

Air Taxis

Air Taxi is defined as “ a nonscheduled carrier using small aircraft for very short haul travel on a charter basis.” Air taxi is not regulated. The following air taxis operate at Kapalua Airport: Air Links, Avante Air, Air-Eco Air Tours, Commercial Flyers, Kumulani Air, Maui Air, Molokai Shuttle, and Paragon Air. An Air Ambulance is available for emergency medical transportation. The total air taxi operations average less than 20 flight per week.

Helicopters

Helicopter operations are prohibited at Kapalua Airport under Maui Ordinance 1535 and the State of Hawaii Administrative Rules §19-39.

In the past, Hawaii Helicopters has proposed a short haul commuter helicopter transportation service between Kapalua and Lanai and later between Kapalua and Kahului. They planned to fly the twin-engine Sikorsky S-76 with a capacity of twelve passengers. However, they would have to amend the Maui Ordinance and the Hawaii Administrative Rules.

Airport Access, Parking and Ground Transportation

Access to the Airport is provided from a two-lane road, Akahahele Street, about 1,600 feet long connecting to Honapiilani Highway below. As you enter the Airport, a public parking lot is on the left for passenger automobiles. It is located just below the terminal building. It can accommodate 77 motor vehicles. The parking rate is \$7.00 per day.

There are no rental car counters at the Airport. However, passengers may use a designated phone to call for rental car pickup. The rental car facility is located about two miles from the Airport. There are two parking stalls reserved for taxi service. There are also two parking stalls reserved for Airport District Manager and one stall for the Maui County Fire Department.

Universal Communication

Kapalua is an uncontrolled airport and does not have a federal Air Traffic Control Tower (ATCT). However, there is a Common Traffic Advisory Frequency (CTAF) that is the published Universal Communication (UNICOM) frequency. The UNICOM is operated from 6:00 am to 6:00 pm or ½ hour before sunset. Pilots must contact Kapalua UNICOM before entering the traffic pattern and maintain contact while operating in the area.

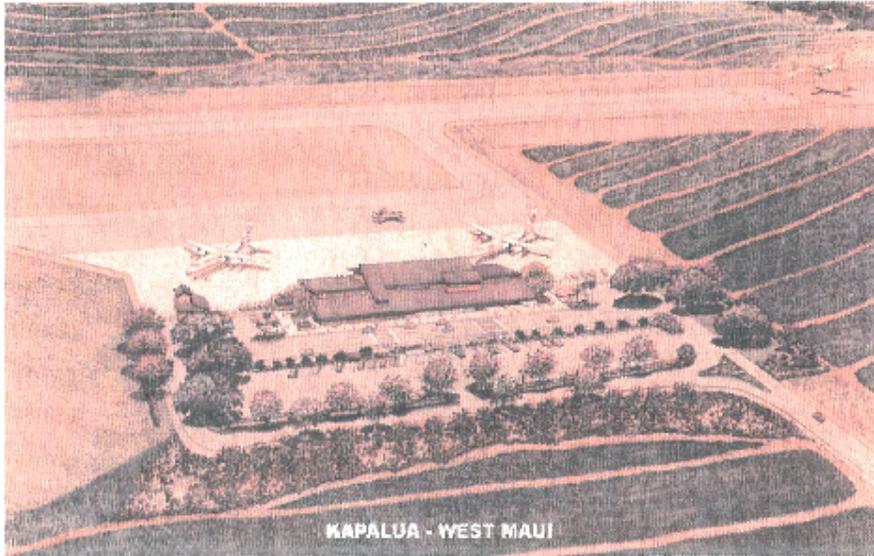
The Communications staff is located on the second level of the Crash/Fire and Communication Building adjacent to the passenger terminal.

Aircraft Rescue and Firefighting (ARFF)

The ARFF is located in the Crash/Fire and Communication Building north, adjacent of the passenger terminal. The building has two trucks, one of which is used for rescue. Two firefighters are on a 12-hour work shift from 6:30 am to 6:30 pm.

Fuel Storage and Loading Facilities

There are two 500-gallon above ground storage tanks located on Kapalua Airport. One tank contains diesel fuel and the other stores gasoline.



KAHULUI AIRPORT

Kahului Airport is part of the Statewide Airport System operated by the State Department of Transportation, Airports Division. The system includes all of the major airports in the islands. Administratively, Kahului Airport is part of the Maui District. In addition to Kahului Airport, the District includes Hana, Kapalua-West Maui, Hana, Kalaupapa, Lanai, and Molokai Airports.

The Maui District Manager is responsible for the overall administration of all the airports on the islands of Maui, Lanai, and Molokai. The District Manager oversees the day-to-day operations of Kahului Airport and exercises control over the other airports through four assistants. These airport operations and maintenance workers are based at, and are responsible for the day-to-day management of the District's airports.

Three assistant airport superintendents report to the Maui District Manager for operations at Kahului Airport. The head of the general construction and maintenance section oversees maintenance, janitorial, and groundskeeping operations at Kahului Airport. The Fire Commander oversees the aircraft rescue and firefighting operations, and the Chief of Operations is responsible for maintaining the security of the Airport.

With one exception, all land within the Airport Boundary is owned by the State of Hawaii and controlled by the Department of Transportation Airports Division through executive orders. The exception is the U.S. Post Office site located on Keolani Plance. A number of related business concessions hold leases within the Airport.

Kahului Airport occupies approximately 1,447 acres of land on the northeastern side of the Town of Kahului, Maui. The main passenger terminal, commuter airline terminal, airline offices, air cargo facilities, airline ground maintenance facilities, aircraft rescue and firefighting (ARFF) facilities, DOT airport maintenance baseyard, ground transportation subdivision, and airport industrial area are located on the west side of Runway 2-20. Facilities for general aviation (e.g., aircraft maintenance facilities, hangars, based and itinerant aircraft parking apron, fixed base operator), facilities for helicopter and air taxis (including scenic air tour operations), and the FAA Air Traffic Control Tower are located on the eastern side of Runway 2-20. The ARFF training area is located on the north side of Runway 5-23.

Kahului Airport's service area includes the entire island of Maui. The Airport's location places it within an hour's drive of over 90 percent of the island's population. It is the only airport on the island capable of accommodating turbo-jet aircraft; consequently, it handles the vast majority of the passengers and air cargo moving from and to the island. Maui's two other airports handle general aviation and air taxi aircraft, as well as a limited number of scheduled Dash-7 flights operated by Hawaiian Airlines to and from the Kapalua-West Maui Airport and DHC-6 flights operated by Island Air to and from the Kapalua-West Maui and Hana Airports. Both the Hana Airport and the Kapalua-West Maui Airport are owned and operated by the Airports Division.

Kahului Airport has two runways: Runway 2-20 and Runway 5-23.

Runway 2-20 is 7,000 feet long, 150 feet wide, and has 35-foot-wide stabilized asphaltic concrete shoulders. The runway safety area shown in the FAA approved Airport Certification Manual (dated October 30, 1992) is 400 feet wide and extends 1,000 feet beyond both ends of Runway 2-20. The ends of Ruways 2 and 20 are 54 feet and 12 feet above mean sea level, respectively. The average runway slope from southwest to northeast is 0.60 percent. The runway is painted with all-weather precision markings.

According to the February 1991 edition of the FAA Airport Master Record, the generalized gross load pavement strength for unlimited numbers of operations is 130,000 pounds for single-wheel aircraft and 170,000 pounds for dual-wheel aircraft. The FAA's published pavement strength data sheets for the runway (WE Form 5335-1 dated July 9, 1992) indicate the following gross load capabilities for specific aircraft currently using the runway:

<u>Aircraft</u>	<u>Pavement Strength Capacity</u>	<u>Main Landing Gear Configuration</u>
B-747-100	550,000 pounds	Double Dual Tandem
DC-10-10	360,000 pounds	Dual Tandem
DC-10-30	460,000 pounds	Dual Tandem (with additional center landing gear)
L-1011-100	360,000 pounds	Dual Tandem

The maximum allowable gross takeoff weights of these aircraft exceed these strengths by a considerable amount.

DOT is currently limiting DC-10-10 and DC-10-30 aircraft to gross takeoff weights of 405,000 pounds and 430,000 pounds, respectively. Widebody aircraft have also been required to abandon their previous practice of turning off at the intersection of Runway 5-23. Instead they must now proceed to the northern end of Runway 2 before taxiing back to the terminal. Spot repairs have also been made to the runway and taxiways.

Runway 5-23

Runway 5-23 is 4,990 feet long and 150 feet wide. Because portions of it cross an abandoned intersecting runway (old Runway 17-35), the width of its asphaltic concrete shoulders is variable; however, in all instances they are at least 35 feet wide. The runway safety area shown in the Airport Certification Manual is 370 feet wide and extends 1,000 feet beyond both ends of Runway 5-23. The threshold elevations for Runways 5 and 23 are 20 feet and 16 feet above mean sea level, respectively. The average gradient from west-to-east is 0.08 percent. Runway 5-23 is painted with non-precision markings and there are no instrument approach aids.

The gross load limits listed on the FAA Airport Master Record (February 1991) for the runway are 130,000 pounds, 170,000 pounds, and 270,000 pounds for single-wheel, dual-wheel, and dual-tandem wheel aircraft, respectively. This is more than adequate for all of the aircraft that are capable of operating on the existing runway length. No signs of pavement distress have been observed on this runway except for where it crosses Runway 2-20.

TAXIWAYS

The locations of the designated taxiways at Kahului Airport are illustrated on Figure 2-1. Taxiway “B”, Taxiway “E”, Taxiway “F”, and Taxiway “G” have variable widths ranging from 50 to 400 feet wide. Taxiway “A”, Taxiway “C”, and Taxiway “I” are each 75 feet wide while Taxiway “D” is approximately 200 feet wide. Taxiway “H” and the unnamed taxiway that runs parallel to Runway 2-20 on the east side are each 50 feet in width.

Table 2-1

DESIGNATED TAXIWAYS

KAHULUI AIRPORT

<u>Taxiway</u>	<u>Description</u>
A.	Parallel taxiway to Runway 2-20 on west side with 75-foot wide asphaltic concrete pavement and 25-foot wide asphaltic concrete shoulders.
B.	Diagonal connecting taxiway from a point 2,000 feet from the southern end of Runway 2-20 to the main passenger terminal apron and Runway 5-23. Pavement width ranges from approximately 50 feet to over 75 feet.
C.	Exit taxiway at the end of Runway 2 that connects to the helicopter operating area. Pavement width is 75 feet.
D.	Exit taxiway that connects the passenger terminal apron with Runway 2-20 approximately 1,000 feet from the southern end of the runway. Pavement width is approximately 200 feet.
E.	The portion northwest of Runway 2-20 is a diagonal exit taxiway connecting the passenger terminal apron with Runway 2-20 approximately 2,000 feet from its southern end. This portion's pavement is approximately 125 feet wide. The portion southeast of Runway 2-20 is a diagonal exit taxiway connecting the southern end of the air taxi apron with Runway 2-20. This portion's pavement is 75 feet wide with 20-foot wide asphaltic concrete shoulders.
F.	Exit taxiway connecting Runway 2-20 with Taxiway "B" and Taxiway "H" at the western end of Runway 5-23. A portion of the taxiway connects the general aviation apron with Runway 2-20. Pavement width is 75 feet between Runway 2-20 and Taxiway "A", and between the general aviation apron and Runway 2-20; 50 feet between Taxiway "A" and Taxiway "B"; and variable between Taxiway "B" and Runway 5-23.
G.	Exit taxiway connecting northern part of Runway 2-20 with Taxiway "A". Pavement width varies from 125 to 400 feet.
H.	Exit taxiway at the end of Runway 5-23 that connects the commuter terminal apron with the approach end of Runway 5. Pavement width is approximately 50 feet.
I.	Exit taxiway that connects the northern end of the general aviation apron with Runway 2-20. Pavement width is 75 feet.

Unnamed Connecting taxiway, parallel to Runway 2-20 on east side, that connects the runway to the East Ramp parking apron. Pavement width is 50 feet.

The pavement strengths of Taxiways “A” through “H” indicated on the FAA’s Form 5335-1 for Single-wheel, dual-wheel, and dual-tandem-wheel aircraft are 130,000, 170,000, and 270,000 pounds, respectively. The corresponding figures are Taxiways “I” and portions of “F” are 30,000 pounds, 40,000 pounds, and 65,000 pounds, respectively.

The DOTA considers the taxiway pavement strengths to be generally adequate for the runways they serve, and most are in reasonably good condition. An exception is the portion of Taxiway “A” near the northern end of Runway 2-20, where some distress has been noticed on portions used by wide-body aircraft.

AIRCRAFT PARKING APRONS

Kahului Airport has several aircraft parking aprons. The main apron is the passenger terminal apron and is located between the terminal building and Taxiway “A”. The commuter/air taxi terminal aircraft parking apron is located northeast of the terminal building on the island side of Runway 5-23. The “East Ramp” apron east of Runway 2-20 serves general aviation aircraft, helicopters, and air taxi operations. The characteristics of these aprons are described below.

PASSENGER TERMINAL APRON

The apron fronting the new passenger terminal measures approximately 2,900 feet by 500 feet. The concrete hardstand portion of it is approximately 2,800 feet long and 150 feet wide. The hardstand was reconstructed as part of the passenger terminal expansion project and is designed to accommodate all of the types of wide-body aircraft now using the Airport. The FAA has calculated pavement strengths, based on their Advisory Circulars, for the terminal apron (*telephone conversation with FAA representative, July 1992*). Their calculations indicated the following gross load capacities for aircraft using the apron:

Aircraft	Pavement Strength Capacity	Main Landing Gear Configuration
B-747-100	780,000 pounds	Double Dual Tandem
B-747SP	700,000 pounds	Double Dual Tandem
DC-10-10	450,000 pounds	Dual Tandem
DC-1Q-30	520,000 pounds	Dual Tandem (with
additional		center landing gear)
L-101 1-100	450,000 pounds	Dual Tandem
L-101 1-200	470,000 pounds	Dual Tandem

COMMUTER TERMINAL APRON

The commuter terminal apron measures approximately 600 feet by 400 feet. Airport records indicate that it is designed to accommodate single-wheel aircraft with gross weights up to 75,000 pounds and dual-wheel type landing gear aircraft with gross weights up to 145,000 pounds. This is more than adequate to accommodate the type of aircraft that use the commuter/air taxi terminal.

EAST RAMP APRON

The “East Ramp” Apron consists of two distinct areas. The first consists of the southern end of an abandoned runway (formerly Runway 17-35). This area measures approximately 1,200 feet long by 400 feet wide and is now used for helicopter operations. The second area parallels Runway 2-20. It is approximately 3,400 feet long by 200 feet wide and is used for general aviation and air taxi aircraft parking. According to the latest information available from the Airports Division, the pavement strength for single-, dual-, and dual-tandem-landing gear aircraft for most of the apron are 30,000, 40,000, and 65,000 pounds, respectively.

RUNWAY PROTECTION ZONES, APPROACH AREAS, AND OBSTRUCTIONS

Runway Protection Zones (RPZ)

Runway protection zones (formerly called clear zones) are based on Federal Aviation Regulations (FAR) Part 77 approach surface dimensions out to the point at which the approach surface is 50 feet above the runway threshold or 50 feet above the underlying terrain, whichever is less. The width of the runway end of the RPZ is determined by the most precise approach standard applicable to the runway. For example, if an instrument (IFR) approach is maintained at one end and a visual (VFR) approach at the other, the IFR inner width minimum is applicable at both ends.

Runway 2 (which is equipped with an Instrument Landing System, or ILS) has a precision instrument approach requiring an inner width of 1,000 feet for both ends of Runway 2-20. Based on the most precise approach procedure, only a non-precision instrument runway protection zone with a 34:1 approach slope is required for Runway 20. However the Airports Division maintains a more restrictive instrument runway protection zone for the runway. The approach surface slopes for Runways 2 and 20 are 50:1 for the first 10,000 feet from the runway threshold. The slope of the remaining 40,000 feet of these approach surfaces is 40:1. This meets the FAA’s standard for precision instrument approaches to runways.

Runway 5-23 has only visual approaches to both ends requiring an inner width of 500 feet and an outer width of 1,010 feet. Based on the most precise approach procedure, only a visual runway protection zone with a 20:1 approach slope is required for Runway 5-23. However the Airports Division maintains more restrictive non-precision runway protection zones—with a 34:1 approach slope for Runways 5 and 23. This meets the FAA criteria for non-precision approaches for large aircraft with visibility minimums of more than three-quarters of a mile. Because the runway is occasionally used by jet air carrier (interisland) aircraft when Runway 2-20 is not available (e.g., when it is closed for maintenance or when crosswinds preclude its use), the more restrictive approach slope provides an added margin of safety.

Existing runway protection zone information for each runway approach end is as follow:

<u>Runway</u>	<u>Type of Runway Protection Zone</u>	<u>Length in feet</u>	<u>Inner Width in feet</u>	<u>Outer Width in feet</u>
2	Precision	2,500	1,000	1,750
20	Precision	2,500	1,000	1,750
5	Non-precision	1,700	500	1,010
23	Non-precision	1,700	500	1,010

Except for portions over the Pacific Ocean to the north and a small portion for Runway 23 to the northeast, all of the runway protection zones lie entirely within Airport property (see Figure 2-1).

OBSTRUCTIONS

Both the FAA Airport Master Record and the Airport Obstruction Chart published by the National Oceanic and Atmospheric Administration (NOAA) were reviewed to identify obstructions as defined by Federal Aviation Regulations (FAR) Part 77: “Objects Affecting Navigable Airspace.” FAR Part 77 establishes “imaginary surfaces” related to airports and their runways. These imaginary surfaces are used to identify obstructions. See Table 2-2 for a comparison of the standard FAR Part 77 approach slopes at Kahului Airport with existing obstacles/obstructions in the vicinity of the Airport.

The Runway 2 imaginary approach surface is penetrated by two groups of objects. The first penetration is by Kealoloa Ridge of the West Maui Mountains, which penetrates a portion of the 7:1 transitional surface between 8 and 10 miles south of the runway threshold. The second penetration is by the tallest (252 feet above mean sea level) of the five stacks at the Puunene Sugar Mill. This stack is located approximately 9,800 feet south of the Runway 2 threshold and extends almost 6 feet into the approach surface (A. T. Tanaka Engineers, Inc., February 1991).

Some trees penetrate the approach surface to Runway 20, but they are 475 feet off the Runway centerline.

NAVIGATIONAL FACILITIES AND LIGHTING

Kahului Airport has an FAA Air Traffic Control Tower which operates between 6:00 AM and 10:00 PM. The Airport also has an Airport Surveillance Radar (ASR) for control of aircraft within the Airport Radar Service Area. The ASR is located on the Airport, but is controlled remotely from the Honolulu Air Route Traffic Control Center (ARTCC) which provides radar approach/departure control services. The FAA radio transmitter/receiver building for air traffic control is located east of Runway 2-20 near the existing ASR facility. The Airport is equipped with a lighted wind indicator, a segmented circle and wind cones, and a rotating beacon. Non-directional beacons are located at McGregor Point (identification call sign letters “MPH”) and at the middle marker (identification call sign letters “VYI”).

Table 2-2
**COMPARISON OF FAR PART 77 STANDARDS FOR APPROACH SLOPES
 WITH EXISTING OBSTACLE-CONTROLLED APPROACH SLOPES
 KAHULUI AIRPORT**

<u>Runway</u>		<u>Approach Slope</u>		<u>Extended Runway Centerline</u> <u>Threshold</u>		
<u>No.</u>	<u>Elev.</u>	<u>Standard</u>	<u>Actual</u>	<u>Type</u>	<u>Elev.</u>	<u>Location</u>
2	53 feet	50:1	48:1	Stack	252	9,837 ft along and 300 ft N.West of runway centerline
20	12 feet	50:1	15:1	Trees		200 ft along and 475 ft N.West of runway centerline
NOTE: Actual slope 50:1 is Along runway centerline						
5	20 feet	34:1	50:1	None		
23	16 feet	34:1	50:1	None		

Source: FAA Airport Master Record and NOAA Airport Obstruction Chart

The Airport is equipped with a VHF Omni-Directional Range/Tactical Air Navigation (VORTAC) radio navigational aid system (Maui VORTAC) to assist aircraft in determining azimuth and distance. The VORTAC is located 500 feet from Runway 5-23 and 638 feet from Runway 2-20. The FAA has recommended that it be relocated to an area at the approach end of Runways 20 and 23 to eliminate signal problems that are believed to be related to new construction in the terminal area.

Runway 2-20 has precision runway markings and high intensity runway lights (HIRL). Both ends of the runway are equipped with Visual Approach Slope Indicators (VASI-4). Runway 2 has an Instrument Landing System (including Middle and Outer Markers), and a medium intensity approach lighting system with runway alignment indicator lights (MALSR).

Runway 5-23 is painted with non-precision runway markings and equipped with medium intensity runway lights (MIRL). Runway 5 has a VASI-4 visual approach slope indicator.

All entry/exit taxiways and parallel taxiways to both runways are equipped with medium intensity taxiway lights (MITL).

The airfield lighting vault is located in the new passenger terminal building.

METEOROLOGICAL CONDITIONS

The average annual temperature at Kahului Airport is 74° F. During the summer, the average monthly high is 82° F and the average low is in the low 70s. Winter temperatures are about ten degrees cooler. The highest temperature on records is 91° F and the lowest is 55° F. The average maximum daily temperature for the hottest month is 84° F.

Rainfall at Kahului is quite low, averaging less than 20 inches per year. The majority of this occurs during the winter as large-scale frontal systems move past the island. Despite the relatively low annual average, storms can generate intense rainfall over short periods of time, and the runoff from these events must be accommodated in the published by the U.S. Department of Commerce (1962), estimates that the average 24 hour rainfall having a recurrence interval of 50 years is approximately 7 inches.

Winds at Kahului Airport are influenced by a variety of factors. These include: the strong prevailing tradewinds; the physical presence of large mountain masses to the east (Haleakala) and west (West Maui Mountains) of the Airport; and the nighttime drainage winds that carry cool air from the mountain slopes to the coastal areas of Kahului. These winds have a significant effect on the operations of the Airport.

Based on data collected at the Airport between January 1970 and December 1979, the wind coverage for 13 knots crosswinds is 96.1 percent for Runway 2-20 and 98.4 percent for Runway 5-23. The combined coverage for both runways is 99.8 percent for 13 knot crosswinds.

Wind speeds are greater than 10 knots for more than two-thirds of the time during the day; however at night, the percentage of the time during which they exceed 10 knots is less than half that. Moderate to brisk tradewinds (easterly winds greater than 6 knots) occur approximately 77 percent of the time during the day and 50 percent of the time

during the night. Winds less than 6 knots occur approximately 17 percent of the time during the day and 48 percent of the time during the night. In general, winds from the south tend to occur more frequently during the night than during the day, and southerly winds most often have speeds of less than 6 knots.

The annual frequencies of wind speed/direction for the daytime and nighttime periods at Kahului Airport are as follows (Note: because of rounding, the figures do not add to 100 percent):

		Daytime Wind				
		<u>Direction/Speed</u>	<u>Calm</u>	<u>1-6 knots</u>	<u>7-10 knots</u>	<u>>10</u>
65.2%	<u>knots</u>					
	Tradewind		2.0%	8.9%	12.2%	
	Kona			6.3%	1.8%	3.8%
		Nighttime Wind				
		<u>Direction/Speed</u>	<u>Calm</u>	<u>1-6 knots</u>	<u>7-10 knots</u>	<u>>10</u>
30.7%	<u>knots</u>					
	Tradewind		5.4%	17.1%	18.8%	
	Kona			25.4%	1.6%	0.9%

Air carrier aircraft generally use Runway 2 during tradewind conditions and Runway 20 during Kona conditions. The same kind of use occurs on Runway 5.23, with Runway 5 being used during tradewind conditions and Runway 23 being used when there are Kona winds.

PASSENGER TERMINAL COMPLEX

The first increment of Phase 1 of the new passenger terminal complex was completed in October 1990. It contains new passenger ticketing/check-in counters, baggage handling facilities, six passenger hold rooms (i.e., waiting areas), and eight passenger loading bridges. In addition, the terminal complex contains automobile and tour bus parking areas, concessions, a realigned roadway system, and an aircraft parking apron. Passengers enplane and deplane at the second level through passenger loading bridges. Construction of the second increment of the new passenger facilities is scheduled for completion by mid-1993. It involves the conversion of the old passenger terminal into a baggage claim area (now completed) and the construction of additional passenger hold rooms along the airfield side of the complex.

The passenger terminal apron can accommodate up to 20 interisland-size (DC-9/B-737) aircraft in a single row with power-in/push back operation. Currently, eight positions, are marked for overseas DC-B, DC-b, and L-1011 aircraft which reduces the below-grade hydrants, but the fuel storage and supply lines for them has not yet been installed. Hence, aircraft continue to be fueled from trucks.

COMMUTER TERMINAL

Located north of the air carrier passenger terminal, the commuter terminal building includes space for ticketing/check-in, baggage claim, waiting, airline offices, and restrooms. Opened in 1987, the facilities are in good condition. The commuter aircraft parking apron can accommodate up to 12 de Havilland DHC-6 type aircraft. It is connected to the southern end of Runway 5-23 by Taxiways “F” and “H” and also to Taxiway “B” via Taxiway “F” approximately 1,500 feet from the approach end of Runway 5. Aircraft are refueled from trucks.

AIR CARGO FACILITIES

Most air cargo is processed at the cargo facility located north of the passenger terminal just to the west of the Aircraft Rescue and Firefighting (ARFF) Station and adjacent to the passenger terminal. This building was completed in 1983 and accommodates air cargo from most interisland and overseas air carriers, as well as some air taxis. In the past, a small volume of air cargo was handled from facilities at the northern end of the East Ramp. UPS operations are presently being conducted from a portion of the ground equipment maintenance building north of the existing ARFF building.

GENERAL AVIATION FACILITIES

General aviation facilities are located east of Runway 2.20. These facilities include three T-hangar buildings (with a total of 30 spaces) that are owned by the State and leased to individual aircraft owners. The 34 tiedowns presently situated on the East Ramp occupy an 800-foot by 200-foot area immediately adjacent to the T-hangars and are used by based and itinerant aircraft. Because of the absence of other suitable on-airport space, the State’s guidelines for use of the T-hangars have been broadly interpreted. Consequently, some of the T-hangar spaces are used for activities for which they were not intended, including aircraft maintenance.

Century Aviation operates a number of facilities on the East Ramp. It is currently the primary fuel vendor at the Airport. In addition to the fueling services, this company also provides a full range of services for corporate (executive) aircraft that visit Kahului. It has a reception office and employee areas, a maintenance shop and storage shed, and fuel storage tanks.

American Pacific Air, Inc. occupies one of the T-hangar spaces. This company operates a fleet of 12 aircraft used for aircraft rental s and flight training. This company is presently severely constrained by the lack of suitable space. A similar situation exists for Air Molokai which owns three aircraft and also operates out of a T-hangar.

AIR TAXIS

The scenic air taxi aircraft that visit Kahului park on the East Ramp apron. Aircraft are fueled on the apron by Century Aviation. Parking space is provided adjacent to the apron for tour buses and vans that carry passengers around Maui. A small terminal building, with only basic amenities for passengers, is also located on the site but it is not currently in use.

HELICOPTERS

Helicopter operations at Kahului Airport are concentrated at the southeastern corner of the Airport. This area includes two landing and takeoff helipads, as well as an apron area for helicopter parking and passenger loading and unloading. However, some helicopters land and takeoff from the passenger loading and unloading positions. Small plots along the edge of the apron are leased to the helicopter operators who have erected buildings containing reception areas, offices, and aircraft storage space. Helicopters are fueled on the apron by Century Aviation or, in some cases, from operator-owned fuel trucks or from the two underground fueling tanks maintained by Papillon Hawaiian Helicopters and Hawaii Helicopters.

AIRPORT ACCESS, PARKING, AND GROUND TRANSPORTATION

Airport Access

Keolani Place is a 4-lane roadway that provides vehicular access to the main passenger terminal, the parking areas, the rental car ready/return area west of the terminal, as well as to the air cargo facilities, the commuter/air taxi terminal, and other facilities west of the passenger terminal. It provides a direct connection with Hana Highway for vehicles traveling between the Airport and Wailuku and Kahului.

The facilities adjacent to the East Ramp are reached from Hana Highway via Kala Road and Haleakala Highway. At present, Haleakala Highway continues around the southern end of Runway 2-20, terminating at the intersection of Keolani Place and Dairy Road. Therefore, these facilities can also be readily accessed from the west side of the Airport. However, the State has announced plans to close the portion of Haleakala Highway west of Runway 2-20 if the runway is extended. If that is done, this segment of the roadway will serve only the East Ramp development.

While not intended as a major access route, Koeheke Street (which intersects Keolani Place opposite the main passenger terminal parking area and provides access to the rental car baseyards and airport industrial area) extends to Alahao Street, Alahao Street is a narrow, two-lane roadway which runs along the west side of the Airport and serves the recreational areas and other facilities located along the shoreline adjacent to the Airport. At one time Alahao Street crossed what is now Airport property into West Spreckelsville; however, it now ends at a fence along the Airport boundary.

VEHICULAR PARKING

The principal vehicular parking area at the Airport is located on the northwestern side of the passenger terminal. It contains 1,172 parking stalls for use by the public and 742 parking stalls for use by employees of Federal and State agencies, tenants, concessionaires, and airlines. A limited number of parking stalls are also located adjacent to the cargo facility, the rental car counters and commuter terminal north of the passenger terminal and the general aviation and helicopter facilities which are adjacent to the East Ramp. Parking at the main parking area is under the operation of a concessionaire. The other areas are patrolled by Airport security personnel.

GROUND TRANSPORTATION

At present, approximately 23 acres of land along the western side of Keolani Place is made available for lease by rental car operators. The parcels, which range in size from one-quarter of an acre to four acres, are used to store and service the vehicles. Convenient public access to the lease sites is provided from Keolani Place and Koeheke Street. Other ground transportation activities are interspersed with rental car activities in this area. The State provides improved streets, level lots, and utilities. The operators are responsible for constructing and maintaining their own facilities. The rental car counters are situated in a relatively new, State-owned building constructed for that purpose opposite the northern end of the main passenger terminal parking area. As previously noted, a limited number of parking stalls are situated immediately north of the rental car counters for ready and return vehicles.

AIRPORT SUPPORT FACILITIES

FAA AIR TRAFFIC CONTROL TOWER

The FAA Air Traffic Control Tower complex, which includes offices for the FAA and the National Weather Service, was completed in 1988. It is located east of the General Aviation T hangars. Underground communication lines link the FAA Air Traffic Control Tower with the Airport Surveillance Radar (ASR), new Radio Transmitter/Receiver Building, and new Airfield Lighting Vault.

Because of the Air Traffic Control Tower's location relative to terrain and buildings that have been constructed adjacent to the East Ramp, certain portions of the apron used by helicopters cannot be seen by controllers. This complicates the task of controlling the ground movement of these aircraft. The northernmost portion of the new passenger terminal obstructs the controllers views of Taxiway "H", portions of Taxiway "F" and the commuter terminal apron.

AIRCRAFT RESCUE AND FIREFIGHTING (ARFF)

The Aircraft Rescue and Firefighting (ARFF) facility abuts the apron on the west side of Runway 2-20. It has direct access to the aircraft operating area which helps ARFF crews

to respond quickly to fires in the passenger terminal complex area. Completed in 1978, the structure is in relatively good condition. Six firefighting and rescue trucks are assigned to the station. These include two 3,000-gallon and two 1,500-gallon capacity firefighting trucks, one rescue truck, and one 4-wheel drive utility vehicle. Airfield access, however, from the station has been compromised by the new holdrooms, and the Airports Division has a new ARFF facility under construction on the East Ramp.

The training area for the ARFF crew is located on the west side of Runway 5-23. It is a remote area and well-screened by vegetation from public view. This training area is readily accessible from the aircraft operating area, as well as from the Airport via Alahao Street. The prevailing winds blow smoke generated by practice operations away from the passenger terminal.

AIRLINE GROUND EQUIPMENT MAINTENANCE

The airlines at Kahului Airport use a portion of the ramp located to the east of the intersection of Taxiway "B" and Taxiway "F" and leading to the commuter aircraft parking apron, to maintain ground support equipment. Because of the area's proximity to the VORTAC navigational facility, maintenance shelters have been constructed of wood to minimize electromagnetic interference.

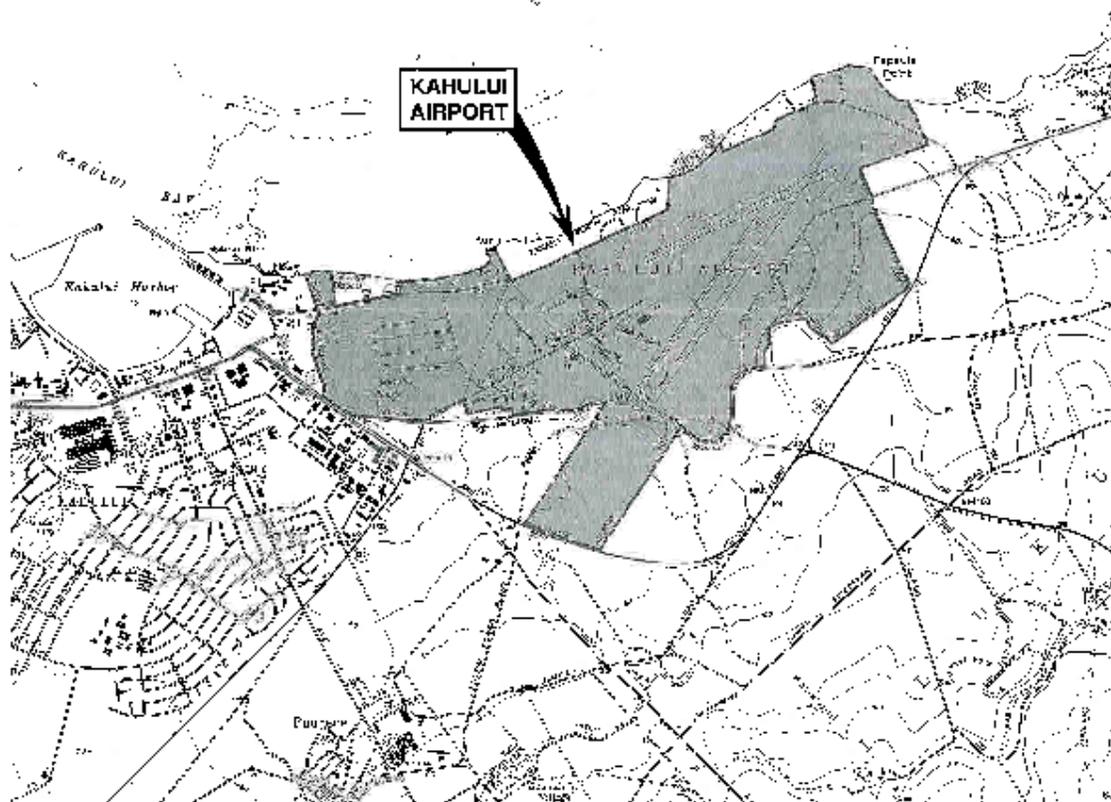
FUEL STORAGE AND LOADING FACILITIES

Fuel storage and loading at Kahului Airport is decentralized. Century Aviation has four storage tanks, with only three in use at the present time. The two largest tanks are used for jet fuel with 23,000-gallon and 28,000-gallon capacities, respectively. The third tank, with a 10,000-gallon capacity, is used for Avgas. The fourth tank, with a capacity of approximately 8,000 gallons, is unused at the present time. Fuel is brought to these tanks by the company's tanker trucks. Trucks resupplying the tanks travel between the large oil company fuel storage tanks located at Kahului Harbor and the Airport via Hana Highway, Haleakala Highway, Kala Road, and Eena Street. Currently, the tanker trucks used for aircraft refueling are based on the East Ramp. Because there is no suitable airport service road, they must cross Runway 2-20 to reach the air carrier aircraft parking apron adjacent to the passenger terminal. This requires clearance from the FAA Air Traffic Control Tower. Reportedly the FAA has requested that the practice be terminated at the earliest possible date. The only available alternate route would take the tanker trucks out of the Airport along Hana Highway but because the equipment now in service exceeds the load ratings of the roads that would have to be used, this is neither feasible nor permitted.

At the present time, the only other large fuel tank on the Airport is a 50,000-gallon capacity tank that Hawaiian Airlines constructed to store fuel for its aircraft. The tank is located at the intersection of Aalele Street and Old Haleakala Highway. It is not currently in use. When it was in use, it was resupplied by trucks that followed an Aalele Street/Keolani Place/Hana Highway route between the harbor storage facilities and the

Airport. Hawaiian Airlines refueling trucks traveled via Aalele Street and Keolani Place past the passenger terminal to Gate 1, entering the airport operating area at that point.

In addition to these on-site fuel tanks, two of the helicopter operators based on the East Ramp have their own small fuel storage tanks. These are refilled by trucks that follow essentially the same route used by the Century Aviation tanker trucks to and from the Airport.



LANAI AIRPORT

Lanai Airport is located on the island of Lanai, three miles southwest of Lanai City. The Airport is situated on the rim of an ancient volcano, surrounded by agricultural lands. Lanai Airport is the only aviation transportation facility located on the island. The existing Airport boundaries encompass approximately 505 acres of land. The Airport is located at approximately 20 degrees 47' 20" N latitude and 156 degrees 57' 15" W longitude. The topographical elevation of the property is 1,308 feet above mean sea level. Lanai Airport is classified as a "Commercial Service Primary Airport – Short Haul" in the National Plan of Integrated Airport Systems, which typically serves short haul air carrier routes of less than 1,500 miles. Facilities at Lanai Airport accommodate primarily inter-island passenger and cargo operations as well as charter flights.

RUNWAYS

Lanai Airport has a single runway configuration. This is the simplest of runway configurations. Runway 3-21, which is 5,000 feet long and 150 feet wide, is aligned in a northeast-southwest direction. The effective gradient is 0.06 percent sloping downward toward the southwest.

The structural pavement section of Runway 3-21 consists of a 5 1/2 –inch thick layer of asphaltic concrete pavement on a 6-inch layer of aggregate base and a 7-inch layer of sub-base on a sub-grade with a CBR of 11. The equivalent pavement thickness is 18 inches. In early 1998, the runway pavement was resurfaced by removing and replacing 2 inches of asphaltic concrete. The runway pavement was also re-grooved at that time with 1/4-inch deep by 1/4-inch wide grooves running perpendicular to the runway.

Runway 3-21 has an estimated pavement strength, in terms of maximum gross weight (pounds), as defined by aircraft landing gear configuration as follows: Single Wheel (S) – 75,000, Dual Wheel (D) – 110,000, Dual Tandem (DT) – 170,000.

TAXIWAY

There is a single taxiway that serves as both an entrance and exit to and from Runway 3-21. The taxiway is 75 feet wide by 287.5 feet long. It is aligned perpendicular to the runway and is located approximately 1,050 feet from the end of Runway 3-21. Taxiing to the runway thresholds for takeoff is along the runway. Aircraft landing on Runway 21 must back-taxi along the runway to exit onto the taxiway. Taxiway markings on the pavement are used to aid pilots in guiding the aircraft during the day and at dusk. Lights are used to guide pilots maneuvering at the Airport at night.

Essential features of a taxiway marking system include: the centerline of the taxiway, holding line at intersections where there is an operational need, and at the edge of the taxiway that may occur on a large paved area such as an aircraft parking apron. The

existing markings consist of yellow centerline taxiway markings and holding line. There is no directional taxiway signage at the Airport.

The taxiway pavement section consists of a 4 ½-inch thick layer of asphaltic concrete overlay on a 6-inch layer of untreated base over a 7-inch layer of granular sub-base.

AIRCRAFT PARKING APRON

The terminal apron provides the connection between the terminal buildings and the airfield. It includes parking areas for airplanes and aircraft circulation, and taxiing areas for access to these parking areas. The aircraft park in areas designated as gates or aircraft hard stands. The parking positions are sized-based on the geometric properties of the aircraft, including wingspan, fuselage length, and turning radii, and for the requirements for aircraft access by ground support vehicles and equipment at the gates. A total paved apron area of approximately 317,000 is available.

Directly adjacent to the passenger terminal building are two angled nose-in striped gate parking positions for power in/power out operations by inter-island aircraft that allow for the enplaning and deplaning of passengers. Both jet and turbo-prop aircraft currently being utilized by air carriers (DC-9, B-737, Dash 8, and Dash 6) servicing the Airport are accommodated by these gates.

There are three angled nose-in long term aircraft parking positions located along the northeastern edge of the apron. General aviation and business jets are accommodated by these parking positions. A fourth aircraft may be parked in the turfed area adjacent to the apron.

Short-term parking for aircraft involved in air cargo operations is provided in designated area approximately 90-feet by 140-feet directly opposite and adjacent to the cargo building. Transient aircraft with wing spans less than 50 feet are parked in the turfed area along the perimeter of the apron. There are seven aircraft tie-down positions located in a turfed area along the southwestern edge of the parking apron. These tie-downs are adequate for single engine and light twin engine airplanes in airplane design group I, which is a grouping of airplanes based on a wingspan up to, but not including, 49 feet. One tie-down position is located next to the designated air cargo operations area. Additional parking for transient aircraft is accommodated in the turfed area along the east perimeter of the apron.

The apron currently has no designated area for the parking of helicopters. It has been reported that occasionally up to twelve helicopters have been parked on the southwest portion of the apron.

The pavement section of the parking apron consists of a 4-inch thick layer of asphaltic concrete pavement on a 6-inch layer of asphalt-treated base over a 7-inch layer of aggregate base placed on a prepared sub-grade.

For ease of towing and aircraft taxiing, apron slopes or grades are kept to the minimum consistent with good drainage requirements. The effective gradient of the apron is approximately 0.7 percent.

Lighting of the apron is provided by four light standards located along the building restriction line. The spacing of the light standards is approximately 200 feet center-to-center.

RUNWAY PROTECTION ZONES, APPROACH AREAS, AND OBSTRUCTIONS

Publicly-owned airports, such as Lanai Airport, are required to conform to certain Federal Aviation Administration (FAA) design standards. These airports must meet certain geometric design criteria regarding runway protection zones (RPZ), runway approach and departure areas, and obstructions that may be hazardous to air navigation.

For geometric design, the FAA classifies airports based on an airport reference code (ARC). The current ARC for Lanai Airport is C-111. Runway 3 currently has a non-precision approach requiring an inner width of 500 feet. The lengths of the RPZ are 1,700 feet for Runway 3 and 1,000 feet for Runway 21. The outer widths are 1,010 feet for Runway 3 and 700 feet for Runway 21.

The approach area to Runway 3 has no controlling obstacle/obstruction to set an actual approach slope. The Lanai Very High Frequency Omnidirectional Range/Tactical Air Navigational Facility (VORTAC) at 7,290 feet from the runway to the southwest is the highest obstacle in the approach area and its elevation is 1,276 feet MSL, or 29 feet below the runway threshold elevation.

Although the controlling obstacle in the approach area to Runway 21 sets an actual approach slope of 34:1, there is a bush at the corner of the inner end and northwest edge of the approach area that is nine feet above the Runway 21 threshold. Just beyond the outer end of the 5,000-foot approach surface at 5,960 feet from the threshold, there is an old abandoned pineapple field with an elevation of 1,492 feet MSL. This is part of a larger area of old pineapple field that penetrates both the 150-foot horizontal and 20:1 conical surface to the north-northeast of the Airport.

It should be noted that along the outer edges of the primary surface are bushes ranging from two to eight feet above the centerline elevation of the runway and are identified as obstructions. The primary surface extends the length of the runway plus 200 feet beyond each end of the runway, and it is 500 feet wide, and centered on the runway centerline.

NAVIGATIONAL FACILITIES AND LIGHTING

Runway 3-21 is painted with non-precision runway markings and equipped with medium intensity runway lights (MIRL). Runway 3 has a non-precision instrument approach with straight in minimums. Runway 3 has a visual approach slope indicator (VASI-4L) and an instrument landing system (ILS). There is an airport rotating beacon located west of the

passenger terminal and aircraft parking apron. The Airport has a lighted wind indicator, wind cones and a segmented circle at the end of Runway 21. There is also a lighted anemometer to the southwest of the aviation apron.

The Airport does not have an Air Traffic Control tower and is therefore an uncontrolled airport. However, there is a Common Traffic Advisory Frequency (CTAF) for pilots to advise each other of their intentions and positions while operating near the Airport. Additionally, a Remote Communications Outlet (RCO) is located near the Airport for communications with Honolulu Flight Service Station (FSS). The Honolulu Combined Center/Radar Approach Control (CERAP), located on the island of Oahu, provides air traffic control for en route IFR aircraft and for approach and departure IFR aircraft.

The Lanai VORTAC facility is 1.2 nautical miles (NM) southwest from the Runway 3 threshold and provides the primary navigational information for Lanai Airport. Distance Measuring Equipment (DME), which provides the pilot with information on how many nautical miles the aircraft is from the airport, is typically co-located with the localizer in an ILS. The DME at the Lanai Airport is currently located at the VORTAC and would not be co-located with the localizer.

Navigational and landing aids at the Lanai Airport include the following;

- VORTAC (identification call sign letter LNY)
- Remote communications outlet (RCO)
- Airport rotating light beacon
- Visual approach slope indicator (VASI-4) to Runway 3
- Instrument Landing System (ILS) (Glide Slope Antenna on Fwy 3 and Localizer on Rwy 21)
- Medium Intensity Runway Lights (MIRLS) on Runway 3-21
- Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR)

METEOROLOGICAL CONDITIONS

At Lanai City, at an elevation of 1,620 feet MSL, the average temperature of the warmest month is 73 degrees (Fahrenheit) and of the coolest month is 66 degrees. The extreme range of temperature is a low of 46 degrees and a high of 88 degrees. The average maximum daily temperature during the hottest month is 84 degrees.

Annual rainfall is generally low due to the island's location on the leeward side of Maui. Lanai's annual average rainfall is estimated to vary between 10 inches near the coast to 35 inches at Lanaihale, which reaches an elevation of 3,370 feet.

Lanai lies in the belt of the northeasterly trade winds, which are very consistent. The whole island is not exposed to the full effect of the trade winds as the island is partly sheltered by Maui. However, the funneling effect of the East Molokai and West Maui

mountains increases wind velocity in the channel. Southerly or “kona” winds interrupt the trade winds at times, especially during the winter months.

Based on the data collected at Lanai Airport for the period January through December 1965, Runway 3-21 provides 98.3 percent wind coverage for 15 knot crosswinds and 93.8 percent wind coverage for 10.5 knot (12 mph) crosswinds.

PASSENGER TERMINAL COMPLEX

The Lanai Airport passenger terminal complex includes the terminal building, administration building, Aircraft Rescue Fire Fighting (ARFF), cargo/maintenance building, public and employee automobile parking areas, tenant concession area, and an aircraft parking apron. Passengers enplane and deplane at ground level.

The one-story passenger terminal building consists of four interconnected one-story buildings with an interior gross floor area encompassing 13,516 square feet. The terminal building provides space for airline ticketing and check-in operations, USDA agricultural inspection, baggage claim, security check point, passenger waiting lobby, public telephones, restrooms, resort registration and terminal support facilities. Commuter and cargo airlines also use space in the cargo building.

AIR CARGO

Air cargo is defined as “any mail, freight or goods moving by air.” A new cargo building with an interior gross floor area of 4,000 square feet was completed in February 1993. The cargo building has three cargo spaces. There is also a maintenance shop, a maintenance office and a generator room. The maintenance spaces are for custodial staff and for general repairs to the terminal grounds and not for any aircraft maintenance.

GENERAL AVIATION

General aviation is the term used to designate all flying done other than by the commercial airlines, commuter, air taxi, or the military. General aviation aircraft have a transportation function similar to that of the private automobile. For statistical purposes, general aviation in the United States is usually divided into business flying (i.e., transportation not for hire), commercial flying, instructional flying, and personal flying.

There are no fixed base operators (FBO) or hangar facilities at the Airport. Presently there are limited general aviation facilities at Lanai Airport.

AIR TAXIS

Air taxi is defined as “a non-scheduled carrier using small aircraft for very short haul travel on a charter basis.” Air taxi is not “regulated.” There is no FAA certificated fixed wing air taxi operators located at the Lanai Airport.

HELICOPTERS

There are no helicopters based at Lanai Airport, nor facilities to support them. Charter helicopter tours use the Airport on a non-regularly scheduled basis.

AIRPORT ACCESS, PARKING AND GROUND TRANSPORTATION

Access to the Airport is via a two-lane paved road from Kaunalapau Highway half-a-mile in length. The pavement section of the access road was widened in 1994 from 18 feet to 24 feet with 6-foot shoulders. At the present time, traffic is relatively light on both the highway and the airport access road so traffic signals are not currently required at the intersection. However turning lanes from Kaunalapau Highway onto the airport access road are provided.

Immediately upon entering the terminal complex, vehicular parking facilities are provided. Vehicular parking at the Airport consists of 90 public parking spaces, 55 designated employee parking spaces, 11 cargo parking spaces, and 5 commercial bus/van parking spaces, for a total of 161 spaces. While there is no charge for parking, 24 of the public parking stalls have one-hour parking restrictions.

In addition, 18 of the stalls are designated as 24-hour parking. Overnight parking is confined to the remaining 48 public parking stalls.

There are no rental car or taxi counters at the Airport. However, rental cars and taxis are available at Lanai City through Lanai City Service & U-Drive and Dollar Rent-A-Car. The Koele Lodge and Manele Bay Hotels provide shuttle service to the hotels from the Airport.

Kaunalapau Highway (Hawaii State Route 440) is the major road connecting the Lanai Airport to Lanai City.

The circular turnaround located adjacent to the new terminal curbside entrance provides a convenient space for unloading and loading of passengers and their baggage directly in front of the entrance to the terminal building. The pavement section of the parking areas consists of a 2-inch thick layer of asphaltic concrete pavement on an 8-inch thick layer of aggregate base over a compacted sub-grade.



LANAI AIRPORT

Photo by Air Survey Hawaii, Inc. July 6, 1995

AMERICAN MEDICAL RESPONSE

230 Hana Highway, Space 10B Telephone number 871-2153

Hana Telephone number 248-8201

Curt Morimoto

American Medical Response is the emergency medical service ground-ambulance company that is awarded the State contract for the Maui Emergency MedEvac Helicopter. The Maui Emergency MedEvac Helicopter is a state-run program funded by State and County funds. The MedEvac Helicopter operations are restricted during bad weather and at night unless the moon is more than half-full and above the horizon. Ambient light levels may suffice for MedEvac Helicopter response to West Maui incidents, however, as the missions will likely involve transfers from West Maui to Central Maui medical facilities, and not require flights over open oceans. American Medical Response operations also utilize the County Fire Department's helicopter and the Hawaii National Guard's HUMVEE for rough terrain rescues. American Medical Response operations are activated via 911.

QUICK FACTS

- Emergency Certified, CEN,
CCRN and CFRN Flight Nurses
- Newest and Largest Fleet of Aircraft
on the Islands (five aircraft)
- Unprecedented ETAs
- 365/24/7 Local/ Live Dispatch
- Highly Trained/Competent and
Qualified Medical Staff
- Best-of-Class Pilots (3000 hrs+)
- Community Based
- Red to Bed Service (actual flight crews)
- In-House Maintenance Facilities
- Completely New Management Team
- Preferred Provider: HMOA (all plans),
Kaiser, UHA, Aloha Care,
HMO, Medicare, Medicaid,
MDX Hawaii/Queens Health Mgmt +



*"Serving our Ohana, our Friends
and our Community!"*



LOCAL 24-HOUR DISPATCH
800-201-2911

Hawaii Air Ambulance
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Honolulu, HI 96819
1-808-833-2270

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R/7



***THE MEDICAL
TRANSPORTATION EXPERTS***

- Trauma -Neurological
- Cardiac -High-Risk Obstetrical
- Medical -IABP
- Pediatrics -Psychiatric

EQUIPPED

CrossVent 3

Capable of CMV, SIMV, PS, PEEP and CPAP modes. Ventilator can monitor exhaled tidal volume, peak inspiratory pressures, mean airway pressures and leak for critical conditions. I:E ratio and inspiratory flow rate can be adjusted to patient condition. With pressure limiting volume control, barotrauma is minimized. HEPA filtered for infection control.

WMI Cardiac Monitor

Capable of biphasic defibrillation, transcutaneous pacing, continuous waveform capnography, arterial line, CVP and Swan-Ganz monitoring, transesophageal temperature monitoring, 12-lead EKG, pulse oximetry and NIBP.

Nicole Versalah 3 Obstetrical Monitor

Allows for continuous tocodynamometer and FHT readouts. Mom carries a push button to document contractions.

Airway Management

Items include orotracheal intubation, nasotracheal trigger tubes, LMA, Bougie introducer, combi-tube airway, surgical and needle cricothyrotomy. Flight crews are trained in difficult airway techniques such as manual intubation, digital intubation, BURP maneuver and capnography assisted intubation. ETT tube cuff pressures are measured to minimize tracheal necrosis.

IVAC Pump

Provides a three channel system allowing for three separate drip medications. Flight crews are trained to manually calculate and infuse drip medications as backup.

Advanced IV Access

Flight crews are trained to perform *drill gun intraosseous access* on adult and pediatrics in emergency situations, eliminating the need for unreliable sternal IO or unsafe central line placement.

COMMITTED

Hawaii Air Ambulance, a FAA certified carrier, is a dedicated provider of air medical services, committed to the highest level of safety attainable in the air medical transport environment. Our focus is a strong devotion to progressive medical practice and clinical excellence. Highly trained, qualified and experienced medical and aviation professionals use state-of-the-art equipment to provide safe, proper and comfortable care to patients requiring basic, advanced and critical care life support services. The multi-disciplinary patient care team includes physicians, registered nurses, paramedics, pilots and flight communications specialists who provide seamless and excellent patient care.

CONTRACTED

Preferred provider agreements with most insurance companies including HMOA (all plans), Kaiser, Aloha Care, HMO (including HMO Summerlin, HMO, PPO), MDX Hawaii/Queens Health Management, UHIA, Medicare, Medicaid.

EXPERIENCED

Our medical crew members average 10 years of critical care or emergency medicine experience. RN/Paramedic or RN/RN crews are highly trained in all aspects of emergency care including:

- Advanced Airway Insertion
- Mechanical Ventilation Modes and Techniques
- Continuous Waveform Capnography
- Critical Care Drugs
- Arterial Line, CVP, Swan-Ganz Monitoring
- Hemodynamic Monitoring
 - Drill Gun Intraosseous Access (Adult and Ped.)
- Biphasic Defibrillation and Cardiac Pacing
- Tocodynamometer and FHT Monitoring
- 12 lead EKG

DEPENDABLE

Beechcraft King Air C90B (five aircraft)

Range: 1475 statute miles

Max Cruising Speed: 276 miles/hour

Equipment:

- Global Positioning System
- Pressurized Cabin
- Turbine (Jet) Engines
- Air Conditioning
- Built-in Oxygen and Suction
- Full-De-icing Equipment
- Satellite Radio

Crews:

- Pilots (3000 hrs+)
- Registered Nurses
- MCT's



PROMPT

Unlike many air ambulance providers, Hawaii Air Ambulance personnel are permanent residents for the different bases in the communities they serve. This creates a mutual relationship of respect and trust between Hawaii Air Ambulance and hospital staff. This also insures the fastest ETAs (estimated time of arrival) by providing the greatest opportunity for the aircraft and crew to be where the patient transport originates. **Basing on the different islands preserves the critical "Golden Hour" of treatment rather than waiting for an aircraft to be dispatched from Oahu, as was the old practice.**

Hawaii Air Ambulance Bases of Operation

*"Basing on the different islands helps
preserve the critical GOLDEN HOUR!"*



APPENDIX D

**ACCOUNTS OF
HONOAPIILANI HIGHWAY
CLOSURES**

HONOAPIILANI HIGHWAY CLOSURES

FIRES

Lahaina Brush Fire Closes Maui Highway

POSTED: 2:28 pm HST October 19, 2007

UPDATED: 2:40 pm HST October 19, 2007

HONOLULU -- *Maui authorities closed Honoapiilani Highway for about an hour on Friday because of a brush fire.*

The 20-acre fire started at about noon near the Lahaina Fire Station near the highway and spread toward the mountain near the Lahaina Civic Center, county officials said.

Police partially opened the highway shortly before 2 p.m. after firefighters brought the fire under control, officials said. Traffic was opened in both directions on the southbound lanes while authorities kept the northbound lanes closed.

Officials said the road closure snarled traffic in the area.

Hanakao`o Beach Park and the Royal Kaanapali Golf Course remained closed as of 1:45 p.m.

Three fire companies and the department's helicopter helped fight the brush fire.

No homes were affected by the fire and no injuries were reported, officials said.

Conditions prime for brushfires on Maui **Friday, July 6, 2007**

LAHAINA, Maui — High winds, sloping terrain and large tracts of vacant farmland covered with tinder-dry kiawe and brush provide a "perfect storm" of conditions for wildfires along Maui's leeward coast from Ukumehame to Lahainaluna.

A ferocious brushfire last week that blackened 2,600 acres in Olowalu and Launiupoko was the second major blaze to strike the area this year. It destroyed two homes and a tomato farm and sent hundreds of evacuees, residents and tourists stranded by the *closure of Honoapi'ilani Highway* to American Red Cross shelters in Kahului and Lahaina.

In February, a fire above the Puamana subdivision burned 1,000 acres and threatened those living in remote Kaua'ula Valley, claiming one family's home.

Launiupoko resident Angus McKelvey said his 2-acre property has been threatened by wildfires five times since he moved into the 153-lot agricultural subdivision six years ago. His neighbor lost a cottage and a pet cat in last week's fire, and McKelvey watched as his own home nearly burned.

"A fireball came within 50 yards of our home. Within 10 minutes it went from some smoke on the hill to a firestorm like you see in the movies," he said.

McKelvey, a state lawmaker, said the wildfire "showcases the problem of the urban-rural interface zone that exists now with projects going up in places that are mostly scrubland."

Those who see the fire-scarred hills at the foot of the West Maui Mountains today may find it hard to believe that until the late 1990s, much of the area was covered in a green carpet of sugar cane growing on land owned or leased by Amfac's Pioneer Mill. The plantation at one time farmed more than 14,000 acres spread across 16 miles of slopes, but by the time the sugar operation shut down in 1999, it had cut back cultivation to approximately 4,000 acres.

Now the sugar cane is gone, and so is the system of reservoirs and ditches maintained by the plantation to provide ready water to the region. In the transition away from large-scale agriculture, lack of water infrastructure and other development issues have idled thousands of acres of former fields, save for a few small farms and agricultural subdivisions.

"The best use for the land that is not going to be developed is some kind of agriculture, but those lands are very rocky and there's no infrastructure for water left," said Wes Nohara, vice chairman of the West Maui Soil and Water Conservation District. "It's a tough situation, and there is a concern about the fire hazard, and after the fires is the issue of potential runoff."

Maui Police: Honoapiilani Highway Open Again Launiupoko Residents Allowed Back Home

POSTED: 7:16 am HST June 28, 2007

UPDATED: 7:32 am HST June 29, 2007

OLOWALU, Hawaii -- Maui police said Honoapiilani Highway is open late Thursday night after firefighters work to put out a brushfire that has scorched more than 1,400 acres and destroyed a home in Olowalu.

The highway has been closed intermittently since Wednesday when the blaze started in West Maui.

More than 400 visitors and residents spent the night in shelters because of the road closures.

Maui crews hope to beat fire today

Star-Bulletin staff Tuesday, September 5, 2006

Maui firefighters were hoping to put out a persistent brush fire in the West Maui mountains sometime today.

The fire has scorched about 4,000 acres and caused evacuations and *highway closures since it began early Friday.*

About 20 firefighters from the Maui Fire Department and the state Forestry Division assisted by helicopters battled the fire yesterday, said acting Battalion Chief Derrick Arruda.

About 90 percent of the fire is in the "mopping up" stage, Arruda said. Most of the firefighting is now taking place near the 3,000-foot level of the West Maui State Forest, where steep and rugged terrain makes it difficult to get heavy equipment in, said Glenn Shishido, a forest management supervisor with the state Forestry Division.

Windy conditions have made it difficult to contain the fire, Arruda said.

"Whenever we get a little bit ahead, (the winds) seem to kick up and stir it up again," he said.

The fire is not threatening any populated areas, Arruda said. Shishido said the fire burned close to native forest areas on Saturday, but firefighters were able to keep the flames away from areas where endangered plants and animals live.

RECENT MAJOR WEST MAUI FIRES

July 2007: A fireworks-related blaze burns 180 acres behind Lahaina Aquatic Center near Lahainaluna homes.

June 2007: A brushfire burns 2,600 acres in Olowalu and Launiupoko, destroying two homes and a tomato farm and causing *repeated closing of Honoapi'ilani Highway.*

February 2007: A fire above the Puamana subdivision near Launiupoko burns 1,000 acres and claims a Kaua'ula Valley home.

October 2005: Arson is suspected in two fires set near Lahainaluna High School; one burns 200 acres of former sugar cane land.

July 2005: A 120-acre brush fire in Launiupoko causes *closure of Honoapi'ilani Highway for 3 1/2 hours.*

July 2002: A 225-acre fire comes within a few hundred yards of Olowalu homes.

January 2001: An 800-acre fire between Olowalu and Launiupoko *closes Honoapi'ilani Highway for hours.*

Most of the work involves building fire breaks and moving in with hoses and shovels to put out hot spots, Shishido said.

The fire was first reported at 12:30 a.m. Friday north of Maalaea near Honoapiilani Highway and McGregor Point.

It closed the highway for most of the day on Friday and caused evacuations near the Maui Ocean Center.

Maui fire evacuates homes, strands visitors

The blaze north of Maalaea closes the highway to West Maui

By Gary Kubota **Saturday, September 2, 2006**

A raging brush fire on the Valley Isle led to the evacuation of homes and closed the main highway to West Maui yesterday, stranding commuters and tourists.

As of 8 p.m. yesterday the fire had burned about 2,000 acres and was still out of control, county officials reported, but *Honoapiilani Highway was reopened by contra-flowing traffic in one lane.* County spokeswoman Ellen Pelissero said firefighters were able to put out the blaze near the pali tunnel last night so they could reopen Honoapiilani Highway.

Pelissero said relief shelters were set up at War Memorial Gym in Wailuku and the Lahaina Civic Center in West Maui in case people remained stranded overnight.

"It kind of sucks but it happens," said Caryl Rose, a Sacramento, Calif., visitor who checked in at the War Memorial shelter. Rose, interviewed at about 8:30 last night, said she and her boyfriend, Brett Havener, arrived at about 12:30 p.m. yesterday and had planned to go to a condominium in West Maui.

The fire caused the evacuation of hundreds of people from Buzz's Wharf Restaurant and the Maui Ocean Center in Maalaea.

Authorities also advised a number of residents living north of Buzz's Wharf to evacuate their homes, Pelissero said. *They were allowing people from West Maui to drive on the back road through Kahakuloa to Central Maui.*

The blaze, reported to police at 12:30 a.m. yesterday, started north of Maalaea near Honoapiilani Highway and McGregor Point and spread mauka to more than 2,000 feet above sea level, threatening a newly built wind farm.

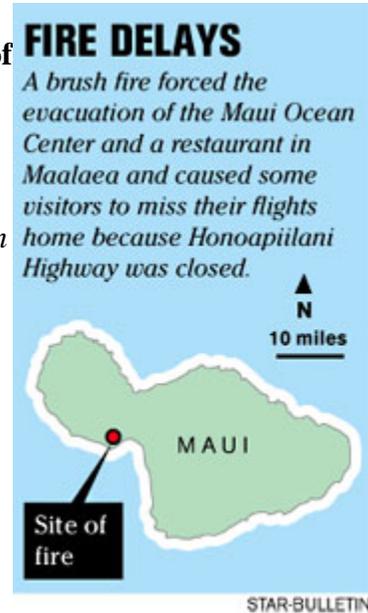
A second flank of the fire was heading toward Olowalu, and the second front was moving toward Waikapu.

State and county firefighters along with Air National Guard helicopters were fighting the blaze on various fronts.

Mick Smith, resident manager of the Maalaea Yacht Marina, said the blaze appeared to be partially contained in Maalaea after workers cut a fire break along the mauka side of Honoapiilani Highway near the Maui Ocean Center.

Closure of the highway caused some people to miss their flights on the busy Labor Day weekend.

"It's a crying shame," said Roger Sullivan, a Dallas resident who missed his flight on American Airlines by five minutes.



"They have to do something about the traffic."

Sullivan said he and his wife, Carol, finally learned of a back road to get to the airport while listening to the radio, but heard it too late to catch their flight.

Gina Crouch, who was traveling with her family, said she left Kaanapali at 10 a.m. and still was unable to make her flight at 1:30 p.m.

Crouch said she heard conflicting stories about whether roads to the airport were closed, and after waiting at the hotel, her family finally drove two hours on the back road to get to the airport.

Ohio resident Linda Hardwick said the drive on the back route was "scary" because some vehicles, including trucks, were driving in the opposite direction and speeding.

Jeff Tarpey, general manager of United Airlines on Maui, said some 40 people missed their flights.

"We were able to help most of them rebook," Tarpey said.

Visitors said it took about an hour and a half to get to Kahului Airport via the back road.

"They should have a bypass road. They have been talking about it for more than 20 years," said a female visitor who declined to give her name.

Tourists and workers alike are stuck along Honoapiilani

By Gary Kubota **Wednesday, July 13, 2005**

WAILUKU » Multiple fires along a major Maui highway delayed thousands of motorists, prevented some from reaching work and kept some visitors from making their flights yesterday.

Traffic backed up for more than 10 miles along Honoapiilani Highway in West Maui yesterday morning as firefighters fought a brush blaze along the Lahaina pali near McGregor Point.

The backup continued late into the night, as firefighters checked for the possibility of a second brush fire in a wooded area above Lahaina.

"We're telling people unless you have to get a flight and to Kahului Airport, don't bother trying to get to the other side," said Frank Lavey, general manager of the Hyatt Regency Maui.

Lavey said his staff was down to 60 percent yesterday because *many were unable to get to work*, but the rest of the crew maintained normal operations.

"Everybody's pretty understanding," he said.

At least a couple of airlines, including Aloha Airlines, said some visitors missed their flights to the mainland but were put on later flights without additional charge.

Several visitors said they were still enjoying their trip to Maui, despite the delays.

Paul Kollasch of Vacaville, Calif., said he and his family got up at 5 a.m. yesterday and took more than two hours to drive from Lahaina to Maalaea to go on a trip to Molokini island.

Kollasch said after arriving at Maalaea, he found the trip was canceled because the captain and crew were unable to get to work due to the traffic tie-up.



He said his family then took about an hour to go back to Lahaina, where the charter tour gave them an upgrade for a trip to Lanai.

Family members said they weren't upset and pointed out the calm sunny weather around them.

Trilogy Excursions Captain Brian Richard said they were waiting for nine to 12 customers and also a captain and first mate who were on the road between central Maui and Lahaina.

"We're just telling them we'll wait as long as we can," he said.

The two-lane highway connecting scores of major hotels and resort condominiums to the Kahului Airport was shut down from about 1:10 to 7 a.m. yesterday before one lane was reopened, fire officials said.

By about 2 p.m. yesterday, the alternating one-lane traffic was moving but still backed up a total of about seven miles from Ukumehame to Maalaea.

Battalion Chief Alan Pascua said yesterday the fire was contained but firefighters were still putting out flare-ups last night.

He said the burn area extended for about a mile along Honoapiilani Highway and from sea level to 450-foot elevation.

Pascua said initial reports indicated there were at least four different points of origin for the fire but there could have been more that went undetected because of the fire spreading and combining with each other.

Some brush fires have started in similarly suspicious way in the past week or two, and fire officials are continuing to investigate the cause of them and the one yesterday, Fire Battalion Chief Frank Tam said.

Firefighting efforts were hampered by the mountainous terrain and winds blowing about 15 to 20 mph near the highway.

A county helicopter made water drops, and fire and county water tankers were brought in to help to fight the blaze.

Maui Brushfire Scorches 500 Acres

UPDATED: 5:14 p.m. HST January 22, 2001

A 500-acre brush fire in the *Olowalu area forced police to close the only highway into the Lahaina coast Monday.*

Police shut down Honoapiilani Highway at about 11:30 a.m. The highway is the main road into the Lahaina and Kaanapali resort areas.

They have also closed Kahekili highway to motorists except for local traffic.

Officials said that four helicopters are helping to battle the fire. Fire engines joined police teams in battling the fire which grew more than 100 acres in two hours. Authorities said that the strong winds are making firefighting tough.

A group of students from Kamalii elementary school were on a whale-watching excursion in Lahaina. Teachers have taken the children to a nearby elementary school to wait out the situation, according to one parent.

Civil Defense officials opened the Lahaina Civic Center as a shelter to those who need a place to stay. Some of those who are taking refuge there include tourists who cannot make it to the airport in Kahului for their flights.

Maui brush fire halts some traffic on Maui **Monday, June 22, 1998**

WAILUKU -- *Traffic on the main highway between Lahaina and central Maui was halted for about eight hours yesterday because of a brush fire in hilly terrain near McGregor Point.*

Police allowed a lane of traffic through the area at 11 p.m. and two lanes by 1:05 a.m.

Authorities said there were no injuries, and no structures were destroyed in the fire, which has burned several hundred acres of brush. It is contained, but still burning.

Police Sgt. David Silva said police received irate calls from some people who were going to miss their airline flights, and that there were a few minor accidents by motorists taking a back road from Lahaina to central Maui.

Ishikawa said police have been monitoring the fire and waiting for helicopters to assist in dousing the blaze.

Ishikawa said the cause of the fire remains unknown, but initial reports indicate it *started on the mauka side of Honoapiilani Highway near McGregor Point and spread toward the Wailuku tunnel.*

WEATHER RELATED

Winds batter neighbor islands

Maui and the Big Isle suffer power failures and boat groundings

Saturday, February 28, 2004

By Gary T. Kubota and Rod Thompson

The storm that pummeled Oahu continued down the island chain, knocking out power to parts of Maui and the Big Island and sending three boats aground.

On Maui the high winds apparently forced the 65-foot America II yacht that once raced in the America's Cup onto a reef about 300 yards off Lahaina town.

Cynthia "Sam" Speedie said her husband, who manages the yacht, received a call from the Coast Guard at 3:45 a.m. yesterday notifying him that the boat had run aground. Speedie said the crew was trying to secure the yacht last night.

"We love the boat. Our customers love the boat. They come back year after year," she said.

America II, once a racing yacht that challenged Dennis Connor of Stars and Stripes in Fremantle, Australia, in 1987, has been doing dinner cruises out of Lahaina Harbor. Its mast broke about a month ago, and the yacht was scheduled to leave Lahaina tomorrow to go into dry dock in Honolulu, Speedie said.

Off the Big Island, two boats also were driven aground by high winds at Kailua-Kona Bay.

One of the boats was the single-hull Coral Sea, which is about 65 feet long, said county Deputy Managing Director Pete Hendricks. Someone tried to get onto the ship to save it, he said, but with 6-foot waves and winds "way over 23 mph," that was not possible.

The second boat was the cruise catamaran Kiana, the smaller of two catamarans operated by Roberts Hawaii Tours, Hendricks said. Damage to the Kiana, roughly the same size as the Coral Sea, is likely severe, he said. The other Roberts Hawaii catamaran, the 150-foot Tamure, was able to get out of Kailua Bay and go to safety at Kawaihae Harbor to the north, he said.

The storm also disrupted power and closed roads on both islands.

Maui Electric workers were working last night near Wailuku Heights after six utility poles fell at about 5:26 p.m. yesterday, forcing the closure of Honoapiilani Highway.

Saturday, January 24, 2004 On Maui, *Honoapiilani Highway was closed for hours early yesterday morning because of landslides between Maalae and mile marker 11.*

Tuesday, December 2, 2003 The rains moved from Kauai to Maui, but some showers were possible for Oahu today, forecasters said. By last night, Maui police officials said there was only one *road closure due to the weather, located along Honoapiilani Highway between Fleming Beach Park and mile post marker 40, two miles north of Nakalele Point.*

MOTOR VEHICLE ACCIDENTS ON HONAPIILANI HIGHWAY

Fatal crash shuts down highway **June 3, 2008**
WAILUKU — A motorcycle rider was killed Monday night after crashing on the Honoapiilani Highway on the Lahaina side of the pali tunnel at about 6:05 p.m., a Maui County spokeswoman said.

The crash and police investigation forced the closure of the highway at Maalaea and near Puamana in Lahaina, creating a traffic jam on both sides of the closed roadway. Police said the Kahekili Highway to Kahakuloa also was closed except to local traffic.

No other details were available Monday night, although initial reports indicated the rider was alone and had been wearing a helmet.

Five-car crash blamed on tractor-trailer **May 22, 2008**
Police: Officers investigating reports of reckless driving

By LILA FUJIMOTO, Staff Writer
OLOWALU — A semitrailer truck, which reportedly was being driven recklessly, rear-ended a vehicle Tuesday afternoon on Honoapiilani Highway to set off a five-vehicle collision that kept traffic in and out of West Maui backed up late into the night, police said.

Seven people were transported by ambulance to Maui Memorial Medical Center after the crash, which was reported at 4:17 p.m. near Olowalu Village, said Capt. Charles Hirata, commander of the Lahaina Patrol District. He said the injuries were reportedly not life-threatening.

“It could have been a lot worse,” Hirata said. “The most important thing is nobody was killed.”

At 4:12 p.m. Tuesday, about five minutes before the crash was reported, police were responding to a report of a blue tractor-trailer that was speeding and crossing a double-solid line to overtake several vehicles on the highway near Dickenson Street in Lahaina town.

Witnesses reported seeing the tractor-trailer going off the roadway and swerving into oncoming traffic, Hirata said. Traffic Sgt. Barry Aoki and Lahaina patrol officer Eduardo Bayle made checks in the area but did not locate the tractor-trailer.

Aoki was on the scene of the crash about one minute after it occurred, involving the same tractor-trailer, Hirata said.

He said the 1989 Peterbilt truck, which was heading toward Maalaea, clipped the rear end of a 1990 Toyota pickup truck that was heading in the same direction and stopped in traffic at Olowalu. The tractor-trailer continued forward, running into a 2005 Honda Accord four-door sedan, which was pushed into a 2000 Dodge Durango, Hirata said.

He said the Durango swerved to try to avoid a collision with a 2008 GMC multipurpose vehicle, which spun as it was pushed into the makai guardrail. The Durango flipped over on its side.

A 34-year-old Kahului man was driving the tractor-trailer, which ended up across the highway on the northbound shoulder, Hirata said.

“When you have a large vehicle like that, you have added responsibility because of the widespread injuries and damage you can cause,” Hirata said. “That’s why rules and licensing requirements are a lot stricter for vehicles like that.”

The tractor-trailer driver was among those transported to the hospital, with Lahaina firefighters and five medic units responding to the scene.

Three of the four occupants of the Honda, driven by a 27-year-old Pukalani man, suffered injuries. A 48-year-old Haiku man driving the Durango and his 34-year-old passenger also were injured, as was a 45-year-old Waiehu man driving the GMC multipurpose vehicle.

A 25-year-old Kihei man driving the Toyota pickup wasn’t injured, police said.

Four tow companies were called to remove the damaged vehicles.

Both lanes of the highway were closed from 4:17 to 5:09 p.m. until debris could be removed from the road, police said. Traffic was allowed through on one lane in alternating directions at 10-minute intervals until the road could be reopened at 6:12 p.m.

Hours after the collision, traffic was backed up in both directions, with the line of Maalaea-bound vehicles reaching into Lahaina town at 8 p.m. Tuesday.

Police on Wednesday were continuing their investigation of the incident.

Head-on crash closes Honoapiilani Highway **Sunday, September 14, 2003**

A head-on collision between a car and a pickup truck last night on *Maui's Honoapiilani Highway near McGregor Point* critically injured one person and closed the road for hours.

The accident happened about 7 p.m. A second victim was in good condition. Both were taken to area hospitals. Police did not yet have the names or ages of those involved in the accident.

The cause of the collision is under investigation.

Motorcycle crash kills 2 and injures 2 on Maui **Sunday, June 9, 2002**

Two people were killed in a crash involving three automobiles and a motorcycle at about 7:41 p.m. Friday *1.8 miles west of the scenic lookout near Lahaina, Maui*.

Robert Gompers, 34, of Haiku, the driver of the Honda motorcycle, and Allison Courter, 21, of Lahaina and formerly of Sacramento, Calif., were pronounced dead at the scene, the Maui Police Department reported.

The motorcycle was traveling in the Wailuku direction on Honoapiilani Highway when it apparently drifted into the Lahaina-bound lane, colliding with a Ford Ranger, police said.

The motorcycle and its riders then were struck by a Dodge Neon traveling westbound toward Lahaina on Honoapiilani Highway, according to the report.

The Dodge crossed the centerline and hit a Honda Accord traveling toward Wailuku on the highway. After the Dodge and Honda Accord collided, the Dodge struck the mountainside and flipped over onto the passenger side of the vehicle.

The 33-year-old driver of the Dodge, a Kahului resident, and her 27-year-old passenger, of Wailuku, were taken to Maui Memorial Medical Center with minor injuries. A six-year-old in the car wasn't injured.

The 29-year-old driver of the Ford Ranger and 22-year-old driver of the Honda Accord, both Lahaina residents, weren't injured.

The operator and passenger of the motorcycle weren't wearing helmets, police said. All occupants of the cars involved were wearing seatbelts.

The accident forced the closure of the highway, stranding hundreds motorists in both directions.

Crash Kills 1; Closes Road To Lahaina Honoapiilani Highway Traffic Stopped For Hours

POSTED: 2:54 p.m. HST August 13, 2001

UPDATED: 4:52 p.m. HST August 13, 2001

OLOWALU, Maui, Hawaii -- One person was killed Monday in a crash that *closed one of the only arteries to west Maui for several hours.* Traffic in and out of Lahaina was stopped by Maui police shortly after noon because of the three-car crash on *Honoapiilani Highway near Ukumehame Park.* *Officers did not allow any traffic to move in both directions during their investigation, including visitors with airline tickets.*



Paramedics took three people to Maui Memorial Medical Center, including one

man in critical condition. Two others are in stable condition, according to hospital officials. Traffic was reopened at about 4 p.m., police officials said. Traffic is still expected to be heavy because of the backlog from the investigation.

OTHER

Maui rock removal to close lane **Thursday, March 15, 2007**

Rock removal from cliffs above Honoapiilani Highway on Maui will cause *lane closures at McGregor Point* today and tomorrow.

Motorists could face delays between 9 a.m. and 3:30 p.m. today and from 9 a.m. to noon tomorrow, according to the state Department of Transportation.

A helicopter will drape nets over the cliffs to protect workers and motorists.

Honoapiilani Highway to close, for a time, for boulder removal **February 3, 2007**

MAALAEA – A number of “big boulders” high up the slopes over the pali section of Honoapiilani Highway require special netting before they can be safely removed, state highways officials said. *A section of the highway will be closed temporarily Monday to accommodate the project.*

There will be intermittent closing of the highway at Milepost 8.9 between 11 a.m. and 3 p.m., Maui District Highways Engineer Ferdinand “Freddie” Cajigal said. The closings

will be required while a helicopter hauls steel netting to be placed over the hazardous boulders to allow workers to “scale” the loose rocks from the cliffside.

Cajigal said the work on the cliffs is continuing to remove rocks and boulders loosened by the magnitude-6.7 and -6.0 earthquakes that rocked the islands in October. Work is being conducted at night, from 9 p.m. to 5 a.m. Mondays through Saturdays, with workers closing one lane of traffic while they are working.

On Monday, *workers will need to close both lanes for as long as 10 minutes while the netting is being installed.*

Drivers are being warned to expect delays and to observe all signs and traffic controllers while on the highway between Maalaea and Ukumehame.

“There are some big boulders up there. They have to install the net over the boulders before they begin to scale them,” Cajigal said.

He said most of the cliff faces over the highway have been worked, but there are unstable rocks higher up the slopes in areas that were cut above the old Lahaina road before the Honoapiilani Highway was constructed in the 1950s.

The \$3 million stabilization project began in December after specialists determined that some sections of the pali were destabilized by the earthquakes.

Cajigal said the work may be completed by the end of February.

MOTOR VEHICLE ACCIDENTS ON HONOAPIILANI HIGHWAY (CLOSURE ?)

Teen seriously injured in crash **Tuesday, February 19, 2008**

WAILUKU » An 18-year-old man was critically injured yesterday after the pickup truck he was riding in crashed on Maui.

The Haiku resident was riding with three other teenagers, including the 19-year-old driver, when the crash occurred at 3:31 a.m. northeast of the Plantation Club Drive in Kapalua.

Police investigator Dukie Racadio said the four-door pickup truck was on Honoapiilani Highway, heading in the Kapalua direction, when the driver lost control of the vehicle, veered off the roadway, struck an embankment and overturned onto its roof.

Racadio said the vehicle kept sliding, encroaching onto the opposite lane of traffic before stopping. The other teenagers sustained non-life-threatening injuries, Racadio said.

Racadio said investigators are still looking into whether seat belts were worn, because all the teens were inside the cab.

Body found off beach on Maui **Wednesday, February 13, 2008**

LAHAINA » Police detectives were investigating the cause of death of a man whose body was found floating near a popular recreational beach in west Maui.

A passerby notified police about the body floating near shore about 50 yards south of Launiupoko Beach Park yesterday evening, police Capt. Milton Matsuoka said.

Matsuoka said it was too early to determine the cause of death.

"We're not really sure," Matsuoka said. "We're not ruling out anything."

Matsuoka said it didn't appear that the man went swimming.

Matsuoka said the man appeared to have some minor injuries and investigators were still trying to determine if the injuries occurred while the body was in the ocean.

The dark-haired man was wearing pants, belt, and a T-shirt when his body was examined by police close to 6 p.m. after being pulled from the water.

The body was taken to Maui Memorial Medical Center, where an autopsy is expected to be performed.

Matsuoka said a car found nearby was believed to belong to the man.

He said police have some idea about the man's identity but wouldn't know for sure until the body was identified by family.

The investigation beside the two-lane Honoapiilani Highway caused rush-hour traffic to slow to a crawl for miles in and out of Lahaina.

W. Maui crash snarls traffic for hours **November 8, 2007**

LAUNIUPOKO – Two drivers were injured in a crash Wednesday morning near Launiupoko Park that slowed traffic on Honoapiilani Highway, police said.

The crash was reported at about 8:25 a.m. near a surfing spot called Guardrails, said Capt. Charles Hirata, commander of the Lahaina Patrol District. He said a Lahaina-bound sport truck crossed the centerline, colliding with a Jeep Cherokee that was heading in the Wailuku direction. Sgt. Dennis Lee said the driver of one of the vehicles was pinned in the vehicle and was believed to be critically injured. The driver was listed as critical but stable after being transported to Maui Memorial Medical Center and examined.

With the vehicles and debris from the crash occupying both lanes, police closed the highway at about 8:30 a.m. At first, officers diverted both directions of traffic onto a cane haul road, Hirata said. But because there was a point where the road was too narrow to accommodate two lanes, Wailuku-bound traffic was rerouted onto the shoulder of the highway while Lahaina-bound traffic continued on the cane-haul road, Hirata said.

Lee said police also were given permission to route traffic through the Makila and Puunoa subdivisions – but a dirt roadway connecting the two projects was blocked by a gate and boulders, leading to a traffic jam in the subdivision.

Although police worked to keep vehicles moving, the number of cars as well as drivers who slowed down to look at the crash scene contributed to a backup, Hirata said. The highway was reopened at 11:28 a.m.

Distracted by the crash, most drivers probably didn't notice a monk seal on the beach near Launiupoko, Hirata said.

2 killed as car goes out of control

By Gary T. Kubota **Friday, October 26, 2007**

WAILUKU » Two men died after they were thrown from a car that ran off Honoapiilani Highway at a turn and spun back onto the road in West Maui.

The driver and his passenger were ejected from the vehicle in *an area between Napili and Kahana* at 1:03 a.m. yesterday, police said.

The driver has been identified as Keone K.M. Brown, 25, of Lahaina, and the passenger as Angel Villagranna-Zamudio, 22, of Vista, Calif.

Police Lt. Robert Hill said officers suspect that speed was a contributing factor in the crash. The car was on Honoapiilani Highway headed south toward Lahaina when it failed to make a right turn and struck a guardrail.

Police investigator Duke Pua said the car then rotated back into its lane and moved into the lane with opposing traffic.

Pua said a motorcycle headed in the opposite direction, then struck the car.

The motorcyclist, a Maui man, suffered a broken rib but did not appear to have life-threatening injuries, police said.

The two dead men were Maui County's 18th and 19th fatalities of the year, compared with 17 for the same period last year.

Hill said police were investigating the crash, including whether alcohol might have been a contributing factor.

Maui crash kills boy visiting from Texas

By Laurie Au **Monday, June 4, 2007**

An 8-year-old boy from San Antonio died yesterday morning on Maui in a car accident that *shut down Honoapiilani Highway near Ukumehame Wayside Park for several hours.*

Will Smith was taken to Maui Memorial Medical Center in critical condition and was pronounced dead at 1:43 p.m.

At about 9:20 a.m. he was with his mother, Susan Moulton, who was driving Maalaea-bound on Honoapiilani Highway. A 2003 Mazda sedan going Lahaina-bound had overtaken a vehicle, lost control, veered into the shoulder lane and then crossed the center, slamming head-on into Moulton's car. Smith was sitting in the front passenger seat.

After crashing into Moulton's car, the Mazda sedan crashed into two other cars that were parked unattended.

The drivers were also taken to Maui Memorial Medical Center, and were treated and released. They were all wearing their seat belts.

Police and emergency personnel closed down all but one lane of the highway until 3 p.m., said Mahina Martin, Maui County spokeswoman. Police are investigating whether speed, drugs or alcohol were factors.

Police said this was the 10th traffic fatality this year, compared with six at this time in 2006.

Head-on crash injures 3 on Maui **Thursday, May 17, 2007**

A two-car crash on Maui hospitalized three people yesterday and backed up traffic for several hours.

At about 6:11 a.m., a Lahaina-bound 1993 Ford pickup, driven by a 38-year-old man, crossed the center line and collided with a 2007 Ford Mustang convertible. *The crash occurred on Honoapiilani Highway, on the Lahaina side of the tunnel.*

The Mustang was driven by a 47-year-old California man, with a 46-year-old woman as his passenger. The pickup driver suffered facial and leg fractures. The condition of the others was not available yesterday afternoon.

The traffic backlog lasted until after 10 a.m. yesterday. All three victims had their seat belts on. Police said if they had not, the crash would have been fatal.

Head-on collision kills 29-year-old **Thursday, March 29, 2007**

One man died and another was listed in critical condition over the weekend after their vehicles were involved in a head-on collision on *Honoapiilani Highway near Kaniau Street* on Maui.

At about 11:10 p.m. Saturday, a 2007 Jeep operated by John Hajewski was heading north on the highway. Police said the Jeep traveled to the left and crossed the center line into the oncoming lane.

He sideswiped a 2001 Subaru operated by Kelsie Hayase. Police said the Jeep then slammed head-on with a 2005 Nissan Altima operated by Reginald Gonsalves.

Gonsalves, 29, of Lahaina, was pronounced dead at the scene. Police said he was wearing a seat belt at the time of the crash.

Hajewski, 38, of Las Vegas, was taken to Maui Memorial Medical Center in critical condition. Police said he was not wearing a seat belt. Police said Hayase, 19, of Lahaina, did not suffer injuries. She was wearing a seat belt when she was sideswiped by the Jeep. Alcohol is suspected to be a factor in the crash, but the accident is still under investigation, police said. This was the fourth traffic-related fatality to occur on Maui compared with four at the same time last year.

Wailuku pedestrian killed in highway hit-and-run Wednesday, December 27, 2006

WAILUKU » Maui police are investigating a hit-and-run incident that killed a 37-year-old Wailuku man early yesterday morning. Police Lt. Jeffrey Tanoue said the man dressed in dark clothing was walking in an unlit area in the middle of the *Honoapiilani Highway on the outskirts of Wailuku* at about 4:34 a.m. yesterday when he was struck by the driver side mirror of a vehicle traveling in the Maalaea-bound lane. Tanoue said the driver returned to the scene of the accident, but by that time the victim had been struck by another vehicle. Police said the man suffered severe head injuries and died as a result of the second collision. Police investigators are looking for the vehicle that ran over the man, Tanoue said. The incident on Honoapiilani Highway, about *196 feet north of Keanu Street*, caused traffic to be redirected for several hours.

Lahaina Teen Critically Injured In Moped Crash

POSTED: 9:44 am HST February 9, 2005

HONOLULU -- A 17-year-old Lahaina boy was critically injured when his moped collided with a pickup truck.

It happened Tuesday night just after 6 p.m. on *Honoapi'ilani Highway near Leiali'i Parkway in Lahaina*, Maui.

The teen was riding his moped on the highway and ran a red light, hitting the passenger side of a truck, police said.

The truck had the green light while making a left turn, investigators said.

The victim is identified as Christopher Boskoff.

Man Killed In Maui Crash

POSTED: 4:31 pm HST January 26, 2005

UPDATED: 5:01 pm HST January 26, 2005

HONOLULU -- A 28-year-old man was killed after a one-car crash in Waikapu, according to Maui police.

The crash happened on *Honoapi'ilani Highway near Pilikana Road* just before 2:30 a.m. Wednesday.

The driver lost control of the car, veered off the highway, and struck a utility pole, police said.

The victim has been identified as Jeremiah McDougall of Wailuku. McDougall was a passenger in the rear seat and was not wearing a seatbelt, according to authorities.

The cause of the crash is under investigation.

Driver Killed In Maui Crash

POSTED: 1:08 pm HST November 25, 2003

HONOLULU -- A driver lost control of his car and crashed into a guardrail on Maui Tuesday.

The collision happened on Honoapiilani Highway just after 1 a.m.

The driver, a 20-year-old Wailuku man, was taken to Maui Memorial Medical Center where he later died.

Police said speed may have been a factor. The driver was not wearing a seat belt.

The driver of the Maxima died at the scene. He's been identified as John Lana Ruggiero Jr., 33, of Haiku.

Bicycle Rider Killed By Pineapple Truck 2002

A bicyclist was killed Friday afternoon after police said he was struck by a Maui Land and Pineapple truck in Lahaina.

The collision happened on Honoapiilani Highway at about 1:40 p.m. According to police, the victim, identified as Quentin Bowman, was riding on the makai shoulder towards oncoming traffic when he drifted into a Wailuku-bound lane and was hit.

Bowman was pronounced dead at the scene. This was Maui's second traffic fatality of the year.

Woman Dies In Maui Crash

POSTED: 9:20 p.m. HST [January 24, 2001](#)

A woman died Thursday afternoon in a two-car collision near Lahaina.

It was Maui's first traffic fatality of the year.

According to police, a Mazda Miata being driven by the woman swerved across the center line of Honoapiilani Highway at about 12:25 p.m. and was struck by a Ford Taurus coming in the other direction.

The woman in the Mazda died at the scene. Two visitors who were in the Ford, a man and wife from Colorado, were taken by ambulance to Maui Memorial Hospital in fair condition.

Investigators have not determined if speed or alcohol were factors in the crash.

Man Dies In Maui Crash

POSTED: 11:33 a.m. HST [December 13, 2000](#)

A crash involving three cars and a motorcycle on Maui killed a man late Tuesday night.

It happened at about 11:40 p.m. A car was traveling west on Honoapiilani Highway when the Maxima crossed the center line and sideswiped a pick-up truck. The Maxima was then hit by a third vehicle. A motorcycle slid into the back of the last vehicle, according to police.

Maui Crash Kills One; Injures Three

POSTED: 9:59 a.m. HST [November 22, 2000](#)

Speed and alcohol were factors in a two-car crash that killed one man and injured three other people, according to Maui police.

It happened on Honoapiilani Highway in Lahaina just before 3 p.m. Tuesday.

Police said that a car was hit by another car while it tried to make a left turn onto Hoohui Street.

Paramedics treated and transported a 36-year-old man to Maui Memorial Hospital. The victim was taken in stable condition, but went into cardiac arrest in the ambulance. He died at the hospital.

A 76-year-old man, a 72-year-old woman and an 18-year-old man suffered minor injuries.

Maui bicyclist struck from behind by truck **Thursday, August 24, 2000**

WAILUKU -- A Lahaina man was in critical condition at Maui Memorial Hospital, after the bicycle he was riding was struck from the rear by a pickup truck in West Maui.

The 31-year-old man was riding his bicycle on the inside lane of the two lanes traveling north on Honoapiilani Highway when the crash occurred at 7:39 p.m. yesterday *near Kenui Street in Lahaina*, according to police officer Gregg Katayama.

Katayama said police officers are investigating whether speed, alcohol or drugs contributed to the crash.

Lahaina man dies when car is struck by a truck **Friday, October 15, 1999**

WAILUKU -- A 29-year-old Lahaina man became the 12th traffic fatality of the year on Maui after the car he was driving was struck broadside by a dump truck.

The car was south of Launiupoko State Park when it tried to make a U-turn toward Lahaina on Honoapiilani Highway and was struck by the truck at about 2:31 p.m. yesterday, Police Lt. Charles Hirata said.

Hirata said speed was not a factor in the accident.

There were 11 traffic fatalities on Maui at this time last year.

JOINT STATE/COUNTY MAUI INTERIM TRANSPORTATION PLAN

Joint State/County Maui Interim Transportation Plan. State of Hawaii. Department of Transportation. Statewide Transportation Planning Office. 2002.

The Honoapiilani Highway/Lahainaluna Road intersection experiences heavy congestion during the morning and afternoon peak periods due to traffic demand generated by the elementary, middle, and high schools located along Lahainaluna Road. Alternative routes could divert traffic away from this congested intersection.

The County of Maui has initiated a planning study for the extension of Dickenson Street towards the proposed Lahaina Bypass Road. The extension of Dickenson Street towards Lahaina Bypass Road with a connection to Lahainaluna Road would provide an alternate route for school generated traffic. The County of Maui is currently negotiating a contract with an engineering consultant for this planning work.

The West Maui Highway Action Committee independently developed a recommendation for an alternative route to divert traffic from the Honoapiilani Highway/Lahainaluna Road intersection. This alternative route involves the use of the cane haul road system previously used for sugar cane production, through the Pioneer Mill site. This alternative route also utilizes an existing bridge over Kahoma Stream and connects to Keawe Street in the Lahaina Business Park. Keawe Street in the Lahaina Business Park connects to Honoapiilani Highway across the Lahaina Cannery Shopping Mall.

Another strategy evaluated was the phased construction of the Lahaina Bypass Road with connections to Honoapiilani Highway. An initial phase of the Lahaina Bypass Road between the proposed connector in the vicinity of the Lahaina Business Park (possibly extending from Kapunakea Street or Keawe Street) and Lahainaluna Road could be implemented to provide an alternate northerly route to areas along Lahainaluna Road. Federal Highway funds could be used to construct the Lahaina Bypass Road.

The Lahaina Bypass Road alternative scenarios include the construction of a connector road between Honoapiilani Highway and the proposed Lahaina Bypass Road. The County of Maui would have to pursue the construction of this local connector road. There are two different alignments along which this local connector road could be constructed. One alignment is to construct this connector along the existing Kapunakea Street. This alternative would, however, involve the acquisition of several residential homes to accommodate the widened roadway. The second alignment would use Keawe Street in the Lahaina Business Park. Either alignment may involve ceded lands issues that must be resolved before pursuing this alternative. This effort would also require close coordination between HDOT and the County of Maui.

Honoapiilani Highway is essentially a two-lane roadway that currently experiences congested conditions during peak periods. The Lahaina Bypass Road is intended to relieve congestion on Honoapiilani Highway by diverting traffic onto this alternate route around Lahaina. The construction of the Lahaina Bypass Road between Honokowai and Puamana, however, will take several years to complete. The widening of Honoapiilani Highway to a four-lane facility from Dickenson Street to south of Front Street was, therefore, evaluated as an interim strategy to relieve congestion. (Honoapiilani Highway is already four-lanes north of Lahainaluna Road)

Task Force Report Strategies to Link Central and West Maui. 2000. State of Hawaii Department of Transportation. Statewide Transportation Planning Office.

The Central and West portions of Maui are linked primarily by a solitary, two-lane principal arterial, Honoapiilani Highway (Route 30). For this reason, incidences along this route, including road closures, has resulted in serious delays and disruptions to the traffic flow. The problem has intensified with the increasing frequency and duration of the road closures.

Honoapiilani Highway is West Maui is a heavily traveled route, with traffic volumes projected to increase as the area develops. Traffic accidents, high ocean surges crossing the roadway, fire and smoke hazards along the route, etc., have resulted in disruptions to the traffic flow and/or complete road closures for as long as two days. Aside from the traffic congestion, residents and tourists have been isolated from the other parts of the island, triggering a variety of socioeconomic impacts.

Identification of Alternatives

Long Term

- 1) Addition of two lanes to the Honoapiilani Highway Corridor from Maalaea Road to Puamana
- 2) Implementation of an expanded bus transit and/or ferry system

Short Term

- 1) Improvements to the cane haul roads for emergency use
 - a. Spot improvements to fill potholes, improve accesses, provide minimal signage
 - b. Coning to improve two directional operations
- 2) Improvements to the northern route via Kahakuloa for emergency use. Spot improvements along the route
- 3) Provision of programmable message signs along major routes accessing West Maui
- 4) Service patrol to expedite restoring the roadways to normal operations and to assist in emergency operations

All alternatives would require funding. To qualify for Federal participation, improvements must meet current standards, and be developed in accordance with applicable regulations and compliance requirements. Spot improvements along the emergency routes would not bring the roads up to standard, and must therefore be funded locally.

Major improvements such as the addition of lanes to the Honoapiilani Highway corridor would require a feasibility study, whereby environmental impacts and other issues would be identified. This would be the first step in the project development process.

APPENDIX E

**STRATEGIES TO LINK CENTRAL
AND WEST MAUI**

TASK FORCE REPORT

STRATEGIES TO LINK CENTRAL AND WEST MAUI



Prepared in collaboration with:
**CENTRAL AND WEST MAUI CONNECTOR TASK FORCE,
A CITIZENS ADVISORY GROUP**

In cooperation with:
**COUNTY OF MAUI DEPARTMENT OF PUBLIC WORKS & WASTE MANAGEMENT
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAYS ADMINISTRATION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION**

Prepared by:
**STATE OF HAWAII DEPARTMENT OF TRANSPORTATION
STATEWIDE TRANSPORTATION PLANNING OFFICE**

FEBRUARY 2000

Excerpts From the:

Task Force Report Strategies to Link Central and West Maui

2000. State of Hawaii Department of Transportation Statewide Transportation Planning Office.

In an effort to seek some sort of solution or mitigation of the problem, State Senator Jan Yagi-Buen has convened a task force of public and private sector representatives to investigate the situation, and to recommend any possible remedies. Staff from the Federal Highway Administration, Maui County Department of Public Works and Waste Water Management, and the State Department of Transportation were tasked with providing technical support and guidance.

The primary mission of the Task Force was to look at permanent solutions (i.e., alternate routes) to this recurring problem, but in the course of its meetings, the groups also identified other problems, which could be addressed with more immediate, temporary measures. This included the lack of public notification of road closures; poor conditions of alternate emergency routes, i.e., cane haul roads, and northern route via Kahakuloa; and possible inefficient use of the emergency routes, e.g., inadequate accesses.

Existing Infrastructure

While West Maui does include both airport and harbor facilities, neither would be capable of providing the equivalent capacity should a road closure occur.

Kapalua Airport in West Maui operates only during daylight hours. Its capability of transferring passengers to Kahului Airport or airports on the other islands is limited. In 1999, the airport accommodated roughly 16 daily flights or 8 roundtrips provided by Aloha Air using DeHavilland Dash-8's, for a maximum daily total of 592 passengers. Helicopters are permitted use of the facility only during emergencies such as to fight fires.

Lahaina Small Boat Harbor with one pier, 21 berths, and 79 moorings, is the main boating facility in West Maui. There are additional small anchorages, mooring areas, and boat ramps at Kaanapali, Lahaina Roadstead, and Mala. Boating provides an alternative transportation link between Central and West Maui. For example, when fires caused road closures on Honoapiilani Highway recently, approximately 100 passengers were shuttled by boats between Lahaina and Maalaea Small Boat Harbors.

There are also some private shuttle buses, which run between the resorts on West Maui and the shopping malls and Kahului Airport.

Finally, the Kaanapali and Pacific Railroad is a private operation running between Lahaina and Kaanapali. This facility mainly serves as a tourist attraction, although it also provides a link between the resort area in Kaanapali and the historic town of Lahaina.

Emergency Plans

Maui County Police Department – Highway Closures (Special Order 99-12)

Special Order 99-12 establishes guidelines for closing portions of major highways on Maui due to a critical incident. A critical incident is defined as any natural or manmade emergency, which has or may cause major property damage, serious bodily injury or death. The chief of Police or ranking field supervisor on duty will determine whether a road closure is required.

Honoapiilani Highway is specifically addressed in the special order. If any portion of Honoapiilani Highway, between Kuihelani Highway and Honolua, is close, then Kahekili Highway traffic flow is only allowed one-way from Lahaina to Kahului. Private roads may be used in accordance with a separate general order, which deals with the emergency use of private property. This would apply to cane haul roads if and where they permit bypassing any portion of the main highway that has been closed due to an emergency.

Additional Problems Encountered

The impact of road closures are magnified by communication barriers or the lack of systematic public notification, delays in clearing the accident scenes, and the poor condition of the alternate emergency routes. An effort is underway to amend the emergency plans, with special procedures to address the Pali Road Closures. While a separate committee has been convened to improve the emergency procedures, the related comments which surfaced at the West Maui Connector Task Force meetings are presented.

- a) There are currently no road signs along the roads leading to the Pali area to notify motorists whenever there is a road closure. Unless they happen to find out through a radio broadcast or by word of mouth, drivers have no means of foretelling a closure until they have traveled into the congested area.
- b) Traffic accidents require the police to gather evidence through procedures acceptable in court. This requires sophisticated data taking and records completion, which in the past have taken up to about 5 or 6 hours to complete. This procedure has since been expedited to about 3.5 hours, but still results in a delay in clearing the accident scene.
- c) The emergency routes, formerly old cane haul roads, are in poor condition. They have potholes and other surface discrepancies, and lack signage, lighting, and striping or other lane division.

Identification of Alternatives

The Task Force identified various improvements to mitigate the road closure problem, depending on the location of the incident. If the problem occurred in the Pali area, the permanent solution would be the construction of an alternate route. If the closure was along other portions of the route, short-term improvements to the contingency plans were recommended.

Long Term

- 1) Add two lanes to the Honoapiilani Highway Corridor from Maalaea Road to Puamana

The need for an additional two lanes of capacity along this segment of Honoapiilani Highway was identified in the Maui Long Range Land Transportation Plan to mitigate existing traffic problems, and to accommodate the projected 20-year travel demand. With the frequency of the road closures, it would be desirable to add the lanes along a separate alignment from the existing road, to provide an alternate route. Also, areas of the existing highway near the coastline have experienced erosion and impacts during high ocean surges

- 2) Transit

Various transit options have been evaluated over the years, the most recent reassessment during the development of the Long Range Plan in 1997. The lack of funding available for an extensive transit system and the need for a large operating and maintenance subsidy on a continuing basis have discouraged the county from pursuing expanded public transit operations. A proposed ferry service between Central and West Maui has also been discussed. A business plan outlining the financial viability of such a service would be required, before the necessary harbor and landside improvements for parking and passenger facilities can be considered.

Short Term

- 1) Emergency use of cane haul roads

A 10-mile segment of Honoapiilani Highway, in the vicinity between Olowalu and Puamana, is interfaced by cane haul roads. In times of emergency, these roads have been used as alternate routes. There have been occasions when the supervising officer on duty had determined that the condition of the cane haul road was such that it should not be used even as a temporary route. To prevent this from happening, the Task Force discussed general spot maintenance of the roads. Also, to improve the traffic flow when the roads are used, it was suggested that coning be considered.

2) Northern route via Kahakuloa

A narrow, single lane, county dirt road links the end of Honoapiilani Highway with Kahekili Highway. This road primarily services the local residents in the area. When road closures occur in the Pali section, this northern route becomes the emergency alternate to get out of West Maui. Traffic is allowed in one direction, out of Lahaina, with personnel stationed at key locations to direct the motorists. The condition of this segment of the road was described as being below standards. Sport improvements to the road would be highly desirable.

3) Improving communications

The lack of advance warning of road closures was cited as further exasperating the situation. If motorists could be alerted to road closures before traversing the route to West Maui, they could be deterred before getting caught in the congestion. Besides establishing communication networking with the broadcast media, which would be addressed in the effort to amend the emergency plans, it was suggested that variable message signs along the routes leading to West Maui would mitigate the problem. These would be permanently installed, programmable signs controlled from the highways district office. Approximately six roadside signs would be required.

4) Service patrols

Service patrols could be implemented, which would assist in incident management and expedite restoring the roadway to normal operations.

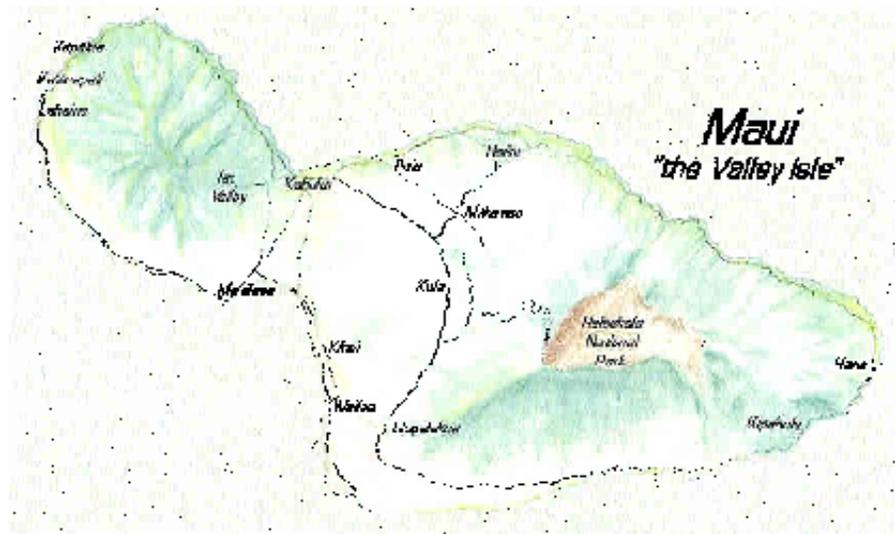
APPENDIX F

JOINT STATE/COUNTY

**MAUI INTERIM
TRANSPORTATION PLAN**

FINAL

**JOINT STATE/COUNTY
MAUI INTERIM TRANSPORTATION PLAN**



Prepared in collaboration with:
MAUI ITP CITIZENS ADVISORY COMMITTEE

In cooperation with:
**COUNTY OF MAUI, DEPARTMENT OF PUBLIC WORKS & WASTE MANAGEMENT
STATE OF HAWAII, DEPARTMENT OF TRANSPORTATION
U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAYS
ADMINISTRATION**

Prepared by:
**STATE OF HAWAII, DEPARTMENT OF TRANSPORTATION
STATEWIDE TRANSPORTATION PLANNING OFFICE**

JANUARY 2002

JOINT STATE/COUNTY MAUI INTERIM TRANSPORTATION PLAN JANUARY 2002

Excerpts from the Executive Summary

INTRODUCTION

The Island of Maui has experienced significant growth in population over the past several years. Census 2000 information reveals that the total population on the Island of Maui has increased 28.8 percent over the period 1990-2000, with most of the growth occurring in Central and South Maui.

This growth in population has resulted in a commensurate increase in traffic demands on the island's transportation system. In those areas where the transportation system has insufficient reserve capacity to accommodate the increase in demand, traffic congestion has occurred. Although there are several major roadway improvement projects currently underway that will provide relief to many of these congested areas, there is a growing sense of public frustration with existing traffic conditions.

PURPOSE

This Maui Interim Transportation Plan (Maui ITP) is a joint effort between the County of Maui and the State of Hawaii, Department of Transportation (HDOT) to develop interim solutions to relieve traffic congestion on the Island of Maui until long-term solutions can be implemented. This effort also attempts to consolidate multiple efforts to develop alternative solutions to mitigate traffic congestions, including the efforts of the West Maui Traffic Action Committee and the Mayor's Transportation Action Committee.

STUDY PROCESS

The general objective of this effort was to assess what congestion mitigation measures would be in place in the near future; and for areas where relief was not imminent, to investigate possible interim strategies.

The study began with a review of existing transportation plans and reports to identify measures previously recommended, and an investigation on the status of recommended improvements underway. Interim strategies were explored and alternatives identified and evaluated. An ad hoc Citizens Advisory Committee (CAC) was convened to provide assistance in verifying focal problem areas, and recommending and screening viable solutions/projects.

FOCAL AREAS

The review of the deficiencies identified in the transportation plans and documents, status of ongoing State and County roadway improvement projects, and discussion and comments from the CAC resulted in a screening of locations where interim improvements would provide the greatest benefit by providing temporary relief of traffic congestion until planned long term solutions are implemented. For the purposes of this report, the Island of Maui was divided into four regions—Central Maui, East Maui/Upcountry, South Maui, and West Maui. Based on the screening, the following problem areas within each of the regions were identified as having opportunities for the implementation of interim measures to relieve congestion.

West Maui

- Congestion along Honoapiilani Highway, between Lahainaluna Road and Puamana
- Congestion at the Honoapiilani Highway/Lahainaluna Road intersection.

INTERIM ALTERNATIVES, ALTERNATIVE INTERIM STRATEGIES

Alternative strategies to provide interim relief of traffic congestion in the various regions on the Island of Maui were developed and evaluated. These alternative strategies included accelerating major roadway improvement project construction through phased implementation, Transportation System Management (TSM) measures, Transportation Demand Management (TDM) techniques, roadway improvements, and alternative routes.

Alternative Routes

Alternative routes divert traffic away from congested areas by dispersing traffic to alternate corridors. The construction of portions of long-term roadway improvements was considered in the development of alternative routes. Phased construction of critical segments of long-term roadway improvements along with the construction of associated connector roads can provide an alternative route to and from destinations and around existing congestion.

EVALUATION OF ALTERNATIVE STRATEGIES

Alternative strategies were evaluated at those locations where there are opportunities to provide interim relief to traffic congestion.

West Maui

The Honoapiilani Highway/Lahainaluna Road intersection experiences heavy congestion during the morning and afternoon peak periods due to traffic demand generated by the elementary, middle, and high schools located along Lahainaluna Road. Alternative routes could divert traffic away from this congested intersection.

A. Dickenson Street

The County of Maui has initiated a planning study for the extension of Dickenson Street towards the proposed Lahaina Bypass Road. They are currently negotiating a contract with an engineering consultant for this work.

B. Cane Haul Road Alternative Route

The West Maui Highway Action Committee independently developed a recommendation for an alternative route to divert traffic from the Honoapiilani Highway/Lahainaluna Road intersection. This alternative route involves the use of the cane haul road system previously used for sugar cane production, through the Pioneer Mill site. This alternative route also utilizes an existing bridge over Kahoma Stream and connects to Keawe Street in the Lahaina Business Park. Keawe Street in the Lahaina Business Park connects to Honoapiilani Highway across the Lahaina Cannery Shopping Mall. The proposed alignment for the cane haul road alternate route is shown in Figure 8.

C. Phased Construction of the Lahaina Bypass Road

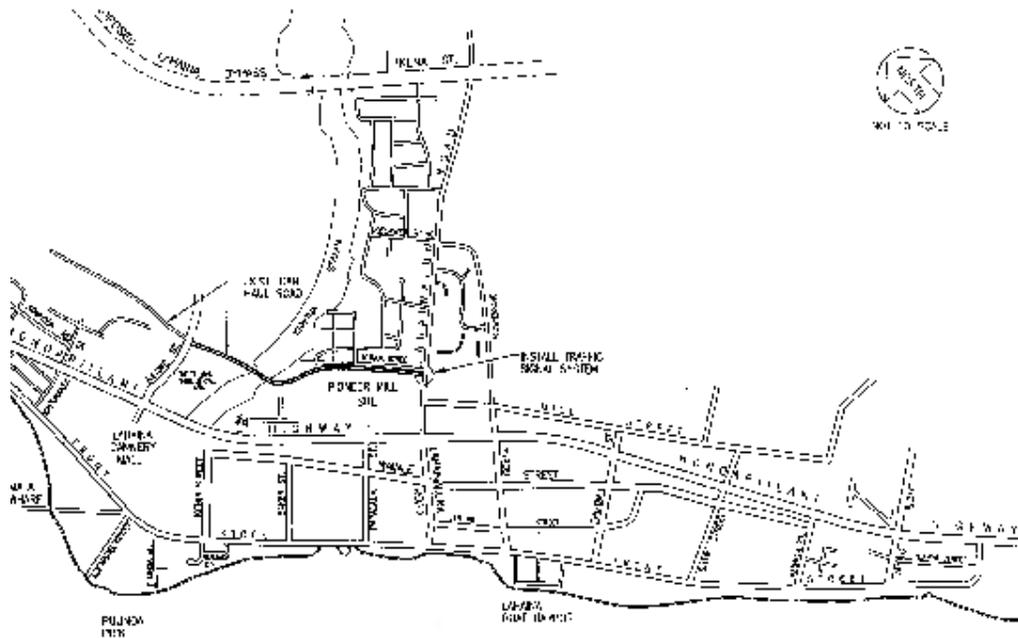
Another strategy evaluated was the phased construction of the Lahaina Bypass Road with connections to Honoapiilani Highway. An initial phase of the Lahaina Bypass Road between the proposed connector in the vicinity of the Lahaina Business Park (possibly extending from Kapunakea Street or Keawe Street) and Lahainaluna Road could be implemented to provide an alternate northerly route to areas along Lahainaluna Road. This alternate route could significantly reduce the volume of traffic on Lahainaluna Road and improve operations at the Honoapiilani Highway/Lahainaluna Road intersections. Major constraints with this alternative are the crossing of Kahoma Stream and possible ceded land issues. The proposed Lahaina Bypass Road alignment requires an approximate 400-foot crossing of Kahoma Stream.

RECOMMENDATIONS

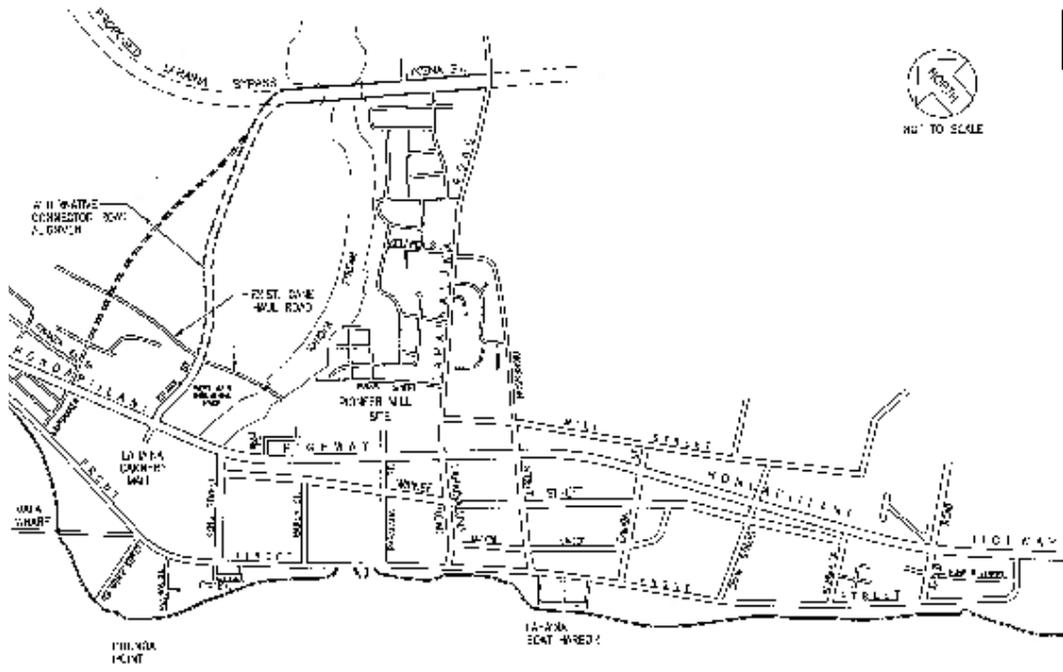
West Maui

1. Investigate the use of the Cane Haul Road as an interim roadway. Pursue an interim roadway alignment between Lahainaluna Road and the Lahaina Business Park by using Keawe Street, the existing cane haul road through the Pioneer Mill site, and connecting to Lahainaluna Road at Kahua Street,
2. HDOT should construct the first phase of the Lahaina Bypass, between Kapunakea Street and Lahainaluna Road; the County of Maui should construct the connector road from Honoapiilani Highway to Lahaina Bypass.
3. HDOT should initiate the project to widen Honoapiilani Highway to a four lane facility between Dickenson Street and approximately 1,000 feet south of Front Street. Construction of these improvements should be done in two phases to utilize the funds already available. The first phase will include widening

Honoapiilani Highway to four lanes between Dickenson Street to approximately 1,000 feet south of Shaw Street; the second phase of construction will be from 1,000 feet south of Shaw Street to 1,000 feet south of Front Street.



WAIKONA COUNTY/STATE JOINT TRANSPORTATION PLAN OCTOBER 2001	FIGURE 8
CANE HAUL ROAD ALTERNATIVE ROUTE	



MAUI JOINT STATE/COUNTY INTERM TRANSFORMATION PLAN OCTOBER 2001	FIGURE 9
LAHAINA BYPASS ROAD, PHASE I	