Summary of Supporting Documentation
Honolulu High-Capacity Transit Corridor Project
Final EIS

Refinement of Airport Alternative
(Aolele Street Transition to Ualena Street)
as presented in Draft EIS, November 2008

Introduction

Subsequent to the Draft EIS, additional coordination with FTA, Federal Aviation Administration (FAA) and HDOT Airports Division revealed that the Airport Layout Plan (ALP) for Honolulu International Airport, upon which the alignment was based, was inconsistent with current FAA regulations for the runway protection zone on runway 22L/4R. The ALP provided by HDOT showed a 1,000-foot runway protection zone where the requirement is now 1,700 feet. Although there are existing buildings within its limits, objects and activities are discouraged from being added to the controlled activity area of the runway protection zone.

This coordination resulted in an evaluation of a range of options to avoid the runway protection zone, including relocation of runway 22L/4R in the makai direction or transitioning the guideway along a range of alignments between Aolele Street and the H-1 Freeway. Based on this evaluation, the design was refined to follow Ualena Street for a short distance; transitioning from Aolele Street to Ualena Street at the extension of Ohohia Street. This option has the lowest cost and fewer impacts to the airport than the Airport Alternative described in the Draft EIS (Figure 1).

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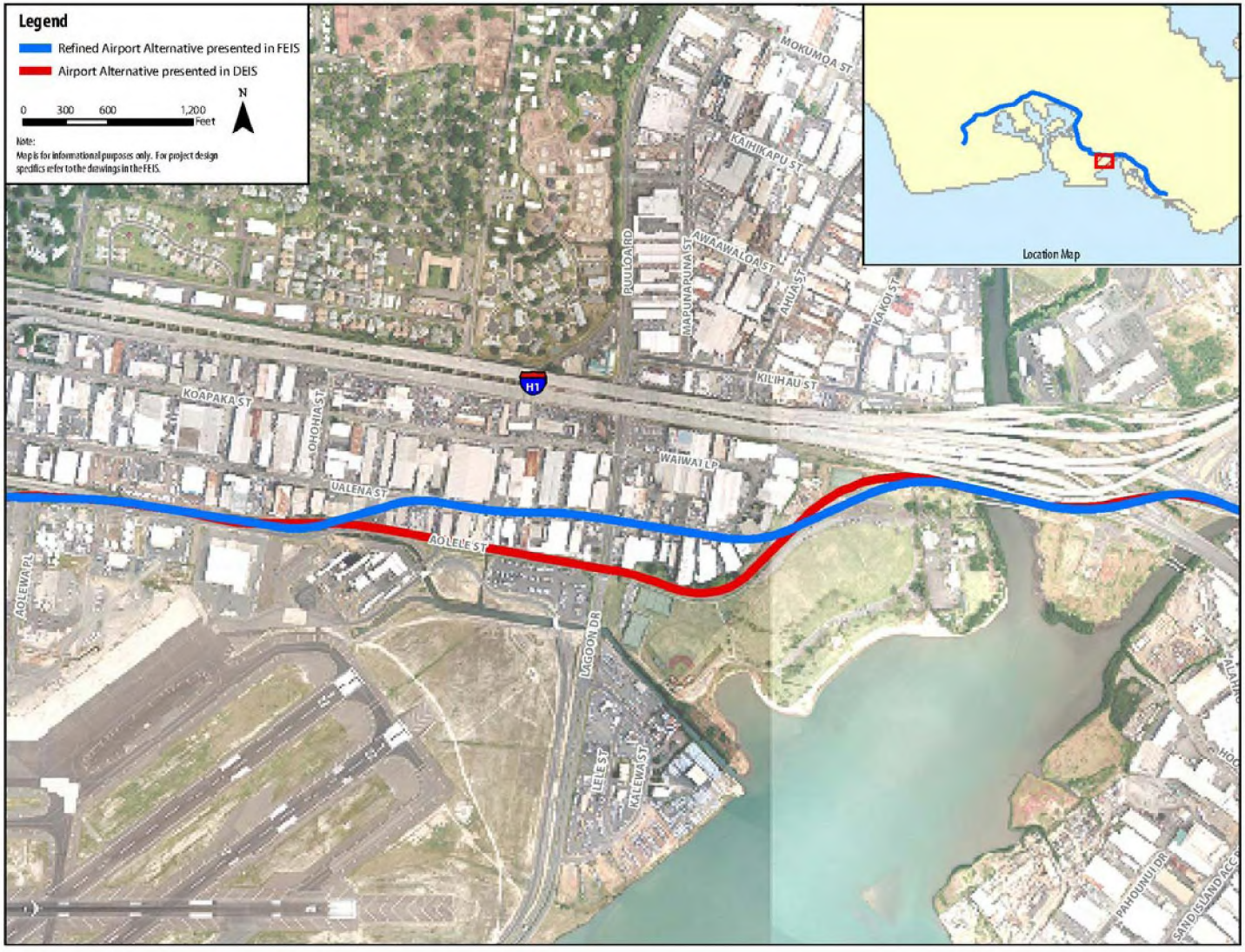
Figure 1. Fixed Guideway Refined Alignment for Aolele Street Transition to Ualena Street



Transportation

The Project will have no significant transportation effects to parking and freight traffic. There will be temporary construction-related effects.

Freight Traffic Volume /Vehicle Mix—As documented in the Final EIS, Table 3-2 shows that island-wide trips by trucks are 1 percent of total daily trips. However, traffic counts completed in March 2010 along Ualena Street and Lagoon Drive show trucks constituting 19 percent of the vehicle mix. Therefore, the industrial area located on Ualena Street has a higher concentration of truck trips than the corridor as a whole (Table 1). Heavily used freight routes include Nimitz Highway, the H-1 Freeway, Kalihi Street, Ala Moana Boulevard, and near the airport and surrounding industrial areas. These major roadways are also used by transit vehicles, so the same delays that automobiles and transit experience along major corridors are also experienced by truck traffic.

Table 1. March 2010 Ualena Street and Lagoon Drive Heavy Vehicle Percentages

Time of Day	Heavy Vehicle Percentage
Morning	28%
Mid-day	18%
Evening	12%
Average	**19%**

Source: Field visit March 2010

Truck Turning Movements—The industrial area centered on Ualena Street has a higher concentration of truck trips than the corridor as a whole. Near the Lagoon Drive Station, column placement could affect existing truck route traffic patterns along certain blocks and streets. Support columns will be located to avoid effects to freight movement. In some areas along the fixed guideway alignment, left turns in and out of driveways could be restricted due to column placements, requiring right-in/right-out access. In other locations, such as near the Lagoon Drive Station, column placement could affect existing truck route traffic patterns along certain blocks and streets. However, access to all businesses will be maintained, and reduced roadway congestion resulting from the Project will generally have a positive effect on freight movement.

Loss of On-Street Parking Spaces—Thirty on-street spaces will be lost on the mauka side of Ualena Street between Ohohia Street and Lagoon Drive. In addition, eight on-street spaces on the Ewa side of Lagoon Drive mauka of Ualena Street will be removed to make room for a new bus stop to serve the station. Additionally, 30 on-street spaces (15 mauka and 15 makai) and 7 off-street spaces will be lost on Waiwai Loop. The width of travel lanes will not be reduced along either Ualena Street or Waiwai Loop. Columns will be placed in the center of the existing roadway and a center left-turn lane will be created between columns on Ualena Street. No mitigation is proposed. Table 2 shows the total number of existing parking spaces in the area.

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Table 2. Parking Counts by Project Location

Location Description	Total Number of Parking Spaces
Along Koapaka St., between Ohohia St. and Lagoon Dr.	130
Along Waiwai Lp., from the intersection of Lagoon Dr./Koapaka St., along Waiwai Lp., to the intersection of Lagoon Dr./Ualena St.	123
Along Lagoon Dr., between Koapaka St. and Ualena St.	10
Along Ualena St., between Lagoon Dr. and Ohohia St.	121
Along Ohohia St/, between Ualena St. and Koapaka St.	18
Total	**402**

Construction Impacts—Construction of the Project will have temporary effects on airport facilities, and notification of any short-term obstructions (e.g., cranes and gantries) will be made to appropriate parties. Temporary lane closures on Ualena Street and Waiwai Loop could cause short-term delays to trucks and deliveries at airport-related facilities.

The City will notify HDOT Airports of the use of cranes, gantries, or other short-term obstructions near airport operations. The City will minimize disruption to freight movement by limiting road and lane closures and timing work along busy freight routes to avoid conflicts with truck traffic. When construction reaches roadways frequented by heavy truck traffic, detour plans prepared as part of the Maintenance of Traffic (MOT) Plan will also account for truck traffic. Additionally, in areas with considerable truck traffic, the City will work with businesses to maintain access to properties, taking into account their particular vehicular needs.

In March 2010, Addendum 03 to the Transportation Technical Report (October 9, 2009) was prepared to document additional transportation-related information and data.

By memorandum dated April 7, 2010, the FAA submitted to FTA an evaluation of design options to avoid airport and operational impacts, this evaluation is included in Appendix K of the Final EIS.

Environmental Effects

Land Use—The Aolele Street transition to Ualena Street will require acquisition of four privately owned parcels (two for the Lagoon Drive Station and two where the Project enters the Keehi Lagoon Beach Park) for transportation use.

For the entire Project, the effects on land use, farmland or land use plans and policies will remain the same for the Airport Alternative presented in the Draft EIS as compared to the refined Airport Alternative presented in the Final EIS.

The entire Airport Alternative presented in the Draft EIS required approximately 160 acres of existing land use will be converted to transportation use. The refined Airport Alternative presented in the Final EIS will also require approximately 160 acres of existing land use be converted to transportation use, and will change the mix of affected

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land uses. The land needed for the Project still represents approximately 1 percent of the total acreage within the study corridor.

Economic Activity—The Aolele Street transition to Ualena Street refinement will require the displacement of five businesses as compared to the Airport Alternative on Aolele Street presented in the Draft EIS. The displacement of these businesses will not change the overall Project's effect on property tax revenues.

For the entire Project, the environmental effects to economic activity will remain the same for the Airport Alternative presented in the Draft EIS as compared to the refined design presented in the Final EIS.

Acquisitions, Displacements, and Relocations— The Aolele Street transition to Ualena Street will require the full acquisition of four privately owned parcels and the partial acquisition of 12 parcels. The 12 partial acquisitions will be from six HDOT owned parcels, one Keehi Lagoon Beach Park parcel, and five privately owned parcels. The four full acquisitions and eight of the partial acquisitions are different from those needed for the Airport Alternative on Aolele Street presented in the Draft EIS. Table 3 shows a comparison of the parcel acquisitions required for both Airport Alternative alignments in the vicinity of the Aolele Street transition to Ualena Street.

The four full acquisitions would result in the displacement of four businesses. One business displacement will occur on one of the parcels located adjacent to where the Project enters the park. (Tables 3 and 5 describe the existing use of these parcels.)

Where relocations will occur, compensation will be provided to affected property owners, businesses, or residents in compliance with all applicable Federal and State laws and will follow the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act (49 CFR 24). Impacts from the transition from Aolele Street to Ualena Street will not be significant.

DTS has notified property owners along Ualena Street and Waiwai Loop of potential impact(s) to their property. DTS is in the process of holding meetings with each owner to explain these potential impacts as well as the acquisition and relocation process, if applicable. Meetings will continue through the month of April and May until each owner has had the opportunity to have a face-to-face meeting with a project engineer and member of the real estate team.

For the entire Project, the Airport Alternative presented in the Draft EIS required approximately 33 full and 158 partial acquisitions. This would have resulted in 20 residential, 61 business, and 1 church displacement. The current Airport Alternative presented in the Final EIS will require 40 full and 159 partial acquisitions. This will result in 20 residential, 67 business, and 1 church displacement. Table 4 and the "Background Information and Data Collection" section below summarize these numbers.

Table 3: Summary of Acquisitions and Displacements for the Airport Alternative Presented in the Draft EIS (Aolele Street) and Refined Airport Alternative Presented in the Final EIS (Aolele Street Transition to Ualena Street)

			Airport Alternative Presented in the Draft EIS (Aolele Street), November 2008			Refined Airport Alternative Presented in the Final EIS (Aolele Street transition to Ualena Street), April 2010		
TMK	Owner	Total Area of TMK	Acquisition Type	Approximate ROW Impacted	Displacements	Acquisition Type	Approximate ROW Impacted	Displacements
11003001	HDOT Airport	2,487 Acres	Access Easements	126,600 sq. ft.	None	Access Easements	54,000 sq. ft.	None
11004012	HDOT Airport	22,000 sq. ft.	Partial[1]	14,400 sq. ft.	None	Partial	1,000 sq. ft.	None
11004013	HDOT Airport, Hawaii Automobile Retailing Group (Tax Bill)	20,000 sq. ft.	Partial[1]	6,000 sq. ft.	None	Partial	3,000 sq. ft.	None
11004014	HDOT Airport, National Car Rental System INC (Lessee)	22,000 sq. ft.	Partial[1]	800 sq. ft.	None	Partial	5,800 sq. ft.	None
11003006	Keehi Lagoon Beach Park		Partial	89,500 sq. ft.	None	Partial	57,500 sq. ft.	None
11003007	Keehi Lagoon Beach Park		Partial	4,400 sq. ft.	None	[2]		
11004001	HDOT Airport, Kronick, Norman M (Lessee) and Shell Oil Co (Lessee)	27,057 sq. ft.	Partial	400 sq. ft.	None	No Acquisition		
11004002	HDOT Airport	25,949 sq. ft.	Partial	1,400 sq. ft.	None	No Acquisition		
11004015	HDOT Airport, National Car Rental System INC (Lessee)	41,752 sq. ft.	No Acquisition			Partial	13,500 sq. ft.	None
11004017	HDOT Airport, National Car Rental System INC (Lessee)	20,675 sq. ft.	No Acquisition			Partial	6,000 sq. ft.	None

			Airport Alternative Presented in the Draft EIS (Aolele Street), November 2008			Refined Airport Alternative Presented in the Final EIS (Aolele Street transition to Ualena Street), April 2010		
TMK	Owner	Total Area of TMK	Acquisition Type	Approximate ROW Impacted	Displacements	Acquisition Type	Approximate ROW Impacted	Displacements
11004018	HDOT Airport, National Car Rental System INC (Lessee)	20,675 sq. ft.	No Acquisition			Partial	2,800 sq. ft.	None
11016005	Waiwai Loop LLC	24,738 sq. ft.	No Acquisition			Full	24,738 sq. ft.	Vacant Structure
11016006	Alert Holdings Group	23,225 sq. ft.	No Acquisition			Full	23,225 sq. ft.	1 Business
11016007	Watumull Enterprises LTD.		No Acquisition			Partial	9,800 sq. ft.	1 Business
11016012	Window World INC	21,389 sq. ft.	No Acquisition			Partial[1]	1,100 sq. ft.	None
11016013	Queen Bee Limited Partnership		No Acquisition			Partial[1]	2,000 sq. ft.	None
11016014	Chevron USA INC		No Acquisition			Full[1]		1 Business
11016015	Brewer Beverly L TR, AL Phillips the Cleaner INC (Lessee)	22,307 sq. ft.	No Acquisition			Full[1]	22,307 sq. ft.	2 Businesses
11016016	International Express INC	22,500 sq. ft.	No Acquisition			Partial[1]	2,000 sq. ft.	None
11016017	Waiwai Loop Rental INC	22,500 sq. ft.	No Acquisition			Partial[1]	1,100 sq. ft.	None

Notes:

1. These acquisitions are required for the Lagoon Drive Station
2. During analysis of the refined airport alternative it was noted that TMK 11003007is part of TMK 11003006.

Table 4. Acquisition and Displacement Summary for the Project

Summary Documentation of Acquisition and Displacements	Parcel Acquisitions			Access Easements	Displacements by Land Use			Total Displace-ments*
	Total	Partial	Full		Residential Units	Commercial and Industrial Businesses	Churches	
Final EIS April 2010 (refined Airport Alternative)	199	159	40	12	20	67	1	88
Administrative Final EIS June 18, 2009	190	156	34	10	18	65	1	84
Salt Lake Alternative (Draft EIS November 2, 2008)	190	155	35	N/A**	20	62	1	83
Airport Alternative (Draft EIS November 2, 2008)	179	145	34	N/A**	20	65	1	86
Airport and Salt Lake Alternative (Draft EIS November 2, 2008)	205	170	35	N/A**	20	67	1	88

*Approximately 780 parcels are adjacent to the alignment. The full parcel acquisitions and displacements from the Project will be a small change to the commercial and residential elements along the alignment.

**Access easements required for each alternative were not included in the Draft EIS, November 2, 2008.

Community Services and Facilities—The Aolele Street transition to Ualena Street refinement shows the alignment primarily in the parking lot within Keʻehi Lagoon Beach Park. The Project will enter the Park mauka of the main entrance from Waiwai Loop and will be elevated over approximately 1 acre of the park. There will be temporary impacts during construction and mitigation consistent with other parts of the corridor.

The refined design will not change the effect on community services and facilities, except for very minor alignment changes within Keʻehi Lagoon Beach Park as documented in Chapter 5 of the Final EIS (Section 4(f) Evaluation). The description of the direct use of Ke`ehi Lagoon Beach Park in the Final EIS Section 5.5 (page 5-18) was refined to reflect the transition that modified the entry point of the transit guideway into the park. The *de minimus* impact on the park does not change as a result of the transition from Aolele Street to Ualena Street. Section 5.8.1 of the Final EIS was revised to slightly change (decrease) the amount of land that will be used in Ke`ehi Lagoon Beach Park. Overall, the Aolele Street transition to Ualena Street refinement shortens the amount of alignment in the park by approximately 800 feet from the 2,000 feet described in the 2008 draft EIS.

For the entire Project, the environmental effects to community services and facilities will remain the same and *de minimis* use of Section 4(f) property will be reduced for the refined design documented in the Final EIS.

Neighborhoods—The Aolele Street transition to Ualena Street refinement will not affect the character of the Airport neighborhood. This neighborhood comprises non-residential land uses, including light industrial businesses, retail services, and some airport-related industry (see Section 4.5.2, page 4-4.1 of the Draft EIS). There are no schools, churches, or houses adjacent to the Project on Ualena Street.

For the entire Project, the environmental effects to neighborhoods will remain the same for the Airport Alternative presented in the Draft EIS compared to the refined design presented in the Final EIS.

Environmental Justice (EJ) —There are no identified EJ areas or communities of concern in the Airport neighborhood where the Aolele Street transition to Ualena Street refinement is located. Section 4.6 of the Draft EIS explains the methodology of how the analysis identified potential effects on minority and low-income populations that reside within the study corridor. Included in this section is an Environmental Justice population, as shown in the *Study Corridor* map, Figure 4-14, on page 4-49 of the Draft EIS. As illustrated on that figure, the Project alignment on Ualena Street is makai by a few blocks from the closest EJ area, as illustrated in the Oahu MPO EJ area 9.

For the entire Project, the environmental effects to environmental justice areas or communities will remain the same for the Airport Alternative presented in the Draft EIS compared to the refined design presented in the Final EIS.

Visual and Aesthetic Conditions—The Aolele Street transition to Ualena Street refinement will have a low-to-moderate visual effect. Figure 4-25, *Viewpoint 9–Keʻehi Lagoon Park Looking Koko Head*, in Section 4.7 of the Draft EIS, page 4-73, shows a multi-lane asphalt roadway with an elevated structure to the left. This viewpoint did not

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show the refined design; therefore, a new simulation was prepared and submitted to FTA on March 31, 2010. This simulation is taken from within the park looking mauka and 'Ewa. From this vantage point, the guideway and columns will be located along the mauka perimeter of the park. They will be visible elements in the background of mauka views from the park, as is the H-1 viaduct today. It will contrast with the open character of park facilities as it traverses the perimeter of the tennis courts near the mauka side and the open field. Farther Koko Head, it will run parallel with the H-1 Freeway viaduct where it will be less noticeable.

For the entire Project, the environmental effects to visual and aesthetic conditions will remain the same for the Airport Alternative presented in the Draft EIS compared to the refined design presented in the Final EIS.

Air Quality—Air quality impacts are anticipated from the Aolele Street transition to Ualena Street refinement. This statement is consistent with Section 4.8 of the Draft EIS, page 4-96, because no substantial air quality impacts are anticipated to result from operation of any of the project alternatives. Any measures to reduce automobile travel will reduce air pollutant emissions.

For the entire Project, the environmental effects to air quality will remain the same for the Airport Alternative presented in the Draft EIS compared to the refined design presented in the Final EIS.

Noise and Vibration—There are no noise or vibration-sensitive receptors near the Aolele Street transition to Ualena Street refinement; therefore, there are no noise and vibration impacts. This statement is consistent with Section 4.9.1 of the Draft EIS, page 4-98, Table 4-13, because the land use descriptions in this table are noise-sensitive. In addition, Section 4.9.1 of the Draft EIS, page 4-99, Table 4-14, lists the FTA ground-borne vibration impact criteria land use categories; the refined design does not meet any of these land use categories.

For the entire Project, the Airport Alternative presented in the Draft EIS would have had moderate noise impacts at six areas. The refined design presented in the Final EIS will have moderate noise impacts at eight areas.

Energy and Electric and Magnetic Fields (EMF)—There are no additional energy consumption needs with the Aolele Street transition to Ualena Street refinement. This statement is consistent with Section 4.10.1 of the Draft EIS, page 4-107. There are no EMF-sensitive receptors along the refined design, as the types of businesses in this area do not use sensitive electronic equipment. This statement is consistent with Section 4.10.2 of the Draft EIS, page 4-108, Table 4-17, because there are no potential EMF receptors within 200 feet of the Project that would be impacted by the Project.

For the entire Project, the Airport Alternative presented in the Draft EIS would have had motor vehicle consumption islandwide of 90,756 MBTUs. The refined design presented in the Final EIS will have a motor vehicle consumption of 90,760 MBTUs.

Hazardous Waste and Materials—The Aolele Street transition to Ualena Street refinement requires the acquisition of a parcel with an operating gasoline station at the corner of Lagoon Drive and Waiwai Loop. A Phase I assessment will be completed. This

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statement and approach is consistent with Section 4.11.2 of the Draft EIS, page 4-111, under the heading "Petroleum Contaminants."

For the entire Project, the environmental effects to hazardous waste and materials will remain the same for the Airport Alternative presented in the Draft EIS compared to the refined design presented in the Final EIS.

Ecosystems—There are no natural ecosystems along the Aolele Street transition to Ualena Street refinement. This statement is consistent with Section 4.12.2 of the Draft EIS, "Affected Environment," which begins on page 4-119.

For the entire Project, the environmental effects to ecosystems will remain the same for the Airport Alternative presented in the Draft EIS compared to the refined design presented in the Final EIS.

Water—The Aolele Street transition to Ualena Street refinement does not impact waters of the U.S. in the area and does not change the amount of temporary or permanent fill below the ordinary high water mark. This statement is consistent with Section 4.13.2 of the Draft EIS, Table 4-25 through Table 4-28, which begin on page 4-129 and Section 4.14 of the Final EIS (with input from the U.S. Army Corps of Engineers).

If the alignment was not refined and remained on Aolele Street, the runway lights in the lagoon would need to be reconstructed to meet FAA runway approach lighting standards. This would require additional fill in waters of the U.S. Work within the lagoon would require additional study to determine potential impacts to turtle and fish habitat in the lagoon. These additional impacts to waters of the U.S. would not be consistent with the Corps of Engineers' guidance to identify the least environmentally practicable alternative.

For the entire Project, the environmental effects to water will remain the same for the Airport Alternative presented in the Draft EIS compared to the refined design presented in the Final EIS.

Street Trees—The Aolele Street transition to Ualena Street refinement has no effect on the number of street trees affected by the Project. This statement is consistent with Section 4.13.2 of the Draft EIS, specifically Figure 4-48 which is a map that locates all the excellent and notable trees. All other trees removed by the Project will be transplanted to another location or, if that is not possible, new trees will be planted in their place. Along the refined design no trees will be removed for the Project, as trees do not exist at this location.

For the entire Project, the environmental effects to street trees will remain the same for the Airport Alternative presented in the Draft EIS compared to the refined design presented in the Final EIS.

Archaeological, Cultural, and Historic Resources—The Aolele Street transition to Ualena Street refinement does not have an effect on historic properties. There are no additional properties eligible for inclusion in the National Register of Historic Places along the transition from Aolele Street to Ualena Street (documented on eligibility determination forms). FTA anticipates concurrence from the State Historic Preservation Officer (SHPO).

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For the entire Project, the Airport Alternative presented in the Draft EIS would have had adverse effects to 33 historic resources and effects to five cultural resources. The refined design presented in the Final EIS will have adverse effects to 33 historic properties and effects to four cultural resources.

Indirect Effects—The Aolele Street transition to Ualena Street refinement will not have an indirect effect of growth and will not affect station area development. The Lagoon Drive Station will be shifted one block mauka of the station location presented in the Draft EIS and is not expected to have transit-oriented development potential. The indirect effects from this alignment transition are similar to the airport alignment presented in the Draft EIS.

Cumulative Effects—The Aolele Street transition to Ualena Street refinement results in no changes to the overall cumulative effects of the Project.

Background Information and Data Collection

This information was collected to serve as documentation for impacts related to land use, parcel acquisitions and business displacements, economics, and neighborhoods in the vicinity of the Aolele Street transition to Ualena Street refinement. The column headings in Table 4 are defined as follows:

- The "TMK" number is the tax map key number assigned to a parcel by the City and County of Honolulu. The TMKs are identified on the preliminary right-of-way plan sheets and the City's GIS database.
- "Airport-Related Business" was based on field observation and internet research of the company.
- "Large Trucks On-site" was based on an observation of truck types on each property and the type of loading bays at each establishment.
- "Vacant Parcel" was established by for sale/lease signs or an empty lot.
- "Type of Business" can be retail, warehouse, light industrial, industrial, financial, office, medical, or vacant. Larger buildings with no other descriptors were considered warehouse. In most cases, the type of business is indicated by the first letter of the descriptor. Where multiple businesses are located on the same parcel, they are listed individually under the one TMK.
- "On-site Parking Available" is based on observation and existence of restrictive parking signs.
- "Acquisition Type" can be blank, meaning not applicable, Full, Partial, or Access Easement.
- "Displaced Business" can be blank, meaning no business displacement, or it can have the number of businesses displaced on this TMK. In cases of multiple businesses on a parcel, the businesses are individually listed.
- Rows highlighted in blue show acquisitions and displacements that are different from those identified as part of the Airport Alternative presented in the Draft EIS and the Ualena Street refinement under consideration in this document.

Table 5: Parcel Data in the Vicinity of the Refined Alignment

TMK	Street Name	Name of Business and Description	Airport-Related Business (Y/N)	Large Trucks On-site (Y/N)	Vacant Parcel (Y/N)	Type of Business	On-site Parking Available (Y/N)	Acquisition Type (blank if not applicable)	Displaced Businesses
11004020	Ualena Street	B&L Seafood	?	Y	N	W	Y		
	Ualena Street	Rainbow Vacuums Sales and Service	N	N	N	I	Y		
11004022	Ualena Street	IC Supply (semiconductors, resisters, capacitors, relays, potentiometers/ trimmers, relays, wire)	?	Y	N	I	Y		

TMK	Street Name	Name of Business and Description	Airport-Related Business (Y/N)	Large Trucks On-site (Y/N)	Vacant Parcel (Y/N)	Type of Business	On-site Parking Available (Y/N)	Acquisition Type (blank if not applicable)	Displaced Businesses
11004057	Ohohia Street	Golden Traders Wholesale, Inc. (bakery and cereal products)	?	Y	N	I	Y		
11004021	Ohohia Street	Kaiser Permanente Service Center	N	N	N	Office	Y		
11004058	Ohohia Street	Concentra Urgent Care	N	N	N	Medical	Y		
11004057	Koapaka Street	Selective Stone	N	Y	N	W	Y		
11004052	Koapaka Street	Marblehaus (Stone)	N	Y	N	W	Y		
11004025	Koapaka Street	Hawaii Home Expo	N	Y	N	LI	Y		
11004023	Ualena Street	Diana Environmental Construction	?	Y	N	W	Y		
	Ualena Street	Hi-Line Distributors, Inc (wholesale automobile body shop equipment/ supplies)	N	N	N	LI	Y		
	Koapaka Street	Ferahmin's Autobody	N	N	N	LI	Y		
	Ualena Street	Alexander Brothers Office Furniture & Equipment	N	Y	N	W	Y		
	Ualena Street	Ray's Carpets	N	N	N	Retail	Y		
	Koapaka Street	Jets Local Fast Food (Koapaka side)	N	N	N	Retail	Y		
	Koapaka Street	Golden Cabinets (Koapaka side)	N	N	N	I	Y		
11004057	Koapaka Street	Selective Stone (Koapaka side)	N	N	N	I	Y		
11004025	Koapaka Street	KYD – packaging and wholesaling	N	Y	N	I	Y		
11004026	Ualena Street	Miyake Concrete	N	Y	N	I	Y		
11004027	Ualena Street	Bob Sun, Inc	N	Y	N	I	Y		
	Ualena Street	Hawaii Candy	N	Y	N	W	Y		
	Ualena Street	Siege Distributors, Inc.	N	Y	N	W	Y		
	Ualena Street	BG	N	Y	N	W	Y		
11004028	Ualena Street	Savage – wholesale building materials	N	Y	N	W	Y		
11004029	Ualena Street	Available for lease by Marcus and Associates	NA	Y	For sale or lease	Vacant	N		
	Koapaka Street	Pinnacle Distribution Concepts Will Call	Y	Y	N	Vacant/ unknown warehouse	Y		
11004011	Ualena Street	Aloha State Sales (countertop provider)	N	N	N	W	Y		
11004010	Ualena Street	Futura Stone of Hawaii	N	Y	N	W	Y		

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TMK	Street Name	Name of Business and Description	Airport-Related Business (Y/N)	Large Trucks On-site (Y/N)	Vacant Parcel (Y/N)	Type of Business	On-site Parking Available (Y/N)	Acquisition Type (blank if not applicable)	Displaced Businesses
11004009	Ualena Street	KW Auto Body Repair and Paint	N	N	N	LI	Y		
11004032	Ualena Street	Thyssen Krupp Elevator	N	Y	N	I	Y		
11004033	Ualena Street	Grabber	Y	Y	N	W	Y		
	Ualena Street	MV Enterprises Inter-Island Airfreight	Y	Y	N	W	Y		
11004035	Ualena Street	Airport Lunch & Deli	N	N	N	Retail	Y		
	Koapaka Street	Truck Equipment Hawaii	Y	Y	N	Retail	Y		
	Ualena Street	Classic Sales, Inc (Hawaii footwear)	N	Y	N	W	Y		
	Ualena St	Island Princess (macadamia nuts and chocolate)	Y	Y	N	W	Y		
	Koapaka St	United Refrigeration	N	Y	N	W	Y		
	Koapaka Street	Fred Rader Mill Supply	N	Y	N	W	Y		
	Koapaka Street	D&M Hydraulic Industrial	N	Y	N	I	Y		
	Ualena Street	PSAV (event presentation services)	N	Y	N	Warehouse	Y		
	Koapaka Street	AOG Accessory Overhaul Group	Y	Y	N	I	Y		
11016031	Lagoon Dr	Ryder Truck Rental	Y	Y	N	Retail	Y		
11004039	Lagoon Dr	Elite Auto Group Fine Automobiles	N	N	N	LI	Y		
11004040	Lagoon Dr	Hawaii National Bank	N	N	N	Financial	Y		
11004001	Ualena Street	Shell Gas Station	N	N	N	Retail	Y		
	Lagoon Dr	Lagoon 500 Strip Club	N	N	N	Retail	Y		
	Lagoon Dr	Lagoon Chinese Food	N	N	N	Retail	Y		
	Lagoon Dr	Lagoon Liquor	N	N	N	Retail	Y		
11004002	Ualena Street	Lim's Auto	N	N	N	LI	Y		
	Ualena Street	Ian's Autobody and Paint	N	N	N	LI	Y		
	Ualena Street	Exacta Sales	N	N	N	Retail	Y		
	Ualena Street	Select Used Cars	N	N	N	LI	Y		
	Ualena Street	B&B Automotive	N	N	N	LI	Y		
11004003	Ualena Street	Architectural Woods, Inc	N	Y	N	W	Y		
11004005	Ualena Street	Nissan Forklift	N	N	N	W	Y		
	Ualena Street	Commercial Shelving, Inc	N	N	N	Retail	Y		
	Ualena Street	State Higa Lift	N	N	N	Retail	Y		
11004006	Ualena Street	Stone World (may be vacant)	N	N	For sale or lease	Vacant	Y		

TMK	Street Name	Name of Business and Description	Airport-Related Business (Y/N)	Large Trucks On-site (Y/N)	Vacant Parcel (Y/N)	Type of Business	On-site Parking Available (Y/N)	Acquisition Type (blank if not applicable)	Displaced Businesses
11004007	Ualena Street	Makana's Autobody and Repair Shop	N	N	N	LI	Y		
	Ualena Street	Spectra Tone Paint (wood trim paint)	N	N	N	W	Y		
11004008	Ualena Street	Pacific Paint, Inc	N	N	N	W	Y		
11016018	Waiwai Loop	Kona Irrigation Supply	N	Y	N	W	Y		
11016019	Waiwai Loop	Triple B Forwarders	Y	Y	N	W	Y		
11016020	Waiwai Loop	Triple B Forwarders	Y	Y	N	W	Y		
11016021	Waiwai Loop	Alakai Mechanical	N	Y	N	LI	Y		
11016026	Waiwai Loop	Alsco American Linen Division	Y	Y	N	W	Y		
11016030	Waiwai Loop	Alsco American Linen Division	Y	Y	N	W	Y		
11016031	Lagoon Drive	Ryder Truck Rental	Y	Y	N	LI	Y		
11016036	Waiwai Loop	Automotive Warehouse Inc – Distribution Center (hydraulic transportation equipment & supplies)	N	Y	N	LI	Y		
11016035	Waiwai Loop	Education Works (educational materials)	N	N	N	Retail	Y		
11016034	Waiwai Loop	Servco Used Car Center	N	N	N	LI	Y		
11016033	Waiwai Loop	Servco Used Car Center	N	N	N	LI	Y		
11016032	Waiwai Loop	Servco Used Car Center	N	N	N	LI	Y		
11016038	Waiwai Loop	Tongs Koa Custom Koa Furniture	N	N	N	I	Y		
	Waiwai Loop	T. Oki Trading Ltd (bathroom and kitchen appliances)	N	N	N	Retail	Y		
	Waiwai Loop	APC Hawaii, Inc (hardware)	N	N	N	Retail	Y		
	Waiwai Loop	Stanley Bostitch (manufacturer)	N	N	N	I	Y		
11003006	Lagoon Drive	Keehi Lagoon Park	N	N	N		Y	Partial	
11003007	Lagoon Drive	Keehi Lagoon Park	N	N	N		N	Partial	
11016039	Waiwai Loop	2720 Waiwai Loop (may be vacant)	?	?	For sale or lease	Vacant	Y		

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TMK	Street Name	Name of Business and Description	Airport-Related Business (Y/N)	Large Trucks On-site (Y/N)	Vacant Parcel (Y/N)	Type of Business	On-site Parking Available (Y/N)	Acquisition Type (blank if not applicable)	Displaced Businesses
11016001	Waiwai Loop	El's Autobody and Paint Collision Repair Center	N	N	N	LI	Y		
11003029	Waiwai Loop	Wastewater Pump							
11016002	Waiwai Loop	True World Foods Import and Wholesale	N	N	N	W	Y		
11016003	Waiwai Loop	For sale	NA	NA	NA	Vacant	Y		
11016004	Waiwai Loop	Hawaii Employers Council	N	N	N	Office	Y		
11016005	Waiwai Loop	(Possibly vacant)	N	NA	For sale or lease	Vacant	N	Full	Vacant structure - 0
11016006	Waiwai Loop	Alert Alarm of Hawaii	N	N	N	Retail	Y	Full	1 business
11016009	Waiwai Loop	Premium Inc. (cleaning systems)	Maybe	Y	N	W	Y		
	Waiwai Loop	Portable on Demand Storage	N	Y	N	W	Y		
11016010	Waiwai Loop	Pacific Marina Inn	Y	N	N	Retail	Y		
	Waiwai Loop	Lance's Kitchen	Y	N	N	Retail	Y		
11004045	Koapaka Street	Attco Inc. (the show people) (on Koapaka Street)	N	Y	N	I	Y		
11004034	Ualena Street	Ryder Freight (Unit B)	N	Y	N	W	Y		
	Ualena Street	Airport Lunch and Deli	N	Y	N	Retail	Y		
11004019	Ualena Street	Hawaii Air Cargo	Y	Y	N	W	Y		
11014001	Ualena Street	Approved Forwarders of Hawaii (Quality Freight Services)	Y	Y	N	LI	Y		
11004018	Ualena Street	Hawaii DOT Airports Division (open parking lot)	N	N	N	LI	Y	Partial	No
11004017	Ualena Street	Hawaii DOT Airports Division (open parking lot)	Y	N	N	LI	Y	Partial	No
11004015	Ualena Street	Hawaii DOT Airports Division (open parking lot)	Y	N	N	LI	Y	Partial	No
11004014	Ualena Street	Hawaii DOT Airports Division (open parking lot)	Y	N	N	LI	Y	Partial	No
11004013	Ualena Street	Hawaii DOT Airports Division (open parking lot)	Y	N	N	LI	Y	Partial	No
11004012	Ualena Street	Hawaii DOT Airports Division	Y	N	N	LI	Y	Partial	1 business

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TMK	Street Name	Name of Business and Description	Airport-Related Business (Y/N)	Large Trucks On-site (Y/N)	Vacant Parcel (Y/N)	Type of Business	On-site Parking Available (Y/N)	Acquisition Type (blank if not applicable)	Displaced Businesses
		(open parking lot)							
11016014	Waiwai Loop	Lagoon Chevron	N	Y	N	Retail/gas station	Y	Full	1 business
11016013	Waiwai Loop	Jeans Warehouse	N	Y	N	W	Y	Partial	No
11016012	Waiwai Loop	Window World Inc.	N	Y	N	W	Y	Partial	No
11016015	Waiwai Loop	VIP USA; Elyte Pacific Services	N	Y	N	Office	Y	Full	2 businesses
11016016	Waiwai Loop	Hawaiian Ocean Transport, Jet Pro, International Express Inc.	Y	Y	N	W	Y	Partial	No
11016017	Waiwai Loop	Waiwai Loop Rental, Inc.	N	Y	N	W	Y	Partial	No
	Waiwai Loop	B&C Masonry	N	Y	N	I	Y		No
	Waiwai Loop	C&B Masonry	N	Y	N	I	Y		No
	Waiwai Loop	JA Electric	N	Y	N	W	Y		No
	Waiwai Loop	K&S Golf Hawaii	N	Y	N	Retail	Y		No
	Waiwai Loop	Landscape Hawaii	N	Y	N	W	Y		No
	Waiwai Loop	The Lightman	N	Y	N	Retail	Y		No
	Waiwai Loop	Waiwai Loop Rental, Inc.	N	Y	N	Retail	Y		No
11016007	Waiwai Loop	Sopogy Inc (solar powered cells)	N	Y	N	W	Y	Partial	1 business
	Waiwai Loop	Taiyo Inc (food manufacturers)	N	Y	N	W	Y		No
	Waiwai Loop	Energy Industries (turn-key energy efficiency and renewable energy systems)	N	Y	N	W	Y		No
	Waiwai Loop	Ekahi Fire Protection	N	Y	N	Office	Y		No
	Waiwai Loop	Kamaaina Cabinets	N	Y	N	W	Y		No

Data Collection Notes:

- TMK research from City and County of Honolulu GIS database: March 13 and 14, 2010, and observation by means of windshield fieldwork on Friday March 12, Saturday March 13, and Sunday March 14, 2010.
- Other useful information relevant to field work: The research area is zoned light to medium industrial and is composed of medium-sized warehouses with some retail businesses. In general, most properties have one driveway that serves as both exit and entrance to the property. If columns are located to avoid these driveways, it is anticipated that truck access can be maintained.
- The research area is composed of about 30 percent airport-related industry, numerous auto-body shops, two plate lunch restaurants, two gas stations, a hotel and restaurant, a strip club/bar, and a few sundry/liquor stores.
- Most on-street parking is used on weekdays and it is assumed that most parked cars are employees and property owners. On weekends most parking was observed near intersections (Ualena/Lagoon, etc). There are no designated loading zones along the street, so loading and unloading must take place on the properties. There appeared to be some abandoned cars.
- Two alleyways connect Ualena Street to Koapaka Street.
- Pedestrians were not observed on sidewalks during the period of observation.

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