

PAIA RELIEF ROUTE PROJECT
State of Hawaii, Department of Transportation
Project No. STP-036-1(11)

Paia Relief Route Advisory Group Meeting No. 8 Summary
Monday, March 15, 2010 – 5:30 p.m.
Kaunoa Senior Center
Paia, Hawaii

PURPOSE:

The purpose of this meeting was to 1) Present information on possible intersection treatments; 2) Discuss conceptual ideas for realignment and connections to the relief route eastern terminus; and 3) Outline the status of the Environmental Process for the project.

SUMMARY OF MEETING:

I. Welcome – Jiro Sumada, Hawaii Department of Transportation, Deputy Director

State of Hawaii Department of Transportation (HDOT) – Ken Tatsuguchi and Wayne Kawahara from the Planning Branch; Robert Miyasaki, Project Coordination and Technical Services Office; and Freddie Cajigal and Bob Spilker from the Maui District Office.

SSFMI International, Inc. - Cheryl Soon, Robin Barnes, Andrew McKenzie, and Heather Forester; **Pacific Catalyst** – Lowell Chun; and **Where Talk Works** – Linda Colburn.

The PRAG members present at this meeting are identified with a “❖” symbol.

Name	Group
Susan Alivado	Paia Elementary School, Principal
❖ Milton Arakawa	County of Maui, Department of Public Works
Sandy Baz	Maui Economic Opportunity
Gregg Blue	Haiku Resident
Wayne Boteilho	County of Maui, Department of Transportation
❖ Patricia Cadiz	Spreckelsville Resident
Karen Chun	Kuau Resident
Grant Chun	A & B Properties, Inc.
❖ Walter Enomoto	Maui Bicycle Alliance
❖ Greg Godwin	Paia Resident
❖ Garret Hew	Hawaii Commercial & Sugar Company
Lance Holter	Sierra Club – Maui Group
Neal Kunin	Haiku Resident
Bill Kirton	Hana Bay Picnic Company
❖ Mark Lopes	Representing Hawaii Transportation Association
Philip Lowenthal	Disabled Biking Enthusiast/Haiku Resident
❖ Marcy Martin	Surfer/Kuau
Mike Molina	County of Maui, County Council

Name	Group
❖ Kai Nishiki	Haiku Resident
William Palmer	Full Circle Publishing/Pukalani Resident
Rob Parsons	Writer for Sierra Club & Maui Tomorrow/Haiku Resident
❖ Jocelyn Perreira	Tri-Isle Main Street Resource Center & Haiku Resident
❖ Doug Sameshima	Paia Main Street Association
Roy Silva	County of Maui, Office of the Mayor
❖ Elisabeth Smith	Spreckelsville V Homeowners Association
❖ Lisa Starr	Paia Main Street Association
❖ Mercer “Chubby” Vicens	Native Hawaiian/Wailuku Loan Advisory Committee
Warren Watanabe	Maui County Farm Bureau
Michael Westfall	Kuau Resident

Friends of the PRAG present included: Avis Takakara, Martin Hauen-Limkilde, Lesley Bruce, Mary Cochary, Lucienne de Naie, and Martha Martin.

II. Presentation on Intersection Treatments – Robert Miyasaki, Program Manager

Mr. Miyasaki presented on intersection treatments: traditional, grade separated, and modern roundabouts (Attachment 1). The objective of an intersection is to facilitate the convenience, ease, and comfort of people traversing the intersection while enhancing the efficient movement of motor vehicles, buses, trucks, bicycles, and pedestrians. Traditional intersections can be stop sign or stop light controlled. Grade separated intersections allow greater mobility but are expensive, take longer to build, and have visual impacts. Modern roundabouts are an alternative intersection treatment which has been shown to reduce the number of severe accidents.

A question and answer period ensued.

1. Are there examples of roundabouts on Maui?
 - A PRAG Member stated that there is an example in Kula by Longs. It would need to be confirmed if this is a modern roundabout vs. a traffic circle.
2. Why did we talk about roundabouts?
 - This presentation was meant to be informational only. Federal Highways states that if a project looks at installing a signal at an intersection, a modern roundabout must also be looked at in order to receive federal funding.
3. A member of the PRAG commented that a roundabout would impact the character of Paia.
4. Does the AASHTO Green Book address parking design?
 - Not particularly. Local agencies would address parking design.
5. A member of the public asked if roundabouts are used at intersections with angled approaches.
 - Roundabouts can be used for intersections with different variations of approaches. They are designed to be angled off center, so drivers must lower their speeds before entering the roundabout.

6. Is there an estimate of cost and time to construct the different intersection treatments?
 - Not at this time. Very specific project level analysis is needed to assess. This will be look at in ore detail in the Environmental Impact Statement.

III. Conceptual Ideas for Realignment and Connection to the Relief Route Eastern Terminus – Lowell Chun, SSFM International

The eastern terminus has three potential touchdown points: 1) west of Hookipa, 2) east of Hookipa, and 3) on the approach to Maliko Gulch (Attachment 2). The numbering of the alternatives does not have a predetermined preference; furthermore, all three alternatives will be evaluated on the same level.

A discussion ensued for each alternative:

1. Connection just prior to Hookipa Beach Park (west of Hookipa):
 - Avoids curve at Kuau
 - Shortest relief route
 - Suggested that the terminus point is brought closer to Holomua Road because less land would need to be purchased and a park could be created
 - A lot of the existing Hana Highway stays
 - Uses less agricultural land
2. Connection just past Hookipa (east of Hookipa):
 - Could create a spur to Hookipa
 - Intended to separate through and leisure traffic
 - Has two potential ways to get to Hana
 - Spur at Hookipa may need more storage lane capacity
 - A lot of the existing Hana Highway stays
3. Connection just before Maliko Gulch (on the approach to Maliko Gulch):
 - Relief route could vary mauka or makai from what is shown
 - Want to protect the old highway remnant
 - Avoid additional land purchase
 - Don't want to see development between road remnant and ocean
 - There is more potential for development which is not desirable
 - Need to look into property ownership rights
 - Impacts three of A&B fields
 - This alternative is a waste of time

Over all comments included the following:

- Greg Godwin stated that the alternatives are not taking the Community Plan into account. Surfers would not like these alternatives.
 - Mr. Godwin proposed a fourth alternative more east than the three proposed alternatives; drop the spur idea and reconnect the road to the west.
- Marcy Martin liked the idea of separating commuter traffic from the park. More beach parking would be available with these alternatives.
 - Lisa Starr concurred and stated that the community needs a local park.
 - Patricia Cadiz concurred.

- Walter Enomoto stated roundabouts should be studied further.
- Lisa Starr stated that Old Maui High School and the village should be kept in mind when looking at alterations to Holomua Road.
- Kai Nishiki suggested combining alternatives 1 and 2.
- Jocelyn Perreira suggested pushing the roadway makai and extending the terminus a bit past Hookipa.

A discussion on the ownership of the existing Hana Highway ensued.

1. If a relief route is constructed, would the current Hana Highway become County of Maui property?
 - It was noted that a discussion with the County of Maui would be held at some point to discuss this issue. There would need to be a negotiation made between the State and County of Maui. It is important to involve all parties in the decision.
2. If HDOT turns the road over to the County of Maui, does the County have to fix the existing road?
 - It is common for HDOT to turn the road over to the County in good condition. The improvements would be included in the negotiation.
3. Is there an option for the existing Hana Highway to remain a State road?
 - In the case of two parallel roads, HDOT prefers to maintain only the arterial road. This would be up for negotiation.

The following general comments were received:

1. A member of the public stated that she was concerned about shoreline erosion. There was also a concern of what would happen to A&B land makai of the proposed alternative route.
2. A member of the public wanted to be sure native plants were preserved. It was noted that certain types of native plants assist in erosion control. In addition, Hookipa Park needs to be expanded mauka to address the current erosion situation. Run-off should be minimized.
 - Concerned that proposed alternatives might make it confusing for tourists to find Mama's Fish House.
 - Need to look at nesting shorebirds in the area.

IV. Status of the Environmental Process for the Project – Cheryl Soon, SSFM International

The Paia Relief Route Project follows both the National Environmental Policy Act (NEPA) and Hawaii Revised Statutes (HRS) 343 processes. The Notice of Intent was published in the Federal Register. This gives federal agencies notice of the project. The Environmental Impact Assessment Preparation Notice (EISPN) is being processed and will be published in the Office of Environmental Quality Control (OEQC) Environmental Notice. This alerts State and County agencies of the project.

A Scoping Meeting will be held to solicit public comment on the Paia Relief Route Project. A court reporter will be present to record comments from the meeting. PRAG Members are encouraged to attend and submit his or her comments. One more PRAG Meeting will be held prior to the Scoping Meeting.

It was stated that the alternatives developed for the Paia Relief Route are not solely up to HDOT and PRAG to decide. Furthermore, the USACOE and other federal agencies will be heavily involved in decision making.

A question and answer period ensued:

1. How will the environmental process come into balance with existing plans?
 - The Environmental Impact Statement will discuss current plans. If a plan is in the process of being drafted or approved, their status will be explained.

V. Next Meeting

The next PRAG Meeting #9 will be held on Monday, April 26, 2010 at 5:30 PM at the Kaunoa Senior Center.

Attachment 1

**Presentation by
Robert Miyasaki
on Intersection Treatments
on March 15, 2010**

Paia Relief Route

Intersection Treatments

Traditional & Roundabouts

March 15, 2010

Movement of People and Goods

Economic and Social Purposes

Access vs. Mobility

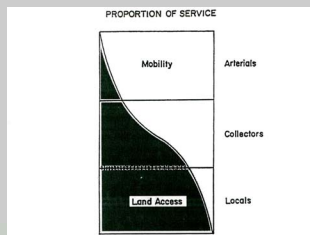


Exhibit 1-5. Relationship of Functionally Classified Systems in Serving Traffic Mobility and Land Access

Functional Classification of Roadways

- Hierarchy of facilities for efficient movement
 - Principal Arterials (substantial countywide travel)
 - Minor Arterials (region to region travel)
 - Collectors
 - Local Roads

What is an Intersection

- Where two or more roadways join or cross
 - Including approaches
- Important part of Highway facility
 - Impacts overall facility efficiency, safety, speed, cost of operation, and capacity

Objective of Intersections

- Facilitate the convenience, ease, and comfort of people traversing the intersection while enhancing the efficient movement of motor vehicles, buses, trucks, bicycles, and pedestrians
- Should be fitted closely to the natural transitional paths and operating characteristics of its users

Five Basic Elements

- Human Factors
- Traffic Considerations
- Physical Elements
- Economic Factors
- Functional Intersection Area

Human Factors

- Driving Habits
- Ability of drivers to make decisions
- Driver expectancy
- Decision and reaction time
- Conformance to natural paths of movements
- Pedestrian use and habits
- Bicycle traffic use and habits

Traffic Considerations

- Design and actual capacities
- Design-hour turning movements
- Movements (merge, diverge, weave, & crossing)
- Vehicle speeds
- Transit involvement
- Crash experience
- Bicycle movements
- Pedestrian movements
- Size and operating characteristics of vehicles

Large Trucks



PHOTOGRAPHY SOURCE: Lee Rodriguez

Emergency Vehicles



PHOTOGRAPHY SOURCE: Brian Walsh

Physical Elements

- Character and use of abutting properties
- Vertical alignments at the intersection
- Sight distance
- Horizontal Alignment – Angle of the intersection
- Conflict area
- Speed-change lanes
- Geometric design features
- Traffic control devices
- Lighting equipment
- Safety features
- Bicycle traffic
- Environmental factors
- Crosswalks

Economic Factors

- Cost of improvements
- Impacts of Access Management
- Energy consumption

Functional Intersection Area

- Physical Area
- Functional Area (approach)
 - Perception-Reaction Distance
 - Maneuver Distance
 - Queue-Storage Distance

Types of Intersections

- Grade Separated
 - Three-leg Intersections
 - Four-leg Intersections
 - Multi-leg Intersections
- At-Grade

Grade Separated Intersection



Characteristics

- Efficient
 - Very High Traffic Volumes
 - Reduce # of Conflicts
- Bridge & Ramps
- Expensive
- Needs lots of ROW

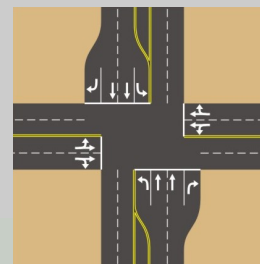
Grade Separated Intersection



Characteristics

- Visual Impacts
- Physical barrier
 - May restrict access to adjoining properties
- Construction Issue
 - Detouring
 - Longer to build

Traditional 4-Way Intersection



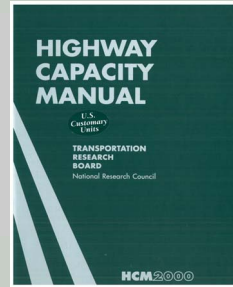
Characteristics

- Channelization
- Turning Lanes
- Acceleration Lanes
- Shelter Lanes
- Divisional Islands

Design Elements

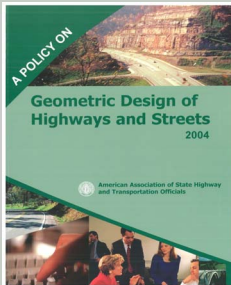
- Based on Functional Classification
- National Standards
 - Highway Capacity Manual
 - A Policy on Geometric Design of Highways and Streets
 - Manual on Uniform Traffic Control Devices

HCM 2000



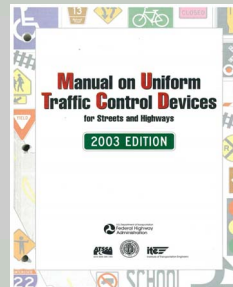
- Roadway Capacity
- Intersection Capacity
 - Delay

Green Book



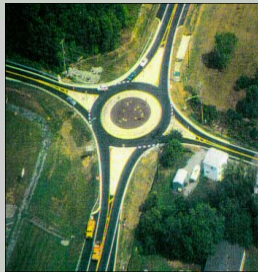
- Sight Distance
- Alignment
- Profile
- Truck Turning Radii
- Pedestrian Crossings
- Pavement Thickness
- Width of lanes and shoulders

MUTCD



- Signs
 - Regulatory (Stop, Yield, Speed Limit)
 - Warning
 - Guide
- Striping
- Markings
- Traffic Signals
 - Warrants

Modern Roundabout



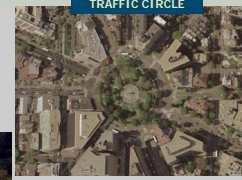
- Alternative intersection configuration
- Overall reduction in number of accidents
 - Severe accidents
- Require more right-of-way
 - Restrict access to adjoining properties
- Provide opportunities for landscaping
- Not to be used solely for traffic calming on arterial highways

Photo: Maryland SH&T

Other Types of Roundabouts



ROTARY



TRAFFIC CIRCLE



NEIGHBORHOOD TRAFFIC CIRCLE

Photo: Washington

Photo: Shreve International Center

Single-Lane Roundabouts



Characteristics

- Slow speed approach (25-30 mph)
- Yield on Entry
- Low Speeds entering and circulating (Operating speed 12-16 mph)
- No pedestrian activity in central island

Accident Reduction

- Reduce number of conflict points
- Eliminate left-turn and right-angle accidents
- Reduce severity of pedestrian accidents
- 90 percent reduction in fatal intersection accidents

Safety Impacts of Modern Roundabouts

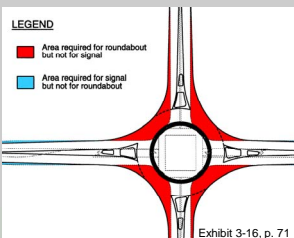
Type of Roundabout	Converted from	# of Conversions	% Reduction of all Crashes	% Reduction of Injury Crashes
Single Lane, Rural	Stop Controlled	9	65%	68%
Single Lane, Urban	Stop Controlled	12	69%	80%
Multi-Lane, Urban	Stop Controlled	9	8%	73%
Urban	Signalized	5	37%	75%
All		33	47%	72%

Source: NYSDOT Study, October 2003

Appropriate Use of Roundabouts

- Preserve functionally classified roadway system
- Where traffic volumes on both roadways are high and well balanced
 - Not to be used where traffic enter from minor street less than 10%
- Where turning movements are relatively high
- Level terrain

Right-of-Way Needs



- Single-lane Roundabout inscribed island of 90-foot to 150-foot diameter
- Commercial and Emergency Vehicles
- Environmental Impacts due to land acquisition
- Access Restriction

Pedestrians & Cyclists

Intersections also introduce concerns for transportation professionals on the safest way to accommodate pedestrians and cyclists.



Pedestrians

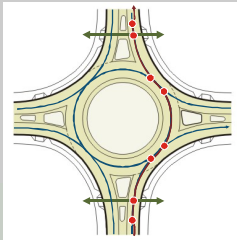
- Lower speed so less severe accidents
- Farther walking distances
- Proper guidance critical (way finding)
- Visually impaired have difficulty
 - Can't hear slower cars
 - No breaks in traffic flows (do not stop)
 - May have difficulty finding crossing location
 - ADA law requires equal treatment

Bicycles

- No striping through central island
- Experienced bicyclists
- Inexperienced bicyclists

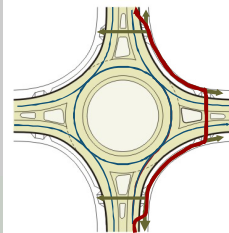
Pedestrians & Cyclists

Bike lanes are not recommended within a roundabout. Instead, cyclists merge with traffic before entering the roundabout, circulate with traffic, and then re-enter the bike lane after exiting.



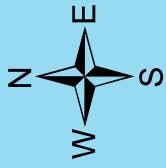
Pedestrians & Cyclists

If a cyclist is uncomfortable riding with traffic, a cyclist can choose to travel instead as a pedestrian.



Attachment 2

Conceptual Ideas for Realignment and Connection to the Relief Route Eastern Terminus



0 0.05 0.1 0.2 Miles

PACIFIC OCEAN

HOOKIPA

HANA HWY

MALIKO GULCH

HAMAKUAPOKO RD

Entrance to Hookipa Beach Park

HOLOMUA RD

Relief Route

KUAU

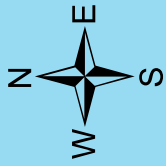
HANA HWY

SSFM
INTERNATIONAL

Source:
County of Maui Parcels, Office of Planning,
State of Hawaii, 2006
Island of Maui Contours, USGS-WGSC, Oct. 2004
Maui Wetlands, USDOJ, Fish and Wildlife Svc., 2003

1. Connection just prior to Hookipa Beach Park

*Pā'ia Relief Route, Project No. STP-036-1(11)
State of Hawai'i, Department of Transportation*



0 0.05 0.1 0.2 Miles

Existing Hana HWY
abandon to become foot path

HOOKIPA

PACIFIC OCEAN

KUAU

MALIKO
GULCH

HAMAKUAPOKO RD

Connection to Hookipa
Beach Park entrance

HOLOMUA RD

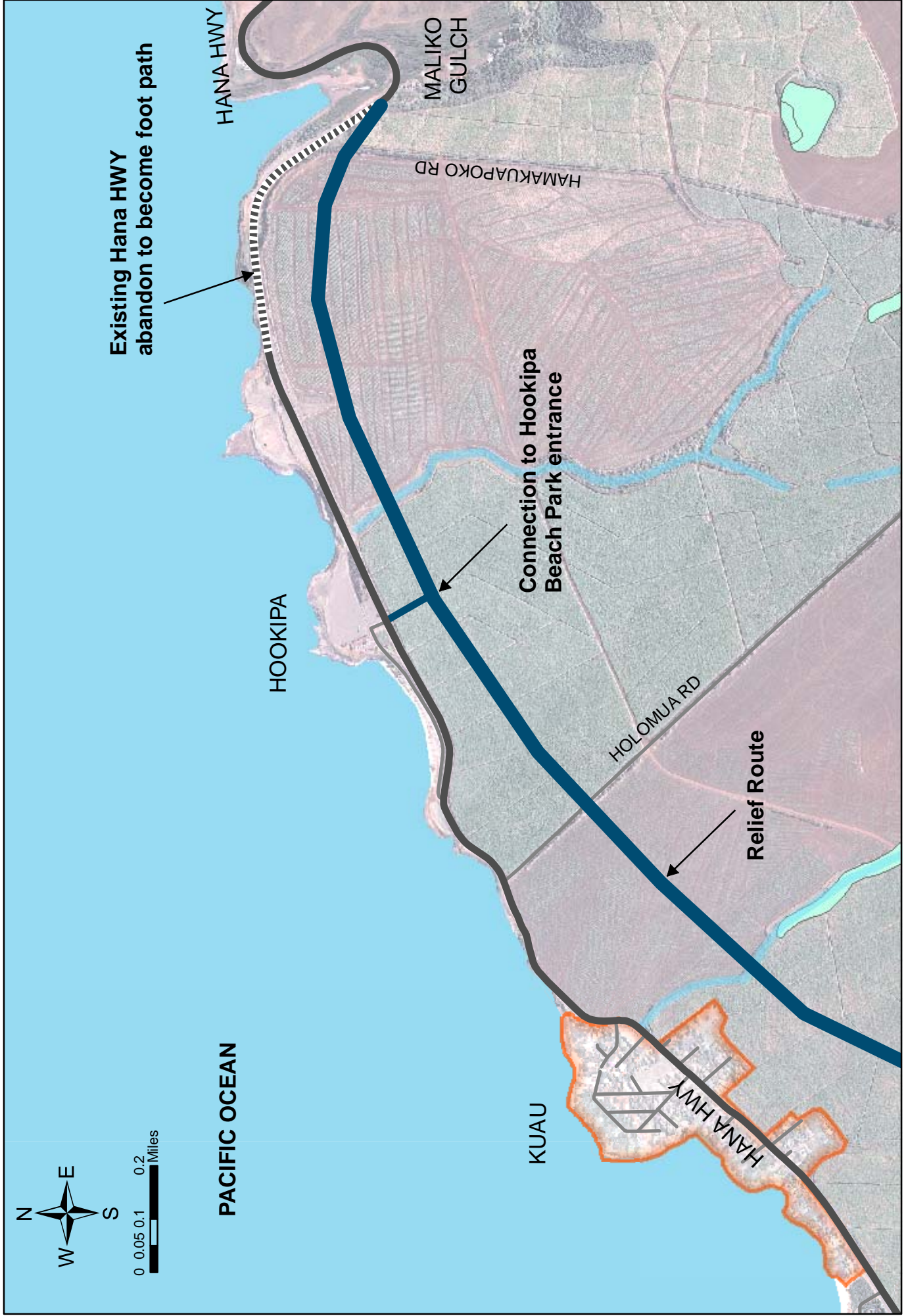
Relief Route

HANA HWY

2. Connection just past Hookipa
Pā 'ia Relief Route, Project No. STP-036-1(11)
State of Hawai 'i, Department of Transportation

Source:
County of Maui Parcels, Office of Planning,
State of Hawai'i, 2006
Island of Maui Contours, USGS-WGSC, Oct. 2004
Maui Wetlands, USDOI, Fish and Wildlife Svc., 2003





Source:
County of Maui Parcels, Office of Planning,
State of Hawaii, 2006
Island of Maui Contours, USGS-WGSC, Oct. 2004
Maui Wetlands, USDOJ, Fish and Wildlife Svc., 2003

3. Connection just before Maliko Gulch
Pā 'ia Relief Route, Project No. STP-036-1(11)
State of Hawai 'i, Department of Transportation