DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
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FILE COPY

MAR - 8 2021

RICK BLANGIARDI
MAYOR

J. ROGER MORTON
DIRECTOR DESIGNATE

JON Y. NOUCHI
DEPUTY DIRECTOR

February 26, 2021

Mr. Keith E. Kawaoka
Office of Environmental Quality Control
Department of Health
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT AND ANTICIPATED FINDING OF NO SIGNIFICANT IMPACT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Kawaoka:

With this letter, the City and County of Honolulu, Department of Transportation Services (DTS), transmits the Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-AFONSI) for the proposed Kekaulike Mall and Kekaulike Street Multimodal Improvements project on the island of Oahu, for review and publication in the next available edition of The Environmental Notice.

In addition to this letter, the online Office of Environmental Quality Control (OEQC) Publication Form has been submitted through the OEQC website. The online submittal includes one electronic copy of the DEA-AFONSI as an Adobe Acrobat PDF file.

Should you have any questions, please contact Honglong Li of the Department of Transportation Services at (808) 768-5472, or Catie Cullison, Consultant with PBR HAWAII & Associate, Inc. at (808) 521-5631. We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Very truly yours,

J. Roger Morton
Director Designate

Enclosure

21-131

From: webmaster@hawaii.gov
To: HI Office of Environmental Quality Control
Subject: New online submission for The Environmental Notice
Date: Monday, March 1, 2021 3:18:45 PM

Action Name

Kekaulike Mall and Kekaulike Street Multimodal Improvements Project

Type of Document/Determination

Draft environmental assessment and anticipated finding of no significant impact (DEA-AFNSI)

HRS §343-5(a) Trigger(s)

- (1) Propose the use of state or county lands or the use of state or county funds

Judicial district

Honolulu, O‘ahu

Tax Map Key(s) (TMK(s))

N/A (Street Right-of-Way)

Action type

Agency

Other required permits and approvals

Minor Modification of Special District Permit Lane Use/Occupancy Permit for Construction Activity State Department of Health Noise Permit National Pollutant Discharge Elimination System (NPDES) Permit Grading/Building Permits

Proposing/determining agency

City and County of Honolulu, Department of Transportation Services

Agency contact name

Honglong Li

Agency contact email (for info about the action)

hli@honolulu.gov

Agency contact phone

(808) 768-8303

Agency address

650 South King Street
3rd Floor
Honolulu, Hawaii 96813
United States
Map It

Was this submittal prepared by a consultant?

Yes

Consultant

PBR HAWAII & Associates, Inc.

Consultant contact name

Catie Cullison

Consultant contact email

ccullision@pbrhawaii.com

Consultant contact phone

(808) 521-5631

Consultant address

1001 Bishop Street
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Map It

Action summary

Infrastructure and streetscape improvements along the entirety of Kekaulike Mall and Kekaulike Street. The “shared-use street” concept is designed to improve pedestrian accessibility, safety, connectivity and wayfinding while promoting economic activity and enhancing the experience of residents and visitors in Chinatown.

Reasons supporting determination

Refer to Section 7.1 (Significance Criteria) of the Draft EA.

Attached documents (signed agency letter & EA/EIS)

- DEA-Kekaulike-3.1.21.pdf
- Kekaulike-DEA-Transmittal-2-26-21.pdf

Action location map

- Project-Site.zip

Authorized individual

Dave Simpson

Authorization

- The above named authorized individual hereby certifies that he/she has the authority to make this submission.

KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

Draft Environmental Assessment/

Anticipated Finding of No Significant Impact

City and County of Honolulu

Department of Transportation Services

This document and all ancillary documents were prepared in accordance with the content requirements of Chapter 343, Hawaii Revised Statutes, and Title 11, Chapter 200.1, Hawaii Administrative Rules.

Prepared by:

PBR HAWAII & ASSOCIATES, INC.

In collaboration with:

HDR

March 2021

SUMMARY

Project Name:	Kekaulike Mall and Kekaulike Street Multimodal Improvements Project
Location:	Chinatown, Oahu, Hawaii
Judicial District:	Honolulu
Proposing/Determining Agency:	City and County of Honolulu Department of Transportation Services 650 S. King Street, 3rd Floor Honolulu, Hawaii 96813 Contact: Roger Morton, Director Phone: (808) 768-8303 Email: rmorton@honolulu.gov
Tax Map Keys (TMK):	n/a
Recorded Fee Owner:	City and County of Honolulu
Existing Use:	Kekaulike Pedestrian Mall and Kekaulike Street
Proposed Action:	Infrastructure and streetscape improvements along the entirety of Kekaulike Mall and Kekaulike Street. The "shared-use street" concept is designed to improve pedestrian accessibility, safety, connectivity and wayfinding while promoting economic activity and enhancing the experience of residents and visitors in Chinatown. See Figure 1.
Need for Environmental Assessment	Use of County lands and funds. Project will include improvements and/or connections to, and/or easements across, County facilities and lands in relation to infrastructure improvements for public facilities, roadways, water, sewer, utility, drainage or other facilities.

Current Land Use Designations:	*State Land Use:* Urban *County Zoning:* BMX-4 (Central Business Mixed Use District) *Special District:* Chinatown Special District *Special Management Area (SMA):* Outside SMA
Major Approvals Required or Anticipated:	Minor Modification of Special District Permit Lane Use/Occupancy Permit for Construction Activity State Department of Health Noise Permit National Pollutant Discharge Elimination System (NPDES) Permit Grading/Building Permits
Alternatives Considered:	Alternatives considered: 1) Overhead Canopies and Architectural Planters 2) No Action

Potential Impacts and Mitigation Measures:	Short-term construction impacts to air quality, noise, solid waste generation, traffic, parking, storm water quality/quantity are anticipated. The Department of Transportation Services will address these impacts through compliance with County and State rules, regulations, permit, and variance requirements regarding fugitive dust, community noise control, and non-point source discharges. In addition, best management practices will be implemented which include structural and non-structural controls designed to inhibit run-off, erosion, and fugitive dust. Long-term impacts are anticipated to be beneficial in that the project is an investment in Honolulu's multimodal transportation network involving improvements to the streetscape and stormwater management in a historic mixed used community. Most vehicular traffic will be restricted within the project area to provide an open shared space for business and pedestrian use. One-way paratransit (TheHandi-Van) will be permitted in the project area and commercial freight access will be permitted only during designated freight loading hours. Emergency and maintenance vehicles will be allowed access at any time.
Anticipated Determination:	Anticipated Finding of No Significant Impact (FONSI)

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ACRONYMS

ADA	Americans with Disabilities Act
AIS	Archaeological Inventory Survey
AMP	Archaeological Monitoring Plan
AM	Ante Meridiem (related to TIAR data)
AMSL	Above Mean Sea Level
BMP	Best Management Practices
ICAP	Center for Island Climate Adaptation and Policy
CCH	City and County of Honolulu
CFR	Code of Federal Regulations
CIA	Cultural Impact Assessment
CIP	Capital Improvement Project
CWRM	Commission on Water Resource Management
CZM	Coastal Zone Management Program
dB	Decibel
DAR	DLNR Division of Aquatic Resources
DBEDT	Department of Business, Economic Development & Tourism
DDC	City and County of Honolulu Department of Design & Construction
DLNR	State of Hawaii Department of Land & Natural Resources
DOH	State of Hawaii Department of Health
DTS	City and County of Honolulu Department of Transportation Services
EA	Environmental Assessment
EPA	United States Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
HAR	Hawaii Administrative Rules
HFD	Honolulu Fire Department
HI-EMA	State of Hawaii, Hawaii Emergency Management Agency
HIOSH	Hawaii Occupational Safety and Health Division
HRS	Hawaii Revised Statutes
HRT	Honolulu Rail Transit

HRTP	Honolulu Rapid Transit Project
LCA	Land Commission Award
Ldn	Average day-night noise level
LED	Light emitting diode
Leq	Hourly average noise levels
LID	Low Impact Development
LOS	Levels of Service
LUST	Leaking Underground Storage Tank
MAR	Mobility Analysis Report
MD	Mid-Day (related to TIAR data)
MGD	Million gallons per day
MMP	Multi-Modal Plan
mph	Miles per hour
MUTCD	Manual on Uniform Traffic Control Devices
NFIP	National Flood Insurance Program
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NWI	National Wetlands Inventory
OEQC	State of Hawaii, Office of Environmental Quality Control
ORTP	Oahu Regional Transportation Plan
OSHA	Federal Occupational Safety and Health Act
OSHCO	Occupational Safety and Health Compliance Officer
PCB	Polychlorinated Biphenyl
PM	Post Meridiem (related to TIAR data)
REC	Recognized Environmental Condition
ROW	Right of Way
RPT	Real Property Tax
sf	square foot
SLR	Sea level rise
SHPD	State Historic Preservation Division
SMA	Special Management Area
TDFM	Travel Demand Forecasting Model

TIAR	Traffic Impact Analysis Report
TMK	Tax Map Key
UIC	Underground injection control
USFWS	United States Fish and Wildlife Service

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1 INTRODUCTION

This Environmental Assessment (EA) is prepared in accordance with Chapter 343, Hawaii Revised Statutes (HRS) for the Kekaulike Mall and Kekaulike Street Multimodal Improvements project. This EA contains information in satisfaction of the requirements under Title 11, Chapter 200.1, Hawaii Administrative Rules (HAR) for an EA.

1.1 PROJECT SUMMARY

The project includes improvements to address the need for spatial continuity and connectivity between Kekaulike Mall, Kekaulike Street, and Holau transit station (the future Honolulu Rail Transit stop in Chinatown). A "shared-use street" concept has been designed that aims to improve pedestrian accessibility, safety, connectivity, and wayfinding while promoting economic activity and enhancing the experience of residents and visitors in Chinatown. The streetscape improvements include conversion of the existing Kekaulike Street from a traditional roadway to a "shared-use street" concept allowing primarily pedestrian use with vehicular access for deliveries to local businesses during discrete hours.

Most vehicular traffic will be restricted within the project area to provide an open shared space for business and pedestrian use. One-way paratransit (TheHandi-Van) will be permitted in the project area and commercial freight access will be permitted only during designated freight loading hours. Emergency and maintenance vehicles will be allowed access at any time. All authorized vehicles will enter at King Street and exit at Nimitz Highway.

The project site is located near several transportation routes and will enhance connectivity between modes of transportation including bicycle, bus, and rail. Improvements to both Kekaulike Mall and Kekaulike Street will also include drainage upgrades in coordination with the City to mitigate stormwater runoff quantity and quality, beautification enhancements such as lighting, shade trees, and opportunities for public art, as well as accommodations for future Wi-Fi, CCTV, blue light call boxes, and public address systems.

Improvements to Kekaulike Mall that will occur in Phase 1 and include replacement of existing brick paver system with poured or pre-cast concrete surface, drainage improvements, and replacement of trees found to be in poor condition. Curb ramp and crosswalk improvements at the intersection of North King Street and Kekaulike Street will be included in Phase 1.

Improvements to Kekaulike Street that will occur in Phase 2 include a raised street level to match the existing curb height with vehicular ramp access up from North King Street intersection for delivery vehicles and an exit ramp feeding into North Nimitz Highway near the future Holau transit station. The raised street level will provide for drainage improvements and enhance the

continuity of multimodal travel experience. Access control to prevent illegal parking is being considered as a part of Phase 2.

Extensive drainage improvements throughout both Kekaulike Mall and Kekaulike Street will be designed to alleviate existing environmental concerns related to stormwater runoff in compliance with City departments having jurisdiction. Landscaping improvements will include planters, grated tree wells, and supplemental irrigation system. There will also be dedicated areas for a future bicycle ride-share station (Biki) along Kekaulike Mall, two freight loading zones on Kekaulike Street and a drop-off for TheHandi-Van near the future Holau transit station along Kekaulike Street. An additional site will be preserved on Kekaulike Mall just mauka of North King Street for a Chinatown gate structure to be designed and developed by the Chinatown community at a future date. Paving or painted design features will be applied to both the Kekaulike Mall and the Kekaulike Street surfaces to offer a cohesive, aesthetically pleasing streetscape that will foster a sense of place consistent with the historical and cultural character of the Chinatown neighborhood.

1.2 LOCATION

The Project Site is comprised of Kekaulike Mall and Kekaulike Street, a pedestrian mall and roadway, which is located in the Chinatown Special District between River and Maunakea Streets, just northwest of downtown Honolulu. Kekaulike Mall runs mauka to makai from North Hotel Street to North King Street. Kekaulike Street extends from North King Street to Nimitz Highway. The pedestrian mall and a portion of the roadway are within the Historic Core Precinct of the special district while the remainder of the roadway is within the Makai Precinct

1.3 SURROUNDING LAND USES

The project location is in the Chinatown neighborhood within the heart of urban Honolulu and adjacent to Honolulu Harbor. Land uses surrounding the project area range from dense residential apartments to a variety of commercial uses such as open-air markets, small proprietary shops, restaurants and other eateries. Light industrial uses are mainly confined to the harbor piers. See Figure 3

The street is a mile (approx. 0.4) to Aloha Tower, 850 feet from the harbor (berth 11), and at the intersection of Nimitz Highway is immediately adjacent to the Chinatown Honolulu Rail Transit (HRT) station.

1.4 LAND OWNERSHIP

Kekaulike Mall and Kekaulike Street are managed by the Department of Parks and Recreation (DPR) and City and County of Honolulu Department of Transportation Services (DTS),

respectively. Kekaulike Street connects with the State of Hawaii, Department of Transportation's (HDOT) Nimitz Highway at the western terminus of the street.

1.5 IDENTIFICATION OF PROPOSING / DETERMINING AGENCY

The proposing/ determining agency is the City and County of Honolulu, Department of Transportation Services.

Contact:

City and County of Honolulu
Department of Transportation Services
650 S. King Street, 3rd Floor
Honolulu, Hawaii 96813
Contact: Roger Morton, Director
Phone: (808) 768-8303

1.6 IDENTIFICATION OF ENVIRONMENTAL CONSULTANT

PBR HAWAII is the City and County of Honolulu, Department of Transportation Services' planning consultant under HDR, Inc. and is the agent for this environmental assessment.

Contact: Catie Cullison
Planner, Principal
PBR HAWAII
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813
Phone: (808) 521-5631
Fax: (808) 523-1402
Email: ccullison@pbrhawaii.com

1.7 COMPLIANCE WITH STATE OF HAWAII ENVIRONMENTAL LAWS

Preparation of this document is in accordance with the provisions of Chapter 343, HRS and Title 11, Chapter 200.1, HAR pertaining to Environmental Assessments. Section 343-5, HRS identifies nine types of actions that "trigger" compliance, which requires an EA. The use of State or County funds and/or lands is one of these "triggers." The preparation of an EA is required because the proposed Kekaulike Mall and Kekaulike Street Multimodal Improvements project is located on County lands and will use State and County funds. It will also include improvements and/or connections to, and/or easements across, County facilities and lands in relation to infrastructure improvements for public facilities, roadways, water, sewer, utility, and drainage facilities.

1.8 IDENTIFICATION OF PARTIES CONSULTED

The following agencies, organizations and businesses were notified of the preparation of this Draft EA and were asked to provide comments and/or information. See Section 8.0 for more detailed information regarding agency and organization pre-consultation correspondence and community meetings.

STATE OF HAWAII
Department of Business, Economic Development & Tourism (DBEDT)
DBEDT - Land Use Commission
DBEDT - Office of Planning
Department of Defense - Engineering Office
Department of Education
Department of Hawaiian Home Lands
Department of Health
Department of Human Services
Department of Labor and Industrial Relations
Department of Land and Natural Resources
Department of Public Safety
Department of the Attorney General
Department of Transportation
Department of Transportation - Harbors
Department of Transportation - Highways
Department of Transportation, Highways Division, Planning Branch
Department of Transportation, Statewide Transportation Planning Office
DLNR - Historic Preservation Division
DLNR - Land Division
Hawaii Community Development Authority
Hawaii Housing Finance and Development Corporation
Hawaii Public Housing Authority
Hawaii Tourism Authority
O‘ahu MPO
Office of Hawaiian Affairs
CITY AND COUNTY OF HONOLULU
Board of Water Supply
Department of Budget and Fiscal Services
Department of Community Services
Department of Customer Services
Department of Design and Construction
Department of Emergency Management
Department of Enterprise Services

Department of Environmental Services
Department of Facility Maintenance
Department of Land Management
Department of Parks and Recreation
Department of Planning and Permitting
Department of Transportation Services
Honolulu Authority for Rapid Transportation
Honolulu Emergency Services Department
Honolulu Fire Department
Honolulu Police Department
Office of Climate Change, Sustainability and Resiliency
Office of Economic Development
REPRESENTATIVES
Senator Karl Rhoads
Representative Daniel Holt
Councilmember Carol Fukunaga
Neighborhood Board No. 13 Chairperson Kevin McDonald
Neighborhood Board No. 13 Secretary Roxie-Anne Kamoshida
Mayor Kirk Caldwell
UTILITIES
Hawaiian Electric Company, Inc.
Hawaiian Telecom
Spectrum
COMMUNITY ORGANIZATIONS
AARP Hawaii
Associated Chinese University Women
Association for Chinese from Vietnam, Laos and Cambodia
Bikeshare Hawaii
Blue Zones Project
Chinese Chamber of Commerce of Hawaii
Friends of Kekaulike Group
Hawaii Bicycling League
Hawaii Chinese History Center
Hawaii Community Foundation

Hawaii Heritage Center
Hawaii Public Health Institute
Historic Hawaii Foundation
Kamehameha Schools Bishop Estate
Kekaulike Courtyards
Move Oahu Forward
Mun Lun School

River of Life Mission
Ulupono Initiative
United Chinese Society of Hawaii
Wah Yun Culture and Arts Academy (dba Chinese Lion Dance Association)
Other Community Organizations

1.9 STUDIES CONTRIBUTING TO THIS ENVIRONMENTAL ASSESSMENT

The analyses contained in this EA has been developed from site visits, generally available information regarding the characteristics of the site and surrounding areas, and technical studies prepared specifically for the project. The technical studies are provided as appendices to this EA include:

- Archaeological Assessment / Archaeological Inventory Survey
- Cultural Impact Assessment
- Multimodal Traffic Impact Analysis Report

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2 PROJECT DESCRIPTION

2.1 BACKGROUND AND NEED FOR THE PROJECT

The project addresses the need for spatial continuity and connectivity between Kekaulike Mall, Kekaulike Street, and the future Holau transit station. Kekaulike Mall and Kekaulike Street are located in the Chinatown Special District between River and Maunakea Streets, just northwest of downtown Honolulu. Kekaulike pedestrian mall runs mauka to makai from North Hotel Street to King Street. Kekaulike Street runs mauka to makai from N. King Street to Nimitz Highway.

The need for improvements to Kekaulike Mall and Kekaulike Street were voiced by the community in a community-based planning effort to identify feasible, achievable neighborhood improvements for Chinatown. The effort culminated in a written plan called the *Chinatown Action Plan* (City and County of Honolulu, 2016). The Chinatown Action Plan can be found at this link: http://www.honolulu.gov/rep/site/dpptod/chinatown_docs/ChinatownActionPlan-Final_3-16.pdf .

A “shared-use street” concept has been designed that aims to improve pedestrian accessibility, safety, connectivity and wayfinding while promoting economic activity and enhancing the experience of residents and visitors in Chinatown. Preliminary designs have been drafted in coordination with State, County and community stakeholder collaboration. The streetscape improvements include conversion of the existing Kekaulike Street from a traditional roadway to a “shared-use street” concept allowing primarily pedestrian and bicycle use with vehicular access for deliveries to local businesses during discrete hours. Improvements to both Kekaulike Mall and Kekaulike Street will also include shading design elements and drainage improvements to mitigate stormwater runoff.

Figure 1 provides a proposed site plan and Appendix A provides detailed plans.

2.1.1 Existing and Surrounding Land Use

Current land use designations for the proposed project area are:

- State Land Use: Urban District
- County Zoning: BMX-4 Central Business Mixed Use District (Figure 4)
- Chinatown Special District (Figure 5)
- Federal Emergency Management Agency Flood Insurance Rate Map: Zone X (Figure 8)

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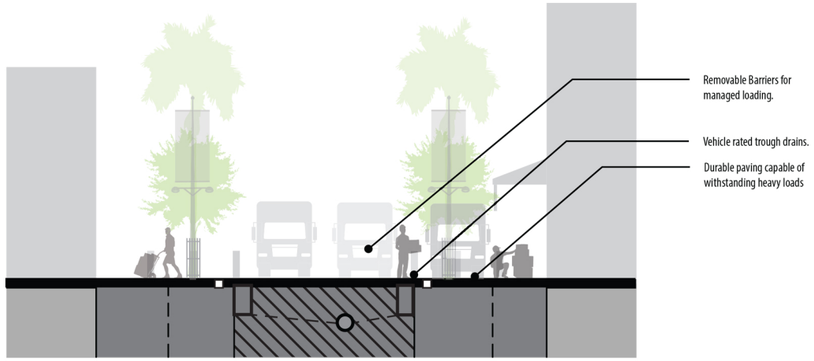

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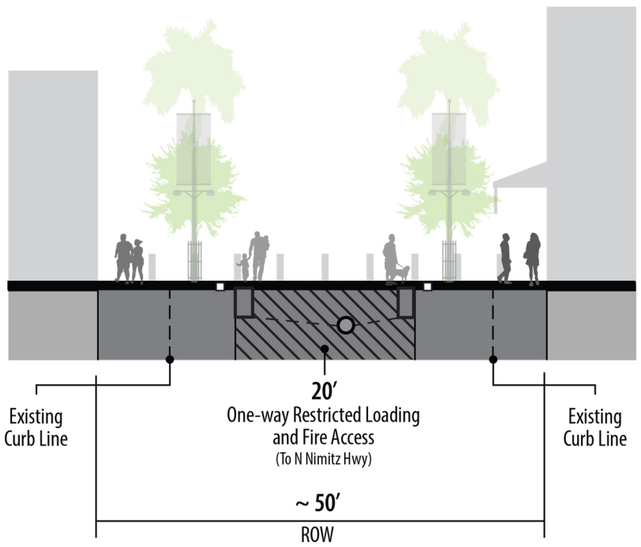

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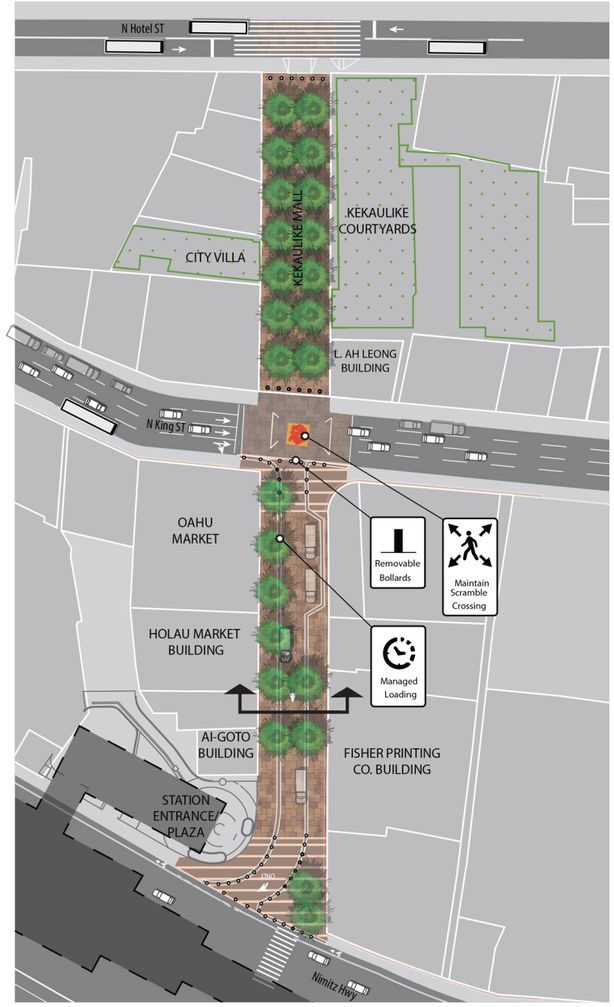

PLAN

PDF - Q:\Oahu\Kekaulike Street\PDF
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Figure 1A

Site Plan Overview Diagram

KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

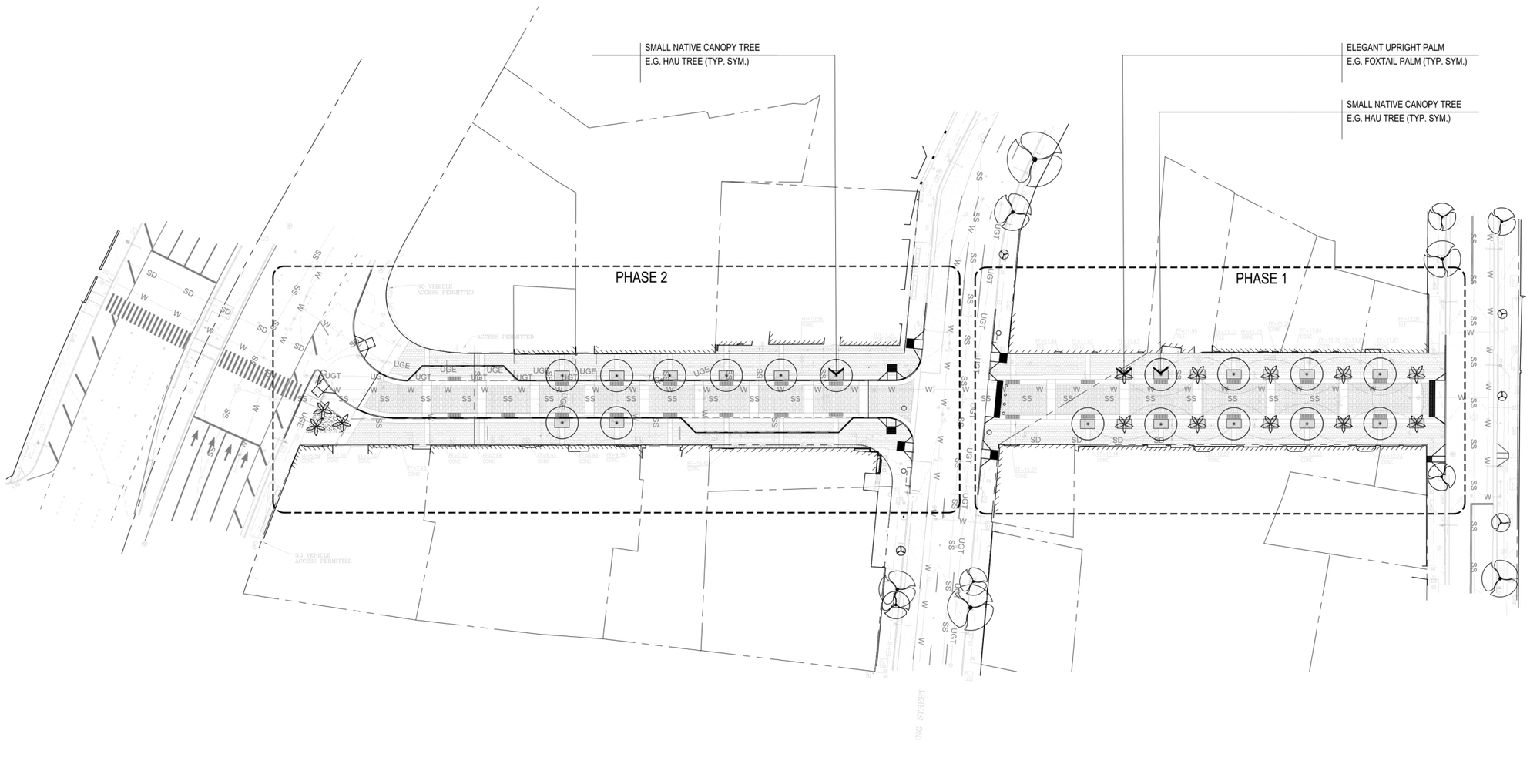
Department of Transportation Services — Island of O'ahu

North

HDR Engineering, Inc.

PBR HAWAII & ASSOCIATES, INC.

Source: HDR, 2021.



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Path - Q:\Oahu\Kekaulike Street\Photoshop

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Figure 1B

Overall Conceptual Landscape Plan

KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

Department of Transportation Services — Island of O'ahu

North

HDR Engineering, Inc.

PBR HAWAII & ASSOCIATES, INC.

Source: HDR, 2021.

Q:\Oahu\Kekaulike Street\GIS\Projects

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DATE: 2/9/2021

Legend

- Kekaulike Mall
- Kekaulike Street

Figure 2

Aerial Map

KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

Department of Transportation Services — Island of O'ahu

North — Linear Scale (feet): 0 25 50 100

PBR HAWAII & ASSOCIATES, INC.

Source: City and County of Honolulu, 2019; Pictometry, 2013.

Q:\Oahu\Kekaulike Street\GIS\Projects

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

DATE: 2/12/2021

Legend

- Kekaulike Mall
- Kekaulike Street

Figure 3

Surronding Land Uses

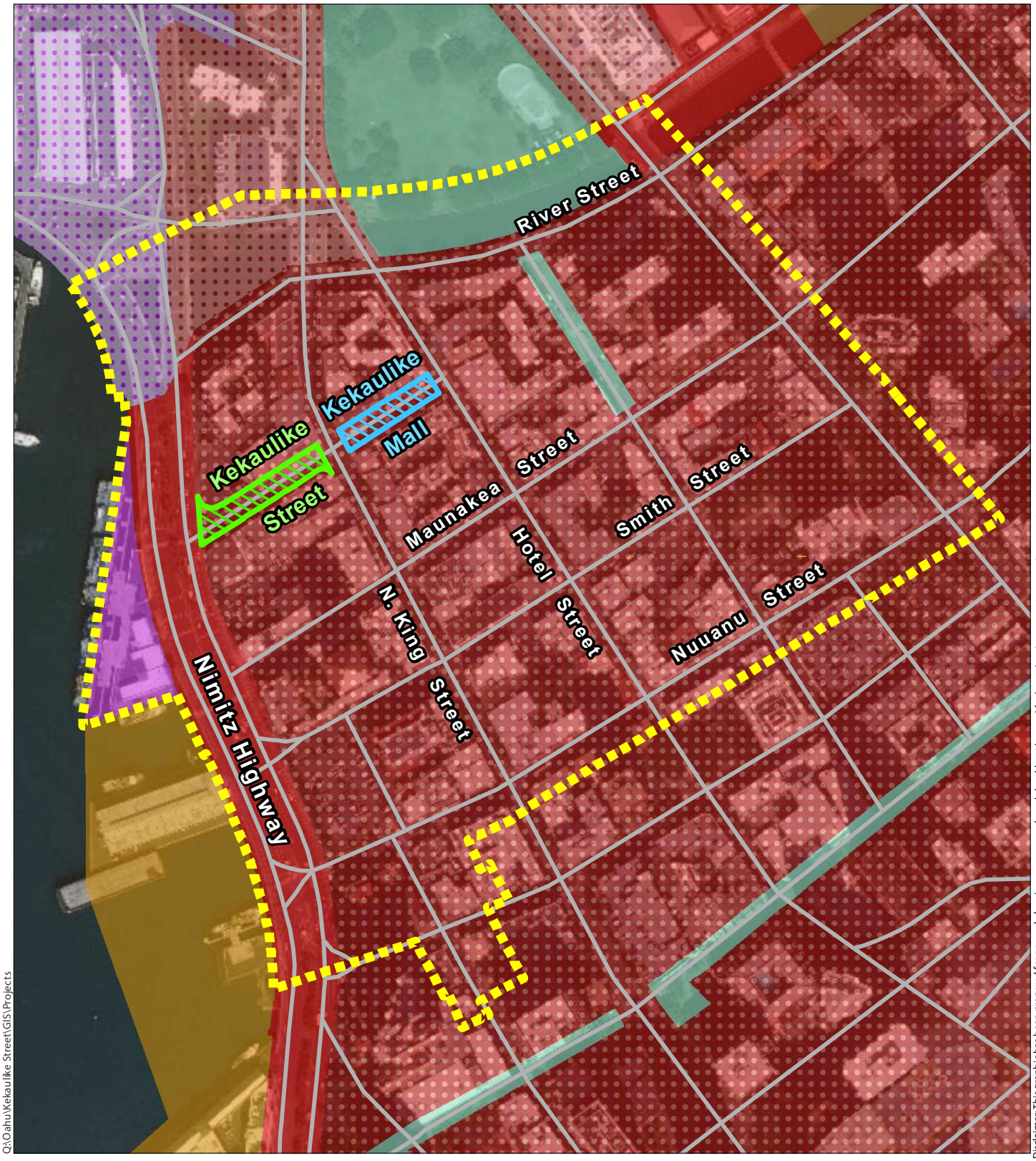
KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

Department of Transportation Services — Island of O'ahu

North — Linear Scale (feet): 0 25 50 100

PBR HAWAII & ASSOCIATES, INC.

Source: City and County of Honolulu, 2019; Google Maps, 2020; Pictometry, 2013.



Q:\Oahu\Kekaulike Street\GIS\Projects

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DATE: 2/9/2021

Legend

- Kekaulike Mall
- Kekaulike Street
- Chinatown Special District
- County and State Roadways

Zoning

- P-2
- A-2
- B-2
- BMX-3
- BMX-4
- I-3
- IMX-1
- ALOHA TOWER PROJ.

Source: City and County of Honolulu, 2019; ESRI Basemap.

Figure 4

City and County of Honolulu Land Use Ordinance

KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

Department of Transportation Services — Island of O'ahu

North — Linear Scale (feet): 0, 75, 150, 300

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DATE: 2/9/2021

Legend

- Kekaulike Mall
- Kekaulike Street
- Chinatown Special District
- Chinatown Historic Precincts

Figure 5

Chinatown Special District

KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

Department of Transportation Services

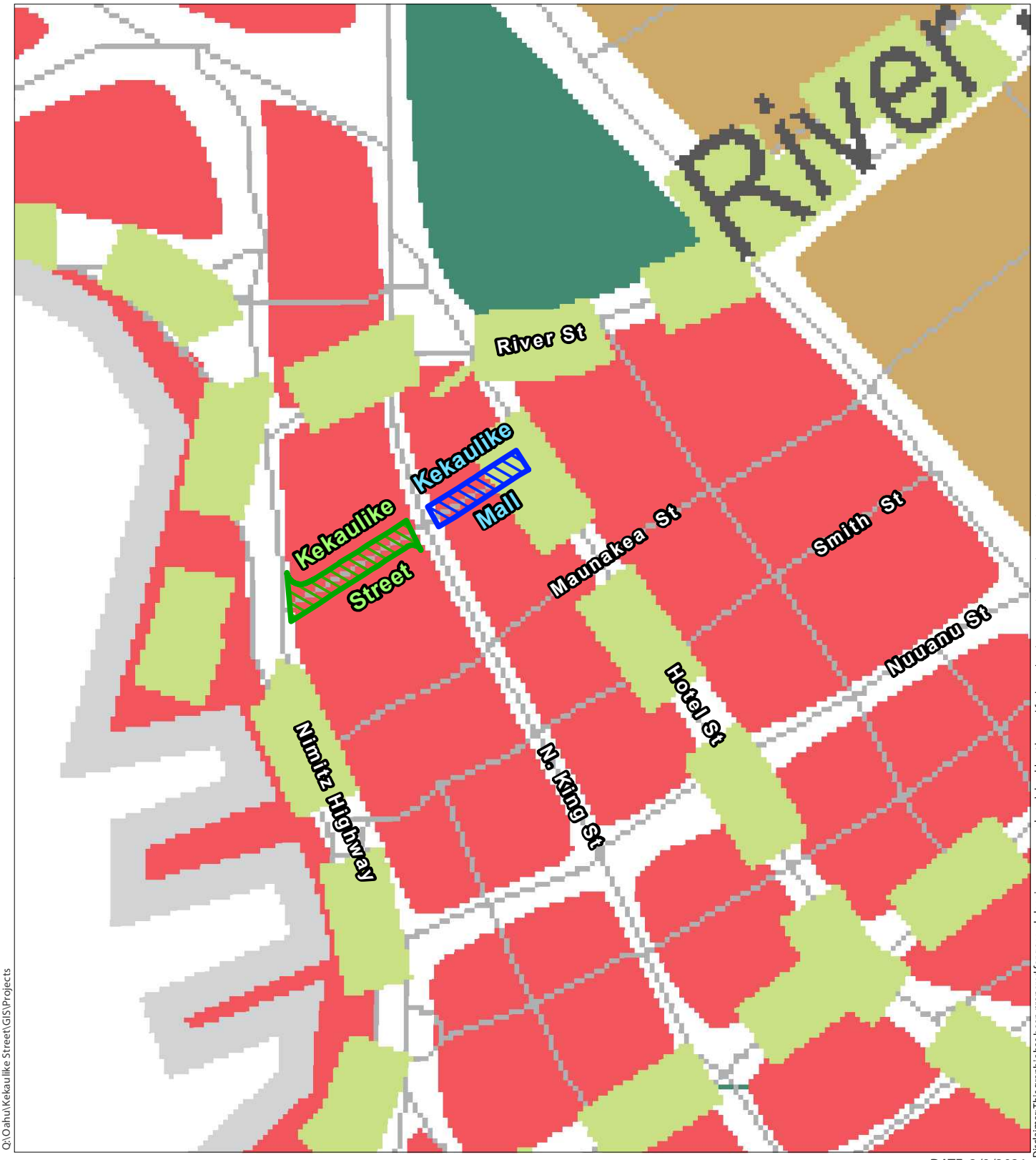
North

Linear Scale (feet)

0 75 150 300

PBR HAWAII & ASSOCIATES, INC.

Source: City and County of Honolulu, 2019; ESRI Basemap.



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DATE: 2/9/2021

Legend

- Kekaulike Mall
- Kekaulike Street
- District Commercial
- Medium and Higher-Density Residential/Mixed Use
- Major Parks and Open Space
- Pedestrian Network

Figure 6

Primary Urban Center Development Plan

KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

Department of Transportation Services — Island of O'ahu

North — Linear Scale (feet): 0 75 150 300

PBR HAWAII & ASSOCIATES, INC.

Source: City and County of Honolulu Department of Planning and Permitting, 2004; ESRI Basemap.

2.1.2 Objectives of the Action

Project Goals and Vision: (1) enhance mobility for all modes of transportation; (2) provide a framework to guide neighborhood change; (3) preserve existing commercial use through construction; (4) encourage economic activity

2.1.3 Key Elements of the Proposed Project

The project proposes to integrate a number of infrastructure and streetscape improvements throughout Kekaulike Mall and Kekaulike Street. Drainage improvements, including the installation of new drainage inlets with lateral storm water drain lines, are proposed to help mitigate current and future flooding events. New, high quality surface pavement materials are being evaluated that allow for easy pavement removal and reinstallation when underground infrastructure work is required. To promote improved accessibility and shared street uses on Kekaulike Street between North King Street and Nimitz Highway, the roadway will be elevated to match the curb height (curb material will be retained). Vehicular access to Kekaulike Street will be limited to authorized emergency vehicles, TheHandi-Van, and delivery vehicles at designated hours with signage and regulatory enforcement. No loading will be permitted outside of the designated loading hours. Commercial freight loading will be permitted in two designated loading zones Monday through Sunday between 8:30 PM and 5:30 AM with no exceptions during daytime use. Parking along Kekaulike Street will be prohibited at all times. Kekaulike Mall between North King Street and North Hotel Street will remain closed to vehicles and will allow pedestrian and bicycle use only. Bike facilities, including a Biki station will also be designed into the pedestrian mall.

Streetscape improvements may include accommodations for future, Wi-Fi, CCTV, blue light call boxes, public address (PA) sound systems, and artwork opportunities. All proposed at-grade infrastructure, include lighting, signage and future accommodations, will be installed in a way that will avoid disturbing the historical building facades of surrounding businesses. Beautification enhancements may include lighting design, shade trees, and opportunities for public art. As part of the proposed landscaping improvements, the project will include removal and relocation of 11 palm trees and 18 other trees. New landscaping will include an additional 20 palm trees and 13 shade trees, resulting in a total of 33 trees compared to the existing 29 trees. The Chinatown gateway arch., which is being conceptualized to sit just mauka of North King Street on Kekaulike Mall to act as a focal point, is currently planned to be designed and developed by the Chinatown community at a future date.

<u>Alternatives to the proposed project include:</u>

Alternative Concept A: Overhead Canopies and Architectural Planters

In response to the community desire for more shade and cooling on Kekaulike Mall and Kekaulike Street, concept plans for the project included overhead canopies and above grade structural tree planters. However, early project consultation with the Historic Hawaii Foundation (HHF), the Department of Planning and Permitting (DPP), and others raised a concern regarding the potential for additional architectural elements to obscure building facades to the detriment of the streetscape. In their response to the project's pre-consultation request for comments, Historic Hawaii Foundation suggests, "*HHF recommends alternative means to provide shade and rain protection that would not alter the spatial relationships and view sheds, such as trees or retractable awnings*". Multiple iterations of canopy studies were conducted to strike a balance between providing shade and keeping the structure(s) secondary to the historic buildings. Ultimately, the shade structures were removed from the plan. Design of tree planters went through a similar design process with multiple above grade planter types considered and eventually discarded in favor of less architecture in the street.

<u>"No Action" Alternative</u>

Under the "No Action" alternative, no changes would be made to the form or function of Kekaulike Mall or Kekaulike Street.

2.1.4 Project Cost and Implementation Timeframe

Design of the Kekaulike Mall and Kekaulike Street Multimodal Improvements project is anticipated by the Summer of 2021, with construction to follow as soon as possible thereafter.

The project cost is anticipated to be approximately $14 million. Each of the two phases is anticipated to cost approximately $7 million.

3 DESCRIPTION OF THE NATURAL ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES

3.1 CLIMATE

Existing Conditions

Kekaulike Mall and Kekaulike Street are located in downtown Honolulu in the Chinatown Special District, which is within close proximity to the Honolulu Harbor and the shoreline. According to *The Rainfall Atlas of Hawaii*, the site receives an average annual rainfall of approximately 29.04 inches (Giambelluca, et al., 2013). Seasonal variation in rainfall occurs with higher levels of rainfall during the months of November through March. According to historic data collected by the U.S. National Oceanic & Atmospheric Administration (NOAA) from the nearby Daniel K. Inouye International Airport monitoring station, temperatures are typically mild and uniform, with the monthly average daily temperatures in Urban Honolulu around 77.7 degrees Fahrenheit.

Potential Impacts and Mitigation Measures

The proposed project includes the construction of a number of streetscape improvements and alternative transportation mode facilities, however, the overall physical improvements are not expected to have an immediate direct impact on the region's climate. The investment in supporting alternative modes of transportation, including a more accessible pedestrian corridor, bike infrastructure and improvements that support the rail project is expected to have a long-term net positive impact to the climate as it reduces the overall reliance on fossil fuels. Reduction in fossil fuel reliance helps meet the State of Hawaii's climate change mitigation goals and policies. Thus, no climate mitigation measures are warranted or planned at this time.

3.2 TOPOGRAPHY

Existing Conditions

Two volcanoes and the subsequent mountain ranges, the Waianae mountain range to the west and the Koolau mountain range to the east, formed the distinctive shape of the island of Oahu. The project site is located close to Honolulu Harbor in downtown Honolulu. Elevation across the proposed project site is relatively uniform with a gradual slope from south to north. At the highest point, the site is approximately 10 feet above mean sea level (AMSL) at the intersection of Kekaulike and King Street. The ground surface of Kekaulike Mall consists of block pavement along the pedestrian walkway lined with market shops. Planters with light vegetation line the pedestrian pathway. Kekaulike Street consists of a paved roadway with elevated sidewalks and open air markets on either side of the street.

Potential Impacts and Mitigation Measures

The proposed project will be constructed on an already developed site which is relatively evenly-sloped. Construction of streetscape improvements, including any required grading and re-paving, will follow Best Management Practices (BMP) as required by State and County permits.

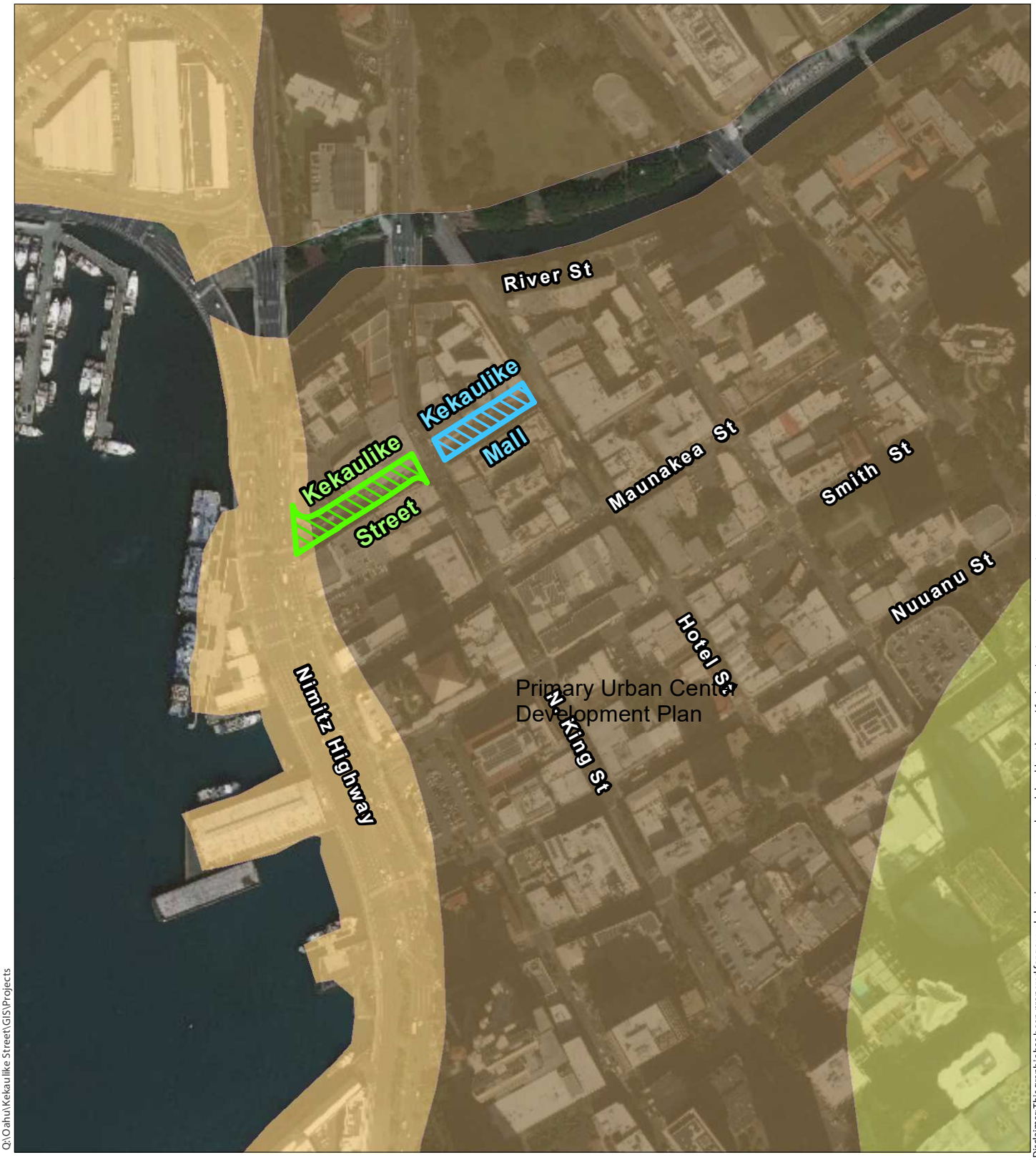
3.2.1 Natural Resources Conservation Service (NRCS)

Existing Conditions

According to the U.S. Department of Agriculture, *Soil Survey of the Island of Kauai, Oahu, Maui, Molokai, and Lānai, State of Hawaii* (Foote, 1972), the soils within the project area is comprised almost entirely of ‘Ewa Silty clay loam (EmA) (Figure 7: Soil Survey). The ‘Ewa soil series is formed from alluvium weathered from basaltic rock. The ‘Ewa soil is classified as well drained with a slope between 0 - 2%. At the makai end of Kekaulike Street, closest to the harbor, the soil is recorded as mixed fill land (FL).

Potential Impacts and Mitigation Measures

The entirety of the project area is developed and no longer suitable for any agricultural uses. As such, the land has not been evaluated for crop cultivation under the State agricultural productivity rating system. Anticipated short term soil impacts may include the potential for erosion and fugitive dust during the installation of streetscape improvements and paving. All construction activities will comply with the applicable federal, state, and county regulations and rules for erosion, sedimentation, and dust control. No long term impacts are anticipated.



Q:\Oahu\Kekaulike Street\GIS\Projects

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DATE: 2/9/2021

Legend

- Kekaulike Mall
- Kekaulike Street

NRCS Soil Survey

- EmA: Ewa Silty Clay Loam
- FL: Fill Land, Mixed
- MkA: Makiki Clay Loam, 0-2% Slopes

Source: City and County of Honolulu, 2019; NRCS, USDA. Web Soil Survey. Available online at https://websoilsurvey.nrcs.usda.gov/. Accessed 09/25/2019, ESRI Basemap.

Figure 7

Soil Survey

KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

Department of Transportation Services — Island of O'ahu

North — Linear Scale (feet): 0 75 150 300

PBR HAWAII & ASSOCIATES, INC.

3.3 WATERS AND WETLANDS

The project area lies within the West Honolulu Watershed, which encompasses Moanalua, Kalihi, Kapalama, and Nuuanu. The Honolulu Board of Water Supply (BWS) commissioned the West Honolulu Watershed Study in 2003 in which existing conditions were analyzed. Although the study is over 10 years old, much of the information remains relevant. As of the publication of the report, it was already established that the vast majority of the watershed was fully developed and the streams which make up the major drainage ways were channelized. Issues associated with channelization were outlined as increased development adjacent to stream courses, increased volume and speed of water flowing to the ocean, and increased impervious surface cover that directs water to streams instead of infiltration into the existing groundwater table (Townscape, Inc.; Dashiell, Eugene P, 2003). A more detailed description of existing surface and groundwater conditions is expounded below.

3.3.1 Surface Water

Existing Conditions

A number of streams and tributaries drain the Nuuanu watershed. The major perennial stream in the watershed, Nuuanu Stream, runs from the BWS's Nuuanu reservoir number 4 in the back of valley to Honolulu Harbor. The stream runs in a natural channel until it converges with Waolani Stream, another major perennial stream in the watershed, just above the H-1 freeway at which point it is channelized and designated by U.S. Fish and Wildlife Service (USFWS) as an estuarine and marine deep-water stream. As it approaches Honolulu Harbor, Nuuanu Stream also joins with Pauoa Stream just above the Chinatown Culture Plaza Center on Beretania Street. Nuuanu Stream connects to the receiving waters of Honolulu Harbor at the River Street, Nimitz Highway roadway intersection, roughly 400 feet from the subject project.

Currently, Kekaulike Mall and Kekaulike Street's curb and gutter stormwater system effectively carry away pollutants and trash and convey them directly to the Harbor waters. During hard rains, curbs overtop and some buildings along the mall and street experience sheet flooding.

Potential Impacts and Mitigation Measures

The Kekaulike Mall and Kekaulike Street Multimodal Improvements project is not anticipated to have a significant adverse impact on surface water resources and are expected to provide reductions in non-point source pollution. None of the following are proposed: alterations to the bed and/or banks of a stream channel; stream diversion work; or new or expanded diversion(s) of surface water. During construction, best management practices for managing storm water and erosion control will be employed so as to avoid temporary inputs of sediment and pollutants into surface water resources. Where applicable, the proposed project will incorporate low impact

development strategies into the design of the project, particularly in design tree wells along the shared-use roadway and pedestrian mall. Post development stormwater discharge will be mitigated by the construction of a drainage system on site. A series of new drainage inlets are proposed along the entire project area. The new drainage inlets will be located on both sides of the shared-use roadway and pedestrian mall sections of the project. The drainage inlets will feed into lateral storm water drain lines that connect to vortex separators downstream to remove trash and sediments before connecting to the main 18-inch storm drain line. There will also be a series of tree wells along the length of the project area offering opportunities for localized groundwater infiltration. The drainage improvements are anticipated to reduce non-point source pollution by collecting localized stormwater, while reducing and intercepting debris that would otherwise flow to nearby waterways, including Honolulu Harbor.

3.3.2 Groundwater

Existing Conditions

The project site lies above the DLNR designated Honolulu Sector, Nuuanu System aquifer. Additionally, the State of Hawaii, Department of Health (DOH) has evaluated the Nuuanu System and detailed two overlying aquifers. The first is classified as basal, unconfined and sedimentary while the other is basal, confined and flanked by lavas of the volcanic dome (Mink & Lau, 1990). According to the DOH, Groundwater Protection Program, Safe Drinking Water Branch 2011 aquifer data, the unconfined aquifer is currently used but is not used for drinking water. It is classified as moderately saline with between 1,000 to 5,000 mg/l Cl-. This aquifer subsystem has also been designated as highly vulnerable to contamination. The confined aquifer is currently used as a drinking water source, and as such is classified as fresh with a salinity below 250 mg/l cl- and is at low risk of contamination.

The project area is also within the Southern O‘ahu Basal Sole Source Aquifer, an EPA designation under the Safe Drinking Water Act which was created to prevent the contamination of groundwater from federally funded projects. While not administratively applicable to the proposed project, the sole source aquifer designation does identify critical areas that supply more than 50% of a community’s drinking water. As such, pollution monitoring and prevention is critical.

Potential Impacts and Mitigation Measures

With the proposed stormwater drainage improvements, it is anticipated that the project will reduce current impacts on groundwater. Given that the unconfined Nuuanu System aquifer is moderately saline, is not a potable water source and does not supply water to an ecologically important system, the project is not above a system that is a critical water source to the

community or biota. The proposed improvements include a drainage system through the center of Kekaulike Mall and Kekaulike Street which is designed to capture more stormwater than what is currently detained. Given the highly developed nature of the surrounding area, the project area is not expected to greatly contribute to groundwater infiltration rates that would lead to significant contamination of the aquifer.

3.4 NATURAL HAZARDS & EFFECTS FROM CLIMATE CHANGE

All of the islands in the Hawaiian island chain are susceptible to potential natural hazards, such as flooding, tsunami inundation, and hurricanes. Low-lying coastal areas are particularly vulnerable to flooding events due to the unique geological features of the coastal plains in addition to the close proximity to the shoreline. The State of Hawaii Emergency Management Agency (HI-EMA) operates a system of emergency sirens throughout the State to alert the public of emergencies and natural hazards, particularly tsunamis and hurricanes. Impacts from natural hazards can be further mitigated by adherence to appropriate emergency measures as determined by HI-EMA and the City and County of Honolulu Department of Emergency Management (DEM). This section provides an analysis of the proposed project site's vulnerability to the various natural hazards individually.

3.4.1 Flood

Existing Conditions

The Federal Emergency Management Agency (FEMA) publishes flood information in the form of Flood Insurance Rate Maps (FIRM) used by government and insurance agencies to determine the relative potential for damage during flood events. According to the FIRM, the entire project site is located in Zone X, which are areas determined to be a minimal flood hazard (Figure 8). Due to the developed nature of the watershed and the channelization of the nearby Nuuanu stream, there is the potential for increased vulnerability to flood hazards as there are less permeable surfaces particularly at the base of the watershed. Nuuanu Stream starts at the Nuuanu Reservoir No.4 dam, which controls the stream flow and has served as flood control since the 1930s. The reservoir is owned and operated by the Board of Water Supply (Townscape, Inc.; Dashiell, Eugene P, 2003).

Potential Hazards and Mitigation Measures

The drainage facilities upgrades proposed with this project are expected to mitigate localized flooding within the project area, as discussed below.

During the Draft Environmental Assessment Pre-Consultation period, the Department of Land and Natural Resources, Engineering Division provided the following comment regarding flood

hazards:

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44 CFR), 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 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) (https://gis.hawaiiinfip.org/FHAT).

The project area is not exposed to a greater risk of flood exposure nor is it expected to have an increased impact on flooding hazards on site or within close proximity to the project area. According to the FIRM, the entire project site is located in an area determined to be a minimal flood hazard. As the Chinatown community is highly developed, the site currently is prone to increased localized flooding during heavy rain events. The project proposes to include an underground drainage system at the center of Kekaulike Mall and Kekaulike Street which will collect and detain stormwater during heavy rain events and divert stormwater flows away from the project area. The proposed drainage improvements are expected to have a net positive impact to existing localized flooding occurrences.

3.4.2 Climate Change and Sea Level Rise

Potential impacts due to global climate change, including localized changes in precipitation and temperature, increased storm frequency and intensity, and marine water inundation due to sea level rise, is projected to effect the State of Hawaii over the coming decades. While State and City and County of Honolulu efforts encourage climate change mitigation to the greatest extent possible, it is also urged that future development adapt to the anticipated impacts. The City and County of Honolulu has begun addressing climate change through specific goals set up out by the Aloha + Challenge (Hawaii Green Growth, 2018). This effort brings together public and private sector stakeholders to address specific sustainability goals which are tracked over time.

The most immediate potential climate change impacts to the project area would be flooding due to larger or more frequent precipitation events and static marine inundation due to Sea Level Rise (SLR). These impacts from global climate change are especially taxing on the limited resources of an island ecosystem. While it cannot be known how the project area will be affected by sea level rise and climate change in the future, scientific models for potential climate change

factors have been considered in the conceptual plan for the proposed project.

Research indicates that Hawaii may see an overall decline in rainfall with heavier rainfall events that cause flash flooding, increased runoff and sedimentation (UH Sea Grant, 2014). Mayor Kirk Caldwell's 2018 directive on climate change and sea level rise (Directive 18-2) was created in response to the City and County of Honolulu's Climate Change Commission's *Climate Change Brief* and *Sea Level Rise Guidance* as well as the State Climate Change Mitigation and Adaptation Commission's *Sea Level Rise Vulnerability and Adaptation Report* and Data Viewer (PacIOOS, Sea Level Rise: Hawaii Sea Level Rise Viewer, 2020). To estimate impacts related to sea level rise, it is recommended that development projects plan for a sea level rise scenario of 3.2 feet at this time (Hawaii Climate Change Mitigation and Adaptation Commission). Additionally, because of continued high global carbon emissions, the Climate Change Commission recommends consideration for a 6 feet of sea level rise scenario (higher high water, equivalent to 7.08 feet msl) in later decades of the century, especially for critical infrastructure with long expected lifespans and low-risk tolerance.

Potential Hazards and Mitigation Measures

The proposed Kekaulike Mall and Kekaulike Street Multimodal Improvements project addresses both mitigation and adaptation goals outlined by the State. In an effort to mitigate future climate change, the project aims to promote multimodal transportation within the downtown Chinatown area by prioritizing pedestrian and bicycle access on Kekaulike Street. The project provides a continuous, non-vehicular pathway from North Hotel Street, where the pedestrian Kekaulike Mall begins, to the future Honolulu Authority for Rapid Transit (HART) Holau transit station on Nimitz Highway. By proposing a pedestrian corridor on Kekaulike Street, the project encourages modes of transport that does not rely heavily on fossil fuel. There is the potential to limit greenhouse gas emissions and further the County Aloha + Challenge goal of reducing petroleum use in the ground transportation sector.

While it cannot be known for certain how the area will be affected by climate change, the need for increased water managment is expected. The proposed project has focused on sustainable design that takes flood frequency into consideration. Currently the project area experiences flooding during heavy rain events as current storm water infrastructure is inadequate to handle rain volumes. To address this issue, the project proposes to create new drainage inlets and stormwater drainage lines that would run down the center of Kekaulike Mall and Kekaulike Street. The drainage system would be designed to handle 50-year peak discharge. Under a 3.2 feet sea level rise scenario, the proposed project is not expected to become routinely flooded from anticipated static sea level rise or flooding due to tidal influences (Hawaii Climate Change Mitigation and Adaptation Commission). However, under a 6 foot sea level rise scenario, a

portion of the proposed project would be impacted near the future Holau transit station site along Nimitz Highway.

The addition of trees in tree wells will further contribute to localized infiltration. The tree canopy, can also provide ecological benefits such as slowing and capturing rainwater which facilitates cooling via return of the water to the atmosphere through evapotranspiration (Honolulu Department of Parks and Recreation, 2020). The tree canopy will also serve to mitigate against rising temperatures and will make a small but locally meaningful contribution to reducing the urban heat island effect.

During the Draft Environmental Assessment Pre-Consultation period, the Department of Planning and Permitting provided the following comment regarding climate change and sea level rise:

We ask that the Draft EA include discussions on the following: … (4) The effects of climate change and sea level rise. Include an analysis of low impact development and conservation best management practices that may help mitigate elevated temperatures and evapotranspiration within the Project area.

3.4.3 Tsunami

Existing Conditions

The State of Hawaii has a long history of tsunami impacts dating back to the first recorded tsunami in 1814. The most recent tsunami to hit Oahu was in 2012 when an earthquake in Canada triggered a tsunami warning and approximately 100,000 people were evacuated from Waikiki. During this event, little damage was reported and the impacts were small. Given the geographic location of the State, it is likely that a tsunami will impact Hawaii and the island of Oahu in the future. In preparation for a future event, the DEM has established the Oahu Tsunami Evacuation Zones. The Tsunami Evacuation Zone is based on past tsunami event impacts and are shown in red-orange on Figure 10: Tsunami Evacuation Zone. Immediately outside of the project site is the designated Extreme Tsunami Evacuation Zone which has been delineated based on hypothetical tsunami events that would exceed the historic record impacts. Any area outside of the Tsunami and Extreme Tsunami Evacuation Zones are deemed safe zones. General guidance from the DEM advises that, in an event that evacuation is required, it is recommended that individuals leave a tsunami evacuation zone on foot or bicycle if possible.

Potential Hazards and Mitigation Measures

The Kekaulike Mall and Kekaulike Street Multimodal Improvements project is not expected to exacerbate any tsunami hazard conditions. While the project area is located within the designated tsunami evacuation zone, the project aims to help improve pedestrian and non-

vehicular transportation. A decrease in vehicular traffic during emergency events along with improved pedestrian corridors could aid in any potential future evacuations as it will likely decrease vehicular congestion.

3.4.4 Hurricanes and Tropical Storms

Existing Conditions

Historically, hurricanes and tropical storms have struck all major islands in the Hawaiian Island chain. The first officially recognized hurricane in Hawaiian waters was Hurricane Hiki in August of 1950. As detailed by NOAA's hurricane database (NOAA, 2019), hurricane landfalls are rare for the state and Oahu has only seen a few within the last few decades. Hurricane Raymond in 1983 crossed the island from the Windward coast through to Kaena Point on the Waianae coast, while Gilma (1988), Flossie (2013), and Darby (2016) were within 50 nautical miles of landfall. While it is difficult to predict these natural occurrences, it is reasonable to assume that future events could likely occur given the recent record.

Potential Impacts and Mitigation Measures

The proposed improvements are not anticipated to impact the site's vulnerability to hurricanes. In the event of a hurricane, the potential impact of destructive torrential rainfall will be mitigated through the proposed stormwater drainage improvements that are expected to improve, but not completely resolve, flooding issues in the immediate area. The closest hurricane shelters are located approximately a half mile mauka of the project area at Central Middle and Kauluwela Elementary Schools. The project will coordinate with State and County agencies to prepare emergency plans and procedures.

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DATE: 2/9/2021

Legend

- Kekaulike Mall
- Kekaulike Street

Flood Zone

- AE: 1% Annual Chance Flood, with Base Floof Elevation
- VE: 1% Annual Chance Coastal Flood, with Base Floof Elevation
- X: Minimal Flood Areas

Figure 8

Federal Emergency Management Agency Flood Insurance Rate Map

KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

Department of Transportation Services

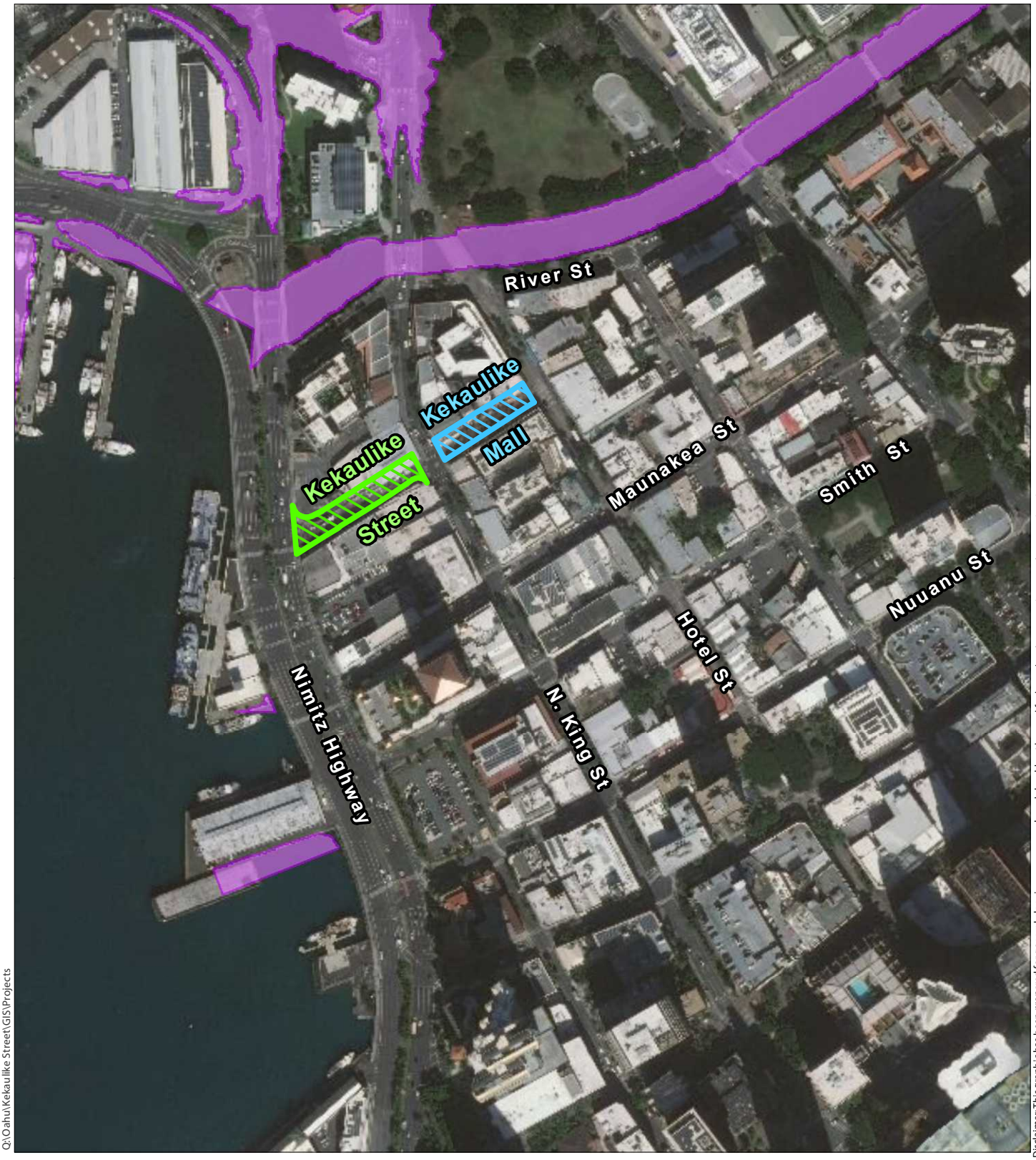
North

Linear Scale (feet)

0 75 150 300

PBR HAWAII & ASSOCIATES, INC.

Source: Federal Emergency Management Agency, 2020; City and County of Honolulu, 2019; ESRI Basemap.



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DATE: 2/9/2021

Legend

- Kekaulike Mall
- Kekaulike Street
- 3.2-ft Sea Level Rise Exposure Area

Figure 9

Sea Level Rise and Climate Change

KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

Department of Transportation Services

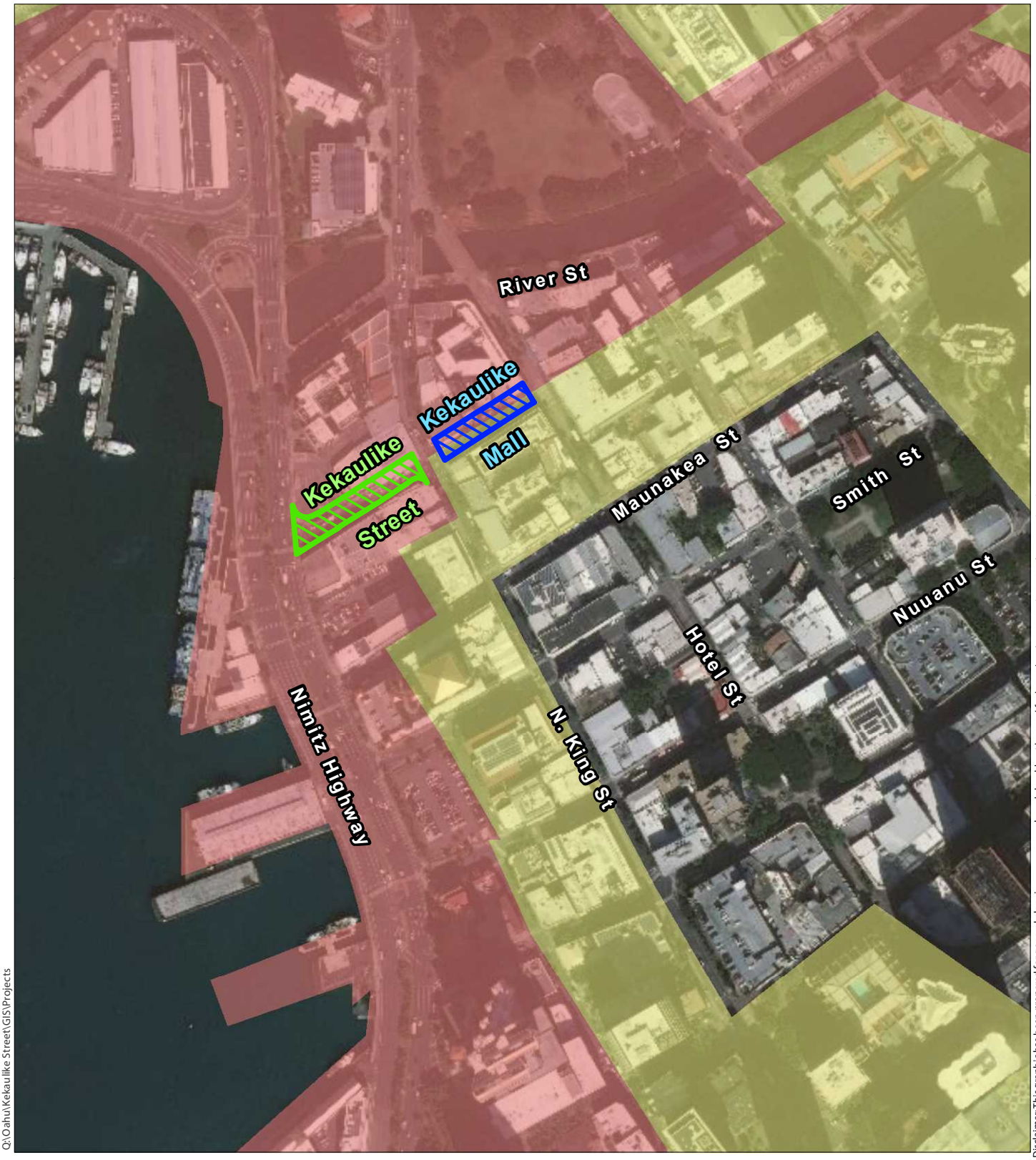
North

Linear Scale (feet)

0 75 150 300

PBR HAWAII & ASSOCIATES, INC.

Source: UH Coastal Geology Group & Tetra Tech, Inc., 2017; City and County of Honolulu, 2019; ESRI Basemap.



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DATE: 2/9/2021

Legend

- Kekaulike Mall
- Kekaulike Street
- Tsunami Evacuation Zone
- Extreme Tsunami Evacuation Zone

Figure 10

Tsunami Evacuation Zone

KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

Department of Transportation Services

North

Linear Scale (feet)

0 75 150 300

PBR HAWAII & ASSOCIATES, INC.

Source: City and County of Honolulu, 2010, 2015 & 2019; ESRI Basemap.

4 DESCRIPTION OF THE HUMAN ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES

This section describes the existing conditions of the human environment, preliminary potential impacts of the Kekaulike Mall and Kekaulike Street Multimodal Improvements project, and the preliminary mitigation measures to minimize any impacts.

4.1 ARCHAEOLOGICAL AND HISTORIC RESOURCES

An Archaeological Literature Review and Field Inspection was conducted by ASM Affiliates. A report on the literature research is included in its entirety in Appendix B and summarized below.

The project area has been considered part of three distinct traditional land divisions: Kou, Kīkīhale, and Kapuʻukolo. The place names Kīkīhale and Kou, are borrowed from legendary aliʻi Kou, known in legends to be a generous and skillful fisherman and his daughter, Kīkīhale. The project area is within the ʻili of Kou, a land division smaller than an ahupuaʻa that bears its own name due to its independence and distinction. Legendary accounts of the project area and vicinity speak to a place where ghosts would gather at night for games and sports. The surf break Mamala in the harbor of Kou is named after a chiefess known for her love of surf, drinking ʻawa, and playing kōnane. In fact, Honolulu Harbor was known as a place to gather to play kōnane.

The street name, Kekaulike, is named for a former chief of Maui who was greedy and a lover of war. Upon waging war on the island of Hawaiʻi and leaving a path of destruction in his wake, Kekaulike's health declined and he named his successor, Kamehamehanui. Kekaulike died in 1736, however his genealogical legacy lived on through his son Kahekili and descendant Kaʻahumanu.

The literature review (Appendix B) includes a summary of reviewed journal entries, publications, newspaper accounts and historical maps to reconstruct the land use and activities of the project area after first contact with Europeans in the late 1700's. The harbor Kou became known as Honolulu, meaning "protected bay," and Kamehameha moved the royal residence from Waikīkī to Pākākā at the Honolulu Harbor in 1809, likely influenced by the growing importance of foreign trade. The area gained additional importance due to increased trade and experienced a rapid shift in the early 1800s as traditional sustenance-based agricultural practices were abandoned. Accounts of the time reported the area to be a place where people came for amusements and where ghosts of earlier participants continued to congregate (See Appendix B, Figure 10).

With the arrival of foreign missionaries in the mid-1800's, Honolulu further transformed. An 1836 census found an island-wide population of 27,798 persons of which nearly 13,000 were residing in Honolulu and Waikīkī. In 1839, Kaumakapili Church was built for Native Hawaiians at

the corner of what is now Smith and Beretania Streets. Maps of this era depict a growing grid of streets with English language names (See Appedix A, Figure 11).

During the Māhele, the area of the project was divided among grants and claims as depicted in Figure 12, Appendix B. Also by the mid 1800's the downtown Honolulu area catered to the population of visiting whalers and sandalwood traders. The western half of the project area is an area that was known as the legal area for liquor sales. During the 1850's the first Chinese laborers arrived to Honolulu, the beginning of an influx of population to work in the commercial sugarcane fields. It is reported that although the area became known as the Chinese quarter and later Chinatown, the population was never exclusively Chinese. In an 1884 census, of the 10,700 people who lived in the Chinese quarter, 4,200 were native Hawaiians, 3,780 were Chinese and the remaining were Portuguese or "other Caucasian".

Fire destroyed much of Chinatown, including the project area on April 18, 1886 (see Figure 18, Appendix B). A second fire in 1889 which began at the corner of Kekaulike and King Street, threatened to destroy what had been rebuilt from the 1886 fire. By the 1890's, the project area and it's vicinity were growing into an increasingly commercial and mixed commercial/residential area. The density and haphazard growth created an environment where there was an outbreak of cholera in 1895, and occurrence of Bubonic Plague detected in Chinatown in 1899. The plague outbreak prompted a strict quarantine, health inspections, forced searches and disinfections and finally controlled burns in Chinatown. One such burn got out of control and Chinatown was again effectively burned to the ground in 1900 (see Figure 22, Appendix B).

By 1906, masonry buildings had been constructed on both sides of Kekaulike and the community continued to grow in population with a diversity of ethnicities including Japanese, Filipino, Koreans, Puerto Ricans and others. In 1930 it was reported that 47% of Chinatown residents were Chinese, 27% Japanese, 9% Hawaiian or part Hawaiian, Filipino, Korean, and Caucasian (2-3% each). Since that time, the Chinatown district has gone through periods of decline and revival. In 1973, the Chinatown Historic District was listed in the National Register of Historic Places. The district was added to the State's register of historic places in 1985 (SIHP Site 09042/09986). The Chinatown Historic District measures 15-square blocks and is bound by South Beretania Street, Nuʻuanu Stream, Honolulu Harbor, and Nuʻuanu Avenue. Most of the buildings date from 1901 through 1930. The district was added to the National Register based on its significant architecture, commerce, and social/humanitarian qualities.

4.1.1 Archaeological Resources

Existing Conditions

The project area and it's vicinity Kekaulike Mall and Kekaulike Street between Nimitz Highway and Hotel Street have been subject to infrastructure and travel-related development since the late 1800's. The archaeological field inspection contained in Appendix B notes that these improvements have resulted in the complete removal of any surface archaeological resources that may have formerly existed. Surrounding residential and commercial development, fire, and reconstruction of residential and commercial uses have erased all intact evidence of land uses prior to western lifeways.

Figure 24, Appendix B illustrates the many archaeological investigations in the area of the Kekaulike Mall and Kekaulike Street and findings of archaeological historic properties in the area are listed in Table 1, Appendix B.

Prior archaeological studies along Kekaulike Street are discussed in Appendix B, beginning on page 40. An Archaeological Inventory Survey (AIS) conducted in 1992 immediately adjacent to the project site revealed a former pond belonging to a konohiki named Pehu (HIHP 50-80-14-4587) and a multicomponent site (SIHP 50-80-14-4588). This site included 53 features including human burials, walls, crushed coral foundation, a urn layer, trash pits, postholes, and fire pits. Data recovery of the site resulted in the recovery of more than 5,000 artifacts and identification of 55 more subsurface features, ranging from pre-contact through twenties century including three additional human burials.

In 1994, an archaeological inventory survey was conducted in advance of the parking garage located on the south side of Kekaulike Street between King and Hotel Streets. The AIS focused on a portion of land that had been previously reported to contain a graveyard. The work found no evidence of the graveyard, one set of human skeletal remains was encountered. Interior to the parking garage site, archaeological data recovery found many pre-contact artifacts that provided some of the earliest known evidence of occupation in Honolulu's history. This project's AIS reported that the area along Kekaulike Street exhibited highly disturbed strata consistent with the series of construction, fire, reconstruction, demolition, and eventual parking lot construction.

A 1997 study for Phase 2 portion of the Kekaulike Diamond Head parking garage posited a high probability for the presence of archaeological resources under Kekaulike Street, because the road was built upon fill material, rather than with subsurface disturbance.

In 1999-2000, archaeological monitoring for the Nimitz Highway Reconstructed Sewer project. A pit excavated at the intersection of Kekaulike Street and Nimitz Highway revealed no cultural material, and found successive fill layers of gravel and coral rubble to the water table.

Archaeological monitoring was conducted in 2012-2013 along King Street for a project involving the rehabilitation of utilities. At the intersection of King Street and Kekaulike, no cultural deposits were found. However, due to the amount of natural stratum, the archaeologists recommended that archaeological monitoring be required for any future ground disturbance.

Potential Impacts and Mitigation Measures

Through consultation with the State Historic Preservation Division (SHPD), it is posited that an archaeological inventory survey would not be warranted prior to project implementation, due to the unlikely event of new discoveries in this already heavily disturbed street corridor. Nevertheless, there is a possibility for encountering intact subsurface cultural deposits. Thus, archaeological monitoring during ground disturbing activities will be conducted. To set the parameters for monitoring, an archaeological monitoring plan in accordance with HRS Section 13-279 will be prepared and submitted to SHPD for review and acceptance prior to construction start.

4.1.2 Historic Architectural Resources

A Historic Resources Evaluation was conducted by Mason Architects, Inc. (MASON). A report on the evaluation is included in its entirety in Appendix C and summarized below.

Existing Conditions

The evaluation included all buildings fronting the project area along Kekaulike Mall and Kekaulike Street. As of early-2020, the Chinatown Historic District list of National Registers of Historic Places is under review pending nomination updates. Therefore, the recent evaluation catalogs buildings as either “contributing” or “non-contributing” to the Chinatown Historic District. Among the inventory of properties examined, six properties on Kekaulike Mall and six properties on Kekaulike Street were listed as “contributing.” Only one property (on Kekaulike Mall) was listed as “non-contributing.” In addition, the inventory identifies buildings determined to be “historic and architecturally significant structures” in accordance with ROH Chapter 21, Article 9. Among the inventory of properties abutting the project area, eight were identified to be significant structures within the Chinatown Special District Precinct. Pre-Consultation comments recieved from Historic Hawaiʻi Foundation provided additional validation of the historic resources present at the project site.

Potential Impacts and Mitigation Measures

The alternatives considered with this project included design concepts with shade structures or canopies. Pre-consultation materials included graphics and discussion of structures as an alternative. The alternative that included structures was deemed to likely have an adverse effect

on historic resources. The pre-application consultation process helped to inform this conclusion. Comments from the Historic Hawai'i Foundation raised concern with graphics that suggested any alteration to the Ai-Goto Building, and with respect to canopies, *"The proposed "Smart" Canopy shade device creates a tunnel effect and would block street-level views of the facades of the historic buildings."* Further, HHF expressed concern with affixing any new material on to historic buildings, "*There should be explicit committments to avoid hanging or installing elements from the buildings, or for technical specifications on how any new elements would be installed to avoid damage to historic fabric"*

The proposed project will not alter or modify any of the buildings or structures fronting Kekaulike Mall and Kekaulike Street. Early design schematics included overhead canopies and fixed, raised planters, which through consultation and evaluation against the Secretary of Interior Standards were deemed to potentially detract from the historic character of the streetscape. The resulting design was concluded to not pose an adverse impact to the historic resources present within the project area or negatively impact historic structures fronting Kekaulike Mall and Kekaulike Street.

4.2 CULTURAL RESOURCES

A Cultural Impact Assessment was conducted by ASM Affiliates, Inc. (ASM). The complete report is included in Appendix D and summarized below.

A Cultural Impact Assessment (CIA) was prepared to learn of and evaluate potential effects of the project on traditional cultural activities in the project area and vicinity. In addition to historical research, the CIA relied on consultation with persons and organizations who were believed to have knowledge of or an interest in cultural and historic information in the project area. Notice of the CIA and invitation to participate were published in the June 2020 edition of *Ka Wai Ola*, the Office of Hawaiian Affairs monthly newspaper. Additionally, calls and emails were placed to twenty-seven individuals and organizations to solicit participation in the CIA. A list of individuals and organizations contacted and their response can be found on pages 60-61 of the CIA. A number of those contacted were unresponsive. Two individuals representing Native Hawaiian organizations responded that they personally were not aware of any Native Hawaiian cultural practices at the site, and forwarded their response to others that might wish to share information. A couple individuals agreed to participate in an interview but were non-responsive to follow up attempts at coordination. interview was secured with Calvin Wong, the owner of Wong's Meat Market, which has been in the Chinatown district for two generations. Mr. Wong shared his recollection of Chinatown and specifically meat distribution from his childhood in the 1950's assisting his father, to his work as an adult assisting with and eventually running the family business since the 1970's. He also recounted cultural practices in Chinatown over the years and how the demographics of the community has changed with time. Regarding impacts of the proposed project, Mr. Wong had no issues or concerns. His primary concern had to do with homeless encampments in the area.

The CIA concludes, *"Based on historical research, observations of the site, and consultation, that there are no specific ongoing Native Hawaiian cultural practices or valued cultural resources identified within the immediate project footprint. However, due to the greater Chinatown area having a rich history with the Chinese community, some ongoing traditional Chinese cultural practices and celebrations still occur within Chinatown such as Chinese memorial month known as Qingming and Chinese New Year."*

The CIA makes the following recommendations:

- Archaeological monitoring for all ground-disturbing activities within the project area
- Establish cultural protocols in advance of any ground-disturbing activities to ensure that any discoveries made are treated appropriately.

4.3 VISUAL RESOURCES

Existing Conditions

Visual corridors are open areas that provide unobstructed views from distant vantage points. The major panoramic views within the Primary Urban Center, as specified by the Primary Urban Center Development Plan 2004 (PUCDP), include views of the Koolau and Waianae Mountain Ranges and their foothills, the Pacific Ocean, Pearl Harbor East Loch, Ford Island, Honolulu Harbor, Keehi Lagoon, Kewalo Basin, and the craters of Lēʻahi (Diamond Head), Puowaina (Punchbowl) and Aliamanu (Department of Planning and Permitting, 2004). The Plan also identifies view corridors along streets oriented from mauka to makai that provide mountain and shoreline vistas. As streets which provide mauka-makai views are important for orienting people around the neighborhoods, it has been identified by the Plan as imperative to preserve. Road characteristics identified by the PUCDP that have the potential to diminish the quality of mauka-makai street corridor views include the width of the street, building setbacks, streetscape elements, and signage.

Potential Impacts and Mitigation Measures

The project improvements will not have a significant impact on the visual corridor along Kekaulike Mall and Kekaulike Street. Identified road characteristics that have the potential to diminish the quality of mauka-makai street corridor views include the width of the street, building setbacks, streetscape elements, and signage. The proposed landscaping design accompanying the streetscape improvements include additional trees that will have a nominal impact on the visual resources along the mall and street corridor. However, the makai views of Honolulu Harbor are already obstructed by existing industrial buildings across Nimitz Highway. Existing mauka views of the Koolau Mountain Range are similarly impeded by existing buildings at the intersection of Kekaulike Mall and North Hotel Street. Visual corridors from a pedestrian height, both mauka and makai, will be maintained and relatively consistent with the historic and natural environment with minimal impact to existing conditions.

An alternative plan for the proposed streetscape improvements included shade canopies that would have impacted the visual resources.

4.4 NOISE

Existing Conditions

Existing noise within the project area is consistent with general surrounding uses common in a central urban district, including motor vehicle traffic, human interactions and activities related to the various nearby markets and other commercial uses. Additionally, there are existing noises

associated with nearby industrial and shipping activities from Honolulu Harbor and heavier vehicular traffic along Nimitz Highway.

Potential Impacts and Mitigation Measures

During construction, general noise related to construction activities will be generated. Noise will be temporary and limited to the hours and time period of construction. After construction, noise will be consistent with existing urban conditions common in a central urban district, including motor vehicle traffic, human interactions and other activities related to the various nearby markets and other commercial uses abutting the project area.

The streetscape improvements will comply with all permissible community noise standards in accordance with HAR Chapter 11-46. Increased noise activity due to construction will be limited to daytime hours and will be confined to the construction period. The use of pile drivers, hoe rams, jack hammers 25 pounds or heavier, and high-pressure sprayers may be required during certain construction phases. However, this will be restricted to 7:00 a.m. to 3:00 p.m., Monday through Friday. No weekend work is anticipated. Construction equipment and on-site vehicles or devices requiring an exhaust of gas or air must be equipped with mufflers. In addition, construction activities must satisfy the DOH's vehicle noise requirement.

4.5 AIR QUALITY

Existing Conditions

Air quality refers to the presence or absence of pollutants in the atmosphere. It is the combined result of the natural background and emissions from multiple pollution sources determined by various human activities in the general vicinity of any given location. The impact of land development activities on air quality for a proposed development differs by project phase (site preparation, construction, occupancy) and project type. In general, air quality on Oahu is considered to be good. The relatively high air quality can be attributed to the region's consistent exposure to wind, which quickly disperses concentrations of emissions and Oahu benefits from steady wind conditions most of the year.

The State of Hawaii operates a statewide network of air quality monitoring stations, and the closest Department of Health (DOH) monitoring stations to the project site are located near Queens Hospital and Sand Island. Both stations report Air Quality Index of "good" year round (DOH, 2018).

Potential Impacts and Mitigation Measures

Long-term impacts from the proposed project are anticipated to have a beneficial impact on air

quality in the immediate vicinity of the site location and contribute to improving air quality in the region. By developing a multimodal shared-use streetscape along Kekaulike Mall and Kekaulike Street, the project will reduce air pollutants associated with vehicular emissions. The project will offer conditions that encourage alternative transportation modes, including pedestrian and bicycle use, within the site as well as the immediate vicinity. In addition, the improvements to the streetscape will promote use of the future Holau transit station abutting the project site and encourage general ridership of the rail system in the Honolulu metropolitan region.

Emissions associated with equipment used during construction are not anticipated to violate any state or federal air quality standards. There may be short-term direct and indirect impacts related to air quality that could potentially occur during construction. However, these construction-related impacts will be minimized and confined to the immediate vicinity of the site and BMPs will be implemented to limit localized impacts.

To minimize fugitive dust impacts during construction, all construction activities will comply with all applicable provisions of HAR Title 11, Chapter 59, related to Ambient Air Quality Standards and HAR §11-60.1-33, related to Fugitive Dust. Long-term negative impacts related to air quality are not anticipated as construction equipment will utilize technology and standards which meet State and Federal air quality requirements.

4.6 INFRASTRUCTURE

4.6.1 Transportation System

A Transportation Impact Analysis Report (TIAR) was conducted by Austin, Tsutsumi & Associates to analyze the potential impacts of the proposed project to the surrounding transportation system, including roadways and traffic, pedestrian and bicycle networks, and public transit. Vehicular manual turning movement counts, intersection observations, and pedestrian counts were collected in November, 2019. As such, existing conditions describe vehicle and pedestrian volumes and activity prior to COVID-19 business restrictions. The complete TIAR can be found in Appendix E.

Roadway Conditions

The project site is comprised of Kekaulike Mall and Kekaulike Street, which is an existing short county road. The project site is bounded by a major arterial roadway to the south, Nimitz Highway, and bisected by another major arterial roadway, North King Street. These major roadways serve a high volume of traffic through the Chinatown district and into and out of downtown Honolulu. The project site is also bounded to the north by one local street, North Hotel Street. Vehicular access connections to the project site are located at the signalized intersections of North King Street and Kekaulike Street and Nimitz Highway and North King Street,

as well as an unsignalized intersection at the intersection of Kekaulike Mall and North Hotel Street. Major roadways in the vicinity of the project site are described in further detail below.

Nimitz Highway: A two-way, four-lane principal arterial roadway owned and operated by the State of Hawaii Department of Transportation that extends in the Ewa-Diamond Head direction makai of the project site with two traffic lanes in each direction divided by a median. It serves as a significant regional connection between the H-1 freeway and Ala Moan Boulevard with a posted speed of 35 miles per hour (mph). Nimitz Highway serves a very high traffic volume through the Primary Urban Center of Oahu, and therefore experiences significant congestion during peak traffic hours. It also provides access to multiple commercial areas, shopping districts, dense urban residential areas, and industrial areas in the vicinity of Honolulu Harbor.

North King Street: A one-way, four-lane major arterial county road bisecting the project site that includes a variety of commercial, retail, residential, and community facilities. It serves as a major regional connection running in the Diamond Head direction and linking the Kalihi neighborhood, Chinatown, the Honolulu central business district, to the McCully/Moiliili neighborhoods with a posted speed of 25 miles per hour (mph). Running parallel to the H-1 freeway, North King Street serves a high volume of traffic through the Primary Urban Center of Oahu, therefore, it experiences significant vehicle use and usually high congestion during peak traffic hours.

North Hotel Street: A two-way, two-lane local roadway mauka of the project site that includes a variety of commercial, retail, and residential uses. Vehicular access is restricted to public bus transit, police vehicles and other authorized government vehicles along the roadway in the vicinity of the project site with a posted speed of 25 miles per hour (mph). As a result, the roadway experiences very low traffic volume.

Existing Traffic Conditions

The major roadways in the vicinity of the project area act as throughways connecting various neighborhoods across the Primary Urban Center (PUC) of Oahu and supplement east-west traffic volume along H-1 Freeway. As a result, they experience high traffic volumes during AM and PM peak hours for commuters.

Level of Service (LOS) was measured at two intersections abutting the project area (North King Street/Kekaulike Street and Nimitz Highway/Kekaulike Street) that would be potentially impacted by the proposed improvements to Kekaulike Mall and Kekaulike Street. Since Nimitz Highway is a divided roadway with no direct intersection of Kekaulike Street with southbound lanes, traffic evaluations were limited to westbound and northbound movements. LOS is a qualitative measurement evaluating the conditions of traffic flows through intersections based on multiple factors such as signal timing, hourly traffic volumes, and lane geometry. The measurements were taken during peak traffic hours, midday, and weekend hours, and are

expressed in time of vehicular delay. Measurements are ranked using a scale of A through F (from the best to worst, respectively). Intersections that operate at LOS D or higher are considered to operate at a desirable service level in the region of study, as opposed to LOS E and F, which generally indicate undesirable traffic flow, or a higher than acceptable delay time. LOS levels were calculated for existing intersection conditions and shown in Table 1, below. Overall, the study intersections show a desirable level of service, operating at LOS C or above.

Table 1: Intersection Level of Service

Intersection	Traffic Control	Peak hour	Delay (sec/veh)	LOS
1. North King Street (TH) / Kekaulike Street (RT)	Signalized	AM	0.66	B
		MD	0.61	B
		PM	0.66	B
		WE	0.63	B
1. North King Street / Kekaulike Street (Overall)	Signalized	AM	0.42	B
		MD	0.39	B
		PM	0.46	B
		WE	0.40	B
2. Nimitz Highway / Kekaulike Street (WB RT)	Unsignalized	AM	0.09	B
		MD	0.20	C
		PM	0.09	C
		WE	0.30	C
2. Nimitz Highway (NB TH) / Kekaulike Street	Unsignalized	AM	0.36	A
		MD	0.39	A
		PM	0.50	A
		WE	0.41	A

Field data was also collected at the identified traffic study intersections, including traffic counts and general observations, to identify existing traffic operational deficiencies and to confirm the accuracy of calculated levels of service. Field observations were conducted on a midweek day and weekend day in November 2019 between the hours of 6:00 AM and 6:00 PM. Following data collection, the peak hours of traffic volume on North King Street for AM, MD, and PM respectively were determined to be between 7:30 AM and 8:30 AM, 9:30 AM and 10:30 AM, and 3:45 PM and 4:45 PM. Peak hours for weekend traffic volume on North King Street occurred between 10:15 AM and 11:15 AM.

Heavy southbound vehicular traffic along North King Street was observed during the AM peak hours with vehicle queues sometimes extending beyond the Kekaulike Street intersection. Light vehicle traffic and pedestrian activity was observed within the project area along Kekaulike Street during AM peak hours. During the mid-day peak hour, heavy pedestrian activity was observed around the intersection of North King Street and the project area of Kekaulike Mall and Kekaulike Street, experiencing the heaviest pedestrian and vehicle volumes along the project area roadway during the field observations. Pedestrian activity was determined to likely be related to customers patronizing business within the project area and immediate vicinity. Parked vehicles along Kekaulike Street were also observed to be mostly unauthorized vehicles patronizing local business in violation of posted freight loading zone restrictions. During PM peak hours, heavy vehicular traffic similar to AM peak observations was observed along North King Street and Nimitz Highway. Weekend traffic observations noted heavier vehicular and pedestrian activity within the project area compared to weekday conditions with congestion compounded by an increase in double parked vehicles likely related to customers patronizing local businesses.

Public Transit Facilities and Services

The surrounding area in the vicinity of the project site is well serviced by Oahu Transit Service's bus transit system, known as "TheBus." Transit ridership among residents in the Chinatown neighborhood is markedly high. Frequent bus service is available at four stops along North King Street and North Hotel Street within close proximity to the project site. There are 35 bus route lines that serve the project area on a regular basis generally running two or more times an hour during peak AM and PM hours. Bus routes serving the project area include: A, C, 1,1L, 2, 2L, 3, 9, 11, 13, 19, 20, 40, 42, 43, 51, 52, 53, 54, 81, 83, 84, 84A, 88A, 90, 91, 92, 93, 96, 97, 98, 98A, 101, 102, and 103.

In addition, the Honolulu Authority for Rapid Transportation (HART) rail project is under construction and is currently projected to be fully operational in 2025. The future Holau transit station will be located at the site abutting the project area at the Ewa/mauka corner of Nimitz Highway and Kekaulike Street, approximately 550 feet from the farthest point on the project site

area to the station, which is roughly within a two minute walk to the future rail station. The station will include access platforms connecting to the elevated rail line structure running along the center of Nimitz Highway and feature ADA pedestrian access and bicycle parking. Current plans are for trains to operate between 4:00 AM and midnight daily, with five-minute headways during peak travel times and eleven-minute headways during off-peak hours. Ridership at this station is anticipated to be relatively modest since the area is close to existing job centers and therefore easily accessible by foot and bicycle and well-served by TheBus. However, the rail will be able to provide another form of rapid transportation for residents and employees in the surrounding area to more distant locations on Oahu without the need for a private vehicle. The Kekaulike Mall and Kekaulike Street Multimodal Improvements project is intended to provide a cohesive multimodal streetscape with pedestrian and bicycle features to compliment the future Holau transit station.

Bicycle Facilities

There is no existing bicycle infrastructure on Kekaulike Mall and Kekaulike Street. Bicycle infrastructure in the immediate vicinity of the project site include bicycle lanes on both sides of Nimitz Highway. In addition, North Hotel Street is a dedicated shared roadway route for bicycles. While cyclists must share the travel lane with vehicles on North Hotel Street, traffic is restricted to bus transit and authorized personnel, such as police vehicles. Given the heavy traffic volume on North King Street and the lack of dedicated bicycle lanes, the majority of cyclists ride on the sidewalks, which creates potential conflicts between bicycles and pedestrians along the existing narrow sidewalk sections in the Chinatown neighborhood.

The O`ahu Bike Plan Update (December 2019) proposes plans for enhanced bicycle facilities to be implemented within the vicinity of the project area. The following are additional planned bicycle projects relevant to the project for connectivity to the multimodal improvements along Kekaulike Mall and Keakaulike Street:

- Bicycle lane on North King Street from Middle Street to River Street (1-96)
- Bicycle route/shared roadway on North King Street from River Street to Bishop Street (3-128)
- Protected bicycle lane on North King Street from Bishop Street to South Street (1-192)
- Bicycle route/shared roadway on River Street from North Beretania Street to Nimitz Highway (2-158)
- Shared use bicycle path along Nuuanu Stream from Foster Botanical Garden to Nimitz Highway (Nuuanu Stream Promenade 2-143)
- Shared use bicycle path along the makai side of Nimitz Highway from Sumner Street to Forrest Avenue (Honolulu Harbor Promenade 2-112)
- Bicycle lane on North Beretania Street from Alapai Street to North King Street (1-70)
- Bicycle lane on Bethel Street from Nimitz Highway to North Beretania Street

In addition, a network of bikeshare stations maintained and operated by Biki are located throughout Urban Honolulu from Iwilei to Kaimuki. Biki bikeshare stations closest to the project site are located at the intersections of Pauahi Street/River Street and Marin Street/Smith Street. Room for a new Biki bikeshare station is accommodated in the plan on Kekaulike Mall.

There was no bicycle activity observed during the traffic study. Since there are no dedicated bicycle facilities currently provided within the project area, the lack of bicyclists traveling on Kekaulike Mall and Kekaulike Street was not unexpected. The volume of cyclists in the vicinity of the project area is expected to increase significantly after construction of the future Holau transit station and the addition of a new Biki bikeshare station on Kekaulike Mall.

Pedestrian Facilities

Existing pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. Kekaulike Mall is a dedicated pedestrian path extending from North Hotel Street to North King Street with limited vehicular access restricted to emergency vehicles and other authorized personnel. All roadways in the immediate vicinity of the project site include sidewalks on both sides of the street with varying widths. The signalized intersections surrounding the project area include marked crosswalks on all intersections. Additionally, the intersection at North King Street linking Kekaulike Mall to Kekaulike Street features a pedestrian scramble crossing with an exclusive pedestrian-only signalized phase halting vehicular traffic movement in all directions. Sidewalks surrounding the project area, including Kekaulike Mall, feature awnings and shade trees with active frontage for commercial uses selling goods during normal business hours, particularly the various markets in the immediate area abutting the project site. Sidewalks generally provide adequate space to accommodate existing levels of pedestrian activity.

Projected Baseline Conditions without the Project

Baseline conditions were selected for the year 2026 to reflect the anticipated project completion year to determine future traffic conditions in the surrounding area without the project. Baseline conditions account for anticipated regional growth rates, future transit options, other transportation projects planned for the area during the respective timeframes, and planned road system improvements in determining future traffic conditions. Traffic growth was based on the Travel Demand Forecasting Model (TDFM) from the Oahu Regional Transportation Plan 2040 (ORTP), and projects a more conservative growth rate between 0.5% and 1.5% for North King Street and Nimitz Highway.

Future conditions at the intersection of Nimitz Highway and Kekaulike Street are expected to remain similar to existing conditions. However, vehicle delays for southbound traffic along North King Street in the vicinity of the project area are expected to increase due to planned traffic restrictions that will reduce through-lanes for passenger vehicles. During AM and PM peak hours, through-lanes for passenger vehicles on North King Street will be decreased from four lanes to three lanes due to a planned bus-only lane along the makai side of North King Street. Through-lanes will be reduced to two lanes for passenger vehicles during mid-day and weekend peak

hours due to existing freight loading zone restrictions along the corridor. While future conditions under the baseline year without the project anticipate increased delays for southbound vehicular traffic on North King Street, all intersections maintain a desirable level of service, operating at LOS C or above.

Potential Impacts and Mitigation Measures

The shared use multimodal design proposed for the project area is intended to address vehicular traffic congestion concerns for the immediate vicinity and surrounding region by promoting alternative forms of transportation to meet anticipated growth projections. The proposed conditions will provide enhanced access to improved bicycle and pedestrian facilities as well as existing transit options, and the future Holau transit station. The shared use roadway along Kekaulike Street will limit vehicular access to authorized emergency vehicles and freight vehicles during designated hours, and also provide drop-off access for paratransit (TheHandi-Van) near the future Holau transit station. While access for passenger vehicles along Kekaulike Street will not be permitted with the proposed improvements, this roadway experiences low vehicle traffic during peak hours under existing conditions and therefore the proposed project will have a minimal impact on vehicular traffic flows in the vicinity.

Under future conditions with completion of the project, proposed restrictions for non-freight vehicle access are expected to shift current parked vehicles into surrounding roadways impacting on-street and off-street parking areas. Alternatively, the proposed shared-use roadway design will promote alternative forms of transportation and create a cohesive connection to the future Holau transit station for regional public transit. The proposed streetscape will also offer connections to the existing pedestrian and bicycle facilities along Nimitz Highway, North King Street and North Hotel Street, and align with the projected increase in pedestrian and bicycle volumes in the surrounding area with completion of the future Holau transit station.

Based on anticipated regulation of freight loading to maintain designated delivery hours along the shared-use segment of Kekaulike Street, delivery vehicles for local businesses will likely impact nearby on-street parking and loading zones. Local businesses and vendors are able to access Kekaulike Street for delivery of goods during anticipated overnight freight delivery hours. Recommendations from the TIAR were analyzed with an assumption of overnight freight delivery hours between 8:30pm and 5:30am. Bollards are proposed as part of the design for Kekaulike Street to control access outside of designated freight delivery hours. Renderings of the conceptual access control design are shown in Figure 11.

During the Draft Environmental Assessment Pre-Consultation period, the Honolulu Police Department provided the following comments as it relates to transportation and traffic:

The HPD recommends that contractors obtain proper street usage permits, adhere to all safety and traffic control regulations, and ensure that employees do not park in unauthorized areas due to the limited parking in the North King Street area. Contractors and their employees should

obtain parking permits and park their work or personal vehicles outside the working area. In addition, contractors and employees should not park at public parks (Aala or Beretaina [sic]) during their work shift, as parking is strictly for park users only. Contractor deliveries and other construction tasks that may cause an interruption in traffic flow should be avoided during peak traffic times.

The proposed area for this project has a high level of traffic and very little parking available. Kekaulike Street hosts three loading zones for the vendors of Oahu Market and Kekaulike Mall. A reduction or limited use of these loading zones will have an adverse effect on the small businesses. We suggest that additional, temporary loading zones for the duration of the construction be added to North King Street to mitigate the loss of the loading zones on Kekaulike Street. The public will still have ample street parking as well access [sic] to the municipal parking lots. If possible, a parking area should be provided for first responders (police, fire and ambulance), one that is easily accessible and close to the main entrance of the construction area.

In regards to the planning of the project, the HPD also suggests that all ingress and egress points (as well as common areas and frequently traversed areas) have security cameras. Due to the thefts throughout the island, video camera footage should be utilized to monitor the construction site for security. The designers may wish to incorporate Crime Prevention Through Environmental Design concepts as well in the planning of this project.

Additionally, information notices/ reports (in English and Chinese) should be sent out to the residents of Chinatown to keep them informed of the construction dates and times as well as anything that may cause a disruption to their everyday activities.

During the Draft Environmental Assessment Pre-Consultation period, the Department of Facility Maintenance provided the following comments:

During construction and upon completion of the project; any damages/ deficiencies to the roadways on Kekaulike Street, North Hotel Street, and King Street shall be repaired to City standards and accepted by the City at no cost to the City and County of Honolulu.

We recommend that the Complete Streets Administrator, Renee Espiau and staff review the documents.

During the Draft Environmental Assessment Pre-Consultation period, the State of Hawaii Department of Transportation (HDOT) provided the following comments:

The State of Hawaii, Department of Transportation, Highways Division (HDOT-HWY):

(1) No significant adverse impacts to traffic conditions are anticipated on Nimitz Highway or the Nimitz Highway- Kekaulike Street intersection. (2) It is unlikely a traffic impact analysis report would be warranted but we recommend the Draft Environmental Assessment (DEA) include the following:

(a) The jurisdiction of roadways in the vicinity;

(b) Description of the existing and anticipated number, schedule, and type of motor vehicles that would enter Nimitz Highway during operations;

(c) Describe the potential impacts on and integration with existing Nimitz Highway bike and pedestrian routes;

(d) Assess cumulative impacts to traffic conditions;

(e) Present the characteristics of project construction/ demolition: development timeline, associated traffic. In addition to the Chinatown Station project, HDOT-HWY has plans to resurface Nimitz Highway; therefore, the timing of intersection improvements should be coordinated among stakeholders to the extent practical.

(f) Describe proposed improvements within the HDOT-HWY right-of-way (ROW), including pipeline and other infrastructure alignments that may be removed or constructed.

(g) Describe the stormwater drainage. The project should not result in additional discharge of surface water run-off onto the HDOT-HWY ROW.

The State of Hawaii, Department of Transportation, Harbors Division (HDOT-HAR):

The Project is located outside of the HDOT-HAR jurisdiction and does not directly impact harbor operations. However, the following should be considered in the DEA:

(2) Potential impacts of traffic associated with the construction of the Project. Nimitz Highway is a major freight corridor critical to the movement of cargo in and out of the Harbor. Where possible, potential impacts to traffic on Nimitz Highway should be avoided.

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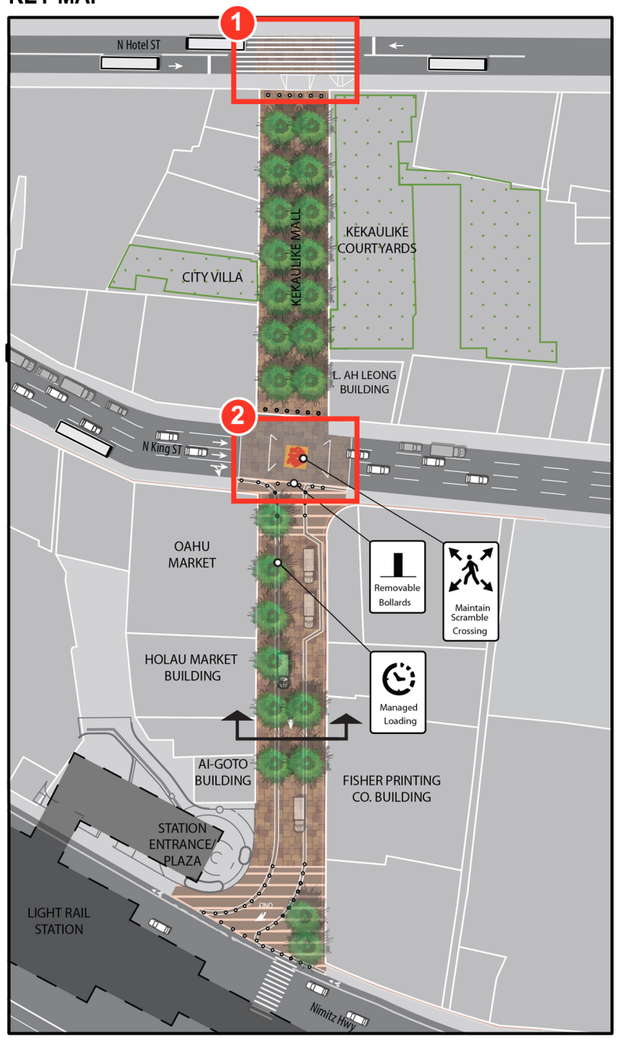
KEY MAP



Makai view of Hotel St & Kekaulike St intersection

Mauka view of King St & Kekaulike St intersection

PDF - Q:\Oahu\Kekaulike Street\PDF
Path - Q:\Oahu\Kekaulike Street\Photoshop

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

DRAFT 2/18/2021

Figure 11

Conceptual Access Control

KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

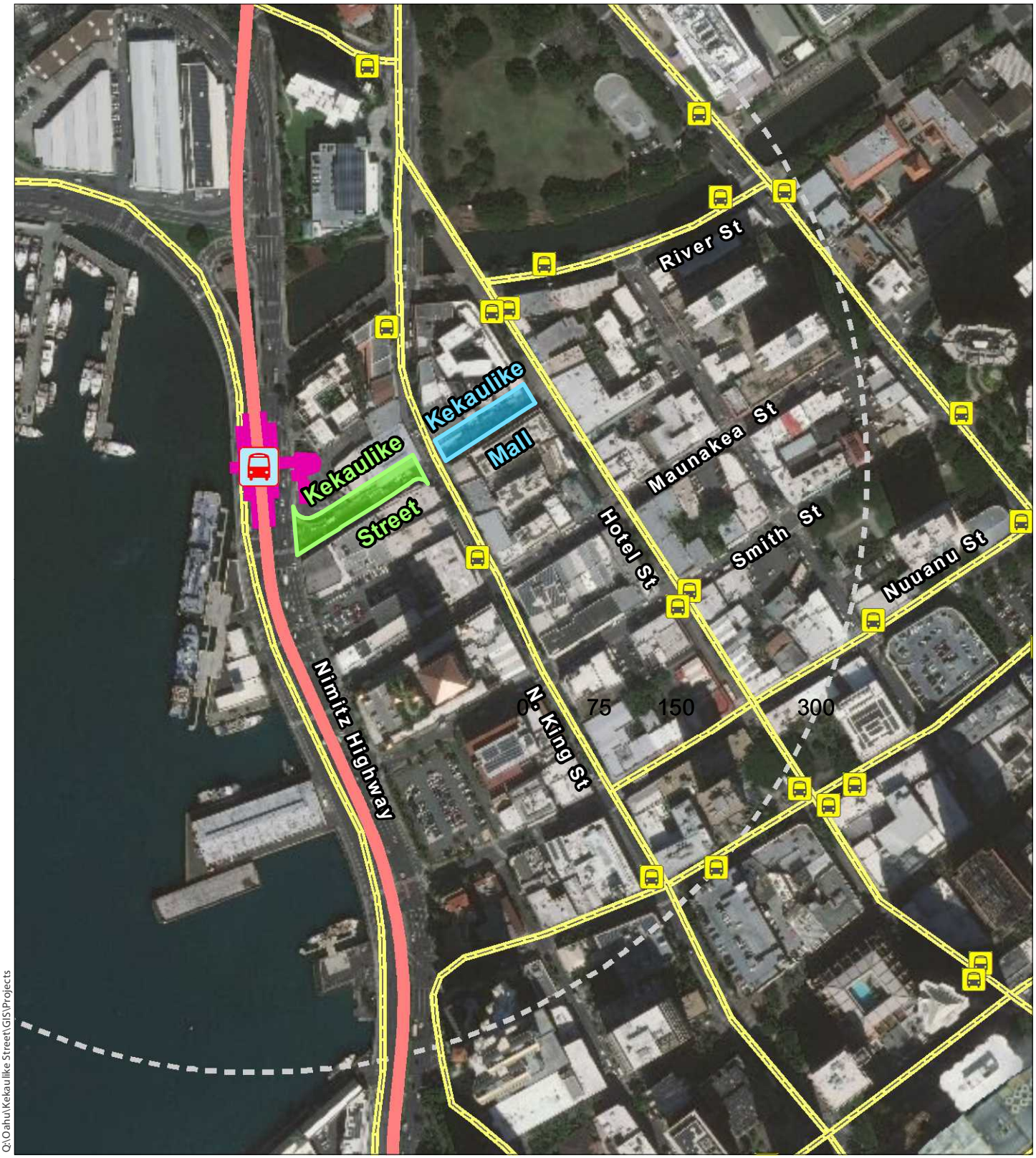
Department of Transportation Services — Island of O'ahu

North

HDR Engineering, Inc.

PBR HAWAII & ASSOCIATES, INC.

Source: HDR, 2021.



Q:\Oahu\Kekaulike Street\GIS\Projects

DATE: 2/12/2021

Legend

- Holau Transit Station (planned)
- Rail Station Footprint (planned)
- Rail Line (planned)
- TOD 0.25 Mile Radius
- Bus Stops
- Bus Routes

Figure 12

Transit Facilities and TOD Corridor

KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

Department of Transportation Services

North

Linear Scale (feet)

0 75 150 300

PBR HAWAII & ASSOCIATES, INC.

Source: HART consultant CH2M, 2020; City and County of Honolulu, 2019; ESRI Basemap.

4.6.2 Water System

Existing Conditions

Water service connections within the project area are provided by the City's Board of Water Supply (BWS). Within the bounds of the project area, the Honolulu Board of Water Supply (BWS) water system includes eight-inch water lines extending mauka to makai along both Kekaulike Mall and Kekaulike Street. Refer to Appendix A for civil engineering concept drawings. These lines were designed for water service and fire protection. The six-inch lateral waterlines provide connections to six inch water meters within the project area.

There is one fire hydrant within the bounds of the project area, located on makai end of Kekaulike Street near the future Holau transit station site. An additional three fire hydrants are located within close proximity to the project area bounds, one on North King Street and two on North Hotel Street. All hydrants connect to the main water lines by way of lateral waterline connections within the two roadways. Refer to Appendix A for more detail on existing conditions.

Potential Impacts and Mitigation Measures

The improvements proposed for Kekaulike Mall and Kekaulike Street will not impact the existing waterline mains, water meters, or fire hydrants. To accommodate spacing for the proposed planters and tree wells, new lateral waterline connections will be rerouted at locations along Keakaulike Mall and Kekauklike Street. Existing water flow capacity will be maintained for water service and fire protection. Details on proposed water system improvements are pending final design. Refer to Appendix A for more detail on proposed conditions.

4.6.3 Wastewater System

Existing Conditions

Wastewater connections within the project area comprise an eight-inch main sanitary sewer line extending mauka to makai along both Kekaulike Mall and Kekaulike Street. There are 11 six-inch lateral sewer line connections along Kekaulike Mall and 10 six-inch along Kekaulike Street. Refer to Appendix A for more detail on existing conditions.

Potential Impacts and Mitigation Measures

The improvements proposed for Kekaulike Mall and Kekaulike Street will not have any impact on the existing main sanitary sewer line. To accommodate spacing for the proposed planters and tree wells, new six-inch lateral sewer line connections will be rerouted along Keakaulike Mall and Kekauklike Street. Existing wastewater flow capacity will be maintained. Details on proposed wastewater system improvements are pending final design. Refer to Appendix A for more detail on proposed conditions.

4.6.4 Drainage System

Existing Conditions

Stormwater runoff collects on various streetscape surfaces and flows roughly mauka to makai. There is an existing 18-inch storm drain line extending along the eastern perimeter of Kekaulike Mall and Kekaulike Street with a connection to the 18-inch storm drain line running perpendicular along North King Street. Some surface stormwater flows are collected in various drainage inlets throughout the project area. The existing brick pavers comprising the majority of Kekaulike Mall provides opportunities for permeability for localized drainage. There are also 6 trench drains located along the western perimeter of Kekaulike Mall for drainage. Stormwater drainage collection occurs at locations within the project area that feed into the main 18-inch storm drain line from three existing curb inlets at the intersection of North King Street and two curb inlets near the future Holau transit station. Refer to Appendix A for more detail on existing drainage conditions.

Potential Impacts and Mitigation Measures

The proposed improvements to Kekaulike Mall and Kekaulike Street are anticipated to improve onsite drainage conditions throughout the project area. A series of new drainage inlets are proposed along the entire project area. The new drainage inlets will be located on both sides of the shared-use roadway and pedestrian mall sections of the project. The drainage inlets will feed into lateral storm water drain lines that connect to vortex separators downstream to remove trash and sediments before connecting to the main 18-inch storm drain line. There will also be a series of tree wells and planters along the length of the project area offering opportunities for localized groundwater infiltration. The drainage improvements are anticipated to reduce non-point source pollution by collecting localized stormwater, while reducing and intercepting debris that would otherwise flow to nearby waterways, including Honolulu Harbor. Details on proposed drainage system improvements are pending final design. Refer to Appendix A for more detail on proposed conditions.

During the Draft Environmental Assessment Pre-Consultation period, the Department of Facility Maintenance provided the following comment regarding project impacts to drainage:

Once construction phase commences, install approved Best Management Practices (BMP) fronting all drainage facilities on Kekaulike Street, North Hotel Street, and King Street.

During the Draft Environmental Assessment Pre-Consultation period, the State of Hawaii, Department of Transportation, Harbors Division (HDOT-HAR) provided the following comment regarding project impacts to drainage:

The Project is located outside of the HDOT-HAR jurisdiction and does not directly impact harbor operations. However, the following should be considered in the DEA:

(1) The Project is located mauka of the Honolulu Commercial Harbor (Harbor) and stormwater outfalls discharge into the Harbor. HDOT-HAR requests that the proposed drainage system improvements consider a catchment system to prevent debris from entering the Harbor. Various means to reduce litter and educate people on the connection between mauka and makai may also be considered.

4.6.5 Solid Waste Disposal

Existing Conditions

The City and County of Honolulu Department of Environmental Services (DES), Solid Waste Division operates and maintains all solid waste collection and disposal facilities on the island. Currently there are a total of two landfills, nine public refuse drop-off locations, six convenience centers and three transfer stations for the disposal of commercial and residential generated waste. Waste generated from construction and demolition activities is sent to the Solid Waste Management Facility in Nanakuli, which is operated by PVT Land Company, Ltd.. The City and County of Honolulu also operates a waste-to-energy plant (H-POWER) located in the Campbell Industrial Park where over 700,000 tons of waste is incinerated to generate 10% of Oahu's power needs (Department of Environmental Services, 2019). The Waimanalo Gulch Landfill is the City's primary solid waste disposal facility, located mauka of Farrington Highway near Kahe Point. The site accepts residential, commercial and nonhazardous industrial solid wastes, demolition debris and ash and residue from the H-POWER waste-to-energy facility. Wastewater treatment sludge, septic tank wastes and cesspool pumpings are accepted, provided such disposal is in accordance with the landfill's operating guidelines. The site also handles special wastes such as spent lime, contaminated foods and asbestos. There are other companies on island who recycle deconstructed materials in order to divert them from the landfills and others who mitigate hazardous construction waste.

Solid waste generated by local businesses and other facilities on Kekaulike Street and Kekaulike Mall is manually collected every day. Bulky item pickup service is permitted by appointment. Collected refuse is then taken to the Honolulu Collection Yard on Middle Street. Items may be dropped off at the Keehi Transfer Station Convenience Center on Middle Street.

Potential Impacts and Mitigation Measures

Short-term impacts from the project include solid waste generated within the project area during site preparation and construction, including soil, rocks, and debris from existing surfaces and infrastructure. Best management practices during construction will be implemented, including diversion of materials suitable for recycling or off-site reuse, as well as minimizing the amount of waste generated. Construction personnel will manage solid waste by separating refuse collection

to distinguish between green waste, concrete, metal, cardboard, and other construction materials. Solid waste materials suitable for on-site reuse, including concrete, rocks, dirt, asphalt and other earthen materials, will be processed for base material, if feasible. Construction waste that cannot be recycled will be deposed of at appropriate landfills and waste facilities in accordance with policies and practices established by the City and County of Honolulu's Department of Environmental Services to ensure that there are no adverse impacts to the County's landfill or operations.

After construction, local businesses and other facilities will maintain existing processing of solid waste generated with daily collection. Access for authorized solid waste collection vehicles along Kekaulike Street will be established after completion of the project to ensure adequate operational support. The proposed project is not anticipated to adversely affect the service capabilities of the County's waste collection operations.

4.6.6 Electrical and Communication Systems

Existing Conditions

Hawaiian Electric Company (HECO) serves all of the City and County of Honolulu with oil generated power plants in Pearl City and Kapolei, a waste-to-energy power plant (HPOWER) in Kapolei, and renewable energy generators across the island.

Hawaiian Telcom and Spectrum provide telephone and cable services to urban Honolulu. Consultation with Spectrum identified existing underground CATV facilities throughout Chinatown including along Kekaulike Mall and Kekaulike Street. Within the project area, there are underground telecommunication and electrical lines.

Potential Impacts and Mitigation Measures

The improvements proposed for Kekaulike Mall and Kekaulike Street including the installation of CCTV will not have any impact on the existing underground lines providing electrical and communication services.

During the Draft Environmental Assessment Pre-Consultation period, Spectrum provided the following comments:

According to our drawings, we will be affected by the proposed work. We have underground facilities in the area, and thu [sic] *Hawaiian tel* [sic] *infrastructure. In any case toning through the One Call Center will identify our facilities in the immediate area.*

4.7 HAZARDOUS WASTES AND MATERIALS

Existing Conditions

Preliminary research of the U.S. Environmental Protection Agency (EPA) NEPAssist online database and reports, there are four facilities monitored for hazardous wastes within close proximity to the project area, include one site abutting the site on Kekaulike Street. All four sites listed are designated as hazardous waste sites subject to the Resource Conservation and Recovery Act (RCRA) (NEPA, 2020). The abutting site is owned by Pioneer Ventures, Inc. and maintains this designation due to management of ignitable waste.

Additionally, the State Department of Health Environmental Health Warehouse (EHW) was reviewed and the project area is not a monitored site for hazardous wastes (http://eha-web.doh.hawaii.gov/ehw/).

Potential Impacts and Mitigation Measures

The proposed project does not include any hazardous waste discharges, injection wells, or underground storage tanks and therefore no hazardous waste is anticipated to be generated. No further mitigation measures are therefore proposed for the ongoing operations of the proposed project.

In the unlikely scenario that hazardous materials are discovered during demolition and construction activities, the applicant will adhere to the provisions of the Hawaii DOH Construction and Demolition (C&D) Waste Disposal General Guidance to ensure proper handling of potentially contaminated materials. Best Management Practices will be performed in accordance with all applicable State and federal requirements and guidelines.

4.8 SOCIO-ECONOMIC CHARACTERISTICS

4.8.1 Population

Existing Conditions

Population data estimates are provided for the year 2018 from the U.S. Census Population Estimates Program (PEP) Quick Facts portal and the American Community Survey 5-Year Estimates as shown in the following table. Urban Honolulu is the most densely populated Census Designated Place (CDP) in the State, with 5,572.5 people per square mile as of the 2010 Census, compared to 211.8 individuals per square mile for the State of Hawaii. Average household size for Urban Honolulu is roughly 2.61 persons per household, which is slightly less than the 3.05 persons in the City and County of Honolulu and 3.02 persons for the State of Hawaii. Housing stock in Urban Honolulu is almost half of the entire housing stock for the County, with 41.3%

(128,814 out of 311,525) of homes located in the Honolulu CDP. Given the high density, housing stock and concentration of businesses within the Honolulu CDP, transportation alternatives that provide equitable access to the area for residents across the County is appropriate.

Table 2: Census 2018 Population Data

Characteristic	Urban Honolulu CDP	City & County of Honolulu	State of Hawaii
Total population	347,397	980,080	1,420,491
% of population under 18	17.1%	21.2%	21.4%
% of population 65 years and over	19.7%	17.7%	18.4%
Households 2014-2018	128,814	311,525	456,782
Persons per household, 2014-2018	2.61	3.05	3.02
Total Housing Units	Estimate not available	352,527	546,213
Owner Occupied Housing Unit Rate 2014-2018	44.4%	55.8%	58.3%
Population per square mile (2010)	5,572.5	1,586.7	211.8
Mean travel time to work (minutes)	23.5	29.1	27.4

Potential Impacts and Mitigation Measures

The infrastructure improvements are not expected to impact population growth on Oahu. However, the streetscape improvements are anticipated to enhance the functionality of the street and mall for projected population growth demands in the Chinatown district, as well as offering an aesthetically appealing connection to the future Holau transit station.

4.8.2 Downtown Chinatown and Economy

Existing Conditions

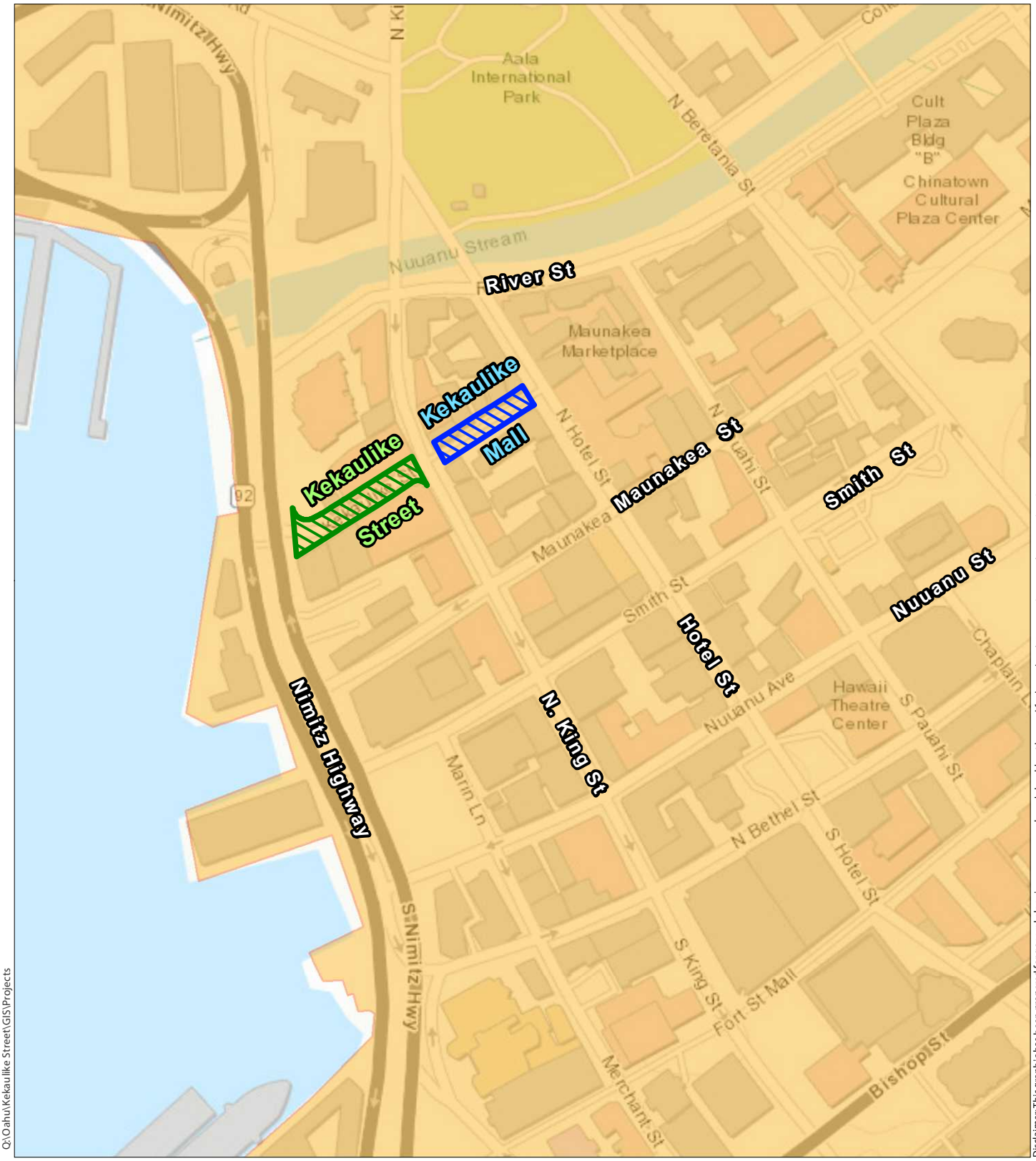
The project area is within the Census Tract 52, Honolulu County, Hawaii and located in the Enterprise Zone; a State of Hawaii, Department of Business, Economic Development and Tourism (DBEDT) program which gives tax and other economic benefits to businesses located in the designated areas. Enterprise Zones were created to stimulate business activity as well as preserve and create jobs. Benefits received from the State includes 100% exemption from the General Excise Tax, 80% non-refundable State income tax credit, and an additional income tax credit equal to 80% of the annual Unemployment Insurance premiums the first year. Benefits received from the County include a two year exemption from any increase in property taxes resulting from new construction within the Enterprise Zone and a waiver of building and grading permit fees for Enterprise Zone enrolled firms.

Potential Impacts and Mitigation Measures

The infrastructure improvements are expected to provide a long-term beneficial impact to the local economy by enhancing the functionality of the street and mall for all modes of transportation as well as offering an aesthetically appealing streetscape connection to the future Holau transit station. Drainage improvements are also expected to enhance the viability of the area for commerce by reducing the frequency of surface flooding.

The improvements coincide with other economic development efforts in the area, specifically, the Housing, Finance, and Development Corporation provided the following comments:

> *HHFDC supports the proposed improvements to Kekaulike Mall. We also wish to inform you that the HHFDC will be assessing the redevelopment potential of State-owned lands in the vicinity of the Iwilei transit station, as well as infrastructure improvements necessary to support their redevelopment. As the State's plans for transit-oriented development may be complementary to planned City projects, we will be consulting with the City as our planning progresses.*



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DATE: 2/9/2021

Legend

Enterprise Zone

Urban Honolulu

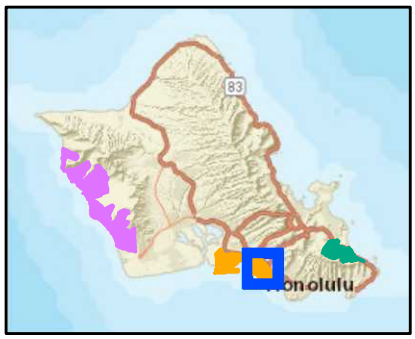

Figure 13

The Enterprise Zones (EZ) Partnership Program

KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

Department of Transportation Services

Island of O'ahu

North

Linear Scale (feet)

0 75 150 300

PBR HAWAII & ASSOCIATES, INC.

Source: City and County of Honolulu, 2016 & 2019; ESRI Basemap.

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4.9 PUBLIC SERVICES AND FACILITIES

4.9.1 Schools

Existing Conditions

The Hawaii Department of Education (DOE) administers the public school system for the entire state and, in total, manages 256 public schools and 37 charter schools. The DOE divided the island of Oahu into four administrative school districts: Honolulu, Windward, Central and Leeward. Kekaulike Street is located within the Honolulu Public School District and within a mile of several elementary and middle schools. Closest to the project area are Central Middle School, Royal Elementary School, Kauluwela Elementary School, and Princess Victoria Kaiulani Elementary School. The closest public high school is Farrington High School roughly two miles away.

In addition to the DOE public schools, a number of private schools and cultural institutions are within close proximity to the project area. Less than a mile away from the project area sits the Hongwanjii Mission School, a Buddhist private school, the Mun Lun School, a Chinese cultural education facility, and St. Andrew's Schools, a private independent college preparatory day school.

Several early childhood education and daycare facilities are also within a mile of the project area including four childcare facilities in the Chinatown / Downtown Honolulu area. Those schools include the Little Seed Early Learning Center, Strode Montessori, Lil' Munkies Childcare, and Cole Academy. Within a mile of Kekaulike Street and just outside of the Chinatown District include the following childcare facilities: People Attentive to Children (PATCH), Ohana Keiki Day Care Preschool, and Keiki Sitters.

The University of Hawaii System manages 10 public higher education campuses across the state. On Oahu, there are two Universities – University of Hawaii at Manoa and West Oahu – as well as three community colleges – Honolulu, Kapiolani, and Leeward Community Colleges. The University of Hawaii, Honolulu Community College is the closest public higher education campus to the project area. Hawaii Pacific University, a private college, is also within close proximity to the project area, less than a half mile away.

Potential Impacts and Mitigation Measures

Given the central location of the project area, there are a number of public and private schools, daycares and cultural facilities that may be impacted in the short-term during the construction phase of the project. Long term benefits of the improvements will include alternative modes of transportation that will provide more opportunities for access to educational institutions in the vicinity, particularly for students commuting to Hawaii Pacific University.

During the Draft Environmental Assessment Pre-Consultation period, the Department of Human Services provided the following comments:

> *The DHS has reviewed the Kekaulike Mall/ Street Multimodal Improvements Project and the map of the proposed area. A check on the DHS' internal data system and Google Maps found several DHS licensed infant toddler child care centers and group child care centers within the one-mile vicinity that may be affected during the construction phase.*

The project team will coordinate with the appropriate DOE principals and school administrators to ensure that parents are informed and prepared to adjust their commute and schedules to prepare for any construction related delays. There are no negative long term impacts anticipated as a result of the implementation of the proposed project.

4.9.2 Police, Fire and Medical Services

Existing Conditions

Police Protection

The Honolulu Police Department has jurisdiction over the entire island of Oahu. The Department has 29 divisions with headquarters located on South Beretania Street. The nearest police station to the project area is the Chinatown substation located on the corner of Maunakea Street and North Hotel Street.

Potential Impacts and Mitigation Measures

The proposed improvements are not expected to impact existing or future public services provided for police protection. Authorized police vehicles will be permitted access to the shared use segment of Kekaulike Street. The improvements have also been designed to allow for future CCTV surveillance installation at a future date.

An alternative action design with larger shade structures may negatively impact visual corridors and may be detrimental to police protection services.

During the Draft Environmental Assessment Pre-Consultation period, the Honolulu Police Department provided the following comment as it relates to crime prevention:

> *In regards to the planning of the project, the HPD also suggests that all ingress and egress points (as well as common areas and frequently traversed areas) have security cameras. Due to the thefts throughout the island, video camera footage should be utilized to monitor the construction site for security. The designers may wish to incorporate Crime Prevention through Environmental Design concepts as well in the planning of this project.*

The project and construction teams will implement the appropriate security features while on site during the construction phase of the project. Crime Prevention through Environmental Design was a recurring theme throughout the early concept design process. Elements such as raised planters were discussed at length with regard to how they might function or serve to obscure visual observation of the whole street. The design concerns for maintaining the historic streetscape, as well as view corridors for both aesthetic and safety purposes led to the preferred alternative to exclude raised planters.

Fire Protection

The Honolulu Fire Department is comprised of the Administrative Services Bureau, Fire Operations, Planning and Development, and Support Service. Fire Operations is responsible for fire suppression operations throughout the island of Oahu while the other three bureaus support the fire suppression forces. Within the Fire Operations, the nearest fire station to the site is the Waterfront Fire Station Number 45 located on Nimitz Highway, approximately a block south of Kekaulike Street. The Honolulu Fire Department Headquarters is located approximately 0.35 miles from the project area on the corner of South Beretania Street and the Fort Street Mall.

Potential Impacts and Mitigation Measures

The proposed improvements are not expected to impact existing or future public services provided for fire protection. Authorized emergency vehicles will be permitted access to the shared use segment of Kekaulike Street with adequate spacing and direct access to fire hydrants, which will maintain sufficient water capacity in conformance with all Honolulu Fire Department regulations. The existing fire hydrant locations will be maintained under the proposed streetscape design.

An alternative action design with larger shade structures would hinder fire protection under certain emergency circumstances requiring free vertical movement.

The Fire Prevention Bureau, which is under the Support Service and is responsible for administering the fire prevention program, provided the following comments during the Draft Environmental Assessment Pre-Consultation period:

> *In response to your letter dated December 3, 2019, regarding the abovementioned subject, the Honolulu Fire Department (HFD) reviewed the submitted information and requires that the following be complied with:*
>
> *(1) Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (45 meters) from fire department access roads as measured by an approved route*

around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; 2012 Edition, Sections 18.2.3.2.2 and 18.2.3.2.2.1.)

A fire department access road shall extend to within 50 feet (15 meters) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building (NFPA 1; 2012 Edition, Section 18.2.3.2.1.)

(2) A water supply approved by the county, capable of supplying the required fire flow for fire protection, shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45,720 millimeters) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ [authority having jurisdiction] (NFPA 1; 2012 Edition, Section 18.3.1, as amended.)

(3) The unobstructed width and unobstructed vertical clearance of a fire apparatus access road shall meet county requirements. (NFA 1; 2012 Edition, Sections 18.2.3.4.1.1 and 18.2.3.4.1.2, as amended.)

(4) Submit civil drawings to the HFD for review and approval.

No short or long-term negative impacts to fire safety and prevention are anticipated as a result of the implementation of the proposed project. The project team will ensure that designs and plans conform to the information provided during the pre-consultation process. Fire access roads, water supply, and vehicle width and vertical clearances will all be addressed, where necessary, in the design schemes and will ensure compliance with the referenced statutes. All civil drawings will be submitted to the HFD for review and approval. Emergency vehicle access will be maintained throughout the construction process in accordance with all Federal, State and County statutes. While the project may limit personal vehicle use along Kekaulike Street and Mall, emergency vehicle access will be maintained and permitted at all times.

Medical Services

The closest hospital to the project site is Queens Medical Center located on Punchbowl Street approximately 0.65 miles away. Queens Medical Center is the largest private nonprofit hospital in the State of Hawaii. Patients can receive treatment for a range of needs including cancer, heart disease, orthopedics, surgery, emergency medicine and behavior health. The hospital also has a trauma center. There is also a Straub Clinic and Hospital located roughly 1.4 miles away from the project area. Straub Clinic and Hospital is staffed to address more than 32 different medical needs including heart related issues, cancer, gastroenterology, geriatric medicine, internal medicine, and burn treatment center, among others. In addition to the two major hospitals, there are a number of clinics in the Chinatown and Downtown Honolulu Districts. A number of acupuncture

clinics are located just east of the project area on Mauna Kea Street, holistic and alternative medicine practitioners are also within a half mile radius of the project. A Longs Pharmacy is located on the corner of South Hotel Street and Bishop Street.

Potential Impacts and Mitigation Measures

The project anticipates positive long-term impacts to public health associated with the implementation of the proposed project. Planning for alternative modes of transportation is expected to help promote physical activity by encouraging commuters to walk and bike safety to their destinations. Multimodal transport systems have been shown to support community health as well as transportation equity. Given the proximity of the proposed project area to jobs, schools, shopping, etc., people utilizing the future rail system as well as existing bus and bike networks will be more active than if they used a vehicle to travel. More active lifestyles can decrease an individual's risk for chronic diseases in the future. There are two major hospitals close to the project area with emergency room services which can address urgent care situations as needed. Given that the project will increase overall safety by prioritizing pedestrian and bicycle use and limiting car access, there is a decreased likelihood of car crashes along Kekaulike Street and Kekaulike Mall. The project design team has considered ADA accessibility requirements, safety features, and cumulative environmental and social health benefits in the proposed designs.

4.9.3 Recreational Facilities

Existing Conditions

In addition to the Department of Parks and Recreation managed Kekaulike pedestrian mall, a number of other DPR governed pedestrian malls, parks and open spaces are within close proximity to the project area. Immediately north of Kekaulike Street and Mall is Aala International Park which is approximately seven acres in size and the largest park within a mile radius of the project. South of the project area lies the Smith-Beretania Urban Park, Dr. Sun Yat-Sen Memorial Park, the Fort Street Mall Mini Park, the Kamalii Mini Park, Robert W. Wilcox Mini Park, and Queen Emma Square; all within a half mile radius of Kekaulike Street. Several other pedestrian malls are within a half-mile radius of the project including Kila Kalikimaka Mall, College Walk Mall, and River Street/ Sun Yat Sen Mall to the north-east of the project area and Fort Street Mall and Union Street Mall to the south of the project area. A bike path network also exists within the general vicinity of Kekaulike Street and Mall. Existing bike lanes on the Hawaii State Department of Transportation Nimitz Highway directly connect with the southern terminus of Kekaulike Street. Shared street bike routes connect at the northern terminus of Kekaulike Mall at the intersection of North Hotel Street. The bike routes on North Hotel Street run the length of the roadway, from River Street to Richards Street in downtown Honolulu. From North Hotel Street, a bicyclist can access most of the aforementioned urban parks and all of the pedestrian malls.

Potential Impacts and Mitigation Measures

The Kekaulike Mall and Kekaulike Street Multimodal Improvements Project is expected to have a positive impact on access to recreational facilities in the Chinatown and Downtown Honolulu area. The proposed improvements along Kekaulike Street and Mall will build upon existing pedestrian and bicycle networks and improve the overall public access and connectivity to the wide range of public open space available in the Chinatown/ Downtown Honolulu areas. Bicyclists will have access to bike storage facilities and a new Biki bike share station. Kekaulike Street will become a pedestrian dominated walkway with landscaping improvements that will serve to make the project area an attractive additional public open space.

Short term impacts to recreational open spaces immediately adjacent to the project area may result during the construction phase of the project. As highlighted by the Honolulu Police Department during the Pre-Consultation process, the project team will ensure that construction contractors and their employees do not park at public parks, including Aala Park or Beretania Park, during their work shifts as parking in those areas is strictly for park users only.

5 LAND USE CONFORMANCE, POLICIES, AND CONTROLS

The processing of various permits and approvals are prerequisites to the creation of the project. Relevant State of Hawaii and City and County of Honolulu land use plans, policies, and ordinances are described below.

5.1 FEDERAL

5.1.1 Clean Water Act

The Clean Water Act establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters.

The National Pollutant Discharge Elimination System (NPDES) permit system is part of the implementation program of the Clean Water Act. NPDES permits are required when pollutants are proposed to be discharged into navigable waters or when more than an acre of land disturbance is proposed. Although no work in a waterway is proposed, a NPDES permit may be required because there will likely be in excess of one acre of land disturbance for the project. Unless the No Action alternative is selected, an NPDES permit will be pursued. Implementation of the proposed drainage improvements will result in no increase in discharge into Honolulu Harbor, via surface runoff, over existing conditions (discussed in Section 4.6.4).

5.2 STATE OF HAWAII

5.2.1 State Environmental Review Law (Chapter 343, Hawaii Revised Statutes)

Preparation of this document is in accordance with the provisions of Chapter 343, HRS and Title 11, Chapter 200.1, HAR pertaining to Environmental Assessments. Section 343-5, HRS identifies nine types of actions that “trigger” compliance, which requires an EA. The use of State or County funds and/or lands is one of these “triggers.” The preparation of an EA is required because the proposed Kekaulike Mall and Kekaulike Street Multimodal Improvements project is located on State lands and will use State funds. It will also include improvements and/or connections to, and/or easements across, State or County facilities and lands in relation to infrastructure improvements for public facilities, roadways, water, sewer, utility, and drainage facilities. While the specific nature of each improvement is not known at this time, the EA is intended to address all current and future instances involving the use of State and/or County lands and funds relating to the project.

5.2.2 State Land Use Law (Chapter 205, Hawaii Revised Statutes)

The State Land Use Law (Chapter 205, HRS) establishes the State Land Use Commission and authorizes this body to designate all lands in the State into one of four districts: Urban, Rural,

Agricultural, or Conservation. The Kekaulike Mall and Kekaulike Street Multimodal Improvements project is located within the State Urban District.

5.2.3 Hawaii Coastal Zone Management Program (Chapter 205A, Hawaii Revised Statutes)

Hawaii's CZM Program, adopted as Chapter 205A, HRS, provides a basis for protecting, restoring, and responsibly developing coastal communities and resources. The objectives and policies of the CZM Program encompass broad concerns such as impact on recreational resources, historic and archaeological resources, coastal scenic resources and open space, coastal ecosystems, coastal hazards, and the management of development. Each of the Counties have adopted Special Management Areas (SMAs) in which a development's consistency with the objectives and policies of the CZM program are evaluated through the SMA permitting process. The site is located outside of The City and County of Honolulu's designated SMA. As the entire State is located within the Coastal Zone Management area, the consistency of the proposed Kekaulike Multimodal Improvements Project with the objectives and policies of the CZM program is discussed below.

Table 3: Coastal Zone Management Act, Chapter 205A, and HRS

S = Supportive, N/S = Not Supportive, N/A = Not Applicable

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
Recreational Resources			
Objective: (A) Provide coastal recreational opportunities accessible to the public.			
Policies:			
1. Improve coordination and funding of coastal recreational planning and management; and			**X**
2. Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:			**X**
1. Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;			**X**

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
2. 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;			**X**
3. Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;			**X**
4. Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;			**X**
5. 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;			**X**
6. Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;			**X**
7. Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and			**X**
8. 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.			**X**
***Discussion*:** The Kekaulike Multimodal Improvements project will have no impact on coastal recreational opportunities accessible to the public.			
Historic Resources			
Objective: (A) 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:			
1. Identify and analyze significant archaeological resources;	**X**		
2. Maximize information retention through preservation of remains and artifacts or salvage operations; and	**X**		

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
3. Support state goals for protection, restoration, interpretation, and display of historic resources.	X		
Discussion: The Kekaulike Multimodal Improvements project endeavors to identify, preserve, and enhance all archaeological and historical resources within the project area. The entirety of the project area is within the Chinatown Historic District which is listed on the National Register of Historic Places. Additionally, archaeological resources have been found within the general vicinity of the project area during past development project. Known archaeological features, including a historic fish pond, have also been identified immediately outside of the project area. The Historic Resources Evaluation concluded that the project does not pose an adverse impact to the historic resources present within the project area or negatively impact historic structures fronting Kekaulike Mall and Kekaulike Street. The proposed project will not alter or modify any of the historic buildings or structures fronting Kekaulike Mall and Kekaulike Street. Archaeological monitoring is proposed to ensure that archaeological resources are identified and protected during ground disturbing activities.			
Scenic and Open Space Resources			
Objective: (A) Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.			
Policies:			
1. Identify valued scenic resources in the coastal zone management area;	X		
2. 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;	X		
3. Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and			X
4. Encourage those developments that are not coastal dependent to locate in inland areas.			X
Discussion*:* Important view corridors identified within the coastal zone management area includes streets oriented from mauka to makai that provide mountain and shoreline vistas. Kekaulike Street and Mall are mauka to makai oriented and offer limited views of Honolulu Harbor and the Koolau Mountain Range at certain vantage points. As discussed in Section 4.3, the identified road characteristics that have the potential to diminish the quality of mauka-makai street corridor views include the width of the street, building setbacks, streetscape elements, and signage. The proposed landscaping design accompanying the streetscape			

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
improvements include additional trees and planters that will have a nominal impact on the visual resources along the mall and street corridor. However, the makai views of Honolulu Harbor are already obstructed by existing industrial buildings across Nimitz Highway. Existing mauka views of the Koolau Mountain Range are similarly impeded by existing buildings at the intersection of Kekaulike Mall and North Hotel Street. Visual corridors from a pedestrian height, both mauka and makai, will be maintained and relatively consistent with the historic and natural environment with minimal impact to existing conditions.			
Coastal Ecosystems			
Objective: (A) Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.			
Policies:			
1. Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;			**X**
2. Improve the technical basis for natural resource management;			**X**
3. Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;			**X**
4. 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			**X**
5. 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.	**X**		
***Discussion*:** The proposed project will not include any work that will disrupt coastal ecosystems nor will there be any work such as stream diversions, channelization or other similar work. The project will improve upon existing stormwater drainage infrastructure within Kekaulike Street and Mall. These improvements include installing additional drainage inlets with lateral stormwater lines connected the existing centralized drainage system. These improvements are expected to address existing stormwater runoff with additional capacity to anticipate an increase in runoff volumes due to climate variability in the future.			

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
Economic Uses			
Objective: (A) Provide public or private facilities and improvements important to the State's economy in suitable locations.			
Policies:			
1. Concentrate coastal dependent development in appropriate areas;	**X**		
2. Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry 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			**X**
3. 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:			**X**
1. Use of presently designated locations is not feasible;			**X**
2. Adverse environmental effects are minimized; and	**X**		
3. The development is important to the State's economy.	**X**		
Discussion: The proposed project improvements will improve upon the existing roadway and pedestrian mall and will not expand the development footprint within the coastal zone. While the project is close to Honolulu Harbor, it is within a highly developed urban core where economic use dominates. This Environmental Assessment has been developed to ensure that any adverse environmental effects as a result of the project are identified and minimized to the greatest extent possible. The project aims to continue to support the State's economy by providing more equitable and convenient transit access to Hawaii residents and visitors.			
Coastal Hazards			
Objective: (A) Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.			
Policies:			
1. Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;	**X**		
2. Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;	**X**		

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
3. Ensure that developments comply with requirements of the Federal Flood Insurance Program; and	X		
4. Prevent coastal flooding from inland projects.			X
Discussion: This Environmental Assessment serves as a disclosure document regarding the impacts storm waves, tsunami, flood, erosion, subsidence and point and nonpoint source pollution hazards may have on the proposed project.			
Managing Development			
Objective: (A) Improve the development review process, communication, and public participation in the management of coastal resources and hazards.			
Policies:			
1. Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;	X		
2. Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and			X
3. 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.			X
Discussion: The proposed project should not be construed as a coastal development. However, given its proximity to Honolulu Harbor, this document serves to effectively use existing law to evaluate potential impacts of the development project. Given the design considerations, in particular the drainage features, there are no anticipated impacts to the coastal zone.			
Public Participation			
Objective: (A) Stimulate public awareness, education, and participation in coastal management.			
Policies:			
1. Promote public involvement in coastal zone management processes;			X
2. 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			X
3. Organize workshops, policy dialogues, and site-specific mediations to respond to			X

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
coastal issues and conflicts.			
Discussion: The Kekaulike Multimodal Improvements project is outside of the City and County of Honolulu Special Management Area (SMA). The project is not a coastal development and it is not anticipated to impact the coastal zone.			
Beach Protection			
Objective: (A) Protect beaches for public use and recreation.			
Policies:			
1. 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;			**X**
2. 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; and			**X**
3. Minimize the construction of public erosion-protection structures seaward of the shoreline.			**X**
4. 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			**X**
5. 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.			**X**
Discussion: The proposed project includes streetscape improvements within an existing roadway and pedestrian mall corridor within the urban Honolulu, Chinatown Historic District. The project does not involve any shoreline development activities.			
Marine Resources			
Objective: (A) Promote the protection, use, and development of marine and coastal resources to assure their sustainability.			
Policies:			
1. Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;			**X**

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
2. Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;			**X**
3. 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;			**X**
4. 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			**X**
5. Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.			**X**
Discussion: The proposed project is not a coastal development and is not anticipated to impact marine or coastal resources.			

5.2.4 Hawaii State Planning Act, Chapter 226, Hawaii Revised Statutes

The Hawaii State Plan (Chapter 226, HRS) sets forth the goals, objectives, policies, and priority guidelines for growth, development, and allocation of limited resources throughout the State. It contains diverse policies and objectives on topics of state interest including but not limited to, the economy, agriculture, the visitor industry, federal expenditure, the physical environment, facility systems, socio-cultural advancement, and sustainability. Conformity with applicable provisions of the State Plan are discussed below. The State Plan is divided into three parts, Part I (Overall Theme, Goals and Policies); Part II (Planning, Coordination and Implementation); and Part III (Priority Guidelines). Parts I and III are provided in matrix format below and the checked boxes indicate whether the individual objectives and policies are supported, not supported, or not applicable. Applicable goals and policies of the Hawaii State Plan are discussed below.

Table 4: Hawaii State Plan, Chapter 226, HRS, Part I

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
HRS § 226-3: Overall Theme			
Hawaii's people, as both individuals and groups, generally accept and live by a number of principles or values which are an integral part of society. This concept is the unifying theme of the State Plan. The following principles or values are established as the overall theme of the Hawaii State Plan:			
(1) Individual and family self-sufficiency refers to the rights of people to maintain as much self-reliance as possible. It is an expression of the value of independence, in other words, being able to freely pursue personal interests and goals. Self-sufficiency means that individuals and families can express and maintain their own self-interest so long as that self-interest does not adversely affect the general welfare. Individual freedom and individual achievement are possible only by reason of other people in society, the institutions, arrangements and customs that they maintain, and the rights and responsibilities that they sanction.	**X**		
(2) Social and economic mobility refers to the right of individuals to choose and to have the opportunities for choice available to them. It is a corollary to self-sufficiency. Social and economic mobility means that opportunities and incentives are available for people to seek out their own levels of social and economic fulfillment.	**X**		
(3) Community or social well-being is a value that encompasses many things. In essence, it refers to healthy social, economic, and physical environments that benefit the community as a whole. A sense of social responsibility, of caring for others and for the well-being of our community and of participating in social and political life, are important aspects of this concept. It further implies the aloha spirit--attitudes of tolerance, respect, cooperation and unselfish giving, within which Hawaii's society can progress.	**X**		

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
One of the basic functions of our society is to enhance the ability of individuals and groups to pursue their goals freely, to satisfy basic needs and to secure desired socio-economic levels. The elements of choice and mobility within society's legal framework are fundamental rights. Society's role is to encourage conditions within which individuals and groups can approach their desired levels of self-reliance and self-determination. This enables people to gain confidence and self-esteem; citizens contribute more when they possess such qualities in a free and open society. Government promotes citizen freedom, self-reliance, self-determination, social and civic responsibility and goals achievement by keeping order, by increasing cooperation among many diverse individuals and groups, and by fostering social and civic responsibilities that affect the general welfare. The greater the number and activities of individuals and groups, the more complex government's role becomes. The function of government, however, is to assist citizens in attaining their goals. Government provides for meaningful participation by the people in decision-making and for effective access to authority as well as an equitable sharing of benefits. Citizens have a responsibility to work with their government to contribute to society's improvement. They must also conduct their activities within an agreed-upon legal system that protects human rights.	**X**		
Discussion: The Kekaulike Multimodal Improvements project upholds the principles and values established by the Hawaii State Plan. The project has been designed to provide a continuous multimodal connection from the planned HART Holau transit station into the heart of the Chinatown District. The plan will increase connectivity to existing multimodal transportation networks including The City and County of Honolulu bus system, bicycle paths, and other pedestrian malls in the general vicinity of downtown Honolulu. The Department of Transportation Services supports alternative transport mode projects as it has been proven to increase equitable access to jobs, residential and shopping areas, open spaces, educational institutions, and other highly sought after destinations. This, in turn, supports individual and family self-sufficiency as well as economic and social mobility. Alternative transportation modes have also been shown to support healthier lifestyles and decrease overall environmental impacts. The project improvements aim to provide a more connected transport network that gives individuals and their families more choices on how they can arrive in urban Honolulu to pursue their goals in a more economical, environmentally sustainable, and healthy way.			

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
HRS § 226-4: State Goals.			
Objectives: 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:			
1. A strong, viable economy, characterized by stability, diversity and growth that enables fulfillment of the needs and expectations of Hawaii's present and future generations.			**X**
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.	**X**		
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.	**X**		
Discussion: While the proposed project is not an economic endeavor, the proposed streetscape improvements and conversion of Kekaulike Street into a multimodal right of way will serve to support the economy by promoting the increase in transportation choices into Chinatown and Downtown Honolulu for Hawaii's residents. The designs will promote an aesthetic that is unique to the cultural and historical context of Chinatown. Improvements will also address drainage concerns and promote a cleaner surrounding environment.			
HRS § 226-5: Objectives and policies for population.			
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.			
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.			**X**
(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(3) Promote increased opportunities for Hawaii's people to pursue their socio-economic aspirations throughout the islands.			**X**
(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.			**X**
(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.			**X**
(6) Pursue an increase in federal assistance for states with a greater proportion of foreign immigrants relative to their state's population.			**X**
(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.			**X**
Discussion: The project is a small-scale endeavor limited to the island of Oahu. No federal funds will be utilized for this project at this time.			
HRS § 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.			**X**
(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.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)		**S**	**N/S**	**N/A**
Policies:				
(1)	Promote and encourage entrepreneurship within Hawaii by residents and nonresidents of the State.			**X**
(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.			**X**
(3)	Promote Hawaii as an attractive market for environmentally and socially sound investment activities that benefit Hawaii's people.			**X**
(4)	Transform and maintain Hawaii as a place that welcomes and facilitates innovative activity that may lead to commercial opportunities.			**X**
(5)	Promote innovative activity that may pose initial risks, but ultimately contribute to the economy of Hawaii			**X**
(6)	Seek broader outlets for new or expanded Hawaii business investments.			**X**
(7)	Expand existing markets and penetrate new markets for Hawaii's products and services.			**X**
(8)	Assure that the basic economic needs of Hawaii's people are maintained in the event of disruptions in overseas transportation.			**X**
(9)	Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.			**X**
(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.			**X**
(11)	Encourage labor-intensive activities that are economically satisfying and which offer opportunities for upward mobility.			**X**
(12)	Encourage innovative activities that may not be labor-intensive, but may otherwise contribute to the economy of Hawaii.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(13) Foster greater cooperation and coordination between the government and private sectors in developing Hawaii's employment and economic growth opportunities.	**X**		
(14) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.			**X**
(15) Maintain acceptable working conditions and standards for Hawaii's workers.			**X**
(16) Provide equal employment opportunities for all segments of Hawaii's population through affirmative action and nondiscrimination measures.			**X**
(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.			**X**
(18) Encourage businesses that have favorable financial multiplier effects within Hawaii's economy, particularly with respect to emerging industries in science and technology.			**X**
(19) Promote and protect intangible resources in Hawaii, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.	**X**		
(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.			**X**
(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.			**X**
Discussion: The proposed improvements to Kekaulike Mall and Kekaulike Street are investments in public infrastructure that supports the retail and commercial services located in Chinatown.			

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
HRS § 226-7: Objectives and policies for the economy - agriculture			
Objectives: 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.			**X**
2 Growth and development of diversified agriculture throughout the State.			**X**
3 An agriculture industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being.			**X**
Policies:			
(1) Establish a clear direction for Hawaii's agriculture through stakeholder commitment and advocacy.			**X**
(2) Encourage agriculture by making best use of natural resources.			**X**
(3) Provide the governor and the legislature with information and options needed for prudent decision making for the development of agriculture.			**X**
(4) Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits.			**X**
(5) Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawaii's economy.			**X**
(6) Seek the enactment and retention of federal and state legislation that benefits Hawaii's agricultural industries.			**X**
(7) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawaii's producers and consumer markets locally, on the continental United States, and internationally.			**X**
(8) Support research and development activities that provide greater efficiency and economic productivity in agriculture.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(9) Enhance agricultural growth by providing public incentives and encouraging private initiatives.			**X**
(10) Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.			**X**
(11) Increase the attractiveness and opportunities for an agricultural education and livelihood.			**X**
(12) 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.			**X**
(13) Promote economically competitive activities that increase Hawaii's agricultural self-sufficiency.			**X**
(14) Promote and assist in the establishment of sound financial programs for diversified agriculture.			**X**
(15) Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment.			**X**
(16) Facilitate the transition of agricultural lands in economically unfeasible agricultural production to economically viable agricultural uses.			**X**
(17) Perpetuate, promote, and increase use of traditional Hawaiian farming systems, such as the use of loko ia, mala, and irrigated loi, and growth of traditional Hawaiian crops, such as kalo, uala, and ulu.			**X**
(18) Increase and develop small-scale farms.			**X**
Discussion: The project is not expected to affect the State's economy with respect to agriculture.			
HRS § 226-8: Objectives and policies for the economy – visitor industry			
Objectives: 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.			

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
Policies:			
(1) Support and assist in the promotion of Hawaii's visitor attractions and facilities.			**X**
(2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people.			**X**
(3) Improve the quality of existing visitor destination areas.			**X**
(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.			**X**
(5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawaii's people.			**X**
(6) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the visitor industry.			**X**
(7) Foster a recognition of the contribution of the visitor industry to Hawaii's economy and the need to perpetuate the aloha spirit.			**X**
(8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawaii's cultures and values.			**X**
Discussion: The project is not expected to affect the State's economy with respect to the visitor industry.			
HRS § 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.			**X**
(2) Promote Hawaii's supportive role in national defense.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(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.			**X**
(4) Increase opportunities for entry and advancement of Hawaii's people into federal government service.			**X**
(5) Promote federal use of local commodities, services, and facilities available in Hawaii.			**X**
(6) Strengthen federal-state-county communication and coordination in all federal activities that affect Hawaii.			**X**
(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.			**X**
Discussion: The project has not planned for the expenditure of federal funds at this time.			
HRS § 226-10: Objectives and policies for the economy – potential growth and innovative activities.			
Objective: Planning for the State's economy with regard to potential growth activities shall be directed towards achievement of the objective of development and expansion of potential growth 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.			**X**
(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;			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(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.			**X**
(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.			**X**
(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;			**X**
(6) Expand Hawaii's capacity to attract and service international programs and activities that generate employment for Hawaii's people.			**X**
(7) Enhance and promote Hawaii's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts.			**X**
(8) Accelerate research and development of new energy-related industries based on wind, solar, ocean, underground resources, and solid waste.			**X**
(9) Promote Hawaii's geographic, environmental, social, and technological advantages to attract new or innovative economic activities into the State.			**X**
(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.			**X**
(11) Increase research and the development of ocean-related economic activities such as mining, food production, and scientific research.			**X**
(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.			**X**
(13) Foster a broader public recognition and understanding of the potential benefits of new or innovative growth-oriented industry in Hawaii.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, 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.			**X**
(15) Increase research and development of businesses and services in the telecommunications and information industries.			**X**
(16) Foster the research and development of non-fossil fuel and energy efficient modes of transportation.			**X**
(17) Recognize and promote health care and health care information technology as growth industries.			**X**
Discussion: The proposed Kekaulike Multimodal Improvements project is not a direct contributor to the State's economic diversification or growth, however, it is expected to support the State economy by through infrastructure improvements in Chinatown.			
HRS § 226-10.5: Objectives and policies for the economy – information industry			
Objective: 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.			
Policies:			
(1) Encourage the continued development and expansion of the telecommunications infrastructure serving Hawaii to accommodate future growth in the information industry;			**X**
(2) Facilitate the development of new business and service ventures in the information industry which will provide employment opportunities for the people of Hawaii;			**X**
(3) Encourage greater cooperation between the public and private sectors in developing and maintaining a well- designed information industry;			**X**
(4) 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;			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(5) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the information industry;			**X**
(6) Foster a recognition of the contribution of the information industry to Hawaii's economy; and			**X**
(7) Assist in the promotion of Hawaii as a broker, creator, and processor of information in the Pacific.			**X**
Discussion: There are no anticipated impacts to the telecommunications and information technology industry as a result of implementing the proposed project.			
HRS § 226-11: Objectives and policies for the physical environment – land-based, shoreline, and marine resources.			
Objectives: 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.			
(1) Prudent use of Hawaii's land-based, shoreline, and marine resources.	**X**		
(2) Effective protection of Hawaii's unique and fragile environmental resources.	**X**		
Policies:			
(1) Exercise an overall conservation ethic in the use of Hawaii's natural resources.	**X**		
(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.			**X**
(3) Take into account the physical attributes of areas when planning and designing activities and facilities.	**X**		
(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.	**X**		
(5) Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaii.			**X**
(7) Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion.			**X**
(8) Pursue compatible relationships among activities, facilities, and natural resources.	**X**		
(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.			**X**
Discussion: The proposed project is considered an asset to enhancing the State's physical environment, including improved stormwater management, aesthetic improvements to the streetscape and fostering preservation of the cultural and historical resources within the Chinatown district.			
HRS § 226-12: Objectives and policies for the physical environment – scenic, natural beauty, and historic resources.			
Objective: 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.			
Policies:			
(1) Promote the preservation and restoration of significant natural and historic resources.	**X**		
(2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.	**X**		
(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.	**X**		
(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawaii's ethnic and cultural heritage.	**X**		
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.	**X**		

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
Discussion: Honolulu Chinatown is listed on the National Register of Historic Places and is one of Oahu's important historic areas. The project site is situated within the historic district and has considered the historic, cultural, environmental, and archaeological context of the area when designing the proposed streetscape improvements.			
HRS § 226-13: Objectives and policies for the physical environment – land, air, and water quality.			
Objectives: 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.	**X**		
(2) Greater public awareness and appreciation of Hawaii's environmental resources.			**X**
Policies:			
(1) Foster educational activities that promote a better understanding of Hawaii's limited environmental resources.			**X**
(2) Promote the proper management of Hawaii's land and water resources.	**X**		
(3) Promote effective measures to achieve desired quality in Hawaii's surface, ground, and coastal waters.	**X**		
(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawaii's people.	**X**		
(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.			**X**
(6) Encourage design and construction practices that enhance the physical qualities of Hawaii's communities.	**X**		
(7) Encourage urban developments in close proximity to existing services and facilities.	**X**		
(8) Foster recognition of the importance and value of the land, air, and water resources to Hawaii's people, their cultures and visitors.	**X**		

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)		**S**	**N/S**	**N/A**
***Discussion**:* Considerations for the State's physical environment, including the long-term climate variability associated with climate change, existing greenhouse gas emissions, and current ambient air and surface water quality, have contributed to the design of the Kekaulike Multimodal Improvements project. Streetscape improvements, including new drainage features and landscaping, aim to help meet the State's objectives to improve water quality. New drainage inlets and drainage lines have been designed to reduce debris and other non-point source pollutants from discharging into nearby waterways, improving surface, ground, and coastal waters. Additionally, supporting multimodal transportation projects can improve overall greenhouse gas emissions as people no longer must rely on personal vehicles as their primary mode of transport. The proposed improvements are both timely and strategically located, with improvements focused within the existing urban area and connected to the planned HART Holau transit station.				
HRS § 226-14: Objective and policies for facility systems – in general				
Objective: 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.				
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.	**X**		
(2)	Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.	**X**		
(3)	Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.	**X**		
(1)	Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.	**X**		
Discussion: The project team has begun coordinating with the appropriate stakeholders, in particular State and County agencies, to appropriately and efficiently plan for a connected transportation network. The Kekaulike Multimodal Improvements project has been planned to complement existing County bus and pedestrian facilities and the rail project.				

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
HRS § 226-15: Objectives and policies for facility systems – solid and liquid wastes.			
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.			**X**
(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.			**X**
Policies:			
(1) Encourage the adequate development of sewerage facilities that complement planned growth.			**X**
(2) Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.			**X**
(3) Promote research to develop more efficient and economical treatment and disposal of solid and liquid wastes.			**X**
Discussion: The project will not involve planning for the State's facility systems with regard to solid and liquid waste. A discussion on solid waste disposal functionality for vendors located on Kekaulike Street has been provided in Section 4.6.5 Solid Waste Disposal.			
HRS § 226-16: Objectives 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.	**X**		
(2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(3) Reclaim and encourage the productive use of runoff water and wastewater discharges.			**X**
(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.			**X**
(5) Support water supply services to areas experiencing critical water problems.			**X**
(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.			**X**
Discussion: The project will not involve planning for the State's facility systems with regards to water. A discussion on access to water to meet all Honolulu Fire Department regulations has been provided in Section 4.9.2: Police, Fire and Medical Services.			
HRS § 226-17: Objectives and policies for facility systems – transportation.			
Objective: Planning for the State's facility systems with regard to transportation shall be directed toward the achievement of the following objectives, giving due consideration to all:			
(1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.	**X**		
(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State.	**X**		
Policies:			
(1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter;	**X**		
(2) Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives;	**X**		
(3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties;	**X**		
(4) Provide for improved accessibility to shipping, docking, and storage facilities;			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(5) Promote a reasonable level and variety of mass transportation services that adequately meet statewide and community needs;	**X**		
(6) Encourage transportation systems that serve to accommodate present and future development needs of communities;	**X**		
(7) Encourage a variety of carriers to offer increased opportunities and advantages to interisland movement of people and goods;			**X**
(8) Increase the capacities of airport and harbor systems and support facilities to effectively accommodate transshipment and storage needs;			**X**
(9) Encourage the development of transportation systems and programs which would assist statewide economic growth and diversification;	**X**		
(10) Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawaii's natural environment;	**X**		
(11) Encourage safe and convenient use of low-cost, energy-efficient, non-polluting means of transportation;	**X**		
(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	**X**		
(13) Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.	**X**		
Discussion: The proposed project is considered to be a significant contribution to the State's goals for enhancing multimodal transportation systems to accommodate future growth. The shared-use streetscape design is intended to promote alternative transportation modes that will align with State objectives and policies.			
HRS § 226-18: Objectives and policies for facility systems – energy.			
Objectives: 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:			

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;			**X**
(2) Increased energy self-sufficiency where the ratio of indigenous to imported energy use is increased;			**X**
(3) Greater energy security in the face of threats to Hawaii's energy supplies and systems; and			**X**
(4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use.			**X**
Policies:			
(1) Support research and development as well as promote the use of renewable energy sources;			**X**
(2) Ensure that the combination of energy supplies and energy-saving systems is sufficient to support the demands of growth;			**X**
(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;			**X**
(4) Promote all cost-effective conservation of power and fuel supplies through measures including:			**X**
(1) Development of cost-effective demand-side management programs;			**X**
(2) Education; and			**X**
(3) Adoption of energy-efficient practices and technologies.			**X**
(5) Ensure to the extent that new supply-side resources are needed, the development or expansion of energy systems utilizes the least-cost energy supply option and maximizes efficient technologies;			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(6) Support research, development, and demonstration of energy efficiency, load management, and other demand-side management programs, practices, and technologies;			**X**
(7) Promote alternate fuels and energy efficiency by encouraging diversification of transportation modes and infrastructure;	**X**		
(8) Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications; and			**X**
(9) Support actions that reduce, avoid, or sequester Hawaii's greenhouse gas emissions through agriculture and forestry initiatives.			**X**
***Discussion**:* While the proposed project does not directly contribute to the State's objectives for renewable energy and mitigation of greenhouse gas emissions, the streetscape design will promote alternative modes of transportation that will decrease overall reliance on carbon-emitting transportation choices.			
HRS § 226-18.5: Objectives and policies for facility systems—telecommunications.			
Objective: 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.			
Policies:			
(1) Facilitate research and development of telecommunications systems and resources;			**X**
(2) Encourage public and private sector efforts to develop means for adequate, ongoing telecommunications planning;			**X**
(3) Promote efficient management and use of existing telecommunications systems and services; and			**X**
(4) Facilitate the development of education and training of telecommunications personnel.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
Discussion: There are no anticipated impacts to telecommunications facilities as a result of implementing the proposed project. The existing underground telecommunications lines will not be impacted during construction and will remain in the same location under future conditions.			
HRS § 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.			**X**
(2) The orderly development of residential areas sensitive to community needs and other land uses.			**X**
(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people.			**X**
Policies:			
(1) Effectively accommodate the housing needs of Hawaii's people.			**X**
(2) Stimulate and promote feasible approaches that increase affordable rental and for sale housing choices for extremely low-, very low-, lower-, moderate-, and above moderate-income households.			**X**
(3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.			**X**
(4) Promote appropriate improvement, rehabilitation, and maintenance of existing rental and for sale housing units and residential areas.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(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.			**X**
(6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.			**X**
(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.			**X**
(8) Promote research and development of methods to reduce the cost of housing construction in Hawaii.			**X**
Discussion: The proposed project involves streetscape improvements. There are no anticipated impacts related to housing as a result of the project.			
HRS § 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.			**X**
(2) Maintenance of sanitary and environmentally healthful conditions in Hawaii's communities.	**X**		
Policies:			
(3) Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.			**X**
(4) 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.			**X**
(5) Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs.	**X**		

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(6) Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures.			**X**
(7) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.	**X**		
(8) Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education, monitoring, and enforcement.			**X**
(9) 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.			**X**
***Discussion**:* While there are no anticipated direct impacts related to healthcare as a result of the project, the multimodal improvements will promote alternative modes of transportation, such as walking and bicycling. Pedestrian and bicycle transportation have been shown to benefit overall wellness and health lifestyles, which can reduce adverse community healthcare issues.			
HRS § 226-21: Objectives and policies for socio-cultural advancement – education.			
Objectives: 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.			**X**
(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(3) Provide appropriate educational opportunities for groups with special needs.			**X**
(1) Promote educational programs which enhance understanding of Hawaii's cultural heritage.			**X**
(2) Provide higher educational opportunities that enable Hawaii's people to adapt to changing employment demands.			**X**
(3) 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.			**X**
(4) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.			**X**
(5) Emphasize quality educational programs in Hawaii's institutions to promote academic excellence.			**X**
(6) Support research programs and activities that enhance the education programs of the State.			**X**
***Discussion**:* The proposed project involves streetscape improvements. There are no anticipated impacts related to education as a result of the project.			
HRS § 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.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(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.			**X**
(3) Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawaii's communities.			**X**
(4) Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations.			**X**
(5) Support public and private efforts to prevent domestic abuse and child molestation, and assist victims of abuse and neglect.			**X**
(6) Promote programs which assist people in need of family planning services to enable them to meet their needs.			**X**
***Discussion**:* The proposed project involves streetscape improvements. There are no anticipated impacts related to social services as a result of the project.			
HRS § 226-23: Objectives 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.			
Policies:			
• Foster and preserve Hawaii's multi-cultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities.			**X**
• 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.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
• Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.			**X**
• 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.			**X**
• Ensure opportunities for everyone to use and enjoy Hawaii's recreational resources.			**X**
• Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs.			**X**
• Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawaii's people.			**X**
• Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms.			**X**
• Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawaii's population to participate in the creative arts.			**X**
• Assure adequate access to significant natural and cultural resources in public ownership.			**X**
Discussion: While there are no anticipated direct impacts related to cultural, artistic, or recreational programs as a result of the project, the design of the streetscape improvements will offer accommodations for future public art projects within the project area.			
HRS § 226-24: Objective and policies for socio-cultural advancement – individual rights and personal well-being.			

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
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.			**X**
(2) Uphold and protect the national and state constitutional rights of every individual.			**X**
(3) Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice.			**X**
(4) Ensure equal opportunities for individual participation in society.			**X**
Discussion*:* The proposed project involves streetscape improvements. There are no anticipated impacts related to individual socio-economic empowerment programs as a result of the project.			
HRS § 226-25: Objectives 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:			
A. Foster increased knowledge and understanding of Hawaii's ethnic and cultural heritages and the history of Hawaii.			**X**
B. 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.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
C. Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawaii.			**X**
D. Encourage the essence of the aloha spirit in people's daily activities to promote harmonious relationships among Hawaii's people and visitors.			**X**
Discussion: While there are no anticipated direct impacts related to socio-cultural advancement as a result of the project, the streetscape improvements are designed to honor and promote the significant cultural heritage of the Chinatown historic district.			
HRS § 226-26: Objectives and policies for socio-cultural advancement – public safety.			
Objectives: Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives:			
i. Assurance of public safety and adequate protection of life and property for all people.			**X**
i. 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.			**X**
i. Promotion of a sense of community responsibility for the welfare and safety of Hawaii's people.			**X**
Policies related to public safety:			
i. Ensure that public safety programs are effective and responsive to community needs.			**X**
i. Encourage increased community awareness and participation in public safety programs.			**X**
Policies related to criminal justice:			
A. Support criminal justice programs aimed at preventing and curtailing criminal activities.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
B. Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies.			**X**
C. 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.			**X**
Policies related to emergency management:			
A. 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.			**X**
B. Enhance the coordination between emergency management programs throughout the State.			**X**
Discussion: The proposed project involves streetscape improvements. There are no anticipated impacts related to public safety, criminal justice, and emergency management as a result of the project.			
HRS § 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.			**X**
(2) Fiscal integrity, responsibility, and efficiency in the state government and county governments.			**X**
Policies:			
(1) Provide for necessary public goods and services not assumed by the private sector.			**X**
(2) Pursue an openness and responsiveness in government that permits the flow of public information, interaction, and response.			**X**
(3) Minimize the size of government to that necessary to be effective.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(4) Stimulate the responsibility in citizens to productively participate in government for a better Hawaii.			**X**
(5) Assure that government attitudes, actions, and services are sensitive to community needs and concerns.			**X**
(6) Provide for a balanced fiscal budget.			**X**
(7) Improve the fiscal budgeting and management system of the State.			**X**
(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.			**X**
Discussion: The proposed project involves streetscape improvements. There are no anticipated impacts related to socio-economic governmental services as a result of the project.			

Table 5: Hawaii State Plan, Chapter 226, HRS, Part III: Priority Guidelines

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
HRS § 226-101: Purpose. The purpose of this part is to establish overall priority guidelines to address areas of statewide concern.			
HRS § 226-102: Overall direction. The State shall strive to improve the quality of life for Hawaii's present and future present and future population through the pursuit of desirable courses of action in five major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, and quality education.			
HRS § 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.			**X**
(A) Encourage investments which:			
(A) Reflect long term commitments to the State;			**X**
(B) Rely on economic linkages within the local economy;	**X**		
(C) Diversify the economy;			**X**
(D) Reinvest in the local economy;			**X**
(E) Are sensitive to community needs and priorities; and			**X**
(F) Demonstrate a commitment to provide management opportunities to Hawaii residents.			**X**
(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;	**X**		
(ii) Academic support from an institution of higher education in Hawaii;			**X**
(iii) Investment interest from Hawaii residents;			**X**
(iv) Resources unique to Hawaii that are required for innovative activity; and			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(v) Complementary or supportive industries or government programs or projects.			**X**
(A) Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements.			**X**
(B) 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.			**X**
(C) Seek to ensure that state business tax and labor laws and administrative policies are equitable, rational, and predictable.			**X**
(D) Streamline the building and development permit and review process, and eliminate or consolidate other burdensome or duplicative governmental requirements imposed on business, where public health, safety and welfare would not be adversely affected.			**X**
(E) 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.			**X**
(F) Continue to seek legislation to protect Hawaii from transportation interruptions between Hawaii and the continental United States.			**X**
(G) Provide public incentives and encourage private initiative to develop and attract industries which promise long-term growth potentials and which have the following characteristics:			**X**
An industry that can take advantage of Hawaii's unique location and available physical and human resources.			**X**
A clean industry that would have minimal adverse effects on Hawaii's environment.			**X**
An industry that is willing to hire and train Hawaii's people to meet the industry's labor needs at all levels of employment.			**X**
An industry that would provide reasonable income and steady employment.			

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(H) Support and encourage, through educational and technical assistance programs and other means, expanded opportunities for employee ownership and participation in Hawaii business.			**X**
(I) Enhance the quality of Hawaii's labor force and develop and maintain career opportunities for Hawaii's people through the following actions:			**X**
Expand vocational training in diversified agriculture, aquaculture, information industry, and other areas where growth is desired and feasible.			**X**
Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities.			**X**
Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired.			**X**
Promote career opportunities in all industries for Hawaii's people by encouraging firms doing business in the State to hire residents.			**X**
Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on- the-job training opportunities.			**X**
Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.			**X**
(b) Priority guidelines to promote the economic health and quality of the visitor industry:			
• Promote visitor satisfaction by fostering an environment which enhances the Aloha Spirit and minimizes inconveniences to Hawaiʻiʻs residents and visitors.			**X**
• 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.			**X**
• 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.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
• Encourage visitor industry practices and activities which respect, preserve, and enhance Hawaiʻiʻs significant natural, scenic, historic, and cultural resources.			**X**
• Develop and maintain career opportunities in the visitor industry for Hawaiʻi's people, with emphasis on managerial positions.			**X**
• Support and coordinate tourism promotion abroad to enhance Hawaiʻi's share of existing and potential visitor markets.			**X**
• Maintain and encourage a more favorable resort investment climate consistent with the objectives of this chapter.			**X**
• Support law enforcement activities that provide a safer environment for both visitors and residents alike.			**X**
• Coordinate visitor industry activities and promotions to business visitors through the state network of advanced data communication techniques.			**X**
(c) Priority guidelines to promote the continued viability of the sugar and pineapple industries:			
• Provide adequate agricultural lands to support the economic viability of the sugar and pineapple industries.			**X**
• Continue efforts to maintain federal support to provide stable sugar prices high enough to allow profitable operations in Hawaiʻi.			**X**
• Support research and development, as appropriate, to improve the quality and production of sugar and pineapple crops.			**X**
(d) Priority guidelines to promote the growth and development of diversified agriculture and aquaculture:			
• Identify, conserve, and protect agricultural and aquaculture lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquaculture uses of such lands.			**X**
• Assist in providing adequate, reasonably priced water for agricultural activities.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
• Encourage public and private investment to increase water supply and to improve transmission, storage, and irrigation facilities in support of diversified agriculture and aquaculture.			**X**
• Assist in the formation and operation of production and marketing associations and cooperatives to reduce production and marketing costs.			**X**
• Encourage and assist with the development of a waterborne and airborne freight and cargo system capable of meeting the needs of Hawaiʻi's agricultural community.			**X**
• Seek favorable freight rates for Hawaiʻi's agricultural products from interisland and overseas transportation operators.			**X**
• Encourage the development and expansion of agricultural and aquaculture activities which offer long-term economic growth potential and employment opportunities.			**X**
• Continue the development of agricultural parks and other programs to assist small independent farmers in securing agricultural lands and loans.			**X**
• Require agricultural uses in agricultural subdivisions and closely monitor the uses in these subdivisions.			**X**
• Support the continuation of land currently in use for diversified agriculture.			**X**
• Encourage residents and visitors to support Hawaiʻi's farmers by purchasing locally grown food and food products.			**X**
(e) Priority guidelines for water use and development:			
• Maintain and improve water conservation programs to reduce the overall water consumption rate.			**X**
• Encourage the improvement of irrigation technology and promote the use of nonpotable water for agricultural and landscaping purposes.			**X**
• Increase the support for research and development of economically feasible alternative water sources.			**X**
• Explore alternative funding sources and approaches to support future water development programs and water system improvements.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(f) Priority guidelines for energy use and development:			
• Encourage the development, demonstration, and commercialization of renewable energy sources.			**X**
• Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy.			**X**
• Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.			**X**
• Encourage the development and use of energy conserving and cost-efficient transportation systems.			**X**
(g) Priority guidelines to promote the development of the information industry:			
• Establish an information network that will serve as the catalyst for establishing a viable information industry in Hawaiʻi.			**X**
• 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.			**X**
• Encourage the development of small businesses in the information field such as software development, the development of new information systems and peripherals, data conversion and data entry services, and home or cottage services such as computer programming, secretarial, and accounting services.			**X**
• Encourage the development or expansion of educational and training opportunities for residents in the information and telecommunications fields.			**X**
• Encourage research activities, including legal research in the information and telecommunications fields.			**X**
• Support promotional activities to market Hawaiʻi's information industry services.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
• 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.			**X**
Discussion: The proposed project is an investment in infrastructure improvements that support the Chinatown and Downtown business districts, facilitating entrapraneuership and investment in the local economy.			
HRS § 226-104: Population growth and land resources priority guidelines.			
Priority guidelines to effect desired statewide growth and distribution:			
1. Encourage planning and resource management to ensure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawaiʻi's people.			**X**
2. Manage a growth rate for Hawaiʻi's economy that will parallel future employment needs for Hawaiʻi's people.			**X**
3. Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State.	**X**		
4. Encourage major state and federal investments and services to promote economic development and private investment to the neighbor islands, as appropriate.			**X**
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.			**X**
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.			**X**
7. Support the development of high technology parks on the neighbor islands.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)		**S**	**N/S**	**N/A**
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.	**X**		
(2)	Make available marginal or nonessential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.			**X**
(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.			**X**
(4)	Encourage restriction of new urban development in areas where water is insufficient from any source for both agricultural and domestic use.			**X**
(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.			**X**
(6)	Seek participation from the private sector for the cost of building infrastructure and utilities, and maintaining open spaces.			**X**
(7)	Pursue rehabilitation of appropriate urban areas.	**X**		
(8)	Support the redevelopment of Kaka'ako into a viable residential, industrial, and commercial community.			**X**
(9)	Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(10) Identify critical environmental areas in Hawaiʻi 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.			**X**
(11) Identify all areas where priority should be given to preserving rural character and lifestyle.			**X**
(12) Utilize Hawaiʻi'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.			**X**
(13) Protect and enhance Hawaiʻi's shoreline, open spaces, and scenic resources.	**X**		
Discussion: The proposed project involves investment in rehabilitation of appropriate urban areas.			
HRS § 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.	**X**		
(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.			**X**
(3) Support community and neighborhood program initiatives that enable residents to assist law enforcement agencies in preventing criminal activities.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(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.			**X**
(5) Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions.			**X**
(6) Increase public and private efforts to assist witnesses and victims of crimes and to minimize the costs of victimization.			**X**
Discussion: The improvements proposed to Kekaulike Mall and Kekaulike Street have been designed with crime prevention through design in mind. The improvements include the ability to install CCTV cameras and lines of sight have been preserved.			
HRS § 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.			**X**
(2) Encourage the use of alternative construction and development methods as a means of reducing production costs.			**X**
(3) Improve information and analysis relative to land availability and suitability for housing.			**X**
(4) Create incentives for development which would increase home ownership and rental opportunities for Hawaiʻi's low- and moderate-income households, gap-group households, and residents with special needs.			**X**
(5) Encourage continued support for government or private housing programs that provide low interest mortgages to Hawaiʻi's people for the purchase of initial owner- occupied housing.			**X**
(6) Encourage public and private sector cooperation in the development of rental housing alternatives.			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(7) Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations.			**X**
(8) Give higher priority to the provision of quality housing that is affordable for Hawaiʻi's residents and less priority to development of housing intended primarily for individuals outside of Hawaiʻi.			**X**
Discussion: While the above priorities are not directly applicable to the project, Chinatown is a mixed-use neighborhood and the propoesed improvements are an investment in one of Honolulu's oldest residential communities.			
HRS § 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;			**X**
(2) Continue emphasis on general education "core" requirements to provide common background to students and essential support to other university programs;			**X**
(3) Initiate efforts to improve the quality of education by improving the capabilities of the education work force;			**X**
(4) Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision-making responsibilities;			**X**
(5) Increase and improve the use of information technology in education by the availability of telecommunications equipment for:			**X**
1. The electronic exchange of information;			**X**
2. Statewide electronic mail; and			**X**
3. Access to the Internet.			**X**
Encourage programs that increase the public's awareness and understanding of the impact of information technologies on our lives;			**X**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(6) Pursue the establishment of Hawai‘i's public and private universities and colleges as research and training centers of the Pacific;			**X**
(7) Develop resources and programs for early childhood education;			**X**
(8) Explore alternatives for funding and delivery of educational services to improve the overall quality of education; and			**X**
(9) Strengthen and expand educational programs and services for students with special needs.			**X**
Discussion: The project is not applicable, nor in conflict with the State’s educational goals.			
HRS § 226-108: Sustainability.			
Priority guidelines and principles to promote sustainability shall include:			
(1) Encouraging balanced economic, social, community, and environmental priorities;	**X**		
(2) Encouraging planning that respects and promotes living within the natural resources and limits of the State;	**X**		
(3) Promoting a diversified and dynamic economy;	**X**		
(4) Encouraging respect for the host culture;	**X**		
(5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations	**X**		
(6) Considering the principles of the ahupua’a system; and	**X**		
(7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawai‘i.	**X**		
Discussion: Improvements to Kekaulike Mall and Kekaulike Street through this project are supportive of the State’s move toward sustainability. The investments are meant to support a historic, urban, mixed use community where people can live and work without the need for automobiles if they so choose. The improvements are also meant to encourage use of rail through pedestrian improvements, again, supporting lifestyles without carbon-emitting vehicles for those who chose to commute into Honolulu’s			

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)		**S**	**N/S**	**N/A**
urban center. Stormwater improvements that reduce non-point source pollution into the ocean is a step toward acknowledging this neighborhood's place in the watershed and reducing its impact on the nearshore environment.				
HRS § 226-109: Climate change adaptation priority guidelines.				
Priority guidelines to prepare the State to address the impacts of climate change, including impacts to the areas of agriculture; conservation lands; coastal and nearshore marine areas; natural and cultural resources; education; energy; higher education; health; historic preservation; water resources; the built environment, such as housing, recreation, transportation; and the economy shall:				
(1)	Ensure that Hawai'i's people are educated, informed, and aware of the impacts climate change may have on their communities;			**X**
(2)	Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies;	**X**		
(3)	Invest in continued monitoring and research of Hawai'i's climate and the impacts of climate change on the State;			**X**
(4)	Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change;			**X**
(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;			**X**
(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;			**X**
(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;	**X**		

HAWAII STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(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;			**X**
(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			**X**
(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.	**X**		
Discussion: The proposed improvements to Kekaulike Mall and Kekaulike Street have been designed with the threat of sea level rise in mind. Stormwater infrastructure improvements in particular are meant to mitigate localized flooding from storm and tidal events.			

5.2.5 State Environmental Policy, Chapter 344, Hawaii Revised Statutes

The State Environmental Policy, as defined in Chapter 344, HRS, establishes the policy of the State of Hawaii on natural resource conservation and the environment. The Project's consistency with the State Environmental Policy is outlined in the table below:

Table 6: State Environmental Policy, Chapter 344, HRS

STATE ENVIRONMENTAL POLICY, CHAPTER 344, HAWAII REVISED STATUTES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
STATE ENVIRONMENTAL POLICY			
§344-3 Environmental policy. It shall be the policy of the State, through its programs, authorities, and resources to:			
(1) Conserve the natural resources, so that land, water, mineral, visual, air and other natural resources are protected by controlling pollution, by preserving or augmenting natural resources, and by	**X**		

STATE ENVIRONMENTAL POLICY, CHAPTER 344, HAWAII REVISED STATUTES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
safeguarding the State's unique natural environmental characteristics in a manner which will foster and promote the general welfare, create and maintain conditions under which humanity and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the people of Hawai'i.			
(2) Enhance the quality of life by:			
(A) Setting population limits so that the interaction between the natural and artificial environments and the population is mutually beneficial;			**X**
(B) Creating opportunities for the residents of Hawai'i to improve their quality of life through diverse economic activities which are stable and in balance with the physical and social environments;	**X**		
(C) Establishing communities which provide a sense of identity, wise use of land, efficient transportation, and aesthetic and social satisfaction in harmony with the natural environment which is uniquely Hawaiian; and	**X**		
(D) Establishing a commitment on the part of each person to protect and enhance Hawai'i's environment and reduce the drain on nonrenewable resources.	**X**		
Discussion: The Kekaulike Mall and Kekaulike Street are intended to support a historic mixed-use community with a strong identity through infrastructure improvments which enhance commercial activity and the environment.			
GUIDELINES			
§344-4 Guidelines. In pursuance of the state policy to conserve the natural resources and enhance the quality of life, all agencies, in the development of programs, shall, insofar as practicable, consider the following guidelines:			
(1) Population.			

STATE ENVIRONMENTAL POLICY, CHAPTER 344, HAWAII REVISED STATUTES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(A) Recognize population impact as a major factor in environmental degradation and adopt guidelines to alleviate this impact and minimize future degradation;			**X**
(B) Recognize optimum population levels for counties and districts within the State, keeping in mind that these will change with technology and circumstance, and adopt guidelines to limit population to the levels determined.			**X**
Discussion: The Proposed Project will neither encourage nor discourage population growth.			
(2) Land, water, mineral, visual, air, and other natural resources.			
(A) Encourage management practices which conserve and fully utilize all natural resources;	**X**		
(B) Promote irrigation and waste water management practices which conserve and fully utilize vital water resources;			**X**
(C) Promote the recycling of waste water;			**X**
(D) Encourage management practices which conserve and protect watersheds and water sources, forest, and open space areas;	**X**		
(E) Establish and maintain natural area preserves, wildlife preserves, forest reserves, marine preserves, and unique ecological preserves;			**X**
(F) Maintain an integrated system of state land use planning which coordinates the state and county general plans;			**X**
(G) Promote the optimal use of solid wastes through programs of waste prevention, energy resource recovery, and recycling so that all our wastes become utilized.	**X**		

STATE ENVIRONMENTAL POLICY, CHAPTER 344, HAWAII REVISED STATUTES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
Discussion: The Project proposes to implement water pollution mitigation measures that will preserve existing water quality and protect the surrounding watershed and adjacent waterbodies.			
(3) Flora and fauna.			
(A) Protect endangered species of indigenous plants and animals and introduce new plants or animals only upon assurance of negligible ecological hazard;			**X**
(B) Foster the planting of native as well as other trees, shrubs, and flowering plants compatible to the enhancement of our environment.	**X**		
Discussion: The Project Site is not in any critical habitat areas, and will have no impact on endangered species. Should federally listed species of flora or fauna be detected in the Project Site, appropriate mitigation measures will be implemented. Landscaping will incorporate trees that provide shade and support evapotranspiration.			
(4) Parks, recreation, and open space.			
(A) Establish, preserve and maintain scenic, historic, cultural, park and recreation areas, including the shorelines, for public recreational, educational, and scientific uses;	**X**		
(B) Protect the shorelines of the State from encroachment of artificial improvements, structures, and activities;			**X**
(C) Promote open space in view of its natural beauty not only as a natural resource but as an ennobling, living environment for its people.			**X**
Discussion: The Kekaulike Mall and Kekaulike Street improvements are specifically designed to enhance an urban open space, maintaining view corridors and the historic character of the Chinatown district.			

STATE ENVIRONMENTAL POLICY, CHAPTER 344, HAWAII REVISED STATUTES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
(5) Economic development.			
(A) Encourage industries in Hawai‘i which would be in harmony with our environment;	**X**		**X**
(B) Promote and foster the agricultural industry of the State; and preserve and conserve productive agricultural lands;			**X**
(C) Encourage federal activities in Hawai‘i to protect the environment;			**X**
(D) Encourage all industries including the fishing, aquaculture, oceanography, recreation, and forest products industries to protect the environment;			**X**
(E) Establish visitor destination areas with planning controls which shall include but not be limited to the number of rooms;			**X**
(F) Promote and foster the aquaculture industry of the State; and preserve and conserve productive aquacultural lands.			**X**
Discussion: The State's economic development guidelines as stated above do not speak to commercial activity that serves long-standing mixed use communities, however, the improvements to the Kekaulike Mall and Kekaulike Street stormwater system will contribute to a commercial district in greater harmony with nature than the current conditions.			
(6) Transportation.			
(A) Encourage transportation systems in harmony with the lifestyle of the people and environment of the State;	**X**		
(B) Adopt guidelines to alleviate environmental degradation caused by motor vehicles;	**X**		
(C) Encourage public and private vehicles and transportation systems to conserve energy, reduce pollution emission, including noise,	**X**		

STATE ENVIRONMENTAL POLICY, CHAPTER 344, HAWAII REVISED STATUTES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
and provide safe and convenient accommodations for their users.			
Discussion: The Proposed Project will facilitate access to and from the future Holau transit station, thereby encouraging use of transportation systems that are less dependant upon carbon-emitting vehicles. Investment in a historically mixed use urban neighborhood may further serve to support residential uses in Chinatown where people may live and work without the need for automobiles.			
(7) Energy.			
(A) Encourage the efficient use of energy resources.			**X**
Discussion: The project is intended to reduce the reliance on carbon emitting vehicles through infrastructure investments that support multimodal travel choices.			
(8) Community life and housing.			
(A) Foster lifestyles compatible with the environment; preserve the variety of lifestyles traditional to Hawai‘i through the design and maintenance of neighborhoods which reflect the culture and mores of the community;	**X**		
(B) Develop communities which provide a sense of identity and social satisfaction in harmony with the environment and provide internal opportunities for shopping, employment, education, and recreation;	**X**		
(C) Encourage the reduction of environmental pollution which may degrade a community;	**X**		
(D) Foster safe, sanitary, and decent homes;			**X**
(E) Recognize community appearances as major economic and aesthetic assets of the counties and the State; encourage green	**X**		

STATE ENVIRONMENTAL POLICY, CHAPTER 344, HAWAII REVISED STATUTES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
belts, plantings, and landscape plans and designs in urban areas; and preserve and promote mountain-to-ocean vistas.			
Discussion: The Proposed Project is intended to enhance a historically mixed use community through infrastructure improvements. The improvments proposed to Kekaulike Mall and Kekaulike Street have been designed in such a way to minimize the impact on the character-defining features of the Chinatown historical district.			
(9) Education and culture.			
(A) Foster culture and the arts and promote their linkage to the enhancement of the environment;			**X**
(B) Encourage both formal and informal environmental education to all age groups.			**X**
Discussion: The Project has no direct relationship to the State's environmental guidelines regarding education and culture. However, the design of the improvements in deference to the historic district facilitate visual access to an important neighborhood in Honolulu's history.			
(10) Citizen participation.			
(A) Encourage all individuals in the State to adopt a moral ethic to respect the natural environment; to reduce waste and excessive consumption; and to fulfill the responsibility as trustees of the environment for the present and succeeding generations; and			**X**
(B) Provide for expanding citizen participation in the decision making process so it continually embraces more citizens and more issues.	**X**		
Discussion: The Kekaulike Mall and Kekaulike Street improvements were identified through a community planning effort (Chinatown Action Plan) as a high priority for infrastructure investment in Chinatown. The concept design of the above ground improvements went through an iterative process that included consultation with the community. This process ultimately lead to the decision toward what is identified as the preferred alternative in this EA. To promote ongoing citizen participation in the environmental review and decision making process, this EA			

STATE ENVIRONMENTAL POLICY, CHAPTER 344, HAWAII REVISED STATUTES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	**S**	**N/S**	**N/A**
discusses potential impacts and mitigation measures of the Proposed Project and will provide an opportunity for public input during the Draft EA Public Comment period.			

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5.3 CITY AND COUNTY OF HONOLULU

County-specific land use plans and ordinances pertaining to the Kekaulike Multimodal Improvements Project include the Oahu General Plan, the Primary Urban Center Development Plan, and the Revised Ordinances of Honolulu (ROH).

5.3.1 Oahu General Plan

The General Plan is the comprehensive policy document for the island of Oahu that sets the long-range objectives and policies to guide the programs and activities of the City and County of Honolulu. An update to the amended 2002 General Plan has been completed and published on the County website as The Oahu General Plan Proposed Revised Plan dated December 2017. The document was transmitted to the City Council for final adoption in 2018 and is the document by which the project is evaluated. The following objectives and policies are applicable to the Kekaulike Multimodal Improvements project.

I. Population

Objective A: *To plan for anticipated population growth in a manner that acknowledges the limits of Oahu's natural resources, that protects the environment, and that minimizes social, cultural, and economic disruptions.*

Policies:

Policy 2: Provide adequate support facilities to accommodate future numbers of visitors to Oahu while seeking to minimize disruption to residents and protect the natural environment.

Objective B: *To establish a pattern of population distribution that will allow the people of Oahu to live, work and play in harmony.*

Policies:

Policy 1: Facilitate the full development of the primary urban center through higher-density redevelopment and the provision of adequate infrastructure.

Discussion: The proposed project involves streetscape improvements offering multimodal transportation modes and provides a cohesive connection to the future Holau transit station. The proposed improvements support implementation of the City's Primary Urban Center Development Plan and Downtown Neighborhood TOD Plan. The project facilitates infrastructure for more diverse modes of transportation, which will accommodate projected population growth

in the heart of the PUC and help to alleviate the potential strain on existing facilities from an increased population density.

II. Economic Activity

Objective A: *To promote economic opportunities that enable all the people of Oahu to attain meaningful employment and a decent standard of living.*

Policies:

Policy 1: Support a strong, diverse and dynamic economic base resilient to changes in global conditions.

Policy 2: Encourage the viability of businesses and industries, including support for small businesses, which contribute to the economic and social well-being of Oahu residents.

Discussion: The proposed improvements to the streetscape will foster increased economic activity within the Chinatown district. The project will also improve access to the future Holau transit station and establish Kekaulike Street and Kekaulike Mall as a hub for economic growth in the Chinatown neighborhood with connections to regional commerce centers via the future rail system. By addressing drainage infrastructure needs, the project will also mitigate localized flooding that may be detrimental to future economic growth.

III. Natural Environment and Resource Stewardship

Objective A: *To protect and preserve the natural environment*

Policies:

Policy 4: Require development projects to give due consideration to natural features and hazards such as slope, inland and coastal erosion and flood hazards, water-recharge areas, and existing vegetation, as well as to plan for coastal hazards that threaten life and property.

Policy 6: Design and maintain surface drainage and flood-control systems in a manner which will help preserve natural and cultural resources.

Policy 7: Protect the natural environment from damaging levels of air, water, and noise pollution.

Policy 12: Plan and prepare for the impacts of climate change on the natural environment, including strategies of adaption.

Objective B: *To preserve and enhance natural landmarks and scenic views of Oahu for the benefit of both residents and visitors as well as future generations.*

Policies:

Policy 3: Locate and design public facilities, infrastructure and utilities to minimize the obstruction of scenic views.

Discussion: Improvements to the stormwater drainage infrastructure will mitigate flood hazards by increasing the capacity of flood control systems throughout the Project Area. Landscaping improvements will include streetscape paving, tree wells, and planters that will offer opportunities for groundwater recharge to reduce surface-level runoff.

V. Transportation and Utilities

Objective A: *To create a multi-modal transportation system which moves people and goods safely, efficiently, and at a reasonable cost and minimizes fossil fuel consumption and greenhouse gas emissions; serves all users, including limited income, elderly and disabled populations; and is integrated with existing and planned development.*

Policies:

Policy 1: Develop a comprehensive, well-connected and integrated ground transportation system that enables safe, comfortable and convenient travel for all users, including motorists, pedestrians, bicyclists, and public transportation users of all ages and abilities.

Policy 5: Support the rail transit system as the transportation spine for the urban core, with links to the airport and maritime terminals, which will work together with other alternative modes of transit and transit-oriented development to reduce automobile dependency and increase multi-modal travel.

Policy 6: Support the development of transportation plans, programs and facilities that are based on Complete Streets features. Maintain and improve road, bicycle, and pedestrian facilities in existing communities to eliminate unsafe conditions.

Policy 7: Design street networks to incorporate greater roadway and pathway connectivity.

Policy 8: Make transportation services safe and accessible to people with limited mobility: the young, elderly, disabled and those with limited incomes.

Policy 9: Consider environmental, social, cultural, and climate change and natural hazard impacts, as well as construction and operating costs, as important factors in planning transportation system improvements.

Policy 11: Enhance pedestrian-friendly and bicycle-friendly travel via public and private programs and improvements.

Discussion: The implementation of the Kekaulike Mall and Kekaulike Street Improvements will serve as a key component to expanding multimodal transportation infrastructure within the Chinatown historic district. The streetscape design will support the future regional rail system and aligns with proposed transit-oriented development plans for the Downtown TOD. The connectivity to the abutting future Holau transit station site will provide a foundation for expanding multimodal networks beyond the Project Area and provide a linkage to anticipated pedestrian and bicycle facilities planned for the PUC urban core. In addition, the improvements include more access for people with special mobility needs provided by a designated loading zone for paratransit (TheHandi-Van) on Kekaulike Street near the future Holau transit station.

VI. Energy

Objective A: *To increase energy self-sufficiency and maintain an efficient, reliable, resilient, and cost-efficient energy system.*

Policies:

Policy 7: Manage our resources and the development of our communities in line with the long-term goals of net zero to net positive performance in the areas of energy, carbon emissions, waste streams, all utilities, and food security.

Objective B: *To conserve energy through the more efficient management of its use and through more energy-efficient technologies.*

Policies:

Policy 4: Promote the development of a multi-modal transportation system that minimizes fossil fuel consumption and greenhouse gas emissions.

Discussion: The proposed multimodal improvements will provide infrastructure for alternative modes of transit with enhanced facilities for pedestrians and connectivity to bicycle facilities. By improving streetscape conditions and accommodating active transportation modes, the project will help mitigate reliance on carbon-emitting transportation.

VII. Physical Development and Urban Design

Objective A: *To coordinate changes in the physical environment of Oahu to ensure that all new developments are timely, well-designed, and appropriate for the areas in which they will be located.*

Policies:

Policy 6: Facilitate transit-oriented development in rail transit station areas to create live/work/play multi-modal communities that reduce travel and traffic congestion.

Policy 11: Encourage siting and design solutions that seek to reduce exposure to natural hazards, including those related to climate change and sea level rise.

Objective B: *To plan and prepare for the long-term impacts of climate change.*

Policies:

Policy 1: Integrate climate change adaptation into the planning, design, and construction of all significant improvements to and development of the built environment.

Objective F: *To create and maintain attractive, meaningful, and stimulating environments throughout Oahu.*

Policies:

Policy 8: Design public street networks to be safe and accessible for users of all ages and abilities, to accommodate multiple modes of travel to be visually attractive and to support sustainable ecological processes.

Discussion: The proposed improvements are intended to align with policies for enhancing the physical environment and support a multimodal community in the Chinatown historic district. The project will be essential to transit-oriented development in the surrounding neighborhood and provides a key linkage to the future Holau transit station. The streetscape design offers a cohesive, visually appealing corridor with enhanced landscaping that will also accommodate conditions for increased pedestrian safety.

VIII. Public Safety and Community Resilience

Objective B: *To protect residents and visitors and their property against natural disasters and other emergencies, traffic and fire hazards, and unsafe conditions.*

Policies:

Policy 6: Reduce hazardous traffic conditions

Policy 9: Plan for the impacts of climate change and sea level rise on public safety, in order to minimize potential future hazards

Discussion: The proposed streetscape design will reduce hazardous conditions for pedestrians by limiting vehicular access to Kekaulike Street. The drainage improvements will also mitigate

localized flood hazards by creating an enhanced infrastructure for stormwater runoff collection, including underground drain line connections to the proposed landscaping.

X. Culture and Recreation

Objective B: *To protect, preserve and enhance Oahu's cultural, historic, architectural, and archaeological resources.*

Policies:

Policy 2: Identify and, to the extent possible, preserve and restore buildings, sites, and areas of social, cultural, historic, architectural, and archaeological significance.

Discussion: The streetscape design for the multimodal improvements is intended to preserve the historic architectural features within the Chinatown district and will not have any impact on existing structures abutting the Project Area. The project will not adversely impact any of the historic structures along Kekaulike Mall and Kekaulike Street and will not impede the façades of any structures fronting the streetscape.

5.3.2 Primary Urban Center Development Plan

The City & County of Honolulu Development Plan provides a system for implementing and accomplishing the objectives and policies of the General Plan. The program designates eight geographical Development Plan (DP) areas on Oahu. Among these geographic areas is the Primary Urban Center (PUC), which comprises the central urban districts extending from the historic downtown Honolulu to Waiʻalae-Kāhala in the east and to Pearl City in the west. The Primary Urban Center is envisioned as the key location for future urban growth and development on Oahu.

The Primary Urban Center Development Plan was adopted in June 2004 and is intended to shape the growth and development of the Primary Urban Center over a 20-year time period. The Development Plan offers a vision for the region's future development, presenting policies and guidelines to guide policy for more detailed zoning maps, land use regulations, and public and private sector investment decisions.

The following provides an overview of the Project's relationship with the vision and guidelines of the Primary Urban Center Development Plan.

5.3.2.1 The Role of the PUC in Oahu's Development Pattern

The PUC DP states, "As part of the City's overall strategy to 'keep the country, country' and to maintain a compact urban core," the PUC is expected to accommodate the majority of Oahu's future residential population and job growth. The PUC is envisioned to be "a lively metropolitan

city that is home to almost half of Oahu's population and three-quarters of all jobs."

Discussion: The Kekaulike Multi-Modal Improvements support the role of the PUC in Oahu's Development Pattern. The project provides additional transportation infrastructure that will help diversify the modes by which residents will travel within the central urban core and accompanies the planned rail transit project's Holau transit station. The design of the streetscape improvements facilitates the projected growth of jobs and residential population within the PUC while mitigating the adverse impacts that these anticipated increases may produce.

5.3.2.2 Key Elements of the Vision for the PUC's Future

The vision for the future of the PUC looks forward to the Honolulu of 2025. The following are key elements of the City's vision from Section 2 of the PUC DP. The italicized text below are direct quotes from the PUC DP.

PUC DP Section 2.1: Honolulu's Natural, Cultural and Scenic Resources are Protected and Enhanced

Within the city, the open space network links mauka lands and shorelines to parks and open spaces within the urban area. Regional, beach and nature parks, the larger district parks, major campuses and golf courses provide green open space and recreational opportunities. The Civic Center, campuses and cemeteries also provide valuable open space. The public enjoys the Honolulu and Pearl Harbor waterfronts, with their promenades, bikeways and opportunities for entertainment. Stream greenbelts, numerous bikeways and pedestrian friendly streets connect major parks and open spaces.

Culturally- and historically-important sites, landforms and structures continue to be preserved and enhanced. Historic and cultural districts are improved and interpreted for visitors.

People enjoy the panoramic views of Honolulu's mountain ridges, craters and coastlines from key vantage points. Within the city, view corridors are preserved through careful planning and design.

Discussion: The proposed project will create a more pedestrian friendly streetscape within the project area and provide better multimodal connectivity to the surrounding community and street network. The improvements also support the historic and cultural character of the Chinatown district by preserving the architecturally significant resources fronting Kekaulike Street and Kekaulike Mall. The project has maintained a design that will not impede the visual resources along the historic corridor.

PUC DP Section 2.2: Livable Neighborhoods have Business Districts, Parks and Plazas, and Walkable Streets

The PUC is an interconnected network of vibrant, distinct neighborhoods. Each has qualities that make it a livable and enjoyable place to live, work or play. The City and County of Honolulu supports an ongoing program of neighborhood planning and improvement.

Livable neighborhoods include business and community services as well as residences. Key to livability is convenient access to work and to the many services and attractions Found in an urban center. Rather than segregate residential from commercial uses, the goal is to integrate them in ways that provide greater convenience and bring activity to neighborhood streets.

Livable neighborhoods have centers where people meet. In sonic neighborhoods, the center is a business district. In others, it is a popular park that has sports activities. Some neighborhoods have more than one center. In neighborhood business districts, shaded sidewalks and district parking Support small shops open to the street.

In-town residential neighborhoods offer the greatest amenities for urban living. Consisting mostly of apartment dwellings. These neighborhoods are closest to employment centers, universities and cultural institutions. They are also close to grocery stores, shopping districts, and other government, health and commercial services. Proximity to rapid transit lines gives residents mobility and makes it possible to live with fewer automobiles. Newer apartment buildings are typically four to six stories tall, with shops and services on the ground floor. Small parks, plazas and "green streets" provide places for people to meet and for small children to play.

Discussion: The Kekaulike Multimodal Improvements creates a more livable neighborhood within the Chinatown district. The improvements support convenient multimodal access for residents, incorporating key elements that implement complete streets design to encourage an active lifestyle within the urban environment. The streetscape also provides a direct connection to the future rapid transit rail system, which will increase access to alternative transportation modes and enhance the existing commerce and employment centers in the urban core.

PUC DP Section 2.3: The PUC Offers In-Town Housing Choices for People of All Ages and Income

More and more households are attracted to in-town residential neighborhoods because of the convenience and amenities of the urban lifestyle. They include a growing number of elderly moving to smaller quarters but wanting to remain near their home neighborhoods. Young families are drawn to in-town neighborhoods with convenient elementary schools and parks. Living close to work is more popular than ever.

Discussion: While the Kekaulike Multimodal Improvements do not provide for in-town housing, the project will support a historic mixed-use neighborhood within the Chinatown district that will continue to encourage residential use in the urban core.

PUC DP Section 2.4: Honolulu is the Pacific's Leading City and Travel Destination

The Primary Urban Center continues to be Oahu's primary employment center and the center for many commercial, industrial, transportation and government functions essential to the State of Hawaii.

Discussion: While the Kekaulike Multimodal Improvements will not directly contribute to

employment opportunities, the project will create a more accessibility to employment centers in the Chinatown district and nearby business districts in Downtown Honolulu. Enhancing the streetscape will support more growth in the urban core, which will advance and evolve the functionality of existing transportation systems to accommodate the future rail system and expand multimodal transportation networks throughout the City.

PUC DP Section 2.5: A Balanced Transportation System Provides Mobility

Honolulu's balanced transportation system provides excellent mobility for residents, workers and visitors traveling throughout the Primary Urban Center. Streets are engineered to accommodate automobiles along with transit vehicles, bicycles and pedestrians.

The PUC is known for being a pedestrian-friendly place, where tree-lined sidewalks attract people to walk for health and pleasure. Regional pedestrian networks along streets and stream corridors connect neighborhoods and mauka areas in both the Honolulu and Pearl Harbor regions. In Waikiki, Kakaako, McCully-Moiliili and other Primary Urban Center Development Plan 2-7 Vision for the PUC's Future in-town neighborhoods, special pedestrian streets and districts connect residential blocks with parks and shopping areas. Streets with rapid transit system lines have shelters and specially-designed pedestrian crossings. Sidewalks and bus shelters are designed to assure that disabled individuals also have excellent mobility.

Discussion: The Kekaulike Multimodal Improvements will enhance mobility for residents, workers and visitors through connectivity to the future Holau transit station. Streetscape design to accommodate pedestrians links the project area to the growing multimodal network. Landscaping improvements have been incorporated to create an attractive and cohesive pedestrian corridor that will be visually appealing, while also maintaining the existing historical and cultural character of the Chinatown district. The design also provides more access for disabled individuals with a dedicated paratransit loading zone abutting the future rail site and expands mobility option for all residents to create a more balanced transportation system

5.3.2.3 Land Use and Transportation

Chapter 3 of the PUC DP describes the policies and guidelines as they relate to the key vision statements in Chapter 2. The italicized text below are direct quotes from the PUC DP.

PUC DP Section 3.1: Protecting and Enhancing Natural, Cultural and Scenic Resources

The first Key Element, "Honolulu's natural, cultural, and scenic resources are protected and enhanced," addresses the natural and cultural setting of the Primary Urban Center (PUC), the need for natural areas and open space, and the concept of an open space network that pervades urbanized areas and links them to the mountains and the shoreline.

Discussion: The PUC Development Plan, discusses the importance of preserving the natural, cultural and scenic resources that establish the unique identity of Honolulu. This includes

preserving valuable historic or cultural districts and important visual elements enhanced by the natural landscape surrounding the urban environment.

Section 3.1.1.2 of the PUC Development Plan discusses the scenic views and view corridors of important features such as the Koolau and Waianae mountain ranges, Pūowaina (Punchbowl), and Honolulu Harbor. The Kekaulike Multimodal Improvements project has been designed to preserve the existing view planes and the streetscape enhancements will not impede these views. The proposed landscaping design accompanying the streetscape improvements include additional trees that will have a nominal impact on the visual resources along the mall and street corridor. However, the makai views of Honolulu Harbor are already obstructed by existing industrial buildings across Nimitz Highway. Existing mauka views of the Koolau Mountain Range are similarly impeded by existing buildings at the intersection of Kekaulike Mall and North Hotel Street. Visual corridors from a pedestrian height, both mauka and makai, will be maintained and relatively consistent with the historic and natural environment with minimal impact to existing conditions. Section 3.1.1.5 discusses "Other Urban Open Spaces," including landscaped plazas within Downtown Honolulu. While the project does not qualify as a plaza, the streetscape design will compliment other plazas in the Downtown area, providing additional urban public open spaces.

PUC DP Section 3.2: Neighborhood Planning and Improvement

The Vision states: "Livable neighborhoods have business districts, parks and plazas, and walkable streets." Key components of livability include residences within close proximity to employment, businesses, community services and recreational amenities, with facilities integrated in a manner that enhances accessibility and convenience, encourages walking and bicycling as alternative forms of mobility and promotes sidewalk activity. Livable neighborhoods need to be cultivated through neighborhood planning, appropriate zoning controls and incentives, and targeted capital improvements.

To cultivate livable neighborhoods, this section sets forth general land use policy for residential neighborhoods and the commercial districts that serve them.

Discussion: The PUC Development Plan, discusses key components of livability to include enhanced accessibility and convenience with facilities that encourage walking and bicycling as alternative forms of mobility and promote sidewalk activity. The Kekaulike Multimodal Improvements create a more livable neighborhood within the Chinatown district that incorporate the desired elements for streetscapes described in the Section 3.2. The improvements support convenient multimodal access for residents and encourage walking and bicycling as alternative forms of travel within the urban environment. To cultivate livable neighborhoods, the PUC DP describes the different types of neighborhoods and "sets forth general land use policy for residential neighborhoods and the commercial districts that serve them" in Section 3.2. The following apply to the proposed Kekaulike Multimodal Improvements.

Shopping and Retail Business Districts

Section 3.2.2.4 of the PUC DP envisions commercial streets within the urban core to provide "wide sidewalks and trees for shade" to accommodate high pedestrian activity with storefronts that stimulate this activity. The Kekaulike Multimodal Improvements offer ideal conditions to align with the vision for commercial streets including substantial pedestrian improvements for increased activity to enhance storefront engagement with additional landscaped trees providing shade.

PUC DP Section 3.4: The Pacific's Leading City

According to the Vision, the Honolulu of 2025 will be "the Pacific's leading city and travel destination." This section addresses the importance of the PUC to the economy of Oahu and the state as a whole, and sets policy relating to the central business and industrial areas of the PUC.

Discussion: While the Kekaulike Multimodal Improvements will not directly contribute to economic activity, the project will enhance the Kekaulike corridor and create a more accessible streetscape linking the future Holau transit station to commerce centers through the Chinatown district and nearby business districts in Downtown Honolulu. Enhancing the streetscape will support more growth in the urban core that will support increased economic activity for business fronting Kekaulike Mall and Kekaulike Street.

PUC DP Section 3.4: Develop a Balanced Transportation System

The fifth Key Element is to "develop a balanced transportation system that reduces reliance on cars and improves alternate modes connecting neighborhoods and activity centers." Full development of the Primary Urban Center, as called for in the General Plan, can only be achieved with the support of a well-conceived transportation system that is tightly integrated with land use policies and regulations.

Discussion: The Kekaulike Multimodal Improvements will contribute to the envisioned transportation system within the PUC by promoting alternative modes of travel that will reduce reliance on cars. In addition to the local streetscape improvements to facilitate pedestrian and bicycle networks, the project provides direct connectivity to the future Holau transit station and a foundation for linkage to future multimodal networks in the vicinity. The design also offers more access for disabled individuals with a dedicated paratransit loading zone abutting the future rail site and expands mobility options for all residents to create a more balanced transportation system with safe pedestrian access and connections to planned bicycle networks. Landscaping improvements have been incorporated to create an attractive and cohesive pedestrian corridor that will be visually appealing, while also maintaining the existing historical and cultural character of the Chinatown district.

5.3.2.4 Infrastructure and Public Facilities

Chapter 4 of the PUC DP describes the infrastructure and public facilities that are "vital to all PUC communities. It is intended to give direction to the long-range functional and facility plans that should be prepared by each of the respective service agencies." The italicized text below are direct quotes from the PUC DP.

PUC DP Section 4.6.2: Policies for Stormwater Systems

- *Require methods of retaining or detaining stormwater for gradual release into the ground as the preferred strategy for the management of stormwater. Where feasible, utilize open spaces including parking lots, landscaped areas, parks, and golf courses to detain or infiltrate stormwater flows to reduce their volume and runoff rates. (City Council Resolution No. 94—296).*
- *Manage stormwater flows through best management practices to minimize stormwater runoff and peak discharge rates.*
- *Preserve stream and estuarine habitats.*

PUC DP Section 4.6.3: Guidelines for Stormwater Systems

- *Integrate planned improvements to the drainage system into the open space network by emphasizing the use of retention basins, the creation of passive recreational areas, and recreational access for pedestrians and bicycles without jeopardizing public safety.*
- *Establish best management practices to guide stormwater management within the Primary Urban Center.*
- *Design and construct stormwater infrastructure in areas that contribute to high inflow and infiltration into the wastewater collection system.*

Discussion: The project enhancements will be designed and built in compliance with all applicable Federal, State, and City regulations pertaining to storm water management including the City & County of Honolulu's grading ordinance, water quality rules, erosion and sediment control, and LID requirements, and the DOH NPDES permit program. During construction, BMPs will be implemented to prevent indirect or cumulative impacts on streams and nearshore resources.

After completion of the project, the proposed improvements are anticipated to improve onsite drainage conditions throughout the project area. A series of new drainage inlets are proposed on both sides of the shared-use roadway and pedestrian mall sections of the project. The drainage inlets will feed into lateral storm water drain lines that connect to a stormwater pollution capture device to remove sediment before connecting to the main storm drain line. There will also be a series of tree wells and planters along the length of the project area offering opportunities for localized groundwater infiltration. The drainage improvements are anticipated to reduce non-point source pollution by collecting localized stormwater, while reducing and intercepting debris that would otherwise flow to nearby waterways, including Honolulu Harbor.

5.3.3 Revised Ordinances of Honolulu (ROH)

An analysis of the project and its compliance with the Revised Ordinances of Honolulu is described below:

5.3.3.1 ROH Chapter 14 Section 33 - Compete Streets Ordinance

The City and County of Honolulu ROH 14-33 establishes a Complete Streets policy for the City and County of Honolulu, with the objective of encouraging the development of transportation facilities or projects that are planned, designed, operated, and maintained to provide safe mobility for all users. The Kekaulike Multimodal Improvements project proposes a number of streetscape improvements along Kekaulike Mall and Kekaulike Street which will serve primarily pedestrian and bicycle transport modes. Current ordinances under the traffic code related to existing pedestrian malls (ROH §15-25.1) do not accommodate bicycle use to align with the Complete Streets Ordinance and there is no defined criteria for future or proposed pedestrian malls under the Revised Ordinances of Honolulu. Similarly, commercial uses on shared-use streets are not defined by existing ordinances to align with the Complete Streets Ordinance. Revisions to the ROH may be needed to fully realize the multimodal network envisioned by the Complete Streets Ordinance and Complete Streed Design Manual.

The project will be in compliance with the following stated complete streets principles:

(1) **Improve safety;**

Currently Kekaulike Street contains a one-way vehicular travel lane with street parking permitted. Sidewalks line either side of the street and provide pedestrian access to the shops and venders that line the roadway. The proposed improvements would close off Kekaulike Street to general vehicular use and only permit delivery truck access during designated delivery hours. TheHandi-Van access would be permitted as well. The street conversion to a shared street concept dominated by pedestrian and bicycle uses is expected to improve overall safety as pedestrians would not complete with vehicles for access along the street corridor. Additional improvements such as the installation of bollards to control vehicular access, improving street lighting, and increased signage and wayfinding is also expected to improve safety and use.

(2) **Apply a context sensitive solution process that integrates community context and the surrounding environment, including land use;**

The proposed streetscape design has been developed with extensive community and stakeholder input. Design concepts take into consideration the special character, history and context of Honolulu's Chinatown district and remains compliant with all Chinatown Special District requirements. See ROH Chapter 21 – Land Use Ordinance.

5.3.3.2 ROH Chapter 21 – Land Use Ordinance

The ROH Chapter 21 Land Use Ordinance (LUO) Code establishes zoning districts, permitted uses, and development standards within the zoning districts. The entire project site is zoned BMX-4, Central Business Mixed Use District. Public infrastructure improvements are generally permitted in the BMX-4 district. However, in addition to the BMX-4 zoning district, the project site is located within the Chinatown Special District.

During the Draft Environmental Assessment Pre-Consultation period, the City and County of Honolulu, Department of Planning and Permitting provided the following response:

We ask that the Draft EA include discussions on the following: (1) How the proposed multi-modal improvements will meet the Chinatown Special District objectives. Describe how the proposed shade devices are compatible with nearby historic structures of low heights, continuous street frontage, and street façade elements. (2) The proposed street furnishings and how they complement the designs older facades. (3) the architectural design and the choice of materials, colors, textures, and outdoor lighting for the proposed multi-modal improvements.

5.3.3.3 ROH Chapter 21, Section 9 – Chinatown Special District

As noted in the ROH, Chinatown is listed on the National Register of Historic Places and represents a diverse ethnic population and business community that founded what is currently the greater downtown Honolulu area. The ordinance recognizes that the architectural character that dominated the area from the 1880s to the 1940s is of emphatic importance to preserve. The Chinatown Special District is further sub-categorized into the Mauka Precinct, Historic Core Precinct and the Makai Precinct, each with its own objectives and variations in design guidelines. The project area lies predominantly within the Historic Core Precinct with a small portion of Kekaulike Street within the Makai Precinct. In addition to being in compliance with the stated objectives within the overall Chinatown Special District, the project will also ensure compliance with each of the sub-districts within which the project is sited.

The project will be in compliance with the following stated Chinatown Special District objectives:

(a) **Help promote the long-term economic viability of the Chinatown district as a unique community of retail, office and residential uses;**

Positive, long-term economic impacts as a result of pedestrian friendly public transportation infrastructure improvements are expected. The project anticipates increasing pedestrian foot traffic along Kekaulike Street and Kekaulike Mall as a result of the streetscape improvements. With the advent of the Holau transit station on Nimitz Highway, there is also the potential to increase the number of individuals coming to Chinatown to provide additional goods, services, or to purchase existing wares. Increased foot traffic is likely to increase overall economic activity along the project area and within the entirety of Chinatown.

(c) **Retain and enhance pedestrian-oriented commercial uses and building design,**

particularly on the ground level;

The proposed project is expected to improve the pedestrian oriented commercial experience along the project area. Enhancements such as additional lighting, integrated shade structures, and improved signage and wayfinding aim to improve the overall pedestrian experience while providing an enhanced, friendly character that encourages retail activities.

(d) **Preserve and restore, to the extent possible, buildings and sites of historic, cultural and/or architectural significance, and encourage new development which is compatible with and complements these buildings and sites, primarily through building materials and finishes, architectural detailing and provisions for pedestrian amenities, such as storefront windows and historic signage details;**

While the proposed project does not include improvements to buildings nor historic or cultural sites, the streetscape improvements have been designed to be integrated seamlessly into the existing buildings and sites. Signage and wayfinding materials will be compatible with the surrounding historic architectural style of the project site. Additional provisions for pedestrian amenities, such as planters, shade structures, and lighting, will also comply with the design standards outlined in the ROH.

(e) **Improve traffic circulation with emphasis on pedestrian linkages within and connecting outside Chinatown;**

The objective of the proposed project is to increase pedestrian linkages within and connecting to Chinatown. Closure of Kekaulike Street to vehicular traffic and conversion to a 'shared street' concept is designed to encourage pedestrian and bicycle uses throughout the project area. The proposed Biki station on the mauka end of Kekaulike Mall is an additional feature meant to promote alternative transportation modes throughout Chinatown and Downtown Honolulu and thus connect Chinatown to adjacent neighborhoods and economic activities. The arrival of the HART Holau transit station will further increase the connections to the rest of Oahu and the project is expected to support rail riders who choose to use alternative modes of transport in the area to commute, shop or explore the area.

(f) **Retain makai view corridors as a visual means of maintaining the historic link between Chinatown and the harbor;**

The improvements will not have an impact on the makai view corridors. The project includes additional trees and landscaping that will have a minimal impact on the visual corridor. In addition, the makai views of the harbor across Nimitz highway are already impeded by industrial buildings.

(g) **Encourage a variety of signage and graphics that reflect and complement the district's ethnic vitality and diversity, and which are compatible with and complement buildings and sites within the district;**

Proposed signage and wayfinding has been designed to reflect the district's ethnic diversity and to be compatible with the buildings and sites within the project area and the entirety of the district.

(h) **Encourage outdoor lighting for the purpose of contributing to a lively, friendly, and safe urban environment.**

Enhanced outdoor lighting is also proposed within the scope of the overall project. Lighting will be designed to be compatible with the buildings and sites within the project area.

The project will be in compliance with the following stated Historic Core Precinct Objectives:

(b) **Ensure the design compatibility of new structures with historic structures through low building heights, continuous street frontages and characteristic street façade elements;**

While the proposed project will not involve improvements to any of the structures within the site area, it is expected that the streetscape improvements will incorporate some elements, including additional lighting and signage, that will be required to match the existing street façade elements of the buildings. All proposed designs have been created to match the historic character of the Chinatown Historic Core Precinct.

The project will be in compliance with the following stated Makai Precinct Objectives:

(b) **Create a transition between the high-rise central business district and the historic core of Chinatown;**

The proposed project provides a more integrated, alternative transport mode network that connects the eventual HART rail users to Chinatown and the greater Downtown Honolulu area. Direct connections between the high-rise central business district and the historic core of Chinatown will be realized by the installation of a Biki station and future bike station at either ends of Kekaulike Street and Kekaulike Mall. People will also have an opportunity to walk or utilize existing bus services to connect to the greater Downtown area.

(c) **Provide a visible connection between Nimitz Highway and the interior of Chinatown;**

The entrance to Kekaulike Street from Nimitz Highway will be widened and converted to a leveled street plaza. The pavements, lighting, signage, wayfinding elements and other streetscape

improvements proposed by the project will clearly signal the transition from the Harbor into Chinatown.

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5.4 MAJOR APPROVALS AND PERMITS

A listing of anticipated permits and approvals required for the Project is presented below:

Table 7: Approvals and Permits

Permit/Approval	Responsible Agency
Chapter 343, HRS Compliance	Office of Environmental Quality Control
National Pollutant Discharge Elimination System (NPDES) Permit	State Department of Health
Construction Noise Permit	
Chinatown Special District Permit, Minor Modification	City and County of Honolulu, Department of Planning and Permitting
Grading Permit	
Street Use Permit for Construction	City and County of Honolulu, Department of Transportation Services

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6 ALTERNATIVES CONSIDERED

This section identifies and evaluates a range of alternatives that could meet the objectives of the action and possibly avoid, reduce, or minimize adverse environmental effects. The reference point to compare alternatives is the "No Action" alternative.

6.1 ALTERNATIVE OVERHEAD CANOPIES AND ARCHITECTURAL PLANTERS

In response to the community desire for more shade and cooling on Kekaulike Mall and Kekaulike Street, concept plans for the project included overhead canopies and above grade structural tree planters. However, early project consultation with the Department of Planning and Permitting (DPP) and Historic Hawaiʻi Foundation (HHF) raised concerns with the potential for additional architectural elements to obscure building facades to the detriment of the streetscape. In their response to the project's pre-consultation request for comments, Historic Hawaiʻi Foundation (HHF) suggests, "*HHF recommends alternative means to provide shade and rain protection that would not alter the spatial relationships and view sheds, such as trees or retractable awnings*". Multiple iterations of canopy studies were conducted to strike a balance between providing shade and keeping the structure(s) secondary to the historic buildings. Ultimately, the shade structures were removed from the plan. Design of tree planters went through a similar design process with multiple above grade planter types considered and after team evaluation bearing in mind the Secretary of Interior Standards for historic preservation, Chinatown Special District guidelines, view corridors, as well as crime prevention through design, eventually discarded in favor of less architecture in the street.

6.2 NO ACTION ALTERNATIVE

Under the "No Action" alternative, the project area remains in the existing state with the Kekaulike Street roadway functioning primarily as vehicular throughway with small sidewalk spacing for pedestrian use. The Kekaulike Mall remains a pedestrian-only thoroughfare. This alternative does not honor the action item identified in the Chinatown Action Plan, nor does it address the project purpose and need.

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7 FINDINGS, SUPPORTING REASONS AND ANTICIPATED DETERMINATION

To determine whether the Kekaulike Multimodal Improvements project may have a significant impact on the physical and human environment, all phases and expected consequences of the proposed project have been evaluated, including potential primary, secondary, short-range, long-range, and cumulative impacts. Based on this evaluation, it is anticipated that the Determining Agency (the City and County of Honolulu, Department of Transportation Services) will issue a Finding of No Significant Impact (FONSI). The supporting rationale for this finding is presented in this chapter.

7.1 SIGNIFICANCE CRITERIA

The discussion below evaluates the significance of the Project's impacts based upon the Significance Criteria set forth in Hawaii Administrative Rules section 11-200.1-13.

(1) Involves an irrevocable commitment of any natural, cultural, or historical resource;

Discussion: The project does not irrevocably commit any natural, cultural, or historic resources. As described throughout this document, the design evolution began with shade structures and/or canopies, and through a consultative process and evaluation of historic resources, it was deemed more appropriate to eliminate that design element so as to preserve historic resources. The stormwater improvements are expected to reduce the pollution and sediment that currently flows from the street (either through the storm drain system or above ground in flood events) to the Honolulu Harbor.

(2) Curtails the range of beneficial uses of the environment;

Discussion: The proposed project is intended to support multi-modal transportation as part of a larger effort on the part of the City and County of Honolulu to facilitate wellness through the built environment. The proposed project does not curtail beneficial uses of the environment.

(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;

Discussion: Compliance with Chapter 344, HRS is documented at length in Chapter 6 of this document. The investment in Kekaulike Mall and Kekaulike Street infrastructure enhancements is intended to support the local economy through improvements to an urban open space located within a historic mixed-use community that support commercial activity, sustain the historic character of the Chinatown district and mitigate impacts to the environment.

(4) Substantially affects the economic or social welfare or cultural practices of the community or State;

Discussion: The improvements proposed for Kekaulike Mall and Kekaulike Street are directly supportive of the Chinatown economy and social life. The provision of flood mitigation, shade trees, accessible surfaces, CCTV, and wayfinding devices are expected to provide beneficial impacts to the community.

(5) Substantially affects public health;

Discussion: This project is planned to provide opportunity for beneficial impacts to public health by making multimodal transportation choices more attractive to Honolulu residents.

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

Discussion: Secondary impacts are expected to be beneficial, such as evapotranspiration from an increased tree canopy and reduced non-point stormwater pollution in Honolulu Harbor.

(7) Involves a substantial degradation of environmental quality;

Discussion: Environmental quality will not be degraded by the project. Beneficial environmental impacts of the Kekaulike Mall and Kekaulike Street investments include reduced localized flooding, reduced heat island effect, and reduced non-point source pollution. Furthermore, the project is expected to enhance the pedestrian environment immediately adjacent to the future Holau transit station, encouraging Honolulu's population to utilize rail as a mode of transport.

(8) Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment for larger actions;

Discussion: Individually and cumulatively, this project is expected to have net beneficial impacts to the environment as discussed throughout this document. Localized direct beneficial impacts are anticipated to be greater shade and reduced heat for shoppers and vendors, flooding mitigation, and safety improvements such as CCTV. Secondary beneficial impacts include a contribution to reducing the urban heat island effect, improved evapotranspiration, and a reduction to non-point source pollution through stormwater system improvements. Long term cumulative effects are also expected to be beneficial in that aging infrastructure is maintained, the multimodal transportation network is enhanced, and Chinatown receives investment that is deferential to the historic built environment for use by future generations.

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

Discussion: The project area does not contain habitat for threatened or endangered species. Stormwater improvements will reduce non-point source pollution from the project area which will make a small contribution toward improved water quality in Honolulu Harbor.

(10) Detrimentally affects air or water quality or ambient noise levels;

Discussion: The project is expected to have secondary beneficial impacts to air and water quality through enhancements to the multimodal transportation network, facilitating transportation choices other than carbon-emitting automobiles.

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

Discussion: It is expected that climate change will cause sea level rise, thus, the need for increased water management is expected. The proposed project has focused on sustainable design that takes flood frequency into consideration. Currently the project area experiences flooding during heavy rain events as current storm water infrastructure is inadequate to handle rain volumes. To address this issue, the project proposes to create new drainage inlets and stormwater drainage lines that would run down the center of Kekaulike Mall and Kekaulike Street. Under a 3.2 feet sea level rise scenario, the proposed project is not expected to become routinely flooded from anticipated static sea level rise or flooding due to tidal influences (Hawaii Climate Change Mitigation and Adaptation Commission). However, under a 6 foot sea level rise scenario, a portion of the proposed project would be impacted near the future Holau transit station site along Nimitz Highway. The addition of trees in tree wells will further contribute to localized infiltration. The tree canopy, can also provide ecological benefits such as slowing and capturing rainwater which facilitates a return of the water to the atmoshpere through evapotranspiration (Honolulu Department of Parks and Recreation, 2020). The tree canopy will also serve to mitigate against rising temperatures and will make a small but locally meaningful contribution to reducing the urban heat island effect.

(12) Substantially affects scenic vistas and view planes, during day or night, identified in County or State plans or studies; or,

Discussion: The project improvements will not have a significant impact on the visual corridor along Kekaulike Mall and Kekaulike Street. Identified road characteristics that have the potential to diminish the quality of mauka-makai street corridor views include the width of the street, building setbacks, streetscape elements, and signage. The proposed landscaping design accompanying the streetscape improvements include additional trees that will have a nominal impact on the visual resources along the mall and street corridor. However, the makai views of

Honolulu Harbor are already obstructed by existing industrial buildings across Nimitz Highway. Existing mauka views of the Koolau Mountain Range are similarly impeded by existing buildings at the intersection of Kekaulike Mall and North Hotel Street. Visual corridors from a pedestrian height, both mauka and makai, will be maintained and relatively consistent with the historic and natural environment with minimal impact to existing conditions.

(13) Requires substantial energy consumption or emits substantial greenhouse gases.

Discussion: The infrastructure improvements proposed do not require substantial energy consumption, nor do they emit substantial greenhouse gasses. The project is intended to make a contribution toward Honolulu's goals for reducing fossil fuel energy consumption and carbon production.

7.2 ANTICIPATED DETERMINATION

Pursuant to Chapter 343, HRS, it is anticipated the Determining Agency will issue a Finding of No Significant Impact (FONSI) for this environmental assessment. This finding is founded on the basis of impacts and mitigation measures examined in this document, public comments received during the pre-consultation and public review phases, and analyzed under the above criteria.

8 CONSULTATION

In the course of designing the Kekaulike Multimodal Streets Improvement project, stakeholder meetings were held to ensure that the improvements met the goals, needs, and objectives of the surrounding community. As the next phase of planning for the proposed project continues, comments have been solicited from agencies and community members that may have an interest in the development of the facility.

8.1 PRE-ASSESSMENT CONSULTATION

Pre-consultation was conducted prior to preparation of the Draft EA. The purpose of the pre-consultation period is to consult with individuals, community organizations, private groups, and government agencies with technical expertise, or an interest or will be affected by the proposed action. This process is part of the scoping process for the Draft EA. Comments and input received during this period are used to identify environmental issues and concerns to be addressed in the Draft EA, which in turn undergoes a 30-day public comment period. The comments received and corresponding responses are reproduced in Appendix F.

Table 8: Pre-consultation

STATE OF HAWAIʻI	Pre-Consultation Sent	Comment Dated
Department of Business, Economic Development & Tourism (DBEDT)	X	
DBEDT - Land Use Commission	X	
DBEDT - Office of Planning	X	
Department of Defense - Engineering Office	X	
Department of Education	X	01/06/2020
Department of Hawaiian Home Lands	X	
Department of Health	X	
Department of Human Services	X	12/18/2019
Department of Labor and Industrial Relations	X	
Department of Land and Natural Resources	X	1/02/2020
Department of Public Safety	X	
Department of the Attorney General	X	
Department of Transportation	X	
Department of Transportation - Harbors	X	12/30/2019
Department of Transportation - Highways		12/30/2019
Department of Transportation, Highways Division, Planning Branch	X	
Department of Transportation, Statewide Transportation Planning Office	X	
DLNR - Historic Preservation Division	X	
DLNR - Land Division		
Hawaii Community Development Authority	X	

Hawaii Housing Finance and Development Corporation	X	12/27/2019
Hawaii Public Housing Authority	X	
Hawaii Tourism Authority	X	
Oahu MPO	X	
Office of Hawaiian Affairs	X	
CITY AND COUNTY OF HONOLULU	X	
Board of Water Supply	X	01/02/2020
Department of Budget and Fiscal Services	X	12/17/2019
Department of Community Services	X	
Department of Customer Services	X	
Department of Design and Construction	X	
Department of Emergency Management	X	
Department of Enterprise Services	X	
Department of Environmental Services	X	
Department of Facility Maintenance	X	12/20/2019
Department of Land Management	X	
Department of Parks and Recreation	X	
Department of Planning and Permitting	X	12/19/2019
Department of Transportation Services	X	
Honolulu Authority for Rapid Transportation	X	
Honolulu Emergency Services Department	X	
Honolulu Fire Department	X	12/27/2019
Honolulu Police Department	X	12/23/2019
Office of Climate Change, Sustainability and Resiliency		
Office of Economic Development	X	
REPRESENTATIVES	X	
Senator Karl Rhoads	X	
Representative Daniel Holt	X	
Councilmember Carol Fukunaga	X	
Neighborhood Board No. 13 Chairperson Kevin McDonald	X	
Neighborhood Board No. 13 Secretary Roxie-Anne Kamoshida	X	
Mayor Kirk Caldwell		
UTILITIES	X	
Hawaiian Electric Company, Inc.	X	
Hawaiian Telecom	X	
Spectrum	X	12/17/2019
COMMUNITY ORGANIZATIONS	X	
AARP Hawaiʻi	X	
Associated Chinese University Women	X	
Association for Chinese from Vietnam, Laos and Cambodia	X	

Bikeshare Hawaiʻi	X	
Blue Zones Project	X	
Chinese Chamber of Commerce of Hawaiʻi	X	
Friends of Kekaulike Group	X	
Hawaiʻi Bicycling League	X	
Hawaiʻi Chinese History Center	X	
Hawaiʻi Community Foundation	X	
Hawaiʻi Heritage Center	X	
Hawaiʻi Public Health Institute	X	
Historic Hawaii Foundation	X	
Kamehameha Schools Bishop Estate	X	
Kekaulike Courtyards	X	
Move Oahu Forward	X	
Mun Lun School	X	
River of Life Mission	X	
Ulupono Initiative	X	
United Chinese Society of Hawaiʻi	X	
Wah Yun Culture and Arts Academy (dba Chinese Lion Dance Association)	X	
Other Community Organizations		

8.2 COMMUNITY & KEY STAKEHOLDER MEETINGS

The Kekaulike Multimodal Improvements project supports overall improvements to pedestrian and bicycle access throughout Chinatown and Downtown Honolulu. Specifically, the project seeks to improve the spatial continuity and connectivity between Kekaulike Mall, Kekaulike Street and the eventual Holau transit station. The project team has engaged with key stakeholders, community members, and State and County agencies as the project went through the conceptual design process. A chart detailing the outreach efforts is provided below:

Date	Meeting	Attendees
6/27/2015	Chinatown Action Summit	Public Sign-In Sheet Available Upon Request
12/1/2015	Chinatown Action Plan Community Meeting #2	Public Sign-In Sheet Available Upon Request
7/25/2016	Meeting with HART	S. Solamillo, A. Marceau, Jon Nouchi, Nancy Tornatore, Mike Boomsma, Ryan Tam
9/2/2016	Meeting with Friends of Kekaulike	Johnny Ng, Joe Young, Eric Wong, Gale Braceros, Susanna Ho, Roland Louie, Doreen Furuyama, Paul Min, Diana Ronquillo, Joseph Yang
9/15/2016	Chinatown Action Plan Community Meeting #3	Public Sign-In Sheet Available Upon Request
10/10/2016	Meeting with Department of Facility Maintenance	Ross Sasamura, Tyler Sugihara
10/13/2016	Meeting with the Neighborhood Commission Office	Shawn Hamamoto
10/13/2016	Meeting with Office of Housing	Jun Yang
11/3/2016	Meeting with Honolulu Police Department	Major Roy Sugimoto
11/16/2016	Meeting with Friends of Kekaulike	Romeo Garcia, Rosemary Makio, Breighton J.K. Yee, Hasting Toma, Kevin Wong, Suzanna Wong, Paul Min, Roy Sugimoto, Steven Matsuda, Shawn Hamamoto
11/22/2016	Meeting with the Department of Parks and Recreation	Ros Young, Keith Nishimura, Calvin Palama, Albert Baca

12/13/2016	Meeting with the Honolulu Fire Department	Chief Socrates Bratakos, Chief Jeffery Hooker, Captain Jarin Wong
1/6/2017	Meeting with the Department of Transportation - Highways, and the Department of Transportation – Harbors	Dre Kalili, Darrell Young, Ford Fuchigami, Scot Urada, Bryan, Kimura, Ed Sniffen
12/18/2017	Meeting with Department of Planning and Permitting, HART, Department of Transportation Services	Chris Clark, Ty Fukumitsu, Andrew Tang, Craig Chung, Mark Kikuchi, Jack Patterson, Jon Nouchi, Ryan Tam, Renee Espiau, Eileen Mark
1/10/2018	Meeting with Department of Facility Maintenance	Ross Sasamura, Tyler Sugihara
2/5/2018	Meeting with TOD sub-cabinet	Denise W. Wong, Ed Hawkins, A. Pokorny, Sandy Pfund, Keith Nishimura, Calvin Palama, Ross Sasamura, Timothy Hiu, Eugene Takahashi, Robert Kroning, Mark Wong, Marc Alexander, Renee Espiau, Joette Yago, Tony Ching, Virginia Sosh, Manuel T. Valbuene, Eileen Mark, Jon Nouchi, Henry Jin, Guy Kaulukukui, Harrison Rue, Cate Picardo, Jeanne Ishikawa, Matthew Gonser, Ben Travino, Tim Streitz, Tomo Murata, Andrew Tang
8/7/2019	Concept Design Development	Department of Planning and Permitting, Department of Parks and Recreation
3/4/2020	Traffic	Department of Transportation Services
6/12/2020	Concept Design Development	Department of Planning and Permitting, Department of Parks and Recreation
6/30/2020	Concept Design Refinement	Department of Planning and Permitting, Department of Parks and Recreation, Department of Design and Construction

7/10/2020	Design Refinement	Department of Planning and Permitting, Department of Parks and Recreation
7/22/2020	Complete Streets Coordination	City and County of Honolulu Complete Streets team
11/23/2020	Landscape plant selection	Department of Parks and Recreation, Division of Urban Forestry
12/15/2020	Historic Resources Coordination	State Historic Preservation Division, HART

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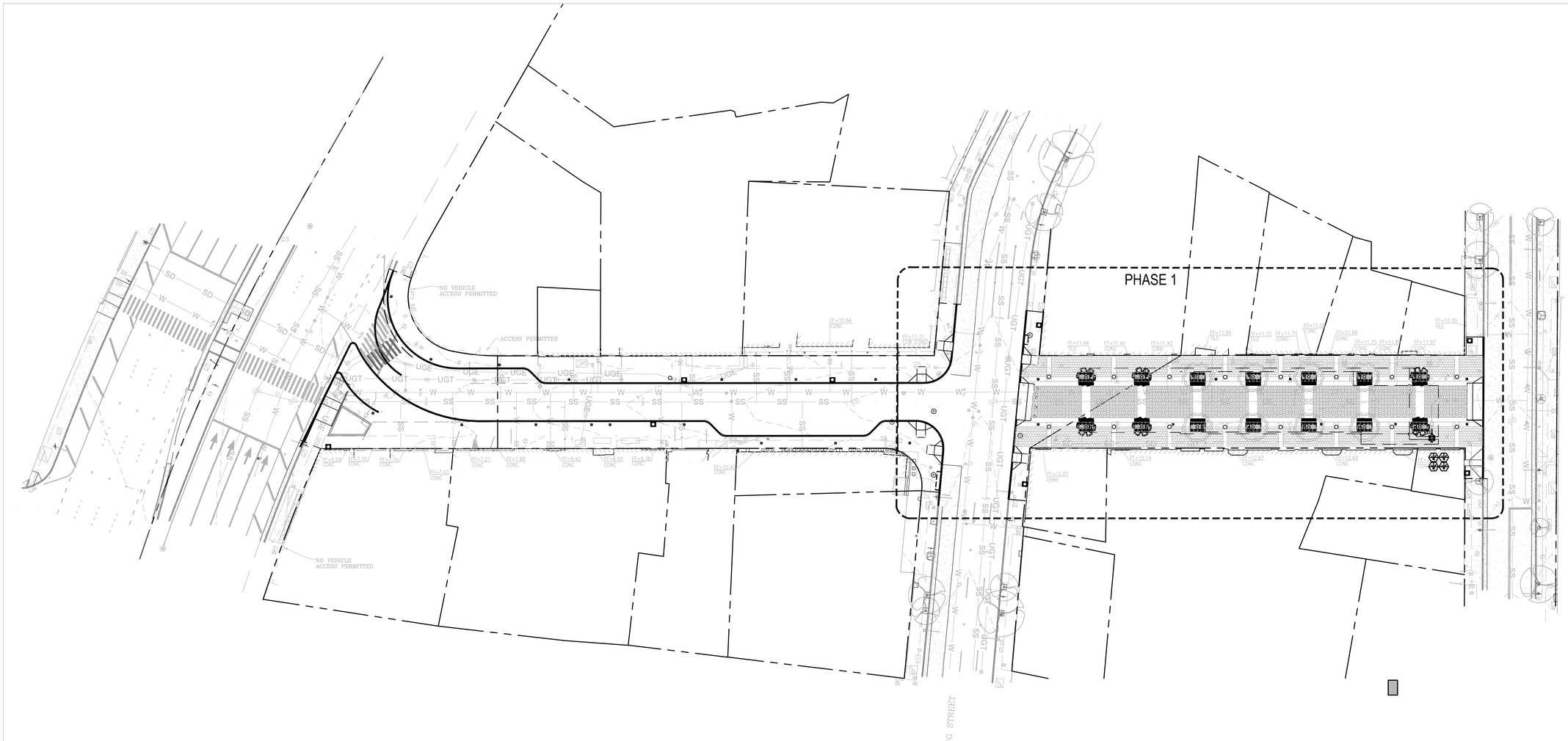
APPENDIX A

Detailed Site Plans



1 OVERALL LANDSCAPE IRRIGATION PLAN

SCALE: 1/30"=1'-0"

N

REVISION NO.	DESCRIPTION	DATE	APPROVED
△			
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△			
△			
△			

NOT FOR CONSTRUCTION

PROGRESS SUBMITTAL
19 FEBRUARY 2021

This work was prepared by me or under my supervision, and construction of this project will be under my observation. (Par. 6-82-8, Department of Commerce and Consumer Affairs)

Loriann Gordon 04/03/2022
SIGNATURE EXP. DATE OF THE LICENSE

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49 S. Hotel St. Ste. 210
Honolulu,Hawaii 96813
(808) 492-1633
www.iglahawaii.com

OVERALL LANDSCAPE IRRIGATION PLAN

APPROVED:

DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU — DATE

DATE: 02/19/2021
DRAWING NO.
L-100

PROGRESS SUBMITTAL

SHEET 1 OF X

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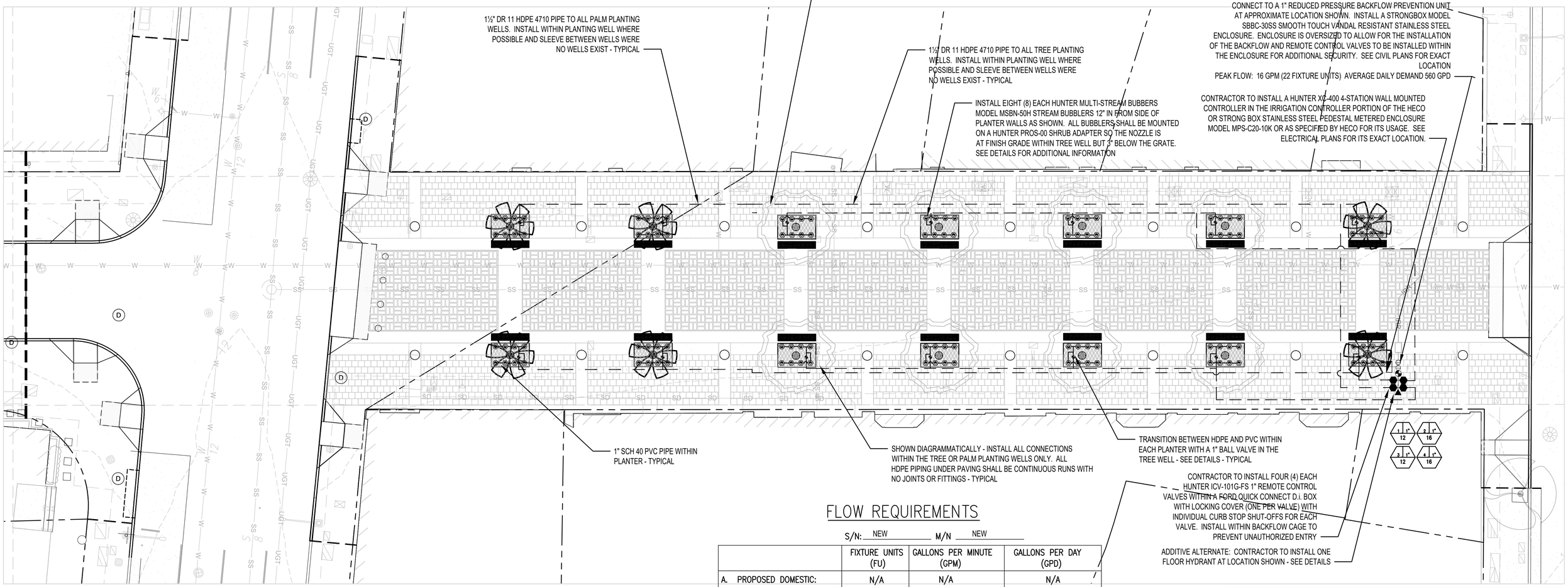

FLOW REQUIREMENTS

S/N: NEW M/N NEW

	FIXTURE UNITS (FU)	GALLONS PER MINUTE (GPM)	GALLONS PER DAY (GPD)
A. PROPOSED DOMESTIC:	N/A	N/A	N/A
B. PROPOSED IRRIGATION:	22	16	560
C. PROPOSED AFS:	N/A	N/A	N/A
D. TOTAL PROPOSED:	22	16	560
E. TO BE REMOVED: (DEMOLITION)	0	0	0000
F. NET CHANGE:	22	16	560
G. EXISTING DOMESTIC TO REMAIN:	0	0	0000
H. EXISTING IRRIGATION TO REMAIN:	0	0	0000
I. EXISTING AFS TO REMAIN:	0	0	0000
J. TOTAL TO REMAIN	0	0	0000
G. GRAND TOTAL (F + J):	22	16	560

1 LANDSCAPE IRRIGATION PLAN PHASE 1

SCALE: 1/10"=1'-0"

N

PROGRESS SUBMITTAL

REVISION NO.	DESCRIPTION	DATE	APPROVED

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LANDSCAPE IRRIGATION PLAN PHASE 1

APPROVED:

DIRECTOR DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU — DATE

DATE: 02/19/2021

DRAWING NO. L-101

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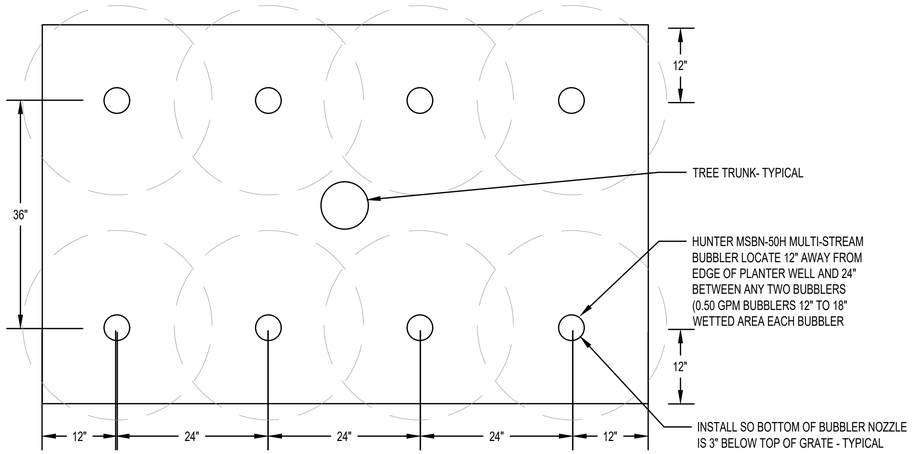
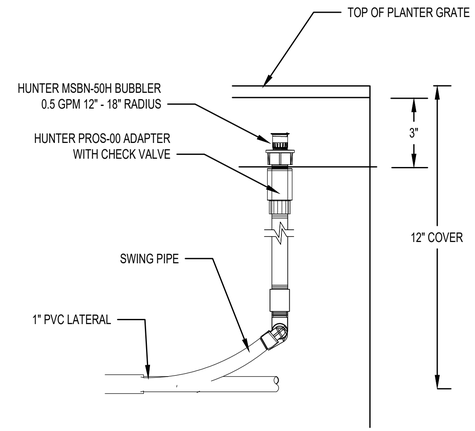


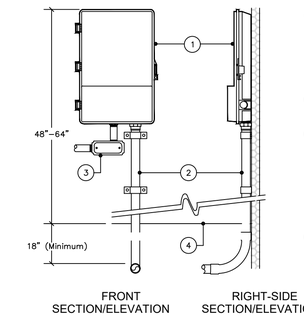
1 TREE OR PALM WELL PCN BUBBLER LAYOUT

NTS



2 BUBBLER IN PLANTER DETAIL

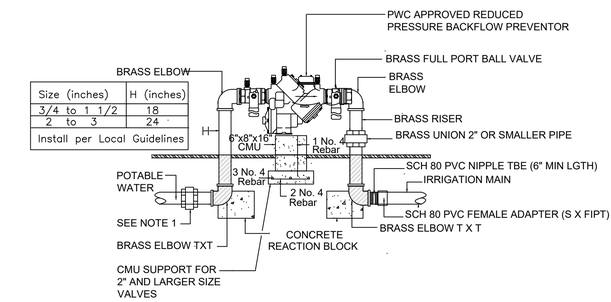
NTS



1. OUTDOOR WALL MOUNTED IRRIGATION CONTROLLER WITHIN A NEMA 3R ENCLOSURE SEE PLAN NUMBER OF STATIONS. ANCHOR SECURELY TO WALL.
2. CONTROL, COMMON AND SENSOR WIRES
3. CONDUIT FOR ELECTRICAL POWER CONDUCTORS PER LOCAL AND NATIONAL CODES (120V) SECURE TO WALL WITH APPROPRIATE PIPE CLAMPS
4. FINISHED SURFACE - INSTALL CONDUIT & WIRES 12" MINIMUM BEYOND WALL IN LANDSCAPED AREA . TERMINATE IN SPLICE BOX

3 WALL MOUNTED CONTROLLER

NTS



Size (inches)	H (inches)
3/4 to 1 1/2	18
2 to 3	24
Install per Local Guidelines	

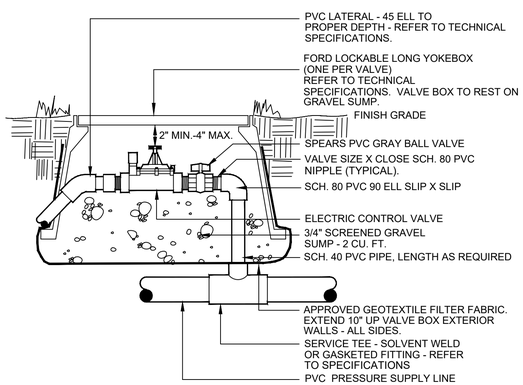
NOTES:

1. IF UPSTREAM POTABLE WATER SERVICE IS NOT COPPER PIPING, USE A DIAELECTRIC UNION BETWEEN THE POTABLE SERVICE AND THE UPSTREAM COPPER ELBOW

   REDUCE OR INCREASE BRASS RISER AT BELOW GRADE ELBOW TO MEET SERVICE AND/OR MAIN LINE SIZES PER PLAN.

6 BACKFLOW PREVENTER

NTS



NOTE: DIAMETERS OF RISER, FITTINGS, BALL VALVE AND NIPPLE SHALL EQUAL CONTROL VALVE DIAMETER. LOOP ALL SPARE WIRES FROM CONTROLLER INSIDE EACH VALVE BOX-12" DIAMETER LOOP (MIN.)

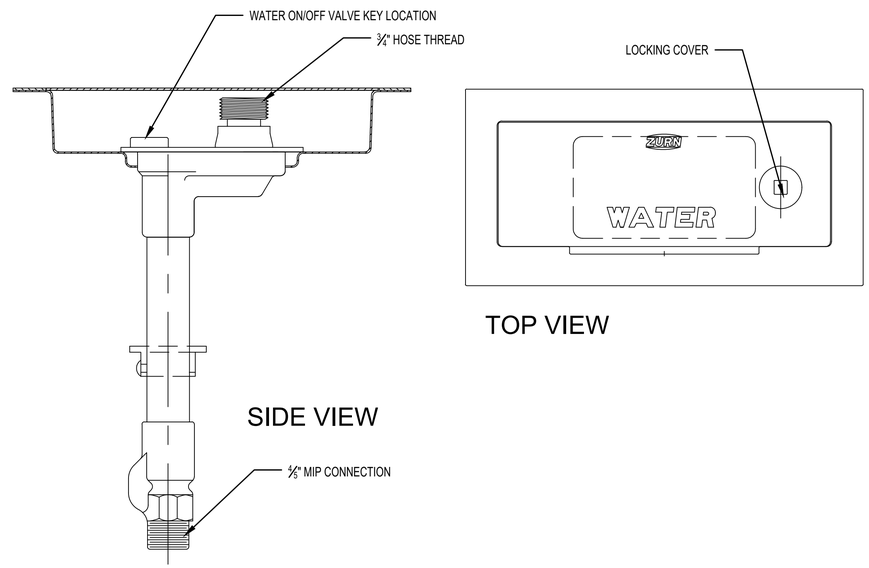
ALL WIRING TO BE INSTALLED PER LOCAL CODE.

PROVIDE EXPANSION COILS AT EACH WIRE CONNECTION W/IN VALVE BOX (WRAP AROUND 1/2" PIPE 15 TIMES, REMOVE PIPE)

COMPACT SOIL AROUND VALVE BOX TO SAME DENSITY AS UNDISTURBED ADJACENT SOIL.

4 ELECTRIC CONTROL VALVE

NTS



5 OPTIONAL SIDEWALK HYDRANT

NTS

REVISION NO.	DESCRIPTION	DATE	APPROVED
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LANDSCAPE IRRIGATION DETAILS PHASE 1

APPROVED:

DIRECTOR DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU — DATE

DATE: 02/19/2021

DRAWING NO. L-102

PROGRESS SUBMITTAL

FILE	POCKET	FOLDER	NO.

IRRIGATION NOTES

1. WORK SHOWN IS DIAGRAMMATIC AND FOR DESIGN INTENT OF THE FINISHED IMPROVEMENTS AND ARE THEREFORE SUBJECT TO ADJUSTMENTS DUE TO ACTUAL CONDITIONS ENCOUNTERED IN THE FIELD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY INVESTIGATING THE SITE CONDITIONS AND PROVIDING THE WORK NECESSARY TO MEET THE DESIGN INTENT OF THE DRAWINGS TO THE SATISFACTION OF THE CONTRACTING OFFICER. THE CONTRACTOR SHALL MAKE ADJUSTMENTS TO AVOID OBSTACLES OR TO IMPROVE PERFORMANCE TO ACCOMMODATE ACTUAL SITE CONDITIONS.
2. ANY EXISTING IRRIGATION COMPONENTS SHOWN OR NOTED ON THE DRAWINGS ARE BASED ON PLANS AND MAPS PREPARED BY OTHERS AND BY FIELD OBSERVATIONS. NO GUARANTEE IS MADE ON THE ACCURACY OR COMPLETENESS OF THE EXISTING INFORMATION SHOWN. THE USER(S) OF THESE DRAWINGS SHALL VERIFY PRIOR TO AND DURING CONSTRUCTION, THE EXISTING INFORMATION SHOWN IN ORDER TO COMPLETE THE CONTRACT.
3. ALL NEW WIRING SHALL BE INSTALLED IN A MINIMUM 14 GA UL/UF WIRING INSTALL WITHIN A 2" PVC SCH. 40 SLEEVE UNDER PAVEMENT OR THROUGH WALLS.
4. PROTECT EXISTING IMPROVEMENTS ON THE PREMISES AND IN ADJACENT AREAS. REPAIR DAMAGES TO MATCH SURROUNDING SURFACES, INCLUDING BUT NOT LIMITED TO, PATCHING, PAINTING, AND RE-PLANTING. CONSULT WITH THE LANDSCAPE ARCHITECT PRIOR TO ACTION INVOLVING REPAIR OF EXISTING SURFACES AND FINISHES.
5. EXISTING IRRIGATION SYSTEMS SERVING AREAS OUTSIDE THE AFFECTED ZONES SHALL REMAIN OPERATIONAL AND BE PROTECTED. SHOULD EXISTING SYSTEMS BE DAMAGED OR MADE INOPERABLE DUE TO WORK UNDER THIS CONTRACT, IMMEDIATELY MAKE REPAIRS OR PROVIDE TEMPORARY IRRIGATION UNTIL REPAIRS CAN BE MADE.
6. MAINTAIN A CURRENT SET OF DRAWINGS ON SITE AS WORK PROGRESSES. ANNOTATE FIELD CHANGES AND DEVIATIONS AS THEY OCCUR. THESE DRAWINGS SHALL BE USED TO PREPARE AS-BUILT DRAWINGS FOR SUBMITTAL AT THE END OF THE CONTRACT. AS-BUILT DRAWINGS SHALL AT THE MINIMUM SHOW CONTROLLER LOCATIONS AND DIAGRAMMATIC CONDUIT AND WIRE RUNS.
7. ALL CONTROLLERS SHALL BE PROGRAMMED BY THE CONTRACTOR TO PROVIDE ADEQUATE IRRIGATION TO THE VARIOUS TYPES OF PLANT MATERIAL BEING IRRIGATED BASED UPON THE SPRINKLER TYPE, SOIL, SLOPE AND SOLAR EXPOSURE TO EACH AREA.
8. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND QUANTITY OF ALL EQUIPMENT IN EACH AREA AND ADJUST AS REQUIRED.

GENERAL NOTES

1. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS FROM APPROPRIATE GOVERNMENT AGENCIES.
2. THE CONTRACTOR IS ALERTED TO THE ENCOUNTERING OF OBSTACLES WHETHER SHOWN ON THE DRAWINGS OR NOT, OR WHICH MAY DIFFER IN LOCATION FROM THAT SHOWN WHICH MAY INTERFERE WITH HIS NORMAL METHOD OF OPERATIONS. THE CONTRACTOR SHALL TAKE INTO ACCOUNT ADDITIONAL COSTS ANTICIPATED DUE TO THESE CONDITIONS AND SHALL HAVE THESE COSTS INCLUDED IN THE BID ITEMS WHICH HE FEELS MOST APPROPRIATE.
3. UNDERGROUND UTILITIES ARE NOT SHOWN ON THE DRAWINGS. PERFORM AN INDEPENDENT CHECK ON THE GROUND AND WITH HICKAM AIR FORCE BASE, VARIOUS UTILITY COMPANIES, AND GOVERNMENT AGENCIES TO ASCERTAIN POSSIBLE CONFLICTING UTILITY LOCATIONS AND DEPTH. THE CONTRACTOR MUST SATISFY HIMSELF THROUGH HIS OWN INVESTIGATIONS AS TO WHAT SUBSURFACE CONDITIONS ARE TO BE ENCOUNTERED. EXERCISE EXTREME CARE IN EXCAVATING THE AREA.
4. BE AWARE THAT ITEMS OF HISTORIC SIGNIFICANCE MAY BE FOUND DURING EXCAVATIONS. NOTIFY THE ARCHITECT IF ANY SUCH ITEMS ARE FOUND.
5. PRIOR TO EXCAVATION AND TRENCHING TO VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND OTHER OBSTRUCTIONS THAT MAY AFFECT THE WORK. REPORT OBSTRUCTIONS TO THE ARCHITECT DO NOT BEGIN WORK IN ANY GIVEN AREA UNTIL AUTHORIZATION IS RECEIVED FROM THE ARCHITECT.
6. IF THE CONTRACTOR ELECTS NOT TO VERIFY OR EXPOSE EXISTING UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO EXCAVATION, HE FORFEITS HIS RIGHTS FOR ANY CLAIMS FOR COMPENSATION CAUSED BY ANY CONFLICTS WITH EXISTING UTILITIES AND STRUCTURES.
7. INSPECT THE SITE AND VERIFY CONDITIONS PRIOR TO COMMENCING WITH THE WORK. PERFORM AN INDEPENDENT CHECK OF ELEMENTS AND POSSIBLE CONFLICTING STRUCTURES. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION ENGINEER. BY COMMENCING WITH THE WORK, THE CONTRACTOR ACCEPTS THE EXISTING CONDITIONS AND RESPONSIBILITY FOR WORKING WITH AND MAINTAINING THOSE CONDITIONS.
8. PROVIDE SAFEGUARDS AND EXERCISE CAUTION AGAINST INJURY OR DEFACEMENT OF EXISTING SITE IMPROVEMENTS. UNLESS PROTECTION HAS BEEN PROVIDED, VEHICLES SHALL NOT PASS OVER WALKWAYS AND CURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE RESULTING FROM HIS OPERATIONS AND REPAIR OR REPLACE SUCH DAMAGE AT CONTRACTOR'S EXPENSE. REPAIR DAMAGE IN A MANNER SATISFACTORY TO THE ARCHITECT.
9. FIELD LAYOUT THE LOCATION, ALIGNMENT AND ELEVATION PROFILE OF PROPOSED IMPROVEMENTS AND OBTAIN APPROVAL FROM THE ARCHITECT PRIOR TO START OF INSTALLATION. THE ARCHITECT RESERVES THE RIGHT TO REVISE THE LAYOUT AND ELEVATIONS OF THE PROPOSED IMPROVEMENTS PRIOR TO START OF CONSTRUCTION.
10. WHEN EXCAVATIONS ARE ADJACENT TO OR UNDER EXISTING STRUCTURES, PROPERLY SHEET AND BRACE THE EXCAVATION, STABILIZE THE EXISTING GROUND, AND PROPERLY SUPPORT EXISTING STRUCTURES WITH BEAMS, STRUTS OR UNDERPINNING TO RENDER IT SAFE AND SECURE FROM POSSIBLE SLIDES, CAVE INS AND SETTLEMENT, AND TO FULLY PROTECT IT FROM DAMAGE.
11. PROVIDE, INSTALL AND MAINTAIN SIGNS, LIGHTS, BARRICADES, AND PROTECTIVE FACILITIES NECESSARY FOR THE SAFETY OF THE PUBLIC.
12. REMOVE SILT AND DEBRIS DEPOSITED IN DRAINAGE FACILITIES, ROADWAYS, AND OTHER AREAS RESULTING FROM WORK UNDER THIS CONTRACT. THE COSTS INCURRED FOR REMEDIAL ACTION SHALL BE PAID BY THE CONTRACTOR. CONFORM WITH ORDINANCES, REGULATIONS, CODES, PERMITS AND INSPECTIONS GOVERNING SUCH WORK.
13. MAINTAIN THE WORK AREAS IN THE HIGHEST REASONABLE STATE OF CLEANLINESS CONSISTENT WITH THE WORK PERFORMED. REMOVE AND DISPOSE OF WASTE MATERIAL AND DEBRIS OFF-SITE AT APPROVED DISPOSAL SITES. COMPLY WITH FEDERAL, STATE AND LOCAL HAULING AND DISPOSAL REGULATIONS.

ABBREVIATIONS

AWG	AMERICAN WIRE GAUGE
CONC	CONCRETE
DET	DETAIL
DWG	DRAWING
DWGS	DRAWINGS
EXST	EXISTING
FIN	FINISH
GA	GAUGE
IRR	IRRIGATION
MIN	MINIMUM
NO	NUMBER
PVC	POLYVINYL CHLORIDE
REQ'D.	REQUIRED
SCH	SCHEDULE
UL	UNDERWRITERS LABORATORY INC.

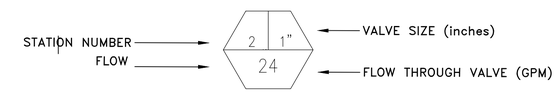
SPRINKLER SCHEDULE

Head Symbol	Arc/Angle	Manufacturer/ catalog number or approved equal		
Shrub Adapter with Pressure Regulating Body and Bubbler		Hunter PROS With MSBN-50H Bubbler or acceptable equal per details and performance		
		G.P.M.	P.S.I.	Radius
	360°	0.50	30	1 – 1.5'

IRRIGATION MATERIAL SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER/ CATALOG NUMBER
	4 STA. CONTROLLER OUTDOOR WALL MOUNTED	HUNTER XC-400 OUTDOOR 4-STATION CONTROLLER (EXPANDABLE) WITHIN A NEMA 3R ENCLOSURE
	REMOTE CONTROL VALVE WITH PRESSURE REGULATION	HUNTER ICV-151G-FS SERIES OR ACCEPTABLE EQUAL SIZE AS NOTED
	REDUCED PRESSURE BACKFLOW PREVENTION UNIT – 1" SIZE	BWS APPROVED 1" BACKFLOW PREVENTION UNIT WITHIN A STRONGBOX OR EQUAL SMOOTH TOUCH MESH ENCLOSURE
	HOSE BIBB	HOSE BIBB IN FLOOR MOUNTED HYDRANT BOX – LOCKABLE
	MANUAL ANGLE VALVE	BRASS 1½" AT VALVES AND 1" WITHIN PLANTERS BALL FULL PORT WITHIN VALVE BOX
	HDPE PIPE FOR TREE WELLS	HDPE 4710 DR-11 200 PSI RATED 1½" TO ALL TREE WELLS SEE SPEC'S – 18" MIN. DEPTH INSTALL BETWEEN VALVE AND WELLS
	HDPE PIPE FOR PALM WELLS	HDPE 4710 DR-11 200 PSI RATED 1½" TO ALL PALM WELLS SEE SPEC'S – 18" MIN. DEPTH INSTALL BETWEEN VALVE AND WELLS
	1" IRRIGATION LATERAL	SCH 40 PVC, SIZE AS NOTED, 12" MIN. DEPTH
	PVC SLEEVE UNDER PAVEMENT	SCH 40 PVC PIPE (SIZE AS NOTED) 24"DEPTH
Ball 1½"	MANUAL VALVE CALL OUT	TYPE OF VALVE (TOP) SIZE OF VALVE (BOTTOM)
1½" / 3"	SLEEVE CALL OUT	PIPE SIZE (TOP) WITHIN SLEEVE SIZE (BOTTOM)
WIRE / 2"	CONDUIT CALL OUT	RACEWAY USE (TOP) RACEWAY SIZE (BOTTOM) CONDUIT RACEWAY FOR 24V WIRING (INSTALL ONE EXTRA WIRE THROUGH RACEWAY FOR FUTURE USE)

CONTROL VALVE CALL OUT



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19 FEBRUARY 2021

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SIGNATURE — 04/03/2022 — EXP. DATE OF THE LICENSE

LANDSCAPE IRRIGATION SCHEDULE & NOTES PHASE 1

APPROVED:

DIRECTOR, DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU — DATE

DATE: 02/19/2021

DRAWING NO. L-103

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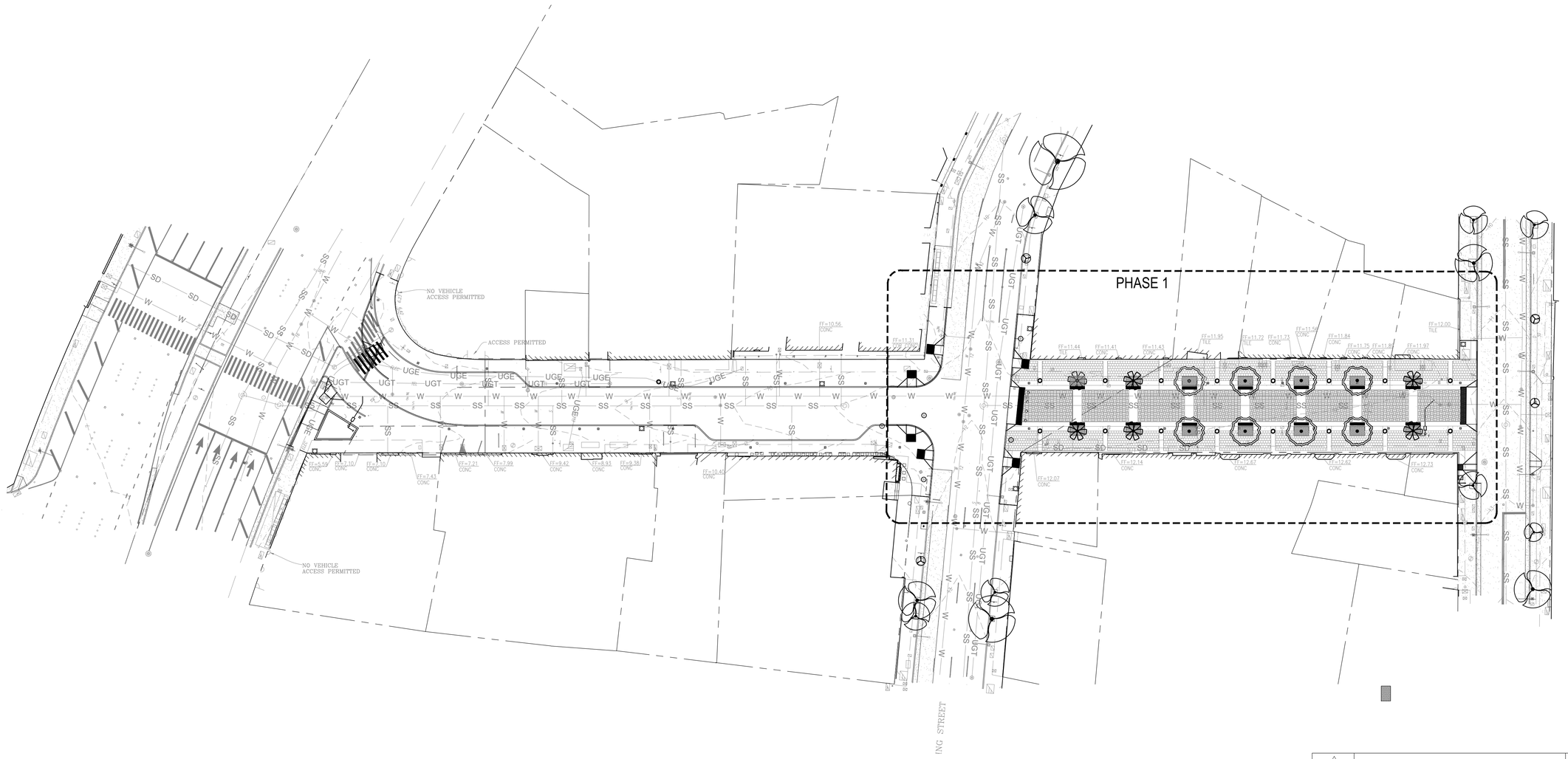
FILE	POCKET	FOLDER	NO.



1 OVERALL LANDSCAPE PLANTING PLAN

SCALE: 1/30"=1'-0"

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REVISION NO.	DESCRIPTION	DATE	APPROVED
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19 FEBRUARY 2021

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www.lglahawaii.com

OVERALL LANDSCAPE PLANTING PLAN

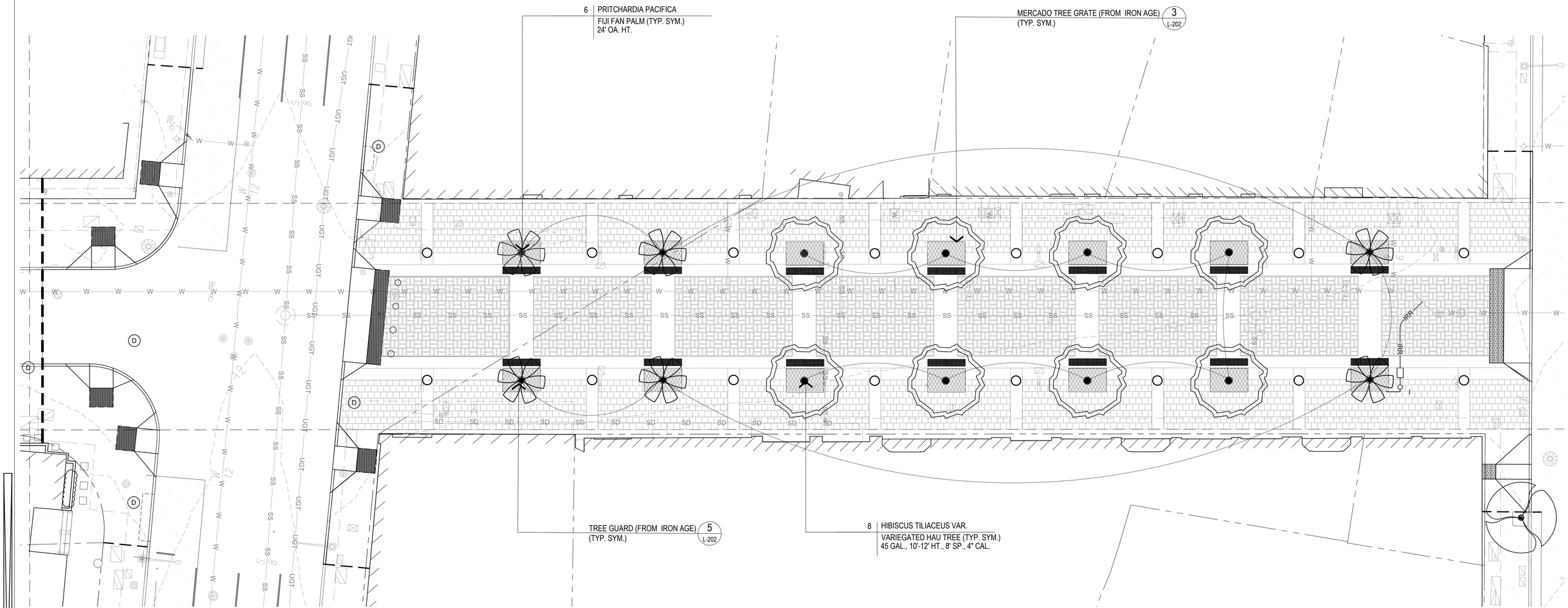
APPROVED:

DIRECTOR — DATE
DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU

DATE: 02/19/2021

DRAWING NO. L-200

FILE	POCKET	FOLDER	NO.



1 LANDSCAPE PLANTING PLAN PHASE 1

SCALE: 1/10"=1'-0"

REVISION NO.	DESCRIPTION	DATE	APPROVED
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SIGNATURE — EXP. DATE OF THE LICENSE 04/03/2022

LANDSCAPE PLANTING PLAN PHASE 1

APPROVED:

DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU — DATE

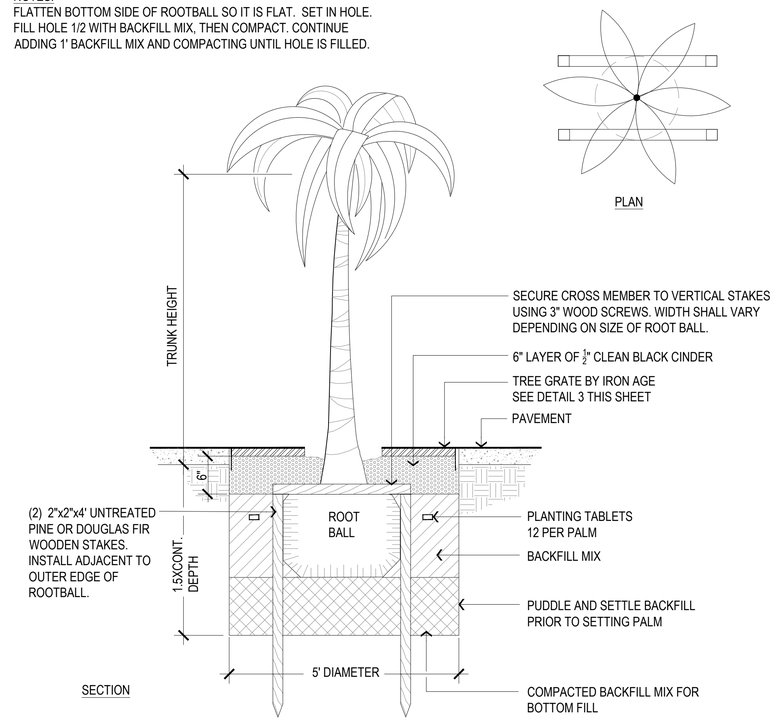
DATE: 02/19/2021

DRAWING NO.
L-201

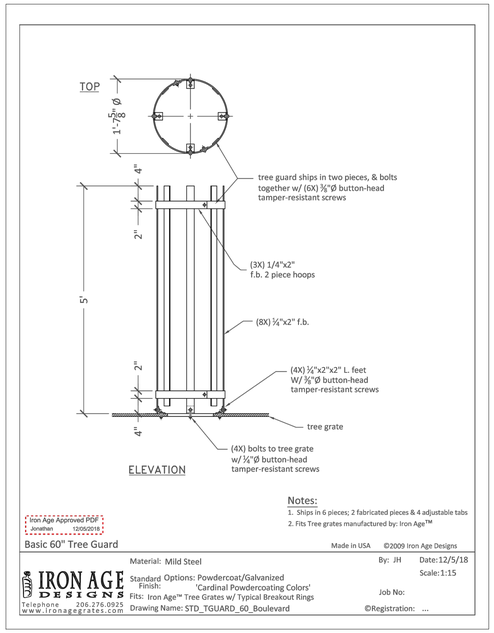
PROGRESS SUBMITTAL

FILE	POCKET	FOLDER	NO.

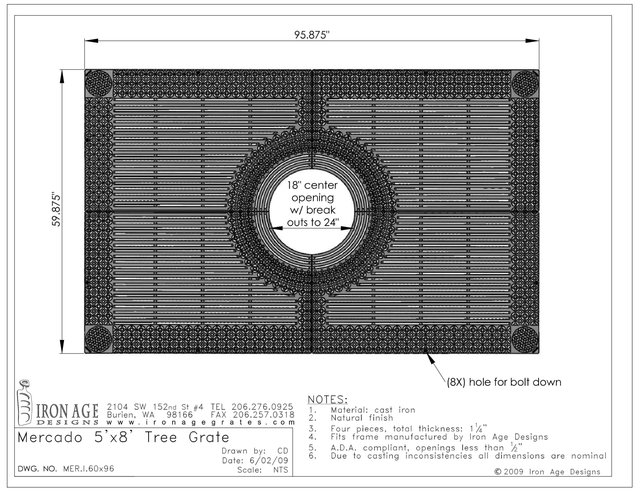
NOTES:
FLATTEN BOTTOM SIDE OF ROOTBALL SO IT IS FLAT. SET IN HOLE.
FILL HOLE 1/2 WITH BACKFILL MIX, THEN COMPACT. CONTINUE
ADDING 1' BACKFILL MIX AND COMPACTING UNTIL HOLE IS FILLED.



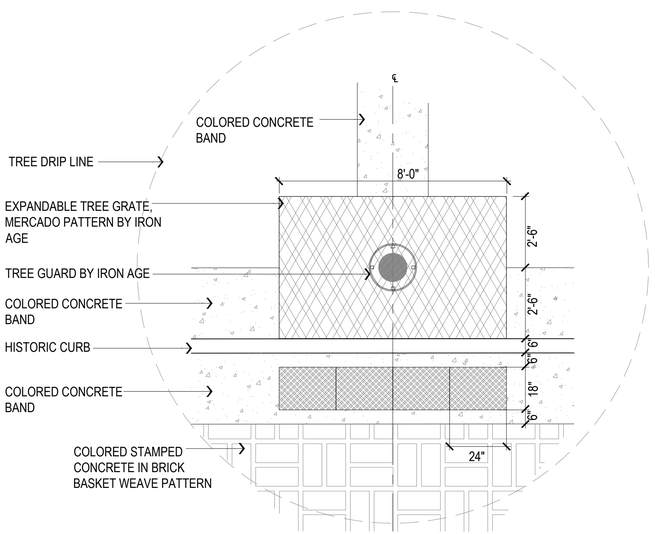
1 L-202 SINGLE TRUNK PALM INSTALLATION
SCALE: 1/2" = 1'-0"



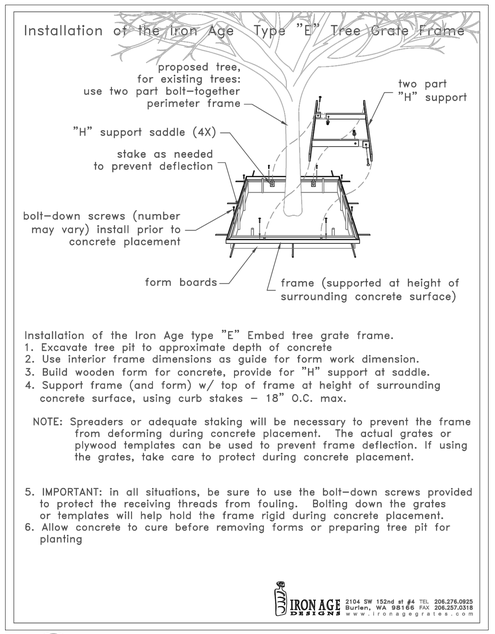
5 L-202 TREE GUARD DETAIL (FROM IRON AGE)
SCALE: N.T.S.



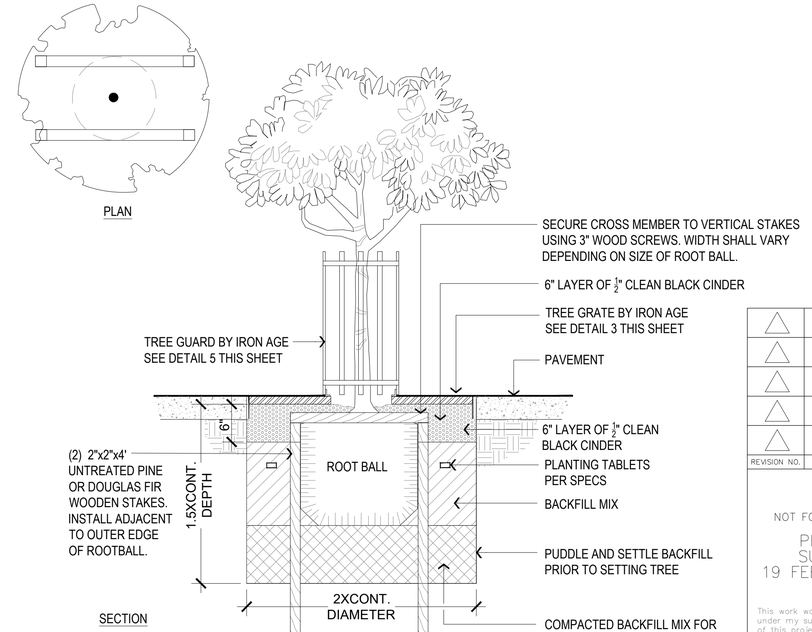
3 L-202 MERCADO TREE GRATE DETAIL (FROM IRON AGE)
SCALE: N.T.S.



6 L-202 TREE GRATE AND TREE GUARD PLAN ENLARGEMENT
SCALE: N.T.S.



4 L-202 TREE GRATE INSTALLATION DETAIL
SCALE: N.T.S.



2 L-202 TREE PLANTING DETAIL
SCALE: 1/2" = 1'-0"

REVISION NO.	DESCRIPTION	DATE	APPROVED
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04/03/2022
SIGNATURE EXP. DATE OF THE LICENSE

LANDSCAPE DETAILS - PHASE 1

APPROVED:

DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU
DATE

DATE: 02/19/2021
DRAWING NO.
L-202

PROGRESS SUBMITTAL

FILE	POCKET	FOLDER	NO.

PLANTING NOTES

1. PLANT QUANTITIES ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES AND PROVIDE THE QUANTITY OF PLANT MATERIALS REQUIRED TO FULFILL THE DESIGN INTENT OF THE PLANS AT THE SIZES AND SPACING SHOWN INDICATED.

2. THE LANDSCAPE CONTRACTOR SHALL SUPPLY 12 INCHES OF NURSERY MIX #1 TOPSOIL MIX CONSISTING OF 1/3 SOIL CONDITIONER, AND 2/3 SCREENED TOPSOIL FROM HAWAIIAN EARTH PRODUCTS IN ALL PLANTING AREAS.

3. VERIFY ALL PLANT MATERIALS WITH THE LANDSCAPE ARCHITECT PRIOR TO PURCHASING.

4. TRIM AND REMOVE DEAD AND OR BROKEN PALM FRONDS AND FRUIT DURING THE CONSTRUCTION PERIOD.

5. ALL TREES AND PALMS TO BE PLANTED WITH THE TOP OF THE ROOTBALL 1"-2" ABOVE FINISH GRADE OF THE SURROUNDING AREA.

6. THE TOP OF THE ROOTBALL IS WHERE THE ROOTS ATTACH TO THE TRUNK OF THE PLANT. VERIFY ON ALL TREES, PALMS AND SHRUBS.

7. INSTALL BIO-BARRIER AT ALL UTILITIES IN CONFLICT WITH TREE AND PALM ROOTBALLS, AND AT THE EDGE OF HARDSCAPE 10' OR LESS FROM TREE AND/OR PALM ROOTBALLS. INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

8. ALL PLANT MATERIAL TO BE FULLY FOLIATED FROM TOP TO BOTTOM UNLESS SPECIFIED OTHERWISE.

9. ALL PLANT MATERIAL SHALL BE FREE OF LITTLE FIRE ANTS AND THE STINGING NETTLE CATERPILLAR.

10. IMPORTED SOIL SHALL BE FREE OF NUT GRASS, CLAY TERMITES AND OTHER DELETERIOUS MATTER.

GENERAL NOTES

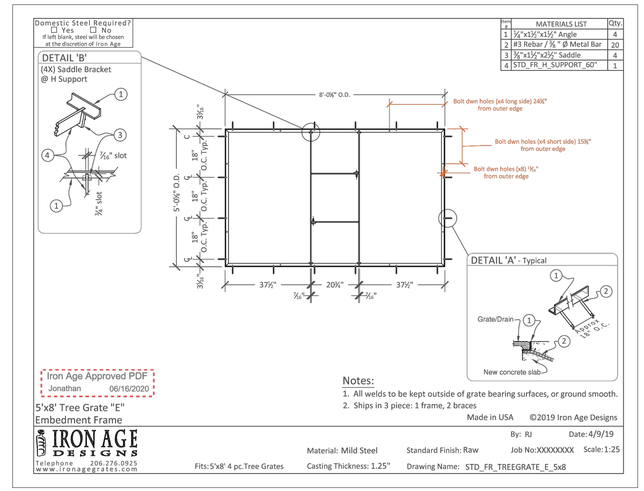
1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES PRIOR TO EXCAVATION.

2. INSPECT THE SITE AND VERIFY ALL CONDITIONS PRIOR TO COMMENCING WITH THE WORK. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER. BY COMMENCING WITH THE WORK, THE CONTRACTOR ACCEPTS THE EXISTING CONDITIONS AND RESPONSIBILITY FOR MAINTAINING THOSE CONDITIONS.

3. THE CONTRACTOR SHALL NOT ALTER FROM THE DRAWINGS AND SPECIFICATIONS. IN THE EVENT OF ERRORS AND DISCREPANCIES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER.

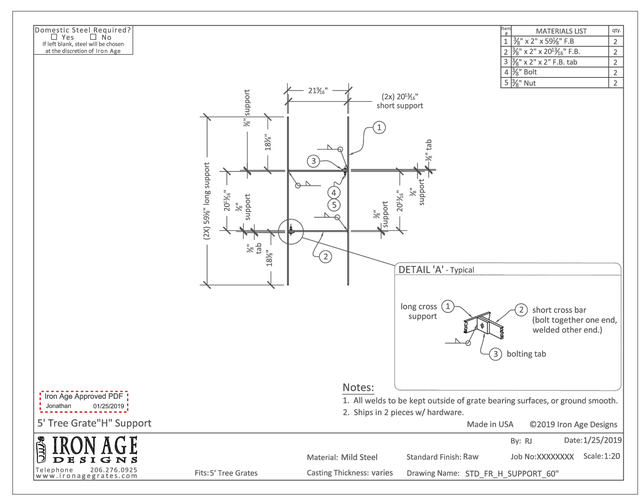
4. THE CONTRACTOR SHALL EMPLOY THE USUAL STANDARD PRACTICE OF COORDINATING THE LANDSCAPE CONSTRUCTION WORK WITH THE WORK OF OTHER DISCIPLINES.

5. COORDINATE ALL WORK WITH THE GENERAL CONTRACTOR.



1 L-203 5'x8' TREE GRATE TYPE E EMBEDMENT FRAME DETAIL (FROM IRON AGE)

SCALE: N.T.S.



2 L-203 5' TREE GRATE H SUPPORT DETAIL (FROM IRON AGE)

SCALE: N.T.S.

REVISION NO.	DESCRIPTION	DATE	APPROVED

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04/03/2022

SIGNATURE EXP. DATE OF THE LICENSE

LANDSCAPE DETAILS AND NOTES - PHASE 1

APPROVED:

DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU

DATE

DATE: 02/19/2021

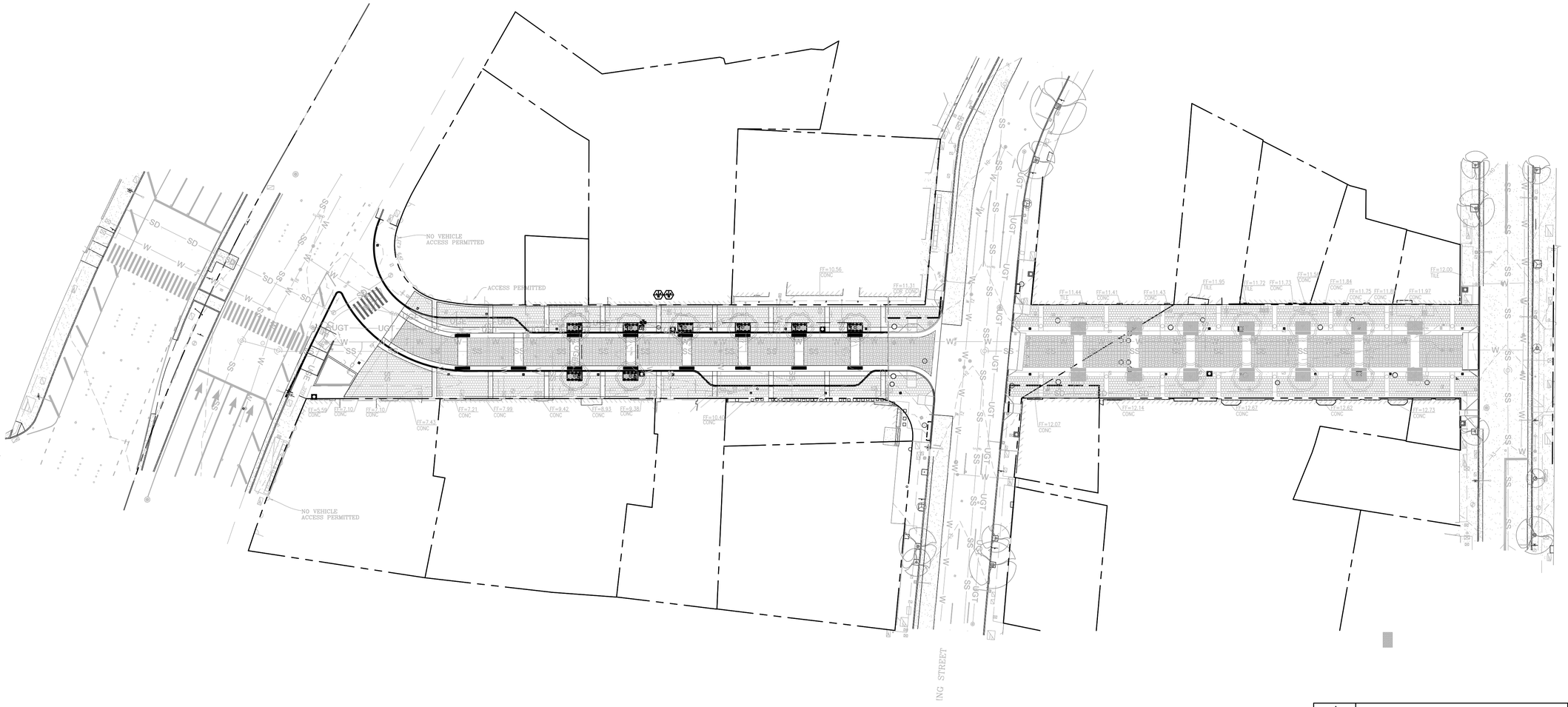
DRAWING NO.

L-203

PROGRESS SUBMITTAL

SHEET 8 OF X

FILE	POCKET	FOLDER	NO.



1 OVERALL LANDSCAPE IRRIGATION PLAN - PHASE 2

SCALE: 1/30"=1'-0"

N

REVISION NO.	DESCRIPTION	DATE	APPROVED
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OVERALL LANDSCAPE IRRIGATION PLAN - PHASE 2

APPROVED:

DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU — DATE

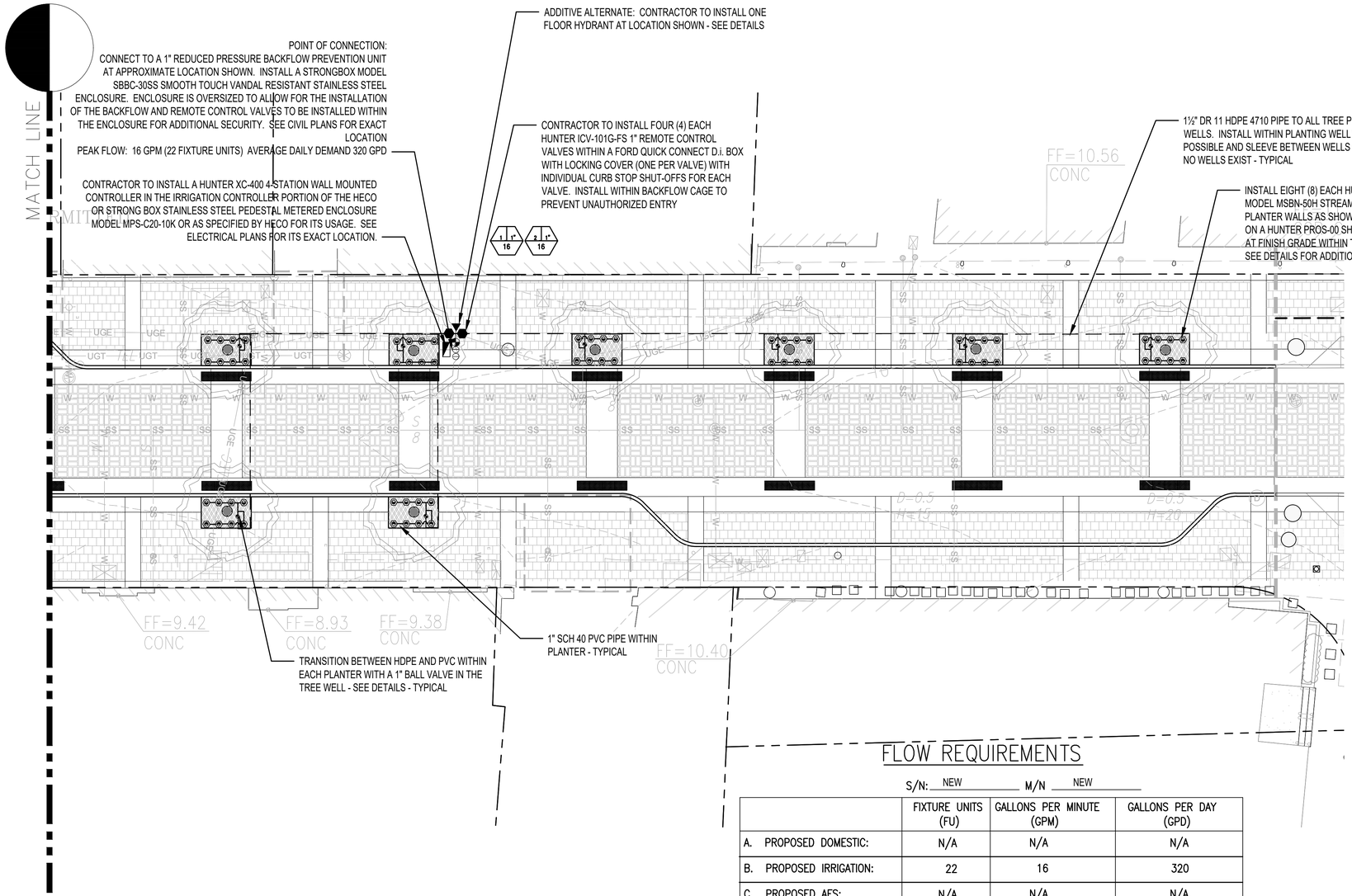
DATE: 02/19/2021

DRAWING NO.
L-100

PROGRESS SUBMITTAL

SHEET 1 OF X

FILE	POCKET	FOLDER	NO.



FLOW REQUIREMENTS

S/N: NEW M/N NEW

	FIXTURE UNITS (FU)	GALLONS PER MINUTE (GPM)	GALLONS PER DAY (GPD)
A. PROPOSED DOMESTIC:	N/A	N/A	N/A
B. PROPOSED IRRIGATION:	22	16	320
C. PROPOSED AFS:	N/A	N/A	N/A
D. TOTAL PROPOSED:	22	16	320
E. TO BE REMOVED: (DEMOLITION)	0	0	0000
F. NET CHANGE:	22	16	320
G. EXISTING DOMESTIC TO REMAIN:	0	0	0000
H. EXISTING IRRIGATION TO REMAIN:	0	0	0000
I. EXISTING AFS TO REMAIN:	0	0	0000
J. TOTAL TO REMAIN	0	0	0000
G. GRAND TOTAL (F + J):	22	16	320

1 LANDSCAPE IRRIGATION PLAN PHASE 2 ENLARGEMENT 1

SCALE: 1/10"=1'-0"

N

PROGRESS SUBMITTAL

DATE: 02/19/2021

DRAWING NO. L-101

REVISION NO.	DESCRIPTION	DATE	APPROVED
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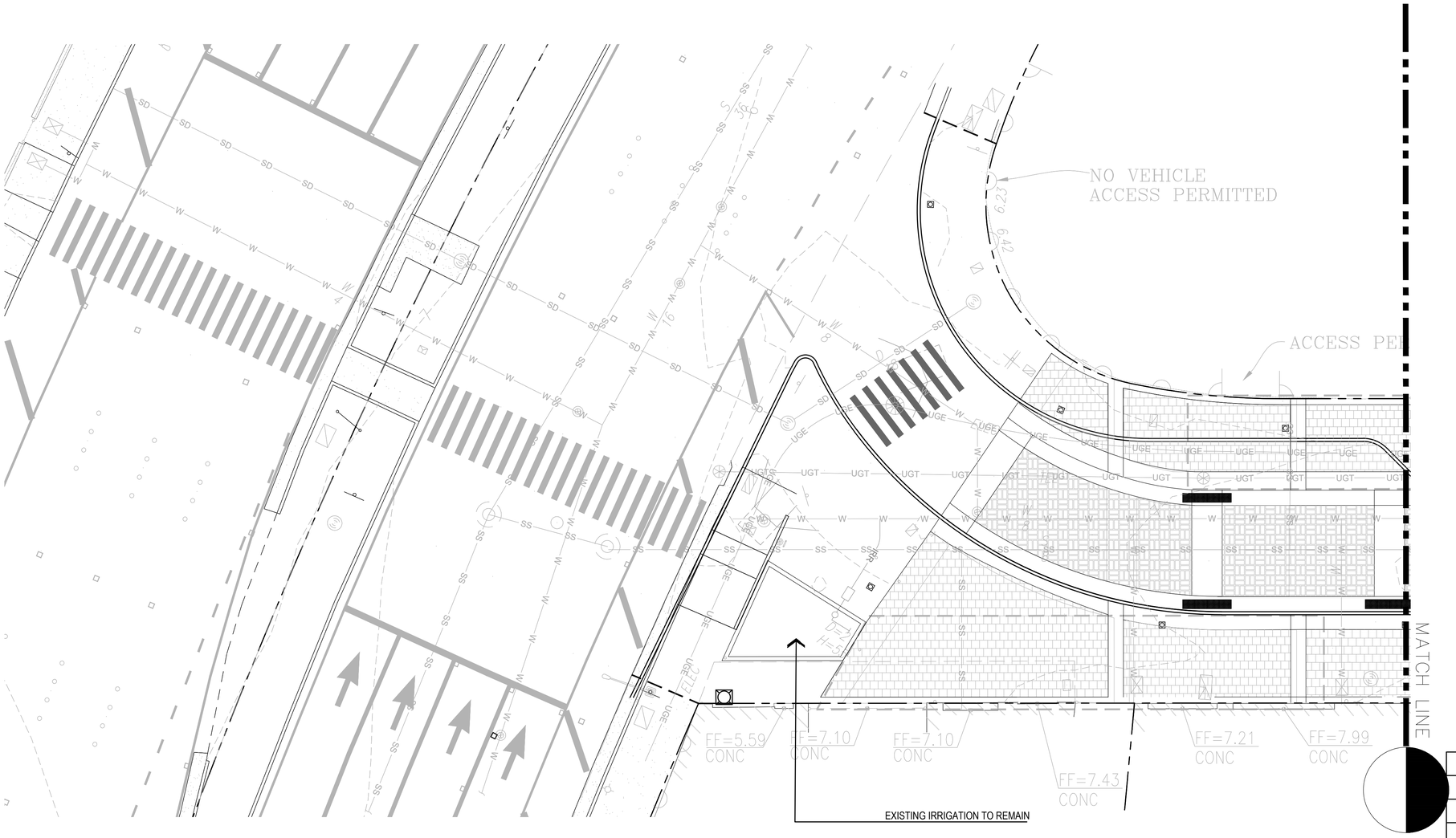
LANDSCAPE IRRIGATION PLAN PHASE 2 - ENLARGEMENT 1

APPROVED:

DIRECTOR DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU DATE

FILE	POCKET	FOLDER	NO.



1 LANDSCAPE IRRIGATION PLAN PHASE 2 ENLARGEMENT 2

SCALE: 1/10"=1'-0"

PROGRESS SUBMITTAL

REVISION NO.	DESCRIPTION	DATE	APPROVED
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Loriann Gordon 04/03/2022
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LANDSCAPE IRRIGATION PLAN
PHASE 2 - ENLARGEMENT 2

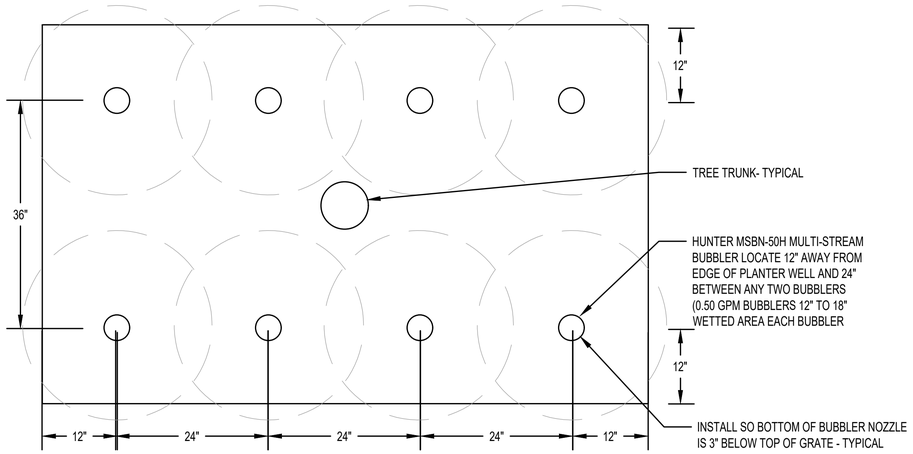
APPROVED:

DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU

DATE

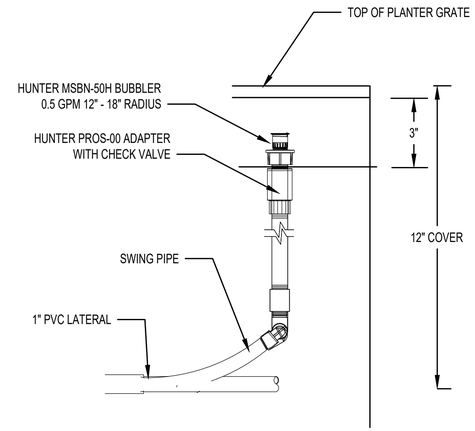
DATE: 02/19/2021
DRAWING NO.
L-102

FILE	POCKET	FOLDER	NO.



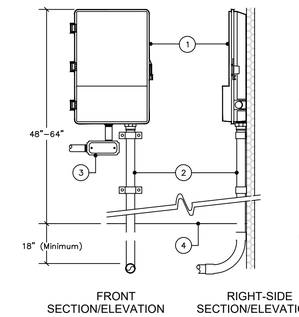
1 TREE OR PALM WELL PCN BUBBLER LAYOUT

NTS



2 BUBBLER IN PLANTER DETAIL

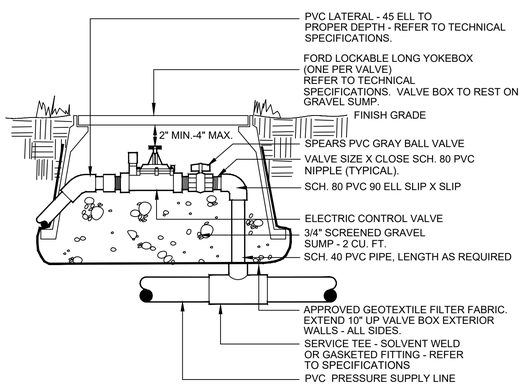
NTS



1. OUTDOOR WALL MOUNTED IRRIGATION CONTROLLER WITHIN A NEMA 3R ENCLOSURE SEE PLAN NUMBER OF STATIONS. ANCHOR SECURELY TO WALL.
2. CONTROL, COMMON AND SENSOR WIRES
3. CONDUIT FOR ELECTRICAL POWER CONDUCTORS PER LOCAL AND NATIONAL CODES (120V) SECURE TO WALL WITH APPROPRIATE PIPE CLAMPS
4. FINISHED SURFACE - INSTALL CONDUIT & WIRES 12" MINIMUM BEYOND WALL IN LANDSCAPED AREA . TERMINATE IN SPLICE BOX

3 WALL MOUNTED CONTROLLER

NTS



NOTE: DIAMETERS OF RISER, FITTINGS, BALL VALVE AND NIPPLE SHALL EQUAL CONTROL VALVE DIAMETER. LOOP ALL SPARE WIRES FROM CONTROLLER INSIDE EACH VALVE BOX-12" DIAMETER LOOP (MIN.)

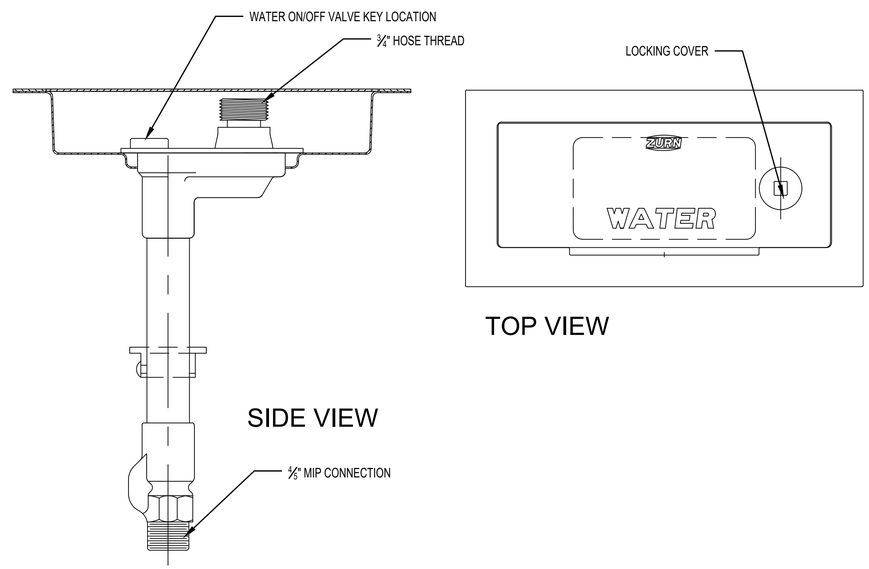
ALL WIRING TO BE INSTALLED PER LOCAL CODE.

PROVIDE EXPANSION COILS AT EACH WIRE CONNECTION W/IN VALVE BOX (WRAP AROUND 1/2" PIPE 15 TIMES, REMOVE PIPE)

COMPACT SOIL AROUND VALVE BOX TO SAME DENSITY AS UNDISTURBED ADJACENT SOIL.

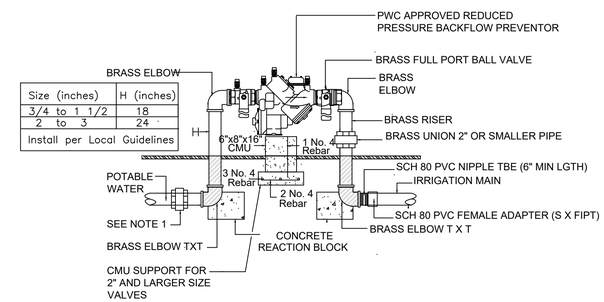
4 ELECTRIC CONTROL VALVE

NTS



5 OPTIONAL SIDEWALK HYDRANT

NTS



Size (inches)	H (inches)
3/4 to 1 1/2	18
2 to 3	24
Install per Local Guidelines	

NOTES:

1. IF UPSTREAM POTABLE WATER SERVICE IS NOT COPPER PIPING, USE A DIAELECTRIC UNION BETWEEN THE POTABLE SERVICE AND THE UPSTREAM COPPER ELBOW

   REDUCE OR INCREASE BRASS RISER AT BELOW GRADE ELBOW TO MEET SERVICE AND/OR MAIN LINE SIZES PER PLAN.

6 BACKFLOW PREVENTER

NTS

REVISION NO.	DESCRIPTION	DATE	APPROVED
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LANDSCAPE IRRIGATION DETAILS PHASE 2

APPROVED:

DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU — DATE

DATE: 02/19/2021
DRAWING NO.
L-103

PROGRESS SUBMITTAL

FILE	POCKET	FOLDER	NO.

IRRIGATION NOTES

1. WORK SHOWN IS DIAGRAMMATIC AND FOR DESIGN INTENT OF THE FINISHED IMPROVEMENTS AND ARE THEREFORE SUBJECT TO ADJUSTMENTS DUE TO ACTUAL CONDITIONS ENCOUNTERED IN THE FIELD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY INVESTIGATING THE SITE CONDITIONS AND PROVIDING THE WORK NECESSARY TO MEET THE DESIGN INTENT OF THE DRAWINGS TO THE SATISFACTION OF THE CONTRACTING OFFICER. THE CONTRACTOR SHALL MAKE ADJUSTMENTS TO AVOID OBSTACLES OR TO IMPROVE PERFORMANCE TO ACCOMMODATE ACTUAL SITE CONDITIONS.
2. ANY EXISTING IRRIGATION COMPONENTS SHOWN OR NOTED ON THE DRAWINGS ARE BASED ON PLANS AND MAPS PREPARED BY OTHERS AND BY FIELD OBSERVATIONS. NO GUARANTEE IS MADE ON THE ACCURACY OR COMPLETENESS OF THE EXISTING INFORMATION SHOWN. THE USER(S) OF THESE DRAWINGS SHALL VERIFY PRIOR TO AND DURING CONSTRUCTION, THE EXISTING INFORMATION SHOWN IN ORDER TO COMPLETE THE CONTRACT.
3. ALL NEW WIRING SHALL BE INSTALLED IN A MINIMUM 14 GA UL/UF WIRING INSTALL WITHIN A 2" PVC SCH. 40 SLEEVE UNDER PAVEMENT OR THROUGH WALLS.
4. PROTECT EXISTING IMPROVEMENTS ON THE PREMISES AND IN ADJACENT AREAS. REPAIR DAMAGES TO MATCH SURROUNDING SURFACES, INCLUDING BUT NOT LIMITED TO, PATCHING, PAINTING, AND RE-PLANTING. CONSULT WITH THE LANDSCAPE ARCHITECT PRIOR TO ACTION INVOLVING REPAIR OF EXISTING SURFACES AND FINISHES.
5. EXISTING IRRIGATION SYSTEMS SERVING AREAS OUTSIDE THE AFFECTED ZONES SHALL REMAIN OPERATIONAL AND BE PROTECTED. SHOULD EXISTING SYSTEMS BE DAMAGED OR MADE INOPERABLE DUE TO WORK UNDER THIS CONTRACT, IMMEDIATELY MAKE REPAIRS OR PROVIDE TEMPORARY IRRIGATION UNTIL REPAIRS CAN BE MADE.
6. MAINTAIN A CURRENT SET OF DRAWINGS ON SITE AS WORK PROGRESSES. ANNOTATE FIELD CHANGES AND DEVIATIONS AS THEY OCCUR. THESE DRAWINGS SHALL BE USED TO PREPARE AS-BUILT DRAWINGS FOR SUBMITTAL AT THE END OF THE CONTRACT. AS-BUILT DRAWINGS SHALL AT THE MINIMUM SHOW CONTROLLER LOCATIONS AND DIAGRAMMATIC CONDUIT AND WIRE RUNS.
7. ALL CONTROLLERS SHALL BE PROGRAMMED BY THE CONTRACTOR TO PROVIDE ADEQUATE IRRIGATION TO THE VARIOUS TYPES OF PLANT MATERIAL BEING IRRIGATED BASED UPON THE SPRINKLER TYPE, SOIL, SLOPE AND SOLAR EXPOSURE TO EACH AREA.
8. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND QUANTITY OF ALL EQUIPMENT IN EACH AREA AND ADJUST AS REQUIRED.

GENERAL NOTES

1. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS FROM APPROPRIATE GOVERNMENT AGENCIES.
2. THE CONTRACTOR IS ALERTED TO THE ENCOUNTERING OF OBSTACLES WHETHER SHOWN ON THE DRAWINGS OR NOT, OR WHICH MAY DIFFER IN LOCATION FROM THAT SHOWN WHICH MAY INTERFERE WITH HIS NORMAL METHOD OF OPERATIONS. THE CONTRACTOR SHALL TAKE INTO ACCOUNT ADDITIONAL COSTS ANTICIPATED DUE TO THESE CONDITIONS AND SHALL HAVE THESE COSTS INCLUDED IN THE BID ITEMS WHICH HE FEELS MOST APPROPRIATE.
3. UNDERGROUND UTILITIES ARE NOT SHOWN ON THE DRAWINGS. PERFORM AN INDEPENDENT CHECK ON THE GROUND AND WITH HICKAM AIR FORCE BASE, VARIOUS UTILITY COMPANIES, AND GOVERNMENT AGENCIES TO ASCERTAIN POSSIBLE CONFLICTING UTILITY LOCATIONS AND DEPTH. THE CONTRACTOR MUST SATISFY HIMSELF THROUGH HIS OWN INVESTIGATIONS AS TO WHAT SUBSURFACE CONDITIONS ARE TO BE ENCOUNTERED. EXERCISE EXTREME CARE IN EXCAVATING THE AREA.
4. BE AWARE THAT ITEMS OF HISTORIC SIGNIFICANCE MAY BE FOUND DURING EXCAVATIONS. NOTIFY THE ARCHITECT IF ANY SUCH ITEMS ARE FOUND.
5. PRIOR TO EXCAVATION AND TRENCHING TO VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND OTHER OBSTRUCTIONS THAT MAY AFFECT THE WORK. REPORT OBSTRUCTIONS TO THE ARCHITECT DO NOT BEGIN WORK IN ANY GIVEN AREA UNTIL AUTHORIZATION IS RECEIVED FROM THE ARCHITECT.
6. IF THE CONTRACTOR ELECTS NOT TO VERIFY OR EXPOSE EXISTING UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO EXCAVATION, HE FORFEITS HIS RIGHTS FOR ANY CLAIMS FOR COMPENSATION CAUSED BY ANY CONFLICTS WITH EXISTING UTILITIES AND STRUCTURES.
7. INSPECT THE SITE AND VERIFY CONDITIONS PRIOR TO COMMENCING WITH THE WORK. PERFORM AN INDEPENDENT CHECK OF ELEMENTS AND POSSIBLE CONFLICTING STRUCTURES. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION ENGINEER. BY COMMENCING WITH THE WORK, THE CONTRACTOR ACCEPTS THE EXISTING CONDITIONS AND RESPONSIBILITY FOR WORKING WITH AND MAINTAINING THOSE CONDITIONS.
8. PROVIDE SAFEGUARDS AND EXERCISE CAUTION AGAINST INJURY OR DEFACEMENT OF EXISTING SITE IMPROVEMENTS. UNLESS PROTECTION HAS BEEN PROVIDED, VEHICLES SHALL NOT PASS OVER WALKWAYS AND CURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE RESULTING FROM HIS OPERATIONS AND REPAIR OR REPLACE SUCH DAMAGE AT CONTRACTOR'S EXPENSE. REPAIR DAMAGE IN A MANNER SATISFACTORY TO THE ARCHITECT.
9. FIELD LAYOUT THE LOCATION, ALIGNMENT AND ELEVATION PROFILE OF PROPOSED IMPROVEMENTS AND OBTAIN APPROVAL FROM THE ARCHITECT PRIOR TO START OF INSTALLATION. THE ARCHITECT RESERVES THE RIGHT TO REVISE THE LAYOUT AND ELEVATIONS OF THE PROPOSED IMPROVEMENTS PRIOR TO START OF CONSTRUCTION.
10. WHEN EXCAVATIONS ARE ADJACENT TO OR UNDER EXISTING STRUCTURES, PROPERLY SHEET AND BRACE THE EXCAVATION, STABILIZE THE EXISTING GROUND, AND PROPERLY SUPPORT EXISTING STRUCTURES WITH BEAMS, STRUTS OR UNDERPINNING TO RENDER IT SAFE AND SECURE FROM POSSIBLE SLIDES, CAVE INS AND SETTLEMENT, AND TO FULLY PROTECT IT FROM DAMAGE.
11. PROVIDE, INSTALL AND MAINTAIN SIGNS, LIGHTS, BARRICADES, AND PROTECTIVE FACILITIES NECESSARY FOR THE SAFETY OF THE PUBLIC.
12. REMOVE SILT AND DEBRIS DEPOSITED IN DRAINAGE FACILITIES, ROADWAYS, AND OTHER AREAS RESULTING FROM WORK UNDER THIS CONTRACT. THE COSTS INCURRED FOR REMEDIAL ACTION SHALL BE PAID BY THE CONTRACTOR. CONFORM WITH ORDINANCES, REGULATIONS, CODES, PERMITS AND INSPECTIONS GOVERNING SUCH WORK.
13. MAINTAIN THE WORK AREAS IN THE HIGHEST REASONABLE STATE OF CLEANLINESS CONSISTENT WITH THE WORK PERFORMED. REMOVE AND DISPOSE OF WASTE MATERIAL AND DEBRIS OFF-SITE AT APPROVED DISPOSAL SITES. COMPLY WITH FEDERAL, STATE AND LOCAL HAULING AND DISPOSAL REGULATIONS.

ABBREVIATIONS

AWG	AMERICAN WIRE GAUGE
CONC	CONCRETE
DET	DETAIL
DWG	DRAWING
DWGS	DRAWINGS
EXST	EXISTING
FIN	FINISH
GA	GAUGE
IRR	IRRIGATION
MIN	MINIMUM
NO	NUMBER
PVC	POLYVINYL CHLORIDE
REQ'D.	REQUIRED
SCH	SCHEDULE
UL	UNDERWRITERS LABORATORY INC.

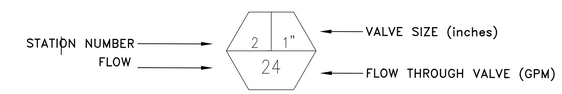
SPRINKLER SCHEDULE

Head Symbol	Arc/Angle	Manufacturer/ catalog number or approved equal		
Shrub Adapter with Pressure Regulating Body and Bubbler		Hunter PROS With MSBN-50H Bubbler or acceptable equal per details and performance		
		G.P.M.	P.S.I.	Radius
	360°	0.50	30	1 – 1.5'

IRRIGATION MATERIAL SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER/ CATALOG NUMBER
	4 STA. CONTROLLER OUTDOOR WALL MOUNTED	HUNTER XC-400 OUTDOOR 4-STATION CONTROLLER (EXPANDABLE) WITHIN A NEMA 3R ENCLOSURE
	REMOTE CONTROL VALVE WITH PRESSURE REGULATION	HUNTER ICV-151G-FS SERIES OR ACCEPTABLE EQUAL SIZE AS NOTED
	REDUCED PRESSURE BACKFLOW PREVENTION UNIT – 1" SIZE	BWS APPROVED 1" BACKFLOW PREVENTION UNIT WITHIN A STRONGBOX OR EQUAL SMOOTH TOUCH MESH ENCLOSURE
	HOSE BIBB	HOSE BIBB IN FLOOR MOUNTED HYDRANT BOX – LOCKABLE
	MANUAL ANGLE VALVE	BRASS 1½" AT VALVES AND 1" WITHIN PLANTERS BALL FULL PORT WITHIN VALVE BOX
	HDPE PIPE FOR TREE WELLS	HDPE 4710 DR-11 200 PSI RATED 1½" TO ALL TREE WELLS SEE SPEC'S – 18" MIN. DEPTH INSTALL BETWEEN VALVE AND WELLS
	HDPE PIPE FOR PALM WELLS	HDPE 4710 DR-11 200 PSI RATED 1½" TO ALL PALM WELLS SEE SPEC'S – 18" MIN. DEPTH INSTALL BETWEEN VALVE AND WELLS
	1" IRRIGATION LATERAL	SCH 40 PVC, SIZE AS NOTED, 12" MIN. DEPTH
	PVC SLEEVE UNDER PAVEMENT	SCH 40 PVC PIPE (SIZE AS NOTED) 24"DEPTH
Ball 1½"	MANUAL VALVE CALL OUT	TYPE OF VALVE (TOP) SIZE OF VALVE (BOTTOM)
1½" / 3"	SLEEVE CALL OUT	PIPE SIZE (TOP) WITHIN SLEEVE SIZE (BOTTOM)
WIRE / 2"	CONDUIT CALL OUT	RACEWAY USE (TOP) RACEWAY SIZE (BOTTOM) CONDUIT RACEWAY FOR 24V WIRING (INSTALL ONE EXTRA WIRE THROUGH RACEWAY FOR FUTURE USE)

CONTROL VALVE CALL OUT



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19 FEBRUARY 2021

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LANDSCAPE IRRIGATION SCHEDULE & NOTES PHASE 2

APPROVED:

DIRECTOR — DATE
DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU

DATE: 02/19/2021
DRAWING NO.
L-104

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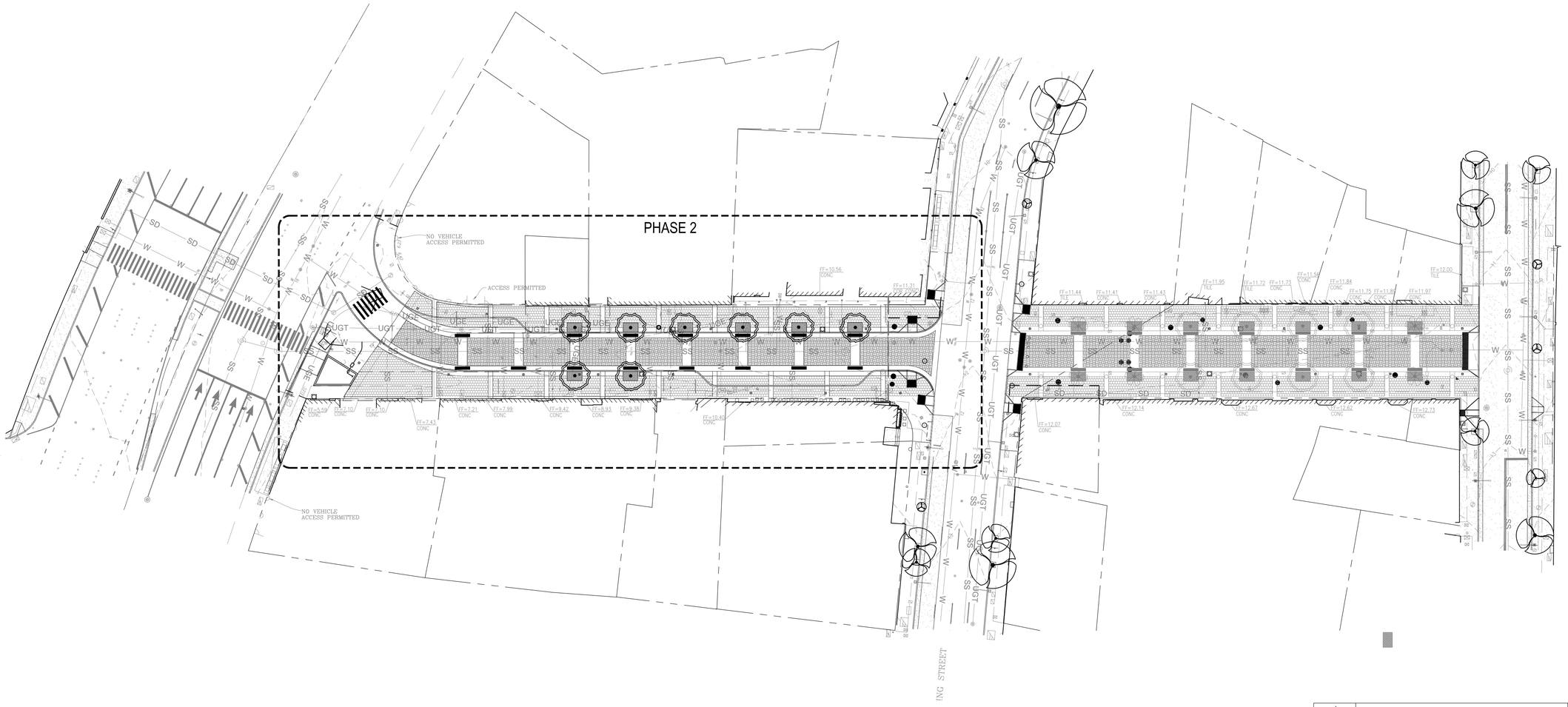

1 OVERALL LANDSCAPE PLANTING PLAN - PHASE 2

SCALE: 1/30"=1'-0"

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OVERALL LANDSCAPE PLANTING PLAN - PHASE 2

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DATE: 02/19/2021

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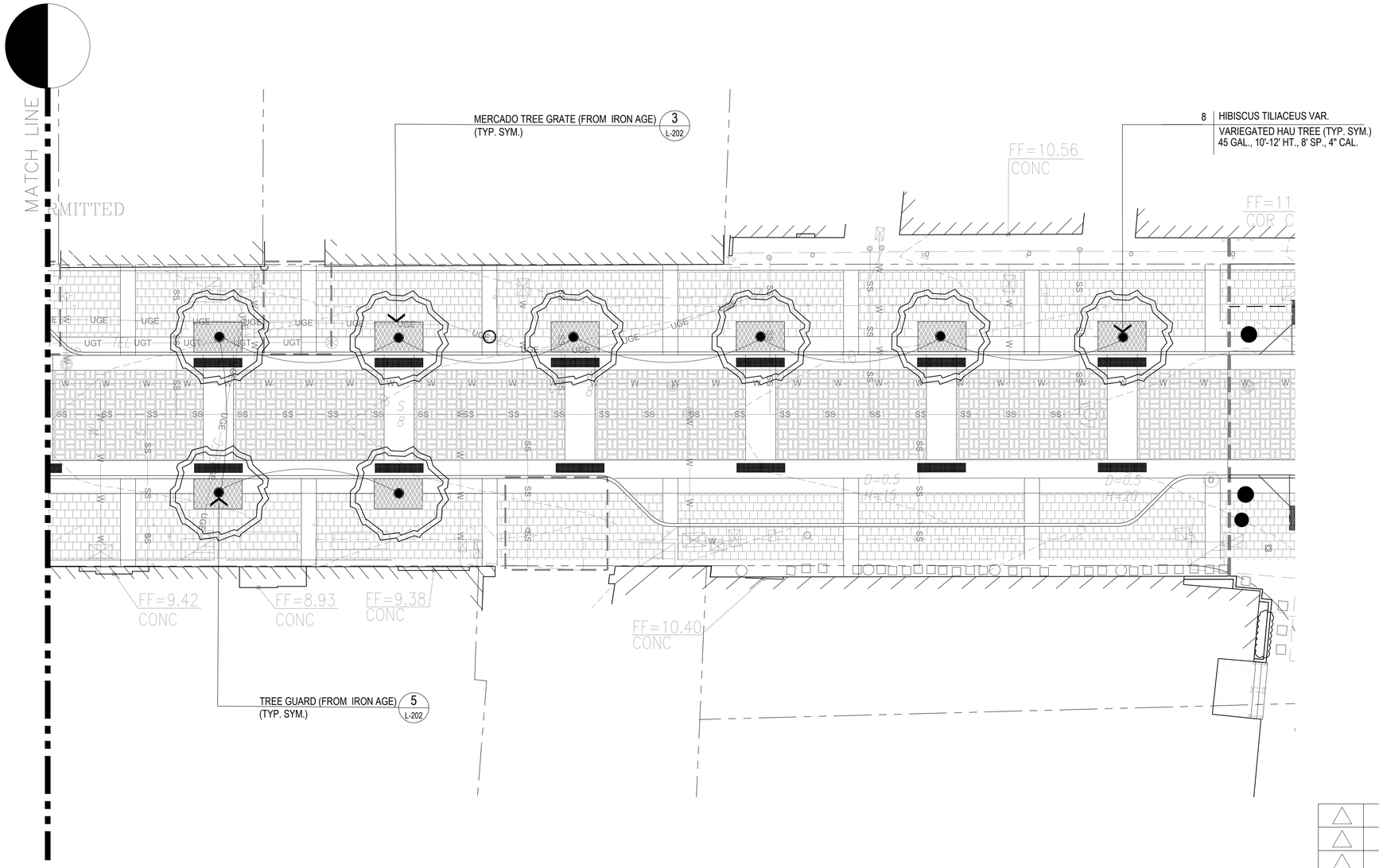

1 LANDSCAPE PLANTING PLAN PHASE 2 ENLARGEMENT 1

SCALE: 1/10"=1'-0"

N

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LANDSCAPE PLANTING PLAN
PHASE 2 - ENLARGEMENT 1

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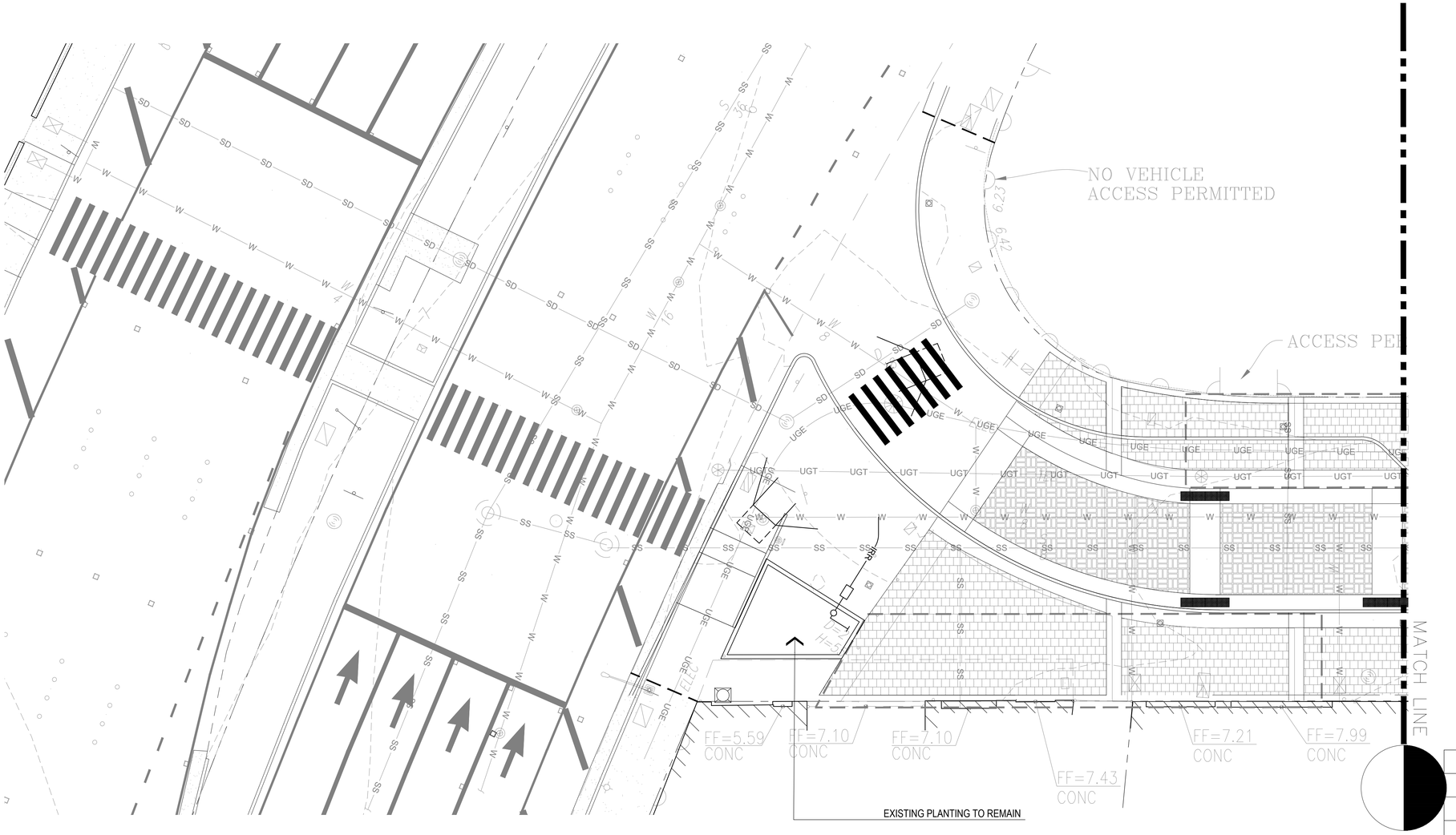

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LANDSCAPE PLANTING PLAN
PHASE 2 - ENLARGEMENT 2

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DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU — DATE

1 LANDSCAPE PLANTING PLAN PHASE 2 ENLARGEMENT 2

SCALE: 1/10"=1'-0"

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L-202

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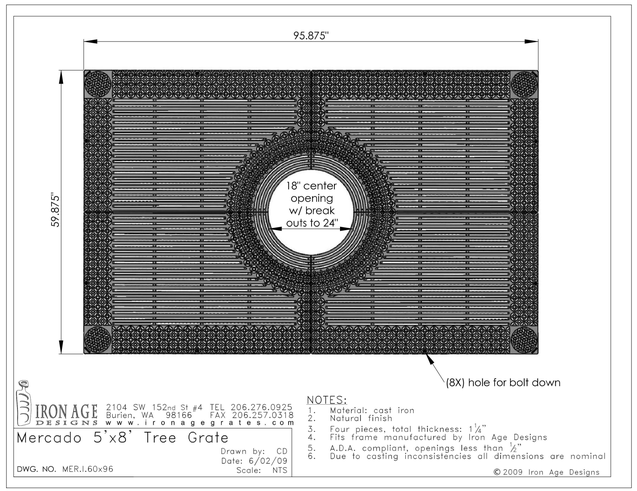
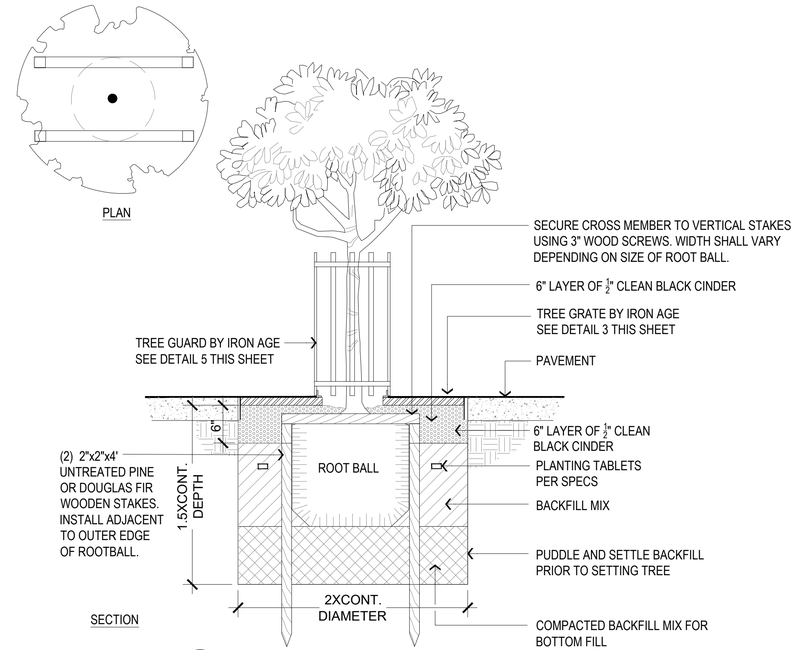
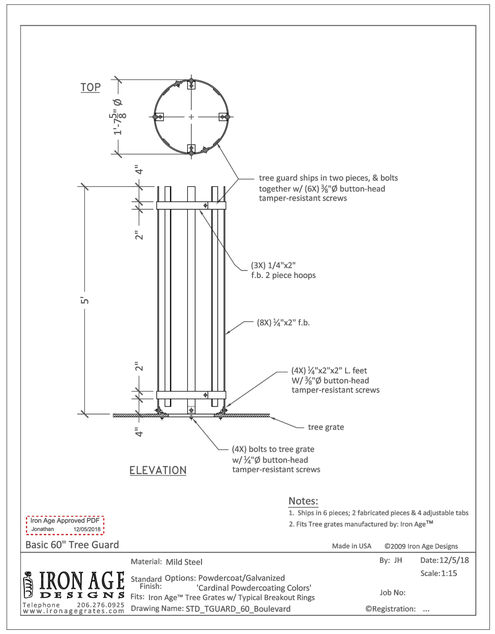


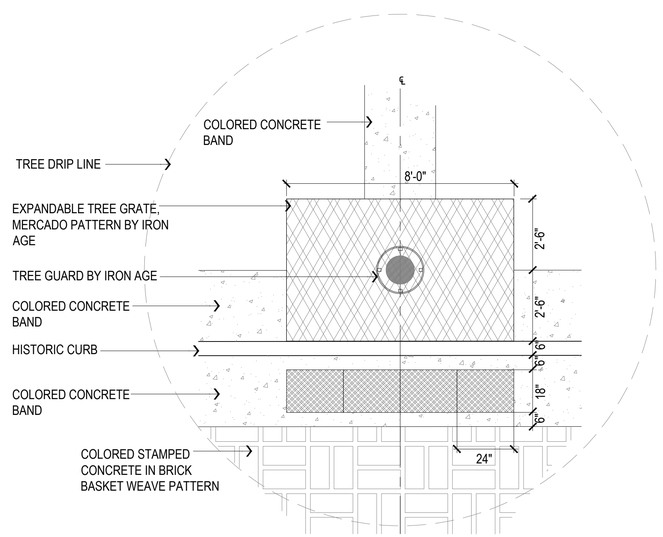
3 L-203 MERCADO TREE GRATE DETAIL (FROM IRON AGE)
SCALE: N.T.S.



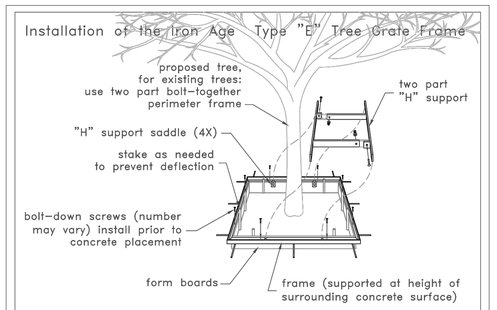
1 L-203 TREE PLANTING DETAIL
SCALE: 1/2" = 1'-0"



5 L-203 TREE GUARD DETAIL (FROM IRON AGE)
SCALE: N.T.S.



4 L-203 TREE GRATE AND TREE GUARD PLAN ENLARGEMENT
SCALE: N.T.S.



Installation of the Iron Age type "E" Embed tree grate frame.
1. Excavate tree pit to approximate depth of concrete
2. Use interior frame dimensions as guide for form work dimension.
3. Build wooden form for concrete, provide for "H" support at saddle.
4. Support frame (and form) w/ top of frame at height of surrounding concrete surface, using curb stakes – 18" O.C. max.

NOTE: Spreaders or adequate staking will be necessary to prevent the frame from deforming during concrete placement. The actual grates or plywood templates can be used to prevent frame deflection. If using the grates, take care to protect during concrete placement.

5. IMPORTANT: in all situations, be sure to use the bolt-down screws provided to protect the receiving threads from fouling. Bolting down the grates or templates will help hold the frame rigid during concrete placement.
6. Allow concrete to cure before removing forms or preparing tree pit for planting

IRON AGE DESIGNS 2104 SW 152nd st #4 Burien, WA 98166 TEL 206.276.0925 FAX 206.257.0518 www.ironagegrates.com

2 L-203 TREE GRATE INSTALLATION DETAIL
SCALE: N.T.S.

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PLANTING NOTES

1. PLANT QUANTITIES ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES AND PROVIDE THE QUANTITY OF PLANT MATERIALS REQUIRED TO FULFILL THE DESIGN INTENT OF THE PLANS AT THE SIZES AND SPACING SHOWN INDICATED.

2. THE LANDSCAPE CONTRACTOR SHALL SUPPLY 12 INCHES OF NURSERY MIX #1 TOPSOIL MIX CONSISTING OF 1/3 SOIL CONDITIONER, AND 2/3 SCREENED TOPSOIL FROM HAWAIIAN EARTH PRODUCTS IN ALL PLANTING AREAS.

3. VERIFY ALL PLANT MATERIALS WITH THE LANDSCAPE ARCHITECT PRIOR TO PURCHASING.

4. TRIM AND REMOVE DEAD AND OR BROKEN PALM FRONDS AND FRUIT DURING THE CONSTRUCTION PERIOD.

5. ALL TREES AND PALMS TO BE PLANTED WITH THE TOP OF THE ROOTBALL 1"-2" ABOVE FINISH GRADE OF THE SURROUNDING AREA.

6. THE TOP OF THE ROOTBALL IS WHERE THE ROOTS ATTACH TO THE TRUNK OF THE PLANT. VERIFY ON ALL TREES, PALMS AND SHRUBS.

7. INSTALL BIO-BARRIER AT ALL UTILITIES IN CONFLICT WITH TREE AND PALM ROOTBALLS, AND AT THE EDGE OF HARDSCAPE 10' OR LESS FROM TREE AND/OR PALM ROOTBALLS. INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

8. ALL PLANT MATERIAL TO BE FULLY FOLIATED FROM TOP TO BOTTOM UNLESS SPECIFIED OTHERWISE.

9. ALL PLANT MATERIAL SHALL BE FREE OF LITTLE FIRE ANTS AND THE STINGING NETTLE CATERPILLAR.

10. IMPORTED SOIL SHALL BE FREE OF NUT GRASS, CLAY TERMITES AND OTHER DELETERIOUS MATTER.

GENERAL NOTES

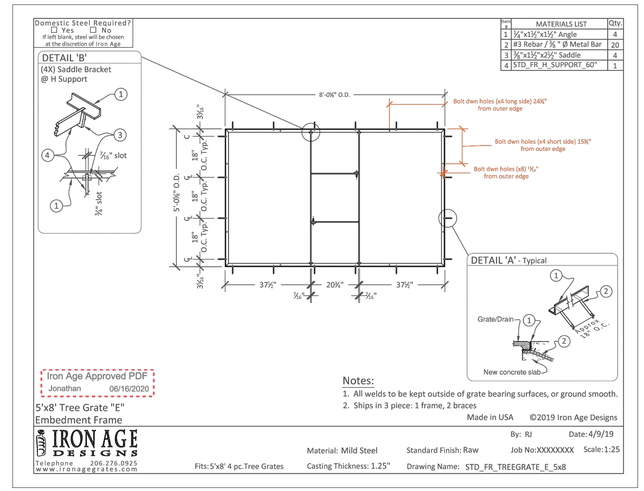
1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES PRIOR TO EXCAVATION.

2. INSPECT THE SITE AND VERIFY ALL CONDITIONS PRIOR TO COMMENCING WITH THE WORK. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER. BY COMMENCING WITH THE WORK, THE CONTRACTOR ACCEPTS THE EXISTING CONDITIONS AND RESPONSIBILITY FOR MAINTAINING THOSE CONDITIONS.

3. THE CONTRACTOR SHALL NOT ALTER FROM THE DRAWINGS AND SPECIFICATIONS. IN THE EVENT OF ERRORS AND DISCREPANCIES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER.

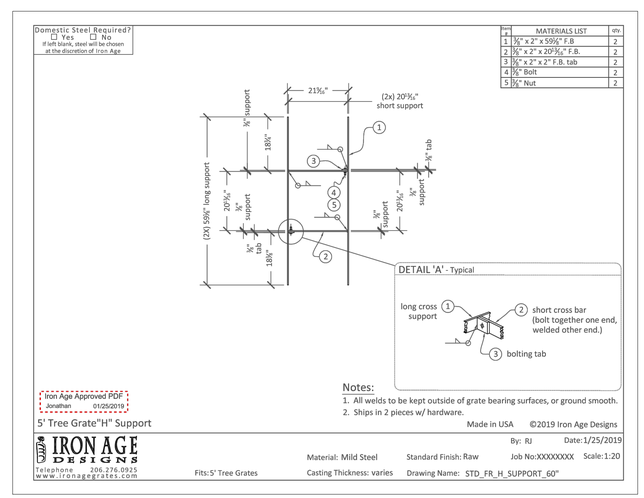
4. THE CONTRACTOR SHALL EMPLOY THE USUAL STANDARD PRACTICE OF COORDINATING THE LANDSCAPE CONSTRUCTION WORK WITH THE WORK OF OTHER DISCIPLINES.

5. COORDINATE ALL WORK WITH THE GENERAL CONTRACTOR.



1 L-204 5'x8' TREE GRATE TYPE E EMBEDMENT FRAME DETAIL (FROM IRON AGE)

SCALE: N.T.S.



2 L-204 5' TREE GRATE H SUPPORT DETAIL (FROM IRON AGE)

SCALE: N.T.S.

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LANDSCAPE DETAILS & NOTES

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DEPARTMENT OF TRANSPORTATION SERVICES, CITY & COUNTY OF HONOLULU

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SHEET 10 OF X

FILE	POCKET	FOLDER	NO.

APPENDIX B

Archaeological Literature Review and Field Inspection

Archaeological Literature Review and Field Inspection for the Kekaulike Mall and Kekaulike Street Multimodal Improvements Project

Honolulu Ahupua'a
Kona District
Island of O'ahu

DRAFT VERSION

Prepared By:

Teresa Gotay M.A.

and

Robert B. Rechtman, Ph.D.

Prepared For:

HDR, Inc.
1001 Bishop Street, Suite 400
Honolulu, HI 96813

February 2021

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820 Mililani Street, Suite 700, Honolulu, HI 96813

ASM Project Number 34320.00

An Archaeological Literature Review and Field Inspection for the Kekaulike Mall and the Kekaulike Mall and Kekaulike Street Multimodal Improvements Project

Honolulu Ahupuaʻa
Kona District
Island of Oʻahu

ASM affiliates

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1. Previously recorded historic properties located near the current project area. 34

1. INTRODUCTION

At the request of PBR Hawaii, on behalf of the City and County of Honolulu, ASM Affiliates (ASM) conducted an archaeological literature review of previous relevant reports and maps and an archaeological field inspection of a roughly 0.58-acre section of Kekaulike Street that comprises the proposed Kekaulike Street Multimodal Improvements Project area in Honolulu Ahupuaʻa, Kona District, Island of Oʻahu (Figures 1and 2). The proposing agency intends to provide a more coherent connection between the existing Kekaulike Mall (from Hotel Street to North King Street), Kekaulike Street (from N. King Street to Nimitz Highway), and the future Holau transit station (the future Honolulu Rail Transit stop in Chinatown at the northeast corner of Kekaulike and Nimitz Highway). To that end, the proposing agency is planning to convert Kekaulike Street into a shared-use street, which will improve pedestrian accessibility and safety, while promoting economic and social activities in the newly created shared space between North Hotel Street and Nimitz Highway. The proposed improvements will primarily facilitate pedestrian and bicycle use, as well as vehicular access to businesses for deliveries and maintenance, and improve drainage conditions. A detailed description of the proposed project is provided in the following section of this report.

The purpose of the current field inspection and archival review is to determine if any undocumented historic properties exist in the proposed project area. This document is intended to support an environmental assessment being prepared in compliance with Hawaiʻi Revised Statutes (HRS) Chapter 343, and for subsequent inclusion in the HRS Chapter 6E-8 submittal package to the Department of Land and Natural Resources-State Historic Preservation Division (DLNR-SHPD).

The following pages outline the land use and settlement patterns in the project area vicinity and the subject *ahupuaʻa* based on a review of existing archival documents, databases, and maps of the project area vicinity. This information includes details about Chinatown and Honolulu Ahupuaʻa, as well as the greater Kona District during the Precontact and Historic periods; and concludes with the findings from archaeological investigations conducted in the project area vicinity. The contextual discussion is presented as a means of understanding the cultural significance of the area and any previously recorded, or any as of yet unidentified historic properties within the project area.

PROJECT AREA DESCRIPTION

The project area is located within downtown Honolulu and comprises the Kekaulike Street Mall between N. Hotel Street and King Street, and Kekaulike Street between King Street and Nimitz Highway—and extends the length of 2 city blocks—about 190 meters (0.12 miles); the *makai* (seaward) end of the project area lies approximately 47 meters inland of the waters of Honolulu Harbor (see Figures 1and 2). The project area is bound on all sides by urban commercial and residential development (see Figure 3).

Regarding its geological context, per Sherrod et al. (2007) the project area lies within an alluvial deposit (geologic map unit Qa), which is typical of the broad drainages that hold sand and silt; this non-volcanic deposit is situated between lagoon/reef deposits (geologic map unit Qcrs) and fill deposits (geologic map unit Qf; Figure 4). Most of the project area consists of one soil type, Ewa Silty Clay Loam (EmA) with a small section of mixed fill land near the *makai end* along Nimitz Highway (Figure 5). Per Foote et al. (1973:30), Ewa Silty Clay Loam is well-drained and moderately shallow (coral limestone depth is 20 to 50 inches) and flat (0 to 2 percent slopes) The elevation of the project area ranges between 12 and 18 feet (3.6 and 5.5 meters) above mean sea level (amsl) with an average annual rainfall of 29 inches or 737 millimeters (Frazier et al. 2016). Annual average temperatures in Honolulu range between 67° Fahrenheit (19.4° Celsius) in December and January to 90° F (32.2° C) in August and September (Juvik and Juvik 1998:56). The topography within the immediate vicinity of the project area between the harbor and Nuʻuanu Stream has been extensively altered by human development over the past 150 years. Dredging of Honolulu Harbor and modifications to the Nuʻuanu streambed have resulted in the extension of the shoreline outwards into the harbor; the shoreline was formerly located further inland, on the *mauka* (inland) side of present-day Nimitz Highway.

As previously mentioned, the current project area comprises the Kekaulike Mall, a pedestrian mall with access to businesses and a portion of Kekaulike Street roadway, which empties onto Nimitz Highway. There is no natural vegetation in the project area except; few coconut palms and flowering trees that are present along the margins of the Kekaulike Mall and to a lesser extent within the Kekaulike Street portion of the project area (see Figures 6 and 7).

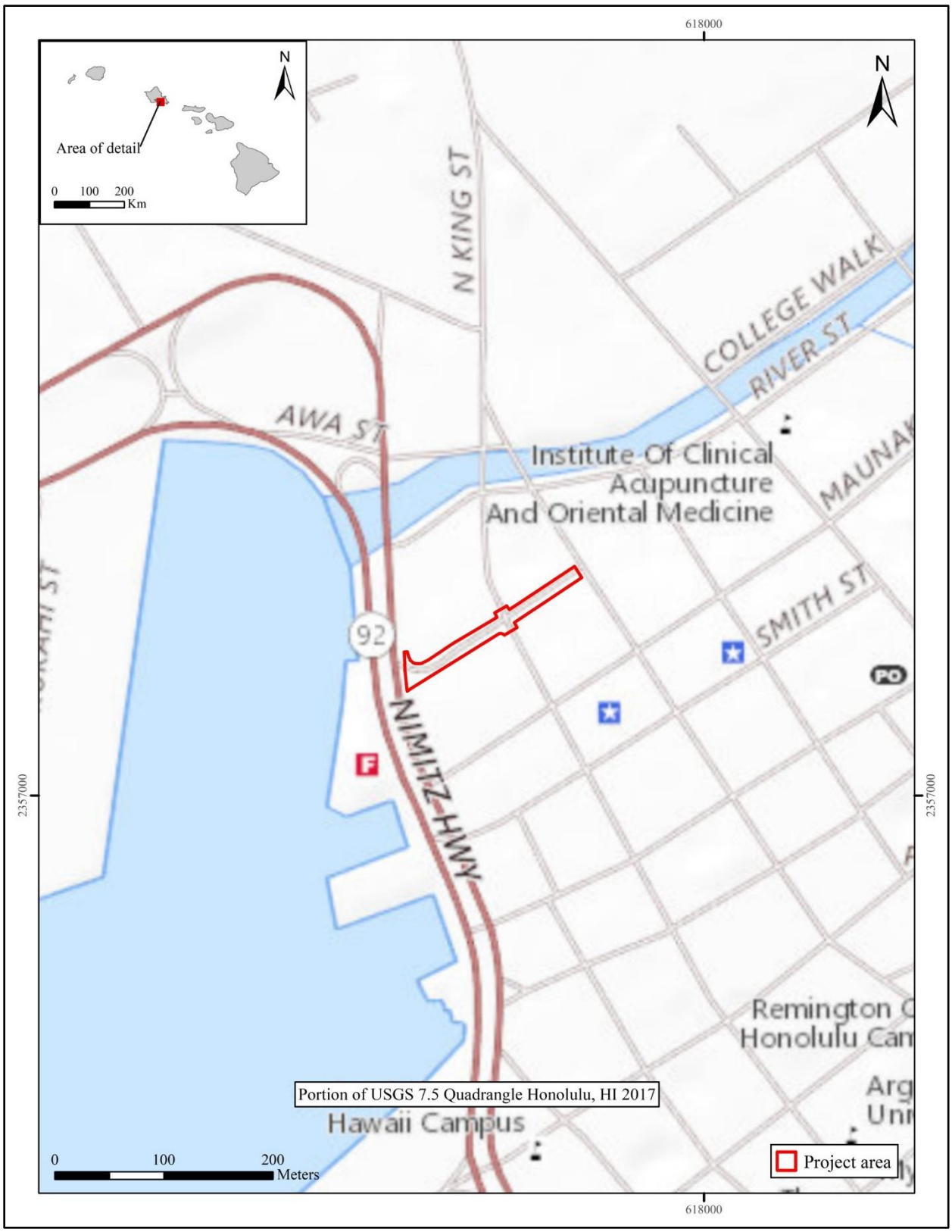

Figure 1. Project area location.

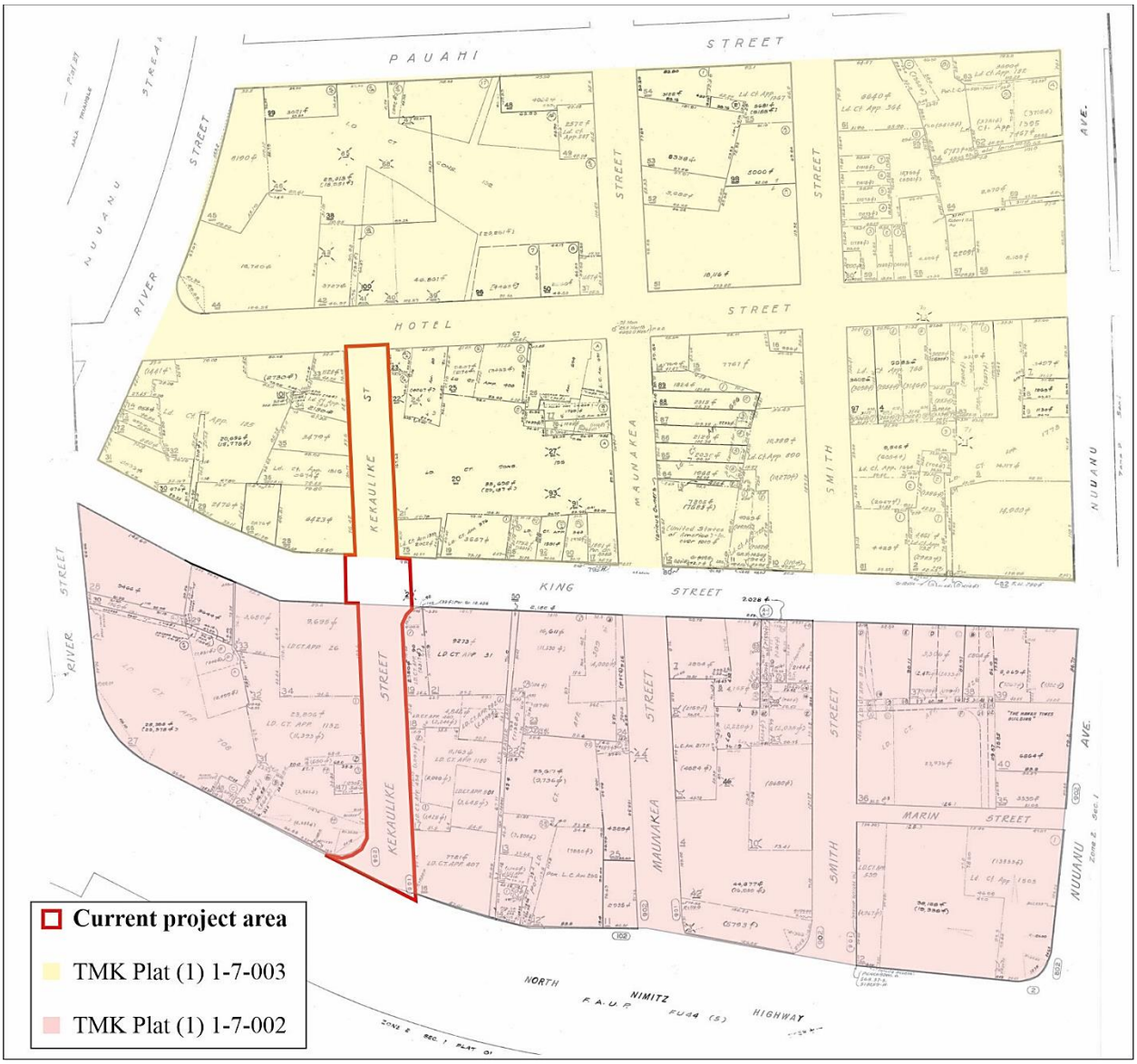

Figure 2. Location of current project area relative to TMK parcels within plats (1) 1-7-002 and 003.

Figure 3. Recent composite image showing project area location.

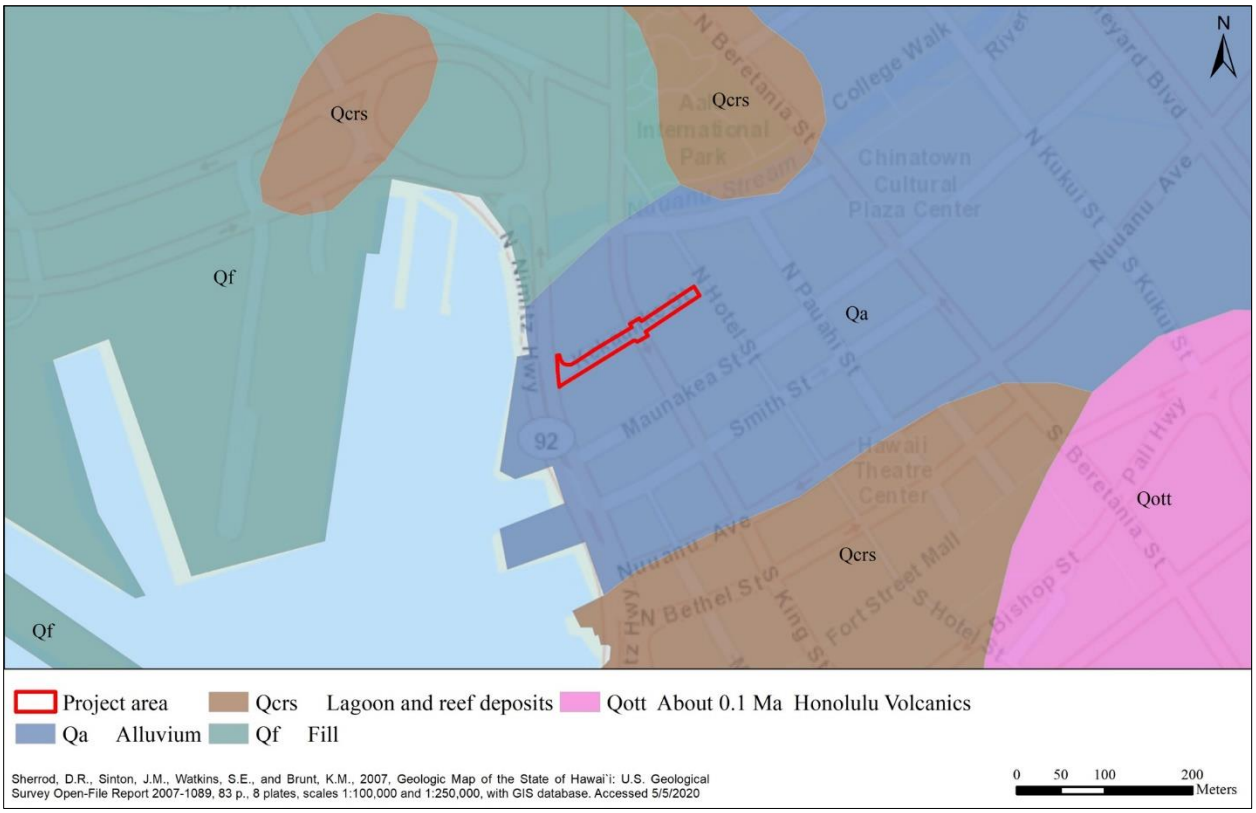

Figure 4. Geology in the current project area.

Figure 5. Soils in the current project area.

Figure 6. Representative photograph of the Kekaulike Street portion of the project area, view to the southwest.

Figure 7. Representative photo of palm and flowering trees in Kekaulike Mall portion of project area, view to the northeast.

PROPOSED DEVELOPMENT ACTIVITY

The Kekaulike Street Multimodal Improvements Project (Figure 8) will include conversion of the existing Kekaulike Street from a traditional roadway to a "shared-use street" concept allowing primarily pedestrian and bicycle use with vehicular access for deliveries to local businesses during discrete hours. Improvements to both Kekaulike Street and Kekaulike Mall will also include drainage upgrades to mitigate stormwater runoff quantity and quality, as well as technology and beautification enhancements such as lighting, shade trees, Wi-Fi, CCTV, public address system, and opportunities for public art. This will be implemented in two phases.

Improvements to Kekaulike Mall (between North King and Hotel streets) will occur in Phase 1 and include replacement of existing brick paver system with poured concrete surface, drainage improvements, and replacement of trees found to be in poor condition. Curb ramp and crosswalk improvements at the intersection of North King Street and Kekaulike Street will also be included in Phase 1.

The improvements to Kekaulike Street (between North King Street and Nimitz Highway) will occur in Phase 2 and include a raised street level to match the existing curb height with vehicular access ramp up from the North King Street intersection for delivery vehicles and an exit ramp feeding into North Nimitz Highway near the future Holau transit station. The raised street level will provide for new drainage improvements and enhance the continuity of multi-modal travel. Vehicular control measures to regulate authorized access and prevent illegal parking on Kekaulike Street is also being considered as part of Phase 2.

Extensive drainage improvements throughout both Kekaulike Mall and Kekaulike Street will be designed to alleviate existing environmental concerns related to stormwater runoff. Landscaping improvements will include planters, grated tree wells, and a supplemental irrigation system. There will also be dedicated areas for a future bicycle ride-share station (Biki) along Kekaulike Mall, a freight loading zone on Kekaulike Street and a drop-off zone for paratransit (The Handi-Van) near the future Holau transit station along Kekaulike Street. An additional site will be preserved on Kekaulike Mall just *mauka* of North King Street for a Chinatown gate structure to be designed and developed by the City at a future date. Paving or painted design features will be applied to both the Kekaulike Mall and the Kekaulike Street surfaces to offer a cohesive, aesthetically pleasing streetscape that will foster a sense of place consistent with the historical and cultural character of the Chinatown neighborhood.

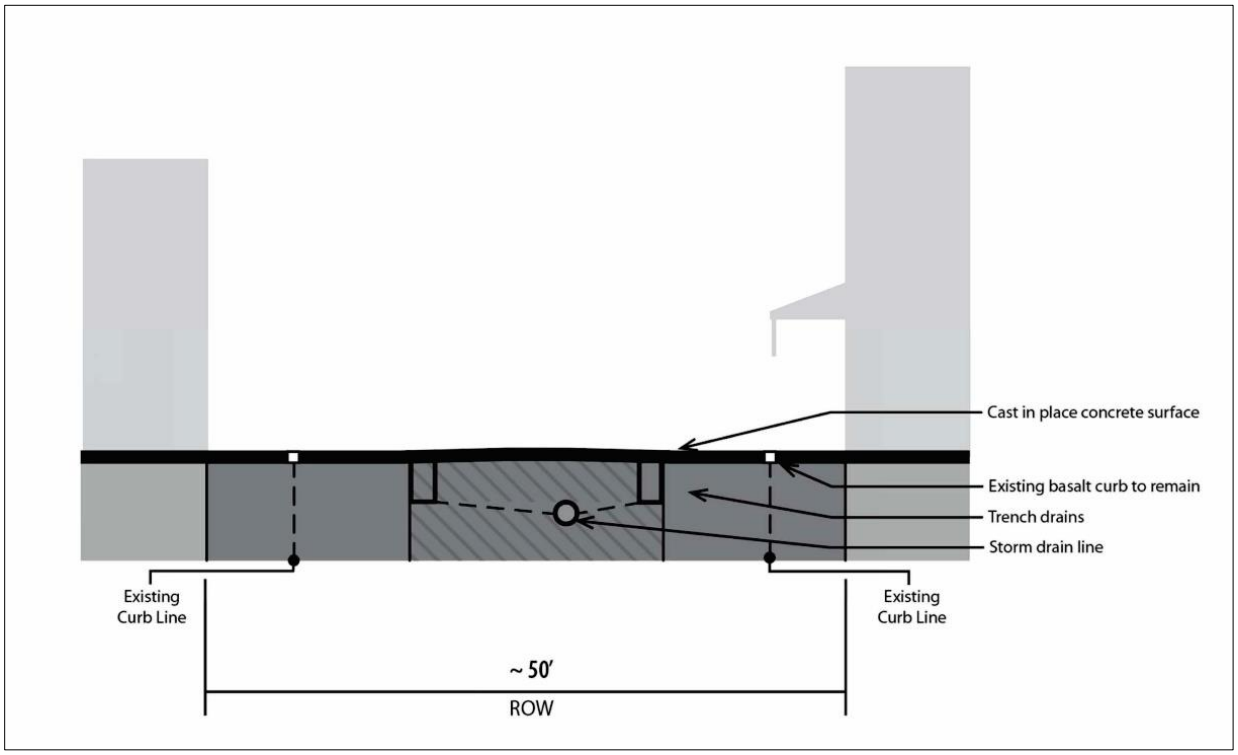

Figure 8. Kekaulike Street Multimodal Improvements Project schematic street plan showing subsurface drain elements.

2. ARCHAEOLOGICAL LITERATURE REVIEW

To generate a set of expectations regarding the nature of archaeological resources that might be encountered within the current project area, and to establish an environment within which to assess the significance of any such resources, a general culture-historical context for Honolulu Ahupuaʻa and the greater Kona region is presented. This discussion includes legendary and historical accounts of the project area vicinity as well as the findings from relevant prior archaeological studies conducted therein; and concludes with field inspection expectations.

CULTURE HISTORICAL CONTEXT OF HONOLULU AND THE KONA DISTRICT

As previously mentioned, the current project area is located between Nimitz Highway and North Hotel Street near the western extreme of the Chinatown Historic District in Honolulu Ahupuaʻa within the traditional *moku* (district) of Kona (commonly referred to as Honolulu District). Handy et al. (1991:473-474) described the ancient Kona Coast of Oʻahu thusly,

> This area is subject to the cyclonic southerly (kona) storms in winter months, but through most of the year is cooled by trade winds sweeping through low gaps in the Koʻolau range at the top of Moanalua, Kalihi, Nuʻuanu and Manoa Valleys. There were abundant rain, ever flowing streams, springs, pools, verdant interior valleys, broad slopes and well-watered low-lands, fishpond areas, harbors, beaches, and lagoons. Altogether Kona was, for Oahu, the area richest in natural resources and most pleasant for abundant and comfortable living.

The subject *ahupuaʻa* of Honolulu is bounded to the north by Kāpālama and Kālihi *ahupuaʻa* and to the south by Waikīkī Ahupuaʻa. These *ahupuaʻa* are located within the traditional District of Kona, along the south shore of Oʻahu. The Chinatown Historic District extends roughly north-south between Nuʻuanu Stream and Nuʻuanu Street and roughly east-west from Beretania Street to Nimitz Highway, fronting Honolulu Harbor. During the Precontact Period, the political center of Oʻahu was located in the ʻEwa District but by the 18th century it had shifted to the Kona District and the foremost settlement on the south shore of Oʻahu arose in Waikīkī (Cordy 1981). At that time, present-day Honolulu was only sparsely populated with barren terrain as compared to Waikīkī (Handy et al. 1991). In the early nineteenth century, Honolulu Harbor become a hot spot for foreign trade; subsequent population growth and development in Honolulu continued to be centered on the harbor, waterfront, and surrounding areas (Daws 2006). Per Handy et al. (1991:270), "it was purely coincidental that the harbor now named Honolulu—the best harbor in the islands for sailing ships, as it turned out—became the commercial center after European discovery, and that the town subsequently bordering it became the capital of the Hawaiian kingdom." The arrival of foreign missionaries in 1820 and the establishment and construction of Kawaiahaʻo Church and Mission Houses led the village of Honolulu to spread eastward and inland away from Nuʻuanu Stream to less populated areas. Traditional land use continued for some time; however, Native Hawaiian populations were devastated by introduced diseases. The influx of immigrant laborers for the sugar and pineapple industries and associated railroad construction in the middle to late 1800s further drove the growth and development of Honolulu. Sweeping economic and demographic changes had lasting impacts to the physical and cultural landscape and resulted in the emergence of Chinatown as we know it today. It is within this general context that the following discussion of the project area vicinity is based.

Legendary Accounts of the Project Area Vicinity

Honolulu is mentioned in numerous Hawaiian legends; but, in most instances, the legends tell the tales of other *wahi pana* (legendary places) within what is now known as Honolulu rather than feature Honolulu as their subject. Many of these *moʻolelo* (traditional accounts) feature the uplands of nearby Nuʻuanu Valley. For instance, "the legends say that one of the homes of Wakea and Papa [the progenitors of the Hawaiian people] was the splendid country around Nuuanu Valley and Honolulu" (Westervelt 1915:76). However, as the current project area location has been considered part of three distinct traditional land divisions: Kou, Kīkīhale, and Kapuʻukolo, this discussion focuses on legends associated with these *wahi pana* located in the immediate project area vicinity rather than Honolulu or Nuʻuanu Valley.

According to Westervelt (1915) the corner of Nuʻuanu Avenue and King Street, to the southeast of the current project area, was known as a place where ghosts would gather nightly to engage in games and sports. The surf break in the harbor of Kou was known as Mamala and named after a chiefess who loved to surf, drink *ʻawa* (narcotic drink made from the kava [*Piper methysticum*] plant), and play *kōnane* (ancient checkers); and who whose second husband, the *aliʻi* Honokaupu lent his name to an *ʻili* located to the southeast of the project area and *makai* of Merchant Street. Westervelt (1915:57) also tells of a sacred place called Peleula near the corner of Beretania and Nuʻuanu streets where offerings were made. One legend tells of how Kaehu "the little yellow shark of Pearl Harbor" and his shark friends

punished a man-eating shark from Maui; using two surfers as bait, Kaehu tricked Pehu who consequently became trapped in the coral reef at Waikīkī and was killed by the surfers. The surfers made an earth oven or *imu* at Peleula and burned the pieces of the killer shark there (Westervelt 1915).

Another traditional account about Aiai, son of Kūʻula—the god of the fish of the sea mentions the *aliʻi* Kou and his daughter Kīkīhale, two legendary characters whose names were later borrowed and applied to the project area vicinity. The following summary is based on a legend told by Moses "Moke" Manu, translated by Moses Nakuina, and originally published by Thomas Thrum in the early 1900s. When Aiai visited Oʻahu, he stayed at Kakaʻako, to the south of the project area, for several days with his friend—a man named Apua, "listening to the murmurs of the chief named Kou" (Thrum 1998:242). Apparently, Kou was known as a generous and skillful *aku* (*Katsuwomus pelamis*-skipjack tuna) fisherman. During this time, Aiai met and promptly married a young woman named Puiwa, who soon bore him a son named Puniaiki. Aiai lived up in the valley with his family for a time.

On one occasion, their household received only a meager ration of *aku* from Honolulu, and Puiwa told Aiai to get *ʻoʻopu* and *ʻōpae* (general terms for fish and shrimp, respectively) from a nearby brook. Aiai did her bidding and dammed the brook to create pits for catching *ʻoʻopu* and *ʻōpae*. One day, the family went to collect *ʻoʻopu* and *ʻōpae* and Puiwa left Puniaiki alone on the stream bank while she fished; he soon began to cry and Puiwa refused to stop fishing and attend to the baby and talked back to Aiai when he told her to do so. Thus, Aiai called upon his ancestors and brought a flash flood down upon the stream, which washed away the dam and baby Puniaiki with it. Aiai then abandoned his wife and went to Kaumakapili, an *ʻili* located *mauka* of the current project area; while there, he saw the guardian of chiefess Kīkīhale, Kou's daughter, gather up a large *oʻopu*, which Kīkīhale chose to keep as a pet in a large calabash. Aiai recognized the fish as his son Puniaiki transformed, but he let Kīkīhale's guardian keep his son in the calabash for he was well taken care of. Eventually, Puniaiki shifted back into human form and the chiefess ordered her guardian to raise the child until he reached adulthood, at which point Kīkīhale said she would become his wife. Against her guardian's advice, Kīkīhale did marry the much younger man once he came of age and they were happy at first; but, with time she became unsatisfied because her husband would not engage in fishing. Upon hearing her reproach, Puniaiki responded that he had "authority over fish, men, pigs, and dogs" (Thrum 1998:245) and told Kīkīhale to ask her father for double canoes, fishing equipment, and paddlers. Kou provided the requested canoes, men, and equipment and upon receiving them Puniaiki made a fire and burned 1,000 pearl fishhooks; all but two *aku* hooks that Kou had kept for himself. The next day at dawn Aiai revealed the place of the *pā* (fishhook) named Kahuai and Puniaiki took Kahuai wrapped in a gourd out to the breakers of Puʻuiki and to the fishermen's surprise, upon unwrapping Kahuai and holding it in his palm, "the akus, unprecedented in number, fairly leaped into the canoes," overflowed the harbor and swam to Kūwili fishpond, formerly located to the northwest of the project area. Puniaiki took two of the fish to his father who told him to take them to where his mother lived as an offering to Kūʻula and he later returned to his mother with more *aku* for her. According to Thrum (1998:248),

> The people marveled at the quantity of fish throughout the harbor, so that even the stream at Kikihale was also full of akus, and Puniaiki commanded the people to take of them day and night; and the news of this visit of akus went all around Oahu. This unequalled haul of akus was a great humiliation to Kou, affecting his fame as a fisherman; but he was neither jealous of his son-in-law or angry,–he just sat silent. He thought much on the subject but with kindly feelings, resulting in turning over this employment to him who could prosecute it without worry.

THE PROJECT AREA VICINITY DURING THE PRECONTACT PERIOD

The current project area lies within the Honolulu plain along the southern coast of Oʻahu between Nuʻuanu and Pauoa valleys, which Handy et al. (1991) characterized as sparsely populated barren terrain prior to the arrival of foreigners from the west in the late 18th century. Thus, the early inhabitants of what is known today as Honolulu depended on deep-sea fisheries for their sustenance, which they supplemented by planting *loʻi kalo* (wet taro patches) in the *mauka* lands of Nuʻuanu Valley and constructing fishponds in the *makai* lands, such as Kawa and Kūwili—formerly located to the west of the mouth of Nuʻuanu Stream and northwest of the current project area.

As previously mentioned, the project area was once considered part of the traditional land division known as Kou. Kou was an *ʻili kupono* or *ku*—land divisions smaller than an *ahupuaʻa*, "which were independent of the Ahupuaʻa, and generally did not pay tribute to its chief" (Alexander 1890:106). Thus, these types of land divisions bear the name of distinct localities but are not *ahupuaʻa* unto themselves. Westervelt (1915:2) relates that Kou was named after Kou, a chief who was in power at the time of Kakuhihewa; and that Kou comprised a section of the fertile lowlands "lying between Hotel Street and the sea and between Nuuanu Avenue and Alakea Street." Per Pukui and Elbert (1986:167) the Honolulu Harbor vicinity of Kou was a "famous rendezvous for *kōnane* checkers" and the saying "*Hui aku nā maka i Kou,"* which translates to "the eyes will meet at Kou" refers to people coming together to play games in front

of spectators. Per Malo (1951:65), in Kou, *ali‘i* commonly engaged in games related to mock-warfare, such as spear-throwing (*lono maka-ihe*), pole-vaulting (*ku-pololu*), wrestling (*ka‘ala*) and boxing (*kui-alua*)

In addition to being part of Kou, a review of historical maps and accounts revealed that the project area comprises portions of two other traditional land divisions: Kīkīhale and Kapu‘ukolo (Figure 9). According to Pukui et al. (1974:110), the immediate project area vicinity, “bordered by Mauna-kea and King Streets to Nu‘u-anu Stream” was formerly known as Kīkīhale, “named for the daughter of Chief Kou” who was featured in one of the legendary accounts above. While Kapu‘ukolo was defined as an “old section of Honolulu bounded by Nu‘u-anu Stream and Honolulu Harbor” (Pukui et al. 1974:90). Kamakau (1992:272) further specifies the boundaries of Kīkīhale thusly, “on the Waikiki side of Nu‘uanu Stream running from River Street to Kekaulike between Hotel and King Streets.” Thus, it appears that the eastern portion of the current project area (currently the Kekaulike Mall) coincides with the southern extreme of Kīkīhale; while the western portion of the project area (currently Kekaulike Street) coincides with a portion of Kapu‘ukolo (See Figure 9).

The thoroughfare that comprises the current project area is named after Kekaulike, a former ruling chief or *mō‘ī* of Maui whom Kamakau (1992:75) described as “an ambitious chief, a lover of war and greedy for rule over Hawaii.” After the death of the Hawai‘i chief Keawe, a rival chief from Maui named Alapa‘i successfully defeated the chiefs of Kona and Kohala and became the ruler of those lands; Kekaulike then took war to the island of Hawai‘i and successfully sabotaged Alapa‘i’s attempt to unite the island under his rule by keeping his men occupied in battle. Per Kamakau (1992:66), before fleeing from Alapa‘i and after cutting down the trees of Kona and Kawaihae “he abused the country people of Kekaha” and “slaughtered the country people of Kohala, seized their possessions, and returned to Maui.” Shortly after his return to Maui, Kekaulike began having epileptic fits and his ill health forced him to name his successor, Kamehamehanui—the highest ranking of the many children he had with his wives and female retainers. Kekaulike died on Maui in March of 1736 but his legacy lived on for generations as he was also the father of Kahekili and maternal grandfather of Ka‘ahumanu.

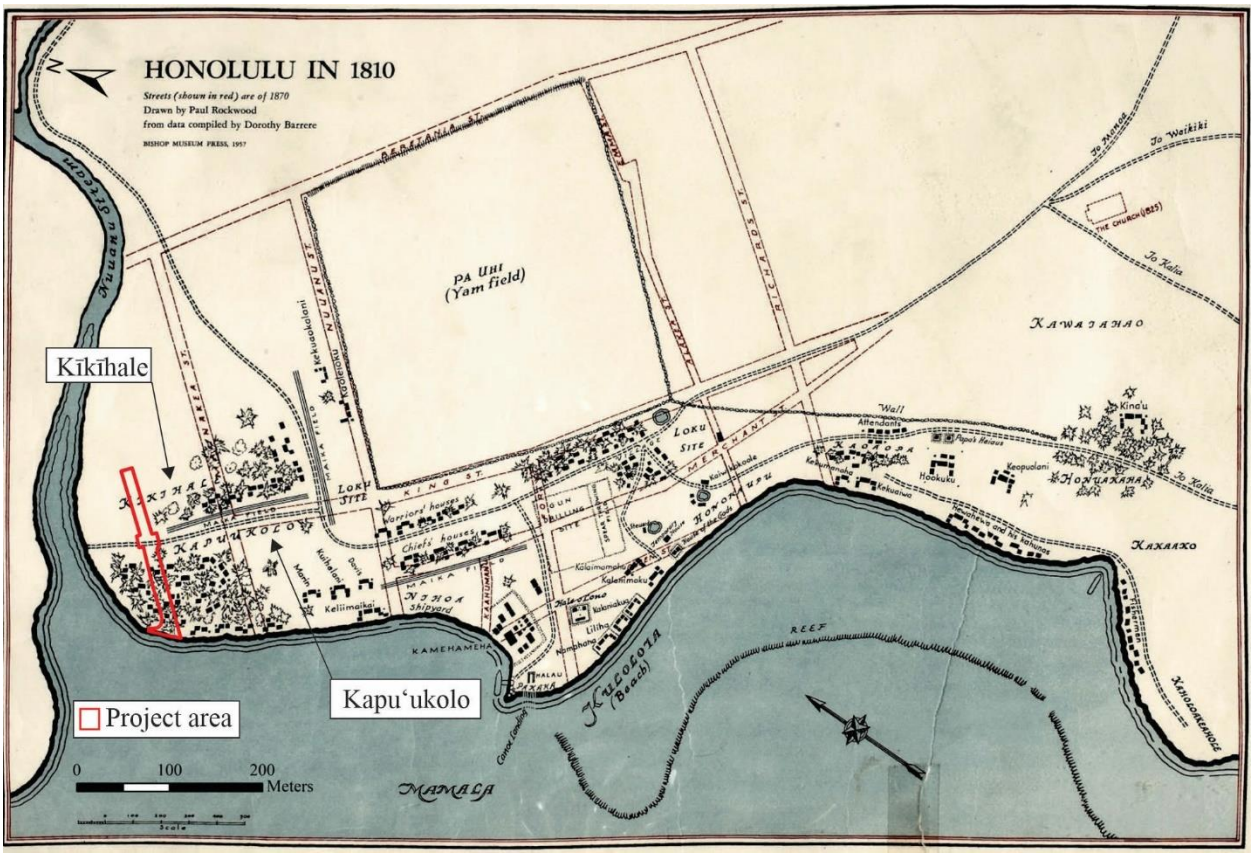

Figure 9. Project area location relative to *‘ili* referred to in the discussion ca. 1810 (after Rockwood 1957).

THE PROJECT AREA VICINITY AT THE START OF THE HISTORIC PERIOD

Historical accounts penned by both Hawaiian Historians and foreign-born visitors and settlers are an invaluable resource. Journal entries and articles from annual publications as well as Hawaiian and English language newspapers along with historical maps were reviewed as part of the current study in an effort to reconstruct the land use and environs of the current project area and greater Honolulu after the first contact with Europeans in the late 1700s.

Early historical accounts (1789-1819)

In March of 1792, British explorer George Vancouver visited Oʻahu and recorded his experience. Upon arriving at Oʻahu, Vancouver (1798:161) moored his ship in a bay, "which the natives call Whyteetee [Waikīkī]" and came ashore in search of drinking water near what he referred to as "a large Indian village." Apparently, at the time of Vancouver's visit many of the chiefs and warriors of Oʻahu were engaged in warfare off-island at Molokaʻi and Maui. Vancouver (1798:163) and some of his men were guided to a freshwater source roughly a mile to the north of the village via "an exceedingly well-made causeway, about twelve feet broad, with a ditch on each side." Along the way, Vancouver (1798:163-164) made the following observations, which can also be applied to the current project area vicinity:

> This opened to our view a spacious plain, which, in the immediate vicinity of the village, had the appearance of the open common fields in England; but, on advancing, the major part appeared divided into fields of irregular shape and figure, which were separated from each other by low stone walls, and were in a very high state of cultivation. . . and abounding with a variety of wild fowl, chiefly of the duck kind, some of which our sportsmen shot, and they were fine eating. The sides of the hills, which were at some distance, seemed rocky and barren; the intermediate vallies [sic], which were all inhabited, produced some large trees, and made a pleasing appearance.

In the early 1800s, following the landings of foreign merchant ships in Honolulu Harbor and the subsequent development of Honolulu, there was a rapid alteration of traditional subsistence patterns due in part to the influx of foreigners. After Kamehameha's conquest of Oʻahu in 1795 (Handy et al. 1991), Kou became known as Honolulu, which means "protected bay" (Pukui et al. 1974:50). The growing importance of foreign trade may have influenced Kamehameha I's decision, in 1809, to relocate the royal residence from Waikīkī to Pākākā at Honolulu Harbor—an "old canoe landing" and later a "wharf built in 1827 at the same site" (Pukui et al. 1974:175), located to the southwest of the project area (Figure 10). However, according to Daws (1966:36) the motivation for the move is not entirely clear for ships arrived at port "at the rate of only one a month, and for some years Kamehameha had been able to handle a comparable volume of Honolulu trade from his home at Waikiki." Furthermore, compared to Waikīkī, the project area vicinity was "hotter and dustier," and as Nuʻuanu Stream was tidal, "fresh water had to be brought from the inland springs in gourds" and although rich in marine resources, the beachfront along present-day Honolulu Harbor "was marred by mudflats" (Daws 1966:36). Kamehameha spent only three years in Honolulu before he left Oʻahu for Hawaiʻi Island in 1812, never to return. Kamakau (1992:271-272) provides details about the project area vicinity around this time—during the early nineteenth century, as follows:

> . . . Houses were built above the stream of Kikihale down to Kapuʻukolo. . . on the beach called today Mokuaʻaikaua and at Kaluaokapili and at ʻApua, Kaʻoaʻopa, and all the way to Honuakaha. Within these boundaries there were a few buildings. . . The *maika* grounds called Kalanikahua ran from the Kikihale stream in front of William Stevens' place, southeast along John Meek's place to Polelewa (Bethel Church) and along Ka-makea's coconut grove. A watercourse ran from Kaʻakopua (Central Grammar School) to the fishponds of Kahoʻikekanaka *makai* of Honuakaha. The center was occupied by a few scattered houses where the foreigners lived. Liholiho and his chiefs lived at Pakaka (the end of Fort Street) and at places near the fort, where also lived the influential people and the soldiers who guarded the fort.

Hawaiian Historian and member of the royal court, John Papa ʻĪʻī wrote a series of articles for the Hawaiian newspaper *Kuokoa* about historical incidents that he recalled from his own lifetime, which were published from 1868 until his death in 1870. Subsequently, Mary Kawena Pukui translated all the Kuokoa articles written by ʻĪʻī, and Dorothy Barrère compiled and edited an illustrated volume published under the title *Fragments of Hawaiian History* (ʻĪʻī 1959). In 1957, Bishop Museum artist Paul Rockwood drafted a map titled "Honolulu in 1810," based on three sources: data compiled by Dorothy Barrère from ʻĪʻī's Kuokoa articles; an 1825 sketch map by Lieutenant Charles Malden; and an 1870 government survey map that depicted the street names as they appeared at that time. The area known today as Honolulu is depicted with the corresponding names of the various *ʻili* and landmarks as they were in 1810; while red ink indicates the streets as they were referred to in 1869 by ʻĪʻī. This map is reproduced in its entirety as Figure 9 above, while Figure 10 below is a detail view of the portion of the map that includes the immediate project area vicinity.

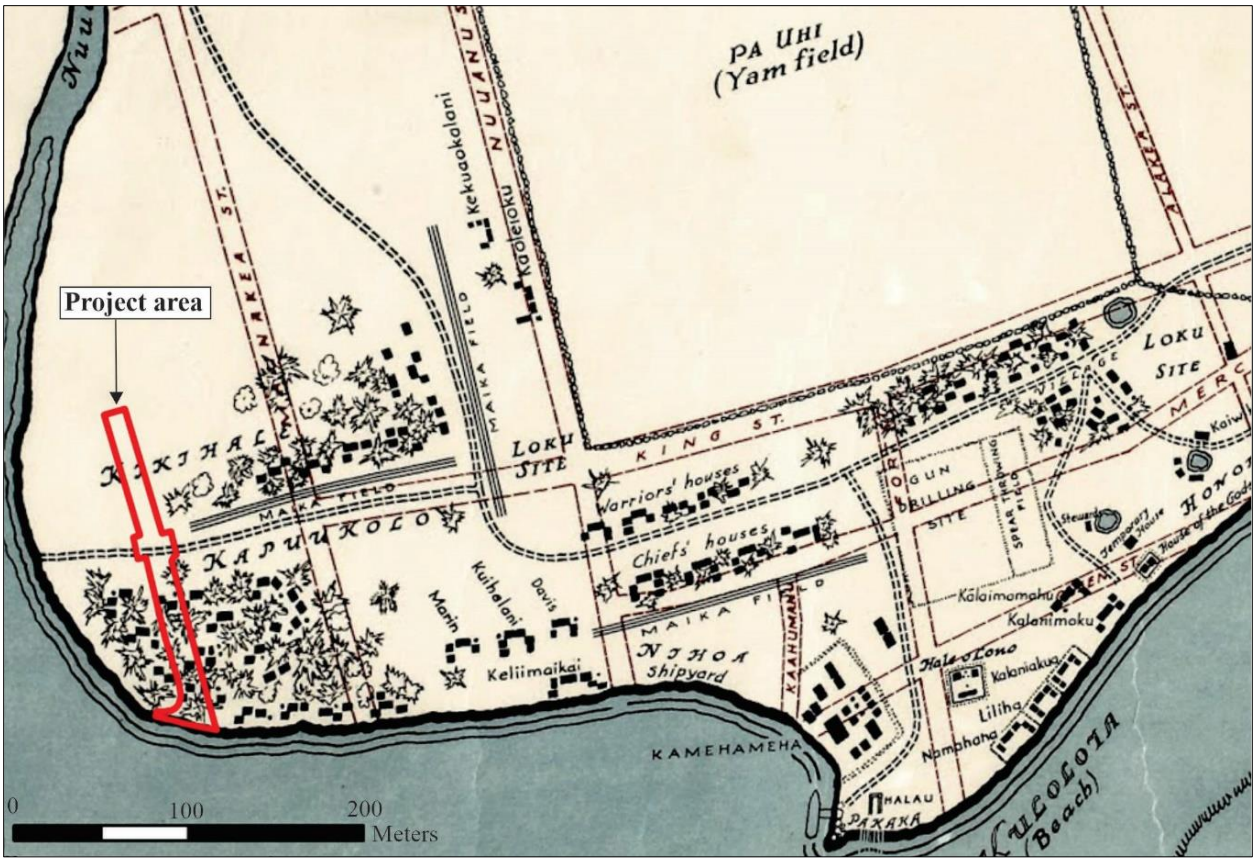

Figure 10. Portion of the map of Honolulu in 1810 showing the location of the project area relative to landmarks mentioned in the discussion (after Rockwood 1957).

Among the many details provided by ʻĪʻī (1959:63-64) about early Honolulu is the following account that explains *loku*—places "where men and women of every kind gathered in the evenings to enjoy themselves" he adds, "such places were known from the distant past." While ʻĪʻī was at court one of the more popular *loku* was found at the corner of King and Nuʻuanu Streets to the south of the project area and another near the intersection of Merchant and Alakea streets further south (see Figure 10). ʻĪʻī (1959:64) explained the concept of *loku* thusly,

> Some of the amusements indulged in there were hula dances, chants, the recitation of narratives in chant form, and the telling of legends. . . It was customary to announce in advance the nights when entertainments were to be held, and to explain what kind would be performed on a given night in a given place.

Additionally, as in the legendary account by Westervelt (1915) discussed near the beginning of this chapter, ʻĪʻī (1959:64) also reported that "the ghosts of earlier participants are now said to congregate in these places every evening from seven o'clock until midnight."

Makai of King Street and south of the *loku* site were the houses of the warriors across, which were situated across from the houses of the *aliʻi* on the *mauka/makai* sides of a trail, just *mauka* of Nihoa (see Figure 10). ʻĪʻī (1959:64), who was born and raised in ʻEwa District, also enjoyed visiting the waterfront at Nihoa, "the area now bounded at either end by Kaahamanu and Nuuanu Streets, to see the ships built by Hawaiians under the direction of haoles." Near Nihoa, ʻĪʻī (1959:64-65) recalled the following details,

> . . . a house with double doors facing Ewa, with three small grass houses in front of it for the chiefesses. These were fenced in like Papa's house. Makai of them was the *mua*, or men's house, called Halehui, which faced Koholaloa and served Kamehameha I. A little makai of that was a small pond, and to the right of the houses and pond was a wharf of rocks where a three-masted foreign-built vessel could be seen. . . Just makai of that place was a canoe landing [Pākākā], and eastward from there stood the canoe building shed of Kamehameha.

> Just mauka was a large eating house called Kapapoko which belonged to Kaahumanu. And back of this were two storehouses, filled from top to bottom with gunpowder and guns. East of these were some houses in which were stored the belongings of Kamehameha, of the heir to the kingdom, and of the gods of the heiaus. About 2 chains away from the heiau houses was a vacant space approximately 4 chains square which was the *kahua* site used for gun drilling. Beyond this *kahua* site and east of the fence-enclosed houses of the king was the site for the practice of throwing hau wood spears. Here those who were skilled in this branch of Hawaiian warfare could be observed.

In addition to *kahua*, spectators also gathered to watch *maika* played on the various *maika* fields in Kou; one *maika* field extended across Nihoa roughly along present-day Merchant Street between Fort Street and Nuʻuanu. Another *maika* field extended roughly along present-day King Street, beginning near the intersection of Kekaulike and King Streets, immediately south of the project area (see Figure 10). Near the southern terminus of this nearby *maika* field, a third and longer *maika* field extended eastward parallel to Nuʻuanu Street. Per ʻĪʻī (1959:66), a *maika* stone or *ulu maika* "resembles a wheel whetstone in shape, but it is small enough to be held in the palm of the hand" and is thrown underhand by the player. ʻĪʻī (1959:67) further explains three types of *maika* play as follows:

> A player held the stone to his forehead and ran from one end or the other of the field to a good spot from which to toss it. A man who acted as a pointer indicated where the stone first hit the ground, and waved his right hand to show where it came to a stop before he gave the signal for the next player to begin.
>
> Another way of playing *maika* was for two or more persons to play on the same field at the same time. Still another was to have stakes placed at each end of the field. Then one player rolled his *maika* stone from the stakes which acted as markers at one end toward those at the other end of the field, while the other player rolled his to the spot where the first player's stakes were. If he had finished throwing and his stone touched the ground and began to roll before the other player's stone hit the ground, he won a point. If it did not roll before the other's stone touched the ground, then that player won a point. The first to reach the goal won two points. If his opponent was not strong in rolling his *maika* stone, he would never win a point. He was no better than a strong man who sent his *maika* stone off the course. Those who placed their wagers on such stopped at once.

The *maika* field located closest to the project area was known as the *maika* field of Kīkīhale while the one that parallels Nuʻuanu street was known as the *maika field* of Kalanikahua. Per ʻĪʻī (1959:92), both *maika* fields had houses bordering each side, while the *loku* site near the intersection of King and Nuʻuanu Streets mentioned above, "was where the two *maika* fields joined, and that place was without a house."

Other landmarks depicted in the Rockwood (1957) map and described by ʻĪʻī (1959:88) include Kapauhi, "the king's yam garden" to the southeast of the project area bounded by Beretania, King, Alakea, and Nuʻuanu Streets; and Kamehameha's residential compound at Pākākā, *makai* of Kapauhi (see Figure 10). A stone wall that began in Kakaʻako to the southeast of the project area connected with the southernmost corner of Kapauhi and extended along King Street to Nuʻuanu Street then up to Beretania Street and then became a *hau* wood fence on the *mauka* side before it came down along Emma and Alakea streets into Honokaupu. The *ʻili* of Honokaupu, located *makai* and to the south of the project area was where the houses of the king's stewards were built near Honokaupu Spring. Also found in Honokaupu, was a place where trails from Waikīkī, Nuʻuanu Valley and Pākākā converged, as well as the "houses of the gods Kalaipahoa, Kihawahine, and others" (ʻĪʻī 1959:91). ʻĪʻī (1959:91) further added the following information regarding the use of the trails in Honokaupu:

> Just beyond the houses of the gods were Kalanimoku's houses, close to the edge of the sea. The trail there was always used to reach the drilling field, for by going between the houses of the gods and the heiaus one escaped death.

Regarding Kapuʻukolo residents, ʻĪʻī (1959) reports that they were primarily fishermen who used a variety of traditional Hawaiian nets in their craft. One of his relatives named Kuihelani was a prominent and wealthy member of the Kapuʻukolo community; he worked as Kamehameha I's property manager, and thus had a large household with many servants. George Isaac Davis and his retinue lived to the south of Kuihelani and to the north lived Francisco de Paula Marin, a Spaniard who became a confidant of Kamehameha I. Per Ii (1959:94) on his property "he had two or three horses one a mare, and a young cow" and was "an expert in the stick hula." *Makai* of their residences, on the site of the first custom house on the coral point lived someone name Keliimaikai (see Figure 10).

Of particular relevance to the current study, ʻĪʻī (1959:94) goes on to add that this area—near the *makai* end of Nuʻuanu Street and to the south of the project area within present day Chinatown—was the first place a Chinese immigrant settled, as follows:

> . . . in the vicinity of the custom house at the beach was a house for the very first Chinese ever seen here. There were two or three of them and they prepared food for the captains of the ships which took sandalwood to China. Because the faces of these people were unusual and their speech—which is now commonly heard—was strange, a great number of persons went to look at them.

While Kamehameha was on Hawaiʻi Island, construction of a fort at the *makai* end of present-day Fort Street began under the management of governor Boki (ʻĪʻī 1959). The following brief discussion of the history of Honolulu Fort is mostly based on a paper prepared by Nathanial Emerson (1900) as part of an annual report of the Hawaiian Historical Society. In 1816, the Russian brig *Ilmen* captained by Doctor George Anton Schäffer arrived in Honolulu for repairs and was soon joined by the *Kodiak*, another Russian ship under the command of Captain Young. Although they had permission from Kamehameha to build a block house in Honolulu, the crew of about eighty Russians proceeded to build a fort made from mined coral blocks, mounted their guns, and raised the Russian flag. Their actions alarmed the residents of Honolulu as this was viewed as an attempt of the Russians to seize the island. A messenger was sent to inform Kamehameha of the situation, who dispatched his generals and warriors to investigate and settle the matter. In response to the arrival of Kamehameha's militia the Russians abandoned Honolulu and sailed back to Kauaʻi. Left with a half-completed building, John Young and Kalanimoku (William Pitt) advised Kamehameha to construct a fort that would protect the port and the nearby royal compound from future invaders. Kamehameha proclaimed a draft and ordered all men and women to help with erecting the fort known as Kekuanohu, which was completed in 1817 and later referred to as Honolulu Fort (Emerson 1900). Per Pukui et al. (1974:107), Kekuanohu was completed using Hawaiian labor and subsequently Fort Street was named after the fort; "it was removed in 1857, and coral stones from its walls were used for a retaining wall along the waterfront." Over the forty years that it stood, Honolulu Fort housed several administrative functions such as police headquarters, courthouse, and served as the first jail on Oʻahu primarily for unruly foreign sailors (Emerson 1900).

Missionary accounts (1820-1839)

After the death of Kamehameha I in 1819, Kaʻahumanu proclaimed herself "*Kuhina nui*" (Prime Minister), and the ancient Hawaiian *kapu* system of political and religious governance was radically transformed. The arrival of foreign missionaries shortly thereafter, further advanced this sea change. In 1820, American missionary Hiram Bingham and members of the American Board of Commissioners for Foreign Missions (ABCFM) toured the island of Oʻahu seeking out communities in which to establish church centers for the growing Calvinist mission. Bingham (1848) kept a journal of his experiences over his twenty-one-year residence in the Hawaiian Islands, which offers a rare glimpse at the project area vicinity during the early 1800s. Bingham (1848:92) wrote the following entry when he first glimpsed Oʻahu upon his arrival in 1820, which is applicable to the project area vicinity and Honolulu Ahupuaʻa:

> Early in the morning of the 14th April, that island rose to our view, and, as we approached rapidly, presented successively its pointed mountains, covered with trees and shrubbery, its well-marked, extinguished craters near its shores, its grass covered hills, and more fertile valleys, its dingy thatched villages, its cocoanut groves, its fort and harbor, and its swarthy inhabitants in throngs. . . We cast anchor in the roadstead abreast of Honolulu village, on the south side of the island, about 17 miles from the eastern extremity.

Shortly after their arrival, they scaled Punchbowl Hill or Pūʻowaina and Bingham (1848:93) reported the following details from the view:

> From the highest part of the rim we had a beautiful view of the village and valley of Honolulu, the harbor and ocean, and of the principal mountains of the island. On the east were the plain and groves of Waikiki, with its amphitheatre of hills. . . Below us, on the south and west, spread the plain of Honolulu, having its fish-ponds and salt making pools along the sea-shore, the village and fort between us and the harbor, and the valley stretching a few miles north into the interior, which presented its scattered habitations and numerous beds of *kalo* (*arum esculentum*) in its various stages of growth, with its large green leaves, beautifully embossed on the silvery water, in which it flourishes. Through this valley, several streams descending from the mountains in the interior, wind their way, some six or seven miles, watering and overflowing by means of numerous artificial canals, the bottoms of kalo patches, and then, by one mouth, fall into the peaceful harbor.

A few years later, another Missionary named William Ellis (1917:24) visited the Hawaiian Islands and documented his experience; including the following excerpt regarding the geology of Honolulu and the sourcing of fresh drinking water via wells dug in the Honolulu Plain in the early 1820s:

> The plain of Honoruru exhibits in a singular manner the extent and effects of volcanic agency; it is not less than nine or ten miles in length, and, in some parts, two miles from the sea to the foot of the mountains; the whole plain is covered with a rich alluvial soil, frequently two or three feet deep; beneath this, a layer of fine volcanic ash and cinders extends to the depth of fourteen or sixteen feet; these ashes lie upon a stratum of solid rock by no means volcanic, but evidently calcareous, and apparently a kind of sediment deposited by the sea, in which branches of white coral, bones of fish and animals, and several varieties of marine shells, are often found. A number of wells have been recently dug in different parts of the plain, in which, after penetrating through the calcareous rock, sometimes twelve or thirteen feet, good clear water has been always found: the water in all these wells is perfectly free from any salt or brackish taste, though it invariably rises and falls with the tide, which would lead to the supposition that it is connected with the waters of the adjacent ocean, from which the wells are from 100 yards to three quarters of a mile distant. The rock is always hard and compact near the surface, but becomes soft and porous as the depth increases. . .

Ellis (1917:27-28) also made the following observations about Honolulu Harbor and the city of Honolulu as a royal residence and trade hub in 1823:

> The harbor is the best, and indeed the only secure one at all seasons, in the Sandwich Islands, and is more frequented by foreign vessels than any other; seldom having within it less than three or four, and sometimes upward of thirty, lying at anchor at the same time.
>
> The town has also, since the number of shipping has increased, become populous, and is one of the largest in the islands, usually containing 6000 or 7000 inhabitants. It is the frequent residence of the king and principal chiefs, who are much engaged in traffic with foreigners visiting the islands, or residing on shore, for purposes of trade.
>
> There are twelve or fourteen merchants, principally Americans, who have established warehouses on shore for foreign goods, principally piece goods, hardware, crockery, hats and shoes, naval stores, &c. [*sic*], which they retail to the natives for Spanish dollars or sandal wood.

On March 30, 1828, American Missionary Laura Fish Judd, wife of Dr. Gerritt Judd first spied O‘ahu from the decks of a ship called *Parthian*. Judd (1880:2) made the following record of her first impression of Honolulu thusly,

> There! I see the town of Honolulu, a mass of brown huts, looking precisely like so many haystacks in the country; not one white cottage, no church spire, not a garden nor a tree to be seen save the grove of cocoanuts. The background of green hills and mountains is picturesque. A host of living, moving beings are coming out of that long, brown building; it must be Mr. Bingham’s congregation just dismissed from morning service; they pour out like bees from a hive. I can see their draperies of brown, black, white, pink and yellow native tapa.

As part of an ethnographic study of traditional Hawaiian agriculture, E.S. Handy (1940) collected oral accounts and written historical descriptions agricultural activities that were extant in the Hawaiian Islands prior to European contact. In so doing, Handy (1940:77) reports two somewhat contradictory accounts from the 1830s and 1810s that discuss Honolulu (Honoruru and Hanarara) as a planting locality for taro as follows:

> **Honolulu.** Of the specific section in early days known as Honolulu, Meyer [1834] writes [of his visit in 1830-1832]:
>
> > If one were to visit the great plains of Honoruru and see all the beautiful cultivated land in the transverse valleys, that extends onto the plains of Honoruru, and also the tremendous quantity of food plants that are cultivated in the valley of the Pearl river, one might perhaps be persuaded to believe that a great excess of food prevails here, although that is not the case. The taro plantations occupy a great deal of space and yield far less nourishment than our potato and grain fields. In fact, the high price of fresh supplies at the market of Honoruru we might directly ascribe to inadequate cultivation.
>
> Kotzebue, traveling in the islands from 1815 to 1818, was more impressed. He writes:
>
> > Woajoo is the most fertile of the Sandwich Islands, from which Owyhee receives a part of the taro necessary for its consumption. The cultivation of the valleys behind Hanarura is remarkable; artificial ponds support, even on the mountains, the taro plantations, which are at the same time fish ponds; and all kinds of useful plants are cultivated on the intervening dams.
>
> Elsewhere Kotzebue describes the method of taro cultivation in greater detail:

> The artificial taro fields, which may justly be called taro lakes, excited my attention. Each of them forms a regular square of 160 feet, and is enclosed with stone all round like our basins. . . In the spaces between the fields, which are from three to six feet broad, there are very pleasant shady avenues, and on both sides bananas and sugar cane are planted. . . I have seen whole mountains covered with such fields, through which the water gradually flowed; each sluice formed a small cascade, which ran through avenues of sugar cane, or bananas, into the next pond, and afforded an extremely picturesque prospect.

Within two years of Meyer's visit excerpted above, the results of a census of O'ahu conducted in 1836 resulted in an island-wide population estimate of 27,798 individuals, of which 12,994 souls were reported as residing in Honolulu and Waikīkī (The Hawaiian Spectator 1839:112). In 1839, a second Christian church, Kaumakapili Church, was built for Native Hawaiians at the corner of present day Smith and Beretania Streets on a lot granted by *ali'i* Abner Paki and his wife Konia, parents of Bernice Pauahi Bishop. The construction of the church reinforced the work of the missionaries and accelerated the shift away from traditional Hawaiian practices that further altered the landscape and cultural character of the growing town. The associated urban development within the project area vicinity during this time is evident in a map of (Figure 11), which shows Kaumakapili Church as "Smith's Church" after its first pastor, as well as the grid layout of streets with English language names such as King, Bethel, and Beretania. Also depicted are a Roman Catholic Church and the French consulate along the *mauka* side of Beretania Street.

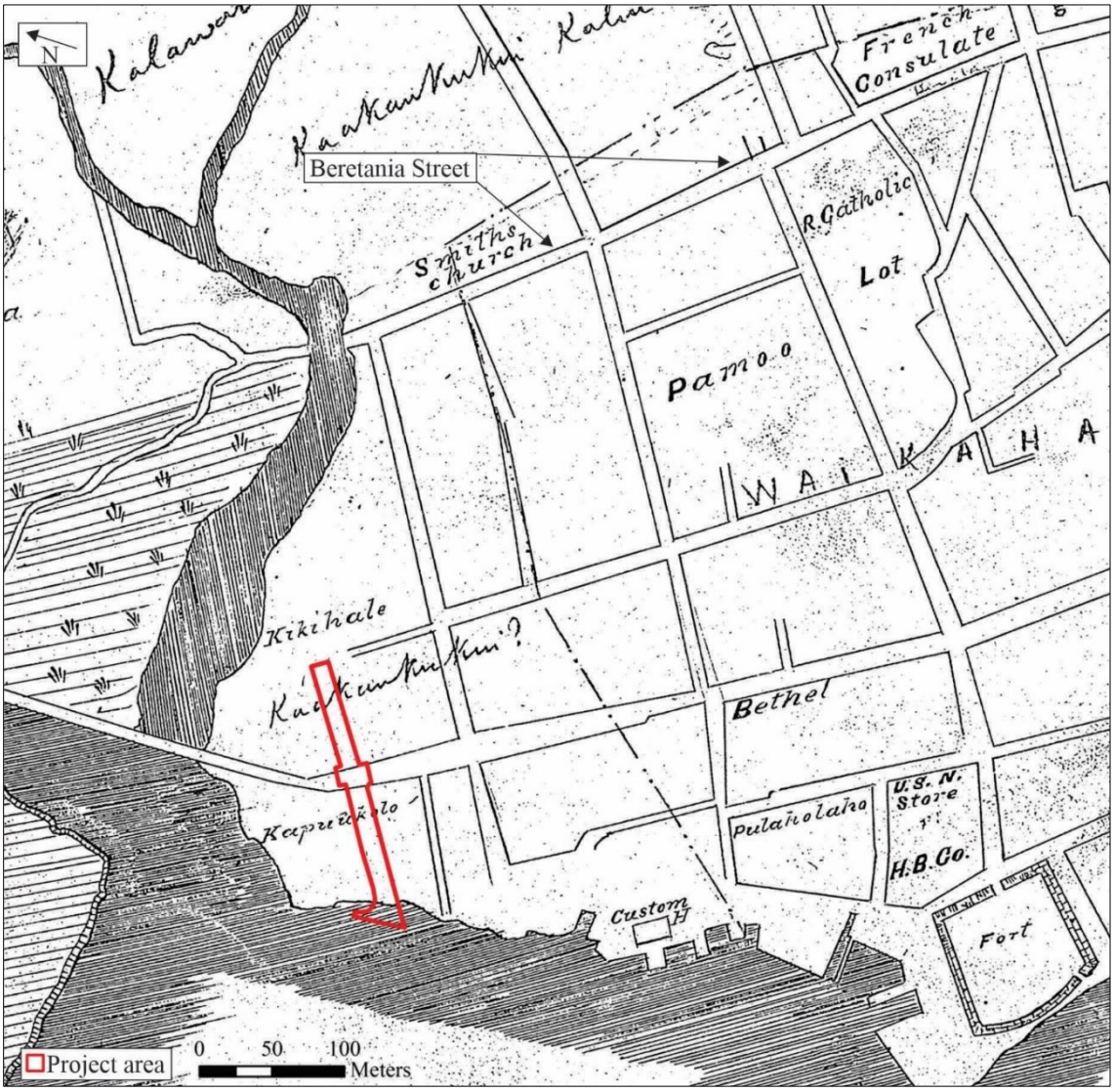

Figure 11. Portion of Hawai'i Reg. Map 242 (Lydgate n.d.) showing the project area relative to land use and development of Honolulu ca. 1847-1849.

THE PROJECT AREA VICINITY DURING THE LATTER HALF OF THE 1800s

The sandalwood trade and provisioning of whaling ships at Honolulu Harbor sparked further expansion of urban Honolulu through the first half of the nineteenth century. The profound religious, socioeconomic, and demographic changes that took place during this time resulted in the establishment of a Euro-American style of land tenure, and the *Māhele ʻĀina* of 1848 or Great *Māhele* was the vehicle used to divide the land between the crown, government, *konohiki*, and native tenants. Prior to this land reformation, all the land and natural resources of Hawaiʻi were held in trust by the *aliʻi* who, in concert with *konohiki* land agents, meted out use rights to the native tenants at will.

The *Māhele ʻĀina* and the birth of Chinatown (1848-1885)

During the *Māhele* all lands were placed in one of three categories: Crown Lands (for the occupant of the throne), Government Lands, or *Konohiki* Lands; all three types of land were subject to the rights of the native tenants therein. The *aliʻi* and *konohiki* were required to present their claims to the Land Commission to receive a Land Commission Award (LCAw.) for lands provided to them by Kamehameha III. They were also required to provide commutations to the government in order to receive royal patents on their awards. The lands were identified by name only, with the understanding that the ancient boundaries would prevail until the land could be surveyed. This process expedited the work of the Land Commission and subsequent land transfers (Chinen 1961). Native commoners could also register claims for land with the Land Commission, and if substantiated, they would receive a LCAw., often referred to as a *kuleana*; upon confirmation of a claim, a survey was required before the Land Commission could issue a *kuleana* award. Based on a review of historical maps it appears that portions of four *kuleana* awards and portions of four land grants comprised the project area as a result of the *Māhele* and the land grant program (Figure 12). Information gathered from Foreign Testimony (F.T.) and Native Testimony (N.T.) database online at AVAKONOHIKI (2020) and the online land grant database at Waihona Aina (2020) is summarized for each *kuleana* and grant below.

The easternmost end of the project area, which is today part of the Kekaulike Mall contains portions of two *kuleana* claims LCAw. 3 and LCAw. 69 and is thus depicted as LCAw. 3-69 to Kaapuiki (see Figure 12). Regarding LCAw. 69, the claimant's attorney testified on behalf of Kawailepolepo's children, who were minors at the time and "under the care of the Missionaries until grown up" as per an order their father made upon his death bed. According to the attorney, Kawailepolepo also ordered that "Kaapuiki and Kaniau should have the property in their care in the interim, and then deliver it up to them" (F.T. Vol.1:71); thus, the claim is depicted as Kaapuiki for Keomailani (see Figure 12). The same entry refers the reader to the testimony recorded for LCAw. 3 to Kaapuiki. Paahana testified on his brother Kaapuiki's behalf that he was familiar with the land since his childhood. Paahana added that Kamehameha had given the land in Kīkīhale to the "head man of all Honolulu" named Kuihelane and that they had lived there with their father and others "as servants of Kuihelane" and that the land was shared with another "head man under Kuihelane" named Hikiau (F.T. Vol. 1:12). Per Paahana, Kuihelane died suddenly with no will in place and they continued to live and serve his replacement, a man named Mahoi, as well as his subsequent replacement Kawailepolepo (mentioned in LCAw. 69 claim above). Paahana also reported that when Liholiho (Kamehameha II) moved to Oʻahu around 1820, "the chiefs and people filled up the place" so he and some of the other servants relocated back to Pālama, "and left our yard with my grandmother & others of my relations. Kaapuiki was at this time a child and stayed with his grandmother, at which place he has always lived to the present time" (F.T. Vol. 1:12).

The two *kuleana* that comprise the western end of the project area, LCAw. 22 to G. Kauwaina (also spelled Kawaina) and LCAw. 66 to Napahi, near the intersection of Kekaulike Street and Nimitz Highway (see Figure 12) are more intertwined in the *Māhele* records than LCAw. 3 and 69 above. In fact, the foreign testimony for these claims is reported under both numbers on the same day. Four separate individuals gave testimony; the first, a female named Umi stated that she knew the claimant (unspecified) lived there since his childhood and that his father "occupied the place in the time of Kamehameha 1st" and that the fence around the property was a much later addition (F.T. Vol 1:30). The second witness, a man named Kane knew the claimant (unspecified) lived there since at least the time Liholiho arrived on Oʻahu (ca. 1820). The third witness, Kainahihi testified that "a difficulty arose between Napahi and Kauwaina in consequence of some women in Kauwaina's yard bringing in some foreigners" and that Napahi built the fence between the two yards as a result. The fourth witness Makaloa recalled that when Kinau was still alive Napahi had difficulties with his neighbors because, "they were rum drinkers and he wished to drive them away" and thus erected a fence between the yards.

Located immediately *mauka* of LCAw. 66 and LCAw. 22, LCAw. 107 appears to have been one of four separate claims (LCAw. 107-110) made by Antonio Manuel for lands on Oʻahu that he applied for continually between 1846 and 1850, at which time the claim appears to have been awarded; but only after Manuel had sold it to Thompson (F.T. Vol 1:331). Other documentation reports the land claim in Honolulu to be a house lot, which he had received from Aniani (LCA Book 3:112-113).

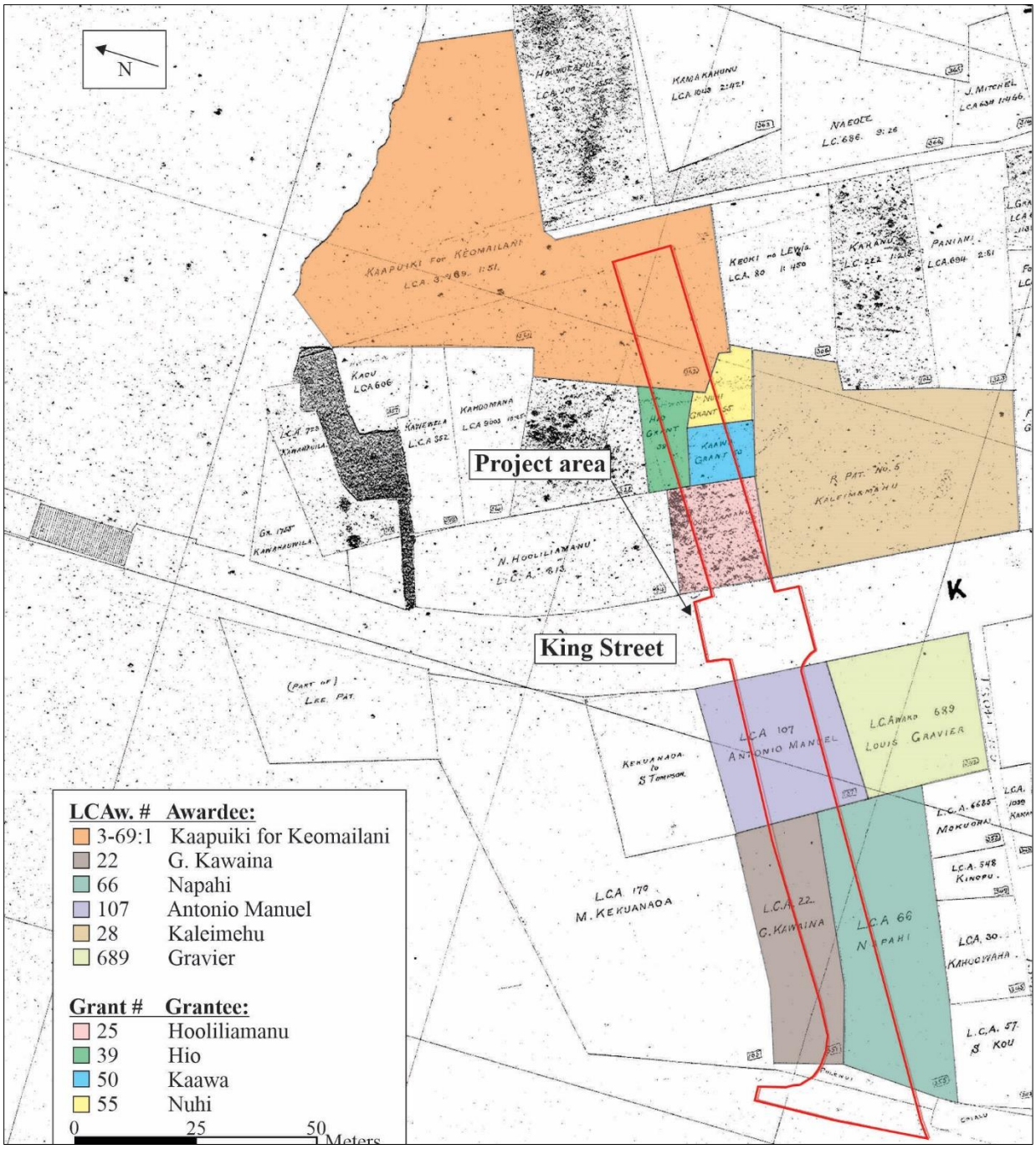

Figure 12. Portion of Hawai‘i Reg. Map 1390 (Wall 1886) annotated to show the locations of grants and *kuleana* parcels relative to the current project area from the discussion.

Regarding Grants 25, 39, 50, and 55, they were all secured by their respective grantees in 1847 for use as house lots. Grant 25 was granted to Hooliliamanu for 0.095 acres on the *mauka* side of King Street (see Figure 12). Immediately *mauka* of Grant 25, the 0.064-acre Grant 39 was received by Hio and Polimanu, a native Hawaiian couple; this narrow parcel shared a border with Grants 50 and 55 (see Figure 12). The 0.045-acre Grant 50 was awarded to Kaawa and Keakeaalani, another native couple, and subsequently deeded to Isaac Montgomery in 1848; ten years later, his heir J. Montgomery sold the lot and its buildings to Johnson Wilkinson (Hurst and Cleghorn 1991). Lastly, the 0.045-acre Grant 55 in Kīkīhale was granted to Kaaikulua and Nuhi, a native couple, and later mortgaged to Stephen Spencer in 1868 (Hurst and Cleghorn 1991). Thus, the current alignment of Kekaulike Street was built upon a minimum of eight former house lots, which were occupied by residents prior to, during, and after the *Māhele*.

Also worthy of inclusion in the current discussion is LCAw. 28 (Royal Patent 5) to Kaleimehu in 1847, which is located slightly beyond the project area boundary, immediately to the south of Kekaulike Street and Grants 25, 50, and 55—along the *mauka* side King Street (see Figure 12). In *Māhele* testimony, a graveyard was reported to have been present somewhere within LCAw. 28; a witness by the name of Uini stated that her husband had given the land, which extended all the way to the ocean to Keaniani and that someone named Keikeoewa had asked Keaniani for some of the land so that he could settle a debt he owed to Louis Gravier. Per Uini's testimony, Keaniani replied "that he had no place for him except a graveyard" and Keikeoewa replied, "what's the harm of that? Dead bodies can be dug up; and the place was transferred to him" (Hurst and Cleghorn 1991:17). The original land claim for LCAw. 28 appears to have extended from the *mauka* side of King Street all the way to the sea—a considerably larger area than what appears on the map as LCAw. 28. Furthermore, LCAw. 689 located *makai* of LCAw. 28 and King Street was awarded to Louis Gravier (see Figure 12) and most likely comprises that portion of LCAw. 28, which was reportedly given to Louis Gravier by Keaniani on behalf of Keikeoewa, as mentioned above. Therefore, it is likely that the reported graveyard was present within LCAw. 689 to Gravier, which was located slightly beyond the Kekaulike Street portion of the project area and *makai* of King Street. (see Figure 12). However, it is also possible that the burials within the graveyard were disinterred and reburied elsewhere when the property changed hands as implied in Uini's *Māhele* testimony discussed above.

By the mid-1800s, downtown Honolulu comprised "dance-houses, restaurants, taverns, and houses of assignation" that had emerged to meet the needs of the visiting whalers (Daws 2006:239). The western half of the project area is within what was then known as the legal area for liquor sales, which according to Daws (2006:239), extended "inland as far as King Street and westward from Nuʻuanu Street toward Nuʻuanu Stream." The area was a "district of dilapidated native huts and tenements, tiny bar-rooms, coffee-shops, and run-down 'boarding houses' all turning to the harbor for their opportunities and income" (Daws 2006:239). The sandalwood and whaling trades and the demand for supplies for the California gold miners declined as did the Hawaiian population, which made it necessary for wealthy sugar planters to turn abroad for their labor forces. During the 1850s, the first Chinese laborers arrived in Hawaiʻi to work in the commercial sugarcane fields, many of whom settled in what became known as Chinatown. In 1859, "for taxation, educational and juridical purposes," Kona District was officially renamed Honolulu District and defined as the lands from Maunalua to Moanalua (King 1935:216-217). This change was made because people often referred to the district of Kona as Honolulu. Today, both names are used to refer to the subject district; Kona most often refers to the traditional *moku* while Honolulu is the more modern iteration in reference to the city, district, and at times, the entire Island of Oʻahu is referred to as Honolulu County.

In his comprehensive volume titled *Sojourners and Settlers: Chinese Migrants in Hawaii*, Glick (1980:123) reports that "in 1866 over half the 370 'Chinese foreigners; in Honolulu lived in the downtown section, which included the low-lying land immediately northwest of the present central business district." He goes on to add that although this area was soon thereafter referred to as the Chinese quarter and later Chinatown, "there was never a time when this section was exclusively Chinese or when all Chinese in Honolulu lived there" (Glick 980:123). Thus, Glick (1980:123) suggests that Chinatown be considered as "a place where the Chinese first concentrated and which continued to be the center of Chinese business and social life even after Chinese residences were dispersed throughout the city." A testament to the presence of non-Chinese inhabitants of the so-called Chinese quarter during that time appears on a map of Honolulu Harbor ca. 1875 (Figure 13). A cluster of "Native Houses" is depicted along Nuʻuanu Stream—the *makai* half of the current project area (Kekaulike Street portion) lies within this area populated by Hawaiians at that time. This historical map also illustrates the continued growth of the project area vicinity—the further development of formal roads, as well as a fish market, police headquarters and post office to the south of the project area (see Figure 13). Thus, despite the growing immigrant population and the shift from residential to commercial land use in the area, some traditional Hawaiian residences and land use remained in the immediate project area vicinity.

Census records show that between 1853 and 1878, the number of Chinese immigrants steadily increased with between 22 and 34 percent of all immigrants from China to the Hawaiian Islands residing in Honolulu (Glick 1980). Those Chinese residents who lived outside of Chinatown in more Caucasian neighborhoods most often worked as household servants; while a smaller number who lived in "the outskirts of the town were engaged in farming or trade with the Hawaiians who were the main residents of these outlying sections" (Glick 1980:124). In 1878, the total population of Honolulu numbered 14,114, of which 1,299 were Chinese; and 83 percent of merchandise license-holders had their stores in the project area vicinity (Glick 1980:119). In 1879, the Hawaiian Board of Missions helped a group of Chinese Christians to establish the Fort Street Chinese Church (Glick 1980). By 1884, the project area vicinity was referred to as the "the old Chinese quarter" in official census documents with most of the Chinese residents living at their places of business (Glick 1980). However, roughly 10,700 people resided in the Chinese quarter, of whom 4,200 were native Hawaiians, 3,780 were Chinese, and the remaining 2,700 were Portuguese and "other Caucasian" (Glick 1980:125).

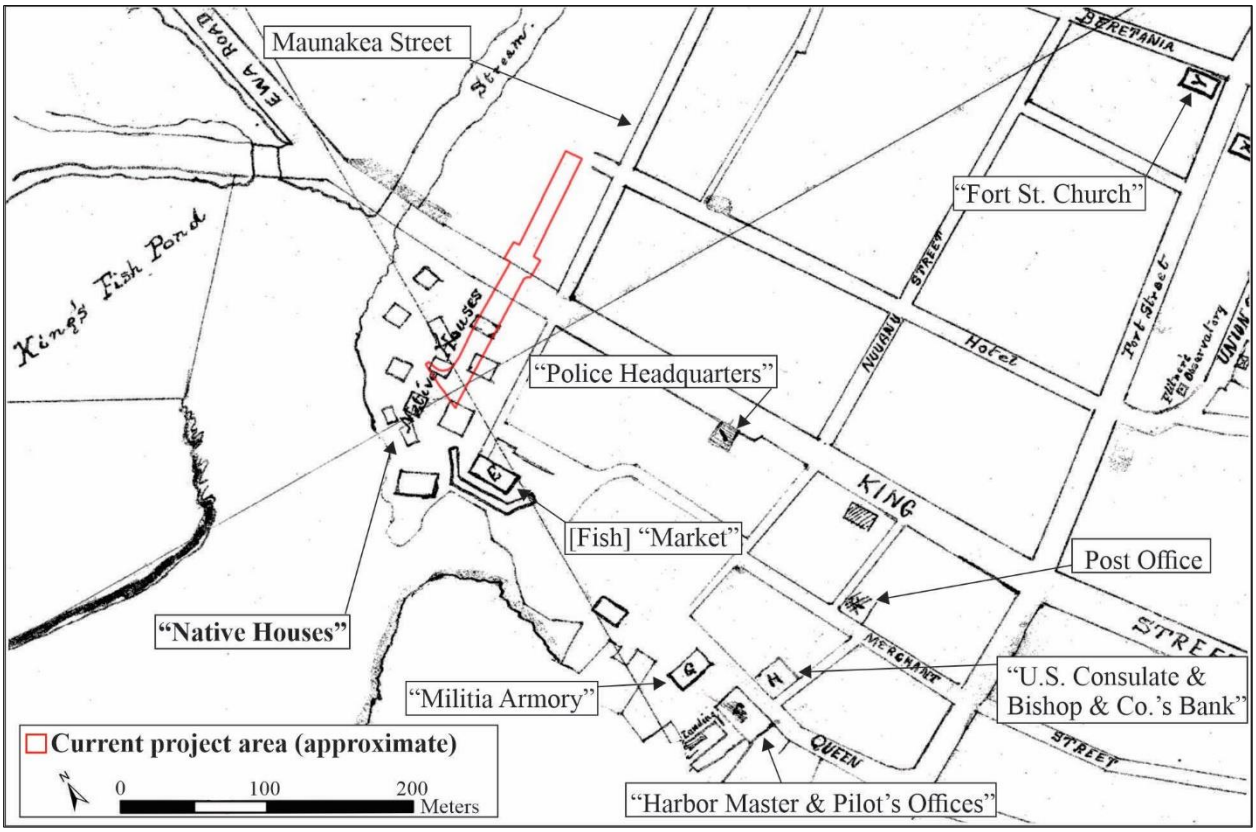

Figure 13. Portion of Hawai'i Reg. Map 430 (USS Pensacola 1875)of Honolulu Harbor annotated to show the location of the project area ca. 1875 partially within a cluster of "Native Houses."

Between 1866 and 1875 the annual number of Chinese immigrant arrivals to the Hawaiian Islands averaged 130 per year; in contrast, from 1876 to 1885, the annual average for arrivals from China numbered upwards of 2,500 souls (Glick 1980). These higher numbers during the latter years did not last long, for anti-immigrant sentiment against the Chinese began to grow after a group of "several thousand unrecruited Chinese men—some infected with smallpox—had arrived unexpectedly early in 1883" (Glick 1980:191). Subsequent arrivals from China were required to pass through quarantine and in March 1884, the Hawaiian government issued the first of many regulations to restrict Chinese immigration, an effort that would continue through annexation in 1898. Furthermore, in order to offset immigration from China, in 1885 large numbers of Japanese contract laborers were brought in to work the sugar fields (Greer 1976).

Disaster and disease in the project area vicinity (1886-1900)

By 1886, the number of commercial establishments in Chinatown had grown exponentially. Businesses lined nearby Maunakea and King streets with outbuildings and tenements tucked behind. Residences in Chinatown were usually collocated at places of business, in offices, and in other temporary lodgings scattered throughout the neighborhood (Greer 1976). In early 1886, the current project area did not exist as we know it today—Kekaulike Street was merely in the planning stages at that time as illustrated on two maps produced in March of 1886. The first of these maps shows the Kīkīhale Block, which corresponds with the *mauka* portion of the project area (Figure 14). The other shows the Kapu'ukolo Block and the *makai* portion of the current project area (Figure 15).

On Sunday, April 18, 1886 around 4 o'clock a cooking fire in a house on the corner of Hotel and Smith streets accidentally sparked what the Daily Bulletin (1886:2) referred to as "A Deluge of Fire: the greatest conflagration ever known in Honolulu—Chinatown Wiped Away" (Figures 16 and 17). According to the article, "Although not a breath of wind stirred, the inflammable nature of surrounding buildings invited the flames, and quicker than can be told the fire was leaping from roof to roof" (Daily Bulletin 1886:2). Within an hour the fire had spread along Hotel Street near Maunakea and continued to consume everything in its path in both directions towards Beretania and King streets. Explosions rose out of warehouses and as the fire gained strength the only way to salvage Kaumakapili church was to create a firebreak by tearing down the small buildings on the north side of the church.

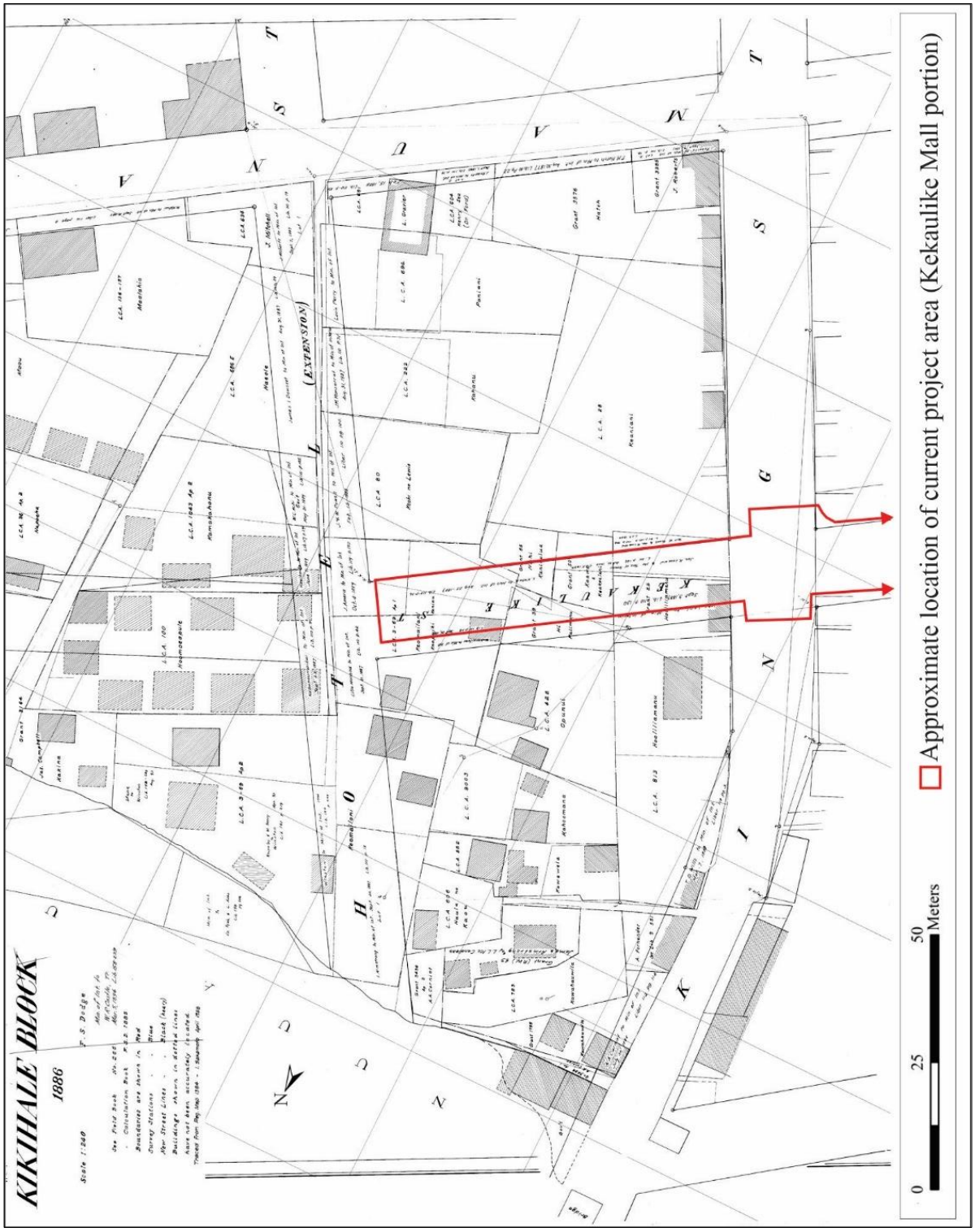

Figure 14. Portion of Hawai'i Reg. Map 1384 showing Kekaulike Mall portion of the project area within footprint of plan for Kekaulike Street in March 1886, before the fire.

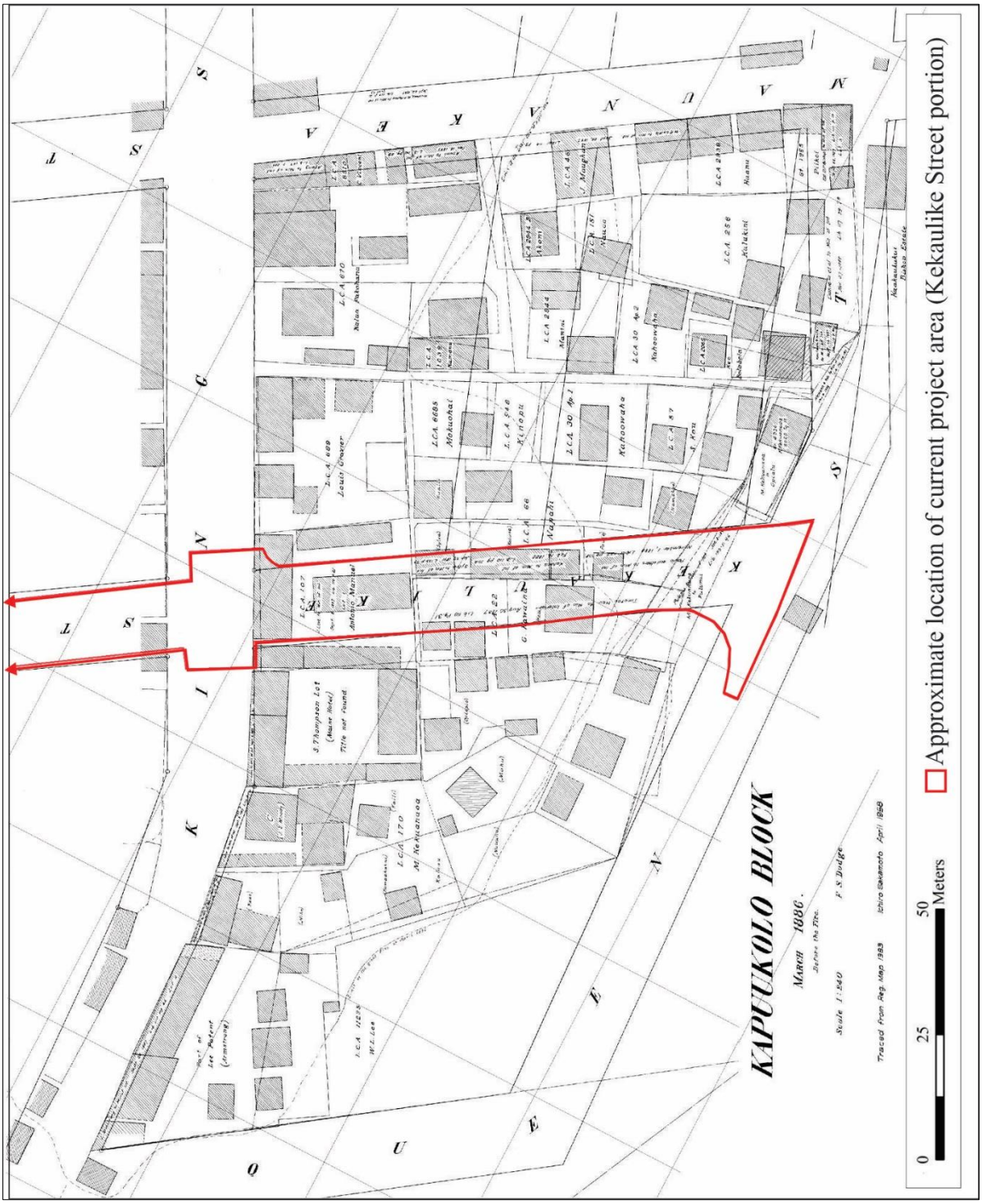

Figure 15. Portion of Hawai'i Reg. Map 1383 showing Kekaulike Street portion of the project area within footprint of plan for Kekaulike Street in March 1886, before the fire.

MONDAY, APRIL 19, 1886.

A DELUGE OF FIRE.

The Greatest Conflagration ever Known in Honolulu.

Chinatown Wiped Away.

What has long been feared by some, and considered a certain event by others, has happened. The Chinese quarter of Honolulu has been devastated by a fire, that, gaining headway in the dense aggregation of wooden buildings, was quickly beyond control and sweeping in all directions. Practically all of Chinatown proper has been involved in a sudden and vast conflagration. With its narrow alleys and dark, unwholesome courts and hovels; its picturesque ugliness and interesting Oriental features; its immense traffic, on large and small scales, legitimate and otherwise; its social institutions, of good and bad repute, it has been wiped almost completely off the city plot. A large amount of valuable property belonging to people of the European and Hawaiian races has been obliterated at the same time within and on the borders of Chinatown. Below will be found particulars of this overshadowing event, as full and accurate as possible under the circumstances.

ORIGIN OF THE FIRE.

Yesterday—Sunday, April 18th, 1886—will ever be memorable in the annals of Honolulu for this great fire. A few minutes before 4 o'clock the fire started in a Chinese cook house on the corner of Hotel street and Smith's lane. It was produced accidentally by the owner of the premises in lighting his fire for cooking. Some Chinese ran from the spot, by way of Meek street, toward the Police Station, shouting an alarm. Officer McKeague ordered the Station bell to be rung, which was done with vigor. A general alarm quickly followed from all the engine houses. China Engine Company was the first to reach the scene. At the start a few buckets of water would have quenched the flames, but the Chinese denizens of the neighborhood, in terror of losing their all, paid no attention to the flaming house, but devoted all their activity and energy to saving the contents of their shops and tenements. Although not a breath of wind stirred, the inflammable nature of surrounding buildings invited the flames, and quicker than can be told the fire was leaping from roof to roof, gliding along verandahs, entwining itself about pillars and posts, festooning doors and windows, and darting its fangs into every corner and cranny where a sure hold could be obtained. In the calm the smoke rose in a vast volume, mingled with tongues of flame, high into the air, showing the entire population of the city and suburbs that a formidable fire had started. Both thoroughfares from the starting point were soon lanes of fire, quickly extending themselves into other streets.

PROGRESS OF THE FIRE.

By 5 o'clock the fire had spread along Hotel street near Maunakea, and the fine three story building, of Sun Hang Far Co., corner of Maunakea and Hotel streets, was enveloped in flames. It was evident by this time that the fire was beyond control. The flames from this structure ignited the Hop Chong Market and Hing Kee Laundry on the opposite side of the street, which were soon ablaze. From this corner, it marched steadily forward in opposite directions towards Beretania and King streets, the firemen fighting it at every step, but the odds were against them. Engine No. 1 and the Hose reels of Nos. 1 and 5 were stationed at the corner of Maunakea and King streets. A number of sailors from the British warships in port, happening on shore, went to work and rendered effective service. Hawaii Engine No. 4, with No. 1 Hose reel was stationed at the corner of Beretania and Nuuanu streets, whence a couple of streams were played upon a mass of small wooden buildings to the rear of Love's bakery. Operations at this point were ably conducted by ex-Marshal Parke and Mr. J. A. Hassinger, whose skilful generalship was crowned with success in preventing the fire from reaching Beretania street in that direction. At the same hour, 5 o'clock, Meek street was blazing on both sides, and the forward march of the flames was making steady progress, being then about half way down towards King street. On Maunakea street, the American House, at 5:20, was a mass of flame. On the opposite side of the street, a couple of warehouses were being rapidly consumed, giving forth a series of loud explosions as the oil and other inflammable stock within were reached by the devouring element. It was becoming more and more evident every minute that unless further progress was soon arrested in this direction, the Kaumakapili church was doomed. Suggestions were urged by the BULLETIN reporters and other spectators to prominent persons supposed to be in authority to make a gap ahead of the fire by demolishing a few of the small buildings on the river side, after which the firemen and other workers would have their hands free to prevent the flames getting hold of a long row of two-story buildings on the Waikiki side and which extended clear back to Beretania opposite the church, but the invariable answer was "I have no authority." At this juncture, His Majesty the King accompanied by Captain Hayley walked round the corner, and at once took in the situation, and gave orders forthwith to tear down the structures referred to, and the job was done. About half an hour later, the tug of war here reached a climax. A body of men on the top and within the building at the end of the row already mentioned, were tearing the fabric topieces, while the hosemen on the opposite side surrounded by the blistering heat were playing upon the flames with a steady stream. The fire fiend was happily baffled in the struggle, and the conflagration at this point was under control.

All this time, the conflagration was rapidly spreading in other directions. Maunakea, Meek and Nuuanu streets were all but cleaned out, thus putting the pestilential slums and back yards of Chinatown through a most effectual purification. The fire on Nuuanu street had reached the brick and cement building formerly occupied by Hollister & Co., which was now a great burning cauldron within, the flames bursting out round the iron shutters. Next above this building was a vacant lot, and, beyond the gap, Love's bakery. The buildings in rear of the bakery were burned close up by the fire spreading from Smith's lane. King street, by 6 o'clock, presented an awful scene. The flames, having marched down, in three solid, double columns by Maunakea, Meek and Nuuanu streets, raged on both the seaward and mountain sides of King, all the way from Maunakea to Mossman's corner. Great volumes of smoke, in pink, purple, orange, black and yellow rolled skyward, while, in every direction, columns of flame and showers of sparks contributed to the advancing shades of evening a lurid and terrible glare. From the upper rear verandah of the Sailor's Home, a fair view of the whole scene was obtained. The flames from the burning Anchor Saloon rose high in the air; a body of men were at work desperately trying to demolish the building on the corner of Nuuanu and King streets, occupied by Wolfe & Co., grocers,

Figure 16. Evening edition of the Daily Bulletin April 19, 1886 part 1.

when, on the opposite corner, a dense grey cloud of smoke covered the roof of the Chinese store. The Chinese store was in a few minutes a mass of blazing timbers. Wolfe's store was at once ignited and axemen and others, engaged in tearing it down, were driven off, and the building soon met the fate of the day. Adjoining this was a fine brick building, the Merchant's Exchange, part of which was occupied by the Merchant's Exchange Saloon. Windows, doors and all other removable woodwork were torn out, and flung into the street. By this means, the building was saved, and the adjoining store of Castle & Cooke received but little damage. However, in case of emergency, Messrs. Castle & Cooke had removed all powder and inflammable stock from the premises. The Police Station was now enveloped in flame from the ground to the cupola. The officials had, early in the progress of the fire, removed the prisoners from the premises, as well as all records of value, leaving the stock of opium, confiscated from time to time, to be smoked out by the fire fiend. At precisely 6:57, the bell and cupola tumbled into the blazing debris.

The interior of the Chinese Club House, the grand opening of which was reported in the BULLETIN on the third of February was being licked up by the flames, its iron shutters, this morning presenting a sadly warped and battered appearance. From the Anchor Saloon to the Bethel Vestry, the blaze rose upward in a mighty volume, and was bent over in a threatening manner towards the roof of the Sailors' Home, three stories high. At this stage, the old historic Bethel church around which clustered many sacred associations of the past and the present, was given up for lost. The movables were quickly taken in charge by friendly hands, and by 8:30 o'clock all that was left of this grand landmark in the history of Hawaiian civilization was the bare stone walls of the lower half of the building. On the Bethel and King street corner, the shop occupied by S. M. Jonhson as a harness and saddlery store was torn down, and also C. C. Coleman's, blacksmith and machine shop, on the opposite side of King street. The equipments and lease of this shop were advertised to have been sold at auction, to-day. Several buildings had been pulled down, at other points, during the evening.

From the Anchor Saloon, the fire entered the brick and cement store of Wing Wo Tai, and was thence communicated to the large three-story brick building of Wing Wo Chan. With the burning of the Bethel Church and the Wing Wo Tai and Wing Wo Chan buildings, the crisis of the conflagration was reached. It was an hour of terrible suspense. Merchant and Fort streets were in imminent danger. Thirty minutes would decide whether only the Chinese quarters or the whole city of Honolulu would next morning be a weird wilderness of charred and smoking ruins.

The phenomenally perfect calm which had prevailed all the evening now changed to a barely perceptible southwest breeze, turning the flames and flying fragments in the direction of the quarters already hopelessly on fire. Several umbrageous giants, in the rear of the Bethel Church lot, interposed their widespreading arms, between the flames and the two-story fabric behind the Post Office on one side of Bethel street, and the Sailors' Home on the other. Connecting sheds were speedily torn down by the British tars with axes and hawser, aided by a body of the household troops, firemen and others. The Wing Wo Chan building, stocked with a ship's cargo of goods, burned internally like the crater of a volcano, while explosions from burning kerosene sounded like discharges from a battery of artillery. Happily for the city, the conflagration did not get across Bethel street or into the Sailors' Home building, and the crisis had passed in safety so far as Fort, Merchant and Queen streets were concerned.

A hard fought battle was maintained for three long hours, up to 9 o'clock, in the vicinity of the Foundry. Only the outbuildings of this establishment were destroyed. Engine No. 1 had secured a position on the dock near the limekiln, making sure of an inexhaustible supply of water, having the Pacific Ocean to draw from.

All this while, the flames were sweeping along King street, on both sides, towards the bridgne. At 11:20 precisely, the wall of the last building, on the seaward side, next the bridge, fell in; the second last house directly across the street being then well ignited. These two houses, strange to stay, were saved; and this morning stand, in grim isolation, on the corner of some sixty acres of a black waste of smoking debris.

The number of persons, made houseless by this terrible calamity, is variously stated from 5,000 to 8,000.

THE LOSS.

The following is the valuation of the property destroyed, as given by the assessment books, from which it is inferred that the disaster involves a loss of at least one million five hundred thousand dollars ($1,500,000):—

Block 18	$150,000
Block 37	95,000
Block 14	80,000
Block 15	165,000
Block 10	450,000
Block 7	135,000
Block 5	130,000
Block 9	150,000
Total assessment	$1,355,000

The Daily Bulletin.

MONDAY, APRIL 19, 1886.

[CONCLUDED FROM SECOND PAGE.]

THE BRITISH SAILORS.

The gaps made by the tearing down of buildings were effected by the assistance of detachments of sailors and marines from H. B. M.'s steamships Heroine and Satellite, some of whom were ashore on leave, and others had been sent from the ships immediately on the outbreak of the fire. The jolly naval heroes worked with tremendous energy and enthusiasm, and their splendid order and discipline caused their efforts to tell. At whatever point their services were engaged, results were at once apparent.

Figure 17. Evening edition of the Daily Bulletin April 19, 1886 part 2.

To that end, “His Majesty the King. . . gave orders forthwith to tear down the structures referred to, and the job was done. . . and the conflagration at this point was under control” (Daily Bulletin 1886:2). After many hours of terror and brave attempts to quell the fire, as the flames swept along both sides of King street towards the bridge, “at 11:20 precisely, the wall of the last building, on the seaward side, next the bridge, fell in; the second last house directly across the street being then well ignited” (Daily Bulletin 1886:2). The fire had finally died out and the following day, the two houses closest to the river, “strange to say, were saved; and this morning stand, in grim isolation, on the corner of some sixty acres of a black waste of smoking debris.” As a result of the devastating fire, the Daily Bulletin (1886:2) reported, “The number of persons, made houseless by this terrible calamity, is variously stated from 5,000 to 8,000.”

The fire of April 1886 incinerated nearly eight square blocks overnight (Figure 18), including most of the current project area and subsequent rebuilding efforts including sanitation and roadway improvements took over Chinatown. The government issued guidelines for reconstruction, which strictly prohibited the permanent repair or construction of wooden buildings and permitted “only stone, brick, iron or other fireproof material” (Greer 1976: 46). On the April 21, 1886, Chief Justice Judd was tasked with assembling a committee dedicated to road improvements within the burnt district. Among their recommendations was the following, which refers to the creation of the current project area—Kekaulike Street: “Opening a new street 50 feet wide from the proposed extension of Hotel St. to the proposed extension of Queen St., parallel with and 180 feet northwest of the new Maunakea St. line (Greer 1976:47).

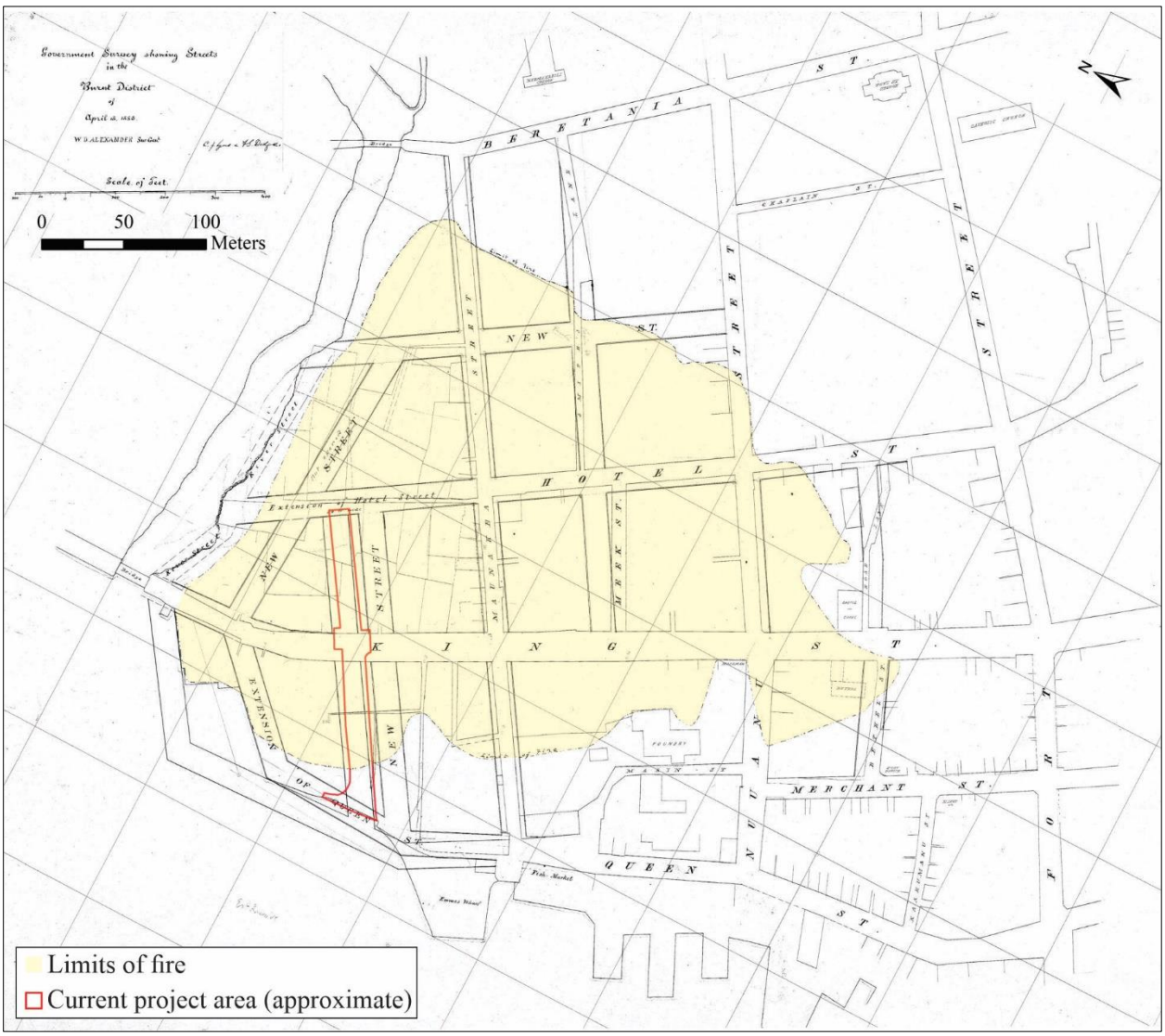

Figure 18. Government Survey Map of the burnt district (Lyons and Dodge 1886) annotated to show the approximate location of the project area relative to the extent of the April 19, 1886 fire damage.

Although a truly horrific disaster, some people looked at the resultant smoldering empty space as a clean slate and an improvement compared to the former unsanitary overcrowded conditions. Such views are evidenced by the article titled "Rising from the Ashes" published just five months later in the Hawaiian Gazette (1886:8) on September 21, 1886 and reproduced in its entirety as Figure 19, below, and excerpted on the page that follows.

Rising from the Ashes.

There is marked improvement in that portion of the city known as "Chinatown." From Maunakea street, on King street, as far west as the King street bridge, the burnt buildings have nearly all been replaced by neat frame buildings, mostly two stories in height, and outwardly present a fine appearance. But inwardly the finish is of the most primitive description—which suits the Celestial inhabitant to a charm. All the buildings have the ungainly overhanging balcony which infringes on to the street on both sides—giving the roadway a narrow look. Aside from this, the buildings are a decided improvement on those destroyed by the late fire.

Maunakea street having been widened may be said to be entirely rebuilt, from King street to Beretania street, and occupied by the Chinese, and presents the appearance of a fine thrifty thoroughfare, composed almost entirely of small dealers, and after the street is thoroughly graded, will be frequented oftener by our citizens than it was six months ago. Hotel street, also a favorite with the Celestial, is improving rapidly, both sides being built up with wooden buildings to Smith street, and from the latter to Maunakea street all the buildings in course of erection are composed of brick, and when completed will form a fine and substantial business center, second to none in Honolulu.

On the south corner of Hotel and Smith streets, a large two story brick building is in course of erection by Chinese builders, and is intended for four stores on the ground floor. Next on the same side of Hotel street, is Judge Bickerton's two story brick building, now nearly completed, by Mr. George Lucas. This building would be a credit to the city, located in any of the principal centers.

Next to this comes the Cosmopolitan saloon building, on the west corner of Nuuanu and Hotel streets, which contains three small stores and the saloon, and is one story in height. Another story added to this building would improve its appearance very much. Directly opposite on the north corner of Nuuanu and Hotel streets, Messrs. Mendonca & Selig have purchased the lot and will soon commence the erection of a two story brick building, the lower portion to be used as stores, which will extend from Mr. Pico's building on Nuuanu street, to the corner and about fifty feet on Hotel street. Next adjoining this Mr. Lucas is engaged in putting up a fine brick building eighty-nine feet front on Hotel street, for the same gentlemen. Adjoining the latter, Mr. Cavanagh has nearly completed a two story brick building for Mr. Mendonca—the balance of the block to Smith street is yet vacant.

Mr. Thomas has just completed a large brick building on the corner of Maunakea and King streets for a Chinese firm. The building is two stories in height, and is fitted for four large stores, and will be cemented in front. On the opposite corner Mr. Thomas has broken ground for another brick building (two stories), extending about fifty feet on King street by forty on Maunakea street.

Mr. Lucas has the foundation laid for a two-story brick building on King street, just east of the above building, which will comprise three large stores on the ground floor.

The only contract as yet for building on the north side of King street has been awarded to Mr. Mayhew, who will shortly proceed to rebuild the Chinese club house.

On the north corner of King and Nuuanu street Mr. Cavanagh has just completed a large two-story building for Mr. L. Asen, extending about eighty feet on Nuuanu street by fifty feet on King street. Next above this, on Nuuanu street, is Mr. Aswan's new brick building—one of the finest structures in town—the front being composed of pressed brick, and is divided into two stores. Adjoining this building Mr. Thomas has broken ground for another brick building for Mr. Aswan. On the northeast side of Nuuanu street, directly opposite Mr. Aswan's, Mr. Thomas has also broken ground for a two-story brick structure, which will be about fifty feet front by forty deep.

On the south corner of Hotel and Nuuanu street, Mr. Lishman has completed for Mr. James Olds a fine substantial one-story building, to be used as the Empire Saloon. This building is faced with cement on all sides, and a substantial granite sidewalk is laid on the Hotel and Nuuanu street sides of the building. The internal fittings are being done by Mr. F. Wilhelm.

In addition to the above list there are also three new brick buildings built and now occupied viz., Nuuanu street below King, viz., Mr. S. Spencer's new two story structure, with pressed brick front, built by Mr. Lucas, and now occupied by Messrs Wing Wo Chan & Co; also just northeast of the above is Mr. S. Magnin's two story brick front (cemented), rented to Messrs Wing Wo Tai & Co., and on the corner is the new Anchor Saloon brick building—one story in height—ready for occupancy.

Taking in consideration all these improvements, completed and other portions well under way, it will readily be seen that Honolulu, since the great fire of April 18th, has made rapid strides in replacing the destruction of that memorable Sunday afternoon.

It is not alone in the better class of buildings which now occupy the burnt district that the city is the gainer, but in a sanitary point of view the gain is incalculable, from the amount of filth and feverproducing garbage consumed, and which the best efforts of the Board of Health failed to remove.

Figure 19. Hawaiian Gazette article published September 21, 1886.

Regarding the reconstruction effort in particular, the Hawaiian Gazette (1886:8) article states,

> . . . From Maunakea street, on King street, as far west as the King street bridge, the burnt buildings have nearly all been replaced by neat frame buildings, mostly two stories in height, and outwardly present a fine appearance but inwardly the finish is of the most primitive description—which suits the Celestial inhabitant to a charm. All the buildings have the ungainly overhanging balcony which infringes on to the street on both sides—giving the roadway a narrow look. Aside from this, the buildings are a decided improvement on those destroyed by the late fire. . .

The The Hawaiian Gazette (1886:8) article concludes thusly,

> Taking in consideration all these improvements, completed and other portions well under way, it will readily be seen that Honolulu, since the great fire of April 18th, has made rapid strides in replacing the destruction of that memorable Sunday afternoon.
>
> It is not alone in the better class of buildings which now occupy the burnt district that the city is the gainer, but in a sanitary point of view the gain is incalculable, from the amount of filth and fever producing garbage consumed, and which the best efforts of the Board of Health failed to remove.

Just three years later, a second fire threatened to consume the newly rebuilt Chinatown during the night of January 26, 1889. However, this blaze began within the immediate project area vicinity in a building on the corner of Kekaulike and King streets (Hawaiian Gazette 1889). An article titled "A Big Blaze: One Building Destroyed and Others Damaged" and published in the Hawaiian Gazette provides a detailed account of the fire and its aftermath. Despite the guidelines inspired by the great fire of 1886, said building was a two-story wooden construction and Kekaulike Street remained ungraded (Hawaiian Gazette 1889). The Hawaiian Gazette (1889) article goes on to recount the challenges met by the fire fighters in getting sufficient water to dampen the flames; apparently, "wooden buildings stood in every direction from the burning fabric" and other buildings on Kekaulike Street were soon in flames. The fire was believed to have been the result of a domestic dispute between a Hawaiian couple, who were arrested under suspicion of throwing a lit oil lamp at each other during a quarrel. An elderly Chinese man named Lohiau lost his life in the blaze due to smoke inhalation. The article concludes by mentioning a power outage, looting and associated arrests, as well as downed telephone lines.

By the early 1890s, the growth of Honolulu had spread across the south shore of O‘ahu. During this time, the project area vicinity maintained some of its residential character; however, a shift to a more commercial district was clearly underway. Figure 20 shows the mixed residential and commercial development of the project area vicinity in 1891. At that time, the buildings that lined both sides of Kekaulike Street, *makai* of King Street, were primarily residential (dwellings coded as "DWG" in Figure 20); except for a jeweler and a furniture store at the northwest and southwest corners of King and Kekaulike streets, respectively (see Figure 20). While the buildings located *mauka* of King Street were more commercial and included three retail stores and a bakery (general merchandise coded as "GENL MDSE" in Figure 20) and the dwellings were located further back from Kekaulike Street approaching Hotel Street.

Family stores, which were important social institutions and often functioned as banks and residences. Chinatown residents often lived at their places of business or in other temporary lodgings scattered throughout the somewhat haphazard neighborhood. In addition to retailers, butchers, blacksmiths, barbers, and food vendors herbalists and faith healers practiced the healing arts. Per Glick (1980:141), "Chinatown could provide the best substitutes for the physical care and spiritual assistance he [the Chinese migrant] would have received at home from family, clan, and village temple." Unfortunately, the increased density of occupation in the project area vicinity ushered in unsanitary conditions.

On May 27, 1893, a reporter for the Hawaiian Star newspaper accompanied the Health Officer on his daily inspection of Chinatown, which resulted in an article titled "In Celestial Slums" with the byline "Cholera's Breeding Grounds and Fever's Spawning Beds—Vile Sights and Smells Abound" (Hawaiian Star 1893:2). The first place they visited was the public washhouse where laundrymen did their daily work in heinous conditions. Per The Hawaiian Star (1893:2) article, "over sixty eight new cesspools. . . and hundreds of ventilator pipes" had been installed in the months leading up to their visit, but it simply was not enough. In particular, "decayed poi, the sewage from out-houses and the slops thrown out by inmates have made the places underneath some of the tenements simply unbearable" (Hawaiian Star 1893:2). The reporter also mentions the immediate project area vicinity specifically as host to such "unbearable" tenement buildings as follows:

> Kekaulike street is another offshoot from King street and is environed by some of the broken down Chinese tenements, the yards of which smell to heaven. The microbes and bacteria could be caught floating around in the air, while the effluvia was loathsome. (Hawaiian Star 1893:2)

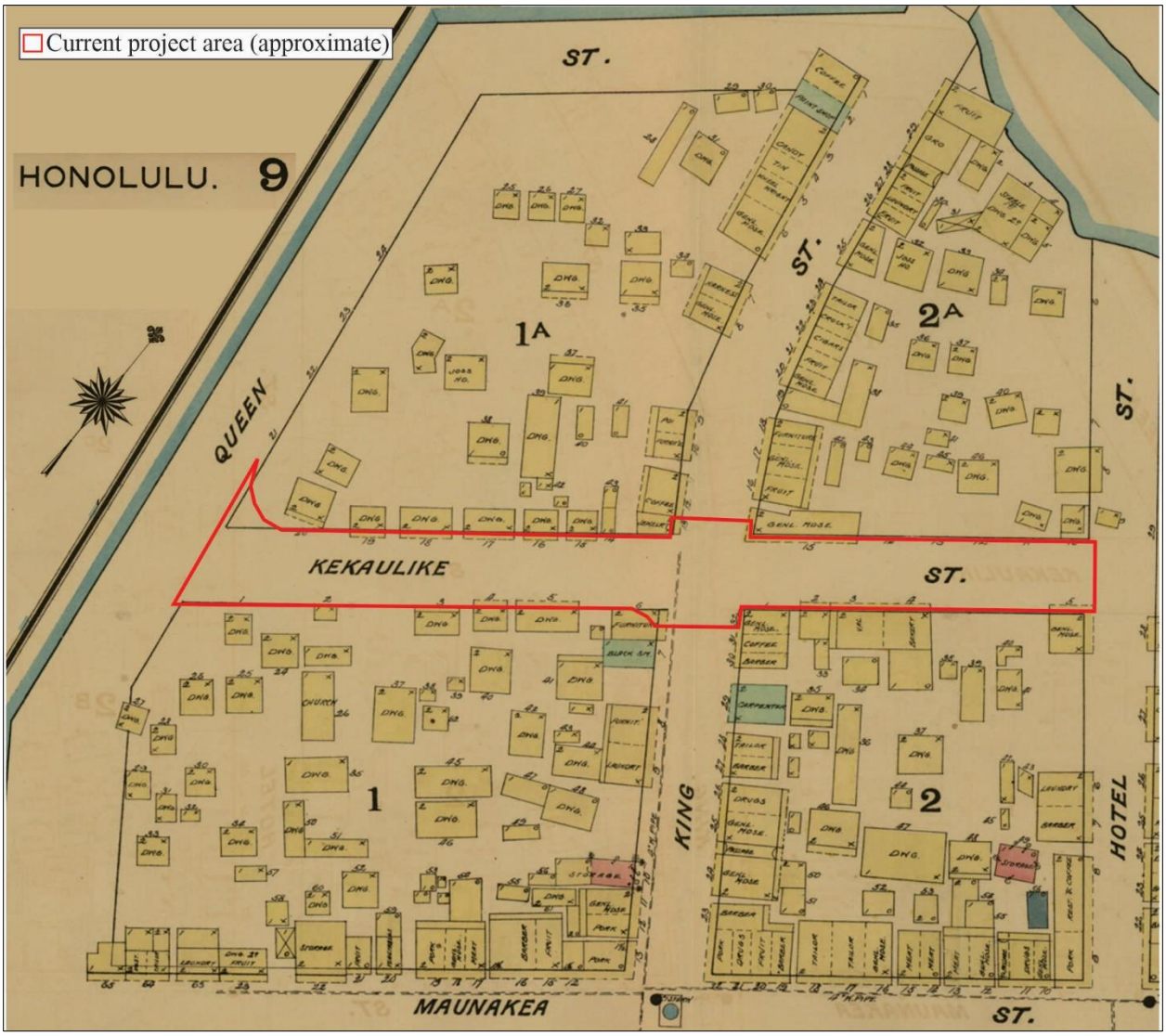

Figure 20. Portion of Dakin Fire Insurance Map showing the project area vicinity as it appeared in 1891.

Roughly between August and October of 1895, the overcrowding and the unsanitary conditions of Honolulu Harbor and Nuʻuanu Stream area of Honolulu led to an outbreak of cholera. According to The Friend (1895:85), as of October 1, 1895 there had been 112 deaths from the water-borne disease, most of the cases occurred in the Iwilei neighborhood among the Hawaiian community there; 88 of the victims of the disease were Hawaiians. Although the epicenter of the outbreak was located across Nuʻuanu Stream and beyond Chinatown, the Government and Board of Health imposed strict quarantine and clean up measures on the thirty blocks of Chinatown (Mohr 2005). Notwithstanding only seven Chinese residents succumbed to cholera (The Friend 1895:85), the harsh measures taken had lasting impacts on the Chinese and Japanese community that lived and worked in Chinatown. Perhaps worst of all, the quarantine sowed doubt and fear of Western medical practitioners and the Government in the Asian community, which proved detrimental when Bubonic Plague was detected in Chinatown four years later (Mohr 2005).

In the aftermath of the cholera outbreak, the United Chinese Society decided to build a Chinese hospital; and in March of 1897 the Wai Wah Yee Yuen officially opened in Pālama (Glick 1980). Steps were also taken to improve sanitation conditions surrounding Nuʻuanu Stream and within Chinatown (Mohr 2005). The waterway was dredged and straightened, and stone walls were built to reinforce the banks of the stream. In addition to improving the sanitary conditions of the stream, the infilling and stabilization of the stream banks created land that allowed for more substantial structures to be built in place of the dilapidated tenements. These improvements and the then-newly constructed River Street are depicted on the 1899 Dakin Fire Insurance Map (Figure 21).

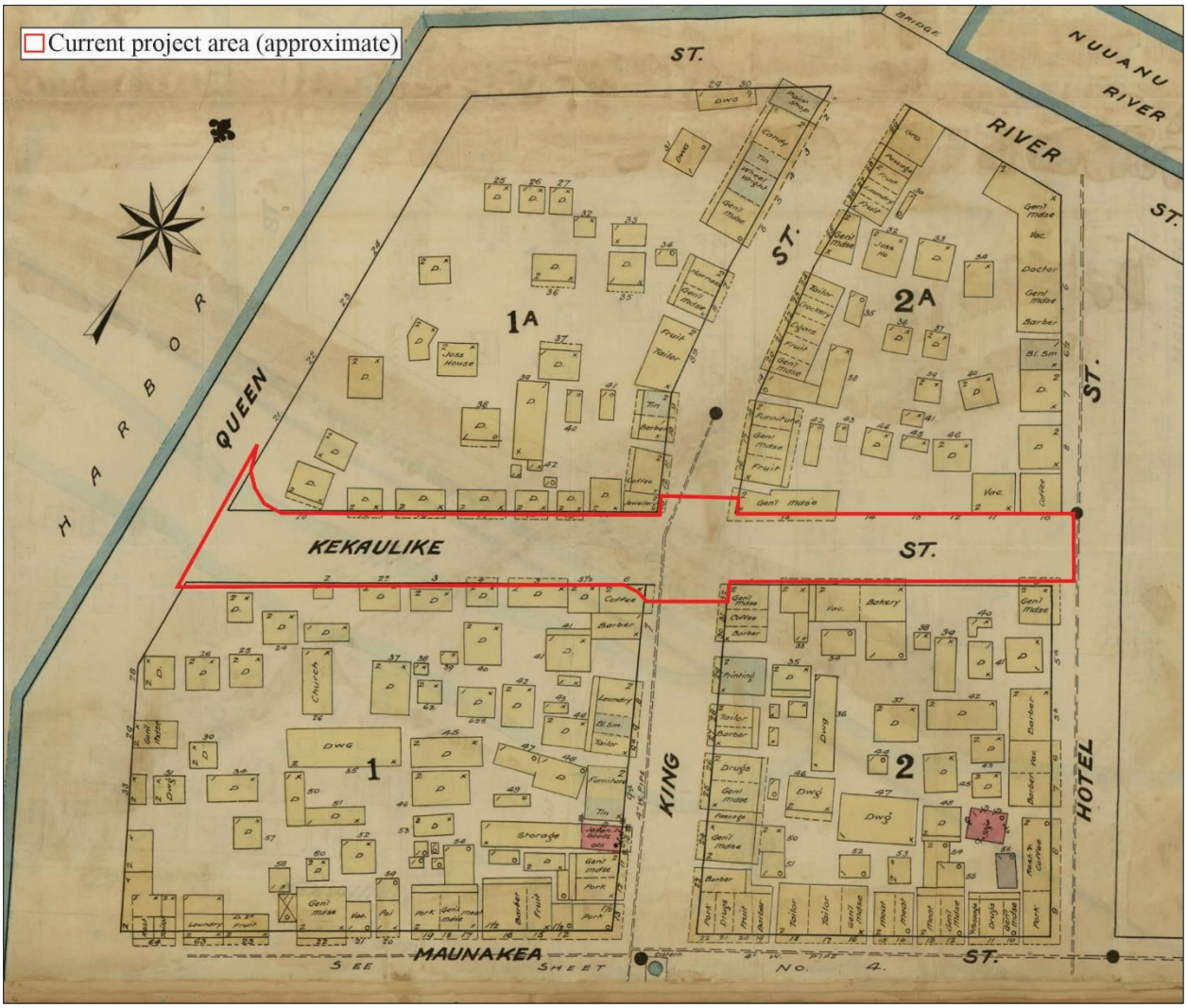

Figure 21. Portion of Dakin Fire Insurance Map showing the project area vicinity as it appeared in 1899.

As previously mentioned, in 1899, an outbreak of the bubonic plague struck Chinatown. On December 12, 1899, three cases were identified (Iwamoto 1967). The following day Sanford Dole, President of the Provisional Government placed the Board of Health in charge of the Hawaiian Islands and they promptly instituted restrictions on travel in and out of Honolulu, a strict quarantine for Chinatown (no one was allowed in or out) and barred Chinese and Japanese persons from inter-island travel or entering the city of Honolulu (Mohr 2005). By this time, roughly 2,000 Chinese, 1,500 Japanese (primarily single men), about 1,000 Hawaiians, as well as Portuguese, Europeans, Polynesians, and Micronesians resided in Chinatown, and between 8,000 to 10,000 souls were quarantined together on and off for the remainder of December (Mohr 2005). While under quarantine, Chinatown residents were subjected to house by house searches/inspections and forced to disinfect their belongings and themselves at designated disinfection stations. On December 31, 1899, upon the recommendations of the Sanitation Committee, the Board of Health set the first of many intentional fires to sanitize and disinfect those buildings that had been host to the plague; for, they concluded that the only way to eradicate the disease was with fire (Iwamoto 1967). During these controlled burns, sick people were housed at a quarantine camp in Kakaʻako whilst their homes and belongings were destroyed, and healthy people were housed at the Kakaʻako Rifle Range and their belongings were stored at the Kaumakapili Church (Mohr 2005). On January 20, 1900, a fire set near Nuʻuanu Avenue quickly began burning out of control—high winds sent embers to the roof of the Kaumakapili Church and burned it to the ground (Iwamoto 1967:385).These winds further scattered embers across the neighborhood causing the fire to spread to several other blocks and to the harbor, effectively destroying the entirety of Chinatown (Iwamoto 1967), including the current project area (Figure 22). The density of mostly wood-framed structures contributed to the conflagration, which inspired the use of fire-proof masonry construction as Chinatown was later rebuilt.

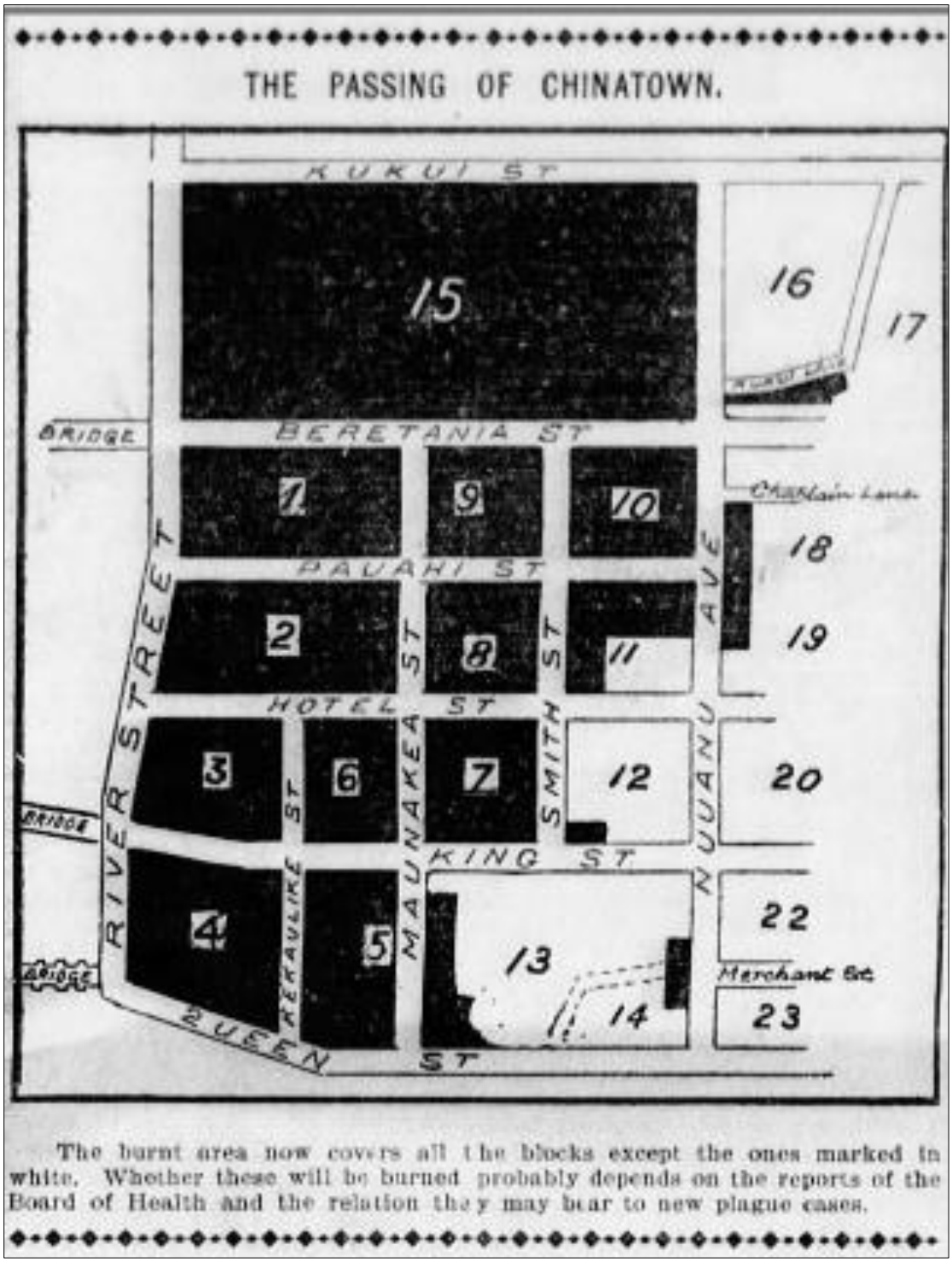

Figure 22. Map of the burnt district after the Chinatown fire of 1900 (Hawaiian Gazette 1900:1).

The Chinatown fire of 1900 caused more than 4,300 men, women, and children to be homeless and they were housed temporarily across Honolulu, including the grounds of Kawaiahao Church (Hawaiian Star 1900). A compelling account of the blaze and valiant efforts to bring it under control was provided in the article that accompanied the map above, titled "Fire Sweeps Away Almost All Chinatown: Attempt to Burn Block Fifteen Clears Many Blocks" published on the front page of the Hawaiian Gazette on January 23, 1900. It is excerpted below

All Efforts Fail

> It was soon apparent that Block 2 could not be saved, nor could the progress of the fire be stopped there. Dynamite was time and time again placed in buildings along the corners of Kekaulike and King streets, but without avail. No power could withstand the fury of the flames. No street seemed too broad for them to leap; in some instances the heat caused a building front to burst into flames. The great difficulty throughout the entire day was the flying embers lighting on roofs of distant blocks. The combined efforts of bucket brigades failed to put out the fires caused in this manner. Buildings were cut down with axes, balconies torn away in a vain effort to put a barrier of space between the surging fire and the doomed structures on the harbor side. The fire raged fiercely from all sides; the firemen were half the time enveloped in dense clouds of smoke, the blaze blistering their hands and skin, but they stood nobly at their posts, retreating foot by foot. Volunteers passed buckets of water to the men at the hose nozzle, drenching them constantly, but even then the heat was so terrific that the steam arose in white clouds from the men. (Hawaiian Gazette 1900:1)

According to an article published December 22, 1900 in the Honolulu Republican, prior to the 1886 fire, the streets in Chinatown were only 36 feet wide; after the fire they were widened to 50 feet. However, by the time of the great fire of 1900, "the streets were entirely too narrow for the traffic on them. They were low, muddy and unclean" (Honolulu Republican 1900:1). Nearly a year later, the Republican (1900) reported on the missed opportunity for road improvements within the burnt district as they were insufficient for traffic therein. Apparently, King and Nuʻuanu streets were re-established to their pre-fire widths, much to the chagrin of the article's author; however, the only positive observation referred to the project area, as follows:

> One thing we have to be thankful for is that Kekaulike street is to be carried through. If one or two more of such streets should be cut through the city would be improved wonderfully.

The Rebirth(s) of Chinatown (1900-2020)

After the destruction of Chinatown in 1900, there was extensive redevelopment of the area with small retail shops, but also markets, hotels, factories, mills fronting the streets and tenement buildings and smaller dwellings within the interior of the city blocks.

The Pacific Commercial Advertiser (1902) reported on the following scene observed the day after yet another fire in Chinatown burned during the morning of August 18, 1902, "all day yesterday there gathered about the blackened remnants of one of the fiercest blazes of recent days, men, women and children of all nationalities picking among the embers for what they could find." The blaze was reportedly started by a frightened cat that had knocked over a lit oil lamp inside a building between Kekaulike Street and River Road as witnessed by Ah Hui, "the butcher, whose store at the corner of Kekaulike and Hotel street was destroyed, the fourth establishment which the owner has lost." This fire destroyed many buildings in the immediate project area vicinity and left many people without shelter—Japanese residents sought refuge at the Japanese theatre while most Chinese residents found places to stay in Kakaako and across Nuʻuanu Stream in Pauoa and Liliha. Apparently, the area that succumbed to the flames was "part of the area which business men and insurance people generally desired to have protected after the big fire of January 20, 1900, by the extension of the fire limits" and associated fireproof building requirements; however, the legislation was appealed because the legislature argued that poor people would not be able to afford fire proof construction costs. Per the Pacific Commercial Advertiser (1902:4), "every building erected has been of the flimsiest character, a perfect trap for fire, and the conflagration has made so many people homeless, is only a result of the failure of the Home Rule legislature to give such protection to the city."

By 1906, buildings had been constructed along both sides of Kekaulike Streets and on the interior of the blocks to the south and north of the project area (Figure 23). In the following decades, development in Chinatown continued to shift toward commercial more than residential, and it was a thriving center of commerce through the 1920s. Per Johnson (1991:326) Honolulu in the twenties and thirties presented an exotic appearance to visitors with "densely packed areas threaded by narrow, twisted lanes" and "the old type of two-story structure, with shops below and living quarters above . . . with permanent awnings of wood or corrugated sheeting, projecting over the sidewalks" along most of the main streets.

Per Riconda (1972:Section 8), despite its name, Chinatown has always hosted residents of other ethnicities; for instance, in 1940 Japanese residents outnumbered Chinese residents and by 1970 Chinese residents comprised less than twenty percent of the Chinatowns population, while Filipino inhabitants comprised forty-seven percent of Chinatown residents (Riconda 1972). Thus, the historical and cultural significance of Chinatown extends beyond the Chinese community to include other ethnic groups, such as Japanese, Koreans, and Puerto Ricans, among others.

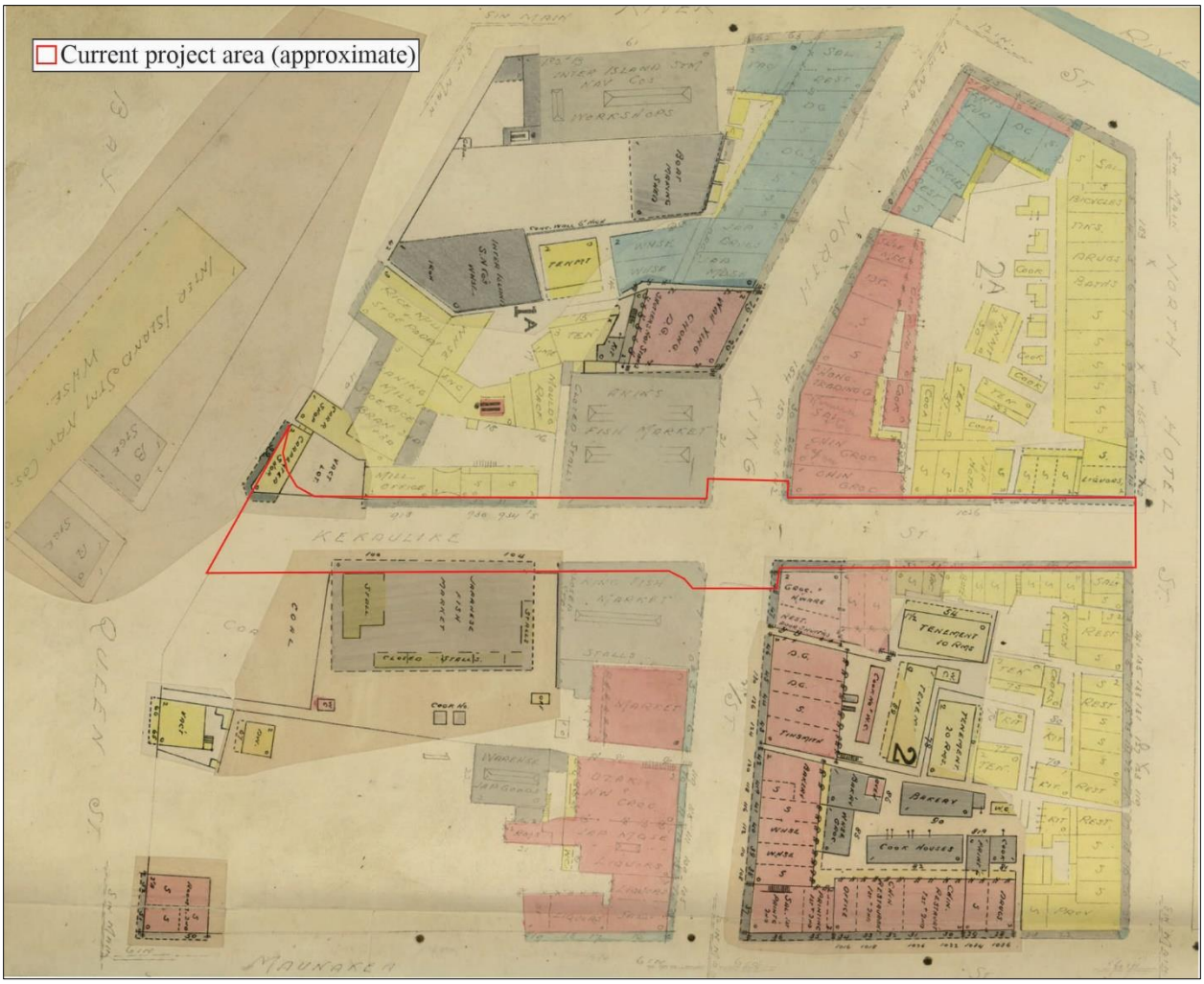

Figure 23. Portion of Dakin Fire Insurance Map showing the project area vicinity as it appeared in 1906.

In 1973, the Chinatown Historic District (SIHP Site 09042/09986), a commercial and residential district, was listed in the NRHP and the HRHP on November 25, 1985. As previously mentioned, the roughly 15-square block (36-acre) district is bound by South Beretania Street, Nu‘uanu Stream, Honolulu Harbor, and Nu‘uanu Avenue. According to the NRHP nomination form prepared by Historian Deborah Riconda, this historic district “holds the longest continuous history of native and immigrant settlement and where the story of Hawaii’s common folk has been most compactly unfolded” (1972:Section 8). Most of the buildings date from 1901 through 1930 with “very few exceptions which escaped the January 20, 1900 fire” (Section 7). One such exception is the Irwin Block Building/Nippu Jiji (Hawaii Times) Building (928 Nu‘uanu Ave.), which was built in 1897. Another is the Yim Quon Building (75 N. King St.) located to the south of the project area a two-story commercial building that was listed in the HRHP on July 18, 2017 and built in 1886 and thus is likely the oldest building in the district (Solamillo 2017). Chinatown was included in the NRHP based on the following areas of significance: architecture, commerce, and social/humanitarian. Riconda sums up Chinatown Historic District, which has “maintained a sense of identity and community over the years,” as follows:

> Chinatown is the most extensive area in Honolulu reflecting a contiguous architectural and historic character which recalls a sense of time and place. Most of the buildings are of a “masonry façade, main street America,” vernacular, circa 1900-1920. Much of the value of the district can be attributed to the large number of buildings which resemble each other in age, scale, use, form, materials, and texture, creating a harmonious physical environment. (1972:Section 7)

In 1930, per Glick (1980:125), “although 3,000 more Chinese were living in Honolulu than in San Francisco,” which boasted the largest Chinese population of any mainland U.S. city, “only 47 percent of the people living in

Chinatown were Chinese and less than 5 percent of the 19,334 Chinese in Honolulu lived there." The remaining 53 percent of the Chinatown population included individuals of Japanese (27 percent), Hawaiian or part-Hawaiian (9 percent), Filipino (2-3 percent), Korean (2-3 percent), and Caucasian (2-3 percent) descent. This multiethnic community lived and ran businesses in Chinatown, which still served as the socio-cultural and commercial center of the Chinese residents of Honolulu. Over the ensuing decades a shift in the demography of Chinese immigrants from single men moving to Honolulu alone to stable Chinese families resulted in a sharp increase in the number of Chinese families and a decline in foreign-born Chinese males (Glick 1980).

Since the 1930s, Chinatown has undergone periods of decline and revival with the neighborhood once again thriving with new restaurants and retail and renewed interest in construction during the early 1990s

Another significant historic property in the vicinity of Chinatown is the Merchant Street Historic District (SIHP Site 9905), which comprises 4 square blocks along Merchant Street to the south of the project area between Nuʻuanu Avenue and Fort Street. The twelve contributing buildings in the Merchant Street Historic District are remnants of the early financial and governmental part of Honolulu. Since the initial listing of the Merchant Street Historic District in the NRHP in 1973, the district has been expanded to include a few other contributing resources such as the Judd Building 843 Fort St. Mall. Additional nearby HRHP- and NRHP- listed historic properties include: The C. Brewer Building (SIHP Site 9938) located at 827 Fort Street, Our Lady of Peace Cathedral (SIHP Site 9066) also on Fort Street, the Hawaiʻi Theatre (SIHP Site 50-80-14-1332) on Bethel Street, and the concrete Nuʻuanu Stream Bridge (built in 1932) on North Nimitz Highway spanning Nuʻuanu Stream immediately north of the project area (determined eligible for listing in the NRHP by Mason Architects in July of 2008).

PREVIOUS ARCHAEOLOGICAL STUDIES

The earliest archaeological study conducted in the vicinity of the current project area is that of Thomas G. Thrum, who created a list of the *heiau* of ancient Hawaiʻi in the early 1900s. Thrum Thrum (1906a) published his list of *heiau* in a series of entries in the *Hawaiian Almanac and Annual*, beginning with the 1907 edition. Thrum made the following remarks about his investigations in a preliminary paper titled "Tales from the Temples" Thrum (1906b:49) (published in the 1907 annual:

> This much is being realized, and expressions of regret have been freely made, that we are at least fifty years too late in entering upon these investigations for a complete knowledge of the matter, for there are no natives now living that have more than hear-say information on the subject, not a little of which proves conflicting if not contradictory. . . While these difficulties may delay the result of our study of the subject, there is nevertheless much material of deep interest attending the search and listing of the temples of these islands that warrants a record thereof for reference and preservation.

Thrum (1906a) and his associates compiled information on over seventy *heiau* located throughout Oʻahu. One must take into consideration that Thrum listed *heiau* that had already been destroyed prior to his data collection efforts in the early 1900s. Of Honolulu, Thrum (1906b:56) wrote ". . . of all the temples that have come down to us in name by historian none now remain, and but one is left of those famed in tradition." He then discusses how Kamakau wrote of several *heiau* including some that formerly overlooked Nuʻuanu; and states that the locations of Pakaka Heiau and Kaheiki Heiau, both *heiau poʻokanaka* believed to have existed in Honolulu, remained unknown.

The earliest formal archaeological survey of Oʻahu was conducted by J. Gilbert McAllister on behalf of the Bishop Museum during nine months in 1930. His purpose was "to collect information regarding the archaeology of Oahu" (McAllister 1933:3) and he made it clear that his investigation was a beginning rather than a complete account of all the cultural resources on Oʻahu. McAllister (1933:3) also made the following statement regarding the state of cultural resources on Oʻahu at the time, in the introduction to his resultant publication *Archaeology of Oahu*:

> As the archaeological remains are those of the people found in Hawaii by the early voyagers, contact with Hawaiians was an indispensable part of the work. Not only are the sites being destroyed by the changes wrought by European culture, but with the introduction of exotic vegetation many sites have been completely hidden. Such remains would be as good as lost, were it not for the knowledge of them still treasured by old residents (*kamaaina*) of Oahu. With the passing of these old people most of this information will disappear.

McAllister assigned discrete site numbers to each of the archaeological sites he identified in his manuscript. Regarding the project area vicinity, McAllister (1933:80) provided excerpts from the writings of Hawaiian historians and foreign visitors in his site description of "Site 66 Honolulu," which he began with the following statement that echoes Thrum (1906b):

> Information regarding former sites within the present limits of Honolulu must come entirely from literary sources. If there are any Hawaiians who remember having heard of old places, I have not been able to discover them.

During the decades that immediately followed McAllister's initial survey of O'ahu, no archaeological studies of the project area vicinity were produced. However, in the 1970s, with the advent of Cultural Resource Management (CRM) as a response to newly-established historic preservation laws and increased modern development, archaeologists began recording more discrete sites and performing test excavations throughout the Hawaiian Islands. The earliest formal CRM investigations in Chinatown were undertaken during the 1980s. Over the ensuing decades, many more studies took place and included the implementation of rigorous data recovery and mitigation efforts (Goodwin et al. 1996; Goodwin and Allen 2005, among others); as well as archaeological monitoring of demolition and construction projects and the preparation of associated archaeological monitoring plans (e.g. Collins et al. 2008; Dagher and Spear 2013; Davis et al. 2019; Perzinski and Hammatt 2002) and subsequent archaeological monitoring reports ((e.g. Mintmier et al. 2014; Russell et al. 2012). Archaeological work (Hammatt 2013) conducted as part of the Honolulu High-Capacity Transit Corridor Project, more commonly known today as the HART rail project, focused on an area just to the north of the intersection of Keakulike Street and Nimitz Highway. The locations of the most relevant prior archaeological studies conducted near the project area are depicted in Figure 24. The findings of the prior studies, including previously identified historic properties (Table 1), are summarized below.

Table 1. Previously recorded historic properties located near the current project area.

SIHP Site Number	*Description*	*Function/Age*
50-80-14-2142	Disturbed artifacts within fill soils	Refuse deposit/Historic
50-80-14-2456	Harbor Court cultural deposits	Habitation/Precontact-Historic
50-80-14-4192	Human skeletal and organic remains	Burial/Precontact-Historic
50-80-14-4494	Marin Tower cultural deposits	Habitation and burial/ Precontact-Historic
50-80-14-4587	Pehu's pond	Possible fishpond/unknown
50-80-14-4588	Multicomponent site	Habitation and burial/ Precontact-Historic
50-80-14-4875	Kekaulike Diamond Head site	Habitation/Precontact-Historic
50-80-14-5496	800 Nu'uanu cultural deposits	Habitation/Precontact-Historic
50-80-14-5368	Kūwili fishpond	Aquaculture/likely Precontact
50-80-14-5781	Human skeletal remains	Burial/Precontact
50-80-14-5942	Honolulu Rapid Transit & Land Company Trolley	Transportation/Historic
50-80-14-5966	Kawa fishpond	Unknown/likely Precontact
50-80-14-6371	Incomplete human skeletal remains	Burial/unknown
50-80-14-6691	Disturbed skeletal remains, structural remnants	Burial and habitation/Precontact-Historic
50-80-14-6772	Midden deposit with pits	Habitation/Precontact-Historic
50-80-14-6889	Human skeletal remains	Burial/possibly Precontact
50-80-14-6926	Stoneware bottle cache in storm drain	Refuse deposit/Historic
50-80-14-7427	Cultural deposit, structural remains and refuse pit, one human skeletal element	Habitation, Commercial/Historic
50-80-14-9986	Chinatown Historic District	Commercial-Residential/Historic

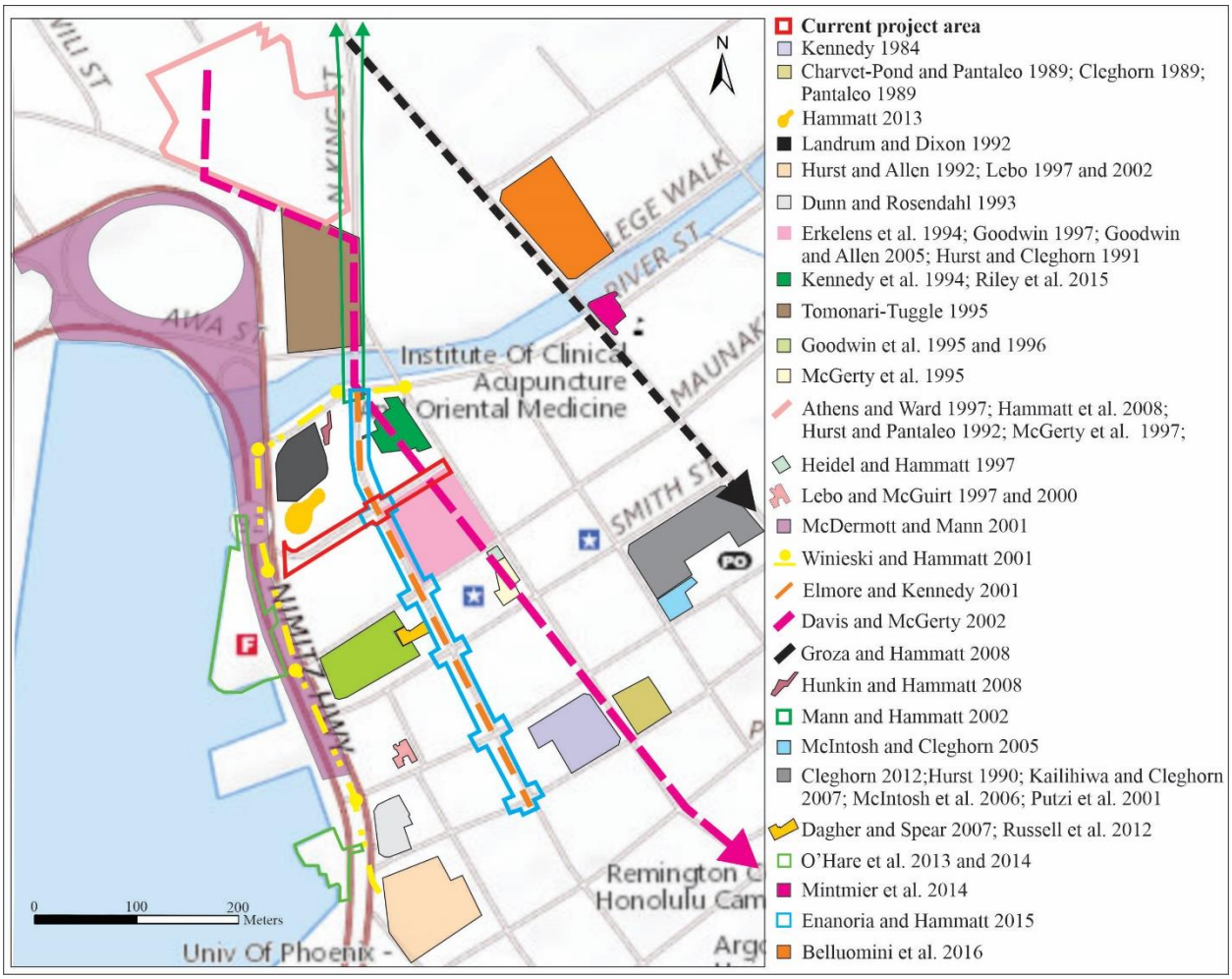

Figure 24. Approximate locations of prior archaeological studies relative to the current project area.

In 1984, Archaeological Consultants of Hawaii, Inc. (ACH) conducted subsurface testing (Kennedy 1984) at the intersection of Fort Street and Hotel Street, located five blocks south of the current project area (See Figure 24). The stratigraphy consisted of fill above a coral substrate, and no Historic or Precontact artifacts or features were encountered during their testing as a result of prior building construction and demolition within their project area.

The B. P. Bishop Museum Department of Anthropology conducted test excavations (Cleghorn 1989) and an archival literature review (Charvet-Pond and Pantaleo 1989) prior to the initiation of construction of the Chinatown Gateway Plaza, located to the southeast the current project area (see Figure 24). Cleghorn (1989) reported observations of extensive prior subsurface disturbance and that fill layers contained scattered historic artifacts. Charvet-Pond and Pantaleo (1989) reported that four buildings within the proposed Chinatown Gateway Plaza project area had construction dates of 1891, 1924, 1925, and 1933; and that during the Precontact Period, their project area had likely been used for agriculture and habitation-related activities. Subsequently, Bishop Museum staff conducted archaeological monitoring and subsurface testing (Pantaleo 1989) for the Chinatown Gateway Plaza Project and reported the presence of disturbed Historic glass bottles and ceramic fragments within fill soils dating from the 1880s to the 1920s, which were interpreted as a Historic trash deposit (SIHP 50-80-14-2142).

In 1989 the Applied Research Group at the Bishop Museum (Landrum and Dixon 1992) conducted an emergency mitigation of inadvertently discovered human remains (SIHP 50-80-14-4192) found during ground disturbance associated with the River-Nimitz Redevelopment Project located to the northeast of the intersection of River Street and Nimitz Highway, and one block north of the current project area (see Figure 24). The burial was found 2.5 meters below ground surface in a water-saturated, anaerobic matrix, was a well-preserved human burial with skeletal and soft-tissue remains recovered with associated fragments of braided cordage with twinned, plaited, and matted *pandanus* fibers. The human remains were deposited at the interface of a gleyed, sandy clay layer with an overlying

riverine and/or marine sand matrix, covered by landfill material which appeared to have been dredged from the adjacent harbor. Landrum and Dixon (1992:12) collected the following material from the overburden matrix: animal bone, marine shell, lithics, Historic bottle glass fragments, ceramic sherds, metal, wood, other preserved plant remains, and soil samples. Samples were submitted for radiocarbon analysis, but no results are given; on the basis of associated data and the result of their osteological analysis a determination was made that the individual the burial dated to the Precontact Period and likely of Polynesian descent (Landrum and Dixon 1992). Landrum and Dixon (1992) also identified two Historic refuse pits and two secondarily deposited Historic refuse areas containing Historic debris dating between the 1840s and 1920s, as well as a brick, concrete, and coral foundation remnant with a 6-inch pipe, which was interpreted as sewage infrastructure dating to 1929.

Over a period of twelve years, the property known as Block 10 to the southwest of the intersection of Smith and Beretania streets was subject to a series of archaeological studies (Cleghorn et al. 2012; Hurst 1990; Kalihiwa and Cleghorn 2007; McIntosh et al. 2006; Pietrusewsky 2003; Putzi et al. 2001). In May of 1990, Bishop Museum conducted a historic literature review and documents search (Hurst 1990) for the Smith-Beretania parking structure redevelopment project at Block 10, located to the southeast of the current project area (see Figure 24). The next formal study, an AIS (Putzi et al. 2001; McIntosh et al. 2006) of the Smith-Beretania parking structure that was constructed in 1952, was conducted in August of 2001 by Pacific Legacy. During the AIS, six backhoe trenches exposed 68 subsurface features and dense artifactual and ecofactual evidence of occupation (SIHP 50-80-12-6772). Four different types of pits were identified: cooking pits, containing charcoal and sometimes fire cracked rock; charcoal-stained pits, containing charcoal staining, but no charcoal concentration; midden pits, containing food refuse such as animal bones and shells; and refuse pits, containing artifacts such as bottles, ceramics, metal and sometimes midden (McIntosh et al. 2006). Other features included building foundations; traditional Hawaiian artifacts included ‘*ulumaika*, a complete stone adze, poi pounder fragments, cowrie shell lures, and a complete conch shell trumpet.

In September of 2001, Pacific Legacy returned to Block 10 and conducted archaeological data recovery (ADR) investigations (Cleghorn et al. 2012) at Site -6772. The ADR investigations expanded upon the prior studies (Hurst 1990; McIntosh et al. 2006; Putzi et al. 2001). Nine block excavations averaging 4-square-meters placed adjacent to the previously recorded features exposed numerous features and artifacts primarily within a lens situated 40 to 80 centimeters below the ground surface. Traditional Hawaiian artifacts identified and collected, included *poi* pounders, adzes, and *‘ulumaika;* Historic artifacts included roughly 2,700 items (over 1,000 glass bottles and fragments), ceramics and just over 400 pounds of miscellaneous metal. The artifacts included daily use items such as pipes and beer bottles, as well as fancy ceramics and fine glassware. Two human burials were also documented: Burial 1 was situated within a burial pit, lying in a flexed position, and buried with three fishhooks; Burial 2 was buried in an extended position with associated marine shell, bird bone, metal, coral, and wood. Cleghorn et al. (2012) reported that little evidence of the fire of 1900 exists in the archaeological record, which suggests that a major clean-up followed the fire; and an even layer of soil observed across Site -6772 indicates the area was intentionally capped, perhaps to control the plague outbreak. In addition, little direct evidence of Native Hawaiian occupation prior to European colonization was observed; although some habitation-related artifacts such as *poi* pounders were found, no traditional architectural features were observed.

In November 2001 and between January and April of 2002, Pacific Legacy returned to Block 10 to conduct archaeological monitoring (Kailihiwa and Cleghorn 2007) for the Smith-Beretania Parking Lot and Park project. Additional features of Site -6772 were exposed during the monitoring effort, including cultural deposits and human remains were identified. These consisted of six non-burial features: trash pits, midden pit, mortar basalt wall, and a basement; as well as 22 burials: six coffin burials, one possible wrapped burial, two flexed burials, and 13 of unknown type, which included isolated skeletal elements. In many cases artifacts were found associated with the burials, to include a pocket watch, beads, and metal chain with a pendant. Subsequent osteological analysis conducted by Pietrusewsky (2003:i) determined the burials represented a minimum of 21 individuals: two children, three young adults, and 16 adults, and that the majority of the remains had features “consistent with Hawaiian/Polynesian or Polynesian/Asian ancestry.” Pietrusewsky (2003:8) opined that the age and sex distribution across a concentration of 13 burials (6 adult males, 6 adult females, and one child) was consistent with Pacific Legacy’s interpretation of a possible family cemetery within a portion of their project area. The skeletal remains were recovered during the monitoring effort and later reburied on-site.

Over the course of a decade, the former Ka‘ahumanu Parking Structure property located on Queen Street between Bethel Street and Fort Street Mall and four blocks to the south of the current project area within the Merchant Street Historic District, was subject to various studies prior to the construction of Harbor Court Tower ((Hurst and Allen 1992; Lebo 1997, 2002). In 1991, Bishop Museum staff conducted the first of these studies, an archaeological

inventory survey (AIS) and archaeological monitoring (Hurst and Allen 1992; see Figure 24). Hurst and Allen (1992) identified Precontact and Historic cultural deposits and building foundations, which were assigned SIHP 50-80-14-2456 (Site 2456).

Shortly thereafter, PHRI conducted an AIS of the then-proposed Nuʻuanu Court Project property (Dunn and Rosendahl 1993) located immediately to the north of the Hurst and Allen (1992) project area, on Nimitz Highway between Bethel Street and Nuʻuanu Avenue and to the south of the current project area (see Figure 24). The Dunn and Rosendahl (1993) AIS resulted in the identification of additional Precontact and Historic features and artifacts of Site 2456. The additional artifacts and features included marine shell midden, faunal remains, postholes, pit features, basalt flakes, modified marine shell and bone, as well as medal, ceramic, and glass fragments.

Between October 1991 and January 1992, PHRI returned to the Harbor Court property and conducted data recovery for Site 2456 (Lebo 1997), which resulted in the expansion of the multicomponent site to include 35 additional features, including traditional Hawaiian postholes, artifact concentrations, and a fire pit; and Historic structural elements (foundations, postmolds, and coral blocks) and a bottle cache. Some modified glass items exhibited edge alterations and were interpreted as possibly modified using traditional Hawaiian methods. PHRI completed a data recovery report (Lebo 2002) based on the data recovered at the Harbor Court property in 1991 and 1992, which reported additional Precontact and Historic features and artifacts of Site 2456 and radiocarbon-based dates for the occupation of the site as beginning between A.D. 1000 and 1200.

In 1992, IARII conducted an AIS, data recovery, and archaeological monitoring (Goodwin et al. 1996; Goodwin et al. 1995) in support of the construction of the Marin Tower, on the city block bounded by Maunakea and Smith streets, North King, and Nimitz Highway, located to the south of the project area (see Figure 24). Between 1810 and 1860, the property was the former residence of the Marin family. Thus, most of the Historic features and artifacts encountered were associated with the Marin's use of the property, including 28 human burials (some with coffins and some without). However, Precontact fire pits, midden, and post molds were also revealed during data recovery. The entire property was designated as SIHP 50-80-14-4494 (Site 4494), and the burials were interpreted as representing the Marin family and their household staff.

In 1992, Aki Sinoto Consulting prepared a historical literature review (Hurst and Pantaleo 1992) for the then-proposed Liliha Civic Center at the northwest corner of North King Street and Iwilei Road, located to the north of Nuʻuanu Stream and the current project area (see Figure 24). Then in 1995, IARII conducted archival research (Tomonari-Tuggle 1995) of a parking lot immediately to the south of the Hurst and Pantaleo (1992) study area and to the north of the current project area (see Figure 24). Per Tomonari-Tuggle (1995:1), "prior to Dillinghman's major dredging and filling operations, the parcel was situated in the shallow waters at the mouth of Nuʻuanu Stream" and includes portions of Kūwili (SIHP 50-80-14-5368) and Kawa fishponds (SIHP 50-80-14-5966). IARII recommended an AIS with a focus on collection of sediment cores to better understand the fishpond deposits. Subsequently, Scientific Consultant Services conducted an AIS with subsurface testing (McGerty et al. 1997) of the then-proposed Liliha Civic Center site (see Figure 24). Said testing resulted in the identification of soil layers interpreted as the former Kūwili fishpond (Site 5368). Based on results of radiocarbon dating, McGerty et al. (1997) reported that the pond may have been constructed by A.D. 1100. Athens and Ward (1997) conducted a paleoenvironmental study of sediment cores from Kūwili fishpond and determined it was likely constructed between ad 1400 and 1650; their study was published as Appendix A of the McGerty et al. (1997) report. Most recently, in 2008, CSH conducted data recovery of Site - 5368 (Hammatt et al. 2008) within the same project area for the Iwilei Senior Housing project. Testing of sediment cores resulted in the earliest deposits in Kūwili fishpond being dated to ad 1100, which is more consistent with the dates that resulted from the earlier McGerty et al. (1997) study than the Athens and Ward (1997) study.

In 1995, SCS conducted background research and a field inspection (McGerty et al. 1995) for the then-proposed Chinatown Community Service Center project on Hotel Street between Maunakea and Smith streets, located two blocks south of the current project area (see Figure 24). McGerty et al. (1995:18) concluded that "those portions of the project area not impacted by basement construction have high potential to contain significant archaeological deposits" and they recommended an AIS be conducted in said areas.

In 1997, CSH conducted archeological testing (Heidel and Hammatt 1997) of a 1,700-sq-ft parcel at the southwest corner of Maunakea and North Hotel streets, located one block south of the project area (see Figure 24). No cultural material or subsurface features were recorded in the four test trenches they excavated, except for a basement filled with sediment and modern debris to which no occupation date or site designation was assigned.

In 1997, Bishop Museum staff conducted archaeological data recovery (Lebo and McGuirt 2000) of SIHP 50-80-14-5496 (Site 5496) at 800 Nu‘uanu Avenue (near Marin Street), located to the south of the current project area (see Figure 24). Site 5496 had been identified during an AIS conducted by Bishop Museum staff (Lebo and McGuirt 1997). Lebo and McGuirt (1997) identified seven features and eight structures during backhoe trenching beneath an extant parking lot on the southeast portion of the property. The subsequent data recovery focused on the deposits located within the northeast portion of their project area and included backhoe trenching and manual block excavation, Lebo and McGuirt (2000) identified three cultural zones to represent temporal periods and cultural activities. Cultural Zone 1 (1810-1860s) was characterized by both habitation and commercial-related activities to include traditional Hawaiian artifacts, such as retouched flakes, and imported colonial artifacts, such as buttons, Chinese and English ceramics, and kaolin tobacco pipe fragments; features included coral block walls, firepits, and tamped earthen floors. Cultural Zone 2 (1860s-1890s) is characterized by a series of wooden framed businesses on the periphery of the lot and privies and storage facilities on the interior, and a loss of traditional Hawaiian activities at the site. Cultural Zone 3 (1890s-present) is defined by the construction of brick and cement buildings and their continued use over time. Lebo and McGuirt (2000) concluded that traditional Hawaiian activities continued after the larger commercial buildings were in use around the mid-1800s and that the dynamic and multidirectional culture change exhibited in -Site 5496 inlcuded Hawaiian, European, American, and Chinese influences.

Between November of 1999 and July of 2000, Archaeological Consultants of the Pacific, Inc. conducted archaeological monitoring (Elmore and Kennedy 2001) for miscellaneous sidewalk improvements on both sides of King Street, between River Street and Bethel Street; a portion of their project area coincides with the eastern boundary of the current project area (see Figure 24). Elmore and Kennedy (2001) identified an in situ human burial (SIHP 50-80-14-5781) in a trench, from 90 to 110 centimeters beneath the surface of the *mauka* lane of King Street, located between Maunakea Street and Smith Street—one block south of the project area. Based on the burial’s flexed position and lack of Historic artifacts, the burial was assessed as likely of Native Hawaiian and of Precontact temporal origin. The remains were recovered for relocation and reburial. Artifacts recovered from a backdirt pile included glass and ceramic fragments, a shark tooth, possible drilled shell fragments, a possible shark tooth tool, and a single fishhook; however, none of the artifacts could be directly associated with the burial.

In 2001, CSH conducted an AIS (McDermott and Mann 2001) for the Nimitz Highway Water System improvements project between Awa Street (in Iwilei) and Queen Street, located to the west of the current project area (see Figure 24). The archaeological fieldwork comprised pedestrian survey of their entire project area and subsurface testing focused primarily on the investigation of Kawa Fishpond, formerly located within the northern portion of their project area (SIHP 50-80-14-5966). CSH conducted backhoe testing and extracted sediment cores in the area corresponding to the former fishpond and tested the fishpond sediments found beneath Historic fill layers. Inversions in the dates produced by radiocarbon testing resulted in a lack of a clear chromoly for the construction and use of the fishpond; however, McDermott and Mann (2001:65) reported that Kawa fishpond appears to have been accumulating sediment since approximately ad 1150-1350,” and recommended further sample collection of sediments from Kawa Fishpond and the lagoonal deposit beneath it. To that end, in 2003, CSH prepared a data recovery plan (DRP) for the Nimitz Highway Water System Improvements project (O’Hare et al. 2003). However, to date, no report appears to document further data recovery efforts in their project area.

Between August 2001 and June 2002, CSH performed archaeological monitoring (Mann and Hammatt 2002) of the installation of new drain lines, electrical conduit, and electrical boxes for the King Street Rehabilitation project within two sections of King Street between Dillingham Boulevard and South Street, a portion of which terminates at the intersection of North King and River streets, one block north of the current project area (see Figure 24). Although CSH recovered a previously disturbed incomplete human burial (SIHP 50-80-14-6371) at 63 centimeters below the road surface, near the intersection of South King and Punchbowl streets and identified a pit feature containing butchered animal bones near the intersection of South King and Richards streets, no historic properties or artifacts were encountered during the monitoring effort near the current project area.

In 2002, Garcia and Associates (GANDA) conducted archaeological monitoring (West et al. 2002) for the installation of water mains along North King Street between Liliha Street and River Street to the north of the current project area (see Figure 24). As a result of their monitoring effort, GANDA identified portions of a previously recorded historic property and associated artifacts of the Honolulu Rapid Transit & Land Company Trolley (SIHP 50-80-14-5942) across their linear project area. Trolley system remnants included railroad ties, metal hardware, and brick construction atop fill material; associated artifacts included glass jars and bottles, faunal remains, marine shell, wood, charcoal, ceramics, and leather shoes found within the fill material.

In 2002, SCS prepared an assessment of archaeological and cultural resources (Davis and McGerty 2002) as part of the Environmental Impact Statement for the then-proposed Bus Rapid Transit (BRT) Primary Corridor connecting Kapolei with Waikīkī and Mānoa, a section of which crossed over Nuʻuanu Stream and the current project area via Hotel Street (see Figure 24). Based on their background research, SCS assessed the Chinatown subsection of the In-Town Route section of the BRT corridor, which crosses the current project area, to be of high archaeological/historical sensitivity and recommended archaeological monitoring of all ground disturbance therein.

In 2005, Pacific Legacy conducted an AIS (McIntosh and Cleghorn 2005) at the corner of Nuʻuanu Avenue and Pauahi Street, located to the southeast of the project area (see Figure 24). As a result, McIntosh and Cleghorn (2005) identified a multi-component historic property (SIHP 50-80-14-6691). Site 6691 comprises the incomplete remains of two disturbed human burials within two Historic trash pits; the charred remains of a structure destroyed in the 1900 Chinatown fire; and structural remnants of a Historic building that partially collapsed in 2001. McIntosh and Cleghorn (2005) concluded the burials were likely Precontact in origin and had been previously disturbed and incorporated into the trash pits during the early 1900s.

Between September 2006 and June 2007, CSH performed archaeological monitoring (Groza and Hammatt 2008) of sidewalk reconstruction, road resurfacing, the installation of concrete bus pads, curb ramps, and traffic signal systems, and improvements to utility boxes and drainage systems for the Rehabilitation of Streets project within a 1,800-meter long section of Beretania Street between North King and Alapaʻi Street, located to the north and east of the current project area (see Figure 24). No historic properties or cultural deposits were identified during the archaeological monitoring effort. Groza and Hammatt (2008) reported that the soils observed beneath the road surface and sidewalks comprised fill soils, which indicates significant prior disturbance throughout their project area.

In 2007, Scientific Consulting Services, Inc. (SCS) reported the results of archaeological monitoring (Dagher and Spear 2007) for the Pacific Gateway Center renovation project, located along the *makai* side of North King Street between Maunakea and Smith streets and one block south of the current project area (see Figure 24). As a result of the monitoring effort, which followed an approved AMP (Drennan et al. 2006), SCS identified two historic properties. The first, human skeletal remains representing an adult male and an adult female of Polynesian ancestry (SIHP 50-80-14-6889); and a foundation wall with concrete in the construction and a cache of Chinese brown stoneware liquor bottles in a collapsed storm drain comprised the second site (SIHP 50-80-14-6926). Between June of 2008 and October of 2011 Pacific Consulting Services, Inc. (PCSI) conducted further archaeological monitoring (Russell et al. 2012) of the Pacific Gateway Center renovation project intermittently per an approved addendum AMP (Park and Collins 2008). PCSI monitored six excavation locations within the building, which resulted in the identification of additional features associated with Site 6926—primarily artifact concentrations and a foundation wall remnant. Although much of the matrix was a result of secondary deposition, several traditional Hawaiian artifacts were recovered, including a basalt pestle, a modified mammal bone, and sea urchin spine abrader. Stratigraphy observed included a modern fill layer (Fill A) over three Historic fill layers (Fill B, C and D), over an in situ layer (Layer I), which contained Historic subsurface features and artifacts. Russell et al. (2012) recommended data recovery prior to any future ground disturbances within their project area.

In 2008, CSH conducted archaeological monitoring (Hunkin and Hammatt 2008) of the Armstrong Building Courtyard Renovation project at the southeast corner of the intersection of North King and River streets, located one block north of the current project area (see Figure 24). Monitoring followed an approved AMP (O'Hare et al. 2008) and involved demolition and removal of an existing concrete pavement and minor excavation of small ditches along the perimeter of the area to be repaved. No historic properties or intact subsurface deposits were observed during their monitoring effort.

From 2006 through 2013, CSH conducted fieldwork and produced reports for the proposed Honolulu High-Capacity Transit Corridor Project (HHCTCP), which crossed various parcels from Kapolei to Mānoa with a connection in Waikīkī throughout portions of multiple *ahupuaʻa* including Honolulu Ahupuaʻa. In 2008, CSH produced the Archaeological Resources Technical Report which proposed the research methods (Hammatt 2008). Hammatt (2008) divided their study area into archaeological sub-areas, the current project area falls within the Downtown Waterfront sub-area. A portion of the corridor extends along Honolulu Harbor, *makai* of the current project area and includes the location of a transit station (Holau transit station) at the northeast corner of Kekaulike Street and Nimitz Highway. Hammatt (2013) reported on the results of an AIS that included subsurface testing in the area of the future transit station just to the north of the intersection of Kekaulike Street and Nimitz Highway (see Figure 24). As a result of the subsurface testing, Site 50-80-14-7427 was recorded and described as a "cultural resource consisting of subsurface infrastructure remnants, cultural deposits, and a human skeletal element located 3 m east of Nimitz Highway near the Kekaulike Street intersection;" and was recommended for data recovery (Hammatt 2013:572).

In 2013, CSH conducted a literature review and field inspection (O'Hare et al. 2013) for the Pier 12 and Pier 15 Improvement Project; Pier 15 is located *makai* of the current project area across Nimitz Highway (see Figure 24). Subsequently, CSH prepared an AMP (O'Hare et al. 2014) and in 2015 and 2016, Keala Pono Archaeological Consulting conducted archaeological monitoring (Graves et al. 2017) for the project. As a result of the monitoring effort, Keala Pono recorded an artifact assemblage at each of the piers SIHP 50-8014-7575 at Pier 12 and SIHP 50-80-14-7576 at Pier 15, both associated with earlier construction phases of the piers. The artifact assemblages comprised various Historic materials, primarily from 1870-1920, and a few traditional artifacts.

In May and June of 2013, PCSI conducted intermittent archaeological monitoring (Mintmier et al. 2014) of excavations associated with traffic infrastructure improvements at the intersection of North Beretania and River Streets, to the northeast of the current project area (see Figure 24). As a result of their monitoring effort, no historic properties were identified. However, eighteen Historic artifacts (ten glass and eight ceramic) were collected and subsequently analyzed. Mintmier et al. (2014) concluded that some glass specimens were manufactured between 1870 and the middle 1900s, while the ceramics were manufactured in the 1800s. Stratigraphy observed included an upper layer (Layer I) of base course fill associated with road and sidewalk construction over two dark grayish-brown silt loam layers (IIa, and IIb), which exhibit evidence of prior historic and recent disturbance. Mintmier et al. (2014) recommended archaeological monitoring of any future ground disturbances within their project area.

In 2016, CSH conducted an AIS (Belluomini et al. 2016) for the American Savings Bank Campus at 300 North Beretania Street, located to the northeast of the current project area and across Nu'uanu Stream (see Figure 24). As a result of subsurface testing, CSH identified three historic properties: seven human burials and six associated features (SIHP 50-80-14-7933); LCAw. Boundary wall remnants (SIHP 50-80-14-7934); and building foundation structural remnants (SIHP 50-80-14-7935).

Prior Studies Conducted Along Kekaulike Street

Between September and October of 1992, Archaeological Consultants of Hawaii (ACH) conducted an inspection and archaeological monitoring of the demolition of the buildings on the property, and a subsequent AIS (Kennedy et al. 1994) for the Kekaulike Revitalization Project Ewa block bounded by Hotel, River, and King streets, located along the north side of Kekaulike Street and thus immediately adjacent to a portion of the current project area (see Figure 24). Per Kennedy et al. (1994), the Wong building, built in 1902, was the last wooden building remaining in Chinatown. Nine backhoe trenches and three hand-dug test units revealed two previously unrecorded sites: Pehu's Pond, a former pond belonging to a *konohiki* named Pehu (SIHP 50-80-14-4587) and a multicomponent site (SIHP 50-80-14-4588) that spans various periods of occupation and use from Precontact through the twentieth century. Per Kennedy et al. (1994), historical documents do not specify the use of Site 4587, but it may have been a *loko wai* fishpond due to its proximity to Nu'uanu Stream and Kikihale Spring, which was reportedly located *mauka* of the pond possibly within LCAw. 69; the date of construction and use also remain unknown however, historical research indicates the pond was likely filled in by the 1850s. Site 4588 included 53 features, three of which were human burials (two Historic and one possible Precontact), along with walls, crushed coral foundations, a burn layer, trash pits, postholes, and fire pits. Stratigraphy observed included three upper layers (Layers I, II, and III) of fill containing imported soils and Historic trash throughout that reached a maximum depth of about 1.2 meters below the ground surface, over a sediment that may have been naturally occurring or historic fill although no Historic cultural material was observed (Layer IV), over four layers of naturally deposited sediment (Layers V, VI, VII, and VIII), over coral shelf. ACH recommended data recovery and the preparation of a burial treatment plan. In 1995, ACH returned to their project area and conducted data recovery at Sites 4587 and 4588 (Riley et al. 1995), which resulted in the recovery of more than 5,000 artifacts and the identification of 55 more subsurface features from Precontact though the twentieth century, including post molds, pits, a possible burn layer, trash pits, fishpond sediments and a wall, and three additional human burials.

In March 1994, IARII conducted an AIS (Goodwin 1997) of a surface parking lot in preparation for the construction of an underground parking garage associated with the Kekaulike Diamond Head project, located on the south side of Kekaulike Street between King and Hotel streets, and thus immediately adjacent to a portion of the current the project area (see Figure 24). Per Goodwin (1997), Bishop Museum staff had conducted the initial background research of the Kekaulike Parking Lot redevelopment project (Hurst and Cleghorn 1991), a few years prior. Hurst and Cleghorn (1991) had reported that a graveyard had been mentioned in *Māhele* documents associated with LCAw. 28 to Keaniani. As a result, the AIS fieldwork focused on the portion of their project area that coincided with LCAw. 28 (along King Street and closer to Maunakea Street) to determine whether the graveyard was on the property in addition to subsurface testing across the rest of the property. The survey included the mechanical

excavation of 2l test trenches that revealed 105 features and six cultural layers out of twelve strata beneath a parking lot. Although no evidence of the graveyard was encountered as a result of the AIS, a single secondary burial was found; IARII described the skeletal remains in a separate report (Erkelens et al. 1994). The Kekaulike Diamond Head site (SIHP 50-80-14-4875) comprises the entire block and that portion of Kekaulike Street fronting the block (Goodwin 1997)(Goodwin 1997). The stratigraphy observed within the excavated portions of their project area included a 10-20 centimeters thick layer of base course immediately under the paved surface. Goodwin (1997:10) further explains the stratigraphy as follows:

> Prior to the parking lot, the property had housed various commercial and residential structures, associated outbuildings, parking and service areas, and alley ways. All these buildings were demolished, and most of the structural material hauled away. The demolition process scattered structural elements and building contents across the property. The top few centimeters of sediment and the top few centimeters of some buried features (utility trenches, privies, wells, and trash pits) were also disturbed during demolition; their contents were mixed in sediments with the scattered structural elements. Collectively, these materials formed a demolition matrix that varied in thickness between l0 and 30 cm across most of the site. Once demolition was complete and the cellars were filled, the property was graded and rolled. This process further mixed all the demolition debris and compressed the top 5 to l0 cm. Beneath the coral/gravel substrate, therefore, IARII field technicians found two layers of destruction debris - the uppermost (Stratum A) more compacted that the lower one (Stratum B) - across the northern 3/4 of the property. All the test trenches, except those immediately fronting Maunakea Street contained one or both of these strata.

Per Goodwin (1997:15), new buildings were constructed along Kekaulike Street after the two Chinatown fires and that these post-1900 buildings did not include basements; rather they were set "on brick and/or stone foundation walls which apparently sat on coral bedrock that generally was less than a meter below grade in this location." IARII reported that the Kekaulike frontage area exhibited highly disturbed strata as a result of the construction, fire, demolition, and parking lot construction sequence. The test trenches, or portions thereof, excavated in closest proximity to the current project area (TT3, TT17, and TT18) displayed these characteristics. Elsewhere within their project area, trenching exposed traditional Hawaiian features within deeper strata such as post holes, shallow cellars, house floors, trash pits, and midden. A fire pit feature (Feature 25) yielded a calibrated radiocarbon date range of AD 1184-1394. Goodwin (1997) also reported that they encountered structural remnants of outbuildings and wooden tenements in nearly every test trench within the central portion of their project area including filled privies, wells, and trash pits that they attributed to post-l850 Chinese occupation of the site. Regarding the unsurveyed portions of their project area and Site 4875, Goodwin (1997:35) opined that "the northern edge of the property that fronts Kekaulike Street also had little potential for yielding significant archaeological features" given the sequences of building and demolition therein. However, Goodwin (1997:37) stated that because Kekaulike Street was built after the 1886 Chinatown fire on former residential property and road construction typically requires grading and the addition of fill material rather than deep subsurface disturbance, "it was posited that there is a high probability for the presence of significant archaeological resources under Kekaulike Street." IARII recommended archaeological data recovery "on the inventoried portion of the site prior to the demolition of the structures on the unsurveyed portions" of the site: a small area in the southwest corner and a large area in the northeast corner of the property that had extant structures, and a portion of Kekaulike Street within the current project area.

IARII prepared a mitigation plan that included data recovery, burial treatment, and monitoring procedures for the entire project area. From August to October of 1994, IARII returned to the Kekaulike Diamond Head block to conduct data recovery of Site 4875 (Goodwin and Allen 2005). IARII excavated 97 units that uncovered dozens of early Historic and Precontact features that represent some of the earliest known evidence of occupation in Honolulu's history. Most of the features and deposits were associated with four house compounds (two each in former LCAw. 28 and LCAw. 222) and a blacksmith's shop located along with property boundaries. While the four house compounds date to the early 19th century, samples from some deeply buried deposits produced Precontact radiocarbon dates two features. Per Goodwin and Allen (2005:5), each house compound "contains traditional Hawaiian, Euro-American, and Asian material items, yet each shows a difference in types and quantities of the materials used, suggesting that different households were acquiring different goods at different rates and times." Feature types observed included structural remnants of the houses and infrastructure, as well as iron debris near the former smithy, heavy machine parts, and post molds that appear to delineate LCAw. Parcel boundaries. More than 8,500 artifacts with a wide range of attributes and ethnic associations were collected during the data recovery of Site 4875, and large amounts of faunal bone, which included the remains of Precontact and introduced fauna (Goodwin and Allen 2005).

Between March of 1999 and January of 2001, CSH performed archaeological monitoring (Winieski and Hammatt 2001) for the Nimitz Highway Reconstructed Sewer project, which extended *makai* from the intersection of River and Hotel streets to Nimitz Highway, to the north and immediately west of the current project area, and continued southward to merge with Queen Street to South Street to its southern terminus at Ala Moana Boulevard and Keawe Street (see Figure 24). CSH monitored the excavation of 24 jacking and receiving pits and 20 pothole probes, as well as a few open-cut trenches along the sewer line corridor. One such pit was excavated beneath the highway at the intersection with Kekaulike Street, immediately to the west of the project area. The 6-meter by 4-meter pit revealed no cultural material and the following stratigraphy: "below 20 cm of asphalt and 30 cm of gravel road bed were successive fill layers, which contained gravel and coral rubble. The fill layers continued well below to water table" (Winieski and Hammatt 2001:18). As a result of the monitoring effort, CSH identified a brick-lined manhole and a remnant of the Honolulu Rapid Transit narrow-gauge trolley system at the intersection of Nimitz Highway and Queen Street (SIHP 50-80-14-5942).

Between March 2012 and July 2013, CSH conducted archaeological monitoring (Enanoria and Hammatt 2015) for rehabilitation and replacement of water, gas, sewer, and drain lines along King Street and at each of the cross-street intersections between River and Bethel streets. The intersection of King Street with Kekaulike within the current project area coincides with a portion of their 1,500 linear-foot project area. Stratigraphy consisted of a series of fill sediments associated with the construction of the existing asphalt surface and the installation of subsurface utilities overlying disturbed natural alluvium, natural volcanic cinder, and a coral shelf. No historic properties were identified; however, according to Enanoria and Hammatt (2015:79), "a substantial amount of the natural ground surface has not been altered and therefore still has a high potential of containing cultural deposits and historic properties." Thus, they recommended that archaeological monitoring be required for any future ground disturbances.

3. ARCHAEOLOGICAL EXPECTATIONS

Based on the results of prior archaeological fieldwork conducted near the current project area and the review of historical maps and documentary material presented above, a set of archaeological expectations for the project area is presented.

The location of the project area across from Honolulu Harbor was used during Precontact times for habitation, subsistence-related activities, ceremonial practices, trade, and burials. The evidence of these activities has been recorded in studies conducted to the north and south of the current project area. Early maps show the current project area to have been the location of traditional house plots, a land use that is supported by the *Māhele* data. The "graveyard" mentioned in the *Māhele* testimony for LCAw. 28 has not been identified archaeologically, and it is possible that evidence of this graveyard could be encountered beneath Kekaulike Street near its intersection with King Street. Traditional burial sites have been encountered during both archaeological excavation and monitoring projects in a few places within the Chinatown area.

As a result of the AIS (Goodwin 1997) for the Kekaulike Diamond Head underground parking project, which was conducted in the immediate proximity of the Phase 2 portion of the current project, with respect to Kekaulike Street proper Goodwin (1997) posited a high probability for the presence of archaeological resources under Kekaulike Street. Archaeological data recovery projects (Goodwin and Allen 2005; Goodwin et al. 1996; Lebo 1997, 2002; Riley et al. 2015) in the vicinity of the current project area have all demonstrated the presence of intact and partially intact buried cultural deposits dating from both the Precontact and Historic periods.

Historical maps also indicate that during the middle nineteenth century at least one house may have existed within the current project area. Similar such house sites have been encountered during prior monitoring, testing, and data recovery efforts, which have identified a range of structural components including stone or brick foundations, wooden post and beam foundations, and wood sills surrounding earthen floors. However, as Cleghorn et al. (2012) have reported, a major clean-up effort appears to have followed the 1900 Chinatown fire, efforts which may have obliterated evidence of all prior land use. They observed little direct evidence of Native Hawaiian occupation prior to European colonization; and while some habitation-related artifacts such as *poi* pounders were found, no traditional architectural features were observed. The limited number of Precontact cultural resources recorded within the immediate project area vicinity during prior archaeological investigations is indicative of the destructive impact of the widespread development and redevelopment activities that have been occurring in the immediate project area vicinity since the late nineteenth century.

4. ARCHAEOLOGICAL FIELD INSPECTION

A field inspection of both the Phase 1 (Kekaulike Mall between King and Hotel streets) and Phase 2 (Kekaulike Street between Nimitz Highway and King Street) areas was conducted on May 20, 2020 by Teresa Gotay, M.A. under the supervision of Robert B. Rechtman, Ph.D. The project area is a completely built environment with no native ground surface exposed. The above-ground built-environment potential historic properties (i.e., buildings, structures, pavements and kerbing, etc.) that were observed during the current field inspection are not addressed in this study, but rather are described and assessed in a report entitled "Historic Resources Evaluation for HRS Chapter 343 Environmental Assessment for *Kekaulike Mall/Street Multimodal Improvements Project*, Chinatown Historic District, Oahu, Hawaii" prepared by Mason Architects, Inc. (Mason 2020).

The numerous sewer manholes, water connection boxes, and electrical pull boxes observed (Figures 25, 26, 27, and 28) attest to the high degree to which subsurface utilities exist below the current paved walkways and roadway within the project area. It is likely that the placement of the existing subsurface infrastructure has impacted any subsurface cultural deposits that may have survived the periodic devastation and rebuilding of the Chinatown area.

Figure 25. Storm drain and utility pull box in sidewalk of Kekaulike Street.

Figure 26. Sewer manhole and electrical utility vaults at intersection of N. King and Kekaulike streets.

Figure 27. Storm drain and utility vault in sidewalk along Kekaulike Street.

Figure 28. Sewer manhole in center of roadway in the Phase 2 (Kekaulike Street) portion of the project area, view to the west toward Nimitz Highway.

5. CONCLUSION AND RECOMMENDATIONS

In conclusion, the results of the current literature review combined with the negative findings from the limited field inspection indicate that there is a low likelihood intact cultural deposits within the project area. As the project area comprises the paved right-of-way of Kekaulike Street and Kekaulike Mall between Nimitz Highway and Hotel Street, it has been subject to infrastructure- and travel-related development since the late 1800s, which has resulted in the complete removal of any surface archaeological resources that may have formerly existed.

The literature review did reveal that the project area vicinity was among the earliest of the communities of O‘ahu to be impacted by commercial development and western lifeways via foreign traders and visiting whaling ships. As such, very few traditional habitation and agricultural sites have survived within the current project area or greater Chinatown. However, intact subsurface cultural layers and burials have been uncovered beyond the current project area beneath Chinatown. The current project area has been either a street for vehicular transportation or a pedestrian mall for over 120 years, replete with prior ground disturbance and impacts associated with the installation and maintenance of infrastructure, such as utilities and communication lines. Furthermore, more than a century of nearby residential and commercial development and multiple destructive fires may have erased all intact evidence of prior land use. However, as demonstrated by the Hammatt (2013) study conducted slightly to north of the current project area, there is a potential for encountering subsurface Historic Period cultural deposits, albeit within disturbed contexts.

With respect to the historic preservation review process and in consultation with the DLNR–SHPD Archaeology Branch Chief, it is posited that an archaeological inventory survey would not be required prior to project implementation. However, with the understanding that there is a potential (albeit limited) for encountering subsurface cultural deposits, on-site archaeological monitoring as a mitigation measure is recommended. To that end, an archaeological monitoring plan in accordance with Hawai'i Administrative Rules (HRS) §13-279 shall be prepared and submitted to DLNR-SHPD for review and acceptance.

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APPENDIX C

Historic Resources Evaluation

Historic Resources Evaluation for HRS Chapter 343 Environmental Assessment for *Kekaulike Mall/Street Multimodal Improvements Project*, Chinatown Historic District, Oahu, Hawaii

Prepared by MASON under contract to

HDR Inc for

City and County of Honolulu Department of Transportation Services

Draft
November 2020

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Introduction

Mason Architects, Inc. (MASON) was hired as a sub-consultant to HDR Inc. (HDR) to perform historical consulting in support of the Environmental Assessment (EA) being prepared by PBR Hawaii for the *Kekaulike Mall/Street Multimodal Improvements Project* (project) in Honolulu, Hawaii. This project is proposed by the City and County of Honolulu's Department of Transportation Services (CCH DTS) in anticipation of the Chinatown light rail station at the Ewa side of the intersection of Kekaulike Street and Nimitz Highway, planned by the Honolulu Authority for Rapid Transit (HART).

Project Site and Study Area

The project site is the full length of Kekaulike Mall and Kekaulike Street, from Hotel Street to Nimitz Highway, in the Chinatown Historical District and the Chinatown Special Design District (Fig 1). The study area used for the evaluation of effect incorporates the project site, including the buildings that front Kekaulike Mall and Kekaulike Street.

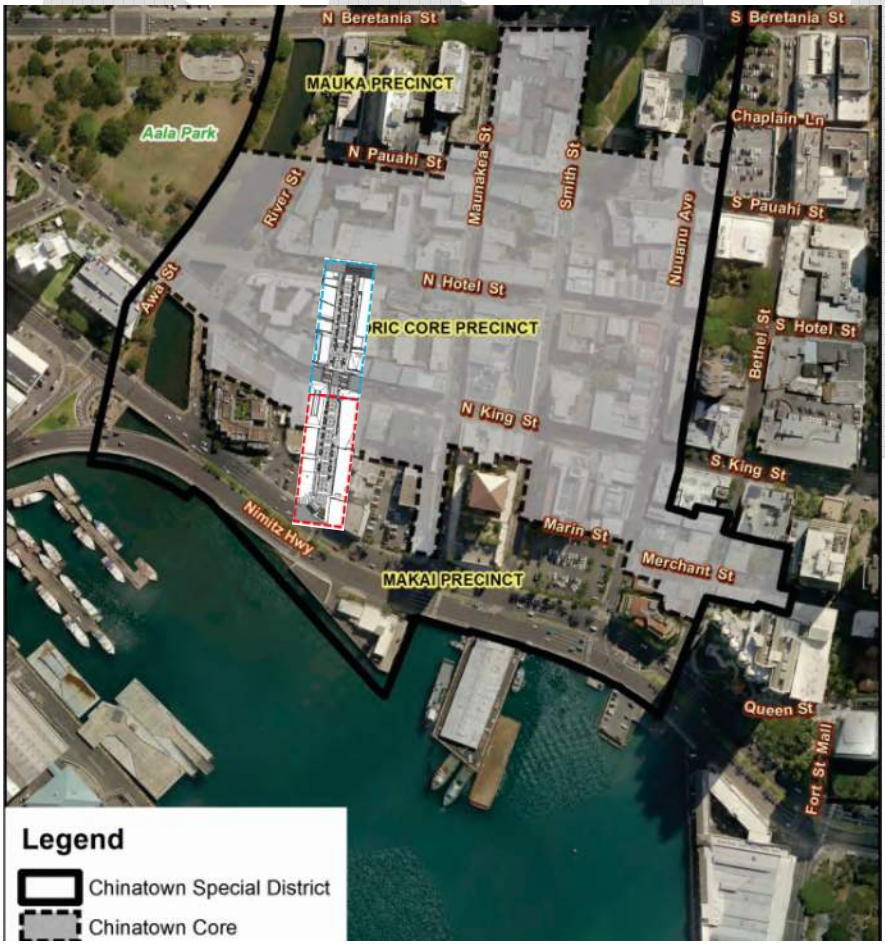

Figure 1: Map of Chinatown Special District with project site overlay. Blue and red dashed line boundaries show the project site/phases. Sources: Base map: "Sustaining Chinatown: Historic Preservation Summer Series 2016, Zoning and Special District Design Guidelines in Chinatown." Project site overlay is by HDR.

Historical Overview

The project is located within the Hawaii Register and National Register-listed Chinatown Historical District. The section below provides an overview of the context of the historical development of Kekaulike Street. The individual buildings within the study area are denoted in the narrative below with a bold font (and also listed in Table 1). The buildings situated along Kekaulike Mall and Street have been evaluated previously for historical significance, and many have been recognized as architecturally important and/or historically significant, as documented in the Special District Design Guidelines, Special District Exhibit 21-9.10A, and in the Working Draft Chinatown Historic District Nomination Update (expanded Chinatown Historical District). These evaluations are included in the historical overview below in parenthesis.

Established where the Nu'uanu Stream empties into the Honolulu Harbor, today's Chinatown evolved from a native Hawaiian settlement, to a primarily Chinese trading and social center in the mid-nineteenth century. Eventually it became a diverse community comprised of various immigrant groups from Japan, Portugal, Korea, Philippines, Vietnam, Laos, and other Southeast Asian countries. The district's architecture today exhibits details attributable to some of these ethnic groups (primarily Chinese and Portuguese), that are applied to western architectural styles including Renaissance Revival and Neoclassical. The district also includes some mid-century modern buildings. The Chinatown Historic District was listed in the National Register of Historic Places in 1973[1] consisting of approximately 36 acres between the Honolulu Harbor, Nu'uanu Stream, Beretania Street, and includes buildings on both sides of Nu'uanu Avenue. Since that time, the demographics and architectural styles of the district have continued to evolve.

Located where the city meets the harbor and piers, Kekaulike Street (Kekaulike) exemplifies the history of Chinatown. Maps from the mid-19th century begin to show what would become Kekaulike and the streets of Chinatown. By the 1890s the area had established itself with a gridded plan, dirt roads, concrete sidewalks with basalt curbs, and buildings populating city blocks. At this time, there was minimal vegetation. On Kekaulike were relatively scattered detached two-story, wood-framed dwellings with small building footprints. Many of the street-facing buildings had canopies that overhung the streets creating shade for pedestrians and shoppers. Two-story, wood-framed commercial buildings were located at the intersections with North King Street (N. King) and N. Hotel Street (N. Hotel) providing services to the many residences.

By 1900, two fires had destroyed most of the buildings on Kekaulike, and by 1906, residences were replaced with a dense collection of commercial or mixed used buildings, including offices, general merchandise, grocery stores, and open stall fish markets. Lei sellers became prevalent throughout Chinatown during "Boat Days," when the twice-weekly steamships full of travelers arrived and departed from Honolulu Harbor's piers. Lei vendors set up stalls on the sidewalks of Kekaulike Street, and other streets in the area, as well as within Irwin Park. Permanent lei stands and stores were eventually established throughout Chinatown (Fig. 6). Detached wood-framed tenement buildings were situated at the rear of the commercial uses, and residential uses fronting the street were generally at the upper levels. Despite greater enforcement of building regulations in response to the fires, a large portion of Chinatown's reconstructed buildings continued to be built entirely of wood.

[1] The National Register-listed Chinatown Historical District is currently in the process of being expanded and updated. "Draft Chinatown HD Nomination" referenced throughout, refers to the working document that is currently being drafted as of 2020.

1020 Kekaulike, 142-159 N. King, a one-story grocery store, located at the northeast corner of Kekaulike and King, emerged at this time (between 1900-1906) and has operated primarily as a grocery store and market, with occasional residential use, since opening. (This building was identified in the S.D. Design Guidelines Appendix, was listed in S.D. Exhibit, and is a contributor to the expanded Chinatown Historical District.)

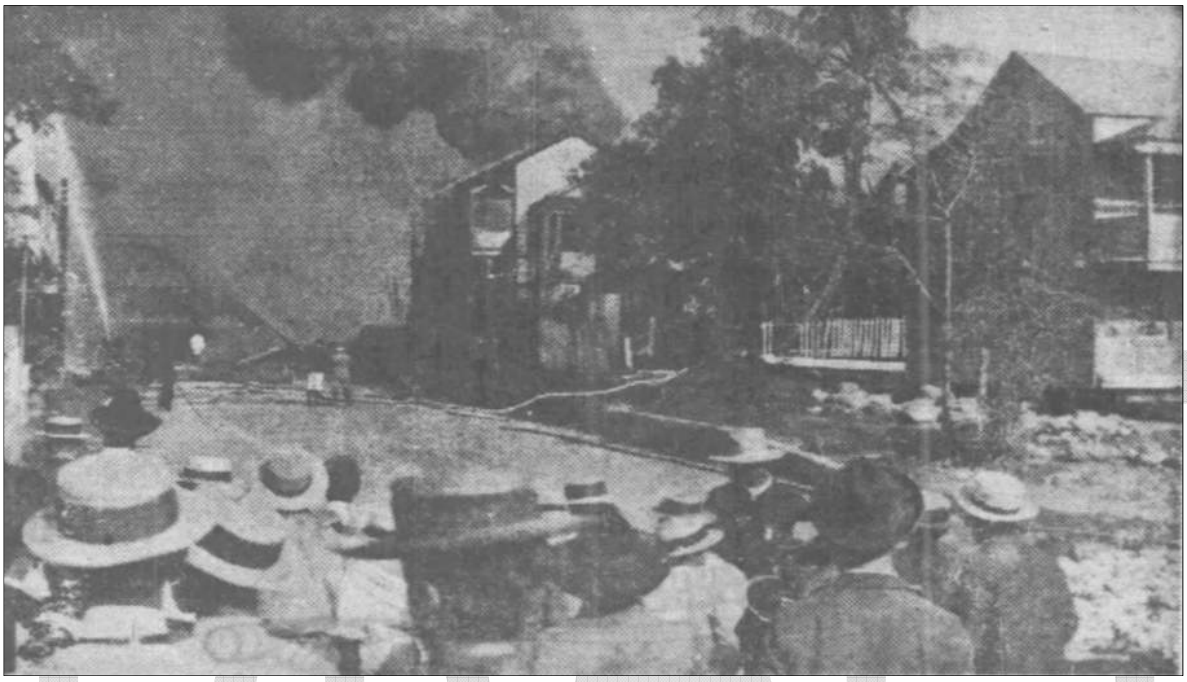

Figure 2: Ca. 1900 Photograph showing early Kekaulike during a fire; note unpaved road and sidewalks with curbs (Honolulu Advertiser, 1950).

In 1904, **Oahu Market at 145 N. King** , a one-story fish market with a steel truss roof supported on cast iron columns with interior open stalls opened at the northwest corner of Kekaulike and N. King. The building has continually operated as a market, housing a variety of food and grocery options. The open architecture of these two buildings encourages visitors to enter from multiple locations along Kekaulike or King, creating a particularly engaging relationship with the street. (This building was not identified in the S.D. Design Guidelines Appendix, was listed in S.D. Exhibit, and is a contributor to the expanded Chinatown Historical District.)

In 1909, the **L. Ah Leong Building at 1019 Kekaulike, 136-138 N. King**, a two-story, mixed-use masonry building was constructed at the southeast intersection of Kekaulike and N. King. L. Ah Leong was a businessman associated with the early development of Chinatown and his name is engraved in a raised parapet at the N. King street-facing elevation. (This building was identified in the S.D. Design Guidelines Appendix, was listed in S.D. Exhibit, and is a contributor to the expanded Chinatown Historical District.) Numerous markets and stores have occupied the ground level and the upper level served a residential use. By the 1910s, the dirt streets of Chinatown were paved and the basalt curbs provided a visual delineation for where the sidewalk met the street.

Figure 3: Kekaulike Street and early general property lines, buildings, and uses (Sanborn Map, 1913).

In 1919, **901-905 Kekaulike**, a two-story, mixed-use building, was constructed at the southeast corner of Kekaulike and Queen. This building was historically the headquarters of the Sperry Flour Company. Its occupancy changed to a fishing supply store in the early 1960s. While retaining its two-story height and general massing, the building was significantly altered in the 1950s when Queen Street was widened and transformed to Nimitz Highway. (This building was identified in the S.D. Design Guidelines Appendix, was listed in S.D. Exhibit, and is a contributor to the expanded Chinatown Historical District.

During the 1920s, Honolulu experienced a building boom that was powered by expanding sugar and pineapple industries, a growing tourism industry, and increasing interest and investment in Hawaii by the U.S. military. As a result, Chinatown became an energetic and lively district. In 1924, **915-937 Kekaulike**, a three-story commercial building, replaced a fish market. The reinforced concrete building (class A fireproof structure) was designed by local architect Herman R. Stettin. The building was originally called the Service Cold Storage building and was occupied by several companies. "Armour & Co.," the name of a butchery, was emblazoned on the facade. By 1970 it was occupied by Fisher Printing Co. The building now contains a variety of uses, including a seafood market and restaurant equipment supplier on the ground level and upper level offices. The windows have all been altered and the ground level canopy is no long extant. (This building was not identified in the S.D. Design Guidelines Appendix, was listed in S.D. Exhibit, and is a contributor to the expanded Chinatown Historical District).

Anticipating war in the Pacific, the 1930s saw an increased military presence in Hawaii and Chinatown. In turn, Chinatown became a burgeoning red-light district catering to military personnel following the shutdown of Iwilei's red-light district. Shops originally established to accommodate the local Chinese population gave way to pool halls, bars, adult theaters, and tattoo parlors, while prostitution increased.

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Figure 4: Photograph of Armour & Co. at 915-937 Kekaulike Street. (Honolulu Star Bulletin, 1924).

Figure 5: Photograph of Holau Market at 924-928 Kekaulike Street (Historic Hawaii Foundation, ca. 1980).

In 1936, the **Holau Market at 924-928 Kekaulike**, a one-story, concrete building with a false front facade. The interior has a high bay, with the ceiling height almost two stories tall. The building was designed with Streamline Moderne and Art Deco details including metal "Holau Market" lettering when it opened, and linear decorative elements on a stepped parapet. At the grand opening of this modern grocery market and soda fountain, native Hawaiian performer Lena Machado performed her song "Holau." The building continued in use as a market under "M. Ichiki Stores," but was eventually named the Chinatown Marketplace. Today, the building is vacant, and the ground-level glazing and cantilevered canopy have been removed. The character-defining features on the upper facade appear to be original. (This building was identified in the S.D. Design Guidelines Appendix, was listed in S.D. Exhibit, and is a contributor to the expanded Chinatown Historical District.)

After the war, the vitality of Chinatown declined and by the 1950s and 1960s, Chinatown's reputation as the island's red-light district contributed to urban renewal projects aimed at reinventing the district. However, many of these projects did little to improve Chinatown, and its economic situation deteriorated when Ala Moana Shopping Center opened, and residents had new shopping options away from downtown. By 1952, Henry Awa Wong, the unofficial "Mayor" of Chinatown, advocated for territorial tourism as an indirect booster to the economic vitality of the area. All the wood-framed tenements located on Kekaulike between. N. King and N. Hotel, for instance, were demolished and replaced by a surface parking lot by 1953.

In 1953, **902 Kekaulike**,[2] a small one-story, concrete, commercial building was constructed next door to Holau Market. The building was primarily used for automobile services and is currently vacant and lacks its original canopy and is devoid of architectural detailing. (This building was not identified in the S.D. Design Guidelines Appendix, was not listed in S.D. Exhibit, and is a contributor to the expanded Chinatown Historical District.)

Under construction beginning in the late 1950s, the Makai Arterial widened and transformed Queen Street to N. Nimitz Highway (Nimitz), changing the setting of the western boundary of Chinatown. By 1960, upon completion of the new highway, Kekaulike Street was converted to a one-way street. Its alignment was slightly altered with a curve north at its intersection with Nimitz. A triangular-shaped landscaped median was constructed in front of 905 Kekaulike to facilitate a clearer sight line of oncoming traffic.

By the 1960s, to clean up Chinatown and improve its tourism and local appeal many historic wood-framed buildings deemed dilapidated were demolished and replaced with contemporary buildings. Urban planners and city officials at this time recognized the appeal of the historic building fabric and encouraged new design to be compatible with the historic neighborhood context in terms of massing, fenestration, and detailing.

Built in 1960, **1026-1028 Kekaulike**, a two-story mixed-use building, was the first new building constructed as part of this effort. The ground level was historically a variety of commercial uses, including restaurants and a florist, and the second level was residential or office. (This building was not identified in the S.D. Design Guidelines Appendix, was listed in S.D. Exhibit, and is a contributor to expanded Chinatown Historical District.) In 1964, **City Villa at 1022-1024 Kekaulike**, a four-story apartment building was constructed. (This building was not identified in the S.D. Design Guidelines Appendix, was not listed in S.D. Exhibit, and is a contributor to the expanded Chinatown Historical District.) In 1965, **1032-1038 Kekaulike**, a two-story mixed-used building was constructed in a design

[2] This building is frequently referred to in HART planning documents as the "Ai-Goto Building." This name may be a reference to prior ownership. However, that information was not found during the research for this report.

very similar to 1026-1028 Kekaulike. The ground level was also historically a variety of commercial uses, including a lei shop, tailor, and beauty salon, and the second level was residential or office. (This building was not identified in the S.D. Design Guidelines Appendix, was not listed in S.D. Exhibit, and is a contributor to the expanded Chinatown Historical District.)

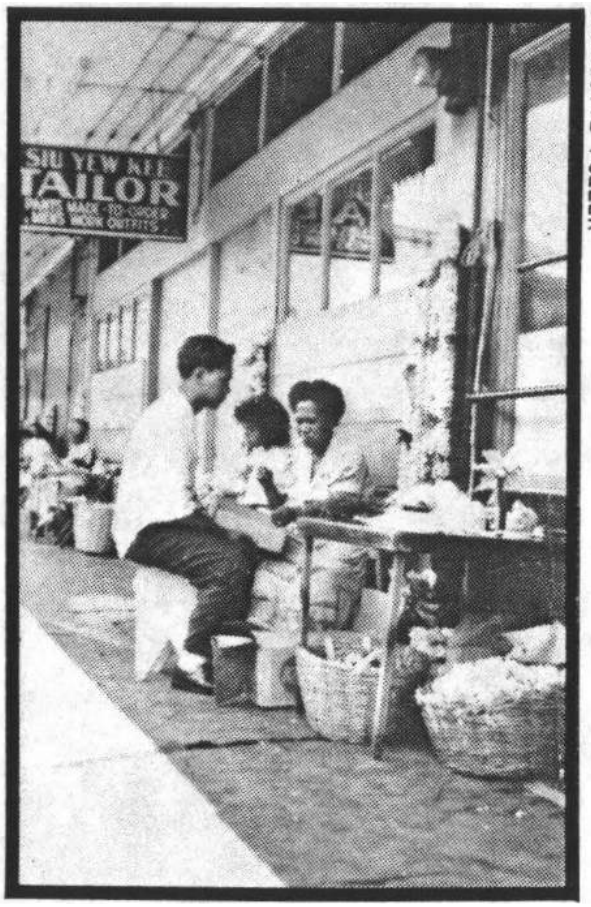

Figure 6: Photographs of Kekaulike Street Lei sellers, ca. 1940. Photograph at left is likely at 1032-1038 Kekaulike Street, view towards N. King. (Source, Ka Po'e Kau Lei, An Oral History of Hawai'i's Lei Sellers, 1986.)

Also, in 1965, **159 N. Hotel and 1040 Kekaulike**, a two-story commercial building, opened, replacing a fish market. Lung Doo Benevolent Society clubhouse has occupied 159 N. Hotel since then. The ground-level at 159 N. Hotel has functioned in a variety of commercial uses and is now a liquor store. 1040 Kekaulike appears to be residential. The architecture clearly incorporates modern design elements, such as window bands, decorative concrete block, and cantilevered canopies while also displaying some Asian inspired elements such as curving upwards roof lines. (This building was not identified in the S.D. Design Guidelines Appendix, was not listed in S.D. Exhibit, and is a contributor to the expanded Chinatown Historical District.) In 1966, **943 Kekaulike and 102-135 N. King**, a one-story commercial building at the southwest corner of Kekaulike and King was built. Supermarkets, restaurants, and various other commercial uses have occupied this building. This building has relatively high ceilings and glass windows, columns with engraved dragon motifs, and faux curving upwards roof lines. (This building was identified in the S.D. Design Guidelines Appendix, was listed in S.D. Exhibit, and is a contributor to the expanded Chinatown Historical District.) Both this building and 1040 Kekaulike and 159 N. Hotel are 1960s examples of buildings with Asian-inspired design elements meant to emphasis the Asian visual identity of the neighborhood and attract tourists.

During the 1950s to 1970s, as part of the larger effort to improve access and draw visitors back to Chinatown, many of the commercial buildings on the mauka side of N. Hotel were demolished and replaced by taxi stands and parking.

In 1973, the Chinatown Historical District was listed on the National Register of Historic Places and in in 1974 Aotani & Hartwell Associations drafted the "Chinatown Historic Preservation Plan". In 1981 Peat, Marwick, Mitchell & Co. drafted the "Chinatown Revitalization Plan" as a tool to balance preservation and economic objectives. Most recently, in 1991, "Chinatown Special District Design Guidelines" were authored by the City and County of Honolulu Department of Land Utilization to guide future development.

By 1985, where Kekaulike terminates past N. Hotel was completely surface parking and by 1989 was developed as the Maunakea Marketplace.

In 1992, Chinatown redevelopment continued with the planning of a pedestrian mall between N. King and N. Hotel, and by 1997, **Kekaulike Mall** was complete. The asphalt vehicular roadbed was raised to curb height, and resurfaced with grey rectangular brick pavers. Rows of red bricks set in rectangles were also part of the design. The sidewalk remained concrete, and no physical remnants of the road exist. Over time, planters, trashcans, and metal light posts and flag posts were added. At-grade planters with palms punctuate the pavement. Where Kekaulike Mall meets N. King, square granite pavers with chipped edges meant to mimic earlier pavers found throughout Chinatown made of historic sailing ship ballast blocks, were also installed, creating a gradual slope from the street level to the road level at Kekaulike/King. Overall, the development of Kekaulike Mall resulted in the retention of few, if any, historic streetscape materials.

Also in 1997, **Kekaulike Market and Kekaulike Courtyards, at 1039 Kekaulike**, a four-story, mixed-use building with ground-level commercial and upper level residential was constructed. While one building, the design aims to break up the massing with three separate façade treatments. (This building was not identified in the S.D. Design Guidelines Appendix, was not listed in S.D. Exhibit, and is not a contributor to the expanded Chinatown Historical District.)

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NRHP Criteria for Evaluation

The Chinatown Historical District was listed in 1973 using the Hawai'i and National Register Guidelines evaluation criteria. The nomination form did not include a list of significant/contributing buildings in the district. The nomination is currently being updated under a separate project, and will identify the specific buildings that contribute to the district. (A working draft of the update was reviewed for this project, and the preliminary evaluations for the buildings noted in that document are incorporated into Table 1.)

The sections to follow are excerpts of National Park Service's (NPS) National Register Bulletin 15, which explains how the National Register Criteria are applied.

> The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
>
> A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B. That are associated with the lives of persons significant in our past; or
>
> C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> D. That have yielded or may be likely to yield, information important in prehistory or history.

To meet the National Register Criteria for Evaluation, a property, in addition to possessing significance within a historic context, must retain integrity. Integrity is the ability of a property to convey its significance through the retention of essential physical characteristics from its period of significance. National Register Bulletin 15 explains the following seven aspects of integrity:

> Location is the place where the historic property was constructed or the place where the historic event occurred.
>
> Design is the combination of elements that create the form, plan, space, structure, and style of a property.
>
> Setting is the physical environment of a historic property.
>
> Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
>
> Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
>
> Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.
>
> Association is the direct link between an important historic event or person and a historic property.

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HRHP Criteria for Evaluation

Hawaii Administrative Rules (HAR) Section §13-275-6, Evaluation of Significance, explains that "to be significant, a historic property shall possess integrity of location, design, setting, materials, workmanship, feeling, and association and shall meet one or more of the following criterion:"

a. That are associated with events that have made a significant contribution to the broad patterns of our history; or
b. That are associated with the lives of significant persons in our past; or
c. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a distinguishable entity whose components may lack individual distinction; or
d. That have yielded or may be likely to yield, information important in history or prehistory;
e. Has an important value to the native Hawaiian people or to another ethnic group of the state due to association 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 (similar traditional cultural significance for NRHP)

The main difference between Hawaii Register Criteria and National Register Criteria is Hawaii has one additional criterion; Criterion "e".

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Identification of Historic Properties

The preceding Historical Overview section provided some historical information about Kekaulike Street, Chinatown, and the resources in the study area that were previously identified as historically important. See Table 1 on the following page for this list of resources. The character-defining features of the Kekaulike Streetscape are provided in the summary narrative that directly follows Table 1.

The Chinatown Historical District (listed in 1973) encompasses approximately 36 acres between the Honolulu Harbor, Nu'uanu Stream, Beretania Street, and buildings on both sides of Nu'uanu Avenue, and thus includes all of Kekaulike Street and Kekaulike Mall. The historic district's decades-old nomination form is currently being updated (by others) in partial fulfillment of mitigation requirements outlined in the *Programmatic Agreement Among the U.S. Department of Transportation Federal Transit Administration, the Hawaii State Historic Preservation Officer, the United States Navy, and the Advisory Council on Historic Preservation Regarding the Honolulu High-Capacity Transit Corridor Project in the City and County of Honolulu, Hawaii* (2011). Notes about significance taken from a cursory review by MASON of an early-2020 working draft of that document are provided in Table 1 on the following page. These indicate whether buildings in the project area were identified as "contributing" or "non-contributing" to the Chinatown Historical District. These evaluations are not final, and may change. The full report is not available at this time and its anticipated completion date is not known. The establishment of a new, presumably expanded, district boundary and list of contributing resources, will likely trigger a review of the Special District boundaries, which were based on the 1973 listing.

Table 1 also provides the previous significance evaluations made in the guiding documents associated with the Special District list of Historic and Architecturally Significant Structures (Exhibit 21-9.10-A) or Design Guidelines Appendix building list. Some of these evaluations contradict each other, and/or contradict the evaluations within the working draft nomination form. Despite these contradictions, Table 1 provides an overview of the broad collection of historically significant resources found within the study area, some which are deemed as having "very high preservation value." (Notes are provided at the end of Table 1 to explain the basis for these evaluations as well as the other column headings.)

Features of the landscape, such as view planes, are not included in Table 1 because they are not built architectural structures or individual historic resources. The landscape, or environment, of the project area is loosely addressed in the character-defining features, and as it relates to the evaluation of effects on setting and feeling. View planes are more formally addressed in a separate Visual Analysis report in the EA.

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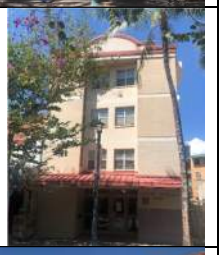
Table 1 – Historic Resources in Project Area						
Address (Name) TMK	Year Built	Existing Historical Significance Assessments				Photo
Chinatown Historical District	Var.	Listed on Hawaii and National Registers, 1973. Nomination form is being updated.				
Kekaulike Mall/Street Resources:						
		S. D. Precinct	Identified in S.D. Design Guidelines Appendix?	Listed in S.D. Exhibit 21-9.10-A?	Working Draft Chinatown H.D. Nomination Update	
Buildings Fronting Kekaulike Mall:						
159 N. Hotel Street / 1040 Kekaulike Street [1] 1-7-003: 033	1963	Historic Core Precinct	No	Yes	Contributing	
1032-1038 Kekaulike Street [1] 1-7-003: 034	1963	Historic Core Precinct	No	No	Contributing	
1026-1028 Kekaulike Street [1] 1-7-003: 035	1960	Historic Core Precinct	No	No	Contributing	
1022-1024 Kekaulike Street [1] 1-7-003: 036	1964	Historic Core Precinct	No	No	Contributing	
1020 Kekaulike Street / 142-159 N. King St. (Kekaulike Building) [1] 1-7-003: 028	1900	Historic Core Precinct	Yes: "High*" Preserva-tion value	Yes	Contributing	

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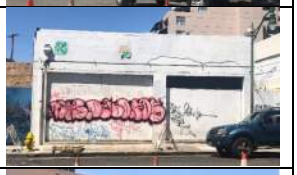
1039 Kekaulike Street (Kekaulike Market) [1] 1-7-003: 020	1997	Historic Core Precinct	No	No	Non-contributing	
1019 Kekaulike Street / 136-138 N. King Street (L. Ah Leong Building) [1] 1-7-003: 075	1909	Historic Core Precinct	Yes: "Very High*" Preserva-tion value	Yes	Contributing	
Buildings Fronting Kekaulike Street:						
145 N. King Street (Oahu Market) [1] 1-7-002: 034	1904	Historic Core Precinct	Yes: "Very High*" preservati on value	Yes	Contributing	
928-942 Kekaulike Street (Former Holau Market) [1] 1-7-002: 026	1936	Makai Precinct	Yes: "Very High*" Preserva-tion value	Yes	Contributing	
902 Kekaulike Street [1] 1-7-002: 026	1953	Makai Precinct	No	No	Contributing	
125-135 N. King Street & 943 Kekaulike Street [1] 1-7-002: 021 & 019	1966	Historic Core Precinct	Yes: "Medium*" Preserva-tion value	Yes	Contributing	
915-927 Kekaulike Street (Former Service Cold Storage Building) [1] 1-7-002: 017 & 018	1924	Makai Precinct	No	Yes	Contributing	
901-905 Kekaulike Street [1] 1-7-002: 016	1919	Makai Precinct	Yes: "Medium" Preserva-tion value	Yes	Contributing	

See the following page for explanation of Table 1 column headings.

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Explanation of Table 1 column headings

- **Address/Name/TMK. Building address is provided first, followed by any known names for the building. TMK is provided last.**
- **Year Built.** The year the building was built.
- **Listed in S.D. Exhibit 21-9.10-A?** Was the building identified in Exhibit 21-9.10-A, Chinatown Special District "Historic and Architecturally Significant Structures"? Yes or No answers are provided.
- **S.D. Precinct.** Which Special District Precinct is the resource found in?
- **Working Draft Chinatown H.D. Nomination Update.** Notes taken from a cursory review of an early-2020 working draft of the National Register nomination update are provided in this column. These notes indicate whether buildings in the project area were noted as "contributing" or "non-contributing" to the (expanded) Chinatown Historic District. These evaluations are not final, and may change. The full report is not available at this time and its anticipated completion date is not known.
- **Identified in S.D. Design Guidelines Appendix?** The Special District Design Guidelines dated April, 1991, includes an appendix that identifies the district buildings' preservation values: Medium, High, or Very High. The building assessments in the appendix were compiled from: 1) The Chinatown Historic Preservation Plan, 1974; 2) Chinatown Revitalization Plan, 1981; and 3) Department of Land Utilization Design Advisory Committee. The buildings assessed by the Design Advisory Committee are noted with an asterisk (*). The Appendix explains that "Buildings which do not appear on this list are either new or considered to have low value to the district."
- **Photo.** Representative photo.

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Character Defining Features of the Kekaulike Street streetscape

To follow are the historic character defining features of Kekaulike Street. See Table 1 for the individual resources in the project area that contribute to the Chinatown Historic District.

Historic Character Defining Features

- Asphalt roadway and concrete gutter.
- Basalt curbs that delineate the roadway from the sidewalks.
- Concrete sidewalks.
- Awnings/canopies that overhang the sidewalks (in rough alignment with the existing basalt curb line), creating a well-defined, shaded, pedestrian corridor for walking and shopping.
- Several historic buildings.
- Low building heights (maximum is three stories).
- An open view towards Honolulu Harbor that terminates across Nimitz Hwy. at Pier 15.

Non Historic Features

- Some basalt curbs have been removed and replaced with concrete. The inconsistency is particularly evident where curbs have been altered into driveways.
- The street light fixtures in place today are not historic, but are the same type of "period" fixture used in other parts of Chinatown, adopted in previous city projects.
- Trees planted at-grade in sidewalk alignment. Historically, Chinatown had little to no vegetation or trees planted within the sidewalk alignments.
- Where Kekaulike Mall meets N. King, square granite pavers with chipped edges meant to mimic earlier pavers found throughout Chinatown made of historic sailing ship ballast blocks, were also installed, creating a gradual slope from the street level to the road level at Kekaulike/King.
- Several non-historic buildings.

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Proposed Action

The proposed streetscape improvements will convert the existing Kekaulike Street from a traditional vehicular roadway to a "shared-use street" concept, joining a similar arrangement already in place at Kekaulike Mall. The shared-use concept is intended to support pedestrian and bicycle use, and at Kekaulike will specifically limit vehicular access during specified hours (for deliveries to local businesses). Improvements will include technology and beautification enhancements such as lighting, shade trees, Wi-Fi, CCTV, public address system, and opportunities for public art. Currently in its conceptual design phase, some aspects of this project have not yet been determined. Improvements to Kekaulike Mall and Kekaulike Street follow.

Kekaulike Mall

- Existing brick paver system replacement with a poured concrete surface, drainage improvements, and replacement of trees found to be in poor condition.
- Curb ramp and crosswalk improvements at the intersection of N. King Street and Kekaulike Street.
- A site will be retained on Kekaulike Mall just mauka of N. King Street for a Chinatown gate structure to be designed and developed by the City at a future date.
- Extensive drainage improvements at Kekaulike Mall will be designed to alleviate existing environmental concerns related to stormwater runoff.
- Landscaping improvements will include planters, grated tree wells, and a supplemental irrigation system.
- Paving or painted design features will be applied to Kekaulike Mall surfaces.
- Dedicated area for a future bicycle ride-share station (Biki) addition along Kekaulike Mall.

Kekaulike Street

- Raised street level to match the existing curb height with vehicular access ramp up from the N. King Street intersection for delivery vehicles, and an exit ramp feeding into N. Nimitz Highway near the future Chinatown rail station site. The raised street level will provide for new drainage improvements and enhance the continuity of multi-modal travel.
- Extensive drainage improvements on Kekaulike Street will be designed to alleviate existing environmental concerns related to stormwater runoff.
- Landscaping improvements will include planters, grated tree wells, and a supplemental irrigation system.
- Paving or painted design features will be applied to Kekaulike Street poured concrete surfaces.
- There will be a freight loading zone on Kekaulike Street and a drop-off zone for paratransit (TheHandi-Van) near the future Chinatown rail station.
- Vehicular control measures to regulate authorized access and prevent illegal parking on Kekaulike Street is also being considered.

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Figure 7: Current view of project site, view mauka from Kekaulike Street. Source: MASON

Figure 8: Conceptual rendering showing project site, view mauka from Kekaulike Street. Source: HDR

Figure 9: Current view of project site, looking mauka towards Kekaulike Mall. Source: MASON.

Figure 10: Conceptual rendering showing project site, view mauka towards Kekaulike Mall from Kekaulike/King. Source: HDR.

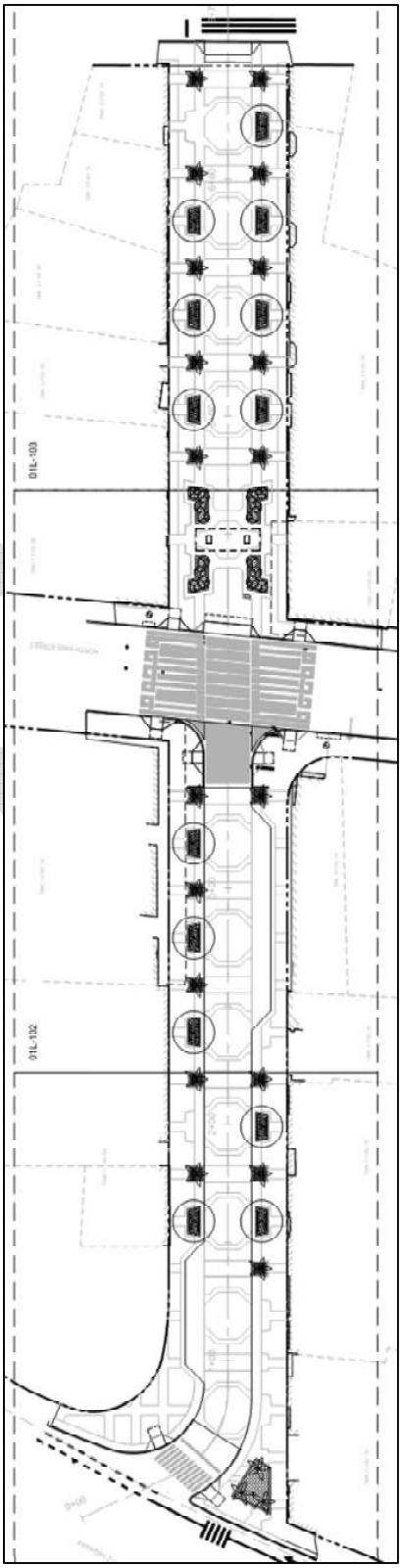

Figure 11: Conceptual Landscape plan for the Project from N. Hotel St, to Nimitz Hwy., which shows the planters, paving concepts, and loading zones. Source: HDR.

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Evaluation of Effects on Historic Properties

Hawaii Administrative Rules chapter 13-275-7 (b) describes effects on historic properties as:

> Effects include, but are not limited to, partial or total destruction or alteration of the historic property, detrimental alteration of the properties' surrounding environment, detrimental visual, spatial, noise or atmospheric impingement, increasing access with the chances of resulting damage, and neglect resulting in deterioration or destruction.

The proposed project will not alter or modify any of the individual buildings (historic or otherwise) located along Kekaulike Mall or Kekaulike Street. The proposed project was evaluated for effect on the Chinatown Historical District overall, and on individual buildings. Several aspects of the project have not yet been designed or determined, so evaluations of effect for these components are subject to change. This includes aspects such as the type of planters to be used, details relating to curbs and ramps, etc.

Overall, the project poses no adverse effects to Kekaulike Mall, since the proposed work does not alter historic buildings, characteristics or materials of the streetscape. This site was converted from a vehicular street to a pedestrian mall in the 1990s and does not retain historic roadway or paving, basalt curbs, concrete sidewalks, landscaping, or street lights. (If historic basalt curb material is removed and not replaced as part of curb ramp and crosswalk modifications, it would be an adverse effect.)

However, the project does pose an adverse effect at Kekaulike Street, to both the Chinatown Historical District and the historic buildings. In keeping with the definition in HAR chapter 13-275-7 (b) above, the effects on historic properties include:

1) The "alteration of the historic property" (Raising the street level to meet the sidewalk height is an adverse effect, since it will remove the historic basalt curb alignment and the historic demarcation between sidewalk and street, as well as alter the public use, which are modifications to the Chinatown Historical District's streetscape);
2) "Detrimental alteration of the properties' surrounding environment" (converting the historic street that fronts historic buildings into a pedestrian mall compromises their integrity of setting and feeling. Further, Integrity of "association" is compromised by changing the functionality of the roadway, by limiting vehicular access.

Further, it is possible that "detrimental visual, spatial … impingement" may occur, by way of inclusion of fixed concrete planters within the historically open roadway. If the concrete planters are fixed and permanent, they would pose an adverse effect because they would alter the historic function and appearance of the road, effectively narrowing its width. However, the selection of planter type – permanent vs. temporary – is not yet determined.

The evaluations of effect are presented in tabular form in Table 2, on the following pages. Mitigation corresponding to these components of the project are found in Table 3.

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Table 2: Evaluation of Effect on Historic District and Buildings		
Historic Resource	Proposed Work	Evaluation of Effect
Kekaulike Mall & Historic/Contributing Buildings fronting Kekaulike Mall	No building modifications are planned. Streetscape improvements are: • Replace existing brick paver system with poured concrete surface. • Improve curb ramp and crosswalk at the intersection of N. King St. / Kekaulike Mall. • Improve drainage to alleviate stormwater runoff. • Install new planters, grated tree wells, and a supplemental irrigation system. • Replace trees in poor condition. • Apply paving or painted design features to Kekaulike Mall surfaces. • Create a dedicated area for a future bicycle ride-share station (Biki) along Kekaulike Mall. • Preserve a site on Kekaulike Mall just mauka of N. King St. for a Chinatown gate structure, to be designed and developed by the City at a future date.	No adverse effect to historic buildings or Kekaulike Mall. The proposed work does not alter historic buildings or historic characteristics or materials of the streetscape. This site was converted from a vehicular street to a pedestrian mall in the 1990s and does not retain historic roadway or paving, basalt curbs, concrete sidewalks, landscaping, or street lights. (If historic basalt curb material is removed and <u>not</u> replaced as part of curb ramp and crosswalk modifications, it would be an adverse effect.)
Kekaulike Street & Historic/Contributing Buildings fronting Kekaulike Street	No building modifications are planned. Streetscape improvements are: • Raise street level to match existing curb height, with vehicular access ramp up from the N. King St. intersection for delivery vehicles, and an exit ramp to N. Nimitz Hwy. • Remove existing basalt curbs, and replace in new location/alignments. • Improve drainage to alleviate stormwater runoff. • Add concrete planters (at outer edges of roadway) • Install grated tree wells and a supplemental irrigation system. • Apply paving or painted design features to Kekaulike Street surfaces. • Create freight loading zone and a drop-off zone for TheHandi-Van use near the future Chinatown rail station. • Install vehicular control measures to regulate authorized access and prevent illegal parking on Kekaulike Street.	Adverse effect. Raising the street level to meet the sidewalk height is an adverse effect, since it will remove/relocate the historic basalt curbs, remove the historic delineation between sidewalk and street, and alter the public use. If the concrete planters are fixed and permanent, they would pose an adverse effect because they would alter the historic function and appearance of the road, effectively narrowing its width. Adverse effects to historic / contributing buildings include: Compromising their integrity of "setting" and "feeling" by a change to their streetscape environment, and integrity of "association" by changing the functionality of the roadway. See Table 3 for recommended mitigation.

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Mitigation

Mitigation measures are required for any adverse effects to historic resources. Appropriate mitigation commitments and detailed mitigation plans are developed in consultation with SHPD, and cannot be determined without SHPD involvement. According to the Administrative Rules Chapter 13-275 (Rules Governing Procedures for Historic Preservation Review for Governmental Projects Covered Under HRS Sections 6E-7 and 6E-8) mitigation for an architectural resource may take the form of one or more of the following four approaches. The first approach, Preservation, is always preferred:

A. *Preservation. Preservation may include avoidance of the effect and protection, rehabilitation, restoration, or reconstruction.*
B. *Architectural Recordation. Recordation involves the photographic documentation and possibly the measured drawing of a building, structure or object prior to its alteration. Architectural recordation plans and photos shall meet the minimal standards as provided by Historic American Building Survey (HABS).*
C. *Historical Data Recovery. Data recovery involves researching historical source materials to document an adequate and reasonable amount of information about the property when a property will be altered or destroyed.*
D. *Ethnographic Documentation. Ethnographic documentation consists of interviewing knowledgeable individuals and researching historical materials to document an adequate and reasonable amount of information about the property.*

Preservation

For this project, it may be possible to undertake design modifications in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (SOI Standards), to minimize the effects of the proposed action. See Table 3: Preservation Recommendations for Mitigation of Adverse Effects.

Architectural Recordation, Historical Data Recovery, Ethnographic Documentation

Architectural recordation, in the form of HABS/HAER/HALS recordation and large-scale photography, may be an appropriate method to document the streetscape before it is modified into a pedestrian mall. Architectural Recordation, Historical Data Recovery and Ethnographic Documentation may take the form of a context study, oral history, or other written documentation.

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Table 3: Preservation Recommendations for Mitigation of Adverse Effects		
Historic Resource	Adverse Effect	Proposed Mitigation
Kekaulike Mall & Historic/Contributing Buildings fronting Kekaulike Mall	If historic basalt curb material is removed* as part of curb ramp and crosswalk modifications, it would be an adverse effect. *It is unknown at this time if this is occurring; it will be determined in a later design phase.	This could be mitigated by replacing any removed basalt curb sections with salvaged basalt curb sections.
Kekaulike Street & Historic/Contributing Buildings fronting Kekaulike Street	Raising the street level to meet the sidewalk height is an adverse effect; it will entail removal and relocation of historic basalt curbs, which will remove the demarcation between the historic sidewalk and street.	This could be mitigated by 1) Retaining in place the alignment of basalt curbs (preferred) or; 2) re-using the basalt curbs to define the new "sidewalk" borders. The color of paving material on either side of the curbs should mimic the coloring of the original concrete sidewalks and asphalt roadway: darker for the inner "roadway" and lighter-colored for the outer "sidewalks".
	If fixed concrete planters are installed in the historic roadway,* it would be an adverse effect because it alters the appearance and functionality of the historic street.	This could be mitigated by selecting planters that are easily movable/removable and their presence would be easily reversible.
	*The planter type has not yet been determined. These beautification enhancements, including lighting, will be determined in a later design phase.	Follow SDD Guidelines for lighting and other streetscape beautification projects.
	If historic basalt curb material is removed* as part of curb ramp and crosswalk modifications, it would be an adverse effect. *It is unknown at this time if this is occurring; it will be determined in a later design phase.	This could be mitigated by replacing any removed basalt curb sections with salvaged basalt curb sections.

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Chinatown Special Design District

The proposed project is located within the Chinatown Special Design District. This designation recognizes Chinatown as the oldest section of downtown Honolulu, and its historic role in the growth of the city, as well as its architectural significance. Special Districts are recognized under Chapter 21, Article 9, of the Hawaii Land Use Ordinance. Undertakings within special districts must adhere to design controls specific to them (SDD Guidelines), be reviewed by a Design Advisory Committee, and approved by the Director of the Department of Planning and Permitting (DPP). Special District Regulations are outlined in Chapter 21, Article 9 of the Land Use Ordinance (LUO), Revised Ordinances of Honolulu, ROH 21-9.30.

The Chinatown Special Design District's objectives are numerous, and were developed to encourage development in the area in a historically compatible manner. They include; promoting the long -term economic viability of Chinatown's retail, office and residential uses; retaining low-rise urban forms while retaining and enhancing pedestrian-oriented commercial uses; preserving and restoring historic, cultural and/or architectural resources and encouraging new development which is compatible with them; providing pedestrian amenities such as storefront windows and historic signage details; improving traffic circulation that emphasizes pedestrian linkages within and connecting outside Chinatown; retaining makai view corridors as a visual means of maintaining the historic link between Chinatown and the harbor; encouraging signage and graphics that complement the district; and finally, encouraging outdoor lighting for the purpose of contributing to a lively, friendly, and safe urban environment (Section 21-9.60-1).

The Special District is divided into three management precincts, as shown in Fig 1. These include the Mauka Precinct, the Historic Core Precinct, and the Makai Precinct. The project site falls within portions of both the Historic Core Precinct and the Makai Precinct.

Core Precinct

The development standards of the Historic Core Precinct (Sec. 21-9.60-9) include measures for maximum building heights and alignments, as well as open space and landscaping (at interior of buildings), that are not applicable to the project. Only a few standards loosely relate to this project, such as a measure that explains that trees are not required in the district and their use should take into consideration the desire for continuous building frontages and sidewalk canopies.[3] Another standard emphasizes the importance of a continuous street façade,[4] while the final standard requires adherence to the Chinatown Special District Design Guidelines (SDD).[5] When the conceptual designs are advanced to final design, specific items such as sidewalk finishes, street furniture, lighting, etc., will need to follow the SDD Guidelines.

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[3] Sec. 21-9.60-9 (b)(2) – "Street trees shall not be required. Any trees planted within a front yard or sidewalk area shall take into consideration the objectives of the precinct, especially the desire for continuous building frontages and sidewalk canopies, as well as traffic and pedestrian safety."

[4] Sec. 21-9.60-9 (c)(2) – "All buildings on the same block face shall form a continuous street facade, except for necessary driveways, pedestrian entryways and small open space pockets."

[5] Sec. 21-9.60-9 (f) Design Guidelines. All street facades shall meet the requirements of Section 21-9.60-12, street façade guidelines.

Makai Precinct

Among several objectives of the Makai Precinct is the goal to "provide a visible connection between Nimitz Highway and the interior of Chinatown" (Sec. 21-9.60-10(c)). The project supports for this connection since the planters are set at the outer edges of the current roadway, which allows for an unobstructed view of Nimitz Highway.

The Makai Precinct's development standards (Sec. 21-9.60-11) include measures for maximum building heights and setbacks, as well as open space and landscaping. This includes rooftop gardens, landscaped yards and the use of coconut palm trees along Nimitz Highway. Standards also include measures that guide the type of uses within buildings, and parking accommodations. These standards are not applicable to the project.

Street Façade Guidelines

The Street Façade Guidelines (Sec. 21-9.60-12) provide the following guidance: "Street furnishings include planters, benches, street signs, lampposts, sidewalk paving and covered shelters. They shall be designed to complement the designs of older facades. Styles and detailing inappropriate to Chinatown's period of significance, which is from the 1880s to the 1940s, shall not be permitted."

The Street Façade Guidelines also include regulations for signs and graphics (Sec. 21-9.60-12 (c)) and outdoor lighting (Sec. 21-9.60-12 (e)) that will need to be considered as part of the final design.

The planter type, street signs, street furniture, lampposts/outdoor lighting, and sidewalk paving details have not yet been specified or selected for this project. When specified/selected, they will need to complement the historic building facades, and be appropriate to Chinatown's period of significance of the era between the 1880s and the 1940s.

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Appendices

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Appendix A: 2016 Map showing Chinatown Special District Historically Significant Buildings

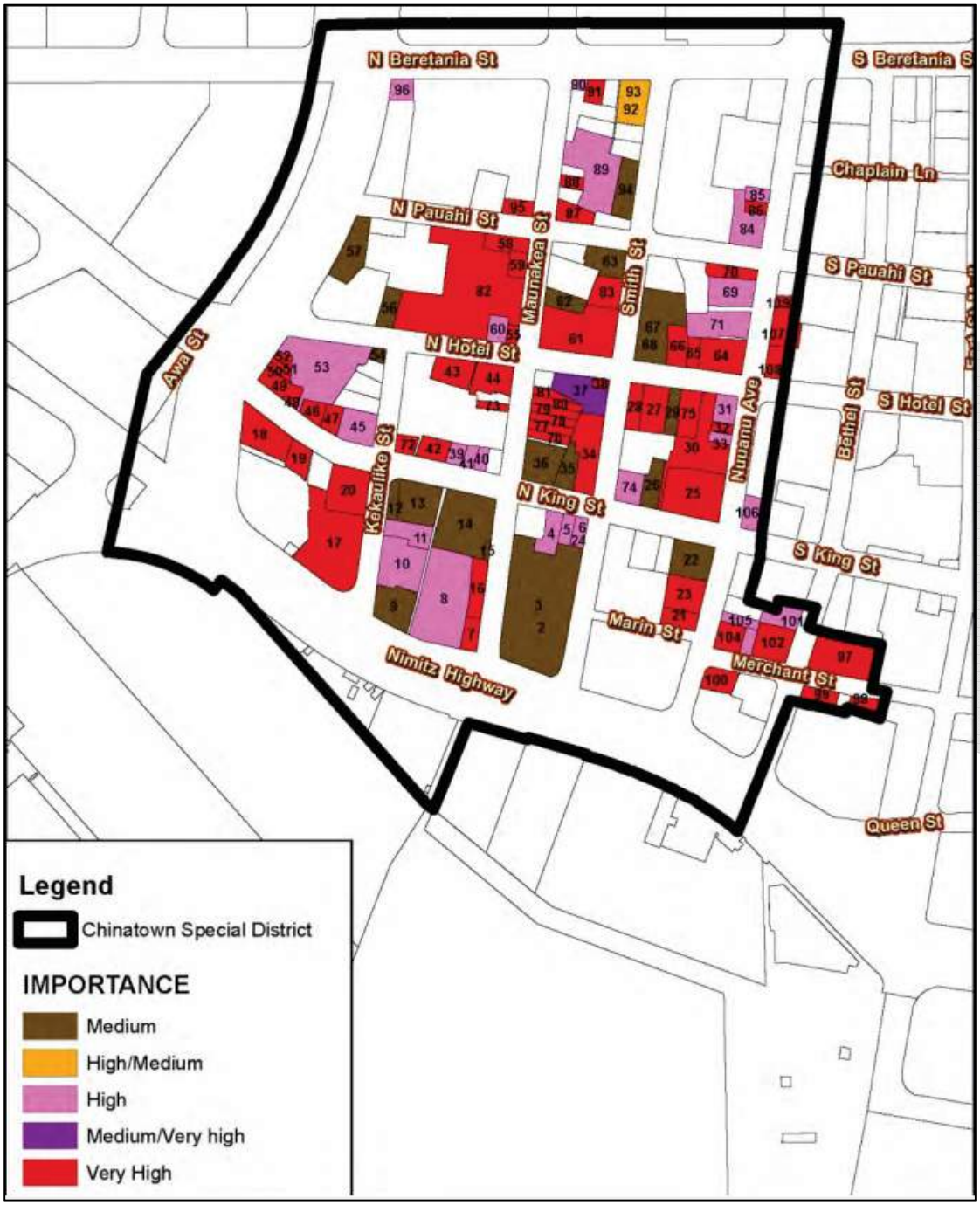
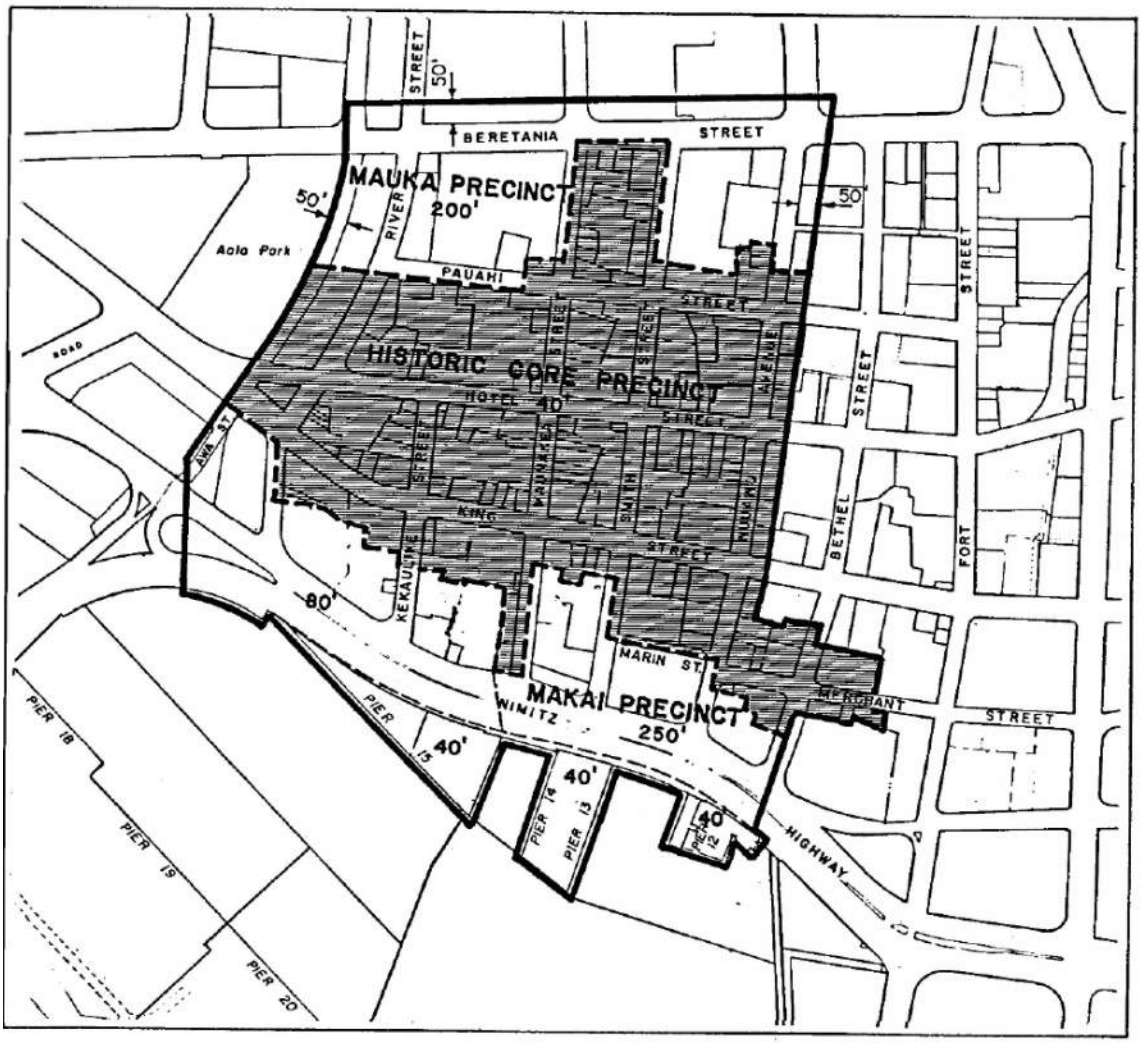
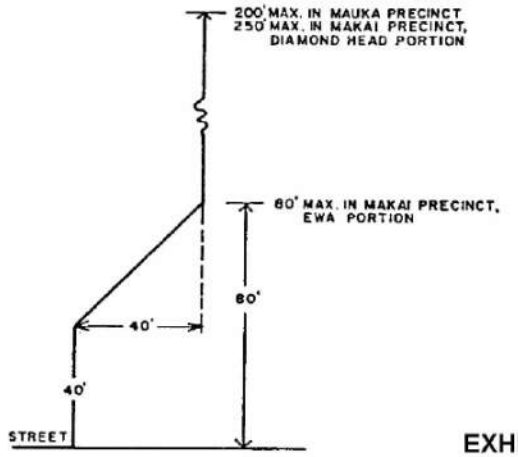


Figure 12: Map of Historically Significant Buildings. Source: "Sustaining Chinatown: Historic Preservation Summer Series 2016", Zoning and Special District Design Guidelines in Chinatown. DPP, City and County of Honolulu Zoning and Special District Design Guidelines in Chinatown.

Appendix B: Chinatown Special District Map

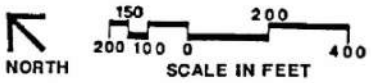




HEIGHT SETBACK FOR MAUKA AND MAKAI PRECINCTS

CHINATOWN SPECIAL DISTRICT

PRECINCT BOUNDARIES AND HEIGHT LIMITS



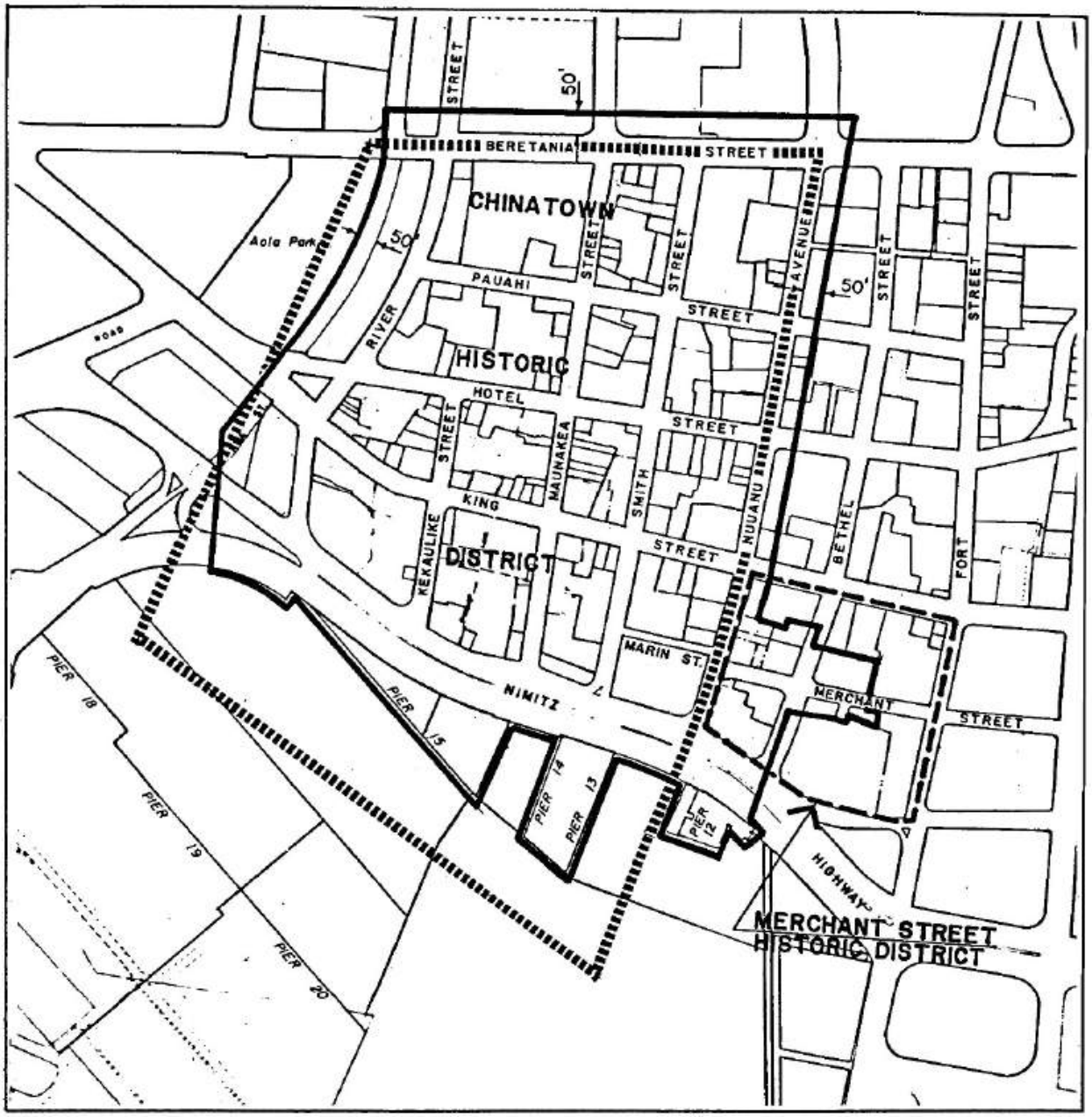
LEGEND:

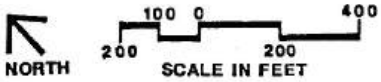
DISTRICT BOUNDARY

PRECINCT BOUNDARY

EXHIBIT 21-9.9

Appendix C: Chinatown Historic District Map





CHINATOWN SPECIAL DISTRICT
REGISTERED HISTORIC AREAS

LEGEND:

- DISTRICT BOUNDARY
- CHINATOWN
- MERCHANT ST.

EXHIBIT 21-9.10

Appendix D: Special District Historic and Architecturally Significant Structures (Exhibit 21-9.10-A)

EXHIBIT 21-9.10-A

CHINATOWN SPECIAL DISTRICT HISTORIC AND ARCHITECTURALLY SIGNIFICANT STRUCTURES

Tax Map Key	Address[1]	Building Name
1-7-01: 2	55 N. Nimitz Hwy.	Pier 13 & 14
1-7-02: 2	800 Nuuanu Ave.	Fisher Hawaii Building
1-7-02: 4		State of Hawaii (shops)
1-7-02: 4	925 Maunakea St.	Fireboat Fire Station
1-7-02: 8	83 N. King St.	Goodwill Industries
1-7-02: 9,45	75 N. King St.	D. Dam/N. Tam
1-7-02: 11	900 Maunakea St.	M. Kawahara & T. Sato
1-7-02: 13	128 N. Nimitz Hwy.	C. Q. Yee Hop (stone)
1-7-02: 16	905 Kekaulike St.	Nimitz & Kekaulike
1-7-02: 17,18	915 Kekaulike St., 937 Kekaulike St.	King & Kekaulike
1-7-02: 19,21	943 Kekaulike St., 125 N. King St.	Fish Market
1-7-02: 23	101 N. King St.	Bank of Hawaii
1-7-02: 24	950 Maunakea St.	Dentist
1-7-02: 25	922 Maunakea St.	J. H. Schnack
1-7-02: 26	902 Kekaulike St.	Holau Market
1-7-02: 28	175 N. King St.	McCandless
1-7-02: 29	165 N. King St.	Musashiya
1-7-02: 34	145 N. King St.	Oahu Market
1-7-02: 35	2 Marin St.	T. R. Foster/Spaghetti 2 Bldg.
1-7-02: 39	1 N. King St.	One North King
1-7-02: 40	928 Nuuanu Ave.	Nippu Jiji
1-7-02: 45	69 N. King St.	Oka
1-7-03: 1	2 N. King St.	Hocking Hotel
1-7-03: 2	36 N. King St.	United Chinese Society
1-7-03: 4,97	39 N. Hotel St.	Swing Club
1-7-03: 5	29 N. Hotel St.	29 31 Hotel Street
1-7-03: 6	15 N. Hotel St.	Nuuanu Shops
1-7-03: 7	1 N. Hotel St.	Gallery
1-7-03: 8	1044 Nuuanu Ave.	McCandless Property
1-7-03: 9	1038 Nuuanu Ave.	Kim Chow
1-7-03: 10	72 N. King St.	Hawaii National Bank
1-7-03: 11	80 N. King St.	Lum Yip Kee
1-7-03: 12	90 N. King St.	Lee & Young
1-7-03: 15	61 N. Hotel St.	Bath Palace
1-7-03: 15	61 N. Hotel St.	Mendonca (makai)
1-7-03: 16	51 N. Hotel St.	Mendonca (small, corner)
1-7-03: 18,90 92	116 N. King St.	D & B's Lunch
1-7-03: 19	124 N. King St.	Uptown Jewelers
1-7-03: 25	119 N. Hotel St.	Lum Yip Kee 1936
1-7-03: 26	111 N. Hotel St.	Wo Fat
1-7-03: 28	1020 Kekaulike St.	Arita Store
1-7-03: 28	1020 Kekaulike St.	Kekaulike Building
1-7-03: 29,66	170 N. King St.	Lee Building
1-7-03: 30,31 72 74	178 N. King St., 182 N. King St.	N. King & River Streets
1-7-03: 32	165 N. Hotel St.	Wong Building
1-7-03: 33	159 N. Hotel St.	LDCST BenevSoc
1-7-03: 37	102 N. Hotel St.	Siu Building
1-7-03: 42	158 N. Hotel St.	Wong
1-7-03: 45	175 N. Pauahi St.	Komeya Apartments
1-7-03: 48	1138 Maunakea St.	Sumida Building 1926
1-7-03: 49	1130 Maunakea St.	Lum Yip Kee 1920
1-7-03: 50	1110 Maunakea St.	Lee Building
1-7-03: 51	54 N. Hotel St.	Mendonca
1-7-03: 52	1125 Maunakea St.	Ket On Society
1-7-03: 55	65 N. Pauahi St.	Barbershop
1-7-03: 56	2 N. Hotel St.	Encore Saloon Building
1-7-03: 57	24 N. Hotel St.	24 Hotel Street (Mel's)

1-7-03: 58	30 N. Hotel St.	Risque
1-7-03: 59	42 N. Hotel St.	Kuo Min Tang
1-7-03: 59	42 N. Hotel St.	Young Market
1-7-03: 59	50 N. Hotel St.	Mini Garden
1-7-03: 62	1126 Nuuanu Ave.	Love's Bakery
1-7-03: 63	1136 Nuuanu Ave.	McCandless Block
1-7-03: 64	1118 Nuuanu Ave.	Lai Fong
1-7-03: 66,29	158 N. King St.	United Press, Ltd.
1-7-03: 75	136 N. King St.	L. Ah Leong
1-7-03: 76	1034 Maunakea St.	Cindy's Leis
1-7-03: 81	1021 Smith St.	
1-7-03: 83	21 N. Hotel St.	Club Hubba Hubba
1-7-03: 84 89	1023 Maunakea St.	Chung Chong Yuen
1-7-03: 96	1120 Maunakea St.	Colusa Building (part of Maunakea Marketplace)
1-7-03: 98	1128 Smith St.	1128 Smith Street
1-7-04: 1	1150 Nuuanu Ave.	Four Seas Chop Suey
1-7-04: 8	1162 Nuuanu Ave.	Bo San Ton
1-7-04: 9	1158 Nuuanu Ave.	Oweco World Travel
1-7-04: 11	1149 Maunakea St.	Yanin Ltd. Building
1-7-04: 13	1159 Maunakea St.	Tsung Tsin Association
1-7-04: 16	1165 Maunakea St.	Old Jailhouse (stone building)
1-7-04: 18	83 N. Beretania St.	Hai On Tong
1-7-04: 19	73 N. Beretania St.	79 N. Beretania Street
1-7-04: 21,22	53 N. Beretania St.	OK Restaurant (2 sections)
1-7-04: 25	1146 Smith St.	Golden Harvest
1-7-04: 28	1152 Maunakea St.	Minatoya Sukiyaki
1-7-04: 36	171 N. Beretania St.	Fong Building
2-1-02: 12	901 Bethel St.	Kamehameha V Building
2-1-02: 19	63 Merchant St.	Bishop Bank Building
2-1-02: 20	51 Merchant St.	Melcher Building
2-1-02: 24,57	842 Bethel St.	Old Honolulu Police Station (Walter Murray Gibson Building)
2-1-02: 32	924 Bethel St.	The Friend
2-1-02: 33	908 Bethel St.	Honolulu Publishing Co.
2-1-02: 34	16 Merchant St.	
2-1-02: 35	2 Merchant St.	Royal Saloon
2-1-02: 37	923 Nuuanu Ave.	Wing Wo Tai
2-1-02: 42	2 S. King St.	King's Court/First Federal
2-1-03: 16	1121 Nuuanu Ave.	McLean Block
2-1-03: 17	2 S. Hotel St.	Perry Block 1888
2-1-03: 18	1129 Nuuanu Ave.	Pantheon Bar

[1]In the event the listed addresses are not consistent with the tax map keys or building names, the tax map keys and building names shall prevail.
(Added by Ord. 99-12; Am. Ord. 10-19)

APPENDIX D

Cultural Impact Assessment

A Cultural Impact Assessment for the Kekaulike Mall and Kekaulike Street Multimodal Improvements Project

Honolulu Ahupuaʻa
Kona District
Island of Oʻahu

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ASM Project Number 34320.00

A Cultural Impact Assessment for the Kekaulike Mall and Kekaulike Street Multimodal Improvements Project

Honolulu Ahupua‘a
Kona District
Island of O‘ahu

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1. INTRODUCTION

At the request of HDR, Inc., on behalf of the City and County of Honolulu, Department of Transportation Services (proposing agency), ASM Affiliates (ASM) prepared this Cultural Impact Assessment (CIA) for the proposed Kekaulike Mall and Kekaulike Street Multimodal Improvements project (referred to hereafter as the 'proposed project'). The proposed project comprises a roughly 0.58-acre section of Kekaulike Street that spans Tax Map Key (TMK) plats (1) 1-7-002 and 003 in Honolulu Ahupuaʻa, Kona District, Island of Oʻahu. (Figures 1, 2 and, 3). The proposing agency intends to provide a more coherent connection between the existing Kekaulike Mall (from Hotel Street to North King Street), Kekaulike Street (from N. King Street to Nimitz Highway), and the future Holau transit station (the future Honolulu Rail Transit stop in Chinatown at the northeast corner of Kekaulike and Nimitz Highway). To that end, the proposing agency is planning to convert Kekaulike Street into a shared-use street, which will improve pedestrian accessibility and safety, while promoting economic and social activities in the newly created shared space between North Hotel Street and Nimitz Highway. The proposed improvements will primarily facilitate pedestrian and bicycle use, as well as vehicular access to businesses for deliveries and maintenance, and improve drainage conditions. A detailed description of the proposed project is provided in the following section of this report.

The expenditure of state funds qualifies the proposed project as an action subject to the Hawaiʻi Environmental Policy Act (HEPA) as codified in Hawaiʻi Revised Statutes (HRS) Chapter 343. This CIA study is intended to inform an Environmental Assessment (EA) conducted in compliance with HRS Chapter 343, pursuant to Act 50 and in accordance with the Office of Environmental Quality Control (OEQC) *Guidelines for Assessing Cultural Impacts*, adopted by the Environmental Council, State of Hawaiʻi, on November 19, 1997 (OEQC 1997). Act 50, which was proposed and passed as Hawaiʻi State House of Representatives Bill No. 2895 and signed into law by the Governor on April 26, 2000, specifically acknowledges the State's responsibility to protect native Hawaiian cultural practices. Act 50 further states that "environmental assessments . . . should identify and address effects on Hawaii's culture, and traditional and customary rights" and that "native Hawaiian culture plays a vital role in preserving and advancing the unique quality of life and the 'aloha spirit' in Hawaiʻi. Articles IX and XII of the state constitution, other state laws, and the courts of the State impose on governmental agencies a duty to promote and protect cultural beliefs, practices, and resources of native Hawaiians as well as other ethnic groups."

This report is divided into four main sections, beginning with an introduction, which includes a description of the proposed project, as well as a general description of the project area. To provide a physical and cultural context, section two includes a detailed culture-historical background specific to Honolulu Ahupuaʻa and historic Chinatown and a presentation of prior cultural and archaeological studies conducted in the vicinity of the proposed project area. Section three reports the results of the consultation process and section four concludes with a discussion of potential cultural impacts and recommended actions and strategies that may help to mitigate any such impacts.

Figure 1. Project area location.

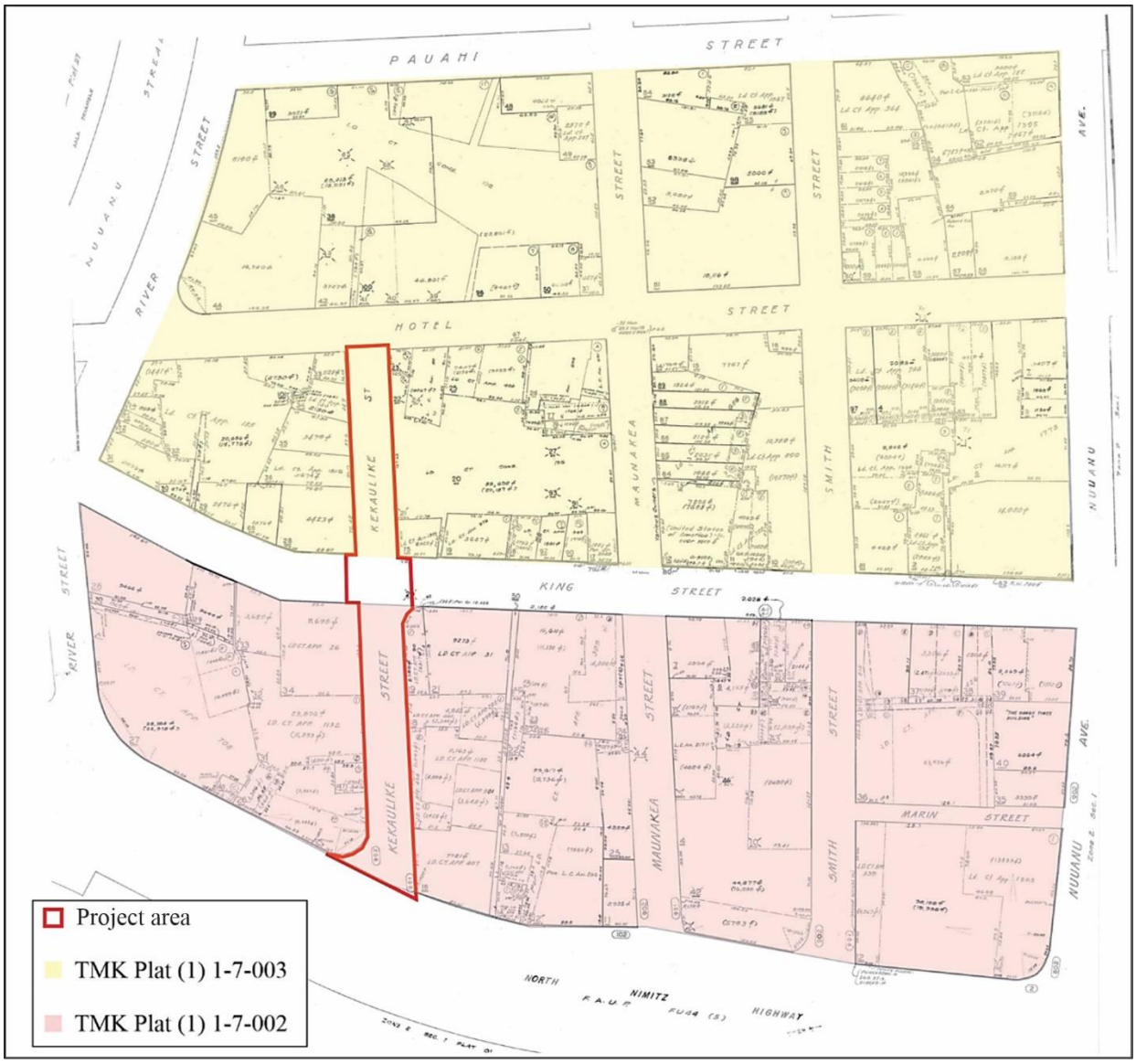

Figure 2. Project area relative to TMK parcels within plats (1) 1-7-002 and 003.

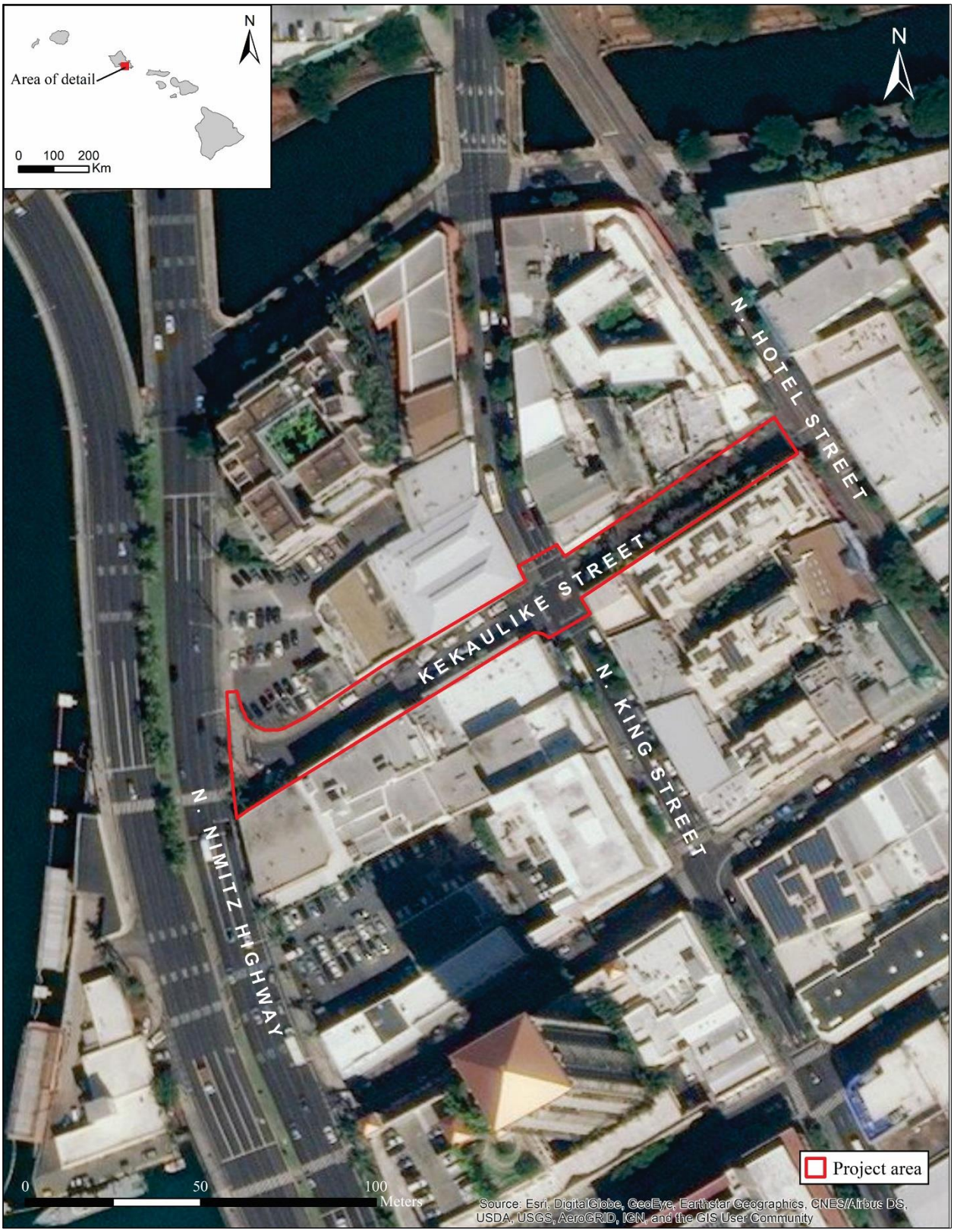

Figure 3. Google Earth™ satellite image showing the project area location.

DESCRIPTION OF THE PROPOSED PROJECT

The Kekaulike Mall and Kekaulike Street Multimodal Improvements Project (Figure 4) will include converting the existing Kekaulike Street from a traditional roadway to a "shared-use street." This shared-use street would prioritize pedestrian and bicycle use while limiting vehicular access to delivering goods and other supplies to local businessess during discrete hours. Improvements to Kekaulike Street and Kekaulike Mall will also include drainage upgrades to mitigate stormwater runoff and beautification enhancements such as lighting, shade trees, Wi-Fi, CCTV, public address system, and opportunities for public art. The project will be implemented in two phases.

Improvements to Kekaulike Mall (between North King and Hotel streets) will occur in Phase 1 and include replacing the existing brick paver system with a poured concrete surface, drainage improvements, and replacing trees in poor condition. Curb ramp and crosswalk improvements at the intersection of North King Street and Kekaulike Street will also be included in Phase 1.

The improvements to Kekaulike Street (between North King Street and Nimitz Highway) will occur in Phase 2 and include a raised street level to match the existing curb height with vehicular access ramp up from the North King Street intersection for delivery vehicles and an exit ramp feeding into North Nimitz Highway near the future Holau transit station. The raised street level will provide for new drainage improvements and enhance the continuity of multi-modal travel. Vehicular control measures to regulate authorized access and prevent illegal parking on Kekaulike Street are also being considered as part of Phase 2.

Extensive drainage improvements throughout both Kekaulike Mall and Kekaulike Street will be designed to alleviate existing environmental concerns related to stormwater runoff. Landscaping improvements will include planters, grated tree wells, and a supplemental irrigation system. There will also be dedicated areas for a future bicycle ride-share station (Biki) along Kekaulike Mall, a freight loading zone on Kekaulike Street, and a paratransit drop-off zone (The Handi-Van) near the future Holau transit station along Kekaulike Street. An additional site will be preserved on Kekaulike Mall just *mauka* of North King Street for a Chinatown gate structure to be designed and developed by the City at a future date. Paving or painted design features will be applied to both the Kekaulike Mall and the Kekaulike Street surfaces to offer a cohesive, aesthetically pleasing streetscape to foster a sense of place consistent with the historical and cultural character of the Chinatown neighborhood.

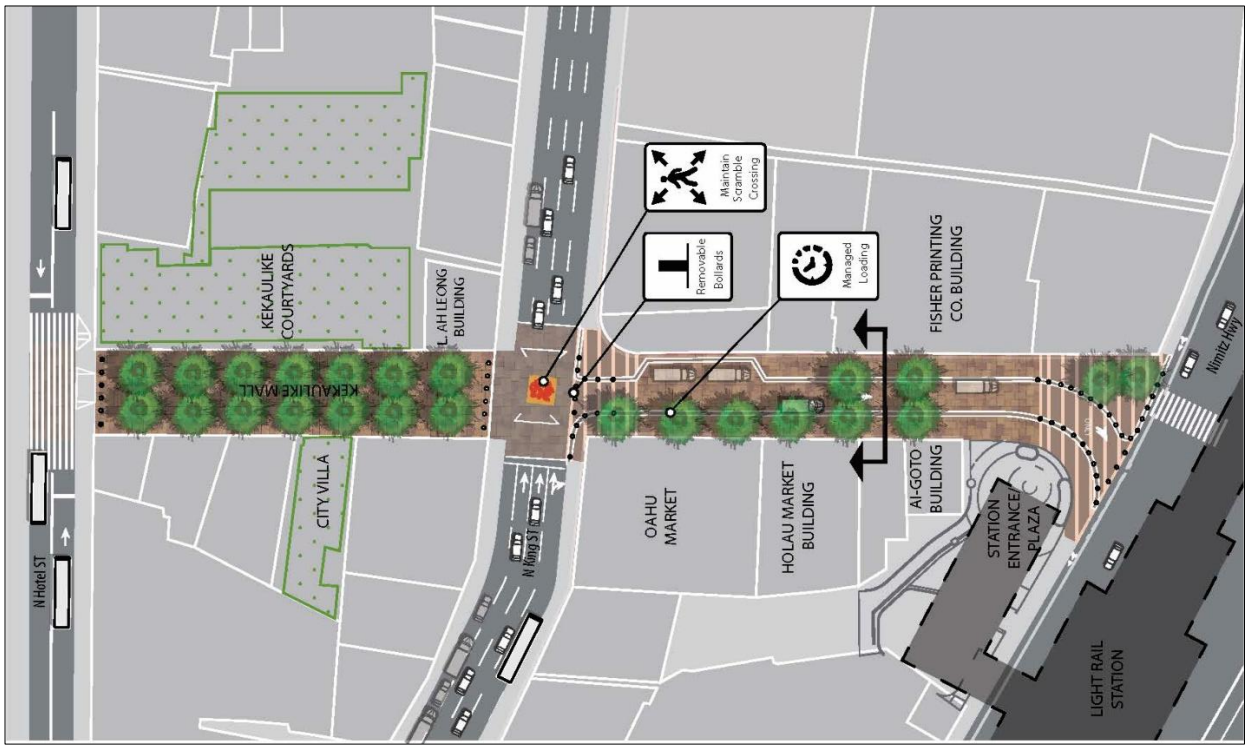

Figure 4. Proposed Kekaulike Mall and Kekaulike Street Multimodal Improvements Project.

NATURAL AND BUILT ENVIRONMENT

The project area is geologically within an alluvial deposit (mapped in Figure 5 as “Qa”), which is typical of the broad drainages that hold sand and silt. This non-volcanic deposit is situated between lagoon/reef deposits (mapped in Figure 5 as “Qcrs”) and fill deposits (mapped in Figure 5 as “Qf”) Sherrod et al. (2007).

Most of the project area consists of one soil type, Ewa Silty Clay Loam (mapped in Figure 6 as “EmA”) with a small section of mixed fill land near the *makai end* along Nimitz Highway. According to Foote et al. (1972:30), Ewa Silty Clay Loam is well-drained and moderately shallow (coral limestone depth is 20 to 50 inches) and flat (0 to 2 percent slopes).

The elevation of the project area ranges between 12 and 18 feet (3.6 and 5.5 meters) above mean sea level (amsl) with an average annual rainfall of 29 inches or 737 millimeters (Frazier et al. 2016). Annual average temperatures in Honolulu range between 67° Fahrenheit (19.4° Celsius) in December and January to 90° F (32.2° C) in August and September (Juvik and Juvik 1998:56). The topography within the immediate vicinity of the project area between the harbor and Nu‘uanu Stream has been extensively altered by human development over the past 150 years. Dredging of Honolulu Harbor and modifications to the Nu‘uanu streambed have resulted in the extension of the shoreline outwards into the harbor. The shoreline was formerly located further inland, on the *mauka* (inland) side of present-day Nimitz Highway.

As previously mentioned, the current project area comprises the Kekaulike Mall, a pedestrian mall with access to businesses, and a portion of the Kekaulike Street roadway, which empties onto Nimitz Highway. There is no natural vegetation in the project area except for a few coconut palms, and flowering trees present along the margins of the Kekaulike Mall and to a lesser extent within the Kekaulike Street portion of the project area. Representative photos of the project area are shown in Figures 7 and 8.

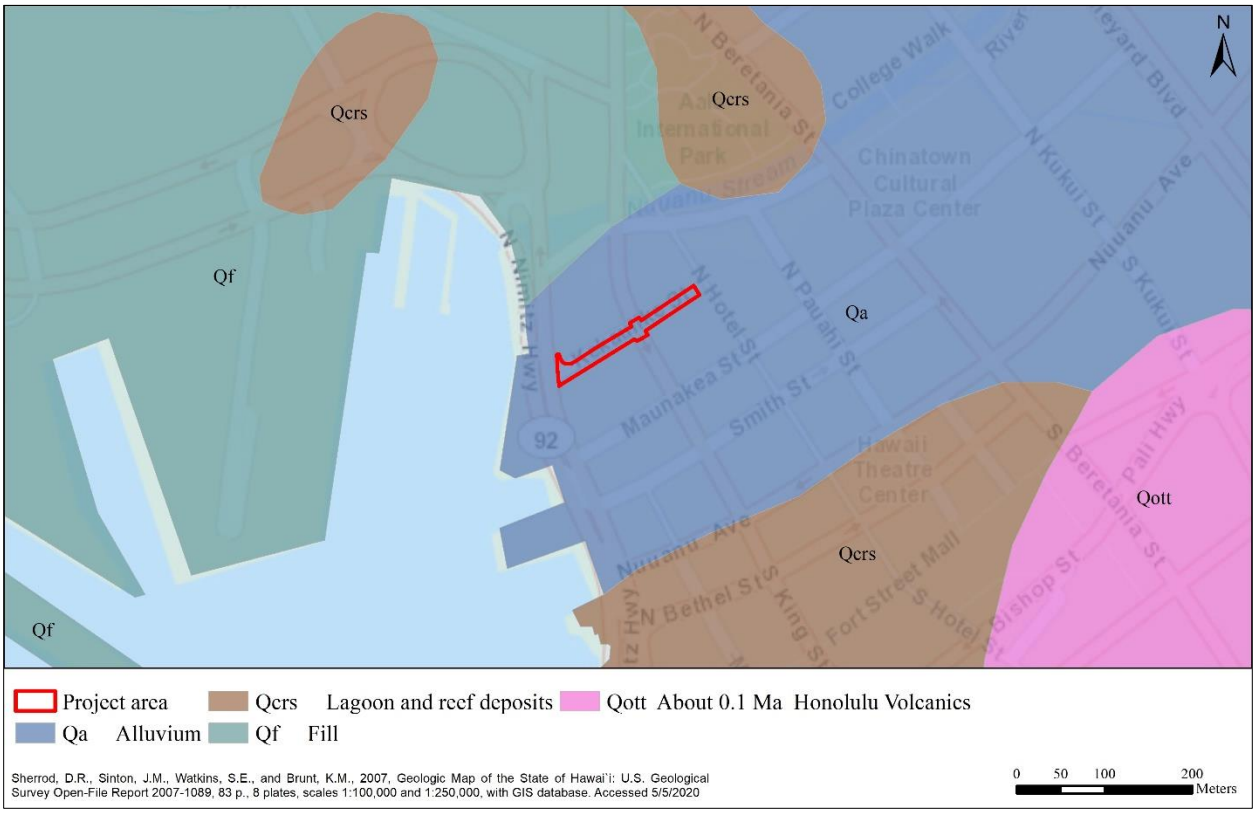

Figure 5. Geology in the project area.

Figure 6. Soils in the project area.

Figure 7. View of Kekaulike Street from the N. King Street and Kekaulike Street intersection, view to the southwest.

Figure 8. Representative photo of the vegetation within the Kekaulike Mall portion of the project area, view to the northeast.

2. BACKGROUND

As specified in the OEQC *Guidelines for Assessing Cultural Impacts* (1997:1), "…the geographical extent of the inquiry should, in most instances, be greater than the area over which the proposed action will take place. This is to ensure that cultural practices which may not occur within the boundaries of the project area, but which may nonetheless be affected, are included in the assessment." For this cultural impact assessment, the *ahupuaʻa* of Honolulu is considered the study area. At the same time, the proposed project location on Kekaulike Street is referred to as the project area. To generate a set of expectations regarding the nature of cultural resources that might be encountered within the current project area and to establish a context to assess such resources' significance, the background section begins with a general culture-historical context. Following this description is a culture-historical background specific to the history of Honolulu is provided. Background of the *moku* (district) of Kona, the broader regional designation in which Honolulu is situated, also falls within the parameters of the OEQC guidelines and ensures that a broader set of cultural practices and histories are considered. Following this background section is a discussion of relevant prior archaeological and cultural studies that have been conducted in the vicinity of the project area.

RESEARCH METHODS

The culture-historical context and summary of previously conducted archaeological and cultural research presented below are based on research conducted by ASM Affiliates at various physical and digital repositories. Primary English language and Hawaiian language resources were found at multiple state agencies, including the State Historic Preservation Division, Hawaiʻi State Archives, and the Department of Accounting and General Services Land Survey Division. Digital collections provided through the Office of Hawaiian Affairs Papakilo and Kīpuka databases, Waihona ʻĀina, the Ulukau Hawaiian Electronic Library, the Hawaiʻi Genealogical Indexes, and Newspapers.com provided further historical context and information. Lastly, secondary resources stored at ASM Affiliates' Hilo office offer general information regarding the history of land use, politics, and culture change in Hawaiʻi, enhancing the broad sampling of primary source materials cited throughout this cultural impact assessment.

CULTURE-HISTORICAL CONTEXT

The following subsections are intended to provide a general overview of Hawaiian origins, settlement, and expansion, emphasizing sociopolitical and cultural transformations over time. The discussion continues with a summary of traditional philosophies associated with the land and the intensification and development of Hawaiian land stewardship practices.

A Generalized Model of Hawaiian Origins and Settlement

While the question of when Polynesians first settled Hawai‘i remains contested, scholars working in archaeology, folklore, Hawaiian studies, and linguistics have offered several theories. With advances in palynology and radiocarbon dating techniques, Kirch (2011), Athens et al. (2014), and Wilmshurst et al. (2011) have argued that Polynesians arrived in the Hawaiian Islands sometime between A.D. 1000 and A.D. 1200. This initial migration took place on intricately crafted *wa‘a kaulua* (double-hulled canoes) to Hawai‘i from Kahiki, the ancestral homelands of Hawaiian deities and peoples from southern Pacific islands and continued from initial settlement to the 13th century. According to Fornander (1969), Hawaiians brought from their homeland certain Polynesian customs and beliefs that included the major gods Kāne, Kū, Lono, and Kanaloa (who have cognates in other Pacific cultures), the *kapu* system of political and religious governance, and the concepts of *pu‘uhonua* (places of refuge), *‘aumakua* (ancestral deity), and *mana* (divine power). Kenneth Emory, an archaeologist who worked in the early to mid-20th century, reported that the sources of early Hawaiian populations originated from the southern Marquesas Islands (Emory in Tatar 1982). However, Emory’s theory is not universally accepted, as Hawaiian scholars in the past and present have argued for a pluralistic outlook on ancestral Hawaiian origins from Kahiki (Case 2015; Fornander 1916-1917; Kamakau 1866; Kikiloi 2010; Nakaa 1893; Poepoe 1906).

While stories of episodic migrations were widely published in the Hawaiian language by knowledgeable and skilled *kū‘auhau* (individuals trained in the discipline of remembering genealogies and associated ancestral stories), the cultural belief that living organisms were *hānau ‘ia* (born) out of a time of eternal darkness (*pō*) and chaos (*kahuli*) was also brought and adapted by ancestral Hawaiian populations to reflect their intimate connection to their environment. For example, the *Kumulipo*, Hawai‘i’s most famed *ko‘ihonua* (a cosmogonic genealogical chant), establishes a birth-rank genealogical order for all living beings (Beckwith 1951; Liliuokalani 1978). One such genealogical relationship that remains widely accepted in Hawai‘i is the belief that *kalo* (taro) plants (in addition to all other plants, land animals, and sea creatures) are elder siblings to humans (Beckwith 1951). This hierarchical creation concept enforces the belief that all life forms are connected, a belief initial settlement populations developed further over generations through intensive interaction with their local environment to form a unique Hawaiian culture.

In Hawai‘i’s ancient past, inhabitants were primarily engaged in subsistence-level agriculture and fishing (Handy et al. 1991). Following the initial settlement period, communities clustered in the *ko‘olau* (windward) shores of the Hawaiian Islands due to the abundance and easy access to fresh water sources. Sheltered bays allowed for nearshore fisheries (enriched by numerous estuaries) and deep-sea fisheries to be easily accessed (McEldowney 1979). Widespread environmental modification on land also occurred as early Hawaiian *mahi‘ai* (farmers) developed new subsistence strategies, adapting their familiar patterns and traditional tools to work efficiently in their new home (Kirch 1985; Pogue 1978). Areas with the richest natural resources became heavily populated, resulting in the population’s expansion to the *kona* (leeward) side of the islands and more remote areas (Cordy 2000).

As populations expanded, significant socioeconomic changes occurred, such as the development of complex social stratification and land stewardship systems. During this expansion period, additional migrations to Hawai‘i occurred from the islands of Tahiti. Rosendahl (1972) proposed that settlement during this period was seasonally recurrent, in which coastal sites were occupied in the summer to exploit marine resources, and upland agricultural plots were maintained during the winter months. Hommon (1976) adds that increasing reliance on agricultural products may have caused a shift in social networks as kinship links between coastal settlements disintegrated with the expansion of *mauka-makai* (upland-coastal) settlements that allowed for the exchange of agricultural products for marine resources. This shift is believed to have resulted in establishing the *ahupua‘a* system sometime during the 15th century (Kirch 1985). The implications of this model include a shift in residential patterns from seasonal, temporary habitation to the permanent dispersed habitation of both coastal and upland areas.

Overview of Traditional Hawaiian Land Management Strategies

Adding to an already complex society was the development of traditional land stewardship systems, including the *ahupua‘a.* The *ahupua‘a* was the principal land division that functioned for both taxation purposes and furnished its residents with nearly all subsistence and household necessities. *Ahupua‘a* are land divisions that typically include

multiple ecozones from *ma uka* (upland mountainous regions) to *ma kai* (shore and near-shore regions), assuring a diverse subsistence resource base (Hommon 1986). Although the *ahupuaʻa* land division typically incorporated all of the eco-zones, their size and shape varied greatly (Cannelora 1974). Noted Hawaiian historian and scholar Samuel Kamakau in his serialized history of Hawaiʻi titled *Ka Moolelo o Hawaii* (The History of Hawaii) listed the various terms that were given to the ecozones found from the mountaintops to the ocean, ecozones that are also found in *ahupuaʻa*. Published in the newspapers *Ke Au Okoa* in 1869, a translation of Kamaukau's original Hawaiian text is provided below:

> Here are some of the terms that were given to the mountainous regions and mountaintops. *Mauna* is the general term for the frequently-used term *kuahiwi*, however, there are numerous terms that are associated with the mountains. Here are some of the terms associated with the mountains. The central region located in front and behind the mountain was termed *kuamauna*. Below the *kuamauna* is the *kuahea*, and below the *kuahea* is the *kuahiwi*, which is where shrubs and small trees grow. It (the *kuahea* and *kuahiwi*) is a place also called the *wao nahele*. Further down, the trees grow taller. This is the *wao lipo*. Below the *wao lipo* is the *wao ʻeiwa*. Below the *waoʻeiwa* is the *wao maʻukele*. Below the *wao maʻukele* is the *wao akua*. Below the *wao akua*, is the *wao kanaka*, which is where people farm. Below the *wao kanaka* is the *ʻamaʻu*. Below the *ʻamaʻu* is the *ʻāpaʻa*. Below the *ʻāpaʻa* is the *paheʻe* and *ʻilima*. And below that is the *kula* and the *ʻāpoho* all the way to the villages. Below the villages is the *kahakai*, the *kahaone*, the *kālawa*, and then the ʻ*aekai*, and that is how the people of old named their environment. (Kamakau 1869:1)

The *makaʻāinana* (commoners, literally the "people that attend the land") who lived on the land had rights to gather resources for subsistence and tribute within their *ahupuaʻa* (Jokiel et al. 2011). As part of these rights, residents were required to supply resources and labor to *aliʻi* (chiefs) of local, regional, and island chiefdoms. The *ahupuaʻa* became the equivalent of a local community with its own social, economic, and political practices and served as the taxable land division during the annual *Makahiki* procession (Kelly 1956). During the *Makahiki*, the paramount *aliʻi* sent select members of his/her retinue to collect *hoʻokupu* (tribute and offerings) in the form of goods from each *ahupuaʻa*. The *makaʻāinana* brought their share of *hoʻokupu* to an *ahu* (altar) that was marked with the image of a *puaʻa* (pig), serving as a physical visual marker of *ahupuaʻa* boundaries. In most instances, these boundaries followed mountain ridges, hills, rivers, or ravines (Alexander 1890). However, Chinen (1958:1) reports that "oftentimes only a line of growth of a certain type of tree or grass marked a boundary; and sometimes only a stone determined the corner of a division." These ephemeral markers, as well as their more permanent counterparts, were oftentimes named as evidenced in the thousands of boundary marker names that are listed in Soehren (Soehren 2008).

Ahupuaʻa were ruled by *aliʻi ʻai ahupuaʻa* or chiefs who controlled the *ahupuaʻa* resources. Generally speaking, *aliʻi ʻai ahupuaʻa* had complete autonomy over the *ahupuaʻa* they oversaw (Malo 1951). *Ahupuaʻa* residents were not bound to the land nor were they considered the property of the *aliʻi*. If the living conditions under a particular *ahupuaʻa* chief were deemed unsuitable, the residents could move freely in pursuit of more favorable conditions (Lam 1985). This structure safeguarded the well-being of the people and the overall productivity of the land, lest the chief loses the principal support and loyalty of his or her supporters. In turn, *ahupuaʻa* lands were managed by an appointed *konohiki*, oftentimes a chief of lower rank, who oversaw and coordinated stewardship of an area's natural resources (Lam 1985). In some places, the *poʻo lawaiʻa* (head fisherman) held the same responsibilities as the *konohiki* (Jokiel et al. 2011). When necessary, the *konohiki* took the liberty of implementing *kapu* (restrictions and prohibitions) to protect the *mana* of an area's resources from environmental and spiritual depletion.

Many *ahupuaʻa* were divided into smaller land units termed *ʻili* and *ʻili kūpono* (often shortened to *ʻili kū*). *ʻIli* were created for the convenience of the *ahupuaʻa* chief and served as the basic land unit which *hoaʻāina* (caretakers of particular lands) often retained for multiple generations (Jokiel et al. 2011; MacKenzie 2015). As *ʻili* were typically passed down in families, so too were the *kuleana* (responsibilities, privileges) that were associated with it. The right to use and cultivate *ʻili* was maintained within the *ʻohana*, regardless of the succession of *aliʻi ʻai ahupuaʻa* (Handy et al. 1991). Malo (1951) recorded several types of *ʻili*, including the *ʻili paʻa* (a single intact parcel) and *ʻili lele* (a discontinuous parcel dispersed across an area). Whether dispersed or wholly intact, *ʻili* required a cross-section of available resources, and for the *hoaʻāina*, this generally included access to agriculturally fertile lands and coastal fisheries. *ʻIli kūpono* differed from other *ʻili* lands because they did not fall under the jurisdiction of the *ahupuaʻa* chief. Rather, they were specific areas containing resources that were highly valued by the ruling paramount chiefs, such as fishponds (Handy et al. 1991).

Aliʻi ʻai ahupuaʻa, in turn, answered to an *aliʻi ʻai moku* (chief who claimed the abundance of the entire *moku or* district) (Malo 1951). Although a *moku* comprises multiple *ahupuaʻa*, *moku* were considered geographical subdivisions with no explicit reference to rights in the land (Cannelora 1974). While the *ahupuaʻa* was the most

common and fundamental land division unit within the traditional Hawaiian land management structure, variances occurred, such as the existence of the *kalana*. By definition, a *kalana* is a division of land that is smaller than a *moku*. *Kalana* was sometimes used interchangeably with the term *ʻokana* (Lucas 1995; Pukui and Elbert 1986), but Kamakau (1976) equates a *kalana* to a *moku* and states that *ʻokana* is merely a subdistrict. For the island of Oʻahu, S. K. Kuhano in 1873 identified the lands of Kona, ʻEwa, Waiʻanae, Waialua, Koʻolau Loa, and Koʻolau Poko as the six *kalana* that makes up the island of Oʻahu (Kuhano in Kameʻeleihiwa 1992). Despite these contending and sometimes conflicting definitions, what is clear is that *kalana* consisted of several *ahupuaʻa* and *ʻili ʻāina*.

This form of district subdividing was integral to Hawaiian life and the product of advanced natural resource management systems. As populations resided in an area over centuries, direct-teaching and extensive observations of an area's natural cycles and resources were retained, well-understood, and passed down orally and experientially over the generations. This knowledge informed management decisions that aimed to sustainably adapt subsistence practices to meet the needs of growing populations. The *ahupuaʻa* system and the highly complex land management system that developed in the islands are but one example of the unique Hawaiian culture that developed in these islands.

Intensification and Development of Hawaiian Land Stewardship Practices

Hawaiian philosophies of life in relation to the environment helped to maintain both natural, spiritual, and social order. In describing the intimate relationship that exists between Hawaiians and *ʻāina* (land), Kepā Maly writes:

> In the Hawaiian context, these values—the "sense of place"—have developed over hundreds of generations of evolving "cultural attachment" to the natural, physical, and spiritual environments. In any culturally sensitive discussion on land use in Hawaiʻi, one must understand that Hawaiian culture evolved in close partnership with its' natural environment. Thus, Hawaiian culture does not have a clear dividing line of where culture and and nature begins.
>
> In a traditional Hawaiian context, nature and culture are one in the same, there is no division between the two. The wealth and limitations of the land and ocean resources gave birth to, and shaped the Hawaiian world view. The *ʻāina* (land), *wai* (water), *kai* (ocean), and *lewa* (sky) were the foundation of life and the source of the spiritual relationship between people and their environs. (Maly 2001)

The *ʻōlelo noʻeau* (proverbial saying) "*hānau ka ʻāina, hānau ke aliʻi, hānau ke kanaka*" (born was the land, born were the chiefs, born were the commoners), conveys the belief that all things of the land, including *kanaka* (humans), are connected through kinship links that extend beyond the immediate family (Pukui 1983:57). *ʻĀina* or land, was perhaps most revered, as noted in the *ʻōlelo noʻeau* "*he aliʻi ka ʻāina; he kauwā ke kanaka,*" which Pukui (1983:62) translated as "[t]he land is a chief; man is its servant." The lifeways of early Hawaiians, which were dependent entirely on the finite natural resources of these islands, necessitated the development of sustainable resource management practices. Over time, what developed was an environmentally responsive management system that integrated the care of watersheds, natural freshwater systems, and nearshore fisheries (Jokiel et al. 2011).

Disciplined and astute observation of the natural world became one of the most fundamental stewardship tools used by Hawaiians of the ancient past. The vast knowledge acquired through direct observation enabled them to detect and record subtle changes, distinctions, and correlations in the natural world. Examples of their keen observations are evident in the development of a Hawaiian nomenclature to describe various rains, clouds, winds, stones, environments, flora, and fauna. Many of these names are geographically unique or island-specific and have been recorded in *oli* (chants), *mele* (songs), *pule* (prayers), *inoa ʻāina* (place names), and *ʻōlelo noʻeau* (proverbial sayings). Other Hawaiian arts and practices such as *hula* (traditional dance), *lapaʻau* (traditional healing), *lawaiʻa* (fishing), *mahiʻai* (farming) further aided in the practice of knowing the rhythms and cycles of the natural world.

Comprehensive systems of observing and stewarding the land were coupled with the strict adherence to practices that maintained and enhanced the *kapu* and *mana* of living and non-living persons, objects, and materials. In Hawaiian belief, all things—places, people, animals, plants, rocks, etc.—possessed *mana* or "divine power" (Pukui and Elbert 1986:235; Pukui et al. 1972). *Mana* is derived from the plethora of Hawaiian gods (*kini akua*) embodied in elemental forces, land, natural resources, and specific material objects and persons (Crabbe et al. 2017). Buck (1993) expanded on this concept noting that *mana* was associated with "the well-being of a community, in human knowledge and skills (canoe building, harvesting) and in nature (crop fertility, weather, etc.)" (c.f. Else 2004:244).

To safeguard the *mana* of a person, place, or resource, *kapu* were implemented and strictly enforced to limit over-exploitation and defilement. Elbert and Pukui (1986:132) defined *kapu* as "taboo, prohibitions; special privilege or exemption." Kepelino noted that *kapu* associated with *akua* (deities) applied to all social classes, while *kapu* associated with *aliʻi* were applied to the people (in Beckwith 1932). As *kapu* dictated social relationships, they also provided "environmental rules and controls that were essential for a subsistence economy" (Else 2004:246). The companion to

kapu was *noa*, translated as "freed of taboo, released from restrictions, profane, freedom" (Pukui and Elbert 1986:268). Some *kapu*, particularly those associated with maintaining social hierarchy and gender differentiation, were unremitting, while those *kapu* placed on natural resources were applied and enforced according to seasonal changes. The application of *kapu* to natural resources ensured that such resources remained available for future use. When the *ali'i* or the lesser chiefs (including *konohiki* and *po'o lawai'a*) determined that a particular resource was to be made available to the people, a decree was proclaimed indicating that *kapu* had been lifted, thereby making it *noa*. Although transitioning a resource from a state of *kapu* to *noa* allowed for its use, people were expected to practice sustainable harvesting methods and pay tribute to the paramount chief and the *akua* associated with that resource. *Kapu* were strictly enforced, and violators faced severe consequences, including death (Jokiel et al. 2011). Violators who escaped execution sought refuge at a *pu'uhonua*, a designated place of refuge, or an individual who could pardon the accused (Kamakau 1992).

In summary, the layering and interweaving of beliefs, land stewardship practices, and the socio-political system form the basis of the relationship between Hawaiians and the land. We can develop a more nuanced understanding of land use and relationships to land from a Hawaiian worldview through the analysis and recognition of these dynamic elements.

KOU, HONOLULU AHUPUA'A, AND THE KONA DISTRICT

The project area is located in the coastal portion of Honolulu Ahupua'a, one of six *ahupua'a* that make up the southerly Kona District of O'ahu (Figure 9). According to King (1935), the enactment of the Civil Code of 1859 resulted in the renaming of the Kona District to Honolulu; thus, a name once used to reference an *ahupua'a* (Honolulu) was applied to a broader geographical area (Kona). Pukui et al. (1974:50) translated Honolulu as "protected bay," however, Westervelt (1915:1) adds that "[t]he old Hawaiians say that "Hono" means "abundance" and "lulu" means "peace," or "abundance of peace." Westervelt (1915:1) goes on to add that:

> "Honolulu" was probably a name given to a very rich district of farm land near what is now known as the junction of Liliha and School Streets, because its chief was Honolulu, one of the high chiefs of the time of Kakuhikewa, according to the legends. Kamakau, the Hawaiian historian, describes this farm district thus: "Honolulu was a small district, a pleasant land looking towards the west,--a flat land, with flowing streams and springs of water, abundant water for taro patches.

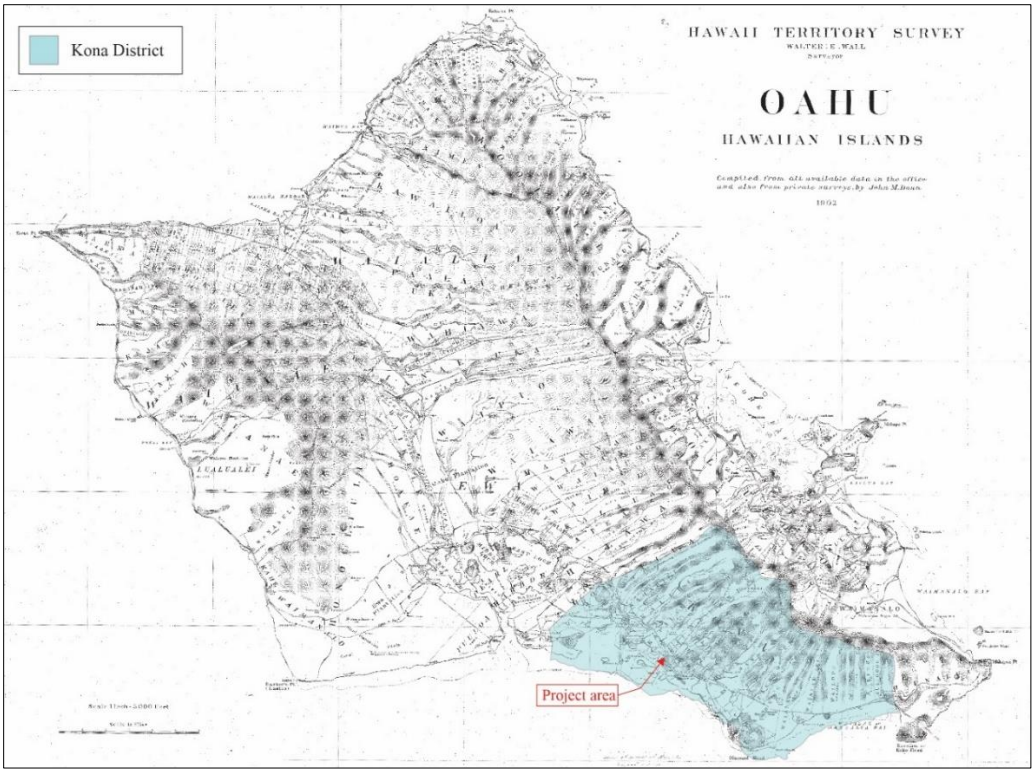

Figure 9. Hawai'i Registered Map No. 2374 by J. M. Donn, 1902 showing the project area in the Kona District.

The project area is situated a short distance (less than 50 meters) *mauka* (inland) of Honolulu Harbor and south of Nuʻuanu Stream in an area that today comprises a portion of downtown Honolulu and the Chinatown Historic District (State Inventory of Historic Places [SIHP] Site 50-80-14-09986) (Figure 10). The Chinatown Historic District extends roughly north-south between Nuʻuanu Stream and Nuʻuanu Street and roughly east-west from Beretania Street to Nimitz Highway, fronting Honolulu Harbor (see Figure 10).

According to Westervelt the project area is traditionally within the land area known as Kou, a gathering place popular among Hawaiian nobility. Kou is also the name of an *aliʻi* who served as an *ilāmuku* (marshal) under the *aliʻi* Kākuhihewa and is said to be the old name of Honolulu until 1800, where the "great Ulu-maika [bowling] place for the gathering of the chiefs" was located (Westervelt 1915:4). Westervelt (1915:2) adds that "Kou appears to have been a small district, or, rather, a chief's group of houses and grounds, loosely defined as lying between Hotel Street and the sea and between Nuuanu Avenue and Alakea Street." Pukui et al. (1974:118) add that Kou was "…noted for *kōnane* (pebble checkers) and for *ulu maika* (bowling)," and said to be named for Kākuhihewa's *ilāmuku*. *Kou* is also the name of an indigenous tree (*Cordia subcordata*) that was planted by Polynesian settlers in hot southern and leeward localities near settlements and valued for its wood and flowers (Abbott 1992; Handy et al. 1991). A *moʻolelo* that further explains the story behind Kou was printed in December of 1908 in *Kuokoa Home Rula*, a bilingual newspaper published in the Hawaiian language and in english that was connected to Hawaiʻi's Home Rule Party:

> The harbor of Honolulu was and is always known by the name of Kou. Very often we hear natives talking among themselve, "Ke awa o Kou," (the harbor of Kou). But ask any of the young natives; why Honolulu harbor was so called? Not a single one of them can give you the right answer. It was an old saying among the old native kamaainas of Honolulu, not altogether unkown by some of the young people of these days: "Hui aku na maka i Kou," or we shall meet at Kou, or in a more literal translation: "The eyes shall meet at Kou."
>
> What is Kou? What the saying "hui aku na maka i Kou" referred to?
>
> According to an old legend known in the days of Governor Kekuanaoa, Kou was a name, not of a place or locality, but of a large flat piece of smooth coral stone, used by Honokaupu, a man, and Mamala, his wife, for a papa konane or checker board. The legend runs thus, the couple, Honokaupu and Mamala, on each fine evening, after drinking their cups of awa or piper methisticum, sat on each side of this coral stone, and under the glimmering light of the *kukui* torches or when the light of the moon was at its best, passed the time playing konane game. Very often one single game took them all night to reach a satisfactory conclusion to both. Evening after evening, the battle of konane, between husband and wife, was kept up with much interest. The spot where Honokaupu and Mamala played konane, was called Kou. It became the favorite gathering place of many people, old and young, from every part of Honolulu. When one is getting ready to go to Kou, the saying "Hui aku na maka i Kou" would be gladly thrown at him (or her) by a lover or a friend.
>
> Kou is said to be at a spot where now stands Spreckles bank. (Kuokoa Home Rula 1908)

The land area of Kou is fronted by Ke-kai-o-Māmala (the sea of Māmala), the bay that extends from Honolulu west to Pearl Harbor (Pukui et al. 1974). When the sea rose high it was called "Ka-nuku-o-Māmala" (The nose of Māmala) (Westervelt 1915:52). Ke-kai-o-Māmala is "named for a shark woman who lived at the entrance of Honolulu Harbor and often played *kōnane*. She left her shark husband, ʻOuha, for Hono-kaʻupu. ʻOuha then became the shark god of Waikīkī and Koko Head" (Pukui et al. 1974:144). The project area is also situated on the south side of the mouth of the Nuʻuanu Stream, whose ancient name is Puehuehu, which carries freshwater from the Koʻolau mountains through Nuʻuanu Valley, where it empties into Ke-kai-o-Māmala (Westervelt 1915). Pukui (1983) recorded the following *ʻōlelo noʻeau* (Hawaiian proverbial sayings) for the area of Māmāla:

> *He kai hele kohana ko Māmala*.
>
> A sea going naked is at Māmala.
>
> The entrance to Honolulu Harbor was known as Māmala. In time of war the people took off their clothes and traveled along the reef to avoid meeting the enemy on land. (Pukui 1983:74)
>
> *Ka nuku o Māmala*.
>
> The mouth of Māmala.
>
> The entrance to Honolulu Harbor, named for a shark goddess who once lived in the vicinity. (Pukui 1983:163)

> *Ke kai ʻau umauma o Māmala.*
>
> The sea of Māmala, where one swims at the surface.
>
> Māmala is the entrance to Honolulu Harbor. (Pukui 1983:185)
>
> *Na ʻale kuehu o Māmala.*
>
> The billows of Māmala with wind-blown sprays.
>
> Māmala is the entrance to Honolulu Harbor. (Pukui 1983:241)

Historical records also place the project area within the traditional *ʻili* of Kīkīhale and Kapuʻukolo. Kīkīhale, which has been translated by Andrews and Parker (1922:651) as "bundled house material" is described as an "old section of Honolulu bordered by Mauna-kea and King streets to Nuʻu-anu stream" and said to be named after the daughter of the chief Kou (Pukui et al. 1974:110). Kamakau (1992:272) further specified the boundaries of Kīkīhale writing that it is, "on the Waikiki side of Nuʻuanu Stream running from River Street to Kekaulike between Hotel and King Streets." The area of Kapuʻukolo, whose name has been translated by Andrews and Parker (1922:646) as "the crawling hill" is described as an "old section of Honolulu bounded by Nuʻu-anu stream and Honolulu Harbor" (Soehren 2008). The location of these two *ʻili* with respect to the project area is shown in Figures 11 and 12 below and it appears that the eastern portion of the project area coincides with the southern extreme of Kīkīhale, while the western portion of the project area coincides with a portion of Kapuʻukolo. In contextualizing the land areas noted above, the following description of the broader Kona District written by Handy et al. (1991:473) states that:

> On Oahu the *ʻokana* (now termed district) of Kona is the area extending from Moanalua (Two-broad-expanses) down the southern (*kona*) coast as far as, but not including, the great fishpond named Keahu-pua-o-Maunalua, modernly called simply Kuapa Pond (*kuapa* meaning causeway) and its hinterland called Maunalua (Two-mountains). This area (like ʻEwa, Waiʻanae, Koʻolauloa, and Koʻolaupoko) was the domain of one high chief (*aliʻi nui* or *moʻi*) who parceled out to chiefs of districts (*aliʻi ʻaipuaʻa*) the various subsistence areas (valleys, lowlands, and shore) such as Moanalua, Nuʻuanu, and Manoa. It was not until the 18th century that Oahu was unified under one chief, Kahahana, who was born on Maui and was elected chief of all Oahu by the high chiefs of the various major chiefdoms. The fist high chief of Kona mentioned in legend, or perhaps one should say mythology, was Kumuhonua (Earth Foundation), who battled with Wakea and Haumea, the progenitors of the island, the taro, and the human race.

In further describing the Kona District, Handy et al. (1991:473-474) adds that:

> This area is subject to the cyclonic southerly (*kona*) storms in winter months, but through most of the year is cooled by trade winds sweeping through low gaps in the Koʻolau range at the top of Moanalua, Kalihi, Nuʻuanu and Manoa Valleys. There were abundant rain, ever flowing streams, springs, pools, verdant interior valleys, broad slopes and well-watered low-lands, fishpond areas, harbors, beaches, and lagoons. Altogether Kona was, for Oahu, the area richest in natural resources and most pleasant for abundant and comfortable living.

The thoroughfare that comprises the project area is named after Kekaulike Kui-Hono-i-ka-Moku, a former ruling chief or *mōʻī* of Maui (Kamakau 1992). Kekaulike was the only child and successor of the *aliʻi* Kaulahea II of Maui and through his five consorts, from which fifteen royal children were born, founded Maui's last ruling dynasty (Kapiikauinamoku 1956). Kapiikauinamoku (1956:13) wrote that "the Kekaulike Dynasty of Maui was the mightiest in island history," perhaps because of their success in expanding their chiefdom to include Maui, Molokaʻi, Lānaʻi, Oʻahu, Kauaʻi and Niʻihau. The expansion of the Kekaulike dynasty was achieved through warfare and through political marriages with *aliʻi wahine* (chiefesses) from neighboring island chiefdoms. Through his five consorts, namely Kekuiapoiwa (mother of Kamehameha I), Holau, Haʻalou, Kane-a-Lae, and Kahilipoilani, and their children, "the power of Maui was made absolute throughout the islands" (Kapiikauinamoku 1956:13). It was the descendants of Kekaulike, specifically Kahekili II and Kalanikūpule, that conquered Oʻahu during the 18th century and who posed the greatest threats to Kamehameha I's campaign to conquer the islands (Kamakau 1992). Kekaulike died on Maui in March of 1736 but his legacy lives on for generations (Kamakau 1992).

Figure 10. USGS map showing project area within the Chinatown Historic District.

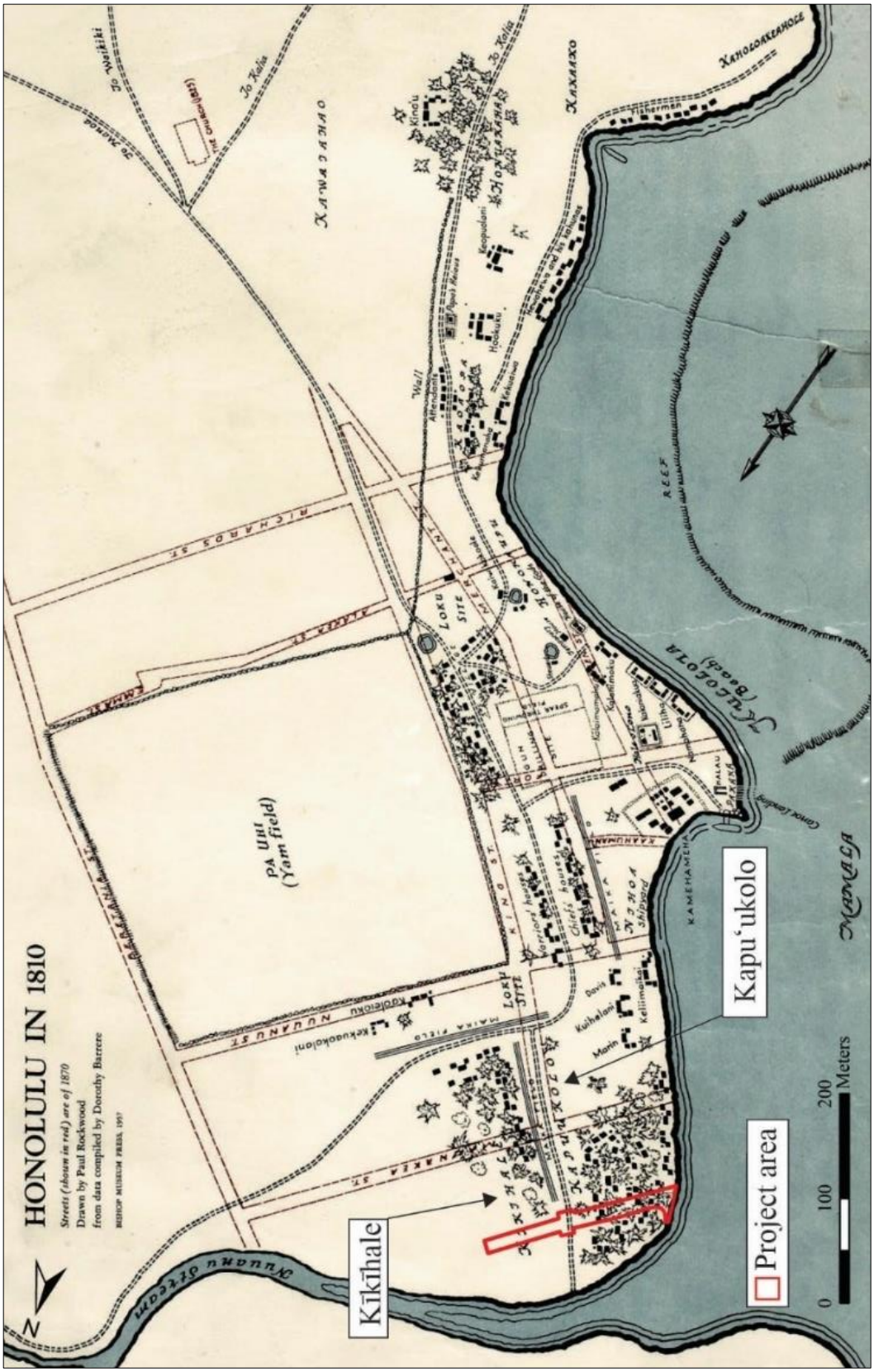

Figure 11. Portion of the map of Honolulu in 1810 showing the project area within Kīkīhale and Kapuʻukolo (after Rockwood 1957).

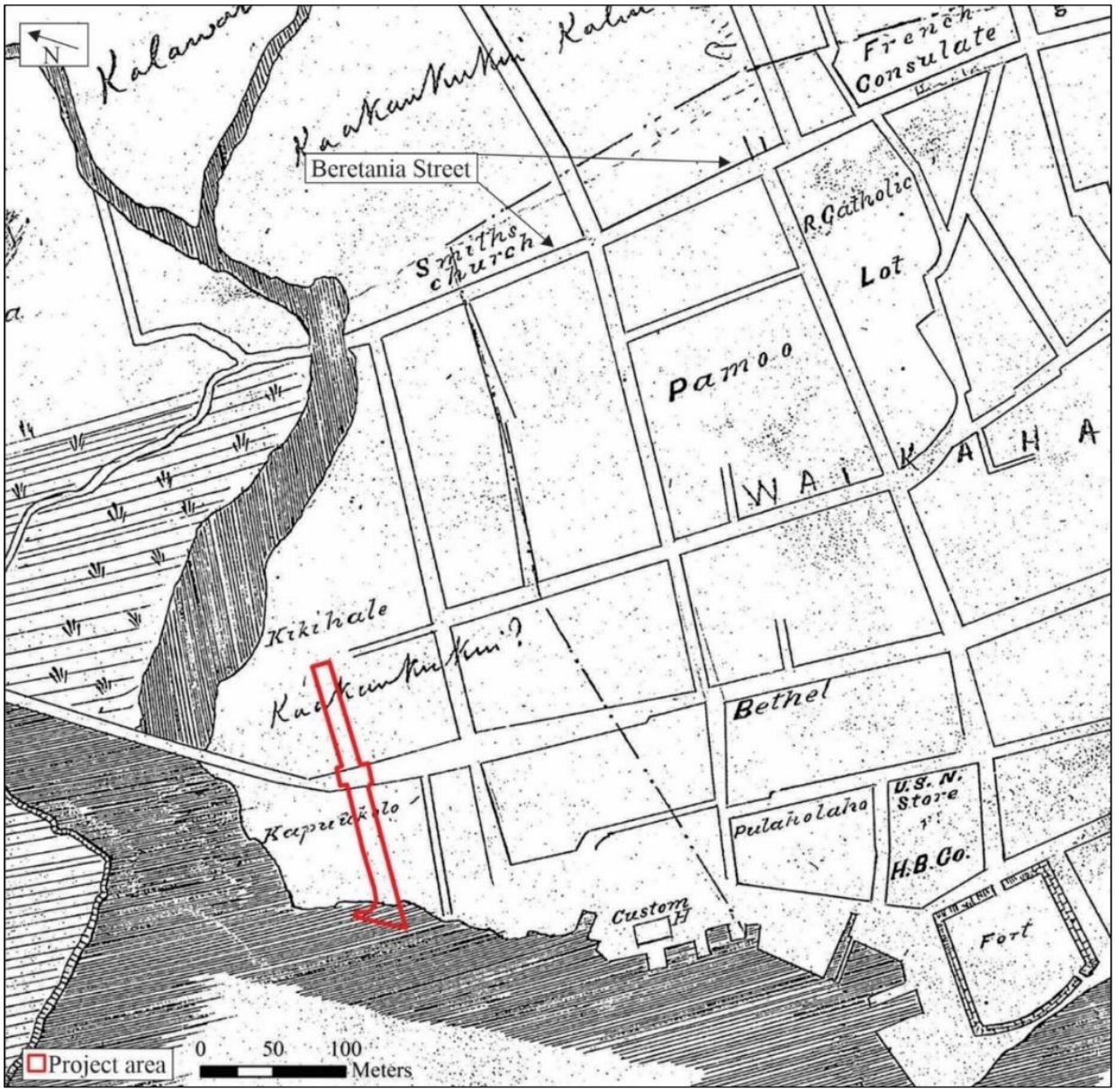

Figure 12. Portion of Hawai‘i Reg. Map No. 242 by Lydgate showing the project area within Kīkīhale and Kapu‘ukolo, Honolulu ca. 1847-1849.

Hawaiian Legendary Accounts in the Project Area Vicinity

Honolulu is mentioned in numerous Hawaiian legends, and in most instances these accounts pertain to specific places within what is now known as Honolulu, including *mo‘olelo* (stories, history, tale, legend) that feature the uplands of nearby Nu‘uanu Valley, Kou, and the sea of Māmala. For instance, “the legends say that one of the homes of Wakea and Papa [the progenitors of the Hawaiian people] was the splendid country around Nuuanu Valley and Honolulu” (Westervelt 1915:76). Given the current project area’s location in the three distinct traditional land divisions of Kou, Kīkīhale, and Kapu‘ukolo, this discussion focuses on legends associated with these *wahi* (places) located in the immediate project area vicinity rather than Honolulu or Nu‘uanu Valley.

According to Westervelt (1915), the corner of Nu‘uanu Avenue and King Street (southeast of the current project area) was known as a place where ghosts gathered nightly to engage in games and sports. The surf break in the harbor of Kou was known as Māmala and named after a chiefess who loved to surf, drink *‘awa* (narcotic drink made from the roots of the kava [*Piper methysticum*] plant) and play *kōnane* (ancient checkers). Māmala’s second husband, the *ali‘i* Honoka‘upu, lent his name to an *‘ili* located to the southeast of the project area and *makai* of Merchant Street.

Westervelt (1915:57) also tells of a sacred place called Peleula near the corner of Beretania and Nuʻuanu streets where offerings were made. One legend tells of how Kaehu, "the little yellow shark of Pearl Harbor," and his shark friends punished a man-eating shark named Pehu from Maui. Kaehu tricked Pehu by using two surfers as bait. As a result, Pehu became trapped in the coral reef at Waikīkī and was killed by the surfers. The surfers made an *imu* (earth oven) at Peleula and burned the pieces of the killer shark there (Westervelt 1915).

Kou is mentioned in passing in several *moʻolelo*, including the story of Kawelo, as well an account regarding the owls of Honolulu. Westervelt (1915:132-133) writes:

> The second legendary owl locality is found near the foot of Punchbowl Hill, near the school-buildings at the head of Fort Street.
>
> Honolulu as the name of even a village was not known. Apparently there were very few people living along the watercourse coming down Nuuanu Valley. It may have been that even "Kou," the ancient name for Honolulu, had not been heard. At any rate, the seacoast was a place of growing rushes and nesting birds. A dry heated plain almost entirely destitute of trees extended up to the foothills. Taro patches and little groves of various kinds of trees bordered each watercourse. The population was small and widely scattered. There was a legend of a band of robbers which infested this region. It was almost a "desolate place."

Kula-o-ka-hua, the plains above Kou, are noted in the story of the famed rat-shooter Pīkoi of Kauaʻi. In this account, Pīkoi "wandered away down the valley and out toward the lands overlooking the harbor of Kou (Honolulu)" (Westervelt 1915:160). This plain was situated below Makiki Valley and "covered at that time with a small shrub, or dwarf-like tree, called aweoweo" in which "rats were hiding under the shelter of the thick leaves and branches" (Westervelt 1915:160). In the story of Lepe-a-Moa, which is set during the reign of Kākuhihewa, a complaining chief was carried by a magical spear to Kou and where the magical spear informed the chief of a *wiliwili* (*Erythrina sandwicensis*) tree that was located on the coast (Westervelt 1915). While the accounts noted above make mere references to Kou, the following *moʻolelo* provide a more robust cultural understanding of the project area.

The Account of ʻAiʻai

Another traditional *moʻolelo* that mentions the *aliʻi* Kou and his daughter Kīkīhale is the *moʻolelo* of ʻAiʻai.ʻAiʻai was the son of Kūʻula, the god of fishermen. The following summary is based on two versions of the *moʻolelo*: a legend told by Moses Manu, translated by Moses Kuaea Nakuina, and originally published by Thomas Thrum in the early 1900s, as well as a version published anonymously in the Hawaiian language newspaper *Ke Alakai o Hawaii*.

When ʻAiʻai visited Oʻahu, he stayed at Kakaʻako (south of the project area) for several days with his friend, a man named Apua. While there, ʻAiʻai and Apua listened "to the murmurs of the chief named Kou" regarding his prowess in *aku* (*Katsuwomus pelamis*-skipjack tuna) fishing (Thrum 1998:242). In addition to learning of Kou, ʻAiʻai met and married a young woman named Puiwa, who soon bore him a son named Puniaiki. They lived together for some time.

On one occasion, their household received a meager ration of *aku* from Honolulu, prompting Puiwa to instruct ʻAiʻai to catch *ʻoʻopu* and *ʻōpae* (general terms for fish and shrimp, respectively) from a nearby brook. Following his mother's request, ʻAiʻai dammed the brook to create pits for catching *ʻoʻopu* and *ʻōpae*. One day, as the family collected *ʻoʻopu* and *ʻōpae*, Puiwa left Puniaiki alone on the stream bank. He soon began to cry. Upon hearing his child, ʻAiʻai told Puiwa to attend to Puniaiki. Puiwa refused to listen to ʻAiʻai, choosing instead to continue fishing. As punishment for Puiwa's neglect, ʻAiʻai called upon his ancestors and brought a flash flood down upon the stream. The flood washed away the dam and took baby Puniaiki downstream. ʻAiʻai then abandoned Puiwa and went to Kaumakapili, an *ʻili* located *mauka* of the current project area.

While at Kaumakapili, ʻAiʻai saw the guardian of chiefess Kīkīhale gather up a large *oʻopu*. Kīkīhale was the daughter of Kou and chose to keep the *ʻoʻopu* as a pet in a large calabash. Immediately, ʻAiʻai recognized the fish as his son Puniaiki transformed, but he let Kīkīhale's guardian keep his son in the calabash, for he was well cared for. Eventually, Puniaiki shapeshifted back into human form. Kīkīhale then ordered her guardian to raise the child until he reached adulthood so that she could marry him.

Much to the dismay of her guardian, Kīkīhale married Puniaiki once he came of age. They were happy at first. However, overtime, she became dissatisfied with Puniaiki because he would not fish. When Kīkīhale confronted Puniaiki about this, he responded that he had "authority over fish, men, pigs, and dogs" (Thrum 1998:245). As such, and as proof of his claim, Puniaiki told Kīkīhale to ask her father for double hauled canoes, fishing equipment, and paddlers. Kou provided the requested canoes, men, and equipment, and upon receiving them, Puniaiki made a fire and burned 1,000 pearl fishhooks, save for two *aku* hooks that Kou kept for himself.

The next day, at dawn, Puniaiki's father, ʻAiʻai, revealed the location of the *pā* (fishhook) named Kahuai. Once found, Puniaiki placed Kahuai in a gourd and took it to the breakers of Puʻuiki. To his surprise, upon unwrapping Kahuai and holding it in his palm, a large number of *aku* leaped into the canoes. The *aku* overflowed the harbor and swam to Kūwili fishpond (northwest of the project area). Puniaiki took two of the fish to his father, who told him to take them to where his mother lived as an offering to Kūʻula. He later returned to his mother with more *aku* for her. According to Thrum (1998:248):

> The people marveled at the quantity of fish throughout the harbor, so that even the stream at Kikihale was also full of akus, and Puniaiki commanded the people to take of them day and night; and the news of this visit of akus went all around Oahu. This unequalled haul of akus was a great humiliation to Kou, affecting his fame as a fisherman; but he was neither jealous of his son-in-law or angry,–he just sat silent. He thought much on the subject but with kindly feelings, resulting in turning over this employment to him who could prosecute it without worry.

Another version of the *moʻolelo* of ʻAiʻai was published in the newspaper *Ke Alakai o Hawaii* in 1935 (Ke Alakai O Hawaii 1935:3). In this retelling of the story, ʻAiʻai is named as the son of Kūʻula and Hina and the place within Nuʻuanu Valley that they lived was Niolopā. Kūʻula and Hina were both known as fisher people and they both cared for the legendary fishhook named Kahuoi. Kahuoi was also protected by a supernatural bird named Kamanuwai. Whenever Kūʻula went fishing in the sea of Māmala with Kahuoi, the *aku* swam up and out of the water and into his canoe. Kūʻula would then feed Kamanuwai some of the *aku* that he caught.

One day, as Kūʻula was fishing for *aku*, Kipapalaulu, the *aliʻi* fisherman of Honolulu, saw the *aku* jump into Kūʻula's boat. When he saw this, Kipapalaulu stole Kahuoi from Kūʻula. Because Kūʻula no longer possessed Kahuoi, there was no one to feed Kamanuwai, and thus the bird slowly starved. When Kamanuwai was hungry, their eyes would close. Thus, the name Kaumakapili (in this account) refers to Kamanuwai's hunger and closed eyes.

The *moʻolelo* continues with the birth of ʻAiʻai to Hina and Kūʻula, who both placed him in a stream below Kaumakapili. The waters of the stream took ʻAiʻai all the way to the landing area of Hoʻoliliamanu and to a rock named Nahakaipuami. While there, ʻAiʻai was found by Kauaelemimo, daughter of Kipapalaulu, and taken to their residence in Kapuʻukolo. Kauaelemimo raised ʻAiʻai until he was a grown man, eventually becoming his wife.

When Kauaelemimo became pregnant, she began to crave fish, which ʻAiʻai acquired nearby at a place called Halekuke. For months Kauaelemimo craved fish until she eventually craved a specific kind of fish: *aku*. When she asked ʻAiʻai to go *aku* fishing, he requested that she go to her father and request for a *pā* (fishhook) that he could use. ʻAiʻai knew that Kipapalaulu possessed the legendary *pā* of Kahuoi and that this would be his opportunity to retrieve his birth parents' prized possession. However, when Kauaelemimo went to Kipapalaulu, he gave her a regular *pā* with no magical properties and denied possession of another *pā*. When ʻAiʻai learned of this, he told Kauaelemimo to return to her father and to ask him to search inside of his fishing container (*ipu holoholona*). Kauaelemimo did as ʻAiʻai instructed, and when she asked Kipapalaulu to look in his container, there was Kahuoi. When she gave the legendary fishhook to ʻAiʻai, he proclaimed "the bones, they live! You (Kahuoi) have returned" (Ke Alakai O Hawaii 1935:3).

With Kahuoi in his posession, ʻAiʻai further instructed Kauaelemimo to visit her father once more and request a very large canoe. Once a canoe was secured, ʻAiʻai went out to sea with Kamanuwai. Like Kūʻula, his father before him, ʻAiʻai revealed Kahuoi and the *aku* began to swim towards him and up into his canoe. Kamanuwai once again became the guardian of this legendary fishhook.

Kou Described in the Epic Saga of Hiʻiakaikapoliopele

Kou is mentioned on several occasions in the saga concerning Hiʻiakaikapoliopele, the younger sister of the volcanic goddess, Pelehonuamea. In this *moʻolelo*, Kou is described as a favorite gathering place of the *aliʻi*, a significant harbor filled with numerous canoes, and a *hale kilu* (gaming house) that belonged to Peleʻula, a chiefess of the area (Hoʻoulumāhiehie 2006b). The *ʻōlelo noʻeau* (Hawaiian proverbial saying), "*hui aku na maka i Kou*," the faces will meet you at Kou, is said in reference to this famed gathering place, and "was the place where the chiefs played games, and people came from everywhere to watch" (Pukui 1983:120). In the *moʻolelo*, Hiʻiakaikapoliopele uttered the *ʻōlelo noʻeau,* to which the author, Hoʻoulumāhiehie, explained:

> Dear reader, we see these last words that Hiʻiaka pronounced to that woman from Puʻuloa, "Kou is where we shall meet again." This shows that Hiʻiaka was not the first persons to utter that famous phrase we all know by heart now. "Friends meet in Kou." For in the story of Kou, the most beautiful woman here on Oʻahu in ancient days, she was attributed with saying those words in this mele she composed for ʻOuha (m).

Kū ka nalu kai a ke Koʻolau	The surf rises, stirred up by the Koʻolau wind
Pūhā ka nalu i kai māʻokiʻoki	Waves burst in the hue-streaked sea
Pī kai pua lana awa	Sprinkling the flowers drifting in the harbor
A kuʻu kāne aloha, ʻo ʻOuha	Of my beloved husband, ʻOuha
Kai hāhā pāpaʻi, hāhā pāpaʻi o Kou	**Crab-fishing sea, for crab-fishers of Kou**
I loaʻa ka pūpū ʻawa	To find a morsel to go with the ʻawa
Kōnane papa ʻiliʻili a Honokaʻupu	The pebbled kōnane board of Honokaʻupu
Kuʻu ipo	My beloved sweetheart
Kuʻu hoa haʻihaʻi ʻōlelo o ka welelau nalu	My chatting companion on the crest of the wave
Pā pae (papa pae) a kāua	On the waves our boards have mounted
I kaʻu aloha lā, ua hala	To my love who has gone
Ka hōkū papa nemonemo ō	The star of that smooth strata, oh
Aloha ka makani lihi kai o Kālia	Beloved in the shoreline breeze at Kālia
Ke kali nei au ʻo kō hoʻi mai	I await your return
Hoʻoneʻe nā ʻiliʻili nehe	The rustling pebbles move about
ʻO ka pā poko, ka pā loa, ka pā lele	The short board, the long board, the leaping board
A lele lā i Kahiki	Soaring to Kahiki
Ko Nuʻumealani ala	The path of Nuʻumealani
ʻO kō aloha kā ia o ka hoʻi hou i hope	Such is your love returning here to me
A pehea lā au, e Honokaʻupu, kuʻu aloha	And what of me, O Honokaʻupu, my love
I ka welelau nalu kai o Uhi, o ʻOā	Upon the crest of the surf at Uhi and ʻOā
ʻO nā maka i ke ao (pō) o poina	Eyes in the living realm (night) of oblivion
Ma hea lā wau, e ke aloha lā	Where am I, O my love
ʻO Kou ka papa	**Kou is the coral flat**
ʻO Kaʻākaukukui ka loko	**Kaʻākaukukui is the pool**
ʻO ka ʻalamihi aʻe nō	Some ʻalamihi, indeed
ʻO ka lā a pō iho	Wait all day until night
Hui aku i Kou nā maka.	**Friends shall meet in Kou**
(Hoʻoulumāhiehie 2006b:296-297)	(Hoʻoulumāhiehie 2006a:277)

Kou's *mele* to ʻOuha provides additional insight into traditional practices associated with Kou such as *hāhā pāpaʻi* (crab-fishing). The practice of crab-fishing in Kou is also mentioned in the *ʻōlelo noʻeau* "*Hāhā pōʻele ka pāpaʻi o Kou*," which translates literally as "[t]he crabs of Kou are groped for in the dark." Pukui (1983:50) interpreted this saying in the following manner:

> The chiefs held *kōnane* and other games at the shore of Kou (now central Honolulu), and the people came from everywhere to watch. Very often they remained until it was too dark to see and had to grope for their companions.

The *mele* above also describes Kou as a *papa* (coral flat) and names a *loko* (pool) known as Kaʻākaukukui. While Lydgate's map (see Figure 12) questions whether Kaʻākaukukui is within the project area vicinity, additional research revealed that this land area is located further south in the vicinity of Kakaʻako. Westervelt (1915) explains that Kaʻākaukukui:

> …was the place where small konane (checker) boards were laid. These were flat stones with rows of little holes in which a game was played with black and white stones. Here Mamala and Ouha drank awa and played konane. Here also Kekuanaoa, father of Kamehameha V., built his home.

Māmala, the Surf-Rider and How ʻOuha Dissolved His Connection with Humanity

Westervelt (1915) related the following short-story regarding ʻOuha and Māmala, a chiefess who possessed supernatural powers and could shapeshift into a *moʻo* (reptile, water spirit), a shark, or a beautiful woman. In the account, Māmala's husband was ʻOuha, a shark-god. They both drank *ʻawa* and played on the smooth, stone *kōnane* board at Kou. Westervelt writes:

> Mamala was a wonderful surf-rider. Very skillfully she danced on the roughest waves. The surf in which she most delighted rose far out in the rough sea, where the winds blew strong and whitecaps were on waves which rolled in rough disorder into the bay of Kou. The people on the beach, watching her, filled the air with resounding applause as they clapped their hands over her extraordinary athletic feats.

After some time, Māmala met a man named Honokaʻupu and left ʻOuha. Angered by Māmala's decision, ʻOuha attempted to injure Māmala and Honokaʻupu. He was unsuccessful, and made his way to Kaʻihikapu in Waikīkī. One day, ʻOuha appeared before some women holding a basket full of fresh fish and shrimp. When he opened the basket, the shrimp and fish within it leaped out and escaped into the water. ʻOuha "fled from the taunts of the women, casting off his human form, and dissolving his connection with humanity" and became the shark-god of the coast between Waikīkī and Koko Head.

Early Historical Descriptions (1792-1819)

Historical accounts penned by visitors, missionaries, and residents are another means to reconstruct life in the Honolulu area during the early Historic Period. Many of these visitors were engaged in the sea otter trade between the Pacific Northwest and China, making Honolulu an important provisioning center between these locales. Additionally, the discovery of *ʻiliahi* (Hawaiian sandalwood) in Hawaiʻi, coupled with the Chinese market for sandalwood, attracted additional Europeans to the islands. As Fitzpatrick and Moffat (1986:50) noted, it was the area's protected harbors and the abundance of "agricultural products" like *ʻiliahi* that transformed Honolulu into an a central commercial port. Although Kou was the name that many native residences used to refer to the area, the name Honolulu was used more frequently following Kamehameha's conquest of Oʻahu in 1795 (Handy et al. 1991).

In March of 1792, British explorer George Vancouver visited Oʻahu. Vancouver moored his ship in a bay "which the natives call Whyteetee [Waikīkī]" and came ashore in search of drinking water near what he referred to as "a large Indian village" (Vancouver 1798:161). At the time of Vancouver's visit, many of the chiefs and warriors of Oʻahu were engaged in warfare on Molokaʻi and Maui. Vancouver and his men were guided to a freshwater source roughly a mile to the north of the village via "an exceedingly well-made causeway, about twelve feet broad, with a ditch on each side" (Vancouver 1798:163). Vancouver made the following observations:

> This opened to our view a spacious plain, which, in the immediate vicinity of the village, had the appearance of the open common fields in England; but, on advancing, the major part appeared divided into fields of irregular shape and figure, which were separated from each other by low stone walls, and were in a very high state of cultivation. . . and abounding with a variety of wild fowl, chiefly of the duck kind, some of which our sportsmen shot, and they were fine eating. The sides of the hills, which were at some distance, seemed rocky and barren; the intermediate vallies [*sic*], which were all inhabited, produced some large trees, and made a pleasing appearance. (Vancouver 1798:163-164)

The growing importance of foreign trade may have influenced Kamehameha I's decision, in 1809, to relocate the royal residence from Waikīkī to Pākākā at Honolulu Harbor. Pākākā was the name of an "old canoe landing" and later a wharf that was built there in 1827 (Pukui et al. 1974:175). According to Westervelt (1915), Pākākā was also the name of temple found in the same area:

> In Kou itself was the noted Pakaka Temple. This temple was standing on the western side of the foot of Fort Street long after the fort was built after which the street was named. It was just below the fort. Pakaka was owned by Kinau, the mother of Kamehameha V. It was a heiau, or temple built before the time of Kakuhihewa. In this temple, the school of the priest of Oahu had its headquarters for centuries. The walls of the temple were adorned all around with heads of men offered in sacrifice.
>
> Kou was probably the most noted konane (or checker) board place on Oahu. There was a famous large stone almost opposite the site of the temple. Here the chiefs gathered for many a game. Property and even lives were freely gambled away. The Spreckles Building covers the site of this famous gambling resort.
>
> One of the finest "Ulu-maika" places on the islands was the one belonging to Kou. This was a hard, smooth track about twelve feet wide extending from the corner of Merchant and Fort Streets now occupied by the Bank of Hawaii along the seaward side of Merchant Street to the place beyond Nuuanu Avenue known as the old iron woks at Ula-ko-heo. It was used by the highest chiefs for rolling the stone disc known as "the maika stone." Kamehameha I. is recorded as having used this maika track. (Westervelt 1915:8-9)

Pākāka as well as the *ulu maika* fields can be seen in Figure 11 above. They were located to the southwest of the project area. According to Daws (1966:36), the motivation for Kamehameha's move is not entirely clear, for ships arrived at port "at the rate of only one a month, and for some years Kamehameha had been able to handle a comparable volume of Honolulu trade from his home at Waikiki." Compared to Waikīkī, the vicinity of the project area was "hotter and dustier," lacked freshwater, and "was marred by mudflats" (Daws 1966:36). Kamehameha spent only three

years in Honolulu before he left Oʻahu for Hawaiʻi Island in 1812. Hawaiian historian Kamakau also provided a description of the project area in his serialized history of the Kamehameha dynasty *Ka Moolelo O Na Kamehameha* (The History of the Kamehamehas), including many of the place names that are listed in historical maps:

> *...i ke au hoi o Kamehameha I., ua noho hapaluaia ma Waikiki ia ma Honolulu; a i ke au hoi o ka Moi Liholiho, ua noho paa ia o Honolulu. Penei hoi ka noho ana, o kahi i nohoia o Kamanuwai, e hele lihi ana ke kukulu ana o kauhale, maluna mai o ka muliwai o Kikihale, a hiki aku i kai o Kapuukolo, a makai hoi o Kaaloa hale, ka hale waiwai o Kuihelani, a makai iho hoi o Pulaholaho, ka aina o Kaahumanu i lawe waleia ai e Beritania; a ma kahakai o Mokuaikaua, he inoa hou nae ia; a ma Kaluaokapili, a ma Apua, Kaoaopa, a hiki loa i Honuakaha; a he kakaikahi na wahi o waena i kukuluia i kauhale; o Kauanonoula, a o Honokaupu, o Honolulu kahiko a me ka Home Sela. E moe ana hoi he kahua maika mai ka muliwai o Kikihale, ma ke alo iho o kahi o William Siwini, a holo aku la i ka Hema Hikina ae, ma ka pa o Keoni Miki, ma ka hale pule o Polelewa, ma ka ulu niu o Kamakea. O Kalanikahua ka inoa o ia kahua maika. A e moe ana hoi ka auwai mai Kaakopua aku a hiki i na lokoi-a o Kahoikekanaka makai iho o Honuakaha. He kiokioki o waena i na hale i noho ia e na haole. Ma Pakaka hoi kahi i noho ia e ka Moi Liholiho a me kona poe alii, a ma na wahi e kokoke ana i ka Papu, malaila i noho ai na'lii a me ka poe koikoi a me na koa e malama ana i ka Moi ame ka Papu*. (Kamakau 1868:1)
>
> In Kamehameha's time the chief lived half his time at Waikiki and half in Honolulu. Liholiho made Honolulu his usual place of residence. He used to live at Kamanuwai. Houses were built above the stream of Kikihale down to Kapuʻukolo and to Kaʻaloa House, the warehouse owned by Ku-i-helani, above which was Pula-holaho, the land owned by Ka-ʻahu-manu which the British seized; on the beach called today Mokuʻaikaua and at Kaluaokapili and at ʻApua, Kaʻoaʻopa', and all the way to Honuakaha. Within these boundaries there were a few buildings, in Kauanonoʻula, Honokaʻupu, old Honolulu, and Sailors' Home. The maika grounds called Kalanikahua ran from the Kikihale stream in front of William Stevens' place, southeast along John Meek's place to Polelewa (Bethel Church) and along Ka-makea's coconut grove. A watercourse ran from Kaʻakopua [Central Grammar School] to the fishponds of Kahoʻikekanaka makai of Honuakaha. The center was occupied by a few scattered houses where the foreigners lived. Liholiho and his chiefs lived at Pakaka [the end of Fort Street] and at places near the fort, where also lived the influential people and the soldiers who guarded the fort. (Kamakau 1992:271-272)

Vancouver and Kamakau's observations regarding Honolulu's populace and abundance of resources are also found in the maps and writings of Russian explorer Otto von Kotzebue, who stopped in Honolulu twice in 1816 to replenish his ship, the *Rurick*, with food, water, and firewood (Fitzpatrick and Moffat 1986). During his visit, Kotzebue produced one of the earliest known maps of Honolulu, detailing areas of clustered agricultural fields along Nuʻuanu Stream and heavily populated settlements along the Honolulu coastline, including the vicinity of the project area (Figure 13). Von Kotzebue was clearly impressed with the productivity of Oʻahu at the time of his visit, evidenced by the following observations he wrote as he approached Oʻahu from the southeast, near Lēʻahi (Diamond Head):

> Whoahuu [Oʻahu] is acknowledge [sic], both by Europeans and by the natives, to be the most fruitful of the whole group; it is called the garden of the Sandwich islands, and it has a right to this name, on account of its extraordinary high state of cultivation, united with the greatest natural beauties. (von Kotzebue 1821:319)
>
> … but you have scarcely sailed round the Yellow Diamond Hill [Diamond Head], when you are surprised by the most beautiful landscape. Close to the shore you see verdant vallies adorned with palm and banana-trees, under which the habitations of the savages lie scattered; behind this, the land gradually rises, all the hills are covered with a smiling verdure, and bear the stamp of industry. You have here the southern part of the island before you, which runs in a straight line of twenty miles in length, from east to west, without any difference in the state of the county. (von Kotzebue 1821:320)

As Kotzebue sailed towards Honolulu, he observed the native people, their settlements, and the environs in the vicinity of the project area:

> …and saw through our telescopes the village of Hana-rura [Honolulu], close to which is the harbor of the same name. A canoe, with three men, rowed up to us. Manuja [sic] called to the people, jumped into the water, and being an expert swimmer, soon reached the boat, with which he went on shore to announce our arrival to the chiefs, and to send us a pilot, on account of the difficult entrance into the harbour. We were near Hana-rura, and saw several houses built in the European fashion,

> which made a singular contrast with the huts of the natives. The environs of Hana-rura are very beautiful; in the harbour was a fort from which Tamaahmaah's [Kamehameha] flag was displayed. (von Kotzebue 1821:320-321)
>
> The whole coast is surrounded by coral reefs, which in many places extend for a mile or more into the sea; and, behind these, nature has formed the beautiful harbour of Hana-rura, which is protected by reefs on the sea side against the fury of the waves, and might be called the first in the world, if the entrance were not too shallow for large ships. (von Kotzebue 1821:322)

The fort that von Kotzebue mentioned in his writings "...was nothing more than a square, provided with embrasures," with walls that were two fathoms high and made of coral (von Kotzebue 1821:333-334). Although Kamehameha's flag flew over the structure when von Kozebue viewed it from his telescope, this was not always the case. A few months prior to von Kotzebue's visit, two other Russian vessels, the *Ilmen* and the *Kodiak*, arrived in Honolulu for repairs and provisions. According to Nathaniel Emerson (1900), the Russians were permitted by Kamehameha (who was on Hawai'i island at this time) to build a block house in Honolulu, which they began to construct immediately. A crew of about eight men proceeded to build the building from mined coral blocks. However, it soon became apparent that they were building a fort instead of a block house once guns were mounted and the Russian flag was raised. The Russians' actions alarmed the residents of Honolulu, as this was perceived as an attempt to seize the island. A messenger informed Kamehameha of the situation, who, in turn, dispatched his generals and warriors to investigate and settle the matter. With the arrival of Kamehameha's militia, the Russians abandoned their fort in Honolulu and sailed to Kaua'i.

Left with a half-completed building, John Young and Kalanimoku (William Pitt) advised Kamehameha to finish constructing the fort to protect the port and nearby royal compound from future invasions. Finding this plan agreeable, Kamehameha ordered all of the men and women to finish constructing the fort. The fort was completed in 1817 and named Kekuanohu (Figure 14). Kekuanohu was renamed Honolulu Fort and remained functional until 1857 (Emerson 1900). When the fort was destroyed, the "coral stones from its walls were used for a retaining wall along the waterfront" (Pukui et al. 1974:107). Over the forty years that it stood, Honolulu Fort served as police headquarters, a courthouse, and the first jail on O'ahu, primarily for unruly sailors (Emerson 1900).

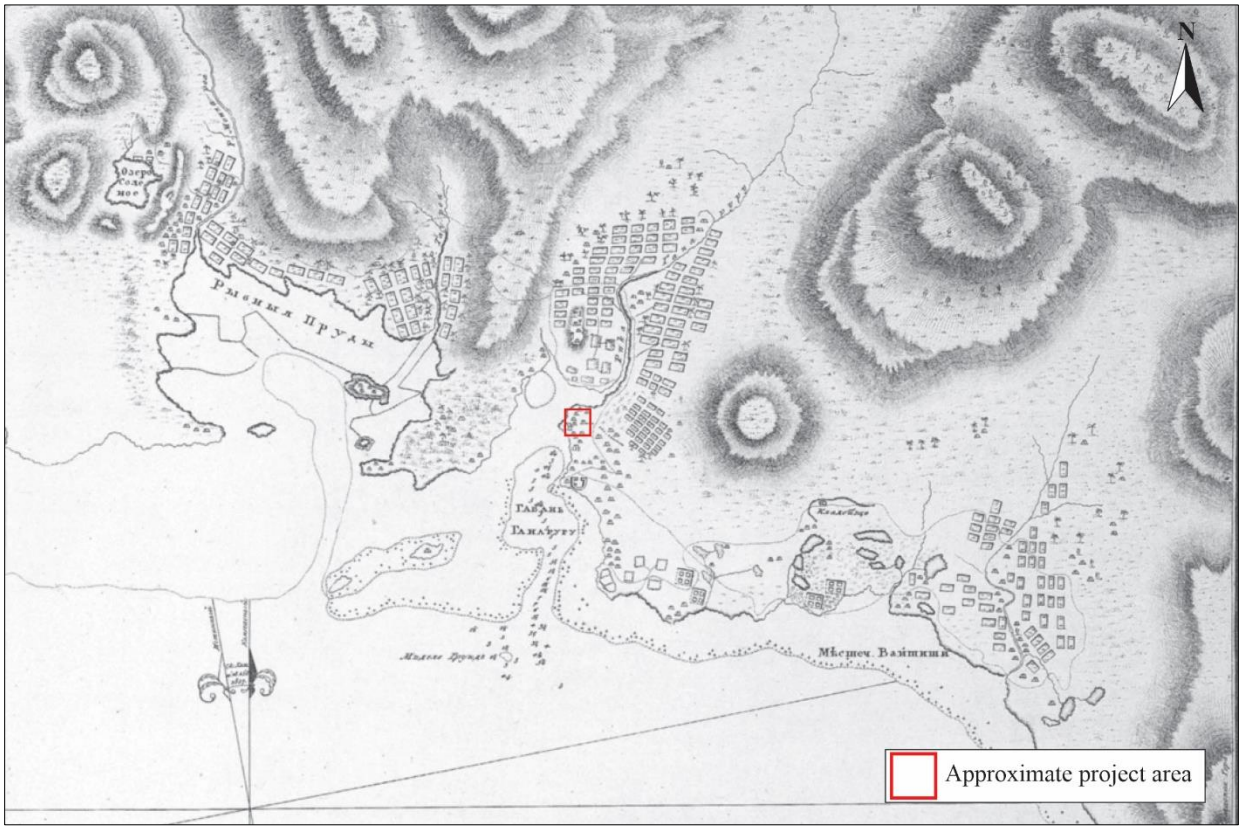

Figure 13. The 1817 von Kotzebue map of Honolulu showing the approximate project area location.

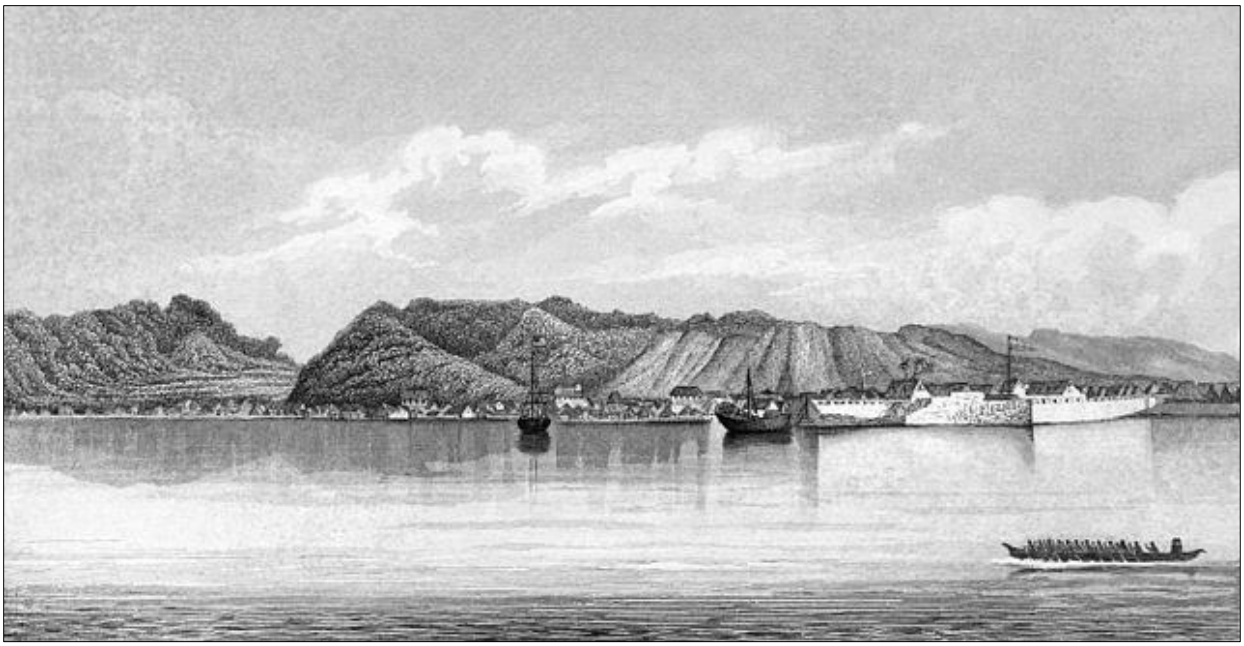

Figure 14. View of Honolulu, O‘ahu and project area vicinity with Honolulu Fort (right) (Belcher 1843:60).

In 1824, Lord George Anson Byron, commander of the *H.M.S. Blonde* along with lieutenant Charles R. Malden, called into Honolulu with the remains of King Liholiho (Kamehameha II) and Queen Kamāmalu, both of whom died in London as a result of contracting measles (Byron 1826). In 1825, after completing their primary business of returning the bodies of these Hawaiian *ali‘i*, Byron and Malden made a tour of the islands, which afforded Malden the opportunity to create maps of several localities, including Honolulu Harbor (Figure 15. Unlike Kotzebue’s map (see Figure 13), which depicted native settlement and agricultural areas, Malden’s map shows only a few scatterings of buildings south of Honolulu. Within the project area vicinity, Malden merely shaded in the Honolulu area, a cartographic technique typically used to depict a densely settled area. In addition to the map, Byron provided the following commentary regarding the Honolulu area and the fort:

> Boki, the first in rank, has been the king’s friend, and was governor of the Island of Oahu, which is considered as the chief of the Sandwich Islands, the royal residence and principal fort being at Honoruru [Honolulu], the capital of that Island (Byron 1826:80).
>
> The fort on the beach mounts 42 guns of various calibres; that on the hill, behind, which is in fact only the mouth of the crater of a spent volcano, mounts eight…Besides the houses and huts of the natives, there are several good stone dwellings built by Europeans, and timber houses, the frames of which have been brought from America and finished here. (Byron 1826:109-110)
>
> Honoruru is a considerable town, in general very irregular, each house having a small enclosure secured by stakes or wickerwork around it; there are, however, two or three tolerably regular streets, and what may be called the public place, where Karaimoku’s house is situated, and near it the Christian church. The houses vary in size from the small hut of the kanaka, which barely holds him and a few domestic utensils, to the roomy dwelling of the chief, which is often fifty and sometimes eighty feet in length, and of proportionable width and height. They are all, however, constructed of the same materials, i.e. poles or timbers fastened together with cord made of the twisted fibers of various plants, and covered with either the leaves of ti…or a long kind of grass, and lined with various leaves, often elegantly plaited. (Byron 1826:119)
>
> …Honoruru can boast of several very commodious wooden houses, brought, in separate parts, from the United States. One of these, lately erected by the queen Kahumanu [sic], she had offered to Lord Byron as a shore residence while he remains at this Island. A few stone buildings have also been lately erected, the largest and most commodious of which belongs to Karaimoku, and is as yet scarcely finished. (Byron 1826:120)

Byron went on to describe the environs located around Honolulu and noted the extensive taro fields and fishponds, the latter of which were depicted in a sketch by Rob Dampier (Figure 16).

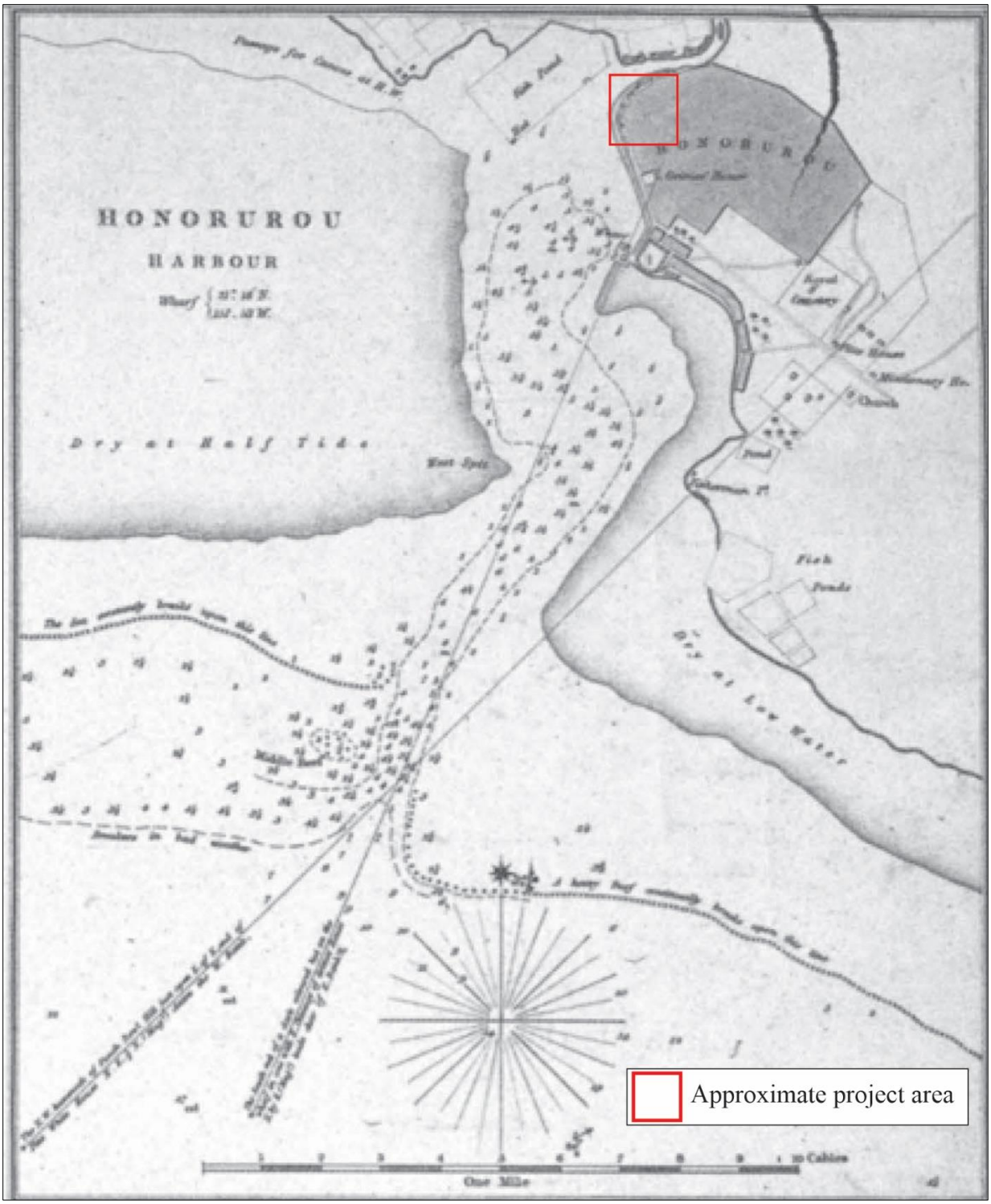

Figure 15. Inset on Malden's 1825 map of "Honorurou [Honolulu] Harbour".

Figure 16. "Fish Ponds at Honoruru, Oahu" by Rob Dampier (Byron 1826:120).

Between 1840-41, Commander Charles Wilkes (1845) led the U.S. Exploring Expedition on a tour of the Hawaiian Islands. While a number of scientists accompanied the expedition, Wilkes was responsible for scouting and charting potential harbors in the Hawaiian Islands. One of the maps that Wilkes generated was of Honolulu Harbor (Figure 17). He depicted a growing town complete with clearly defined roads (including King Street), a formal port, and businesses. Wilkes' commentary also illuminated the growing European and Chinese influences in Honolulu:

> Honolulu exhibits, even to a distant view, many dwellings built in the European style, with look-outs, and several steeples rising above the habitations. Some edifices of large size are also seen in the progress of construction. Native houses, with thatched roofs, however, predominate, which prevent it from losing the appearance of a Polynesian town, and area associated with ideas of semi-civilization. To look upon it was, notwithstanding, a source of pleasure, as it gave evidence of a change being in progress, in which some of our own countrymen are performing a prominent part. (Wilkes 1845:373)
>
> The aspect of country around Honolulu, as seen from the roads, is barren; the plan on which the town stands is almost destitute of verdure, and exhibits only a few scattered houses. This plain extends both east and west from the town, while behind it the land gradually rises towards the Nuuanu Valley. (Wilkes 1845:373-374)
>
> The grouping of the adobe walls, European houses with piazzas, native houses and pulperias, is as striking as the variety of feature and dress, from the Chinese in their loose shirt and trowsers and broad-brimmed straw-hat, to the well-dressed Europeans, in cloth coat and tightly-strapped pantaloons. (Wilkes 1845:375)

Colorful and detailed descriptions area also given by Wilkes about the roads in Honolulu:

> Every thing is earth-colour, with the exception of a few green blinds. The streets, if so they may be called, have no regularity as to width, and are ankle-deep in light dust and sand. Little pains are taken to keep them clean from offal; and, in some places, offensive sink-holes strike the senses, in which are seen wallowing some old and corpulent hogs. One of these, which was pointed out to us as belonging to the king, was tabooed, and consequently a privileged personage.

John Papa ʻĪʻī, a Hawaiian historian and judge who served as *kahu* (caretaker) to some of Kamehameha's high-ranking children and grandchildren, wrote his memoirs of growing up in Kamehameha's court in the Hawaiian language newspaper *Ka Nupepa Kuokoa*. His memoirs were published in serialized form, beginning in 1868 and ending with his death in 1870. Decades later, ʻĪʻī's memoirs were translated and reorganized by Mary Kawena Pukui and Dorothy Barrère into the seminal text *Fragments of Hawaiian History* (Ii 1993). Included in this publication was a map created by artist Paul Rockwood in 1957 titled "Honolulu in 1810." The map was based on three sources: data compiled by Barrère from ʻĪʻī's newspaper accounts, an 1825 sketch map by Lieutenant Charles Malden, and an 1870 government survey map that depicted the street names as they appeared at that time. The area known today as Honolulu is depicted with the corresponding names of the various *ʻili* and landmarks as they were in 1810. The red ink indicates the streets as they were in 1869. The map is reproduced in its entirety as Figure 11 above.

Among the many details provided by ʻĪʻī about early Honolulu is his description of *loku*—places "where men and women of every kind gathered in the evenings to enjoy themselves" (1993:63-64). ʻĪʻī added that "[s]ome of the amusements indulged in there were hula dances, chants, the recitation of narratives in chant form, and the telling of legends," and that "[i]t was customary to announce in advance the nights when entertainments were to be held, and to explain what kind would be performed on a given night in a given place" (1993:64). Two of the more popular *loku* that ʻĪʻī described were found at the corner of King and Nuʻuanu Streets, which is south of the project area, and near the intersection of Merchant and Alakea streets further south (see Figure 11).

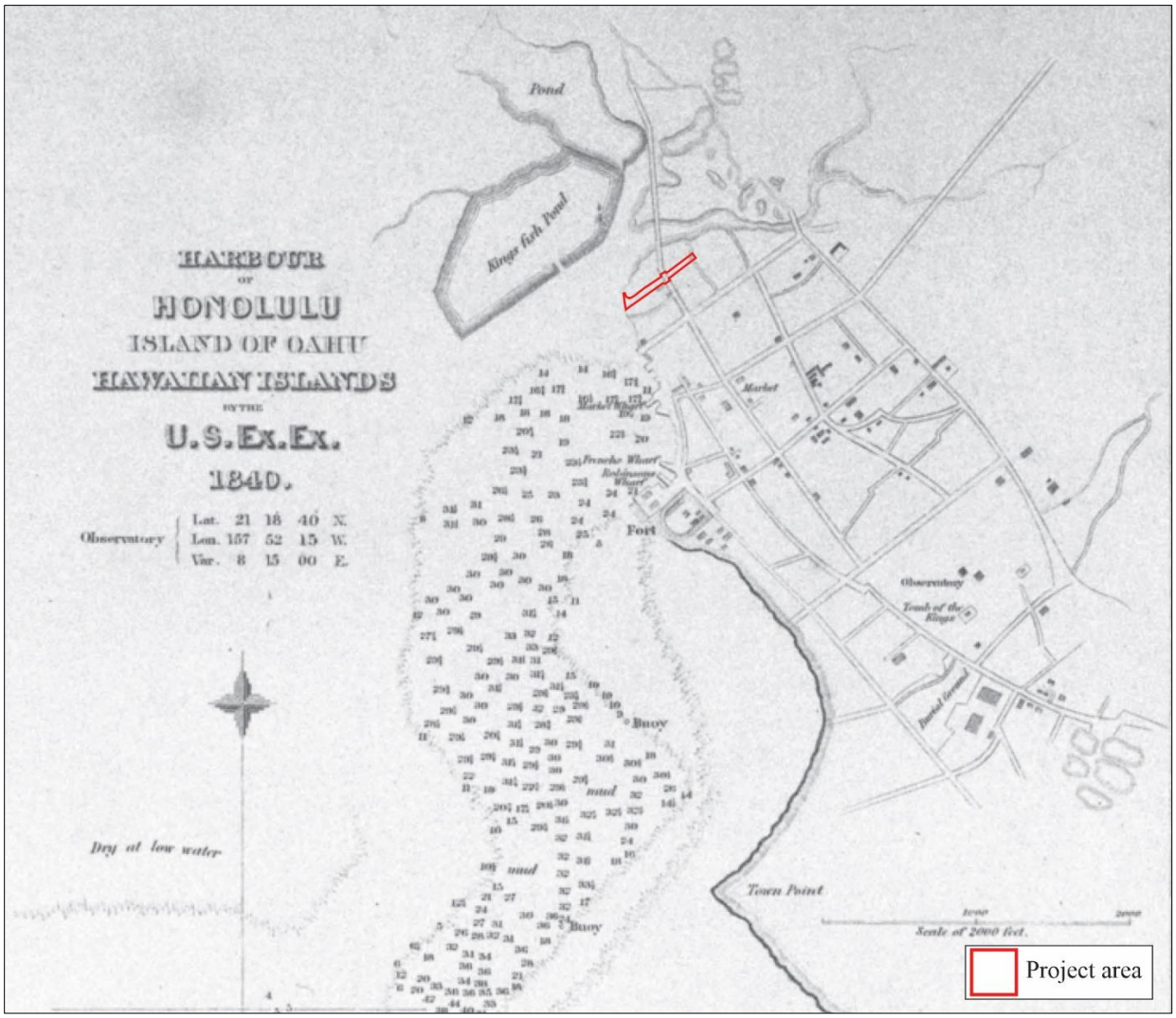

Figure 17. Portion of Wilkes' 1840 map of Honolulu harbor (Wilkes 1845).

Similar to Westervelt (1915), ʻĪʻī also reported that "the ghosts of earlier participants are now said to congregate in these places every evening from seven o'clock until midnight" (1993:64). *Makai* of King Street and south of the *loku* site were the houses of the warriors, situated across from the houses of the *aliʻi* on the *mauka*/*makai* sides of a trail and *mauka* of Nihoa (see Figure 11). ʻĪʻī (1993:64) also enjoyed visiting the waterfront at Nihoa, "the area now bounded at either end by Kaahumanu and Nuuanu Streets, to see the ships built by Hawaiians under the direction of haoles." Near Nihoa, ʻĪʻī (1993:64-66) recalled the following details:

> … a house with double doors facing Ewa, with three small grass houses in front of it for the chiefesses. These were fenced in like Papa's house. Makai of them was the *mua*, or men's house, called Halehui, which faced Koholaloa and served Kamehameha I. A little makai of that was a small point, and to the right of the houses and pond was a wharf of rocks where a three-masted foreign-built vessel could be seen…Just makai of that place was a canoe landing [Pākākā], and eastward from there stood the canoe building shed of Kamehameha.
>
> Just mauka was a large eating house called Kapapoko which belonged to Kaahumanu. And back of this were two storehouses, filled from top to bottom with gunpowder and guns. East of these were some houses in which were stored the belongings of Kamehameha, of the heir to the kingdom, and of the gods of the heiaus. About 2 chains away from the heiau houses was a vacant space approximately 4 chains square which was the *kahua* site used for gun drilling. Beyond this kahua site and east of the fence-enclosed houses of the king was the site for the practice of throwing hau wood spears. Here those who were skilled in this branch of Hawaiian warfare could be observed. (Ii 1993:64-66)

In addition to *kahua*, spectators gathered to watch *maika* played on the various game fields in Kou. Per ʻĪʻī (1993:66), a *maika* stone or *ulu maika* "resembles a wheel whetstone in shape, but it is small enough to be held in the palm of the hand" and is thrown underhand by the plater. ʻĪʻī (1993:67) further explained three types of *maika* play:

> A player held the stone to his forehead and ran from one end or the other of the field to a good spot from which to toss it. A man who acted as a pointer indicated where the stone first hit the ground, and waved his right hand to show where it came to a stop before he gave the signal for the next player to begin.
>
> Another way of playing *maika* was for two or more persons to play on the same field at the same time. Still another was to have stakes placed at each end of the field. Then one player rolled his *maika* stone from the stakes which acted as markers at one end toward those at the other end of the field, while the other player rolled his to the spot where the first player's stakes were. If he had finished throwing and his stone touched the ground and began to roll before the other player's stone hit the ground, he won a point. If it did not roll before the other's stone touched the ground, then that player won a point. The first to reach the goal won two points. If his opponent was not strong in rolling his *maika* stone, he would never win a point. He was no better than a strong man who sent his *maika* stone off the course. Those who placed their wagers on such stopped at once.

In Kou, one *maika* field extended across Nihoa roughly along present-day Merchant Street between Fort Street and Nuʻuanu. Another extended roughly along present-day King Street, beginning near the intersection of Kekaulike and King Streets, immediately south of the project area (see Figure 11). Near the southern terminus of this nearby *maika* field, a third and longer *maika* field extended eastward parallel to Nuʻuanu Street.

The *maika* field located closest to the project area was known as the *maika* field of Kīkīhale, while the one that was adjacent to Nuʻuanu Street was known as Kalanikahua. Both *maika* fields were bordered by houses on each side, while the *loku* site near the intersection of King and Nuʻuanu Streets "was where the two *maika* fields joined, and that place was without a house" (Ii 1993:92).

Other landmarks depicted in the Rockwood (1957) map and described by ʻĪʻī (1993:88) include Kapauhi, "the king's yam garden," located southeast of the project area and bounded by Beretania, King, Alakea, and Nuʻuanu Streets, and Kamehameha's residential compound at Pākākā, *makai* of Kapauhi (see Figure 11). A stone wall that began in Kakaʻako to the southeast of the project area connected with the southernmost corner of Kapauhi and extended along King Street to Nuʻuanu Street then up to Beretania Street and then became a *hau* wood fence on the *mauka* side before it came down along Emma and Alakea streets into Honokaʻupu. The *ʻili* of Honokaʻupu, located *makai* and to the south of the project area, was the location of the king's stewards' houses, a nearby spring, as well as the "houses of the gods Kalaipahoa, Kihawahine, and others" (Ii 1993:91). Trails from Waikīkī, Nuʻuanu Valley and Pākākā converged in the area. ʻĪʻī added the following remarks regarding the use of the trails in Honokaʻupu:

> Just beyond the houses of the gods were Kalanimoku's houses, close to the edge of the sea. The trail there was always used to reach the drilling field, for by going between the houses of the gods and the heiaus one escaped death. (ibid.)

Regarding Kapuʻukolo residents, ʻĪʻī (1993) recalled that they were primarily fishermen who used a variety of traditional Hawaiian nets in their craft. Kuihelani, one of ʻĪʻī's relatives, was a prominent and wealthy member of the Kapuʻukolo community. He worked as Kamehameha I's property manager and thus had a large household with many servants. South of Kuihelani's residence was the residence of George Isaac Davis and his retinue. To the north lived Francisco de Paula Marin, a Spaniard who was a confidant of Kamehameha I who "had two or three horses, one a mare, and a young cow" and was "an expert in the stick hula" (Ii 1993:94). *Makai* of the Kuihelani, Davis, and Marin's residences was the site of the first custom house, which also served as the residence of Keliimaikai, brother of Kamehameha I (see Figure 11).

Of particular relevance to the project area, ʻĪʻī (ibid.) goes on to add that this area—near the *makai* end of Nuʻuanu Street and to the south of the project area within present day Chinatown—was the first place a Chinese immigrant settled:

> … in the vicinity of the custom house at the beach was a house for the very first Chinese ever seen here. There were two or three of them and they prepared food for the captains of the ships which took sandalwood to China. Because the faces of these people were unusual and their speech—which is now commonly heard—was strange, a great number of persons went to look at them.

Missionary Accounts

After the death of Kamehameha I in 1819, Kaʻahumanu proclaimed herself "Kuhina nui" (Prime Minister), and the ancient Hawaiian *kapu* system of political and religious governance was radically transformed. The arrival of foreign missionaries shortly thereafter, further advanced this change. In 1820, American missionary Hiram Bingham and members of the American Board of Commissioners for Foreign Missions (ABCFM) toured the island of Oʻahu seeking out communities where they could establish church centers to grow the Hawaiʻi Calvinist mission. Bingham (1848), who kept a journal of his experiences over his twenty-one-year residence in the Hawaiian Islands, offered a rare glimpse of the project area vicinity when he first set eye on Oʻahu and the ahupuaʻa of Honolulu:

> Early in the morning of the 14th April, that island rose to our view, and, as we approached rapidly, presented successively its pointed mountains, covered with trees and shrubbery, its well-marked, extinguished craters near its shores, its grass covered hills, and more fertile valleys, its dingy thatched villages, its cocoanut groves, its fort and harbor, and its swarthy inhabitants in throngs. . . We cast anchor in the roadstead abreast of Honolulu village, on the south side of the island, about 17 miles from the eastern extremity. (Bingham 1848:92)

Shortly after their arrival, Bingham and others in his company scaled Pūowaina (Punchbowl Hill) and reported the following details:

> From the highest part of the rim we had a beautiful view of the village and valley of Honolulu, the harbor and ocean, and of the principal mountains of the island. On the east were the plain and groves of Waikiki, with its amphitheatre of hills. . . Below us, on the south and west, spread the plain of Honolulu, having its fish-ponds and salt making pools along the sea-shore, the village and fort between us and the harbor, and the valley stretching a few miles north into the interior, which presented its scattered habitations and numerous beds of *kalo* (*arum esculentum*) in its various stages of growth, with its large green leaves, beautifully embossed on the silvery water, in which it flourishes. Through this valley, several streams descending from the mountains in the interior, wind their way, some six or seven miles, watering and overflowing by means of numerous artificial canals, the bottoms of kalo patches, and then, by one mouth, fall into the peaceful harbor. (Bingham 1848:93)

A few years later, William Ellis, a British missionary who was a member of the London Missionary Society, visited the Hawaiian Islands and documented his experience. The following excerpt from Ellis' writings describe the geology of Honolulu and the fresh water wells that were dug in the early 1820s:

> The plain of Honoruru [Honolulu] exhibits in a singular manner the extent and effects of volcanic agency; it is not less than nine or ten miles in length, and, in some parts, two miles from the sea to the foot of the mountains; the whole plain is covered with a rich alluvial soil, frequently two or three feet deep; beneath this, a layer of fine volcanic ash and cinders extends to the depth of fourteen or sixteen feet; these ashes lie upon a stratum of solid rock by no means volcanic, but evidently

> calcareous, and apparently a kind of sediment deposited by the sea, in which branches of white coral, bones of fish and animals, and several varieties of marine shells, are often found. A number of wells have been recently dug in different parts of the plain, in which, after penetrating through the calcareous rock, sometimes twelve or thirteen feet, good clear water has been always found: the water in all these wells is perfectly free from any salt or brackish taste, though it invariably rises and falls with the tide, which would lead to the supposition that it is connected with the waters of the adjacent ocean, from which the wells are from 100 yards to three quarters of a mile distant. The rock is always hard and compact near the surface, but becomes soft and porous as the depth increases. (Ellis 1917:24)

Ellis (1917:27-28) also made the following observations about Honolulu Harbor and the city of Honolulu as a royal residence and trade hub in 1823:

> The harbor is the best, and indeed the only secure one at all seasons, in the Sandwich Islands, and is more frequented by foreign vessels than any other; seldom having within it less than three or four, and sometimes upward of thirty, lying at anchor at the same time.
>
> The town has also, since the number of shipping has increased, become populous, and is one of the largest in the islands, usually containing 6000 or 7000 inhabitants. It is the frequent residence of the king and principal chiefs, who are much engaged in traffic with foreigners visiting the islands, or residing on shore, for purposes of trade.
>
> There are twelve or fourteen merchants, principally Americans, who have established warehouses on shore for foreign goods, principally piece goods, hardware, crockery, hats and shoes, naval stores, &c. [sic], which they retail to the natives for Spanish dollars or sandal wood.

On March 30, 1828, Laura Fish Judd, a missionary and wife of Dr. Gerritt Judd, first viewed O‘ahu from the deck of the *Parthian*:

> There! I see the town of Honolulu, a mass of brown huts, looking precisely like so many haystacks in the country; not one white cottage, no church spire, not a garden nor a tree to be seen save the grove of cocoanuts. The background of green hills and mountains is picturesque. A host of living, moving beings are coming out of that long, brown building; it must be Mr. Bingham’s congregation just dismissed from morning service; they pour out like bees from a hive. I can see their draperies of brown, black, white, pink and yellow native tapa. (1880:2)

As part of an ethnological study of traditional Hawaiian agriculture, anthropologist Edward Smith Craighill Handy (1940) collected oral accounts and written historical descriptions of agricultural activities that were extant in the Hawaiian Islands prior to and after European contact. Handy (1940:77) reported two accounts from the 1830s and 1810s that discussed Honolulu (Honoruru and Hanarara) as a planting locality for taro. The first account was written by Prussian botanist Franz Julius Meyen when he visited the islands between 1830-1832:

> If one were to visit the great plains of Honoruru and see all the beautiful cultivated land in the transverse valleys, that extends onto the plains of Honoruru, and also the tremendous quantity of food plants that are cultivated in the valley of the Pearl river, one might perhaps be persuaded to believe that a great excess of food prevails here, although that is not the case. The taro plantations occupy a great deal of space and yield far less nourishment than our potato and grain fields. In fact, the high price of fresh supplies at the market of Honoruru we might directly ascribe to inadequate cultivation. (Meyen in Handy 1940:77)

The second account is from Russian navigator Otto von Kotzebue, who traveled the islands from 1815 to 1818:

> Woajoo is the most fertile of the Sandwich Islands, from which Owyhee receives a part of the taro necessary for its consumption. The cultivation of the valleys behind Hanarura is remarkable; artificial ponds support, even on the mountains, the taro plantations, which are at the same time fish ponds; and all kinds of useful plants are cultivated on the intervening dams. (von Kotzebue in Handy 1940:77)

Elsehwere in von Kotzebue’s writing, he continued to describe the agricultural plots he witnessed:

> The artificial taro fields, which may justly be called taro lakes, excited my attention. Each of them forms a regular square of 160 feet, and is enclosed with stone all round like our basins. . . In the spaces between the fields, which are from three to six feet broad, there are very pleasant shady avenues, and on both sides bananas and sugar cane are planted. . . I have seen whole mountains covered with such fields, through which the water gradually flowed; each sluice formed a small

> cascade, which ran through avenues of sugar cane, or bananas, into the next pond, and afforded an extremely picturesque prospect. (ibid.)

Within two years of Meyen's visit excerpted above, the results of a census of Oʻahu conducted in 1836 resulted in an island-wide population estimate of 27,798 individuals, of which 12,994 individuals were reported as residing in Honolulu and Waikīkī (The Hawaiian Spectator 1839:112). In 1839, a second Christian church, Kaumakapili Church, was built for Native Hawaiians at the corner of present day Smith and Beretania Streets on a lot granted by *aliʻi* Abner Paki and his wife Konia, parents of Bernice Pauahi Bishop. The construction of the church reinforced the work of the missionaries and accelerated the shift away from traditional Hawaiian practices that further altered the landscape and cultural character of the growing town. This shift is also evident in a map (see Figure 11) that lists Kaumakapili Church as "Smith's Church" after its first pastor, and illustrates the grid layout of streets with English language names such as King, Bethel, and Beretania. Also depicted is a Roman Catholic Church and the French consulate along the mauka side of Beretania Street.

The *Māhele ʻĀina* of 1848

By the mid-19th century, the Hawaiian Kingdom was an established center of commerce and trade in the Pacific, recognized internationally by the United States and other nations in the Pacific and Europe (Sai 2011). As Hawaiian political elite sought ways to modernize the burgeoning Kingdom, and as more Westerners settled in the Hawaiian Islands, major socioeconomic and political changes took place, including the formal adoption of a Hawaiian constitution by 1840, the change in governance from an absolute monarchy to a constitutional monarchy, and the shift towards a Euro-American model of private land ownership. This change in land governance was partially informed by ex-missionaries and Euro-American businessmen in the islands who were generally hesitant to enter business deals on leasehold lands that could be revoked from them at any time. *Mōʻī* (King) Kauikeaouli (Kamehameha III), through intense deliberations with his high-ranking chiefs and political advisors, separated and defined the ownership of all lands in the Kingdom (King n.d.). They decided that three classes of people each had one-third vested rights to the lands of Hawaiʻi: the *Mōʻī*, the *aliʻi* and *konohiki*, and the native tenants known as *hoaʻāina*. In 1846, King Kauikeaouli formed the Board of Commissioners to Quiet Land Titles (more commonly known as the Land Commission) to adopt guiding principles and procedures for dividing the lands, grant land titles, and act as a court of record to investigate and ultimately award or reject all claims brought before them (Bailey in Commissioner of Public Lands 1929). All land claims, whether by chiefs for an entire *ahupuaʻa* or *ʻili kūpono* (nearly independent *ʻili* land division within an *ahupuaʻa*, that paid tribute to the ruling chief and not to the chief of the *ahupuaʻa*), or by *hoaʻāina* for their house lots and gardens, had to be filed with the Land Commission within two years of the effective date of the Act (February 14, 1846) to be considered. This deadline was extended several times for chiefs and *konohiki*, but not for native tenants (Soehren 2008).

The *Mōʻī* and some 245 *aliʻi* spent nearly two years trying unsuccessfully to divide all the lands of Hawaiʻi amongst themselves before the matter was discussed in the Privy Council on December 18, 1847 (King n.d.; Kuykendall 1938). Once the *Mōʻī* and his *aliʻi* accepted the principles of the Privy Council, the *Māhele ʻĀina* (Land Division) was completed in just forty days (on March 7, 1848). The names of all of the *ahupuaʻa* and *ʻili kūpono* of the Hawaiian Islands, as well as the names of the chiefs who claimed them, were recorded in the *Buke Māhele* (*Māhele* Book) (Buke Māhele 1848; Soehren 2008). As this process unfolded, the *Mōʻī*, Kauikeaouli, received roughly one-third of the lands of Hawaiʻi, realizing in the process the importance of setting aside public lands that could be sold to raise money for the government and also purchased for fee simple title by his subjects. Accordingly, the day after the division when the name of the last chief was recorded in the *Buke Māhele*, the *Mōʻī* commuted about two-thirds of the lands awarded to him to the government (King n.d.). Unlike Kauikeaouli, the chiefs and *konohiki* were required to present their claims to the Land Commission to receive their Land Commission Awards (LCAw.). The chiefs who participated in the *Māhele* were also required to provide to the government commutations of a portion of their lands in order to receive a Royal Patent giving them title to their remaining lands. The lands surrendered to the government by the King and chiefs became known as "Government Land." The lands personally retained by the King became known as "Crown Land." Lastly, the lands received by the chiefs became known as "Konohiki Land" (Chinen 1958:vii; 1961:13). To expedite the work of the Land Commission, all lands awarded during the *Māhele* were identified by name only, with the understanding that the ancient boundaries would prevail until the lands could be formally surveyed.

Disposition of Kou at the time of Māhele

At the time of the 1848 *Māhele*, Honolulu Ahupuaʻa was itself not awarded to any particular *aliʻi* (Soehren 2008). Rather, the different *ʻili ʻāina* contained therein were divided and awarded to different *aliʻi* and *hoaʻāina*. A review

of claims made in the *Buke Māhele* (Buke Māhele 1848) did not associate any particular *ali‘i* to the land areas of Kīkīhale or Kapu‘ukolo, in which the project area is located. While no *ali‘i* award could be traced to the aforementioned lands, awards were made to several *hoa‘āina.* The details of these claims and awards are discussed in the following paragraphs.

Land Commission Awards in the Project Area

As the King and his *ali‘i* and *konohiki* made claims to large tracts of land via the *Māhele*, questions arose regarding the rights of native tenants. To resolve this matter, on August 6, 1850, the Kuleana Act (also known as the Enabling Act) was passed, clarifying the process by which native tenants could claim fee simple title to any portion of lands that they physically occupied, actively cultivated, or had improved (Garavoy 2005). The Kuleana Act also clarified access to *kuleana* parcels, which were typically landlocked, and addressed gathering rights within an *ahupua‘a*. Lands awarded through the *Kuleana* Act were and still are, referred to as *kuleana* awards or *kuleana* lands. The Land Commission oversaw the program and administered the *kuleana* as Land Commission Awards (Chinen 1958). Native tenants wishing to make a claim to their lands were required to register those lands, in writing, with the Land Commission, who then assigned a number to each claim (the Native Register). The claim number was used to track the claimant through the entire land claims process. The native tenants registering their *kuleana* were then required to have at least two individuals (typically neighbors) provide testimony to confirm their claim to the land. Testimonies in Hawaiian were recorded collectively in what is now referred to as the Native Testimony. Likewise, testimonies given in English were recorded in the Foreign Testimony. Once all required information was acquired by the Land Commission, they rendered a decision. Tenants who were successful in their efforts were issued a Land Commission Award (LCAw.). Finally, to relinquished any government interest in the property, the holder of a LCAw. obtained a Royal Patent Grant from the Minister of the Interior upon payment of the commutation fee.

The project area extends across portions of five LCAw, all of which are listed in Table 4 and shown in Figure 18. Information gathered from Foreign Testimony (F.T.) and Native Testimony (N.T.) were retrieved from the Office of Hawaiian Affairs Papakilo Database (https://www.papakilodatabase.com/).

Table 1. Land Commission Awards in the project area.

LCAw. No	*Awardee*	*Royal Patent No.*	*Acres*	*‘Ili Name*
3-69:1	Kaapuki for Keomailani	5709	0.12	Kīkīhale
22	G. Kawaina	7498	0.20	Kapu‘ukolo
28	Kaleimahu/Keaniani	5	0.44	Kīkīhale
66	Napahi	7332	0.35	Kapu‘ukolo
107	A. Manuel	3620 1/2	0.28	King Street

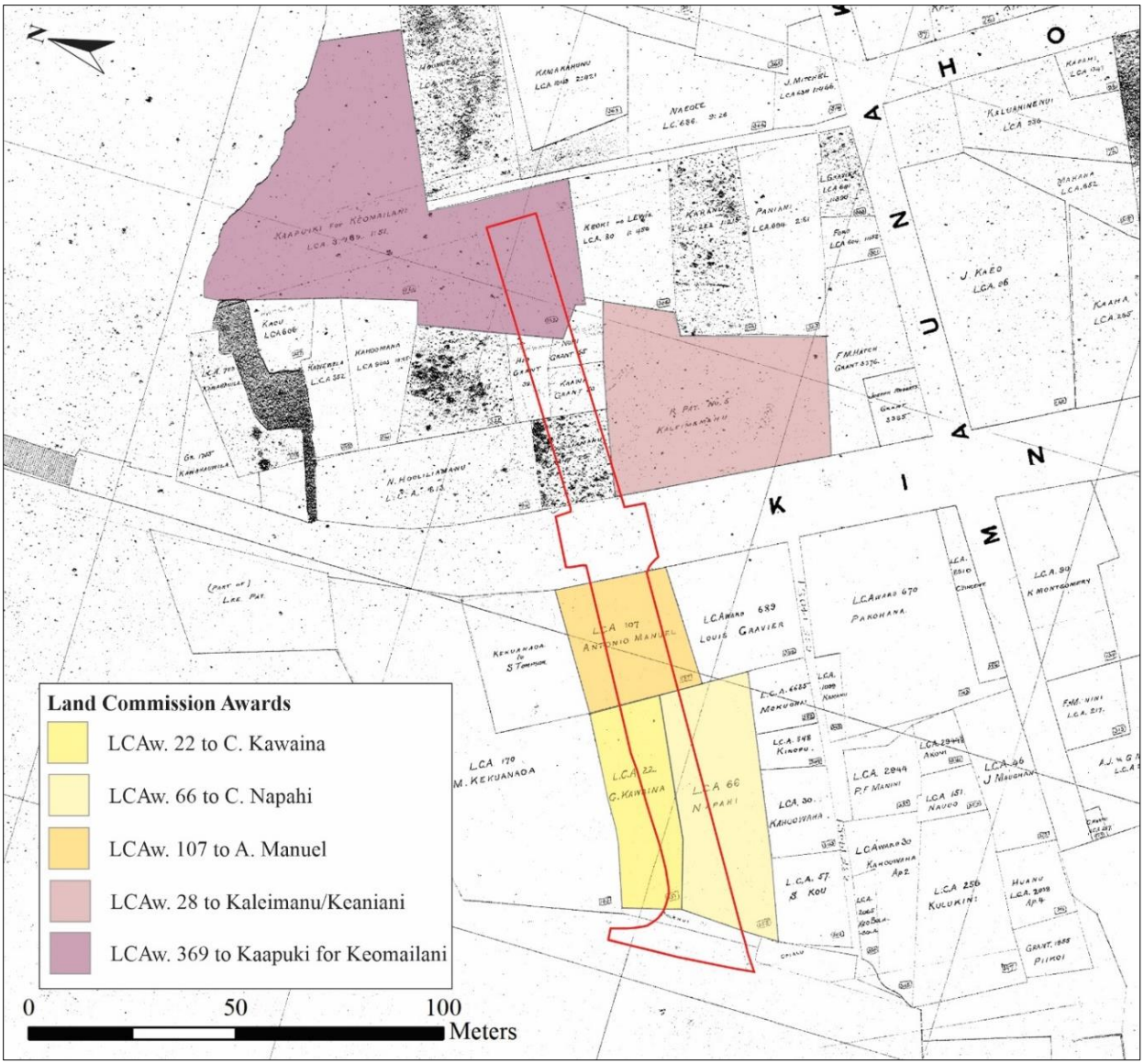

Figure 18. Portion of Hawai‘i Registered Map No. 1390 (Wall 1886) showing the location of Land Commission Awards in project area (outlined red).

The easternmost end of the project area, which is today part of the Kekaulike Mall, contains portions of three LCAws.: LCAw. 3 and LCAw. 69 which is depicted as LCAw. 3-69 to Kaapuiki for Keomailani and LCAw. 28 to Kaleimanu/Keaniani (see Figure 18). Regarding LCAw. 69, the claimant’s attorney testified on behalf of Kawailepolepo’s children, who were minors at the time and “under the care of the Missionaries until grown up” per their father’s final *kauoha* (dying charge). According to the attorney, Kawailepolepo ordered that “Kaapuiki and Kaniau should have the property in their care in the interim, and then deliver it up to them” (F.T. Vol.1:71), hence the claim being depicted as Kaapuiki for Keomailani (see Figure 18).

The same entry refers the reader to the testimony recorded for LCAw. 3 to Kaapuiki. Paahana testified for Kaapuiki, who was his brother, stating that he was familiar with those land since his childhood. Furthermore, Paahana added that Kamehameha gave the land in Kīkīhale to the “head man of all Honolulu” named Kuihelane and that they had lived there with their father and others “as servants of Kuihelane” and that the land was shared with another “head man under Kuihelane” named Hikiau (F.T. Vol. 1:12). Paahana continued, describing how Kuihelane died suddenly with no will in place. Following Kuihelani’s death, Paahana and Kaapuiki continued to live in the area and served Mahoi and later (mentioned in LCAw. 69 claim above). Paahana also reported that when Liholiho (Kamehameha II) moved to O‘ahu around 1820, “the chiefs and people filled up the place” so he and some of the other servants relocated

back to Pālama, "and left our yard with my grandmother & others of my relations. Kaapuiki was at this time a child and stayed with his grandmother, at which place he has always lived to the present time" (F.T. Vol. 1:12).

Concerning LCAw. 28 to Kaleimahu/Keaniani (see Figure 18), testimony provided by five individuals indicate that the land was originally awarded as a houselot to Keaniani who lived there with her husband Kaumaumakea. The parcel, which was enclosed by a wooden fence, originally extended "from the road [likely present-day N. King Street] down to the sea; and it even extended across the road [likely present-day N. Nimitz Highway]" (F.T. Vol. 1:29). The testimony goes on to state that the *ali'i* Kaikio'ewa, who was a cousin of Kamehameha I, took a portion of Keaniani's property and gave it to Mr. Louis Gravier as a way to "discharge a debt which Kaikioewa owed him for making sails" for the schooner *Thaddeus* (F.T. Vol, 1:29). Testimony provided by the *ali'i* Kekūanāo'a stated that the portion of Keaniani's land given to Mr. Gravier was a graveyard and that the land given to Mr. Gravier was executed without the permission of the King (F.T. Vol. 1: 32). While Mr. Gravier's property is not within the project area, it is located to the south of the project area.

Three *kuleana* comprise the western end of the project area: LCAw. 22 to G. Kauwaina (also spelled Kawaina), LCAw. 66 to Napahi, and LCAw. 107 to Antonio Manuel (see Figure 18). The foreign testimony for Kauwaina and Kapahi's claims were reported on the same day. Four separate individuals gave testimony. The first, a female named Umi, stated that she knew the claimant (unspecified) lived there since his childhood and that his father "occupied the place in the time of Kamehameha 1st" and that the fence around the property was a much later addition (F.T. Vol 1:30). The second witness, a man named Kane, knew the claimant (unspecified) lived there since at least the time Liholiho arrived on O'ahu (ca. 1820). The third witness, Kainahihi, testified that "a difficulty arose between Napahi and Kauwaina in consequence of some women in Kauwaina's yard bringing in some foreigners" and that Napahi built the fence between the two yards as a result. The fourth witness, Makaloa, recalled that when Kinau was still alive, Napahi had difficulties with his neighbors because "they were rum drinkers and he wished to drive them away" and thus erected a fence between the yards. Located immediately *mauka* of LCAw. 66 to Napahi and LCAw. 22 to G. Kauwaina, LCAw. 107 appears to have been one of four separate claims (LCAw. 107-110) made by Antonio Manuel for lands on O'ahu that he applied for continually between 1846 and 1850, at which time the claim appears to have been awarded but only after Manuel had sold it to Thompson (F.T. Vol 1:331). Other documentation reports the land claim in Honolulu to be a house lot, which he had received from Aniani (LCA Book 3:112-113).

Government Land Grants

In conjunction with the *Māhele*, the King authorized the issuance of Royal Patent Grants to applicants for tracts of land larger than those generally available through the Land Commission. The application process was clarified by the "Enabling Act," ratified on August 6, 1850. The Act allowed for portions of Government Lands, established during the *Māhele* of 1848, to be set aside and sold as grants, ranging in size from one to fifty acres at a cost of fifty cents per acre. The stated goal of the Act was to enable native tenants, many of whom were not awarded lands during the *Māhele*, to purchase lands on their own. Despite the stated goal of the land grant program, the Act enabled foreigners to disproportionately acquire large tracts of land. Unlike the Land Commission award claims where claimants stated their use of the land, land grant documents typically do not include information regarding their intended use. The Royal Patent deeds and survey notes do contain some limited information about geographical features, vegetation, and survey markers, but they generally do not include information about improvements to the land or land use. The project area extends across four land grants which are listed in Table 4 and shown in Figure 19.

Table 2. Land Grants in the project area.

Grant No.	*Awardee*	*Acres*	*Year Awarded*
25	Hooliliamanu	0.95	1847
39	Hio	0.64	1847
50	Kaawa	0.45	1847
55	Nuhi	0.45	1847

The land grants are situated in the eastern section of the project area (east of N. King Street). Regarding Grants 25, 39, 50, and 55, they were all secured by their respective grantees in 1847 for use as house lots. Grant 25 was sold to Hooliliamanu for 0.095 acres on the *mauka* side of King Street (see Figure 19). Immediately *mauka* of Grant 25, Grant 39 was sold to Hio and Polimanu. This narrow parcel shared a border with Grants 50 and 55 (see Figure 19). Grant 50 was awarded to Kaawa and Keakeaalani and subsequently deeded to Isaac Montgomery in 1848. Ten years

later, his heir, J. Montgomery, sold the lot and its buildings to Johnson Wilkinson (Hurst and Cleghorn 1991). Lastly, Grant 55 in Kīkīhale was granted to Nuhi and Kaaikulua and later mortgaged to Stephen Spencer in 1868 (Hurst and Cleghorn 1991). Thus, the current alignment of Kekaulike Street was built upon a minimum of eight former house lots, which were occupied by residents prior to, during, and after the *Māhele*. Figure 20 below shows the location of both LCAw. and Land Grants within the project area.

Figure 19. Portion of Hawai‘i Registered Map No. 1390 (Wall 1886) showing the location of Land Grants in project area (outlined red).

Figure 20. Portion of Hawai‘i Registered Map No. 1390 (Wall 1886) showing the location of Land Commission Awards and Land Grants in project area (outlined red).

Chinese Immigration and the Formation of Chinatown

By the mid-1800s, downtown Honolulu was known for its many “dance-houses, restaurants, taverns, and houses of assignation,” many of which were established earlier in the century to meet the needs of visiting whalers (Daws 2006:239). The western half of the project area was within the legal area for liquor sales at that time, extending “inland as far as King Street and westward from Nu‘uanu Street toward Nu‘uanu Stream.” The area was a “district of dilapidated native huts and tenements, tiny bar-rooms, coffee-shops, and run-down ‘boarding houses’ all turning to the harbor for their opportunities and income” (Daws 2006:239).

As the whaling and sandalwood industries dwindled over the decades, the plantation industry in the islands grew. In the 1850s, the first Chinese laborers arrived in Hawai‘i to work on commercial sugarcane fields. Many of these early laborers settled in Honolulu and aided in the development of what became known as Chinatown. In 1859, “for taxation, educational and juridical purposes,” the Kona District was officially renamed the “Honolulu District” since Honolulu was oftentimes the name that residents and foreigners used to refer to the district (King 1935:216-217). The district of Honolulu extended from Maunalua in the east to Moanalua in the west. Today, both names are used to refer to the district. Kona is used in reference to the traditional name of the *moku* (district), while Honolulu is used today in reference to the city, district, and county.

In his comprehensive volume titled *Sojourners and Settlers: Chinese Migrants in Hawaii*, Glick (1980:123) reports that “in 1866 over half the 370 ‘Chinese foreigners’ in Honolulu lived in the downtown section, which included the low-lying land immediately northwest of the present central business district.” Although this area was referred to

as the "Chinese quarter" and later Chinatown, he adds that "there was never a time when this section was exclusively Chinese or when all Chinese in Honolulu lived there" (Glick 1980:123). Thus, Glick (ibid.) suggests that Chinatown be considered "a place where the Chinese first concentrated and which continued to be the center of Chinese business and social life even after Chinese residences were dispersed throughout the city." A testament to the presence of non-Chinese inhabitants of the so-called Chinese quarter during that time appears on a map of Honolulu Harbor ca. 1875 (Figure 21). A cluster of "Native Houses" is depicted along Nuʻuanu Stream—the *makai* half of the current project area (Kekaulike Street portion) lies within this area populated by Hawaiians at that time. This historical map also illustrates the continued growth of the project area vicinity, including the development of formal roads, a fish market, police headquarters, and a post office to the south of the project area (see Figure 21). Despite the growing immigrant population and the shift from residential to commercial land use in the area, some Hawaiian residences remained in the immediate project area vicinity.

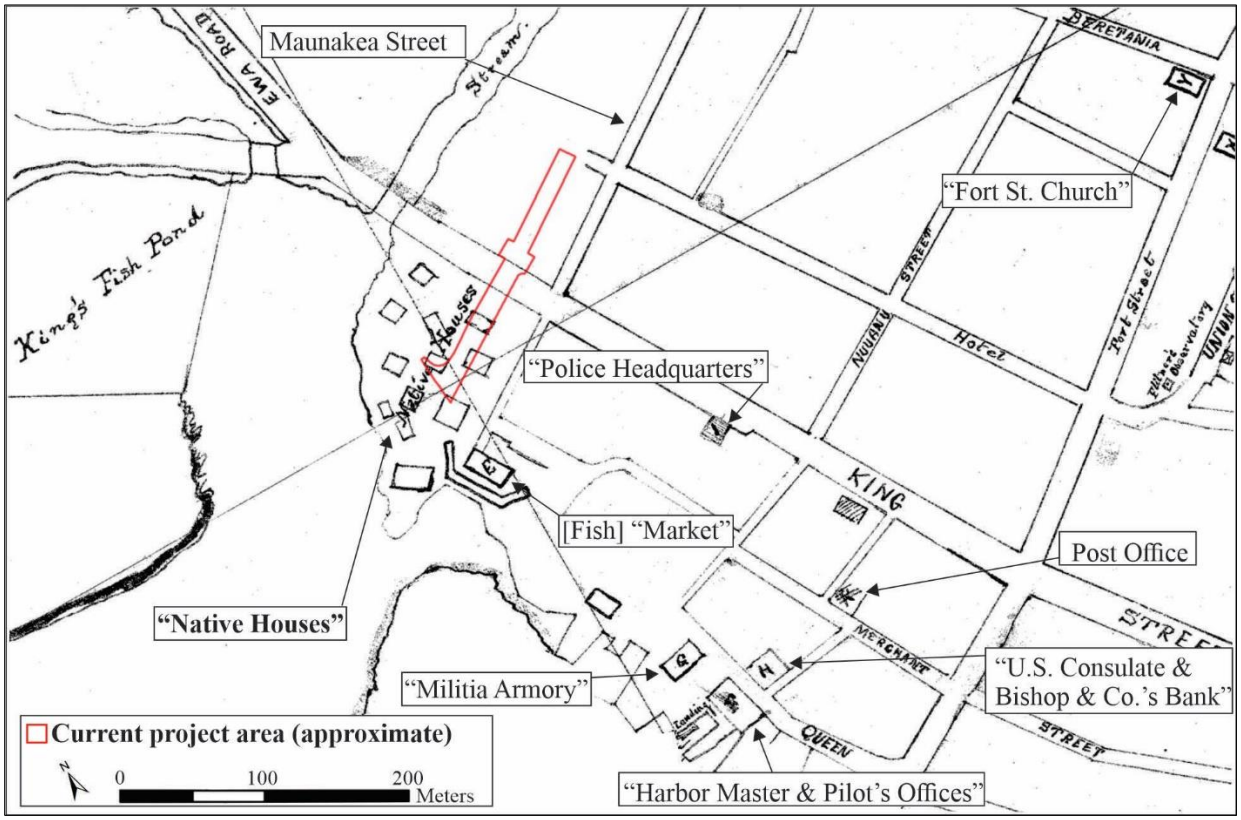

Figure 21. Portion of Hawaiʻi Reg. Map 430 (USS Pensacola 1875) of Honolulu Harbor annotated to show the location of the project area ca. 1875 partially within a cluster of "Native Houses."

Census records show that between 1853 and 1878, the number of Chinese immigrants residing in Honolulu steadily increased from 22 to 34 percent (Glick 1980). Those Chinese residents who lived outside of Chinatown oftentimes worked as household servants, while a smaller number living on "the outskirts of the town were engaged in farming or trade with the Hawaiians who were the main residents of these outlying sections" (Glick 1980:124). In 1878, the total population of Honolulu numbered 14,114, of which 1,299 were Chinese. Eighty-three percent of merchandise license-holders had their stores in the project area vicinity (Glick 1980:119).

In 1879, the Hawaiian Board of Missions assisted a group of Chinese Christians to establish the Fort Street Chinese Church (Glick 1980). By 1884, the project area vicinity was referred to as "the old Chinese quarter" in official census documents, with most of the Chinese residents living at their place of business (Glick 1980). However, roughly 10,700 people resided in the Chinese quarter, of whom 4,200 were native Hawaiians, 3,780 were Chinese, and the remaining 2,700 were Portuguese and "other Caucasian" (Glick 1980:125).

Between 1866 and 1875 the annual number of Chinese arrivals to the islands averaged 130 per year. This number drastically increased from 1876 to 1885, with the annual average for arrivals from China numbering up to 2,500 individuals (Glick 1980). These increases lasted until the mid-1880s, when "several thousand unrecruited Chinese men—some infected with smallpox—had arrived unexpectedly early in 1883" (Glick 1980:191). Subsequent arrivals from China were required

to pass through quarantine and in March of 1884, the Hawaiian Kingdom government issued the first of many regulations to restrict Chinese immigration. To offset immigration from China, in 1885, large numbers of Japanese contract laborers were brought in to work the sugar fields (Greer 1976).

Disaster, Disease, and the Rebuilding of Chinatown (1886-1900)

By 1886, the number of commercial establishments in Chinatown grew exponentially. Businesses lined Maunakea and King streets, with outbuildings and tenements tucked behind. Residents of Chinatown usually collocated at places of business, in offices, and other temporary lodgings scattered throughout the neighborhood (Greer 1976). At this time, the current project area did not exist as we know it today: Kekaulike Street was merely in the planning stages, as illustrated on two maps produced in March of 1886. The first of these maps show the Kīkīhale Block, which corresponds with the *mauka* portion of the project area (Figure 22). The other shows the Kapuʻukolo Block and the *makai* portion of the current project area (Figure 23).

On Sunday, April 18, 1886, a cooking fire ignited a house located on the corner of Hotel and Smith streets, eventually spreading to other buildings. Under the header "A Deluge of Fire: the greatest conflagration ever known in Honolulu—Chinatown Wiped Away," the *Daily Bulletin* (1886:2) reported that "[a]lthough not a breath of wind stirred, the inflammable nature of surrounding buildings invited the flames, and quicker than can be told the fire was leaping from roof to roof" (The Daily Bulletin 1886:2). Within an hour, the fire spread along Hotel Street near Maunakea and continued to consume everything in its path. Explosions rose out of warehouses, and as the fire gained strength, the only way to salvage Kaumakapili church was to create a firebreak by tearing down the small buildings on the north side of the church.

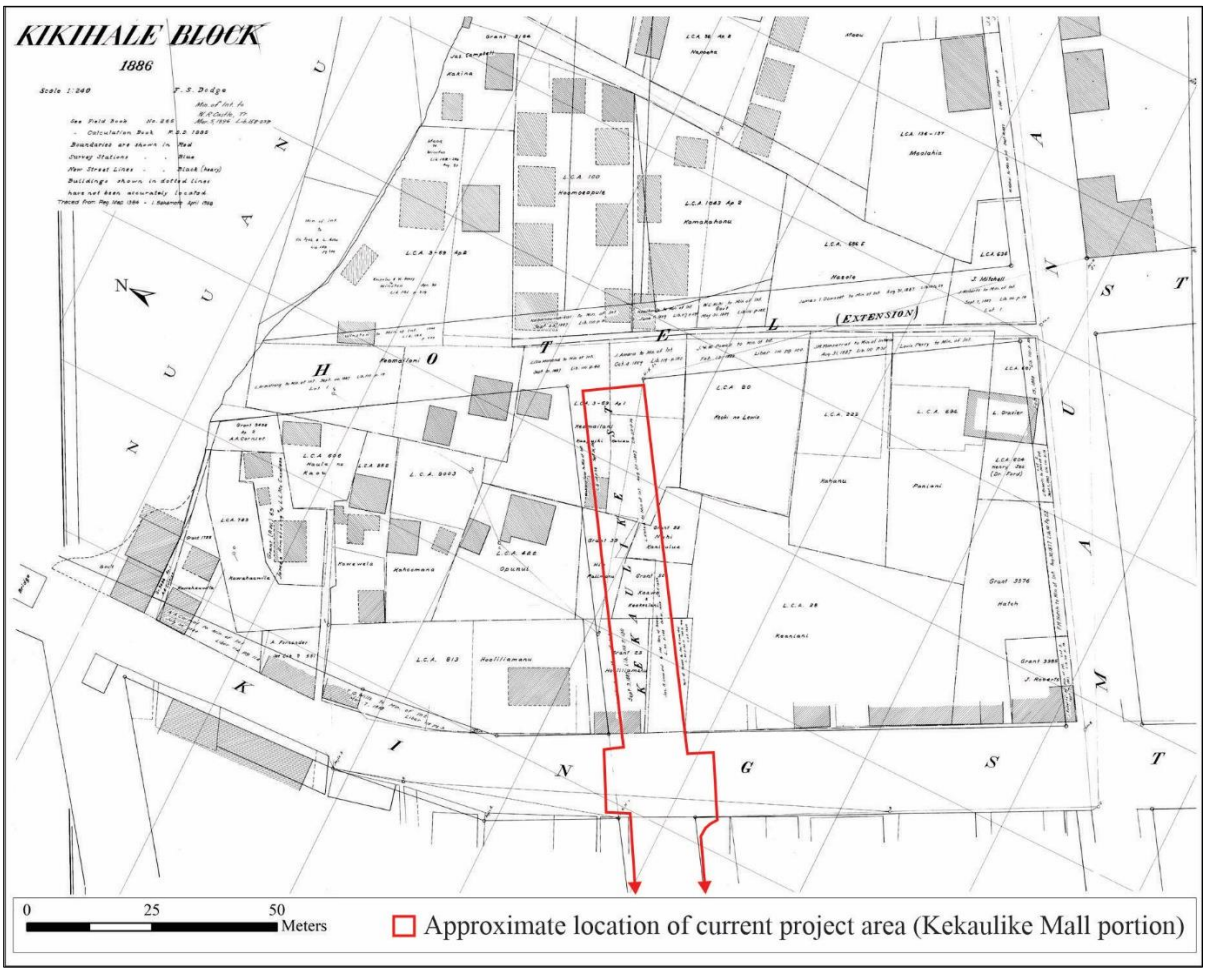

Figure 22. Portion of Hawaiʻi Reg. Map 1384 showing Kekaulike Mall portion of the project area within the planned footprint of Kekaulike Street in March 1886, before the fire.

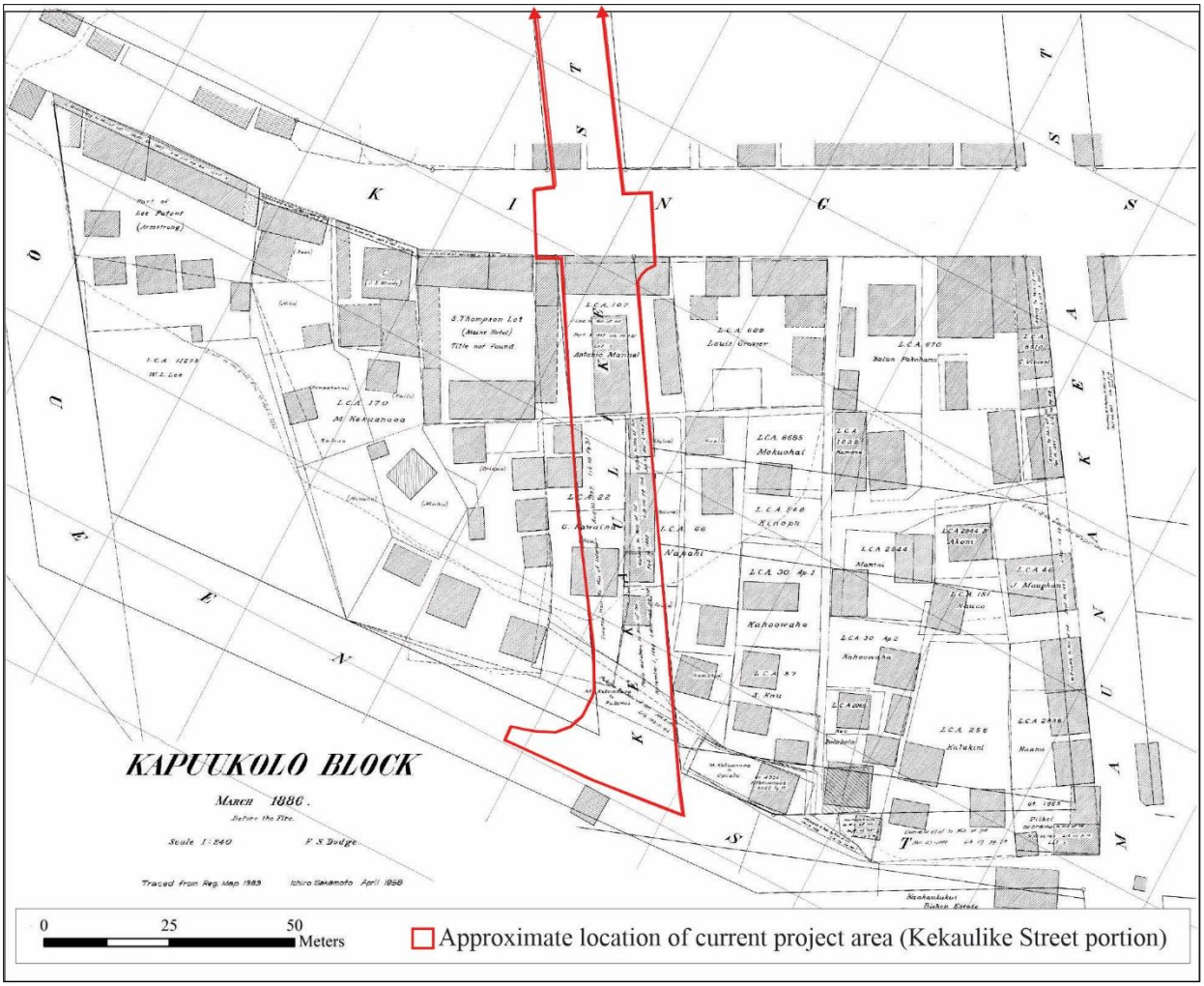

Figure 23. Portion of Hawai‘i Reg. Map 1383 showing Kekaulike Street portion of the project area within the planned footprint of Kekaulike Street in March 1886, before the fire.

In response to this disaster and the effort to save Kaumakapili, “His Majesty the King. . . gave orders forthwith to tear down the structures referred to, and the job was done. . . and the conflagration at this point was under control” (The Daily Bulletin 1886:2). After many hours of terror and brave attempts to quell the fire, the flames swept along both sides of King streets. Once the fire subsided, only two houses, closest to the river, “...were saved; and this morning stand, in grim isolation, on the corner of some sixty acres of a black waste of smoking debris.” As a result of the devastating fire, the *Daily Bulletin* (1886:2) reported, “The number of persons, made houseless by this terrible calamity, is variously stated from 5,000 to 8,000.”

The fire of April 1886 incinerated nearly eight square blocks overnight (Figure 24), including most of the current project area. Subsequently, rebuilding efforts, including sanitation and roadway improvements, immediately took place in Chinatown. The government issued strict guidelines for reconstruction, prohibiting the permanent repair or construction of wooden buildings while permitting “only stone, brick, iron or other fireproof material” (Greer 1976:46). On April 21, 1886, Chief Justice Judd was tasked with assembling a committee dedicated to road improvements within the burnt district. Among their recommendations was the creation of Kekaulike Street: “Opening a new street 50 feet wide from the proposed extension of Hotel St. to the proposed extension of Queen St., parallel with and 180 feet northwest of the new Maunakea St. line” (Greer 1976:47).

Although the fire destroyed nearly every building in Chinatown, some saw this as an opportunity to improve santiation and to rebuild sturdier, fireproof buildings. Such views are evidenced, for example, in an editorial titled “Rising from the Ashes” that was published in *The Hawaiian Gazette* on September 21,1886. Excerpts of the article with explicit reference to the project area is provided below:

> . . . From Maunakea street, on King street, as far west as the King street bridge, the burnt buildings have nearly all been replaced by neat frame buildings, mostly two stories in height, and outwardly present a fine appearance but inwardly the finish is of the most primitive description—which suits the Celestial inhabitant to a charm. All the buildings have the ungainly overhanging balcony which infringes on to the street on both sides—giving the roadway a narrow look. Aside from this, the buildings are a decided improvement on those destroyed by the late fire. . .
>
> . . . Taking in consideration all these improvements, completed and other portions well under way, it will readily be seen that Honolulu, since the great fire of April 18th, has made rapid strides in replacing the destruction of that memorable Sunday afternoon.
>
> It is not alone in the better class of buildings which now occupy the burnt district that the city is the gainer, but in a sanitary point of view the gain is incalculable, from the amount of filth and fever producing garbage consumed, and which the best efforts of the Board of Health failed to remove. (The Hawaiian Gazette 1886:8)

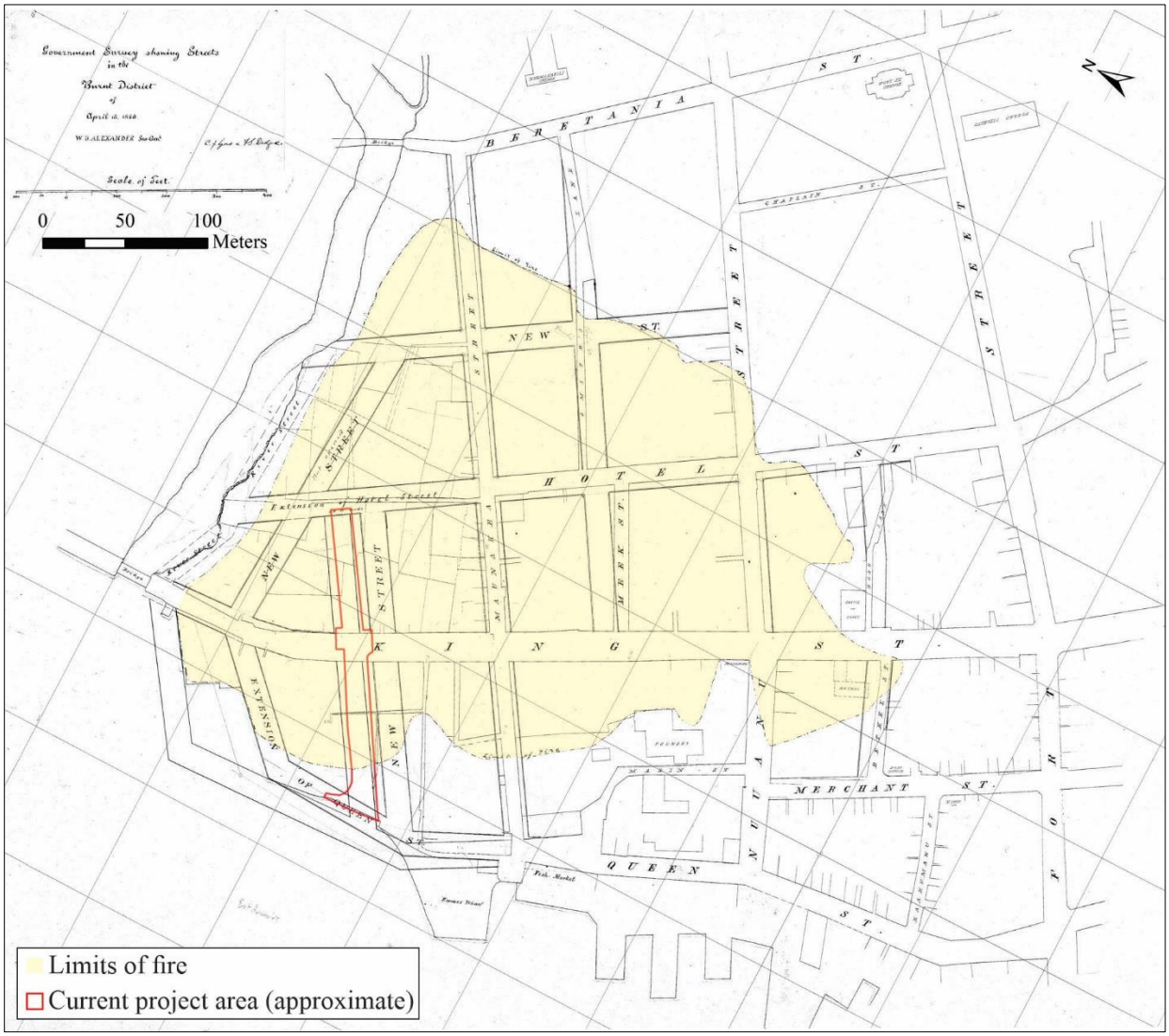

Figure 24. Government Survey Map of the burnt district (Lyons and Dodge 1886) annotated to show the approximate location of the project area relative to the extent of the April 19, 1886 fire damage.

Three years later, a second fire threatened to consume the newly rebuilt Chinatown on the night of January 26, 1889. This blaze began within the immediate project area vicinity in a building on the corner of Kekaulike and King streets (The Hawaiian Gazette 1889). An article titled "A Big Blaze: One Building Destroyed and Others Damaged" and published in *The Hawaiian Gazette* provides a detailed account of the fire and its aftermath. Despite the guidelines that were set after the fire of 1886, the building at the corner of Kekaulike and King was a two-story wooden construction and Kekaulike Street remained ungraded (The Hawaiian Gazette 1889). *The Hawaiian Gazette* (1889:7) article goes on to recount the challenges met by the firefighters in getting sufficient water to dampen the flames: "wooden buildings stood in every direction from the burning fabric" and other buildings on Kekaulike Street were soon in flames. The fire was believed to have been the result of a domestic dispute between a Hawaiian couple, who were arrested under suspicion of throwing a lit oil lamp at each other during a quarrel. An elderly Chinese man named Lohiau lost his life in the blaze due to smoke inhalation. The article concludes by mentioning a power outage, looting, and associated arrests, as well as downed telephone lines.

By the early 1890s, the growth of Honolulu spread across the south shore of O'ahu. During this time, the project area vicinity maintained some of its residential character. However, a shift to a more commercial district was clearly underway. Figure 25 shows the mixed residential and commercial development of the project area vicinity in 1891. At that time, the buildings that lined both sides of Kekaulike Street, *makai* of King Street, were primarily residential (dwellings coded as "DWG" in Figure 25), except for a jeweler and a furniture store at the northwest and southwest corners of King and Kekaulike streets (see Figure 25). The buildings located *mauka* of King Street were more commercial and included three retail stores and a bakery (general merchandise coded as "GENL MDSE" in Figure 25) and the dwellings were located further back from Kekaulike Street approaching Hotel Street.

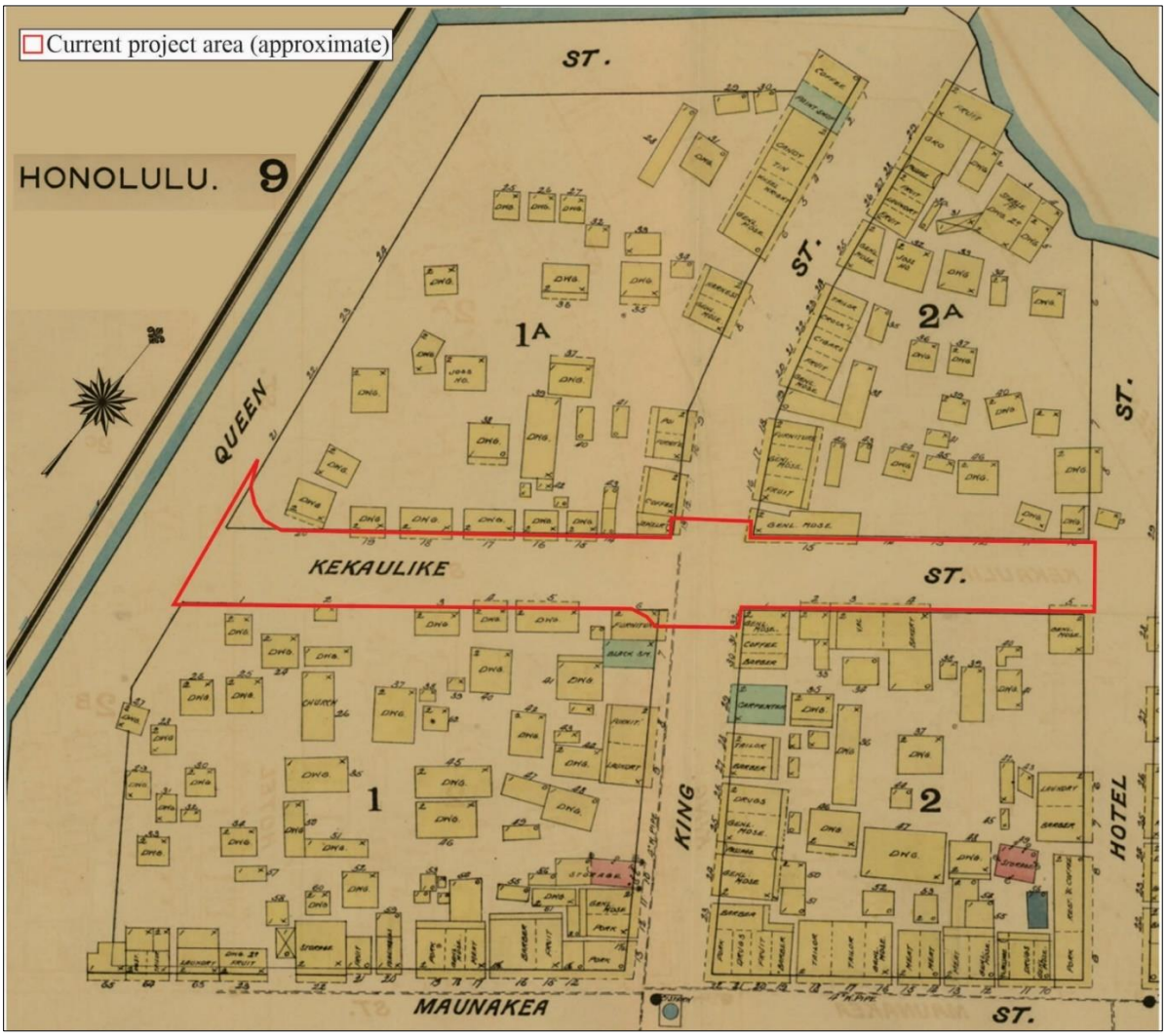

Figure 25. Portion of Dakin Fire Insurance Map showing the project area vicinity as it appeared in 1891.

Family stores were important social institutions and often functioned as banks and residences. Chinatown residents often lived at their places of business or in other temporary lodgings scattered throughout the neighborhood. In addition to stores, the neighborhood comprised of butchers, blacksmiths, barbers, food vendors, herbalists, and faith healers. Per Glick (1980:141), "Chinatown could provide the best substitutes for the physical care and spiritual assistance he [the Chinese migrant] would have received at home from family, clan, and village temple." Unfortunately, the increased density of occupation in the project area vicinity ushered in unsanitary conditions. On May 27, 1893, a reporter for *The Hawaiian Star* newspaper accompanied the Health Officer on his daily inspection of Chinatown, which resulted in an article titled "In Celestial Slums" with the byline "Cholera's Breeding Grounds and Fever's Spawning Beds—Vile Sights and Smells Abound" (The Hawaiian Star 1893:2). The first place they visited was the public washhouse where laundrymen did their daily work in heinous conditions. Per *The Hawaiian Star* (1893:2) article, "over sixty eight new cesspools. . . and hundreds of ventilator pipes" had been installed in the months leading up to their visit, but it simply was not enough. In particular, "decayed poi, the sewage from out-houses and the slops thrown out by inmates have made the places underneath some of the tenements simply unbearable" (The Hawaiian Star 1893:2). The reporter also mentions the immediate project area vicinity specifically as host to such "unbearable" tenement buildings as follows:

> Kekaulike street is another offshoot from King street and is environed by some of the broken down Chinese tenements, the yards of which smell to heaven. The microbes and bacteria could be caught floating around in the air, while the effluvia was loathsome. (The Hawaiian Star 1893:2)

Roughly between August and October of 1895, the overcrowding and unsanitary conditions of Honolulu Harbor and Nuʻuanu Stream area led to an outbreak of cholera. According to *The Friend* (1895:85), as of October 1, 1895, there had been 112 deaths from the water-borne disease, most of the cases occurred in the majority Hawaiian neighborhood of Iwilei. Of the 112 deaths that were reported, 88 of those who succumbed to cholera were Hawaiians. Seven deaths were of Chinese. Although the epicenter of the outbreak was located across Nuʻuanu Stream and beyond Chinatown, the Government and Board of Health imposed strict quarantine and clean up measures on the thirty blocks of Chinatown (Mohr 2005). These harsh measures sowed doubt and fear in the Chinese and Japanese communities in Chinatown regarding the effectiveness of government intervention and of Western medicine. These views proved to be detrimental when the Bubonic Plague was detected in Chinatown four years later (Mohr 2005).

In the aftermath of the cholera outbreak, the United Chinese Society built a Chinese hospital, and in March of 1897, the Wai Wah Yee Yuen officially opened in Pālama (Glick 1980). Steps were also taken to improve sanitation conditions near Nuʻuanu Stream and within Chinatown (Mohr 2005). The waterway was dredged and straightened; stone walls were built to reinforce the stream banks. To improve the sanitary conditions of the stream, the infilling and stabilization of the stream banks created land that allowed for more substantial structures to be built in place of the dilapidated tenements. These improvements and the then-newly constructed River Street are depicted on the 1899 Dakin Fire Insurance Map (Figure 26). In 1899, an outbreak of the bubonic plague struck Chinatown. The first three cases were identified on December 12, 1899, prompting Sanford Dole, President of the Provisional Government, to take drastic measures (Iwamoto 1967). Dole placed the Board of Health in charge and they promptly instituted restrictions on travel in and out of Honolulu, a strict quarantine for Chinatown (no one was allowed in or out), and an inter-island travel ban for Chinese and Japanese passengers entering the city of Honolulu (Mohr 2005). By this time, roughly 2,000 Chinese, 1,500 Japanese (primarily single men), about 1,000 Hawaiians, as well as Portuguese, Europeans, Polynesians, and Micronesians resided in Chinatown. Between 8,000 to 10,000 persons were quarantined together for the remainder of December (Mohr 2005).

While under quarantine, Chinatown residents were subjected to house searches/inspections and forced to disinfect their belongings and themselves at designated disinfection stations. On December 31, 1899, at the recommendations of the Sanitation Committee, the Board of Health set the first of many intentional fires to sanitize and disinfect buildings that had been host to the plague, concluding that the only way to eradicate the disease was with fire (Iwamoto 1967). An article published in *The Honolulu Advertiser* (1900) indicated that controlled burning of buildings on Kekaulike Street were scheduled for January 4, 1900 (Figure 27). During the controlled burns, individuals who contracted the disease were housed at a quarantine camp in Kakaʻako whilst their homes and belongings were destroyed. Individuals and families who were healthy were housed at the Kakaʻako Rifle Range and their belongings were stored at Kaumakapili Church (Mohr 2005). On January 20, 1900, a fire set near Nuʻuanu Avenue quickly began burning out of control. High winds sent embers to the roof of the Kaumakapili Church (Figure 28) and burned it to the ground (Iwamoto 1967:385). These winds scattered embers across the neighborhood, causing the fire to spread to several blocks and to the harbor (Figure 29). The fire effectively destroyed the entirety of Chinatown (Iwamoto 1967), including the current project area (Figure 30). The density of mostly wood-framed structures contributed to the conflagration, which resulted in the use of fire-proof masonry construction when Chinatown was later rebuilt.

Figure 26. Portion of Dakin Fire Insurance Map showing the project area vicinity as it appeared in 1899.

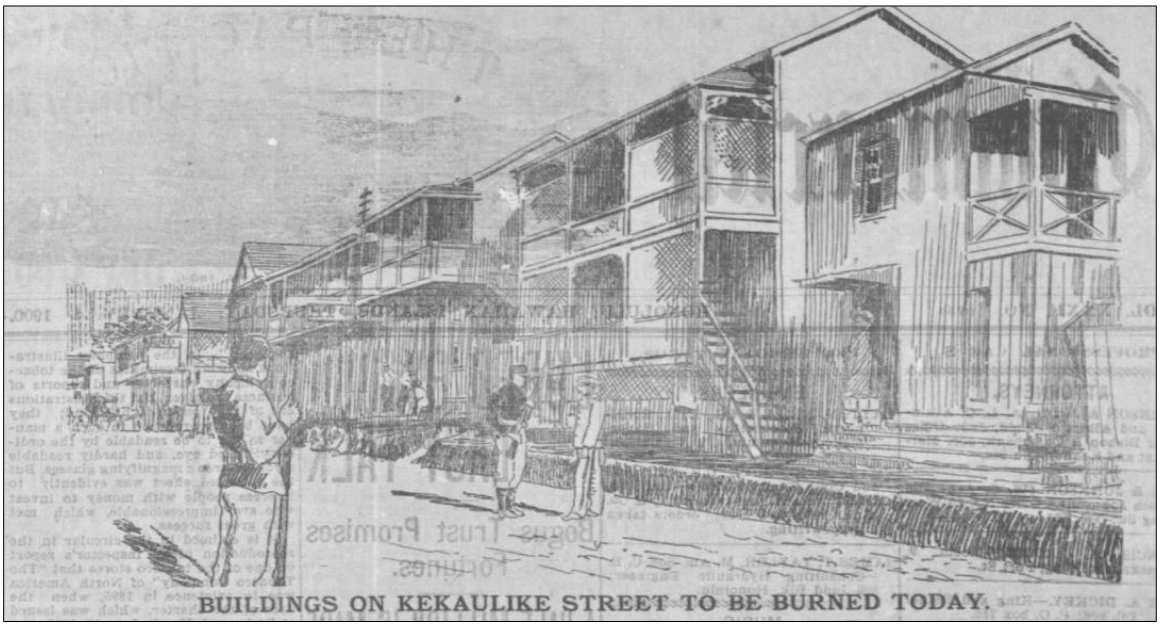

Figure 27. Sketch of Kekaulike Street buildings scheduled for burning on January 4, 1900 (The Honolulu Advertiser 1900:2).

Figure 28. Kaumakapili Church and the surrounding area after Chinatown fire of 1900, Brother Bertram Collection (www.ulukau.org).

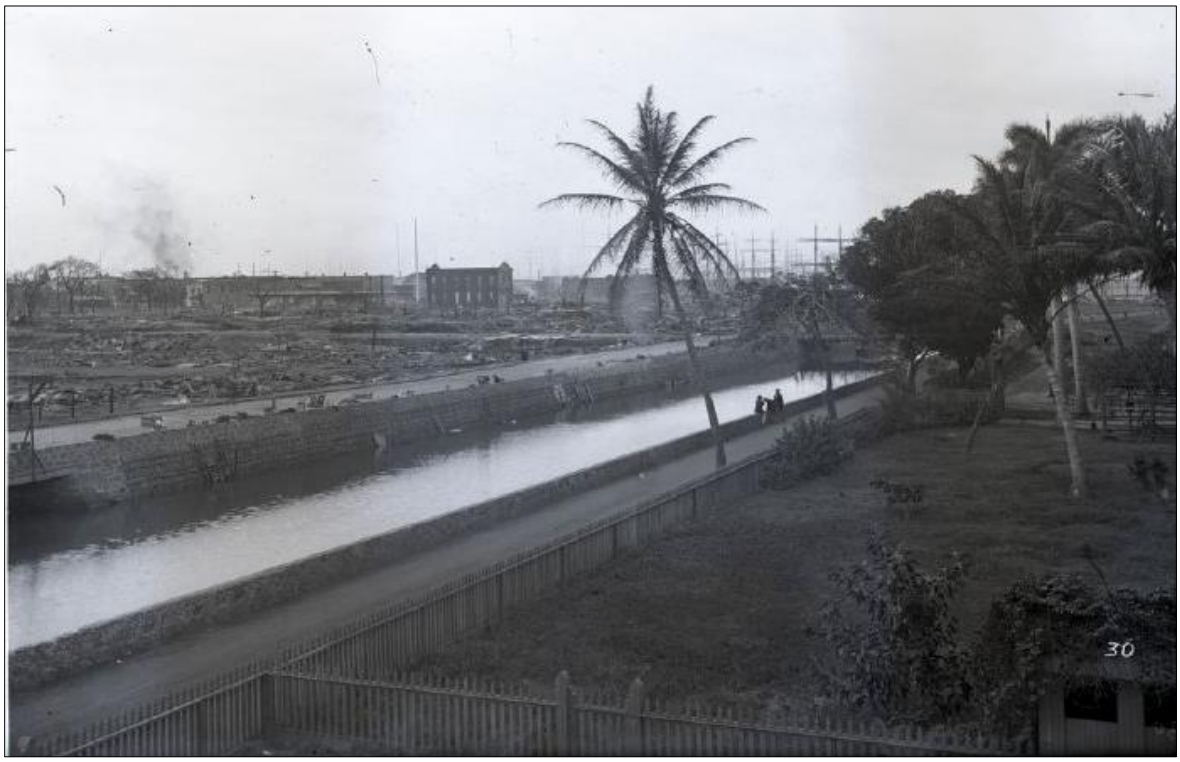

Figure 29. Chinatown plague fire with Nuʻuanu Stream and River Street in foreground and project area in the background, 1900, Brother Bertram Collection (www.ulukau.org).

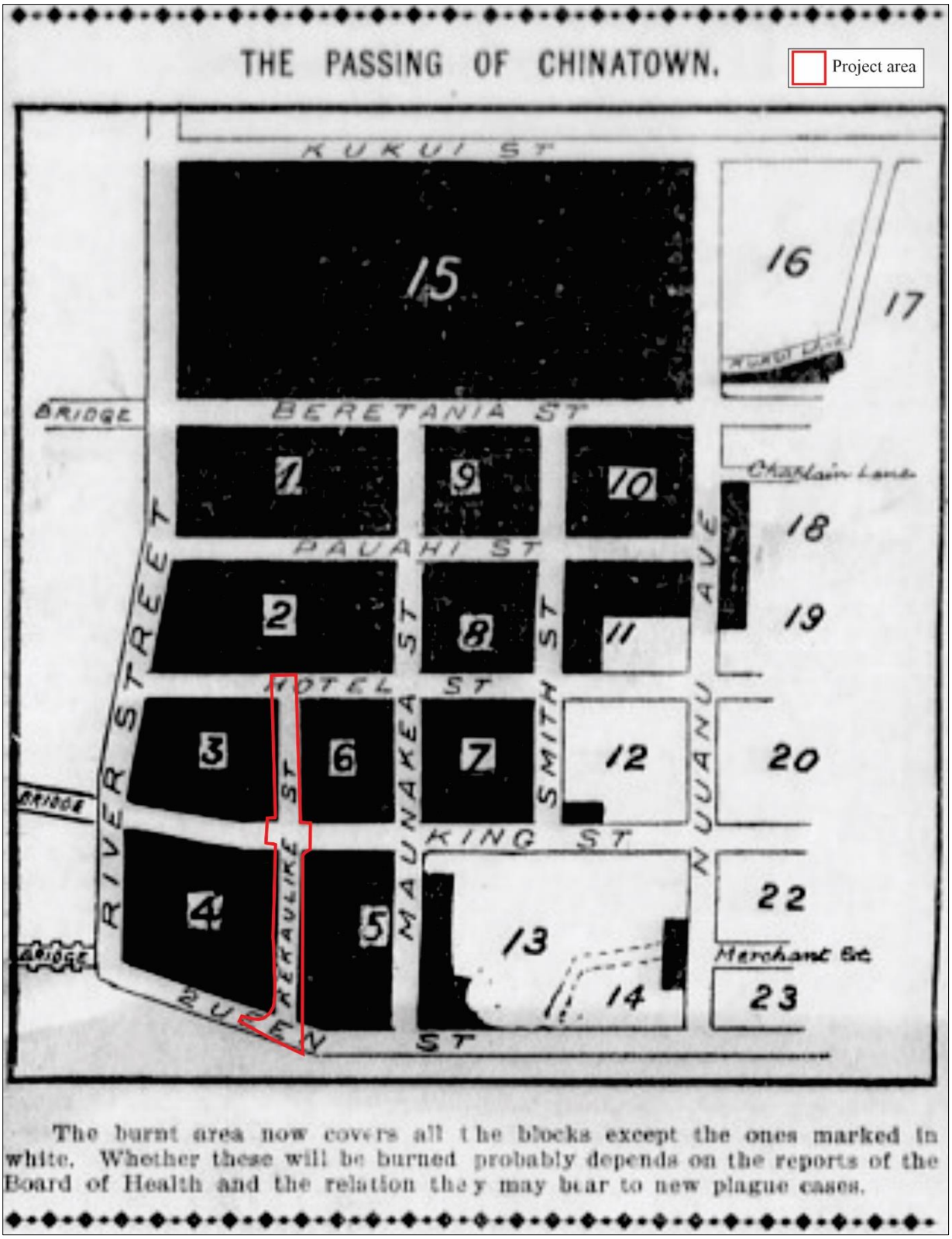

Figure 30. Map of the burnt city blocks (shaded black) after the Chinatown fire of 1900 overlaid with project area (The Hawaiian Gazette 1900:1).

The Chinatown fire of 1900 caused more than 4,300 men, women, and children to be homeless. They were housed temporarily across Honolulu, including the grounds of Kawaiahaʻo Church (The Hawaiian Star 1900). A compelling account of the blaze and valiant efforts to bring it under control was provided in the article that accompanied the map above, titled "Fire Sweeps Away Almost All Chinatown: Attempt to Burn Block Fifteen Clears Many Blocks" and published in the *Hawaiian Gazette* on January 23, 1900:

All Efforts Fail

> It was soon apparent that Block 2 [see Figure 30] could not be saved, nor could the progress of the fire be stopped there. Dynamite was time and time again placed in buildings along the corners of Kekaulike and King streets, but without avail. No power could withstand the fury of the flames. No street seemed too broad for them to leap; in some instances the heat caused a building front to burst into flames. The great difficulty throughout the entire day was the flying embers lighting on roofs of distant blocks. The combined efforts of bucket brigades failed to put out the fires caused in this manner. Buildings were cut down with axes, balconies torn away in a vain effort to put a barrier of space between the surging fire and the doomed structures on the harbor side. The fire raged fiercely from all sides; the firemen were half the time enveloped in dense clouds of smoke, the blaze blistering their hands and skin, but they stood nobly at their posts, retreating foot by foot. Volunteers passed buckets of water to the men at the hose nozzle, drenching them constantly, but even then the heat was so terrific that the steam arose in white clouds from the men.
>
> The engine stationed at the corner of Hotel and Maunakea streets retreated time and gain from a fresh onset of flames. It was a time when the citizens thought nothing of clothes or comfort, and eagerly assisted the firemen in carrying the muddy hose along the street.
>
> After Blocks 3 and 6 [see Figure 30] were in flames the scene down King street became almost indescribable. The entire district was covered with a heavy, pungent pall of smoke. The King street bridge was observed to be on fire and the heat drove guards across to the Palama side. Nothing could be done towards stopping the flames, and soon Blocks 4 and 5 [see Figure 30] were raging. The heavy wind blowing steadily from the Pali carried the flames to the wharves, where great piles of lumber, lately discharged from vessels, were consumed. (The Hawaiian Gazette 1900:1)

According to an article published December 22, 1900, in *The Honolulu Republican*, prior to the 1886 fire, the streets in Chinatown were only 36 feet wide. After the fire they were widened to 50 feet. However, by the time of the great fire of 1900, "the streets were entirely too narrow for the traffic on them. They were low, muddy and unclean" (The Honolulu Republican 1900:1). Nearly a year later, *The Honolulu Republican* (1900) reported on the missed opportunity for road improvements within the burnt district as they were insufficient for traffic therein. Apparently, King and Nuʻuanu streets were re-established to their pre-fire widths, much to the chagrin of the article's author. However, the only positive observation referred to the project area, as follows:

> One thing we have to be thankful for is that Kekaulike street is to be carried through. If one or two more of such streets should be cut through the city would be improved wonderfully. (The Honolulu Republican 1900:1)

The Rebirth(s) of Chinatown (1900-2020)

After the destruction of Chinatown in 1900, there was extensive redevelopment of the area with small retail shops, but also markets, hotels, factories, mills fronting the streets and tenement buildings, and smaller dwellings within the interior of the city blocks. *The Honolulu Advertiser* (1902:1) reported on the following scene observed the day after yet another fire in Chinatown burned during the morning of August 18, 1902, "all day yesterday there gathered about the blackened remnants of one of the fiercest blazes of recent days, men, women and children of all nationalities picking among the embers for what they could find." The blaze was reportedly started by a frightened cat that had knocked over a lit oil lamp inside a building between Kekaulike Street and River Road as witnessed by Ah Hui, "the butcher, whose store at the corner of Kekaulike and Hotel street was destroyed, the fourth establishment which the owner has lost" (The Honolulu Advertiser 1902:1). This fire destroyed many buildings in the immediate project area vicinity and left many people without shelter—Japanese residents sought refuge at the Japanese theatre while most Chinese residents found places to stay in Kakaʻako and across Nuʻuanu Stream in Pauoa and Liliha. Apparently, the area that succumbed to the flames was "part of the area which business men and insurance people generally desired to have protected after the big fire of January 20, 1900, by the extension of the fire limits" and associated fireproof building requirements; however, the legislation was appealed because the legislature argued that poor people would not be able to afford fire proof construction costs (The Honolulu Advertiser 1902:1). Per *The Honolulu Advertiser*

(1902:4), “every building erected has been of the flimsiest character, a perfect trap for fire, and the conflagration has made so many people homeless, is only a result of the failure of the Home Rule legislature to give such protection to the city.”

By 1906, buildings had been constructed along both sides of Kekaulike Streets and on the interior of the blocks to the south and north of the project area (Figure 31). In the following decades, development in Chinatown continued to shift toward commercial more than residential, and it was a thriving center of commerce through the 1920s. According to Johnson (1991:326), Honolulu in the twenties and thirties presented an exotic appearance to visitors with “densely packed areas threaded by narrow, twisted lanes” and “the old type of two-story structure, with shops below and living quarters above . . . with permanent awnings of wood or corrugated sheeting, projecting over the sidewalks” along most of the main streets.

As expressed by Riconda (1972), despite its name, Chinatown has always hosted residents of other ethnicities; for instance, in 1940 Japanese residents outnumbered Chinese residents and by 1970 Chinese residents comprised less than twenty percent of the Chinatowns population, while Filipino inhabitants comprised forty-seven percent of Chinatown residents. Thus, the historical and cultural significance of Chinatown extends beyond the Chinese community to include other ethnic groups, such as Japanese, Koreans, and Puerto Ricans, among others.

In 1973, the Chinatown Historic District (SIHP Site 09042/09986), a commercial and residential district, was listed in the National Register of Historic Places (NRHP) and the Hawai‘i Register of Historic Places (HRHP) on November 25, 1985. As previously mentioned, the roughly 15-square block (36-acre) district is bound by South Beretania Street, Nu‘uanu Stream, Honolulu Harbor, and Nu‘uanu Avenue. According to the NRHP nomination form prepared by Historian Deborah Riconda (1972:Section 8), this historic district “holds the longest continuous history of native and immigrant settlement and where the story of Hawaii’s common folk has been most compactly unfolded.” Most of the buildings date from 1901 through 1930 with “very few exceptions which escaped the January 20, 1900 fire” (Riconda 1972:Section 7). One such exception is the Irwin Block Building/Nippu Jiji (Hawaii Times) Building (928 Nu‘uanu Ave.), which was built in 1897. Another is the Yim Quon Building (75 N. King St.) located to the south of the project area a two-story commercial building that was listed in the HRHP on July 18, 2017 and built in 1886 and thus is likely the oldest building in the district (Solamillo 2017). Chinatown was included in the NRHP based on the following areas of significance: architecture, commerce, and social/humanitarian. Riconda sums up Chinatown Historic District, which has “maintained a sense of identity and community over the years,” as follows:

> Chinatown is the most extensive area in Honolulu reflecting a contiguous architectural and historic character which recalls a sense of time and place. Most of the buildings are of a “masonry façade, main street America,” vernacular, circa 1900-1920. Much of the value of the district can be attributed to the large number of buildings which resemble each other in age, scale, use, form, materials, and texture, creating a harmonious physical environment. (Riconda 1972:Section 7)

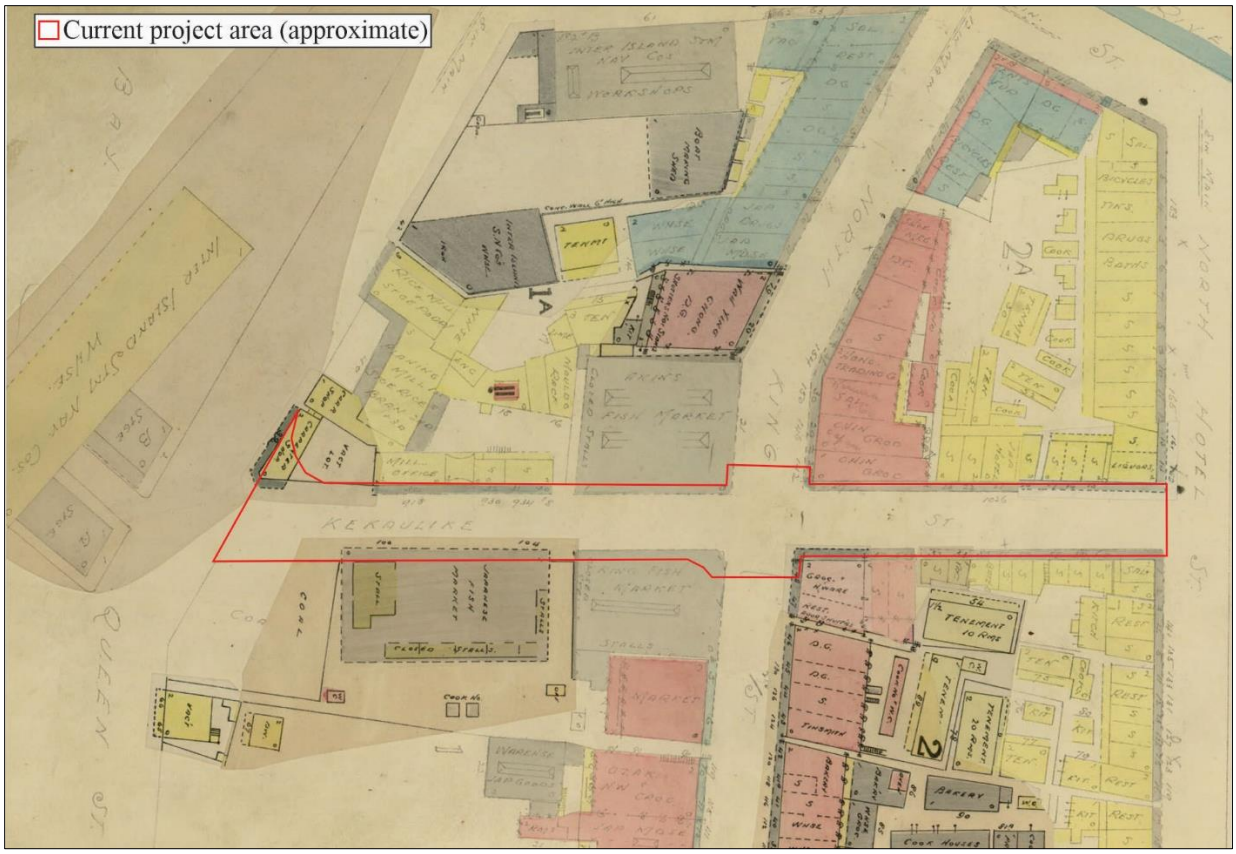

Figure 31. Portion of Dakin Fire Insurance Map showing the project area vicinity as it appeared in 1906.

In 1930, per Glick (1980:125), "although 3,000 more Chinese were living in Honolulu than in San Francisco," which boasted the largest Chinese population of any mainland U.S. city, "only 47 percent of the people living in Chinatown were Chinese and less than 5 percent of the 19,334 Chinese in Honolulu lived there." The remaining 53 percent of the Chinatown population included individuals of Japanese (27 percent), Hawaiian or part-Hawaiian (9 percent), Filipino (2-3 percent), Korean (2-3 percent), and Caucasian (2-3 percent) descent. This multiethnic community lived and ran businesses in Chinatown, which still served as the socio-cultural and commercial center of the Chinese residents of Honolulu. Over the ensuing decades a shift in the demography of Chinese immigrants from single men moving to Honolulu alone to stable Chinese families resulted in a sharp increase in the number of Chinese families and a decline in foreign-born Chinese males (Glick 1980).

Since the 1930s, Chinatown has undergone periods of decline and revival with the neighborhood once again thriving with new restaurants and retail and renewed interest in construction during the early 1990s. Another significant historic property in the vicinity of Chinatown is the Merchant Street Historic District (SIHP Site 9905), which comprises 4 square blocks along Merchant Street to the south of the project area between Nu'uanu Avenue and Fort Street. The twelve contributing buildings in the Merchant Street Historic District are remnants of the early financial and governmental part of Honolulu. Since the initial listing of the Merchant Street Historic District in the NRHP in 1973, the district has been expanded to include a few other contributing resources such as the Judd Building 843 Fort St. Mall. Additional nearby HRHP- and NRHP- listed historic properties include: The C. Brewer Building (SIHP Site 9938) located at 827 Fort Street, Our Lady of Peace Cathedral (SIHP Site 9066) also on Fort Street, the Hawai'i Theatre (SIHP Site 50-80-14-1332) on Bethel Street, and the concrete Nu'uanu Stream Bridge (built in 1932) on North Nimitz Highway spanning Nu'uanu Stream immediately north of the project area (determined eligible for listing in the NRHP by Mason Architects in July of 2008).

PRIOR STUDIES

The earliest study conducted in the vicinity of the current project area is Thomas G. Thrum's inventory of *heiau* in the early 1900s. Thrum (1906a) published this inventory in a series of entries in the *Hawaiian Almanac and Annual*, beginning with the 1907 edition. In a preliminary paper titled "Tales from the Temples," Thrum (1906b:49) stated the following:

> This much is being realized, and expressions of regret have been freely made, that we are at least fifty years too late in entering upon these investigations for a complete knowledge of the matter, for there are no natives now living that have more than hear-say information on the subject, not a little of which proves conflicting if not contradictory. . . While these difficulties may delay the result of our study of the subject, there is nevertheless much material of deep interest attending the search and listing of the temples of these islands that warrants a record thereof for reference and preservation.

Thrum (1906a) and his associates compiled information on over seventy *heiau* located throughout O'ahu, including *heiau* that were already dismantled prior to his data collection efforts in the early 1900s. In Honolulu, Thrum (1906b:56) wrote ". . . of all the temples that have come down to us in name by historian none now remain, and but one is left of those famed in tradition." He then discussed how Kamakau wrote of several *heiau*, including some that formerly overlooked Nu'uanu, stating that the locations of Pakaka Heiau and Kaheiki Heiau, both *heiau po'okanaka* believed to have existed in Honolulu, remained unknown.

A nine-month archaeological survey of O'ahu was conducted by J. Gilbert McAllister on behalf of the Bishop Museum in 1930 "to collect information regarding the archaeology of Oahu" (McAllister 1933:3). McAllister clearly indicated that his investigation was preliminary and should not be treated as a comprehensive account of all the cultural resources on O'ahu. In his study titled *Archaeology of Oahu*, he stated the following remarks:

> As the archaeological remains are those of the people found in Hawaii by the early voyagers, contact with Hawaiians was an indispensable part of the work. Not only are the sites being destroyed by the changes wrought by European culture, but with the introduction of exotic vegetation many sites have been completely hidden. Such remains would be as good as lost, were it not for the knowledge of them still treasured by old residents (*kamaaina*) of Oahu. With the passing of these old people most of this information will disappear.

McAllister assigned discrete site numbers to each of the archaeological sites he identified in his manuscript. Regarding the project area vicinity, McAllister (1933:80) provided excerpts from the writings of Hawaiian historians and foreign visitors in his site description of "Site 66 Honolulu," which began with the following statement that echoes Thrum (1906b):

> Information regarding former sites within the present limits of Honolulu must come entirely from literary sources. If there are any Hawaiians who remember having heard of old places, I have not been able to discover them.

It would be decades after McAllister's initial survey of O'ahu that new archaeological studies of the project area vicinity were produced. In the 1970s, the advent of Cultural Resource Management (CRM) in response to newly-established state and federal historic preservation laws and increased modern development mandated archaeologists to begin recording more discrete sites and perform test excavations throughout the Hawaiian Islands. The earliest formal CRM investigations in Chinatown were undertaken during the 1980s. Over the ensuing decades, many more studies took place and included the implementation of rigorous data recovery and mitigation efforts (Goodwin and Allen 2005; Goodwin et al. 1996, among others). Archaeological monitoring of demolition and construction projects, the preparation of associated archaeological monitoring plans also became standard (e.g. Collins et al. 2008; Dagher and Spear 2013; Davis et al. 2019; Perzinski and Hammatt 2002), and subsequent archaeological monitoring reports became standard (e.g. Mintmier et al. 2014; Russell et al. 2012). The locations of the most relevant prior archaeological studies conducted near the project area are depicted in Figure 32. The findings of the prior studies, including previously identified historic properties, are listed in Table 3 and summarized below.

Table 3. Previously recorded historic properties near the current project area.

SIHP Site No.	*Description*	*Function/Age*
50-80-14-2142	Disturbed artifacts within fill soils	Refuse deposit/Historic
50-80-14-2456	Harbor Court cultural deposits	Habitation/Precontact-Historic
50-80-14-4192	Human skeletal and organic remains	Burial/Precontact-Historic
50-80-14-4494	Marin Tower cultural deposits	Habitation and burial/ Precontact-Historic
50-80-14-4587	Pehu's pond	Possible fishpond/unknown
50-80-14-4588	Multicomponent site	Habitation and burial/ Precontact-Historic
50-80-14-4875	Kekaulike Diamond Head site	Habitation/Precontact-Historic
50-80-14-5496	800 Nuʻuanu cultural deposits	Habitation/Precontact-Historic
50-80-14-5368	Kūwili fishpond	Aquaculture/likely Precontact
50-80-14-5781	Human skeletal remains	Burial/Precontact
50-80-14-5942	Honolulu Rapid Transit & Land Company Trolley	Transportation/Historic
50-80-14-5966	Kawa fishpond	Unknown/likely Precontact
50-80-14-6371	Incomplete human skeletal remains	Burial/unknown
50-80-14-6691	Disturbed skeletal remains, structural remnants	Burial and habitation/Precontact-Historic
50-80-14-6772	Midden deposit with pits	Habitation/Precontact-Historic
50-80-14-6889	Human skeletal remains	Burial/possibly Precontact
50-80-14-6926	Stoneware bottle cache in storm drain	Refuse deposit/Historic
50-80-14-7427	Cultural deposit, structural remains and refuse pit, one human skeletal element	Habitation, Commercial/Historic
50-08-14-9986	Chinatown Historic District	Commercial-Residential/Historic

Figure 32. Approximate locations of prior archaeological studies near the project area.

In 1984, Archaeological Consultants of Hawaii, Inc. (ACH) conducted subsurface testing (Kennedy 1984) at the intersection of Fort Street and Hotel Street, located five blocks south of the current project area (see Figure 32). The stratigraphy consisted of fill above a coral substrate; no Historic or Precontact artifacts or features were encountered during their testing as a result of prior building construction and demolition within their project area.

The Bernice Pauahi Bishop Museum Department of Anthropology conducted test excavations (Cleghorn 1989) and an archival literature review (Charvet-Pond and Pantaleo 1989) prior to the initiation of construction of the Chinatown Gateway Plaza, located to the southeast of the current project area (see Figure 32). Cleghorn (1989) observed extensive prior subsurface disturbance and fill layers containing scattered historic artifacts. Charvet-Pond and Pantaleo (1989) reported that four buildings within the proposed Chinatown Gateway Plaza project area had construction dates of 1891, 1924, 1925, and 1933. They stated that, during the Precontact Period, their project area had likely been used for agriculture and habitation-related activities. Subsequently, Bishop Museum staff conducted archaeological monitoring and subsurface testing (Pantaleo 1989) for the Chinatown Gateway Plaza Project and reported the presence of disturbed Historic glass bottles and ceramic fragments within fill soils dating from the 1880s to the 1920s, which were interpreted as a Historic trash deposit (SIHP 50-80-14-2142).

In 1989 the Applied Research Group at the Bishop Museum (Landrum and Dixon 1992) conducted an emergency mitigation of inadvertently discovered human remains (SIHP 50-80-14-4192) found during ground disturbance associated with the River-Nimitz Redevelopment Project located to the northeast of the intersection of River Street and Nimitz Highway, one block north of the current project area (see Figure 32). The burial was found 2.5 meters below the surface in a water-saturated, anaerobic matrix. The burial consisted of well-preserved human remains, including skeletal and soft-tissue remains, as well as associated fragments of braided cordage with twinned, plaited, and matted *pandanus* fibers. The human remains were deposited at the interface of a gleyed, sandy clay layer with an overlying riverine and/or marine sand matrix, covered by landfill material which appeared to have been dredged from the adjacent harbor. Landrum and Dixon (1992:12) also collected the following material from the overburden matrix: animal bone, marine shell, lithics, Historic bottle glass fragments, ceramic sherds, metal, wood, other preserved plant remains, and soil samples. Samples were submitted for radiocarbon analysis, but no results were given in the report on the basis that the associated data and the results of their osteological analysis provided enough evidence to determine that the individual burial dated to the Precontact Period and was likely of Polynesian descent (Landrum and Dixon 1992). Landrum and Dixon (1992) also identified two Historic refuse pits and two secondarily deposited Historic refuse areas containing Historic debris dating between the 1840s and 1920s, as well as a brick, concrete, and coral foundation remnant with a 6-inch pipe, which was interpreted as sewage infrastructure dating to 1929.

Over a period of twelve years, the property known as Block 10 to the southwest of the intersection of Smith and Beretania streets was subject to a series of archaeological studies (Cleghorn et al. 2012; Hurst 1990; Kailihiwa and Cleghorn 2007; McIntosh et al. 2006; Pietrusewsky 2003; Putzi et al. 2001). In May of 1990, Bishop Museum conducted a historic literature review and documents search (Hurst 1990) for the Smith-Beretania parking structure redevelopment project at Block 10, located to the southeast of the current project area (see Figure 32). The next formal study, an AIS (McIntosh et al. 2006; Putzi et al. 2001) of the Smith-Beretania parking structure that was constructed in 1952, was conducted in August of 2001 by Pacific Legacy. During the AIS, six backhoe trenches exposed 68 subsurface features and dense artifactual and ecofactual evidence of occupation (SIHP 50-80-12-6772). Four different types of pits were identified: cooking pits, containing charcoal and sometimes fire cracked rock; charcoal-stained pits, containing charcoal staining, but no charcoal concentration; midden pits, containing food refuse such as animal bones and shells; and refuse pits, containing artifacts such as bottles, ceramics, metal and sometimes midden (McIntosh et al. 2006). Other features included building foundations; traditional Hawaiian artifacts included ‘*ulumaika*, a complete stone adze, poi pounder fragments, cowrie shell lures, and a complete conch shell trumpet.

In September of 2001, Pacific Legacy returned to Block 10 and conducted archaeological data recovery (ADR) investigations (Cleghorn et al. 2012) at Site -6772. The ADR investigations expanded upon the prior studies (Hurst 1990; McIntosh et al. 2006; Putzi et al. 2001). Nine block excavations averaging 4-square-meters placed adjacent to the previously recorded features exposed numerous features and artifacts primarily within a lens situated 40 to 80 centimeters below the ground surface. Traditional Hawaiian artifacts identified and collected, included *poi* pounders, adzes, and *‘ulumaika;* Historic artifacts included roughly 2,700 items (over 1,000 glass bottles and fragments), ceramics and just over 400 pounds of miscellaneous metal. The artifacts included daily use items such as pipes and beer bottles, as well as fancy ceramics and fine glassware. Two human burials were also documented: Burial 1 was situated within a burial pit, lying in a flexed position, and buried with three fishhooks; Burial 2 was buried in an extended position with associated marine shell, bird bone, metal, coral, and wood. Cleghorn et al. (2012) reported that little evidence of the fire of 1900 exists in the archaeological record, which suggests that a major clean-up followed the fire; and an even layer of soil observed across Site -6772 indicates the area was intentionally capped, perhaps to

control the plague outbreak. In addition, little direct evidence of Native Hawaiian occupation prior to European colonization was observed; although some habitation-related artifacts such as *poi* pounders were found, no traditional architectural features were observed.

In November 2001 and between January and April of 2002, Pacific Legacy returned to Block 10 to conduct archaeological monitoring (Kailihiwa and Cleghorn 2007) for the Smith-Beretania Parking Lot and Park project. Additional features of Site -6772 were exposed during the monitoring effort, including cultural deposits and human remains were identified. These consisted of six non-burial features: trash pits, midden pit, mortar basalt wall, and a basement; as well as 22 burials: six coffin burials, one possible wrapped burial, two flexed burials, and 13 of unknown type, which included isolated skeletal elements. In many cases artifacts were found associated with the burials, to include a pocket watch, beads, and metal chain with a pendant. Subsequent osteological analysis conducted by Pietrusewsky (2003:i) determined the burials represented a minimum of 21 individuals: two children, three young adults, and 16 adults, and that the majority of the remains had features "consistent with Hawaiian/Polynesian or Polynesian/Asian ancestry." Pietrusewsky (2003:8) opined that the age and sex distribution across a concentration of 13 burials (6 adult males, 6 adult females, and one child) was consistent with Pacific Legacy's interpretation of a possible family cemetery within a portion of their project area. The skeletal remains were recovered during the monitoring effort and later reburied on-site.

Over the course of a decade, the former Kaʻahumanu Parking Structure property located on Queen Street between Bethel Street and Fort Street Mall and four blocks to the south of the current project area (see Figure 32) within the Merchant Street Historic District, was subject to various studies prior to the construction of Harbor Court Tower (Hurst and Allen 1992; Lebo 1997, 2002). In 1991, Bishop Museum staff conducted the first of these studies, an archaeological inventory survey (AIS) and archaeological monitoring (Hurst and Allen 1992; see Figure 32). Hurst and Allen (1992) identified Precontact and Historic cultural deposits and building foundations, which were assigned SIHP 50-80-14-2456 (Site 2456).

Shortly thereafter, PHRI conducted an AIS of the then-proposed Nuʻuanu Court Project property (Dunn and Rosendahl 1993) located immediately to the north of the Hurst and Allen (1992) project area, on Nimitz Highway between Bethel Street and Nuʻuanu Avenue and to the south of the current project area (see Figure 32). The Dunn and Rosendahl (1993) AIS resulted in the identification of additional Precontact and Historic features and artifacts of Site 2456. The additional artifacts and features included marine shell midden, faunal remains, postholes, pit features, basalt flakes, modified marine shell and bone, as well as medal, ceramic, and glass fragments.

Between October 1991 and January 1992, PHRI returned to the Harbor Court property (see Figure 32) and conducted data recovery for Site 2456 (Lebo 1997), which resulted in the expansion of the multicomponent site to include 35 additional features, including traditional Hawaiian postholes, artifact concentrations, and a fire pit; and Historic structural elements (foundations, post molds, and coral blocks) and a bottle cache. Some modified glass items exhibited edge alterations and were interpreted as possibly modified using traditional Hawaiian methods. PHRI completed a data recovery report (Lebo 2002) based on the data recovered at the Harbor Court property in 1991 and 1992, which reported additional Precontact and Historic features and artifacts of Site 2456 and radiocarbon-based dates for the occupation of the site as beginning between A.D. 1000 and 1200.

In 1992, International Archaeological Research Institute, Inc. (IARII) conducted an AIS, data recovery, and archaeological monitoring (Goodwin et al. 1996; Goodwin et al. 1995) in support of the construction of the Marin Tower, on the city block bounded by Maunakea and Smith streets, North King, and Nimitz Highway, located to the south of the project area (see Figure 32). Between 1810 and 1860, the property was the former residence of the Marin family. Thus, most of the Historic features and artifacts encountered were associated with the Marin's use of the property, including 28 human burials (some with coffins and some without). However, Precontact fire pits, midden, and post molds were also revealed during data recovery. The entire property was designated as SIHP 50-80-14-4494, and the burials were interpreted as representing the Marin family and their household staff.

In 1992, Aki Sinoto Consulting prepared a historical literature review (Hurst and Pantaleo 1992) for the then-proposed Liliha Civic Center at the northwest corner of North King Street and Iwilei Road, located to the north of Nuʻuanu Stream and the current project area (see Figure 32). Then in 1995, IARII conducted archival research (Tomonari-Tuggle 1995) of a parking lot immediately to the south of the Hurst and Pantaleo (1992) study area and to the north of the current project area (see Figure 32). Per Tomonari-Tuggle (1995:1), "prior to Dillinghman's major dredging and filling operations, the parcel was situated in the shallow waters at the mouth of Nuʻuanu Stream" and includes portions of Kūwili (SIHP 50-80-14-5368) and Kawa fishponds (SIHP 50-80-14-5966). IARII recommended

an AIS with a focus on collection of sediment cores to better understand the fishpond deposits. Subsequently, Scientific Consultant Services conducted an AIS with subsurface testing (McGerty et al. 1997) of the then-proposed Liliha Civic Center site (see Figure 32). The testing resulted in the identification of soil layers interpreted as the former Kūwili fishpond (Site 5368). Based on results of radiocarbon dating, McGerty et al. (1997) reported that the pond may have been constructed by A.D. 1100. Athens and Ward (1997) conducted a paleoenvironmental study of sediment cores from Kūwili fishpond and determined it was likely constructed between ad 1400 and 1650; their study was published as Appendix A of the McGerty et al. (1997) report. Most recently, in 2008, CSH conducted data recovery of Site - 5368 (Hammatt et al. 2008) within the same project area for the Iwilei Senior Housing project. Testing of sediment cores resulted in the earliest deposits in Kūwili fishpond being dated to ad 1100, which is more consistent with the dates that resulted from the earlier McGerty et al. (1997) study than the Athens and Ward (1997) study.

In 1995, SCS conducted background research and a field inspection (McGerty et al. 1995) for the then-proposed Chinatown Community Service Center project on Hotel Street between Maunakea and Smith streets, located two blocks south of the current project area (see Figure 32). McGerty et al. (1995:18) concluded that "those portions of the project area not impacted by basement construction have high potential to contain significant archaeological deposits" and they recommended an AIS be conducted in said areas.

In 1997, CSH conducted archeological testing (Heidel and Hammatt 1997) of a 1,700-sq-ft parcel at the southwest corner of Maunakea and North Hotel streets, located one block south of the project area (see Figure 32). No cultural material or subsurface features were recorded in the four test trenches they excavated, except for a basement filled with sediment and modern debris to which no occupation date or site designation was assigned.

In 1997, Bishop Museum staff conducted archaeological data recovery (Lebo and McGuirt 2000) of SIHP 50-80-14-5496 at 800 Nuʻuanu Avenue (near Marin Street), located to the south of the current project area (see Figure 32). Site 5496 had been identified during an AIS conducted by Bishop Museum staff (Lebo and McGuirt 1997). Lebo and McGuirt (1997) identified seven features and eight structures during backhoe trenching beneath an extant parking lot on the southeast portion of the property. The subsequent data recovery focused on the deposits located within the northeast portion of their project area and included backhoe trenching and manual block excavation, Lebo and McGuirt (2000) identified three cultural zones to represent temporal periods and cultural activities. Cultural Zone 1 (1810-1860s) was characterized by both habitation and commercial-related activities to include traditional Hawaiian artifacts, such as retouched flakes, and imported colonial artifacts, such as buttons, Chinese and English ceramics, and kaolin tobacco pipe fragments; features included coral block walls, firepits, and tamped earthen floors. Cultural Zone 2 (1860s-1890s) is characterized by a series of wooden framed businesses on the periphery of the lot and privies and storage facilities on the interior, and a loss of traditional Hawaiian activities at the site. Cultural Zone 3 (1890s-present) is defined by the construction of brick and cement buildings and their continued use over time. Lebo and McGuirt (2000) concluded that traditional Hawaiian activities continued after the larger commercial buildings were in use around the mid-1800s and that the dynamic and multidirectional culture change exhibited in Site 5496 included Hawaiian, European, American, and Chinese influences.

Between November of 1999 and July of 2000, Archaeological Consultants of the Pacific, Inc. conducted archaeological monitoring (Elmore and Kennedy 2001) for miscellaneous sidewalk improvements on both sides of King Street, between River Street and Bethel Street; a portion of their project area coincides with the eastern boundary of the current project area (see Figure 32). Elmore and Kennedy (2001) identified an in situ human burial (SIHP 50-80-14-5781) in a trench, from 90 to 110 centimeters beneath the surface of the *mauka* lane of King Street, located between Maunakea Street and Smith Street—one block south of the project area. Based on the burial's flexed position and lack of Historic artifacts, the burial was assessed as likely of Native Hawaiian and of Precontact temporal origin. The remains were recovered for relocation and reburial. Artifacts recovered from a backdirt pile included glass and ceramic fragments, a shark tooth, possible drilled shell fragments, a possible shark tooth tool, and a single fishhook; however, none of the artifacts could be directly associated with the burial.

In 2001, CSH conducted an AIS (McDermott and Mann 2001) for the Nimitz Highway Water System improvements project between Awa Street (in Iwilei) and Queen Street, located to the west of the current project area (see Figure 32). The archaeological fieldwork comprised pedestrian survey of their entire project area and subsurface testing focused primarily on the investigation of Kawa Fishpond, formerly located within the northern portion of their project area (SIHP 50-80-14-5966). CSH conducted backhoe testing and extracted sediment cores in the area corresponding to the former fishpond and tested the fishpond sediments found beneath Historic fill layers. Inversions in the dates produced by radiocarbon testing resulted in a lack of a clear chromoly for the construction and use of the fishpond; however, McDermott and Mann (2001:65) reported that Kawa fishpond appears to have been accumulating

sediment since approximately ad 1150-1350," and recommended further sample collection of sediments from Kawa Fishpond and the lagoonal deposit beneath it. To that end, in 2003, CSH prepared a data recovery plan (DRP) for the Nimitz Highway Water System Improvements project (O'Hare et al. 2003). However, to date, no report appears to document further data recovery efforts in their project area.

Between August 2001 and June 2002, CSH performed archaeological monitoring (Mann and Hammatt 2002) of the installation of new drain lines, electrical conduit, and electrical boxes for the King Street Rehabilitation project within two sections of King Street between Dillingham Boulevard and South Street, a portion of which terminates at the intersection of North King and River streets, one block north of the current project area (see Figure 32). Although CSH recovered a previously disturbed incomplete human burial (SIHP 50-80-14-6371) at 63 centimeters below the road surface, near the intersection of South King and Punchbowl streets and identified a pit feature containing butchered animal bones near the intersection of South King and Richards streets, no historic properties or artifacts were encountered during the monitoring effort near the current project area.

In 2002, Garcia and Associates (GANDA) conducted archaeological monitoring (West et al. 2002) for the installation of water mains along North King Street between Liliha Street and River Street to the north of the current project area (see Figure 32). As a result of their monitoring effort, GANDA identified portions of a previously recorded historic property and associated artifacts of the Honolulu Rapid Transit & Land Company Trolley (SIHP 50-80-14-5942) across their linear project area. Trolley system remnants included railroad ties, metal hardware, and brick construction atop fill material; associated artifacts included glass jars and bottles, faunal remains, marine shell, wood, charcoal, ceramics, and leather shoes found within the fill material.

In 2002, SCS prepared an assessment of archaeological and cultural resources (Davis and McGerty 2002) as part of the Environmental Impact Statement for the then-proposed Bus Rapid Transit (BRT) Primary Corridor connecting Kapolei with Waikīkī and Mānoa, a section of which crossed over Nuʻuanu Stream and the current project area via Hotel Street (see Figure 32). Based on their background research, SCS assessed the Chinatown subsection of the In-Town Route section of the BRT corridor, which crosses the current project area, to be of high archaeological/historical sensitivity and recommended archaeological monitoring of all ground disturbance therein.

In 2005, Pacific Legacy conducted an AIS (McIntosh and Cleghorn 2005) at the corner of Nuʻuanu Avenue and Pauahi Street, located to the southeast of the project area (see Figure 32). As a result, McIntosh and Cleghorn (2005) identified a multi-component historic property (SIHP 50-80-14-6691). Site 6691 comprises the incomplete remains of two disturbed human burials within two Historic trash pits; the charred remains of a structure destroyed in the 1900 Chinatown fire; and structural remnants of a Historic building that partially collapsed in 2001. McIntosh and Cleghorn (2005) concluded the burials were likely Precontact in origin and had been previously disturbed and incorporated into the trash pits during the early 1900s.

Between September 2006 and June 2007, CSH performed archaeological monitoring (Groza and Hammatt 2008) of sidewalk reconstruction, road resurfacing, the installation of concrete bus pads, curb ramps, and traffic signal systems, and improvements to utility boxes and drainage systems for the Rehabilitation of Streets project within a 1,800-meter long section of Beretania Street between North King and Alapaʻi Street, located to the north and east of the current project area (see Figure 32). No historic properties or cultural deposits were identified as a result of the archaeological monitoring effort. Groza and Hammatt (2008) reported that the majority of the soils observed beneath the road surface and sidewalks comprised fill soils, which indicates significant prior disturbance throughout their project area.

In 2007, Scientific Consulting Services, Inc. (SCS) reported the results of archaeological monitoring (Dagher and Spear 2007) for the Pacific Gateway Center renovation project, located along the *makai* side of North King Street between Maunakea and Smith streets and one block south of the current project area (see Figure 32). As a result of the monitoring effort, which followed an approved AMP (Drennan et al. 2006), SCS identified two historic properties. The first, human skeletal remains representing an adult male and an adult female of Polynesian ancestry (SIHP 50-80-14-6889); and a foundation wall with concrete in the construction and a cache of Chinese brown stoneware liquor bottles in a collapsed storm drain comprised the second site (SIHP 50-80-14-6926). Between June of 2008 and October of 2011 Pacific Consulting Services, Inc. (PCSI) conducted further archaeological monitoring (Russell et al. 2012) of the Pacific Gateway Center renovation project intermittently per an approved addendum AMP (Park and Collins 2008). PCSI monitored six excavation locations within the building, which resulted in the identification of additional features associated with Site 6926—primarily artifact concentrations and a foundation wall remnant. Although much of the matrix was a result of secondary deposition, several traditional Hawaiian artifacts were recovered, including a

basalt pestle, a modified mammal bone, and sea urchin spine abrader. Stratigraphy observed included a modern fill layer (Fill A) over three Historic fill layers (Fill B, C and D), over an in situ layer (Layer I), which contained Historic subsurface features and artifacts. Russell et al. (2012) recommended data recovery prior to any future ground disturbances within their project area.

In 2008, CSH conducted archaeological monitoring (Hunkin and Hammatt 2008) of the Armstrong Building Courtyard Renovation project at the southeast corner of the intersection of North King and River streets, located one block north of the current project area (see Figure 32). Monitoring followed an approved AMP (O'Hare et al. 2008) and involved demolition and removal of an existing concrete pavement and minor excavation of small ditches along the perimeter of the area to be repaved. No historic properties or intact subsurface deposits were observed during their monitoring effort.

From 2006 through 2013, CSH conducted fieldwork and produced reports for the proposed Honolulu High-Capacity Transit Corridor Project (HHCTCP), which crossed various parcels from Kapolei to Mānoa with a connection in Waikīkī throughout portions of multiple *ahupuaʻa* including Honolulu Ahupuaʻa. In 2008, CSH produced the Archaeological Resources Technical Report which proposed the research methods (Hammatt 2008). Hammatt (2008) divided their study area into archaeological sub-areas, the current project area falls within the Downtown Waterfront sub-area. A portion of the corridor extends along Honolulu Harbor, *makai* of the current project area and includes the location of a transit station (Holau transit station) at the northeast corner of Kekaulike Street and Nimitz Highway. Hammatt (2013) reported on the results of an AIS that included subsurface testing in the area of the future transit station just to the north of the intersection of Kekaulike Street and Nimitz Highway (see Figure 24). As a result of the subsurface testing, Site 50-80-14-7427 was recorded and described as a "cultural resource consisting of subsurface infrastructure remnants, cultural deposits, and a human skeletal element located 3 m east of Nimitz Highway near the Kekaulike Street intersection;" and was recommended for data recovery (Hammatt 2013:572).

In 2013, CSH conducted a literature review and field inspection (O'Hare et al. 2013) for the Pier 12 and Pier 15 Improvement Project; Pier 15 is located *makai* of the current project area across Nimitz Highway (see Figure 32). Subsequently, CSH prepared an AMP (O'Hare et al. 2014) and in 2015 and 2016, Keala Pono Archaeological Consulting conducted archaeological monitoring (Graves et al. 2017) for the project. As a result of the monitoring effort, Keala Pono recorded an artifact assemblage at each of the piers SIHP 50-8014-7575 at Pier 12 and SIHP 50-80-14-7576 at Pier 15, both associated with earlier construction phases of the piers. The artifact assemblages comprised various Historic materials, primarily from 1870-1920, and a few traditional artifacts.

In May and June of 2013, PCSI conducted intermittent archaeological monitoring (Mintmier et al. 2014) of excavations associated with traffic infrastructure improvements at the intersection of North Beretania and River Streets, to the northeast of the current project area (see Figure 32). As a result of their monitoring effort, no historic properties were identified. However, eighteen Historic artifacts (ten glass and eight ceramic) were collected and subsequently analyzed. Mintmier et al. (2014) concluded that some glass specimens were manufactured between 1870 and the middle 1900s, while the ceramics were manufactured in the 1800s. Stratigraphy observed included an upper layer (Layer I) of base course fill associated with road and sidewalk construction over two dark grayish-brown silt loam layers (IIa, and IIb), which exhibit evidence of prior historic and recent disturbance. Mintmier et al. (2014) recommended archaeological monitoring of any future ground disturbances within their project area.

In 2016, CSH conducted an AIS (Belluomini et al. 2016) for the American Savings Bank Campus at 300 North Beretania Street, located to the northeast of the current project area and across Nuʻuanu Stream (see Figure 32). As a result of subsurface testing, CSH identified three historic properties: seven human burials and six associated features (SIHP 50-80-14-7933); LCAw. Boundary wall remnants (SIHP 50-80-14-7934); and building foundation structural remnants (SIHP 50-80-14-7935).

Prior Studies Conducted on Kekaulike Street

Between September and October of 1992, Archaeological Consultants of Hawaii (ACH) conducted an inspection and archaeological monitoring of the demolition of the buildings on the property, and a subsequent AIS (Kennedy et al. 1994) for the Kekaulike Revitalization Project Ewa block bounded by Hotel, River, and King streets, located along the north side of Kekaulike Street and thus immediately adjacent to a portion of the current project area (see Figure 32). Per Kennedy et al. (1994), the Wong building, built in 1902, was the last wooden building remaining in Chinatown. Nine backhoe trenches and three hand-dug test units revealed two previously unrecorded sites: Pehu's Pond, a former pond belonging to a *konohiki* named Pehu (SIHP 50-80-14-4587) and a multicomponent site (SIHP 50-80-14-4588) that spans various periods of occupation and use from Precontact through the twentieth century. Per

Kennedy et al. (1994), historical documents do not specify the use of Site 4587, but it may have been a *loko wai* fishpond due to its proximity to Nuʻuanu Stream and Kikihale Spring, which was reportedly located *mauka* of the pond possibly within LCAw. 69; the date of construction and use also remain unknown however, historical research indicates the pond was likely filled in by the 1850s. Site 4588 included 53 features, three of which were human burials (two Historic and one possible Precontact), along with walls, crushed coral foundations, a burn layer, trash pits, postholes, and fire pits. Stratigraphy observed included three upper layers (Layers I, II, and III) of fill containing imported soils and Historic trash throughout that reached a maximum depth of about 1.2 meters below the ground surface, over a sediment that may have been naturally occurring or historic fill although no Historic cultural material was observed (Layer IV), over four layers of naturally deposited sediment (Layers V, VI, VII, and VIII), over coral shelf. ACH recommended data recovery and the preparation of a burial treatment plan. In 1995, ACH returned to their project area and conducted data recovery at Sites 4587 and 4588 (Riley et al. 1995), which resulted in the recovery of more than 5,000 artifacts and the identification of 55 more subsurface features from Precontact though the twentieth century, including post molds, pits, a possible burn layer, trash pits, fishpond sediments and a wall, and three additional human burials.

In March 1994, IARII conducted an AIS (Goodwin 1997) of a surface parking lot in preparation for the construction of an underground parking garage associated with the Kekaulike Diamond Head project, located on the south side of Kekaulike Street between King and Hotel streets, and thus immediately adjacent to a portion of the current the project area (see Figure 32). Per Goodwin (1997), Bishop Museum staff had conducted the initial background research of the Kekaulike Parking Lot redevelopment project (Hurst and Cleghorn 1991), a few years prior. Hurst and Cleghorn (1991) had reported that a graveyard had been mentioned in *Māhele* documents associated with LCAw. 28 to Keaniani. As a result, the AIS fieldwork focused on the portion of their project area that coincided with LCAw. 28 (along King Street and closer to Maunakea Street) to determine whether the graveyard was on the property in addition to subsurface testing across the rest of the property. The survey included the mechanical excavation of 2l test trenches that revealed 105 features and six cultural layers out of twelve strata beneath a parking lot. Although no evidence of the graveyard was encountered as a result of the AIS, a single secondary burial was found; IARII described the skeletal remains in a separate report (Erkelens et al. 1994). The Kekaulike Diamond Head site (SIHP 50-80-14-4875) comprises the entire block and that portion of Kekaulike Street fronting the block (Goodwin 1997). The stratigraphy observed within the excavated portions of their project area included a 10-20 centimeters thick layer of base course immediately under the paved surface. Goodwin further explains the stratigraphy as follows:

> Prior to the parking lot, the property had housed various commercial and residential structures, associated outbuildings, parking and service areas, and alley ways. All these buildings were demolished, and most of the structural material hauled away. The demolition process scattered structural elements and building contents across the property. The top few centimeters of sediment and the top few centimeters of some buried features (utility trenches, privies, wells, and trash pits) were also disturbed during demolition; their contents were mixed in sediments with the scattered structural elements. Collectively, these materials formed a demolition matrix that varied in thickness between l0 and 30 cm across most of the site. Once demolition was complete and the cellars were filled, the property was graded and rolled. This process further mixed all the demolition debris and compressed the top 5 to l0 cm. Beneath the coral/gravel substrate, therefore, IARII field technicians found two layers of destruction debris - the uppermost (Stratum A) more compacted that the lower one (Stratum B) - across the northern 3/4 of the property. All the test trenches, except those immediately fronting Maunakea Street contained one or both of these strata. (Goodwin 1997:10)

Per Goodwin (1997:15), new buildings were constructed along Kekaulike Street after the two Chinatown fires and that these post-1900 buildings did not include basements; rather they were set "on brick and/or stone foundation walls which apparently sat on coral bedrock that generally was less than a meter below grade in this location." IARII reported that the Kekaulike frontage area exhibited highly disturbed strata as a result of the construction, fire, demolition, and parking lot construction sequence. The test trenches, or portions thereof, excavated in closest proximity to the current project area (TT3, TT17, and TT18) displayed these characteristics. Elsewhere within their project area, trenching exposed traditional Hawaiian features within deeper strata such as post holes, shallow cellars, house floors, trash pits, and midden. A fire pit feature (Feature 25) yielded a calibrated radiocarbon date range of AD 1184-1394. Goodwin (1997) also reported that they encountered structural remnants of outbuildings and wooden tenements in nearly every test trench within the central portion of their project area including filled privies, wells, and trash pits that they attributed to post-l850 Chinese occupation of the site. Regarding the unsurveyed portions of their project area and Site 4875, Goodwin (1997:35) opined that "the northern edge of the property that fronts Kekaulike

Street also had little potential for yielding significant archaeological features" given the sequences of building and demolition therein. However, Goodwin (1997:37) stated that because Kekaulike Street was built after the 1886 Chinatown fire on former residential property and road construction typically requires grading and the addition of fill material rather than deep subsurface disturbance, "it was posited that there is a high probability for the presence of significant archaeological resources under Kekaulike Street." IARII recommended archaeological data recovery "on the inventoried portion of the site prior to the demolition of the structures on the unsurveyed portions" of the site: a small area in the southwest corner and a large area in the northeast corner of the property that had extant structures, and a portion of Kekaulike Street within the current project area.

IARII prepared a mitigation plan that included data recovery, burial treatment, and monitoring procedures for the entire project area. From August to October of 1994, IARII returned to the Kekaulike Diamond Head block to conduct data recovery of Site 4875 (Goodwin and Allen 2005). IARII excavated 97 units that uncovered dozens of early Historic and Precontact features that represent some of the earliest known evidence of occupation in Honolulu's history. Most of the features and deposits were associated with four house compounds (two each in former LCAw. 28 and LCAw. 222) and a blacksmith's shop located along with property boundaries. While the four house compounds date to the early 19th century, samples from some deeply buried deposits produced Precontact radiocarbon dates two features. Per Goodwin and Allen (2005:5), each house compound "contains traditional Hawaiian, Euro-American, and Asian material items, yet each shows a difference in types and quantities of the materials used, suggesting that different households were acquiring different goods at different rates and times." Feature types observed included structural remnants of the houses and infrastructure, as well as iron debris near the former smithy, heavy machine parts, and post molds that appear to delineate LCAw. Parcel boundaries. More than 8,500 artifacts with a wide range of attributes and ethnic associations were collected during the data recovery of Site 4875, and large amounts of faunal bone, which included the remains of Precontact and introduced fauna (Goodwin and Allen 2005).

Between March of 1999 and January of 2001, CSH performed archaeological monitoring (Winieski and Hammatt 2001) for the Nimitz Highway Reconstructed Sewer project, which extended *makai* from the intersection of River and Hotel streets to Nimitz Highway, to the north and immediately west of the current project area, and continued southward to merge with Queen Street to South Street to its southern terminus at Ala Moana Boulevard and Keawe Street (see Figure 32). CSH monitored the excavation of 24 jacking and receiving pits and 20 pothole probes, as well as a few open-cut trenches along the sewer line corridor. One such pit was excavated beneath the highway at the intersection with Kekaulike Street, immediately to the west of the project area. The 6-meter by 4-meter pit revealed no cultural material and the following stratigraphy: "below 20 cm of asphalt and 30 cm of gravel road bed were successive fill layers, which contained gravel and coral rubble. The fill layers continued well below to water table" (Winieski and Hammatt 2001:18). As a result of the monitoring effort, CSH identified a brick-lined manhole and a remnant of the Honolulu Rapid Transit narrow-gauge trolley system at the intersection of Nimitz Highway and Queen Street (SIHP 50-80-14-5942).

Between March 2012 and July 2013, CSH conducted archaeological monitoring (Enanoria and Hammatt 2015) for rehabilitation and replacement of water, gas, sewer, and drain lines along King Street and at each of the cross-street intersections between River and Bethel streets. The intersection of King Street with Kekaulike within the current project area coincides with a portion of their 1,500 linear-foot project area. Stratigraphy consisted of a series of fill sediments associated with the construction of the existing asphalt surface and the installation of subsurface utilities overlying disturbed natural alluvium, natural volcanic cinder, and a coral shelf. No historic properties were identified; however, according to Enanoria and Hammatt (2015:79), "a substantial amount of the natural ground surface has not been altered and therefore still has a high potential of containing cultural deposits and historic properties." Thus, they recommended that archaeological monitoring be required for any future ground disturbances.

3. CONSULTATION

Gathering input from community members with genealogical ties and long-standing residency or relationships to the study area is vital to the process of assessing potential cultural impacts to resources, practices, and beliefs. It is precisely these individuals that ascribe meaning and value to traditional resources and practices. Community members often possess traditional knowledge and in-depth understanding that are unavailable elsewhere in the historical or cultural record of a place. As stated in the OEQC (1997) *Guidelines for Assessing Cultural Impacts*, the goal of the oral interview process is to identify potential cultural resources, practices, and beliefs associated with the affected project area. It is the present authors' further contention that the oral interviews should also be used to augment the process of assessing the significance of any identified traditional cultural properties. Thus, it is the researcher's responsibility to use the gathered information to identify and describe potential cultural impacts and propose appropriate mitigation as necessary.

SCOPING AND INTERVIEW METHODOLOGY

In an effort to identify individuals knowledgeable about traditional cultural practices and/or uses associated with the current project area, a public notice was submitted to the Office of Hawaiian Affairs (OHA) on May 13, 2020 for publication in their monthly newspaper, *Ka Wai Ola*. The notice was published in the June 2020 edition of *Ka Wai Ola* and a copy of the notice has been included in Appendix A of this report. As of the date of the current report, no responses have been received from the public notice.

In addition to the public notice, ASM staff identified and compiled a list of persons and organizations who were believed to have knowledge of or an interest in cultural and historic information of the project area. Using the Department of the Interior's list of Native Hawaiian Organization and web searches for organization who conduct work in the Honolulu vicinity, the following list in Table 4 of persons and organizations were compiled. Request for consultation letters were mailed or emailed to all persons/organization in Table 4.

Although no responses were received as a result of the *Ka Wai Ola* publication, twenty-seven individuals/organizations were contacted via email and/or phone: United Chinese Society of Hawaiʻi; Chinese Chamber of Commerce; Chinatown Business and Community Association; Arthur K.C. Wong of the Wong Kong Har Tong Society; Wayne K.C. Wong of the Wong Kong Har Tong Society; Wayne K.C. Wong of the Wong Kong Har Tong Society; Christy M.J.W. Yee of the Wong Kong Har Tong Society; Beverly H.K. Wong of the Wong Kong Har Tong Society; Calvin Wong of Wong's Meat Market; Kaleo Paik, Kona Representative for the Oʻahu ʻAha Moku Council; Makani Christensen, Kona Representative for the Oʻahu ʻAha Moku Council; Manu Boyd of the Hawaiian Civic Club of Honolulu; Anita Nāone of the Hawaiian Civic Club of Honolulu; Mālia Sanders of the Hawaiian Civic Club of Honolulu; Leimomi Khan of the Kalihi-Palama Hawaiian Civic Club; Juanita Brown-Kawamoto of the Kalihi-Palama Hawaiian Civic Club; Hailama Farden, Kamehameha Schools; Leimana DeMatte, ʻAha Moku; Shelley Muneoka, KAHEA; OHA compliance; Kaumakapili Church; Marques Marzan of Bishop Museum; Paula Akana, Executive Director, Friends of ʻIolani Palace; Christian Yee, *kamaʻāina* knowledgeable in sites and *moʻolelo*; Kehaulani Kupihea of Muliola Keʻehi; Kalei Lum-Ho, Hulili Ke Kukui Hawaiian Center at Honolulu Community College; Lisa L. Chow, Hawaiian Mission Houses; and Kiersten Faulkner, Executive Director, Historic Hawaiʻi Foundation. In addition to those listed above, Ms. Leimomi Khan included the following individuals in an email who may have knowledge of any impacts on the Native Hawaiian and/or Chinese community: Melodie Aduja, Kendrick Farm, Jean Iida, Juanita Brown-Kawamoto, Robert Wylie Keaweheulu Brown, Kainoa Kaumeihiwa-Rego, Lei Kihoi, Benton Pang, Pohai Ryan, Arlene Luster, and Liana and Charles Benn.

While interviews for CIA's are typically held in person and sometimes accompanied by a site visit, in light of the COVID-19 pandemic and state social distancing recommendations, all interviews were conducted via phone. Prior to the interview, ASM staff provided the potential interviewees with information about the nature and location of the proposed project and the scope the current CIA study. The potential interviewees were informed that the interviews were voluntary and that they would be given an opportunity to review and edit their interview summary prior to inclusion in this report. With their consent, ASM staff then asked questions about their background, their knowledge of past land use, and history of the project area, as well as their knowledge of any past or ongoing cultural practices. The informants were also invited to share their thoughts on the proposed development and offer mitigative solutions. Below are the interview summaries that have been reviewed and approved by the consulted parties.

Table 4. Persons/organizations contacted for consultation.

Name/Organization	*Initial Contact Date*	*Response*
United Chinese Society of Hawai‘i	1/15/2021	No response.
Chinese Chamber of Commerce	1/15/2021	No response.
Chinatown Business and Community Association	1/15/2021	Agreed to participate. Followed up multiple times via email with no response.
Arthur K. C. Wong/ Wong Kong Har Tong Society	1/22/2021	No response.
Wayne K. C. Wong/ Wong Kong Har Tong Society	1/22/2021	No response.
Christy M. J. W. Yee/ Wong Kong Har Tong Society	1/22/2021	No response.
Beverly H. K. Wong/ Wong Kong Har Tong Society	1/22/2021	No response.
Calvin Wong	1/29/2021	Contacted via phone on January 29, 2021. Interviewed on February 9, 2021. See consultation below.
Kaleo Paik	1/15/2021	No response.
Makani Christensen	1/15/2021	Mr. Christensen responded via email on 1/22/2021 with the following: I don’t know of any Native Hawaiian cultural impact of this area. My lack of knowledge does not mean that cultural practices do not happen. My recommendation: 1) Long Term Physical Assessment- Person on the Ground Asking Questions and Monitoring 2) Historical Documents 3) Ensure all History is Incorporated Appreciate you taking the time to reach out to me.
Many Boyd/ Hawaiian Civic Club of Honolulu	1/22/2021	No response.
Anita Nāone/ Hawaiian Civic Club of Honolulu	1/22/2021	No response.
Mālia Sanders/ Hawaiian Civic Club of Honolulu	1/22/2021	No response.
Leimomi Khan/ Kalihi-Palama Hawaiian Civic Club	1/15/2021	Ms. Khan responded via email on 1/26/2021 with the following: Mahalo for the invitation, but respectively decline since I have little knowledge of the past and ongoing traditional cultural practices occurring in the areas covered by your assessment. Even though, I have included the Chair and the members of the

Name/Organization	*Initial Contact Date*	*Response*
		Executive Committee of the Hawaiian Affairs Caucus of the Democratic Party of Hawaii to see if they know of anyone who could contribute; and I've included two personal friends who may know any cultural impact to the Native Hawaiian and/or Chinese community. I recall as a child that both of my parents were involved with the chinese community who held festivals in these areas. The following parties were CC'd: Melodie Aduja, Kendrick Farm, Jean Iida, Juanita Brown Kawamoto and Robert Wylie Keaweaheulu Brown, Kainoa Kaumeihiwa-Rego, Lei Kihoi, Benton Pang, Pohai Ryan, Arlene Luster, and Liana and Charles Benn
Juanita Brown-Kawamoto/ Kalihi-Palama Hawaiian Civic Club	1/22/2021	No response.
Hailama Farden/ Kamehameha Schools	1/15/2021	No response.
Leimana DeMatte/ 'Aha Moku	1/15/2021	Email returned; unable to secure new contact information.
Shelley Muneoka/ KAHEA Hawaiian Environmental Alliance	1/15/2021	No response.
Office of Hawaiian Affairs	1/19/2021	No response.
Kaumakapili Church	1/19/2021	No response.
Marques Marzan/ Bishop Museum	1/19/2021	No response.
Paula Akana/ Friends of 'Iolani Palace	1/19/2021	No response.
Christian Yee	1/19/2021	Agreed to participate. Followed up multiple times via email with no response.
Kehaulani Kupihea/ Muliola Ke'ehi	1/19/2021	No response.
Kalei Lum-Ho/ Hulili Ke Kukui Hawaiian Center at Honolulu Community College	1/15/2021	Ms. Lum-Ho responded via email 1/20/2021 that she was not from the area and does not have a connection to the area.
Lisa L. Chow/ Hawaiian Mission Houses	1/15/2021	No response.
Tricia Kehaulani Watson/HART Cultural Liason	12/15/2020	No response
Kiersten Faulkner/ Historic Hawai'i Foundation	1/19/2021	No response.

CALVIN WONG

ASM Affiliates staff interviewed Calvin Y.K. Wong of Wong's Meat Market via phone on February 9, 2021, for the Kekaulike Street Improvements project. Mr. Wong was asked questions regarding his connection to the Chinatown area in Honolulu; his knowledge of historical and/or cultural events as well as Chinese customs occurring in the area; and if he was aware of any potential impacts, had concerns, and/or wanted to share any mitigation measures about the project.

One of seven children, Mr. Wong was born and raised in ʻĀlewa Heights located in the Liliha-Kapālama area. His mother was a homemaker, while his father worked full-time as a journeymen welder and part-time as a meat cutter. On the weekends, his father worked at ʻAʻala Marketplace, which was located *makai* of ʻAʻala Park and a block and a half from the project area. Eventually, his father quit his job as a welder and became a full-time meat cutter and distributor. He shared that the owners of ʻAʻala Marketplace were the Otani family who owned the land where the market was and another property across Nimitz Highway. Brothers Akira and Jay Otani ran the market, which offered fresh meat, seafood, and vegetables. The market served as the main headquarters for vegetable peddlers who stocked up on product early in the morning then reported back to their communities where they would sell their goods. He recalled one of the last peddlers was Yoneo Kaneshiro who stopped peddling in the mid-to-late 1990s after a vehicle hit his truck. Mr. Wong shared that ʻAʻala Marketplace was the original site of the Honolulu fish auction until it moved to Pier 38 at Honolulu Harbor.

During his teenage years, Mr. Wong would help his father on the weekends and prep for holidays at the marketplace to prepare for the anticipated crowds. He recalled often starting at midnight and ending their day at 5:00 PM. Mr. Wong's father was a pork distributor mostly supplying the Chinatown area. "Back then Chinatown was really a Chinatown in a sense where the majority of the vendors there were primarily all Chinese. Whereas today it's more like an Asian market where you have a lot of Vietnamese and a lot of Filipinos and very few Chinese left," he stated. He began to see this shift in vendors beginning in the 1970s. After graduating from high school in 1963, Mr. Wong enrolled in the military and then attended college. He returned to Hawaiʻi in 1971 to help his father with the business and has been home since.

Mr. Wong recalled the Chinatown area being confined to a four-block radius bounded by River Street (north), North Hotel Street (east), Maunakea Street (south), and Nimitz Highway (west). "Chinatown was primarily the Kekaulike Street, King Street area," he recounted with the historic Armstrong Building marking the beginning of Chinatown and the C.Q. Yee Hop Plaza as the end. He pointed out that the *mauka* portion of the project area that is now a promenade never existed and that Kekaulike Street was once a through street. He estimated that the street was converted into a walking plaza during the 1980-1990s. He also pointed out that the Mauna Kea Marketplace, which is just north of the project area, did not exist until in recent years. When asked if he knew of any original businesses and/or business owners within the project area, Mr. Wong stated that many of the original stores and owners have either sold their businesses, retired, or passed on.

When asked if he knew of any traditional cultural practices, stories, or cultural resources of the area, he did not know of any and offered his recollections of the project area and the greater Chinatown area spanning from the late 1950s until the present.

Because Mr. Wong and his family were one of the main distributors of pork for the Chinatown area, when asked if there were any cultural events where their services were needed, he spoke of Chinese memorial month also known as Qingming, which occurs every April. The month-long event brings families together to celebrate the dead. Family members would purchase dry goods such as fake money, fireworks, and candles in the Hotel Street area. Food items purchased from Chinatown include roast pork, *char siu* (red sweet pork), *manapua* (pork-filled buns), a case of oranges, oysters, mushrooms, and fish. When asked if each item used to commemorate the dead had a symbolic meaning to it, Mr. Wong shared that the paper money that was burned was viewed as sending money to the deceased. Once items were gathered for Qingming, families would prepare some of the items. For example, Mr. Wong related that the fake money needed to be folded a certain way and either strung into a *lei* (garland) or placed in a bag where it would be burned. Other Chinese cultural activities included lighting fireworks and performing *baisun* or prayer. These dry goods and food items would be shared with the dead as well. Each family name had a society that was based in Chinatown such as the Lee Society, Wong Society, and Chun Society. Mr. Wong explained that the Mānoa Chinese Cemetery in the back of Mānoa Valley was crowded every April. The cemetery also has a pavilion where each family society would meet and potluck. Mr. Wong's father and uncle were responsible for the Wong family's Qingming gathering. Because the Wong's are in the pork distribution business, they were able to roast a whole pig. As a result, they would chop the pig up and gave extended family portions. Mr. Wong pointed out that throughout the years' many families have not passed down the tradition and the practice has dwindled over time.

When asked if dry goods and food items gathered for Chinese New Year (which occurs every February) were the same as Qingming, Mr. Wong replied that most items were the same but some differed. In addition to dry goods and food items, a weekend before Chinese New Year festivities would begin. He shared that one-weekend Maunakea Street was closed off from South Beretania Street to Nimitz Highway where vendors would line the streets and traditional lion dancers would perform. The following weekend there would be a celebration in the Chinatown Cultural Plaza located *makai*. Mr. Wong was asked if he knew of any historical events that occurred in Chinatown and he was unaware of any.

Regarding the impacts and concerns about the proposed project, Mr. Wong had no issues with the project because he felt that the Kekaulike Street area has changed so much throughout the years. However, the biggest concern he had is with the homeless population. He gave the example of Nimitz Highway at the bend approximately a quarter mile north of the project area, where he has witnessed City & County of Honolulu employees clear the area only to have the homeless encampment move across the street. He recommended speaking to Chu Lan Shubert-Kwock, President of the Chinatown Community & Business Association, and to some of the vendors in Chinatown including the owners of Sing Hee Market who have seen the changes in Chinatown as well as the dwindling customs. Attempts were made to reach out to these individuals, but no responses were received.

4. IDENTIFICATION AND MITIGATION OF POTENTIAL CULTURAL IMPACTS

The OEQC guidelines identify several possible types of cultural practices and beliefs that are subject to assessment. These include "...subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs" (OEQC 1997:1). The guidelines also identify the types of cultural resources, associated with cultural practices and beliefs that are subject to assessment. These include other types of historic properties, both man made and natural, submerged cultural resources, and traditional cultural properties. The origin of the concept and the expanded definition of traditional cultural property is found in National Register Bulletin 38 published by the U.S. Department of Interior-National Park Service (Parker and King 1998). An abbreviated definition is provided below:

> "Traditional cultural property" means any historic property associated with the traditional practices and beliefs of an ethnic community or members of that community for more than fifty years. These traditions shall be founded in an ethnic community's history and contribute to maintaining the ethnic community's cultural identity. Traditional associations are those demonstrating a continuity of practice or belief until present or those documented in historical source materials, or both.

"Traditional" as it is used, implies a time depth of at least 50 years, and a generalized mode of transmission of information from one generation to the next, either orally or by act. "Cultural" refers to the beliefs, practices, lifeways, and social institutions of a given community. The use of the term "Property" defines this category of resource as an identifiable place. Traditional cultural properties are not intangible, they must have some kind of boundary; and are subject to the same kind of evaluation as any other historic resource, with one very important exception. By definition, the significance of traditional cultural properties should be determined by the community that values them.

It is however with the definition of "Property" wherein there lies an inherent contradiction, and corresponding difficulty in the process of identification and evaluation of potential Hawaiian traditional cultural properties, because it is precisely the concept of boundaries that runs counter to the traditional Hawaiian belief system. The sacredness of a particular landscape feature is often cosmologically tied to the rest of the landscape as well as to other features on it. To limit a property to a specifically defined area may actually partition it from what makes it significant in the first place. However offensive the concept of boundaries may be, it is nonetheless the regulatory benchmark for defining and assessing traditional cultural properties.

As the OEQC guidelines do not contain criteria for assessing the significance for traditional cultural properties, this study will adopt the state criteria for evaluating the significance of historic properties, of which traditional cultural properties are a subset. To be significant the potential historic property or traditional cultural property must possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria:

a Be associated with events that have made an important contribution to the broad patterns of our history;

b Be 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.

While it is the practice of the DLNR-SHPD to consider most historic properties significant under Criterion d at a minimum, it is clear that traditional cultural properties by definition would also be significant under Criterion e. A further analytical framework for addressing the preservation and protection of customary and traditional native practices specific to Hawaiian communities resulted from the *Ka Paʻakai O Ka ʻĀina* v Land Use Commission court case. The court decision established a three-part process relative to evaluating such potential impacts: first, to identify whether any valued cultural, historical or natural resources are present; and identify the extent to which any traditional and customary native Hawaiian rights are exercised; second, to identify the extent to which those resources and rights will be affected or impaired; and third, specify any mitigative actions to be taken to reasonably protect native Hawaiian rights if they are found to exist.

SUMMARY OF CULTURE-HISTORICAL BACKGROUND INFORMATION

The cultural-historical information gathered as part of this study illuminates the project area's long and rich history. The project area is set within Kou, a place famed in Hawaiian culture as a gathering place of the *aliʻi* and renowned for its great *ulu maika* fields and *kōnane* gaming areas. Māmala, the sea fronting Kou, is also remembered in Hawaiian culture as the home of shark goddess bearing the same name who enjoyed surfing and consuming *ʻawa*. Māmala was transformed into Honolulu Harbor after European contact in 1778. *ʻŌlelo noʻeau* stresses the importance of the centralized harbor and pelagic resources. Historical records also place the project area within two traditional *ʻili*, Kīkīhale which coincides with the eastern part of the project area and Kapuʻukolo which covers the western part of the project area. Kou, Kīkīhale, and Kapuʻukolo area all within the traditional *moku* of Kona, a district noted for its warm weather and abundant resources that provided a pleasant and comfortable living for its residents. The thoroughfare that comprises the project area is named after Kekaulike, a ruling chief from Maui, who through warfare and intermarriages managed to expand his dynasty, and the rule of Oʻahu is credited to his descendants Kahekili II and Kalanikūpule.

Early historical descriptions of Honolulu describe the coast as a place of rushes and nesting birds and further *mauka* to the foothills, as a dry plain nearly devoid of trees. Taro patches and trees of various kinds were found along the streams and rivers that carried water from Koʻolau Mountains to the coastline where several fishponds were constructed. Early historical maps show native settlements to be somewhat scattered along the coast including the project area vicinity. By the late 1700's and early 1800's, during the reign of Kamehameha I, Honolulu drew in numerous foreign visitors, many of whom remarked on the high state of cultivation of Oʻahu and beauty of the harbor. For many of the early visitors, the abundance of vegetables and proteins that could be procured for their long voyages made Honolulu an exceptionally attractive locale to develop a harbor. Foreign trade may have influenced Kamehameha I to relocate from Waikīkī to Pākākā in 1809, but only stayed there until 1812 before leaving to Hawaiʻi island. Shortly after his departure, Russian vessels arrived and were permitted by Kamehameha to build a blockhouse, which was quickly constructed but resembled a fort with mounted guns. When Kamehameha received word of the matter, he sent generals and soldiers to investigate that led to the Russians abandoning the partially constructed building and eventually sailed to Kauaʻi. Honolulu Fort was completed and served as a police headquarters for over forty years.

Māhele documentation indicates that Honolulu Ahupuaʻa was not awarded to a particular *aliʻi*. However, the various *ʻili ʻāina* therein were divided amongst *aliʻi* and *hoaʻāina* instead. The lands of Kīkīhale and Kapuʻukolo, where the project area is located, were not associated with any *aliʻi* rather were awarded to *hoaʻāina*. Awardees include: Kaapuki for Keomailani, G. Kawaina, Kaleimahu/Keaniani, Napahi, and A. Manuel. Land Grants awardees within the project area include: Hooliliamanu, Hio, Kaawa, and Nuhi.

By the mid-1800s, Honolulu was a burgeoning town with infrastructure and European and Chinese influences. In particular, author and historian John Papa ʻĪʻī pointed out that the first Chinese immigrants settled just south of the project area and prepared food for ship captains in the sandalwood trade (Ii 1993). As the whaling and sandalwood industries began to dwindle, the plantation industry throughout the Hawaiian Islands grew and early laborers began to settle in Honolulu in the area now known as Chinatown. Census records indicate that between 1853 and 1878, Chinese immigrants steadily moved into Honolulu.

In 1886, businesses and infrastructure in Chinatown grew and developed tremendously. Kekaulike Street was not developed at the time and was only in the planning stages. On April 18, 1866, a cooking fire at a home on the corner of Hotel and Smith streets spread to other buildings and as a result, nearly sixty-acres were burned. By September of that year, new buildings replaced burnt rubble, but the city had become incredibly filthy requiring the Board of Health to mitigate. Three additional fires, a cholera outbreak, and the bubonic plague all struck Chinatown in the years to follow. Despite these setbacks, Chinatown continued to thrive and develop.

Interviewee Calvin Wong of Wong's Meat Market shared his memories of Chinatown dating back to the late 1950s where he worked with his father at ʻAʻala Meat Market. He indicated that ʻAʻala Meat Market was the main headquarters for peddlers and the original site of the Honolulu fish auction. Mr. Wong recalled the Chinatown area being confined to a four-block radius bound by River, North Hotel, and Maunakea streets, and Nimitz Highway. He also shared that the historic Armstrong Building and C.Q. Yee Hop Plaza marked these boundaries. In 1973, Chinatown became a historic district and was listed in the NRHP. In 1985, it was listed in the HRHP. The historic district is bound by South Beretania Street, Nuʻuanu Stream, Honolulu Harbor, and Nuʻuanu Avenue and covers an approximately 15-square block area (36-acres). Mr. Wong stated that Chinatown has evolved over the years, pointing out that Kekaulike was once a through street but was converted to a walking plaza during the 1980s-1990s. Many of the original businesses and business owners have changed ownership, retired, or passed on.

In terms of cultural practices, informants such as Makani Christensen, Leimomi Khan, and Mr. Wong were unaware of any traditional Hawaiian cultural practices that still occurred within the project area. However, Mr. Christensen stated that this does not necessarily mean none were or are occurring. Ms. Khan included colleagues and friends in an email, attempting to initiate conversation if any traditional Hawaiian cultural practices still occur. Mr. Wong and Ms. Khan both celebrated and exercised traditional Chinese cultural practices in the Chinatown area with their families. Mr. Wong specifically spoke of Qingming, a month-long event in April that celebrates and commemorates ancestors. The event included gathering dry goods such as candles, fireworks, and fake money. Food items purchased from Chinatown included roast pork, *char siu*, *manapua*, cases of oranges, mushrooms, and fish. Similar items would be purchased for the Chinese New Year that occurs every February as well.

Identification of Potential Cultural Impacts and Recommended Mitigative Measures

There are no specific ongoing Native Hawaiian cultural practices or valued cultural resources that were identified within the immediate project area footprint. However, due to the greater Chinatown area having a rich history with the Chinese community, some ongoing traditional Chinese cultural practices and celebrations still occur within Chinatown such as Chinese memorial month known as Qingming and Chinese New Year. Mr. Wong pointed out that dry goods and food items are purchased throughout Chinatown for these celebrations. Concerning the potential cultural impacts regarding the proposed Kekaulike Street improvements, Mr. Wong did not feel that the project would impact any as the project area has transformed throughout the years and continues to evolve. One concern shared by Mr. Wong was the long-standing homeless population issue.

A review of previous research revealed that Precontact and Historic era sites have been identified in the area. The range of historic properties found in this area underscores Chinatown's diverse history and extensive changes as it was among the earliest of the communities of Oʻahu to be impacted by commercial development and western lifeways via foreign traders and visiting whaling ships. As a result, intact subsurface cultural layers and burials have been uncovered beyond the current project area beneath Chinatown. A companion archaeological literature review and field inspection (Gotay and Rechtman 2020) indicated that in consultation with the DLNR-SHPD Archaeology Branch Chief, an archaeological inventory survey would not be required. However, due to the potential for encountering subsurface cultural deposits, archaeological monitoring as a mitigative measure was recommended.

The authors of this study concur with Gotay and Rechtman's (2020) findings and recommend archaeological monitoring for all ground-disturbing activities associated with the proposed Kekaulike Mall and Kekaulike Street Multimodal Improvements Project area. Additionally, as part of the development planning there should be a set of cultural protocols developed in advance of the work to ensure that any discoveries that area made are treated appropriately.

In summary, the information and recommendations provided above are to ensure that the project developers consider the thoughts and concerns shared by the consulted party and remain mindful of the cultural, social, and environmental uniqueness of the broader Chinatown area. Attention to and implementation of the above-described issues and measures will help to ensure that no valued cultural or historical resources and customary practices are adversely affected by the Kekaulike Mall and Kekaulike Street Multimodal Improvements Project.

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APPENDIX A.
KA WAI OLA PUBLIC NOTICE

CULTURAL IMPACT ASSESSMENT - KEKAULIKE STREET

ASM Affiliates is preparing a Cultural Impact Assessment (CIA) for the proposed Kekaulike Street Improvements Project in the Chinatown neighborhood of downtown Honolulu, Kona District, Island of O‘ahu. The City and County of Honolulu intends to convert Kekaulike Street into a shared-use street, which will improve pedestrian accessibility and safety, and promote economic and social activities in the newly created shared space between North Hotel Street and Nimitz Highway; and provide a more coherent connection between the existing Kekaulike Mall and the future Chinatown rail station at the corner of Kekaulike Street and Nimitz Highway.

In addition to its association with Chinatown, the proposed project area has been associated with the traditional land divisions Kikihale and Kapuukolo, and the ahupua‘a of Nu‘uanu and Honolulu. We are seeking consultation with community members that might have knowledge of traditional cultural uses of the proposed project area; or who are involved in any ongoing cultural practices on or in the general vicinity of the subject Kekaulike Street. If you are willing to share any such information please contact Teresa Gotay (tgotay@asmaffiliates.com); phone (808) 439-8089, mailing address ASM Affiliates 820 Mililani St. Suite 700, Honolulu, HI 96813.

APPENDIX E

Multimodal Transportation Impact Assessment Report

TRAFFIC ASSESSMENT
KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

HONOLULU, OAHU, HAWAII

DRAFT

February 16, 2021

Prepared for:

HDR, Inc.
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TRAFFIC ASSESSMENT
KEKAULIKE MALL AND KEKAULIKE STREET
MULTIMODAL IMPROVEMENTS PROJECT

Honolulu, Oahu, Hawaii

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AUSTIN, TSUTSUMI & ASSOCIATES, INC. CIVIL ENGINEERS • SURVEYORS
CONTINUING THE ENGINEERING PRACTICE FOUNDED BY H. A. R. AUSTIN IN 1934

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DRAFT TRAFFIC ASSESSMENT

Kekaulike Mall and Kekaulike Street Multimodal Improvements Project

Honolulu, Oahu, Hawaii

1. INTRODUCTION

This report documents the findings of a traffic study conducted by Austin, Tsutsumi, and Associates, Inc. (ATA) to evaluate the traffic impacts resulting from the proposed Kekaulike Mall and Kekaulike Street Multimodal Improvements Project (hereinafter referred to as the "Project") located in Honolulu, Hawaii.

1.1 Project Description

The Project includes improvements to address the need for spatial continuity and connectivity between Kekaulike Mall, Kekaulike Street, and Holau transit station (the future Honolulu Rail Transit stop in Chinatown). A "shared-use street" concept has been designed that aims to improve pedestrian accessibility, safety, connectivity, and wayfinding while promoting economic activity and enhancing the experience of residents and visitors in Chinatown. The streetscape improvements include conversion of the existing Kekaulike Street from a traditional roadway to a "shared-use street" concept allowing primarily pedestrian use with vehicular access for deliveries to local businesses during discrete hours.

Most vehicular traffic will be restricted within the Project area to provide an open shared space for business and pedestrian use. One-way paratransit (TheHandi-Van) and commercial freight access will be permitted in the Project area during business hours and freight loading hours, respectively. Emergency and maintenance vehicles will be allowed access at any time. All authorized vehicles will enter at King Street and exit at Nimitz Highway.

The Project will be completed in two phases. Improvements to Kekaulike Mall that will occur in Phase 1 and include replacement of existing brick paver system with poured or pre-cast concrete surface, drainage improvements, and replacement of trees found to be in poor condition. Curb ramp and crosswalk improvements at the intersection of North King Street and Kekaulike Street will be included in Phase 1.

Improvements to Kekaulike Street that will occur in Phase 2 include a raised street level to match the existing curb height with vehicular ramp access up from North King Street intersection for delivery vehicles and an exit ramp feeding into North Nimitz Highway near the future Holau transit station. The raised street level will provide for drainage improvements and enhance the continuity

of multimodal travel experience. Access control to prevent illegal parking is being considered as a part of Phase 2.

There will also be dedicated areas for a future bicycle ride-share station (Biki) along Kekaulike Mall, a freight loading zone on Kekaulike Street, and a drop-off for TheHandi-Van near the future Holau transit station along Kekaulike Street. Construction of the Project is anticipated to be completed by Year 2026.

This report will assess the traffic impacts of the shared-use street design and discuss the potential impacts of reduced freight loading zones and modified freight loading hours for authorized vehicles along the Study Segment.

See Figure 1.1 Project Location. See Figure 1.2 for the Preferred Concept Shared Street Plan.

1.2 Study Methodology

This study will address the following:

- Identify existing and planned improvements that will improve pedestrian, bicycle, and transit accessibility within the study area.
- Assess existing traffic operating conditions during the weekday AM, mid-day (MD), PM, and Saturday mid-day (WE) peak hours of traffic within the study area.
- Traffic Projections for Base Year 2026 (without the Project).
- Traffic reroute projections with the proposed Project.
- Traffic projections for the Project for Future Year 2026 (with Project).
- Assess existing vehicular activity along the Study Segment during a 24-hour period on a weekday and a weekend day (Saturday).
- Provide recommendations for roadway improvements or other mitigative measures, as appropriate, to reduce or eliminate the adverse Project impacts resulting from reduced freight loading zones and modified freight loading hours.

1.2.1 Analysis Methodology

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), 2000 includes methods for calculating volume-to-capacity (v/c) ratios, delays, and corresponding LOS that were used in this study. See Appendix A for LOS Criteria.

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.

1.2.2 Study Area Intersection Analysis

Intersection analysis was performed at the following study intersections due to their proximity to the Project:

1. Nimitz Highway/Kekaulike Street (Unsignalized)
2. King Street/Kekaulike Street (Signalized)

KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

AustinTsutsumi & ASSOCIATES, INC.
Engineers & Surveyors

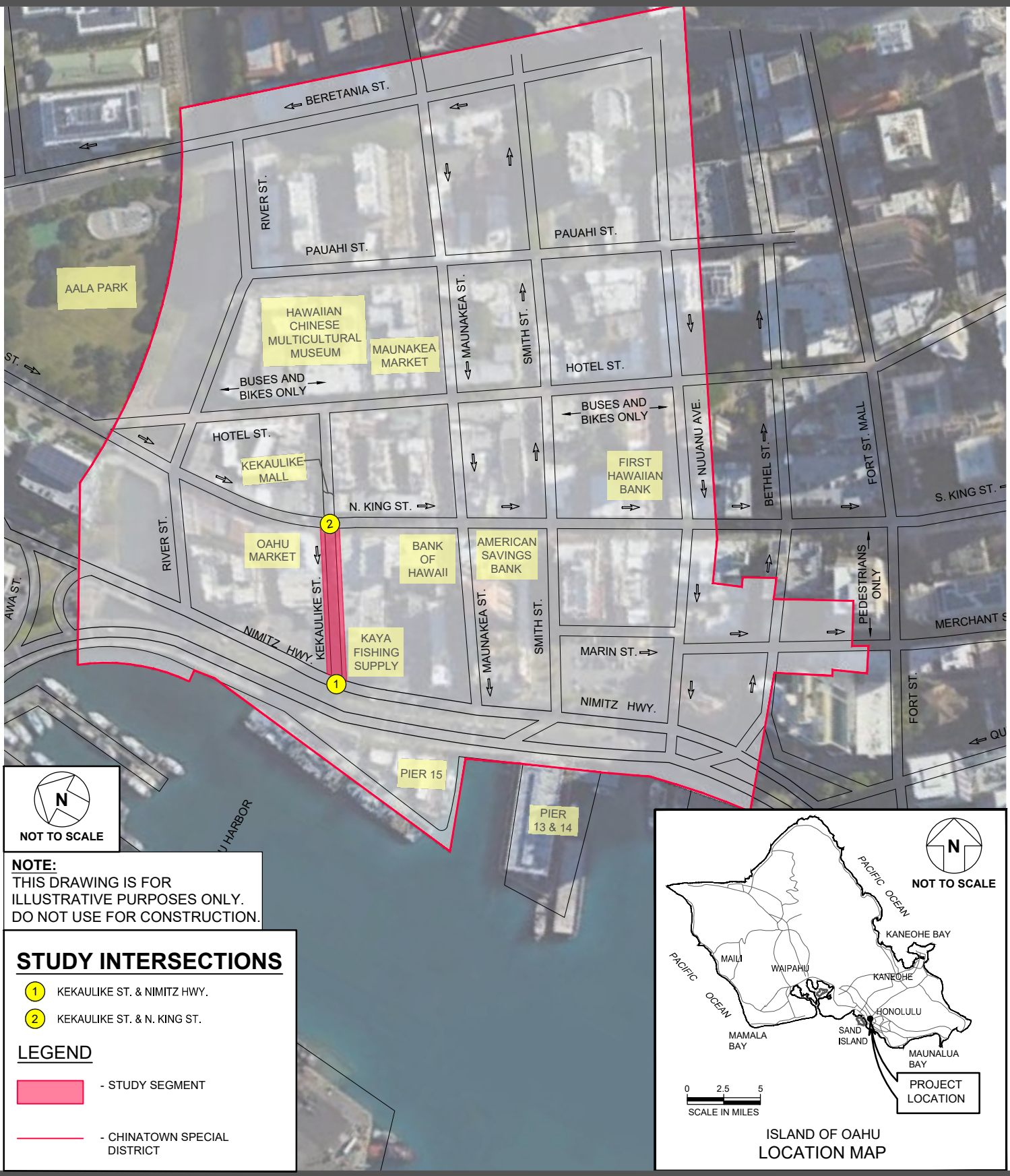

FIGURE 1.1

LOCATION MAP

AustinTsutsumi & ASSOCIATES, INC.
Engineers & Surveyors

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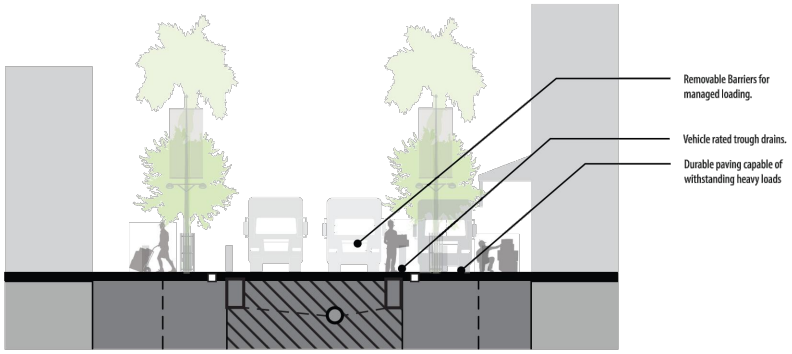
KEKAULIKE STREET IMPROVEMENTS



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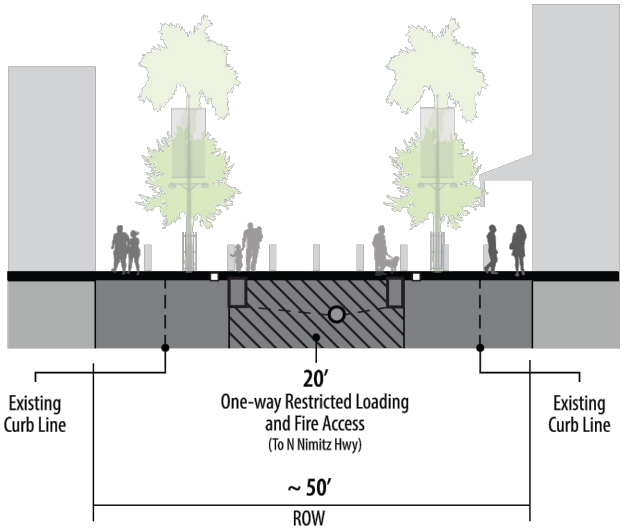

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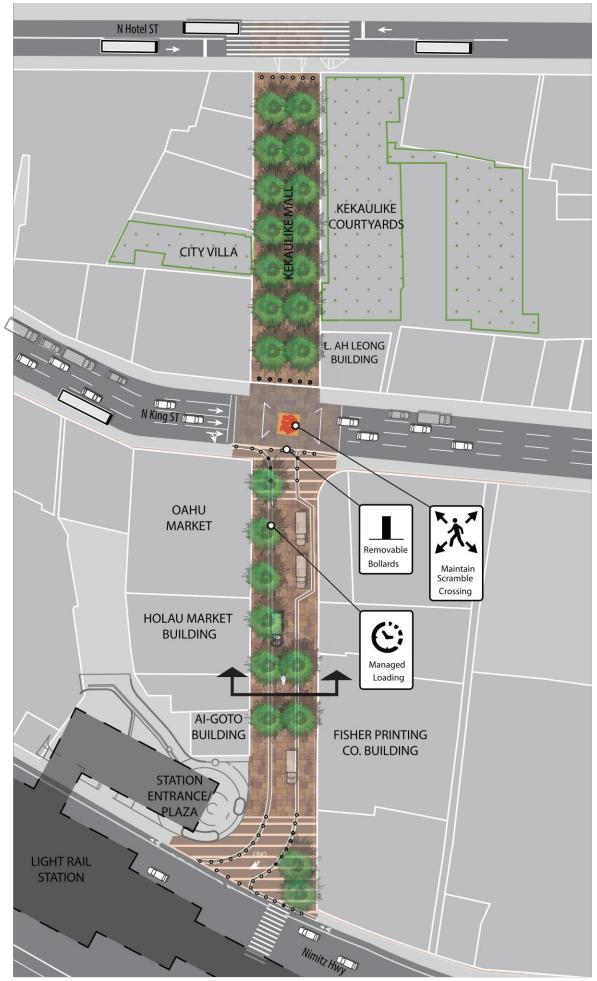

PLAN

2. TRANSPORTATION ENVIRONMENT

2.1 Study Area

Existing Conditions

The Project is located within the Downtown Honolulu area, more specifically in the Chinatown Special District (CSD). The CSD is an approximately 522-acre area bounded by Beretania Street, Nuuanu Street, Honolulu Harbor, and Awa Street and is on the National Register of Historic Places. The special district was established to preserve and enhance its unique historic character, while allowing a mixture of commercial, residential, and recreational uses.

The buildings near the Project generally include ground floor shops and restaurants with affordable housing and small offices on the floors above. Nearby businesses are generally open between 7:00 AM and 3:00 PM on weekdays and Saturdays; and close early at 2:00 PM on Sundays.

Future Conditions

As previously mentioned, the Project is located near the future Holau transit station. In anticipation of the Honolulu Rail Transit, the Downtown Neighborhood TOD Plan, dated August 2017, was developed to address the opportunities of growth and new development within the Downtown area near the three (3) proposed rail stations: Iwilei, Chinatown, and Downtown. The plan recommends an integrated transportation network that will improve the road network and facilities for all users, such as pedestrians, bicyclists, and transit riders.

The Downtown TOD zone is shown in Figure 2.1. Figure 2.2 shows the existing and proposed pedestrian, bicycle, transit, and motor vehicle facilities within the study area.

KEKAULIKE MALL & KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT

AustinTsutsumi & ASSOCIATES, INC.
Engineers & Surveyors

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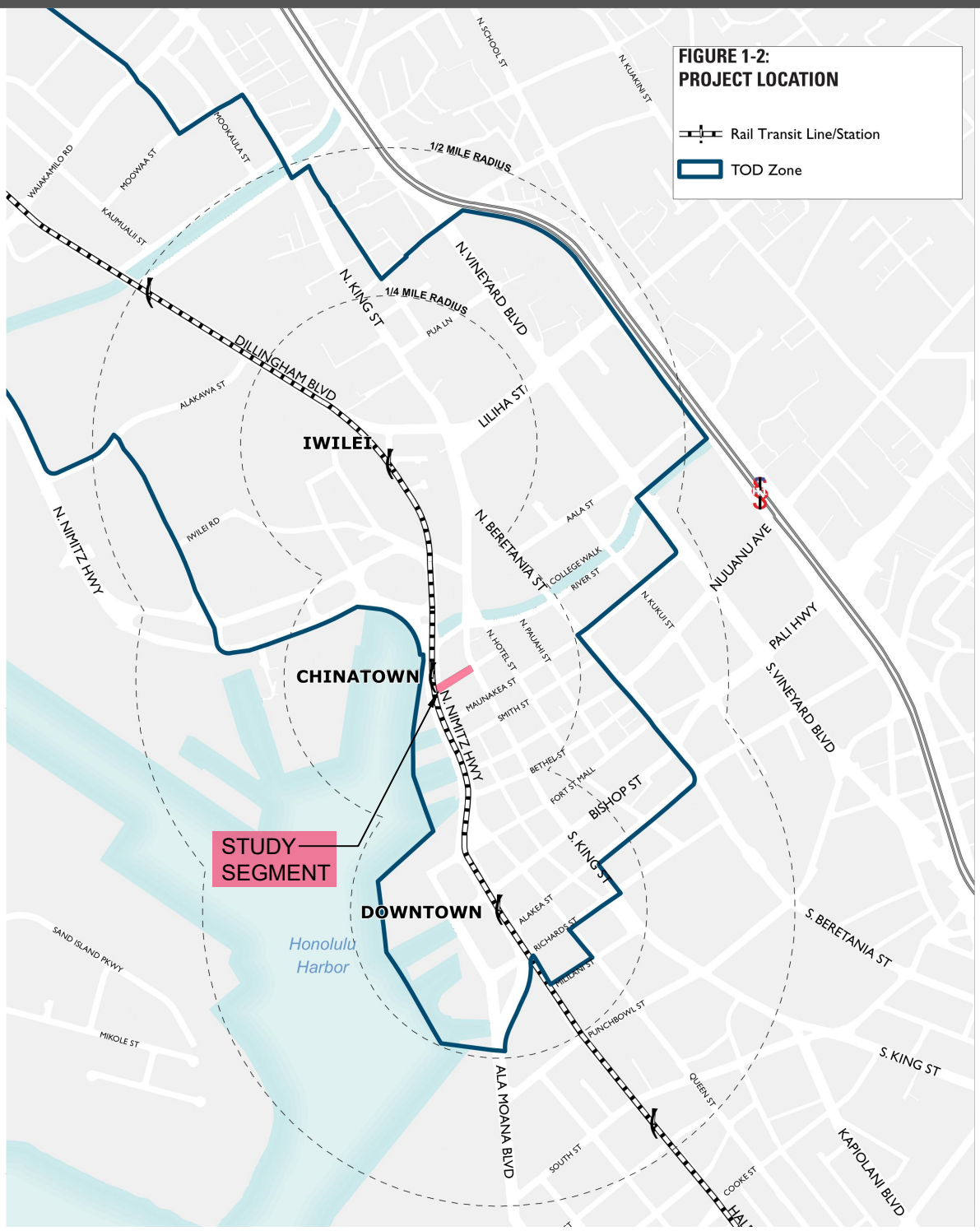

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SOURCE: DOWNTOWN NEIGHBODHOOD TRANSIT-ORIENTED DEVELOPMENT PLAN, CITY AND COUNTY OF HONOLULU, AUGUST 2017

FIGURE 2.1

DOWNTOWN TOD ZONE

2.2 Pedestrian Facilities

Existing Conditions

Within the immediate vicinity of the Project, sidewalks are continuous along both sides of Kekaulike Street, Nimitz Highway, and King Street. A pedestrian pathway with limited vehicle access for emergency and maintenance vehicles only is provided along Kekaulike Street between Hotel Street and King Street, hereinafter referred as Kekaulike Mall. During business hours, sidewalks and Kekaulike Mall are used as an active frontage to sell goods by surrounding businesses, which reduces the space available for pedestrian travel.

A pedestrian scramble crossing is provided at the King Street/Kekaulike Street intersection, which provides an exclusive pedestrian phase at the signalized intersection where all traffic movements must stop and pedestrians are able to cross un-impeded in all directions.

Future Conditions

The Downtown TOD Plan includes pedestrian connectivity, streetscape, wayfinding, and lighting improvements to enhance pedestrian comfort and safety within the CSD district. The Downtown TOD Plan has identified the following pedestrian improvements within the study area:

- A shared use path is proposed along
  - Kekaulike Street between North King Street and Nimitz Highway. The proposed Project will widen the sidewalks between North King Street and Nimitz Highway.
  - River Street, south of Nuuanu Stream, between Nimitz Highway and Beretania Street.
  - Nimitz Highway between Sumner Street and Fort Street Mall (path will continue through Aloha Tower waterfront area and connect to Ala Moana Boulevard)
- Pedestrian crossing improvements are proposed at the Nimitz Highway/Kekaulike Street study intersection.
- A pedestrian/bicycle bridge is proposed along Pauahi Street between River Street and Aala Park.

The existing and proposed pedestrian facilities in the study area are shown in Figure 2.2.

2.3 Bicycle Facilities

Existing Conditions

Within the immediate vicinity of the Project, bike lanes are provided on both sides of Nimitz Highway. Hotel Street between Aala Park and Richards Street is a shared roadway (i.e. a roadway where bicyclists and motor vehicles are expected to share the same travel lane). The nearest Biki Bikeshare Stations near the Project are located along Fort Street Mall and Beretania Street.

Future Conditions

The Oahu Bike Plan, dated December 2019, identified the following bicycle improvements within the study area:

- See Section 2.2 above, for the locations of the proposed shared use paths in the study area.
- A shared roadway is proposed along King Street between River Street and Bishop Street, which will connect to the proposed protected bike lane between Bishop Street and South Street – an extension of the existing cycle track along King Street and the proposed protected bike lane north of River Street.

As mentioned above, new Biki Bikeshare Station is proposed for the Kekaulike Mall.

The existing and proposed bicycle facilities in the study area are shown in Figure 2.2.

2.4 Transit

Existing Conditions

Oahu Transit Services (OTS) operates TheBus with a fleet of 542 fixed-route buses and services most populated areas of the island. Bus stops are available along King Street and Hotel Street within the Project area. Hotel Street is designated as a bus transit and bicycle roadway only between River Street and Alakea Street. A bus-only lane was recently constructed in December 2020 in the rightmost travel lane along King Street between Dillingham Boulevard and Alapai Street.

There are four (4) bus stops near the Project located on King Street and Hotel Street. As shown in Table 2.1, there are 35 bus routes that travel through the study area. All routes generally run at least once an hour, with the majority of the routes running two (2) or more times an hour during the AM and PM commuter peaks.

Future Conditions

The Honolulu Rail Transit is a fixed guideway rail system that is projected to span 20 miles between East Kapolei and Honolulu and is anticipated to be fully operational in 2026.[1] At full completion, it will provide 21 stations at key commuter and visitor destinations. As noted previously, the Project area is located near the future Holau transit station. The Holau transit station will be located on an elevated structure centered above Nimitz Highway between Kekaulike Street and River Street and access to the station will be provided on the northwest corner of the Nimitz Highway/ Kekaulike Street intersection.

The existing and proposed transit facilities in the study area are shown in Figure 2.2.

[1] According to the Honolulu Authority for Rapid Transit (www.honolulutransit.org). Date Accessed January 12, 2021.

Table 2.1: Bus Route Summary

Bus Route	Bus Stops On (within the study area)	Headways (during the AM and PM commuter peaks)
Route 1 – Kaimuki/Kalihi	Hotel Street	~5-10 min
Route 1L – School Street/Hawaii Kai Limited	King Street	~30-60 min
Route 2 – Waikiki/School/Middle	Hotel Street	~10 min
Route 2L – Waikiki/School/Middle Limited	King Street	10-15 min
Route 3 – Kaimuki/Salt Lake	Hotel Street	~10-15 min
Route 9 – Kaimuki/Pearl Harbor	Hotel Street	~10-25 min
Route 11 – Makalapa/Halawa/Aiea Heights	Hotel Street	25-60 min
Route 13 – Liliha/Waikiki/University	Hotel Street	~10-25 min
Route 19 – Waikiki/Airport/Hickam	King Street	~20-40 min
Route 20 – Waikiki/Pearlridge	King Street	~ 40 min
Route 40 – Honolulu/Makaha	King Street	~30-60 min
Route 42 – Ewa Beach/Waikiki	King Street	~25-35 min
Route 43 – Waipahu/Honolulu/Alapai	King Street	~30-60 min
Route 51 – Honolulu/Wahiawa	Hotel Street	~25-30 min
Route 52 – Honolulu/Mililani/Haleiwa	Hotel Street	~25-30 min
Route 53 – Honolulu/Pacific Palisades	Hotel Street	~15-45 min
Route 54 – Honolulu/Pearl City	Hotel Street	~15-35 min
Route 81 – Waipahu Express	King Street	~15-30 min
Route 83 – Wahiawa Town Express	King Street	~10-30 min
Route 84 – Mililani Express - North	King Street	~25-30 min
Route 84A – Mililani Express - South	King Street	~30 min
Route 88A – North Shore Express	Hotel Street	2 AM and PM trips
Route 90 – Pearl City Express	King Street	2 AM and PM trips
Route 91 – Ewa Beach Express	King Street	9 AM and 8 PM trips
Route 92 – Makakilo City Express	King Street	3 AM and PM trips
Route 93 – Waianae Coast Express	King Street	11 AM and 10 PM trips
Route 96 – Waipio Gentry Express	King Street	2 AM and PM trips
Route 97 – Village Park Express	King Street	4 AM and PM trips
Route 98 – Wahiawa/Mililani Park and Ride Express	King Street	3 AM and PM trips
Route 98A – Wahiawa/Mililani Transit Center Express	King Street	2 AM and PM trips
Route 101 – Ewa Gentry Express	King Street	5 AM and PM trips
Route 102 – Villages of Kapolei Express	King Street	3 AM and PM trips
Route 103 – Paiwa/Waikele Express	King Street	2 AM and PM trips
Route A – City Express (Waipahu to UH)	King Street	~10-15 min
Route C – Country Express (Makaha to Honolulu)	King Street	~10-30 min

2.5 Roadway System

Existing Conditions

The following are brief descriptions of the existing roadways in the vicinity of the Project:

King Street is generally a one-way, four-lane, north-south arterial[2], county roadway within the study area. As mentioned above, the rightmost travel lane has been dedicated as a bus-only lane as of December 2020. It begins at its intersection with H-1 Freeway to the north and terminates

[2] Based on the Downtown Neighborhood Transit-Oriented Development Plan, City and County of Honolulu, August 2017.

to the south at its intersection with Harding Avenue and Kapiolani Boulevard. King Street provides regional connectivity between Kalihi and McCully/Moiliili. The posted speed limit along this roadway is 25 miles per hour (mph) in the vicinity of the Project.

Kekaulike Street is a short county roadway that begins at its intersection with Hotel Street to the east and terminates to the west at its intersection with Nimitz Highway. Kekaulike Street makai of North King Street is generally a one-way, two-lane, east-west local[3] roadway. As mentioned above, Kekaulike Street mauka of North King Street is a pedestrian pathway with limited vehicular access. It provides local access to the commercial/retail areas. There is no posted speed limit.

Nimitz Highway is generally a two-way, four-lane, divided principal arterial roadway. This roadway is a State highway. It provides regional connectivity between H-1 Freeway and Ala Moana Boulevard. The posted speed limit along this roadway is 35 mph in the vicinity of the Project.

Future Conditions

The following roadway modifications are anticipated within the study area:

- As part of the Downtown TOD Plan, the proposed Project will transform Kekaulike Street into a shared-use street that will restrict most vehicular access. Authorized vehicles will be able to access Kekaulike Street during permitted loading hours.
- Hawaii Department of Transportation Highways Division (HDOT-HWY) plans to resurface Nimitz Highway between the H-1 Freeway and Atkinson Drive.

2.6 Parking/Loading Facilities

The Study Segment is currently designated as freight loading zone between 7:00 AM to 4:00 PM on Monday through Saturday, which means it is reserved for the exclusive use of commercial vehicles with a permit while unauthorized vehicles will be towed away.

Within the study area, on-street parking is provided on the mauka side of King Street between River Street and Maunakea Street, which is designated as a freight loading zone Monday through Friday between 8:30 AM and 3:30 PM. On Saturdays, Sundays, and State Holidays on-street parking on King Street is permitted for all users (i.e. a permit is not required). Tow-away hours are 4:00 AM to 8:30 AM and 3:30 PM to 6:30 PM on Monday through Friday, and 4:00 AM to 6:00 AM on Saturdays.

On-street parking is also provided along Maunakea Street, with some portions designated as a freight loading zone on Monday through Saturday between 7:00 AM to 4:00 PM. There are several nearby off-street parking areas including Chinatown Marketplace Parking Lot, Harbor Courtyard Garage, and Kekaulike Courtyard Garage. The existing freight loading zone and parking restrictions are shown in Figure 2.3.

[3] Based on the Downtown Neighborhood Transit-Oriented Development Plan, City and County of Honolulu, August 2017.

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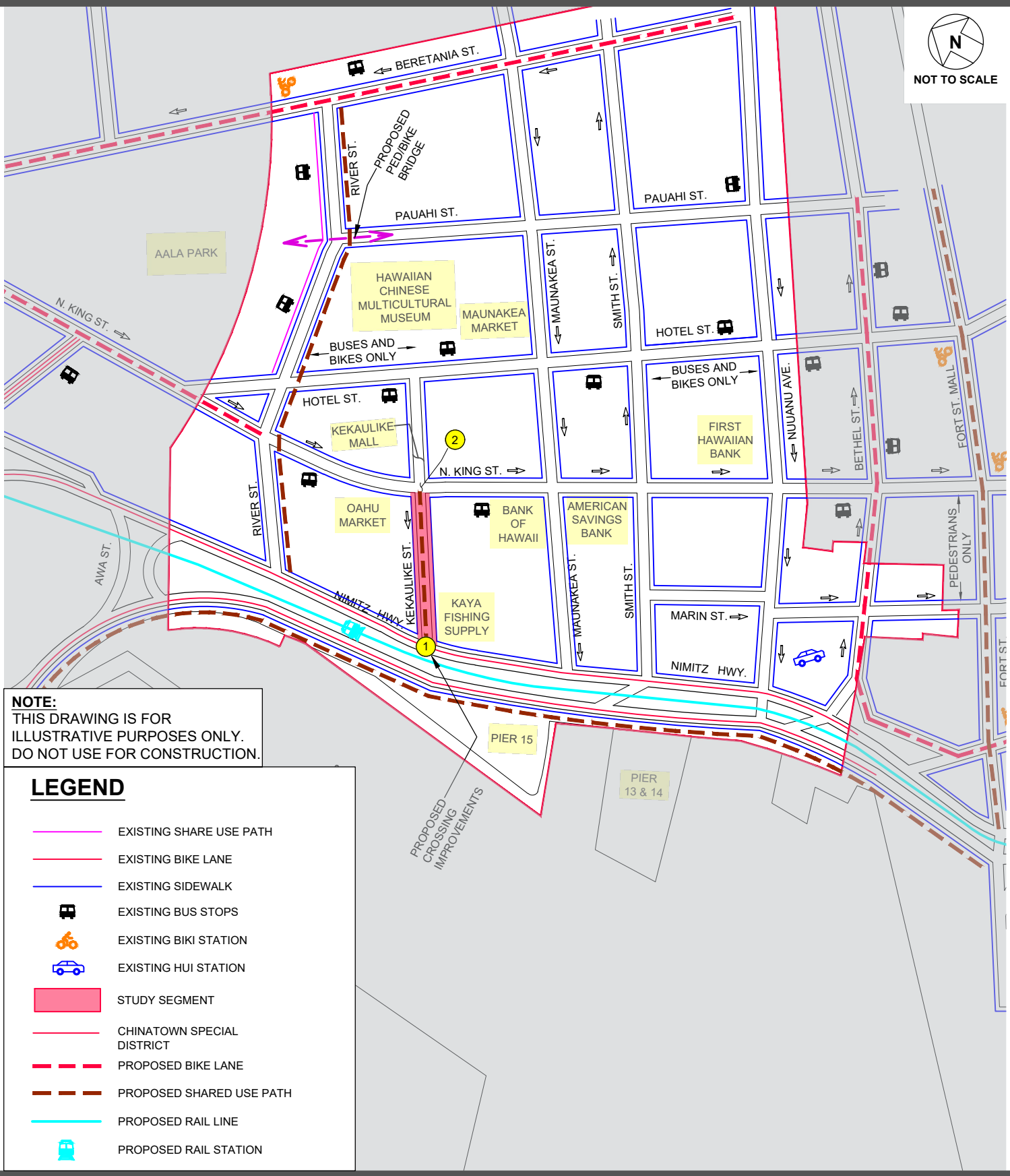

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LEGEND

- EXISTING SHARE USE PATH
- EXISTING BIKE LANE
- EXISTING SIDEWALK
- EXISTING BUS STOPS
- EXISTING BIKI STATION
- EXISTING HUI STATION
- STUDY SEGMENT
- CHINATOWN SPECIAL DISTRICT
- PROPOSED BIKE LANE
- PROPOSED SHARED USE PATH
- PROPOSED RAIL LINE
- PROPOSED RAIL STATION

FIGURE 2.2

EXISTING AND PROPOSED PEDESTRIAN, BICYCLE AND TRANSIT FACILITIES

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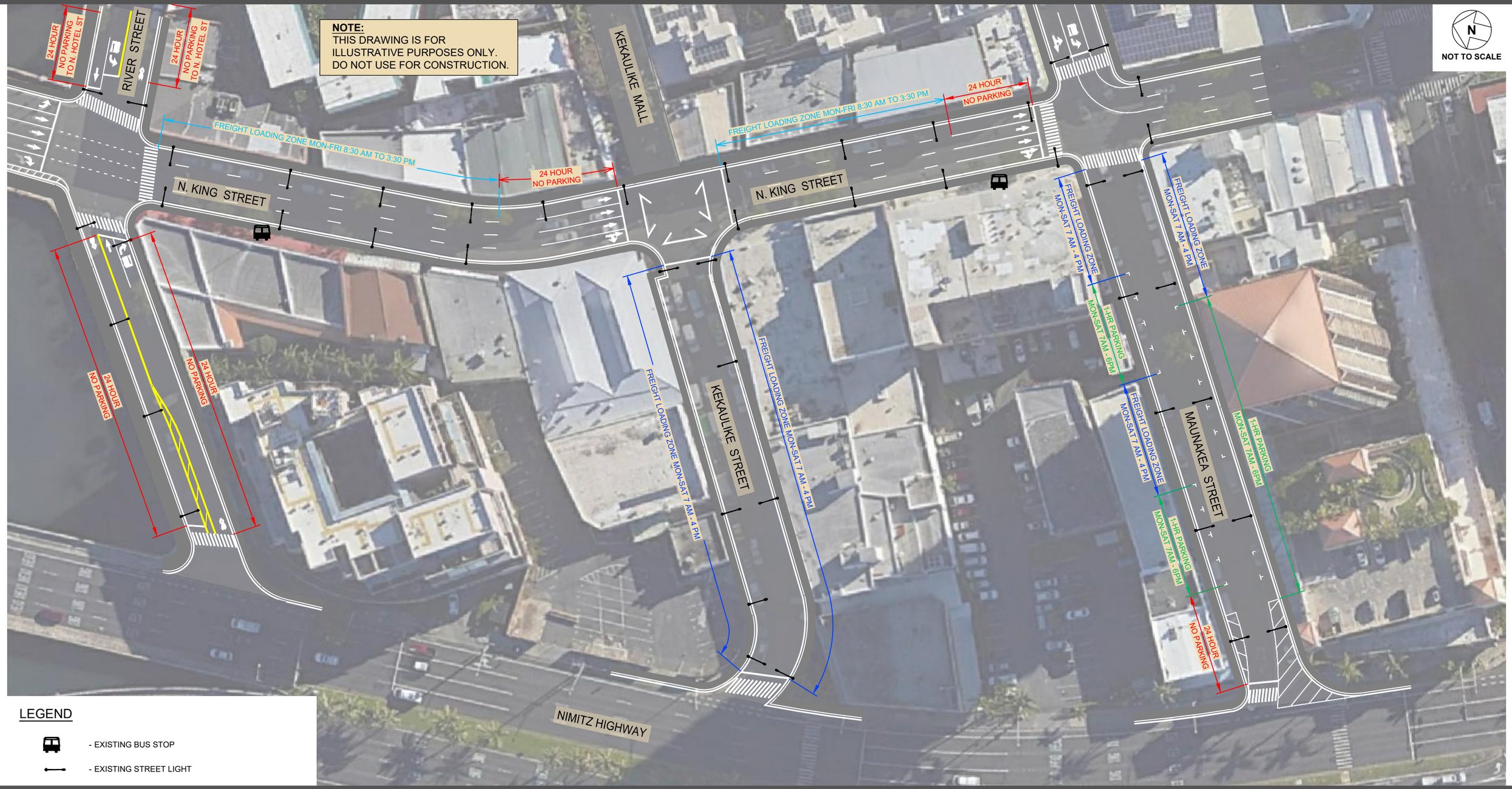

FIGURE 2.3

EXISTING FREIGHT LOADING ZONE AND ON-STREET PARKING AREAS

3. EXISTING TRAFFIC CONDITIONS

Manual turning movement traffic counts and pedestrian counts were conducted at the study intersections on Thursday, November 14, 2019 and Saturday, November 16, 2019 between 6:00 AM and 6:00 PM. Note: Since Nimitz Highway is a divided roadway only the westbound and northbound movements were included in the data collection.

Based on the count data, it was determined that the weekday AM, MD, and PM peak hours of traffic on King Street occur between 7:30 AM and 8:30 AM, 9:30 AM and 10:30 AM, and 3:45 PM and 4:45 PM, while the WE peak hour occurs between 10:15 AM and 11:15 AM. The weekday AM, MD, and PM peak hours of traffic on Nimitz Highway occur between 7:15 AM and 8:15 AM, 11:00 AM and 12:00 PM, and 4:15 PM and 5:15 PM, while the WE peak hour occurs between 12:00 PM and 1:00 PM. Traffic count data is provided in Appendix B.

3.1 Regional Observations

Weekday Traffic

During the AM peak hour of traffic, heavy southbound traffic was observed along King Street as commuters head to work. At times, the southbound vehicle queue was observed to extend beyond the Kekaulike Street intersection from adjacent signalized intersections. Light traffic was observed along the Study Segment during the AM peak hour of traffic. Light pedestrian activity within the study area was observed during the AM peak hour of traffic.

During the MD peak hour of traffic, heavy pedestrian activity was observed at the King Street/Kekaulike Street intersection. Based on field observations, pedestrians were mostly customers of the nearby businesses. The highest hourly volume of traffic to travel along the Study Segment during a 12-hour period was observed to occur during the MD peak hour of traffic. As previously mentioned in Section 2.2, the Study Segment is designated as freight loading zone for permitted vehicles only between 7:00 AM to 4:00 PM on Monday through Saturday. However, due to the lack of enforcement, most of the vehicles parked in the freight loading zone area were observed to be passenger vehicles of customers shopping within the study area. In addition, some were observed to double park and block a through lane on Kekaulike Street.

Based on field observations, the freight loading zone along King Street was generally observed to be fully utilized during the freight loading zone hours. Similar to the Study Segment, non-permitted vehicles were observed to use the freight loading zone to park.

During the PM peak hour of traffic, heavy southbound traffic was observed along King Street and Nimitz Highway. Similar to the AM peak hour, the southbound vehicle queue along King Street was observed to extend beyond the Kekaulike Street intersection from adjacent signalized intersections. Light pedestrian activity within the study area and light vehicular traffic along the Study Segment was observed during the PM peak hour of traffic as most of the nearby businesses close by/around 3:00 PM.

Weekend Traffic

During the WE peak hour of traffic, higher pedestrian activity was observed in the study area and higher vehicle traffic was observed along the Study Segment when compared to the weekday MD peak hour of traffic. In addition, congestion along the Study Segment was compounded by the increase in the number of vehicles that were observed to double park during the WE peak hour

of traffic. Based on field observations, on-street parking along King Street was generally observed to be fully utilized during the WE peak hour of traffic

3.2 Existing Conditions Intersection Analysis

At the time of data collection and field observations the King Street bus only lane had not been constructed, thus it was not included as part of the existing conditions.

All movements at the study intersections currently operated at LOS C or better during the weekday AM, MD, PM, and WE peak hours of traffic.

Table 3.1 shows a summary of the existing delay, v/c ratio, and LOS. Figure 3.1 shows the existing traffic volumes and lane configuration at the study intersections. LOS worksheets are provided in Appendix C.

Table 3.1: Existing Conditions LOS Summary

Intersection	Existing Conditions											
	AM			MD			PM			WE		
	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: Nimitz Highway/Kekaulike Street*												
WB RT	14	0.09	B	17	0.20	C	18	0.09	C	19	0.30	C
NB TH	0	0.36	A	0	0.39	A	0	0.50	A	0	0.41	A
2: King Street/Kekaulike Street*												
SB TH/RT	15	0.66	B	15	0.61	B	14	0.66	B	15	0.63	B
Overall	15	0.42	B	15	0.39	B	14	0.46	B	15	0.40	B

*Due to limitations in the HCM 6th Edition and HCM 2010 methodology, this intersection was analyzed using HCM 2000 methodology.

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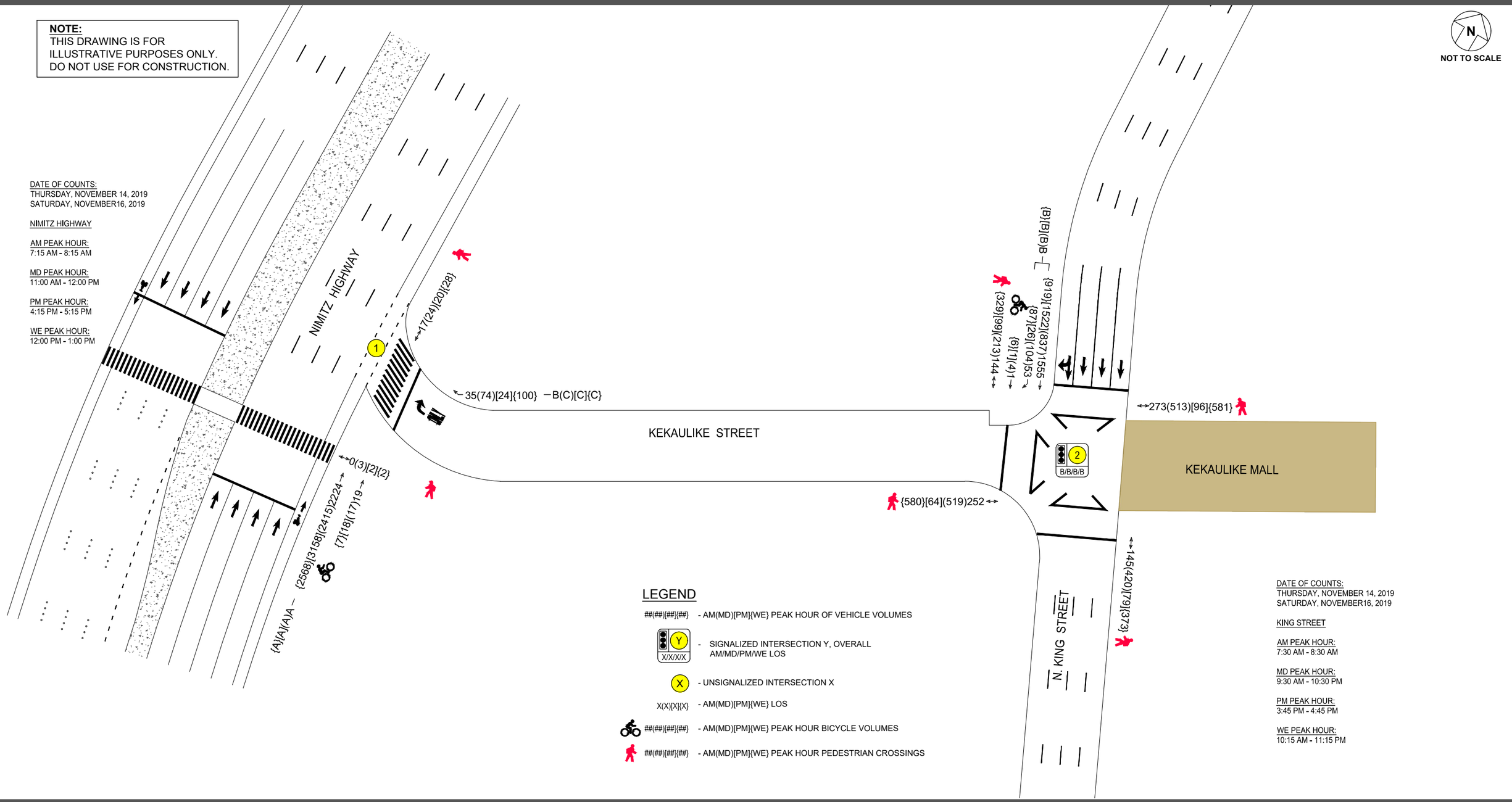

FIGURE 3.1

EXISTING CONDITIONS, LANE CONFIGURATION, TRAFFIC VOLUMES, AND LOS

4. BASE YEAR 2026 TRAFFIC CONDITIONS

The Year 2026 was selected to reflect the Project completion year. The Base Year 2026 scenario represents the traffic conditions within the study area without the Project.

4.1 De Facto Growth Rate

Background traffic growth in the study area was determined based on the Oahu Regional Transportation Plan 2040 (ORTP) Travel Demand Forecasting Model (TDFM). The TDFM uses data from 2012 as its baseline before assigning land uses and socioeconomic data to Traffic Analysis Zones (TAZs) to generate and assign traffic across the roadway network. Based on the TDFM, a conservative background growth rate of 0.5% and 1.5% were applied along North King Street and Nimitz Highway, respectively, to determine Base Year 2026 conditions without the Project.

4.2 Planned Roadway Projects

As mentioned above the conversion of one through lane on King Street to a bus-only lane between Dillingham Boulevard and Alapai Street was completed in December 2020 after traffic volumes were collected. Thus, the lane reduction on King Street was reflected under Base Year 2026 conditions.

4.3 Base Year 2026 Intersection Analysis

Under Base Year 2026 conditions, all movements at the Nimitz Highway/Kekaulike Street intersection are expected to continue operating similar to existing conditions during the AM, MD, PM, and WE peak hours of traffic, while the vehicle delay for the southbound movements at the King Street/Kekaulike Street intersection are expected to increase due to the proposed reduced laneage for passenger vehicles along King Street.

During the AM and PM peak hours of traffic, the number of through lanes on King Street was reduced from four (4) to three (3) lanes due to the reduction of one through lane for the bus only lane. During the MD and WE peak hours of traffic, the number of through lanes on King Street was reduced from four (4) to two (2) lanes due to the reduction of one through lane for the bus only lane and reduction of one through lane for the existing on-street freight loading zone. Southbound right-turn vehicles will be allowed to turn from the bus only lane. The vehicle delay for the southbound movements at the King Street/Kekaulike Street intersection are expected to increase by less than 10 seconds during the AM, MD, PM, and WE peak hours of traffic.

Table 4.1 shows a summary of the Base Year 2026 delay, v/c ratio, and LOS. Figure 4.1 shows the Base Year 2026 traffic volumes and lane configuration at the study intersections. LOS worksheets are provided in Appendix C.

Table 4.1: Existing Conditions and Base Year 2026 LOS Summary

Intersection	Existing Conditions												Base Year 2026											
	AM			MD			PM			WE			AM			MD			PM			WE		
	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	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS
1: Nimitz Highway/Kekaulike Street*																								
WB RT	14	0.09	B	17	0.20	C	18	0.09	C	19	0.30	C	15	0.10	C	18	0.23	C	21	0.11	C	21	0.33	C
NB TH	0	0.36	A	0	0.39	A	0	0.50	A	0	0.41	A	0	0.39	A	0	0.43	A	0	0.56	A	0	0.46	A
2: King Street/Kekaulike Street*																								
SB TH/RT	15	0.66	B	15	0.61	B	14	0.66	B	15	0.63	B	18	0.79	B	21	0.79	C	18	0.80	B	24	0.84	C
SB RT	-	-	-	-	-	-	-	-	-	-	-	-	10	0.15	A	11	0.25	B	8	0.08	A	11	0.21	B
Overall	15	0.42	B	15	0.39	B	14	0.46	B	15	0.40	B	18	0.49	B	20	0.50	B	18	0.55	B	22	0.53	C

*Due to limitations in the HCM 6th Edition and HCM 2010 methodology, this intersection was analyzed using HCM 2000 methodology.

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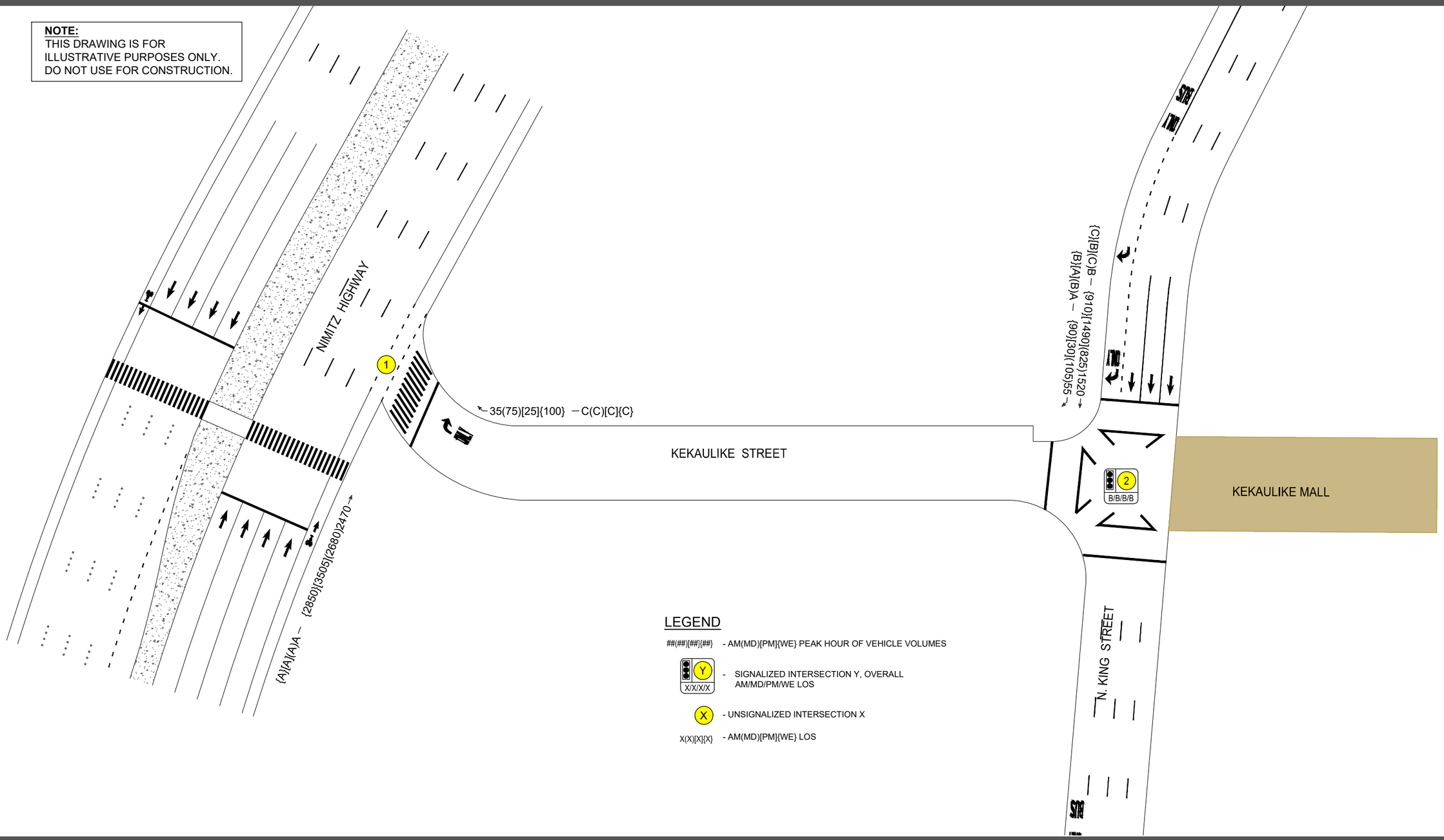

FIGURE 4.1

BASE YEAR 2026 TRAFFIC VOLUMES AND LOS

5. FUTURE YEAR 2026 TRAFFIC CONDITIONS

The Future Year 2026 scenario represents the traffic conditions within the Project study area with the full build-out of the Project.

5.1 Project Description

The Project includes improvements to address the need for spatial continuity and connectivity between Kekaulike Mall, Kekaulike Street, and the Holau transit station. The Project proposes to convert the existing Kekaulike Street from a traditional roadway to a "shared-use street" concept allowing primarily pedestrian use with vehicular access for deliveries to local businesses during discrete hours.

Most vehicular traffic will be restricted within the Project area to provide an open shared space for business and pedestrian use. One-way paratransit (TheHandi-Van) and commercial freight access will be permitted in the project area during business hours and freight loading hours, respectively. Emergency and maintenance vehicles will be allowed access at any time. All authorized vehicles will enter at King Street and exit at Nimitz Highway.

5.1.1 Trip Distribution & Assignment

Upon completion of the Project, to be conservative it was assumed that the existing freight traffic traveling on Kekaulike Street during the weekday AM, MD, PM, and WE peak hours of traffic would remain on King Street and divert to other roadways such as Maunakea Street. See Figure 5.1 for Project Re-route Trips.

5.2 Future Year 2026 Analysis

Under Future Year 2026 conditions, all movements at the study intersections are expected to continue operating similar to Base Year 2026 conditions during the AM, MD, PM, and WE peak hours of traffic. Table 5.1 shows a summary of the Future Year 2026 delay, v/c ratio, and LOS. Figure 5.2 shows the Future Year 2026 traffic volumes and lane configuration at the study intersections. LOS worksheets are provided in Appendix C.

5.3 Multi-modal Impacts

The purpose of the Project is to improve multi-modal access along Kekaulike Street near the future Holau transit station. According to the Downtown TOD plan, approximately 97 percent of rail transit trips to the three (3) Downtown stations will begin as a walking, biking, or bus transit trip.[4] The proposed Project is expected to reduce the number of vehicles traveling along the Study Segment by eliminating passenger vehicle traffic and limiting daytime commercial freight deliveries. This creates an environment for pedestrian and bicyclists to travel directly from the future Holau transit station to Chinatown with a reduced potential of conflicts with vehicles.

The existing pedestrian and bicycle volumes along Nimitz Highway are currently low, but are expected to increase with the construction of rail. Thus, the multi-modal improvements along Kekaulike Street should consider the existing and planned pedestrian and bicycle facilities on Nimitz Highway.

[4] City and County of Honolulu, Downtown Neighborhood Transit-Oriented Development Plan, August 2017.

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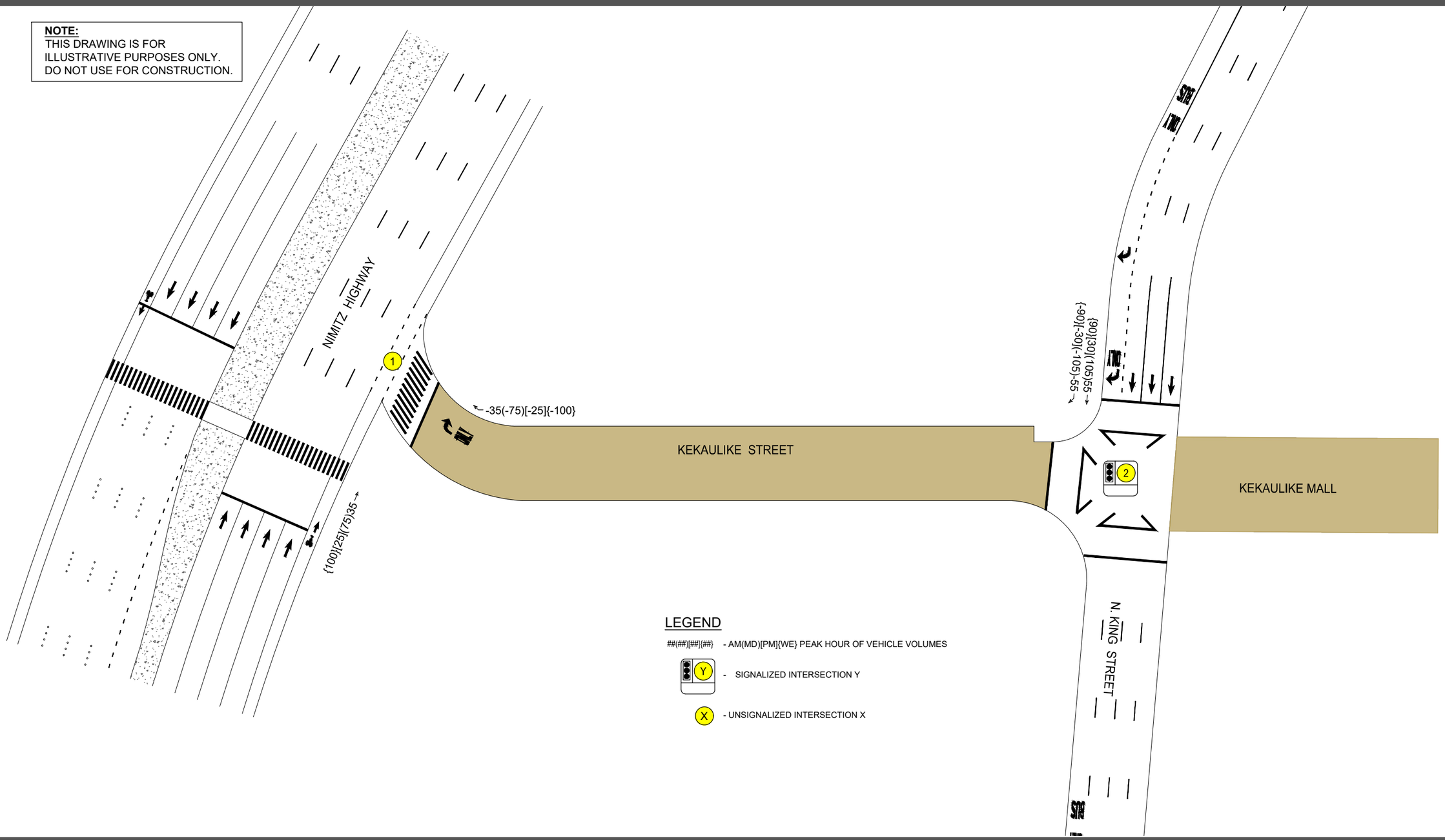

FIGURE 5.1

PROJECT REROUTE TRIPS

Table 5.1: Base Year and Future Year 2026 LOS Summary

Intersection	Base Year 2026												Future Year 2026											
	AM			MD			PM			WE			AM			MD			PM			WE		
	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	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS
1: Nimitz Highway/Kekaulike Street*																								
NB TH	0	0.39	A	0	0.43	A	0	0.56	A	0	0.46	A	0	0.40	A	0	0.44	A	0	0.56	A	0	0.47	A
2: King Street/Kekaulike Street*																								
SB TH/RT	18	0.79	B	21	0.79	C	18	0.80	B	24	0.84	C	19	0.81	B	27	0.89	C	19	0.82	B	31	0.93	C
Overall	18	0.49	B	20	0.50	B	18	0.55	B	22	0.53	C	19	0.51	B	27	0.56	C	19	0.56	B	31	0.58	C

*Due to limitations in the HCM 6th Edition and HCM 2010 methodology, this intersection was analyzed using HCM 2000 methodology.

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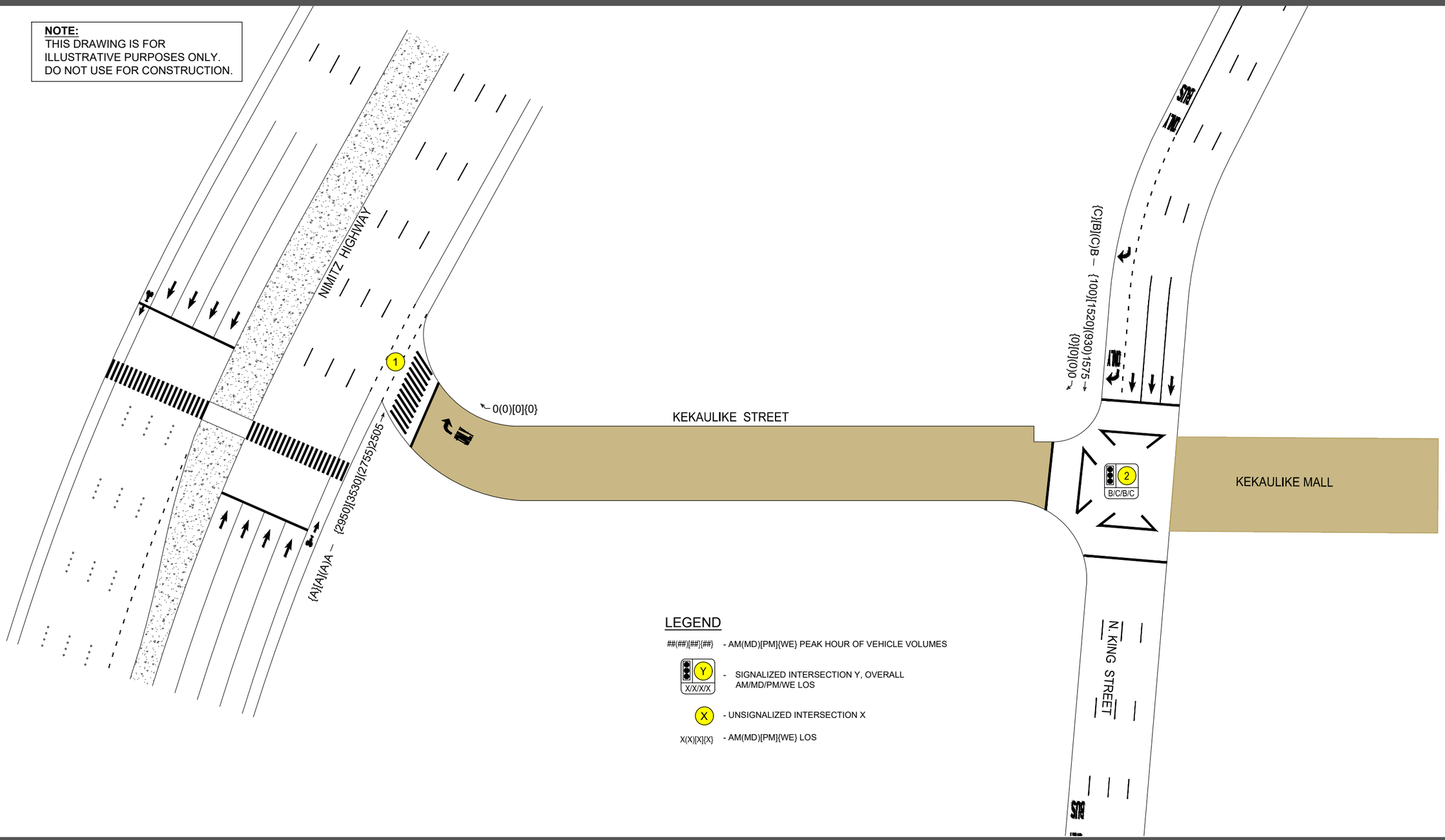

FIGURE 5.2

FUTURE YEAR 2026 TRAFFIC VOLUMES AND LOS

6. FREIGHT LOADING ZONE IMPACTS

The Project proposes to convert the existing Kekaulike Street from a traditional roadway to a "shared-use street" concept allowing primarily pedestrian use with vehicular access for deliveries to local businesses during discrete hours. Most vehicular traffic will be restricted within the Project area to provide an open shared space for business and pedestrian use. One-way paratransit (TheHandi-Van) and commercial freight access will be permitted in the project area during business hours and freight loading hours, respectively. The Project will also include reduced freight loading zones (i.e. curb space) and modified freight loading hours. Emergency and maintenance vehicles will be allowed access at any time. All authorized vehicles will enter at King Street and exit at Nimitz Highway.

Field observations and traffic data collection were conducted on Thursday, November 14, 2019 and Saturday, November 16, 2019. Figure 6.1 through Figure 6.4 summarize the existing weekday and Saturday traffic volumes along the Study Segment and at the King Street/Kekaulike Street intersection.

6.1 Freight Loading Zone Hours

Existing Operations

The Study Segment is currently designated as freight loading zone between 7:00 AM to 4:00 PM on Monday through Saturday. There is approximately 400 feet of available curb space (200 feet on each side) along the Study Segment for loading/unloading activities. However, many non-freight vehicles were observed to use the Study Segment for passenger loading/unloading or to park for personal shopping/business for extended periods of time. In addition, many of these non-freight related vehicles parking along the Study Segment were observed to double park and block a through lane. Some freight vehicles were also observed to double park and block a through lane.

Many of the freight vehicles were observed to make deliveries to multiple businesses within the study area some of which were parked longer than the 30-minute time limit, per Section 15-15.1 (b) (1) in the Revised Ordinances of Honolulu. Cargo vans and box trucks were the most common freight vehicles observed. Other freight vehicles observed were mini vans, pick-up trucks, and sedans.

Daily business hours within the study area are generally between 7:00 AM and 3:00 PM.

Future Operations

Commercial freight loading will be permitted between 8:30 PM and 5:30 AM Monday through Sunday with no exceptions during daytime use. The Project will provide two (2) freight loading zones, one roughly 78-foot loading zone on the south side of the roadway near King Street and one roughly 44-foot loading zone on the north side of the roadway near Nimitz Highway.

6.2 Potential Impacts

The following section describes potential impacts of the proposed Project.

Traffic Volume Shift to Surrounding Roadways

As mentioned above, many vehicles were observed to park along the Study Segment for both freight and non-freight related uses with some observed to double park and block a through lane along the Study Segment.

Upon completion of the Project, both freight and non-freight vehicles will not be allowed to park along the Study Segment between 5:30 AM and 8:30 PM. Thus, the vehicles currently parking along the Study Segment will likely shift to other roadways (or shift delivery times as discussed below). As shown in Table 6.1, the roughly 316(396) vehicles currently parking along the Study Segment between 5:30 AM and 8:30 PM on the weekday(Saturday) will likely shift to nearby on-street or off-street parking areas.

Table 6.1 Vehicle Parking Along Study Segment Between 5:30 AM and 8:30 PM

Type	Weekday	Saturday
Freight Loading/Unloading	47	38
Non-Freight Use	269	358
Total	**316**	**396**

Shift of delivery times

As shown in Figure 6.2 and Figure 6.4, the freight loading/unloading activity is spread out during the day with most deliveries occurring during daily business hours. Thus, with the proposed loading zone hours, the approximately 47(38) freight loading vehicles operating outside of the proposed freight loading times during the weekday(Saturday), would need to shift their delivery schedule or relocate to a nearby freight loading area (e.g. King Street or Maunakea Street).

Table 6.2 summarizes the current freight loading activity within and outside of the proposed freight loading hours. It is estimated that all current deliveries along the Study Segment can be accommodated during the proposed overnight freight loading period. This estimate is based on the following assumptions:

- There is approximately 120 feet of available curb space along the Study Segment for loading/unloading activities.
- Roughly 40 feet of space is needed for each commercial vehicle, which is based on the most frequently observed commercial vehicle, a box truck (10-26 feet long).
- A maximum freight loading/unloading time of 30 minutes per vehicle.

If more than three (3) freight vehicles arrive at the same time, freight vehicles may shift to surrounding roadways (e.g. Maunakea Street) or wait and circle around until a space is available. Enforcement of the 30-minute loading/unloading period would help to ensure adequate turnover to serve existing demand along the Study Segment.

Table 6.2 Existing Freight Loading Activity Time of Day Summary

Time Period/Day	Weekday	Saturday
12:00 AM - 5:30 AM*	2	3
5:30 AM – 8:30 PM	47	38
8:30 PM – 12:00 AM*	0	0
Total Outside Recommended Hours	47	38
Total Within Recommended Hours	2	3
24- Hour Total	**49**	**41**
*Permitted freight loading hours		

Shift of business operations

Currently, the Study Segment is designated as a freight loading zone between 7:00 AM to 4:00 PM on Monday through Saturday. Thus, nearby businesses and vendors are currently able to use the Study Segment to receive or deliver goods during all business hours and one hour after closing.

With the recommended freight loading zone hours, businesses would be need to receive or deliver goods during non-business hours.

6.3 Potential Mitigations

To help mitigate the potential impacts of the proposed Project, the following may be considered:

- Increase enforcement to ensure only commercial vehicles with a permit are using the freight loading zone, which may include enforcement officers actively monitoring the project area and issuing citations/tickets.
- Provide incentives for business owners to encourage delivery time shifts (to avoid overflow to adjacent roadways during the daytime).
- Designate King Street between River Street and Maunakea Street as a freight loading zone on Saturdays to provide additional space for freight loading/unloading.
- Lengthen the freight loading zone on Maunakea Street and/or River Street to provide additional space for freight loading/unloading.
- Identify nearby off-street parking areas for additional freight and non-freight use (e.g. Chinatown Marketplace Parking Lot, Harbor Courtyard Garage, and Kekaulike Courtyard Garage)

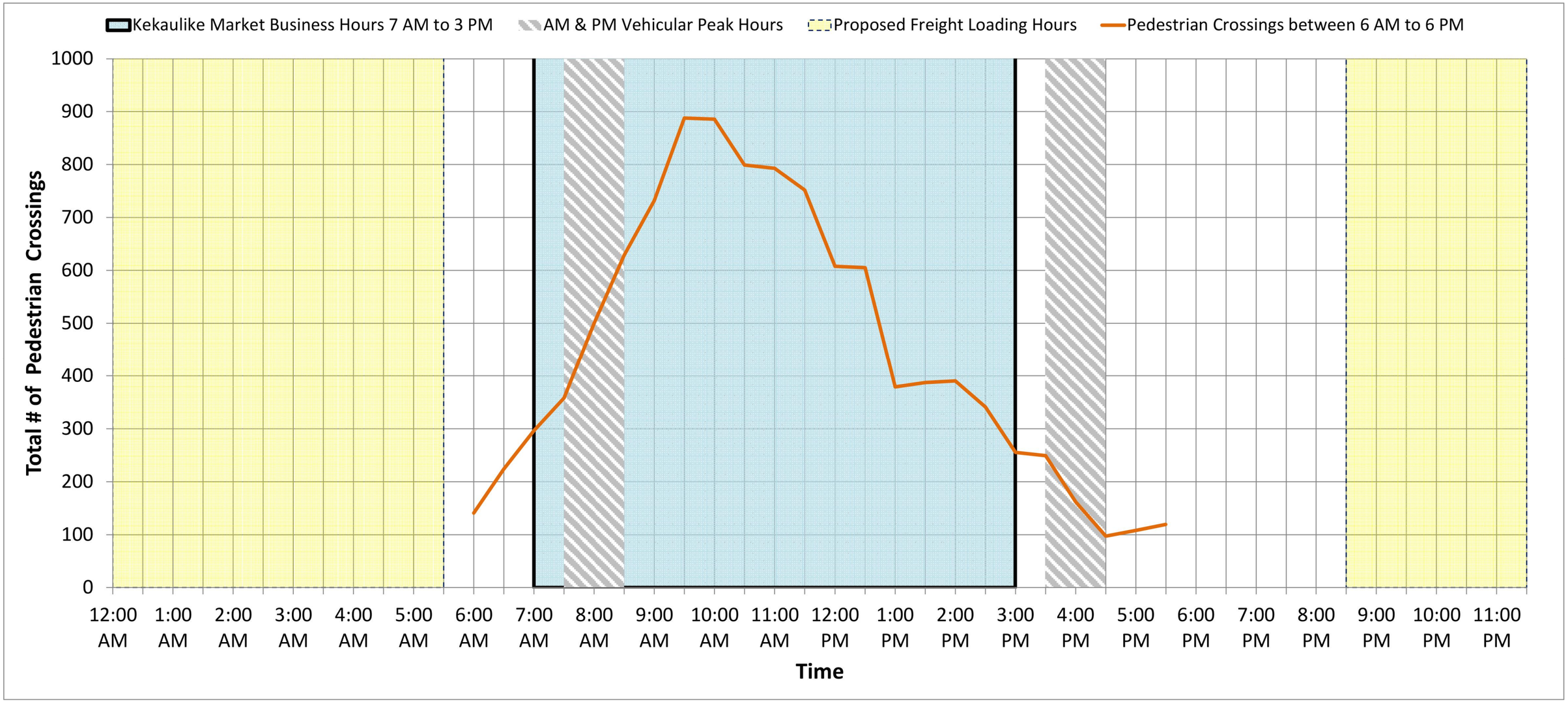

FIGURE 6.1

WEEKDAY TRAFFIC PEDESTRIAN VOLUME

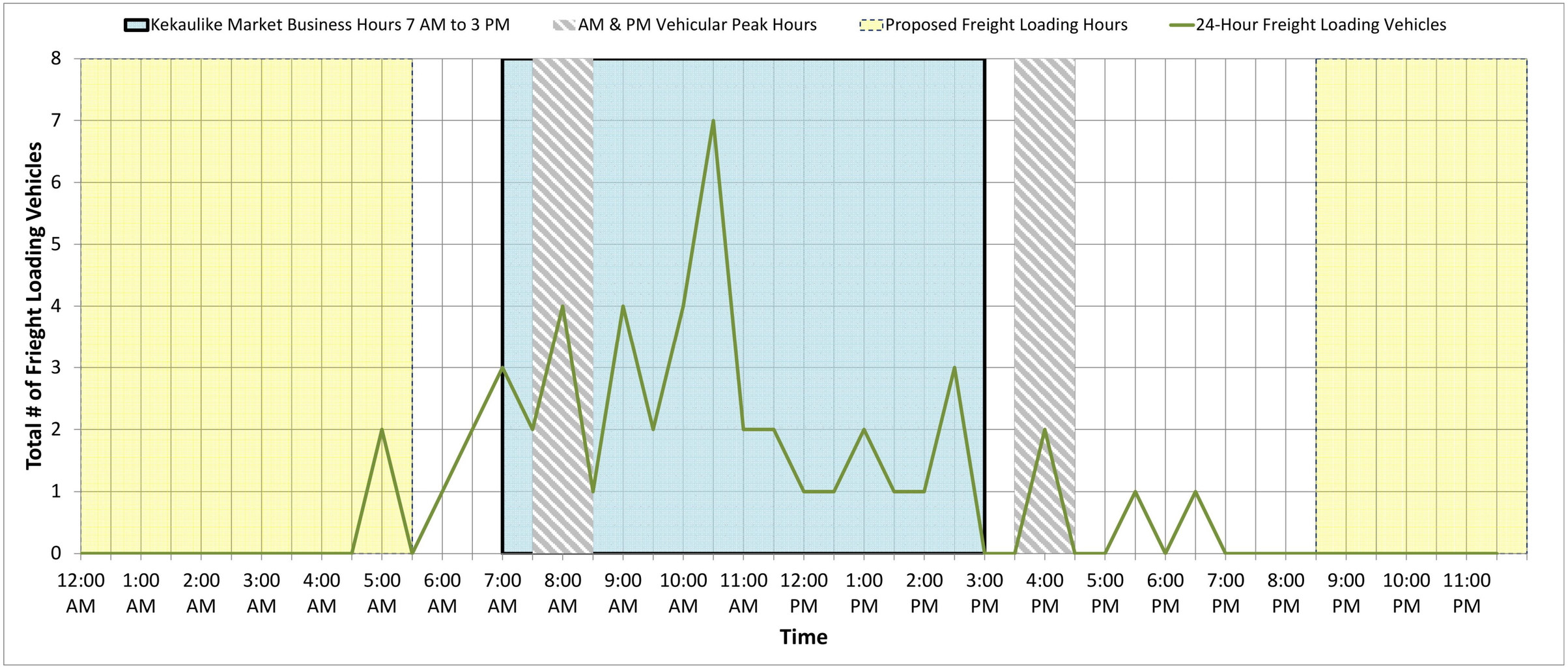

FIGURE 6.2

WEEKDAY TRAFFIC FREIGHT LOADING

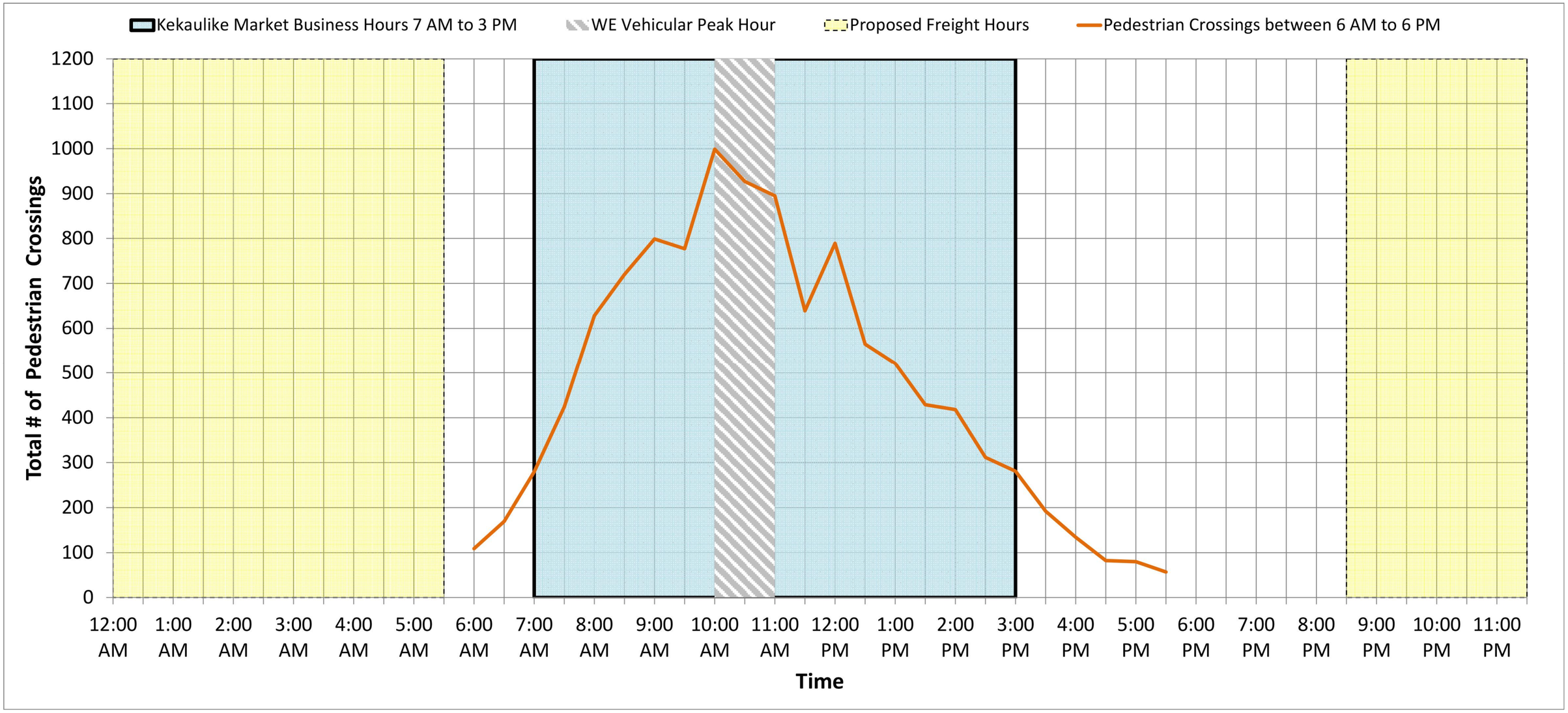

FIGURE 6.3

WEEKEND TRAFFIC PEDESTRIAN VOLUME

AustinTsutsumi & ASSOCIATES, INC.
Engineers & Surveyors

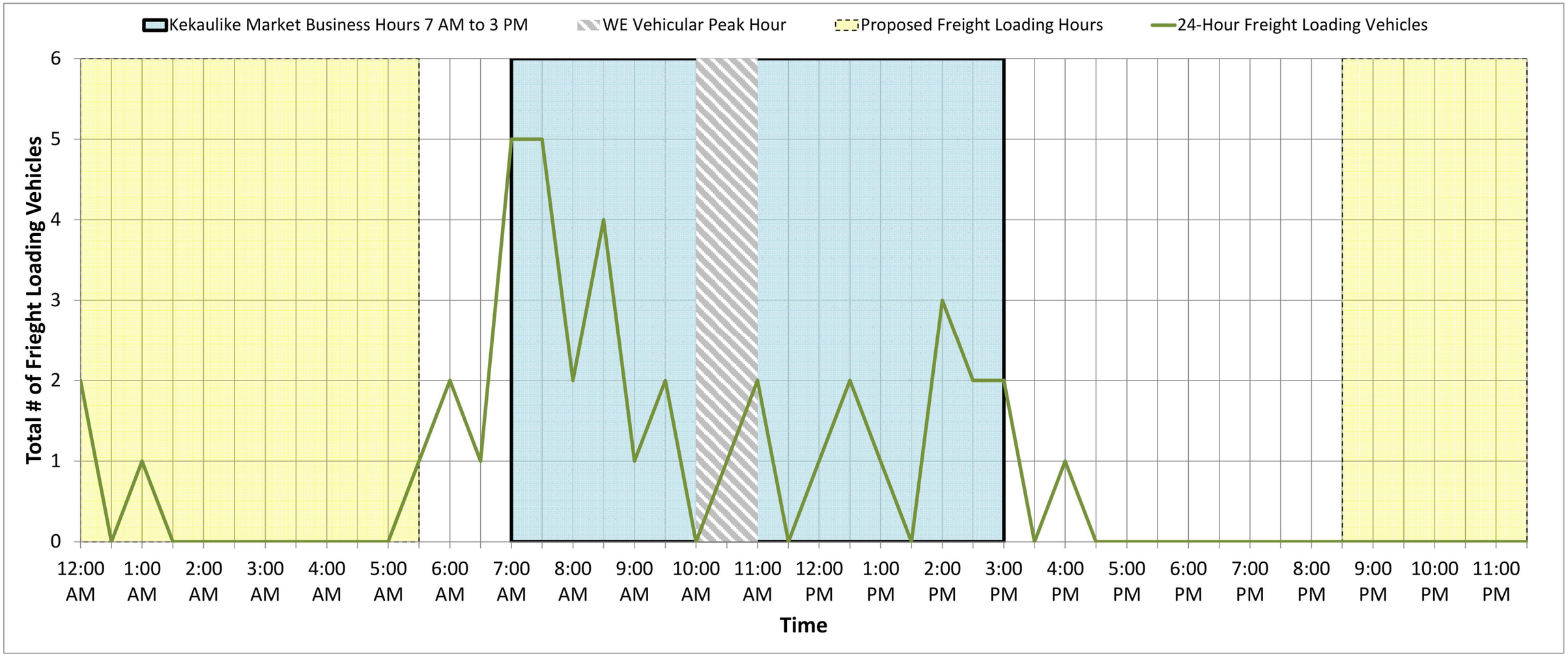

FIGURE 6.4

WEEKEND TRAFFIC FREIGHT LOADING

7. CONCLUSION

The Project proposes to convert the existing Kekaulike Street from a traditional roadway to a "shared-use street" concept allowing primarily pedestrian use with vehicular access for deliveries to local businesses during discrete hours. Most vehicular traffic will be restricted within the Project area to provide an open shared space for business and pedestrian use. One-way paratransit (TheHandi-Van) and commercial freight access will be permitted in the project area during business hours and freight loading hours, respectively. The Project will also include reduced freight loading zones (i.e. curb space) and modified freight loading hours. Emergency and maintenance vehicles will be allowed access at any time. All authorized vehicles will enter at King Street and exit at Nimitz Highway. Construction of the Project, both Phase 1 and Phase 2, is anticipated to be completed by Year 2026.

7.1 Existing Conditions

During the AM and PM peak hours of traffic, heavy southbound traffic was observed along King Street with the southbound vehicle queue extending extend beyond the Kekaulike Street intersection from adjacent signalized intersections. Light pedestrian activity within the study area and light vehicular traffic along the Study Segment was observed during the AM and PM peak hours of traffic.

During the MD peak hour of traffic, heavy pedestrian activity was observed at the King Street/Kekaulike Street intersection along with heavy westbound traffic along the Study Segment. Although, the Study Segment is designated as freight loading zone for permitted vehicles only between 7:00 AM to 4:00 PM on Monday through Saturday most of the vehicles parked in the freight loading zone area were observed to be non-commercial vehicle, some of which were observed to double park and block a through lane on Kekaulike Street.

During the WE peak hour of traffic, higher pedestrian activity was observed in the study area and higher vehicle traffic was observed along the Study Segment when compared to the weekday MD peak hour of traffic. In addition, congestion along the Study Segment was compounded by the increase in the number of vehicles that were observed to double park during the WE peak hour of traffic.

All movements at the study intersections currently operated at LOS C or better during the weekday AM, MD, PM, and WE peak hours of traffic.

7.2 Base Year 2026 Conditions

The conversion of one through lane on King Street to a bus-only lane between Dillingham Boulevard and Alapai Street was completed in December 2020 after traffic volumes were collected. Thus, the lane reduction on King Street was reflected under Base Year 2026 conditions.

Under Base Year 2026 conditions, all movements at the Nimitz Highway/Kekaulike Street intersection are expected to continue operating similar to existing conditions during the AM, MD, PM, and WE peak hours of traffic, while the vehicle delay for the southbound movements at the King Street/Kekaulike Street intersection are expected to increase due to the reduction of one through lane on King Street for the bus only lane. However, all movements at the King Street/Kekaulike Street intersection are expected to operate under capacity and at LOS C or better during the weekday AM, MD, PM, and WE peak hours of traffic.

7.3 Future Year 2026 Conditions

Upon completion of the Project, to be conservative it was assumed that the existing freight traffic traveling on Kekaulike Street during the weekday AM, MD, PM, and WE peak hours of traffic would remain on King Street and divert to other roadways such as Maunakea Street.

Under Future Year 2026 conditions, all movements at the study intersections are expected to continue operating similar to Base Year 2026 conditions during the AM, MD, PM, and WE peak hours of traffic.

7.4 Freight Loading Zone Impacts

Under Future Year 2026 conditions:

- Commercial freight loading will be permitted between **8:30 PM and 5:30 AM (i.e. overnight)** Monday through Sunday with no exceptions during daytime use.
- Signage and enforcement should be used to ensure freight loading/unloading does not occur during restricted hours.

8. REFERENCES

1. Transportation Research Board, Highway Capacity Manual, 2000.

2. City & County of Honolulu, Downtown Neighborhood Transit-Oriented Development Plan, August 2017.

3. City & County of Honolulu Department of Transportation Services, Oahu Bike Plan, December 2019.

APPENDICES

APPENDIX A

LEVEL OF SERVICE CRITERIA

LEVEL OF SERVICE (LOS) CRITERIA

VEHICULAR LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS (HCM 2000)

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 2000)

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 : 19-216_Kekaulike_St_-_King_St_111419_738218_11-14-2019
Site Code : 19-216 Kekaulike Complete Streets
Start Date : 11/14/2019
Page No : 1

Groups Printed- Motorcycles - Cars & Light Goods - Buses - Unit Trucks - Articulated Trucks - Bicycles on Road - Bicycles on Crosswalk - Pedestrians

	Southbound Approach Southbound				KING ST Westbound				SOUTHEASTBOUND APPROACH Northwestbound	KEKAULIKE ST Northbound				KING ST Eastbound				NORTHWEST BOUND APPROACH Southeastbound	
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Peds	Int. Total
06:00 AM	0	0	0	12	0	0	0	19	5	0	0	0	9	1	93	3	21	4	167
06:15 AM	0	0	0	14	0	0	0	25	3	0	0	0	8	0	128	10	19	2	209
06:30 AM	0	0	0	22	0	0	0	21	8	0	0	0	17	0	207	5	26	1	307
06:45 AM	0	0	0	42	0	0	0	34	6	0	0	0	19	0	294	5	25	3	428
Total	0	0	0	90	0	0	0	99	22	0	0	0	53	1	722	23	91	10	1111
07:00 AM	0	0	0	22	0	0	0	39	1	0	1	1	26	0	325	9	37	5	466
07:15 AM	0	0	0	26	0	0	0	53	2	0	0	0	36	0	379	11	45	4	556
07:30 AM	0	0	0	26	0	0	0	55	8	0	0	0	27	0	431	16	50	4	617
07:45 AM	0	1	0	34	0	0	0	52	5	0	0	0	28	1	447	7	65	4	644
Total	0	1	0	108	0	0	0	199	16	0	1	1	117	1	1582	43	197	17	2283
08:00 AM	2	1	0	39	1	0	0	77	4	0	0	0	35	0	375	9	66	6	615
08:15 AM	1	0	0	46	0	0	0	68	6	0	0	0	54	0	302	21	92	7	597
08:30 AM	0	0	0	61	0	0	0	101	13	0	0	0	36	0	237	15	105	2	570
08:45 AM	0	0	0	58	0	0	0	106	4	0	0	0	47	0	232	17	92	4	560
Total	3	1	0	204	1	0	0	352	27	0	0	0	172	0	1146	62	355	19	2342
09:00 AM	0	0	0	116	0	0	0	96	11	0	0	0	38	0	202	19	103	8	593
09:15 AM	0	0	0	105	0	0	0	108	10	0	0	0	48	0	213	15	87	2	588
09:30 AM	0	0	0	107	0	0	0	136	11	0	0	0	42	0	226	27	131	4	684
09:45 AM	0	0	0	120	0	0	0	155	10	0	0	0	47	0	207	25	121	4	689
Total	0	0	0	448	0	0	0	495	42	0	0	0	175	0	848	86	442	18	2554
10:00 AM	0	0	0	108	0	0	0	125	27	0	1	0	60	0	217	26	137	17	718
10:15 AM	0	0	0	85	0	0	0	103	21	0	0	0	64	0	187	26	124	15	625
10:30 AM	0	0	0	62	0	0	0	121	20	0	0	0	68	0	231	22	119	20	663
10:45 AM	0	0	0	65	0	0	0	92	19	0	0	0	77	0	221	21	126	10	631
Total	0	0	0	320	0	0	0	441	87	0	1	0	269	0	856	95	506	62	2637
11:00 AM	0	0	0	108	0	0	1	103	3	0	0	1	49	0	230	17	125	6	643
11:15 AM	0	0	0	111	0	0	0	91	17	0	0	0	55	0	210	22	116	9	631
11:30 AM	0	0	0	122	0	0	0	103	9	0	0	0	67	0	244	23	132	1	701
11:45 AM	0	0	0	94	0	0	0	69	11	0	0	0	45	0	215	11	94	5	544
Total	0	0	0	435	0	0	1	366	40	0	0	1	216	0	899	73	467	21	2519
12:00 PM	0	0	0	65	0	0	0	58	11	0	0	0	51	0	232	15	98	10	540
12:15 PM	0	0	0	75	0	0	0	61	21	0	0	0	51	0	190	14	93	14	519
12:30 PM	0	0	0	88	0	0	0	71	2	0	0	0	66	0	252	14	77	6	576
12:45 PM	0	0	0	69	0	0	0	52	6	0	0	0	54	0	202	12	109	5	509
Total	0	0	0	297	0	0	0	242	40	0	0	0	222	0	876	55	377	35	2144
01:00 PM	0	0	0	56	0	0	0	40	3	0	0	0	27	0	230	13	64	2	435
01:15 PM	0	0	0	46	0	0	0	35	1	0	0	0	50	0	220	18	54	1	425
01:30 PM	0	0	0	53	0	0	0	34	4	0	0	0	37	0	212	14	69	3	426

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Groups Printed- Motorcycles - Cars & Light Goods - Buses - Unit Trucks - Articulated Trucks - Bicycles on Road - Bicycles on Crosswalk - Pedestrians

	Southbound Approach Southbound				KING ST Westbound				SOUTHEASTBOUND APPROACH Northwestbound	KEKAULIKE ST Northbound				KING ST Eastbound				NORTHWESTBOUND APPROACH Southeastbound	
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Peds	Int. Total
01:45 PM	0	1	0	47	0	0	0	46	9	0	0	0	30	0	226	13	54	1	427
Total	0	1	0	202	0	0	0	155	17	0	0	0	144	0	888	58	241	7	1713
02:00 PM	0	0	0	48	0	0	0	29	20	0	0	0	39	0	194	3	72	9	414
02:15 PM	0	0	0	30	0	0	0	40	11	0	0	0	34	0	224	9	42	16	406
02:30 PM	0	0	0	36	0	0	0	44	18	0	0	0	15	0	234	11	46	13	417
02:45 PM	0	0	0	35	0	0	0	37	11	0	0	0	39	0	243	9	36	11	421
Total	0	0	0	149	0	0	0	150	60	0	0	0	127	0	895	32	196	49	1658
03:00 PM	0	0	0	19	0	0	0	24	5	0	0	0	24	0	256	14	30	0	372
03:15 PM	0	0	0	33	0	0	0	24	6	0	0	0	41	0	309	8	48	1	470
03:30 PM	0	0	0	30	0	0	0	20	3	0	0	0	25	0	311	11	39	4	443
03:45 PM	0	0	0	21	0	0	0	30	4	0	0	0	34	0	356	8	35	4	492
Total	0	0	0	103	0	0	0	98	18	0	0	0	124	0	1232	41	152	9	1777
04:00 PM	1	0	0	30	0	0	0	10	2	0	0	0	19	0	354	6	33	0	455
04:15 PM	0	0	0	18	0	0	0	13	0	0	0	0	22	0	385	6	15	0	459
04:30 PM	0	0	0	10	0	0	0	11	1	0	0	1	24	0	427	6	13	1	494
04:45 PM	0	0	0	10	0	0	0	10	0	0	0	0	13	0	372	3	3	1	412
Total	1	0	0	68	0	0	0	44	3	0	0	1	78	0	1538	21	64	2	1820
05:00 PM	0	1	0	17	0	0	0	12	0	0	0	0	13	0	355	6	10	5	419
05:15 PM	0	1	0	7	0	0	0	19	0	0	0	0	12	0	358	7	7	6	417
05:30 PM	0	0	0	15	0	0	0	14	0	0	0	0	20	0	341	4	10	1	405
05:45 PM	0	0	0	4	0	0	0	16	0	0	0	0	18	0	364	6	17	4	429
Total	0	2	0	43	0	0	0	61	0	0	0	0	63	0	1418	23	44	16	1670
Grand Total	4	5	0	2467	1	0	1	2702	372	0	2	3	1760	2	12900	612	3132	265	24228
Apprch %	0.2	0.2	0	99.6	0	0	0	99.9	100	0	0.1	0.2	99.7	0	77.5	3.7	18.8	100	
Total %	0	0	0	10.2	0	0	0	11.2	1.5	0	0	0	7.3	0	53.2	2.5	12.9	1.1	
Motorcycles	1	0	0	0	0	0	0	0	0	0	0	1	0	0	184	4	0	0	190
% Motorcycles	25	0	0	0	0	0	0	0	0	0	0	33.3	0	0	1.4	0.7	0	0	0.8
Cars & Light Goods	1	2	0	0	0	0	0	0	0	0	1	1	0	1	12228	589	0	0	12823
% Cars & Light Goods	25	40	0	0	0	0	0	0	0	0	50	33.3	0	50	94.8	96.2	0	0	52.9
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	328	2	0	0	330
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.5	0.3	0	0	1.4
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	126	13	0	0	139
% Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.1	0	0	0.6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	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
Bicycles on Road	2	3	0	0	1	0	1	0	0	0	1	1	0	1	30	4	0	0	44
% Bicycles on Road	50	60	0	0	100	0	100	0	0	0	50	33.3	0	50	0.2	0.7	0	0	0.2
Bicycles on Crosswalk	0	0	0	14	0	0	0	8	2	0	0	0	28	0	0	0	4	7	63
% Bicycles on Crosswalk	0	0	0	0.6	0	0	0	0.3	0.5	0	0	0	1.6	0	0	0	0.1	2.6	0.3
Pedestrians	0	0	0	2453	0	0	0	2694	370	0	0	0	1732	0	0	0	3128	258	10635
% Pedestrians	0	0	0	99.4	0	0	0	99.7	99.5	0	0	0	98.4	0	0	0	99.9	97.4	43.9

NWbound movement captures pedestrians crossing diagonally from the NE corner to the SW corner.
***SEbound movement captures pedestrians crossing diagonally from the NW corner to the SE corner. ***

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Site Code : 19-216 Kekaulike Complete Streets
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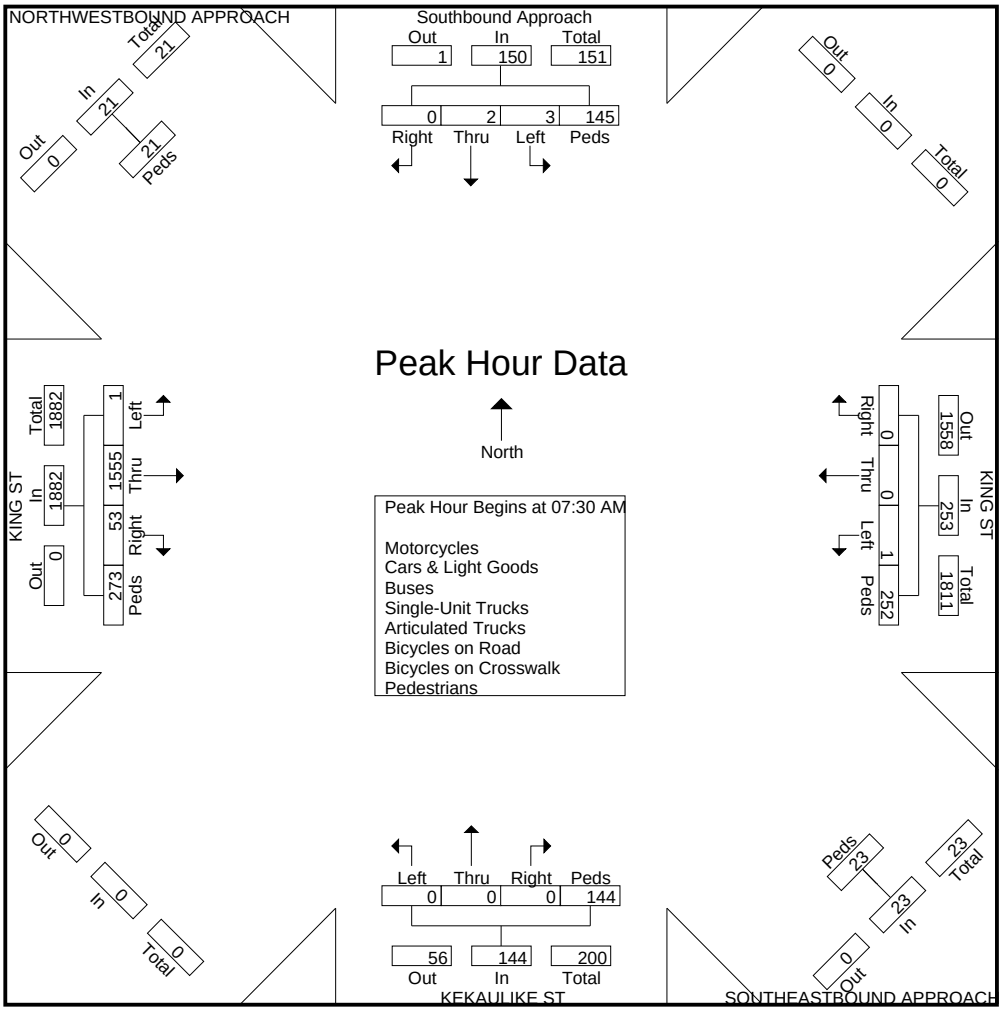
	Southbound Approach Southbound					KING ST Westbound					SOUTHEASTBOUND APPROACH Northwestbound		KEKAULIKE ST Northbound					KING ST Eastbound					NORTHWESTBOUND APPROACH Southeastbound		
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:30 AM																									
07:30 AM	0	0	0	26	26	0	0	0	55	55	**8**	**8**	0	0	0	27	27	0	431	16	50	497	4	4	617
07:45 AM		**1**																**1**	**447**			**520**			**644**
08:00 AM	**2**	1	0	39	42	**1**	0	0	**77**	**78**	4	4	0	0	0	35	35	0	375	9	66	450	6	6	615
08:15 AM				**46**	**47**											**54**	**54**		302	**21**	**92**		**7**	**7**	
Total Volume	3	2	0	145	150	1	0	0	252	253	23	23	0	0	0	144	144	1	1555	53	273	1882	21	21	2473
% App. Total	2	1.3	0	96.7		0.4	0	0	99.6		100		0	0	0	100		0.1	82.6	2.8	14.5		100		
PHF	.375	.500	.000	.788	.798	.250	.000	.000	.818	.811	.719	.719	.000	.000	.000	.667	.667	.250	.870	.631	.742	.905	.750	.750	.960



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File Name : Kekaulike St - King St 111419 6hr
Site Code : 19-216 Kekaulike Complete Streets
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	Southbound Approach SOUTHBOUND					KING ST WESTBOUND					SOUTHEAST BOUND APPROACH From Southeast		KEKAULIKE ST NORTHBOUND					KING ST EASTBOUND					NORTHWES TBOUND APPROACH From Northwest		
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Int. Total
Peak Hour Analysis From 09:00 AM to 10:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 09:30 AM																									
09:30 AM	0	0	0	107	107	0	0	0	136	136	11	11	0	0	0	42	42	0	**226**	**27**	131	**384**	4	4	684
09:45 AM	0	0	0	**120**	**120**	0	0	0	**155**	**155**	10	10	0	0	0	47	47	0	207	25	121	353	4	4	689
10:00 AM	0	0	0	108	108	0	0	0	125	125	**27**	**27**	0	**1**	0	60	61	0	217	26	**137**	380	**17**	**17**	**718**
10:15 AM	0	0	0	85	85	0	0	0	103	103	21	21	0	0	0	**64**	**64**	0	187	26	124	337	15	15	625
Total Volume	0	0	0	420	420	0	0	0	519	519	69	69	0	1	0	213	214	0	837	104	513	1454	40	40	2716
% App. Total	0	0	0	100		0	0	0	100		100		0	0.5	0	99.5		0	57.6	7.2	35.3		100		
PHF	.000	.000	.000	.875	.875	.000	.000	.000	.837	.837	.639	.639	.000	.250	.000	.832	.836	.000	.926	.963	.936	.947	.588	.588	.946

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File Name : Kekaulike St - King St 111419 6hr
Site Code : 19-216 Kekaulike Complete Streets
Start Date : 11/14/2019
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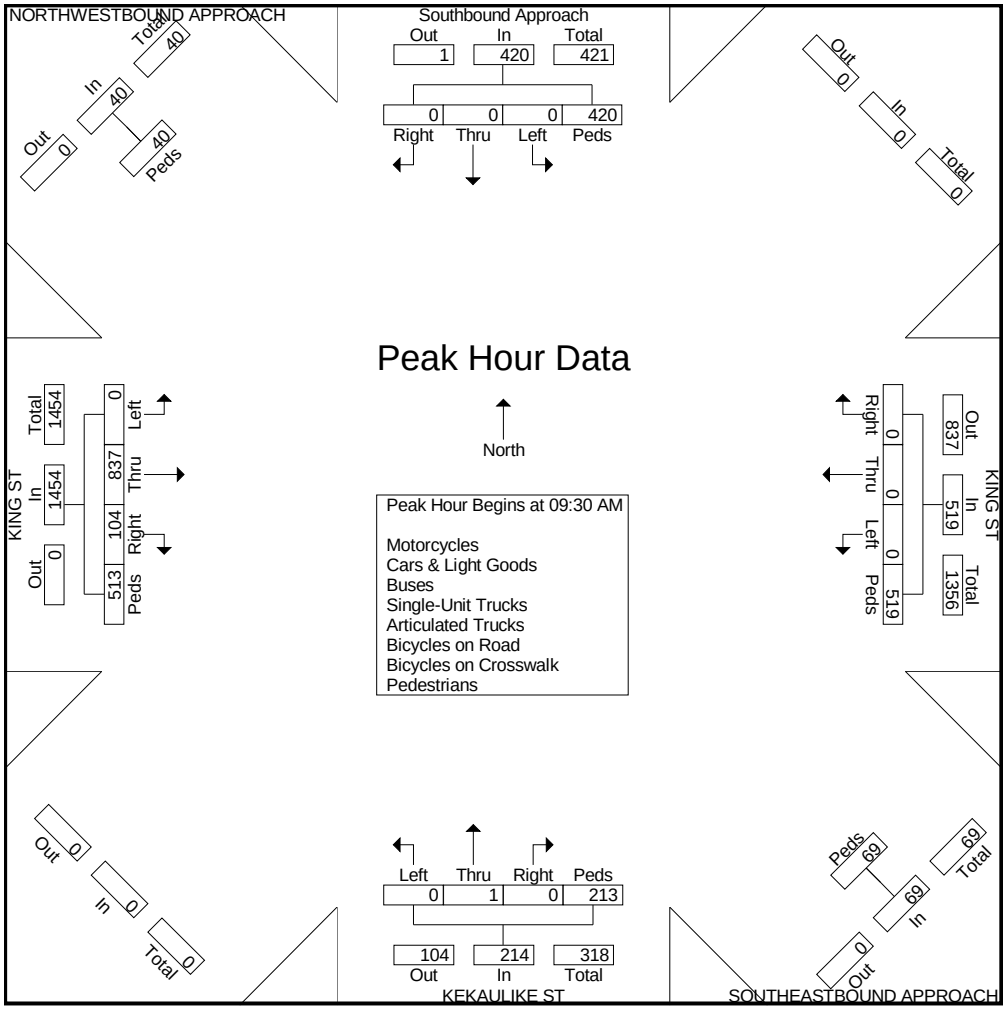

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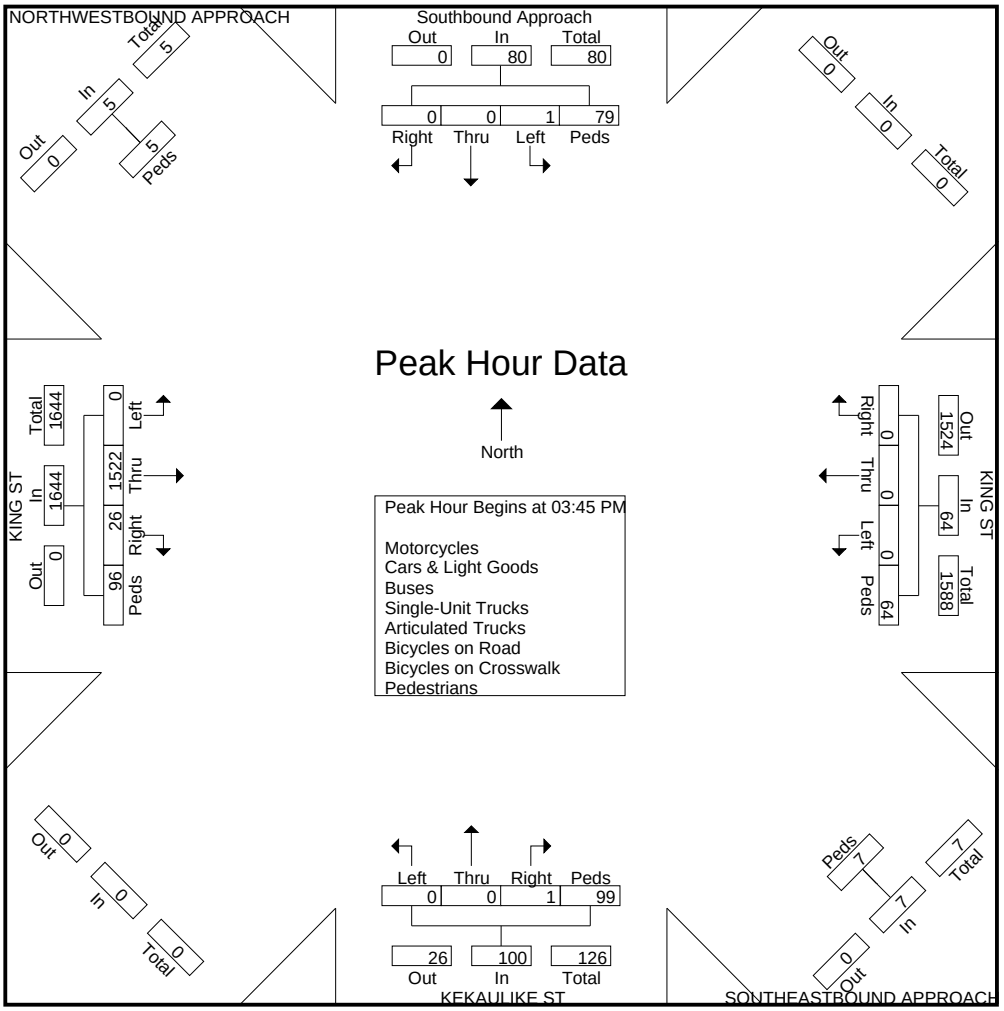
File Name : 19-216_Kekaulike_St_-_King_St_111419_738218_11-14-2019
Site Code : 19-216 Kekaulike Complete Streets
Start Date : 11/14/2019
Page No : 3

	Southbound Approach Southbound					KING ST Westbound					SOUTHEASTBOUND APPROACH Northwestbound		KEKAULIKE ST Northbound					KING ST Eastbound					NORTHWESTBOUND APPROACH Southeastbound		
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 03:45 PM																									
03:45 PM	0	0	0	21	21	0	0	0	**30**	**30**	**4**	**4**	0	0	0	**34**	**34**	0	356	**8**	**35**	399	**4**	**4**	492
04:00 PM	**1**	0	0	**30**	**31**	0	0	0	10	10	2	2	0	0	0	19	19	0	354	6	33	393	0	0	455
04:15 PM																			385	6	15	406	0	0	459
04:30 PM															**1**				**427**			**446**			**494**
Total Volume	1	0	0	79	80	0	0	0	64	64	7	7	0	0	1	99	100	0	1522	26	96	1644	5	5	1900
% App. Total	1.2	0	0	98.8		0	0	0	100		100		0	0	1	99		0	92.6	1.6	5.8		100		
PHF	.250	.000	.000	.658	.645	.000	.000	.000	.533	.533	.438	.438	.000	.000	.250	.728	.735	.000	.891	.813	.686	.922	.313	.313	.962



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File Name : Kekaulike St - King St (WE) 12 Hour Revised
Site Code : 19-216 Kekaulike Complete Streets
Start Date : 11/16/2019
Page No : 1

Groups Printed- Motorcycles - Cars & Light Goods - Buses - Unit Trucks - Articulated Trucks - Bicycles on Road - Bicycles on Crosswalk - Pedestrians

	Southbound Approach Southbound				KING ST Westbound				SOUTHEASTBOUND APPROACH Northwestbound	KEKAULIKE ST Northbound				KING ST Eastbound				NORTHWEST BOUND APPROACH Southeastbound	
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Peds	Int. Total
06:00 AM	0	0	0	10	0	0	0	15	2	0	0	0	13	0	53	6	18	0	117
06:15 AM	0	0	0	9	0	0	0	19	2	0	0	0	6	0	55	5	15	0	111
06:30 AM	0	0	0	14	0	0	0	22	1	0	0	0	11	0	67	12	28	0	155
06:45 AM	0	0	0	13	0	0	0	33	0	0	0	0	14	0	106	11	35	2	214
Total	0	0	0	46	0	0	0	89	5	0	0	0	44	0	281	34	96	2	597
07:00 AM	0	0	0	20	0	0	0	29	2	0	0	0	23	0	102	17	39	5	237
07:15 AM	0	0	0	28	0	0	0	44	1	0	0	0	24	0	109	15	64	3	288
07:30 AM	0	0	0	43	0	0	0	51	2	0	0	0	31	0	96	11	51	0	285
07:45 AM	0	0	0	51	0	0	0	63	2	0	0	0	37	0	122	24	96	0	395
Total	0	0	0	142	0	0	0	187	7	0	0	0	115	0	429	67	250	8	1205
08:00 AM	0	0	0	57	0	0	0	62	8	0	0	0	40	1	102	7	122	2	401
08:15 AM	0	0	0	56	0	0	0	72	3	0	0	0	72	0	133	16	133	1	486
08:30 AM	0	0	0	75	0	0	0	126	1	0	0	0	58	0	164	18	134	0	576
08:45 AM	1	0	0	62	0	0	0	87	4	0	0	0	58	0	151	26	118	1	508
Total	1	0	0	250	0	0	0	347	16	0	0	0	228	1	550	67	507	4	1971
09:00 AM	0	0	0	80	0	0	0	123	3	0	0	1	78	0	147	20	95	6	553
09:15 AM	0	0	0	85	0	0	0	129	3	0	0	0	62	0	175	27	127	8	616
09:30 AM	0	0	0	75	0	0	0	117	4	0	0	0	61	0	198	17	111	10	593
09:45 AM	0	0	0	72	0	0	0	118	3	0	0	0	62	0	210	25	141	3	634
Total	0	0	0	312	0	0	0	487	13	0	0	1	263	0	730	89	474	27	2396
10:00 AM	0	0	0	108	0	0	0	143	11	0	0	0	73	0	192	23	135	3	688
10:15 AM	0	0	0	107	0	0	0	161	11	0	0	0	90	0	236	24	163	0	792
10:30 AM	0	0	0	88	0	0	0	155	4	0	0	0	72	0	225	16	132	1	693
10:45 AM	0	0	0	105	0	0	0	140	9	0	0	0	90	0	223	26	130	2	725
Total	0	0	0	408	0	0	0	599	35	0	0	0	325	0	876	89	560	6	2898
11:00 AM	0	0	0	73	1	0	0	124	5	0	0	0	77	0	235	21	156	11	703
11:15 AM	0	0	0	97	0	0	0	126	7	0	0	0	63	0	245	24	153	3	718
11:30 AM	1	0	0	56	0	0	0	94	14	0	0	0	64	0	246	32	130	3	640
11:45 AM	0	0	0	52	0	0	0	78	7	0	0	0	31	0	235	18	108	2	531
Total	1	0	0	278	1	0	0	422	33	0	0	0	235	0	961	95	547	19	2592
12:00 PM	0	0	0	122	0	0	0	100	5	0	0	0	70	0	217	26	98	6	644
12:15 PM	2	0	0	97	0	0	0	83	7	0	0	0	67	0	212	16	137	2	623
12:30 PM	0	0	0	78	0	0	0	57	4	0	0	0	50	0	264	23	98	2	576
12:45 PM	0	0	0	67	0	0	0	58	2	0	0	0	49	0	219	33	101	0	529
Total	2	0	0	364	0	0	0	298	18	0	0	0	236	0	912	98	434	10	2372
01:00 PM	0	0	0	48	0	0	0	58	11	0	0	0	44	0	233	29	102	1	526
01:15 PM	0	0	0	33	0	0	0	51	11	0	0	0	55	0	222	19	108	1	500
01:30 PM	1	0	0	68	2	0	0	52	8	0	0	0	48	0	208	12	75	2	476

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File Name : Kekaulike St - King St (WE) 12 Hour Revised
Site Code : 19-216 Kekaulike Complete Streets
Start Date : 11/16/2019

Groups Printed- Motorcycles - Cars & Light Goods - Buses - Unit Trucks - Articulated Trucks - Bicycles on Road - Bicycles on Crosswalk - Pedestrians

	Southbound Approach Southbound				KING ST Westbound				SOUTHEASTBOUND APPROACH Northwestbound	KEKAULIKE ST Northbound				KING ST Eastbound				NORTHWESTBOUND APPROACH Southeastbound	
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Peds	Int. Total
01:45 PM	1	1	1	37	0	0	0	50	7	0	0	0	28	0	227	16	55	0	423
Total	2	1	1	186	2	0	0	211	37	0	0	0	175	0	890	76	340	4	1925
02:00 PM	0	0	0	64	0	0	0	45	5	0	0	0	24	0	207	20	95	0	460
02:15 PM	0	0	0	47	0	0	0	42	5	0	0	0	31	0	219	12	58	4	418
02:30 PM	0	0	0	36	0	0	0	29	3	0	0	0	49	0	229	13	41	0	400
02:45 PM	0	0	0	38	0	0	0	27	2	0	0	0	18	0	194	19	75	0	373
Total	0	0	0	185	0	0	0	143	15	0	0	0	122	0	849	64	269	4	1651
03:00 PM	0	0	0	37	0	0	0	21	1	0	0	0	33	0	198	9	58	0	357
03:15 PM	0	0	0	29	0	0	0	24	0	0	0	0	29	0	217	12	48	1	360
03:30 PM	0	0	0	15	0	0	0	38	0	0	0	0	26	0	200	6	25	1	311
03:45 PM	0	0	0	15	0	0	0	28	1	0	0	0	17	0	158	8	28	1	256
Total	0	0	0	96	0	0	0	111	2	0	0	0	105	0	773	35	159	3	1284
04:00 PM	0	0	0	14	0	0	0	16	1	0	0	0	26	0	183	4	20	0	264
04:15 PM	0	0	0	15	0	0	0	14	1	0	0	0	14	0	178	4	12	2	240
04:30 PM	1	0	0	8	0	0	0	14	2	0	0	0	17	0	154	5	9	0	210
04:45 PM	1	0	0	7	0	0	0	12	0	0	0	0	7	0	178	4	9	0	218
Total	2	0	0	44	0	0	0	56	4	0	0	0	64	0	693	17	50	2	932
05:00 PM	0	1	0	11	0	0	0	11	2	0	0	0	9	0	173	6	15	0	228
05:15 PM	0	0	0	8	0	0	0	10	2	0	0	0	12	0	193	3	4	0	232
05:30 PM	0	0	0	4	0	0	0	6	1	0	0	0	16	0	185	4	4	0	220
05:45 PM	0	0	0	4	0	0	0	7	1	0	0	0	14	0	179	5	6	0	216
Total	0	1	0	27	0	0	0	34	6	0	0	0	51	0	730	18	29	0	896
Grand Total	8	2	1	2338	3	0	0	2984	191	0	0	1	1963	1	8674	749	3715	89	20719
Apprch %	0.3	0.1	0	99.5	0.1	0	0	99.9	100	0	0	0.1	99.9	0	66	5.7	28.3	100	
Total %	0	0	0	11.3	0	0	0	14.4	0.9	0	0	0	9.5	0	41.9	3.6	17.9	0.4	
Motorcycles	1	0	0	0	1	0	0	0	0	0	0	0	0	0	152	5	0	0	159
% Motorcycles	12.5	0	0	0	33.3	0	0	0	0	0	0	0	0	0	1.8	0.7	0	0	0.8
Cars & Light Goods	1	0	0	0	0	0	0	0	0	0	0	1	0	0	8288	726	0	0	9016
% Cars & Light Goods	12.5	0	0	0	0	0	0	0	0	0	0	100	0	0	95.5	96.9	0	0	43.5
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	0	0	0	160
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.8	0	0	0	0.8
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	17	0	0	67
% Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.3	0	0	0.3
Articulated Trucks	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
Bicycles on Road	6	2	1	0	2	0	0	0	0	0	0	0	0	1	24	1	0	0	37
% Bicycles on Road	75	100	100	0	66.7	0	0	0	0	0	0	0	0	100	0.3	0.1	0	0	0.2
Bicycles on Crosswalk	0	0	0	3	0	0	0	12	1	0	0	0	32	0	0	0	6	0	54
% Bicycles on Crosswalk	0	0	0	0.1	0	0	0	0.4	0.5	0	0	0	1.6	0	0	0	0.2	0	0.3
Pedestrians	0	0	0	2335	0	0	0	2972	190	0	0	0	1931	0	0	0	3709	89	11226
% Pedestrians	0	0	0	99.9	0	0	0	99.6	99.5	0	0	0	98.4	0	0	0	99.8	100	54.2

NWbound movement captures pedestrians crossing diagonally from the NE corner to the SW corner.
SEbound movement captures pedestrians crossing diagonally from the NW corner to the SE corner.

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File Name : Kekaulike St - King St (WE) 12 Hour Revised
Site Code : 19-216 Kekaulike Complete Streets
Start Date : 11/16/2019
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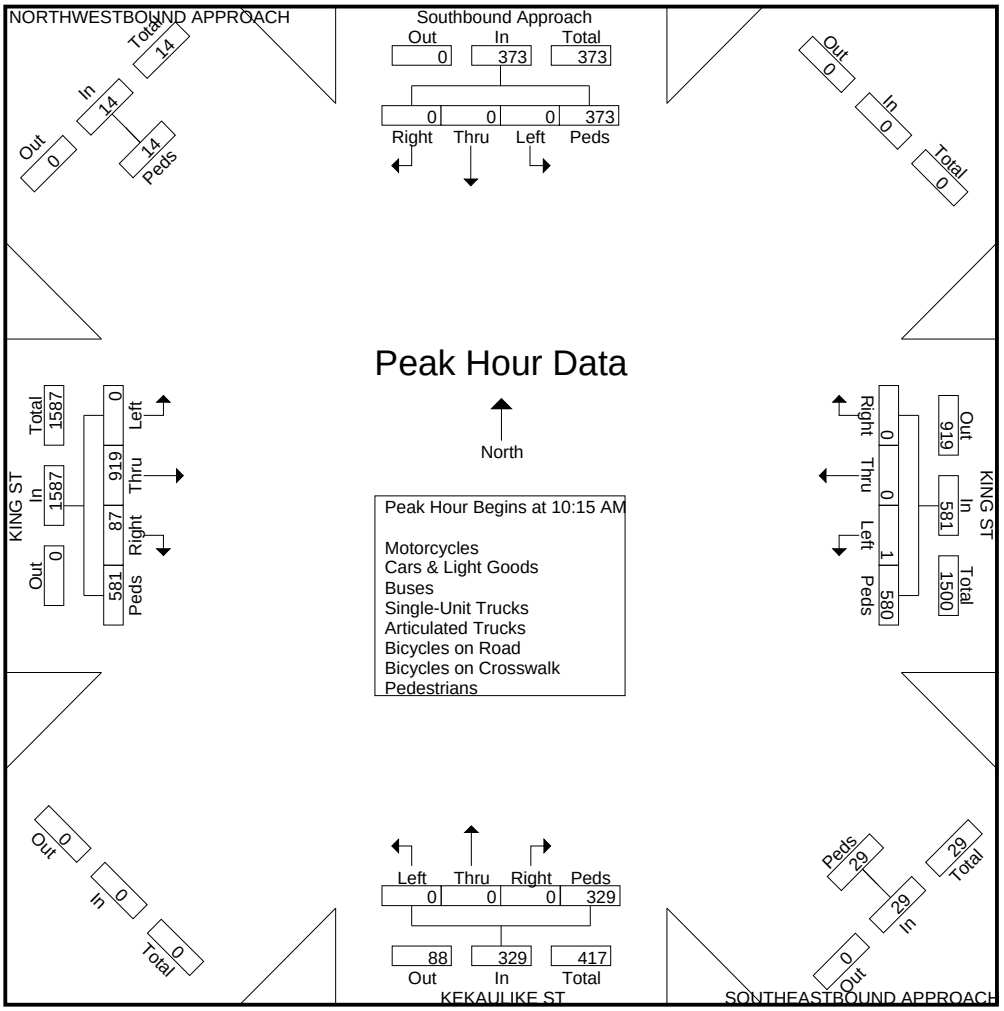
	Southbound Approach Southbound					KING ST Westbound					SOUTHEASTBOUND APPROACH Northwestbound		KEKAULIKE ST Northbound					KING ST Eastbound					NORTHWESTBOUND APPROACH Southeastbound		
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 10:15 AM																									
10:15 AM	0	0	0	**107**	**107**	0	0	0	**161**	**161**	**11**	**11**	0	0	0	**90**	**90**	0	**236**	**24**	**163**	**423**	0	0	**792**
10:30 AM	0	0	0	88	88	0	0	0	155	155	4	4	0	0	0	72	72	0	225	16	132	373	1	1	693
10:45 AM				105	105	0	0	0	140	140	9	9	0	0	0	90	90	0	223	**26**	130	379	2	2	725
11:00 AM						**1**			124	125	5	5	0	0	0	77	77	0	235	21	156	412	**11**	**11**	
Total Volume	0	0	0	373	373	1	0	0	580	581	29	29	0	0	0	329	329	0	919	87	581	1587	14	14	2913
% App. Total	0	0	0	100		0.2	0	0	99.8		100		0	0	0	100		0	57.9	5.5	36.6		100		
PHF	.000	.000	.000	.871	.871	.250	.000	.000	.901	.902	.659	.659	.000	.000	.000	.914	.914	.000	.974	.837	.891	.938	.318	.318	.920



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File Name : Kekaulike St - Nimitz Hwy 111419
Site Code : 19-216 Kekaulike Complete Streets
Start Date : 11/14/2019
Page No : 1

Groups Printed- Motorcycles - Cars & Light Goods - Buses - Unit Trucks - Articulated Trucks - Bicycles on Road - Bicycles on Crosswalk - Pedestrians

	KEKAULIKE ST SOUTHBOUND				NIMITZ HWY WESTBOUND				NORTHBOUND				NIMITZ HWY EASTBOUND				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00 AM	0	0	10	6	0	486	0	0	0	0	0	0	0	0	0	0	502
07:15 AM	0	0	8	4	0	584	0	0	0	0	0	0	0	0	0	0	596
07:30 AM	0	0	13	3	0	539	0	0	0	0	0	0	0	1	0	0	556
07:45 AM	0	0	5	7	0	590	0	0	0	0	0	0	0	2	0	0	604
Total	0	0	36	20	0	2199	0	0	0	0	0	0	0	3	0	0	2258
08:00 AM	0	0	9	3	0	511	0	0	0	0	0	0	0	0	0	0	523
08:15 AM	0	0	19	7	0	523	0	0	0	0	0	0	0	0	0	0	549
08:30 AM	0	0	16	2	0	546	0	0	0	0	0	0	0	0	0	0	564
08:45 AM	0	0	20	4	0	486	0	1	0	0	0	0	0	0	0	0	511
Total	0	0	64	16	0	2066	0	1	0	0	0	0	0	0	0	0	2147
Grand Total	0	0	100	36	0	4265	0	1	0	0	0	0	0	3	0	0	4405
Apprch %	0	0	73.5	26.5	0	100	0	0	0	0	0	0	0	100	0	0	
Total %	0	0	2.3	0.8	0	96.8	0	0	0	0	0	0	0	0.1	0	0	
Motorcycles	0	0	0	0	0	44	0	0	0	0	0	0	0	0	0	0	44
% Motorcycles	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Cars & Light Goods	0	0	96	0	0	4022	0	0	0	0	0	0	0	0	0	0	4118
% Cars & Light Goods	0	0	96	0	0	94.3	0	0	0	0	0	0	0	0	0	0	93.5
Buses	0	0	0	0	0	42	0	0	0	0	0	0	0	0	0	0	42
% Buses	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Single-Unit Trucks	0	0	4	0	0	119	0	0	0	0	0	0	0	0	0	0	123
% Single-Unit Trucks	0	0	4	0	0	2.8	0	0	0	0	0	0	0	0	0	0	2.8
Articulated Trucks	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	19
% Articulated Trucks	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0.4
Bicycles on Road	0	0	0	0	0	19	0	0	0	0	0	0	0	3	0	0	22
% Bicycles on Road	0	0	0	0	0	0.4	0	0	0	0	0	0	0	100	0	0	0.5
Bicycles on Crosswalk	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
% Bicycles on Crosswalk	0	0	0	19.4	0	0	0	0	0	0	0	0	0	0	0	0	0.2
Pedestrians	0	0	0	29	0	0	0	1	0	0	0	0	0	0	0	0	30
% Pedestrians	0	0	0	80.6	0	0	0	100	0	0	0	0	0	0	0	0	0.7

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File Name : Kekaulike St - Nimitz Hwy 111419
Site Code : 19-216 Kekaulike Complete Streets
Start Date : 11/14/2019
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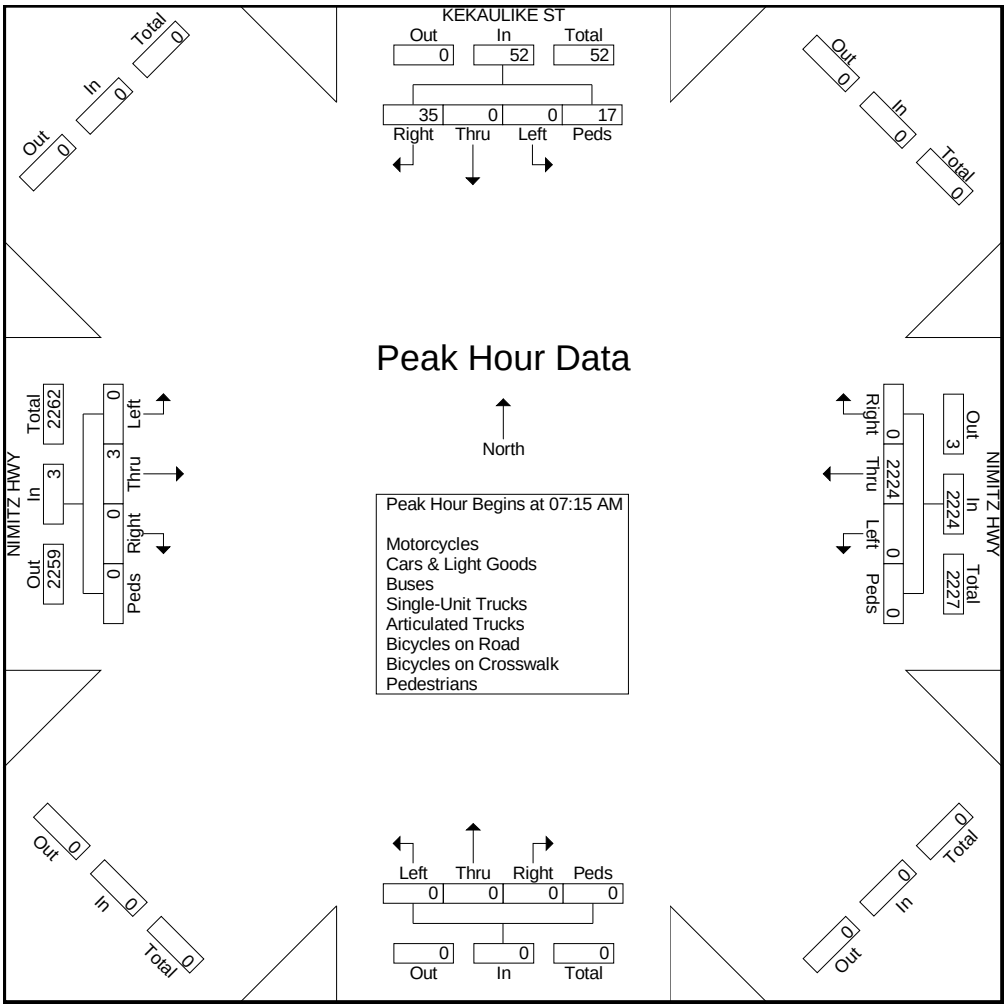
	KEKAULIKE ST SOUTHBOUND					NIMITZ HWY WESTBOUND					NORTHBOUND					NIMITZ HWY EASTBOUND					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	0	8	4	12	0	584	0	0	584	0	0	0	0	0	0	0	0	0	0	596
07:30 AM	0	0	**13**	3	**16**	0	539	0	0	539	0	0	0	0	0	0	1	0	0	1	556
07:45 AM	0	0	5	**7**	12	0	**590**	0	0	**590**	0	0	0	0	0	0	**2**	0	0	**2**	**604**
08:00 AM	0	0	9	3	12	0	511	0	0	511	0	0	0	0	0	0	0	0	0	0	523
Total Volume	0	0	35	17	52	0	2224	0	0	2224	0	0	0	0	0	0	3	0	0	3	2279
% App. Total	0	0	67.3	32.7		0	100	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.673	.607	.813	.000	.942	.000	.000	.942	.000	.000	.000	.000	.000	.000	.375	.000	.000	.375	.943



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Groups Printed- Motorcycles - Cars & Light Goods - Buses - Unit Trucks - Articulated Trucks - Bicycles on Road - Bicycles on Crosswalk - Pedestrians

	KEKAULIKE ST SOUTHBOUND				NIMITZ HWY WESTBOUND				NORTHBOUND				NIMITZ HWY EASTBOUND				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
11:00 AM	0	0	16	10	0	637	0	2	0	0	0	0	2	0	0	0	667
11:15 AM	0	0	24	3	0	646	0	1	0	0	0	0	0	0	0	0	674
11:30 AM	0	0	23	5	0	606	0	0	0	0	0	0	0	0	0	0	634
11:45 AM	0	0	11	6	0	526	0	0	0	0	0	0	0	0	0	0	543
Total	0	0	74	24	0	2415	0	3	0	0	0	0	2	0	0	0	2518
12:00 PM	0	0	13	3	0	576	0	1	0	0	0	0	0	0	0	0	593
12:15 PM	0	0	18	6	0	636	0	0	0	0	0	0	0	0	0	0	660
12:30 PM	0	0	14	3	0	595	0	1	0	0	0	0	0	0	0	0	613
12:45 PM	0	0	9	4	0	616	0	0	0	0	0	0	0	0	0	1	630
Total	0	0	54	16	0	2423	0	2	0	0	0	0	0	0	0	1	2496
Grand Total	0	0	128	40	0	4838	0	5	0	0	0	0	2	0	0	1	5014
Apprch %	0	0	76.2	23.8	0	99.9	0	0.1	0	0	0	0	66.7	0	0	33.3	
Total %	0	0	2.6	0.8	0	96.5	0	0.1	0	0	0	0	0	0	0	0	
Motorcycles	0	0	0	0	0	46	0	0	0	0	0	0	0	0	0	0	46
% Motorcycles	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.9
Cars & Light Goods	0	0	126	0	0	4579	0	0	0	0	0	0	0	0	0	0	4705
% Cars & Light Goods	0	0	98.4	0	0	94.6	0	0	0	0	0	0	0	0	0	0	93.8
Buses	0	0	0	0	0	35	0	0	0	0	0	0	0	0	0	0	35
% Buses	0	0	0	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0.7
Single-Unit Trucks	0	0	2	0	0	136	0	0	0	0	0	0	0	0	0	0	138
% Single-Unit Trucks	0	0	1.6	0	0	2.8	0	0	0	0	0	0	0	0	0	0	2.8
Articulated Trucks	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	25
% Articulated Trucks	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0.5
Bicycles on Road	0	0	0	0	0	17	0	0	0	0	0	0	2	0	0	0	19
% Bicycles on Road	0	0	0	0	0	0.4	0	0	0	0	0	0	100	0	0	0	0.4
Bicycles on Crosswalk	0	0	0	11	0	0	0	1	0	0	0	0	0	0	0	0	12
% Bicycles on Crosswalk	0	0	0	27.5	0	0	0	20	0	0	0	0	0	0	0	0	0.2
Pedestrians	0	0	0	29	0	0	0	4	0	0	0	0	0	0	0	1	34
% Pedestrians	0	0	0	72.5	0	0	0	80	0	0	0	0	0	0	0	100	0.7

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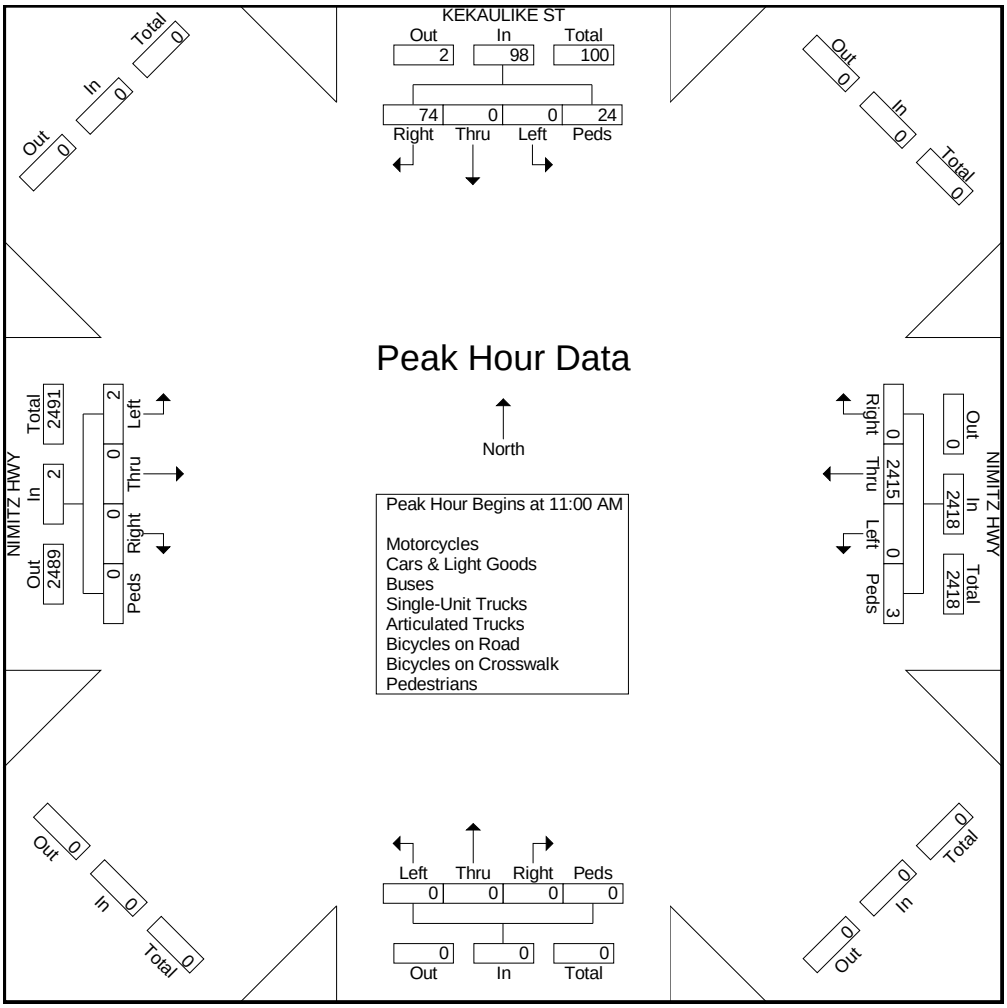
	KEKAULIKE ST SOUTHBOUND					NIMITZ HWY WESTBOUND					NORTHBOUND					NIMITZ HWY EASTBOUND					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	0	0	16	**10**	26	0	637	0	**2**	639	0	0	0	0	0	**2**	0	0	0	**2**	667
11:15 AM	0	0	**24**	3	27	0	**646**	0	1	**647**	0	0	0	0	0	0	0	0	0	0	**674**
11:30 AM	0	0	23	5	**28**	0	606	0	0	606	0	0	0	0	0	0	0	0	0	0	634
11:45 AM	0	0	11	6	17	0	526	0	0	526	0	0	0	0	0	0	0	0	0	0	543
Total Volume	0	0	74	24	98	0	2415	0	3	2418	0	0	0	0	0	2	0	0	0	2	2518
% App. Total	0	0	75.5	24.5		0	99.9	0	0.1		0	0	0	0		100	0	0	0		
PHF	.000	.000	.771	.600	.875	.000	.935	.000	.375	.934	.000	.000	.000	.000	.000	.250	.000	.000	.000	.250	.934



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Groups Printed- Motorcycles - Cars & Light Goods - Buses - Unit Trucks - Articulated Trucks - Bicycles on Road - Bicycles on Crosswalk - Pedestrians

	KEKAULIKE ST SOUTHBOUND				NIMITZ HWY WESTBOUND				NORTHBOUND				NIMITZ HWY EASTBOUND				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
04:00 PM	0	0	4	2	0	691	0	0	0	0	0	0	0	0	0	0	697
04:15 PM	0	0	7	4	0	771	0	1	0	0	0	0	0	0	0	0	783
04:30 PM	0	0	6	3	0	745	0	0	0	0	0	0	0	0	0	0	754
04:45 PM	0	0	5	7	0	836	0	1	0	0	0	0	0	0	0	0	849
Total	0	0	22	16	0	3043	0	2	0	0	0	0	0	0	0	0	3083
05:00 PM	0	0	6	6	0	806	0	0	0	0	0	0	0	0	0	0	818
05:15 PM	0	0	4	11	0	759	0	0	0	0	0	0	0	0	0	0	774
05:30 PM	0	0	5	6	0	732	0	1	0	0	0	0	0	0	0	0	744
05:45 PM	0	0	10	6	0	662	4	0	0	0	0	0	0	0	0	0	682
Total	0	0	25	29	0	2959	4	1	0	0	0	0	0	0	0	0	3018
Grand Total	0	0	47	45	0	6002	4	3	0	0	0	0	0	0	0	0	6101
Apprch %	0	0	51.1	48.9	0	99.9	0.1	0	0	0	0	0	0	0	0	0	
Total %	0	0	0.8	0.7	0	98.4	0.1	0	0	0	0	0	0	0	0	0	
Motorcycles	0	0	3	0	0	53	0	0	0	0	0	0	0	0	0	0	56
% Motorcycles	0	0	6.4	0	0	0.9	0	0	0	0	0	0	0	0	0	0	0.9
Cars & Light Goods	0	0	44	1	0	5811	4	0	0	0	0	0	0	0	0	0	5860
% Cars & Light Goods	0	0	93.6	2.2	0	96.8	100	0	0	0	0	0	0	0	0	0	96
Buses	0	0	0	0	0	52	0	0	0	0	0	0	0	0	0	0	52
% Buses	0	0	0	0	0	0.9	0	0	0	0	0	0	0	0	0	0	0.9
Single-Unit Trucks	0	0	0	0	0	63	0	0	0	0	0	0	0	0	0	0	63
% Single-Unit Trucks	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Articulated Trucks	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5
% Articulated Trucks	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0.1
Bicycles on Road	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	18
% Bicycles on Road	0	0	0	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0.3
Bicycles on Crosswalk	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
% Bicycles on Crosswalk	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0.1
Pedestrians	0	0	0	35	0	0	0	3	0	0	0	0	0	0	0	0	38
% Pedestrians	0	0	0	77.8	0	0	0	100	0	0	0	0	0	0	0	0	0.6

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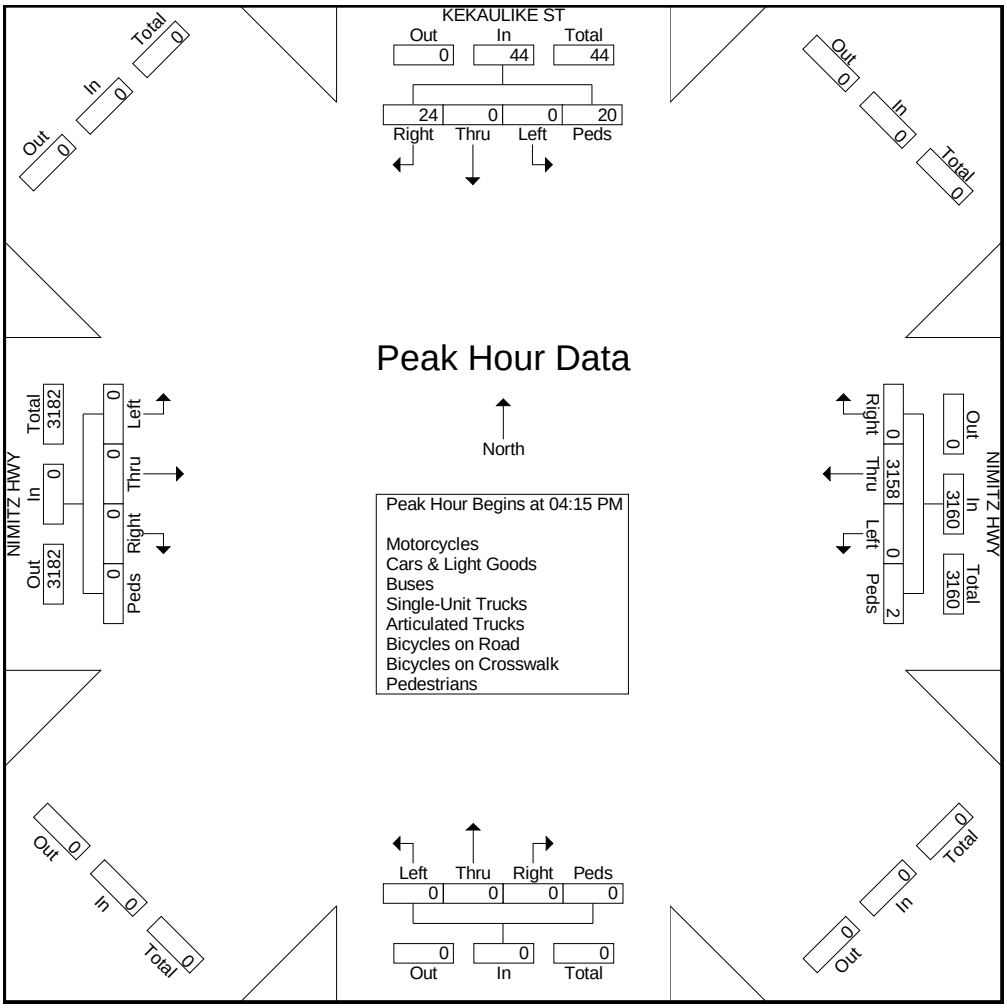
	KEKAULIKE ST SOUTHBOUND					NIMITZ HWY WESTBOUND					NORTHBOUND					NIMITZ HWY EASTBOUND					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	0	0	**7**	4	11	0	771	0	**1**	772	0	0	0	0	0	0	0	0	0	0	783
04:30 PM	0	0	6	3	9	0	745	0	0	745	0	0	0	0	0	0	0	0	0	0	754
04:45 PM	0	0	5	**7**	**12**	0	**836**	0	1	**837**	0	0	0	0	0	0	0	0	0	0	**849**
05:00 PM	0	0	6	6	12	0	806	0	0	806	0	0	0	0	0	0	0	0	0	0	818
Total Volume	0	0	24	20	44	0	3158	0	2	3160	0	0	0	0	0	0	0	0	0	0	3204
% App. Total	0	0	54.5	45.5		0	99.9	0	0.1		0	0	0	0		0	0	0	0		
PHF	.000	.000	.857	.714	.917	.000	.944	.000	.500	.944	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.943



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Groups Printed- Motorcycles - Cars & Light Goods - Buses - Unit Trucks - Articulated Trucks - Bicycles on Road - Bicycles on Crosswalk - Pedestrians

	KEKAULIKE ST SOUTHBOUND				NIMITZ HWY WESTBOUND				NORTHBOUND				NIMITZ HWY EASTBOUND				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
11:00 AM	0	0	25	4	0	595	0	2	0	0	0	0	0	0	0	0	626
11:15 AM	0	0	24	8	0	582	0	0	0	0	0	0	0	0	0	0	614
11:30 AM	0	0	33	7	0	659	0	2	0	0	0	0	0	0	0	0	701
11:45 AM	0	0	18	5	0	547	0	0	0	0	0	0	0	0	0	0	570
Total	0	0	100	24	0	2383	0	4	0	0	0	0	0	0	0	0	2511
12:00 PM	0	0	26	3	0	609	0	0	0	0	0	0	0	0	0	0	638
12:15 PM	0	0	17	8	0	632	0	2	0	0	0	0	0	0	0	0	659
12:30 PM	0	0	25	10	0	626	0	0	0	0	0	0	0	0	0	0	661
12:45 PM	0	0	32	7	0	701	0	0	0	0	0	0	0	0	0	0	740
Total	0	0	100	28	0	2568	0	2	0	0	0	0	0	0	0	0	2698
Grand Total	0	0	200	52	0	4951	0	6	0	0	0	0	0	0	0	0	5209
Apprch %	0	0	79.4	20.6	0	99.9	0	0.1	0	0	0	0	0	0	0	0	
Total %	0	0	3.8	1	0	95	0	0.1	0	0	0	0	0	0	0	0	
Motorcycles	0	0	2	0	0	39	0	0	0	0	0	0	0	0	0	0	41
% Motorcycles	0	0	1	0	0	0.8	0	0	0	0	0	0	0	0	0	0	0.8
Cars & Light Goods	0	0	194	0	0	4794	0	0	0	0	0	0	0	0	0	0	4988
% Cars & Light Goods	0	0	97	0	0	96.8	0	0	0	0	0	0	0	0	0	0	95.8
Buses	0	0	0	0	0	36	0	0	0	0	0	0	0	0	0	0	36
% Buses	0	0	0	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0.7
Single-Unit Trucks	0	0	3	0	0	69	0	0	0	0	0	0	0	0	0	0	72
% Single-Unit Trucks	0	0	1.5	0	0	1.4	0	0	0	0	0	0	0	0	0	0	1.4
Articulated Trucks	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	6
% Articulated Trucks	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0.1
Bicycles on Road	0	0	1	0	0	7	0	0	0	0	0	0	0	0	0	0	8
% Bicycles on Road	0	0	0.5	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0.2
Bicycles on Crosswalk	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
% Bicycles on Crosswalk	0	0	0	7.7	0	0	0	0	0	0	0	0	0	0	0	0	0.1
Pedestrians	0	0	0	48	0	0	0	6	0	0	0	0	0	0	0	0	54
% Pedestrians	0	0	0	92.3	0	0	0	100	0	0	0	0	0	0	0	0	1

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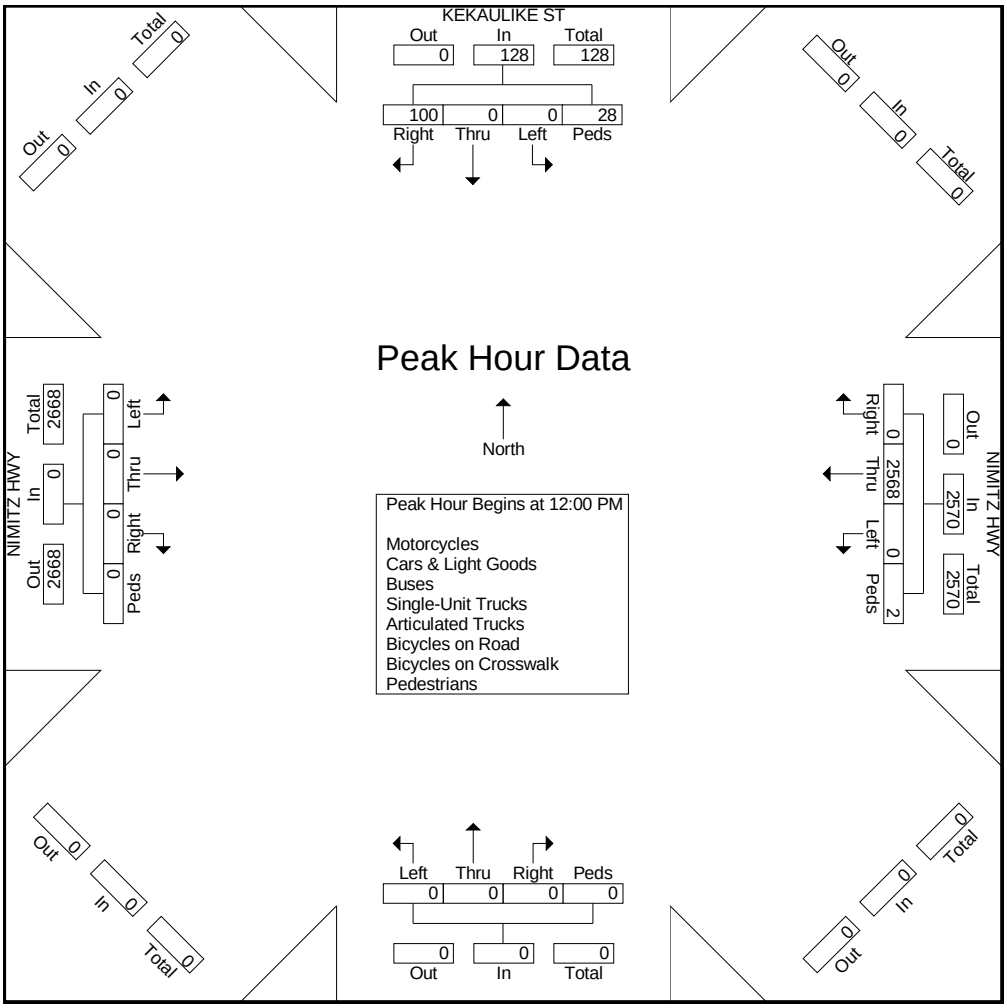
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	0	0	26	3	29	0	609	0	0	609	0	0	0	0	0	0	0	0	0	0	638
12:15 PM	0	0	17	8	25	0	632	0	**2**	634	0	0	0	0	0	0	0	0	0	0	659
12:30 PM	0	0	25	**10**	35	0	626	0	0	626	0	0	0	0	0	0	0	0	0	0	661
12:45 PM	0	0	**32**	7	**39**	0	**701**	0	0	**701**	0	0	0	0	0	0	0	0	0	0	**740**
Total Volume	0	0	100	28	128	0	2568	0	2	2570	0	0	0	0	0	0	0	0	0	0	2698
% App. Total	0	0	78.1	21.9		0	99.9	0	0.1		0	0	0	0		0	0	0	0		
PHF	.000	.000	.781	.700	.821	.000	.916	.000	.250	.917	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.911



APPENDIX C

LOS WORKSHEETS

APPENDIX C

LOS WORKSHEETS

Existing Conditions

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	35	2224	0	0	0
Future Volume (Veh/h)	0	35	2224	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	38	2417	0	0	0
Pedestrians						17
Lane Width (ft)						0.0
Walking Speed (ft/s)						3.5
Percent Blockage						0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2417	621			2417	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2417	621			2417	
tC, single (s)	6.9	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	91			100	
cM capacity (veh/h)	26	425			194	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	38	604	604	604	604
Volume Left	0	0	0	0	0
Volume Right	38	0	0	0	0
cSH	425	1700	1700	1700	1700
Volume to Capacity	0.09	0.36	0.36	0.36	0.36
Queue Length 95th (ft)	7	0	0	0	0
Control Delay (s)	14.3	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	14.3	0.0			
Approach LOS	B				

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	1555	53
Future Volume (vph)	0	0	0	0	1555	53
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)					5.0	
Lane Util. Factor					0.86	
Frpb, ped/bikes					1.00	
Flpb, ped/bikes					1.00	
Frt					1.00	
Flt Protected					1.00	
Satd. Flow (prot)					4650	
Flt Permitted					1.00	
Satd. Flow (perm)					4650	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1690	58
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1748	0
Confl. Bikes (#/hr)						2
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Turn Type					NA	
Protected Phases					2	
Permitted Phases						
Actuated Green, G (s)					51.0	
Effective Green, g (s)					51.0	
Actuated g/C Ratio					0.57	
Clearance Time (s)					5.0	
Vehicle Extension (s)					5.0	
Lane Grp Cap (vph)					2635	
v/s Ratio Prot					c0.38	
v/s Ratio Perm						
v/c Ratio					0.66	
Uniform Delay, d1					13.5	
Progression Factor					1.00	
Incremental Delay, d2					1.3	
Delay (s)					14.9	
Level of Service					B	
Approach Delay (s)	0.0			0.0	14.9	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	74	2415	0	0	0
Future Volume (Veh/h)	0	74	2415	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	80	2625	0	0	0
Pedestrians						24
Lane Width (ft)						0.0
Walking Speed (ft/s)						3.5
Percent Blockage						0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2625	680			2625	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2625	680			2625	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	80			100	
cM capacity (veh/h)	19	393			160	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	80	656	656	656	656
Volume Left	0	0	0	0	0
Volume Right	80	0	0	0	0
cSH	393	1700	1700	1700	1700
Volume to Capacity	0.20	0.39	0.39	0.39	0.39
Queue Length 95th (ft)	19	0	0	0	0
Control Delay (s)	16.5	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	16.5	0.0			
Approach LOS	C				

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	837	104
Future Volume (vph)	0	0	0	0	837	104
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Total Lost time (s)					5.0	
Lane Util. Factor					0.91	
Frpb, ped/bikes					1.00	
Flpb, ped/bikes					1.00	
Frt					0.98	
Flt Protected					1.00	
Satd. Flow (prot)					2944	
Flt Permitted					1.00	
Satd. Flow (perm)					2944	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	910	113
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1023	0
Confl. Bikes (#/hr)						3
Parking (#/hr)					20	
Turn Type					NA	
Protected Phases					2	
Permitted Phases						
Actuated Green, G (s)					51.0	
Effective Green, g (s)					51.0	
Actuated g/C Ratio					0.57	
Clearance Time (s)					5.0	
Vehicle Extension (s)					5.0	
Lane Grp Cap (vph)					1668	
v/s Ratio Prot					c0.35	
v/s Ratio Perm						
v/c Ratio					0.61	
Uniform Delay, d1					13.0	
Progression Factor					1.00	
Incremental Delay, d2					1.7	
Delay (s)					14.6	
Level of Service					B	
Approach Delay (s)	0.0			0.0	14.6	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	33.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	24	3158	0	0	0
Future Volume (Veh/h)	0	24	3158	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	26	3433	0	0	0
Pedestrians						20
Lane Width (ft)						0.0
Walking Speed (ft/s)						3.5
Percent Blockage						0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	3433	878			3433	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3433	878			3433	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	91			100	
cM capacity (veh/h)	5	295			75	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	26	858	858	858	858
Volume Left	0	0	0	0	0
Volume Right	26	0	0	0	0
cSH	295	1700	1700	1700	1700
Volume to Capacity	0.09	0.50	0.50	0.50	0.50
Queue Length 95th (ft)	7	0	0	0	0
Control Delay (s)	18.4	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	18.4	0.0			
Approach LOS	C				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	1522	26
Future Volume (vph)	0	0	0	0	1522	26
Ideal Flow (vphpl)	1500	1500	1500	1500	1200	1200
Total Lost time (s)					5.0	
Lane Util. Factor					0.86	
Frpb, ped/bikes					1.00	
Flpb, ped/bikes					1.00	
Frt					1.00	
Flt Protected					1.00	
Satd. Flow (prot)					4036	
Flt Permitted					1.00	
Satd. Flow (perm)					4036	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1654	28
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1682	0
Confl. Bikes (#/hr)						10
Turn Type					NA	
Protected Phases					2	
Permitted Phases						
Actuated Green, G (s)					66.0	
Effective Green, g (s)					66.0	
Actuated g/C Ratio					0.63	
Clearance Time (s)					5.0	
Vehicle Extension (s)					5.0	
Lane Grp Cap (vph)					2536	
v/s Ratio Prot					c0.42	
v/s Ratio Perm						
v/c Ratio					0.66	
Uniform Delay, d1					12.4	
Progression Factor					1.00	
Incremental Delay, d2					1.4	
Delay (s)					13.8	
Level of Service					B	
Approach Delay (s)	0.0			0.0	13.8	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	100	2568	0	0	0
Future Volume (Veh/h)	0	100	2568	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	109	2791	0	0	0
Pedestrians						28
Lane Width (ft)						0.0
Walking Speed (ft/s)						3.5
Percent Blockage						0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2791	726			2791	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2791	726			2791	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	70			100	
cM capacity (veh/h)	15	367			137	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	109	698	698	698	698
Volume Left	0	0	0	0	0
Volume Right	109	0	0	0	0
cSH	367	1700	1700	1700	1700
Volume to Capacity	0.30	0.41	0.41	0.41	0.41
Queue Length 95th (ft)	31	0	0	0	0
Control Delay (s)	18.9	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	18.9	0.0			
Approach LOS	C				

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	919	87
Future Volume (vph)	0	0	0	0	919	87
Ideal Flow (vphpl)	1250	1250	1250	1250	1250	1250
Total Lost time (s)					5.0	
Lane Util. Factor					0.91	
Frpb, ped/bikes					1.00	
Flpb, ped/bikes					1.00	
Frt					0.99	
Flt Protected					1.00	
Satd. Flow (prot)					3048	
Flt Permitted					1.00	
Satd. Flow (perm)					3048	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	999	95
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1094	0
Confl. Bikes (#/hr)						3
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Parking (#/hr)					20	
Turn Type					NA	
Protected Phases					2	
Permitted Phases						
Actuated Green, G (s)					51.0	
Effective Green, g (s)					51.0	
Actuated g/C Ratio					0.57	
Clearance Time (s)					5.0	
Vehicle Extension (s)					5.0	
Lane Grp Cap (vph)					1727	
v/s Ratio Prot					c0.36	
v/s Ratio Perm						
v/c Ratio					0.63	
Uniform Delay, d1					13.2	
Progression Factor					1.00	
Incremental Delay, d2					1.8	
Delay (s)					15.0	
Level of Service					B	
Approach Delay (s)	0.0			0.0	15.0	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX C

LOS WORKSHEETS

Base Year 2026 Conditions

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	35	2470	0	0	0
Future Volume (Veh/h)	0	35	2470	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	38	2685	0	0	0
Pedestrians						17
Lane Width (ft)						0.0
Walking Speed (ft/s)						3.5
Percent Blockage						0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2685	688			2685	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2685	688			2685	
tC, single (s)	6.9	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	90			100	
cM capacity (veh/h)	17	384			151	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	38	671	671	671	671
Volume Left	0	0	0	0	0
Volume Right	38	0	0	0	0
cSH	384	1700	1700	1700	1700
Volume to Capacity	0.10	0.39	0.39	0.39	0.39
Queue Length 95th (ft)	8	0	0	0	0
Control Delay (s)	15.4	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	15.4	0.0			
Approach LOS	C				

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	1520	55
Future Volume (vph)	0	0	0	0	1520	55
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)					5.0	5.0
Lane Util. Factor					0.91	1.00
Frpb, ped/bikes					1.00	0.99
Flpb, ped/bikes					1.00	1.00
Frt					1.00	0.85
Flt Protected					1.00	1.00
Satd. Flow (prot)					3711	730
Flt Permitted					1.00	1.00
Satd. Flow (perm)					3711	730
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1652	60
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1652	60
Confl. Bikes (#/hr)						2
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	90
Turn Type					NA	Perm
Protected Phases					2	
Permitted Phases						2
Actuated Green, G (s)					51.0	51.0
Effective Green, g (s)					51.0	51.0
Actuated g/C Ratio					0.57	0.57
Clearance Time (s)					5.0	5.0
Vehicle Extension (s)					5.0	5.0
Lane Grp Cap (vph)					2102	413
v/s Ratio Prot					c0.45	
v/s Ratio Perm						0.08
v/c Ratio					0.79	0.15
Uniform Delay, d1					15.2	9.2
Progression Factor					1.00	1.00
Incremental Delay, d2					3.0	0.7
Delay (s)					18.3	9.9
Level of Service					B	A
Approach Delay (s)	0.0			0.0	18.0	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	75	2680	0	0	0
Future Volume (Veh/h)	0	75	2680	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	82	2913	0	0	0
Pedestrians						24
Lane Width (ft)						0.0
Walking Speed (ft/s)						3.5
Percent Blockage						0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2913	752			2913	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2913	752			2913	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	77			100	
cM capacity (veh/h)	12	353			123	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	82	728	728	728	728
Volume Left	0	0	0	0	0
Volume Right	82	0	0	0	0
cSH	353	1700	1700	1700	1700
Volume to Capacity	0.23	0.43	0.43	0.43	0.43
Queue Length 95th (ft)	22	0	0	0	0
Control Delay (s)	18.3	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	18.3	0.0			
Approach LOS	C				

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	825	105
Future Volume (vph)	0	0	0	0	825	105
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Total Lost time (s)					5.0	5.0
Lane Util. Factor					0.95	1.00
Frpb, ped/bikes					1.00	0.99
Flpb, ped/bikes					1.00	1.00
Frt					1.00	0.85
Flt Protected					1.00	1.00
Satd. Flow (prot)					2012	809
Flt Permitted					1.00	1.00
Satd. Flow (perm)					2012	809
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	897	114
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	897	114
Confl. Bikes (#/hr)						3
Bus Blockages (#/hr)	0	0	0	0	0	45
Parking (#/hr)					20	
Turn Type					NA	Perm
Protected Phases					2	
Permitted Phases						2
Actuated Green, G (s)					51.0	51.0
Effective Green, g (s)					51.0	51.0
Actuated g/C Ratio					0.57	0.57
Clearance Time (s)					5.0	5.0
Vehicle Extension (s)					5.0	5.0
Lane Grp Cap (vph)					1140	458
v/s Ratio Prot					c0.45	
v/s Ratio Perm						0.14
v/c Ratio					0.79	0.25
Uniform Delay, d1					15.2	9.8
Progression Factor					1.00	1.00
Incremental Delay, d2					5.5	1.3
Delay (s)					20.8	11.1
Level of Service					C	B
Approach Delay (s)	0.0			0.0	19.7	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	25	3505	0	0	0
Future Volume (Veh/h)	0	25	3505	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	27	3810	0	0	0
Pedestrians						20
Lane Width (ft)						0.0
Walking Speed (ft/s)						3.5
Percent Blockage						0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	3810	972			3810	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3810	972			3810	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	89			100	
cM capacity (veh/h)	3	256			53	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	27	952	952	952	952
Volume Left	0	0	0	0	0
Volume Right	27	0	0	0	0
cSH	256	1700	1700	1700	1700
Volume to Capacity	0.11	0.56	0.56	0.56	0.56
Queue Length 95th (ft)	9	0	0	0	0
Control Delay (s)	20.7	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	20.7	0.0			
Approach LOS	C				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	1490	30
Future Volume (vph)	0	0	0	0	1490	30
Ideal Flow (vphpl)	1500	1500	1500	1500	1200	1200
Total Lost time (s)					5.0	5.0
Lane Util. Factor					0.91	1.00
Frpb, ped/bikes					1.00	0.98
Flpb, ped/bikes					1.00	1.00
Frt					1.00	0.85
Flt Protected					1.00	1.00
Satd. Flow (prot)					3212	630
Flt Permitted					1.00	1.00
Satd. Flow (perm)					3212	630
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1620	33
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1620	33
Confl. Bikes (#/hr)						10
Bus Blockages (#/hr)	0	0	0	0	0	90
Turn Type					NA	Perm
Protected Phases					2	
Permitted Phases						2
Actuated Green, G (s)					66.0	66.0
Effective Green, g (s)					66.0	66.0
Actuated g/C Ratio					0.63	0.63
Clearance Time (s)					5.0	5.0
Vehicle Extension (s)					5.0	5.0
Lane Grp Cap (vph)					2018	396
v/s Ratio Prot					c0.50	
v/s Ratio Perm						0.05
v/c Ratio					0.80	0.08
Uniform Delay, d1					14.6	7.6
Progression Factor					1.00	1.00
Incremental Delay, d2					3.5	0.4
Delay (s)					18.1	8.1
Level of Service					B	A
Approach Delay (s)	0.0			0.0	17.9	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	100	2850	0	0	0
Future Volume (Veh/h)	0	100	2850	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	109	3098	0	0	0
Pedestrians						28
Lane Width (ft)						0.0
Walking Speed (ft/s)						3.5
Percent Blockage						0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	3098	802			3098	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3098	802			3098	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	67			100	
cM capacity (veh/h)	9	327			103	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	109	774	774	774	774
Volume Left	0	0	0	0	0
Volume Right	109	0	0	0	0
cSH	327	1700	1700	1700	1700
Volume to Capacity	0.33	0.46	0.46	0.46	0.46
Queue Length 95th (ft)	36	0	0	0	0
Control Delay (s)	21.4	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	21.4	0.0			
Approach LOS	C				

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	910	90
Future Volume (vph)	0	0	0	0	910	90
Ideal Flow (vphpl)	1250	1250	1250	1250	1250	1250
Total Lost time (s)					5.0	5.0
Lane Util. Factor					0.95	1.00
Frpb, ped/bikes					1.00	0.99
Flpb, ped/bikes					1.00	1.00
Frt					1.00	0.85
Flt Protected					1.00	1.00
Satd. Flow (prot)					2075	835
Flt Permitted					1.00	1.00
Satd. Flow (perm)					2075	835
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	989	98
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	989	98
Confl. Bikes (#/hr)						3
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	45
Parking (#/hr)					20	
Turn Type					NA	Perm
Protected Phases					2	
Permitted Phases						2
Actuated Green, G (s)					51.0	51.0
Effective Green, g (s)					51.0	51.0
Actuated g/C Ratio					0.57	0.57
Clearance Time (s)					5.0	5.0
Vehicle Extension (s)					5.0	5.0
Lane Grp Cap (vph)					1175	473
v/s Ratio Prot					c0.48	
v/s Ratio Perm						0.12
v/c Ratio					0.84	0.21
Uniform Delay, d1					16.2	9.6
Progression Factor					1.00	1.00
Incremental Delay, d2					7.4	1.0
Delay (s)					23.5	10.6
Level of Service					C	B
Approach Delay (s)	0.0			0.0	22.4	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX C

LOS WORKSHEETS

Future Year 2026 Conditions

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑↑↑			
Traffic Volume (veh/h)	0	0	2505	0	0	0
Future Volume (Veh/h)	0	0	2505	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	2723	0	0	0
Pedestrians						17
Lane Width (ft)						0.0
Walking Speed (ft/s)						3.5
Percent Blockage						0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2723	698			2723	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2723	698			2723	
tC, single (s)	6.9	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	16	378			146	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	0	681	681	681	681
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.40	0.40	0.40	0.40
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	0.0	0.0			
Approach LOS	A				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	1575	0
Future Volume (vph)	0	0	0	0	1575	0
Ideal Flow (vphpl)	1400	1400	1400	1400	1400	1400
Total Lost time (s)					5.0	
Lane Util. Factor					0.91	
Frpb, ped/bikes					1.00	
Flpb, ped/bikes					1.00	
Frt					1.00	
Flt Protected					1.00	
Satd. Flow (prot)					3711	
Flt Permitted					1.00	
Satd. Flow (perm)					3711	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1712	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1712	0
Confl. Bikes (#/hr)						2
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	90
Turn Type					NA	Perm
Protected Phases					2	
Permitted Phases						2
Actuated Green, G (s)					51.0	
Effective Green, g (s)					51.0	
Actuated g/C Ratio					0.57	
Clearance Time (s)					5.0	
Vehicle Extension (s)					5.0	
Lane Grp Cap (vph)					2102	
v/s Ratio Prot					c0.46	
v/s Ratio Perm						
v/c Ratio					0.81	
Uniform Delay, d1					15.7	
Progression Factor					1.00	
Incremental Delay, d2					3.6	
Delay (s)					19.3	
Level of Service					B	
Approach Delay (s)	0.0			0.0	19.3	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	2755	0	0	0
Future Volume (Veh/h)	0	0	2755	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	2995	0	0	0
Pedestrians						24
Lane Width (ft)						0.0
Walking Speed (ft/s)						3.5
Percent Blockage						0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2995	773			2995	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2995	773			2995	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	11	342			114	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	0	749	749	749	749
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.44	0.44	0.44	0.44
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	0.0	0.0			
Approach LOS	A				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	930	0
Future Volume (vph)	0	0	0	0	930	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Total Lost time (s)					5.0	
Lane Util. Factor					0.95	
Frpb, ped/bikes					1.00	
Flpb, ped/bikes					1.00	
Frt					1.00	
Flt Protected					1.00	
Satd. Flow (prot)					2012	
Flt Permitted					1.00	
Satd. Flow (perm)					2012	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1011	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1011	0
Confl. Bikes (#/hr)						3
Bus Blockages (#/hr)	0	0	0	0	0	45
Parking (#/hr)					20	
Turn Type					NA	Perm
Protected Phases					2	
Permitted Phases						2
Actuated Green, G (s)					51.0	
Effective Green, g (s)					51.0	
Actuated g/C Ratio					0.57	
Clearance Time (s)					5.0	
Vehicle Extension (s)					5.0	
Lane Grp Cap (vph)					1140	
v/s Ratio Prot					c0.50	
v/s Ratio Perm						
v/c Ratio					0.89	
Uniform Delay, d1					17.0	
Progression Factor					1.00	
Incremental Delay, d2					10.3	
Delay (s)					27.3	
Level of Service					C	
Approach Delay (s)	0.0			0.0	27.3	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	27.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	3530	0	0	0
Future Volume (Veh/h)	0	0	3530	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	3837	0	0	0
Pedestrians						20
Lane Width (ft)						0.0
Walking Speed (ft/s)						3.5
Percent Blockage						0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	3837	979			3837	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3837	979			3837	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	3	253			51	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	0	959	959	959	959
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.56	0.56	0.56	0.56
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	0.0	0.0			
Approach LOS	A				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	1520	0
Future Volume (vph)	0	0	0	0	1520	0
Ideal Flow (vphpl)	1500	1500	1500	1500	1200	1200
Total Lost time (s)					5.0	
Lane Util. Factor					0.91	
Frpb, ped/bikes					1.00	
Flpb, ped/bikes					1.00	
Frt					1.00	
Flt Protected					1.00	
Satd. Flow (prot)					3212	
Flt Permitted					1.00	
Satd. Flow (perm)					3212	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1652	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1652	0
Confl. Bikes (#/hr)						10
Bus Blockages (#/hr)	0	0	0	0	0	90
Turn Type					NA	Perm
Protected Phases					2	
Permitted Phases						2
Actuated Green, G (s)					66.0	
Effective Green, g (s)					66.0	
Actuated g/C Ratio					0.63	
Clearance Time (s)					5.0	
Vehicle Extension (s)					5.0	
Lane Grp Cap (vph)					2018	
v/s Ratio Prot					c0.51	
v/s Ratio Perm						
v/c Ratio					0.82	
Uniform Delay, d1					14.9	
Progression Factor					1.00	
Incremental Delay, d2					3.8	
Delay (s)					18.8	
Level of Service					B	
Approach Delay (s)	0.0			0.0	18.8	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	2950	0	0	0
Future Volume (Veh/h)	0	0	2950	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	3207	0	0	0
Pedestrians						28
Lane Width (ft)						0.0
Walking Speed (ft/s)						3.5
Percent Blockage						0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	3207	830			3207	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3207	830			3207	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	8	313			93	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	0	802	802	802	802
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.47	0.47	0.47	0.47
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	0.0	0.0			
Approach LOS	A				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	1000	0
Future Volume (vph)	0	0	0	0	1000	0
Ideal Flow (vphpl)	1250	1250	1250	1250	1250	1250
Total Lost time (s)					5.0	
Lane Util. Factor					0.95	
Frpb, ped/bikes					1.00	
Flpb, ped/bikes					1.00	
Frt					1.00	
Flt Protected					1.00	
Satd. Flow (prot)					2075	
Flt Permitted					1.00	
Satd. Flow (perm)					2075	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1087	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1087	0
Confl. Bikes (#/hr)						3
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	45
Parking (#/hr)					20	
Turn Type					NA	Perm
Protected Phases					2	
Permitted Phases						2
Actuated Green, G (s)					51.0	
Effective Green, g (s)					51.0	
Actuated g/C Ratio					0.57	
Clearance Time (s)					5.0	
Vehicle Extension (s)					5.0	
Lane Grp Cap (vph)					1175	
v/s Ratio Prot					c0.52	
v/s Ratio Perm						
v/c Ratio					0.93	
Uniform Delay, d1					17.8	
Progression Factor					1.00	
Incremental Delay, d2					13.5	
Delay (s)					31.3	
Level of Service					C	
Approach Delay (s)	0.0			0.0	31.3	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX F

Pre-Application Comments and Responses

HISTORIC HAWAI'I FOUNDATION

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January 8, 2020

Catie Cullison
Planner, Senior Associate
PBR Hawai'i & Associates
1001 Bishop Street, Suite 650
Honolulu, HI 96813-3484

Re: Pre-Consultation for a HRS Chapter 343 Environmental Assessment
Proposed Kekaulike Mall/Street Multimodal Improvements Project
Chinatown Historic District
District of Honolulu, Island of O'ahu, Hawai'i

Dear Ms. Cullison,

Thank you for referring the above mentioned project to Historic Hawai'i Foundation (HHF) under Chapter 343 of the Hawai'i Revised statutes. HHF received the notice of December 03, 2019 requesting pre-consultation on issues to consider when preparing the Environmental Assessment.

Historic Hawai'i Foundation is a statewide organization established in 1974 to encourage the preservation of sites, buildings, structures, objects and districts that are significant to the history of Hawai'i. HHF is an organization with a demonstrated interest in the undertaking and a concern for the effects on historic properties.

Project Scope

The project proposes to close Kekaulike Street to traffic between King Street and Nimitz Highway, creating a continuation of the Kekaulike pedestrian Mall between Hotel Street and King Street. The proposed concepts integrate a number of infrastructure and streetscape improvements.

The stated goal is to "address the need for spatial continuity and connectivity between Kekaulike Mall, Kekaulike Street, and the eventual Chinatown Rail Station."

Planning Area: The planning area appears to include Kekaulike Mall and Street from Hotel Street to Nimitz Highway, and includes the public plaza space around the proposed rail station.

Context

Kekaulike Mall and Street between Hotel Street and Nimitz Highway lie mostly within the Core Historic Precinct of the Chinatown Special Design District (SDD) under the jurisdiction of the City and County of Honolulu Land Use Ordinance (LUO). Kekaulike Mall and Street are contained wholly within the Chinatown Historic District which is on the National Register of Historic Places. A portion of the street at the makai end is under the jurisdiction of the State Department of Transportation, while the Station area is under the jurisdiction of the Honolulu Authority for Rapid Transporation.

HHF Comments and Recommendations on Key Elements of the Concept Plan

Historic Hawai'i Foundation is generally supportive of multimodal improvements to Kekaulike Street and Mall as well as the physical and visual interconnectivity to the future Chinatown Rail Station on Nimitz Highway, provided that such improvements are designed and implemented in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (SOI Standards) and other relevant standards and guidelines for the treatment of historic properties.

In particular, HHF recommends consideration of the following existing or proposed projects, plans, policies or programs:

HISTORIC PRESERVATION

1. The historic Ai-Goto Building, adjacent to the proposed rail station plaza, needs to be preserved and rehabilitated in accordance with the SOI standards. The project materials included a concept sketch titled "exploring integration with the Chinatown Station" that appears to significantly alter the character of this building, presumably to relate to the new rail station. HHF opposes any extensive alterations to the form, massing, fenestration, materials or other character-defining features of the building. Instead, rehabiliation should focus on preserving and restoring features along with adaptive reuse of the building.
2. The proposed "Smart" Canopy shade device creates a tunnel effect and would block street-level views of the facades of the historic buildings. This would not be in keeping with the Chinatown SDD guidelines, which encourage visibility and design compatibility with the architectural character of the period architecture found in the Historic Core Precinct. It would also obscure the makai view corridor, which is an identified link between Chinatown and Honolulu Harbor. HHF recommends alternative means to provide shade and rain protection that would not alter the spatial relationships and view sheds, such as trees or retractable awnings.
3. We appreciate the street-friendly streetscape concepts of lighting, graphics, paving materials and artwork opportunities contained in the shared street plan. It should be noted that the SOI Standards encourage new additions and site elements to be secondary to the historic buildings and not detract from their significance, so detailed concept plans will be needed in order to assess compliance with this intent.

4. We appreciate the intent to install streetscape elements "in such a way as to avoid disturbing the historic[al] building facades." There should be explicit commitments to avoid hanging or installing elements from the buildings, or for technical specifications on how any new elements would be installed to avoid damage to historic fabric.
5. The existing ballast block curbing is a character-defining feature of the historic district which should be retained and reset. If the street level is raised, how will the curbing material and profile be maintained?

ARCHITECTURE AND INFRASTRUCTURE

1. A common building element in Chinatown is the use of roof drainage conducted to the ground via gutters and downspouts which feed directly into the street gutter. If Kekaulike Street's grade is raised to eliminate gutters, this could have the unintended consequence of causing building flooding or ponding by blocking the outfalls. Adjacent buildings and their drainage systems need to be accommodated in any changes to street grade. The storm water management plans need to provide for diversion of the rooftop drainage underground and to avoid ponding in the pedestrian plaza.
2. HHF does not oppose extending the Kekaulike Pedestrian Mall south of King Street, per se. However, functional consideration for maintenance (garbage trucks) and deliveries poses some challenges related to loading zone hours. Similar restrictions were mandated several years ago in Waikīkī. Eventually the enforcement of restricted times was relaxed due to property owner concerns, resulting in current competition between pedestrians, private vehicles, deliveries and trolleys. Careful study should be done to ensure that the restricted times and zones are realistic for the adjacent business and all other users.

URBAN DESIGN AND STREETSCAPE

1. We encourage the introduction of appropriate building treatment and streetscape elements that complement the character of Chinatown in an authentic manner. However, we are concerned that designers should not utilize cultural symbols or romanticised allusions to dragons and other culturally-significant icons. We recommend consultation with local (and possibly international) Chinese cultural experts and organizations to avoid cultural appropriation or ill-advised use of symbols or representational elements.
2. The design intent to integrate with the proposed rail station raises issues of timing. HHF previously submitted comments on the preliminary Chinatown station design to the City in accordance with the Programmatic Agreement for the Honolulu Transit System (see HHF comments to HART, October 2018), and the City responded (January 2019) that final design would address our concerns after the Transit system's private development partner is under contract and able to participate in

consultation and design development. We note that the design of the station and its plaza are in flux, so it may not be possible to integrate the streetscape until the station designer is selected.

3. Please provide additional information on the planned "Chinatown Gateway Arch" at the intersection of King and Kekaulike. Usually, gates separate areas and serve as a entryway or point of connection. What is being connected or separated by the Gateway? This location is in the center of an existing district and is not a logical location for a gate. Who is installing it and why?
4. HHF's prior comments to HART on the rail station design encourage the use of the open courtyard space around the Ai-Goto buiilding extending behind the Holau Market building to the back of the Chun's Meat Market Building. This is in keeping with the Chinatown Special District Guidelines which encourages "landscaped interior courtyards to create activity centers, intimate pedestrian open spaces and visual enjoyment." We recommend that this be considered as a complementary open space to the proposed Kekaulike Street Mall and rail station plaza.

Thank you for the opportunity to comment. Historic Hawai'i Foundation looks forward to participating in the environmental review and historic preservation processes.

Very truly yours,

Kiersten Faulkner

Kiersten Faulkner
Executive Director

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
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March 1, 2021

Ms. Kiersten Faulkner, Executive Director
Historic Hawai‘i Foundation
680 Iwilei Road Suite 690
Honolulu, HI 96817

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Ms. Faulkner:

Thank you for your letter dated January 8, 2020 regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge the Historic Hawai‘i Foundation (HHF) comments below and provide the following responses.

We appreciate your comment that HHF is generally supportive of the multimodal improvements to Kekaulike Mall and Kekaulike Street, including the physical and visual interconnectivity to the future Holau transit station on Nimitz Highway. We also acknowledge your comments that the improvements should be designed and implemented in accordance with the Secretary of the Interior’s Standards for the Treatment of Historic Properties (SOI Standards) and other relevant standards and guidelines for the treatment of historic properties.

The project area includes Kekaulike Mall and Kekaulike Street. It does not include the rail station or its plaza.

HISTORIC PRESERVATION

1. *The historic Ai-Goto Building, adjacent to the proposed rail station plaza, needs to be preserved and rehabilitated in accordance with the SOI standards. The project materials included a concept sketch titled “exploring integration with the Chinatown Station” that appears to significantly alter the character of this building, presumably to relate to the new rail station. HHF opposes any extensive alterations to the form, massing, fenestration, materials or other character-defining features of the building. Instead, rehabilitation should focus on preserving and restoring features along with adaptive reuse of the building.*
2. *The proposed “Smart” Canopy shade device creates a tunnel effect and would block street-level views of the facades of the historic buildings. This would not be in keeping with the Chinatown SDD guidelines, which encourage visibility and design compatibility with the architectural character of the period*

architecture found in the Historic Core Precinct. It would also obscure the makai view corridor, which is an identified link between Chinatown and Honolulu Harbor. HHF recommends alternative means to provide shade and rain protection that would not alter the spatial relationships and view sheds, such as trees or retractable awnings.

The proposed project will not alter or modify any of the buildings or structures fronting Kekaulike Mall and Kekaulike Street. Early design schematics included overhead canopies and fixed, raised planters, which through consultation and evaluation against the Secretary of Interior Standards were deemed to potentially detract from the historic character of the streetscape. Through an iterative design process that took in to account pre-consultation comments, inter-department meetings, and the Secretary of Interior's Standards along with the Chinatown Special District Standards, canopies were removed from the preferred alternative. The resulting design was concluded to not pose an adverse impact to the historic resources present within the project area or negatively impact historic structures fronting Kekaulike Mall and Kekaulike Street. Discussions on the historic resources related to the proposed improvements are described in Section 4.1.2 and Appendix C of the Draft EA.

3. *We appreciate the street-friendly streetscape concepts of lighting, graphics, paving materials and artwork opportunities contained in the shared street plan. It should be noted that the SOI Standards encourage new additions and site elements to be secondary to the historic buildings and not detract from their significance, so detailed concept plans will be needed in order to assess compliance with this intent.*

The proposed streetscape elements, including lighting concepts, graphics, paving materials, and artwork opportunities, will feature an aesthetically cohesive design consistent with the historical significance and cultural character of the Chinatown neighborhood. Discussions on the architectural design are described in Section 2.1.3 of the Draft EA and detailed conceptual plans are provided in Appendix A of the Draft EA.

4. *We appreciate the intent to install streetscape elements "in such a way as to avoid disturbing the historic[al] building facades." There should be explicit commitments to avoid hanging or installing elements from the buildings, or for technical specifications on how any new elements would be installed to avoid damage to historic fabric.*

The proposed streetscape elements will not alter or modify any of the building facades or structures fronting Kekaulike Mall and Kekaulike Street. Discussions on the architectural design and historic resources related to the proposed improvements are described respectively in Section 2.1.3 and Section 4.1.2 of the Draft EA. Technical specifications are provided with the conceptual plans in Appendix A of the Draft EA.

5. *The existing ballast block curbing is a character-defining feature of the historic district which should be retained and reset. If the street level is raised, how will the curbing material and profile be maintained?*

Curb material will be retained. To promote improved accessibility and shared street uses on Kekaulike Street between North King Street and Nimitz Highway, the roadway will be elevated to match the curb height allowing the top face of the curb to be exposed.

ARCHITECTURE AND INFRASTRUCTURE

1. *A common building element in Chinatown is the use of roof drainage conducted to the ground via gutters and downspouts which feed directly into the street gutter. If Kekaulike Street's grade is*

raised to eliminate gutters, this could have the unintended consequence of causing building flooding or ponding by blocking the outfalls. Adjacent buildings and their drainage systems need to be accommodated in any changes to street grade. The storm water management plans need to provide for diversion of the rooftop drainage underground and to avoid ponding in the pedestrian plaza.

We acknowledge your comments on stormwater management and existing drainage systems. The proposed improvements to Kekaulike Mall and Kekaulike Street are anticipated to improve onsite drainage conditions throughout the project area. A series of new drainage inlets are proposed along the entire project area. The new drainage inlets will be located on both sides of the shared-use roadway and pedestrian mall sections of the project. The drainage inlets will feed into lateral storm water drain lines that connect to vortex separators downstream to remove trash and sediments before connecting to the main 18-inch storm drain line. There will also be a series of tree wells and planters along the length of the project area offering opportunities for localized groundwater infiltration. The drainage improvements are anticipated to reduce non-point source pollution by collecting localized stormwater, while reducing and intercepting debris that would otherwise flow to nearby waterways. Proposed drainage improvements are described in Section 4.6.4 and Appendix A of the Draft EA.

2. *HHF does not oppose extending the Kekaulike Pedestrian Mall south of King Street, per se. However, functional consideration for maintenance (garbage trucks) and deliveries poses some challenges related to loading zone hours. Similar restrictions were mandated several years ago in Waikīkī. Eventually the enforcement of restricted times was relaxed due to property owner concerns, resulting in current competition between pedestrians, private vehicles, deliveries and trolleys. Careful study should be done to ensure that the restricted times and zones are realistic for the adjacent business and all other users.*

We acknowledge your comments on functional design for maintenance access and loading zone considerations. The proposed conceptual plans include dedicated areas for freight loading and signage to regulate restricted access times. Most vehicular traffic will be restricted within the project area to provide an open shared space for business and pedestrian use. One-way paratransit (TheHandi-Van) and commercial freight access will be permitted in the project area during business hours and freight loading hours, respectively. Emergency and maintenance vehicles will be allowed access at any time. All authorized vehicles will enter at King Street and exit at Nimitz Highway. Consultation with local businesses and other community leaders will determine final loading hours. Discussions on key elements of the proposed project are described in Section 2.1.3 and Appendix A of the Draft EA.

URBAN DESIGN AND STREETSCAPE

1. *We encourage the introduction of appropriate building treatment and streetscape elements that complement the character of Chinatown in an authentic manner. However, we are concerned that designers should not utilize cultural symbols or romanticised allusions to dragons and other culturally-significant icons. We recommend consultation with local (and possibly international) Chinese cultural experts and organizations to avoid cultural appropriation or ill-advised use of symbols or representational elements.*

Early design schematics for the proposed streetscape elements included overhead canopies and other artistic elements, which through consultation and evaluation against the Secretary of Interior Standards were deemed to potentially detract from the historic character of the streetscape. The resulting design was concluded to not pose an adverse impact to the historic resources present within the project area or negatively impact historic structures fronting Kekaulike Mall and Kekaulike Street. Paving or painted

design features will be applied to both the Kekaulike Mall and the Kekaulike Street surfaces to offer a cohesive, aesthetically pleasing streetscape that will foster a sense of place consistent with the historical and cultural character of the Chinatown neighborhood. Discussions on the architectural design and historic resources related to the proposed improvements are described respectively in Section 2.1.3 and Section 4.1.2 of the Draft EA. Detailed conceptual plans are provided in Appendix A of the Draft EA.

2. *The design intent to integrate with the proposed rail station raises issues of timing. HHF previously submitted comments on the preliminary Chinatown station design to the City in accordance with the Programmatic Agreement for the Honolulu Transit System (see HHF comments to HART, October 2018), and the City responded (January 2019) that final design would address our concerns after the Transit system's private development partner is under contract and able to participate in consultation and design development. We note that the design of the station and its plaza are in flux, so it may not be possible to integrate the streetscape until the station designer is selected.*

The jurisdiction of the future Holau transit station is beyond of the scope of the proposed project. However, consultation with HART will be conducted as the rail station and plaza design is finalized to ensure connectivity and cohesive streetscape elements. Discussions on the architectural design are described in Section 2.1.3 and Appendix A of the Draft EA.

3. *Please provide additional information on the planned "Chinatown Gateway Arch" at the intersection of King and Kekaulike. Usually, gates separate areas and serve as a entryway or point of connection. What is being connected or separated by the Gateway? This location is in the center of an existing district and is not a logical location for a gate. Who is installing it and why?*

The Chinatown arch location and design are not within this project's scope but has been an ongoing project by the Chinatown community and therefore acknowledged in the planning of the Kekaulike Mall and Kekaulike Street Multimodal Improvements Project. The Chinatown gateway arch., which is being conceptualized to sit just mauka of North King Street on Kekaulike Mall to act as a focal point, is currently planned to be designed and developed by the Chinatown community at a future date.

4. *HHF's prior comments to HART on the rail station design encourage the use of the open courtyard space around the Ai-Goto building extending behind the Holau Market building to the back of the Chun's Meat Market Building. This is in keeping with the Chinatown Special District Guidelines which encourages "landscaped interior courtyards to create activity centers, intimate pedestrian open spaces and visual enjoyment." We recommend that this be considered as a complementary open space to the proposed Kekaulike Street Mall and rail station plaza.*

We acknowledge your recommendations for intimate pedestrian open space elements for the proposed project area to complement Kekaulike Street and the Holau transit station. Early design schematics included overhead canopies and fixed, raised planters, which through consultation and evaluation against the Secretary of Interior Standards were deemed to potentially detract from the historic character of the streetscape. The resulting design maintains a pedestrian open space aligning with your recommendations.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

SUBJECT: AGENCYPRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII
DATE: February 16, 2021

Catie Cullison
Planner, Principal

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843
www.boardofwatersupply.com

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ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.
Deputy Manager and Chief Engineer

January 2, 2020

Ms. Catie Cullison
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Ms. Cullison:

Subject: Your Letter Dated December 3, 2019 Requesting Comments on the Pre-Consultation for the Environmental Assessment for the Proposed Kekaulike Mall and Street Multimodal Improvements Project

Thank you for your letter regarding the proposed multimodal improvements project.

The construction drawings should be submitted for our review.

The construction schedule should be coordinated to minimize impact to the water system.

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

Very truly yours,

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

PBR HAWAII
& ASSOCIATES, INC.

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Project Director

RAMSAY R. M. TAUM
Cultural Sustainability Planner

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March 1, 2021

Mr. Ernest Lau, P.E.
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, HI 96843

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Lau:

Thank you for your letter dated January 2, 2020 regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge that construction drawings should be submitted to the Board of Water Supply for review and that the construction schedule should be coordinated to minimize impact to the water system.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Principal

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DEPARTMENT OF BUDGET AND FISCAL SERVICES
CITY AND COUNTY OF HONOLULU
530 SOUTH KING STREET, ROOM 208 • HONOLULU, HAWAII 96813
PHONE: (808) 768-3900 • FAX: (808) 768-3179 • INTERNET: www.honolulu.gov

KIRK CALDWELL
MAYOR

NELSON H. KOYANAGI, JR.
DIRECTOR

MANUEL T. VALBUENA
DEPUTY DIRECTOR

December 17, 2019

Ms. Catie Cullison, Planner, Senior Associate
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 600
Honolulu, Hawaii 96813

Dear Ms. Cullison:

SUBJECT: Pre-Consultation for a HRS Chapter 343 Environmental Assessment for the Proposed Kekaulike Mall/Street Multimodal Improvements Project

This is in response to your letter dated December 3, 2019, requesting comments for the above-mentioned project. The City's Department of Budget and Fiscal Services does not object to the proposed improvement project nor do we have any comments at this time.

Should you have any questions, you may contact Tammy Namihira at (808) 768-3942.

Sincerely,

Nelson H. Koyanagi, Jr.
Director

NHK/tn

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
Chairman / Principal

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Principal

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Principal

CATIE CULLISON, AICP
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March 1, 2021

Mr. Nelson Koyanagi
Department of Budget and Fiscal Services
City and County of Honolulu
530 South King Street, Room 208
Honolulu, HI 96813

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Koyanagi:

Thank you for your letter dated December 17, 2019 regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge that the Department of Budget and Fiscal Services does not object to the proposed improvement project nor do you have any comments at this time.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Prinicipal

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DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
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KIRK CALDWELL
MAYOR

MARK YONAMINE, P.E.
DIRECTOR

HAKU MILLES, P.E.
DEPUTY DIRECTOR

January 31, 2020

PBR Hawaii & Associates, Inc.
ATTN: Catie Cullison
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Ms. Cullison,

Subject: Agency Pre-Consultation for a HRS Chapter 343 Environmental Assessment for the proposed Kekaulike Mall/ Street Multimodal Improvements Project, District of Honolulu, Island of Oahu, Hawaii

Thank you for the opportunity to review and comment. The Department of Design and Construction has the following comments:

Our Mechanical Electrical division asks that you consider upgrading the existing lighting in the mall to LED Lighting.

Our Facilities division comments that Improvements will need to meet the new Storm Water Quality Rules. The Retractable bollard system may not be maintainable by the Department of Facility Maintenance. A simpler manual system should be considered. The Paver system should be a pervious pavement system and should have a subsurface water storage system. This system will need to handle the large amounts of debris and garbage left on the mall from the homeless and businesses.

Should you have any further questions, please contact Allyn Lee from our Mechanical Electrical division at 768-8429, or Clifford Lau from our Facilities division at 768-8483.

Sincerely,

FOR Mark Yonamine, P.E.
Director

MY:ms(795789)

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
Chairman / Principal

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President / Principal

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March 1, 2021

Mr. Mark Yonamine, P.E.
Department of Design and Construction
City and County of Honolulu
650 South King Street
Honolulu, HI 96813

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Yonamine:

Thank you for your letter dated January 31, 2020 regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge your request to upgrade the existing lighting in the mall to LED lighting. Discussions on key elements of the projects, including lighting, are described in Section 2.1.3 of the Draft EA.

We acknowledge your comments that the proposed project is required to meet Storm Water Quality Rules and should include pervious pavement and subsurface water storage system. The design includes new drainage inlets that will feed into lateral storm water drain lines that connect to vortex separators downstream to remove trash and sediments before connecting to the main 18-inch storm drain line. There will also be a series of tree wells and planters along the length of the project area offering opportunities for localized groundwater infiltration. The drainage improvements are anticipated to reduce non-point source pollution by collecting localized stormwater, while reducing and intercepting debris that would otherwise flow to nearby waterways, including Honolulu Harbor. Details on proposed drainage system improvements and pavements surfaces proposed are pending final design. Discussions on the proposed drainage system are described in Section 2.1.3, Section 4.6.4. and Appendix A of the Draft EA.

We acknowledge your comments on the proposed bollards in the initial design presented during preconsultation. The revised design does not include bollards. Discussions on key elements of the projects, including lighting, are described in Section 2.1.3 of the Draft EA.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Principal

O:\Job35\3543.01 Kekaulike Multi-Modal Improvements\HRS 343 EA\DEA\Preconsultation\Client Response Letters\COUNTY_DDC Draft Response.docx

DEPARTMENT OF FACILITY MAINTENANCE

CITY AND COUNTY OF HONOLULU

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KIRK CALDWELL
MAYOR

ROSS S. SASAMURA, P.E.
DIRECTOR AND CHIEF ENGINEER

EDUARDO P. MANGLALLAN
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 19-695

December 20, 2019

Ms. Catie Cullison
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Ms. Cullison:

Subject: Pre-Assessment Consultation for Chapter 343, HRS Environmental Assessment for the Proposed Kekaulike Mall/Street Multimodal Improvments Project

Thank you for the opportunity to review and comment on the subject project.

- Once construction phase commences, install approved Best Management Practices (BMP) fronting all drainage facilities on Kekaulike Street, North Hotel Street, and King Street.

- During construction and upon completion of the project; any damages/deficiencies to the roadways on Kekaulike Street, North Hotel Street and King Street shall be repaired to City standards and accepted by the City at no cost to the City and County of Honolulu.

- We recommend that the Complete Streets Administrator, Renee Espiau and staff review the documents.

- The Department of Parks and Recreation maintains the Kekaulike Mall.

If you have any questions, please call Mr. Kyle Oyasato of the Division of Road Maintenance at 768-3697.

Sincerely,

Ross S. Sasamura, P.E.
Director and Chief Engineer

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
Chairman / Principal

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President / Principal

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March 1, 2021

Mr. Ross Sasamura, P.E.
Department of Facility Maintenance
City and County of Honolulu
1000 Ulu'ohia Street, Suite 215
Kapolei, HI 96707

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Sasamura:

Thank you for your letter dated December 20, 2019 (DRM 19-695) regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge your comments below and provide the following responses:

1. *Once construction phase commences, install approved Best Management Practices (BMP) fronting all drainage facilities on Kekaulike Street, North Hotel Street, and King Street.*

We acknowledge your comment that once the construction phase commences, install approved Best Management Practices (BMP) fronting all drainage facilities on Kekaulike Street, North Hotel Street, and King Street. The proposed drainage systems are described in Section 4.6.4 of the Draft EA.

2. *During construction and upon completion of the project; any damages/deficiencies to the roadways on Kekaulike Street, North Hotel Street and King Street shall be repaired to City standards and accepted by the City at no cost to the City and County of Honolulu.*

We acknowledge your comment that during construction and upon completion of the project; any damages/ deficiencies to the roadways on Kekaulike Street, North Hotel Street and King Street shall be repaired to City standards and accepted by the City at no cost to the City and County of Honolulu. Discussions on proposed transportation systems is described in Section 4.6.1 and Appendix E of the Draft EA.

3. *We recommend that the Complete Streets Administrator, Renee Espiau and staff review the documents.*

We acknowledge your recommendation that the Complete Streets Administrator, Renee Espiau and staff review the documents. DTS staff have been coordinating with the Complete Streets program staff, Department of Planning and Permitting, Department of Parks and Recreation as well as Facilities Maintenance on the concept design in an effort to improve the street as part of a multi-modal network while balancing considerations for maintenance, security, connectivity, and deference to historic and architectural character. Additionally, compliance with the Complete Streets Ordinance is discussed in the in Section 5.3.3.1 of the Draft EA.

4. *The Department of Parks and Recreation maintains the Kekaulike Mall.*

We acknowledge your comment that the Department of Parks and Recreation maintains the Kekaulike Mall. DTS staff has been coordinating with the Department of Parks and Recreation throughout the design concept development.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Principal

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
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MAYOR

KATHY K. SOKUGAWA
ACTING DIRECTOR

TIMOTHY F. T. HIU
DEPUTY DIRECTOR

EUGENE H. TAKAHASHI
DEPUTY DIRECTOR

December 19, 2019 2019/ELOG-2411(JY)

Ms. Catie Cullison
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Dear Ms. Cullison:

SUBJECT: Pre-Consultation - Chapter 343 Hawaii Revised Statutes Environmental Assessment
Kekaulike Mall/Multi-Modal Improvements
Kekaulike Street and Mall - Chinatown

This is in response to your letter, received December 4, 2019, requesting input for the preparation of a Chapter 343 Hawaii Revised Statutes Environmental Assessment (EA) for the above-mentioned Project. We ask that the Draft EA include discussions on the following:

1. How the proposed multi-modal improvements will meet the Chinatown Special District objectives. Describe how the proposed shade devices are compatible with nearby historic structures of low heights, continuous street frontage, and street facade elements.

2. The proposed street furnishings and how they complement the designs older facades.

3. The architectural design and the choice of materials, colors, textures, and outdoor lighting for the proposed multi-modal improvements.

4. The effects of climate change and sea level rise. Include an analysis of low impact development and conservation best management practices that may help mitigate elevated temperatures and evapotranspiration within the Project area.

Should you have any further questions on this matter, please contact Joette Yago, of our Urban Design Branch, at 768-8034 or jyago@honolulu.gov.

Very truly yours,

for Kathy K. Sokugawa
Acting Director

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
Chairman / Principal

R. STAN DUNCAN, ASLA
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March 1, 2021

Mr. Dean Uchida
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, HI 96813

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Uchida:

Thank you for your letter dated December 19, 2019 [2019/ELOG-2411(JY)] regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge your comments below and provide the following responses.

We ask that the Draft EA include discussions on the following:

1. *How the proposed multi-modal improvements will met the Chinatown Special District objectives. Describe how the proposed shade devices are compatible with nearby historic structures of low heights, continuous street frontages, and street façade elements*
2. *The proposed street furnishings and how they complement the designs older facades.*
3. *The architectural design and the choice of materials, colors, textures, and outdoor lighting for the proposed multi-modal improvements.*
4. *The effects of climate change and sea level rise. The DEA will include an analysis of low impact development and conservation best management practices that may help mitigate elevated temperatures and evapotranspiration within the Project area.*

The Draft Environmental Assessment (DEA) includes discussions on the following:

1. The project will be in compliance with the Chinatown Special District objectives. The proposed project will not alter or modify any of the buildings or structures fronting Kekaulike Mall and Kekaulike Street. Early design schematics included overhead canopies and fixed, raised planters, which through consultation and evaluation against the Secretary of Interior Standards were deemed to potentially detract from the historic character of the

streetscape. The resulting design was concluded to not pose an adverse impact to the historic resources present within the project area or negatively impact historic structures fronting Kekaulike Mall and Kekaulike Street.

The alternatives considered with this project included design concepts with shade structures or canopies. Pre-consultation materials included graphics and discussion of structures as an alternative. The alternative that included structures was deemed to likely have an adverse effect on historic resources. The pre-application consultation process helped to inform this conclusion. Project conformance with the Chinatown Special District standards is discussed in Section 5.3.3.2 of the Draft EA. Discussions on the historic resources related to the proposed improvements are described in Section 4.1.2 and Appendix C.

2. The proposed street furnishings for Kekaulike Mall and Kekaulike Street have been designed to offer a cohesive streetscape that will foster a sense of place consistent with the historical and cultural character of the Chinatown neighborhood. Discussions on the proposed street furnishings are described in Section 2.1.3 and Appendix A.
3. The proposed streetscape elements, including materials, colors, textures, and outdoor lighting, will feature an aesthetically cohesive design that will foster a sense of place consistent with the historical and cultural character of the Chinatown neighborhood. Discussions on the architectural design are described in Section 2.1.3 and Appendix A.
4. The proposed Kekaulike Multimodal Improvements project addresses both mitigation and adaptation goals outlined by the State. In an effort to mitigate future climate change, the project aims to promote multimodal transportation within the downtown Chinatown area by prioritizing pedestrian and bicycle access on Kekaulike Street. Discussions on impacts related to climate change and sea level rise are described in Section 3.4.2

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Principal

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 3RD FLOOR
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KIRK CALDWELL
MAYOR

WES FRYSZTACKI
DIRECTOR

JON Y. NOUCHI
DEPUTY DIRECTOR

TP12/19-796480

January 17, 2020

Ms. Catie Cullison
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Ms. Cullison:

SUBJECT: Agency Pre-Consultation for a HRS Chapter 343 Environmental Assessment for the Proposed Kekaulike Mall/Street Multimodal Improvements Project, District of Honolulu, Island of Oahu, Hawaii

In response to your letter dated December 3, 2019, we have the following comments and questions.

1. **Complete Streets Design Elements**. The Application should contain a discussion of compliance with County and State Complete Streets policies, pursuant to Act 54, Session Laws of Hawaii 2009, HRS §264-20.5 and ROH 12-15. The project should elaborate on how it will comply with Complete Streets policies, including specific adherence to the following key Complete Streets principles: safety, Context Sensitive Solutions, accessibility and mobility for all, use and comfort of all users, consistency of design guidelines and standards, energy efficiency, and health and green infrastructure. Specific complete street design elements are listed below:

   a. Use a durable pavement treatment (striping or other material) for the pedestrian scramble crossing at Kekaulike/King Street to maximize safety, and to create a sense of place.

   b. Consider integrating this project with a possible red bus-only lane in the Makai lane of King Street.

c. Improve the pedestrian & bicycle crossing from Kekaulike Station to Makai side of Nimitz Highway.

d. Re-evaluate the street lighting for pedestrian scale and to ensure the safety and security of the public.

e. Clarify the typical dimensions of each of the street components, including landscaping.

2. **Transportation Impact Assessment (TIA).**

a. A multi-modal TIA should be completed instead of a Traffic Impact Analysis Report in the Environmental Assessment (EA).

b. The TIA should determine the impacts to vehicle, pedestrian, bicycle, and public transit at nearby intersections and project access driveways. The TIA should identify corresponding improvements to mitigate these impacts by applying Complete Streets principles.

c. The calculated and observational Level of Service (LOS) should be provided.

d. Define performance measures for use in the study:

i. V/C ratio targets that are >1 for 1st and/or 2nd highest peak hours;
ii. Identify where vehicle LOS will not be used;
iii. Pedestrian LOS;
iv. Bicycle Level of Traffic Stress;
v. Transit Capacity and Quality of Service.

e. The TIA should discuss access management and loading. Specifically, it should

i. Evaluate the street width required for loading on both sides of the street while retaining adequate space for emergency access;
ii. Determine the extent of permitted loading hours;
iii. Determine the method and responsible agency for enforcing loading and access restrictions.

3. **Traffic Management Plan (TMP).** A TMP should be prepared for this project that is jointly reviewed and accepted by the Department of Transportation Services (DTS) and the Department of Planning and Permitting. The TMP shall include the following:

   a. A discussion of the traffic impacts that the project may have on any surrounding City roadways and facilities, including short-term impacts during construction with corresponding measures to mitigate these impacts by applying Complete Streets principles.

   b. Construction materials and equipment should be transferred to and from the project site during off-peak traffic hours (8:30 a.m. to 3:30 p.m.) to minimize any possible disruption to traffic on adjoining streets.

   c. Roadway, Sidewalk and Crosswalk Closures. If there are any roadway, sidewalk or crosswalk closures, alternate routes should be provided for vehicles, pedestrians, and bicyclists that are safe and clearly marked.

   d. Vehicle/Pedestrian Crossing. Any existing pedestrian, bicycle and vehicle access/crossing shall be maintained with the highest safety measures during construction.

   e. Best Management Practice (BMP) Controls. BMP controls should be included at the construction site to prevent trailing of dirt and debris onto adjacent roadways.

   f. Roadway Damage. Any damage to the existing roadway and sidewalk area caused by the project should be repaired to current City standards as well as meet Americans with Disabilities Act (ADA) requirements.

4. **Street Usage Permit**. A street usage permit from the DTS should be obtained for any construction-related work that may require the temporary closure of any traffic lane or pedestrian mall on a City street.

5. **Neighborhood Impacts**. The area representatives, neighborhood board, as well as the area residents, businesses, emergency personnel (fire, ambulance, and police), Oahu Transit Services, Inc. (TheBus and TheHandi-Van), etc., should be kept apprised of the details and status throughout the project and the impacts that the project may have on the adjoining local street area network.

6. **Bus Stops**. The project site is in the immediate vicinity of bus stops located on King Street and Hotel Street. Submit project plans to DTS – Transportation Mobility Division (TMD) for review and approval. Contact DTS-TMD at TheBusStop@honolulu.gov.

7. **Disability and Communication Access Board (DCAB)**. Project plans (vehicular and pedestrian circulation, sidewalks, parking and pedestrian pathways, vehicular ingress/egress, etc.) should be reviewed and approved by DCAB to ensure full compliance with ADA requirements.

Thank you for the opportunity to review this matter. Should you have any questions, please contact Mike Motoki, of my staff, at 768-6684.

Very truly yours,

Wes Frysztacki
Director

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
Chairman / Principal

R. STAN DUNCAN, ASLA
President / Principal

RUSSELL Y. J. CHUNG, FASLA, LEED® AP BD+C
Executive Vice-President / Principal

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March 1, 2021

Mr. Roger Morton, Director
City and County of Honolulu
Department of Transportation Services
650 South King Street, 3rd Floor
Honolulu, HI 96813
Attn: Mr. Mike Motoki

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Morton:

Thank you for your letter dated January 17, 2020 (TP 12/19-796480) regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge the Department of Transportation Services comments below and provide the following responses.

1. *Complete Streets Design Elements. The Application should contain a discussion of compliance with County and State Complete Streets policies, pursuant to Act 54, Session Laws of Hawaii 2009, HRS§264-20.5 and ROH 12-15. The project should elaborate on how it will comply with Complete Streets policies, including specific adherence to the following key Complete Streets principles: safety, Context Sensitive Solutions, accessibility and mobility for all, use and comfort of all users, consistency of design guidelines and standards, energy efficiency, and health and green infrastructure. Specific complete street design elements are listed below:*

    a. *Use a durable pavement treatment (striping or other material) for the pedestrian scramble crossing at Kekaulike/King Street to maximize safety, and to create a sense of place.*

    b. *Consider integrating this project with a possible red bus-only lane in the Makai lane of King Street*

    c. *Improve the pedestrian & bicycle crossing from Kekaulike Station to Makai side of Nimitz Highway.*

    d. *Re-evaluate the street lighting for pedestrian scale and to ensure the safety and security of the public.*

e. Clarify the typical dimensions of each of the street components, including landscaping.

As requested, the Draft Environmental Assessment (DEA) includes a discussion on compliance with the Complete Streets Ordinance in Section 5.3.3.1 of the Draft EA.

(a) The jurisdiction of the pedestrian scramble on King Street is beyond the scope of the project. However, coordination within the Department of Transportation Services will be conducted during construction of the project. Transportation infrastructure related to the project area and surrounding area is described in Section 4.6.1 and Appendix E of the Draft EA.

(b) A description of integration with the red bus-only lane along North King Street is included in the Draft EA. Transportation infrastructure related to the project area and surrounding area is described in Section 4.6.1 and Appendix E of the Draft EA.

(c) The jurisdiction of the pedestrian and bicycle crossing from Kekaulike Station to Makai side of Nimitz Highway is beyond of the scope of the project. However, coordination within the State Department of Transportation will be conducted during construction of the project. Transportation infrastructure related to the project area and surrounding area is described in Section 4.6.1 and Appendix E of the Draft EA.

(d) The proposed streetscape elements, including street lighting, will feature an aesthetically cohesive design that will be designed with consideration of the pedestrian scale to ensure safety and security for the project area after completion. Discussions on the architectural design are described in Section 2.1.3 and Appendix A.

(e) The proposed streetscape elements and design, including dimensions related to landscaping and other street components, are described in the Draft EA. Discussions on the architectural design are described in Section 2.1.3 and Appendix A of the Draft EA.

2. Transportation Impact Assessment (TIA).:

a. A multi-modal TIA should be completed instead of a Traffic Impact Analysis Report in the Environmental Assessment (EA).

b. The TIA should determine the impacts to vehicle, pedestrian, bicycle, and public transit at nearby intersections and project access driveways. The TIA should identify corresponding improvements to mitigate these impacts by applying Complete Streets principles.

c. The calculated and observational Level of Service (LOS) should be provided.

d. Define performance measures for use in the study:

i. V/C ratio targets that are > 1 for 1st and/or 2nd highest peak hours;

ii. Identify where vehicle LOS will not be used;

iii. Pedestrian LOS;

iv. Bicycle Level of Traffic Stress;

v. Transit Capacity and Quality of Service

e. The TIA should discuss access management and loading. Specifically, it should

i. Evaluate the street width required for loading on both sides of the street while retaining adequate space for emergency access; Identify where vehicle LOS will not be used;

ii. Determine the extent of permitted loading hours;

iii. Determine the method and responsible agency for enforcing loading and access restrictions.

(a) The Draft EA includes a Multimodal TIAR, which evaluates roadway conditions, traffic, bicycle facilities, pedestrian facilities, and public transit, as well as projected impacts from the future Holau transit station abutting the project area. Transportation infrastructure related to the project area and surrounding area is described in Section 4.6.1 and Appendix E of the Draft EA.

(b) The Draft EA includes a Multimodal TIAR, which evaluates projected impacts to vehicular traffic, pedestrian facilities, bicycle facilities, and public transit, as well as projected impacts from the future Holau transit station abutting the project area. Transportation infrastructure related to the project area and surrounding area is described in Section 4.6.1 and Appendix E of the Draft EA.

(c) The Draft EA includes discussion on calculated and observational Level of Service (LOS). Discussions on LOS are described in Section 4.6.1 and Appendix E of the Draft EA

(d) The Multimodal TIAR includes discussion on V/C ratios, Level of Service (LOS), pedestrian facilities, bicycle facilities, public transit and quality of service. Discussions on transportation infrastructure, existing conditions and projected conditions are described in Section 4.6.1 and Appendix E of the Draft EA

(e) The Multimodal TIAR includes discussion on parking and loading facilities. The Multimodal TIAR was analyzed with the assumption of overnight loading hours between 8:30pm and 5:30am. Discussions on transportation infrastructure related to parking and loading zones are described in Section 4.6.1 and Appendix E of the Draft EA.

3. Traffic Management Plan (TMP). A TMP should be prepared for this project that is jointly reviewed and accepted by the Department of Transportation Services (DTS) and the Department of Planning and Permitting. The TMP shall include the following:

a. A discussion of the traffic impacts that the project may have on any surrounding City roadways and facilities, including short-term impacts during construction with corresponding measures to mitigate these impacts by applying Complete Streets principles.

b. Construction materials and equipment should be transferred to and from the project site during off-peak traffic hours (8:30 a.m. to 3:30 p.m.) to minimize any possible disruption to traffic on adjoining streets.

c. Roadway, Sidewalk and Crosswalk Closures. If there are any roadway, sidewalk or crosswalk closures, alternate routes should be provided for vehicles, pedestrians, and bicyclists that are safe and clearly marked.

d. Vehicle/Pedestrian Crossing. Any existing pedestrian, bicycle and vehicle access/crossing shall be maintained with the highest safety measures during construction.

e. Best Management Practice (BMP) Controls. BMP controls should be included at the construction site to prevent trailing of dirt and debris onto adjacent roadways

f. Roadway Damage. Any damage to the existing roadway and sidewalk area caused by the project should be repaired to current City standards as well as meet Americans with Disabilities Act (ADA) requirements.

A Traffic Management Plan will be prepared to address the concerns raised above through the construction process.

4. *Street Usage Permit. A street usage permit from the DTS should be obtained for any construction-related work that may require the temporary closure of any traffic lane or pedestrian mall on a City street.*

The Applicant will obtain the necessary street usage permit from DTS for any work that may require closure of traffic lanes on streets or pedestrian mall throughways within the jurisdiction of the City during construction of the project.

5. *Neighborhood Impacts. The area representatives, neighborhood board, as well as the area residents, businesses, emergency personnel (fire, ambulance, and police), Oahu Transit Services, Inc. (TheBus and TheHandi-Van), etc., should be kept apprised of the details and status throughout the project and the impacts that the project may have on the adjoining local street area network.*

Community engagement has been conducted throughout the environmental review process, including consultation with area representatives, neighborhood board, as well as the area residents, businesses, emergency personnel (fire, ambulance, and police), Oahu Transit Services. Public engagement will continue to be conducted throughout the environmental review for any forthcoming details and status updates on the project that may impact the surrounding area, including the adjoining local street network.

6. *Bus Stops. The project site is in the immediate vicinity of bus stops located on King Street and Hotel Street. Submit project plans to DTS - Transportation Mobility Division (TMD) for review and approval. Contact DTS-TMD at TheBusStop@honolulu.gov.*

Project plans will be submitted to DTS – Transportation Mobility Division (TMD) for review and approval, including potential impacts to the immediate vicinity of bus stops.

7. *Disability and Communication Access Board (DCAB). Project plans (vehicular and pedestrian circulation, sidewalks, parking and pedestrian pathways, vehicular ingress/egress, etc.) should be reviewed and approved by DCAB to ensure full compliance with ADA requirements.*

Project plans, including details on vehicular and pedestrian circulation, sidewalks, parking and pedestrian pathways, vehicular ingress/egress, will be submitted to the Disability and Communication Access Board (DCAB) for review and approval.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Principal

HONOLULU FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

636 South Street
Honolulu, Hawaii 96813-5007
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

KIRK CALDWELL
MAYOR

MANUEL P. NEVES
FIRE CHIEF

LIONEL CAMARA JR.
DEPUTY FIRE CHIEF

December 27, 2019

Ms. Catie Cullison
Planner, Senior Associate
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Ms. Cullison:

Subject: Preconsultation for a Hawaii Revised Statute Chapter 343 Environmental Assessment for the Proposed Kekaulike Mall/Street Multimodal Improvements Project

In response to your letter dated December 3, 2019, regarding the abovementioned subject, the Honolulu Fire Department (HFD) reviewed the submitted information and requires that the following be complied with:

1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (45 meters) from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; 2012 Edition, Sections 18.2.3.2.2 and 18.2.3.2.2.1.)

   A fire department access road shall extend to within 50 feet (15 meters) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA 1; 2012 Edition, Section 18.2.3.2.1.)

2. A water supply approved by the county, capable of supplying the required fire flow for fire protection, shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter

constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45,720 millimeters) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ [Authority Having Jurisdiction]. (NFPA 1; 2012 Edition, Section 18.3.1, as amended.)

3. The unobstructed width and unobstructed vertical clearance of a fire apparatus access road shall meet county requirements. (NFPA 1; 2012 Edition, Sections 18.2.3.4.1.1 and 18.2.3.4.1.2, as amended.)

4. Submit civil drawings to the HFD for review and approval.

Should you have questions, please contact Battalion Chief Wayne Masuda of our Fire Prevention Bureau at wmasuda@honolulu.gov or 723-7151.

Sincerely,

JASON SAMALA
Assistant Chief

JS/TC:jl

PBR HAWAII
& ASSOCIATES, INC.

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March 1, 2021

Mr. Jason Samala
Honolulu Fire Department
City and County of Honolulu
636 South Street
Honolulu, HI 96813

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Samala:

Thank you for your letter dated December 27, 2019 regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge your comments below and provide the following responses.

1. *Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (45 meters) from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; 2012 Edition, Sections 18.2.3.2.2 and 18.2.3.2.2.1.)*

   A fire department access road shall extend to within 50 feet (15 meters) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA 1; 2012 Edition, Section 18.2.3.2.1.)

We acknowledge that the proposed project shall be in compliance with requirements for fire department access roads provisions such that any portion of the facility or any portion of an exterior wall of the first story of the buildings is located not more than 150 feet (45 meters) from access roads as measured by an approved route around the exterior of the building or facility.

2. *A water supply approved by the county, capable of supplying the required fire flow for fire protection, shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45,720 millimeters) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ [Authority Having Jurisdiction). (NFPA 1; 2012 Edition, Section 18.3.1, as amended.)*

The proposed improvements will maintain water supply approved by the county capable of supplying the required fire flow. A discussion is included in the DEA describing fire hydrants and mains capable of supplying the required fire flow as required by the Authority Having Jurisdiction in accordance with NFPA 1; 2012 Edition, Section 18.3.1, as amended. Discussion on the proposed water system is described in Section 4.6.2 and Appendix A of the Draft EA.

3. *The unobstructed width and unobstructed vertical clearance of a fire apparatus access road shall meet county requirements. (NFPA 1; 2012 Edition, Sections 18.2.3.4.1.1 and 18.2.3.4.1.2, as amended.)*

An unobstructed width and unobstructed vertical clearance of a fire apparatus access road is maintained with the proposed improvements in compliance with county requirements in accordance with NFPA 1; 2012 Edition, Sections 18.2.3.4.1.1 and 18.2.3.4.1.2 as amended. Early design and pre-consultation materials included schematics showing overhead canopies and fixed, raised planters, which through consultation and evaluation were deemed to potentially detract from the historic character of the streetscape. The pre-application consultation process helped to inform this conclusion. Discussions on key elements of the project and alternatives are described in Section 2.1.3 and Appendix A of the Draft EA.

4. *Submit civil drawings to the HFD for review and approval.*

We acknowledge your comment to submit civil drawings to the HFD for review and approval.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Principal

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulupd.org

KIRK CALDWELL
MAYOR

SUSAN BALLARD
CHIEF

JOHN D. McCARTHY
~~XXXXXXXXXXXXXX~~
DEPUTY CHIEFS

OUR REFERENCE RN-DK

December 23, 2019

Ms. Catie Cullison
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Ms. Cullison:

This is in response to your letter of December 3, 2019, requesting input on a Pre-Consultation, Draft Environmental Assessment, for the proposed Kekaulike Mall and Kekaulike Street Multimodal Improvements project.

The Honolulu Police Department (HPD) has reviewed the project summary provided and anticipates short- and long-term impacts to pedestrian and vehicular traffic in and around the project area, especially during peak traffic hours. These impacts may cause an increase in calls for service to the area.

The HPD recommends that contractors obtain proper street usage permits, adhere to all safety and traffic control regulations, and ensure that employees do not park in unauthorized areas due to the limited parking in the North King Street area. Contractors and their employees should obtain parking permits and park their work or personal vehicles outside the working area. In addition, contractors and employees should not park at public parks (Aala or Beretaina) during their work shift, as parking is strictly for park users only. Contractor deliveries and other construction tasks that may cause an interruption in traffic flow should be avoided during peak traffic times.

The proposed area for this project has a high level of traffic and very little parking available. Kekaulike Street hosts three loading zones for the vendors of Oahu Market and Kekaulike Mall. A reduction or limited use of these loading zones will have an adverse effect on the small businesses. We suggest that additional, temporary loading zones for the duration of the construction be added to North King Street to mitigate the loss of the loading zones on Kekaulike Street. The public will still have ample street parking as well access to the municipal parking lots. If possible, a parking area should be provided for first responders (police, fire, and ambulance), one that is easily accessible and close to the main entrance of the construction area.

In regards to the planning of the project, the HPD also suggests that all ingress and egress points (as well as common areas and frequently traversed areas) have security cameras. Due to the thefts throughout the island, video camera footage should be utilized to monitor the construction site for security. The designers may wish to incorporate Crime Prevention Through Environmental Design concepts as well in the planning of this project.

Additionally, informational notices/reports (in English and Chinese) should be sent out to the residents of Chinatown to keep them informed of the construction dates and times as well as anything that may cause a disruption to their everyday activities.

If there are any questions, please call Major Ryan Nishibun of District 1 (Central Honolulu) at 723-3327.

Sincerely,

ALLAN T. NAGATA
Assistant Chief
Support Services Bureau

PBR HAWAII
& ASSOCIATES, INC.

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March 1, 2021

Mr. Allan Nagata
Honolulu Police Department
City and County of Honolulu
801 South Beretania Street
Honolulu, HI 96813

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Nagata:

Thank you for your letter dated December 23, 2019 (RN-DK) regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge your comments on the short and long-term impacts to pedestrian and vehicular traffic in and around the project area, especially during peak traffic hours, and provide the following responses.

We acknowledge your recommendation that contractors obtain proper street usage permits, adhere to all safety and traffic control regulations, and ensure that employees do not park in unauthorized areas due to the limited parking in the North King Street area. We acknowledge your comment that contractors and their employees should obtain parking permits and park their work or personal vehicles outside the working area and that contractors and employees should not park at public parks (A'ala or Beretania) during their work shift, as parking is strictly for park users only. We acknowledge your comment that contractor deliveries and other construction tasks that may cause an interruption in traffic flow should be avoided during peak traffic times.

A discussion of the short-term and long-term impacts to parking and traffic as well as other transportation system considerations is provided in Section 4.6.1 of the Draft Environmental Assessment. Please note that the Draft EA also contains a Multimodal Traffic Impact Assessment Report in Appendix E.

We acknowledge your comment that the proposed area for this project has a high level of traffic and very little parking available. We acknowledge your comment that Kekaulike Street hosts three loading zones for the vendors of Oahu Market and Kekaulike Mall and that a reduction or limited use of these loading zones will have an adverse effect on the small businesses. We acknowledge your suggestion that additional, temporary loading zones for the duration of the construction be added to North King Street to mitigate the loss of the loading zones on Kekaulike Street.

We acknowledge your recommendation that, if possible, a parking area should be provided for first responders (police, fire and ambulance), one that is easily accessible and close to the main entrance of the construction area. Discussions on traffic and parking considerations related to the project are described in Section 4.6.1 of the Draft EA and the Multimodal Traffic Impact Assessment Report in Appendix E of the Draft EA.

We acknowledge your suggestion that all ingress and egress points (as well as common areas and frequently traversed areas) have security cameras. We acknowledge your comment that, due to the thefts throughout the island, video camera footage should be utilized to monitor the construction site for security. The designers may wish to incorporate Crime Prevention through Environmental Design concepts as well in the planning of this project. The proposed improvements include accommodations for future CCTV, blue light call boxes, and public address systems. Discussions on key elements of the project are described in Section 2.1.3 and Appendix A of the Draft EA

We acknowledge your recommendation that information notices/ reports (in English and Chinese) should be sent out to the residents of Chinatown to keep them informed of the construction dates and times as well as anything that may cause a disruption to their everyday activities.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Principal

DAVID Y. IGE
GOVERNOR

PANKAJ BHANOT
DIRECTOR

CATHY BETTS
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF HUMAN SERVICES
Benefit, Employment and Support Services Division
1010 Richards Street, Suite 512
Honolulu, Hawai'i 96813

December 18, 2019

Re: 19-0558

PBR HAWAII & Associates
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484
Attn: Catie Cullison

Dear Ms. Cullison:

SUBJECT: Agency Pre-Consultation for A HRS Chapter 343 Environmental Assessment for The Proposed Kekaulike Mall/Street Multimodal Improvements Project, District of Honolulu, Island of Oahu, Hawaii

This is in response to your letter dated December 3, 2019 requesting the Department of Human Services (DHS) to review and comment on the above-named project.

The DHS has reviewed the Kekaulike Mall/Street Multimodal Improvements Project and the map of the proposed area. A check on DHS' internal data system and Google Maps found several DHS licensed infant toddler child care centers and group child care centers within the one-mile vicinity that may be affected during the construction phase.

If you should have any question regarding this matter, please contact Ms. Lisa Galino, Child Care Program Specialist at (808) 586-5712.

Sincerely,

Scott Nakasone

Scott Nakasone
Assistant Division Administrator

c: Pankaj Bhanot, Director

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& ASSOCIATES, INC.

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Project Director

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E-mail: sysadmin@pbrhawaii.com

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March 1, 2021

Mr. Scott Nakasone
Department of Human Services
State of Hawaii
1010 Richards Street, Suite 512
Honolulu, HI 96813

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Nakasone

Thank you for your letter dated December 18, 2019 (19-0558) regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge your comments and provide the following response.

We acknowledge your comment that a check on DHS' internal data system and Google Maps found several DHS licensed infant/toddler childcare centers and group child care centers within the one-mile vicinity that may be affected during the construction phase. A discussion of all nearby schools and childcare centers, potential impacts to those facilities, and any proposed mitigation measures is provided in Section 4.9.1 of the Draft EA.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Principal

O:\Job35\3543.01 Kekaulike Multi-Modal Improvements\HRS 343 EA\DEA\Preconsultation\Client Response Letters\STATE_DHS Draft Response.docx

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

LD 2175

January 02, 2020

PBR HAWAII & Associates, Inc.
Attn: Catie Cullison
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Via email: sysadmin@pbrhawaii.com

Dear Ms. Cullison:

SUBJECT: **Pre-Consultation for Chapter 343, HRS, Environmental Assessment for Proposed Kekaulike Mall & Street Multimodal Improvements Project,** located at Kekaulike Street and Mall, Honolulu, Island of Oahu

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

Enclosed are responses received from the (a) Engineering Division, and (b) Land Division – Oahu District on the subject matter. Should you have any questions, please feel free to contact Barbara Lee at (808) 587-0453 or by email at barbara.j.lee@hawaii.gov. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)
cc: Central Files

LD2175

PBR HAWAII
& ASSOCIATES, INC.

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LAND DIVISION

2019 DEC -4 AM 11:25

DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

December 03, 2019

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Honolulu, Hawai'i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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Mr. Russell Tsuji, Administrator
State of Hawaii
DLNR - Land Division
Kalanimoku Building
1151 Punchbowl Street, Rm. 220
Honolulu, HI 96813

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL / STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF O'AHU, HAWAI'I

Dear Mr. Tsuji,

PBR HAWAII & Associates has been contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS) with the preparation of a Hawai'i Revised Statutes (HRS) Chapter 343 Environmental Assessment for proposed multimodal street improvements to Kekaulike Mall and Street in Honolulu, Hawai'i. The project addresses the need for spatial continuity and connectivity between Kekaulike Mall, Kekaulike Street, and the eventual Chinatown rail station. A "shared-use street" concept has been designed that aims to improve pedestrian accessibility, safety, connectivity and wayfinding while promoting economic activity and enhancing the experience of residents and visitors in Chinatown. Preliminary designs have been drafted in coordination with State, County and community stakeholder collaboration. The resulting concepts are detailed below as the preferred design alternatives but are subject to change.

Kekaulike Mall and Kekaulike Street are located in the Chinatown Special District between River and Maunakea Streets, just northwest of downtown Honolulu. Kekaulike pedestrian mall runs mauka to makai from Hotel Street to King Street. Kekaulike Street runs mauka to makai from N. King Street to Nimitz Highway. See Enclosure.

The project proposes to integrate a number of infrastructure and streetscape improvements throughout Kekaulike Street and Kekaulike Mall. Drainage improvements, including the installation of trench drains and underground retention basins, are proposed to help mitigate current and future flooding events. New, high quality surface pavement materials are being evaluated that allow for easy pavement removal and reinstallation when underground infrastructure work is required. To promote improved accessibility and shared street uses between N. King Street and Nimitz Highway, Kekaulike Street will be elevated to match the curb height and vehicle bollards will be installed at the King Street intersection in order to limit vehicle use to only delivery vehicle and handi-van access within designated hours. The bollards could be removed or lowered during a specified timeframe to allow delivery truck and handi-van access. No loading will be permitted outside of the designated loading hours. Parking along Kekaulike Street will be prohibited at all times.

Kekaulike Mall between N. King Street and Hotel Street will remain closed to vehicles and will allow pedestrian and bicycle use only. Bike facilities, including a Biki station will also be designed into the pedestrian mall. See Enclosure.

Streetscape improvements may include a 'shade devices and/or shade systems' that may also integrate lighting, Wi-Fi, CCTV, PA/ sound system, and artwork opportunities. Additional proposed infrastructure may include lighting, signage and Wi-Fi service installed in such a way as to avoid disturbing the historical building facades of the surrounding shops. The Chinatown gateway arch., which is being conceptualized to sit between Kekaulike Mall and Kekaulike Street to act as a focal point, is currently planned to be built by others.

With this letter, we seek your agency's or organization's input as to existing or proposed projects, plans, policies, or programs that we should consider when preparing the **Chapter 343, HRS Environmental Assessment**. Please send us any comments by **January 03, 2020.** You may mail your comments to:

PBR HAWAII & Associates, Inc.
Attn: Catie Cullison
1001 Bishop Street, Suite 650
Honolulu, HI 96813-3484

We note that in addition to solicitation of pre-consultation comments, opportunities to comment on the project design will be provided to the public in the coming months. Please let us know in your response letter if you wish to be kept informed of any community meetings pertaining to this project.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Senior Associate

cc: Mr. Wes Frysztacki, Department of Transportation Services
Mr. Honglong Li, Department of Transportation Services

Enclosures: Kekaulike Mall / Street Improvements Detailed Site Plan

KEKAULIKE MALL / STREET MULTIMODAL IMPROVEMENTS PROJECT

Summary

The Kekaulike Mall and Kekaulike Street multi-modal improvements project addresses the need for spatial continuity and connectivity between Kekaulike Mall, Kekaulike Street, and the eventual Chinatown rail station. The project will improve pedestrian accessibility, safety, connectivity, and wayfinding; while promoting economic activity, and enahancing the experience of residents and visitors in Chinatown. The City has executed a contract for the planning and design of Kekaulike Mall and Kekaulike Street from N. Hotel Street to Nimitz Highway as a "Shared-use Street". The planning phase has evaluated pedestrian, bicycle, and business access, retail and event opportunities, and placemaking opportunities.

Of the explored options, concept C is recommended because it creates the most opportune environment for the shared-street concept to achieve a high level of success in the future. By controlling vehicle access on Kekaulike Street, this strategy opens the space up to business and pedestrian use while maintaining access for vendor deliveries.

Historic Holau Market and Oahu Market buildings are located on Kekaulike Street.

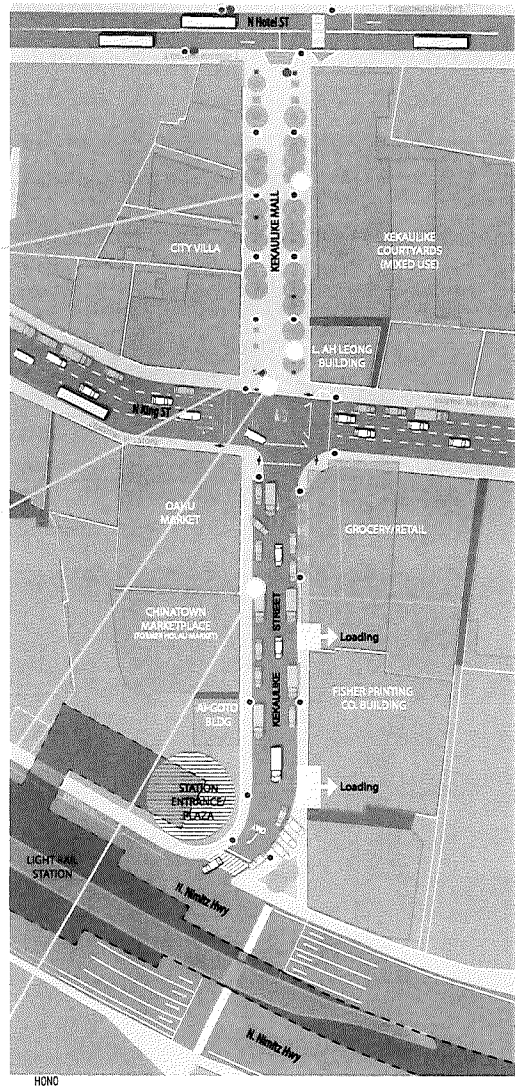
Existing Conditions

View Mauka on Kekaulike Mall

Variety of fresh produce on Kekaulike Mall

View Mauka on Kekaulike Mall

View of Kekaulike Street from King Street

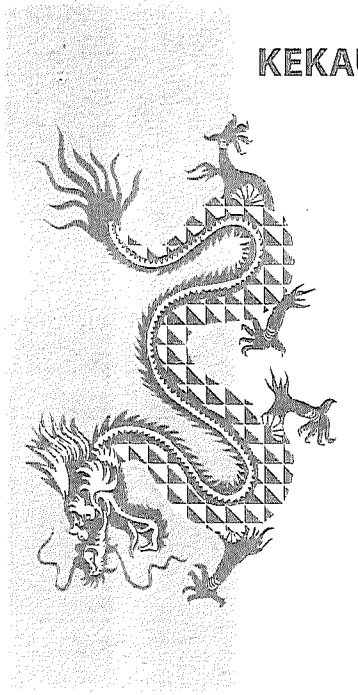


HONO

Existing condition site diagram

November 11, 2019

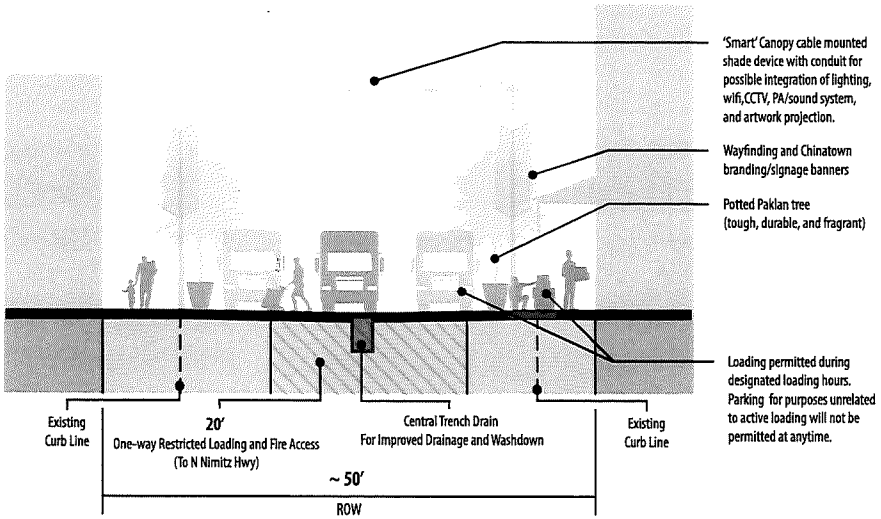
KEKAULIKE MALL / STREET MULTIMODAL IMPROVEMENTS PROJECT



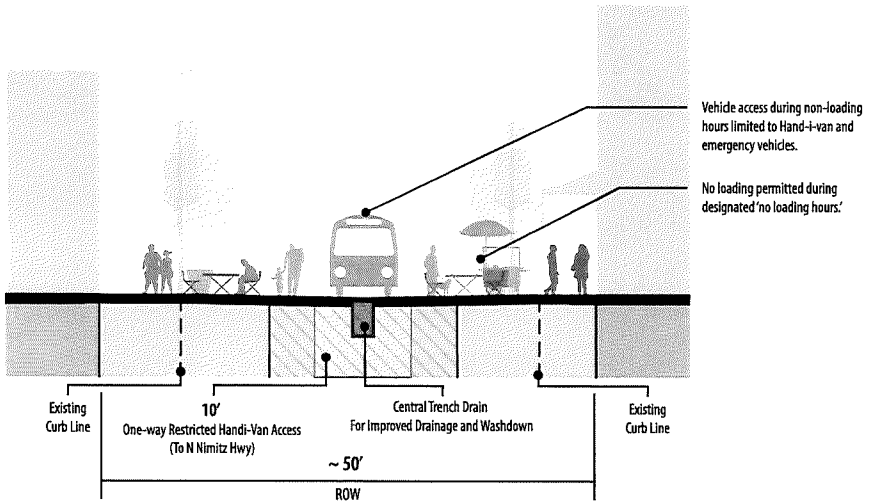
Date	Meeting	Attendees
6/27/2015	Chinatown Action Summit	See Public Sign-in sheet
12/1/2015	Chinatown Action Plan Community Meeting #2	See Public Sign-in sheet
7/25/2016	Meeting with HART	S. Solamillo, A. Marceau, Jon Nouchi, Nancy Tornatore, Mike Boomsma, Ryan Tam
9/2/2016	Meeting with Friends of Kekaulike	Johnny Ng, Joe Young, Eric Wong, Gale Braceros, Susanna Ho, Roland Louie, Doreen Furuyama, Paul Min, Diana Ronquillo, Joseph Yang
9/15/2016	Chinatown Action Plan Community Meeting #3	See Public Sign-in sheet
10/10/2016	Meeting with Department of Facility Maintenance	Ross Sasamura, Tyler Sugihara
10/13/2016	Meeting with Neightborhood Commission Office	Shawn Hamamoto
10/13/2016	Meeting With Office of Housing	Jun Yang
11/3/2016	Meeting With Honolulu Police Department	Major Roy Sugimoto
11/16/2016	Meeting with Friends of Kekaulike	Romeo Garcia, Rosemary Makio, Breighton J.K. Yee, Hasting Toma, Kevin Wong, Suzanna Ho, Eric Wong, Paul Min, Roy Sugimoto, Steven Matsuda, Shawn Hamamoto
11/22/2016	Meeting with Department of Parks & Recreation	Ros Young, Keith Nishimura, Calvin Palama, Albert Baca
12/13/2016	Meeting with Honolulu Fire Department	Chief Socrates Bratakos, Chief Jeffery Hooker, Captain Jarin Wong
1/6/2017	Meeting with Department of Transportation - Highways, Department of Transportation - Harbors	Dre Kalili, Darrell Young, Ford Fuchigami, Scot Urada, Bryan, Kimura, Ed Sniffen
12/18/2017	Meeting with Department of Planning and Permitting, HART, Department of Transportation Services	Chris Clark, Ty Fukumitsu, Andrew Tang, Craig Chung, Mark Kikuchi, Jack Patterson, Jon Nouchi, Ryan Tam, Renee Espiau, Eileen Mark
1/10/2018	Meeting with Department of Facility Maintenance	Ross Sasamura, Tyler Sugihara
2/5/2018	Meeting with TOD sub-cabinet	Denise W. Wong, Ed Hawkins, A. Pokorny, Sandy Pfund, Keith Nishimura, Calvin Palama, Ross Sasamura, Timothy Hiu, Eugene Takahashi, Robert Kroning, Mark Wong, Marc Alexander, Renee Espiau, Joette Yago, Tony Ching, Virginia Sosh, Manuel T. Valbuene, Eileen Mark, Jon Nouchi, Henry Jin, Guy Kaulukukui, Harrison Rue, Cate Picardo, Jeanne Ishikawa, Matthew Gonser, Ben Trovino, Tim Streitz, Tomo Murata, Andrew Tang

KEKAULIKE MALL / STREET MULTIMODAL IMPROVEMENTS PROJECT

SHARED STREET SECTIONS

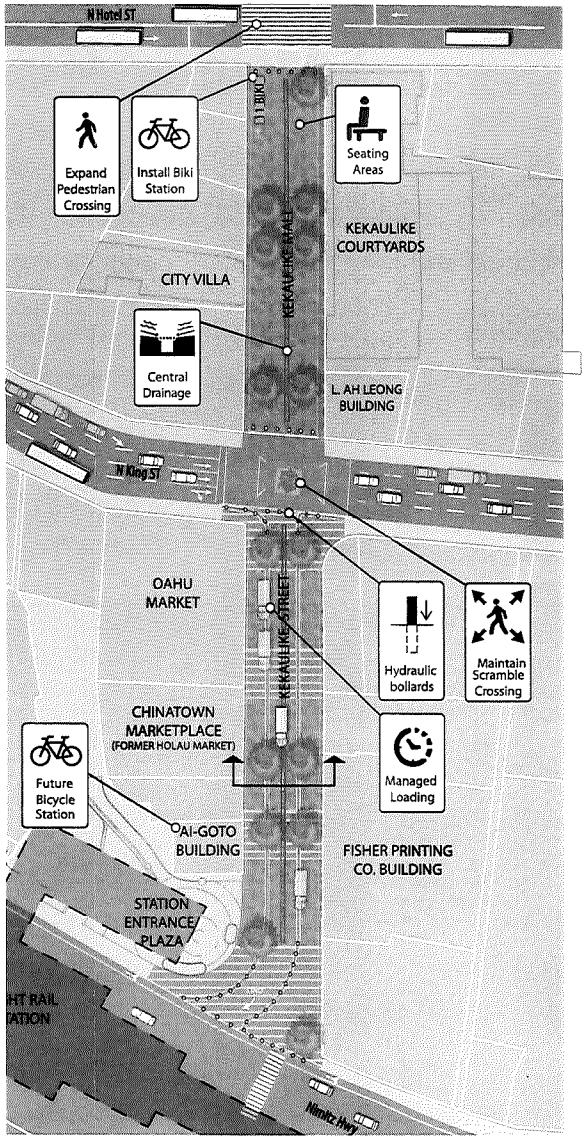


LOADING HOURS



NO LOADING HOURS

PREFERRED CONCEPT SHARED STREET PLAN

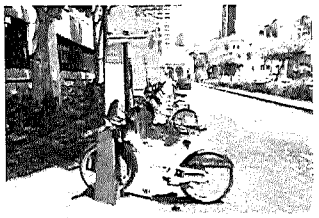


November 11, 2019

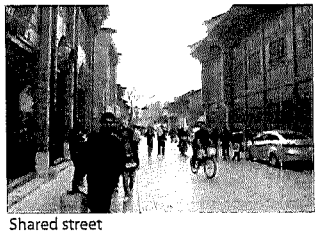
KEKAULIKE MALL / STREET MULTIMODAL IMPROVEMENTS PROJECT

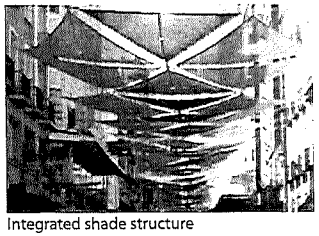
Concepts

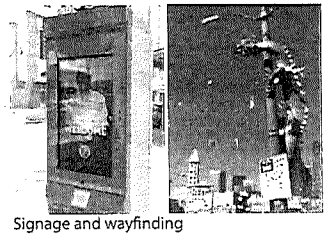
Lighting/Art opportunities

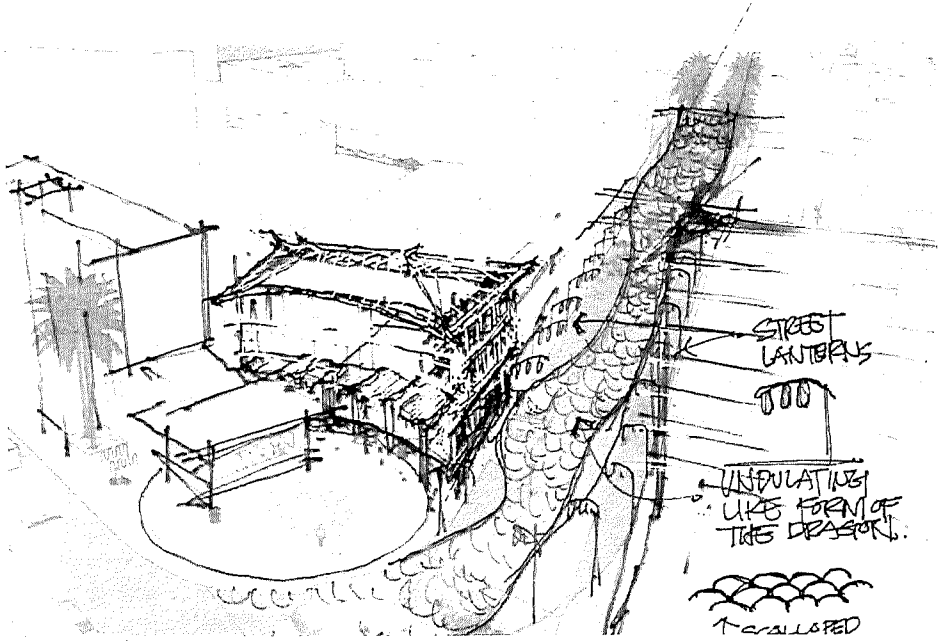

Bicycle share

Enhanced retail activity


Shared street

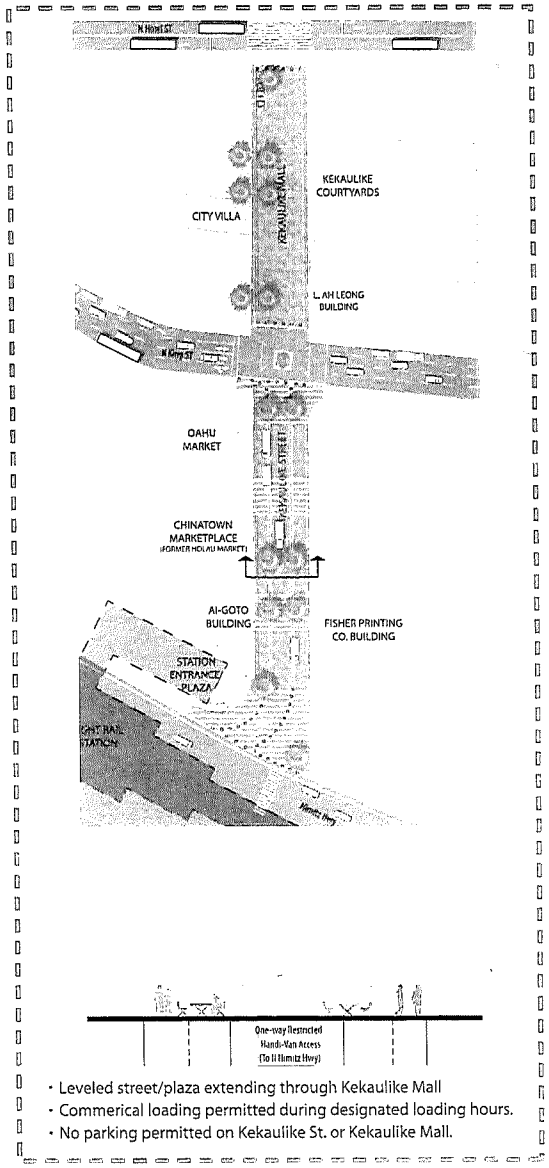

Integrated shade structure


Signage and wayfinding



Concept sketch exploring integration with Chinatown Station.

PREFERRED CONCEPT SHARED STREET PLAN



- Leveled street/plaza extending through Kekaulike Mall
- Commerical loading permitted during designated loading hours.
- No parking permitted on Kekaulike St. or Kekaulike Mall.

RECOMMENDED OPTION

November 11, 2019

LD 2287

DAVID Y. IGE
GOVERNOR OF HAWAII

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

RECEIVED
LAND DIVISION
2019 DEC 20 PM 3:37
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

'19 DEC 19 AM 08:53 ENGINEERING

December 12, 2019

LD 2175

MEMORANDUM

FROM

TO:

DLNR Agencies:
__Division of Aquatic Resources
__Division of Boating & Ocean Recreation
X Engineering Division
X Division of Forestry & Wildlife
__Division of State Parks
X Commission on Water Resource Management
__Office of Conservation & Coastal Lands
X Land Division – Oahu District
X Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: **Pre-Consultation for Chapter 343, HRS, Environmental Assessment for Proposed Kekaulike Mall & Street Multimodal Improvements Project**
LOCATION: Kekaulike Street and Mall, Honolulu, Island of Oahu
APPLICANTS: PBR Hawaii & Associates, Inc., on behalf of HDR, Inc., to assist the City and County of Honolulu, Department of Transportation Services

Transmitted for your review and comment is information on the proposed action for the above-referenced project.

Please submit any comments to Land Division by **December 31, 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 Barbara Lee at 587-0453 or by email at barbara.j.lee@hawaii.gov. Thank you.

( ) We have no objections.
( ) We have no comments.
(✓) Comments are attached.

Signed:
Print Name: Carty S. Chang, Chief Engineer
Date: 12/20/19

Attachments
cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/Russell Y. Tsuji
Ref: Pre-Consultation for Chapter 343, HRS, Environmental Assessment for Proposed Kekaulike Mall & Street Multimodal Improvements Project Location: Kekaulike Street and Mall, Honolulu, Island of Oahu Applicant: PBR Hawaii & Associates, Inc., on behalf of HDR, Inc., to assist the City and County of Honolulu, Department of Transportation Services

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:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7253.
- Kauai: County of Kauai, Department of Public Works (808) 241-4896.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 12/20/19

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

December 12, 2019

LD 2175

MEMORANDUM

TO: **DLNR Agencies:**
__Division of Aquatic Resources
__Division of Boating & Ocean Recreation
_X_Engineering Division
_X_Division of Forestry & Wildlife
__Division of State Parks
_X_Commission on Water Resource Management
__Office of Conservation & Coastal Lands
_X_Land Division – Oahu District
_X_Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: **Pre-Consultation for Chapter 343, HRS, Environmental Assessment for Proposed Kekaulike Mall & Street Multimodal Improvements Project**
LOCATION: Kekaulike Street and Mall, Honolulu, Island of Oahu
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Transmitted for your review and comment is information on the proposed action for the above-referenced project.

Please submit any comments to Land Division by **December 31, 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 Barbara Lee at 587-0453 or by email at barbara.j.lee@hawaii.gov. Thank you.

( ) We have no objections.
(x) We have no comments.
( ) Comments are attached.

Signed: Darlene Bryant-Takamatsu
Print Name: Darlene Bryant-Takamatsu
Date: 12/13/19

Attachments
cc: Central Files

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
Chairman / Principal

R. STAN DUNCAN, ASLA
President / Principal

RUSSELL Y. J. CHUNG, FASLA, LEED® AP BD+C
Executive Vice-President / Principal

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DACHENG DONG, LEED® AP
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Project Director

RAMSAY R. M. TAUM
Cultural Sustainability Planner

MICAH McMILLEN, ASLA, LEED® AP
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GRACE ZHENG, ASLA, LEED® GA, SITES® AP
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Senior Associate

BLAINE ONISHI, ASLA
Associate

ETSUYO KILA
Associate

GREG NAKAI
Associate

SELENA PANG
Associate

1001 Bishop Street, Suite 650
Honolulu, Hawai'i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

printed on recycled paper

March 1, 2021

Mr. Russell Tsuji
Department of Land and Natural Resources
Engineering Division
State of Hawaii
P.O. Box 621
Honolulu, HI 96809

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Tsuji:

Thank you for your letter dated December 12, 2019 (LD 2175) regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge the Department of Land and Natural Resources – Engineering Division (DLNR) comments and provide the following response.

We acknowledge the DLNR, Engineering Division comments regarding the National Flood Insurance Program (NFIP). The Draft Environmental Assessment will provide a discussion on the National Flood Insurance Program (NFIP) and the Federal Emergency Management Agency (FEMA) Special Flood Hazard Zones. Please note that it has been determined that the project area is located within FEMA Flood Zone X, which is an area outside of the Special Flood Hazard Zones and within an area of minimal flood risk (reference FEMA FIRM Panels 15003C0354G and 15003C0362G).

We also acknowledge DLNR Land Division's review of the pre-application materials and that the Division has no comment at this time.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Principal

O:\Job35\3543.01 Kekaulike Multi-Modal Improvements\HRS 343 EA\DEA\Preconsultation\Client Response Letters\STATE_DLNR Draft Response.docx

DAVID Y. IGE
GOVERNOR

DR. CHRISTINA M. KISHIMOTO
SUPERINTENDENT

STATE OF HAWAI`I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI`I 96804

OFFICE OF FACILITIES AND OPERATIONS

January 6, 2020

Catie Cullision
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Re: Chapter Pre-Assement Consultation for the Proposed Kekaulike Mall/Street Multimodal Improvement Project, Honolulu, Oahu, Hawaii

Dear Ms. Cullision:

The Hawaii State Department of Education (DOE) has the following comments for the preparation of an environmental assessment for the proposed multimodal street improvements to Kekaulike Mall and Street (Project). According to the information provided, the Project will utilize a "shared-use street" concept to provide connectivity between Kekaulike Mall, Kekaulike Street and the proposed Chinatown rail station located in Honolulu, Island of Oahu.

The proposed Project will not impact existing DOE schools or facilities.

Thank you for the opportunity to comment. Should you have questions, please contact Robyn Loudermilk, Acting Land Use Planner, Facilities Development Branch, Planning Section, at 784-5093 or via email at Robyn.loudermilk@k12.hi.us.

Respectfully,

Kenneth G. Masden II
Public Works Manager
Planning Section

KGM:rll

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ETSUYO KILA
Associate

GREG NAKAI
Associate

SELENA PANG
Associate

1001 Bishop Street, Suite 650
Honolulu, Hawai'i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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March 1, 2021

Mr. Kenneth G. Madsen II
State of Hawaii
Department of Education, Office of Facilities and Operations
P.O. Box 2360
Honolulu, HI 96804

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Madsen:

Thank you for your letter dated January 6, 2020 regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge your comment that the proposed project will not impact existing DOE schools or facilities.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Principal

O:\Job35\3543.01 Kekaulike Multi-Modal Improvements\HRS 343 EA\DEA\Preconsultation\Client Response Letters\STATE_DOE Draft Response.docx

DAVID Y. IGE
GOVERNOR

JADE T. BUTAY
DIRECTOR

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

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

IN REPLY REFER TO:
DIR 1236
STP 8.2824

December 30, 2019

Ms. Catie Cullison, AICP
Senior Planner
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Dear Ms. Cullison:

Subject: City and County of Honolulu, Department of Transportation Services (DTS)
Pre-Consultation for the Kekaulike Mall / Street Multimodal Improvements (Project)
Honolulu, Oahu, Hawaii
TMK: (1) 1-7-002: var, 1-7-003: var

The Hawaii Department of Transportation (HDOT) understands DTS proposes multimodal improvements to Kekaulike Mall and Street that would limit the types and schedules of motor vehicle travel from North King Street to Nimitz Highway (State Route 92). The proposed project would address the need for continuity and connectivity between Kekaulike Mall, Kekaulike Street, and the future Chinatown rail station while improving pedestrian accessibility and safety via a shared-use street concept. HDOT comments on the subject Project are as follows:

Highways Division (HDOT-HWY)

1. No significant adverse impacts to traffic conditions are anticipated on Nimitz Highway or the Nimitz Highway-Kekaulike Street intersection.

2. It is unlikely a traffic impact analysis report would be warranted but we recommend the Draft Environmental Assessment (DEA) include the following:

    a. The jurisdiction of roadways in the vicinity.

    b. Description of the existing and anticipated number, schedule, and type of motor vehicles that would enter Nimitz Highway during operations.

    c. Describe the potential impacts on and integration with existing Nimitz Highway bike and pedestrian routes.

d. Assess cumulative impacts to traffic conditions.

e. Present the characteristics of project construction/demolition: development timeline, associated traffic. In addition to the Chinatown Station project, HDOT-HWY has plans to resurface Nimitz Highway; therefore, the timing of intersection improvements should be coordinated among stakeholders to the extent practical.

f. Describe proposed improvements within the HDOT-HWY right-of-way (ROW), including pipeline and other infrastructure alignments that may be removed or constructed.

g. Describe the stormwater drainage. The project should not result in additional discharge of surface water run-off onto the HDOT-HWY ROW.

Harbors Division (HDOT-HAR)

The Project is located outside of the HDOT-HAR jurisdiction and does not directly impact harbor operations. However, the following should be considered in the DEA:

1. The Project is located mauka of the Honolulu Commercial Harbor (Harbor) and stormwater outfalls discharge into the Harbor. HDOT-HAR requests that the proposed drainage system improvements consider a catchment system to prevent debris from entering in the Harbor. Various means to reduce litter and educate people on the connection between mauka and makai may also be considered.

2. Potential impacts of traffic associated with the construction of the Project. Nimitz Highway is a major freight corridor critical to the movement of cargo in and out of the Harbor. Where possible, potential impacts to traffic on Nimitz Highway should be avoided.

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

Sincerely,

JADE T. BUTAY
Director of Transportation

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
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R. STAN DUNCAN, ASLA
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RUSSELL Y. J. CHUNG, FASLA, LEED® AP BD+C
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1001 Bishop Street, Suite 650
Honolulu, Hawai'i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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March 1, 2021

Mr. Jade Butay, Director
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, HI 96813
Attn: Mr. Blayne Nikado

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Butay:

Thank you for your letter dated December 30, 2019 (DIR 1236 STP 8.2824) regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge the Department of Transportation, Highway Division's (HDOT-HWY) comments below and provide the following responses.

1. *No significant adverse impacts to traffic conditions are anticipated on Nimitz Highway or the Nimitz Highway-Kekaulike Street intersection.*

We appreciate the HDOT-HWY comment that no anticipated adverse impacts to traffic conditions on Nimitz Highway or the Nimitz Highway-Kekaulike Street intersection are expected. Please note that a Multimodal Traffic Impact Assessment Report (TIAR) has been prepared to evaluate potential impacts of the proposed project and is included in the Draft Environmental Assessment (DEA).

2. *It is unlikely a traffic impact analysis report would be warranted but we recommend the Draft Environmental Assessment (DEA) include the following:*
    a. *The jurisdiction of roadways in the vicinity.*
    b. *Description of the existing and anticipated number, schedule, and type of motor vehicles that would enter Nimitz Highway during operations.*
    c. *Describe the potential impacts on and integration with existing Nimitz Highway bike and pedestrian routes.*
    d. *Assess cumulative impacts to traffic conditions.*

e. Present the characteristics of project construction/demolition: development timeline, associated traffic. In addition to the Chinatown Station project, HDOT-HWY has plans to resurface Nimitz Highway; therefore, the timing of intersection improvements should be coordinated among stakeholders to the extent practical.

f. Describe proposed improvements within the HDOT-HWY right-of-way (ROW), including pipeline and other infrastructure alignments that may be removed or constructed.

g. Describe the stormwater drainage. The project should not result in additional discharge of surface water run-off onto the HDOT-HWY ROW.

As requested, the Draft Environmental Assessment (DEA) will evaluate and include a discussion on the following:

(a) The jurisdiction of roadways in the vicinity of the project area is described in Section 4.6.1 and Appendix E of the DEA.

(b) A description of the existing and anticipated number, schedule, and type of motor vehicles that would enter Nimitz Highway during operations is included in Section 4.6.1 and Appendix E of the DEA.

(c) A description of the potential impacts on and integration with existing Nimitz Highway bike and pedestrian routes is included in Section 4.6.1 and Appendix E of the DEA.

(d) An assessment of the cumulative impacts to traffic conditions is described in Section 4.6.1 and Appendix E of the DEA.

(e) A discussion on the characteristics of project construction and demolition including a development timeline and anticipated traffic conditions. We acknowledge your comment that, in addition to the Holau transit station project, HDOT-HWY has plans to resurface Nimitz Highway and therefore the timing of intersection improvements should be coordinated among stakeholders to the extent practical. The project implementation timeframe is described in Section 2.1.4 of the DEA.

(f) A description of proposed improvements within the HDOT-HWY right-of-way (ROW), including pipeline and other infrastructure alignments that may be removed or constructed is described in Section 4.6 and Appendix A.

(g) We acknowledge HDOT-HWY's comment that the project should not result in additional discharge of surface water run-off onto the HDOT_HWY ROW. A description of stormwater drainage is included in Section 4.6.4 and Appendix A.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Principal

PBR HAWAII
& ASSOCIATES, INC.

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March 1, 2021

Mr. Jade T. Butay, Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, HI 96813
Attn: Mr. Blayne Nikado

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Butay:

Thank you for your letter dated December 30, 2019 (DIR 1236 STP 8.2824) regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge the Department of Transportation, Harbor Division's (HDOT-HAR) comments below and provide the following responses.

The Project is located outside of the HDOT-HAR jurisdiction and does not directly impact harbor operations. However, the following should be considered in the DEA:

1. *The Project is located mauka of the Honolulu Commercial Harbor (Harbor) and stormwater outfalls discharge into the Harbor. HDOT-HAR requests that the proposed drainage system improvements consider a catchment system to prevent debris from entering in the Harbor. Various means to reduce litter and educate people on the connection between mauka and makai may also be considered.*

We acknowledge the HDOT-HAR comment that the proposed project is outside the HDOT-HAR jurisdiction and does not directly impact harbor operations.

We acknowledge the comments requesting consideration of a catchment system within the drainage system. As requested, the proposed drainage improvements include connections to vortex separators downstream to remove trash and sediments before connecting to the main 18-inch storm drain line. There will also be a series of tree wells and planters along the length of the project area offering opportunities for localized groundwater infiltration. The drainage improvements are anticipated to reduce non-point source pollution by collecting localized stormwater, while reducing and intercepting debris that would otherwise flow to nearby waterways, including Honolulu Harbor. Proposed drainage improvements are described in Section 4.6.4 and Appendix A.

2. *Potential impacts of traffic associated with the construction of the Project. Nimitz Highway is a major freight corridor critical to the movement of cargo in and out of the Harbor. Where possible, potential impacts to traffic on Nimitz Highway should be avoided.*

We acknowledge the comment that Nimitz Highway is a major freight corridor critical to the movement of cargo in and out of the Harbor. We also acknowledge that, where possible, potential impacts to traffic on Nimitz Highway should be avoided. A discussion of the potential impacts of traffic associated with the construction of the project is described in Section 4.6.1 and Appendix E.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Principal

DAVID Y. IGE
GOVERNOR

DENISE ISERI-MATSUBARA
INTERIM EXECUTIVE DIRECTOR

STATE OF HAWAII
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
HAWAII HOUSING FINANCE AND DEVELOPMENT CORPORATION
677 QUEEN STREET, SUITE 300
HONOLULU, HAWAII 96813
FAX: (808) 587-0600

IN REPLY REFER TO:
19: DEV/216

December 27, 2019

PBR Hawaii & Associates, Inc.
Attn: Catie Cullison
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Ms. Cullison:

Subject: Pre-Consultation for the proposed Kekaulike Mall / Street Multimodal Improvement Project

Thank you for consulting with the Hawaii Housing Finance and Development Corporation (HHFDC) in regard to the proposed Kekaulike Mall / Street Multimodal Improvements project. HHFDC supports the proposed improvements to Kekaulike Mall. We also wish to inform you that the HHFDC will be assessing the redevelopment potential of State-owned lands in the vicinity of the Iwilei transit station, as well as infrastructure improvements necessary to support their redevelopment. As the State's plans for transit-oriented development may be complementary to planned City projects, we will be consulting with the City as our planning progresses.

Should you have any questions please contact Dean Minakami, Development Section Chief, by phone at 587-0518 or email at dean.minakami@hawaii.gov.

Sincerely,

for Deepak Neupane,
Development Branch Chief

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March 1, 2021

Mr. Dean Minakami
Department of Business, Economic Development, and Tourism
Hawaii Housing, Finance, and Development Corporation
State of Hawaii
677 Queen Street, Suite 300
Honolulu, HI 96813

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Minakami:

Thank you for your letter dated December 27, 2019 (19:DEV/216) regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge your comment that the HHFDC supports the proposed improvements to Kekaulike Mall and Kekaulike Street. We also acknowledge that the HHFDC will be assessing the redevelopment potential of State-owned lands in the vicinity of the Iwilei transit station, as well as infrastructure improvements necessary to support their redevelopment.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Principal

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December 17, 2019

Catie Cullison
1001 Bishop st , suite 650
Honolulu, Hawaii 96813

Attention: Catie Cullison

Subject: Kekaulike Mall Improvements project

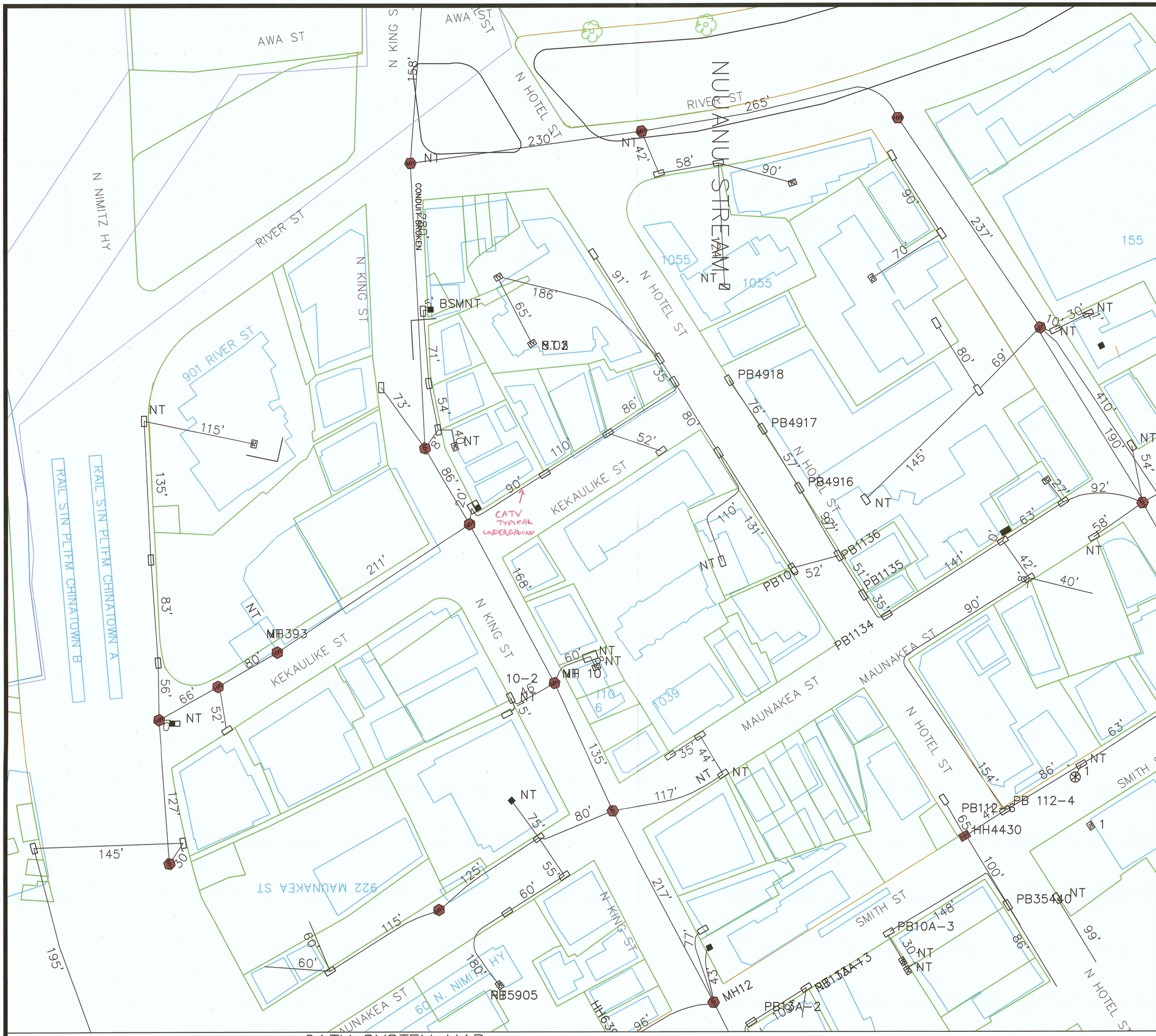
Dear Ms. Cullison

Thank you for the opportunity to review and comment on the proposed Kekaulike Mall Improvements project. According to our drawings, we will be affected by the proposed work. We have underground facilities in the area, and thru Hawaiian tel infrastructure. In any case toning through the One Call Center will identify our facilities in the immediate area. Should you have any questions, or need anything clarified please contact me at #292-7721 or via e-mail at James.Donaldson@charter.com

Sincerely,

James Donaldson
Construction Cordinator

Enclosure: 1 facilities map of project area



CATV SYSTEM MAP
SCALE: NTS

Spectrum
200 AKAMAINUI STREET
MILILANI, HI 96789-3999
PHONE # (808) 625-2100

KEKAULIKE MALL IMPROVMENTS PROJECT
KEKAULIKE ST
CHINATOWN

TITLE:
LOCATION MAP
CATV SYSTEM MAP
NOTES

DATE: 12-12-19

SCALE: NTS

DES. BY	DR. BY	CHK. BY
JD	JD	JD

PROJECT NO: KEKAULIKE MALL PROJECT

SHEET NO: 1

1 OF 1 SHEETS

FILENAME : KEKAULIKE MALL PROJECT BASEMAP
PLOT SCALE: NTS

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E-mail: sysadmin@pbrhawaii.com

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March 1, 2021

Mr. James Donaldson, Construction Coordinator
Spectrum
200 Akamainui Street
Mililani, HI 96789

SUBJECT: AGENCY PRE-CONSULTATION FOR A HRS CHAPTER 343 ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED KEKAULIKE MALL AND KEKAULIKE STREET MULTIMODAL IMPROVEMENTS PROJECT, DISTRICT OF HONOLULU, ISLAND OF OAHU, HAWAII

Dear Mr. Donaldson:

Thank you for your letter dated December 17, 2019 regarding the subject project. As the planning consultant contracted by HDR, Inc. to assist the City and County of Honolulu, Department of Transportation Services (DTS), we acknowledge your comments and provide the following response.

The Draft Environmental Assessment (DEA) will provide a discussion on Spectrum's underground facilities in the area including those that are through Hawaiian Telecom infrastructure. We acknowledge your comment that toning through the One Call Center will identify your facilities in the immediate area.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,
PBR HAWAII

Catie Cullison
Planner, Principal

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