Attachment A: Final Environmental Assessment

AHUKINI to LYDGATE
Bicycle / Pedestrian Path
STP-0700 (51)

FINAL ENVIRONMENTAL ASSESSMENT

County of Kauai
Department of Public Works



JUNE 2016

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AHUKINI to LYDGATE PARK
Bicycle and Pedestrian Path Project

County of Kaua'i, Hawai'i
Federal Aid Project No. STP-0700 (51)

Final Environmental Assessment/ Finding of No Significant Impact

Submitted pursuant to Hawai'i Revised Statutes, Chapter 343

County of Kaua'i, Department of Public Works
and State of Hawai'i, Department of Transportation, Highways Division

8/20/12
Date of Approval

For County of Kaua'i, Department of Public Works

6.9.12
Date of Approval

For State of Hawai'i, Department of Transportation

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The Department of Public Works (DPW) of the County of Kauai is proposing to construct a multi-use path for bicyclists, pedestrians, and other users from Ahukini Point to Lydgate Park. A 10' wide path will be constructed using various low maintenance materials and is approximately 6.7 miles in length. Other design elements include 3 comfort stations, restoration of two historical bridge structures, improvements to a parking lot at Marine Camp, and improvements to the entranceway and lower parking lot at the Wailua Golf Course. The project is not expected to cause substantial environmental impacts because of limited construction area and location of the path. Impacts associated with these improvements are generally associated with short-term construction activities. Mitigation measures will be implemented in accordance with applicable regulations and/or consultation with appropriate agencies.

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AHUKINI POINT TO LYDGATE PARK
BIKE AND PEDESTRIAN PATH

FINAL ENVIRONMENTAL ASSESSMENT

APPENDICES

APPENDIX G
Estimate of Probable Construction Costs

APPENDIX H
Maintenance Plan

TABLES AND FIGURES

ACOE	Army Corps of Engineers
APE	Area of Potential Effect
CFR	Code of Federal Regulations
CMU	Concrete Masonry Units
CWA	Clean Water Act
CZM	Department of Business, Economic Development and Tourism, Office of Planning, Coastal Zone Management Program
CZMA	Coastal Zone Management Act
DA	Department of Army
DAR	Department of Land and Natural Resources, Division of Aquatic Resources
DEA	Draft Environmental Assessment
DHHL	Department of Hawaiian Homelands
DLNR	Department of Land and Natural Resources
DOCARE	Department of Land and Natural Resources, Division of Conservation and Resources Enforcement
DOFAW	Department of Land and Natural Resources, Division of Forestry and Wildlife
DOH	State of Hawai‘i Department of Health
DPR	Department of Parks and Recreation
DPW	Department of Public Works
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEA	Final Environmental Assessment
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
HAR	Hawaii Administrative Rules
HDOT	State of Hawai‘i Department of Transportation
HEER	State of Hawai‘i Department of Health Hazard Evaluation and Emergency Response
HRS	Hawai‘i Revised Statues
HUD	U.S. Department of Housing and Urban Development
ISST	State of Hawai‘i Department of Health Initial Site Screening Team
JD	Jurisdictional Determination
KHPRC	Kaua‘i Historic Preservation Review Committee
LUC	Land Use Commission
LWCF	Land and Water Conservation Fund
MSAT	Mobile Source Air Toxins
NEPA	National Environmental Policy Act
NHO	Native Hawaiian Organizations
NPDES	National Pollutant Discharge Elimination System
NPS	U.S. National Park Service
NTBG	National Tropical Botanical Garden
NHHPC	Native Hawaiian Historic Preservation Council
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration
OEQC	Office of Environmental Quality Control
OHA	Office of Hawaiian Affairs
PIERC	U.S. Geological Survey, Biological Resources Division, Pacific Island Ecosystems Research Center
SHPD	Department of Land and Natural Resources, State Historic Preservation Division

SMA	Special Management Area
SRP	Ahukini State Recreation Pier
TE	Transportation Enhancement
TEA	Transportation Equity Act
TMDL	Total Maximum Daily Load
TMK	Tax Map Key
TSA	Transportation Security Administration
UBC	Uniform Building Code
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tanks
VMT	Vehicle Miles Traveled

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1.0 INTRODUCTION

1.1 Proposing Agency

The action is proposed by the County of Kauaʻi Department of Public Works.

1.2 Approving Agencies of the Environmental Assessment

The County of Kauaʻi Department of Public Works and the State of Hawaiʻi Department of Transportation will accept the Environmental Assessment under the state environmental review process. The Federal Highway Administration (FHWA) will serve as the lead federal agency that will ensure that the Environmental Assessment complies with National Environmental Policy Act (NEPA) documentation and processes.

1.3 Purpose and Need for Action

Kauai's ocean and coastline are frequently visited areas for recreational activities and gatherings, especially during weekends and holidays. The popularity of these areas creates a need to improve existing pathways or create new pathways to provide Kauaʻi residents and visitors with alternative transportation modes to access the shoreline. This project presents opportunities to provide an improved pathway for walkers, joggers, bicyclists, and other non-motorized forms of transportation which need a safe thoroughfare to and along the coastline.

The purpose of the proposed project, referred to as "Ahukini to Lydgate Park Bicycle and Pedestrian Path," is to provide a shared-use bicycle and pedestrian path for residents and visitors to Kauaʻi. The path will begin at Ahukini Point and will end by connecting with an existing path to the north at Lydgate Park, covering a distance of approximately 6.7 miles. Construction of this path will be a key segment of the Nawiliwili to Anahola Bike and Pedestrian Path proposed in the 1994 State of Hawaiʻi Master Plan – Bike Plan Hawaiʻi.

The rising costs of fuel and transportation have increased public interest in bicycling, however bicyclists have limited or no riding space in the project area. In addition, many of the popular coastline sites in the project area are not easily accessible and do not have improved access ways. The path will provide an alternative transportation route for bicyclist and pedestrians besides Kūhiō Highway. This alternative route would help bicyclist and pedestrians travel between the Airport, Ahukini Point and Lydgate Park along a pathway that is accessible to a variety of users of differing ages and skill levels. The paths for bicyclists would be consistent with County and State DOT plans for promoting bicycling within the State.

This shared-use bicycle and pedestrian facility will meet the following needs for residents and visitors to Kauaʻi by providing an alternative form of transportation to the automobile, thereby reducing fuel consumption, pollution, roadway congestion and the need for parking lots; by providing affordable recreation for persons of all ages and abilities; by providing a safe mode of transportation and recreation; and by providing a means for ecotourism. There is also need to provide supporting facilities for current coastal resources. Implementing this project creates an opportunity to provide supporting facilities within the project area such as comfort stations and parking.

The objectives of the project are to design a 10' wide path that can be constructed using various low maintenance materials such as concrete, composite plastics, stainless steel, etc. Other design elements include:

- 3 comfort stations
- Restoration of two historical bridges
- Improvements to the parking lot at Marine Camp
- Improvements to the entranceway and lower parking lot at the Wailua Golf Course

1.4 State and Federal Involvement

Funding for this project will come from two sources: The Federal Highway Administration (FHWA) and the County of Kaua'i. The use of County funds and jurisdictional lands for the project requires a state review process, specifically the environmental documentation requirements prescribed under Hawaii Revised Statutes Chapter 343, Environmental Impact Statements, Hawaii Revised Statutes (as amended) and Title 11, Chapter 200 (Environmental Impact Statement Rules) of the Department of Health's Hawaii Administrative Rules (as amended, State of Hawai'i 1996). The use of federal FHWA funds requires that the project undergo a federal review process as prescribed under the National Environmental Policy Act (NEPA). The federal review process under NEPA involves the FHWA's review of the project to determine if a categorical exclusion, environmental assessment, or environmental impact statement is warranted for this project under the National Environmental Policy Act, and 23 CFR 771. The County of Kauai is currently in the process of addressing the NEPA compliance requirements for the project with FHWA and HDOT. Consultations conducted with Federal Agencies are included in Appendix A.

1.5 Process and Purpose of the Final Environmental Assessment

The Final Environmental Assessment (FEA) is a product that is derived from the draft environmental assessment (DEA) process, which takes into account the environmental, cultural, and socioeconomic effects that would be caused by implementing a project. The DEA was prepared to satisfy State Regulatory Requirements. The DEA examined the project corridor, the alternative alignment routes, and the impacts associated with the different options. The publication of the DEA was published in the Office of Environmental Quality Control (OEQC) *Environmental Notice*. In addition, copies were sent to libraries, regulatory agencies, land owners, and other organizations with a request for comments (see Appendix C). All received comments and the responses to each are included in this Final Environmental Assessment (FEA) document (see Appendix C) The FEA discloses the impacts, mitigation measures, and permitting processes that would be associated with the preferred alignment.

Environmental review for this project was necessary for the following reasons:

- The project proposes the use of public lands
- The project proposes the use of public funds
- The project proposes the use of land that is designated Conservation Land
- The project proposes development within the Special Management Area (SMA)
- The project proposes to repurpose a historical bridge
- The project proposes the use of archaeologically recognized areas

The environmental review process determines what level of impact the project will have on the environment. There are three levels of impact and associated courses of action of each that can be determined from the environmental review process, including:

- Categorical Exclusion-the project proposes actions that do not individually or cumulatively have a significant environmental effect.
- Finding Of No Significant Impact (FONSI)-the project does not have a "significant" impact to the environment. An Environmental Assessment (EA) is prepared and is to be used as the formal environmental review document.
- Significant Impact-the project has a "significant" impact to the environment. An Environmental Impact Statement and Record of Decision (ROD) is prepared.

The FEA is also used to determine if there is a significant impact on the environment and may result in either a Finding Of No Significant Impact (FONSI) or an Environmental Impact Statement (EIS) and Record of Decision (ROD).

A FONSI is rendered for this project under the state HRS 343 review process. A 30-day challenge period is opened following the OEQC's notice of availability of a FEA/FONSI. Section 1.6 outlines the State environmental review process steps.

1.6 Steps in the Environmental Review Process

Proposed Project

Agency (County, State, & Federal) consultation and assessment

⇩

Start of HRS §343 EA

⇩

Agency (County and State) anticipates an HRS §343 FONSI

⇩

Agency (County) consults with community, experts, and other agencies

⇩

Pre-Draft HRS §343 EA reviewed and accepted by Agency (County & State) with determination of an anticipated FONSI

⇩

Draft HRS §343 EA submitted to and published by OEQC

⇩

30 day comment period

⇩

Pre-Final HRS §343 EA reviewed and accepted by Agency (County)

⇩

HRS §343 Final EA and FONSI
submitted to and published by OEQC

⇩

30 day challenge period

1.7 Coordinating Agencies

1.7.1 Federal:

1.7.1.1 Federal Highway Administration
Administers the funding for Transportation Enhancements (TE) projects, and coordinates with all federal, state, and local governmental offices.

1.7.1.2 U.S. Environmental Protection Agency (EPA)
Reviews permits under the ten comprehensive environmental protection laws to include the Clean Air and Water Acts, and the Marine Protection, Research, and Sanctuaries Act.

1.7.1.3 U.S. Army Corps of Engineers
Reviews permits for dredging and filling activities in wetlands and waters of the US.

1.7.1.4 U.S. Department of the Interior, U.S. Fish & Wildlife Service, Ecological Services
Performs formal and informal consultation under Section 7 of the Endangered Species Act (ESA) as it relates to land and freshwater organisms, reviews Federal, state and local permits and license applications, environmental assessments and impact statements, general plans and land use amendments, clearinghouse reviews, water quality certifications, and issues regarding fish and wildlife resource study methods and design.

1.7.1.5 National Oceanic and Atmospheric Administration (NOAA)
Performs formal and informal consultation under Section 7 of the Endangered Species Act as it relates to marine and anadromous organisms.

1.7.1.6 U.S. Department of Housing and Urban Development (HUD)
Reviews EIS' initiated under NEPA or Chapter 343. HUD review is not required for a NEPA EA.

1.7.1.7 U.S. Department of Agriculture, Natural Resources Conservation Service
Works with county, state, and federal agencies as well as with Hawai'i's 16 Soil and Water Conservation Districts to prevent soil erosion and water contamination, and to improve water quality and quantity, soil productivity, wetlands ecosystems, and wildlife habitats.

1.7.1.8 U.S. Geological Survey, Biological Resources Division, Pacific Island Ecosystems Research Center (PIERC)
Reviews and gives technical assistance, relating to conservation of indigenous biological resources occurring within the cultural, sociological, political and environmental environs of all lands and islands under US jurisdiction in the Pacific Basin.

1.7.2 State:

1.7.2.1 Department of Land and Natural Resources
Reviews all Conservation District Use permits, and includes the following divisions:

- **Engineering Division**
  Submit permits relating to Water Resources management, mineral resources, flood prevention, and control or water development.
- **Land Management Division**
  Submit any permits related to State Owned Lands that are not set aside for use by other governmental agencies. This is the office of record and maintains a central repository of all government documents dating back to the Great Mahele of 1848.
- **Aquatic Resources Division (DAR)**
  Reviews all permits relative to pelagic, reef, and inshore aquatic resources protection and enhancement programs.

- **Forestry and Wildlife Division (DOFAW)**
  Consults on issues relating to forest reserves, public hunting, wildlife sanctuaries, commercial forestry on State lands, endangered species protection and management, and provides information on natural resources.
- **State Historic Preservation Division (SHPD)**
  Reviews all proposed projects for any effects they might have on historic properties. Can assist with the statewide inventory of properties on historical, architectural or cultural importance, and coordinates the Burial Sites Program and Historic Preserves Program. Any human remains that are unearthed are reported to this office.

1.7.2.2 State Department of Transportation, Statewide Transportation Planning Office

Reviews and coordinates any intergovernmental endorsements and approvals, integrating established plans and parameters and groundwork for the implementation of transportation plans.

1.7.2.3 Environmental Center (University of Hawai‘i)

Reviews Environmental Impact Statements, applications for various environmental pollution management permits, proposed environmental legislation and regulations, and various state and federal plans which may have environmental implications.

1.7.2.4 Department of Health, Environmental Planning Office

Assists with planning services, maintains environmental plans, land use, environmental education and public information programs.

1.7.2.5 Office of Environment and Quality Control

Reviews Draft EAs and Final EAs.

1.7.2.6 Department of Business, Economic Development and Tourism

Includes the following divisions:

- **Land Use Commission**
  Reviews any petitions to change land uses
- **Office of Planning, Coastal Zone Management Program (CZM)**
  Reviews any permits relating to coastal issues to ensure consistency in actions that can impact the coastal zone
- **Office of Planning, Land Use Division**
  Reviews any issues relating to land use policies of the State of Hawai‘i

1.7.2.7 Disability and Communication Access Board

Enforces and reviews ADA compliance. In particular “All buildings, facilities, and sites shall conform to applicable federal, state, and county accessibility guidelines and standards. Hawai’i Revised Statutes 103-50 requires all State of Hawai’i or County governments’ buildings, facilities and sites to be designed and constructed to conform to the Americans with Disabilities Act Accessibility Guidelines, the Federal Fair Housing Amendments Act, and other applicable design standards as adopted and amended by the Disability and Communication Access Board. The law further requires all plans and specifications prepared for the construction of State of Hawai‘i or County government buildings, facilities, and sites to be reviewed by the Disability and Communication Access Board for conformance to those guidelines and standards.”

1.7.3 County:

1.7.3.1 Kauaʻi Planning Department and Planning Commission
Reviews all land-use related permits relating to zoning, shoreline setback variances, and special management area permits.

1.7.3.2 Kauaʻi Historic Preservation Review Commission
Reviews and provides recommendations on various aspects of archeological and building design review of historic resources and in-fill development.

1.7.3.3 Kauaʻi County Council
The Kauaʻi County Council is the legislative branch of Kauaʻi County government. Authority includes approval of land acquisitions and acceptance of grant funds.

1.7.3.4 Kauaʻi Department of Public Works
Coordinating and approving agency for this project.

1.7.3.5 Kauaʻi Department of Water
Reviews Draft EA and Final EA for issues relating to water.

1.7.3.6 Kauaʻi Police Department
Reviews path plan to ensure that police patrolling and emergency response access is adequate along the path corridor.

1.7.3.7 Kauaʻi Fire Department
Reviews path plan to determine if emergency response access has been provided along the path corridor.

1.8 Project Summary

1.8.1 Project Name
Ahukini to Lydgate Park Bicycle and Pedestrian Path.

1.8.2 Proposing Agency
The proposing agency is the County of Kauaʻi Department of Public Works.

1.8.3 Tax Map Key Numbers
3-05-00, 3-05-01, 3-07-00, 3-07-02, 3-07-03, 3-09-00, 3-09-02, 3-09-05, 3-09-06

1.8.4 Determination
A Finding Of No Significant Impact (FONSI) is determined for this project. The path will be aligned in areas with minimal impact, including existing roads, highways and social trails. The habitats of endangered or threatened species will not be affected by the construction or use of this project. Construction of the path or any design elements will not occur within the designated Shoreline Setback Area (within 40' of the certified shoreline). The use of historical and archeological resources will undergo the necessary consultation process. All actions are determined to result in no significant impact.

1.8.5 Land Use Classifications

1.8.5.1 State Designations
The State Land Use Commission has the right to classify all lands in the State of Hawaiʻi, as stated in Chapter 205 and 205A, HRD and Chapter 15-15, Hawaii Administrative Rules (HAR). Land falls into one

of four categories: Conservation, Urban, Rural, or Agriculture. Most of the lands of the corridor fall into the Conservation Zone. Areas that are zoned urban include the land mauka of the conservation zone on the Ocean Bay Plantation property, and the area behind Hanama'ulu Beach Park that is owned by Grove Farms.

1.8.5.2 County Designations

The land on the County of Kaua'i is divided into the following categories: residential, resort, commercial, industrial, agricultural, open, special treatment, or constraint areas. Most of the corridor falls into conservation. Zoning at the Radisson property is urban. The area mauka of the conservation zone on the Ocean Bay Plantation property is zoned open-scenic ecological resources.

1.8.5.3 Special Designations

Special Management Areas (SMA) are located along the corridor, including from Ahukini Point to the existing Motocross Park. At the Motocross Park, a sub-route of the path diverts to Marine Camp which is also included in the SMA boundary. The main path connection to Lydgate Park at Nehe Road is also included in the SMA boundary.

1.8.6 County General Plan

The County of Kaua'i in 2000 revised and adopted the General Plan. This Plan considers long-range planning, development, protection of scenic views, conservation and other resources. The following are issues relative to this adopted General Plan that this project supports and/or exhibits:

- **Scenic Views**

The County seeks to preserve scenic views and public resources in administering land use regulations. Scenic views with a high degree of intactness or vividness shall be protected. The scenic qualities of mountains, hills or other elevated sites shall be protected. The lowlands and open spaces, to include the shoreline, marshes, fishponds, bluffs overlooking the coast, historic or cultural properties shall be protected.

- **Historic and Archaeological Sites**

The County seeks to preserve historic and archaeological sites and provide buffers in between them and other uses abutting them, and to provide pedestrian access to the sites, where appropriate.

- **Visitor Activities, Parks, & Natural Areas Policies**

To manage parks, resources, streams, beaches and other areas to conserve resources, encourage and provide for access to these areas, and to allow for group use. In addition, the plan strives to enhance the visitor experience and provide jobs to residents, and to interpret natural areas, historic and archaeological sites, and cultural activities, and to maintain and manage these facilities.

- **Open Lands Policies**

Areas designated as Open, shall be protected to maintain or enhance the characteristics of the land. These lands can be coastal bluffs, stream valleys, native plant and wildlife habitats, and archaeological resources.

- **Scenic Roadway Corridors Policies**

Scenic Roadway Corridors shall receive such designation to conserve the open space and scenic qualities and views along the most heavily traveled roadways.

- **Bikeways**

The County wants to support and develop a bikeway system to provide for transportation, recreation and activities that are alternatives to vehicles.

This project does not require any variances or action contrary to these policies and objectives adopted by the County.

1.9 List of Commitments

Many different stakeholders were consulted throughout the writing of this Final Environmental Assessment and associated processes. Through discussions with government agencies, community members, Native

Hawaiian Organizations, adjacent landowners, and other interested parties a list of commitments is included in this Final Environmental Assessment as commitments by the County Public Works Department.

WAILUA GOLF COURSE

- Wailua Golf Course personnel will be consulted during all phases of the design process
- The public will be provided the opportunity to review and comment on proposed design solutions
- A designer with golf course experience will be part of the design team
- There will be no loss of fairways
- Safety will be improved for automobiles turning into and out of the golf course parking lot
- The aesthetics of the golf course entrance will be improved with a new entrance sign and lower parking lot, plus new landscaping, paving and fencing
- The reconstruction of the Wailua Golf Course parking lot will be funded to include grading, paving, striping, and signage
- There will be no net loss of parking stalls at the Wailua Golf Course parking lot
- Wailua Golf Course overflow parking will be provided for
- Signs will be placed that state that the golf course in to a parking access location for the shared use path
- Horses will be banned from the golf course reach of the path
- Measures will be taken to prevent people from illegally accessing the golf course
- A guardrail will be placed along Kuhio Highway where appropriate to prevent automobiles from driving onto the path and golf course
- Visual and noise pollution from Kuhio Highway will be reduced
- Construction fencing and an approved construction staging and phasing plan will minimize the negative impact to the golf course during construction

PATH SIGNAGE

- The County of Kaua‘i will work with DOFAW on two interpretative signs and two regulatory seabird signs using DOFAW provided text and graphics
- Educational signage will be incorporated where appropriate to inform the public of the marine environment and the species that live there. Educational signage will also include wildlife viewing guidelines as part of the County of Kaua‘i’s interpretive sign program titled “Sign Requirements for Proposed Bikeway/Walkway”
- Signage reflecting all rules for the shared use path will be posted

MAINTENANCE

- A Maintenance Plan for the facility has been drafted and is included as Appendix H in this report
- Construction materials that minimize maintenance will be used

LANDSCAPING AND TREES

- The path will be routed around any major trees whenever possible, avoiding the drip line
- Trees that are one-foot or greater will be moved to a nearby location if they cannot be avoided
- Any tree moving within known nesting areas will be done in consultation with DOFAW to determine whether or not nesting burrows are near the affected trees
- Landscaping buffers, where appropriate, will be placed on the golf course side of the fencing
- New plants will be irrigated until they are established
- Areas disturbed by construction will be re-vegetated as soon as possible after construction of each area
- Native plants will be used for new plantings where this is feasible

LISTED SEABIRDS AND WATERBIRDS

- No outdoor lights will be installed along the path
- In order to minimize the potential for disorienting listed seabirds and minimizing collision of listed seabirds and bats with light poles, lighting at the comfort stations will be shielded lighting mounted on the shortest poles possible that do not extend above the height of the existing vegetation
- In order to minimize the effect of the proposed project on listed waterbirds, disturbance from construction and increased human activity along the proposed path will be kept to a minimum

AHUKINI STATE RECREATION PIER AND COMFORT STATION

- An assessment of additional parking needs created by the proposed path at Ahukini State Recreation Pier (SRP) will be completed in the design phase
- DLNR State Parks will manage any user conflicts between park and path users on an as-needed basis
- DLNR State Parks will own and manage the new comfort station at Ahukini SRP
- Septic system for new comfort station at Ahukini SRP will require a leach field

HISTORIC PRESERVATION

- To protect the historic character of Hanamaʻulu Cane Haul Bridge (Site number -1845), work to the bridge will be as minimal as possible and will include structural repairs as well as handrails and other public safety features
- The historical concrete box culvert structure (Site number -1846) will be left intact; additions will be minimal, including deck pavement with concrete and safety railings

NATIVE HAWAIIAN ORGANIZATIONS

- The design team is to work with the Office of Hawaiian Affairs (OHA), State of Hawaiʻi Department of Hawaiian Homelands, local Hawaiians, the Kauaʻi/Niʻihau Island Burial Council, and whomever OHA recommends so that the needs and wishes of the Native Hawaiians are better understood.

ARCHAEOLOGY

- The Archaeological Monitoring Plan will be the primary form of mitigation to address the presence/absence of sites not previously identified along the path corridor

INTERMENT SITE

- There will be a 30-foot buffer around the interment site

2.0 Technical Characteristics

PREFERED PATH ALIGNMENT ACTION
(Refer to Alternative Alignment Map at the end of this Chapter and in Appendix E)
The Preferred Path Alignment Alternative is approximately 6.7 miles in length. The proposed path ranges from ten feet wide to 12 feet wide (12 foot width preferred), depending on cost considerations and the available land to accommodate the path. The required easement for the path will be a minimum of 16-18 feet wide (add three foot wide shoulders on each side of the path). The maximum width required for the path will depend on the amount of grading disturbance required to construct the path and proposed path amenities that are desired along the path such as pocket parks, scenic overlooks, comfort stations, etc. Construction materials for the path vary from concrete to wooden or plastic composite materials, depending on durability and cost. In addition to the actual path, three comfort stations and path access/trailheads are also planned. The Preferred Path Alignment has been sub-divided into the following 10 sub-reaches:

Sub Reach One - Airport
An on-street, Shared Road Bicycle Route designation is planned for Ahukini Road, between Ahukini Landing and Kapule Highway (See Photo Points 1a through 1c).

The Airport Authority owns the property along the upper ridge of Ahukini Landing. An eight-foot tall security fence is planned to separate the airport property from the path.

Photo Point 1a - Ahukini Road just south of Ahukini Landing

Photo Point 1b - Improved section of Ahukini Road halfway between Ahukini Landing and the airport

Photo Point 1c - Ahukini Road adjacent to the airport. Kapule Highway is shown in the background.

Sub Reach Two - Ahukini Landing

The path ends at Ahukini Landing, the southern terminus of this project (See Photo Point 2a). Existing parking will serve as a trailhead and path access location. Ahukini Landing will become a major destination and trailhead for path users. Parking lot improvements will include striping to delineate parking and accessible parking stalls.

A ramp will be required in order to make a connection between the upper ridge of the point and the parking lot. Since the elevation change is not significant, there will be little, if any, retaining walls required for the path. A comfort station is proposed for Ahukini Landing (See Photo Point 2b and Figure 2a). Outdoor showers, a septic tank, and leach field sewer system are planned for the comfort station. The leach field will be located underneath the paved parking area. The proposed comfort station would be approximately 20 feet by 24 feet (480 square feet), constructed on a concrete slab on grade makai of the shoreline setback required by the County Planning Department and as determined by the SMA permitting process. The walls of the proposed comfort station will consist of concrete masonry units (CMU) and a wood framed roof with asphalt shingles. The comfort station shall be placed outside of the AE Flood Zone. The approximate cost for the proposed comfort station is $300,000.00.

Potable water and electrical supply will come from the airport area.

Photo Point 2a - Ahukini Landing

Photo Point 2b - Location of the proposed comfort station at Ahukini Landing

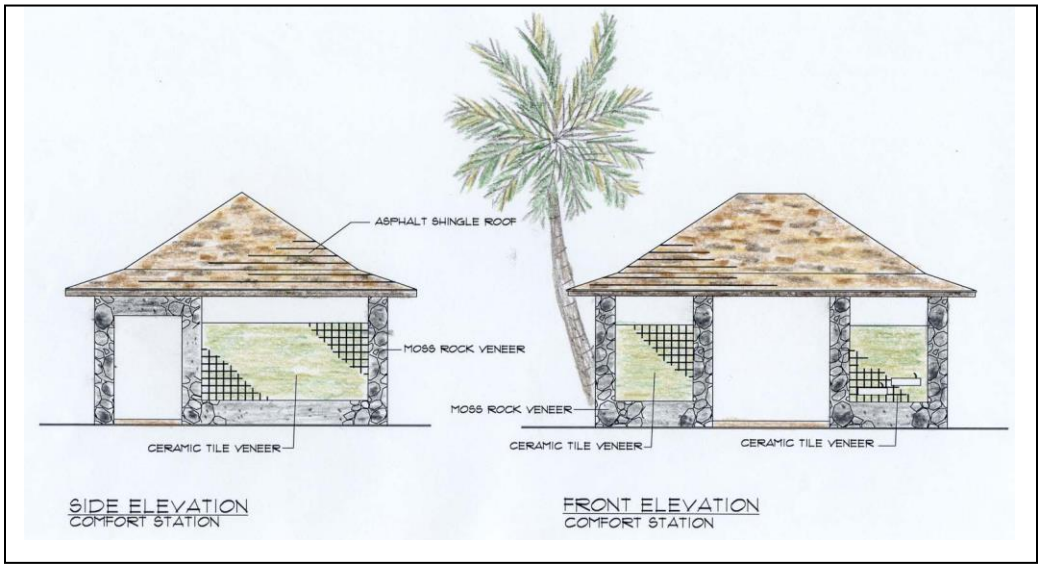

Figure 2a - Elevation of the proposed comfort station at Ahukini Landing

Sub Reach Three - Grove Farms

Once the path departs from the proposed Ahukini Landing comfort station and parking area, it will extend mauka long the bay side of an abandoned cane field for a distance of approximately 2,400 lineal feet. Rental car companies currently store cars in the field (See Photo Point 3a). An eight-foot tall security fence is planned for the path in this area in order to keep path users from accessing the rental car lots. From this point the path continues on to an abandoned cane haul road that drops in elevation at a slope of approximately 3 to 5 percent, all of the way to a low-lying area southwest of the Hanamaʻulu Stream and Beach (See Photo Points 3b and 3c). The lower grade area is an abandoned agricultural field characterized by vegetation typical of disturbed sites. No threatened and endangered species, wetlands, or cultural resources were found in this area. The path turns to the north toward the abandoned Hanamaʻulu Railroad Bridge that spans over the Hanamaʻulu Stream and Beach Park access road. Grove Farms owns the Hanamaʻulu Railroad Bridge as well as the low lying property that the path traverses. Heading north, the path would extend off of the north railroad bridge abutment and ramp upward to the bridge deck elevation. The elevation change between the railroad grade and the lower area is approximately 25 – 30 feet, and it appears that the lower area is within the AE Flood Zone . An elevated bridge/ramp structure constructed on spread footings or piles, depending on the soil characteristics in that area (See Figure 3a) is proposed to ramp the path from the low-lying area to the existing Hanamaʻulu Bridge. The preferred path ramp grade is 5%, however, steeper grades in compliance with Outdoor Recreation Accessibility Guidelines may be required. An advantage of the elevated bridge option is that there is little impact on the surrounding vegetation and drainage patterns, as only the footing and/or the piles contact the ground. These footings only occur at selected, on-center distances depending on alignment, construction materials, soil conditions, topography of the area, etc. A budget of approximately $250.00 per square foot area of path ramp/bridge deck should be considered for this option.

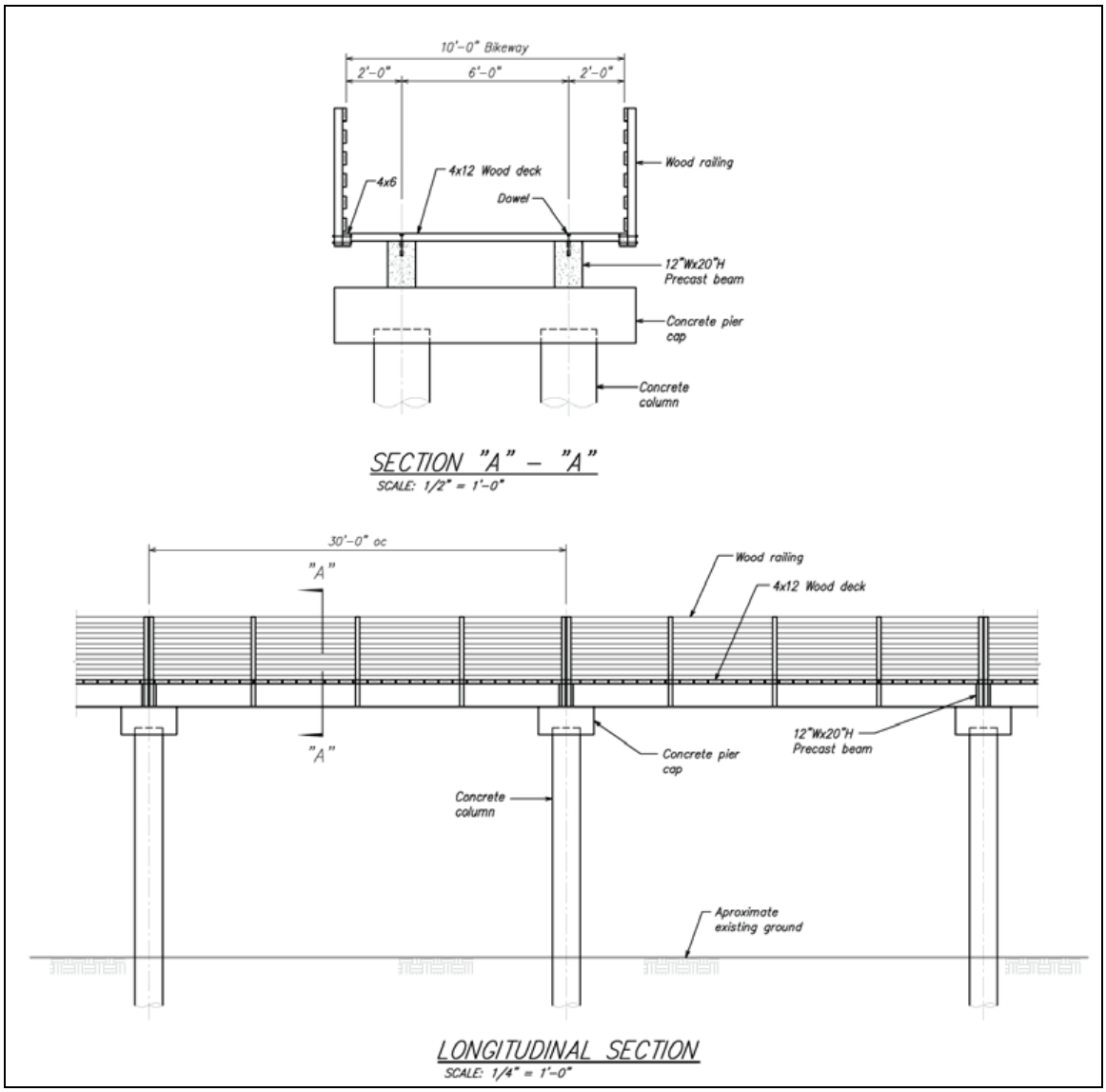

Figure 3a. Elevated Bridge/Ramp

Photo Point 3a – Photo of the abandoned cane filed where rental cars are stored

Photo Point 3b – Upper cane haul road on the south edge of Hanamaʻulu Bay

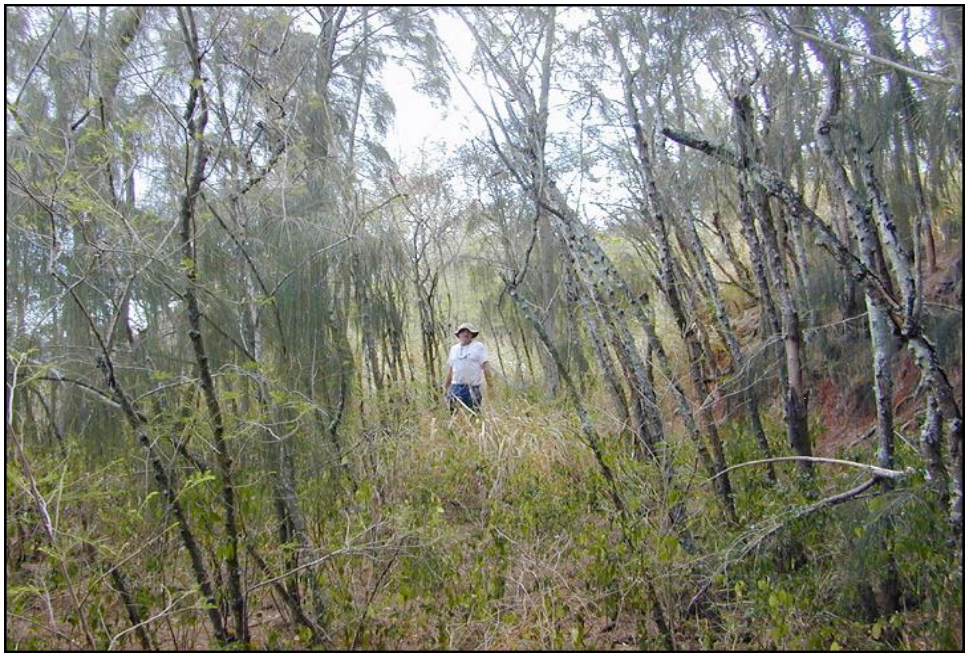

Photo Point 3c – The existing lower can haul road on the south edge of Hanamaʻulu Bay

Sub Reach Four - Hanamaʻulu Railroad Bridge

The path continues along the existing**,** abandoned railroad grade until it reaches the Hanamaʻulu Railroad Bridge (See Photo Points 4a and 4b). The Hanamaʻulu Railroad Bridge spans over the roadway and the Hanamaʻulu River. The path will be constructed on top of the existing railroad bridge. Structural analysis of the bridge indicates that the bridge is structurally sound, but will need some retrofitting and restoration in order to make the bridge safe for pedestrians and cyclists. These efforts would include widening of the deck to a width of 12-feet and adding safety railing (See Figure 4a). Concrete planks would be added to the top of the existing bridge. The planks would be doweled into the existing structure to provide stability. The approximate cost to restore and retrofit the Hanamaʻulu Bridge is $300,000.00. Because of its height relative to the surrounding landscape, views from the bridge are spectacular. A residence currently exists below the north abutment and approach to the bridge.

Photo Point 4a - The Hanamaʻulu Bridge

Photo Point 4b – The Hanamaʻulu Bridge

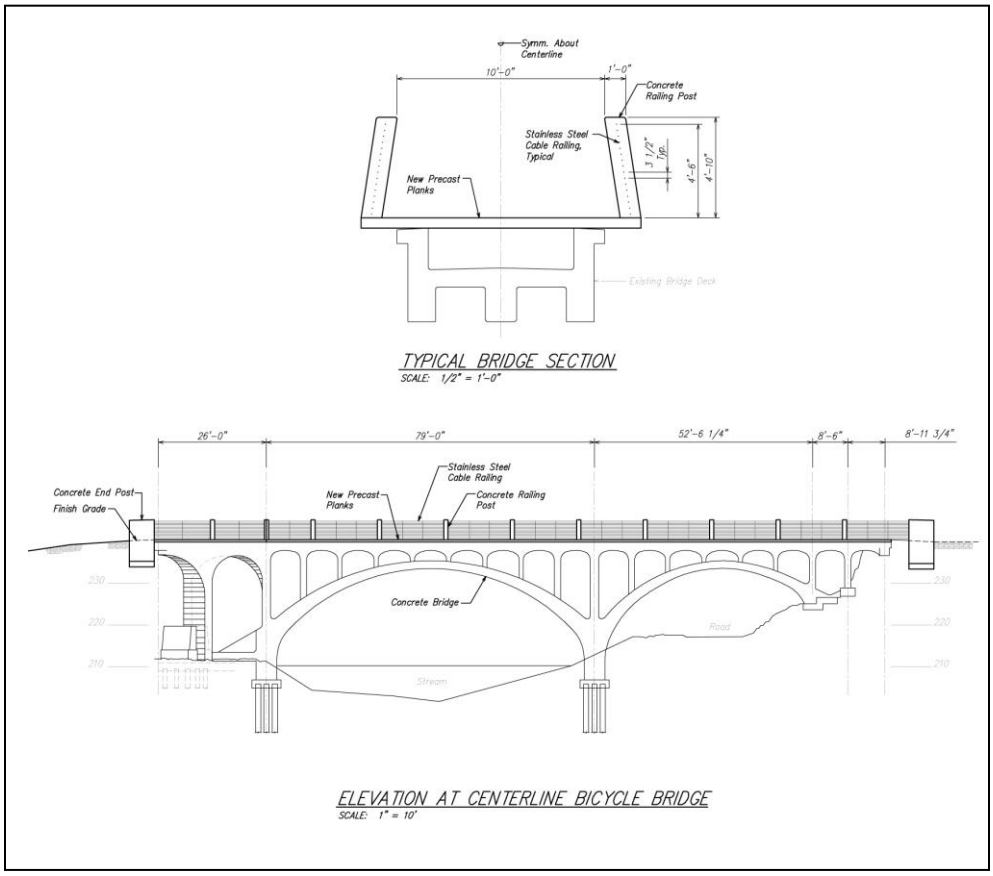

Figure 4a – Proposed Hanamaʻulu Bridge retrofit

Sub Reach Five - Hanamaʻulu Beach Park
The path will continue north on the abandoned railroad bed to Hanamaʻulu Beach Park (See Photo Point 5a). In order to obtain access to the railroad grade from the beach park, (an elevation of approximately 25 – 30 feet), a 10-foot wide ramp of approximately 800 lineal feet will be required. In order to create a bench for the ramp, structural walls will be needed. Safety railings will be provided on the downhill side of the path. The desired grade of the ramp would be at a 5.0 percent grade, however, steeper grades in compliance with the Outdoor Recreation Accessibility Guidelines may be necessary (See Figure 5a).

The ramp will extend to a point near the existing pavilion/comfort station and parking area located on the north end of the beach park. A visual inspection of the existing pavilion/comfort station was conducted resulting in the conclusion that the building is beyond repair (See Photo Point 5b). The inspection found that the foundation appears to be undermined due to water. The wood framed walls and roof also have termite and water damage. Improvements to the pavilion/comfort station would consist of removing the existing structure and constructing a new building to replace the old one. The existing sewer system may be useable but further inspections are required to determine the condition of the sewer pipes, septic system or cesspool, and leach field. Water and electricity are already to the building. The approximate cost to demolish the old pavilion/comfort station and build a new one is approximately $300,000.00.

Hanamaʻulu Beach Park will function as a trailhead/path access location as well as a major destination for path users.

Photo Point 5a - Hanamaʻulu Beach Park taken from the Kapule Highway bridge

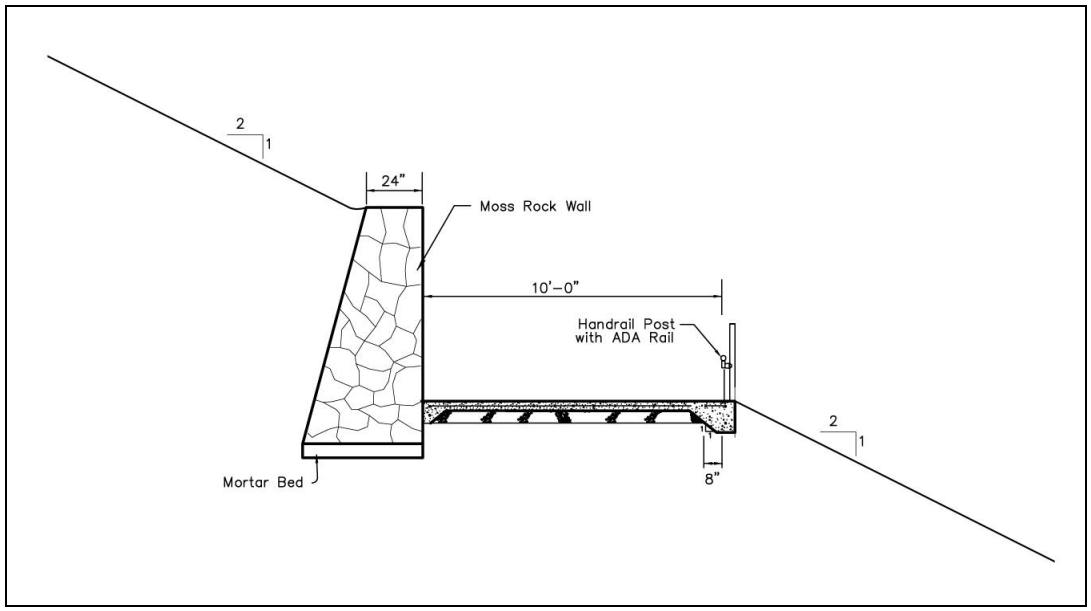

Figure 5a – Cross section of ramp

Photo Point 5b - Photo of existing comfort station at Hanamaʻulu Beach Park

Sub Reach Six - Ocean Bay Plantation

Moving north from the historic Hanama'ulu Bridge, the path will follow along the railroad grade for approximately 1,300 lineal feet, gaining elevation up and onto the upper cane haul road located on the Ocean Bay Plantation property. From this point, the path will follow the upper cane haul road that extends along the makai edge of the field (See Photo Point 6a) for approximately 5,600 lineal feet where it will depart the cane haul road to an area through a more scenic landscape (See Photo Points 6b and 6c). The Land Use designation in this area is Conservation Land. From this area, there are panoramic views of the ocean and many trees that provide shade. The U.S. Fish and Wildlife Service (USFWS) recommends that a survey for the wedge-tailed shearwater be conducted during the peak breeding season to determine the location of nesting adults (if any) and to avoid take, move the proposed path alignment to an area where the wedge-tailed shearwaters do not nest (refer to USFWS letter dated May 4, 2007 in Appendix A –Federal Consultations). The State of Hawai'i Department of Land and Natural Resources (DLNR) and the consultant jointly conducted a nesting seabird study in July of 2008. The area surveyed is the north side of Hanamaʻulu Bay along the coast and makai of the old sugar cane road to the south of Hilton Lane. Although no seabird nesting sites were observed, the area is a suitable nesting habitat for the Wedge-tailed Shearwater, and nesting Wedge-tailed Shearwaters have been seen in the area in the past (refer to DLNR letter dated October 27, 2008 in Appendix A – Federal Consultations). Recommendations in the letter include appropriate path alignment to avoid known nesting sites, protection of native coastal vegetation, no outdoor lighting along the path, and future consultations with the DLNR during the design, development, and construction phases of the project.

As the path extends further to the north, it must decrease in elevation until it meets the existing grade at Hilton Lane.

Photo Point 6a - Existing abandoned cane haul road on the upper bluff

Photo Point 6b – Scenic views from the Conservation Lands below the cane field

Photo Point 6c – Ocean view from the proposed path location within the Conservation Lands

Photo Point 6d –North view of cane haul road approximately 100 feet south of Hilton Lane

The path will continue north within the Conservation Land, utilizing abandoned cane haul roads (See Photo Point 6d) whenever possible until it comes to Hilton Lane. Before reaching Hilton Lane, the path will need to cross over an un-named drainage ditch just mauka of an existing box culvert (See Photo Point 6e). The U.S. Army Corps of Engineers provided a Jurisdictional Determination (JD) for the proposed ditch

crossing. In a letter dated July 8, 2009 (see letter in Appendix A), the Corps determined that the ditch was not a navigable water of the U.S., and therefore, a Section 10 Permit is not required. However, a Section 404 Permit and Corps authorization are required prior to any construction of a structure crossing over the ditch. A new concrete box culvert is proposed to span over the existing drainage ditch that is located along the south edge of Hilton Lane and then will continue along the south edge of Hilton Lane (See Photo Point 6f).

Photo Point 6e – Abandoned drainage ditch and box culvert. The box culvert will not be utilized for the path.

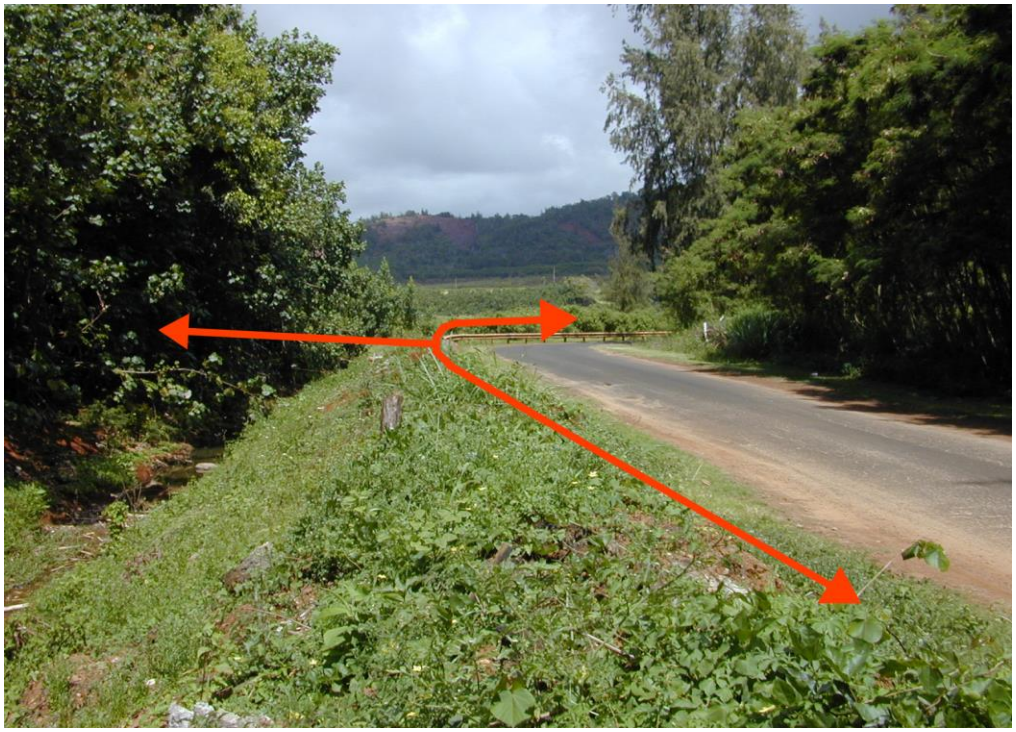

Photo Point 6f - Mauka view of Hilton Lane and location of the proposed path and ditch crossing

Sub Reach Seven – Hilton Hotel

At Hilton Lane, the path extends in two directions; one makai toward the existing comfort station and the other, along the south and mauka edge of Hilton Lane (See Photo Points 6f, 7a, and 7b). The path continues along Hilton Lane on the mauka edge of the road until it reaches Kauai Beach Drive, the main entrance roadway into the Hilton Hotel complex (See Photo Points 7c and 7d). The owner of the roadway and land is planning to install a round-a-bout intersection at this location. The path will go to the mauka edge of the round-a-bout. North of Kauai Beach Drive, the path will follow a dirt road that was once a cane haul road and extend over a concrete box culvert bridge that was also used as a bridge for the cane industry (See Photo Points 7e – 7g). The box culvert will be retrofitted with a new concrete deck and safety railings on each side (See Figure 7a).

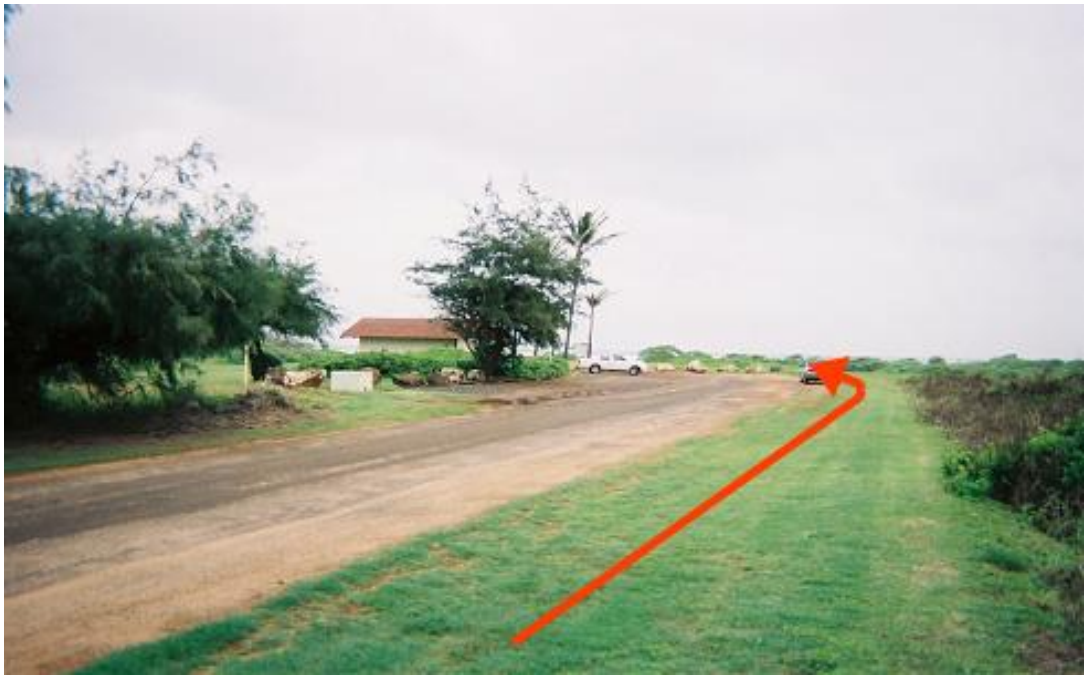

Photo Point 7a- Makai view along Hilton Lane towards the existing comfort station. The path ends where the existing large boulders are placed.

Photo Point 7b – North view along Hilton Lane. The path will be located on the mauka side of the road.

Photo Point 7c – North view of the intersection with Hilton Lane and the Kauai Beach Road (entrance to the Hilton Hotel) where a round-a-bout intersection and an at-grade crossing is proposed.

Photo Point 7d – North view of the abandoned cane haul road

Photo Point 7e – North view of the abandoned cane haul road. The box culvert bridge is located 20 feet beyond the pile of debris

Photo Point 7f – Mauka view of the abandoned box culvert bridge

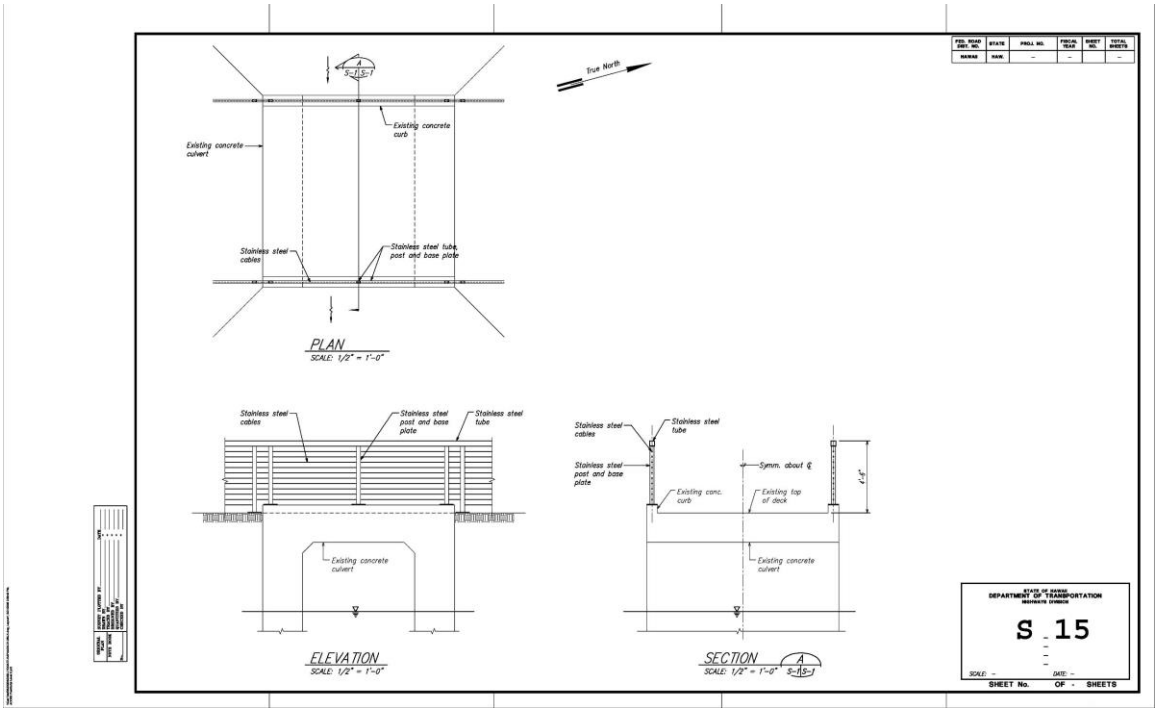

Figure 7a - Retrofit of the box culvert with a new concrete deck and safety railings

Photo Point 7g – North view of the abandoned cane haul road. Marine Camp Park and the moto-cross course are to the right of the earthen berm located on the right side of the photo.

Sub Reach Eight - Marine Camp

North of the Radisson Hotel Complex, the path will follow the abandoned cane haul road all of the way to Marine Camp Park (See Photo Points 8a and 8b). Currently, Marine Camp Park is casually used for fishing, accessing the beach, parking cars, and unrestricted dirt bike use. Proposed improvements for this property may include a comfort station (with septic and leach field sewer systems), drinking water, showers, a pay phone and parking. The proposed comfort station would be of the same size and design as the comfort station proposed for Ahukini Point (see Sub Reach Two-Ahukini Point).

The parking area will consist of gravel with large boulders used to control vehicle access within the park. The future beach park would be a trailhead/access location to the path system and would be a major destination for path users. Improvements to Marine Camp Park will be placed above the AE Flood Zone. Other potential uses for the site include a junior golf course if the existing MotoCross facility is moved to another location. Heading north from Marine Camp, the path will follow the dirt road access that extends between Kuhio Highway and Marine Camp all of the way to the Wailua Golf Course (See Photo Points 8c and 8d).

Photo Point 8a - Makai view from the abandoned box culvert bridge and location of the path connection into the park

Photo Point 8b – Existing conditions of the Marine Camp Park site

Photo Point 8c – North view of un-named cane haul road extending to the Marine Camp Park site from Kuhio Highway. The golf course can be seen in the background.

Photo Point 8d – North view from the dirt road entrance drive to Marine Camp Park at the south end of the golf course

Sub Reach Nine – Wailua Golf Course

Once the path has crossed into the golf course, it will extend north on the makai side of the drainage ditch and will often be on the same alignment as an informal golf course maintenance road that runs parallel to the drainage ditch (See Photo Point 9a) and continue mauka of the 4th green, 5th tee, 6th green, 7th fairway and the 9th fairway and makai of the drainage ditch.

A safety fence and landscaping will be required along the makai edge of the path in order to protect path users from errant golf balls. A shorter, chain link fence will be installed along the canal edge (See Figures 9a and 9b).

Photo Point 9a – Before photo along the 7th fairway

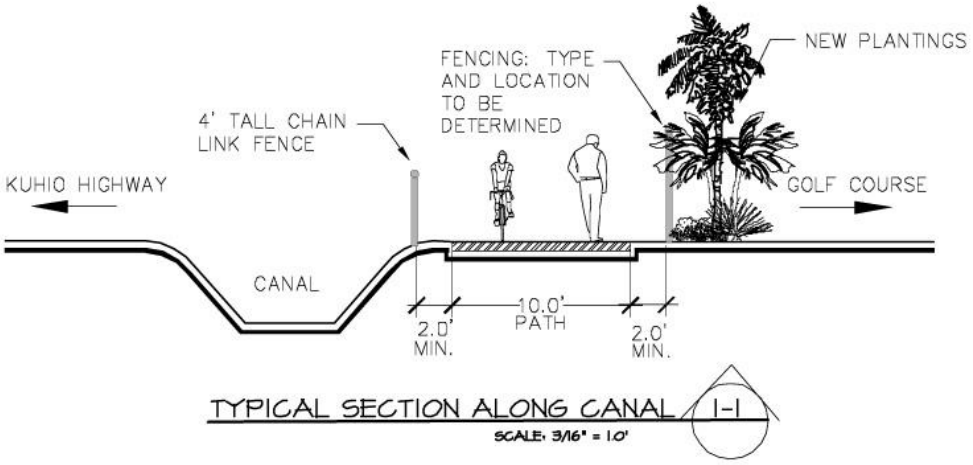

Figure 9a – Typical section along the drainage canal

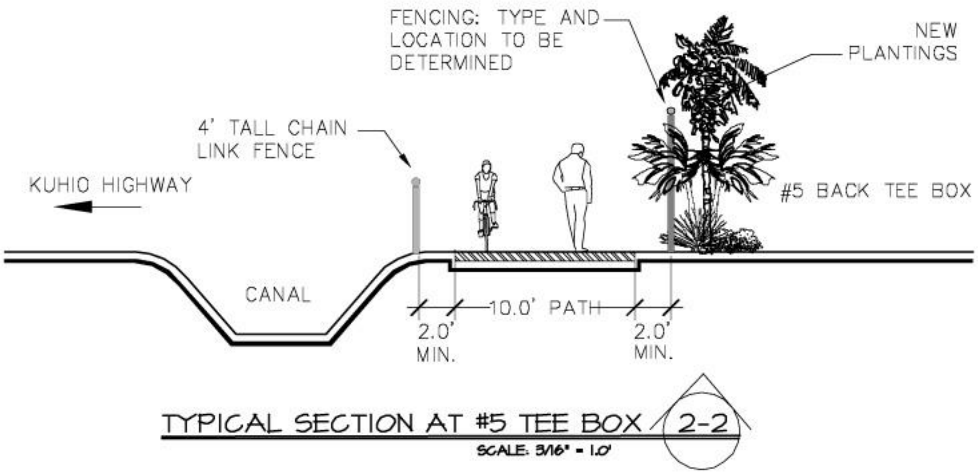

Figure 9b – Typical section along the drainage canal at the #5 back tee box

Sub Reach Ten – Wailua Golf Course Parking Lot and Entrance Drive
After passing the 9th green, the path intersects the only entrance driveway into the golf course from Kuhio Highway (See Photo Points 10a and 10b). The consulting team has been advised that this section of Kuhio Highway is one of the most dangerous roadways on the island, due in part to vehicles entering and departing the golf course. If the entrance drive configuration were to remain the same as it is today, the path would need to cross over the entrance driveway in order to continue northward. Therefore, a signalized intersection with a user activated crosswalk is proposed for this scenario. In addition, regulatory signs would warn the motorist and path user of potential dangers. Even with these improvements, safety for motorists and path users at this intersection will remain a concern. This scenario would require signal warrants if implemented.

Upon review of the alternative alignment plan in the DEA, The Kauaʻi Office of the Hawaiʻi Department of Transportation (HDOT) proposed an entrance drive/path alignment alternative that would help to resolve the existing safety concerns at this intersection as well as new ones that would arise with the addition of a path crossing. The HDOT proposal is to align the golf course entrance across from the existing entrance with the County Correctional Facility. In addition, decel/accel lanes and left turn lanes for the golf course would be provided by moving utility poles and other utilities makai from their current location. The path would be aligned makai of the highway/golf course entrance drive intersection and along the edge of the lower parking lot (See Figures 10a and 10b). By implementing this plan, cyclists and pedestrians will be crossing where automobiles are moving much slower and have a greater line of sight (See Photo Points 10c – 10e). Since the existing golf course parking lot is at capacity for golf course patrons, the parking lot will not be used as a path access point/trailhead.

In addition, the golf course parking lot will be improved by new paving, striping, and stairs between the lower and upper lots, and a golf course sign. Finally, the parking lot can be used for construction staging and access during construction of the path and parking lot improvements.

Photo Point 10a – North view towards the golf course entrance drive. The path is located on top of the dirt maintenance road.

Photo Point 10b – North view of the entrance drive into the Wailua Golf Course

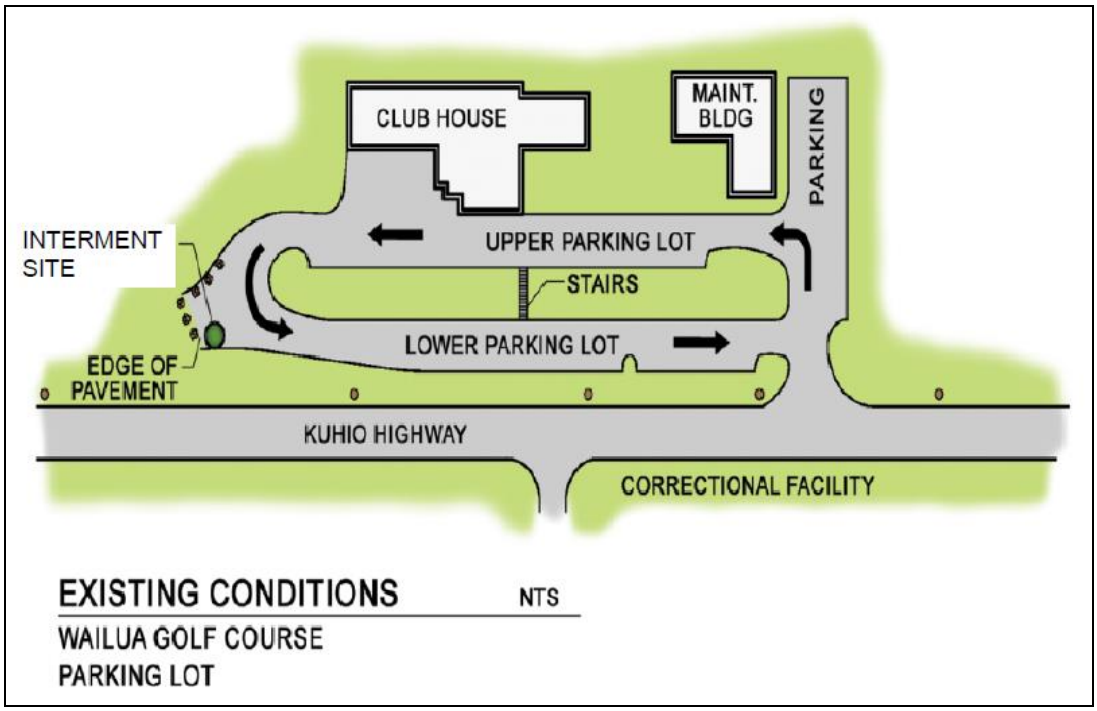

Figure 10a – Existing Conditions to the Wailua Golf Course Parking Lot and Kuhio Highway

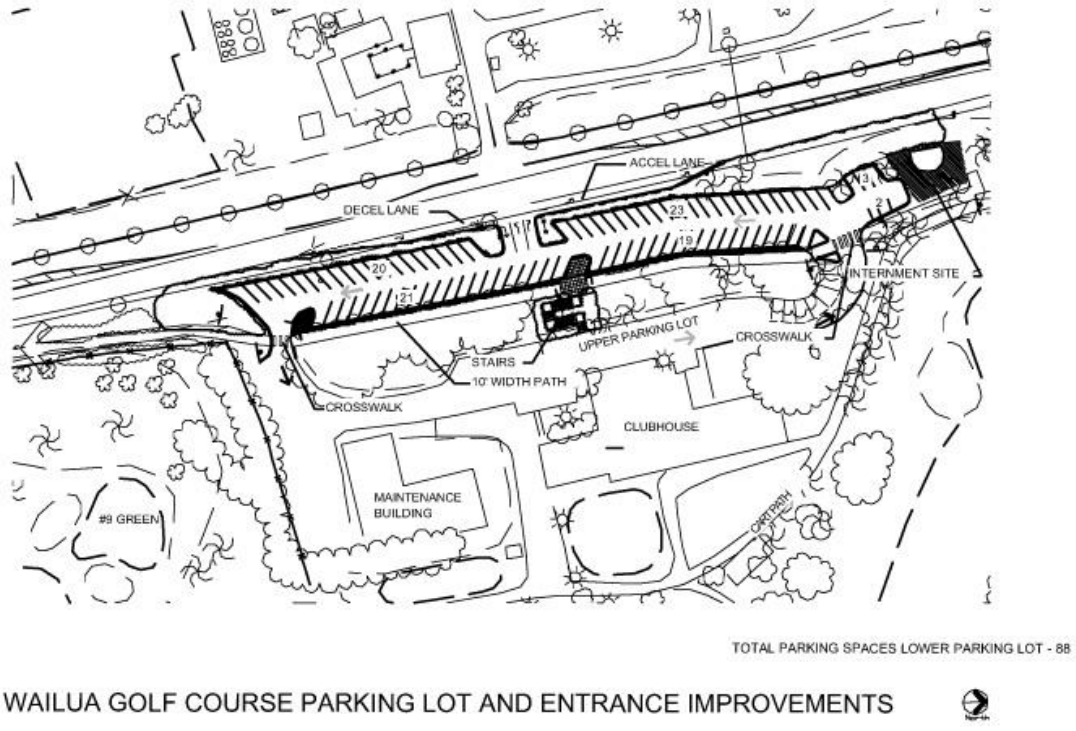

Figure 10b – Proposed improvements to the Wailua Golf Course Parking Lot and Kuhio Highway

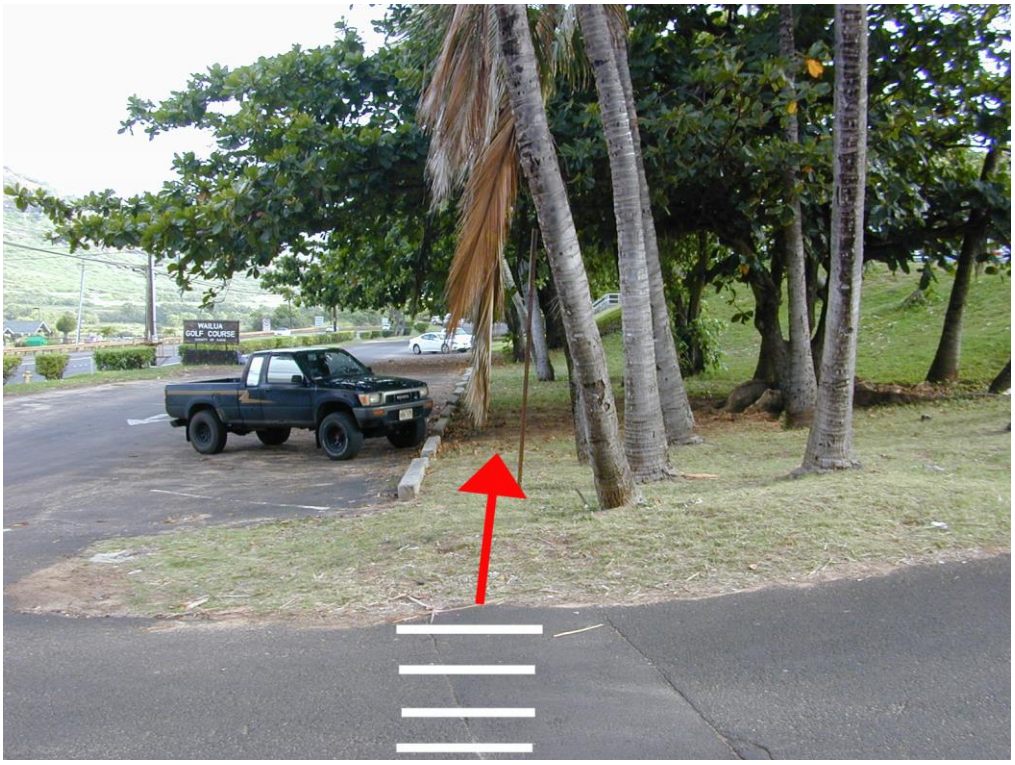

Photo Point 10c – North view of the lower parking lot and landscape area

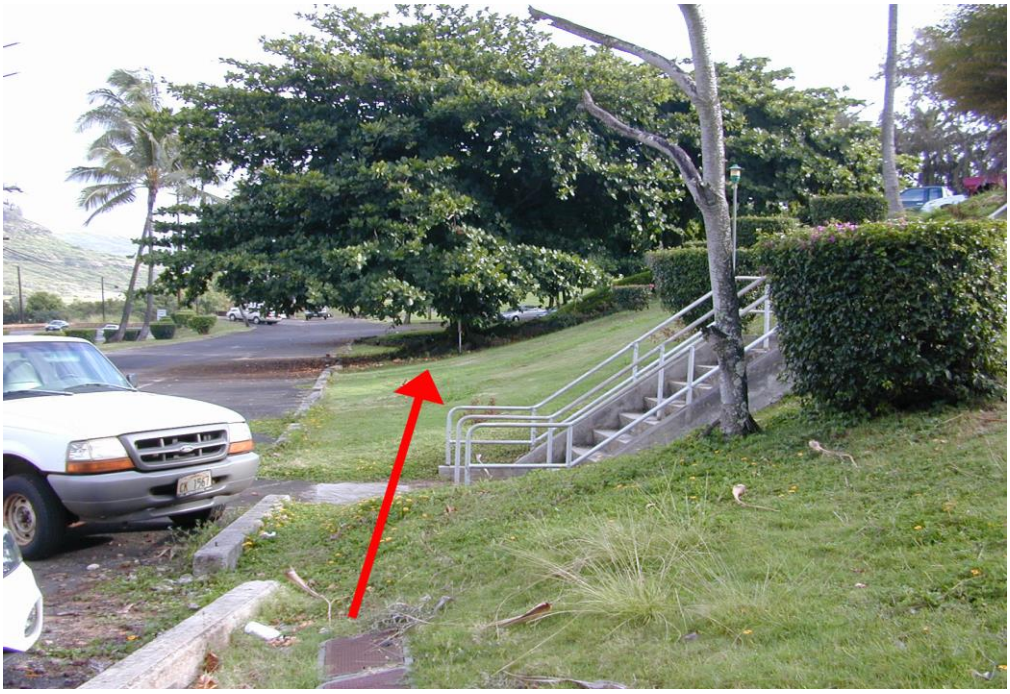

Photo Point 10d – North view of the lower parking lot and landscape area. The stairs will need to be redesigned to accommodate the path.

Photo Point 10e-North view of the north edge of the lower parking lot

An interment site is located on the north end of the lower golf course parking lot. The path is proposed to pass along the makai edge of the interment site (See Photo Points 10f – 10g).

Photo Point 10f – South view of the interment site and lower parking lot. The path will be located to the left of the interment site.

The path continues north past the interment site toward and below the 18th tee. (See Photo Point 10g). The path continues mauka and below of the 10th tee and between the irrigation pump station building located adjacent to the 10th tee and Kuhio Highway (See Photo Points 10h and 10i). A solid safety fencing and guardrail will be installed between the pump house and highway to keep path users from wandering onto the highway and automobiles on the highway (see Figure 10c).

Photo Point 10g – South view of the slope area below the interment site

Photo Point 10h– North view of the area between the pump house and Kuhio Highway (on left)

Photo Point 10i – South view of irrigated pump house. The path will be located between the pump house and the highway.

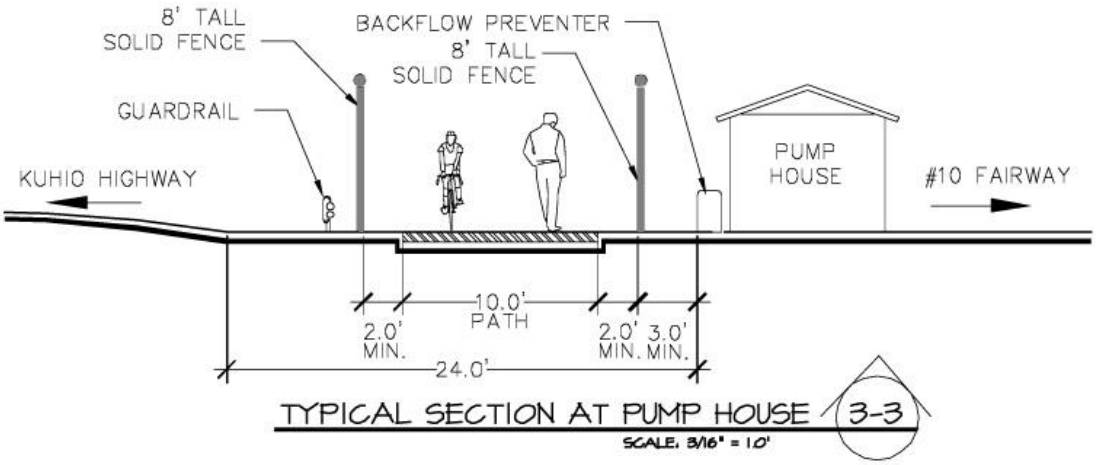

Figure 10c – Typical section at Pump House

The path extends north on the mauka edge of the 10th fairway (See Photo Point 10j) inside of the existing trees (See Photo Point 10k) along the 11th fairway. It then extends behind the 12th green. The path will need to be protected from errant golf balls along the golf course fairways by installing a ten-foot tall safety fence along the makai edge of the path. As applicable, guardrail will be installed between the path and the highway.

Photo Point 10j - 10th fairway taken from the back 10th tee

Photo Point 10k – North view along Kuhio Highway. The 10th fairway is to the right.

After passing the 10th fairway, the path heads north toward the 11th green and 12th tee (See Photo Point 10l). The path will be located between the 11th green and Kuhio Highway, where existing vegetation will help screen the path from the green. Since the back 12th tee is close to the highway, approximately 10 feet of the back tee will need to be removed in order to accommodate the path (See Photo Point 10m). A safety fence and landscaping buffer will be installed between the back tee and path. According to golf course management, play from the back tee will not be affected (see Figure 10d).

Photo Point 10l – North view along the edge of the 10th fairway looking towards the 11th green and 12th tee. Kuhio Highway is to the left.

Photo Point 10m – South view of the back 12th tee box. A solid fence will be installed between the tee box and path. Kuhio Highway is to the right.

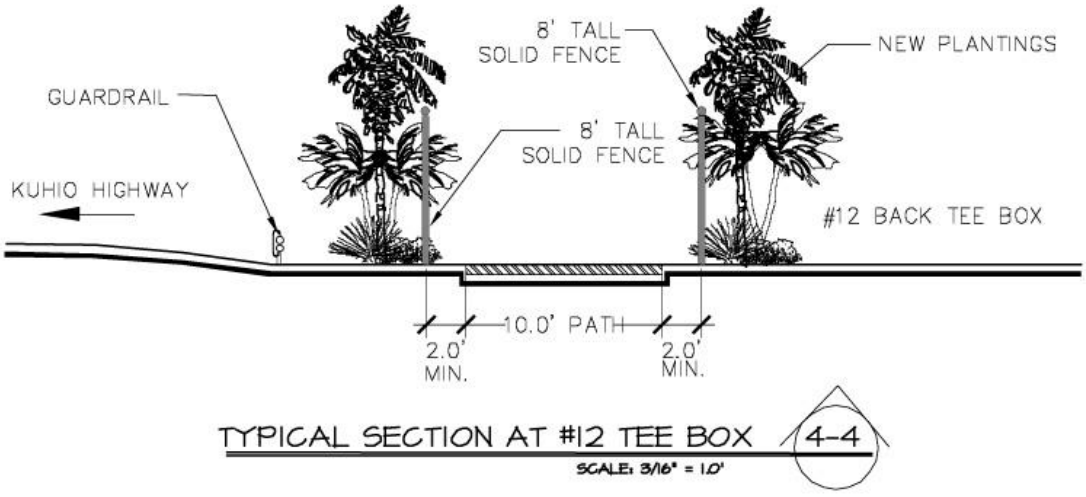

Figure 10d –Typical section at the 12th Back Tee Box

Once the path passes behind the 12th tee, it will continue along Kuhio Highway all of the way to Leho Drive. The path continues makai on the south edge of Leho Drive to Nehe Road, where it connects with the existing Lydgate Park path near the Kaha Lani Condominiums and the south end of Lydgate Park (See Photo Points 10n, 10o and 10p). A map of the preferred alignment is presented in Figure 11.

Photo Point 10n – View of Leho Drive from Kuhio Highway

Photo Point 10o – Leho Drive at Nehe Road. The path will connect with the existing Nehe Road/Lydgate Park Path and continue makai on Nehe Road

Photo Point 10p – Mauka view of the existing Lydgate Park path where it crosses over Nehe Road. The golf course is to the left beyond the fence.

Figure 11. Preferred Alignment Map

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3.0 AFFECTED ENVIRONMENT

3.1 Physical Environment

The action is proposed by the County of Kauaʻi Department of Public Works.

3.1.1 Geology

A Preliminary Geotechnical Engineering Study was prepared for this project and can be found in Appendix D. The soils descriptions described in this document have been taken from the Soil Conservation Service (SCS) *Soil Survey of Islands of Kauaʻi, Oʻahu, Maui, Molokaʻi, and Lānaʻi, State of Hawaiʻi*.

The Island of Kauaʻi is composed of a single basalt shield volcano built by the extrusion of lava of the Waimea Canyon Volcanic Series during the late Pliocene Epoch (more than 2.25 million years before present). Following the cessation of this main shield building phase, there was renewed volcanic activity with the extrusion of basaltic lava of the post-erosional Kōloa Volcanic Series and the concurrent deposit of the alluvial sediments of the Palikea Formation.

The majority of the Island of Kauaʻi is covered by lava of the Waimea Canyon Volcanic Series. These lavas consist of four distinct formations: Napali, Olokele, Haupu, and Makaweli. These formations are comprised of thin-bedded aʻa and pahoehoe flows to massive basalt flows that ponded in calderas and graben.

Rocks of the Kōloa Volcanic Series cover most of the eastern half of the Island of Kauaʻi. These rocks are generally characterized as thick flows of dense basalt extruded from groups of vents aligned in north-south trends in various locales. Associated with the vents are pyroclastic materials, which usally form low cinder cones at the vent.

The basaltic rock built by the extrusion of lavas of the Kōloa Volcanic Series are generally characterized by flows of jointed dense vesicular basalt inter-bedded with thin clinker layers. The weathering process has formed a mantle of residual soils which grade to saprolite with depth. In general, saprolite is composed of mainly silty material and is typical of the tropical weathering of volcanic rocks. The saprolite grades to basaltic formation with depth.

Erosion of the upper Kōloa and Waimea Canyon Volcanic Series has deposited alluvial sediments along streams, drainageways, and low-lying areas. These sediments are generally unconsolidated to moderately consolidated, noncalcareous soil deposits. Agricultural and commercial developments within the last century have brought the project site to its present conditions.

The geology of the preferred alignment is mainly underlain by alluvial deposits consisting of recent and older alluvium as described above. The older alluvial deposits are more consolidated and stiffer in consistency compared to the recent alluvial deposits. The southern portion of the path alignment is underlain by basalt rock formation of the Kōloa Volcanic Series. The presence of residual and saprolitic soils near the ground surface is anticipated. These soils are developed from the in-situ weathering of the basalt formation. In addition, the northern portion of the path alignment near Lydgate Park is underlain by a dune sand deposit. Recent alluvial deposits may be encountered further inland from the shoreline near the Kawailoa area and within the Hanamaʻulu Stream area. The recent alluvial deposits tend to be soft in consistency and compressible. In addition, basalt rock formation of the Kōloa Volcanic Series may be encountered along the southern portion of the path alignment at the sides of Hanamaʻulu Bay.

3.1.2 Soils

Dune land
Dune land (DL) consists of hills and ridges of sand-size particles drifted and piled by wind. The hills and ridges are actively shifting or are so recently fixed or stabilized that no soil horizons have developed. The sand is dominantly from coral and seashells.

This miscellaneous land type occurs in coastal areas on the islands of Maui and Kauaʻi.

Elevations range from nearly sea level to 150 feet. The annual rainfall amounts to 15 to 90 inches.

This land type is used for wildlife habitat and recreational areas and as a source of liming material. Vegetation is sparse, but ironwood trees, koa haole, tropical almond, kiawe, and mixed grasses have gained a foothold in places. (Capability classification VUle, non-irrigated).

Fill Land
This land type consists of areas filled with material from dredging, excavation from adjacent uplands, garbage, and bagasse and slurry from sugar mills. The areas are on the islands of Kauaʻi, Maui, and Oʻahu.

Fill Land (Fd)

This land type consists mostly of areas filled with bagasse and slurry from sugar mills. A few areas are filled with material from dredging and from soil excavations. Generally, these materials are dumped and spread over marshes, low-lying areas along the coastal flats, coral sand, coral limestone, or areas shallow to bedrock.

Hanalei Series

This series consists of somewhat poorly drained to poorly drained soils on bottom lands on the islands of Kauaʻi and Oʻahu. These soils developed in alluvium derived from basic igneous rock. They are level to gently sloping. Elevations range from nearly sea level to 300 feet. The annual rainfall amounts to 20 to 120 inches. Soil temperatures range from 69° F to 74° F. Hanalei soils are geographically associated with Haleiwa, Hihimanu, Mokuleia, and Pearl Harbor soils.

These soils are used for taro, pasture, sugarcane, and vegetables. The natural vegetation consists of paragrass, sensitiveplant, honohono, Java plum, and guava.

Hanalei silty clay, 0 to 2 percent slopes (HnA).

This soil is on stream bottoms and flood plains. Included in the areas mapped on Kauai along the Waimea River and in Waipaoiki Valley are small areas where the surface layer is 8 to 10 inches of reddish-brown silty clay. Included in the areas mapped on Oʻahu were small areas of very deep, well-drained alluvial soils and small areas of very poorly drained to poorly drained clay soils that are strongly mottled and are underlain by peat, muck, or massive marine clay.

In a representative profile the surface layer, about 10 inches thick, is dark-gray and very dark gray silty clay that has dark-brown and reddish mottles. The subsurface layer is very dark gray and dark-gray silty clay about 3 inches thick. The subsoil, about 13 inches thick, is mottled, dark-gray and dark grayish-brown silty

clay loam that has angular blocky structure. The substratum is stratified alluvium. The soil is strongly acid to very strongly acid in the surface layer and neutral in the subsoil.

Permeability is moderate. Runoff is very slow, and the erosion hazard is no more than slight. The available moisture capacity is about 2.1 inches per foot of soil. Roots penetrate to the water table. Flooding is a hazard.

This soil is used for taro, pasture, and sugarcane. (Capability classification Iiw).

Kalapa Series
This series consists of well-drained soils at the base of slopes on the island of Kauaʻi. These soils developed in material weathered from basic igneous rock and in colluvium. They are moderately sloping to very steep. Elevations range from 200 to 1,200 feet. The annual rainfall amounts to 60 to 100 inches.

The mean annual soil temperature ranges from *69° to 74° F*. Kalapa soils are geographically associated with Hihimanu and Hanamaʻulu soils. These soils are used mainly for water supply, woodland, wildlife habitat, and pasture. A small acreage is used for irrigated sugarcane. The natural vegetation consists of guava, lantana, joee, sensitiveplant, pilipiliula, ohia, Japanese tea, and ferns.

Kalapa silty clay, 40 to 70 percent slopes (KdF)
This soil is on uplands. In a representative profile the surface layer is dark reddish-brown silty clay about 10 inches thick. The subsoil, about 40 inches thick, ranges from dark-red to dark reddish-brown silty clay and clay that has subangular blocky structure. The substratum is dark-brown, duskyred, and dark-red silty clay and soft, highly weathered rock. The soil is very strongly acid throughout the profile.

Permeability is moderately rapid. Runoff is very rapid, and the erosion hazard is severe to very severe. In places roots penetrate to a depth of 5 feet or more.

This soil is used for water supply, pasture, and woodland. (Capability classification Vile, non-irrigated; pasture group 8; woodland group 14) .
This soil is used for irrigated sugarcane and pasture. (Capability classification I if irrigated, IVc if non-irrigated; sugarcane group 1; pasture group 2; woodland group 4).

Koloa Series
This series consists of well-drained soils on slopes of old volcanic vents and upland ridges on the island of Kauai. These soils are underlain by hard rock at a depth of 20 to 40 inches. They developed in material weathered from basic igneous rock. They are gently sloping to moderately steep. Elevations range from nearly sea level to 300 feet. The annual rainfall amounts to 40 to 60 inches. The mean annual soil temperature is 74° F. Koloa soils are geographically associated with Mamala and Waikomo soils. These soils are used for irrigated sugarcane. The natural vegetation is mainly koa haole.

Koloa stony silty clay, 8 to 15 percent slopes (KvC)
On this soil, runoff is medium and the erosion hazard is moderate.

This soil is used for irrigated sugarcane. (Capability classification lIIe if irrigated, IVe if non irrigated; sugarcane group1; pasture group 5; woodland group 5)

Koloa stony silty clay, 15 to 25 percent slopes (KvD)
On this soil, runoff is medium and the erosion hazard is moderate to severe. Included in mapping were small areas where the slope is more than 40 percent. This soil is used for irrigated sugarcane, pasture, woodland, and wildlife habitat. (Capability classification IVe, irrigated or nonirrigated; sugarcane group 1; pasture group 5; woodland group 5).

Lihue Series
This series consists of well-drained soils on uplands on the island of Kauaʻi. These soils developed in material weathered from basic igneous rock. They are gently sloping to steep. Elevations range from nearly sea level to 800 feet. The annual rainfall amounts to 40 to 60 inches. The mean annual soil temperature is 730 F. Lihue soils are geographically associated with loleau and Puhi soils.

These soils are used for irrigated sugarcane, pineapple, pasture, truck crops, orchards, wildlife habitat, woodland, and homesites. The natural vegetation consists of lantana, guava, koa haole, joee, kikuyu grass, molasses grass, guinea grass, bermuda grass, and Java plum.

Lihue silty clay, 0 to 8 percent slopes (LhB)
This soil is on the tops of broad interfluves in the uplands. Included in mapping were small areas of a soil that has a very dark grayish-brown surface layer and a mottled subsoil.

In a representative profile the surface layer is dusky red silty clay about 12 inches thick. The subsoil, more than 48 inches thick, is dark-red and dark reddish-brown, compact silty clay that has sub-angular blocky structure. The substratum is soft, weathered rock. The surface layer is strongly acid. The subsoil is slightly acid to neutral.

Permeability is moderately rapid. Runoff is slow, and the erosion hazard is no more than slight. The available water capacity is about 1.5 inches per foot of soil. In places roots penetrate to a depth of 5 feet or more.

This soil is used for sugarcane, pineapple, pasture, truck crops, orchards, wildlife habitat, and homesites. (Capability classification lie, irrigated or nonirrigated; sugarcane group 1; pineapple group 5; pasture group 5; woodland group 5)

Mokuleia Series
This series consists of well-drained soils along the coastal plains on the islands of Oʻahu and Kauaʻi. These soils formed in recent alluvium deposited over coral sand. They are shallow and nearly level. Elevations range from nearly sea level to 100 feet. The annual rainfall amounts to 15 to 40 inches on Oʻahu and 50 to 100 inches on Kauaʻi. The mean annual soil temperature is 74° F. Mokuleia soils are geographically associated with Hanalei, Jaucas, and Keaau soils.

In this survey area a poorly drained variant of the Mokuleia series was mapped. This soil, Mokuleia clay loam, poorly drained variant, is described in alphabetical order, along with other mapping units of this series.

These soils are used for sugarcane, truck crops, and pasture. The natural vegetation consists of kiawe, klu, koa haole, and bermuda grass in the drier areas and napier grass, guava, and joee in the wetter areas.

Mokuleia fine sandy loam (Mr)
This soil occurs on the eastern and northern coastal plains of Kauaʻi. It is nearly level. This soil has a profile like that of Mokuleia clay loam, except for the texture of the surface layer.

Permeability is moderately rapid in the surface layer and rapid in the subsoil. Runoff is very slow, and the erosion hazard is slight. The available water capacity is about 1 inch per foot in the surface layer and 0.7 inch per foot in the subsoil. Included in mapping were small areas where the slope is as much as 8 percent.

This soil is used for pasture. (Capability classification Ills if irrigated, IVs if nonirrigated; sugarcane group 1; pasture group 3)

Mokuleia clay loam, poorly drained variant (Mta)
This soil occurs on Kauaʻi. It is nearly level. The soil is poorly drained, and in this way, it differs from other soils of the Mokuleia series. The surface layer is dark brown to black and is mottled.

This soil is used for sugarcane, taro, and pasture. (Capability classification IIIw, irrigated or non-irrigated; sugarcane group 3; pasture group 3)

Rough Broken Land

Rough broken land (rRR) consists of very steep land broken by numerous intermittent drainage channels. In most places it is not stony. It occurs in gulches and on mountainsides on all the islands except O'ahu. The slope is 40 to 70 percent. Elevations range from nearly sea level to about 8,000 feet. The local relief is generally between 25 and 500 feet. Runoff is rapid, and geologic erosion is active. The annual rainfall amounts to 25 to more than 200 inches.

These soils are variable. They are 20 to more than 60 inches deep over soft, weathered rock. In most places some weathered rock fragments are mixed with the soil material. Small areas of rock outcrop, stones, and soil slips are common. Included in mapping were areas of colluvium and alluvium along gulch bottoms.

This land type is used primarily for watershed and wildlife habitat. In places it is used also for pasture and woodland. The dominant natural vegetation in the drier areas consists of guava, lantana, Natal redtop, bermuda grass, koa haole, and molasses grass. Ohia, kukui, koa, and ferns are dominant in the wetter areas. Puakeawe, aalii, and sweet vernal grass are common at the higher elevations. (Capability classification VIIe, nonirrigated.

This land type is used mostly for the production of sugarcane. (Not in a capability classification)

Rock Outcrop

Rock outcrop (rRO) consists of areas where exposed bedrock covers more than 90 percent of the surface. It occurs on all five islands. The rock outcrops are mainly basalt and andesite. This land type is gently sloping to precipitous. Elevations range from nearly sea level to 10,000 feet. Included in mapping were a small area of lithified coral sand on Moloka'i and small areas of coral outcrop along the coasts of other islands.

This land type is not suited to farming. It is used for water supply, wildlife habitat, and recreation. (Capability classification VIIIs, nonirrigated)

The following is the Legend for the next Soil Maps:

Map Symbol	Soil Name
BS	Beaches
DL	Dune Land
Fd	Fill Land
HnA	Hanalei silty clay, 0 to 2 percent slopes
KdF	Kalapa silty clay, 40 to 70 percent slopes
KvB	Koloa stony silty clay, 3 to 8 percent slopes
KvC	Koloa stony silty clay, 8 to 15 percent slopes
KvD	Koloa stony silty clay, 15 to 25 percent slopes
LhB	Lihue silty clay, 0 to 8 percent slopes
LhC	Lihue sitly clay, 8 to 15 percent slopes
LhE2	Lihue silty clay, 25 to 40 percent slopes, eroded
LiB	Lihue gravelly silty clay, 0 to 8 percent slopes
LiC	Lihue gravelly silty clay, 8 to 15 percent slopes
Mr	Mokuleia fine sandy loam
Mta	Mokuleia clay loam, poorly drained variant
rRR	Rough broken land
rRO	Rock Outcrop

3.1.3 Topography
The topography varies along the path corridor. The terrain is hilly at the north end of the project around the Lydgate Play Bridge Structure. The land becomes relatively flat along Kuhio Highway, through the golf course and onto the Marine Camp Site.

Two drainage areas occur on the project site; one is located north of the Radisson Hotel and the other fronts the hotel. Moving south, the topography rises at the Ocean Bay Plantation and then runs in a steady, but slight incline across the coastal bluff towards the Hanama'ulu railroad bridge. At the south end of the bridge, the topography drops dramatically to then meet the airport property. Above the Ahukini Point fishing Pier, the land flattens out again across the bluff.

3.1.4 Climate
Climate conditions in the area are known to have mean temperatures ranging from 70.3 degrees Fahrenheit in the winter to 78.4 degrees Fahrenheit in the summertime. The relative humidity levels vary from 63% to 88%. The annual average rainfall is approximately 45 inches.

3.1.5 Air Quality
The air on the island of Kaua'i is good and meets the standards of the Clean Air Act.

3.1.6 Hydrology and Water Quality
The alignment of the proposed bicycle and pedestrian path lies within two watersheds, the Hanama'ulu and Kawailoa watershed, and are described below:

Hanamaʻulu Watershed

Within the project area, the Hanama'ulu watershed contains the Hanama'ulu Stream that will be traversed approximately twenty-five feet above the drainage canal and along an existing bridge.

Kawailoa Watershed

Within the project area, the Kawailoa watershed contains one drainage ditch and one drainage canal that will be traversed along the proposed alignment. The drainage ditch flows adjacent to Hilton Lane. The water level fluctuates greatly with precipitation, and is most often dry at the location where the ditch will be traversed. The drainage canal flows south of the Motocross facility located in Marine Camp Park. The path will cross over the drainage canal on an existing, abandoned cane haul concrete box culvert bridge.

According to the USGS topographical map of the area, another drainage traverses the Moody property, flowing to the southeast. The canal terminates mauka of the railroad grade and cane haul road intersections. This drainage most likely functioned as a means for irrigating for the cane haul fields. The drainage will not be traversed along the proposed path alignment.

Water Quality
The state waters that will be traversed along the project corridor are classified as inland, flowing, Class II waters as defined by the Department of Health (HAR Title 11, Chapter 54). The objective of Class II waters is "to protect their use for recreational purposes, the support and propagation of aquatic life, agricultural and industrial water supplies, shipping, and navigation. The uses to be protected in this class of waters are all uses compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters." These waters shall not receive discharge without a high degree of control compatible for the criteria established for this class (Chapter 54-3).

Clean Water Act, Section 303(d)
The federal Clean Water Act (CWA) requires states to submit to the Environmental Protection Agency lists of waterbodies that are not expected to meet state water quality standards. This list is referred to as the 303(d) List of Impaired Waters. The level of impairment of each waterbody as determined by the state is judged by review of all existing available surface water quality data and compared to the State's Water Quality Standards. For all impaired waters, the State Department of Health (DOH) is required to compute

the Total Maximum Daily Load (TMDL). This is the maximum amount of a pollutant, from point or non-point sources, that a waterbody can receive and still meet water quality standards. The DOH assigns each impaired waterbody a priority of high, medium, or low, based on the severity of pollution and how the water is used. The Hanamaʻulu Stream is the only listing in the project area. It is a priority 2a stream, and is listed on a numeric basis for an exceedance of the wet season turbidity standard. (http://www.hawaii.gov/health/environmental/env-planning/wqm/303dpcfinal.pdf)

3.1.7 Natural Hazards

The natural hazards endemic to all of Hawaiʻi involves tsunami action. There have been four episodes since 1946. These occurrences happened in 1946, 1957, 1960 and 1964 respectively. In the project area, the runup heights vary from 9.5 feet to 20 feet.

Flood Zones are designated by FEMA and depicted on a Flood Insurance Rate Map (FIRM). Zone X includes areas that have a less than 0.2 percent chance of annual flooding. Zone VE includes areas which are subject to a one percent or greater annual chance of flooding in a year where base flood elevations have been determined and the site is subject to velocity hazards caused by ocean wave action. Zone AE includes areas which are subject to a one percent or greaer annual chance of flooding and base flood elevations have been determined. Zone A includes areas which are sujbect to a one percent or greater annual chance of flooding in a year, but base flood elevations are not available because hydraulic analysis has not been performed.

In relation to flooding, most of the project corridor is assigned Zone X, defined as areas outside the 0.2% annual chance floodplain. Only one area along the preferred path alignment is within Zone VE, defined as the coastal flood zone with velocity hazard caused by wave action in the 100 year flood. This area occurs at the Hanamaʻulu Stream. Three additional areas are within Zone AE, defined as a special flood hazard area that is subject to inundation by the 1% annual flood, where base flood elevations are determined. These areas occur at Ahukini Point, along Hilton Lane where the path alignment meets the Hilton Lane and continues makai to the existing comfort station, and in the northern region of the golf course. Another area along the Wailua Golf Course is within Zone A, where no base flood elevations have been determined.

Further natural hazards include hurricanes and swells. Swells have had a range of waves from four to ten feet. The most recent hurricanes to affect the island of Kauaʻi were Hurricane Iwa in 1982, and Hurricane Iniki in 1992. The wave action from these hurricanes varied from 17 to 40 feet.

Earthquakes in Hawaiʻi are typically associated with volcano action. The Uniform Building Code (UBC) scale is rated from Seismic Zone 1 through 4, with 1 having the lowest potential for seismic induced ground movement. Kauaʻi is assigned to Seismic Zone 1, and has had lower intensity of seismic activity than most of the Hawaiian Islands.

3.1.8 Noise

Currently, there is not a substantial amount of noise along the path corridor, with the exception of the sound of traffic along Kuhio Highway.

3.1.9 Hazardous Materials

Research was conducted to identify areas with potential ground contamination in the area of the corridor that could come into contact during construction of the pathway. Governmental databases were reviewed for this information, including those that are maintained by the Department of Health and the Environmental Protection Agency.

The mission of the Hazard Evaluation and Emergency Response (HEER) Office is to protect human health, public welfare, and the environment and provide state leadership, support and partnership in preventing, planning for, responding to and enforcing environmental laws relating to the releases or threats of releases of hazardous substances, pollutants or contaminants. The HEER Office has an interest, has already investigated, or may investigate under HRS 128D the following facilities, sites, or areas that the preferred path alignment may come into contact with:

Site Name	Address	Fed ID#/Case #	Activity Type	Status
Lihue Plantation Co, LTD-Lihue Herbicide Mixing Plant	3-4671 Kuhio Hwy Hanamaʻulu, HI 96766	No data available	PA1/SI1	Ongoing Superfund Site
Hanamaʻulu Beach Park	Hanamaʻulu Beach Park, 96766	20040708-1157	Abandoned drum containing inert material	No further action required
Radisson Kauaʻi Beach Resort	4331 Kauai Beach Drive Lihue, HI 96766	19910903	UST removal and remediation (Diesel Fuel)	No further action required
Aloha Airlines, Lihue Airport	No data available	19981221-2230	1 gallon jug in cardboard box-unknown	No further action required
Lihue Airport	No data available	20000831-1434	Ahukini Road well dumping of 2,000 gallons of motor oil	No data available
Radisson Kauaʻi Beach Resort	No data available	’33 (?)	KAUAI HILTON Soil Remediation	No further action required

Mapping and/or data of the exact location of the contamination on each property was not found in the databases. Therefore, the path may or may not encounter these contamination sites.

3.2 Biological Environment

Consultation with the US Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) was conducted to identify sensitive areas as related to the biological environment (refer to the ESA section of Appendix A). This document does not include specific assessments for plants, birds or marine animals, as the only areas of this project that are relatively undisturbed were studied with the preparation of the EIS for the Ocean Bay Plantation project, and the Lihue/Hanama'ulu Master Plan.

3.2.1 Flora and Vegetation Communities

The vegetation along the corridor is a mixture of native and introduced species. According to Dr. David Lorence, Director of Science and Chair of Botany at the National Tropical Botanical Garden, there are no known terrestrial endangered plants where the project is located (refer to Appendix C for the meeting minutes associated with this consultation). In addition, no concerns were identified from the USFWS (refer to the ESA section of Appendix A).

The following vegetation communities and dominant plant species of each are represented along the corridor:

Rock Outcrop: This vegetation community is located along the coastal bluff of the Ocean Bay Plantation.

Trees:
- ironwood (*Casuarina equistifolia)*
- tree heliotrope (*Tournefortia argentea)*

Shrubs:
- naupaka (*Scaevola sericea)*
- yellow ilima (*Sida fallax)*

Understory:
- pau o hiiaka (*Jacquemontia ovalifolia ssp. sandwicensis)*
- akulikuli (*Sesuvium portulacastrum)*
- aki aki grass (*Sporobolus virginicus)*

Forested Areas: This vegetation community is located along the Hanama'ulu Bay and where the path extends into Conservation Land on the north side of the Ocean Bay Plantation Property heading towards Hilton Lane.

Trees:
- ironwood
- coconut palm (*Cocos nucifera)*
- java plum (*Syzygium cumini)*
- lemonscented gum (*Eucalyptus citriodora)*
- bingabing *(Macaranga mappa)*
- parasol leaf tree (*Macaranga tanarius)*
- kolomona (*Senna gaudichaudii)*
- hau (*Hibiscus tiliaceus)*

Understory:
- guinea grass (Panicum maximum)
- wedelia (*Wedelia tribolata)*
- coramadel (*Asystasia sp.)*

Abandoned Sugar Cane Fields: This vegetation community exists along the old cane haul roads that will be used for sections of the path corridor. These roads occur mauka of Ahukini State Recreation Pier, at the south end of the Ocean Bay Plantation property, and where Hilton Lane road ends and turns into a cane haul road mauka of the existing motocross facility.

Trees:
- guava (*Psidium guajava)*
- chinaberrytree (*Melia azedarach)*
- kolomona
- hau
- silkoak (*Grevillea robusta)*
- ironwood
- haole-koa (*Leucaena leucocephala)*

Understory:
- guinea grass
- lantana (*Lantanta camara)*
- California grass (*Brachiaria mutica)*
- molasses grass (*Melinis munutiflora)*

Beach Parks: This vegetation community occurs at Ahukini Beach Park, Hanamaʻulu Beach Park, Marine Camp, and at the Lydgate Park Play Bridge Structure.

Trees:
- ironwood
- coconut palm
- tree heliotrope
- false kamani (*Terminalia catappa)*

Shrubs:
- naupaka

Understory:
- bermuda grass species
- aki aki grass

Disturbed Sites: These areas have been highly disturbed from development and include the Kauaʻi Beach Hotel and Resort (old Radisson), Kauaʻi Beach Villas, the Wailua Golf Course, and along Kuhio Highway. The resort, villas, and golf course consist mainly of grassy lawns and landscaping. Kuhio Highway is bordered by a thick mass of guinea grass.

3.2.2 TERRESTRIAL FAUNA

The following mammalian and avian species have already been documented in the project area:

- **Mammals:** In the EIS prepared for the Lihue-Hanamaʻulu Master Plan, one endangered mammalian species, the hoary bat (*Lasiurus cinereus semotus)* was documented in the area.

- **Avians:** In the EIS prepared for the Lihue-Hanamaʻulu Master Plan (Bruner, 1994), no native land, water, or migratory birds were found in the area studied for the EIS. Hawaiian Duck (*Anas wyvilliana)* and Hawaiian Moorhen (*Gallinula chloropus sandvicensis)* were observed off-site in wetlands. These two species are listed as endangered under the Federal Endangered Species Act. In addition, Newell's Shearwater (*Puffinus auricularis newelli)* was recorded as being a probable species to fly over the property as they move between nesting and foraging. This species is listed as a threatened species.

Another study was conducted for the Ocean Bay Plantation EIS in 2001 (Rana Productions Ltd., 2001). Three endangered avian species were documented in this area, including the Hawaiian Coot (*Fulica alai*), the Hawaiian Petrel (*Pterodroma phaeophgia sandwichensis*) and Newell's Shearwater. The Wedge-tailed Shearwater, or the ʻuaʻu kani (*Puffinus pacificus*), is an indigenous breeding seabird that was also documented in the area.

Another protected avian species in the area is the Nene (*Nesochen sandvicensis*).

A study to determine if endangered bird species, notably, the Wedge-tailed Shearwater, are present will need to be conducted to determine if a path route through the Conservation Lands is possible. The survey of the path route cannot be conducted until permission for right-of-entry is granted by the landowner, which has not been obtained as of this publication. If the Conservation Lands do contain nesting Wedge-tailed Shearwaters, it is recommended by the DLNR that the path be re-aligned along the old sugar cane road to avoid impact to these species (refer to the ESA section of Appendix A).

3.2.3 Marine Fauna

According to Dr. Jeffrey Walters, Co-Manager of the Hawaiian Islands Humpback Whale National Marine Sanctuary for the State of Hawaiʻi, Department of Land and Natural Resources Division of Aquatic Resources, Kauaʻi sees the Humpback Whale (*Megaptera novaeangliae*), Green Sea Turtle (*Chelonia mydas*), and Hawaiian Monk Seal (*Monachus schauinslandi*) as they swim south. All of these species are listed as endangered under the Endangered Species Act.

The Humpback Whale season is November to May, with January to March being the peak season. The Green Sea Turtle will breed in the northwest islands and go south to forage. The Hawaiian Monk Seal uses the beach to dry out, digest food, and rest throughout the day, and then goes to sea to feed during the night. There are approximately 200-300 Hawaiian Monk Seals in the main eight Hawaiian Islands.

3.3 Socio-Economic Environment

A full discussion of Archaeological, Historic, and Cultural Resources and Native Hawaiian Rights Issues is found in Appendix A of this document.

3.3.1 Archaeological Resources

There have been at least 15 archaeological projects conducted in this area from 1907 to 2004 (Archaeological Conditions Report, 2005). These have lead to the documentation of numerous prehistoric sites. In 1906, two *heiau* were recorded in the project area: Ahukini and Kalauokamanu. These *heiau* were not marked on maps but were simply described. During an island-wide survey in 1928-1929, the two *heiau*, now known as Site 101 and Site 102, were also noted. Ahukini *heiau* was built near Ahukini Point on a bluff overlooking the sea while the location of Kalauokamanu *heiau* was never identified. Both *heiau* had been destroyed as of 1855.

The most well-known site in this area, due to the influx of Cultural Resources Management research related to golf course activities and development of Lydgate Park, is Site 103, originally recorded by Bennett during an island-wide survey in 1928-1929. Bennett makes first mention of Site 103 in this area: "in the sand dunes that run along the shore half way between Hanamaʻulu and Wailua River are many burials." At this writing, over 66 burials have been identified throughout the golf course area alone, with most of these having been re-interred in a burial crypt at the golf course itself.

An above ground interment site, a critical component of Site 103, is located inside the parking lot of the Wailua Golf Course. The interment site will not be directly affected, but the path alignment will cross within 30' of the site.

3.3.2 Historical Resources

There are many historical sites in the general project area (refer to Appendix D-Archaeological Conditions Report). These include Ahukini Landing as well as other local historic resources including habitation complexes, structures, roads, and cemeteries/burial areas. The historic infrastructure from Ahukini

Landing toward the Lydgate area is dominated by plantation-era construction representing transport and processing relative to the sugar cane industry. It is very possible that the disturbance caused by the historic sugar cane industry destroyed many prehistoric sites in the area, including dryland agricultural loci and house sites. During WWII, the military enhanced some of these features for their own transport and access and often created new roads through the area. However, the history of this area still remains entrenched within the bygone plantation-era.

Specific to the preferred path alignment, only two historical sites will be traversed. Site 1845 is the historic Hanamaʻulu Railroad Bridge, a structure representing the plantation era. Site 1846 represents two historical concrete railroad bridges; only one will be traversed, located north of the Radisson property and north of the dead end of Hilton Lane.

3.3.3 Cultural Resources

Hanamaʻulu translates as "tired (as from walking) bay" and is said to be the birthplace of the hero Kawelo. This area was referred to as Puna District at the time of the Great Mahele of 1848; not as Lihue District as it is now. The Hanamaʻulu area is not specifically mentioned in many historical texts.
However, Hanamaʻulu is noted in *Olelo Noćeau*, a book of Hawaiian sayings and epithets, which states the following:

- No Hanamaʻulu ka ipu puehu ("The quickly emptied container belongs to Hanamaʻulu").

Another quote about the area states the following (Archeological Conditions Report, 2005):

- "Said of the stingy people of Hanamaʻulu, Kauaʻi—no hospitality there. At one time, food containers would be hidden away and the people of Hanamaʻulu would apologize for having so little to offer their guests."

From Hanamaʻulu Bay to the west, toward Lihue, multiple Land Commission Awards (LCA's) are present. In general, the LCA's primarily denote *loʻi* lands (taro fields). Here, dryland taro cultivation was probably practiced while coconut, sweet potato, and breadfruit were also likely grown. The Mahele records of the Hanamaʻulu area tell of native tenants living in the valleys and by the shoreline. House sites, taro pond fields, irrigation systems, dryland agricultural parcels, fishponds, pastures, and other features were across the landscape. Many of these lands were cleared during Plantation days, thus masking or erasing these sites.

The cultural significance of the Wailua Area, further to the North, is well documented. Center of the isle's political and economic universe, Wailua was the chiefly seat of Kauaʻi during prehistoric times, as is attested by the numerous *heiau* and other ceremonial sites occurring along the Wailua River basin.

3.3.4 Native Hawaiian Rights

According to Wade Ishikaura, of Department of Land and Natural Resources, Aquatic Resources Division, many local men fish in the areas of the Marine Camp and Ahukini Point. Swimming is a common activity for locals at Hanamaʻulu Beach Park. According to LaFrance Kapaka Arboleda, of Office of Hawaiian Affairs, Burial Council indicates that in the area north of the Hanamaʻulu Railroad Bridge is an area known as "nokuliʻi", and may contain mass burials.

According to members of a native Hawaiian family and their friends, there are a number of ancient historic paths used by the native Hawaiians, which may or may not occur on this path corridor. Based on cultural interviews, access to native gathering areas for fishing remain just as important today.

Further, this native group stakes a claim on all the property of the corridor, with the view that all the land of Hawai'i belongs to all the native Hawaiians. A common view is that all lands that contain wetlands or ponds are to be preserved for taro fields, and all the dry land should be preserved for home sites.

3.3.5 Summary of the Socio-Economic Environment

Overall, this portion of eastern Kauaʻi contains abundant evidence for historic networks related to plantation-era days and prehistoric sites related to burial and temporary habitation locations. While none of the sites beyond Ahukini Landing remain in spectacular form, they do allude to land tenure in the area

during the late 1880's onwards. The preferred path alignment will cross through various important historical zones, providing opportunities for educational signage and outdoor classroom experiences.

3.3.6 Title VI/Environmental Justice

The area of Hanamaúlu is an Environmental Justice community. Throughout this process, the County of Kauaí has worked to ensure full and fair participation by the community in the transporation decision-making process. A number of families in the area were consulted throughout this process. This area will benefit from this proposed bicycle/pedestrian path as it will provide transportation alternatives to the community.

3.4 Public Infrastructure and Facilities

3.4.1 Vehicular Access

Access to the path by vehicles can be accomplished in several locations along the corridor, including Ahukini Point, Hanama'ulu Beach Park, Marine Camp, the Radisson Hotel and Lydgate Park.

3.4.2 Water

The County Water Department will supply adequate water to the path project.

3.4.3 Wastewater

The waste from the comfort stations will use septic tanks and leach fields.

3.4.4 Power & Communications

There is power and electricity along Kapule/Kuhio Highway. The existing capacity is adequate to serve the project.

3.4.5 Schools

The only school near the project corridor vicinity is King Kaumaulii Elementary School in Hanama'ulu.

3.4.6 Parks & Recreation Facilities

There are three county parks and one state park recreational facility within the boundaries of this project. On the north end is the county park, known as Lydgate Park. The second county park is the Marine Camp, and towards the south end of the project is the third county park, Hanama'ulu Beach Park. Ahukini Point at the south end is a State Park Recreation Area providing fishing opportunities.

3.5 Public Health and Safety

3.5.1 Police Services

Services will be provided by the County of Kaua'i Police Department. The Deputy Chief, Ron Venneman requests that access be available for the police cars at reasonable points along the corridor, that the path use at night be considered the same as any other County park facility, and that emergency call boxes be installed in the more remote locations along the corridor.

3.5.2 Fire and Emergency Services

Fire protection and Emergency services will be provided from the County of Kaua'i Fire Department. The closest hospital is Wilcox Hospital in Lihue, and will be the service provider for emergencies.

The Prevention Captain, Chief David Bukowski, requests that access be available for fire trucks at intervals of no less than ¼ mile, and on either end of the Hanama'ulu Railroad Bridge.

4. IMPACTS AND MITIGATION MEASURES

4.1. Short-term Impacts

4.1.1. Noise

4.1.1.1. No Action Alternative

Under the No Action Alternative, future traffic noise levels are likely to increase in relation to the increases of traffic volumes on Kūhiō Highway that would be associated with trips generated by coastal recreational resources, such as Lydgate Park, Hanamāʻulu Beach Park and Ahukini Landing. This alternative would not entail any construction and therefore create no temporary increases in noise from construction activities.

4.1.1.2. Preferred Alternative

Noise will be generated during the construction phase of this project. This impact is temporary and confined to the period of construction. During construction, the contractor must comply with DOH Administrative Rules Chapter 11-46 on Community Noise Control.

Non-motorized transportation does not generally produce loud noise. Socializing along the path could be an issue to golfers and residents of the area. Nighttime use of the path could be disruptive to the Kauaʻi Beach Villas and/or the Radisson Hotel. A mitigation measure for this impact is to install signs along the path in noise sensitive areas, reminding path users to keep noise at a respectful level.

4.1.2. Air Quality

4.1.2.1. No Action Alternative

Under the No Action Alternative, no path would be constructed and no path amenities would be provided. Therefore, there would be no short-term impacts on air quality resulting from construction activities.

4.1.2.2. Preferred Alternative

The purpose of this project is to reduce combustion vehicle trips and provide recreational opportunities by constructing a non-motorized bicycle and pedestrian path. The project will not result in any meaningful changes in traffic volumes, vehicle mix, location of the existing facility, or any other factor that would cause an increase in emission impacts relative to the no-action alternative. As such, FHWA has determined that this project will generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special mobile source air toxin (MSAT) concerns. Consequently, this effort is exempt from analysis for MSAT.

Moreover, EPA regulations for vehicle engines and fuels will cause overall MSATs to decline significantly over the next 20 years. Even after accounting for a 64 percent increase in vehicle-miles traveled (VMT), FHWA predicts MSATs will decline in the range of 57 percent to 87 percent, from 2003 to 2020, based on regulations now in effect, even with a projected 64 percent increase in VMT. This will both reduce the background level of MSATs as well as the possibility of even minor emissions from this project.

Best Management Practices will be incorporated into the construction of the path project. Some of the mitigation measures include:

- Irrigate the construction site during periods of drought or high winds
- Install silt screening in the areas of disturbance
- Clean roads of construction dirt from the construction vehicles
- Cover open beds of trucks hauling materials into and out of the site
- Disturb only the areas of construction that are in the immediate zone of construction to limit the amount of time that the areas will be subject to erosion

To minimize the amount of exhaust from the construction trucks and other vehicles, all equipment shall be maintained properly to minimize emission during the time of construction.

The contractor shall incorporate the measures required by the State Department of Health Rules and Regulations in Chapter 43, Section 10, and the Hawaii Administrative Rules Chapter 11-60.1 Air Pollution Control, and Section 11-60.1-33 related to Fugitive Dust Emissions.

4.1.3. Energy and Mineral Resources

The resources required for construction will not be excessive and will be required only for the course of the construction of the project.

4.1.4. Construction and Utilities

4.1.4.1. No Action Alternative

Under the No Action Alternative, no construction would be required and therefore no construction and utilities impacts are expected.

4.1.4.2. Preferred Alternative

The impacts of the construction of the project will involve construction of the path, comfort stations, and parking lots at the golf course and Marine Camp. The present entranceway to the golf course will remain open while the new one is constructed. The parking lot at Marine Camp will be gravel. The utilities required for the Hanamāʻulu Beach Park comfort station renovation are in place, as they were needed for the operation of the building that was formerly in the location of the comfort station. Six utility poles at the Wailuā Golf Course will need to be moved in order to widen Kūhiō Highway for deceleration and acceleration lanes in and out of the golf course. These impacts will be temporary and are confined to the time of construction.

4.1.5. Underground Storage Tanks

4.1.5.1. No Action Alternative

No impacts are anticipated since there are no known underground storage tanks within the project corridor.

4.1.5.2. Preferred Alternative

No impacts are anticipated since there are no known underground storage tanks within the project corridor.

4.1.6. Hazardous Waste Sites

From the research conducted for potential hazardous waste sites in or near the project corridor using the HEER website database, two sites are lacking specific detail and were a cause of initial concern. These two sites are listed below:

Site Name	Address	Fed ID #/Case #	Activity Type	Status
Līhuʻe Airport	No data available	20000831-1434	Ahukini Road well dumping of 2,000 gallons of motor oil	No data available
Radisson Kauaʻi Beach Resort	4331 Kauaʻi Beach Drive Līhuʻe, HI 96766	19910903	UST removal and remediation (Diesel Fuel)	Refer to ISST

4.1.6.1. No Action Alternative

The No Action Alternative would not entail any construction and therefore not cause any adverse impacts to any known or unknown hazardous waste sites.

4.1.6.2. Preferred Alternative

The "Līhuʻe Airport" Site is not of concern because the proposed path alignment in this area will utilize the existing paved roadway of Ahukini Road. No construction is necessary for this portion of the pathway; rather, a bike lane will be added to the present concrete using white striping to indicate the assigned bike lane. Though the address and status of this hazardous site is not available in the HEER database, "well dumping" would occur at a well location. Well sites would not occur on a constructed roadway.

Personal communications with Melody Calisay, from the Department of Health, have occurred regarding the status of the "Radisson Kauaʻi Beach Resort" site. Per Ms. Calisay's letter response dated February 16, 2000, the site was evaluated by HEER according to criteria listed in HAR Tile 11, Chapter 451 for the appropriate determination of prioritization. Possible priority determinations can identify sites as high priority, medium priority, low priority, or for no further action. Based on an evaluation of available reports and studies, the HEER Office had determined that no further action was appropriate for this site in regards to release and threats of releases of hazardous substances.

4.1.7. Traffic

4.1.7.1. No Action Alternative

Under the No Action Alternative, no path or recreational amenities would be improved. Pedestrians and bicyclist would be forced to use Kūhiō Highway to traverse the project corridor.

4.1.7.2. Traffic Impacts

There will be no disruption to existing traffic patterns for the construction of the project. Some short-term impact to roadways may result from construction activities, such as temporary lane closures and disruptions to Kūhiō Highway. If necessary, a traffic control plan would be developed and coordinated with County and State agencies for the appropriate review and approval. It is possible that police officers may be required to assist with implementing traffic control during construction activities along Kūhiō Highway.

4.1.8. Employment

4.1.8.1. No Action Alternative

The No Action Alternative would have a negative impact on the employment in Kauaʻi, as jobs for numerous laborers and supervisors for construction would not be created.

4.1.8.2. Preferred Alternative

The construction of the project will have a positive impact on the employment in Kauaʻi, as there will be a need for numerous laborers and supervisors for construction.

4.2. Long Term Impacts

4.2.1. Land Use Changes

4.2.1.1. No Action Alternative

The No Action Alternative would not entail any land use changes and would not cause any land use impacts.

4.2.1.2. Preferred Alternative

The alignment is compatible with existing land use designations and is not anticipated to require any changes.

4.2.2. Zoning

4.2.2.1. No Action Alternative

The No Action Alternative would not entail any zoning changes and would not cause any zoning impacts.

4.2.2.2. Preferred Alternative

The project will not require any zoning changes from the County.

4.2.3. Churches and Institutions

4.2.3.1. No Action Alternative

There are no churches or institutions located in the vicinity of the project corridor; therefore, the No Action Alternative would not have any impacts on churches and institutions.

4.2.3.2. Preferred Alternative

There are no churches or institutions located in the vicinity of the project corridor to be affected.

4.2.4. Controversy Potential

4.2.4.1. No Action Alternative

Under the No Action Alternative, no path would be built which would result in the disappointment of those community and political leaders who supported the project. In addition, a portion of the Nāwiliwili to Anahola Bike/Pedestrian Path contained in the 1994 State of Hawai‘i Master Plan – Bike Plan Hawai‘i would not be completed.

4.2.4.2. Preferred Alternative

Overall, there is widespread support for this project from the community and political leaders. Several Native Hawaiians expressed the desire to determine land uses in this area rather than having government make that determination for them. Many golfers expressed concerns about path users interfacing with the golf course and felt this would impact their ability to play at the Wailuā Golf Course. However, after discussion of the alternative alignments at Public Meeting #3, many golfers saw those alternatives as causing a much greater impact to the golf course, and much of the concerns were relieved.

Mitigation for this impact is to take into consideration the views and opinions of everyone who expresses a voice about the project. A goal of the project is to strive to create a path that is compromising and a reflection of a majority of people’s opinions and concerns. Considering the efforts to appease everyone involved, public opposition is considered minimal.

4.2.5. Economic

4.2.5.1. No Action Alternative

The No Action Alternative would not involve the increase of short term jobs through construction and therefore not have any economic impacts.

4.2.5.2. Preferred Alternative

There are no negative long-term impacts resulting from the bicycle and pedestrian path project.

4.2.6. Historical, Archeological, and Cultural Resources

Appendix A includes the Section 106 Consultation documents and correspondence letters that relate to historical, archeological, and cultural resource issues. Specifically, coordination with the State Historic Preservation Division occurred as a response to the Draft Environmental Assessment (DEA) on January 31, 2006 (see Appendix C). Additional Section 106 consultation occurred in 2012 and is contained in Appendix A.

The following historical, archeological, and cultural resources will be traversed within the proposed path alignment:

- The Hanamā‘ulu Railroad Bridge
- A historical concrete box culvert
- An interment site in the Wailuā Golf Course parking lot

4.2.6.1. No Action Alternative

The No Action Alternative would not create any new or direct impacts on any historical, archeological, and cultural resources.

4.2.6.2. Preferred Alternative

Minimal impact with no adverse effect is expected for these resources.

In general, the following mitigation efforts are proposed:

- The historic and cultural sites are to be avoided where possible. An Archaeological Monitoring Plan was prepared for the SHPD because of the archaeologically sensitive nature of portions of the project area (refer to Appendix D). This report determines what measures will be taken when and if cultural artifacts are found during and/or before construction commences. Monitoring procedures will be conducted in accordance with the rules and regulations established by the Department of Land and Natural Resources (DLNR) SHPD.

- To protect the historic character of the Hanamāʻulu Railroad Bridge, work to the bridge will be as minimal as possible. Structural repairs will be done to restore and stabilize the bridge. Further, handrails and other features that will be required for public safety shall be incorporated with sensitivity to the historic nature of the bridge and to minimize the visual effect of handrails by using tension cabling for the handrails. A letter dated May 1, 2006, was submitted to Susan Tasaki at SHPD for comment. As of this writing, no comment has been forwarded regarding modifications to the bridge and they are deemed acceptable (SHPD 30-day review period).

- The design team is to work with the Office of Hawaiian Affairs (OHA), Hawaiian Homelands, local Hawaiians, the Kauaʻi Burial Council, and whomever OHA recommends so that the needs and wishes of the Native Hawaiians are better understood. The ancient ala loa (ancient paths) are to be used where feasible and desirable, and signage to celebrate and educate about the Hawaiian heritage should be incorporated where budget and design allow.

SHPD has agreed that the Monitoring Plan will be the primary form of mitigation to address the presence/absence of sites not previously identified along the preferred path corridor. At this juncture, the preferred path alignment has not adverse impacts to any known sites with the possible exception of the Hanamāʻulu Railroad Bridge. A letter was sent to SHPD regarding the proposed path retrofit of the bridge. No response was received within the 30-day review period, indicating that SHPD had no concerns with the proposed path use of the bridge.

4.2.7. Wetlands

4.2.7.1. No Action Alternative

The No Action Alternative would not create any wetland impacts.

4.2.7.2. Preferred Alternative

Consultation with the Army Corps of Engineers (ACOE) occurred on January 9, 2006 as a response to the alternative alignment options that were analyzed in the draft environmental assessment process (refer to Appendix C). In 2009, a letter was submitted requesting a Jurisdictional Determination (JD), which was received on July 8, 2009. This project will be required to get an approved Department of Army (DA) Permit under Section 404 prior to construction, and if necessary, another JD approval would be sought in the event that the current JD expires prior to obtaining the permit.

4.2.8. Hydrology and Water Quality

4.2.8.1. No Action Alternative

The No Action Alternative would not impact hydrology or water quality.

4.2.8.2. Preferred Alternative

Hydrology and water quality will not impacted by the project. The existing Hanamāʻulu Railroad Bridge and an existing concrete box culvert bridge (located at Marine Camp) that will be used as bridges for the path do not and will not impede upon the hydrologic flow for the water from the mauka to makai sides of the path, and no work is planned inside of the canal channel. In addition, the irrigation canal that the concrete box culvert bridge crosses has not been listed as “impaired waters” by the Department of Health.

Hanamāʻulu Stream is the only listing in the project area by the Department of Health. It is a priority 2a stream and is listed on a numeric basis for exceeding the wet season turbidity standard. There will be no impacts to these current conditions, as the existing bridge over Hanamāʻulu Stream will be used for the proposed path alignment.

The National Pollutant Discharge Elimination System (NPDES) permitting mechanism, as mandated by Congress under the Clean Water Act, requires the implementation of controls designed to prevent harmful pollutants from being washed by stormwater runoff into local body waters. A permit is required if 1 or more acres of land will be disturbed, regardless of the size of any of the individually-owned or developed sites. The operator is responsible for applying for the permit as required by 40 CFR 122.21(b), the operator being the person who has operational control over the construction plans and specifications.

A Jurisdictional Determination for the proposed project was made by the U.S. Army Corps of Engineers (USACE), Honolulu District dated July 8, 2009. As determined by the USACE, no navigable waters of the U.S. are being crossed by the project that would trigger the need for a Section 10 Department of Army Permit. However a Section 404 permit is likely required for the proposed culvert replacement which has the potential to impact the physical, chemical, or biological integrity of a navigable water of the U.S. If the Section 404 Permit is deemed applicable after further consultation with the USACE, then a Section 401 Water Quality Certification will also be required for the culvert replacement.

Any impacts from non-point source pollution from construction activities will be minimized by implementation of best management practices. During the long term operation and maintenance of the path, impacts from non-point source pollution will be minimal because of adjacent landscaping and vegetation.

4.2.9. Wild/Scenic Rivers

4.2.9.1. No Action Alternative

There are no wild or scenic rivers in the proposed project site; therefore, the No Action Alternative will not impact any rivers.

4.2.9.2. Preferred Alternative

There are no wild or scenic rivers in the proposed project site that will be impacted by the project.

4.2.10. Farmland

4.2.10.1. No Action Alternative

There are no active farmlands on the corridor; therefore, the No Action Alternative will not impact any farmlands.

4.2.10.2. Preferred Alternative

There are no active farmlands on the corridor. The sugar cane fields that were on the Ocean Bay Plantation site and behind Hanamāʻulu Beach Park are no longer in production.

4.2.11. Natural Hazards

4.2.11.1. No Action Alternative

The No Action Alternative will not impact any natural hazards.

4.2.11.2. Preferred Alternative

Portions of the proposed alignment are within natural hazard zones and mitigation measures will be implemented.

Floodplains

Most of the proposed path alignment is outside the .2% annual chance floodplain, and are not areas of concern for impact of flood activity by the path. In these areas (Zone "X"), the path will not encroach on the base flood plains as defined in 23 CFR Part 650. In this regard, the majority of the path is not expected to obstruct floodwaters in extreme rain weather.

Four areas along the pathway are within flood zones for which base flood elevations have been determined. Zone VE occurs where the path traverses Hanamāʻulu Stream. However, since the proposed pathway will occur on top of the Hanamāʻulu Railroad Bridge, located approximately twenty-five feet above the stream, this path will not impact nor be impacted by the flood zone in this area.

Zone AE occurs in three areas: at Ahukini Point; where the path meets Hilton Lane and heads makai to the existing comfort station; and in the northern region of the golf course. The proposed path will be built with construction techniques and materials that are floodable. The proposed comfort stations will be built above the flood zones. A Best Management Practices program will be designed prior to commencement of construction to minimize storm water runoff during construction.

Tsunamis, Hurricanes, and Earthquakes
Coastal portions of the alignment are located within the tsunami inundation zone. Except for the bridges and the proposed comfort stations, the path alignment is flat and not vulnerable to hurricane high wind action. The bridge will be retrofitted to meet seismic and load standards. The culvert is not being used by the project and therefore would not be retrofitted.

Mitigation measures should include signage in natural hazardous areas, which would warn path users of potential coastal hazards, including hurricanes, tsunamis from wave action, or flood potential from storm action. In extreme weather conditions, the path should be closed as comparable to beach closures during the same conditions. Under such closure regulations, path users should be subject to evacuation or additional instructions as given by authorities for the area.

4.2.12. Traffic

4.2.13. No Action Alternative

The No Action Alternative would mean that an alternative form of transportation to the automobile would not be available in this area.

4.2.13.1. Preferred Alternative

Any long term effect on traffic may be positive, as more people will use the path and non-motorized transportation to connect to destinations along the corridor, rather than driving automobiles.

4.2.14. Visual

The 2000 Kauaʻi General Plan includes Heritage Resource Maps that depict natural, cultural, and scenic resources that are important to the County of Kauaʻi and that are intended to be conserved. The Līhuʻe Planning District Heritage Resource Map was reviewed to identify resources that may be affected by the proposed path corridor. Within the project area, Ahukini Point and the Radisson Hotel properties are identified as "residential, urban, resort, transportation, and/or military." Around the half circle of Hanamāʻulu Bay, the area is identified as an "important land form." Heading north into the conservation area and onto Hilton Lane heading inland towards the golf course and Kūhiō Highway, the land is identified as, "open space, parks, agriculture, and conservation." Kūhiō Highway and the entire pathway along the golf course are identified as a "scenic roadway corridor."

4.2.14.1. No Action Alternative

The No Action Alternative will not have any visual impacts.

4.2.14.2. Preferred Alternative

In general, the proposed path alignment is not expected to have significant negative impacts on view opportunities; rather, this flat corridor will not intrude on the surroundings but provide greater opportunities for the public to experience and appreciate the beauty of the natural settings.

Vertical additions to the proposed pathway include safety rails to the two existing bridges and safety fencing between the golf course fairways and the path. These visual impairments are minimal compared to the safety elements that they provide to the users. The boundary between Kūhiō Highway and the Wailuā

Golf Course is already separated by an abundance of trees, which reduce, if not eliminate, any view of the path and safety fence from the highway. Views from the golf course to the path and safety fence will be partially mitigated through placement of the proposed amenity through existing vegetation and by planting shrubs and trees on the golf course side of the safety fence. The existing bridges will have safety railing additions to them that could only block minimal specific heights for views. However, safe, non-motorized access along the proposed path corridor and accessibility for persons with disabilities will extend access to the many scenic viewpoints along the corridor to more people that would regularly have access to such views if the path were not built.
To minimize the visual impact along the path corridor, the path should be constructed with materials and colors that blend into the natural environment whenever possible.

4.2.15. Endangered/Threatened Species

4.2.15.1. No Action Alternative

The No Action Alternative will not have any impacts on endangered/threatened species.

4.2.15.2. Preferred Alternative

There are no endangered plant species in the area of the proposed path. The preferred alignment is not a coastal alignment and therefore avoids the habitat of the Hawaiian Monk Seal. The areas of concern that are inhabited by nesting Wedge-tailed Shearwaters will be surveyed, and if colonies are found, the path will be redirected along cane haul roads to avoid disturbance. In order to minimize the potential for disorienting listed seabirds and minimizing collision of listed seabirds and bats with light poles, lighting at the comfort stations will be shielded lighting mounted on the shortest poles possible that do not extend above the height of the existing vegetation. In order to minimize the effect of the proposed project on listed waterbirds, disturbance from construction and increased human activity along the proposed path will be kept to a minimum. The County of Kauaʻi will work with DOFAW on two interpretative signs and two regulatory seabird signs using DOFAW provided text and graphics. Educational signage will be incorporated where appropriate to inform the public of the marine environment and the species that live there. Educational signage will also include wildlife viewing guidelines as part of the County of Kauaʻi's interpretive sign program titled "Sign Requirements for Proposed Bikeway/Walkway."

4.2.16. Native Vegetation

4.2.16.1. No Action Alternative

The No Action Alternative will not have any impacts on Native Vegetation.

4.2.16.2. Preferred Alternative

It is not anticipated that there will be any negative impact to the native vegetation along the corridor; however, the following is a list of the measures that will be taken if encountered:

- The path will be routed around any major trees whenever possible, avoiding the drip line
- Trees that are one-foot or greater will be moved to a nearby location if they cannot be avoided
- New plants will be irrigated, at least until they are established
- Areas disturbed by construction will be re-vegetated as soon as possible after construction of each area
- Native plants will be used for new plantings where this is feasible

4.2.17. Terrestrial Environment

4.2.17.1. No Action Alternative

The No Action Alternative will not have any impacts to the terrestrial environment.

4.2.17.2. Preferred Alternative

It is not anticipated that there will be any negative impact to the terrestrial environment during construction. However, it is anticipated that a signage program can be incorporated into the path program to educate path users to the importance of the terrestrial environments along the corridor.

4.2.18. Marine Fauna

4.2.18.1. No Action Alternative—Marine Fauna

The No Action Alternative will not impact any marine fauna.

4.2.18.2. Preferred Alternative

It is not anticipated that there will be any negative impact to the marine mammal environment during construction, however, it is anticipated that an educational signage program can be incorporated into the path program to educate path users about Hawaiian Monk Seals and a description identifying the importance of the protocol that is followed when a Hawaiian Monk Seal beaches itself onto the shore. In addition, interpretive signs can be established for other marine fauna that may be observed at viewpoints along the path.

The State of Hawai‘i Department of Land and Natural Resources, Division of Aquatic Resources has offered to assist the County and the design team in the development of this signage program.

4.2.19. Interpretive Signs

4.2.19.1. No Action Alternative

The No Action Alternative will not would not entail any construction and therefore there would not be a need for Interpretive Signs.

4.2.19.2. Preferred Alternative

The County of Kaua‘i has developed an interpretive sign program titled “Sign Requirements for Proposed Bikeway/Walkway” for the path between Nāwiliwili Harbor and Anahola Beach Park, including locations within the Ahukini to Lydgate Park reach. The list of signs should be reviewed and incorporated into the path design during the design phase of the project.

4.2.20. Segmentation Cumulative Impacts

The current phasing of the path project is a result of budget constraints that prohibited the planning and permitting for the entire project length as one initiative. As funds were made available, each path reach was started; however, each path reach has logical termini. All the other segments of the path project that are currently in the environmental permitting, planning, pre-planning, and construction phases are being completed by other consulting teams and are not included in the scope of work or budget for this particular project.

4.2.20.1. No Action Alternative

The No Action Alternative would not entail any construction; therefore, there would not be any segmentation cumulative impacts.

4.2.20.2. Preferred Alternative

The project area satisfies two general principals in FHWA regulations (23 CFR 771.111(f)) (GPO 2004) on framing a transportation project.

1. Connect logical termini and is of sufficient length to address environmental matters on a broad scope.

   The proposed action for the Ahukini to Lydgate Park project has logical termini. The project begins on the south end at Ahukini Point, a State Park and popular destination point. The north end of the proposed path connects with an existing bicycle and pedestrian path located in Lydgate Park. Therefore, the proposed action connects an existing bicycle and pedestrian facility located within a park to another park amenity, Ahukini Point.

   The approximate length of the proposed path is 6.7 miles and the study area is approximately 850 acres. The length and size of the study area are sufficient to address the environmental issues for each of the alternative alignments presented in the Draft Environmental Assessment (DEA) phase of the project. The overall goal of the DEA is to identify and study alternative alignments and to

obtain comments from regulatory agencies and the public. Based on these comments, a preferred alternative alignment is selected that best avoids adverse environmental impacts.

2. Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made.

   The proposed path extension of the existing path from Lydgate Park to Ahukini Point is an independent and usable bicycle and pedestrian facility for both recreation and transportation. Additional connections/trip generators within this corridor include the Hanamā‘ulu Beach Park, Marine Camp Park and its motor-cross facility, the Radisson Hotel and condos, and the Wailuā Golf Course. An on-street bicycle facility planned to extend along Ahukini Road to the airport will allow for an additional multi-modal transportation connection.

   As an independent utility, the proposed project is reasonable even if no other transportation improvements in the area are made. The project is not expected to require a substantial amount of natural resources to construct, nor would the completion of the project require a significantly large commitment of such resources after construction. The project is expected to have minimal secondary impacts on resident population, land use patterns, public facilities and infrastructure, and the natural environment. Project construction activities are expected to generate only minor short-term impacts. Creation of short-term construction jobs would not require a substantial number of workers to move to Kaua‘i island to fill these new jobs. It is anticipated that local Kaua‘i contractors or contractors within the State of Hawai‘i would likely be used for the project’s construction. These workers would have minimal if any effect on the County’s residential population or housing demand and thus not generate the associated secondary effects on infrastructure, public facilities, and housing.

5.0 ALTERNATIVES TO THE PROPOSED ACTION

5.1. No Action Alternative

The No Action Alternative involves no changes in the site. The path project has been identified in the Lydgate Park Master Plan as one of the most important aspects of the park, and in Bike Plan Hawaii. Further, the project has been awarded TEA funds in the past for the construction of the project, and the current funding mechanism is MAP-21. There continues to be high community anticipation for the path and path related amenities such as comfort station.

If the project were not to be constructed, the following negative impacts would result:

- The shared-use path would need to be replaced by a path, sidewalk, or on-street bike and pedestrian facility with the Kūhiō and Kapule Highways right-of-ways resulting in an unsafe amenity for cyclists, pedestrians, and motorists.
- A major gap would be left in between the Lydgate to Anahola path segment and the Nāwiliwili to Ahukini Point path segment. Path users would be forced onto the highway (an unsafe option) would have to turn around once they encountered the un-built gap. If the Lydgate to Anahola and the Nāwiliwili to Ahukini Point shared use paths were not constructed, then the No Action Alternative would not result in this negative impact. However, the Lydgate to Anahola connecting path segment has been constructed, and the Nāwiliwili to Ahukini Point path segment has received approved entitlements to construct.
- Because of the un-built path segment, the original intention of the entire path network as a viable form of transportation as an alternative to the automobile would be greatly diminished. This means there would not be a reduction in fuel consumption, pollution, or roadway congestion. The need for parking lots would increase because the availability of an alternative to the automobile would not be available in this area.
- Affordable recreation for persons of all ages and abilities would not be provided.
- A means for ecotourism would not be provided.

5.2. Alternative Path Alignments Examined in the DEA

Two major path alignments and four sub-alternatives were identified in the DEA including:

- Alternative Alignment 1 (Coastal Path)
- Alternative Alignment 2 (Kapule/Kūhiō Highway Path)
- Sub-Alternative 3 (Ocean Bay Plantation—Upper Cane Haul Road)
- Sub-Alternative 4 (Hilton Lane and Marine Camp Connection)
- Sub-Alternative 5 (Radisson Hotel Bypass)
- Sub-Alternative 6 (Wailuā Golf Course Tunnel)

Refer to Appendix E—Alternative Maps 1 through 6, and Tables 1, 2, and 3 at the end of this chapter for the following discussion.

5.2.1. Common Elements to all Path Alignments

Each alignment and sub-alignment alternative has one segment in common, the reach between Ahukini Point and Hanamā‘ulu Beach Park because of a lack of other viable locations on which to construct the path. All path alignments that were considered have the following elements in common:

- Connection to Ahukini Point, including a new comfort station and on-street bicycle facility extending along Ahukini Road to the Līhu‘e Airport and Kapule Highway;
- Use of the abandoned can haul road/railroad bed and Historic Hanamā‘ulu Railroad Bridge for the path;
- Connection to Hanamā‘ulu Beach Park, including the reconstruction of an existing comfort station;
- Connection to the existing comfort station located south of the Radisson Hotel on Hilton Lane, including a path trailhead and automobile parking improvements;

- Connection to the Radisson Hotel;
- Connection to the Marine Camp site, including a new comfort station, path trailhead, and new gravel parking lot;
- Connection to the Wailuā Golf Course;
- Connection to the existing path in Lydgate Park;
- Eight to ten foot width concrete path with 3-foot wide shoulders; and
- Minimum corridor width of 16 feet.

5.2.2. Alternative Alignment 1 (Coastal Path)

(Refer to Appendix E – Alternative Alignment Map 1-6)
The Coastal Path Alignment is approximately 4.5 miles in length and is located along the coastline whenever possible. The major characteristics of the Coastal Path Alignment Alternative are:

- Is along the coast from approximately 2,000 lineal feet south of the Radisson Hotel all of the way to Lydgate Park, including the Wailuā Golf Course.
- Requires significant dune restoration to construct the path along the golf course reach.
- Requires specially designed wood and recycled plastic board walks for the pathway.
- New bike and pedestrian bridge that attaches to the existing Kamalani Play Bridge in Lydgate Park.

5.2.3. Alternative Alignment 2 (Kapule/Kūhiō Highway Path)

(Refer to Appendix E– Alternative Alignment Map 1-6)
The total distance of the Kapule/Kūhiō Highway Alternative is approximately 4.8 miles. The Kapule/Kūhiō Highway Path alignment generally runs parallel to both the Kapule and Kūhiō Highways most of its length. However, since the Kapule Highway Bridge spanning over the Hanamā‘ulu Stream does not have accommodations for bicycles or pedestrians and any such accommodation would be unsafe and cost prohibitive, the path will need to depart the highway corridor and make a connection into the abandoned cane haul road located mauka of the highway on the north side of Hanamā‘ulu Bay.

A major characteristic of the Kapule/Kūhiō Highway Path Alignment Alternative is:

- Avoids potential environmental conflicts that may occur with a coastal path alignment.

5.2.4. Sub-Alternative 3 (Ocean Bay Plantation – Upper Cane Haul Road)

(Refer to Appendix E – Alternative Alignment Map 1-6)
This alignment alternative takes advantage of the abandoned cane haul road rather than the area with the Conservation lands.

Major characteristics of the Ocean Bay Plantation – Upper Can Haul Road Alignment Alternative are:

- Relatively easy and inexpensive construction.
- Can be very hot on the abandoned cane haul road due to a lack of trade winds.
- Ocean views are often blocked because of vegetation and land.

5.2.5. Sub Alternative 4 (Hilton Lane and Marine Camp Connections)

(Refer to Appendix E – Alternative Alignment Map 3)
This Sub-Alternative was provided in order to provide a connection to those two locations from the Kapule/Kūhiō Highway Path Alternative.

Major characteristics of the Hilton Lane and Marine Camp Connections Alignment Alternative are:

- Connections to the Marine Camp site and existing comfort station located south of the Radisson Hotel, including parking lot improvements and trailhead amenities.
- Relatively easy and inexpensive construction along Hilton Lane.

5.2.6. Sub-Alternative 5 (Radisson Hotel Bypass)

(Refer to Appendix E – Alternative Alignment Map 3)
This sub-alternative was identified as an alternative to locating the path makai of the Radisson Hotel and Kaua'i Beach Villas Condominium complex, including a bridge over the drainage ditch that flows along the north edge of the Radisson property.

Major characteristics of the Radisson Hotel Bypass Alignment Alternative are:

- Eliminates one new bike/pedestrian bridge.
- Utilizes an abandoned cane haul road and existing box culvert bridge over the drainage ditch.
- Requires an at-grade crosswalk at Kaua'i Beach Drive.
- Relatively easy and inexpensive construction along Hilton Lane and the abandoned cane haul road.

5.2.7. Sub-Alternative 6 (Wailuā Golf Course Tunnel)

(Refer to Appendix E– Alternative Alignment Map 4)
The Wailuā Golf Course Tunnel was identified as an alternative to the Coastal Path along the 1st and 2nd fairways of the golf course. It also allows for an additional path alignment alternative that combines a portion of the Highway and Coastal Alternatives. This sub-alternative involved dividing the golf course along the south edge of the driving range and parking lot, thereby avoiding the entrance drive into the golf course parking lot. In order to minimize disturbance to the golf course from this alignment, a tunnel is proposed to extend underneath the 1st tee.

Major characteristics of the Wailuā Golf Course Tunnel Alignment Alternative are:

- Tunnel would reduce conflicts between path users and those playing golf.
- Eliminates the possibility of negative impacts to the 1st and 2nd fairways and greens.
- Is less expensive to construct than the path alternative along the 1st and 2nd fairways and greens.

5.3. Explanation for the Non-Selection of Alternative Path Alignments

The Path Alignment Alternatives identified in Section 5.2 were presented in the DEA and at Public Input Meeting Two. The public was given the chance to select the No Build Alternative as well as all other alternatives. As part of the EA process, a notice of availability and request for comment on the Draft EA was published in the OEQC Environmental Notice on November 23, 2005.

Written comments received during the DEA review period and Public Input Meeting Two are summarized in this section as explanations of why a given Alternative Path Alignment was not selected. Comments from each public agency and civic organization can be found in Appendix C of the Final EA. Refer to Chapter 7 for Public Meeting Minutes and to view letters from the public regarding the project.

Since two major alternative alignments and four sub-alternative alignments were identified in preparation of the DEA, it was likely that the eventual preferred path alignment could be a hybrid of more than one path alignment alternative based on known environmental resources and potential to impact listed bird species.

5.3.1. Alternative Alignment 1 (Coastal Path)

The Coastal Path Alternative received the most negative feedback and concerns than any of the other Alignment Alternatives during the DEA comment review period. Of the 18 written responses received, 13 comment letters contained comments not supporting a coastal path alignment. Negative consequences to the environment such as the endangered monk seal, conflicts with the Wailuā Golf Course along the coastline, and coastal erosion issues that might eventually destroy the path, dominated the concerns. It is important to note that despite the negative comments, none specifically suggested that a coastal path alignment could not be permitted and eventually constructed.

Another concern was the cost of construction and long-term maintenance of the dune restoration/path portion of the coastal path alignment. In addition to a maintenance plan, the costs to put the plan into action were also a concern. Because of the dynamic nature of the coastal environment and the likelihood that erosion rates would be intensified during storms, tsunamis, and hurricanes, the annual maintenance costs for the Coastal Path are unpredictable.

5.3.2. Alternative Alignment 2 (Kapule/Kūhiō Highway Path)

The Kapule Highway reach of the Kapule/Kūhiō Highway Path was eliminated because other more desirable alignment alternatives including the Hilton Land and Marine Camp connections and Radisson Hotel Bypass sub-alternatives were found to have widespread support and received no adverse comments. In addition, these two sub-alternatives provide connections to important destinations and trip generators including the Marine Camp site, Radisson Hotel Complex, and the existing comfort station east of the Radisson Hotel.

5.3.3. Sub-Alternative 3 (Ocean Bay Plantation)

Some portions of the upper cane haul sub-alignment alternative were incorporated into the preferred alignment while other portions were not. The portion that was eliminated includes the railroad grade that runs along the south edge of the property near the coastline between Connection Points A and B (refer to Alternative Alignment Maps 1 and 2). Comments from agencies and private citizens included one comment of no support because the shoreline along Hanamā‘ulu Bay is unsafe for pedestrians and too rocky for construction.

5.3.4. Sub-Alternative 6 (Wailuā Golf Course Tunnel)

The Wailuā Golf Course Tunnel sub-alternative did not receive any support in the comments received. Five negative comments were identified including user conflicts between path and golf course users, noise from path users disrupting golf play, potential for increased maintenance for golf course maintenance staff, and negative impact to sacred Hawaiian burial grounds.

5.4. Alternatives Selected and Eliminated Prior to the DEA

A path alignment alternative was explored that would locate the path on the mauka side of both Kūhiō and Kapule Highways. The alignment alternative was eliminated for the following reasons:

1. A mauka path alignment will not safely connect important destinations and trip generators such as Lydgate Park, Wailuā Golf Course, Radisson Hotel Complex, the Marine Camp site and motor-cross facility. There are no important destinations or trip generators on the mauka side of the highways between Lydgate Park and Kapule Highway.

2. Two highway crossings would be required, one adjacent to Lydgate park and the other before the Kapule Highway Bridge over Hanamā‘ulu Stream. There are no traffic signals in the vicinity of Lydgate Park through the Wailuā Golf Course, rendering an at-grade crossing extremely unsafe. If the crosswalk were to be signalized, the flow of traffic would be slowed to allow for persons to cross the highway. The signalized intersections at Kūhiō and Kapule Highway or Kapule Highway and Ahukini would be the best locations for the second crossing, however, additional time would need to be allowed in the signal for persons crossing the highway, slowing the movement of automobiles in all directions.

3. The Hawai‘i Department of Transportation will not allow for a signalized crosswalk in between Lydgate Park and the Kapule/Kūhiō Highway intersection.

4. Construction of a bike and pedestrian bridge over the highways would be very expensive to construct and maintain. In addition, future widening or relocation efforts on the highways could render the bridge overpasses useless.

5. There was no support for the mauka highway path alignment alternative in the first two public meetings.

5.5. Summary of Draft Environmental Assessment Comments

The following Tables provide a summary of the comments that were received from regulatory agencies, private property owners, and citizens for the alignment and sub-alignment alternatives. Only the comments that relate directly to alignment issues are included on the Summary Chart. To review the un-edited comment letters, refer directly to Appendix C.

Table 1: Summary of Agency and Public Comments of the Alternative Alignments from the Draft Environmental Assessment

COUNTY AGENCIES	ALIGNMENT 1-COASTAL PATH	ALIGNMENT 2-KAPULE/KUHIO HWY
Gregg Fujikawa Department of Water	NO COMMENT SPECIFIC TO ALIGNMENT	NO COMMENT SPECIFIC TO ALIGNMENT
Ed Okamoto Wailua Golf Course	• **NO SUPPORT** (SR11)-path will encroach onto golf course (40' setback) and interfere with hole #1, 2, and 17 (signature hole). The vegetation line is already on the golf course.	• **SOME SUPPORT**-still impacts the golf course negatively. Back tee for #5 and #10 will have to be relocated. • **NO SUPPORT**-can't move irrigation pumpline.
Kauai Burial Council		• **SUPPORT**-waved 30' buffer around interment site.

STATE AGENCIES	ALIGNMENT 1-COASTAL PATH	ALIGNMENT 2-KAPULE/KUHIO HWY
Susan Tasaki SHPO		
Steven Kyono HDOT		• **NO SUPPORT**-traffic increase • **NO SUPPORT**-two opposing driveways to Kauai Community Correction Center and golf course driveway increases accident rate. • **SUPPORT**-if relocation of golf course entrance to align with driveway to KCC.
Clyde Namu'o OHA	• **SUPPORT**-doesn't jeopardize the integrity of burial interment sites.	• **SUPPORT**-only if 30' buffer to protect Kuhio Highway interment site.
Francine Wai Disability & Communication Access Board	NO COMMENT SPECIFIC TO ALIGNMENTS	NO COMMENT SPECIFIC TO ALIGNMENTS
Andrea Erichsen Divison of Forestry and Wildlife	• **NO SUPPORT**-path will affect breeding habitat for wedge-tailed shearwater • **SUPPORT**-only if pre-construction surveys are conducted to avoid and protect existing colonies • **SUPPORT**-only if dogs are leashed and educational signage is incorporated	
Michele Olry DLNR Division of Aquatic Resources	• **NO SUPPORT**-concern for cumulative impact from all phases of the project • **NO SUPPORT**-construction and establishment of path will interfere with monk seals • **NO SUPPORT**-seals could haul out on bike path	
Alapaki Nahalea Hawaiian Homelands Commission Adjacent Landowner	• **SUPPORT** preservation of coastal access • **SUPPORT** safe recreational use • **SUPPORT** alternative modes of transportation	

Table 1: Summary of Agency and Public Comments of the Alternative Alignments from the Draft Environmental Assessment (Continued)

STATE AGENCIES (continued)	ALIGNMENT 1-COASTAL PATH	ALIGNMENT 2-KAPULE/KUHIO HWY
Dan Polhemus DLNR Division of Aquatic Resources	• **NO SUPPORT**-unless there is a minimum of 150' between humans and monk seals. • **NO SUPPORT**-unless consultation with NMFS occurs to establish guidelines. • **SUPPORT**-educational signage regarding seals and other marine wildlife.	
Melanie Chinen State Historic Preservation Division	• **NO SUPPORT**-archeological inventory survey plan, testing and monitoring required because of subsurface habitation deposits and human burials exist in the ROW.	• **SUPPORT**-alignment is acceptable
Genevieve Salmonson Office of Environmental Quality Control	NO COMMENT SPECIFIC TO ALIGNMENTS	NO COMMENT SPECIFIC TO ALIGNMENTS
Sam Lemmo DLNR Office of Conservation and Coastal Lands	• **NO SUPPORT**-monk seals use "haul out" areas and would be disturbed by human activity, unless path is 150' away • **NO SUPPORT**-concern is maintenance and funding of dunes and renourishment after an erosion episode. • **NO SUPPORT**-erosion problems in front of driving range and 17th green. • **SUPPORT**-only if path is routed to minimize monk seal disturbance regimes and educational signs are incorporated.	• **SUPPORT**-with a proposed tunnel route then along the coast to Lydgate Park

FEDERAL AGENCIES	ALIGNMENT 1-COASTAL PATH	ALIGNMENT 2-KAPULE/KUHIO HWY
George Young Army Corp of Engineers	• **NO SUPPORT** (SR7/SR8/SR9/SR11)-wetland/drainages/dune renourishment subject to DA permitting. More information needed. • **SUPPORT** (SR 4)-Hanama'ulu Bridge portion will not require a DA permit	
Chris Yates NMFS	• **NO SUPPORT**-consultation with the NMFS and a BA is required if path impacts monk seal "haul out" habitat	

Table 1: Summary of Agency and Public Comments of the Alternative Alignments from the Draft Environmental Assessment (Continued)

LAND OWNERS	ALIGNMENT 1-COASTAL PATH	ALIGNMENT 2-KAPULE/KUHIO HWY
Jerry Corush Ocean Bay Plantation Property	• **NO SUPPORT**-shoreline along Hanamaʻulu Bay and north to property is unsafe for pedestrians and too rocky for construction	• **SUPPORT**-the bike route is similar to that proposed in the EIS for the Ocean Bay Plantation. • **NO SUPPORT**-path comes into conservation line. • **SUPPORT**-with an alternative route to Hanamaʻulu Bay and beach other than cane haul road
David Walters **Lynn McCrory** PAHIO Resorts	• **NO SUPPORT**	

NONPROFIT	ALIGNMENT 1-COASTAL PATH	ALIGNMENT 2-KAPULE/KUHIO HWY
Juan Wilson Sierra Club	• **NO SUPPORT-**does not comply with HRS 205A-2 or HRS 344-4 • **NO SUPPORT-**40' setback would touch a wetland boundary • **NO SUPPORT-**alignment has significant impact as set by criteria of the DOH rules.	• **SUPPORT-**no shoreline issues (See proposed alignment map prepared by the Sierra Club, Appendix B).

PUBLIC	ALIGNMENT 1-COASTAL PATH	ALIGNMENT 2-KAPULE/KUHIO HWY
Gabriela Taylor	• **SUPPORT**-benefits hotel guests and the public with a path on the beach	• **NO SUPPORT**-not a pleasant recreational experience along the highway
Kurt Bosshard	• **NO SUPPORT**-golf course encroachment • **NO SUPPORT**-insufficient space on beach • **NO SUPPORT**-coastal erosion happens at a fast rate/beach re-nourishment is unfeasible • **NO SUPPORT**-Oceanit's EA findings are being overlooked • **NO SUPPORT**-land is owned by the State • **NO SUPPORT**-takes away from the privacy for beach users • **NO SUPPORT**-vehicular traffic on the beach will increase • **NO SUPPORT**-impact to native gathering and fishing • **NO SUPPORT**-negative effect on monk seal. • **NO SUPPORT**-fence at golf course will be an eye sore	• **SUPPORT**-no interference to beach users or golfers. • **SUPPORT**-more cost efficient to construct and maintain.

Table 2: Summary of Agency and Public Comments of the Sub-Alternative Alignments from the Draft Environmental Assessment

COUNTY AGENCIES	SUBALT #3 Ocean Bay Plantation-Upper Cane Haul Road	SUBALT #4 Hilton Lane & Marine Camp Connections	SUBALT #5 Radisson Hotel Bypass	SUBALT #6 Wailua Golf Course Tunnel
Gregg Fujikawa Department of Water	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.
Ed Okamoto Wailua Golf Course	• **SUPPORT**-no impact to the golf course			• **NO SUPPORT**-brings pedestrian pathway onto golf course • **NO SUPPORT**-understaffed to maintain additional landscaping for tunnel and/or fencing • **NO SUPPORT**-noise will disturb golfers • **NO SUPPORT**-area around #1 teeing ground is sacred Hawaiian ground
Kaua'i Burial Council				

STATE AGENCIES	SUBALT #3 Ocean Bay Plantation-Upper Cane Haul Road	SUBALT #4 Hilton Lane & Marine Camp Connections	SUBALT #5 Radisson Hotel Bypass	SUBALT #6 Wailua Golf Course Tunnel
Susan Tasaki SHPD	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.
Steven Kyono HDOT	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.
Clyde Namu'o OHA	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.
Francine Wai Disability & Communication Access Board	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.
Andrea Erichsen Divison of Forestry and Wildlife	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.
Mimi Ofry DLNR Division of Aquatic Resources	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.
Dan Polhemus DLNR Division of Aquatic Resources	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.
Melanie Chinen State Historic Preservation Division	• **SUPPORT**-avoids most of the historic properties			• **NO SUPPORT**-direct impact to Hawaiian burial ground

Table 2: Summary of Agency and Public Comments of the Sub-Alternative Alignments from the Draft Environmental Assessment (Continued)

STATE AGENCIES (continued)	**SUBALT #3** Ocean Bay Plantation-Upper Cane Haul Road	**SUBALT #4** Hilton Lane & Marine Camp Connections	**SUBALT #5** Radisson Hotel Bypass	**SUBALT #6** Wailua Golf Course Tunnel
Genevieve Salmonson Office of Environmental Quality Control	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.
Sam Lemmo DLNR Office of Conservation and Coastal Lands	• **SUPPORT-**	• **SUPPORT-** combined with Alternative #2	• **SUPPORT-** combined with Alternative #2	

FEDERAL AGENCIES	**SUBALT #3** Ocean Bay Plantation-Upper Cane Haul Road	**SUBALT #4** Hilton Lane & Marine Camp Connections	**SUBALT #5** Radisson Hotel Bypass	**SUBALT #6** Wailua Golf Course Tunnel
George Young Army Corp of Engineers	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.
Chris Yates NMFS	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.

LAND OWNERS	**SUBALT #3** Ocean Bay Plantation-Upper Cane Haul Road	**SUBALT #4** Hilton Lane & Marine Camp Connections	**SUBALT #5** Radisson Hotel Bypass	**SUBALT #6** Wailua Golf Course Tunnel
Jerry Corush Ocean Bay Plantation Property	• **NO SUPPORT-** shoreline along Hanama'ulu Bay and north to property is unsafe for pedestrians and too rocky for construction			
David Walters **Lynn McCrory** PAHIO Resorts		• **SUPPORT**	• **SUPPORT-**would eliminate cost to purchase 3 properties and have KBRA still maintain Hilton Lane and comfort station. • **SUPPORT-**one could enjoy glimpse of the ocean from the comfort station.	

NONPROFIT	**SUBALT #3** Ocean Bay Plantation-Upper Cane Haul Road	**SUBALT #4** Hilton Lane & Marine Camp Connections	**SUBALT #5** Radisson Hotel Bypass	**SUBALT #6** Wailua Golf Course Tunnel
Juan Wilson Sierra Club	• **SUPPORT-**least impact to shoreline	• **SUPPORT-**only if 700 yards mauka of existing comfort station to avoid shoreline and wetland		

PUBLIC	**SUBALT #3** Ocean Bay Plantation-Upper Cane Haul Road	**SUBALT #4** Hilton Lane & Marine Camp Connections	**SUBALT #5** Radisson Hotel Bypass	**SUBALT #6** Wailua Golf Course Tunnel
Gabriela Taylor	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.	NO COMMENT SPECIFIC TO SUBALT.
Kurt Bosshard	• **SUPPORT-**no interference to beach users or golfers • **SUPPORT-**more cost efficient to construct and maintain			

Table 3 presents a summary showing how Alignments #1 and #2 and Sub-Alignments #3-#6 meet the project Purpose and Need.

Table 3: Summary How of Alignments #1 and #2, Sub-Alignments #3-#6 Meet Purpose and Need

Alignment	Purpose: Shared Use Path	Need: Alternative Form of Transportation	Need: Affordable Recreation for all ages and abilities	Need: Safe mode of transportation and recreation	Need: Means for ecotourism
Alignment #1	YES	YES	YES	YES	YES
Alignment #2	YES	YES	YES	YES	YES
Sub-Alignment #3: Ocean Bay Plantation—Upper Cane Haul Road	YES	YES	YES	YES	YES
Sub-Alignment #4: Hilton Lane and Marine Camp Connections	YES	YES	YES	YES	YES
Sub-Alignment #5: Radisson Hotel Bypass	YES	YES	YES	YES	YES
Sub-Alignment #6: Wailuā Golf Course Tunnel	YES	YES	YES	YES	YES

While all alignments and sub-alignments had the ability to meet all points of purpose and need, not all alignments were selected due to agency and public comments, cost of construction, impacts to Native Hawaiian burial ground, potential impacts to listed species and property ownership limitations.

6.0 DETERMINATION

6.1 State of Hawai‘i Finding of No Significant Impact (FONSI)

Based on the findings and investigations as evidenced in this report, the proposed path is not expected to result in negative significant social, economic, cultural, or environmental impacts. As a result, it is defined that, as per the provisions of Subchapter 6 of Chapter 200, Title 11, Hawaii Administrative Rules of the Department of Health, that a Finding of No Significant Impact (FONSI) has been determined for this project.

6.2 Findings / Significance Criteria and Reasons

According to the Department of Health Rules (11-200-12), an applicant or agency must determine whether an action may have a significant impact on the environment, including all phases of the project, its expected consequences, both primary and secondary, it's cumulative impact with other projects, and it's short and long term effects. In making the determination, the Rules establish "Significance Criteria" to be used as a basis for identifying whether significant impact environmental impact will occur. According to the Rules, an action shall be determined to have a significant impact on the environment if it meets any one of the following criteria:

1. Involves an irrevocable commitment to loss or destruction of any natural or cultural resources;

The proposed project will not cause any irrevocable loss of natural or cultural resources. Existing parks that can be accessed from the corridor have been used historically for recreation and fishing. The project will not cause a loss or destruction of these parks or the cultural activities that occur within them. Additionally, ocean views will not be impacted with the construction of the path or path amenities.

Should any archaeologically significant artifacts, bones, or other indicators of previous on-site activity be uncovered during the construction phase, their treatment will be conducted in strict compliance with the requirements of the Department of Land and Natural Resources.

2. Curtails the range of beneficial uses of the environment;

The alignment occurs within parks and park corridors that are dedicated to active and passive recreation. Currently, there is no restriction or direction given to people who walk, run, or jog within the parks or through the various habitats. With the construction of the trail, the users will restrict movement to the trail and thereby protect the environment from encroachment.

3. *Conflicts with the State's long term environmental policies and guidelines as expressed in Chapter 344 HRS; and any revisions thereof and amendments thereto, court decisions, or executive orders;*

The proposed trail project is consistent with the Environmental Policies established in Chapter 344, HRS.

4. *Substantially affects the economic or social welfare of the community or state;*

The proposed project will provide a significant and positive impact on the Kaua‘i community in the short term with employment opportunities, and in the long term with enhanced and improved recreational opportunities.

5. *Substantially affects public health;*

During construction, there will be minor impacts to air quality and noise levels. After completion of the construction work, these will be insignificant or undetectable. The positive aspects of the proposed project in the areas of economic and social benefits such as improved health through exercise and recreation for the community are greater than the "No Action" alternative.

6. Involves substantial secondary impacts, such as population changes or effects on public facilities;

Impacts on public facilities will not be an issue. It is expected that the trail project will bring more tourists to Kaua'i who are interested in eco-tourism and recreation, but it is not expected that the trail project will bring an increase in population to live on Kaua'i.

7. Involves a substantial degradation of environmental quality;

The trail project and its construction do not involve a substantial degradation of environmental quality.

8. Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions;

The Ahukini to Lydgate Park Bike and Pedestrian Path will make the current county park system more accessible via non-motorized transportation, especially for those who cannot operate a motorized vehicle because of a disability or age, and will be sited away from environmentally sensitive areas, and does not commit resources or energy for a larger action.

9. Substantially affects a rare, threatened, or endangered species, or its habitat;

No endangered plant or animal species will be adversetly affected by the project with mitigations.

10. Detrimentally affects air or water quality or ambient noise levels;

There are no air or water quality or noise issues surrounding this project. All measures will be taken during construction to prevent runoff.

11. Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;

The preferred alignment is not on the coast, and therefore, will not affect the environmentally sensitive areas of concern.

12. Substantially affects scenic vistas and viewplanes identified in county or state plans or studies; or,

The path will not substantially affect the views into or out of the corridor.

13. Requires substantial energy consumption.

The construction and/or use of the path, the bridges, and/or comfort station will not require substantial consumption of energy or resources.

7.0 CONSULTATIONS, MEETINGS, PRESS RELEASE, PUBLIC COMMENT

7.1 PREASSESSMENT CONSULTATIONS- Refer to Appendix B for a copy of all of the preassessment consultation meeting minutes that occurred before the Draft Environmental Assessment was published.

7.2 PUBLIC MEETINGS

7.2.1 Public Meeting Number One

AGENDA
Environmental Assessment Public Meeting #1

Wednesday, June 22, 2005
7:00 PM to 9:00 PM
King Kaumualiʻi Elementary School
Hanamaʻulu, Hawaii

7:00 – 7:10	Welcome to Attendees Introduction of County officials in attendance Summary of the agenda for meeting Introduction of Doug Haigh, County Project Manager
7:10 – 7:25	Presentation on Nawiliwili – Anahola Bike & Pedestrian Path Project by Doug Haigh Questions and answers
7:25 – 8:00	Introduction Merle Grimes, MDG, Inc LLC, team lead Introduction of team and respective roles Presentation on Ahukini-Lydate Bike & Pedestrian Path Environmental Assessment project Questions and answers
8:00 – 8:05	Small group exercise instructions Break into 4 groups Each group has one or more project team members Groups provided with maps and colored markers Assignment: Mark **special and significant places** in **green** Mark **preferred trail alignments in blue** Mark **desired amenities and locations in red** Use **post-it notes** to provide more detail 5 minute summary report to the large group
8:05 – 8:40	Small groups meet to complete their assignments
8:40 – 9:00	Small group summary reports – 5 minutes max each
9:00	Next steps and brief closing remarks

AHUKINI-LYDGATE BIKE & PEDESTRIAN PATH

Environmental Assessment Public Meeting #1

Wednesday, June 22, 2005
7:00 PM to 9:00 PM
King Kaumualiʻi Elementary School

MEETING NOTES

WELCOME AND MEETING OVERVIEW
Project Team Public Communications Consultant and meeting facilitator, Roxanne MacDougall opened the meeting and reviewed the agenda and objectives, which were:

- Provide information on the scope of the environmental assessment project
- Present a visual tour of the path corridor, with discussion on potential alignments
- Answer questions and receive public input on the project

OVERALL MULTI-USE PATH HISTORY AND BACKGROUND
Doug Haigh, Chief of the County Building Division and Project Manager for the Nawiliwili to Anahola Bike and Pedestrian Path Project provided background on the origins of the project. Details on this information may be found in the County of Kauaʻi website, on a page devoted to the bike and pedestrian path project. The page address is www.kauai.gov/bikepath/aspx.

AHUKINI-LYDGATE PATH PRESENTATION
Lead consultant, Merle Grimes, of Merle D. Grimes LLC, presented an extensive discussion of the options and issues related to this phase of the path. A PowerPoint slide show was used to provide a visual tour of the path corridor.

During the presentation, members of the consulting team provided additional information. Sara Simmons-Fife, Sweetgrass Design, described the complex permitting process required as part of the environmental assessment. Charles Fletcher, PhD, University of Hawaii coastal expert, discussed the causes of beach erosion and the possibilities available for a win/win solution that protects the golf course while providing a coastal path. He stressed that beach erosion can not be stopped, but it can be delayed and reduced by periodic replenishing of the dunes. Mike Dega, SCS Archeology, spoke about the historically and culturally significant sites along the ocean side path. There are numerous prehistoric sites, as well as plantation era sites. These would be protected and educational signage installed along the path.

QUESTIONS, ANSWERS AND COMMENTS:

Question from Attendee: If I started my own bicycle company, for the bike path, there are a lot of people out there who walk. Who takes precedence?

Doug Haigh (project manager for the County) answers: As people, we work it out. Signs tell the protocol.

Merle Grimes (team lead) answers: In Lydgate, the Federal funding is to reduce vehicular traffic. Bicycles are a major component of that. We design these at a standard that can accommodate a variety of uses. The path allows for walkers, joggers, cyclists which is the reason for the 10-12' path. Some neighborhoods require a 14' wide path. Sometimes we put a stripe down the middle to differentiate users.

Cyclists have every right to be on the path.

The etiquette, calls for cyclists first. Signage like at Lydgate indicates that when a cyclist is approaching a pedestrian or slower cyclist is to announce "on your right, passing on your left." Usually it just works out.

There are no national liability issues typically with mixed use path projects. Most paths are there for recreation. The highway cyclists who want to go fast are usually on the highways.

Comment from Attendee: Planning of this is wonderful, in the future more tourists will be in front of the Kauaʻi Villas and the Radisson, there will be more of this, and wonder what the impact will be in the future, the hotels will be encouraging people to use the paths, not use the highway. This is a good thing.

Comment from Attendee: Liberta Aubau, Kamehameha will be building school at the edge of the golf course on Leho Drive, and the fourteen acre area confronting Aloha Beach hotel, there will be a commercial development by the Department of Hawaiian homes. Across the highway from the Correctional Facility all the way to the Wailua River there will be new homes planned. The first increment will be 200 homes in 2007. Will offer a copy of the plan.

MAP EXERCISE
After the presentation, and questions/answers, meeting participants gathered around a map of the corridor. They marked special places, preferred path alignments and amenities. They discussed their preferences with the consulting team.

CLOSE
Merle Grimes thanked the participants for their excellent feedback. The second public meeting will be held August 22, 2005 at the Lydgate Park Pavilion.

7.2.2 Public Meeting Number Two

AHUKINI-LYDGATE BIKE & PEDESTRIAN PATH

Environmental Assessment Public Meeting #2

Monday, August 22, 2005
7:00 PM to 9:00 PM
Lydgate Park Pavillion

MEETING NOTES

NOTE: THIS EVENT WAS FILMED BY HOIKE PUBLIC TELEVISION AND WILL BE AIRED ON CHANNEL 52.

WELCOME AND MEETING OVERVIEW
Project Team Public Communications Consultant and meeting facilitator, Roxanne MacDougall opened the meeting and reviewed the agenda and objectives, which were:

- Provide information on potential path alignments
- Answer questions and receive input on proposed or new alignments, significant places and desired path amenities.

OVERALL MULTI-USE PATH HISTORY AND BACKGROUND

Doug Haigh, Chief of the County Building Division and Project Manager for the Nawiliwili to Anahola Bike and Pedestrian Path Project provided background on the origins of the project. Details on this information may be found in the County of Kaua'i website, on a page devoted to the bike and pedestrian path project. The page address is www.kauai.gov/bikepath/aspx.

AHUKINI-LYDGATE PATH PRESENTATION

Lead consultant, Merle Grimes, of Merle D. Grimes LLC, presented an extensive discussion of the options and issues related to this phase of the path. A PowerPoint slide show was used to illustrate the geography and simulate various ways the path might be designed. Six maps were taped to tables, so that participants could look at them and write comments during the presentation.

Several path alignment options were discussed, including:

- A totally coastal pathway, running from Ahukini Landing to the Kamalani Kai Bridge, along the ocean. This option will require beach restoration along the Wailua Golf Course, where erosion is a major problem.
- A route that moves inland to go around the golf course along the highway.
- A route that partially goes along the ocean side of the golf course and also goes along the highway, with a tunnel to move pedestrians and cyclists across the golf course, with minimal disturbance to golfers.
- A route that avoids the golf course entirely by going mauka of the highway.

During the presentation, four members of the consulting team provided additional information. Sara Simmons-Fife, Sweetgrass Design, described the complex permitting process required as part of the environmental assessment. Charles Fletcher, PhD, University of Hawai'i coastal expert, discussed the causes of beach erosion and the possibilities available for a win/win solution that protects the golf course while providing a coastal path. He stressed that beach erosion can not be stopped, but it can be delayed and reduced by periodic replenishing of the dunes.

Frank Sullivan, golf course designer, spoke about the use of tunnels in golf courses. He has implemented a tunnel at Pua Kea golf course.

Mike Dega, SCS Archeology, spoke about the historically and culturally significant sites along the ocean side path. There are numerous prehistoric sites, as well as plantation era sites. These would be protected and educational signage installed along the path.

Merle Grimes concluded the presentation, with a summation of the options. He then opened the floor to questions, answers and comments.

QUESTIONS, ANSWERS AND COMMENTS:

C- If we don't restore the dunes, we will lose part of the golf course. This is the simple fact that we must recognize. We don't have a choice.

Q - What about the moving of boulders. Several years ago, the county had issues with

A - We will not be moving existing boulders. They will be buried in the sand.

Q - What are the options for connecting with the Kamalani Kai Bridge? Can we consider a cable bridge? What about the wheel chair area?

A - We are intending to design a bridge compatible with the existing bridge. We can consider a cable bridge and will ensure wheelchair access.

C - Please make the path accessible with dogs, and horses if possible. Allow dogs on leashes so people have a place to walk their dogs.

C - The Kapaa Business Association is in support of the path. The speaker had some concerns about putting the path along the golf course lower to the beach, in order not to block the view from the golf course. The tunnel is better than going alon the dunes. There are safety issues with people potentially getting hit by golf balls. The fence and protection takes away golfers' view of the ocean. This is one of the top public golf courses in the country. We don't want to hurt this position.

C - I prefer the coastal route. I also prefer that you keep the signs low to the ground so they don't intrude upon the views and environment.

Q - Why would you consider any non-coastal options? Other options are not for pedestrians and not true to the "Beach access forever" slogan. Also, the county is overwhelmed now. How will they handle litter, vandals, unauthorized vehicles, etc? Will there be a ranger?

A - A maintenance plan will be included with the environmental assessment. It is difficult to determine costs until the path alignment is selected. The issues you raise will be explored with County officials. Vehicles can be locked out. Other communities have formed non-profits to support the maintenance, safety and enjoyment of the pathways. Kauaʻi could consider such a model.

C - "Undesirables" will be on and around the path at night, making it unsafe. It is hard to stop them.

Comment submitted in writing at the end of the meeting:

New TEA funding just passed. More money for cycle/pedestrian projects comes down to the state DOT in the millions. Use that money for the Kapule/Kuhio Highway cycle/pedestrian improvements later (make the State DOT accountable). Use this money, the current TEA funds, for the coastal path.

SMALL GROUP EXERCISE

The participants were asked to break into small groups. Each group had one or more project team members with them. The groups worked with the black and white area maps taped to the tables. They were given colored markers. Their assignment:

- Mark special and significant places in green
- Mark preferred trail alignments in blue
- Mark desired amenities and locations in red
- Use post-it notes to provide more detail

There was active participation and a wealth of feedback provided. The consultants collected all maps and will process the feedback provided.

FINAL UNOFFICIAL "STRAW" VOTE

To get a sense of where people were in their preferences at the end of the meeting, the audience was polled on their choice of path options. The results were:

- Coast path only - 27 votes
- Tunnel options - 4 votes

- All highway option - 0 votes
- Mauka option - 0 votes.

CLOSE
Merle Grimes thanked the participants for their excellent feedback. The third and final meeting will be held in the late fall/early winter. The date will be announced through multiple media, including the web page www.kauai.gov/bikepath.aspx.

7.2.3 Public Meeting Number Three

AHUKINI-LYDGATE BIKE & PEDESTRIAN PATH

Environmental Assessment Public Meeting #3

Tuesday, May 23, 2006
7:00 PM to 9:00 PM
Lydgate Park Pavilion

MEETING NOTES

NOTE: THIS EVENT WAS FILMED BY HOIKE PUBLIC TELEVISION AND WILL BE AIRED ON CHANNEL 52. CONTACT HOIKE FOR THE SCHEDULE.

WELCOME AND MEETING OVERVIEW
Project Team Public Communications Consultant and meeting facilitator, Roxanne MacDougall opened the meeting and reviewed the agenda and objectives, which were:

- Overview and update the Nawiliwili-Anahola Bike & Pedestrian Path
- Review the Ahukini-Lydgate Bike & Pedestrian Path Draft Environmental Assessment
- Present a visual tour of the Ahukini-Lydgate preferred alignment
- Receive public comment and answer questions

NAWILIWILI-ANAHOLA BIKE & PEDESTRIAN PATH
Doug Haigh, Chief of the County Building Division and Project Manager for the Nawiliwili to Anahola Bike and Pedestrian Path Project provided background on the origins and scope of the overall project. He gave an update on progress on the various segments of the path. An overview article about the project may be found in the County of Kaua'i website, on a page devoted to the bike and pedestrian path project. The page address is www.kauai.gov/bikepath/aspx.

AHUKINI-LYDGATE BIKE & PEDESTRIAN PATH
DRAFT ENVIRONMENTAL ASSESSMENT
Lead consultant, Merle Grimes, of Merle D. Grimes LLC, reviewed the Ahukini-Lydgate project and the Draft Environmental Assessment, which is published on the website listed above. This document was created over several months of research and comment from government agencies and the general public.
A PowerPoint slide show was used to illustrate the path alignment options, and their pros and cons.

Three path alignment options were evaluated in the Draft EA:

- A totally coastal pathway, running from Ahukini Landing to the Kamalani Kai Bridge, along the ocean. This option would require beach restoration along the Wailua Golf Course, where erosion is a major problem. This option is not viable, due to environmental and economic concerns expressed by a number of agencies.

- A route that moves inland to go around the golf course along the highway. Portions of this route are included in the preferred alignment, to be discussed below.

- A route that avoids the golf course entirely by going "mauka" of the highway, across the highway toward the mountains. This route is not viable due to safety concerns related to crossing a very busy road with fast-moving traffic.

AHUKINI-LYDGATE ENVIRONMENTAL ASSESSMENT PREFERRED ALIGNMENT
Merle Grimes went on to describe the preferred alignment which has emerged from consultant research and extensive input from governmental agencies and the general public. He took the audience on a visual tour of the path. The exact path and design details have not be determined at this time. The final EA will be accompanied by 30% design drawings, as well as a maintenance plan.

The path will move from the Ahukini fishing pier, around Hanama'ulu Bay, across the restored old haul cane bridge, along ocean bluffs to lands south of the Hilton Hotel. It will then move inland and run along the ocean side of the Kuhio Highway all the way to Lydgate Park. Grimes provided considerable detail on how this route can best be accomplished. He also showed where beach access and public amenities might be located.

He ended his presentation with a brief discussion on a maintenance plan to accompany the Final Environmental Assessment.

QUESTIONS, ANSWERS AND COMMENTS
Primarily fielded by Merle Grimes

Comment:
This is a good compromise. I support it. I want to clarify some details. It is possible to go over or under the highway. It can be done well, as in other areas of the country. You could use the high ground on the mauka side to help the grade. At Hilton Road, you could go under the highway, via a trench. The mauka route does have advantages, including scenery. I also think you are underestimating the difficulty of the 10th hole bottleneck. But, all in all, this is a good solution. It does not go through wetlands.

Answer:
Yes, we intentionally bypass wetlands. We will do a grade elevation to go above the wetlands.

Question:
Why couldn't you run the path from Marine Camp along the coast to the golf course?

Answer:
There are concerns. This is a monk seal area. We got a lot of agency comments on this. It is a known wetland. The resort will give us the land to go around it. This is the best option.

Question:
What about night use of the path? Is it allowed? Will there be lights? I am concerned about the shearwater birds and the lights.

Answer:
There will be no lights, except at previously existing comfort stations. Any lights will be shielded for birds.

Question:
There are shearwater colonies near the path. Who enforces the dog leash law?

Answer:
Most paths run on self-enforcement by users, with cell phones. This will not be the role of the ranger. The Draft EA went to the police and fire departments for comment. The design phase will deal with access for them to the path.

> **Doug Haigh, Department of Public Works, Project Manager:**
> The County ordinance allows dogs in public parks only by permit and on leash. The Department of Community Assistance, which governs parks, is currently establishing policy regarding the path system.

Question:
For safety purposes, will there be any location signs or mile markers, so that people who need assistance can be located?

Answer:
Now that the path system is growing, mile markers will make sense. This is a design decision. There will be public meetings related to design where this could be suggested.

Comment from Thomas Noyes, head of Ke Ala Hele Makalae bike and pedestrian path committee:
I invite all of you are interested in being on our contact list to provide me with your email address. My address is thomasnoyes@hawaiiantel.net.

Comment from Mimi Ulry, DLNR and NOAA monk seal coordinator:
I am concerned about the Nukoli‘i access. This is a big seal haul out area. Bikers will more easily be attracted to the seals. What will be done? Also, the old comfort station is in great disrepair.

Answer:
We would love to work with you to do whatever is appropriate. Signs can actually be an attractive nuisance, encouraging people to go to the seals. The comfort station is privately owned.

Question:
What assurance do we have that native plants will be protected?

Answer:
It is the rule of thumb to avoid native plants. The design phase will have a more specific alignment where we would know which plants will be affected. We do have experts to assist us, including Kaua‘i Nursery and NTBG.

> **Doug Haigh:**
> We are committed to use native plants and to preserve those there.

Question;
Who is liable for accidents from golf balls hitting people?

Answer:
There will be a special fence, minimum 10 feet high, designed based on the play of the ball. We will work with the golf course management and staff on this.

Question:
What will be done about flooding in the low area near the 12th fairway?

Answer:
We were there during the floods and know the problem. This will also be a design issue.

Question:
Why are you hugging the road right up to the park?

Answer;
We need to go around the property of the Department of Hawaiian Homelands.

CLOSE
Merle Grimes and Doug Haigh thanked the participants for their excellent feedback. The next step will be the completion of the Final Environmental Assessment, which will be submitted to the County to assist the decision-making of elected officials.

7.2.4 Public Meeting Number Four

7.2.4.1 Mailed Invitation

The following invitation was sent to 232 of 312 Kaua'i Residents who signed a petition against the path going through the Wailua Golf Course. Eighty of the signatures and addresses were not legible. The petition is included in section 8.5.5 - Public Comment Letters.

The County of Kaua'i invites you to participate in the

Ahukini-Lydgate Bike & Pedestrian Path

Environmental Assessment

Public Meeting #4
Monday, February 26, 2007
Lydgate Park Pavilion
7:00 PM to 9:00 PM

Agenda

- Overview entire Ahukini-Lydgate planning process
- Review path alignment options and selection process, as presented in Public Meeting #3, May 23, 2006
- Review golf course alignment and possible design alternatives
- Provide forum for public education and input

Call Roxanne MacDougall at 808-822-5798 for more information.

7.2.4.2 Press Release

The following press release was submitted:

AHUKINI-LYDGATE BIKE & PEDESTRIAN PATH

Environmental Assessment Public Meeting #4

Monday, February 26, 2007
7:00 PM to 9:00 PM
Lydgate Park Pavilion

MEETING NOTES

NOTE: THIS EVENT WAS FILMED BY HOIKE PUBLIC TELEVISION AND WILL BE AIRED ON CHANNEL 52. CONTACT HOIKE FOR THE SCHEDULE.
NOTES WILL ALSO BE POSTED ON THE COUNTY WEBSITE AT WWW.KAUAI.GOV/BIKEPATH.ASPX

WELCOME AND MEETING OVERVIEW
Project Team Public Communications Consultant and meeting facilitator, Roxanne MacDougall, along with facilitator Laurie Ho, opened the meeting and reviewed the agenda and objectives, which were:

- REVIEW the Ahukini-Lydgate Bike & Pedestrian Path
  Environmental Assessment process, alignment options
  and preferred alignment selection
- FOCUS on the Wailua Golf Course alignment and design alternatives
- RESPOND to community questions and comments

SPEAKERS
Merle Grimes, Merle D. Grimes LLC, lead project consultant
Steve Kyono, Hawaii Department of Transportation
Ed Okamoto, Wailua Golf Course Manager
Pat Phung, Federal Highway Administration
Thomas Noyes, Na Ala Hele Makalae committee chairman

AHUKINI-LYDGATE BIKE & PEDESTRIAN PATH
ENVIRONMENTAL ASSESSMENT PROJECT
Merle Grimes, supported by a PowerPoint presentation, provided background on the scope of the overall project, including the potential path alignments that were considered in the Draft EA. This document was created over several months of research and comment from government agencies and the general public.

Three path alignment options were evaluated in the Draft EA:

- A coastal pathway, running from Ahukini Landing to the Kamalani Kai Bridge in Lydgate Park. This option would require beach restoration along the Wailua Golf Course, where erosion is a major problem. This option is not viable, due to environmental and economic concerns expressed by a number of agencies and shoreline experts.

- A route that moves inland to go around the golf course along the highway. Portions of this route are included in the preferred alignment, to be discussed below.

- A route that avoids the golf course entirely by going "mauka" of the highway, across the highway toward the mountains. This route is not viable due to safety concerns related to crossing a very busy road with fast-moving traffic. This position was supported by comments from Steve Kyono of HDOT.

Merle Grimes then reviewed the rationale for the recommended preferred alignment, which is in the Draft EA. This draft may be seen in the County website on page www.kauai.gov/bikepath/aspx.

AHUKINI-LYDGATE ENVIRONMENTAL ASSESSMENT PREFERRED ALIGNMENT,
Merle Grimes went on to describe the Preferred Alignment, which has emerged from consultant research and extensive input from governmental agencies and the general public. He took the audience on a visual tour of the path. The Final EA will be accompanied by approximately 30% plan drawings, as well as a maintenance plan. The design and engineering phase of the project will be completed by an engineering firm during the next phase of the project. Design and engineering is not within the scope of work for the Environmental phase that is being completed by Merle D. Grimes, llc. The future engineering firm will be tasked with providing a specific alignment plan, based on specific site conditions and guidelines included in the Final Environmental

Assessment and 30% complete plans.
The basic description of the Preferred Alignment for the Ahukini to Lydgate Path follows:

> The path will move from the Ahukini fishing pier, around Hanamaʻulu Bay, and cross the existing concrete cane haul bridge over the Hanamaulu Stream, then continue on the abandoned cane haul rail road alignment above Hanamaʻulu Beach Park and onto the property known as the Moody Property and along ocean bluffs to lands south of the Hilton Hotel, again, following abandoned cane haul roads when appropriate. The path continues along the mauka edge of Hilton Lane to the Wailua Golf Course where is will follow along the existing drainage canal and Kuhio Highway all of the way to Leho Drive. The path continues makai on Leho to Nehe Road where it will follow on the south edge of the road until it connects with the existing path at Lydgate Park.

Merle Grimes provided considerable detail on how this route can best be accomplished. He also showed where beach access and public amenities might be located.

WAILUA GOLF COURSE REACH
Project ideals that guide decision making were reviewed by Merle Grimes:

- Safety concerns
- Provide alternative form of transportation
- Build community bonds
- Meet community needs
- Americans with Disabilities Act compliance
- Compatible with other path phases
- Durable and high quality materials
- Low maintenance design
- Create first-rate public amenity
- Improve and/or sustain the coastal environment
- Cultural education
- Compatible with Wailua Golf Course
- Maximized existing amenities, such as the Hanamaʻulu Beach Park and railroad bridge
- Compatible with existing path amenities, such as Lydgate Park pathways

Merle Grimes then reviewed the elements of the golf course reach that the EA will include. He also drew upon the expertise of Steve Kyono, Hawaii Department of Transportation and Ed Okamoto, Wailua Golf Course manager, in

support of the analysis and decision-making, which resulted in the selection of the preferred alignment. Mr. Kyono stated that the mauka alignment would be much too costly, the relocating of the golf course entrance across from KCCC's entrance would be beneficial and safe (no traffic light is planned at this time) and any future highway widening would have to occur on the mauka side. Mr. Okamoto said that golf course impacts would not reduce the course quality and that locating the path along the highway to Leho Drive would eliminate a number of potential concerns.

Merle Grimes reviewed the following conditions and guidelines will be included in the Final Environmental Assessment:

- Golf Course personnel will be consulted during all phases of the design process.
- The public will be provided opportunity to review and comment on proposed design solutions.
- There will be no loss of fairways.
- Safety will be improved for automobiles turning into and out of the golf course parking lot.
- Aesthetics of the golf course entrance will be improved by a new entrance sign and lower parking lot, plus new landscaping, paving, and fencing
- Signs will be placed that state that the golf course is not a parking access location for the path
- There will be no net loss of parking stalls
- Overflow parking will be provided for
- There will be a buffer around the interment site
- Visual and noise pollution from Kuhio Highway will be reduced
- A designer with golf course experience will be part of the design team
- A guardrail will be placed along Kuhio Highway where appropriate to prevent autos from driving onto the path and golf course
- Measures will be taken to prevent people from accessing the golf course
- Horses will be banned from the golf course reach of the path
- Trees will be moved when necessary, not removed.
- Landscaping buffers, where appropriate, will be placed on the golf course side of fencing
- Construction fencing, and an approved construction staging and phasing plan, will minimize the negative impact during construction

In concluding his presentation, after reviewing general maintenance recommendations based on volunteer assistance for county parks employees, Merle Grimes opened the floor for discussion.

QUESTIONS AND COMMENTS, WITH RESPONSES (PARAPHRASED)

C: As a person who walks and occasionally bicycles this route, my option now is to be near cars going 50-60 mph. I am in complete support of this project, since now we have nothing but the highway.

C: I am a golfer at this course several times a week. The 7th fairway goes to the out-of-bounds marker. You are taking part of the golf course at the 7th. At the 10th, golfers hit balls into the trees every day. You will take away the playability and quality of the golf course by making the 7th easier and negatively affecting the 10th. Golfers won't like it. We have the best municipal golf course in the whole country now. Public links tournaments have come here twice. You should go mauka with the path.

R: Ed Okamoto
The path will infringe on the out-of-bounds for 7th and 10th. 7th is a par 3. We will still maintain the OB on 7 and 10. It will be tougher since narrower by 15-16 feet. My

position is that the path has to be put as close to the highway as possible, even in the areas that are sloped. I am trying to preserve golf course integrity as much as possible. I don't think it will greatly impact our course. It is good that the decision was made to run along the highway to Leho Drive vs going around the 12th.

Q: Is this path a county facility? If so, you will have problems with the union for using volunteer labor.

R: Merle Grimes
Volunteers will only assist county workers, as they do at Lydgate Park right now.

C: I am also a big walker and am very happy that this is happening.

Q: What about fishing access, such as at Marine Camp?

R: Merle Grimes
Nothing in this reach requires driving over the path. It goes along the side of Marine Camp Road. Fishing will not be adversely affected. We hope to improve the park there.

Q: What about the path attracting homeless people, as we have now in the park?

R: Merle Grimes
Kahalani condos had a problem with the homeless until the path went in. Generally, the homeless do not want to be beside a public path.

Q: Why build on the drainage canal from the golf course? It floods regularly, now due to a fence under the bridge.

R: Merle Grimes
This reach does not cross that canal. Drainage has always been a problem there.

Q: Why do you always talk about the view of the ocean? Why not go mauka?

R: Merle Grimes: As we just showed in the presentation, there is no safe way to cross the highway twice. We tried to find a safe, affordable way and failed. In addition, HDOT did not support any highway crossings.

Q: Cars could drive on the path at the 7th fairway, yes?

R: Merle Grimes: There will be a guardrail installed for safety.

Q: What about 11th green access?
R: Ed Okamoto: We will add a fence and gate, which will be open during the day.

C: I have walked this area for 20 years. I appreciate that we are preserving this forever. This is a good compromise. May bring some good for the golf course. I am highly in favor.

Q: I am not against the path, just against the highway route. What happens if the DOT decides to widen the highway?

R: Steve Kyono:
Good question. In this area all alternatives are mauka, since we can not use public recreation lands.

Q: Turn lanes for the golf course and KCCC, if aligned, will cause chaos. What happens to contra flow?

R: Steve Kyono: This is an engineering issue. When it is warranted, we will consider this.

Q: What is an EIS, vs an EA? Why no EIS required?

R: Pat Phung, Federal Highways Administration:
An EA gauges significant impact. If warranted, an EIS would be done. This meeting tonight will help us decide what is next.

Q: Why not reduce the speed limit to make the road safer and make it easier to negotiate that section?

R: Merle Grimes: A traffic study would assess this and would be required before any action could be taken. This is part of the design phase.

Q: What is the total mileage of this section and would it be possible to consider horses for the Marine Camp area? This has been a past use. I just want to get this request on the record.

R: Merle Grimes: About 4.5 miles. Horses on the path would be dealt with in future work.

C: By same participant shown in second comment: If you take away 7 and 10 rough, it does impact quality. Narrowness is not an improvement. Golfers hit balls over the trees. A wall will not be safe.

R: Merle Grimes: In the design phase, canopies can be considered to protect users of the path in certain key areas.

Q: Are there any plans for path access for Hanama`ulu residents? School?

R: Merle Grimes: The best highway crossing is at Ahukini Road. This is a tough issue. The highway is a major problem. Better addressed in the design phase.

C: I was disappointed that we could not go along the shoreline, but I like this and am excited. Let's build it.

Q: I am excited about using the old train bridge. Can we keep the old pavilion design?

R: Merle Grimes: Yes, this is the plan.

C: I appreciate what you are doing. There are no kids here tonight. This is for them. It will be great to bring kids to the path.

Q: I am really excited about the possibilities. This is an amazing process. How about a boardwalk on the shore for pedestrians?

R: Merle Grimes: We looked at that with shoreline experts. Golfers were very opposed to an ocean side route. Shoreline erosion is an issue. It is an expensive option, with many challenges.

Ed Okamoto: The coast route would create much loss for 1, 2 and 17, our signature hole.

I was very much against it.

C: My husband plays golf at Wailua. I enjoy seeing the golfers as I drive by. It is beautiful. Don't build a wall.

C: I am impressed by effort to fin win/win. Put a top over for safety. Look for a pedestrian path along the shore. This is great. I am totally for it and looking forward.

R: Merle Grimes: We can canopy, as mentioned. There is a type of "floating" boardwalk. This is preferable to social trails and ATV's on the dunes.

Q: Could we do it without a boardwalk?

R: Merle Grimes: It is possible, using signage. This will be important to study for a future walking-only path.

C: Thanks, I voice my support. I am disappointed about the coast trail, but I understand why. I am afraid of the section along the highway, to bring my child there. I have been hit by a golf ball. Do cover the trail.

R: Merle Grimes: The design phase criteria will include what types of fence, plus the requirement for a golf course designer.

C: I commend you all. My wife and I drive here from Anahola everyday of the week, for years. Will leashed dogs be allowed?

R: Thomas Noyes, Na Ala Hele Makalae Committee:
The path is a county park and currently dogs are not allowed in county parks. We are working on a permitting system for dogs and horses.

C: I am in support of leashed dogs on the entire path.

NEXT STEPS
In closing the meeting, Merle Grimes reiterated that all comments will be included in the Final EA, to be submitted to the county and to the Federal Highways Administration. These entities will determine whether any further work will be needed. Once a Final EA is approved, it will be used to guide the design and engineering phase of the project. The design phase will determine the best way to implement the preferred alignment as presented at this meeting and in the Final EA, and will include more study and public input.

7.2.5 Meeting with Stakeholders at Wailua Golf Course

AHUKINI POINT TO LYDGATE PARK MEETING MINUTES

DATE: August 18, 2005

WORKSHOP TIME: 7:00 p.m. HST

WORKSHOP LOCATION: Wailua Golf Course

FROM: Sara Edi Simmons-Fife

WORKSHOP ATTENDEES: Tim Bynum, Mayor's Office

Doug Haigh, County Public Works, project manager
Ed Okomoto, Golf Course Manager
Various golfers on island
Merle D. Grimes, MDG, llc
Sara Edi Simmons-Fife
Dr. Chip Fletcher, University of Hawai‘i
Frank Sullivan, Team Golf Course Consultant
Thomas Noyes, Team Computer Imaging Consultant
Roxanne MacDougal, Team Public Facilitator

WORKSHOP SUBJECT: Path Routing Interaction with Wailua Golf Course

The workshop began with Merle introducing the team to the golf course stakeholder group, and gave a brief overview of the project and the various situations that the path will have to interact with the golf course.

Merle described the Highway Alignment first, using a power point presentation constructed by Thomas. Merle showed and described that should the path be aligned along the highway in the area of the golf course, it would require a tall net to be installed along hole #10 and at the # 17 green to keep the balls out of the highway and off the path. The other solution for this area, would be to re-build the tees lower.

The path must avoid the existing interment site that is located in the parking lot at the highway. From the team discussions with the State Archaeologist, Nancy McMahon, she wanted to see a thirty foot (30’) buffer around the interment site. Merle also described the crossing at the entrance to the Golf Course as very dangerous.

Then, he described the Coastal Path issues and how this alignment relates to the Golf Course.

Merle said that this alignment could potentially have several sub alternatives. That the path would begin on the north end at the point of the existing playbridge at Lydgate Park.

This connection may be a swinging bridge. The path would go past the 17th green and be tight at the green. At the 18th tee, would be a boardwalk and the path would be hidden down the slope. Thomas’ power point presentation then showed a photo simulation at the 17th to show the helical piles and boardwalk.

Behind the driving range in 1994 and 1995, behind the driving range, is eroded and some natural vegetation has come back. A fiber optic cable at the south end of the range was installed in 1994.

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