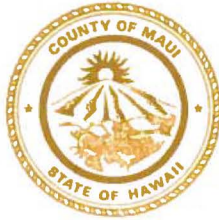


MICHAEL P. VICTORINO
Mayor

MARC I. TAKAMORI
Director

MICHAEL B. DU PONT
Deputy Director



DEPARTMENT OF TRANSPORTATION
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

TELEPHONE: (808) 270-7511
FAX: (808) 270-7505

April 26, 2019

Scott Glenn, Director
Office of Environmental Quality Control
State of Hawaii
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

SUBJECT: Draft Environmental Assessment and Anticipated Finding of No Significant Impact for Proposed Transit Hub Relocation Project; Kahului, Wailuku District, Maui Island; TMKs (2)3-7-002:020 (por.), (2)3-7-004:003 (por.), and (2)3-7-005:003 (por.)

Dear Mr. Glenn:

The County of Maui, Department of Transportation (MDOT) hereby transmits the Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-FONSI) for the Proposed Transit Hub Relocation project situated at Tax Map Keys (TMK) (2)3-7-002:020 (por.), (2)3-7-004:003 (por.), and (2)3-7-005:003 (por.) in the Wailuku District on the Island of Maui for publication in the next available edition of the Environmental Notice.

Enclosed are the completed OEQC Publication Form, one (1) copy of the DEA-AFONSI, an Adobe Acrobat PDF file of the same and an electronic copy of the Publication Form in Microsoft Word.

If there are any questions, please feel free to contact me at (808) 270-7511.

Sincerely,

Marc Takamori
Director



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Enclosures

cc: Charlene Shibuya, Munekiyo Hiraga

AGENCY PUBLICATION FORM

Project Name:	Proposed Transit Hub Relocation Project Draft Environmental Assessment
Project Short Name:	Proposed Transit Hub Relocation Project
HRS §343-5 Trigger(s):	Use of State and County Funds and Use of State Lands
Island(s):	Maui
Judicial District(s):	Wailuku
TMK(s):	(2)3-7-002:020 (por.), (2)3-7-004:003 (por.), and (2)3-7-005:003 (por.)
Permit(s)/Approval(s):	Special Management Area Use Permit, Grading/Grubbing Permit, Building Permits, Work on County Highway
Proposing/Determining Agency:	County of Maui, Department of Transportation
<i>Contact Name, Email, Telephone, Address</i>	Contact: Marc Takamori, Director 2145 Kaohu Street, Trask Building, Suite 102 Wailuku, Hawai'i, 96793
Accepting Authority:	(for EIS submittals only)
<i>Contact Name, Email, Telephone, Address</i>	
Consultant:	Munekiyo Hiraga
<i>Contact Name, Email, Telephone, Address</i>	Contact: Charlene S. Shibuya, Senior Associate 305 High Street, Suite 104 Wailuku, Hawai'i, 96793

Status (select one) DEA-AFNSI**Submittal Requirements**

Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEA, and 4) a searchable PDF of the DEA; a 30-day comment period follows from the date of publication in the Notice.

 FEA-FONSI

Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; no comment period follows from publication in the Notice.

 FEA-EISPN

Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; a 30-day comment period follows from the date of publication in the Notice.

 Act 172-12 EISPN
("Direct to EIS")

Submit 1) the proposing agency notice of determination letter on agency letterhead and 2) this completed OEQC publication form as a Word file; no EA is required and a 30-day comment period follows from the date of publication in the Notice.

 DEIS

Submit 1) a transmittal letter to the OEQC and to the accepting authority, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEIS, 4) a searchable PDF of the DEIS, and 5) a searchable PDF of the distribution list; a 45-day comment period follows from the date of publication in the Notice.

 FEIS

Submit 1) a transmittal letter to the OEQC and to the accepting authority, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEIS, 4) a searchable PDF of the FEIS, and 5) a searchable PDF of the distribution list; no comment period follows from publication in the Notice.

 FEIS Acceptance
Determination

The accepting authority simultaneously transmits to both the OEQC and the proposing agency a letter of its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS; no comment period ensues upon publication in the Notice.

 FEIS Statutory
Acceptance

Timely statutory acceptance of the FEIS under Section 343-5(c), HRS, is not applicable to agency actions.

- Supplemental EIS Determination The accepting authority simultaneously transmits its notice to both the proposing agency and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is or is not required; no EA is required and no comment period ensues upon publication in the Notice.
- Withdrawal Identify the specific document(s) to withdraw and explain in the project summary section.
- Other Contact the OEQC if your action is not one of the above items.

Project Summary

The County of Maui, Department of Transportation (MDOT) proposes to relocate the existing transit hub, currently located at the Queen Kaahumanu Center (QKC), on a portion of Tax Map Key (TMK) (2)3-7-002:020 in Kahului, Maui to a new 0.85-acre site located on portions of TMKs (2)3-7-004:003 and (2)3-7-005:003, Parcel 4-3 and Parcel 5-3, respectively. Improvements on Parcel 4-3 include the development of a ticket booth and office, restrooms and storage building, roof structures to cover the passenger waiting and loading areas, and parking lot. Related onsite improvements include grading work, removal of old and installation of new asphalt pavement, installation of bollards, access gates, and fencing, and landscaping improvements. Related off site improvements on Parcel 5-3 include roadway frontage improvements, placement of existing overhead utility lines underground, sewer and water connections, sidewalks, and driveway access improvements.

An additional component of the proposed action is the removal of 11 existing bus shelters at the current QKC transit hub. No other work is proposed for this location.

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Draft Environmental Assessment

PROPOSED TRANSIT HUB RELOCATION AT KAHULUI, MAUI, HAWAI'I (TMKS (2)3-7-002:020 (por.), (2)3-7-004:003 (por.), and (2)3-7-005:003(por.))

Prepared for:

County of Maui
Department of Transportation

Approving Agency:

County of Maui
Department of Transportation

May 2019

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MUNEKIYO HIRAGA

Planning. Project Management. Sustainable Solutions.

Draft Environmental Assessment

PROPOSED TRANSIT HUB RELOCATION AT KAHULUI, MAUI, HAWAI‘I (TMKS (2)3-7-002:020 (por.), (2)3-7-004:003 (por.), and (2)3-7-005:003(por.))

Prepared for:

**County of Maui
Department of Transportation**

Approving Agency:

**County of Maui
Department of Transportation**

May 2019

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MUNEKIYO HIRAGA

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- Appendix C.** Biological Resources Survey
- Appendix D.** Section 6E, Hawai'i Revised Statutes Submittal Form to State Historic
Preservation Division
- Appendix E.** Traffic Impact Analysis Report

Executive Summary

Project Name:	Proposed Transit Hub Relocation
Type of Document:	Draft Environmental Assessment
Legal Authority:	Chapter 343, Hawai'i Revised Statutes
Anticipated Determination:	Anticipated Finding of No Significant Impact (AFONSI)
Applicable Environmental Assessment review "Trigger":	Use of State and County Funds and Use of State Lands
Location:	Maui Island Kahului Tax Map Key (TMK) Nos. (2)3-7-002:020 (por.), (2)3-7-004:003 (por.), and (2)3-7-005:003(por.)
Landowner:	State of Hawai'i (Parcel 4-3), QKC Maui Owner, LLC (Parcel 20), and Kahului Lani Senior Affordable – Condo Master (Parcel 5-3)
Applicant:	County of Maui, Department of Transportation Contact: Marc Takamori Director 2145 Kaohu Street, Trask Building Suite 102 Wailuku, Hawai'i 96793 Phone: (808) 270-7511
Approving Agency:	County of Maui, Department of Transportation 2145 Kaohu Street, Trask Building Suite 102 Wailuku, Hawai'i 96793 Contact: Marc Takamori Phone: (808) 270-7511
Consultant:	Munekiyo Hiraga 305 High Street, Suite 104 Wailuku, Hawai'i 96793 Contact: Charlene Shibuya, Senior Associate Phone: (808) 244-2015
Project Summary:	The County of Maui, Department of Transportation (MDOT) proposes to relocate the existing transit hub

currently located at Queen Ka'ahumanu Center (QKC) on a portion of TMK (2)3-7-002:020 in Kahului. The site of the new transit hub is an approximately 0.85-acre site, of which 0.73 acre is on TMK (2)3-7-004:003 (Parcel 4-3) and 0.12 acre is on TMK (2)3-7-005:003 (Parcel 5-3). Thus, the transit hub relocation improvements will occur on an area approximately 0.85 acre in size. Scope of improvements on Parcel 4-3 include a new ticket booth, a new restroom and storage building, roof structures to cover the passenger waiting area and bus loading areas, and parking lot. Related onsite improvements involve grading work, removal and installation of asphalt pavement, installation of bollards, access gates and fencing, and landscaping improvements. Related offsite improvements on Parcel 5-3 involve roadway frontage improvements, placement of existing overhead utilities underground, sewer and water utility connection upgrades, sidewalks, and driveway access improvements.

There are two (2) existing buildings on Parcel 4-3, one (1) of which currently houses the Mckinley Community School for Adults Maui Campus and a Department of Accounting and General Services mechanic shop for equipment repairs. The other adjacent building is abandoned and in a dilapidated state.

Additionally, the project scope includes removal of the existing bus shelters located at the QKC. There are 11 pre-fabricated covered bus shelters, located on paved surfaces which will be removed. The paved surfaces will remain after the bus shelters are removed.

The use of State and County funds and State lands are triggers for the preparation of an Environmental Assessment (EA) pursuant to Chapter 343, Hawai'i Revised Statutes (HRS) and Section 11-200-6, Hawai'i Administrative Rules (HAR). As such, this EA has been prepared to evaluate the technical characteristics, environmental impacts, and alternatives, as well as to advance findings relative to the proposed project. The approving agency for the EA is the County of Maui, Department of Transportation. The EA also serves as the supporting technical document for the project's Special Management Area (SMA) Use Permit application because the project sites are located within the County of Maui's SMA.

List of Acronyms

AFONSI	Anticipated Finding of No Significant Impact
AIS	Archaeological Inventory Survey
AM	Morning
AMP	Archaeological Monitoring Plan
amsl	above mean sea level
BMPs	Best Management Practices
cfs	cubic feet per second
DAGS	Department of Accounting and General Services
EA	Environmental Assessment
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
gpd	gallons per day
gpm	gallons per minute
HAR	Hawai'i Administrative Rules
HRS	Hawai'i Revised Statutes
KL	Kahului Lani 1
LCAs	Land Commission Awards
LOS	Level-Of-Service
LPAP	Landscape Planting Plan (Parking Lots) Approval
MCC	Maui County Code
MDOT	County of Maui, Department of Transportation
MECO	Maui Electric Company, Ltd.
MEO	Maui Economic Opportunity, Inc.
mg	million gallon
mgd	million gallons per day
MIP	Maui Island Plan
mph	Miles Per Hour
NPDES	National Pollutant Discharge Elimination System
PER	Preliminary Engineering Report
PM	Afternoon
PZUE	Pu'uone Sand, 7 to 30 percent slopes
QKC	Queen Ka'ahumanu Center
RGB	Rural Growth Boundary
SCS	Scientific Consultant Services
SHPD	State Historic Preservation Division
SMA	Special Management Area
SOEST	School of Ocean and Earth Science Technology
STB	Small Town Boundary
TIAR	Traffic Impact Analysis Report
TMK	Tax Map Key
UGB	Urban Growth Boundary
UHMC	University of Hawai'i, Maui College
WRF	Wastewater Reclamation Facility

PROJECT OVERVIEW



I. PROJECT OVERVIEW

A. PROJECT LOCATION, CURRENT LAND USE, AND OWNERSHIP

The County of Maui, Department of Transportation (MDOT) is proposing to relocate the existing transit hub currently located at Queen Ka'ahumanu Center (QKC) on a portion of Tax Map Key (TMK) 3-7-002:020 (Parcel 20) in Kahului. The proposed site of the new transit hub is an approximately 0.85-acre site, of which 0.73 acre is on TMK (2)3-7-004:003 (Parcel 4-3) located to the east of the QKC complex. See **Figure 1** and **Figure 2**. The physical address of Parcel 4-3 is 153 West Ka'ahumanu Avenue. There are two (2) buildings on the property of which one (1) currently houses the McKinley Community School for Adults Maui Campus and a Department of Accounting and General Services (DAGS) mechanic shop for equipment repairs. The other adjacent building is abandoned and in a dilapidated state. It is noted that certain offsite improvements that are part of the proposed action will occur on privately owned Vevau Street, which is part of the Kahului Lani project, on a 0.12-acre portion of TMK (2)3-7-005:003 (Parcel 5-3).

The relocated transit hub site is bordered by West Ka'ahumanu Avenue to the north, Kane Street to the west, and Vevau Street to the south. Immediately surrounding the property is the Waterfront Apartments to the east, the Kahului Lani 1 senior affordable apartment project (currently under construction) located across Vevau Street, the QKC located across Kane Street, and the Maui Beach Hotel located across Kaahumanu Avenue. Kitty-corner to the project site is the Foodland Store to the southwest, the Kahului Public Library to the southeast, and Maui Ceramic Tile Plus to the northwest. Several churches, including the First Church of Christ, Scientology; Seicho No-Ie Maui; Church of the Nazarene; and Family Life Center, are located to the south of the project site. Residential areas exist at the end of Kane Street and various business and commercial establishments exist in the general vicinity of the project.

Parcel 20 is currently owned by QKC Maui Owner, LLC. Parcel 4-3 is currently owned by the State of Hawai'i, under the jurisdiction of DAGS, however, transfer of jurisdiction to the Hawai'i Housing Finance and Development Corporation (HHFDC), from whom MDOT has secured a Memorandum of Understanding for the proposed project is under way. Parcel 5-3 is owned by Kahului Lani Senior Affordable Condo Master.

B. PROPOSED ACTION

The MDOT is proposing to relocate the existing transit hub currently located at QKC in Kahului. Scope of improvements for development of the new transit hub site include a new ticket booth, a new restroom and storage building, roof structures to cover the passenger waiting area and bus loading area, and parking lot on Parcel 4-3. See **Figure 3**. Related onsite improvements involve grading work, removal of asphalt pavement,

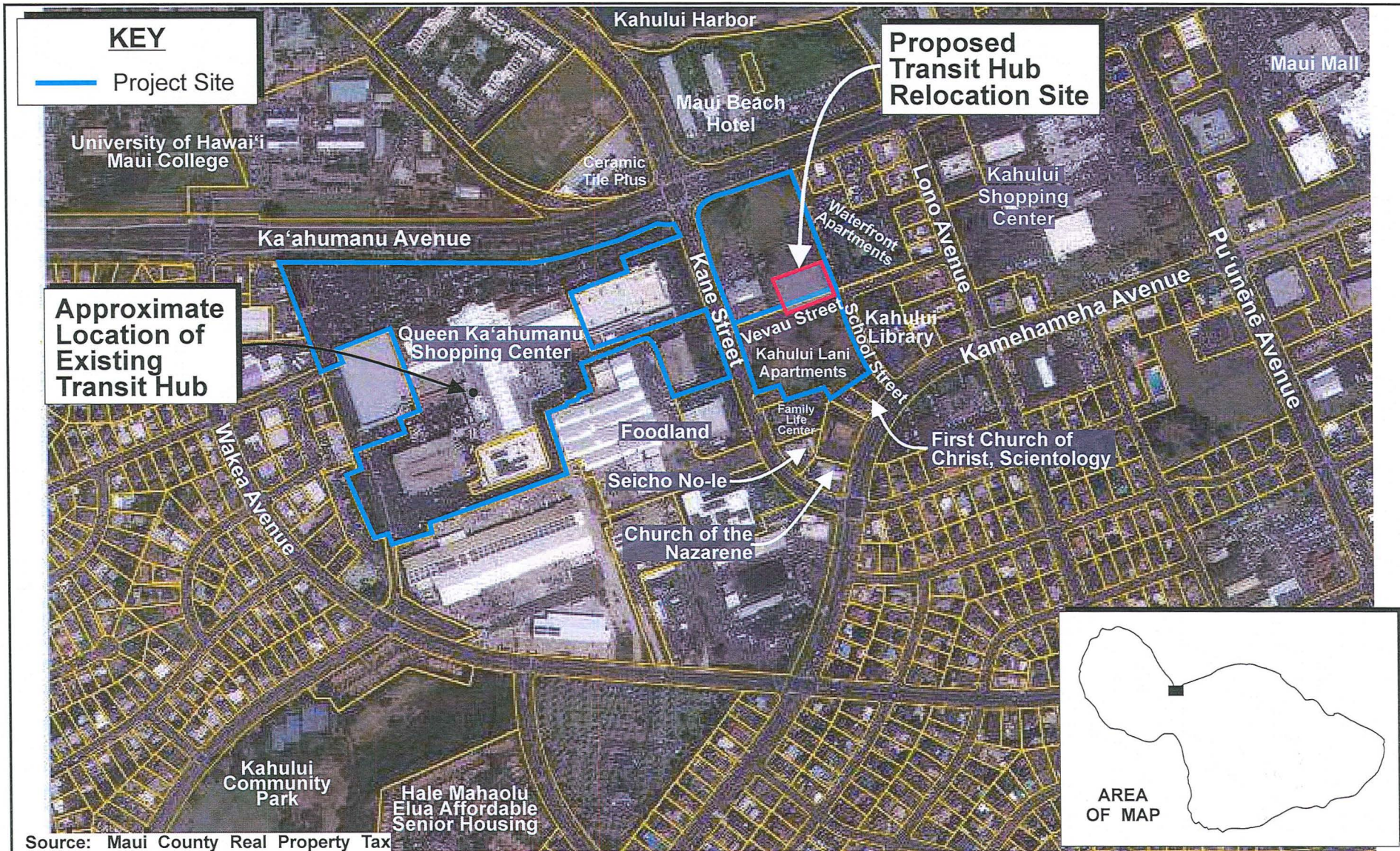
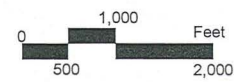
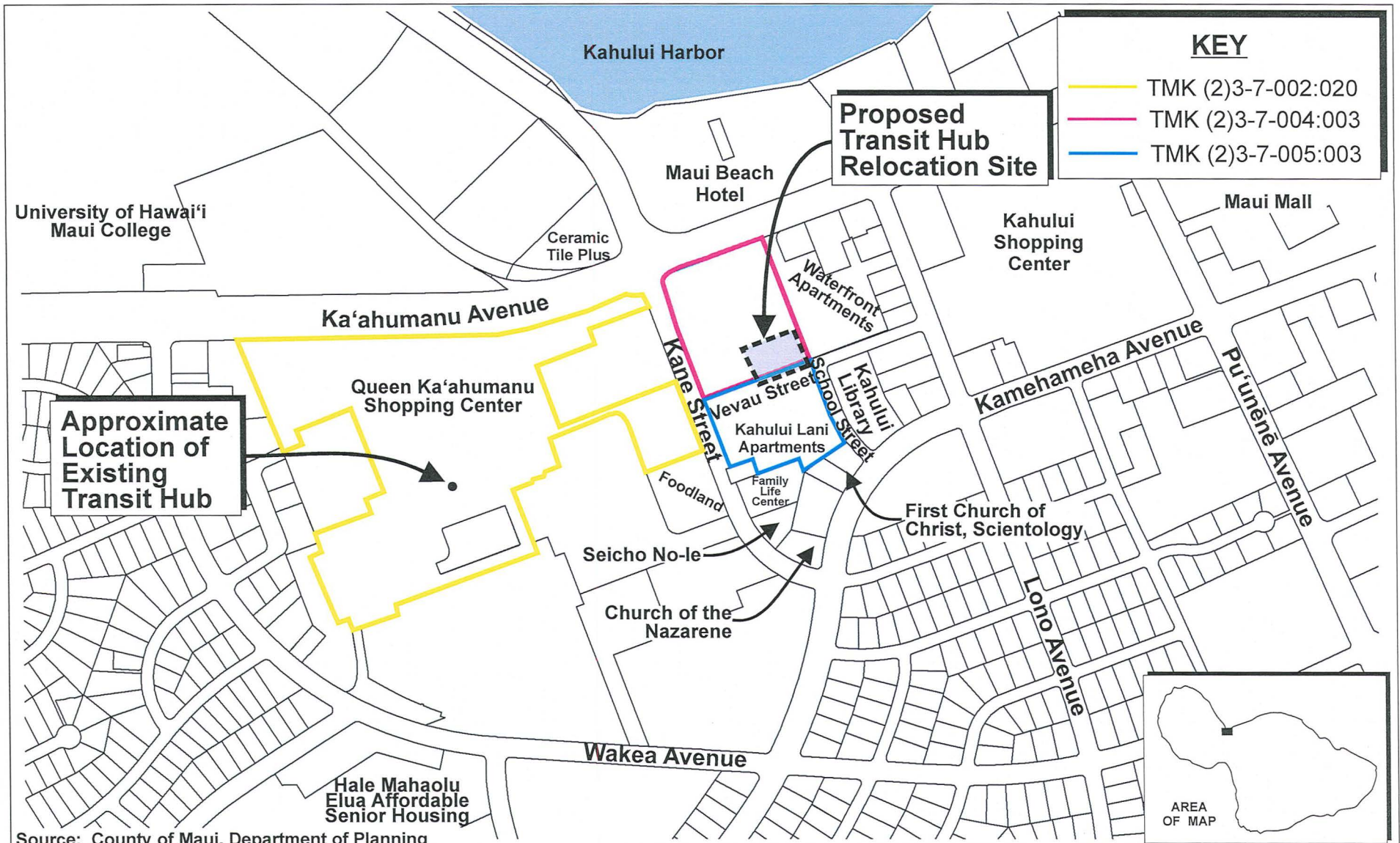


Figure 1 Proposed County Bus Terminal Relocation
 Regional Location Map



Prepared for: County of Maui, Department of Transportation





Source: County of Maui, Department of Planning

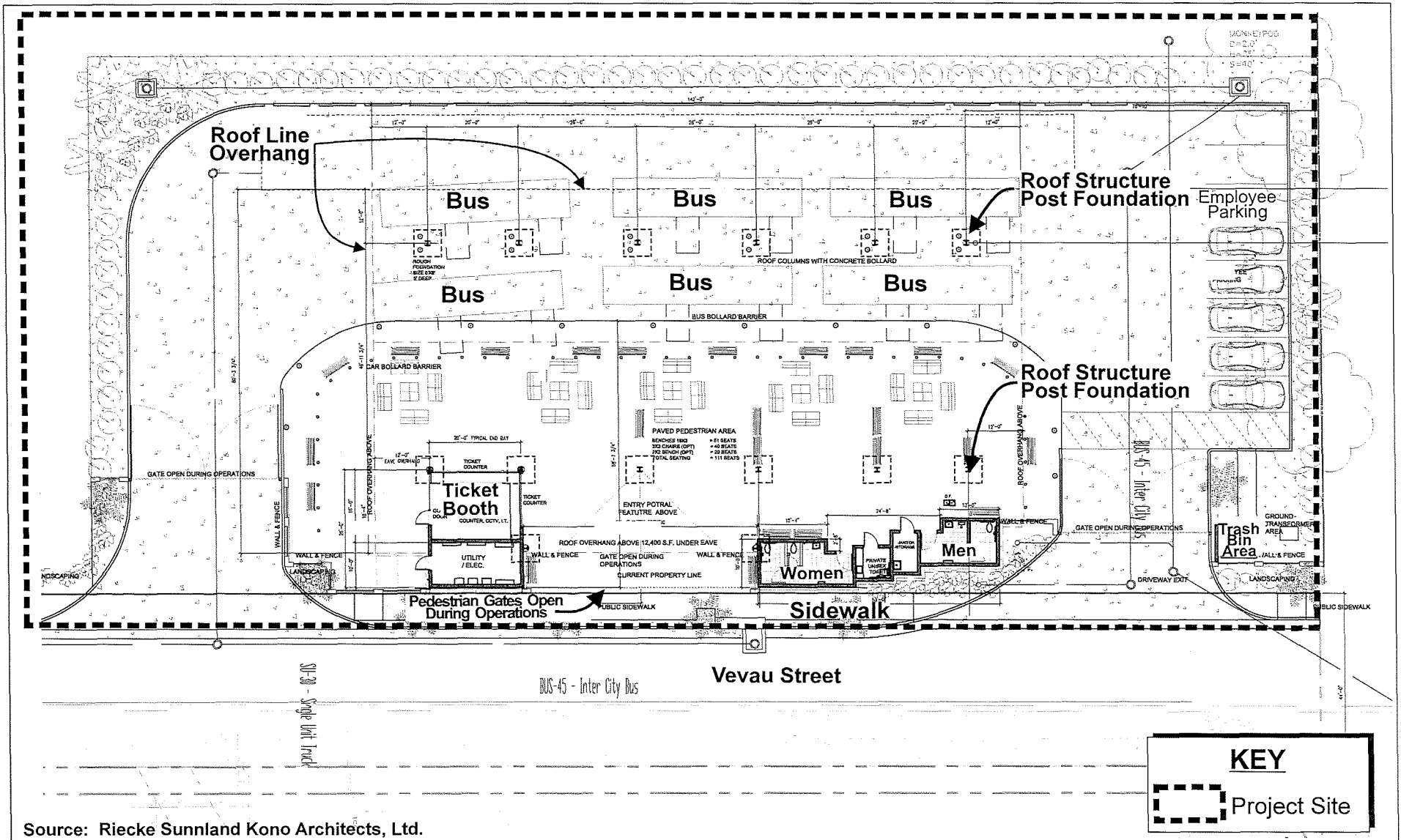
Figure 2 Proposed Transit Hub Relocation
Property Location Map

KEY

- TMK (2)3-7-002:020
- TMK (2)3-7-004:003
- TMK (2)3-7-005:003



Prepared for: County of Maui, Department of Transportation



Source: Riecke Sunnland Kono Architects, Ltd.

Figure 3
 Transit Hub Relocation
 Preliminary Site Plan

NOT TO SCALE



Prepared for: County of Maui, Department of Transportation



installation of concrete pavement, installation of bollards, access gate and fencing, and landscaping improvements. Related offsite improvements on Parcel 5-3 involve roadway frontage improvements along Vevau Street, placement of overhead utilities underground, sewer and water utility connection upgrades, installation of sidewalks, and driveway access improvements.

Additionally, the project scope includes removal of the existing bus shelters located at the QKC. There are 11 pre-fabricated covered shelters located on paved surfaces which will be removed. The paved surfaces will remain after the bus shelters are removed.

Collectively, the construction of the new transit hub, related improvements, and removal of the existing bus shelters at the current transit hub will be referred to as the "proposed project".

Access to the relocated transit hub site will be provided by new driveways off Vevau Street. As previously noted, Vevau Street is located within private property being improved under the Kahului Lani 1 (KL) senior affordable apartment project. Under the KL project, Vevau Street will be improved to meet County standards appropriate for dedication to the County.

C. PROJECT NEED

MDOT currently has a License to Occupy with the QKC to operate the existing transit hub within the shopping center site. The License to Occupy will expire in January 2020 after which the QKC will no longer offer the shopping center site to MDOT for long-term use. Therefore, MDOT needs to relocate its transit hub to a nearby central location that is viable for such operations as MDOT's transit hub is vital for its current operations to effectively service transit users. As such, as previously noted, MDOT has secured a Memorandum of Understanding for the proposed project area on Parcel 4-3 from HHFDC. The centrally located government-owned property is located across of the QKC complex. Majority of the property is unused except for a building tucked in the southwest corner that is aged. As previously mentioned, another abandoned and dilapidated building exists with a collapsed roof. Therefore, the condition of the property is in need of redevelopment, making the site viable for constructing a new transit hub facility.

D. CHAPTER 343, HAWAI'I REVISED STATUTES REQUIREMENT

The project will use State and County funds and State lands, which are triggers for the preparation of an Environmental Assessment (EA) pursuant to Chapter 343, Hawai'i Revised Statutes (HRS) and Section 11-200-6, Hawai'i Administrative Rules (HAR). As such, this EA has been prepared to evaluate the technical characteristics, environmental impacts, and alternatives, as well as to advance findings relative to the proposed project. The approving agency for the EA is MDOT. The EA also serves as the supporting

technical document for the project's Special Management Area (SMA) Use Permit application.

E. LAND USE ENTITLEMENT REQUIREMENTS

Parcel 4-3 and Parcel 5-3 are designated "Urban" by the State Land Use Commission, "B, Business/Commercial" by the Wailuku-Kahului Community Plan, and zoned "B-2, Community Business" by Maui County zoning, which permits the proposed use.

1. SMA Use Permit

The project sites are located within the County's SMA. As such, a SMA Use Permit application will be submitted to the County of Maui, Department of Planning for review and approval by the Maui Planning Commission. The EA will serve as a supporting document for the SMA Use Permit application.

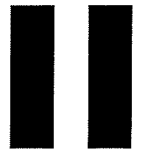
2. Landscape Planting Plan (Parking Lots) Approval (LPAP)

A LPAP for the relocated transit hub site will also be required from the County of Maui, Department of Planning in accordance with Chapter 19.36B.080, Maui County Code to ensure that the trees, turfgrass, and ground covers selected are appropriate for the climate, soil conditions, and availability of water as indicated by the underlying planting zone. The LPAP application will be filed under separate cover.

F. CONSTRUCTION COST AND IMPLEMENTATION TIME FRAME

The development of the proposed Transit Hub Relocation project will commence upon receipt of regulatory and construction permits and approvals. Construction is anticipated to span approximately ten (10) months. The estimated cost of construction for the proposed project is \$2,000,000.00.

**DESCRIPTION OF THE EXISTING
CONDITIONS, POTENTIAL
IMPACTS, AND PROPOSED
MITIGATION MEASURES**



II. DESCRIPTION OF THE EXISTING CONDITIONS, POTENTIAL IMPACTS, AND PROPOSED MITIGATION MEASURES

A. PHYSICAL SETTING

1. Surrounding Land Uses

a. Existing Conditions

The proposed project is located within the urban core of Kahului, within walking distance of various commercial centers, as well as the Kahului Harbor, the island's only deep water port. The Kahului Airport, the second busiest airport in the State, is also located in the region and is less than two (2) miles from the subject properties. With its proximity to the harbor and airport, the Kahului region has emerged as the focal point for heavy industrial, light industrial, and commercial activities and services. These services include warehousing, baseyard operations, automotive sales and maintenance, and retailing for equipment and material suppliers.

The region is also considered Central Maui's commercial retailing center with the Maui Mall, Kahului Shopping Center, and Queen Ka'ahumanu Center (QKC) located within a mile radius of each other. Surrounding this commercial core is an expansive residential area comprised principally of single-family residential units. Residential uses encompass the area extending from the Maui Memorial Medical Center to Pu'unēnē Avenue.

The proposed transit hub relocation site is bordered by West Ka'ahumanu Avenue to the north, Kane Street to the west, and Vevau Street to the south. Immediately surrounding the property is the Waterfront Apartments to the east, the Kahului Lani (KL) 1 senior affordable apartment project (currently under construction) located across Vevau Street, the QKC located across Kane Street, and the Maui Beach Hotel located across Kaahumanu Avenue. Kitty-corner to the project site is the Foodland Store to the southwest, the Kahului Public Library to the southeast, and Maui Ceramic Tile Plus to the northwest. Several churches, including the First Church of Christ, Scientology; Seicho No-le Maui; Church of the Nazarene; and Family Life Center, are located to the south of the relocation site. Residential areas exist at the end of Kane Street and various business and commercial establishments exist in the general vicinity of the project.

The existing transit hub site where the existing bus shelters will be removed is within the existing QKC.

b. Potential Impacts and Proposed Mitigation Measures

The proposed project entails the relocation of an existing transit hub from the QKC to an underutilized site in close proximity, as well as the removal of existing bus shelters. As such, the proposed project will not present any significant impacts on the regional character of Kahului or surrounding land uses.

2. Climate

a. Existing Conditions

Like most areas of Hawai'i, Maui's climate is relatively uniform year-round. Characteristic of Hawai'i's climate, the project site experiences mild and uniform temperatures year round, moderate humidity and a relatively consistent northeasterly tradewind. Variation in climate on the island is largely left to local terrain.

The climate of Maui County is defined by average temperatures ranging from 88.0 degrees in the warmest month at Kahului Airport to 63.0 degrees in the coolest month. September is historically the warmest month, while February is the coolest. Rainfall in the region averages approximately 17.83 inches per year. Winds in the Kahului region are predominantly out of the north and northeast (County of Maui, Office of Economic Development, 2017).

b. Potential Impacts and Proposed Mitigation Measures

The proposed project is not anticipated to adversely affect climatic conditions in the area. Landscaping, including shade trees throughout the parking lot and roof structure, will be incorporated into the relocated transit hub site plan to take advantage of the natural cooling effects of shading.

3. Topography and Soil Characteristics

a. Existing Conditions

The transit hub relocation site is relatively flat. The property generally slopes from south to north and west to east along Vevau Street, with an average slope range of approximately 0 to 2 percent. Elevations onsite range from approximately 8 to 10 feet above mean sea level (amsl). See **Appendix "B"**.












According to the “Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii”, prepared by the United States Department of Agriculture Soil Conservation Service, underlying the transit hub relocation site and surrounding lands are soils belonging to the Pulehu-Ewa-Jaucas association. See **Figure 4**. This soil association is characteristically deep and well-drained, as well as located on alluvial fans and in basins. The soil type specific to the transit hub relocation site is classified as Puuone Sand, 7 to 30 percent slopes (PZUE). See **Figure 5**. This soil is typically on sandhills near the ocean and consists of a surface layer approximately 20 inches thick of calcareous sand, over grayish brown cemented sand. Permeability is rapid above the cemented layer, runoff is slow, and the wind erosion hazard is moderate to severe. This soil type is typically used for pasture or residential development (U.S. Department of Agriculture, Soil Conservation Service, 1972).

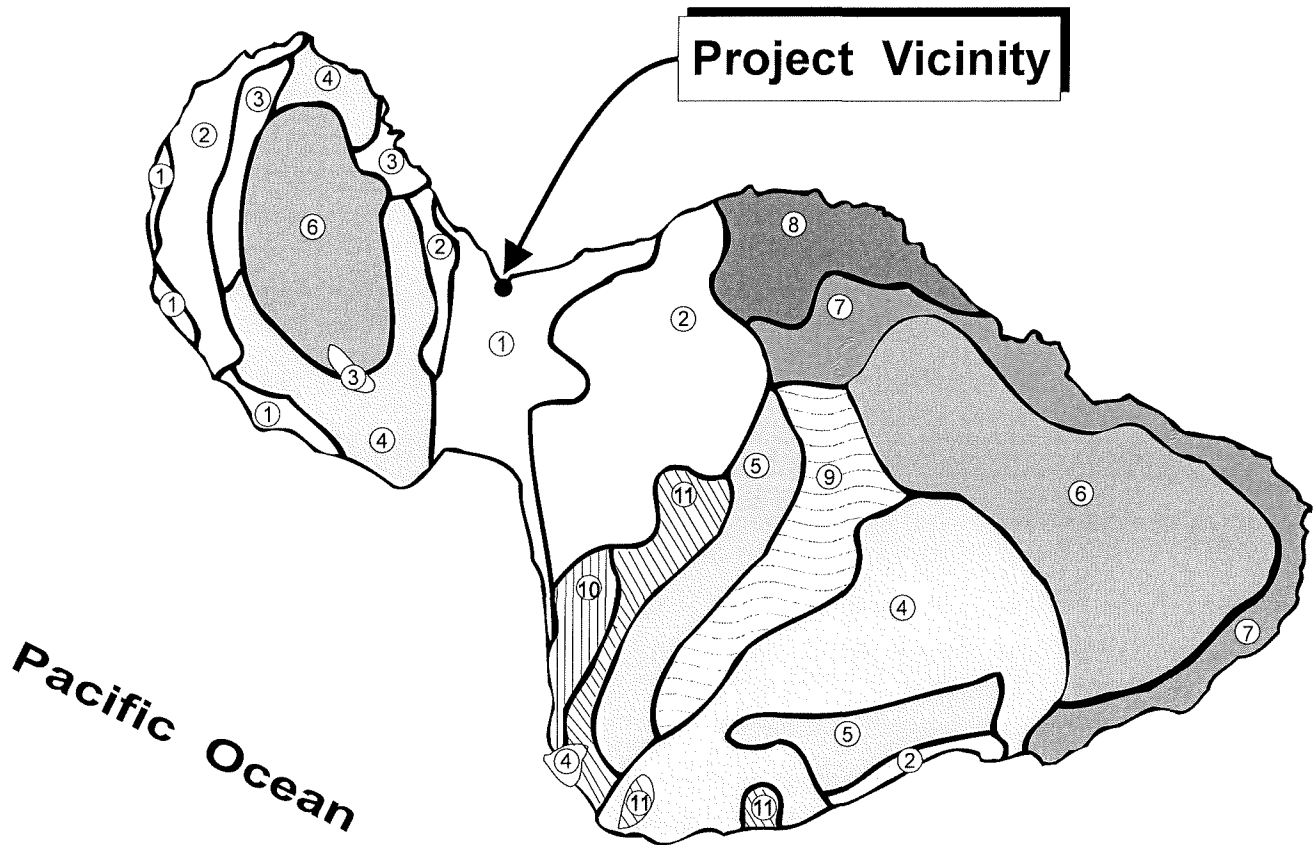
b. Potential Impacts and Proposed Mitigation Measures

The relocated transit hub site was previously topographically modified from its original condition to accommodate development. The site was originally developed for an elementary school campus with a level schoolyard. The original school buildings were demolished and single-story buildings were constructed to house the Department of Accounting and General Services (DAGS), Kahului Civic Center with minimal changes to the site elevations. One building remains in use as the McKinley Community School for Adults and a DAGS mechanic shop, although the site of the proposed project is currently vacant (Munekiyo Hiraga, 2017).

The proposed project will result in ground altering activities and minor alterations to existing topographical conditions to provide drainage improvements, utility service, and the necessary finished floor elevations for the proposed transit hub facilities, parking, and driveways. Grading activities associated with the improvements will be completed in accordance with Chapter 20.08, Soil Erosion and Sedimentation Control, of the Maui County Code and the permit requirements of the State of Hawai'i, Department of Health and the National Pollutant Discharge Elimination System (NPDES). In addition, the removal of the existing bus shelters at the QKC will not involve ground altering work. Adverse impacts to topography and soil conditions in the vicinity of the project site are not anticipated as a result of the proposed action.

LEGEND

- | | |
|--|--|
|  ① Pulehu-Ewa-Jaucas association |  ⑦ Hana-Makaalae-Kailua association |
|  ② Waiakoa-Keahua-Molokai association |  ⑧ Pauwela-Haiku association |
|  ③ Honolua-Olelo association |  ⑨ Laumaia-Kaipoi-Olinda association |
|  ④ Rock land-Rough mountainous land association |  ⑩ Keawakapu-Makena association |
|  ⑤ Puu Pa-Kula-Pane association |  ⑪ Kamaole-Oanapuka association |
|  ⑥ Hydrandepts-Tropaquods association | |



Source: USDA Soil Conservation Service

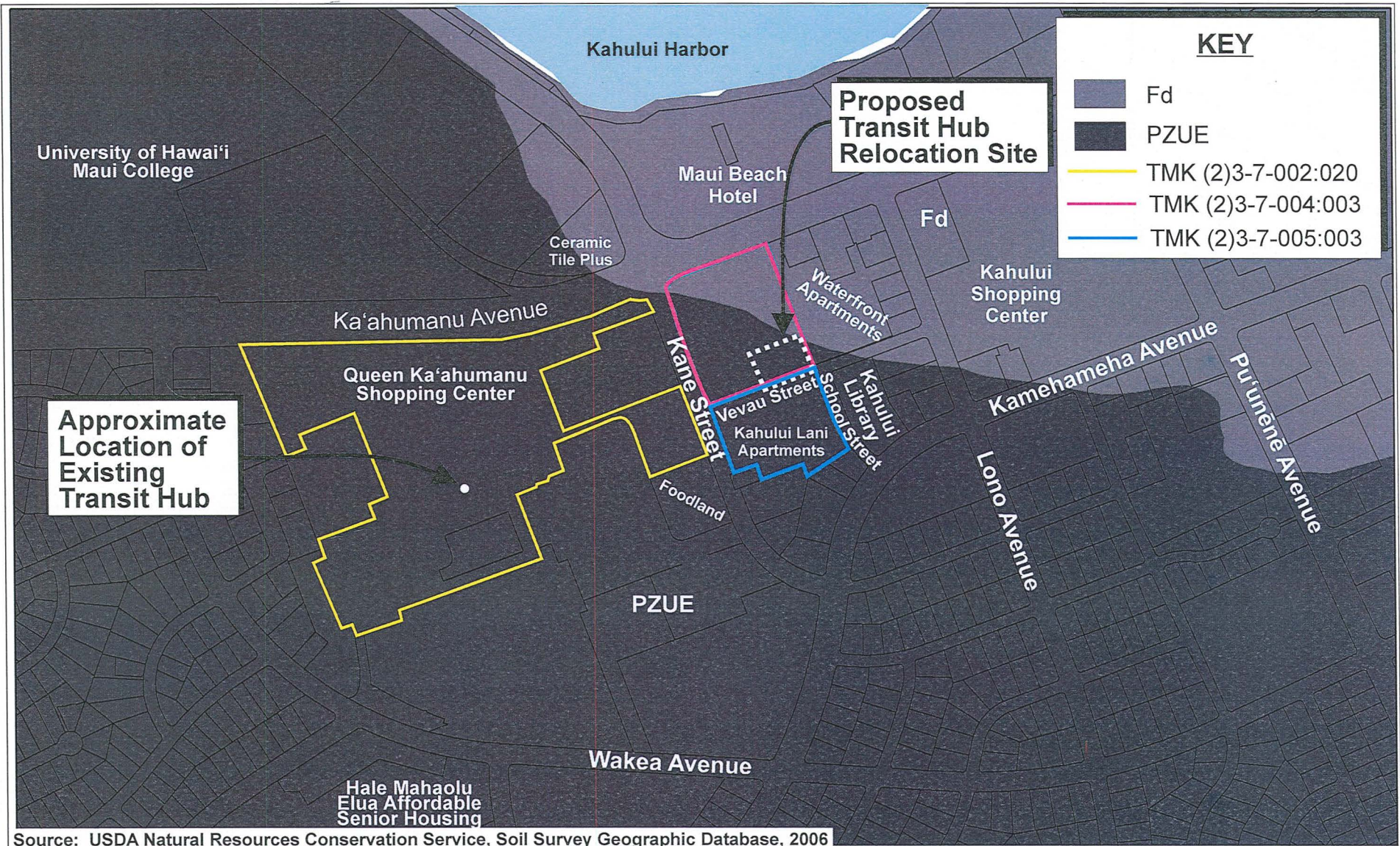
**Figure 4 Proposed Transit Hub Relocation
Soil Association Map**

NOT TO SCALE



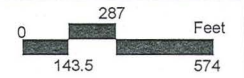
Prepared for: County of Maui, Department of Transportation

 MUNEKIYO HIRAGA



Source: USDA Natural Resources Conservation Service, Soil Survey Geographic Database, 2006

Figure 5 Proposed Transit Hub Relocation
Soil Classification Map



Prepared for: County of Maui, Department of Transportation



4. **Flood and Tsunami Hazards**

a. **Existing Conditions**

The Federal Emergency Management Agency (FEMA) manages the National Flood Insurance Program under which flood-prone areas are identified and flood insurance is made available. FEMA produces Flood Insurance Rate Maps (FIRM), an insurance and floodplain map that identifies the areas subject to flooding during a 1-percent chance (100-year) flood event, as well as areas inundated by the 0.2-percent annual chance (500-year) flood. The 100-year floodplain is the boundary of the flood that has a 1-percent chance of being equaled or exceeded in any year, while the 500-year floodplain is the boundary of the flood that has a 0.2-percent chance of being equaled or exceeded in any given year. FEMA's FIRM indicates that the subject properties are located within Zone X (unshaded). See **Figure 6**.

According to FEMA, Zone X is identified as areas of low flood risk and minimal flooding with no development restrictions. Specifically, Zone X (unshaded) corresponds to areas that are determined to be outside the 0.2-percent annual chance floodplain.

The subject properties are located within the tsunami evacuation zone as designated by the County of Maui, Emergency Management Agency. See **Figure 7**.

b. **Potential Impacts and Proposed Mitigation Measures**

The proposed Transit Hub Relocation Project is located within Flood Zone X, areas of minimal flooding. As such, a Special Flood Hazard Area Development Permit will not be required for project implementation.

Procedures to organize and direct operations at the transit hub in the event of an emergency or civil defense action, such as a tsunami, will be established. The procedures will identify protocol during times of emergency or disruption and specific actions dependent upon the type of emergency or disruption.

Given the FIRM designation for the subject properties and the emergency and civil defense procedures to be established, no adverse impacts to flood and tsunami conditions are anticipated with the implementation of the proposed project.

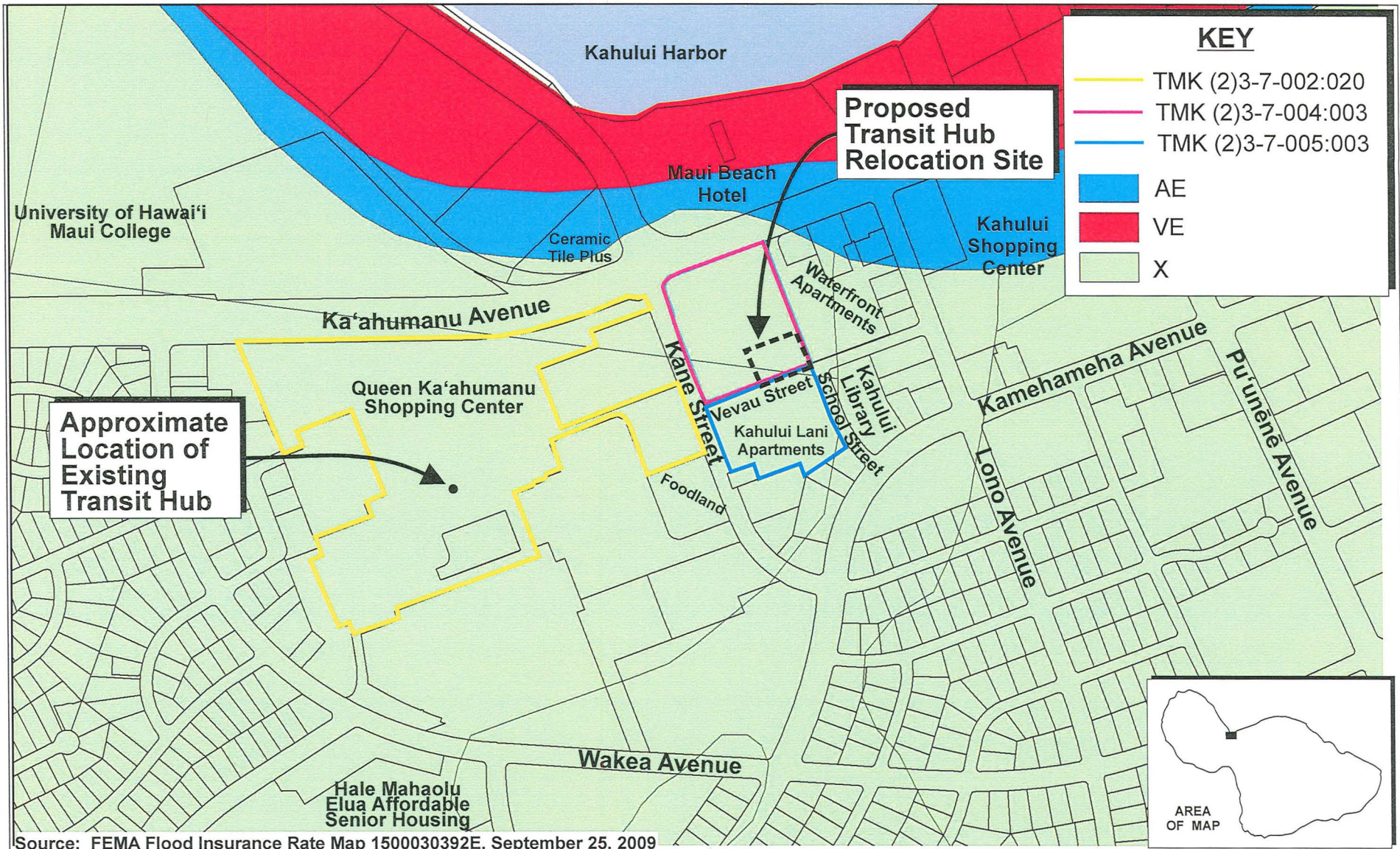


Figure 6

Proposed Transit Hub Relocation
Flood Insurance Rate Map



Prepared for: County of Maui, Department of Transportation



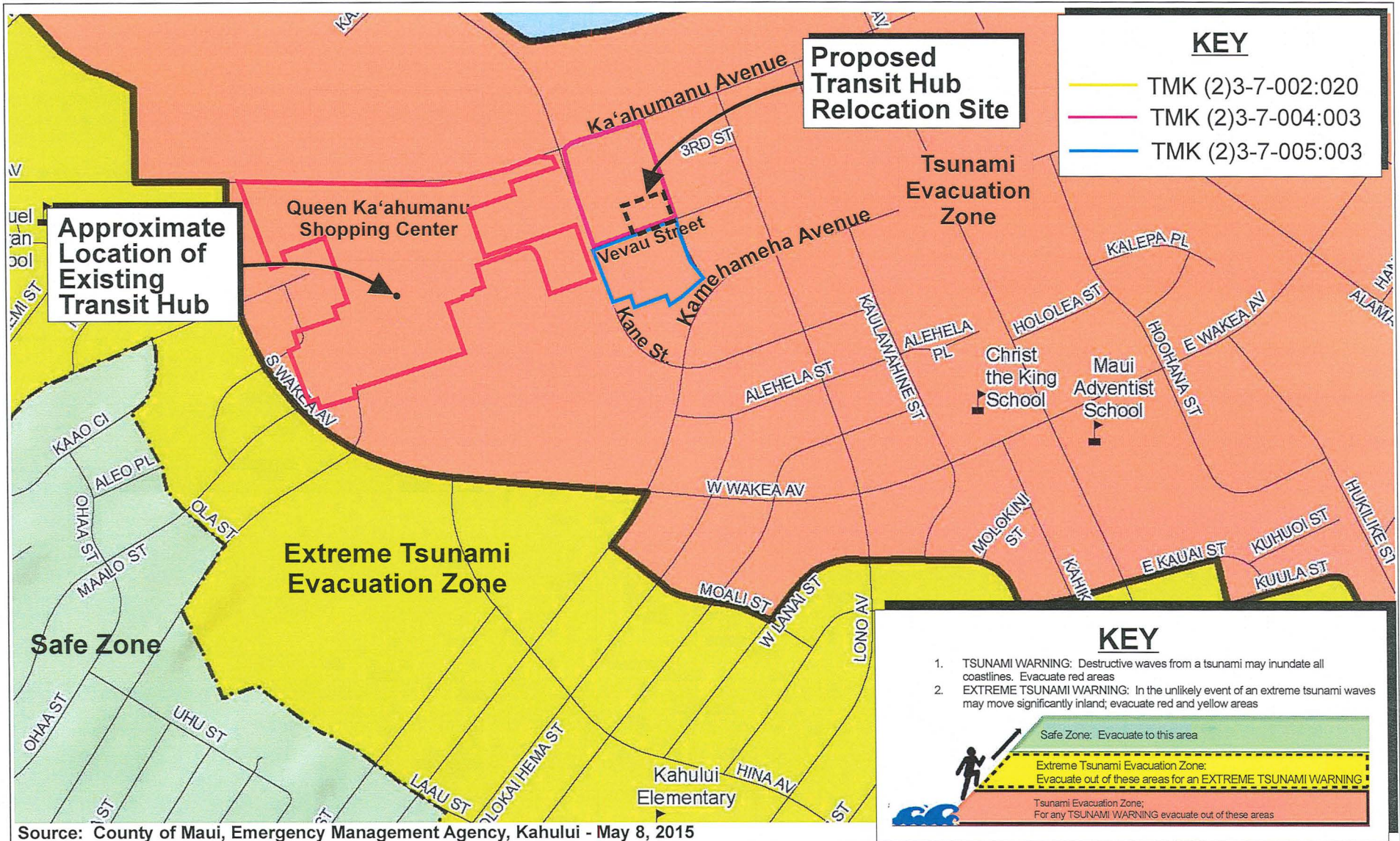


Figure 7

Proposed Transit Hub Relocation Tsunami Evacuation Map

NOT TO SCALE



Prepared for: County of Maui, Department of Transportation



With respect to sea level rise, the University of Hawai'i, School of Ocean and Earth Science Technology (SOEST) states that current research indicates that global mean sea level may rise by one (1) foot by mid-century and be 2.5 to 6.2 feet by 2100 (University of Hawai'i, SOEST, 2016). Because the subject properties are located inland from the coast at elevations of approximately 8 to 10 feet amsl, impacts from sea level rise are not anticipated.

The removal of the existing bus shelters at the QKC will not present any flood or tsunami hazards or risks.

5. **Streams and Wetlands**

a. **Existing Conditions**

There are no streams in the vicinity of the subject properties. The closest wetland to the project area is Kanaha Pond, located approximately 0.8 of a mile west of the project area.

b. **Potential Impacts and Proposed Mitigation Measures**

No adverse impacts on streams or wetlands are anticipated as a result of the proposed project.

6. **Flora, Fauna and Avifauna**

a. **Existing Conditions**

A biological resources survey was conducted by Robert W. Hobdy in November 2018. See **Appendix "C"**. According to the survey, the relocated transit hub site is on level land with partially paved areas. Vegetation consists of one large monkeypod tree (*Samanea saman*) and a variety of grasses, vines and herbaceous weeds. Fifty (50) species of non-native plants and two (2) common native plants namely the 'uhaloa (*Waltheria indica*) and the pōpolo (*Solanum americanum*) were recorded. The indigenous 'uhaloa and pōpolo are both widespread and common in Hawai'i and other parts of the Pacific. Neither species carry any special protected status. Also, no federally listed endangered or threatened plant species were found.

A fauna survey was also conducted in conjunction with the botanical survey. No mammals were seen during the one (1) time daytime visit and one (1) evening visit. Expected in this area would include rats, mice, feral cats, and mongoose. Just five (5) species of birdlife were recorded during

the visits. Two (2) were common namely the zebra dove (*Columba livia*) and the common chicken (*Coallus gallus*). Uncommon species were the spotted dove and the nutmeg mannikin (*Lonchura punctulata*) and house sparrow (*Passer domesticus*) was rare. Few other non-native species might occasionally occur in the project area but the highly altered habitat is unsuitable for native birds and seabirds. No Hawaiian hoary bats were detected and are not expected to occur in the project area. Fourteen (14) species of insect life were recorded representing six (6) insect orders. Abundant was the long-tailed blue butterfly (*Lampides boeificus*), while three (3) others were common namely the dung fly (*Musca sorbens*), honeybee (*Apis mellifera*), and the sleepy orange butterfly. Six (6) species were uncommon, four (4) species were rare and one (1) species was native, namely the indigenous globe skimmer dragonfly (*Pantala flavescens*). The native dragonfly is widespread and common throughout Hawai'i and occurs throughout the tropics worldwide. No federally threatened or endangered fauna species occur in the project area nor does any critical habitat for any protected species occur here either. Refer to **Appendix "C"**.

b. Potential Impacts and Proposed Mitigation Measures

The Biological Resources Survey conducted/recorded no known significant habitats or rare, endangered, or threatened species of flora, fauna, and avifauna located within the transit hub relocation site. Landscaping is proposed as part of the project. Since the transit hub relocation site was previously developed with moderate landscaping, the proposed project is not anticipated to have an adverse impact upon these environmental features.

As a result of the survey's findings, the proposed project is not expected to have a significant impact on botanical resources in this part of Maui.

Further, it is not anticipated that the removal of the 11 existing bus shelters at the current transit hub site would present any adverse impacts with regards to flora and fauna.

7. Archaeological Resources

a. Existing Conditions

In 2004, an Archaeological Inventory Survey (AIS) was completed for the neighboring KL senior affordable housing project area by Scientific Consultant Services (SCS). No significant historic sites were discovered during the preparation of the AIS, however, archaeological monitoring was

recommended for future planned construction activities. An Archaeological Monitoring Plan (AMP) was subsequently prepared and accepted by the State Historic Preservation Division (SHPD). Archaeological monitoring was conducted at the KL project site between September 22, 2005 and April 28, 2006. The Archaeological Monitoring Report prepared stated that no human remains were discovered during monitoring and all archaeological materials documented and collected during monitoring dated to the Historic period (Munekiyo Hiraga, 2017).

A Section 6E, Hawai'i Revised Statutes (HRS) submittal form for the project has been submitted to initiate consultation with SHPD. See **Appendix "D"**.

b. Potential Impacts and Proposed Mitigation Measures

Given the history of the transit hub relocation site and the developed nature of the surroundings, it is unlikely that significant archaeological and cultural remains will be uncovered. However, coordination has been initiated with SHPD.

No ground altering activities are anticipated in relation to the removal of the 11 existing bus shelters at the current transit hub site. As such, adverse impacts with regards to archaeological resources are not anticipated.

In accordance with Section 6E-43.6, HRS and Chapter 13-300, Hawai'i Administrative Rules (HAR), if any significant cultural deposits or human skeletal remains are encountered, work will stop in the immediate vicinity and SHPD will be contacted to establish the appropriate protocols and level of mitigation.

8. Cultural Resources

a. Existing Conditions

The transit hub relocation site is located within the ahupua'a of Wailuku, in the district of Wailuku. The ahupua'a of Wailuku is part of a greater area, known as Nā Wai 'Ehā, "The Four Waters", named after the four (4) major streams that fed the taro-growing areas of Waikapū, Wailuku, Wai'ehu, and Waihe'e.

In traditional times, Kahului appears to have been a marginal settlement location, relative to Wailuku Town and areas to the north. It contained scattered fishing settlements, which suggests a low population density or limited socio-economic status. While there are hundreds of Land

Commission Awards (LCAs) for Wailuku, there are none for the project area.

At one time, areas upslope and west of the project area were covered with lo'i and house sites. Areas downslope sometimes served as burial grounds (Munekiyo Hiraga, 2017).

b. Potential Impacts and Proposed Mitigation Measures

As part of the EA for the KL project, two (2) individuals familiar with the project area were interviewed to assess potential impacts the project may have on cultural resources and practices. These interviews are included herein as the KL project is located in close proximity to the subject project site (Munekiyo Hiraga, 2017). The interviewees were contacted to see if they had any additional information or comments to offer relative to the proposed project.

Hökūlani Holt

Hökūlani Holt is the Hawai'i Papa o ke Ao Cultural Director and the Director of the Ka Hikina O Ka Lā Program at the University of Hawai'i, Maui College (UHMC). Although she was born on O'ahu, she came to Maui, where both her parents are from, and was raised from infancy by her maternal grandparents in Wai'ehu near Ka'ehu Bay until she was five (5) years old. The agreement between her parents and grandparents was that she would move back to O'ahu at age 5, but she returned to spend her summers here on Maui with her grandparents and moved here permanently in 1975.

When asked about her connection to the Kahului Lani project site, Hökūlani shared that as a child, she attended church with her grandparents at the Church of Jesus Christ of Latter Day Saints, near the project site. She also mentioned that the Kahului Shopping Center near the project site was the only shopping center when she was growing up, so she went there frequently. Her first work experience in high school was working at the former Maui Land and Pineapple Company cannery, which was also near the project site.

Hökūlani recalls that there used to be houses at the project site in the 1950s. She remembers the area being known as "Railroad Camp" because the families who worked for Kahului Railroad Company lived there. The railroad ran along Ka'ahumanu Avenue from the Wailuku Sugar Mill and connected to port near Hobron Road. It also ran from the port all the way down to the Pā'ia Sugar Mill. When the railroad closed down in

the 1960s people living there had to move out of their homes because the land was being sold.

Hökūlani is not aware of any traditional cultural practices occurring at the project site, but she recalled that the families from “Railroad Camp” used to throw net and lay net at Kahului Harbor. She noted that there was also a “Fishing Camp” closer to Kahului Harbor that some of the locals referred to as “Raw Fish Camp” where the fishermen and their families lived. She mentioned that it is important for projects in general to not just consider what was culturally done there, but that the human connection with the natural environment be considered, such as the awareness of the way the winds blow, how the sun affects the surrounding area, and where the names of places originated from.

When asked about any additional considerations related to the proposed project, Hökūlani stated that she thinks having the transit hub on Vevau Street will be of great benefit to the Kahului Lani affordable housing community and the UH students as well. She notes concerns regarding the state of the existing crosswalks and pedestrian access to and around the Vevau Street area and adds that overall safety of the area is a concern.

Hökūlani added that since the relocated transit hub site was also the site of the old Kahului School, perhaps some sort of recognition of that historical connection can be at the site as well; either as part of the building aesthetic, applied art, or building name.

Gladys Baisa

Mrs. Gladys Baisa was born in 1940 in Pā‘ia. She lived there with her family until the age of 6, when she moved to Makawao, where she grew up and still lives. Gladys describes herself as an avid reader and Rotarian. She is a long-time member of the Kahului Rotary Club because she used to work in Kahului at Maui Economic Opportunity, Inc. (MEO) and is deeply committed to serving her community. After retiring from MEO, Gladys served Maui County as a Councilmember in the Upcountry seat for ten (10) years.

Although the current MEO office is located at the Cameron Center, the former MEO office was located in the vicinity of the proposed Kahului Lani project, next to what used to be referred to as the old Kahului Elementary School. Gladys worked there from 1969 to 2005. She remembers the old go-kart facility that was located on a portion of the project area because it was very noisy.

In discussing the location of the proposed project, Gladys noted several changes since she left MEO. She mentioned that since the MEO office was relocated, the old Kahului Elementary School building was torn down, and she has noticed several Kingdom of Hawai'i events at the old MEO property. She also noted that there are a lot of homeless people who sleep under the trees near the library.

Gladys does not recall any historic cultural practices being carried out at the project site. She is not aware of any traditional beach or mountain access trails that would be affected by the proposed project. When asked if there are any considerations that should be considered in the development plans for the currently proposed project, she notes safety is her main concern, and that there should be adequate security in the area when both the transit hub and adjacent Kahului Lani projects are complete.

Neither of the individuals interviewed were aware of any traditional cultural practices within the relocated transit hub site. As such, significant adverse impacts to cultural resources and practices are not anticipated for the project.

9. **Air Quality**

a. **Existing Conditions**

Air pollution in the Kahului area results from both natural and man-made sources. Natural sources include windblown dust. Man-made sources include industrial sources (e.g., power plants), mobile sources (e.g., vehicular traffic), and agricultural sources.

The proposed project is located within the urban core of Kahului and the only known sources of pollutant air emissions in the immediate vicinity are associated with fuel combustion emissions from vehicular activity on nearby roadways, and the Maui Electric Company Ltd.'s Kahului Power Plant located adjacent to Kahului Harbor.

Air quality in Hawai'i is relatively high, attributed in part to the consistent trade winds that quickly disperse concentrations of emissions. The rapid dispersion was evident during previous burning of sugar cane in fields which were located to the southeast of the Kahului residential core.

b. **Potential Impacts and Proposed Mitigation Measures**

Airborne particulates, including dust, may be generated during site preparation and construction activities. Dust control measures, such as

regular watering and sprinkling and erection of dust fences around the construction site, will be implemented as needed, to minimize windblown emissions. In the long term, vehicle-generated emissions from busses and other automobiles driving to and from the relocated transit hub are not anticipated to create significant adverse impacts to local and regional ambient air quality conditions. MDOT is continuing to review options to replace their gasoline powered busses with alternative fuels which would further reduce emissions.

10. Noise

a. Existing Conditions

Ambient noise conditions at the project sites are typical of urban environments. Traffic noise from nearby roadways is the predominant source of background noise in the project vicinity.

b. Potential Impacts and Proposed Mitigation Measures

As with air quality, ambient noise conditions will be temporarily impacted by construction activities. Heavy construction equipment, such as bulldozers, front end loaders, and dump trucks and trailers, will be the dominant source of noise during site construction. Construction generated noise will be mitigated through Best Management Practices (BMPs) and construction activities will be limited to daylight work hours only. BMPs include, but are not limited to use of equipment mufflers or other noise attenuating equipment, as well as regular vehicle maintenance. Construction noise impacts will be mitigated through compliance with the provisions of the State of Hawai'i, Department of Health Administrative Rules Title 11, Chapter 46 "Community Noise Control", which requires a noise permit if the noise levels from construction activities are expected to exceed the allowable levels set by Chapter 46. In addition, precautionary measures will be taken so as to not disrupt the adjacent tenants during the construction process.

Hours of operation for the relocated transit hub are anticipated to be from 5:30 a.m. to 10:30 p.m. daily so as to not disrupt neighboring residential developments. In the context of long-term operations, the proposed Transit Hub Relocation Project is not anticipated to significantly affect ambient noise levels.

11. **Visual Resources**

a. **Existing Conditions**

The project area is located within Kahului's commercial core. Properties surrounding the relocated transit hub site are developed and include Foodland and QKC, the Kahului Public Library, the Waterfront Apartments, and several churches. Scenic resources to the west of the relocated transit hub site include ʻĪao Valley and the West Maui Mountains. Haleakalā lies east of the relocated transit hub site. To the north lies the Kahului Harbor and the Pacific Ocean.

b. **Potential Impacts and Proposed Mitigation Measures**

The proposed single-story Transit Hub Relocation Project is within the urban core of Kahului and is not located in a designated scenic corridor. In the context of the surrounding urbanized and developed land uses, including the existing multi-story Waterfront Apartments buildings nearby, and upcoming six-story KL 1 senior affordable apartments, the proposed action is not anticipated to have a significant adverse impact upon the scenic and open space resources of the area. In addition, the removal of the 11 bus shelters at the existing transit hub locator will not impede visual resources in the area.

B. **SOCIO-ECONOMIC ENVIRONMENT**

1. **Population**

a. **Existing Conditions**

The County of Maui had a population of 154,834 in 2010. Approximately 31 percent of the County's population, or 54,400 people, resided in the Waikuku-Kahului Community Plan region, the most populous region in the County (U.S. Census Bureau, 2010). In 2017, the estimated population of the County was 166,260 people, an increase of 7.4 percent since 2010 (U.S. Census Bureau, 2017). Population growth is expected to continue at a steady pace in Maui County, with the resident population expected to increase to 207,300 by 2030 (State of Hawai'i, Department of Business, Economic Development, and Tourism, 2012).

b. Potential Impacts and Proposed Mitigation Measures

The Transit Hub Relocation Project is intended to continue serving the existing population. The project itself is not considered a population generator.

2. Economy

a. Existing Conditions

The Kahului region is the island's center of commerce. Combined with neighboring Wailuku, the region's economic character encompasses a broad range of commercial, service, and governmental activities. The Kahului Harbor, a deep sea port, and Kahului Airport, both located in the Wailuku-Kahului region, provide vital links to off-island economies and links through which virtually all imports and exports pass. Visitor arrivals to Maui County were at 2,678,089 in 2016, with the vast majority traveling through Kahului Airport (Maui County Data Book, 2017). There were an estimated 80,250 jobs on Maui island in February 2017, an 11 percent increase since 2007 (Department of Labor and Industrial Relations, 2017).

The unemployment rate (not seasonally adjusted) for Maui County was 2.8 percent in March 2019, with Maui Island's rate at 2.7 percent, an increase from the respective rates from March 2018 of 2.2 and 2.1 percent. The State's unemployment rate for March 2019 was 2.8 percent (Department of Labor and Industrial Relations, 2019).

b. Potential Impacts and Proposed Mitigation Measures

Short-term benefits to the local economy will occur with the provision of construction-related employment and related spending. In the long term, the proposed project will continue the existing bus service currently located at the QKC which will be relocated to another centrally located property approximately one-quarter mile away across Kane Street.

The proposed ticket booth at the relocated transit hub site will employ approximately three (3) full-time employees each day, an increase over existing operations as the current QKC transit hub does not currently have a ticket booth.

C. PUBLIC SERVICES

1. Recreational Facilities

a. Existing Conditions

County recreational facilities are administered and maintained by the County Department of Parks and Recreation. The Wailuku-Kahului region contains a network of recreational facilities comprised of mini-parks, as well as neighborhood and district parks. The region's seven (7) mini-parks are distributed throughout the area, while the region's eleven (11) neighborhood and three (3) district parks provide a wide range of facilities to meet the recreational needs of the community.

In the vicinity of the project sites, shoreline and ocean recreation activities such as boating, fishing, diving, surfing, canoeing, kayaking, picnicking, and windsurfing are available at the Kahului Harbor and nearby beach parks. County parks in the immediate vicinity of the project sites include Keopuolani Park and the War Memorial Sports Complex.

b. Potential Impacts and Proposed Mitigation Measures

The proposed Transit Hub Relocation Project is not anticipated to adversely impact the existing level of recreational facilities and services available to Maui County residents. The approximate quarter-mile relocation of the facilities will not significantly impact any park facility users that may utilize the bus system.

2. Police and Fire Protection

a. Existing Conditions

Police protection for the Wailuku-Kahului region is provided by the County Police Department headquartered on Mahalani Street, approximately one (1) mile from the project sites. The region is served by the Department's Central Maui patrol.

Fire prevention, suppression, and protection services for the Wailuku-Kahului region is provided by the County Department of Fire and Public Safety's Wailuku Station, located in Wailuku Town, as well as the Kahului Station located on Dairy Road. The project sites are located approximately one (1) mile from the Kahului Station.

b. **Potential Impacts and Proposed Mitigation Measures**

Police and fire protection services are not expected to be adversely impacted by the proposed project. The proposed Transit Hub Relocation Project will be located in the Kahului urban area and will not extend existing service area limits for emergency services.

3. **Solid Waste**

a. **Existing Conditions**

Solid waste collection service is provided by the County of Maui on a weekly basis. Residential solid waste collected by County crews are disposed at the County's Central Maui Landfill, located 4.0 miles southeast of the Kahului Airport. In addition to County-collected refuse, the Central Maui Landfill accepts commercial waste from private collection companies.

b. **Potential Impacts and Proposed Mitigation Measures**

During construction and following project completion, solid waste for the Transit Hub Relocation Project will be handled by the County's Department of Environmental Management. The solid waste generated by the proposed project is not anticipated to adversely impact the County solid waste capacity of the Central Maui Landfill.

4. **Healthcare**

a. **Existing Conditions**

Maui Memorial Medical Center, the only major medical facility on the island, services the Wailuku-Kahului region. Acute, general and emergency care services are provided by the approximately 214-bed facility. In addition, numerous privately operated medical/dental clinics and offices are located in the area to serve the region's residents.

b. **Potential Impacts and Proposed Mitigation Measures**

The Transit Hub Relocation Project is located within close proximity to existing medical facilities and services in the region, including the Maui Memorial Medical Center. Inasmuch as the proposed project is intended to continue accommodating the needs of Maui's existing population, the project is not anticipated to increase the service demands placed upon emergency healthcare services.

5. **Educational Facilities**

a. **Existing Conditions**

The Wailuku-Kahului region is served by the State Department of Education's public school system as well as several privately operated schools accommodating elementary, intermediate and high school students. Department of Education facilities in the Kahului area include Pomaikai, Lihikai, and Kahului Elementary Schools (Grades K-5), Maui Waena Intermediate School (Grades 6-8), and Maui High School (Grades 9-12). Existing facilities in the Wailuku area include Wailuku and Pu'u Kukui Elementary Schools (Grades K-5), 'Īao Intermediate School (Grades 6-8), and Baldwin High School (Grades 9-12). The University of Hawai'i Maui College is the primary higher education institution serving Maui.

b. **Potential Impacts and Proposed Mitigation Measures**

The proposed Transit Hub Relocation Project is not expected to place new demands upon area schools. As such, adverse impacts to the public as well as private school systems are not anticipated as a result of the proposed action.

D. **INFRASTRUCTURE**

1. **Roadways**

a. **Existing Conditions**

A Traffic Impact Analysis Report (TIAR) was prepared for the proposed project. See **Appendix "E"**. The Wailuku-Kahului region is served by a roadway network which includes arterial, collector, and local roads. Major roadways in the vicinity of the project sites include the following:

Ka'ahumanu Avenue

Ka'ahumanu Avenue, north of the project, is a two-way, six-lane, divided State highway with a posted speed limit of 30 miles per hour (mph) in the vicinity of the project sites. It is the main thoroughfare through Kahului with an east-west orientation.

Kane Street/Kahului Beach Road

Kane Street is a two-way, three-lane, undivided roadway running north-south with a posted speed limit of 20 mph in the vicinity of the project sites. North of Ka'ahumanu Avenue, Kane Street turns into Kahului Beach Road.

In the vicinity of the relocated transit hub site, Kane Street provides access to commercial/retail uses, including the QKC.

Lono Avenue

Lono Avenue is a two-way, three-lane, undivided roadway running north-south with a posted speed limit of 20 mph in the vicinity of the project sites.

Vevau Street

Vevau Street is a two-way, two-lane, undivided roadway running east-west in the vicinity of the project sites. In the vicinity of the project site, Vevau Street is privately owned by KL Senior Affordable Condo Master.

School Street

School Street is a two-way, two-lane, undivided roadway running north-south in the vicinity of the project sites, providing access to the Kahului Public Library and a church.

The TIAR included a Level Of Service (LOS) analysis for the various intersections surrounding the project area. The TIAR stated that during morning (AM) and afternoon (PM) peak traffic, some movements at the Ka’ahumanu Avenue/Kahului Beach Road/Kane Street and Ka’ahumanu Avenue/Lono Avenue intersection currently operate at LOS E/F, primarily due to signal coordination based on traffic volumes. However, according to the TIAR, overall signalized and unsignalized intersections operate at LOS D or better. See **Table 1**.

Table 1. Existing LOS for Signalized Study Intersections

Intersection	LOS for AM Peak Hour	LOS for PM Peak Hour
Ka’ahumanu Avenue/Kahului Beach Road/Kane Street	D	D
Ka’ahumanu Avenue/Lono Avenue	B	B

Source: Austin, Tsutsumi & Associates, Inc., 2019.

b. Potential Impacts and Proposed Mitigation Measures

Access to the relocated transit hub site will be provided by new driveways off of Vevau Street. It is also noted that the County of Maui’s current transit hub is located across the street at the QKC. A bus stop is also located at the nearby Kahului Shopping Center.

The TIAR included a background traffic analysis to define the future traffic conditions without the proposed project. Future traffic growth is dependent

on two (2) components, ambient background growth and estimated traffic from other development projects in the vicinity of the project area. According to the TIAR, there is one (1) known development project, the Kahului Lani project, and no known roadway projects within the study area. The Kahului Lani project is anticipated to generate 63 AM peak hour trips and 81 PM peak hour trips. The background-plus-project projection assumes that the peak hours at the relocated transit hub site coincide with the peak hours at the study intersections, representing a worse-case scenario. See **Table 2** and refer to **Appendix “E”**.

Table 2. LOS for Signalized Study Intersections Without and With Proposed Project

Intersection	LOS for AM Peak Hour		LOS for PM Peak Hour	
	Without Project	With Project	Without Project	With Project
Ka'ahumanu Avenue/Kahului Beach Road/Kane Street	D	D	D	D
Ka'ahumanu Avenue/Lono Avenue	B	B	B	B
Source: Austin, Tsutsumi & Associates, Inc., 2019.				

All movements at the study intersections are forecast to operate at the same LOS with or without the project. Based on the traffic generations at the study intersections, the project does not meet a traffic signal warrant, nor does the project require provision of left-turn lanes. As such, no roadway improvements would be required as a result of the proposed project. However, as mentioned previously, roadway improvements are planned as part of the Kahului Lani project. Vevau Street will be improved to County standards, as will the adjacent sides of Kane Street and School Street, and Vevau Street will be dedicated to the County of Maui.

During construction, traffic control devices and personnel will be utilized to mitigate impacts to pedestrians and to vehicular movement by heavy equipment and construction vehicles.

2. Airports

a. Existing Conditions

The Transit Hub Relocation Project is proposed approximately 1.5 miles from Kahului Airport. Kahului Airport, Maui’s primary airport, receives both interisland and overseas flights. In 2015, the airport hosted a total of 134,674 aircraft movements (County of Maui, Office of Economic Development, 2017).

b. **Potential Impacts and Proposed Mitigation Measures**

No adverse impacts are anticipated due to the project's proximity to the airport and limited scope of improvements.

3. **Wastewater**

a. **Existing Conditions**

Domestic wastewater generated in the Wailuku-Kahului region is conveyed to the County's Wailuku-Kahului Wastewater Reclamation Facility (WRF) located one-half mile south of Kahului Harbor. The design capacity of the facility is 7.9 million gallons per day (mgd). The facility serves the Kahului, Wailuku, Paia, Kuau, and Spreckelsville areas. Cumulative allocated wastewater flows from the Kahului facility are approximately 6.6 mgd (Munekiyo Hiraga, 2015).

Wastewater infrastructure in the project vicinity includes an existing 15-inch gravity sewerline along Vevau Street that connects to a series of 18-inch and 24-inch gravity sewer mains which transport sewage to the Kahului Wastewater Pump Station, and eventually to the Wailuku-Kahului WRF through a 3,123-foot long 20-inch diameter force main. The 15-inch gravity sewer main in Vevau Street is encased in concrete and contains a cured-in-place lining along the interior of the pipe, which prohibits the tapping of the sewer main with new sewer laterals. Refer to **Appendix "B"**.

b. **Potential Impacts and Proposed Mitigation Measures**

According to the Preliminary Engineering Report (PER) prepared for the project, the total wastewater flow for the project is estimated at approximately 1,005 gallons per day (gpd). Refer to **Appendix "B"**. The relocated transit hub facility will connect to the County wastewater system via a new service lateral that will connect to an existing sewer manhole located at the intersection of Vevau Street and School Street (SMH #KA 01000800). Sewer system improvements will be designed to comply with the Design Standards of the Wastewater Reclamation Division of the County of Maui.

4. **Water**

a. **Existing Conditions**

Domestic water and fire flow for the Kahului area are serviced from the 3.0 million gallon (mg) Mokuhau tank and wells in Happy Valley. There are

existing 8-inch waterlines in Kane Street and Vevau Street, however, the Vevau Street line does not pass in front of the relocated transit hub property. Instead, the property is serviced by a 1-inch water meter tapping off a 12-inch main in Ka'ahumanu Avenue. Refer to **Appendix "B"**.

b. Potential Impacts and Proposed Mitigation Measures

As noted in the PER, the average daily domestic demand for potable water for the project is 42 gallons per minute (gpm). The average daily demand for landscape irrigation is 8 gpm. Refer to **Appendix "B"**. Water system improvements for the proposed project include a 4-inch fire protection service lateral and a 1-inch water service lateral. Both laterals will be connected to the future 8-inch water main extension in Vevau Street which is being constructed as part of the Kahului Lani project. The potable water system will comply with the latest Water System Standards and Standard Details for Water System Construction for the County of Maui, Department of Water Supply.

Water conserving plumbing fixtures for the restroom facilities and water conservation landscape irrigation practices will be incorporated into the project.

5. Drainage

a. Existing Conditions

There are no onsite drainage improvements within the project area. Runoff generally sheet-flows in a northeasterly direction toward the open grass field from the relocated transit hub site with some ponding or overflows to catch basins in Ka'ahumanu Avenue. The catch basins discharge to a 36-inch drainline within Ka'ahumanu Avenue.

b. Potential Impacts and Mitigation Measures

The PER prepared for the project estimates that under conditions of a 50-year, 1-hour peak flow storm event, runoff from the relocated transit hub site will be increased by approximately 3.03 cubic feet per second (cfs) due to the proposed project, requiring approximately 4,630 cubic feet of retention storage. It is noted that these calculations were prepared for the 0.73-acre area in Parcel 4-3 as drainage calculations for Parcel 5-3 were included as part of the EA prepared for the KL housing project. Refer to **Appendix "B"**. The proposed drainage improvements for the project include drain inlets, catch basins, manholes, drainpipes, hydrodynamic separator, and a subsurface detention/retention basin to mitigate the

anticipated increase in runoff. The drainage system design will comply with the Rules for the Design of Storm Drainage Facilities in the County of Maui, dated July 1995. Construction Best Management Practices (BMPs) will be implemented to ensure that construction-related runoff will have no effect on downstream properties.

6. Electrical and Telephone Services

a. Existing Conditions

Electrical service to the area is currently provided by Maui Electric Company, Ltd., telephone service is provided by Hawaiian Telcom, while cable television is provided by Spectrum. Existing utility infrastructure is located above ground. It is noted that Kahului Lani project improvements include moving the overhead lines underground along Vevau Street fronting the subject project.

b. Potential Impacts and Mitigation Measures

The proposed action is not anticipated to impact existing utility facilities and services. Coordination will be carried out with the service providers to ensure timely service capability and capacity for the relocated transit hub site as may be required. Energy conservation measures will be incorporated into the project where feasible, including use of LED lighting that complies with Hawai'i Energy standards for energy efficiency and longevity, and photosensors on outdoor lighting. The facility design will consider appropriate infrastructure to accommodate future energy efficient systems. Also, the proposed open air design with roof structure shading the bus and passenger waiting areas eliminates a substantial amount of air conditioning energy use.

E. CUMULATIVE AND SECONDARY IMPACTS

Pursuant to Section 11-200-2 of the Hawai'i Administrative Rules, Chapter 200, entitled Environmental Impact Statement Rules, a cumulative impact means:

The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The Transit Hub Relocation Project is proposed in an urbanized area of Kahului on lands designated for urban use. The proposed project is not a phase of a larger action, nor does it represent a commitment to such actions. Given the surrounding development and urban

land uses, significant environmental impacts are not anticipated as a result of the project. Although the proposed project requires provision of basic infrastructure such as water and wastewater service, these requirements are not considered significant and will be developed in conjunction with the adjacent Kahului Lani development. The TIAR prepared for the project concludes that LOS at nearby roadway intersections will not be significantly impacted by the project. As such, no cumulative impacts are anticipated as a result of the proposed project.

Secondary impacts are those which have the potential to occur late in time or farther in distance, but are still reasonably foreseeable. They can be viewed as actions of others that are taken because of the presence of a project. The proposed transit hub may make it more desirable for the development of business and commercial or residential uses in the vicinity of the proposed project. The Department of Accounting and General Services (DAGS) noted in their early consultation comments that it is working with the Hawai'i Housing Finance and Development Corporation (HHFDC) for future development of Parcel 4-3. DAGS noted a concern for accessibility to the remainder of Parcel 4-3 and future traffic on Vevau Street. No details on the future DAGS/HHFDC project were publicly available at the time of the Draft EA preparation for the transit hub relocation project. MDOT will coordinate with DAGS/HHFDC on vehicle access to the remainder of Parcel 4-3 as plans are developed for the future project. However, the proposed transit hub relocation project will be located in the midst of land either already in business and commercial uses, or on lands designated for these uses. As such, given the surrounding development and urban land uses, significant environmental impacts are not anticipated as a result of the project. Given that the proposed project is a relocation of an existing transit hub intended to continue serving the existing population, the project is not considered a population generator in and of itself. Therefore, with the proposed mitigation measures, the project is not anticipated to result in significant adverse secondary impacts.

**RELATIONSHIP TO
GOVERNMENTAL PLANS,
POLICIES, AND CONTROLS**



III. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES, AND CONTROLS

A. STATE LAND USE DISTRICTS

All lands in the State are placed into the four (4) major land use districts by Chapter 205, Hawai'i Revised Statutes (HRS), relating to the Land Use Commission. These districts are designated "Urban", "Rural", "Agricultural" and "Conservation". The proposed Transit Hub Relocation Project improvements are located within the "Urban" District and are an allowable use within this district. See **Figure 8**.

B. HAWAI'I STATE PLAN

Chapter 226, HRS, also known as the Hawai'i State Plan, is a long-range comprehensive plan which serves as a guide for the future long-term development of the State by identifying goals, objectives, policies, and priorities, as well as implementation mechanisms. The Plan consists of three (3) parts. Part I includes the Overall Theme, Goals, Objectives, and Policies; Part II includes Planning, Coordination, and Implementation; and Part III establishes Priority Guidelines. Inasmuch as Part II of the State Plan covers its administrative structure and implementation process, discussion of the proposed project's applicability to Part II is not appropriate. Below is an analysis of the project's applicability to Part I and Part III of the Hawai'i State Plan.

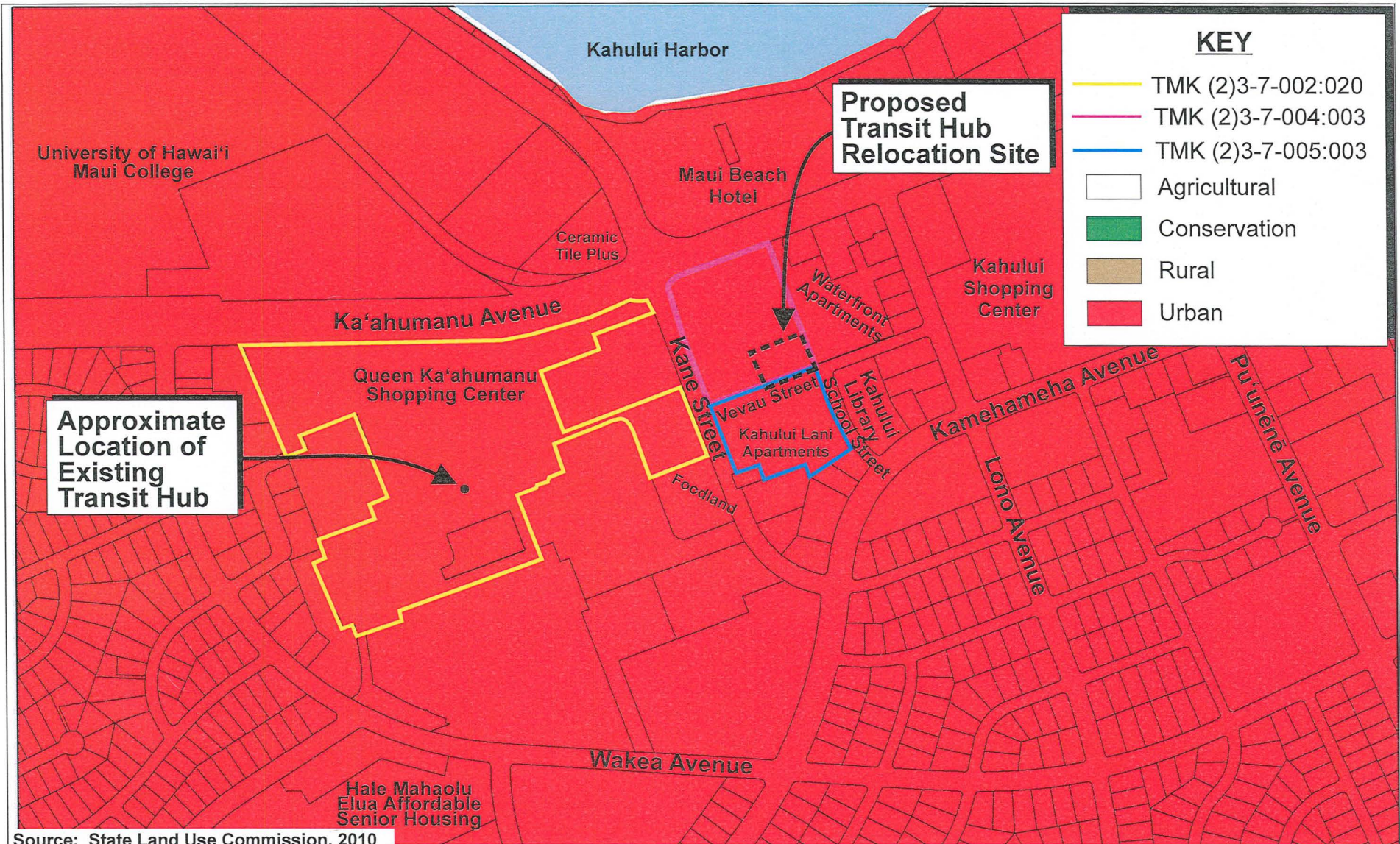
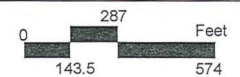


Figure 8

Proposed Transit Hub Relocation
State Land Use District



Prepared for: County of Maui, Department of Transportation



Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies	S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable			
HRS 226-1: Findings and Purpose			
HRS 226-2: Definitions			
HRS 226-3: Overall Theme			
<p>HRS 226-4: State Goals. In order to guarantee, for the present and future generations, those elements of choice and mobility that insure that individuals and groups may approach their desired levels of self-reliance and self determination, it shall be the goal of the State to achieve:</p> <ol style="list-style-type: none"> (1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawaii's present and future generations. (2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people. (3) Physical, social, and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring, and of participation in community life. 			
<p>Analysis: The proposed project will relocate the existing transit hub at the Queen Ka'ahumanu Center (QKC) to a new location on Vevau Street, as well as remove existing bus shelters at QKC. The project supports the State's goal to maintain a strong, viable economy that fulfills the needs and expectations of Hawai'i's present and future generations.</p>			
Chapter 226-5 Objective and Policies for Population			
<p>Objective: It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic and social objectives contained in this chapter.</p>			✓
Policies:			
(1) Manage population growth statewide in a manner that provides increased opportunities for Hawaii's people to pursue their physical, social, and economic aspirations while recognizing the unique needs of each county.			✓
(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.			✓
(3) Promote increased opportunities for Hawaii's people to pursue their socio-economic aspirations throughout the islands.			✓
(4) Encourage research activities and public awareness programs to foster an understanding of Hawaii's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawaii's population.			✓
(5) Encourage federal actions and coordination among major governmental agencies to promote a more balanced distribution of immigrants among the states, provided that such actions do not prevent the reunion of immediate family members.			✓
(6) Pursue an increase in federal assistance for states with a greater proportion of foreign immigrants relative to their state's population.			✓
(7) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.			✓
<p>Analysis: The objective and policies listed above for population are not applicable to the proposed project.</p>			

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies			S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable					
Chapter 226-6 Objectives and policies for the economy – – in general					
Objectives: Planning for the State's economy in general shall be directed toward achievement of the following objectives:					
(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people, while at the same time stimulating the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.					✓
(2) A steadily growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands.					✓
Policies:					
(1) Promote and encourage entrepreneurship within Hawaii by residents and nonresidents of the State.					✓
(2) Expand Hawaii's national and international marketing, communication, and organizational ties, to increase the State's capacity to adjust to and capitalize upon economic changes and opportunities occurring outside the State.					✓
(3) Promote Hawaii as an attractive market for environmentally and socially sound investment activities that benefit Hawaii's people.					✓
(4) Transform and maintain Hawaii as a place that welcomes and facilitates innovative activity that may lead to commercial opportunities.					✓
(5) Promote innovative activity that may pose initial risks, but ultimately contribute to the economy of Hawaii.					✓
(6) Seek broader outlets for new or expanded Hawaii business investments.					✓
(7) Expand existing markets and penetrate new markets for Hawaii's products and services.					✓
(8) Assure that the basic economic needs of Hawaii's people are maintained in the event of disruptions in overseas transportation.					✓
(9) Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.					✓
(10) Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawaii's small scale producers, manufacturers, and distributors.					✓
(11) Encourage labor-intensive activities that are economically satisfying and which offer opportunities for upward mobility.					✓
(12) Encourage innovative activities that may not be labor-intensive, but may otherwise contribute to the economy of Hawaii.					✓
(13) Foster greater cooperation and coordination between the government and private sectors in developing Hawaii's employment and economic growth opportunities.					✓
(14) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.					✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable		S	N/S	N/A
(15)	Maintain acceptable working conditions and standards for Hawaii's workers.			✓
(16)	Provide equal employment opportunities for all segments of Hawaii's population through affirmative action and nondiscrimination measures.			✓
(17)	Stimulate the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.			✓
(18)	Encourage businesses that have favorable financial multiplier effects within Hawaii's economy, particularly with respect to emerging industries in science and technology.			✓
(19)	Promote and protect intangible resources in Hawaii, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.			✓
(20)	Increase effective communication between the educational community and the private sector to develop relevant curricula and training programs to meet future employment needs in general, and requirements of new or innovative potential growth industries in particular.			✓
(21)	Foster a business climate in Hawaii--including attitudes, tax and regulatory policies, and financial and technical assistance programs-- that is conducive to the expansion of existing enterprises and the creation and attraction of new business and industry.			✓
<u>Analysis:</u> The objectives and policies listed above for the economy in general are not applicable to the project.				
Chapter 226-7 Objectives and policies for the economy -- agriculture.				
<u>Objectives:</u> Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives:				
(1)	Viability of Hawaii's sugar and pineapple industries.			✓
(2)	Growth and development of diversified agriculture throughout the State.			✓
(3)	An agriculture industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being.			✓
<u>Policies:</u>				
(1)	Establish a clear direction for Hawaii's agriculture through stakeholder commitment and advocacy.			✓
(2)	Encourage agriculture by making the best use of natural resources.			✓
(3)	Provide the governor and the legislature with information and options needed for prudent decision-making for the development of agriculture.			✓
(4)	Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits.			✓
(5)	Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawaii's economy.			✓
(6)	Seek the enactment and retention of federal and state legislation that benefits Hawaii's agricultural industries.			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(7) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawaii's food producers and consumers in the State, nation, and world.			✓
(8) Support research and development activities that strengthen economic productivity in agriculture, stimulate greater efficiency, and enhance the development of new products and agricultural by-products.			✓
(9) Enhance agricultural growth by providing public incentives and encouraging private initiatives.			✓
(10) Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.			✓
(11) Increase the attractiveness and opportunities for an agricultural education and livelihood.			✓
(12) In addition to the State's priority on food, expand Hawaii's agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises.			✓
(13) Promote economically competitive activities that increase Hawaii's agricultural self-sufficiency, including the increased purchase and use of Hawaii-grown food and food products by residents, businesses, and governmental bodies as defined under section 103D-104.			✓
(14) Promote and assist in the establishment of sound financial programs for diversified agriculture.			✓
(15) Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment.			✓
(16) Facilitate the transition of agricultural lands in economically nonfeasible agricultural production to economically viable agricultural uses.			✓
(17) Perpetuate, promote, and increase use of traditional Hawaiian farming systems, such as the use of loko i'a, māla, and irrigated lo'i, and growth of traditional Hawaiian crops, such as kalo, 'uala, and 'ulu.			✓
(18) Increase and develop small-scale farms.			✓
<u>Analysis:</u> The objectives and policies listed above for the economy related to agriculture are not applicable to the project.			
Chapter 226-8 Objective and policies for the economy – – visitor industry.			
Objective: Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaii's economy.			✓
<u>Policies:</u>			
(1) Support and assist in the promotion of Hawaii's visitor attractions and facilities.	✓		
(2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people.			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(3) Improve the quality of existing visitor destination areas by utilizing Hawaii's strengths in science and technology.			✓
(4) Encourage cooperation and coordination between the government and private sectors in developing and maintaining well-designed, adequately serviced visitor industry and related developments which are sensitive to neighboring communities and activities.			✓
(5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawaii's people.			✓
(6) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the visitor industry.			✓
(7) Foster a recognition of the contribution of the visitor industry to Hawaii's economy and the need to perpetuate the aloha spirit.			✓
(8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawaii's cultures and values.			✓
Analysis: Maui County Department of Transportation (MDOT) provides bus services, for both residents and tourists, to locations across the island. The proposed project and continuation of bus services will serve and support Hawai'i's visitor attractions.			
Chapter 226-9 Objective and policies for the economy – – federal expenditures.			
Objective: Planning for the State's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawaii's economy.			✓
Policies:			
(1) Encourage the sustained flow of federal expenditures in Hawaii that generates long-term government civilian employment;			✓
(2) Promote Hawaii's supportive role in national defense, in a manner consistent with Hawaii's social, environmental, and cultural goals by building upon dual-use and defense applications to develop thriving ocean engineering, aerospace research and development, and related dual-use technology sectors in Hawaii's economy;			✓
(3) Promote the development of federally supported activities in Hawaii that respect statewide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawaii's environment;			✓
(4) Increase opportunities for entry and advancement of Hawaii's people into federal government service;			✓
(5) Promote federal use of local commodities, services, and facilities available in Hawaii;			✓
(6) Strengthen federal-state-county communication and coordination in all federal activities that affect Hawaii; and			✓
(7) Pursue the return of federally controlled lands in Hawaii that are not required for either the defense of the nation or for other purposes of national importance, and promote the mutually beneficial exchanges of land between federal agencies, the State, and the counties.			✓
Analysis: The objectives and policies listed above for the economy related to federal expenditures are not applicable to the proposed project.			

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies			S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable					
Chapter 226-10 Objective and policies for the economy – – potential growth and innovative activities.					
Objective: Planning for the State's economy with regard to potential growth and innovative activities shall be directed towards achievement of the objective of development and expansion of potential growth and innovative activities that serve to increase and diversify Hawaii's economic base.					✓
Policies:					
(1) Facilitate investment and employment growth in economic activities that have the potential to expand and diversify Hawaii's economy, including but not limited to diversified agriculture, aquaculture, renewable energy development, creative media, health care, and science and technology-based sectors;					✓
(2) Facilitate investment in innovative activity that may pose risks or be less labor-intensive than other traditional business activity, but if successful, will generate revenue in Hawaii through the export of services or products or substitution of imported services or products;					✓
(3) Encourage entrepreneurship in innovative activity by academic researchers and instructors who may not have the background, skill, or initial inclination to commercially exploit their discoveries or achievements;					✓
(4) Recognize that innovative activity is not exclusively dependent upon individuals with advanced formal education, but that many self-taught, motivated individuals are able, willing, sufficiently knowledgeable, and equipped with the attitude necessary to undertake innovative activity;					✓
(5) Increase the opportunities for investors in innovative activity and talent engaged in innovative activity to personally meet and interact at cultural, art, entertainment, culinary, athletic, or visitor-oriented events without a business focus;					✓
(6) Expand Hawaii's capacity to attract and service international programs and activities that generate employment for Hawaii's people;					✓
(7) Enhance and promote Hawaii's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts;					✓
(8) Accelerate research and development of new energy-related industries based on wind, solar, ocean, underground resources, and solid waste;					✓
(9) Promote Hawaii's geographic, environmental, social, and technological advantages to attract new or innovative economic activities into the State;					✓
(10) Provide public incentives and encourage private initiative to attract new or innovative industries that best support Hawaii's social, economic, physical, and environmental objectives;					✓
(11) Increase research and the development of ocean-related economic activities such as mining, food production, and scientific research;					✓
(12) Develop, promote, and support research and educational and training programs that will enhance Hawaii's ability to attract and develop economic activities of benefit to Hawaii;					✓
(13) Foster a broader public recognition and understanding of the potential benefits of new or innovative growth-oriented industry in Hawaii;					✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies			
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable			
	S	N/S	N/A
(14) Encourage the development and implementation of joint federal and state initiatives to attract federal programs and projects that will support Hawaii's social, economic, physical, and environmental objectives;			✓
(15) Increase research and development of businesses and services in the telecommunications and information industries;			✓
(16) Foster the research and development of nonfossil fuel and energy efficient modes of transportation; and			✓
(17) Recognize and promote health care and health care information technology as growth industries.			✓
<u>Analysis:</u> The objectives and policies listed above for the economy related to potential growth and innovative activities are not applicable to the proposed project.			
Chapter 226-10.5 Objectives and policies for the economy – – information industry.			
<u>Objective:</u> Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawaii as a leader in broadband and wireless communications and applications in the Pacific Region.			✓
<u>Policies:</u>			
(1) Promote efforts to attain the highest speeds of electronic and wireless communication within Hawaii and between Hawaii and the world, and make high speed communication available to all residents and businesses in Hawaii;			✓
(2) Encourage the continued development and expansion of the telecommunications infrastructure serving Hawaii to accommodate future growth and innovation in Hawaii's economy;			✓
(3) Facilitate the development of new or innovative business and service ventures in the information industry which will provide employment opportunities for the people of Hawaii;			✓
(4) Encourage mainland- and foreign-based companies of all sizes, whether information technology-focused or not, to allow their principals, employees, or contractors to live in and work from Hawaii, using technology to communicate with their headquarters, offices, or customers located out-of-state;			✓
(5) Encourage greater cooperation between the public and private sectors in developing and maintaining a well-designed information industry;			✓
(6) Ensure that the development of new businesses and services in the industry are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people;			✓
(7) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the information industry;			✓
(8) Foster a recognition of the contribution of the information industry to Hawaii's economy; and			✓
(9) Assist in the promotion of Hawaii as a broker, creator, and processor of information in the Pacific.			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies			
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable			
	S	N/S	N/A
<u>Analysis:</u> The objectives and policies listed above for the economy related to the information industry are not applicable to the proposed project.			
Chapter 226-11 Objectives and policies for the physical environment – – land based, shoreline, and marine resources.			
<u>Objectives:</u> Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:			
(1) Prudent use of Hawaii's land-based, shoreline, and marine resources.			✓
(2) Effective protection of Hawaii's unique and fragile environmental resources.			✓
<u>Policies:</u>			
(1) Exercise an overall conservation ethic in the use of Hawaii's natural resources.			✓
(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.			✓
(3) Take into account the physical attributes of areas when planning and designing activities and facilities.	✓		
(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.			✓
(5) Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions.			✓
(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaii.			✓
(7) Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion.			✓
(8) Pursue compatible relationships among activities, facilities, and natural resources.			✓
(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.			✓
<u>Analysis:</u> The proposed project will take into account the physical attributes of the surrounding area during planning and design by maintaining a low-scale development and implementing appropriate drainage measures to mitigate potential onsite water retention due to the area's low lying and flat topography. Also, the proposed project is being implemented amongst existing residential and commercial uses.			
Chapter 226-12 Objective and policies for the physical environment – – scenic, natural beauty, and historic resources.			
<u>Objective:</u> Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multi-cultural/historical resources.	✓		
<u>Policies:</u>			
(1) Promote the preservation and restoration of significant natural and historic resources.			✓
(2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies			
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable			
	S	N/S	N/A
(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.	✓		
(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawaii's ethnic and cultural heritage.			✓
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.			✓
<u>Analysis:</u> The design for the proposed development will not adversely impact visual aesthetics and scenic landscapes surrounding the area.			
Chapter 226-13 Objectives and policies for the physical environment – – land, air, and water quality.			
<u>Objectives:</u> Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives.			
(1) Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources.			✓
(2) Greater public awareness and appreciation of Hawaii's environmental resources.			✓
<u>Policies:</u>			
(1) Foster educational activities that promote a better understanding of Hawaii's limited environmental resources.			✓
(2) Promote the proper management of Hawaii's land and water resources.			✓
(3) Promote effective measures to achieve desired quality in Hawaii's surface, ground, and coastal waters.			✓
(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawaii's people.			✓
(5) Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.			✓
(6) Encourage design and construction practices that enhance the physical qualities of Hawaii's communities.			✓
(7) Encourage urban developments in close proximity to existing services and facilities.			✓
(8) Foster recognition of the importance and value of the land, air, and water resources to Hawaii's people, their cultures and visitors.			✓
<u>Analysis:</u> The objectives and policies listed above for the physical environment related to land, air, and water quality are not applicable to the proposed project.			
Chapter 226-14 Objective and policies for facility systems – – in general.			
<u>Objective:</u> Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.	✓		

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies			
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable			
	S	N/S	N/A
Policies:			
(1) Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.	✓		
(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.			✓
(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.	✓		
(4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.			✓
Analysis: The proposed project will support statewide social, economic, and physical objectives in transportation in consonance with State and County plans by ensuring that bus services come at a reasonable cost to the user.			
Chapter 226-15 Objectives and policies for facility systems – – solid and liquid waste.			
Objectives: Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:			
(1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.			✓
(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.			✓
Policies:			
(1) Encourage the adequate development of sewerage facilities that complement planned growth.			✓
(2) Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.			✓
(3) Promote research to develop more efficient and economical treatment and disposal of solid and liquid wastes.			✓
Analysis: The objectives and policies listed above for facility systems related to solid and liquid waste are not applicable to the proposed project.			
Chapter 226-16 Objective and policies for facility systems – – water.			
Objective: Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.			
Policies:			
(1) Coordinate development of land use activities with existing and potential water supply.			✓
(2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.			✓
(3) Reclaim and encourage the productive use of runoff water and wastewater discharges.			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.			✓
(5) Support water supply services to areas experiencing critical water problems.			✓
(6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.			✓
Analysis: The objectives and policies listed above for facility systems related to water are not applicable to the proposed project.			
Chapter 226-17 Objectives and policies for facility systems – – transportation.			
Objectives: Planning for the State's facility systems with regard to transportation shall be directed towards the achievement of the following objectives:			
(1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.	✓		
(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State.			✓
Policies:			
(1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter;			✓
(2) Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives;			✓
(3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties;	✓		
(4) Provide for improved accessibility to shipping, docking, and storage facilities;			✓
(5) Promote a reasonable level and variety of mass transportation services that adequately meet statewide and community needs;	✓		
(6) Encourage transportation systems that serve to accommodate present and future development needs of communities;			✓
(7) Encourage a variety of carriers to offer increased opportunities and advantages to interisland movement of people and goods;			✓
(8) Increase the capacities of airport and harbor systems and support facilities to effectively accommodate transshipment and storage needs;			✓
(9) Encourage the development of transportation systems and programs which would assist statewide economic growth and diversification;	✓		
(10) Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawaii's natural environment;	✓		
(11) Encourage safe and convenient use of low-cost, energy-efficient, non-polluting means of transportation;			✓
(12) Coordinate intergovernmental land use and transportation planning activities to ensure the timely delivery of supporting transportation infrastructure in order to accommodate planned growth objectives; and			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies			
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable			
	S	N/S	N/A
(13) Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.			✓
<u>Analysis:</u> The proposed project supports a desired multi-modal transportation system, and will reasonably distribute the financial responsibilities of the transit hub relocation between State and County funds. The new location on Vevau Street is near centers of employment, shopping, education, housing and social services, and is expected to have a positive effect on the surrounding community and the quality of Hawai'i's natural environment.			
Chapter 226-18 Objectives and policies for facility systems – – energy.			
<u>Objectives:</u> Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:			
(1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;			✓
(2) Increased energy security and self-sufficiency through the reduction and ultimate elimination of Hawaii's dependence on imported fuels for electrical generation and ground transportation.			✓
(3) Greater diversification of energy generation in the face of threats to Hawaii's energy supplies and systems;			✓
(4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use; and			✓
(5) Utility models that make the social and financial interests of Hawaii's utility customers a priority.			✓
(b) To achieve the energy objectives, it shall be the policy of this State to ensure the short- and long-term provision of adequate, reasonably prices, and dependable energy services to accommodate demand.			✓
<u>Policies:</u>			
(1) Support research and development as well as promote the use of renewable energy sources;			✓
(2) Ensure that the combination of energy supplies and energy-saving systems is sufficient to support the demands of growth;			✓
(3) Base decisions of least-cost supply-side and demand-side energy resource options on a comparison of their total costs and benefits when a least-cost is determined by a reasonably comprehensive, quantitative, and qualitative accounting of their long-term, direct and indirect economic, environmental, social, cultural, and public health costs and benefits;			✓
(4) Promote all cost-effective conservation of power and fuel supplies through measures, including:	✓		
(A) Development of cost-effective demand-side management programs;			✓
(B) Education;			✓
(C) Adoption of energy-efficient practices and technologies; and			✓
(D) Increasing energy efficiency and decreasing energy use in public infrastructure	✓		

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(5) Ensure, to the extent that new supply-side resources are needed, that the development or expansion of energy systems uses the least-cost energy supply option and maximizes efficient technologies; and			✓
(6) Support research, development, demonstration, and use of energy efficiency, load management, and other demand-side management programs, practices, and technologies;			✓
(7) Promote alternate fuels and transportation energy efficiency;			✓
(8) Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications;			✓
(9) Support actions that reduce, avoid, or sequester Hawaii's greenhouse gas emissions through agriculture and forestry initiatives;			✓
(10) Provide priority handling and processing for all state and county permits required for renewable energy projects;			✓
(11) Ensure that liquefied natural gas is used only as a cost-effective transitional, limited-term replacement of petroleum for electricity generation and does not impede the development and use of other cost-effective renewable energy sources; and			✓
(12) Promote the development of indigenous geothermal energy resources that are located on public trust land as an affordable and reliable source of firm power for Hawaii.			✓
<i>Analysis:</i> The proposed project will consider cost effective energy efficient technologies that become available such as the use of energy efficient lighting and photovoltaic panels. Also, the proposed open air design with roof structure shading eliminates air conditioning energy use.			
Chapter 226-18.5 Objectives and policies for facility systems – – telecommunications.			
<u>Objectives:</u>			
(a) Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people.			✓
(b) To achieve the telecommunications objective, it shall be the policy of this State to ensure the provision of adequate, reasonably priced, and dependable telecommunications services to accommodate demand.			✓
<u>Policies:</u>			
(1) Facilitate research and development of telecommunications systems and resources;			✓
(2) Encourage public and private sector efforts to develop means for adequate, ongoing telecommunications planning;			✓
(3) Promote efficient management and use of existing telecommunications systems and services; and			✓
(4) Facilitate the development of education and training of telecommunications personnel.			✓
<i>Analysis:</i> The objectives and policies listed above for facility systems related to telecommunications are not applicable to the proposed project.			

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies			
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable			
S	N/S	N/A	
Chapter 226-19 Objectives and policies for socio-cultural advancement – – housing.			
Objectives: Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:			
			✓
(1) Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low- and moderate-income segments of Hawaii's population.			
			✓
(2) The orderly development of residential areas sensitive to community needs and other land uses.			
			✓
(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people.			
Policies:			
			✓
(1) Effectively accommodate the housing needs of Hawaii's people.			
			✓
(2) Stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households.			
			✓
(3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.			
			✓
(4) Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.			
			✓
(5) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.			
			✓
(6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.			
			✓
(7) Foster a variety of lifestyles traditional to Hawaii through the design and maintenance of neighborhoods that reflect the culture and values of the community.			
			✓
(8) Promote research and development of methods to reduce the cost of housing construction in Hawaii.			
Analysis: The objectives and policies listed above for socio-cultural advancement related to housing are not applicable to the proposed project.			
Chapter 226-20 Objectives and policies for socio-cultural advancement – – health.			
Objectives: Planning for the State's socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives:			
			✓
(1) Fulfillment of basic individual health needs of the general public.			
			✓
(2) Maintenance of sanitary and environmentally healthful conditions in Hawaii's communities.			
			✓
(3) Elimination of health disparities by identifying and addressing social determinants of health.			

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies			S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable					
Policies:					
(1) Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.					✓
(2) Encourage improved cooperation among public and private sectors in the provision of health care to accommodate the total health needs of individuals throughout the State.					✓
(3) Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs.					✓
(4) Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures.					✓
(5) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.					✓
(6) Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education, monitoring, and enforcement.					✓
(7) Prioritize programs, services, interventions, and activities that address identified social determinants of health to improve native Hawaiian health and well-being consistent with the United States Congress' declaration of policy as codified in title 42 United States Code section 11702, and to reduce health disparities of disproportionately affected demographics, including native Hawaiians, other Pacific Islanders, and Filipinos. The prioritization of affected demographic groups other than native Hawaiians may be reviewed every ten years and revised based on the best available epidemiological and public health data.					✓
Analysis: The objectives and policies listed above for socio-cultural advancement related to health are not applicable to the proposed project.					
Chapter 226-21 Objectives and policies for Socio-cultural advancement – – education.					
Objective: Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.					✓
Policies:					
(1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.					✓
(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.					✓
(3) Provide appropriate educational opportunities for groups with special needs.					✓
(4) Promote educational programs which enhance understanding of Hawaii's cultural heritage.					✓
(5) Provide higher educational opportunities that enable Hawaii's people to adapt to changing employment demands.					✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies			
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable			
	S	N/S	N/A
(6) Assist individuals, especially those experiencing critical employment problems or barriers, or undergoing employment transitions, by providing appropriate employment training programs and other related educational opportunities.			✓
(7) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.			✓
(8) Emphasize quality educational programs in Hawaii's institutions to promote academic excellence.			✓
(9) Support research programs and activities that enhance the education programs of the State.			✓
<i>Analysis:</i> The objectives and policies listed above for socio-cultural advancement related to education are not applicable to the proposed project.			
Chapter 226-22 Objective and policies for socio-cultural advancement – – social services.			
Objective: Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being.			✓
Policies:			
(1) Assist individuals, especially those in need of attaining a minimally adequate standard of living and those confronted by social and economic hardship conditions, through social services and activities within the State's fiscal capacities.			✓
(2) Promote coordination and integrative approaches among public and private agencies and programs to jointly address social problems that will enable individuals, families, and groups to deal effectively with social problems and to enhance their participation in society.			✓
(3) Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawaii's communities.			✓
(4) Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations.			✓
(5) Support public and private efforts to prevent domestic abuse and child molestation, and assist victims of abuse and neglect.			✓
(6) Promote programs which assist people in need of family planning services to enable them to meet their needs.			✓
<i>Analysis:</i> The objectives and policies listed above for socio-cultural advancement related to social services are not applicable to the proposed project.			
Chapter 226-23 Objective and policies for socio-cultural advancement – – leisure.			
Objective: Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.			✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies			S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable					
Policies:					
(1) Foster and preserve Hawaii's multi-cultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities.					✓
(2) Provide a wide range of activities and facilities to fulfill the cultural, artistic, and recreational needs of all diverse and special groups effectively and efficiently.					✓
(3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.					✓
(4) Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historical, geological, or biological values while ensuring that their inherent values are preserved.					✓
(5) Ensure opportunities for everyone to use and enjoy Hawaii's recreational resources.					✓
(6) Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs.					✓
(7) Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawaii's people.					✓
(8) Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms.					✓
(9) Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawaii's population to participate in the creative arts.					✓
(10) Assure adequate access to significant natural and cultural resources in public ownership.					✓
Analysis: The objectives and policies listed above for socio-cultural advancement related to leisure are not applicable to the proposed project.					
Chapter 226-24 Objective and policies for socio-cultural advancement – individual rights and personal well-being.					
Objective: Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations.					✓
Policies:					
(1) Provide effective services and activities that protect individuals from criminal acts and unfair practices and that alleviate the consequences of criminal acts in order to foster a safe and secure environment.					✓
(2) Uphold and protect the national and state constitutional rights of every individual.					✓
(3) Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice.					✓

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies			
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable			
S	N/S	N/A	
			✓
(4) Ensure equal opportunities for individual participation in society.			
Analysis: The objectives and policies listed above for socio-cultural advancement related to individual rights and personal well-being are not applicable to the proposed project.			
Chapter 226-25 Objective and policies for socio-cultural advancement – – culture.			
			✓
Objective: Planning for the State's socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawaii's people.			
Policies:			
			✓
(1) Foster increased knowledge and understanding of Hawaii's ethnic and cultural heritages and the history of Hawaii.			
			✓
(2) Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawaii's people and which are sensitive and responsive to family and community needs.			
			✓
(3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawaii.			
			✓
(4) Encourage the essence of the aloha spirit in people's daily activities to promote harmonious relationships among Hawaii's people and visitors.			
Analysis: The objectives and policies listed above for socio-cultural advancement related to culture are not applicable to the proposed project.			
Chapter 226-26 Objectives and policies for socio-cultural advancement – – public safety.			
Objective: Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives:			
			✓
(1) Assurance of public safety and adequate protection of life and property for all people.			
			✓
(2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances.			
			✓
(3) Promotion of a sense of community responsibility for the welfare and safety of Hawaii's people.			
Policies (Public Safety):			
			✓
(1) Ensure that public safety programs are effective and responsive to community needs.			
			✓
(2) Encourage increased community awareness and participation in public safety programs.			
Policies (Public Safety-Criminal Justice):			
			✓
(1) Support criminal justice programs aimed at preventing and curtailing criminal activities.			

Hawai'i State Plan, Chapter 226, HRS Part I. Overall Themes, Goals, Objectives and Policies Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(2) Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies.			✓
(3) Provide a range of correctional resources which may include facilities and alternatives to traditional incarceration in order to address the varied security needs of the community and successfully reintegrate offenders into the community.			✓
<u>Policies (Public Safety – Emergency Management):</u>			
(1) Ensure that responsible organizations are in a proper state of readiness to respond to major war-related, natural, or technological disasters and civil disturbances at all times.			✓
(2) Enhance the coordination between emergency management programs throughout the State.			✓
<i>Analysis:</i> The objectives and policies listed above with regard to public safety are not applicable to the proposed project.			
Chapter 226-27 Objectives and policies for socio-cultural advancement – – government.			
Objectives: Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:			
(1) Efficient, effective, and responsive government services at all levels in the State.			✓
(2) Fiscal integrity, responsibility, and efficiency in the state government and county governments.			✓
<u>Policies:</u>			
(1) Provide for necessary public goods and services not assumed by the private sector.	✓		
(2) Pursue an openness and responsiveness in government that permits the flow of public information, interaction, and response.			✓
(3) Minimize the size of government to that necessary to be effective.			✓
(4) Stimulate the responsibility in citizens to productively participate in government for a better Hawaii.			✓
(5) Assure that government attitudes, actions, and services are sensitive to community needs and concerns.			✓
(6) Provide for a balanced fiscal budget.			✓
(7) Improve the fiscal budgeting and management system of the State.			✓
(8) Promote the consolidation of state and county governmental functions to increase the effective and efficient delivery of government programs and services and to eliminate duplicative services wherever feasible.			✓
<i>Analysis:</i> The proposed project will continue to provide the necessary County government bus services currently located at the QKC, to a relocated site within a parcel located near QKC.			

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES			
	S	N/S	N/A
Chapter 226-101: Purpose. The purpose of this part is to establish overall priority guidelines to address areas of statewide concern.			
Chapter 226-102: Overall direction. The State shall strive to improve the quality of life for Hawaii's present and future population through the pursuit of desirable courses of action in seven major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education, principles of sustainability, and climate change adaptation.			
Chapter 226-103: Economic priority guidelines.			
(a) Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawaii's people and achieve a stable and diversified economy:			
(1) Seek a variety of means to increase the availability of investment capital for new and expanding enterprises.			✓
(A) Encourage investments which:			✓
(i) Reflect long term commitments to the State;			✓
(ii) Rely on economic linkages within the local economy;			✓
(iii) Diversify the economy;			✓
(iv) Reinvest in the local economy;			✓
(v) Are sensitive to community needs and priorities; and			✓
(vi) Demonstrate a commitment to provide management opportunities to Hawaii residents; and			✓
(B) Encourage investments in innovative activities that have a nexus to the State, such as:			✓
(i) Present or former residents acting as entrepreneurs or principals;			✓
(ii) Academic support from an institution of higher education in Hawaii;			✓
(iii) Investment interest from Hawaii residents;			✓
(iv) Resources unique to Hawaii that are required for innovative activity; and			✓
(v) Complementary or supportive industries or government programs or projects.			✓
(2) Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements.			✓
(3) Improve the quality, accessibility, and range of services provided by government to business, including data and reference services and assistance in complying with governmental regulations.			✓
(4) Seek to ensure that state business tax and labor laws and administrative policies are equitable, rational, and predictable.			✓

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(5) Streamline the processes for building and development permit and review, and telecommunication infrastructure installation approval and eliminate or consolidate other burdensome or duplicative governmental requirements imposed on business, where scientific evidence indicates that public health, safety and welfare would not be adversely affected.			✓
(6) Encourage the formation of cooperatives and other favorable marketing or distribution arrangements at the regional or local level to assist Hawaii's small-scale producers, manufacturers, and distributors.			✓
(7) Continue to seek legislation to protect Hawaii from transportation interruptions between Hawaii and the continental United States.			✓
(8) Provide public incentives and encourage private initiative to develop and attract industries which promise long-term growth potentials and which have the following characteristics:			✓
(A) An industry that can take advantage of Hawaii's unique location and available physical and human resources.			✓
(B) A clean industry that would have minimal adverse effects on Hawaii's environment.			✓
(C) An industry that is willing to hire and train Hawaii's people to meet the industry's labor needs at all levels of employment.			✓
(D) An industry that would provide reasonable income and steady employment.			✓
(9) Support and encourage, through educational and technical assistance programs and other means, expanded opportunities for employee ownership and participation in Hawaii business.			✓
(10) Enhance the quality of Hawaii's labor force and develop and maintain career opportunities for Hawaii's people through the following actions:			✓
(A) Expand vocational training in diversified agriculture, aquaculture, information industry, and other areas where growth is desired and feasible.			✓
(B) Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities.			✓
(C) Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired.			✓
(D) Promote career opportunities in all industries for Hawaii's people by encouraging firms doing business in the State to hire residents.			✓
(E) Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on-the-job training opportunities.			✓
(F) Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.			✓
(b) Priority guidelines to promote the economic health and quality of the visitor industry:			
(1) Promote visitor satisfaction by fostering an environment which enhances the Aloha Spirit and minimizes inconveniences to Hawaii's residents and visitors.			✓
(2) Encourage the development and maintenance of well-designed, adequately serviced hotels and resort destination areas which are sensitive to neighboring communities and activities and which provide for adequate shoreline setbacks and beach access.			✓

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(3) Support appropriate capital improvements to enhance the quality of existing resort destination areas and provide incentives to encourage investment in upgrading, repair, and maintenance of visitor facilities.			✓
(4) Encourage visitor industry practices and activities which respect, preserve, and enhance Hawaii's significant natural, scenic, historic, and cultural resources.			✓
(5) Develop and maintain career opportunities in the visitor industry for Hawaii's people, with emphasis on managerial positions.			✓
(6) Support and coordinate tourism promotion abroad to enhance Hawaii's share of existing and potential visitor markets.			✓
(7) Maintain and encourage a more favorable resort investment climate consistent with the objectives of this chapter.			✓
(8) Support law enforcement activities that provide a safer environment for both visitors and residents alike.			✓
(9) Coordinate visitor industry activities and promotions to business visitors through the state network of advanced data communication techniques.			✓
(c) Priority guidelines to promote the continued viability of the sugar and pineapple industries:			
(1) Provide adequate agricultural lands to support the economic viability of the sugar and pineapple industries.			✓
(2) Continue efforts to maintain federal support to provide stable sugar prices high enough to allow profitable operations in Hawaii.			✓
(3) Support research and development, as appropriate, to improve the quality and production of sugar and pineapple crops.			✓
(d) Priority guidelines to promote the growth and development of diversified agriculture and aquaculture:			
(1) Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands.			✓
(2) Assist in providing adequate, reasonably priced water for agricultural activities.			✓
(3) Encourage public and private investment to increase water supply and to improve transmission, storage, and irrigation facilities in support of diversified agriculture and aquaculture.			✓
(4) Assist in the formation and operation of production and marketing associations and cooperatives to reduce production and marketing costs.			✓
(5) Encourage and assist with the development of a waterborne and airborne freight and cargo system capable of meeting the needs of Hawaii's agricultural community.			✓
(6) Seek favorable freight rates for Hawaii's agricultural products from interisland and overseas transportation operators.			✓
(7) Encourage the development and expansion of agricultural and aquacultural activities which offer long-term economic growth potential and employment opportunities.			✓
(8) Continue the development of agricultural parks and other programs to assist small independent farmers in securing agricultural lands and loans.			✓

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(9) Require agricultural uses in agricultural subdivisions and closely monitor the uses in these subdivisions.			✓
(10) Support the continuation of land currently in use for diversified agriculture.			✓
(11) Encourage residents and visitors to support Hawaii's farmers by purchasing locally grown food and food products.			✓
(e) Priority guidelines for water use and development:			
(1) Maintain and improve water conservation programs to reduce the overall water consumption rate.			✓
(2) Encourage the improvement of irrigation technology and promote the use of nonpotable water for agricultural and landscaping purposes.			✓
(3) Increase the support for research and development of economically feasible alternative water sources.			✓
(4) Explore alternative funding sources and approaches to support future water development programs and water system improvements.			✓
(f) Priority guidelines for energy use and development:			
(1) Encourage the development, demonstration, and commercialization of renewable energy sources.			✓
(2) Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy.			✓
(3) Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.			✓
(4) Encourage the development and use of energy conserving and cost-efficient transportation systems.	✓		
(g) Priority guidelines to promote the development of the information industry:			
(1) Establish an information network, with an emphasis on broadband and wireless infrastructure and capability that will serve as the foundation of and catalyst for overall economic growth and diversification in Hawaii.			✓
(2) Encourage the development of services such as financial data processing, a products and services exchange, foreign language translations, telemarketing, teleconferencing, a twenty-four-hour international stock exchange, international banking, and a Pacific Rim management center.			✓
(3) Encourage the development of small businesses in the information field such as software development; the development of new information systems, peripherals, and applications; data conversion and data entry services; and home or cottage services such as computer programming, secretarial, and accounting services.			✓
(4) Encourage the development or expansion of educational and training opportunities for residents in the information and telecommunications fields.			✓
(5) Encourage research activities, including legal research in the information and telecommunications fields.			✓
(6) Support promotional activities to market Hawaii's information industry services.			✓

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(7) Encourage the location or co-location of telecommunication or wireless information relay facilities in the community, including public areas, where scientific evidence indicates that the public health, safety, and welfare would not be adversely affected.			✓
<i>Analysis:</i> The economic priority guidelines listed above, with the exception of energy use and development, are not applicable to the proposed project. The proposed project will consider cost effective energy efficient technologies that become available.			
Chapter 226-104: Population growth and land resources priority guidelines.			
(a) Priority guidelines to effect desired statewide growth and distribution:			
(1) Encourage planning and resource management to insure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawaii's people.			✓
(2) Manage a growth rate for Hawaii's economy that will parallel future employment needs for Hawaii's people.			✓
(3) Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State.			✓
(4) Encourage major state and federal investments and services to promote economic development and private investment to the neighbor islands, as appropriate.			✓
(5) Explore the possibility of making available urban land, low-interest loans, and housing subsidies to encourage the provision of housing to support selective economic and population growth on the neighbor islands.			✓
(6) Seek federal funds and other funding sources outside the State for research, program development, and training to provide future employment opportunities on the neighbor islands.			✓
(7) Support the development of high technology parks on the neighbor islands.			✓
(b) Priority guidelines for regional growth distribution and land resource utilization:			
(1) Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public expenditures, and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles.			✓
(2) Make available marginal or nonessential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.			✓
(3) Restrict development when drafting of water would result in exceeding the sustainable yield or in significantly diminishing the recharge capacity of any groundwater area.			✓
(4) Encourage restriction of new urban development in areas where water is insufficient from any source for both agricultural and domestic use.			✓
(5) In order to preserve green belts, give priority to state capital-improvement funds which encourage location of urban development within existing urban areas except where compelling public interest dictates development of a noncontiguous new urban core.			✓
(6) Seek participation from the private sector for the cost of building infrastructure and utilities, and maintaining open spaces.			✓
(7) Pursue rehabilitation of appropriate urban areas.			✓

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(8) Support the redevelopment of Kakaako into a viable residential, industrial, and commercial community.			✓
(9) Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized.			✓
(10) Identify critical environmental areas in Hawaii to include but not be limited to the following: watershed and recharge areas; wildlife habitats (on land and in the ocean); areas with endangered species of plants and wildlife; natural streams and water bodies; scenic and recreational shoreline resources; open space and natural areas; historic and cultural sites; areas particularly sensitive to reduction in water and air quality; and scenic resources.			✓
(11) Identify all areas where priority should be given to preserving rural character and lifestyle.			✓
(12) Utilize Hawaii's limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations.			✓
(13) Protect and enhance Hawaii's shoreline, open spaces, and scenic resources.			✓
<i>Analysis:</i> The population growth and land resources priority guidelines listed above are not applicable to the proposed project.			
Chapter 226-105: Crime and criminal justice.			
Priority guidelines in the area of crime and criminal justice:			
(1) Support law enforcement activities and other criminal justice efforts that are directed to provide a safer environment.			✓
(2) Target state and local resources on efforts to reduce the incidence of violent crime and on programs relating to the apprehension and prosecution of repeat offenders.			✓
(3) Support community and neighborhood program initiatives that enable residents to assist law enforcement agencies in preventing criminal activities.			✓
(4) Reduce overcrowding or substandard conditions in correctional facilities through a comprehensive approach among all criminal justice agencies which may include sentencing law revisions and use of alternative sanctions other than incarceration for persons who pose no danger to their community.			✓
(5) Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions.			✓
(6) Increase public and private efforts to assist witnesses and victims of crimes and to minimize the costs of victimization.			✓
<i>Analysis:</i> The crime and criminal justice priority guidelines listed above are not applicable to the proposed project.			
Chapter 226-106: Affordable housing.			
Priority guidelines for the provision of affordable housing:			
(1) Seek to use marginal or nonessential agricultural land and public land to meet housing needs of low- and moderate-income and gap-group households.			✓

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(2) Encourage the use of alternative construction and development methods as a means of reducing production costs.			✓
(3) Improve information and analysis relative to land availability and suitability for housing.			✓
(4) Create incentives for development which would increase home ownership and rental opportunities for Hawaii's low- and moderate-income households, gap-group households, and residents with special needs.			✓
(5) Encourage continued support for government or private housing programs that provide low interest mortgages to Hawaii's people for the purchase of initial owner-occupied housing.			✓
(6) Encourage public and private sector cooperation in the development of rental housing alternatives.			✓
(7) Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations.			✓
(8) Give higher priority to the provision of quality housing that is affordable for Hawaii's residents and less priority to development of housing intended primarily for individuals outside of Hawaii.			✓
<i>Analysis:</i> The affordable housing priority guidelines listed above are not applicable to the proposed project.			
Chapter 226-107: Quality education.			
Priority guidelines to promote quality education:			
(1) Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement;			✓
(2) Continue emphasis on general education "core" requirements to provide common background to students and essential support to other university programs;			✓
(3) Initiate efforts to improve the quality of education by improving the capabilities of the education work force;			✓
(4) Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision making responsibilities;			✓
(5) Increase and improve the use of information technology in education by the availability of telecommunications equipment for:			✓
(A) The electronic exchange of information;			✓
(B) Statewide electronic mail; and			✓
(C) Access to the Internet.			✓
(6) Encourage programs that increase the public's awareness and understanding of the impact of information technologies on our lives;			✓
(7) Pursue the establishment of Hawaii's public and private universities and colleges as research and training centers of the Pacific;			✓
(8) Develop resources and programs for early childhood education;			✓
(9) Explore alternatives for funding and delivery of educational services to improve the overall quality of education; and			✓

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(10) Strengthen and expand educational programs and services for students with special needs.			✓
<i>Analysis:</i> The quality education priority guidelines listed above are not applicable to the proposed project.			
CHAPTER 226-108: Sustainability			
Priority guidelines and principles to promote sustainability shall include:			
(1) Encouraging balanced economic, social, community, and environmental priorities;			✓
(2) Encouraging planning that respects and promotes living within the natural resources and limits of the State;			✓
(3) Promoting a diversified and dynamic economy;			✓
(4) Encouraging respect for the host culture;			✓
(5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations;			✓
(6) Considering the principles of the ahupuaa system; and			✓
(7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawaii.			✓
<i>Analysis:</i> The sustainability priority guidelines listed above are not applicable to the proposed project.			
CHAPTER 226-109: Climate change adaptation			
Priority guidelines and principles to promote climate change adaptation shall include:			
(1) Ensure that Hawaii's people are educated, informed, and aware of the impacts climate change may have on their communities;			✓
(2) Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies;			✓
(3) Invest in continued monitoring and research of Hawaii's climate and the impacts of climate change on the State;			✓
(4) Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change;			✓
(5) Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands, that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change;			✓
(6) Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments;			✓
(7) Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options;			✓
(8) Foster cross-jurisdictional collaboration between county, state, and federal agencies and partnerships between government and private entities and other nongovernmental entities, including nonprofit entities;			✓

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(9) Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans; and			✓
(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.			✓
<u>Analysis:</u> The climate change adaptation priority guidelines listed above are not applicable to the proposed project.			

C. STATE FUNCTIONAL PLANS

A key element of the Statewide Planning System is the Functional Plans which set forth the policies, statewide guidelines, and priorities within a specific field of activity. There are 13 Functional Plans which have been developed by the State agency primarily responsible for a given functional area. Together with the County General Plans, the State Functional Plans establish more specific strategies for implementation. In particular, State Functional Plans provide for the following:

- Identify major Statewide priority concerns
- Define current strategies for each functional area
- Identify major relationships among functional areas
- Provide direction and strategies for departmental policies, programs, and priorities
- Provide a guide for the allocation of resources
- Coordinate State and County roles and responsibilities in the implementation of the Hawaii State Plan

Thirteen (13) Functional Plans have been prepared by State agencies. **Table 3** provides an assessment of the relationship between the proposed action and each of the 13 Functional Plans.

Table 3. Relationship Between the Proposed Transit Hub Relocation and the State Functional Plans

State Functional Plan		State Coordinating Agency	Purpose	Analysis
1	Agriculture Functional Plan (1991)	Department of Agriculture	Continued viability of agriculture throughout the State	Not applicable.
2	Conservation Lands State Functional Plan (1991)	Department of Land and Natural Resources	Addresses issues of population and economic growth and its strain on current natural resources; broadening public use of natural resources while protecting lands and shorelines from overuse; additionally, promotes the aquaculture industry	Not applicable.
3	Education State Functional Plan (1989)	Department of Education	Improvements to Hawaii's educational curriculum, quality of educational staff, and access to adequate facilities	Not applicable.
4	Employment State Functional Plan (1990)	Department of Labor and Industrial Relations	Improve the qualifications, productivity, and effectiveness of the State's workforce through better education and training of workers as well as efficient planning of economic development, employment opportunities, and training activities	Not applicable.
5	Energy State Functional Plan (1991)	Department of Business, Economic Development and Tourism	Lessen the reliance on petroleum and other fossil fuels in favor of alternative sources of energy so as to keep up with the State's increasing energy demands while also becoming a more sustainable island state; achieving dependable, efficient, and economical statewide energy systems	MDOT will explore the feasibility of using energy efficient lighting and photovoltaic systems. The facility design will consider appropriate infrastructure to accommodate future energy efficient systems. Also, the proposed open air design with roof structure shading the bus and passenger waiting areas eliminates a substantial amount of air conditioning energy use.
6	Health State Functional Plan (1989)	Department of Health	Improve health care system by providing for those who don't have access to private health care providers; increasing preventative health measures; addressing 'quality of care' elements in private and public sectors to cut increasing costs	Not applicable.

State Functional Plan		State Coordinating Agency	Purpose	Analysis
7	Higher Education Functional Plan (1984)	University of Hawaii	Prepare Hawaii's citizens for the demands of an increasingly complex world through providing technical and intellectual tools	Not applicable.
8	Historic Preservation State Functional Plan (1991)	Department of Land and Natural Resources	Preservation of historic properties, records, artifacts and oral histories; provide public with information/education on the ethnic and cultural heritages and history of Hawai'i	Oral historical accounts of the surrounding area are included in Chapter II of the EA. In addition, coordination has been initiated with the State Historic Preservation Division (SHPD) in regards to archaeological resources that may be present in the area. Therefore, the proposed MDOT Transit Hub Relocation Project is supportive of the Historic Preservation State Functional Plan (1991).
9	Housing State Functional Plan (1989)	Hawaii Housing Finance and Development Corporation	Provide affordable rental and for-sale housing; increase homeownership and amount of rental housing units; acquiring public and privately-owned lands for future residential development; maintain a statewide housing data system	Not applicable.
10	Human Services State Functional Plan (1989)	Department of Human Services	Refining support systems for families and individuals by improving elderly care, increasing preventative measures to combat child/spousal abuse and neglect; providing means for 'self-sufficiency'	Not applicable.
11	Recreation State Functional Plan (1991)	Department of Land and Natural Resources	Manage the use of recreational resources via addressing issues: (1) ocean and shoreline recreation, (2) mauka, urban, and other recreation opportunities, (3) public access to shoreline and upland recreation areas, (4) resource conservation and management, (5) management of recreation programs/facilities/areas, and (6) wetlands protection and management	Not applicable.

	State Functional Plan	State Coordinating Agency	Purpose	Analysis
12	Tourism State Functional Plan (1991)	Department of Business, Economic Development and Tourism	Balance tourism/economic growth with environmental and community concerns; development that is cognizant of the limited land and water resources of the islands; maintaining friendly relations between tourists and community members; development of a productive workforce and enhancement of career and employment opportunities in the visitor industry	Not applicable.
13	Transportation State Functional Plan (1991)	Department of Transportation	Development of a safer, more efficient transportation system that also is consistent with planned physical and economic growth of the state; construction of facility and infrastructure improvements; develop a transportation system balanced with new alternatives; pursue land use initiatives which help reduce travel demand	The proposed Transit Hub Relocation Project supports the plan as it will continue and improve service to public transportation users surrounding the project site. The new relocated location is in the midst of a supermarket, apartments, upcoming senior housing project, businesses, churches, a public library, and the QKC to better service a broad range of users. Amenities will include a ticket booth, storage, restrooms, and roof overhang structures in passenger loading areas. In addition, the proposed project will also improve the surrounding sidewalks on Vevau Street to increase pedestrian safety and accessibility.

D. **MAUI COUNTY GENERAL PLAN**

As indicated by the Maui County Charter, the purpose of the General Plan shall be to:

... indicate desired population and physical development patterns for each island and region within the county; shall address the unique problems and needs of each island and region; shall explain opportunities and the social, economic, and environmental consequences related to potential developments; and shall set forth the desired sequence, patterns and characteristics of future developments. The general plan shall identify objectives to be achieved, and priorities, policies, and implementing actions to be pursued with respect to population density; land use maps, land use regulations, transportation systems, public and community facility locations, water and sewage systems, visitor destinations, urban design, and other matters related to development.

Chapter 2.80B of the Maui County Code (MCC), relating to the General Plan and Community Plans, implements the foregoing Charter provision through enabling legislation which calls for a Countywide Policy Plan and a Maui Island Plan. The Countywide Policy Plan was adopted as Ordinance No. 3732 and took effect on March 24, 2010. The Maui Island Plan, which delineates areas for future urban and rural growth as part of a Directed Growth Strategy, was adopted as Ordinance No. 4004 on December 28, 2012.

The following sections identify pertinent objectives, policies, implementing actions and related provisions set forth in the Countywide Policy Plan and the Maui Island Plan. It is recognized that both documents are comprehensive in nature and address a number of functional planning areas which apply to all programs, plans, and projects. However, for purposes of addressing General Plan compliance requirements, policy considerations which are deemed most relevant in terms of compatibility and consistency are addressed in this report section.

1. **Countywide Policy Plan**

The *General Plan of the County of Maui 1990 Update* and provides the policy framework for the development of the forthcoming Maui Island Plan as well as for updating the nine detailed Community Plans.

The Countywide Policy Plan provides broad goals, objectives, policies and implementing actions that portray the desired direction of the County's future. Goals are intended to describe a desirable condition of the County by the year 2030 and are intentionally general. Objectives tend to be more specific and may be regarded as milestones to achieve the larger goals. Policies are not intended

as regulations, but instead provide a general guideline for County decision makers, departments, and collaborating organizations toward the attainment of goals and objectives. Implementing actions are specific tasks, procedures, programs, or techniques that carry out policy.

Discussion of how the Transit Hub Relocation Project conforms to the relevant goals, objectives, policies, and implementing actions of the Countywide Policy Plan is provided below.

COUNTYWIDE POLICY PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
A. PROTECT THE NATURAL ENVIRONMENT			
Goal: Maui County's natural environment and distinctive open spaces will be preserved, managed, and cared for in perpetuity.			✓
Objective:			
(1) Improve the opportunity to experience the natural beauty and native biodiversity of the islands for present and future generations.			✓
Policies:			
(a) Perpetuate native Hawaiian biodiversity by preventing the introduction of invasive species, containing or eliminating existing noxious pests, and protecting critical habitat areas.			✓
(b) Preserve and reestablish indigenous and endemic species' habitats and their connectivity.			✓
(c) Restore and protect forests, wetlands, watersheds, and stream flows, and guard against wildfires, flooding, and erosion.			✓
(d) Protect baseline stream flows for perennial streams, and support policies that ensure adequate stream flow to support Native Hawaiian aquatic species, traditional kalo cultivation, and self-sustaining ahupua'a.			✓
(e) Protect undeveloped beaches, dunes, and coastal ecosystems, and restore natural shoreline processes.			✓
(f) Protect the natural state and integrity of unique terrain, valued natural environments, and geological features.			✓
(g) Preserve and provide ongoing care for important scenic vistas, view planes, landscapes, and open-space resources.			✓
(h) Expand coordination with the State and nonprofit agencies and their volunteers to reduce invasive species, replant indigenous species, and identify critical habitat.			✓
Implementing Actions:			
(a) Develop island-wide networks of greenways, watercourses, and habitat corridors.			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
Objective:			
(2) Improve the quality of environmentally sensitive, locally valued natural resources and native ecology of each island.			✓
Policies:			
(a) Protect and restore nearshore reef environments and water quality.			✓
(b) Protect marine resources and valued wildlife.			✓
(c) Improve the connection between urban environments and the natural landscape, and incorporate natural features of the land into urban design.			✓

COUNTYWIDE POLICY PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
(d) Utilize land-conservation tools to ensure the permanence of valued open spaces.			✓
(e) Mitigate the negative effects of upland uses on coastal wetlands, marine life, and coral reefs.			✓
(f) Strengthen coastal-zone management, re-naturalization of shorelines, where possible, and filtration or treatment of urban and agricultural runoff.			✓
(g) Regulate the use and maintenance of stormwater-treatment systems that incorporate the use of native vegetation and mimic natural systems.			✓
(h) Advocate for stronger regulation of fishing, boating, cruise ship, and ecotourism activities.			✓
(i) Restore watersheds and aquifer-recharge areas to healthy and productive status, and increase public knowledge about the importance of watershed stewardship, water conservation, and groundwater protection.			✓
Implementing Actions:			
(a) Develop regulations to minimize runoff of pollutants into nearshore waters and reduce nonpoint and point source pollution.			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
Objective:			
(3) Improve the stewardship of the natural environment.			✓
Policies:			
(a) Preserve and protect natural resources with significant scenic, economic, cultural, environmental, or recreational value.			✓
(b) Improve communication, coordination, and collaboration among government agencies, nonprofit organizations, communities, individuals, and land owners that work for the protection of the natural environment.			✓
(c) Evaluate development to assess potential short-term and long-term impacts on land, air, aquatic, and marine environments.			✓
(d) Improve efforts to mitigate and plan for the impact of natural disasters, human influenced emergencies, and global warming.			✓
(e) Regulate access to sensitive ecological sites and landscapes.			✓
(f) Reduce air, noise, light, land, and water pollution, and reduce Maui County's contribution to global climate change.			✓
(g) Plan and prepare for and educate visitors and residents about the possible effects of global warming.			✓
(h) Provide public access to beaches and shorelines for recreational and cultural purposes where appropriate.			✓
(i) Educate the construction and landscape industries and property owners about the use of best management practices to prevent erosion and nonpoint source pollution.			✓
(j) Support the acquisition of resources with scenic, environmental, and recreational value, and encumber their use.			✓
(k) Improve enforcement activities relating to the natural environment.			✓
(l) For each shoreline community, identify and prioritize beach-conservation objectives, and develop action plans for their implementation.			✓
Implementing Actions:			
(a) Document, record, and monitor existing conditions, populations, and locations of flora and fauna communities.			✓
(b) Implement Federal and State policies that require a reduction of greenhouse-gas emissions.			✓

COUNTYWIDE POLICY PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			
	S	N/S	N/A
(c) Establish a baseline inventory of available natural resources and their respective carrying capacities.			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
Objective:			
(4) Educate residents and visitors about responsible stewardship practices and the interconnectedness of the natural environment and people.			✓
Policies:			
(a) Expand education about native flora, fauna, and ecosystems.			✓
(b) Align priorities to recognize that the health of the natural environment and the health of people are inextricably linked.			✓
(c) Promote programs and incentives that decrease greenhouse-gas emissions and improve environmental stewardship.			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
B. PRESERVE LOCAL CULTURES AND TRADITIONS			
Goal: Maui County will foster a spirit of pono and protect, perpetuate, and reinvigorate its residents' multi-cultural values and traditions to ensure that current and future generations will enjoy the benefits of their rich island heritage.			✓
Objective:			
(1) Perpetuate the Hawaiian culture as a vital force in the lives of residents.			✓
Policies:			
(a) Protect and preserve access to mountain, ocean, and island resources for traditional Hawaiian cultural practices.			✓
(b) Prohibit inappropriate development of cultural lands and sites that are important for traditional Hawaiian cultural practices, and establish mandates for the special protection of these lands in perpetuity.			✓
(c) Promote the use of ahupua'a and moku management practices.			✓
(d) Encourage the use of traditional Hawaiian architecture and craftsmanship.			✓
(e) Promote the use of the Hawaiian language.			✓
(f) Recognize and preserve the unique natural and cultural characteristics of each ahupua'a or district.			✓
(g) Encourage schools to promote broader incorporation of Hawaiian and other local cultures' history and values lessons into curriculum.			✓
(h) Ensure the protection of Native Hawaiian rights.			✓
(i) Promote, encourage, and require the correct use of traditional place names, particularly in government documents, signage, and the tourism industry.			✓
Implementing Actions:			
(a) Establish alternative land use and overlay zoning designations that recognize and preserve the unique natural and cultural characteristics of each ahupua'a or district.			✓
(b) Develop requirements for all County applicants to perpetuate and use proper traditional place names in all applications submitted.			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			

COUNTYWIDE POLICY PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)		S	N/S	N/A
Objective:				
(2) Emphasize respect for our island lifestyle and our unique local cultures, family, and natural environment.				✓
Policies:				
(a) Acknowledge the Hawaiian culture as the host culture, and foster respect and humility among residents and visitors toward the Hawaiian people and their practices.				✓
(b) Perpetuate a respect for diversity, and recognize the historic blending of cultures and ethnicities.				✓
(c) Encourage the perpetuation of each culture's unique cuisine, attire, dance, music, and folklore, and other unique island traditions and recreational activities.				✓
(d) Recognize the interconnectedness between the natural environment and the cultural heritage of the islands.				✓
(e) Protect and prioritize funding for recreational activities that support local cultural practices, such as surfing, fishing, and outrigger-canoe paddling.				✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.				
Objective:				
(3) Preserve for present and future generations the opportunity to know and experience the arts, culture, and history of Maui County.				✓
Policies:				
(a) Foster teaching opportunities for cultural practitioners to share their knowledge and skills.				✓
(b) Support the development of cultural centers.				✓
(c) Broaden opportunities for public art and the display of local artwork.				✓
(d) Foster the Aloha Spirit by celebrating the Hawaiian host culture and other Maui County cultures through support of cultural-education programs, festivals, celebrations, and ceremonies.				✓
(e) Support the perpetuation of Hawaiian arts and culture.				✓
(f) Support programs and activities that record the oral and pictorial history of residents.				✓
(g) Support the development of repositories for culture, history, genealogy, oral history, film, and interactive learning.				✓
Implementing Actions:				
(a) Establish incentives for the display of public art.				✓
(b) Establish centers and programs of excellence for the perpetuation of Hawaiian arts and culture.				✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.				
Objective:				
(4) Preserve and restore significant historic architecture, structures, cultural sites, cultural districts, and cultural landscapes.				✓
Policies:				
(a) Support the development of island-wide historic, archaeological, and cultural resources inventories.				✓
(b) Promote the rehabilitation and adaptive reuse of historic sites, buildings, and structures to perpetuate a traditional sense of place.				✓
(c) Identify a sustainable rate of use and set forth specific policies to protect cultural resources.				✓

COUNTYWIDE POLICY PLAN			
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			
	S	N/S	N/A
(d) Protect and preserve lands that are culturally or historically significant.			✓
(e) Support programs that protect, record, restore, maintain, provide education about, and interpret cultural districts, landscapes, sites, and artifacts in both natural and museum settings.			✓
(f) Perpetuate the authentic character and historic integrity of rural communities and small towns.			✓
(g) Seek solutions that honor the traditions and practices of the host culture while recognizing the needs of the community.			✓
(h) Support the development of an Archaeological District Ordinance.			✓
(i) Protect summits, slopes, and ridgelines from inappropriate development.			✓
(j) Support the registering of important historic sites on the State and Federal historic registers.			✓
(k) Provide opportunities for public involvement with restoration and enhancement of all types of cultural resources.			✓
(l) Foster partnerships to identify and preserve or revitalize historic and cultural sites.			✓
Implementing Actions:			
(a) Identify, develop, map, and maintain an inventory of locally significant natural, cultural, and historical resources for protection.			✓
(b) Prepare, continually update, and implement a cultural-management plan for cultural sites, districts, and landscapes, where appropriate.			✓
(c) Enact an Archaeological District Ordinance.			✓
(d) Nominate important historic sites to the State and Federal historic registers.			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
C. IMPROVE EDUCATION			
Goal: Residents will have access to lifelong formal and informal educational options enabling them to realize their ambitions.			✓
Objective:			
(1) Encourage the State to attract and retain school administrators and educators of the highest quality.			✓
Policies:			
(a) Encourage the State to provide teachers with nationally competitive pay and benefit packages.			✓
(b) Encourage the State to ensure teachers will have the teaching tools and support staff needed to provide students with an excellent education.			✓
(c) Explore Maui County district- and school-based decision making in public education.			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
Objective:			
(2) Provide nurturing learning environments that build skills for the 21st century.			✓
Policies:			
(a) Expand professional-development opportunities in disciplines that support the economic-development goals of Maui County.			✓
(b) Plan for demographic, social, and technological changes in a timely manner.			✓
(c) Encourage collaborative partnerships to improve conditions of learning environments.			✓

COUNTYWIDE POLICY PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
(d) Promote development of neighborhood schools and educational centers.			✓
(e) Integrate schools, community parks, and playgrounds, and expand each community's use of these facilities.			✓
(f) Support coordination between land use and school-facility planning agencies.			✓
(g) Encourage the upgrade and ongoing maintenance of public-school facilities.			✓
(h) Encourage the State Department of Education to seek reliable, innovative, and alternative methods to support a level of per-pupil funding that places Hawai'i among the top tier of states nationally for its financial support of public schools.			✓
(i) Encourage the State to promote healthier, more productive learning environments, including by providing healthy meals, more physical activity, natural lighting, and passive cooling.			✓
(j) Encourage the State to support the development of benchmarks to measure the success of Hawai'i's public-education system and clarify lines of accountability.			✓
(k) Design school and park facilities in proximity to residential areas.			✓
(l) Support technology- and natural-environment-based learning.			✓
(m) Encourage the State to support lower student-teacher ratios in public schools.			✓
(n) Encourage alternative learning and educational opportunities.			✓
Implementing Actions:			
(a) Develop safe walking and bicycling programs for school children.			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
Objective:			
(3) Provide all residents with educational opportunities that can help them better understand themselves and their surroundings and allow them to realize their ambitions.			✓
Policies:			
(a) Encourage the State to improve Maui Community College as a comprehensive community college that will serve each community.			✓
(b) Broaden the use of technology and telecommunications to improve educational opportunities throughout the County.			✓
(c) Attract graduate-level research programs and institutions.			✓
(d) Promote the teaching of traditional practices, including aquaculture; subsistence agriculture; Pacific Island, Asian, and other forms of alternative health practices; and indigenous Hawaiian architecture.			✓
(e) Integrate cultural and environmental values in education, including self-sufficiency and sustainability.			✓
(f) Foster a partnership and ongoing dialogue between business organizations, formal educational institutions, and vocational training centers to tailor learning and mentoring programs to County needs.			✓
(g) Ensure teaching of the arts to all ages.			✓
(h) Expand and develop vocational learning opportunities by establishing trade schools.			✓
(i) Encourage the State to integrate financial and economic literacy in elementary, secondary, and higher-education levels.			✓

COUNTYWIDE POLICY PLAN					
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			S	N/S	N/A
Implementing Actions:					
(a) Encourage the State to establish a four-year university, and support the development of other higher-education institutions to enable residents to obtain bachelor degrees and postgraduate degrees in Maui County.					✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.					
Objective:					
(4) Maximize community-based educational opportunities.					✓
Policies:					
(a) Encourage the State and others to expand pre-school, after-school, and homebased (parent-child) learning.					✓
(b) Support public-private partnerships to develop youth-internship, -apprenticeship, and -mentoring programs.					✓
(c) Support the development of a wide range of informal educational and cultural programs for all residents.					✓
(d) Improve partnerships that utilize the skills and talents at Hawai'i's colleges and universities to benefit the County.					✓
(e) Support career-development and job-recruitment programs and centers.					✓
(f) Attract learning institutions and specialty schools to diversify and enhance educational opportunities.					✓
(g) Expand education of important life skills for the general public.					✓
(h) Support community facilities such as museums, libraries, nature centers, and open spaces that provide interactive-learning opportunities for all ages.					✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.					
D. STRENGTHEN SOCIAL AND HEALTHCARE SERVICES					
Goal: Health and social services in Maui County will fully and comprehensively serve all segments of the population.					✓
Objective:					
(1) In cooperation with the Federal and State governments and nonprofit agencies, broaden access to social and healthcare services and expand options to improve the overall wellness of the people of Maui County.					✓
Policies:					
(a) Work with other levels of government and the nonprofit sector to expand services to address hunger, homelessness, and poverty.					✓
(b) Support the improvement of opportunities for disadvantaged youth, encourage the tradition of hanai relatives, and support expanded opportunities for foster care.					✓
(c) Support expanded long-term-care options, both in institutions and at home, for patients requiring ongoing assistance and medical attention.					✓
(d) Encourage the expansion and improvement of local hospitals, facilitate the establishment of new healthcare facilities, and facilitate prompt and high-quality emergency- and urgent-care services for all.					✓
(e) Support broadened access to affordable health insurance and health care, and recognize the unique economic challenges posed to families when healthcare services are provided off-island.					✓
(f) Encourage equal access to social and healthcare services through both technological and traditional means.					✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.					

COUNTYWIDE POLICY PLAN			
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			
S	N/S	N/A	
Objective:			
			✓
(2) Encourage the Federal and State governments and the private sector to improve the quality and delivery of social and healthcare services.			
Policies:			
			✓
(a) Strengthen partnerships with government, nonprofit, and private organizations to provide funding and to improve counseling and other assistance to address substance abuse, domestic violence, and other pressing social challenges.			
			✓
(b) Encourage the State to improve the quality of medical personnel, facilities, services, and equipment.			
			✓
(c) Encourage investment to improve the recruitment of medical professionals and the quality of medical facilities and equipment throughout Maui County.			
			✓
(d) Promote the development of continuum-of-care facilities that provide assisted living, hospice, home-care, and skilled-nursing options allowing the individual to be cared for in a manner congruent with his or her needs and desires.			
			✓
(e) Support improved social, healthcare, and governmental services for special needs populations.			
			✓
(f) Plan for the needs of an aging population and the resulting impacts on social services, housing, and healthcare delivery.			
			✓
(g) Improve coordination among the police, the courts, and the public in the administration of social and healthcare services.			
			✓
(h) Support programs that address needs of veterans.			
			✓
(i) Support programs that address the needs of immigrants.			
			✓
Implementing Actions:			
			✓
(a) Invest in programs designed to improve the general welfare and quality of life of Native Hawaiians.			
			✓
(b) Assist and facilitate the State Department of Public Safety and others in efforts to strengthen programs and facilities that will improve the mental and social health of incarcerated people and assist in prison inmates' successful transition back into Maui County communities.			
			✓
(c) Develop and maintain a comprehensive index that will measure the health and wellness needs of families.			
			✓
(d) Provide heliports countywide for emergency health and safety purposes.			
			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
Objective:			
			✓
(3) Strengthen public-awareness programs related to healthy lifestyles and social and medical services.			
Policies:			
			✓
(a) Expand public awareness about personal safety and crime prevention.			
			✓
(b) Encourage residents to pursue education and training for careers in the healthcare, social services, and community-development fields.			
			✓
(c) Expand public awareness and promote programs to achieve healthy eating habits and drug-free lifestyles.			
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
E. EXPAND HOUSING OPPORTUNITIES FOR RESIDENTS			
Goal: Quality, island-appropriate housing will be available to all residents.			✓
Objective:			
			✓
(1) Reduce the affordable housing deficit for residents.			

COUNTYWIDE POLICY PLAN					
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			S	N/S	N/A
Policies:					
(a)	Ensure that an adequate and permanent supply of affordable housing, both new and existing units, is made available for purchase or rental to our resident and/or workforce population, with special emphasis on providing housing for low- to moderate-income families, and ensure that all affordable housing remains affordable in perpetuity.				✓
(b)	Seek innovative ways to lower housing costs without compromising the quality of our island lifestyle.				✓
(c)	Seek innovative methods to secure land for the development of low- and moderate- income housing.				✓
(d)	Provide the homeless population with emergency and transitional shelter and other supportive programs.				✓
(e)	Provide for a range of senior-citizen and special needs housing choices on each island that affordably facilitates a continuum of care and services.				✓
(f)	Support the Department of Hawaiian Home Lands' development of homestead lands.				✓
(g)	Manage property-tax burdens to protect affordable resident homeownership.				✓
(h)	Explore taxation mechanisms to increase and maintain access to affordable housing.				✓
(i)	Improve awareness regarding available affordable homeowner's insurance.				✓
(j)	Redevelop commercial areas with a mixture of affordable residential and business uses, where appropriate.				✓
(k)	Ensure residents are given priority to obtain affordable housing units developed in their communities, consistent with all applicable regulations.				✓
(l)	Establish pricing for affordable housing that is more reflective of Maui County's workforce than the United States Housing and Urban Development's median-income estimates for Maui County.				✓
(m)	Develop neighborhoods with a mixture of accessible and integrated community facilities and services.				✓
(n)	Provide alternative regulatory frameworks to facilitate the use of Kuleana lands by the descendants of Native Hawaiians who received those lands pursuant to the Kuleana Act of 1850.				✓
(o)	Work with lending institutions to expand housing options and safeguard the financial security of homeowners.				✓
(p)	Promote the use of the community land trust model and other land-lease and land- financing options.				✓
(q)	Support the opportunity to age in place by providing accessible and appropriately designed residential units.				✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.					
Objective:					
(2)	Increase the mix of housing types in towns and neighborhoods to promote sustainable land use planning, expand consumer choice, and protect the County's rural and small town character.				✓
Policies:					
(a)	Seek innovative ways to develop 'ohana cottages and accessory-dwelling units as affordable housing.				✓
(b)	Design neighborhoods to foster interaction among neighbors.				✓
(c)	Encourage a mix of social, economic, and age groups within neighborhoods.				✓
(d)	Promote infill housing in urban areas at scales that capitalize on existing infrastructure, lower development costs, and are consistent with existing or desired patterns of development.				✓

COUNTYWIDE POLICY PLAN			
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			
	S	N/S	N/A
(e) Encourage the building industry to use environmentally sustainable materials, technologies, and site planning.			✓
(f) Develop workforce housing in proximity to job centers and transit facilities.			✓
(g) Provide incentives to developers and owners who incorporate green building practices and energy-efficient technologies into their housing developments.			✓
Implementing Actions:			
(a) Revise laws to support neighborhood designs that incorporate a mix of housing types that are appropriate for island living.			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
Objective:			
(3) Increase and maintain the affordable housing inventory.			✓
Policies:			
(a) Recognize housing as a basic human need, and work to fulfill that need.			✓
(b) Prioritize available infrastructure capacity for affordable housing.			✓
(c) Improve communication, collaboration, and coordination among housing providers and social-service organizations.			✓
(d) Study future projected housing needs, monitor economic cycles, and prepare for future conditions on each island.			✓
(e) Develop public-private and nonprofit partnerships that facilitate the construction of quality affordable housing.			✓
(f) Streamline the review process for high-quality, affordable housing developments that implement the goals, objectives, and policies of the General Plan.			✓
(g) Minimize the intrusion of housing on prime, productive, and potentially productive agricultural lands and regionally valuable agricultural lands.			✓
(h) Encourage long-term residential use of existing and future housing to meet residential needs.			✓
Implementing Actions:			
(a) Develop policies to even out the peaks and valleys in Maui County's construction-demand cycles.			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
Objective:			
(4) Expand access to education related to housing options, homeownership, financing, and residential construction.			✓
Policies:			
(a) Broaden access to information about County, State, and Federal programs that provide financial assistance to renters and home buyers.			✓
(b) Expand access to information about opportunities for homeownership and self-help housing.			✓
(c) Educate residents about making housing choices that support their individual needs, the needs of their communities, and the health of the islands' natural systems.			✓
(d) Improve home buyers' education on all aspects of homeownership.			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
F. STRENGTHEN THE LOCAL ECONOMY			
Goal: Maui County's economy will be diverse, sustainable, and supportive of community values.			✓

COUNTYWIDE POLICY PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			S	N/S	N/A
Objective:					
(1) Promote an economic climate that will encourage diversification of the County's economic base and a sustainable rate of economic growth.					✓
Policies:					
(a) Support economic decisions that create long-term benefits.					✓
(b) Promote lifelong education, career development, and technical training for existing and emerging industries.					✓
(c) Invest in infrastructure, facilities, and programs that foster economic diversification.					✓
(d) Support and promote locally produced products and locally owned operations and businesses that benefit local communities and meet local demand.					✓
(e) Support programs that assist industries to retain and attract more local labor and facilitate the creation of jobs that offer a living wage.					✓
(f) Encourage work environments that are safe, rewarding, and fulfilling to employees.					✓
(g) Support home-based businesses that are appropriate for and in character with the community.					✓
(h) Encourage businesses that promote the health and well-being of the residents, produce value-added products, and support community values.					✓
(i) Foster an understanding of the role of all industries in our economy.					✓
(j) Support efforts to improve conditions that foster economic vitality in our historic small towns.					✓
(k) Support and encourage traditional host-culture businesses and indigenous agricultural practices.					✓
(l) Support public and private entities that assist entrepreneurs in establishing locally operated businesses.					✓
Implementing Actions:					
(a) Develop regulations and programs that support opportunities for local merchants, farmers, and small businesses to sell their goods and services directly to the public.					✓
(b) Monitor the carrying capacity of the islands' social, ecological, and infrastructure systems with respect to the economy.					✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.					
Objective:					
(2) Diversify and expand sustainable forms of agriculture and aquaculture.					✓
Policies:					
(a) Support programs that position Maui County's agricultural products as premium export products.					✓
(b) Prioritize the use of agricultural land to feed the local population, and promote the use of agricultural lands for sustainable and diversified agricultural activities.					✓
(c) Capitalize on Hawai'i's economic opportunities in the ecologically sensitive aquaculture industries.					✓
(d) Assist farmers to help make Maui County more self-sufficient in food production.					✓
(e) Support ordinances, programs, and policies that keep agricultural land and water available and affordable to farmers.					✓
(f) Support a tax structure that is conducive to the growth of the agricultural economy.					✓
(g) Enhance County efforts to monitor and regulate important agricultural issues.					✓

COUNTYWIDE POLICY PLAN			
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			
	S	N/S	N/A
(h) Support education, research, and facilities that strengthen the agricultural industry.			✓
(i) Maintain the genetic integrity of existing food crops.			✓
(j) Encourage healthy and organic farm practices that contribute to land health and regeneration.			✓
(k) Support cooperatives and other types of nontraditional communal farming and efforts.			✓
(l) Encourage methods of monitoring and controlling genetically modified crops to prevent adverse effects.			✓
(m) Work with the State to ease the permitting process for the revitalization of traditional fish ponds.			✓
Implementing Actions:			
(a) Redirect efforts in the Office of Economic Development to further facilitate the development of the agricultural section and to monitor agricultural legislation and issues.			✓
(b) Publicly identify, with signage and other means, the field locations of all genetically modified crops.			✓
(c) Create agricultural parks in areas distant from genetically modified crops.			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
Objective:			
(3) Support a visitor industry that respects the resident culture and the environment.			✓
Policies:			
(a) Promote traditional Hawaiian practices in visitor-related facilities and activities.			✓
(b) Encourage and educate the visitor industry to be sensitive to island lifestyles and cultural values.			✓
(c) Encourage a spirit of welcome for residents at visitor facilities, such as by offering kama'aina incentives and discount programs.			✓
(d) Support the renovation and enhancement of existing visitor facilities.			✓
(e) Support policies, programs, and a tax structure that redirect the benefits of the visitor industry back into the local community.			✓
(f) Encourage resident ownership of visitor-related businesses and facilities.			✓
(g) Develop partnerships to provide educational and training facilities to residents employed in the visitor industry.			✓
(h) Foster an understanding of local cultures, customs, and etiquette, and emphasize the importance of the Aloha Spirit as a common good for all.			✓
(i) Support the diversification, development, evolution, and integration of the visitor industry in a way that is compatible with the traditional, social, economic, spiritual, and environmental values of island residents			✓
(j) Improve collaboration between the visitor industry and the other sectors of Maui County's economy.			✓
(k) Perpetuate an authentic image of the Hawaiian culture and history and an appropriate recognition of the host culture.			✓
(l) Support the programs and initiatives outlined in the Maui County Tourism Strategic Plan 2006-2015.			✓
(m) Promote water conservation, beach conservation, and open-space conservation in areas providing services for visitors.			✓
(n) Recognize the important contributions that the visitor industry makes to the County's economy, and support a healthy and vibrant visitor industry.			✓

COUNTYWIDE POLICY PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			S	N/S	N/A
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.					
Objective:					
(4) Expand economic sectors that increase living-wage job choices and are compatible with community values.					✓
Policies:					
(a) Support emerging industries, including the following: • Health and wellness industry; • Sports and recreation industry; • Film and entertainment industry; • Arts and culture industry; • Renewable-energy industry;	• Research and development industry; • High-technology and knowledge-based industries; • Education and training industry; • Ecotourism industry; and • Agritourism industry.				✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.					
G. IMPROVE PARKS AND PUBLIC FACILITIES					
Goal: A full range of island-appropriate public facilities and recreational opportunities will be provided to improve the quality of life for residents and visitors.					
					✓
Objective:					
(1) Expand access to recreational opportunities and community facilities to meet the present and future needs of residents of all ages and physical abilities.					✓
Policies:					
(a) Protect, enhance, and expand access to public shoreline and mountain resources.					✓
(b) Expand and enhance the network of parks, multi-use paths, and bikeways.					✓
(c) Assist communities in developing recreational facilities that promote physical fitness.					✓
(d) Expand venue options for recreation and performances that enrich the lifestyles of Maui County's people.					✓
(e) Expand affordable recreational and after-school programs for youth.					✓
(f) Encourage and invest in recreational, social, and leisure activities that bring people together and build community pride.					✓
(g) Promote the development and enhancement of community centers, civic spaces, and gathering places throughout our communities.					✓
(h) Expand affordable access to recreational opportunities that support the local lifestyle.					✓
Implementing Actions:					
(a) Identify and reserve lands for cemeteries, and preserve existing cemeteries on all islands, appropriately accommodating varying cultural and, faith-based traditions.					✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.					
Objective:					
(2) Improve the quality and adequacy of community facilities.					✓
Policies:					
(a) Provide an adequate supply of dedicated shelters and facilities for disaster relief.					✓
(b) Provide and maintain community facilities that are appropriately designed to reflect the traditions and customs of local cultures.					✓

COUNTYWIDE POLICY PLAN			
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			
	S	N/S	N/A
(c) Ensure that parks and public facilities are safe and adequately equipped for the needs of all ages and physical abilities to the extent reasonable.			✓
(d) Maintain, enhance, expand, and provide new active and passive recreational facilities in ways that preserve the natural beauty of their locations.			✓
(e) Redesign or retrofit public facilities to adapt to major shifts in environmental or urban conditions to the extent reasonable.			✓
<i>Analysis:</i> The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
Objective:			
(3) Enhance the funding, management, and planning of public facilities and park lands.			✓
Policies:			
(a) Identify and encourage the establishment of regulated and environmentally sound campgrounds.			✓
(b) Manage park use and control access to natural resources in order to rest sensitive places and utilize the resources in a sustainable manner.			✓
(c) Provide public-recreational facilities that are clean and well-maintained.			✓
(d) Develop partnerships to ensure proper stewardship of the islands' trails, public lands, and access systems.			✓
(e) Ensure that there is an adequate supply of public restrooms in convenient locations.			✓
Implementing Actions:			
(a) Encourage the State to allow for overnight fishing along the shoreline in accordance with management plans and regulations.			✓
(b) Develop and regularly update functional plans, including those relating to public facilities, parks, and campgrounds.			✓
(c) Develop and adopt local level-of-service standards for public facilities and parks.			✓
(d) Identify, acquire, and develop lands for parks, civic spaces, and public uses.			✓
<i>Analysis:</i> The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
H. DIVERSIFY TRANSPORTATION OPTIONS			
Goal: Maui County will have an efficient, economical, and environmentally sensitive means of moving people and goods.			✓
Objective:			
(1) Provide an effective, affordable, and convenient ground-transportation system that is environmentally sustainable.	✓		
Policies:			
(a) Execute planning strategies to reduce traffic congestion.	✓		
(b) Plan for the efficient relocation of roadways for the public benefit.			✓
(c) Support the use of alternative roadway designs, such as traffic-calming techniques and modern roundabouts.			✓
(d) Increase route and mode options in the ground-transportation network.	✓		
(e) Ensure that roadway systems are safe, efficient, and maintained in good condition.			✓
(f) Preserve roadway corridors that have historic, scenic, or unique physical attributes that enhance the character and scenic resources of communities.			✓
(g) Design new roads and roadway improvements to retain and enhance the existing character and scenic resources of the communities through which they pass.			✓

COUNTYWIDE POLICY PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
(h) Promote a variety of affordable and convenient transportation services that meet countywide and community needs and expand ridership of transit systems.	✓		
(i) Collaborate with transit agencies, government agencies, employers, and operators to provide planning strategies that reduce peak-hour traffic.			✓
(j) Develop and expand an attractive, island-appropriate, and efficient public transportation system.	✓		
(k) Provide and encourage the development of specialized transportation options for the young, the elderly, and persons with disabilities.			✓
(l) Evaluate all alternatives to preserve quality of life before widening roads.			✓
(m) Encourage businesses in the promotion of alternative transportation options for resident and visitor use.			✓
(n) Support the development of carbon-emission standards and an incentive program aimed at achieving County carbon-emission goals.			✓
Implementing Actions:			
(a) Create incentives and implement strategies to reduce visitor dependence on rental cars.			✓
(b) Establish efficient public-transit routes between employment centers and primary workforce residential areas.	✓		
(c) Create attractive, island-appropriate, conveniently located park-and-ride and ride-share facilities.			✓
Analysis: The proposed project will continue to provide Maui island with an efficient, economical, and environmentally sensitive means of public transit. The affordable and convenient transportation services will meet islandwide and community needs.			
Objective:			
(2) Reduce the reliance on the automobile and fossil fuels by encouraging walking, bicycling, and other energy-efficient and safe alternative modes of transportation.	✓		
Policies:			
(a) Make walking and bicycling transportation safe and easy between and within communities.			✓
(b) Require development to be designed with the pedestrian in mind.			✓
(c) Design new and retrofit existing rights-of-way with adequate sidewalks, bicycle lanes, or separated multi-use transit corridors.			✓
(d) Support the development of a countywide network of bikeways, equestrian trails, and pedestrian paths.			✓
(e) Support the reestablishment of traditional trails between communities, to the ocean, and through the mountains for public use.			✓
(f) Encourage educational programs to increase safety for pedestrians and bicyclists.			✓
Implementing Actions:			
(a) Design, build, and modify existing bikeways to improve safety and separation from automobiles.			✓
(b) Increase enforcement to reduce abuse of bicycle and pedestrian lanes by motorized vehicles.			✓
(c) Identify non-motorized transportation options as a priority for new sources of funding.			✓
Analysis: The MDOT Transit Hub Relocation Project will continue bus transportation service at a convenient location surrounded by residential apartments, the QKC, supermarket, public library, businesses, and churches. The affordable and convenient transportation service will help reduce the reliance on the automobile and fossil fuels by encouraging walking and utilizing the bus.			

COUNTYWIDE POLICY PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			S	N/S	N/A
Objective:					
(3) Improve opportunities for affordable, efficient, safe, and reliable air transportation.					✓
Policies:					
(a) Discourage private helicopter and fixed-wing landing sites to mitigate environmental and social impacts.					✓
(b) Encourage the use of quieter aircraft and noise-abatement procedures for arrivals and departures.					✓
(c) Encourage the modernization and maintenance of air-transportation facilities for general-aviation activities.					✓
(d) Encourage a viable and competitive atmosphere for air carriers to expand service and ensure sufficient intra-County flights and affordable fares for consumers.					✓
(e) Continue to support secondary airports, and encourage the State to provide them with adequate funding.					✓
(f) During Community Plan updates, explore the use of the smaller airports.					✓
(g) Encourage the State to provide efficient, adequate, and affordable parking and transit connections within and around airports.					✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.					
Objective:					
(4) Improve opportunities for affordable, efficient, safe, and reliable ocean transportation.					✓
Policies:					
(a) Support programs and regulations that reduce the disposal of maritime waste and prevent spills into the ocean.					✓
(b) Encourage the upgrading of harbors to resist damage from natural hazards and disasters.					✓
(c) Encourage the State to study the use of existing harbors and set priorities for future use.					✓
(d) Explore all options to protect the traditional recreational uses of harbors, and mitigate harbor-upgrade impacts to recreational uses where feasible.					✓
(e) Encourage the upgrading of harbors and the separation of cargo and bulk materials from passenger and recreational uses.					✓
(f) Encourage the State to provide for improved capacity at shipping, docking, and storage facilities.					✓
(g) Encourage the State to provide adequate parking facilities and transit connections within and around harbor areas.					✓
(h) Encourage the redevelopment and revitalization of harbors while preserving historic and cultural assets in harbor districts.					✓
(i) Encourage the State to provide adequate facilities for small-boat operations, including small-boat launch ramps, according to community needs.					✓
(j) Support the maintenance and cleanliness of harbor facilities.					✓
(k) Support the redevelopment of harbors as pedestrian-oriented gathering places.					✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.					
Objective:					
(5) Improve and expand the planning and management of transportation systems.					✓

COUNTYWIDE POLICY PLAN					
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			S	N/S	N/A
Policies:					
(a) Encourage progressive community design and development that will reduce transportation trips.					✓
(b) Require new developments to contribute their pro rata share of local and regional infrastructure costs.					✓
(c) Establish appropriate user fees for private enterprises that utilize public transportation facilities for recreational purposes.					✓
(d) Support the revision of roadway-design criteria and standards so that roads are compatible with surrounding neighborhoods and the character of rural areas.					✓
(e) Plan for multi-modal transportation and utility corridors on each island.					✓
(f) Support designing all transportation facilities, including airport, harbor, and mass- transit stations, to reflect Hawaiian architecture.					✓
(g) Utilize transportation-demand management as an integral part of transportation planning.					✓
(h) Accommodate the planting of street trees and other appropriate landscaping in all public rights-of-way.					✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.					
I. IMPROVE PHYSICAL INFRASTRUCTURE					
Goal: Maui County's physical infrastructure will be maintained in optimum condition and will provide for and effectively serve the needs of the County through clean and sustainable technologies.					✓
Objective:					
(1) Improve water systems to assure access to sustainable, clean, reliable, and affordable sources of water.					✓
Policies:					
(a) Ensure that adequate supplies of water are available prior to approval of subdivision or construction documents.					✓
(b) Develop and fund improved water-delivery systems.					✓
(c) Ensure a reliable and affordable supply of water for productive agricultural uses.					✓
(d) Promote the reclamation of gray water, and enable the use of reclaimed, gray, and brackish water for activities that do not require potable water.					✓
(e) Retain and expand public control and ownership of water resources and delivery systems.					✓
(f) Improve the management of water systems so that surface-water and groundwater resources are not degraded by overuse or pollution.					✓
(g) Explore and promote alternative water-source-development methods.					✓
(h) Seek reliable long-term sources of water to serve developments that achieve consistency with the appropriate Community Plans.					✓
Implementing Actions:					
(a) Develop a process to review all applications for desalination.					✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.					
Objective:					
(2) Improve waste-disposal practices and systems to be efficient, safe, and as environmentally sound as possible.					✓
Policies:					
(a) Provide sustainable waste-disposal systems and comprehensive, convenient recycling programs to reduce the flow of waste into landfills.					✓

COUNTYWIDE POLICY PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
(b) Support innovative and alternative practices in recycling solid waste and wastewater and disposing of hazardous waste.			✓
(c) Encourage vendors and owners of automobile, appliance, and white goods to participate in the safe disposal and recycling of such goods, and ensure greater accountability for large waste producers.			✓
(d) Develop strategies to promote public awareness to reduce pollution and litter, and encourage residents to reduce, reuse, recycle, and compost waste materials.			✓
(e) Pursue improvements and upgrades to existing wastewater and solid-waste systems consistent with current and future plans and the County's Capital Improvement Program.			✓
Implementing Actions:			
(a) Establish recycling, trash-separation, and materials recovery programs and facilities to reduce the flow of waste into landfills.			✓
(b) Study the feasibility of developing environmentally safe waste-to-energy facilities.			✓
(c) Utilize taxes and fees as means to encourage conservation and recycling.			✓
(d) Implement and regularly update the Integrated Solid Waste Management Plan.			✓
(e) Phase out the use of injection wells.			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
Objective:			
(3) Significantly increase the use of renewable and green technologies to promote energy efficiency and energy self-sufficiency.	✓		
Policies:			
(a) Promote the use of locally renewable energy sources, and reward energy efficiency.			✓
(b) Consider tax incentives and credits for the development of sustainable- and renewable-energy sources.			✓
(c) Expand education about energy conservation and self-sufficiency.			✓
(d) Encourage small-scale energy generation that utilizes wind, sun, water, biowaste, and other renewable sources of energy.			✓
(e) Expand renewable-energy production.			✓
(f) Develop public-private partnerships to ensure the use of renewable energy and increase energy efficiency.			✓
(g) Require the incorporation of locally appropriate energy-saving and green building design concepts in all new developments by providing energy efficient urban design guidelines and amendments to the Building Code.			✓
(h) Encourage the use of sustainable energy to power vehicles.			✓
(i) Promote the retrofitting of existing buildings and new development to incorporate energy-saving design concepts and devices.			✓
(j) Encourage green footprint practices.			✓
(k) Reduce Maui County's dependence on fossil fuels and energy imports.			✓
(l) Support green building practices such as the construction of buildings that aim to minimize carbon dioxide production, produce renewable energy, and recycle water.	✓		
(m) Promote and support environmentally friendly practices in all energy sectors.			✓

COUNTYWIDE POLICY PLAN					
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			S	N/S	N/A
Implementing Actions:					
(a) Adopt an energy-efficiency policy for Maui County government as a model for other jurisdictions.					✓
(b) Adopt a Green Building Code, and support green building practices.					✓
Analysis: To the extent practicable, the project will implement energy efficient measures such as energy efficient lighting and photovoltaic panels. Also, the proposed open air design with roof structure shading the bus and passenger waiting areas eliminates a substantial amount of air conditioning use.					
Objective:					
(4) Direct growth in a way that makes efficient use of existing infrastructure and to areas where there is available infrastructure capacity.					✓
Policies:					
(a) Capitalize on existing infrastructure capacity as a priority over infrastructure expansion.					✓
(b) Planning for new towns should only be considered if a region's growth is too large to be directed into infill and adjacent growth areas.					✓
(c) Utilize appropriate infrastructure technologies in the appropriate locations.					✓
(d) Promote land use patterns that can be provided with infrastructure and public facilities in a cost-effective manner.					✓
(e) Support catchment systems and on-site wastewater treatment in rural areas and aggregated water and wastewater systems in urban areas if they are appropriately located.					✓
Implementing Actions:					
(a) Develop a streamlining system for urban infill projects.					✓
(b) Identify appropriate areas for urban expansion of existing towns where infrastructure and public facilities can be provided in a cost-effective manner.					✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.					
Objective:					
(5) Improve the planning and management of infrastructure systems.					✓
Policies:					
(a) Provide a reliable and sufficient level of funding to enhance and maintain infrastructure systems.					✓
(b) Require new developments to contribute their pro rata share of local and regional infrastructure costs.					✓
(c) Improve coordination among infrastructure providers and planning agencies to minimize construction impacts.					✓
(d) Maintain inventories of infrastructure capacity, and project future infrastructure needs.					✓
(e) Require social-justice and -equity issues to be considered during the infrastructure-planning process.					✓
(f) Discourage the development of critical infrastructure systems within hazard zones and the tsunami-inundation zone to the extent practical.					✓
(g) Ensure that infrastructure is built concurrent with or prior to development.					✓
(h) Ensure that basic infrastructure needs can be met during a disaster.					✓
(i) Locate public facilities and emergency services in appropriate locations that support the health, safety, and welfare of each community and that minimize delivery inefficiencies.					✓
(j) Promote the undergrounding of utility and other distribution lines for health safety, and aesthetic reasons.					✓

COUNTYWIDE POLICY PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)		S	N/S	N/A
Implementing Actions:				
(a) Develop and regularly update functional plans for infrastructure systems.				✓
(b) Develop, adopt, and regularly update local or community-sensitive level-of-service standards for infrastructure systems.				✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.				
J. PROMOTE SUSTAINABLE LAND USE AND GROWTH MANAGEMENT				
Goal: Community character, lifestyles, economies, and natural assets will be preserved by managing growth and using land in a sustainable manner.				✓
Objective:				
(1) Improve land use management and implement a directed-growth strategy.				✓
Policies:				
(a) Establish, map, and enforce urban- and rural-growth limits.				✓
(b) Direct urban and rural growth to designated areas.				✓
(c) Limit the number of visitor-accommodation units and facilities in Community Plan Areas.				✓
(d) Maintain a sustainable balance between the resident, part-time resident, and visitor populations.				✓
(e) Encourage redevelopment and infill in existing communities on lands intended for urban use to protect productive farm land and open-space resources.				✓
(f) Discourage new entitlements for residential, resort, or commercial development along the shoreline.				✓
(g) Restrict development in areas that are prone to natural hazards, disasters, or sea-level rise.				✓
(h) Direct new development in and around communities with existing infrastructure and service capacity, and protect natural, scenic, shoreline, and cultural resources.				✓
(i) Establish and maintain permanent open space between communities to protect each community's identity.				✓
(j) Support the dedication of land for public uses.				✓
(k) Preserve the public's rights of access to and continuous lateral access along all shorelines.				✓
(l) Enable existing and future communities to be self-sufficient through sustainable land use planning and management practices.				✓
(m) Protect summits, slopes, and ridgelines from inappropriate development.				✓
Implementing Actions:				
(a) Regularly update urban- and rural-growth boundaries and their maps.				✓
(b) Establish transfer and purchase of development rights programs.				✓
(c) Develop and adopt a green infrastructure plan.				✓
(d) Develop studies to help determine a sustainable social, environmental, and economic carrying capacity for each island.				✓
(e) Identify and define resort-destination areas.				✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.				
Objective:				
(2) Improve planning for and management of agricultural lands and rural areas.				✓

COUNTYWIDE POLICY PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			S	N/S	N/A
Policies:					
(a) Protect prime, productive, and potentially productive agricultural lands to maintain the islands' agricultural and rural identities and economies.					✓
(b) Provide opportunities and incentives for self-sufficient and subsistence homesteads and farms.					✓
(c) Discourage developing or subdividing agriculturally designated lands when non-agricultural activities would be primary uses.					✓
(d) Conduct agricultural-development planning to facilitate robust and sustainable agricultural activities.					✓
Implementing Actions:					
(a) Inventory and protect prime, productive, and potentially productive agricultural lands from competing non-agricultural land uses.					✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.					
Objective:					
(3) Design all developments to be in harmony with the environment and to protect each community's sense of place.	✓				
Policies:					
(a) Support and provide incentives for green building practices.					✓
(b) Encourage the incorporation of green building practices and technologies into all government facilities to the extent practicable.	✓				
(c) Protect and enhance the unique architectural and landscape characteristics of each Community Plan Area, small town, and neighborhood.					✓
(d) Ensure that adequate recreational areas, open spaces, and public-gathering places are provided and maintained in all urban centers and neighborhoods.					✓
(e) Ensure business districts are distinctive, attractive, and pedestrian-friendly destinations.					✓
(f) Use trees and other forms of landscaping along rights-of-way and within parking lots to provide shade, beauty, urban-heat reduction, and separation of pedestrians from automobile traffic in accordance with community desires.	✓				
(g) Where appropriate, integrate public-transit, equestrian, pedestrian, and bicycle facilities, and public rights-of-way as design elements in new and existing communities.	✓				
(h) Ensure better connectivity and linkages between land uses.					✓
(i) Adequately buffer and mitigate noise and air pollution in mixed-use areas to maintain residential quality of life.					✓
(j) Protect rural communities and traditional small towns by regulating the footprint, locations, site planning, and design of structures.					✓
(k) Support small-town revitalization and preservation.					✓
(l) Facilitate safe pedestrian access, and create linkages between destinations and within parking areas.	✓				
Implementing Actions:					
(a) Establish design guidelines and standards to enhance urban and rural environments.					✓
(b) Provide funding for civic-center and civic-space developments.					✓
(c) Establish and enhance urban forests in neighborhoods and business districts.					✓

COUNTYWIDE POLICY PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)				S	N/S	N/A
Analysis: In addition to the new transit hub, the proposed project plans to extend the sidewalks on Vevau Street, incorporate street trees, creating linkages from other destinations, and facilitating safe pedestrian access to the site. Although parking will be limited to employee-only parking, landscaping will be used to provide shade, beauty, and urban-heat reduction. In addition, to the extent practicable, the project will implement energy efficient measures such as energy efficient lighting. Also, the proposed open air design with roof structure shading the bus and passenger waiting areas eliminates a substantial amount of air conditioning energy use.						
Objective:						
(4) Improve and increase efficiency in land use planning and management.						✓
Policies:						
(a) Assess the cumulative impact of developments on natural ecosystems, natural resources, wildlife habitat, and surrounding uses.	✓					
(b) Ensure that new development projects requiring discretionary permits demonstrate a community need, show consistency with the General Plan, and provide an analysis of impacts.	✓					
(c) Encourage public and private partnerships to preserve lands of importance, develop housing, and meet the needs of residents.						✓
(d) Promote creative subdivision designs that implement best practices in land development, sustainable management of natural and physical resources, increased pedestrian and bicycle functionality and safety, and the principles of livable communities.						✓
(e) Coordinate with Federal, State, and County officials in order to ensure that land use decisions are consistent with County plans and the vision local populations have for their communities.						✓
(f) Enable greater public participation in the review of subdivisions.						✓
(g) Improve land use decision making through the use of land- and geographic information systems.						✓
Implementing Actions:						
(a) Institute a time limit and sunseting stipulations on development entitlements and their implementation.						✓
Analysis: The MDOT transit hub is being relocated in order to continue service across the island. The proposed project will be located in an existing urban area, across the street from its current location. A full analysis will be completed to assess the cumulative impacts of the development and show consistency with the General Plan through the HRS, Chapter 343 and Chapter 205 processes.						
K. STRIVE FOR GOOD GOVERNANCE						
Objective:						
(1) Strengthen governmental planning, coordination, consensus building, and decision making.						✓
Policies:						
(a) Plan and prepare for the effects of social, demographic, economic, and environmental shifts.						✓
(b) Plan for and address the possible implications of Hawaiian sovereignty.						✓
(c) Encourage collaboration among government agencies to reduce duplication of efforts and promote information availability and exchange.						✓
(d) Expand opportunities for the County to be involved in and affect State and Federal decision making.						✓
(e) Plan and prepare for large-scale emergencies and contingencies.						✓
(f) Improve public awareness about preparing for natural hazards, disasters, and						✓

COUNTYWIDE POLICY PLAN			
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			
S	N/S	N/A	
			evacuation plans.
		✓	(g) Improve coordination among Federal, State, and County agencies.
Implementing Actions:			
		✓	(a) Develop policies, regulations, and programs to protect and enhance the unique character and needs of the County's various communities.
		✓	(b) Evaluate and if necessary, recommend modifications to the County Charter that could result in a possible change to the form of governance for Maui County.
		✓	(c) Study and evaluate the feasibility and implications of voting in Maui County Council elections.
		✓	(d) Study and evaluate the feasibility of authorizing town governments in Maui County.
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
Objective:			
		✓	(2) Promote civic engagement.
Policies:			
		✓	(a) Foster consensus building through in-depth, innovative, and accessible public participatory processes.
		✓	(b) Promote and ensure public participation and equal access to government among all citizens.
		✓	(c) Encourage a broad cross-section of residents to volunteer on boards and commissions.
		✓	(d) Encourage the State to improve its community-involvement processes.
		✓	(e) Support community-based decision making.
		✓	(f) Expand advisory functions at the community level.
		✓	(g) Expand opportunities for all members of the public to participate in public meetings and forums.
		✓	(h) Facilitate the community's ability to obtain relevant documentation.
		✓	(i) Increase voter registration and turnout.
Implementing Actions:			
		✓	(a) Implement two-way communication using audio-visual technology that allows residents to participate in the County's planning processes.
		✓	(b) Ensure and expand the use of online notification of County business and public meetings, and ensure the posting of all County board and commission meeting minutes.
		✓	(c) Explore funding mechanisms to improve participation by volunteers on boards and commissions.
		✓	(d) Develop a project-review process that mandates early and ongoing consultation in and with communities affected by planning and land use activities.
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
Objective:			
		✓	(3) Improve the efficiency, reliability, and transparency of County government's internal processes and decision making.
Policies:			
		✓	(a) Use advanced technology to improve efficiency.
		✓	(b) Simplify and clarify the permitting process to provide uniformity, reliability, efficiency, and transparency.

COUNTYWIDE POLICY PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
(c) Improve communication with Lana'i and Moloka'i through the expanded use of information technologies, expanded staffing, and the creation and expansion of government-service centers.			✓
(d) Ensure that laws, policies, and regulations are internally consistent and effectuate the intent of the General Plan.			✓
Implementing Actions:			
(a) Update the County Code to be consistent with the General Plan.			✓
(b) Identify and update County regulations and procedures to increase the productivity and efficiency of County government.			✓
(c) Develop local level-of-service standards for infrastructure, public facilities, and services.			✓
(d) Implement plans through programs, regulations, and capital improvements in a timely manner.			✓
(e) Expand government online services.			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
Objective:			
(4) Adequately fund in order to effectively administer, implement, and enforce the General Plan.			✓
Policies:			
(a) Adequately fund, staff, and support the timely update and implementation of planning policy, programs, functional plans, and enforcement activities.			✓
(b) Ensure that the County's General Plan process provides for efficient planning at the County, island, town, and neighborhood level.			✓
(c) Encourage ongoing professional development, education, and training of County employees.			✓
(d) Encourage competitive compensation packages for County employees to attract and retain County personnel.			✓
(e) Enable the County government to be more responsive in implementing our General Plan and Community Plans.			✓
(f) Review discretionary permits for compliance with the Countywide Policy Plan.			✓
(g) Strengthen the enforcement of County, State, and Federal land use laws.			✓
Implementing Actions:			
(a) Establish penalties to ensure compliance with County, State, and Federal land use laws.			✓
Analysis: The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			
Objective:			
(5) Strive for County government to be a role model for implementing cultural and environmental policies and practices.			✓
Policies:			
(a) Educate residents on the benefits of sustainable practices.			✓
(b) Encourage the retention and hiring of qualified professionals who can improve cultural and environmental practices.			✓
(c) Incorporate environmentally sound and culturally appropriate practices in government operations and services.			✓
(d) Encourage all vendors with County contracts to incorporate environmentally sound and culturally appropriate practices.			✓

COUNTYWIDE POLICY PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<u>Analysis:</u> The goals, objectives, policies, and implementing actions listed above are not applicable to the proposed project.			

2. Maui Island Plan

The Maui Island Plan (MIP), is applicable to the island of Maui only, providing more specific policy-based strategies for population, land use, transportation, public and community facilities, water and sewage systems, visitor destinations, urban design, and other matters related to future growth.

As provided by Chapter 2.80B, the MIP shall include the following components:

1. *An island-wide land use strategy, including a managed and directed growth plan*
2. *A water element assessing supply, demand and quality parameters*
3. *A nearshore ecosystem element assessing nearshore waters and requirements for preservation and restoration*
4. *An implementation program which addresses the County's 20-year capital improvement requirements, financial program for implementation, and action implementation schedule*
5. *Milestone indicators designed to measure implementation progress of the MIP*

It is noted the Ordinance No. 4004 does not address the component relating to the implementation program. Chapter 2.80B of the MCC, relating to the General Plan, was amended via Ordinance No. 3979, October 5, 2012, to provide that the implementation program component be adopted no later than one (1) year following the effective date of Ordinance No. 4004. In December 2013 and March 2014, the Maui County Council approved time extensions for approval and adoption of the implementation chapter of the MIP. The MIP implementation chapter was adopted as Ordinance No. 4126 on May 27, 2014.

The MIP addresses a number of planning categories with detailed policy analysis and recommendations which are framed in terms of goals, objectives, policies and implementing actions. These planning categories address the following areas:

1. Population
2. Heritage Resources
3. Natural Hazards
4. Economic Development
5. Housing
6. Infrastructure and Public Facilities

7. Land Use

Additionally, an essential element of the MIP is its directed growth plan which provides a management framework for future growth in a manner that is fiscally, environmentally, and culturally prudent. Among the directed growth management tools developed through the MIP process are maps delineating urban growth boundaries (UGB), small town boundaries (STB) and rural growth boundaries (RGB). The respective boundaries identify areas appropriate for future growth and their corresponding intent with respect to development character.

The proposed Transit Hub Relocation Project is located within the Wailuku – Kahului UGB. In this regard, it is consistent with the directed growth strategy defined via growth maps adopted in the MIP.

In addition, the proposed project has been reviewed with respect to pertinent goals, objectives, policies, and implementing actions of the MIP. The analysis is presented in the table below.

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
CHAPTER 1 – POPULATION				
<u>Goal:</u>				
1.1	Maui's people, values, and lifestyles thrive through strong, healthy, and vibrant island communities.			✓
<u>Objective:</u>				
1.1.1	Greater retention and return of island residents by providing viable work, education, and lifestyle options.			✓
<u>Policies:</u>				
1.1.1.a	Expand programs that enable the community to meet the education, employment, housing, and social goals of youth and young adults.			✓
1.1.1.b	Expand housing, transportation, employment, and social opportunities to ensure residents are able to comfortably age within their communities.	✓		
1.1.1.c	Measure and track resident satisfaction through surveys and community indicators.			✓
1.1.1.d	Support funding for transportation, housing, health care, recreation, and social service programs that help those with special needs (including the elderly and disabled).			✓
<u>Analysis:</u> The proposed project's location provides ease of access for area residents to nearby commercial uses, the Kahului Library, and churches.				
CHAPTER 2 – HERITAGE RESOURCES				
CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES ISSUES				
<u>Goal:</u>				
2.1	Our community respects and protects archaeological and cultural resources while perpetuating diverse cultural identities and traditions.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
Objective:				
2.1.1	An island culture and lifestyle that is healthy and vibrant as measured by the ability of residents to live on Maui, access and enjoy the natural environment, and practice Hawaiian customs and traditions in accordance with Article XII, Section 7, Hawai'i State Constitution, and Section 7-1, Hawai'i Revised Statutes (HRS).			✓
Policies:				
2.1.1.a	Perpetuate the spirit of aloha and celebrate the host Hawaiian culture and other ethnic cultures.			✓
2.1.1.b	Perpetuate a respect for diversity and recognize the broad blending of cultures and ethnicities as vital to the quality of life on Maui.			✓
2.1.1.c	Ensure traditional public access routes, including native Hawaiian trails, are maintained for public use.			✓
2.1.1.d	Support the education of visitors and new residents about the customs and etiquette of the Hawaiian culture, as well as other cultures.			✓
Analysis: The goals, objectives, and policies listed above are not applicable to the proposed project.				
Objective:				
2.2	A more effective and efficient planning and review process that incorporates the best available cultural resources inventory, protection techniques, and preservation strategies.			✓
Policies:				
2.1.2.a	Ensure that the island has a comprehensive and up-to-date inventory of historic and archaeological resources, and their cultural significance.			✓
2.1.2.b	Require the update of existing planning and regulatory mechanisms to protect the natural, cultural, scenic, and historic resources within designated Heritage Areas (see Cultural Resources Overlay/Scenic Corridor Protection Technical Reference Map).			✓
2.1.2.c	Ensure that cultural, historic, and archaeological resources are protected for the benefit of present and future generations.			✓
Objective:				
2.3	Enhance the island's historic, archaeological, and cultural resources.			✓
Policies:				
2.1.3.a	Identify and pursue a listing of the properties and sites on the State and National Register of Historic Places.			✓
2.1.3.b	Support the use of easements, dedications, and other mechanisms to acquire, maintain, and protect lands with cultural, archaeological, and historic significance.			✓
2.1.3.c	Support regulations to require developers, when appropriate, to prepare an Archaeological Inventory Survey, Cultural Impact Assessment, and Ethnographic Inventories that are reviewed and commented upon by the Office of Hawaiian Affairs, Native Hawaiian advisory bodies, the State Historic Preservation Division (SHPD), and the Office of Environmental Quality Control, and systematically comply with the steps listed in SHPD's	✓		

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
	administrative rules, including consultation and monitoring during construction phases of projects.			
2.1.3.d	Promote the rehabilitation and adaptive reuse of historic sites, buildings, and structures.			✓
2.1.3.e	Encourage property owners to register historic and archaeological sites on the State and National Register.			✓
2.1.3.f	Support opportunities for public involvement with the intent to facilitate the protection and restoration of historic and archeological sites, including consultation with stakeholders.			✓
2.1.3.g	Encourage the resolution of land title questions relating to Land Commission Awards and Royal patents.			✓
2.1.3.h	Ensure compliance with historic preservation laws, and discourage demolition of properties that are determined to be eligible for listing on the National or State Register of Historic Places.			✓
<i>Analysis:</i> Oral historical accounts of the surrounding areas are included in Chapter II of the EA. In addition, coordination has been initiated with the SHPD in regards to archaeological resources that may be present in the area. Therefore, the proposed Transit Hub Relocation Project is supportive of the MIP Chapter 2 Heritage Resources planning category.				
SHORELINE, REEFS, AND NEARSHORE WATERS				
<u>Goal:</u>				
2.2	An intact, ecologically functional system of reef, shoreline, and nearshore waters that are protected in perpetuity.			✓
<u>Objective:</u>				
2.2.1	A more comprehensive and community-based ICZM program.			✓
<u>Policies:</u>				
2.2.1.a	Encourage a management system that protects and temporarily rests the reef ecosystems from overuse.			✓
2.2.1.b	Support the establishment of additional MMAs and reef replenishment areas.			✓
2.2.1.c	Work with appropriate agencies and community members to protect any special managed conservation areas from overuse and ensure that surrounding land uses do not contribute to the degradation of the natural resources, such as 'Ahihi-Kina'u Natural Area Reserve, Honolua-Mokulē'ia Bay Marine Life Conservation District, and Mākena State Park.			✓
2.2.1.d	Incorporate the following into the MIP, where consistent with the MIP:			✓
	(1) Beach Management Plan for Maui;			✓
	(2) Coastal Nonpoint Pollution Control Program Management Plan;			✓
	(3) Implementation Plan for Polluted Runoff Control; and			✓
	(4) Ocean Resource Management Plan.			✓
2.2.1.e	Support greater coordination among governmental agencies involved with the protection of the island's marine resources.			✓

Maui Island Plan Goals, Objectives and Policies Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable		S	N/S	N/A
Objective:				
2.2.2	Improved reef health, coastal water quality, and marine life.			✓
Policies:				
2.2.2.a	Create additional mechanisms where needed to contain and control runoff and pollution.	✓		
2.2.2.b	Allow extraction of high quality, Class A, low silt sands only when they will be used to protect or restore Maui's shorelines and beaches.			✓
2.2.2.c	Carefully manage beach nourishment activities to protect the coastal and marine ecosystem.			✓
2.2.2.d	Require, where appropriate, a buffer between landscaped areas and the shoreline, gulches, and streams to reduce the runoff of fertilizers, pesticides, herbicides, and other pollutants into coastal waters.			✓
2.2.2.e	Strictly regulate shoreline armoring in accordance with adopted Shoreline Rules, with an intent to protect the coastal and marine ecosystem.			✓
2.2.2.f	Support greater protection of Keālia Pond National Wildlife Refuge through the following:			✓
	(1) Enhancement of marine ecosystems;			✓
	(2) Beach and sand dune restoration; and			✓
	(3) Expansion of habitat for Maui's threatened or endangered sea turtles, birds, and other species.			✓
2.2.2.g	Support the development of regulations to prevent the excessive depletion of fish stocks due to non-sustainable practices and gear such as SCUBA spear-fishing and lay nets, within the context of nearshore ecosystems.			✓
2.2.2.h	Encourage the State to conduct a regular census of fish populations and monitor coral health.			✓
2.2.2.i	Encourage the State to significantly increase the number of park rangers, enforcement officers, and marine biologists to protect coastal resources.			✓
2.2.2.j	Encourage the State to prohibit the collection and exportation of fish, coral, algae, and other marine species for the ornamental and aquarium trade.			✓
Objective:				
2.2.3	Water quality that meets or exceeds State Clean Water Act standards.			✓
Policies:				
2.2.3.a	Reduce the amount of impervious surface and devise site plan standards that aim to minimize storm runoff and NPS pollution.			✓
2.2.3.b	Support the revision of existing regulations to require an Erosion and Sedimentation Control Plan (ESCP) for development activities that may pose a threat to water quality.	✓		
2.2.3.c	Require an on-site monitoring program, where applicable, when grading may pose a threat to water quality or when recommended in the ESCP.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
2.2.3.d	Avoid development actions that impair Maui's reef systems and remove identified stressors.			✓
2.2.3.e	Phase out cesspools and restrict the use of septic systems in ecologically sensitive coastal areas by converting to environmentally-friendly alternative sewage treatment systems, and connecting to central sewerage systems when and where feasible.			✓
2.2.3.f	Prohibit the development of new wastewater injection wells, except when unavoidable for public health and safety purposes.			✓
2.2.3.g	Ensure that the County upholds its affirmative duty under the Clean Water Act by monitoring and reducing point and NPS pollution to help safeguard coastal waters.			✓
Objective:				
2.2.4	Acquire additional shoreline lands and shoreline access rights.			✓
Policies:				
2.2.4.a	Promote the use of conservation easements, land trusts, transfer and purchase of development rights, and mitigation banking.			✓
2.2.4.b	Require the dedication of public beach and rocky shoreline access ways to and along the shoreline where it serves a practical public interest as a condition of development or subdivision approval; future subdivisions and developments shall be consistent with and effectuate, to the extent practicable, the <i>Shoreline Access Inventory Update - Final Report</i> (March 2005), and its updates.			✓
2.2.4.c	Incorporate the <i>Shoreline Access Inventory Update - Final Report</i> (March 2005), and its regular updates, into this plan.			✓
2.2.4.d	Identify access points while further acquiring key shoreline parcels and easement rights to enhance and protect beach access and shoreline recreation.			✓
<i>Analysis:</i> The proposed Transit Hub Relocation Project will employ Best Management Practices (BMPs) and include an Erosion and Sedimentation Control plan to insure construction activities will control runoff and pollution from entering the Kahului Harbor shoreline and ocean waters located north of the property across Ka'ahumanu Avenue and along Kahului Beach Road. Therefore, the proposed project is supportive of the MIP Chapter 2 Heritage Resources – Shoreline, Reefs, and Nearshore Waters planning category.				
WATERSHEDS, STREAMS, AND WETLANDS ISSUES				
Goal:				
2.3	Healthy watersheds, streams, and riparian environments.			✓
Objective:				
2.3.1	Greater protection and enhancement of watersheds, streams, and riparian environments.			✓
Policies:				
2.3.1.a	All present and future watershed management plans shall incorporate concepts of ahupua'a management based on the interconnectedness of upland and coastal ecosystems/species.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
2.3.1.b	Continue to support and be an active member of watershed partnerships.			✓
2.3.1.c	Support the establishment of regional water trusts, composed of public and private members, to manage water resources.			✓
2.3.1.d	Support regulations to require developments to utilize ahupua'a management practices.			✓
2.3.1.e	Work with private and non-profit entities to educate the public about the connection between upland activities within the watershed and the impacts on nearshore ecosystems and coral reefs.			✓
2.3.1.f	Provide adequate funding and staff to develop and implement watershed protection plans and policies, including acquisition and management of watershed resources and land.			✓
2.3.1.g	Encourage the State to mandate instream assessment to provide adequate water for native species.			✓
2.3.1.h	Maui will protect all watersheds and streams in a manner that guarantees a healthy, sustainable riparian environment.			✓
<u>Objective:</u>				
2.3.2	Decreased NPS and point source pollution.			✓
<u>Policies:</u>				
2.3.2.a	Enforce water pollution related standards and codes.			✓
2.3.2.b	Support the use of LID Techniques such as those described in the State of Hawai'i LID Practitioner's Guide (June 2006), as amended.			✓
2.3.2.c	Encourage farmers and ranchers to use agricultural BMPs to address NPS pollution.			✓
<u>Objective:</u>				
2.3.3	Preserve existing wetlands and improve and restore degraded wetlands.			✓
<u>Policies:</u>				
2.3.3.a	Prohibit the destruction and degradation of existing upland, mid-elevation, and coastal wetlands.			✓
2.3.3.b	Support and fund wetland protection and improvement, and restoration of degraded wetlands.			✓
2.3.3.c	Where applicable, require developers to provide a wetland protection buffer and/or other protective measures around and between development and wetland resources.			✓
<u>Objective:</u>				
2.3.4	Greater preservation of native flora and fauna biodiversity to protect native species.			✓
<u>Policies:</u>				
2.3.4.a	Work with appropriate agencies to eliminate feral ungulate populations and invasive species.			✓
2.3.4.b	Encourage the State to provide adequate funding to preserve biodiversity, protect native species, and contain or eliminate invasive species.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
2.3.4.c	Support the work of conservation groups and organizations that protect, reestablish, manage, and nurture sensitive ecological areas and threatened indigenous ecosystems.			✓
<u>Objective:</u>				
2.3.5	Limited development in critical watershed areas.			✓
<u>Policies:</u>				
2.3.5.a	Discourage development and subdivision of land within critical watersheds and in areas susceptible to high erosion and sediment loss.			✓
2.3.5.b	Designate critical watershed areas as conservation lands.			✓
2.3.5.c	Strongly encourage new subdivisions and developments that are proximate to environmentally sensitive watershed resources to prepare and implement CSD plans.			✓
<u>Objective:</u>				
2.3.6	Enhance the vitality and functioning of streams, while balancing the multiple needs of the community.			✓
<u>Policies:</u>				
2.3.6.a	Protect and enhance natural streambeds and discourage stream alteration.			✓
2.3.6.b	Work with appropriate agencies to establish minimum stream flow levels and ensure adequate stream flow to sustain riparian ecosystems, traditional kalo cultivation, and self-sustaining ahupua'a.			✓
2.3.6.c	Respect and participate in the resolution of native Hawaiian residual land and water rights issues (kuleana lands, ceded lands, and historic agricultural and gathering rights).			✓
2.3.6.d	Ensure that stream flows implement laws and policies found in the State Constitution and Water Code.			✓
2.3.6.e	Work with appropriate agencies and stakeholders to establish minimum stream flow levels, promote actions to support riparian habitat and the use of available lo'i, and maintain adequate flows for the production of healthy kalo crops.			✓
<i>Analysis:</i> The goals, objectives, and policies listed above are not applicable to the proposed project.				
WILDLIFE AND NATURAL AREAS				
<u>Goal:</u>				
2.4	Maui's natural areas and indigenous flora and fauna will be protected.			✓
<u>Objective:</u>				
2.4.1	A comprehensive management strategy that includes further identification, protection, and restoration of indigenous wildlife habitats.			✓
<u>Policies:</u>				
2.4.1.a	Identify and inventory the following:			✓

Maui Island Plan Goals, Objectives and Policies Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable		S	N/S	N/A
	(1) Natural, recreational, and open space resources;			✓
	(2) Flora and fauna with medium, high, and very high concentrations of threatened or endangered species; and			✓
	(3) Location and extent of invasive species.			✓
2.4.1.b	Require flora and fauna assessment and protection plans for development in areas with concentrations of indigenous flora and fauna; development shall comply with the assessment and protection plan and shall use the avoidance, minimization, and mitigation approach respectively, with an emphasis on avoidance.	✓		
2.4.1.c	Support the implementation of Hawai'i's Comprehensive Wildlife Conservation Strategy (October 2005).			✓
Objective:				
2.4.2	A decrease in invasive species through programs and partnerships that eradicate undesirable species and protect native habitat.			✓
Policies:				
2.4.2.a	Prevent the introduction of invasive species at all of Maui's airports and harbors.			✓
2.4.2.b	Encourage the State to increase funding in support of invasive species interception, control, and eradication.			✓
2.4.2.c	Encourage the State to develop programs that allow students to participate in invasive species eradication projects.			✓
Objective:				
2.4.3	Greater protection of sensitive lands, indigenous habitat, and native flora and fauna.			✓
Policies:				
2.4.3.a	Secure an interconnected network of sensitive lands, greenways, watercourses, and habitats.			✓
2.4.3.b	Protect Maui's sensitive lands (see Sensitive Lands on Protected Areas Diagrams).			✓
2.4.3.c	Promote innovative environmental-planning methods and site-planning standards that preserve and re-establish indigenous flora and fauna habitat, to preserve and restore connected habitat corridors and open space.			✓
2.4.3.d	Utilize protection tools such as conservation easements, land trusts, land banks, Purchase of Developments Rights (PDRs), Transfer of Development Rights (TDRs), and other stewardship tools to acquire natural areas			✓
2.4.3.e	Encourage discussions with communities to designate heritage areas that protect recreational and cultural lifestyles and resources.			✓
2.4.3.f	Support the expansion of Haleakalā National Park, and the creation of new national parks, where appropriate and supported by local communities.			✓
2.4.3.g	Encourage reforestation efforts that increase native species' habitat.			✓
2.4.3.h	Utilize the Natural Area Partnership Program (NAPP) and other programs to protect natural lands.			✓

Maui Island Plan Goals, Objectives and Policies Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable		S	N/S	N/A
2.4.3.i	Support increased dedicated funding for the acquisition, protection, restoration, or preservation of important natural areas or open space through the following: grants from the Land and Water Conservation Fund; dedicated funding from real property taxes or other appropriate revenues; bond issues; real estate transfer tax; revenues from the Transient Accommodations Tax; development mitigation fees; and other appropriate funding sources.			✓
<i>Analysis:</i> Included in this EA is a Biological Resource Survey (Refer to Appendix "C") that inventories all flora and fauna at the relocated transit hub site. The Biological Resource Survey recorded no known significant habitats or rare, endangered, or threatened species of flora, fauna, and avifauna located within the site. Also, no federally threatened or endangered flora or fauna species or critical habitat occur in the project area. It is also noted that the removal of the existing bus shelters at the current transit hub site is not anticipated to result in adverse impacts with regards to flora and fauna. Conducting the Biological Resource Survey is supportive of the MIP Chapter 2 Heritage Resources – Wildlife and Natural Areas planning category.				
SCENIC RESOURCES				
Goal:				
2.5	Maui will continue to be a beautiful island steeped in coastal, mountain, open space, and historically significant views that are preserved to enrich the residents' quality of life, attract visitors, provide a connection to the past, and promote a sense of place.			✓
Objective:				
2.5.1	A greater level of protection for scenic resources.			✓
Policies:				
2.5.1.a	Protect views to include, but not be limited to, Haleakalā, ʻĪao Valley, the Mauna Kahalawai (West Maui Mountains), Pu'u Ō'la'i, Kaho'olawe, Molokini, Moloka'i, and Lāna'i, Mauna Kea, Mauna Loa, sea stacks, the Pacific Ocean, and significant water features, ridgelines, and landforms.			✓
2.5.1.b	Identify, preserve, and provide ongoing management of important scenic vistas and open space resources, including mauka-to-makai and makai-to-mauka view planes.			✓
2.5.1.c	Protect "night sky" resources by encouraging the implementation of ambient light ordinances and encouraging conversion of all sources that create excessive light pollution, affecting our ability to view the stars.			✓
2.5.1.d	Protect ridgelines from development where practicable to facilitate the protection of public views.			✓
2.5.1.e	Protect scenic resources along Maui's scenic roadway corridors.			✓
Objective:				
2.5.2.	Reduce impacts of development projects and public-utility improvements on scenic resources.			✓
Policies:				
2.5.2.a	Enforce the policies and guidelines of the SMA regarding the protection of views.	✓		

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
2.5.2.b	Require any new subdivision of land, development, or redevelopment adjacent to a "high" or "exceptional" scenic corridor to submit an impact assessment of the project's scenic impacts; this assessment shall use the avoidance, minimization, and mitigation steps respectively, with an emphasis on avoidance.			✓
2.5.2.c	Require appropriate building setbacks and limits on wall heights to protect views along scenic corridors.	✓		
2.5.2.d	Encourage the State of Hawai'i Board of Land and Natural Resources to deny any development within the State Conservation District that interferes with a scenic landscape or disrupts important open space resources.			✓
2.5.2.e	Require Urban Design and Review Board (UDRB) review and approval of utility poles, facilities, and other visible infrastructure improvements along scenic corridors.			✓
2.5.2.f	Ensure little or no effect on scenic resources from utility improvements, primarily power poles.	✓		
2.5.2.g	Protect scenic vistas from intrusion by power poles.			✓
Objective:				
2.5.3	Greater protection of and access to scenic vistas, access points, and scenic lookout points.			✓
Policy:				
2.5.3.a	Protect, enhance, and acquire access to Maui's scenic vistas and resources.			✓
Analysis: The proposed project will enforce the SMA policies and guidelines regarding the protection of views by adhering to established setbacks and height limits to ensure little to no effect on scenic resources. It is also noted that utilities will be located underground as part of the adjacent Kahului Lani development.				
CHAPTER 3 – NATURAL HAZARDS				
Goal:				
3.1	Maui will be disaster resilient.			✓
Objective:				
3.1.1	Increased inter-agency coordination.			✓
Policy:				
3.1.1.a	Reinforce the island's preparedness capacity by:			✓
	(1) Applying the latest data-gathering techniques/technology;			✓
	(2) Pursuing funding opportunities;			✓
	(3) Improving monitoring and advance warning systems;			✓
	(4) Fostering public awareness; and			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
(5)	Working with external agencies to coordinate disaster mitigation and response.			✓
Objective:				
3.1.2	Greater protection of life and property.			✓
Policies:				
3.1.2.a	Identify critical infrastructure, lifelines, roads, and populations that are vulnerable to coastal hazards, and encourage strategic retreat and relocation to safer areas.			✓
3.1.2.b	Consider the location of dams, reservoirs, holding ponds, and other water-containing entities that are upstream of inhabited areas to anticipate, avoid, and mitigate inundation risks, and discourage new development in areas where possible inundation hazards may exist.			✓
3.1.2.c	Strengthen current development standards to minimize destruction of land and property.			✓
3.1.2.d	Encourage the use of construction techniques that reduce the potential for damage from natural hazards.			✓
3.1.2.e	Increase the County's resilience to drought.			✓
3.1.2.f	Increase food and energy security through local production and storage.			✓
Objective:				
3.1.3	A more coordinated emergency response system that includes clearly defined and mapped evacuation routes.			✓
Policy:				
3.1.3.a	Identify and expand shelter facilities and evacuation routes away from areas susceptible to natural hazards.			✓
Objective:				
3.1.4	A more educated and involved public that is aware of and prepared for natural hazards.			✓
Policies:				
3.1.4.a	Promote public education and involvement related to natural hazards awareness and preparedness.			✓
3.1.4.b	Coordinate a multi-agency effort to establish and promote a comprehensive public education program that will focus on practical approaches to preparedness, damage prevention, and hazard mitigation.			✓
Analysis: The goals, objectives, and policies listed above are not applicable to the proposed project.				

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
CHAPTER 4 – ECONOMIC DEVELOPMENT				
ECONOMIC DIVERSIFICATION				
Goal:				
4.1	Maui will have a balanced economy composed of a variety of industries that offer employment opportunities and well-paying jobs and a business environment that is sensitive to resident needs and the island's unique natural and cultural resources.			✓
Objective:				
4.1.1	A more diversified economy.			✓
Policies:				
4.1.1.a	Encourage an economy that is driven by innovation, research and development, and human resource development, including but not limited to, increasing technology- and knowledge-based sectors to be a major component in Maui County's economic base.			✓
4.1.1.b	Support the creation of new jobs and industries that provide a living wage.			✓
4.1.1.c	Facilitate and expedite permits and approvals.			✓
4.1.1.d	Develop linkages and partnerships among international research and development activities and Maui businesses.			✓
Objective:				
4.1.2	Increase activities that support principles of sustainability			✓
Policies:				
4.1.2.a	Support industries that are sustainable, and culturally and environmentally sensitive.			✓
4.1.2.b	Encourage and support local businesses.			✓
4.1.2.c	Substitute imports with locally-produced services and products where practicable.			✓
4.1.2.d	Support the development of economic development clusters in targeted industry sectors.			✓
4.1.2.e	Encourage all businesses to save energy, water, and other resources.			✓
Objective:				
4.1.3	Improve the island's business climate.			✓
Policies:				
4.1.3.a	Upgrade, maintain the quality of, and improve access to telecommunications infrastructure.			✓
4.1.3.b	Ensure an adequate supply of affordable workforce housing.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
4.1.3.c	Develop neighborhoods and communities that are attractive to the workforce of a diversified economy.			✓
4.1.3.d	Encourage, nurture, and reward entrepreneurship and innovation.			✓
4.1.3.e	Encourage employers to establish incentive programs. Support flexibility in workforce policies compatible with business and quality of life goals.			✓
4.1.3.f	Assist community development organizations with revitalization and development of neighborhoods and communities that are attractive to the workforce of a diversified economy.			✓
<u>Analysis:</u> The goals, objectives, and policies listed above are not applicable to the proposed project.				
TOURISM				
<u>Goal:</u>				
4.2	A healthy visitor industry that provides economic well-being with stable and diverse employment opportunities.			✓
<u>Objective:</u>				
4.2.1	Increase the economic contribution of the visitor industry to the island's environmental well-being for the island's residents' quality of life.			✓
<u>Policies:</u>				
4.2.1.a	Engage the visitor industry in the growth of emerging sectors where practicable.			✓
4.2.1.b	Support the implementation of the Maui County TSP, when consistent with the MIP.			✓
4.2.1.c	Focus economic growth in the visitor industry through enhanced visitor experiences and an emphasis on attracting higher-spending.			✓
4.2.1.d	Provide a rich visitor experience, while protecting the island's natural beauty, culture, lifestyles, and aloha spirit.			✓
4.2.1.e	Diversify the tourism industry by supporting appropriate niche activities such as ecotourism, cultural tourism, voluntourism, ag-tourism, health and wellness tourism, educational tourism, medical tourism, and other viable tourism-related businesses in appropriate locations.			✓
4.2.1.f	Recognize the important economic contributions that the visitor industry makes and support a healthy and vibrant visitor industry.			✓
4.2.1.g	Support the increased availability of kama'āina discount programs.			✓
<u>Objective:</u>				
4.2.2	Comprehensively manage future visitor-unit expansion.			✓
<u>Policies:</u>				
4.2.2.a	Mitigate the impact of tourism on the host culture, natural environment, and resident lifestyles.			✓
4.2.2.b	Allow, where permitted by the community plan, the development of business hotels and small, sensitively-designed inns.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
4.2.2.c	Manage impacts from transient vacation rentals, hotels, bed and breakfast units, timeshares, and resort condominiums on residential communities, public infrastructure, and community facilities.			✓
4.2.2.d	Discourage supplanting of existing island housing to visitor accommodations that may have a negative impact on long-term rental housing, price of housing, and price of land.			✓
4.2.2.e	Allow the designation of retreat/mini-conference centers in appropriate locations through the community plan process.			✓
4.2.2.f	Community plans should consider establishing standards such as limits on building size, room count, and the number of inns, if any, that will be allowed in small towns.			✓
Objective:				
4.2.3	Maximize residents' benefits from the visitor industry.			✓
Policies:				
4.2.3.a	Promote a desirable island population by striving to not exceed an island-wide visitor population of roughly 33 percent of the resident population.			✓
4.2.3.b	Use the required General Plan Annual Status Report to monitor trends related to residents and visitors.			✓
Analysis: The goals, objectives, and policies listed above are not applicable to the proposed project.				
AGRICULTURE				
Goal:				
4.3	Maui will have a diversified agricultural industry contributing to greater economic, food, and energy security and prosperity.			✓
Objective:				
4.3.1	Strive for at least 85 percent of locally-consumed fruits and vegetables and 30 percent of all other locally-consumed foods to be grown in-State.			✓
Policies:				
4.3.1.a	Strive to substitute food/agricultural product imports with a reliable supply of locally produced food and agricultural products.			✓
4.3.1.b	Facilitate and support the direct marketing/sale of the island's agricultural products to local consumers, through farmers markets and similar venues.			✓
4.3.1.c	Encourage growing a diverse variety of crops and livestock to ensure the stewardship of our land while safeguarding consumer safety.			✓
4.3.1.d	Work with the State to regulate and monitor genetically-modified-organism (GMO) crops to ensure the safety of all crops and label all GMO products.			✓
Objective:				
4.3.2	Maintain or increase agriculture's share of the total island economy.			✓
Policies:				
4.3.2.a	Encourage the export of the island's agricultural products to offshore markets.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
4.3.2.b	Support infrastructure investments at harbors, such as ferry service, airports, and other facilities for the rapid and cost-effective export of island-grown products.			✓
4.3.2.c	Encourage the continued viability of sugar cane production, or other agricultural crops, in central Maui and all of Maui Island.			✓
4.3.2.d	Work with the State to reduce excise taxes for commercial agricultural products produced within the State.			✓
4.3.2.e	Coordinate with appropriate State and Federal Departments and agencies, private shipping companies, and farmers associations to assist in the rapid and cost-effective export of Maui's agricultural products to off-island markets.			✓
Objective:				
4.3.3	Expand diversified agriculture production at an average annual rate of 4 percent.			✓
Policies:				
4.3.3.a	Promote the development of locally-grown and ecologically-sound biofuels, aquaculture, and forest products.			✓
4.3.3.b	Support the development of farming associations/cooperatives.			✓
4.3.3.c	Work with educational institutions and appropriate agencies to provide education and training for farm owners and entrepreneurs.			✓
Analysis: The goals, objectives, and policies listed above are not applicable to the proposed project.				
EMERGING SECTORS				
Goal:				
4.4	A diverse array of emerging economic sectors.			✓
Objective:				
4.4.1	Support increased investment and expanded activity in emerging industries.			✓
Policies:				
4.4.1.a	Support the development of and access to state-of-the-art voice, video, and data telecommunications systems and high-speed Internet.			✓
4.4.1.b	Attract and assist industries to compete in high technology activities such as those related to renewable energy, green technologies, diversified agriculture, ocean sciences, health sciences, space technologies, and other knowledge-based industries.			✓
4.4.1.c	Support new industries that are environmentally and culturally sensitive such as health and wellness, sports and outdoor activities, cultural activities, the arts, film-making, entertainment, and digital media.			✓
4.4.1.d	Support a sustainable, culturally sensitive, astronomy industry.			✓
4.4.1.e	Support the continued development of the Maui Research and Technology Park in Kihei, as a center for research and development, education, and diversified economic development, as provided by the Maui County Code.			✓

Maui Island Plan Goals, Objectives and Policies Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable		S	N/S	N/A
4.4.1.f	Work with appropriate organizations to support the development of high technology clusters around renewable energy, diversified agriculture, ocean sciences, health sciences, and other knowledge-based industries.			✓
Objective:				
4.4.2	Increase the development of renewable energy technologies that are supported by the local community.			✓
Policies:				
4.4.2.a	Support the expansion of the renewable energy sector and the use of solar, wind, wave, and biofuel technologies.			✓
4.4.2.b	Provide incentives to encourage renewable energy development, the use of green energy technologies, and energy conservation.			✓
4.4.2.c	Ensure an adequate supply of land and facilitate permitting to meet the needs for renewable energy technologies such as solar, wind, wave, biofuel, and other technologies, provided that environmental, view plane, and cultural impacts are addressed.			✓
4.4.2.d	Support the Maui County Energy Alliance Plan where consistent with the MIP.			✓
Analysis: The goals, objectives, and policies listed above are not applicable to the proposed project.				
SMALL BUSINESS DEVELOPMENT				
Goal:				
4.5	Small businesses will play a key role in Maui's economy.			✓
Objective:				
4.5.1	Increase the number of and revenue generated by small businesses and decrease the percentage of small business failures.			✓
Policies:				
4.5.1.a	Provide incentives and support for small businesses and entrepreneurs that incorporate sustainable technologies and practices into their operations, utilize local materials, or produce and sell locally-made goods or services.			✓
4.5.1.b	Assist traditional "mom and pop" business establishments.			✓
4.5.1.c	Reduce barriers to small business development.			✓
4.5.1.d	Require, where feasible, the government procurement of goods and services from locally-owned, small businesses.			✓
4.5.1.e	Support community markets and venues that sell locally-made produce, goods, and services.			✓
Analysis: The goals, objectives, and policies listed above are not applicable to the proposed project.				
HEALTH CARE SECTOR				
Goal:				
4.6	Maui will have a health care industry and options that broaden career opportunities that are reliable, efficient, and provide social well-being.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
Objective:				
4.6.1	Expand the economic benefits of the health care sector.			✓
Policies:				
4.6.1.a	Encourage expanded services at MMMC and at other medical facilities.			✓
4.6.1.b	Support expansion of federally qualified health centers with the direct involvement of the residents of the communities served.			✓
4.6.1.c	Support the use of multimedia as a means to provide healthcare information.			✓
4.6.1.d	Encourage digitalization of all diagnostic equipment at all facilities on Maui to enable sharing of data and more efficient use of limited provider workforce, consistent with data protection and patient privacy.			✓
4.6.1.e	Support the expansion of telemedicine.			✓
4.6.1.f	Encourage expansion and improved access to emergency care in all communities.			✓
Objective:				
4.6.2	Be more efficient in the delivery of health care services and in minimizing health care costs.			✓
Policies:				
4.6.2.a	Support expansion of health care providers and facilities to improve access to quality care throughout the island.			✓
4.6.2.b	Encourage the expansion of veteran health care services.			✓
4.6.2.c	Allow home-based out-patient medical care that does not interfere with surrounding neighborhoods.			✓
Objective:				
4.6.3.	Expand Maui's alternative health care services, including spiritual practices.			✓
Policies:				
4.6.3.a	Support efforts to promote alternative medicine.			✓
4.6.3.b	Allow small-scale home-alternative medicine businesses such as massage, chiropractic care, traditional Hawaiian healing, and acupuncture that do not interfere with surrounding neighborhoods.			✓
Analysis: The goals, objectives, and policies listed above are not applicable to the proposed project.				
EDUCATION AND WORKFORCE DEVELOPMENT				
Goal:				
4.7	Maui will have effective education and workforce development programs and initiatives that are aligned with economic development goals.			✓
Objective:				
4.7.1	Improve preschool and K-12 education to allow our youth to develop the skills needed to successfully navigate the 21st century.			✓

Maui Island Plan Goals, Objectives and Policies Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable		S	N/S	N/A
Objectives:				
4.7.1.a	Encourage the State to implement programs such as:			✓
	(1) Universally available preschool for children between the ages of one and five;			✓
	(2) Mandatory kindergarten;			✓
	(3) Mandatory K-5th grade classroom size limits of 1 teacher to 20 students;			✓
	(4) Mandatory nutrition programs; and			✓
	(5) Mandatory Native Hawaiian programs at all grade levels.			✓
4.7.1.b	Encourage the DOE to extend the school day by at least an hour.			✓
4.7.1.c	Encourage the State to increase funding for public education so that Hawai'i is among the top 10 states nationally as measured by investment per pupil.			✓
4.7.1.d	Encourage the State to ensure teacher certifications relate to effective delivery and improved student performances, and develop an industry experience/equivalency certification to assure our DOE students have access to career technical education and training.			✓
4.7.1.e	Encourage the UHMC to provide dormitory space for high school students.			✓
4.7.1.f	Encourage the development and implementation of curriculum on native Hawaiian history, culture, and practices, in consultation with native Hawaiian groups and associations.			✓
Objective:				
4.7.2	Encourage an increase in the number of certificate recipients and associate, bachelors, and graduate degrees conferred.			✓
Policies:				
4.7.2.a	Encourage the State to increase the number of articulation agreements between the UHMC and four-year universities, particularly the University of Hawai'i at Manoa.			✓
4.7.2.b	Encourage the State to expand accredited 2-year, 4-year, and graduate programs through the UHMC.			✓
4.7.2.c	Encourage the education and training of our residents to meet the needs of a diversified economy.			✓
4.7.2.d	Support education and training programs such as student internships, vocational training, and career development opportunities to ensure a highly skilled workforce			✓
4.7.2.e	Work with educational institutions to improve and expand access to education and training through multiple modes, including distance learning.			✓
Objective:				
4.7.3	Strive to ensure that more of Maui's jobs are developed in STEM-related sectors by 2030.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
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Policies:				
4.7.3.a	Support the development of STEM-related certificates and degrees at the two- and four year levels.			✓
4.7.3.b	Support the education initiatives of the Maui Agricultural Development Plan.			✓
4.7.3.c	Expand and seek funding for internships, mentoring, job shadowing, etc. to foster interest in health and green workforce careers.			✓
4.7.3.d	Work with MEDB, UHMC, and other similar organizations to expand internship/education programs to support STEM careers.			✓
4.7.3.e	Continue to partner with the MEDB and other similar organizations to recruit, assist, and retain emerging industries, research and development activities, and educational/workforce opportunities.			✓
Analysis: The goals, objectives, and policies listed above are not applicable to the proposed project.				
CHAPTER 5 – HOUSING				
Goal:				
5.1	Maui will have safe, decent, appropriate, and affordable housing for all residents developed in a way that contributes to strong neighborhoods and a thriving island community.			✓
Objective:				
5.1.1	More livable communities that provide for a mix of housing types, land uses, income levels, and age.			✓
Policies:				
5.1.1.a	Promote livable communities (compact/walkable/bikeable, access to transit) that provide for a mix of housing types and land uses, including parks, open space, and recreational areas.	✓		
5.1.1.b	Promote planning approaches that provide a mix of multifamily and single-family housing units to expand housing choices.			✓
5.1.1.c	Discourage gated communities.			✓
5.1.1.d	Provide incentives for the rehabilitation or adaptive reuse of historic structures to facilitate more housing choices.			✓
5.1.1.e	Use planning and regulatory approaches to provide higher housing densities.			✓
Objective:				
5.1.2	Better monitoring, evaluation, and refinement of affordable housing policy in conjunction with the economic cycle.			✓
Policies:				
5.1.2.a	Improve data on resident and nonresident housing.			✓
5.1.2.b	Utilize the following approaches to promote resident housing and to minimize offshore market impacts:			✓
	(1) Ensure that the future housing stock is composed of a mix of housing types (multifamily, small lots, ohana units, co-housing, cottage houses, etc.);			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
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(2)	Encourage new housing in proximity to jobs and services, in places that are conducive/affordable to island residents; and			✓
(3)	Explore taxation alternatives and building fee structures.			✓
Objective:				
5.1.3	Provide affordable housing, rental or in fee, to the broad spectrum of our island community.			✓
Policies:				
5.1.3.a	Consider regulations that can help keep affordable housing available at affordable rents.			✓
5.1.3.b	Seek to have ownership of affordable for-sale and rental housing vested in a non-profit community land trust, or other qualified housing provider, committed to keeping such housing affordable in perpetuity.			✓
5.1.3.c	Facilitate the use of public lands in urban areas that are suitable for affordable housing.			✓
5.1.3.d	Develop or support partnerships and initiatives that provide housing-related education/outreach.			✓
5.1.3.e	Support the continuing efforts of the County and its community partners to:			✓
	(1) Disseminate information on different housing/financial assistance programs (loans, grants, etc.) including information on housing rehabilitation/restoration/adaptive reuse;			✓
	(2) Provide housing-related counseling including budget, credit, and financial planning assistance; and			✓
	(3) Create and maintain a comprehensive/master list of available affordable housing to help residents secure a unit that satisfies their need.			✓
Objective:				
5.1.4	Provide infrastructure in a more timely manner to support the development of affordable housing.			✓
Policies:				
5.1.4.a	Prioritize the development of infrastructure that supports the development of affordable housing.			✓
5.1.4.b	Utilize appropriate financing approaches and assistance tools to encourage the development of infrastructure and public facilities.			✓
5.1.4.c	Tailor infrastructure requirements to correspond with appropriate level-of-service standards to help control housing costs and to maintain safety.			✓
Objective:				
5.1.5	A wider range of affordable housing options and programs for those with special needs.			✓
Policies:				
5.1.5.a	Ensure that residents with special needs have access to appropriate housing.			✓
5.1.5.b	Encourage housing to be built or rehabilitated to allow the elderly and those with special needs to live in their homes.			✓

Maui Island Plan Goals, Objectives and Policies Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable		S	N/S	N/A
5.1.5.c	Ensure and facilitate programs to assist those with special needs from becoming homeless.			✓
5.1.5.d	Promote programs that stimulate the production of sustainable homeless shelters and alternative housing technologies.			✓
5.1.5.e	Support programs that offer home modification counseling on low-interest retrofit loans and grants to those with special needs.			✓
Objective:				
5.1.6	Reduce the cost to developers of providing housing that is affordable to families with household incomes 160 percent and below of annual median income.			✓
Policies:				
5.1.6.a	Support fast-track processing procedures for the following housing-related entitlements: affordable housing projects/units; indigenous Hawaiian housing/units; and special-needs housing units (seniors, disabled, homeless, etc.).			✓
5.1.6.b	Require the construction of affordable for-sale and rental housing units as part of the construction of new housing developments.			✓
5.1.6.c	Offer extra incentives in boom periods and withdraw incentives during slack periods.			✓
Objective:				
5.1.7	Increased preservation and promotion of indigenous Hawaiian housing and architecture.			✓
Policies:				
5.1.7.a	Preserve, promote, and give priority to Hawaiian housing/architecture forms to preserve Hawaiian culture.			✓
5.1.7.b	Provide for indigenous architecture as an allowable structure for native Hawaiian uses to include hula and lā'au lapa'au.			✓
Analysis: The proposed relocation of the transit hub is supportive of the MIP Chapter 5 Housing planning category. The new location will promote a livable community by providing easy access for pedestrians and bicycles from surrounding residential apartments, a supermarket, businesses, churches, a public library, and the QKC.				
CHAPTER 6 – INFRASTRUCTURE AND PUBLIC FACILITIES				
SOLID WASTE				
Goal:				
6.1	Maui will have implemented the ISWMP thereby diverting waste from its landfills, extending their capacities.			✓
Objective:				
6.1.1	Meet our future solid waste needs with a more comprehensive planning and management strategy.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
Policies:				
6.1.1.a	Update and publicize the ISWMP every ten years.			✓
6.1.1.b	Strengthen inter-agency coordination including Planning and Environmental Management departments.			✓
6.1.1.c	Divert waste from the landfills and educate the public about the recommendations of the ISWMP.			✓
6.1.1.d	Minimize future active, unlined landfill cells to the extent feasible.			✓
Objective:				
6.1.2	Divert at least 60 percent of solid waste from the island's landfills.			✓
Policies:				
6.1.2.a	Require residents and commercial enterprises that generate waste to pay a fair proportion of disposal costs.			✓
6.1.2.b	Encourage environmentally safe waste-to-energy solutions.			✓
6.1.2.c	Facilitate the reduction of solid waste generated by packaging, food service products, construction waste, etc.			✓
6.1.2.d	Educate residents and visitors about the impacts of and methods to reduce, reuse, and recycle.			✓
6.1.2.e	Discourage the disposal of landfill leachate by diversion to wastewater treatment plants, where practicable.			✓
Analysis: The goals, objectives, and policies listed above are not applicable to the proposed project.				
WASTEWATER				
Goal:				
6.2	Maui will have wastewater systems that comply with or exceed State and Federal regulations; meet levels-of-service needs; provide adequate capacity to accommodate projected demand; ensure efficient, effective, and environmentally sensitive operation; and maximize wastewater reuse where feasible.			✓
Objective:				
6.2.1	A wastewater planning program capable of efficiently providing timely and adequate capacity to service projected demand where economically feasible and practicable.			✓
Policies:				
6.2.1.a	Encourage the use of renewable energy in support of wastewater treatment facilities.			✓
6.2.1.b	Focus the expansion of wastewater systems to accommodate planned growth consistent with the MIP Directed Growth Strategy.			✓

Maui Island Plan Goals, Objectives and Policies Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable		S	N/S	N/A
6.2.1.c	Establish new wastewater treatment plant(s) outside the tsunami zone.			✓
Objective:				
6.2.2	Adequate levels of wastewater service with minimal environmental impacts.			✓
Policies:				
6.2.2.a	Meet or exceed all State and Federal standards regulating wastewater disposal or reuse.			✓
6.2.2.b	Encourage tertiary treatment for all municipal wastewater that is disposed through deep injection wells. Phase out all municipal and private injection wells in coordination with water reuse programs, where feasible, by 2020.			✓
6.2.2.c	Improve and upgrade the County's existing wastewater collection, treatment, and reuse facilities consistent with current and future plans and the County's CIP.			✓
6.2.2.d	Maintain an ongoing sewer inspection program for public and private multi-user systems to identify potential problems and forecast each system's residual life.			✓
6.2.2.e	Require all new developments to fund system improvements in proportion to the development impact and in accordance with the County's wastewater functional plan.			✓
6.2.2.f	Require appropriate funding mechanisms, such as a sinking fund, to adequately maintain or replace aging water-system components.			✓
6.2.2.g	Strongly encourage the phase out of cesspools.			✓
Objective:				
6.2.3	Increase the reuse of wastewater.			✓
Policies:				
6.2.3.a	Strengthen coordination between the Department of Water Supply (DWS) and the WWRD to promote reuse/recycling of wastewater.			✓
6.2.3.b	Expand the reuse of wastewater from the Central Maui, Kihei, Lahaina, and other wastewater systems.			✓
Analysis: The goals, objectives, and policies listed above are not applicable to the proposed project.				
WATER				
Goal:				
6.3	Maui will have an environmentally sustainable, reliable, safe, and efficient water system.			✓
Objective:				
6.3.1	More comprehensive approach to water resources planning to effectively protect, recharge, and manage water resources including watersheds, groundwater, streams, and aquifers.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
Policies:				
6.3.1.a	Ensure that DWS actions reflect its public trust responsibilities toward water.			✓
6.3.1.b	Ensure the WUDP implements the State Water Code and MIP's goals, objectives, and policies.			✓
6.3.1.c	Regularly update the WUDP, to maintain compliance with the General Plan.			✓
6.3.1.d	Ensure that the County's CIP for water-source development is consistent with the WUDP and the MIP.			✓
6.3.1.e	Where desirable, retain and expand public ownership and management of watersheds and fresh-water systems.			✓
6.3.1.f	Encourage and improve data exchange and coordination among Federal, State, County, and private land use planning and water resource management agencies.			✓
Objective:				
6.3.2	Increase the efficiency and capacity of the water systems in striving to meet the needs and balance the island's water needs.			✓
Policies:				
6.3.2.a	Ensure the efficiency of all water system elements including well and stream intakes, water catchment, transmission lines, reservoirs, and all other system infrastructure.			✓
6.3.2.b	Encourage increased education about and use of private catchment systems where practicable for nonpotable uses.			✓
6.3.2.c	Maximize the efficient use of reclaimed wastewater to serve nonpotable needs.			✓
6.3.2.d	Work with appropriate State and County agencies to achieve a balance in resolving the needs of water users in keeping with the water allocation priorities of the MIP.			✓
6.3.2.e	Ensure water conservation through education, incentives, and regulations.			✓
6.3.2.f	Acquire and develop additional sources of potable water.			✓
Objective:				
6.3	Improve water quality and the monitoring of public and private water systems.			✓
Policy:				
6.3.3.a	Protect and maintain water delivery systems.			✓
Analysis: The goals, objectives, and policies listed above are not applicable to the proposed project.				

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
TRANSPORTATION				
Goal:				
6.4	An interconnected, efficient, and well-maintained, multimodal transportation system.	✓		
Objective:				
6.4.1	Provide for a more integrated island-wide transportation and land use planning program that reduces congestion and promotes more efficient (transit-friendly) land use patterns.			✓
Policies:				
6.4.1.a	Plan for an integrated multi-modal transportation system comprised of public transit, bicycle, pedestrian, automobile, and other transportation modes.	✓		
6.4.1.b	Refocus transportation investment from the construction of additional roadways only for the automobile to the expansion of a multimodal transportation system.			✓
6.4.1.c	Encourage the use of "complete streets" design methods.			✓
6.4.1.d	Encourage employers to implement TDM strategies.			✓
Objective:				
6.4.2	Safe, interconnected transit, roadway, bicycle, equestrian, and pedestrian network.			✓
Policies:				
6.4.2.a	Ensure transit-, roadway-, and pedestrian-facilities design and level-of-service standards respect the unique character of our communities.			✓
6.4.2.b	Prioritize transportation improvements list to cost-effectively meet existing and future needs consistent with the MIP.			✓
6.4.2.c	Require new development, where appropriate, to integrate sidewalks, pathways, bikeways, and transit infrastructure into new commercial and residential projects while enhancing community character.	✓		
6.4.2.d	Identify and improve hazardous and substandard sections of roadways, drainage infrastructure, and bridges, provided that the historical integrity of the roads and bridges are protected.			✓
6.4.2.e	Consider identification, acquisition where appropriate, and utilization of abandoned right of-ways for bikeways, pedestrian pathways, and open-space networks.			✓
6.4.2.f	Support the implementation of the <i>Central Maui Pedestrian & Bicycle Master Plan</i> (March 2012), when consistent with the MIP.			✓
Objective:				
6.4.3	An island-wide, multimodal transportation system that respects and enhances the natural environment, scenic views, and each community's character.	✓		

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
Policies:				
6.4.3.a	Ensure that the roadway and transit alignments respect the natural environment and scenic views.			✓
6.4.3.b	Ensure that roadways and transit systems in rural areas and small towns enhance community character.			✓
6.4.3.c	Design all transit systems to respect visual corridors and Maui's character.			✓
Analysis: The proposed relocation of the transit hub will ensure continued efficient bus service for the community. The facility design and level-of-service standards will respect the community character. Cost-effective improvements will be made to meet the existing need, consistent with the MIP. New sidewalks along the project's Vevau Street frontage will be constructed to insure pedestrian connectivity to existing sidewalks surrounding the project. Therefore, the proposed project is supportive of the MIP Chapter 6 Transportation planning category.				
TRANSIT				
Goal:				
6.5	An island-wide transit system that addresses the needs of residents and visitors and contributes to healthy and livable communities.			✓
Objective:				
6.5.1	An integrated transit system that better serves all mobility needs of Maui's residents and visitors.			✓
Policies:				
6.5.1.a	Maximize access to public transit in town centers, commercial districts, and employment centers.	✓		
6.5.1.b	Expand regional and inter-regional transit services, where appropriate, in heavily traveled corridors and within communities			✓
6.5.1.c	Increase the frequency of current service, add additional bus routes as demand requires, and transition to nonpolluting transit vehicles, as funding permits.			✓
6.5.1.d	Provide adequate transit infrastructure (e.g., bus pullouts, waiting benches and shelters, signs) along existing and future transit right-of-ways.	✓		
6.5.1.e	Require new development where appropriate, to provide right-of-ways (ROWs) to accommodate transit circulation and support facilities.			✓
6.5.1.f	Identify, protect, and preserve, or acquire corridors for future inter-community transit use, including but not limited to, rail and also multimodal use corridors.			✓
6.5.1.g	Establish transit corridors by planning for and securing right-of-way when appropriate for alternative modes of transportation (such as rail and water ferry service).			✓
6.5.1.h	Pursue improvements and upgrades to the existing transit system consistent with updated MDOT planning studies/transit plans (within the framework of comprehensive island-wide multimodal transportation plans).	✓		
6.5.1.i	Increase inter-agency coordination between the Department of Planning, State Department of Transportation, County Department of Public Works, and other applicable agencies.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
Objective:				
6.5.2	Plan for a more diversified and stable funding base to support transportation goals.			✓
Policies:				
6.5.2.a	Support alternative methods and sources of funding transportation improvements (including impact fees, higher taxes, fare adjustments, dedicated sources of funding, and assessments).			✓
6.5.2.b	Collaborate with public-private entities or nonprofit organizations to reduce public transit operational expenses.			✓
6.5.2.c	Coordinate with appropriate Federal, State, and County agencies to fund transportation projects in areas where growth is anticipated.			✓
Analysis: The proposed Transit Hub Relocation Project will provide an enhanced transit hub while maintaining service for the community and is supportive of the MIP Chapter 6 Transit category. The proposed location will maximize access to public transit for the surrounding residential, commercial, and civic areas.				
PARKS				
Goal:				
6.6	Maui will have a diverse range of active and passive recreational parks, wilderness areas, and other natural-resource areas linked, where feasible, by a network of greenways, bikeways, pathways, and roads that are accessible to all.			✓
Objective:				
6.6.1	More effective, long-range planning of parks and recreation programs able to meet community needs.			✓
Policies:				
6.6.1.a	Support, consistent with the MIP, the implementation of open-space and recreational plans, such as the <i>Pali to Puamana Parkway Master Plan</i> and the <i>Upcountry Greenways Master Plan</i> .			✓
6.6.1.b	Utilize the ahupua'a approach by integrating mauka-to-makai natural landscapes into an island-wide parks and recreation functional plan.			✓
6.6.1.c	Provide a balanced mix of passive and active parks, including neighborhood, community, and regional parks, in each community plan area.			✓
6.6.1.d	Support the expansion of Haleakala National Park, where supported by affected communities.			✓
6.6.1.e	Support lo'i and dryland taro restoration in County, State, and Federal parks.			✓
6.6.1.f	Encourage private landowners to dedicate land to Federal, State, or County governments, or nonprofit land trusts, for parks and open-space protection consistent with the MIP.			✓
6.6.1.g	Strengthen inter-agency coordination including State and County departments, such as resolving joint use of facilities and properties.			✓
6.6.1.h	Work with the State to prepare and implement a master management plan for 'Āhihi-Kīna'u and La Perouse-Keone'ō'io Bay to Kanaloa Point region.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
Objective:				
6.6.2	Achieve parks and recreation opportunities to meet the diverse needs of our community.			✓
Policies:				
6.6.2.a	Establish appropriate level-of-service standards at the neighborhood, community, and regional levels.			✓
6.6.2.b	Identify and acquire parks and recreational facilities that address existing park inadequacies and complement and enhance neighborhoods, communities, and natural land features.			✓
6.6.2.c	Design park facilities to preserve and enhance natural site characteristics, maximize views, protect environmental and cultural sites, and minimize water demands.			✓
6.6.2.d	Acquire lands along the shoreline, between coastal roadways and the ocean.			✓
6.6.2.e	Encourage the development of regional parks, district parks, and greenways in a manner that helps to contain sprawl, provide separation between distinct communities, or offer open space within urban communities.			✓
6.6.2.f	Require large master-planned communities that incorporate a mixture of park facilities pursuant to parks standards and functional plans.			✓
6.6.2.g	Support appropriate areas for cultural parks (e.g., Kepaniwai) in each community plan area.			✓
6.6.2.h	Incorporate community input to determine the appropriate location, design, and long-term stewardship of parks and recreation facilities.			✓
6.6.2.i	Manage commercial activities at public parks to minimize impacts to residents.			✓
6.6.2.j	Support public-private partnerships to implement the acquisition and development of parks when consistent with the General Plan.			✓
6.6.2.k	Support a coordinated program to improve, operate, and maintain joint-use facilities and grounds.			✓
Objective:				
6.6.3	An expanded network of greenways, trails, pathways, and bikeways.			✓
Policies:				
6.6.3.a	Link existing and future park sites, natural areas, the shoreline, and residential areas with a network of bikeways, pedestrian paths, trails, and greenways.			✓
6.6.3.b	Support the implementation of plans and programs that facilitate pedestrian mobility and access to active and passive recreation areas and sites.			✓
6.6.3.c	Collaborate with the State and private land owners to ensure perpetual access and proper stewardship of traditional trails and access systems.			✓
6.6.3.d	Facilitate the development of well-managed noncommercial campgrounds throughout the island.			✓
6.6.3.e	Consider requiring commercial bike rental businesses to provide funding that supports a mauka-to-makai Haleakalā bikeway improvement program.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
6.6.3.f	Ensure ADA compliance and seek opportunities to make all parks and recreational facilities accessible to people with disabilities.			✓
<u>Analysis:</u> The goals, objectives, and policies listed above are not applicable to the proposed project.				
PUBLIC FACILITIES				
<u>Goal:</u>				
6.7	Maui will have adequate public facilities that meet the diverse needs of residents.			✓
<u>Objective:</u>				
6.7.1	More effective planning for public facilities to meet community needs.			✓
<u>Policies:</u>				
6.7.1.a	Ensure the development and update of island-wide public facilities functional plans that incorporate prioritized facilities, programs, and a financial component.			✓
6.7.1.b	Establish appropriate level-of-service standards for public facilities provided by the County.			✓
6.7.1.c	Pursue improvements and upgrades of County public facilities consistent with the public facilities functional plan.			✓
6.7.1.d	Recognize Wailuku Town as Maui's Civic Center and support the revitalization of the Civic Center District by consolidating government office spaces, enhancing landscape beautification, and providing adequate public parking.			✓
6.7.1.e	Support, with community input, the relocation of the Maui Community Correctional Center from Wailuku to an appropriate location in Pu'unēhē.			✓
6.7.1.f	Adequately plan and fund public safety facilities (fire, police, ambulance, civil defense) to meet community needs.			✓
6.7.1.g	Increase joint facilities utilization and program coordination between State and County agencies such as baseyards, communication centers, recreational facilities, etc., where feasible.			✓
6.7.1.h	Focus future expenditures for additional government office space, parking, and related facilities in Wailuku's Civic Center District.			✓
6.7.1.i	Encourage continuous and safe walkways for children within one mile of each school.			✓
6.7.1.j	Encourage public-private partnerships to identify and resolve public facility plan shortcomings when consistent with the General Plan.			✓
6.7.1.k	Incorporate community/area residents' input to determine the appropriate location and design of public facilities.			✓
<u>Analysis:</u> The goals, objectives, and policies listed above are not applicable to the proposed project.				

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
SCHOOLS AND LIBRARIES				
Goal:				
6.8	Maui will have school and library facilities that meet residents' needs and goals.			✓
Objective:				
6.8.1	Assist in providing appropriate school and library facilities in a timely manner and in strategic locations.			✓
Policies:				
6.8.1.a	Work in partnership with all educational institutions to meet current and future needs including appropriate location, timing, and design of future facilities.			✓
6.8.1.b	Allow for the expansion and intensification of uses at the UHMC including satellite campuses operating in remote areas.			✓
6.8.1.c	Encourage the DOE to build and maintain smaller, community-oriented schools.			✓
6.8.1.d	Encourage better cooperation by the State and County for use of State and County facilities.			✓
6.8.1.e	Encourage the State to upgrade, modernize, and expand school facilities, including those in remote communities.			✓
6.8.1.f	Work with the State to develop a master plan for the expansion of UHMC in accordance with the MIP.			✓
6.8.1.g	Support partnerships (public/private/nonprofit) to build and staff new schools and improve existing facilities.			✓
6.8.1.h	Work with the BOE HSPLS to provide centralized library services (including telecommunications) to all areas of Maui.			✓
6.8.1.i	Work with the State to expedite planning and construction of Kīhei High School, including the integration of the high school with the Maui Research and Technology Park.			✓
6.8.1.j	Work with the State to identify intermediate school sites in Central Maui and other areas where needed.			✓
Objective:				
6.8.2	Provide a more expansive network of safe and convenient pedestrian-friendly streets, trails, pathways, and bikeways between neighborhoods and schools where appropriate.			✓
Policies:				
6.8.2.a	Encourage the State to build new school facilities in appropriate locations that minimize time and distance for students to travel to and from school.			✓
6.8.2.b	Encourage the State to implement the Safe Routes to School initiative with funding commitments to help the County plan and fund projects that ensure safe access routes to school.			✓
Analysis: The goals, objectives, and policies listed above are not applicable to the proposed project.				

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
HEALTH CARE				
Goal:				
6.9	All of Maui residents will have the best possible health care to include healthy living, disease prevention, as well as acute and long-term care.			✓
Objective:				
6.9.1	Greater autonomy to the Maui region in their efforts to improve medical care on the island.			✓
Policies:				
6.9.1.a	Encourage the State to give greater autonomy to the Maui region in their efforts to improve medical care on the island.			✓
6.9.1.b	Support innovative financial solutions, such as capital partnerships, joint ventures, and consolidations for MMMC and other health institutions.			✓
6.9.1.c	Support MMMC as a major core medical center that provides a greater range of services.			✓
6.9.1.d	Support the immediate development of a critical access hospital in West Maui.			✓
6.9.1.e	Support the expansion of regional critical-access facilities, where allowed by Federal regulations.			✓
6.9.1.f	Improve medical service to remote and outlying regions.			✓
6.9.1.g	Support transportation services for dialysis patients and community dialysis programs.			✓
6.9.1.h	Work with the State to determine the feasibility of appropriate medical facilities in South Maui and Hāna, including the possible reestablishment of a small community hospital in Hāna, the establishment of a hospital in South Maui, and assist the State in securing funding to meet Maui's health care needs.			✓
Objective:				
6.9.2	An expansion of long-term care facilities and long-term care alternatives to meet the needs of our aging population.			✓
Policies:				
6.9.2.a	Support efforts to increase Maui's long-term care bed capacity to cover current and future needs, close to large population centers.			✓
6.9.2.b	Recognize that facilities for low-income elders who need long-term care are a needed form of affordable and subsidized housing.			✓
6.9.2.c	Evaluate the needs of the long-term disabled and provide planning support for their care, if there is a need for long-term care facilities.			✓
6.9.2.d	Consider long-term care facilities as a major potential employment base and encourage the recruitment and training of potential employees.			✓
Objective:				
6.9.3	More support to home-care and community-based programs so they become alternatives to traditional nursing homes.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
Policies:				
6.9.3.a	Support the establishment of a program to assist the elderly and people with disabilities to remain in their homes or in a home-like setting.			✓
6.9.3.b	Support the establishment of senior and adult-day-care centers and senior housing.			✓
6.9.3.c	Continue to support existing senior centers (e.g. Kaunoa), and establish new senior centers that will provide day-care sites and programs for the disabled and elderly.			✓
6.9.3.d	Support funding alternatives for community-based services that assist home-care efforts.			✓
6.9.3.e	Encourage the State to adopt the recommendations contained within the Legislative Reference Bureau's report entitled "Gimme a Break: Respite Care Services in Other States," (December 2007) where appropriate, feasible, and consistent with the MIP.			✓
Objective:				
6.9.4	Improved preventative medicine and primary health care.			✓
Policies:				
6.9.4.a	Develop and utilize health-status benchmarks to measure prevention and primary health care service delivery.			✓
6.9.4.b	Support programs that provide family planning assistance.			✓
Analysis: The goals, objectives, and policies listed above are not applicable to the proposed project.				
ENERGY				
Goal:				
6.10	Maui will meet its energy needs through local sources of clean, renewable energy, and through conservation.	✓		
Objective:				
6.10.1	Reduce fossil fuel consumption. Using the 2005 electricity consumption as a baseline, reduce by 15 percent in 2015; 20 percent by 2020; and 30 percent by 2030.	✓		
Policies:				
6.10.1.a	Support energy efficient systems, processes, and methods in public and private operations, buildings, and facilities.	✓		
6.10.1.b	Support the Maui Solar Rooftop initiative.	✓		
6.10.1.c	Support Hawai'i Energy and other Public Utility Commission (PUC) approved energy efficiency programs.	✓		

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
Objective:				
6.10.2	Increase the minimum percentage of electricity obtained from clean, renewable energy sources. By 2015, more than 15 percent of Maui's electricity will be produced from locally-produced, clean, renewable energy sources, 25 percent by 2020, and 40 percent by 2030.			✓
Policies:				
6.10.2.a	Evaluate available renewable energy resource sites and applicable technologies.			✓
6.10.2.b	Encourage the installation of renewable energy systems, where appropriate.			✓
6.10.2.c	Support the establishment of new renewable energy facilities at appropriate locations provided that environmental, view plane, and cultural impacts are addressed.			✓
6.10.2.d	Encourage all new County facilities completed after January 1, 2015, to produce at least 15 percent of their projected electricity needs with onsite renewable energy.			✓
Objective:				
6.10.3	Increased use of clean, renewable energy.			✓
Policies:				
6.10.3.a	Support efforts in the PUC to upgrade Maui's power grid to integrate renewable energy from multiple sources and wheeling of electricity.			✓
6.10.3.b	Encourage the PUC to work with the County to implement and expedite community supported renewable energy projects.			✓
6.10.3.c	Encourage efforts to produce more renewable energy using distributed generation.			✓
6.10.3.d	Encourage import substitution by MECO and the broader community to become more self-sufficient in energy production.			✓
6.10.3.e	Educate the public on the economic and environmental benefits from the increased use of renewable energy.			✓
6.10.3.f	Encourage support from the Federal government, State, and the private sector for Maui's renewable energy objectives.			✓
6.10.3.g	Encourage incentives to support the development and use of renewable energy.			✓
Objective:				
6.10.4	More efficient distribution of power throughout the island while preserving island beauty.			✓
Analysis: As of January 1, 2015, County facilities are encouraged to produce 15 percent of energy demand with onsite renewable energy. The MDOT Transit Hub Relocation plans do not include onsite energy production at the present time. However, should the opportunity arise for onsite energy production, measures will be taken to include such plan.				

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
HARBORS AND AIRPORT				
Goal:				
6.11	Maui will have harbors and airports that will efficiently, dependably, and safely facilitate the movement of passengers and cargo.			✓
Objective:				
6.11.1	Upgraded harbor facilities to handle larger volumes of freight and passengers and additional small boat harbors.			✓
Policies:				
6.11.1.a	Support the expansion and upgrade of Kahului Harbor through the following, provided that any expansion is respectful of cultural practices and existing recreational uses and supports improved water quality:			✓
	(1) Accommodate increasing volumes of cargo;			✓
	(2) Provide deeper pier depths and greater fuel-receiving and storing capacities; and			✓
	(3) Ensure safe and efficient work areas, including separating passenger operations from fuel and cargo operations.			✓
6.11.1.b	Work with public and private entities to provide adequate pier slips, utilities, repair facilities, and waste-disposal capabilities.			✓
6.11.1.c	Encourage the State to safely separate passenger (cruise and ferry) operations from hazardous bulk fuels and heavy cargo transporting operations, while not decreasing harbor's capacity to safely support various recreational uses.			✓
6.11.1.d	Encourage the State to develop cargo inspecting sites and facilities for efficient cargo and container processing and transportation and to prevent alien species entry.			✓
6.11.1.e	Support a State and County task force to study the feasibility of a second commercial harbor on Maui.			✓
Objective:				
6.11.2	Establish more economically thriving and environmentally sensitive small boat harbors accommodating resident and business activity, including fishing, recreation, and tour boats.			✓
Policy:				
6.11.2.a	Provide for needed shore-side facilities and capabilities to support small boat harbor users (e.g. repair facilities, parking, cold storage, and mass-transit connections).			✓
Objective:				
6.11.3	Upgraded airport facilities and navigation aids to serve the needs of passengers, freight movements, and general aviation.			✓
Policies:				
6.11.3.a	Protect the island's airports from encroaching urbanization that may negatively impact the airport operations.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
6.11.3.b	Support State efforts to improve Kahului Airport operations to better serve passenger and cargo needs.			✓
6.11.3.c	Support State efforts to identify sites and plan to relocate and accommodate small and rotary wing aircraft.			✓
6.11.3.d	Encourage the State to improve airport safety including lighting, fuel transmission, fuel safety, etc.			✓
6.11.3.e	Consider expansion of rental car facilities in West and South Maui.			✓
6.11.3.f	Consider expansion of mass transit (bus, fixed-rail, shuttle, and taxis, bicycle, and pedestrian facilities) to and from Kahului Airport and not limited to passenger movements (allowing for luggage and cargo).			✓
6.11.3.g	Encourage the State to maintain airport capacity and to encourage more responsive air services to Hāna and Kapalua.			✓
<u>Analysis:</u> The goals, objectives, and policies listed above are not applicable to the proposed project.				
CHAPTER 7 – LAND USE				
AGRICULTURAL LANDS				
<u>Goal:</u>				
7.1	Maui will have a prosperous agricultural industry and will protect agricultural lands.			✓
<u>Objective:</u>				
7.1.1	Significantly reduce the loss of productive agricultural lands.			✓
<u>Policies:</u>				
7.1.1.a	Allow, where appropriate, the clustering of development on agricultural lands when approved as a CSD plan or similar approval mechanism.			✓
7.1.1.b	Require, where appropriate, the review and approval of CSD plans prior to the subdivision of agricultural land.			✓
7.1.1.c	Discourage developing or subdividing productive agricultural lands for residential uses in which the residence would be the primary use and any agricultural activities would be secondary uses.			✓
7.1.1.d	Consider requirements for public notification and review of the subdivision of agricultural land into four or more lots.			✓
7.1.1.e	Focus urban growth, to the extent practicable, away from productive and important agricultural lands.			✓
7.1.1.f	Strongly discourage the conversion of productive and important agricultural lands (such as sugar, pineapple, and other produce lands) to rural or urban use, unless justified during the General Plan update, or when other overriding factors are present.			✓
7.1.1.g	Further develop the requirements for agricultural assessments found under Section 19.510, MCC.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
7.1.1.h	Provide incentives for landowners to preserve and protect agricultural lands from development through the use of TDR/PDR, tax credits, easement programs, or similar means.			✓
7.1.1.i	Promote the use of U.S.D.A. Farm and Ranch Lands Protection Program grants to fund the acquisition of conservation easements on eligible agricultural lands.			✓
7.1.1.j	Require all major developments adjacent to agricultural lands to provide an appropriate and site-specific agricultural protection buffer as part of a required site plan.			✓
7.1.1.k	Support and promote the viability of Maui's agricultural businesses through property tax incentives and other programs and subsidies.			✓
7.1.1.l	Encourage future community plan efforts to identify lands within the County Agricultural zoning district that are primarily being used for large-lot residential or rural use and consider such lands for reclassification to an appropriate County Rural zone.			✓
<u>Objective:</u>				
7.1.2	Reduction of the island's dependence on off-island agricultural products and expansion of export capacity.			✓
<u>Policies:</u>				
7.1.2.a	Coordinate with the agricultural community, associations/community groups, agricultural landowners, and the State to designate IALs.			✓
7.1.2.b	Support an incentive package for productive Agricultural Lands which aims to ensure agricultural viability for small- and commercial-scale agricultural producers.			✓
7.1.2.c	Actively look to acquire land and provide infrastructure to expand the agricultural park and establish new agricultural parks.			✓
7.1.2.d	Support the designation of a research and development area within agricultural parks to help farmers stay attuned to new technology and research.			✓
7.1.2.e	Support local cooperative extension services to facilitate timely technology transfer opportunities.			✓
7.1.2.f	Support plans and programs to develop additional sources of water for irrigation purposes.			✓
7.1.2.g	Consider appropriate subdivision requirements (gravel roads, above-ground utilities, etc.) in those subdivisions creating Agricultural Parks where lots are limited to agricultural production with no dwellings.			✓
7.1.2.h	Support the recommendations, policies, and actions contained within the Maui Agricultural Development Plan, July 2009, when consistent with the MIP.			✓
7.1.2.i	Allow water and tax discounts for legitimate farming operations on rural and agricultural land.			✓
7.1.2.j	Give priority in delivery and use of agricultural water and agricultural land within County agricultural parks to cultivation of food crops for local consumption.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
7.1.2.k	Support programs that control pests and diseases that affect agriculture.			✓
7.1.2.l	Support the development of training and apprenticeship programs to encourage an adequate supply of agricultural workers.			✓
Objective:				
7.1.3	Support and facilitate connectivity between communities.			✓
Policies:				
7.1.3.a	Evaluate the impact of gated communities on interconnectivity.			✓
7.1.3.b	Discourage land use and urban design that impedes interconnectivity between adjacent communities.			✓
Analysis: The goals, objectives, and policies listed above are not applicable to the proposed project.				
RURAL AREAS				
Goal:				
7.2	Maui will have a rural landscape and lifestyle where natural systems, cultural resources and farm lands are protected and development enhances and compliments the viability and character of rural communities.			✓
Objective:				
7.2.1	Reduce the proliferation and impact of residential development outside of urban, small town, and rural growth boundaries.			✓
Policies:				
7.2.1.a	Focus development to areas inside urban, small town, and rural growth boundaries to preserve natural, cultural, and agricultural resources.			✓
7.2.1.b	Encourage cluster development with a mandatory buffer requirement/clear edge at the interface of country towns, agricultural uses, and surrounding rural landscapes.			✓
7.2.1.c	Encourage or require, where appropriate, CSDs and the use of green spaces/natural separations to protect the character of rural landscapes.			✓
7.2.1.d	Encourage basic goods/services in business country towns.			✓
7.2.1.e	Allow for mixed uses, including residential uses, within Business Country Town Districts.			✓
7.2.1.f	Encourage the use of alternative stormwater management techniques that minimize land disturbance and preserve natural drainage features.			✓
7.2.1.g	Encourage green belts, open space buffers, and riparian zones to minimize conflicts between agriculture and residential uses.			✓
7.2.1.h	Evaluate the impact of gated communities on inter-connectivity.			✓
Objective:				
7.2.2	More appropriate service/infrastructure standards to enhance and protect the island's rural character and natural systems.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
Policies:				
7.2.2.a	Minimize impermeable surfaces within rural areas.			✓
7.2.2.b	Protect and support the character, economic viability, and historic integrity of Maui's small towns.			✓
7.2.2.c	Use infrastructure, public service, and design standards that are appropriate to rural areas.			✓
7.2.2.d	Discourage land use and urban design that impede interconnectivity between adjacent communities.			✓
Analysis: The goals, objectives, and policies listed above are not applicable to the proposed project.				
URBAN AREAS				
Goal:				
7.3	Maui will have livable human-scale urban communities, an efficient and sustainable land use pattern, and sufficient housing and services for Maui residents.			✓
Objective:				
7.3.1	Facilitate and support a more compact, efficient, human-scale urban development pattern.			✓
Policies:				
7.3.1.a	Ensure higher-density compact urban communities, infill, and redevelopment of underutilized urban lots within Urban Growth Boundaries.	✓		
7.3.1.b	Maintain a distinct separation between communities, such as but not limited to, Wailuku and Waikapū; Wailuku and Waihe'e; Pukalani and Makawao; Pukalani and Kula; Makawao and Hāli'imaile; Lahaina and Kā'anapali; Kīhei and Mā'alaea; and Mā'alaea and Waikapū, to protect the character and identity of Maui's communities.			✓
7.3.1.c	Strengthen evaluation requirements for new urban expansion, new towns, and major urban infill projects within urban growth areas. Tailor submittal requirements to reflect the impact or scale of different projects.			✓
7.3.1.d	Ensure future amendments to urban growth boundaries achieve the following: (1) provide a beneficial extension of the existing community; (2) are in areas where it is cost-effective to provide and operate infrastructure/public service facilities; and (3) do not promote automobile-oriented land use patterns.			✓
7.3.1.e	Evaluate the impact of gated communities on inter-connectivity.			✓
7.3.1.f	Encourage the development and implementation of neighborhood design standards that are environmentally friendly, such as LEED for Neighborhood Development (LEED – ND) standards.			✓
7.3.1.g	Discourage future pyramid zoning within the industrial zoning districts, while allowing accessory commercial uses and grandfathering existing uses.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
7.3.1.h	Promote agriculture by encouraging community gardening, community-supported agricultural programs, and farmers markets within and adjacent to urban areas.			✓
7.3.1.i	Discourage land use and urban design that impedes inter-connectivity between adjacent communities.			✓
Objective:				
7.3.2	Facilitate more self-sufficient and sustainable communities.			✓
Policies:				
7.3.2.a	When developing new communities, provide sufficient lands for commercial, appropriate industrial, educational, spiritual, and non-profit uses to serve the daily needs of community residents.			✓
7.3.2.b	Site community facilities such as schools, parks, libraries, and community centers within walking and biking distance of residences.			✓
7.3.2.c	Facilitate self-sufficient communities and shorten commutes by:			✓
	(1) Directing residential development to job-rich areas;			✓
	(2) Allowing for appropriate commercial development and community services to shorten commutes; and			✓
	(3) Allowing home occupations or home-based businesses that are compatible with surrounding neighborhoods and lifestyles.			✓
7.3.2.d	Ensure, where appropriate, that affordable employee housing and multi-modal transportation opportunities are located near major employment centers.	✓		
7.3.2.e	Discourage the establishment of bedroom communities where long commutes are required to employment centers.			✓
7.3.2.f	Facilitate the development of housing by focusing projects in locations where land and infrastructure costs facilitate the development of affordably-priced housing.			✓
7.3.2.g	Provide incentives to facilitate the development of multifamily housing.			✓
7.3.2.h	Encourage the placement of rental housing projects in the same areas as for-sale housing to facilitate mixed-income communities.			✓
7.3.2.i	Develop communities that provide sufficient parks, schools, libraries, and other essential public facilities and services to serve resident needs.			✓
7.3.2.j	Promote agriculture by encouraging community gardening, edible landscaping, community-supported agricultural programs, and farmers markets within and adjacent to urban areas.			✓
Objective:				
7.3.3	Strengthen the island's sense of place.			✓
Policies:				
7.3.3.a	Protect and enhance the unique architectural and landscape characteristics of each community.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
7.3.3.b	Encourage Hawaiian architecture and tropical building designs.			✓
7.3.3.c	Support the continued revitalization of historic country towns, Wailuku Town, and Kahului's commercial core and harbor-front without displacing traditional, cultural, recreational and customary uses.	✓		
7.3.3.d	Strongly encourage the preservation of buildings, structures, and sites of historic significance.			✓
7.3.3.e	Require community input through Design Workshops for major new urban expansion, new towns, and major urban infill projects.			✓
7.3.3.f	Require design enhancement, landscaping, and integration of park and rides, bicycle parking areas, and mass-transit infrastructure to mitigate the effect of parking lots and structured parking on the urban landscape.			✓
7.3.3.g	Ensure that safe and attractive public spaces (e.g., plazas, parks, town/village squares) are provided throughout the island's urban areas.			✓
Objective:				
7.3.4	Strengthen planning and management for the visitor industry to protect resident quality of life and enhance the visitor experience.			✓
Policies:				
7.3.4.a	Discourage the conversion of hotel units to timeshares and fractional ownership.			✓
7.3.4.b	Monitor and manage the amount of, and impacts from, timeshares and fractional ownership.			✓
7.3.4.c	Manage short-term rentals and bed-and-breakfast homes through a permitting and regulatory process in accordance with adopted ordinances and community plan policies.			✓
7.3.4.d	Limit large-scale resort development to the four existing resort destination areas of Wailea, Mākena, Kapalua and Kā'anapali. "Large Scale Resort" is defined as complexes that include multiple accommodation facilities, activity businesses, retail complexes, and other amenities.			✓
Objective:				
7.3.5	Ensure that Maui's planning and development review process becomes more transparent, efficient, and innovative.			✓
Policies:				
7.3.5.a	Encourage greater community involvement in land use planning and decision making.			✓
7.3.5.b	Establish a predictable and timely development review process that facilitates the approval of projects that meet planning and regulatory requirements.			✓
7.3.5.c	Increase inter-agency coordination between the Department of Planning and all State and County agencies responsible for infrastructure and public facilities provision, particularly as it relates to the mitigation of long-term cumulative impacts resulting from development projects.			✓
7.3.5.d	Provide greater certainty and transparency in the development review process.			✓

Maui Island Plan Goals, Objectives and Policies Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable		S	N/S	N/A
7.3.5.e	Expand and maintain land use and geographic information system databases for improved decisions, and make data and products available to the public.			✓
<i>Analysis:</i> The proposed Transit Hub Relocation Project will encourage development infill within the UGB, ensuring higher-density compact urban communities. Furthermore, the transit hub will be located near major employment centers such as the QKC and surrounding businesses. This development will support the continued revitalization of Kahului's commercial core and harbor-front without displacing traditional, cultural, recreational, and customary uses. The transit hub relocation will relocate the existing transit hub currently located at the QKC to the new location on Vevau Street.				
CHAPTER 8 – DIRECTED GROWTH PLAN				
URBAN AND SMALL TOWN GROWTH AREA				
Goal:				
8.1	Maui will have well-serviced, complete, and vibrant urban communities and traditional small towns through sound planning and clearly defined development expectations.			✓
Policies:				
8.1.a	The County, with public input, will be responsible for designating new growth areas where infrastructure and public facilities will be provided, consistent with the policies of the MIP and in accordance with State and County infrastructure plans.			✓
8.1.b	Amendments to a UGB or STB shall be reviewed as a MIP amendment. A UGB or STB shall only be expanded if the island-wide inventory (maintained by the Department of Planning) of existing land uses (residential, commercial, industrial) indicates that additional urban density land is necessary to provide for the needs of the projected population growth within ten years of that inventory; or, during the decennial update of the MIP.			✓
8.1.c	Community plans shall provide for urban density land use designations only within UGBs and Small Towns. The County may only support and approve State Urban Land Use Designations for areas within UGBs, STBs, and Rural Villages.			✓
8.1.d	The unique character and function of existing small towns shall be protected to retain and preserve their sense of place.			✓
8.1.e	New development shall be consistent with the UGBs, STBs, and all other applicable policies of the MIP. New urban-density development shall not be allowed outside of a UGB or STB.			✓
8.1.f	The County, as a condition of development approval, shall require developers of privately owned infrastructure systems to provide financial insurance (bonding, etc.) for the operation and maintenance of these systems.			✓
8.1.g	The County shall implement a zoning program to comprehensively redistrict and rezone lands within UGBs according to updated community plan policies and map designations.			✓
8.1.h	The County will seek to focus capital improvements (schools, libraries, roads, and other infrastructure and public facilities) within the UGBs and STBs in accordance with the MIP.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
8.1.i	The County will promote (through incentives, financial participation, expedited project review, infrastructure/public facilities support, etc.) appropriate urban infill, redevelopment and the efficient use of buildable land within UGBs to avoid the need to expand the UGBs.			✓
8.1.j	The MIP's UGBs and STBs shall not be construed or implemented to prohibit the construction of a single-family dwelling on any existing parcel where otherwise permitted by law.			✓
<i>Analysis:</i> The goals, objectives, and policies listed above are not applicable to the proposed project.				
RURAL GROWTH AREA				
<u>Goal:</u>				
8.2	Maui will maintain opportunities for agriculture and rural communities through sound planning and clearly defined development expectations.			✓
<u>Policies:</u>				
8.2.a	Amendments to a RGB shall be reviewed as an MIP amendment. A RGB shall only be expanded if an island-wide inventory of existing land uses (residential, commercial, industrial) indicates that additional lands are necessary to provide for the needs of the projected population growth within ten years of that inventory; or, during the decennial update of the MIP.			✓
8.2.b	New development shall be consistent with RGB and all other applicable policies and requirements of the MIP. Public, quasi-public, civic, and limited commercial or industrial uses may be allowed in the RGB when the proposed uses demonstrate a public need and are consistent with the Community Plan and zoning.			✓
8.2.c	Environmental protection and compatibility will be a top priority in rural growth areas.			✓
8.2.d	All development within rural growth areas should avoid encroachment upon prime agricultural land.			✓
8.2.e	Rural growth areas include Rural Residential Areas and Rural Villages. Rural residential areas may be designated when they are located in association with or on the border of urban growth areas or Small Towns; and/or when they provide for complete, self-sufficient rural communities with a range of uses to be developed at densities that do not require urban infrastructure.			✓
8.2.f	Community plans shall provide for rural density land use designations only within RGBs; provided that limited community plan urban designations may be allowed within Rural Villages. New rural growth areas shall not be located where urban expansion may ultimately become necessary or desirable. New rural-density development shall not be allowed outside of a RGB.			✓
8.2.g	New rural growth areas intended to be complete, self-sufficient rural communities must be located a significant distance from existing urban areas, distinctly separated by agricultural or open lands.			✓
8.2.h	Urban-scale infrastructure and public facilities shall not be provided in rural areas except as described in the defined Level-of-Service (LOS) standards. There should be no expectations of urban services in rural areas.			✓

Maui Island Plan Goals, Objectives and Policies		S	N/S	N/A
Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable				
8.2.i	Urban development standards shall not be required within RGBs except in fulfillment of Federal law.			✓
8.2.j	The unique character and function of existing small towns and rural communities shall be protected to retain and preserve their sense of place.			✓
8.2.k	Preserve rural landscapes in which natural systems, cultural resources, and agricultural lands are protected and development compliments rural character and contributes to the viability of communities and small towns.			✓
8.2.l	The MIP's RGBs shall not be construed or implemented to prohibit the construction of a single family dwelling on any existing parcel where otherwise permitted by law.			✓
8.2.m	The County shall implement a zoning program to comprehensively redistrict and rezone lands within RGBs, and to implement community plan policies and map designations.			✓
8.2.n	At the time of zoning from agricultural to rural, Council will consider prohibiting restrictions on agricultural activity.			✓
<i>Analysis:</i> The goals, objectives, and policies listed above are not applicable to the proposed project.				
PROTECTED AREA POLICY				
8.3.a	The Protected Areas in Diagrams E-1, NW-1, N-1, NE-1, S-1, SE-1, and WC-1 should be concurrently reviewed with Table 8-2 and with any proposed land uses that may result in an adverse impact on a Protected Area. The County Council and the Administration should be notified if a Protected Area may be compromised by a development proposal.			✓
<i>Analysis:</i> The goals, objectives, and policies listed above are not applicable to the proposed project.				

E. WAILUKU-KAHULUI COMMUNITY PLAN

The proposed project is located within the Wailuku-Kahului Community Plan which covers the Central Maui region with boundaries from the northern shoreline from Poelua Bay to Baldwin Park on the north, Kailua Gulch and Lowrie Ditch on the east, Spanish Road to Waikapū to Honoapi'ilani Highway to Pohakea Guild on the south, and the Wailuku Judicial District boundary on the west. The Wailuku-Kahului Plan designates the project area as "Business/Commercial".

The project sites are located in the Wailuku-Kahului Community Plan region which is one (1) of nine (9) Community Plan regions established in the County of Maui. Planning for each region is guided by the respective Community Plans, which are designed to implement the Maui County General Plan. Each Community Plan contains recommendations and standards which guide the sequencing, patterns, and characteristics of future development in the region.

The Wailuku-Kahului Community Plan was adopted by the County of Maui through Ordinance No. 3061 which took effect on May 30, 2002.

Land use guidelines are set forth by the Wailuku-Kahului Community Plan Land Use Map. See **Figure 9**. Parcels 4-3 and 5-3 are designated “B, Business/Commercial” by the Community Plan, while Parcel 20 is designated “B, Business/Commercial” and “H1, Heavy Industrial”. The proposed project is in compliance with these community plan land use designations.

The 2002 Wailuku-Kahului Community Plan has ten (10) Goals, Objectives, Policies, and Implementing Actions. They include Economic Activity, Environment, Cultural Resources, Indigenous Architecture, Housing, Social Infrastructure, Government, Land Use, Infrastructure, and Urban Design. Because the proposed project is limited in its scope and impact, the most relevant of these ten (10) goals and policies is that of “Infrastructure” and “Urban Design”. The proposed project is consistent with these goals and policies of the Wailuku-Kahului Community Plan as is discussed below.

INFRASTRUCTURE

Goal:

Timely and environmentally sound planning, development and maintenance of infrastructure systems which serve to protect and preserve the safety and health of the region’s residents, commuters and visitors through the provision of clean water, effective waste disposal and drainage systems, and efficient transportation systems which meet the needs of the community.

Policy (Energy)

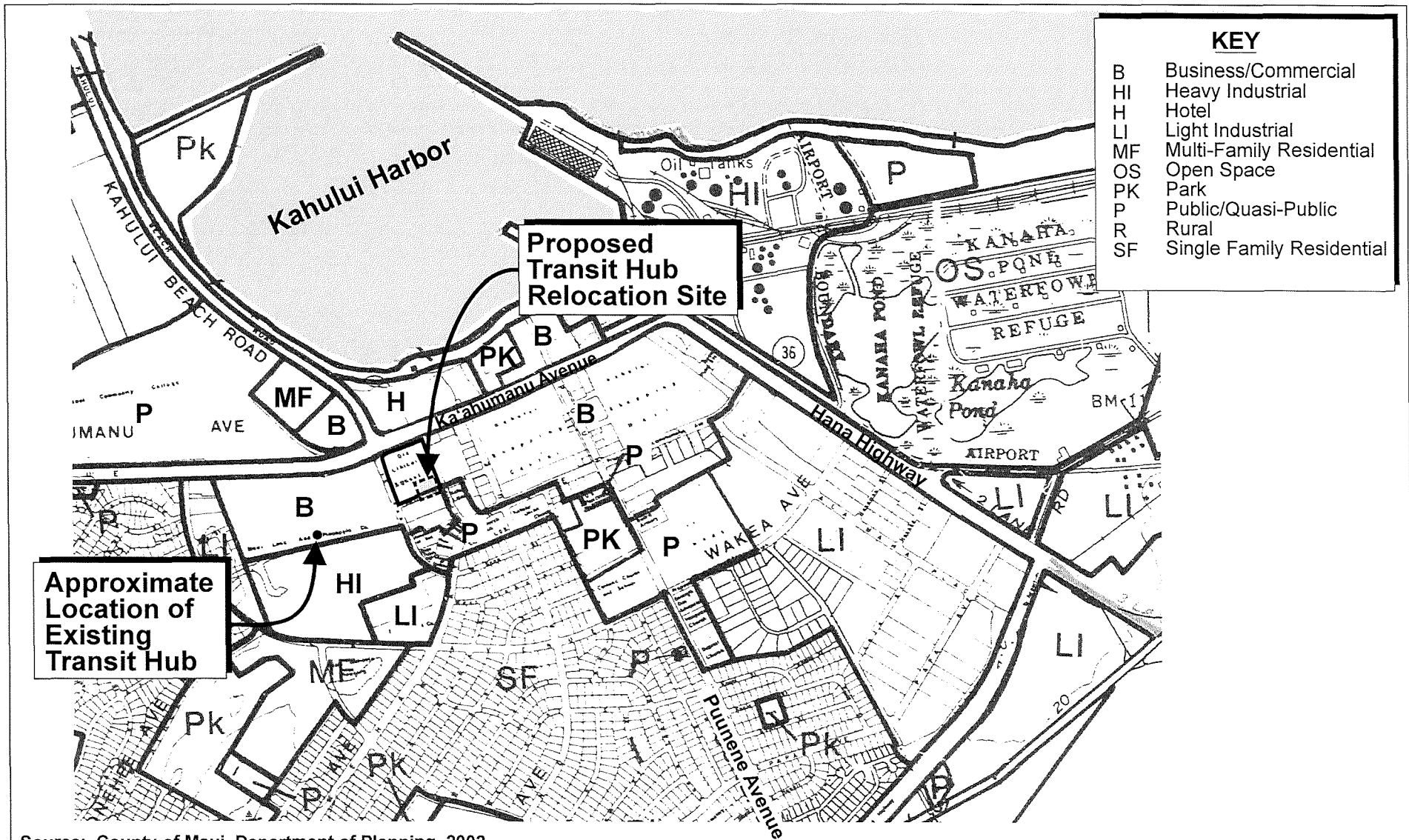
* * *

2. *Develop efficient circulation systems, public transportation and promote bicycle and pedestrian travel to reduce energy expenditures for travel.*

Policy (Transportation)

* * *

2. *Provide bikeway and walkway systems in the Wailuku-Kahului area which offer safe and pleasant means of access, particularly along routes accessing residential districts, major community facilities and activity centers, school sites, and the shoreline between Kahului Harbor and Pa’ia.*



Source: County of Maui, Department of Planning, 2002

Figure 9

Proposed Transit Hub Relocation
Community Plan Map

NOT TO SCALE



Prepared for: County of Maui, Department of Transportation

 MUNEKIYO HIRAGA

URBAN DESIGN

Goal:

An attractive and functionally integrated urban environment that enhances neighborhood character, promotes quality design, defines a unified landscape planting and beautification theme along major public roads and highways, watercourses and at major public facilities, and recognizes the historic importance and traditions of the region.

Policy (Kahului)

* * *

2. *Circulation: provide and maintain sidewalks and bikeways for convenient and pleasant connections between activity centers, such as shopping centers, schools, Maui Community College and public parks. These pathways should have adequate separation from vehicular traffic for safety purposes.*

F. ZONING

Parcels 4-3, 5-3, and 20 on which the relocated transit hub improvements will be implemented, are zoned "B-2, Community Business". See **Figure 10**. As such, the proposed project is permitted by zoning.

G. HAWAI'I COASTAL ZONE MANAGEMENT PROGRAM - OBJECTIVES AND POLICIES

The project sites are located within the County of Maui's SMA. Pursuant to HRS Chapter 205A and the Rules and Regulations of the Planning Commission of the County of Maui, projects located within the SMA are evaluated with respect to Hawai'i Coastal Zone Management Program objectives, policies, and guidelines. This section addresses the proposed action's relationship to applicable coastal zone management considerations, as set forth in HRS Chapter 205A.

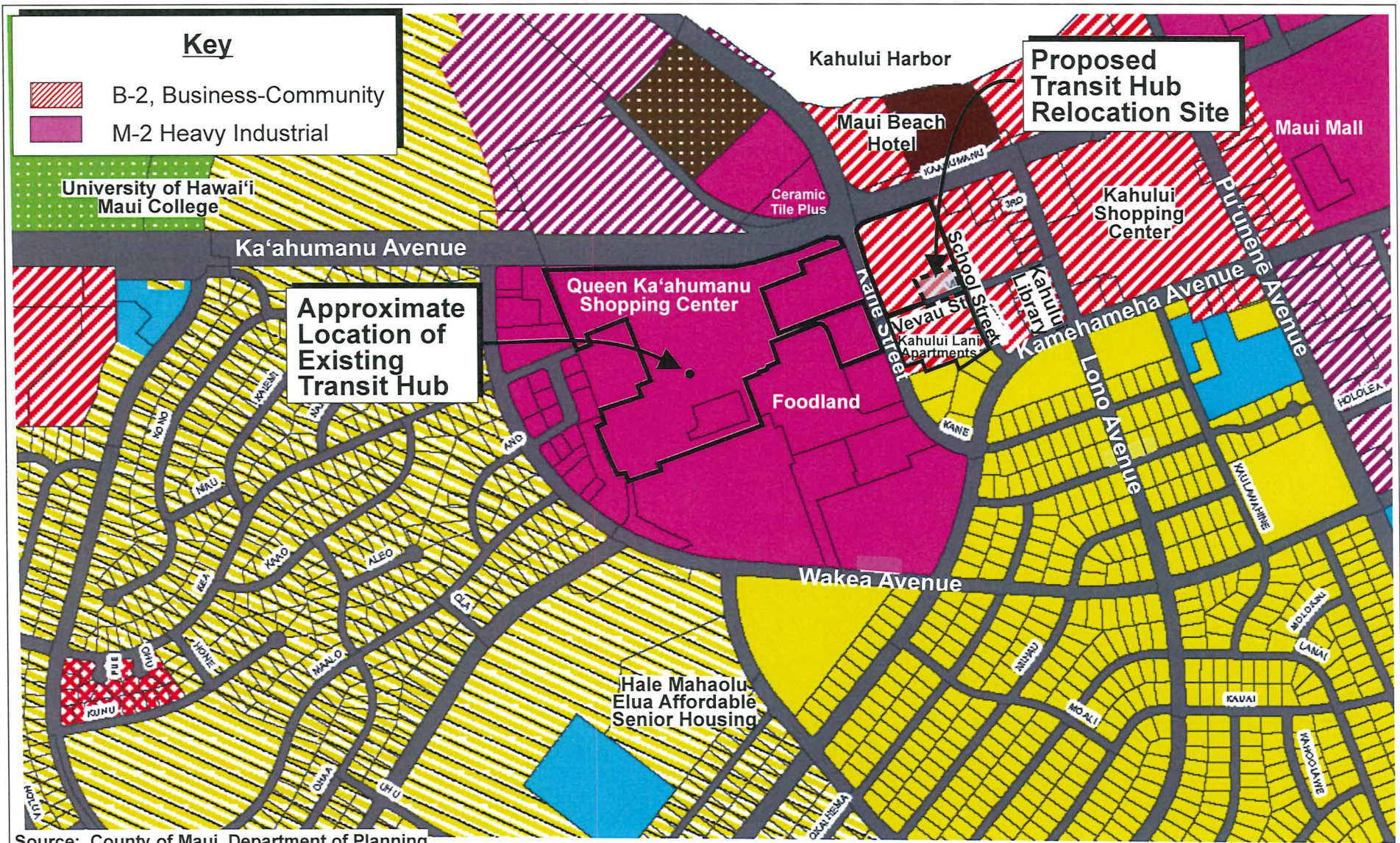
1. Recreational Resources

Objective:

Provide coastal recreational opportunities accessible to the public.

Policies:

- a. *Improve coordination and funding of coastal recreational planning and management; and*



Source: County of Maui, Department of Planning

Figure 10 Proposed Transit Hub Relocation Land Zoning Map

NOT TO SCALE



Prepared for: County of Maui, Department of Transportation



- b. *Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management areas;*
- c. *Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;*
- d. *Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the state for recreation when replacement is not feasible or desirable;*
- e. *Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;*
- f. *Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;*
- g. *Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;*
- h. *Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;*
- i. *Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and*
- j. *Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6, HRS.*

Response: The project sites are located approximately 1,250 feet from the shoreline and within the urban core of Kahului. The proposed project will not affect coastal zone recreational opportunities. Accessibility to shoreline areas will not be impacted by the proposed action.

2. **Historic Resources**

Objective:

Protect, preserve and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Policies:

- a. *Identify and analyze significant archaeological resources;*
- b. *Maximize information retention through preservation of remains and artifacts or salvage operations; and*
- c. *Support state goals for protection, restoration, interpretation, and display of historic resources.*

Response: Oral history accounts of the surrounding areas are included in Chapter II of the EA. In addition, coordination has been initiated with the SHPD in regards to archaeological resources that may be present in the area.

Given the history of the transit hub relocation site and the developed nature of the surroundings, it is unlikely that significant archaeological and cultural remains will be uncovered.

No ground altering activities are anticipated in relation to the removal of 11 existing bus shelters at the current transit hub site. As such, adverse impacts with regards to archaeological resources are not anticipated.

In accordance with Section 6E-43.6, HRS and Chapter 13-300 Hawai'i Administrative Rules (HAR), if any significant cultural deposits or human skeletal remains are encountered, work will stop in the immediate vicinity and SHPD will be contacted to establish the appropriate protocols and level of mitigation.

3. Scenic and Open Space Resources

Objective:

Protect, preserve and, where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies:

- a. *Identify valued scenic resources in the coastal zone management area;*
- b. *Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;*
- c. *Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and*
- d. *Encourage those developments that are not coastal dependent to locate in inland areas.*

Response: The proposed project is not located in a designated scenic corridor and lies within an urbanized area of Maui, mauka of the coastal Ka'ahumanu Avenue roadway. In the context of the surrounding urbanized and developed land uses, including the multi-story Waterfront Apartment buildings, the relocation of the transit hub is not anticipated to have a significant adverse impact upon the scenic and open space resources of the area. It is also noted that utilities will be located underground as part of the adjacent Kahului Lani development.

4. **Coastal Ecosystem**

Objective:

Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.

Policies:

- a. *Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;*
- b. *Improve the technical basis for natural resource management;*
- c. *Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;*
- d. *Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and*
- e. *Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.*

Response: The proposed project is not anticipated to significantly disrupt or impact coastal ecosystems. Applicable BMPs and erosion-control measures will be implemented to mitigate runoff and minimize potential impacts to coastal water ecosystems during construction-related activities. The project will comply with all applicable County drainage provisions.

5. **Economic Use**

Objective:

Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies:

- a. *Concentrate coastal dependent development in appropriate areas;*
- b. *Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and*
- c. *Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:*
 - i. *Use of presently designated locations is not feasible;*
 - ii. *Adverse environmental effects are minimized; and*
 - iii. *The development is important to the State's economy.*

Response: The proposed action will support short-term construction and construction-related jobs. The relocated transit hub is anticipated to employ three (3) full-time employees, an improvement over current conditions at the QKC transit hub location. The proposed project is not anticipated to result in any significant adverse long-term economic impacts.

6. Coastal Hazards

Objective:

Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence and pollution.

Policies:

- a. *Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;*
- b. *Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint pollution hazards;*
- c. *Ensure that developments comply with requirements of the Federal Flood Insurance Program; and*
- d. *Prevent coastal flooding from inland projects.*

Response: According to the Flood Insurance Rate Map for the area, the subject properties are located in Flood Zone X, an area of minimal flooding. Further, the project sites are located within the tsunami evacuation zone. The proposed action is not anticipated to increase the region's susceptibility to coastal hazards. Appropriate drainage measures will be implemented at the relocated transit hub site to ensure that downstream and adjacent properties are not adversely impacted. Further, as previously noted, emergency and civil defense procedures to organize and direct operations at the facility in the event of an emergency or civil defense action, such as a tsunami, will be established.

7. **Managing Development**

Objective:

Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

Policies:

- a. *Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;*
- b. *Facilitate timely processing of applications for development permits and resolve overlapping of conflicting permit requirements; and*
- c. *Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.*

Response: In accordance with the Rules of Practice and Procedures for the Maui Planning Commission and the SMA Rules for the Maui Planning Commission, this SMA Use Permit application will be filed with the County Planning Department and undergo public hearing and decision by the Maui Planning Commission. Opportunity for public review and consideration of the proposed action is provided through the SMA permitting processes.

8. **Public Participation**

Objective:

Stimulate public awareness, education, and participation in coastal management.

Policies:

- a. *Promote public involvement in coastal zone management processes;*
- b. *Disseminate information on coastal management issues by means of*

educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and

- c. *Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.*

Response: As previously noted, a public hearing is required as part of the County's SMA Use Permit process. In addition, there will be further opportunity for public input during the processing of the EA being prepared in relation to the proposed project. The proposed project complies with the objective of public awareness, education, and participation.

9. **Beach Protection**

Objective:

Protect beaches for public use and recreation.

Policies:

- a. *Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;*
- b. *Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities;*
- c. *Minimize the construction of public erosion-protection structures seaward of the shoreline;*
- d. *Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and*
- e. *Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor.*

Response: The project sites are located approximately 1,250 feet from the shoreline and within the urban core of Kahului. Based on the project scope, location, and its proximity to other nearby commercial structures, the proposed project is not anticipated to affect the coastal environment. Beach access and shoreline recreation will not be impacted by the proposed action.

10. **Marine Resources**

Objective:

Promote the protection, use, and development of marine and coastal resources to assure their sustainability.

Policies:

- a. *Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;*
- b. *Coordinate the management of marine and coastal resources and activities management to improve effectiveness and efficiency;*
- c. *Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;*
- d. *Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and*
- e. *Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.*

Response: The proposed project is not anticipated to have adverse effects upon marine and coastal resources in the vicinity. As previously noted, the project sites are located approximately 1,250 feet away from the shoreline. BMPs will be incorporated during construction to support the policies of effective management to protect marine and coastal resources.

In addition to the foregoing objectives and policies, HRS Section 205A-30.5 Prohibitions, provides specifications for the limitation of lighting in coastal shoreline areas in relation to the granting of SMA permits:

No special management area use permit or special management area minor permit shall be granted for structures that allow artificial light from floodlights, uplights, or spotlights used for decorative or aesthetic purposes when the light:

- (1) *Directly illuminates the shoreline and ocean waters; or*
- (2) *Is directed to travel across property boundaries toward the shoreline and ocean waters.*

Subsection (a) shall not apply to special management area use permits for structures with:

Artificial lighting provided by a government agency or its authorized users for government operations, security, public safety, or navigational needs; provided that a government agency or its authorized users shall make reasonable efforts to properly position or shield lights to minimize adverse impacts.

Response: All exterior lighting proposed for the project will be shielded and configured in a downward direction. The design considerations are anticipated to mitigate light pollution and prevent light from traveling across property boundaries toward the shoreline and ocean. The project will comply with the County of Maui's outdoor lighting ordinance, as applicable.

H. **MAUI PLANNING COMMISSION SPECIAL MANAGEMENT AREA RULES AND REGULATIONS**

The Rules and Regulations of the Maui Planning Commission, Chapter 202 were established in order to implement Hawai'i Revised Statutes, Chapter 205A relating to Coastal Zone Management and Special Management Areas. In addition to establishing procedures for processing of SMA applications and procurement of related permits, the rules assist the Commission in giving consideration to state policy regarding coastal zones.

This section addresses the project's relationship to applicable coastal zone management considerations as set forth in the Maui Planning Commission Rules and Regulations, Chapter 202, "Special Management Area Permit Procedures," which are provided for considering the significance of potential environmental and ecological effects of a proposed action. The criteria have been reviewed and analyzed with respect to the proposed Transit Hub Relocation Project as follows.

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

The proposed project commits 0.85 acre of land designated for "Urban" use for a relocated transit hub. There are no endangered species of critical habitats in the project area. Given the history of the transit hub relocation site and the developed nature of the surroundings, it is unlikely that significant archaeological and cultural remains will be uncovered. Further, no ground altering activities are anticipated in relation to the removal of 11 existing bus shelters at the current transit hub site. The MDOT is coordinating with the SHPD to determine the level of archaeological review needed for the proposed project. As such, adverse impacts with regards to archaeological resources are not anticipated.

Due to the developed nature of the surrounding areas, no adverse impacts to natural or cultural resources are anticipated as a result of the proposed project. In

addition, there are no streams or wetlands which will be impacted, and there are no rare, threatened, or endangered species of plants or wildlife which will be affected by the proposed project.

2. **Significantly curtails the range of beneficial uses of the environment.**

The proposed project will not curtail the range of beneficial uses of the environment. The proposed project involves the relocation of the existing transit hub from its current location at the QKC to the proposed location on Vevau Street, related improvements to support the transit hub and removal of 11 existing bus shelters at the QKC transit hub location. BMPs will be implemented to minimize any construction-related impacts.

3. **Conflicts with the county's or the state's long-term environmental policies or goals.**

The proposed project does not conflict with the State's Environmental Policy and Guidelines as set forth in HRS Chapter 344. The proposed project is consistent with the underlying land use designations of the project sites.

4. **Substantially affects the economic or social welfare and activities of the community, county, or state.**

On a short-term basis, the project will support construction and construction-related employment and have a beneficial impact on the local economy during the period of construction. The relocated transit hub is anticipated to employ three (3) full-time employees, an improvement over current conditions at the QKC transit hub relocation. The relocated transit hub will also provide a permanent, central location for bus riders utilizing the County's transportation system. Thus, the proposed project will have an overall beneficial impact on the social welfare of residents and visitors to the island.

5. **Involves substantial secondary impacts, such as population changes and increased effects on public facilities, streets, drainage, sewage, and water systems, and pedestrian walkways.**

The proposed project will relocate the existing transit hub services from QKC to the project site at Vevau Street, construct new facilities at the Vevau Street location, and remove the existing bus shelter structures from QKC. The transit hub is a vital service for the County transportation system as it allows for riders to transit from one location of Maui to another, such as from Kula to Kihei. Because the proposed project scope is to relocate the existing transit hub services, there is no population growth anticipated.

The proposed project will include provision of infrastructure to service the development, including appropriate water, wastewater, drainage, and traffic improvements. As such, substantial secondary impacts are not anticipated as a result of the proposed project.

6. **In itself has no significant adverse effects but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.**

The proposed Transit Hub Relocation Project does not involve a commitment for larger actions and is not anticipated to have a significant impact on the environment in the area. As previously noted, the proposed project will relocate existing transit hub services for the County transportation system. The transit hub plays a vital role in the overall operation of the transit system. The central location for the hub is near existing public and professional services, retail, education, and residential areas. The removal of the existing bus shelter structures at the QKC site are not anticipated to have any cumulative impacts as the area will remain a part of the existing shopping center. The Vevau Street location is also surrounded by existing and proposed development and as such, no cumulative impacts are anticipated as a result of the project. It is noted that the proposed transit hub may also make the development of commercial and retail uses in the area desirable. However, given the project's location within an existing urban area, this potential impact is not deemed significant. It is also noted that the Department of Accounting and General Services (DAGS) stated in their early consultation comments that it is working with the Hawai'i Housing Finance and Development Corporation (HHFDC) for future development of Parcel 4-3, upon which the proposed transit hub relocation site is located. DAGS noted a concern for accessibility to the remainder of Parcel 4-3 and future traffic on Vevau Street. No details on the future DAGS/HHFDC development were publicly available during the preparation of this Draft EA. MDOT will coordinate with DAGS/HHFDC on vehicle access to the remainder of Parcel 4-3 as plans are developed for the project.

7. **Substantially affects a rare, threatened, or endangered species of animal or plant, or its habitat.**

Given the developed nature of the area, there are no rare, threatened, or endangered species of fauna, flora, or their habitats at or adjacent to the project sites. Adverse impacts to these environmental features are not anticipated. Refer to **Appendix "C"**, biological resources study.

8. **Is contrary to the state plan, county's general plan, appropriate community plans, zoning and subdivision ordinances.**

The proposed project is in accordance with applicable State, County, and the Wailuku-Kahului Community Plan land use policies and plans. Please refer to

Sections B-F of this chapter for more detailed assessments of the project's consistency with the Hawai'i State Plan, Maui County General Plan, Wailuku-Kahului Community Plan, and Maui County zoning. No subdivision is being proposed for the project.

9. Detrimentially affects air or water quality or ambient noise levels.

Construction activities will result in short-term air quality and noise impacts. Dust control measures, such as regular watering and sprinkling, and installation of dust screens will be implemented to minimize wind-blown emissions. In the short term, noise impacts will occur primarily from construction equipment and measures to remove blue rock. Equipment mufflers or other noise attenuating equipment, as well as proper equipment and vehicle maintenance, will be used during construction activities. Construction noise impacts will be mitigated through compliance with the provisions of the State of Hawai'i, Department of Health Administrative Rules Title 11, Chapter 46, "Community Noise Control". These rules require a noise permit if the noise levels from construction activities are expected to exceed the allowable levels set forth in the Chapter 46 rules.

From a long-term perspective, there may be some impacts to ambient air and noise quality in the immediate vicinity of the transit hub due to the buses traveling to and from the area. The transit hub will operate from 5:30 am to 10:30 pm, seven (7) days a week. The MDOT is continuing to review options to replace their gasoline powered buses with alternative fuels which would reduce the emissions in the area.

10. Affects an environmentally sensitive area, such as flood plains, shoreline, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh waters, or coastal waters.

The subject properties are located in Flood X. This designation denotes an area of low flood risk and minimal flooding with no development restrictions. The subject properties are located within the tsunami evacuation zone. Emergency and civil defense procedures to provide the necessary guidance to organize and direct operations at the facility in the event of an emergency or civil defense action, such as a tsunami, will be established.

11. Substantially alters natural land forms and existing public views to and along the shoreline.

The proposed transit hub relocation site is not located within a designated scenic corridor and is surrounded by existing and proposed development in the area. The proposed transit hub facilities (roof structures, ticket booth and restroom facilities) are generally single-story structures. At its maximum height, the roof structure is

29 feet tall. There are existing and proposed multi-story structures in close proximity to the proposed transit hub, including the Kahului Lani senior affordable housing project being developed across Vevau Street. As such, the proposed relocated transit hub is not anticipated to impact any scenic vistas or view planes.

The removal of the existing bus shelter structures at the QKC facilities are also not located within any scenic area as the shelters are located within the shopping center itself.

12. Is contrary to the objectives and policies of chapter 205A, HRS.

A review of the objectives and policies of Chapter 205A, HRS, is provided in its entirety in the previous part of this section. Therein, it addresses the project's relationship to the Coastal Zone Management considerations. Based on the foregoing analysis, the project will appropriately and adequately mitigate impacts to SMA-relevant areas of interest. Accordingly, there are no anticipated significant environmental and ecological effects attributed to the proposed Transit Hub Relocation Project.

**ALTERNATIVES TO THE
PROPOSED ACTION**

IV

IV. ALTERNATIVES TO THE PROPOSED ACTION

The applicant has looked at a variety of options in accommodating the proposed project.

A. PREFERRED ALTERNATIVE

The proposed project improvements, as outlined in Chapter 1 of the Environmental Assessment (EA) document, represents the preferred alternative. The relocation of the transit hub to the new location off of Vevau Street and removal of existing bus shelters at the Queen Ka'ahumanu Center (QKC) will allow for a central location to service users of the County transit system. The relocated transit hub will continue to be near existing public and professional services, retail operations, education services, and residential areas. Further, existing infrastructure and utility services are located near the proposed relocation site and can provide connections to the new transit hub.

B. NO ACTION ALTERNATIVE

The No Action alternative is not feasible for the proposed project. As previously noted, the County of Maui's lease with the QKC owner for the existing transit hub is expiring in the year 2020. As such, the transit hub must be relocated. The County bus service provides needed transportation services for residents and visitors on the island of Maui. This alternative was dismissed from further review.

C. DEFERRED ACTION ALTERNATIVE

Similar to the No Action alternative, the Deferred Action alternative is not feasible for the proposed project. The lease for the existing transit hub is expiring and it is essential to have County transit services continue. The transit hub provides a central location for riders to get from one area of Maui to another, such as from Kahului to Lahaina. Deferring the relocation of the transit hub will likely cause a reduction of service or a loss of transportation services when the lease for the current location expires. This alternative was also not deemed appropriate for the project.

D. DESIGN ALTERNATIVE

During the design of the proposed relocated transit hub, a few alternatives were considered. Among the ideas considered were relocation of the existing bus shelters at the QKC site to the new Vevau Street site, as well as a variety of spatial layouts for the restroom, ticket booth buildings, and bus loading area. Ultimately, the proposed layout, as shown in **Figure 3**, was determined to be the desired design alternative, due to passenger access, security considerations, potential noise impacts to adjacent Kahului Lani residents, condition of the existing bus shelters, as well as cost considerations.

E. ALTERNATIVE LOCATIONS

Multiple alternative sites were evaluated by MDOT and based on a set of criteria, three (3) alternative sites as follows, were evaluated more closely:

- On the south side of the Old Kahului Shopping Center property off of Kamehameha Avenue in the grassy area between the Lono Avenue Building and Pu'unēnē Avenue.
- Area on the western boundary of the Queen Kaahumanu Center property
- War Memorial Stadium site

The criteria considered in the evaluation included vehicle accessibility for buses and customers, traffic impacts, pedestrian accessibility, effect on bus routes and schedules, proneness to flooding, neighboring land uses that support Transit Orient Development principles, geography, archaeological concerns, development costs, and project completion time. Based on the evaluation criteria, the MDOT determined that the proposed Vevau Street site possessed the most favorable attributes.

**SUMMARY OF UNAVOIDABLE
IMPACTS AND COMMITMENTS
OF RESOURCES**



V. SUMMARY OF UNAVOIDABLE IMPACTS AND COMMITMENTS OF RESOURCES

The development of the project will result in certain unavoidable construction-related environmental impacts as outlined in Chapter II.

In the short term, construction associated with the proposed development will generate noise impacts. These impacts will be limited to the immediate vicinity of the project construction areas. Sound attenuating construction equipment will be used, where practicable, to mitigate noise impacts caused by construction. Noise may also be generated by busses entering and leaving the relocated transit hub site. Hours of operation will be from 5:30 a.m. to 10:30 p.m. so as to not disrupt neighboring residents.

Unavoidable air quality impacts will also arise as a result of construction activities, such as the generation of dust and other airborne pollutants. Appropriate Best Management Practices (BMPs) will be incorporated in the construction process to mitigate adverse impacts, including frequent watering of exposed surfaces and regular maintenance of construction equipment to minimize construction-related impacts.

The proposed project will commit the use of approximately 0.85 acre of land for the relocation of the transit hub. The relocated site will be centrally located in close proximity to public and professional services, retail establishments, education services, and residential areas. In addition, the proposed transit hub may also make the development of commercial and retail uses in the area desirable. However, given the project's location within an existing urban area, this potential impact is not deemed significant.

Removal of the existing bus shelters at the Queen Ka'ahumanu Center (QKC) will not require the use of any additional lands, nor will it require ground altering activities.

Development of the proposed project will also involve a commitment of energy, labor, fiscal, and material resources. The use of these resources, when weighed against the expected benefit to be derived from the project, is not considered an adverse commitment.

**SIGNIFICANCE CRITERIA
ASSESSMENT**

VI

VI. SIGNIFICANCE CRITERIA ASSESSMENT

The "Significance Criteria", Section 12 of the Hawai'i Administrative Rules, Title 11, Chapter 200, "Environmental Impact Statement Rules", were reviewed and analyzed to determine whether the proposed project will have significant impacts to the environment. The following criteria and preliminary analysis are provided.

1. **Involves an irrevocable commitment to loss or destruction of any natural or cultural resource.**

The proposed project commits approximately 0.85 acre of land previously designated for "Urban" use for a relocated transit hub. There are no endangered species or critical habitats in the project area. Given the history of the transit hub relocation site and the developed nature of the surroundings, it is unlikely that significant archaeological and cultural remains will be uncovered. Further, no ground altering activities are anticipated in relation to the removal of 11 existing bus shelters at the current transit hub site. The MDOT is coordinating with State Historic Preservation Division (SHPD) to determine the level of archaeological review needed for the proposed project. As such, adverse impacts with regards to archaeological resources are not anticipated.

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

The proposed project will not curtail the range of beneficial uses of the environment. Best Management Practices (BMPs) and will be implemented to minimize any construction-related impacts. The project will relocate an existing transit hub in Central Maui and involves the removal of 11 existing bus shelters at the current location, and the development of a new transit hub and related improvements on approximately 0.85 acre of land.

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

The proposed project does not conflict with the State's Environmental Policy and Guidelines as set forth in Chapter 344, Hawai'i Revised Statutes (HRS). The proposed project is consistent with the underlying land use designations of the project sites.

4. **Substantially affects the economic welfare, social welfare, and cultural practices of the community or State.**

On a short-term basis, the project will support construction and construction-related employment and have a beneficial impact on the local economy during the period of construction. From a long-term perspective, it is anticipated that the relocated transit hub will employ approximately three (3) full-time employees each day, an increase over existing operations. The relocated transit hub will also provide a permanent, central location for bus riders utilizing the County's transportation system. Thus, the proposed project will have an overall beneficial impact on the social welfare of residents and visitors to the island.

5. **Substantially affects public health.**

The proposed project is not anticipated to have any significant adverse impacts to public health.

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

The proposed project will relocate the existing transit hub services from QKC to the project site at Vevau Street, construct new facilities at the Vevau Street location, and remove the existing bus shelter structures from QKC. The transit hub is a vital service for the County transportation system as it allows for riders to transit from one location of Maui to another, such as from Kula to Kihei. Because the proposed project scope is to relocate the existing transit hub services, there is no population growth anticipated.

The proposed project will include provision of infrastructure to service the development, including appropriate water, wastewater, drainage, and traffic improvements. As such, substantial secondary impacts are not anticipated as a result of the proposed project.

7. **Involves a substantial degradation of environmental quality.**

The project is not anticipated to have a significant adverse impact upon the natural environment. During construction, recommended BMPs will be implemented for erosion and sedimentation control. Drainage system design will comply with the Rules for Design of Storm Drainage Facilities in the County of Maui dated July 1995. Operational BMPs will also be put into place. Other appropriate mitigation measures will be developed in consultation with the applicable governmental agencies during the project design process. Refer to **Appendix "B"**.

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

The proposed Transit Hub Relocation Project does not involve a commitment for larger actions and is not anticipated to have a significant impact on the environment in the area. As previously noted, the proposed project will relocate existing transit hub services for the County transportation system. The transit hub plays a vital role in the overall operation of the transit system. The central location for the hub is near existing public and professional services, retail, education, and residential areas. The removal of the existing bus shelter structures at the QKC site are not anticipated to have any cumulative impacts as the area will remain a part of the existing shopping center. The Vevau Street location is also surrounded by existing and proposed development and as such, no cumulative impacts are anticipated as a result of the project. It is noted that the proposed transit hub may also make the development of commercial and retail uses in the area desirable. However, given the project's location within an existing urban area, this potential impact is not deemed significant. It is also noted that DAGS stated in their early consultation comments that it is working with HHFDC for future development of Parcel 4-3, upon which the proposed transit hub relocation site is located. DAGS noted a concern for accessibility to the remainder of Parcel 4-3 and future traffic on Vevau Street. No details on the future DAGS/HHFDC development were publicly available during the preparation of this Draft EA. MDOT will coordinate with DAGS/HHFDC on vehicle access to the remainder of Parcel 4-3 as plans are developed for the project.

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

There are no known significant habitats or rare, endangered, or threatened species of flora, fauna, and avifauna located within the project sites. Refer to **Appendix "C"**. Landscaping is proposed as part of the project. A copy of the project's landscape plan is provided in **Appendix "A"**. Since the project site is currently developed with moderate landscaping, the proposed action is not anticipated to have an adverse impact upon these environmental features.

10. **Detrimentially affects air or water quality or ambient noise levels.**

Construction activities will result in short-term air quality and noise impacts. Dust control measures, such as regular watering and sprinkling, and installation of dust screens will be implemented to minimize wind-blown emissions. In the short term, noise impacts will occur primarily from construction equipment and measures to remove blue rock. Equipment mufflers or other noise attenuating equipment, as well as proper equipment and vehicle maintenance, will be used during construction activities. Construction noise impacts will be mitigated through

compliance with the provisions of the State of Hawai'i, Department of Health Administrative Rules Title 11, Chapter 46, "Community Noise Control". These rules require a noise permit if the noise levels from construction activities are expected to exceed the allowable levels set forth in the Chapter 46 rules.

From a long-term perspective, there may be some impacts to ambient air and noise quality in the immediate vicinity of the transit hub due to the buses traveling to and from the area. The transit hub will operate from 5:30 am to 10:30 pm, seven (7) days a week.

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 subject properties are located in Flood X. This designation denotes an area of low flood risk and minimal flooding with no development restrictions. The subject properties are located within the tsunami evacuation zone. Emergency and civil defense procedures to provide the necessary guidance to organize and direct operations at the facility in the event of an emergency or civil defense action, such as a tsunami, will be established.

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

The proposed transit hub relocation site is not located within a designated scenic corridor and is surrounded by existing and proposed development in the area. The proposed transit hub facilities (roof structures, ticket booth and restroom facilities) are generally single-story structures. At its maximum height, the roof structure is 29 feet tall. There are existing and proposed multi-story structures in close proximity to the proposed transit hub, including the Kahului Lani senior affordable housing project being developed across Vevau Street. As such, the proposed relocated transit hub is not anticipated to impact any scenic vistas or view planes.

The removal of the existing bus shelter structures at the QKC facilities are also not located within any scenic area as the shelters are located within the shopping center itself.

13. **Requires substantial energy consumption.**

The proposed project will involve the commitment of fuel for construction equipment, vehicles, and machinery during demolition, construction, and maintenance activities. Coordination with Maui Electric Company, Ltd. (MECO) will be undertaken during the electrical plans preparation phase of work to ensure all operational parameters are addressed for the proposed project.

The continued transit hub operation will also require the use of fuel and electricity for the buses and the associated structures. The use of fuel and electricity for the continued bus transit hub operation is not considered substantial energy consumption.

The proposed project will provide a relocated transit hub at Vevau Street for the existing County transportation system and remove the existing bus shelter structures from the QKC location. Based on the foregoing analysis, the MDOT anticipates that the proposed action will result in a Finding of No Significant Impact determination.

**LIST OF PERMITS AND
APPROVALS**

VII

VII. LIST OF PERMITS AND APPROVALS

The following list of permits and approvals are anticipated to be needed for project implementation.

1. **State of Hawai'i**

- A. Hawai'i Revised Statutes, Chapter 343 Compliance
- B. Noise Permit, as applicable.

2. **County of Maui**

- A. Special Management Area Use Permit
- B. Landscape Planting Plan Approval (Parking Lots)
- C. Construction Permits (Grading Permit/Building Permit)

**PARTIES CONSULTED
DURING THE PREPARATION
OF THE DRAFT
ENVIRONMENTAL
ASSESSMENT; LETTERS
RECEIVED AND RESPONSES
TO SUBSTANTIVE
COMMENTS**

VIII

VIII. PARTIES CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED AND RESPONSES TO SUBSTANTIVE COMMENTS

The following agencies were consulted during preparation of the Draft Environmental Assessment (EA). Agency comments and responses to substantive comments are included herein.

Federal Agencies

1. Kahana Stone, Soil Conservationist
U.S. Department of Agriculture
Natural Resources Conservation Service
77 Ho'okele Street, Suite 202
Kahului, Hawai'i 96732
2. Tunis W. McElwain, Chief
U.S. Department of the Army
U.S. Army Engineer District,
Honolulu Regulatory Branch,
Building 230
Fort Shafter, Hawai'i 96858-5440
3. Michelle Bogardus, Island Team Leader
U.S. Fish and Wildlife Service
300 Ala Moana Blvd., Rm. 3-122
Honolulu, Hawai'i 96850
4. Christina Kishimoto,
Superintendent
State of Hawai'i
Department of Education
P.O. Box 2360
Honolulu, Hawai'i 96804
5. Heidi Meeker
State of Hawai'i
Department of Education
Office of Business Services
3633 Waiale Avenue, Rm. C209
Honolulu, Hawai'i 96816
6. Bruce Anderson, Director
State of Hawai'i
Department of Health
1250 Punchbowl Street
Honolulu, Hawai'i 96813
7. Alec Wong, P.E., Chief
State of Hawai'i
Department of Health
Clean Water Branch
Hale Ola, Room 225
2827 Waimano Home Road
Pearl City, Hawai'i 96782
8. Laura McIntyre, AICP
State of Hawai'i
Department of Health
Environmental Planning Office
P.O. Box 3378
Honolulu, Hawai'i 96801-3378
9. Patti Kitkowski
State of Hawai'i
Department of Health
Maui Sanitation Branch
54 South High Street, Room 300
Wailuku, Hawai'i 96793
10. Suzanne Case, Chairperson
State of Hawai'i
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawai'i 96809

State Agencies

11. Alan Downer, Administrator
State of Hawai'i
Department of Land and Natural Resources
State Historic Preservation Division
601 Kamokila Blvd., Room 555
Kapolei, Hawai'i 96707
 12. State of Hawai'i
Department of Land and Natural Resources
State Historic Preservation Division
101 Maalaea Boat Harbor Road
Wailuku, Hawai'i 96793
 13. Jade Butay, Acting Director
State of Hawai'i
Department of Transportation
869 Punchbowl Street
Honolulu, Hawai'i 96813
 14. Craig Hirai, Executive Director
State of Hawai'i
Hawai'i Housing Finance and Development Corporation
677 Queen Street
Honolulu, Hawai'i 96813
 15. Major General Arthur "Joe" Logan, Adjutant General
Hawai'i State Civil Defense
3949 Diamond Head Road
Honolulu, Hawai'i 96816
 16. Jobie Masagatani, Acting Chair
State of Hawai'i
Department of Hawaiian Home Lands
P.O. Box 1879
Honolulu, Hawai'i 96805
 17. Scott Glenn, Director
State of Hawai'i
Office of Environmental Quality Control
235 S. Beretania Street, Suite 702
Honolulu, Hawai'i 96813
 18. Dr. Kamana`opono Crabbe, Chief Executive Officer
State of Hawai'i
Office of Hawaiian Affairs
560 N. Nimitz Highway, Suite 200
Honolulu, Hawai'i 96817
 19. Leo R. Asuncion, Jr., AICP, Director
State of Hawai'i
Office of Planning
P. O. Box 2359
Honolulu, Hawai'i 96804
 20. Curt Otaguro, Comptroller
State of Hawai'i
Department of Accounting and General Services
Kalanimoku Building
1151 Punchbowl Street
Honolulu, Hawai'i 96813
 21. Senator Gil Keith-Agaran
Hawai'i State Senate
Hawai'i State Capitol, Room 221
415 S. Beretania Street
Honolulu, Hawai'i 96813
 22. Representative Justin Woodson
House of Representatives
Hawai'i State Capitol, Room 405
415 S. Beretania Street
Honolulu, Hawai'i 96813
- County Agencies**
23. Michael Miyamoto, Director
County of Maui
Department of Environmental Management
2050 Main Street, Suite 2B
Wailuku, Hawai'i 96793
 24. David Thyne, Chief
County of Maui
Department of Fire and Public Safety
200 Dairy Road
Kahului, Hawai'i 96732

25. William Spence, Acting Director
County of Maui
Department of Housing and
Human Concerns
One Main Plaza
2200 Main Street, Suite 546
Wailuku, Hawai'i 96793
26. Karla Peters, Director
County of Maui
Department of Parks and
Recreation
700 Halia Nakoa Street, Unit 2F
Wailuku, Hawai'i 96793
27. Michele Chouteau McLean,
Director
County of Maui
Department of Planning
2200 Main Street, Suite 315
Wailuku, Hawai'i 96793
28. Tivoli Faamu, Chief
County of Maui
Department of Police
55 Mahalani Street
Wailuku, Hawai'i 96793
29. David Goode, Acting Director
County of Maui
Department of Public Works
200 South High Street
Wailuku, Hawai'i 96793
30. Jeff Pearson, Director
County of Maui
Department of Water Supply
200 South High Street, 5th Floor
Wailuku, Hawai'i 96793
31. Herman Andaya, Emergency
Management Officer
County of Maui
Emergency Management Agency
200 South High Street
Wailuku, Hawai'i 96793
32. Mayor Michael Victorino
County of Maui
200 South High Street
Wailuku, Hawai'i 96793
33. Honorable Kelly King, Council
Chair
Maui County Council
200 South High Street
Wailuku, Hawai'i 96793
34. Honorable Tasha Kama
Maui County Council
200 South High Street
Wailuku, Hawai'i 96793
35. Kay Fukumoto
County of Maui
Office of Economic Development
2200 Main Street, Suite 305
Wailuku, Hawai'i 96793

Other Agencies

36. Hawaiian Telcom
60 South Church Street
Wailuku, Hawai'i 96793
37. Michael Grider, Manager,
Engineering
Maui Electric Company, Ltd.
P.O. Box 398
Kahului, Hawai'i 96733



Natural Resources
Conservation Service

Pacific Islands Area
Kahului Field Office

77 Hookele St., # 202
Kahului, HI 96732

Voice
808-871-5500 ext. 3
Fax
855-878-2454

March 5, 2019

Ms. Charlene Shibuya
Munekiyo Hiraga
305 High St., Suite 104
Wailuku, HI 96793

Dear Ms. Shibuya:

Subject: Early Consultation Request for Proposed County of Maui
Department Transportation Transit Hub Relocation; TMK: 3-7-004:
003 (por.), 3-7-002: 020 (por.), and 3-7-005: 003 (por.)

I have no comment.

Sincerely,

Kahana Stone
Soil Conservationist

April 25, 2019

Kahana Stone, Soil Conservationist
United States Department of Agriculture
Natural Resources Conservation Service
77 Hookele Street, #202
Kahului, Hawai'i 96732

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003 (por.), and (2)3-7-005:003 (por.); Kahului, Maui, Hawai'i

Dear Mr. Stone:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your letter dated March 5, 2019 providing comments on the subject project. We acknowledge that you have no comments to offer at this time.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your email and this response will be included in the Draft Environmental Assessment for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at 244-2015.

Very truly yours,



Charlene S. Shibuya
Senior Associate

CSS:tn

cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering

K:\DATA\FE\MDOT Bus Terminal Reloc\Applications\Early Consultation\Response Letters\USDA NRCS Response.doc

From: Kraska, Johnathon [<mailto:johnathon.kraska@fws.gov>]
Sent: Thursday, March 07, 2019 1:08 PM
To: General eMail <planning@munekiyohiraga.com>
Subject: DOT Transit Hub Relocation, Maui

Charlene,

As there is no federal nexus, there is no requirement to complete a Section 7 consultation for the Endangered Species Act. You can find avoidance and minimization measures for plants and animals

here: <https://www.fws.gov/pacificislands//promo.cfm?id=177175840>

For this project I would anticipate possible effects to the Hawaiian hoary bat, Blackburn's sphinx moth, and Seabirds if nighttime lighting is used or installed. A survey of the area would give you a more complete list, but still might not include every species that may transit the area. I recommend working closely with the State's Natural Resource Managers to further reduce any impacts to all species.

Thanks for reaching out to us to help conserve our precious species,

--

Johnathon Kraska

Endangered Species Biologist
U.S. Fish and Wildlife Service
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850
Office: (808) 792-9427, Mobile: (808) 260-3078
johnathon.kraska@fws.gov



April 25, 2019

Johnathon Kraska, Endangered Species Biologist
U.S. Fish and Wildlife Service
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawai'i 96850

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003 (por.), and (2)3-7-005:003 (por.); Kahului, Maui, Hawai'i

Dear Mr. Kraska:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your email dated March 7, 2019 providing comments on the subject project. We offer the following information in response to the comments received.

We acknowledge your comment that Section 7 consultation per the Endangered Species Act is not triggered by the proposed project as there is no Federal nexus.

We will review the avoidance and minimization measures for plants and animals as suggested.

We acknowledge your comment regarding possible effects to the Hawaiian hoary bat, Blackburn's sphinx moth, and seabirds if nighttime lighting is used. We note that lighting fixtures will be shielded and/or downward facing so as to avoid any possible impacts to migratory seabirds.

Further, we note that a biological resources survey was completed for the proposed transit hub relocation site in November 2018. The report findings state that no federally threatened or endangered fauna species occur in the area, nor does any critical habitat for any protected species occur. The report also noted that the Hawaiian hoary bat is not expected to occur in the area. A copy of the biological report will be included in the Draft EA.

Johnathon Kraska, Endangered Species Biologist
April 25, 2019
Page 2

Lastly, we note that the Department of Land and Natural Resources (DLNR) was also consulted as part of the early consultation process for the proposed project. The project will adhere to any recommendations in regards to avoiding or minimizing impacts to all species that may be provided by the DLNR.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your email and this response will be included in the Draft Environmental Assessment for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at (808) 244-2015.

Very truly yours,

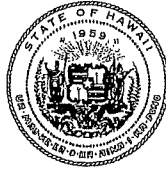


Charlene S. Shibuya
Senior Associate

CSS:tn

cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering

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STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

March 28, 2019

Charlene Shibuya
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Re: Early Consultation Request for the Proposed Relocation of the County of Maui
Department of Transportation Transit Hub, Maui TMK 3-7-002:020 por.,
3-7-004:003 por., and 3-7-005:003 por., Kahului, Maui

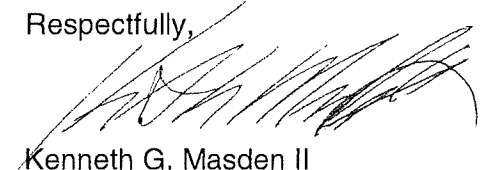
Dear Ms. Shibuya:

The Hawaii State Department of Education (HIDOE) has the following comments on the early consultation request to prepare a Draft Environmental Assessment (DEA) for the relocation of the County bus transit hub to property located at Kahului, Island of Maui, TMK: Key 3-7-002:020 por., 3-7-004:003 por., and 3-7-005:003 por.

The proposed Project may impact HIDOE facilities. McKinley Community School for Adults - Maui District and a base yard used to store landscaping equipment are located on the same parcel as, and adjacent to the Project. Additional comments will be provided during DEA review.

Thank you for the opportunity to comment. Should you have questions, please contact Robyn Loudermilk, School Lands and Facilities Specialist of the Facilities Development Branch, Planning Section, at (808) 784-5093 or via email at robyn_loudermilk@notes.k12.hi.us.

Respectfully,



Kenneth G. Masden II
Public Works Manager
Planning Section

KGM:rl

c: Kurt Ginoza, Vice-Principal, McKinley Community School for Adults - Maui District
Facilities Development Branch

April 25, 2019

Kenneth Masden, Public Works Manager
State of Hawai'i
Department of Education
P.O. Box 2360
Honolulu, Hawai'i 96804

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003(por.), and (2)3-7-005:003(por.); Kahului, Maui, Hawai'i

Dear Mr. Masden:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your letter dated March 28, 2019 providing comments on the subject project. We offer the following information in response to the comments received.

We acknowledge your comment. The Proposed Transit Hub Relocation Project, although it will be located adjacent to the McKinley Community School for Adults – Maui District (MCSA) and State-owned baseyard, will not negatively impact these facilities. Construction Best Management Practices will be implemented so as to minimize adverse noise and air impacts to surrounding properties as will be discussed further in the Draft Environmental Assessment (EA) currently being prepared. In addition, the location of the Transit Hub will favorably affect the MCSA as it will provide easier access to the facility for those who rely on the bus system.

Kenneth Masden, Public Works Manager
April 25, 2019
Page 2

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft EA for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at (808) 244-2015.

Very truly yours,



Charlene Shibuya
Senior Associate

CSS:tn

cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering

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MAR 15 2019

DAVID Y. IGE
GOVERNOR OF HAWAII



BRUCE S. ANDERSON, Ph.D.
DIRECTOR OF HEALTH

LORRIN W. PANG, M.D., M.P.H.
DISTRICT HEALTH OFFICER

STATE OF HAWAII
DEPARTMENT OF HEALTH
MAUI DISTRICT HEALTH OFFICE
54 HIGH STREET
WAILUKU, HAWAII 96793-3378

March 13, 2019

Ms. Charlene Shibuya
Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Shibuya:

**Subject: Early Consultation Request for Proposed County of Maui, Department of Transportation Transit Hub Relocation, Kahului, Hawaii
TMK: (2) 3-7-004:003 (por.); (2) 3-7-002:020 (por.); & (2) 3-7-005:003 (por.)**

Thank you for the opportunity to review this project. We have the following comments to offer:

The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules, Chapter 11-46, "Community Noise Control." A noise permit may be required and should be obtained before the commencement of work. Please call the Indoor & Radiological Health Branch at 808 586-4700.

Should you have any questions, please contact me at 808 984-8230 or email me at patricia.kitkowski@doh.hawaii.gov.

Sincerely,

A handwritten signature in black ink that reads "Patti Kitkowski".

Patti Kitkowski
District Environmental Health Program Chief

c Sina Pruder, Acting EMD Administrator {Via Email}

April 25, 2019

Patti Kitkowski, District Environmental
Health Program Chief
State of Hawai'i
Department of Health
Maui District Health Office
54 High Street
Wailuku, Hawai'i 96793

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003 (por.), and (2)3-7-005:003 (por.); Kahului, Maui, Hawai'i

Dear Ms. Kitkowski:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your letter dated March 13, 2019 providing comments on the subject project. We offer the following information in response to the comments received.

Coordination will be undertaken with the Department of Health, Indoor and Radiological Health Branch, as applicable, to obtain a noise permit for noise generated during the construction phase as per Hawai'i Administrative Rules, Chapter 11-46.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment for the project. In the meantime, should you

Patti Kitkowski, District Environmental
Health Program Chief
April 25, 2019
Page 2

have any questions or require additional information, please feel free to contact me at
244-2015.

Very truly yours,



Charlene S. Shibuya
Senior Associate

CSS:tn

cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering, Inc.

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DAVID Y. IGE
GOVERNOR OF HAWAII



SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

March 27, 2019

Munekiyo Hiraga
Attn: Ms. Charlene Shibuya
Senior Associate
305 High Street, Suite 104
Wailuku, Hawaii 96793

via email: planning@munekiyohiraga.com

Dear Ms. Shibuya:

SUBJECT: Early Consultation Request for Maui Bus Transit Hub Relocation
located at Queen Kaahumanu Shopping Center to Vevau Street, Kahului,
Island of Maui; TMK Nos.: (2) 3-7-004:003 (por.); (2) 3-7-002:020 (por.);
and (2) 3-7-005:003 (por.)

Thank you for the opportunity to review and comment on the subject matter. The Land Division of the Department of Land and Natural Resources (DLNR) distributed or made available a copy of your request pertaining to the subject matter to DLNR's Divisions for their review and comments.

At this time, enclosed are comments from the Engineering Division on the subject matter. Should you have any questions, please feel free to call Darlene Nakamura at (808) 587-0417. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell Y. Tsuji".

Russell Y. Tsuji
Land Administrator

Enclosure
cc: Central Files



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

March 7, 2019

MEMORANDUM

TO:

DLNR Agencies:

- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division
- Div. of Forestry & Wildlife
- Div. of State Parks
- Commission on Water Resource Management
- Office of Conservation & Coastal Lands
- Land Division – Maui District
- Historic Preservation

FROM:

f Russell Y. Tsuji, Land Administrator *RS*

SUBJECT:

Early Consultation Request for **Maui Bus Transit Hub Relocation**

LOCATION:

Queen Kaahumanu Shopping Center to Vevau Street, Kahului,
Island of Maui; TMK Nos.: (2) 3-7-004:003 (por.); (2) 3-7-002:020 (por.);
and (2) 3-7-005:003 (por.)

APPLICANT:

Munekiyo Hiraga on behalf of County of Maui, Department of Transportation

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **March 25, 2019**.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

- We have no objections.
- We have no comments.
- Comments are attached.

Signed:

C. Chang

Print Name:

Cathy S. Chang, Chief Engineer

Date:

3/13/19

Attachments

cc: Central Files

19 MAR 07 PM 10:01 ENGINEERING

**DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION**

LD/Russell Y. Tsuji

Ref: Early Consultation Request for Maui Bus Transit Hub Relocation

**Location: Queen Kaahumanu Shopping Center to Vevau Street, Kahului,
Island of Maui**

**TMK(s): (2) 3-7-004:003 (por.); (2) 3-7-002:020 (por.); and (2) 3-7-005:003
(por.)**

**Applicant: Munekiyo Hiraga on behalf of County of Maui, Department of
Transportation**

COMMENTS


The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (high risk areas). State projects are required to comply with 44CFR regulations as stipulated in Section 60.12. Be advised that 44CFR reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards.

The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood Hazard Zones are designated on FEMA's Flood Insurance Rate Maps (FIRM), which can be viewed on our Flood Hazard Assessment Tool (FHAT) (<http://gis.hawaiinfip.org/FHAT>).

If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:

- o Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- o Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- o Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7253.
- o Kauai: County of Kauai, Department of Public Works (808) 241-4846.

Signed: _____


CARTY S. CHANG, CHIEF ENGINEER

Date: _____

3/13/19

April 25, 2019

Russell Tsuji, Land Administrator
State of Hawai'i
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawai'i 96809

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003(por.), and (2)3-7-005:003(por.); Kahului, Maui, Hawai'i

Dear Mr. Tsuji:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your letter dated March 27, 2019 providing comments on the subject project. We offer the following information in response to the comments received.

Comments from the Engineering Division

We acknowledge your comments regarding the requirement for State projects to comply with the rules and regulations of the National Flood Insurance Program, Title 44 of the Code of Federal Regulations when the project falls within a Special Flood Hazard Area. We note that the Flood Insurance Rate map for the area indicates that the project falls within Zone X.

Russell Tsuji, Land Administrator
April 25, 2019
Page 2

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at (808) 244-2015.

Very truly yours,



Charlene Shibuya
Senior Associate

CSS

cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering

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APR 03 2019

DAVID Y. IGE
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

JADE T. BUTAY
DIRECTOR

Deputy Directors
LYNN A.S. ARAKI-REGAN
DEREK J. CHOW
ROSS M. HIGASHI
EDWIN H. SNIFFEN

IN REPLY REFER TO:
DIR 0206
STP 8.2630

March 29, 2019

Ms. Charlene Shibuya
Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Shibuya:

Subject: Maui Transit Hub Relocation
Early Consultation for Draft Environmental Assessment (DEA)
Kahului, Maui, Hawaii
TMK: (2) 3-7-004:003 (por.), 3-7-002:020 (por.) and 3-7-005:003 (por.)

The State Department of Transportation (DOT) understands the County of Maui, Department of Transportation is proposing to relocate the Maui Bus Transit Hub. DOT comments on the subject project are as follows:

Highways Division

1. A Traffic Assessment or a Traffic Impact Analysis Report should be prepared by a traffic engineer licensed in the State of Hawaii and should be included in the DEA.
 - a. The traffic study should evaluate any local impacts to the State highways such as the Kaahumanu Avenue (Route 32) or nearby State facilities attributed by the project.
 - b. The traffic study should include intersections:
 - i. Kaahumanu Avenue/Kane Street
 - ii. Kaahumanu Avenue/Lono Avenue
 - c. The traffic study should evaluate whether the storage lane for the right turn approach on Kane Street may be required to be lengthened.
 - d. A discussion should be provided on the typical bus schedule operations/enroute patterns.

Ms. Charlene Shibuya
March 29, 2019
Page 2

DIR 0206
STP 8.2630

2. The DEA and the traffic study should include a discussion on any planned bicyclist/pedestrian paths leading into the proposed transit hub. The DOT requires that appropriate measures should be taken to mitigate safety and connectivity with the immediate surrounding communities.
3. Construction plans for all work done within the Kaahumanu Avenue right-of-way, must be submitted to the Maui District Engineer of the Highways Division for review and approval.

If there are any questions, please contact Mr. Blayne Nikaido of the DOT Statewide Transportation Planning Office at (808) 831-7979 or by email at blayne.h.nikaido@hawaii.gov.

Sincerely,



JADE T. BUTAY
Director of Transportation

April 25, 2019

Jade Butay, Director
State of Hawai'i
Department of Transportation
869 Punchbowl Street
Honolulu, Hawai'i 96813-5097

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003 (por.), and (2)3-7-005:003 (por.); Kahului, Maui, Hawai'i; Reply To: DIR 0206, STP 8.2630

Dear Mr. Butay:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your letter dated March 29, 2019 providing comments on the subject project. We offer the following information in response to the comments received.

A Traffic Impact Analysis Report (TIAR) has been prepared by a licensed traffic engineer and will be included in the Draft Environmental Assessment (EA) being prepared for the project. As requested in your letter, the TIAR will include the following:

1. An evaluation of any local impacts to the State highways such as the Kaahumanu Avenue (Route 32).
2. Analysis of the intersections of Kaahumanu Avenue at Kane Street and Kaahumanu Avenue at Lono Avenue.
3. An evaluation of whether the storage lane for the right turn approach on Kane Street may be required to be lengthened.
4. A discussion on the typical bus schedule operations and enroute patterns.
5. A discussion on any planned bicycle and pedestrian paths leading into the proposed transit hub, and if appropriate, recommend measures to mitigate safety and connectivity with the immediate surrounding communities.

Finally, we acknowledge your comment regarding work on Ka'ahumanu Avenue. No work is anticipated to be done within the Ka'ahumanu Avenue right-of-way as part of the proposed project.

Jade Butay, Director
April 25, 2019
Page 2

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your email and this response will be included in the Draft EA for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at (808) 244-2015.

Very truly yours,



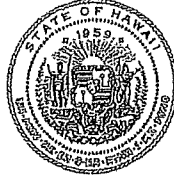
Charlene S. Shibuya
Senior Associate

CSS:tn

cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering
Anthony Riecke Gonzales, Riecke Sunnland Kono Architects Ltd.
Tyler Fujiwara, Austin, Tsutsumi & Associates, Inc.

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DAVID Y. IGE
GOVERNOR



CRAIG K. HIRAI
EXECUTIVE DIRECTOR

STATE OF HAWAII
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
HAWAII HOUSING FINANCE AND DEVELOPMENT CORPORATION

IN REPLY REFER TO:
19:DEV/026

677 QUEEN STREET, SUITE 300
HONOLULU, HAWAII 96813
FAX: (808) 587-0600

March 14, 2019

Munekiyo Hiraga
Attention: Charlene Shibuya, Senior Associate
305 High Street, Suite 104
Wailuku, Hawaii 96793

Subject: Early Consultation Request for Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2) 3-7-004:003(por.), (2) 3-7-002:020(por.), and (2) 3-7-005:003(por.); Kahului, Hawaii

Thank you for the opportunity to provide preliminary comments on the Maui Bus Transit Hub relocation project. In response to your letter dated February 27, 2019, we have the following comments:

- Page 2, 2nd paragraph: Parcel 3 is currently owned by the State of Hawaii; transfer of jurisdiction from the State of Hawaii Department of Accounting and General Services ("DAGS") to the Hawaii Housing Finance and Development Corporation ("HHFDC") is pending.

Should you have any questions, please contact Stan Fujimoto, project manager with HHFDC for the Mixed-Use Project, at 587-0541.

Sincerely,

A handwritten signature in black ink, appearing to read "Craig K. Hirai".

Craig K. Hirai
Executive Director

Cc: Chris Kinimaka, DAGS

April 25, 2019

Craig K. Hirai, Executive Director
State of Hawai'i
Hawai'i Housing Finance and
Development Corporation
677 Queen Street, Suite 300
Honolulu, Hawai'i 96813

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003 (por.), and (2)3-7-005:003 (por.); Kahului, Maui, Hawai'i; Reply to: 19:DEV/026

Dear Mr. Hirai:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your letter dated March 14, 2019 providing comments on the subject project. We offer the following information in response to the comments received.

We will note in the Draft Environmental Assessment (EA) currently being prepared for the project that jurisdiction of Parcel (2)3-7-004:003 is currently with the Department of Accounting and General Services, and that the transfer of that jurisdiction to the Hawai'i Housing Finance and Development Corporation is pending. If the transfer is finalized before the Draft EA is published, we will reflect the land status appropriately.

Craig K. Hirai, Executive Director
April 25, 2019
Page 2

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your email and this response will be included in the Draft EA for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at (808) 244-2015.

Very truly yours,



Charlene S. Shibuya
Senior Associate

CSS:tn

cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering

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From: Jerome K. Yasuhara [<mailto:jeromey@oha.org>]

Sent: Monday, March 11, 2019 3:11 PM

To: General eMail <planning@munekiyohiraga.com>

Subject: Early Consultation Request Proposed County of Maui DOT Transit Hub Relocation TMK (2)3-7-004:003(por.) et seq.

Aloha Munekiyo Hiraga (ATTN: CHARLENE SHIBUYA, SENIOR ASSOCIATE):

This regards your correspondence dated February 27 2019, received by the Office of Hawaiian Affairs concerning the above subject matter. To better assist in our office's review of the project, we would appreciate first receiving a copy of your Draft Environmental Assessment (DEA) or Environmental Impact Statement (DEIS), to include among other things a Cultural Impact Assessment (CIA), as mandated by the State of Hawai'i. Thank you for your kind attention to this matter; we look forward to receipt of the appropriate documents when they are made available. Please to not hesitate to contact me should you have any questions.

*Me ka ha`aha`a,
Jerome Yasuhara*

Jerome Yasuhara | Ka `Aho Pueo, Kia`i Kānāwai | **Compliance Specialist**
OFFICE OF HAWAIIAN AFFAIRS



560 N. Nimitz Highway, Suite 200 | Honolulu, HI 96817

☎: 808.594.0129 | ☎: 808.594.1825 | ✉: jeromey@oha.org

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April 25, 2019

Jerome Yasuhara, Compliance Specialist
Office of Hawaiian Affairs
560 North Nimitz Highway, Suite 200
Honolulu, Hawai'i 96817

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003 (por.), and (2)3-7-005:003 (por.); Kahului, Maui, Hawai'i

Dear Mr. Yasuhara:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your email dated March 11, 2019 providing comments on the subject project. We offer the following information in response to the comments received.

We acknowledge your comments. As requested, a copy of the Draft Environmental Assessment (EA) will be provided for your office's review and comment. The Draft EA will include a summary of cultural interviewees relative to the project area.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your email and this response will be included in the Draft EA for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at (808) 244-2015.

Very truly yours,



Charlene S. Shibuya
Senior Associate

CSS:tn

cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering

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APR 01 2019



**OFFICE OF PLANNING
STATE OF HAWAII**

DAVID Y. IGE
GOVERNOR

DIRECTOR
OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: <http://planning.hawaii.gov/>

DTS201903280653BE

March 27, 2019

Ms. Charlene Shibuya
Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Shibuya:

Subject: Pre-Assessment Consultation for a HRS Chapter 343 Environmental Assessment – Proposed County of Maui, Department of Transportation Transit Hub Relocation, Tax Map Key (TMK) Nos. (2) 3-7-004: 003 (por), 3-7-002: 020 (por), and 3-7-005: 003 (por), Kahului, Maui

Thank you for the opportunity to provide comments for the preparation of a Draft Environmental Assessment (Draft EA) for the proposed project.

It is our understanding that the Maui Department of Transportation (MDOT) proposes the relocation of the existing Maui Bus Transit Hub from the Queen Kaahumanu Shopping Center (QKSC) to an approximately 0.85-acre portion of TMK No. 3-7-004: 003, a State-owned parcel, situated on Vevau Street immediately adjacent to the east of QKSC. The project would include construction of a new transit hub with covered bus loading and waiting areas, ticket booth/office, restrooms, storage building, employee parking, driveway improvements, access gates, and landscaping. The project would include installation of utilities at the Vevau site and removal of existing bus shelters at QKSC.

The Office of Planning (OP) has reviewed the transmitted material and has the following comments to offer.

1. Transit Oriented Development
The proposed Transit Hub is one of the priority TOD projects identified by the County in the *State of Hawaii Strategic Plan for Transit Oriented Development, Revised August 2018*. The Draft EA should consider the *TOD Strategic Plan* when evaluating the proposed project and its impacts. In addition, the new Transit Hub should be evaluated and planned in terms of how to optimize its physical and functional relationship to another priority TOD project identified in the *TOD Strategic Plan*, the Kane Street Affordable Housing Project to be

developed by the Hawaii Housing Finance and Development Corporation (HHFDC). OP recommends consultation with HHFDC to ensure that optimal TOD benefits are derived from the co-location of these as well as landowner Department of Accounting and General Services projects at this site. The *TOD Strategic Plan* can be found at: https://planning.hawaii.gov/wp-content/uploads/State-TOD-Strategic-Plan_Dec-2017-Rev-Aug-2018.pdf.

The County of Maui has also identified a new TOD planning initiative—preparation of a Wailuku-Kahului Transit Corridor Master Plan—of which the new Transit Hub will be a key component. The Draft EA should consider and evaluate how the Transit Hub will contribute to increasing livability in the corridor and support master planning efforts to increase jobs, business, and civic services, affordable housing, and access to education, health care, and other community amenities in this corridor.

Other issues to be evaluated for the Draft EA include:

- Promotion of physical and functional connections—including pedestrian and bike access—between the transit hub and adjoining properties and nearby destinations;
- Bike parking or provision of bikeshare to promote multi-modal connections to the transit hub;
- Signage and wayfinding for bus riders and pedestrians at the facility;
- Accommodation for drop-offs, and safe, visible connection/access to planned drop-off locations;
- Containment, mitigation, and/or onsite treatment of stormwater runoff from vehicular lanes and parking onsite, and other low impact design techniques that can be incorporated in site design;
- Integration and use of renewable energy in the transit facility;
- Recycling and/or repurposing of existing bus shelters being removed from QKSC; and
- Discussion of actions to be taken to ensure long-term use of the private road to access the facility and avoid future disruption in transit service.

2. Special Management Area

The Special Management Area (SMA) guidelines, articulated in HRS § 205A-26, apply specifically to the SMA permit process. As the proposed action is located within the County of Maui's SMA, the subject EA should assess the compliance of the proposed development to the SMA guidelines and County of Maui's SMA rules.

The planning departments of the various counties are charged with assessing SMA permit applications and shoreline setbacks. Please consult with the Maui Planning Department on the SMA permit requirements for the subject project.

3. Hawaii State Planning Act
Hawaii Administrative Rules (HAR) § 11-200-10(4) requires an Environmental Assessment to provide a general description of the action's technical, economic, social, and environmental characteristics. The Draft EA should provide a discussion on the project and its ability to meet State goals and priorities as detailed in HRS Chapter 226.

The analysis on the Hawaii State Planning Act should examine the project's consistency with all three parts of HRS Chapter 226 or clarify where the project conflicts with them. If any of these statutes are not applicable to the project, the analysis should affirmatively state such determination, along with discussion paragraphs.

4. Hawaii Coastal Zone Management Program
The Hawaii Coastal Zone Management (CZM) area is defined as "all lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the U.S. territorial sea" (HRS § 205A-1).

Pursuant to HRS § 205A-4, in implementing the objectives of the CZM program, agencies shall fully consider ecological, cultural, historic, esthetic, recreational, scenic, and open space values, and coastal hazards, as well as to needs for economic development. The Draft EA should therefore provide analysis on the project's consistency with the objectives and supporting policies of the Hawaii CZM program, pursuant to HRS § 205A-2.

5. Drainage / Stormwater Runoff Mitigation / Erosion Control / Sea Level Rise
Pursuant to HAR § 11-200-10(6) and (7) – identification and summary of impacts and alternatives considered and proposed mitigation measures, the effects of stormwater volume and runoff and the effect, if any, of sea level rise on the proposed project and project development activities that would contribute to offsite impacts should be evaluated in the Draft EA.

Issues that may be examined include, but are not limited to, project site characteristics in relation to flood and erosion prone areas, open spaces, the potential vulnerability of surface water resources, drainage infrastructure

Ms. Charlene Shibuya
March 27, 2019
Page 4

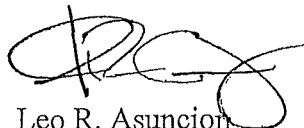
currently in place, and comparing the level of impervious versus permeable in the project area. These items should be considered when developing mitigation measures for the protection of nearby water resources and the coastal ecosystem, pursuant to HAR § 11-200-10(7).

To assist in developing stormwater runoff strategies and use of LID, OP has developed guidance documents on this subject. We recommend consulting these stormwater evaluative tools when developing mitigation approaches for polluted runoff. They offer useful techniques to keep land-based pollutants and sediment in place, while considering the management practices best suited for the area and the types of contaminants affecting the surrounding environment. The evaluative tools that should be considered during the design process include:

- Stormwater Impact Assessments can be used to identify and analyze information on hydrology, sensitivity of coastal and riparian resources, and management measures to control runoff, as well as consider secondary and cumulative impacts to the area.
http://files.hawaii.gov/dbedt/op/czm/initiative/stomwater_imapct/final_stormwater_impact_assessments_guidance.pdf; and
- Low Impact Development (LID), A Practitioners Guide covers a range of structural systems and best management practices that mimic or utilize the natural processes of infiltration and evapotranspiration of polluted runoff. LID features promote onsite storm water management, urban layouts that minimize environmental impacts, and can lead to improved water quality.
http://files.hawaii.gov/dbedt/op/czm/initiative/lid/lid_guide_2006.pdf

If you have any questions regarding this comment letter, please contact Ruby Edwards, Land Use Division, at (808) 587-2817.

Sincerely,



Leo R. Asuncion
Planning Program Administrator II

April 25, 2019

Leo R. Asuncion
Planning Program Administrator
State of Hawai'i
Office of Planning
P.O. Box 2359
Honolulu, Hawai'i 96804

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003 (por.), and (2)3-7-005:003 (por.); Kahului, Maui, Hawai'i

Dear Mr. Asuncion:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your letter dated March 27, 2019 providing comments on the subject project. We offer the following information in response to the comments received.

We acknowledge that the proposed transit hub relocation project is one (1) of the priority Transit-Oriented Development (TOD) projects identified by the County of Maui in the State of Hawai'i Strategic Plan for Transit Oriented Development, Revised August 2018. The TOD Strategic Plan will be reviewed in the context of the proposed project. The Draft Environmental Assessment (EA) being prepared for the project will evaluate the proximity and potential synergistic relationship between the proposed project and the adjacent Kahului Lani senior affordable housing project currently under construction. In addition, we note that the Hawai'i Housing Development and Financing Corporation (HHFDC) and Department of Accounting and General Services will be consulted on the project and provided a copy of the Draft EA for review and comment.

We acknowledge your comment regarding the County of Maui's Wailuku-Kahului Transit Corridor Master Plan. Should the plan be adopted prior to publication of the EA, a discussion of the proposed project's consistency with the plan will be included.

In addition to the above, the Draft EA will include information on vehicular and pedestrian connections between the project and nearby destinations, safety, stormwater mitigation, and potential use of renewable energy at the proposed relocated transit hub.

Leo R. Asuncion
Planning Program Administrator
April 25, 2019
Page 2

The Draft EA will also address the project's compliance with the Special Management Area (SMA) guidelines articulated in Chapter 205A-26, Hawai'i Revised Statutes (HRS), as well as the SMA Rules of the Maui Planning Commission (MPC). A SMA Use Permit application is also being prepared for the project for review and action by the MPC.

Similarly, the Draft EA will describe the project's technical, economic, social, and environmental characteristics, and will address the project's conformance with the Hawai'i State Planning Act as codified in Chapter 226, HRS.

Further, the Draft EA will provide an analysis of the project's consistency with the objectives and supporting policies of the Hawai'i Coastal Zone Management Program, pursuant to Chapter 205A-2, HRS. Specifically, the Draft EA will discuss the ecological, cultural, historic, aesthetic, recreational, scenic, and open space values of the project, coastal hazard implications, and the project's impact on economic development.

Finally, the Draft EA will identify and summarize impacts and alternatives considered and proposed mitigation measures pursuant to Chapter 11-200-10(6) and (7), Hawai'i Administrative Rules. This includes information relative to stormwater volume and runoff and the effect, if any, of sea level rise on the proposed project. The Stormwater Impact Assessment and Low Impact Development tools provided in your email will be provided to the project's design team for consideration in the proposed project.

Thank you for your participation in the Chapter 343, HRS environmental review process. A copy of your email and this response will be included in the Draft EA for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at (808) 244-2015.

Very truly yours,



Charlene S. Shibuya
Senior Associate

CSS:tn

cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering
Anthony Riecke Gonzales, Riecke Sunnland Kono Architects Ltd.

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MAY 01 2019

DAVID Y. IGE
GOVERNOR



CURT T. OTAGURO
COMPTROLLER
AUDREY HIDANO
DEPUTY COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

P.O. BOX 119, HONOLULU, HAWAII 96810-0119

(P)19.065

APR 29 2019

Ms. Charlene Shibuya, Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793


Dear Ms. Shibuya:

Subject: Early Consultation Request
Proposed County of Maui, Department of Transportation Transit Hub Relocation
Kahului, Maui, Hawaii
TMK: (2) 3-7-004:003 (por) (2) 3-7-002:020 (por) and (2) 3-7-005:003 (por)

Thank you for the opportunity to comment on the subject project. We concur with the intent of this project, however, we offer the following:

1. Hawaii Housing and Finance and Development Corporation (HHFDC) in conjunction with DAGS is developing the Parcel 3. We are concerned on the impacts of the bus hub to the accessibility of our property and the overall traffic and congestion along Vevau Street.
2. HHFDC has been consulted on the draft EA.
3. DAGS and HHFDC shall be kept informed and given the opportunity to review any future progress to the project

Sincerely,


CURT T. OTAGURO
Comptroller

May 6, 2019

Curt Otaguro, Comptroller
State of Hawai'i
Department of Accounting and General Services
P.O. Box 119
Honolulu, Hawai'i 96810-0119

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003 (por.), and (2)3-7-005:003 (por.); Kahului, Maui, Hawai'i

Dear Mr. Otaguro:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your letter dated April 29, 2019 providing comments on the subject project. We offer the following information in response to the comments received.

We acknowledge that the Department of Accounting and General Services (DAGS) concurs with the intent of the project.

We note that DAGS and the Hawai'i Housing and Financing and Development Corporation (HHFDC) are planning to develop subject TMK (2)3-7-004:003 (Parcel 3). The proposed project's location on Parcel 3 is not meant to impede any future development on Parcel 3. Furthermore, the location of the proposed transit hub in proximity to the DAGS/HHFDC future development will positively impact accessibility to residences and services in the area for transit riders and pedestrians.

We confirm that HHFDC has been consulted on the proposed project.

Curt Otaguro, Comptroller
May 6, 2019
Page 2

Thank you for your comments and we will provide both DAGS and HHFDC with copies of the Draft Environmental Assessment (EA) for review and comment. A copy of your letter and this response will be included in the Draft Environmental Assessment for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at (808) 244-2015.

Very truly yours,



Charlene S. Shibuya
Senior Associate

CSS:lh

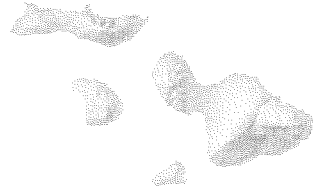
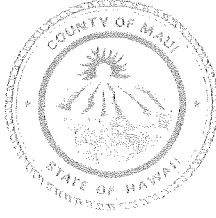
cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering, Inc.

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MICHAEL P. VICTORINO
Mayor

DAVID C. THYNE
Fire Chief

BRADFORD K. VENTURA
Deputy Fire Chief



DEPARTMENT OF FIRE & PUBLIC SAFETY

COUNTY OF MAUI
200 DAIRY ROAD
KAHULUI, HI 96732

March 27, 2019

Munekiyo Hiraga
Attn: Charlene Shibuya, Senior Associate
305 High St. Suite 104
Wailuku, HI 96793

SUBJECT: MDOT Transit Hub Relocation
Kahului, HI
TMK: (2) 3-7-004:003 (por.), (2) 3-7-002:020 (por.), (2) 3-7-005:003 (por.)

Dear Charlene,

Thank you for allowing our office to provide comment on the subject proposed project. As per your request, comments are provided below:

- At this time, there are no comments in regards to the proposed relocation of the transit hub.
- Our office does reserve the right to comment on the proposed project during the building permit review process when detailed plans for this project are routed to our office for review. At that time, fire department access, water supply for fire protection, and fire and life safety requirements will be addressed.

If there are any questions or comments, please feel free to contact me at (808) 876-4693 or by email at paul.haake@mauicounty.gov.

Sincerely,

Paul Haake

A handwritten signature in cursive script that reads "Paul Haake".

Captain - Fire Prevention Bureau



Michael T. Munekiyo
CHAIRMAN
Karlynn K. Fukuda
PRESIDENT
Mark Alexander Roy
VICE PRESIDENT
Tessa Munekiyo Ng
VICE PRESIDENT

April 25, 2019

Captain Paul Haake
County of Maui
Department of Fire and Public Safety
Fire Prevention Bureau
313 Manea Place
Wailuku, Hawai'i 96793

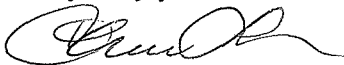
SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003(por.), and (2)3-7-005:003(por.); Kahului, Maui, Hawai'i

Dear Captain Haake:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your letter dated March 27, 2019 providing comments on the subject project. We acknowledge that you have no comments to offer at this time.

We acknowledge that the Fire Prevention Bureau reserves the right to comment on the project during the building permit review process, at which time Fire Department access, water supply for fire protection, and fire and life safety requirements will be assessed.

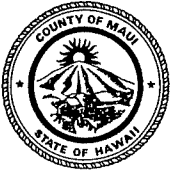
Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your email and this response will be included in the Draft EA for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at 244-2015.

Very truly yours,

Charlene S. Shibuya
Senior Associate

CSS:tn

cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering

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DEPARTMENT OF
HOUSING AND HUMAN CONCERNS
COUNTY OF MAUI

APR 25 2019

MICHAEL P. VICTORINO
Mayor

LORI TSUHAKO
Acting Director

LINDA R. MUNSELL
Deputy Director

2065 MAIN STREET SUITE 108 • WAILUKU, HAWAII 96793 • PHONE (808) 270-7351 • FAX 270-6284 • EMAIL housing@mauicounty.gov

April 22, 2019

Charlene Shibuya
Senior Associate
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Charlene Shibuya:

**Subject: Early Consultation Request for Proposed County of Maui
Department of Transportation Transit Hub Relocation; TMK
(2)3-7-004:003(por.), (2)3-7-002:020(por.), and (2)3-7-
005:003(por.); Kahului, Hawaii**

The Department has reviewed the request for Early Consultation for the above subject project. Based on our review, we have determined that the subject project is not subject to Chapter 2.96, Maui County Code. At the present time, the Department has no additional comments to offer.

Please feel free to contact me at (808) 270-7355 if you have any questions.

Sincerely,

C. BUDDY ALMEIDA
Housing Administrator

cc: Director of Housing and Human Concerns



Michael T. Munekiyo
CHAIRMAN

Karlynn K. Fukuda
PRESIDENT

Mark Alexander Roy
VICE PRESIDENT

Tessa Munekiyo Ng
VICE PRESIDENT

April 25, 2019

C. Buddy Almeida, Housing Administrator
County of Maui
Department of Housing and Human Concerns
2065 Main Street, Suite 108
Wailuku, Hawai'i 96793

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003 (por.), and (2)3-7-005:003 (por.); Kahului, Maui, Hawai'i

Dear Mr. Almeida:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your letter dated April 22, 2019 providing comments on the subject project. We acknowledge your comment that the project is not subject to the workforce housing requirements of Chapter 2.96, Maui County Code, and that the Department of Housing and Human Concerns has no comments to offer at this time.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at 244-2015.

Very truly yours,

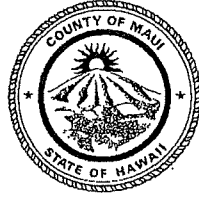
Charlene S. Shibuya
Senior Associate

CSS:lh

cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering, Inc.

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MICHAEL P. VICTORINO
Mayor



MAR 04 2019

KARLA H. PETERS
Director

JOHN L. BUCK III
Deputy Director

DEPARTMENT OF PARKS & RECREATION

700 Hali'a Nakoa Street, Unit 2, Wailuku, Hawaii 96793

(808) 270-7230
FAX (808) 270-7934

March 8, 2019

Charlene Shibuya, Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, HI 96793

Dear Ms. Shibuya:

SUBJECT: Early Consultation Request for Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2) 3-7-004:003 (por.), (2) 3-7-002:020 (por.), and (2) 3-7-005:003 (por.); Kahului, Hawaii

Thank you for the opportunity to review and comment on the subject project. The Department of Parks & Recreation has no comment at this time, and looks forward to reviewing the Draft Environmental Assessment when it is available.

Please feel free to contact me or Robert Halvorson, Chief of Planning and Development, at robert.halvorson@co.maui.hi.us or (808) 270-7387, should you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "K. Peters", written over a horizontal line.

KARLA H. PETERS
Director of Parks & Recreation

c: Robert Halvorson, Chief of Planning and Development

KP:RH:csa

April 25, 2019

Karla Peters, Director
County of Maui
Department of Parks and Recreation
700 Hali'a Nako Street, Unit 2
Wailuku, Hawai'i 96793

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003 (por.), and (2)3-7-005:003 (por.); Kahului, Maui, Hawai'i

Dear Ms. Peters:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your letter dated March 8, 2019 on the subject project. We acknowledge that you have no comments to offer at this time. A copy of the the Draft Environmental Assessment (EA) being prepared for the project will be provided for your Department's review and comment.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft EA for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at 244-2015.

Very truly yours,



Charlene S. Shibuya
Senior Associate

CSS:tn

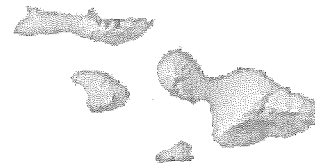
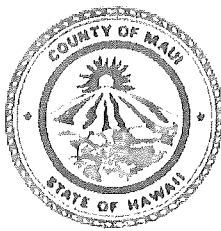
cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering, Inc.

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MICHAEL P. VICTORINO
Mayor

MICHELE CHOUTEAU MCLEAN, AICP
Director

JORDAN E. HART
Deputy Director



DEPARTMENT OF PLANNING
COUNTY OF MAUI
ONE MAIN PLAZA
2200 MAIN STREET, SUITE 315
WAILUKU, MAUI, HAWAII 96793

April 12, 2019

Ms. Charlene Shibuya
Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Shibuya:

SUBJECT: EARLY CONSULTATION REQUEST FOR PROPOSED COUNTY OF MAUI, DEPARTMENT OF TRANSPORTATION TRANSIT HUB RELOCATION, KAHULUI, MAUI, HAWAII; TMK: (2) 3-7-004:003 (POR.), (2) 3-7-002:020 (POR), and (2) 3-7-005:003 (POR.) (EAC 2019/0004)

The Department of Planning (Department) is in receipt of an early consultation request by the County of Maui, Department of Transportation (MDOT) regarding the proposed relocation of its Maui Bus Transit Hub from its existing location within the Queen Kaahumanu Shopping Center (QKC) to a portion of a property located off Vevau Street in Kahului.

The Department understands that the proposed relocation of the Transit Hub will involve the use of County of Maui and State of Hawaii funds and the use of State of Hawaii lands and, therefore, require environmental review in accordance with Hawaii Revised Statutes (HRS), Chapter 343. An Environmental Assessment (EA) document will be prepared and the MDOT will be the approving agency. Additionally, the Department notes that a Special Management Area (SMA) Use Permit application must be prepared and filed with the County of Maui, Department of Planning with that final action taken by the Maui Planning Commission (Commission).

Comments from the Department's Planned Implementation Division are that the EA should address how the project implements the Maui Island Plan. Language regarding the importance of transit planning for Maui Island can be found in Chapter 6 of the Maui Island Plan, particularly pages 6-34 to 6-37.

Ms. Charlene Shibuya
Munekiyo Hiraga
April 12, 2019
Page 2

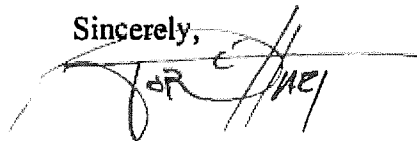
Comments from the Department's Long Range Division are that the Vevau/Kane infill mixed use development project provides a much needed central location for the Transit Hub located next to affordable housing, commercial services and Maui's major employment centers and seat of County government. The MDOT Transit Hub project embodies Smart Growth principles as they relate to transportation and land use. The relocation of the Central Maui Transit Hub to Vevau Street provides transportation choices in a central location in close proximity to jobs, schools, shops, health, civic and financial services. Relocating the transit hub in Central Maui strengthens opportunities commonly seen by transit oriented development (TOD) projects around the country. The benefit of this type of development, commonly referred to as TOD, is that it includes a mix of land uses such as housing, office, retail and/or other amenities integrated into a walkable, moderate to high-density neighborhood typically within a one half mile radius of public transportation nodes. This proposed facility is located across the street from a major retail shopping mall, blocks away from affordable rentals and densely populated residential areas. Additional street improvements would incorporate Complete Street concepts leveraging pedestrian, bicycle and public transit opportunities.

In addition to the potential connection of residents to employment centers, business services and commercial districts, this location would serve to connect visitors to Maui's commercial and retail shopping areas. The 2017 Maui Short Range Transportation Plan reported that over eight percent of the Maui Bus ridership were visitors. Kahului Harbor receives many large cruise ships and passengers would be located much closer to the Maui Bus Transit Hub if it were relocated to Vevau/Kane Streets, providing a critical connector for visitors to Maui's economy.

Relocation of the Maui Bus Transit Hub to this location would also provide an opportunity for equitable development that promotes and supports community well-being and active and healthy lifestyles. The Vevau/Kane Street location is in close proximity to densely populated residential areas and has tremendous opportunities for providing more walkable/bikeable paths to connect residents to commercial, retail and business districts.

Thank you for the opportunity to comment on this project. Should you have any questions about the comments in this letter, please contact the Department by email at planning@mauicounty.gov or by phone at (808) 270-8205.

Sincerely,

A handwritten signature in black ink, appearing to read "MICHELE MCLEAN". The signature is stylized and includes a horizontal line extending to the right.

 MICHELE MCLEAN, AICP
Planning Director

Ms. Charlene Shibuya
Munekiyo Hiraga
April 12, 2019
Page 3

xc: Clayton I. Yoshida, Planning Program Administrator, AICP (PDF)
John S. Rapacz, Planning Program Administrator (PDF)
Kathleen Aoki, Planning Program Administrator (PDF)
Pam Eaton, Planning Program Administrator (PDF)
Kurt F. Wollenhaupt, Staff Planner (PDF)
County of Maui Department of Transportation (PDF)
Charlene Shibuya, Munekiyo Hiraga (PDF)
Project File

MCM:CIY:KFW:lak

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April 25, 2019

Michele Chouteau McLean, AICP, Director
County of Maui
Department of Planning
2200 Main Street, Suite 315
Wailuku, Hawai'i 96793

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003(por.), and (2)3-7-005:003(por.); Kahului, Maui, Hawai'i

Dear Ms. McLean:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your letter dated April 12, 2019 providing comments on the subject project. We offer the following information in response to the comments received.

Comments from the Plan Implementation Division

Thank you for your comment. The Draft Environmental Assessment (EA) being prepared for the project will include a discussion on the project's conformance to land use plans, policies, and controls, including the Maui Island Plan, and its transit planning policies for Maui.

Comments from the Long Range Division

We acknowledge your comment that the proposed project represents a much needed central infill project which locates the Transit Hub next to affordable housing, commercial services, and Maui's major employment center and seat of government. In this regard, we acknowledge that the Transit Hub Relocation embodies Smart Growth principles as they relate to transportation and land use. We affirm that the proposed project strengthens opportunities commonly seen by Transit Oriented Development projects throughout the country, whereby a mix of land uses and amenities are integrated into a walkable, moderate to high-density neighborhood are located in close proximity to transportation nodes. We also affirm that additional street improvements, such as construction of sidewalks and improvements to existing crosswalks, incorporate

Michele Chouteau McLean, AICP, Director
April 25, 2019
Page 2

Complete Streets concepts into the proposed project thereby leveraging pedestrian, bicycle, and public transit opportunities:

We acknowledge your comment that the relocated Transit Hub would also greatly serve Maui's visitors and provide easier connections to commercial and retail shopping areas, particularly for those arriving by cruise ship.

We acknowledge your comment that the relocated Transit Hub will also provide an opportunity for equitable development that promotes and supports community well-being and active lifestyles as the proposed location of the project is in proximity to densely populated residential areas and commercial and retail areas that present opportunities for increased walkability in the area.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your email and this response will be included in the Draft Environmental Assessment for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at 244-2015.

Very truly yours,



Charlene Shibuya
Senior Associate

CSS:lh

cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering

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MICHAEL P. VICTORINO
MAYOR

OUR REFERENCE
YOUR REFERENCE

POLICE DEPARTMENT

COUNTY OF MAUI

55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-6400
FAX (808) 244-6411



TIVOLI S. FAAUMU
CHIEF OF POLICE

DEAN M. RICKARD
DEPUTY CHIEF OF POLICE

March 12, 2019

Ms. Charlene Shibuya, Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

**SUBJECT: Early Consultation Request for Proposed County of Maui,
Department of Transportation Transit Hub Relocation; TMK: (2) 3-7-
004:003 (por.), (2) 3-7-002:020 (por.), and (2) 3-7-005:003 (por.);
Kahului, Hawaii**


Dear Ms. Shibuya:

This is in response to your letter dated February 27, 2019 requesting comments on the proposed relocation of the Maui Bus Transit Hub from Queen Kaahumanu Shopping Center to a portion of a property located off of Vevau Street in Kahului.

In review of the submitted documents, our recommendations are enclosed with this response.

Thank you for giving us the opportunity to comment on this project.

Sincerely,


Assistant Chief John Jakubczak
for: TIVOLI S. FAAUMU
Chief of Police

Enclosure

TO : TIVOLI S. FAAUMU, CHIEF OF POLICE, MAUI COUNTY POLICE DEPARTMENT
VIA : CHANNELS John Jakubczak *NOTED. RESPONSE LETTER TO BE DRAFTED AND SUBMITTED TO MUNEKIYO HIRAGA.*
FROM : JOHN KALAMA, POLICE OFFICER III, COMMUNITY POLICING *3/12/19*
SUBJECT : RESPONSE TO A REQUEST FOR COMMENTS REGARDING CONSULTATION REQUEST FOR PROPOSED DEPARTMENT OF TRANSPORTATION TRANSIT HUB RELOCATION, TMK (2) 3-7-004:003 (POR), KAHULUI, HAWAII.

This communication is submitted as a response to request for comments regarding, consultation of the proposed relocation of its Maui Bus Transit Hub from its existing location within the Queen Kaahumanu Shopping Center (QKC) to a portion of a property located off of Vevau Street in Kahului.

SUBJECT: RELOCATION OF THE MAUI BUS TRANSIT HUB, QUEEN KAAHUMANU MALL (QKC) TO AN AREA ON VEAU STREET IN KAHULUI.

APPLICANT: CHARLENE SHIBUYA, SENIOR ASSOCIATE, MUNEKIYO HIRAGA
 305 HIGH STREET, SUITE 104, WAILUKU, HAWAII 96793
 WORK PHONE (808) 244-2015

TMK: (2)3-7-004:003 (POR), (2)3-7-002:020 (POR) AND (2)3-7-005:003 (POR), KAHULUI, HAWAII

In short, the new transit hub would cover an area of 0.85 acres of property identified under TMK# (2) 3-7-004:003 (Parcel 3) figure #1. The proposed bus hub on Vevau Street is adjacent to QKC and other public services such as Kahului Public Library, residential areas and other retail centers. The project would have a new ticket booth with an office, new restroom, storage building and roof structures to cover the waiting and bus loading areas. Other related improvements would be installation of utilities for the buildings and landscaping. Driveway improvements to access the terminal, sidewalk frontage improvements, installation of access gates and fencing around the entire site are also planned.

COMMENTS:

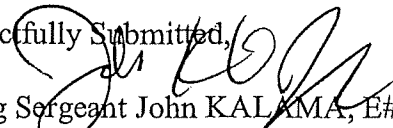
In review of the submitted documents, concerns from the police perspective are upon the safety of pedestrians and vehicular movement. As of this time the proposed new transit hub area, is a vacant lot located between the Waterfront Apartments and the McKinley Community School for Adults (MCSA) in Kahului. The new transit hub should be constructed to blend in with the surrounding buildings and businesses.

After review of the site/landscaping plans, I recommend utilizing Crime Prevention Through Environmental Design (CPTED) principles when applicable. The basis of CPTED is that proper design and effective use of the built environment can reduce the incidence and fear of crime. This in turn leads to improvements in the quality of life. Such examples would be to place picnic tables or sitting areas that would provide the best surveillance to the parking lots or main structures. A person is less likely to commit a crime if they think someone will see them do it. The use of walkways, fences, lighting, signage and landscape to clearly guide people and vehicles to and from the proper entrance will also decrease the opportunity for crime. Keep landscaping groundcover below 2 feet in height and overheard tree canopy no less than 6 feet in height. If available, utilize LED lighting for all lighting sources as it provides the best color rendering for identification purposes. Lighting and landscape play an important role in CPTED. Physical designs such as pavement treatments, landscaping and signage help to distinguish between public and private property. Potential trespassers perceive this control and are thereby discouraged. Being this area is frequented by passing homeless, it should be strictly monitored or outsourced to a private security contractor to deter illegal activities.

Extreme efforts should be made to minimize noise, dust, and debris so not to inhibit those whose health and well-being may be affected as there are residence/businesses in the area of the proposed project. It is important to consider where the heavy construction equipment will be stored or parked during the night time hours or when the contractors are not working. It is the duty of the project manager to examine the impact of vehicular movement within the area while work is conducted on this project.

Upon review of the attachments, the project must meet all requirements and minimal standards set forth by county codes and state laws.

I do not have any concerns with this project.

Respectfully Submitted,

Acting Sergeant John KALAMA, E#13979
Police Officer III / Community Policing
03/11/19 @ 1245 hrs.

FOR YOUR REVIEW
NO CONCERNS NOTED
AT THIS TIME.

E.L. [Signature] E3719
CPTD 1
3/11/19 1525

April 25, 2019

Tivoli Faaumu, Chief
County of Maui
Police Department
55 Mahalani Street
Wailuku, Hawai'i 96793

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003 (por.), and (2)3-7-005:003 (por.); Kahului, Maui, Hawai'i

Dear Chief Faaumu:

On behalf of the County of Maui, Department of Transportation, thank you for your letter dated March 12, 2019 providing comments on the subject project. We offer the following information in response to the comments received.

We acknowledge your comments regarding the safety of pedestrians and vehicular movements in the area. As part of the subject project and the adjacent Kahului Lani affordable senior housing project currently under construction, streetscape improvements will be undertaken along Vevau Street to enhance pedestrian safety, including installation of sidewalks and crosswalk improvements.

Your comments related to the use of Crime Prevention Through Environmental Design (CPTED) principles will be forwarded to the project's design team for consideration. The structure is designed to be an open-air structure to maximize visibility from the street. Fences and lighting are also planned to be installed for security purposes.

As will be discussed further in the Draft Environmental Assessment (EA) being prepared for the project, Best Management Practices will be employed during the construction phase so as to minimize noise and dust emissions.

Tivoli Faaumu, Chief
April 25, 2019
Page 2

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your email and this response will be included in the Draft EA for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at 244-2015.

Very truly yours,



Charlene S. Shibuya
Senior Associate

CSS:tn

cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering, Inc.
Anthony Riecke-Gonzales, Riecke Sunnland Kono Architects, Ltd.

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APR 08 2019

MICHAEL P. VICTORINO
Mayor

ROWENA M. DAGDAG-ANDAYA
Acting Director

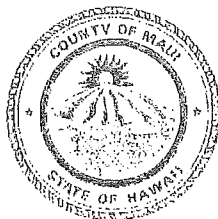
Deputy Director

GLEN A. UENO, P.E., L.S.
Development Services Administration

RODRIGO "CHICO" RABARA, P.E.
Engineering Division

JOHN R. SMITH, P.E.
Highways Division

Telephone: (808) 270-7845
Fax: (808) 270-7955



COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
200 SOUTH HIGH STREET, ROOM 434
WAILUKU, MAUI, HAWAII 96793

April 1, 2019

Ms. Charlene Shibuya, Senior Associate
MUNEKIYO HIRAGA
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Shibuya:

**SUBJECT: EARLY CONSULTATION FOR PROPOSED COUNTY OF MAUI
DEPARTMENT OF TRANSPORTATION TRANSIT HUB
RELOCATION; TMK: (2) 3-7-004:003 (POR)**

We reviewed the subject application and have the following comments.

Comments from the Engineering Division:

1. Any drainage improvements will need to comply with the following references:
 - Hawaii Administrative Rules (HAR), Title MC-15, Chapter 4, "Rules for the Design of Storm Drainage Facilities in the County of Maui";
 - HAR, Title MC-15, Chapter 111, "Rules for the Design of Storm Water Treatment Best Management Practices"; and
 - Maui County Code, (MCC), Chapter 20.08, "Soil Erosion and Sedimentation Control".
2. Although Vevau Street between Kane Street and School Street is currently under private ownership, the owner has approached the County with a proposal to dedicate the roadway in the near future. Ensure that all improvements by this project to be located within the future Vevau Street right-of-way comply with requirements provided to the owner of the roadway.
3. Sidewalks fronting the project shall be a minimum of six (6) feet in width.

Ms. Charlene Shibuya, Senior Associate
April 1, 2019
Page 2

4. Ramps incorporated into the project's driveways shall be submitted to the State of Hawaii Disability & Communication Access Board for review.

If you have any questions regarding this memorandum, please call me at 270-7845.

Sincerely,



ROWENA M. DAGDAG-ANDAYA
Acting Director of Public Works

RMDA:da

xc: Engineering Division
Highways Division

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April 25, 2019

Rowena Dagdag-Andaya, Acting Director
County of Maui
Department of Public Works
200 South High Street, Room 434
Wailuku, Hawai'i 96793

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003(por.), and (2)3-7-005:003(por.); Kahului, Maui, Hawai'i

Dear Ms. Dagdag-Andaya:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your letter dated April 1, 2019 providing comments on the subject project. We offer the following information in response to the comments received.

Drainage improvements for the project will comply with Hawai'i Administrative Rules (HAR), Title MC-15, Chapter 4, "Rules for the Design of Storm Drainage Facilities in the County of Maui", HAR, Title MC-15, Chapter 111, "Rules for the Design of Storm Water Treatment Best Management Practices", and Maui County Code, Chapter 20.08, "Soil Erosion and Sedimentation Control". These references have been forwarded to the project's civil engineer.

We acknowledge your comment. Roadway frontage improvements on privately-owned Vevau Street constructed as part of the proposed project will be coordinated with the roadway owner, Kahului Lani I LP.

We acknowledge your comment. Sidewalks fronting the proposed project will be six (6) feet in width, as required.

As this is a government project, ramps constructed as a part of the project will be submitted to the State of Hawai'i Disability & Communication Access Board for review, as required.

Rowena Dagdag-Andaya, Acting Director
April 25, 2019
Page 2

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment (EA) for the project. A copy of the Draft EA will be provided to your office for review and comment. In the meantime, should you have any questions or require additional information, please feel free to contact me at 244-2015.

Very truly yours,



Charlene Shibuya
Senior Associate

CSS:lh

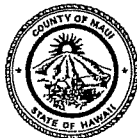
cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering
Anthony Riecke-Gonzales, Riecke Sunnland Kono Architects Ltd.
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Council Chair
Kelly T. King

Vice-Chair
Keani N.W. Rawlins-Fernandez

Presiding Officer Pro Tempore
Tasha Kama

Councilmembers
Riki Hokama
Alice L. Lee
Michael J. Molina
Tamara Paltin
Shane M. Sinenci
Yuki Lei K. Sugimura



RECEIVED
COUNTY OF MAUI
Director of Council Services
Maria E. Zielinski

2019 MAR 27 AM 10:33

COUNTY COUNCIL
COUNTY OF MAUI DEPT OF TRANSPORTATION
200 S. HIGH STREET
WAILUKU, MAUI, HAWAII 96793
www.MauiCounty.us

March 21, 2019

ROUTE: KE ✓
CSS _____

Emailed to ^{RF} TMN if appl.
Project File (orig.)
Agency file (copy)
Update WF template ✓
Job Name/No. 2116 FE-MDOT Bus
Terminal Reloc.

Charlene S. Shibuya
Senior Associate
Munekiyo Hiraga
205 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Shibuya:

SUBJECT: Response to Early Consultation Request for Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-004:003(por.), (2)3-7-002:020(por.), and (2)3-7-005:003(por.); Kahului, Hawaii

Thank you for the opportunity to consult on this significant potential improvement to the Maui Bus through the relocation of the main transit hub from its current location on-site at Queen Ka'ahumanu Center to a new location on Vevau Street.

Since County Council has not officially taken a position on the details of this project, I am providing comment as an individual councilmember.

My comments are:

1. Consider relocating the transit hub from its proposed mid-block location along Vevau Street to the corner of Kane Street and Vevau Street. Relocating the transit hub to a corner location would remove potential noise impacts on the existing residents of the Waterfront Apartment complex. This would be particularly advantageous if the State of Hawaii proceeds with a possible plan to redevelop the balance of the property with a State Office Annex.

Charlene Shibuya, Munekiyo Hiraga
March 21, 2019
Page 2

2. If they have not already been engaged in consultation, please consider including the management of the Waterfront Apartment complex (50 Vevau Street) and the developer of the Kahului Lani Senior Housing (Hawaiian Catholic Charities Housing Development Corporation) in this consultation.
3. If the location remains adjacent to the Waterfront Apartment complex, please consider the inclusion of direct pedestrian access between the Transit Hub and the Waterfront Apartment.
4. Please consider offsite pedestrian improvements to Vevau Street to facilitate additional use of the Transit Hub (and therefore the transit system). In particular, the pedestrian walkway system is incomplete along Vevau Street on the Library side of the street and beyond the Waterfront Apartment complex towards Lono Avenue on the other side of the street. Given the need for good pedestrian access to this relocated facility, it may be advisable to audit the conditions of existing sidewalks in the vicinity (Kaahumanu Avenue, Kane Street, Vevau Street, and Lono Avenue).

Thank you again for requesting early consultation. If you have questions about my comments, please contact my office.

Sincerely,


TASHA KAMA
Councilmember

TK/EPD/EPD/epd

cc: Director Marc Takamori, County of Maui, Department of Transportation

April 25, 2019

Honorable Tasha Kama, Presiding Officer Pro Tempore
County of Maui
Maui County Council
200 South High Street
Wailuku, Hawai'i 96793

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003(por.), and (2)3-7-005:003(por.); Kahului, Maui, Hawai'i

Dear Councilmember Kama:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your letter dated March 21, 2019 providing comments on the subject project. We offer the following information in response to the comments received.

We acknowledge your comment. Relocating the transit hub to the southwest corner is not possible due to the existing State facilities needing to remain in operation. The Department of Accounting and General Services landscape equipment baseyard building and the McKinley Community School for Adults currently encompasses the South Kane Street and Vevau Street corner of the lot.

We acknowledge your comment. The County of Maui is currently negotiating a lease agreement with the Hawai'i Housing Financing and Development Corporation (HHFDC), owner of the subject property, for the area of the proposed relocated transit hub. In recognizing the adjacent residential use, bus service at the transit hub will cease by 10:30 p.m. so as to avoid potential noise impacts on the Waterfront Apartments.

We acknowledge your comment. The proposed project requires the filing of a Special Management Area (SMA) Use Permit application. As part of the SMA process, landowners and lessees within 500 feet of the subject property, including the Waterfront Apartments and Kahului Lani Senior Affordable project, will be notified when the SMA application has been filed, and again when the SMA application is scheduled for a hearing before the Maui Planning Commission. Further, because a portion of the proposed transit hub, namely the sidewalk and roadway frontage improvements, will be

Honorable Tasha Kama, Presiding Officer Pro Tempore
April 25, 2019
Page 2

constructed on Vevau Street, which is privately-owned by Kahului Lani I, LP, early coordination with the property owner will be undertaken.

As part of the proposed project and the adjacent Kahului Lani project, roadway improvements, including sidewalks and crosswalks, will be constructed along Vevau Street, thereby improving pedestrian circulation in the area.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your letter and this response will be included in the Draft Environmental Assessment for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at 244-2015.

Very truly yours,



Charlene Shibuya
Senior Associate

CSS:lh

cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering

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March 12, 2019

Ms. Charlene Shibuya, Senior Associate
Munekiyo Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Shibuya,

Subject: Early Consultation Request
County of Maui – Department of Transportation – Transit Hub Relocation
Kahului, Maui, Hawaii
Tax Map Key:(2) 3-7-004:003(por.), (2) 3-7-002:020(por.),
and (2) 3-7-005:003(por.)

Thank you for allowing us to comment on the subject project.

In reviewing our records and the information received, Maui Electric Company, Limited has no comments or objection to the project at this time. However, we highly encourage the customer's electrical consultant to submit an electric service request with the electrical demand requirements and project time schedule as soon as practical so that any new service can be provided on a timely basis.

Should you have any other questions or concerns, please feel free to call me at 871-2340.

Sincerely,

Ray Okazaki
Engineer II, Engineering

April 25, 2019

Ray Okazaki, Engineer
Maui Electric Company
P.O. Box 398
Kahului, Hawai'i 96733

SUBJECT: Response to Early Consultation Comments Regarding the Proposed County of Maui, Department of Transportation Transit Hub Relocation; TMK (2)3-7-002:020(por.), (2)3-7-004:003 (por.), and (2)3-7-005:003 (por.); Kahului, Maui, Hawai'i

Dear Mr. Okazaki:

On behalf of the County of Maui, Department of Transportation (MDOT), thank you for your letter dated March 12, 2019 providing comments on the subject project. We acknowledge that you have no comments to offer at this time.

When MDOT's consultant team advances the design work, the electrical consultant will submit an electric service request with electrical demand requirements and anticipated project schedule so that service can be provided on a timely basis.

Thank you for your participation in the Chapter 343, Hawai'i Revised Statutes environmental review process. A copy of your email and this response will be included in the Draft Environmental Assessment for the project. In the meantime, should you have any questions or require additional information, please feel free to contact me at 244-2015.

Very truly yours,



Charlene S. Shibuya
Senior Associate

CSS:tn

cc: Marc Takamori, County of Maui, Department of Transportation
Mike Silva, Fukumoto Engineering, Inc.

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REFERENCES

IX

IX. REFERENCES

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Munekiyo Hiraga, Final Environmental Assessment Proposed Kahului Lani Affordable Senior Housing Project (TMK (2)3-7-005:003), 2017.

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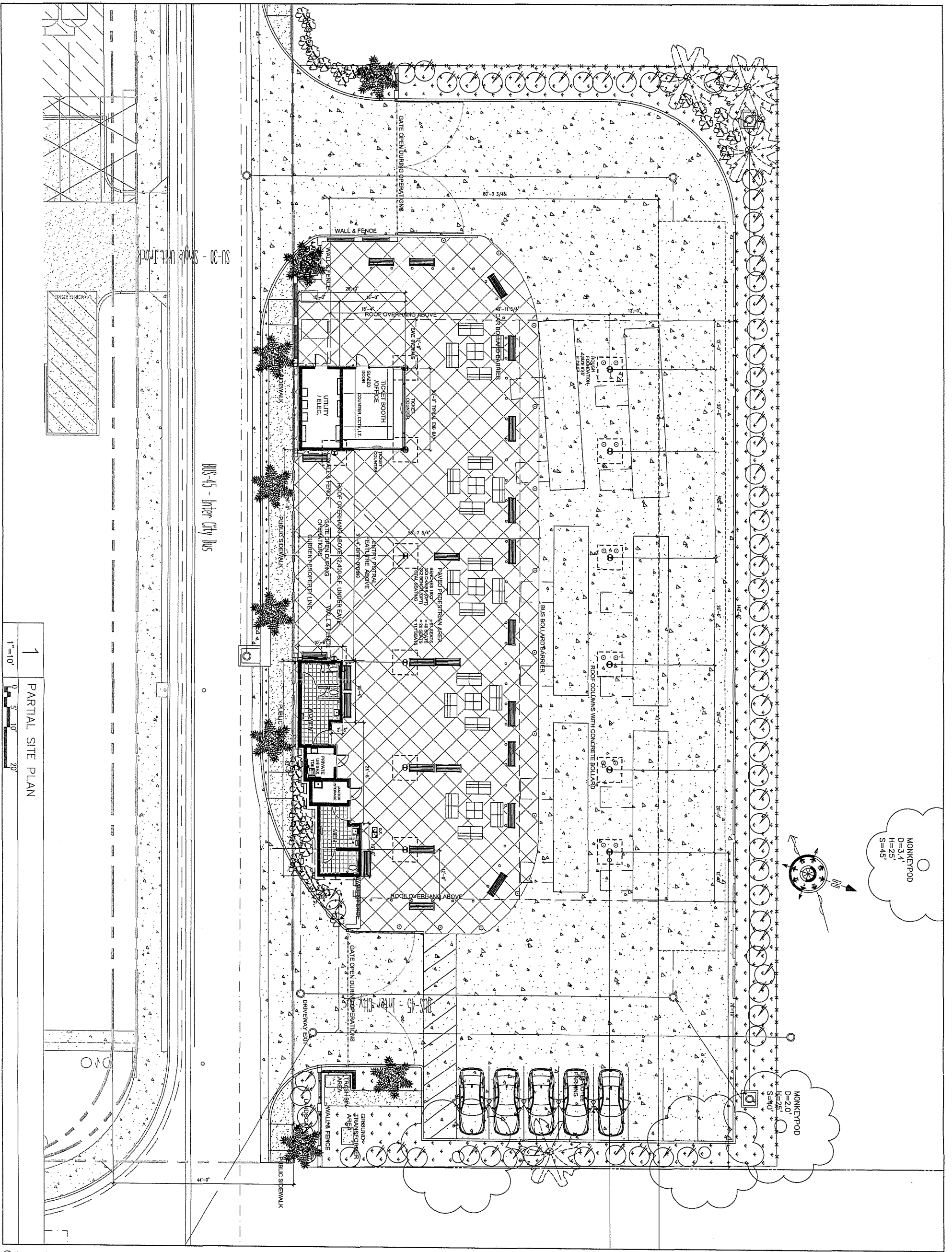
U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, in cooperation with the University of Hawaii, Agricultural Experiment Station, August 1972.

USDA Natural Resources Conservation Service, Soil Survey Geographic Database, Soil Classification Map, 2006

CONCEPTUAL PLANS

APPENDIX

A



1 PARTIAL SITE PLAN
 1" = 10'
 0 5 10 20'

© 2017 Riecke Sunnland Kono Architects, Ltd.

A-1
 SHEET OF
 PROJECT NO. 2018-OXX
 DATE: MAY, 2018

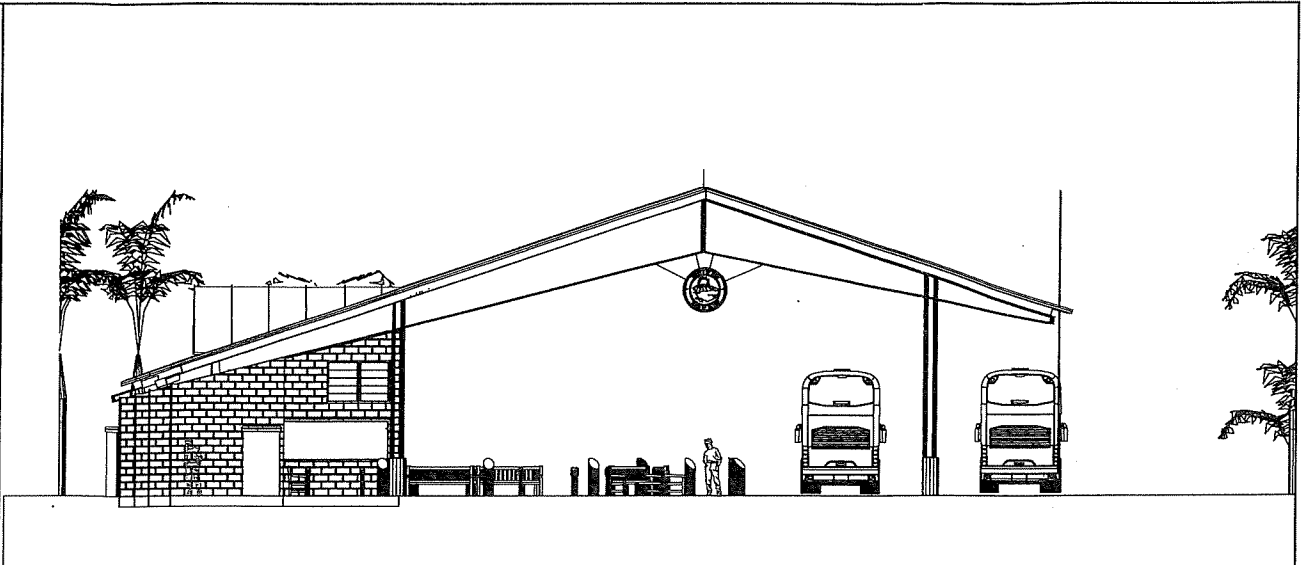
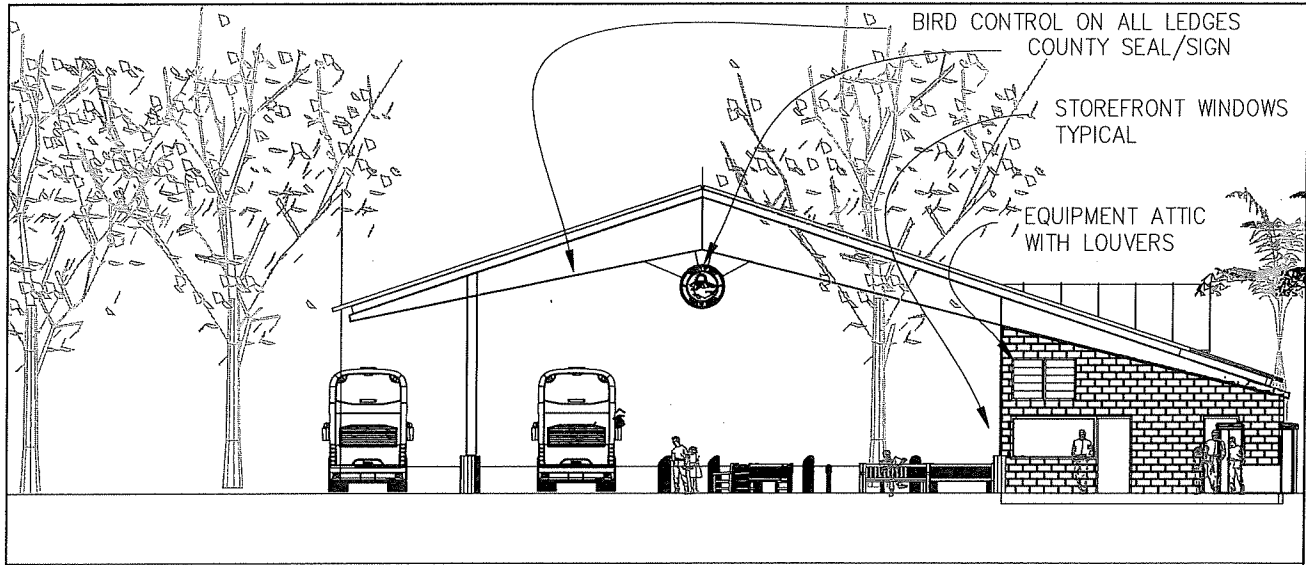
REVISIONS
 2019-02-15 CONCEPT PLAN

TRANSIT HUB
 VEVAU ST
 KAHULUI, MAUI, HAWAII
 (2) 03-07-004:003
FLOOR PLAN & EXTERIOR ELEVATION

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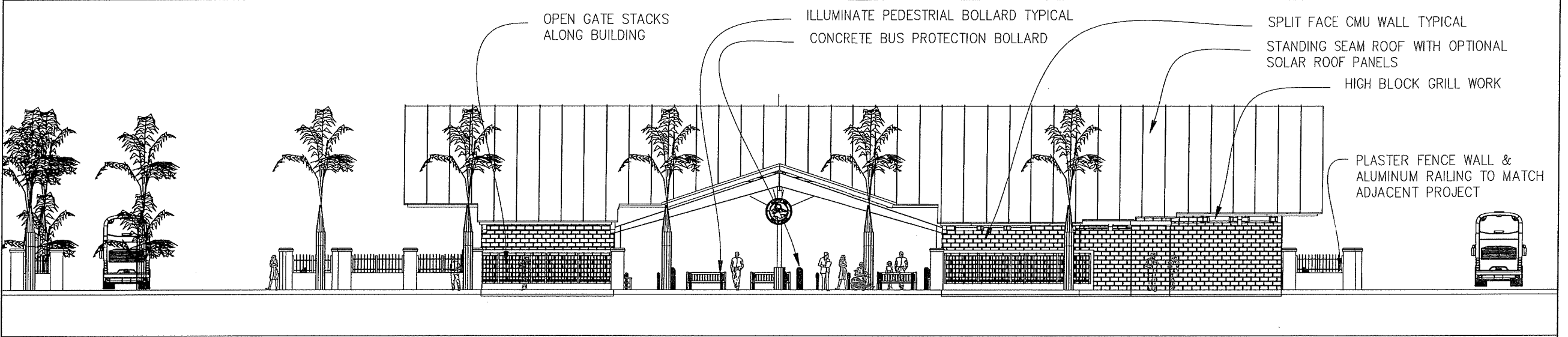


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 PO BOX 1627
 KAHULUI, MAUI, HAWAII 96733-1627
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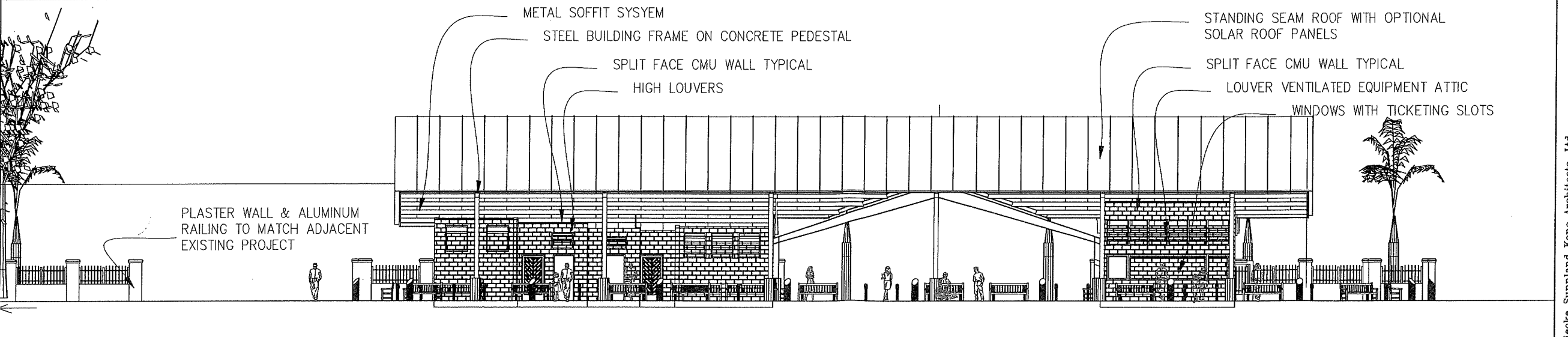
2 WEST ELEVATION
1/4"=1'-0"

1 EAST ELEVATION
1/4"=1'-0"



3 SOUTH ELEVATION
1/4"=1'-0"

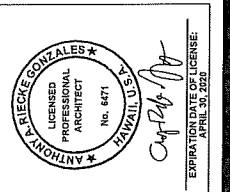
ENTRY WITH GATE IN OPEN POSITION



4 NORTH ELEVATION
1/4"=1'-0"

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APRIL 30, 2020

TRANSIT HUB

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(2) 03-07-004-003

ISOMETRICS &
EXTERIOR ELEVATIONS

REVISIONS

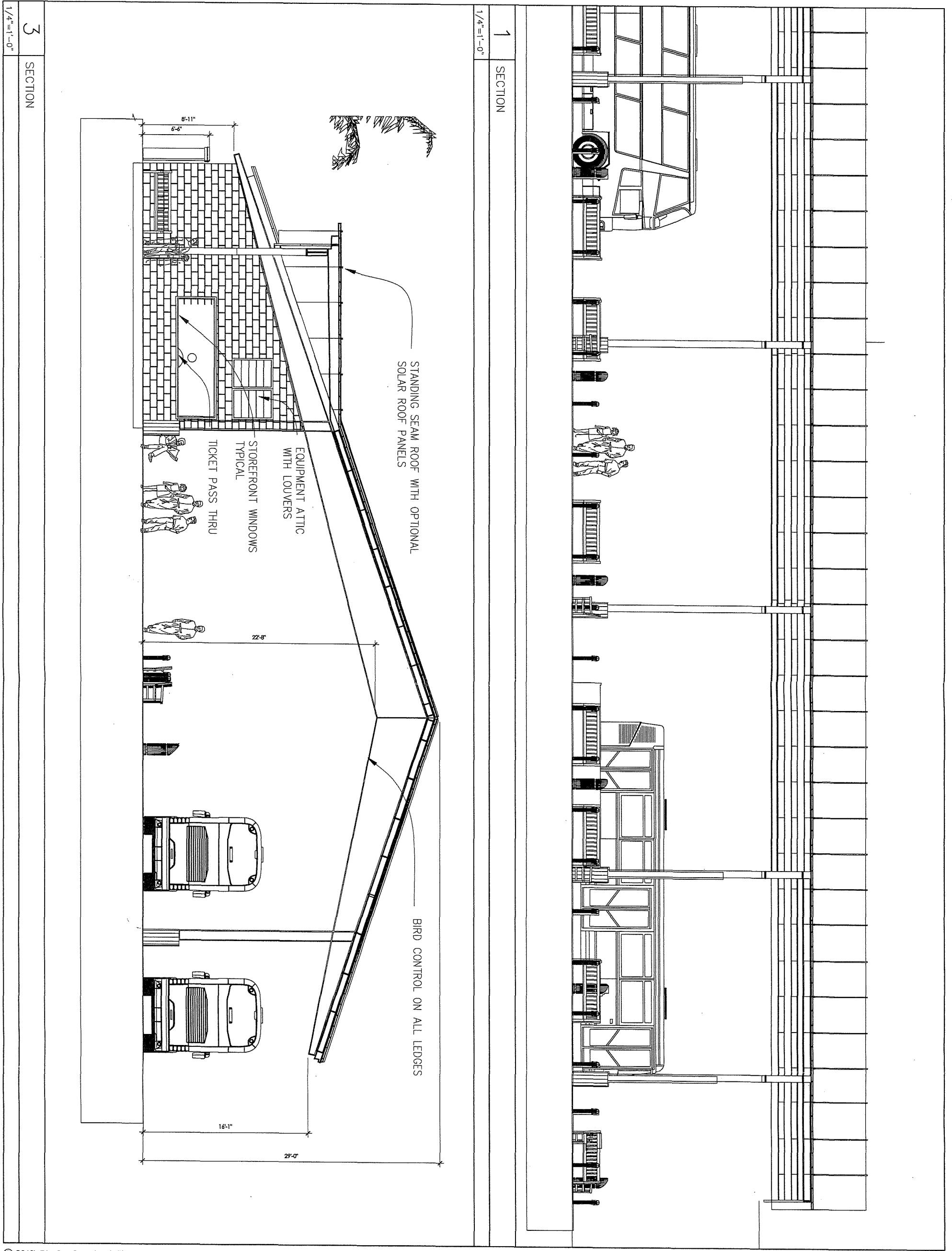
2019-02-15 CONCEPT PLAN

A-2

SHEET OF
PROJECT NO. 2018-0XX

DATE MAY, 2018

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A-3
 SHEET 04
 PROJECT NO. 2018-OXX
 DATE: MAY, 2018

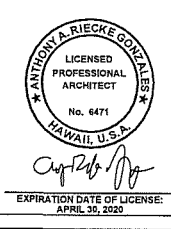
REVISIONS:
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TRANSIT HUB

VEVAU ST
 KAHULUI, MAUI, HAWAII
 (2) 03-07-004:003

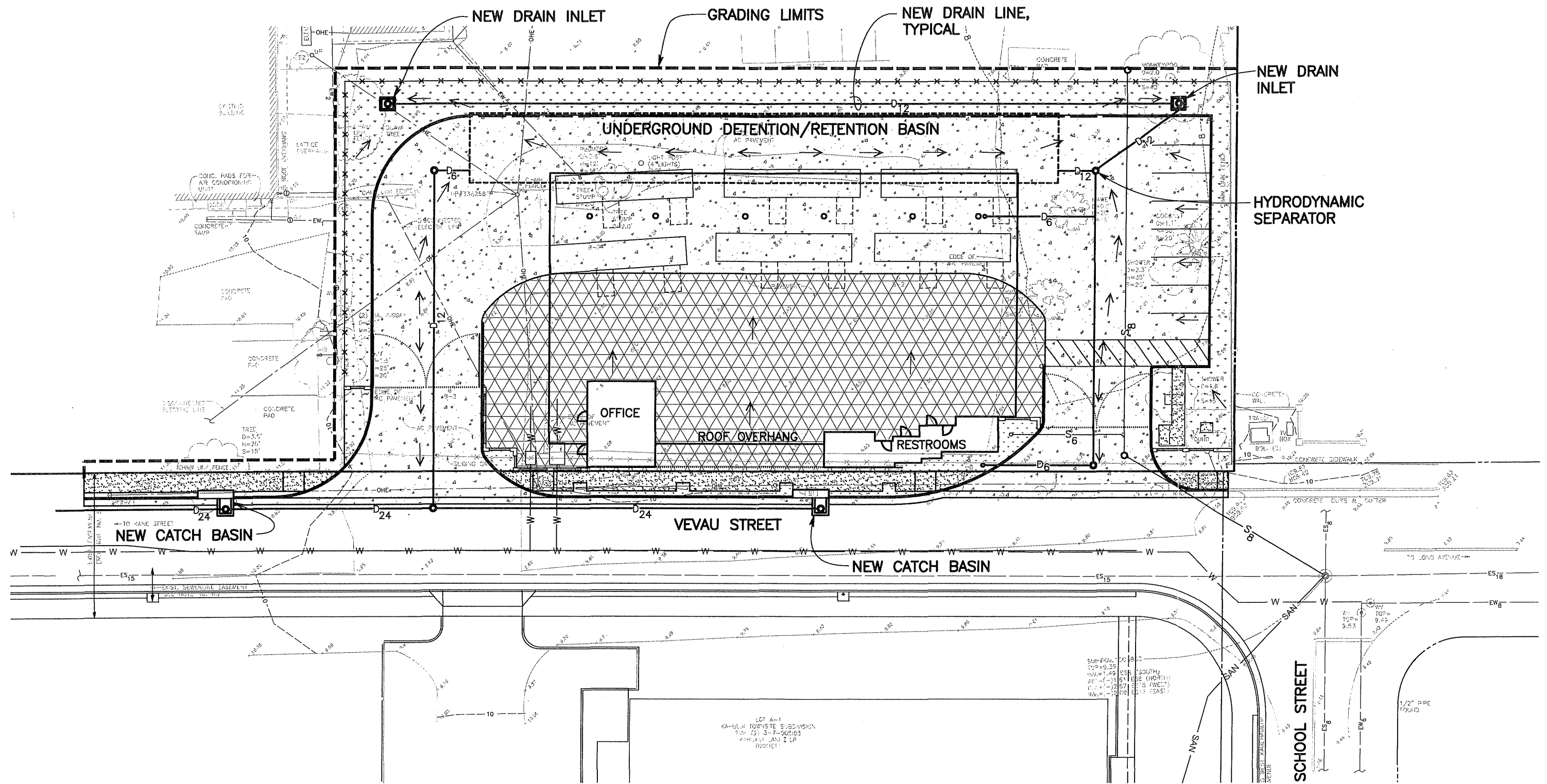
ISOMETRICS &
 EXTERIOR ELEVATIONS

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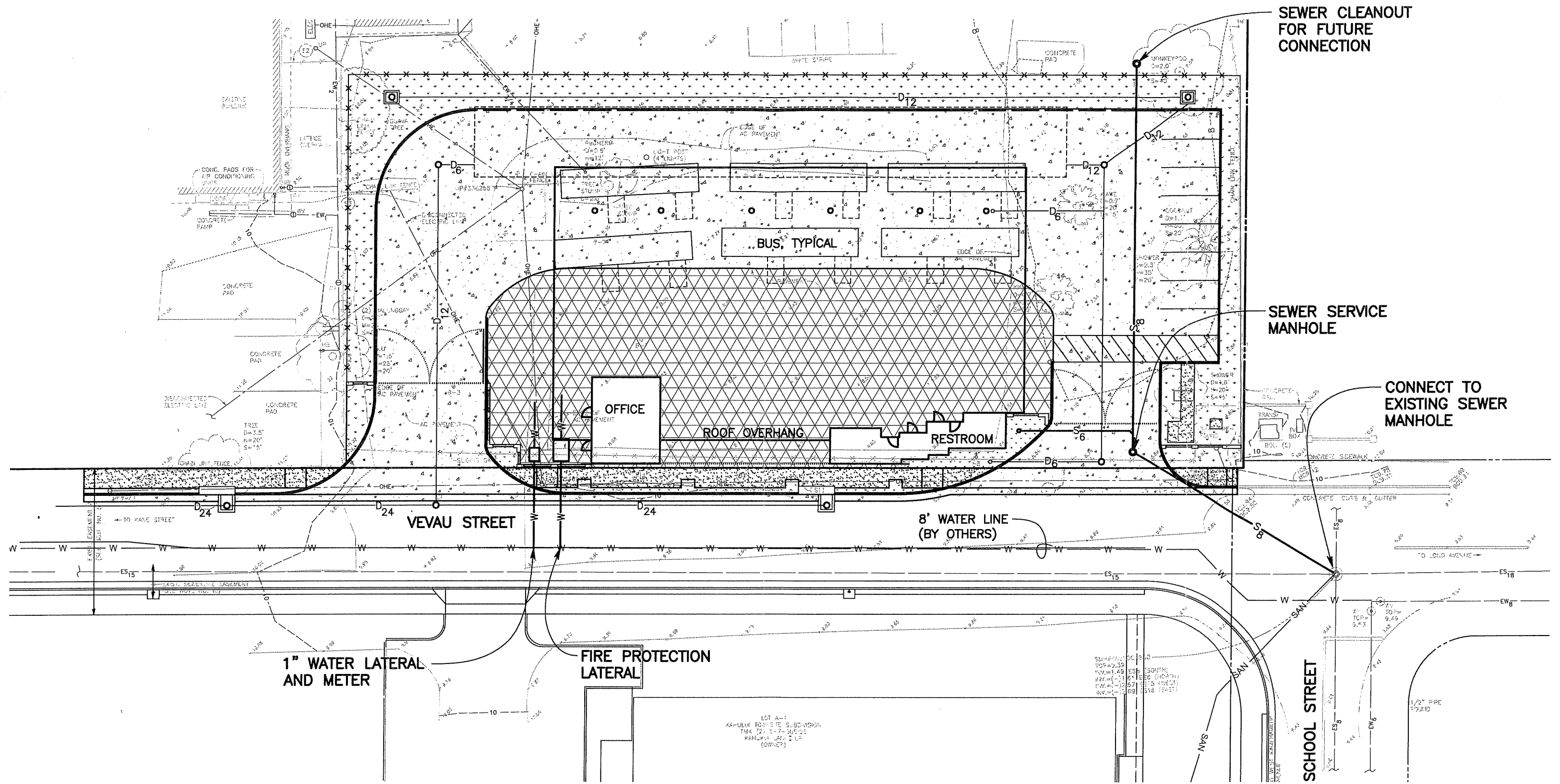
PRELIMINARY GRADING AND DRAINAGE PLAN

SCALE IN FEET



FEBRUARY 19, 2019





LOT A-1
 KAPULANI FORTS SUBDIVISION
 TMK (2) 1-7-001-01
 KAHALUPE, MAUI, HI
 (OWNER)



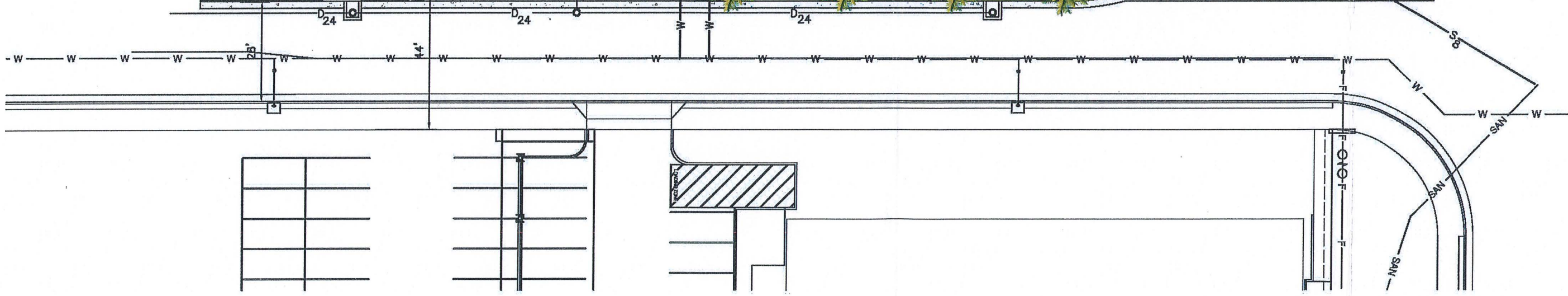
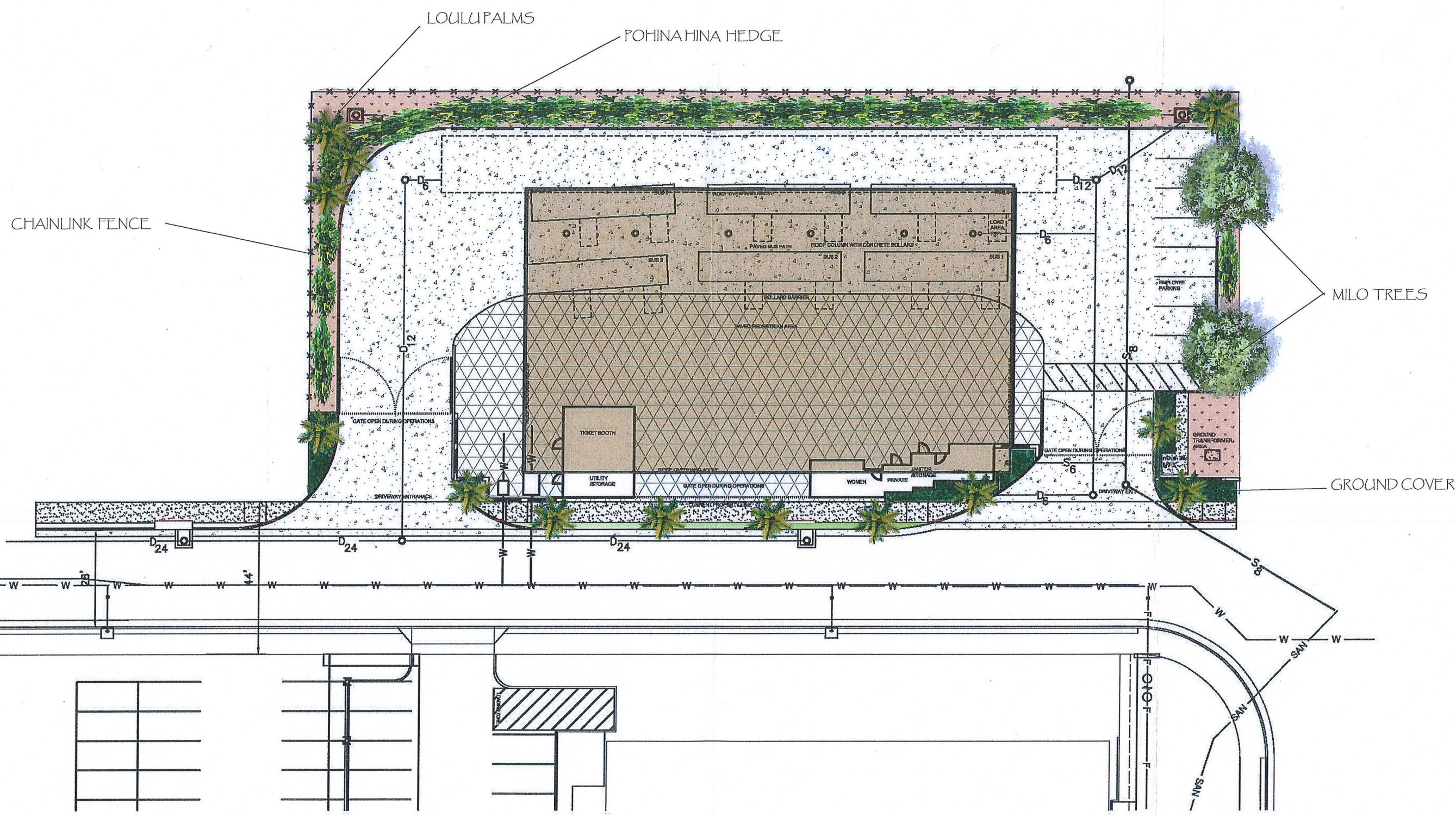
PRELIMINARY UTILITIES PLAN

SCALE IN FEET



FEBRUARY 19, 2019





REVISED PRELIMINARY LANDSCAPE PLAN
SCALE IN FEET

DATE: 02/13/2019



PREPARED FOR: DESIGN TEAM COORDINATION

PREPARED BY: FUKUMOTO ENGINEERING, INC.
TRANSIT HUB



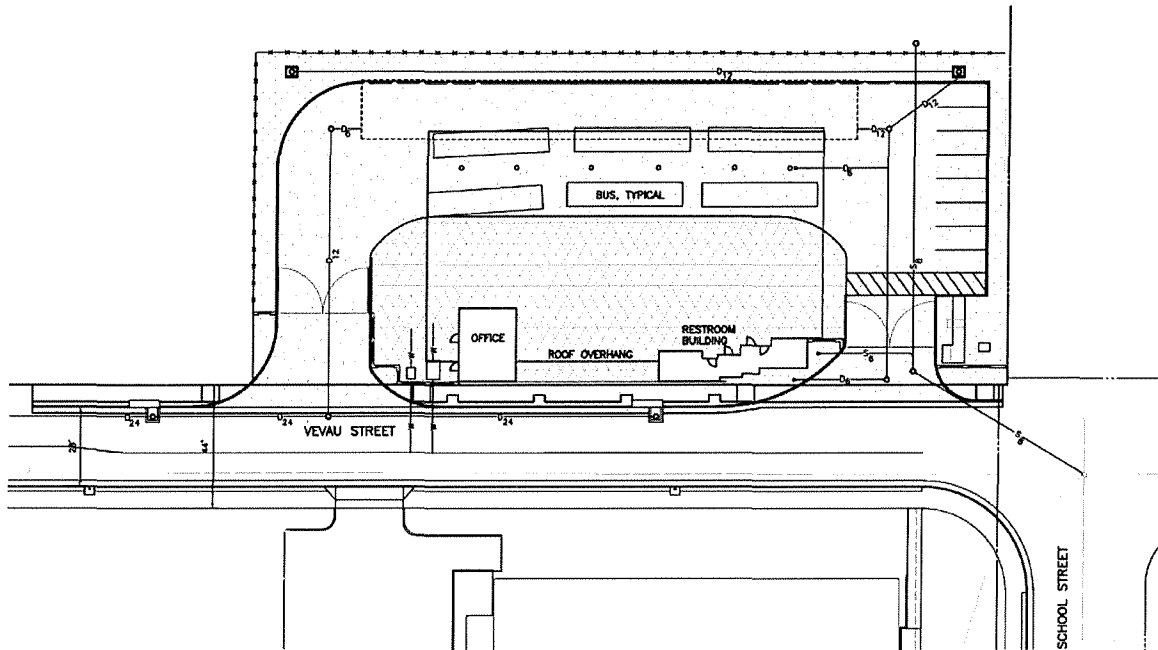
**PRELIMINARY
ENGINEERING REPORT**

APPENDIX

B

DRAFT
PRELIMINARY ENGINEERING REPORT
For Transit Hub

Kahului, Maui, Hawaii
Tax Map Key (2) 3-7-004:003 (Portion)



Project:

Transit Hub
Kahului, Maui, Hawaii

Date:

March 14, 2019

Client:

Department of Transportation
County of Maui
2145 Kaohu Street
Wailuku, Hawaii 96793
Phone: (808) 270-7511

Consultant:

Fukumoto Engineering, Inc.
1721 Wili Pa Loop, Suite 203
Wailuku, Hawaii 96793
Phone: (808) 242-8611
E-Mail: office@maui.com

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I. PURPOSE

The purpose of this report is to evaluate the effects of the project on existing infrastructure. This report will review the water system, wastewater system, and electrical, telephone, and cable television systems serving the project. This report will also provide an analysis of existing and proposed drainage systems. The drainage analysis will describe existing drainage conditions, present preliminary grading and drainage plans, and provide drainage design information for incorporation into the final designs.

II. PROJECT DESCRIPTION

A. General Location

The project involves relocating the Maui Bus transit hub currently located at Queen Kaahumanu Center to a portion of a lot in Kahului that is owned by the State of Hawaii, Department of Education identified as Tax Map Key (2) 3-7-004:003. The 5.572-acre parcel is bounded by Kaahumanu Avenue to the north, Kane Street to the west, Vevau Street to the South, and a gas station and residential condominiums to the east. On the lot, there exists one office building, several abandoned structures, asphalt and concrete pavement, and a large open grass field. The office building is actively occupied by the McKinley Community School for Adults. See Figure 1 – Location Map (USGS), page 7; Figure 2 – Vicinity Map (Tax Map), page 8.

The portion of the lot to be occupied by the new transit hub will be located along Vevau Street approximately 300 feet east of the intersection of Vevau Street and Kane Street. The project site will encompass approximately 0.85 acre.

B. Project Components

The relocation of the transit hub involves construction of an office and ticket booth, a restroom building, and a roof structure covering the passenger waiting area and 6 bus bays. Site improvements will include vehicle and pedestrian pavements, plantings, site lighting, and utility services including water, sewer, electric, communications, and drainage.

III. WATER SYSTEM

A. Existing Conditions

The County of Maui Department of Water Supply (DWS) provides water service for the parcel and surrounding areas. The existing water distribution system in the area includes a 12-inch diameter water main in Kaahumanu Avenue, an 8-inch diameter water main in Kane Street, and an 8-inch diameter water main in Vevau Street which does not pass in front of the lot but runs from School Street to Lono Avenue just east of the project site. Water service to the parcel is provided by a 1-inch water meter tapping off the 12-inch diameter water main in Kaahumanu Avenue. The water meter is located near the north-east corner of the lot in the open grass field.

There is an ongoing construction project directly across the project site on Vevau Street. The Kahului Lani Phase 1 project will be a residential facility and will include roadway and utility system improvements in the area. Water system improvements include extension of the 8-inch diameter water main in Vevau Street from School Street to connect to the 8-inch diameter water main in Kane Street.

B. Developed Conditions

Water system improvements for this project include one 4-inch fire protection service lateral and one 1-inch water service lateral. Both laterals will be connected to the future 8-inch diameter water main extension in Vevau Street to be constructed under the Kahului Lani Phase 1 project. Projected water demand for the transit hub is 50 gpm. See Figure 6 – Preliminary Utilities Plan, page 12, and preliminary water information in Appendix A.

IV. WASTEWATER SYSTEM

A. Existing Conditions

The Wastewater Reclamation Division (WWRD) of the County of Maui Department of Environmental Management provides wastewater service for the parcel and surrounding areas. The existing wastewater collection system in the area consists of a 15-inch diameter gravity sewer main in Vevau Street that connects to a series of 18-inch and 24-inch diameter gravity sewer mains which transport sewage to the Kahului Wastewater Pump Station. The pump station pumps sewage through a 3,123-foot long 20-inch diameter force main to the Wailuku-Kahului Wastewater Reclamation Facility. Per discussions with the WWRD, the 15-inch gravity sewer main in Vevau Street is encased in concrete and contains a cured-in-place lining along the interior of the pipe. These conditions prohibit the tapping of the sewer main with new sewer laterals.

B. Developed Conditions

Wastewater improvements for this project include installing a new sewer service lateral to serve the new restroom building of the transit hub, as well as any future development on the lot. Because the 15-inch diameter gravity sewer main in Vevau Street cannot be tapped, the new sewer service lateral will connect to an existing sewer manhole located in the intersection of Vevau Street and School Street (SMH#KA01000800).

The new transit hub will have a maximum of 4 employees and capacity of 185 passengers. Based on the projected use and the wastewater rate of 20 gallons per day per employee and 5 gallons per day per passenger, the new service load is projected to be 1,005 gallons per day. See Figure 6 – Preliminary Utilities Plan, page 12, and preliminary wastewater information in Appendix B.

V. ELECTRICAL, TELEPHONE & CABLE TELEVISION SYSTEMS

Maui Electric Company, Hawaiian Telcom, and Oceanic Time Warner Cable provide electrical, telephone, and cable television service for the area. Existing overhead lines run adjacent to the site along Vevau Street. Kahului Lani Phase 1 improvements include moving the overhead lines underground. Improvements for this project include new electrical, telephone, and cable television service for the new restroom and ticket office buildings.

VI. DRAINAGE SYSTEM

A. Topography

The project site sits on partially developed land consisting of asphalt pavement and overgrown landscaping. Generally, the site slopes down from South to North and West to East along Vevau Street. Elevations range from 8 feet to 10 feet above mean sea level. Slopes range from 0 to 2 percent. (See Figure 5 – Topographic Map, page 11.)

B. Soil

According to the Soil Conservation Service, the on-site soils include Puuone sand, 7 to 30 percent slopes (PZUE). The Puuone series consists of somewhat excessively drained soils on low uplands on the island of Maui. The survey characterizes the soil as grayish-brown, calcareous sand about 20 inches thick and underlain by grayish-brown, cemented sand, moderately alkaline, permeability rapid above the cemented layer, and runoff is slow. The soil is generally used for pasture and home sites. (See Figure 3 – Soil Map, page 9.)

C. Flood and Tsunami Hazard

The flood insurance rate map of the area shows there are no flood hazard areas on the site. The flood insurance rate map designates the site as Zone X, an area subject to minimal flooding. (See Figure 4 - Flood Insurance Rate Map, page 10.)

D. Existing Drainage Improvements

There are no existing drainage improvements within the project site. Runoff from the project site sheet flows from the property line fronting Vevau Street in a northeasterly direction toward the open grass field. From the grass field, runoff ponds or overflows to catch basins located in Kaahumanu Avenue. The catch basins discharge to a 36" drainline within Kaahumanu Avenue.

E. Proposed Drainage Improvements

The proposed drainage improvements for the transit hub include drain inlets, catch basins, manholes, drain pipes, hydrodynamic separator, and a subsurface detention/retention (D/R) basin to mitigate the increase in runoff due to the project.

The County drainage standards require the use of a 50-year, 1-hour rainfall for computing volumes and rates of flow.

Drainage improvements that involve transmission of storm flows will conform to the "Rules for the Design of Storm Drainage Facilities in the County of Maui." The rules will be applied to the sizing of drain lines and the D/R basin. Based on the County rules, the drainage systems will be designed to handle a storm with a recurrence interval of 50 years since the drainage area is less than 100 acres.

The following is a summary of hydrologic design data for the proposed project (see Appendix C for drainage calculations). The total project area is approximately 0.85 acre, however for drainage calculations the improvements within Vevau Street are excluded. Therefore a drainage area of 0.73 acre is used for the drainage calculations.

<u>Item</u>	<u>Undeveloped</u>	<u>Developed</u>
Drainage Area	0.73 acres	0.73 acres
50-year, 1-hour Rainfall	2.89 inches	2.89 inches
50-year, 1-hour Peak Flow	1.33 cfs	4.36 cfs

The Preliminary Grading and Drainage Plan shows the proposed grading and drainage improvements. See Figure 7 – Preliminary Grading and Drainage Plan, page 13. The plan involves grading for the driveway pavement, building pads, pedestrian waiting areas and walkways, landscaping, and parking areas.

Design concepts incorporated in the plan include maintaining existing drainage patterns, mitigating increases in runoff volume and runoff flow rate due to the project compared to an undeveloped site, and removal of total suspended solids (TSS) and pollutants from runoff. Measures for mitigating increases in runoff include drain inlets, catch basins, and a subsurface D/R basin. The D/R basin consists of infiltration chambers in a gravel bed and an outlet pipe with a flow restrictor. The D/R basin will regulate the outflow of runoff and retain a portion of the collected runoff.

Runoff from two portions of the project site will not discharge to the D/R basin (see Area A and Area B on Figure 7 – Preliminary Grading and Drainage Plan). The increase in runoff volume and flow rate from these two areas will be accounted for in the volume and mitigated/reduced outflow rate of the D/R basin.

The following is a summary of preliminary design data for the D/R basin. These figures are subject to adjustment as the designs are further refined. See Appendix C for preliminary drainage information.

Retention Volume	4,630 cubic feet
Flow Rate In	4.36 cfs
Flow Rate Out	0.92 cfs

F. Water Quality Improvements

The County has established rules for post-construction storm water BMP requirements as part of the building code for new structures and developments. The rules are defined in Title MC-15, Chapter 11 "Rules for the Design of Storm Water Treatment Best Management Practices" and under these rules, projects with a disturbed area of more than one acre are required to meet the specific criteria for sizing of storm water quality facilities. Although, this project is less than one acre in disturbed area, the project will conform to the criteria as defined.

In order to address storm water quality, storm water runoff generated onsite will be directed to a hydrodynamic separator. The hydrodynamic separator in conjunction with the D/R basin will remove TSS, debris, and other pollutants before discharging to existing storm drains.

The rules define the required flow-rate for a flow-through system, such as a hydrodynamic separator, to be calculated based on the following formula:

$$\begin{aligned} \text{WQFR} &= C \times 0.4 \times A \\ \text{WQFR} &= \text{Water Quality Flow rate in cubic feet per second} \\ C &= \text{Runoff coefficient} \\ A &= \text{Area of the site in acres} \end{aligned}$$

Applying that formula with project specific data is shown below:

$$\begin{aligned} \text{WQFR} &= 0.81 \times 0.4 \times 0.73 \\ \text{WQFR} &= 0.24 \text{ cubic feet per second} \end{aligned}$$

Based on this required flow rate, the project will utilize a Contech CDS Unit, Model #2015 or a similar product for stormwater treatment. The project owner, the County of Maui Department of Transportation, will be responsible for properly operating and maintaining the hydrodynamic separator.

G. Conclusion

There will be no adverse effects on the adjacent or downstream properties due to this project. This conclusion is based on maintaining peak discharge rates and volumes at pre-development level as well as removing total suspended solids, debris, and other pollutants.

VII. REFERENCES

1. City and County of Honolulu, Department of Public Works, Division of Engineering, *Storm Drainage Standards*, Honolulu, Hawaii, May 1988.
2. County of Maui, "Title MC-15, Department of Public Works and Waste Management, Chapter 4, Rules for the Design of Storm Drainage Facilities in the County of Maui," Wailuku, Hawaii, November 1995.
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5. Maidment, David R., *Handbook of Hydrology*, McGraw-Hill, Inc., New York, New York, 1993
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7. State of Hawaii, "Title 11, Hawaii Administrative Rules Department of Health, Chapter 62, Wastewater Systems," Honolulu, Hawaii, January 14, 2004.
8. U. S. Department of Agriculture, Soil Conservation Service, *Erosion and Sediment Control Guide for Hawaii*, Honolulu, Hawaii, March 1981.
9. U. S. Department of Agriculture, Soil Conservation Service, *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*, Washington, D.C., August 1972.
10. U. S. Department of Agriculture, Soil Conservation Service, *Urban Hydrology for Small Watersheds*, Technical Release 55, Second Edition, Washington, D.C., June 1986.
11. U. S. Department of Commerce, Weather Bureau, *Rainfall-Frequency Atlas of the Hawaiian Islands for Areas to 200 Square Miles, Durations to 24 Hours, and Return Periods from 1 to 100 Years*, Technical Paper No. 43, Washington, D.C., 1962.
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PRELIMINARY WATER INFORMATION

A. PRELIMINARY WATER METER SIZING

Fixture	Fixture Units per Fixture	Transit Hub Quantity	Total FU
Toilet (Flushometer Valve Public)	5.6	3	16.8
Toilet (Private)	1.7	1	1.7
Urinal (Flushometer Valve Public)	2.8	1	2.8
Lavatory (Public)	1.2	2	2.4
Lavatory (Private)	0.6	1	0.6
Drinking Fountain (Public)	2.0	1	2.0
Service Sink (Private)	1.6	1	1.6
Hose Bib (Private)	3.0	1	3.0
Total FU			30.9
Fixture Unit Demand (gpm)			42
Irrigation Demand of largest circuit (assumed)			8
Total Demand (gpm)			50

PRELIMINARY WASTEWATER INFORMATION

A. PROPOSED WASTEWATER FLOWS

Proposed Conditions - Type of Use	Number of Units	Contribution (Gal/Unit/Day)	Total Flow (Gal/Day)
Employees	4	20	80
Passengers	185	5	925
Total Estimated Flow - Proposed			1,005

PRELIMINARY DRAINAGE INFORMATION

A. FLOW RATE (RATIONAL METHOD)

1. RUNOFF COEFFICIENT

a. Existing Conditions

i. On-site Unimproved Area	Area = 0.73 acre	C = 0.30
----------------------------	------------------	----------

b. Developed Conditions

i. On-site Developed Area

Landscaping	Area = 0.11 acre	C = 0.30
-------------	------------------	----------

<u>Building/Roadways/Walkways</u>	<u>Area = 0.62 acre</u>	<u>C = 0.90</u>
-----------------------------------	-------------------------	-----------------

Total Area = 0.73 acre

$$C_{\text{COMPOSITE}} = [(0.11 \times 0.30) + (0.62 \times 0.90)]/0.73 = 0.81$$

3. RECURRENCE INTERVAL & RAINFALL

a. Recurrence interval $T_m = 50$ yearsb. One-hour rainfall $I_{50} = 2.89$ inches

4. TIME OF CONCENTRATION

a. Existing On-site Conditions $T_c = 9$ minutesb. Developed On-site Conditions $T_c = 5$ minutes

5. EXISTING RUNOFF (Rational Method)

a. Existing Conditions

$$C = 0.30$$

$$I_{50} = 2.89 \times 2.1025 = 6.08 \text{ inches/hour}$$

$$a = 0.73 \text{ acres}$$

$$Q = C_i a = 0.30 \times 6.08 \times 0.73 = 1.33 \text{ cfs}$$

6. DEVELOPED RUNOFF (Rational Method)

a. Developed Conditions

$$C = 0.81$$

$$I_{50} = 2.89 \times 2.5575 = 7.39 \text{ inches/hour}$$

$$a = 0.73 \text{ acre}$$

$$Q = C_i a = 0.81 \times 7.39 \times 0.73 = 4.36 \text{ cfs}$$

7. INCREASE DUE TO DEVELOPMENT (Rational Method)

a. On-site Area

$$\Delta Q = 4.36 - 1.33 = 3.03 \text{ cfs}$$

8. DEVELOPED RUNOFF RELEASED FROM DRIVEWAYS AT AREA A AND AREA B

a. Area A

$$C = 0.90 \text{ (Building/Roadways/Walkways)}$$

$$I_{50} = 2.89 \times 2.5575 = 7.39 \text{ inches/hour}$$

$$a = 0.035 \text{ acre}$$

$$Q_A = C_i a = 0.90 \times 7.39 \times 0.035 = 0.17 \text{ cfs}$$

b. Area B

$$C = 0.90$$

$$I_{50} = 2.89 \times 2.5575 = 7.39 \text{ inches/hour}$$

$$a = 0.025 \text{ acre}$$

$$Q_B = C_i a = 0.90 \times 7.39 \times 0.025 = 0.12 \text{ cfs}$$

9. LIMIT OF FLOW RATE RELEASE FROM DRAINAGE SYSTEM

$$a. 1.33 \text{ cfs} - Q_A - Q_B = 1.33 - 0.17 - 0.12 = 1.04 \text{ cfs}$$

B. RETENTION VOLUME (TR-55 METHOD)

1. AREA

On-Site Existing and Developed Conditions Area = 0.73 acre

2. RAINFALL DATA

50-year, 1-hour: P=2.89 inches

3. CURVE NUMBER

Soil: PZUE

Hydrologic Soil Group A

a. Existing Conditions

Open Space - Fair Condition	Area = 0.73 acre	CN = 49
-----------------------------	------------------	---------

b. Developed Conditions

Open Space - Good Condition	Area = 0.11 acre	CN = 39
-----------------------------	------------------	---------

Building, Parking, & Walkways	Area = 0.62 acre	CN = 98
-------------------------------	------------------	---------

Total Area = 0.73 acre

$$CN_{WEIGHTED} = [(0.11 \times 39) + (0.62 \times 98) / 0.73] = 89$$

4. RETENTION VOLUME

a. Existing

$$S = (1000/CN) - 10 = (1000/49) - 10 = 10.41$$

$$Q = (P - 0.2S)^2 / (P + 0.8S) = (2.89 - 0.2 \times 10.41)^2 / (2.89 + 0.8 \times 10.41) = 0.06 \text{ inches}$$

$$\text{Volume} = (Q/12) \times A \times 43560 = (0.06/12) \times 0.73 \times 43560 = 155 \text{ cu. ft.}$$

b. Developed

$$S = (1000/CN) - 10 = (1000/89) - 10 = 1.24$$

$$Q = (P - 0.2S)^2 / (P + 0.8S) = (2.89 - 0.2 \times 1.24)^2 / (2.89 + 0.8 \times 1.24) = 1.80 \text{ inches}$$

$$\text{Volume} = (Q/12) \times A \times 43560 = (1.80/12) \times 0.73 \times 43560 = 4,785 \text{ cu. ft.}$$

c. Retention Volume Required

$$V = \text{developed} - \text{existing}$$

$$V = 4,785 - 155 = 4,630 \text{ cu. ft.}$$

C. DETENTION VOLUME

The required detention volume was computed by a hydrograph method using software by Hydroflow. Following are the results

Hydraflow Table of Contents

com81-revised.gpw

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v12

Thursday, 02 / 21 / 2019

50 - Year	
Hydrograph Reports	1
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Hydrograph Report

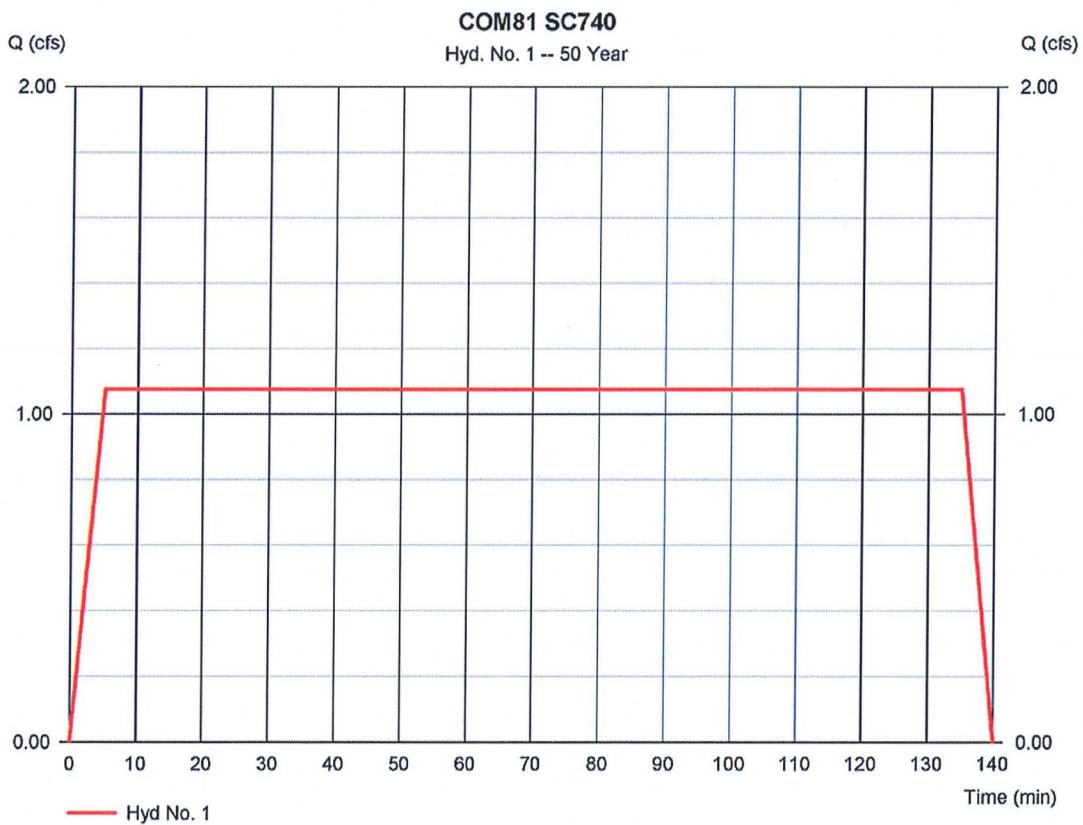
Hydroflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v12

Thursday, 02 / 21 / 2019

Hyd. No. 1

COM81 SC740

Hydrograph type	= Mod. Rational	Peak discharge	= 1.076 cfs
Storm frequency	= 50 yrs	Time to peak	= 5 min
Time interval	= 1 min	Hyd. volume	= 8,714 cuft
Drainage area	= 0.730 ac	Runoff coeff.	= 0.81
Intensity	= 1.819 in/hr	Tc by User	= 5.00 min
IDF Curve	= IDF.IDF	Storm duration	= 27.0 x Tc
Target Q	=n/a	Est. Req'd Storage	=n/a



Hydrograph Report

Hydroflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v12

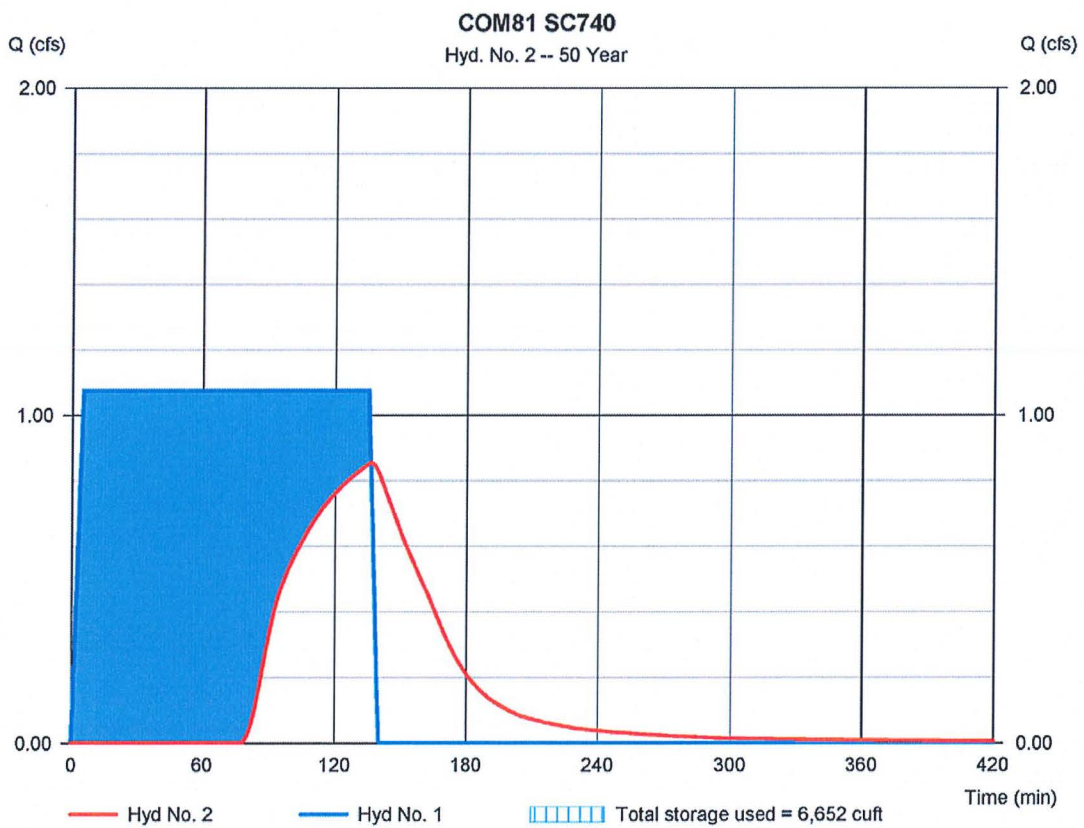
Thursday, 02 / 21 / 2019

Hyd. No. 2

COM81 SC740

Hydrograph type	= Reservoir	Peak discharge	= 0.854 cfs
Storm frequency	= 50 yrs	Time to peak	= 136 min
Time interval	= 1 min	Hyd. volume	= 3,862 cuft
Inflow hyd. No.	= 1 - COM81 SC740	Max. Elevation	= 5.90 ft
Reservoir name	= COM81 SC740	Max. Storage	= 6,652 cuft

Storage Indication method used.



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v12

Thursday, 02 / 21 / 2019

Pond No. 1 - COM81 SC740

Pond Data

Pond storage is based on user-defined values.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	2.00	n/a	0	0
0.50	2.50	n/a	375	375
1.00	3.00	n/a	375	750
1.50	3.50	n/a	1,220	1,970
2.00	4.00	n/a	1,152	3,121
2.50	4.50	n/a	1,048	4,169
3.00	5.00	n/a	1,007	5,176
3.50	5.50	n/a	882	6,058
4.00	6.00	n/a	750	6,808

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 6.00	0.00	0.00	0.00
Span (in)	= 6.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 4.83	0.00	0.00	0.00
Length (ft)	= 20.00	0.00	0.00	0.00
Slope (%)	= 2.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s)

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	2.00	0.00	---	---	---	---	---	---	---	---	---	0.000
0.50	375	2.50	0.00	---	---	---	---	---	---	---	---	---	0.000
1.00	750	3.00	0.00	---	---	---	---	---	---	---	---	---	0.000
1.50	1,970	3.50	0.00	---	---	---	---	---	---	---	---	---	0.000
2.00	3,121	4.00	0.00	---	---	---	---	---	---	---	---	---	0.000
2.50	4,169	4.50	0.00	---	---	---	---	---	---	---	---	---	0.000
3.00	5,176	5.00	0.08 ic	---	---	---	---	---	---	---	---	---	0.083
3.50	6,058	5.50	0.61 ic	---	---	---	---	---	---	---	---	---	0.613
4.00	6,808	6.00	0.91 ic	---	---	---	---	---	---	---	---	---	0.907

Hydraflow Rainfall Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v12

Thursday, 02 / 21 / 2019

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	0.0000	0.0000	0.0000	-----
2	0.0000	0.0000	0.0000	-----
3	0.0000	0.0000	0.0000	-----
5	0.0000	0.0000	0.0000	-----
10	0.0000	0.0000	0.0000	-----
25	0.0000	0.0000	0.0000	-----
50	46.0710	11.9000	0.6477	-----
100	0.0000	0.0000	0.0000	-----

File name: IDF.IDF

$Intensity = B / (Tc + D)^E$

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	7.38	6.24	5.46	4.89	4.45	4.10	3.81	3.57	3.36	3.18	3.03	2.89
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Tc = time in minutes. Values may exceed 60.

Precip. file name: S:\Projects\COM81 Transit Hub\documents\Drainage Report\Hydrograph Files\Precip.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	0.00	0.00	0.00	2.89	0.00

D. FLOW RESTRICTOR SIZING

Determine flow restrictor size, depth, and elevation based on orifice formula:

$$Q = a C_d (2 g h)^{1/2} \text{ (in cubic feet per second)}$$

where a = orifice area in square feet

C_d = coefficient of discharge = 0.61

G = acceleration of gravity = 32.17 feet/second²

h = headwater depth in feet

D/R Basin Design Data (Top of Basin) = 6.0 feet

2. Flow restrictor invert elevation = 4.83 feet

3. $h = 6.0 - 4.83 - (6/12/2) = 0.92$ feet

4. Flow restrictor diameter = 6.0 inches

5. Flow restrictor area = $a = 0.20$ square feet

6. $Q_{\text{ALLOWABLE}} = 1.04$ cfs

7. $Q = 0.20 \times 0.61 \times (2 \times 32.17 \times 0.92)^{1/2} = 0.92$ cfs ≤ 1.04 cfs, therefore O.K.

E. DRAINLINE SIZING

Determine pipe size based on Manning's Formula:

$$Q = AV = 1.486 (A/P)^{2/3} S^{1/2} A / n$$

where A = Area of cross section (square foot)

V = Velocity (foot per second)

n = Manning's roughness coefficient

P = Wetted Perimeter (feet)

S = Slope of the energy gradient (foot/foot)

Developed Peak Flow Data

1. $Q_{\text{REQUIRED}} = 3.78$ cfs

2. Pipe Diameter = $D = 12$ inches

3. Area of cross section = $A = \pi r^2 = \pi (12/2/12)^2 = 0.79$ ft²

4. Wetted Perimeter at full flow = $P = \pi D = \pi (12/12) = 3.14$ ft

5. Minimum slope of pipe = $S = 0.02$ ft/ft

6. Manning's roughness coefficient = 0.013

7. $Q = 1.486 \times (0.79/3.14)^{2/3} \times 0.02^{1/2} \times 0.79 / 0.013 = 5.04$ cfs ≥ 4.36 cfs, therefore O.K.

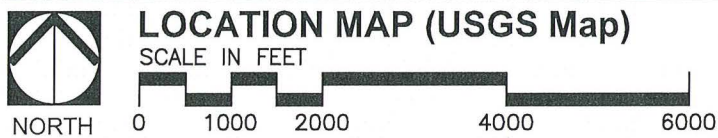
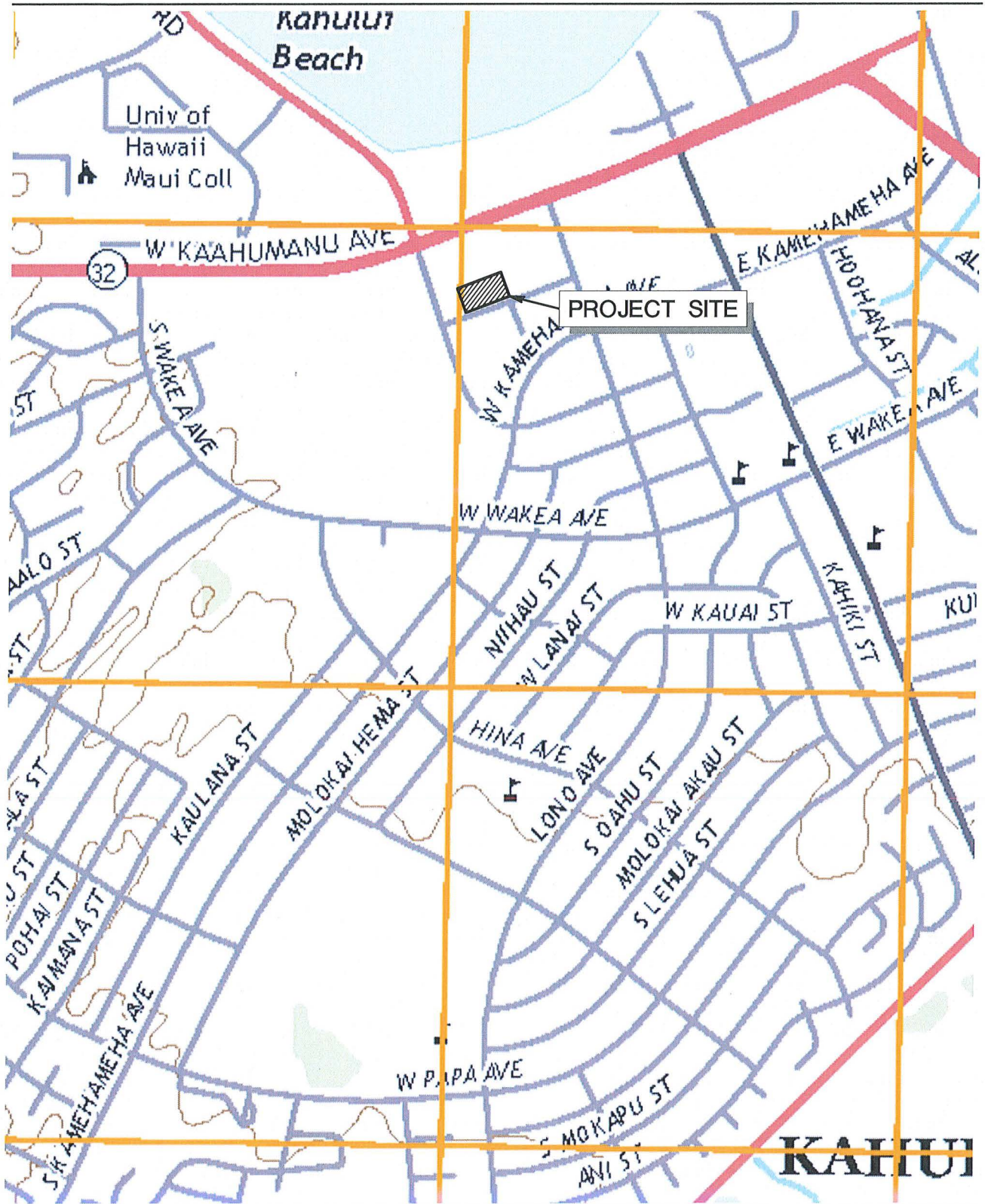


Figure 1
SOURCE: USGS WAILUKU QUADRANGLE MAP



Custom Soil Resource Report
Soil Map



SOIL MAP
SCALE IN FEET

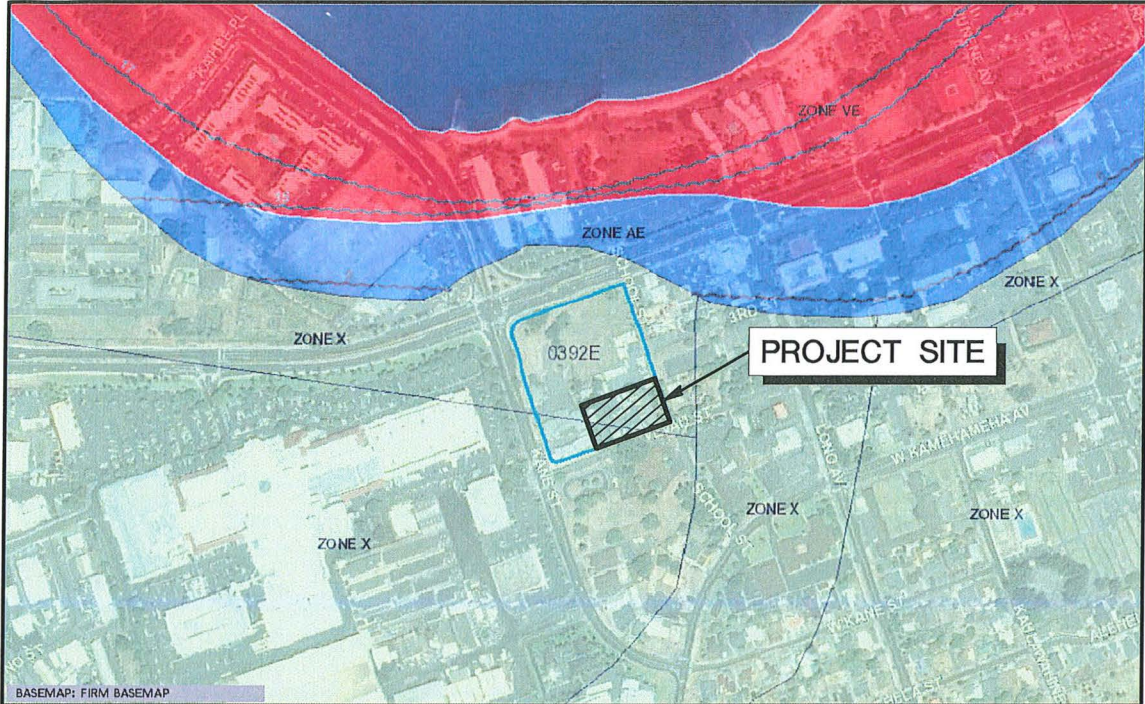


NORTH

Figure 3

SOURCE: SOIL SURVEY





BASEMAP: FIRM BASEMAP



Flood Hazard Assessment Report

www.hawaiiinfip.org

Property Information

COUNTY: MAUI
 TM K NO: (2) 3-7-004:003
 WATERSHED: IAO
 PARCEL ADDRESS: 153 W KAAHUMANU AVE
 KAHULUI, HI 96732

Notes:

Flood Hazard Information

FIRM INDEX DATE: N NOVEMBER 04, 2015
 LETTER OF MAP CHANGE(S): NONE
 FEMA FIRM PANEL: 1500030392E
 PANEL EFFECTIVE DATE: SEPTEMBER 25, 2009

THIS PROPERTY IS WITHIN A TSUNAMI EVACUATION ZONE: YES
 FOR MORE INFO, VISIT: <http://www.scd.hawaii.gov/>

THIS PROPERTY IS WITHIN A DAM EVACUATION ZONE: YES (MA-0083; MA-0084; MA-0085; MA-0141; MA-0150;
 FOR MORE INFO, VISIT: <http://dlnr.hawaii.gov/dam/> MA-0151)

Disclaimer: The Hawaii Department of Land and Natural Resources (DLNR) assumes no responsibility arising from the use, accuracy, completeness, and timeliness of any information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the DLNR, its officers, and employees from any liability which may arise from its use of its data or information.

If this map has been identified as 'PRELIMINARY', please note that it is being provided for informational purposes and is not to be used for flood insurance rating. Contact your county floodplain manager for flood zone determinations to be used for compliance with local floodplain management regulations.

FLOOD HAZARD ASSESSMENT TOOL LAYER LEGEND (Note: legend does not correspond with NFHL)

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD - The 1% annual chance flood (100-year), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. SFHAs include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

	Zone A: No BFE determined.
	Zone AE: BFE determined.
	Zone AH: Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
	Zone AO: Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
	Zone V: Coastal flood zone with velocity hazard (wave action); no BFE determined.
	Zone VE: Coastal flood zone with velocity hazard (wave action); BFE determined.
	Zone AEF: Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

NON-SPECIAL FLOOD HAZARD AREA - An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

	Zone XS (X shaded): Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
	Zone X: Areas determined to be outside the 0.2% annual chance floodplain.

OTHER FLOOD AREAS

	Zone D: Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase apply, but coverage is available in participating communities.
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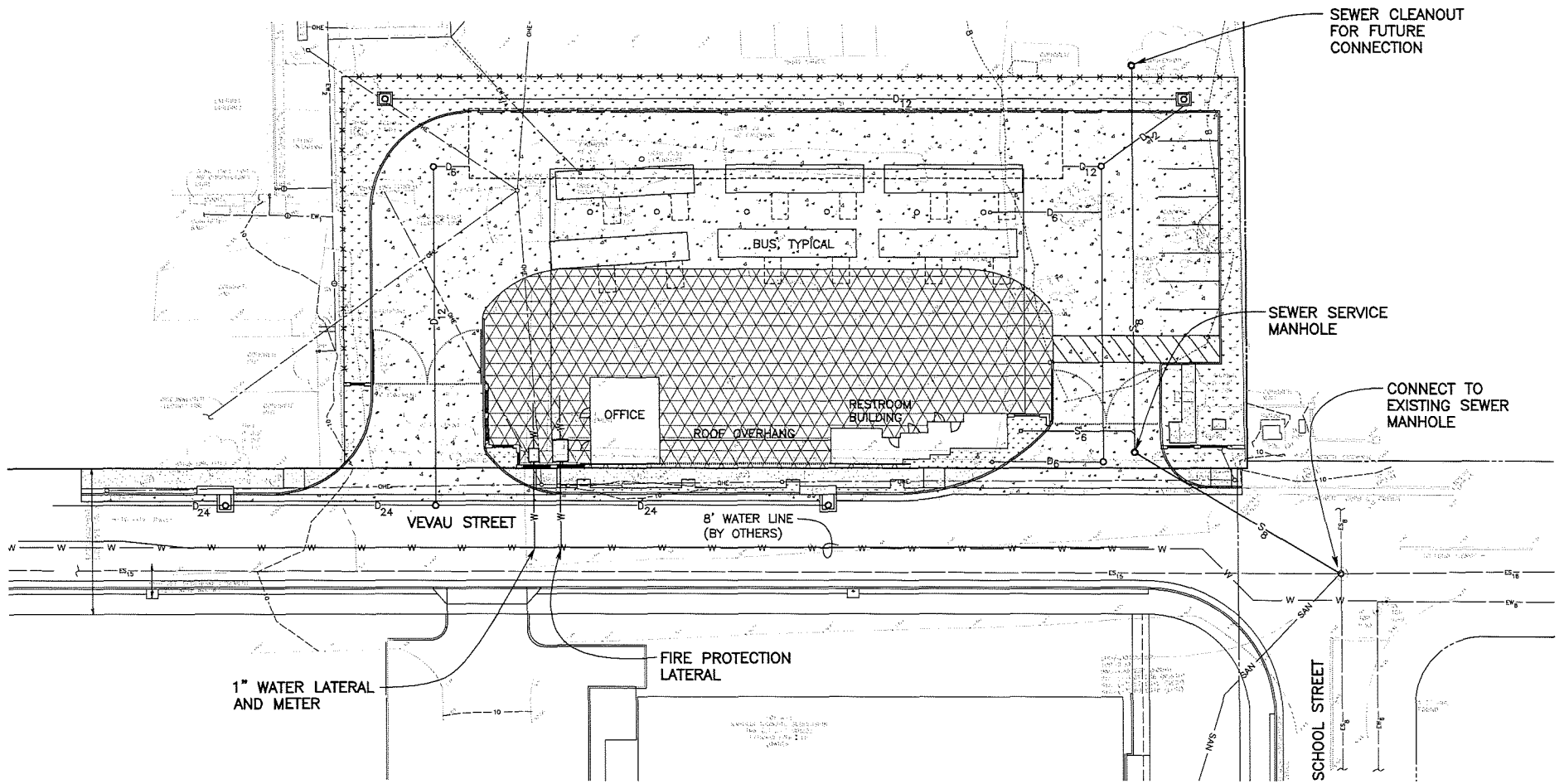
NORTH

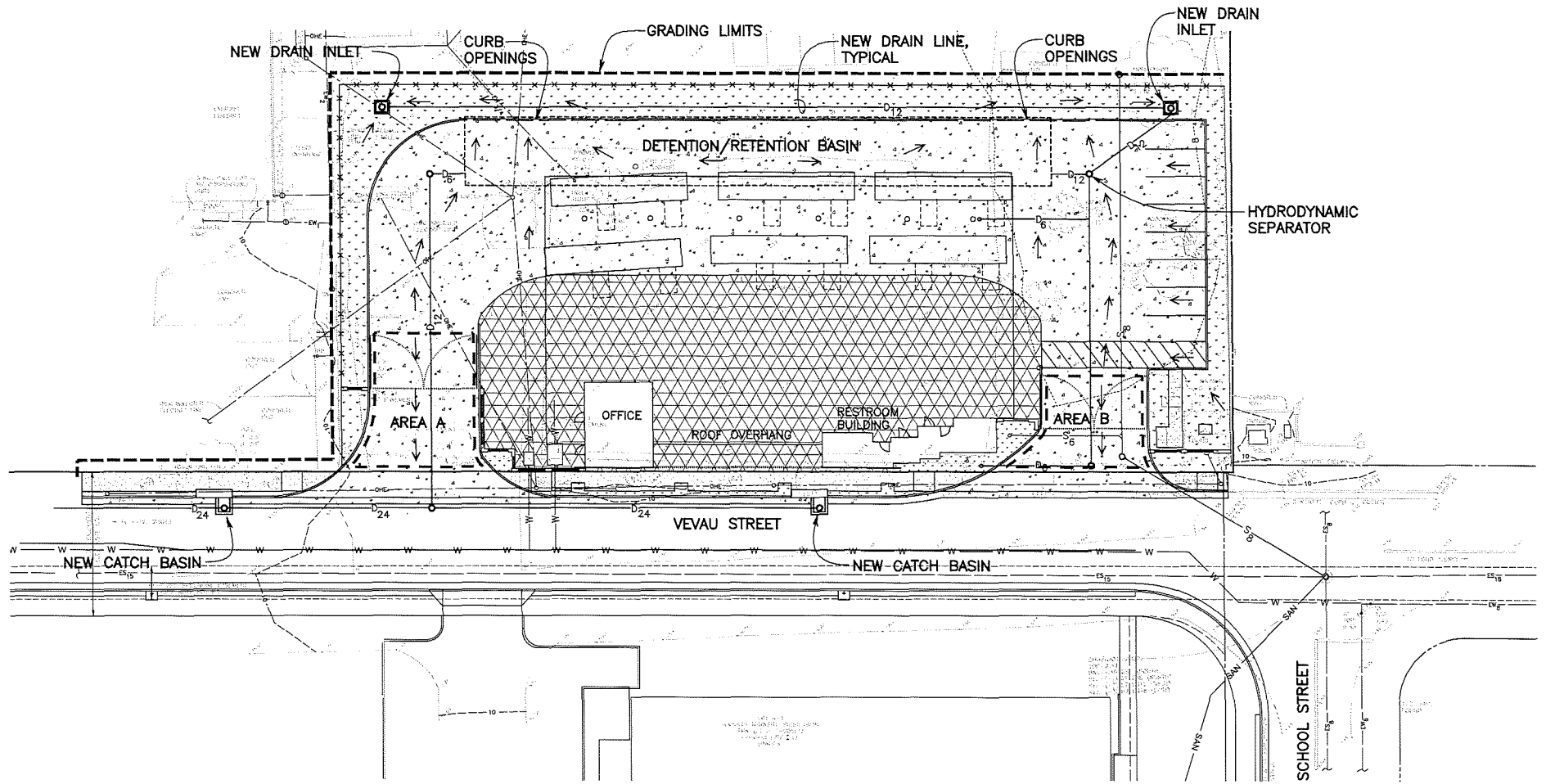
FLOOD HAZARD ASSESSMENT REPORT

NOT TO SCALE

Figure 4
 SOURCE: FLOOD HAZARD ASSESSMENT TOOL







PRELIMINARY GRADING AND DRAINAGE PLAN

SCALE IN FEET



Figure 7



**BIOLOGICAL
RESOURCES SURVEY**

APPENDIX

C

Biological Resource Survey
County of Maui Department of Transportation
Bus Terminal Relocation Project
Kahului, Maui, Hawaii

by:
Robert W. Hobdy
Environmental Consultant
Kokomo, Maui
November 2018

Prepared for: Munekiyo Hiraga

BIOLOGICAL RESOURCES SURVEY
COUNTY OF MAUI DEPARTMENT OF TRANSPORTATION
BUS TERMINAL RELOCATION PROJECT
KAHULUI, MAUI, HAWAII

INTRODUCTION

The County of Maui Department of Transportation Bus Terminal Relocation project is situated in urban lower Kahului town on approximately 0.75 acres of vacant land on the makai side of Vevau Street, TMK (2) 3-07-004:003 (see Figure 1.) This biological resources survey and assessment was initiated in fulfillment of environmental requirements of the planning process.

SITE DESCRIPTION

The project area lies on level land on the Kahului coastal plain. The area is partially paved with asphalt. The vegetation consists of a few large trees and a variety of grasses, vines and herbaceous weeds. The soil consists of calcareous sand and coral fragments that were deposited along the Kahului shoreline in 1910 when the harbor was dredged (Foote et al, 1972). Rainfall averages around 20 inches per year with most occurring during the winter months (Armstrong, 1983).

SURVEY OBJECTIVES

This report summarizes the findings of a flora and fauna survey of the proposed Maui County Department of Transportation Bus Terminal Relocation project area that was conducted in November 2018. The objectives of the survey were to:

1. Document what plant, bird and mammal species occur on the property or may likely occur in the existing habitat.
2. Document the status and abundance of each species.
3. Determine the presence or likely occurrence of any native flora and fauna, particularly any that are Federally listed as Threatened or Endangered (USFWS, 2018). If such occur, identify what features of the habitat may be essential for these species.
4. Determine if the project area contains any special habitats which if lost or altered might result in a significant negative impact on the flora and fauna in this part of the island.

BOTANICAL SURVEY REPORT

SURVEY METHODS

A walk-through botanical survey method was used on this 0.75 acre project area. All plant species were inventoried and notes were made on their abundance and distribution.

DESCRIPTION OF THE VEGETATION

The project area consists of one large monkeypod tree (*Samanea saman*) and an assortment of grasses, vines and herbaceous weeds. A total of 52 plant species were recorded during the survey. Seven species were common: swollen fingergrass (*Chloris barbata*), Natal redtop (*Melinis repens*), Guinea grass (*Megathyrsus maximus*), Chinese violet (*Asystasia gangetica*), coat buttons (*Tridax procumbens*), hairy spurge (*Euphorbia hirta*) and siratro (*Macroptilium atropurpureum*). Seventeen species were uncommon and twenty eight species were of rare occurrence here.

Just two common native plants were recorded: the 'uhaloa (*Waltheria indica*) and the pōpolo (*Solanum americanum*). The remaining fifty species were all non-native plants.

DISCUSSION AND RECOMMENDATION

The vegetation in the project area is dominated by non-native species. Only two common indigenous species were found. No federally listed Endangered or Threatened species were found, nor do any plants proposed as candidates for such status occur on the property. The indigenous 'uhaloa and pōpolo are both widespread and common in Hawaii as well as in other parts of the Pacific and neither carries any special protected status.

As a result of the above findings it is determined that there is little of botanical concern and that the proposed project is not expected to have a significant negative impact on the botanical resources in this part of Maui. No recommendations regarding the vegetation are deemed necessary.

PLANT SPECIES LIST

Following is a checklist of all those vascular plant species inventoried during the field studies. Plant families are arranged alphabetically within each of two groups: Monocots and Dicots. Taxonomy and nomenclature of the flowering plants (Monocots and Dicots) are in accordance with Wagner et al. (1999) and Staples and Herbst (2005).

For each species, the following information is provided:

1. Scientific name with author citation.
2. Common English or Hawaiian name.
3. Bio-geographic status. The following symbols are used:

endemic = native only to the Hawaiian Islands; not naturally occurring anywhere else in the world.

indigenous = native to the Hawaiian Islands and also to one or more other geographic area(s).

Polynesian = all those plants brought to Hawaii during the course of Polynesian migrations.

non-native = all those plants brought to the islands intentionally or accidentally after western contact.

4. Abundance of each species within the project area:

abundant = forming a major part of the vegetation within the project area.

common = widely scattered throughout the area or locally abundant within a portion of it.

uncommon = scattered sparsely throughout the area or occurring in a few small patches.

rare = only a few isolated individuals within the project area.

SCIENTIFIC NAME	COMMON NAME	STATUS	ABUNDANCE
MONOCOTS			
ARACEAE (Aroid Family)			
<i>Syngonium podophyllum</i> Schott	five-fingers	non-native	rare
ARECACEAE (Palm Family)			
<i>Phoenix sylvestris</i> (L.) Roxb.	wild date palm	non-native	rare
ASPARAGACEAE (Asparagus Family)			
<i>Dracaena marginata</i> Lamarck	money tree	non-native	rare
POACEAE (Grass Family)			
<i>Cenchrus ciliaris</i> L.	buffelgrass	non-native	uncommon
<i>Cenchrus echinatus</i> L.	common sandbur	non-native	uncommon
<i>Chloris barbatus</i> (L.) Sw.	swollen fingergrass	non-native	common
<i>Cynodon dactylon</i> (L.) Pers.	Bermuda grass	non-native	uncommon
<i>Digitarius insularis</i> (L.) Mez ex Ekman	sourgrass	non-native	rare
<i>Digitaria violascens</i> Link	smooth crabgrass	non-native	rare
<i>Eragrostis amabilis</i> (L.) Wight & Arnott	Japanese lovegrass	non-native	rare
<i>Megathyrsus maximus</i> (Jacq.) Simon & Jacobs	Guinea grass	non-native	common
<i>Melinis repens</i> (Willd.) Zizka	Natal redtop	non-native	common
<i>Urochloa subquadriflora</i> (Trin.) R.D. Webster	tropical signalgrass	non-native	rare
DICOTS			
ACANTHACEAE (Acanthus Family)			
<i>Asystasia gangetica</i> (L.) T. Anderson	Chinese violet	non-native	common
APOCYNACEAE (Dogbane Family)			
<i>Allamanda cathartica</i> L.	allamanda	non-native	rare
<i>Cathartanthus roseus</i> (L.) G. Don	Madagascar periwinkle	non-native	rare
<i>Plumeria rubra</i> L.	plumeria	non-native	rare
ARALIACEAE (Ginseng Family)			
<i>Polyscias guilfoylei</i> (W. Bull) L.H. Bailey	panax	non-native	rare
ASTERACEAE (Sunflower Family)			
<i>Conyza bonariensis</i> (L.) Cronq.	hairy horseweed	non-native	rare
<i>Emilia fosbergii</i> Nicolson	red pualele	non-native	rare
<i>Pluchea carolinensis</i> (Jacq.) G. Don	sourbush	non-native	uncommon
<i>Tridax procumbens</i> L.	coat buttons	non-native	common
BIGNONIACEAE (Bignonia Family)			
<i>Spathodea campanulata</i> P. Beauv.	African tulip tree	non-native	rare

SCIENTIFIC NAME	COMMON NAME	STATUS	ABUNDANCE
BORAGINACEAE (Borage Family)			
<i>Carmona retusa</i> (Vahl) Masamino	Fukien tea	non-native	rare
<i>Heliotropium procumbens</i> Mill.	four-spike heliotrope	non-native	uncommon
CLEOMACEAE (Cleome Family)			
<i>Cleome gynandra</i> L.	wild spider flower	non-native	rare
CONVOLVULACEAE (Morning Glory Family)			
<i>Ipomoea obscura</i> (L.) Ker-Gawl.	obscure morning glory	non-native	uncommon
CUCURBITACEAE (Gourd Family)			
<i>Momordica charantia</i> L.	bitter melon	non-native	rare
EUPHORBIACEAE (Spurge Family)			
<i>Codiaeum variegatum</i> (L.) Blume	croton	non-native	rare
<i>Euphorbia hirta</i> L.	hairy spurge	non-native	common
<i>Euphorbia hypericifolia</i> L.	graceful spurge	non-native	rare
<i>Euphorbia prostrata</i> Aiton	prostrate spurge	non-native	rare
<i>Ricinus communis</i> L.	Castor bean	non-native	uncommon
FABACEAE (Pea Family)			
<i>Cassia fistula</i> L.	golden shower	non-native	rare
<i>Chamaecrista nictitans</i> (L.) Moench	partridge pea	non-native	rare
<i>Desmodium tortuosum</i> (Sw.) DC.	Florida beggarweed	non-native	uncommon
<i>Leucaena leucocephala</i> (Lam.) de Wit	koa haole	non-native	rare
<i>Macroptilium atropurpureum</i> (DC.) Urb.	siratro	non-native	common
<i>Neonotonia wightii</i> (Wight & Arnott) Lackey	glycine	non-native	uncommon
<i>Prosopis pallida</i> (Humb. & Bonpl. ex Willd) Kunth	kiawe	non-native	uncommon
<i>Samanea saman</i> (Jacq.) Merr.	monkeypod	non-native	rare
MALVACEAE (Mallow Family)			
<i>Abutilon grandifolium</i> (Willd.) Sweet	hairy abutilon	non-native	rare
<i>Malvastrum coromandelianum</i> (L.) Garcke	false mallow	non-native	uncommon
<i>Sida ciliaris</i> L.	bracted fanpetals	non-native	uncommon
<i>Sida rhombifolia</i> L.	arrowleaf sida	non-native	uncommon
<i>Waltheria indica</i> L.	'uhaloa	indigenous	uncommon
MORACEAE (Mulberry Family)			
<i>Ficus microcarpa</i> L. fil.	Chinese banyan	non-native	rare
MYRTACEAE (Myrtle Family)			
<i>Psidium guajava</i> L.	common guava	non-native	uncommon
<i>Syzygium cumini</i> (L.) Skeels	Java plum	non-native	uncommon
NYCTAGINACEAE (Four-o'clock Family)			
<i>Boerhavia coccinea</i> Mill.	scarlet spiderling	non-native	uncommon
PASSIFLORACEAE (Passion Flower Family)			
<i>Turnera ulmifolia</i> L.	yellow alder	non-native	rare

SCIENTIFIC NAME	COMMON NAME	STATUS	ABUNDANCE
SOLANACEAE (Nightshade Family) <i>Solanum americanum</i> Mill.	pōpolo	indigenous	rare

FAUNA SURVEY REPORT

SURVEY METHODS

A walk-through survey method was conducted in conjunction with the botanical survey. All parts of the project area were covered. Field observations were made with the aid of binoculars and by listening to vocalizations. Notes were made on species, abundance, activities and location as well as observations of trails, tracks scat and signs of feeding. In addition an evening visit was made to the area to record crepuscular activities and vocalizations and to see if there was any evidence of occurrence of the Hawaiian hoary bat (*Lasiurus cinereus semotus*) in the area.

RESULTS

MAMMALS

No mammals were seen during the course of the survey including one daytime visit and one evening visit. Taxonomy and nomenclature follow Tomich (1986).

Mammals one would expect to find in this area would include rats (*Rattus* spp.), mice (*Mus domesticus*), feral cats (*Felis catus*) and mongoose (*Herpestes auropuntatus*).

A special effort was made to look for the native Hawaiian hoary bat by making an evening survey of the area. A bat detecting device (Batbox IIID) was used, set to the frequency of 27,000 to 28,000 hertz which is the typical range within which these bats are known to function. No activity was detected using this device.

BIRDS

Birdlife was rather sparse in this open, urban environment. Just five species of birds were recorded during two site visits to the project area. Taxonomy and nomenclature follow American Ornithologists' Union (2018). Two species were common: the zebra dove (*Columba livia*) and the common chicken (*Gallus gallus*). The spotted dove and the nutmeg mannikin (*Lonchura punctulata*) were uncommon and the house sparrow (*Passer domesticus*) was rare. A few other non-native species might occasionally occur here, but the habitat is unsuitable for native forest birds and seabirds.

INSECTS

Insect life was moderately represented with fourteen species recorded, representing six insect Orders. Taxonomy and nomenclature follow Nishida et al (1992). One species was abundant in the project area, the long-tailed blue butterfly (*Lampides boeticus*), while three others were common: the dung fly (*Musca sorbens*), the honeybee (*Apis mellifera*) and the sleepy orange butterfly (*Eurema nicippe*). Six species were uncommon and four species were rare in the project area. One insect species was native, the indigenous globe skimmer dragonfly (*Pantala flavescens*). This native dragonfly is widespread and common throughout Hawaii and also occurs throughout the tropics world wide.

DISCUSSION AND RECOMMENDATIONS

The proposed Kahului Bus Terminal Relocation project site lies on a small parcel of land within the surrounding urban environment of Kahului Town. This highly altered habitat is not suitable for most native species. The Hawaiian hoary bat survey did not detect any of these endemic bats, and they are not expected to occur here.

The only indigenous species was the globe skimmer dragonfly. This common dragonfly is considered to be of least concern and it has no protected status. All of the other non-native bird and insect species are of no conservation concern.

No federally Threatened or Endangered fauna species occur in the project area, nor does any Critical Habitat for any protected species occur here either.

As a result of these findings it is determined that there is little of environmental concern with regard to animal life in this project area. The development of the proposed project is not expected to have a significant negative effect on the fauna resources in this part of Maui.

ANIMAL SPECIES LIST

Following is a checklist of the animal species inventoried during the field work. Animal species are arranged in descending abundance within two groups: Birds and Insects. For each species the following information is provided:

1. Common name.
2. Scientific name.
3. Bio-geographical status. The following symbols are used:

endemic = native only to Hawaii; not naturally occurring anywhere else in the world.

indigenous = native to the Hawaiian Islands and also to one or more other geographic area(s).

non-native = all those animals brought to Hawaii intentionally or accidentally after western contact.

migratory = spending a portion of the year in Hawaii and a portion elsewhere. In Hawaii the migratory birds are usually in the overwintering/non-breeding phase of their life cycle.

4. Abundance of each species within the project area:

abundant = many flocks or individuals seen throughout the area at all times of day.

common = a few flocks or well scattered individuals throughout the area.

uncommon = only one flock or several individuals seen within the project area.

rare = only one or two seen within the project area.

SCIENTIFIC NAME	COMMON NAME	STATUS	ABUNDANCE
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MAMMALS

None Recorded

BIRDS

COLUMBIDAE (Dove Family)

<i>Geopelia striata</i> L.	zebra dove	non-native	common
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<i>Streptopelia chinensis</i> Scopoli	spotted dove	non-native	uncommon
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ESTRILDIDAE (Estrildid Finch Family)

<i>Lonchurus punctulata</i> L.	nutmeg mannikin	non-native	uncommon
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PASSERIDAE (House Finch Family)

<i>Passer domesticus</i> L.	house finch	non-native	rare
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PHASIANIDAE (Pheasant Family)

<i>Gallus gallus</i> L.	common chicken	non-native	common
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INSECTS

Order ARANAE - true spiders

SALTICIDAE (Jumping Spider Family)

<i>Menemerus bivittatus</i> Dufour	gray wall jumper	non-native	rare
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Order DIPTERA - flies

DOLICHOPODIDAE (Long-legged Fly Family)

<i>Chrysosoma globiferum</i> Wiedemann	iridescent green long-legged fly	non-native	rare
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MUSCIDAE (House Fly Family)

<i>Musca sorbens</i> Wiedemann	dung fly	non-native	common
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Order HYMENOPTERA - bees, wasps, ants

APIDAE (Honeybee Family)

<i>Apis mellifera</i> L.	honeybee	non-native	common
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FORMICIDAE (Ant Family)

<i>Pheidole megacephala</i> Fabricius	big-headed ant	non-native	uncommon
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Order LEPIDOPTERA - butterflies, moths

CRAMBIDAE (Grass Moth Family)

<i>Spoladea recurvalis</i> Fabricius	beet webworm	non-native	uncommon
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SCIENTIFIC NAME	COMMON NAME	STATUS	ABUNDANCE
LYCAENIDAE (Gossamer-winged Butterfly Family)			
<i>Lampides boeticus</i> L.	long-tailed blue butterfly	non-native	abundant
NOCTUIDAE (Owlet Moth Family)			
<i>Achaea janata</i> L.	Castor semi-looper	non-native	rare
NYMPHALIDAE (Brush-footed Butterfly Family)			
<i>Danaus plexippus</i> L.	monarch butterfly	non-native	uncommon
PAPILIONIDAE (Swallowtail Butterfly Family)			
<i>Papilio xuthus</i> L.	Asian swallowtail butterfly	non-native	uncommon
PIERIDAE (White and Sulphur Butterfly Family)			
<i>Eurema nicippe</i> Cramer	sleepy orange butterfly	non-native	common
<i>Phoebis agarithe</i> Boisduval	large sulphur butterfly	non-native	rare
Order ODONATA - dragonflies, damselflies			
LIBELLULIDAE (Skimmer Dragonfly Family)			
<i>Pantala flavescens</i> Fabricius	globe skimmer dragonfly	indigenous	uncommon
Order ORTHOPTERA - grasshoppers, crickets			
ACRIDIDAE (Grasshopper Family)			
<i>Oxya japonica</i> Thunberg	small rice grasshopper	non-native	rare

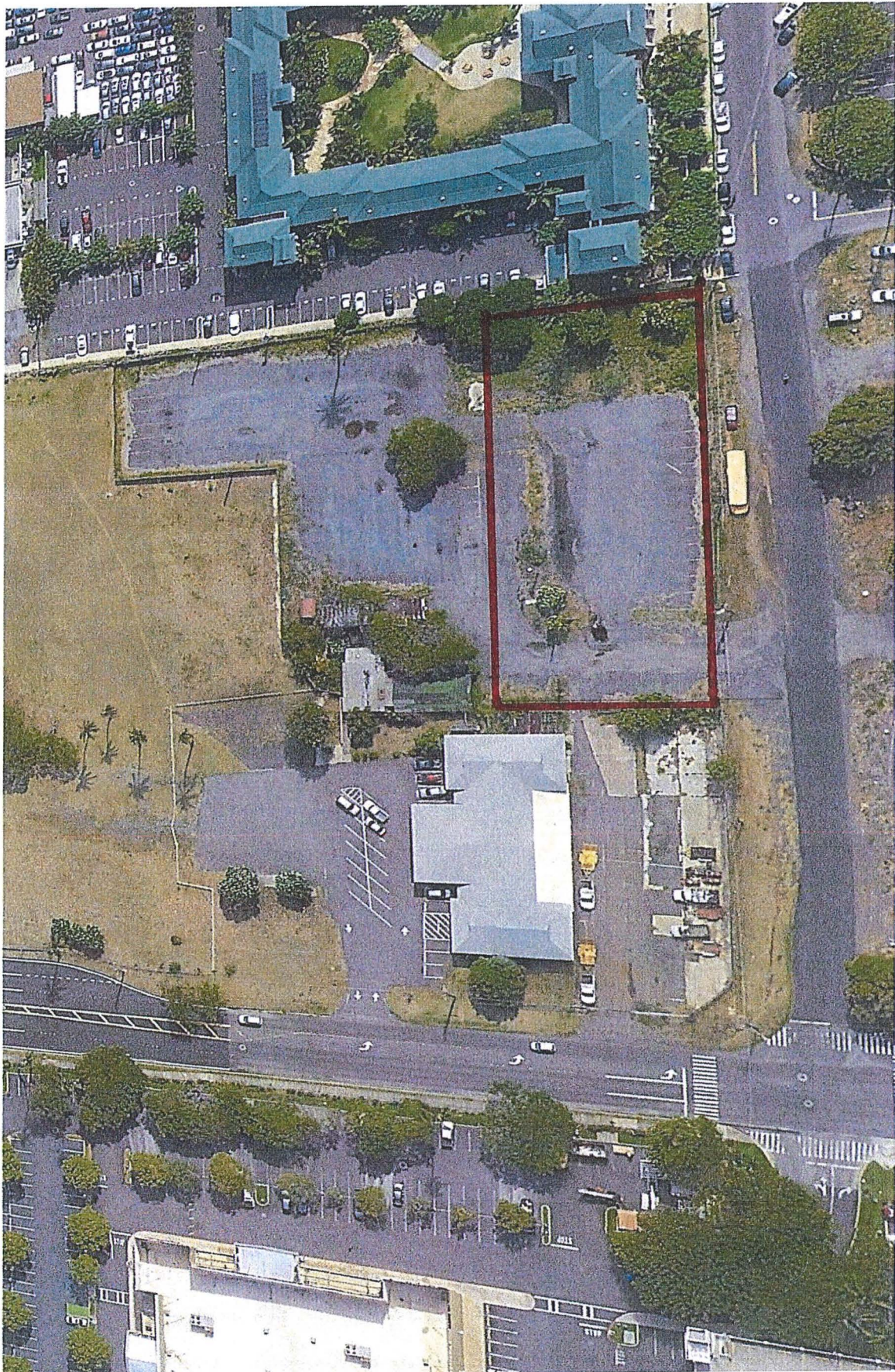


Figure 1. County of Maui, Department of Transportation
Bus Terminal Relocation project area – Vevau Street Kahului, Maui.

Literature Cited

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**SECTION 6E, HAWAI'I REVISED
STATUTES SUBMITTAL FORM
TO STATE HISTORIC
PRESERVATION DIVISION**

APPENDIX

D

Karlynn Fukuda

From: DLNR.Intake.SHPD <dlnr.intake.shpd@hawaii.gov>
Sent: Monday, April 15, 2019 12:10 PM
To: Marc Takamori; Lebo, Susan A; Soares, Lehua K; Clark, Garnet K
Cc: Michael DuPont; Mike Silva; xamanekresearchesllc@gmail.com; Charlene Shibuya; Lynne Hiromoto; Mark Roy; DLNR.Intake.SHPD; DePonte, Ellen M
Subject: ASSIGNED TO ARCHAEOLOGY WITH LOG 2019.00802 ***** RE: MDOT Transit Hub Relocation (TMK: (2)3-7-004:003)

Aloha, your submittal is in the queue for review by the Archaeology Branch and is assigned log 2019.00802 for reference.

Direct all inquiries on this matter to Dr. Lebo, Lehua Soares, and Garnet Clark at their emails above.
Mahalo,
SHPD Intake Specialist

From: Marc Takamori <Marc.Takamori@co.maui.hi.us>
Sent: Thursday, April 11, 2019 2:16 PM
To: DLNR.Intake.SHPD <dlnr.intake.shpd@hawaii.gov>
Cc: Michael DuPont <Michael.DuPont@co.maui.hi.us>; Mike Silva <mike@femaui.com>; xamanekresearchesllc@gmail.com; Charlene Shibuya <charlene@munekiyohiraga.com>; lynne@munekiyohiraga.com; Mark Roy <mark@munekiyohiraga.com>
Subject: MDOT Transit Hub Relocation (TMK: (2)3-7-004:003)

Aloha,

The County of Maui Department of Transportation is submitting the attached PDF file of the HRS 6E Submittal Form package for transmittal to the State Historic Preservation Division (SHPD).

Should you have any questions, please let us know.

Thank you,
Marc Takamori

Marc Takamori | Director
County of Maui | Department of Transportation
2145 Kaohu Street, Suite #102, Wailuku, HI 96793
Ph (808) 270-7511 | marc.takamori@mauicounty.gov



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State Historic Preservation Division
HRS 6E Submittal Form

Per §6E, Hawai'i Revised Statutes, if the Project requires review by the State Historic Preservation Division (SHPD), please review and fill out this form and submit all requested information to SHPD. Please submit this form and project documentation **electronically** to:

dlnr.intake.shpd@hawaii.gov

If you are unable to submit electronically, please contact SHPD at (808) 692-8015. Mahalo.

The submission date of this form is:

1. APPLICANT (select one)

Property Owner Government Agency

2. AGENCY (select one)

Planning Department Department of Public Works Other (specify): County of Maui Department of Transportation

Type of Permit Applied For: Environmental Assessment, Special Management Area Use Permit, Grading/Grubbing Permit, and Building permit

3. APPLICANT CONTACT

3.1) Name: Marc Takamori 3.2) Title: Director
3.3) Street Address: 2145 Kaohu Street, Trask Building, Suite 102
3.4) County: Maui 3.5) State: Hawai'i 3.6) Zip Code: 96793
3.7) Phone: (808) 270-7505 3.8) Email: public.transit@mauicounty.gov

4. PROJECT DATA

4.1) Permit Number (if applicable): not issued yet
4.2) TMK [e.g. (3) 1-2-003:004]: (2)3-7-002:020(por.), (2)3-7-004:003(por.), (2)3-7-005:003(por.)
4.3) Street Address: 275 West Kaahumanu Avenue/153 West Kaahumanu Avenue, Kahului/
65 School Street, Kahului
4.4) County: Maui 4.5) State: Hawai'i 4.6) Zip Code: 96732
4.7) Total Property Acreage: 24.60 acres/5.572 acres/3.836 acres
4.8) Project Area (acreage, square feet): 0.85 acre, 34,848 square feet
4.9) List any previous SHPD correspondence (LOG Number & DOC Number, if applicable):
LOG NO. none DOC NO. none

5. PROJECT INFORMATION

5.1) Does the Project involve a Historic Property? A Historic Property is any building, structure, object,

district, area, or site, including heiau and underwater site, which is over 50 years old (HRS §6E-2).

Yes No

5.2) The date(s) of construction for the historic property (building, structure, object, district, area, or site, including heiau and underwater site) is N/A

5.3) Is the Property listed on the Hawai'i and or National Register of Historic Places? To check: <http://dlnr.hawaii.gov/shpd/>

Yes No

5.4) Detailed Project Description and Scope of Work:

Construct a new Maui Bus Transit Hub at TMK (2)3-7-004:003 (153 West Kaahumanu Avenue). The scope of work includes a new ticket booth, restrooms, roof structure to cover waiting area and bus loading area, driveway improvements, gates and fencing, onsite drainage and utilities, parking lot and landscaping. See preliminary plans A-1, A-2, Grading and Drainage, and Utility Plan. A portion of sidewalk fronting the transit hub and driveway connections to Vevau Street will be constructed on TMK (2)3-7-005:003. Remove prefabricated bus shelters located at the Queen Kaahumanu Shopping Center located on TMK (2)3-7-002:020 (275 West Kaahumanu Avenue). It is noted that no ground altering work will occur on Parcel 20.

5.5) Description of previous ground disturbance (e.g. previous grading and grubbing): The proposed project area sits on the portion of the property that was originally occupied by the Kahului School Classroom Annex Building originally built in 1939 and a few storage buildings. The annex building is documented in a Historic American Buildings Survey report (HABS No. HI-555) prepared back in November 2011. The annex was part of the former campus of Kahului School that began to dismantle after 1996 when the 2-story 1927 classroom building and small storage buildings were taken down. From about 1970, the Maui Economic Opportunity used that portion of the property as a base yard for buses which is now abandoned with no buildings existing and only remnants of a paved base yard. Thus, previous grading and grubbing done were associated with site paving and original construction and eventual demolition of the Old Kahului School classroom annex building and storage buildings. For TMK (2)3-7-005:003, the site was previously improved with the existing Vevau Street and a former paved lot used for a go-kart facility.

5.6) Description of proposed ground disturbance (e.g. # of trenches, Length x Width x Depth):

The proposed ground disturbances associated with various work elements are as follows:

1. Roof structure post foundations - twelve (12) each, 6 ft x 6 ft x 5' deep excavations
2. Wall along Vevau Street will have footings approximately 2 ft. deep with gate posts up to 2 ft. x 2' x 4 ft deep. Perimeter fencing around side and rear boundaries will have fence posts up to 4 ft deep.
3. Drainline trenches - 800 lineal feet x 4 ft wide x 8 ft deep
4. Drainage Detention/Retention Basin - 178 ft long x 21 ft wide x 8 ft deep
5. Sewerline trenches - 350 lineal ft x 2 ft wide x 10 ft deep
6. Pavement, sidewalk, and building slab foundations - 30,000 square feet x 2 ft deep
7. Grading/grubbing area limit is 0.85 acre

5.7) The Agency shall ensure whether historic properties are present in the project area, and, if so, it shall ensure that these properties are properly identified and inventoried. Identify all known historic properties:

After initial consultation with SHPD, archaeologist Erik Frederickson of Xamanek Researches will conduct an archaeological assessment and testing, if deemed appropriate, to identify and inventory all known historic properties.

5.8) Once a historic property is identified, then an assessment of significance shall occur.

Integrity (check all that apply):

Location Design Setting Materials Workmanship Feeling Association

Criteria (check all that apply):

- a - associated with events that have made an important contribution to the broad patterns of our history
- b - associated with the lives of persons important in our past
- c - embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value
- d - have yielded, or is likely to yield, information important for research on prehistory or history
- e - have an important value to the Native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out or still carried out, at the property or due to associations with traditional beliefs, events, or oral accounts - - these associations being important to the group's history and cultural identity

The following are the minimum number and type of color photographs required:

Quantity	Description
1-2	Street view(s) of the resource and surrounding area
1-2	Over view of exterior work area
1	exterior photo of the North elevation (if applicable)
1	exterior photo of the South elevation (if applicable)
1	exterior photo of the East elevation (if applicable)
1	exterior photo of the West elevation (if applicable)
1-2	interior photos(s) of areas affected (if applicable)

CHECKLIST

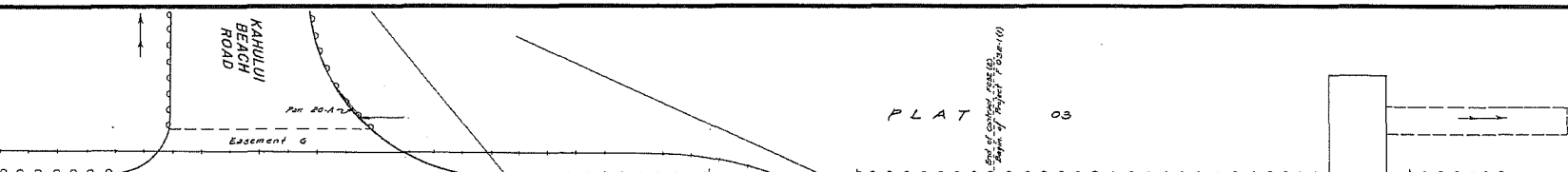
- SHPD FORM 6E** (this form)
- PROJECT SUBMITTALS** (any requested documentation for items 6.1 - 6.7 of this form)
- FILING FEE FORM** (if applicable)

PROJECT SUBMITTAL LIST

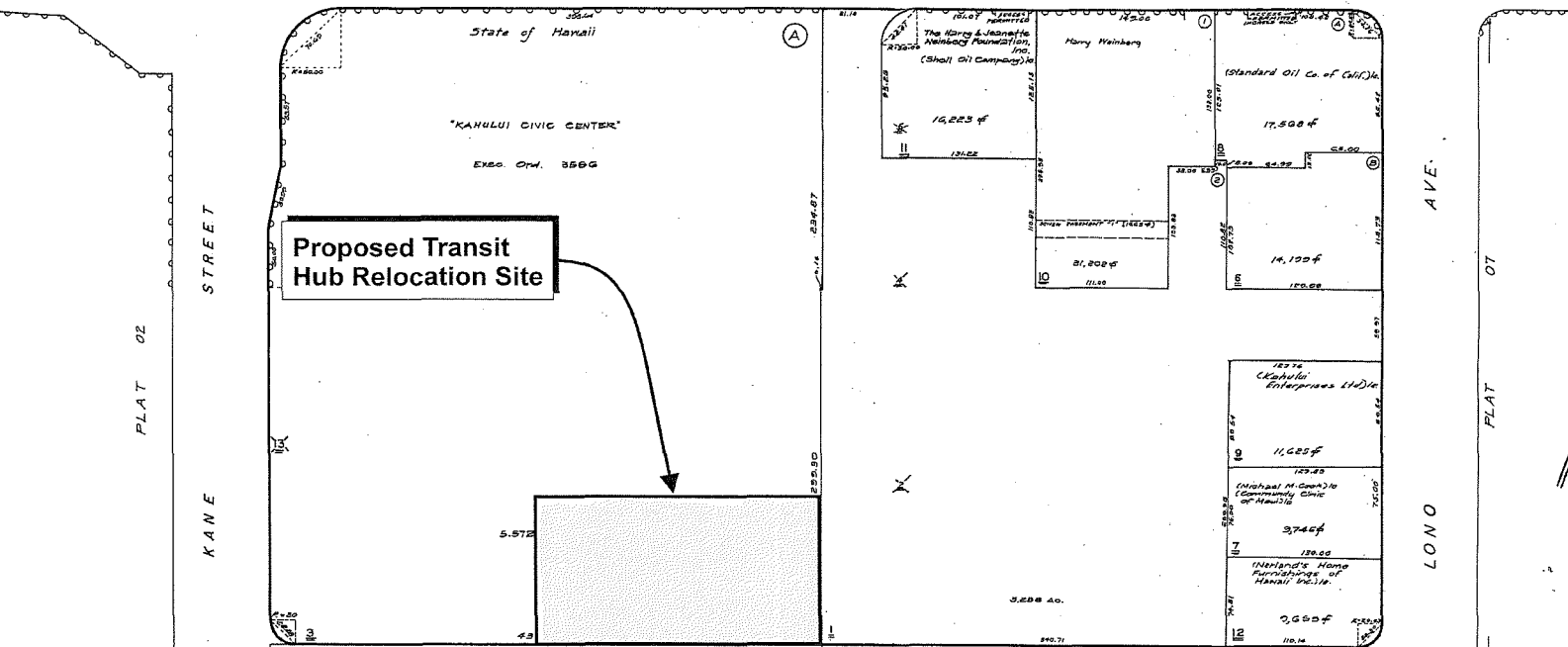
1. Tax Map Key maps showing project locations
2. Figure 1 – Property Location Map
3. Preliminary Site Plan
4. Preliminary Exterior Elevations
5. Preliminary Grading and Drainage Plan
6. Preliminary Utilities and Footing Plans

K:\DATA\FE\MDOT Bus Terminal Reloc\Applications\Section 6E\PROJECT SUBMITTAL LIST.docx

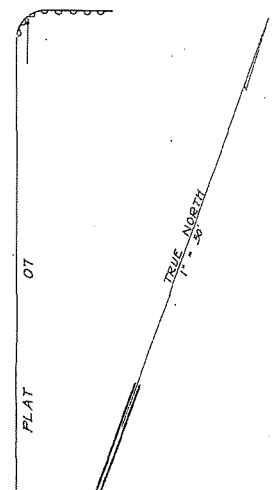
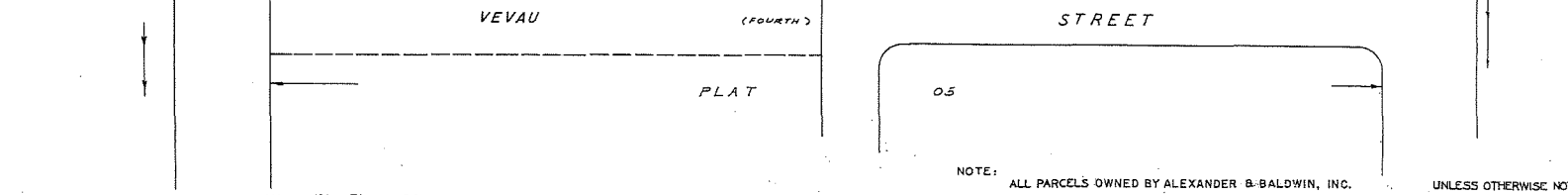
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KAAHUMANU AVENUE



Proposed Transit Hub Relocation Site



Eng. No. 1844
City: H.A. & D.S. Co.
Source: Tax Maps - Honolulu

Per. of KAHULUI, MAUI, File Plan 22

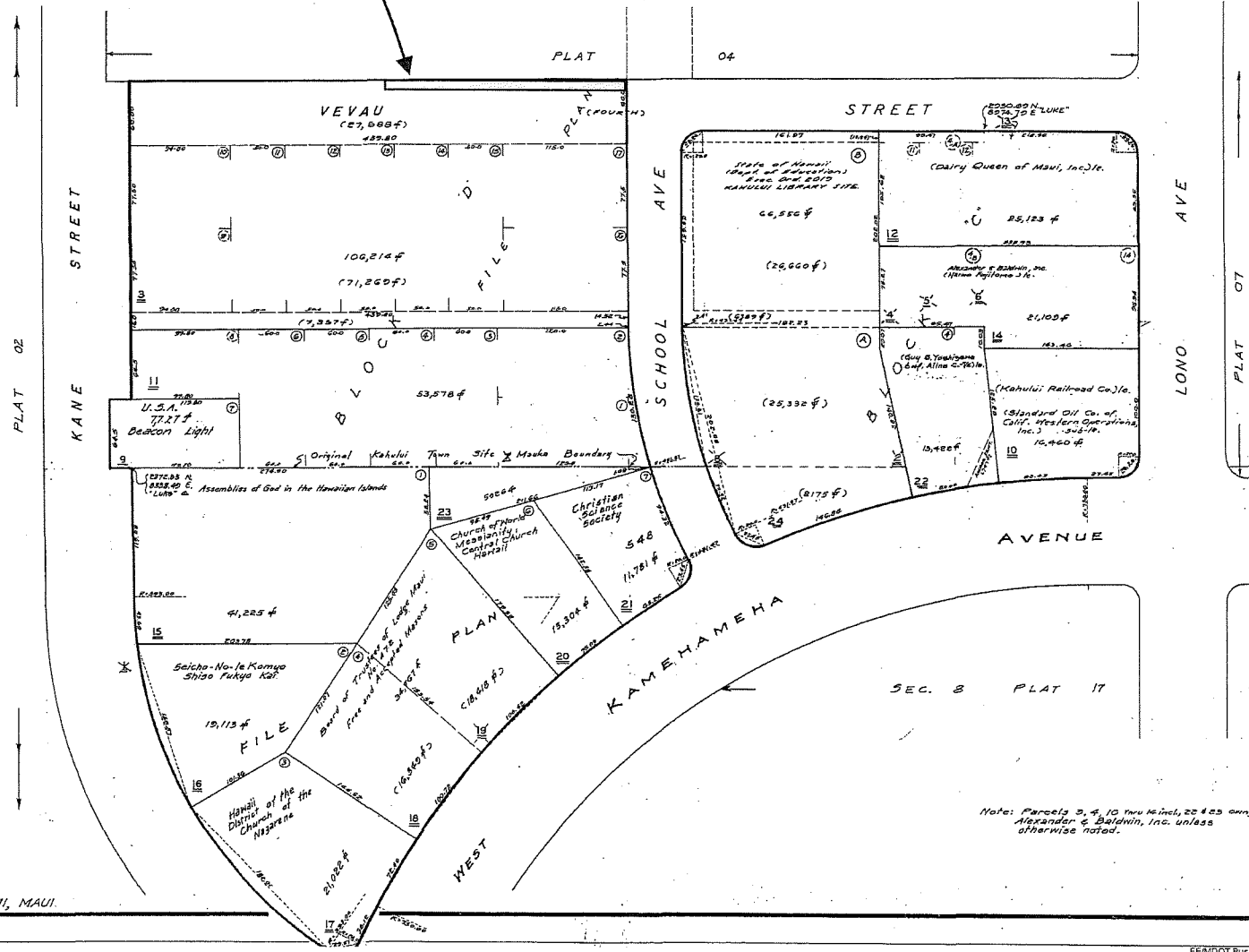
NOTE: ALL PARCELS OWNED BY ALEXANDER B-BALDWIN, INC.

Parcels Dropped: 6, 2, 4, 13,
ADVANCE SHEET
SUBJECT TO CHANGE
SECOND DIVISION
ZONE SEC. PLAT
3 7 04
CONTAINING 6 PARCELS
SCALE: 1 in. = 50 ft.

UNLESS OTHERWISE NOTED.

PRINTED

Proposed Vevau Street Frontage Improvements



CORRECTED
 MAY 22 1966
 BY N. A. I. D. S. C.
 SOURCE: Tax Maps Bureau

Map No. 1046
 By N. A. I. D. S. C.
 Source: Tax Maps Bureau

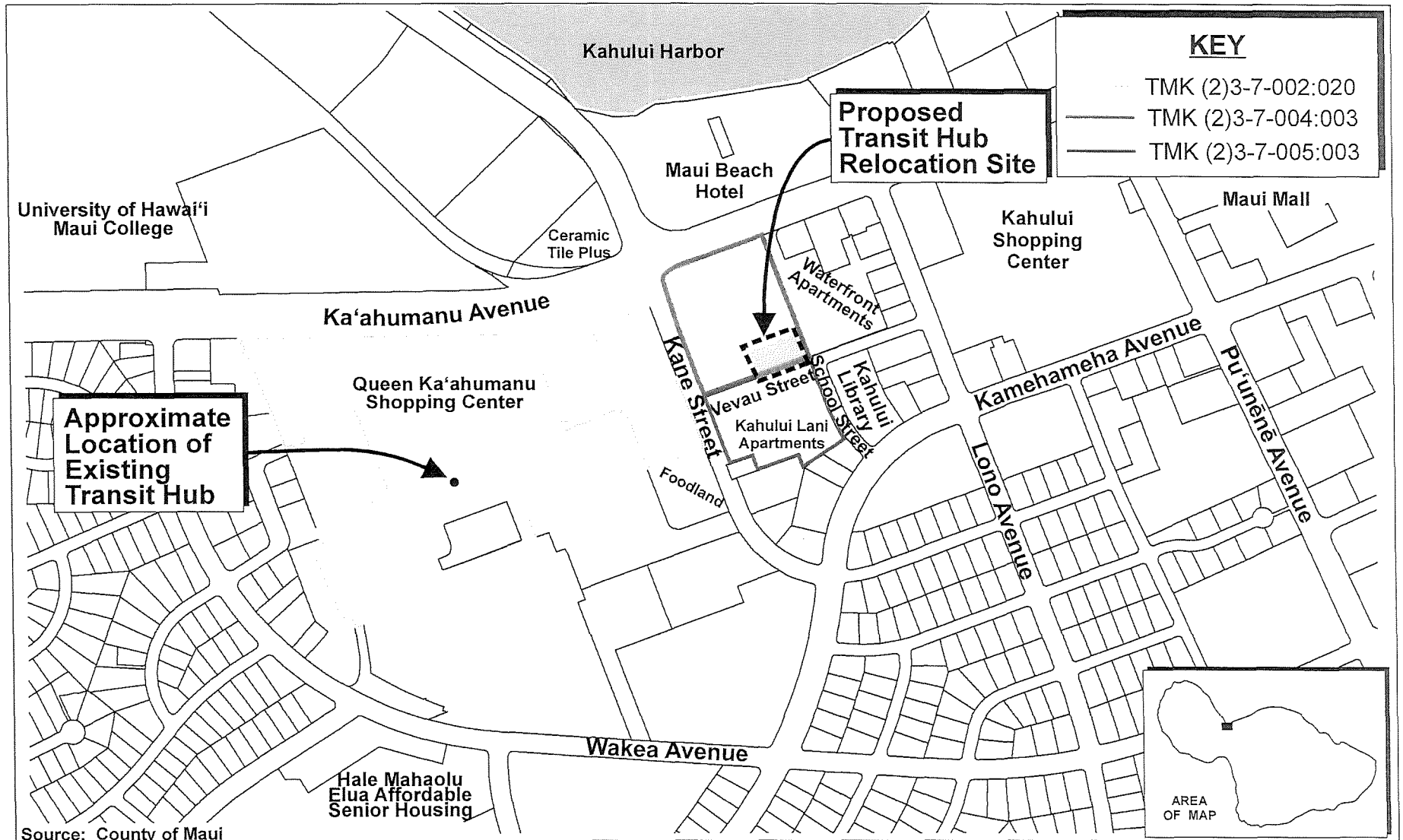
Part of KAHULUI, MAUI.

Dropped: 1, 2, 5, 6, 13, 4
 Notes: Parcels 3, 4, 10 thru 16 incl, 20 & 23 owned by Alexander & Baldwin, Inc. unless otherwise noted.

ADVANCE SHEET
SUBJECT TO CHANGE

SECOND DIVISION		
ZONE	SEC.	PLAT
3	7	05
CONTAINING 6 PARCELS		
SCALE 1" = 50 ft.		

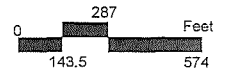
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Source: County of Maui

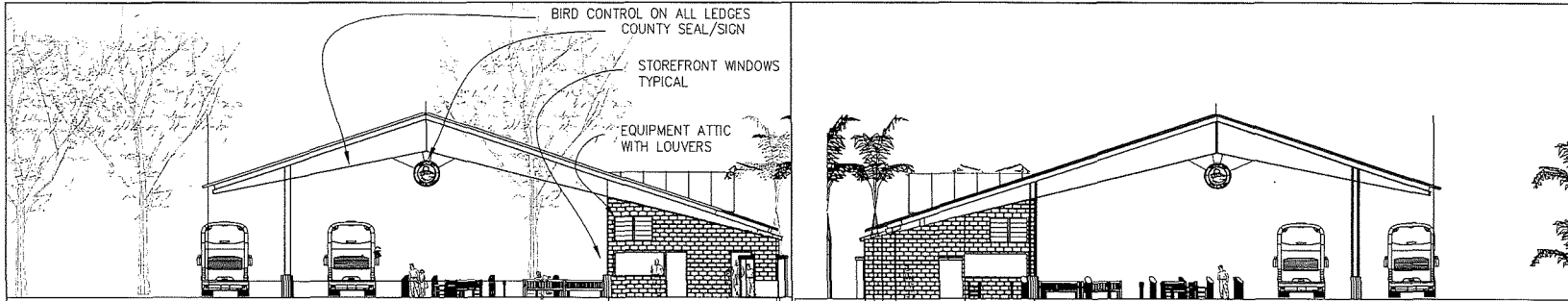
Figure 1

Proposed Transit Hub Relocation Property Location Map



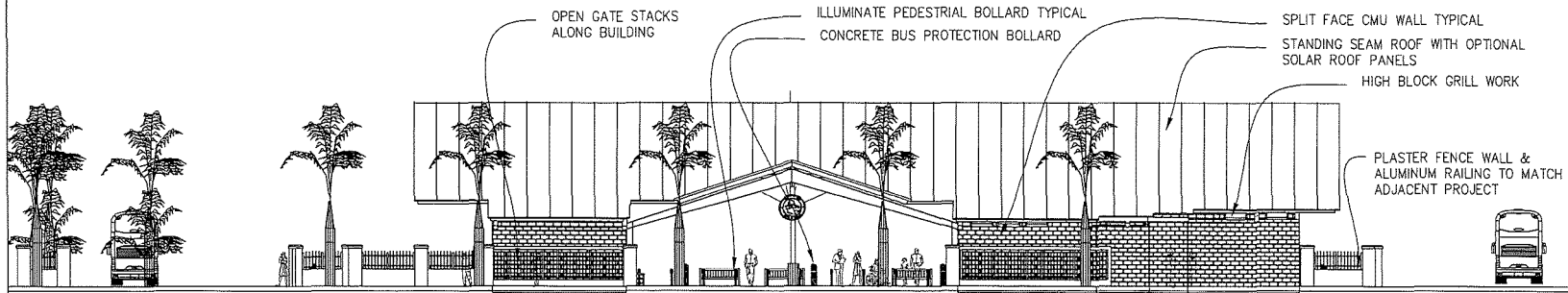
Prepared for: County of Maui, Department of Transportation

 MUNEKIYO HIRAGA

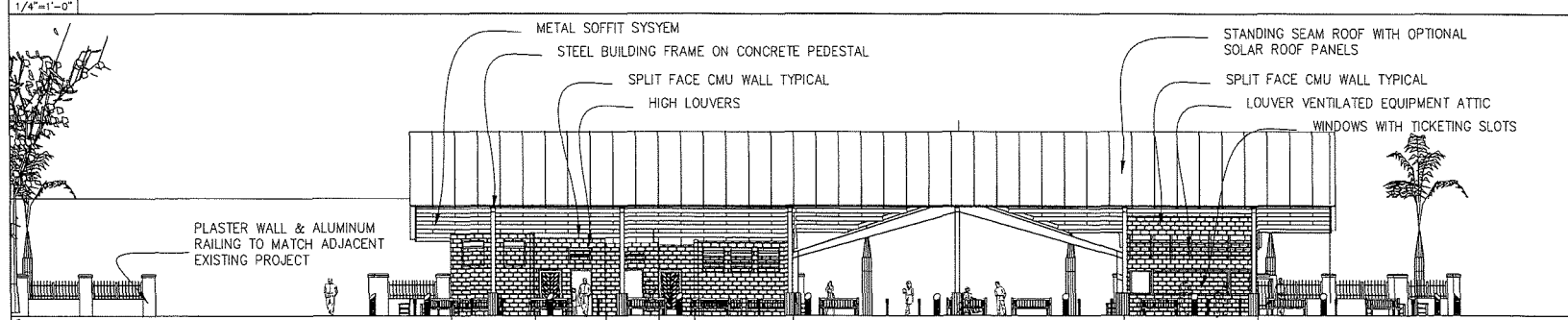


2 WEST ELEVATION
1/4"=1'-0"

1 EAST ELEVATION
1/4"=1'-0"



3 SOUTH ELEVATION
1/4"=1'-0" ENTRY WITH GATE IN OPEN POSITION



4 NORTH ELEVATION
1/4"=1'-0"

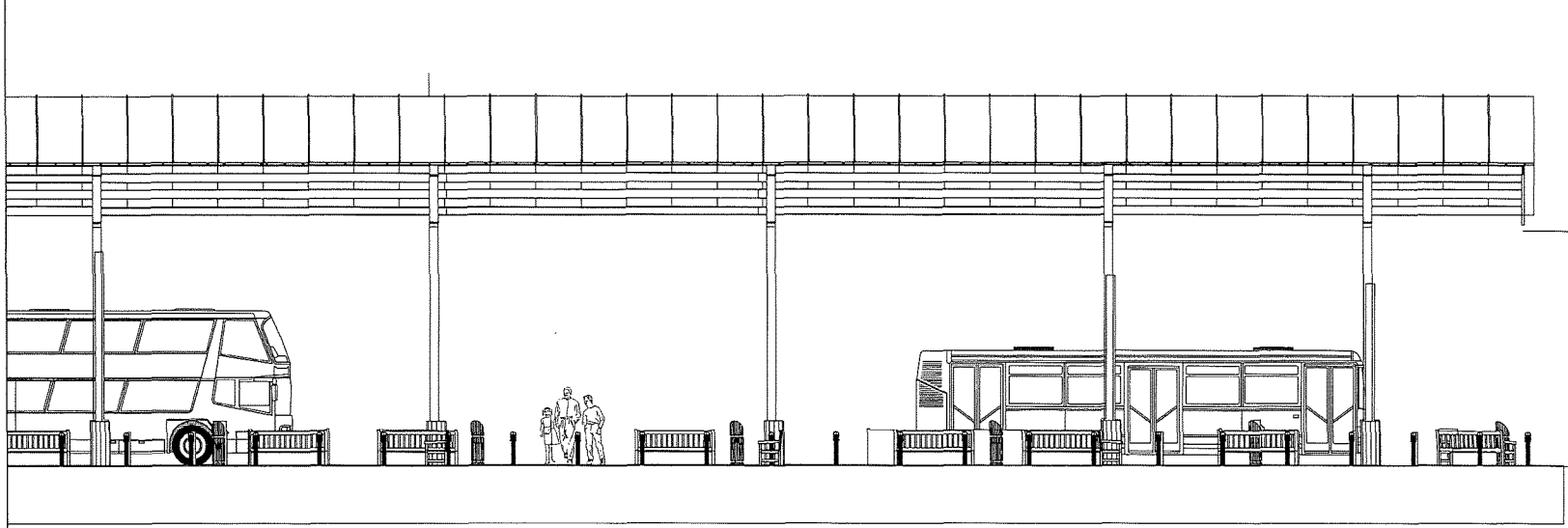
**RIECKE
SUNNLAND
ARCHITECTS, LLC
KONO**
31 EGG AKAKE CT, 2ND
FLOOR, HAWAII, HI 96741
TEL: 808.933.8723

THESE PLANS WERE PREPARED BY THE ARCHITECT OR UNDER HIS SUPERVISION AND TO THE BEST OF HIS KNOWLEDGE AND BELIEF THEY COMPLY WITH ALL CITY, STATE AND FEDERAL REQUIREMENTS.
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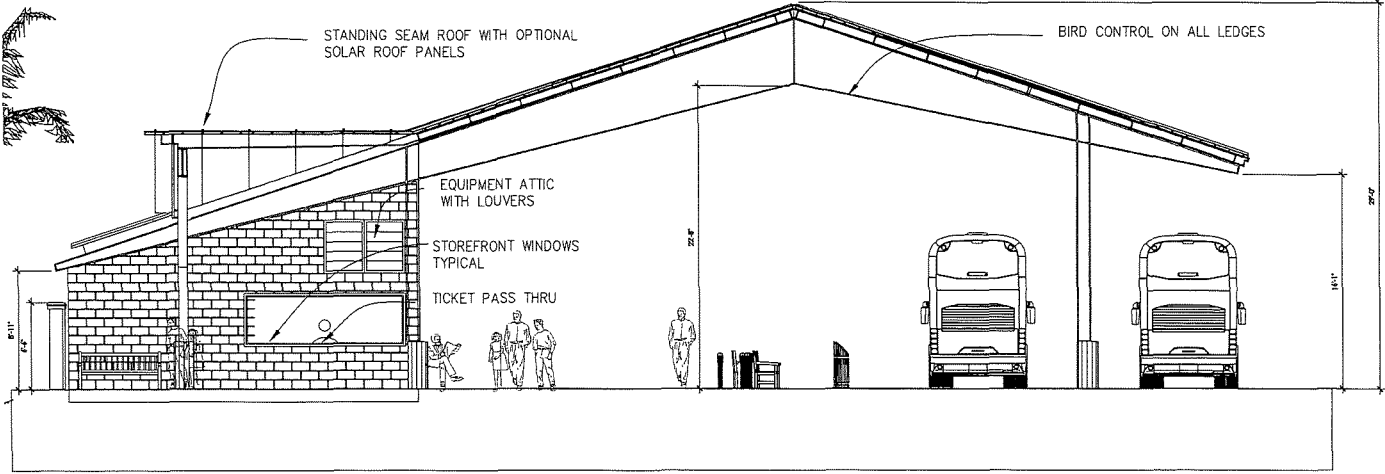
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2018-02-15 CONCEPT PLAN

A-2
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1 SECTION
1/4"=1'-0"



3 SECTION
1/4"=1'-0"

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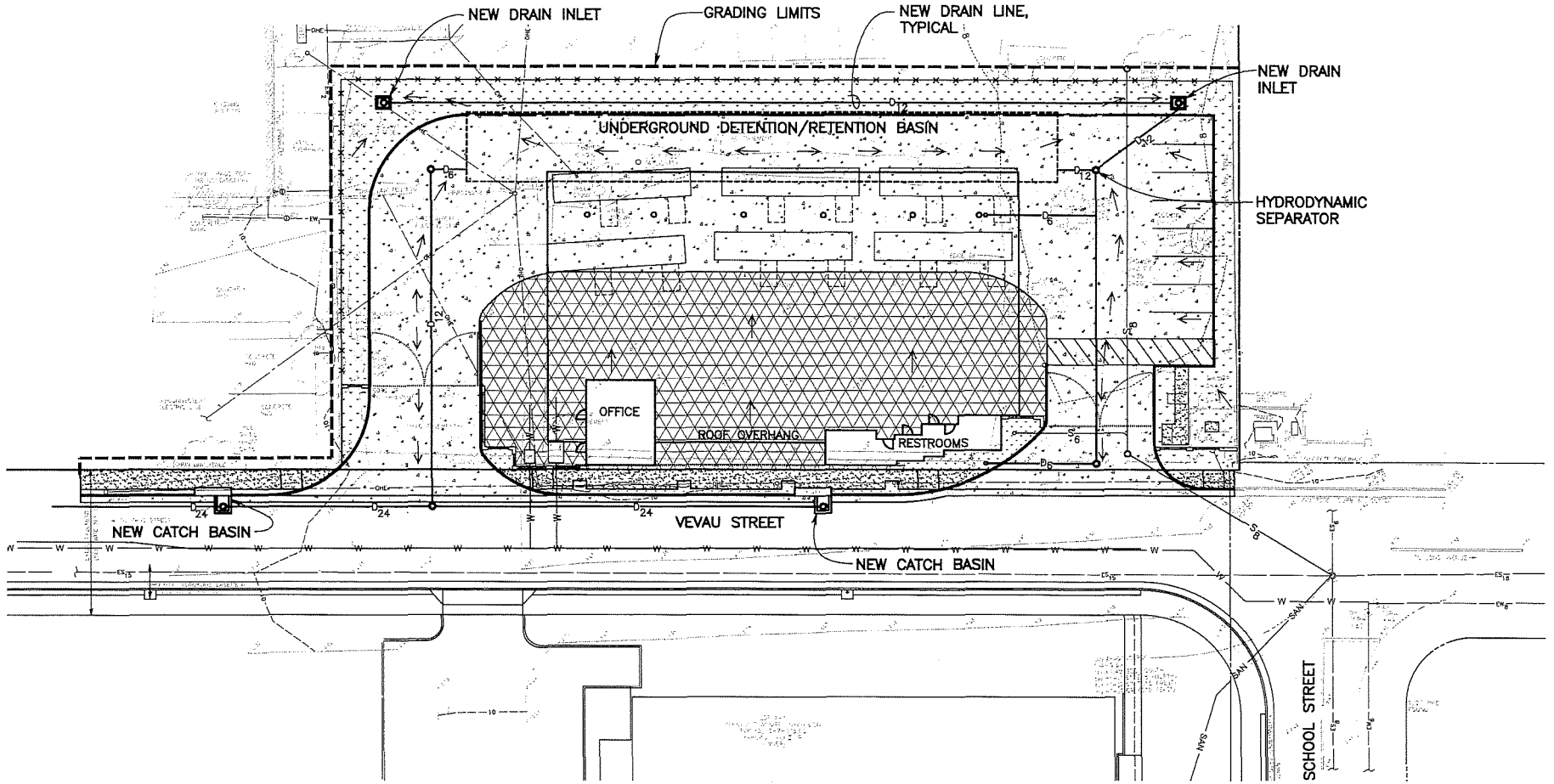
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PRELIMINARY GRADING AND DRAINAGE PLAN

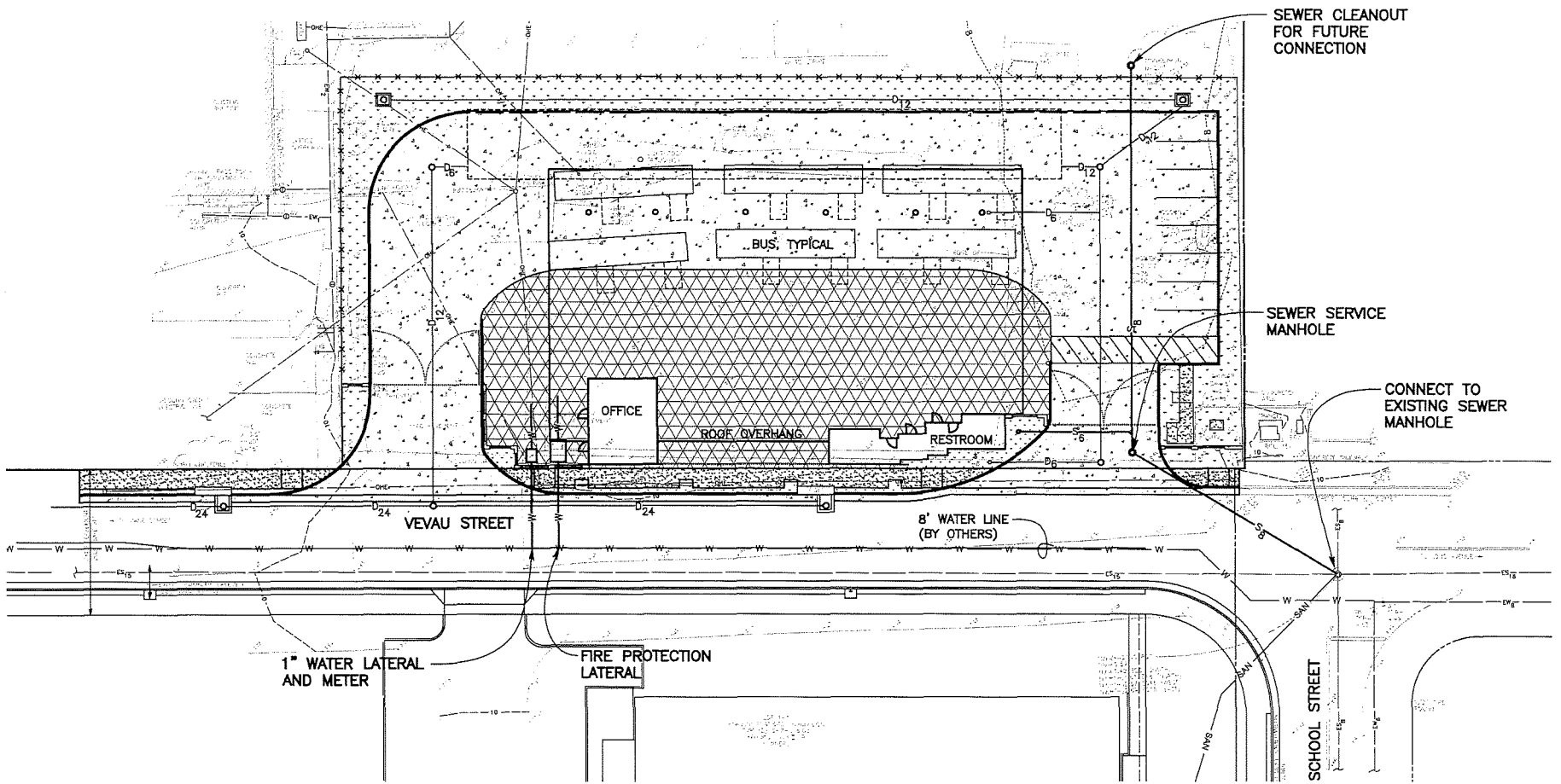
FEBRUARY 19, 2019

SCALE IN FEET



PREPARED FOR: COUNTY OF MAUI, DEPARTMENT OF TRANSPORTATION PREPARED BY: FUKUMOTO ENGINEERING, INC.





PRELIMINARY UTILITIES PLAN
 SCALE IN FEET
 NORTH 0 15 30 60 90

FEBRUARY 19, 2019

PREPARED FOR: COUNTY OF MAUI, DEPARTMENT OF TRANSPORTATION PREPARED BY: FUKUMOTO ENGINEERING, INC.

**TRAFFIC IMPACT
ANALYSIS REPORT**

APPENDIX

E

TRAFFIC IMPACT ANALYSIS REPORT

VEVAU STREET BUS HUB

Kahului, Maui, Hawaii

DRAFT FINAL

April 17, 2019

Prepared for:
Fukumoto Engineering, Inc.
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**TRAFFIC IMPACT ANALYSIS REPORT
VEVAU STREET BUS HUB**

Kahului, Maui, Hawaii

DRAFT FINAL

Prepared for

**Fukumoto Engineering, Inc.
1721 Wili Pa Loop, Suite 203
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April 17, 2019



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- D. LOS WORKSHEETS
- E. MAUI BUS ROUTES MAP & TIMETABLE
- F. SIGNAL WARRANT



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TRAFFIC IMPACT ANALYSIS REPORT

VEVAU STREET BUS HUB

KAHULUI, MAUI, HAWAII

1. INTRODUCTION

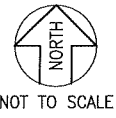
This report documents the findings of a transportation evaluation conducted by Austin, Tsutsumi & Associates, Inc. (ATA) to evaluate the traffic impacts of the proposed relocation of the Maui Bus Transit Hub to Vevau Street (hereinafter referred to as the "Project").

1.1 Location

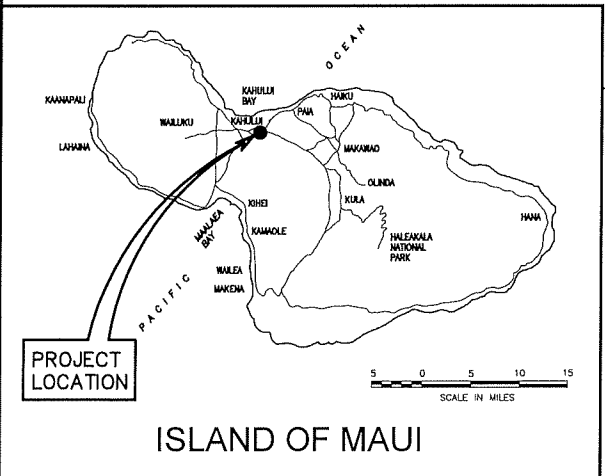
The Project is located in Kahului, east of Queen Kaahumanu Shopping Center and west of Kahului Public Library on the island of Maui. The Project is bound by Vevau Street to the south, The Waterfront Apartments at Kahului to the east, and undeveloped land to the north. Figure 1.1 shows the Project location.

1.2 Project Description

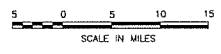
The Project proposes to relocate the Maui Bus Transit hub from its existing location at Queen Kaahumanu Center (QKC) to a portion of land fronting Vevau Street, on the northwest quadrant of the Vevau Street/School Street intersection. The Vevau Street Bus Hub location will provide a canopy for shade, ticket booth, restrooms, storage of six (6) buses and six (6) parking stalls for the transit hub employees. The Project is expected to be completed by the year 2021 and will include a porte cochere access with clockwise circulation. Figure 1.2 shows the Project site plan.



NOT TO SCALE



ISLAND OF MAUI



STUDY INTERSECTIONS

PROJECT SITE

- ① W. KAAHUMANU AVE. & KANE ST. & KAHULUI BEACH RD.
- ② KANE ST. & VEVAU ST.
- ③ VEVAU ST. & SCHOOL ST.
- ④ LONO AVE. & VEVAU ST.
- ⑤ W. KAAHUMANU AVE. & LONO AVE.

VEVAU STREET BUS HUB TIAR

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS HONOLULU, HAWAII

FIGURE
1.1

LOCATION MAP



2. METHODOLOGY

2.1 Study Methodology

This Study will address the following:

1. Assess existing traffic conditions during the weekday AM and PM peak hours of traffic within the study area.
2. Traffic projections for Base Year 2021 (without the project).
3. Estimate vehicular trips generated by the Project.
4. Traffic projections for the Project for Future Year 2021 (with project).
5. Recommend roadway improvements or other mitigative measures, as appropriate, to reduce or eliminate adverse impact(s) on traffic operations.

2.2 Intersection Analysis

Level of Service (LOS) is a qualitative measure used to describe the conditions of traffic flow at intersections, with values ranging from free-flow conditions at LOS A to congested conditions at LOS F. The Highway Capacity Manual (HCM), 6th Edition includes methods for calculating volume to capacity ratios, delays, and corresponding Levels of Service that were utilized in this study. LOS definitions for signalized and unsignalized intersections are provided in Appendix A.

Analyses for the Study Intersections were performed using the traffic analysis software Synchro, which is able to prepare reports based on the methodologies described in the HCM. These reports contain control delay results as based on intersection lane geometry, signal timing, and hourly traffic volumes. Based on the vehicular delay at each intersection, a LOS is assigned to each approach and intersection movement as a qualitative measure of performance. These results, as confirmed or refined by field observations, constitute the technical analysis that will form the basis of the recommendations outlined in this report.



3. EXISTING TRAFFIC CONDITIONS

3.1 Roadway System

The following are brief descriptions of the existing roadways in the vicinity of the Project:

Kaahumanu Avenue – in the vicinity of the Project is generally an east-west, two-way, six-lane (three-lanes in the each direction), divided arterial roadway with a posted speed limit of 30 miles per hour (mph). Kaahumanu Avenue serves as an arterial roadway between Kahului and Wailuku; connecting Hana Highway on the east end and Main Street on the west end. It also serves access to various commercial and industrial businesses.

Kahului Beach Road/Kane Street - is generally a north-south, two-way, three-lane (two-lane in the southbound direction and one-lane in the northbound direction), undivided roadway with a posted speed limit of 20 mph along Kane Street and 35 mph along Kahului Beach Road in the vicinity of the Project. Kahului Beach Road begins north of Kaahumanu Avenue and Kane Street begins south of Kaahumanu Avenue. In the vicinity of the Project, Kane Street provides access to Queen Kaahumanu Center and other small businesses.

Lono Avenue - is generally a north-south, two-way, three-lane (one-lane in each direction with a two-way left-turn lane), undivided roadway with a posted speed limit of 20 mph in the vicinity of the Project. Lono Avenue begins at Kaahumanu Avenue and terminates at Makalii Street on the south end. In the vicinity of the Project, Lono Avenue serves access to various retail spaces. Further south of its intersection with Kamehameha Highway, Lono Avenue provides access to residential areas.

Vevau Street - is generally an east-west, two-way, two-lane, undivided roadway. Vevau Street begins at Kane Street and terminates at Lono Avenue on the east end. Vevau Street provides access to various retail spaces as well as an apartment complex.

School Street - is generally a north-south, two-way, two-lane, undivided roadway. School Street begins at Vevau Street and terminates at Kamehameha Avenue on the south end. School Street provides access to the Kahului Public Library and a church.

3.2 Transportation Demand

The following are brief descriptions of the existing multimodal facilities in the vicinity of the Project:

3.2.1 Pedestrian Accessibility

In the vicinity of the Project, sidewalks are provided along the following roadways:

- Kaahumanu Avenue – Within the vicinity of the Project, there is an approximately 6-foot sidewalk along both sides of the roadway, with the exception of a portion of roadway located west of the Kaahumanu Avenue and Kahului Beach Road/Kane Street intersection, along the westbound direction of the roadway. The sidewalk resumes along Kaahumanu Avenue after its intersection with the Queen Kaahumanu Shopping Center driveway.



- Kane Street – Within the vicinity of the Project, there is an approximately 6-foot sidewalk along the southbound direction of the roadway. This sidewalk provides access and connectivity to the Queen Kaahumanu Shopping Center.
- Vevau Street – Currently, the only portion of Vevau Street containing a sidewalk is the area fronting The Waterfront Apartments at Kahului, which includes an approximate 6-foot sidewalk. According to the Central Maui Pedestrian & Bicycle Master Plan for 2030, Vevau Street in entirety is planned to be a pedestrian linkage roadway. The proposed Kahului Lani Senior Housing development is proposing to construct a continuous sidewalk along its frontage on the southern side of Vevau Street, which will wrap around its frontage along Kane Street and School Street. Kahului Lani Senior Housing development will also construct the sidewalk along the northern side of Vevau Street, ultimately connecting to the Kane Street intersection. Crosswalks are also provided crossing Kane Street, for connectivity between Vevau Street and Queen Kaahumanu Center.
- Lono Avenue – Within the vicinity of the Project, Lono Avenue includes an approximately 5-foot sidewalk along both sides of the roadway. The majority of the sidewalks include an approximate 7-foot landscaped buffer to the roadway.

See Figure 3.1 for the existing and proposed pedestrian and bicycle facilities.

3.2.2 Bicycle Accessibility

In the vicinity of the Project, bicycle lanes were provided along Kaahumanu Avenue on both sides of the roadway. Only a few (2-3) cyclists were observed within the Project area riding alongside vehicles.

See Figure 3.1 for the existing and proposed pedestrian and bicycle facilities.

3.2.3 Public Transit

The Maui Bus Public Transit System provides services to and in between various Central Maui, South Maui, West Maui, Haiku, Kula and Upcountry Maui communities. The main transfer center is currently located at the Queen Kaahumanu Center and provides service for the following bus routes:

- Route 1 – Wailuku Loop
- Route 2 – Wailuku Reverse Loop
- Route 5 - Kahului Loop
- Route 6 - Kahului Reverse Loop
- Route 8 – Waihee Villager
- Route 10 – Kihei Islander
- Route 20 – Lahaina Islander
- Route 35 – Haiku Islander
- Route 39 – Kula Islander
- Route 40 – Upcountry Islander

The Wailuku, Kahului, Kihei and Lahaina routes run every hour, generally from its earliest start time of 5:30AM to 10:00PM. The Waihee Villager and Kula Islander routes runs five (5) routes



every three hours generally from its earliest start time of 7:15AM to 9:00PM. The Haiku and Upcountry Islander routes run every hour and a half, generally from its earliest start time of 5:30AM to 10:30PM. Figure 3.2 illustrates the existing public transit routes and stops near the Project site.

3.3 Existing Traffic Volumes

Manual turning movement traffic counts were conducted at the following Study locations on Saturday, October 13, 2018 and on Tuesday, October 16, 2018.

- Vevau Street and Kane Street intersection (unsignalized)
- Existing Maui Bus Transit Hub facility at QKC

Manual turning movement traffic counts were conducted at the following Study locations in 2017:

- Kaahumanu Avenue/Kahului Beach Road/Kane Street (signalized)
- Kaahumanu Avenue/Lono Avenue (signalized)
- Lono Avenue/Vevau Street (unsignalized)
- Vevau Street/School Street (unsignalized)

It was determined that the weekday AM peak hour of traffic occurs between 7:15 AM and 8:15 AM, the PM peak hour of traffic occurs between 4:00 PM and 5:00 PM. Traffic counts are provided in Appendix B.

3.4 Existing Observations and Analysis

Generally, traffic was observed to be relatively light and free-flowing along Vevau Street throughout the peak hours of traffic. The roadways surrounding the Project area also seemed to be generally free-flowing during the AM and PM peak hours of traffic; some queuing occurred at the approaches to the signalized intersections of Kaahumanu Avenue/Kahului Beach Road/Kane Street and Kaahumanu Avenue/Lono Avenue but generally cleared within one signal cycle length.

The Maui Bus buses were observed to abide by the bus schedule, arriving and departing on-time. The existing QKC transit hub provides covered bench seating, which are only sometimes used by riders; most bus riders were observed standing while waiting for the bus.

According to the Maui Bus ridership data from July 2018, the weekday average boardings at the existing transit hub at QKC was 92(125) during the AM(PM) peak hour. Average Saturday boardings were slightly higher than the weekdays' at 96(145) during the AM(PM) peak.

Speed data was collected over a 24 hour period along Kane Street near its intersection with Vevau Street. The average speed along this section was 22 miles per hour (mph) and the 85th percentile speed was 28 mph. See Appendix C for the full speed study results.



Kaahumanu Avenue/Kahului Beach Road/Kane Street is a signalized cross intersection with higher volumes traveling along the eastbound and westbound direction as well as the southbound left-turn (from Kahului Beach Road) and westbound right-turn (to Kahului Beach Road). The westbound right-turn is a channelized right-turn into its own lane.

Since the southbound left-turn movement operates with a relatively high vehicular volume (approximately 900 vehicles per hour) during the AM and PM peak hours of traffic, the movement is provided with a lengthy green time. The intersection also operates on a coordinated timing plan, which requires the intersection to run on a fixed cycle length, favoring mainline through traffic along Kaahumanu Avenue. As a result, some various mainline left-turn movements and the Kane Street approach operate at LOS E/F. Observations, performed over multiple days, indicate the westbound approach queues back to Lono Avenue with the majority of the vehicles clearing within one signal cycle, while the eastbound queues during the PM peak hour of traffic queued at varying lengths from a 5-car length queue to queues that spilled back to or beyond the Queen Kaahumanu Center signalized access.

The existing northbound right-turn movement on Kane Street serves a relatively low right-turn volume of only 3(31) vehicles during the AM(PM) peak hours of traffic, resulting in adequate LOS A conditions. Based on observations, northbound through vehicles along Kane Street queued on average between 2-5 vehicles long with occasional maximums of 8 vehicles. Mostly all right-turn vehicles were able to merge into the northbound right-turn lane unimpeded by northbound through queues, so the right-turn lane is adequate given existing usage.

Kaahumanu Avenue/Lono Avenue is a signalized cross intersection with higher volumes traveling along the eastbound and westbound directions. The north leg of the intersection is the entrance to Maui Seaside Hotel and secondary access to Maui Beach Hotel. During both the AM and PM peak hours of traffic, the eastbound left-turn and westbound left-turn operates at LOS E due to signal coordination and low vehicular volumes between 10 to 50 vehicles.

Kane Street/Vevau Street is an unsignalized cross intersection with the eastbound and westbound approaches as the stop-controlled approach. The eastbound leg provides access to Queen Kaahumanu Shopping Center. The intersection operates at LOS D or better during the AM and PM peak hours of traffic.

Vevau Street/School Street is an unsignalized T- intersection with the northbound (School Street) approach as the stem of the "T" and the stop-controlled approach. The intersection operates at LOS A or better during the AM and PM peak hours of traffic.

Lono Avenue/Vevau Street is an unsignalized cross intersection with the eastbound and westbound approaches as the stop-controlled approach. The westbound leg is one of four access points to Kahului Shopping Center. The intersection operates at LOS B or better during the AM and PM peak hours of traffic.

Existing traffic volumes, lane configuration, and movement LOS are illustrated in Figure 3.3. Table 3.1 shows a summary of the existing delay, v/c ratio, and LOS for the study intersections. LOS worksheets are provided in Appendix D.



3.5 Traffic Signal Warrant

The Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD) provides nine (9) different warrants to determine if a traffic signal is warranted at an intersection. The applicable warrants for the Kane Street and Vevau Street Intersection are Warrants 1 and 2.

Warrant 1 – Eight-Hour Vehicular Volume: requires that certain volume thresholds for the total of both major street approaches and the higher volume minor street approach be satisfied for any eight hours of a typical day.

- *Condition A - The Minimum Vehicular Volume:* is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.
- *Condition B - The Interruption of Continuous Traffic:* is intended for application at locations where the traffic volume on a major street is so heavy that traffic on a minor intersection street suffers excessive delay or conflict in entering or crossing the major street.

Note: If Condition A is satisfied, then Warrant 1 is satisfied and analyses of Condition B and the combination of Conditions A and B are not needed. Similarly, if Condition B is satisfied, then Warrant 1 is satisfied and an analysis of the combination of Conditions A and B is not needed.









Warrant 2 – Four-Hour Vehicular Volume: requires that the total of both major street approaches and the higher volume minor street approach volumes when graphed exceed a graphed threshold. Warrant 2 is intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

Based on the above descriptions and the existing traffic data, the Kane Street and Vevau Street intersection **does not meet a traffic signal warrant** based upon Warrant 1 (Eight- Hour Vehicular Volume) and Warrant 2 (Four-Hour Vehicular Volume) based on weekday traffic conditions. The traffic signal warrant analysis is included in Appendix F.

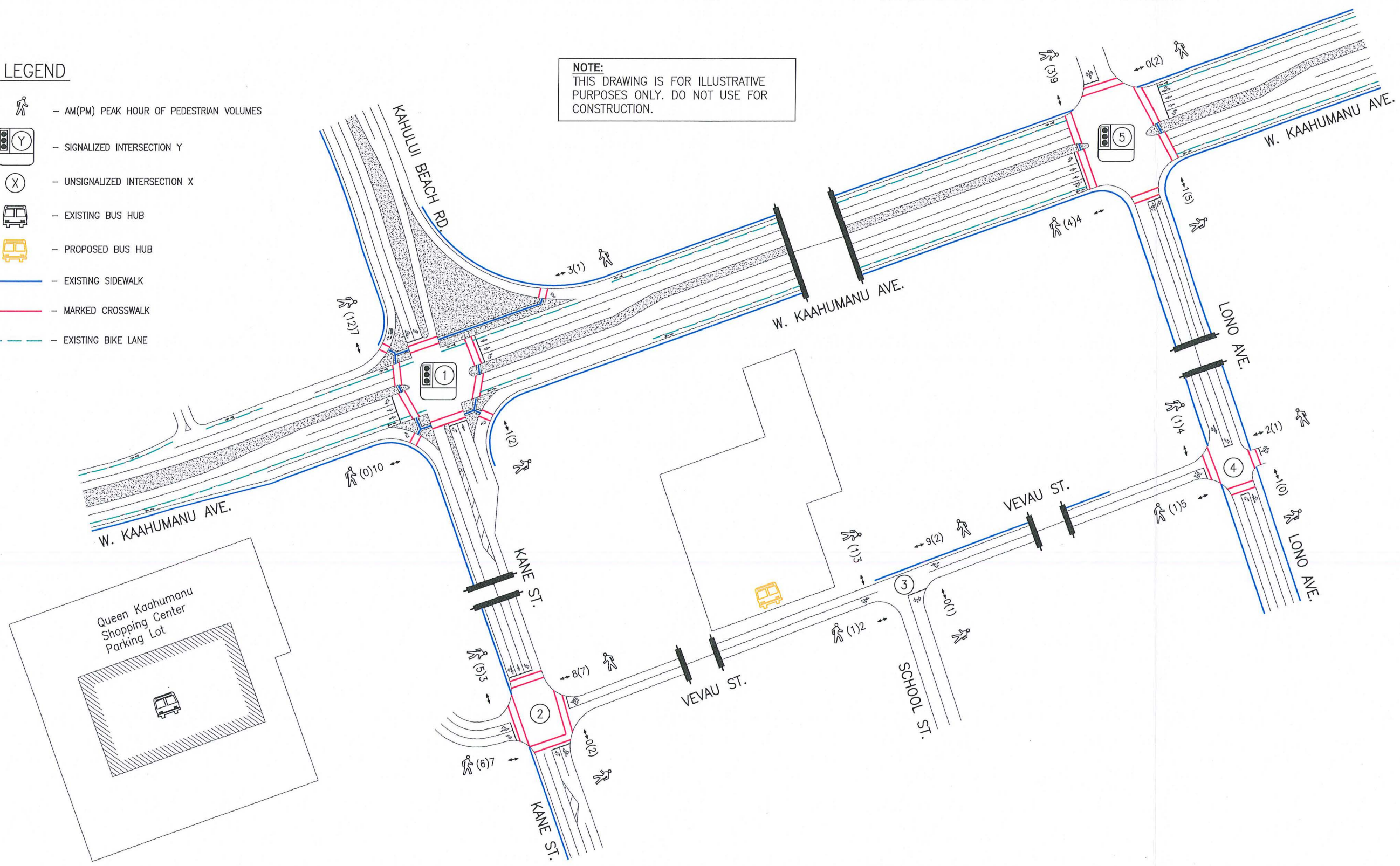


NOT TO SCALE

LEGEND

-  - AM(PM) PEAK HOUR OF PEDESTRIAN VOLUMES
-  - SIGNALIZED INTERSECTION Y
-  - UNSIGNALIZED INTERSECTION X
-  - EXISTING BUS HUB
-  - PROPOSED BUS HUB
-  - EXISTING SIDEWALK
-  - MARKED CROSSWALK
-  - EXISTING BIKE LANE

NOTE:
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VEVAU STREET BUS HUB TIAR

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, HAWAII

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

FIGURE

3.1

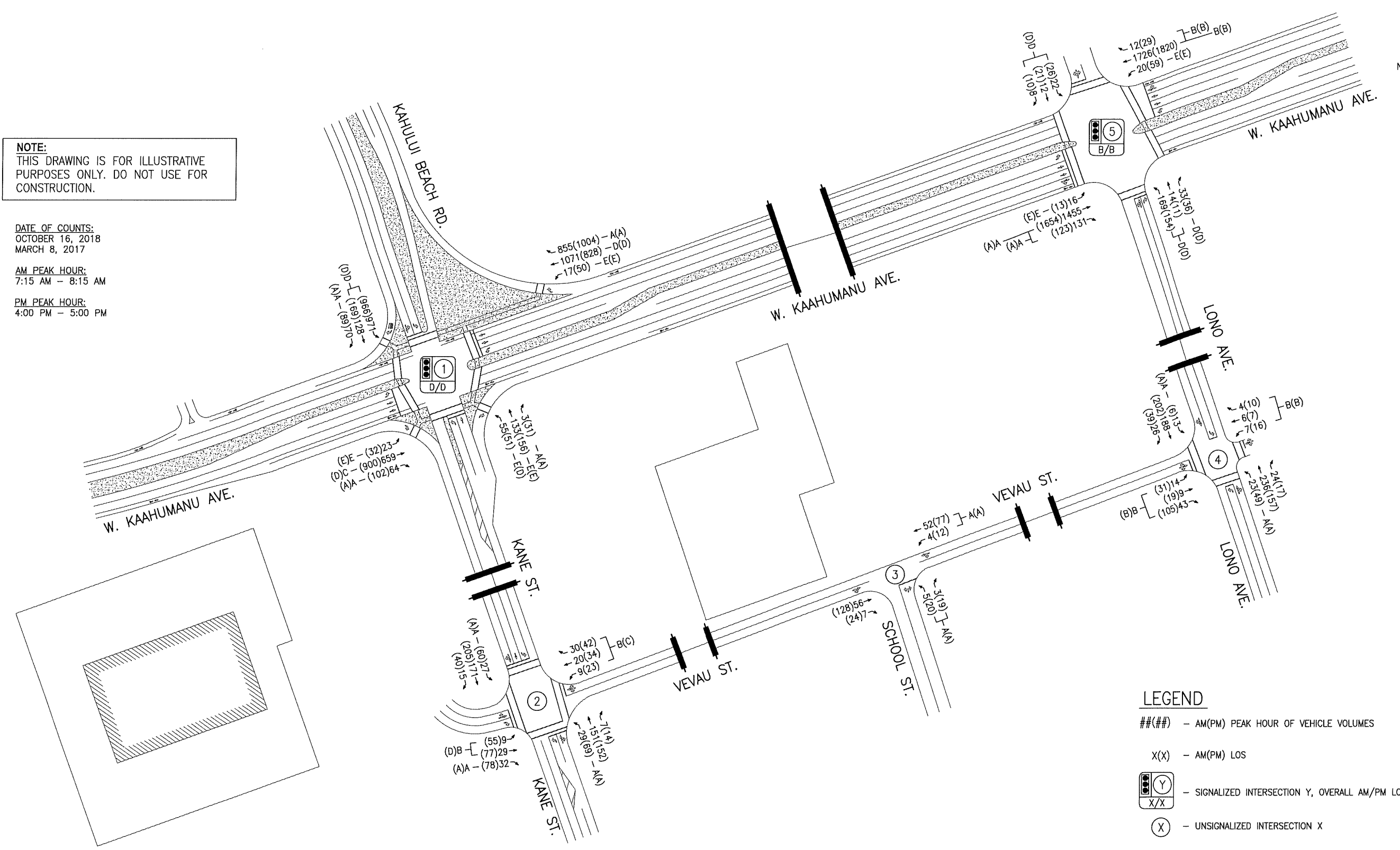


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DATE OF COUNTS:
OCTOBER 16, 2018
MARCH 8, 2017

AM PEAK HOUR:
7:15 AM - 8:15 AM

PM PEAK HOUR:
4:00 PM - 5:00 PM



- LEGEND**
- ##(##) - AM(PM) PEAK HOUR OF VEHICLE VOLUMES
 - X(X) - AM(PM) LOS
 - Y - SIGNALIZED INTERSECTION Y, OVERALL AM/PM LOS
 - X - UNSIGNALIZED INTERSECTION X

VEVAU STREET BUS HUB TIAR

ATA AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS HONOLULU, HAWAII

EXISTING LANEAGE, VOLUMES AND LOS

FIGURE
3.3

Table 3.1 - Existing Conditions Level of Service Summary

Intersection	Existing Conditions					
	AM			PM		
	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS
1: Kane Street/Kahului Beach Road & Kaahumanu Ave						
NB LT	56.1	0.35	E	54.1	0.28	D
NB TH	65.7	0.80	E	68.6	0.83	E
NB RT	0.0	0.00	A	0.0	0.00	A
EB LT	77.0	0.61	E	80.0	0.71	E
EB TH	31.0	0.51	C	41.8	0.77	D
EB RT	0.0	0.00	A	0.0	0.00	A
WB LT	74.8	0.55	E	76.7	0.77	E
WB TH	41.0	0.84	D	52.4	0.69	D
WB RT	0.0	0.00	A	0.0	0.00	A
SB LT	50.4	0.92	D	50.7	0.93	D
SB RT	0.0	0.00	A	0.0	0.00	A
Overall	44.0	-	D	50.2	-	D
2: Kane Street & Vevau Street						
NB LT	7.7	0.02	A	7.9	0.06	A
EB LT/TH	13.9	0.09	B	29.0	0.50	D
EB RT	9.0	0.04	A	9.5	0.10	A
WB LT/TH/RT	11.6	0.11	B	16.9	0.26	C
SB LT	7.6	0.02	A	7.7	0.05	A
Overall	3.7	-	-	8.5	-	-
3: School Street & Vevau Street						
NB LT/RT	9.0	0.01	A	9.8	0.05	A
WB LT/TH	7.4	0.00	A	7.6	0.01	A
Overall	0.8	-	-	1.7	-	-
4: Lono Street & Vevau Street						
NB LT	7.7	0.02	A	7.9	0.04	A
EB LT/TH/RT	11.7	0.12	B	13.0	0.27	B
WB LT/TH/RT	13.5	0.04	B	14.3	0.09	B
SB LT	7.8	0.01	A	7.6	0.01	A
Overall	2.1	-	-	4.4	-	-
5: Lono Street & Kaahumanu Ave						
NB LT/TH	53.0	0.70	D	51.7	0.68	D
NB RT	40.7	0.10	D	39.7	0.11	D
EB LT	70.9	0.54	E	67.2	0.51	E
EB TH	0.5	0.51	A	6.1	0.60	A
EB TH/RT	1.0	0.51	A	6.4	0.60	A
WB LT	76.7	0.59	E	76.0	0.78	E
WB TH	12.7	0.54	B	13.9	0.59	B
WB TH/RT	13.5	0.54	B	14.9	0.59	B
SB LT/TH/RT	50.9	0.41	D	50.9	0.49	D
Overall	10.9	-	B	14.0	-	B



4. BASE YEAR 2021 TRAFFIC CONDITIONS

The Year 2021 was selected to reflect the Project completion year. The Base Year 2021 scenario represents the traffic conditions within the study area without the Project. Traffic projections were formulated by applying a defector growth rate to existing 2018 traffic count volumes as well as trips generated by known developments in the vicinity of the Project.

4.1 Defacto Growth Rate

Projections for Base Year 2021 traffic were based upon existing traffic counts performed by ATA, assumed Maui Regional Travel Demand Model (MRTDM) ambient growth, and nearby developments in the immediate vicinity of the Project. The resulting growth was approximately 0.7 percent per year along Kaahumanu Avenue, 3.5 percent along Lono Avenue and 3.5 percent along Kane Street. These growth percentages were applied to the existing traffic volumes.

4.2 Traffic Forecasts for Known Developments

By year 2021, the following development shown in Figure 4.1 and Table 4.1 is assumed to be constructed:

- **Kahului Lani Senior Housing** – This project proposed to construct 164 senior rental units, 1 managers unit, approximately 2,500 square feet of recreational space and 5,000 square feet of office type space for Catholic Charities of Hawaii and park space. The project’s TIAR estimated completion date is in the year 2019.

Table 4.1- Total Trips Generated by Known Developments in Project Vicinity

Known Development	Land Use	Units	AM Peak Hour			AM Peak Hour		
			Enter	Exit	Total	Enter	Exit	Total
Kahului Lani Senior Housing	Senior Adult Housing	165 DU	11	21	32	23	15	38
	Single Tenant Office Building	5,000 SF	28	3	31	6	37	43
TOTAL			39	24	63	29	52	81

4.3 Planned Roadway Projects

The proposed Kahului Lani Senior Housing development is proposing to construct a continuous sidewalk along its frontage on the southern side of Vevau Street, which will wrap around its frontage along Kane Street and School Street. Kahului Lani Senior Housing development will also construct the sidewalk along the northern side of Vevau Street, ultimately connecting to the Kane Street intersection.

No other improvements are planned for the study roadways within the vicinity of the Project according to the State of Hawaii, Department of Transportation (HDOT) Statewide Transportation Improvement Program (STIP).



NOT TO SCALE

P A C I F I C O C E A N



LEGEND



PROJECT SITE



KAHULUI LANI SENIOR HOUSING

VEVAU STREET BUS HUB TIAR



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FIGURE

BACKGROUND PROJECTS

4.1



4.4 Base Year 2021 Analysis

By year 2021, the majority of intersections are anticipated to operate similar to existing conditions, due to no major anticipated traffic increases in the area. The following study intersections are anticipated to experience a higher LOS than existing conditions:

Kaahumanu Avenue/Kahului Beach Road/Kane Street intersection will operate similar to existing conditions, with various mainline left-turn and minor street approaches operating at LOS E/F conditions during the AM and PM peak hours of traffic.

Kaahumanu Avenue/Lono Avenue intersection will operate similar to existing conditions, with various mainline left-turn and minor street approaches operating at LOS E/F conditions during the AM and PM peak hours of traffic.

Kane Street/Vevau Street intersection eastbound left-turn/through movement is anticipated to operate at LOS C during the AM peak hour of traffic and LOS F during the PM peak hour of traffic. The westbound shared movement is anticipated to operate at LOS D in the PM peak hour.

Vevau Street/School Street intersection northbound left-turn/right-turn operates at LOS B during the PM peak hour of traffic.

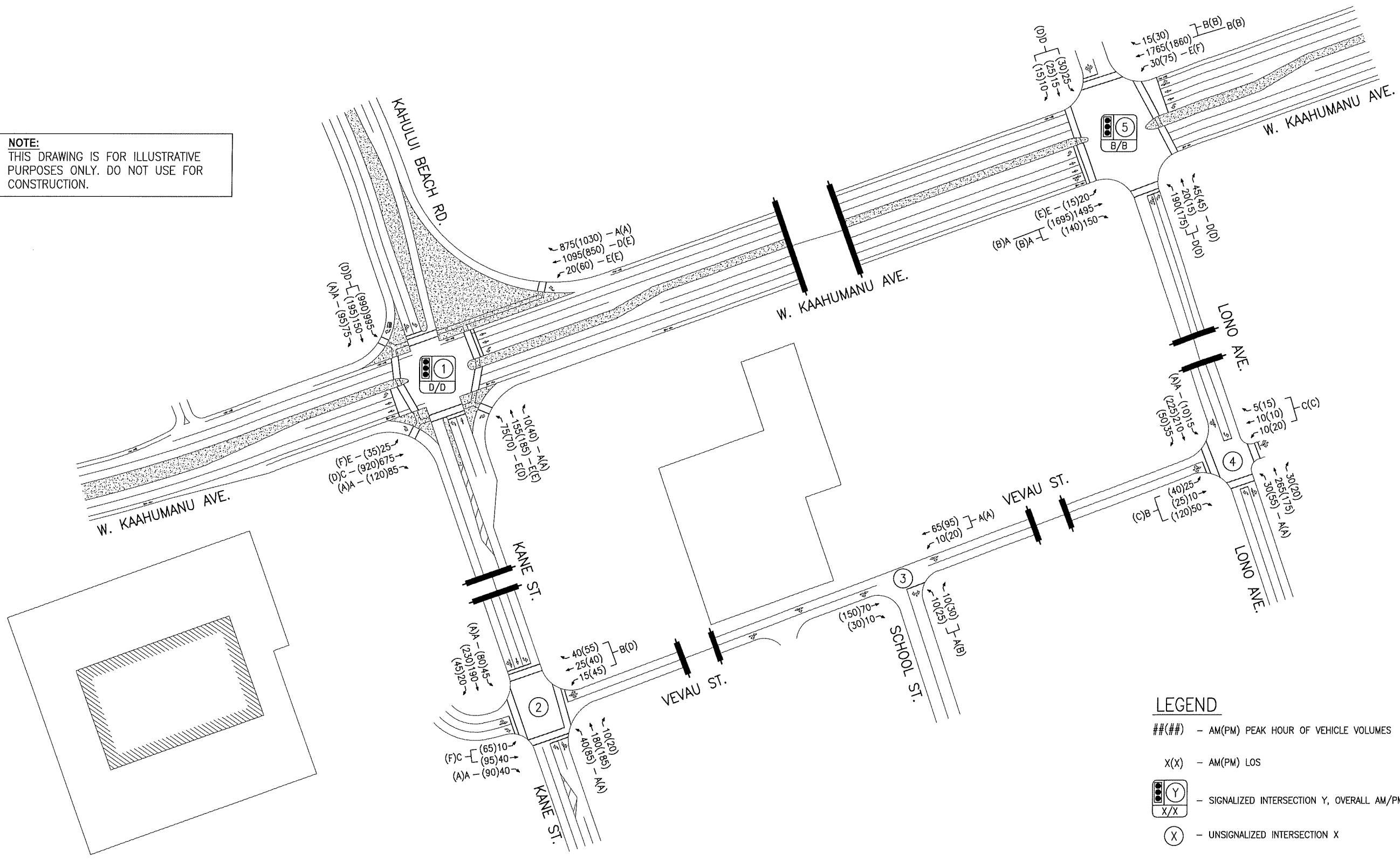
Vevau Street/Lono Street intersection will operate similar to existing conditions, with the eastbound and westbound shared approaches operating at LOS B/C during the AM and PM peak hours of traffic.

Projected traffic volumes, lane configuration and movement LOS are illustrated in Figure 4.2. Table 4.2 summarizes the Base Year 2021 LOS at the study intersections compared to existing conditions. LOS worksheets are provided in Appendix D.



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LEGEND

- ##(##) - AM(PM) PEAK HOUR OF VEHICLE VOLUMES
- X(X) - AM(PM) LOS
- SIGNALIZED INTERSECTION Y, OVERALL AM/PM LOS
- UNSIGNALIZED INTERSECTION X

VEVAU STREET BUS HUB TIAR

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BASE YEAR 2021 LANEAGE, VOLUMES AND LOS

FIGURE

4.2

Table 4.2 - BY 2021 Conditions Level of Service Summary

Intersection	Existing Conditions						BY 2021 Conditions					
	AM			PM			AM			PM		
	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS
1: Kane Street/Kahului Beach Road & Kaahumanu Ave												
NB LT	56.1	0.35	E	54.1	0.28	D	55.6	0.42	E	52.8	0.34	D
NB TH	65.7	0.80	E	68.6	0.83	E	68.7	0.83	E	73.7	0.86	E
NB RT	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A
EB LT	77.0	0.61	E	80.0	0.71	E	77.3	0.63	E	81.6	0.74	F
EB TH	31.0	0.51	C	41.8	0.77	D	34.2	0.56	C	51.1	0.88	D
EB RT	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A
WB LT	74.8	0.55	E	76.7	0.77	E	74.0	0.59	E	74.3	0.77	E
WB TH	41.0	0.84	D	52.4	0.69	D	48.1	0.91	D	56.3	0.76	E
WB RT	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A
SB LT	50.4	0.92	D	50.7	0.93	D	51.0	0.93	D	51.6	0.94	D
SB RT	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A
Overall	44.0	-	D	50.2	-	D	47.7	-	D	54.7	-	D
2: Kane Street & Vevau Street												
NB LT	7.7	0.02	A	7.9	0.06	A	7.8	0.03	A	8.1	0.07	A
EB LT/TH	13.9	0.09	B	29.0	0.50	D	16.5	0.15	C	66.2	0.80	F
EB RT	9.0	0.04	A	9.5	0.10	A	9.1	0.05	A	9.7	0.11	A
WB LT/TH/RT	11.6	0.11	B	16.9	0.26	C	13.3	0.17	B	30.7	0.53	D
SB LT	7.6	0.02	A	7.7	0.05	A	7.7	0.04	A	7.9	0.07	A
Overall	3.7	-	-	8.5	-	-	4.5	-	-	16.5	-	-
3: School Street & Vevau Street												
NB LT/RT	9.0	0.01	A	9.8	0.05	A	9.2	0.03	A	10.2	0.08	B
WB LT/TH	7.4	0.00	A	7.6	0.01	A	7.4	0.01	A	7.7	0.02	A
Overall	0.8	-	-	1.7	-	-	1.5	-	-	2.0	-	-
4: Lono Street & Vevau Street												
NB LT	7.7	0.02	A	7.9	0.04	A	7.8	0.03	A	8.0	0.05	A
EB LT/TH/RT	11.7	0.12	B	13.0	0.27	B	13.2	0.18	B	15.1	0.36	C
WB LT/TH/RT	13.5	0.04	B	14.3	0.09	B	15.1	0.07	C	16.0	0.13	C
SB LT	7.8	0.01	A	7.6	0.01	A	7.9	0.01	A	7.7	0.01	A
Overall	2.1	-	-	4.4	-	-	2.7	-	-	5.3	-	-
5: Lono Street & Kaahumanu Ave												
NB LT/TH	53.0	0.70	D	51.7	0.68	D	53.1	0.73	D	51.5	0.70	D
NB RT	40.7	0.10	D	39.7	0.11	D	37.1	0.12	D	35.6	0.11	D
EB LT	70.9	0.54	E	67.2	0.51	E	69.3	0.59	E	64.9	0.53	E
EB TH	0.5	0.51	A	6.1	0.60	A	0.6	0.56	A	10.3	0.68	B
EB TH/RT	1.0	0.51	A	6.4	0.60	A	1.1	0.56	A	10.6	0.68	B
WB LT	76.7	0.59	E	76.0	0.78	E	79.1	0.69	E	83.3	0.80	F
WB TH	12.7	0.54	B	13.9	0.59	B	16.3	0.59	B	18.0	0.64	B
WB TH/RT	13.5	0.54	B	14.9	0.59	B	17.3	0.60	B	19.3	0.64	B
SB LT/TH/RT	50.9	0.41	D	50.9	0.49	D	49.6	0.46	D	50.3	0.55	D
Overall	10.9	-	B	14.0	-	B	13.2	-	B	18.5	-	B



5. FUTURE YEAR 2021 TRAFFIC CONDITIONS

The Future Year 2021 scenario represents the traffic conditions within the Project study area with the full build-out of the Project. According to the current Project Plan, this will occur by Year 2021.

5.1 Background

As previously mentioned in Section 1.2, The Project proposes to relocate the Maui Bus Transit hub from its existing location at Queen Kaahumanu Center (QKC) to a portion of land fronting Vevau Street, on the northwest quadrant of the Vevau Street/School Street intersection. The Vevau Street Bus Hub location will provide a canopy for shade, ticket booth, restrooms, storage of six (6) buses and six (6) parking stalls for the transit hub employees.

The Project will include a porte cochere access with clockwise circulation. Buses accessing the Project will enter from the west driveway and exit through the east driveway. Vehicles accessing the employee stalls will enter and exit through the east driveway only.

5.2 Travel Demand Estimations

5.2.1 Trip Generation

Project trips were derived from operations at the existing transit hub at QKC, as well as an estimated trip generation of the six (6) employee parking stalls on the new Project site. According to the Maui Bus Schedule and confirmed through observations, 9 buses enter/exit the transit hub during the AM peak hour, and 12 buses enter/exit the transit hub during the PM peak hour of traffic. See Appendix E for the Maui Bus Schedule.

It was conservatively estimated that the six (6) employee parking stalls would generate 6 vehicles entering/exiting the Project site during the AM and PM peak hours of traffic. Depending on when the employee shift changes occur, this number is likely an overestimate of actual conditions.

See Table 5.1 for the combined total project generated trips.

Table 5.1: Total Project Generated Trips

Land Use	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Employee Parking Stalls	6	6	12	6	6	12
Existing buses at QKC	9	9	18	12	12	24
TOTAL	15	15	30	18	18	36

5.2.2 Trip Distribution

Trips generated by the Project were assigned throughout the study area based upon existing travel patterns and likely bus reroutes due to the relocated transit hub. The traffic generated by the Project was added to the forecast Base Year 2021 traffic volumes within the vicinity of the Project to constitute the traffic volumes for the Future Year 2021 traffic conditions. Figure 5.1 illustrates the Project-generated trip distribution.



5.3 Future Year 2021 Analysis

Upon completion of the Project, all movements at the study intersections are forecast to operate with the same LOS as Base Year 2021 conditions. Various mainline left-turn and minor street approaches at the Kaahumanu Avenue/Kahului Beach Road/Kane Street and Kaahumanu Avenue/Lono Street intersections will continue to operate at LOS E/F conditions due to signal coordination. The Project is only adding between 3-6 vehicles to the northbound left-turn and northbound through lanes along Kane Street at its intersection with Kaahumanu Avenue. This translates to only an additional vehicle every 10 to 20 minutes. As a result, northbound traffic should continue operating adequately and similar to existing conditions given its current laneage. All movement delays at these intersections will experience minimal increases of zero to two seconds, with no direct volume increases to the more critical mainline through movements along Kaahumanu Avenue.

All proposed access intersections will operate at LOS B or better during the AM and PM peak hours of traffic.

Figure 5.2 illustrates the Future Year 2021 forecast traffic volumes and LOS for the study intersection movements. Table 5.4 summarizes the Future Year 2021 LOS at the study intersections compared to Base Year 2021 conditions. LOS worksheets are provided in Appendix D.

5.3.1 Left-Turn Lane Guidance

The American Association of State Highway and Transportation Officials, A Policy on Geometric Design of Highways and Streets, 2011 (hereinafter referred to as “2011 AASHTO Green Book”) provides guidelines for the design and recommendation of left-turn lanes at intersections. The recommendation for an exclusive left-turn lane is based on the following parameters:

- Operating Speed, mph;
- Advancing Volume, V_a , vph, vehicular volume approaching intersection from the same direction as the left-turn movement under consideration (includes left-turn volume);
- Opposing Volume, V_o , vph, vehicular volume opposing the advancing volume;
- Percent Left-turns, % LT, percentage of advancing volume turning left.

Table 9-23 of the 2011 AASHTO Green Book provides thresholds for the parameters discussed above for operating speeds of 40, 50 and 60 mph. Vevau Street has a posted speed limit of 25 mph and an assumed operating speed of 25. Advancing Volume thresholds for the operating speed of 25 mph were developed by extrapolating the volumes given for operating speeds of 40 and 50 mph. Additionally, values for specific Opposing Volume and Percent Left-turns were extrapolated from given volumes.

Based on an operating speed of 25 mph, a left-turn lane is not anticipated to be warranted along Vevau Street into the Project site based on Future Year 2021 conditions.

See Tables 5.2 and 5.3 below for the Left-Turn Lane parameters and recommendations and extrapolated values from the AASHTO Green Book.



Table 5.2: Left-Turn Lane Parameters and Recommendations at 25 mph

Future Year 2021 Projected Traffic Volumes						
AM Peak Hour			PM Peak Hour			
Vevau Street/Project Access Eastbound Left-Turn						
	Volumes	Threshold ¹	Left-Turn Recommended?	Volumes	Threshold ¹	Left-Turn Recommended?
V _O (vph)	95	--	--	145	--	--
% LT	5%	--	--	3%	--	--
V _a (vph)	105	883	NO	205	924	NO

1. Threshold values are calculated as shown in Table 5.3.

Table 5.3: AASHTO Green Book Extrapolated Volumes at 25 mph

Scenario	OPPOSING VOLUME (VPH)	Left-turns				
		3%	5%	10%	20%	30%
25-MPH OPERATING SPEED ¹						
	800	453	405	285	203	198
	600	563	500	343	270	245
	400	694	630	470	328	298
	200	855	775	575	425	358
PM EB LT	145	924				
	100	981	878	620	473	408
AM EB LT	95		883			
40-MPH OPERATING SPEED ²						
	800		330	240	180	160
	600		410	305	225	200
	400		510	380	275	245
	200		640	470	350	305
	100		720	515	390	340
50-MPH OPERATING SPEED ²						
	800		280	210	165	135
	600		350	280	195	170
	400		430	320	240	210
	200		550	400	300	270
	100		615	445	335	295

Notes:

1. Advancing volumes were extrapolated from the 40-mph and 50-mph volumes.
2. Advancing volumes were obtained from the 2011 AASHTO Green Book.



5.3.2 Traffic Signal Warrant

The Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD) provides nine (9) different warrants to determine if a traffic signal is warranted at an intersection in the year 2021. The applicable warrant for the Kane Street and Vevau Street Intersection is Warrant 2.

Based on the descriptions listed in Section 3.5 and the projected 2021 traffic data, the Kane Street and Vevau Street intersection **does not meet a traffic signal warrant** based upon Warrant 2 (Four-Hour Vehicular Volume) based on projected 2021 traffic conditions. The traffic signal warrant analysis is included in Appendix F.



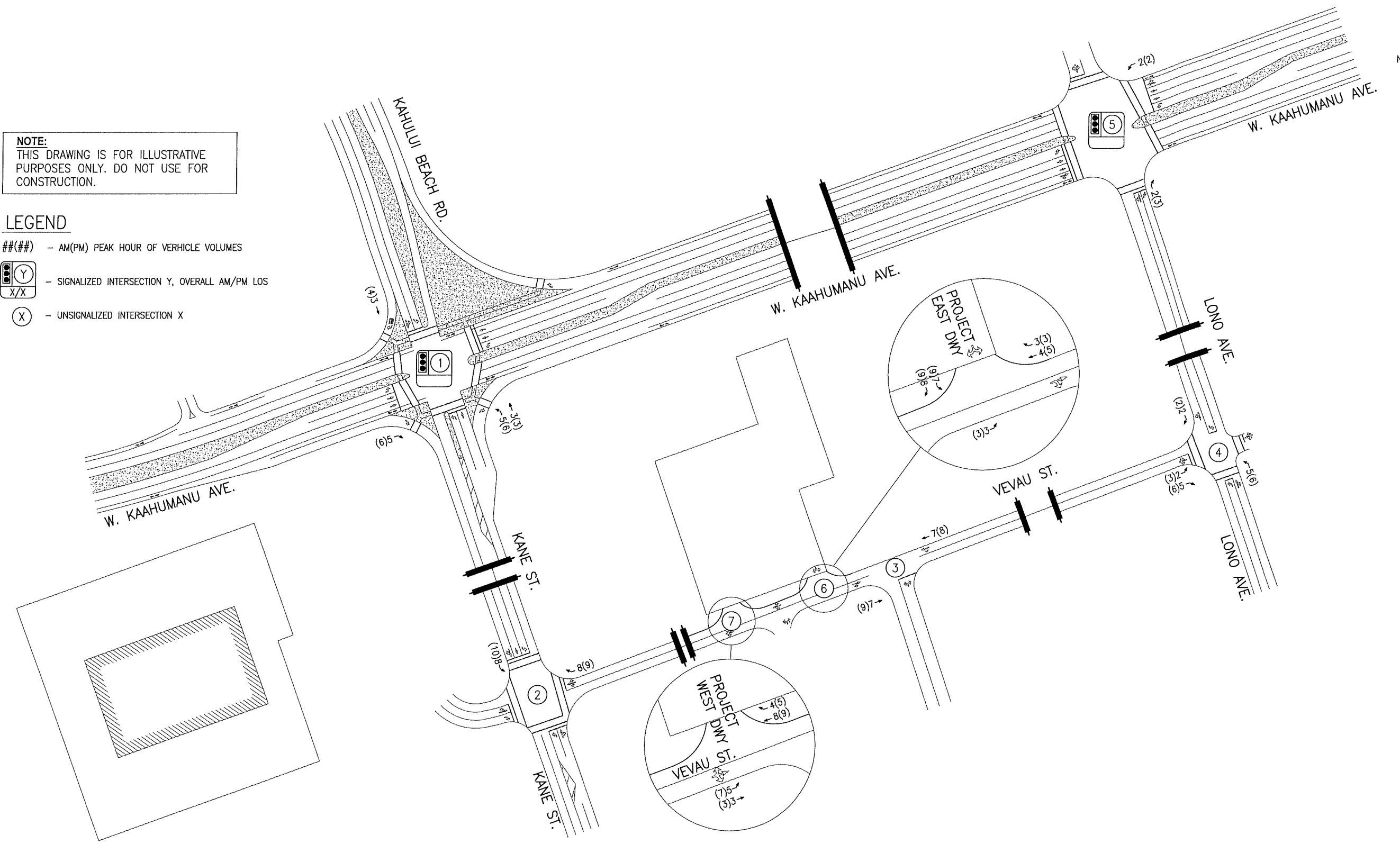
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LEGEND

##(##) - AM(PM) PEAK HOUR OF VEHICLE VOLUMES

 - SIGNALIZED INTERSECTION Y, OVERALL AM/PM LOS

 - UNSIGNALIZED INTERSECTION X



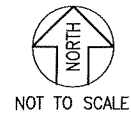
VEVAU STREET BUS HUB TIAR

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PROJECT-GENERATED TRIPS



FIGURE

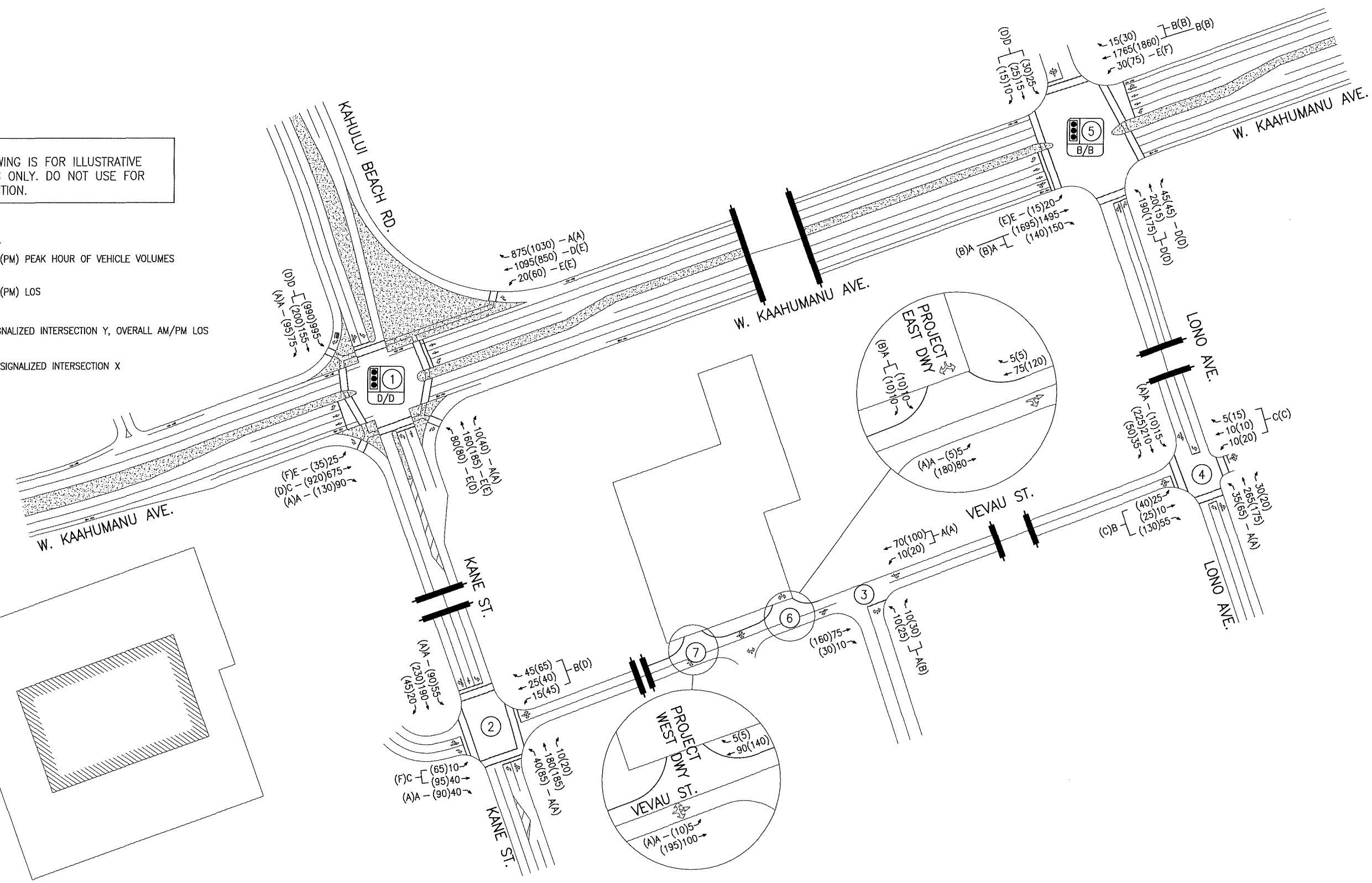
5.1



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LEGEND

- ##(##) - AM(PM) PEAK HOUR OF VEHICLE VOLUMES
- X(X) - AM(PM) LOS
-  - SIGNALIZED INTERSECTION Y, OVERALL AM/PM LOS
-  - UNSIGNALIZED INTERSECTION X



VEVAU STREET BUS HUB TIAR

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FUTURE YEAR 2021 LANEAGE, VOLUMES AND LOS

FIGURE

5.2

Table 5.4 - FY 2021 Conditions Level of Service Summary

Intersection	Existing Conditions						BY 2021 Conditions						FY 2021 Conditions					
	AM			PM			AM			PM			AM			PM		
	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS
1: Kane Street/Kahului Beach Road & Kaahumanu Ave																		
NB LT	56.1	0.35	E	54.1	0.28	D	55.6	0.42	E	52.8	0.34	D	55.6	0.45	E	53.6	0.41	D
NB TH	65.7	0.80	E	68.6	0.83	E	68.7	0.83	E	73.7	0.86	E	69.9	0.83	E	74.0	0.86	E
NB RT	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A
EB LT	77.0	0.61	E	80.0	0.71	E	77.3	0.63	E	81.6	0.74	F	77.3	0.63	E	81.6	0.74	F
EB TH	31.0	0.51	C	41.8	0.77	D	34.2	0.56	C	51.1	0.88	D	34.7	0.56	C	51.7	0.88	D
EB RT	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A
WB LT	74.8	0.55	E	76.7	0.77	E	74.0	0.59	E	74.3	0.77	E	74.0	0.59	E	74.3	0.77	E
WB TH	41.0	0.84	D	52.4	0.69	D	48.1	0.91	D	56.3	0.76	E	49.8	0.92	D	56.5	0.77	E
WB RT	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A
SB LT	50.4	0.92	D	50.7	0.93	D	51.0	0.93	D	51.6	0.94	D	51.0	0.93	D	51.7	0.94	D
SB RT	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A
Overall	44.0	-	D	50.2	-	D	47.7	-	D	54.7	-	D	48.5	-	D	55.0	-	D
2: Kane Street & Vevau Street																		
NB LT	7.7	0.02	A	7.9	0.06	A	7.8	0.03	A	8.1	0.07	A	7.8	0.03	A	8.1	0.07	A
EB LT/TH	13.9	0.09	B	29.0	0.50	D	16.5	0.15	C	66.2	0.80	F	17.1	0.16	C	77.1	0.85	F
EB RT	9.0	0.04	A	9.5	0.10	A	9.1	0.05	A	9.7	0.11	A	9.1	0.05	A	9.7	0.11	A
WB LT/TH/RT	11.6	0.11	B	16.9	0.26	C	13.3	0.17	B	30.7	0.53	D	13.6	0.18	B	32.8	0.57	D
SB LT	7.6	0.02	A	7.7	0.05	A	7.7	0.04	A	7.9	0.07	A	7.9	0.05	A	8.0	0.08	A
Overall	3.7	-	-	8.5	-	-	4.5	-	-	16.5	-	-	4.7	-	-	18.5	-	-
3: School Street & Vevau Street																		
NB LT/RT	9.0	0.01	A	9.8	0.05	A	9.2	0.03	A	10.2	0.08	B	9.2	0.03	A	10.3	0.08	B
WB LT/TH	7.4	0.00	A	7.6	0.01	A	7.4	0.01	A	7.7	0.02	A	7.4	0.01	A	7.7	0.02	A
Overall	2.1	-	-	4.4	-	-	1.5	-	-	2.0	-	-	1.4	-	-	2.0	-	-
4: Lono Street & Vevau Street																		
NB LT	7.7	0.02	A	7.9	0.04	A	7.8	0.03	A	8.0	0.05	A	8.0	0.03	A	8.1	0.06	A
EB LT/TH/RT	11.7	0.12	B	13.0	0.27	B	13.2	0.18	B	15.1	0.36	C	13.4	0.19	B	15.7	0.39	C
WB LT/TH/RT	13.5	0.04	B	14.3	0.09	B	15.1	0.07	C	16.0	0.13	C	15.4	0.07	C	16.7	0.14	C
SB LT	7.8	0.01	A	7.6	0.01	A	7.9	0.01	A	7.7	0.01	A	7.9	0.01	A	7.7	0.01	A
Overall	2.1	-	-	4.4	-	-	2.7	-	-	5.3	-	-	2.8	-	-	5.6	-	-
5: Lono Street & Kaahumanu Ave																		
NB LT/TH	53.0	0.70	D	51.7	0.68	D	53.1	0.73	D	51.5	0.70	D	53.1	0.73	D	51.5	0.70	D
NB RT	40.7	0.10	D	39.7	0.11	D	37.1	0.12	D	35.6	0.11	D	37.1	0.12	D	35.7	0.12	D
EB LT	70.9	0.54	E	67.2	0.51	E	69.3	0.59	E	64.9	0.53	E	69.3	0.59	E	64.6	0.53	E
EB TH	0.5	0.51	A	6.1	0.60	A	0.6	0.56	A	10.3	0.68	B	0.6	0.57	A	10.3	0.68	B
EB TH/RT	1.0	0.51	A	6.4	0.60	A	1.1	0.56	A	10.6	0.68	B	1.2	0.57	A	10.6	0.68	B
WB LT	76.7	0.59	E	76.0	0.78	E	79.1	0.69	E	83.3	0.80	F	71.9	0.60	E	84.4	0.80	F
WB TH	12.7	0.54	B	13.9	0.59	B	16.3	0.59	B	18.0	0.64	B	16.3	0.59	B	18.0	0.64	B
WB TH/RT	13.5	0.54	B	14.9	0.59	B	17.3	0.60	B	19.3	0.64	B	17.3	0.60	B	19.3	0.64	B
SB LT/TH/RT	50.9	0.41	D	50.9	0.49	D	49.6	0.46	D	50.3	0.55	D	49.6	0.46	D	50.3	0.55	D
Overall	10.9	-	B	14.0	-	B	13.2	-	B	18.5	-	B	13.2	-	B	18.5	-	B
6: Vevau Street & East Project Dwy																		
EB LT	-	-	-	-	-	-	-	-	-	-	-	-	7.4	0.00	A	7.5	0.00	A
SB LT/RT	-	-	-	-	-	-	-	-	-	-	-	-	9.7	0.03	A	10.8	0.03	B
Overall	-	-	-	-	-	-	-	-	-	-	-	-	1.3	-	-	0.8	-	-
7: Vevau Street & West Project Dwy																		
EB LT	-	-	-	-	-	-	-	-	-	-	-	-	8.4	0.01	A	8.6	0.01	A
Overall	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	0.2	-	-



6. CONCLUSIONS

The County's existing Maui Bus Transit hub is currently leasing space on the Wailuku side of the Queen Kaahumanu Center (QKC). The transit hub is planning to relocate to a portion of land on 153 W. Kaahumanu Avenue fronting Vevau Street, on the northwest quadrant of the Vevau Street/School Street intersection.

6.1 Existing Conditions

Kaahumanu Avenue/Kahului Beach Road/Kane Street is a signalized cross intersection with higher volumes traveling along the eastbound and westbound direction as well as the southbound left-turn (from Kahului Beach Road) and westbound right-turn (to Kahului Beach Road). The westbound right-turn is a channelized right-turn into its own lane.

Since the southbound left-turn movement operates with a relatively high vehicular volume (approximately 900 vehicles per hour) during the AM and PM peak hours of traffic, the movement is provided with a lengthy green time. The intersection also operates on a coordinated timing plan, which requires the intersection to run on a fixed cycle length, favoring mainline through traffic along Kaahumanu Avenue. As a result, some various mainline left-turn movements and the Kane Street approach operate at LOS E/F. Observations, performed over multiple days, indicate the westbound approach queues back to Lono Avenue with the majority of the vehicles clearing within one signal cycle, while the eastbound queues during the PM peak hour of traffic queued at varying lengths from a 5-car length queue to queues that spilled back to or beyond the Queen Kaahumanu Center signalized access.

The existing northbound right-turn movement on Kane Street serves a relatively low right-turn volume of only 3(31) vehicles during the AM(PM) peak hours of traffic, resulting in adequate LOS A conditions. Based on observations, northbound through vehicles along Kane Street queued on average between 2-5 vehicles long with occasional maximums of 8 vehicles. Mostly all right-turn vehicles were able to merge into the northbound right-turn lane unimpeded by northbound through queues, so the right-turn lane is adequate given existing usage.

Kaahumanu Avenue/Lono Avenue is a signalized cross intersection with higher volumes traveling along the eastbound and westbound directions. The north leg of the intersection is the entrance to Maui Seaside Hotel and secondary access to Maui Beach Hotel. During both the AM and PM peak hours of traffic, the eastbound left-turn and westbound left-turn operates at LOS E due to signal coordination and low vehicular volumes between 10 to 50 vehicles.

Kane Street/Vevau Street is an unsignalized cross intersection with the eastbound and westbound approaches as the stop-controlled approach. The eastbound leg provides access to Queen Kaahumanu Shopping Center. The intersection operates at LOS D or better during the AM and PM peak hours of traffic.

Vevau Street/School Street is an unsignalized T- intersection with the northbound (School Street) approach as the stem of the "T" and the stop-controlled approach. The intersection operates at LOS A or better during the AM and PM peak hours of traffic.

Lono Avenue/Vevau Street is an unsignalized cross intersection with the eastbound and westbound approaches as the stop-controlled approach. The westbound leg is one of four access points to Kahului Shopping Center. The intersection operates at LOS B or better during the AM and PM peak hours of traffic.



The Kane Street and Vevau Street intersection does not meet a traffic signal warrant based upon Warrant 1 (Eight- Hour Vehicular Volume) and Warrant 2 (Four-Hour Vehicular Volume) based on weekday traffic conditions.

6.2 Base Year 2021

By year 2021, the majority of intersections are anticipated to operate similar to existing conditions, due to no major anticipated traffic increases in the area. The following study intersections are anticipated to experience a higher LOS than existing conditions:

Kaahumanu Avenue/Kahului Beach Road/Kane Street intersection will operate similar to existing conditions, with various mainline left-turn and minor street approaches operating at LOS E/F conditions during the AM and PM peak hours of traffic.

Kaahumanu Avenue/Lono Avenue intersection will operate similar to existing conditions, with various mainline left-turn and minor street approaches operating at LOS E/F conditions during the AM and PM peak hours of traffic.

Kane Street/Vevau Street intersection eastbound left-turn/through movement is anticipated to operate at LOS C during the AM peak hour of traffic and LOS F during the PM peak hour of traffic. The westbound shared movement is anticipated to operate at LOS D in the PM peak hour.

6.3 Future Year 2021

Upon completion of the Project, all movements at the study intersections are forecast to operate with the same LOS as Base Year 2021 conditions. Various mainline left-turn and minor street approaches at the Kaahumanu Avenue/Kahului Beach Road/Kane Street and Kaahumanu Avenue/Lono Street intersections will continue to operate at LOS E/F conditions due to signal coordination. The Project is only adding between 3-6 vehicles to the northbound left-turn and northbound through lanes along Kane Street at its intersection with Kaahumanu Avenue. This translates to only an additional vehicle every 10 to 20 minutes. As a result, northbound traffic should continue operating adequately and similar to existing conditions given its current laneage. All movement delays at these intersections will experience minimal increases of zero to two seconds, with no direct volume increases to the more critical mainline through movements along Kaahumanu Avenue. At the remaining study intersections, all movements will continue to operate with the same LOS, with minimal delay increases from Base Year 2021 conditions.

All proposed access intersections will operate at LOS B or better during the AM and PM peak hours of traffic

Based on an operating speed of 25 mph, a left-turn lane is not anticipated to be warranted along Vevau Street. Note that the recommendation is based on estimations of Future Year 2021 volumes along Vevau Street and accessing the Project.

Based on the descriptions listed in Section 3.5 and the projected 2021 traffic data, the Kane Street and Vevau Street intersection does not meet a traffic signal warrant based upon Warrant 2 (Four-Hour Vehicular Volume) based on projected 2021 traffic conditions.



7. REFERENCES

1. Austin, Tsutsumi and Associates, Inc., Traffic Impact Analysis Report Kahului Affordable Senior Housing, 2017.
2. County of Maui, <https://www.mauicounty.gov/605/Bus-Service-Information>, 2018.
3. Transportation Research Board, Highway Capacity Manual, 6th Edition, 2016.
4. Federal Highway Administration, Manual on Uniform Traffic Control Devices (MUTCD), 2009.



APPENDICES



APPENDIX A

LEVEL OF SERVICE CRITERIA

APPENDIX A – LEVEL OF SERVICE (LOS) CRITERIA

VEHICULAR LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS (HCM 6th EDITION)

Level of service for vehicles at signalized intersections is directly related to delay values and is assigned on that basis. Level of Service is a measure of the acceptability of delay values to motorists at a given intersection. The criteria are given in the table below.

Level-of Service Criteria for Signalized Intersections

Level of Service	Control Delay per Vehicle (sec./veh.)
A	< 10.0
B	>10.0 and ≤ 20.0
C	>20.0 and ≤ 35.0
D	>35.0 and ≤ 55.0
E	>55.0 and ≤ 80.0
F	> 80.0

Delay is a complex measure, and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group or approach in question.

VEHICULAR LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS (HCM 6th EDITION)

The level of service criteria for vehicles at unsignalized intersections is defined as the average control delay, in seconds per vehicle.

LOS delay threshold values are lower for two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections than those of signalized intersections. This is because more vehicles pass through signalized intersections, and therefore, drivers expect and tolerate greater delays. While the criteria for level of service for TWSC and AWSC intersections are the same, procedures to calculate the average total delay may differ.

Level of Service Criteria for Two-Way Stop-Controlled Intersections

Level of Service	Average Control Delay (sec/veh)
A	≤ 10
B	>10 and ≤15
C	>15 and ≤25
D	>25 and ≤35
E	>35 and ≤50
F	> 50



APPENDIX B

TRAFFIC COUNT DATA

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File Name : AM_Kahului Beach Road_Kane St - Kaahumanu Ave

Site Code : 00000000

Start Date : 3/8/2017

Page No : 1

Groups Printed- Unshifted

Start Time	KAAHUMANU AVE Eastbound				KAAHUMANU AVE Westbound				KANE ST Northbound				KAHULUI BEACH RD Southbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
06:45 AM	11	166	17	6	4	165	123	1	5	19	0	0	212	28	9	3	769
Total	11	166	17	6	4	165	123	1	5	19	0	0	212	28	9	3	769
07:00 AM	4	152	9	1	4	191	171	1	5	19	2	2	237	23	17	0	838
07:15 AM	3	167	17	2	5	244	190	1	10	28	1	0	246	28	26	0	968
07:30 AM	9	169	12	1	2	277	218	0	11	30	0	4	253	34	14	1	1035
07:45 AM	5	163	26	0	5	291	229	0	9	18	0	2	254	32	16	2	1052
Total	21	651	64	4	16	1003	808	2	35	95	3	8	990	117	73	3	3893
08:00 AM	6	160	9	4	5	259	218	0	6	21	1	4	218	34	14	0	959
08:15 AM	17	118	5	0	8	213	170	0	8	23	6	0	239	28	20	0	855
08:30 AM	9	150	1	0	13	198	241	0	5	16	10	0	202	15	23	0	883
Grand Total	64	1245	96	14	46	1838	1560	3	59	174	20	12	1861	222	139	6	7359
Apprch %	4.5	87.7	6.8	1	1.3	53.3	45.3	0.1	22.3	65.7	7.5	4.5	83.5	10	6.2	0.3	
Total %	0.9	16.9	1.3	0.2	0.6	25	21.2	0	0.8	2.4	0.3	0.2	25.3	3	1.9	0.1	

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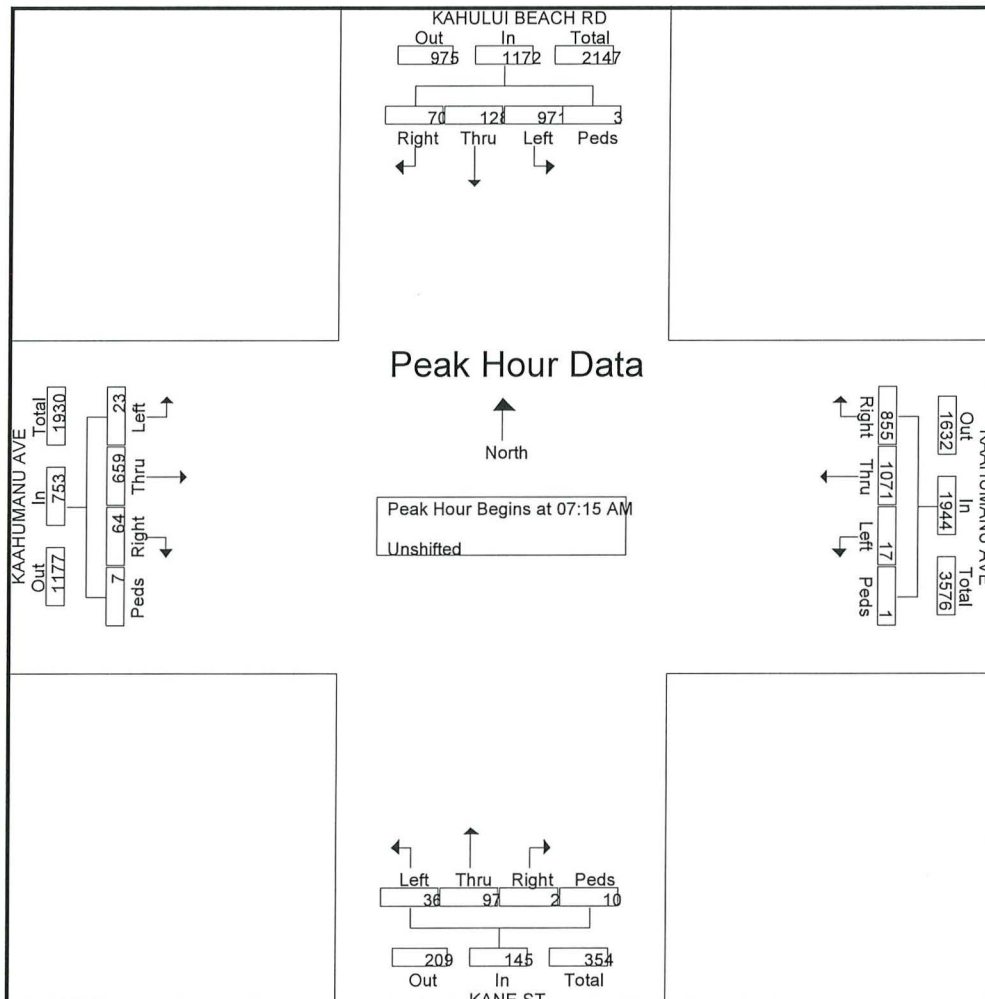
File Name : AM_Kahului Beach Road_Kane St - Kaahumanu Ave

Site Code : 00000000

Start Date : 3/8/2017

Page No : 2

Start Time	KAAHUMANU AVE Eastbound					KAAHUMANU AVE Westbound					KANE ST Northbound					KAHULUI BEACH RD Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:45 AM to 08:30 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	3	167	17	2	189	5	244	190	1	440	10	28	1	0	39	246	28	26	0	300	968
07:30 AM	9	169	12	1	191	2	277	218	0	497	11	30	0	4	45	253	34	14	1	302	1035
07:45 AM	5	163	26	0	194	5	291	229	0	525	9	18	0	2	29	254	32	16	2	304	1052
08:00 AM	6	160	9	4	179	5	259	218	0	482	6	21	1	4	32	218	34	14	0	266	959
Total Volume	23	659	64	7	753	17	1071	855	1	1944	36	97	2	10	145	971	128	70	3	1172	4014
% App. Total	3.1	87.5	8.5	0.9		0.9	55.1	44	0.1		24.8	66.9	1.4	6.9		82.8	10.9	6	0.3		
PHF	.639	.975	.615	.438	.970	.850	.920	.933	.250	.926	.818	.808	.500	.625	.806	.956	.941	.673	.375	.964	.954



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Site Code : 00000000

Start Date : 3/8/2017

Page No : 1

Groups Printed- Unshifted

Start Time	KAAHUMANU AVE Eastbound				KAAHUMANU AVE Westbound				KANE ST Northbound				KAHULUI BEACH RD Southbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
03:15 PM	9	210	29	1	14	202	191	0	16	24	3	0	190	38	30	0	957
03:30 PM	14	202	25	4	13	209	221	0	7	31	6	0	217	48	18	0	1015
03:45 PM	9	220	28	4	12	190	180	0	9	29	3	0	221	25	29	0	959
Total	32	632	82	9	39	601	592	0	32	84	12	0	628	111	77	0	2931
04:00 PM	6	242	20	1	11	219	242	0	10	24	5	0	231	45	22	0	1078
04:15 PM	10	223	30	3	10	173	229	1	4	31	5	0	239	51	22	0	1031
04:30 PM	9	196	22	8	15	192	245	1	13	34	2	0	245	35	21	1	1039
04:45 PM	7	239	30	0	14	244	288	0	9	33	12	0	251	38	24	0	1189
Total	32	900	102	12	50	828	1004	2	36	122	24	0	966	169	89	1	4337
05:00 PM	6	177	29	0	15	222	279	0	6	35	10	0	228	42	22	0	1071
Grand Total	70	1709	213	21	104	1651	1875	2	74	241	46	0	1822	322	188	1	8339
Apprch %	3.5	84.9	10.6	1	2.9	45.5	51.6	0.1	20.5	66.8	12.7	0	78.1	13.8	8.1	0	
Total %	0.8	20.5	2.6	0.3	1.2	19.8	22.5	0	0.9	2.9	0.6	0	21.8	3.9	2.3	0	

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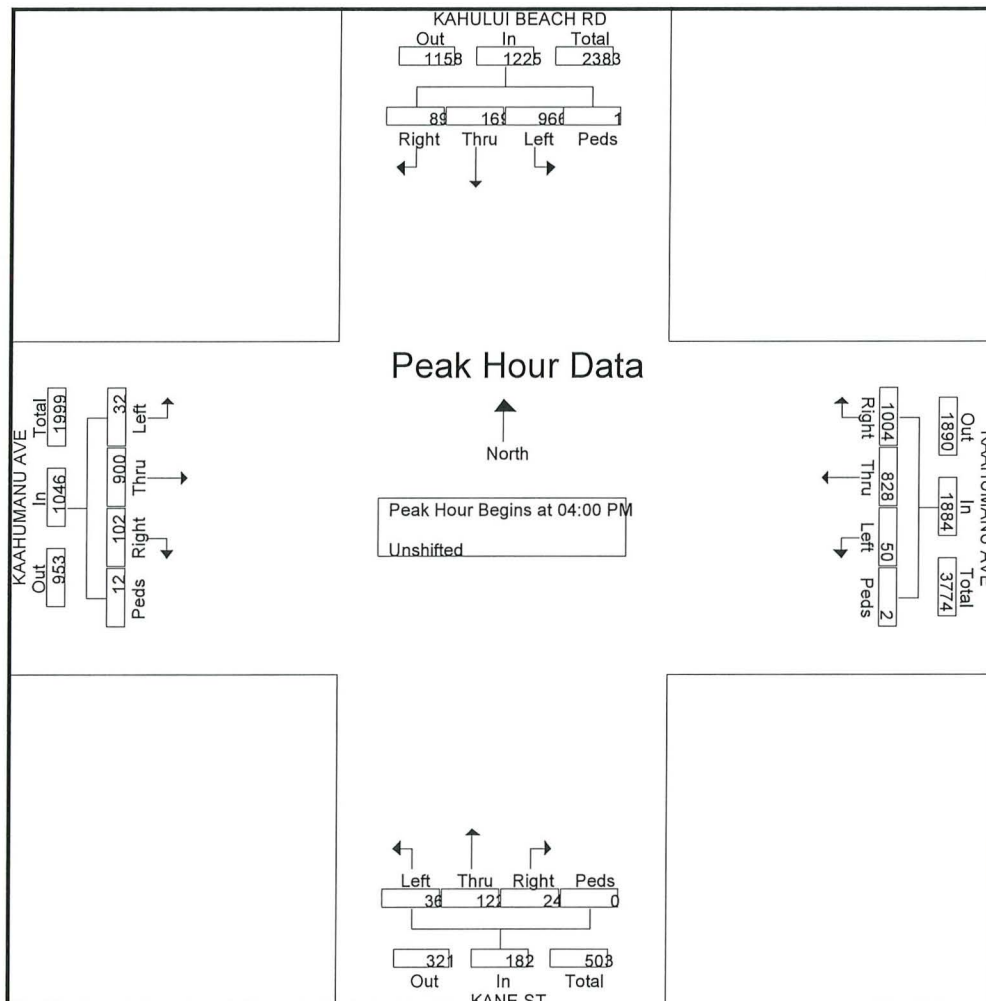
File Name : PM_Kahului Beach Road_Kane St - Kaahumanu Ave

Site Code : 00000000

Start Date : 3/8/2017

Page No : 2

Start Time	KAAHUMANU AVE Eastbound					KAAHUMANU AVE Westbound					KANE ST Northbound					KAHULUI BEACH RD Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 03:15 PM to 05:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	6	242	20	1	269	11	219	242	0	472	10	24	5	0	39	231	45	22	0	298	1078
04:15 PM	10	223	30	3	266	10	173	229	1	413	4	31	5	0	40	239	51	22	0	312	1031
04:30 PM	9	196	22	8	235	15	192	245	1	453	13	34	2	0	49	245	35	21	1	302	1039
04:45 PM	7	239	30	0	276	14	244	288	0	546	9	33	12	0	54	251	38	24	0	313	1189
Total Volume	32	900	102	12	1046	50	828	1004	2	1884	36	122	24	0	182	966	169	89	1	1225	4337
% App. Total	3.1	86	9.8	1.1		2.7	43.9	53.3	0.1		19.8	67	13.2	0		78.9	13.8	7.3	0.1		
PHF	.800	.930	.850	.375	.947	.833	.848	.872	.500	.863	.692	.897	.500	.000	.843	.962	.828	.927	.250	.978	.912



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File Name : Kane St - Vevau St

Site Code : 18-550 Maui Bus Hub

Start Date : 10/16/2018

Page No : 1

Groups Printed- Motorcycles - Cars & Light Goods - Buses - Unit Trucks - Articulated Trucks - Bicycles on Road - Bicycles on Crosswalk - Pedestrians

Start Time	KANE STREET SOUTHBOUND				VEVAU STREET WESTBOUND				KANE STREET NORTHBOUND				QKC DWY EASTBOUND				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
06:45	5	57	1	0	4	5	9	0	8	25	5	5	1	5	5	0	135
Total	5	57	1	0	4	5	9	0	8	25	5	5	1	5	5	0	135
07:00	6	46	7	1	3	2	7	0	5	19	2	0	5	7	4	1	115
07:15	12	37	3	1	1	3	4	0	5	32	1	1	2	6	10	1	119
07:30	8	51	6	4	4	6	12	0	8	38	3	3	0	5	9	1	158
07:45	3	47	2	3	0	6	7	0	9	43	3	3	3	12	8	1	150
Total	29	181	18	9	8	17	30	0	27	132	9	7	10	30	31	4	542
08:00	4	36	4	0	4	5	7	0	7	38	0	0	4	6	5	0	120
08:15	6	32	5	0	3	4	6	0	7	15	0	0	3	5	4	0	90
08:30	4	35	9	0	1	5	3	0	16	25	1	3	3	9	12	2	128
Grand Total	48	341	37	9	20	36	55	0	65	235	15	15	21	55	57	6	1015
Apprch %	11	78.4	8.5	2.1	18	32.4	49.5	0	19.7	71.2	4.5	4.5	15.1	39.6	41	4.3	
Total %	4.7	33.6	3.6	0.9	2	3.5	5.4	0	6.4	23.2	1.5	1.5	2.1	5.4	5.6	0.6	
Motorcycles	1	0	0	0	0	1	0	0	0	3	0	0	0	3	1	0	9
% Motorcycles	2.1	0	0	0	0	2.8	0	0	0	1.3	0	0	0	5.5	1.8	0	0.9
Cars & Light Goods	46	325	37	0	20	35	53	0	65	218	15	0	21	50	54	0	939
% Cars & Light Goods	95.8	95.3	100	0	100	97.2	96.4	0	100	92.8	100	0	100	90.9	94.7	0	92.5
Buses	0	3	0	0	0	0	1	0	0	2	0	0	0	0	1	0	7
% Buses	0	0.9	0	0	0	0	1.8	0	0	0.9	0	0	0	0	1.8	0	0.7
Single-Unit Trucks	1	12	0	0	0	0	1	0	0	9	0	0	0	1	1	0	25
% Single-Unit Trucks	2.1	3.5	0	0	0	0	1.8	0	0	3.8	0	0	0	1.8	1.8	0	2.5
Articulated Trucks	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	4
% Articulated Trucks	0	0.3	0	0	0	0	0	0	0	1.3	0	0	0	0	0	0	0.4
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
% Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	1.8	0	0	0.1
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	13.3	0	0	0	0	0.2
Pedestrians	0	0	0	9	0	0	0	0	0	0	0	13	0	0	0	6	28
% Pedestrians	0	0	0	100	0	0	0	0	0	0	0	86.7	0	0	0	100	2.8

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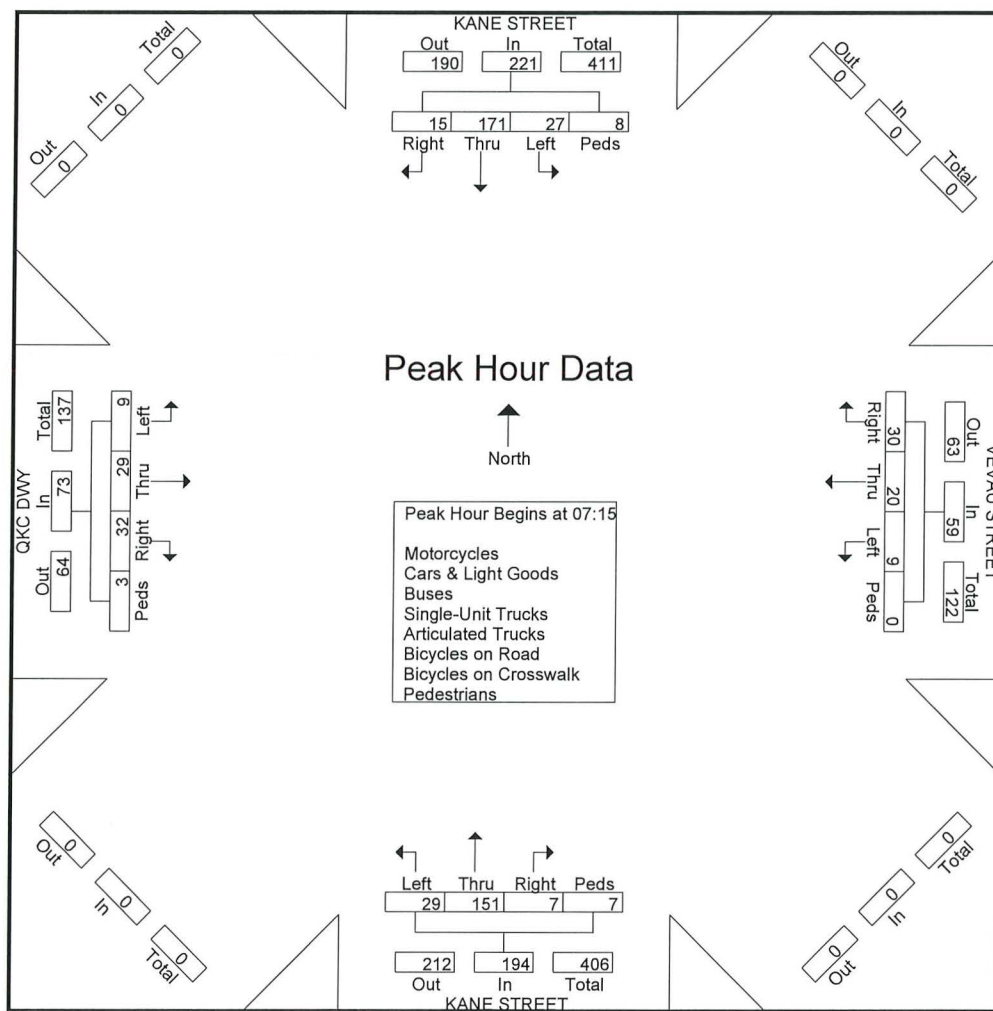
File Name : Kane St - Vevau St

Site Code : 18-550 Maui Bus Hub

Start Date : 10/16/2018

Page No : 2

Start Time	KANE STREET SOUTHBOUND					VEVAU STREET WESTBOUND					KANE STREET NORTHBOUND					QKC DWY EASTBOUND					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:45 to 08:30 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	12	37	3	1	53	1	3	4	0	8	5	32	1	1	39	2	6	10	1	19	119
07:30	8	51	6	4	69	4	6	12	0	22	8	38	3	3	52	0	5	9	1	15	158
07:45	3	47	2	3	55	0	6	7	0	13	9	43	3	3	58	3	12	8	1	24	150
08:00	4	36	4	0	44	4	5	7	0	16	7	38	0	0	45	4	6	5	0	15	120
Total Volume	27	171	15	8	221	9	20	30	0	59	29	151	7	7	194	9	29	32	3	73	547
% App. Total	12.2	77.4	6.8	3.6		15.3	33.9	50.8	0		14.9	77.8	3.6	3.6		12.3	39.7	43.8	4.1		
PHF	.563	.838	.625	.500	.801	.563	.833	.625	.000	.670	.806	.878	.583	.583	.836	.563	.604	.800	.750	.760	.866



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File Name : Kane St - Vevau St
 Site Code : 18-550 Maui Bus Hub
 Start Date : 10/16/2018
 Page No : 1

Groups Printed- Motorcycles - Cars & Light Goods - Buses - Unit Trucks - Articulated Trucks - Bicycles on Road - Bicycles on Crosswalk - Pedestrians

Start Time	KANE STREET SOUTHBOUND				VEVAU STREET WESTBOUND				KANE STREET NORTHBOUND				QKC DWY EASTBOUND				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
15:15	15	42	16	1	3	3	9	0	23	25	3	4	16	12	16	0	188
15:30	10	45	12	4	3	8	9	0	11	35	3	2	15	11	25	1	194
15:45	7	47	14	3	3	10	4	1	16	30	1	3	12	8	18	1	178
Total	32	134	42	8	9	21	22	1	50	90	7	9	43	31	59	2	560
16:00	5	45	10	2	3	7	11	0	14	38	3	0	12	11	16	3	180
16:15	7	53	12	3	4	11	10	0	21	41	3	2	15	10	24	0	216
16:30	10	55	7	2	10	8	11	0	20	38	4	3	12	14	23	2	219
16:45	8	52	11	0	6	8	10	2	14	35	4	1	16	12	15	0	194
Total	30	205	40	7	23	34	42	2	69	152	14	6	55	47	78	5	809
17:00	6	58	11	2	7	7	10	0	10	30	5	4	12	13	18	0	193
Grand Total	68	397	93	17	39	62	74	3	129	272	26	19	110	91	155	7	1562
Apprch %	11.8	69	16.2	3	21.9	34.8	41.6	1.7	28.9	61	5.8	4.3	30.3	25.1	42.7	1.9	
Total %	4.4	25.4	6	1.1	2.5	4	4.7	0.2	8.3	17.4	1.7	1.2	7	5.8	9.9	0.4	
Motorcycles	0	1	0	0	0	2	0	0	0	0	0	0	0	1	0	0	4
% Motorcycles	0	0.3	0	0	0	3.2	0	0	0	0	0	0	0	1.1	0	0	0.3
Cars & Light Goods	67	389	92	0	39	58	72	0	126	265	26	0	109	88	154	0	1485
% Cars & Light Goods	98.5	98	98.9	0	100	93.5	97.3	0	97.7	97.4	100	0	99.1	96.7	99.4	0	95.1
Buses	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	4
% Buses	0	0.5	0	0	0	0	0	0	0	0.7	0	0	0	0	0	0	0.3
Single-Unit Trucks	1	3	1	0	0	0	1	0	1	4	0	0	1	1	1	0	14
% Single-Unit Trucks	1.5	0.8	1.1	0	0	0	1.4	0	0.8	1.5	0	0	0.9	1.1	0.6	0	0.9
Articulated Trucks	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Articulated Trucks	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
Bicycles on Road	0	1	0	0	0	2	1	0	2	1	0	0	0	1	0	0	8
% Bicycles on Road	0	0.3	0	0	0	3.2	1.4	0	1.6	0.4	0	0	0	1.1	0	0	0.5
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28.6	0.1
Pedestrians	0	0	0	17	0	0	0	3	0	0	0	19	0	0	0	5	44
% Pedestrians	0	0	0	100	0	0	0	100	0	0	0	100	0	0	0	71.4	2.8

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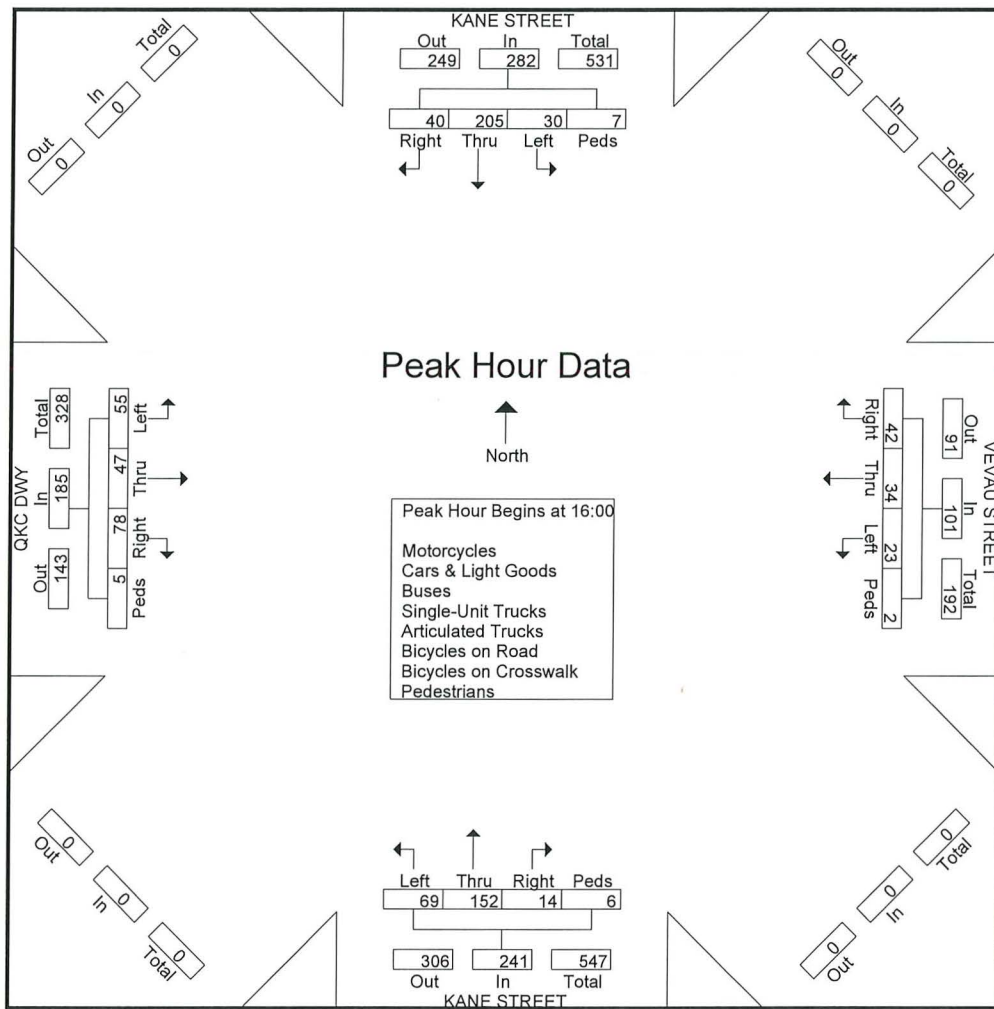
File Name : Kane St - Vevau St

Site Code : 18-550 Maui Bus Hub

Start Date : 10/16/2018

Page No : 2

Start Time	KANE STREET SOUTHBOUND					VEVAU STREET WESTBOUND					KANE STREET NORTHBOUND					QKC DWY EASTBOUND					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 16:00 to 16:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:00																					
16:00	5	45	10	2	62	3	7	11	0	21	14	38	3	0	55	12	11	16	3	42	180
16:15	7	53	12	3	75	4	11	10	0	25	21	41	3	2	67	15	10	24	0	49	216
16:30	10	55	7	2	74	10	8	11	0	29	20	38	4	3	65	12	14	23	2	51	219
16:45	8	52	11	0	71	6	8	10	2	26	14	35	4	1	54	16	12	15	0	43	194
Total Volume	30	205	40	7	282	23	34	42	2	101	69	152	14	6	241	55	47	78	5	185	809
% App. Total	10.6	72.7	14.2	2.5		22.8	33.7	41.6	2		28.6	63.1	5.8	2.5		29.7	25.4	42.2	2.7		
PHF	.750	.932	.833	.583	.940	.575	.773	.955	.250	.871	.821	.927	.875	.500	.899	.859	.839	.813	.417	.907	.924



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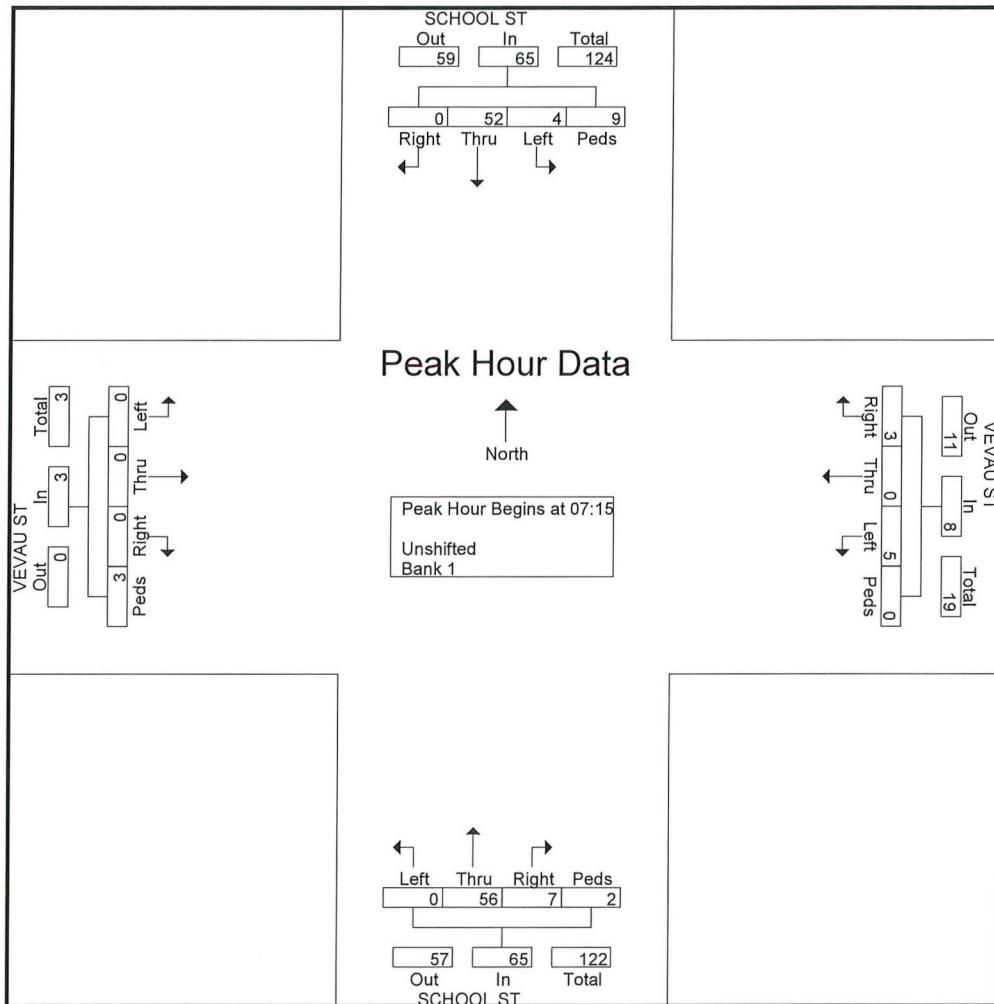
File Name : AM_School St - Vevau St

Site Code : 00000000

Start Date : 3/8/2017

Page No : 2

Start Time	SCHOOL ST SOUTHBOUND					VEVAU ST WESTBOUND					SCHOOL ST NORTHBOUND					VEVAU ST EASTBOUND					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:45 to 08:30 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	14	0	4	18	2	0	0	0	2	0	12	1	1	14	0	0	0	1	1	35
07:30	1	10	0	2	13	0	0	0	0	0	0	14	2	0	16	0	0	0	1	1	30
07:45	3	15	0	1	19	0	0	1	0	1	0	16	2	0	18	0	0	0	1	1	39
08:00	0	13	0	2	15	3	0	2	0	5	0	14	2	1	17	0	0	0	0	0	37
Total Volume	4	52	0	9	65	5	0	3	0	8	0	56	7	2	65	0	0	0	3	3	141
% App. Total	6.2	80	0	13.8		62.5	0	37.5	0		0	86.2	10.8	3.1		0	0	0	100		
PHF	.333	.867	.000	.563	.855	.417	.000	.375	.000	.400	.000	.875	.875	.500	.903	.000	.000	.000	.750	.750	.904



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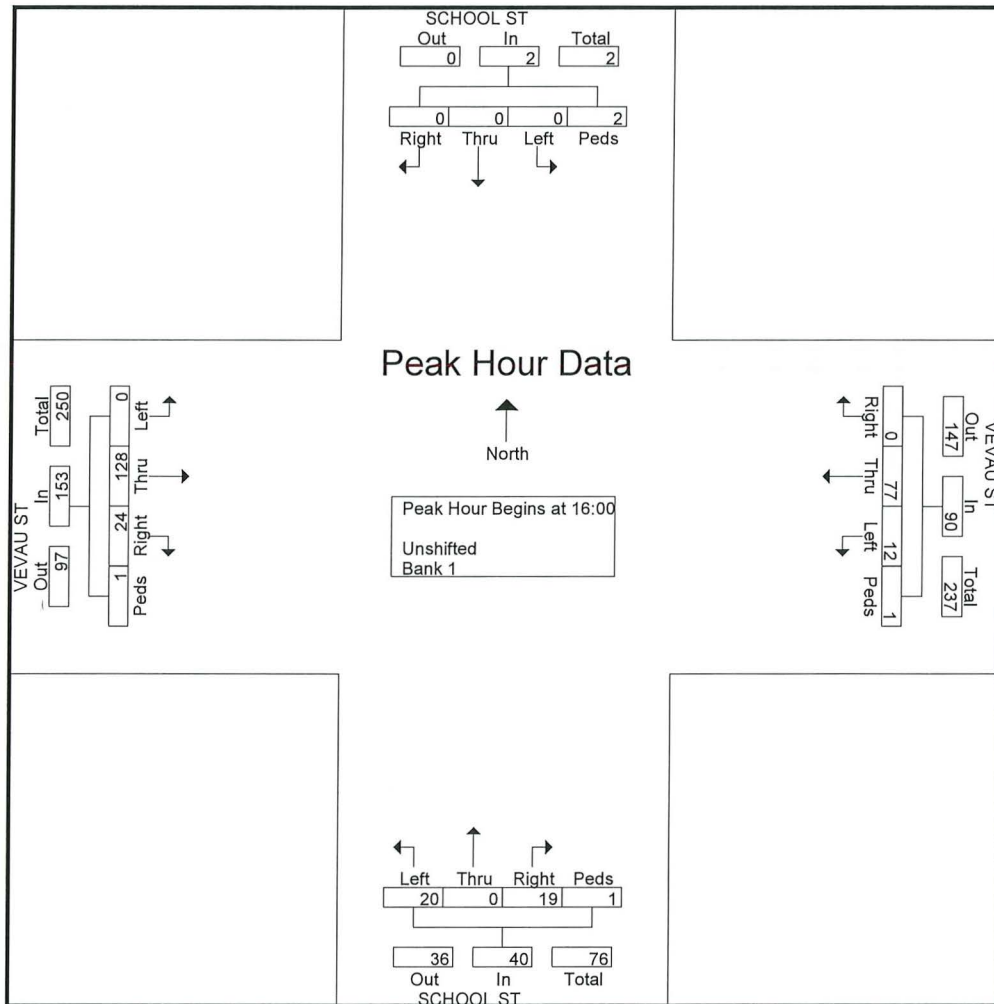
File Name : PM_School St - Vevau St

Site Code : 00000000

Start Date : 3/8/2017

Page No : 2

Start Time	SCHOOL ST SOUTHBOUND					VEVAU ST WESTBOUND					SCHOOL ST NORTHBOUND					VEVAU ST EASTBOUND					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 16:00 to 16:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:00																					
16:00	0	0	0	0	0	2	16	0	0	18	2	0	5	0	7	0	31	4	1	36	61
16:15	0	0	0	0	0	3	18	0	1	22	3	0	7	0	10	0	34	5	0	39	71
16:30	0	0	0	2	2	4	18	0	0	22	7	0	3	1	11	0	33	6	0	39	74
16:45	0	0	0	0	0	3	25	0	0	28	8	0	4	0	12	0	30	9	0	39	79
Total Volume	0	0	0	2	2	12	77	0	1	90	20	0	19	1	40	0	128	24	1	153	285
% App. Total	0	0	0	100		13.3	85.6	0	1.1		50	0	47.5	2.5		0	83.7	15.7	0.7		
PHF	.000	.000	.000	.250	.250	.750	.770	.000	.250	.804	.625	.000	.679	.250	.833	.000	.941	.667	.250	.981	.902



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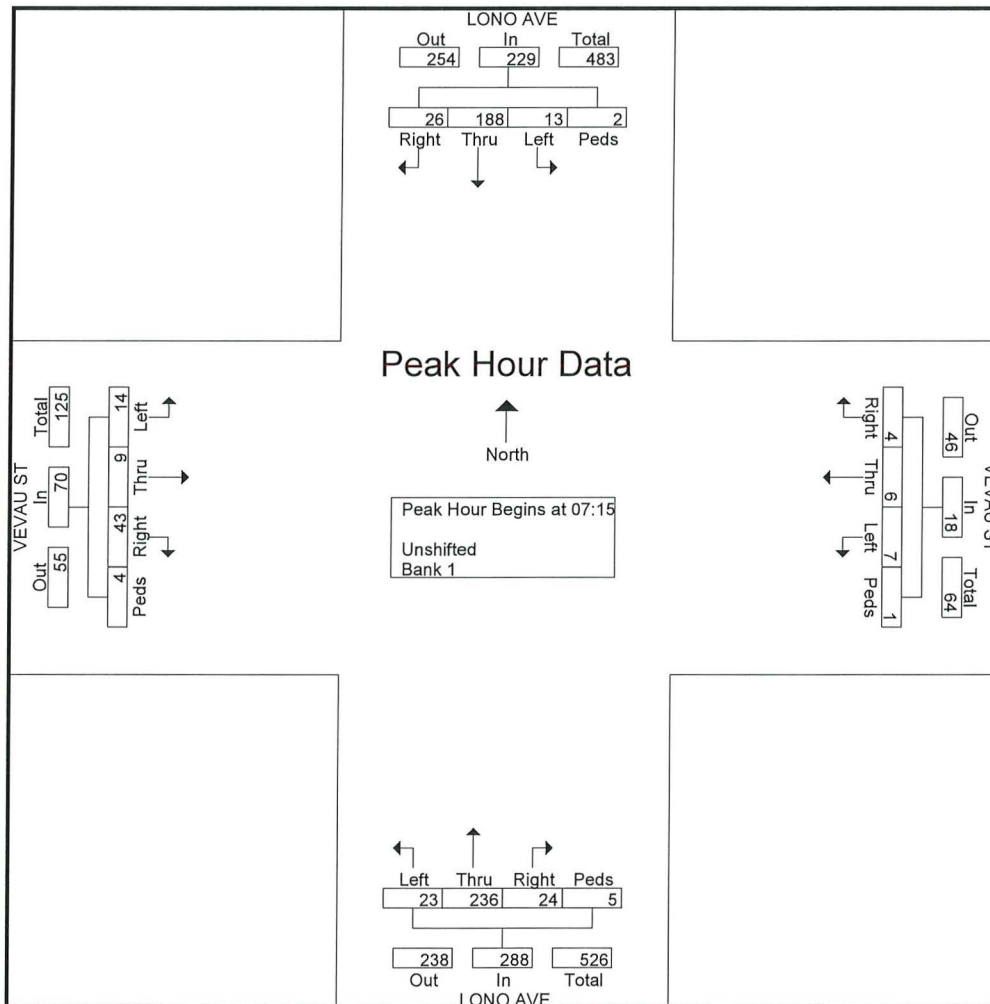
File Name : AM_Lono Ave - Vevau St

Site Code : 00000000

Start Date : 3/8/2017

Page No : 2

Start Time	LONO AVE SOUTHBOUND					VEVAU ST WESTBOUND					LONO AVE NORTHBOUND					VEVAU ST EASTBOUND					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:45 to 08:30 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	5	48	7	0	60	1	2	1	0	4	4	61	5	0	70	6	2	6	0	14	148
07:30	3	40	8	0	51	0	0	1	0	1	5	66	3	3	77	2	2	11	1	16	145
07:45	2	59	6	0	67	1	2	0	1	4	9	56	11	2	78	2	1	16	1	20	169
08:00	3	41	5	2	51	5	2	2	0	9	5	53	5	0	63	4	4	10	2	20	143
Total Volume	13	188	26	2	229	7	6	4	1	18	23	236	24	5	288	14	9	43	4	70	605
% App. Total	5.7	82.1	11.4	0.9		38.9	33.3	22.2	5.6		8	81.9	8.3	1.7		20	12.9	61.4	5.7		
PHF	.650	.797	.813	.250	.854	.350	.750	.500	.250	.500	.639	.894	.545	.417	.923	.583	.563	.672	.500	.875	.895



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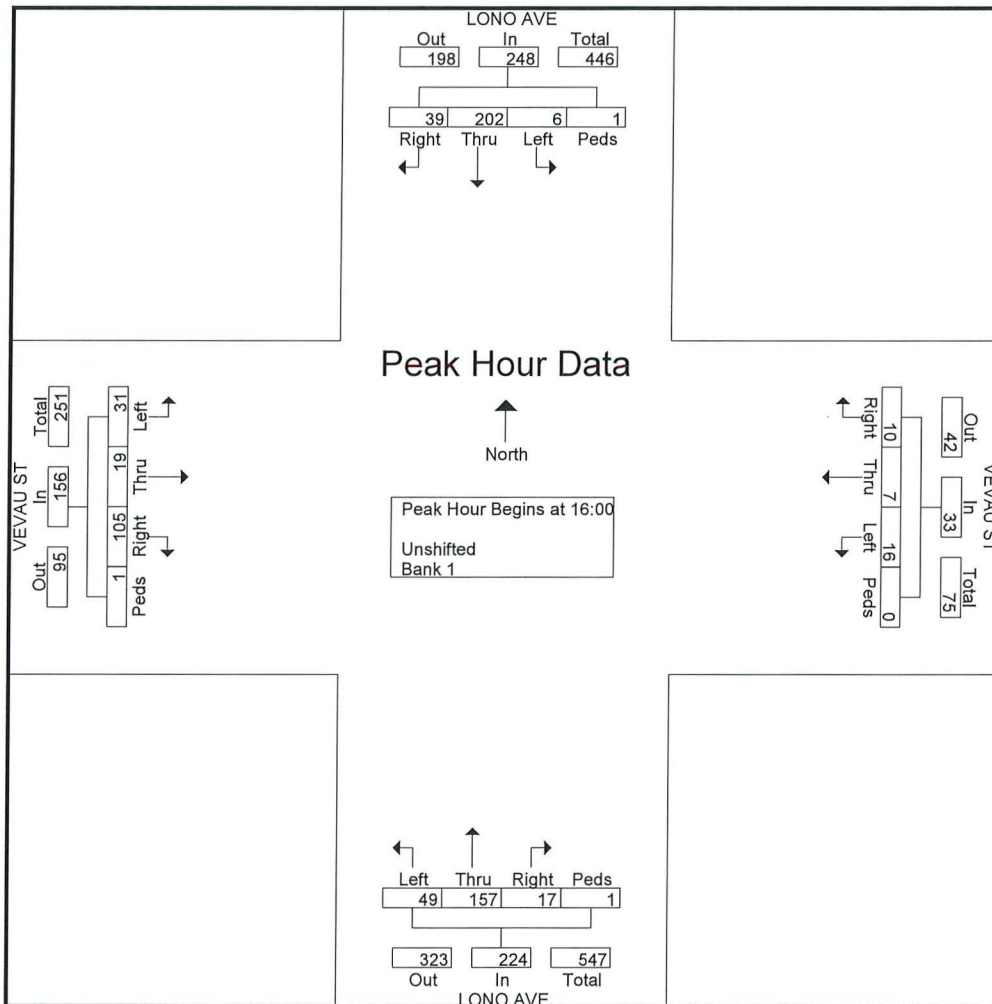
File Name : PM_Lono Ave - Vevau St

Site Code : 00000000

Start Date : 3/8/2017

Page No : 2

Start Time	LONO AVE SOUTHBOUND					VEVAU ST WESTBOUND					LONO AVE NORTHBOUND					VEVAU ST EASTBOUND					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 16:00 to 16:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:00																					
16:00	3	55	5	1	64	1	1	0	0	2	13	39	4	1	57	6	4	26	1	37	160
16:15	2	51	7	0	60	7	2	5	0	14	14	42	5	0	61	11	4	30	0	45	180
16:30	0	55	16	0	71	6	1	2	0	9	7	33	5	0	45	7	8	24	0	39	164
16:45	1	41	11	0	53	2	3	3	0	8	15	43	3	0	61	7	3	25	0	35	157
Total Volume	6	202	39	1	248	16	7	10	0	33	49	157	17	1	224	31	19	105	1	156	661
% App. Total	2.4	81.5	15.7	0.4		48.5	21.2	30.3	0		21.9	70.1	7.6	0.4		19.9	12.2	67.3	0.6		
PHF	.500	.918	.609	.250	.873	.571	.583	.500	.000	.589	.817	.913	.850	.250	.918	.705	.594	.875	.250	.867	.918



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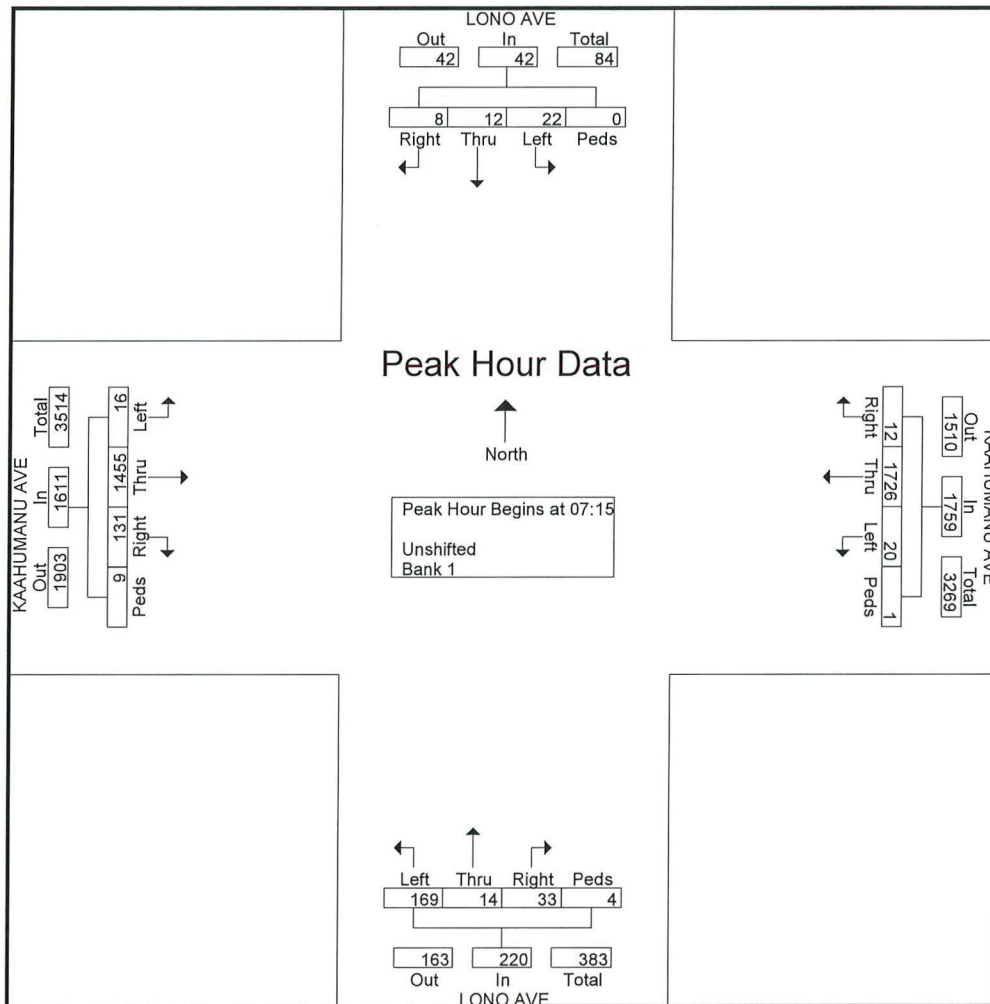
File Name : AM_Lono Ave - Kaahumanu Ave

Site Code : 00000000

Start Date : 3/8/2017

Page No : 2

Start Time	LONO AVE SOUTHBOUND					KAAHUMANU AVE WESTBOUND					LONO AVE NORTHBOUND					KAAHUMANU AVE EASTBOUND					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:45 to 08:30 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	4	3	0	0	7	7	394	1	0	402	43	0	9	1	53	2	354	40	2	398	860
07:30	6	1	3	0	10	6	469	2	0	477	51	5	10	1	67	5	372	29	5	411	965
07:45	4	3	5	0	12	4	425	4	1	434	33	7	10	2	52	7	365	34	2	408	906
08:00	8	5	0	0	13	3	438	5	0	446	42	2	4	0	48	2	364	28	0	394	901
Total Volume	22	12	8	0	42	20	1726	12	1	1759	169	14	33	4	220	16	1455	131	9	1611	3632
% App. Total	52.4	28.6	19	0		1.1	98.1	0.7	0.1		76.8	6.4	15	1.8		1	90.3	8.1	0.6		
PHF	.688	.600	.400	.000	.808	.714	.920	.600	.250	.922	.828	.500	.825	.500	.821	.571	.978	.819	.450	.980	.941



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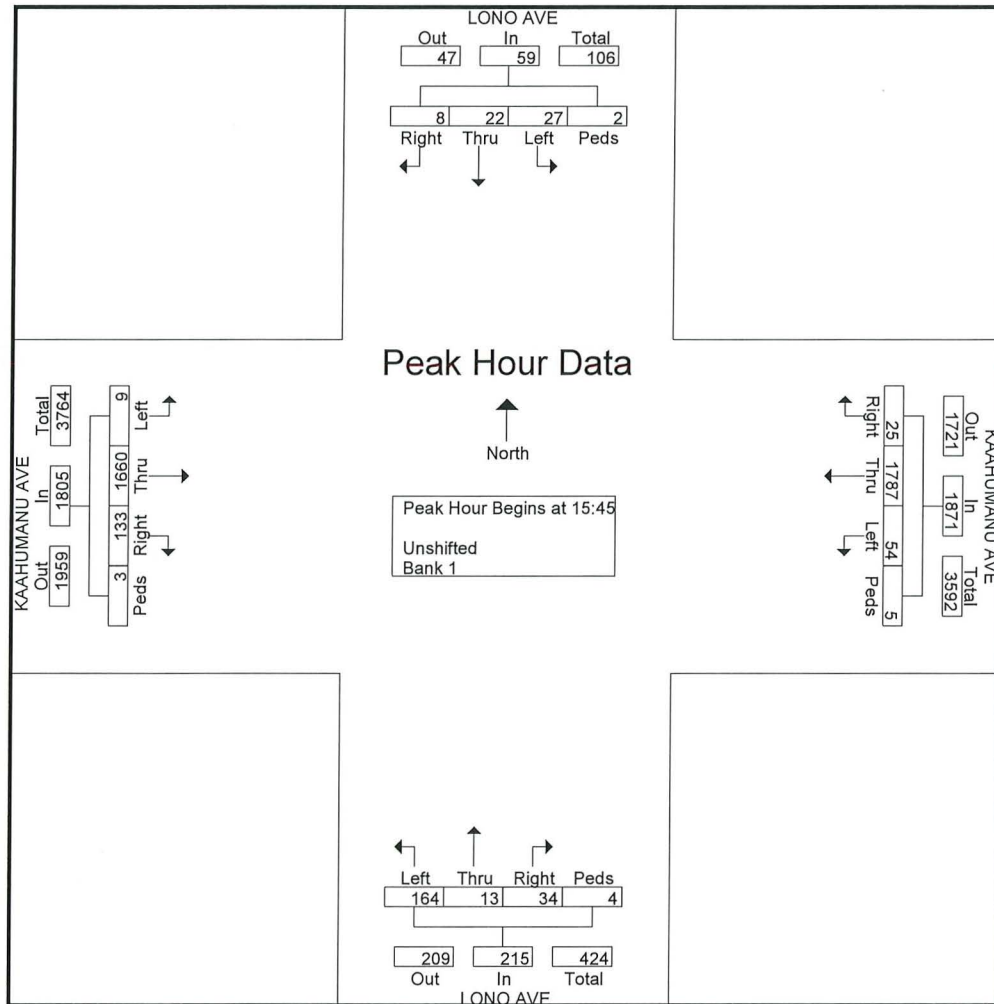
File Name : PM_Lono Ave - Kaahumanu Ave

Site Code : 00000000

Start Date : 3/8/2017

Page No : 2

Start Time	LONO AVE SOUTHBOUND					KAAHUMANU AVE WESTBOUND					LONO AVE NORTHBOUND					KAAHUMANU AVE EASTBOUND					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 15:45 to 16:30 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 15:45																					
15:45	5	2	1	0	8	12	419	5	2	438	47	3	6	1	57	0	436	27	0	463	966
16:00	6	5	0	0	11	17	477	3	0	497	44	1	7	1	53	2	385	56	2	445	1006
16:15	8	5	3	2	18	15	427	9	3	454	32	7	16	2	57	2	433	23	0	458	987
16:30	8	10	4	0	22	10	464	8	0	482	41	2	5	0	48	5	406	27	1	439	991
Total Volume	27	22	8	2	59	54	1787	25	5	1871	164	13	34	4	215	9	1660	133	3	1805	3950
% App. Total	45.8	37.3	13.6	3.4		2.9	95.5	1.3	0.3		76.3	6	15.8	1.9		0.5	92	7.4	0.2		
PHF	.844	.550	.500	.250	.670	.794	.937	.694	.417	.941	.872	.464	.531	.500	.943	.450	.952	.594	.375	.975	.982



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Count Name: 18-550 Kane St-Vevau St 101618
 6am-6pm
 Site Code: 18-550 Maui Bus Hub
 Start Date: 10/16/2018
 Page No: 1

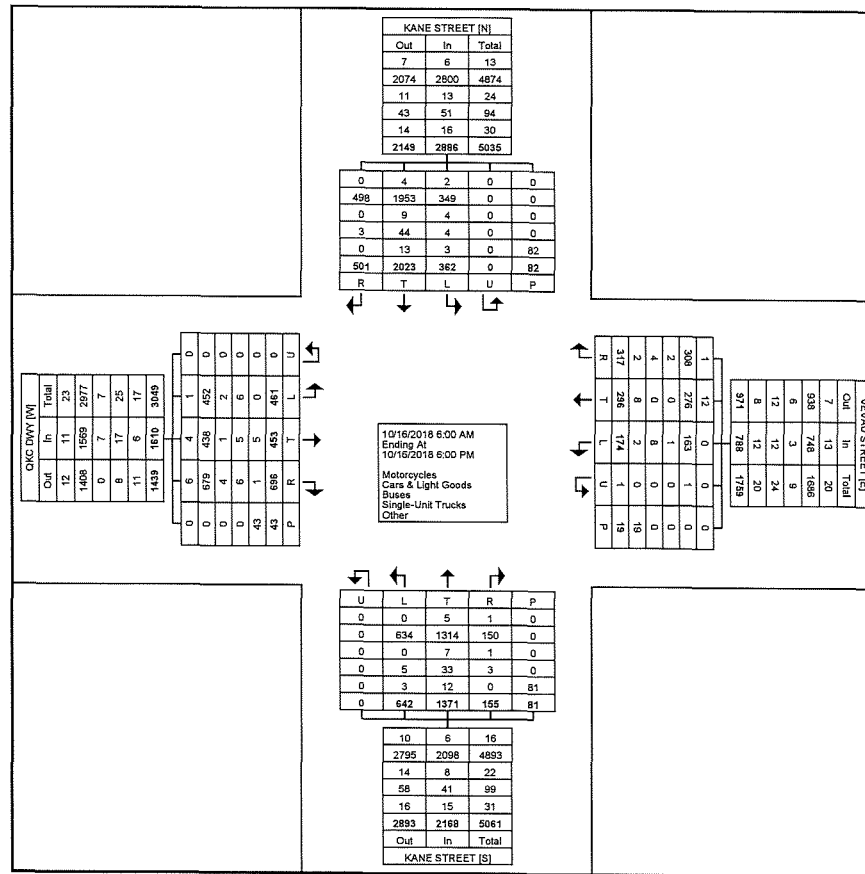
Turning Movement Data

Start Time	KANE STREET Southbound						VEVAU STREET Westbound						KANE STREET Northbound						QKC DWY Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
6:00 AM	4	23	5	0	0	32	0	1	0	0	0	1	2	8	2	0	0	12	1	2	0	0	0	3	48
6:15 AM	2	23	8	0	0	33	1	4	3	0	0	8	5	12	2	0	3	19	3	2	1	0	0	6	66
6:30 AM	0	34	7	0	1	41	4	0	2	0	0	6	4	16	1	0	0	21	5	1	2	0	1	8	76
6:45 AM	1	57	5	0	0	63	9	5	4	0	0	18	5	25	8	0	5	38	5	5	1	0	0	11	130
Hourly Total	7	137	25	0	1	169	14	10	9	0	0	33	16	61	13	0	8	90	14	10	4	0	1	28	320
7:00 AM	7	46	6	0	1	59	7	2	3	0	0	12	2	19	5	0	0	26	4	7	5	0	1	16	113
7:15 AM	3	37	12	0	1	52	4	3	1	0	0	8	1	32	5	0	1	38	10	6	2	0	1	18	116
7:30 AM	6	51	8	0	4	65	12	6	4	0	0	22	3	38	8	0	3	49	9	5	0	0	1	14	150
7:45 AM	2	47	3	0	3	52	7	6	0	0	0	13	3	43	9	0	3	55	8	12	3	0	1	23	143
Hourly Total	18	181	29	0	9	228	30	17	8	0	0	55	9	132	27	0	7	168	31	30	10	0	4	71	522
8:00 AM	4	36	4	0	0	44	7	5	4	1	0	17	0	38	7	0	0	45	5	6	4	0	0	15	121
8:15 AM	5	32	6	0	0	43	6	4	3	0	0	13	0	15	7	0	0	22	4	5	3	0	0	12	90
8:30 AM	9	35	4	0	0	48	3	5	1	0	0	9	1	25	16	0	3	42	12	9	3	0	2	24	123
8:45 AM	6	45	6	0	3	57	8	5	1	0	0	14	1	26	9	0	2	36	5	1	3	0	1	9	116
Hourly Total	24	148	20	0	3	192	24	19	9	1	0	53	2	104	39	0	5	145	26	21	13	0	3	60	450
9:00 AM	12	35	9	0	3	56	6	3	2	0	0	11	3	29	17	0	0	49	18	4	4	0	1	26	142
9:15 AM	6	31	6	0	3	43	5	7	2	0	1	14	5	21	11	0	1	37	13	2	6	0	2	21	115
9:30 AM	6	40	7	0	0	53	5	4	2	0	0	11	5	26	19	0	3	50	9	6	7	0	1	22	136
9:45 AM	22	43	13	0	2	78	7	5	5	0	0	17	0	30	15	0	2	45	19	8	8	0	0	35	175
Hourly Total	46	149	35	0	8	230	23	19	11	0	1	53	13	106	62	0	6	181	59	20	25	0	4	104	568
10:00 AM	25	42	5	0	1	72	3	7	5	0	0	15	6	25	24	0	0	55	13	7	6	0	1	26	168
10:15 AM	20	48	5	0	1	73	6	6	0	0	0	12	1	21	15	0	2	37	18	17	11	0	2	46	168
10:30 AM	16	43	7	0	5	66	3	2	8	0	2	13	6	22	17	0	2	45	14	11	14	0	0	39	163
10:45 AM	17	27	5	0	0	49	4	11	2	0	0	17	4	26	17	0	2	47	17	4	16	0	0	37	150
Hourly Total	78	160	22	0	7	260	16	26	15	0	2	57	17	94	73	0	6	184	62	39	47	0	3	148	649
11:00 AM	20	51	10	0	0	81	5	9	4	0	0	18	5	19	17	0	1	41	15	15	15	0	0	45	185
11:15 AM	11	35	8	0	3	54	5	4	3	0	0	12	2	34	15	0	2	51	18	7	16	0	5	41	158
11:30 AM	14	37	8	0	2	59	5	9	5	0	0	19	5	27	22	0	1	54	12	15	14	0	0	41	173
11:45 AM	16	52	8	0	1	76	10	6	2	0	0	18	3	31	12	0	2	46	11	13	16	0	0	40	180
Hourly Total	61	175	34	0	6	270	25	28	14	0	0	67	15	111	66	0	6	192	56	50	61	0	5	167	696
12:00 PM	16	41	10	0	2	67	5	8	3	0	1	16	2	28	15	0	0	45	13	10	14	0	1	37	165
12:15 PM	10	37	5	0	0	52	11	7	5	0	0	23	2	37	19	0	1	58	17	10	9	0	1	36	169
12:30 PM	7	29	9	0	1	45	5	10	1	0	0	16	6	24	19	0	3	49	17	13	19	0	2	49	159
12:45 PM	14	28	9	0	2	51	9	11	6	0	0	26	3	18	14	0	0	35	23	19	16	0	1	58	170
Hourly Total	47	135	33	0	5	215	30	36	15	0	1	81	13	107	67	0	4	187	70	52	58	0	5	180	663
1:00 PM	8	50	3	0	0	61	7	6	4	0	4	17	2	37	12	0	5	51	25	19	12	0	0	56	185
1:15 PM	15	43	6	0	3	64	13	5	3	0	3	21	3	21	12	0	2	36	15	11	15	0	2	41	162
1:30 PM	4	44	7	0	0	55	6	10	5	0	2	21	4	23	6	0	2	33	15	10	18	0	0	43	152
1:45 PM	17	59	5	0	2	81	5	6	0	0	1	11	4	29	11	0	1	44	16	9	7	0	1	32	168
Hourly Total	44	196	21	0	5	261	31	27	12	0	10	70	13	110	41	0	10	164	71	49	52	0	3	172	667

2:00 PM	15	40	8	0	6	63	5	6	4	0	0	15	2	32	13	0	0	47	15	10	12	0	0	37	162
2:15 PM	11	37	9	0	1	57	10	3	10	0	1	23	4	46	18	0	1	68	22	9	10	0	0	41	189
2:30 PM	18	41	12	0	3	71	8	6	4	0	0	18	6	43	18	0	0	67	24	9	12	0	1	45	201
2:45 PM	10	52	10	0	0	72	8	7	8	0	0	23	2	27	15	0	2	44	25	15	15	0	4	55	194
Hourly Total	54	170	39	0	10	263	31	22	26	0	1	79	14	148	64	0	3	226	86	43	49	0	5	178	746
3:00 PM	7	37	11	0	3	55	3	12	4	0	0	19	5	32	18	0	4	55	12	15	7	0	0	34	163
3:15 PM	16	42	15	0	1	73	9	3	3	0	0	15	3	25	23	0	4	51	16	12	16	0	0	44	183
3:30 PM	12	45	10	0	4	67	9	8	3	0	0	20	3	35	11	0	2	49	25	11	15	0	1	51	187
3:45 PM	14	47	7	0	3	68	4	10	3	0	1	17	1	30	16	0	3	47	18	8	12	0	1	38	170
Hourly Total	49	171	43	0	11	263	25	33	13	0	1	71	12	122	68	0	13	202	71	46	50	0	2	167	703
4:00 PM	10	45	5	0	2	60	11	7	3	0	0	21	3	38	14	0	0	55	16	11	12	0	3	39	175
4:15 PM	12	53	7	0	3	72	10	11	4	0	0	25	3	41	21	0	2	65	24	10	15	0	0	49	211
4:30 PM	7	55	10	0	2	72	11	8	10	0	0	29	4	38	20	0	3	62	23	14	12	0	2	49	212
4:45 PM	11	52	8	0	0	71	10	8	6	0	2	24	4	35	14	0	1	53	15	12	16	0	0	43	191
Hourly Total	40	205	30	0	7	275	42	34	23	0	2	99	14	152	69	0	6	235	78	47	55	0	5	180	789
5:00 PM	11	58	6	0	2	75	10	7	7	0	0	24	5	30	10	0	4	45	18	13	12	0	0	43	187
5:15 PM	8	49	12	0	3	69	5	4	3	0	1	12	3	30	20	0	0	53	15	13	6	0	2	34	168
5:30 PM	8	55	6	0	0	69	4	8	3	0	0	15	5	35	14	0	2	54	17	8	8	0	1	33	171
5:45 PM	6	34	7	0	5	47	7	6	6	0	0	19	4	29	9	0	1	42	22	12	11	0	0	45	153
Hourly Total	33	196	31	0	10	260	26	25	19	0	1	70	17	124	53	0	7	194	72	46	37	0	3	155	679
Grand Total	501	2023	362	0	82	2886	317	296	174	1	19	788	155	1371	642	0	81	2168	696	453	461	0	43	1610	7452
Approach %	17.4	70.1	12.5	0.0	-	-	40.2	37.6	22.1	0.1	-	-	7.1	63.2	29.6	0.0	-	-	43.2	28.1	28.6	0.0	-	-	-
Total %	6.7	27.1	4.9	0.0	-	38.7	4.3	4.0	2.3	0.0	-	10.6	2.1	18.4	8.6	0.0	-	29.1	9.3	6.1	6.2	0.0	-	21.6	-
Motorcycles	0	4	2	0	-	6	1	12	0	0	-	13	1	5	0	0	-	6	6	4	1	0	-	11	36
% Motorcycles	0.0	0.2	0.6	-	-	0.2	0.3	4.1	0.0	0.0	-	1.6	0.6	0.4	0.0	-	-	0.3	0.9	0.9	0.2	-	-	0.7	0.5
Cars & Light Goods	498	1953	349	0	-	2800	308	276	163	1	-	748	150	1314	634	0	-	2098	679	438	452	0	-	1569	7215
% Cars & Light Goods	99.4	96.5	96.4	-	-	97.0	97.2	93.2	93.7	100.0	-	94.9	96.8	95.8	98.8	-	-	96.8	97.6	96.7	98.0	-	-	97.5	96.8
Buses	0	9	4	0	-	13	2	0	1	0	-	3	1	7	0	0	-	8	4	1	2	0	-	7	31
% Buses	0.0	0.4	1.1	-	-	0.5	0.6	0.0	0.6	0.0	-	0.4	0.6	0.5	0.0	-	-	0.4	0.6	0.2	0.4	-	-	0.4	0.4
Single-Unit Trucks	3	44	4	0	-	51	4	0	8	0	-	12	3	33	5	0	-	41	6	5	6	0	-	17	121
% Single-Unit Trucks	0.6	2.2	1.1	-	-	1.8	1.3	0.0	4.6	0.0	-	1.5	1.9	2.4	0.8	-	-	1.9	0.9	1.1	1.3	-	-	1.1	1.6
Articulated Trucks	0	8	0	0	-	8	0	0	1	0	-	1	0	10	0	0	-	10	0	0	0	0	-	0	19
% Articulated Trucks	0.0	0.4	0.0	-	-	0.3	0.0	0.0	0.6	0.0	-	0.1	0.0	0.7	0.0	-	-	0.5	0.0	0.0	0.0	-	-	0.0	0.3
Bicycles on Road	0	5	3	0	-	8	2	8	1	0	-	11	0	2	3	0	-	5	1	5	0	0	-	6	30
% Bicycles on Road	0.0	0.2	0.8	-	-	0.3	0.6	2.7	0.6	0.0	-	1.4	0.0	0.1	0.5	-	-	0.2	0.1	1.1	0.0	-	-	0.4	0.4
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	7	-	-
% Bicycles on Crosswalk	-	-	-	-	1.2	-	-	-	-	-	5.3	-	-	-	-	-	4.9	-	-	-	-	-	16.3	-	-
Pedestrians	-	-	-	-	81	-	-	-	-	-	18	-	-	-	-	-	77	-	-	-	-	-	36	-	-
% Pedestrians	-	-	-	-	98.6	-	-	-	-	-	94.7	-	-	-	-	-	95.1	-	-	-	-	-	63.7	-	-

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Count Name: 18-550 Kane St-Vevau St 101618
 6am-6pm
 Site Code: 18-550 Maui Bus Hub
 Start Date: 10/16/2018
 Page No: 3



Turning Movement Data Plot

Austin, Tsutsumi & Associates
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Count Name: 18-550 Kane St-Vevau St 101618
 6am-6pm
 Site Code: 18-550 Maui Bus Hub
 Start Date: 10/16/2018
 Page No: 4

Turning Movement Peak Hour Data (11:00 AM)

Start Time	KANE STREET Southbound						VEVAU STREET Westbound						KANE STREET Northbound						QKC DWY Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	20	51	10	0	0	81	5	9	4	0	0	18	5	19	17	0	1	41	15	15	15	0	0	45	185
11:15 AM	11	35	8	0	3	54	5	4	3	0	0	12	2	34	15	0	2	51	18	7	16	0	5	41	158
11:30 AM	14	37	8	0	2	59	5	9	5	0	0	19	5	27	22	0	1	54	12	15	14	0	0	41	173
11:45 AM	16	52	8	0	1	76	10	6	2	0	0	18	3	31	12	0	2	46	11	13	16	0	0	40	180
Total	61	175	34	0	6	270	25	28	14	0	0	67	15	111	66	0	6	192	56	50	61	0	5	167	696
Approach %	22.6	64.8	12.6	0.0	-	-	37.3	41.8	20.9	0.0	-	-	7.8	57.8	34.4	0.0	-	-	33.5	29.9	36.5	0.0	-	-	-
Total %	8.8	25.1	4.9	0.0	-	38.8	3.6	4.0	2.0	0.0	-	9.6	2.2	15.9	9.5	0.0	-	27.6	8.0	7.2	8.8	0.0	-	24.0	-
PHF	0.763	0.841	0.850	0.000	-	0.833	0.625	0.778	0.700	0.000	-	0.882	0.750	0.816	0.750	0.000	-	0.889	0.778	0.833	0.953	0.000	-	0.928	0.941
Motorcycles	0	0	0	0	-	0	0	1	0	0	-	1	0	1	0	0	-	1	0	0	0	0	-	0	2
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	3.6	0.0	-	-	1.5	0.0	0.9	0.0	-	-	0.5	0.0	0.0	0.0	-	-	0.0	0.3
Cars & Light Goods	60	166	33	0	-	259	25	24	14	0	-	63	15	107	66	0	-	188	55	48	60	0	-	163	673
% Cars & Light Goods	98.4	94.9	97.1	-	-	95.9	100.0	85.7	100.0	-	-	94.0	100.0	96.4	100.0	-	-	97.9	98.2	96.0	98.4	-	-	97.6	96.7
Buses	0	1	0	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	0	1	0	0	-	1	3
% Buses	0.0	0.6	0.0	-	-	0.4	0.0	0.0	0.0	-	-	0.0	0.0	0.9	0.0	-	-	0.5	0.0	2.0	0.0	-	-	0.6	0.4
Single-Unit Trucks	1	6	0	0	-	7	0	0	0	0	-	0	0	2	0	0	-	2	1	1	1	0	-	3	12
% Single-Unit Trucks	1.6	3.4	0.0	-	-	2.6	0.0	0.0	0.0	-	-	0.0	0.0	1.8	0.0	-	-	1.0	1.8	2.0	1.6	-	-	1.8	1.7
Articulated Trucks	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Articulated Trucks	0.0	0.6	0.0	-	-	0.4	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Road	0	1	1	0	-	2	0	3	0	0	-	3	0	0	0	0	-	0	0	0	0	0	-	0	5
% Bicycles on Road	0.0	0.6	2.9	-	-	0.7	0.0	10.7	0.0	-	-	4.5	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.7
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	16.7	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	5	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	83.3	-	-	-	-	-	100.0	-	-

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Count Name: 18-550 Kane St-Vevau St 101318
 6am-6pm
 Site Code: 18-550 Maui Bus Hub
 Start Date: 10/13/2018
 Page No: 1

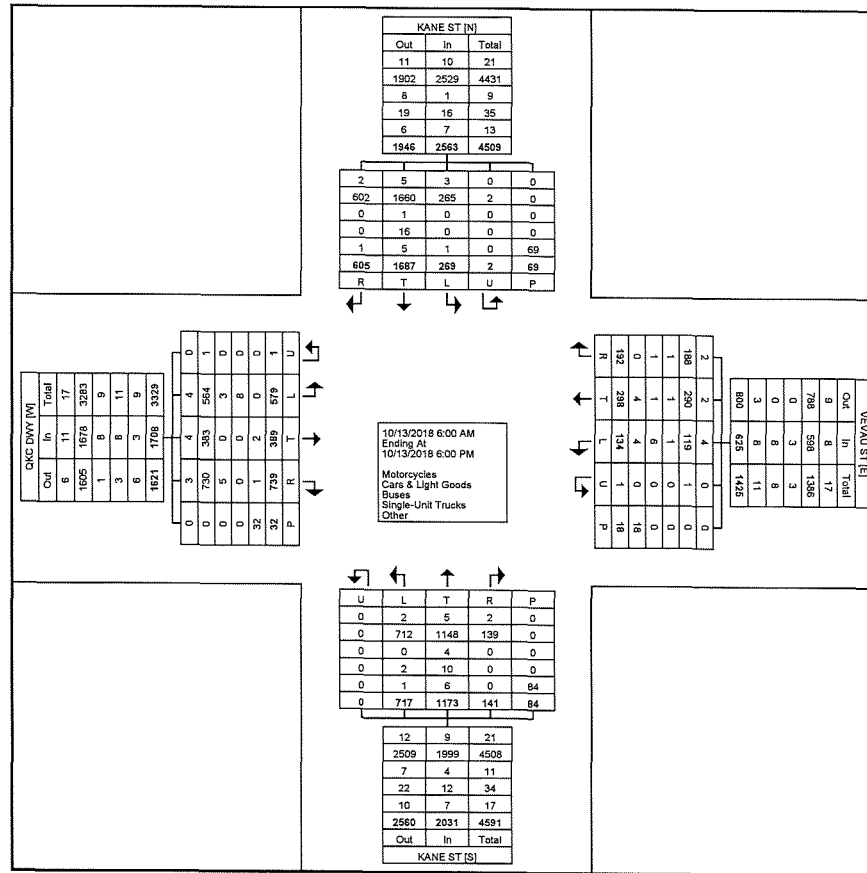
Turning Movement Data

Start Time	KANE ST Southbound						VEVAU ST Westbound						KANE ST Northbound						QKC DWY Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
6:00 AM	2	11	0	0	0	13	0	4	0	1	0	5	1	9	1	0	0	11	2	1	0	0	0	3	32
6:15 AM	2	12	1	0	2	15	1	0	1	0	0	2	3	9	0	0	0	12	0	2	1	0	0	3	32
6:30 AM	1	17	2	0	1	20	0	3	1	0	0	4	0	6	1	0	0	7	1	3	1	0	0	5	36
6:45 AM	3	16	1	0	0	20	1	4	1	0	0	6	0	10	4	0	0	14	2	1	2	0	0	5	45
Hourly Total	8	56	4	0	3	68	2	11	3	1	0	17	4	34	6	0	0	44	5	7	4	0	0	16	145
7:00 AM	4	29	6	0	0	39	2	5	2	0	0	9	4	16	3	0	0	23	2	3	2	0	0	7	78
7:15 AM	3	25	6	0	0	34	7	2	1	0	0	10	2	26	4	0	0	32	3	3	4	0	1	10	86
7:30 AM	4	21	2	0	0	27	2	5	2	0	0	9	0	18	5	0	1	23	3	0	5	0	0	8	67
7:45 AM	7	35	6	0	2	48	4	6	0	0	0	10	2	25	10	0	1	37	6	2	4	0	1	12	107
Hourly Total	18	110	20	0	2	148	15	18	5	0	0	38	8	85	22	0	2	115	14	8	15	0	2	37	338
8:00 AM	6	25	7	0	1	38	5	3	0	0	0	8	6	21	5	0	2	32	8	3	1	0	0	12	90
8:15 AM	8	48	5	0	0	61	2	3	1	0	0	6	3	31	7	0	0	41	0	7	3	0	1	10	118
8:30 AM	10	36	5	0	1	51	3	2	3	0	0	8	3	18	3	0	1	24	2	4	5	0	0	11	94
8:45 AM	5	41	5	0	1	51	4	4	1	0	0	9	5	27	5	0	2	37	2	7	3	0	2	12	109
Hourly Total	29	150	22	0	3	201	14	12	5	0	0	31	17	97	20	0	5	134	12	21	12	0	3	45	411
9:00 AM	3	38	5	0	5	46	2	5	3	0	0	10	2	16	10	0	1	28	5	4	4	0	0	13	97
9:15 AM	19	42	8	1	1	70	7	5	4	0	0	16	4	22	11	0	0	37	8	4	5	0	2	17	140
9:30 AM	18	30	4	0	0	52	4	4	4	0	1	12	5	21	17	0	4	43	11	4	9	0	2	24	131
9:45 AM	13	36	5	0	1	54	6	5	3	0	0	14	2	36	15	0	2	53	13	8	8	0	0	29	150
Hourly Total	53	146	22	1	7	222	19	19	14	0	1	52	13	95	53	0	7	161	37	20	26	0	4	83	518
10:00 AM	17	46	7	0	1	70	4	5	5	0	1	14	2	20	11	0	3	33	10	10	9	0	1	29	146
10:15 AM	8	43	6	0	1	57	5	4	2	0	0	11	5	29	25	0	1	59	13	14	14	0	2	41	168
10:30 AM	17	54	6	0	3	77	7	7	3	0	0	17	4	27	19	0	4	50	18	6	9	0	1	33	177
10:45 AM	22	40	12	0	2	74	4	7	4	0	0	15	5	23	28	0	1	56	20	9	10	0	2	39	184
Hourly Total	64	183	31	0	7	278	20	23	14	0	1	57	16	99	83	0	9	198	61	39	42	0	6	142	675
11:00 AM	23	36	6	0	3	65	6	13	1	0	0	20	1	31	32	0	1	64	20	12	18	0	1	50	199
11:15 AM	17	43	8	0	1	68	4	10	3	0	1	17	3	31	17	0	1	51	20	10	10	0	0	40	176
11:30 AM	19	40	11	0	2	70	5	10	4	0	0	19	5	25	18	0	4	48	23	16	20	0	0	59	196
11:45 AM	27	45	7	1	1	80	8	10	5	0	1	23	2	24	19	0	3	45	18	13	14	0	0	45	193
Hourly Total	86	164	32	1	7	283	23	43	13	0	2	79	11	111	86	0	9	208	81	51	62	0	1	194	764
12:00 PM	17	36	6	0	2	59	4	3	4	0	0	11	6	32	25	0	0	63	24	7	10	1	0	42	175
12:15 PM	17	31	5	0	3	53	4	11	4	0	0	19	4	18	24	0	0	46	30	12	21	0	0	63	181
12:30 PM	16	42	6	0	1	64	3	9	2	0	0	14	2	23	30	0	3	55	22	13	11	0	0	46	179
12:45 PM	20	28	4	0	0	52	3	9	1	0	2	13	2	22	27	0	7	51	13	14	20	0	0	47	163
Hourly Total	70	137	21	0	6	228	14	32	11	0	2	57	14	95	106	0	10	215	89	46	62	1	0	198	698
1:00 PM	20	34	11	0	0	65	3	14	3	0	0	20	5	35	16	0	4	56	29	11	22	0	0	62	203
1:15 PM	25	52	9	0	3	86	4	9	8	0	0	21	3	28	26	0	2	57	21	8	21	0	0	50	214
1:30 PM	25	34	5	0	3	64	7	6	6	0	0	19	2	21	14	0	0	37	27	13	16	0	0	56	176
1:45 PM	11	39	7	0	2	57	4	9	2	0	0	15	3	30	20	0	2	53	26	5	24	0	0	55	180
Hourly Total	81	159	32	0	8	272	18	38	19	0	0	75	13	114	76	0	8	203	103	37	83	0	0	223	773

2:00 PM	19	42	9	0	3	70	5	6	3	0	1	14	3	18	16	0	4	37	27	9	17	0	1	53	174
2:15 PM	17	32	3	0	3	52	4	8	3	0	0	15	1	18	17	0	1	36	20	10	20	0	0	50	153
2:30 PM	20	30	3	0	1	53	3	5	2	0	0	10	1	27	13	0	0	41	25	13	22	0	0	60	164
2:45 PM	16	42	7	0	2	65	1	3	3	0	0	7	2	29	15	0	0	46	19	11	18	0	1	48	166
Hourly Total	72	146	22	0	9	240	13	22	11	0	1	46	7	92	61	0	5	160	91	43	77	0	2	211	657
3:00 PM	4	39	5	0	0	48	8	9	2	0	0	19	5	29	19	0	1	53	25	13	15	0	1	53	173
3:15 PM	8	45	1	0	1	54	2	7	3	0	1	12	0	27	24	0	2	51	14	14	26	0	1	54	171
3:30 PM	12	30	7	0	1	49	3	7	3	0	2	13	3	28	25	0	11	56	17	15	13	0	0	45	163
3:45 PM	14	31	2	0	0	47	1	6	2	0	0	9	6	38	18	0	2	62	22	13	29	0	0	64	182
Hourly Total	38	145	15	0	2	198	14	29	10	0	3	53	14	122	86	0	16	222	78	55	83	0	2	216	689
4:00 PM	7	37	5	0	4	49	8	1	4	0	1	13	5	37	11	0	6	53	28	10	15	0	0	53	168
4:15 PM	16	46	4	0	5	66	3	8	3	0	6	14	3	23	20	0	1	46	16	4	9	0	5	29	155
4:30 PM	12	34	5	0	1	51	7	8	5	0	0	20	1	35	17	0	2	53	18	11	15	0	3	44	168
4:45 PM	11	34	7	0	3	52	7	6	0	0	1	13	4	24	19	0	2	47	26	11	11	0	0	48	160
Hourly Total	46	151	21	0	13	218	25	23	12	0	8	60	13	119	67	0	11	199	88	36	50	0	8	174	651
5:00 PM	14	33	10	0	1	57	4	7	5	0	0	16	1	27	14	0	0	42	31	8	18	0	1	57	172
5:15 PM	10	33	5	0	0	48	4	6	4	0	0	14	7	28	8	0	0	43	18	3	10	0	2	31	136
5:30 PM	8	35	3	0	1	46	3	9	4	0	0	16	2	32	16	0	1	50	14	8	18	0	0	40	152
5:45 PM	8	39	9	0	0	56	4	6	4	0	0	14	1	23	13	0	1	37	17	7	17	0	1	41	148
Hourly Total	40	140	27	0	2	207	15	28	17	0	0	60	11	110	51	0	2	172	80	26	63	0	4	169	608
Grand Total	605	1687	269	2	69	2563	192	298	134	1	18	625	141	1173	717	0	84	2031	739	389	579	1	32	1708	6927
Approach %	23.6	65.8	10.5	0.1	-	-	30.7	47.7	21.4	0.2	-	-	6.9	57.8	35.3	0.0	-	-	43.3	22.8	33.9	0.1	-	-	-
Total %	8.7	24.4	3.9	0.0	-	37.0	2.8	4.3	1.9	0.0	-	9.0	2.0	16.9	10.4	0.0	-	29.3	10.7	5.6	8.4	0.0	-	24.7	-
Motorcycles	2	5	3	0	-	10	2	2	4	0	-	8	2	5	2	0	-	9	3	4	4	0	-	11	38
% Motorcycles	0.3	0.3	1.1	0.0	-	0.4	1.0	0.7	3.0	0.0	-	1.3	1.4	0.4	0.3	-	-	0.4	0.4	1.0	0.7	0.0	-	0.6	0.5
Cars & Light Goods	602	1660	265	2	-	2529	188	290	119	1	-	598	139	1148	712	0	-	1999	730	383	564	1	-	1678	6804
% Cars & Light Goods	99.5	98.4	98.5	100.0	-	98.7	97.9	97.3	88.8	100.0	-	95.7	98.6	97.9	99.3	-	-	98.4	98.8	98.5	97.4	100.0	-	98.2	98.2
Buses	0	1	0	0	-	1	1	1	1	0	-	3	0	4	0	0	-	4	5	0	3	0	-	8	16
% Buses	0.0	0.1	0.0	0.0	-	0.0	0.5	0.3	0.7	0.0	-	0.5	0.0	0.3	0.0	-	-	0.2	0.7	0.0	0.5	0.0	-	0.5	0.2
Single-Unit Trucks	0	16	0	0	-	16	1	1	6	0	-	8	0	10	2	0	-	12	0	0	8	0	-	8	44
% Single-Unit Trucks	0.0	0.9	0.0	0.0	-	0.6	0.5	0.3	4.5	0.0	-	1.3	0.0	0.9	0.3	-	-	0.6	0.0	0.0	1.4	0.0	-	0.5	0.6
Articulated Trucks	0	2	0	0	-	2	0	0	3	0	-	3	0	2	0	0	-	2	0	0	0	0	-	0	7
% Articulated Trucks	0.0	0.1	0.0	0.0	-	0.1	0.0	0.0	2.2	0.0	-	0.5	0.0	0.2	0.0	-	-	0.1	0.0	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Road	1	3	1	0	-	5	0	4	1	0	-	5	0	4	1	0	-	5	1	2	0	0	-	3	18
% Bicycles on Road	0.2	0.2	0.4	0.0	-	0.2	0.0	1.3	0.7	0.0	-	0.8	0.0	0.3	0.1	-	-	0.2	0.1	0.5	0.0	0.0	-	0.2	0.3
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	4	-	-
% Bicycles on Crosswalk	-	-	-	-	1.4	-	-	-	-	-	5.6	-	-	-	-	-	4.8	-	-	-	-	-	12.5	-	-
Pedestrians	-	-	-	-	68	-	-	-	-	-	17	-	-	-	-	-	80	-	-	-	-	-	28	-	-
% Pedestrians	-	-	-	-	98.6	-	-	-	-	-	94.4	-	-	-	-	-	95.2	-	-	-	-	-	67.5	-	-

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Count Name: 18-550 Kane St-Vevau St 101318
 6am-6pm
 Site Code: 18-550 Maui Bus Hub
 Start Date: 10/13/2018
 Page No: 3



Turning Movement Data Plot

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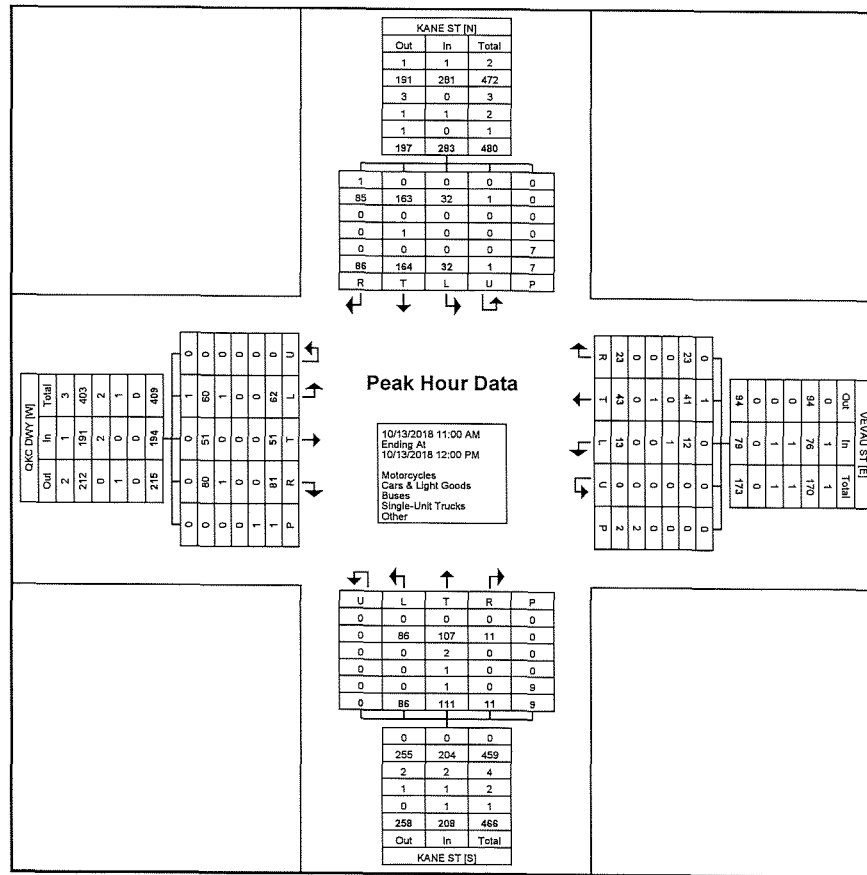
Count Name: 18-550 Kane St-Vevau St 101318
 6am-6pm
 Site Code: 18-550 Maui Bus Hub
 Start Date: 10/13/2018
 Page No: 4

Turning Movement Peak Hour Data (11:00 AM)

Start Time	KANE ST Southbound						VEVAU ST Westbound						KANE ST Northbound						QKC DWY Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
11:00 AM	23	36	6	0	3	65	6	13	1	0	0	20	1	31	32	0	1	64	20	12	18	0	1	50	199
11:15 AM	17	43	8	0	1	68	4	10	3	0	1	17	3	31	17	0	1	51	20	10	10	0	0	40	176
11:30 AM	19	40	11	0	2	70	5	10	4	0	0	19	5	25	18	0	4	48	23	16	20	0	0	59	196
11:45 AM	27	45	7	1	1	80	8	10	5	0	1	23	2	24	19	0	3	45	18	13	14	0	0	45	193
Total	86	164	32	1	7	283	23	43	13	0	2	79	11	111	86	0	9	208	81	51	62	0	1	194	764
Approach %	30.4	58.0	11.3	0.4	-	-	29.1	54.4	16.5	0.0	-	-	5.3	53.4	41.3	0.0	-	-	41.8	26.3	32.0	0.0	-	-	-
Total %	11.3	21.5	4.2	0.1	-	37.0	3.0	5.6	1.7	0.0	-	10.3	1.4	14.5	11.3	0.0	-	27.2	10.6	6.7	8.1	0.0	-	25.4	-
PHF	0.796	0.911	0.727	0.250	-	0.884	0.719	0.827	0.650	0.000	-	0.859	0.550	0.895	0.672	0.000	-	0.813	0.880	0.797	0.775	0.000	-	0.822	0.960
Motorcycles	1	0	0	0	-	1	0	1	0	0	-	1	0	0	0	0	-	0	0	0	1	0	-	1	3
% Motorcycles	1.2	0.0	0.0	0.0	-	0.4	0.0	2.3	0.0	-	-	1.3	0.0	0.0	0.0	-	-	0.0	0.0	0.0	1.6	-	-	0.5	0.4
Cars & Light Goods	85	163	32	1	-	281	23	41	12	0	-	76	11	107	86	0	-	204	80	51	60	0	-	191	752
% Cars & Light Goods	98.8	99.4	100.0	100.0	-	99.3	100.0	95.3	92.3	-	-	96.2	100.0	96.4	100.0	-	-	98.1	98.8	100.0	96.8	-	-	98.5	98.4
Buses	0	0	0	0	-	0	0	0	1	0	-	1	0	2	0	0	-	2	1	0	1	0	-	2	5
% Buses	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	7.7	-	-	1.3	0.0	1.8	0.0	-	-	1.0	1.2	0.0	1.6	-	-	1.0	0.7
Single-Unit Trucks	0	1	0	0	-	1	0	1	0	0	-	1	0	1	0	0	-	1	0	0	0	0	-	0	3
% Single-Unit Trucks	0.0	0.6	0.0	0.0	-	0.4	0.0	2.3	0.0	-	-	1.3	0.0	0.9	0.0	-	-	0.5	0.0	0.0	0.0	-	-	0.0	0.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.9	0.0	-	-	0.5	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	100.0	-	-
Pedestrians	-	-	-	-	7	-	-	-	-	2	-	-	-	-	-	-	9	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	0.0	-	-

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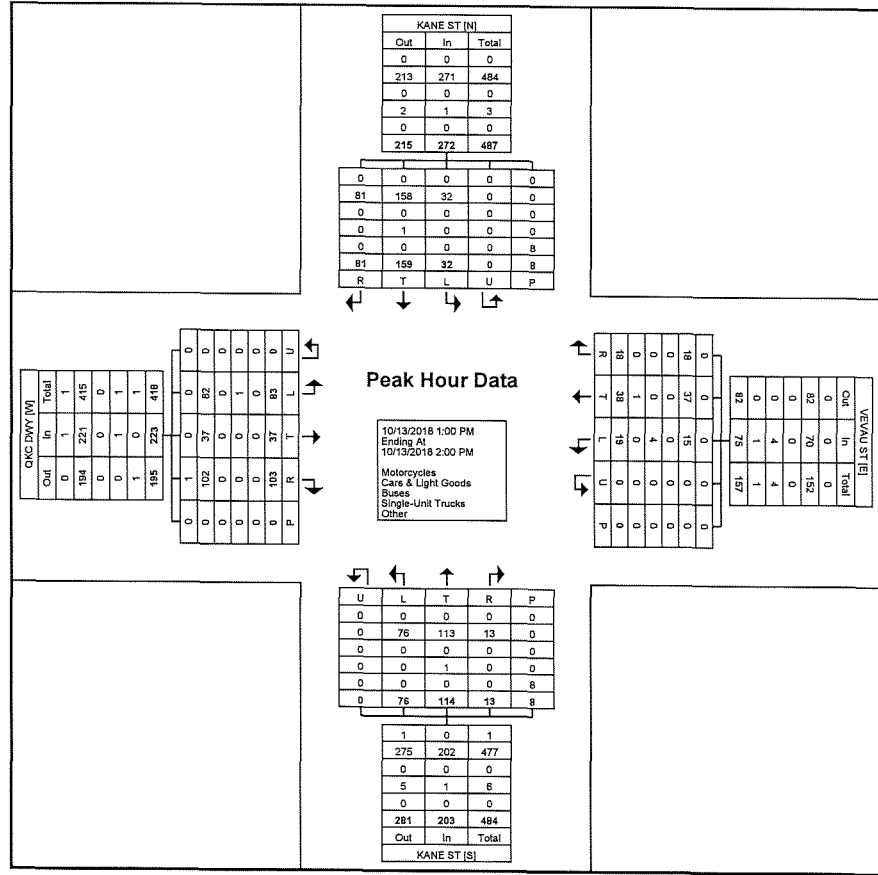
Count Name: 18-550 Kane St-Vevau St 101318
 6am-6pm
 Site Code: 18-550 Maui Bus Hub
 Start Date: 10/13/2018
 Page No: 5



Turning Movement Peak Hour Data Plot (11:00 AM)

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Count Name: 18-550 Kane St-Vevau St 101318
 6am-6pm
 Site Code: 18-550 Maui Bus Hub
 Start Date: 10/13/2018
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Turning Movement Peak Hour Data Plot (1:00 PM)

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Count Name: 18-550 Kane St-Vevau St 101318
6am-6pm
Site Code: 18-550 Maui Bus Hub
Start Date: 10/13/2018
Page No: 8

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Count Name: 18-550 Kane St-Vevau St 101618
 6am-6pm
 Site Code: 18-550 Maui Bus Hub
 Start Date: 10/16/2018
 Page No: 6

Turning Movement Peak Hour Data (4:15 PM)

Start Time	KANE STREET Southbound						VEVAU STREET Westbound						KANE STREET Northbound						QKC DWY Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
4:15 PM	12	53	7	0	3	72	10	11	4	0	0	25	3	41	21	0	2	65	24	10	15	0	0	49	211
4:30 PM	7	55	10	0	2	72	11	8	10	0	0	29	4	38	20	0	3	62	23	14	12	0	2	49	212
4:45 PM	11	52	8	0	0	71	10	8	6	0	2	24	4	35	14	0	1	53	15	12	16	0	0	43	191
5:00 PM	11	58	6	0	2	75	10	7	7	0	0	24	5	30	10	0	4	45	18	13	12	0	0	43	187
Total	41	218	31	0	7	290	41	34	27	0	2	102	16	144	65	0	10	225	80	49	55	0	2	184	801
Approach %	14.1	75.2	10.7	0.0	-	-	40.2	33.3	26.5	0.0	-	-	7.1	64.0	28.9	0.0	-	-	43.5	26.6	29.9	0.0	-	-	-
Total %	5.1	27.2	3.9	0.0	-	36.2	5.1	4.2	3.4	0.0	-	12.7	2.0	18.0	8.1	0.0	-	28.1	10.0	6.1	6.9	0.0	-	23.0	-
PHF	0.854	0.940	0.775	0.000	-	0.967	0.932	0.773	0.675	0.000	-	0.879	0.800	0.878	0.774	0.000	-	0.865	0.833	0.875	0.859	0.000	-	0.939	0.945
Motorcycles	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	0	1	0	0	-	1	3
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	5.9	0.0	-	-	2.0	0.0	0.0	0.0	-	-	0.0	0.0	2.0	0.0	-	-	0.5	0.4
Cars & Light Goods	40	214	31	0	-	285	40	30	27	0	-	97	16	138	63	0	-	217	80	48	54	0	-	182	781
% Cars & Light Goods	97.6	98.2	100.0	-	-	98.3	97.6	88.2	100.0	-	-	95.1	100.0	95.8	96.9	-	-	96.4	100.0	98.0	98.2	-	-	98.9	97.5
Buses	0	1	0	0	-	1	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	3
% Buses	0.0	0.5	0.0	-	-	0.3	0.0	0.0	0.0	-	-	0.0	0.0	1.4	0.0	-	-	0.9	0.0	0.0	0.0	-	-	0.0	0.4
Single-Unit Trucks	1	1	0	0	-	2	1	0	0	0	-	1	0	3	1	0	-	4	0	0	1	0	-	1	8
% Single-Unit Trucks	2.4	0.5	0.0	-	-	0.7	2.4	0.0	0.0	-	-	1.0	0.0	2.1	1.5	-	-	1.8	0.0	0.0	1.8	-	-	0.5	1.0
Articulated Trucks	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Articulated Trucks	0.0	0.5	0.0	-	-	0.3	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Road	0	1	0	0	-	1	0	2	0	0	-	2	0	1	1	0	-	2	0	0	0	0	-	0	5
% Bicycles on Road	0.0	0.5	0.0	-	-	0.3	0.0	5.9	0.0	-	-	2.0	0.0	0.7	1.5	-	-	0.9	0.0	0.0	0.0	-	-	0.0	0.6
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	7	-	-	-	-	-	2	-	-	-	-	-	10	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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Count Name: 18-550 Kane St-Vevau St 101618
6am-6pm
Site Code: 18-550 Maui Bus Hub
Start Date: 10/16/2018
Page No: 8



APPENDIX C

SPEED STUDY

Austin Tsutsumi & Associates

501 Sumner Street, Suite 521
Honolulu, HI 96817-5031

Phone: (808) 533-3646 Fax: (808) 526-1267

SPEED_Kane St
Site Code: KANE

Date Start: 16-Oct-18
Date End: 16-Oct-18

NORTHBOUND, SOUTHBOUND

Start Time	1 3	4 6	7 9	10 12	13 15	16 18	19 21	22 24	25 27	28 30	31 33	34 36	37 39	40 999	Total
10/16/18	0	0	0	0	0	1	0	3	1	1	0	0	0	0	6
00:15	0	0	0	0	0	0	0	1	3	0	0	1	0	0	5
00:30	0	0	0	0	0	0	1	3	2	1	4	1	0	0	12
00:45	0	0	0	0	0	0	0	1	0	2	1	0	0	0	4
01:00	0	0	0	0	0	1	1	8	6	4	5	2	0	0	27
01:15	0	0	0	1	0	0	3	0	0	0	1	0	0	0	5
01:30	0	0	0	0	0	0	1	0	0	2	0	1	0	0	4
01:45	0	0	1	0	1	0	0	2	0	3	0	0	0	0	2
02:00	0	0	1	1	1	0	4	3	0	6	1	1	0	0	18
02:15	0	0	0	0	0	0	3	0	1	3	0	0	0	0	7
02:30	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
02:45	0	0	0	0	0	0	0	2	0	0	1	0	0	0	3
03:00	0	0	0	0	0	0	5	4	1	3	1	0	0	0	14
03:15	0	0	0	0	0	0	2	0	0	1	0	0	0	0	3
03:30	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
03:45	0	0	0	0	0	1	2	1	0	0	1	0	0	0	5
04:00	0	0	0	0	0	2	4	2	1	3	3	1	0	0	16
04:15	1	0	0	0	1	3	2	0	3	1	1	0	0	1	13
04:30	0	0	0	1	0	0	0	1	1	2	0	1	0	0	6
04:45	0	1	0	2	0	0	3	1	0	1	1	1	0	0	10
05:00	0	0	0	0	0	0	1	2	2	1	3	0	0	0	9
05:15	1	1	0	3	1	3	6	4	6	5	5	2	0	1	38
05:30	0	0	0	0	0	1	3	2	4	2	1	2	0	0	15
05:45	0	0	0	0	0	2	1	5	3	3	2	0	0	0	16
06:00	0	0	0	0	0	2	0	3	4	2	3	1	0	0	15
06:15	0	0	0	1	1	0	2	2	4	6	3	0	1	0	20
06:30	0	0	0	1	1	5	6	12	15	13	9	3	1	0	66
06:45	0	0	0	2	6	2	6	4	9	5	2	2	0	0	38
07:00	0	0	0	0	3	2	1	6	7	7	2	0	0	0	28
07:15	1	0	0	0	6	7	5	8	7	6	9	0	1	0	50
07:30	2	0	1	5	12	7	5	10	7	13	2	1	0	0	65
07:45	3	0	1	7	27	18	17	28	30	31	15	3	1	0	181
08:00	1	0	3	5	5	8	13	13	16	16	10	7	1	1	99
08:15	1	0	0	3	6	8	3	13	17	12	11	2	1	0	77
08:30	0	0	0	0	6	10	14	27	12	13	5	4	3	0	94
08:45	1	1	3	2	4	7	9	16	23	31	10	2	2	1	112
09:00	3	1	6	10	21	33	39	69	68	72	36	15	7	2	382
09:15	6	1	2	2	11	9	16	18	21	15	4	3	0	0	108
09:30	1	0	0	1	3	9	7	16	16	7	9	5	1	0	75
09:45	1	0	0	0	5	10	11	11	13	16	7	0	0	0	74
10:00	9	1	2	7	26	44	41	60	66	50	29	10	1	1	347
10:15	0	0	2	2	5	8	7	9	17	18	6	1	1	0	76
10:30	1	0	1	3	9	12	10	16	23	10	1	0	0	0	86
10:45	3	1	0	4	1	6	14	10	22	9	6	2	0	0	78
11:00	2	0	0	2	4	11	22	13	11	18	8	2	0	0	93
11:15	6	1	3	11	19	37	53	48	73	55	21	5	1	0	333
11:30	4	0	1	2	9	14	20	24	14	8	9	1	0	0	106
11:45	4	0	5	0	5	15	16	26	21	15	4	0	1	0	112
12:00	1	0	2	7	8	7	17	20	21	9	6	1	1	1	101
12:15	3	0	1	5	8	12	15	26	15	10	6	2	1	0	104
12:30	12	0	9	14	30	48	68	96	71	42	25	4	3	1	423
12:45	2	0	0	2	11	17	14	18	17	11	3	1	0	0	96
13:00	1	0	0	3	8	8	20	19	19	17	7	1	0	0	103
13:15	4	0	0	1	9	12	11	24	23	12	4	0	1	0	101
13:30	2	1	1	4	6	15	14	11	17	19	8	2	0	0	100
13:45	9	1	1	10	34	52	59	72	76	59	22	4	1	0	400
Total	43	5	23	64	160	243	303	406	413	343	172	50	15	5	2245

Austin Tsutsumi & Associates

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SPEED_Kane St
Site Code: KANE

Date Start: 16-Oct-18
Date End: 16-Oct-18

NORTHBOUND, SOUTHBOUND

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	999	Total
12 PM	1	0	2	4	4	15	19	18	23	11	5	3	0	0	0	105
12:15	2	0	2	3	7	17	12	14	19	14	3	4	0	0	0	97
12:30	2	0	1	5	13	20	14	20	19	9	5	0	0	0	0	108
12:45	2	2	0	1	4	10	13	12	17	17	4	3	0	2	0	87
13:00	7	2	5	13	28	62	58	64	78	51	17	10	0	2	0	397
13:15	0	1	4	3	12	7	9	19	19	14	3	2	1	0	0	94
13:30	1	1	0	5	8	8	17	33	24	15	11	1	0	0	0	124
13:45	2	0	0	3	9	8	9	21	18	13	8	1	0	0	0	92
14:00	2	0	0	4	6	5	11	15	19	21	8	5	0	0	0	96
14:15	5	2	4	15	35	28	46	88	80	63	30	9	1	0	0	406
14:30	0	0	1	4	2	10	18	18	20	22	12	1	3	0	0	111
14:45	4	4	6	6	16	18	18	21	11	10	4	0	0	0	0	118
15:00	4	0	1	3	14	23	23	28	16	14	3	4	0	0	0	133
15:15	5	0	0	2	19	12	20	26	22	17	7	2	1	1	1	134
15:30	13	4	8	15	51	63	79	93	69	63	26	7	4	1	0	496
15:45	1	0	0	2	11	18	11	25	19	15	10	0	1	2	0	115
16:00	2	0	0	2	11	13	14	24	17	11	7	2	0	0	0	103
16:15	1	2	0	3	7	8	18	19	17	13	8	2	1	0	0	99
16:30	3	2	5	3	10	18	18	18	17	14	7	1	0	0	0	116
16:45	7	4	5	10	39	57	61	86	70	53	32	5	2	2	0	433
17:00	6	1	1	3	17	17	17	19	15	18	9	2	1	0	0	126
17:15	5	0	0	2	14	19	22	20	25	13	4	3	1	0	0	128
17:30	2	3	3	8	15	19	19	28	27	16	9	4	1	1	0	155
17:45	11	6	3	6	21	20	23	16	14	10	3	0	0	0	0	133
18:00	24	10	7	19	67	75	81	83	81	57	25	9	3	1	0	542
18:15	5	2	5	12	17	18	16	23	13	11	9	0	0	0	0	131
18:30	1	1	0	10	13	17	13	22	22	12	10	1	1	0	0	123
18:45	3	0	4	4	15	8	16	18	23	19	5	1	2	1	0	119
19:00	2	0	3	5	16	21	17	21	16	21	3	1	0	0	0	126
19:15	11	3	12	31	61	64	62	84	74	63	27	3	3	1	0	499
19:30	4	0	2	5	10	18	23	18	17	7	6	2	1	0	0	113
19:45	3	1	2	6	17	30	19	13	17	4	8	0	2	0	0	122
20:00	2	0	0	3	9	18	16	22	13	9	6	1	0	0	0	99
20:15	4	0	0	4	11	13	22	30	25	12	4	0	0	0	0	125
20:30	13	1	4	18	47	79	80	83	72	32	24	3	3	0	0	459
20:45	1	1	0	9	11	13	6	22	19	9	3	1	1	0	0	96
21:00	2	0	0	2	13	14	16	15	12	5	4	0	0	0	0	83
21:15	1	0	2	0	13	3	10	6	11	6	2	2	1	1	0	58
21:30	0	0	1	3	6	12	11	13	15	6	2	0	0	1	0	70
21:45	4	1	3	14	43	42	43	56	57	26	11	3	2	2	0	307
22:00	0	0	1	2	7	9	18	14	17	9	1	1	0	0	0	79
22:15	2	0	1	3	7	11	22	14	13	9	1	1	0	0	0	84
22:30	1	0	0	1	4	3	8	8	17	6	1	0	0	1	0	50
22:45	1	0	0	3	7	8	3	8	9	6	6	1	0	0	0	52
23:00	4	0	2	9	25	31	51	44	56	30	9	3	0	1	0	265
23:15	1	1	0	2	12	4	9	11	6	4	2	1	1	0	0	54
23:30	0	0	1	0	3	5	4	4	8	10	3	0	0	0	0	38
23:45	0	0	0	0	5	8	2	8	12	3	3	0	0	0	0	41
Total	1	0	0	2	3	3	3	7	9	5	3	1	0	0	0	37
22:00	2	1	1	4	23	20	18	30	35	22	11	2	1	0	0	170
22:15	1	0	2	3	3	5	3	6	4	5	3	1	0	1	0	37
22:30	0	0	0	3	4	3	8	2	7	1	2	2	0	0	0	32
22:45	0	0	0	2	0	0	2	2	0	3	1	2	0	1	0	13
23:00	0	0	0	3	2	2	2	4	4	6	3	0	0	0	0	24
23:15	1	0	2	8	10	10	15	14	15	15	9	5	0	2	0	106
23:30	0	0	0	2	2	2	1	2	2	4	1	0	0	0	0	16
23:45	0	0	0	1	4	2	0	4	3	1	0	0	0	0	0	15
Total	0	0	0	1	1	3	0	0	0	1	1	0	0	0	0	7
Total	0	0	0	2	1	0	0	1	3	1	1	1	0	0	0	9
Total	0	0	0	3	6	10	3	2	7	11	4	1	0	0	0	47
Grand Total	91	28	53	159	435	541	597	727	694	486	225	60	19	12	0	4127

15th Percentile : 14 MPH
 50th Percentile : 22 MPH
 85th Percentile : 28 MPH
 95th Percentile : 31 MPH

Stats
 Mean Speed(Average) : 22 MPH
 10 MPH Pace Speed : 19-28 MPH
 Number in Pace : 3416
 Percent in Pace : 53.6%

Number of Vehicles > 55 MPH :	0
Percent of Vehicles > 55 MPH :	0.0%



APPENDIX D

LEVEL OF SERVICE CALCULATIONS



APPENDIX D

























LEVEL OF SERVICE CALCULATIONS

- Existing Conditions AM
-
-

HCM 6th Signalized Intersection Summary

1: Kane Street/Kahului Beach Road & Kaahumanu Ave

12/10/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	659	64	17	1071	855	55	133	3	971	128	70
Future Volume (veh/h)	23	659	64	17	1071	855	55	133	3	971	128	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	716	0	18	1164	0	60	145	0	1154	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	1406		33	1390		172	180		1251	0	
Arrive On Green	0.02	0.40	0.00	0.02	0.39	0.00	0.10	0.10	0.00	0.35	0.00	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	3563	0	1585
Grp Volume(v), veh/h	25	716	0	18	1164	0	60	145	0	1154	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	1.8	19.8	0.0	1.3	38.5	0.0	4.1	9.9	0.0	40.4	0.0	0.0
Cycle Q Clear(g_c), s	1.8	19.8	0.0	1.3	38.5	0.0	4.1	9.9	0.0	40.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	1406		33	1390		172	180		1251	0	
V/C Ratio(X)	0.61	0.51		0.55	0.84		0.35	0.80		0.92	0.00	
Avail Cap(c_a), veh/h	144	1406		144	1390		281	295		1384	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.84	0.84	0.00	1.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	62.9	29.7	0.0	63.3	35.8	0.0	54.9	57.5	0.0	40.5	0.0	0.0
Incr Delay (d2), s/veh	14.0	1.3	0.0	11.5	5.2	0.0	1.2	8.1	0.0	9.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.8	0.0	0.7	17.5	0.0	1.9	5.1	0.0	19.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.0	31.0	0.0	74.8	41.0	0.0	56.1	65.7	0.0	50.4	0.0	0.0
LnGrp LOS	E	C		E	D		E	E		D	A	
Approach Vol, veh/h		741	A		1182	A		205	A		1154	A
Approach Delay, s/veh		32.6			41.5			62.9			50.4	
Approach LOS		C			D			E			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	55.9		50.1	7.5	55.4		17.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.5	30.5		50.5	10.5	30.5		20.5				
Max Q Clear Time (g_c+I1), s	3.3	21.8		42.4	3.8	40.5		11.9				
Green Ext Time (p_c), s	0.0	3.2		3.2	0.0	0.0		0.6				
Intersection Summary												
HCM 6th Ctrl Delay			44.0									
HCM 6th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th TWSC
2: Kane Street & Vevau Street

12/10/2018

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕		↕	↕		↕	↕	↕
Traffic Vol, veh/h	9	29	32	9	20	30	29	151	7	27	171	15
Future Vol, veh/h	9	29	32	9	20	30	29	151	7	27	171	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	75	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	32	35	10	22	33	32	164	8	29	186	16

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	512	488	101	399	492	168	202	0	0	172	0	0
Stage 1	252	252	-	232	232	-	-	-	-	-	-	-
Stage 2	260	236	-	167	260	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	458	479	935	548	477	875	1369	-	-	1404	-	-
Stage 1	731	698	-	770	712	-	-	-	-	-	-	-
Stage 2	744	709	-	819	692	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	411	458	935	483	456	875	1369	-	-	1404	-	-
Mov Cap-2 Maneuver	411	458	-	483	456	-	-	-	-	-	-	-
Stage 1	714	683	-	752	696	-	-	-	-	-	-	-
Stage 2	678	693	-	737	677	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	11.6	1.2	1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1369	-	-	446	935	610	1404	-	-
HCM Lane V/C Ratio	0.023	-	-	0.093	0.037	0.105	0.021	-	-
HCM Control Delay (s)	7.7	-	-	13.9	9	11.6	7.6	-	-
HCM Lane LOS	A	-	-	B	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.1	0.4	0.1	-	-

HCM 6th TWSC
4: School Street & Vevau Street

12/10/2018

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	56	7	4	52	5	3
Future Vol, veh/h	56	7	4	52	5	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	8	4	57	5	3

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	69	0	130
Stage 1	-	-	-	-	65
Stage 2	-	-	-	-	65
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1532	-	864
Stage 1	-	-	-	-	958
Stage 2	-	-	-	-	958
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1532	-	861
Mov Cap-2 Maneuver	-	-	-	-	861
Stage 1	-	-	-	-	955
Stage 2	-	-	-	-	958

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	908	-	-	1532	-
HCM Lane V/C Ratio	0.01	-	-	0.003	-
HCM Control Delay (s)	9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	14	9	43	7	6	4	23	236	24	13	188	26
Future Vol, veh/h	14	9	43	7	6	4	23	236	24	13	188	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	120	-	-	350	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	10	47	8	7	4	25	257	26	14	204	28




















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	572	579	218	595	580	270	232	0	0	283	0	0
Stage 1	246	246	-	320	320	-	-	-	-	-	-	-
Stage 2	326	333	-	275	260	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	431	426	822	416	426	769	1336	-	-	1279	-	-
Stage 1	758	703	-	692	652	-	-	-	-	-	-	-
Stage 2	687	644	-	731	693	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	414	413	822	376	413	769	1336	-	-	1279	-	-
Mov Cap-2 Maneuver	414	413	-	376	413	-	-	-	-	-	-	-
Stage 1	744	695	-	679	640	-	-	-	-	-	-	-
Stage 2	664	632	-	672	685	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	13.5	0.6	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1336	-	-	612	443	1279	-	-
HCM Lane V/C Ratio	0.019	-	-	0.117	0.042	0.011	-	-
HCM Control Delay (s)	7.7	-	-	11.7	13.5	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.1	0	-	-

HCM 6th Signalized Intersection Summary
6: Lono Street & Kaahumanu Ave

12/10/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	1455	131	20	1726	12	169	14	33	22	12	8
Future Volume (veh/h)	16	1455	131	20	1726	12	169	14	33	22	12	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	17	1582	142	22	1876	13	184	15	36	24	13	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	31	3127	280	38	3449	24	265	17	347	65	33	14
Arrive On Green	0.04	1.00	1.00	0.02	0.66	0.66	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	4768	428	1781	5232	36	967	79	1583	105	150	62
Grp Volume(v), veh/h	17	1129	595	22	1221	668	199	0	36	46	0	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1792	1781	1702	1864	1046	0	1583	317	0	0
Q Serve(g_s), s	1.2	0.0	0.0	1.6	24.8	24.8	0.0	0.0	2.4	1.7	0.0	0.0
Cycle Q Clear(g_c), s	1.2	0.0	0.0	1.6	24.8	24.8	24.7	0.0	2.4	26.4	0.0	0.0
Prop In Lane	1.00		0.24	1.00		0.02	0.92		1.00	0.52		0.20
Lane Grp Cap(c), veh/h	31	2232	1175	38	2244	1229	283	0	347	112	0	0
V/C Ratio(X)	0.54	0.51	0.51	0.59	0.54	0.54	0.70	0.00	0.10	0.41	0.00	0.00
Avail Cap(c_a), veh/h	130	2232	1175	130	2244	1229	381	0	457	216	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	62.2	0.0	0.0	63.1	11.8	11.8	49.3	0.0	40.5	48.5	0.0	0.0
Incr Delay (d2), s/veh	8.7	0.5	1.0	13.6	1.0	1.7	3.7	0.0	0.1	2.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.2	0.3	0.9	9.2	10.4	6.5	0.0	0.9	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.9	0.5	1.0	76.7	12.7	13.5	53.0	0.0	40.7	50.9	0.0	0.0
LnGrp LOS	E	A	A	E	B	B	D	A	D	D	A	A
Approach Vol, veh/h		1741			1911			235			46	
Approach Delay, s/veh		1.4			13.7			51.1			50.9	
Approach LOS		A			B			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	89.8		33.0	6.8	90.2		33.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	69.5		37.5	9.5	69.5		37.5				
Max Q Clear Time (g_c+I1), s	3.6	2.0		26.7	3.2	26.8		28.4				
Green Ext Time (p_c), s	0.0	21.7		0.9	0.0	21.5		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				10.9								
HCM 6th LOS				B								



APPENDIX D LEVEL OF SERVICE CALCULATIONS

- Existing Conditions PM
-

HCM 6th Signalized Intersection Summary

1: Kane Street/Kahului Beach Road & Kaahumanu Ave

12/10/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	900	102	50	828	1004	51	155	30	966	169	89
Future Volume (veh/h)	32	900	102	50	828	1004	51	155	30	966	169	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	978	0	54	900	0	55	168	0	1181	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	49	1265		70	1307		194	203		1273	0	
Arrive On Green	0.03	0.36	0.00	0.01	0.12	0.00	0.11	0.11	0.00	0.36	0.00	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	3563	0	1585
Grp Volume(v), veh/h	35	978	0	54	900	0	55	168	0	1181	0	0
Grp Sat Flow(s), veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	2.5	31.8	0.0	3.9	31.6	0.0	3.7	11.4	0.0	41.4	0.0	0.0
Cycle Q Clear(g_c), s	2.5	31.8	0.0	3.9	31.6	0.0	3.7	11.4	0.0	41.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	1265		70	1307		194	203		1273	0	
V/C Ratio(X)	0.71	0.77		0.77	0.69		0.28	0.83		0.93	0.00	
Avail Cap(c_a), veh/h	212	1265		212	1307		281	295		1384	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.81	0.81	0.00	1.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	62.7	37.2	0.0	63.6	50.0	0.0	53.3	56.7	0.0	40.2	0.0	0.0
Incr Delay (d2), s/veh	17.3	4.6	0.0	13.2	2.4	0.0	0.8	11.9	0.0	10.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	14.6	0.0	2.1	15.6	0.0	1.7	6.1	0.0	19.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.0	41.8	0.0	76.7	52.4	0.0	54.1	68.6	0.0	50.7	0.0	0.0
LnGrp LOS	E	D		E	D		D	E		D	A	
Approach Vol, veh/h		1013	A		954	A		223	A		1181	A
Approach Delay, s/veh		43.1			53.8			65.0			50.7	
Approach LOS		D			D			E			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	50.8		51.0	8.1	52.3		18.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	15.5	25.5		50.5	15.5	25.5		20.5				
Max Q Clear Time (g_c+I1), s	5.9	33.8		43.4	4.5	33.6		13.4				
Green Ext Time (p_c), s	0.1	0.0		3.0	0.0	0.0		0.6				

Intersection Summary

HCM 6th Ctrl Delay	50.2
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
2: Kane Street & Vevau Street

12/10/2018

Intersection												
Int Delay, s/veh	8.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕		↕	↕		↕	↕	
Traffic Vol, veh/h	55	77	78	23	34	42	69	152	14	60	205	40
Future Vol, veh/h	55	77	78	23	34	42	69	152	14	60	205	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	75	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	84	85	25	37	46	75	165	15	65	223	43

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	739	705	133	607	719	173	266	0	0	180	0	0
Stage 1	375	375	-	323	323	-	-	-	-	-	-	-
Stage 2	364	330	-	284	396	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	319	360	892	394	354	870	1296	-	-	1394	-	-
Stage 1	619	616	-	688	650	-	-	-	-	-	-	-
Stage 2	654	645	-	700	603	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	254	323	892	264	318	870	1296	-	-	1394	-	-
Mov Cap-2 Maneuver	254	323	-	264	318	-	-	-	-	-	-	-
Stage 1	583	587	-	648	612	-	-	-	-	-	-	-
Stage 2	549	608	-	518	575	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	21.8		16.9		2.3		1.5	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1296	-	-	290	892	409	1394	-	-
HCM Lane V/C Ratio	0.058	-	-	0.495	0.095	0.263	0.047	-	-
HCM Control Delay (s)	7.9	-	-	29	9.5	16.9	7.7	-	-
HCM Lane LOS	A	-	-	D	A	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2.6	0.3	1	0.1	-	-

HCM 6th TWSC
4: School Street & Vevau Street

12/10/2018

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↕		↔
Traffic Vol, veh/h	128	24	12	77	20	19
Future Vol, veh/h	128	24	12	77	20	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	139	26	13	84	22	21

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	165	0	262
Stage 1	-	-	-	-	152
Stage 2	-	-	-	-	110
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1413	-	727
Stage 1	-	-	-	-	876
Stage 2	-	-	-	-	915
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1413	-	720
Mov Cap-2 Maneuver	-	-	-	-	720
Stage 1	-	-	-	-	867
Stage 2	-	-	-	-	915

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	795	-	-	1413	-
HCM Lane V/C Ratio	0.053	-	-	0.009	-
HCM Control Delay (s)	9.8	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

HCM 6th TWSC
5: Lono Street & Vevau Street

12/10/2018

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	31	19	105	16	7	10	49	157	17	6	202	39
Future Vol, veh/h	31	19	105	16	7	10	49	157	17	6	202	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	120	-	-	350	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	34	21	114	17	8	11	53	171	18	7	220	42

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	551	550	241	609	562	180	262	0	0	189	0	0
Stage 1	255	255	-	286	286	-	-	-	-	-	-	-
Stage 2	296	295	-	323	276	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	445	443	798	407	436	863	1302	-	-	1385	-	-
Stage 1	749	696	-	721	675	-	-	-	-	-	-	-
Stage 2	712	669	-	689	682	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	418	423	798	324	416	863	1302	-	-	1385	-	-
Mov Cap-2 Maneuver	418	423	-	324	416	-	-	-	-	-	-	-
Stage 1	718	693	-	691	647	-	-	-	-	-	-	-
Stage 2	666	642	-	570	679	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13	14.3	1.7	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1302	-	-	618	424	1385	-	-
HCM Lane V/C Ratio	0.041	-	-	0.273	0.085	0.005	-	-
HCM Control Delay (s)	7.9	-	-	13	14.3	7.6	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.1	0.3	0	-	-

HCM 6th Signalized Intersection Summary

6: Lono Street & Kaahumanu Ave

12/10/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑	↗		↕	
Traffic Volume (veh/h)	13	1654	123	59	1820	29	154	11	36	26	21	10
Future Volume (veh/h)	13	1654	123	59	1820	29	154	11	36	26	21	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	1798	134	64	1978	32	167	12	39	28	23	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	27	3011	224	82	3373	55	251	14	361	64	47	15
Arrive On Green	0.02	0.83	0.83	0.05	0.65	0.65	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1781	4849	360	1781	5176	84	860	62	1575	103	206	67
Grp Volume(v), veh/h	14	1261	671	64	1300	710	179	0	39	62	0	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1805	1781	1702	1855	922	0	1575	376	0	0
Q Serve(g_s), s	1.0	16.5	16.6	4.6	28.0	28.0	0.0	0.0	2.5	2.3	0.0	0.0
Cycle Q Clear(g_c), s	1.0	16.5	16.6	4.6	28.0	28.0	25.4	0.0	2.5	27.7	0.0	0.0
Prop In Lane	1.00		0.20	1.00		0.05	0.93		1.00	0.45		0.18
Lane Grp Cap(c), veh/h	27	2114	1121	82	2219	1209	265	0	361	126	0	0
V/C Ratio(X)	0.51	0.60	0.60	0.78	0.59	0.59	0.68	0.00	0.11	0.49	0.00	0.00
Avail Cap(c_a), veh/h	130	2114	1121	130	2219	1209	348	0	454	219	0	0
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.27	0.27	0.27	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	63.2	5.7	5.7	61.4	12.8	12.8	48.4	0.0	39.6	48.0	0.0	0.0
Incr Delay (d2), s/veh	4.0	0.3	0.6	14.6	1.1	2.1	3.3	0.0	0.1	2.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.9	4.2	2.4	10.5	11.8	5.8	0.0	1.0	2.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.2	6.1	6.4	76.0	13.9	14.9	51.7	0.0	39.7	50.9	0.0	0.0
LnGrp LOS	E	A	A	E	B	B	D	A	D	D	A	A
Approach Vol, veh/h		1946			2074			218				62
Approach Delay, s/veh		6.6			16.1			49.6				50.9
Approach LOS		A			B			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	85.2		34.3	6.5	89.2		34.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	69.5		37.5	9.5	69.5		37.5				
Max Q Clear Time (g_c+I1), s	6.6	18.6		27.4	3.0	30.0		29.7				
Green Ext Time (p_c), s	0.0	24.3		0.7	0.0	22.6		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			14.0									
HCM 6th LOS			B									



APPENDIX D LEVEL OF SERVICE CALCULATIONS

- Base Year 2021 AM
-

HCM 6th Signalized Intersection Summary

1: Kane Street/Kahului Beach Road & Kaahumanu Ave

12/10/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	675	85	20	1095	875	75	155	10	995	150	75
Future Volume (veh/h)	25	675	85	20	1095	875	75	155	10	995	150	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	734	0	22	1190	0	82	168	0	1198	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	43	1317		38	1307		194	203		1287	0	
Arrive On Green	0.02	0.37	0.00	0.02	0.37	0.00	0.11	0.11	0.00	0.36	0.00	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	3563	0	1585
Grp Volume(v), veh/h	27	734	0	22	1190	0	82	168	0	1198	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	2.0	21.3	0.0	1.6	41.4	0.0	5.6	11.4	0.0	42.1	0.0	0.0
Cycle Q Clear(g_c), s	2.0	21.3	0.0	1.6	41.4	0.0	5.6	11.4	0.0	42.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	43	1317		38	1307		194	203		1287	0	
V/C Ratio(X)	0.63	0.56		0.59	0.91		0.42	0.83		0.93	0.00	
Avail Cap(c_a), veh/h	144	1317		144	1307		281	295		1384	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.79	0.79	0.00	1.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	62.9	32.4	0.0	63.1	39.1	0.0	54.1	56.7	0.0	40.0	0.0	0.0
Incr Delay (d2), s/veh	14.4	1.7	0.0	10.9	9.0	0.0	1.5	11.9	0.0	11.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.5	0.0	0.8	19.5	0.0	2.6	6.1	0.0	20.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.3	34.2	0.0	74.0	48.1	0.0	55.6	68.7	0.0	51.0	0.0	0.0
LnGrp LOS	E	C		E	D		E	E		D	A	
Approach Vol, veh/h		761	A		1212	A		250	A		1198	A
Approach Delay, s/veh		35.7			48.6			64.4			51.0	
Approach LOS		D			D			E			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	52.7		51.5	7.6	52.3		18.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.5	30.5		50.5	10.5	30.5		20.5				
Max Q Clear Time (g_c+I1), s	3.6	23.3		44.1	4.0	43.4		13.4				
Green Ext Time (p_c), s	0.0	2.9		2.9	0.0	0.0		0.6				

Intersection Summary

HCM 6th Ctrl Delay	47.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
2: Kane Street & Vevau Street

12/10/2018

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	10	40	40	15	25	40	40	180	10	45	190	20
Future Vol, veh/h	10	40	40	15	25	40	40	180	10	45	190	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	75	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	43	43	16	27	43	43	196	11	49	207	22

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	639	609	115	511	615	202	229	0	0	207	0	0
Stage 1	316	316	-	288	288	-	-	-	-	-	-	-
Stage 2	323	293	-	223	327	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	374	409	916	459	406	838	1338	-	-	1363	-	-
Stage 1	670	654	-	719	673	-	-	-	-	-	-	-
Stage 2	688	670	-	760	647	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	318	382	916	379	379	838	1338	-	-	1363	-	-
Mov Cap-2 Maneuver	318	382	-	379	379	-	-	-	-	-	-	-
Stage 1	649	630	-	696	651	-	-	-	-	-	-	-
Stage 2	605	649	-	650	624	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.2	13.3	1.4	1.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1338	-	-	367	916	522	1363	-	-
HCM Lane V/C Ratio	0.032	-	-	0.148	0.047	0.167	0.036	-	-
HCM Control Delay (s)	7.8	-	-	16.5	9.1	13.3	7.7	-	-
HCM Lane LOS	A	-	-	C	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.1	0.6	0.1	-	-

HCM 6th TWSC
3: Private Dwy & Vevau Street

12/10/2018

Intersection						
Int Delay, s/veh	1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	75	15	5	70	10	5
Future Vol, veh/h	75	15	5	70	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	82	16	5	76	11	5

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	98	0	176
Stage 1	-	-	-	-	90
Stage 2	-	-	-	-	86
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1495	-	814
Stage 1	-	-	-	-	934
Stage 2	-	-	-	-	937
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1495	-	812
Mov Cap-2 Maneuver	-	-	-	-	812
Stage 1	-	-	-	-	931
Stage 2	-	-	-	-	937

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	858	-	-	1495	-
HCM Lane V/C Ratio	0.019	-	-	0.004	-
HCM Control Delay (s)	9.3	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 6th TWSC
 4: School Street & Vevau Street

12/10/2018

Intersection						
Int Delay, s/veh	1.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↕		↔
Traffic Vol, veh/h	70	10	10	65	10	10
Future Vol, veh/h	70	10	10	65	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	11	11	71	11	11

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	87	0	175
Stage 1	-	-	-	-	82
Stage 2	-	-	-	-	93
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1509	-	815
Stage 1	-	-	-	-	941
Stage 2	-	-	-	-	931
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1509	-	808
Mov Cap-2 Maneuver	-	-	-	-	808
Stage 1	-	-	-	-	933
Stage 2	-	-	-	-	931

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	885	-	-	1509	-
HCM Lane V/C Ratio	0.025	-	-	0.007	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 6th TWSC
5: Lono Street & Vevau Street

12/10/2018

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	25	10	50	10	10	5	30	265	30	15	210	35
Future Vol, veh/h	25	10	50	10	10	5	30	265	30	15	210	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	120	-	-	350	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	11	54	11	11	5	33	288	33	16	228	38

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	658	666	247	683	669	305	266	0	0	321	0	0
Stage 1	279	279	-	371	371	-	-	-	-	-	-	-
Stage 2	379	387	-	312	298	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	378	380	792	363	379	735	1298	-	-	1239	-	-
Stage 1	728	680	-	649	620	-	-	-	-	-	-	-
Stage 2	643	610	-	699	667	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	356	366	792	321	365	735	1298	-	-	1239	-	-
Mov Cap-2 Maneuver	356	366	-	321	365	-	-	-	-	-	-	-
Stage 1	710	671	-	633	605	-	-	-	-	-	-	-
Stage 2	611	595	-	632	658	-	-	-	-	-	-	-





















Approach	EB	WB	NB	SB
HCM Control Delay, s	13.2	15.1	0.7	0.5
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1298	-	-	529	383	1239	-	-
HCM Lane V/C Ratio	0.025	-	-	0.175	0.071	0.013	-	-
HCM Control Delay (s)	7.8	-	-	13.2	15.1	7.9	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.2	0	-	-

HCM 6th Signalized Intersection Summary

6: Lono Street & Kaahumanu Ave

12/10/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1495	150	30	1765	15	190	20	45	25	15	10
Future Volume (veh/h)	20	1495	150	30	1765	15	190	20	45	25	15	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	1625	163	33	1918	16	207	22	49	27	16	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	38	2884	289	48	3224	27	288	25	408	66	37	16
Arrive On Green	0.04	1.00	1.00	0.03	0.62	0.62	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1781	4715	472	1781	5223	44	914	97	1583	96	142	61
Grp Volume(v), veh/h	22	1172	616	33	1250	684	229	0	49	54	0	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1784	1781	1702	1863	1011	0	1583	298	0	0
Q Serve(g_s), s	1.6	0.0	0.0	2.4	28.9	28.9	0.0	0.0	3.1	2.2	0.0	0.0
Cycle Q Clear(g_c), s	1.6	0.0	0.0	2.4	28.9	28.9	29.2	0.0	3.1	31.5	0.0	0.0
Prop In Lane	1.00		0.26	1.00		0.02	0.90		1.00	0.50		0.20
Lane Grp Cap(c), veh/h	38	2082	1091	48	2101	1150	313	0	408	118	0	0
V/C Ratio(X)	0.59	0.56	0.56	0.69	0.59	0.60	0.73	0.00	0.12	0.46	0.00	0.00
Avail Cap(c_a), veh/h	130	2082	1091	130	2101	1150	357	0	457	165	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.54	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	61.7	0.0	0.0	62.7	15.0	15.0	46.7	0.0	37.0	46.9	0.0	0.0
Incr Delay (d2), s/veh	7.6	0.6	1.1	16.4	1.2	2.3	6.5	0.0	0.1	2.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	0.3	1.3	11.2	12.5	7.7	0.0	1.2	1.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.3	0.6	1.1	79.1	16.3	17.3	53.1	0.0	37.1	49.6	0.0	0.0
LnGrp LOS	E	A	A	E	B	B	D	A	D	D	A	A
Approach Vol, veh/h		1810			1967			278			54	
Approach Delay, s/veh		1.6			17.7			50.3			49.6	
Approach LOS		A			B			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	84.0		38.0	7.2	84.8		38.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	69.5		37.5	9.5	69.5		37.5				
Max Q Clear Time (g_c+I1), s	4.4	2.0		31.2	3.6	30.9		33.5				
Green Ext Time (p_c), s	0.0	23.3		0.7	0.0	21.2		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				13.2								
HCM 6th LOS				B								



APPENDIX D LEVEL OF SERVICE CALCULATIONS

- Base Year 2021 PM
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HCM 6th Signalized Intersection Summary

1: Kane Street/Kahului Beach Road & Kaahumanu Ave

12/10/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	920	120	60	850	1030	70	185	40	990	195	95
Future Volume (veh/h)	35	920	120	60	850	1030	70	185	40	990	195	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	1000	0	65	924	0	76	201	0	1227	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	1142		84	1208		223	235		1309	0	
Arrive On Green	0.03	0.32	0.00	0.02	0.11	0.00	0.13	0.13	0.00	0.37	0.00	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1870	1585	3563	0	1585
Grp Volume(v), veh/h	38	1000	0	65	924	0	76	201	0	1227	0	0
Grp Sat Flow(s), veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	2.8	34.5	0.0	4.7	32.8	0.0	5.1	13.7	0.0	43.2	0.0	0.0
Cycle Q Clear(g_c), s	2.8	34.5	0.0	4.7	32.8	0.0	5.1	13.7	0.0	43.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	1142		84	1208		223	235		1309	0	
V/C Ratio(X)	0.74	0.88		0.77	0.76		0.34	0.86		0.94	0.00	
Avail Cap(c_a), veh/h	212	1142		212	1208		281	295		1384	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	0.78	0.78	0.00	1.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	62.7	41.6	0.0	63.3	52.7	0.0	51.9	55.7	0.0	39.7	0.0	0.0
Incr Delay (d2), s/veh	18.9	9.5	0.0	11.0	3.7	0.0	0.9	18.0	0.0	11.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	16.6	0.0	2.5	16.3	0.0	2.3	7.6	0.0	20.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.6	51.1	0.0	74.3	56.3	0.0	52.8	73.7	0.0	51.6	0.0	0.0
LnGrp LOS	F	D		E	E		D	E		D	A	
Approach Vol, veh/h		1038	A		989	A		277	A		1227	A
Approach Delay, s/veh		52.2			57.5			68.0			51.6	
Approach LOS		D			E			E			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	46.3		52.3	8.2	48.7		20.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	15.5	25.5		50.5	15.5	25.5		20.5				
Max Q Clear Time (g_c+I1), s	6.7	36.5		45.2	4.8	34.8		15.7				
Green Ext Time (p_c), s	0.1	0.0		2.6	0.0	0.0		0.5				

Intersection Summary

HCM 6th Ctrl Delay	54.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
2: Kane Street & Vevau Street

12/10/2018

Intersection												
Int Delay, s/veh	16.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕		↕	↕		↕	↕↔	
Traffic Vol, veh/h	65	95	90	45	40	55	85	185	20	80	230	45
Future Vol, veh/h	65	95	90	45	40	55	85	185	20	80	230	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	75	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	103	98	49	43	60	92	201	22	87	250	49

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	897	856	150	747	869	212	299	0	0	223	0	0
Stage 1	449	449	-	396	396	-	-	-	-	-	-	-
Stage 2	448	407	-	351	473	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	247	294	870	315	289	827	1261	-	-	1344	-	-
Stage 1	560	571	-	629	603	-	-	-	-	-	-	-
Stage 2	589	596	-	639	558	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	179	255	870	173	251	827	1261	-	-	1344	-	-
Mov Cap-2 Maneuver	179	255	-	173	251	-	-	-	-	-	-	-
Stage 1	519	534	-	583	559	-	-	-	-	-	-	-
Stage 2	467	552	-	428	522	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	45.9	30.7	2.4	1.8
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1261	-	-	217	870	288	1344	-	-
HCM Lane V/C Ratio	0.073	-	-	0.801	0.112	0.528	0.065	-	-
HCM Control Delay (s)	8.1	-	-	66.2	9.7	30.7	7.9	-	-
HCM Lane LOS	A	-	-	F	A	D	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	5.8	0.4	2.9	0.2	-	-

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	180	15	5	115	15	5
Future Vol, veh/h	180	15	5	115	15	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	196	16	5	125	16	5

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	212	0	339	204
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	135	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1358	-	657	837
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	891	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1358	-	654	837
Mov Cap-2 Maneuver	-	-	-	-	654	-
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	891	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	692	-	-	1358	-
HCM Lane V/C Ratio	0.031	-	-	0.004	-
HCM Control Delay (s)	10.4	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	150	30	20	95	25	30
Future Vol, veh/h	150	30	20	95	25	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	163	33	22	103	27	33

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	196	0	327	180
Stage 1	-	-	-	-	180	-
Stage 2	-	-	-	-	147	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1377	-	667	863
Stage 1	-	-	-	-	851	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1377	-	656	863
Mov Cap-2 Maneuver	-	-	-	-	656	-
Stage 1	-	-	-	-	837	-
Stage 2	-	-	-	-	880	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	755	-	-	1377	-
HCM Lane V/C Ratio	0.079	-	-	0.016	-
HCM Control Delay (s)	10.2	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

HCM 6th TWSC
5: Lono Street & Vevau Street

12/10/2018

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	40	25	120	20	10	15	55	175	20	10	225	50
Future Vol, veh/h	40	25	120	20	10	15	55	175	20	10	225	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	120	-	-	350	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	27	130	22	11	16	60	190	22	11	245	54

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	629	626	272	694	642	201	299	0	0	212	0	0
Stage 1	294	294	-	321	321	-	-	-	-	-	-	-
Stage 2	335	332	-	373	321	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	395	401	767	357	392	840	1262	-	-	1358	-	-
Stage 1	714	670	-	691	652	-	-	-	-	-	-	-
Stage 2	679	644	-	648	652	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	363	379	767	268	370	840	1262	-	-	1358	-	-
Mov Cap-2 Maneuver	363	379	-	268	370	-	-	-	-	-	-	-
Stage 1	680	665	-	658	621	-	-	-	-	-	-	-
Stage 2	623	613	-	512	647	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	15.1		16		1.8		0.3	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1262	-	-	556	377	1358	-	-
HCM Lane V/C Ratio	0.047	-	-	0.362	0.13	0.008	-	-
HCM Control Delay (s)	8	-	-	15.1	16	7.7	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.6	0.4	0	-	-

HCM 6th Signalized Intersection Summary
6: Lono Street & Kaahumanu Ave

12/10/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑			↑	↗		↕	
Traffic Volume (veh/h)	15	1695	140	75	1860	30	175	15	45	30	25	15
Future Volume (veh/h)	15	1695	140	75	1860	30	175	15	45	30	25	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	1842	152	82	2022	33	190	16	49	33	27	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	2721	224	103	3141	51	275	19	429	67	51	21
Arrive On Green	0.02	0.75	0.75	0.06	0.61	0.61	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1781	4808	395	1781	5175	84	816	69	1576	100	187	77
Grp Volume(v), veh/h	16	1302	692	82	1329	726	206	0	49	76	0	0
Grp Sat Flow(s), veh/h/ln	1781	1702	1799	1781	1702	1855	885	0	1576	364	0	0
Q Serve(g_s), s	1.2	25.0	25.3	5.9	32.7	32.8	0.0	0.0	3.0	3.3	0.0	0.0
Cycle Q Clear(g_c), s	1.2	25.0	25.3	5.9	32.7	32.8	30.1	0.0	3.0	33.4	0.0	0.0
Prop In Lane	1.00		0.22	1.00		0.05	0.92		1.00	0.43		0.21
Lane Grp Cap(c), veh/h	30	1927	1018	103	2066	1126	294	0	429	139	0	0
V/C Ratio(X)	0.53	0.68	0.68	0.80	0.64	0.64	0.70	0.00	0.11	0.55	0.00	0.00
Avail Cap(c_a), veh/h	130	1927	1018	130	2066	1126	317	0	455	164	0	0
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.13	0.13	0.13	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	63.0	10.1	10.1	60.5	16.5	16.5	45.4	0.0	35.5	46.9	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.3	0.5	22.9	1.6	2.8	6.2	0.0	0.1	3.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	6.8	7.3	3.3	12.8	14.4	6.9	0.0	1.2	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.9	10.3	10.6	83.3	18.0	19.3	51.5	0.0	35.6	50.3	0.0	0.0
LnGrp LOS	E	B	B	F	B	B	D	A	D	D	A	A
Approach Vol, veh/h		2010			2137			255			76	
Approach Delay, s/veh		10.8			21.0			48.5			50.3	
Approach LOS		B			C			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	78.1		39.9	6.7	83.4		39.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	69.5		37.5	9.5	69.5		37.5				
Max Q Clear Time (g_c+I1), s	7.9	27.3		32.1	3.2	34.8		35.4				
Green Ext Time (p_c), s	0.0	23.4		0.6	0.0	21.6		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				18.5								
HCM 6th LOS				B								



APPENDIX D LEVEL OF SERVICE CALCULATIONS

- Future Year 2021 AM
-

HCM 6th Signalized Intersection Summary

1: Kane Street/Kahului Beach Road & Kaahumanu Ave

12/14/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	675	90	20	1095	875	80	160	10	995	155	75
Future Volume (veh/h)	25	675	90	20	1095	875	80	160	10	995	155	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1870	1870	1796	1856	1870	1870	1856	1870
Adj Flow Rate, veh/h	27	734	0	22	1190	0	87	174	0	1202	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	7	2	2	2	7	3	2	2	3	2
Cap, veh/h	43	1300		38	1290		192	209		1290	0	
Arrive On Green	0.02	0.37	0.00	0.02	0.36	0.00	0.11	0.11	0.00	0.36	0.00	0.00
Sat Flow, veh/h	1781	3554	1522	1781	3554	1585	1711	1856	1585	3563	0	1585
Grp Volume(v), veh/h	27	734	0	22	1190	0	87	174	0	1202	0	0
Grp Sat Flow(s), veh/h/ln	1781	1777	1522	1781	1777	1585	1711	1856	1585	1781	0	1585
Q Serve(g_s), s	2.0	21.5	0.0	1.6	41.7	0.0	6.2	11.9	0.0	42.2	0.0	0.0
Cycle Q Clear(g_c), s	2.0	21.5	0.0	1.6	41.7	0.0	6.2	11.9	0.0	42.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	43	1300		38	1290		192	209		1290	0	
V/C Ratio(X)	0.63	0.56		0.59	0.92		0.45	0.83		0.93	0.00	
Avail Cap(c_a), veh/h	144	1300		144	1290		270	293		1384	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.79	0.79	0.00	1.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	62.9	32.9	0.0	63.1	39.6	0.0	53.9	56.5	0.0	39.9	0.0	0.0
Incr Delay (d2), s/veh	14.4	1.8	0.0	10.9	10.1	0.0	1.7	13.4	0.0	11.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.6	0.0	0.8	19.8	0.0	2.8	6.4	0.0	20.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.3	34.7	0.0	74.0	49.8	0.0	55.6	69.9	0.0	51.0	0.0	0.0
LnGrp LOS	E	C		E	D		E	E		D	A	
Approach Vol, veh/h		761	A		1212	A		261	A		1202	A
Approach Delay, s/veh		36.2			50.2			65.1			51.0	
Approach LOS		D			D			E			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	52.1		51.6	7.6	51.7		19.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.5	30.5		50.5	10.5	30.5		20.5				
Max Q Clear Time (g_c+I1), s	3.6	23.5		44.2	4.0	43.7		13.9				
Green Ext Time (p_c), s	0.0	2.8		2.8	0.0	0.0		0.6				

Intersection Summary

HCM 6th Ctrl Delay	48.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
2: Kane Street & Vevau Street

12/14/2018

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↕		↕	↕	↕
Traffic Vol, veh/h	10	40	40	15	25	45	40	180	10	55	190	20
Future Vol, veh/h	10	40	40	15	25	45	40	180	10	55	190	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	75	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	14	2	2	2	2	2	12	2	2
Mvmt Flow	11	43	43	16	27	49	43	196	11	60	207	22

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	664	631	115	533	637	202	229	0	0	207	0	0
Stage 1	338	338	-	288	288	-	-	-	-	-	-	-
Stage 2	326	293	-	245	349	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.51	6.53	6.23	4.13	-	-	4.28	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.31	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.71	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.633	4.019	3.319	2.219	-	-	2.314	-	-
Pot Cap-1 Maneuver	360	397	916	421	394	838	1338	-	-	1299	-	-
Stage 1	651	640	-	689	673	-	-	-	-	-	-	-
Stage 2	686	670	-	708	633	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	301	366	916	344	364	838	1338	-	-	1299	-	-
Mov Cap-2 Maneuver	301	366	-	344	364	-	-	-	-	-	-	-
Stage 1	630	611	-	667	651	-	-	-	-	-	-	-
Stage 2	599	649	-	597	604	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	13.5		13.6		1.4		1.6	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1338	-	-	351	916	512	1299	-	-
HCM Lane V/C Ratio	0.032	-	-	0.155	0.047	0.18	0.046	-	-
HCM Control Delay (s)	7.8	-	-	17.1	9.1	13.6	7.9	-	-
HCM Lane LOS	A	-	-	C	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.1	0.7	0.1	-	-

HCM 6th TWSC
3: Private Dwy & Vevau Street

12/14/2018

Intersection

Int Delay, s/veh 1

Movement EBT EBR WBL WBT NBL NBR

Lane Configurations	↔			↕	↕	
Traffic Vol, veh/h	75	15	5	70	10	5
Future Vol, veh/h	75	15	5	70	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	82	16	5	76	11	5

Major/Minor Major1 Major2 Minor1

Conflicting Flow All	0	0	98	0	176	90
Stage 1	-	-	-	-	90	-
Stage 2	-	-	-	-	86	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1495	-	814	968
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	937	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1495	-	812	968
Mov Cap-2 Maneuver	-	-	-	-	812	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	937	-

Approach EB WB NB

HCM Control Delay, s	0	0.5	9.3
HCM LOS			A

Minor Lane/Major Mvmt NBLn1 EBT EBR WBL WBT

Capacity (veh/h)	858	-	-	1495	-
HCM Lane V/C Ratio	0.019	-	-	0.004	-
HCM Control Delay (s)	9.3	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	75	10	10	70	10	10
Future Vol, veh/h	75	10	10	70	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	2	2	8	2	2
Mvmt Flow	82	11	11	76	11	11

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	93	0	186
Stage 1	-	-	-	-	88
Stage 2	-	-	-	-	98
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1501	-	803
Stage 1	-	-	-	-	935
Stage 2	-	-	-	-	926
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1501	-	797
Mov Cap-2 Maneuver	-	-	-	-	797
Stage 1	-	-	-	-	928
Stage 2	-	-	-	-	926

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	875	-	-	1501	-
HCM Lane V/C Ratio	0.025	-	-	0.007	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 6th TWSC
5: Lono Street & Vevau Street

12/14/2018

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	25	10	55	10	10	5	35	265	30	15	210	35
Future Vol, veh/h	25	10	55	10	10	5	35	265	30	15	210	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	120	-	-	350	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	6	2	8	2	2	2	11	2	2	2	2	5
Mvmt Flow	27	11	60	11	11	5	38	288	33	16	228	38

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	668	676	247	696	679	305	266	0	0	321	0	0
Stage 1	279	279	-	381	381	-	-	-	-	-	-	-
Stage 2	389	397	-	315	298	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.52	6.28	7.12	6.52	6.22	4.21	-	-	4.12	-	-
Critical Hdwy Stg 1	6.16	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.018	3.372	3.518	4.018	3.318	2.299	-	-	2.218	-	-
Pot Cap-1 Maneuver	366	375	777	356	374	735	1247	-	-	1239	-	-
Stage 1	719	680	-	641	613	-	-	-	-	-	-	-
Stage 2	627	603	-	696	667	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	343	359	777	310	358	735	1247	-	-	1239	-	-
Mov Cap-2 Maneuver	343	359	-	310	358	-	-	-	-	-	-	-
Stage 1	697	671	-	622	595	-	-	-	-	-	-	-
Stage 2	592	585	-	624	658	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	13.4		15.4		0.8		0.5	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1247	-	-	525	373	1239	-	-
HCM Lane V/C Ratio	0.031	-	-	0.186	0.073	0.013	-	-
HCM Control Delay (s)	8	-	-	13.4	15.4	7.9	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.2	0	-	-

HCM 6th Signalized Intersection Summary

6: Lono Street & Kaahumanu Ave

12/14/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1495	150	30	1765	15	190	20	45	25	15	10
Future Volume (veh/h)	20	1495	150	30	1765	15	190	20	45	25	15	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1811	1870	1870	1870	1870	1826	1870	1870	1870
Adj Flow Rate, veh/h	22	1625	163	33	1918	16	207	22	49	27	16	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	6	2	2	2	2	5	2	2	2
Cap, veh/h	38	2859	286	55	3224	27	288	25	398	66	37	16
Arrive On Green	0.04	1.00	1.00	0.03	0.62	0.62	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1781	4715	472	1725	5223	44	914	97	1546	96	142	61
Grp Volume(v), veh/h	22	1172	616	33	1250	684	229	0	49	54	0	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1784	1725	1702	1863	1011	0	1546	298	0	0
Q Serve(g_s), s	1.6	0.0	0.0	2.5	28.9	28.9	0.0	0.0	3.2	2.2	0.0	0.0
Cycle Q Clear(g_c), s	1.6	0.0	0.0	2.5	28.9	28.9	29.2	0.0	3.2	31.5	0.0	0.0
Prop In Lane	1.00		0.26	1.00		0.02	0.90		1.00	0.50		0.20
Lane Grp Cap(c), veh/h	38	2064	1081	55	2101	1150	313	0	398	118	0	0
V/C Ratio(X)	0.59	0.57	0.57	0.60	0.59	0.60	0.73	0.00	0.12	0.46	0.00	0.00
Avail Cap(c_a), veh/h	130	2064	1081	126	2101	1150	357	0	446	165	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.54	0.54	0.54	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	61.7	0.0	0.0	62.1	15.0	15.0	46.7	0.0	37.0	46.9	0.0	0.0
Incr Delay (d2), s/veh	7.6	0.6	1.2	9.8	1.2	2.3	6.5	0.0	0.1	2.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	0.4	1.2	11.2	12.5	7.7	0.0	1.2	1.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.3	0.6	1.2	71.9	16.3	17.3	53.1	0.0	37.1	49.6	0.0	0.0
LnGrp LOS	E	A	A	E	B	B	D	A	D	D	A	A
Approach Vol, veh/h		1810			1967			278				54
Approach Delay, s/veh		1.6			17.6			50.3				49.6
Approach LOS		A			B			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	83.3		38.0	7.2	84.8		38.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	69.5		37.5	9.5	69.5		37.5				
Max Q Clear Time (g_c+I1), s	4.5	2.0		31.2	3.6	30.9		33.5				
Green Ext Time (p_c), s	0.0	23.3		0.7	0.0	21.2		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				13.2								
HCM 6th LOS				B								

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	5	100	75	5	0	0
Future Vol, veh/h	5	100	75	5	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	100	2	2	100	2	2
Mvmt Flow	5	109	82	5	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	87	0	-	0	204
Stage 1	-	-	-	-	85
Stage 2	-	-	-	-	119
Critical Hdwy	5.1	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	3.1	-	-	-	3.518
Pot Cap-1 Maneuver	1066	-	-	-	784
Stage 1	-	-	-	-	938
Stage 2	-	-	-	-	906
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1066	-	-	-	780
Mov Cap-2 Maneuver	-	-	-	-	780
Stage 1	-	-	-	-	933
Stage 2	-	-	-	-	906

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1066	-	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-	-
HCM Control Delay (s)	8.4	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	5	75	75	5	10	10
Future Vol, veh/h	5	75	75	5	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	50	40
Mvmt Flow	5	82	82	5	11	11

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	87	0	-	0	177 85
Stage 1	-	-	-	-	85 -
Stage 2	-	-	-	-	92 -
Critical Hdwy	4.12	-	-	-	6.9 6.6
Critical Hdwy Stg 1	-	-	-	-	5.9 -
Critical Hdwy Stg 2	-	-	-	-	5.9 -
Follow-up Hdwy	2.218	-	-	-	3.95 3.66
Pot Cap-1 Maneuver	1509	-	-	-	714 879
Stage 1	-	-	-	-	830 -
Stage 2	-	-	-	-	824 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1509	-	-	-	712 879
Mov Cap-2 Maneuver	-	-	-	-	712 -
Stage 1	-	-	-	-	828 -
Stage 2	-	-	-	-	824 -

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1509	-	-	-	787
HCM Lane V/C Ratio	0.004	-	-	-	0.028
HCM Control Delay (s)	7.4	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



APPENDIX D LEVEL OF SERVICE CALCULATIONS

- Future Year 2021 PM
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HCM 6th Signalized Intersection Summary
 1: Kane Street/Kahului Beach Road & Kaahumanu Ave

12/14/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	920	130	60	850	1030	80	185	40	990	200	95
Future Volume (veh/h)	35	920	130	60	850	1030	80	185	40	990	200	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1811	1870	1870	1870	1767	1856	1870	1870	1856	1870
Adj Flow Rate, veh/h	38	1000	0	65	924	0	87	201	0	1231	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	6	2	2	2	9	3	2	2	3	2
Cap, veh/h	51	1136		84	1202		212	234		1312	0	
Arrive On Green	0.03	0.32	0.00	0.02	0.11	0.00	0.13	0.13	0.00	0.37	0.00	0.00
Sat Flow, veh/h	1781	3554	1535	1781	3554	1585	1682	1856	1585	3563	0	1585
Grp Volume(v), veh/h	38	1000	0	65	924	0	87	201	0	1231	0	0
Grp Sat Flow(s), veh/h/ln	1781	1777	1535	1781	1777	1585	1682	1856	1585	1781	0	1585
Q Serve(g_s), s	2.8	34.6	0.0	4.7	32.8	0.0	6.2	13.8	0.0	43.4	0.0	0.0
Cycle Q Clear(g_c), s	2.8	34.6	0.0	4.7	32.8	0.0	6.2	13.8	0.0	43.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	1136		84	1202		212	234		1312	0	
V/C Ratio(X)	0.74	0.88		0.77	0.77		0.41	0.86		0.94	0.00	
Avail Cap(c_a), veh/h	212	1136		212	1202		265	293		1384	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	0.78	0.78	0.00	1.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	62.7	41.9	0.0	63.3	52.8	0.0	52.3	55.6	0.0	39.6	0.0	0.0
Incr Delay (d2), s/veh	18.9	9.8	0.0	11.0	3.7	0.0	1.3	18.3	0.0	12.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	16.6	0.0	2.5	16.4	0.0	2.7	7.7	0.0	20.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.6	51.7	0.0	74.3	56.5	0.0	53.6	74.0	0.0	51.7	0.0	0.0
LnGrp LOS	F	D		E	E		D	E		D	A	
Approach Vol, veh/h		1038	A		989	A		288	A		1231	A
Approach Delay, s/veh		52.8			57.7			67.8			51.7	
Approach LOS		D			E			E			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	46.1		52.4	8.2	48.5		20.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	15.5	25.5		50.5	15.5	25.5		20.5				
Max Q Clear Time (g_c+I1), s	6.7	36.6		45.4	4.8	34.8		15.8				
Green Ext Time (p_c), s	0.1	0.0		2.5	0.0	0.0		0.6				

Intersection Summary												
HCM 6th Ctrl Delay				55.0								
HCM 6th LOS				D								

Notes
 User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
2: Kane Street & Vevau Street

12/14/2018

Intersection												
Int Delay, s/veh	18.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕		↕	↕		↕	↕	↕
Traffic Vol, veh/h	65	95	90	45	40	65	85	185	20	90	230	45
Future Vol, veh/h	65	95	90	45	40	65	85	185	20	90	230	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	75	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	12	2	2	2	10	2	2
Mvmt Flow	71	103	98	49	43	71	92	201	22	98	250	49

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	924	878	150	769	891	212	299	0	0	223	0	0
Stage 1	471	471	-	396	396	-	-	-	-	-	-	-
Stage 2	453	407	-	373	495	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.38	4.13	-	-	4.25	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.414	2.219	-	-	2.295	-	-
Pot Cap-1 Maneuver	237	286	870	304	281	799	1261	-	-	1293	-	-
Stage 1	543	559	-	629	603	-	-	-	-	-	-	-
Stage 2	585	596	-	621	545	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	166	245	870	163	241	799	1261	-	-	1293	-	-
Mov Cap-2 Maneuver	166	245	-	163	241	-	-	-	-	-	-	-
Stage 1	503	517	-	583	559	-	-	-	-	-	-	-
Stage 2	456	552	-	408	504	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	52.8	32.8	2.4	2
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1261	-	-	205	870	287	1293	-	-
HCM Lane V/C Ratio	0.073	-	-	0.848	0.112	0.568	0.076	-	-
HCM Control Delay (s)	8.1	-	-	77.1	9.7	32.8	8	-	-
HCM Lane LOS	A	-	-	F	A	D	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	6.4	0.4	3.3	0.2	-	-

HCM 6th TWSC
3: Private Dwy & Vevau Street

12/14/2018

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↕		↔
Traffic Vol, veh/h	180	15	5	70	15	5
Future Vol, veh/h	180	15	5	70	15	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	196	16	5	76	16	5

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	212	0	290	204
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	86	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1358	-	701	837
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	937	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1358	-	698	837
Mov Cap-2 Maneuver	-	-	-	-	698	-
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	937	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	728	-	-	1358	-
HCM Lane V/C Ratio	0.03	-	-	0.004	-
HCM Control Delay (s)	10.1	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 6th TWSC
4: School Street & Vevau Street

12/14/2018

Intersection						
Int Delay, s/veh	2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↕		↔
Traffic Vol, veh/h	160	30	20	100	25	30
Future Vol, veh/h	160	30	20	100	25	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	2	2	7	2	2
Mvmt Flow	174	33	22	109	27	33

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	207	0	344	191
Stage 1	-	-	-	-	191	-
Stage 2	-	-	-	-	153	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1364	-	652	851
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	875	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1364	-	641	851
Mov Cap-2 Maneuver	-	-	-	-	641	-
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	875	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	741	-	-	1364	-
HCM Lane V/C Ratio	0.081	-	-	0.016	-
HCM Control Delay (s)	10.3	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

HCM 6th TWSC
5: Lono Street & Vevau Street

12/14/2018

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	40	25	130	20	10	15	65	175	20	10	225	50
Future Vol, veh/h	40	25	130	20	10	15	65	175	20	10	225	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	120	-	-	350	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	7	2	6	2	2	2	9	2	2	2	2	4
Mvmt Flow	43	27	141	22	11	16	71	190	22	11	245	54




















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	651	648	272	721	664	201	299	0	0	212	0	0
Stage 1	294	294	-	343	343	-	-	-	-	-	-	-
Stage 2	357	354	-	378	321	-	-	-	-	-	-	-
Critical Hdwy	7.17	6.52	6.26	7.12	6.52	6.22	4.19	-	-	4.12	-	-
Critical Hdwy Stg 1	6.17	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.17	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.563	4.018	3.354	3.518	4.018	3.318	2.281	-	-	2.218	-	-
Pot Cap-1 Maneuver	375	389	757	343	381	840	1223	-	-	1358	-	-
Stage 1	704	670	-	672	637	-	-	-	-	-	-	-
Stage 2	650	630	-	644	652	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	341	363	757	250	356	840	1223	-	-	1358	-	-
Mov Cap-2 Maneuver	341	363	-	250	356	-	-	-	-	-	-	-
Stage 1	663	665	-	633	600	-	-	-	-	-	-	-
Stage 2	590	593	-	498	647	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.7	16.7	2	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1223	-	-	545	357	1358	-
HCM Lane V/C Ratio	0.058	-	-	0.389	0.137	0.008	-
HCM Control Delay (s)	8.1	-	-	15.7	16.7	7.7	-
HCM Lane LOS	A	-	-	C	C	A	-
HCM 95th %tile Q(veh)	0.2	-	-	1.8	0.5	0	-

HCM 6th Signalized Intersection Summary
6: Lono Street & Kaahumanu Ave

12/14/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1695	140	75	1860	30	175	15	45	30	25	15
Future Volume (veh/h)	15	1695	140	75	1860	30	175	15	45	30	25	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1870	1870	1870	1870	1796	1870	1870	1870
Adj Flow Rate, veh/h	16	1842	152	82	2022	33	190	16	49	33	27	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	4	2	2	2	2	7	2	2	2
Cap, veh/h	30	2718	223	103	3141	51	275	19	412	67	51	21
Arrive On Green	0.02	0.75	0.75	0.06	0.61	0.61	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1781	4808	395	1753	5175	84	816	69	1514	100	187	77
Grp Volume(v), veh/h	16	1302	692	82	1329	726	206	0	49	76	0	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1799	1753	1702	1855	885	0	1514	364	0	0
Q Serve(g_s), s	1.2	25.1	25.4	6.0	32.7	32.8	0.0	0.0	3.2	3.3	0.0	0.0
Cycle Q Clear(g_c), s	1.2	25.1	25.4	6.0	32.7	32.8	30.1	0.0	3.2	33.4	0.0	0.0
Prop In Lane	1.00		0.22	1.00		0.05	0.92		1.00	0.43		0.21
Lane Grp Cap(c), veh/h	30	1924	1017	103	2066	1126	294	0	412	139	0	0
V/C Ratio(X)	0.53	0.68	0.68	0.80	0.64	0.64	0.70	0.00	0.12	0.55	0.00	0.00
Avail Cap(c_a), veh/h	130	1924	1017	128	2066	1126	317	0	437	164	0	0
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.11	0.11	0.11	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	63.0	10.1	10.2	60.4	16.5	16.5	45.4	0.0	35.6	46.9	0.0	0.0
Incr Delay (d2), s/veh	1.6	0.2	0.4	24.0	1.6	2.8	6.2	0.0	0.1	3.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	6.8	7.4	3.4	12.8	14.4	6.9	0.0	1.2	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.6	10.3	10.6	84.4	18.0	19.3	51.5	0.0	35.7	50.3	0.0	0.0
LnGrp LOS	E	B	B	F	B	B	D	A	D	D	A	A
Approach Vol, veh/h		2010			2137			255			76	
Approach Delay, s/veh		10.9			21.0			48.5			50.3	
Approach LOS		B			C			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.1	78.0		39.9	6.7	83.4		39.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	69.5		37.5	9.5	69.5		37.5				
Max Q Clear Time (g_c+I1), s	8.0	27.4		32.1	3.2	34.8		35.4				
Green Ext Time (p_c), s	0.0	23.3		0.6	0.0	21.6		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			18.5									
HCM 6th LOS			B									

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	10	195	125	5	0	0
Future Vol, veh/h	10	195	125	5	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	100	2	2	100	2	2
Mvmt Flow	11	212	136	5	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	141	0	-	0	373
Stage 1	-	-	-	-	139
Stage 2	-	-	-	-	234
Critical Hdwy	5.1	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	3.1	-	-	-	3.518
Pot Cap-1 Maneuver	1010	-	-	-	628
Stage 1	-	-	-	-	888
Stage 2	-	-	-	-	805
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1010	-	-	-	620
Mov Cap-2 Maneuver	-	-	-	-	620
Stage 1	-	-	-	-	877
Stage 2	-	-	-	-	805

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1010	-	-	-	-
HCM Lane V/C Ratio	0.011	-	-	-	-
HCM Control Delay (s)	8.6	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection

Int Delay, s/veh 0.8

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	5	180	120	5	10	10
Future Vol, veh/h	5	180	120	5	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	60	60
Mvmt Flow	5	196	130	5	11	11

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	135	0	-	0	339	133
Stage 1	-	-	-	-	133	-
Stage 2	-	-	-	-	206	-
Critical Hdwy	4.12	-	-	-	7	6.8
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	2.218	-	-	-	4.04	3.84
Pot Cap-1 Maneuver	1449	-	-	-	554	782
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	708	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1449	-	-	-	552	782
Mov Cap-2 Maneuver	-	-	-	-	552	-
Stage 1	-	-	-	-	766	-
Stage 2	-	-	-	-	708	-

Approach EB WB SB

HCM Control Delay, s 0.2 0 10.8
 HCM LOS B

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	1449	-	-	-	647
HCM Lane V/C Ratio	0.004	-	-	-	0.034
HCM Control Delay (s)	7.5	0	-	-	10.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1



AUSTIN, TSUTSUMI & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS

APPENDIX E

MAUI BUS MAPS & TIMETABLE

GENERAL INFORMATION

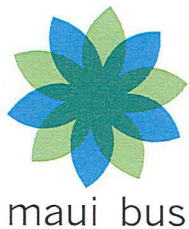
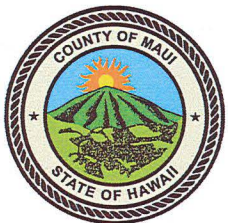
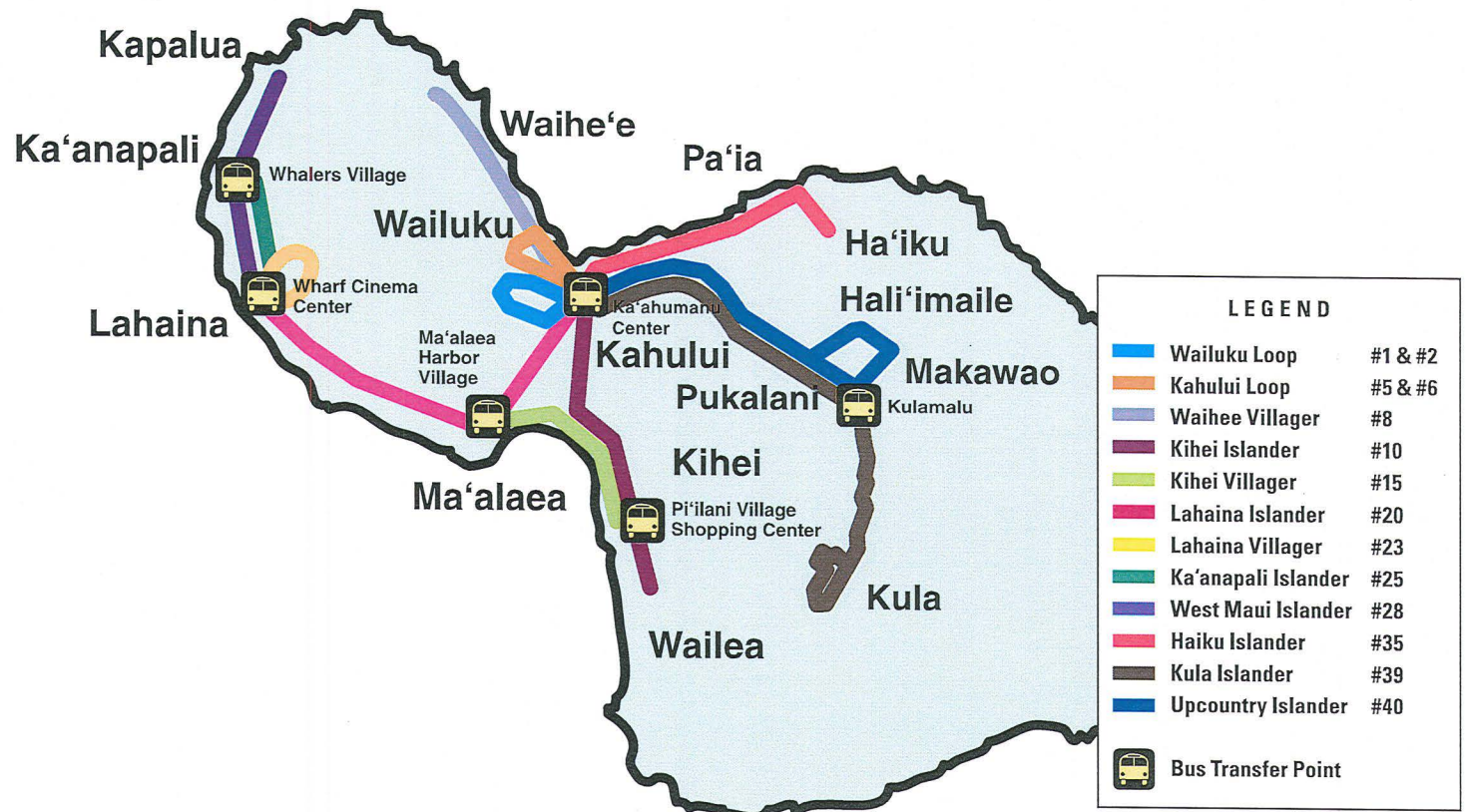
The Maui Bus public transit service consists of fourteen bus routes, all operated by Roberts Hawaii. These routes are funded by the County of Maui and provide service in and between various Central, South, West, Haiku, Kula, and Upcountry Maui communities. All of the routes are operated seven days a week, including holiday. No transfers are given on any of the routes.

FARES

All routes cost \$2.00 per boarding. Infants under 2 years old, riding on the lap of an accompanying adult travel free. Daily and monthly passes are also available.

**DUE TO SPACE LIMITATIONS,
NOT ALL STOPS ARE LISTED
ON THE SCHEDULE.**

Please refer to the County of Maui website at mauicounty.gov/bus to view route maps.



Operated by
Roberts Hawaii

Track your bus with the **new Maui Bus app**.

Available for **free** where apps are sold.

Visit mauibus.org for more information.

WAILUKU LOOP ROUTE #1

Queen Ka ahumanu Center	Maui Memorial Medical Center	Maui Lani Parkway / Kaiser	Wells St. / State & County Buildings	Ka Hale A Ke Ola	High St. / State & County Buildings	Malama I Ke Ola Health Center	Imi Kala St. / Wailuku Post Office	N. Market St. / Pi'ihana Terrace	Maka aia Dr. / Hale Mahaolu	Wailupe Dr. / Waiehu Heights	Waiehu Beach Rd. / Kuhio Pl.	Eha St. / Sack N Save	Velma McWayne Santos Comm. Ctr.	Kanaloa Ave. / Little League Field	Queen Ka ahumanu Center
6:30	6:36	6:37	6:42	6:46	6:52	6:55	6:58	7:03	7:08	7:11	7:13	7:16	7:18	7:22	7:30
7:30	7:36	7:37	7:42	7:46	7:52	7:55	7:58	8:03	8:08	8:11	8:13	8:16	8:18	8:22	8:30
8:30	8:36	8:37	8:42	8:46	8:52	8:55	8:58	9:03	9:08	9:11	9:13	9:16	9:18	9:22	9:30
9:30	9:36	9:37	9:42	9:46	9:52	9:55	9:58	10:03	10:08	10:11	10:13	10:16	10:18	10:22	10:30
10:30	10:36	10:37	10:42	10:46	10:52	10:55	10:58	11:03	11:08	11:11	11:13	11:16	11:18	11:22	11:30
11:30	11:36	11:37	11:42	11:46	11:52	11:55	11:58	12:03	12:08	12:11	12:13	12:16	12:18	12:22	12:30
12:30	12:36	12:37	12:42	12:46	12:52	12:55	12:58	1:03	1:08	1:11	1:13	1:16	1:18	1:22	1:30
1:30	1:36	1:37	1:42	1:46	1:52	1:55	1:58	2:03	2:08	2:11	2:13	2:16	2:18	2:22	2:30
2:30	2:36	2:37	2:42	2:46	2:52	2:55	2:58	3:03	3:08	3:11	3:13	3:16	3:18	3:22	3:30
3:30	3:36	3:37	3:42	3:46	3:52	3:55	3:58	4:03	4:08	4:11	4:13	4:16	4:18	4:22	4:30
4:30	4:36	4:37	4:42	4:46	4:52	4:55	4:58	5:03	5:08	5:11	5:13	5:16	5:18	5:22	5:30
5:30	5:36	5:37	5:42	5:46	5:52	5:55	5:58	6:03	6:08	6:11	6:13	6:16	6:18	6:22	6:30
6:30	6:36	6:37	6:42	6:46	6:52	6:55	6:58	7:03	7:08	7:11	7:13	7:16	7:18	7:22	7:30
7:30	7:36	7:37	7:42	7:46	7:52	7:55	7:58	8:03	8:08	8:11	8:13	8:16	8:18	8:22	8:30
8:30	8:36	8:37	8:42	8:46	8:52	8:55	8:58	9:03	9:08	9:11	9:13	9:16	9:18	9:22	9:30

KAHULUI LOOP ROUTE #5

Queen Ka ahumanu Center	Wahinepio Ave. / MACC	S. Papa Ave. / Roselani Place	Onehe'e Ave. / S. Papa Ave.	Hale Mahaolu	Kamehameha Ave. / Moloka'i Akau St.	Luana Gardens	W. Papa Ave. / La'au St.	Pakaula St. / Wal-Mart	Dairy Rd. / Maui Marketplace	Dairy Rd. / Kele St.	Kamehameha Ave. / Maui Mall	Kahului Shopping Center	Queen Ka ahumanu Center
6:30	6:38	6:41	6:44	6:47	6:49	6:51	6:53	7:00	7:03	7:06	7:12	7:15	7:30
7:30	7:38	7:41	7:44	7:47	7:49	7:51	7:53	8:00	8:03	8:06	8:12	8:15	8:30
8:30	8:38	8:41	8:44	8:47	8:49	8:51	8:53	9:00	9:03	9:06	9:12	9:15	9:30
9:30	9:38	9:41	9:44	9:47	9:49	9:51	9:53	10:00	10:03	10:06	10:12	10:15	10:30
10:30	10:38	10:41	10:44	10:47	10:49	10:51	10:53	11:00	11:03	11:06	11:12	11:15	11:30
11:30	11:38	11:41	11:44	11:47	11:49	11:51	11:53	12:00	12:03	12:06	12:12	12:15	12:30
12:30	12:38	12:41	12:44	12:47	12:49	12:51	12:53	1:00	1:03	1:06	1:12	1:15	1:30
1:30	1:38	1:41	1:44	1:47	1:49	1:51	1:53	2:00	2:03	2:06	2:12	2:15	2:30
2:30	2:38	2:41	2:44	2:47	2:49	2:51	2:53	3:00	3:03	3:06	3:12	3:15	3:30
3:30	3:38	3:41	3:44	3:47	3:49	3:51	3:53	4:00	4:03	4:06	4:12	4:15	4:30
4:30	4:38	4:41	4:44	4:47	4:49	4:51	4:53	5:00	5:03	5:06	5:12	5:15	5:30
5:30	5:38	5:41	5:44	5:47	5:49	5:51	5:53	6:00	6:03	6:06	6:12	6:15	6:30
6:30	6:38	6:41	6:44	6:47	6:49	6:51	6:53	7:00	7:03	7:06	7:12	7:15	7:30
7:30	7:38	7:41	7:44	7:47	7:49	7:51	7:53	8:00	8:03	8:06	8:12	8:15	8:30
8:30	8:38	8:41	8:44	8:47	8:49	8:51	8:53	9:00	9:03	9:06	9:12	9:15	9:30

WAILUKU LOOP ROUTE #2 (reverse)

Queen Ka ahumanu Center	Kanaloa Ave. / Little League Field (across)	Waena St. / Lower Main St.	Eha St. / Ho'okahi St.	Waiehu Beach Rd. / Ka ae Rd.	Wailupe Dr. / Waiehu Heights	Maka aia Dr. / Hale Mahaolu (across)	N. Market St. / Pi'ihana Terrace (across)	Imi Kala St. / Wailuku Post Office	Malama I Ke Ola Health Center	Wells St. / State & County Buildings	Ka Hale A Ke Ola	High St. / State & County Buildings	Maui Lani Parkway / Safeway	Maui Memorial Medical Center (across)	Queen Ka ahumanu Center
7:00	7:03	7:08	7:11	7:15	7:17	7:19	7:24	7:29	7:32	7:35	7:40	7:45	7:48	7:49	8:00
8:00	8:03	8:08	8:11	8:15	8:17	8:19	8:24	8:29	8:32	8:35	8:40	8:45	8:48	8:49	9:00
9:00	9:03	9:08	9:11	9:15	9:17	9:19	9:24	9:29	9:32	9:35	9:40	9:45	9:48	9:49	10:00
10:00	10:03	10:08	10:11	10:15	10:17	10:19	10:24	10:29	10:32	10:35	10:40	10:45	10:48	10:49	11:00
11:00	11:03	11:08	11:11	11:15	11:17	11:19	11:24	11:29	11:32	11:35	11:40	11:45	11:48	11:49	12:00
12:00	12:03	12:08	12:11	12:15	12:17	12:19	12:24	12:29	12:32	12:35	12:40	12:45	12:48	12:49	1:00
1:00	1:03	1:08	1:11	1:15	1:17	1:19	1:24	1:29	1:32	1:35	1:40	1:45	1:48	1:49	2:00
2:00	2:03	2:08	2:11	2:15	2:17	2:19	2:24	2:29	2:32	2:35	2:40	2:45	2:48	2:49	3:00
3:00	3:03	3:08	3:11	3:15	3:17	3:19	3:24	3:29	3:32	3:35	3:40	3:45	3:48	3:49	4:00
4:00	4:03	4:08	4:11	4:15	4:17	4:19	4:24	4:29	4:32	4:35	4:40	4:45	4:48	4:49	5:00
5:00	5:03	5:08	5:11	5:15	5:17	5:19	5:24	5:29	5:32	5:35	5:40	5:45	5:48	5:49	6:00
6:00	6:03	6:08	6:11	6:15	6:17	6:19	6:24	6:29	6:32	6:35	6:40	6:45	6:48	6:49	7:00
7:00	7:03	7:08	7:11	7:15	7:17	7:19	7:24	7:29	7:32	7:35	7:40	7:45	7:48	7:49	8:00
8:00	8:03	8:08	8:11	8:15	8:17	8:19	8:24	8:29	8:32	8:35	8:40	8:45	8:48	8:49	9:00
9:00	9:03	9:08	9:11	9:15	9:17	9:19	9:24	9:29	9:32	9:35	9:40	9:45	9:48	9:49	10:00

KAHULUI LOOP ROUTE #6 (reverse)

Queen Ka ahumanu Center	Kahului Shopping Center	Kamehameha Ave. / Ho'ohana St.	Dairy Rd. / Kele St.	Dairy Rd. / Maui Marketplace (across)	Pakaula St. / Home Depot	W. Papa Ave. / La'au St.	Luana Gardens	Kamehameha Ave. / Moloka'i Akau St.	Hale Mahaolu	Onehe'e Ave. / S. Papa Ave.	S. Papa Ave. / Roselani Place (across)	Wahinepio Ave. / UH Maui College	Queen Ka ahumanu Center
7:00	7:08	7:10	7:15	7:20	7:22	7:29	7:31	7:32	7:34	7:37	7:39	7:42	8:00
8:00	8:08	8:10	8:15	8:20	8:22	8:29	8:31	8:32	8:34	8:37	8:39	8:42	9:00
9:00	9:08	9:10	9:15	9:20	9:22	9:29	9:31	9:32	9:34	9:37	9:39	9:42	10:00
10:00	10:08	10:10	10:15	10:20	10:22	10:29	10:31	10:32	10:34	10:37	10:39	10:42	11:00
11:00	11:08	11:10	11:15	11:20	11:22	11:29	11:31	11:32	11:34	11:37	11:39	11:42	12:00
12:00	12:08	12:10	12:15	12:20	12:22	12:29	12:31	12:32	12:34	12:37	12:39	12:42	1:00
1:00	1:08	1:10	1:15	1:20	1:22	1:29	1:31	1:32	1:34	1:37	1:39	1:42	2:00
2:00	2:08	2:10	2:15	2:20	2:22	2:29	2:31	2:32	2:34	2:37	2:39	2:42	3:00
3:00	3:08	3:10	3:15	3:20	3:22	3:29	3:31	3:32	3:34	3:37	3:39	3:42	4:00
4:00	4:08	4:10	4:15	4:20	4:22	4:29	4:31	4:32	4:34	4:37	4:39	4:42	5:00
5:00	5:08	5:10	5:15	5:20	5:22	5:29	5:31	5:32	5:34	5:37	5:39	5:42	6:00
6:00	6:08	6:10	6:15	6:20	6:22	6:29	6:31	6:32	6:34	6:37	6:39	6:42	7:00
7:00	7:08	7:10	7:15	7:20	7:22	7:29	7:31	7:32	7:34	7:37	7:39	7:42	8:00
8:00	8:08	8:10	8:15	8:20	8:22	8:29	8:31	8:32	8:34	8:37	8:39	8:42	9:00
9:00	9:08	9:10	9:15	9:20	9:22	9:29	9:31	9:32	9:34	9:37	9:39	9:42	10:00

HAIKU ISLANDER ROUTE #35

Queen Ka ahumanu Center	Kamehameha Ave. / Kahului Salvation Army	Kamehameha Ave. / Ho'ohana St.	Kahului Airport Pick-Up Zone #3	Paia Town/Public Parking (to Haiku)	Haiku Marketplace	Pauwele Rd. / Hana Hwy.	Paia Town/Public Parking (to Kahului)	Kahului Airport Pick-Up Zone #3	Kamehameha Ave. / Maui Mall	Kamehameha Ave. / Kahului Shopping Ctr.	Queen Ka ahumanu Center
5:30	5:33	5:34	5:40	5:53	6:11	6:17	6:29	6:40	6:47	6:48	7:00
7:00	7:03	7:04	7:10	7:23	7:41	7:47	7:59	8:10	8:17	8:18	8:30
8:30	8:33	8:34	8:40	8:53	9:11	9:17	9:29	9:40	9:47	9:48	10:00
10:00	10:03	10:04	10:10	10:23	10:41	10:47	10:59	11:10	11:17	11:18	11:30
11:30	11:33	11:34	11:40	11:53	12:11	12:17	12:29	12:40	12:47	12:48	1:00
1:00	1:03	1:04	1:10	1:23	1:41	1:47	1:59	2:10	2:17	2:18	2:30
2:30	2:33	2:34	2:40	2:53	3:11	3:17	3:29	3:40	3:47	3:48	4:00
4:00	4:03	4:04	4:10	4:23	4:41	4:47	4:59	5:10	5:17	5:18	5:30
5:30	5:33	5:34	5:40	5:53	6:11	6:17	6:29	6:40	6:47	6:48	7:00
7:00	7:03	7:04	7:10	7:23	7:41	7:47	7:59	8:10	8:17	8:18	8:30
8:30	8:33	8:34	8:40	8:53	9:11	9:17	9:29	9:40	9:47	9:48	10:00

UPCOUNTRY ISLANDER ROUTE #40

Queen Ka ahumanu Center	Kamehameha Ave. / Kahului Salvation Army	Kamehameha Ave. / Ho'ohana St.	Kahului Airport Pick-Up Zone #3	Mayor Hamibal Tavares Comm. Ctr.	Kaunaloa Town Ctr. (to Makawao)	Makawao Public Library	Hali'imaile Park & Tennis	Kahului Airport Pick-Up Zone #3	Kamehameha Ave. / Maui Mall	Kamehameha Ave. / Kahului Shopping Ctr.	Queen Ka ahumanu Center
6:00	6:03	6:04	6:10	6:30	6:38	6:48	6:53	7:11	7:17	7:18	7:30
7:30	7:33	7:34	7:40	8:00	8:08	8:18	8:23	8:41	8:47	8:48	9:00
9:00	9:03	9:04	9:10	9:30	9:38	9:48	9:53	10:11	10:17	10:18	10:30
10:30	10:33	10:34	10:40	11:00	11:08	11:18	11:23	11:41	11:47	11:48	12:00
12:00	12:03	12:04	12:10	12:30	12:38	12:48	12:53	1:11	1:17	1:18	1:30
1:30	1:33	1:34	1:40	2:00	2:08	2:18	2:23				

KIHEI ISLANDER ROUTE #10

Queen Ka'ahumanu Center	Kamehameha Ave./Kahului Salvation Army	S. Kihei Rd./Uwepo Rd.	S. Kihei Rd./Kulanihako St. (leeward)	Pi'ilani Village Shopping Center	S. Kihei Rd./Keala Pl. (leeward)	Kamaole Beach III (leeward)	Wailea Ike Drive	Kamaole Beach III (leeward)	S. Kihei Rd./Keala Pl. (leeward)	Pi'ilani Village Shopping Center	S. Kihei Rd./Kulanihako St. (leeward)	S. Kihei Rd./Uwepo Rd. (leeward)	Kamehameha Ave./Kahului Shopping Ctr.	Queen Ka'ahumanu Center
5:30	5:35	5:50	5:55	6:03	6:12	6:20	6:27	6:34	6:42	6:50	6:57	7:02	7:18	7:30
6:30	6:35	6:50	6:55	7:03	7:12	7:20	7:27	7:34	7:42	7:50	7:57	8:02	8:18	8:30
7:30	7:35	7:50	7:55	8:03	8:12	8:20	8:27	8:34	8:42	8:50	8:57	9:02	9:18	9:30
8:30	8:35	8:50	8:55	9:03	9:12	9:20	9:27	9:34	9:42	9:50	9:57	10:02	10:18	10:30
9:30	9:35	9:50	9:55	10:03	10:12	10:20	10:27	10:34	10:42	10:50	10:57	11:02	11:18	11:30
10:30	10:35	10:50	10:55	11:03	11:12	11:20	11:27	11:34	11:42	11:50	11:57	12:02	12:18	12:30
11:30	11:35	11:50	11:55	12:03	12:12	12:20	12:27	12:34	12:42	12:50	12:57	1:02	1:18	1:30
12:30	12:35	12:50	12:55	1:03	1:12	1:20	1:27	1:34	1:42	1:50	1:57	2:02	2:18	2:30
1:30	1:35	1:50	1:55	2:03	2:12	2:20	2:27	2:34	2:42	2:50	2:57	3:02	3:18	3:30
2:30	2:35	2:50	2:55	3:03	3:12	3:20	3:27	3:34	3:42	3:50	3:57	4:02	4:18	4:30
3:30	3:35	3:50	3:55	4:03	4:12	4:20	4:27	4:34	4:42	4:50	4:57	5:02	5:18	5:30
4:30	4:35	4:50	4:55	5:03	5:12	5:20	5:27	5:34	5:42	5:50	5:57	6:02	6:18	6:30
5:30	5:35	5:50	5:55	6:03	6:12	6:20	6:27	6:34	6:42	6:50	6:57	7:02	7:18	7:30
6:30	6:35	6:50	6:55	7:03	7:12	7:20	7:27	7:34	7:42	7:50	7:57	8:02	8:18	8:30
7:30	7:35	7:50	7:55	8:03	8:12	8:20	8:27	8:34	8:42	8:50	8:57	9:02	9:18	9:30

KIHEI VILLAGER ROUTE #15

Ma'alea Harbor Village	S. Kihei Rd./Uwepo Rd. (leeward)	S. Kihei Rd./Ohukai Rd. (leeward)	S. Kihei Rd./Kamanoou St. (leeward)	S. Kihei Rd./Kulanihako St. (leeward)	S. Kihei Rd./Waipuilani Rd. (leeward)	Pi'ikea Ave./S. Kihei Rd.	Pi'ilani Village Shopping Center	Pi'ikea Ave./S. Kihei Rd.	S. Kihei Rd./Waipuilani Rd. (leeward)	S. Kihei Rd./Kulanihako St. (leeward)	S. Kihei Rd./Kamanoou St. (leeward)	S. Kihei Rd./Ohukai Rd. (leeward)	S. Kihei Rd./Uwepo Rd. (leeward)	Ma'alea Harbor Village
6:00	6:13	6:15	6:16	6:17	6:19	6:21	6:26	6:29	6:31	6:32	6:33	6:35	6:37	6:55
7:00	7:13	7:15	7:16	7:17	7:19	7:21	7:26	7:29	7:31	7:32	7:33	7:35	7:37	7:55
8:00	8:13	8:15	8:16	8:17	8:19	8:21	8:26	8:29	8:31	8:32	8:33	8:35	8:37	8:55
9:00	9:13	9:15	9:16	9:17	9:19	9:21	9:26	9:29	9:31	9:32	9:33	9:35	9:37	9:55
10:00	10:13	10:15	10:16	10:17	10:19	10:21	10:26	10:29	10:31	10:32	10:33	10:35	10:37	10:55
11:00	11:13	11:15	11:16	11:17	11:19	11:21	11:26	11:29	11:31	11:32	11:33	11:35	11:37	11:55
12:00	12:13	12:15	12:16	12:17	12:19	12:21	12:26	12:29	12:31	12:32	12:33	12:35	12:37	12:55
1:00	1:13	1:15	1:16	1:17	1:19	1:21	1:26	1:29	1:31	1:32	1:33	1:35	1:37	1:55
2:00	2:13	2:15	2:16	2:17	2:19	2:21	2:26	2:29	2:31	2:32	2:33	2:35	2:37	2:55
3:00	3:13	3:15	3:16	3:17	3:19	3:21	3:26	3:29	3:31	3:32	3:33	3:35	3:37	3:55
4:00	4:13	4:15	4:16	4:17	4:19	4:21	4:26	4:29	4:31	4:32	4:33	4:35	4:37	4:55
5:00	5:13	5:15	5:16	5:17	5:19	5:21	5:26	5:29	5:31	5:32	5:33	5:35	5:37	5:55
6:00	6:13	6:15	6:16	6:17	6:19	6:21	6:26	6:29	6:31	6:32	6:33	6:35	6:37	6:55
7:00	7:13	7:15	7:16	7:17	7:19	7:21	7:26	7:29	7:31	7:32	7:33	7:35	7:37	7:55
8:00	8:13	8:15	8:16	8:17	8:19	8:21	8:26	8:29	8:31	8:32	8:33	8:35	8:37	8:55

KULA ISLANDER ROUTE #39 (REVISED ROUTE)

Queen Ka'ahumanu Center	Kamehameha Ave./Kahului Salvation Army	Pakaula St./Home Depot	Mayor Hannibal Tavares Comm. Ctr.	Kulamalu Town Ctr. (to Kula)	Kula Hardware (to Kula)	Kula Community Ctr. (to Kula)	Harold W. Rice Memorial Park (to Kula)	Pueo Dr./Kula Hwy.	Pueo Dr./Hi'ipali Lp.	Kula Hwy./Kula Hospital	Harold W. Rice Memorial Park (to Pakalani)	Kula Community Ctr. (to Pakalani)	Kula Hardware (to Pakalani)	Kulamalu Town Ctr. (to Pakalani)	Mayor Hannibal Tavares Comm. Ctr.	Pakaula St./Wal-Mart	Kamehameha Ave./Kahului Shopping Ctr.	Queen Ka'ahumanu Center
8:00	8:05	8:11	8:28	8:36	8:44	8:48	8:53	8:56	8:59	9:11	9:16	9:21	9:23	9:31	9:38	9:58	10:03	10:10
11:00	11:05	11:11	11:28	11:36	11:44	11:48	11:53	11:56	11:59	12:11	12:16	12:21	12:23	12:31	12:38	12:58	1:03	1:10
2:00	2:05	2:11	2:28	2:36	2:44	2:48	2:53	2:56	2:59	3:11	3:16	3:21	3:23	3:31	3:38	3:58	4:03	4:10
5:00	5:05	5:11	5:28	5:36	5:44	5:48	5:53	5:56	5:59	6:11	6:16	6:21	6:23	6:31	6:38	6:58	7:03	7:10
8:00	8:05	8:11	8:28	8:36	8:44	8:48	8:53	8:56	8:59	9:11	9:16	9:21	9:23	9:31	9:38	9:58	10:03	10:10

WAIHE'E VILLAGER ROUTE #8 (NEW ROUTE)

Queen Ka'ahumanu Center	Kea St./Kaiehi St.	S. Papa Ave./Roselani Place (across)	Waihe'ie Ave./UH Maui College	Ho'okahi St./Eha St. (to Waihe'e)	Waihe'u Beach Rd./Ka'ae Rd.	Lower Waihe'u Beach Rd./Pakele Pl.	Akake St./Lower Waihe'u Beach Rd.	Hooums St./Oceanview Estates	Kahehiki Hwy.-Bus Shelter	Kahehiki Hwy./Waihe'u Kou	Kahehiki Hwy./Ho'ola Hou St. (past)	Richard Pablo Caldito Sr. Park	Kahehiki Hwy./Hooums St.	Waihe'u Beach Rd./Kuhio Pl.	Ho'okahi St./Eha St. (to Kahului)	Waihe'ie Ave./MACC	S. Papa Ave./Roselani Place	Kea St./Hone St.	Queen Ka'ahumanu Center
7:15	7:18	7:20	7:23	7:27	7:29	7:31	7:33	7:35	7:36	7:37	7:38	7:39	7:42	7:45	7:47	7:50	7:52	7:54	8:00
10:15	10:18	10:20	10:23	10:27	10:29	10:31	10:33	10:35	10:36	10:37	10:38	10:39	10:42	10:45	10:47	10:50	10:52	10:54	11:00
1:15	1:18	1:20	1:23	1:27	1:29	1:31	1:33	1:35	1:36	1:37	1:38	1:39	1:42	1:45	1:47	1:50	1:52	1:54	2:00
4:15	4:18	4:20	4:23	4:27	4:29	4:31	4:33	4:35	4:36	4:37	4:38	4:39	4:42	4:45	4:47	4:50	4:52	4:54	5:00
7:15	7:18	7:20	7:23	7:27	7:29	7:31	7:33	7:35	7:36	7:37	7:38	7:39	7:42	7:45	7:47	7:50	7:52	7:54	8:00

WEST MAUI ISLANDER #28

Wharf Cinema Center	Papalaua St./Front St.	Lahaina Cannery Mall	Whalers Village	Honokowai Shopping Center (to Kapalani)	L. Honoapiilani Rd./Polynesian Shores (to Kapalani)	L. Honoapiilani Rd./Kahana Manor	Napili Plaza	L. Honoapiilani Rd./Napili Shores (to Kapalani)	Kapalua Dr./Kapalua	L. Honoapiilani Rd./Napili Kai	L. Honoapiilani Rd./Napili Shores (to Lahaina)	Napili Plaza	L. Honoapiilani Rd./Kahana Sunset	L. Honoapiilani Rd./Valley Isle Resort	L. Honoapiilani Rd./Polynesian Shores (to Lahaina)	Honokowai Shopping Center (to Lahaina)	Whalers Village	Lahaina Cannery Mall	Papalaua St./Front St.	Wharf Cinema Center
6:30	6:39	6:46	6:58	7:06	7:11	7:13	7:20	7:23	7:30	7:36	7:39	7:43	7:46	7:49	7:51	7:57	8:07	8:16	8:21	8:30
7:30	7:39	7:46	7:58	8:06	8:11	8:13	8:20	8:23	8:30	8:36	8:39	8:43	8:46	8:49	8:51	8:57	9:07	9:16	9:21	9:30
8:30	8:39	8:46	8:58	9:06	9:11	9:13	9:20	9:23	9:30	9:36	9:39	9:43	9:46	9:49	9:51	9:57	10:07	10:16	10:21	10:30
9:30	9:39	9:46	9:58	10:06	10:11	10:13	10:20	10:23	10:30	10:36	10:39	10:43	10:46	10:49	10:51	10:57	11:07	11:16	11:21	11:30
10:30	10:39	10:46	10:58	11:06	11:11	11:13	11:20	11:23	11:30	11:36	11:39	11:43	11:46	11:49	11:51	11:57	12:07	12:16	12:21	12:30
11:30	11:39	11:46	11:58	12:06	12:11	12:13	12:20	12:23	12:30	12:36	12:39	12:43	12:46	12:49	12:51	12:57	1:07	1:16	1:21	1:30
12:30	12:39	12:46	12:58	1:06	1:11	1:13	1:20	1:23	1:30	1:36	1:39	1:43	1:46	1:49	1:51	1:57	2:07	2:16	2:21	2:30
1:30	1:39	1:46	1:58	2:06	2:11	2:13	2:20	2:23	2:30	2:36	2:39	2:43	2:46	2:49	2:51	2:57	3:07	3:16	3:21	3:30
2:30	2:39	2:46	2:58	3:06	3:11	3:13	3:20	3:23	3:30	3:36	3:39	3:43	3:46	3:49	3:51	3:57	4:07	4:16	4:21	4:30
3:30	3:39	3:46	3:58	4:06	4:11	4:13	4:20	4:23	4:30	4:36	4:39	4:43	4:46	4:49	4:51	4:57	5:07	5:16	5:21	5:30
4:30	4:39	4:46	4:58	5:06	5:11	5:13	5:20	5:23	5:30	5:36	5:39	5:43	5:46	5:49	5:51	5:57	6:07	6:16	6:21	6:30
5:30	5:39	5:46	5:58	6:06	6:11	6:13	6:20	6:23	6:30	6:36	6:39	6:43	6:46	6:49	6:51	6:57	7:07	7:16	7:21	7:30
6:30	6:39	6:46	6:58	7:06	7:11	7:13	7:20	7:23	7:30	7:36	7:39	7:43	7:46	7:49	7:51	7:57	8:07	8:16	8:21	8:30
7:30	7:39	7:46	7:58	8:06	8:11	8:13	8:20	8:23	8:30	8:36	8:39	8:43	8:46	8:49	8:51	8:57	9:07	9:16	9:21	9:30
8:30	8:39	8:46	8:58																	

LAHAINA VILLAGER #23

Wharf Cinema Center Luakini Street	505 Front Street	Lahaina Aquatics Center	Kuiaua Street/Kumukahi Street	Kalena Street/Pikanele Street	Lahaina Gateway	Amakea Road/Fleming Road	Leialii Parkway/Near Ho'oli Street	Lahaina Cannery Mall	Papalaua Street	Wharf Cinema Center Luakini Street
8:00	8:04	8:09	8:15	8:17	8:23	8:27	8:31	8:42	8:48	9:00
9:00	9:04	9:09	9:15	9:17	9:23	9:27	9:31	9:42	9:48	10:00
10:00	10:04	10:09	10:15	10:17	10:23	10:27	10:31	10:42	10:48	11:00
11:00	11:04	11:09	11:15	11:17	11:23	11:27	11:31	11:42	11:48	12:00
12:00	12:04	12:09	12:15	12:17	12:23	12:27	12:31	12:42	12:48	1:00
1:00	1:04	1:09	1:15	1:17	1:23	1:27	1:31	1:42	1:48	2:00
BREAK										
3:00	3:04	3:09	3:15	3:17	3:23	3:27	3:31	3:42	3:48	4:00
4:00	4:04	4:09	4:15	4:17	4:23	4:27	4:31	4:42	4:48	5:00
5:00	5:04	5:09	5:15	5:17	5:23	5:27	5:31	5:42	5:48	6:00
6:00	6:04	6:09	6:15	6:17	6:23	6:27	6:31	6:42	6:48	7:00
7:00	7:04	7:09	7:15							

BUS RULES

For your safety and the safety of others:

- Please be at the bus stop at least five (5) minutes prior to the departure time. Wait on the proper side of the road for the bus to arrive at the bus stop sign. Wait for the bus to make a complete stop before approaching the bus.
- Exact fare or bus pass must be presented when boarding.
- Infants under 2 years old, traveling free, must ride on the lap of an accompanying adult.
- Please allow senior citizens the use of front seating.
- Please be alert at all times for sudden or quick stops.
- When standing, please move to the rear of the bus and always hold on to the standee handbars or seatbars.
- Shirt and footwear are required.
- Pets must be in an enclosed carrier or cage. Service animals are allowed on the bus.
- Anyone who believes that he or she has been discriminated against on the basis of race, color, or national origin, while using the Maui Bus or its paratransit services may file a Title VI complaint with the County of Maui Department of Transportation.

BAGGAGE RULES

All baggage and personal items must be stored under your seat or on your lap, and will not protrude to another seat or interfere with other passengers. Baggage that will not be admitted on board shall include any oversized, dangerous, or offensive article that may cause harm or discomfort to any passenger. All items must be free of sand and debris. No baggage may be stored in the aisle or on another seat.

- One (1) medium-sized suitcase, duffelbag, backpack, carry-on bag, metal-framed child carriers, small metal caddy on wheels, collapsible baby stroller, band instrument, skateboard, soft body board without skegs, beach chair, pet carrier or cage, small cooler, or container with no sharp edges holding a maximum of three (3) golf clubs or detachable fishing poles is allowed.
- Grocery and reusable bags that a passenger can carry in their arms are allowed. Bags filled with bottle and can recyclables are not allowed.

BICYCLE RULES

- All buses are equipped with a bicycle rack that can hold a maximum of two (2) bicycles. Both tires must sit flat to the base of the rack.
- Only two-wheeled, non-motorized bicycles are permitted. No gas or electric powered bicycles are allowed.
- Bicycles with an oversized basket or other type of carrier that obstructs the view of the driver are not permitted.

PROHIBITED

- Surboards and skimboards.
- Eating, drinking, smoking, e-cigarettes, or loud music.
- Flammable, explosive, or toxic material.
- Weapons and dangerous instruments.
- Littering on the bus.
- Obstructing or interfering with the bus driver.

FARES

All routes cost \$2.00 per boarding. Infants under 2 years old, riding on the lap of an accompanying adult travel free. Daily and monthly passes are also available.

GENERAL BOARDING - All Routes Fixed Routes, Commuter, and ADA Paratransit Service	\$2.00
DAILY PASS Fixed Routes and ADA Paratransit Service	\$4.00
MONTHLY PASS (PRIORITY BOARDING)	
General Boarding Fixed Routes and Commuter Service	\$45.00
Student Pass (w/Valid ID, Ages 24 & under) Fixed Routes and ADA Paratransit Service	\$30.00
Senior Pass (55 Years & Older) Fixed Routes Only	\$25.00
Person with Disability Pass* Fixed Routes Only	\$30.00

*Applicants shall be required to register with Maui Economic Opportunity, Inc. (MEO) to qualify for this rate. Please contact MEO at (808) 249-2990 for application and information.

Monthly passes are valid for a calendar month and are available for purchase from the 25th of the previous month through the 10th of each month.

Monthly and daily passes are available from:

- Maui Bus Drivers
- Maui County Business Resource Center - Maui Mall
Weekdays, 8am-4:30pm, excluding holidays
- Wharf Cinema Center Management Office
Weekdays, 9am-4pm, excluding holidays

Note: Lost, stolen, destroyed, or misplaced bus passes will not be replaced or refunded. Monthly and daily passes are non-transferable.

CONTACT INFORMATION

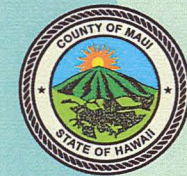
mauicounty.gov/bus
public.transit@mauicounty.gov
(808) 871-4838



maui bus

All vehicles are ADA accessible and are equipped with two bicycle racks.

County of Maui
Department of Transportation



Operated By
Roberts Hawaii 
(808) 871-4838

EFFECTIVE AUGUST 2018

July 2018 Passengers Boarding at QKC

Route name & number	Weekday average		Sat average	
	AM	PM	AM	PM
Wailuku Loop #1	9	11	12	13
Wailuku Reverse Loop #2	6	24	7	26
Kahului Loop #5	9	13	9	13
Kahului Reverse Loop #6	4	13	4	17
Waihee Villager Route #8	1	2	1	2
Kihei Islander Route #10	17	20	17	22
Lahaina Islander #20	18	17	21	18
Haiku Islander #35	12	11	10	13
Kula Islander #39	3	3	3	3
Upcountry Islander #40	12	11	13	18
TOTAL	92	125	96	145

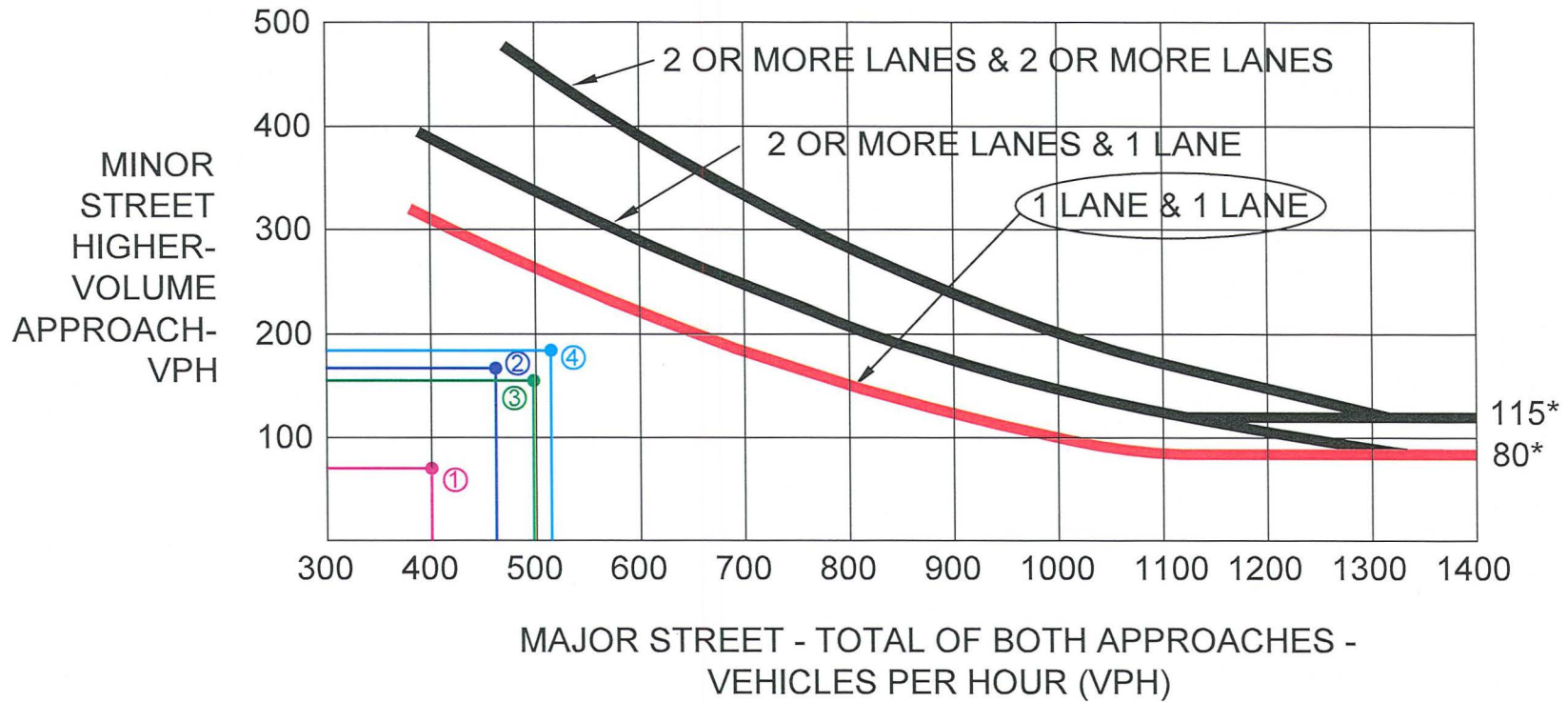


AUSTIN, TSUTSUMI & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS

APPENDIX F

TRAFFIC SIGNAL WARRANT

Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

- ① (7:15 AM to 8:15 AM), (400, 70)
- ② (11:00 AM to 12:00 PM), (462, 167)
- ③ (1:45 PM to 2:45 PM), (498, 155)
- ④ (4:15 PM to 5:15 PM), (515, 184)

VEVAU STREET BUS
HUB TIAR



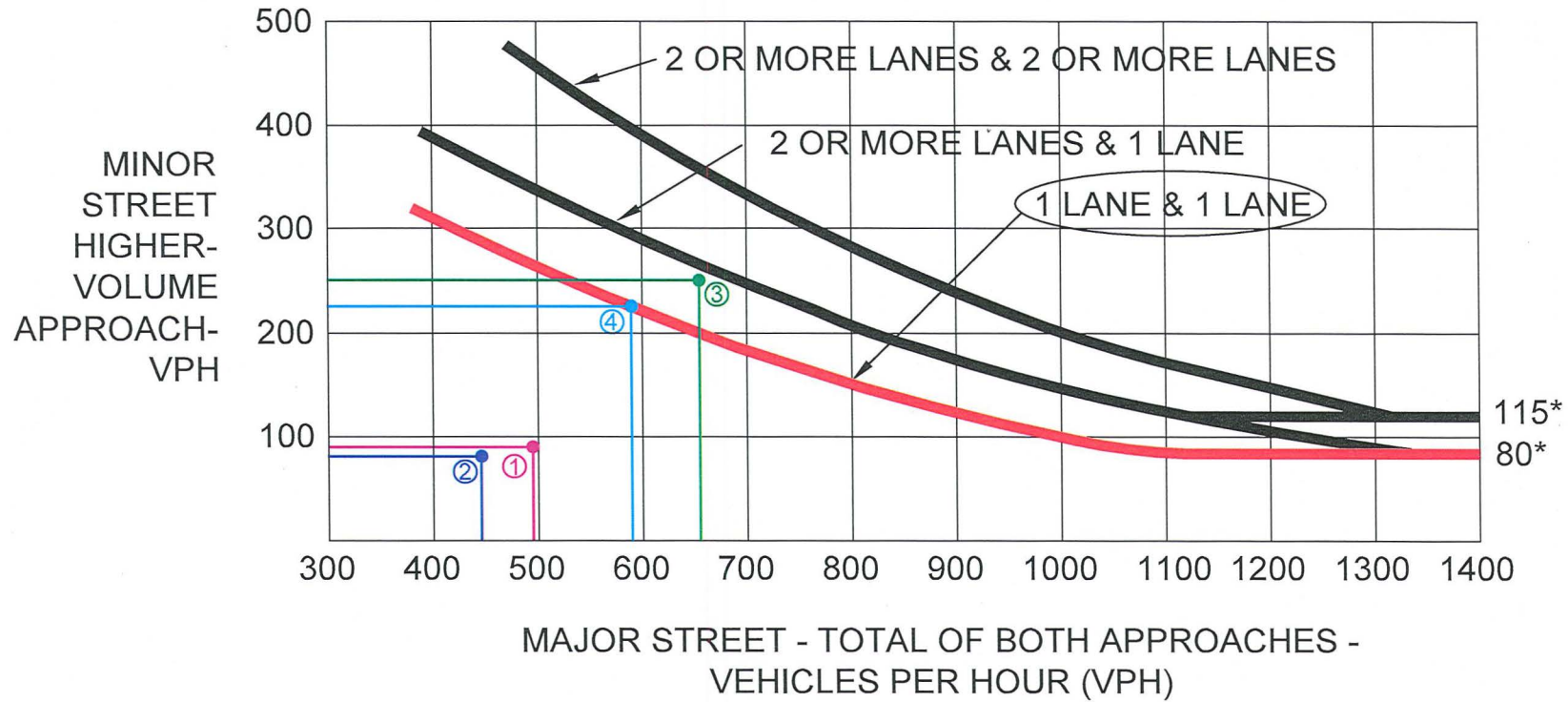
AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS HONOLULU, HAWAII

APPENDIX

TRAFFIC SIGNAL WARRANT FOR EXISTING CONDITIONS KANE ST/VEVAU ST INT.

F

Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

- ① (7:15 AM to 8:15 AM), (495, 90)
- ② (8:15 AM to 9:15 AM), (446, 81)
- ③ (4:00 PM to 5:00 PM), (655, 250)
- ④ (5:00 PM to 6:00 PM), (590, 225)

VEVAU STREET BUS
HUB TIAR



AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS HONOLULU, HAWAII

APPENDIX

TRAFFIC SIGNAL WARRANT FOR FY2021 CONDITIONS KANE ST/VEVAU ST INT.

F