ALAN M. ARAKAWA
Mayor

DAVID C. GOODE
Director

ROWENA M. DAGDAG-ANDAYA
Deputy Director

Telephone: (808) 270-7745
Fax: (808) 270-7975

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Development Services Administration

CARY YAMASHITA, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

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OFC. OF ENVIRONMENTAL QUALITY CONTROL

July 10, 2012

AUG 06 2012
FILE COPY

Mr. Gary Hooser, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Mr. Hooser:

RE: Finding of No Significant Impact for the Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii

The County of Maui's Department of Public Works has reviewed the Final Environmental Assessment and comments received on the Draft Environmental Assessment during the 30-day public comment period which ended on January 31, 2012. The Department has determined that this project will not have significant environmental impacts and has issued a Finding of No Significant Impact. Please publish notice in the next available OEQC Environmental Notice.

We have enclosed a completed OEQC Publication Form and one (1) copy of the document in PDF format on a CD; and one (1) hardcopy of the Final EA. Please call contact Ms. Wendy Kobashigawa at (808) 270-7745 or Wendy.Kobashigawa@mauicounty.gov if you have any questions.

Sincerely,

for DAVID C. GOODE
Director of Public Works

Enclosure

DG/wykk:gq(ED12-781)
S:\ENG\ALL\WYK\WailukuParkingStructure\EAs\OEQC GHooser 2012-07 FEA.doc

xc: Ms. Wendy Kobashigawa
Ms. Wendy Taomoto
Mr. Brian Ide
Mr. Christopher Hart

FINAL
HRS CHAPTER 343
ENVIRONMENTAL ASSESSMENT

WAILUKU MUNICIPAL PARKING STRUCTURE



2601 West Vineyard Street
Wailuku, Maui, Hawaii
Tax Map Key: (2) 3-4-013:075

Prepared for:
Department of Public Works
County of Maui
250 South High Street
Wailuku, Hawaii 96793
Phone: (808) 270-7845

Prepared by:
Chris Hart & Partners, Inc.
Landscape Architecture & City and Regional Planning
115 North Market Street
Wailuku, Hawaii 96793
Phone: (808) 242-1955
Facsimile: (808) 242-1956

CHRIS HART & PARTNERS, INC.

JULY 2012

FINAL
HRS CHAPTER 343
ENVIRONMENTAL ASSESSMENT

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CHRIS HART & PARTNERS, INC.

JULY 2012

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Appendix B	Zoning & Flood Confirmation Form
Appendix C	Pre-Consultation Comments
Appendix D	Wailuku Municipal Parking Lot Master Plan
Appendix E	Wailuku Redevelopment Area Market-Based Plan
Appendix F	Wailuku Town Parking Study and Parking Management Plan Analysis
Appendix G	Interim Parking Plan
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Appendix K	History of Wailuku's Parking Lot Block
Appendix L	Archaeological Monitoring Plan
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Appendix N	Preliminary Engineering Report
Appendix O	Traffic Impact Report
Appendix P	Draft Environmental Assessment Comments & Responses
Appendix Q	Maui Redevelopment Agency, June 17, 2011 Meeting Minutes

ACRONYMS

ADAAG	Americans with Disabilities Act Access Guidelines
AMP	Archaeological Monitoring Plan
AMSL	Above Mean Sea Level
BMP	Best Management Practices
CDC	Community Development Corporation
CH&P	Chris Hart & Partners, Inc.
CIA	Cultural Impact Analysis
DOH	Department of Health
DP&PA	Downtown Parking & Planning Associates, LLC
DPW	Department of Public Works
DSA	Development Services Administration
EA	Environmental Assessment
EDA	Economic Development Administration
ENAR	Environmental Noise Assessment Report
ESA	Environmental Site Assessment
GHG	Green House Gases
HRS	Hawaii Revised Statutes
IPP	Interim Parking Plan
MCPD	Maui County Planning Department
MCV	Merchant/Customer/Visitor
MRA	Maui Redevelopment Agency
NA	Nishikawa Architects, Inc.
OEQC	Office of Environmental Quality and Control
PER	Preliminary Engineering Report
PUMA	Progressive Urban Management Associates, Inc.
PV	Photo-Voltaic
SHPD	State Historic Preservation Division
TIR	Traffic Impact Report
WMPL	Wailuku Municipal Parking Lot Master Plan Report

WOC	Wilson Okamoto Corporation
WRADG	Wailuku Redevelopment Area Design Guidelines
WRAMP	Wailuku Redevelopment Area Market-Based Plan
WRAZDC	Wailuku Redevelopment Area Zoning and Development Code
WRP	Wailuku Redevelopment Plan
WTPS&PMPA	Wailuku Town Parking Study and Parking Management Plan Analysis

I. PROJECT INFORMATION

A. PREFACE

The existing Wailuku Municipal Parking Lot is a 2.192-acre site paved and striped for 210 parking stalls. The site is situated within the core of Wailuku Town's business district, within the Wailuku Redevelopment Area, and provides the primary source of public parking to businesses and government offices in the area. A key implementing action of the *Wailuku Redevelopment Plan* (WRP) (Maui County Planning Department [MCPD], December 2000) is the redevelopment of the Municipal Parking Lot to accommodate a centralized parking structure and mixed-use development.

This Environmental Assessment (EA) has been prepared for the redevelopment of the Wailuku Municipal Parking Lot to accommodate a five-level parking structure and surface parking totaling 426 stalls.

B. PURPOSE OF THE REQUEST

This Environmental Assessment describes and analyzes the impacts associated with the construction of a parking structure on a portion of a 2.192-acre parcel in Wailuku, Maui, Hawaii, parcel (2) 3-4-013:075. The preparation of this EA is in compliance with Chapter 343, Hawaii Revised Statutes (HRS), Section 5(a)(1), which states in part that an environmental assessment shall be required for actions which *propose the use of state or county lands or the use of state or county funds… ;* and Chapter 200, Hawaii Administrative Rules, Environmental Impact Statement Rules.

The intent of the applicant is to redevelop the Municipal Parking Lot site in accordance with the policies, objectives, and strategies set forth in the *WRP* (MCPD, 2000). One of the projects of the *WRP* is to "Develop additional parking at the site of the existing municipal parking lot." (VPC-6, p. 30)

C. PROJECT PROFILE

Proposed Project:	Parking Structure and site improvements
Existing Land Use:	210-Stall Parking Lot

Total Project Area:	2.192 acres
Access:	Market Street, Vineyard Street, Church Street, Pili Street
Land Owner:	County of Maui

D. IDENTIFICATION OF THE APPLICANT/ACCEPTING AGENCY

Applicant:	County of Maui, Department of Public Works
	200 South High Street Wailuku, Hawaii 96793
Phone:	Voice: (808) 270-7845 Fax: (808) 270-7955
Contact:	Mr. David Goode

E. CONSULTANTS

Structural Engineers and Prime Consultant:	Allison-Ide Structural Engineers LLC
Address:	900 Fort Street Mall, Suite 1670 Honolulu, Hawaii 96813
Phone:	Voice: (808) 536-2108 Fax: (808) 521-3000
Contact:	Mr. Brian M. Ide
Architects:	Media5 Architecture
Address:	345 Queen Street, #901 Honolulu, Hawaii 96813
Phone:	Voice: (808) 524-2040 Fax: (808) 476-0368
Contact:	Mr. Mel Choy
Land Use Planners & Landscape Architects:	Chris Hart & Partners, Inc.
Address:	115 North Market Street Wailuku, Maui, Hawaii 96793
Phone:	Voice: (808) 242-1955 Fax: (808) 242-1956

Contact:	Mr. Christopher L. Hart Mr. David Sereda
Civil Engineers:	Otomo Engineering, Inc.
Address:	305 South High Street, Suite 102 Wailuku, Maui, Hawaii 96793
Phone:	Voice: (808) 242-0032 Fax: (808) 242-5779
Contact:	Mr. Stacy Otomo
Traffic Consultants:	Wilson Okamoto Corporation
Address:	1907 S. Beretania Street, Suite 400 Honolulu, Hawaii 96813
Phone:	Voice: (808) 946-2277 Fax: (808) 946-2253
Contact:	Mr. Pete Pascua
Geotechnical Engineers:	Island Geotechnical Engineering, Inc.
Address:	330 Ohukai Street, Suite 119 Kihei, Maui, Hawaii 96753
Phone:	Voice: (808) 825-7355 Fax: (808) 875-7122
Contact:	Mr. Charles Biegel
Hazardous Material Consultant:	EKNA Services, Inc.
Address:	615 Piikoi Street, Suite 300 Honolulu, Hawaii 96814
Phone:	Voice: (808) 591-8553 Fax: (808) 593-8551
Contact:	Ms. Elaine Tamaye
Archaeological and Cultural Consultant:	Xamanek Researches LLC
Address:	P.O. Box 880131 Pukalani, Hawaii 96788
Phone:	Voice: (808) 572-8900 Fax: (808) 572-6118
Contact:	Mr. Erik Fredericksen

Acoustic Consultant:	D.L. Adams Associates, Ltd.
Address:	970 N. Kalaheo Avenue, Suite A311 Kailua, Hawaii 96734
Phone:	Voice: (808) 254-3318 Fax: (808) 254-5295
Contact:	Mr. Todd Beiler

F. MAJOR LAND USE, DEVELOPMENT AND CONSTRUCTION APPROVALS

1. Grading/Grubbing Permit from the Department of Public Works (DPW), County of Maui.
2. Building, Electrical, and Plumbing Permits for future structures from Development Services Administration (DSA), DPW.
3. National Pollution Discharge Elimination System (NPDES) General Permit from the Department of Health (DOH), State of Hawaii.
4. Design Review Approval from the Maui Redevelopment Agency (MRA).

G. PRE-CONSULTED AGENCIES & PRIVATE INTERESTS

A. County of Maui

1. Department of Environmental Management
2. Department of Fire & Public Safety
3. Department of Planning
4. Police Department
5. Department of Public Works
6. Department of Transportation
7. Department of Water Supply

B. State of Hawaii

1. Department of Business, Economic Development & Tourism
2. Department of Land and Natural Resources, Historic Preservation Division.
3. Department of Transportation

C. Other

1. Maui Electric Company
2. Wailuku Redevelopment Agency
3. Wailuku Main Street Association
4. Wailuku Community Association

(**See**: Appendix "C" for pre-consultation comment letters)

H. CONSULTED AGENCIES & PRIVATE INTERESTS

The Draft Environmental Assessment for the Wailuku Municipal Parking Structure was published on October 23, 2011 by the State Office of Environmental Quality Control (OEQC) in its Environmental Notice bulletin. The publication initiated a 30-day public review period ending on November 21, 2011. The Draft EA was mailed to the agencies below. A notice of extension of the comment period was mailed on December 21, 2011 to agencies that did not respond as of that date, with an extended deadline of January 31, 2012. All comment and response letters are found in Appendix "P", unless noted otherwise.

PUBLIC AGENCIES:

Federal
1. Economic Development Administration
2. U.S. Fish & Wildlife Service

State
1. Department of Accounting & General Services
2. Department of Business, Economic Development & Tourism
3. Department of Hawaiian Home Lands
4. Department of Health
5. Department of Land and Natural Resources
6. Historic Preservation Division, Department of Land and Natural Resources
7. Office of Hawaiian Affairs

8. Department of Transportation

County

1. Department of Environmental Management
2. Department of Housing and Human Concerns
3. Department of Planning
4. Department of Public Works
5. Department of Transportation
6. Department of Water Supply
7. Maui County Council Chairperson Danny Mateo
8. Maui County Councilmember Gladys Baisa
9. Maui County Councilmember Robert Carroll
10. Maui County Councilmember Elle Cochran
11. Maui County Councilmember Donald Couch
12. Maui County Councilmember Riki Hokama
13. Maui County Councilmember Joseph Pontanilla
14. Maui County Councilmember Michael Victorino
15. Maui County Councilmember Mike White
16. Maui Redevelopment Agency
17. Mayor Alan Arakawa
18. Office of Economic Development
19. Police Department

PRIVATE INTERESTS:

1. Maui Electric Company
2. Wailuku Main Street Association
3. Wailuku Community Association
4. Wailuku Property Owners Group

A presentation of the project was made at a public information meeting, held on June 16, 2011 in the Maui Planning Commission meeting room in Wailuku, Maui, with approximately twenty (20) people present, followed by a question and answer session. The project was also presented at the regular meeting of the Maui Redevelopment Agency (MRA) on June 17, 2011 at the same location. Public testimony on the project was taken, in addition to questions and answers with members of the MRA (**See**: Appendix "Q"). One private citizen submitted a letter with comments on the Draft EA (**See**: Appendix "P").

II. DESCRIPTION OF THE PROPERTY AND PROPOSED ACTION

A. PROPERTY LOCATION

The subject property is located in Wailuku, Maui, Hawaii; TMK: (2) 3-4-013:075. The subject site is bound to the north by Vineyard Street, to the south by commercial buildings fronting Main Street, to the west by commercial buildings fronting Church Street, and to the east by commercial buildings fronting Market Street. (**See**: Figures No. 1 "Regional Location", No. 2 "Tax Map Key", and No. 3 "Aerial Map").

B. EXISTING LAND USE

The site is currently operated as the Wailuku Municipal Parking Lot. The site currently has 210 stalls, all unmetered, but with varying time limitations (**See**: Figure Nos. 4.1-4.3 "Photographs").

C. LAND USE DESIGNATIONS

See: Figures No. 5 "Wailuku-Kahului Community Plan" & No. 6 "County Zoning Map" and Appendix B, "Zoning and Flood Confirmation Form"

State Land Use Classification:	Urban
Wailuku-Kahului Community Plan:	Commercial
Wailuku Redevelopment Area Zoning:	Commercial/Mixed-Use
Flood Zone Designation:	"X" - Outside the 0.2% annual chance floodplain (**See**: Figure No. 7, "Flood Map")
Special Designations:	Wailuku Redevelopment Area

D. PROJECT NEED

The Wailuku Municipal Parking lot provides the predominant source of public parking to Wailuku Town's businesses. At the time the lot was created in 1964, it was recognized that centralized parking would be necessary if the area's businesses were to

compete with newer shopping malls being built in Kahului. Many of the District's businesses are located on "non-conforming" lots that were created before modern zoning standards were established requiring minimum lot sizes and on-site parking. Many of these older parcels are small and irregularly shaped and the existing buildings typically occupy most of the lot. Requiring on-site parking in accordance with current zoning would render many of these parcels un-developable and/or underutilized.

Since the 1960's, property owners within 400-feet of the Wailuku Municipal Parking lot have been able to request parking waivers from the Maui Redevelopment Agency (MRA). The waiver has allowed area businesses to expand without having to provide on-site parking. The Municipal Parking Lot is now at capacity and as a result of the parking shortage, the MRA no longer grants parking waivers and this has had a negative impact on property owners and area businesses.

The *Wailuku Redevelopment Plan* (MCPD, 2000) identifies the scarcity of public parking, the high cost associated with complying with on-site parking requirements, and the dearth of activity generating land uses as major impediments to economic revitalization within the Redevelopment Area. A major implementing action of the Plan is to bring additional parking supply to the area through the redevelopment of the Wailuku Municipal Parking lot site. The site is the last large contiguous parcel downtown that could be redeveloped into an activity generating mixed-use project, incorporating the proposed multi-level centralized parking structure.

The *Wailuku Municipal Parking Lot Master Plan Report* (WMPL) (January 2004) (**See**: Appendix "D"), prepared for the MRA by Chris Hart & Partners, Inc. (CH&P), was reviewed and accepted by both the MRA and the Planning Department. The *WMPL Master Plan Report* determined that if several existing underutilized parcels were redeveloped, there would be an additional demand for 193 parking stalls (p. ii). Moreover, if an activity generating mixed-use redevelopment project was to occur on the site's remnant frontage along Vineyard Street there would be even greater demand for additional centralized parking.

According to the *WMPL Master Plan Report*:

> *Wailuku Town's residents, merchants, and professionals have championed the redevelopment of the Wailuku Municipal Parking lot to accommodate additional parking for over a decade. This report is a culmination of previous planning efforts, and draws heavily upon research, analysis, and community outreach programs conducted during the preparation of the following documents:*
>
> - *The Wailuku Redevelopment Plan (December 2000);*
> - *The Final Report for the Wailuku Municipal Parking Lot Design Charette prepared by the AIA Maui (September 2000);*

- *Parking lot plans and information prepared by the Wailuku Main Street Association (WMSA);*
- *The Market Street Beautification Plan (April 1997); and*
- *The Wailuku Redevelopment Area Design Guidelines (July 1997).* (p. 4)

In October 2010, the *Wailuku Redevelopment Area Market-Based Plan* (WRAMP) was prepared for the MRA by Progressive Urban Management Associates, Inc. (PUMA) (**See**: Appendix "E"). In its Parking Management section, the report states, "Parking in downtown Wailuku is a barrier to its commercial viability" (p. 42). The first "Near-term" recommendation is to "Undertake a Parking Management Plan …"(p. 42). The first "Mid-term" recommendation is to "Build the parking structure" (p. 43).

In May 2011, the *Wailuku Town Parking Study and Parking Management Plan Analysis* (WTPS&PMPA) was prepared for the MRA by Downtown Parking & Planning Associates, LLC (DP&PA) (**See**: Appendix "F"). Its stated purpose was to "explore the existing Wailuku Town parking situation in detail, to confirm existing conditions and to provide recommendations …" (p. 2). The study concludes that there is a parking shortage of approximately -200 spaces in the Central Market sub-area and that only 16.5 percent of the total stalls in the existing municipal parking lot is available to the general public due to the 12 hour time limit on most of the spaces. One of the recommendations of the WTPS&PMPA relative to the proposed project:

> *We recommend the County move forward as quickly as possible to fund actual construction of the new parking structure. The need for additional parking capacity has been substantiated and quantified. In addition to the new garage, surface parking sites identified to provide temporary parking during construction should be considered for more permanent or semi-permanent paid parking lots as part of the new "Parking District". These smaller parking lots would be strategically located throughout the downtown area and could provide convenient public parking while also generating revenue for the new parking system. However, the long term plan/goal for all such lots should be as future development sites.* (p. 9)

E. DESCRIPTION OF PROPOSED ACTION

The County of Maui is proposing to construct a five (5) level, approximately 117,532 square feet, parking structure with 308 standard and 47 compact parking stalls, for a total of 355 stalls within the structure (**See**: Figure Nos. 8.1 - 8.11). Of these, 9 stalls will meet Americans with Disabilities Act Accessible Guidelines (ADAAG). Pili Street, connecting Market Street and Church Street, will be re-established as a driveway and

will provide vehicular access to the structure. There will be 20 stalls (including 1 ADAAG) of additional on-site on grade parking south of Pili Street along the eastern boundary of the structure. To the north of Pili Street, there will be 51 stalls of additional on-site on-grade parking including 3 that will comply with ADAAG. Altogether, there will be 426 parking stalls on the subject property. The circulation pattern within the structure is a single helix configuration with two-lane two-way traffic. The structure design is a modified version of the "preferred Option PC-1" identified in the *WMPL Master Plan* (CH&P, 2004). The redesign was necessary due to Fire Department requirements regarding access ways.

The proposed parking structure will be approximately 124 feet by 215-1/2 feet and will not exceed the 45-foot height limitation established by the *Wailuku Redevelopment Area Zoning & Development Code* (WRAZDC) (MRA, 2002). The remaining portion of the site, approximately 20,500 square feet, north of Pili Street, will be on grade parking reconfigured to accommodate the 51 stalls described above. The existing entrance driveway from Vineyard Street will be realigned with the parking structure entrance. Future development of the "remnant" 20,500 square feet may include mixed–use retail/commercial/residential or a cultural/entertainment project. According to the *WMPL Master Plan Report* (CH&P, 2004, p. 21), the emphasis for this future project would include: "uses that attract residents and visitors downtown Monday through Friday and during evening and weekend hours". Until such a project is proposed, the use of the area will be for parking.

The structure initially included photo-voltaic (PV) array panels to augment energy requirements; however, it was determined to not be cost effective at this time. Nevertheless, the electrical system will be able to accommodate PV installation should it become warranted in the future. The open air design eliminates the need for artificial ventilation and requires minimum day lighting. Accommodations are made for nine (9) recharging stalls for electric/hybrid vehicles. Initially, five (5) stations will be provided; additional stations will be added as required by Hawaii Revised Statutes (HRS) §291-71.

Site Plan Rationale & Architectural Character

The primary objectives of the site plan are to 1) develop approximately 400 parking stalls; 2) provide the opportunity for mixed-use development on the parcel; 3) mitigate the impact of the scale and massing of the structure; and 4) to protect mauka and makai views. To accomplish these objectives, the entire parking structure is placed south of Pili Street within the existing one to four-story building envelope to minimize its impact of scale and mass. A single multi-use structure was considered for the site, however the WMPL Master Plan parking consultant recommended separate developments for design efficiency. This allows Pili Street to be reestablished as a driveway, which provides

efficient pedestrian and vehicular circulation, preserves *mauka/makai* public views through the site (existing Iao Valley views from Market Street and Pacific Ocean views from Church Street), and creates a natural buffer between the structure and the future mixed-use project on the remnant parcel. This layout maximizes the formation of the 20,500 square foot remnant land area that is proposed, in the interim, for parking use, accommodating 48 stalls. In the longer term, this remnant land area will be redeveloped to accommodate a properly scaled mixed-use development, in accordance with the WRP (**See**: "Remnant Parcel" discussion below). Developing the site as separate complementary components (parking structure and a mixed-use project), allows each component to be efficiently designed and developed since each has separate infrastructure needs. Once the Pili Street frontage is redeveloped, the parking structure will be essentially "tucked" behind existing commercial buildings mitigating its mass from Main Street, Market Street, Vineyard Street and Church Street. Development on the "remnant parcel" will eliminate the Haleakala view, but future buildings on this site will serve to "wrap" the parking structure, masking its height and mass. *Mauka/makai* views through Vineyard Street would remain. The preservation of Pili Street functions as ingress/egress to the site, and creates a double frontage on the remnant lot making it more desirable for commercial development.

The proposed master plan maintains the existing pedestrian connections to the property from Main, Market, Vineyard, and Church Streets. A generous service alley around the structure provides a buffer between the structure and the backs of existing buildings along Market, Main and Church Streets. The service alley is large enough to comfortably accommodate delivery vehicles, refuse vehicles and fire trucks. The service alley has been enhanced to accommodate 20 at grade parking stalls along the east side of the structure together with sidewalks and landscape planting between the structure and Market Street. Along the west side of the structure, the concrete firelane (alternative surface may be asphalt) will have removable bollards at each end to restrict vehicular access through this area, except in the event of emergency.

Pedestrians will exit the structure from stairwells located in each corner of the structure in addition to ground level exits on the Market Street and Pili Street frontages. One (1) elevator provides pedestrian access to each level for the mobility challenged. The elevator is proposed at either the southeast or northeast corner to provide direct and convenient access to the corner of Market Street and Main Street or Market Street and Pili Street. A second elevator is an "additive alternative" feature that is dependent on economic feasibility. The existing pedestrian connections linking Market Street and the southeast corner of the structure and Main Street and the southwest corner of the building will be maintained in their present condition.

Architecture

Architectural elements will reflect the character of Wailuku Town (**See**: Figure No. 8.11). The historic Iao Theater provides the inspiration for much of the proposed structure details. The color scheme, the railing design, the cornice detail on the columns are borrowed directly from the theater. The trellises at the ground level also mimics the theater's front canopy. The repeating "leaf and ball" medallions on the columns pay homage to Maui's plantation heritage. The shear walls utilize alternating textured panels to break up the scale and mass. The open air design and surrounding landscape plantings also provides relief from the mass of the structure.

Long term maintenance is minimized by these design features:

- Material selection
  - Reinforced concrete basic structure
  - Corrosion resistant
  - Focus on Long-Term Service Life
- No planters
- Ease of wash down of parking and stairwells
- Exterior fenestration
  - Precast concrete
  - Fiberglass
  - Aluminum
  - Exterior Insulation Finishing System (EIFS)

Landscape plantings of Royal Palms and Pink Tecoma canopy shade trees are used to provide definition to Pili Street and the surface parking area north of Pili Street (**See**: Figure No. 9). The Royal Palms and canopy shade trees will serve to soften the scale and massing of the parking structure, provide shade, calm traffic and offer pedestrians a pleasant walking experience. The species selected will match the Pink Tecoma trees planted along Market Street, in order to provide for a critical mass of colors and a unifying theme. Along the perimeter of the building, native shrubs and groundcover will be utilized to define and soften the building's exterior and to create a more unique and Hawaii sense of place.

Remnant Parcel

The *WMPL Master Plan Report* (CH&P, 2004) (**See**: Appendix "D") states that: "Development of the remnant parcel should encourage high density, small scale variety, and diversity in building design so as to complement surrounding architectural styles and be consistent with the Wailuku Redevelopment Area Design Guidelines" (p. 18). It goes on to say: "The remnant parcel [fronting Vineyard Street] should be developed as a

cultural/entertainment and/or residential mixed–use project in order to facilitate the economic revitalization of the redevelopment area" (p. 21). The proposed parking structure is the first step in this direction, providing parking for the eventual multi-use developments on the 20,500 square foot remnant parcel. The County would sell or lease portions of the land with a set of conditions that would run with the land, prescribing the uses and design specifications. The suggested uses for the parcel are:

- Residential Mixed Use

  This theme would provide for ground floor retail with upper floor multi-family residential in two to three story structures. Uses could include boutique retail/groceries/services, ethnic restaurants, pocket park/plaza and residential uses.

- Civic/Cultural Educational

  This cultural based theme would enhance the historical aspect of Wailuku Town. Uses within two to three story structures could include museum/theater/arts center, entertainment, retail, eating and drinking establishments, and a pocket park.

- Entertainment-Mixed Use

  This theme would be centered around performing arts in addition to related and accessory commercial establishments within two to three story structures. Uses could include the reconstruction of the King Theater, market, ethnic/specialty restaurants, live music, boutique retail/services, sidewalk sales/entertainment, and a pocket park/plaza.

- Municipal Office

  The County would retain ownership of the parcel for this theme. The ground floor spaces within the three to four story structures would be for leased retail, restaurants, and services. The upper floors would be primarily for government offices, and excess office space would be leased to private enterprises.

Other sources have suggested a public market, a neighborhood market, and/or other retail uses.

Parking Management and Maintenance

The *WTPS&PMPA* (DP&PA, 2011) suggests that if a Community Development Corporation (CDC) is created, that entity would be the best "to be tasked with downtown parking management" (p. 32). A CDC or a public/private partnership, committee, or organization would assume primary parking management responsibility

in Wailuku and would provide clear leadership. Benefits of this management system include:

- *They tend to be more efficient, entrepreneurial and customer focused;*
- *Have greater ability to pull in privately owned facilities under unified management;*
- *Have a vested interest in downtown and a greater stake in positive outcomes;*
- *They represent current "crest-of-the-wave" best practices for downtowns throughout US;*
- *Tend to be more successful in branding, marketing, and public relations/ communications;*
- *Result in greater buy-in and ownership by downtown stakeholders who are directly affected by public parking facilities, policies and management practices.*

The Parking Management organization could provide budget and operations oversight and make policy decisions or recommendations on the issues that have surfaced:

- Location of monthly permit parking versus transient short term parking;
- Appropriate ratio of monthly permit parking/short term parking;
- Appropriate meter rates in order to encourage use of the structure and to be self supporting;
- Possibility of self enforcement of infractions in order to generate and retain fines as means of revenue;
- Regular maintenance program in order to preserve the County's investment;
- Provide a long term management plan.

Schedule and Cost

Construction of the project is estimated to take eighteen (18) months to complete. The estimated cost of the project is approximately $15 million and is expected to be funded by Maui County. During construction, mitigation measures, as described herein, will be employed to control noise, dust, run-off, loss of parking, and other construction phase impacts.

F. ALTERNATIVES

1. No action

Analysis. The "No Action" alternative would maintain the current level of parking in Wailuku Town. As noted in Section II.D, demand for parking within the commercial district currently exceeds the existing supply of stalls. As a result, the MRA has suspended providing parking waivers for redevelopment projects. This condition jeopardizes the long-term economic viability of the Wailuku Redevelopment Area since many property owners and business owners cannot

comply with current on-site parking requirements. Without additional parking, many properties will continue to be underutilized; thereby, dampening economic vitality throughout the entire district. The "No Action" alternative will also cost short-term jobs created in the construction industry. As described in Section III.B.2, approximately 96 direct and indirect jobs will be created during the $15 million construction project. Direct, indirect and induced jobs created during the construction phase are estimated to equal 144 jobs.

Whereas the proposed action will generate impacts during the construction and operation phase, the "No Action" alternative will not.

2. Alternate Site(s)

Analysis. This option would require that the County find and develop another property or properties to accommodate the projected increase in demand for off-site parking. The County does not own another suitable site centrally located and large enough for a parking structure. Nor does the County own smaller parcels within the Redevelopment Area that could be used for surface parking. Acquiring and developing such properties could be more expensive than building a single parking structure and may require the removal of existing historic and/or commercial buildings to accommodate the needed parking. In addition, utilizing existing commercial lots for surface or structured parking would remove the opportunity for future activity generating land uses to emerge on these parcels. The long-term impact of dislocating commercial uses from the commercial district may be to depress the long–term economic vitality of the Wailuku Redevelopment Area.

Structured Parking - Alternative Site

Developing a parking structure at an alternative site within the Redevelopment Area would likely produce greater impacts than developing the structure at the proposed site. As stated, there are no undeveloped lots within the commercial district that are of sufficient size to accommodate a parking structure of the size necessary to accommodate projected parking demand. The proposed site is the last large undeveloped lot within the commercial core, and is easily accessible from Main, Market, Church and Vineyard Streets. Developing a structure on an existing developed parcel would require demolition of existing commercial buildings which would displace existing and/or future commercial uses; thereby, negatively impacting the long-term economic vitality of the area.

Developing a multi-level parking structure at an alternative site would mitigate site specific impacts, such as mauka and makai view impacts or changes to the urban

design character of the neighborhood, but similar or greater impacts would likely occur at an alternative site as well.

Surface Parking – Alternative Site(s)

This alternative, which would be in lieu of constructing the proposed parking structure within the Wailuku Municipal Parking Lot, has two options: a) Long Term Lease and; b) Property Purchase and Redevelopment.

a) Long Term Lease. The County would lease existing private stalls at various properties. Although some properties may require improvements, construction impacts would be minimal. The cost of leases is unknown at this time.

b) Property Purchase and Redevelopment. The County would purchase vacant or developed properties, demolish existing structures, and construct parking lots on these properties: This option could yield more stalls, however the costs of purchasing and development could be quite high and acquisition could be challenging.

The number of stalls acquired, together with the existing parking lot, must meet the objective of developing at least 400 stalls. Adjacent properties at Church and Vineyard Streets and Market and Vineyard Streets would be possible sites for additional surface parking. These sites together could provide approximately 40 stalls.

Both of these options would avoid any construction impacts related to a multi-level parking structure and the development of surface parking lots would mitigate certain longer-term site specific impacts, such as mauka and makai view impacts or changes to the urban design character of the neighborhood.

Leasing or purchasing alternative lots for surface parking within the commercial district would produce significantly fewer direct, indirect and induced construction related jobs than what would be created during the construction phase of the project.

Long-term environmental impacts associated with the development of additional surface parking lots include increased urban runoff and increase in ambient temperatures produced by the increase in impervious asphaltic surfaces. However, these impacts can be mitigated through appropriate site design and engineering counter measures. The primary long-term impact of surface parking is to displace existing and or future commercial uses; thereby, negatively impacting the long-term economic vitality of the Wailuku Redevelopment Area. Surface parking lots also negatively impact an area's urban design character by removing existing and/or

future commercial buildings from the streetscape and by spreading land uses further apart.

3. Deferred Action

Analysis. This alternative would delay the construction of a parking structure. This would delay the development of additional parking in Wailuku Town's commercial district and in turn, delay the economic development that additional parking would encourage.

4. Parking Structure Alternatives

Analysis. The aforementioned *WMPL Master Plan Report* (CH&P, 2004) analyzed three parking structure options (**See:** Appendix "D"), Options "A", "B", and "C" (pp. 25-32).

Option "A" is a four-level structure, providing 453 stalls. This option preserves Pili Street and has the best vehicular circulation, but has the least number of stalls, has a minimum service alley around the structure, and is closer to neighboring properties.

Option "B" is a three- and four-level structure providing 478 stalls. This option has a generous service alley around the structure, but it would eliminate Pili Street, would have the largest building massing and footprint, and would impose a greater impact on existing public view planes and the urban design character of the district. This option also limits the potential opportunity for future mixed-use development on the remnant land north of Pili Street.

Option "C" is a five-level structure providing 488 stalls. This option would provide the most stalls, provide a generous service alley and preserve Pili Street, but would exceed the height limit of 45 feet.

The "Preferred Action" (Option PC-1) was selected by the community because it better addresses the following community objectives:

- Provides a generous service alley around the structure;
- Mitigates the massing and scale of the building;
- Reestablishes Pili Street; and
- Preserves the opportunity for future mixed-use development along the Vineyard Street frontage.

The final preferred concept that is being proposed is a modified version of Option "PC-1". Modifications needed to be made to accommodate Fire Department access requirements while maintaining the optimum number of parking stalls.

5. Parking Structure with Main Street Access

This alternative is the proposed parking structure with an additional vehicular ingress/egress directly from Main Street. It was not considered in the final design for the following reasons:

- Proximity to the Main/Market Street intersection. The access from Main may have an impact on the queues at that intersection.
- The access lane would eliminate parking stalls on the First Hawaiian Bank and Main Street Promenade properties, directly affecting these businesses that currently offer free parking for their customers.

6. Satellite Parking and Multi-level Parking Structure

This alternative would include the use of satellite parking lots and the construction of a downsized parking structure within the Wailuku Municipal Parking Lot.

Impacts of satellite parking are described above in "2. Alternative Site(s)" under the sub-heading "Surface Parking – Alternative Site(s)". The parking structure would need to be downsized and redesigned.

7. Satellite Parking and Multi-level Multi-Use Parking Structure

This alternative would include the use of satellite parking lots and the construction of a parking structure within the Wailuku Municipal Parking Lot that would include commercial storefronts. The storefronts could be located either on the ground floor or uppermost floor. Storefronts on the ground floor would eliminate approximately 60 stalls and would have greater accessibility. The storefronts would essentially be 400 square foot "bump-outs" for "incubator" businesses. Storefronts on the uppermost floor would eliminate approximately 100 stalls, but would allow for an improved roof structure.

Impacts of satellite parking are described above in "2. Alternative Site(s)" under the sub-heading "Surface Parking – Alternative Site(s)". The parking structure would need to be redesigned to accommodate additional infrastructure demands that commercial storefronts would create, increasing the cost of the structure. Utilizing the proposed structure as a single use building for parking would be more efficient

and economical. The remnant parcel will provide more flexible opportunities for commercial "incubators".

III. DESCRIPTION OF THE EXISTING ENVIRONMENT, POTENTIAL IMPACTS AND MITIGATION MEASURES

A. PHYSICAL ENVIRONMENT

1. Land Use

Existing Conditions. The 2.192 acre parcel currently contains a 210-stall parking lot and is designated Business/Commercial in the Wailuku-Kahului Community Plan. The subject property is centrally located in the core of Wailuku Town's commercial district within the Wailuku Redevelopment Area. It is bound on three sides by commercial properties along Market Street, Main Street, and Church Street, and on the north side by Vineyard Street. Access is provided from Market, Church, and Vineyard Streets.

The following is a description of zoning, community plan designations, and existing land uses adjacent to the subject property:

North:	State Land Use: Urban Zoning: Business/Multi-Family Community Plan: Business Multi-Family **Existing uses**. Vineyard Street, businesses, multi-family.
East:	State Land Use: Urban Zoning: Commercial/Mixed-Use Community Plan: Commercial **Existing uses**. Business.
South:	State Land Use: Urban Zoning: Commercial/Mixed-Use Community Plan: Commercial **Existing uses.** Business, public/quasi-public.

West:

State Land Use: Urban
Zoning: Commercial/Mixed-Use
Community Plan: Commercial
Existing uses. Business.

Potential Impacts and Mitigation Measures. The primary purpose of the project is to increase the inventory of public parking stalls in Wailuku Town's commercial district. This increase will enable existing and future land uses to function better as commercial properties. Modern zoning and subdivision requirements mandate on-site parking for the various land uses permitted within the Commercial/Mixed Use District and Business Multi-Family District; the predominant zoning districts within the Redevelopment Area. As noted, many of the commercial lots served by the municipal parking lot cannot comply with current parking requirements because they are too small and irregularly shaped and existing buildings typically cover the majority of the parcel.

By centralizing additional parking in the District, infill development and business expansion can take place, helping to facilitate the District's long-term economic revitalization.

Short-term loss of parking stalls during construction

During the approximate 18 month construction phase, 210 public parking stalls will be temporarily removed from the parking inventory. These stalls serve area businesses and State, County and Federal agencies. The *Interim Parking Plan for the Construction Phase of Wailuku Municipal Parking Structure* (IPP) was prepared in June 2011 by Nishikawa Architects, Inc. (NAI) (**See**: Appendix "G"). The IPP recommends the following measures to mitigate the effects to existing users of the parking facility:

- Satellite Parking. Parking would be provided at temporary alternate sites. The locations would be tailored towards the targeted groups: County employees, State employees, and a group designated as merchant/ customer/visitor (MCV).

- Transportation Demand Management. Options to address the parking demand by government employees include subsidized public transportation and/or a subsidized ride share/van pool program.

- Public Relations Program. This effort would generate excitement about the project and community/business support for the project. Information about the interim parking locations and alternative transportation options would be promoted with the support of merchants and the government.

Some of the satellite parking sites for County employees would require a shuttle because of distance factors. For the MCV sector, the report actually recommends three preferred sites. Depending on the zoning, some of the temporary sites may need Conditional Use Permits. The IPP is further discussed in Section III.B.2 "Economy".

2. Topography and Soils

Existing Conditions. The subject property slopes west to east from its highest point at the Pili Street/Church Street intersection at approximately 299 feet above mean sea level (AMSL) to approximately 283 feet AMSL at the property corner adjacent to the First Hawaiian Bank parking lot.

The soil type specific to the subject property is Wailuku silty clay (WvB), 3 to 7 percent slopes (**See:** Figure No. 10). The soil is characterized as reddish-brown with moderate permeability, slow runoff with slight erosion hazard. Water capacity is 1.6 inches per foot on the surface and at subsoil.

A *Soils Investigation Report for the Wailuku Municipal Parking Structure* (March 2011) was prepared by Island Geotechnical Engineering, Inc. (**See**: Appendix "H"). Eight (8) test borings to depths of 16.5 feet to 32 feet below existing grade at various locations on the site were completed. Soil samples were laboratory tested and engineering analysis was performed.

Potential Impacts and Mitigation Measures. The Soils Investigation Report describes the site's surface and subsoil conditions and makes recommendations for foundation design and other considerations relative to the construction of the proposed project. Analysis of the subsurface materials revealed the following:

> *In general, the borings disclosed the site to be overlain with 15 to 25.75 feet of fine-grained and coarse grained soils. A hard layer/rock was encountered in 7 of the 8 test borings at depths of 15 to 25.75 feet below existing grade.*
>
> *No groundwater was encountered in any of the test borings.* (preface)

The subsurface result. The report concludes "that the proposed structure may be supported on spread footings bearing on compacted on-site soil or properly compacted fill" (p. 4). The report also has recommendations for site preparation, placement of fill/backfill, and footing excavations and compaction, as well as monitoring of these activities by Island Geotechnical Engineering, Inc.

3. Flood and Tsunami Zone

Existing Conditions. According to the Flood Insurance Rate Map No. 0391 E for this region, the entire project site is situated within Flood Zone X, which is determined to be outside the 0.2% annual chance floodplain (**See:** Figure No. 7). The project site is located approximately 1.5 miles from the shoreline.

Potential Impacts and Mitigation Measures. All proposed improvements will meet necessary requirements so that no adverse flood hazards impact neighboring or downstream properties.

4. Terrestrial Biota (Flora and Fauna)

Existing Conditions. Due to the built environment and its surroundings, the project site has been altered from its natural state for more than a century. Landscape planting placed on the site includes palm, African tulip, and paper bark. Other vegetation found on site includes ti, croton, mock orange, snow bush, hibiscus, creeping fig, and various grasses and weeds. Feral mammals typically found in this area include mongoose, cats, dogs, and rodents. Avifauna commonly found in this area includes the common mynah, several species of dove, cardinal, house sparrow, and house finch.

Potential Impacts and Mitigation Measures. There are no known significant habitats of rare, endangered or threatened species of flora and fauna located on the subject property. Therefore rare, endangered, or threatened species of flora and fauna will not be impacted by the proposed project.

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 many pollution sources. The impact of land development activities on air quality in a proposed development's locale differs by project phase (site preparation, construction, occupancy) and project type.

In general, air quality in the Wailuku area is considered relatively good. Due to the proximity to schools, businesses and government offices, at times there are significant non-point source emissions (automobile) in the area; however they do not generate a high concentration of pollutants. The relatively high quality of air can also be attributed to the region's exposure to wind, which quickly disperses concentrations of emissions. The Wailuku area is currently in attainment of all criteria pollutants established by the Clean Air Act, as well as, the State of Hawaii Air Quality Standards.

Potential Impacts and Mitigation Measures. During construction, there will be air quality impacts attributed to short-term construction related activities. Air quality impacts could include dust generated by short-term construction related activities. Site work such as grading and building construction, for example, will generate airborne particulate. Adequate dust control measures that comply with the provisions of Hawaii Administrative Rules, Chapter 11-60.1, "Air Pollution Control, " Section 11-60.1-33, Fugitive Dust, will be implemented during all phases of construction. A Best Management Practices (BMP) plan will be implemented which will include, but not limited to:

- Providing an adequate water source prior to start-up of construction for use in dust control;
- Landscaping and rapid covering of bare areas, including slopes, beginning with the initial grubbing and grading phase;
- Controlling of dust from shoulders, project entrances and other access roads;
- Providing adequate dust control measures during weekends, after hours and prior to daily start-up of construction activities;
- Controlling of dust from debris hauled away from the project site; and
- Erecting a dust fence to shield the adjacent project sites.

In the long term, the additional parking stalls may result in an increased volume of traffic in the region, which would increase vehicular emissions such as carbon monoxide. However, this increase is not considered significant when compared to the overall amount of vehicles in this area. In addition, the structure will be the first parking structure to be equipped with electric vehicle charging stations, encouraging the use of low-emissions and fuel efficient vehicles. Thus, the proposed project is not anticipated to be detrimental to local air quality or contribute significantly to Green House Gas (GHG) emissions.

6. Noise Characteristics

Existing Conditions. The noise level is an important indicator of environmental quality. In an urban environment, noise is due primarily to vehicular traffic, air traffic, heavy machinery, and heating, ventilation, and air-conditioning equipment. Ramifications of various sound levels and types may impact health conditions and an area's aesthetic appeal.

An Environmental Noise Assessment Report (ENAR) was prepared by D.L. Adams Associates for the proposed Wailuku Municipal Parking Structure (May, 2011) (**See**: Appendix "I"). The *ENAR* identifies dominant noise sources in the vicinity as

"Vehicular traffic from parking lot and surrounding streets, mechanical noise" (p. 4). Secondary sources are "Birds, wind, typical urban noises such as pedestrians, sirens, car horns, etc" (Ibid.) Other background noises come from the schools and government buildings in the area.

Potential Impacts and Mitigation Measures. During the construction phase, construction activities may generate a significant amount of noise such as work involving earth moving equipment (e.g. bulldozers, diesel-powered trucks). The contractor will obtain noise permits from the Department of Health (DOH) for activities that are expected to exceed "maximum permissible" levels. Mitigation measures that may be required include noise monitoring, limits on construction activities to normal daylight hours, and/or temporary noise barriers. In any case, the contractor will adhere to the DOH's noise regulations for construction equipment.

During the longer-term, as documented in the ENAR, the proposed project is not expected to generate a significant increase in traffic noise. Noises that are similar to the existing parking lot such as car alarms, engine startup, car door slams, etc. are sporadic in nature, but may be up to 3 dBs higher due to reverberation within a parking structure. Another common source of noise within parking structures is tire "squeal" around corners of the garage ramps. The structure relies on natural ventilation so noise mitigation for stationary mechanical equipment, such as exhaust fans, will not be required. Long term mitigation measures include:

- Broom finish on concrete sloping ramps to prevent tire "squeal".
- Comply with State DOH Community Noise Control rules.

7. Hazardous Substances

Existing Conditions. The existing site has been used as a parking lot since 1964. A Phase I Environmental Site Assessment (ESA) was prepared for the proposed project by EKNA Services, Inc. (February, 2011) (**See**: Appendix "J"). The purpose of the ESA was to assess the likely presence of any hazardous substances or petroleum products and to identify any potential source of contamination.

Potential Impacts and Mitigation Measures. The *ESA* (EKNA, February 2011) concluded that there are no Recognized Environmental Conditions (REC) for the site. However, the report notes that there are two (2) "possible environmental concerns":

- *Lead containing paints (LCP) may be present in painted parking marks at the Site. At the time of the Site inspection, these paints were in good condition. Lead paints are not considered a REC and do not presently pose an environmental concern at the Site*

- *There is a transformer vault immediately adjacent to the Site at the back of the adjoining Main Street Promenade property. This vault may contain PCBs and any future leakage of transformer oils from the vault would likely run onto the Site.* (p. 20)

The *ESA* makes four (4) recommendations:

> *Maui Electric Company, Ltd. should be promptly notified of any leakage of oils from the transformer vault immediately adjacent to the Site at the back of the adjoining Main Street Promenade property.*
>
> *LCPs that become damaged should only be sampled by a licensed and trained lead or hazardous materials contractor, and should only be handled, removed and disposed of, by licensed and trained lead or hazardous materials abatement contractors, in accordance with all applicable laws and regulations.*
>
> *Since the paints on the parking lot asphalt may be lead containing, a Toxicity Characteristic Leaching Procedure (TCLP) test for lead may be required on the asphalt debris by the landfill facility prior to disposal.*
>
> *During demolition and construction at the Site, any suspect petroleum containing soils (discolored or odor bearing) encountered should be properly sampled and profiled prior to any landfill disposal, as required by the landfill facility regulations.* (p. 21)

8. Archaeological/Historical Resources

Existing Conditions. Wailuku has been a business community for over a century, beginning with the founding of Wailuku Sugar Company in the 1860s. Followed by the establishment of Maui's county seat in Wailuku in 1905, Wailuku was transformed into a bustling commercial and government center through the following decades. In December 2001, Ms. Jill Engledow prepared a "History of Wailuku's Parking Lot Block" (**See**: Appendix "K"). The report recounts the history of Wailuku beginning with Chief Kahekili in the 1700s and development by missionaries and plantations in the 1800s. During the early 1900s, development on the lots that comprised the area included offices, banks, bakeries, grocery stores, barbershops, tailors, gas stations, auto sales dealer, movie houses, churches, a hospital, as well as assorted residences. Pili Street was formerly known as "Kalua Avenue" until 1929, when it was named after a prominent Hawaiian who passed away that year (p. 5). With the establishment of residential subdivisions and shopping malls in Kahului in the 1950s, Wailuku entered into a period of decline. In recent years however, there has been a resurgent effort to restore Wailuku's commercial core and re-establish its vitality.

The County of Maui purchased the project site from various owners in 1963 and constructed the existing parking lot in 1964. No archaeological inventory assessment has been conducted on the site. As recommended by the State Historic Preservation Division (SHPD), the *Archaeological Monitoring Plan for the Proposed Wailuku Municipal Parking Structure Project* (AMP) was prepared by Xamanek Researches, Inc. for the proposed project in August 2011 (**See**: Appendix "L").

Potential Impacts and Mitigation Measures. The *AMP* (Xamanek, 2011) notes that "there is a possibility that significant material culture remains (including human burials and/or human skeletal remains) may be inadvertently disturbed during earthmoving activities on the subject parcel" (p. 10). The *AMP* will be implemented during excavation for the foundation and utilities. Should cultural deposits or burial remains be found during construction of the parking structure and related improvements, the appropriate measures will be taken as outlined in the *AMP* and the appropriate agencies will be contacted. When fieldwork described in the *AMP* is completed, a draft monitoring report will be prepared and said report will be submitted to the SHPD for comment and approval within 180 days of the completion of the project. The *AMP* also notes that since a federal entity, the Economic Development Administration (EDA), is funding the design phase of the Wailuku Municipal Parking Structure, compliance with Section 106 of the National Historic Preservation Act is required to address the potential effects of a project on historic properties. The EDA concurs with the AMP and has submitted a request for concurrence from SHPD (**See**: Appendix "L", last page).

9. Visual Resources

Existing Conditions. Wailuku Town has sweeping views of the Pacific Ocean, West Maui Mountains and Haleakala.

Neighborhood Character. The project site is bound to the north by two-story structures across Vineyard Street. Along the west boundary, in order from north to south, are:

- Vacant lot
- One Medical Plaza – 1-story (1967)
- Wailuku Executive Center – 3-story plus parking level (1988)

Along the east boundary, in order from north to south, are:

- Banyan Tree Park
- Office building – 1-story (1957)
- American Savings Bank – 1-story (1975)
- Vacant lot

- Office/store – 2-story (1932)
- Art studio – 3-story (1929)
- Therapy office – 2 –story (1929)
- 33 Market Street Offices – 2- & 3-story (1978)
- First Hawaiian Bank – 1-story (1965)

Along the south boundary are:

- Calvary Church – 1-story (1941)
- Main Street Promenade – 3-story (2000)

The subject property is located in the heart of what is designated as the "Commercial Core Neighborhood" in the *Wailuku Redevelopment Area Design Guidelines* (MCPD, 2006). Adjacent properties are in commercial use and have no front yard setbacks, creating the distinctive "wall of buildings" streetscape.

View Opportunities. Due to the urbanized character of the "Commercial Core Neighborhood", scenic vistas in the vicinity are limited, although pockets of views towards Maui's most prominent visual resources, the Pacific Ocean, the West Maui Mountains, and Haleakala, do exist from certain positions in public areas.

Market Street. For the most part, buildings on Market Street abut the public sidewalk which restrict both *mauka* and *makai* views. The exceptions are at Pili Street and the vacant lot at 59 Market Street, where the views to the West Maui Mountains are prominent. The *mauka* view through 59 Market is partially blocked by the Wailuku Executive Center across the parking lot.

Main Street. The major *mauka/makai* views run parallel to the street.

Church Street. There are no *makai* views along Church Street between Main Street and Pili Street due to the existing structures. The north section of Church from Pili to Vineyard has significant *makai* views through Pili and Haleakala views through the existing parking lot and the vacant lot at 2091 Vineyard Street.

Vineyard Street. Like Main Street, the *mauka/makai* views run parallel to the street. There are also significant views towards Haleakala through the existing parking lot.

Potential Impacts and Mitigation Measures.

Scale. The proposed parking structure will be the largest structure in the area in terms of total square footage and footprint. However, it will be "tucked" behind the two largest buildings on the block, the Main Street Promenade and the Wailuku Executive Center. Vertical divisions and tall trees (royal palms) help to reduce contextual scale.

Height. The proposed parking structure will have five levels. The uppermost level is not covered and will conform with the height limitation of forty-five (45) feet. Preliminary studies show that this level will be even with or lower than the roofs of the two largest adjacent buildings (Main Street Promenade and the Wailuku Executive Center). The parking structure essentially provides a step down from the large buildings to the three and two story buildings on Market Street. The stairwell and elevator roofs are exceptions to the height limits. A portion of the lowest level will be at-grade or sub-grade along the south and west portion of the structure.

Mass. Although the structure will be the largest on the block, architectural details reduce the apparent mass. Transparency of the structure is achieved with the open design featuring generous use of railings, grills, and lattices. The exterior columns and shear walls minimize the use of interior structural columns, while providing alternating textured panels to reduce the apparent scale.

View Impacts. The proposed parking structure will be visible at various positions on each of the roadways in the vicinity.

Market Street. The view towards the West Maui Mountains through Pili Street will be preserved, although the vista will not be as wide as currently. The view through the vacant 59 Market Street parcel will be completely blocked; however, future commercial development on this parcel will likely eliminate this view.

Main Street. The *mauka/makai* views will not be impacted; however, the proposed parking structure will be visible over the Calvary Chapel building.

Church Street. The makai view through Pili Street will be preserved. The current Haleakala view from north portion of Church will be blocked; however, future commercial development at 2091 Vineyard Street will likely eliminate most of this view.

Vineyard. From the western portion of Vineyard fronting the subject property, the view towards Haleakala will be eliminated, however it is restored approaching Market Street, on the east side of the proposed parking structure. Future development on the "remnant parcel" will likely diminish this view further, but future commercial buildings on this site will serve to "wrap" around the parking structure, softening its height and mass.

View Mitigation. The size of the structure will unavoidably impact some of the existing public views. These views, especially of the West Maui Mountains, add to the charm and character of Wailuku Town. However, since the proposed parking structure will be

a public facility, the structure will create new opportunities for public viewing of scenic vistas, especially from the upper levels.

Some private views will be impacted by the proposed structure, particularly views from the Wailuku Executive Center. In the context of business districts, private views cannot be guaranteed, but the open design of the proposed parking structure strives to minimize the impacts to surrounding buildings.

B. SOCIO-ECONOMIC ENVIRONMENT

1. Population and Housing

Existing Conditions. The population of the County of Maui has exhibited relatively strong growth over the past decade with a 2010 population of 154,834, a 20.9% increase over the 2000 population of 128,094. The 2010 population of the Wailuku District was 15,313, or 9.9% of Maui County's population (U.S. Census Bureau, Census 2010). Maui Island is expected to increase to 162,370 in 2020 and to 186,254 in 2030. Wailuku-Kahului Region is expected to increase to 60,877 in 2020 (37% of Maui Island) and to 71,223 in 2030 (44% of Maui Island).

Potential Impacts and Mitigation Measures. The proposed project will not lead to a direct impact on population levels since there is no residential component. However, the increase in parking opportunities will have an indirect impact on population by encouraging new business and/or mixed-use developments within the Wailuku Redevelopment Area, which will draw more residents and visitors into Wailuku town.

2. Economy

Existing Conditions. The Wailuku economy was once based primarily upon the agricultural industry with the establishment of sugar mills in the 1800s. In 1864, the new Wailuku Sugar Company erected a "first-class" mill on the south bank of Iao Stream. As the company grew, Wailuku town grew into a center of population and commerce. In the 1950s, as residential communities and shopping malls were developed in Kahului, the population and commercial centers moved eastward and the importance of Wailuku as a business community declined. The closure of the Wailuku Sugar Mill in 1978 symbolized the demise of agriculture in the community.

Today, government offices and medical facilities are Wailuku Town's primary employers. Also in the economic mix are small professional offices (financial, medical, legal), specialty retail (clothing, jewelry, book, antique), and ethnic restaurants. While

the commercial core exudes a certain charm, there are several factors that are obstacles to economic growth. One of these factors is public parking. The *WRAMP* (PUMA, 2010) (**See**: Appendix "E") documents and summarizes a community survey which was used, in conjunction with a market analysis, to develop a "competitive analysis". This analysis revealed some of these "conclusions and niche opportunities":

> ***Wailuku Town needs to be inviting – clean, safe and easy to park in.*** *Wailuku's street environment creates significant barriers to realizing its potential. Parking is poorly managed, resulting in peak daytime shortages of convenient parking in key retail locations. The pedestrian experience is inconsistent, with many areas lacking appropriate sidewalks, amenities and intuitive connections. The area is perceived by many as dangerous, particularly after dark, despite notable improvements in reducing crime.*
>
> ***Capture the Wailuku Experience*** *is proposed as a niche strategy for Wailuku,* ***incorporating its history, authenticity and potential to become a center for dining, entertainment, culture and eclectic retail for Maui****. This niche strategy allows for growth to take advantage of Wailuku's existing infrastructure in the short term, including the availability of parking during evenings and weekends, and the existing supply of relatively inexpensive real estate.* (p. 3)

Potential Impacts and Mitigation Measures. In the short term, the proposed project is expected to have an economic impact by temporarily reducing the number of parking stalls available to potential customers, merchants, and visitors during construction. As noted in III.A.5 "Air Quality" and III.A.6 "Noise Characteristics", Best Management Practices (BMP) plans and mitigation measures will be implemented to minimize construction related impacts to neighboring properties and businesses. Onsite construction staging and storage will minimize traffic disruptions by construction vehicles.

Interim Parking Plan. One of the recommendations of the *IPP* (NA, 2011) (**See**: Appendix "G") is to provide temporary interim parking at satellite locations. The *IPP* identified three groups that utilize parking at the existing lot: County employees, State employees, and a group designated as Merchant/Customer/Visitor (MCV). For each group, the report proposes preferred options for interim parking, as well as alternative sites. The preferred sites could provide the following number of stalls:

Group	Minimum	Maximum
County Employees	45	66
State Employees	25	30
Merchant/Customer/Visitor	55	75

Some of the alternative sites for County employees would require a shuttle because of distance factors. For the MCV sector, the report actually recommends three preferred sites (the parking count is a sum of all three sites). Depending on the zoning, some of the temporary sites may need Conditional Use Permits. Traffic patterns may change temporarily as drivers are diverted to the satellite lots. Nearby residential neighborhoods may be affected by drivers seeking on-street parking instead of utilizing the satellite lots.

The *IPP* also recommends two other programs to mitigate the temporary loss of parking: Transportation Demand Management (TDM) and Public Relations (PR). TDM options are subsidized public transportation and/or a subsidized ride share/van pool program as incentives for County employees. The PR Program is designed to generate excitement about the project and community/business support for the project. Information about the interim satellite parking locations and alternative transportation options would be promoted with the support of merchants and the government.

Short-term construction related impacts. Using the State of Hawaii, Department of Business Economic Development and Tourism's Input-Output Model (2005), the direct, indirect, and induced employment impact spread over the construction phase of the development (1 year) is approximately 144 jobs. The direct and indirect employment impact during this period is estimated to be approximately 96 jobs during the construction phase.

Long-term impacts. In the long term, the proposed parking structure would encourage more visitors and customers to the commercial core and alleviate the parking requirements of new businesses. The number one "Mid-Term" recommendation by the *WRAMP* (PUMA, 2010) is to:

> *Build the parking structure. There is a tremendous opportunity to build a structure that promotes the overall revitalization of downtown, providing not only a place to park, but also (along with the "remnant parcel") other civic amenities that could help create a central gathering place for a variety of community based events and activities appealing to locals and tourists alike. The parking structure should also support the development of housing, retail and office uses in central Wailuku.* (p. 43)

As such, the proposed project would have a positive impact on the existing commercial community as well as encourage development of new businesses in accordance with the overarching purpose of the Wailuku Redevelopment Plan, which is to facilitate revitalization of the Wailuku Redevelopment Area.

3. Cultural Resources

Existing Conditions. The United States Geological Survey (USGS) identifies the *ahupua'a* as Wailuku, an area noted as a place in which there were numerous landing sites, and a place where many battles were fought in precontact times.

The subject property is located within a highly urbanized commercial area of Wailuku. The site itself has been a paved parking lot since 1964. The project site is bound by existing commercial development and collector roads. The subject property is not located within Wailuku Historic District No. 3. However, there are sites in the immediate area that are identified by the Wailuku-Kahului Community Plan (2002) as culturally "significant":

- Chee Kung Tong Society Hall
- Church of the Good Shepherd
- 'Iao Theatre
- Market Street from Main Street through Happy Valley
- Vineyard Street from Market Street to end

A *Cultural Impact Assessment for the Proposed Wailuku Municipal Parking Structure* (CIA) was prepared for the project by Xamanek Researches LLC (2011) (**See**: Appendix "M").

Potential Impacts and Mitigation Measures. The *CIA* did not identify any cultural resources, i.e. medicinal plants, shoreline resources, religious sites that will be impacted by the project. Nor are there such sites in the immediate vicinity of the subject property that require access through the property. From a cultural practices and beliefs perspective, the subject property bears no apparent signs of cultural practices or gatherings taking place on the subject property or in the immediate vicinity of the subject property.

The *CIA* notes that it could not identify "any specific traditional Hawaiian cultural uses for the subject parcel at present" (p. 31). The *CIA* summarizes its assessment as such:

> *The subject parcel and surrounding area have been heavily impacted by post-contact activities of the 19th and 20th centuries. If traditional Hawaiian cultural sites were present prior to the Plantation Era, they were either destroyed or buried by earth altering activities, or more recent land alteration and demolition actions in Wailuku. The project area is actively utilized as a municipal parking lot at present. We are not aware of any traditional cultural practices that occur on the project area at present.* (pp. 31-32)

Nevertheless, the CIA recommends archaeological monitoring during ground altering activities due to the "possibility that significant material cultural remains may be located under the paved parking lot" (p. 32).

C. PUBLIC SERVICES

1. Recreational Facilities

Existing Conditions. Wailuku is serviced by several recreational facilities that provide indoor and outdoor activities for the area's residents. These facilities include the War Memorial Sports Complex, Velma Santos Community Center, Wells Park, Kepaniwai Park, Wailuku Gym and Swimming Pool, and the Iao Valley State Park.

Potential Impacts and Mitigation Measures. The proposed action is not anticipated to have any significant impact upon existing recreation facilities and services in the region.

2. Police and Fire Protection

Existing Conditions. The County of Maui's Police Department is headquartered at its Wailuku Station, which provides service to Maui's residents, approximately 0.8 miles away. The Central Maui patrol includes approximately 146 uniformed full time patrol officers and 38 investigative officers.

Fire prevention, suppression, and protection services are provided by the County Department of Fire and Public Safety's Wailuku Fire Station No. 1 located approximately 0.2 miles away. The station is staffed by fifteen full-time personnel.

Potential Impacts and Mitigation Measures. The proposed project will not extend the existing service area limits for emergency services nor will it induce a significant increase in population. Thus, the proposed project is not anticipated to have an adverse impact upon existing police and fire protection services.

3. Schools

Existing Conditions. The Wailuku region is serviced by both private and public schools, which provide education from preschool through high school. Public schools in the region include the Wailuku Elementary School, Waihee Elementary School, Iao Intermediate School, and H.P. Baldwin High School.

Potential Impacts and Mitigation Measures. Since there is no residential component, the education system is not expected to be directly impacted by the proposed project. A number of students travel through the Main/Market/Church/Vineyard pedestrian corridors returning home after school sessions end. Signage, barricades and other protective devices will be utilized to provide safe, protected, and convenient passage through the area for students, as well as visitors.

4. Medical Facilities

Existing Conditions. The Wailuku based Maui Memorial Medical Center provides centralized medical services for the island and is located approximately 0.8 miles away. Medical and dental offices are also located in Wailuku Town to serve the region's residents.

Potential Impacts and Mitigation Measures. The proposed project is not anticipated to have a significant impact upon medical services in terms of service area.

5. Solid Waste

Existing Conditions. Only two landfills are currently operating on Maui, the Central Maui Landfill in Puunene, and the Hana landfill. Residential solid waste collection is provided by the County and taken to the Central Maui Landfill, which also accepts waste from private refuse collection companies.

Potential Impacts and Mitigation Measures. Construction and demolition debris will be reused or recycled when practical, or disposed at a construction and demolition waste landfill. During demolition of the existing parking lot, if any material, such as lead paint, arsenic, asbestos, etc., is suspect, it will be removed and disposed of in accordance with all county, state and federal codes and guidelines.

In the long term, the proposed project is not anticipated to have a significant impact upon solid waste disposal since no solid waste is directly generated by the project.

D. INFRASTRUCTURE

The *Preliminary Engineering Report for the Wailuku Municipal Parking Structure* (PER), prepared by Otomo Engineering, Inc., in March 2011, addresses the project's off-site infrastructure and drainage impacts (**See**: Appendix "N"). The following is a description of infrastructure systems that will service the development.

1. Water

Existing Conditions. The Wailuku region is part of the Central Maui Water System, which services the communities of Waihee and Waiehu to the north, Wailuku, Kahului and Paia to the east, and Maalaea-Kihei-Makena to the south. Within the region, water district sub-areas include Iao Valley, Wailuku Heights, and Wailuku Town.

The Central Maui System water sources are located on the windward slope of the West Maui Mountains. Virtually all of the water to supply the Central Maui System is withdrawn from the Iao Aquifer in the vicinity of Iao Stream and Waiehu Stream. The base perennial flows in Iao and Waiehu Valleys originate as ground water seepage from high-level aquifers in the calderas and dike complex of the West Maui Mountains. The ground water resource occurs in the basal lens extending between Waikapu and Waihee Valleys below an elevation of about 800 feet.

The *Preliminary Engineering Report for the Wailuku Municipal Parking Structure* (Otomo, 2011) (**See**: Appendix "N") describes the existing conditions for the subject parcel as such:

> *Domestic water and fire protection for the project area are serviced from the 3.0 million gallon Mokuhau tank and wells in Happy Valley, which is at elevation of 358 feet. There is an existing 8-inch waterline on Church Street which provides domestic water and fire protection to the project site. The Department of Water Supply recently installed a 12-inch waterline along Vineyard Street. Presently, there is a one-inch water meter serving the existing parcel. It is located within the property where the stem portion of Pili Street enters the parking lot from Church Street.* (p. 4)

Potential Impacts and Mitigation Measures. The aforementioned *PER* (Otomo, 2011) anticipates that:

> *(the) proposed development will require 2,500 gallons of water daily to meet the minimal irrigation demand. No domestic water demand is anticipated for the project. The existing one-inch water meter will be used for the project. A reduced pressure backflow preventer will be installed after the water meter as required by the Department of Water Supply. Calculations will be prepared and submitted during the building permit process to validate the adequacy of the existing meter.* (p. 7)

The following conservation methods will be utilized to reduce irrigation demand:

1. Select drought resistant plant species for landscaping.
2. Drip irrigation will be utilized.
3. Use of weather sensor irrigation controllers.

4. Limit use of turf.

The Department of Water Supply recommends the following Best Management Practices to address ground water protection during construction:

1. There shall be a designated person onsite during operating hours who is responsible for supervising the use, storage, and handling of hazardous material and who shall take appropriate mitigating actions necessary in the event of fire or spill.
2. Hazardous materials left on site when the site is unsupervised must be inaccessible to the public. Locked storage sheds, locked fencing, locked fuel tanks on construction vehicles, or other techniques may be used if they will preclude access.
3. Construction vehicles and stationary equipment that are found to be leaking fuel, hydraulic fluid, and/or other hazardous materials shall be removed from the site and from the wellhead protection area. The vehicle or equipment may be repaired in place, provided the leakage is completely contained.
4. Hazardous materials shall not be allowed to enter stormwater systems.

As such, no significant impact to the existing water system is anticipated.

2. Sewer

Existing Conditions. The Central Maui Wastewater Reclamation Facility (CMWRF), located to the east of the project site, serves the Wailuku area.

Potential Impacts and Mitigation Measures. Restrooms, sinks, and other such water fixtures are not part of this project; therefore, no wastewater is generated. The proposed project is not expected to impact the public sewer system.

3. Drainage

Existing Conditions. The *PER* (Otomo, 2011, pp. 2-3) states that storm water on the site currently sheet flows in a west to east direction, with a 10-year, 1-hour storm runoff of 7.65 cubic feet per second (cfs). There are two drainage systems in the vicinity of the project site: the Vineyard Street Drainage System and the North Market Street Drainage Systems.

Potential Impacts and Mitigation Measures. During subsequent building permit application processing, the applicant may be required to comply with Maui County Code Chapter 20.08, Soil Erosion and Sediment Control. During construction, a Best

Management Practices (BMP) plan will be implemented which will include, but not be limited to:

- Minimize time of construction;
- Retain existing ground cover until latest date to complete construction;
- Early construction of drainage control features;
- Use temporary area sprinklers in non-active construction areas when ground cover is removed;
- Use temporary berms and cut-off ditches, where needed, for control of erosion;
- Graded areas shall be thoroughly watered after construction activity has ceased for the day and on weekends.

If necessary, a National Pollutant Discharge Elimination System (NPDES) will be obtained prior to construction.

After development of the site, the total storm flow is anticipated to be 7.37 cfs, a net decrease of 0.28 cfs. This is due to the increase in landscape planting areas and decrease in imperious surface areas. As such, there is no adverse impact to the existing drainage systems in the vicinity (Otomo, 2011, p. 6).

4. Roadways and Traffic

Existing Conditions. A *Traffic Impact Report for the Wailuku Municipal Parking Structure* (TIR) was prepared by Wilson Okamoto Corporation (WOC) (February 2012) which describes the traffic characteristics of the proposed project and likely impacts to the adjacent roadway network (**See**: Appendix "O", "Traffic Impact Report").

The automobile is the primary source of transportation on Maui. The roadway system in the Wailuku business district has varied right-of-way widths. Most roads are paved with asphaltic concrete and concrete curbing and sidewalks while others have limited curbs.

Within the study area are four roads that delineate the block containing the proposed parking structure site and existing commercial properties. To the south is Main Street, predominantly a two-lane, two way roadway with an east-west orientation providing access through Wailuku and connection to other districts. To the east is Market Street, a northbound one lane, one-way road beginning at Main Street, transitioning to a two-lane, two-way road with a north-south orientation north of Vineyard Street. To the north is Vineyard Street, a two-lane, two-way road with an east-west orientation and driveway access to the existing parking lot site. To the west is Church Street, a southbound one-lane, one-way road. Pili Street provides access to the subject parcel

from Market Street and Church Street. Only the intersection of Main and Market is signalized. In the vicinity of the proposed project, there are pedestrian sidewalks on both sides of each street, except for a portion of Church Street.

The *TIR* (WOC, 2012) was prepared using traffic counts collected in November 2010 (**See**: Appendix "O"). During this site investigation conducted for the *TIR*, it was determined that the morning (AM) peak hour occurs generally between the hours of 7:00 a.m. and 8:00 a.m., while the afternoon (PM) peak hour occurs between 3:45 p.m. and 4:45 p.m. The *TIR* analysis was based upon procedures in the "Highway Capacity Manual" (Transportation Research Board, 2000) and the "Highway Capacity Software" by the Federal Highways Administration and based on the concept of Level-of-Service (LOS). LOS is rated from "A" to "F", LOS "A" representing ideal or free-flowing traffic conditions and LOS "F" representing unacceptable or congested traffic conditions. LOS was evaluated at seven (7) intersections:

1. Market Street and Main Street;
2. Market Street and Pili Street;
3. Market Street and Vineyard Street;
4. Vineyard Street and Driveway;
5. Church Street and Vineyard Street;
6. Church Street and Pili Street;
7. Church Street and Main Street.

Other intersections within the study area were considered for analysis; however, impacts to these intersections were less than five percent (5%) with no effect on their respective LOS. Therefore, these intersections are not included in this analysis.

All movements at each intersection currently operate at LOS "C" or better except at the Market/Vineyard intersection for the following movements which operate at LOS "D":

Intersection	Direction	Movements	Peak Hour	Current LOS
Market/Vineyard	Southbound	All	AM	D
	Northbound	All	PM	D
	Eastbound	Left Turn	PM	D

Public Transportation. The Maui Bus is the only public transportation option on Maui. The nearest bus stops are located at the State Office Building (High Street and Wells Street), at the Malama I Ke Ola Health Clinic (Nani Street), and at Kahekili Terrace

(Market Street), all located within a quarter-mile of an entrance to the proposed parking structure.

Pedestrian Access. There is pedestrian access to and from the four major roadways that bound the block containing the existing Wailuku Municipal Parking lot. The subject parcel has approximately 185 feet of frontage on Vineyard Street. Pili Street has 4-foot wide sidewalks that provide access to both Church Street, at the west end, and Market Street, at the east end. Market Street can also be accessed via an 8-foot wide paved pedestrian walkway between First Hawaiian Bank and 33 Market Street at the southeast corner of the subject parcel. Main Street is accessed via a 4-foot wide sidewalk bordering the Main Street Promenade property at the southwest corner of the subject parcel. The adjoining streets have sidewalks as noted:

Street	Both Sides?	Widths	Condition
Market	Yes	6 – 14 ft.	Fair to Good
Main	Yes	6 – 10 ft.	Very Good
Church	Intermittent on east side	3 – 6 ft.	Poor to Good
Vineyard	Yes	4 – 8 ft.	Fair to Good

However, beyond this block, pedestrian access is inadequate to nonexistent in certain areas, especially along Vineyard Street.

Potential Impacts and Mitigation Measures. The *TIR* provides projections for traffic conditions in 2014, the target completion date of the proposed parking structure. The Institute of Transportation Engineers (ITE) does not identify a parking structure as a trip generator; therefore, the assumption is that the proposed parking structure is not anticipated to generate additional vehicular trips. As such, the LOS for all movements at all intersections remains relatively unchanged in the 2014 completion year. The lowest LOS are at the Market/Vineyard intersection, all northbound movements during the PM peak hour and all southbound movements during AM peak hour, operating at LOS "D" with or without the project. All other intersections and movements operate at LOS "C" or better.

The project is intended to promote redevelopment and revitalization by potentially fulfilling future developments' parking requirements. Since the types of future developments are unknown, for this model, the trip generation rate was "developed empirically by correlating the collected vehicles trip generation data from the existing

surface parking lot to the total number of parking stalls" (WOC, 2012, p. 17). Thus, the study attempts to forecast traffic volumes with the project at "full capacity" at some future unknown year. At "full capacity", the LOS for certain movements at certain intersections will be affected, with certain movements reaching unacceptable levels:

Intersection	Direction	Movements	Peak Hour	LOS without Project	LOS with Project
Market/Vineyard	Eastbound	Left Turn	PM	D	F
		Through		B	C
	Westbound	Through-Right Turn		B	C
	Northbound	All		D	E
	Southbound	Left Turn-Right Turn	AM	D	F
Vineyard Driveway	Northbound	Left Turn-Right Turn	AM	A	B

As forecasted for the undetermined horizon year, the Market/Vineyard intersection is the most affected. The eastbound left-turn during the PM peak hour and all allowable movements southbound during the AM peak hour would be at unacceptable levels (LOS "F").

The *TIR* (WOC, 2012) recommends the following improvements once the parking structure reaches full capacity:

1. *Modify the northbound approach of North Market Street at the intersection with Vineyard Street to provide an exclusive left-turn and a shared through and right-turn lane. The design and layout of these lanes should be determined during the design phase of the project.*

2. *Modify the southbound approach of North Market Street at the intersection with Vineyard Street to provide exclusive left-turn and right-turn lanes. The design and layout of these lanes should be determined during the design phase of the project.*

3. *Install a traffic signal system at the intersection of North Market Street and Vineyard Street. Although the signal is anticipated to be warranted once the parking structure reaches full capacity, a traffic signal warrant study should be prepared prior to*

installation to confirm future traffic conditions. The design and layout of this system should be determined during the design phase of the project. (pp. 25-26)

Recommendation Nos. 1 and 2 may require significant modifications to the roadways, sidewalks, tree planters, and lighting fixtures. In addition, some of the on-street parking stalls may need to be eliminated.

For new developments in the vicinity, traffic studies will be required that identify specific impacts and mitigation measures for each project. Since it is not known what these new developments may be, the level of impact on traffic and, in turn, the appropriate level of mitigation required cannot be determined at this time. However, the following future road improvements would improve the LOS at the Market/Vineyard intersection to acceptable levels of "C" or better:

Intersection	**Direction**	**Movements**	**Peak Hour**	**LOS without Imp.**	**LOS with Imp.**
Market/Vineyard	Eastbound	Left Turn	PM	F	C
		Through		C	B
	Westbound	Through-Right Turn		C	B
	Northbound	Left Turn		E	B
		Through-Right Turn			C
	Southbound	Left Turn-Right Turn	AM	F	B

As new developments are introduced to the area, traffic will increase over time as the proposed parking structure approaches "full capacity". A timetable for these new developments cannot be predicted; it may take 10 years or longer. Due to these uncertainties regarding future new development, a logical link between road improvements and the proposed parking structure cannot be determined at this time.

The *TIR* (WOC, 2012) makes three recommendations for implementation in conjunction with the proposed parking structure:

1. *Maintain sufficient sight distances for motorists to safely enter and exit all project driveways/roadways.*

2. *Provide sufficient turning radii at all project driveways/roadways to avoid or minimize vehicle encroachments to oncoming traffic lanes.*

3. *If access to the parking garage is controlled (i.e., automatic gate, etc.), provide sufficient storage for vehicles on-site to ensure that queues do not extend onto the adjacent public roadways.* (p. 25)

The *TIR* (WOC, 2012) concludes that:

> *… The new parking structure will replace an existing at-grade parking lot and as such, the proposed project is not expected to generate additional traffic or result in modifications to the existing travel patterns in the project vicinity. However, usage of the parking garage is expected to increase as future developments are completed in the vicinity. When the parking garage reaches full capacity due to these developments, additional improvements are expected to be implemented at the intersection of North Market Street with Vineyard Street … Each new development in the vicinity should be required to prepare a traffic impact study to verify future conditions and identify additional mitigative measures as necessary.* (p. 26)

Public Transportation. A stop for the Maui Bus was considered, however a suitable location could not be determined. Current routes do not traverse Church Street, Vineyard Street, or Market Street in the vicinity of the subject property due to the narrow road widths and limited turning radii. There are four (4) current bus stops in the vicinity which are a quarter (1/4) of a mile or less in walking distance to the proposed structure.

Pedestrian Access. During construction, foot traffic will be restricted through the site. However, care will be taken to allow safe passage for pedestrians along the sidewalks along the adjoining streets. Upon completion, the structure will have stairwells at each corner that access every level. One (1) elevator provides pedestrian access to each level for the mobility challenged. A second elevator is an "additive alternative" feature that is dependent on economic feasibility. The service alley surrounding the structure provides pedestrian access to existing walkways leading to existing pedestrian facilities along Church, Market, Main, and Vineyard streets. In addition to exits at each stairwell, there are three (3) pedestrian exits at ground level on the Market Street (east) side of the structure.

5. Electrical, Telephone, Cable & Data

Existing Conditions. Electrical service to the subject property is provided by Maui Electric Company, Ltd. (MECo). Connections to telephone, cable, and data services are available to the subject parcel.

Potential Impacts and Mitigation Measures. Provisions for nine electric/hybrid vehicle stalls for recharging are located on the second level. Initially, five (5) stations will be provided; additional stations will be added as required by Hawaii Revised Statutes (HRS). The Engineering Department of MECo will be consulted regarding the metering of the charging stations. Fluorescent, metal-halide, and LED lighting will be utilized where appropriate to maximize energy savings while providing safe levels of illumination. Electrical equipment will accommodate future installation of photo-voltaic (PV) panels for onsite renewable energy generation. The Renewable Energy Department of MECo will be consulted prior to PV installation.

Construction of the proposed structure will comply with Chapter 16.26.1300 "Energy Conservation", Maui County Code. Where practicable and economically feasible, structures will exceed the building efficiency standards for the State of Hawaii. All connections to existing distributions systems will be underground. During the building permit process, the applicant will comply with the requirements of the appropriate public utilities.

IV. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES, AND CONTROLS

A. STATE LAND USE LAW

Chapter 205, Hawaii Revised Statutes, relating to the Land Use Commission, establishes four major land use districts into which all lands in the State are placed. These districts are designated Urban, Rural, Agricultural, and Conservation. The subject property is within the Urban District.

B. COUNTY OF MAUI 2030 GENERAL PLAN

The 2030 update to the General Plan of the County of Maui is currently under review by the Maui County Council. The Countywide Policy Plan was adopted by the Maui County Council on March 19, 2010 and provides a long-term vision, principles, goals, policies, and objectives directed toward improving living conditions in the County. The following Themes, Objectives and Policies are applicable to the proposed project:

F. STRENGTHEN THE LOCAL ECONOMY

Goal: ***Maui County's economy will be diverse, sustainable, and supportive of community values.***

Objective:

1. ***Promote an economic climate that will encourage diversification of the County's economic base and a sustainable rate of economic growth.***

Policies:

a. *Support economic decisions that create long-term benefits.*

c. *Invest in infrastructure, facilities, and programs that foster economic diversification.*

d. *Support and promote locally produced products and locally owned operations and businesses that benefit local communities and meet local demand.*

j. *Support efforts to improve conditions that foster economic vitality in our historic small towns.*

l. *Support public and private entities that assist entrepreneurs in establishing locally operated businesses.*

Analysis. The proposed Wailuku Municipal Parking Structure will provide direct opportunities for employment in both the short-term (construction related) and indirect opportunities long term (providing stimulus for commercial growth). The proposed project will provide a needed facility within the Wailuku Town commercial core to support existing businesses and future growth. Implementation of the Wailuku Municipal Parking Structure is a key implementing action identified in the Draft Maui Island Plan, Wailuku-Kahului Community Plan and Wailuku Redevelopment Area Plan.

I. IMPROVE PHYSICAL INFRASTRUCTURE

Goal: ***Maui County's physical infrastructure will be maintained in optimum condition and will provide for and effectively serve the needs of the County through clean and sustainable technologies.***

Objective:

3. ***Significantly increase the use of renewable and green technologies to promote energy efficiency and energy self-sufficiency.***

Policies:

h. *Encourage the use of sustainable energy to power vehicles.*

Analysis. Recharging stalls for electric/hybrid vehicles will be installed. Initially, five (5) stations will be provided; additional stations will be added as required by Hawaii Revised Statutes (HRS). Electrical equipment is designed to accommodate future installation of photo-voltaic (PV) panels.

C. DRAFT MAUI ISLAND PLAN

The 2030 update to the General Plan of the County of Maui is currently under review by the Maui County Council. The Maui Island Plan will ultimately be used to determine the appropriateness of discretionary development proposals. The following Goals, Objectives and Policies of the December 2009 Draft Maui Island Plan are applicable to the proposed project:

ECONOMIC DEVELOPMENT

ECONOMIC DIVERSIFICATION

Goal:

4.1 ***A sustainable, diversified economy that provides full employment and a living wage.***

Objective:

4.1.2 ***Increase activities that support principles of sustainability.***

Policies:

4.1.2.c *Support the clustering of economic activities and improve linkages to transportation/telecommunications infrastructure that serve such economic activities.*

Analysis. The proposed Wailuku Municipal Parking Structure will be located within walking distance of government offices as well as commercial establishments within Wailuku Town. The project makes more efficient use of existing County owned property; and by doing so will support economic activities by providing sufficient parking for existing and future businesses.

SMALL BUSINESS DEVELOPMENT

Goal:

4.5 ***Small businesses will play a key role in Maui's economy.***

Objective:

4.5.1 ***Increase the number of and revenue generated by small businesses and decrease the percentage of small business failures.***

Policies:

4.5.1.b *Assist traditional "mom and pop" business establishments.*

4.5.1.c *Reduce barriers to small business development.*

Analysis. The lack of adequate parking for small businesses has been an obstacle to the establishment of new businesses within the core of the Wailuku Town commercial district. The proposed project will remove this obstacle and encourage the support of existing businesses.

INFRASTRUCTURE AND PUBLIC FACILITIES

PUBLIC FACILITIES

Goal:

6.7 ***Maui will have high quality public facilities that meet the needs of residents.***

Actions:

6.7.1- Action 1 *Implement key recommendations from the Wailuku Municipal Service Center Master Plan Report (February 2004) and the Wailuku Municipal Parking Lot Master Plan (2004), as amended, and as consistent with the MIP.*

Analysis. The *WMPL Master Plan Repor*t (CH&P, 2004) recommends developing "Option PC-1" on the property. The current proposal is a modified version of "Option PC-1" that better addresses site constraints while addressing the established community objectives for the project.

ENERGY

Goal:

6.10 ***Maui will meet its energy needs through local sources of clean, renewable energy and through conservation.***

Objective:

6.10.1 *Reduce fossil fuel consumption: using the 2005 consumption as a baseline, reduce by 15% in 2015; 20% by 2020; and 30% by 2030.*

Policies:

6.10.1.a	*Support energy efficient systems, processes, and methods in public and private operations, buildings and facilities.*

Analysis. Recharging stalls for electric/hybrid vehicles will be installed. Initially, five (5) stations will be provided; additional stations will be added as required by Hawaii Revised Statutes (HRS). Electrical equipment is designed to accommodate future installation of photo-voltaic (PV) panels.

LAND USE

URBAN AREAS

Goal:	
7.3	***Maui will have livable human scale communities, and efficient and sustainable land use patterns, and sufficient housing and services for Maui residents.***
Objective:	***Strengthen the island's sense of place.***
Policies:	
7.3.3.c	*Support the continued revitalization of Wailuku Town and Kahului's commercial core and harborfront without displacing traditional, cultural, recreational and customary uses.*
Actions:	
7.3.3 – Action 1	*Implement the Wailuku Redevelopment Plan, and other subsequent updates, and formulate plans for other appropriate areas.*

Analysis. The proposed Wailuku Municipal Parking Structure will make more efficient use of the existing site by significantly increasing the density of available public parking stalls. The more efficient use of the site will result in more available parking for area businesses and a "remnant" land area to attract new businesses and strengthen the economic vitality of the area. In addition, with additional centralized public parking being available, more efficient use of the District's existing zoned lots will produce a more vibrant and environmentally and economically sustainable settlement pattern.

D. WAILUKU-KAHULUI COMMUNITY PLAN

Nine community plan regions have been established in Maui County. Each region's growth and development is guided by a community plan, which contains objectives and policies in accordance with the Maui County General Plan. The purpose of the community plan is to outline a relatively detailed agenda for carrying out these objectives.

The subject property is located within the Wailuku-Kahului region. The Wailuku-Kahului Community Plan was amended by ordinance No. 3061 on June 5, 2002.

The following Wailuku-Kahului Community Plan goals, objectives, and policies are applicable to the proposed action:

ECONOMIC ACTIVITY

Goal

A stable and viable economy that provides opportunities for growth and diversification to meet long-term community and regional needs and in a manner that promotes agricultural activity and preserves agricultural lands and open space resources.

Objectives and Policies:

2. Support the revitalization of the Wailuku commercial core and adjacent areas by expanding the range of commercial services; improving circulation and parking; enhancing and maintaining the town's existing character through the establishment of a Wailuku Town design district; redevelopment of the Wailuku Municipal Parking Lot with emphasis on additional public parking; establishing urban design guidelines; and providing opportunities for new residential uses. Improve Wailuku's image and level of service as a commercial center for the region's population. A combination of redevelopment and rehabilitation actions is necessary to meet the needs of a growing center.

7. Provide for the establishment of centralized business districts within the region, in order to minimize the extensive migration of commercial projects into light industrial developments.

Implementing Actions:

1. *Place a high priority on the planning, design and construction of a multi-level parking facility at the Wailuku Municipal Parking Lot with potential opportunities*

for mixed use development, such as residential, commercial, park and other public uses.

Analysis: The proposed project provides for the "planning, design and construction of a multi-level parking facility at the Wailuku Municipal Parking Lot with potential opportunities for mixed-use development, such as residential, commercial, park and other public uses", in accordance with the above-referenced Implementing Action.

ENVIRONMENT

Goal

A clean and attractive physical and natural environment in which man-made developments or alterations to the natural environment relate to sound environmental and ecological practices, and important scenic and open space resources are maintained for public use and enjoyment.

Objectives and Policies

14. Promote the planting and maintenance of trees and other landscape planting to enhance the streetscapes and the built-environment.

Analysis: Proposed landscape plantings promotes natural cooling effects and enhances the surrounding built environment.

LAND USE

Goal

An attractive, well-planned community with a mixture of compatible land uses in appropriate areas to accommodate the future needs of residents and visitors in a manner that provides for the stable social and economic well-being of residents and the preservation and enhancement of the region's environmental resources and traditional towns and villages.

Objectives and Policies

10. All zoning applications and/or proposed land uses and developments shall conform with the planned use designations, as specified in the adopted Community Plan Land Use Map, and be consistent with the Community Plan policies.

13. Within the Wailuku Town core, formulate and implement flexible land use guidance policies that enhance the various activity centers and maintain the traditional character of the town.

c. Commercial and Residential: The following comprise the commercial core, commercial areas, and surrounding residential uses:

1) Commercial Core. This area is generally situated along Central, Wells, Main, High, and Vineyard Streets. It should emphasize commercial uses oriented to serve the business and residential community. Ground floor activities should emphasize commercial retail with expansion of the variety and scope of offerings to serve residents.

Analysis: The subject property is designated for business uses and located within the current urban growth boundaries. The proposed project is in conformance with the Wailuku-Kahului Community Plan, Wailuku Redevelopment Area Plan and Wailuku Redevelopment Area Zoning & Development Code and will serve existing businesses and encourage expansion of business ventures within the commercial core.

INFRASTRUCTURE

Goal

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

ENERGY

Objectives and Policies

6. Encourage energy efficient building design and site development practices.

7. Support energy conservation measures, including the use of solar heating and photovoltaic systems, in conjunction with urban uses.

Analysis: As noted previously, the open air design eliminates the need for artificial ventilation. Also, recharging stalls for electric/hybrid vehicles are provided. Initially, five (5) stations will be provided; additional stations will be added as required by Hawaii Revised Statutes (HRS). Electrical equipment is designed to accommodate future installation of photo-voltaic (PV) panels.

TRANSPORTATION

Objectives and Policies

3. Expand parking facilities serving the civic and commercial centers of Wailuku. Parking improvements should include expanding the existing public parking facilities off Market Street and around the civic center, and improving controls over existing civic

center parking to reserve it for short-term use. Explore the feasibility of a shuttle service for County employees to remote parking facilities.

Analysis: The proposed project will expand "the existing public parking facilities off Market Street" and will result in more parking being available for short-term use. As an interim construction phase mitigation measure, the County will explore the necessity of a shuttle service for County employees to remote parking facilities.

URBAN DESIGN

Goal

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

Objectives and Policies for the Wailuku-Kahului Region in General

15. Emphasize contrasting earth-tone color schemes for buildings and avoid bright or garish colors. Within Wailuku Town, require buildings that have bright or garish colors to comply with earth-tone color schemes.

Objectives and Policies for Wailuku Town

1. Maintain the existing character of historic Wailuku Town

3. Circulation and Parking

c. Expand public parking facilities at the Wailuku Municipal Parking lot and provide for safe and convenient bicycle parking in Wailuku town.

Analysis: The proposed project will complement the color scheme of the historic Iao Theater, including trim and accent colors. The Iao Theater railing accent was used as inspiration for the parking structure railings. Columns and cornices at the open stairwells are architectural details compatible with the character of Wailuku Town. The proposed project will improve traffic circulation and expand the capacity of the existing Wailuku Municipal Parking lot. Bicycle racks are provided within the proposed on-grade parking lot.

E. COUNTY ZONING

The existing Wailuku Municipal Parking Lot property is situated within the Wailuku Redevelopment Area's Commercial/Mixed-Use Zoning District (**See**: Figure No. 6). The proposed project is an allowable use within the Commercial/Mixed-Use District and complies with the WRA Zoning and Development Code's development standards (§30.03). An MRA Use Permit is not required.

F. WAILUKU REDEVELOPMENT AREA PLAN

The subject property lies within the Wailuku Redevelopment Area (WRA).

LAND USE

Objectives

B. Commercial Core

1. *Focus on infill development with an emphasis on adaptive reuse, development of vacant sites and redevelopment of dilapidated structures.*

Projects

LU-3 Redevelop the Municipal Parking Lot with potential opportunities for mixed-use development, such as a business hotel, commercial, residential, entertainment, public parking or other uses that will create an activity generator.

Analysis: The proposed project is the redevelopment of an existing parking lot into a more efficient and attractive structure. The proposed layout maximizes the formation of the "remnant parcel" for future mixed-use development. The proposed action implements the WRP's Project No. LU-3.

VEHICULAR AND PEDESTRIAN CIRCULATION

Objectives

A. Vehicular Circulation

1. *Establish a safe and efficient roadway network by discouraging through traffic, minimizing conflicts between parking and traffic movements, signalizing intersections and providing left-turn lanes where justified by traffic volumes and safety concerns.*

C. Parking

1 Increase and maintain the parking supply to meet future demand by developing new public parking and improvements at the Wailuku Municipal Parking Lot, and other sites, and retaining on-street parking where possible.

2. Improve access to public parking areas by improving directional signage to public parking lots, proving adequate ingress and egress for vehicles using off-street parking lots and providing access to public parking lots from major roadways.

3. Discourage all-day parking in public parking lots by developing fee systems.

Projects

VPC-3 Acquire an access easement off of Main Street into the Municipal Parking Lot.

VPC-6 Develop additional parking at the site of the existing municipal parking lot.

VPC-9 Develop a fee structure at the Wailuku Municipal Parking Lot to discourage long-term parking.

Analysis: The proposed action complies with Objectives C.1, C.2 and C.3. The proposed parking structure will accommodate future demand for parking at the site of the Municipal Parking Lot. Directional signage will be provided to users of the structure at appropriate locations along Main, Market, Vineyard and Church Streets. A fee system will be studied as a means to generate revenues for the long-term operation of the project and to manage short- and long-term parking within the structure. The option of an access to and from the structure from Main Street is preserved, but is not proposed due to potential impact to the intersection of Main and Market Street and physical constraints.

URBAN DESIGN AND BEAUTIFICATION

Objectives

A. Urban Design

1. *Build upon historical and cultural assets by renovating buildings with architectural and historical value and requiring new buildings to complement the area's historical character and architectural scale.*

B. Beautification

1. *Beautify streetscapes and other public spaces with period sensitive landscaping, paving, lighting, street furniture and signage. Explore the feasibility of underground utility lines.*

2. *Landscape off-street parking areas to improve their appearance, provide shade and screen adjacent uses as well as the parking area itself.*

Analysis: The proposed structure will complement the area's historical character by drawing from certain architectural elements of historic buildings, such as the Iao Theater. The streetscape and public areas will have period elements similar to the recent Market Street renovation. Landscape plantings surrounding the structure and throughout the on grade parking areas will provide shade as well as relief from the visual mass of the structure.

MARKET DEVELOPMENT

B. Stimulate business creation and investment in Wailuku Town by facilitating development proposals that include uses important to revitalization.

Analysis: The proposed project is an important element in the revitalization of Wailuku Town. By providing safe, attractive, and ample parking, business creation will be stimulated and investment will be encouraged.

G. WAILUKU REDEVELOPMENT AREA DESIGN GUIDELINES

IV. DESIGN GUIDELINES

B. General Design Recommendations

√ *Landscape all parking lots that have street frontage.*

√ *Improve sidewalks to adequate widths; build new sidewalks where necessary, especially in areas where sidewalks are not continuous.*

√ *Build a parking structure at the municipal parking lot site that compliments, rather than overwhelms, Wailuku's historic architecture. Consider incorporating storefronts into the garage on the street level on Vineyard.*

Analysis. The street frontage along Vineyard Street and Pili Street will have new landscape plantings. New sidewalks will be provided along Pili Street and sidewalks along the Market street boundary will be replaced.

The proposed parking structure will complement Wailuku's architecture by fitting within the "building envelope" provided by buildings on the adjoining properties. The structure will not intrude into the "remnant parcel" area along Vineyard, allowing future storefronts to be developed there.

C. Commercial-Mixed Use District Design Guidelines – Commercial Core, Happy Valley & Lower Vineyard Street Neighborhoods

1. Architectural Design Guidelines

Height, Mass, and Scale

√ *Building height should conform to the limits defined in the Wailuku Redevelopment Area Zoning and Development Code.*

√ *New construction should be similar in mass and scale to historic structures. When a new building is sited adjacent to architecturally or historically significant buildings, the new building façade should be no more than one story higher than the adjacent historic buildings.*

√ *The scale of a neighborhood takes precedence over the scale of an individual structure. Abrupt changes in scale are inappropriate. No structure or complex should significantly change the overall scale of the neighborhood.*

√ *Structures with more than two stories should be mitigated by means of stepping the 3rd and/or 4th stories back from the line of view from the street. A third story may be hidden behind a false front.*

√ *The contextual scale of large, new buildings can be reduced by using vertical divisions and stepped roof lines.*

Analysis. The proposed structure height is forty-five (45) feet which conforms to the Wailuku Redevelopment Area Zoning and Development Code. The proposed structure will be adjacent to the two largest buildings on the block, the Main Street Promenade and the Wailuku Executive Center, and will be nestled within the building envelope behind these buildings, which keeps it in scale with the neighborhood. Because of the distance from the major streets around the block

(Market, Main, Vineyard and Church), the impact of the height of the structure is lessened. Columns and shear walls provide vertical divisions to provide contextual scale.

Façades

√ *Relief in the form of geometric patterns or curvilinear shapes is encouraged on stucco façades in order to create interest and emulate traditional stucco design elements.*

√ *New buildings with a façade over 50 feet wide should use vertical divisions in the façades to create the appearance of separate storefronts.*

Analysis. Geometric patterns are provided by the railing and lattice details, cornices, grills, and medallions borrowed from other art-deco period structures, creating visual interest. Decorative fiberglass plaques or medallions at each floor level on the columns match those found at the columns surrounding the stairwells. The shear walls have been redesigned with alternating textured panels to break up the scale and mass. Vertical divisions are provided by concrete columns.

Canopies

√ *Canopies or balconies are strongly encouraged along the street frontage for all new developments, redevelopments, and renovation projects.*

Analysis. A trellis is provided at the first level around the entire structure. This architectural detail simulates a flat canopy.

Ornamental/Architectural Details

√ *Architectural details should be simple.*

√ *Design motifs should reflect meaningful symbols or forms from the surrounding environments.*

√ *Trim or patterned relief should be used as a detail, especially on stucco and concrete walls, to help break the monotony of a large expanse.*

√ *New construction should not be cluttered with excessive ornamentation.*

Analysis. The proposed structure has simple architectural details borrowed from early 1900s art-deco buildings. Reveals and alternating textured panels on the stucco surface of the shear walls provide relief from its mass.

Walls and Wall Finish

√ *Wall finish should be compatible with the historic character of the existing buildings I the Wailuku Redevelopment Area.*

√ *For concrete walls, treatment and textures should match those on existing buildings in the Wailuku Redevelopment Area.*

Analysis. Concrete walls will have a stucco finish matching similar existing buildings in the Wailuku Redevelopment Area.

Color

√ *Appropriate colors should be used for various types of construction:*

- *Stucco construction: beige, light earth tones, pale pastels are typical.*
- *Modern structures: earth tones, beige, white, tan.*

√ *A building's color scheme should be compatible with those of adjacent buildings.*

√ *Side and rear walls should be painted in the same colors as the building's main façade.*

Analysis. The color scheme pays homage to the nearby historic Iao Theater.

Building Lighting

√ *Minimize the variety of lighting fixtures.*

√ *Shield exterior light sources.*

Analysis. Within the structure, only two styles of lighting are proposed. The interior will be lighted by sealed ceiling fixtures and the stairwells will have period sconce fixtures. Exterior lights are downward shielded as required by Maui County Code. The light post standards are carried over from the early 1900s theme used on Market Street.

2. Site Design Guidelines

Parking

√ *Parking areas should be screened from the street with landscaping, walls and /or fences.*

√ *Rooftop parking should be screened from public view by architectural features such as false fronts.*

Analysis. Parking area are screened from the adjoining streets with appropriate landscape plantings providing shade while maintaining security.

Landscape Planting

√ *Landscaping should be used to encourage pedestrian circulation by providing visual variety, color, and shade.*

√ *Parking lots should be landscaped with canopy shade trees and screened by hedges, walls, or fences from public view and adjacent buildings.*

Analysis. A Landscape Planting Plan (**See**: Figure No. 9), prepared by Chris Hart & Partners, Inc., provides a variety of plant species for shade, screening, color, and softening of the structure mass.

Pedestrian Paths

- √ *Pedestrian access should be provided by pathways that connect the municipal parking lot and adjacent streets. These paths may include open-air walkways, covered walkways, or courtyards.*
- √ *Landscaping is encouraged for pathways.*
- √ *Pedestrian pathways should be provided and existing pathways should be preserved.*
- √ *Pedestrian pathways should be well lit, attractive, and safe.*

Analysis. Pedestrian walkways connect to all adjacent streets. Landscaping is provided where the access widths allow. Wherever possible, pedestrian pathways will be enhanced to provide safe access.

V. HRS CHAPTER 343 SIGNIFICANCE CRITERIA

A finding of no significant impact (FONSI) is anticipated and therefore an environmental impact statement will not be required for the proposed action. This determination has been made in accordance with the following significance criteria specified in Section 11-200-12 of the Department of Health rules relating to Environmental Impact Statements:

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

As documented in this report, no historic properties were identified during site inspection, however the site has been the location of various businesses and residences. As such, an Archaeological Monitoring Plan will be implemented during excavation activities. No significant natural resources are identified on the property.

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

The areas surrounding the subject property is in commercial and residential use. The subject property has been used as a parking lot since the 1960s; therefore, the proposed project does not introduce a new use to the area. The project will not curtail the range of beneficial uses of the environment in the project vicinity.

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

The project is being developed in compliance with the state's long term environmental goals. As documented in this report, adequate mitigation measures will be implemented to minimize the potential for negative impacts to the environment.

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

In both the short and long term, the project will result in increased employment and business opportunities. The project will have a positive effect on the economic welfare of the community by providing parking opportunities for existing and future commercial establishments. The project will stimulate redevelopment and revitalization of the commercial core of Wailuku town. As documented in this report, there will be no significant negative long term impacts to the socio-economic environment.

E. *Substantially affects public health.*

There are no special or unique aspects of the project which will have an impact on public health.

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

The proposed project will not lead to a substantial impact on population levels since there is no residential component. As documented in this report, the project will not result in a significant negative impact on public facilities.

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

Mitigation measures will be implemented during construction to minimize negative short term impacts such as noise, soil erosion and sedimentation. The existing site is an asphalt paved parking lot. The proposed project will not cause long term impacts to environmental quality.

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

The project does not involve a commitment for larger actions on behalf of the applicant or any public agency. In terms of cumulative impacts, the project site is situated within an area that historically has had mixed uses, such as residential, commercial and public uses. Infrastructure and utilities are adequate to service the proposed project. Therefore, the project will not result in cumulative negative impacts on the environment.

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

There are no known rare, threatened, or endangered species or habitat identified at the project site.

J. *Detrimentally affects air or water quality or ambient noise levels.*

As documented, there will be short term impacts on air and water quality and ambient noise levels during construction; however, mitigation measures will be employed to minimize these impacts. Adverse long-term impacts are not anticipated.

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

The project site is not located within any flood plain and is not in the coastal area. The subject property is in Zone X, an area outside the 0.2% annual chance floodplain (*Panel No. 150003-0391E,* FEMA 2009). Compliance with County grading requirements will be met.

L. *Substantially affects scenic vistas and view planes identified in county or state plans or studies.*

As discussed in Section III.A.8, the proposed structure is nestled within the building envelope of adjacent buildings. Although there will be unavoidable impacts on certain existing view planes, public views along the major *mauka/makai* view corridors towards Iao Valley and the Pacific Ocean will be protected.

M. *Requires substantial energy consumption.*

As previously noted, the open air design eliminates the need for artificial ventilation and reduces the lighting requirements. Construction of the proposed structure will comply with Chapter 16.26.1300, "Energy Conservation", Maui County Code. Where practical and economically feasible, the proposed structure will meet or exceed the building efficiency standard for the State of Hawaii.

VI. FINDINGS AND CONCLUSIONS

This Final Environmental Assessment, in support of the Wailuku Municipal Parking Structure on a 2.192-acre parcel at Wailuku, Maui, Hawaii, parcel (2) 3-4-013:075, analyzes the environmental and socio-economic impacts associated with the construction of a five-level parking structure.

The proposed development is not anticipated to result in significant environmental impacts to surrounding properties, natural resources, and/or archaeological and historic resources on the site or in the immediate area. Public infrastructure and services including roadways, sewer and water systems, medical facilities, police and fire protection, parks, and schools are, or will be, adequate to serve the project and are not anticipated to be significantly impacted by the project. By providing additional parking in the area, the project may encourage more traffic, but in itself, will not generate additional traffic. Commercial development will be stimulated by removing a development barrier: lack of parking. Future individual projects may need to mitigate generated traffic. Temporary loss of parking during construction will be mitigated by the Interim Parking Plan. Although the proposed project will impact public view corridors, it will also create new opportunities for public views both *mauka* and *makai* from the upper level of the parking structure. It is not anticipated to produce significant adverse impact upon the visual character of the site and its immediate environs since the project will be "tucked" behind existing commercial structures and future developments on the "remnant parcel".

The subject property is situated within the State's Urban District and is County zoned Commercial/Mixed Use (Wailuku Redevelopment Area) and Community Planned Commercial Mixed Use. The proposed action is consistent with the objectives and policies contained within the Wailuku-Kahului Community Plan, as well as State Land Use Law and County Zoning. The proposed project implements a Vehicular and Pedestrian Circulation action of the *Wailuku Redevelopment Area Plan* (MRA, 2000) by providing additional parking within the existing municipal parking lot

In light of the foregoing analysis and conclusion, the proposed Wailuku Municipal Parking Structure will not have significant impacts to the environment and is consistent with the requirements of HRS Chapter 343. Therefore, a Finding of No Significant Impact (FONSI) is warranted.

VII. REFERENCES

County of Maui, Department of Planning. 2010. *The Countywide Policy Plan, County of Maui 2030 General Plan.* Wailuku, Hawaii.

County of Maui, Department of Planning. 2010. *Draft Maui Island Plan,* Wailuku, Hawaii.

County of Maui, Department of Planning. 2002. *Wailuku-Kahului Community Plan.* Wailuku, Hawaii.

County of Maui, Department of Planning. 2006. *Wailuku Redevelopment Area Guidelines.* Wailuku, Hawaii.

County of Maui, Maui Redevelopment Agency. 2002. *Wailuku Redevelopment Area Zoning and Development Code.* Wailuku, Hawaii.

County of Maui, Maui Redevelopment Agency. 2000. *Wailuku Redevelopment Plan.* Wailuku, Hawaii.

County of Maui, Office of Economic Development. 2009. *Maui County Data Book.* Wailuku, Hawaii.

Federal Emergency Management Agency. Revised September 25, 2009. *Flood Insurance Rate Map.* Community Panel Map Number 150003 0391E.

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

FIGURES

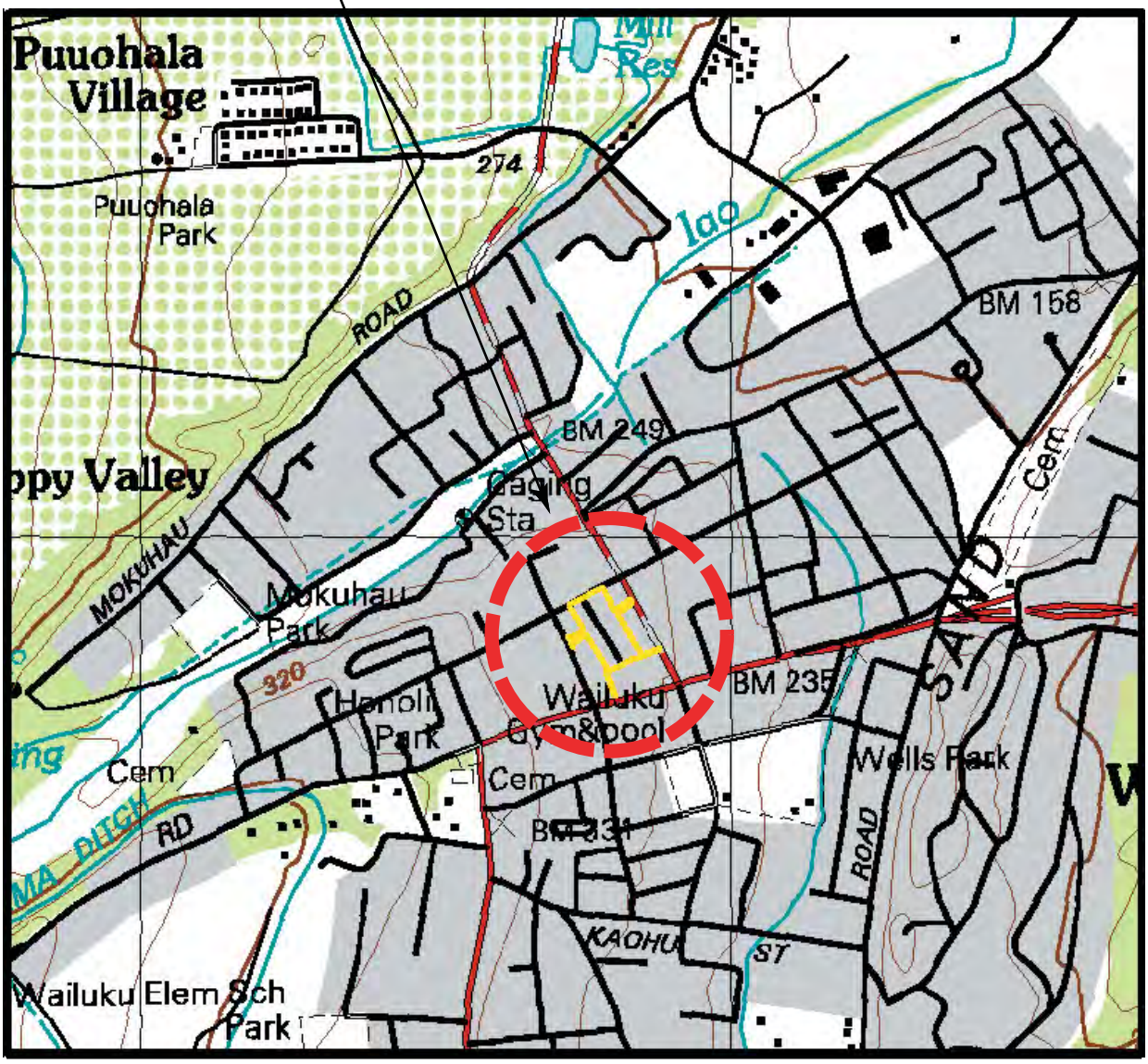


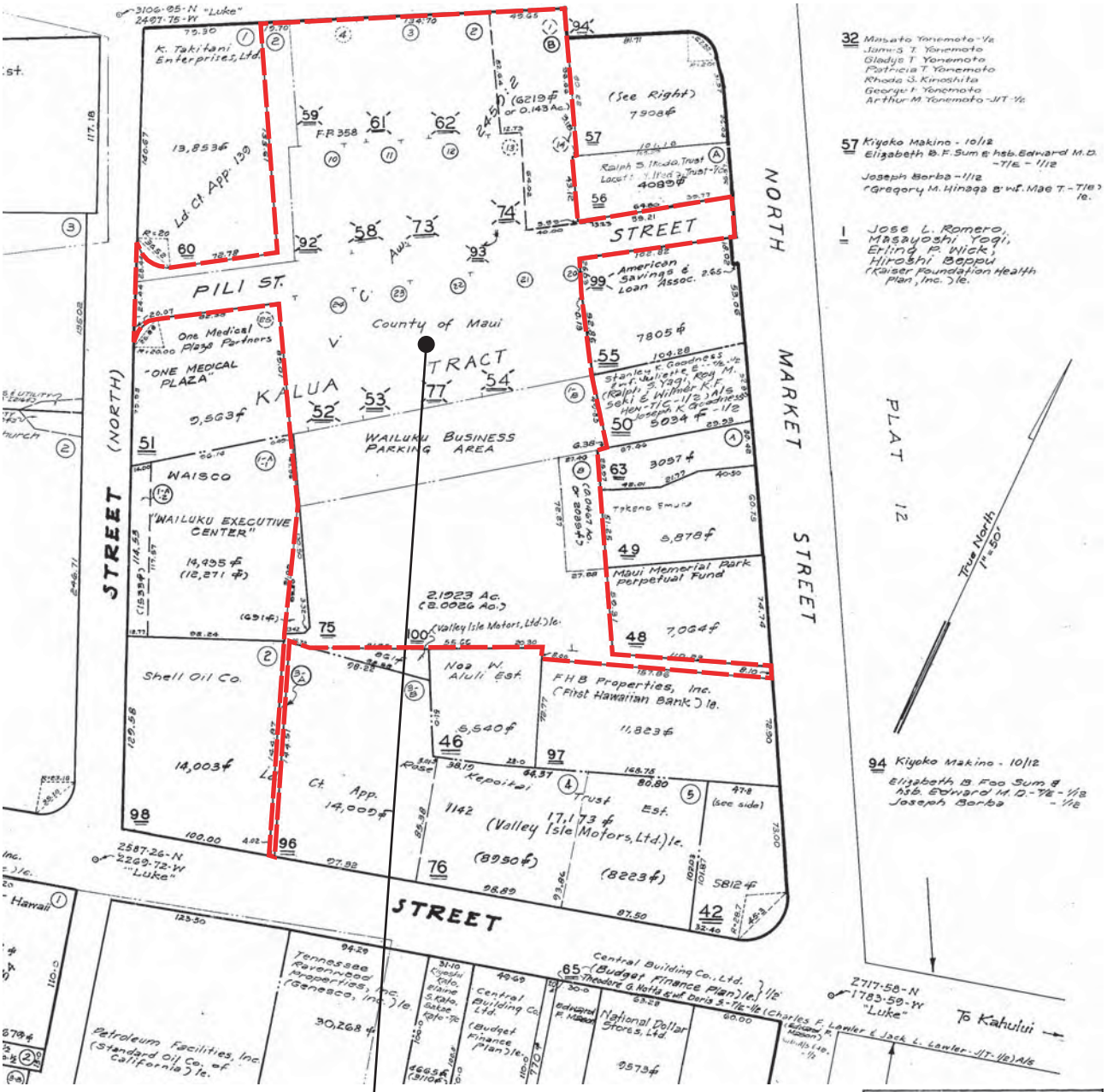
FIGURE 1

Not to Scale	AUGUST 2011

REGIONAL LOCATION

WAILUKU MUNICIPAL PARKING STRUCTURE

CHRIS HART & PARTNERS, INC.



TAXATION MAPS BRANCH
OF HAWAII
TAX MAP

SECOND DISTRICT		
ZONE	SEC.	PLAT
3	4	13
CONTAINING		PARCELS

FIGURE 2

Parcel 13 Not to Scale	AUGUST 2011

TAX MAP

WAILUKU MUNICIPAL PARKING STRUCTURE

CHRIS HART & PARTNERS, INC.



FIGURE 3

AUGUST 2011

AERIAL MAP

WAILUKU MUNICIPAL PARKING STRUCTURE

CHRIS HART & PARTNERS, INC.

Source: Google Earth, March 2011



Photo 1: Existing 210-stall Wailuku Parking Lot viewed from across Vineyard Street looking south.



Photo 2: Existing Wailuku Parking Lot from southwest corner of property looking north.



Photo 3: Pili Street looking west towards Church Street. One Medical Plaza on left and vacant lot on right.



PHOTO KEY



Photo 4: Pili Street looking east towards Market Street. Public Defender and PACT office on left and American Savings Bank on the right.

FIGURE 4.1

Photos taken between 2/18/2011 & 5/25/2011

AUGUST 2011

PHOTOGRAPHS

WAILUKU MUNICIPAL PARKING STRUCTURE

CHRIS HART & PARTNERS, INC.



Photo 5: Rear of buildings at 45 Market St.(left) and 33 Market St. facing the Wailuku Municipal Parking Lot site.



Photo 6: Calvary Chapel (left) and Main Street Promenade facing existing parking lot.



Photo 7: Buildings across Vineyard St. from Church St. intersection at left.



Photo 11: Rear of 59 Market St. (vacant) and 51 Market St. properties facing existing parking lot.

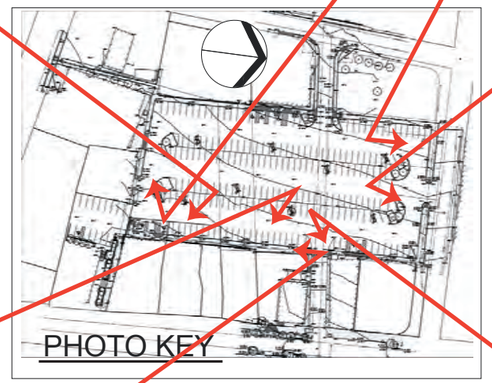




Photo 8: Building directly across Vineyard St. entrance to existing parking lot.



Photo 10: Rear of American Savings Bank property at Pili St. and existing parking lot.



Photo 9: Building at 81 Market St. housing PACT and Public Defenders offices .

FIGURE 4.2

Photos taken between 2/18/2011 & 5/25/2011

AUGUST 2011

PHOTOGRAPHS
WAILUKU MUNICIPAL PARKING STRUCTURE

CHRIS HART & PARTNERS, INC.



Photo 12: View of Wailuku Executive Center on Church St. from existing parking lot.



Photo 13: View of One Medical Plaza on Church St. from existing parking lot.



Photo 14: Pili St. entrance into existing parking lot from Church St.



Photo 19: Rear of Main Street Promenade facing existing parking lot.

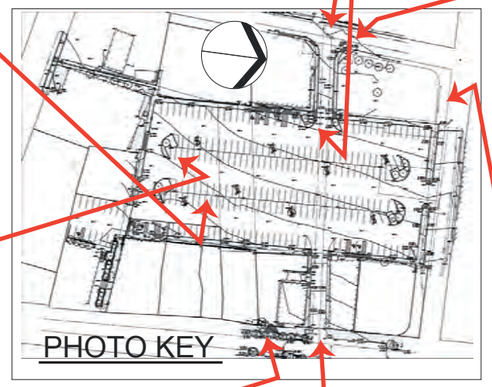




Photo 15: Looking southeast on Church St. towards Pili St. (left), One Medical Plaza (center) and Wailuku Executive Center (right). Iao Theater is visible in the distance on the left.



Photo 16: View of empty lot on the corner of Vineyard St. and Church St.



Photo 18: View from Market St. through 59 Market St. toward parking structure site. Wailuku Executive Center and One Medical Plaza are visible in the distance.



Photo 17: Pili St. entrance to parking lot from Market St. looking towards west. American Savings Bank on left and Public Defenders office on right.

FIGURE 4.3

Photos taken between 2/18/2011 & 5/25/2011

AUGUST 2011

PHOTOGRAPHS
WAILUKU MUNICIPAL PARKING STRUCTURE

CHRIS HART & PARTNERS, INC.



Photo 20: Pedestrian access to parking lot site from Main St. Wailuku Executive Center at left and Main Street Promenade at right



Photo 21: View from Church St. between Wailuku Executive Center at left and Main Street Promenade at right



Photo 22: Church St. looking south at intersection with Vineyard St. approaching Pili St.



Photo 23: Vineyard St. looking east at intersection with Church St approaching north entrance to parking lot.



Photo 28: View from Main St. of Main Street Promenade (left) and Calvary Chapel.

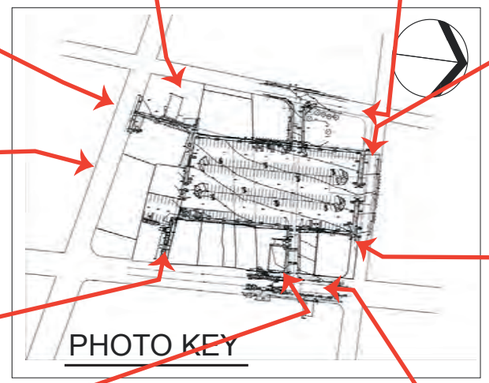




Photo 24: View of parking lot from Vineyard St. with Main Street Promenade (left) and Wailuku Executive Center in the distance.



Photo 27: Pedestrian access to parking lot site from Market St. with First Hawaiian Bank on left and 33 Market Street on right.



Photo 26: View from *mauka* side of Market St. at Pili St./Market St. intersection.



Photo 25: Market St. looking south with Iao Theater on left and American Savings Bank and Public Defenders office on right.

FIGURE 4.4

Photos taken between 2/18/2011 & 5/25/2011

AUGUST 2011

PHOTOGRAPHS

WAILUKU MUNICIPAL PARKING STRUCTURE

CHRIS HART & PARTNERS, INC.

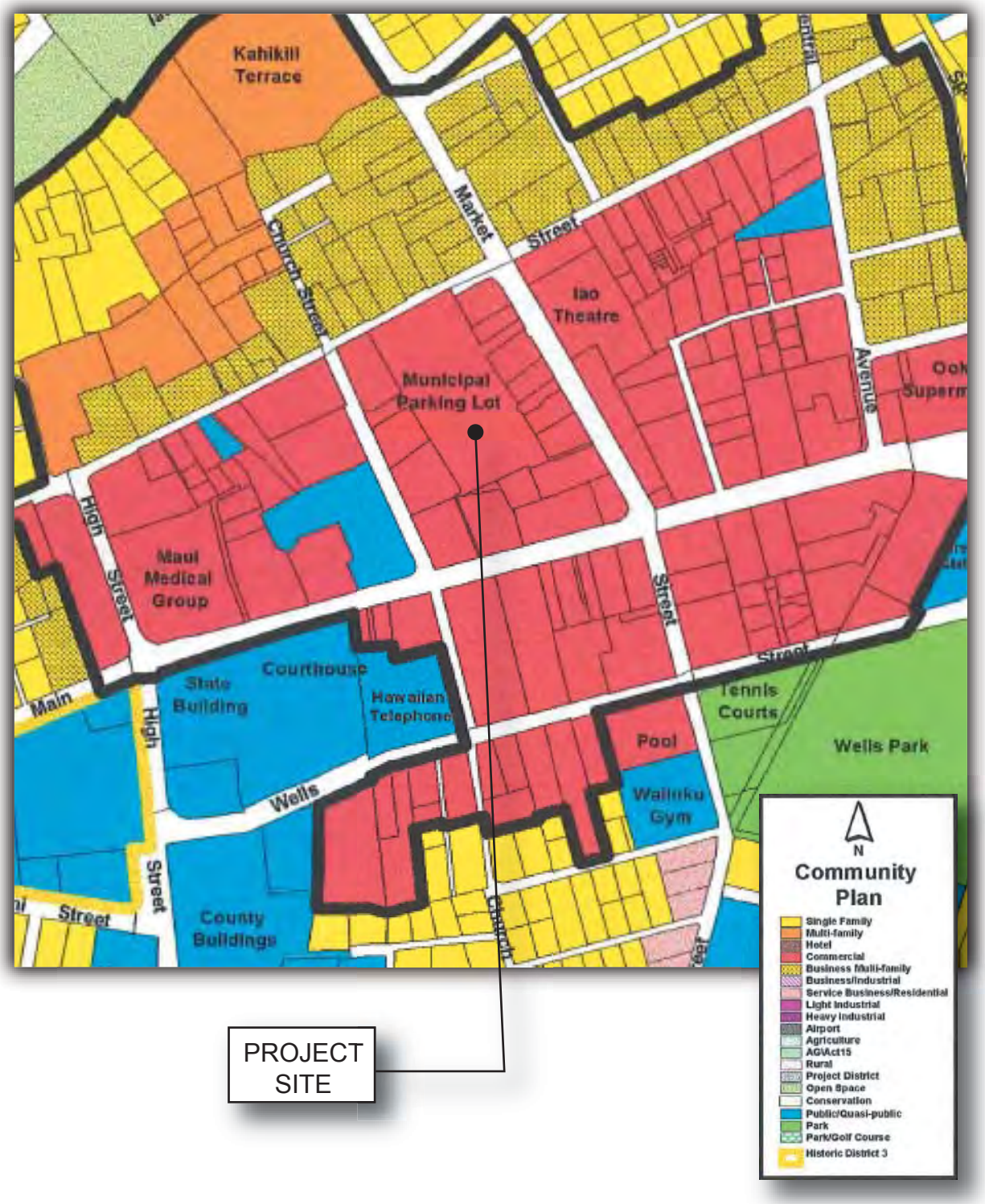


FIGURE 5

Not to Scale	AUGUST 2011
KAHULUI-WAILUKU COMMUNITY PLAN **WAILUKU MUNICIPAL PARKING STRUCTURE**	

CHRIS HART & PARTNERS, INC.

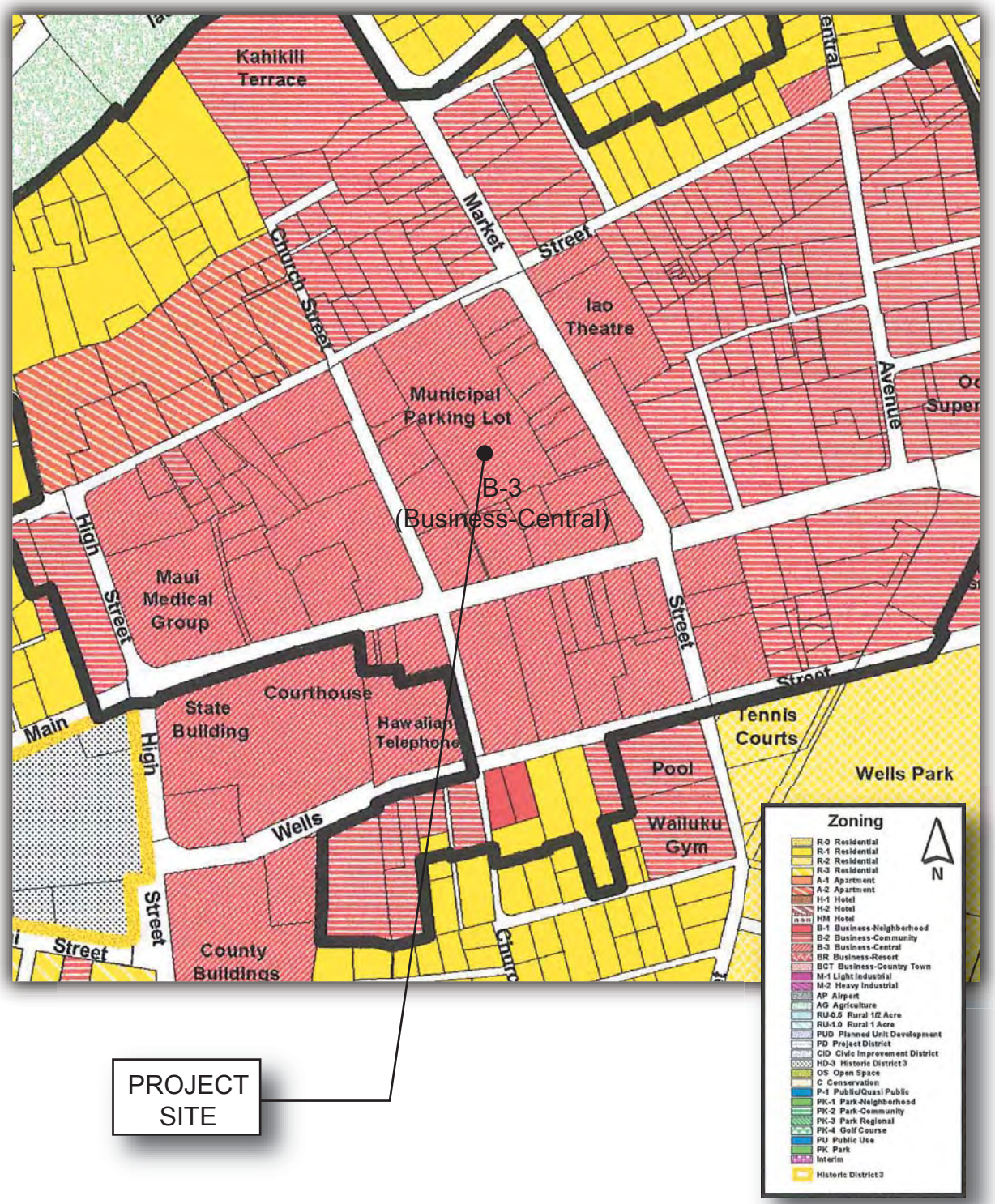


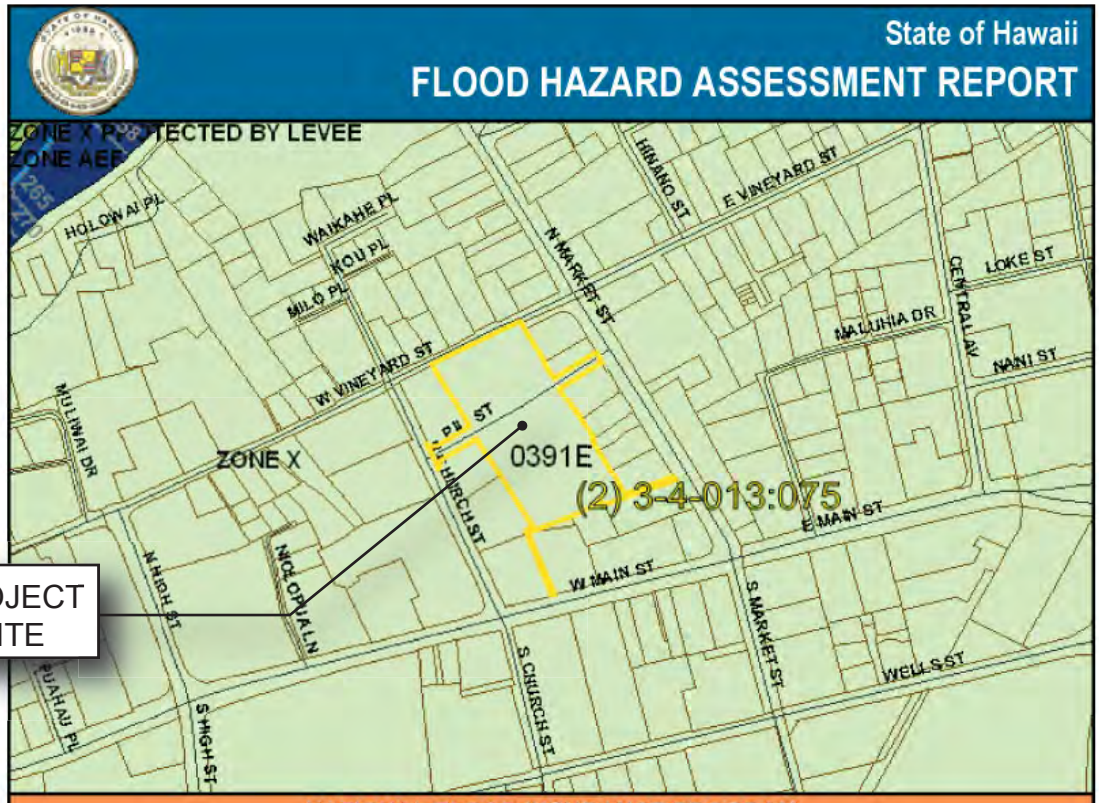
FIGURE 6

Not to Scale	AUGUST 2011

COUNTY ZONING MAP

WAILUKU MUNICIPAL PARKING STRUCTURE

CHRIS HART & PARTNERS, INC.



PROJECT SITE

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD ZONE DEFINITIONS

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water-surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

- **Zone A:** No BFE determined.
- **Zone AE:** BFE determined.
- **Zone AH:** Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
- **Zone AO:** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
- **Zone V:** Coastal flood zone with velocity hazard (wave action); no BFE determined.
- **Zone VE:** Coastal flood zone with velocity hazard (wave action); BFE determined.
- **Zone AEF:** Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

NON-SPECIAL FLOOD HAZARD AREA – An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

- **Zone XS (X shaded):** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- **Zone X:** Areas determined to be outside the 0.2% annual chance floodplain.

OTHER FLOOD AREAS

- **Zone D:** Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

PROPERTY INFORMATION

COUNTY:	MAUI
TMK NO:	(2) 3-4-013-075
PARCEL ADDRESS:	2061 VINEYARD ST
FIRM INDEX DATE:	SEPTEMBER 25, 2009
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL(S):	1500030391E
PANEL EFFECTIVE DATE:	SEPTEMBER 25, 2009

PARCEL DATA FROM:	AUGUST 2010
IMAGERY DATA FROM:	MAY 2005

IMPORTANT PHONE NUMBERS

County NFIP Coordinator	
County of Maui	
Francis Cerizo, CFM	(808) 270-7771
State NFIP Coordinator	
Carol Tyau-Beam, P.E., CFM	(808) 587-0267

Disclaimer: The Department of Land and Natural Resources assumes no responsibility arising from the use of the information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the Department of Land and Natural Resources from any liability, which may arise from its use.

Preliminary DFIRM Disclaimer: If this map has been identified as "PRELIMINARY", please note that it is being provided for commenting purposes only and is not to be use for official/legal decisions or regulatory compliance.

FIGURE 7

Not to Scale FEMA Flood Insurance Map	AUGUST 2011

FLOOD MAP

WAILUKU MUNICIPAL PARKING STRUCTURE

CHRIS HART & PARTNERS, INC.



1 SITE/ROOF PLAN. (TMK: (2) 3-4-13:075)

W S N E

0' 10' 20' 35' 50' 75' 100'

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Honolulu, HI 96813-3717
Tel 808 539 2108 Fax 808 521 3996
email: allisonllc@hawaii.rr.com

Media5 Architecture
345 Queen Street, Suite 901
Honolulu, Hawaii 96813
Ph.: 808.524.2040
Fax.: 888.476.0368 (Toll Free)
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CHRIS HART & PARTNERS, INC.

FIGURE 8.1
OVERALL SITE PLAN
Scale: 1 IN. = 50 FT.
APRIL 2012

WATERPROOF MEMBRANE WITH DRAINAGE MAT & PROTECTION BOARD (DENOTED BY BOLD DASH-DOT LINE)

2 A5.02

A4.02 1

1 A5.22

1 2 3 4 5 6 7 8 9

14' - 9" 20' - 8" 20' - 8" 20' - 8" 20' - 8" 20' - 8" 20' - 8" 20' - 8" 20' - 8"

A B B.7 C C.3 D E

14' - 9" 33' - 3" 14' - 0" 124' - 0" 14' - 0" 33' - 3" 14' - 9"

(4.50) UNDER STAIR STAIR #3 EL 290.15

EL 291.17 UP (4.50)

(4.67)

(4.83) CANT

(4.83)

S-9 SL S-9

1 ELECTRICAL ROOM (4.75) 10' - 0"

RETAINING WALL

2 STORAGE ROOM (4.75) 7' - 5"

20' - 8" (4.82)

(4.50) SL

S-4P COMPACT

1 A5.02

PIPE BOLLARD, 1 EACH

S-4W

(5.495)

WATERPROOF MEMBRANE WITH DRAINAGE MAT & PROTECTION BOARD (DENOTED BY BOLD DASH-DOT LINE)

WATERPROOF MEMBRANE WITH PROTECTION BOARD (DENOTED BY BOLD CENTERLINE)

(4.50)

RETAINING WALL

(6.16) (5.74)

(4.94)

FEC-S

FD (6.16)

S-4P

DOWNSPOUT TO STORMDRAIN

(5.27) (4.37)

SWALE SEE SECTION 2/A5.02

CORNER GUARDS SEE MOUNTING SCHED. ON SHEET A0.01

2 A5.01

COMPACT

(4.50)

EL 286.63

1 A5.11 SL SL PIPE BOLLARD, 5 EACH

RAMP UP

SEE P-1.5 PARKING PLAN SEE SHEET A1.02

S-8W

1 ELEVATOR #1

7G

STAIR #1 SL

(4.50) UNDER STAIR UP (4.50)

(4.67) (4.83) (3.94) (3.04)

4' - 4"

RAILING RAILING

EL 286.23

10 A5.21 CROSSWALK, SEE SITEPLAN

3 A6.06 UP CROSSWALK, SEE SITEPLAN

NOTE:
1) DATUM ELEVATION OF 291.61=FF 0.00
2) FLOOR SLOPES ARE 1/4" PER FOOT UNLESS OTHERWISE NOTED
3) MIN SLOPE IN PARKING AT ANY LOCATION SHOULD BE 1-1/2% OR 3/16" PER FOOT

1 P-1 PARKING PLAN

SCALE 1/8" = 1'-0"

W S N E

0' 2' 4' 6' 8' 12' 16' 24' 32'

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Honolulu HI 96813-3717
Tel 808 539 2168 Fax 808 521 3586
email: allisonllc@hawaii.rr.com

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345 Queen Street, Suite 901
Honolulu, Hawaii 96813
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WAILUKU MUNICIPAL PARKING STRUCTURE
LEVEL P-1 PLAN
Scale: Half as Shown

CHRIS HART & PARTNERS, INC.

FIGURE 8.2

APRIL 2012

1 P-1.5 PARKING PLAN
SCALE: 1/8" = 1'-0"

WAILUKU MUNICIPAL PARKING STRUCTURE LEVEL P-1.5 PLAN

Scale: Half as Shown

FIGURE 8.3

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1 P-2 PARKING PLAN
SCALE: 1/8" = 1'-0"

0' 2' 4' 6' 8' 12' 16' 24' 32'

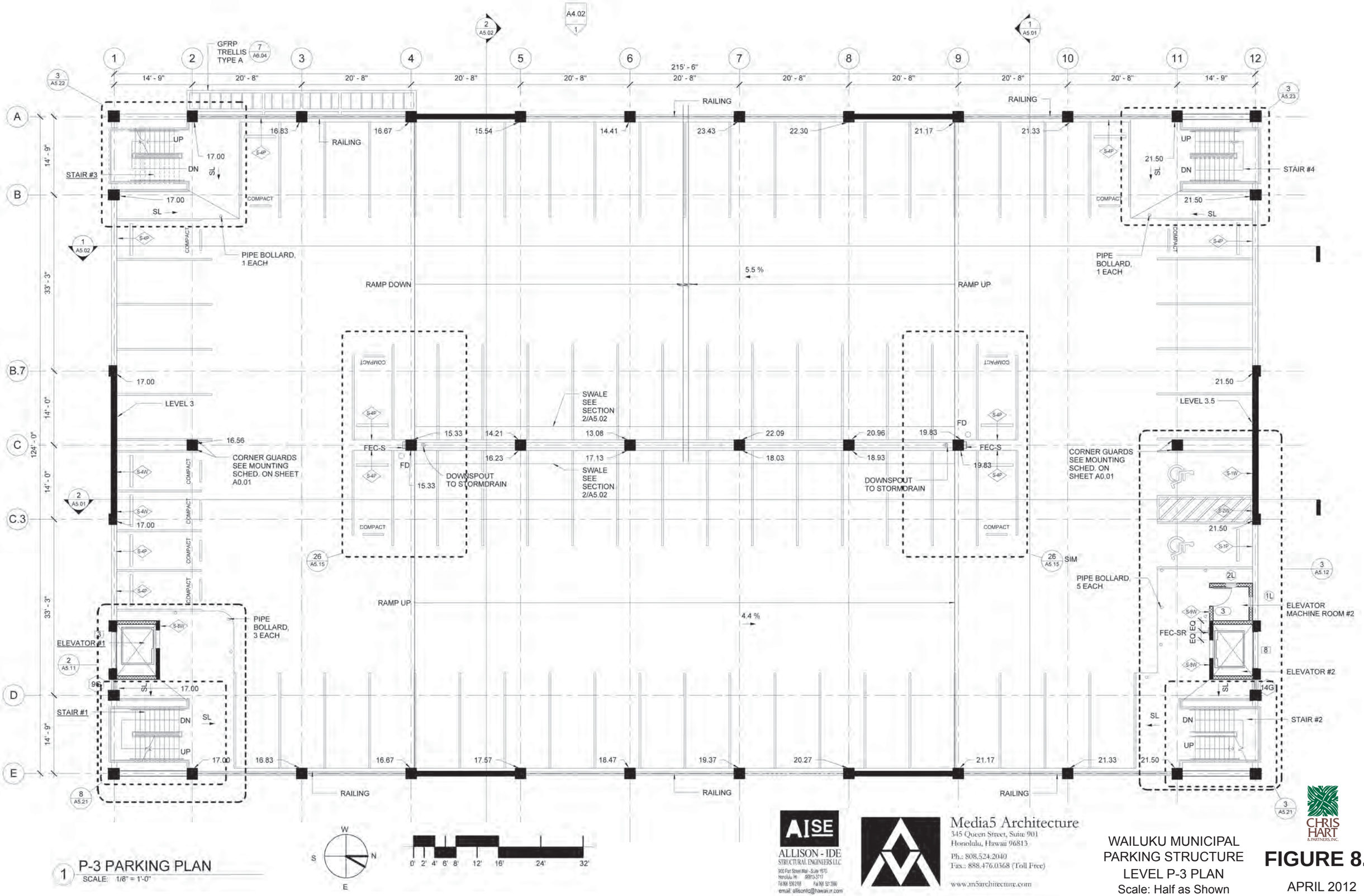
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WAILUKU MUNICIPAL
PARKING STRUCTURE
LEVEL P-2 PLAN
Scale: Half as Shown

FIGURE 8.4

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1 P-3 PARKING PLAN
SCALE: 1/8" = 1'-0"

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WAILUKU MUNICIPAL
PARKING STRUCTURE
LEVEL P-3 PLAN
Scale: Half as Shown

FIGURE 8.5

APRIL 2012

NOTE:
1) DATUM ELEVATION OF 291.61=FF 0.00
2) FLOOR SLOPES ARE 1/4" PER FOOT UNLESS OTHERWISE NOTED
3) MIN SLOPE IN PARKING AT ANY LOCATION SHOULD BE 1-1/2% OR 3/16" PER FOOT

DENOTES WATERPROOFING COATING (UPPER DECK ONLY)

1 P-4 PARKING PLAN
SCALE: 1/8" = 1'-0"

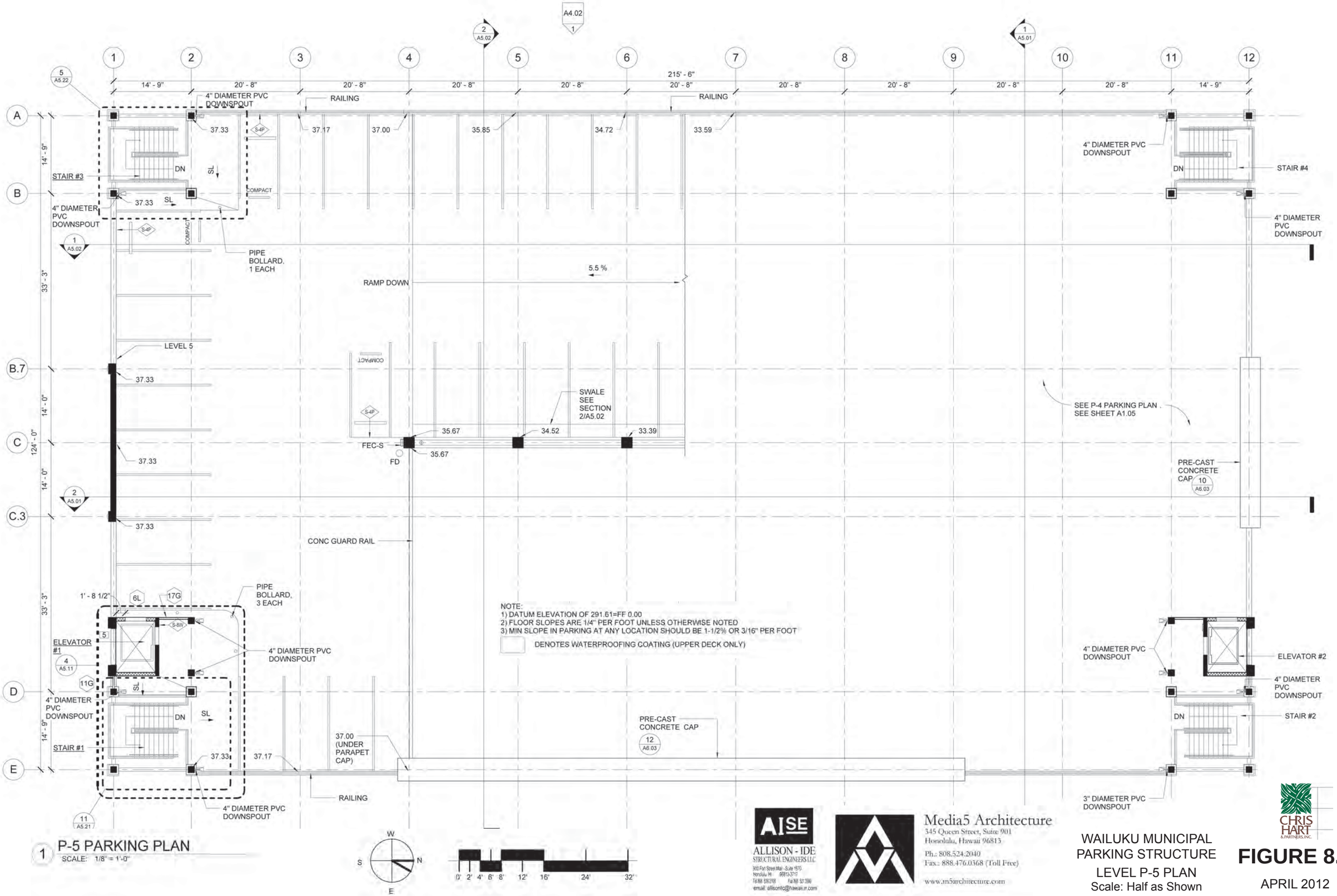
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WAILUKU MUNICIPAL
PARKING STRUCTURE
LEVEL P-4 PLAN
Scale: Half as Shown

FIGURE 8.6

APRIL 2012



1 P-5 PARKING PLAN
SCALE: 1/8" = 1'-0"

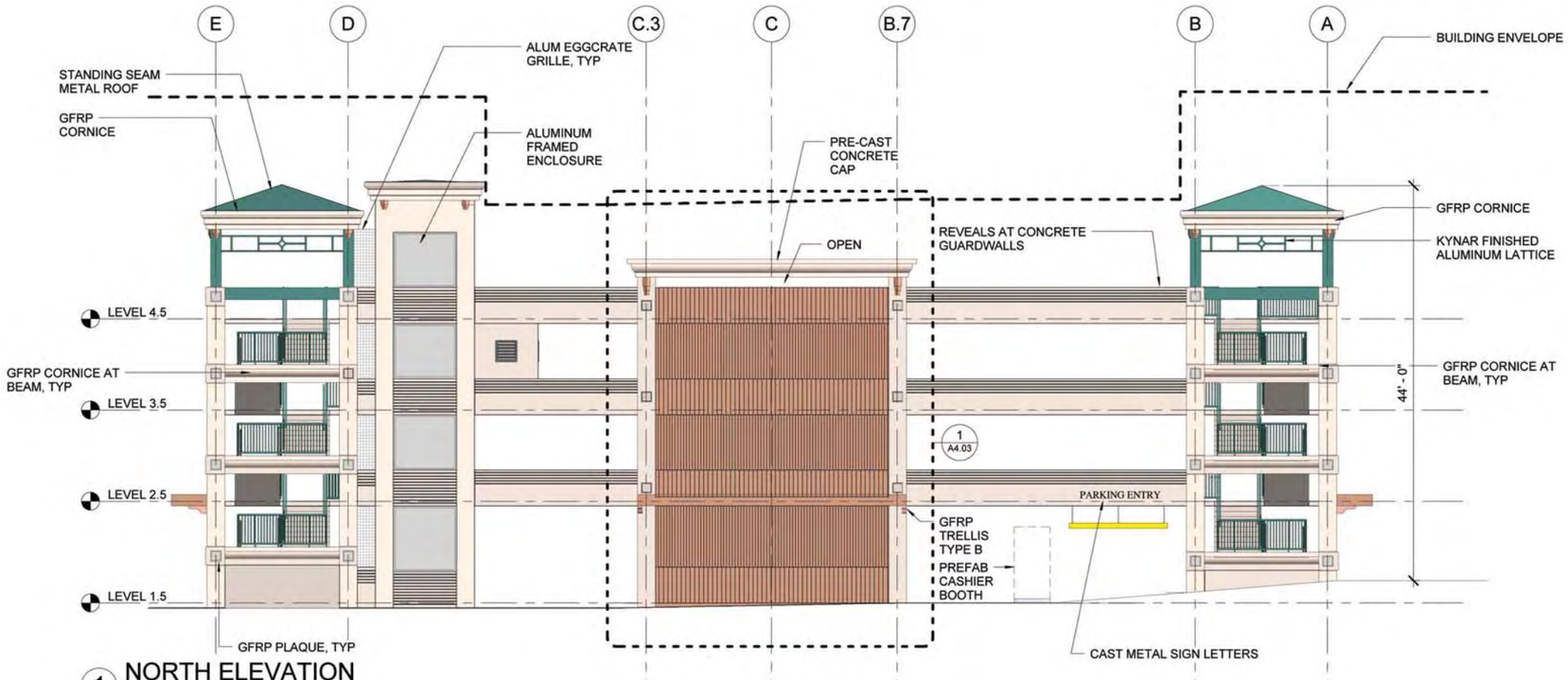
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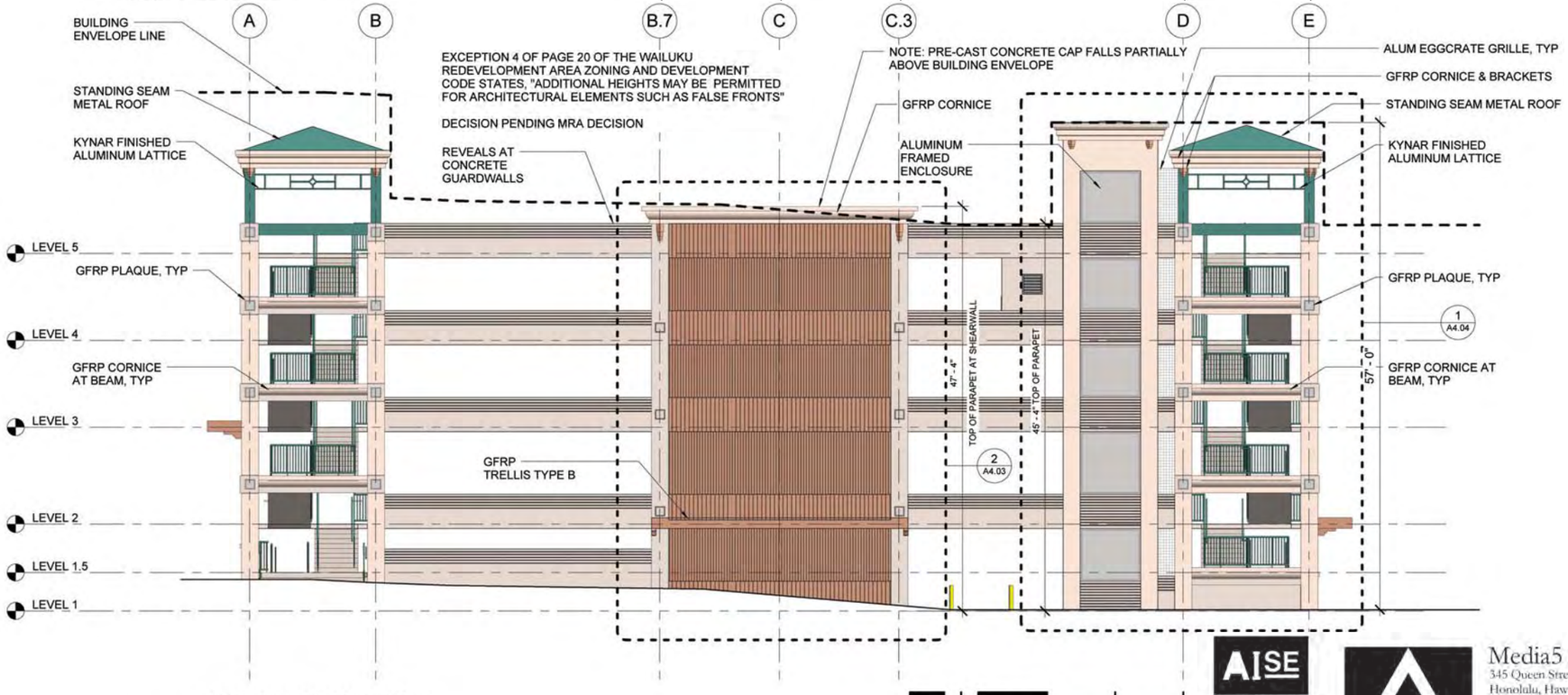
WAILUKU MUNICIPAL PARKING STRUCTURE
LEVEL P-5 PLAN
Scale: Half as Shown

FIGURE 8.7

APRIL 2012



1 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



2 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

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Tel 808 530 2168 Fax 808 521 3586
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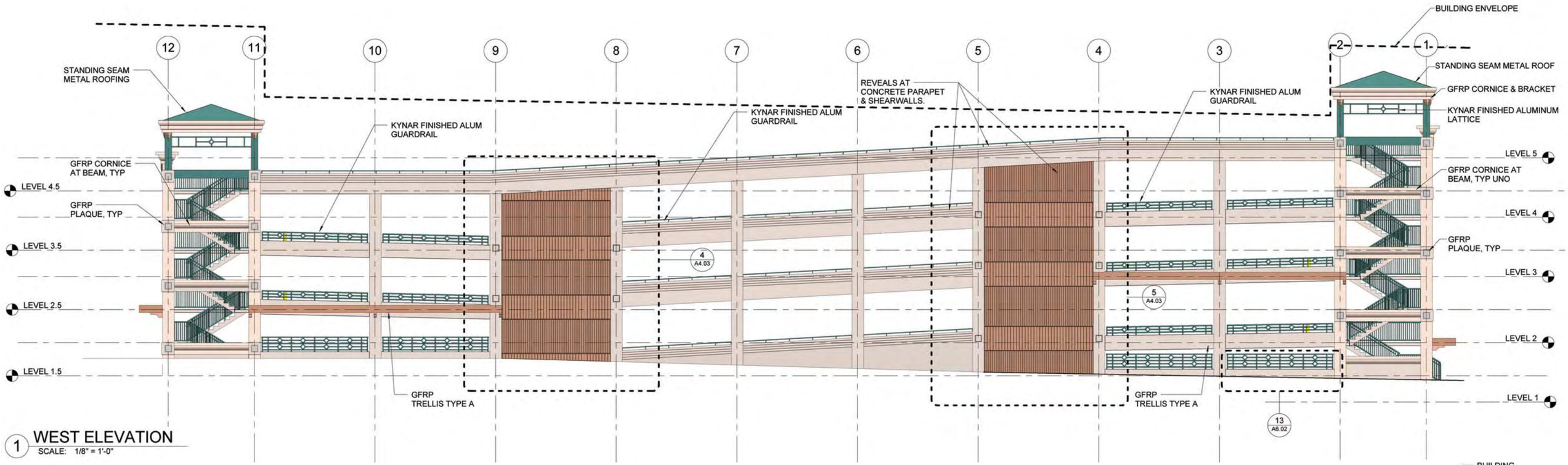
WAILUKU MUNICIPAL PARKING STRUCTURE

ELEVATIONS
Scale: Half as Shown

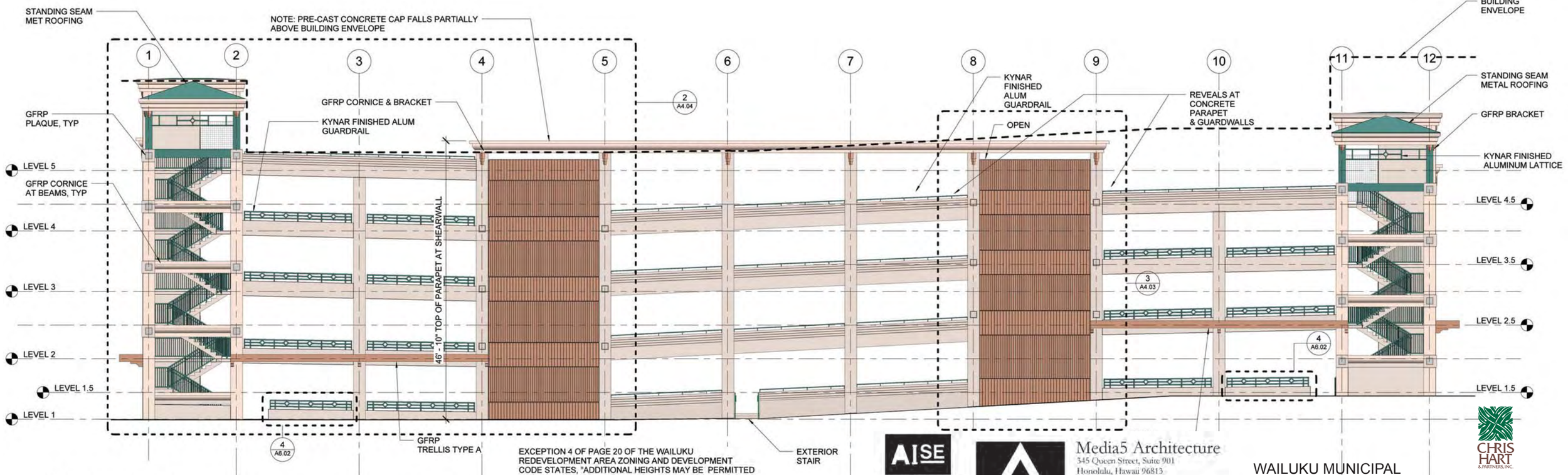
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FIGURE 8.8

APRIL 2012



1 WEST ELEVATION
SCALE: 1/8" = 1'-0"



2 EAST ELEVATION
SCALE: 1/8" = 1'-0"

EXCEPTION 4 OF PAGE 20 OF THE WAILUKU REDEVELOPMENT AREA ZONING AND DEVELOPMENT CODE STATES, "ADDITIONAL HEIGHTS MAY BE PERMITTED FOR ARCHITECTURAL ELEMENTS SUCH AS FALSE FRONTS"

DECISION PENDING MRA DECISION

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ALLISON - IDE
STRUCTURAL ENGINEERS LLC
900 Fort Street Mall - Suite 1570
Honolulu, HI 96813-3717
Tel 808 539 2168 Fax 808 521 3586
email: allisonllc@hawaii.rr.com

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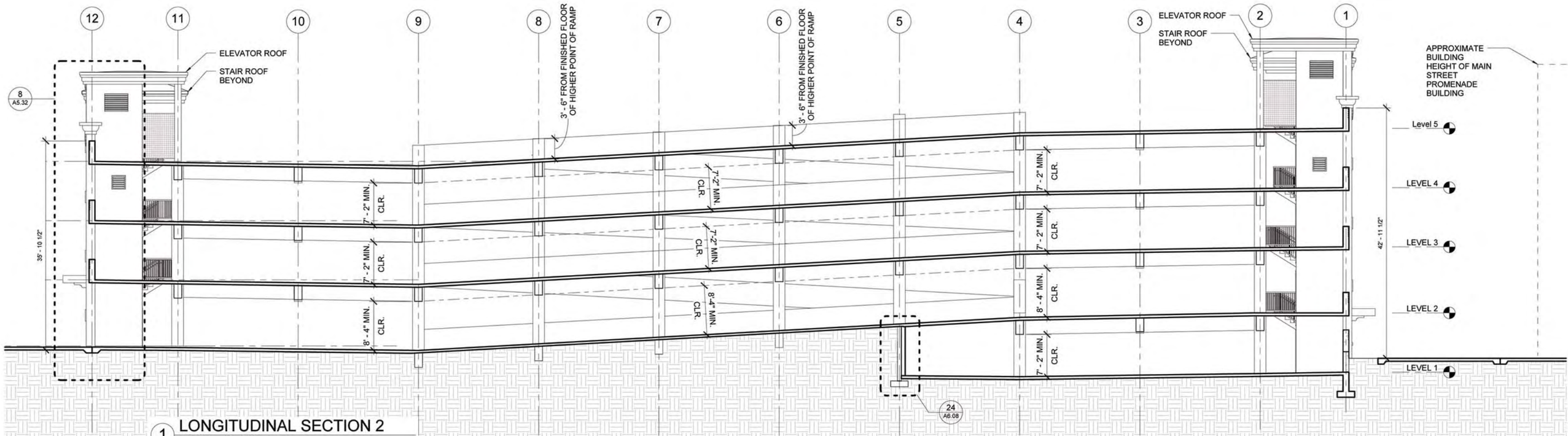
WAILUKU MUNICIPAL PARKING STRUCTURE

ELEVATIONS
Scale: Half as Shown

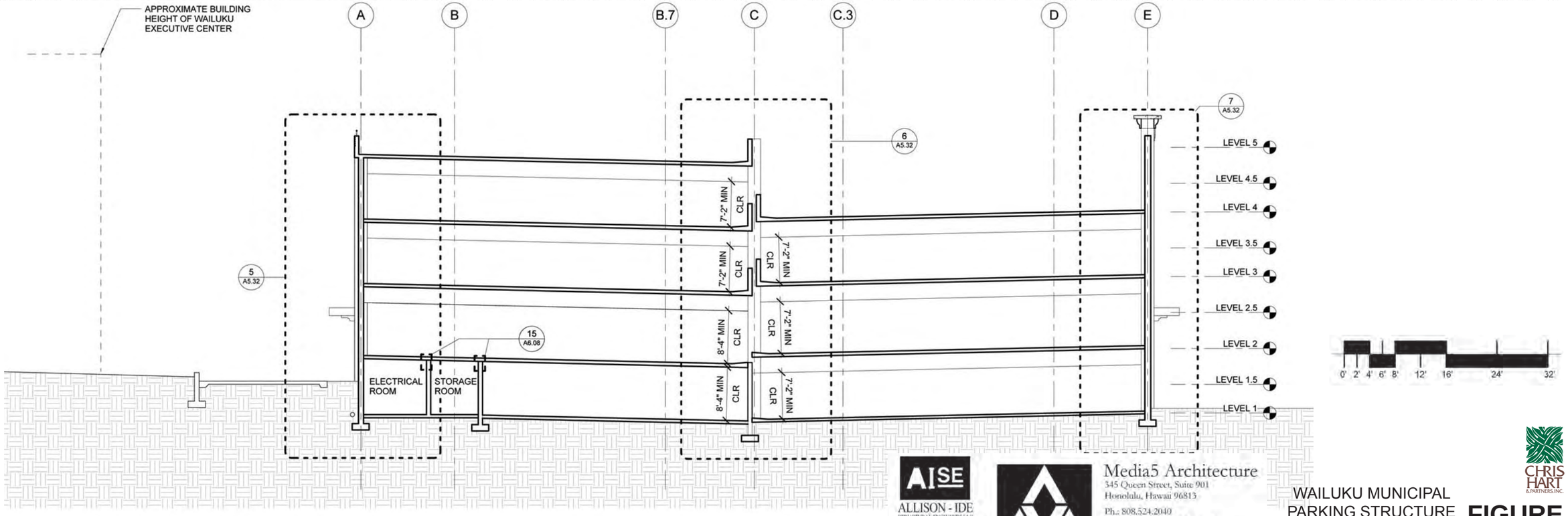
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FIGURE 8.9

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1 LONGITUDINAL SECTION 2
SCALE: 1/8" = 1'-0"



2 TRANSVERSE SECTION 2
SCALE: 1/8" = 1'-0"

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900 Fort Street Mall - Suite 1570
Honolulu HI 96813-3717
Ph 808 539 2168 Fax 808 521 3586
email: allisonfc@hawaii.rr.com

Media5 Architecture
345 Queen Street, Suite 901
Honolulu, Hawaii 96813
Ph.: 808.524.2040
Fax.: 888.476.0368 (Toll Free)
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CHRIS HART & PARTNERS, INC.

WAILUKU MUNICIPAL PARKING STRUCTURE
SECTIONS
Scale: Half as Shown

FIGURE 8.10

APRIL 2012



IMAGE OF STANDING SEAM ROOF

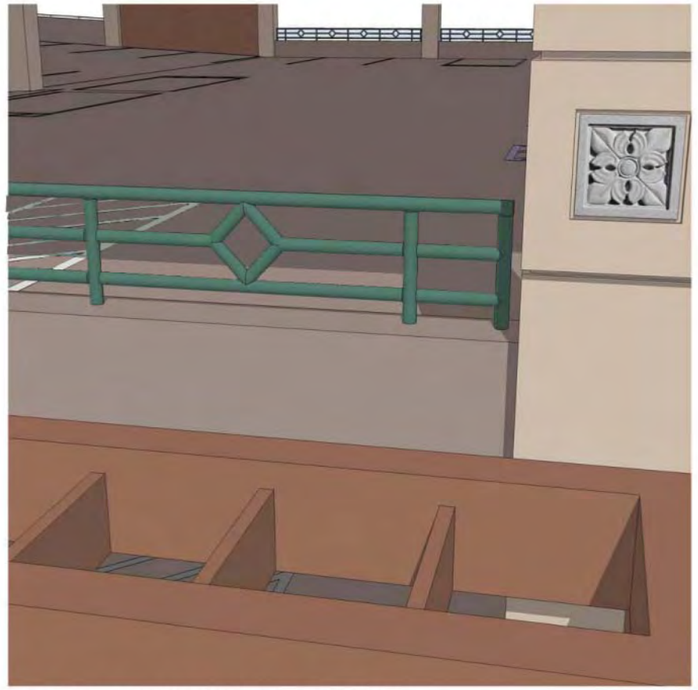


IMAGE OF RAILING AND TRELLIS

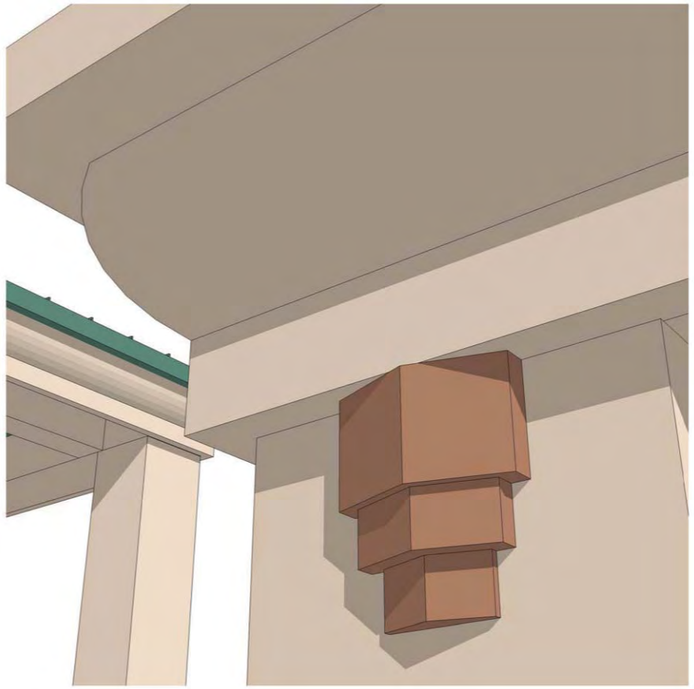


IMAGE OF CORNICE

CORNICE, COLUMN, WALL COLOR
PT-1 BENJAMIN MOORE
COLOR PREVIEW
2163-60 LATTE

GUARDWALL COLOR
PT-2 BENJAMIN MOORE
COLOR PREVIEW
2107-50 SANDLOT GRAY

ROOF COLOR
MR-1 SHURLOCK STANDING SEAM PROFILE
KELLY GREEN

RAILING, GRILLE COLOR
PT-3 BENJAMIN MOORE
COLOR PREVIEW
HC-136 WATERBURY GREEN

BRACKET, SHEAR WALL, TRELLIS COLOR
PT-4 BENJAMIN
MOORE
COLOR PREVIEW
AC-15 COLORADO
CLAY



PRE-CAST CONCRETE MEDALLION
PRE-CAST CONCRETE MEDALLION
PINEAPPLE GROVE: LEAF & BALL MEDALLION
CONCRETE GREY FINISH

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STRUCTURAL ENGINEERS LLC
900 Fort Street Mall - Suite 1570
Honolulu, HI 96813-3717
Tel 808 539 2168 Fax 808 521 3986
email: allisonlc@hawaii.rr.com

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345 Queen Street, Suite 901
Honolulu, Hawaii 96813
Ph.: 808.524.2040
Fax.: 888.476.0368 (Toll Free)
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WAILUKU MUNICIPAL
PARKING STRUCTURE
ARCHITECTURAL DETAILS
Not to Scale

CHRIS HART & PARTNERS, INC.

FIGURE 8.11

APRIL 2012

CHURCH STREET

MAIN STREET

PILI STREET

VINEYARD STREET

MARKET STREET

NEW CONCRETE WALK

REMOVEABLE BOLLARDS, TYP.

PLAZA CONCRETE WALKWAY.

20' FIRE LANE

EXISTING S.W. CURB & GUTTER TO REMAIN, TYP.

SHRUB HEDGE - U'ULEI ROSE
GROUNDCOVER - KUPUKUPU FERN

SCORED CONCRETE SIDEWALK CROSSINGS, TYP.

ASPHALT

CONCRETE WALK

REBUILD RETAINING WALLS

SAND SET PAVERS w/ TREES IN GRATES, TO MATCH MARKET STREET, TYP.

NEW FENCE ALONG PL. TO CONNECT TO EXISTING VINYL FENCE.

BIKE RACKS, TYPICAL

PEDESTRIAN LIGHT STANDARDS

CONCRETE WALK

SAND SET PAVERS w/ TREES IN GRATES, TO MATCH MARKET STREET, TYP.

ASPHALT

6' BENCH & TRASH RECEPTACLE, TO MATCH MARKET STREET

12" x12" HH TYP.

NEW SIDEWALK

PLANT LEGEND

Symbol	Common Name	(Size / Notes)
TREES AND PALM		
TREES:		
	Pink Tecoma	(min. 2" cal., 8' planted ht.)
PALM TREES:		
	Royal Palm	(F.S. 10' matched ht.)
SHRUBS AND GROUNDCOVER		
	U'ulei Hawaiian Rose	
	Kupukupu fern with crushed cinder thru	

ALLISON - IDE
STRUCTURAL ENGINEERS LLC
900 Fort Street Mall - Suite 1570
Honolulu HI 96813-3712
Tel/Fax 536-2168 Tel/Fax 521-2886
email: allisonlic@hawaii.rr.com

Media5 Architecture
345 Queen Street, Suite 901
Honolulu, Hawaii 96813
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W S N E

0 ft. 10' 20' 40' 60'

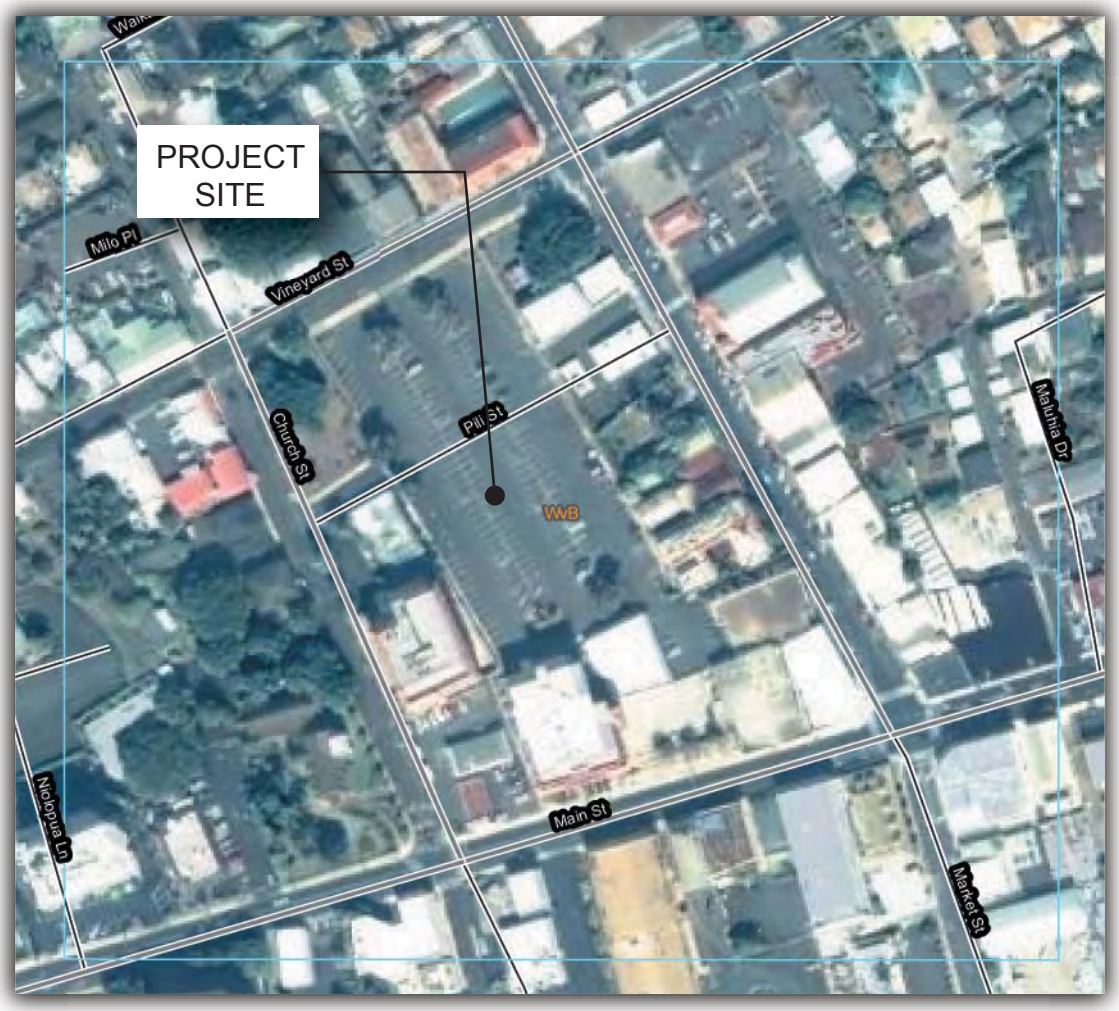
CHRIS HART & PARTNERS, INC.

WAILUKU MUNICIPAL PARKING STRUCTURE

LANDSCAPE PLANTING PLAN
Scale: 1 inch = 50 feet

FIGURE 9

JUNE 2012



Map Scale: 1:2,450 if printed on A size (8.5" x 11") sheet.

N

Meters
0 30 60 120 180

Feet
0 100 200 400 600

FIGURE 10

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 4N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Island of Maui, Hawaii
Survey Area Data: Version 7, Dec 31, 2006

Not to Scale

AUGUST 2011

SOILS MAP

WAILUKU MUNICIPAL PARKING STRUCTURE

CHRIS HART & PARTNERS, INC.

APPENDICES

APPENDIX A
Ownership Documents



Parcel Summary

TMK:	2340130750000	**Alt. TMK:**	
Domain:		**Type:**	PAR
Status:	EXST	Display Legal	GIS Parcel

Parcel Master Address						
Address	**Frac**	**Prefix**	**Street**	**Type**	**PD**	**Suite**
2061			VINEYARD	ST	4O	

Addresses		
Address	**Alias**	**Origin**
No other addresses available for this parcel		

Owner(s)

Name: COUNTY OF MAUI
Address: , 00000
Phone:
E-mail:

Zone Code	Zone Description	Ordinance No.	Origin
B-3	COUNTY'S B-3 CENTRAL BUSINESS DISTRICT		
URBAN	STATE URBAN DISTRICT		
WRA-COMM	WAILUKU REDEV AREA-COMM MIXED USE		
SMA NONE	NOT IN THE SPECIAL MANAGEMENT AREA		

Attributes			
Front:	0.00	**Rear:**	0.00
Side 1:	0.00	**Side 2:**	0.00
Acres:	2.19	**SqFt.:**	95,496.59
Frontage:	0.00		
Flood:	C - AREAS OF MINIMAL FLOODING		
Soil:			
Slope:			
Seismic:			
Land Use:			

Struct / Improv Value:	0	**Property Value:**	0
Land Value:	3223000	**Exempt Value:**	3223000
Owner Occupy:			

There are no establishments on this parcel.



Recent Sales in Neighborhood | Recent Sales in Area | Previous Parcel | Next Parcel | Return to Main Search Page | Maui Home

Owner and Parcel Information

Owner Name	COUNTY OF MAUI	**Today's Date**	August 9, 2011
Mailing Address	00000 0000	**Parcel Number**	340130750000
Location Address	2061 W VINEYARD ST		
Property Type	COMMERCIAL	**Parcel Map**	Show Parcel Map
Neighborhood Code	3431-3	**Land Area**	2.1923 Acres
Legal Information			

Assessment Information Show Historical Assessments

Year	Tax Class	Market Land Value	Agricultural Land Value	Assessed Land Value	Building Value	Total Assessed Value	Total Exemption Value	Total Net Taxable Value
2011	COMMERCIAL	$ 3,223,000	$ 0	$ 3,223,000	$ 0	$ 3,223,000	$ 3,223,000	$ 0

Current Tax Bill Information 2011 Tax Payments Show Historical Taxes

Tax Period	Description	Original Due Date	Taxes Assessment	Tax Credits	Net Tax	Penalty	Interest	Other	Amount Due
No Tax Information available on this parcel.									

Improvement Information

No improvement information available for this parcel.

Accessory Information

Description	Year Built	Dimensions / Units	Value
No accessory information associated with this parcel.			

Sales Information

Sale Date	Price	Instrument #	Instrument Type	Document Type
05/19/1998	$ 0	0000000000		
07/24/1990	$ 3,200	9000144269	Fee conveyance	
02/13/1990	$ 0	9000037115	Fee conveyance	

Permit Information

Date	Permit Number	Reason	Permit Amount
No permit information associated with this parcel.			

Recent Sales in Neighborhood | Recent Sales in Area | Previous Parcel | Next Parcel | Return to Main Search Page | Maui Home

The Maui County Tax Assessor's Office makes every effort to produce the most accurate information possible. No warranties, expressed or implied, are provided for the data herein, its use or interpretation. Website Updated: August 6, 2011

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APPENDIX B
Zoning and Flood Confirmation

1/4280 GMW

COUNTY OF MAUI
DEPARTMENT OF PLANNING
Kalana Pakui Building
250 South High Street
Wailuku, Hawaii 96793

Zoning Administration and
Enforcement Division (ZAED)
Telephone: (808) 270-7253
Facsimile: (808) 270-7634
E-mail: planning@mauicounty.gov

'11 JUL 28 A9:17

DEPT OF PLANNING
COUNTY OF MAUI
RECEIVED

ZONING AND FLOOD CONFIRMATION FORM

APPLICANT INFORMATION *(To be completed by Applicant)*

APPLICANT NAME Raymond Cabebe TELEPHONE 808 242-1955

PROJECT NAME Wailuku Municipal Parking Structure E-MAIL rcabebe@chpmaui.com

ADDRESS/LOCATION Wailuku TAX MAP KEY (2) 3-4-013:075

☐ Yes ☒ No Will this Zoning and Flood Confirmation Form be used with a Subdivision Application, including four (4) or more dwelling units on a parcel, but NOT including subdivisions listed and processed under the exceptions in Section 18.04.030(B), Maui County Code? **IF YES, LIST THE PROPOSED LAND USES BELOW:**

NOTE: 1) **Use a separate Zoning and Flood Confirmation Form for each Tax Map Key (TMK) number.**
2) **If the above "Yes" box is checked AND if the zoning information for the subject property contains multiple State Land Use Districts, Community Plan Designations, or County Zoning, a signed and dated Land Use Designations (LUD) Map, prepared by a licensed surveyor showing all the various districts, designations, zonings, and any subdistricts, shall be submitted for review and approval.**
3) **If the above "Yes" box is checked AND if there are multiple State Land Use District designations, the applicant shall procure a District Boundary Interpretation from the State Land Use Commission.**

FOR COUNTY USE ONLY *(To be completed by ZAED)*

ZONING INFORMATION

STATE LAND USE DISTRICT(S) Urban

COMMUNITY PLAN DESIGNATION(S) Commercial

COUNTY ZONING(S) HRA (Hana Redevelopment Area)

OTHER DESIGNATION(S) WRA (Wailuku Redevelopment Area

☐ Yes ☐ No See Additional Comments On Page Two

☐ Yes ☐ No See The Attached Land Use Designation Map

☐ Yes ☑ No SPECIAL MANAGEMENT AREA (SMA)

☐ Yes ☑ No PLANNED DEVELOPMENT

☐ Yes ☑ No PROJECT DISTRICT

FLOOD INFORMATION

FLOOD HAZARD AREA ZONE(S) X For Flood Zone AO, FLOOD DEPTH ____

BASE FLOOD ELEVATION(S) N/A feet mean sea level, Local Tidal Datum.

*FLOODWAY ☐ Yes ☑ No *FLOOD DEVELOPMENT PERMIT REQUIRED ☐ Yes ☑ No

*For flood hazard area zones X or XS, a flood development permit would be required if any work is done in any drainage facility or stream area that would reduce the capacity of the drainage facility, river, or stream, or adversely affect downstream property.

*For subdivisions in ALL FLOOD HAZARD AREA ZONES (including zones X or XS) that involve streams, gulches, low areas, or any type of draingeway, a designation of the 100 year flood inundation limits or a drainage reserve may be required.

SUBDIVISION CONSISTENCY *[Section 18.04.030(D), Maui County Code]*

☐ N/A (Not Applicable) ☐ **The proposed land uses appear to be consistent ____ a unilateral agreement.

Except as permitted in Section 18.04.030(B) MCC, property containing any Interim Zoning shall NOT be subdivided.

Comments: ____

☐ **The proposed land uses appear to NOT be consistent.

Comments: ____

** All proposed subdivisions will be further reviewed during the subdivision application process to verify subdivision consistency, unilateral agreement requirements, and the conditions associated with a unilateral agreement.

REVIEWED & CONFIRMED BY:

Jan Sakai-Nakaa 8/9/11

(Signature) (Date)

For: AARON SHINMOTO, Planning Program Administrator, Zoning Administration and Enforcement Division

APPENDIX C
Pre-Consultation Comments

ALAN M. ARAKAWA
Mayor

JO ANNE JOHNSON WINER
Director
MARC I. TAKAMORI
Deputy Director
Telephone (808) 270-7511

DEPARTMENT OF TRANSPORTATION

COUNTY OF MAUI
200 South High Street
Wailuku, Hawaii, USA 96793-2155

RECEIVED
APR 21 2011
CHRIS HART & PARTNERS INC.
Landscape Architecture and Planning

CC: Mike & Raymon

April 15, 2011

Mr. Michael J. Summers
Chris Hart & Partners Inc.
115 N Market Street
Wailuku, Maui, Hawaii 96793

Subject: Proposed Wailuku Municipal Parking Strucuture

Dear Mr. Summers,

Thank you for the opportunity to comment on this project. We have no comments to make at this time.

Please feel free to contact me if you have any questions.

Sincerely,

Jo Anne Johnson Winer
Director

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 15, 2011

Ms. Jo Anne Johnson Winer
Department of Transportation
200 South High Street
Wailuku, HI 96793-2155

Dear Ms. Winer:

Re: Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Thank you for your April 15, 2011 "no comments" letter in response to our request for Environmental Assessment (EA) pre-consultation comments on the subject project.

If you have any further questions or concerns, please contact myself or Mr. Raymond Cabebe, Associate Land Planner, of our office.

Sincerely,

Michael J. Summers

Michael J. Summers
Senior Land Planner

MJS:rrc
attachment

c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

ALAN M. ARAKAWA
MAYOR

JEFFREY A. MURRAY
CHIEF

ROBERT M. SHIMADA
DEPUTY CHIEF

COUNTY OF MAUI
DEPARTMENT OF FIRE AND PUBLIC SAFETY
FIRE PREVENTION BUREAU

313 MANEA PLACE • WAILUKU, HAWAII 96793
(808) 244-9161 • FAX (808) 244-1363

April 25, 2011

Michael Summers
Chris Hart & Partners, Inc.
115 N. Market Street
Wailuku, HI 96793

Subject: **Proposed Wailuku Municipal Parking Structure**
Preconsultation for Environmental Assessment
Wailuku, Maui
(2) 3-4-013: 075

Dear Michael,

Thank you for the opportunity to comment on the environmental assessment for this proposed project. At this time, The Fire Prevention Bureau has no comments to provide regarding the EA. Our office does reserve the right to comment during the building permit review process when fire apparatus access, water supply for fire protection, and life safety requirements will be addressed.

If you have any questions, you may call me at 244-9161 ext. 23 or fax at 244-1363.

Sincerely,

Paul Haake
Captain, Fire Prevention Bureau
313 Manea Place
Wailuku, HI 96793

cc: mike + Raymon

RECEIVED
APR 27 2011
CHRIS HART & PARTNERS
Landscape Architecture
10|078

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 15, 2011

Captain Paul Haake
Fire Prevention Bureau
Department of Fire and Public Safety
313 Manea Place
Wailuku, Hawaii 96793

Dear Capt. Haake:

RE: Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Thank you for your April 25, 2011 response letter to our request for Environmental Assessment (EA) pre-consultation comments on the subject project. We acknowledge that your office reserves its right to comment specifically on the project during the building permit process.

Thank you for your cooperation. If you have any further questions, please contact myself, or Mr. Raymond Cabebe, Associate Land Planner, of our office.

Sincerely,

Michael J. Summers

Michael J. Summers
Senior Land Planner

MJS:rrc
attachment

c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

ALAN M. ARAKAWA
Mayor

DAVID TAYLOR, P.E.
Director

PAUL J. MEYER
Deputy Director

DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2155
www.mauiwater.org

RECEIVED
APR 29 2011
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

cc: Mike & Raymon
10/0/18

April 26, 2011

Mr. Michael Summers, Senior Land Planner
Chris Hart & Partners, Inc.
115 N. Market Street
Wailuku, Hawaii 96793

Subject: Pre-Consultation: Environmental Assessment for the Proposed Wailuku Municipal Parking Structure, situated at Wailuku, Maui, Hawaii
TMK: 3-4-013:075

Dear Mr. Summers,

Thank you for consulting with the Department of Water Supply in preparation of this Environmental Assessment (EA).

Source Availability and System Infrastructure
The project area is served by the Central Maui System. Sources for this system are the Iao, Waihee and Kahului aquifers, the Iao tunnel and the Iao-Waikapu Ditch. The property is served by a 1-inch water meter. The EA should identify potable and non potable demand for the proposed project. Domestic and irrigation calculations to determine meter adequacy will be required in the building permit process. The property is served by a 6-inch waterline and two fire hydrants along Vineyard Street, and a 12-inch waterline and three fire hydrants along Market Street. System improvement requirements will be determined in the building permit process.

Conservation
We recommend that the following conservation measures be included in the EA and implemented in landscaping of the property:
a.Plan landscapes that require less water by using native, zone-appropriate plants. The project is located in Plant Zone 4. Please refer to the attached brochure ""*Saving Water in the Yard: What and How to Plant in Your Area"*
b.Use Smart Approved WaterMark irrigation products. Examples include ET irrigation controllers, drip irrigation, and water saving spray heads.
c.Avoid plant fertilizing and pruning that would stimulate excessive growth.
d. Remove weeds and unhealthy plants so remaining plants can benefit from the water saved.
e. Time watering to occur in the early morning or evening to limit evaporation.

Printed on recycled paper

f. Limit turf to as small an area as possible.

Should you have any questions, please contact our Water Resources and Planning Division at 244-8550.

Sincerely,

David Taylor, Director
emb

Attachments:
County of Maui Department of Water Supply, *Saving Water in the Yard: What and How to Plant in Your Area*

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 15, 2011

Mr. David Taylor, Director
Department of Water Supply
200 South High Street
Wailuku, Hawaii 96793

Dear Mr. Taylor:

Re: Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075
Wailuku, Maui, Hawaii.

Thank you for your April 26, 2011 comment letter in response to our Environmental Assessment (EA) pre-consultation request for the subject project. We offer the following responses to your comments:

Source Availability and System Infrastructure. We acknowledge the property is served by a 1-inch meter. It is anticipated that there will be no demand for domestic water for this project. Irrigation demand is estimated to be 2,500 gallons per day. Calculations will be provided during the building permit application process. Requirements for additional fire hydrants will also be addressed during the building permit process. It is our understanding that the waterline along Vineyard Street was recently upgraded to a 12-inch line.

Conservation. Your suggestions for conservation measures will be considered for inclusion in the EA.

Thank you for your cooperation. If you have any further questions, please contact myself, or Mr. Raymond Cabebe, Associate Land Planner, of our office.

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

Sincerely,

Michael J. Summers

Michael J. Summers
Senior Land Planner

MJS:rrc
attachment

c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

ALAN M. ARAKAWA
Mayor

WILLIAM R. SPENCE
Director

MICHELE CHOUTEAU McLEAN
Deputy Director

COUNTY OF MAUI
DEPARTMENT OF PLANNING

April 28, 2011

Mr. Michael Summers
Chris Hart & Partners, Inc.
115 North Market Street
Wailuku, Hawaii 96793

Dear Mr. Summers:

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT (EA) EARLY CONSULTATION NOTICE FOR THE PROPOSED WAILUKU MUNICIPAL PARKING STRUCTURE, LOCATED IN DOWNTOWN WAILUKU, ISLAND OF MAUI, HAWAII; TMK: (2) 3-4-013:075 (EAC 2011/0006)

The Department of Planning (Department) is in receipt of the above-referenced request for comments on the Wailuku Municipal Parking Structure prior to the development of a Draft EA. The Department understands the proposed action includes the following:

- Construction of a five (5) level parking structure containing a total of 367 parking stalls within the structure;
- The re-establishment of Pili Street; and
- The development of 80 parking stalls of additional on-site, on-grade parking outside the new structure.

Based on the foregoing, the Department provides the following comments on the Draft EA:

1. The Land Use Designations for the project are assumed to be as follows:

   a. State Land Use: Urban

   b. Wailuku-Kahului Community Plan: Commercial

   c. Wailuku Redevelopment Area Zoning: Commercial/Mixed-Use

   d. Other: As stated, the site is within the Wailuku Redevelopment Area, and is subject to the Wailuku Redevelopment Area Zoning and Development Code (WRAZDC), and the Wailuku Redevelopment Area Design Guidelines (WRADG).

2. Land Use - Element 1 of the Wailuku Redevelopment Plan states that a primary action of the Maui Redevelopment Agency should be to, "Redevelop the Municipal Parking Lot with potential opportunities for mixed use development, such as business, hotel, commercial, residential, entertainment, public parking or other uses that will create an activity generator." At this time it appears that no activity generator is associated with the parking structure project. Please address this;

3. Multi-modal access -

   a. Within Element 2: Vehicular and Pedestrian Circulation of The Wailuku Redevelopment Area Plan it states that, "A clear emphasis on pedestrian use must be established within Wailuku's commercial core if walking and street activity are to be encouraged." Likewise, it states on page 28 "Provide safe pedestrian access from parking areas to commercial areas by providing street lighting, crosswalks, and other physical improvements." Please indicate how this has been addressed within the project and along the Vineyard Street and Pili Street frontages. Please address the adequacy of the sidewalks on the block immediately surrounding the project and along anticipated pathways of travel for pedestrians who might utilize the parking garage and walk to a destination outside of the immediate urban block;

   b. Please describe the locations where pedestrians ingress and egress from the proposed structure and the strategy of those specific locations in relation to the on-grade pedestrian connections. Please address whether or not there is ADAAG access to Market Street from the proposed structure; and

   c. The WRA Plan also reads, "Provide opportunities for alternative transportation modes, such as bus, bicycle, jitney and other means of transit." Please incorporate an evaluation of any additional modes of transportation that can be accommodated within the project site.

4. Design - Commercial and public parking are uses permitted by right in the Commercial/Mixed-Use district, subject to 30.14.010 and the Wailuku Redevelopment Area Design Guidelines (WRADG). Please ensure each relevant section of the code and design guidelines is addressed including:

   a. Height, Mass and Scale - As stated on page 35 of the WRADG, "A building's height, mass and scale define the character of an area and are key considerations in making a structure compatible with its surroundings." Please explain how the height, mass and scale of the parking structure are compatible with Wailuku's traditional character, and if not, why. Element 1, Objective D.2. also mentions protecting mauka and makai view planes. Please address any impacts to existing views;

b. Ornamentation/Architectural Details, Color and Lighting - Please explain the inspiration for the architectural details being incorporated into the building and how they serve to enhance the architectural integrity of the district. Please describe the selected color scheme of the building and whether or not it is consistent with the WRADG, and provide a description, and of the building lighting and its compatibility with the WRADG;

c. Site features including surface parking, landscape planting, walls/fences and pedestrian paths - Please describe how these guidelines in the WRADG have been addressed in the project's site design; and

d. Please document any additional considerations incorporated into the structure design to increase safety and accessibility for users.

5. Construction -

a. It was indicated in the pre-consultation letter that the loss of parking during construction will be addressed. Please ensure that the Interim Parking Plan for the Wailuku Municipal Parking Structure is included as a study in the EA and that the loss of existing parking during construction as well as proposed mitigation measures are addressed;

b. During the consideration of construction impacts, please also anticipate the economic impacts of the disruption created by the construction. As such, please also evaluate possible mitigation measures to protect area businesses such as collaborative marketing programs, enhanced directional signage for parking, promotional events, etc.;

c. Please indicate if and where they might be impacted portions of the sidewalk system, and provide mitigation alternatives to ensure safe pedestrian accessibility throughout the downtown area; and

d. Finally, please discuss the equipment and materials staging locations and the anticipated impact on local traffic circulation when materials and equipment are being moved within the Wailuku Redevelopment Area.

6. Studies - The Maui Redevelopment Agency recently participated in two (2) different studies which lend important information to the parking structure project. The Wailuku Market Based Plan, completed in October 2010, provides market profile information, community opinion and preferences, and economic realities regarding Wailuku Town and the larger region. The Wailuku Parking Management Plan, currently in its final stages of completion, evaluates the parking throughout Wailuku Town as a system and provides recommendations for the management and development of parking as infrastructure within the

Redevelopment Area. Please utilize these documents in your research to provide clear and factual data about the potential impacts, positive or negative, of the parking structure;

7. Pili Street - Will the re-establishment of Pili Street require a subdivision of the property and a re-dedication of Pili Street? Please address whether or not this is envisioned as part of the project and why or why not;

8. Loss of open space - a consistent criticism of the parking structure project in its current location has been a concern for the loss of open space within the central urban core. Please ensure that this is an impact that is addressed within the document; and

9. Maintenance and Management - The long-term maintenance and management of a facility such as this can dramatically impact whether the facility acts as an asset or a detriment to the Wailuku Redevelopment Area. Please address how the facility will be managed and maintained.

Thank you for the opportunity to comment. Should you require further clarification, please contact Staff Planner Erin Wade at erin.wade@mauicounty.gov or at (808) 270-5517.

Sincerely,

for CLAYTON I. YOSHIDA, AICP
Planning Program Administrator

for WILLIAM SPENCE
Planning Director

xc: Erin K. Wade, AICP, Staff Planner
Jocelyn Perreira, Wailuku Main Street Association/Tri-Isle Main Street Resource Center
Maui Redevelopment Agency Members
2011 EAC File
General File

WRS:CIY:EKW:vb
K:\WP_DOCS\PLANNING\EAC\2011\0006_WailukuMunicipalParkingStructure\CommentLtr.doc

ALAN M. ARAKAWA
Mayor

DAVID C. GOODE
Director

ROWENA M. DAGDAG-ANDAYA
Deputy Director

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

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
200 SOUTH HIGH STREET, ROOM NO. 434
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Development Services Administration

CARY YAMASHITA, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

May 3, 2011

RECEIVED
MAY - 9 2011
CHRIS HART & PARTNERS INC.
Landscape Architecture and Planning

cc: Mike + Raymond

101078

Mr. Michael Summers, Senior Land Planner
CHRIS HART & PARTNERS, INC.
115 North Market Street
Wailuku, Maui, Hawaii 96793-1717

Dear Mr. Summers:

SUBJECT: PRE-CONSULTATION ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED WAILUKU MUNICIPAL PARKING STRUCTURE; TMK: (2) 3-4-013:075

We reviewed your pre-consultation request and have no comments at this time.

Should you have any questions, please call Rowena M. Dagdag-Andaya at 270-7845.

Sincerely,

for DAVID C. GOODE
Director of Public Works

DCG:RMDA:ls
xc: Highways Division
Engineering Division
S:\LUCA\CZM\prop_wailuku_municipal_parking_struc_ea_34013075_ls.wpd

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

July 15, 2011

Mr. David C. Goode, Director
Department of Public Works
200 South High Street, Room No. 434
Wailuku, Hawaii 96793

Attention: Ms. Rowena M. Dagdag-Andaya

Dear Mr. Goode:

Re: Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075
Wailuku, Maui, Hawaii.

Thank you for your May 3, 2011 "no comments" letter in response to our request for Environmental Assessment (EA) pre-consultation comments on the subject project.

If you have any further questions, please contact myself, or Mr. Raymond Cabebe, Associate Land Planner, of our office.

Sincerely,

Michael J. Summers

Michael J. Summers
Senior Land Planner

MJS:rrc
attachment

c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
FORD N. FUCHIGAMI
JAN S. GOUVEIA
RANDY GRUNE
JADINE URASAKI

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

IN REPLY REFER TO:

STP 8.0444

May 24, 2011

RECEIVED
JUN - 2 2011
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

CC: Mike
Jordan

Mr. Michael Summers
Senior Land Planner
Chris Hart & Partners, Inc.
115 N. Market Street
Wailuku, Hawaii 96793-1717

Dear Mr. Summers:

Subject: Wailuku Municipal Parking Structure
Pre-Consultation for Draft Environmental Assessment (DEA)

Thank you for requesting the State Department of Transportation's (DOT) review of the subject project as part of the pre-consultation.

DOT understands the Maui County, Department of Public Works proposes to construct a five (5) level parking structure on the 2.192 acre site of an existing parking lot. All together there will be 447 parking stalls. Access to the project will be from Market Street, Church Street and Vineyard Street. The DOT also understands a DEA will be done for the project.

DOT does not anticipate any significant adverse impacts to the State transportation facilities; however, with the expected vehicle and pedestrian traffic to and from the parking also involving State Route 32 (Main Street), the DOT will be interested in the traffic and drainage analysis contained in the DEA.

DOT appreciates the opportunity to provide its initial comments. When a DEA of the project is completed, DOT requests that four (4) copies of the document and one (1) CD be provided for staff review and any necessary approvals. If there are any questions, please contact Mr. David Shimokawa of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

Very truly yours,

GLENN M. OKIMOTO, Ph.D.
Director of Transportation

Wailuku Main Street Association, Inc.
Tri-Isle Main Street Resource Center
A Non-Profit Organization
1942 Main Street, Unit 101 • Wailuku, Maui, HI 96793
Tel (808) 244-3888 • Fax (808) 242-2710

RECEIVED
MAY 25 2011
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning
Hand delivered - SY

May 25, 2011

Mr. Michael Summers
Chris Hart and Partners, Inc. (CH&P)
115 North Market Street
Wailuku, Hawaii 96793

RE: Comments on the Draft Environmental Assessment (EA) Early Consultation Notice for the Proposed Wailuku Municipal Parking Structure TMK: (2) 3-4-013:075

Dear Mr. Summers:

The Wailuku Main Street Association Inc./Tri-Isle Main Street Resource Center received your letter dated 3/31/11 request for early consultation on April 6, 2011. At the April 13, 2011 Board of Director's meeting the request was referred to two of our professional committees to schedule a review, provide recommendations and comments. At a regularly scheduled review by our Structure and Design Committee on April 18, 2011 it was determined by our team of professionals that the brief project description, the attached location, aerial and concept landscape plan was lacking in the extent of detail we were interested in and a request for additional information and blueprints were needed in order to conduct a thorough review.

We have previously requested verbally and on the record at various meetings, through project consultants, and government officials an opportunity to meet with the project contractor/ architect to discuss this project and to review early conceptual drawings. This is a very important project and we have been focused on it for many years now. We called Morgan Gerdel, project manager and called your office requesting additional information as it became available. Subsequently, we called the Planning Department for information on documents which they based their comprehensive review dated 4/28/11. This lead us back to you and we discussed the above request for additional information. On May 10, 2011 our office received the information they had been waiting for. Additionally, our professionals also received blueprints provided by Wendi Taomoto at the 5/20 MRA meeting. Subsequently, on May 12 and May 25, 2011 a comprehensive review was conducted by both our Wailuku Revitalization and Structure and Design Committees. The comments herein will be shared with the Board of Directors at their June 8, 2011 meeting.

It is our sincerest hope that you will immediately forward our comments to the consultants/contractor Brian Ede and Media Five Architecture firms in order to affect a meaningful dialogue to enable requested revisions to the Plan.

We appreciate your acknowledgement of our on-going work as a major stakeholder in Wailuku and the priority that this particular project represents to our organization and the citizens we advocate for. As a result, several professional committees have taken the time to

review the proposal and offer and recommend that a meeting to discuss various design concerns be scheduled to provide further clarification to our comments.

WMSA, Inc. Committees participating in the reviews were:
Wailuku Revitalization Committee, the Structure & Design Committee
and our WMSA/Tri-Isle Main Street Board of Directors.

We understand the proposed action will include the following:

1. Construction of a five (5) level parking structure that will contain a total of 349 stalls within the structure plus 68 surface parking stalls for a total of 407 stalls.
2. The intention of re-establishing Pili Street; and
3. The development of 80 parking stalls of additional on-site, on-grade parking outside and in addition to the new structure.

Further that the County Consultant is aware that:

4. That both the MRA and the WMSA has agreed to support the PC-1 design.
5. That the remnant parcel along Vineyard Street is not part of this proposal and is to be determined with input from the County Council.

We note that the lack of sufficient parking is one of the major impediments to long-term revitalization of Wailuku Town. Additional parking on the lot should accommodate at least a doubling of the amount of spaces there today. We also note for the record that the parking structure should be sensitively designed with thought to accommodate the possibility of future expansion i.e., structural engineering to accommodate vertical and multi-use expansion of more levels and appropriate infrastructure.

Based on our understanding of the above, we provide comments in accordance with provisions identified in the Wailuku Redevelopment Plan. (WRP)

A. Land Use Designations
   1. State Land Use: Urban
   2. Wailuku-Kahului Community Plan: Commercial
   3. Wailuku Redevelopment Area Zoning: Commercial/Mixed Use. (Please note

      WMSA is listed as a partner in ..LU-3 pg. 25 (redevelop municipal parking lot)
      VPC-7 pg. 30 (parking study) and
      as an implementing partner in UDB-6 pg. 34 (provide design reviews)

   4. Other relevant documents: (WMSA participated in development of documents)
      Wailuku Redevelopment Area Zoning and Development Code
      Wailuku Redevelopment Area Design Guidelines

B. Land Use: The WRP states that a primary action of the MRA should be to "Redevelop the Municipal Parking Lot with potential opportunities for mixed use development and that those uses will create an activity generator.

WMSA has noted on several occasions and was supported by a WMSA Study conducted by Jackie Harp that an Economic Component should be a part of the project to enable achieving a priority standing for securing design and construction funding.

We further note that additional parking to meet the growing needs of Wailuku Town alone will generate economic activity within the town core. When carefully considering the possibilities for mixed use along with placing appropriate government services as an economic activity generator; you effectively create a magnet in the heart of town surrounded by the Super Block. Our prior submittals to the Maui Redevelopment Agency and the County Council included the position that an economic generator be identified together with the project that may include a revenue generating anchor i.e., a local grocery store (of the size and scale of the Pukalani Superette). This Wailuku Superette will help fill the void left by Ooka Supermarket that can specialize in Wailuku-made products and is of a size and scale that is more compatible to Wailuku Town then larger groceries located on the outskirts of town. The grocery store, occupying the ground level of a mixed use building. This structure would be designed in such a way to create a street front along Vineyard which is in keeping with the traditional elevation, scale and streetscape of Wailuku.

C. Multi-modal access-

1. Vehicular and Pedestrian Circulation of the WRP has placed an emphasis on pedestrian use that should be encouraged. Further, that safe pedestrian access from parking areas to commercial areas with street lighting, crosswalks and other physical amenities and improvements.

It's confusing to know the intent because the conceptual landscape plan and the parking structure site/root plan are inconsistent. Along the north/south walkway and the walkway along Pili Street, there should be curb side landscaping along the sidewalk. The trees should be planted on those strips to provide a shaded streetscape (with appropriate root barriers) for calming traffic, pedestrian safety and cooling the environment.

An important inconsistency in the conceptual Landscape Plan shows a clear alignment of Pili Street (mauka and makai) which is preferable. In the architectural site/roof plan, the parking structure encroaches into Pili Street and destroys the alignment.

It is important to delineate the crosswalks where connecting with the sidewalks at all pedestrian access ways and as they abut the towers. The crosswalks could be delineated by using the same material as the sidewalks slightly elevated.

2. Provide a description of the locations where pedestrians ingress and egress from the proposed structure and the strategy of those specific locations in relation to the on-grade pedestrian connections. Existing grades and contours may preclude strict conformance with ADA accessibility. The appropriate department will make sure it conforms.

3. The WRP calls for providing opportunities for alternative modes of transportation. We are concerned that we don't get bogged down with too many

specifics as there are many. Priority should be given to public/private transportation i.e., handicapped vans. An evaluation of any additional modes that can be accommodated on the project site should be analyzed and incorporated as part of the developing plan.

D. Design: Commercial and public parking are uses permitted in the Commercial/Mixed Use district. Please ensure that each of the following relevant sections is addressed.

1. Height, Mass and Scale: A building's height, mass and scale define the character of an area and are key considerations in making a structure compatible with its surroundings.

We note that the height and mass is when architectural details are incorporated will be compatible with the commercial core of Wailuku town. Our organization has studied this project for many years. Further our professionals on the Structure and Design Committee met previously with the CH&P consultants the Watry Group to discuss various aspects of the proposed parking structure.

We note that the landscape and streetscape design on Pili Street should have traffic calming measures to diminish its potential of being a through street. Further, that the footings for the Plan allow for future expansion over surface parking and possible commercial retail/grocery on the remnant parcel (to be compatible with parking structure along with possible need for additional office space in the upper levels).

The desired on-grade relationship needs to exist along the entire frontage of the structure which faces east toward Market Street. To facilitate this, the rampage should be accomplished at the rear or the structure. This will allow a horizontal presence in relation to the down town business district.

2. Ornamentation/Architectural Details, Color and Lighting: As noted above, our organization's professionals previously met with the CH&P consultants, the Watry Group which resulted in a better understanding of Wailuku's sense of place and to reference its historic buildings i.e., Iao Theater in its design. As it is now, it has too much of an urban feel. The architectural design does not enhance or reflect the historical architectural character of its immediate surroundings in Wailuku particularly as it relates to this older section of town.

A legitimate attempt to utilize the vernacular detail of the Iao Theater as originally agreed should be made. The strict plainer quality of the proposed elevations should be altered to incorporate an undulating façade which will reduce the massive mass and scale to provide opportunity to introduce more compatible characteristics of Wailuku's architecture.

As proposed the design essentially pays homage to the exposure of vehicles in the middle of town. Not the intended objective of the Wailuku Design Guidelines. An attempt should be made to obscure the vehicles. The best way to do this is provide landscape planters which will provide shade to cool the structure and honor Wailuku's verdant green mountains. Some of the most successful parking structures world-wide

are entirely covered up with landscaping and a complimentary enhancement to the community. These planters could be incorporated with other sun shade devices consistent with those found with the theme.

We feel that some greenery or planters should be located on each level to help break up the massiveness of the structure.

3. Site Features including surface parking, landscape planting, walls/fences and pedestrian paths: This is a large parking structure, what are the plans for any public amenities housed within the structure, or will they be addressed at the Iao Passive Park next to the theater?

A Trellis is shown at the street level but there is no precedence for that. It has no street presence. A canopy is much better. A trellis provides no shade or street protection. The canopy is more pedestrian friendly and it would be more in character with Wailuku and support for canopies are referenced in the Wailuku Redevelopment Area Design Guidelines..

Alleyways should be kept within the concept of Wailuku Town and should have benches on the outer boundaries of the structure within the walkways.

4. Additional considerations to increase safety and accessibility for users.

a. An increase in traffic within the entire super block is a concern. To alleviate the increase in traffic, public transportation drop off areas should be provided and marked clearly and a traffic analysis and Plan may be beneficial to provide adequate traffic flow.

E. Construction: This will be a critical portion of the project that will need to be carefully accessed and thoroughly thought out.

1. As indicated in a pre-consultation letter, the loss of parking during construction will be addressed. This is extremely important to our organization as we have long advocated for an effective Parking Management Plan. Where do the existing 200 cars go in the interim? An interim parking plan should be provided.

2. We anticipate economic impacts due to disruption that will be created by the construction. Please explore effective mitigation measures and involve all stakeholders including our organization, which advocates for more than 51% of the owners in the area in the development of enhanced directional signage for parking, a collaborative marketing program, promotional events and shopper incentives.

3. In that there will be impacted portions of the sidewalk system throughout the Superblock area and certainly affecting those from Happy Valley out to Iao Intermediate School and Wailuku Elementary Schools. What are the alternative routes for residents and children that travel daily through Market Street and/or the Superblock?

We ask that you convene a meeting to discuss these details with those directly affected and be sure that we are notified as well.

4. Will merchants be compensated for well documented business losses?? Property damage???

5. Equipment and materials staging and baseyard: We recommend that you provide a staging area and base yard on site to minimize equipment moving up and down on Market Street. The intensification of construction traffic on Market Street can be significant and have an impact on neighboring structures. What is your plan for mitigating measures for impacted buildings during construction?

What will be the hours of construction??? There are various thoughts on this subject 24/7 and run 3 crews would get the project done sooner but does not take into consideration the noise factor at night which we believe will be very disturbing to the residents in the area and costly on overtime compensation. What other feasible options are you considering???

F. Studies: We hope that you will utilize only those studies that have been fully vetted through a formal public process and have received approvals from appropriate agencies, the County Council and the Office of the Mayor.

We note that although a comprehensive Marketing Study of the commercial core of Wailuku was completed in October 2010. It should be viewed not as an approved Plan of Action, rather A Study, which provided a snapshot in time. The Study was done to provide statistical information to consider when formulating plans for the future of Wailuku Town. Much of what is contained in that report is echoed in the WRP. The Planning Department accepted the work performed and we applaud the statistical information gleaned at the time. In this regard, you should not consider it an approved document that provides consensus on preferences or economic realities regarding Wailuku Town and the larger region. It is a helpful document that provides important information that can be a useful tool for planning Wailuku's future.

We are looking forward to the results of a Wailuku Parking Management Plan another helpful planning tool by consultant Andy Miller, as an indication of a parking system that has been properly evaluated and provides some good recommendations for the management and development of parking as infrastructure within the Redevelopment Area. It is important to make decisions based upon clear and factual data about both positive and negative potential impacts associated with the parking structure.

We understand that the property belongs to the County of Maui and that a recent campus study was conducted to determine highest and best use of County resources. We feel that this study was properly vetted and should be taken into consideration.

G. Pili Street: We feel that Pili Street should not necessarily become a through vehicular street for motorized vehicles but rather encouraged as a pedestrian access way.

Particularly when you consider what kind of future options may be appropriate for the remnant parcel. We know that the remnant parcel holds the potential for an economic

generator and the redevelopment along Vineyard Street. We feel that this might be premature and that a broader discussion should ensue with our County Councilmembers as the total property in question belongs to the County of Maui. The property was condemned and homeowners had to relocate to make way for the highest and best use of the property. The County is therefore obliged to consider its highest and best use in the interest of the public. We do not know the feelings of the Council as far as maximizing the use of the area and feel it is essential to consult with the County Council on this matter.

H. Loss of Open Space: In any town, open space is an important asset to helping retain "a sense of place". It is for this reason our organization has worked within the town's core to develop "pocket parks" and even a community garden with respective property owners until other development plans were in place.

All of these private properties will eventually be built upon. It became essential that when the County purchased the Iao Theater and surrounding property, that a green passive park be available alongside the theater for a public gathering place. (We support parking on that space until such time as the municipal parking structure is completed; then the parcel should revert back to the original intended plan for a passive park). We note that the lot at the corner of Vineyard and Market and also the lot on Vineyard and Church be considered for either purchase or use as pocket parks until development plans are in place.

I. Maintenance and Management: The long-term maintenance and management of this public amenity can impact the entire area. It can be viewed as a well thought out asset or an area of continued concerns. Therefore, the management and maintenance of the parking structure should be conducted through a formal bidding process. In order to respond to this, we need a clearer proposal with details and expectations.

In conclusion, it is important that this project come to fruition. As previously stated, we offer and recommend that a special meeting to discuss various design concerns by our teams of professional resources be scheduled to provide further clarification on our comments.

Thank you for the opportunity to provide pre-consultation comments on this important Wailuku project that will benefit not only the existing stakeholders, but also provide opportunities for community-wide reinvestment drawing those who will come to rediscover Wailuku, to shop, work, conduct public/private business, and make a long term investment.

Sincerely,
Wailuku Main Street Association, Inc.
-Tri-Isle Main Street Resource Center-

On behalf of the Structure & Design Committee
The Wailuku Revitalization Committee

Jocelyn A. Perreira, Executive Director/
Tri-Isle Main Street Program Coordinator

Sam Clark, Chairman of the Board

ALAN M. ARAKAWA
Mayor

KYLE K. GINOZA, P.E.
Director

MICHAEL M. MIYAMOTO
Deputy Director

TRACY TAKAMINE, P.E.
Solid Waste Division

ERIC NAKAGAWA, P.E.
Wastewater Reclamation Division

RECEIVED

JUN - 3 2011

CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

Cc: Mike & Raymond
10018

COUNTY OF MAUI
DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT
2200 MAIN STREET, SUITE 100
WAILUKU, MAUI, HAWAII 96793

June 1, 2011

Mr. Michael Summers
Chris Hart & Partners, Inc.
115 North Market Street
Wailuku, Hawaii 96793

SUBJECT: WAILUKU MUNICIPAL PARKING STRUCTURE
PRE-CONSULTATION
TMK (2) 3-4-013:075, WAILUKU

We reviewed the subject application and have the following comments:

1. Solid Waste Division comments:

   a. None.

2. Wastewater Reclamation Division (WWRD) comments:

   a. Construction plans shall show the County's existing sewerline running through Pili Street of the subject property.

If you have any questions regarding this memorandum, please contact Michael Miyamoto at 270-8230.

Sincerely,

KYLE K. GINOZA, P.E.
Director of Environmental Management

Wailuku Main Street Association, Inc.
Tri-Isle Main Street Resource Center
A Non-Profit Organization
1942 Main Street, Unit 101 • Wailuku, Maui, HI 96793
Tel (808) 244-3888 • Fax (808) 242-2710

June 30, 2011

Ms. Wendy Taomoto, Office of the Mayor
Ms. Wendy Kobashigawa, Department of Public Works
County of Maui
200 South High Street
Wailuku, Hawaii 96793

RE: Comments on Wailuku Municipal Parking Structure
Public Informational Meeting 6.16.11 and MRA Meeting 6.17.11

Dear Ms. Taomoto:

The Wailuku Main Street Association Inc./Tri-Isle Main Street Resource Center received information and a copy of the power point presentation on the Wailuku Municipal Parking Structure. We have a number of concerns and recommendations to offer you and the Allison/Ide Structural Engineering Team of Consultants. As you know, our organization has an unbroken involvement with this project spanning two decades. Keeping focused on resolving Wailuku's long standing parking issues, providing the professional expertise and community/business advocacy for this crucial infrastructure project, and advocating it as a priority in the Wailuku Redevelopment Plan has resulted in progress. Enclosed is a power-point presentation that was prepared in 2008 for the County Council to illustrating a vision for the new parking structure achieved by community consensus and referred to as modified PC-1. It seems that the design presented today may have been based on 2003 information, and that the designers were not made aware of the more recently agreed upon 2008 modified PC-1. Although the present design is reasonable given just the 2003 information, it needs to be adjusted somewhat to take into account the more recently agreed upon vision of the modified PC-1.

Both the MRA and the WMSA agreed to support the **modified PC-1** design which is a compromise position from the original PC-1 proposed by the Watry Group. This included an on-grade ground level, 2nd, 3rd and 4th roof top level for an approximately 3 to 4 story structure with ingress/egress from Main Street. We remain concerned about a 5 story structure. The building we supported was to be a lower height & mass. The vertical elements on this newest design have been accentuated and there is a need to visually break up these components to afford the structure a more Wailuku-like human scale. The color of this element also reinforces the verticality of the design, as well as the control joints which visually break the wall into seven pieces making it appear at a glance to be a 7-story architectural element. The verticality of the proposed structure provides emphasis to what appears to be a tall skinny wall. We understand that the requirements in the scope of work mandated that the building be squeezed so that the height increased to meet code and maximize the number of parking spaces , but we feel that the structure does not yet have a distinct Wailuku scale or architectural character.

We do not feel that "the main component of the structure has to look like a parking structure." We support a multi-use sensitively designed structure situated in a location that is surrounded by buildings that screens the cars, and reflects the architectural character and special "sense of place" of Wailuku.

We understand that the designers were given directives that were maintenance and cost driven, however the addition of planters to obscure the structure (except in the area needed for a direct connection to grade) would be helpful in making the cars less visible.

We note that some of the "design keys" that provided a solid framework for the redeveloped municipal parking lot's final configuration have been incorporated into the project. But, the overall vision for the superblock is missing, along with other missed opportunities. The goal of the project is not only about solving the present severe parking problem in Wailuku, as validated by Andy Miller's Parking Management Analysis. It must also create a framework that will enhance (and not limit) the possibilities for surrounding property owners to redevelop, or maintain their present buildings, over the lifespan of the new structure.

We recommend removing the short wall on the ground floor facing the east/Market Street elevation to provide a direct on-grade relationship to an adjacent sidewalk, so that one can access the parking along that whole stretch instead of having to walk all the way around the structure to enter only at its ends. This will enable an opportunity to enhance an important economic component by providing more direct access to surrounding businesses.

The view from Vineyard Street has an urban "Ala Moana" character and it is the side of the structure most exposed to public view. We're a classic old town. An attempt to improve the shear wall design will help reduce the overall massiveness the building is projecting. The "modified PC-1" concept which we supported included an ingress/egress from Main Street that allowed Pili Street not to be turned into a thoroughfare and to remain an internal street. (Comments on the above two paragraphs are also referred to in Section B on Design in the body of the letter on page 3).

We understand that the remnant parcel along Vineyard Street is not part of this proposal and that it's eventual use is to be determined with County Council input. Here again, we strongly feel that an economic component such as a neighborhood specialty grocery or health food store can be a major draw for the area along with County Council approved appropriate civic uses that provides convenience and service to the general public.

The lack of sufficient parking is one of the major impediments to long-term revitalization of Wailuku Town. It is important that the parking structure's design reflect the unique characteristics of Wailuku and carefully blend attributes of the old with newer concepts i.e., photovoltaic's, accommodations for the physically challenged, public transit and other future possibilities that will require adequate engineering and planning to accommodate appropriate vertical and multi-use expansion.

We hope that you will utilize only those studies that have been fully validated through a formal public process and have received approvals and/or formal adoption from appropriate agencies, the County Council and the Office of the Mayor. Based on our above positions, we provide comments in accordance with provisions identified in the Wailuku Redevelopment Plan. (WRP)

A. Land Use: The WRP states that a primary action of the MRA should be to redevelop the Municipal Parking Lot with potential opportunities for mixed use development and that those uses are activity generators.

The municipal lot property belongs to the County of Maui and a recent campus study was conducted to determine highest and best use of County resources. It is important that this campus study be taken into

consideration to fully understand the options available and respectfully include the input of the current Mayor and the County Council's vision on the highest and best use of this publically owned property. It is important to make decisions based upon clear and factual data with historical perspectives about both positive and negative potential impacts associated with the parking structure. That an open and transparent process for discussion is made available for all stakeholders.

We would do well to remember the history and the sacrifice connected with this project and the visionary decision of our County leaders who acted to create a place for centralized parking. The property was condemned and homeowners had to relocate for the benefit of entire community. The County is therefore obliged to consider the highest and best use of the County owned property in the interest of the general public. We do not know the feelings of the Council as far as maximizing the use of the area and feel it is essential to consult with the County Council and our new Mayor on this matter.

WMSA has proposed on several occasions that an economic component be a part of the project thus enabling the County to achieve a priority standing for securing design and construction funding from a variety of funding sources. This was validated by a WMSA Grant Search and subsequent Grant Proposal prepared by consultant Jackie Harp.

B. Design:

1. Height, Mass and Scale: A building's height, mass and scale define the character of an area and are key considerations in making a structure compatible with its surroundings. The proposed structure does not achieve this end. To have a better understanding, of Wailuku's "sense of place" a starting point is to reference its historic buildings i.e., Iao Theater and to incorporate these components in its design. As it is now, it has too much of an urban feel. The architectural design does not enhance or reflect the historical architectural character of its immediate surroundings in Wailuku, particularly as it relates to this older section of town.

A desired on-grade relationship needs to exist along the entire frontage of the structure which faces east toward Market Street. This will allow a horizontal presence in relation to the down town business district which positively creates and promotes pedestrian interaction and broadens the appeal of the super block.

2. Ornamentation/Architectural Details, Color and Lighting:

The vernacular detail of the Iao Theater as originally agreed should be incorporated. The strict plainer quality of the proposed elevations should be altered to incorporate an undulating façade which will reduce the massive mass and scale and provide opportunity to introduce more compatible characteristics of Wailuku's architecture.

As proposed the design essentially pays homage to the exposure of vehicles in the middle of town, NOT the intended objective of the Wailuku Design Guidelines. An attempt should be made to obscure the vehicles. The best way to do this is provide landscape planters which will provide shade to cool the structure. Some of the most successful parking structures world-wide are entirely covered up with landscaping and a complimentary enhancement to the community. These planters could be incorporated with other sun shade devices consistent with those found with the theme. We feel that some greenery or planters should be located on each level to help break up the massiveness of the structure.

C. We feel that Pili Street should not necessarily become a through vehicular street for motorized vehicles but rather encouraged as a pedestrian access way with a safer, visual connectivity. It you allowed an ingress/egress into the project from Main Street you can retain the open feel that is evident in the lot today. It also allows opportunities for future creative use of the property.

Although the remnant parcel is not part of this "stand alone" project, you should consider what kind of future options may be appropriate for the remnant parcel and how that will relate to the proposed municipal lot project. We feel that the parcel on the Vineyard Street side of the lot holds the potential for an economic generator and the redevelopment along Vineyard Street that can maintain a street wall that is complementary and reinforces the dynamics of Vineyard Street with exciting new possibilities.

Additional considerations to increase safety and accessibility for users.

An increase in traffic within the entire super block is a concern. To alleviate the increase in traffic, public transportation drop off areas should be provided and marked clearly and a traffic analysis and Plan may be beneficial to provide adequate traffic flow.

D. Construction: This will be a critical portion of the project that will need to be carefully accessed and thoroughly thought out.

1. As indicated in a pre-consultation letter, we would like to see a detailed traffic control plan by an engineer and we understand that this will happen later in the process. What will be the hours of construction? How will the loss of parking during construction will be addressed? We are pleased to see that progress has been made on our repeated request to have a consultant make recommendations for an effective Parking Management Plan. However, where do the existing 200 cars go in the interim? An interim parking plan should also be provided.

2. In that there will be impacted portions of the sidewalk system throughout the Superblock area and certainly affecting those from Happy Valley out to Iao Intermediate School and Wailuku Elementary Schools. What are the alternative routes for residents and children that travel daily through Market Street and/or the Superblock?

We ask that you convene a meeting to discuss these details with those directly affected and be sure that we are notified as well.

3. Are there promotional plans for existing merchants to assure access to their shops/restaurants in the interim?

4. We recommend that you provide aa equipment and materials staging and baseyard area on site to minimize equipment moving up and down on Market Street. The intensification of construction traffic on Market Street can be significant and have an impact on neighboring structures. What is your plan for mitigating measures for impacted buildings during construction?

E. Loss of Open Space: In any town, open space is an important asset to helping retain "a sense of place". It is for this reason our organization has worked within the town's core to develop "pocket parks" and even initiated the first a community garden with respective property owners until other development plans were in place.

All of these private properties will eventually be built upon. It is therefore essential that the County owned Iao Theater and surrounding property include a planned green passive park in the heart of town to serve diverse groups as a public gathering place. (We support parking on that space until such time as the municipal parking structure is completed; then the parcel should revert back to the original intended plan for a passive park). We note that the lot at the corner of Vineyard and Market and also the lot on Vineyard and Church be considered for either purchase or use as pocket parks until development plans are in place.

F. The long-term maintenance and management of this public amenity can impact the entire area. It can be viewed as a well thought out asset or an area of continued concerns. Therefore, the management and maintenance of the parking structure should be conducted through a fair and formal bidding process. A clearer proposal with details and expectations should be provided at the appropriate time.

In conclusion, it is important that this project receive the necessary assistance and support to achieve an important goal outlined in the Wailuku Redevelopment Plan. We continue to offer our expertise and recommendations by our teams of professional resources. Thank you for the opportunity to provide comments on this important Wailuku project that will benefit not only the existing stakeholders, but also provide opportunities for community-wide reinvestment drawing those who will come to rediscover Wailuku, to shop, work, conduct public/private business, and make a long term investment and commitment to Wailuku's future.

Sincerely,
Wailuku Main Street Association, Inc. / Tri-Isle Main Street Resource Center
On behalf of the Board of Directors, the Structure & Design Committee
And our Wailuku Revitalization Committee

Samuel R. Clark
Chairman of the Board

Jocelyn A. Perreira, Executive Director/
Tri-Isle Main Street Program Coordinator

w/Attachments –Power Point and Design Comparisons

cc Mayor Alan Arakawa
County Council Chair Danny Mateo & Councilmembers
Maui Redevelopment Agency Commissioners
Project Consultant Team, Allison/Ide Engineering (Principal)

COUNTY OF MAUI

MAUI REDEVELOPMENT AGENCY

July 12, 2011

Mr. Michael Summers
Chris Hart & Partners, Inc.
115 North Market Street
Wailuku, Hawaii 96793

Dear Mr. Summers:

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT (EA) EARLY CONSULTATION NOTICE FOR THE PROPOSED WAILUKU MUNICIPAL PARKING STRUCTURE, LOCATED IN DOWNTOWN WAILUKU, ISLAND OF MAUI, HAWAII; TMK: (2) 3-4-013:075

On June 17, 2011 the Maui Redevelopment Agency (MRA) hosted a public meeting to discuss the design and configuration of the Wailuku Municipal Parking Structure, as proposed. On July 1, 2011 the MRA met again in a Special Meeting to hear additional public testimony, and to provide recommendations and comments on the parking structure design.

Based on the foregoing, the Maui Redevelopment Agency provides the following comments on the Draft EA:

1. The proposed location of the parking structure, on TMK (2) 3-4-013:075 is the preferred location. The MRA supports the 5 level parking structure, total stall configuration and stall count generally. The agency members expressed concern that the area provided for electric vehicle charging be easily expandable in the future.

2. Regarding access within and around the structure the MRA had the following comments:
   a. Accommodate moped, bicycle, and motorcycle parking within the parking structure and quantify the numbers of spaces available. It is further recommended that these motorcycle and bicycle parking areas be located in highly visible locations to reduce the potential for theft.
   b. Include defined pedestrian access on both sides of Pili Street.
   c. Include two elevators in the structure design.
   d. Provide bus and/or other mass transit access on the site.

3. The Maui Redevelopment is working to ensure Wailuku Town remains clean and safe. As a result, the agency would like additional trash receptacles to be incorporated in the

site perimeter and near the stairwells at grade.

4. The MRA is generally supportive of the building architecture. A few suggestions the group agreed upon included:

   a. Providing for better fenestration of the building to break-up the scale and massing. In particular, the agency expressed concern about the shear walls and recommended incorporating pilasters in keeping with the Art Deco style of old Wailuku Town.

   b. Eliminating the roof with solar equipment.

   c. Replacing the stairwell skylights with standing seam metal roof to match the rest of the structure roofing.

   d. Investigate lowering the height of the roof over the stairwells so they are not projecting so far above the roofdeck.

   e. Replace the glass walls in the elevator with open, Art Deco grille work that meets all Code standards.

Thank you for the opportunity to comment. Should you require further clarification, please contact, the Maui Redevelopment Agency Staff Planner Erin Wade at erin.wade@mauicounty.gov or at (808) 270-5517.

Sincerely,

for ALEXA BETTS BASINGER
Maui Redevelopment Agency Chair

xc: Erin K. Wade, AICP, Staff Planner
Maui Redevelopment Agency Members
Wendy Taomoto, CIP Coordinator
Wendy Kobashigawa, P.E. Public Works
Morgan Gerdel, AIA, ADC
Joe Alueta, Project Manager
2011 EAC File
General File

ABB:EKW
K:\WP_DOCS\PLANNING\EAC\2011\0006_WailukuMunicipalParkingStructure\MRACommentLtr.doc

APPENDIX D
Wailuku Municipal Parking Lot Master Plan

Wailuku Municipal Parking Lot Master Plan





Prepared for:

The Maui Redevelopment Agency

Prepared by:

Chris Hart & Partners, Inc.
Landscape Architecture & Planning

January 2004

Wailuku Municipal Parking Lot Master Plan

Prepared For:

Maui Redevelopment Agency

Clyde K. Kono, Chairperson
Gerald Hiyakumoto, Vice-Chairperson
Stephanie Ohigashi
Mark Rickard
Lloyd Poelman, Esq.

Prepared By:

Planning Department

Michael Foley, Director
John Summers, Administrative Planning Officer

Consultant Team

Christopher L. Hart, Chris Hart & Partners Inc. President
Michael J. Summers, Chris Hart & Partners, Inc. - Project Planner
Paul Flinn, Chris Hart & Partners, Inc. - Designer
Jim Niess, Maui Architectural Group – Architect
Michelle Wendler, Watry Group, – Principal, Parking Planner
Charlotte Chan, Watry Group, - Parking Planner
Warren Unemori, Warren S. Unemori, Inc., Civil Engineer
Phillip Rowell, Phillip Rowell & Associates, Traffic Engineer
Charles Biegel, Island Geotechnical Engineering, Inc. – Soil Engineer
Jill Engledow, Historical Resources Consultant

CHRIS HART & PARTNERS, INC.

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EXECUTIVE SUMMARY

Background

The *purpose* of this report is to identify several feasible land use and urban design concepts to guide the redevelopment of the Municipal Parking Lot site in accordance with the policies, objectives, and strategies set forth in the Wailuku Redevelopment Plan (December 2000).

The Wailuku Redevelopment Plan (December 2000) identifies the scarcity of public parking, the high cost associated with complying with on-site parking requirements, and the dearth of activity generating land uses as major impediments to economic revitalization within the redevelopment area. In response, a major implementing action of the Plan is to bring additional parking supply to the area through the redevelopment of the Wailuku Municipal Parking lot site.

The Wailuku Municipal Parking lot is a 2.192-acre site that is paved and striped for 208 parking stalls. The lot is situated within the core of the commercial district, and is the predominant source of public parking to the numerous businesses and state government offices in the area. The site also remains the last large contiguous parcel downtown that could be redeveloped into an activity generating mixed-use project, incorporating a multi-level centralized parking structure.

Overview of Findings

Wailuku Town is currently experiencing a modest building expansion after several years of high vacancy rates and urban blight conditions. Several properties have recently been redeveloped and several others are currently planned for development. An analysis of existing demand for parking indicates that when current demand is added to projects currently planned but not yet built, there is a potential need for approximately 193 additional parking stalls within the Municipal Parking Lot site.[1]

	No. Stalls
Existing Supply	208
Existing Demand	(185)
Existing Capacity	**23**
Future Demand	(216)
Projected Deficit	**(193)**

In addition, if the County's Municipal Parking Lot site is redeveloped to accommodate a parking structure to the south of Pili Street and a mixed-use commercial/residential project on the remnant 20,500 square feet parcel, then an additional **60 stalls** may be required.

[1] Based upon preliminary plans provided by area landowners to the Wailuku Main Street Association (WMSA).

Conclusions and Recommendations

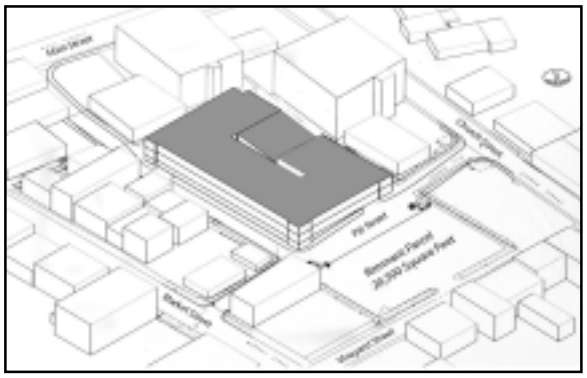
Preferred Parking Structure

After analyzing several design alternatives, and gathering input from government agencies, neighboring property owners, and the Wailuku Main Street Association, the preferred parking structure (Option PC-1) is a four-level parking structure that provides 363 stalls within the structure and 26 stalls on grade. The total stalls provided are 389. Option PC-1 re-establishes Pili Street and preserves approximately 20,500 square feet for future development along Vineyard, Church, and Market Streets.

Option PC-1 is tucked into the established building envelope and thereby minimizes the project's visual intrusion upon public roadways. Mauka and Makai view corridors are preserved along Pili Street and pedestrian and vehicular circulation patterns are enhanced.

Option PC-1 is the most appropriately sized structure for the site given the size and shape of the parcel and the scale and character of adjacent development. The County should consider sizing the structures columns to accommodate a fifth level if there is a need for additional parking in the future.

Option PC-1



- Four (4) level parking structure
- Re-establishes Pili Street
- 389 parking stalls
- 20,500 SF reserved for activity generating land uses
- Total project cost: $7,173,713.00
- Factored project cost: $6,251,213.00
- Factored project cost / stall: $16,069.00

Redevelopment of Remnant Parcel

Future use of the Municipal Parking Lot site is key to the long-term economic vitality of the commercial core. Paramount is the need to maintain an adequate supply of readily available public parking on the site. An equally important objective is to encourage renovation, development, and redevelopment of underutilized parcels.

In order to facilitate revitalization, the Municipal Parking Lot site should be redeveloped with a centralized parking structure and a mixed-use retail residential and or cultural / entertainment project. Emphasis should be placed on uses that attract residents

and visitors downtown Monday through Friday and during evening and weekend hours. The resultant increase in consumer spending will significantly benefit area businesses that offer goods and services to this market.

The county would sell or lease the land with a set of conditions that would run with the land and that would prescribe the types of uses and urban design specifications for the site. The County, through the sale or lease of the property, could generate revenue to help finance County office space in the Civic District or the parking structure.

It is the consultant team's professional opinion that the development of Municipal Office Space on the remnant parcel would "crowd-out" viable mixed-use projects that could potentially provide a much greater benefit to the downtown economy. Municipal Office Space would be largely vacant during evening and weekend hours and employees of the project would compete with surrounding property owners for parking thereby limiting the stimulus associated with this land use.

PART ONE INTRODUCTION

1.1 Introduction

On December 10, 2001, the County of Maui, on behalf of the Maui Redevelopment Agency, contracted Chris Hart & Partners, Inc., to develop a master plan for the Redevelopment of the County owned Wailuku Municipal Parking lot site. This report has been prepared in fulfillment of this contract.

The Master Plan identifies three *feasible* land use, urban design, and landscape concepts for the site. A fourth concept was also prepared in response to requests by the Planning Department and members of the Maui County Council. A preferred final plan supported by an implementation schedule and budget is also provided. The County of Maui will use the Master Plan to acquire funding to implement the plan.

1.2 Project Purpose and Objectives

The Wailuku Redevelopment Plan, December 2000, provides the vision, direction, and plan of action for the revitalization of the Wailuku Redevelopment Area. The plan includes specific strategies and actions that are required to eliminate slum and blight conditions in the area.



The Redevelopment Plan identifies the scarcity of public parking, the high cost associated with complying with on-site parking requirements, and the dearth of activity generating land uses as major impediments to economic revitalization within the redevelopment area. In response, a major implementing action of the Plan is to bring additional parking supply to the area through the redevelopment of the Wailuku Municipal Parking lot site. The Redevelopment Plan's Action Chart: Land Use (LU-3) and Action Chart: Vehicular and Pedestrian Circulation (VPC-3, 6, and 9) identifies a two-pronged redevelopment strategy for the site focusing on creating additional parking along with activity generating mixed land uses:

- **Action Chart: Land use (LU—3).** Redevelop the Municipal Parking Lot with potential opportunities for mixed use development, such as a business hotel, commercial, residential, entertainment, public parking or other uses that will create an activity generator.

- **Action Chart: Vehicular and Pedestrian Circulation (VPC-3; VPC-6; VPC-9).** Acquire an access easement off of Main Street into the Municipal Parking Lot (VPC-3).

  Develop additional parking at the site of the existing Municipal parking lot (VPC-6).

  Develop a fee structure at the Wailuku Municipal Parking Lot to discourage long-term parking (VPC-9).

Under **Element 2, Vehicular and Pedestrian Circulation, Objective C.1**, the Redevelopment Plan states: *Increase and maintain the parking supply to meet future demand by developing new parking and improvements at the Wailuku Municipal Parking Lot, and other sites (*i.e., satellite surface parking lots along Central Avenue and in Happy Valley) *and retaining on-street parking where possible.*

The *purpose* of this Report is to identify several feasible land use and urban design concepts to guide the redevelopment of the Municipal Parking Lot site in accordance with the policies, objectives, and strategies set forth in the Wailuku Redevelopment Plan (December 2000).

1.3 Project Parameters







The Wailuku Municipal Parking lot is a 2.192-acre site that is paved and striped for 208 parking stalls. The lot is situated within the core of the commercial district, and is the predominant source of public parking to the numerous businesses and State government offices in the area.

In accordance with the required scope of services, the plan identifies three *feasible* land use, urban design, and landscape concepts for the site. Each conceptual land use and urban design plan contains the following elements:

- A multi-level structure accommodating from 400 – 500 parking stalls;

- A mixture of commercial, park, open-space, multi-family residential, cultural, and entertainment uses, as appropriate;

- A plan showing pedestrian and vehicular circulation patterns and connections; and

- A description of how the concept will support the implementation of the Wailuku Redevelopment Plan, and further the objective of economic revitalization in Wailuku Town.

Each concept is differentiated from one another by the degree of open space, mix of uses, number of parking stalls provided, parking structure and building designs, automobile and pedestrian circulation, landscape planting and other project and design elements. The final plan is supported by an implementation schedule, budget, and environmental assessment.

1.4 Project Organization, Methodology, and Process

1. Project Organization

As prime consultant, Chris Hart & Partners, Inc., is responsible for overall coordination of all planning and design activities. The following additional firms provided design, engineering, and planning expertise to the project:

• The Watry Group Redwood City, CA	Parking structure planning, engineering, and design;
• Maui Architectural Group Wailuku, Maui, HI	Architectural planning and design;
• Warren S. Unemori Engineering Wailuku, Maui, HI	Civil engineering;
• Phillip Rowell & Associates Honolulu, HI	Traffic engineering;
• Island Geotechnical Wailuku, Maui, HI	Soil Engineering; and
• Jill Engledow Wailuku, Maui, HI	Historical research and analysis.

The project team also received support from the Wailuku Main Street Association (WMSA) and worked closely with its Parking Structure Planning and Design Committee in the planning and design of the proposed parking structure.

2. Methodology and Process

Wailuku Town's residents, merchants, and professionals have championed the redevelopment of the Wailuku Municipal Parking lot to accommodate additional parking for over a decade. This report is a culmination of previous planning efforts, and draws heavily upon research, analysis, and community outreach programs conducted during the preparation of the following planning documents:

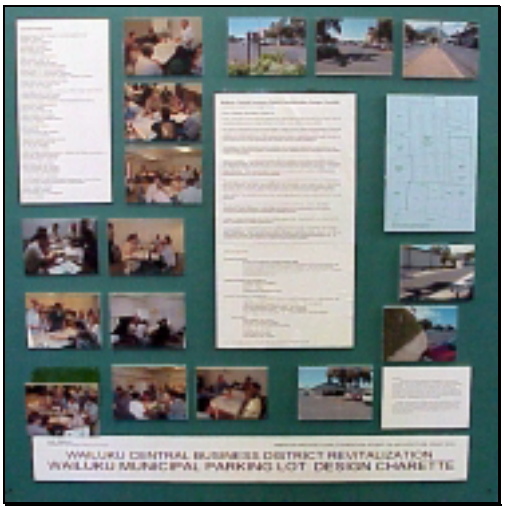


Figure 1. AIA Maui sponsored design charette.

- The Wailuku Redevelopment Plan (December 2000);
- The Final Report for the Wailuku Municipal Parking Lot Design Charette prepared by the AIA Maui (September 2000);
- Parking lot plans and information prepared by the Wailuku Main Street Association (WMSA);
- The Market Street Beautification Plan (April 1997); and
- The Wailuku Redevelopment Area Design Guidelines (July 1997).







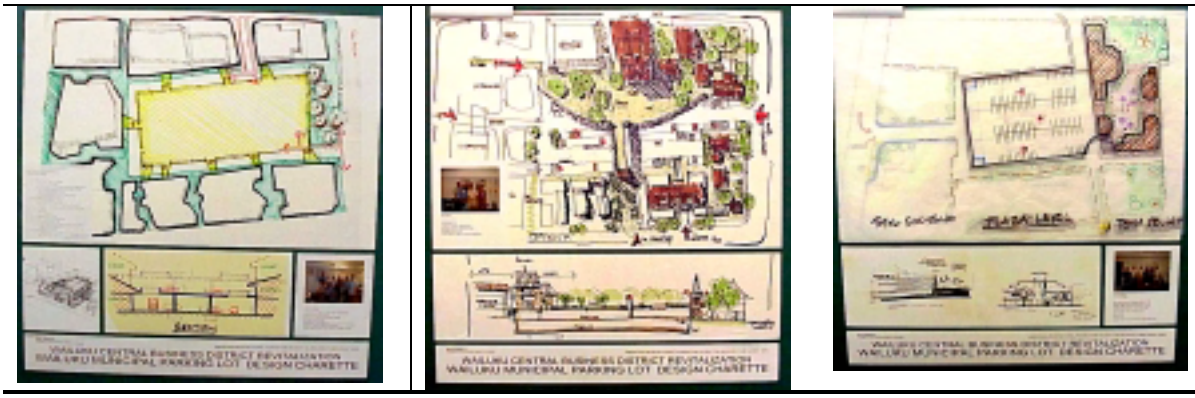
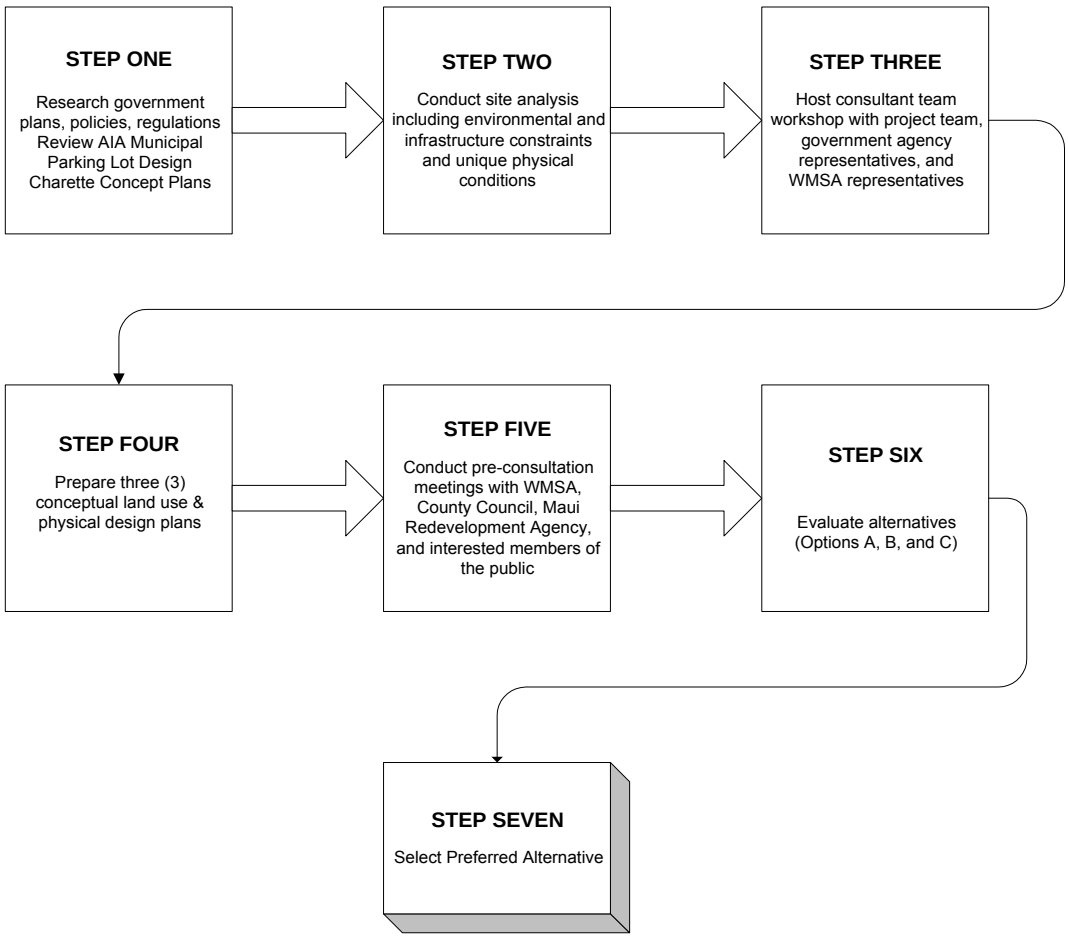


Figure 2. Wailuku Municipal Parking Lot Design Charette Team Concepts

The planning and design process was conducted in several steps. These steps included conducting research of prior plans and regulatory requirements, site analysis, and community pre-consultation. The following diagram depicts the planning process.

PLANNING PROCESS



3. Urban Design Principles:

Wailuku Town is a small compact mixed-use community nestled at the foot of the West Maui Mountains with dramatic views of the Pacific Ocean and the Iao Valley. Originally developed during the 1860's to serve Wailuku Sugar Company, the town quickly expanded to become Maui's commercial and government center. Narrow streets fronted by sidewalks and backed by a mixture of small irregularly shaped lots define the scale of the town. The town's primary commercial roadways – Main Street, Market Street, Vineyard Street, and Church Street abut the project site. Development along these roadways is characterized by compact, mixed-use development, and buildings close together and close to the street. Buildings abutting the project site are typically two- and three story structures with traditional western / plantation era architectural detailing. The character of the land uses, building forms, and roadways that abut the project site largely defines the commercial district's sense of place.



Figure 3. Looking west on Main Street.



Figure 4. Looking north on Market Street.

In consideration of the unique architectural heritage, scale, and character of Wailuku Town the consultant team determined that the following urban design principles should guide development of the site:

- Maintain the existing ***traditional small town commercial character***.
- Encourage ***high density, small-scale variety, and diversity*** in building design.
- Provide through-block access ways between the municipal parking lot and adjacent blocks to ***enhance pedestrian circulation and access***.
- Maintain a ***scale and mass that is consistent*** with the existing two- and three-story building forms along Main, Church, Market, and Vineyard Streets.
- ***Leverage existing building envelopes*** around the site to minimize the impact of the scale and mass of the parking structure.
- ***Protect and maintain established mauka and makai view corridors***.

- Utilize ***architectural themes that compliment*** surrounding architectural styles and are consistent with the Wailuku Redevelopment Area Design Guidelines.

- Promote the use of ***street trees along the abutting roadways***.

4. Implementation

Once a preferred alternative is chosen, an environmental assessment will be prepared and processed through the State Office of Environmental Quality Control. Thereafter, the County will acquire funding through a combination of public and private sources to implement the plan (See: Part Nine, "Implementation").

SITE DEVELOPMENT ANALYSIS









PART TWO SITE DEVELOPMENT ANALYSIS

Prior to preparing concept plans, a site development analysis was conducted to determine unique environmental, physical, and infrastructure constraints to be considered during the planning process. The following factors were evaluated:

1. ***Physical Environment:***

    - Size and shape of parcel;
    - Topography;
    - View corridors;
    - Wind and sun directions; and
    - Soil characteristics.

2. ***Regional and on-site infrastructure capacity.***

3. ***Automobile and pedestrian circulation.***

4. ***Relationship to surrounding buildings and land uses.***

5. ***Impact of established governmental plans, policies, and guidelines on development.***

PART TWO --
Site Development Analysis

2.1 Physical Environment

- *Location, size and shape of parcel*
- *Topography*
- *View corridors*
- *Wind and sun direction*
- *Soil characteristics*

The Wailuku Municipal Parking Lot is a roughly rectangular shaped 2.193-acre asphalt paved parcel situated within the core of Wailuku Town's commercial district. The parcel measures approximately 300 feet wide and 800 feet deep and is bound by Market Street to the east, Church Street to the west, Vineyard Street to the north, and existing commercial development and Main Street to the south.

The project site slopes approximately 2% from west to east. Elevations range from 296 feet at the west/northwest corner to 283.5 feet at the east/southeast corner. Uninterrupted views of the Iao Valley and West Maui Mountains exist from the east end of Pili Street. Unobstructed views of the Pacific Ocean exist from the west end of Pili Street and expansive views of Haleakala exist from Vineyard Street.

Tradewinds prevail from the northeast. The sun traverses the project site in an east to west direction. Neither tradewinds nor sunlight is significantly impacted by adjacent development.

The site is located in an area designated as Wailuku silty clay, 3 to 7 percent slopes (Wvb). The Wailuku series consists of well-drained soils on alluvial fans on the island of Maui. The shrink swell potential is low. The topographic and soil analysis suggests that the proposed development is suitable for the site.



Figure 5. Mauka and Makai views from Pili Street.

2.2 Regional and on-site infrastructure capacity

- *Roadways*
- *Water Systems*
- *Drainage facilities*

2.3 Automobile and pedestrian circulation

- *Market Street, Vineyard Street, Church Street and Main Street*

2.4 Relationship to surrounding buildings and land uses

- *Land Use Pattern*
- *Architecture*
- *Building Heights*
- *Uses*

The land use pattern in the area is characterized by compact, mixed-use development, and buildings close together and close to the street. Main Street, Market Street, Vineyard Street, and Church Street are narrow interconnected roadways that provide little opportunity for road widening. These streets operate at close to capacity during peak travel periods. Buildings abutting the project site are typically two and three story structures with traditional western / plantation era architectural detailing. Land uses are diverse and include offices, boutique retail, performing arts, banks, restaurants, boarding houses, and single-family residences.

The project site serves as the principal source of public parking for numerous businesses and State government offices in the immediate area.

Regional and on-site infrastructure capacity are major development constraints affecting Wailuku Town. Main Street, Market Street, Vineyard Street, and Church Street are all substandard roadways. Narrow pavement widths are the most common problem. Upgrading of the many roads to County standard is not practical because of narrow right-of-way widths (Maui Redevelopment Plan, 2000). Water, sewer, and drainage infrastructure is also substandard and will require a considerable amount of investment from public and private sources to accommodate future development.

Automobile circulation into and from the site occurs from Market Street and Church Street via Pili Street and from Vineyard Street. Main Street is a two-lane State Highway that is the primary arterial through Wailuku Town. Market Street is a one-way street that links Main Street with Vineyard Street and provides a combination of parallel and angled parking along both sides of the roadway. Vineyard Street is a two-lane roadway providing two-way traffic flow in an east west direction. Church Street is a one-way roadway providing access from Vineyard Street in a southerly direction to Main Street.

Pedestrian access is provided from Church and Market Streets via Pili Street and from Vineyard Street. Pedestrian access also occurs from Market Street via a pedestrian way situated between the First Hawaiian Bank building and 33 Market Street and from Main Street via a pedestrian way situated along the western boundary of the Main Street Promenade.

2.5 Impact of governmental plans, policies, and guidelines on development

- *Maui Redevelopment Area Plan*
- *Wailuku Redevelopment Area Zoning and Development Code*
- *Redevelopment Area Design Guidelines*

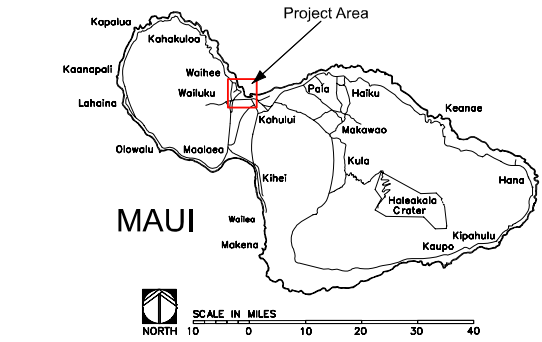
2.6 Analysis of development constraints and opportunities

Land use plans and controls that affect the project site include the Wailuku Redevelopment Area Plan, the Wailuku Redevelopment Zoning and Development Code, and the Wailuku Redevelopment Area Design Guidelines. The primary affect of these plans is to limit the maximum building height on the property to 45 feet and to require consistency with the urban design principles, guidelines, and policies set forth in the plans. Furthermore, any future use of the site will require review and approval of the Maui Redevelopment Agency.

The Redevelopment Plan's Action Chart: Land Use (LU-3) and Action Chart: Vehicular and Pedestrian Circulation (VPC-3, 6, and 9) identifies a two-pronged redevelopment strategy for the site focusing on creating additional parking along with activity generating mixed land uses. The Plan also calls for parking to be provided on other sites as well, i.e. satellite surface parking lots along Central Avenue and in Happy Valley.

Analysis of Development Constraints and Opportunities: The subject property offers unique attributes that make it highly desirable for a multi-story parking structure with a complimentary commercial mixed-use component. The subject property is in a highly strategic location within the core of the commercial district and is accessible from Main, Market, Church, and Vineyard Streets. From a land suitability perspective, the subject property offers favorable form and size, topography, drainage, and soils, which makes it highly developable.

Development constraints primarily relate to the capacity of supporting roadways and intersections to accommodate additional traffic. In addition, land use regulations constrain building heights to approximately 45-feet and require that future development conform to the urban design principles, policies, and guidelines set forth in the Maui Redevelopment Plan and Wailuku Redevelopment Area Urban Design Guidelines.





VIEW OF SITE - LOOKING EAST FROM
6th FLOOR OF 'ONE MAIN PLAZA'



Figure 6. Aerial Photographs

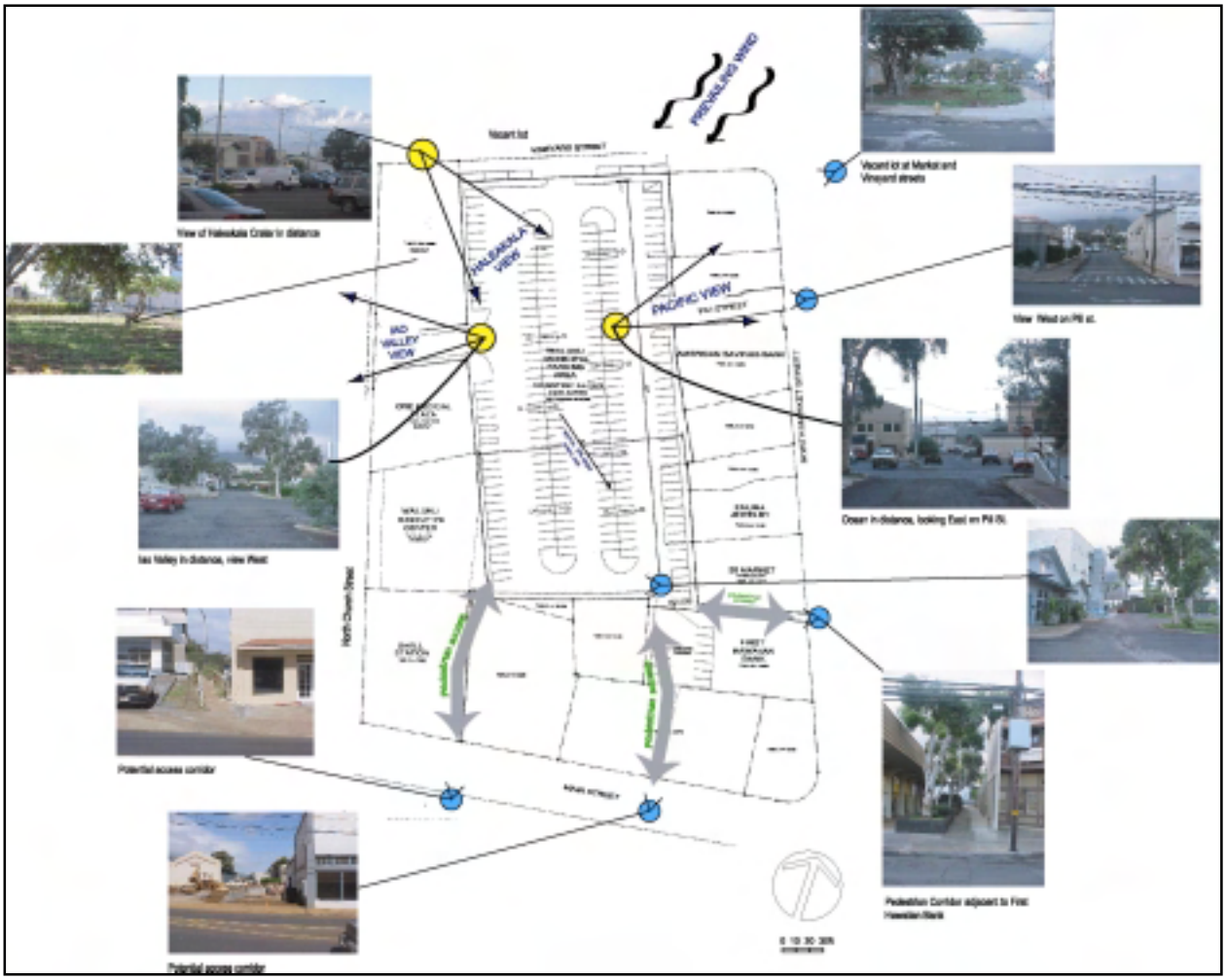


Figure 7. Site Development Analysis

Streetscapes

Main Street. A two-lane State Highway providing primary access into and from Wailuku Town. The street is curbed with sidewalks on both sides. Main Street bounds the southern boundary of the project.




Main St.

Market Street. Wailuku Town's densest commercial strip. Market Street, between Main and Vineyard Streets, is restricted to one lane of traffic traveling north. The street is curbed with parking and sidewalks on both sides. Market Street bounds the eastern boundary of the project.




Market St.

Vineyard Street. Vineyard Street is a two-lane collector roadway. Sidewalks are located intermittently along both sides of the street. Vineyard Street bounds the northern boundary of the project.




Vineyard St.

Church Street. Church Street is restricted to one lane of traffic traveling south between Vineyard and Main Street. Church Street bounds the western boundary of the project.




Church St.

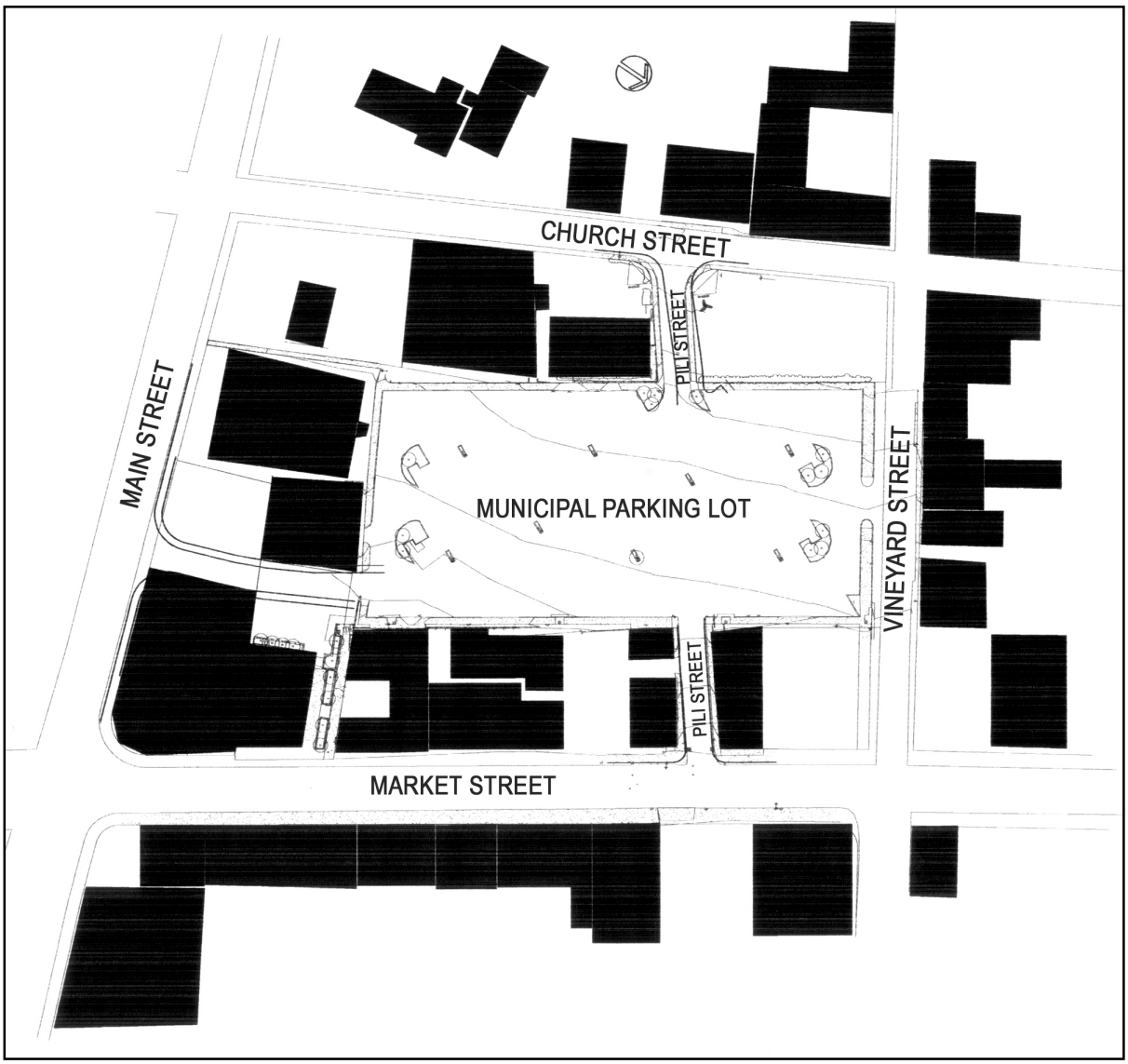


Figure 8. Building Footprints

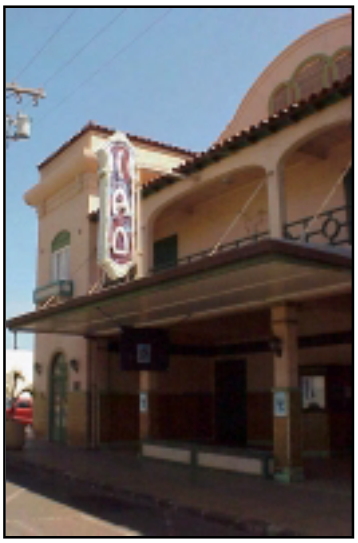
Parcel configuration within the area is poor, with 57 percent of the lots being small and substandard, large and irregularly shaped, or landlocked. (Maui Redevelopment Plan, December 2000). According to the Maui Redevelopment Plan, 55 percent of the parcels in the area have structures located on them that are in need of repair. A major obstacle to the adaptive reuse and redevelopment of parcels is the requirement to provide off-street parking. A centralized parking structure will provide relief for neighboring property owners when lots are too small to accommodate parking on-site.

LAND USE AND URBAN DESIGN









PART THREE LAND USE AND URBAN DESIGN

3.1 Site Planning & Urban Design

The primary purpose of the redevelopment is to increase the supply of parking within the commercial core and to identify new activity generating land uses that will facilitate revitalization. Development of the site should seek to accomplish these objectives while being sensitive to the scale and quality of the traditional small town.

Redevelopment of the site should therefore seek to minimize the scale and massing of the structure. Likewise, future development along the adjacent streets should be of proper proportion so as not to dominate and overbear neighboring buildings.



Figure 9. View of site from the 6th floor of 'One Main Plaza'.

The site should be planned so that pedestrian and vehicular circulation is efficiently provided. Moreover, ample land area to accommodate an attractively designed, mixed-use project should be incorporated into the site plan. Such a project will help to revitalize the redevelopment area by attracting residents and visitors downtown throughout the day and on evenings and weekends.

In keeping with these objectives, the proposed plan leverages the existing building envelopes around the site to minimize the impact caused by the scale of the proposed structure. For this reason, the parking structure has been placed south of Pili Street and Pili Street has been reestablished as a through street connecting Church and Market Streets. Pili Street creates a natural buffer between the parking structure and a future mixed-use project that could be developed on the remnant 20,500 square feet parcel.



Figure 10. Circulation Plan.

The remnant parcel has double frontage along Vineyard and Pili Streets and is a highly desirable location for development. Development of the remnant parcel should encourage high density, small-scale variety, and diversity in building design so as to compliment surrounding architectural styles and be consistent with the Wailuku Redevelopment Area Design Guidelines.

SCALE AND MASSING

A multi-level parking structure, by its very nature, can be a dominating and imposing structure on the built environment. To mitigate the impact caused by the scale and massing of the structure, the building has been placed within the existing building envelope south of Pili Street. Pili Street creates a tree-lined buffer between the structure and the remnant parcel. Future development on the remnant parcel should be consistent with the existing two- and three-story building forms along Church, Market, and Vineyard Streets.

VEHICULAR & PEDESTRIAN CIRCULATION

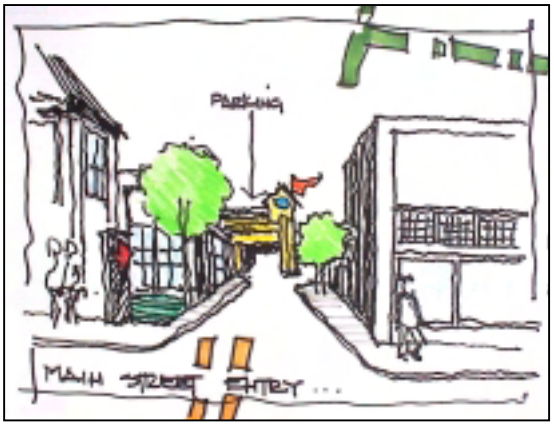


Figure 11. Main Street Entry to the parking structure provides convenient vehicular and pedestrian access.

Livable cities and towns provide safe, efficient, and aesthetically pleasing roadways for the citizenry. Pedestrian traffic is separated from vehicular travel lanes and traffic-calming measures allow for the comfortable interface of the vehicle and pedestrian. In the context of a commercial core, pedestrian linkages between activity areas should be plentiful and diverse and include landscaped sidewalks abutting roadways and formal and informal pedestrian ways between buildings and across public and private spaces. The proposed master plan increases vehicular and pedestrian commuting efficiencies through the re-establishment of Pili Street and by formalizing existing pedestrian ways along Main, Market, Vineyard, and Church Streets.



Figure 12. Pili Street Entry to Parking Structure.

Vehicular access into the structure is provided from the major roadways including Main, Market, and Church Streets. Access into the garage from Vineyard Street is not recommended because of its impact on the intersection of Market and Vineyard Street and because it would significantly decrease the development potential of the remnant parcel. The proposed design incorporates a generous service alley around the structure to accommodate delivery vehicles, refuse vehicles, and fire trucks. This service alley has been enhanced to accommodate parallel parking, sidewalks, and landscape planting between the structure and Market Street.
Pedestrians will exit the structure from stairwells located in each corner of the structure. In addition, an elevator is

provided at the southeast corner to provide direct and convenient access to the corner of Market and Main Street, the busiest intersection downtown.



Figure 13. Pedestrian way from Market Street alongside the First Hawaiian Bank.

VIEW CORRIDORS

Wailuku's charm and unique sense of place results from its traditional buildings, narrow streets, and natural beauty resources. Being nestled at the foot of the West Maui Mountains, Wailuku Town offers dramatic views of the Iao Valley, Haleakala, and the Pacific Ocean. These views are unique resources that directly enhance the quality of life on Maui and should be preserved wherever possible. The proposed plan provides for the preservation of Mauka and Makai View corridors along Pili Street. However, views of Haleakala from Vineyard Street will be unavoidably impacted by any development that fronts Vineyard Street.

ON-STREET PARKING

Providing an adequate supply of on-street parking is critical to the economic success of any downtown commercial area. Angled parking is generally preferable to parallel parking since it offers greater convenience and is more efficiently provided. The land use plan proposes an additional twenty-six on-street parking stalls, of which sixteen are angled stalls along Pili Street, and ten are parallel stalls along the Market Street service alley.

LANDSCAPE TREATMENTS

Landscape planting of primarily canopy shade trees is used to provide definition to Pili Street, the Market Street Service Alley, and the driveway connecting the garage to Main Street. The trees will also serve to soften the scale and massing of the parking structure, provide shade, calm traffic, and offer pedestrians a pleasant walking experience. The species selected should be similar to the ones being proposed along Market Street, in order to provide for a critical mass of colors and a unifying theme.

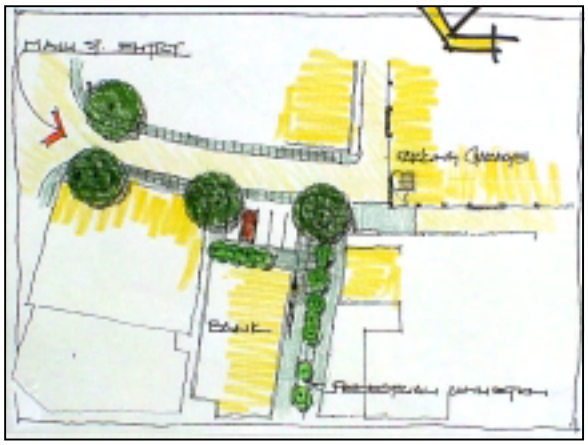


Figure 14.. Landscape planting provides definition to roadways.

PARKING STRUCTURE DESIGN

The scale and massing of the proposed structure, and its location within the core of the commercial district, demands that it be designed in a manner that compliments surrounding architectural styles and is consistent with the Wailuku Redevelopment Area Design Guidelines. The structure will likely be the single largest building within the redevelopment area. Three sides of the structure will be significantly buffered by existing multi-story buildings and will therefore require less elaborate treatments. However, the Pili Street façade will be directly visible from Pili, Market, Church, and Vineyard Streets; thereby, demanding greater attention to architectural detailing.



Figure 15. Balanced, Past and Present architectural theme.

The primary goal of the design team is to develop an architectural theme that is sensitive to the local architectural vernacular and yet honest in design. The main focal points of the structure are the stair and elevator towers located at the corners. The towers break-up the massing of the structure by giving the building a vertical emphasis and creating interest by featuring a hollow tile roof similar in character to the Iao Theatre. The structures detailing in brick, metal accents and textured concrete relates the structure to nearby historical buildings. A rich variety of architectural forms are utilized to provide an overall handsome treatment of a service structure.

REMNANT PARCEL

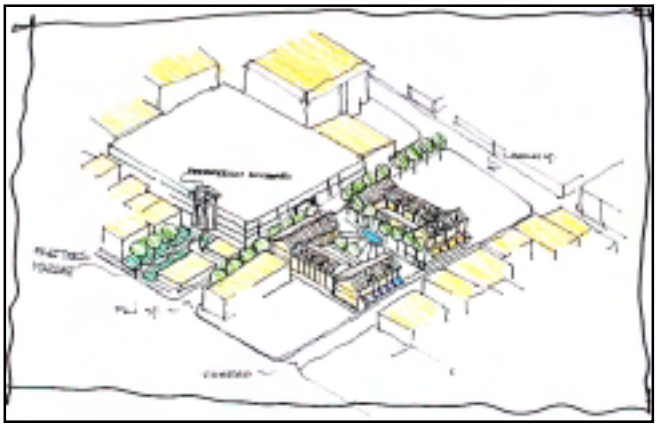


Figure 16. Residential Mixed-Use theme.

The remnant parcel should be developed as a cultural / entertainment and / or residential mixed-use project in order to facilitate the economic revitalization of the redevelopment area. Emphasis should be placed on uses that attract residents and visitors downtown Monday through Friday and during evening and weekend hours. The resultant increase in consumer spending will significantly benefit area businesses that offer goods and services to this market. The two- and three-story project would provide an architecturally diverse streetscape compatible with existing buildings along Market and Vineyard Streets. Buildings would be built close together and oriented towards the sidewalks to facilitate an active, lively, and interesting pedestrian experience.

From an economic revitalization perspective, it is the team's professional opinion that Municipal Office Space is a less desirable land use for the area since the buildings would be largely vacant

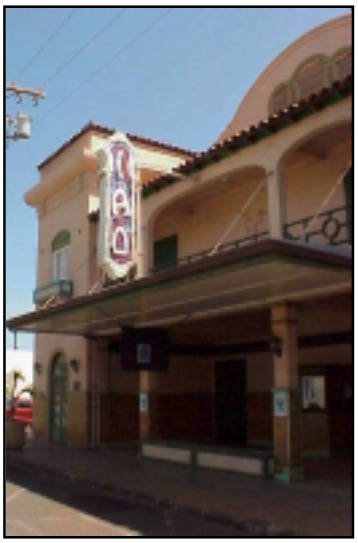
during evening and weekend hours and municipal employees would compete with surrounding property owners for parking. As such, a project focusing on municipal office space is unlikely to facilitate economic revitalization and may well be counterproductive.

PARKING STRUCTURE ALTERNATIVES





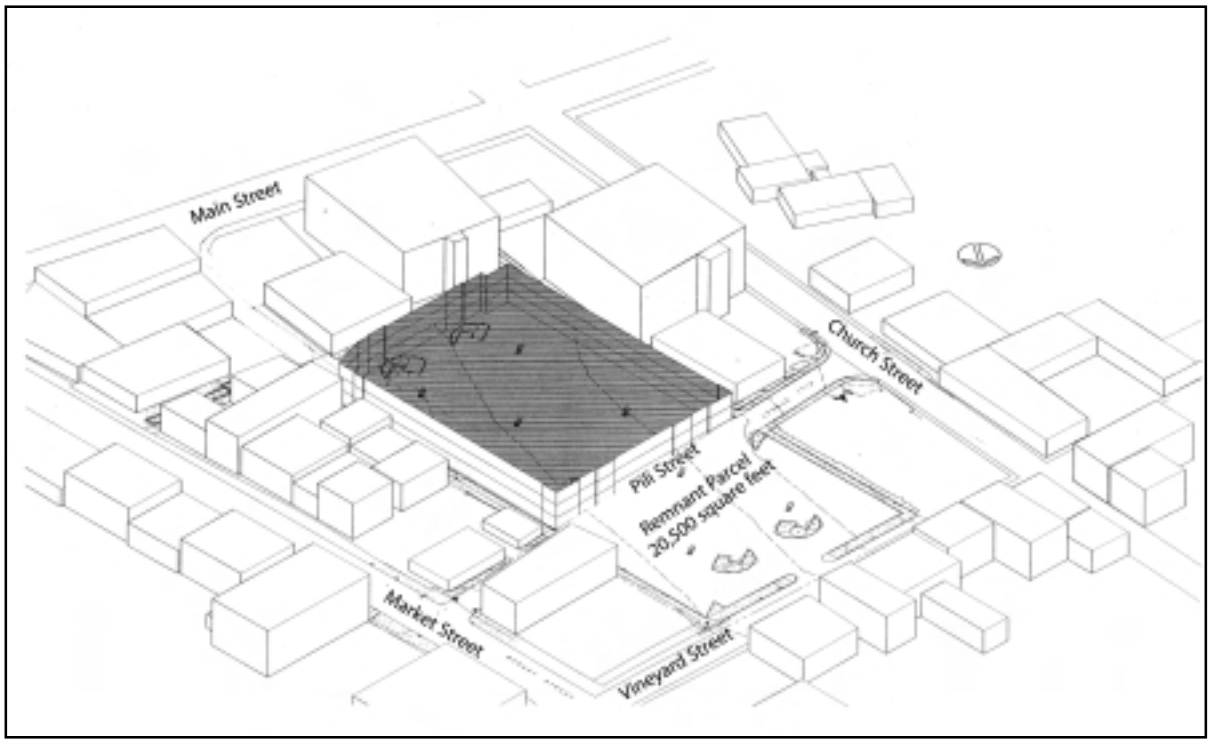




PART FOUR PARKING STRUCTURE ALTERNATIVES

4.1 Parking Structure Alternatives

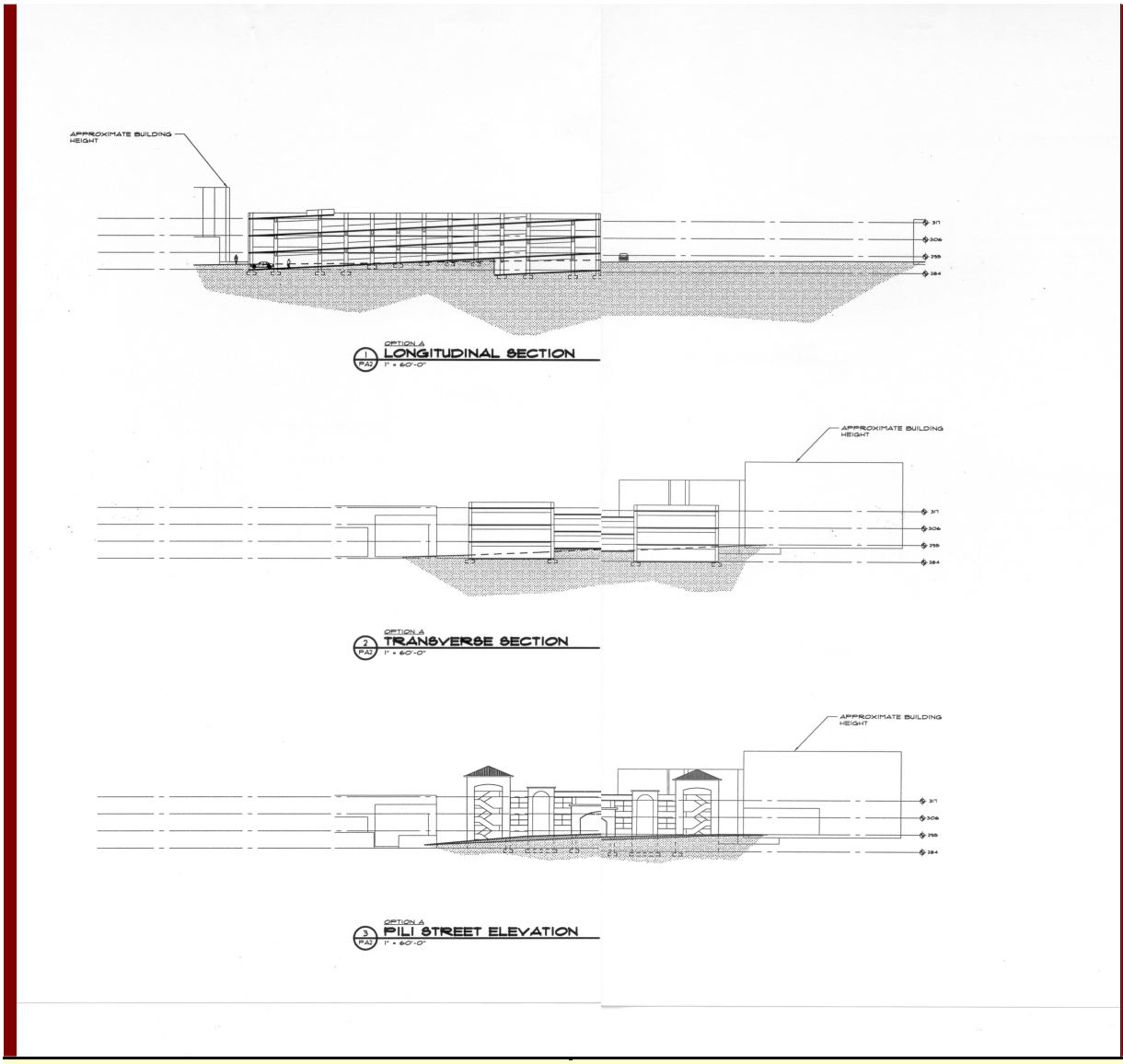
Three parking structure options – A, B, and C – were analyzed during the preparation of the master plan. Unique costs and benefits are associated with each option. After careful analysis the preferred plan, Option PC-1, incorporates the best features of Options A, B, and C. The following describes the parking structure alternatives:



Option A – Four-level parking structure that re-establishes Pili Street

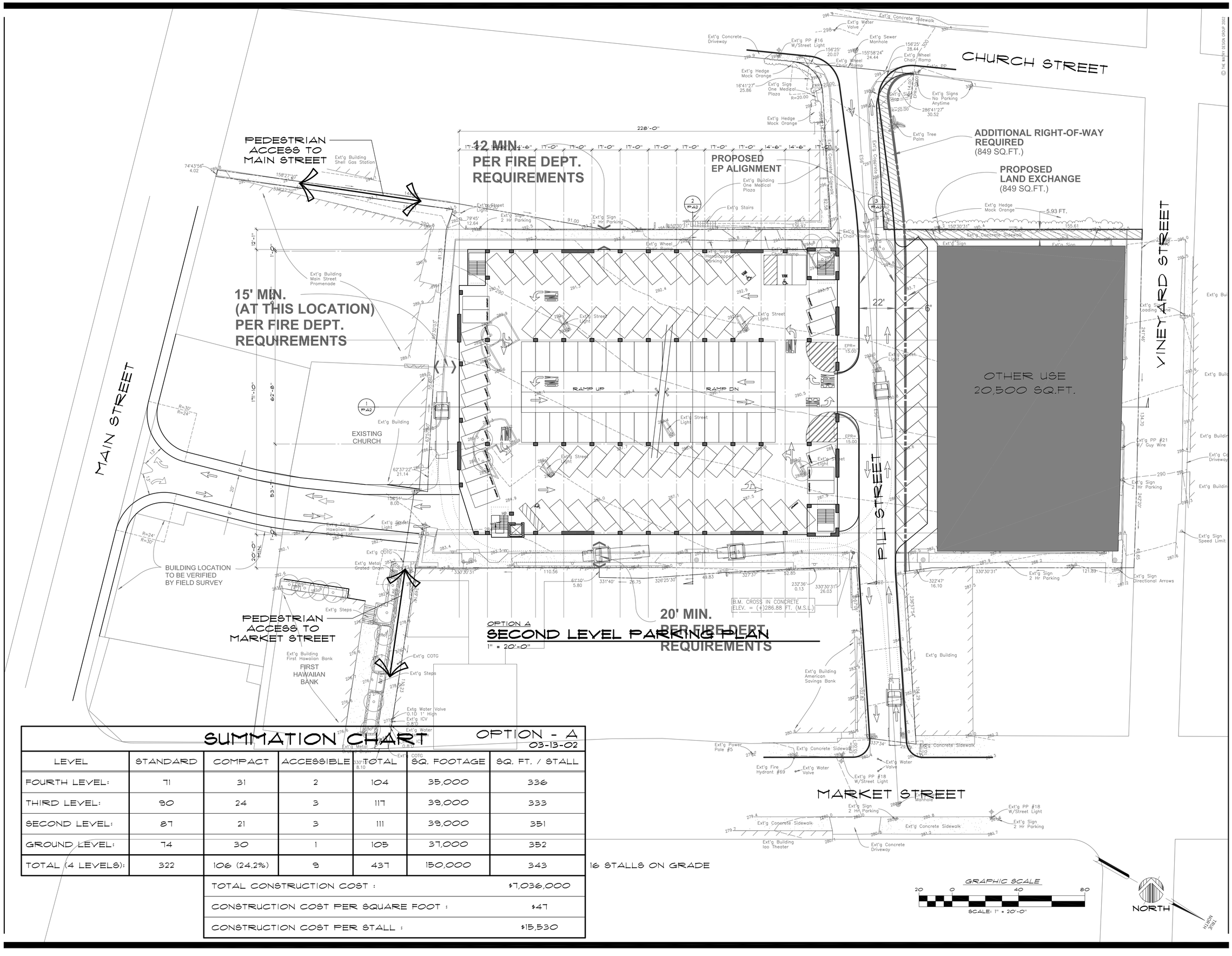
Option "A" is a four-level parking structure that provides 437 stalls within the structure and 16 angled stalls on grade. The total stalls provided are 453. Option "A" re-establishes Pili Street and preserves approximately 20,500 square feet for future development along Vineyard, Church, and Market Streets. Option "A" provides angled parking within the structure and has been designed as a three-bay structure allowing for one-way ingress and egress from the garage. Approximately 24 percent of the stalls within the structure are compact. Option "A" has a service alley of approximately 20 feet along Market Street, 15 feet at the rear of the structure, and 12 feet along Church Street.

Option "A" is tucked into the established building envelope thereby minimizing its visual intrusion upon public roadways. Mauka and Makai view corridors are preserved along Pili Street and pedestrian and vehicular circulation patterns are enhanced.



Option A—Summary:

- Four (4) level structure
- Re-establishes Pili Street
- Angled parking
- 20,500 S.F. for future development
- Three-bay structure provides one-way traffic circulation
- Twenty-four (24) percent of stalls are compact
- 437 stalls within structure
- 16 angled stalls on grade
- Total of 453 stalls
- Estimated total project cost is $8,228,602
- Estimated excess land value is $922,500
- Estimated factored project cost is $7,306,102
- Estimated factored cost / stall is $16,126
- Estimated factored cost / new stall is $29,820



OPTION A

SECOND LEVEL PARKING PLAN

1" = 20'-0"

SUMMATION CHART — OPTION - A

03-13-02

LEVEL	STANDARD	COMPACT	ACCESSIBLE	TOTAL	SQ. FOOTAGE	SQ. FT. / STALL
FOURTH LEVEL:	71	31	2	104	35,000	336
THIRD LEVEL:	90	24	3	117	39,000	333
SECOND LEVEL:	87	21	3	111	39,000	351
GROUND LEVEL:	74	30	1	105	37,000	352
TOTAL (4 LEVELS):	322	106 (24.2%)	9	437	150,000	343

16 STALLS ON GRADE

TOTAL CONSTRUCTION COST :	$7,036,000
CONSTRUCTION COST PER SQUARE FOOT :	$47
CONSTRUCTION COST PER STALL :	$15,530

GRAPHIC SCALE
20 0 40 80
SCALE: 1" = 20'-0"

NORTH
TRUE NORTH

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WATRY DESIGN, INC.
815 Hamilton Street
Redwood City, California 94063
Tel: 650.298.8150
Fax: 650.298.8151
E-mail: wdi@watrydesign.com
www.watrydesign.com

GROUND LEVEL PARKING PLAN

WAILUKU MUNICIPAL PARKING STRUCTURE

WAILUKU, MAUI, HAWAII

CONCEPTUAL DESIGN

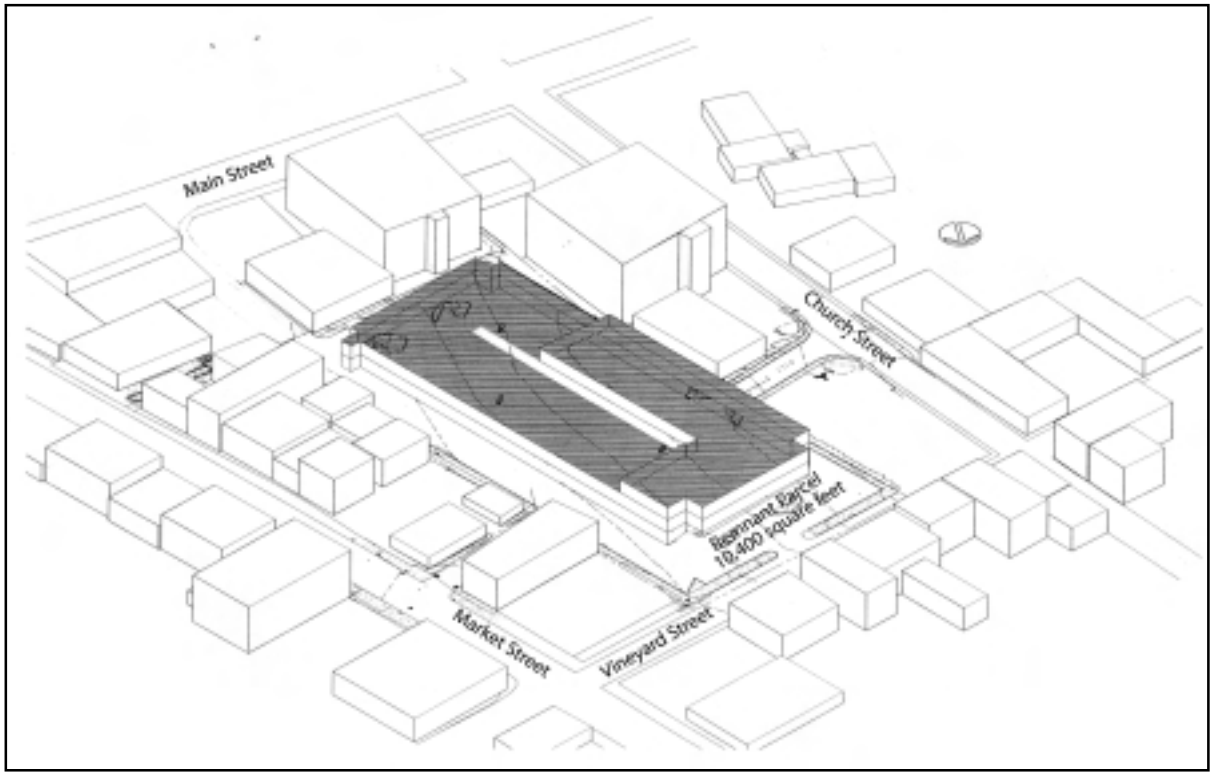
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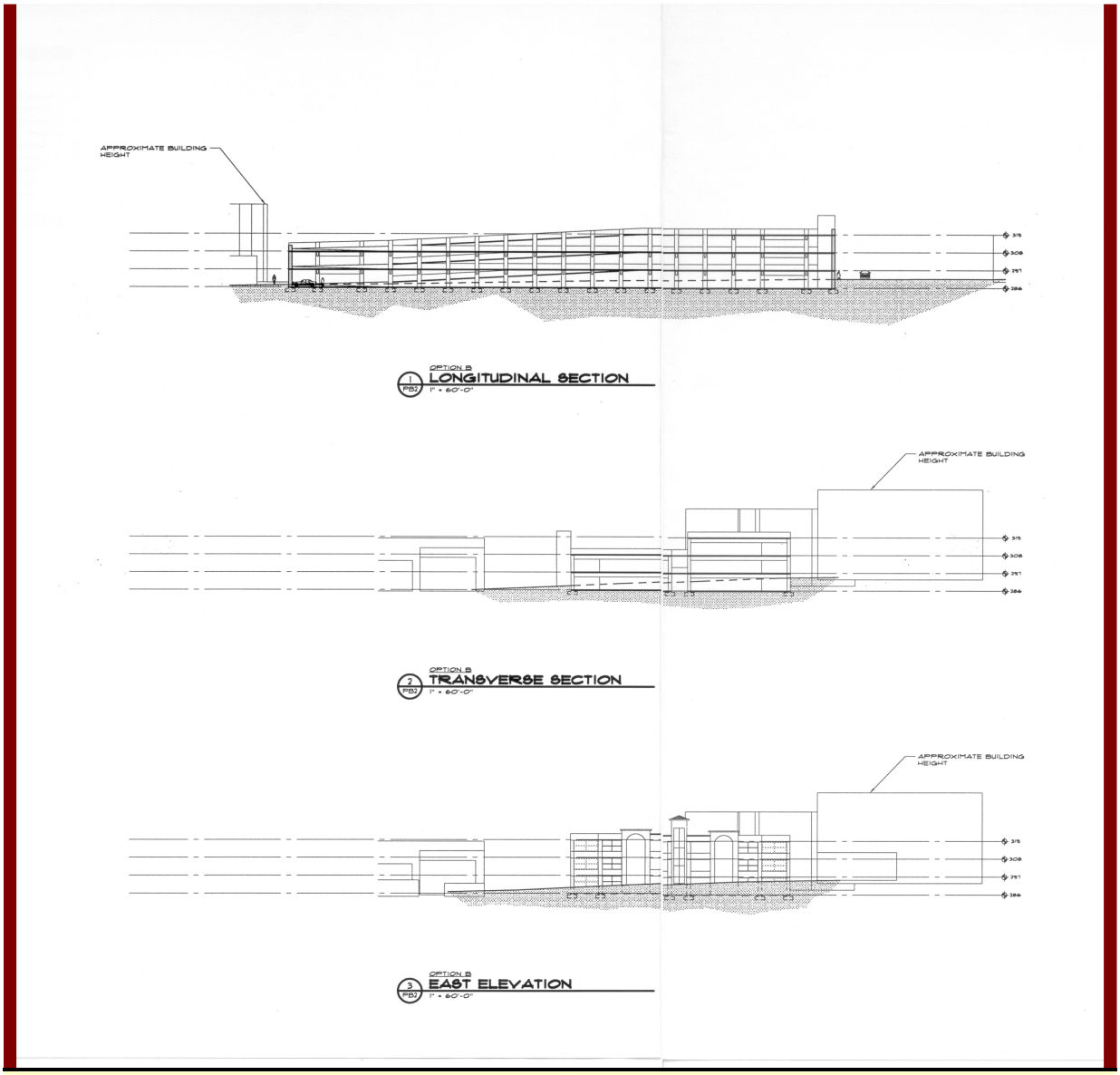
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Option B – Three and four-level parking structure that extends beyond Pili Street



Option "B" is a three and four-level parking structure that provides 465 stalls within the structure and 13 parallel stalls on grade. The total stalls provided are 478. Option "B" extends beyond Pili Street and preserves approximately 10,400 square feet of land area for future development along Vineyard, Church, and Market Streets. Option "B" provides 90 degree parking within the structure and is a two-bay structure resulting in two-way traffic circulation within the structure. Approximately twenty-one percent of the stalls within the structure are compact. Option "B" provides for a service alley of approximately 45 feet along Market Street, 15 feet at the rear of the structure, and 12 feet along Church Street.

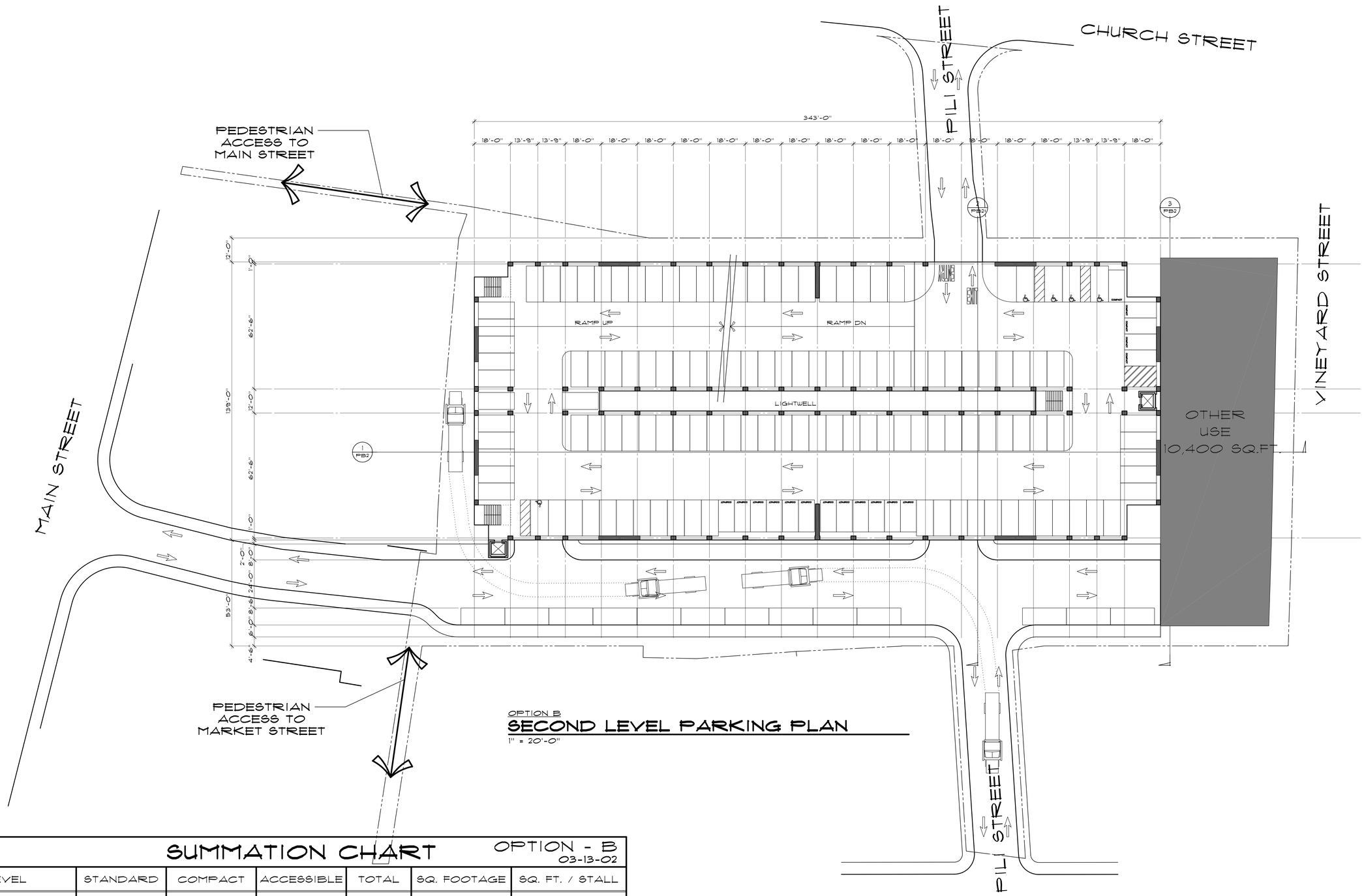
Option "B" allows for a more generous service alley around the structure. However, Option "B", due to its increased length, produces greater visual intrusions upon adjacent roadways, eliminates mauka and makai view corridors along Pili Street, and constrains future re-development opportunities along Vineyard Street.



Option B—Summary:

- Three (3) and four (4) level structure
- Extends beyond Pili Street
- 90 degree parking
- Two-bay structure resulting in two-way traffic circulation
- 10,400 S.F. for future development
- Light-well within structure
- Twenty-one (21) percent of stalls are compact
- 465 stalls within structure
- 13 parallel stalls on grade
- Total of 478 stalls
- Estimated total project cost is $8,208,721
- Estimated excess land value is $416,000
- Estimated factored project cost is $7,792,721
- Estimated factored cost / stall is $16,302
- Estimated factored cost / new stall is $28,861

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OPTION B

SECOND LEVEL PARKING PLAN

1" = 20'-0"

SUMMATION CHART

OPTION - B
03-13-02

LEVEL	STANDARD	COMPACT	ACCESSIBLE	TOTAL	SQ. FOOTAGE	SQ. FT. / STALL
FOURTH LEVEL:	32	29	0	61	18,300	300
THIRD LEVEL:	127	24	0	151	44,900	297
SECOND LEVEL:	119	17	5	141	44,900	318
GROUND LEVEL:	78	30	4	112	38,600	345
TOTAL (4 LEVELS):	356	100 (21.5%)	9	465	146,700	315

13 STALLS ON GRADE

TOTAL CONSTRUCTION COST :	$7,019,000
CONSTRUCTION COST PER SQUARE FOOT :	$48
CONSTRUCTION COST PER STALL :	$14,680

GRAPHIC SCALE
20 0 40 80
SCALE: 1" = 20'-0"

NORTH

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WATRY DESIGN, INC.

815 Hamilton Street
Redwood City, California 94063
Tel: 650.298.8150
Fax: 650.298.8151
E-mail: wdi@watrydesign.com
www.watrydesign.com

GROUND LEVEL PARKING PLAN

WAILUKU MUNICIPAL PARKING STRUCTURE

WAILUKU, MAUI, HAWAII

CONCEPTUAL DESIGN

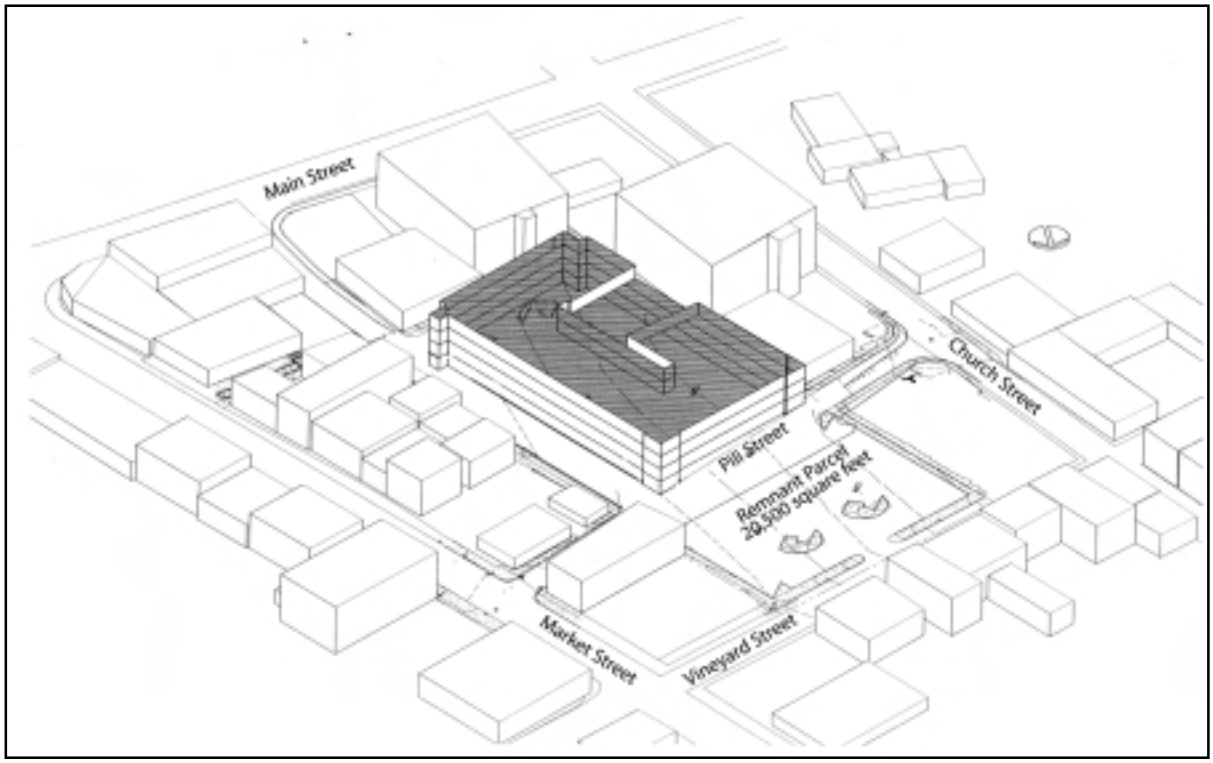
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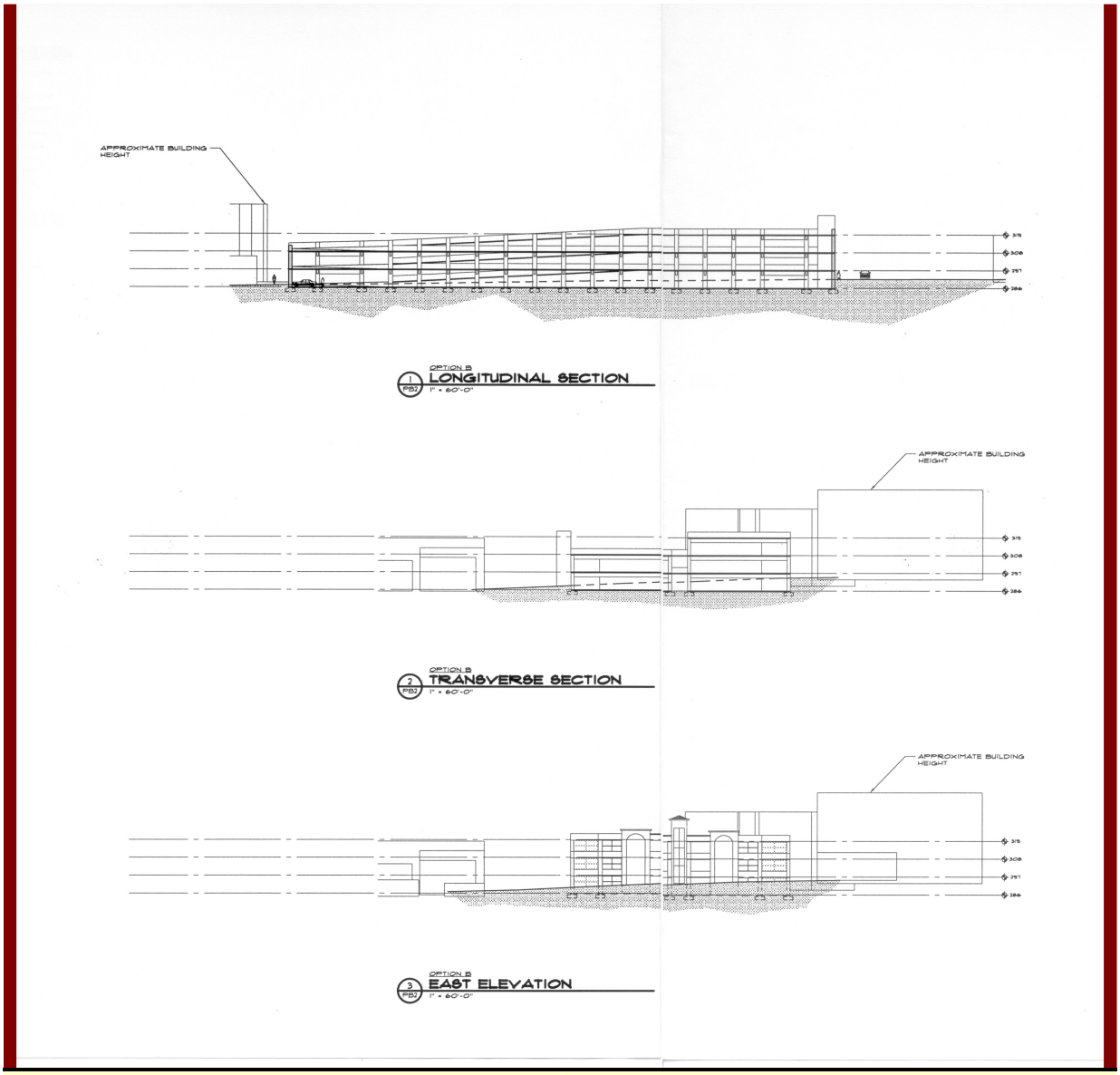
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Option C – Five-level parking structure that re-establishes Pili Street



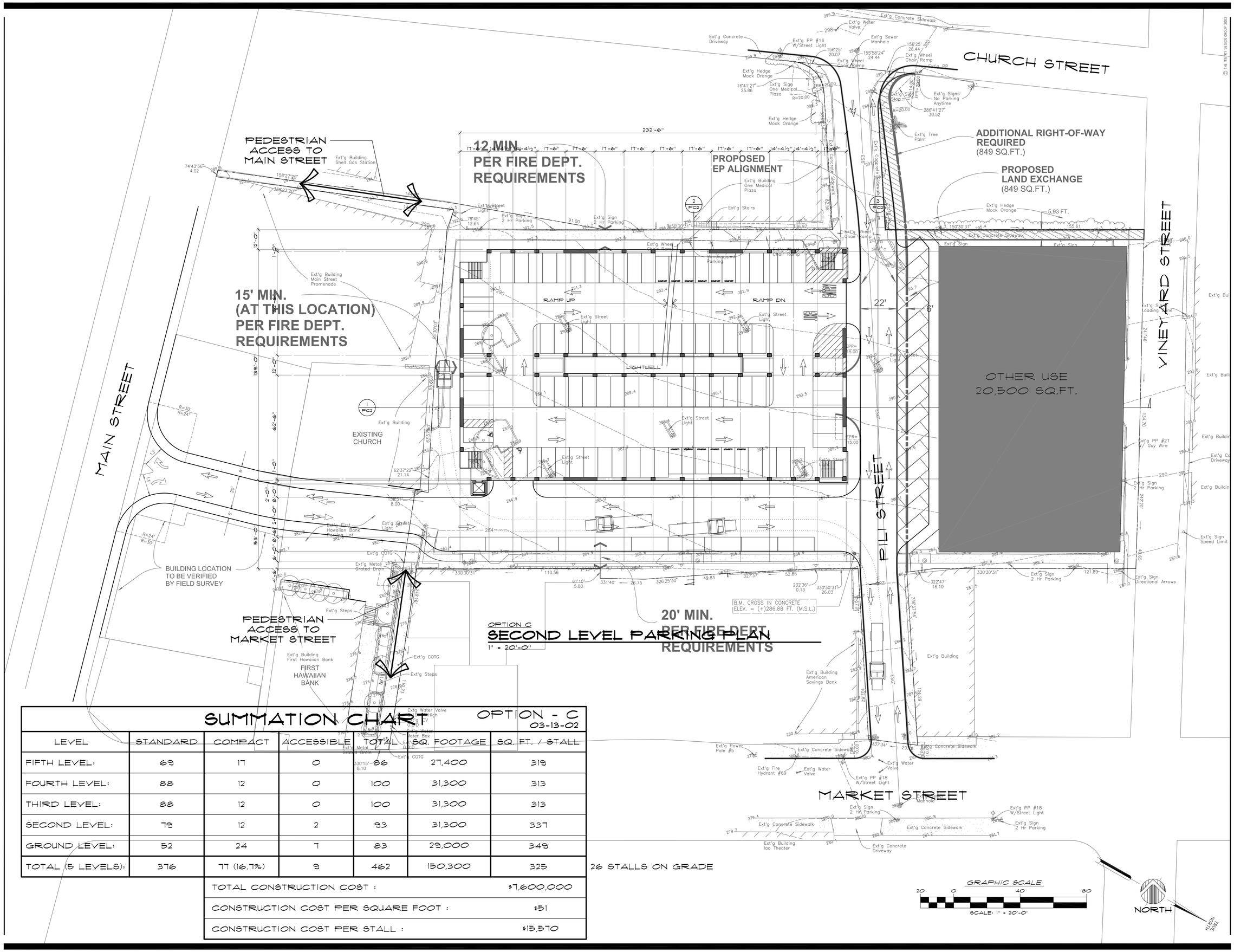
Option "C" is a five-level parking structure that provides 462 stalls within the structure and 26 angled stalls on grade. The total stalls provided are 488. Option "C" re-establishes Pili Street and preserves approximately 20,500 square feet for future development along Vineyard, Church, and Market Streets. Option "C" provides parallel parking within the structure and has been designed as a two-bay structure allowing for two-way traffic circulation within the structure. Approximately 17% percent of the stalls within the structure are compact. Option "C" has a service alley of approximately 45 feet along Market Street, 15 feet at the rear of the structure, and 12 feet along Church Street.

Option "C" is tucked into the established building envelope thereby minimizing its visual intrusion upon public roadways. However, Option "C" is a taller structure and exceeds the 45-feet height requirement. Option "C" preserves Mauka and Makai view corridors along Pili Street.



Option C—Summary:

- Five (5) level structure
- Re-establishes Pili Street
- 90 degree parking
- 20,500 S.F. for future development
- Light-well within structure
- Approximately seventeen (17) percent of stalls are compact
- 462 stalls within structure
- 16 angled and 10 parallel stalls on grade
- Total stalls is 488
- Estimated total project cost is $8,888,200
- Estimated excess land value is $922,500
- Estimated factored project cost is $7,965,700
- Estimated factored cost / stall is $16,323
- Estimated factored cost / new stall is $28,448



OPTION C

SECOND LEVEL PARKING PLAN

1" = 20'-0"

SUMMATION CHART — OPTION - C 03-13-02

LEVEL	STANDARD	COMPACT	ACCESSIBLE	TOTAL	SQ. FOOTAGE	SQ. FT. / STALL
FIFTH LEVEL:	69	17	0	86	27,400	319
FOURTH LEVEL:	88	12	0	100	31,300	313
THIRD LEVEL:	88	12	0	100	31,300	313
SECOND LEVEL:	79	12	2	93	31,300	337
GROUND LEVEL:	52	24	7	83	29,000	349
TOTAL (5 LEVELS):	376	77 (16.7%)	9	462	150,300	325

26 STALLS ON GRADE

TOTAL CONSTRUCTION COST :	$7,600,000
CONSTRUCTION COST PER SQUARE FOOT :	$51
CONSTRUCTION COST PER STALL :	$15,570

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WATRY DESIGN, INC.

815 Hamilton Street
Redwood City, California 94063
Tel: 650.298.8150
Fax: 650.298.8151
E-mail: wdi@watrydesign.com
www.watrydesign.com

GROUND LEVEL AND SECOND LEVEL PARKING PLAN

WAILUKU MUNICIPAL PARKING STRUCTURE

WAILUKU, MAUI, HAWAII

CONCEPTUAL DESIGN

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EVALUATION OF ALTERNATIVES









PART FIVE EVALUATION OF ALTERNATIVES

5.1 Evaluation of Alternatives

Criteria	*Options*			*Comments*
	A	B	C	
Factored Project Costs	1st	2nd	3rd	Option A: $7,306,102 Option B: $7,792,721 Option C: $7,965,700
Factored Costs/Stall	1st	2nd	3rd	Option A: $16,126.00 Option B: $16,302.00 Option C: $16,323.00
No. Stalls Provided	3rd	2nd	1st	Option C: 488 Option B: 478 Option A: 453
Vehicular Circulation within Structure	1st	2nd	2nd	Option A is a 3-bay versus a 2-bay structure (Options B and C). A 3-bay structure provides superior circulation since incoming and outgoing vehicles are serviced by a one-way circulation system.
Ease of Parking	1st	2nd	2nd	Option A provides angled versus ninety degree parking (Option B and C). Option A has a greater percentage of compact stalls (24.3%) than Option B (20.5%) and Option C (16.7%).
No. Compact Stalls	3rd	2nd	1st	Option C = 16.7% Option B = 20.5% Option A = 24.3%
Urban Design Character	1st	3rd	2nd	Option A has been "tucked" into the existing building envelope south of Pili Street and is not as tall as Option C and long as Option B. Option A and C provide a roadway buffer between the structure and future development of the remnant parcel.
Impact on Public View Corridors	1st	3rd	2nd	Option A and C preserve mauka and makai view corridors along Pili Street. Option C significantly impacts views of Haleakala from Vineyard Street.
Maximize Development Potential of Remnant Parcel	1st	2nd	1st	Options A and C preserve 20,500 SF versus 10,400 SF (Option B) for future development.
Emergency Service Access Around Structure	2nd	1st	1st	Options B and C provide a more generous alley around the structure -- 45 feet along

				Market Street, 15 feet at the rear of the building, and 12 feet along the Church Street side of the property -- versus 20 feet along Market Street, 15 feet at the rear of the building, and 12 feet along Church Street (Option A). However, based upon discussions with the Fire Department, Option A meets the minimum requirements for fire access.
Land Use Opportunities at rear of Buildings along Market Street	2nd	1st	1st	Options B and C provide a wider street (approximately 45 feet versus 20 feet) between the structure and Market Street. The wider street may facilitate greater pedestrian activity along the rear of the Market Street lots, which in turn may stimulate greater business use and pedestrian activity at the rear of those lots.
Impact to Adjacent Lots	2nd	1st	2nd	Options B and C provide a greater setback from existing buildings abutting the structure, but option B is not as tall as Option C. Adequate access for emergency vehicles and loading and unloading is provided in each option, although Options A and B provide for a more generous service alley around the structure. However, Option A will have a greater impact on Makai views.

Summary Analysis:

Each option provides unique costs and benefits. Option A provides superior vehicular circulation within the structure, provides a better parking experience, is more appropriately sized and scaled, and provides a larger remnant parcel that could be sold or leased to help defray the costs associated with the project and to support economic revitalization. Option A, however, provides only a minimum service alley around the site and is built closer to neighboring properties.

Option B provides a more generous service alley around the structure, but imposes a greater impact upon the built environment due to the length and mass of the structure. In addition, Option B provides considerably less land area for future development.

Option C provides a wider service ally around the structure but exceeds the required height limit of 45-feet.

PREFERRED PARKING STRUCTURE



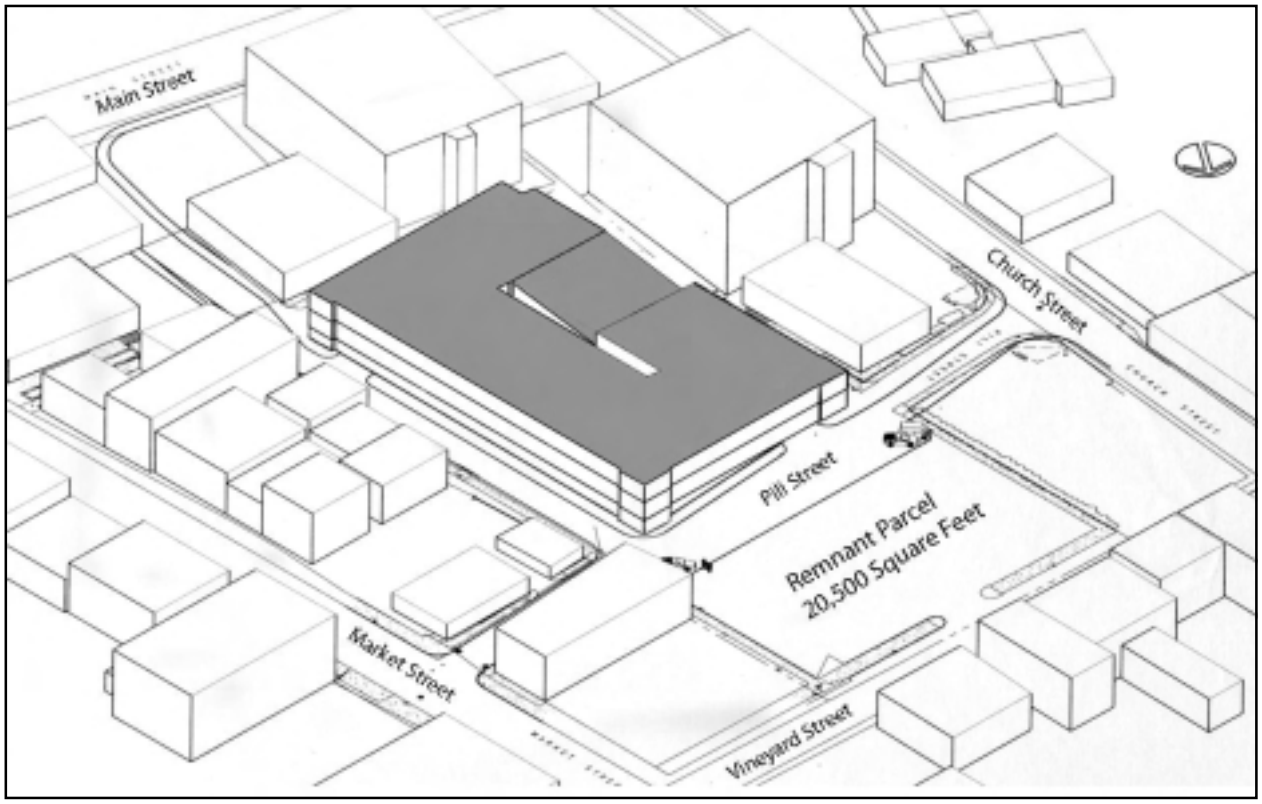






PART SIX PREFERRED PARKING STRUCTURE

6.1 Preferred Structure (Modified PC-1)



The preferred option (Option PC-1) is a four-level parking structure that provides 363 stalls within the structure and 26 stalls on grade. The total stalls provided are 389. Option PC-1 re-establishes Pili Street and preserves approximately 20,500 square feet for future development along Vineyard, Church, and Market Streets. Option PC-1 provides parallel parking within the structure and has been designed as a two-bay structure allowing for two-way ingress and egress from the garage. Approximately 20.4 percent of the stalls within the structure are compact. Option PC-1 has a service alley of approximately 44 feet along Market Street, 15 feet at the rear of the structure, and 21 feet along Church Street.

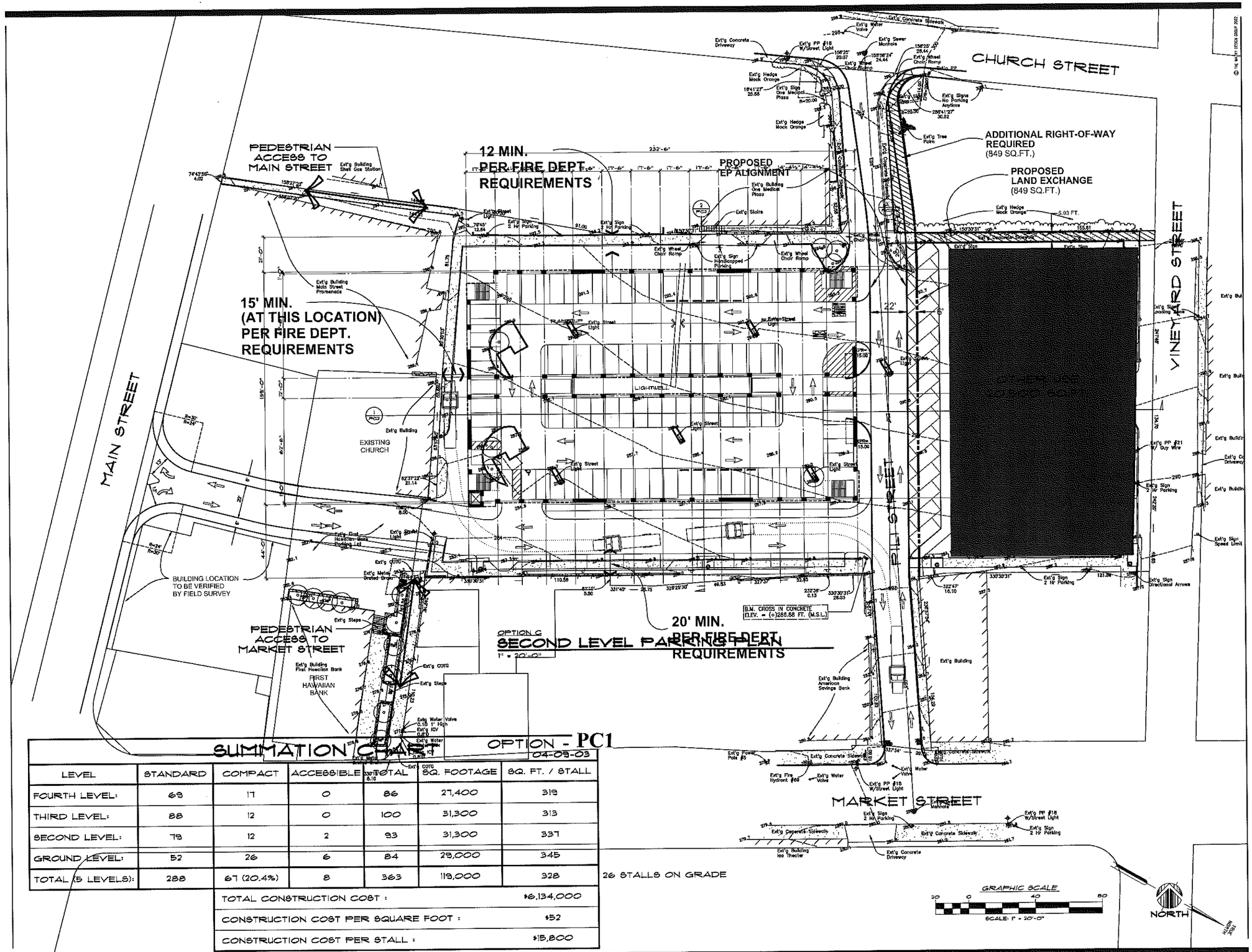
Option PC-1 is tucked into the established building envelope thereby minimizing its visual intrusion upon public roadways. Mauka and Makai view corridors are preserved along Pili Street and pedestrian and vehicular circulation patterns are enhanced.

Option PC-1 accommodates the most appropriately sized structure for the site given the size and shape of the parcel and the scale and character of adjacent development. In

consideration of recent demand projections, Option PC-1 provides a sufficient number of parking stalls to accommodate approximately 20 years of future growth and provides the opportunity to establish new activity generating land uses within the commercial core. In considering the costs and benefits associated with each parking structure option, Option PC-1 most closely conforms to the policies, goals, and objectives set forth in the Wailuku Redevelopment Plan.

Option PC-1 —Summary:

- Four (4) level structure
- Re-establishes Pili Street
- 90 degree parking
- 20,500 S.F. for future development
- Light-well within structure
- Approximately 20.4% of stalls are compact
- 363 stalls within structure
- 16 angled and 10 parallel stalls on grade
- Total stalls is 389
- Estimated total project cost is $7,173,713
- Estimated excess land value is $922,500
- Estimated factored project cost is $6,251,213
- Estimated factored cost / stall is $16,069
- Estimated factored cost / new stall is $34,537



SUMMATION CHART - OPTION - PC1

04-09-03

LEVEL	STANDARD	COMPACT	ACCESSIBLE	TOTAL	SQ. FOOTAGE	SQ. FT. / STALL
FOURTH LEVEL:	69	17	0	86	27,400	319
THIRD LEVEL:	88	12	0	100	31,300	313
SECOND LEVEL:	79	12	2	93	31,300	337
GROUND LEVEL:	52	26	6	84	29,000	345
TOTAL (5 LEVELS):	288	67 (20.4%)	8	363	119,000	328

TOTAL CONSTRUCTION COST :	$6,134,000
CONSTRUCTION COST PER SQUARE FOOT :	$52
CONSTRUCTION COST PER STALL :	$15,800

26 STALLS ON GRADE

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WATRY DESIGN, INC.

813 Hamilton Street
Redwood City, California 94063
Tel: 650.298.8150
Fax: 650.298.8151
E-mail: wdi@watrydesign.com
www.watrydesign.com

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GROUND LEVEL PARKING PLAN

WAILUKU MUNICIPAL PARKING STRUCTURE

WAILUKU, MAUI, HAWAII

CONCEPTUAL DESIGN

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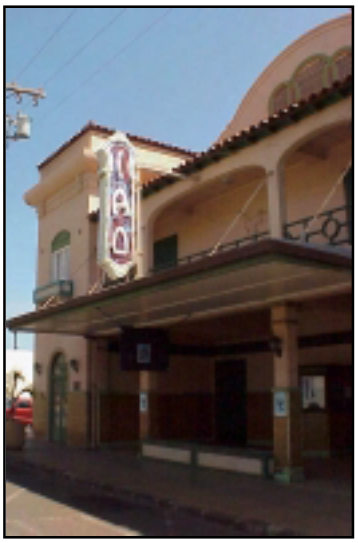
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LAND USE CONCEPTS









PART SEVEN LAND USE CONCEPTS

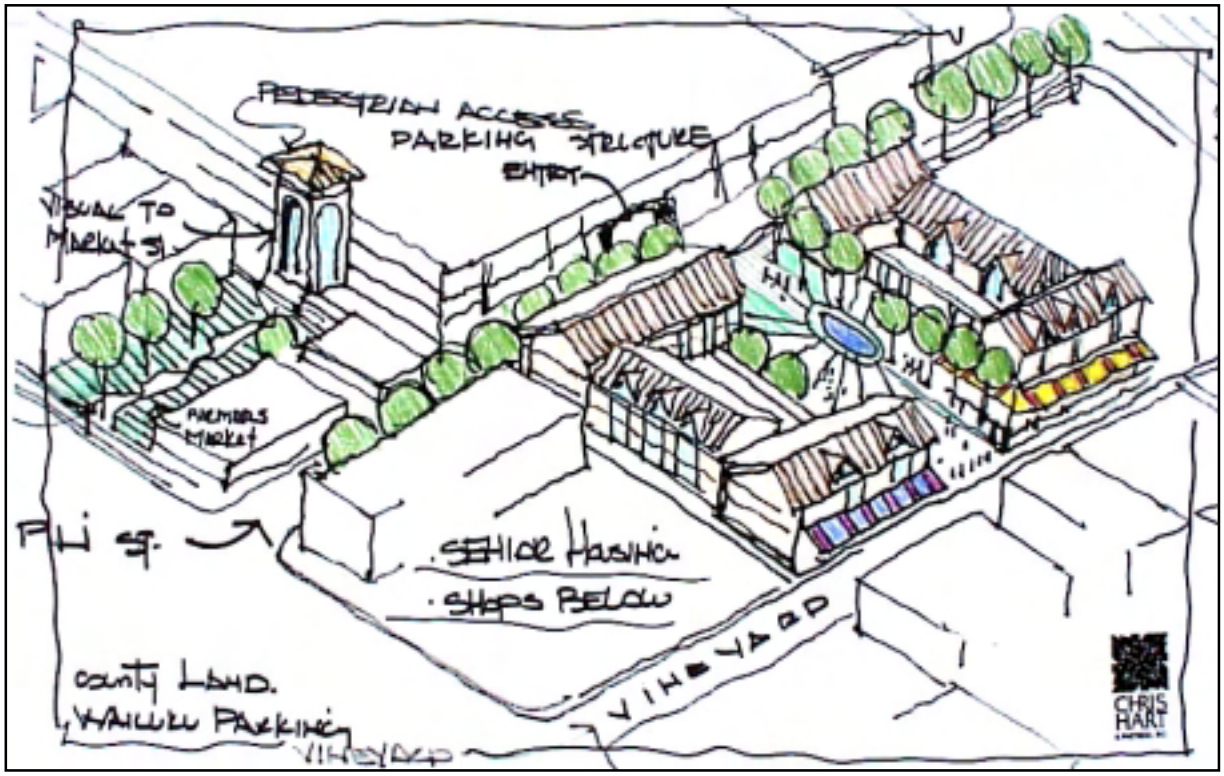
7.1 Land Use Concepts

Introduction

Five land use concepts were prepared for the site. Each concept seeks to leverage the developable space in a manner supportive of the***Vision of Wailuku Town*** as set forth in the Wailuku Redevelopment Plan (December 2000):

> *The Wailuku of the next century will be a* ***locus of commerce, culture, and entertainment*** *in Central Maui. It will be a vibrant, clean and safe place to* ***live, work or visit****. Its urban edges will be clearly defined, and be in balance with surrounding conservation, agricultural and rural land uses.*
>
> *The commercial core will be economically healthy and self-sufficient. It will include* ***office, residential and entertainment functions in addition to retail shops and restaurants****. The town will continue to be Maui County's civic center and a supplier of medical services.*
>
> *Wailuku's commercial core will have* ***an abundance of life, color and variety that reflect the Town's history and culture****. The town will be alive with local music, hula, arts and crafts. A variety of ethnic cuisine, "bentos" and "pupus" will be available. Seasonal vendors, outdoor exhibits, flower and produce markets, artists and musicians will provide a* ***roster of events that draw local residents and visitors throughout the day and evening****. Community festivals and special events will promote the area's traditions. Wailuku will be a comfortable place to "talk story" with friends, neighbors, and visitors.*
>
> ***The urban landscape will be woven of many threads into a rich and varied tapestry that is compatible in scale and character****. Each street will have its own unique identity.* ***The pedestrian-oriented small town ambience will be maintained, and centralized parking provided****. Wailuku Town will remain true to itself.*
>
> *What you will find in Wailuku is aloha and an emphasis on community values. Wailuku will be a town that lives aloha in a vibrant, fun way. Families, businesses, government, the land and traditions will be bound together in a way that creates a strong sense of community. Wailuku's residents will cherish, protect and share their special place as a legacy for following generations* (Wailuku Redevelopment Plan, December 2000*).*

Residential Mixed Use



This theme provides for a mix of ground floor retail with 2nd floor multi-family residential opportunities. The theme bolsters a residential base in the commercial core that will support surrounding retail shops and restaurants throughout the week.

- **Implementation.** The county would sell or lease the land with a set of conditions that would run with the land and that would prescribe the types of uses and urban design specifications for the site, based upon the above theme. The County, through the sale or lease of the property, could generate revenue from this alternative to help finance the parking structure.

- **Types of Uses**

  - ✓ Boutique retail / groceries / services
  - ✓ Multifamily residential above retail
  - ✓ Ethnic restaurants
  - ✓ Pocket park / plaza

Economic Benefit. The Residential Mixed-Use theme creates a residential population base within the core of Wailuku Town. Downtown residents will spend money on goods and services supporting area merchants. New economic activity in the form of new or expanded retailers, restaurants, and entertainment uses will attract greater numbers of visitors to downtown during evenings and weekends. Merchants benefiting the most from the resultant economic expansion will include grocers, restaurateurs, boutique retailers, and personal service providers.

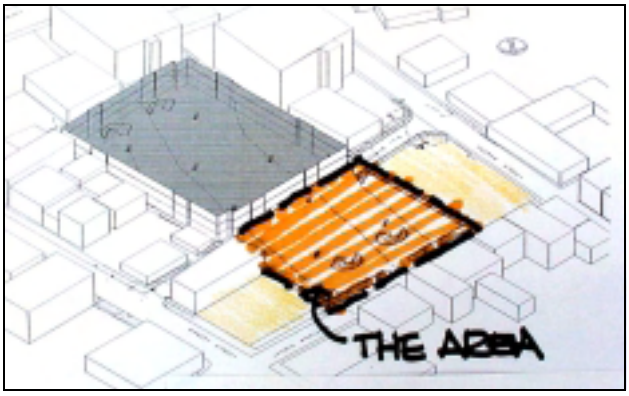


Figure 17. The Area.

Project Description. The 2 and 3-story project would be designed around a central landscaped courtyard. Third-story residents would be afforded expansive views of the Iao Valley, Hakeakala, and the Pacific Ocean. First floor businesses would front Pili and Vineyard Streets. Parking would be provided within the Municipal Parking structure and on-site.

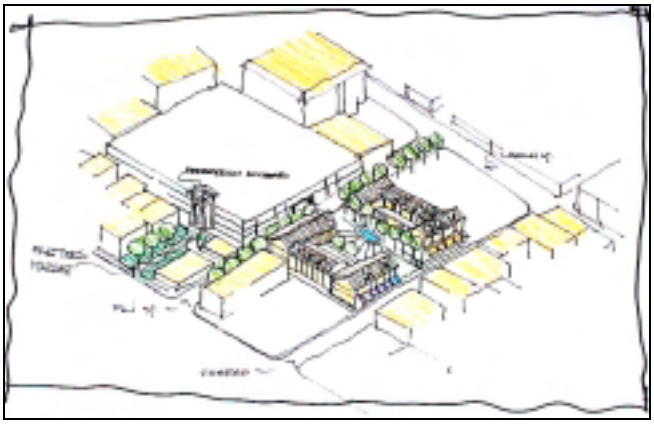


Figure 18. Urban design character.

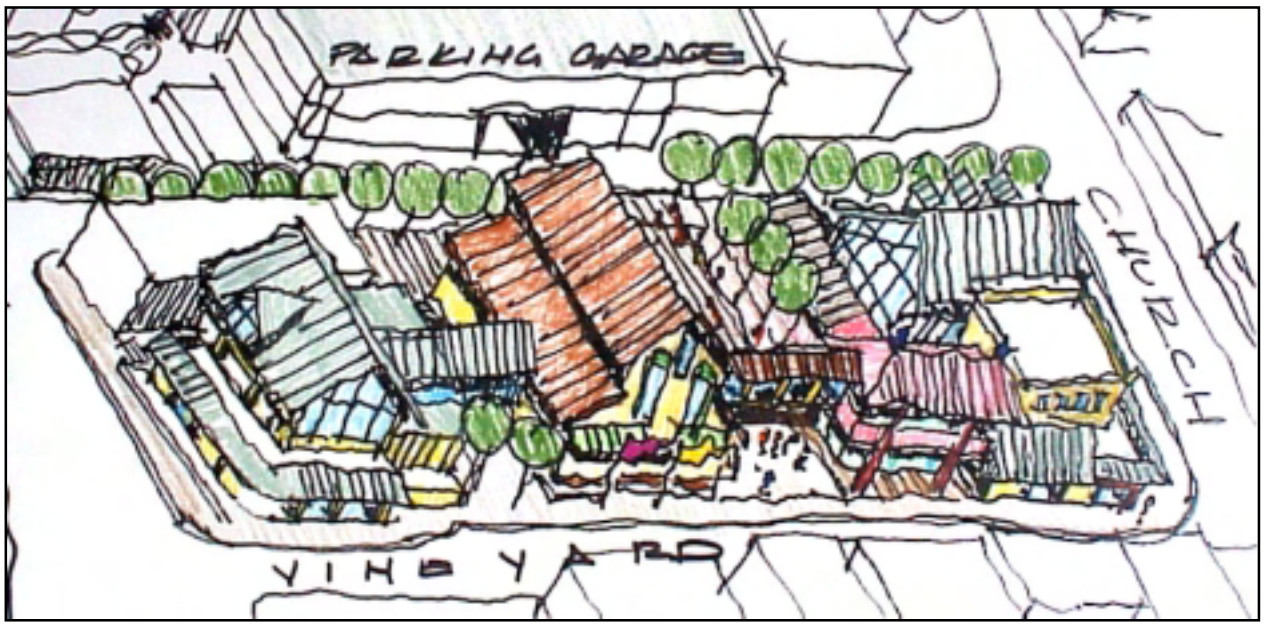
Project Specifications.

- 2-and 3-story project
- Multi-family: Forty (40) 1-bedroom units and thirteen (13) 2-bedroom units;
- Retail / Office: 7,000 SF
- Restaurant: 3,000 SF
- Pocket Park: 5,000 SF
- Required Parking: 88 stalls (Wailuku Redevelopment Area Zoning & Development Code)
- On-site: 53 stalls
- Parking Provided within Municipal Parking Garage: 35 stalls



Figure 19. View from Vineyard Street.

Civic/Cultural Educational



This theme seeks to leverage and build upon Wailuku's cultural sites including the Haleki'i-Pihana Heiaus, the Bailey House Musuem, Kepaniwai / Iao Valley, and Wailuku's historic civic buildings to provide a critical mass / chain of cultural sites and activities that will draw visitors, investment and jobs to Wailuku. The activities will also provide educational opportunities for local residents, while perpetuating the Hawaiian culture and local traditions.

- **Implementation.** The County would sell or lease all or portions of the land to a combination of non-profit, civic, or for-profit organizations that would implement the above plan in a manner that achieves a significant public purpose and forwards County efforts to revitalize Wailuku Town.

- **Types of Uses**

  - ✓ Native Hawaiian cultural and history center with a major emphasis on Hawaiian life and society on Maui – active, educationally oriented exhibits for children and visitors.
  - ✓ Wailuku historical and educational / cultural center (Hawaiian, Chinese, Japanese, Korean, Filipinos, Haloes, Portuguese, etc).
  - ✓ WWII 5th Marine Division Museum (Iwo Jima, Tinian, Saipan, etc.)
  - ✓ AJA 442nd and 100th Army Musuem – alternative or in addition to Kahului Beach Road site
  - ✓ Pacific arts museum / center
  - ✓ Children's educational arts center

Economic Benefits. The Civic/Cultural Educational theme will attract residents and tourists to Wailuku Town, especially during evening and weekend hours. The resultant increase in consumer spending will significantly benefit area businesses that cater to this market. Likely benefactors will include boutique retailers, restaurants, open-air markets, and businesses specializing in the performing arts, among others.

Project Description. This 2 and 3-story mixed-use project includes a variety of architectural forms including a central theatre or museum, smaller culturally significant buildings, and interesting alleyways, nooks and crannies, gardens, and landscaped walkways to explore.

Project Specifications.

- 2-and 3-story project
- Mixed-use project including entertainment, cultural, retail, and eating and drinking establishments
- Theatre and/or Museum: 25,000 SF
- Office: 5,000 SF
- Restaurant: 10,000 SF
- Retail: 10,000 SF
- Pocket Park: 5,000 SF
- Required Parking: 114 stalls (Museum Option)
- Required Parking: 91 stalls (Theatre Option)
- Parking provided within Municipal Garage: 114 stalls (Museum); 91 stalls (Theatre)

Note: Concept plan includes the use of TMK: Parcel Nos. 3-004-013:060 and 057. Alternatively, the project could be designed entirely within the County's property.

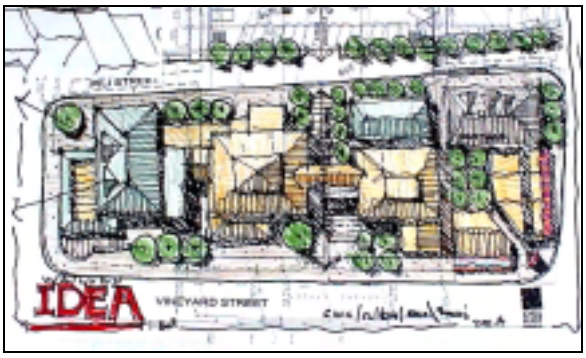


Figure 20. Concept Site Plan.



Figure 21.. View from Market Street

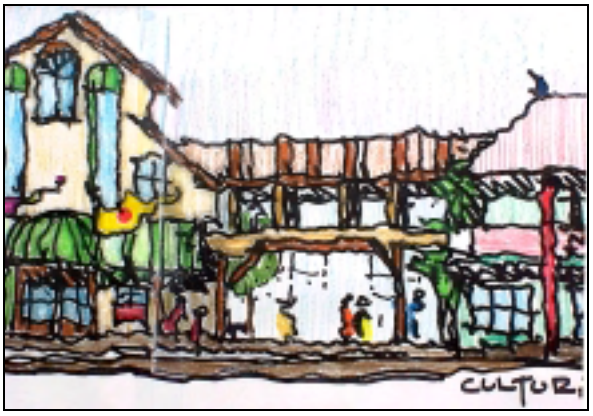
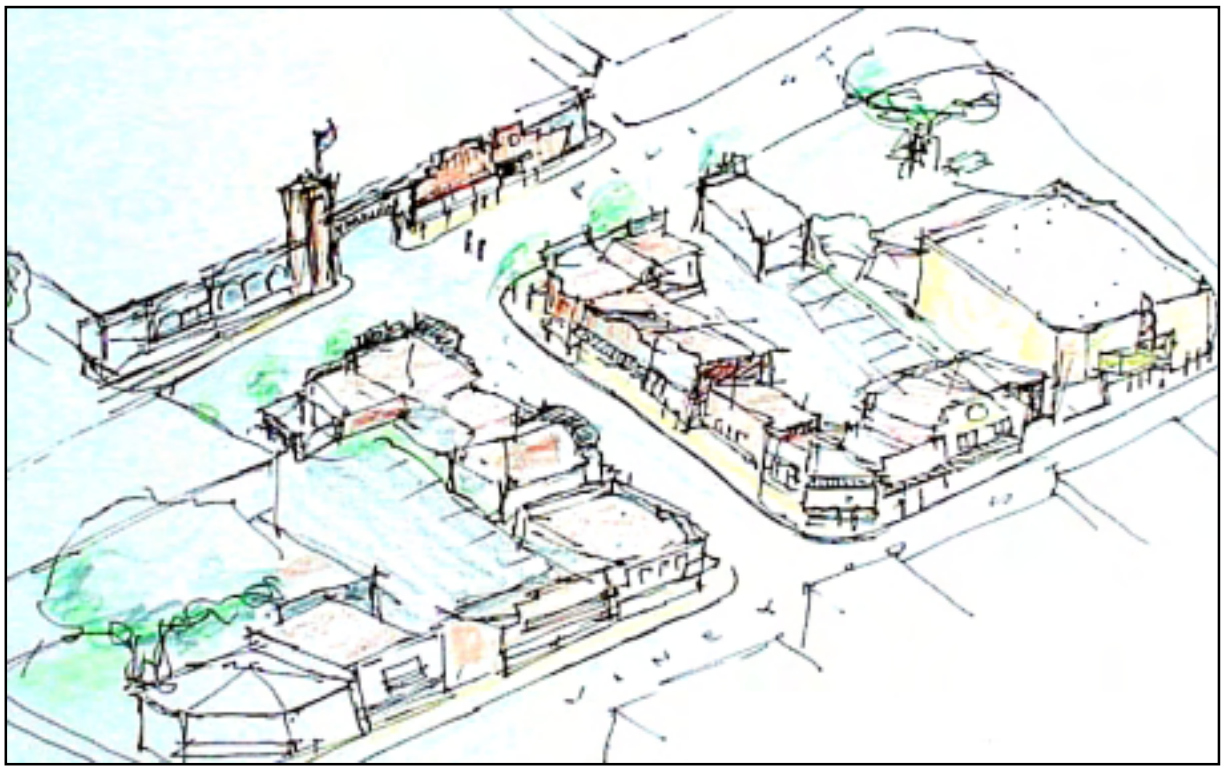


Figure 22.. Character of development.

Entertainment-Mixed Use



This theme seeks to leverage and build upon the Iao Theater, Maui Academy of Performing Arts and the existing restaurants within Wailuku to create a critical mass of entertainment functions that will draw people and investment into Wailuku, particularly during evening and weekend hours.

- **Implementation.** The County would sell or lease the land with conditions that would run with the land and that would prescribe the types of uses and urban design specifications for the site, based upon the above theme. The County, through the sale or lease of the property, could generate revenue to help finance the parking structure.

- **Types of Uses**

  - ✓ The King's Theater (featuring foreign films, film festivals, etc.)
  - ✓ Night and / or daytime market
  - ✓ Ethnic / specialty restaurants
  - ✓ Space for live music (Jazz and Hawaiian music, etc.)
  - ✓ Karaoke venue
  - ✓ Boutique retail / services
  - ✓ Sidewalk sales and entertainment
  - ✓ Pocket park / plaza

Economic Benefit. The Entertainment Mixed-Use theme will attract visitors and residents into Wailuku Town, particularly during evenings and weekends, to experience a diverse range of entertainment, performing arts, and culinary experiences. The resultant increase in consumer spending will significantly benefit area businesses that offer goods and services to this market. Likely benefactors will include boutique retailers, restaurants, open-air markets, and businesses specializing in the performing arts.

Project Description. The 2 and 3-story project would provide an architecturally diverse streetscape compatible with existing buildings along Market and Vineyard Streets. Buildings would be built close together and oriented to the sidewalks to facilitate an active, lively, and interesting pedestrian experience.

Project Specifications.

- Described in previous scenario.

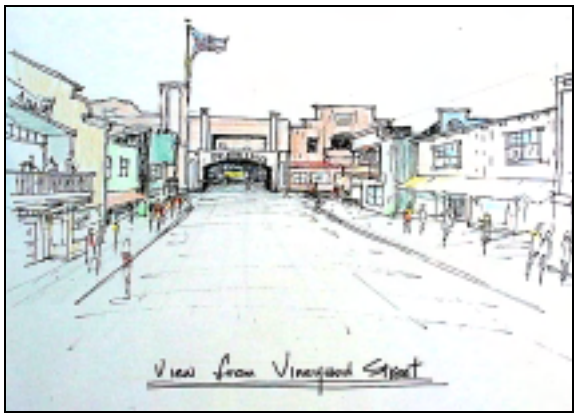


Figure 23. View from Vineyard Street.

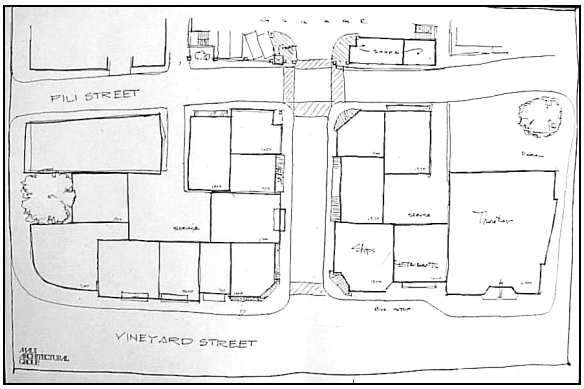


Figure 24.. Site Plan



Figure 25. View from Pili Street

Municipal Office Space



This theme provides for a mix of municipal office space with ground floor retail within the commercial core. The theme would alleviate the current municipal office shortfall within the civic district and would bring residents into the commercial core during regular business hours. The theme would benefit surrounding retail shops and restaurants that are able to cater to this market.

- **Implementation.** The county would retain ownership of the land and would construct municipal office space on the property. Space for ground floor retail would be leased generating additional revenue to help finance the parking structure.

- **Types of Uses**

  - ✓ Government office space
  - ✓ Commercial office space
  - ✓ Retail, restaurants, and services

Economic Benefit. The Municipal Office theme will attract municipal office workers, and their clientele, into the commercial core during regular working hours. The increase in visitors, along with an expansion in the number of County employees working in the area, will stimulate business activity for goods and service providers positioned to serve this market.

Project Description. The 3 and 4-level project would be designed around an interior courtyard and plaza with concrete columns, windows and textured walls facing outward onto Vineyard Street. Hipped rooflines would provide a modern Hawaiian architectural character to the building. Landscape planting along the front of the project would soften the scale of the building and its physical dominance of neighboring structures.

Project Specifications.

- 2-and 3-story structure
- Municipal Office: 21,325 SF
- Retail: 10,270 SF
- Required Parking: 63 stalls
- Parking Provided within Municipal Garage: 63 stalls



Figure 26. View from Vineyard Street

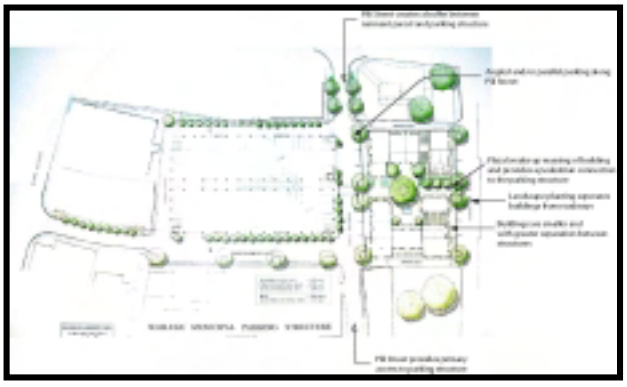


Figure 27. Site Plan

ARCHITECTURAL CONCEPTS









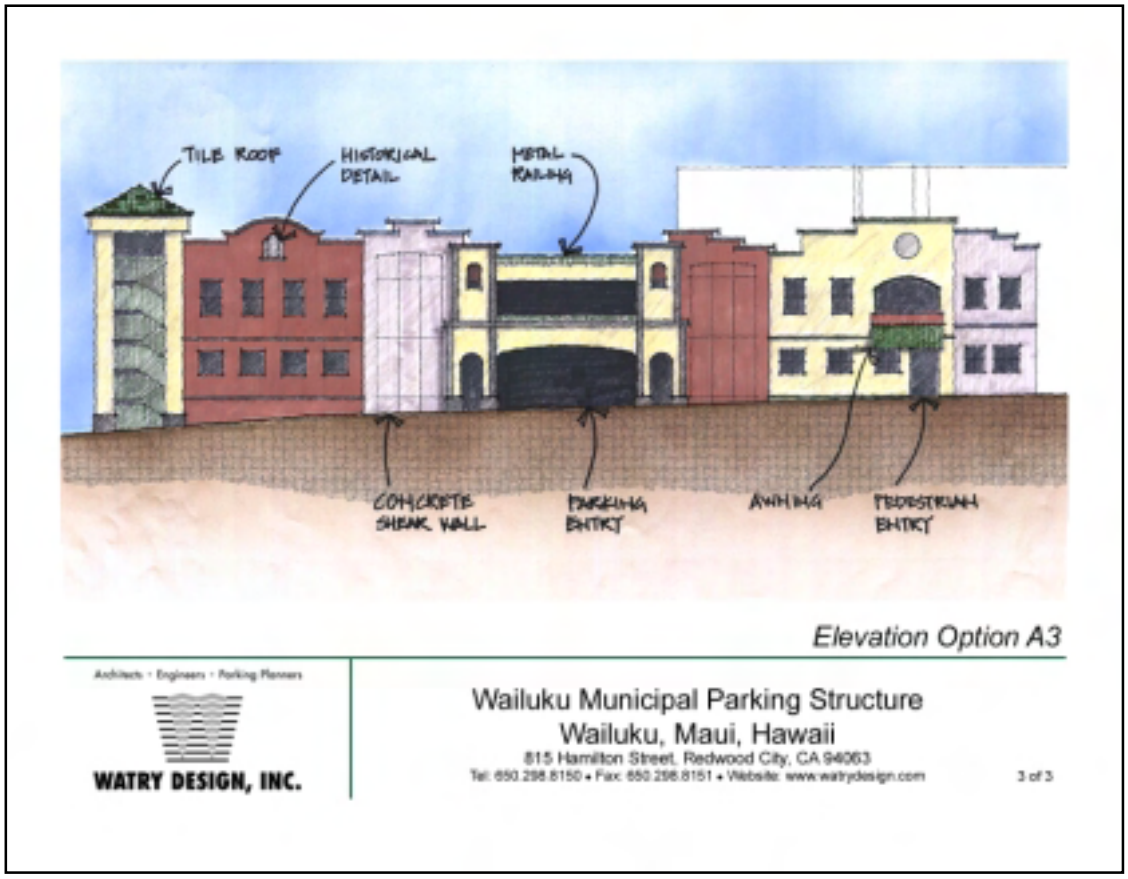
PART EIGHT ARCHITECTURAL CONCEPTS

8.1 Architectural Concepts

Three architectural concepts were prepared for the structure. These concepts range from a cost-conscious utilitarian treatment to more elaborate treatments emphasizing architectural elements unique to Wailuku Town. The following briefly describes the character of each architectural concept:

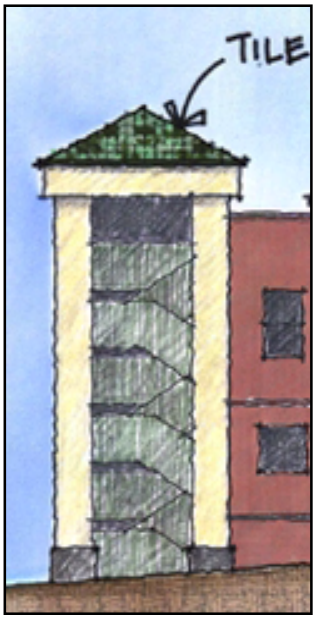
- ***"Traditional"***
  - Traditional Treatments (Storefront façade on Pili Street)
  - Pedestrian Friendly
  - Emphasis on Urban Design Guidelines
- ***"Utilitarian"***
  - Minimal detailing on four sides
  - Cost conscious
  - No-frills
- ***"Balanced – Past & Present"***
  - Incorporates architectural elements from important Wailuku buildings past & present
  - Honesty in design
  - Handsome treatment of a service structure

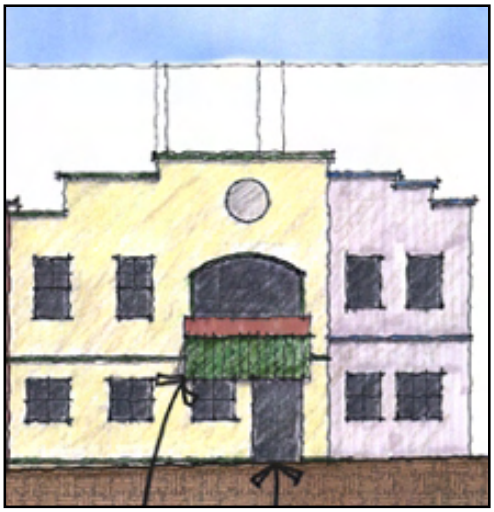
Traditional



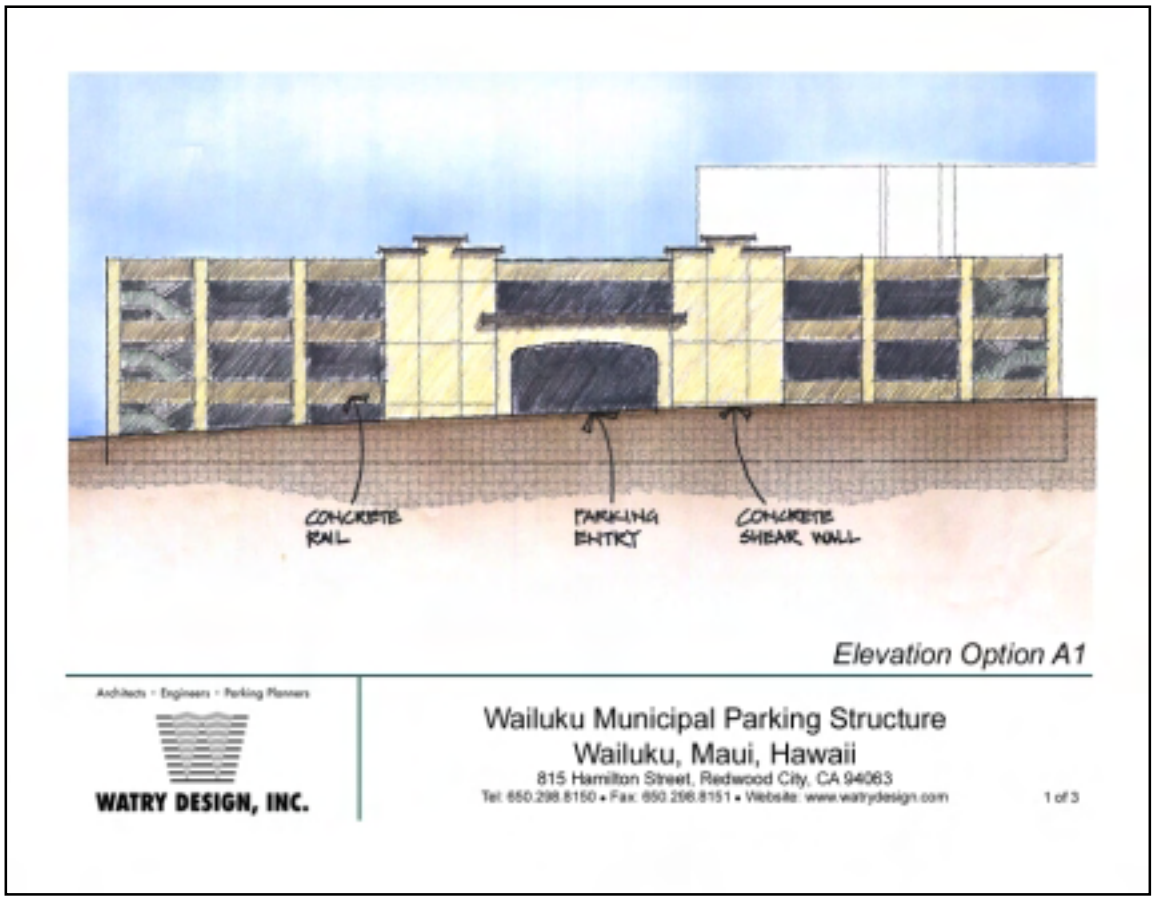
Principles:

- *Traditional Treatments (Store front façade on Pili Street)*
- *Pedestrian Friendly*
- *Emphasis on Urban Design Guidelines*



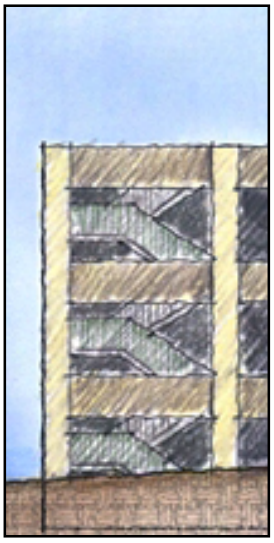


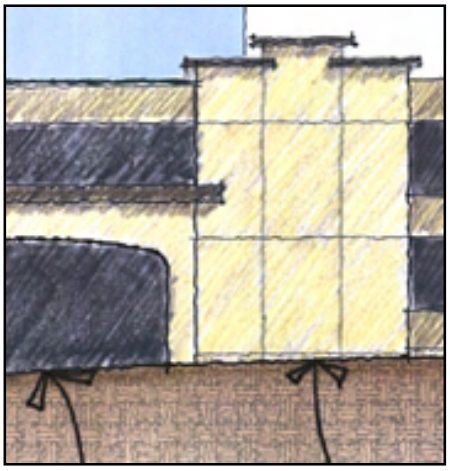
Utilitarian



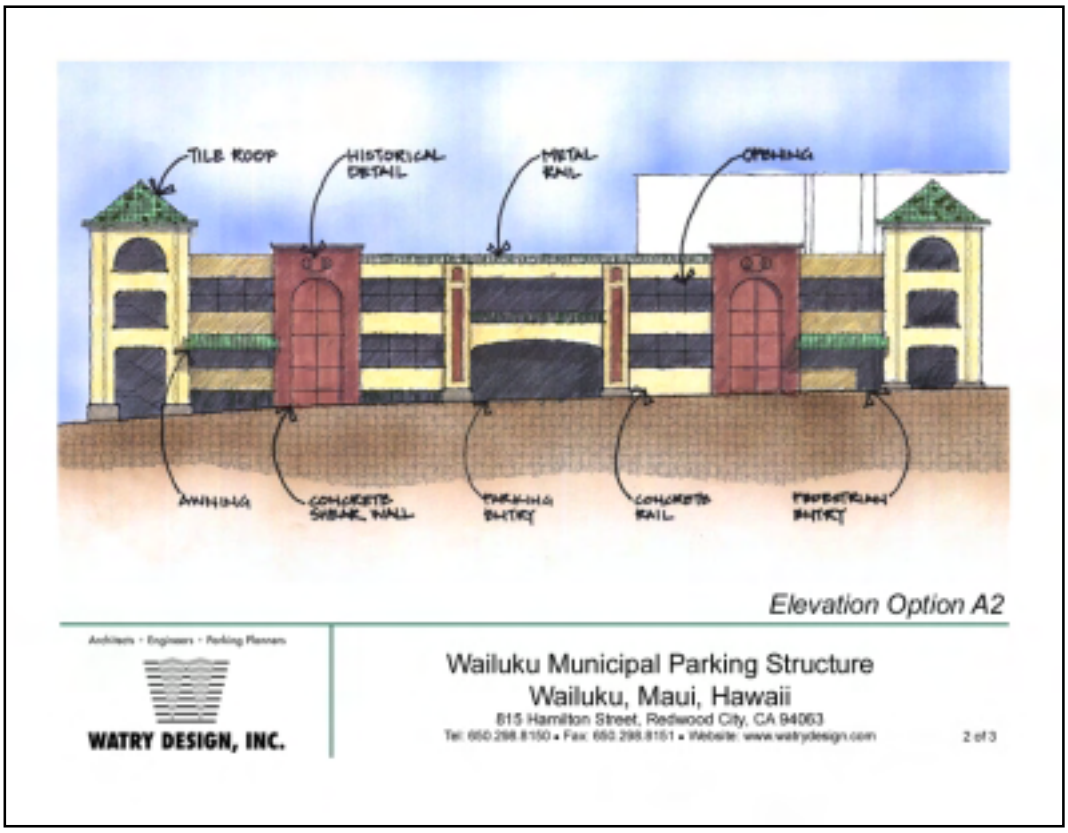
Principles:

- *Minimal detailing on four sides*
- *Cost Conscious*
- *No-frills*



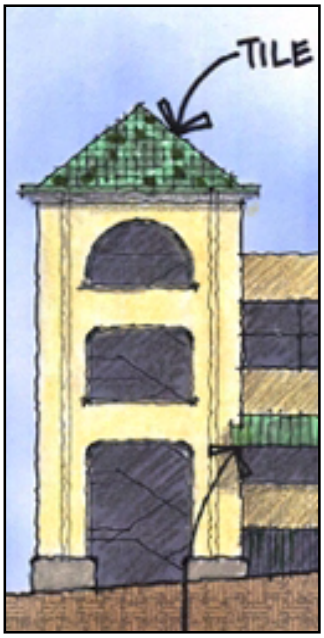


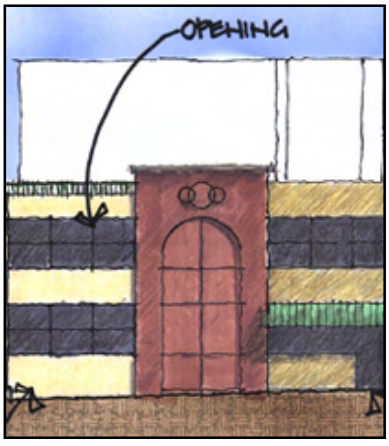
Balanced, Past & Present



Principles:

- *Incorporates architectural elements from important Wailuku buildings past & present*
- *Honesty in design*
- *Handsome treatment of a service structure*





8.2 Architectural Simulation

Balanced Past & Present

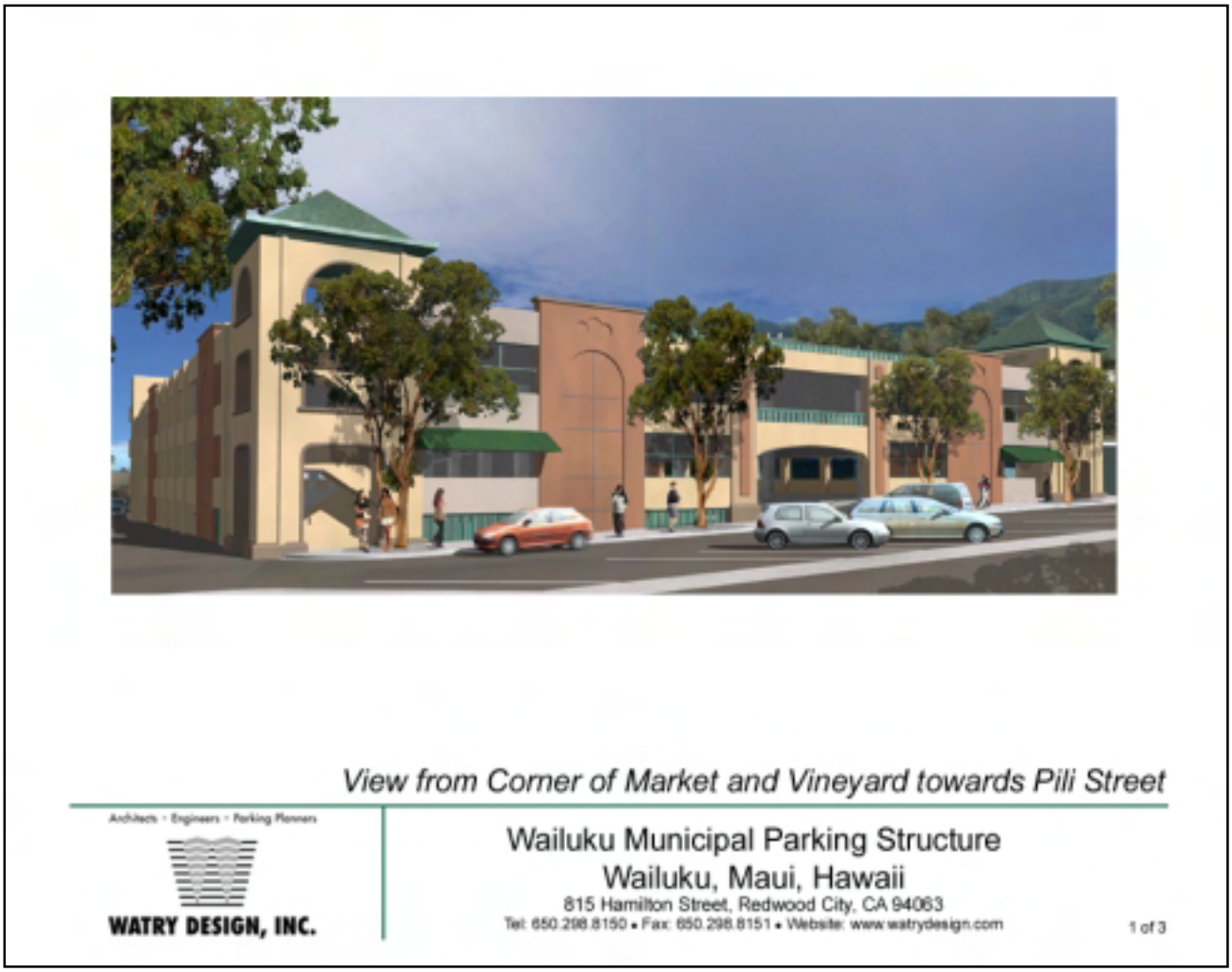


Figure 28. View from Corner of Market and Vineyard towards Pili Street.



Figure 29. Architectural Simulation, View from Corner of Market and Vineyard towards Pili Street



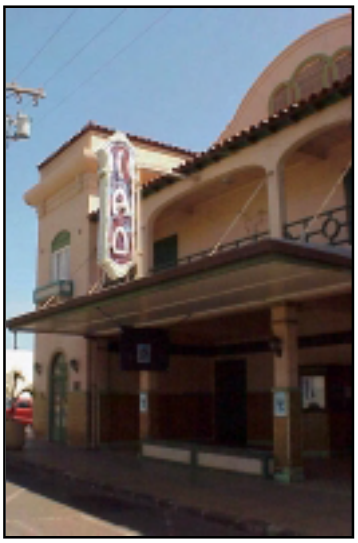
Figure 30. Architectural Simulation, View from Corner of Market and Vineyard towards Pili Street

IMPLEMENTATION







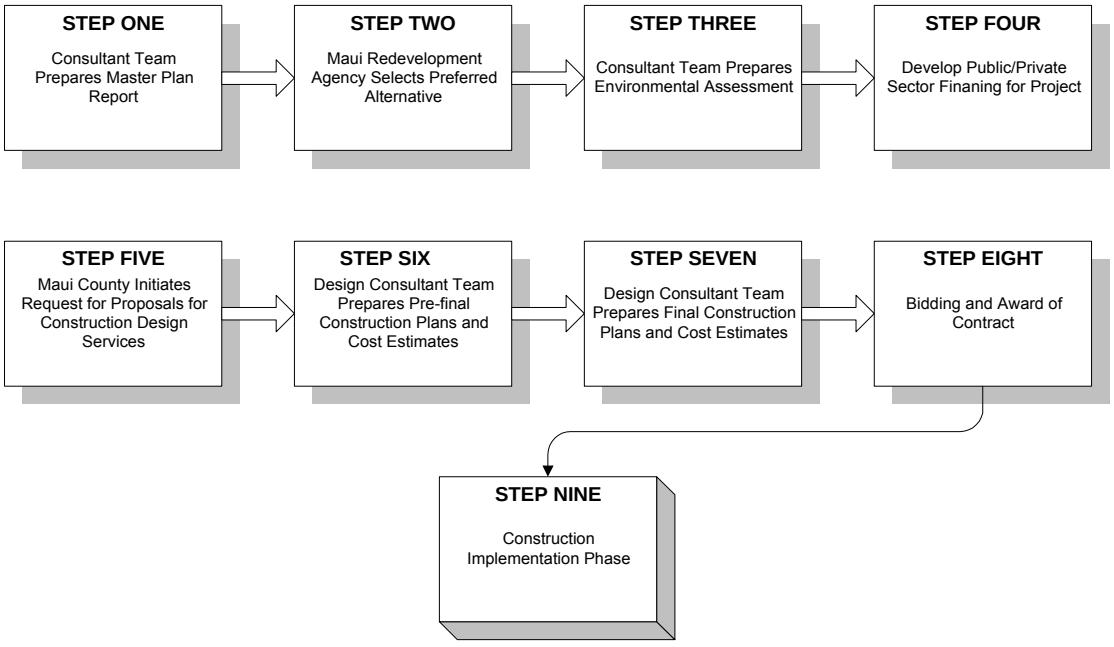


PART NINE IMPLEMENTATION

Once a preferred alternative is chosen, an environmental assessment will be prepared and processed through the State Office of Environmental Quality Control. Thereafter, the County will acquire funding through a combination of public and private sources to finance the design and construction of the project.

The preparation of construction documents and bidding for construction services will be undertaken utilizing a five-step approach. Advertisement for design consultant services would begin with selection of the design consultant in 2004. The principle consultant would prepare construction drawings of the preferred plan. Once the design consultant is selected, the preparation of construction drawings would be divided into "Pre-final Construction Design Phase" and "Final Construction Document Phase". Once construction plans are completed, the Bidding and Award of Contract would commence.

IMPLEMENTATION PHASE



9.1 Construction Phasing

Tentative plans call for construction of the parking structure being completed by mid 2007. As shown on the attached "Wailuku Municipal Parking Lot Master Plan Project Design, Bidding, and Construction Schedule", the construction phase of the project is divided into the following six steps:

STEPS	
1. Request for Proposals (Construction Design Services)	This step will determine who will prepare the final construction drawings and specifications for the parking structure, and associated improvements, as determined by the selected Urban Design Master Plan. The Request for Proposals (RFP) will be processed in accordance with State and County laws and procedures to determine the best qualified and cost efficient consultant capable of performing this function.
2. Pre-final Construction Design Plans	The Pre-Final Construction Design Plans incorporate all applicable baseline information required to prepare final construction design plans. Meetings will be held with the Planning Department and Department of Public Works to review the comments and concerns regarding the Pre-Final Plans and impact on existing infrastructure and other facilities.
3. Final Construction Document Phase	All final construction drawings, plans, and specifications are prepared in accordance with the input provided in Step 2. All applicable baseline data has been gathered, materials selected, and improvements finalized. Construction cost estimates are completed once the details of the final design are known. Upon completion, all plans, specifications and cost estimates will be submitted to the Planning Department for use in the bidding and award of the construction contract.
4. Obtain Financing for Construction	The County will rely upon a variety of funding sources to construct the structure. These might include: General Obligation Bonds, Sale of Remnant Land, Parking in-lieu Fees, Parking Revenues, Federal and State Monies, and Benefit Assessment.
5. Bidding and Award of Contract	Upon final approval of the construction plans and specifications by the Department of Public Works and Planning Department, the final plans will be printed and the Request for Proposals issued.
6. Construction	Construction is estimated to require 12 months.

9.2 Construction Cost

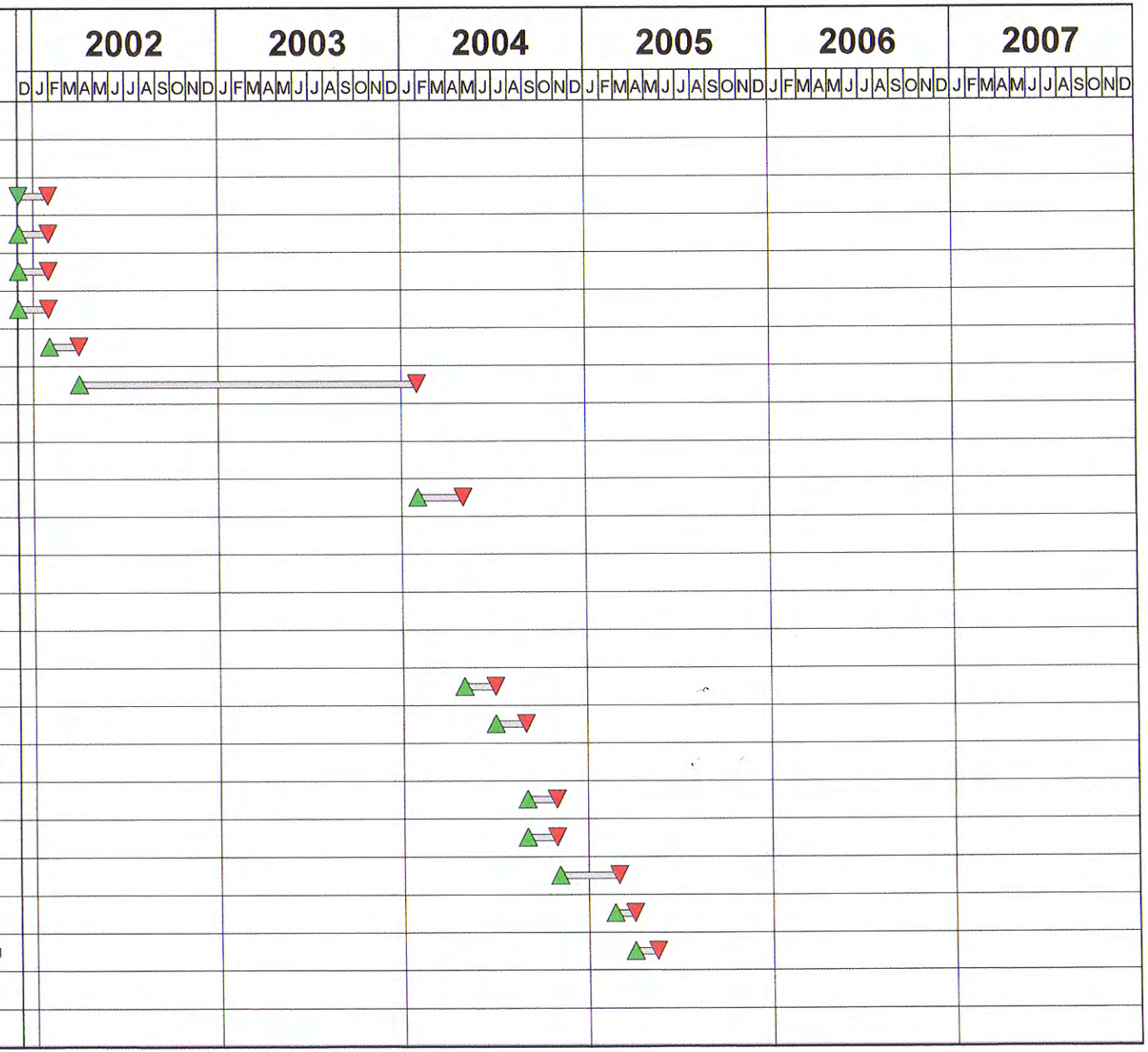
The estimated Total Project Cost to construct Option PC-1 is approximately $7.17 million. The factored cost to construct Option P-C 1 is approximately $6.25 million. These costs are summarized in Appendix A, “Construction Cost Summary”.

WAILUKU MUNICIPAL PARKING LOT MASTER PLAN PROJECT

DESIGN, BIDDING, AND CONSTRUCTION SCHEDULE

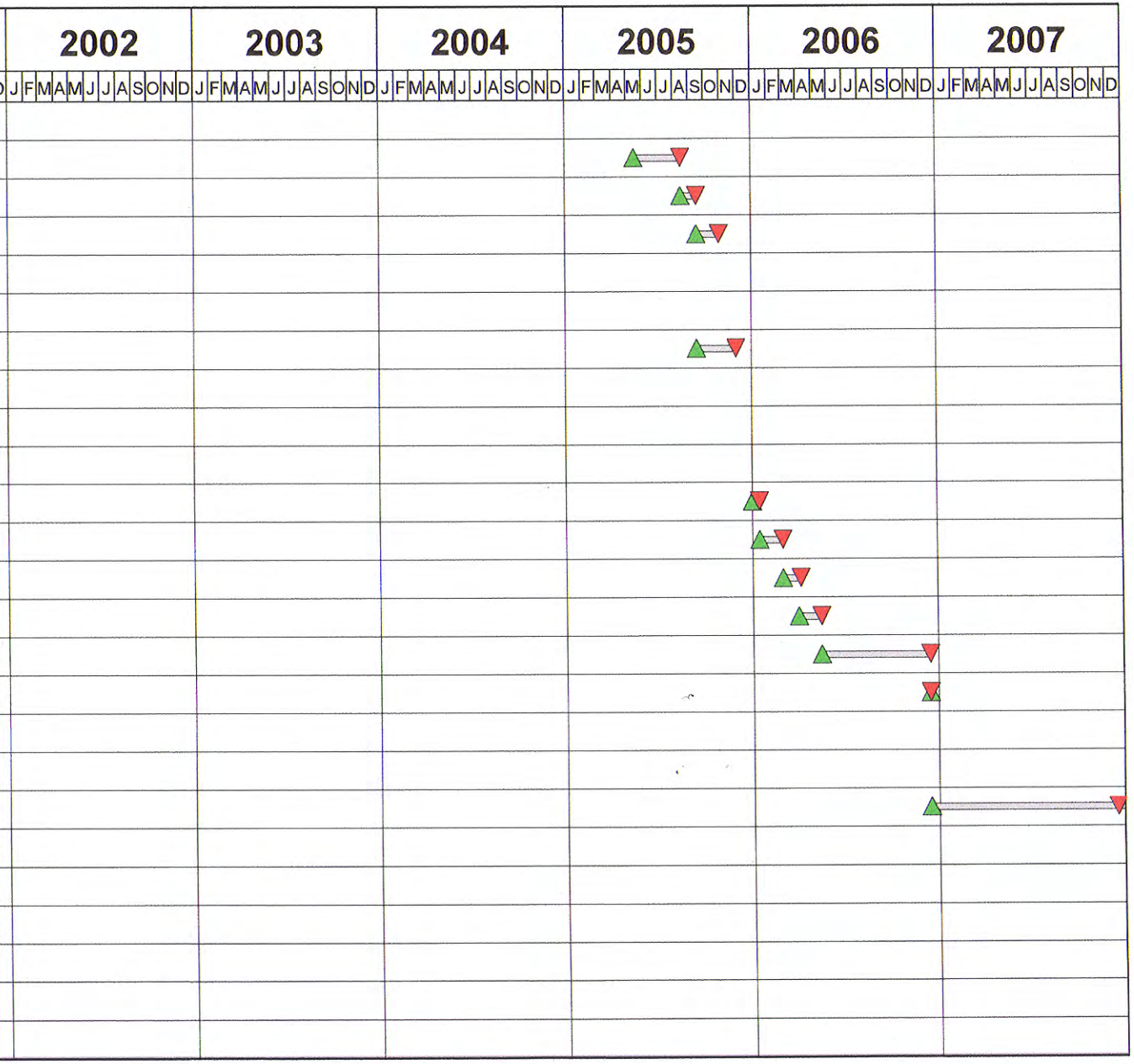
Prepared by Chris Hart & Partners, Inc.

End Date	Start Date	TASK
		PHASE I
		MASTER PLAN REPORT
1/30/02	12/1/01	Planning Research and Analysis
1/30/02	12/1/01	Review of Previous Plans and Studies
1/30/02	12/1/01	Conduct Site Development Analysis
1/30/02	12/1/01	Prepare Concept Plan Alternatives
3/31/02	2/1/02	Conduct Public Participation
1/31/04	4/1/02	Prepare Final Master Plan Report
		PHASE II
5/1/04	2/1/04	**OBTAIN FINANCING FOR CONSTRUCTION DRAWINGS**
		PHASE III
		CONSTRUCTION DOCUMENTS AND BIDDING
		REQUEST FOR PROPOSALS (Design Services)
7/1/04	5/1/04	Advertise for Design Consultant Services
8/30/04	7/1/04	Select Design Consultant
		PRE-FINAL CONSTRUCTION DESIGN PHASE
10/30/04	9/1/04	Review Urban Design Plan and Report
10/30/04	9/1/04	Meet with Planning Department to Review Plans
3/1/05	11/4/04	Prepare Pre-Final Design Plans and Specs
4/1/05	2/21/05	Prepare Pre-Final Design Cost Estimates
5/15/05	4/1/05	Review by Planning Department and DPWWM



WAILUKU MUNICIPAL PARKING LOT MASTER PLAN PROJECT
DESIGN, BIDDING, AND CONSTRUCTION SCHEDULE
Prepared by Chris Hart & Partners, Inc.

End Date	Start Date	TASK
		FINAL CONSTRUCTION DOCUMENT PHASE
8/15/05	5/15/05	Prepare Construction Drawings and Specs
9/15/05	8/15/05	Prepare Construction Cost Estimates
10/30/05	9/15/05	Submit Plans/Cost Estimates to Planning Dept.
		PHASE III
12/1/05	9/15/05	**OBTAIN FINANCING FOR CONSTRUCTION**
		PHASE IV
		BIDDING AND AWARD OF CONTRACT
1/15/06	1/1/06	Print Plans and Specifications
3/1/06	1/15/06	Advertise for Bids/RFP
4/5/06	3/1/06	Bid Opening
5/15/06	4/1/06	Construction Contract Award
12/15/06	5/15/06	Permit Review and Approval
12/15/06	12/15/06	Notice to Proceed with Construction
		PHASE V
12/17/07	**12/15/06**	**CONSTRUCTION PHASE (12 MONTHS)**



APPENDICES

Appendix – A
Construction Cost Summary

Architects • Engineers • Parking Planners

WATRY DESIGN, INC.

Wailuku Municipal Parking Structure WDI Project # 01066.314

Summary of Parking Structure Costs by Option 04/15/03

	Structured Stalls	Total Stalls	Structured Sq. Ft.	Structured Sf/Stall	Total Const Cost**	Construction Cost /Sf	Construction Cost/Stall	Total Project Cost*	Excess Land Sf	Excess Land Value/Sf	Excess Land Cost	Factored Project Costs
Option A	437	453	150,000	343	$ 7,036,000	$ 46.91	$ 15,532	$ 8,228,602	20,500	$ 45.00	$ 922,500	$ 7,306,102
Option B	465	478	146,700	315	$ 7,019,000	$ 47.85	$ 14,684	$ 8,208,721	10,400	$ 40.00	$ 416,000	$ 7,792,721
Option C	462	488	150,300	325	$ 7,600,000	$ 50.57	$ 15,574	$ 8,888,200	20,500	$ 45.00	$ 922,500	$ 7,965,700
Option C Revised 4 Levels	363	389	119,000	328	$ 6,134,000	$ 51.55	$ 15,769	$ 7,173,713	20,500	$ 45.00	$ 922,500	$ 6,251,213

*** Construction cost does not include fees for any offsite work other than Pili Street and Main Street Access*

** Project cost does not include fees in current contract Work to date includes soils, topographic, concept design, environmental approx. 2% of construction cost*

Estimate for Soft Costs to achieve total project cost

	% of Const Cost
Design Fees	8.0%
Permits	1.0%
Testing & Insp	1.0%
Fees	3.0%
Misc	1.0%
Project Management	1.0%
Bonds	1.0%
Insurance	1.0%
	17.0%

Land costs not included
Financing costs not included

Design Fees Breakdown

	% of Const Cost
Additional Soils	0.20%
A&E	4.75%
Civil	1.00%
Landscape	0.40%
Mechanical	0.35%
Electrical	0.45%
Plumbing	0.30%
Security	0.15%
Local Arch	0.35%
Total	7.95%

Appendix – B
Opinion of Probable Construction Cost – Options A, B, and C

Option A

Architects • Engineers • Parking Planners

WATRY DESIGN, INC.

WDI #01066
date 2/7/2002
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Prepared By: JJM

Checked By: MW

OPINION OF PROBABLE CONSTRUCTION COST

Wailuku Municipal Parking Structure
Wailuku, Maui, Hawaii
Option A - 03.13.02

NUMBER OF STALLS IN STRUCTURE: 437 ON GRADE: 16
TOTAL NUMBER OF PARKING STALLS: 453
NUMBER OF ELEVATED DECKS: 3
ELEVATED DECK SQUARE FOOTAGE: 111,000 SF
SLAB ON GRADE SQUARE FOOTAGE: 39,000 SF
TOTAL SQUARE FOOTAGE: 150,000 SF
SQUARE FOOT PER STALL(STRUCTURE): 343 SF

SITE WORK

Item	Description	Quantity	Range	Unit Cost	Extension
1	DEMOLITION AND CLEARING		LUMP SUM	$50,000.00	$50,000
2	EXCAVATION (Silt and Rock Mix)	9,000 CY	$5-$15/CY	$12.00	$108,000
3	BACKFILLING & COMPACTING	2,200 CY	$50-$80/CY	$65.00	$143,000
4	WALKS	7,000 SF	$2.25-$4.00/SF	$4.50	$31,500
5	CURBS & GUTTER	410 LF	$9-$15/LF	$22.00	$9,020
6	STORM DRAINAGE	500 LF	$50-$200/LF	$72.00	$36,000
7	FENCING AND GATES	690 LF	$12-$20/LF	$35.00	$24,150
8	FIRE & DOMESTIC WATER	1,120 LF	$50-$200/LF	$72.00	$80,640
9	FIRE HYDRANT	5	$3500/EA	$3,500.00	$17,500
10	RECONSTRUCT CATCH BASIN	2	$4000/EA	$4,000.00	$8,000
11	LANDSCAPE & IRRIGATION	7,000 SF	$2-$5/SF	$5.00	$35,000
12	PARKING LOT ON GRADE	3,500 SF	$2-$5/SF	$5.00	$17,500
13	NEW MAIN ST. ACCESS ROAD	6,500 SF	$10-$15/SF	$15.00	$97,500
14	PILI STREET RESURFACING	12,300 SF	$5-$15/SF	$9.00	$110,700
				SITE WORK TOTAL	**$768,510**

STRUCTURAL WORK

Item	Description	Quantity	Range	Unit Cost	Extension
1	SLAB ON GRADE: Reinf.	32,000 LB	$0.55-$0.80/LB	$0.70	$22,400
2	Base:	780 CY	$20-$40/CY	$30.00	$23,400
3	Hardrock Concrete	660 CY	$120-$140/CY	$150.00	$99,000
	Unit Price	**38,900 SF**	**$2.75-$5.00/SF**	**$3.72/SF**	**$144,800**
4	CURBS ON GRADE Reinf.	18,500 LB	$0.55-$0.80/LB	$0.70	$12,950
5	Hardrock Concrete	115 CY	$120-$140/CY	$150.00	$17,250
6	Formwork	790 SF	$8-$14/SF	$12.00	$9,480
	Unit Price	**6,300 SF**	**$3-$8/SF**	**$6.30/SF**	**$39,680**
7	FOOTINGS Excavation	1,800 CY	$5-$10/CY	$20.00	$36,000
8	Reinf.	180,000 LB	$0.55-$0.80/LB	$0.70	$126,000
9	Hardrock Concrete	1,800 CY	$80-$120/CY	$110.00	$198,000
	Unit Price	**1,800 CY**	**$125-$225/CY**	**$200.00/CY**	**$360,000**
10	ASPHALT	0 SF	$2-$5/SF	$3.00	$0



	STRUCTURAL WORK (con't)				
Item	Description	Quantity	Range	Unit Cost	Extension
11	SUPPORTED DECKS: P-T	39,000 LB	$1.55-$1.90/LB	$1.90	$74,100
12	Reinf.	190,000 LB	$0.55-$0.80/LB	$0.70	$133,000
13	5000 psi Hardrock Concrete	2,050 CY	$125-$165/CY	$160.00	$328,000
14	Formwork	110,100 SF	$2-$5/SF	$4.75	$522,975
	Unit Price	**111,000 SF**	**$5.50-$10.00/SF**	**$9.53/SF**	**$1,058,075**
15	CURBS ON DECKS: Reinf.	46,500 LB	$0.55-$0.80/LB	$0.70	$32,550
16	5000 psi Hardrock Concrete	375 CY	$125-$165/CY	$160.00	$60,000
17	Formwork	2,350 SF	$5-$14/SF	$10.00	$23,500
	Unit Price	**19,000 SF**	**$9-$12/SF**	**$6.11/SF**	**$116,050**
18	PT BEAMS & GIRDERS P-T	46,000 LB	$1.55-$1.90/LB	$1.90	$87,400
19	Reinf.	195,000 LB	$0.55-$0.80/LB	$0.70	$136,500
20	5000 psi Hardrock Concrete	790 CY	$100-$145/CY	$130.00	$102,700
21	Formwork	39,000 SF	$5-$10/SF	$7.50	$292,500
	Unit Price	**7,200 LF**	**$75-$125/LF**	**$73.85/LF**	**$619,100**
22	SHEAR WALLS Reinf.	70,000 LB	$0.55-$0.80/LB	$0.70	$49,000
23	Hardrock Concrete	330 CY	$100-$145/CY	$130.00	$42,900
24	Formwork	6,000 SF	$10-$20/SF	$16.00	$96,000
	Unit Price	**6,000 SF**	**$20-$35/SF**	**$31.32/SF**	**$187,900**
25	COLUMNS (24x30): Reinf.	255,000 LB	$0.55-$0.80/LB	$0.80	$204,000
26	Hardrock Concrete	450 CY	$100-$145/CY	$130.00	$58,500
27	Formwork	22,000 SF	$5-$15/SF	$7.50	$165,000
	Unit Price	**2,432 LF**	**$100-$200/LF**	**$175.78/LF**	**$427,500**
28	COLUMNS (round): Reinf.	0 LB	$0.55-$0.80/LB	$0.80	$0
29	Hardrock Concrete	0 CY	$100-$145/CY	$130.00	$0
30	Formwork	0 SF	$5-$15/SF	$6.50	$0
	Unit Price	**0 LF**	**$75-$125/LF**	**$0.00/LF**	**$0**
31	C.I.P. WALLS: Reinf.	0 LB	$0.55-$0.80/LB	$0.70	$0
32	Hardrock Concrete	0 CY	$100-$145/CY	$130.00	$0
33	Formwork	0 SF	$10-$20/SF	$16.00	$0
	Unit Price	**0 SF**	**$20-$35/SF**	**$0.00/SF**	**$0**
34	C.M.U. WALLS:	8,000 SF	$8-$12/SF	$12.00	$96,000
				STRUCTURE TOTAL	**$3,049,105**

	ARCHITECTURAL WORK				
Item	Description	Quantity	Range	Unit Cost	Extension
1	CONCRETE STAIRS	12	$9000-$25000/EA	$15,000.00	$180,000
2	MISC. METAL		LUMP SUM	$25,000.00	$25,000
3	SEISMIC JOINT FLASHING	0 LF	$30/LF - $250/LF	$50.00	$0
4	CAULKING & SEALANT	600 LF	$4/LF	$4.00	$2,400
5	ALUMINUM STOREFRONT SYSTEM	800 SF	$10-$50/SF	$45.00	$36,000
6	FINISH HARDWARE	4	$250-$500/EA	$275.00	$1,100
7	CERAMIC TILE	100 SF	$5-$15/SF	$8.00	$800
8	Vehicle barrier @ RAMP (CMU & Metal)	1,900 LF	$25-$75/LF	$75.00	$142,500
9	PRECAST RAILS	1,200 LF	$75-$150/LF	$175.00	$210,000
10	CMU RAILS (w/stucco)	1,700 LF	$25-$75/LF	$60.00	$102,000
11	STRIPING	437	$4-$18/EA	$13.00	$5,681
12	ROOF	850 SF	$1-$10/SF	$5.00	$4,250
13	PAINTING w/ columns, soffit	111,000 SF	$0.30-$0.70/SF	$0.50	$55,500
14	ADDITIONAL ARCHITECTURAL FEATURE		LUMP SUM	$50,000.00	$50,000
15	MAN DOORS	4	$200-$500 EA	$500.00	$2,000
16	O/H DOORS	0	$1600-$2500 EA	$0.00	$0



Opinion of Cost | Wailuku, Maui, Hawaii | **Option A - 03.13.02**

ARCHITECTURAL WORK (con't)

Item	Description	Quantity	Range	Unit Cost	Extension
17	DRAINAGE	150,000 SF	$0.50-$0.75/SF	$0.50	$75,000
18	WATERPROOF - Blw Grade	6,000 SF	$0.25-$3.00/SF	$2.00	$12,000
19	WATERPROOF - Deck	1,500 SF	$1.00-$4.00/SF	$2.00	$3,000
20	ELEVATOR (hydraulic)	1	$45,000-$150,000	$75,000.00	$75,000
21	SECURITY GRILL	0 SF	$8-$12/SF	$8.00	$0
22	GLASS/GLAZING	800 SF	$20.00-$60.00/SF	$30.00	$24,000
23	PLUMBING		LUMP SUM	$4,000.00	$4,000
24	FIRE PROTECTION w/sprinklers	111,000 SF	$0.45-$1.85/SF	$1.65	$183,150
25	VENTILATION		LUMP SUM	$20,000.00	$20,000
26	ELECTRICAL LIGHTING (up/down)	150,000 SF	$0.60-$3.00/SF	$1.50	$225,000
27	EMERGENCY POWER (batt.)	1	$35,000/EA	$35,000.00	$35,000
28	FIRE ALARM SYSTEMS	6	$300/EA	$300.00	$1,800
29	TELEPHONE SYSTEM	6	$2,000/EA	$2,000.00	$12,000
30	CAMERA SYSTEM (conduit only)		LUMP SUM	$15,000.00	$15,000
31	SIGNAGE (code minimum)		LUMP SUM	$50,000.00	$50,000
32	PARKING EQUIP		LUMP SUM		$0
33	PLANTERS ON STRUCTURE	0 LF	$200.00/LF	$0.00	$0
34	SAND OIL SEPARATOR	1	$12,000-$25000/EA	$25,000.00	$25,000
				ARCHITECTURAL TOTAL	**$1,577,181**

SUB TOTALS	Typical Range	% of Subtotal	
SITEWORK	2% - 10%	14.2%	$768,510
STRUCTURAL WORK	60% - 85%	56.5%	$3,049,105
ARCHITECTURAL WORK	10% - 35%	29.2%	$1,577,181
		SUBTOTAL	**$5,394,796**

JOB OVERHEAD	4%-8%	8%	$431,584
MARK-UP	4%-10%	5%	$291,319
		CONSTRUCTION COST	**$6,117,699**

CONTINGENCY	6%-25%	15%	$917,655
		CONSTRUCTION TOTAL COST	**$7,035,353**

SUMMARY / UNIT COSTS		
COST PER TOTAL SQUARE FOOT	$18.00-$40.00/SF	$46.90
COST PER ELEVATED DECK AREA	$25.00-$50.00	$63.38
COST PER STRUCTURE PARKING STALL	$5500-$17000/SF	$16,099.21
COST PER TOTAL PARKING STALL	$5500-$17000/SF	$15,530.58

QUANTITIES PER AREA OF ELEVATED DECK		
TOTAL POST-TENSIONING	85,000 LB	0.77 LB/SF
TOTAL MILD STEEL REINFORCING	987,000 LB	8.89 LB/SF
TOTAL CONCRETE	6,570 CY	19.18 IN/SF
TOTAL REINFORCING / TOTAL CONCRETE	150.2 LB/CY	

WDI makes no warranty, expressed or implied, as to the accuracy of the opinion of probable construction cost as compared to bid or actual cost.

Option B

Architects • Engineers • Parking Planners



WATRY DESIGN, INC.

WDI #01066
date 2/5/2002
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Prepared By: JJM

Checked By: MW

OPINION OF PROBABLE CONSTRUCTION COST:

Wailuku Municipal Parking Structure
Wailuku, Maui, Hawaii
Option B - 03.13.02

NUMBER OF STALLS IN STRUCTURE: 465 ON GRADE: 13
TOTAL NUMBER OF PARKING STALLS: 478
NUMBER OF ELEVATED DECKS: 3
ELEVATED DECK SQUARE FOOTAGE: 101,800 SF
SLAB ON GRADE SQUARE FOOTAGE: 44,900 SF
STRUCTURE SQUARE FOOTAGE: 146,700 SF
SQUARE FOOT PER STALL (STRUCTURE): 315 SF

SITE WORK

Item	Description	Quantity	Range	Unit Cost	Extension
1	DEMOLITION AND CLEARING		LUMP SUM	$50,000.00	$50,000
2	EXCAVATION (Silt and Rock Mix)	9,000 CY	$5-$15/CY	$12.00	$108,000
3	BACKFILLING & COMPACTING	2,000 CY	$50-$80/CY	$65.00	$130,000
4	WALKS	6,600 SF	$2.25-$4.00/SF	$4.50	$29,700
5	CURBS & GUTTER	410 LF	$9-$15/LF	$22.00	$9,020
6	STORM DRAINAGE	500 LF	$50-$200/LF	$72.00	$36,000
7	FENCING AND GATES	690 LF	$12-$30/LF	$35.00	$24,150
8	FIRE & DOMESTIC WATER	1,120 LF	$50-$200/LF	$72.00	$80,640
9	FIRE HYDRANT	5	$3500/EA	$3,500.00	$17,500
10	RECONSTRUCT CATCH BASIN	2	$4000/EA	$4,000.00	$8,000
11	PARKING LOT ON GRADE	0 SF	$2-$5/SF	$5.00	$0
12	LANDSCAPE & IRRIGATION	7,000 SF	$2-$5/SF	$5.00	$35,000
13	NEW MAIN ST. ACCESS ROAD	17,500 SF	$10-$15/SF	$15.00	$262,500
14	PILI STREET RESURFACING	6,300 SF	$5-$15/SF	$9.00	$56,700
				SITE WORK TOTAL	**$847,210**

STRUCTURAL WORK

Item	Description	Quantity	Range	Unit Cost	Extension
1	SLAB ON GRADE: Reinf.	36,500 LB	$0.55-$0.80/LB	$0.70	$25,550
2	Base:	890 CY	$20-$40/CY	$30.00	$26,700
3	Hardrock Concrete	745 CY	$120-$140/CY	$150.00	$111,750
	Unit Price	**44,400 SF**	**$2.75-$5.00/SF**	**$3.69/SF**	**$164,000**
4	CURBS ON GRADE Reinf.	18,000 LB	$0.55-$0.80/LB	$0.70	$12,600
5	Hardrock Concrete	110 CY	$120-$140/CY	$150.00	$16,500
6	Formwork	800 SF	$8-$14/SF	$12.00	$9,600
	Unit Price	**6,000 SF**	**$3-$8/SF**	**$6.45/SF**	**$38,700**
7	FOOTINGS Excavation	1,750 CY	$5-$10/CY	$20.00	$35,000
8	Reinf.	175,000 LB	$0.55-$0.80/LB	$0.70	$122,500
9	Hardrock Concrete	1,750 CY	$80-$120/CY	$110.00	$192,500
	Unit Price	**1,750 CY**	**$125-$225/CY**	**$200.00/CY**	**$350,000**
10	ASPHALT	0 SF	$2-$5/SF	$3.00	$0



	STRUCTURAL WORK (con't)				
Item	Description	Quantity	Range	Unit Cost	Extension
11	SUPPORTED DECKS: P-T	37,000 LB	$1.55-$1.90/LB	$1.90	$70,300
12	Reinf.	180,000 LB	$0.55-$0.80/LB	$0.70	$126,000
13	5000 psi Hardrock Concrete	1,800 CY	$125-$165/CY	$160.00	$288,000
14	Formwork	101,100 SF	$2-$5/SF	$4.75	$480,225
	Unit Price	**101,800 SF**	**$5.50-$10.00/SF**	**$9.47/SF**	**$964,525**
15	CURBS ON DECKS: Reinf.	40,000 LB	$0.55-$0.80/LB	$0.70	$28,000
16	5000 psi Hardrock Concrete	320 CY	$125-$165/CY	$160.00	$51,200
17	Formwork	2,040 SF	$5-$14/SF	$10.00	$20,400
	Unit Price	**16,000 SF**	**$9-$12/SF**	**$6.23/SF**	**$99,600**
18	PT BEAMS & GIRDERS P-T	50,000 LB	$1.55-$1.90/LB	$1.90	$95,000
19	Reinf.	205,000 LB	$0.55-$0.80/LB	$0.70	$143,500
20	5000 psi Hardrock Concrete	930 CY	$100-$145/CY	$130.00	$120,900
21	Formwork	50,000 SF	$5-$10/SF	$7.40	$370,000
	Unit Price	**7,500 LF**	**$75-$125/LF**	**$84.59/LF**	**$729,400**
22	SHEAR WALLS Reinf.	88,000 LB	$0.55-$0.80/LB	$0.70	$61,600
23	Hardrock Concrete	390 CY	$100-$145/CY	$130.00	$50,700
24	Formwork	7,000 SF	$10-$20/SF	$16.00	$112,000
	Unit Price	**7,000 SF**	**$20-$35/SF**	**$32.04/SF**	**$224,300**
25	COLUMNS (24x30): Reinf.	245,000 LB	$0.55-$0.80/LB	$0.80	$196,000
26	Hardrock Concrete	420 CY	$100-$145/CY	$130.00	$54,600
27	Formwork	20,000 SF	$5-$15/SF	$7.50	$150,000
	Unit Price	**2,250 LF**	**$100-$200/LF**	**$178.04/LF**	**$400,600**
28	COLUMNS (round): Reinf.	0 LB	$0.55-$0.80/LB	$0.80	$0
29	Hardrock Concrete	0 CY	$100-$145/CY	$130.00	$0
30	Formwork	0 SF	$5-$15/SF	$6.50	$0
	Unit Price	**0 LF**	**$75-$125/LF**	**$0.00/LF**	**$0**
31	C.I.P. WALLS: Reinf.	0 LB	$0.55-$0.80/LB	$0.70	$0
32	Hardrock Concrete	0 CY	$100-$145/CY	$130.00	$0
33	Formwork	0 SF	$10-$20/SF	$16.00	$0
	Unit Price	**0 SF**	**$20-$35/SF**	**$0.00/SF**	**$0**
34	C.M.U. WALLS:	8,000 SF	$8-$12/SF	$12.00	$96,000
				STRUCTURE TOTAL	**$3,067,125**

	ARCHITECTURAL WORK				
Item	Description	Quantity	Range	Unit Cost	Extension
1	CONCRETE STAIRS	9	$9000-$25000/EA	$15,000.00	$135,000
2	MISC. METAL		LUMP SUM	$25,000.00	$25,000
3	SEISMIC JOINT FLASHING	0 LF	$30/LF - $250/LF	$50.00	$0
4	CAULKING & SEALANT	600 LF	$4/LF	$4.00	$2,400
5	ALUMINUM STOREFRONT SYSTEM	0 SF	$10-$50/SF	$45.00	$0
6	FINISH HARDWARE	4	$250-$500/EA	$275.00	$1,100
7	CERAMIC TILE	100 SF	$5-$15/SF	$8.00	$800
8	Vehicle barrier @ RAMP (CMU & Metal)	900 LF	$25-$75/LF	$75.00	$67,500
9	PRECAST RAILS	1,200 LF	$75-$150/LF	$175.00	$210,000
10	CMU RAILS (w/stucco)	1,800 LF	$25-$75/LF	$60.00	$108,000
11	STRIPING	465	$4-$18/EA	$13.00	$6,045
12	ROOF	900 SF	$1-$10/SF	$5.00	$4,500
13	PAINTING w/ columns, soffit	101,800 SF	$0.30-$0.70/SF	$0.50	$50,900
14	ADDITIONAL ARCHITECTURAL FEATURE		LUMP SUM	$50,000.00	$50,000
15	MAN DOORS	4	$200-$500 EA	$500.00	$2,000
16	O/H DOORS	0	$1600-$2500 EA	$0.00	$0

ARCHITECTURAL WORK (con't)

Item	Description	Quantity	Range	Unit Cost	Extension
17	DRAINAGE	146,700 SF	$0.50-$0.75/SF	$0.50	$73,350
18	WATERPROOF - Blw Grade	5,000 SF	$0.25-$3.00/SF	$2.00	$10,000
19	WATERPROOF - Deck	0 SF	$1.00-$4.00/SF	$0.00	$0
20	ELEVATOR (hydraulic)	2	$45,000-$150,000	$75,000.00	$150,000
21	SECURITY GRILL	0 SF	$8-$12/SF	$8.00	$0
22	GLASS/GLAZING	800 SF	$20.00-$60.00/SF	$30.00	$24,000
23	PLUMBING		LUMP SUM	$0.00	$0
24	FIRE PROTECTION w/sprinklers	101,800 SF	$0.45-$1.85/SF	$1.65	$167,970
25	VENTILATION		LUMP SUM	$20,000.00	$20,000
26	ELECTRICAL LIGHTING (up/down)	146,700 SF	$0.60-$3.00/SF	$1.50	$220,050
27	EMERGENCY POWER (batt.)	1	$35,000/EA	$35,000.00	$35,000
28	FIRE ALARM SYSTEMS	6	$300/EA	$300.00	$1,800
29	TELEPHONE SYSTEM	6	$2,000/EA	$2,000.00	$12,000
30	CAMERA SYSTEM (conduit only)		LUMP SUM	$15,000.00	$15,000
31	SIGNAGE (code minimum)		LUMP SUM	$50,000.00	$50,000
32	PARKING EQUIP		LUMP SUM		$0
33	PLANTERS ON STRUCTURE	0 LF	$200.00/LF	$0.00	$0
34	SAND OIL SEPARATOR	1	$12,000-$25000/EA	$25,000.00	$25,000
				ARCHITECTURAL TOTAL	**$1,467,415**

SUB TOTALS	Typical Range	% of Subtotal	
SITEWORK	2% - 10%	15.7%	$847,210
STRUCTURAL WORK	60% - 85%	57.0%	$3,067,125
ARCHITECTURAL WORK	10% - 35%	27.3%	$1,467,415
		SUBTOTAL	**$5,381,750**

JOB OVERHEAD	4%-8%	8%	$430,540
MARK-UP	4%-10%	5%	$290,615
		CONSTRUCTION COST	**$6,102,905**

CONTINGENCY	6%-25%	15%	$915,436
		CONSTRUCTION TOTAL COST	**$7,018,340**

SUMMARY / UNIT COSTS		
COST PER TOTAL SQUARE FOOT	$18.00-$40.00/SF	$47.84
COST PER ELEVATED DECK AREA	$25.00-$50.00	$68.94
COST PER STRUCTURE PARKING STALL	$5500-$17000/SF	$15,093.20
COST PER TOTAL PARKING STALL	$5500-$17000/SF	$14,682.72

QUANTITIES PER AREA OF ELEVATED DECK		
TOTAL POST-TENSIONING	87,000 LB	0.85 LB/SF
TOTAL MILD STEEL REINFORCING	987,500 LB	9.70 LB/SF
TOTAL CONCRETE	6,465 CY	20.58 IN/SF
TOTAL REINFORCING / TOTAL CONCRETE	152.7 LB/CY	

WDI makes no warranty, expressed or implied, as to the accuracy of the opinion of probable construction cost as compared to bid or actual cost.

Option C

Architects • Engineers • Parking Planners

WATRY DESIGN, INC.

WDI #01066
date 2/5/2002
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Prepared By: JJM

Checked By: MW

OPINION OF PROBABLE CONSTRUCTION COST:

Wailuku Municipal Parking Structure
Wailuku, Maui, Hawaii
Option C - 03.13.02

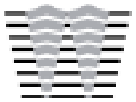
NUMBER OF STALLS IN STRUCTURE: 462 ON GRADE: 26
TOTAL NUMBER OF PARKING STALLS: 488
NUMBER OF ELEVATED DECKS: 4
ELEVATED DECK SQUARE FOOTAGE: 119,000 SF
SLAB ON GRADE SQUARE FOOTAGE: 31,300 SF
STRUCTURE SQUARE FOOTAGE: 150,300 SF
SQUARE FOOT PER STALL (STRUCTURE): 325 SF

SITE WORK

Item	Description	Quantity	Range	Unit Cost	Extension
1	DEMOLITION AND CLEARING		LUMP SUM	$50,000.00	$50,000
2	EXCAVATION (Silt and Rock Mix)	6,000 CY	$5-$15/CY	$12.00	$72,000
3	BACKFILLING & COMPACTING	2,000 CY	$50-$80/CY	$65.00	$130,000
4	WALKS	4,100 SF	$2.25-$4.00/SF	$4.50	$18,450
5	CURBS & GUTTER	410 LF	$9-$15/LF	$22.00	$9,020
6	STORM DRAINAGE	500 LF	$50-$200/LF	$72.00	$36,000
7	FENCING AND GATES	690 LF	$12-$30/LF	$35.00	$24,150
8	FIRE & DOMESTIC WATER	1,120 LF	$50-$200/LF	$72.00	$80,640
9	FIRE HYDRANT	5	$3500/EA	$3,500.00	$17,500
10	RECONSTRUCT CATCH BASIN	2	$4000/EA	$4,000.00	$8,000
11	PARKING LOT ON GRADE	3,600 SF	$2-$5/SF	$5.00	$18,000
12	LANDSCAPE & IRRIGATION	7,000 SF	$2-$5/SF	$5.00	$35,000
13	NEW MAIN ST. ACCESS ROAD	15,000 SF	$10-$15/SF	$15.00	$225,000
13	PILI STREET RESURFACING	12,300 SF	$5-$15/SF	$9.00	$110,700
				SITE WORK TOTAL	**$834,460**

STRUCTURAL WORK

Item	Description	Quantity	Range	Unit Cost	Extension
1	SLAB ON GRADE: Reinf.	25,000 LB	$0.55-$0.80/LB	$0.70	$17,500
2	Base:	610 CY	$20-$40/CY	$30.00	$18,300
3	Hardrock Concrete	510 CY	$120-$140/CY	$150.00	$76,500
	Unit Price	**30,200 SF**	**$2.75-$5.00/SF**	**$3.72/SF**	**$112,300**
4	CURBS ON GRADE Reinf.	12,500 LB	$0.55-$0.80/LB	$0.70	$8,750
5	Hardrock Concrete	75 CY	$120-$140/CY	$150.00	$11,250
6	Formwork	550 SF	$8-$14/SF	$12.00	$6,600
	Unit Price	**4,200 SF**	**$3-$8/SF**	**$6.33/SF**	**$26,600**
7	FOOTINGS Excavation	2,000 CY	$5-$10/CY	$20.00	$40,000
8	Reinf.	210,000 LB	$0.55-$0.80/LB	$0.70	$147,000
9	Hardrock Concrete	2,000 CY	$80-$120/CY	$110.00	$220,000
	Unit Price	**2,000 CY**	**$125-$225/CY**	**$203.50/CY**	**$407,000**
10	ASPHALT	0 SF	$2-$5/SF	$3.00	$0



	STRUCTURAL WORK (con't)				
Item	Description	Quantity	Range	Unit Cost	Extension
11	SUPPORTED DECKS: P-T	42,000 LB	$1.55-$1.90/LB	$1.90	$79,800
12	Reinf.	205,000 LB	$0.55-$0.80/LB	$0.70	$143,500
13	5000 psi Hardrock Concrete	2,100 CY	$125-$165/CY	$160.00	$336,000
14	Formwork	115,300 SF	$2-$5/SF	$4.75	$547,675
	Unit Price	**119,000 SF**	**$5.50-$10.00/SF**	**$9.30/SF**	**$1,106,975**
15	CURBS ON DECKS: Reinf.	45,000 LB	$0.55-$0.80/LB	$0.70	$31,500
16	5000 psi Hardrock Concrete	375 CY	$125-$165/CY	$160.00	$60,000
17	Formwork	2,350 SF	$5-$14/SF	$10.00	$23,500
	Unit Price	**18,500 SF**	**$9-$12/SF**	**$6.22/SF**	**$115,000**
18	PT BEAMS & GIRDERS P-T	57,000 LB	$1.55-$1.90/LB	$1.90	$108,300
19	Reinf.	235,000 LB	$0.55-$0.80/LB	$0.70	$164,500
20	5000 psi Hardrock Concrete	1,060 CY	$100-$145/CY	$130.00	$137,800
21	Formwork	57,000 SF	$5-$10/SF	$7.40	$421,800
	Unit Price	**8,550 LF**	**$75-$125/LF**	**$84.69/LF**	**$832,400**
22	SHEAR WALLS Reinf.	95,000 LB	$0.55-$0.80/LB	$0.70	$66,500
23	Hardrock Concrete	390 CY	$100-$145/CY	$130.00	$50,700
24	Formwork	7,000 SF	$10-$20/SF	$16.00	$112,000
	Unit Price	**7,000 SF**	**$20-$35/SF**	**$32.74/SF**	**$229,200**
25	COLUMNS (24x30): Reinf.	280,000 LB	$0.55-$0.80/LB	$0.80	$224,000
26	Hardrock Concrete	480 CY	$100-$145/CY	$130.00	$62,400
27	Formwork	23,000 SF	$5-$15/SF	$7.50	$172,500
	Unit Price	**2,550 LF**	**$100-$200/LF**	**$179.96/LF**	**$458,900**
28	COLUMNS (round): Reinf.	0 LB	$0.55-$0.80/LB	$0.80	$0
29	Hardrock Concrete	0 CY	$100-$145/CY	$130.00	$0
30	Formwork	0 SF	$5-$15/SF	$6.50	$0
	Unit Price	**0 LF**	**$75-$125/LF**	**$0.00/LF**	**$0**
31	C.I.P. WALLS: Reinf.	0 LB	$0.55-$0.80/LB	$0.70	$0
32	Hardrock Concrete	0 CY	$100-$145/CY	$130.00	$0
33	Formwork	0 SF	$10-$20/SF	$16.00	$0
	Unit Price	**0 SF**	**$20-$35/SF**	**$0.00/SF**	**$0**
34	C.M.U. WALLS:	7,000 SF	$8-$12/SF	$12.00	$84,000
				STRUCTURE TOTAL	**$3,372,375**

	ARCHITECTURAL WORK				
Item	Description	Quantity	Range	Unit Cost	Extension
1	CONCRETE STAIRS	16	$9000-$25000/EA	$15,000.00	$240,000
2	MISC. METAL		LUMP SUM	$25,000.00	$25,000
3	SEISMIC JOINT FLASHING	0 LF	$30/LF - $250/LF	$50.00	$0
4	CAULKING & SEALANT	600 LF	$4/LF	$4.00	$2,400
5	ALUMINUM STOREFRONT SYSTEM	0 SF	$10-$50/SF	$45.00	$0
6	FINISH HARDWARE	4	$250-$500/EA	$275.00	$1,100
7	CERAMIC TILE	100 SF	$5-$15/SF	$8.00	$800
8	Vehicle barrier @ RAMP (CMU & Metal)	1,200 LF	$25-$75/LF	$75.00	$90,000
9	PRECAST RAILS	1,500 LF	$75-$150/LF	$175.00	$262,500
10	CMU RAILS (w/stucco)	1,900 LF	$25-$75/LF	$60.00	$114,000
11	STRIPING	462	$4-$18/EA	$13.00	$6,006
12	ROOF	900 SF	$1-$10/SF	$5.00	$4,500
13	PAINTING w/ columns, soffit	119,000 SF	$0.30-$0.70/SF	$0.50	$59,500
14	ADDITIONAL ARCHITECTURAL FEATURE		LUMP SUM	$50,000.00	$50,000
15	MAN DOORS	4	$200-$500 EA	$500.00	$2,000
16	O/H DOORS	0	$1600-$2500 EA	$0.00	$0



Opinion of Cost: Wailuku, Maui, Hawaii **Option C - 03.13.02**

ARCHITECTURAL WORK (con't)

Item	Description	Quantity	Range	Unit Cost	Extension
17	DRAINAGE	150,300 SF	$0.50-$0.75/SF	$0.50	$75,150
18	WATERPROOF - Blw Grade	4,000 SF	$0.25-$3.00/SF	$2.00	$8,000
19	WATERPROOF - Deck	0 SF	$1.00-$4.00/SF	$0.00	$0
20	ELEVATOR (hydraulic)	1	$45,000-$150,000	$75,000.00	$75,000
21	SECURITY GRILL	0 SF	$8-$12/SF	$8.00	$0
22	GLASS/GLAZING	800 SF	$20.00-$60.00/SF	$30.00	$24,000
23	PLUMBING		LUMP SUM	$0.00	$0
24	FIRE PROTECTION w/sprinklers	119,000 SF	$0.45-$1.85/SF	$1.65	$196,350
25	VENTILATION		LUMP SUM	$20,000.00	$20,000
26	ELECTRICAL LIGHTING (up/down)	150,300 SF	$0.60-$3.00/SF	$1.50	$225,450
27	EMERGENCY POWER (batt.)	1	$35,000/EA	$35,000.00	$35,000
28	FIRE ALARM SYSTEMS	6	$300/EA	$300.00	$1,800
29	TELEPHONE SYSTEM	6	$2,000/EA	$2,000.00	$12,000
30	CAMERA SYSTEM (conduit only)		LUMP SUM	$15,000.00	$15,000
31	SIGNAGE (code minimum)		LUMP SUM	$50,000.00	$50,000
32	PARKING EQUIP		LUMP SUM		$0
33	PLANTERS ON STRUCTURE	0 LF	$200.00/LF	$0.00	$0
34	SAND OIL SEPARATOR	1	$12,000-$25000/EA	$25,000.00	$25,000
				ARCHITECTURAL TOTAL	**$1,620,556**

SUB TOTALS	Typical Range	% of Subtotal	
SITEWORK	2% - 10%	14.3%	$834,460
STRUCTURAL WORK	60% - 85%	57.9%	$3,372,375
ARCHITECTURAL WORK	10% - 35%	27.8%	$1,620,556
		SUBTOTAL	**$5,827,391**

JOB OVERHEAD	4%-8%	8%	$466,191
MARK-UP	4%-10%	5%	$314,679
		CONSTRUCTION COST	**$6,608,261**

CONTINGENCY	6%-25%	15%	$991,239
		CONSTRUCTION TOTAL COST	**$7,599,501**

SUMMARY / UNIT COSTS		
COST PER TOTAL SQUARE FOOT	$18.00-$40.00/SF	$50.56
COST PER ELEVATED DECK AREA	$25.00-$50.00	$63.86
COST PER STRUCTURE PARKING STALL	$5500-$17000/SF	$16,449.14
COST PER TOTAL PARKING STALL	$5500-$17000/SF	$15,572.75

QUANTITIES PER AREA OF ELEVATED DECK		
TOTAL POST-TENSIONING	99,000 LB	0.83 LB/SF
TOTAL MILD STEEL REINFORCING	1,107,500 LB	9.31 LB/SF
TOTAL CONCRETE	6,990 CY	19.03 IN/SF
TOTAL REINFORCING / TOTAL CONCRETE	158.4 LB/CY	

WDI makes no warranty, expressed or implied, as to the accuracy of the opinion of probable construction cost as compared to bid or actual cost.

APPENDIX E
Wailuku Redevelopment Area Market-Based Plan

PROGRESSIVE URBAN MANAGEMENT ASSOCIATES

P.U.M.A.

FINAL REPORT

OCTOBER 1, 2010

WAILUKU REDEVELOPMENT AREA MARKET-BASED PLAN



PREPARED FOR

THE COUNTY OF MAUI

AND

THE MAUI REDEVELOPMENT AGENCY

PREPARED BY

PROGRESSIVE URBAN MANAGEMENT ASSOCIATES, INC.

1616 SEVENTEENTH STREET, # 262
DENVER, COLORADO 80202
T 303/628-5554
F 303/628-5557
www.pumaworldhq.com

Strategic problem solving for downtowns and communities

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- **Community Survey Results**
- **Leakage Analysis Tables**
- **Steering Committee Roster**

EXECUTIVE SUMMARY

In early 2010, The County of Maui and the Maui Redevelopment Agency commissioned Progressive Urban Management Associates, Inc. (P.U.M.A.) to prepare a Market-Based Plan to provide short- and long-term strategies to retain, grow and attract high quality development, new investment and appropriate businesses to Wailuku's Redevelopment Area, also referred to as Wailuku Town. Objectives of the Market-Based Plan included:

- ✧ Evaluate the overall feasibility for new development
- ✧ Create an environment that attracts investment
- ✧ Assess the pros and cons of organizations, agencies and financial tools
- ✧ Provide tactical recommendations and sequencing
- ✧ Engage property owners, businesses, residents and civic leaders in the planning process

The Market-Based Plan builds upon past planning efforts that have helped to boost Wailuku Town development efforts over the past decade. Notably, the following documents were utilized as foundational resources in the Market-Based Plan process:

- ✧ The Wailuku Redevelopment Plan, approved in 2000, provides a key building block for the Market-Based Plan. More than two-thirds of the Redevelopment Plan's recommendations have been implemented and the Market-Based Plan is intended to serve as a formal update to the Redevelopment Plan.
- ✧ Wailuku Redevelopment Area Zoning and Development Code
- ✧ Wailuku Redevelopment Area Design Guidelines
- ✧ Wailuku-Kahului Community Plan
- ✧ Wailuku Campus Space Study
- ✧ Various reports from the Wailuku Main Street Association

The Market-Based Plan was created with oversight from the Maui County Planning Department, the Maui Redevelopment Agency, the Wailuku Main Street Association Inc. program and a Steering Committee composed of nearly 20 diverse Wailuku stakeholders. Funding for the plan was developed through a public/private partnership that included the County, Redevelopment Agency and private property and business owners, and was administered by the Tri-Isle Resource Conservation and Development Council.

Extensive community outreach was engineered by the consultant team during a series of four site visits. More than 75 Wailuku property owners, businesses and residents participated in one-on-one and small group meetings. In addition, more than 1,000 residents working and living in the Wailuku-Kahului market area completed a community attitudes survey that provided consumer insight on Wailuku. The bias of the plan was to determine how Wailuku can become more relevant to local residents, and, building upon increased patronage from residents, visitor markets would follow.

There are two primary bodies of research and recommendations from the Market-Based Plan:

- ✧ A competitive analysis that provides the market foundation and niche strategy for plan recommendations.
- ✧ An implementation business plan that includes proposed initiatives, organizational structure and sequencing.

Highlights from the Competitive Analysis

Market Profile: The market profile provides a snapshot of current market conditions and recent trends that affect the Wailuku Town market. Significant findings from the market profile include:

- ✧ A population of more than 45,000 with median household incomes of $62,000 lives within a three mile radius of Wailuku Town.
- ✧ The area is racially diverse – 47% Asian, 14% White, 10% Pacific Islander, 9% Hispanic.
- ✧ More than 19,000 persons are employed within a three mile radius, including 2,300 County employees, 2,500 State employees, and 2,800 Hawai'i Department of Education/University of Hawai'i employees.

- Overall lease rates for Wailuku tend to be lower than those in neighboring Kahului.
- More than 3,400 residential housing units are under construction or ready to proceed within the study area.
- More than 10,000 vehicles travel along Main Street on a daily basis.
- The ‘Iao Valley State Park attracts more than 365,800 visitors on an annual basis.
- Overall crime in Wailuku Town decreased by 62.4% between 2005 and 2009.
- An inventory of retail reveals that Wailuku Town has 67 existing retail businesses and leasable retail space is more than 156,000 square feet, accounting for about 8% of the Wailuku-Kahului retail supply.
- Retail vacancy rate in Wailuku Town was 18.3%.
- Leisure-related retail (i.e. collectibles/antiques/second hand stores, art galleries) is the largest retail category at 30,000 square feet, followed by restaurants at 20,000 square feet.

Competitive Retail Environment: An analysis of competitive retail districts was performed, which examined major area retail concentrations with which Wailuku Town competes as a center for retail and services:

- Three of the districts were highway corridors that contained traditional shopping centers, strip mall centers, and big boxes and a power center.
- The fourth district was a community located approximately 10 miles away from Wailuku Town, which was considered to be the most relevant in terms of size, scale and historic character.
- Wailuku Town’s differential advantages are as follows:
  - Captive, in place markets of government and other employees, area residents and visitors.
  - Historic surroundings – “Authenticity”, and the historic center of government and commerce, gateway to the ‘Iao Valley.
  - Center of arts, culture, entertainment and events.
  - Locally owned and operated businesses are distinctive and diverse.

Retail Leakage Analysis: A retail leakage analysis of the Wailuku market, including Wailuku Town, identifies dollars that are leaving the community for specific product types. Highlights include:

- There is evidence of significant expenditure outflows for restaurants, both in the primary Wailuku market area and the larger Kahului market area.
- Other categories of retail leakage include leisure retail (i.e. pets, music and electronics), household furnishings and groceries.
- The analysis established an oversupply in the Wailuku/Kahului market areas of general merchandise (i.e. discount and traditional department stores).

Community Attitudes Survey: A community attitudes survey was conducted in spring 2010 via electronic and hard copy distribution through a variety of government, commercial, and non-profit outlets. 1,011 respondents who live and/or work in the Kahului/Wailuku area completed the survey. Key findings from the survey include:

- Nearly two-thirds of respondents visit Wailuku Town for reasons other than work.
- Top reasons for visiting include personal services, County and State business, medical or dental care and restaurants.
- Reasons for not visiting downtown include difficulty finding parking, lack of diverse retail, traffic and congestion, lack of restaurants, a generally unappealing environment and concerns about safety.
- Improvements that would increase visitation include more convenient parking, more restaurants, a more welcoming, cleaner atmosphere, a safer pedestrian environment, a movie theater and unique one-of-a-kind shops.

- ✧ 39% of respondents park for 1 to 2 hours when they visit Wailuku Town, 55% are willing to walk 2 to 5 minutes from their car to their destination, and respondents are split on whether they would consider paying for more convenient parking.
- ✧ More than half of respondents indicated that they would consider living in Wailuku Town; single family homes were the preferred housing type and the top residential amenities cited were a grocery (76%) and clean and safe (75%).

Conclusions and Niche Opportunities

The competitive analysis revealed the following conclusions and suggested niche strategy for Wailuku:

- ✧ *The local market knows Wailuku, has income, and is already here.* Consumer surveys indicated high levels of existing non-work related visitation by residents within the Wailuku/Kahului market area. Residents are currently visiting for an array of personal services, and suggested that more restaurants and retail would increase their frequency of visitation.

- ✧ *Wailuku is an authentic environment that is connected to island history.* Wailuku retains its historic roots, attracts a broad cross-section of Maui's residents as the civic center for island government and commerce and is emerging as a center for celebrating culture and eclectic shopping.

- ✧ *Wailuku Town needs to be inviting – clean, safe and easy to park in.* Wailuku's street environment creates significant barriers to realizing its potential. Parking is poorly managed, resulting in peak daytime shortages of convenient parking in key retail locations. The pedestrian experience is inconsistent, with many areas lacking appropriate sidewalks, amenities and intuitive connections. The area is perceived by many as dangerous, particularly after dark, despite notable improvements in reducing crime.

- ✧ *Opportunities for success can occur by providing the basics.* Results of the community attitude survey and retail leakage analysis converge to identify retail opportunities that would be welcomed by a robust and relatively affluent market living within Wailuku/Kahului. Restaurants top the list of both survey respondents and the retail leakage analysis. Other opportunities that would appeal to local markets include diverse boutique retail, with a notable opportunity in the home furnishings segment, and a grocery.

- ✧ *Capture the Wailuku Experience* is proposed as a niche strategy for Wailuku, *incorporating its history, authenticity and potential to become a center for dining, entertainment, culture and eclectic retail for Maui*. This niche strategy allows for growth to take advantage of Wailuku's existing infrastructure in the short term, including the availability of parking during evenings and weekends, and the existing supply of relatively inexpensive real estate.

- ✧ *Creating the Experience is the foundation for future sustainability.* Ultimately, to be vital and sustainable, Wailuku Town will need to evolve into a vital mixed-use destination that includes employment, retail and housing. Currently, Wailuku Town is one-dimensional – it is primarily an employment center that draws residents mostly for work and personal services. As experienced in downtown revitalization throughout the U.S. over the past generation, the next logical segment is dining and entertainment. As downtowns evolve into dining and entertainment destinations, downtown districts have then seen a growth in demand for housing as people want to live in a walkable, vibrant and interesting environment. Conventional retail tends to be the next and last phase of development, following both vitality and residents. Fortunately, the Market-Based Plan reveals that Wailuku has the market fundamentals to support its next phase of evolution.

Highlights from the Implementation Business Plan

To capitalize on its market opportunities and carry out the recommended niche strategy for Wailuku, the Market-Based Plan provides an Implementation Business Plan with recommended initiatives, organizational structure and sequencing.

Initiatives are organized into five key categories.

- ✧ *Policy & Regulatory Framework* provides recommendations to make sure that the government land use entitlements and development review processes are ready to accommodate the new uses envisioned by the Market-Based Plan. Specific recommendations include:
  - Create a coordinated and more predictable development review process for Wailuku Town, encouraging County officials to employ a team approach, as opposed to the existing method that disperses plan review into several departments.
  - Amend selected building code requirements that are barriers to development, but do not pose health or safety problems. These include roadway widths, fire hydrants and manholes, and conversion of residential uses to compatible commercial uses.
  - Create a dining and entertainment incentive zone that provides regulatory certainty and waivers to promote desired types of uses.
  - Explore building code relief for historic buildings, acknowledging that modern codes often present insurmountable barriers to rehabilitation.
  - Investigate zoning and design review changes to accommodate the type of new investment envisioned by the Market-Based Plan.

- ✧ *Business Development* recommendations to provide incentives and support to attract the type of local, independent restaurant, entertainment and retail businesses envisioned by the Market-Based Plan, including:
  - Market Wailuku Town as "an incubator without walls", a place that local entrepreneurs are welcomed to create new innovate business concepts.
  - Develop an array of financial tools to assist small businesses, ranging from equity investment by property owners to a revolving loan fund that could be capitalized by community development block grant funds.
  - Create a formal dining and entertainment district along Market and Main Streets that provides predictability on how and where new venues are located. Suggested elements of the dining and entertainment district include a good neighbor policy to establish operating standards, waiving parking requirements on smaller spaces and establishing a standardized liquor licensing process within the designated district.

- ✧ *Parking Management* to improve the allocation of on-street and off-street parking for the variety of uses that compete daily for a limited supply. Options include:
  - Undertake a parking management plan that evaluates a variety of parking options, including a formal parking district that could generate revenue from long and short-term parking, and lead efforts to identify parking solutions.
  - While plans are being developed for Wailuku's central parking structure, restripe the central lot to add more parking and initiate paid parking for 12-hour spaces to create more availability for business employees and customers.
  - Acquire land for parking in the Happy Valley section of the Wailuku Redevelopment Area in order to facilitate business growth and new investment.
  - Support plans to develop Wailuku's central parking structure to increase parking availability for employees and customers, and to provide a reservoir of parking to support future housing and office development.

✧ *A Year-Round Public Market* has emerged as a catalytic project opportunity that could complement Wailuku's economic development and provide a critical central gathering place that is currently lacking. Advantages of the public market concept include:

- Provide nearby residents with access to fresh, locally grown food
- Add a new dimension to the Wailuku Experience for locals and tourists alike
- Leverage investment opportunities in the proposed dining and entertainment district
- Create a new central gathering place for Wailuku Town that builds upon the community's historic role

The ideal location for a year-round public market is the "remnant" parcel adjoining the planned parking structure.



Oxbow Public Market, Napa, California



Milwaukee Public Market

✧ *Public Realm* improvements are recommended to update Wailuku Town's infrastructure and to make the Wailuku Experience safe, clean and inviting. Examples of suggested improvements include continuous sidewalks, pedestrian crossings, traffic calming, better lighting, clean and safe initiatives, and collaboration among area social service agencies.

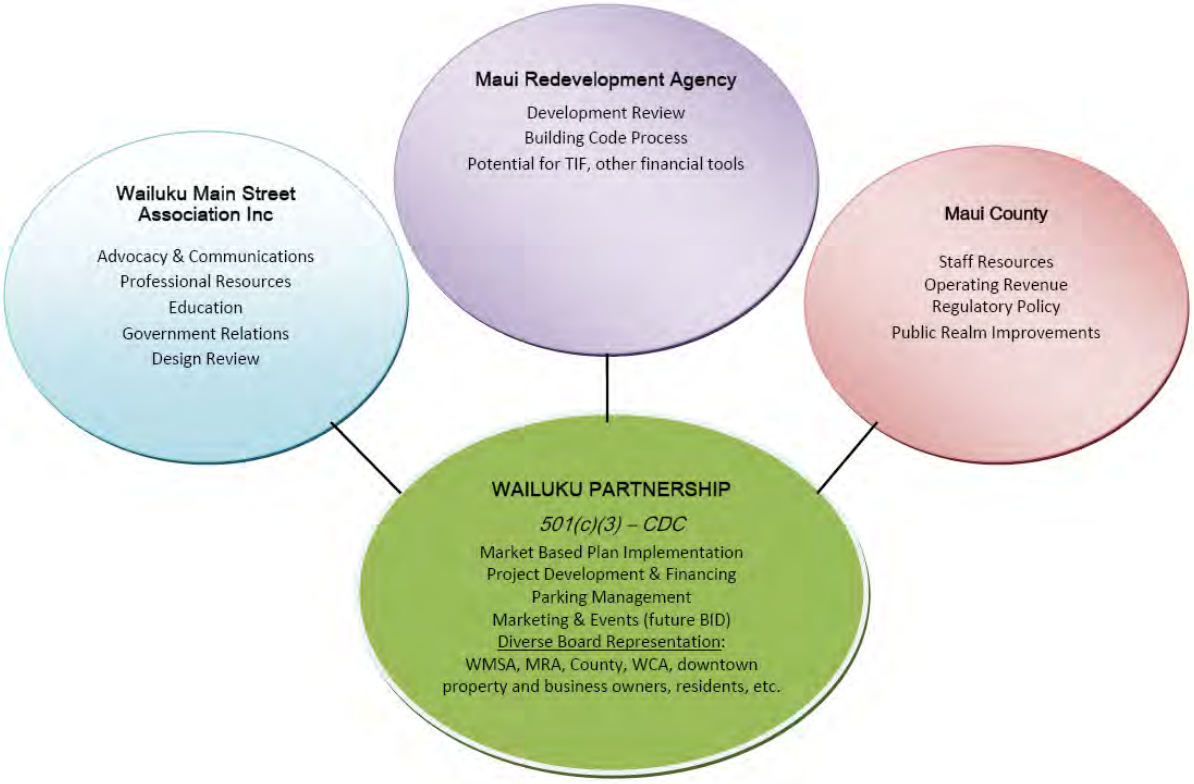
Organizational Structure

To advance the vision and initiatives outlined in the Market-Based Plan, a new collaborative structure is proposed. Wailuku's key organizational drivers – including the County, Maui Redevelopment Agency and Wailuku Main Street Association Inc. – offer well-intentioned energy and resources that are often diluted and dispersed. The organizational plan aims to combine the energy and resources of these entities, and other Wailuku Town improvement groups, into a unified umbrella structure that can combine the best qualities of each.

A new Wailuku Partnership is proposed, to be structured as a 501(c)3 non-profit community development corporation (CDC). The CDC structure could allow the organization to champion Wailuku Town improvement efforts in a variety of ways, acting as a lead developer to advance key civic projects, such as the proposal year-round public market, and helping to evaluate and implement parking management strategies throughout the Redevelopment Area. The CDC is envisioned to be governed by a board of directors consisting of representatives from its partner organizations, plus downtown property owners, businesses and residents that offer expertise and passion to advance its mission.

Proposed Organizational Structure for the Wailuku Partnership

(Draft: Prepared by Progressive Urban Management Associates, revised 9/15/10)



Market Profile



Wailuku Town is located directly to the east of the West Maui Mountains, which provide the town with a spectacular, green backdrop. It is referred to as the gateway to the 'Iao Valley, one of Maui, Hawaii's important historic visitor attractions. Immediately adjacent to Wailuku Town on the east is the harbor town of Kahului, the Island of Maui's commercial and industrial center and home to Maui's air and ocean transportation facilities.

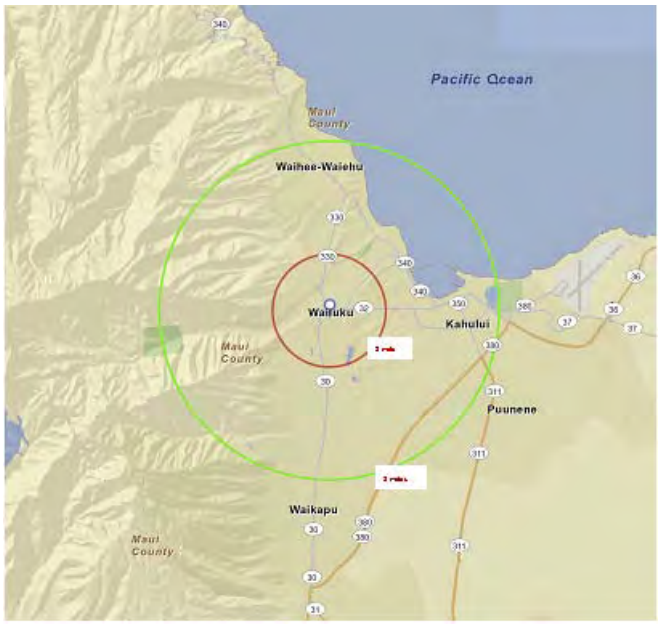
Background. The Wailuku area was a center of power and population in prehistoric Hawai'i. In the mid-1800s it was forever changed when New England missionaries brought their religious beliefs, Western skills and implements, and new agricultural methods. Within fifteen years, the Wailuku Sugar Company and other plantations were busy growing and milling sugarcane. Miles of ditches were dug, bringing irrigation water from deep in the mountains to the fields of Central Maui, where the sugar industry flourished. Thousands of skilled and unskilled workers immigrated to Maui from Asia, Europe and America to work in the fields and factories, bringing ethnic, cultural and religious diversity to the island.

Maui County includes the islands of Maui, Molokai, Lanai and the uninhabited Kahoolawe. Wailuku was declared County Seat in 1905, and it soon grew to become a hub of government, business, hospitality and entertainment and many markets. The sugar industry's decline in the 1960s along with the development of tourism and other commercial centers in other areas of the island drew business away from Wailuku Town. Today, the Wailuku–Kahului area remains the economic and population center of the island, and Wailuku Town is being reborn as a multiuse place for the island of Maui.
sources: Discover Wailuku,*alternative-hawai'i.com*

An analysis of area residents, employees and visitors provides the most accurate description of the target markets that will be generating the demand for the business products and services and amenities in Wailuku Town.

The following analysis is based upon 2000 and 2006 – 2008 Census data and recent forecast data compiled for Maui County, Wailuku CDP (Census Designated Place), Wailuku Town, also known as the Wailuku Redevelopment Area (WRA), and1- and 3- mile radii from Main Street and North Market Street. The one mile radius encompasses most of Wailuku Town proper, and the three mile radius captures Kahului CDP, south to Waikapu and north to Waihee-Waiehu (Figure 1).

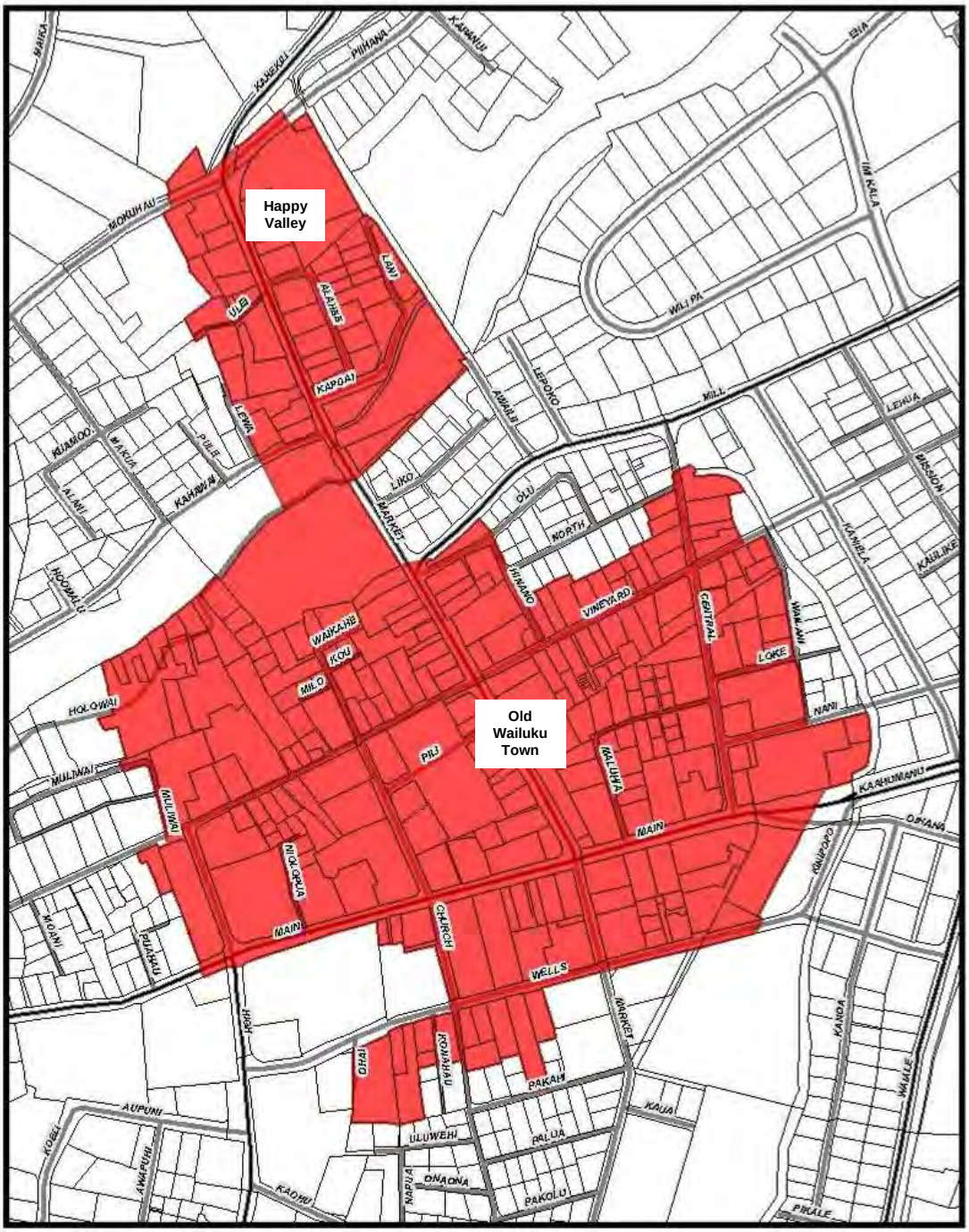
Figure 1
Wailuku Study Area, Maui, Hawai'i
source: ESRI



The approximately 68-acre study area, known as Wailuku Town or the Wailuku Redevelopment Area (WRA) is centrally located within the town of Wailuku. The area includes the business blocks surrounding the Vineyard-Market Street intersection (Old Wailuku Town) and the residential areas west of Church Street to High Street and north of Vineyard Street to the Happy Valley area (Figure 2).

Figure 2
Wailuku Town/Wailuku Redevelopment Area

source: Maui County Planning Department



Population and Households. Recent estimates show that the Wailuku Town population grew from 337 in 2000 to 587 during 2009. The annual rate of growth for the wider area was slower; the one-mile radius changed from a 2000 population of 8,864, and the three mile radius changed from a 2000 population of 40,353. 2010 estimates show the population of the Wailuku/Kahului area as 49,684.The household count in Wailuku Town changed from 167 in 2000 and within the three-mile area, households grew from 12,456 in 2000. Households within the Wailuku Town Area are smaller, growing from 2.02 persons in 2000. Within the three mile area, household size decreased from 3.17 persons in 2000 to 3.10 in 2009. Fewer males than females reside within the area (Figure 3).
sources: 2000 Census, ESRI, Maui County Department of Planning

Figure 3
2009 Population and Households: Wailuku Town, 1- and 3-Mile Radii from North Market and Main Streets

source: ESRI

	Wailuku Redevelopment Area	1-Mile Radius	3-Mile Radius
Population	587	10,815	45,063
Households	247	4,177	14,255
Average Household Size	2.38	2.58	3.1
Annual Rate of Population Growth 2000-2009	6.18%	2.17%	1.2%
Annual Rate of Household Growth 2000-2009	4.32%	2.48%	1.47%
Gender			
Male	284	5,353	22,262
Female	303	5,462	22,801

Age. The median age within Wailuku Town declined slightly from 38.9 in 2000 however, the study area as a whole aged from a median of 36.1 years in 2000 to 36.9 in 2009 (Figure 4).
sources: 2000 Census, ESRI

Figure 4
2009 Age Distribution: Wailuku Town, 1- and 3-Mile Radii from North Market and Main Streets

source: ESRI

	Wailuku Redevelopment Area	1-Mile Radius	3-Mile Radius
under 15 years	17.6%	18.6%	20.1%
15 to 19 years	6.7%	6.5%	7.0%
20 to 24 years	7.0%	6.7%	7.2%
25 to 34 years	14.2%	12.6%	13.5%
35 to 44 years	13.3%	13.5%	12.7%
45 to 54 years	15.2%	15.4%	14.0%
55 to 64 years	11.6%	12.2%	11.3%
65 years and over	11.8%	14.6%	14.3%
Median Age	38.6	39.4	36.9

Race and Ethnicity. Persons identifying as Asian (47.4%) White (14.4%) and Pacific Islander 10.3%) are the largest racial/ethnic groups and persons of Hispanic origin accounted for 9.2% of the population within the broader area (Figure 5).
sources: 2000 Census, ESRI

Figure 5
2009 Race and Ethnicity: Wailuku Town, 1- and 3-Mile Radii from North Market and Main Streets

source: ESRI

	Wailuku Redevelopment Area	1-Mile Radius	3-Mile Radius
White	99	1,996	6,503
African American	2	44	151
American Indian	2	31	135
Asian	233	4,481	21,363
Pacific Islander	73	1,119	4,662
Other	178	3,144	12,249
Hispanic Origin	58	958	4,156

Cultural History and Immigration. Maui is a multi-cultural society, reflecting major immigration patterns throughout its history. During the 1800s, American businessmen arrived to invest in pineapple and sugar plantations. After a smallpox epidemic killed many native Hawai'ians, immigrants from China, Japan, the Philippines, and Europe flocked to Maui to work in the sugar cane fields. Figures 6 and 7 are a timeline of major immigration to Maui from overseas and an analysis of current ethnic groups on Maui.
sources: alternativehawai'i.com, The State of Hawai'i Data Book 2008

Figure 6
Major Immigration to Maui County

source: alternativehawai'i.com

Population	Date of Major Immigration
Polynesia	700 A.D.
United States	1820
China	1852
Japan	1868
Portugal	1878
Puerto Rico	1900
Korea	1903
Phillipines	1906

Figure 7
2008 Maui County Race and Ethnicity

source: The State of Hawai'i Data Book 2008

Ethnicity	
White	46,736
African American	199
Japanese	12,915
Chinese	968
Filipino	22,768
Korean	399
Samoan/Tongan	619
Hawai'ian/part Hawai'ian	35,337
Other	22,685
Total Population	142,626



Wailuku Elementary School Administration Building

Education. 9,365 study area students were enrolled in Maui District public schools and 1,121 students were enrolled in private schools, grades 1 through 12 during the 2009-2010 school year. 32.6% of Maui District study area students received free school lunches during the 2007-2008 school year compared to 34.4% of all Maui District students. The University of Hawai'i Maui College (UHMC) offers courses in liberal and culinary arts, technical and vocational disciplines to 3,300 students. UHMC also delivers 4- and 5-year University of Hawai'i degree instruction though interactive television classrooms that service a tri-isle area. Recent Census estimates show that 25.3%% of Kahului/Wailuku area residents 25 years or older attained a bachelor's degree or higher level of education, compared to 29.2% and 27.4% of residents in Hawai'i and the United States respectively.
sources: Hawai'i State Department of Education, Hawai'i Council of Private Schools, ACS 2006-2008

Income. The 2009 median household income for Wailuku Town was $49,368, up from $38,037 in 2000. By increasing the area to three miles, median household incomes rise to $62,101. 2009 median household income for all United States households is $54,719. The December 2009 cost of living index for Maui County was 107.5*. During 2006 – 2008, 7.4% of people within the Wailuku/Kahului area were in poverty. (Figure 8).

** The cost of living index indicates relative price levels for consumer goods and services. The average composite index for the nation is 100%, and each city's index is read as a percentage of the overall average.*

sources: ESRI, ACCRA, ACS 2006-08

Figure 8

2009 Household Income Distribution: Wailuku Town, 1- and 3-mile Radii from North Market and Main Streets

source: ESRI

	Wailuku Town	1-mile Radius	3-mile Radius
Less than $25,000	23.1%	20.0%	18.7%
$25,000 - $34,999	11.7%	10.6%	8.1%
$35,000 - $49,999	15.8%	13.3%	12.1%
$50,000 – $74,999	18.2%	21.0%	21.1%
$75,000 - $99,999	19.0%	19.4%	19.2%
$100,000 - $149,999	3.6%	8.9%	13.1%
$150,000 or more	8.5%	6.8%	7.8%
Median Household Income	$49,368	$55,832	$62,101
Per Capita Income	$27,530	$26,389	$24,360

Employment. The total civilian labor force for Maui island in 2009 was 72,400.The 2009 annual unemployment rate for the island of Maui was 8.5%%, compared to 6.8% and 8.5% for Hawai'i and the United States, respectively. Figure 9 illustrates the largest private employers located within the study area ranked by sales in the state. Other major employers in the area ranked by number of employees include County government (2,300 employees), State government (2,500 employees), the Hawai'i Department of Education and the University of Hawai'i (2,800 employees).

sources: Hawai'i State Department of Labor and Industrial Relations

Figure 9

2009 Largest Private Corporations, Wailuku Study Area

source: Hawai'i Business

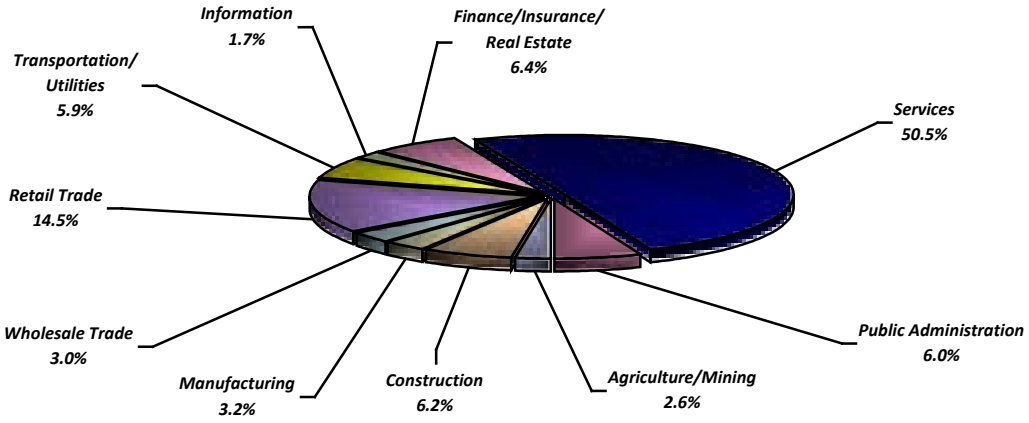
Company	2009 State Rank	2008 Sales ($ million)	Business Type	Employees
Jim Falk Automotive Group	37	226.2	automotive sales	302
Dorvin D. Leis Co. Inc.	88	105.2	mechanical contractor	314
Maui Petroleum	115	80.1	service stations	15
VIP Foodservice	130	70.0	food service	133
MINIT STOP Stores	154	53.4	convenience stores	174
Maui Toyota/Scion	175	43.9	automotive sales	51
Hale Makua	203	33.0	health services	501
Maui Medical Group Inc.	207	32.3	health services	268
Total		644.1		1,758

.

The employed population over the age of 16 years is 19,085 within the three-mile radius. The occupational distribution of the employed population is 50.4% in white collar jobs, 27.5% in services jobs and 22.1% are in blue collar jobs. The services sector which includes health and education, hotel and food services, and the arts and entertainment categories makes up the largest industry category. Retail trade is the second largest category, employing 14.5% of the population (Figure 10).

sources: Hawai'i State Department of Labor and Industrial Relations, ESRI

Figure 10
2009 Distribution of Jobs by Industry Type: 3-Mile Radius from North Market and Main Streets
source: ESRI



Commercial Real Estate. Retail space in Wailuku Town ranged from $0.50 to $1.75 per square foot per month during February 2010. The County of Maui accounts for approximately 80,000 square feet of office space in the Wailuku area. Office lease rates ranged from $0.75 for professional office suites to $ $2.60 per square foot per month for class A office space. Overall lease rates for Wailuku tend to be lower than those in neighboring Kahului. Available properties listed below are office space unless otherwise noted (Figure 11).
source: Commercial Properties of Maui

Figure 11
Commercial Space for Lease in Wailuku Town, February 2010
source: Commercial Properties of Maui

Property Name	Address	Number of Units Available	SF Range	Rent/SF/Month Range	Common Area Charges/SF Range
35 Central Avenue	35 Central Avenue	1	900	$1.11	$0.45
55 North Church Street	55 North Church Street	3	318 – 672	$0.90 - $1.25	$0.50 - $0.58
305 High Street	305 High Street	1	1,018	$3.25	$0.58
1942 Main Street *(retail)*	1942 Main Street	1	1,226	$1.25	$0.23
1955 Main	1955 Main Street	1	805	$1.59	$0.68
2080 Vineyard Street	2080 Vineyard Street	1	2,000	$2.00	$0.32
2119 Vineyard Street *(retail)*	2119 Vineyard Street	2	707-1,475	$0.50 - $1.50	$0.55
Dragon Arts Center	1980 Main Street	4	150 – 2,080	$0.99	$0.33
MDG Building	1995 Main Street	4	231 – 529	$1.00 - $1.70	$0.45 - $0.46
Main Street Promenade	2050 Main Street	1	1,500	$1.50	$0.74
Maui Realty Suites	1885 Main Street	1	948	$0.75	$0.52
One Main Plaza	2200 Main Street	8	158 – 5,921	$2.25 - $2.60	$1.23
TK Supermarket *(retail)*	399 North Market Street	4	1,350 - 4,000	$1.00 - $1.75	$0.45
Wells Street Professional Center	2145 Wells Street	2	1,093 – 1,259	$1.50	$1.00

Neighborhoods. Wailuku neighborhoods tend to have narrow, pedestrian-oriented streets, historic architecture and charming character. The neighborhoods contain single-family and multi-family dwellings that are in some instances, in close proximity to historic business districts. Wailuku and Kahului can lay claim to well-known sites that are currently listed in the state inventory of historic places and on file with the state and national registers of historic places. Newer residential development, including master-planned communities in adjacent Kahului has occurred on the land surrounding Wailuku. During 2009, 53.5% of total housing units within a three-mile radius North Market and Main Streets were owner-occupied*. Figure 12 illustrates recent for sale housing activity for Wailuku and Kahului.
**source: ESRI*

For Sale Housing Activity. Figure 12 illustrates housing sales activity for resale and existing homes and all property types (i.e. condo, single family homes) in Wailuku and Kahului. Over a five-year period, median sales prices in Wailuku have depreciated slower than those in Kahului. Average price per square foot for homes in Wailuku declined by 10.9% compared to an increase of 20.6% in Kahului over the same period in 2009.
source: trulia.com

Figure 12
For Sale Housing Activity:
Wailuku and Kahului: May 2009 to May 2010

source: trulia.com

	Wailuku	Kahului
Median Sale Price May 2010*	$369,153	$380,000
% Change from May 2009	-13.1%	-11.2%
% Change from May 2005	-16.4%	-25.9%
Average Sale Price Per Sq. Ft. May 2010	$278	$263
Number of Sales**	45	56
Foreclosure Listings June 2010***	191	151

**data reflects the period March 10, 2010 to May 10, 2010*
***residential sales made during the previous nine months according to public record*
**** includes properties in the pre-foreclosure, auction, and bank-owned stages of the foreclosure process*

Current Development. Maui Lani and Kehalani are existing master-planned communities that are located within the broader study area. Approximately 500 single family units have been completed recently within those communities. Other recent developments consist of Maui Community College student housing units and affordable single family housing built for native Hawaiians. Figure 13 illustrates recently completed, planned and proposed developments which include a mixed-use community, multi-family units for disabled persons, senior housing and two hotel projects. "Planned-committed" represents projects that are fully entitled and could proceed at any time, "planned-designated" represents projects that are partially entitled, and "proposed" projects need all new entitlements.

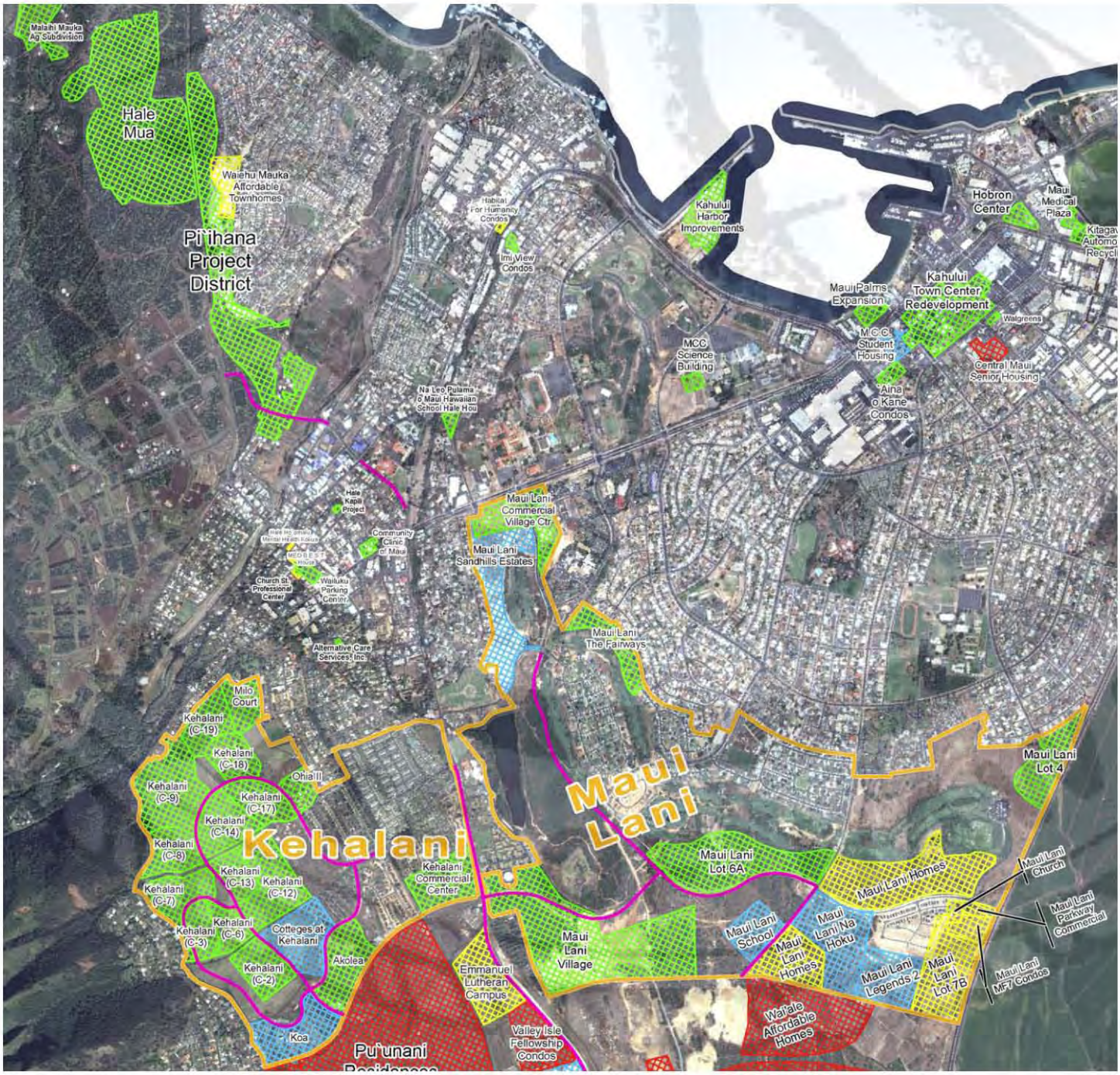
Figure 13
Central Maui Development Projects, 2009

source: County of Maui Planning Department

Project Name	Recently Completed Units	Planned Units		Proposed Units	Total Unit Types	
		Committed	Designated		Single Family	Multi Family
Maui Lani	404	608	581		1,287	306
Kehalani	181	1,183			759	605
Waiehu Kou DHHL	211				211	
M.C.C. Student Housing	100					100
'Aina o Kane Condos		103				103
Hale Kapili Project		4				4
E Paepae Ka Pukoa Spreckelsvile		16			16	
Hale Mua		466			466	
Imi View Condos		28				28
Kahului Town Center Redevelopment		442				442
Kai Holu AG Lots		17			17	
Malaihi/Mauka Ag Subdivisions		12			12	
Na Maia Waihee		5			5	
Pi'ihana Project District 2		535			95	440
Waihee Mauka AG Lots		14			14	
Waihee Valley Large Lot Subdivision		24			24	
Winn 4-lot		4			4	
Church Street Professional Center			5			5
Hale Ho'omalu Mental Health Kokua			6			6
Habitat for Humanity Condos			40			40
MEO B.E.S.T. House			12			12
Waiehu Mauka Affordable Townhomes			100			100
Central Maui Senior Housing				39		39
Hale Kilinahe Project				80	80	
Pu'unani Residences				752	276	476
Pu'unene Village A & B				1,200	1,200	
Spreckelsville Mauka A & B				380	380	
Valley Isle Fellowship Condos				100		100
Wai'ale Affordable Homes				600	300	300
Waihe'e Neighborhood Center				107	25	82
TOTAL	896	3,461	744	3,258	5,171	3,188

Figure 14 illustrates current development that is located adjacent to the close-in study area.

Figure 14
Central Maui Development Projects
source: County of Maui Planning Department

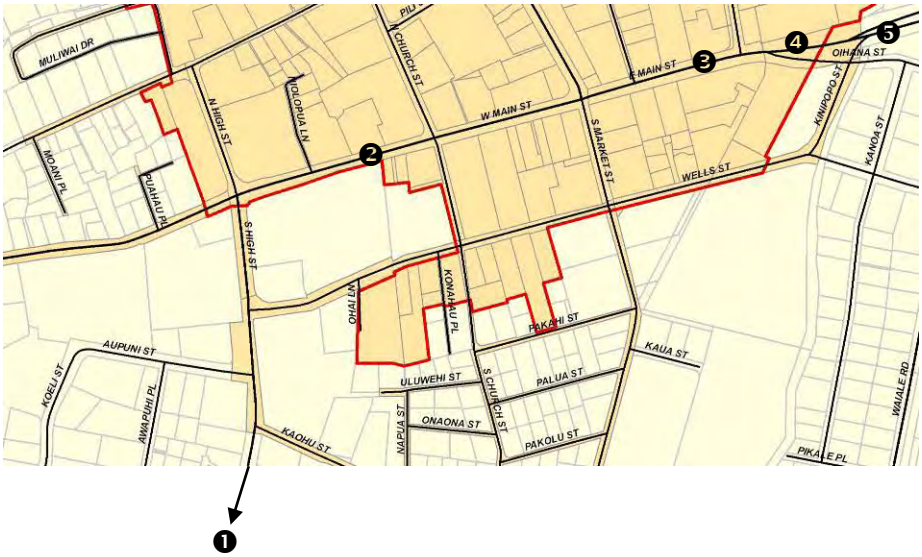


Transit and Commute. Starting in 2008, the County of Maui funded a public bus system that provides service to many Maui Island communities. The routes operate seven days a week including all holidays. The Wailuku Loop Routes #1 and #2 (Reverse) are free routes that have four stops within the Wailuku Town study area, operating between 6:30 am and 10:00 pm. Total Fiscal year 2009 ridership for the Wailuku Loop Routes was 379,032. Ridership on the Wailuku Loop Routes increased by 17.9% during the first seven months of FY 2010 compared to the same period in the previous fiscal year.

In addition, a commuter service that is designed for early morning and evening commuters augments the existing Maui Bus service in Wailuku Town. The Wailuku-Kapalua Commuter is a reservation-based, $1.00-per boarding service that operates to the West Maui coast. Fiscal year 2009 ridership for the commuter service was 104,334.
source: Maui County Department of Transportation

Traffic Counts. 24-hour traffic counts were taken on a weekday in August, 2007 on Main Street and South High Street for vehicles travelling in both directions. The Main Street counts averaged 18,258. Counts #4 and #5 were taken near the intersections of Lower Main Street and Kaahumanu Avenue. A count taken south of the study area along South High Street near Keanu Street revealed that 7,225 vehicles travelled through the area within a 24-hour period (Figure 15).

Figure 15
2007 Daily Traffic Volumes: Main Street and South High Street
source: Hawai'i Department of Transportation



24-Hour Counts

1. 7,225
2. 10,804
3. 13,216
4. 23,850
5. 25,162

Visitors. Between 2007 and 2008, the number of cruise ship passengers arriving at Kahului Harbor declined from 496,813 to 254,862. Total per person per day spending outside of the ship amounted to $44.97, with $26.51 going toward on-shore tours. 2,075,800 visitors arrived by air during 2008, declining to1,893,800 during 2009.

Lodging. In 2008, Maui Island had more than 19,000 rooms. 497 units in 18 properties are located within the Kahului-Wailuku area*. Currently, a140-room Marriott Courtyard Hotel at Kahului Airport, and a 136-room redevelopment of the Maui Palms in Kahului are planned. Maui Island hotels provided 10,900 jobs in 2008. 2006 hotel occupancy reached 80%, declining sharply through 2008. Average daily room rates increased while revenue per available room decreased through 2008. (Figure16).

sources: : Hawai'i State Department of Business, Economic Development and Tourism, Hawai'i State Department of Labor and Industrial Relations

Figure 16
Maui Island Hotel Occupancy and Room Rates, 2007 - 2008

source: Hawai'i State Department of Business, Economic Development and Tourism

	2008	2007	Change
Occupancy	67.9%	75.5%	-7.6**
Average Daily Rate	$268.55	$261.43	2.7%
RevPAR	$182.24	$197.43	-7.7%

**includes B&Bs, condo hotels, hostels and vacation units*
***absolute change*

Cultural Attractions. The study area is home to numerous natural, cultural and historic attractions and facilities including street fairs and farmer's markets which draw resident and visitor populations (Figure 17).



'Iao Valley State Monument



Haleki'i-Pihana Heiaus



Hawai'ian Stilt at Kanaha Pond



Green Dragon Farmer's Market



'Iao Theater

Figure 17
Cultural Attractions, Facilities and Events Located Within the Study Area

source: Hawai'i State Department of Business, Economic Development and Tourism

		2008 Attendance
Alexander & Baldwin Sugar Museum	Exhibits include coverage of Maui's sugar industry entrepreneurs, immigration and the multiethnic labor force, and plantation lifestyles	29,332
Haleki'i-Pihana Heiaus	The archaeological remains of heiaus, or Hawai'iian temples used to perform religious ceremonies.	10,176
Bailey House Museum	Originally a missionary home built in 1833 in the royal compound of King Kahekili, the last king of Maui. Exhibits include collections of Hawai'ian and missionary artifacts.	12,092
Paper Airplane Museum	The museum features photos and artifacts showing the Hawai'ian Islands' aviation history from 1910 to the present	n/a
'Iao Valley State Park	The valley is the site of a famous battle that occurred in 1790, changing Hawai'i history forever when King Kamehameha I destroyed the Maui army in an effort to unite the Hawai'ian Islands.	365,827
Kanaha Pond Waterfowl Sanctuary	Once a royal fishpond, this bird sanctuary is home to two endangered Hawai'ian species, the stilt and the coot. This very large pond is also a stopping point for Canadian geese as they migrate for the winter.	n/a
Maui Nui Botanical Gardens	A 30+ year old collection is housed within the only botanical garden in the state that is located on a coastal dune system featuring native Hawai'ian coastal and dry forest plants.	10,000
Maui Arts and Cultural Center	The Center hosts 1,800 annual events including major visual art, music, theater and dance productions, and the MACC is a frequent gathering place for community meetings and school events.	260,000
'Iao Theater	Once the main entertainment venue in Wailuku, the theater opened in 1928, featuring movie screenings and live stage acts with such stars as Bob Hope and Frank Sinatra. MauiOnStage has occupied the theater since 1984, keeping it active more than 300 nights per year.	30,000
Wailuku Public Library	The library recently celebrated its 80th anniversary, and is the only library left in the state running a full-sized bookmobile. FY 2009 circulation was 89,611.	61,672*
First Fridays	Held at Main and Market Streets, merchants, residents and friends of Wailuku offer a variety of free events including music, art and performance as well as discounts and specials at neighborhood eateries.	n/a
Farmer's Market	The Green Dragon Farmers Market is held every week along Ka'ahumanu Ave in Kahului. The market features arts, crafts and fresh Maui produce sold directly by many of Maui's best farmers.	n/a

n/a: not available
*FY 2008

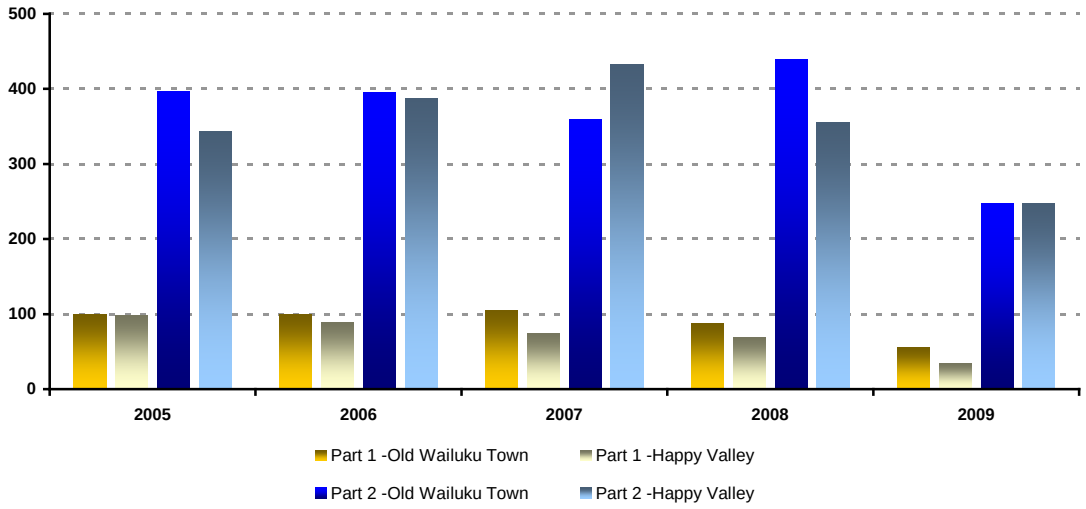
Public Safety. Figure 18 represents documented offenses broken out by the Old Wailuku Town and Happy Valley areas of the Wailuku Redevelopment Area (WRA). During 2009, a total of 586 offenses were reported within the WRA. Part I offenses (i.e., crimes against persons, burglary, theft, arson, etc.) accounted for 15.5% of total crimes in the study area. Part I crimes against property accounted for 92.3% of all Part I offenses in the area. Part II offenses (i.e., fraud, vandalism, narcotics, etc.) accounted for 84.5%% of total offenses in the study area. Total Part I and Part II crimes for both areas decreased by 62.4% between 2005 and 2009. During 2009, total offenses in the WRA represented 13.3% of crime in the entire town of Wailuku*.

source: Maui Police Department

** based upon preliminary 2009 statistics for the town of Wailuku*

Figure 18
Old Wailuku Town and Happy Valley Part I and Part II Offenses, 2005 – 2009

source: Maui Police Department



Summary of Findings.



- ✧ Between 2000 and 2009, population and households grew more rapidly within Wailuku Town than in the broader study area.
- ✧ Recent estimates show that Wailuku Town had a total population of nearly 600 persons, compared to the broader three-mile radius population of over 45,000.
- ✧ The study area population as a whole is aging, while residents of Wailuku Town tend to be older.
- ✧ Asians (47.4%), whites (14.4%) and Pacific Islanders (10.3%) are the largest racial/ethnic groups within the broader study area, and persons of Hispanic origin account for 9.2% of the population.
- ✧ 2009 median household income for Wailuku Town was $49,368, up from $38,037 in 2000. By increasing the area to a three mile radius, median household incomes rise to $62,101. 2009 median household income for all Unites States households is $54,719.
- ✧ The December 2009 cost of living index for Maui County was 107.5*
- ✧ Total Fiscal year 2009 ridership for the Wailuku Loop Routes was 379,032. Ridership on the Wailuku Loop Routes increased by 17.9% during the first seven months of FY 2010 compared to the same period in the previous fiscal year.
- ✧ The visitor industry is an important component of the market; the study area is home to numerous natural, cultural and historic attractions and facilities.

- ✧ More than 365,800 persons visit the ‘Iao Valley State Park on an annual basis.
- ✧ Overall office lease rates for Wailuku tend to be lower than those in neighboring Kahului.
- ✧ More than 3,400 residential housing units are under construction or ready to proceed within the study area.
- ✧ 40.1% of Wailuku retail businesses are located in Wailuku Town.
- ✧ Overall crime in Wailuku Town decreased by 62.4% between 2005 and 2009.

** The cost of living index indicates relative price levels for consumer goods and services. The average composite index for the nation is 100%, and each city's index is read as a percentage of the overall average.*

Retail. The Wailuku and Kahului CDPs have a total of 479 retail business establishments, and 13.9% of those retail businesses are located in Wailuku Town. In 2007, Wailuku retail trade businesses (not including restaurants and personal services businesses) accounted for over $116 million in sales, compared to $1.3 billion in similar retail trade sales for the Kahului CDP. Wailuku Town has a market share of 41.2% of area sporting goods, hobby, book and music stores (Figure 19).
source: 2009 Maui County Data Book

Figure 19: Existing Retail in Wailuku and Kahului

sources: P.U.M.A. survey, 2009 Maui County Data Book

	Wailuku Town	Wailuku	Kahului	Wailuku Town as a Percent of Total Outlets
Hardware, Building Materials	5	8	25	15.1%
General Merchandise	0	1	10	0.0%
Food/Beverage Stores	6	8	19	22.2%
Automotive/Auto Aftermarket	5	16	33	10.2%
Apparel and Accessories	7	8	42	14.0%
Home Furniture and Furnishings	0	7	16	0.0%
Eating & Drinking Establishments	13	67	88	8.4%
Sporting Goods/Hobby/Books/Music	14	14	20	41.2%
Health and Personal Care	10	24	36	16.7%
Miscellaneous	7	14	23	18.9%
Total Establishments	67	167	312	13.9%

**miscellaneous category includes florists, gift stores and pawn stores*

Wailuku Town Retail Audit. For the purposes of this study, Wailuku Town is roughly defined by the Market Street business corridor from Main Street through Happy Valley, and the commercial blocks surrounding this area. An audit of existing ground floor retail businesses was conducted in February 2010 in order to understand the area's current retail situation.



Market Street, Wailuku Town

The Wailuku Town business district contains retail space with stores merchandized to serve residents, area employees and visitors. All ground floor retail space (excluding professional services, i.e., lawyers, accountants, etc.) was estimated in the inventory (Figure 20). Conventional department stores and national discount stores, which comprise the general merchandise category, are located outside of Wailuku Town.

- There are 67 existing retail businesses in Wailuku Town.
- The total square footage of these businesses is estimated to be approximately 127,800 square feet.
- There are 14 vacant retail spaces, or approximately 28,600, square feet in Wailuku Town
- Most vacant retail spaces occurred along Market Street, Vineyard Street and Main Street.
- Leisure-related businesses (i.e. antique/collectible/second hand stores, galleries, bowling center and sporting goods) make up the largest category of retail in Wailuku Town, representing more than 30,000 square feet.

- Five second-hand, collectible and antique stores are located along Market Street, which is known to some as Maui's "Antique Row".
- A three pawn stores and related retail shops are located along Market Street
- Two businesses in Wailuku Town sell goods that reflect history and various aspects of Hawai'ian culture (Hawai'iana), such as casual clothing and gift items.
- Four markets are situated within the survey area.
- A hardware store is located on Market Street in the Happy Valley area.
- Restaurants account for almost 20,000 square feet of retail in the study area, including a food court, other fast food outlets and seven restaurants and cafes.
- No taverns exist within Wailuku Town.
- The apparel category occupies 12,800 square feet of retail, including two women's boutiques, a shoe store and a jewelry store, and apparel services businesses.
- The home services and supplies category includes office supply and printing and shipping services.
- Five banks are located within the study area, accounting for approximately 6,500 square feet of ground floor space.



Grocery store on Market Street



Retail business on Market Street

Figure 20
2010 Existing Retail Activity Within the Wailuku Town Market

source: P.U.M.A. survey

SUMMARY TABLE: 2010 EXISTING RETAIL ACTIVITY WITHIN THE WAILUKU REDEVELOPMENT AREA		
source: P.U.M.A survey 2-10		
	Wailuku Redevelopment Area	
EXISTING RETAIL	estimated square feet	number of units
Food And Beverage Stores		
Market/Convenience	8,700	4
Specialty Food Stores	6,050	2
Food and Beverage Subtotals	**14,750**	**6**
Eating and Drinking		
Restaurants/Cafes	14,700	7
Fast Food	5,125	6
Eating and Drinking Subtotals	**19,825**	**13**
Home		
Home Services/Supplies	5,200	4
Building Materials/Hardware	8,000	1
Home Subtotals	**13,200**	**5**
Apparel		
Apparel	5,300	3
Watches/Jewelry	1,000	1
Footwear	2,500	1
Apparel Services	4,000	2
Apparel Subtotals	**12,800**	**7**
Leisure		
Antique/Collectible/Second Hand Stores	10,000	5
Art Galleries/Framing	2,800	2
Hobbies, Crafts	1,200	1
Recreational Vehicles	2,000	1
Music	2,600	1
Pets	1,000	1
Sporting Goods	5,500	2
Recreation	5,000	1
Leisure Subtotals	**30,100**	**14**
Miscellaneous		
Automotive/Auto Aftermarket	10,500	5
Florist	2,000	1
Gifts	4,100	3
Pawn Stores	6,000	3
Miscellaneous Subtotals	**22,600**	**12**
Health and Personal Care		
Personal Services	10,000	8
Pharmacy	4,500	2
Health and Personal Care Subtotals	**14,500**	**10**
OCCUPIED SQ. FT./UNITS:	***127,775***	***67***
VACANT SQ. FT./UNITS:	***28,600***	***14***
TOTAL LEASABLE SQ.FT./UNITS:	***156,375***	***81***

Competitive Retail Environment. P.U.M.A. identified four major concentrations of retail with which Wailuku Town competes as a center for retail and services. The retail nodes include the retail centers along Ka'ahunamu Avenue Corridor, the Hana Highway/Highway 36 Corridor and the Kuihelani Highway/Dairy Road Corridor in Kahului and the town of Pa'ia. The three busy corridors in Kahului are adjacent to rapidly growing residential communities, the Kahului Airport and Kahului Harbor, which is the most frequently-used port for cruise ships visiting Maui. Site reviews of retail centers within the four nodes were conducted during March 2010. Each of these centers is shown on a map (Figure 21) and is described below. Figure 22 briefly summarizes the retail nodes.

Ka'ahumanu Avenue Corridor



Queen Ka'ahumanu Center

The Queen Ka'ahumanu Center (gross leasable area of 572,896 square feet) is a regional shopping center and home to Macy's and Sears which are the only department stores on Maui. The enclosed center opened in 1972 and underwent its most recent renovation and expansion during 2005. It contains more than 100 stores including a six-screen movie theater and a stage for free local entertainment. The Ka'ahumanu Center is a hub for the Maui Bus public transportation system, and it features a nonstop shuttle that transports cruise ship passengers from Kahului Harbor.

The Kahului Shopping Center is a 112,066 square foot neighborhood retail center that was built in 1951 as Maui's oldest shopping mall. The major tenants in the center are food-related, including an ethnic food market and Asian restaurants. A weekly farmer's and arts and crafts market is held at the center. The center is largely vacant, as a major mixed-use redevelopment called Kahului Town Center, which will include residential condominiums, and retail and office space is planned for the center.



Kahului Shopping Center



Proposed Kahului Town Center

The Maui Mall, built in 1971 is a 182,000 square foot neighborhood retail center that is anchored by Longs Drugs and a brand new Whole Foods Market. The center's last renovation occurred during 1995. It contains 50 stores, including a 12-plex movie theater, local and national retail services and shops, restaurants and County government and financial services businesses make up the remainder of the mall's tenant list.



Maui Mall

The Maui Lani Shopping Center is proposed as a 105,000 square foot neighborhood center with a Safeway grocery store as anchor tenant. Other tenants would include restaurants, retail and service shops and office space. The project is currently undergoing a draft environmental assessment.

Hana Highway/Highway 36 and the Kuihelani Highway/Dairy Road Corridors

Ka'ahumanu Avenue joins the Hana Highway/Highway 36 where a variety of automotive and furniture warehouse businesses and strip mall centers featuring independent sporting goods businesses intersect the Kuihelani Highway/Dairy Road Corridor, which has attracted big-box competitors to the region. In recent years, office/retail centers such as the Akaku Center and Dairy Center as well as Costco, Kmart, Walmart and Home Depot have located along this corridor.



Maui Marketplace

Maui Marketplace is a 317,000 square foot community center that was built in 1997 on Dairy Road, a major artery from the Kahului Airport to Maui's West coast. Twenty five tenants, including anchor tenants Lowe's Home Improvement Center, Old Navy and Borders Bookstore create a regional draw for other national chain stores including sports Authority, Pier 1 Imports and Starbucks.



Paia Town. Paia is an historic coastal town that was the center of the sugar industry until 2000. It is located approximately 10 miles from Wailuku Town along the Hana Highway at the intersection of Baldwin Avenue which leads to upcountry Maui. Paia's close proximity to an internationally-renowned windsurfing beach has led to its evolution into a cosmopolitan, yet laid-back town. The 55 stores in the business district provide an array of independently owned art galleries, specialty shops and boutiques, and numerous restaurants. The town post office and a large market, a bakery, surf shops and salons line the streets which still have intact wooden plantation-style buildings. Paia Town is considered to be the most relevant comparable business district because of its size, scale and historic character.

Figure 21
Competitive Retail Districts Within the Wailuku/Kahului Area

source: Commercial Properties of Maui



Figure 22
Competitive Retail Districts Within the Wailuku/Kahului Area

Prepared by Progressive Urban Management Associates, Inc.

business district	niche	lease rate per sq. ft.	total vacancies and total vacant sq. ft.	market	business mix
Ka'ahunamu Avenue Corridor	retail destination	Queen Ka'ahumanu Center - $8.75/psf Kahului Shopping Center - $1.75 - $2.00/psf Maui Mall - $2.00 - $3.50/psf	20 vacancies 24,706 vacant sq. ft.	local/regional	QKC - Macy's, Sears, American Eagle, Borders Express, Forever 21, Pac Sun, Wet Seal, 6-screen movie theater, food court KSS - Ah Fook's Market, Ichiban Restaurant, Asian Cuisine MM - Whole Foods Market, 12-screen Megaplex Cinema, Longs Drugs, IHOP, local and regional restaurants, shops and services
Hana Highway/Highway 36	neighborhood retail and services	Corridor - $1.95 - $2.25/psf	3 vacancies (on corridor) 5,000 vacant sq. ft.	local/regional	Denny's restaurant, Supercuts. Local independent sail, surf, bicycle and tack shops, personal services and a music store
Kuihelani Highway/ Dairy Road Corridor	discount retail destination	Maui Marketplace – $3.25/psf Dairy Center - $1.75 - $2.25/psf Akaku Center - $2.00 - $3.00/psf	19 vacancies 11,092 vacant sq. ft.	local/regional	MM – Lowes' Old Navy, Borders, Office Max, Sports Authority, Pier 1 Imports, Starbucks DC – office space and local, independent restaurants, home furnishings, women's clothing, stationary shops and services AC – office space, independent restaurants and taverns, personal services Corridor - Costco, Kmart, Walmart and Home Depot, independent grocery, golf store, home furnishings store
Paia Town	neighborhood retail and services	retail space - $3.00 psf +.$0.73/psf restaurant space - $2.98/psf or 7% of gross sales (whichever is greater)	3 vacancies 2,500 vacant sq. ft.	local/regional	independent art galleries, specialty retail and restaurants, neighborhood services

Wailuku Town's Differential Advantages

In comparison to other business districts described above, Wailuku Town appears to have several distinct differential advantages:

- ✧ Captive markets – County and State employees, area residents, visitors
- ✧ Historic surroundings – "Authentic" Wailuku Town as the historic center of government and commerce, gateway to the 'Iao Valley
- ✧ Center of arts, culture, entertainment and events
- ✧ Locally owned and operated businesses are distinctive and diverse

Leakage Analysis. As part of a market analysis, it must be determined if a demand for certain types of retail uses are already being met within the trade area. Determining this for neighborhood retail centers is difficult because of the small size of the market area and the confidential nature of some of the information necessary for a completely accurate analysis. For this reason, P.U.M.A. relies on primary field research as well as secondary information sources to evaluate the existing retail supply.

Supply of Commercial Retail Space. During February and March 2010, P.U.M.A. undertook a field survey of existing major concentrations of retail within both the primary and secondary market areas. The P.U.M.A. survey inventoried approximately 1.7 million square feet of occupied retail space within the primary and secondary markets, which are defined by a one-mile radius from North Market and Main Streets for the primary market and a three-mile radius for the secondary market. 2009 estimates account for more than 45,000 residents in 14,000 households within the three-mile radius area and 10,800 residents in 4,200 households within the one-mile radius area*. Professional service space, i.e., legal, accounting, interior design, travel agencies, real estate offices, etc. were not included in the inventory. The Summary Tables provide a detailed breakdown of total square footage and existing retail usages within the primary and secondary market areas.
**2009 ESRI*

Within the primary market area (Wailuku Town) 127,775 square feet of occupied retail space was surveyed. Retail space within the primary market is concentrated along the Market Street, Main Street, and Vineyard Street corridors. Wailuku Town, which is the area's original business district, and the wider study area offer a blend of specialty retail, commercial, service, and government services, represents 8% of the overall Wailuku area retail market (Figure 23).

Figure 23
Concentration of Retail Space: Primary Market Area
source: P.U.M.A. survey

Retail Node	Occupied Retail Sq. Ft.	Percent of Market
Wailuku Town	127,775	100%
Total Primary Market	127,775	100%

An additional 1.6 million square feet of occupied retail space was surveyed in the three-mile radius secondary market, which is largely situated in Kahului. In this market, which excludes the primary market area, retail space is concentrated along the Ka'ahumanu Avenue, Hana Highway/Highway 36, and Dairy Road corridors (Figure 24).

Figure 24
Concentration of Retail Space: Secondary Market Area, Excluding Primary Market Area
source: P.U.M.A. survey

Retail Node	Occupied Retail Sq. Ft.	Percent of Market
Ka'ahumanu Avenue Corridor	728,758 sq. ft.	45.2%
Hana Highway/Highway 36	48,600 sq. ft.	3.0%
Dairy Road Corridor/Kuihelani Highway	835,792 sq. ft.	51.8%
Total Secondary Market	1,613,150 sq. ft.	100.0%
Total Primary and Secondary Markets	*1,740,925 occupied square feet*	

Vacancy. At the time of the survey, the retail vacancy rate for the total Wailuku area market, excluding the automotive category, was 3.8%. The primary market (Wailuku Town) demonstrated an 18.3% vacancy rate (28,600 square feet). The secondary market, excluding the primary market, experienced a healthy 2.5% vacancy rate (40,798 square feet). The national average retail vacancy rate for first quarter 2010 was 9.5%.*
**source: CoStar*

Leakage Analysis. Using the preceding fieldwork, industry standards for average sales per square foot and average store size, and statistics on average household expenditures in the area, a retail sales leakage analysis was conducted, revealing that the one-mile market area can support a demand for approximately 162,000 additional square feet of retail.

Because of the necessity to use several different sources of data in an analysis such as this, there is bound to be error when the results are brought down to a detailed level. While it is dubious to claim that the exact amount of square footage has been assigned to each category, it is possible to isolate distinct trends and general retail categories that are underserved in this market.

Retail types that appear to be underserved within the market include:

- ✧ Restaurants
- ✧ Pet stores
- ✧ Recreational vehicles (boats)
- ✧ Recreational facilities (bowling alleys, etc.)
- ✧ Audio visual/electronics stores
- ✧ Footwear
- ✧ Grocery stores
- ✧ Household furnishings

The market appears balanced in the categories of children's apparel, toys and hobbies, movie theaters, art galleries, and drug stores.

This analysis established a substantial oversupply of general merchandise retailing found in particular, in the secondary market, which contains over 650,000 square feet of general merchandise outlets, i.e. Sears and Macy's department stores, Costco, Kmart and Wal-Mart. Within the market area, there also appears to be an over-supply of sporting goods stores (Sports Authority and local/independent water sports businesses) and home improvement stores (i.e. Lowe's and Home Depot). The Summary Table provides the detail of this analysis.

In addition to that which is mentioned above, information on consumer expenditures in several specific categories is lacking. These categories include, but are not limited to the general merchandise category and restaurants serving alcoholic beverages.

Many of the underserved retail categories provide more traditional retail types that could be absorbed in Wailuku Town. As an example, Wailuku Town contains a pet groomer, a music store, one shoe store, a small food market/grocery store and a bowling alley, and there are no household furnishings stores in Wailuku Town. In addition, study area restaurants tend to be at a lower price point, i.e. fast food, and national chains, suggesting opportunities for added upscale finer dining, including distinctive ethnic options.

PUBLIC PARTICIPATION

The public participation process for the Wailuku Market-Based Plan included a variety of methods, including:

- One-on-one interviews and focus groups with Wailuku Town property owners, businesses and residents.
- A community attitudes survey that was distributed through a variety of online and point-of-sale channels. More than 1,100 surveys were completed.
- Oversight by a Project Steering Committee composed of 20 Wailuku stakeholders in the public, private and non-profit sectors.

Stakeholder Focus Groups and Interviews: Between February and April, 2010 P.U.M.A. held a series of roundtable discussions and one-on-one interviews with key stakeholders. Throughout the process, P.U.M.A. engaged more than 75 individuals through focus groups and one-on-one interviews including:

- Downtown residents
- Property owners
- Arts and culture groups
- Downtown business owners
- Professional services representatives
- Wailuku Main Street Association Inc. board staff and committees
- County staff from Planning, Finance, Public Works and the Mayor's Office
- Wailuku Redevelopment Agency staff and board
- Wailuku Community Association
- Downtown non-profit agencies

Major themes that emerged from the outreach are outlined below:

Parking: Downtown parking is problematic and a barrier to the economic health of downtown. Parking needs to be improved through increased supply and better management.
Business Development: Focus on downtown retail, services and production through more collaboration, better partnerships, incentives and marketing efforts.
Public Realm: Create a safer and more walkable environment for pedestrians. Update and improve utilities and infrastructure. Plan for future mobility options, including transit, bikes and pedestrians, with an immediate emphasis on an extended and appropriately wide sidewalk network throughout the downtown area.
Regulatory Environment: Make it easier to change the use in or remodel an existing building. Provide tools and create a regulatory environment that encourages new development and investment in downtown.
Financial Tools: Identify financing tools and partnerships to support downtown businesses and improve the public realm through maintenance and capital improvements.
Organization: Create a unified approach for development, management and marketing.
Public Market: Consider developing a year-round public market downtown.
Unique Destination: Wailuku Town is viewed as a unique destination with a wide variety of business types. Its diversity and authenticity are viewed as strengths.
Momentum for Improvement: Since the completion of the Updated Wailuku Redevelopment Plan in 2000, Wailuku Town is viewed as having improved. Recent major investments, including streetscape and the Iao Theater, are generally viewed as positive developments. Momentum has been building for the last 25 years as incremental improvements have enhanced the Wailuku experience and controlled the earlier slum and blight conditions.
Passion!: Those stakeholders most directly involved in Wailuku Town – including property owners, businesses, non-profits, residents and civic officials – are passionate about the area and see great potential in its future.

WAILUKU TOWN SURVEY

As part of the Wailuku Town Market Based Plan process, an online community attitudes survey was conducted via electronic distribution through the County of Maui, State of Hawaii, Maui Memorial Hospital, University of Hawaii, Maui Arts & Cultural Center, Wailuku Main Street Association Inc. and the Wailuku Community Association and First Friday listserves. In addition, hard copy surveys were placed at the Kalana O Maui, Wailuku Main Street Association Inc., If the Shoe Fits retail store, Kaunoa Senior Center, First Hawaiian Bank, YMCA, Wailuku Library, Wailuku Federal Credit Union and the Kalana Pakui Building. 1,011 respondents who live and/or work in the Kahului/Wailuku area completed the survey.

- More than 53% of survey respondents indicated that they work in Wailuku Town. Results are cross-tabulated to identify differences between respondents that work or do not work in Wailuku Town.
- More than 57% of respondents have lived in the Wailuku/Kahului area for more than 10 years.
- 57% of respondents are female, and more than 82% are age 35 to 69. Results are cross-tabulated by age.
- Nearly 44% of households have annual incomes of $50,000 to $99,999, more than 26% of households report incomes of $100,000 or more. Results are cross-tabulated by income.
- Recurring verbatim response themes to “Other (please specify)” are included in the analysis.

KEY FINDINGS FROM THE WAILUKU TOWN SURVEY

- Wailuku Town remains a relevant and important destination for respondents that live or work in the Wailuku/Kahului area. More than 62% visit once a week or more.
- Top reasons for visiting Wailuku Town are County and State business, personal business and restaurants.
- Top reasons for avoiding Wailuku Town are difficulty finding parking, traffic and congestion, and lack of diverse retail and restaurant options. An unappealing environment (28.1%), and concerns about safety (23.9%) were also considered deterrents to visiting Wailuku Town.
- More convenient parking, more and diverse restaurants, and a cleaner, more welcoming, safer pedestrian environment were cited as top improvements that would encourage respondents to visit Wailuku Town more often.
- Single family homes, condos and townhomes were chosen as the most popular housing types.
- More than 71% of respondents would consider living in Wailuku Town.
- Respondents are willing to walk for two to five minutes from their car to their destination, and 24.1 % would walk up to 10 minutes.
- Many respondents agree or are neutral about paying a nominal hourly fee to park closer to their destinations, and most would not be willing to pay a higher daily fee to park in a covered parking structure.
- 36.0% of respondents indicate that improved street safety for pedestrians and bicyclists would make them consider an alternative to personal vehicles.

PROFILE OF SURVEY RESPONDENTS

Survey respondents were generally female (57%), residents of the Wailuku/Kahului area (57.5%), and have been residents of the Wailuku/Kahului area for more than ten years (57.6%). Survey respondents were primarily between the ages of 35 and 69. 53.1% of respondents work in Wailuku Town, and 43.9% of respondent households earn between $50,000 and $99,999.

Profile of Survey Respondents	
Currently work in Wailuku Town	53.1%
Currently reside in the Wailuku/Kahului area	57.5%
Length of residence in the Wailuku/Kahului area	
Less than one year	5.5%
One to five years	21.3%
Six to ten years	15.6%
More than ten years	57.6%
Gender: Female	57.0%
Age	
Younger than 18	0.1%
18 to 24 years	1.8%
25 to 34 years	12.5%
35 to 49 years	34.9%
50 to 69 years	47.3%
More than 69 years	3.4%
Annual Household Income	
Less than $50,000	29.7%
$50,000 to $99,999	43.9%
$100,000 to $149,999	19.6%
$150,000 or more	6.8%

Household Size	0	1	2	3	More than 3
Adults (age 18 or older)	0.5%	17.8%	55.0%	15.1%	11.6%
Children (under age 18)	31.5%	30.2%	27.8%	8.4%	2.1%

WAILUKU TOWN VISITATION TRENDS

The following questions explore respondent visitation trends to Wailuku Town, including frequency of visitation, activities that are participated in, reasons for not visiting and improvements that would encourage more frequent visitation. Respondents were also asked which other shopping areas and business districts that they visited at least once per month.

Frequency of Visitation to Wailuku Town: Respondents were asked how often they visit Wailuku Town for reasons other than work. 62.3% responded that they visit once per week or more and only 2% indicated that they visit once per year or less.

Frequency of Visitation to Wailuku Town (visits in addition to work)	
Once per week or more	62.3%
Approximately twice per month	16.9%
Approximately once per month	11.3%
Approximately four times per year	7.3%
Approximately once per year	1.0%
Never	1.0%

Reasons for Visiting Wailuku Town: Respondents were asked to rank their visitation habits for a variety of activity categories by "frequently," "occasionally" or "rarely or never." County or state business, personal business, (i.e. salon/barber, banking) and restaurants are the top three draws for respondents on a frequent or occasional basis to Wailuku Town. Medical/dental care, other business and special events were also ranked as reasons for visiting Wailuku Town occasionally. Notably, respondents rarely or never visit the library (55.9%) or attend church (76.9%) in Wailuku Town. Recurring responses to "other" reasons included area recreational facilities, i.e. bowling alley, exercise facilities, and swimming and tennis courts. Respondents also cited visits to family and friends who live in Wailuku Town.

How often do you go to Wailuku Town for each of the following activities?			
	Frequently	Occasionally	Rarely or Never
Shopping	11.0%	47.9%	41.0%
Restaurants	22.0%	59.3%	18.7%
County/State business	41.1%	42.5%	16.4%
Cultural events (music, art, theater, etc.)	9.9%	45.8%	44.4%
Library	19.4%	24.7%	55.9%
Personal business (salon/barber, bank, etc.)	43.0%	38.6%	18.4%
Special events	11.6%	50.5%	37.8%
Other business	22.4%	41.0%	36.6%
Medical or dental care	26.1%	38.0%	35.9%
Church	13.1%	9.9%	76.9%

Reasons for Not Visiting Wailuku Town: Parking, traffic and congestion are considered primary reasons for respondents who seldom visit Wailuku Town. An unappealing environment (28.1%), and concerns about safety (23.9%) were also considered deterrents to visiting Wailuku Town. Recurring open-ended concerns were businesses' unsuitable hours of operation, over-zealous parking control and the presence of pawn shops.

If you don't visit Wailuku Town is it because of: (please select all that apply)	
Lack of restaurant options	37.0%
Lack of diverse retail	55.3%
Difficulty finding parking	69.1%
Difficult to get around/find stuff	14.7%
Limited public transportation service and hours	14.3%
Concerns about safety	23.9%
Lack of arts, culture and entertainment	17.2%
Traffic/congestion	38.0%
Generally unappealing environment	28.1%
Too far from where I live	17.7%

Improvements That Would Encourage More Visits to Wailuku Town: More convenient parking, more and diverse restaurants, and a cleaner, more welcoming, and safer pedestrian environment were cited as top improvements that would encourage respondents to visit Wailuku Town more often. A movie theater, unique, one-of-a-kind shops and more green space followed as desired improvements. Notably, 60.6% of respondents indicated that bicycle lanes would not encourage more frequent visitation. Recurring open-ended responses include maintaining/restoring Wailuku Town's historic qualities, concerns with over-zealous parking control, lack of availability of recreational facilities, and the presence of pawn shops.

Which improvements would encourage you to visit Wailuku Town more often?			
	YES – Would encourage me to visit more!	May encourage me to visit more.	NO – Won't encourage me.
More/different restaurants	62.1%	31.5%	6.5%
Unique, one-of-a kind shops	45.7%	35.9%	18.4%
Brand name stores	28.7%	33.1%	38.3%
More arts and cultural venues	36.7%	43.0%	20.4%
Movie theater	48.2%	29.0%	22.9%
Live entertainment	40.1%	38.1%	21.7%
Special events	40.6%	45.5%	13.9%
More welcoming, cleaner atmosphere	56.8%	31.4%	11.9%
Safe pedestrian environment	52.8%	30.4%	16.8%
Bicycle lanes	21.2%	18.3%	60.6%
More green space	40.5%	30.5%	29.0%
Better information on what exists	38.5%	40.5%	21.0%
More convenient parking	69.7%	22.6%	7.7%

Other Business Districts Visited at Least Once Per Month: 87.9% of respondents visit the Dairy Road/State Highway 380 area in Kahului at least once per month. This area contains Costco, Kmart, Wal-mart, Home Depot as well as other large national tenants in the Maui Marketplace Mall. Other frequently visited retail destinations include Queen Ka'ahumanu Shopping Center and the Maui Mall.

Which of the following area business districts do you visit at least once a month? (please select all that apply)	
Queen Ka'ahumanu Shopping Center	80.1%
Kahului Shopping Center	31.7%
Maui Mall	79.0%
Maui Marketplace	70.7%
Dairy Road/State Highway 380 area	87.9%
Pa'ia	28.2%

LIVING IN WAILUKU TOWN

The survey probed respondents' attitudes about living in Wailuku Town, desired housing types and residential amenities that would make Wailuku Town more attractive for living.

Housing Types: Single family homes, condos and townhomes were chosen as the most popular housing types. More than 71% of respondents would consider living in Wailuku Town.

If you would consider living in Wailuku Town, which of the following housing types would be most attractive to you? (please select all that apply)	
Apartment	17.4%
Condo	20.7%
Live/work	19.6%
Townhouse	20.5%
Single family home	37.7%
Age-restricted housing	5.5%
I already live in Wailuku Town	23.5%
I am not interested in living in Wailuku Town	28.8%

Residential Amenities: When asked which amenities would make Wailuku Town more attractive for living, respondents' top choices were a grocery store, a cleaner and safer environment, restaurants, green space and recreational amenities.

To Make Wailuku Town a more attractive place for living, which amenities would be most important to you? (please select all that apply)	
Recreational amenities	44.7%
Green space	49.6%
Entertainment	35.1%
Restaurants	63.2%
Clean and safe	75.3%
Nightlife	30.3%
Grocery	76.3%
Unique retail shopping	32.8%
Services (salon/barber, dry cleaner, etc.)	40.0%

ONE SINGLE IMPROVEMENT

Respondents were asked to suggest one change or addition that could improve Wailuku Town. The open-ended question garnered 697 responses. The top themes are as follows:

If you were to change or add ONE thing to improve Wailuku Town, what would it be?
Increase the amount of inexpensive parking
Open a grocery store
Create a safer environment (i.e, less drugs, homeless)
More diverse retail and restaurants
More, accessible sidewalks and crosswalks
A park/greenspace/gathering place
Clean up the low income housing complexes in Happy Valley
Do away with the pawn shops on Market Street
Businesses need façade repairs/renovations

TRANSPORTATION AND PARKING

The following questions explore respondent's transportation and parking habits and perceptions, including modes of travel and routes traveled, parking duration and distance from destination, parking fees and alternative modes of transportation.

Current Route and Mode of Transportation: Most respondents travel to Wailuku Town via Main Street/Ka'ahumanu Avenue in their personal vehicles. 15.4% of respondents walk to Wailuku Town.

How do you get to Wailuku Town (route and mode)? (you may select more than one)	
Kahekili Highway/Market Street	18.5%
High Street/Honoapi'ilani Highway	32.5%
Main Street/Ka'ahumanu Avenue	55.4%
Personal Auto	84.3%
Maui Bus	4.5%
Vanpool or carpool	1.6%
Walk	15.4%
Bicycle	5.6%

Average Length of Time Parked in Wailuku Town: The majority of respondents park for one to two hours, followed by persons who park for six to eight hours in Wailuku Town.

What is the average length of time that you park in Wailuku Town?	
1 – 2 hours	38.7%
2 – 4 hours	15.7%
4 – 6 hours	3.6%
6 – 8 hours	22.1%
No pattern	16.7%
Not sure	3.2%

Lengths of Time Respondents are Willing to Walk: Most respondents are willing to walk for two to five minutes from their car to their destination, and 24.1 % would walk up to 10 minutes.

What length of time would you be willing to walk from your car to your destination?	
1 minute or less	15.3%
2 – 5 minutes	55.5%
5 – 10 minutes	24.1%
10 minutes or more	5.2%

Parking Fees: Many respondents agree or are neutral about paying a nominal hourly fee to park closer to their destinations, and most would not be willing to pay a higher daily fee to park in a covered parking structure.

I would be willing to pay a nominal fee (up to $1 per hour) to park closer to my destination. (please select one)	
Strongly agree	10.3%
Agree	26.7%
Neither agree or disagree	22.0%
Disagree	20.5%
Strongly disagree	20.6%

I would be willing to pay a higher fee (up to $10 per day) for a space in a covered parking structure. (please select one)	
Strongly agree	4.6%
Agree	7.2%
Neither agree or disagree	21.9%
Disagree	32.2%
Strongly disagree	34.1%

Alternative Modes of Transportation: 36.0% of respondents indicate that improved street safety for pedestrians and bicyclists, followed by more convenient bus stop locations (32.2%) would make them consider an alternative to personal vehicles.

What factors would make you consider an alternative transportation method to your personal auto? (please select all that apply)	
Cost of parking	30.9%
Discounted vanpool or carpool options	4.7%
Car sharing program	4.8%
More convenient bus stop locations	32.2%
Faster bus service	25.1%
Safer streets for walking and biking	36.0%
None of the above	33.7%

SURVEY CROSS-TABULATIONS

Survey results were cross-tabulated by the following:

- Whether the respondent works or does not work in Wailuku Town
- Age
- Annual household income

Cross-Tabulation by Respondent Place of Work: The following differences were observed, based upon whether the respondent works or does not work in Wailuku Town:

- Persons who work in Wailuku Town are more apt to visit at least once per week or more for reasons other than work (74%) than those who do not work in Wailuku Town (50%).
- Respondents who work in Wailuku more frequently shop, dine and attend cultural events than non-workers, although both have similar patterns. For special events, 15% of Wailuku workers attend them frequently versus 7% of non-workers.
- Respondents who work in Wailuku Town more "frequently" take care of State/County business and personal business in Wailuku Town (53%) than non-Wailuku workers (28%). While both groups rarely use the library, 24% of those that work in Wailuku frequently use the library, while only 12% of non-workers do. Both respondent groups "rarely or never" attend church services in Wailuku Town.
- Both respondent groups are consistent in their motivations for avoiding Wailuku, with the exception of safety (a concern of 30% of workers vs. 16% of non-workers) and "generally unappealing environment (a concern of 24% of workers and 34% of non-workers).
- As compared to those who work in Wailuku, non workers felt that more information on what exists, live entertainment, special events and more convenient parking would definitely encourage them to visit Wailuku Town more often.
- Those who work in Wailuku are less averse to living in Wailuku than non-workers – 23% vs. 35% would not consider living in Wailuku.
- A majority of non-Wailuku workers (53%) park for less than 2 hours during most visits, while only 26% of workers responded this way. The most frequent time period stated by workers was 6 to 8 hours (40%).
- A majority of all respondents indicated that they would walk from 2 to 5 minutes from their car to their destinations, followed by 5 to 10 minutes.
- To consider an alternative to driving to Wailuku, workers responded first with safer streets for walking and biking (40%) followed by more convenient bus stops (38%) and cost of parking (35%).
- Demographics of worker vs. non-worker respondents were similar, although non-workers were slightly older.

Cross Tabulation by Respondent Age: The following attributes were noted by respondent age in the highest response groupings of 25 to 34, 35 to 49 and 50 to 69:

- Reasons for visiting Wailuku were similar among the three major respondent age groups.
- Younger respondents (25 to 34) avoided Wailuku more than other age groups due to lack of restaurant options, generally unappealing environment, concerns about safety and difficult to get around/find stuff.
- Younger respondents (25 to 34) were more emphatic about a number of improvements that would encourage them to visit, including shopping (both one-of-a-kind and brand name shops), live entertainment, special events and a more welcoming atmosphere. Better information on what exists would encourage 52% of the younger demographic to visit, versus 35% to 37% of older respondents.
- Younger respondents (25 to 34) are less averse to the notion of living in Wailuku (17% are not interested) versus older demographics (27% to 33%).

- Respondents age 50 years and older cite a grocery store, followed by a clean and safe environment as most important residential amenities, compared to younger respondent groups age 25-34 and 35-49 who desire a cleaner, safer environment, followed by a grocery store.
- Respondent groups age 25 to 34 and 35 to 49 consider safer streets for walking and biking a factor in considering an alternative transportation mode. More of respondents age 50 and older would not consider any of the suggested alternative modes to their personal auto.
- 50% of respondents age 25 to 34 have lived in the Wailuku/Kahului area for five years or less. A majority of older age groups have lived in the area ten years or more.

Cross Tabulation by Annual Household Income: The following attributes were noted by respondent annual household income ranges of less than $50,000, $50,000 to $100,000, $100,000 to $150,000 and over $150,000:

- Visitation frequencies and reasons for visitation are consistent among all income groups. The lower income respondents (less than $50,000) visit the library more than other groups. Interestingly, special events are frequented most by those in the lowest (less than $50,000) and highest (more than $150,000) income groups.
- Lower income respondents (less than $50,000) are more likely to avoid Wailuku because of difficulty finding parking, congestion, concerns about safety and limited public transportation than respondents with higher household incomes. Higher income households (more than $100,000) are more likely to avoid the area due to a lack of restaurant options.
- Lower income respondents (less than $50,000) were more emphatic about a variety of improvements that would encourage them to visit more often, including more arts, culture and live entertainment, special events, cleaner and safer environment, more green space and parking. Higher income respondents (more than $100,000) want more restaurants. Interestingly, both lower (less than $50,000) and higher (more than $150,000) income respondents would like to see more unique one-of-a-kind shops, while those with incomes of $100,000 to $150,000 would like more brand name stores.
- Respondents in the $100,000 to $150,000 are the most averse to living in Wailuku (35% would not consider it) while lower income respondents (less than $50,000) are the least averse (19%).
- 61% of high income respondents (more than $150,000) park less than 2 hours when visiting Wailuku, compared to 29% of lower income respondents (less than $50,000).
- Higher income households (more than $50,000) are more willing to consider paid parking (up to $1 to be closer to a destination) than lower income respondents.
- To consider alternatives to driving, lower income respondents (less than $50,000) are more receptive to more convenient bus stop locations and safer streets for walking and biking. Higher income respondents (more than $150,000) are least willing to consider alternatives to driving for any reason.
- Lower income respondents tend to be younger than higher income respondents.

WAILUKU REDEVELOPMENT AREA MARKET-BASED PLAN
PROPOSED INITIATIVES AND PROGRAMS

I. Policy & Regulatory Framework

In order to attract new businesses and grow and nurture existing ones, selected regulatory and policy adjustments can be made to create a more supportive and user-friendly business environment downtown. If Wailuku is going to be successful in attracting new businesses, jobs and investment, it must create and maintain reliable and predictable development review processes and requirements. Several recommendations that can make redevelopment and change of use in the downtown area easier to accomplish are outlined below.

1. *A Revamped Development Review Processes* Currently, the development review process can be inconsistent between different County departments and the resulting real and perceived cost and time commitments are a disincentive to new investment. Development review is currently administered by several County agencies, each having its own process, standards and requirements. There is little, if any, overlap between the different agencies which can lead to incompatible and/or irreconcilable regulations for the applicant to grapple with. In order to create predictability and consistency in the development review process, a collaborative, inter-departmental approach is recommended that includes the following County agencies:
   - Planning Department
   - Development Services, Plans Review (Public Works)
   - Development Services, Inspection (Public Works)
   - Fire Prevention and Inspection
   - Water Department Engineers
   - Construction and design professionals

Select staff from these agencies can comprise a *Development Review Committee* that establishes criteria, parameters and a process in which to review, accept or deny requests for waivers and variances in the redevelopment area in a timely manner.

It is recommended that the development review committee hold a standing meeting (perhaps monthly - or more frequently if appropriate), to be available to applicants to answer questions and work through development scenarios prior to submitting an application to create efficiencies and allow the process to move more quickly and smoothly.

2. Amend Certain Building Code Requirements by County Ordinance

There are a variety of building code requirements that can be onerous for small businesses and could be amended through County Ordinance. Suggested changes are outlined below.

- *Waive Standard Roadway Width Requirements for Use Changes Within the MRA Boundaries:* Currently, any change of use within the MRA boundary triggers conformance with standard roadway width requirements. Requiring a change in road width is an enormous expense and logistical undertaking for a small business. It is recommended that current road widths in the MRA boundary be grandfathered in with a change of use, i.e. existing road widths will suffice with a change of use within an existing structure. In the case of new development, road width requirements would need to be considered on an individual basis, and may be eligible for a waiver if it maintains consistency in road width with adjacent development. Road width waivers for new development need to be balanced with the ultimate goal of providing safe pedestrian and bike access throughout the downtown area.

- *Waive Required Installation of Fire Hydrants and Manholes Within the MRA Boundaries:* The requirement for business owners to install fire hydrants and manholes is frequently cited as an economic hardship. The County should consider taking on this responsibility as part of its infrastructure programming.

- *Allow Conversion of Residential Buildings to Certain Commercial Uses Without Requiring Variance(s):* Currently, when a residence is converted to any commercial use, a variety of building code variances are routinely sought by applicants for issues including stairway configurations, fire walls, roof overhangs, parapets and others. It is recommended that an applicant apply for a change of use permit without having to go through the variance process when residential uses change to complementary commercial uses including, but not limited to:
    - Professional office
    - Personal and business services
    - Retail
    - Bed and Breakfast
    - Others as appropriate when they are consistent with WRA zone regulations and legally sound

3. Create a Dining and Entertainment District Incentive Zone

A formally designated dining and entertainment district can offer supportive policies and incentives to encourage a destination for dining, theater and cultural venues. Recommended incentives within the designated area include reduced or waived parking requirements and expedited permitting and licensing. The notion of a Dining and Entertainment District is discussed in greater detail in the "Business Development" discussion in the next section of this plan.

4. *Building Code Relief for Historic Structures*

Many downtown structures are either historic or constructed prior to the implementation of modern building codes. They are often very difficult to renovate in compliance with building code requirements that are written for modern buildings. In order to facilitate the adaptive reuse of older buildings, relief from some code requirements should be allowed. Many states and municipalities have adopted policies and regulatory frameworks that allow for less stringent building code requirements for historic structures – most notably California, New Jersey, and New York – although many other states and cities have adopted similar codes. The Department of Housing and Urban Development (HUD) and the National Main Street Center have documents outlining similar codes, potential benefits and challenges to historic building codes, and specific language that can be used in writing historic building code legislation.

5. *Update the MRA Zoning and Redevelopment Code and Design Guidelines*

The existing MRA Zoning and Redevelopment Codes were adopted in 2002 and the MRA Design Guidelines were adopted in 2006. Once the Market Based Plan is adopted, both documents should be updated to support the implementation of the recommendations, initiatives and strategies outlined in this plan. Under the current zoning, some of the recommendations within the plan, including business development strategies, the creation of a dining and entertainment district, improved parking management, development of a public market and changes to the public realm will all likely need to be addressed through administrative review, and waivers and exemptions from the existing regulatory framework. In order to avoid a downtown zoned parcel by parcel, an update of the zoning code is recommended specifically addressing:

- *Decreasing minimum lot sizes* – as new small businesses open in downtown, the minimum lot sizes may be too big for certain small business concepts and act as a disincentive to new development.
- *Use adjacencies* – currently, certain incompatible uses can be adjacent to one another if they are separated by a six-foot wall. As new buildings are developed and new businesses open, a more systematic approach to use adjacencies should be implemented.
- *Minimum parking requirements* – when new parking strategies are adopted, the parking structure is built, and more pedestrian amenities are introduced downtown, the fundamental dynamics of parking ratios will likely change dramatically. Rethinking parking requirements that integrate the anticipated use of a variety of transportation modes will contribute to a more functional downtown.
- *Eliminating use of FAR as a measurement standard* – FAR is a complicated formula that does not clearly articulate a vision. Building height, setbacks and stepbacks that are clearly articulated are a much more effective way of promoting an overall vision for a place.

- *Introducing form-based standards* – Form based zoning standards promote development that is sensitive to the existing built environment. It relies on consistent setbacks, form, height and use compatibility to reinforce existing character and context and is being adopted by many cities around the country. A form-based approach to downtown could create a more predictable development scenario as downtown builds out.
- *Establish a clear process to allow sidewalk dining*. Encourage sidewalk dining permits and create a process to periodically review them to ensure that any new uses or enhancements in the right-of-way do not impede pedestrian movement.

II. Business Development

1. Downtown as Incubator

During the market based planning process, participants in small group discussions and Wailuku Town survey respondents all indicated that unique, local and diverse businesses would encourage more frequent visitation to downtown. The notion of treating downtown Wailuku as a business "incubator" has emerged. Business incubators are intended to accelerate the development of entrepreneurial business enterprises through an array of business support resources and services. Treating all of downtown Wailuku as an Incubator could be a creative way to:

- Encourage innovative, unique and locally owned retail, services and production in downtown Wailuku
- Support new business concepts that appeal to local residents
- Provide jobs and job training opportunities
- Establish ties to high schools and colleges and others for workers, vocational training and internships

2. Financial Tools to Support Small Business Development

Creating accessible sources of capital is a critical ingredient in attracting innovative businesses to downtown. A variety of financing tools are envisioned, including:

- Opportunities for property owner equity or investment in start-up business ventures.
- Contract or lease relief for new businesses that provide needed or desirable goods or services.
- Working capital for innovative business concepts made available through several mechanisms, including:
    - *Revolving Loan Fund:* This fund could provide low-interest or no-interest loans to start-ups and existing businesses wishing to upgrade, expand or invest in tenant finish. As the loans are paid back, that money is then made available for reinvestment in future business concepts.
    - *CDBG Funds:* CDBG funds are used primarily to improve communities through quality housing and living environments and expanded economic activities. CDBG funds are administered by Maui County and made available for development projects targeting those with low and moderate incomes. CDBG funds can be used for real estate acquisition, public facilities improvements, housing rehabilitation, economic development activities, community development and historic preservation.
    - *Bank CDC:* Bank CDC's can be used to pool the resources of many lending institutions and reduce risk, providing capital to assist in the development of under-utilized real estate and to attract business capital for small businesses. A CDC supported by banks located in Wailuku could help facilitate the development of new business concepts, and provide predevelopment, construction and long-term financing. A Wailuku bank CDC could also house a seed capital loan and equity fund to launch new business concepts.
    - *Community Capital Fund:* A community capital fund that would mobilize local property owners and residents to invest in new business concepts through a variety of community-based models, including cooperative and local partnership structures. With the retrenchment of conventional lending during this recessionary economy, there is a new movement toward local financing solutions to advance grassroots economic development. Community finance models that have been used around the country and could be used in Wailuku include:
        - Cooperative – a communally owned and managed business
        - Community-owned corporation – A traditional, for-profit corporation
        - Small ownership group – A small, ad-hoc investor group
        - Investment fund – A community-based fund

3. Dining and Entertainment District Along Market/Main

The creation of a dining and entertainment district in Wailuku presents a compelling opportunity that is central to Wailuku's suggested niche strategy and is supported by market research, the state of Wailuku's existing real estate market, community surveys and the existing strengths of the business district. Opportunities include:

- An underserved market, evidenced by retail leakage analysis that finds a need for more restaurants in both Wailuku's primary and secondary resident market areas.
- Real estate at reasonable rents that could help support local dining and entertainment concepts.
- Community surveys that find a desire to patronize restaurants and unique retail.
- Existing cultural venues that position Wailuku differently from Maui's other small towns and provide a competitive advantage to attract both resident and visitor markets.

Clustering arts, culture, theaters, restaurants and taverns along Market and Main Streets can help make Wailuku a unique destination and entertainment enclave that supports the economic health and overall sustainability of downtown.

A formally designated dining and entertainment district can offer supportive policies and incentives to encourage the creation of a compelling destination for dining, theater and cultural venues, and, perhaps more importantly, provide predictability regarding how and where new venues locate. Additionally, patrons will be able to take advantage of ample evening parking. A dining and entertainment district could leverage the existing cluster of cultural and entertainment venues including:

- Iao Theater
- Maui Academy of Performing Arts
- Maoli Theater (currently under construction)
- Wailuku Coffee Company
- Café O'Lei
- Main Street Bistro
- Seang Thai
- Jennifer's Saigon Café
- Maui Bake Shop and Deli

Several initiatives could support and encourage a well-planned Dining and Entertainment District:

- Establish a new ***dining and entertainment incentive district*** that encourages new arts and cultural venues, restaurants and taverns to locate in the district with accelerated permitting processes, reduced parking requirements or other incentives.
- Establish a clear process to ***permit sidewalk dining***. Ensure sidewalk dining permits are periodically reviewed so they are up-to-date and accommodate any new uses or enhancements in the right-of-way and do not impede pedestrian movement.
- Establish ***a "Good Neighbor" policy***, agreed to by downtown Wailuku businesses and nearby residents that establishes reasonable and predictable operating standards, including hours of operation for restaurants and taverns, cultural and entertainment venues, that establish allowable times for music to be played, parking agreements, trash pickup, etc.,
- ***Waive parking requirements on the first 2500 square*** feet of existing buildings to encourage desirable use that support the dining and entertainment district concept. The current code requires 1 space for every 100 square feet of restaurant space, with a slight reduction within the MRA boundaries. (Section 30.13.060 of the zoning and development code allows a parking abatement for structures less than 1,000 square feet.) The current requirements are a disincentive to new businesses and do not account for the fact that there is ample available parking in the evening hours
- ***Establish design guidelines*** specifically for the entertainment district that establishes a clear aesthetic vision for facades, sidewalk cafes and signage.

- *Establish a liquor licensing process* that is more clear, predictable and efficient within a designated dining and entertainment district.
- Determine inexpensive and easy *collaborative marketing* strategies:
    - Capitalize and expand upon the 300 nights of activity at the Iao Theater by offering promotions that package evening activities
    - Utilize Manao Radio, 95.1, and the entertainment paper *Maui Time Weekly* to help market and promote the notion of an entertainment district
    - Market ample available evening parking to the locals and an authentic Maui experience to tourists and cruise ship passengers through travel guides and publications

Other business development initiatives that should be considered in the mid-to-long term include:

1. Assessing whether a downtown Business Improvement District (BID) would be a feasible mechanism to provide long-term revenue stream to support business programming, marketing, special events and improvements.

2. Pursuing plans to build a pocket park with a stage at Market and Pili to provide an outdoor entertainment venue (this idea is also addresses in the *Public Market* section below).

III. Parking Management

Parking in downtown Wailuku is a barrier to its commercial viability. Consumers view the lack of convenient parking as an impediment to visitation. Business owners cite a shortage of both employee and customer parking options. County and State employees regularly compete each morning to park in the limited number of long term spaces.

The Market-Based Plan did not determine if the parking supply is inadequate, and, in fact, this question has been probed by prior studies leading to the planned construction of a parking structure on the central lot. However, the planning process did reveal that the existing parking supply is poorly managed – there appears to be little rationality on how parking is allocated between short and long-term use.

Some important ideas emerged from the community survey with regard to parking management opportunities including:

- About half of survey respondents said they were willing to pay a nominal parking fee for short term parking use
- Most respondents indicated they park between one-to-two hours
- Most indicated they were willing to walk two to five minutes from their car to their destination

There are several initiatives that can be undertaken in Wailuku that will dramatically improve the parking situation downtown.

Near-term recommendations include:

1. Undertake a Parking Management Plan that would explore how the existing supply of parking can be allocated and priced to create better parking options for customers and employees. Explore parking district feasibility as a way to manage parking and provide a mechanism to reinvest any revenue raised from paid parking in downtown parking improvements. A Parking Management study could:
    - Determine the optimal ways to allocate both on-street and off-street parking for Wailuku's various parking user groups
    - Determine what range of parking fees would be acceptable for downtown drivers
    - What amount of money those fees could raise on an annual basis
    - What types of parking improvements that annual revenue stream could support

- Identify management tools and technology that will contribute to a more predictable parking environment
- Identify strategic options to add to the Wailuku parking supply in the long term.

2. Restripe the central parking lot to accommodate additional spaces – even a small number of new spaces would be helpful to alleviate limited parking supply
3. Initiate paid parking for 12-hour spaces in the central lot. A nominal parking fee could help generate revenue to help pay for parking improvements and create more parking availability for short-term needs.
4. Parking supply is also constrained in the Happy Valley district of the Wailuku Redevelopment Area. Lack of public parking has negatively impacted existing businesses and is a barrier to attracting new businesses and investment. The County and/or the Maui Redevelopment Agency should identify and acquire land in the Happy Valley area that can be utilized as public parking for existing and new businesses.
5. Parking structure: The County has raised more than $1M to begin a parking structure design process. That process is moving forward with the selection of a designer. In addition to the design, potential financing tools to pay for the structure (such as revenue from parking district, TIF and others) need to be identified and put in place.

Mid-Term recommendations include:

1. Build the parking structure. There is a tremendous opportunity to build a structure that promotes a the overall revitalization of downtown, providing not only a place to park, but also (along with the "remnant parcel") other civic amenities that could help create a central gathering place for a variety of community-based events and activities appealing to locals and tourists alike. The parking structure should also support the development of housing, retail and office uses in central Wailuku.

2. Create a Parking District: A parking district will ensure any revenues generated from downtown parking will finance downtown parking improvements, such as a parking structure, signage, management strategies and marketing. Additionally, a parking district could engage in activities such as:
   - Explore installing meters downtown. Determine the best meter technology to fit the driving habits of downtown workers and visitors.
   - Neighborhood Parking Permits*:* Explore establishing neighborhood parking permits. If meters are installed, motorists could push into neighborhoods looking for free parking. Residential permits will keep spaces available for nearby residents.

Long-Term recommendations include:

1. Transportation demand management (TDM) policies to reduce vehicle use. The County and State, as downtown's primary employers, could take the lead in exploring TDM initiatives such as increasing public transit options and availability, car pooling, and improving infrastructure to encourage alternative modes of transportation such as walking and biking to reduce the number of vehicles downtown and alleviate the pressure to develop more parking.

2. Additional satellite parking.



Oxbow Public Market, Napa

IV. Public Market

The notion of establishing a year-round public market in Wailuku is an opportunity that has been revealed through the market-based planning effort. A public market is envisioned as a central community gathering place for residents, workers and visitors. It will be a place where the community can interact with regional food and farm producers, artisans and other unique small businesses which produce goods that celebrate the creativity and vitality of Hawaii. It is envisioned the market will have both indoor and

outdoor elements, and accommodate a variety of products (including non-food items), educational activities and community events. The market could also be a showcase for environmentally sustainable design and operating practices. There are currently numerous year-round public markets throughout the country in large and small cities alike and they are gaining popularity – with several new markets coming online around the country this year. Famous markets include Seattle's Pike Place, or Vancouver's Granville Island, but there are also many smaller markets around the country in communities more similar in size to Wailuku. The Oxbow Public Market in Napa, California showcases local food, produce and wines as a part of its unique local industry and culture.



Oxbow Public Market, Napa



North Public Market, Columbus

A public market could be a tremendous asset to downtown and could:

- Provide a multi-faceted community asset for Wailuku and the region
- Provide residents, workers and visitors with access to fresh, locally grown food and other locally produced goods, arts, crafts and other Hawaii-centric wares
- Be a home for small businesses, many of which can grow to occupy retail spaces throughout Wailuku
- Leverage the dining and entertainment district by providing a multi-dimensional downtown experience

The "remnant parcel" adjacent to the proposed parking structure could be an ideal location for a public market. The market could be managed by the County, MRA, Downtown Wailuku Partnership or by contract. A feasibility study to determine whether a public market would be an economically viable pursuit and the best location should be undertaken.



Milwaukee Public Market

Additionally, the two parcels on either side of the county parking lot could provide a great opportunity to expand the public realm adjacent to the anticipated parking structure, house uses related to the public market or other supportive uses. Potential uses could include performance space (a pocket park with a stage at Market and Pili has been discussed in the past, and could be a great amenity), other pocket parks or other civic use. If those parcels are developed under private ownership, there is a risk the new uses could detract from, or be in conflict with, the tremendous civic potential of the site.



North Market, Columbus

If possible, the County, WRA or the new entity recommended in this plan, the Wailuku Partnership, should consider purchasing the two parcels to ensure control over, and expansion of, civic uses that could make the parking structure the centerpiece of Wailuku community. Additionally, a multi-use, in-fill project with a public market component that promotes public health, walkability, connectivity and a cooperative public/private partnership would likely be a highly competitive project for federal funding under the Obama administration's new livable communities initiative, a partnership of HUD, EPA and DOT.

V. Public Realm

1. Infrastructure Improvements

Survey responses and stakeholder interviews cite a safer, cleaner more welcoming environment as major factors that would encourage more visitation downtown. Basic infrastructure improvements are critical to the overall success and sustainability of downtown Wailuku. Pedestrian amenities such as sidewalks and bike paths are inconsistent and, in some places, non-existent.

As budgetary constraints are reduced and financing tools are identified, downtown Wailuku needs to invest in basic pedestrian and bike infrastructure to establish a safer, more welcoming physical environment.

In the short-term, priority should be given to:

- Planning for sidewalks throughout downtown that are wide enough to provide a safe and enjoyable pedestrian experience and, when there is sufficient right-of-way, provide a landscaped buffer from vehicular traffic.
- Immediate attention should be given to providing continuous, appropriately wide and well maintained sidewalks on Vineyard Street and throughout the superblock

In the mid-term, improvements should include:

- Constructing continuous sidewalks throughout downtown
- Pedestrian crossings
- Traffic calming to create a safer pedestrian environment
- Bike paths, directional signage and bike racks where there is adequate right-of-way
- A better, more connected pedestrian and bike system will allow better mobility and ease of connections to various transit modes

Long term infrastructure improvements will need to include fire, water and drainage improvements that are currently inadequate and will continue to be challenged as downtown Wailuku grows.

2. Clean and Safe Initiatives

Community survey respondents indicated a cleaner, safer and more inviting physical environment would encourage them to come downtown more often. Concerns about personal safety were also mentioned as a reason to avoid downtown. Wailuku also suffers from a lingering stigma that is both real and perceived, that the area is unsafe.

Clean and Safe initiatives should be deployed throughout downtown. Some low or no-cost, short-term recommendations include:

- Coordinated trash pickup – currently all businesses contract individually to have trash picked up. A managed approach to collective trash pickup is recommended. Trash pickup coordination could improve traffic circulation and decrease noise from trash trucks.
- Coordinated delivery hours – it is also recommended that truck deliveries downtown be limited to specific hours of the day, ideally in the early morning so as not to contribute to traffic congestion, noise, and impassable streets.
- Additional police presence in strategic places and times of day
- Strengthen existing neighborhood and business watch programs
- Coordinating social service agencies to provide information and resources such as shelter locations, mental health assistance, food banks and others. Also consider a long-term relocation strategy for social service providers. As downtown develops and real estate values increase, some social service providers may look for alternative, more affordable locations. Creating a supportive strategy to help those organizations if and when they move would benefit all of Maui.

Clean and safe initiatives that require capital investment should be implemented in the mid-to-long term once funding for these improvements has been identified. They include:

- More pedestrian lighting for both an increased sense of place and aesthetics as well as a better sense of safety
- Strategically located trees in the public right of way (that do not interfere with pedestrian lighting)
- Recycling receptacles

WAILUKU REDEVELOPMENT AREA MARKET BASED PLAN: SEQUENCING OF PROPOSED INITIATIVES

	Policy &Regulatory Framework	Business Development	Parking Management	Public Market	Public Realm
Priority/ Near Term (*next 6 to 24 months)*	▪ Revamp Development Review Process ▪ Amend certain building code and development requirements by County Ordinance ▪ Create a Dining & Entertainment District incentive zone	▪ Downtown as Incubator: - Encourage innovative businesses, job creation and training - Create financial tools to support small businesses ▪ Entertainment District along Main/Market: - Good Neighbor Policy - Establish new incentive district - Waive parking requirements on 1st 2500 square feet - Review liquor licensing process - Design Guidelines - Collaborative Marketing	▪ Undertake Parking Management Plan that Includes parking district feasibility analysis ▪ Restripe central lot ▪ Initiate paid parking for 12-hour spaces in central lot ▪ Explore options to acquire land in Happy Valley for public parking. ▪ Parking Structure: Initiate design process; anticipate cost and funding sources ▪ Explore civic purchase or option of parcels adjacent to "remnant" parcel of parking structure	▪ Undertake feasibility study ▪ If feasible, develop business plan including: - Identify potential management structure - Identify best location - Identify vendors	▪ Infrastructure: - Vineyard Street sidewalk plan ▪ Clean and safe Initiatives: - Coordinated trash pickup - Coordinated delivery hours - Increased Police presence/Neighborhood Watch program - Coordinated social service delivery and long-term location strategy
Mid to Long Term *(next 2 to 7 years*)	▪ Update MRA Design Guidelines and Zoning and Development Code ▪ Provide select building code relief for historic structures	▪ Business Improvement District (BID) feasibility ▪ Pocket Park & Stage Plan at Market & Pili	▪ Establish Parking District to explore installing meters & Neighborhood Parking Permits ▪ Transportation Demand Management strategies (Reduce single occupant Vehicle trips) ▪ Build parking structure(s)	▪ Assemble financing & develop public market ▪ Begin operations	▪ Infrastructure: - Sidewalks - Ped crossings - Traffic calming - Bike paths, bike amenities, signage ▪ Transit connections ▪ Clean and safe initiatives: - Ped lighting - Graffiti removal - Trash & recycling receptacles ▪ Fire, Water, Drainage
Applicable Financing Tools	N/A	▪ Revolving Loan Fund ▪ CDBG Funds ▪ Bank CDC ▪ Community Capital Fund ▪ BID	▪ Parking Revenue ▪ TIF ▪ Community Facilities District ▪ Federal Funding	▪ Market Revenues ▪ TIF ▪ CIP ▪ CDBG ▪ Federal Funding	▪ Parking Revenue ▪ TIF ▪ Community Facilities District ▪ CIP ▪ CDBG ▪ Federal Funding
Lead Agency	County/MRA	WMSA/CDC	County/CDC	CDC/WMSA	County/MRA

ORGANIZATION & FINANCING PLAN

A new collaborative structure is proposed to advance the vision and initiatives outlined in the Market-Based Plan, Wailuku's key organizational drivers – including the County, Maui Redevelopment Agency and Wailuku Main Street Association Inc. – offer well-intentioned energy and resources that are sometimes diluted and dispersed. This organizational plan aims to combine the energy and resources of these entities, along with other Wailuku Town improvement groups, into a unified structure that combines the best qualities of each.

A new Wailuku Partnership is proposed to be a non-profit community development corporation (CDC). Community development corporations, or "CDCs", have been an integral part of American community revitalization strategies for more than 40 years. CDCs are generally non-profit 501(c)(3)organizations that are initiated on a grassroots level. CDCs tackle public benefit projects and other redevelopment activities in areas that have difficulty attracting private capital or lack development expertise to undertake complicated public/private financing strategies. Typical activities include:

- Facilitating and/or constructing affordable housing
- Assisting in the growth and development of small businesses and economic development
- Developing underutilized real estate
- Facilitating partnerships throughout the community such as neighborhood police and clean and safe programs
- Providing a comprehensive organizational structure to engage in a variety of activities to aid the healthy development of downtowns and neighborhoods;
- Facilitate financing and develop financing tools

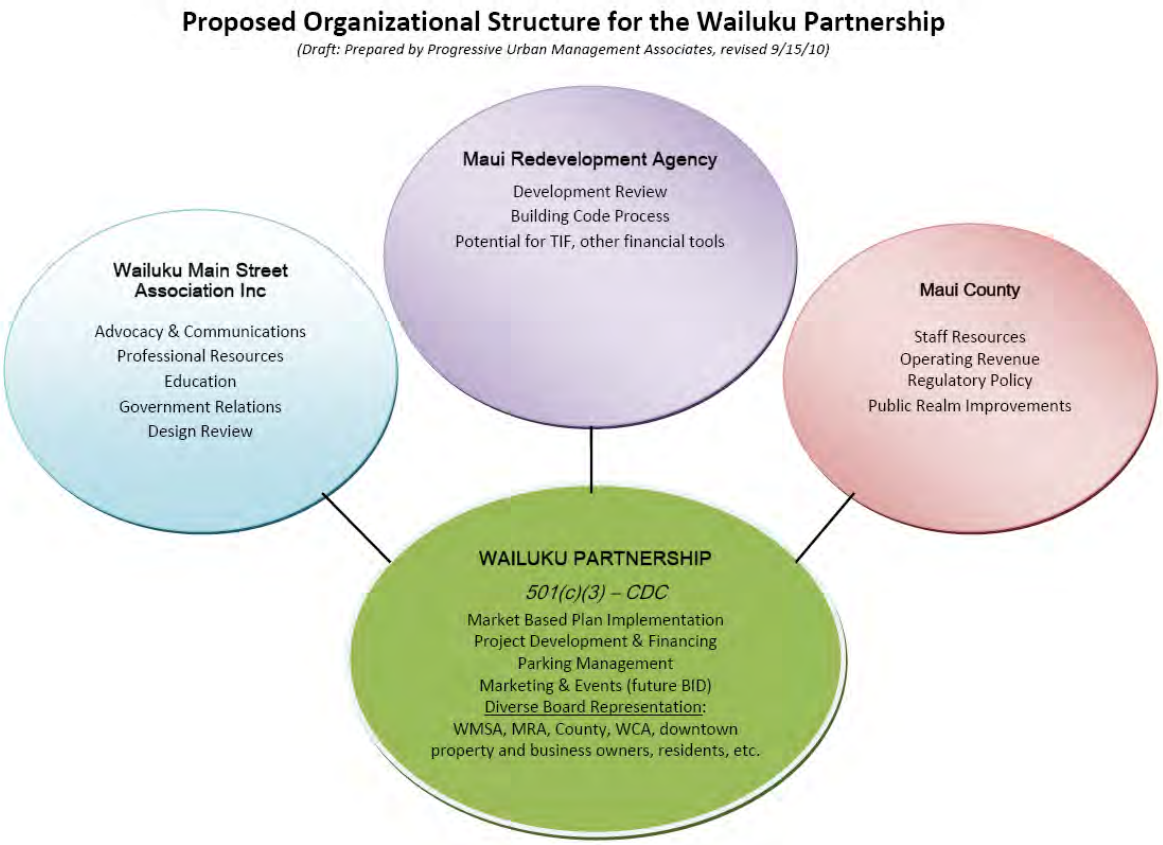
The economic downturn is forcing communities to re-think traditional approaches to downtown development and community development and CDCs are becoming more widely used to foster growth.. The CDC movement is being led by private sector downtown management organizations, institutions such as universities and hospitals, as well as local government. The new relevance of CDCs to downtowns and community development is driven by the following factors:

- Downtown and community development strategies are increasingly incremental and entrepreneurial.
- CDCs tend to take care of the details – infill development that is often overlooked by large plans and public financing agencies.
- CDC approaches are tactical and project-based.
- CDCs create a proven mechanism for including more diverse markets and constituencies within the umbrella of traditional downtown and community management organizations.

In Wailuku, a CDC could provide a partnership dedicated to implementing recently identified goals and priorities and could:

- Build consensus among Wailuku Main Street Association Inc., Maui Redevelopment Agency, the County, downtown residents, businesses, non-profits and other stakeholders through a representative board and committee structure.
- Facilitate and manage the development of a year-round public market, downtown parking structure and parking management plan and other complex public/private projects
- Engage in small business and economic development initiatives
- Provide a structure that identifies and organizes various sources of funding to support healthy and appropriate development

The Wailuku Partnership is envisioned to be governed by a board of directors consisting of representatives from its partner organizations, plus downtown property owners, businesses and residents that offer expertise and passion to advance its mission.



Next Steps for form the Wailuku Partnership

The following steps are suggested for creating the Wailuku Partnership:

1. Endorsement of Concept *(within 3 months)*: The Wailuku Partnership concept should initially be endorsed by the Wailuku Market-Based Plan Task Force and then by the key partners in the proposed venture, including the County, Maui Redevelopment Agency and Wailuku Main Street Association Inc..

2. Task Force Becomes CDC Formation Committee *(within 6 to 9 months)*: The Market-Based Plan Task Force, which includes representatives from all affected groups, would become a CDC Formation Committee charged the following:
   - *Develop CDC board composition*: It is recommended that the CDC board consist of 9 to 13 members with the following standing representatives: County, Maui Redevelopment Agency, Wailuku Main Street Association, Inc., Wailuku Community Association and representation from commercial property owners, business owners, lending institutions, and residents at-large. Geographic representation should also be considered to reflect all of Wailuku Town.
   - *Develop CDC work program*: The Market-Based Plan suggests several initiatives that could provide a basis for an initial CDC work program, including key business development, parking management and public market feasibility functions.

- *Identify CDC seed funding*: A variety of funding sources could serve as seed funds for the CDC, including:
  - ✓ County and CDBG grant funding
  - ✓ Hawaii Community Foundation
  - ✓ Local banks
  - ✓ Local foundations
  - ✓ Local commercial property owners
  - ✓ Parking revenue from long term parking permits in central lot

- *Develop Articles and By-Laws for the Organization:* With agreement on board composition and general purpose, the CDC Formation Committee should work with local legal counsel to develop articles of incorporation, operating by-laws and seek 501(c)3 tax exemption status.

3. CDC Starts Operations *(within 9 to 12 months)*: With a board, work program, budget and operating documents, the Wailuku Partnership initiates operations.

Summary of Financing Tools

A variety of financing tools are recommended to advance the Market-Based Plan initiatives. Below is a summary of the tools and their suggested application within Wailuku Town.

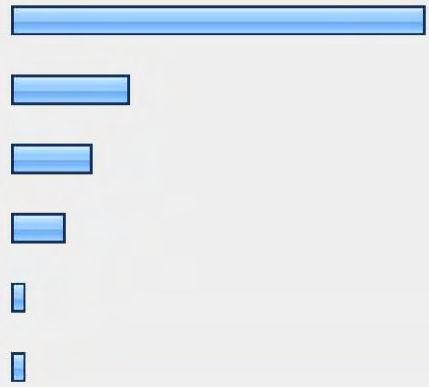
Financing Tool	Description	Applications in Wailuku Town
Parking Revenue	Revenue generated from public paid parking, both on-street and off-street. Initially, long-term parking in the central lot is recommended for paid parking. Eventually, parking management practices may expand concept.	Short-term revenue opportunity from long-term parking in central lot. Long-term revenue opportunity from parking management strategy that establishes formal parking district.
Tax Increment Financing	Revenue generated from future increases in property values within the Wailuku Redevelopment Area – a base year is established (i.e. FY 2011) and "increment" from future increases in tax revenue after base year can be reinvested within the district.	Valuable investment tool that should be utilized by the Maui Redevelopment Authority immediately. Funds could be used for the parking structure and other capital improvements and to assist in private development. Base year should be established now to take advantage of low valuations.
Community Development Block Grants (CDBG)	Annual appropriation to the County from the federal government for projects that improve housing, infrastructure and economic development in low income and blighted areas. Wailuku is currently eligible for funding.	Various applications in Wailuku, including infrastructure repair and replacement, small business support that creates jobs and affordable housing.
Other Federal Funding	The Obama administration is switching funding priorities in a variety of departments – particularly Transportation, Housing & Urban Development and EPA – to benefit urban areas.	Many opportunities for funding projects in the Market-Based Plan, including infrastructure improvements, public market and enhancing overall "livability" of Wailuku Town.
County Capital Improvement Projects	Annual appropriations by County to improve infrastructure.	Infrastructure improvements.
Community Capital Fund	Envisioned as a local venture capital or equity fund that is created by local property owners and residents to invest in businesses and projects that benefit the community.	Could be explored by the CDC after it has been operating for a year or two.
Bank CDC	Envisioned as a revolving loan and/or equity fund that could be capitalized by Wailuku lending institutions. Allows for banks to reduce risk in public benefit investments plus offers favorable community reinvestment act treatment.	Could be explored by the CDC after it has been operating for a year or two.

Summary of Financing Tools (continued)

Financial Tool	Description	Applications in Wailuku Town
Community Facilities District	Method of self assessment that allows property owners to create their own funding district to finance needed infrastructure. Available under Hawaii statutes, but requires enabling legislation from the County.	Infrastructure and public facilities, perhaps including the parking structure and public market.
Business Improvement District	Method of self assessment that allows property and business owners to create their own funding district to finance marketing, special events and physical improvements.	Envisioned as a long-term option (i.e. 5+ years) to sustain Wailuku marketing and management efforts.

Wailuku Town Survey

1. Approximately how often do you go to Wailuku Town (if you work in Wailuku Town, visits in addition to work)?



	Response Percent	Response Count
Once per week or more	**62.3%**	**611**
Approximately twice per month	16.9%	166
Approximately once per month	11.3%	111
Approximately four times per year	7.3%	72
Approximately once per year	1.0%	10
Never	1.0%	10
answered question		**980**
skipped question		**31**

2. How often do you go to Wailuku Town for each of the following activities?

	Frequently	Occasionally	Rarely or Never	Response Count
Shopping	11.0% (102)	**47.9% (443)**	41.0% (379)	924
Restaurants and/or bars	22.0% (210)	**59.3% (567)**	18.7% (179)	956
County/State business	41.1% (390)	**42.5% (404)**	16.4% (156)	950
Cultural events (music, art, theater, etc.)	9.9% (91)	**45.8% (422)**	44.4% (409)	922
Library	19.4% (176)	24.7% (224)	**55.9% (507)**	907
Special events	11.6% (106)	**50.5% (460)**	37.8% (344)	910
Personal business (e.g. salon/barber, bank, etc.)	**43.0% (411)**	38.6% (369)	18.4% (176)	956
Other business	22.4% (193)	**41.0% (354)**	36.6% (316)	863
Medical or dental care	26.1% (241)	**38.0% (350)**	35.9% (331)	922
Church	13.1% (111)	9.9% (84)	**76.9% (650)**	845
			Other (please specify)	88
			answered question	**1,007**
			skipped question	**4**

3. If you DON'T visit Wailuku Town is it because of: (please select all that apply)



	Response Percent	Response Count
Lack of restaurant options	37.0%	249
Lack of diverse retail	55.3%	372
Difficulty finding parking	**69.1%**	**465**
Difficult to get around/find stuff	14.7%	99
Limited public transportation service and hours	14.3%	96
Concerns about safety	23.9%	161
Lack of arts, culture and entertainment	17.2%	116
Traffic/congestion	38.0%	256
Generally unappealing environment	28.1%	189
Too far from where I live	17.7%	119
Other (please specify)		66
answered question		**673**
skipped question		**338**

4. Which of the following area business districts do you visit at least once a month? (please select all that apply)

	Response Percent	Response Count
Queen Ka'ahumanu Shopping Center	80.1%	775
Kahului Shopping Center	31.7%	307
Maui Mall	79.0%	765
Maui Marketplace	70.7%	684
Dairy Road/State Hwy. 380 area (Costco, Kmart, Wal Mart)	**87.8%**	**850**
Pa'ia	28.2%	273
Other (please specify)		127
answered question		**968**
skipped question		**43**

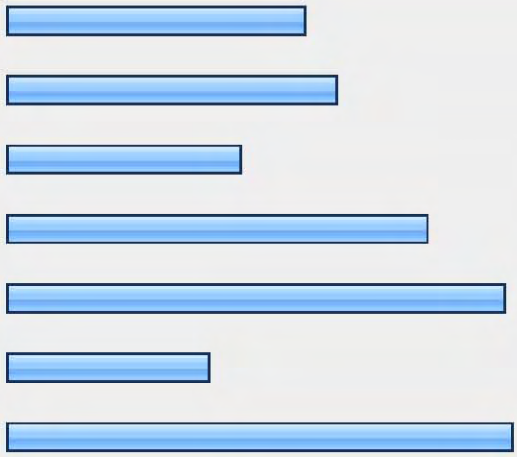
5. Which improvements would encourage you to visit Wailuku Town more often?

	YES - Would encourage me to visit more!	May encourage me to visit more.	NO - Won't encourage me.	Response Count
More/different restaurants	**62.1% (566)**	31.5% (287)	6.5% (59)	912
Unique, one-of-a-kind shops	**45.7% (399)**	35.9% (314)	18.4% (161)	874
Brand name stores	28.7% (243)	33.1% (280)	**38.3% (324)**	847
More arts and cultural venues	36.7% (308)	**43.0% (361)**	20.4% (171)	840
Movie theater	**48.2% (417)**	29.0% (251)	22.9% (198)	866
Live entertainment	**40.1% (340)**	38.1% (323)	21.7% (184)	847
Special events	40.6% (344)	**45.5% (385)**	13.9% (118)	847
More welcoming,cleaner atmosphere	**56.8% (474)**	31.4% (262)	11.9% (99)	835
Safe pedestrian environment	**52.8% (438)**	30.4% (252)	16.8% (139)	829
Bicycle lanes	21.2% (168)	18.3% (145)	**60.6% (481)**	794
More green space	**40.5% (333)**	30.5% (251)	29.0% (238)	822
Better information on what exists	38.5% (316)	**40.5% (332)**	21.0% (172)	820
More convenient parking	**69.7% (636)**	22.6% (206)	7.7% (70)	912
			Other suggestions?	141
			answered question	**984**
			skipped question	**27**

6. If you would consider living in Wailuku Town, which of the following housing types would be most attractive to you? (please select all that apply)

	Response Percent	Response Count
Apartment	17.4%	172
Condo	20.7%	204
Live/work	19.6%	193
Townhouse	20.5%	202
Single family home	**37.7%**	**372**
Age-restricted housing	5.5%	54
I already live in Wailuku Town	23.5%	232
I am not interested in living in Wailuku Town	28.8%	284
answered question		**987**
skipped question		**24**

7. To make Wailuku Town a more attractive place for living, which amenities would be most important to you? (please select all that apply)

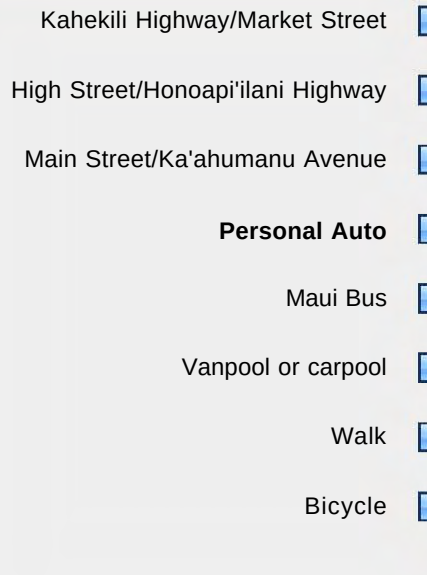


	Response Percent	Response Count
Recreational amenities	44.7%	427
Green space	49.6%	474
Entertainment	35.1%	335
Restaurants	63.2%	604
Clean and safe	75.3%	719
Nightlife	30.3%	289
Grocery	**76.3%**	**729**
Unique retail shopping	32.8%	313
Services (i.e., salon/barber, dry cleaner, etc.)	40.0%	382
answered question		**955**
skipped question		**56**

8. If you were to change or add ONE thing to improve Wailuku Town, what would it be?

	Response Count
	697
answered question	**697**
skipped question	**314**

9. How do you get to Wailuku Town (route and mode)? (you may select more than one)



	Response Percent	Response Count
Kahekili Highway/Market Street	18.5%	181
High Street/Honoapi'ilani Highway	32.5%	318
Main Street/Ka'ahumanu Avenue	55.4%	542
Personal Auto	**84.3%**	**824**
Maui Bus	4.5%	44
Vanpool or carpool	1.6%	16
Walk	15.4%	151
Bicycle	5.6%	55
Other (please specify)		35
answered question		**978**
skipped question		**33**

10. What is the average length of time that you park in Wailuku Town?



	Response Percent	Response Count
1 - 2 hours	**38.7%**	**376**
2 - 4 hours	15.7%	152
4 - 6 hours	3.6%	35
6 - 8 hours	22.1%	215
No pattern	16.7%	162
Not sure	3.2%	31
answered question		**971**
skipped question		**40**

11. What length of time would you be willing to walk from your car to your destination?

	Response Percent	Response Count
1 minute or less	15.3%	149
2 - 5 minutes	**55.5%**	**542**
5 - 10 minutes	24.1%	235
10 minutes or more	5.2%	51
answered question		**977**
skipped question		**34**

12. I would be willing to pay a nominal fee (up to $1 per hour) to park closer to my destination. (please select one)

	Response Percent	Response Count
Strongly agree	10.3%	100
Agree	**26.7%**	**258**
Neither agree or disagree	22.0%	213
Disagree	20.5%	198
Strongly disagree	20.6%	199
answered question		**968**
skipped question		**43**

13. I would be willing to pay a higher fee (up to $10 per day) for a space in a covered parking structure. (please select one)

	Response Percent	Response Count
Strongly agree	4.6%	44
Agree	7.2%	69
Neither agree or disagree	21.9%	210
Disagree	32.2%	308
Strongly disagree	**34.1%**	**326**
answered question		**957**
skipped question		**54**

14. What factors would make you consider an alternative transportation method to your personal auto? (please select all that apply)

	Response Percent	Response Count
Cost of parking	30.9%	285
Discounted vanpool or carpool options	4.7%	43
Car sharing program	4.8%	44
More convenient bus stop locations	32.2%	297
Faster bus service	25.1%	231
Safer streets for walking and biking	**36.0%**	**332**
None of the above	33.7%	311
Other		70
answered question		**922**
skipped question		**89**

15. Do you work in Wailuku Town?

	Response Percent	Response Count
Yes	**53.1%**	**512**
No	46.9%	453
answered question		**965**
skipped question		**46**

16. Do you live in the Wailuku/Kahului area?

	Response Percent	Response Count
Yes	**57.5%**	**553**
No	42.5%	409
answered question		**962**
skipped question		**49**

17. If you DO live in the Wailuku/Kahului area, how long have you lived there?

	Response Percent	Response Count
Less than one year	5.5%	31
1 to 5 years	21.3%	119
6 to 10 years	15.6%	87
More than 10 years	**57.6%**	**322**
answered question		**559**
skipped question		**452**

18. What is your gender?

	Response Percent	Response Count
Female	**57.0%**	**547**
Male	43.0%	412
answered question		**959**
skipped question		**52**

19. How old are you?

	Response Percent	Response Count
Younger than 18	0.1%	1
18 - 24	1.8%	17
25 - 34	12.5%	121
35 - 49	34.9%	337
50 - 69	**47.3%**	**456**
69+	3.4%	33
answered question		**965**
skipped question		**46**

20. What is your annual household income? (optional)

	Response Percent	Response Count
Less than $50,000	29.7%	246
$50,000 to $99,999	**43.9%**	**363**
$100,000 to $149,999	19.6%	162
$150,000 or more	6.8%	56
answered question		**827**
skipped question		**184**

21. How many people live in your household?

	0	1	2	3	More than three	Response Count
Adults (age 18 or older)	0.5% (5)	17.8% (170)	**55.0% (525)**	15.1% (144)	11.6% (111)	955
Children (under age 18)	**31.5% (162)**	30.2% (155)	27.8% (143)	8.4% (43)	2.1% (11)	514
answered question						**957**
skipped question						**54**

22. To be considered for one of the prize packages from Wailuku Town businesses, please complete the following: NOTE: This information is confidential and will not be shared with other parties.

	Response Percent	Response Count
Name:	**99.4%**	**542**
Email Address:	93.6%	510
Phone Number:	94.5%	515
answered question		**545**
skipped question		**466**

SUMMARY TABLE: EXISTING RETAIL ACTIVITY WITHIN THE WAILUKU STUDY AREA

source: March 2010 P.U.M.A. survey

EXISTING RETAIL *(estimated square feet)*	1. Wailuku Town	2. K'ahumanu Avenue Corridor	3. Hana Highway/ Highway 36	4. Dairy Road Corridor/ Kuihelani Highway	TOTAL MARKET AREA
Apparel and Accessories					
Women's Apparel	5,300	45,590		8,141	**59,031**
Men's Apparel		20,000		7,000	**27,000**
Children's Apparel		18,136		7,000	**25,136**
Footwear	2,500	15,000			**17,500**
Jewelry and Watches	1,000	16,578			**17,578**
Other Apparel Products and Services	4,000	19,000		1,500	**24,500**
Leisure					
Pets	1,000	5,175		11,452	**17,627**
Toys, Hobbies and Crafts	1,200	7,000			**8,200**
Art Galleries/Framing	2,800	4,500		3,563	**10,863**
Recreational Vehicles	2,000				**2,000**
Books/Periodicals/Newspapers		8,000		20,000	**28,000**
Music/CDs/Video/Electronics	2,600	4,000	1,500		**8,100**
Sporting Goods	5,500	8,841	10,900	40,000	**65,241**
Movie Theaters		61,875			**61,875**
Recreation	5,000	8,256	2,000		**15,256**
Food and Beverage					
Grocery Stores	14,750	62,536		11,200	**88,486**
Restaurants	19,825	55,515	5,000	32,351	**112,691**
General Merchandise					
General Merchandise	10,100	267,050		383,000	**660,150**
Health Care					
Prescription Drugs	4,500	26,873		1,100	**32,473**
Household Furnishings & Equipment					
Household Furnishings		40,855	25,500	23,000	**89,355**
Housewares and Small Appliances	17,200	10,027		32,169	**59,396**
Shelter					
Hardware	8,000			247,195	**255,195**
Personal Care					
Personal Products and Services	10,000	23,951	3,700	7,121	**44,772**
TOTAL OCCUPIED GLA:*	***117,275***	***728,758***	***48,600***	***835,792***	**1,730,425**
Vacant Square Feet	*26,600*	*24,706*	*5,000*	*11,092*	**67,398**
Vacancy Rate	*18.5%*	*3.3%*	*9.3%*	*1.3%*	***3.8%***

notes

*Gross Leasable Area

automotive category not included in analyis

recreation category includes bowling alleys,video arcades etc.

other apparel products and services includes accessories, dry cleaning

video and audio category includes music and electronics

grocery store category includes specialty food stores and liquor/wine stores

general merchandise category includes department stores, gift shops and other miscellanoeus retailers including tobacco stores, used merchandise stores (pawn shops), etc

housewares and small appliances category includes antiques, florists, print/copy shops/ office/art supplies, telephones, postage

repairs & maintenance category includes building materials, hardware, gardening supplies

personal care category includes beauty/barber, fitness clubs, tattoo parlors

SUMMARY TABLE: EXISTING RETAIL ACTIVITY WITHIN THE WAILUKU TOWN PRIMARY MARKET- ESTIMATED ANNUAL SALES

sources: March 2010 P.U.M.A survey, and ULI Dollars & Cents of Shopping Centers/The SCORE 2008

EXISTING RETAIL	1. Wailuku Town Neighborhood Ctr. Est. Sq. Ft.	Av. Sales/SF	TOTAL ESTIMATED ANNUAL SALES
Apparel and Accessories			
Women's Apparel	5,300	$171	**$906,300**
Men's Apparel			**$0**
Children's Apparel			**$0**
Footwear	2,500	$142	**$355,000**
Jewelry and Watches	1,000	$317	**$317,000**
Other Apparel Products and Services	4,000	$140	**$560,000**
Leisure			
Pets	1,000	$101	**$101,000**
Toys, Hobbies and Crafts	1,200	$199	**$238,800**
Art Galleries/Framing	2,800	$237	**$663,600**
Recreational Vehicles	2,000	$169	**$338,000**
Books/Periodicals/Newspapers			**$0**
Music/CDs/Video/Electronics	2,600	$290	**$754,000**
Sporting Goods	5,500	$221	**$1,215,500**
Movie Theaters			**$0**
Recreation	5,000	$47	**$235,000**
Food and Beverage			
Grocery Stores	14,750	$473	**$6,976,750**
Restaurants	19,825	$223	**$4,424,147**
General Merchandise			
General Merchandise	10,100	$103	**$1,040,300**
Health Care			
Prescription Drugs	4,500	$429	**$1,930,500**
Household Furnishings & Equipment			
Household Furnishings			**$0**
Housewares and Small Appliances	17,200	$202	**$3,474,400**
Shelter			
Hardware	8,000	$144	**$1,152,000**
Personal Care			
Personal Products and Services	10,000	$181	**$1,810,000**
TOTAL OCCUPIED GLA:	***117,275***		***$26,492,297***

SUMMARY TABLE: EXISTING RETAIL ACTIVITY WITHIN THE WAILUKU TOWN SECONDARY MARKET-ESTIMATED ANNUAL SALES

sources: March 2010 P.U.M.A survey, and ULI Dollars & Cents of Shopping Centers/The SCORE 2008

	2. Ka'ahumanu Avenue Corridor Community Ctr.		3. Hana Highway/Highway 36 Strip Ctr.		4. Dairy Road Corridor Kuihelani Highway Community Ctr.			
EXISTING RETAIL	**Est. Sq. Ft.**	**Av. Sales/SF**	**Est. Sq. Ft.**	**Av. Sales/SF**	**Est. Sq. Ft.**	**Av. Sales/SF**	**TOTAL EST. SQUARE FEET**	**TOTAL ESTIMATED ANNUAL SALES**
Apparel & Accessories								
Women's Apparel	45,590	$221			8,141	$221	**53,731**	**$11,874,551**
Men's Apparel	20,000	$275			7,000	$275	**27,000**	**$7,425,000**
Children's Apparel	18,136	$178			7,000	$178	**25,136**	**$4,474,208**
Footwear	15,000	$117				$117	**15,000**	**$1,755,000**
Jewelry and Watches	16,578	$344				$344	**16,578**	**$5,702,832**
Other Apparel Products and Services	19,000	$159			1,500	$159	**20,500**	**$3,259,500**
Leisure								
Pets	5,175	$205			11,452	$205	**16,627**	**$3,408,535**
Toys, Hobbies and Crafts	7,000	$185				$185	**7,000**	**$1,295,000**
Art Galleries/Framing	4,500	$237			3,563	$237	**8,063**	**$1,910,931**
Recreational Vehicles								**$0**
Books/Periodicals/Newspapers	8,000	$246			20,000	$246	**28,000**	**$6,888,000**
Music/CDs/Video/Electronics	4,000	$290	1,500	$221		$290	**5,500**	**$1,491,500**
Sporting Goods	8,841	$221	10,900	$166	40,000	$221	**59,741**	**$12,603,261**
Movie Theaters	61,875	$112				$112	**61,875**	**$6,930,000**
Recreation	8,256	$47	2,000	$35		$47	**10,256**	**$458,032**
Food and Beverage								
Grocery Stores	62,536	$518			11,200	$518	**73,736**	**$38,195,248**
Restaurants	55,515	$270	5,000	$167	32,351	$270	**92,866**	**$24,558,820**
General Merchandise								
General Merchandise	267,050	$116			383,000	$116	**650,050**	**$75,405,800**
Health Care								
Prescription Drugs	26,873	$429			1,100	$429	**27,973**	**$12,000,417**
Household Furnishings & Equipment								
Household Furnishings	40,855	$255	25,500	$178	23,000	$255	**89,355**	**$20,822,025**
Housewares and Small Appliances	10,027	$201			32,169	$201	**42,196**	**$8,481,396**
Shelter								
Hardware		$144			247,195	$144	**247,195**	**$35,596,080**
Personal Care								
Personal Products and Services	23,951	$140	3,700	$101	7,121	$140	**34,772**	**$4,723,780**
TOTAL OCCUPIED GLA:	***728,758***		***48,600***		***835,792***		***1,613,150***	***$289,259,916***

SUMMARY TABLE: WAILUKU MARKET LEAKAGE ANALYSIS - ONE MILE RADIUS FROM NORTH MARKET AND MAIN STREETS

sources: March 2010 P.U.M.A survey, ULI Dollars & Cents of Shopping Centers/The SCORE 2008, 2009 ESRI

Number of Households in Total Market: 4,177*

**2009 estimate*

	Annual Average HH Expenditures	Total Estimated Market Expenditures	Estimated Market Annual Sales	Leakage from/ Import To Market	Less 20% "Normal" Leakage	Nbhd. Center Average Sales/SF	Supportable SF in Market	Nbhd. Center Average Store Size (SF)	Supportable Stores in Market
Apparel and Accessories									
Women's Apparel	$534	$2,230,518	$906,300	($1,324,218)	($1,059,374)	$171	6,195	3,700	**2**
Men's Apparel	$319	$1,332,463	$0	($1,332,463)	($1,065,970)	$275	3,876	4,500	**1**
Children's Apparel	$291	$1,215,507	$0	($1,215,507)	($972,406)	$178	5,463	3,300	**2**
Footwear	$203	$847,931	$355,000	($492,931)	($394,345)	$142	2,777	2,900	**2**
Jewelry and Watches	$208	$868,816	$317,000	($551,816)	($441,453)	$317	1,393	1,500	**1**
Other Apparel Products and Services	$175	$730,975	$560,000	($170,975)	($136,780)	$140	977	1,500	**1**
Entertainment									
Pets	$485	$2,025,845	$101,000	($1,924,845)	($1,539,876)	$101	15,246	3,200	**5**
Toys, Hobbies and Crafts	$121	$505,417	$238,800	($266,617)	($213,294)	$199	1,072	1,800	**1**
Art Galleries/Framing	$142	$593,134	$663,600	$70,466	$56,373	$237	(238)	1,700	**(0)**
Recreational Vehicles	$317	$1,324,109	$338,000	($986,109)	($788,887)	$169	4,668	2,700	**2**
Books, Periodicals, Newspapers	$166	$693,382	$0	($693,382)	($554,706)	$246	2,255	2,800	**1**
Music/CDs/Videos/Electronics	$436	$1,821,172	$754,000	($1,067,172)	($853,738)	$290	2,944	2,400	**1**
Sporting Goods	$153	$639,081	$1,215,500	$576,419	$461,135	$221	(2,087)	3,900	**(1)**
Movie Theaters	$162	$676,674	$0	($676,674)	($541,339)	$112	4,833	32,500	**0**
Recreation	$117	$488,709	$235,000	($253,709)	($202,967)	$47	4,318	3,300	**1**
Food and Beverage									
Grocery Stores	$7,603	$31,757,731	$6,976,750	($24,780,981)	($19,824,785)	$473	41,913	44,000	**1**
Restaurants	$3,198	$13,358,046	$4,424,147	($8,933,899)	($7,147,119)	$223	32,050	3,200	**10**
General Merchandise									
General Merchandise	$840	$3,508,680	$1,040,300	($2,468,380)	($1,974,704)	$103	19,172	8,000	**2**
Health Care									
Prescription Drugs	$561	$2,343,297	$1,930,500	($412,797)	($330,238)	$429	770	12,500	**0**
Household Furnishings & Equipment									
Household Furnishings	$1,035	$4,323,195	$0	($4,323,195)	($3,458,556)	$156	22,170	4,200	**5**
Housewares and Small Appliances	$280	$1,169,560	$3,474,400	$2,304,840	$1,843,872	$202	(9,128)	6,400	**(1)**
Shelter									
Hardware	$388	$1,620,676	$1,152,000	($468,676)	($374,941)	$144	2,604	6,600	**0**
Personal Care									
Personal Products and Services	$381	$1,591,437	$1,810,000	$218,563	$174,850	$181	(966)	1,400	**(1)**
		$75,666,355	***26,492,297***	***($49,174,058)***	***($39,339,246)***		***162,278***		
	Annual average household expenditures by category times number of households	*= total expenditures in market (demand)*	*estimated sales within market area*	*Estimated sales minus demand = calculation of unmet demand/market gap of leakage*	*minus 20% "fudge factor"*	*divided by industry standard =*	*sf market can or cannot support*	*divided by industry standard =*	*supportable stores in market*

SUMMARY TABLE: WAILUKU MARKET LEAKAGE ANALYSIS - THREE MILE RADIUS FROM NORTH MARKET AND MAIN STREETS

sources: March 2010 P.U.M.A survey, ULI Dollars & Cents of Shopping Centers/The SCORE 2008, 2009 ESRI

Number of Households in Total Market: 14,255*

**2009 estimate*

	Annual Average HH Expenditures	Total Estimated Market Expenditures	Estimated Market Annual Sales	Leakage from/ Import To Market	Less 20% "Normal" Leakage	Nbhd. Center Average Sales/SF	Supportable SF in Market	Nbhd. Center Average Store Size (SF)	Supportable Stores in Market
Apparel and Accessories									
Women's Apparel	$571	$8,139,605	$12,780,851	$4,641,246	$3,712,997	$171	(21,713)	3,700	**(6)**
Men's Apparel	$347	$4,946,485	$7,425,000	$2,478,515	$1,982,812	$275	(7,210)	4,500	**(2)**
Children's Apparel	$315	$4,490,325	$4,474,208	($16,117)	($12,894)	$178	72	3,300	**0**
Footwear	$220	$3,136,100	$2,110,000	($1,026,100)	($820,880)	$142	5,781	2,900	**4**
Jewelry and Watches	$226	$3,221,630	$6,019,832	$2,798,202	$2,238,562	$317	(7,062)	1,500	**(5)**
Other Apparel Products and Services	$191	$2,722,705	$3,819,500	$1,096,795	$877,436	$140	(6,267)	1,500	**(4)**
Entertainment									
Pets	$528	$7,526,640	$3,509,535	($4,017,105)	($3,213,684)	$101	31,819	3,200	**10**
Toys, Hobbies and Crafts	$129	$1,838,895	$1,533,800	($305,095)	($244,076)	$199	1,227	1,800	**1**
Art Galleries/Framing	$158	$2,252,290	$2,574,531	$322,241	$257,793	$237	(1,088)	1,700	**(1)**
Recreational Vehicles	$363	$5,174,565	$338,000	($4,836,565)	($3,869,252)	$169	22,895	2,700	**8**
Books, Periodicals, Newspapers	$181	$2,580,155	$6,888,000	$4,307,845	$3,446,276	$246	(14,009)	2,800	**(5)**
Music/CDs/Videos/Electronics	$481	$6,856,655	$2,245,500	($4,611,155)	($3,688,924)	$290	12,720	2,400	**5**
Sporting Goods	$171	$2,437,605	$13,818,761	$11,381,156	$9,104,925	$221	(41,199)	3,900	**(11)**
Movie Theaters	$180	$2,565,900	$6,930,000	$4,364,100	$3,491,280	$112	(31,172)	32,500	**(1)**
Recreation	$130	$1,853,150	$693,032	($1,160,118)	($928,094)	$47	19,747	3,300	**6**
Food and Beverage									
Grocery Stores	$8,166	$116,406,330	$45,171,998	($71,234,332)	($56,987,466)	$473	120,481	44,000	**3**
Restaurants	$3,417	$48,709,335	$28,982,967	($19,726,368)	($15,781,094)	$223	70,767	3,200	**22**
General Merchandise									
General Merchandise	$840	$11,974,200	$76,446,100	$64,471,900	$51,577,520	$103	(500,753)	8,000	**(63)**
Health Care									
Prescription Drugs	$576	$8,210,880	$13,930,917	$5,720,037	$4,576,030	$429	(10,667)	12,500	**(1)**
Household Furnishings & Equipment									
Household Furnishings	$1,589	$22,651,195	$20,822,025	($1,829,170)	($1,463,336)	$156	9,380	4,200	**2**
Housewares and Small Appliances	$311	$4,433,305	$11,955,796	$7,522,491	$6,017,993	$202	(29,792)	6,400	**(5)**
Shelter									
Hardware	$443	$6,314,965	$36,748,080	$30,433,115	$24,346,492	$144	(169,073)	6,600	**(26)**
Personal Care									
Personal Products and Services	$417	$5,944,335	$6,533,780	$589,445	$471,556	$181	(2,605)	1,400	**(2)**
		$284,387,250	***315,752,213***	***$31,364,963***	***$25,091,970***		***(547,721)***		
	Annual average household expenditures by category times number of households	*= total expenditures in market (demand)*	*estimated sales within market area*	*Estimated sales minus demand = calculation of unmet demand/market gap of leakage*	*minus 20% "fudge factor"*	*divided by industry standard =*	*sf market can or cannot support*	*divided by industry standard =*	*supportable stores in market*

Market-Based Plan Task Force

Steering Committee

Jocelyn Perreria	WMSA/ Tri-Isle Main Street Resource Center
Robert Horcajo	Maui Redevelopment Agency
Alexa Betts Basinger	Maui Redevelopment Agency
Jonathan Starr	Starr Equities
Grant Howe	Commercial Properties
Morgan Gerdel	Nishikawa & Associations
Michael Victorino	County Council member, Wailuku
Ron Kawahara	Ronald Kawahara and Company CPA's
Erin Wade	Small Town Planner
Sandy Baz	MEO
Teri Edmonds	Wailuku Community Association
Bill Frampton	Frampton & Ward
Deidre Tegarden	Office of Economic Development
Kristin Holmes	Swan Interiors
Sherri Dodson	Habitat for Humanity
Jordan Hart	Chris Hart and Partners

Appendix F
Wailuku Town Parking Study and Parking Management Plan Analysis

Wailuku Town Parking Study

And

Parking Management Plan Analysis

May 31, 2011



Submitted to:
The County of Maui Department of Planning
and
The Maui Redevelopment Agency

Submitted by:

Andrew W. Miller, AICP
Downtown Parking & Planning Associates, LLC

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I. BACKGROUND / INTRODUCTION

In the fall of 2010, a Wailuku Redevelopment Area Market-Based Plan was completed by Progressive Urban Management Associates (PUMA). As part of this comprehensive market analysis project, PUMA conducted focus group interviews and an extensive community survey that resulted in 1,011 completed surveys from respondents that live and/or work in the Kahului/Wailuku area. The results of the community survey revealed that downtown parking is a major issue affecting the commercial viability of Wailuku Town. Specifically, respondents indicated that difficulty finding parking and traffic congestion are among the top three reasons why they avoid Wailuku Town.

In asking survey respondents what downtown improvements would encourage them to visit Wailuku Town more often, the top response was "more convenient parking". Of the ten major themes that emerged from the focus group interviews with downtown stakeholders, parking was at the top of the list with the following statement:

"Downtown Parking is problematic and a barrier to the economic health of downtown. Parking needs to be improved through increased supply and better management."

Based on the results of the community survey, direct field observations and numerous interviews with downtown stakeholders, the PUMA Market-Based Plan identified the existing parking situation to be a major detriment to the economic viability of Wailuku Town as follows:

"Parking in downtown Wailuku is a barrier to its commercial viability. Consumers view the lack of convenient parking as an impediment to visitation. Business owners cite a shortage of both employee and customer parking options. County and State employees regularly compete each morning to park in the limited number of long term spaces."

"The Market-Based Plan did not determine if the parking supply is inadequate…However, the planning process did reveal that the existing parking supply is poorly managed – there appears to be little rationality on how parking is allocated between short and long-term use."

One of the primary near-term recommendations to come out of the Market-Based Plan was for Wailuku Town to undertake a detailed parking analysis to begin the process of developing a Downtown Parking Management Plan. Primary mid-term recommendations include the possible creation of a Parking District within the Wailuku Redevelopment Area (WRA), and a recommendation to explore various options to institute paid parking downtown. Long term recommendations include the construction of a parking structure on the existing Municipal Lot and the adoption of Transportation Demand Management strategies for State and County employees.

II. PURPOSE OF PARKING ANALYSIS / METHODOLOGY

Following the near-term recommendations contained in the Market-Based Plan, the purpose of this parking analysis is to explore the existing Wailuku Town parking situation in detail, to confirm existing conditions and to provide recommendations in the following primary areas:

- Confirm existing parking supply, demand and utilization
- Examine current parking conditions and regulations and provide recommendations for improvements
- Review current planning and zoning codes as they relate to parking and provide analysis and recommendations
- Provide planning and functional design comments and suggestions for the design of the new Municipal Parking Structure
- Provide analysis on determining what range of fees would be acceptable for paid parking and the amount of revenue such fees could produce on an annual basis
- Provide preliminary recommendations on the establishment of a Parking Management Plan and District for Wailuku Town

In conducting our parking analysis for Wailuku Town, we performed the following specific tasks:

- Reviewed previous studies, reports and plans, including the recent PUMA Market-Based Plan, the 2009 Maui County Campus Study, Wailuku Redevelopment Area Zoning and Development Code, previous parking studies and surveys, and current State and County codes
- Completed a detailed inventory of parking in Wailuku Town, to include on-street and off-street parking assets, and both public and private parking facilities to determine existing parking supply
- Performed a detailed land use analysis of the core Redevelopment Area to document existing conditions, to identify major parking demand generators and to estimate current parking demand
- Documented actual parking occupancy patterns on multiple days in the Wailuku Municipal Lot and observed other key parking areas within the WRA
- Interviewed key staff, downtown stakeholders, private developers and property owners in an effort to draw out major parking issues, perceptions and concerns of the primary users of downtown parking facilities
- Utilized the most recent parking ratios published by the Urban Land Institute (ULI) in 2010, and performed shared parking demand modeling to estimate current parking demand

III. EXECUTIVE SUMMARY

Existing Parking Supply, Demand and Utilization

Of the total inventory of parking documented within the WRA study area, 21.6% is open to the general public. On-street public parking represents 8.7% of the total parking supply. Total parking supply within the study area breaks down as follows:

On-Street Public Parking:	239 (8.7%)
Off-Street Public Parking:	354 (12.9%)
Off-Street Permit/Private/Reserved:	2,150 (78.4%)
TOTAL	2,743 (100%)

The existing 210-space Municipal Lot and the 42-space County visitor lot at High Street are the only County controlled off-street parking facilities available for general public parking. Most other off-street parking facilities are either private, permit or reserved. State metered lots are open to the public, but intended for State business only and are closely monitored by security staff. One Main Plaza offers daily and short term public parking in its attached parking structure, but the garage operator indicates there is very little transient parking activity in the garage. This is likely due to the high cost of short term parking in the One Main Plaza garage ($2.00 per hour/$20 daily max).

The results of our land use analysis and shared parking demand modeling of existing conditions reveals that there is a current parking shortage of approximately (-200) spaces in the Central Market sub-area and a shortage of approximately (-262) spaces in the Government Center sub-area. The West Main, East Main and South Main sub-areas all show minor parking deficits in theory, but we believe these numbers are statistically less significant at this time unless major new development occurs.

Our parking supply and demand analysis for the County of Maui and the State of Hawaii offices as stand-alone entities shows the following results:

County of Maui Campus / ULI Ratio:	Deficit of (-134) parking spaces
County of Maui Campus / Employee Parking:	Deficit range of (-105 to -141)
County of Maui Wailuku Total Employee Parking:	Deficit range of (-252 to -304)
State Office Building & Judiciary / ULI Ratio:	Deficit of (-121) parking spaces
State Office Employee Parking:	Deficit range of (-5 to -34)

Parking occupancy and utilization at the Municipal Lot, the County Visitor Lot and on Market Street consistently exceeded 90% occupancy levels on typical non-furlough weekdays. The 12 hour spaces in the Municipal Lot were consistently parked at 100% occupancy on non-furlough weekdays from 7:30am to roughly 4:00pm on a daily basis.

County and State furlough days have a significant impact on parking availability in the Municipal Lot. Combined State/County furlough days reduced parking occupancies from 100%

to an average of 75.5% in the 12 hour spaces. Average occupancy was 85% in the 12 hour spaces on the State Judiciary-only furlough day.

Existing Land Uses

Our land use analysis revealed that by far, the dominate land use within the MRA is daytime office uses - specifically governmental/banking/medical/professional offices. Daytime office uses account for 79% of the total land uses in the MRA. This very high concentration of weekday daytime uses creates a high demand for employee parking during normal weekday peak periods and reduces the benefits of shared parking demand reductions. This situation is most acute in the "Government Center" sub-area, where 97% of the land use is government office, and in the "West Main" sub-area, where 92% of the land use is professional office/medical clinic.

It is important to note that the specific types of governmental office and medical office/clinic uses so predominate in the MRA are very parking intense land uses within their respective categories. For example, doctor and medical offices tend to generate high demand for both employee and visitor/patient parking. The fact that governmental offices at both the State and County levels are "bursting at the seams" and packing more people and services in less space results in greater parking demand than typical office space. Governmental agencies providing direct services to the public and courthouse facilities also tend to generate greater parking demand than typical office uses due to the higher level of customer/visitor/juror parking demand.

The land use analysis further revealed that retail represents 18% of the land uses in the MRA study area, with restaurants at only 3% of the total land use respectively. Other than the hostel on Vineyard Street and a small bed and breakfast inn outside the MRA, there are no hotels within the Redevelopment Area.

Physical Conditions

On-street parking is the most valuable parking in any downtown urban center, but it represents only 8.7% of total parking supply in Wailuku Town. This is because streets and roads in historic Wailuku Town are very narrow by today's standards and can only accommodate parking on one side of the street in most instances. Market Street appears to be the only street in the MRA wide enough to allow for angled parking.

Land values are very high and lot sizes tend to be very small in Wailuku Town, making it difficult and expensive for property owners and developers to assemble sufficient land to provide on-site parking required by current WRA planning and zoning codes.

The Municipal Lot is in fairly poor physical condition and is not well maintained in terms of routine maintenance and housekeeping. Asphalt paving is in a serious state of deterioration to the point of causing trip hazards for pedestrians. Overgrown weeds and untrimmed hedges dominate landscaped areas, existing signage is faded and in poor condition and trash and debris does not appear to be removed on a routine basis.

Existing Policies and Regulations

Except for the one hour parking area on North High Street between Vineyard and Main Streets, the majority of on-street parking in the WRA is free, 2 hour time limited parking. The only exception to this is Vineyard Street east of Market, which allows parking but has no posted time limit. Free two hour short term parking spaces are also provided in the Municipal Lot (70 spaces) and in the County visitor lot (42 spaces). Short term visitor parking in the State of Hawaii metered lots is limited to two hours at a rate of fifty cents (.50) per hour.

Other than the 210 parking spaces provided in dedicated County employee lots, Maui County does not provide parking for any of its remaining 400 employees in Wailuku Town. In their orientation packets, new County employees are instructed to get on a multi-year waiting list for a County reserved space, to pay for parking in the One Main Plaza garage, to park on-street in adjacent residential or two hour areas, or to park in the Municipal Lot. Employees are prohibited from parking in the 42 space County Visitor lot. Employees are warned to "take note of parking time limits - a very dedicated police officer patrols the area and does not hesitate to give parking citations" (*Source: new employee orientation memo dated November, 2006*).

Similar to Maui County, the State of Hawaii maintains a multi-year waiting list for the 258 designated employee parking spaces in its underground garages. Employees are charged $30 per month for reserved parking in the garages. The State provides some additional employee parking in a surface lot north of High Street, but the balance of State employees are responsible for finding their own parking off-site. The State provides 78 metered parking spaces for customer and visitor parking. Jurors are provided with placards allowing them to park all day in 2 hour areas without penalty, but they are instructed not to park in metered spaces.

Existing WRA Zoning & Development Code

The Maui Redevelopment Agency adopted the Wailuku Redevelopment Area Zoning and Development (WRAZ&D) Code in September, 2002. The purpose of the WRAZ&D was to "reduce regulatory barriers to business creation and investment" and to encourage a greater mix of land uses - specifically restaurants, cafes, retail and entertainment uses. The WRAZ&D code reduces the amount of parking required to be created for new development, major renovations or changes in use from what is otherwise required under Maui's general planning and zoning codes. However, the WRAZ&D still requires all new development and major redevelopment projects to create parking on-site based upon prescribed parking ratios.

In reality the existing WRAZ&D code is a barrier to development, particularly to the types of development the WRA is attempting to encourage. With its requirements for prescribed parking ratios for all land uses, the current code is encouraging inefficient suburban-style development in the heart of Wailuku Town, it is preventing restaurants, cafes, entertainment and hotel venues from building or locating in the WRA, and it is limiting the County's tax base by not allowing for greater density of development.

Proposed WRA Parking Fee in Lieu Ordinance

A draft ordinance has been written but has not yet been adopted that will allow developers and property owners within the WRA to pay a cash fee "in lieu" of providing required parking. As currently drafted, eligible projects must be located within 650 feet of the proposed municipal parking structure and the yet-to-be-determined fee is to be based upon "59% of the construction cost of a multilevel parking facility". The parking fee in lieu is to be paid prior to the issuance of any license, building permit or certificate of occupancy. It is our understanding that at least one developer of a recent private development project within the WRA was required to execute and record an agreement that committed the developer to pay a yet-to-be-determined cash fee per parking space once the municipal garage is completed.

Parking Fines and Enforcement

Parking enforcement is performed by a dedicated, full time County of Maui police officer whose primary focus is downtown Wailuku Town. Parking fines under County of Maui Code are $35 for on-street overtime parking and $60 for overtime/prohibited parking in County lots. Overtime meter violations are a $40 fine under State code. State of Hawaii parking meters are enforced by in-house security personnel. All parking fine revenues, whether County violation or State violation, go to the State of Hawaii Judiciary, with no direct reimbursements to the County of Maui.

Our field observations indicate that parking enforcement in Wailuku Town is dedicated and consistent, and that two hour parking spaces are routinely monitored for compliance. As a result of this level of enforcement, we observed good parking turnover in 2 hour short term parking spaces, particularly along Market Street, in the Municipal Lot and in the County visitor lot.

Because all fine revenues go directly to the State and not the County, there is no incentive for the County to track parking fines, tickets and revenue activity or data. Therefore, we were unable to perform a detailed analysis of the number, types, disposition or total revenues of parking violation activity in Wailuku Town. It should be noted that tickets are still being written manually and not by a computerized hand-held ticketing system, which also makes parking violation reporting, analysis and benchmarking very difficult. (*Detailed parking enforcement & violations analysis is typically an important element of any comprehensive downtown parking study we perform*).

Downtown Stakeholders

Throughout the course of our interviews, a number of consistent and rather powerful themes emerged and were reinforced by most all interviewees:

- There is a palpable level of frustration from everyone interviewed that "nothing has been done" in over twenty years to develop the Municipal Lot, despite promises made from the County
- There was universal sentiment that the site of the Municipal Lot is significant given its history and prime location, and that any proposed development should be "more than just a parking garage"
- There is a great deal of confusion and lack of understanding on the size, design and configuration of the new parking structure (people are still latching onto the old "PC-1" design concept)
- The proposed parking fee in lieu ordinance is not supported by private property owners, but there is support for a possible parking special assessment and even greater support for TIF funding to help pay for parking capital improvements/debt service/operations
- Everyone interviewed confirmed the critical need to create more parking supply, but there was also universal concern that the proposed parking structure not be too large and out of scale compared to the surrounding architecture
- There is a general acceptance and support for the need to charge for parking, so long as the proposed rates are reasonable – and that any parking revenues must be retained to pay for ongoing operations or for future parking improvements
- There was consensus among all interviewees that the new parking structure must include sufficient short-term customer parking in the grade/lower levels and that monthly employee parkers should be required to park in the upper levels of the garage
- Despite the frustration and skepticism expressed by most interviewees, most people also felt optimistic that the actual construction of a parking structure is closer to becoming a reality now than in the past twenty years of repeated attempts

Conclusions and Recommendations

Parking Supply and Demand

There seems to be a general perception that the problem with employee parking in the Municipal Lot is more from State employees than from County of Maui employees. The actual data suggests otherwise. Based on the information provided, the State of Hawaii has more building square footage, but less employees on campus than the County (63 fewer employees) - yet it supplies more employee and visitor parking on-site than the County currently provides.

State Employee Parking =	258	State Visitor Parking =	78
County Employee Parking =	210	County Visitor Parking =	42

The amount of parking available to the general public in Wailuku Town is extremely limited for a downtown business district of its size (21.6% of total parking supply). The 12 hour time limit in the Municipal Lot compounds this problem by effectively taking 140 prime off-street parking spaces out of the public inventory because these spaces are completely consumed on a daily basis by County, State and business employees. In effect, the 12 hour time limit reduces the amount of parking available to the general public to only16.5% of total parking supply. In over twenty years of parking management and consulting practice, we have never encountered a 12 hour posted time limit in any public parking facility – particularly in such a prime location as the Municipal Lot.

We recommend that the 12 hour time limit be eliminated and that paid parking for a combination of monthly permits and transient short term parking be implemented immediately. Low-tech Parking Access & Revenue Control (PARC) technology could be installed quickly and cost effectively to convert the Municipal Lot to a paid facility. The conversion to paid parking should proceed immediately, regardless of the timing of the parking structure project.

Our parking supply, demand and utilization analysis confirms there is a very real parking shortage in Wailuku Town that is preventing more robust redevelopment activity from occurring within the WRA. The combined parking deficit for the Government Center and Central Market sub-areas is (-462) parking spaces. The proposed new parking structure on the Municipal Lot is projected to net 239 total parking spaces based upon the most recent design concept. While this added parking supply in a prime location will help significantly, it is not enough to resolve the overall shortage of parking in Wailuku Town.

We recommend the County move forward as quickly as possible to fund actual construction of the new parking structure. The need for additional parking capacity has been substantiated and quantified. In addition to the new garage, surface parking sites identified to provide temporary parking during construction should be considered for more permanent or semi-permanent paid parking lots as part of the new "Parking District". These smaller parking lots would be strategically located throughout the downtown area and could provide convenient

public parking while also generating revenue for the new parking system. However, the long term plan/goal for all such lots should be as future development sites.

Existing Land Uses / WRAZ&D Code

Our land use analysis shows a rather weak retail sector in downtown Wailuku, with retail comprising only 18% of active land uses. Restaurants represent only 3% of active land uses, and there are no taverns or hotels located within the WRA. This is surprising considering the fact that the WRA Zoning and Development Code was enacted in 2002 with the specific purpose and intent to encourage a better mix of these types of land uses.

We recommend that the WRAZ&D Code be amended to exempt desired land uses from having to conform to any required parking ratios – specifically: full service restaurants; taverns/pubs/cafes; retail; boutique hotels. As demonstrated in our shared parking modeling, these land uses peak at opposite times of the day and can often "share" the same parking facilities as daytime office uses. Non-office land uses have ample parking capacity available in the evenings based upon existing parking inventories, and have minimal impact to daytime parking demand due to the combined effects of shared parking demand, market synergies and captive market reductions. However, due to the preponderance of office uses currently existing in the WRA and the heavy daytime demand generated by office uses, we recommend against the granting of any waivers or parking exemptions for future office developments.

Physical Conditions

As mentioned above, the Municipal Lot is in rather poor physical condition for a public facility, especially compared to the other County of Maui employee and visitor lots that appear to receive greater levels of housekeeping, maintenance and routine repairs. The paving conditions in the Municipal Lot are particularly poor and degraded. The rough physical condition of the paved surfaces creates trip hazards for pedestrians and the rough surfaces tend to trap dust, trash and debris. Line striping, landscaping and signage are all in poor condition as well.

If a parking structure is not constructed on the Municipal Lot within the very near future the parking lot will need major maintenance improvements, physical upgrades and a complete repaving. Even if the parking structure project does move forward within the next 12 to 18 months, the Municipal Lot still needs to receive better ongoing maintenance and housekeeping attention than currently exists. Areas demonstrating the most severe paving deterioration should be patched immediately. Instituting paid parking in the lot in the near term would provide more than sufficient revenues to cover the costs of ongoing repairs and maintenance.

Proposed WRA Parking Fee in Lieu Ordinance

In both theory and practice, the proposed parking fee in lieu ordinance amounts to an impact fee on new development. Instead of encouraging redevelopment activity, the fee in lieu ordinance will deter development, particularly for the types of land uses most desired in the WRAZ&D code. The proposed fee is confusing, subjective and arbitrary, and it could be difficult to defend if challenged.

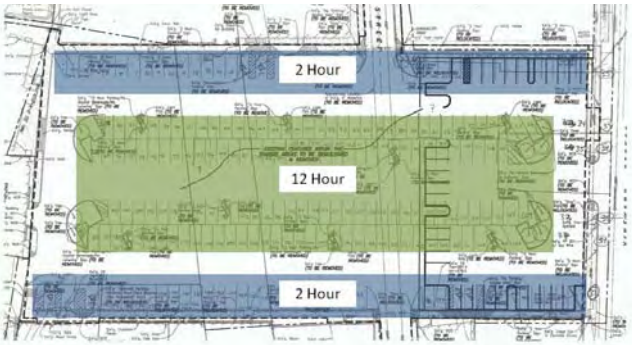
We strongly advise the County and the MRA not to enact this ordinance.

Existing Policies and Regulations – Municipal Lot

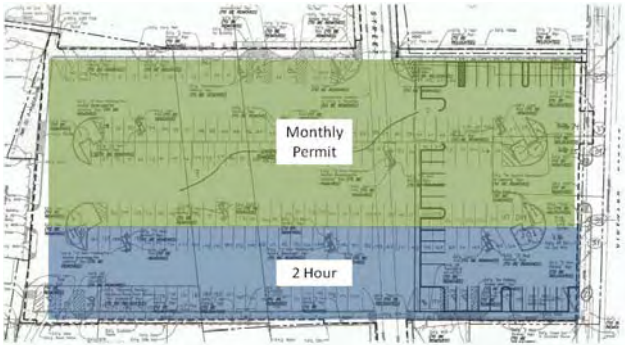
We already recommended that the 12 hour time limit in the Municipal Lot be eliminated and that paid parking be implemented as soon as possible for both monthly "permit" parking and short-term customer parking.

We further believe the lot can better serve Market Street businesses if all of the two hour parking spaces are consolidated on the east side of the lot, instead of the current configuration that has the two hour spaces divided evenly on the extreme east and west sides of the lot. This will also make parking enforcement easier. Another option would be to convert the entire lot to paid parking with an hourly short term rate and a flat rate daily maximum charge.

Existing



Proposed



Existing Policies and Regulations – County of Maui Employee Parking

The existing employee parking policy for the County of Maui is to basically tell employees not lucky enough to get a parking space in a County lot to fend for themselves. The "official" policy tells employees to park on-street or in the Municipal Lot, but to obey all parking regulations. The result of this policy is hurting downtown businesses because employees are parking in prime parking spaces that should be available to private sector employees, customers and visitors. County employees are either parking all day in the 12 hour Municipal Lot, in residential streets, or are performing the "two hour shuffle" by parking in designated 2 hour spaces.

The County of Maui needs to take a much more proactive approach to employee parking by increasing parking supply and by managing employee parking better through the adoption of an Employee Parking Management Plan. One short-term recommendation would be to move all fleet vehicles and storage vehicles off site to the County Baseyard or other satellite location, which would free up 71 parking spaces for additional employee parking. Another element of an Employee Parking Management Plan is the adoption of Transportation Demand Management (TDM) programs and strategies that help to reduce the number of single

occupancy vehicles. (A more thorough description of TDM and examples of successful TDM programs and options for the County to consider are included in Appendix 'x').

Existing Parking Fines

We realize the County cannot control the fine rates established under State codes, but the current County fines are extremely punitive, especially for first time offenders. The existing $35 fine for overtime parking on-street and in the Municipal Lot is high compared to national averages, which typically range from $10 to $15 for the first offense. The $60 fine for overtime/prohibited parking in all other County lots is extremely punitive. We question why the fine rates have been established so high considering the fact that the County does not receive any of the fine revenues from the parking tickets it generates?

We recommend that the County consider revising its parking fine codes to reduce the fine amounts to more reasonable levels. We simply do not understand the rationale used for the $60 fine rate charged for County lot violations.

Parking Enforcement

During our interview, Officer Taguma indicated that he is nearing retirement age. Most cities in the country have moved away from using sworn police officers to issue parking tickets and are employing non-sworn civilian parking enforcement personnel instead. This frees up police officers to perform more important public safety duties, and it saves considerably in personnel costs. It is our understanding that State codes do not require fully sworn police officers to perform parking enforcement duties, and that non-sworn "meter maids" are used for parking enforcement in Honolulu.

We recommend that the County begin the planning process now to replace Officer Taguma (upon retirement) with non-sworn enforcement personnel to reduce costs and to adopt a more customer friendly approach to parking enforcement. Civilian enforcement officers could be trained to double as downtown "ambassadors", providing downtown visitors with information, directions, maps, etc. Non-sworn civilian enforcement personnel could also augment public safety by providing passive security for the downtown area during normal business hours.

The situation in Hawaii is unique to any that we have encountered on the mainland in that all parking fine revenues go to the State of Hawaii and not the local jurisdiction issuing the parking tickets. This State policy deprives cities and towns of much needed parking revenues that most municipal operations on the mainland rely on to support their overall parking operations, and to help keep parking fees and rates low. Municipal parking operations typically rely on fine and enforcement income to generate anywhere from 30% to 50% or more of their total parking revenues. This is an important issue that negatively impacts the WRA's ability to economically sustain a parking management operation.

We do not propose to open a Pandora's Box by attempting to change State parking enforcement codes at this time. However, we do recommend that the County of Maui solicit a legal opinion to determine if the County can create a lower tier level of parking infractions, enforce those infractions on County owned lots and streets, and keep the revenues. Instead of

generating "Traffic Infraction" tickets, enforcement personnel would issue lesser cost "Parking Overtime" notices. Under this concept, full-blown traffic infractions would only be triggered if an overtime parking notice remains unpaid over a period of time, or if a person accumulates three or more unpaid overtime notices.

Revenue Potential for Existing Parking Facilities

Paid parking already exists in downtown Wailuku Town. For example, private off-street lots and garages charge $30 to $80 per month, depending upon location. Meters in the State visitor lots charge fifty cents (.50) per hour and are heavily utilized on a daily basis. Based upon these existing market rates, we have developed very preliminary potential revenue scenarios for on-street meters, for the Municipal Lot and for the County visitor lot at S. High Street.

While we do recommend that the County initiate paid parking in off-street lots as soon as possible, we believe on-street paid parking should be more carefully considered at this time. Converting to paid parking in the lots is much easier to execute logistically, operationally and in terms of capital costs for the installation of the PARC equipment. Converting to paid parking on-street will require much more thought and effort in terms of logistical factors, type of technology, physical planning, installation/capital costs, public relations and enforcement.

Assumptions:

Gross Income Before Expenses
Paid Parking Enforced From 8:00am to 5:00pm Daily
Meter Rates of Fifty (.50) Cents per Hour = Meter Revenue of $4.00 per Day/per Space
Average of Twenty (20) Days of Paid Parking per Month
Monthly Permit Rate of $35 per Space

	Monthly Income	***Annual Income***
County Visitor Lot "Meters" (42) =	***$3,360***	***$40,320***
Municipal Lot "Meters" (70) =	***$5,600***	***$67,200***
Municipal Lot Permits (140) =	***$4,900***	***$58,800***
Off-Street Total Revenues	***$13,860***	***$166,320***
On-Street Meters (239) =	***$19,120***	***$229,440***
Total Revenue with On-Street Meters =	***$32,980***	***$395,760***

NOTES:

Although we use the term "Meters", we anticipate using some form of newer multi-space PARC technology and not older technology single-headed parking meters.

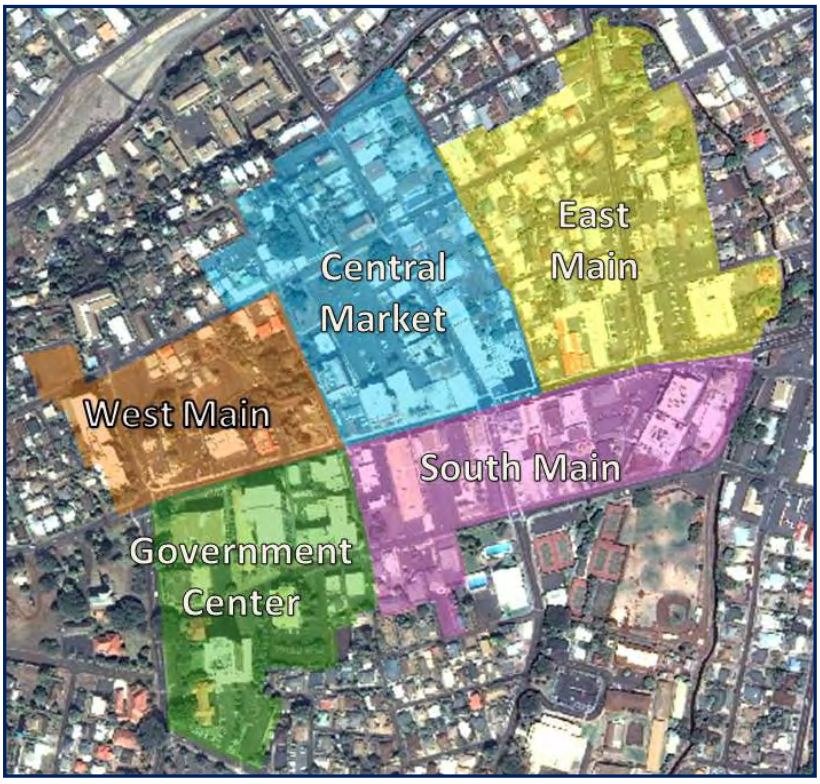
The Municipal Lot would generate greater revenues if more spaces are converted to short-term parking instead of monthly permit parking.

IV. PRIMARY FINDINGS

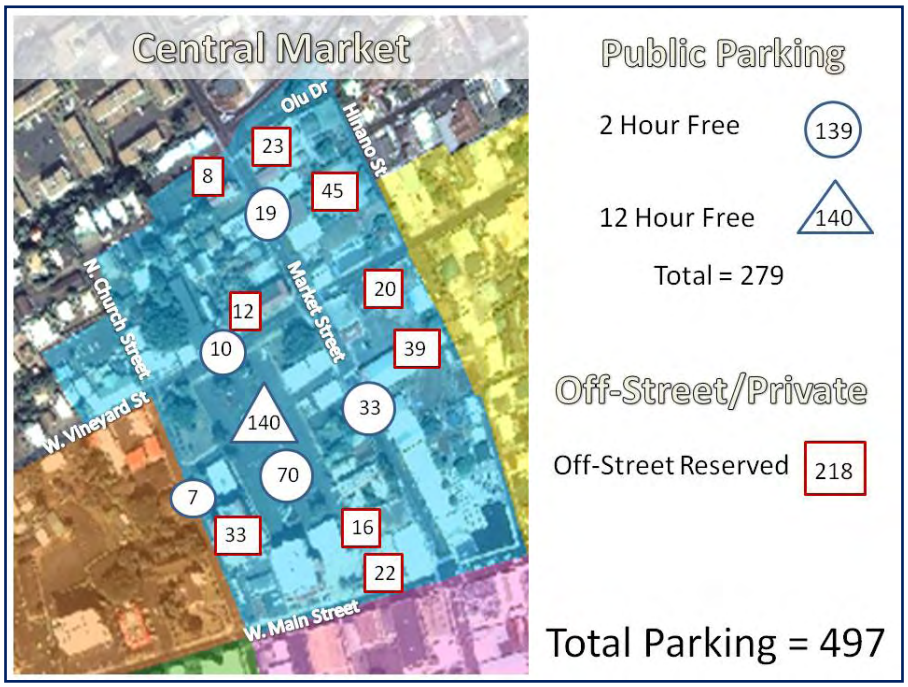
Existing Parking Supply

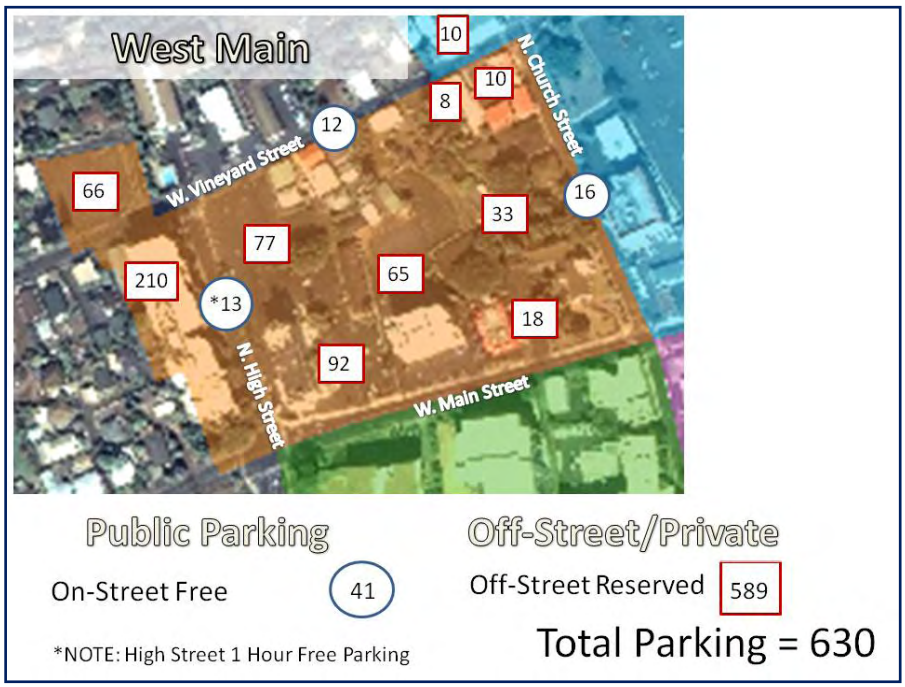
Our parking analysis focused on the core area of the Wailuku Redevelopment Area. We divided the study area into five (5) sub-areas based upon general geographic and land use patterns. We then inventoried all parking assets for on-street and off-street parking, and for both public and private parking facilities. Our inventory included a breakdown of parking supply by sub-area to include parking by type and current regulations. We attempted to collect data on all public and commercial parking assets located within the WRA, however our parking inventory does not necessarily include very small lots of less than 6 vehicles, strictly private parking areas, or individual residential parking areas or lots. A map of the study and the results of our analysis in tabular and graphic form are included below.

Map of Study Area Showing Sub-Areas



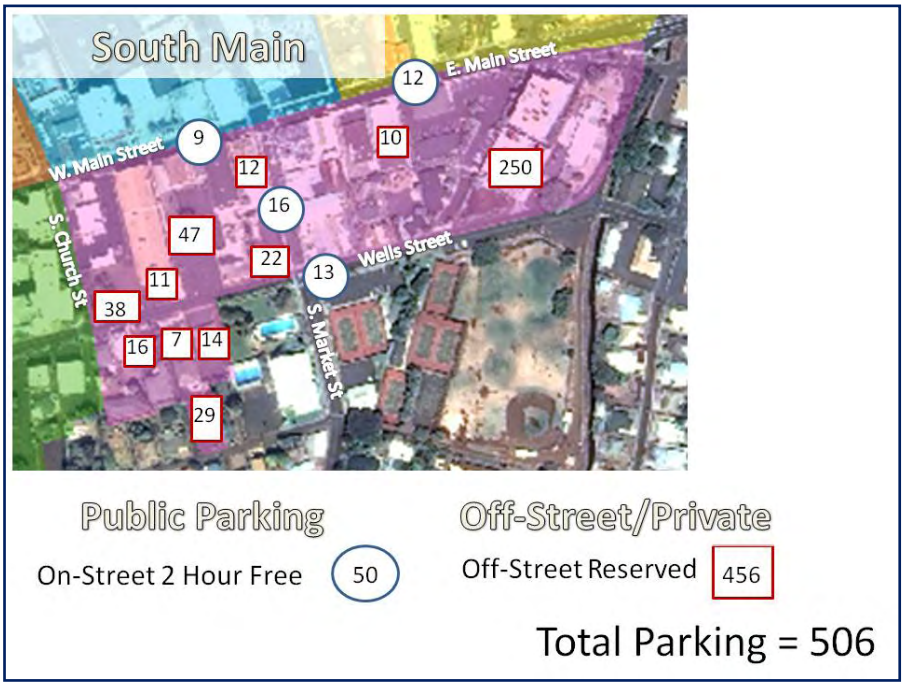
Existing Parking Supply By Sub-Area





Existing Parking Supply By Sub-Area





Existing Parking Supply By Sub-Area

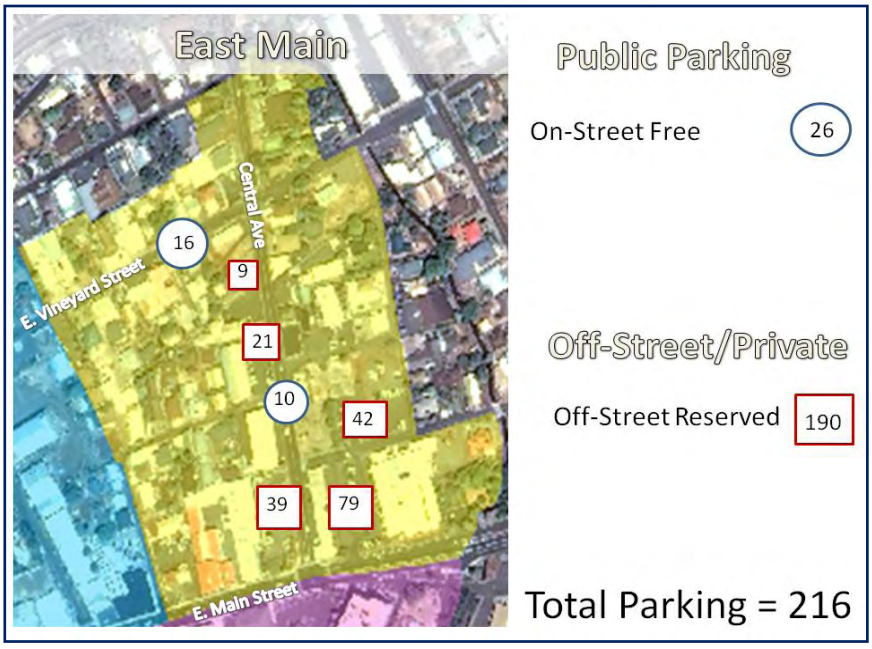


Table 1 – Total Parking Supply by Sub-Area

Sub-Area	Existing Parking Supply
Central Market	497
West Main	630
Government Center	894
South Main	506
East Main	216
Totals	**2,743**

Table 2 – Total Parking Supply Breakdown by Type

Parking Type	Existing Parking Supply	Percent of Total Supply
1HR Free On-Street	13	0.5%
2HR Free On-Street	226	8.2%
12HR Free Municipal Lot	140	5.1%
2HR Free Municipal Lot	70	2.5%
2HR Free County Visitor	42	1.5%
County Storage	71	2.6%
County Employee	210	7.7%
State 2HR Meters	78	2.8%

State Employee	234	8.6%
Private/Reserved	1,659	60.5%
Totals	**2,743**	**100%**

Existing Parking Utilization

We collected field data and performed detailed car counts at the Municipal Lot for a total of six (6) sample days over the course of three separate weeks. Sample data collection days included Wednesday/Friday; Tuesday/Friday; and Monday/Friday for each of the weeks sampled. We also performed periodic spot counts and visual observations of other public parking areas and facilities serving downtown Wailuku Town. Our analysis of parking utilization indicates that the 12 hour spaces in the Municipal Lot consistently operate at 100% capacity, and that the 2 hour spaces in the Municipal Lot operate at 90% or greater capacity on all non-furlough weekdays sampled. The data also shows that parking occupancy and utilization at the Municipal Lot drops considerable during governmental furlough days.

Our visual observations and spot checks at other primary parking locations in the WRA indicates that the following parking areas were consistently observed to be operating at 90% or greater capacity during peak periods of non-furlough days: County of Maui visitor and employee lots; State metered and employee facilities; Maui Medical Lots; S. Market Street; W. Vineyard Street, N. Church Street; N. High Street. All on-street parking within the study area was observed to be heavily utilized.

Parking facilities are considered to be operating at maximum efficiency at 80% to 85% of total capacity. This allows for overlap capacity for customers leaving a parking space and those trying to find a parking spot. When parking facilities consistently operate at 90% or greater capacity, they are considered to be effectively full. This is because customers get frustrated trying to circle the same facility competing for the last remaining spaces. Other conditions can compound this situation by removing parking spaces from the effective supply, such as vehicle loading/unloading, double parked vehicles, illegal parking, temporary construction, etc. Our parking utilization findings are summarized below in graphic and tabular form.

Municipal Lot 12 Hour Spaces

- Peak Parking Period for 12 Hour Spaces is 7:30am – 2:30pm
- During Typical Non-Furlough Weekdays, 12 Hour Spaces Were 100% Occupied From 7:30am to 3:30pm
- Average 12 Hour Peak Parking Occupancy During Combined State/County Furlough Days Was 75.5%
- Average 12 Hour Peak Parking Occupancy During State Judiciary Only Furlough Day Was 85%

Municipal Lot 12 Hour Spaces

- Data Indicates That Employee Parking Impacts 2 Hour Parking More On West Side (Mauka) of Lot Than East Side (Makai)
- Occupancy Patterns "Shift" During Regular vs. Furlough Days
    - West Side Busier During Regular Days
    - East Side Busier During Furlough Days

- Average Peak Occupancies Regular Weekdays:
  - 2HR Mauka = 89%
  - 2 HR Makai = 80%

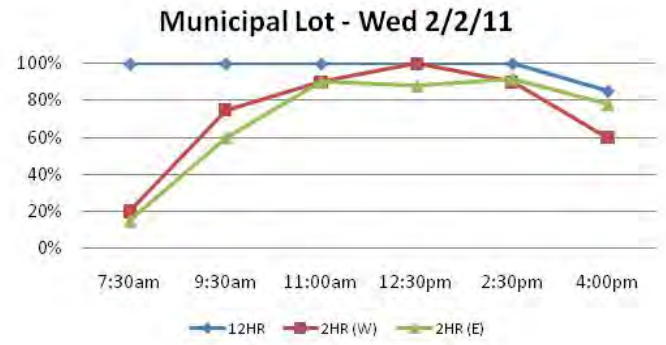
Municipal Lot Occupancy Counts

Municipal Lot Observed Occupancies Week #1

Municipal Lot - Wed 2/2/11	7:30am	9:30am	11:00am	12:30pm	2:30pm	4:00pm	AVG.
12HR	100%	100%	100%	100%	100%	85%	100%
2HR (W)	20%	75%	90%	100%	90%	60%	89%
2HR (E)	15%	60%	90%	88%	92%	78%	83%

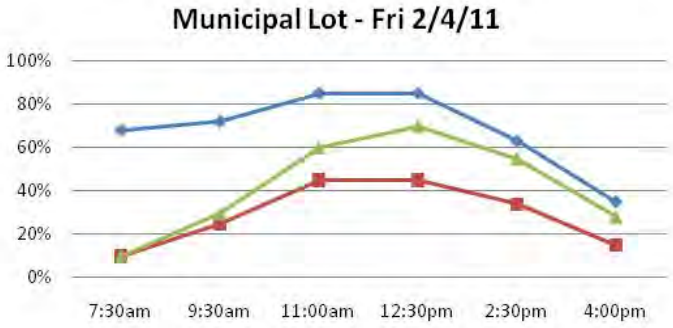
*Municipal Lot - Fri 2/4/11	7:30am	9:30am	11:00am	12:30pm	2:30pm	4:00pm	AVG.
12HR	68%	72%	85%	85%	63%	35%	75%
2HR (W)	10%	25%	45%	45%	34%	15%	37%
2HR (E)	10%	30%	60%	70%	55%	28%	54%

** Combined State/County Furlough Day;*



Average Peak Period Occupancies:

12HR = 100%
2HR (W) = 89%
2HR (E) = 83%



**Combined State & County Furlough Day*

Average Peak Period Occupancies:

12HR = 75%
2HR (W) = 37%
2HR (E) = 54%

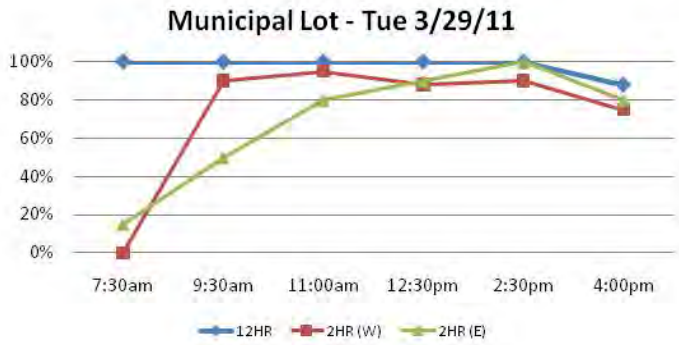
Municipal Lot Occupancy Counts

Municipal Lot Observed Occupancies Week #2

Municipal Lot - Tue 3/29/11	7:30am	9:30am	11:00am	12:30pm	2:30pm	4:00pm	AVG.
12HR	100%	100%	100%	100%	100%	88%	100%
2HR (W)	0%	90%	95%	88%	90%	75%	91%
2HR (E)	15%	50%	80%	90%	100%	80%	80%

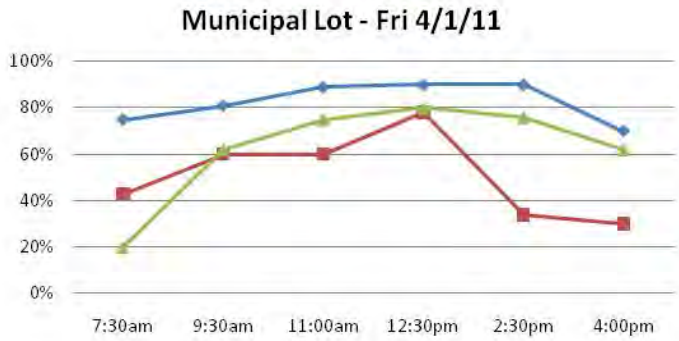
**Municipal Lot - Fri 4/1/11	7:30am	9:30am	11:00am	12:30pm	2:30pm	4:00pm	AVG.
12HR	75%	81%	89%	90%	90%	70%	85%
2HR (W)	43%	60%	60%	78%	34%	30%	58%
2HR (E)	20%	62%	75%	80%	76%	62%	73%

***State Judiciary Only Furlough Day*



Average Peak Period Occupancies:

12HR = 100%
2HR (W) = 91%
2HR (E) = 80%



Average Peak Period Occupancies:

12HR = 85%
2HR (W) = 58%
2HR (E) = 73%

**State Judiciary Only Furlough Day*

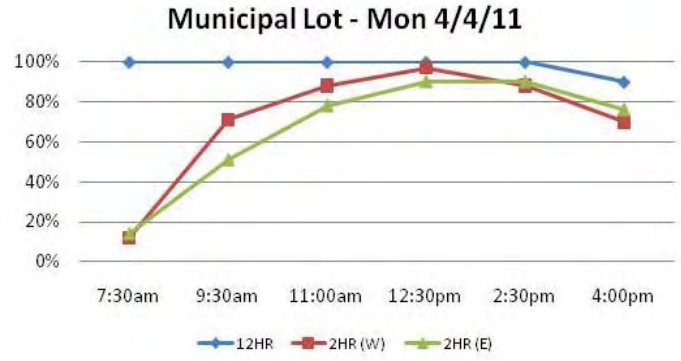
Municipal Lot Occupancy Counts

Municipal Lot Observed Occupancies Week #3

Municipal Lot - Mon 4/4/11	7:30am	9:30am	11:00am	12:30pm	2:30pm	4:00pm	AVG.
12HR	100%	100%	100%	100%	100%	90%	100%
2HR (W)	12%	71%	88%	97%	88%	70%	86%
2HR (E)	14%	51%	78%	90%	90%	76%	77%

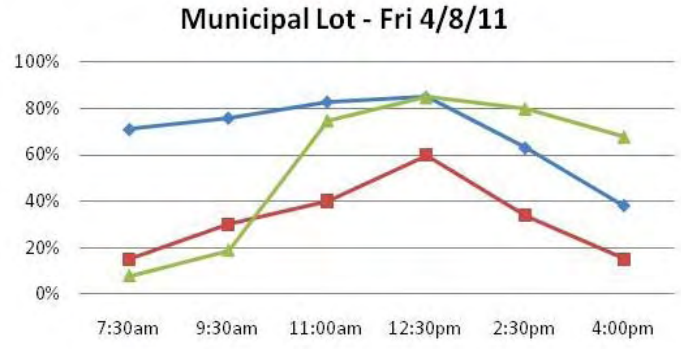
*Municipal Lot - Fri 4/8/11	7:30am	9:30am	11:00am	12:30pm	2:30pm	4:00pm	AVG.
12HR	71%	76%	83%	85%	63%	38%	76%
2HR (W)	15%	30%	40%	60%	34%	15%	41%
2HR (E)	8%	19%	75%	85%	80%	68%	65%

** Combined State/County Furlough Day;*



Average Peak Period Occupancies:

12HR = 100%
2HR (W) = 86%
2HR (E) = 77%



Average Peak Period Occupancies:

12HR = 76%
2HR (W) = 41%
2HR (E) = 65%

**Combined State & County Furlough Day*

Existing Land Use Analysis

Our parking demand estimates are based on a detailed land use analysis that was conducted using current information from the County of Maui Assessors website. Land use information was assembled on a parcel-by-parcel basis to include information on land use classification, lot size, building square footage and assessed values. This information was then compiled by sub-area and by entire study area for analysis and comparison purposes. A summary of key findings of our land use analysis and supporting charts and graphs are included below.

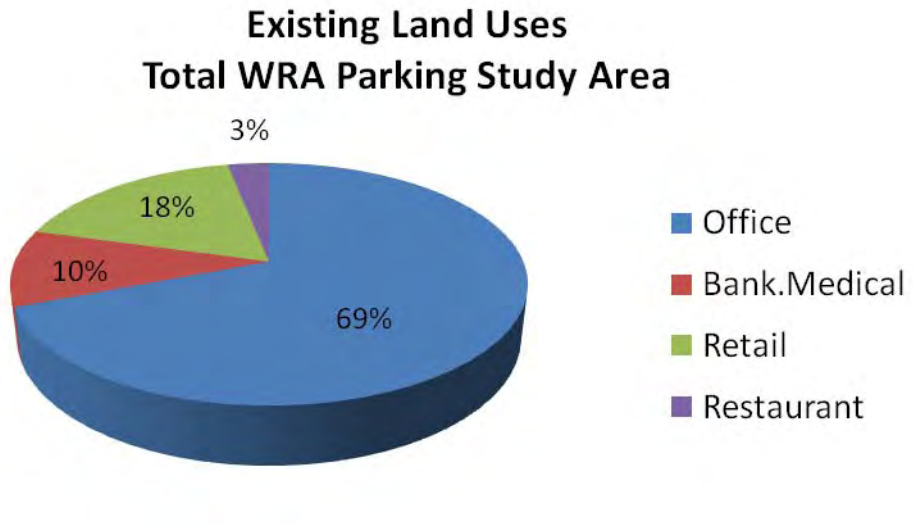
- Government / Banking / Medical Offices Predominate Land Uses in WRA:
  - West Main = 92%
  - Government Center = 97%
  - South Main = 71%
  - Total Study Area = 79%

- Central Market & East Main Sub-Areas Demonstrate Greatest Mix of Land Uses:
  - Central Market = 40% Office / 44% Retail
  - East Main = 44% Office / 38% Retail

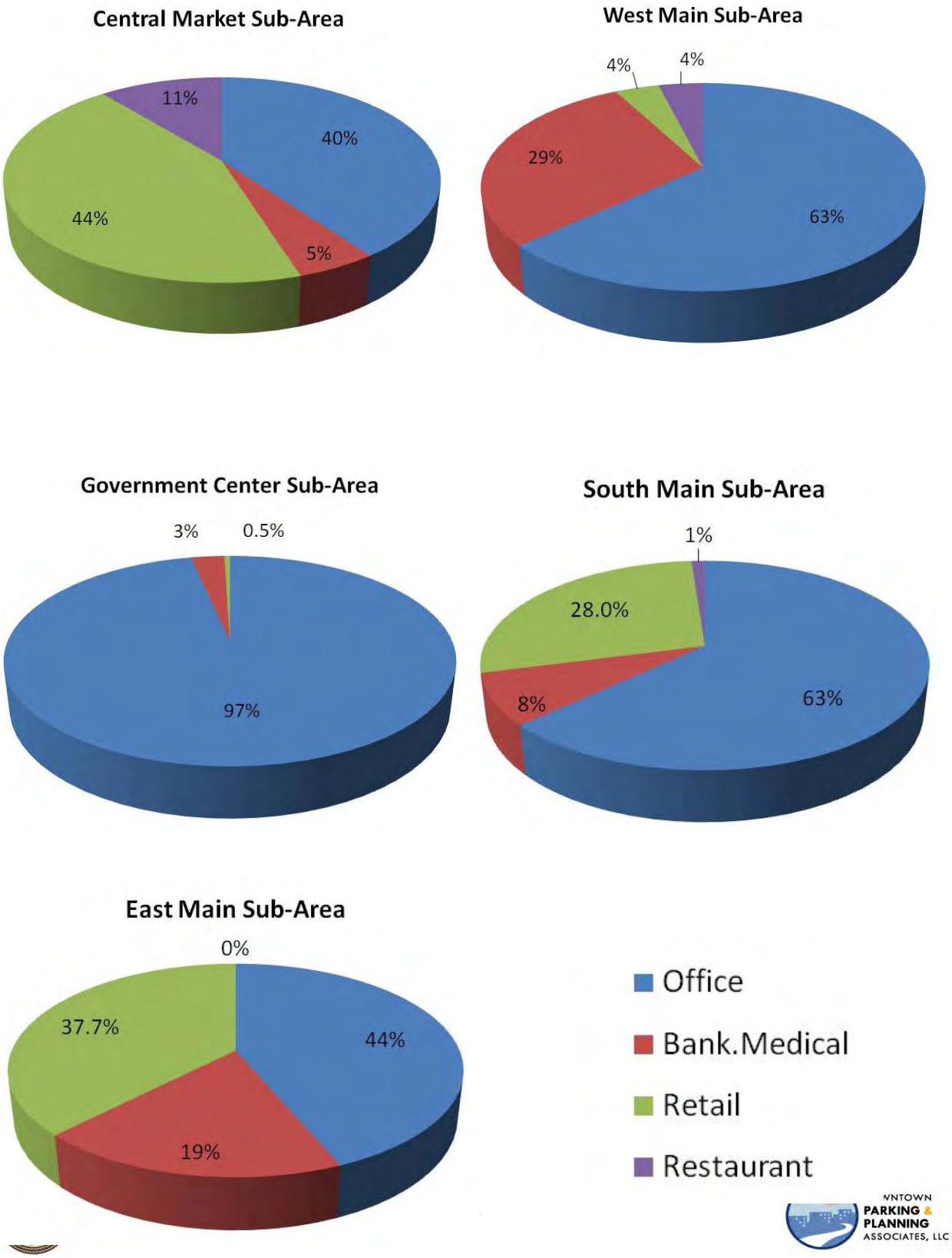
- Lack of Restaurants:
  - Only 3% of Land Use

- Relatively Weak Retail:
  - Only 18% of Land Use

- Benefits of Shared Parking Demand Minimal Due to Predominance of Daytime Office Uses and Lack of Evening/Weekend Activity Generators



Existing Land Uses by Sub-Area



Parking Demand Estimates by Land Use and Sub-Areas

Our parking demand estimates are based upon the parking ratios published by the Urban Land Institute (ULI), recently updated in 2010. Land use and employment information for the County of Maui and State of Hawaii was provided directly from each governmental source. Land use information for the balance of the study area was obtained from the County of Maui Assessor's Office website. Our parking demand estimates assume full occupancy of all land uses.

To more accurately estimate parking demand for mixed-use urban centers, we utilize shared parking demand modeling based upon the ULI models for peak parking demand by time of day for each land use category. Shared demand models account for the fact that parking demand for different land uses peak at different times of the day, thereby allowing some land uses to "share" the same parking facilities. The effects of shared parking demand, captive market reductions and other market "synergies" help to reduce parking demand in higher density, mixed-use urban areas. These market reduction factors are explained further in **Appendix 'A'**.

As **Tables 3 and 4** demonstrate below, the application of shared demand modeling for existing land uses in the WRA results in a reduction of 4.5%, or 157 parking spaces compared to aggregate parking demand. Note that these reduction factors are for shared parking demand only and do not account for other market reduction factors. It is also important to note that the benefits of shared parking demand are very low in Wailuku Town because of the proportion of office space compared to other land uses. The ULI shared demand modeling results and graphs for each sub-area are included in **Appendix 'A'**.

Table 3: Aggregate Parking Demand Based on ULI Parking Ratios

Land Use Grand Totals	Total Area	% Land Use	ULI Parking Ratio Per 1,000sf	Parking Required
Office	642,816	69%	3.4	2,185
Bank/Medical	95,473	10%	4.5	429
Retail	163,540	18%	3.6	588
Restaurant	28,700	3%	10	289
Totals	**930,529**	**100%**		**3,491**

Table 4: Shared Parking Demand Reduction Factors

Sub-Area	Aggregate Parking Demand	Shared Parking Demand	Shared Demand Reduction	% Reduction
Central Market	787	697	(90)	11.4%
West Main	677	633	(44)	6.5%
Government Center	1,156	1,156	-	0%
South Main	595	580	(15)	2.5%

East Main	276	268	(8)	2.9%
Totals	**3,491**	**3,334**	**(157)**	**4.5%**

Aggregate Parking Demand by Sub-Area

Central Area	Total sq/ft	ULI Ratio	Parking	% Land Use
Office	73,870	3.4	251	40%
Bank/Medical	9,400	4.5	42	5%
Retail	81,065	3.6	292	44%
Restaurant	20,200	10	202	11%
Total Parking Demand	**184,535**		**787**	

West Main Area	Total sq/ft	ULI Ratio	Parking	% Land Use
Office	107,467	3.4	365	63%
Bank/Medical	49,573	4.5	223	29%
Retail	6,575	3.6	23	4%
Restaurant	6,600	10	66	4%
Total Parking Demand	**170,215**		**677**	

Government Center	Total sq/ft	ULI Ratio	Parking	% Land Use
Office	325,074	3.4	1106	97%
Bank/Medical	9,500	4.5	43	3%
Retail	1,600	3.6	6	0.5%
Restaurant		10	0	0%
Total Parking Demand	**336,174**		**1,155**	

South Main Area	Total sq/ft	ULI Ratio	Parking	% Land Use
Office	103,610	3.4	352	63%
Bank/Medical	13,000	4.5	59	8%
Retail	46,000	3.6	165	28.0%
Restaurant	1,900	10	19	1%
Total Parking Demand	**164,510**		**595**	

East Main Area	Total sq/ft	ULI Ratio	Parking	% Land Use
Office	32,795	3.4	111	44%
Bank/Medical	14,000	4.5	63	19%
Retail	28,300	3.6	102	37.7%
Restaurant	-	10	0	0%
Total Parking Demand	**75,095**		**276**	

END OF SECTION

Existing Parking Adequacy by Sub Area

We calculated parking demand based upon shared demand modeling and compared the demand estimates to existing parking supply by sub-area. The results are shown in **Table 5** below. Although the chart below indicates parking deficits for South Main and East Main sub-areas, we believe these deficits may be slightly over-stated because they do not account for other market reduction factors.

Table 5: Existing Parking Adequacy by Sub-Area

Sub-Area	Shared Parking Demand	*Existing Parking Supply	Parking Surplus (Deficit)
Central Market	697	497	(200)
West Main	633	630	(3)
Government Center	1,156	894	(262)
South Main	580	506	(74)
East Main	268	216	(52)
Totals	**3,334**	**2,743**	**(591)**

Existing Parking Adequacy by Major Land Uses – ULI Ratios

We performed stand-alone parking supply & demand estimates for each of the land uses shown in **Table 6** based upon ULI parking ratios. We believe these parking estimates based upon ULI ratios to be accurate in reflecting current conditions based upon our field observations.

Table 6: Existing Parking Adequacy by Major Land Uses

Individual Campus	ULI Parking Demand	On-Site Parking Supply	Parking Surplus (Deficit)
Maui County Campus	376	*242	(134)
State Buildings + Judiciary	457	336	(121)
One Main Plaza	299	210	(89)
Maui Medical	223	235	+12
Wells Professional Center	112	133	+21
Net Surplus / (Deficit)			**(311)**

Does not include 71 spaces of storage parking for fleet vehicles

Existing Parking Adequacy for County of Maui and State Offices by Employment

We also performed parking demand estimates for the County of Maui and State of Hawaii offices based upon employment information factored against single vehicle drive ratios from both the 2000 US Census (75.7%) and from the PUMA community survey of 2010 (84.3%).

We believe the results of the employee-based parking demand estimates are reliable in estimating parking demand for the County of Maui employees who are off-campus in leased space. However, we believe the State of Hawaii employee-based estimates may be low due to the nature of courthouse activity that tends to generate greater parking demand than typical office space with jurors, attorneys, visitors, reporters, etc.

Table 6: Employee Parking Estimates – County of Maui

Campus Only Employees: 416	Demand	Supply	(Deficit)
Drive Ratio PUMA Survey @ 84.3%	351	210	(141)
Drive Ratio 2000 US Census @ 75.7%	315	210	(105)
Total Wailuku Employees: 610	**Demand**	**Supply**	**(Deficit)**
Drive Ratio PUMA Survey @ 84.3%	514	210	(304)
Drive Ratio 2000 US Census @ 75.7%	462	210	(252)

Table 7: Employee Parking Estimates – State of Hawaii

State Campus Employees: 347	Demand	Supply	(Deficit)
Drive Ratio PUMA Survey @ 84.3%	292	258	(34)
Drive Ratio 2000 US Census @ 75.7%	263	258	(5)

Existing WRAZ&D Code

The Maui Redevelopment Agency adopted the Wailuku Redevelopment Area Zoning and Development (WRAZ&D) Code in September, 2002. The purpose of the WRAZ&D was to "reduce regulatory barriers to business creation and investment" and to encourage a greater mix of land uses - specifically restaurants, cafes, retail and entertainment uses. The WRAZ&D code reduces the amount of parking required to be created for new development, major renovations or changes in use from what is otherwise required under Maui's general planning and zoning codes. However, the WRAZ&D still requires all new development and major redevelopment projects to create parking on-site based upon prescribed parking ratios.

The following language is taken directly from the WRAZ&D Code:

The Plan Identified Existing Weakness Preventing Redevelopment as: *"…the scarcity of parking, the high cost associated with complying with on-site parking requirements and a dearth of activity generating land uses".*

"The purpose of the business district is to create a mixed-use commercial area to strengthen and enliven the core of Wailuku and its environs."

"The district allows for a full range of retail, service and business uses within a local or regional market area, intermixed with arts, entertainment, multi-family and single family residential uses to create a lively and aesthetically pleasing environment where people can live, work dine, and receive services, and be entertained within a compact area".

Purpose and Intent (30.01.020)

A. Provide for a ***flexible*** and ***creative*** approach to development…
B. Provide for and encourage a ***mix of compatible land uses*** that create opportunities to live, work and shop within a ***compact redevelopment area…***
C. Facilitate the ***efficient use of land…***
D. Encourage a ***mixture*** of retail shops, restaurants, offices, personal and professional services, boutique hotel, multi-family, residential and public-use opportunities within the WRAZ&D District.

Despite its stated purpose, we believe the WRAZ&D Code has discouraged the type of development and redevelopment it was intended to support for the following reasons:

- Serves as a financial barrier to new development / redevelopment
- The code overstates required parking for the most desired land uses: (Restaurant/Hotel/Retail/Entertainment)
- Required parking ratios based on suburban stand-alone uses and subjective
- Promotes inefficient use of valuable urban land
- Does not recognize concept of shared parking/captive market reductions/modal reductions/market synergies
- Proposed parking fee in lieu ordinance inequitable/subjective/penalizes new development

Existing WRAZ&D Code (Cont.)

The following photos show examples of the type of development that is resulting from the application of the WRAZ&D Code. Note the difference in taxable value between the two property examples on the following page.

Suburban Style Development - "Motes of Parking" Surrounding Each Building





More Desired Urban Density





Land Use Comparison



Bank Building, Constructed 2004
Land Area = 21,310 Sq/Ft
Land Value = $1,531,100
Building Value = $595,900
Taxable Value = $2,127,000
Total Value = $106.20 Sq/Ft



Office Building, Constructed 1988
Land Area = 14,500 Sq/Ft
Land Value = $829,100
Building Value = $4,465,300
Taxable Value = $5,294,400
Total Value = $365.13 Sq/Ft

Parking Management Plan

Two of the most fundamental elements of any successful downtown parking management plan are professional staffing/leadership, and strong stakeholder/board/committee policy making, governance and oversight. These elements are historically lacking in Wailuku Town and they are probably the greatest challenge to overcome in attempting to develop any kind of parking management program. If a Community Development Corporation (CDC) is created as recommended in the Wailuku Market Based Plan, then we believe the CDC would be the best entity to be tasked with downtown parking management. If a CDC is not created, we still believe that some sort of private sector partnership, committee or organization assume primary parking management responsibility in Downtown Wailuku.

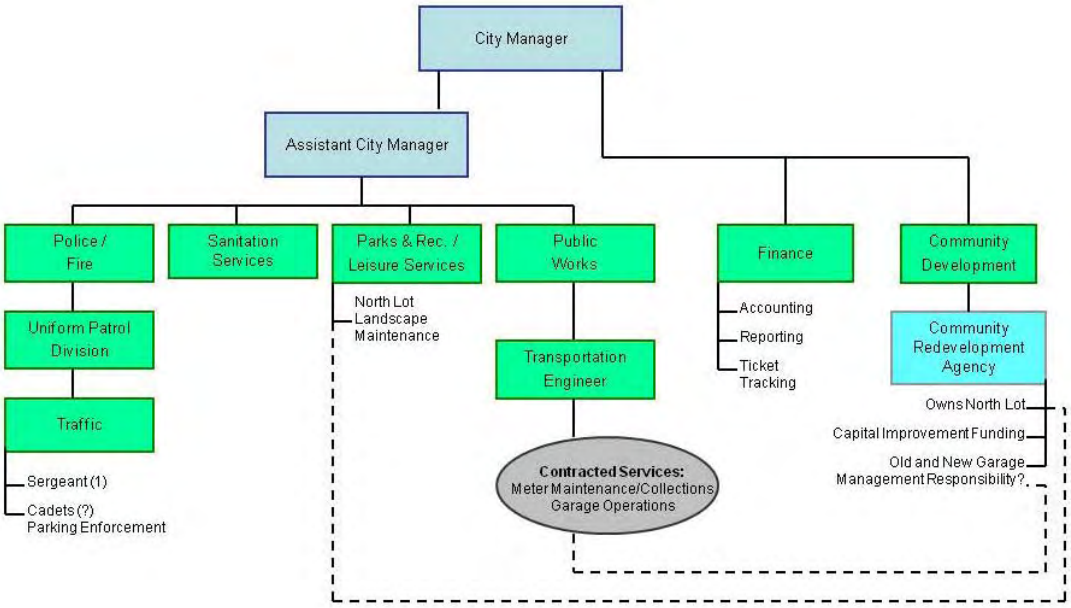
The benefits of public/private "Downtown-managed" parking systems include:

- They tend to be more efficient, entrepreneurial and customer focused
- Have greater ability to pull in privately owned facilities under unified management
- Have a vested interest in downtown and a greater stake in positive outcomes
- They represent current "crest-of-the-wave" best practices for downtowns throughout US
- Tend to be more successful in branding, marketing, and public relations/communications
- Result in greater buy-in and ownership by downtown stakeholders who are directly affected by public parking facilities, policies and management practices

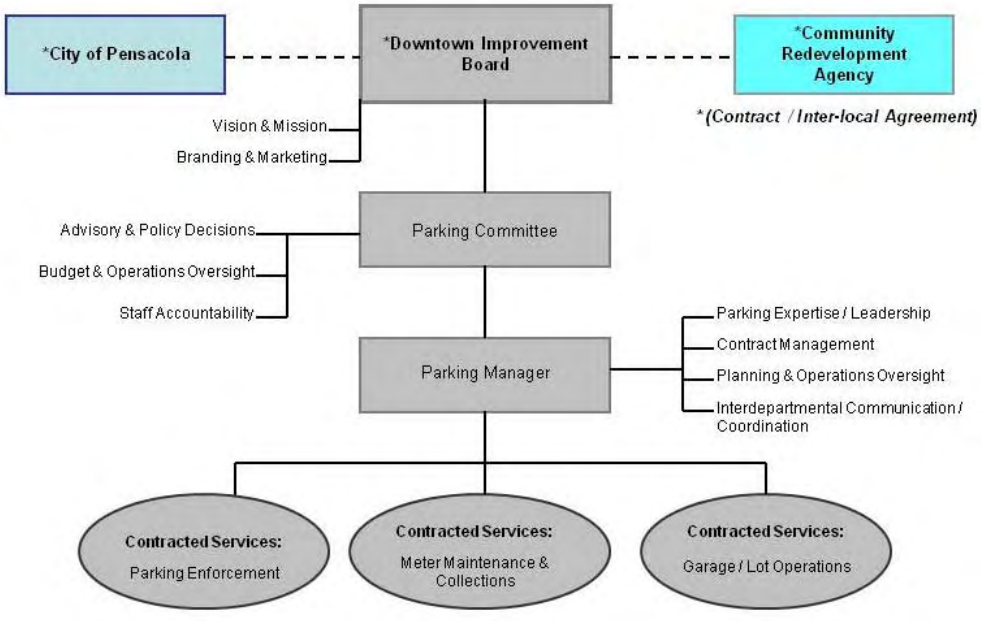
Assuming that paid parking will be implemented at least for the Municipal Lot and County Visitor Lot in the near term, and a parking structure in the long term, we believe a parking management model could be developed that is very similar to the model we successfully implemented in Pensacola, FL. In the case of Pensacola, a Downtown Parking Management District (DPMD) was created and managed by the Pensacola Downtown Improvement Board. The DPMD assumed full management responsibility for all municipal owned parking assets, and it retains all parking fees and enforcement revenues in a parking enterprise fund. Before and after organizational models of the Downtown Pensacola parking management plan are included below. Note that all operational aspects of the Pensacola parking system are contracted to private vendors, with active staff oversight of all contracted services.

Pensacola Parking Management Organizational Charts

Before: Horizontal Management Model / Convoluted Leadership



After: Vertical Management Model / Clear Leadership



APPENDIX 'A'

Explanation of Shared Demand and Captive Market Reductions
Shared Demand Modeling by Sub-Area

The Concept of Shared Parking Demand and The Effect of Captive Market Reductions

Parking demand is defined as the peak accumulation of parked vehicles generated by each building or land use within the area being studied. Historical experience with peak parking accumulations for land uses has been utilized to develop indicators for calculating parking demand. For most land uses, the size of the building (total floor area) is used to compute the peak parking accumulation. Parking ratios, determined by dividing the peak parking accumulation by the floor area, have been assembled and reported by the Urban Land Institute, Institute for Transportation Engineers and the National Parking Institute. These sources are often used by local zoning and planning officials to establish parking ratios for various land uses in local ordinances. When separate parking ratios are combined into an aggregate number for a mixed-use development, the resulting number is referred to in the parking industry as *Aggregate Demand.* Many factors influence the demand for parking at a particular location, including type and intensity of land uses, availability of space for parking, parking fees, availability and convenience of alternate modes of transportation, and income levels of population.

Shared Parking Demand / Captive Market Reductions

Parking demand in Central Business Districts and urban mixed use developments can be significantly overstated if each land use must provide parking in accordance with local ordinances or industry standards. This occurs for three primary reasons:

- Different activity patterns of adjacent or nearby land uses result in variations of peak accumulation by time of day, day of week, or season of year. This concept is known in the parking industry as *Shared Parking Demand*.

- People often patronize two or more land uses in close proximity to each other in a single trip. This concept refers to office workers who shop or dine within the development area, hotel guests, or retail patrons who support restaurant entertainment venues while remaining parked at their original locations. These activities help to reduce total parking demand in mixed use developments and are referred to in the parking industry as *Captive Market Reductions*.

- The density of development and the availability of mass transit and alternate modes of transportation such as carpooling, biking and walking reduces the reliance on the automobile. These activity patterns also help to reduce total parking demand based upon *Modal Splits / Modal Reductions*.

Estimating Parking Demand

To accurately define parking requirements in a mixed-use development, the parking demand ratios for a component land use should be factored downward in proportion to the amount of market support received from adjacent land uses. Although the effects of the captive market at a particular development depend upon local factors and specific market conditions, the Urban Land Institute has determined that up to 60% reductions in parking demand can occur at CBD locations and urban mixed-use developments due to the effects of *Captive Market Reductions.* According to the Urban Land Institute, the average reduction for mixed-use projects in Central Business Districts is 20%. For mixed use developments that include hotel uses, the potential for market synergy is significant. Hotel guests demonstrate a greater propensity for being captive patrons of a mixed-use development than do employees, who are more likely to be captive patrons to the entire downtown area. *Net Parking Demand* refers to the adjusted parking demand for a mixed use development based upon *Shared Parking Demand* and *Captive Market Reductions.*

In estimating parking demand for the Wailuku Town WRA, we performed shared demand modeling for each sub-area based on the ULI model for peak parking demand by time of day for all land uses. It should be noted that our parking demand estimates only account for shared parking demand reductions. Our demand estimates do not factor or account for any other market reductions, market synergies or modal splits.

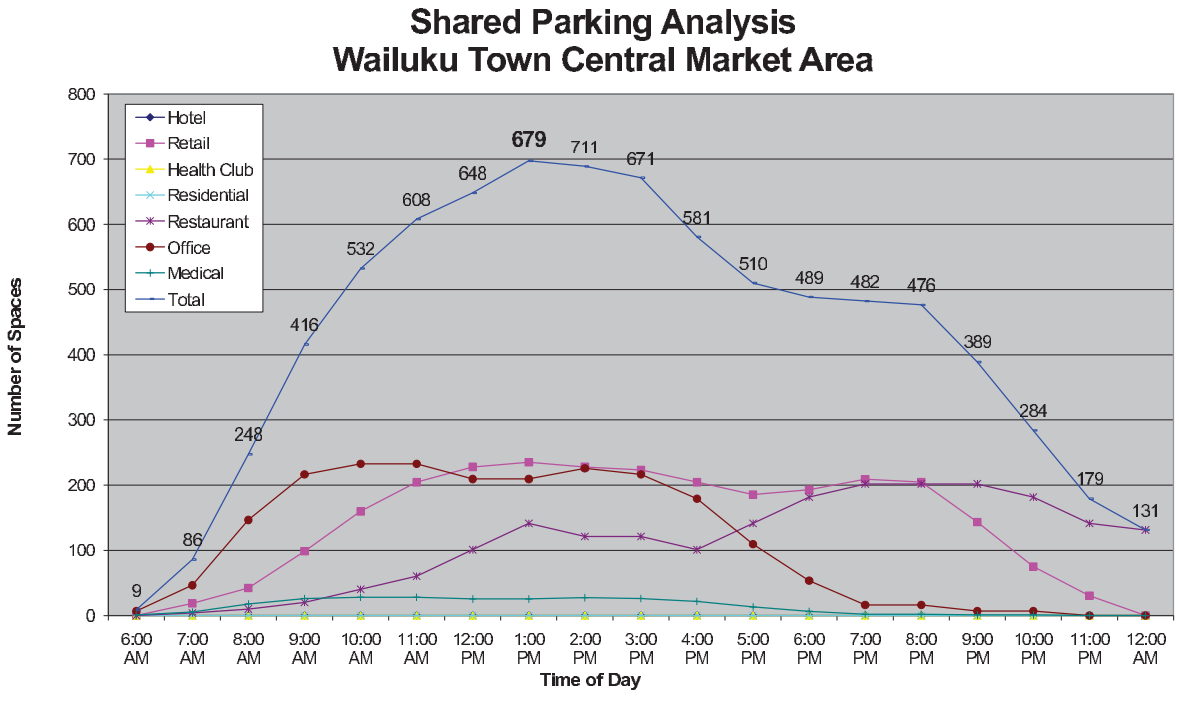
Wailuku Town Shared Demand Model "Central Market Area"
PROJECTED PARKING DEMAND BY HOUR
(BASED ON URBAN LAND INSTITUTE SHARED PARKING MODEL)

Hourly Accumulation of Parked Vehicles by Land Use as a Percentage of Peak Hour Demand											
Hour of Day	Hotel		Retail		Health Club		Residential		Restaurant		Office		Medical
6:00 AM	100%		0%		70%		100%		0%		3%		3%
7:00 AM	85%		8%		40%		87%		2%		20%		20%
8:00 AM	65%		18%		40%		79%		5%		63%		63%
9:00 AM	55%		42%		70%		73%		10%		93%		93%
10:00 AM	45%		68%		68%		68%		20%		100%		100%
11:00 AM	35%		87%		80%		59%		30%		100%		100%
12:00 PM	30%		97%		60%		60%		50%		90%		90%
1:00 PM	30%		100%		70%		59%		70%		90%		90%
2:00 PM	35%		97%		70%		60%		60%		97%		97%
3:00 PM	35%		95%		70%		61%		60%		93%		93%
4:00 PM	45%		87%		80%		66%		50%		77%		77%
5:00 PM	60%		79%		90%		77%		70%		47%		47%
6:00 PM	70%		82%		100%		85%		90%		23%		23%
7:00 PM	75%		89%		90%		94%		100%		7%		7%
8:00 PM	90%		87%		80%		96%		100%		7%		7%
9:00 PM	95%		61%		70%		98%		100%		3%		3%
10:00 PM	100%		32%		40%		99%		90%		3%		3%
11:00 PM	100%		13%		10%		100%		70%		0%		0%
12:00 AM	100%		0%		0%		100%		50%		0%		0%

Parking Demand Ratios

.88/Room	2.9/1,000 SF	5.5/1,000 SF	1.5/Unit	10/1,000 SF	3.15/1000 SF	3.0/1,000 SF
Emp .25/Room	Emp .7/1,000	Emp .4/Space		Maui Code	Visitor .25/1,000 SF	Visitor 1.5/1,000

	Hotel		Retail		Health Club		Residential		Restaurant		Office		Medical		
Hour of Day		Emp	81,065	Emp	0	Emp	0		20,200	Emp	73,870	Vis	9,400	Vis	Total
6:00 AM	0	0	0	0	0	0	0		0		7	1	1	0	9
7:00 AM	0	0	19	5	0	0	0		4		47	4	6	3	86
8:00 AM	0	0	42	10	0	0	0		10		147	12	18	9	248
9:00 AM	0	0	99	24	0	0	0		20		216	17	26	13	416
10:00 AM	0	0	160	39	0	0	0		40		233	18	28	14	532
11:00 AM	0	0	205	49	0	0	0		61		233	18	28	14	608
12:00 PM	0	0	228	55	0	0	0		101		209	17	25	13	648
1:00 PM	0	0	235	57	0	0	0		141		209	17	25	13	697
2:00 PM	0	0	228	55	0	0	0		121		226	18	27	14	689
3:00 PM	0	0	223	54	0	0	0		121		216	17	26	13	671
4:00 PM	0	0	205	49	0	0	0		101		179	14	22	11	581
5:00 PM	0	0	186	45	0	0	0		141		109	9	13	7	510
6:00 PM	0	0	193	47	0	0	0		182		54	4	6	3	489
7:00 PM	0	0	209	51	0	0	0		202		16	1	2	1	482
8:00 PM	0	0	205	49	0	0	0		202		16	1	2	1	476
9:00 PM	0	0	143	35	0	0	0		202		7	1	1	0	389
10:00 PM	0	0	75	18	0	0	0		182		7	1	1	0	284
11:00 PM	0	0	31	7	0	0	0		141		0	0	0	0	179
12:00 AM	0	0	0	0	0	0	0		131		0	0	0	0	131



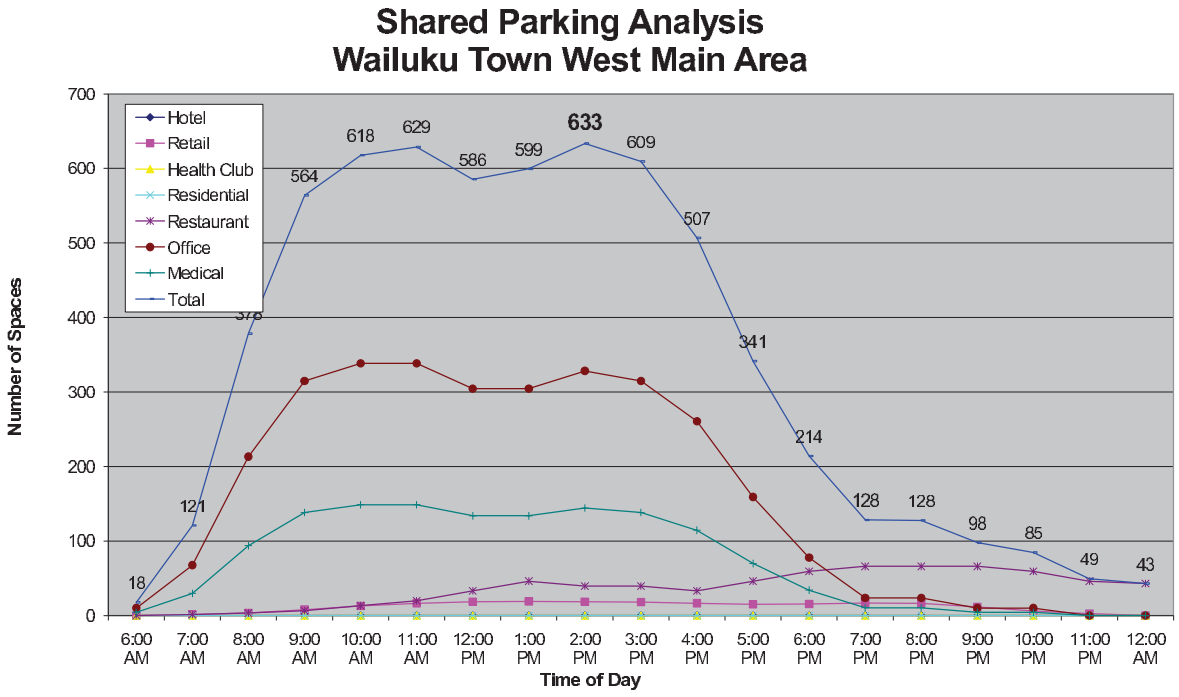
Wailuku Town Shared Demand Model "West Main Area"
PROJECTED PARKING DEMAND BY HOUR
(BASED ON URBAN LAND INSTITUTE SHARED PARKING MODEL)

Hourly Accumulation of Parked Vehicles by Land Use as a Percentage of Peak Hour Demand												
Hour of Day	Hotel		Retail		Health Club		Residential		Restaurant		Office		Medical
6:00 AM	100%		0%		70%		100%		0%		3%		3%
7:00 AM	85%		8%		40%		87%		2%		20%		20%
8:00 AM	65%		18%		40%		79%		5%		63%		63%
9:00 AM	55%		42%		70%		73%		10%		93%		93%
10:00 AM	45%		68%		68%		68%		20%		100%		100%
11:00 AM	35%		87%		80%		59%		30%		100%		100%
12:00 PM	30%		97%		60%		60%		50%		90%		90%
1:00 PM	30%		100%		70%		59%		70%		90%		90%
2:00 PM	35%		97%		70%		60%		60%		97%		97%
3:00 PM	35%		95%		70%		61%		60%		93%		93%
4:00 PM	45%		87%		80%		66%		50%		77%		77%
5:00 PM	60%		79%		90%		77%		70%		47%		47%
6:00 PM	70%		82%		100%		85%		90%		23%		23%
7:00 PM	75%		89%		90%		94%		100%		7%		7%
8:00 PM	90%		87%		80%		96%		100%		7%		7%
9:00 PM	95%		61%		70%		98%		100%		3%		3%
10:00 PM	100%		32%		40%		99%		90%		3%		3%
11:00 PM	100%		13%		10%		100%		70%		0%		0%
12:00 AM	100%		0%		0%		100%		50%		0%		0%

Parking Demand Ratios

.88/Room	2.9/1,000 SF	5.5/1,000 SF	1.5/Unit	10/1,000 SF	3.15/1000 SF	3.0/1,000 SF
Emp .25/Room	Emp .7/1,000	Emp .4/Space		Maui Code	Visitor .25/1,000 SF	Visitor 1.5/1,000

	Hotel		Retail		Health Club		Residential		Restaurant		Office		Medical		
Hour of Day		Emp	6,575	Emp	0	Emp			6,600	Emp	107,467	Vis	49,573	Vis	Total
6:00 AM	0	0	0	0	0	0	0		0		10	1	4	2	18
7:00 AM	0	0	2	0	0	0	0		1		68	5	30	15	121
8:00 AM	0	0	3	1	0	0	0		3		213	17	94	47	378
9:00 AM	0	0	8	2	0	0	0		7		315	25	138	69	564
10:00 AM	0	0	13	3	0	0	0		13		339	27	149	74	618
11:00 AM	0	0	17	4	0	0	0		20		339	27	149	74	629
12:00 PM	0	0	18	4	0	0	0		33		305	24	134	67	586
1:00 PM	0	0	19	5	0	0	0		46		305	24	134	67	599
2:00 PM	0	0	18	4	0	0	0		40		328	26	144	72	**633**
3:00 PM	0	0	18	4	0	0	0		40		315	25	138	69	609
4:00 PM	0	0	17	4	0	0	0		33		261	21	115	57	507
5:00 PM	0	0	15	4	0	0	0		46		159	13	70	35	341
6:00 PM	0	0	16	4	0	0	0		59		78	6	34	17	214
7:00 PM	0	0	17	4	0	0	0		66		24	2	10	5	128
8:00 PM	0	0	17	4	0	0	0		66		24	2	10	5	128
9:00 PM	0	0	12	3	0	0	0		66		10	1	4	2	98
10:00 PM	0	0	6	1	0	0	0		59		10	1	4	2	85
11:00 PM	0	0	2	1	0	0	0		46		0	0	0	0	49
12:00 AM	0	0	0	0	0	0	0		43		0	0	0	0	43



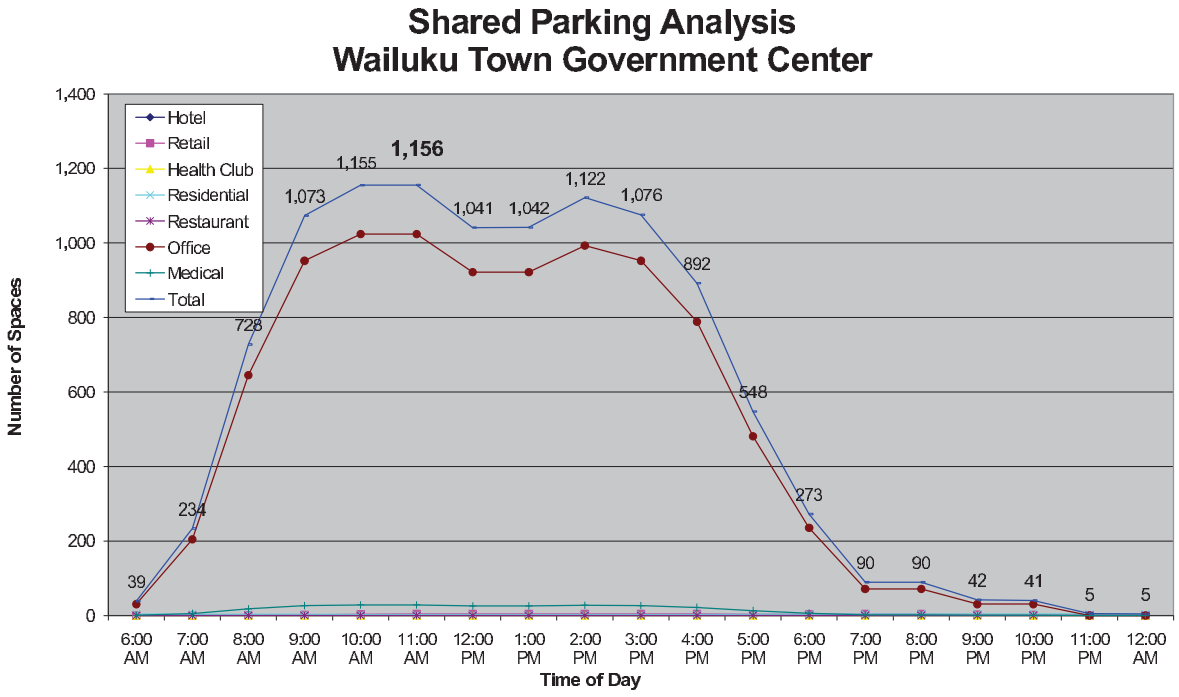
Wailuku Town Shared Demand Model "Government Center Area"
PROJECTED PARKING DEMAND BY HOUR
(BASED ON URBAN LAND INSTITUTE SHARED PARKING MODEL)

Hourly Accumulation of Parked Vehicles by Land Use as a Percentage of Peak Hour Demand											
Hour of Day	Hotel		Retail		Health Club		Residential		Restaurant		Office		Medical
6:00 AM	100%		0%		70%		100%		0%		3%		3%
7:00 AM	85%		8%		40%		87%		2%		20%		20%
8:00 AM	65%		18%		40%		79%		5%		63%		63%
9:00 AM	55%		42%		70%		73%		10%		93%		93%
10:00 AM	45%		68%		68%		68%		20%		100%		100%
11:00 AM	35%		87%		80%		59%		30%		100%		100%
12:00 PM	30%		97%		60%		60%		50%		90%		90%
1:00 PM	30%		100%		70%		59%		70%		90%		90%
2:00 PM	35%		97%		70%		60%		60%		97%		97%
3:00 PM	35%		95%		70%		61%		60%		93%		93%
4:00 PM	45%		87%		80%		66%		50%		77%		77%
5:00 PM	60%		79%		90%		77%		70%		47%		47%
6:00 PM	70%		82%		100%		85%		90%		23%		23%
7:00 PM	75%		89%		90%		94%		100%		7%		7%
8:00 PM	90%		87%		80%		96%		100%		7%		7%
9:00 PM	95%		61%		70%		98%		100%		3%		3%
10:00 PM	100%		32%		40%		99%		90%		3%		3%
11:00 PM	100%		13%		10%		100%		70%		0%		0%
12:00 AM	100%		0%		0%		100%		50%		0%		0%

Parking Demand Ratios

.88/Room	2.9/1,000 SF	5.5/1,000 SF	1.5/Unit	10/1,000 SF	3.15/1000 SF	3.0/1,000 SF
Emp .25/Room	Emp .7/1,000	Emp .4/Space		Maui Code	Visitor .25/1,000 SF	Visitor 1.5/1,000

	Hotel		Retail		Health Club		Residential		Restaurant		Office		Medical		
Hour of Day		Emp	1,600	Emp	0	Emp	3		0	Emp	325,074	Vis	9,500	Vis	Total
6:00 AM	0	0	0	0	0	0	5		0		31	2	1	0	39
7:00 AM	0	0	0	0	0	0	4		0		205	16	6	3	234
8:00 AM	0	0	1	0	0	0	4		0		645	51	18	9	728
9:00 AM	0	0	2	0	0	0	3		0		952	76	27	13	1,073
10:00 AM	0	0	3	1	0	0	3		0		1,024	81	29	14	1,155
11:00 AM	0	0	4	1	0	0	3		0		1,024	81	29	14	**1,156**
12:00 PM	0	0	5	1	0	0	3		0		922	73	26	13	1,041
1:00 PM	0	0	5	1	0	0	3		0		922	73	26	13	1,042
2:00 PM	0	0	5	1	0	0	3		0		993	79	28	14	1,122
3:00 PM	0	0	4	1	0	0	3		0		952	76	27	13	1,076
4:00 PM	0	0	4	1	0	0	3		0		788	63	22	11	892
5:00 PM	0	0	4	1	0	0	3		0		481	38	13	7	548
6:00 PM	0	0	4	1	0	0	4		0		236	19	7	3	273
7:00 PM	0	0	4	1	0	0	4		0		72	6	2	1	90
8:00 PM	0	0	4	1	0	0	4		0		72	6	2	1	90
9:00 PM	0	0	3	1	0	0	4		0		31	2	1	0	42
10:00 PM	0	0	1	0	0	0	4		0		31	2	1	0	41
11:00 PM	0	0	1	0	0	0	5		0		0	0	0	0	5
12:00 AM	0	0	0	0	0	0	5		0		0	0	0	0	5



Wailuku Town Shared Demand Model "South Main Area"
PROJECTED PARKING DEMAND BY HOUR
(BASED ON URBAN LAND INSTITUTE SHARED PARKING MODEL)

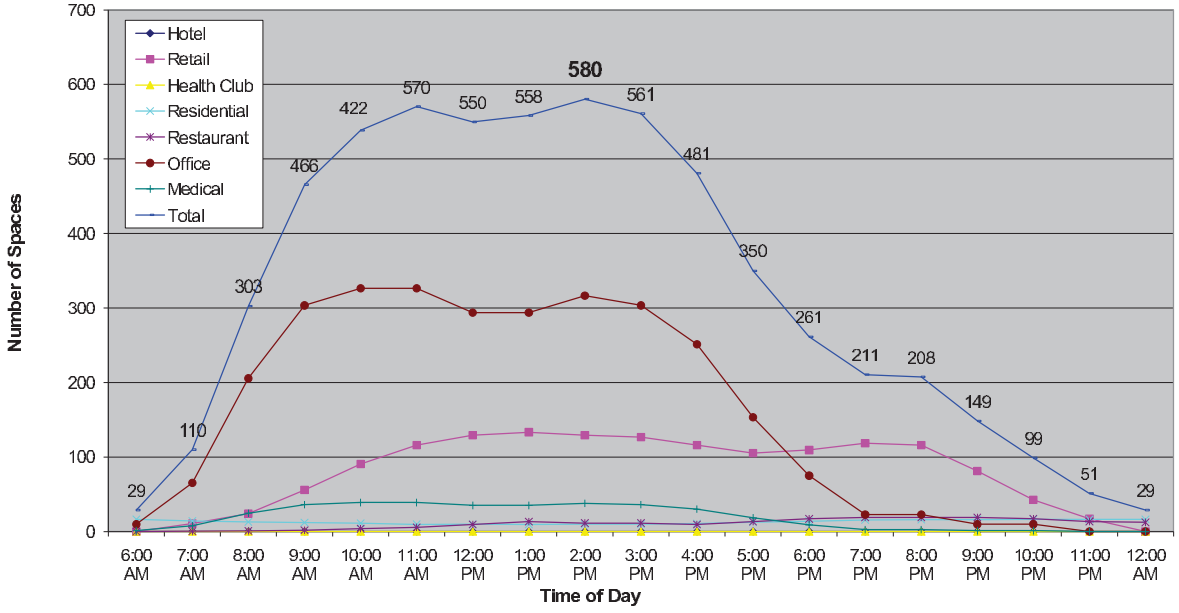
Hourly Accumulation of Parked Vehicles by Land Use as a Percentage of Peak Hour Demand												
Hour of Day	Hotel		Retail		Health Club		Residential		Restaurant		Office		Medical
6:00 AM	100%		0%		70%		100%		0%		3%		3%
7:00 AM	85%		8%		40%		87%		2%		20%		20%
8:00 AM	65%		18%		40%		79%		5%		63%		63%
9:00 AM	55%		42%		70%		73%		10%		93%		93%
10:00 AM	45%		68%		68%		68%		20%		100%		100%
11:00 AM	35%		87%		80%		59%		30%		100%		100%
12:00 PM	30%		97%		60%		60%		50%		90%		90%
1:00 PM	30%		100%		70%		59%		70%		90%		90%
2:00 PM	35%		97%		70%		60%		60%		97%		97%
3:00 PM	35%		95%		70%		61%		60%		93%		93%
4:00 PM	45%		87%		80%		66%		50%		77%		77%
5:00 PM	60%		79%		90%		77%		70%		47%		47%
6:00 PM	70%		82%		100%		85%		90%		23%		23%
7:00 PM	75%		89%		90%		94%		100%		7%		7%
8:00 PM	90%		87%		80%		96%		100%		7%		7%
9:00 PM	95%		61%		70%		98%		100%		3%		3%
10:00 PM	100%		32%		40%		99%		90%		3%		3%
11:00 PM	100%		13%		10%		100%		70%		0%		0%
12:00 AM	100%		0%		0%		100%		50%		0%		0%

Parking Demand Ratios

.88/Room	2.9/1,000 SF	5.5/1,000 SF	1.5/Unit	10/1,000 SF	3.15/1000 SF	3.0/1,000 SF
Emp .25/Room	Emp .7/1,000	Emp .4/Space		Maui Code	Visitor .25/1,000 SF	Visitor 1.5/1,000

	Hotel		Retail		Health Club		Residential		Restaurant		Office		Medical		
Hour of Day		Emp	46,000	Emp	0	Emp	11		1,900	Emp	103,610	Vis	13,000	Vis	Total
6:00 AM	0	0	0	0	0	0	17		0		10	1	1	1	29
7:00 AM	0	0	11	3	0	0	14		0		65	5	8	4	110
8:00 AM	0	0	24	6	0	0	13		1		206	16	25	12	303
9:00 AM	0	0	56	14	0	0	12		2		304	24	36	18	466
10:00 AM	0	0	91	22	0	0	11		4		326	26	39	20	538
11:00 AM	0	0	116	28	0	0	10		6		326	26	39	20	570
12:00 PM	0	0	129	31	0	0	10		10		294	23	35	18	550
1:00 PM	0	0	133	32	0	0	10		13		294	23	35	18	558
2:00 PM	0	0	129	31	0	0	10		11		317	25	38	19	**580**
3:00 PM	0	0	127	31	0	0	10		11		304	24	36	18	561
4:00 PM	0	0	116	28	0	0	11		10		251	20	30	15	481
5:00 PM	0	0	105	25	0	0	13		13		153	12	18	9	350
6:00 PM	0	0	109	26	0	0	14		17		75	6	9	4	261
7:00 PM	0	0	119	29	0	0	16		19		23	2	3	1	211
8:00 PM	0	0	116	28	0	0	16		19		23	2	3	1	208
9:00 PM	0	0	81	20	0	0	16		19		10	1	1	1	149
10:00 PM	0	0	43	10	0	0	16		17		10	1	1	1	99
11:00 PM	0	0	17	4	0	0	17		13		0	0	0	0	51
12:00 AM	0	0	0	0	0	0	17		12		0	0	0	0	29

Shared Parking Analysis
Wailuku Town South Main Area



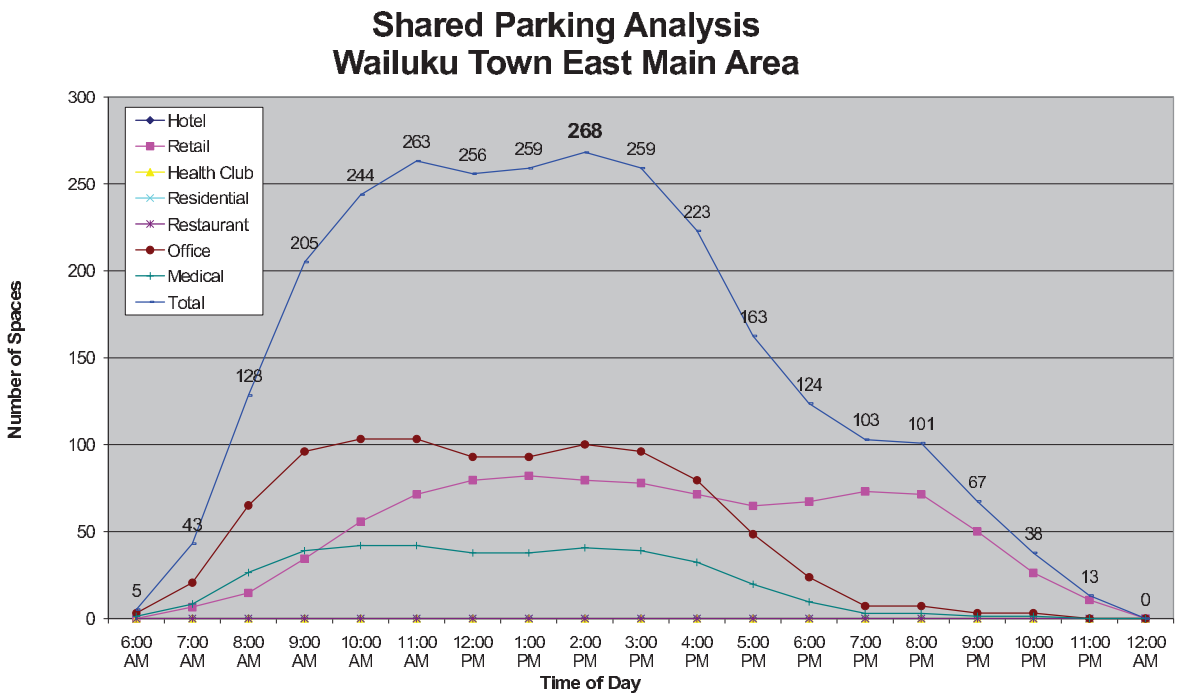
Wailuku Town Shared Demand Model "East Main Area"
PROJECTED PARKING DEMAND BY HOUR
(BASED ON URBAN LAND INSTITUTE SHARED PARKING MODEL)

Hourly Accumulation of Parked Vehicles by Land Use as a Percentage of Peak Hour Demand											
Hour of Day	Hotel		Retail		Health Club		Residential		Restaurant		Office		Medical
6:00 AM	100%		0%		70%		100%		0%		3%		3%
7:00 AM	85%		8%		40%		87%		2%		20%		20%
8:00 AM	65%		18%		40%		79%		5%		63%		63%
9:00 AM	55%		42%		70%		73%		10%		93%		93%
10:00 AM	45%		68%		68%		68%		20%		100%		100%
11:00 AM	35%		87%		80%		59%		30%		100%		100%
12:00 PM	30%		97%		60%		60%		50%		90%		90%
1:00 PM	30%		100%		70%		59%		70%		90%		90%
2:00 PM	35%		97%		70%		60%		60%		97%		97%
3:00 PM	35%		95%		70%		61%		60%		93%		93%
4:00 PM	45%		87%		80%		66%		50%		77%		77%
5:00 PM	60%		79%		90%		77%		70%		47%		47%
6:00 PM	70%		82%		100%		85%		90%		23%		23%
7:00 PM	75%		89%		90%		94%		100%		7%		7%
8:00 PM	90%		87%		80%		96%		100%		7%		7%
9:00 PM	95%		61%		70%		98%		100%		3%		3%
10:00 PM	100%		32%		40%		99%		90%		3%		3%
11:00 PM	100%		13%		10%		100%		70%		0%		0%
12:00 AM	100%		0%		0%		100%		50%		0%		0%

Parking Demand Ratios

.88/Room	2.9/1,000 SF	5.5/1,000 SF	1.5/Unit	10/1,000 SF	3.15/1000 SF	3.0/1,000 SF
Emp .25/Room	Emp .7/1,000	Emp .4/Space		Maui Code	Visitor .25/1,000 SF	Visitor 1.5/1,000

	Hotel		Retail		Health Club		Residential		Restaurant		Office		Medical		
Hour of Day		Emp	28,300	Emp	0	Emp	0		0	Emp	32,795	Vis	14,000	Vis	Total
6:00 AM	0	0	0	0	0	0	0		0		3	0	1	1	5
7:00 AM	0	0	7	2	0	0	0		0		21	2	8	4	43
8:00 AM	0	0	15	4	0	0	0		0		65	5	26	13	128
9:00 AM	0	0	34	8	0	0	0		0		96	8	39	20	205
10:00 AM	0	0	56	13	0	0	0		0		103	8	42	21	244
11:00 AM	0	0	71	17	0	0	0		0		103	8	42	21	263
12:00 PM	0	0	80	19	0	0	0		0		93	7	38	19	256
1:00 PM	0	0	82	20	0	0	0		0		93	7	38	19	259
2:00 PM	0	0	80	19	0	0	0		0		100	8	41	20	**268**
3:00 PM	0	0	78	19	0	0	0		0		96	8	39	20	259
4:00 PM	0	0	71	17	0	0	0		0		80	6	32	16	223
5:00 PM	0	0	65	16	0	0	0		0		49	4	20	10	163
6:00 PM	0	0	67	16	0	0	0		0		24	2	10	5	124
7:00 PM	0	0	73	18	0	0	0		0		7	1	3	1	103
8:00 PM	0	0	71	17	0	0	0		0		7	1	3	1	101
9:00 PM	0	0	50	12	0	0	0		0		3	0	1	1	67
10:00 PM	0	0	26	6	0	0	0		0		3	0	1	1	38
11:00 PM	0	0	11	3	0	0	0		0		0	0	0	0	13
12:00 AM	0	0	0	0	0	0	0		0		0	0	0	0	0



APPENDIX 'B'

Transportation Demand Management Programs and Strategies

Transportation Demand Management (TDM) strategies seek to increase higher occupancy travel, especially during weekday peak congestion periods. The goal of TDM strategies is to shift travel to higher occupancy (transit/carpool/vanpool) or non-motorized (bicycle, walking) transportation modes, to shift travel to less congested times of the day, and/or to reduce or eliminate the need to travel (telecommuting/live-work lifestyle centers). TDM strategies include incentives and disincentives, service improvements, information dissemination and marketing activities, alternative work schedules and sites, and parking management plans.

TDM effectiveness depends upon a variety of factors that extend beyond the actual strategies implemented. For example, promoting transit works well in areas that are well served by a public transit system but not as well in suburban areas that lack public transit facilities and/or where frequencies are light. Each TDM strategy has its own inherent opportunities and limitations. In general, TDM strategies complement each other and multiple strategies tend to result in economies of scale in TDM reductions. Parking management helps to encourage all core TDM options (biking/transit/carpooling/telecommuting). However, in most situations, support strategies such as incentives and subsidies will only aid a few core TDM strategies.

Employer-based TDM programs are generally the most effective in reducing single occupancy vehicle trips, and work trips are the easiest to shift to alternative modes of transportation. TDM strategies can be chosen to meet the specific needs of the employees based upon worksite characteristics and the employees' demographic and travel characteristics. In addition, a "corporate culture" can be created that reinforces the TDM message.

The table below demonstrates the effectiveness of various TDM strategies. These are national effectiveness averages as estimated by a reduction in single-occupant vehicle use per worksite in favor of the preferred modes of transportation.

TDM Effectiveness in Reductions of Single-Occupant Vehicles

Mode	Basic	Enhanced	Aggressive
Carpooling / Vanpooling	1 – 5%	3 – 10%	15% +
Transit Subsidies	1 – 4%	4 – 6%	7 – 15%
Bike / Walk	1 – 2%	2 – 6%	4 – 9%
Telecommuting	5 – 10%	7 – 20%	15%+

Summary of Possible TDM Programs and Strategies

Parking Management Strategies

Parking Charges: Charging employees to park can be very effective in reducing parking demand and encouraging carpooling and other TDM strategies.

Parking Cash Out: Provides employees with a choice – receive a parking space or receive the cash equivalent of the space.

Preferential Parking: Provides convenient parking in designated areas near front entrances for carpoolers and higher occupancy vehicles.

Incentives

Employee Transportation Option Program: These programs involve employers purchasing or heavily subsidizing the cost of monthly bus/transit passes. Employers can choose a range or level of subsidy from totally free to the employee, partially subsidized, or paid by the employee but through pre-tax payroll deduction. Employers benefit through reduced payroll taxes and can deduct the cost of providing the transit benefit as a business expense. The financial aspects of an employer paid program are demonstrated in the table below. In many cases, larger employers can negotiate lower monthly transit rates with local transit agencies based on volume discounts.

Without Program	With Program
Give Employee $780 Raise	**Give Employee $780 in Transit Options**
Cost to Business: $840 (Salary + FICA)	**Cost to Business:** $470 (Salary – Corporate Tax Deductions)
Salary Increase for Employee: $455 (Salary – Taxes)	**Salary Increase for Employee:** $780 (Tax Free Benefit)

Guaranteed Ride Home: Provides a free taxi or fleet vehicle ride home to those employees who fall ill, have an emergency or who are left stranded at work. An employer based guaranteed ride home program could be developed that provides a ride home option for employees who carpool to work.

Efficiency Programs

These programs help to reduce parking demand by providing employees flexibility in work schedules and commuting patterns and include:

Compressed Work Week: Allows employees to receive a day off each week in exchange for working longer hours on other days of the week.

Flexible Work Hours: Allows employees to alter their arrival and departure times to accommodate commuting schedules.

Staggered Work Hours: Allows employees to regularly arrive and leave at times which can vary from as little as 15 minutes to as much as 2 hours.

Telecommuting: Develops specific personnel policies that permit and encourage the use of tele-working at least twice per month.

Physical / Facility Planning & Design

Pedestrian and Bicycle Enhancements: Physical design that creates well lit and safe walking and biking paths, the provision of bike racks and protective lockers, etc.

Enhanced Transit Facilities: Provides for clean, convenient, safe and weather protected transit stations and bus shelters.

Marketing Strategies

Marketing strategies that promote public transit in general and/or employer provided TDM programs. This could include internal brochures, newsletters, webinars, employee orientations, special events and promotions, etc.

APPENDIX 'C'

Photos of Existing Municipal Lot Conditions













APPENDIX G
Interim Parking Plan

INTERIM PARKING PLAN

FOR THE CONSTRUCTION PHASE OF
WAILUKU MUNICIPAL PARKING STRUCTURE
2061 WEST VINEYARD STREET
WAILUKU, MAUI, HAWAII 96793
TMK: (2) 3-4-013:075

July 12, 2011

NISHIKAWA ARCHITECTS, INC.
Architecture & Planning

2145 Wells Street Suite 301 • Wailuku, Maui, Hawaii 96793
808 242 6900 • F 808 986 8301 • nai@adcmaui.com

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INTRODUCTION

The Wailuku Municipal Parking Structure is a County of Maui Capital Improvement Project projected to start in early 2013. The site of the project is the existing 2.19 acre Wailuku Municipal Parking lot, which consists of 210 surface parking stalls, serving State and County employees, local businesses, and customers in downtown Wailuku. The Municipal Lot includes 138 12-hour stalls located at the center of the lot, and 72 2-hour stalls on the mauka and makai edges. The construction of the structure is estimated to run twelve to eighteen months, and it will leave the municipal parking lot unusable during that time. Currently, there is a severe lack of parking available in Wailuku, and this Interim Parking Plan will identify specific strategies to address the need for parking during the construction phase. The recommendations will include possible satellite parking locations, transportation demand management, and public relations programs that will keep Wailuku functioning during the construction of the parking structure.

Concurrently with this Interim Parking Plan, Downtown Parking and Planning Associates (DPPA) is developing a comprehensive Parking Management Plan that will offer long term recommendations to manage parking in Wailuku. DPPA has completed a number of inventory counts recording how the existing parking supply is used in Wailuku. The initial DPPA studies will be referenced to provide a framework to implement the satellite parking locations.

A. METHODOLOGY – SATELLITE PARKING

For interim parking facilities, there are several distinct user groups that must be addressed, to minimize the impact to the current users of the lot. The 12-hour parking spaces are primarily used by State of Hawaii employees, County of Maui employees, and surrounding business employees. The 2-hour spaces are used more by short-term customers of the nearby stores, restaurants, and offices. Sometimes employees will use the 2-hour spaces in the lot or on the street, and move their car as needed to avoid traffic citations.

We will be using the parking counts completed by Downtown Parking and Planning Associates as a reference to the number of spaces occupied by the various user groups. Some parking counts were completed on a State and County furlough days, so it is possible to see the effect of those employees vacating the lot.

On a typical workday, with no State or County furloughs, the municipal lot 12-hour spaces will be occupied an average of 100% from 7:30am to 2:30pm, and may drop to about 80% occupancy by 4:00pm. The 2-hour spaces will also have an average occupancy of about 80% for much of the day. For comparison, a combined State and County furlough day will have an average of 25% less 12-hour spaces occupied (35 spaces). The 2-hour spaces will have about 50% less occupancy on the West side of the lot (17 spaces), and only about 20% less on the East side of the lot (7 spaces). Based on these average occupancies, we can project that roughly State and County user groups typically use 35 to 59 spaces.

Parking Type	Typical Occupancy	State & County Furlough Day	Difference	Number of Spaces Available
12 Hour	100% average	75% average	(25%)	35
2 Hour – West	85% average	35% average	(50%)	17
2 Hour – East	80% average	60% average	(20%)	7
			TOTAL ESTIMATED STATE & COUNTY USERS:	35 – 59

During the furlough day for the Judiciary only, there was about 10% more parking spaces available in the 12-hour, which indicates a basic quantity for the number of Judiciary users that park in the Municipal lot (20 to 31 spaces).[1]

Parking Type	Typical Occupancy	State Judiciary Furlough Day	Difference	Number of Spaces Available
12 Hour	100% average	85% average	(15%)	20
2 Hour – West	85% average	60% average	(25%)	8
2 Hour – East	80% average	73% average	(7%)	3
			TOTAL ESTIMATED STATE JUDICIARY USERS:	20 -31

This estimated number of State and County users will be treated as a "bare minimum," for planning purposes. We recommend that additional parking stalls be planned for these user groups to provide relief to the street parking supply.

To identify possible satellite parking locations, we have inventoried vacant properties within walking distance of the Wailuku Municipal Parking lot. The properties within this distance could serve the current users of the municipal lot, especially those businesses in close proximity. The other areas to look at are parking locations in close proximity to the County and State buildings, since the County and State employees use a number of the 12-hour spaces.

Based on initial discussions with the property owners, a short list of potential satellite locations has been created. Each property has been assigned an estimated number of parking spaces that could be accommodated, based on the general size of the property. The quantity of spaces is based on an average of roughly 300 square feet per stall, in addition to looking at the width of the property to verify space for the stalls and access aisle.

These locations are grouped into various options for each user group, starting with the most desirable locations and gradually becoming less feasible or desirable for the users.

[1] Downtown Parking & Planning Associates, Parking Management Plan (DRAFT)

B. RECOMMENDATIONS – COUNTY EMPLOYEE PARKING

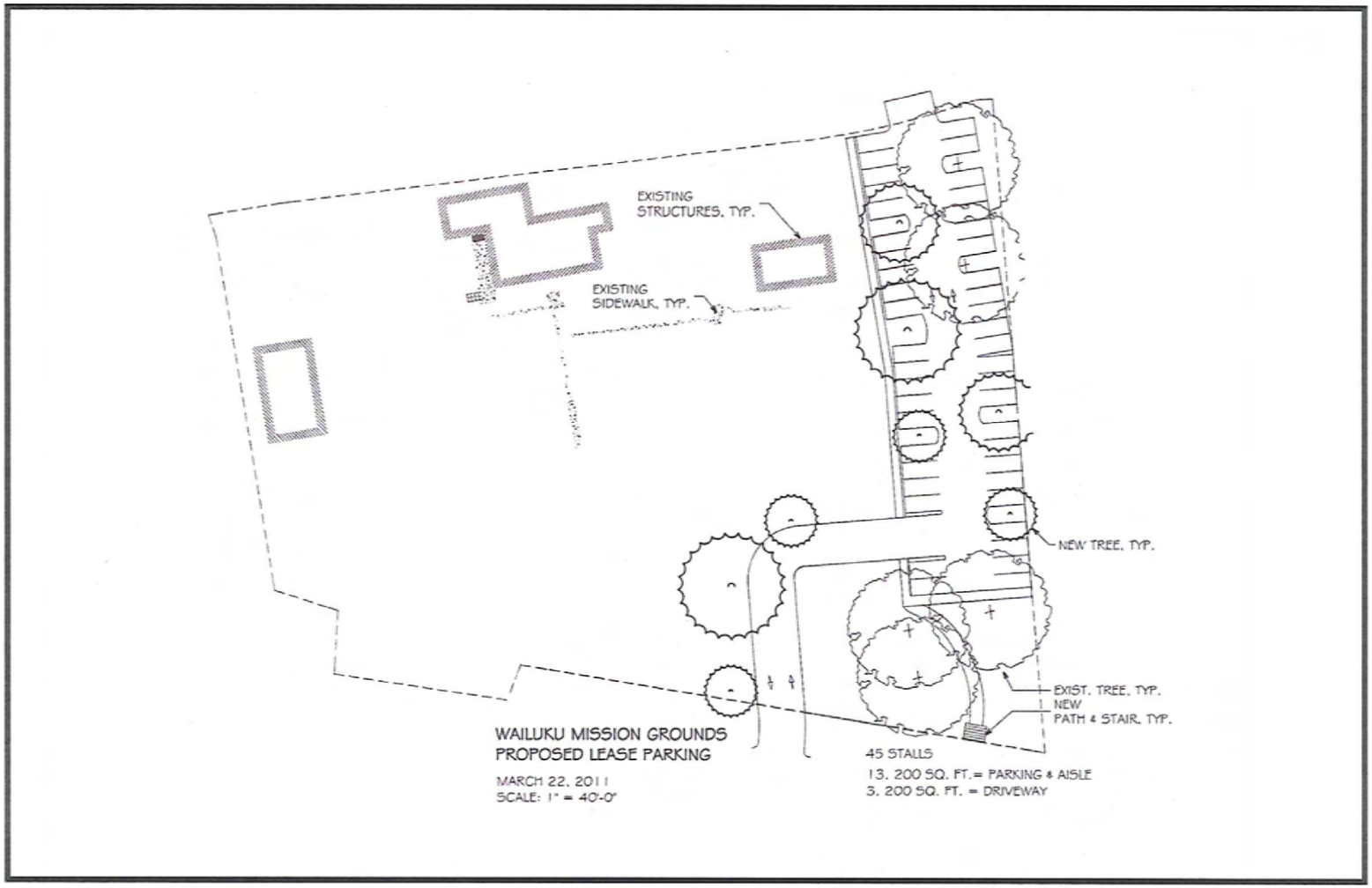
Preferred Option:

2307 Main Street

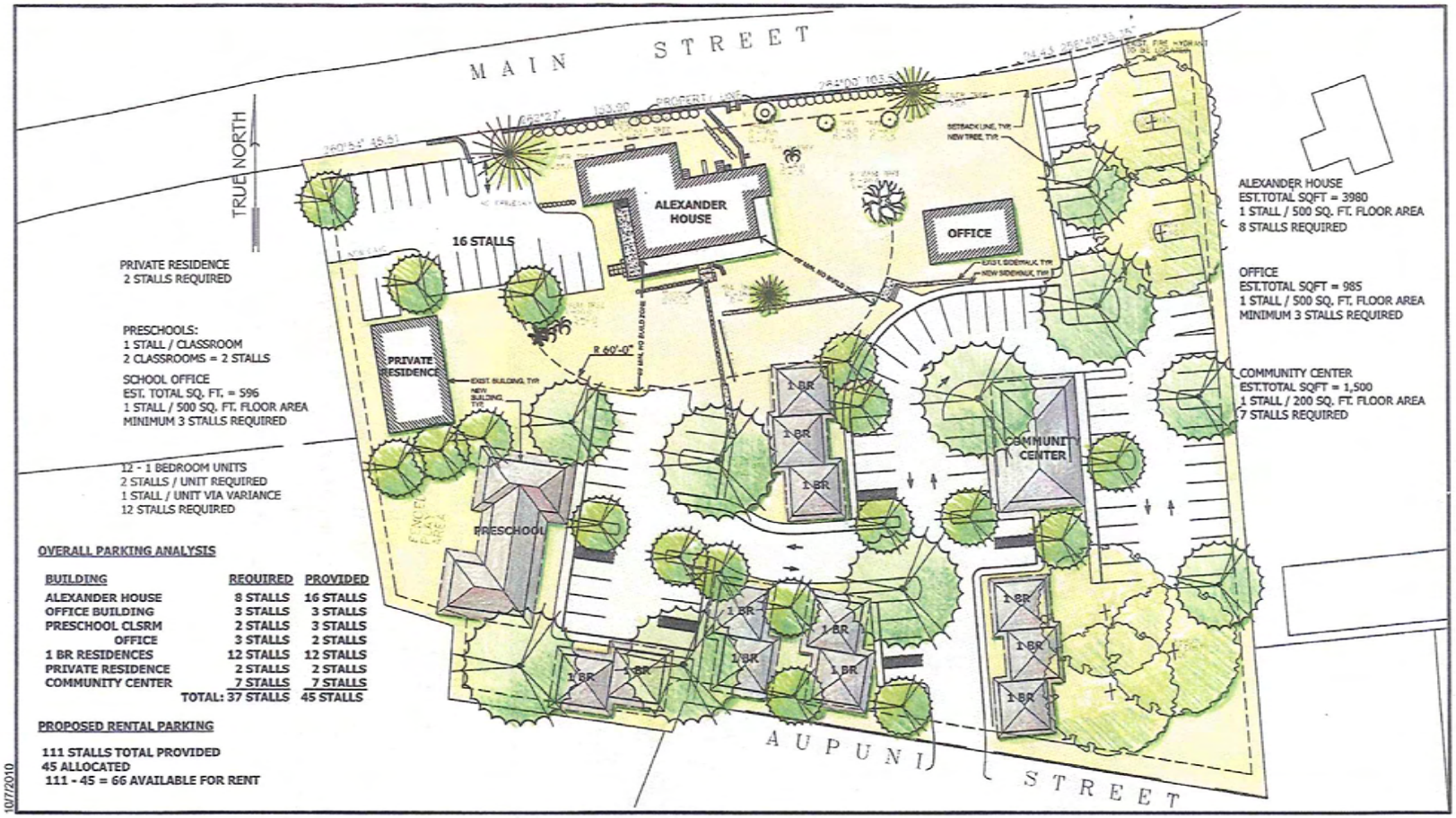


The prime location to provide County employee parking is the Wailuku Union Church property located at 2307 Main Street, TMK (2) 3-4-014:005. The County has used this property in the past for interim parking, and the County administration is currently in discussion with the Church about the possibility of leasing 45-66 stalls for the use of County employees. There is access to the property from Main Street, and it is only a short walking distance to the County buildings on High Street. Nishikawa Architects has met with the Development Coordinator at Wailuku Union Church and they are open to the possibility of the County leasing the property. The property may require a driveway permit and grading permit, depending on the level of improvements desired for the interim parking. It is not located in the Maui Redevelopment Area so it would not require the MRA approval process.

The following pages show the Maui County leased parking plan and the Mission Grounds Master plan, which were provided by Wailuku Union Church.



PROPOSED COUNTY LEASED PARKING



WAILUKU UNION CHURCH MASTER PLAN

RECOMMENDATIONS – COUNTY EMPLOYEE PARKING

Alternative #1:

1993 Kalawi Place



This 7,163 square foot property is only a quarter mile from the County buildings, on the corner of Kalawi Place and Kaohu Street. It would be a reasonable walking distance for County employees to reach the main County Buildings. Based on its size, it could offer parking for 15-20 vehicles. We would recommend the County look at additional parking areas, although this site may minimally address the interim parking needs. It is a fairly level site, with an existing chainlink fence running around the property. This property is not within the Wailuku Redevelopment Area, so it would not require an MRA approval process. It would need a driveway permit to improve access to the site. We have left messages with the owner but have not received a response to date.

RECOMMENDATIONS – COUNTY EMPLOYEE PARKING

Alternative #2:

60 Kanoa Street

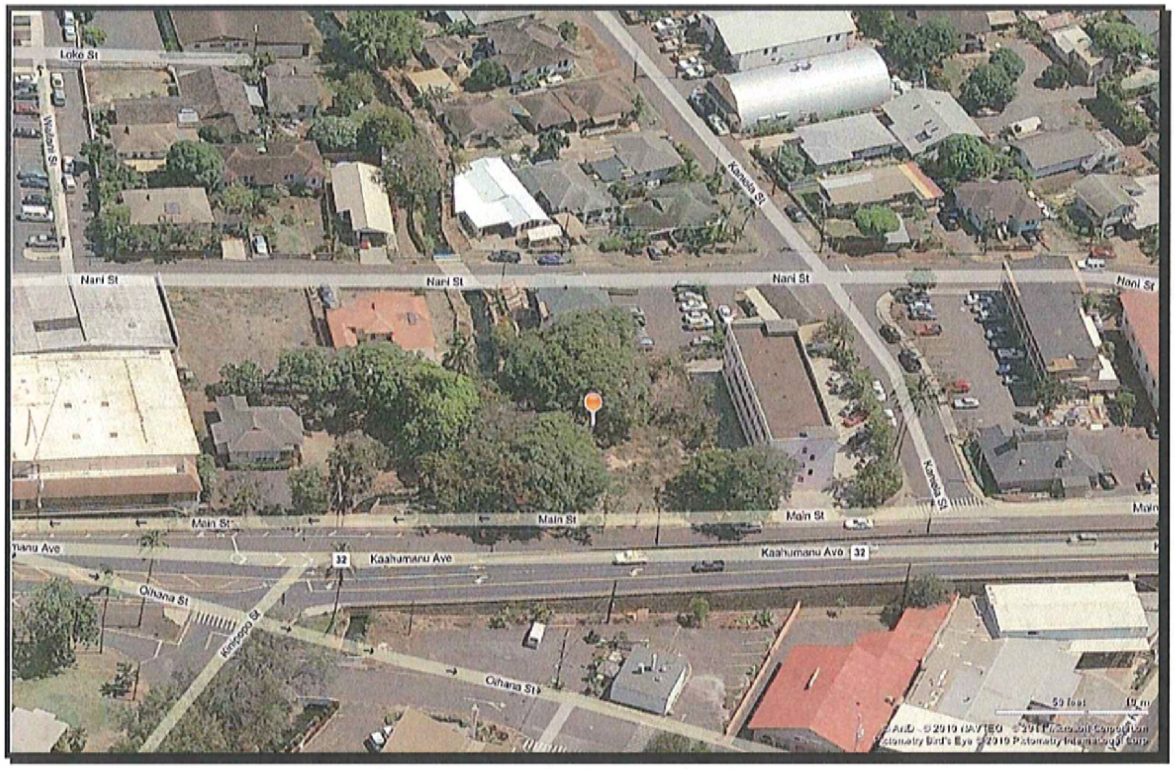


There is a 16,200 square foot property located at 60 Kanoa Street that is currently available for lease, owned by the Gary N. Fujinaka Trust. It is a level, vacant lot with gravel surrounded by a steel mesh fence. Based on its size, it could fit about 30-50 parking stalls. The drawback is that is about half a mile uphill walk to the County buildings, which may not be acceptable for the users. A shuttle could be provided during the early morning and late afternoon, but that would be an additional cost to the County and an inconvenience to County employees. This property is not located in the Maui Redevelopment Area, so the MRA approval process would not be required for it use. It may require a driveway permit for an improved access to the site.

RECOMMENDATIONS – COUNTY EMPLOYEE PARKING

Alternative #3:

1838 Lower Main Street

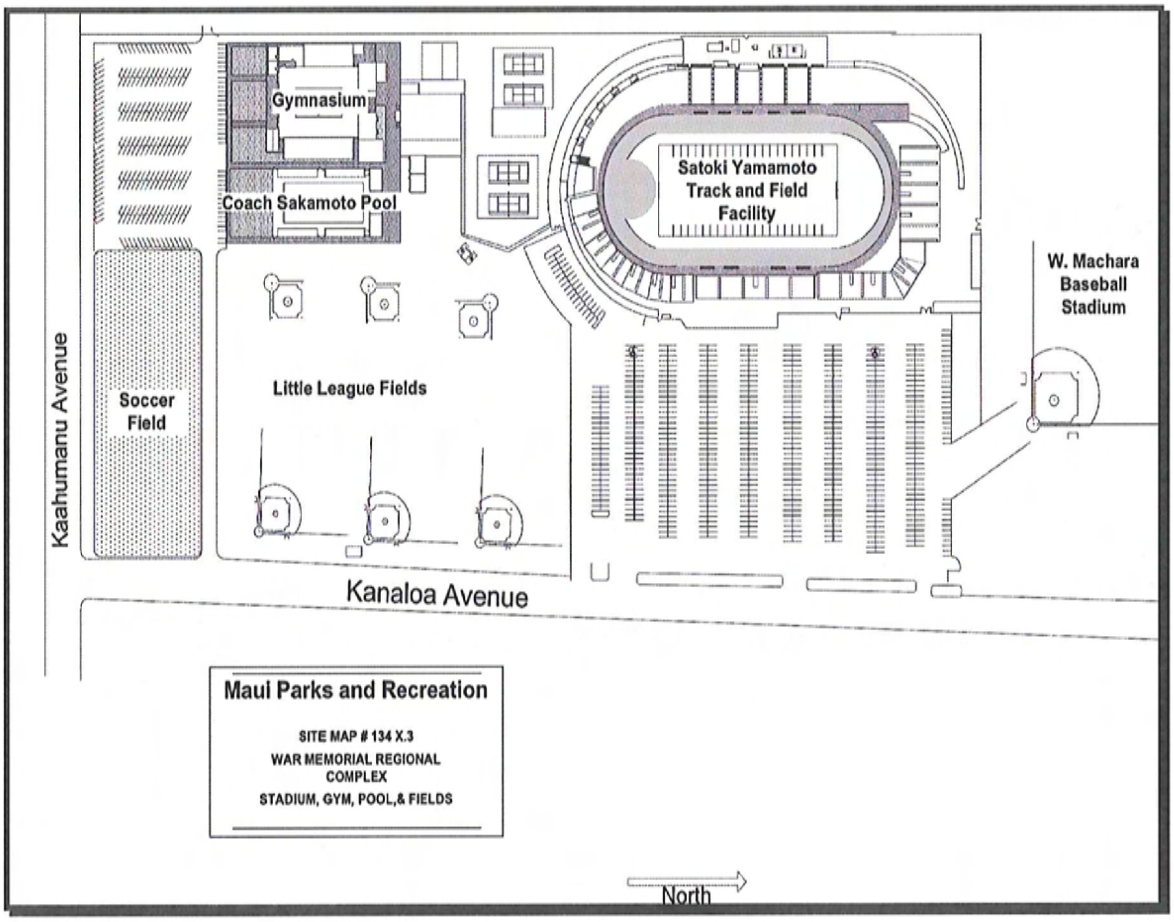


1838 Lower Main Street is a 16,352 square foot vacant lot overgrown with tall grass and some small trees. It is below the Ooka's Building and the raised overpass at the entry to Wailuku town. Based on its size, it can probably park about 40 to 50 vehicles. This site is about a half-mile walk to the County buildings, so it may require a shuttle to be accepted by employees. It is not located in the Maui Redevelopment Area, so it would not require the MRA approval process. Improvements to the property would require a grading permit and driveway permit. The owner's representative is willing to discuss the lease options with the County.

RECOMMENDATIONS – COUNTY EMPLOYEE PARKING

Alternative #4:

War Memorial Complex



War Memorial Complex is a County-owned facility used for sporting events and other large special events. It has excellent traffic flow capabilities, and there is generally extra parking available during the day. Unfortunately, it is located 1.5 miles from the County buildings in Wailuku, which is inconvenient for the users. There is a Maui Bus stop located nearby, but it would take over 30 minutes to arrive to the County Buildings in Wailuku based on the existing schedule. The County would need to create a special shuttle for this location to work effectively. On the positive side, all of the necessary infrastructure is in place and there would be no lease cost to the County. If this space is selected, the County will need to verify with Parks Department if there are certain days on the calendar are not available (County Fair, track meets, football games, etc).

Parking Capacity: 900; main lots: 130; event lots: 450, street: 100; overflow: 220

C. RECOMMENDATIONS – STATE EMPLOYEE PARKING

Preferred Option:

2091 West Vineyard



This property is a 11,627 square foot vacant lot with some existing trees and landscaping. It is ideally located at the corner of Church Street and Vineyard, a short walk to the Judiciary, the State Building and other state offices. It would require minimal improvements to provide parking; it is actually currently used for overflow parking during the Wailuku First Friday events. We estimate that 25 to 30 parking spaces may be able to fit, based on the lot area. It has recently been purchased by Armstrong Builders, and is still listed for sale. The property is located in the Maui Redevelopment Area, so it will require MRA approval for the parking lot use. A driveway permit and grading permit would also be required.

RECOMMENDATIONS – STATE EMPLOYEE PARKING

Alternative #1:

2086 Main Street



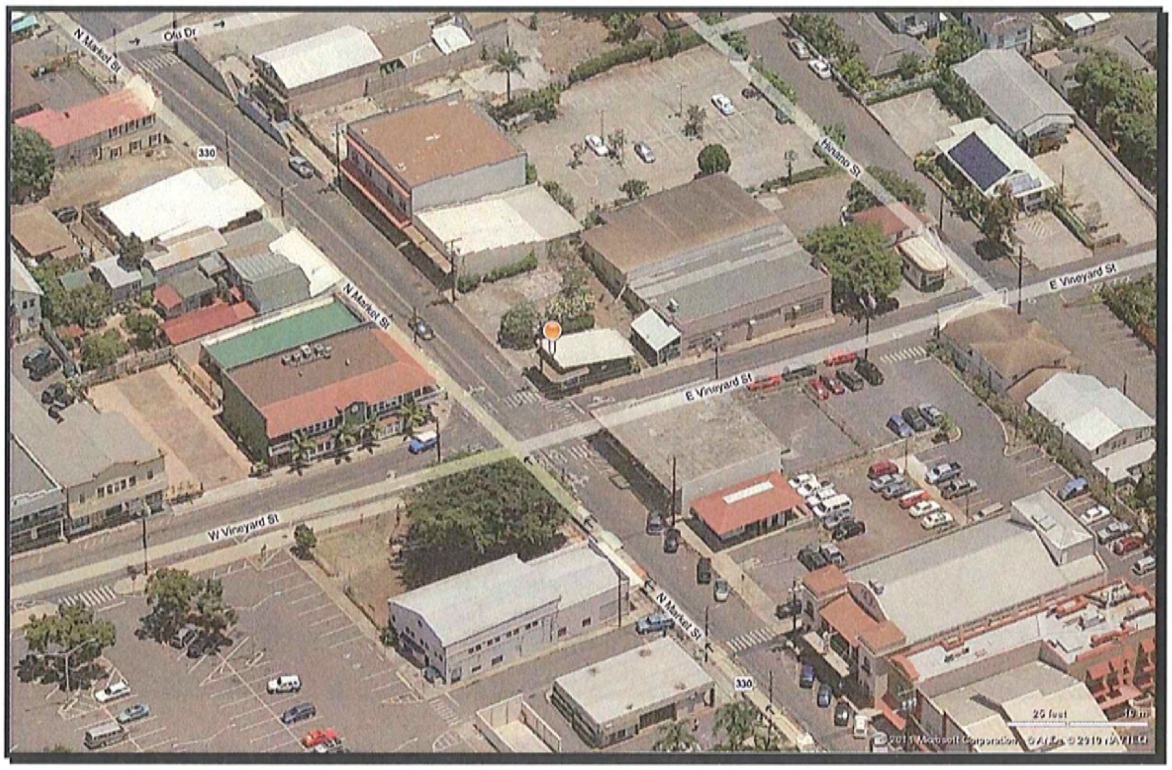
This property is a 14,003 square foot vacant lot paved with asphalt with an older service station building that is currently vacant. It has vehicular access from both Church Street and Main Street. It is very close to the State Buildings and existing municipal parking lot, but the building would require demolition to maximize the number of parking spaces. Based on the lot size, it may fit parking for 20 to 40 vehicles. It is currently owned by Azalea Communications LCC and is listed for sale or lease. This site is located in the Maui Redevelopment Area, and will require MRA approval for the parking lot use. A driveway repair permit may be required to improve access to the site.

D. RECOMMENDATIONS – MERCHANT / CUSTOMER / VISITOR PARKING

Preferred Option:

Since there are a number of smaller lots which can be used to provide interim parking for the merchants, customers, and visitors to Wailuku these recommendations will include several properties for each option.

104 N. Market Street



This 4,852 square foot property is home to an old commercial building that used to be "Gilbert's Formal Wear" and some deteriorated concrete slabs and plumeria trees. There is a narrow alley access from East Vineyard street and no driveway access from Market Street. Depending how much lot area is available, this property could provide parking for up to 15 vehicles. Full use would require demolition of the small commercial building, which could prove problematic since it is over 50 years old and would require SHPD review. Without the demolition, this lot could provide parking for about 10 vehicles, convenient to Market Street and Vineyard Street businesses. It is located in the Wailuku Redevelopment Area, so the parking use would require MRA approval. A driveway repair permit would be required to improve the access to the site.

RECOMMENDATIONS – MERCHANT / CUSTOMER / VISITOR PARKING

Preferred Option (continued):

91. N. Market Street

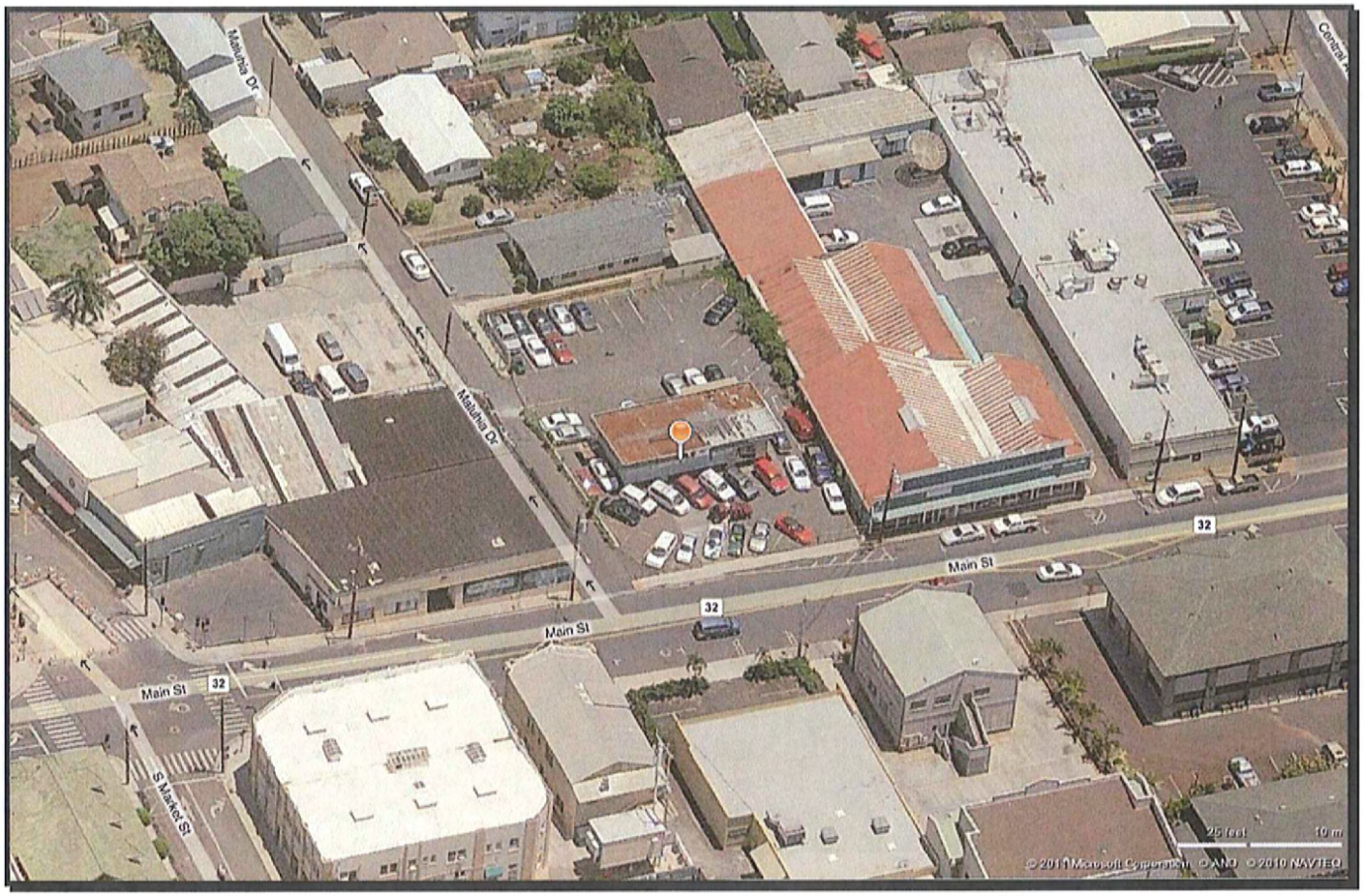


Currently known as "Banyan Tree Park" this 7,908 square foot property is ideally located at the corner of Market Street and Vineyard Street. It is grassed and graveled, with a small white picket fence surrounding the lot. There is a Banyan tree near the front of the property, and the lot is currently used for as a taco truck stand and as vendor space during Wailuku First Friday. Depending on how much of the lot is available, about 15-20 cars could be parked on the site. The owner's representative has indicated they would be willing to lease some of the lot for interim parking. To develop the property for parking, it may require improved access from the Municipal Lot or from Vineyard Street, with a driveway permit. It is located in the Maui Redevelopment Area, so the parking use would need to be reviewed by the MRA.

RECOMMENDATIONS – MERCHANT / CUSTOMER / VISITOR PARKING

Preferred Option (continued):

1960 Main Street / 16 Maluhia Drive



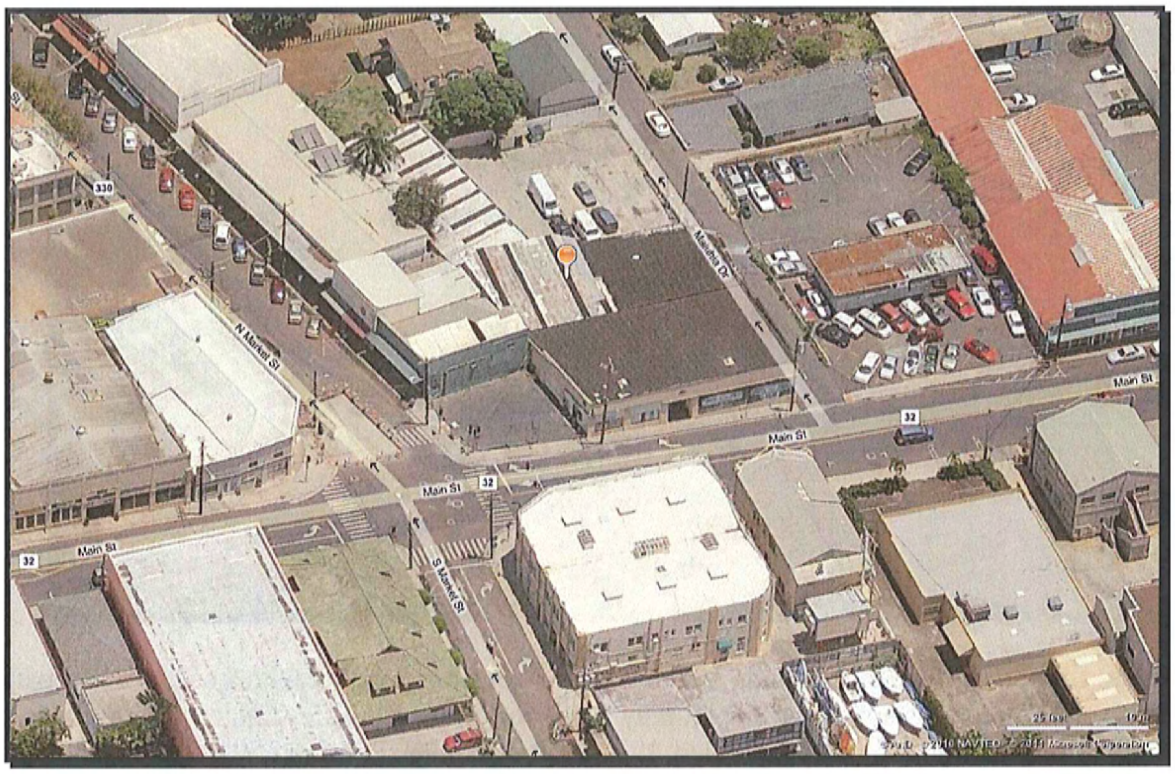
These properties are located east of Market Street, on the corner of Main Street and Maluhia. They are only a short walk from most of the businesses on Main and Market. These two lots comprise an area of over 13,000 square feet combined, which may allow for parking 30-40 vehicles. There is an existing building which is being used as a used car lot / rental that would have to be demolished to maximize the parking area. The owner has indicated that he may be willing to demolish the building to allow for the parking. There is existing access from Maluhia Drive, and the property is already paved with asphalt concrete, which minimizes the cost of the improvements. The properties are within the Maui Redevelopment Area, but since the interim parking use is nearly the same as the existing it may not require an approval process.

RECOMMENDATIONS – MERCHANT / CUSTOMER / VISITOR PARKING

Alternative #1:

If the first group of suggested properties were not available or feasible, this secondary group of properties would be an alternative option for interim parking.

1980 Main Street

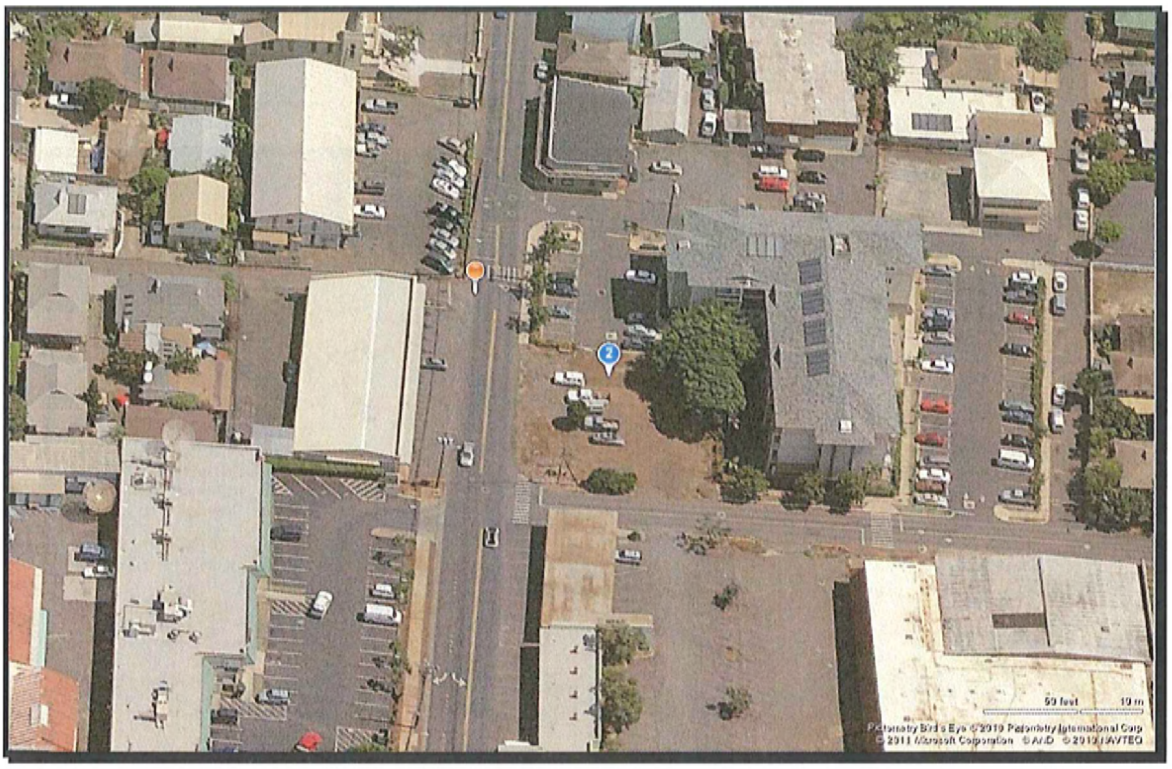


This property is located on the corner of Market and Main Street. It comprises an area of over 20,552 square feet, which may allow for parking 50-60 vehicles. There is an existing building which is would have to be demolished to maximize the parking area. The building is fairly large, so the demolition cost may be high. If the building is demolished, there may also be a cost to improve the surface of the lot. The property is within the Wailuku Redevelopment Area, so the parking use would require an MRA approval process.

RECOMMENDATIONS – MERCHANT / CUSTOMER / VISITOR PARKING

Alternative #1 (continued):

32 Central Avenue



This 9,539 square foot property is located adjacent to a senior housing complex with a surrounding parking lot (see the number 2 marker). Based on its size, it may allow for parking 20-25 vehicles. The lot is vacant, so the cost of a building demolition can be avoided. It is located about a six minute walking distance from the existing municipal lot. The property is within the Wailuku Redevelopment Area, so the parking use would require an MRA approval process. A driveway permit would be required to improve access to the site.

RECOMMENDATIONS – MERCHANT / CUSTOMER / VISITOR PARKING

Alternative #2:

This third group of properties can provide parking if the first two options not available.

97 Central Avenue

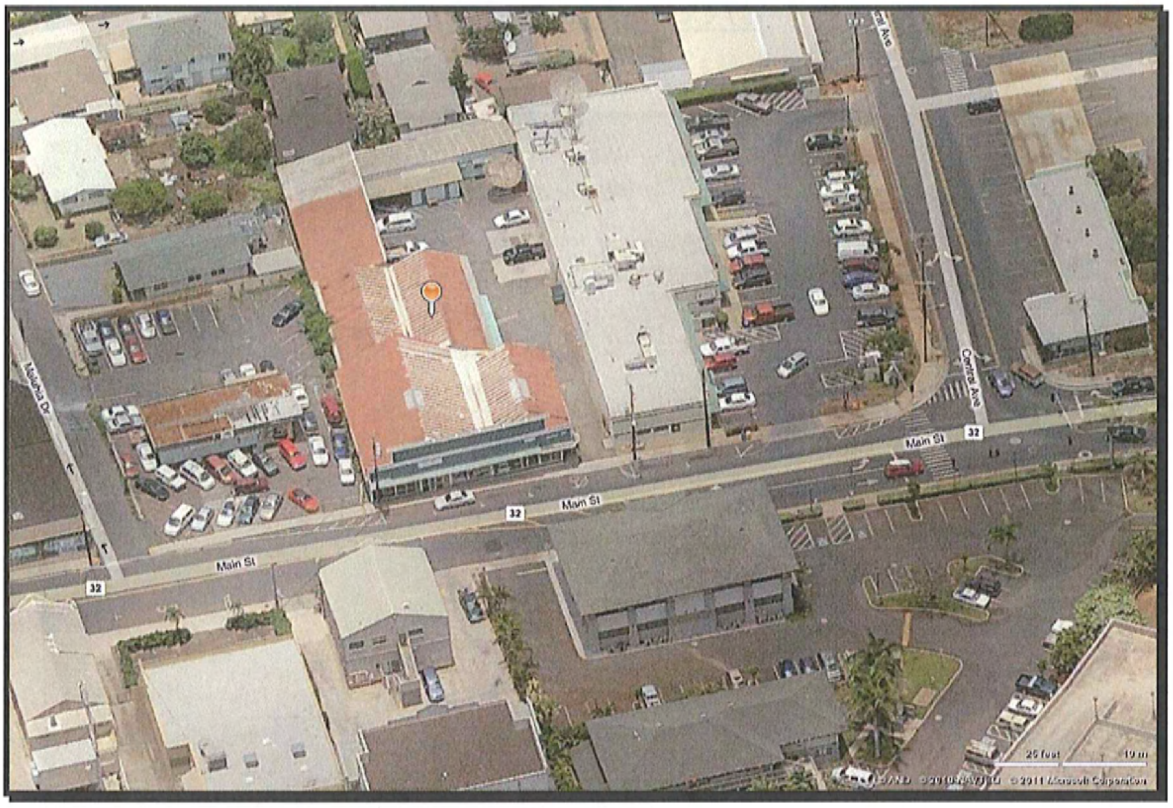


97 Central Avenue is a 13,260 square foot property with a small concrete block building that is currently vacant. If the existing building is demolished, the site may provide parking for up to 40 vehicles. There is an existing driveway access to the site that may need to be improved with a driveway repair permit. Although the property is only about a five-minute walk from the Wailuku Municipal lot, the sidewalks along Vineyard are marginal, so the location is not ideal for safe access to Market Street. In addition, the Vineyard-Central intersection is already fairly congested, so it may not be ideal to create more traffic in this area. The property is within the Wailuku Redevelopment Area, so the parking use would require an MRA approval process.

RECOMMENDATIONS – MERCHANT / CUSTOMER / VISITOR PARKING

Alternative #2 (continued):

1942 Main Street



This 22,154 square foot property is home to a large commercial building that covers much of the site. If this building were demolished, the site could accommodate up to 60 parking spaces. Based on the size of the building, this site is not rated as a prime interim parking location due to the cost and difficulty of the demolition. This property is located a few minutes walk from the Wailuku Municipal Lot, with a good sidewalk connection to Market Street. There is an existing driveway access off of Main Street that connects to a rear parking lot area. The property is within the Wailuku Redevelopment Area, so the parking use would require an MRA approval process.

E. TRANSPORTATION DEMAND MANAGEMENT

In 2009, the County of Maui employed approximately 602 employees in Wailuku Town, but only a portion of County employees are granted parking spaces, resulting in a deficit of 354 spaces[2]. The Parking Management Plan by DPPA has come to a similar conclusion: the "Government Center" subarea with State and County offices has a deficit of about 262 parking spaces, based on modeling the floor areas of the buildings. To address this shortage, there are a number of options the County of Maui should consider:

Subsidized Public Transportation
To encourage use of the Maui Bus, the County could offer employees that forgo using a County parking space a bus pass, either free or at a reduced rate. Reducing the parking demand can save the County revenue in terms of roadway maintenance, future parking facility construction and maintenance, and enforcement of parking. The alternative transportation can be a benefit to the employee as well—the fuel cost savings could be about $800 a year without a subsidized pass, and about $1350 with a free bus pass (based on an average 20 mile round trip commute). If a family could live with one less vehicle in their household, their additional savings could be $5,716.[3] Reducing the number of vehicles on the road can improve the air quality in the town and lessen Hawaii's reliance on imported fossil fuels.

County "Ride Share"/Van Pool Program
Maui County could offer employees assistance with a subsidized "Ride Share" or VanPool program. The County email system can be used to connect commuters living in similar areas, especially for those travelling longer distances from Upcountry, South Maui or West Maui. Maui County's effort can serve as an exemplary model to encourage other employers to take advantage of the program.

F. PUBLIC RELATIONS

The Wailuku community has been waiting a number of years for the construction of the Municipal Parking Structure, it has been over 20 years since the project was first proposed. Although the community understands the need for the structure, there is a legitimate concern that the construction process could negatively impact businesses, especially if the parking supply is reduced, or seems more difficult to use during construction.

To minimize this impact, both perceived and real, a robust public relations effort should be implemented. Working with Wailuku community organizations, the County can generate excitement about the parking structure construction to encourage the public to come see what is happening in Wailuku. The County can create a public information campaign to clearly identify the interim parking locations, to maintain the traffic to local businesses. The campaign could be titled, "Come to Wailuku- We Saved You a Space!" Using alternative transportation such as the Maui Bus, carpooling, or bicycling can be encouraged; businesses can look at creative ways to promote these uses. Maps for the interim parking locations could be available at stores, restaurants, and other businesses. Temporary "Parking" signs can be located at the major roadways to

[2] Wailuku Campus Space Study Final Report, January 2009
[3] http://www.publictransportation.org/tools/fuel-savings.asp##gasCalculator

help direct visitors, customers, and others coming to Wailuku to the appropriate location. The parking violation fees can be waived or reduced by the County during the construction process, especially for first time offenders.

APPENDIX:

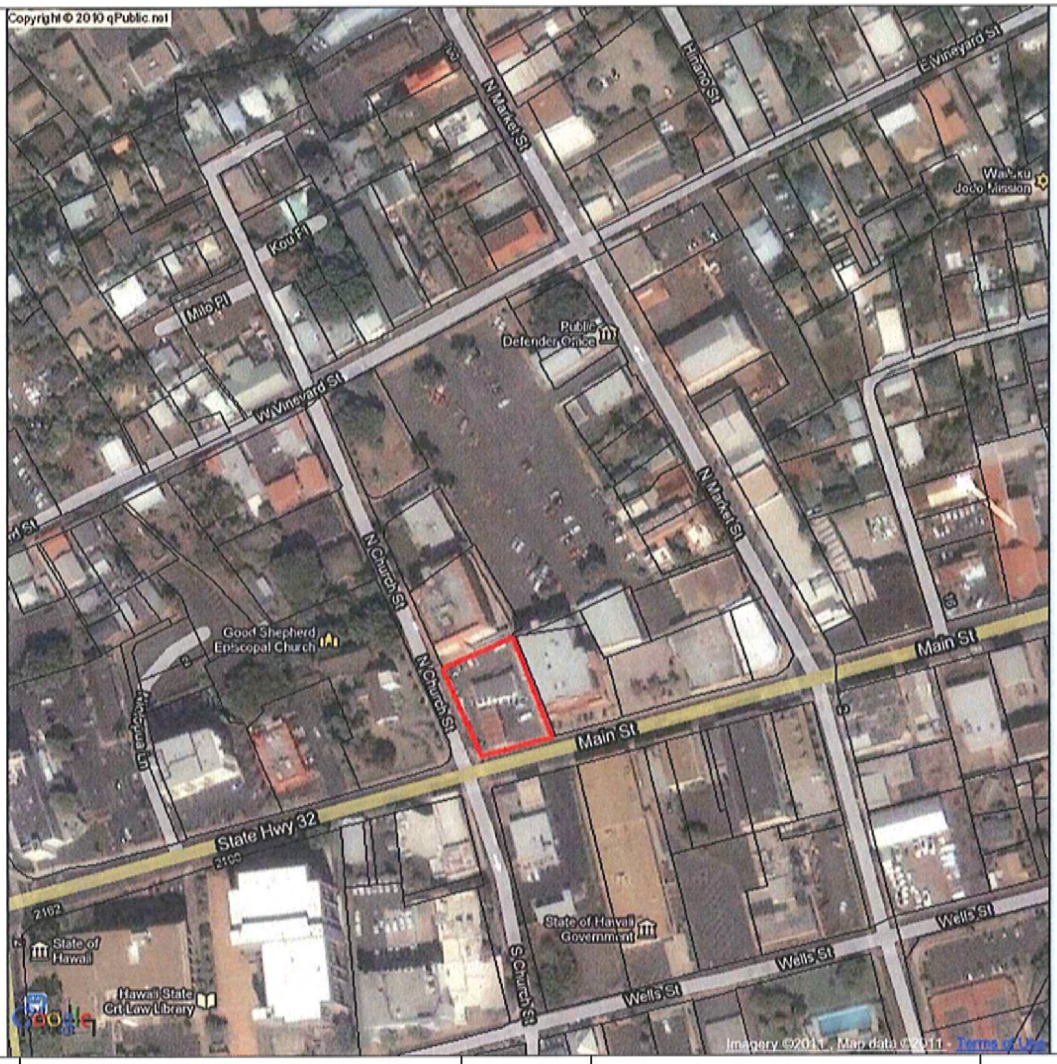
SATELLITE PARKING LOCATION INVENTORY

REFERENCES

SATELLITE PARKING LOCATIONS

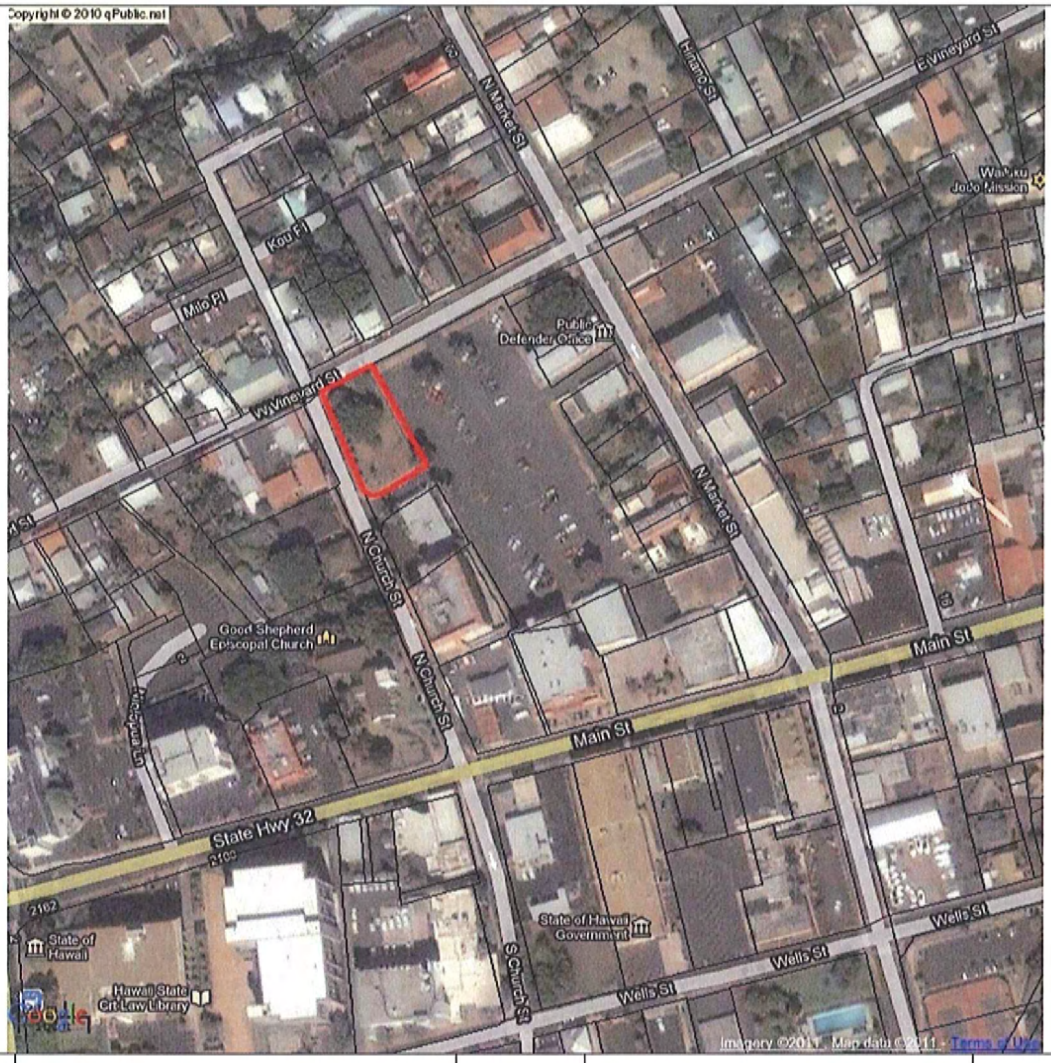
TMK	Address	Owner	Land Area (sf)	Min Number of Spaces	Max Number of Spaces	Walking Distance to Lot (ft)	Walking Time to Lot (Min)	Description
34013098	2086 Main Street	AZALEA COMMUNICATIONS LLC	14003	20	40	0	0	Existing gas station structure
34013060	2091 W Vineyard	RDD LLC	11627	25	30	0	0	Existing trees
34013057	91 N Market Street	MAKINO ENTERPRISES	7908	15	20	0	0	Existing trees
34017019	104 N Market Street	FIRST HAWAIIAN BANK	4852	10	15	150	.5	Existing building, concrete slabs
34012016	1980 Main Street	Starr Properties LLC	20552	50	60	300	2	Existing building
34012006	1960 Main Street	Starr Properties LLC	9460	20	25	430	2	Existing building
34012004	1942 Main Street	Starr Properties LLC	22154	50	60	520	3	Existing building
34012061	16 Maluhia Drive	STARR EQUITIES INC	4562	10	12	550	3	Parking Area
34012037	97 Central Avenue	MAUI PROFESSIONAL ASSOC	13260	30	40	820	5	Existing building
34012046	32 Central Avenue	ARNOLD & MARJORIE MAGBUAL	9539	20	25	1050	6	Vacant Lot
34018001	1838 Lower Main Street	CARPET, LINOLEUM, & SOFT TILE	16352	40	50	1314	7	Vacant Lot
34014005	2307 Main Street	WAILUKU UNION CHURCH	115843	45	66	1370	8	Grassy area
34010034	60 Kanoa Street	FUJINAKA,GARY N TRUST	16200	30	50	1400	8	Vacant Lot
34004042	1993 KALAWI PL	Albert Chee	7163	15	20	1840	10	Vacant Lot with Retaining Wall
38007055	1585 W Kaahumanu	County of Maui	1677611	100	200	5200	25	County Park facility

2086 MAIN STREET: (2) 3-4-13:098



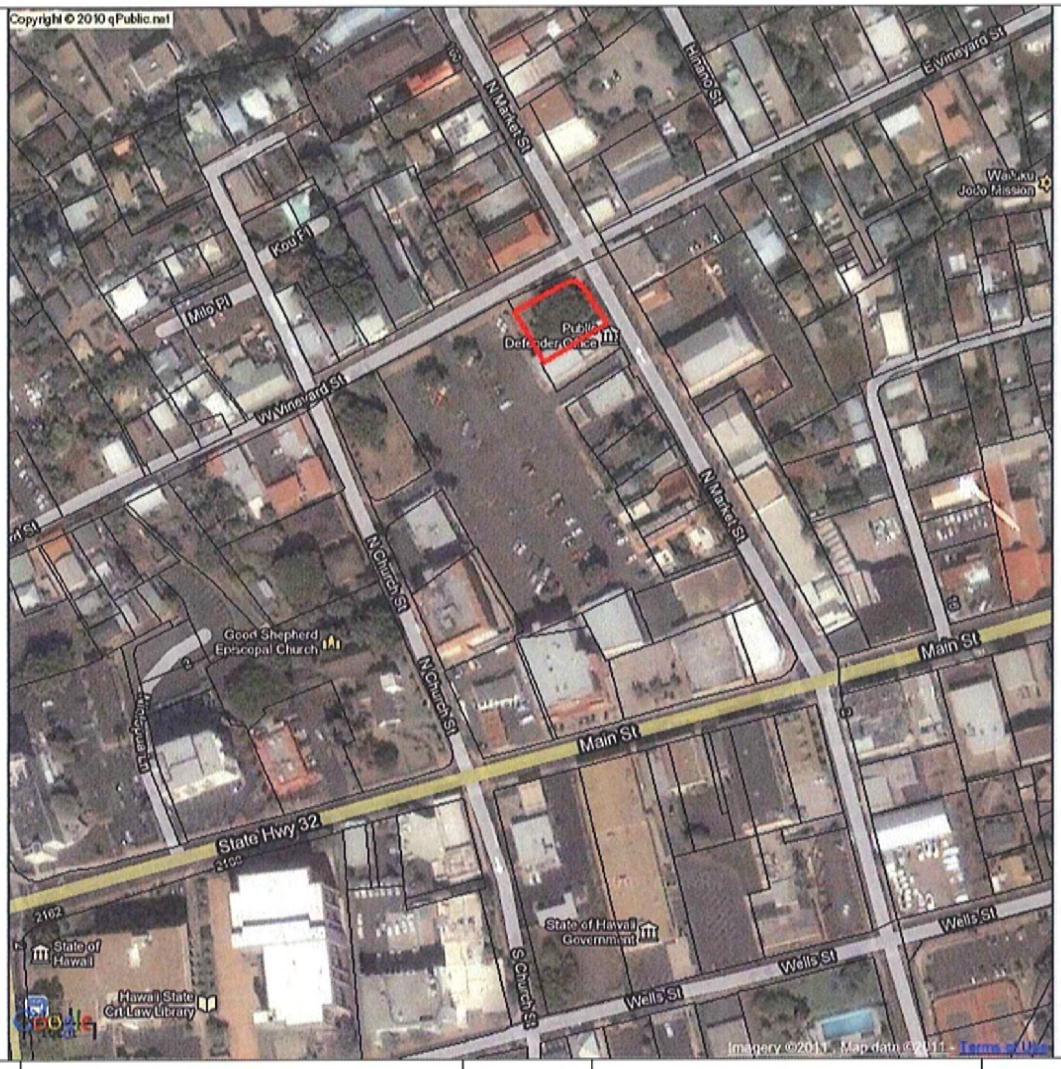
Owner:	Azalea Communications, LLC		**Parking Spaces:**	20-40 stalls
Land Area:	14,003 square feet		**Walking Distance to Municipal Lot:**	0 feet
Description:	Existing gas station structure with paved parking lot, access from Main Street and Church Street		**Development Permits Required:**	Demolition Permit, MRA Use Permit
Property Status:	Listed for sale or lease		**Areas Served:**	State, County, Downtown

2091 WEST VINEYARD: (2) 3-4-13:060



Owner:	ARMSTRONG HOMES LTD		**Parking Spaces:**	25-30 stalls
Land Area:	11,627 square feet		**Walking Distance to Municipal Lot:**	0 feet
Description:	Existing vacant lot with trees and hedges, access from N. Church Street		**Development Permits Required:**	MRA Use Permit
Property Status:	Listed for sale		**Areas Served:**	State, County, Downtown

91 N. MARKET STREET: (2) 3-4-13:057



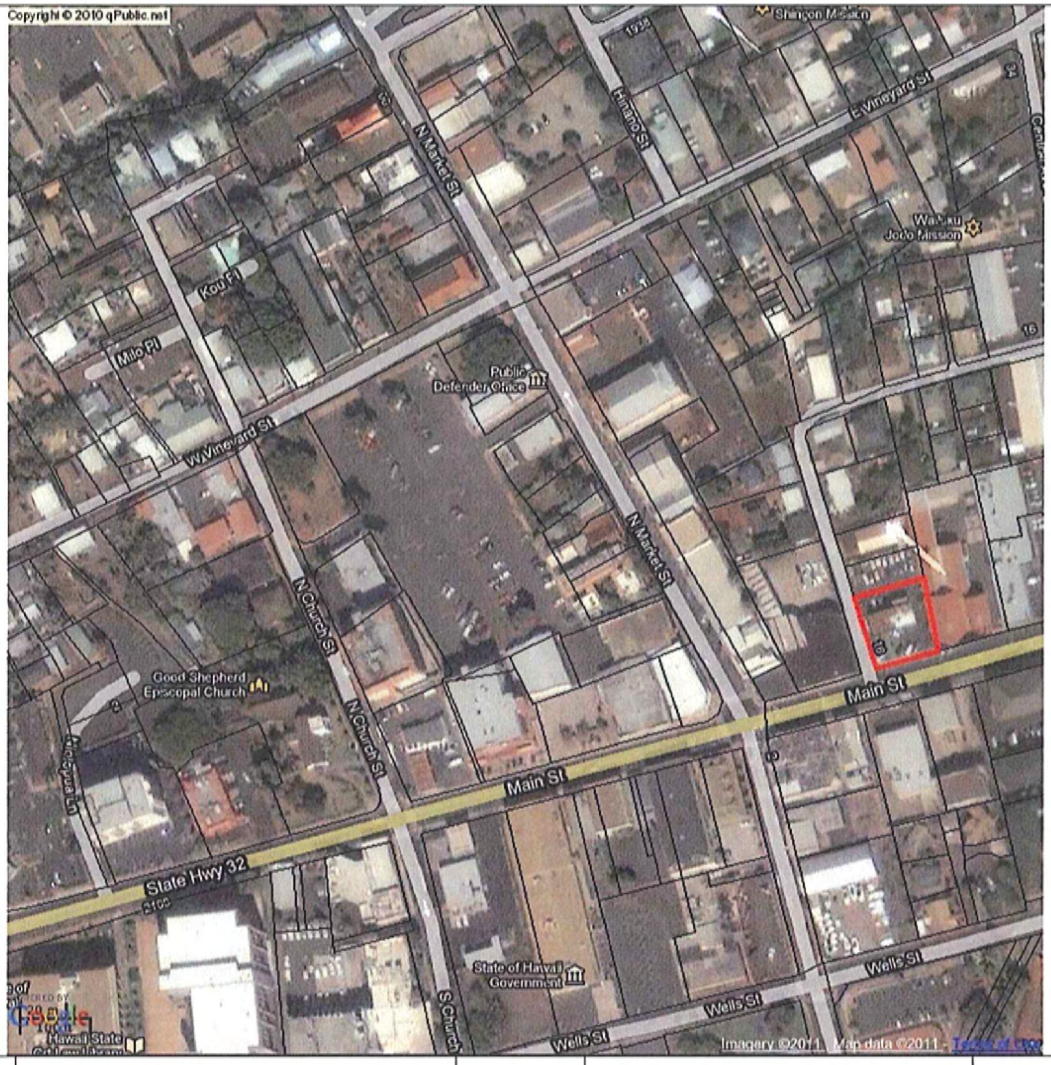
Owner:	MAKINO ENTERPRISES		**Parking Spaces:**	15-20 stalls
Land Area:	7,908 square feet		**Walking Distance to Municipal Lot:**	0 feet
Description:	"Banyan Tree Park" with existing trees and grass		**Development Permits Required:**	MRA Use Permit
Property Status:	Available		**Areas Served:**	State, County, Downtown

104 NORTH MARKET: (2) 3-4-17:060



Owner:	FIRST HAWAIIAN BANK		**Parking Spaces:**	10-15 stalls
Land Area:	4,852 square feet		**Walking Distance to Municipal Lot:**	150 feet
Description:	Existing building, concrete slabs, trees		**Development Permits Required:**	Demolition (SHPD), MRA Use Permit
Property Status:	Listed for sale		**Areas Served:**	Downtown

1960 MAIN STREET: (2) 3-4-12:006



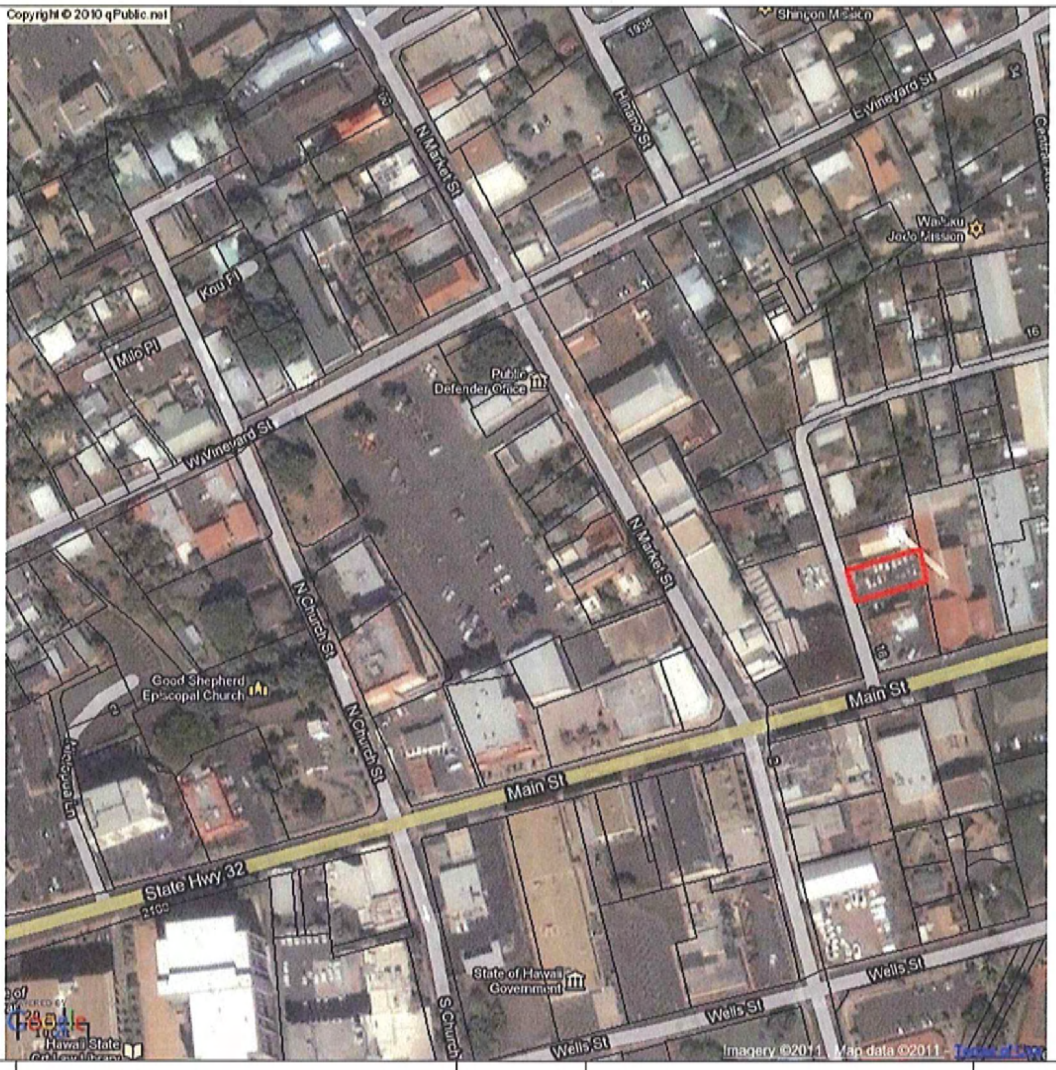
Owner:	Starr Properties, LLC		**Parking Spaces:**	20-25 stalls
Land Area:	9,460 square feet		**Walking Distance to Municipal Lot:**	430 feet
Description:	Existing building in use		**Development Permits Required:**	Demolition Permit, MRA Use Permit
Property Status:	Lease with County possible		**Areas Served:**	State, County, Downtown

1942 MAIN STREET: (2) 3-4-12:004



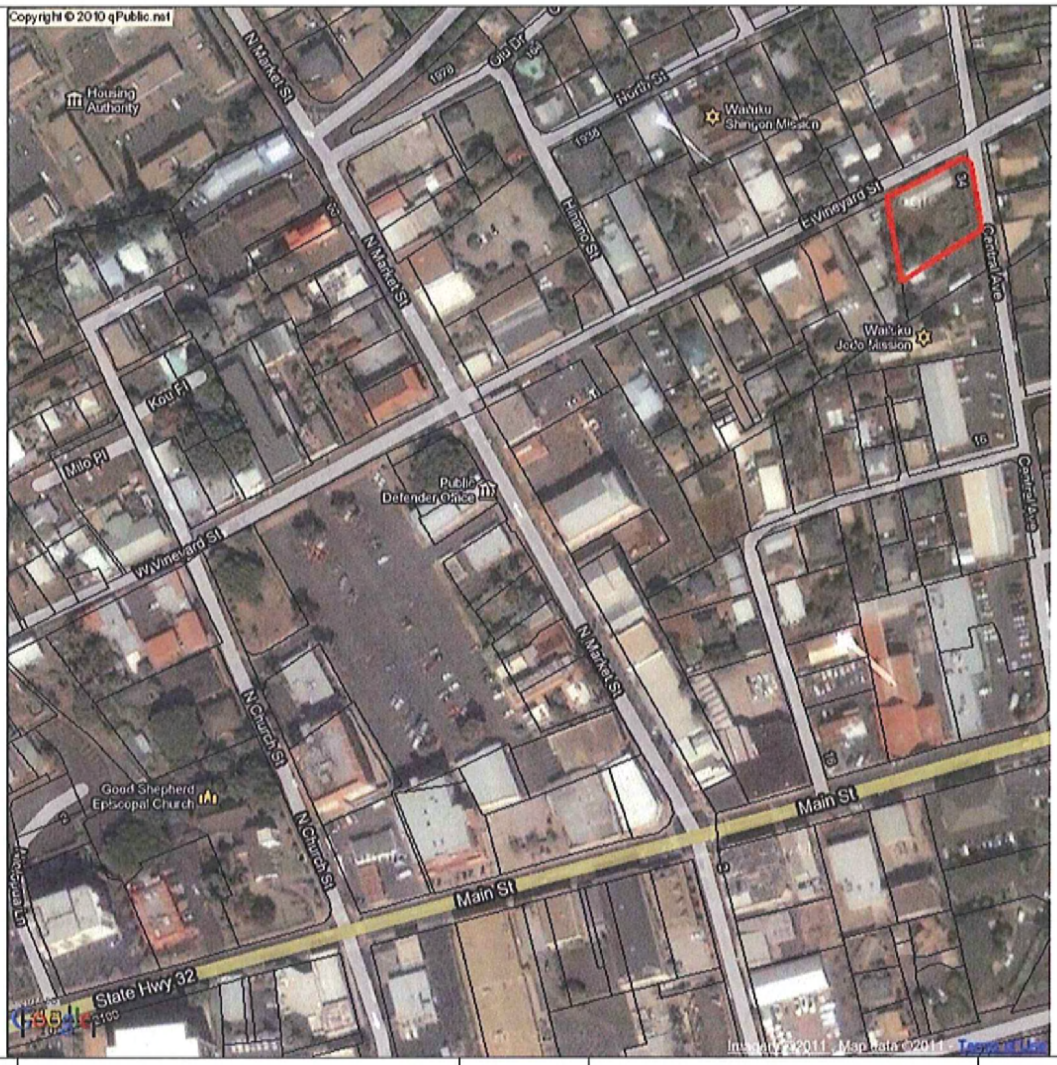
Owner:	Starr Properties, LLC		**Parking Spaces:**	50-60 stalls
Land Area:	22,152 square feet		**Walking Distance to Municipal Lot:**	520 feet
Description:	Existing building in use		**Development Permits Required:**	Demolition Permit, MRA Use Permit
Property Status:	Lease with County possible		**Areas Served:**	State, County, Downtown

16 MALUHIA DRIVE: (2) 3-4-12:061



Owner:	STARR EQUITIES, INC.		**Parking Spaces:**	10-12 stalls
Land Area:	4,562 square feet		**Walking Distance to Municipal Lot:**	550 feet
Description:	Existing parking area		**Development Permits Required:**	Demolition Permit, MRA Use Permit
Property Status:	Lease with County possible		**Areas Served:**	State, County, Downtown

97 CENTRAL AVENUE: (2) 3-4-12:037



Owner:	Maui Professional Association		**Parking Spaces:**	30-40 stalls
Land Area:	13,260 square feet		**Walking Distance to Municipal Lot:**	820 feet
Description:	Existing building (vacant)		**Development Permits Required:**	Demolition Permit, MRA Use Permit
Property Status:	Demo required		**Areas Served:**	Downtown

32 CENTRAL AVENUE: (2) 3-4-12:046



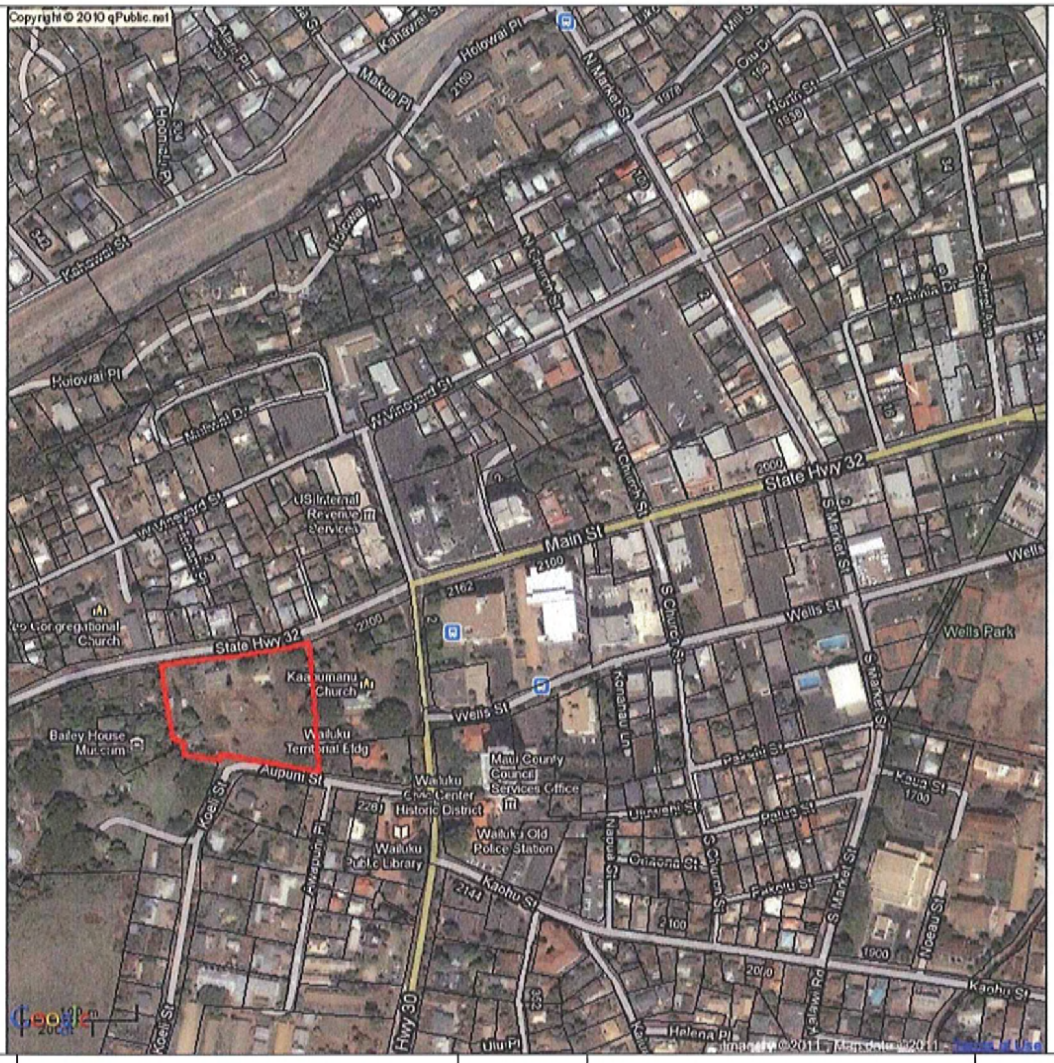
Owner:	Arnold & Marjorie Magbual		**Parking Spaces:**	20-25 stalls
Land Area:	9,539 square feet		**Walking Distance to Municipal Lot:**	1,050 feet
Description:	Vacant lot		**Development Permits Required:**	MRA Use Permit
Property Status:	Lease with County possible		**Areas Served:**	Downtown

1838 LOWER MAIN STREET: (2) 3-4-18:001



Owner:	Carpet, Linoleum, & Soft Tile		**Parking Spaces:**	40-50 stalls
Land Area:	16,352 square feet		**Walking Distance to Municipal Lot:**	1,314 feet
Description:	Vacant lot, overgrown grass and trees		**Development Permits Required:**	Driveway Permit, Grading Permit
Property Status:	Listed for sale, lease with County possible		**Areas Served:**	State, County, Downtown

2307 MAIN STREET: (2) 3-4-14:005



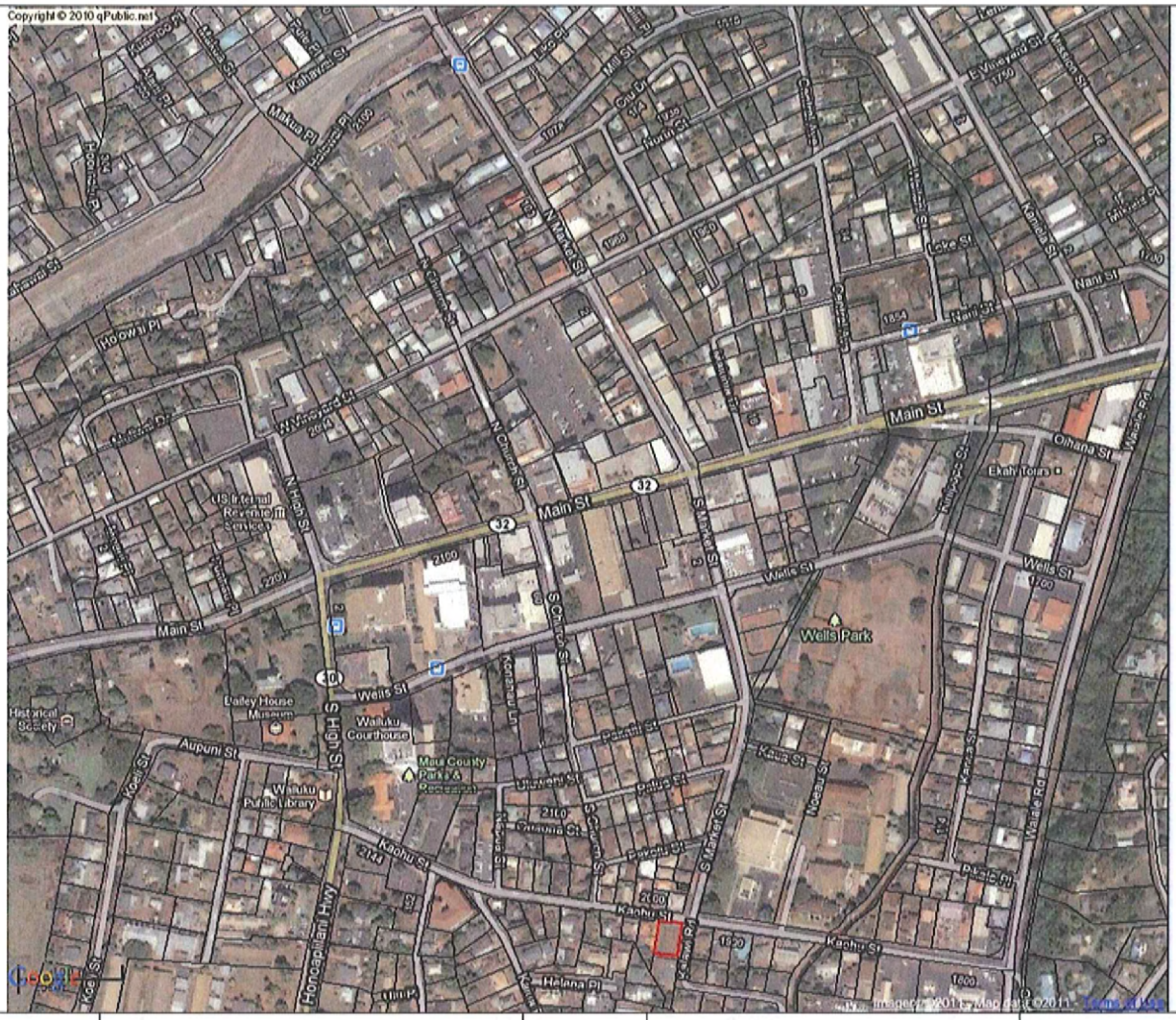
Owner:	Wailuku Union Church		**Parking Spaces:**	45-66 stalls
Land Area:	115,843 square feet		**Walking Distance to Municipal Lot:**	1370 feet
Description:	Existing buildings, grassy area		**Development Permits Required:**	Driveway permit, Grading Permit
Property Status:	Lease with County possible		**Areas Served:**	State, County

60 KANOA STREET: (2) 3-4-10:034



Owner:	Gary N Fujinaka Trust		**Parking Spaces:**	30-50 stalls
Land Area:	16,200 square feet		**Walking Distance to Municipal Lot:**	1400 feet
Description:	Vacant Lot with gravel		**Development Permits Required:**	Driveway permit
Property Status:	Listed for lease, lease with County possible		**Areas Served:**	Downtown

1993 KALAWI PLACE: (2) 3-4-004:042


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Main St
Wells St
Wells Park
Kaahu St
Kalawi Pl
Kalawi St
Kahului St
Mikiua Pl
Hoowili Pl
N Market St
S Market St
N High St
S High St
Honoapiilani Hwy
Aupuni St
Wailuku Courthouse
Bailey House Museum
Historical Society
Wailuku Public Library
Maui County Parks & Recreation
US Internal Revenue Service
Ekahi Tours
Olinana St
Lono Ave
Waiale Rd
Kaua St
Nani St
Lono St
Helena Pl
Kaohu St
Kahoa Pl
Kahoa Ct
Kanoa St
Kaniela St
Kinoea St
Kalialinui St
Kahookele St
Kahoku St
Kaiwi St
Kaiwi Pl
Kaiwi Ct
Kaiwi Ln

REFERENCES

Munekiyo & Hiraga, Wailuku Campus Space Study Final Report, January 2009.

County of Maui, Department of Planning, Wailuku Redevelopment Area Zoning & Development Code, September 2002.

Progressive Urban Management Associates, Market-Based Plan for Wailuku, September 2010.

Downtown Parking & Planning Associates, Parking Management Plan for Wailuku, June 2011.

1980 MAIN STREET: (2) 3-4-12:016



Owner:	Starr Properties, LLC		**Parking Spaces:**	50-60 stalls
Land Area:	20,552 square feet		**Walking Distance to Municipal Lot:**	300 feet
Description:	Existing building in use		**Development Permits Required:**	Demolition Permit, MRA Use Permit
Property Status:	Lease with County possible		**Areas Served:**	State, County, Downtown

Appendix H
Soils Investigation Report

REPORT
SOILS INVESTIGATION

WAILUKU MUNICIPAL PARKING STRUCTURE
2061 WEST VINEYARD STREET
WAILUKU, MAUI, HAWAII
TMK: (2) 3-4-013: 075

for

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

Project No. 01507-FM2
March 29, 2011

ISLAND GEOTECHNICAL ENGINEERING, INC.
Geotechnical Consultants

330 Ohukai Road, Suite 119
Kihei, Maui, Hawaii 96753
Phone: (808) 875-7355
Fax: (808) 875-7122

March 29, 2011
Project No. 01507-FM

County of Maui
Department of Public Works
Engineering Division
200 South High Street
Wailuku, HI. 96793

The attached report presents the results of a soils investigation at the site of the proposed Wailuku Municipal Parking Structure project to be located in Wailuku, Maui, Hawaii.

A summary of the findings is as follows:

1) The subsurface conditions at the site were explored by drilling eight (8) test borings to depths of 16.5 to 32 feet below existing grade.

   In general, the borings disclosed the site to be overlain with 15 to 25.75 feet of fine-grained and coarse grained soils. A hard layer/rock was encountered in 7 of the 8 test borings at depths of 15 to 25.75 feet below existing grade.

2) No groundwater was encountered in any of the explorations.

3) The proposed structures may be supported on foundations that bear on properly compacted fill or compacted on-site soils.

Details of the findings and recommendations are presented in the attached report.

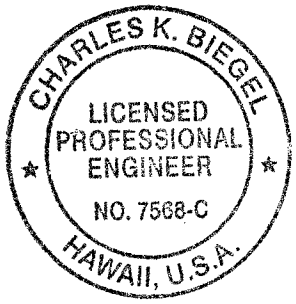
This investigation was made in accordance with generally accepted engineering procedures and included such field and laboratory tests considered necessary for the project. In the opinion of the undersigned, the accompanying report has been substantiated by mathematical data in conformity with generally accepted engineering

principles and presents fairly the design information requested by your organization. No other warranty is either expressed or given.

Respectfully submitted,

ISLAND GEOTECHNICAL ENGINEERING, INC.

Charles K. Biegel, P.E.
President



This work was prepared by
me or under my supervision.

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APPENDIX
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Logs of Test Borings

Laboratory Test Results

Proposed Column Loading Information

INTRODUCTION

This investigation was made for the purpose of obtaining information on the subsurface conditions from which to base recommendations for foundation design for the proposed Wailuku Municipal Parking Structure project to be located in Wailuku, Maui. The location of the site, relative to the existing streets and landmarks, is shown on the Vicinity Map, Plate 1.

SCOPE OF WORK

The services included drilling 8 test borings to depths of 16.5 to 32 feet below existing grade, obtaining samples of the underlying soils, performing laboratory tests on the samples, and performing an engineering analysis from the data gathered. Note that some of the test borings and some of the laboratory test results shown in this report were performed in 2001/2002 when a preliminary soils investigation of the property was performed. In general, the following information is provided for use by the Architect and/or Engineer:

1. General subsurface conditions, as disclosed by the explorations.
2. Physical characteristics of the soils encountered.
3. Recommendations for foundation design, including bearing values, embedment depth and estimated settlement.
4. Recommendations for placement of fill and backfill.
5. Special considerations.

PLANNED DEVELOPMENT

From the information provided, the proposed development will include constructing a new 5-story parking structure on the property. Maximum column load is: 810 kip dead load + 140 kip live load. The provided loading information for the remainder of the columns is shown on the attached Plate 25.

SITE CONDITIONS

Surface

The property, designated by Tax Map Key (2) 3-4-013: 075, is located at 2061 West Vineyard Street in Wailuku, Maui, Hawaii. At the time of the field investigation, there were no structures on the site. The ground cover at the site consisted of asphalt concrete pavement.

From the topographic map provided (see Plate 2), the site slopes from west down to east.

Subsurface

Eight (8) test borings were drilled to depths of 16.5 to 32 feet below existing grade to determine the subsurface conditions at the site. The locations of the explorations are shown on the Plot Plan, Plate 2. Detailed logs of the explorations are presented in the Appendix to this report.

In general, the borings disclosed the site to be overlain with 15 to 25.75 feet of fine-grained and coarse grained soils. A hard layer/rock was encountered in 7 of the 8 test borings at depths of 15 to 25.75 feet below existing grade.

No groundwater was encountered in any of the test borings.

From the USDA Soil Conservation Service "Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii", the site is located in an area designated as Wailuku silty clay, 3 to 7 percent slopes (WvB). The Wailuku series consists of well-drained soils on alluvial fans on the island of Maui. These soils developed in alluvium derived from basic igneous rock. Elevations range from 50 to 1,000 feet. Depth to bedrock is greater than 5 feet (USDA, 1972, pp. 133, 166-167 and Plate 99).

Geology

The site is located on the east flank of the West Maui Mountains. The island of Maui is a volcanic doublet believed to have formed during the late Tertiary (between 1 and 12 million years ago).

The West Maui Mountains were built by lavas flowing from rift zones trending north and south and a central vent. The lava flows which form the mountain have been separated into three groups: Wailuku, Honolua, and Lahaina Volcanic Series (Stearns and

MacDonald, 1942). The main lava mass that makes up the West Maui Mountains is known as the Wailuku Volcanic Series which consist of primitive olivine basalts and associated pyroclastic and intrusive rock.

CONCLUSIONS AND RECOMMENDATIONS

General

Based on the findings and observations of this investigation, it is concluded that the proposed structures may be supported on spread footings bearing on compacted on-site soil or properly compacted fill.

Special Considerations

1) Some of the on-site soils were found to be very moist (wet side of optimum moisture content, ASTM D 1557 test procedure). Compaction of these on-site soils or using the on-site soil as fill or backfill may require aeration (drying) in order to obtain optimum moisture content so that adequate compaction of the soils may be achieved.

Foundations

An allowable bearing value of 2,500 pounds per square foot may be used for footings bearing on firm on-site soil or properly compacted fill and embedded at least 24 inches below the lowest adjacent compacted grade. Minimum footing width is 12 inches.

Footings shall be cast against undisturbed earth. In the event the footings are formed, the backfill around the footings shall be low-strength concrete.

For footings located adjacent to new or existing utility trenches, the bottom of the footing shall be deepened below a 1 horizontal to 1 vertical plane projected upwards from the edge of the utility trench.

For footings located on or adjacent to slopes, the footing shall be deepened such that there is a minimum horizontal distance of 5 feet from the edge of the footing to the slope face.

The bearing values are for dead plus live loads and may be increased by one-third for momentary loads due to wind or seismic forces. If any footing is eccentrically loaded, the maximum edge pressure shall not exceed the bearing pressure for permanent or for momentary loads.

All loose and disturbed soil at the bottom of footing excavations shall be removed to firm soil or the disturbed soil shall be compacted prior to laying of steel or placing of concrete.

The bottom of all footings should be mechanically compacted to produce a firm/unyielding surface.

Site grading should be designed to prevent ponding of water adjacent to slab and footing areas. All surface water should flow away from the building foundations.

Settlement

Under the fully applied recommended bearing pressure, it is estimated that settlement of square or continuous footings bearing on firm on-site soils or properly compacted fill will be less than ¾ inch.

Differential settlement between footings will vary according to the size, bearing pressure and bearing material of the footing.

Lateral Resistance

For resistance of lateral loads, such as wind or seismic forces, an allowable passive resistance equivalent to that exerted by a fluid weighing 200 pounds per cubic foot may be used for footings, or other structural elements, provided the vertical surface is in direct contact with undisturbed soil or properly compacted fill.

Frictional resistance between footings and the underlying materials may be assumed as 0.4 times the dead load for the on-site fine-grained soils.

Lateral resistance and friction may be combined.

Seismic Considerations

According to the 2006 IBC, based on the findings of our explorations and our local knowledge of the strata in this area, Site Class D is recommended for this site.

Retaining Walls

Foundations for retaining walls shall be designed as per the foundation section of this report.

Depending on the type of backfill material within a 1H:2V plane projected upwards from the bottom edge of the retaining wall footing, the following active earth pressures may be used for design of free-standing retaining walls:

Granular soil (3" minus & less than 20% fines) as retaining wall backfill material:

Backfill Slope	Horizontal Component	Vertical Component
Level Backfill	30 pcf	0
3H:1V Backfill	35 pcf	10 pcf
2H:1V Backfill	40 pcf	20 pcf

Free-standing walls are defined as walls that are allowed to rotate between 0.005 to 0.01 times the wall height. The rotation of the wall away from the backfill develops "active

earth pressures". If the wall is not allowed to move as in the case of basement walls or walls that are restrained at the top, the soil pressure that will develop is known as an "at rest" pressure; for restrained walls, the above active earth pressures shall be increased by 50 percent for "at-rest" conditions.

For granular retaining wall backfill, the top 1 foot of the backfill shall be "capped" with fine-grained clay or silt type soil, or capped by an impervious surface such as concrete or asphaltic concrete.

Drainage for the retaining wall backfill shall be accomplished by providing 4-inch diameter weepholes spaced 8-feet on-center (horizontally as well as vertically) or by using a minimum 4-inch diameter perforated PVC footing drain pipe. A 2-foot thick layer of crushed gravel, which is wrapped with geotextile filter fabric, shall be placed above the pipe; the crushed gravel shall be continuous from weephole to weephole, or in the case of a footing drain pipe, laid throughout the full length of the pipe. Geotextile fabric shall be Propex Geotex 601 or similar.

The backfill for the retaining wall shall be properly compacted in accordance with the Site Preparation and Grading section to this report. Site grading should be designed to drain surface water away from the backfill area.

The above active pressures do not include surcharge loads such as footings located within a 45 degree plane projected upwards from the heel of the footing, fine-grained soil as backfill and/or from hydrostatic pressures. If such conditions occur, the active pressure shall be increased accordingly.

Slopes

Cut and fill slopes into soil materials shall not exceed 2 horizontal to 1 vertical. Fill slopes shall be constructed by overfilling and cutting back to compacted soil.

Exposed slopes shall be covered as soon as practical after construction to minimize erosion.

Pavement Design

For 2 axle cars and 2 axle light trucks, it is recommended that flexible pavements consist of 2.5 inches of asphalt concrete, 6 inches of base course gravel and 6 inches of compacted subgrade.

Concrete pavement sections may consist of a minimum of 4.5 inches of concrete, 4 inches of base course gravel and 6 inches of compacted subgrade. Reinforcement recommendations are to be provided by the project structural engineer.

Prior to placing the base course gravel, the on-site subgrade soil should be moisture conditioned to between 0 and 3 percent above (wet-side of) optimum moisture content and compacted to at least 95 percent of the maximum dry density as determined by the ASTM D 1557 test procedure.

The base course gravel (UTB) shall be compacted to at least 95 percent of the maximum dry density as determined by the ASTM D 1557 test procedure.

Modulus of Subgrade Reaction

For properly compacted subgrade soils on this site, a modulus of subgrade reaction value of 100 pci may be used for design purposes.

Site Preparation and Grading

It is recommended that the site be prepared in the following manner:

1. All vegetation, weeds, brush, roots, stumps, rubbish, debris, and other deleterious material shall be removed and disposed of off-site.

2. In areas to receive fill and at finished subgrade in cut areas, the exposed surface shall then be scarified to a depth of 6 inches, moisture conditioned to near optimum moisture and then compacted with a roller weighing not less than 20,000 pounds to at least 90 percent of the maximum dry density (ASTM D1557). If soft or

loose spots are encountered that can not be re-compacted, the loose/soft areas shall be removed to firm material and the resulting depression shall be filled with properly compacted fill.

3. Where fill is placed on existing ground that is steeper than 5 horizontal to 1 vertical, the existing ground surface shall be benched into firm soil as the fill is placed.

4. Fill and Backfill in Structural Areas Structural areas shall be defined as areas beneath, and to 3 feet beyond the edges of the structure. Any fill placed within the 215'x124' footprint that is the new parking structure shall be considered structural fill.

Structural fill and backfill material shall consist of soil which is free of organics and debris. The material shall be granular and well-blended with no particle larger than 3 inches in greatest dimension.

Each layer shall be placed in lifts not exceeding 6 inches in compacted thickness. Prior to compacting the soil, the soil's moisture content shall be adjusted to near optimum moisture content. Each layer shall be thoroughly compacted to at least 95 percent of the maximum dry density (ASTM D1557).

5. Fill and Backfill in Pavement Areas Pavement areas shall be defined as areas beneath asphalt concrete pavements or portland cement concrete pavements. If there is an area that classifies as both pavement area and structural area or there's uncertainty as to whether it is a pavement area or structural area, the structural specification shall apply.

Pavement fill and backfill material shall consist of soil which is free of organics and debris and shall be no more expansive than the on-site soil. In the top three feet from finished grade, the material shall be well-blended with no particle larger than 6 inches in greatest dimension. Below three feet from finished grade, the material shall be well-blended with no particle larger than 12 inches in greatest dimension.

In the top three feet from finished grade, each layer shall be placed in lifts not exceeding 6 inches in compacted thickness. Below three feet from finished grade, each layer shall be placed in lifts not exceeding 12 inches in compacted thickness.

These lift thicknesses shall be reduced if the compaction equipment is not capable of providing adequate compaction. Prior to compacting the soil, the soil's moisture content shall be adjusted to near optimum moisture content. Each layer shall be thoroughly compacted to at least 95 percent of the maximum dry density (ASTM D1557).

6. Fill and Backfill in Non-Structural Areas Non-structural areas shall be defined as A) areas beyond 3 feet from the edge of any building and B) non-pavement areas.

Non-structural fill and backfill material shall consist of material which is free of organics and debris. In the upper 3 feet from finished grade, the material shall be less than 6 inches in greatest dimension. Below 3 feet from finished grade, the material shall be less than 12 inches in greatest dimension, provided there are sufficient fines to fill the interstices.

Each layer shall be placed in lifts not exceeding 12 inches in loose thickness. Prior to compacting the soil, the soil's moisture content shall be adjusted to near optimum moisture content. Each layer shall be thoroughly compacted prior to placing of any subsequent lifts to at least 85 percent of the maximum dry density as determined by the ASTM D 1557 test procedure.

7. Backfill Behind Retaining Walls Retaining wall backfill shall be defined as backfill that extends from the stem of the retaining wall to 6 inches beyond the heel of the wall footing or the footing excavation line, whichever is greater.

All retaining wall backfill material shall consist of material that is in accordance with the project plans and specifications and meets the design criteria of the structural

engineer. Granular backfill is recommended.

Each layer of backfill shall be placed in layers not exceeding 6 inches in compacted thickness. Each layer of backfill shall be thoroughly compacted prior to placing of any subsequent lifts. All retaining wall backfill shall be compacted to at least 90 percent of the maximum dry density as determined by the ASTM D 1557 test procedure. Retaining wall backfill that will support structures or roadways shall be placed and compacted in accordance with the above requirements for Fill and Backfill in Structural Areas or Pavement Areas, respectively.

8. During construction, drainage shall be provided to prevent ponding of water adjacent to or on foundation and pavement areas. Ponded areas shall be drained immediately or water pumped out without damaging adjacent structures and property. If water accumulation softens the subgrade materials, the affected soils shall be removed and replaced with properly compacted fill.

It is particularly important to see that all fill and backfill soils are properly compacted in order to maintain the recommended design parameters provided in this report.

ON-SITE OBSERVATION

During the progress of construction, so as to evaluate general compliance with the design concepts, specifications and recommendations contained herein, a representative from this office should be present to observe the following operations:

1. Site preparation.
2. Placement of fill and backfill.
3. Footing excavations and compaction.

REMARKS

The conclusions and recommendations contained herein are based on the findings and observations made at the exploration locations. If conditions are encountered during construction which appear to differ from those disclosed by the explorations, this office shall be notified so as to consider the need for modifications.

This report has been prepared for the exclusive use of the County of Maui and their respective design consultants. It shall not be used by or transferred to any other party or to another project without the consent and/or thorough review by this facility. Should the project be delayed beyond the period of one year from the date of this report, the report shall be reviewed relative to possible changed conditions.

Samples obtained in this investigation will deteriorate with time and will be unsuitable for

further laboratory tests within one (1) month from the date of this report. Unless otherwise advised, the samples will be discarded at that time. The following are included and complete this report:

Vicinity Map ---------- Plate 1

Plot Plan ---------- Plate 2

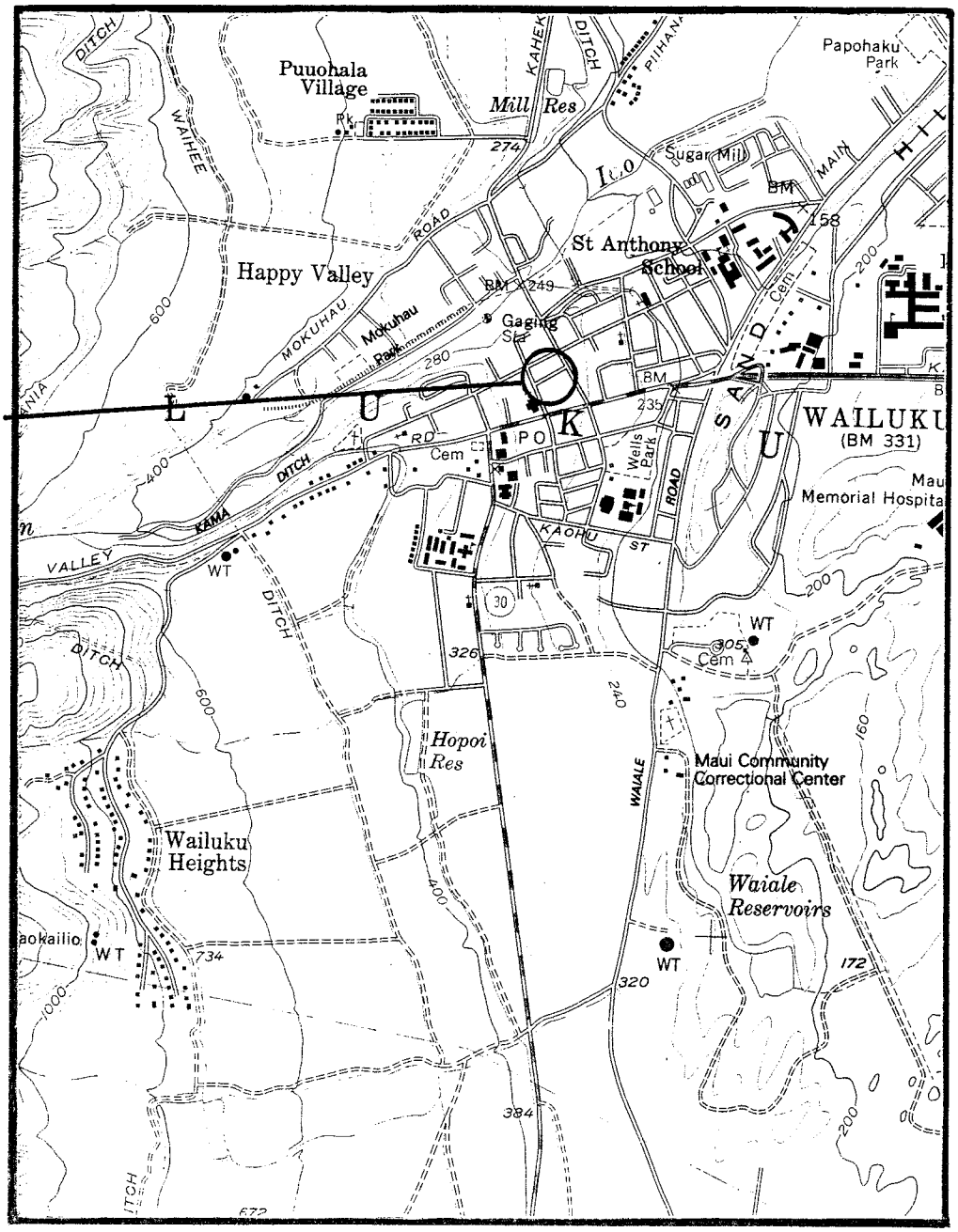
Appendix: Field Investigation and Laboratory Testing

Logs of Test Borings

Laboratory Test Results

Proposed Column Loading Information

VICINITY MAP



REFERENCE:

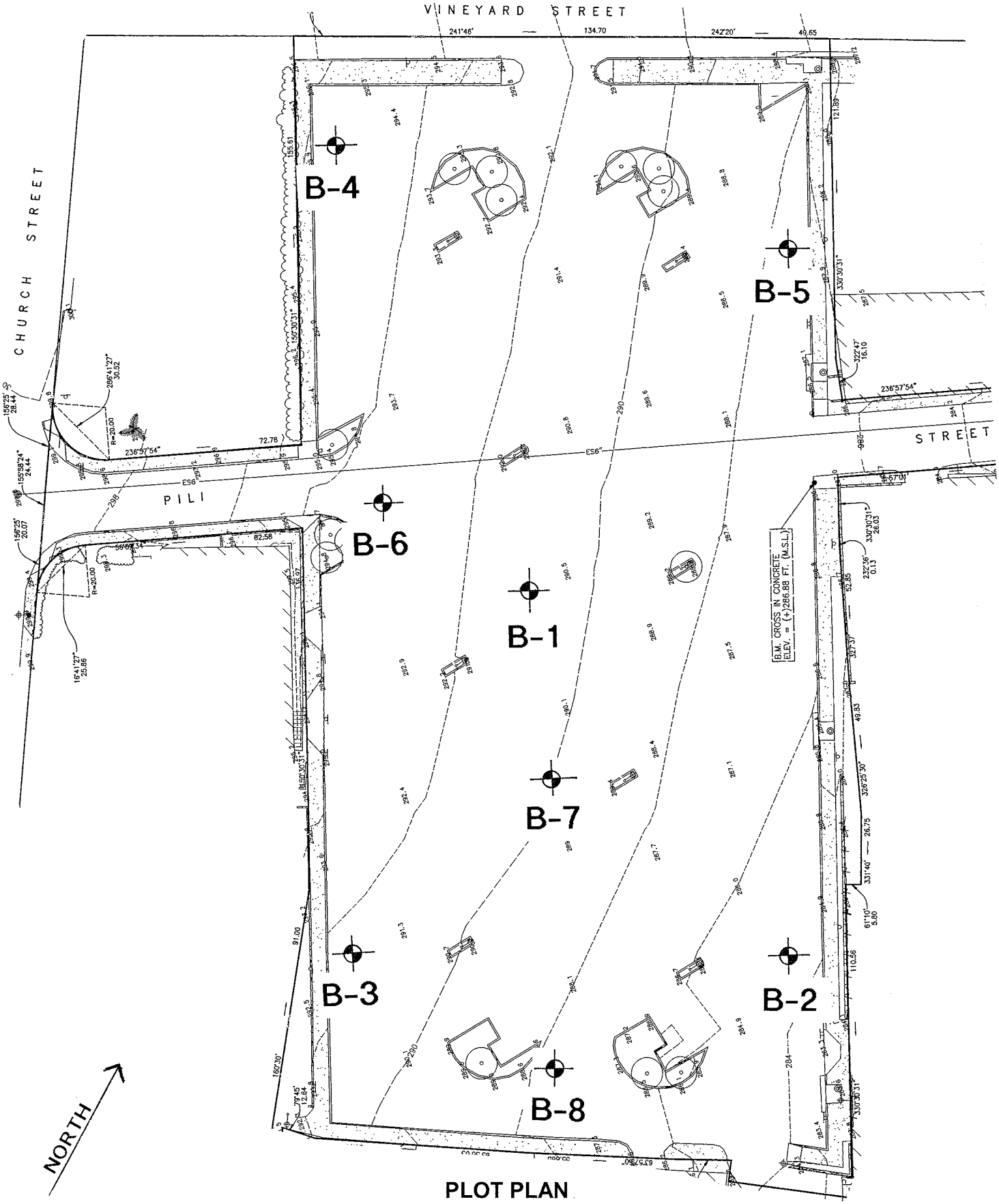
USGS TOPOGRAPHIC MAP
WAILUKU QUADRANGLE

Dated: 1983

WAILUKU MUNICIPAL PARKING LOT

ISLAND GEOTECHNICAL ENGINEERING, INC.
Geotechnical Consultants

PROJECT NO.	01507-FM
DATE	Dec. 2001
SCALE	1" = 2000'
PLATE	1



PLOT PLAN
Scale: 1" = 50' (+/-)

Project : WAILUKU MUNICIPAL PARKING STRUCTURE Project No. : 01507-FM2

ISLAND GEOTECHNICAL ENGINEERING, INC. PLATE 2

APPENDIX

FIELD INVESTIGATION AND LABORATORY TESTING

FIELD INVESTIGATION

General

The field investigation consisted of performing explorations at the locations shown on the Plot Plan. The method used for the exploratory work is shown on the respective exploration log. A description of the various method or methods used is presented below.

Test Borings Using Truck-Mounted Drilling Equipment

Truck-mounted borings are drilled using a gas-powered drilling rig. The hole is advanced using continuous flight augers, wash boring and/or NX coring.

Auger drilling is used in soils where caving does not occur. The augers are 4-1/2 to 6 inch diameter continuous helical flight augers with the lead auger having a head equipped with changeable cutting teeth. Soil cuttings are brought to the surface by the continuous flights. After the bore hole is advanced to the required depth and cleaned of cuttings by additional rotation of the augers, the augers are retracted for soil sampling or in-situ testing.

In soils where caving of the bore hole occurs, the hole is advanced by wash boring or hollow-stem augering. Wash boring consists of advancing steel casing by rotary action and water pressure to flush the soil from the casing. The lead section of the casing is equipped with a carbide or diamond casing bit. After the casing has been advanced to the required depth, soil samples are obtained through the inside of the casing. Hollow-stem drilling consists of advancing the hole with 7-5/8 inch outside diameter and 4-1/4 inch inside diameter augers. The

leading drill bit is connected to drilling rods through the central portion of the auger. At the required sampling depth, the interior drill rods and lead bit are removed, and the soil sample is taken by driving a sampler through the “hollow” section of the augers.

Coring is used for hard formations such as rock, coral or boulders. The core barrel, consisting of a 5-foot long double tube, hardened steel barrel with either a carbide or diamond bit, is attached to drilling rods and set on the hard formation. The core barrel is advanced through the formation by rotation of the core barrel. Water is used to flush out the cuttings. Upon completion of the core run, the sample is removed from the core barrel and inspected. The total core recovery length and the sum of all intact pieces over 4-inches in length are measured. The length of core recovery divided by the length of the core run is the recovery ratio. The combined length of the 4-inch or longer pieces divided by the length of core run is the Rock Quality Designation (RQD). The values provide an indication of the quality of the formation.

Test Borings Using Portable Drilling Equipment

In areas inaccessible to truck-mounted equipment, portable drilling equipment is used to drill the test boring. The boring is advanced by either (1) continuous drive sampling, or by (2) using a small gas-powered drill rig with continuous flight augers, wash boring or NX coring.

Soil samples are obtained with a tripod and cathead assembly using soil sampling methods described below.

Test Pits Using Excavators / Backhoes

Test pits are excavated using an excavator or backhoe. Material excavated from the pit and the sides and bottom of the pit are visually inspected and a continuous log of the hole is kept.

Explorations Using Hand Tools

In inaccessible areas requiring only shallow explorations, borings and test pits are made using hand equipment. Borings are drilled using hand augers. Test pits are excavated using hand tools. Cuttings from the boring and/or pit are inspected and visually classified.

Soil Sampling

Relatively undisturbed samples of the underlying soils are obtained from borings by driving a sampling tube into the subsurface material using a 140-pound safety hammer falling from a height of 30 inches. Ring samples are obtained using a 3-inch outside diameter, 2.5-inch inside diameter steel sampling tube with an interior lining of one-inch long, thin brass rings. The tube is driven approximately 18 inches into the soil and a section of the central portion is placed in a close fitting waterproof container in order to retain field conditions until completion of the laboratory tests. Standard Penetration Test (SPT) values and disturbed soil samples are obtained with a 2-inch (outside diameter) split-barrel sampler instead of the 3-inch sampler. The number of blows required to drive the sampler into the ground is recorded at 6-inch intervals. The blow count for the last 12 inches is shown on the boring logs.

From test pit excavations, relatively undisturbed soil samples are obtained by pushing the 3-inch outside diameter sampling tube (mentioned above) into the ground with the backhoe bucket. In addition, undisturbed bulk samples are retained from cohesive type soil formations and disturbed bulk samples are retained from friable and cohesionless soil formations.

The soil samples are visually classified in the field using the Unified Soil Classification System. Samples are packed in moisture-proof containers and transported to the laboratory for testing.

Dynamic Cone Penetrometer (DCP)

There are two types of DCP tests used in the field. One test is generally used for pavement design and the other test is generally used for foundation design.

The DCP test for pavement design is an in-place test generally performed on the near surface soils. The DCP consists of a steel rod with a steel cone attached to one end which is driven into the soil by means of a sliding hammer. The angle of the cone is 60 degrees. The depth of the cone penetration is recorded at selected penetration or hammer drop intervals. The standard DCP test is designed to penetrate soils to a total depth of 1 meter (39.4 inches), however, extension rods may be used to reach greater depths. The recorded data from the DCP test can be converted to CBR values for use in pavement design.

The DCP test for foundation design (aka Wildcat DCP) is used to evaluate the consistency of the subsurface soils to depths of 25 feet. The test is performed by driving a 1.4-inch diameter

(10 square centimeter area) steel cone (cone is connected to 1.1-inch diameter steel rods) into the ground using a 35-pound slide hammer that is dropped from a height of 15 inches. The number of blows required to drive the steel cone 10 centimeters is recorded and the process is continued until the desired depth is reached.

LABORATORY TESTING

General

Laboratory tests are performed on various soil samples to determine their engineering properties. Descriptions of the various tests are listed below. Some of these test were performed for this project.

Unit Weight and Moisture Content

The in-place moisture content and unit weight of the samples are used to correlate similar soils at various depths. The sample is weighed, the volume determined, and a portion of the sample is placed in the oven. After oven-drying, the sample is again weighed to determine the moisture loss. The data is used to determine the wet-density, dry-density and in-place moisture content.

Direct Shear

Direct shear tests are performed to determine the strength characteristics of the representative soil samples. The test consists of placing the sample into a shear box, applying a normal load and then shearing the sample at a constant rate of strain. The shearing resistance is recorded

at various rates of strain. By varying the normal load, the angle of internal friction and cohesion can be determined.

Consolidation Test

Consolidation tests are performed to obtain data from which time rates of consolidation and amounts of settlement may be estimated. The test is performed by placing a specimen in a consolidation apparatus. Loads are applied in increments to the circular face of a one-inch (1") high sample. Deformation or changes in thickness of the specimen are recorded at selected time intervals. Water is introduced to or allowed to drain from the sample through porous disks placed against the top and bottom faces of the specimen. The data is then used to plot a stress-volume strain curve which is used in estimating settlement.

Expansion Index Test

Expansion Index of fine-grained soils is determined in accordance with ASTM D 4829 test procedure. The soil specimen is compacted into a metal ring so that the degree of saturation is between 40 and 60 percent. The specimen and the ring are placed in a consolidometer. A vertical confining pressure of 1 psi is applied to the specimen and then the specimen is inundated with water. The deformation of the specimen is recorded for 24 hours. The data is used to determine the expansion potential of the soil.

One-Dimensional Swell Test

Another procedure for determining the expansion of fine-grained soils is ASTM D 4546 (Method B) test procedure. The soil specimen is compacted into a 2.5-inch diameter (1-inch height)

metal ring using a 10-pound hammer. The specimen and the ring are placed in an expansion apparatus. A vertical pressure of 155 psi is applied to the specimen and then the specimen is inundated with water. The deformation of the specimen is recorded for 24 hours.

The test is similar in principle to the Expansion Index Test (see above) with the primary difference being the soil specimen in the One-Dimensional Swell Test is usually compacted to a higher dry density than the Expansion Index and, therefore, generally produces a higher degree of expansion.

Classification Tests

The soil samples are classified using the Unified Soil Classification System. Classification tests include sieve and hydrometer analysis to determine grain size distribution, and Atterberg Limits to determine the liquid limit, plastic limit and plasticity index.

California Bearing Ratio Test

California Bearing Ratio (CBR) tests are performed on materials to determine the bearing strength of the soil for determination of pavement sections. The sample is compacted into a 6-inch diameter mold in 5 equal layers. Each layer is compacted with a 10-pound hammer falling from a height of 18 inches, with each layer receiving 56 blows. The mold is then placed in a water bath for 4 days and the vertical swell is measured under a surcharge weight of 10 pounds. After the soaking period, the sample is placed in a CBR apparatus that has a 3-square inch penetrometer. The penetrometer is pressed vertically into the soil at constant strain and the

loads required to press the penetrometer are recorded. A plot of the load-strain relationship is made to determine the CBR value.

Maximum Dry Density / Optimum Moisture Content

The maximum dry density and optimum moisture content of the material is determined in accordance with the ASTM D1557 test procedure. The sample is compacted into a mold in 5 equal layers using a 10-pound hammer falling from a height of 18 inches. The diameter of the mold is either 4 inches or 6 inches, depending on the proportion of gravel in the sample. The sample is compacted at various moisture contents to develop a compaction curve for the soil. The curve is usually bell-shaped with a peak indicating the maximum dry density and optimum moisture content.

Penetrometer Test

Penetrometer tests are performed on clayey soils to determine the consistency of the material and an approximate value of the unconfined compressive strength.

Torvane

Torvane tests are used to determine the approximate undrained shear strength of clayey soils. The torvane apparatus consists of a torque device with a small diameter plate that has vanes situated perpendicular to the plate. The vanes are pushed into the soil and torque is applied until failure occurs. The torque required to cause failure is converted to approximate undrained strength of the soil.

LOG OF BORING NO. 1

ELEVATION: +291' (estimate)

EQUIPMENT USED: Mobile Drill: B-53

DEPTH OF BORING (FT.): 18.5

DATE DRILLED: December 17, 2001

DEPTH OF GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	BLOWS/FOOT	COLOR	CONSISTENCY	MOISTURE	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)
0		MH	2" Asphalt Concrete elastic SILT			black very dark brown	mod. stiff to stiff	moist		20.2	
						dark reddish brown		moist to very moist			
					11					31.4	
3										30.7	
							stiff to very stiff				
					30				89.6	30.7	
		COB	COBBLE							30.6	
6		MH	elastic SILT								
					42	brown to dark brown			76.7	36.3	
										36.0	4.5
9											
						reddish brown to yellowish red	stiff				
					18				83.8	26.3	
12										39.9	
		ML	sandy SILT with gravel and cobbles (Saprolite)				very stiff				
15											
					51				17.9		
18		COB	COBBLE or BOULDER				hard				
			END OF TEST BORING								
21											

PROJECT NAME: WAILUKU MUNICIPAL PARKING LOT

PROJECT NO.: 01507-FM

ISLAND GEOTECHNICAL ENGINEERING, INC.

Geotechnical Consultants

PLATE 3

LOG OF BORING NO. 2

ELEVATION: +285' (estimate)

EQUIPMENT USED: Mobile Drill: B-53

DEPTH OF BORING (FT.): 21

DATE DRILLED: December 17, 2001

DEPTH OF GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	BLOWS/FOOT	COLOR	CONSISTENCY	MOISTURE	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)
0		MH	2" Asphalt Concrete elastic SILT			black dark reddish brown	mod. stiff	moist			
							stiff to very stiff	moist to very moist			
					44				92.8	29.4	
3										29.5	4.5
					45				79.6	30.8	
						very dark brown				31.9	4.5
						dark reddish brown to dark brown				31.0	
6					39					35.2	
9											
						yellowish red	mod. stiff to stiff				
					11				76.8	45.1	
12		ML	sandy SILT (saprolite)			strong brown				43.5	4.0
		BLDR	BOULDER								
		ML	sandy SILT (saprolite)								
15						dark brown and yellowish red	stiff to very stiff				
					25				78.9	40.7	
										40.4	
18											
						dark gray	hard				
21					59					4.6	
			END OF TEST BORING								

PROJECT NAME: WAILUKU MUNICIPAL PARKING LOT

PROJECT NO.: 01507-FM

ISLAND GEOTECHNICAL ENGINEERING, INC.

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PLATE

4

LOG OF BORING NO. 3

ELEVATION: +291.5' (estimate)

EQUIPMENT USED: Mobile Drill: B-53

DEPTH OF BORING (FT.): 20.5

DATE DRILLED: December 17, 2001

DEPTH OF GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	BLOWS/FOOT	COLOR	CONSISTENCY	MOISTURE	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)
0			2" Asphalt Concrete + 4" select borrow			black					
		MH	elastic SILT			dark reddish brown	very stiff	moist			
					77				80.2	26.9	4.5
3								moist to very moist			
					85	reddish brown to dark reddish brown			88.8	31.2 30.3	4.5
6					57	brown to reddish brown			83.4	32.0 28.0	4.5
9											
		ML	sandy SILT (saprolite)			yellowish red					
					32				80.8	40.3 30.9	
12		COB	COBBLE								
		ML	sandy SILT (saprolite)								
15		ROCK	BASALT ROCK: weathered in varying degrees of hardness ---NX Core run from 15.5' to 20.5' Recovery = 14% RQD = 11%			gray brown	soft to mod hard rock				
18											
21			END OF TEST BORING								

PROJECT NAME: WAILUKU MUNICIPAL PARKING LOT

PROJECT NO.: 01507-FM

ISLAND GEOTECHNICAL ENGINEERING, INC.

Geotechnical Consultants

PLATE

5

LOG OF BORING NO. 4

ELEVATION: +295.5' (estimate)

EQUIPMENT USED: Mobile Drill: B-53

DEPTH OF BORING (FT.): 16.5

DATE DRILLED: December 17, 2001

DEPTH OF GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	BLOWS/FOOT	COLOR	CONSISTENCY	MOISTURE	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)
0		MH	1.5" Asphalt Concrete elastic SILT			black dark reddish brown	very stiff	moist			
					95				98.9	27.8 24.0	4.5
3					124				77.2	27.2 26.7	
						dark yellowish brown		moist to very moist			
6					61				71.4	31.8 31.6	
						brown					
9							stiff to very stiff				
		ML	sandy SILT (saprolite)		24				85.8	34.9 33.7	
12											
		ML	sandy SILT with cobbles								
15					61/5"						
		BLDR	BOULDER/ROCK				hard				
			END OF TEST BORING REFUSAL								
18											
21											

PROJECT NAME: WAILUKU MUNICIPAL PARKING LOT

PROJECT NO.: 01507-FM

ISLAND GEOTECHNICAL ENGINEERING, INC.

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PLATE 6

LOG OF BORING NO. 5

ELEVATION: +288' (estimate)

EQUIPMENT USED: Mobile Drill: B-53

DEPTH OF BORING (FT.): 20.5

DATE DRILLED: December 17, 2001

DEPTH OF GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	BLOWS/FOOT	COLOR	CONSISTENCY	MOISTURE	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)
0		MH	2" Asphalt Concrete elastic SILT			black dark reddish brown	stiff to very stiff	moist to very moist			
					38				90.7	30.6	
3										30.0	3.0
			---Specific Gravity = 3.07		52				88.0	31.9	
										30.8	4.5
						dark brown					
6					30				84.1	33.6	
										37.2	
9											
		ML	sandy SILT (saprolite)			yellowish red	mod. stiff				
					10				81.2	40.9	
12										43.6	2.5
15											
					39	strong brown	stiff to very stiff			41.9	
										35.7	
18											
						brown					
					21					38.8	
21			END OF TEST BORING							41.2	4.5

PROJECT NAME: WAILUKU MUNICIPAL PARKING LOT

PROJECT NO.: 01507-FM

ISLAND GEOTECHNICAL ENGINEERING, INC.

Geotechnical Consultants

PLATE

7

LOG OF BORING NO. 6

ELEVATION: see Plate 2

EQUIPMENT USED: Mobile Drill: B-53

DEPTH OF BORING (FT.): 32

DATE DRILLED: February 26, 2011

DEPTH OF GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	BLOWS/FOOT	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)
0			2.5" A.C. + 5" Gravel			black					
		CH	CLAY		21	dark reddish brown	moist	very stiff		27.2	
3											
		MH	SILT with sand							25.4	
6					25	brown with reddish yellow mottling	moist to very moist			31.5	
9		MH	sandy SILT			dark reddish brown					
					23					31.4	
12											
						dark brown to reddish brown		mod. stiff		32.1	
15					7						
		SM	silty SAND with gravel			brown with light gray and black mottling		mod. dense		39.8	
18											
					27					37.3	
21		rock	BASALT ROCK			very dark bluish gray		mod. hard rock			

PROJECT NAME: WAILUKU MUNICIPAL PARKING STRUCTURE

PROJECT NO.: 01507-FM2

ISLAND GEOTECHNICAL ENGINEERING, INC.

Geotechnical Consultants

PLATE 8

LOG OF BORING NO. 6

ELEVATION: see Plate 2

EQUIPMENT USED: Mobile Drill: B-53

DEPTH OF BORING (FT.): 32

DATE DRILLED: February 26, 2011

DEPTH OF GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	BLOWS/FOOT	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)
24		rock	BASALT ROCK NWD4 Core run #1 from 23' to 27': Recovery = 52% RQD = 39%			very dark bluish gray		mod. hard rock			
27						dark bluish gray					
30			NWD4 Core Run #2 from 27' to 32': Recovery = 48% RQD = 35%								
			END OF BORING AT 32 FEET								
33											
36											
39											
42											
45											

PROJECT NAME: WAILUKU MUNICIPAL PARKING STRUCTURE

PROJECT NO.: 01507-FM2

ISLAND GEOTECHNICAL ENGINEERING, INC.

Geotechnical Consultants

PLATE 8

LOG OF BORING NO. 7

ELEVATION: see Plate 2

EQUIPMENT USED: Mobile Drill: B-53

DEPTH OF BORING (FT.): 28.5

DATE DRILLED: February 26, 2011

DEPTH OF GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	BLOWS/FOOT	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)
0			2.5" A.C. + 5.5" Gravel			black					
		CH	CLAY		15	dark reddish brown	moist to very moist	stiff to very stiff		30.0	
3											
		MH	SILT with sand		14	reddish brown				33.7	
6											
9		MH	sandy SILT with gravel		17	brown with dark gray mottling				42.9	
										20.7	
12		SM	silty SAND with gravel					mod. dense			
						dark brown					
15					21	dark gray				28.5	
		GM	silty GRAVEL with sand and cobbles NWD4 Core run #1: 16.5' to 20.5': Recovery = 12% RQD = 9%					dense			
18		SM	silty SAND with gravel					mod. dense			
21								dense		23.6	
					36					34.1	
		rock	BASALT ROCK			dark bluish gray		mod. hard			

PROJECT NAME: WAILUKU MUNICIPAL PARKING STRUCTURE

PROJECT NO.: 01507-FM2

ISLAND GEOTECHNICAL ENGINEERING, INC.

Geotechnical Consultants

PLATE 9

LOG OF BORING NO. 7

ELEVATION: see Plate 2

EQUIPMENT USED: Mobile Drill: B-53

DEPTH OF BORING (FT.): 28.5

DATE DRILLED: February 26, 2011

DEPTH OF GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	BLOWS/FOOT	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)
24		rock	BASALT ROCK NWD4 Core Run #2: 23.5' to 28.5' Recovery = 68% RQD = 67%		5/0"	very dark bluish gray		mod. hard rock			
27			END OF BORING AT 28.5 FEET								
30											
33											
36											
39											
42											
45											

PROJECT NAME: WAILUKU MUNICIPAL PARKING STRUCTURE

PROJECT NO.: 01507-FM2

ISLAND GEOTECHNICAL ENGINEERING, INC.

Geotechnical Consultants

PLATE

9

LOG OF BORING NO. 8

ELEVATION: see Plate 2

EQUIPMENT USED: Mobile Drill: B-53

DEPTH OF BORING (FT.): 25.75

DATE DRILLED: February 27, 2011

DEPTH OF GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	BLOWS/FOOT	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)
0			2" A.C. + 5" Gravel			black					
		CH	CLAY		17	dark brown	moist	very stiff		30.1	
3					16					28.8	
6		MH	SILT with sand		29	reddish brown	moist to very moist			32.1	
9					13	yellowish red				40.2	
12		GM-SM	alternating layers of silty GRAVEL with sand & silty SAND with gravel		11	dark yellowish brown		mod. dense		37.2	
15					11	brown				42.6	
18					21	brown with yellowish red mottling				39.1	
										40.1	
21					27					43.1	

PROJECT NAME: WAILUKU MUNICIPAL PARKING STRUCTURE

PROJECT NO.: 01507-FM2

ISLAND GEOTECHNICAL ENGINEERING, INC.

Geotechnical Consultants

PLATE 10

LOG OF BORING NO. 8

ELEVATION: see Plate 2

EQUIPMENT USED: Mobile Drill: B-53

DEPTH OF BORING (FT.): 25.75

DATE DRILLED: February 27, 2011

DEPTH OF GROUNDWATER: unknown

DEPTH (FT.)	GRAPHIC SYMBOL	SOIL CLASSIFICATION	DESCRIPTION	SAMPLE	BLOWS/FOOT	COLOR	MOISTURE	CONSISTENCY	DRY DENSITY (PCF)	MOISTURE CONTENT (% OF DRY WT.)	PENETROMETER (TSF)
24		GM-SM	alternating layers of silty GRAVEL with sand & silty SAND with gravel			brown		mod. dense			
						dark gray		very dense			
				■	22/3"						
			END OF BORING AT 25.75 FEET ROCK								
27											
30											
33											
36											
39											
42											
45											

PROJECT NAME: WAILUKU MUNICIPAL PARKING STRUCTURE

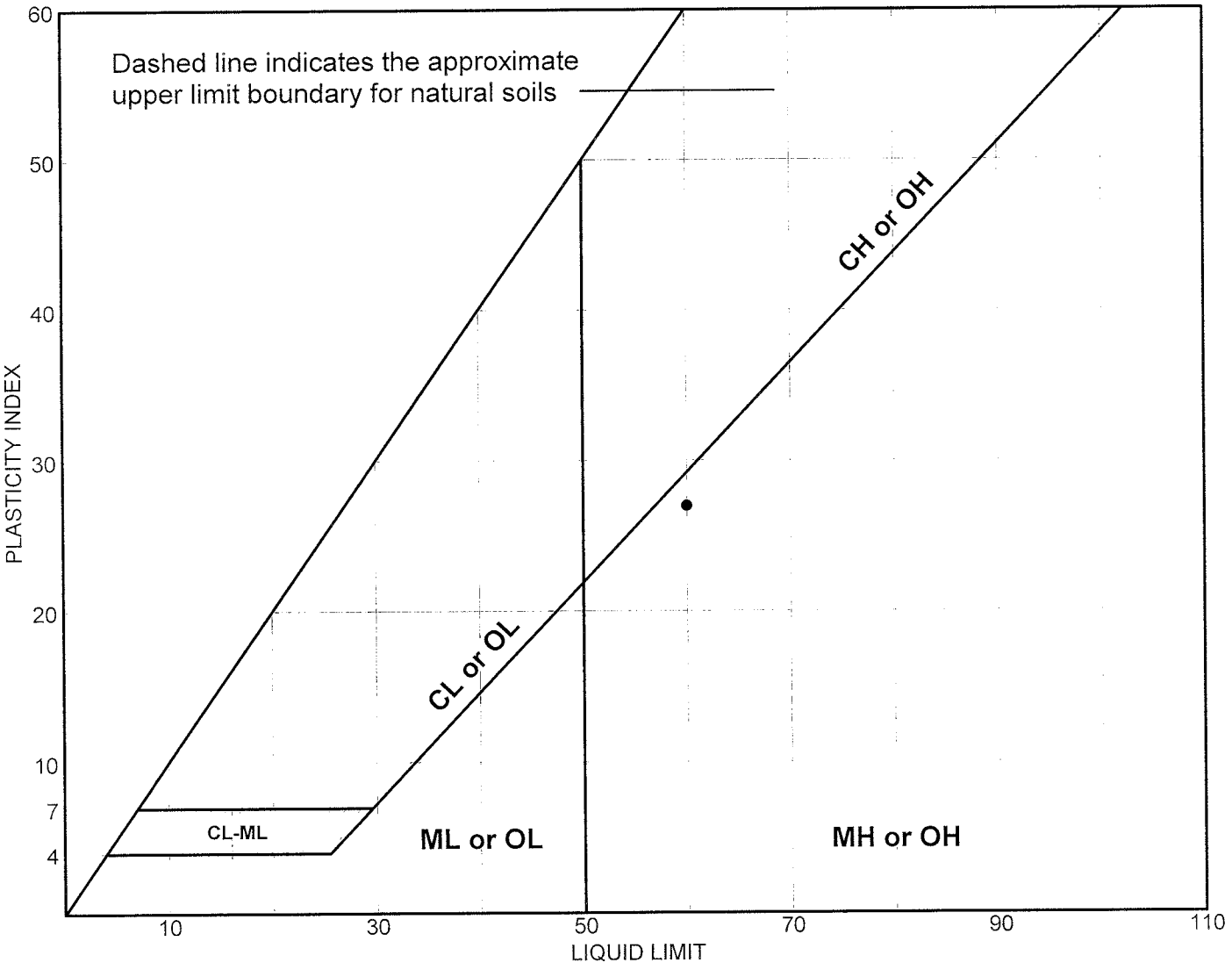
PROJECT NO.: 01507-FM2

ISLAND GEOTECHNICAL ENGINEERING, INC.

Geotechnical Consultants

PLATE 10

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Boring 5	3	3.75 - 4.25	31.9	33	60	27	MH
■	Boring 3	7	10.75 - 11.25	40.3	NP	NV	NP	ML

LIQUID AND PLASTIC LIMITS TEST REPORT

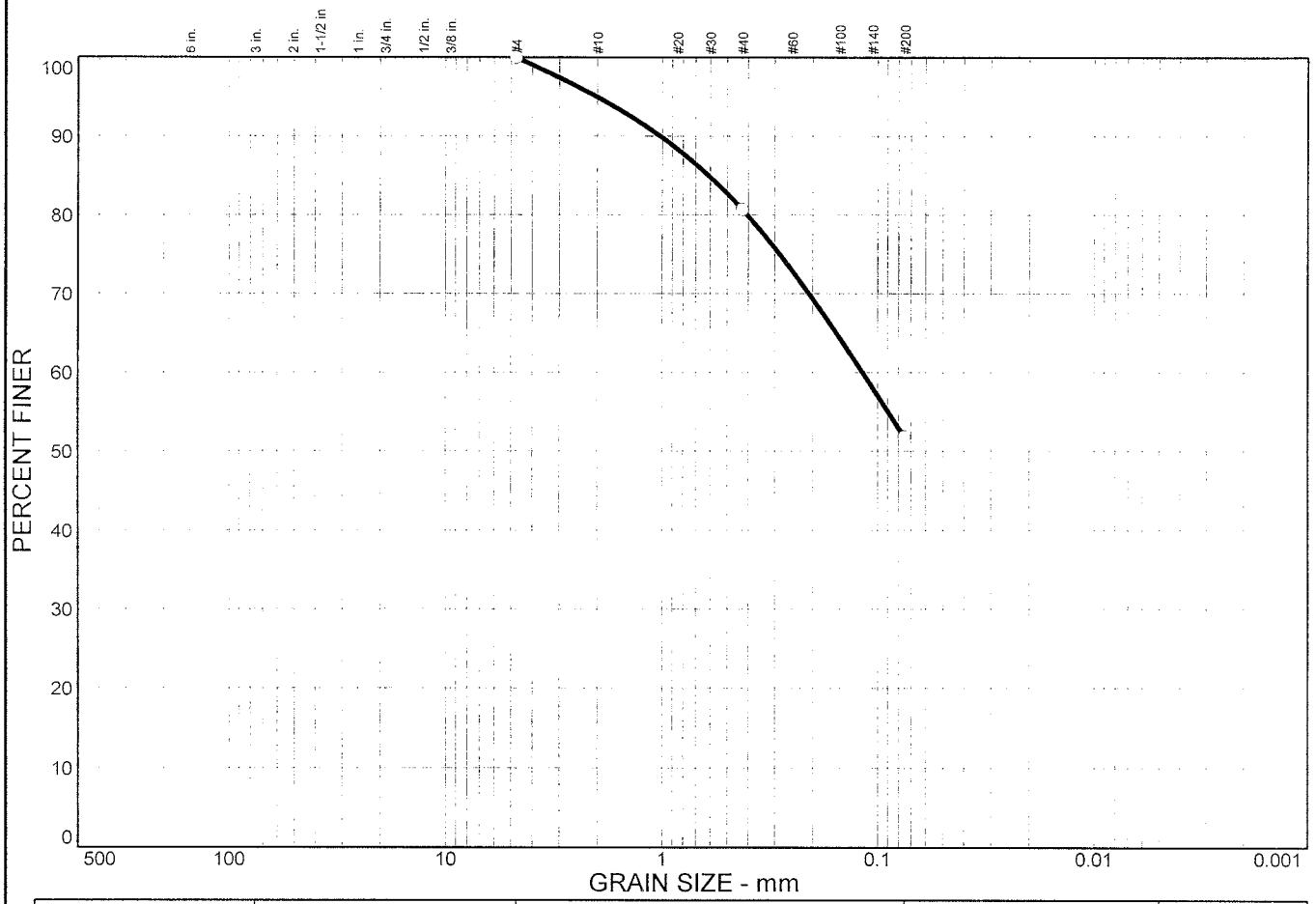
Island Geotechnical Engineering, Inc.

Client:

Project: Wailuku Municipal Parking Lot

Project No.: 01507-FM **Plate** 11

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	48.2	51.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#40	80.7		
#200	51.8		

* (no specification provided)

Soil Description

yellowish red sandy SILT

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.609 D_{60}= 0.117 D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= ML AASHTO=

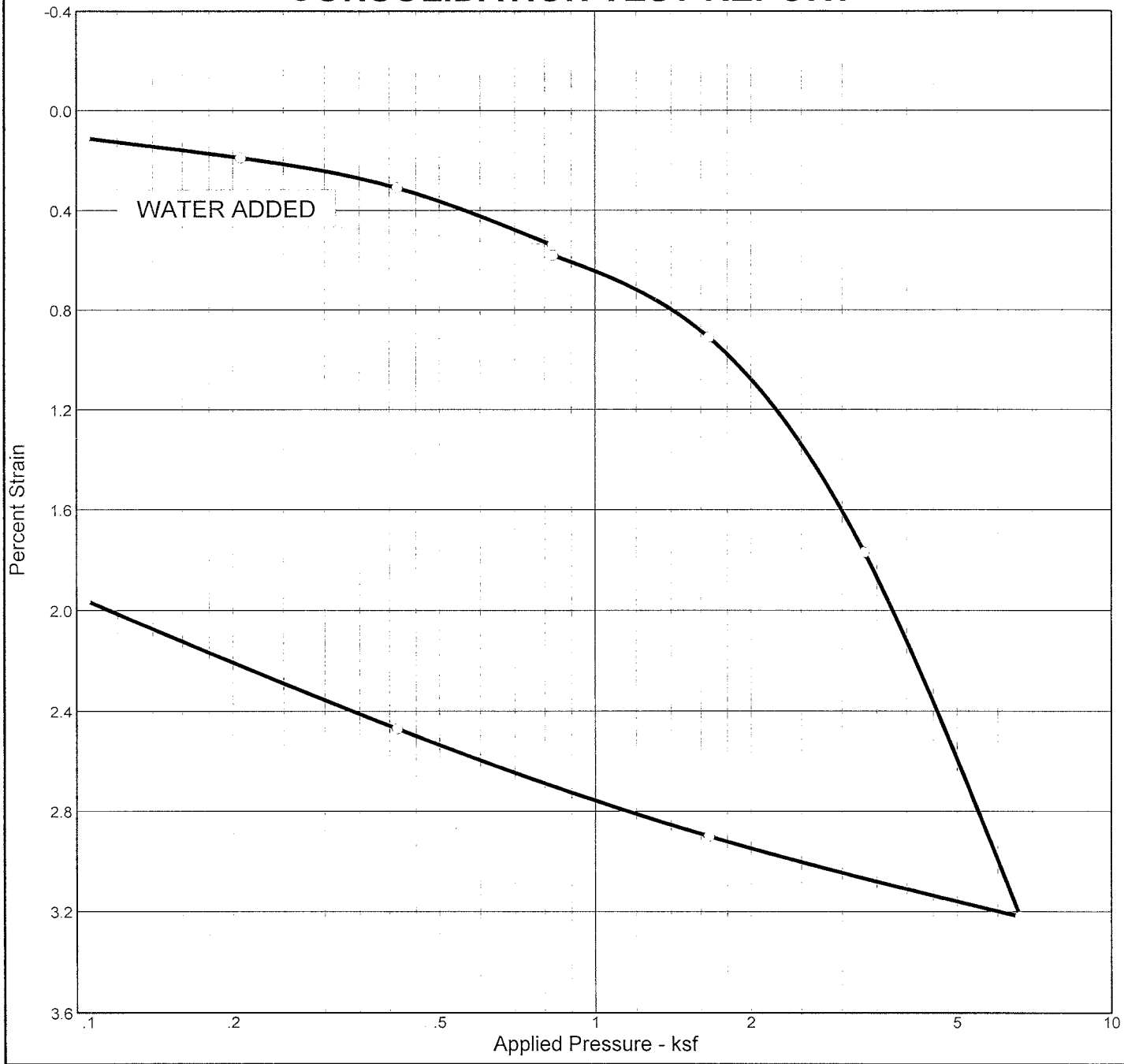
Remarks

Sample No.: 7 **Source of Sample:** Boring 5 **Date:** 1-04-02
Location: **Elev./Depth:** 11.0'

Island Geotechnical Engineering, Inc.

Client:
Project: Wailuku Municipal Parking Lot
Project No: 01507-FM **Plate** 12

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (ksf)	P_c (ksf)	C_c	C_s	Swell Press. (ksf)	Clpse. %	e_o
Sat.	Moist.											
87.2 %	38.2 %	81.8			3.07	1.07	2.45	0.12	0.02		0.1	1.344

MATERIAL DESCRIPTION	USCS	AASHTO
reddish brown elastic SILT w/ sand	MH	

Project No. 01507-FM **Client:**

Project: Wailuku Municipal Parking Lot

Source: Boring 1 **Sample No.:** 8 **Elev./Depth:** 9.25' - 9.75'

Remarks:

1. undisturbed sample.

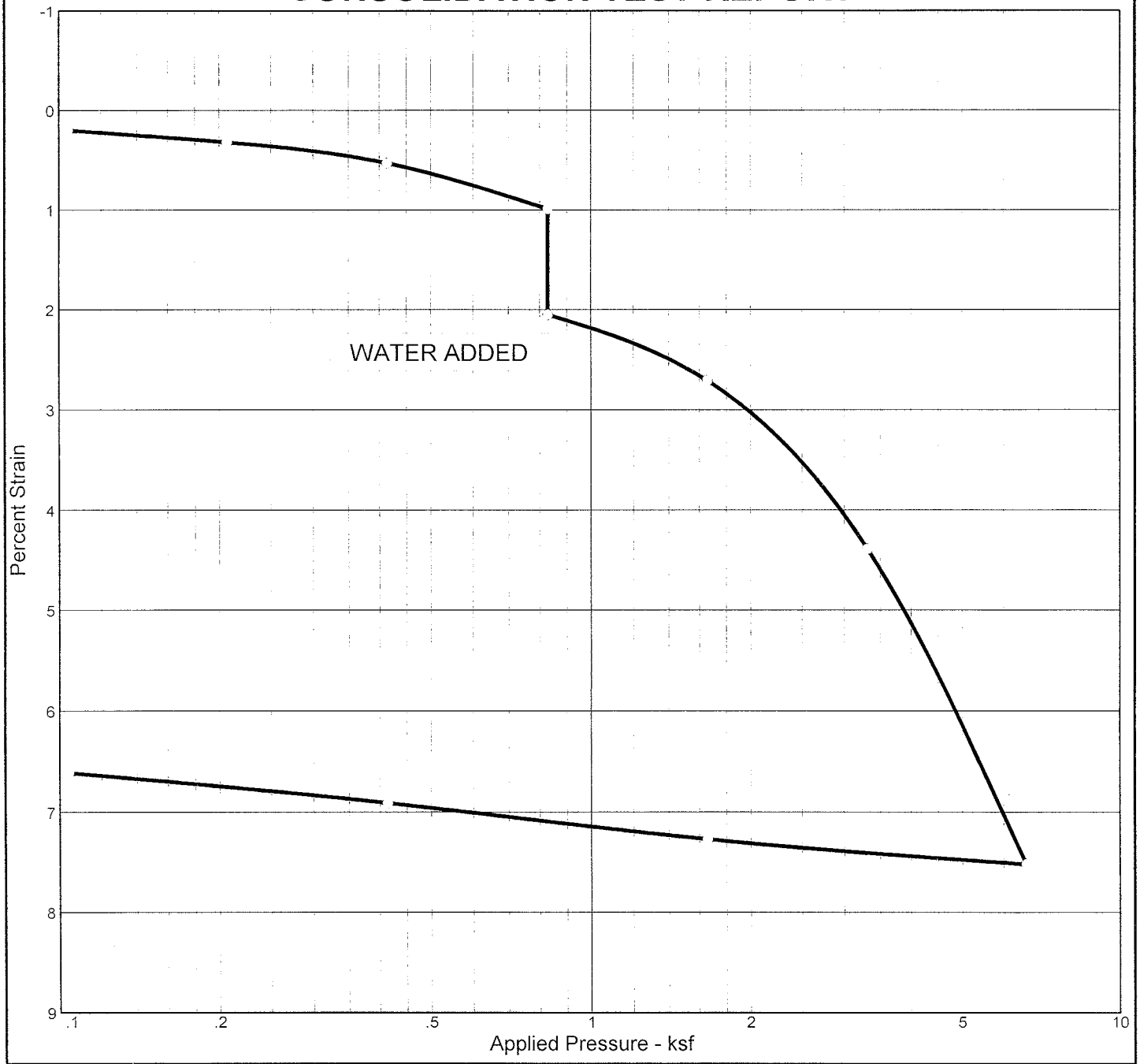
2. water added at .829 ksf

CONSOLIDATION TEST REPORT

Island Geotechnical Engineering, Inc.

Plate 13

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (ksf)	P_c (ksf)	C_c	C_s	Swell Press. (ksf)	Clpse. %	e_o
Sat.	Moist.											
72.4 %	32.6 %	80.4			3.07	0.43	2.68	0.25	0.01		1.1	1.384

MATERIAL DESCRIPTION	USCS	AASHTO
dark reddish brown elastic SILT	MH	

Project No. 01507-FM **Client:**

Project: Wailuku Municipal Parking Lot

Source: Boring 2 **Sample No.:** 4 **Elev./Depth:** 3.75' - 4.25'

CONSOLIDATION TEST REPORT

Island Geotechnical Engineering, Inc.

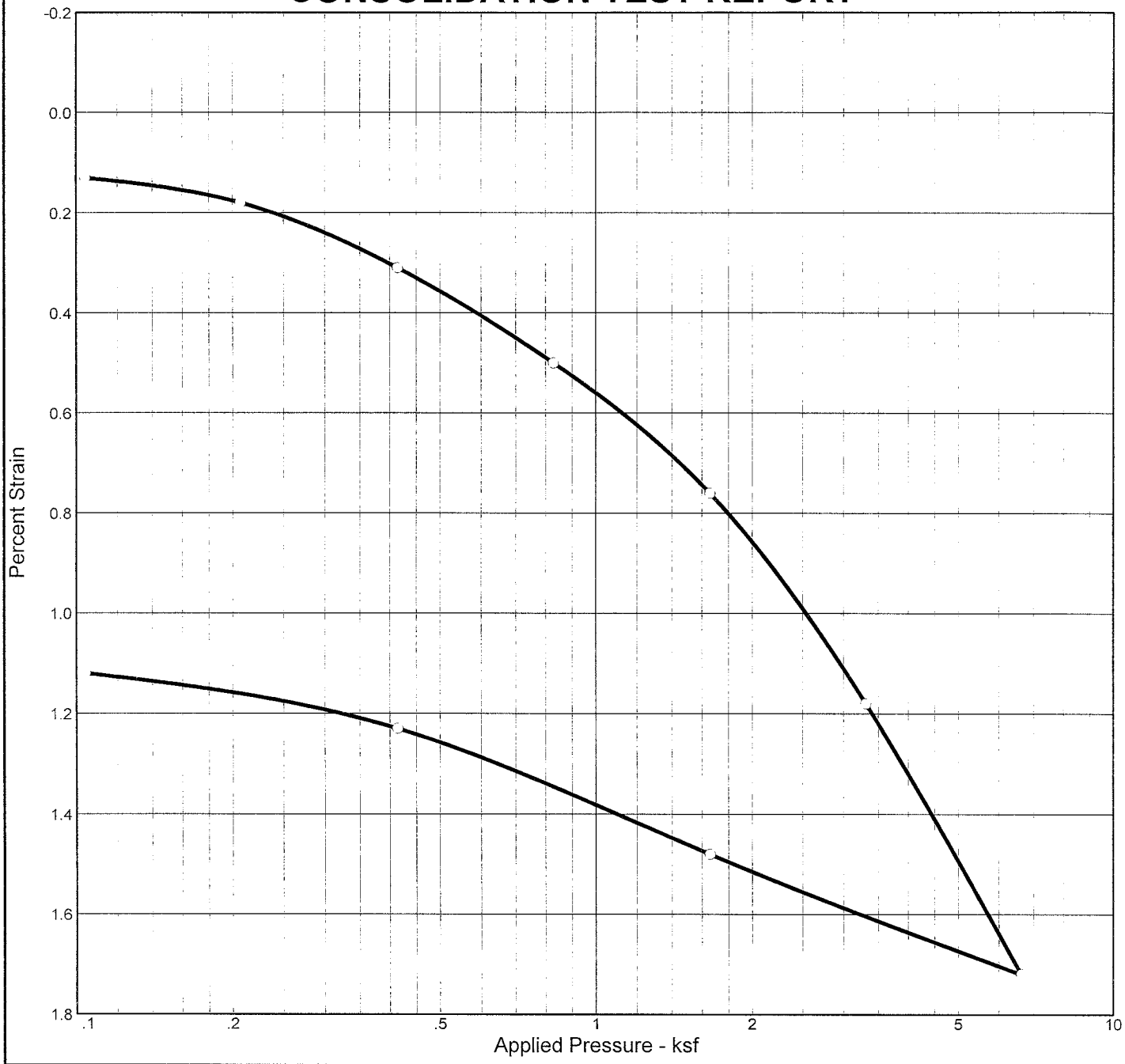
Remarks:

1. undisturbed sample.

2. water added at .829 ksf

Plate 14

CONSOLIDATION TEST REPORT



Natural		Dry Dens.	LL	PI	Sp.	Overburden	P_c	C_c	C_r	Swell Press.	Swell	e_o
Sat.	Moist.	(pcf)			Gr.	(ksf)	(ksf)			(ksf)	%	
80.8 %	29.5 %	90.4			3.07	0.44	2.13	0.04	0.01			1.121

MATERIAL DESCRIPTION	USCS	AASHTO
reddish brown SILT	MH	

Project No. 01507-FM **Client:**

Project: Wailuku Municipal Parking Lot

Source: Boring 3 **Sample No.:** 3 **Elev./Depth:** 4.0'

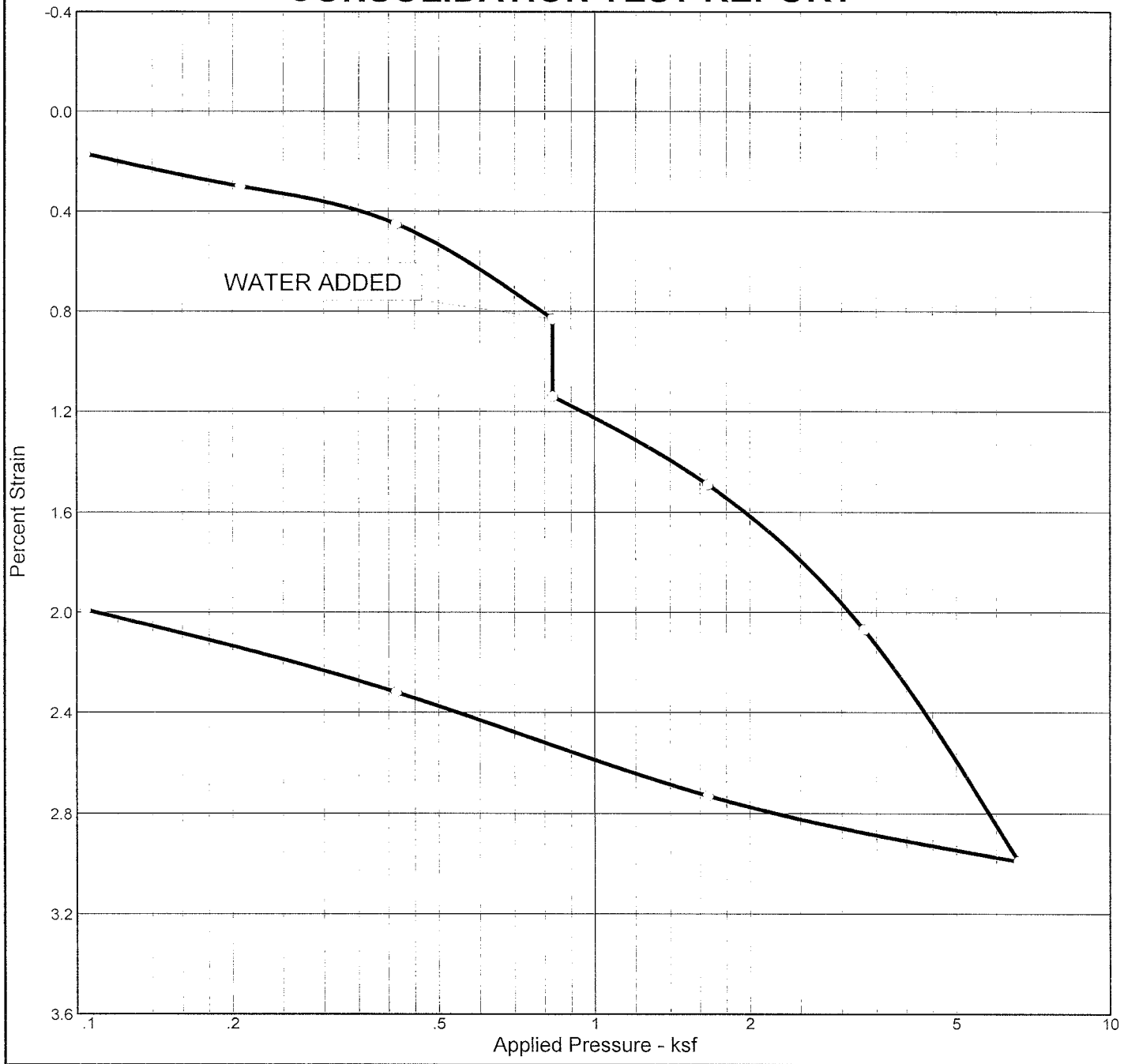
Remarks:
Note: No Water Added.

CONSOLIDATION TEST REPORT

Island Geotechnical Engineering, Inc.

Plate 15

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (ksf)	P_C (ksf)	C_C	C_S	Swell Press. (ksf)	Clpse. %	e_O
Sat.	Moist.											
83.2 %	32.0 %	87.9			3.07	0.44	1.19	0.07	0.01		0.3	1.181

MATERIAL DESCRIPTION	USCS	AASHTO
reddish brown SILT	MH	

Project No. 01507-FM **Client:**

Project: Wailuku Municipal Parking Lot

Source: Boring 3 **Sample No.:** 3 **Elev./Depth:** 4.0'

Remarks:

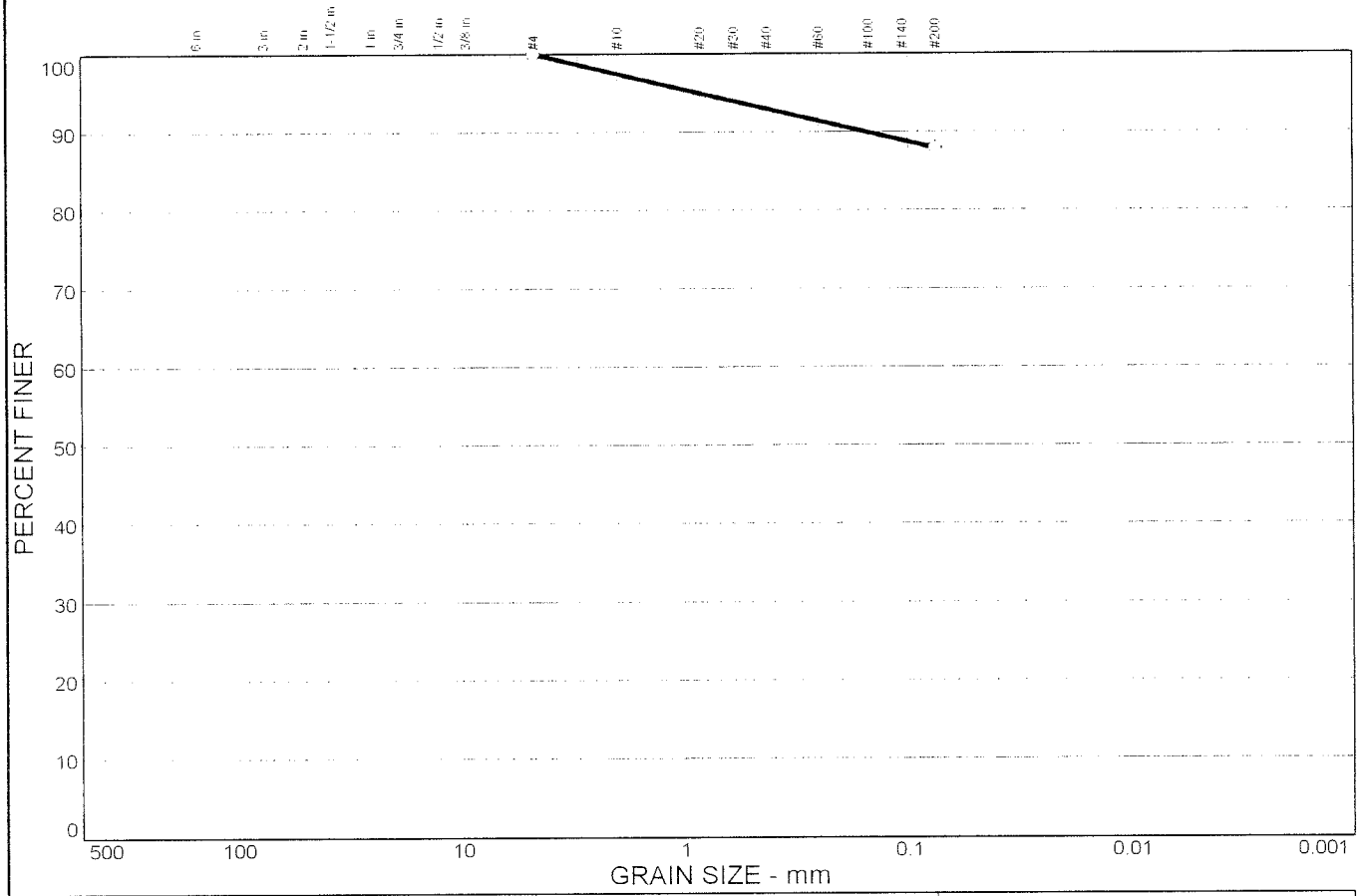
Note: Water Added at 0.829 ksf.

CONSOLIDATION TEST REPORT

Island Geotechnical Engineering, Inc.

Plate 16

SIEVE ANALYSIS



% COBBLES	% GRAVEL		% SAND			% FINES	
	CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	2.5	4.5	5.1	87.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#200	87.9		

* (no specification provided)

Material Description

dark brown fat CLAY

Atterberg Limits

PL= 25 LL= 54 PI= 29

Coefficients

D_{85}= D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= CH AASHTO=

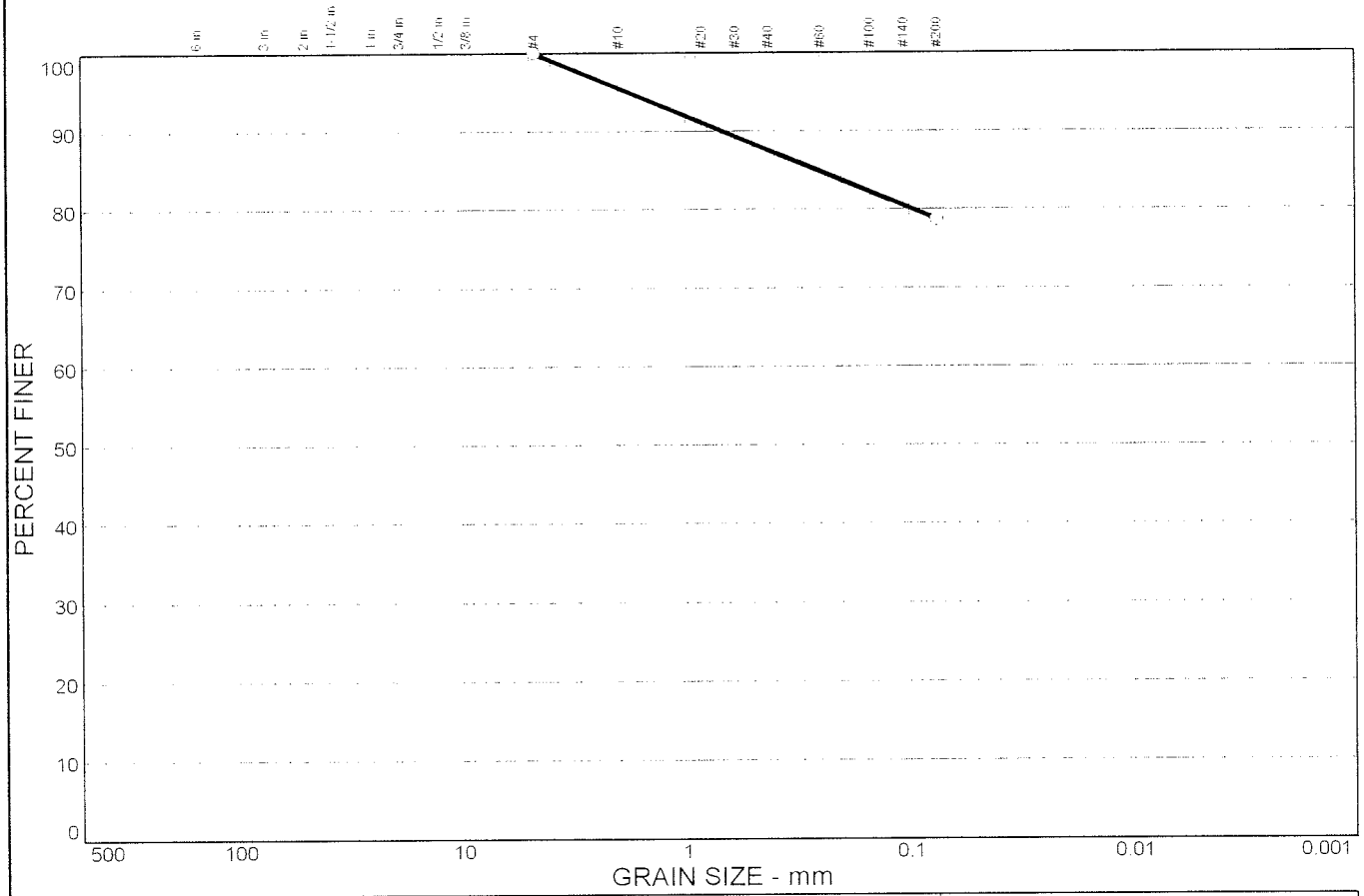
Remarks

Sample No.: 1 Source of Sample: Date:
Location: B-8 Elev./Depth: 1.0' - 3.0'

Island Geotechnical Engineering, Inc.
Wailuku, Hawaii

Client:
Project: Wailuku Parking Structure
Project No: 01507-FM2 Plate 17

SIEVE ANALYSIS



% COBBLES	% GRAVEL		% SAND			% FINES	
	CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	4.4	8.0	8.9	78.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#200	78.7		

* (no specification provided)

Material Description

reddish brown elastic SILT with sand

Atterberg Limits

PL= 36 LL= 60 PI= 24

Coefficients

D_{85}= 0.256 D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= MH AASHTO=

Remarks

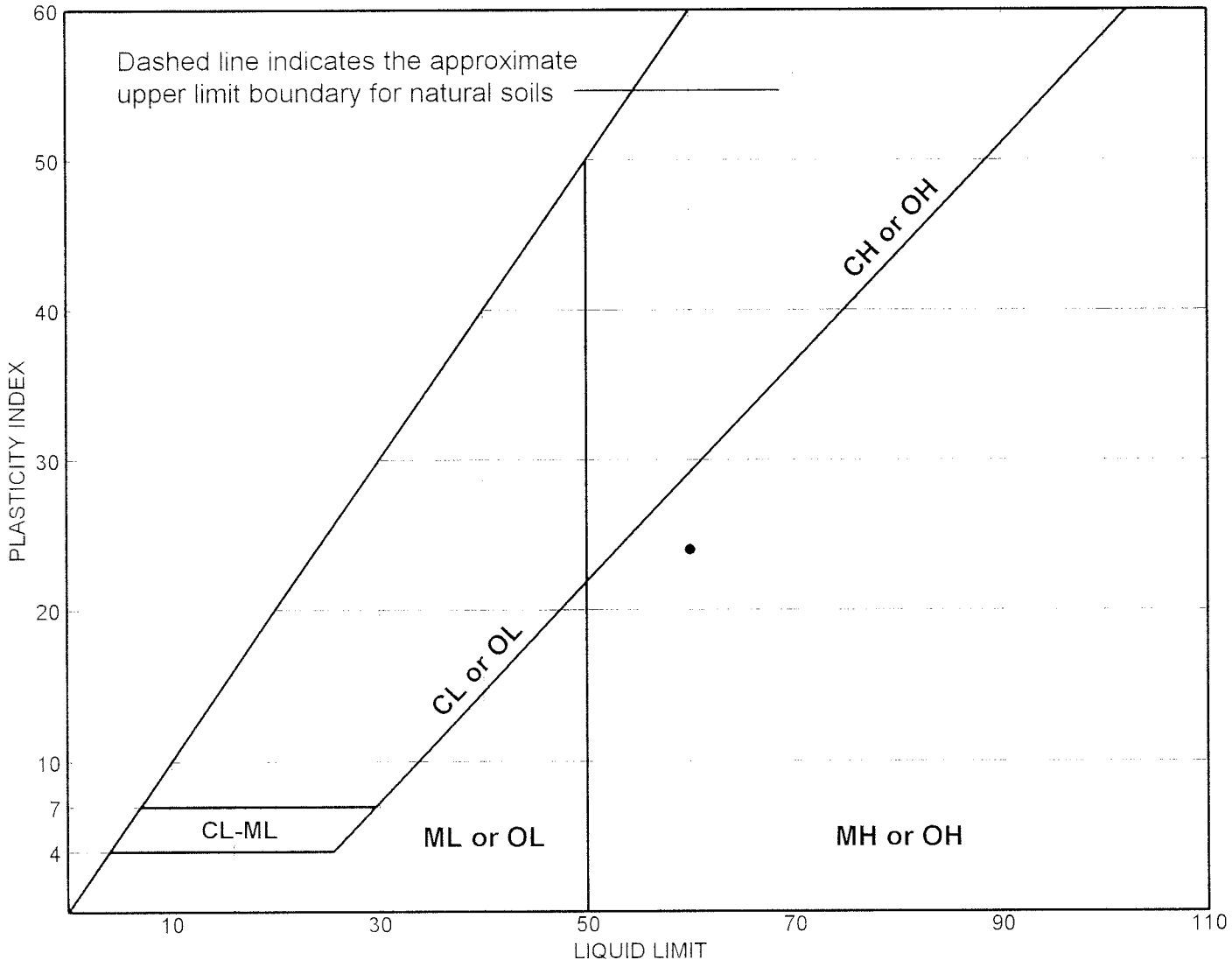
Sample No.: 4
Location: B-8

Source of Sample:

Date:
Elev./Depth: 6.0' - 7.5'

Island Geotechnical Engineering, Inc. Wailuku, Hawaii	Client:
	Project: Wailuku Parking Structure
	Project No: 01507-FM2 Plate 18

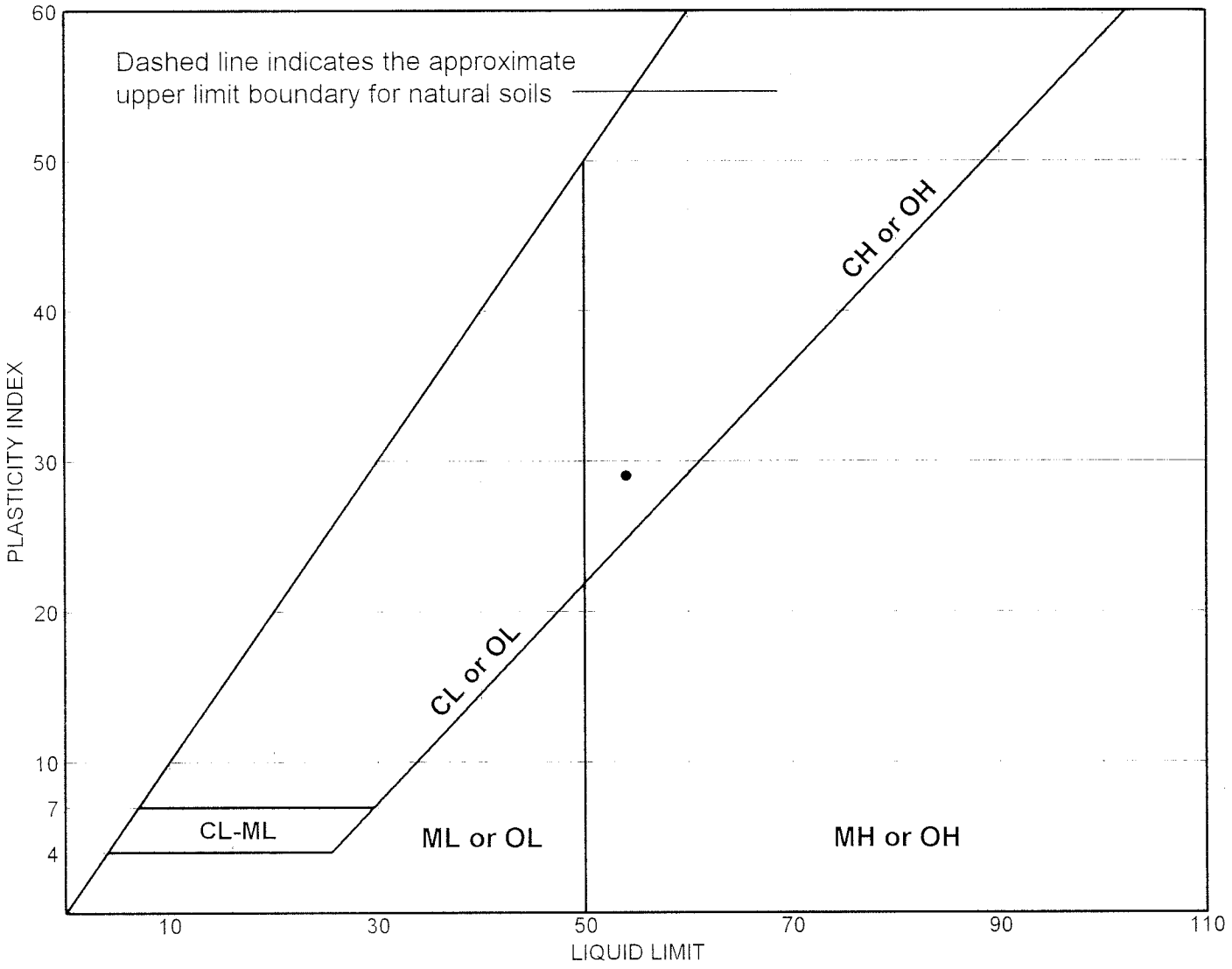
LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	B-6	4	9.0' - 10.5'		36	60	24	MH

LIQUID AND PLASTIC LIMITS TEST REPORT **Island Geotechnical Engineering, Inc.** **Wailuku, Hawaii**	**Client:** **Project:** Wailuku Parking Structure **Project No.:** 01507-FM2 **Plate** 19

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	B-8	1	1.0' - 3.0'		25	54	29	CH

LIQUID AND PLASTIC LIMITS TEST REPORT **Island Geotechnical Engineering, Inc.** **Wailuku, Hawaii**	**Client:** **Project:** Wailuku Parking Structure **Project No.:** 01507-FM2 **Plate** 20

REMOLDED EXPANSION TEST REPORT (One-Dimensional Swell Test)

ASTM D 4546-96: Method B modified (note 1)

SAMPLE LOCATION	DEPTH (feet)	MOLDING WATER CONTENT	MOLDED DRY DENSITY (pcf)	MOLDED % SAT.	FINAL WATER CONTENT	MEASURED EXPANSION
Boring 2	1.75 to 2.25	26.4%	101.4	90.8	29.1%	2.7%
"	"	"	101.9	91.4	28.1%	3.7% (note 2)

note 1: The above test were performed by compacting the soil into a 2.375 inch diameter (1 inch height) ring using 9 blows with a 10 pound hammer; the sample was then placed into an expansion apparatus. A 155 psf surcharge was then placed on the sample. The sample was then submerged in water and the change in vertical height was recorded.

note 2: This sample was air-dried to 16.3% moisture content prior to submerging in water.

FIELD DENSITY EXPANSION TEST REPORT (One-Dimensional Swell Test)

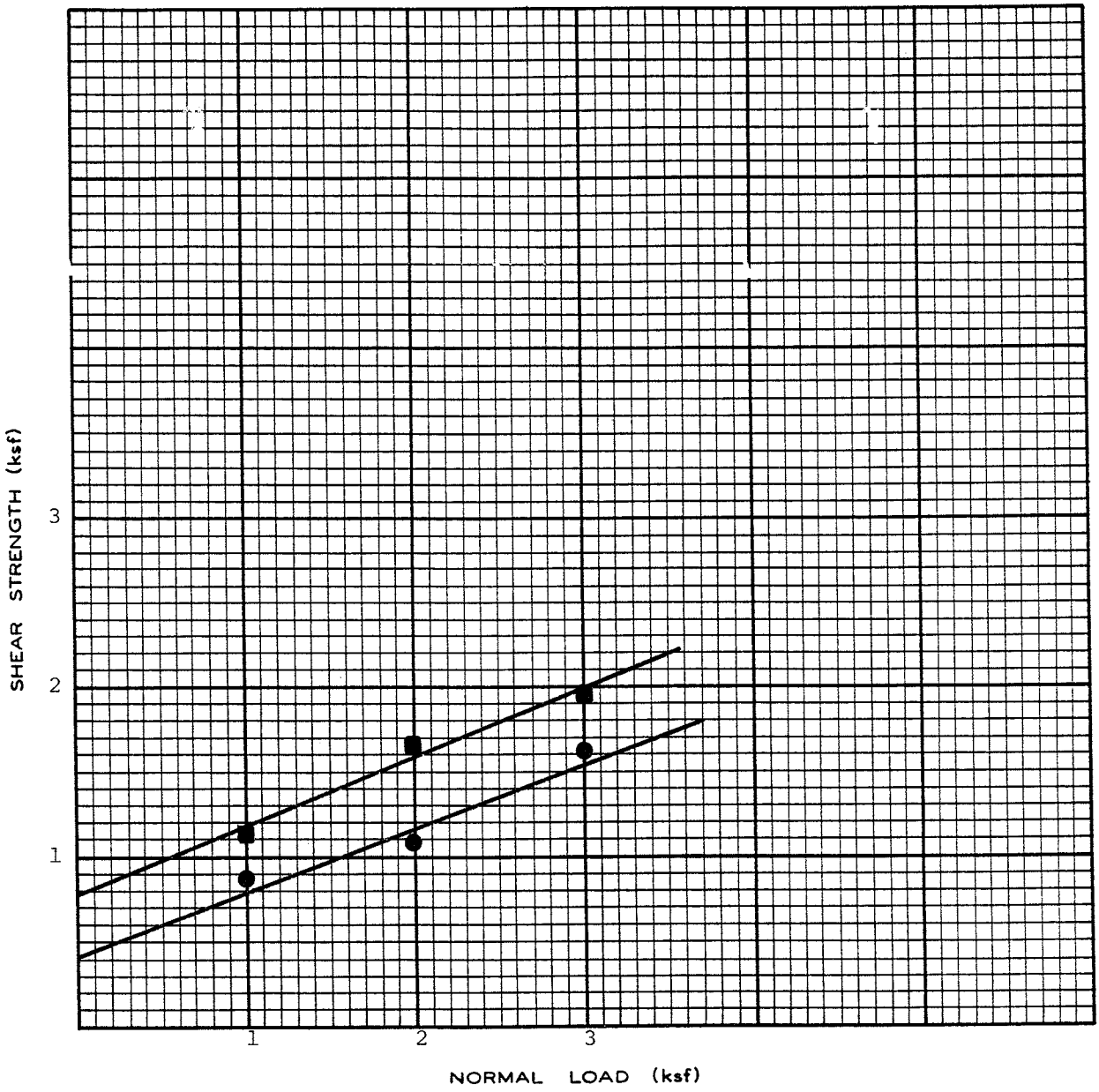
ASTM D 4546-96: Method B modified (note 1)

SAMPLE LOCATION	DEPTH (feet)	INITIAL WATER CONTENT	INITIAL DRY DENSITY (pcf)	INITIAL % SAT.	FINAL WATER CONTENT	MEASURED EXPANSION
Boring 2	1.75 to 2.25	30.1%	93.5	88.1	31.6%	0.1%
"	"	29.8%	93.7	87.6	31.3%	1.2% (note 2)

note 1: The above test were performed by taking 2.5 inch diameter ring samples obtained during the test boring (obtained with a 3" diameter (o.d.) sampling tube) and placing the ring samples into an expansion apparatus. These ring samples are often slightly disturbed producing a lower expansion value than the remolded test (see Plate 8 for remolded test results). A 155 psf surcharge was then placed on the sample. The sample was then submerged in water and the change in vertical height was recorded.

note 2: This sample was air-dried to 23.7% moisture content prior to submerging in water.

DIRECT SHEAR TEST



	LOCATION	DEPTH (ft.)	COHESION (psf)	ANGLE OF INTERNAL FRICTION	TEST CONDITIONS
●	Boring 1	4.0	405	20°	Field Density: Peak Strength
■	Boring 2	11.0	790	22°	Field Density: Peak Strength

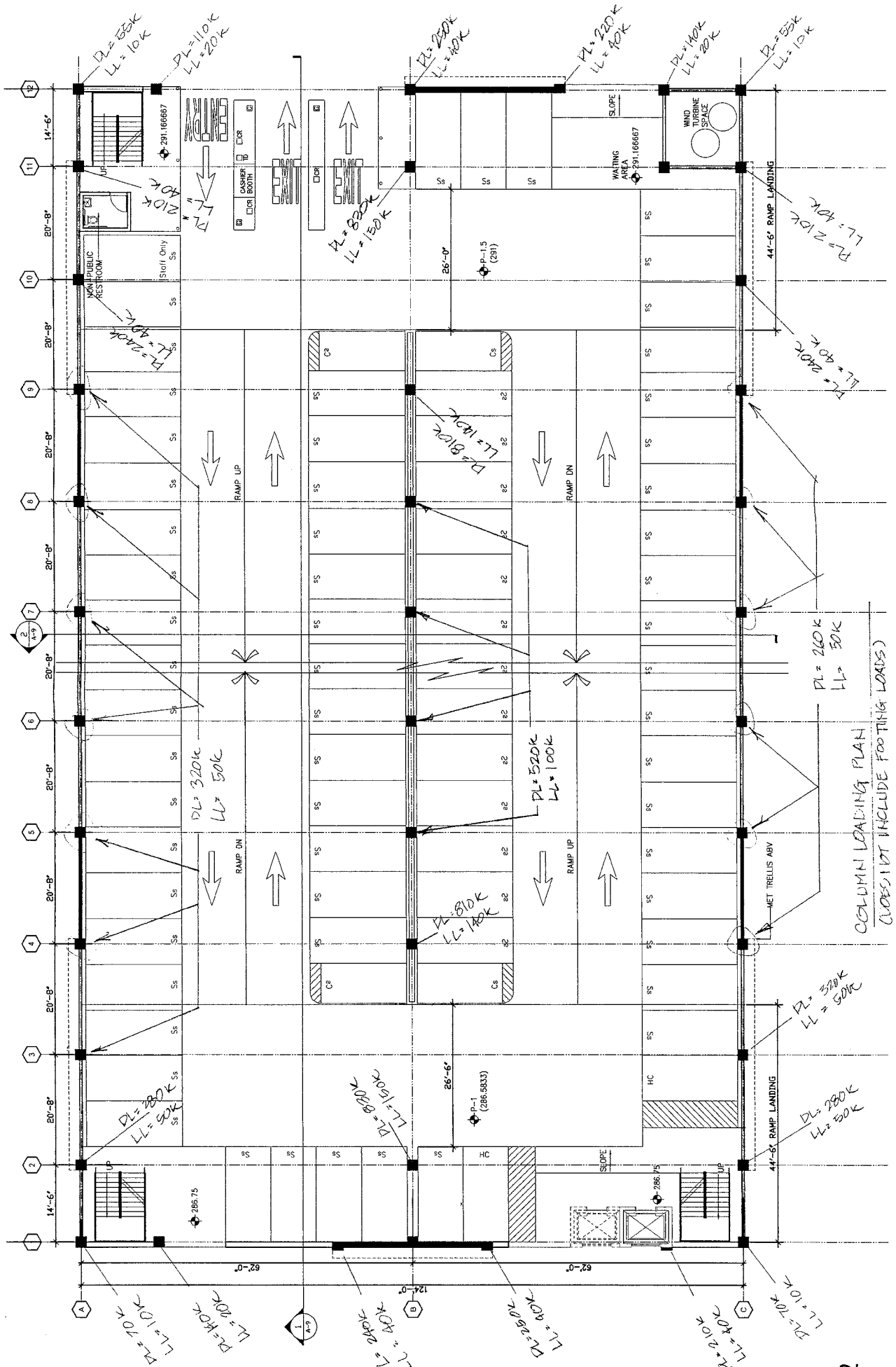
PROJECT:	PROJECT NO.		PLATE
WAILUKU MUNICIPAL PARKING LOT	01507-FM	ISLAND GEOTECHNICAL ENGINEERING, INC. *Geotechnical Consultants*	23

Rock Core Strength Test Results

Boring	Specimen	Core Depth (feet)	Core Diameter	Core Density (pcf)	Compression Break Results in P.S.I
6	A	23 to 27	2.03"	140.6	5,860
6	B	23 to 27	2.04"	169.4	15,370
6	A	27 to 32	2.04"	179.4	15,790
6	B	27 to 32	2.04"	177.9	15,210
7	A	23.5 to 28.5	2.04"	169.1	12,570
7	B	23.5 to 28.5	2.04"	165.8	11,790

The work in the laboratory on the above rock core samples were performed in the following order:

1) Cut cores to desired length.
2) Measure and weight the cut cores.
3) Sulfur cap the cut cores.
4) Perform compression test on the cores.



March, 2011

Plate 25

ISLAND GEOTECHNICAL ENGINEERING, INC.
Geotechnical Consultants

330 Ohukai Road, Suite 119
Kihei, Maui, Hawaii 96753
Phone: (808) 875-7355
Fax: (808) 875-7122

June 29, 2011
Project No. 01507-FM

County of Maui
Department of Public Works
Engineering Division
200 South High Street
Wailuku, Hawaii 96793

Subject: **Amendment #1 to Soils Report entitled "Wailuku Municipal Parking Structure" dated March 29, 2011**
Wailuku, Maui, Hawaii

In our original soils report dated March 29, 2011, in the Special Considerations section of the report on page 4 it states:

"Some of the on-site soils were found to be very moist (wet side of optimum moisture content, ASTM D 1557 test procedure). Compaction of these on-site soils or using the on-site soil as fill or backfill may require aeration (drying) in order to obtain optimum moisture content so that adequate compaction of the soils may be achieved".

The purpose of this letter is to further elaborate on the above in regards to compaction in the bottom of the footing excavation as follows: 1) During the process of excavating the footings and, if needed, aerating the bottom of footing excavation in order to get the soil to near optimum moisture content (for compaction purposes) it is recommended that all footing excavations be protected from overnight showers (that are known to occur in this area) by covering the footing excavations with plywood and/or plastic vapor barrier and/or other means. In addition, it is recommended that a barrier to prevent surface water from flowing into the open excavation be placed on the up-hill side of the footing excavation as most of the ground on this site is sloping and failure to divert this water may result in water flowing into the footing excavation. Failure to protect the open footing excavation from rain may result in construction delays. 2) For un-stable or soft ground conditions that cannot be properly compacted, the soft soil should be removed to a depth of 12" and then 1 layer of 7-ounce non-woven geotextile fabric should be placed over the subgrade. The 12" excavation should then be backfilled with untreated base course gravel (UTB) in two compacted 6 inch lifts.

ISLAND GEOTECHNICAL ENGINEERING, INC.

Charles K. Biegel, P.E.
President

Appendix I
Environmental Noise Assessment Report

D. L. ADAMS ASSOCIATES, LTD.
Consultants in Acoustics and Performing Arts Technologies

Environmental Noise Assessment Report
Wailuku Municipal Parking Structure
Wailuku, Maui, Hawaii

May 2011
Revised September 2011

DLAA Project No. 11-03

Prepared for:
Allison-Ide Structural Engineers LLC
Honolulu, Hawaii

970 N. KALAHEO AVE. • SUITE A311 • KAILUA, HAWAII 96734
808/254-3318 • FAX 808/254-5295
www.dlaa.com • hawaii@dlaa.com

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1.0 EXECUTIVE SUMMARY

1.1 The proposed Wailuku municipal parking structure is located on a 2.192 acre site in Wailuku, Maui, as shown in Figure 1. The project site is currently used as a parking lot and is situated between Vineyard, Market, Main, and Church Streets. The areas surrounding the project site are zoned as a commercial/business district.

1.2 The measured long-term sound levels vary with the time of day based on vehicular traffic patterns in the Wailuku business district as well as environmental noise sources such as birds. The hourly equivalent sound levels, L_{eq}, generally ranged from 48 to 50 dBA at night and 50 to 60 dBA during the day. The average day-night level, L_{dn}, was calculated from the measured noise levels to be 58 dBA.

1.3 During the project construction, the dominant noise sources will probably be earth moving equipment, such as bulldozers and diesel powered trucks. Noise from construction activities will occur on the project site. Noise from construction activities should be short term and must comply with State of Hawaii Community Noise Control Rules and a construction noise permit issued by the Department of Health.

1.4 Noise from mechanical equipment and other stationary equipment must meet the State DOH Community Noise Rule. However, the proposed parking structure will be naturally ventilated and stationary mechanical equipment is not planned.

1.5 The results of the vehicular traffic noise analyses show negligible increases in traffic noise levels due to the project. In addition, all existing and future predicted noise levels are expected to be below the FHWA/HDOT maximum noise limit of 67 dBA. Therefore, the project is not expected to produce a significant traffic noise impact.

1.6 Noise from the planned parking structure is sporadic in nature and will be audible in the vicinity of the project site. The noise sources are similar to those that currently exist at the project site (i.e., car alarm, engine startup noise, car door slams, etc.). However, noise levels from an event that occurs in a reverberant parking structure may be slightly higher than the same event in an open air parking lot. The design of the parking structure should incorporate noise control measures. The current design of the parking structure includes concrete floors with a broom finish which is favorable for preventing tire squeal. The design may also consider treating the ceiling of the parking structure with absorptive material to reduce the build-up of noise within the parking structure.

2.0 PROJECT DESCRIPTION

The proposed Wailuku municipal parking structure is located on a 2.192 acre site in Wailuku, Maui, as shown in Figure 1. The project site is currently used as a parking lot and is situated between Vineyard, Market, Main, and Church Streets. The areas surrounding the project site are zoned as a commercial/business district.

3.0 NOISE STANDARDS

Various local and federal agencies have established guidelines and standards for assessing environmental noise impacts and set noise limits as a function of land use. A brief description of common acoustic terminology used in these guidelines and standards is presented in Appendix A.

3.1 State of Hawaii, Community Noise Control

The State of Hawaii Community Noise Control Rule [Reference 1] defines three classes of zoning districts and specifies corresponding maximum permissible sound levels due to *stationary* noise sources such as air-conditioning units, exhaust systems, generators, compressors, pumps, etc. The Community Noise Control Rule does not address most *moving* sources, such as vehicular traffic noise, air traffic noise, or rail traffic noise. However, the Community Noise Control Rule does regulate noise related to agricultural, construction, and industrial activities, which may not be stationary.

The maximum permissible noise levels are enforced by the State Department of Health (DOH) for any location at or beyond the property line and shall not be exceeded for more than 10% of the time during any 20-minute period. The specified noise limits which apply are a function of the zoning and time of day as shown in Figure 2. With respect to mixed zoning districts, the rule specifies that the primary land use designation shall be used to determine the applicable zoning district class and the maximum permissible sound level. In determining the maximum permissible sound level, the background noise level is taken into account by the DOH.

3.2 U.S. Federal Highway Administration (FHWA)

The FHWA defines four land use categories and assigns corresponding maximum hourly equivalent sound levels, $L_{eq(h)}$, for traffic noise exposure [Reference 2], which are listed in Figure 3. For example, Category B, defined as picnic and recreation areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals, has a corresponding maximum exterior L_{eq} of 67dBA and a maximum interior L_{eq} of 52 dBA. These limits are viewed as design goals, and all projects meeting these limits are deemed in conformance with FHWA noise standards.

3.3 Hawaii Department of Transportation (HDOT)

The HDOT has adopted FHWA's design goals for traffic noise exposure in its noise analysis and abatement policy [Reference 3]. According to the policy, a traffic noise impact occurs when the predicted traffic noise levels "approach" or exceed FHWA's design goals or when the predicted traffic noise levels "substantially exceed the existing noise levels." The policy also states that "approach" means at least 1 dB less than FHWA's design goals and "substantially exceed the existing noise levels" means an increase of at least 15 dB.

4.0 EXISTING ACOUSTICAL ENVIRONMENT

Two types of noise measurements were conducted to assess the existing acoustical environment in the vicinity of the project location. The first noise measurement type consisted of continuous long-term ambient noise level measurements at one location (Location L1), as shown in Figure 1. The second type of noise measurement was short-term and included traffic counts and was conducted at two locations (Location S1 and S2), also shown in Figure 1. The purpose of the short-term noise measurements and corresponding traffic counts were to calibrate a traffic noise prediction model. All noise measurements were conducted between April 19, 2011 and April 23, 2011.

4.1 Noise Measurement Procedure

Long-Term Noise Measurement Procedure

Continuous, hourly, statistical sound levels were recorded for approximately 4 days. The measurements were taken using a Larson-Davis Laboratories, Model 820, Type-1 Sound Level Meter together with a Gras Model 40AQ Type-1 Microphone. Calibration was checked before and after the measurements with a Larson-Davis Model CAL200 calibrator. Both the sound level meter and the calibrator have been certified by the manufacturer within the recommended calibration period.

The microphone was mounted on the rooftop parapet of a commercial building located at 33 Market Street. A windscreen covered the microphone during the entire measurement period. The sound level meter was secured in a weather resistant case.

Short-Term Noise Measurement Procedure

An approximate 20-minute equivalent sound level, L_{eq}, was measured. Vehicular traffic counts and traffic mix were documented during the measurement period. The noise measurement was taken using a Larson-Davis Laboratories, Model 831, Type-1 Sound Level Meter together with a PCB, Model 377B20 Type-1 Microphone. Calibration was checked before and after the measurements with a Larson-Davis Model CAL200 calibrator. Both the sound level meter and the calibrator have been certified by the manufacturer within the recommended calibration period.

The microphone and sound level meter were mounted on a tripod, approximately 5 feet above grade. A windscreen covered the microphone during the entire measurement period.

4.2 Noise Measurement Locations

Long-Term Noise Measurement Location

Location L1: Positioned at the edge of the rooftop overlooking the Wailuku municipal parking lot.

Short-Term Noise Measurement Locations

Location S1: Positioned adjacent to Vineyard Street near the corner of Market Street, approximately 30 feet south of the edge-of-pavement.

Location S2: Positioned adjacent to Main Street near the corner of Church Street, approximately 30 feet north of the edge-of-pavement.

4.3 Long-Term Noise Measurement Results

The measured long-term sound levels vary with the time of day based on vehicular traffic patterns in the Wailuku business district as well as environmental noise sources such as birds. The hourly equivalent sound levels, L_{eq}, generally ranged from 48 to 50 dBA at night and 50 to 60 dBA during the day. The average day-night level, L_{dn}, was calculated from the measured noise levels to be 58 dBA.

The results from the long-term noise measurement are graphically presented in Figure 4, which shows the measured equivalent sound level, L_{eq}, in A-weighted decibels (dBA) as a function of the measurement date and time. The dominant and secondary noise sources are described below:

Noise Sources

Dominant:	Vehicular traffic from parking lot and surrounding streets, mechanical noise.
Secondary:	Birds, wind, typical urban noises such as pedestrians, sirens, car horns, etc.

5.0 POTENTIAL NOISE IMPACTS DUE TO THE PROJECT

5.1 Project Construction Noise

Development of project areas will involve excavation, grading, and other typical construction activities during construction. The various construction phases of the project may generate significant amounts of noise. The actual noise levels produced during construction will be a function of the methods employed during each stage of the construction process. Typical ranges of construction equipment noise are shown in Figure 5. Earthmoving equipment, e.g., bulldozers and diesel-powered trucks, will probably be the loudest equipment used during construction.

5.2 Project Generated Stationary Mechanical Noise and Compliance with State of Hawaii Community Noise Control Rule

Noise from mechanical equipment and other stationary equipment must meet the State DOH noise rules, which stipulate maximum permissible noise limits at the property line. These noise limits are 60 dBA during the daytime hours (7:00 am to 10:00 pm) and 50 dBA during the night time hours (10:00 pm to 7:00 am) for commercial and business districts. The proposed Wailuku municipal parking structure will be naturally ventilated on the upper levels and stationary mechanical equipment is not planned.

5.3 Vehicular Traffic Noise and Compliance with FHWA/HDOT Noise Limits

A vehicular traffic noise analysis was completed for the existing conditions and the expected future year of completion (2014) projections with the "No Build" and "Build" conditions using the FHWA Traffic Noise Model Look-up Tables Software Version 2.5 (2004) [Reference 4]. The traffic noise analysis is based on the traffic counts provided by the Traffic Consultant [Reference 5]. Vehicular traffic noise levels were calculated at 4 locations along Vineyard, Main, Market, and Church Streets in the vicinity of the Wailuku municipal parking structure project site, as shown in Figure 1. The results of the traffic noise analysis are described below and summarized in Table 1.

Table 1. Existing and Future Traffic Noise Projections (dBA)[1]

	Vineyard[2]		**Main[2]**		**Market[3]**		**Church[3]**	
	AM	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Existing (Calculated)	60.1	60.4	61.6	61.4	57.3	57.9	56.2	55.4
Future Without Project (2014)	60.1	60.4	61.7	61.5	57.3	57.9	56.2	55.4
Future With Project (2014)	59.7	59.8	61.7	61.7	57.9	58.1	56.5	56.7
Future Change Without Project (2014)	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Future Change With Project (2014)	-0.4	-0.6	0.1	0.3	0.6	0.2	0.3	1.3
Future Change Due to Project (2014)	**-0.4**	**-0.6**	**0.0**	**0.2**	**0.6**	**0.2**	**0.3**	**1.3**

Notes:
1. Traffic noise level projections are based on peak-hour traffic volumes provided by the Traffic Consultant [Reference 5] and are expressed in A-weighted decibels (dBA).
2. Traffic noise levels were calculated at a distance of 40 feet from the centerline of the roadway for Vineyard and Main Streets.
3. Traffic noise levels were calculated at a distance of 33 feet from the centerline of the roadway for Market and Church Streets.

Noise levels predicted at all locations are well below the FHWA/HDOT maximum noise limit of 67 dBA. A slight traffic noise level increase of less than 2 dB is expected on Market and Church Streets. This corresponds to the increase in traffic volume due to the rerouting of vehicles to Pili Street to enter the parking structure. A significant noise impact on the surrounding community due to project generated traffic noise is not expected.

5.4 Project Generated Noise from the Parking Structure

To characterize noise sources present in a parking structure, additional measurements were conducted at an existing parking structure. Single noise source events were measured in A-weighted decibels (dBA) at a distance of 50 feet from the noise source. The results are summarized in Table 2 below.

Table 2. Parking Structure Noise Levels

Noise Source	L_{max}[1] at 50 ft (Source Level)	L_{99}[2] (Background Level)	Event Duration
Car Alarm	77-81 dBA	56 dBA	1 sec repetition
Keyless Remote Entry	74 dBA	58 dBA	1 sec
Car Door Slam	73 dBA	58 dBA	0.5 sec
Car Starting	69 dBA	58 dBA	2 sec
Car Backing Out of Stall	61 dBA	59 dBA	3 sec
Car Driving Away	63 dBA	58 dBA	3 sec
Brake Squeal	62 dBA	59 dBA	2 sec
Tire Squeal (during a turn)	76 dBA	63 dBA	1 sec
Tire Squeal (during accel.)	71 dBA	61 dBA	8 sec

Notes:
1. L_{max} is the maximum sound level for the single noise event.
2. The L_{99} represents the ambient or background sound level. The L_{99} metric is defined in more detail in Appendix A.

As shown in the table, these noise sources are clearly audible but sporadic in nature. These noise sources are similar to the sources found at the existing municipal parking lot, i.e., car alarms, engine startup noise, car door slams, etc. However, within a parking structure these noise sources cause excessive reverberation and may be slightly higher, approximately 3 dB, than similar events that occur at the existing parking lot. Another source of annoyance not currently present at the parking lot may come from the squeal of tires around corners and on the garage ramps. Since the parking structure is utilized by patrons of the surrounding businesses, the highest concentration of events will likely occur during morning and afternoon peak traffic periods. However, most buildings surrounding the project site are sealed and air conditioned, therefore the slight increase in exterior noise level is not likely to be noticeable to the occupants inside the buildings compared to the existing condition.

6.0 NOISE IMPACT MITIGATION

6.1 Mitigation of Construction Noise

In cases where construction noise exceeds, or is expected to exceed the State's "maximum permissible" property line noise levels [Reference 1], a permit must be obtained from the State DOH to allow the operation of vehicles, cranes, construction equipment, power tools, etc., which emit noise levels in excess of the "maximum permissible" levels.

In order for the State DOH to issue a construction noise permit, the Contractor must submit a noise permit application to the DOH, which describes the construction activities for the project. Prior to issuing the noise permit, the State DOH may require action by the Contractor to incorporate noise mitigation into the construction plan. The DOH may also require the Contractor to conduct noise monitoring or community meetings inviting the neighboring residents and business owners to discuss construction noise. The Contractor should use reasonable and standard practices to mitigate noise, such as using mufflers on diesel and gasoline engines, using properly tuned and balanced machines, etc. However, the State DOH may require additional noise mitigation, such as temporary noise barriers, or time of day usage limits for certain kinds of construction activities.

Specific permit restrictions for construction activities [Reference 1] are:

> "No permit shall allow any construction activities which emit noise in excess of the maximum permissible sound levels ... before 7:00 a.m. and after 6:00 p.m. of the same day, Monday through Friday."
>
> "No permit shall allow any construction activities which emit noise in excess of the maximum permissible sound levels... before 9:00 a.m. and after 6:00 p.m. on Saturday."
>
> "No permit shall allow any construction activities which emit noise in excess of the maximum permissible sound levels on Sundays and on holidays."

The use of hoe rams and jack hammers 25 lbs. or larger, high pressure sprayers, chain saws, and pile drivers are restricted to 9:00 a.m. to 5:30 p.m., Monday through Friday. In addition, construction equipment and on-site vehicles or devices whose operations involve the exhausting of gas or air, excluding pile hammers and pneumatic hand tools weighing less than 15 pounds, must be equipped with mufflers [Reference 1].

The DOH noise permit does not limit the noise level generated at the construction site, but rather the times at which noisy construction can take place. Therefore, noise mitigation for construction activities should be addressed using project management, such that the time restrictions within the DOH permit are followed.

6.2 Mitigation of Project Generated Mechanical Noise

The design of the new parking structure relies on natural ventilation so noise mitigation for stationary mechanical equipment will not be required.

6.3 Mitigation of Vehicular Traffic Noise

The traffic noise analysis shows no significant noise impacts to the surrounding community. Therefore, noise mitigation for vehicular traffic noise is not required.

6.4 Mitigation of Project Generated Noise from the Parking Structure

Noise emanating from the proposed parking structure to the neighboring businesses will be slightly higher, approximately 3 dB, than the noises from the existing parking lot. Noise reduction measures will be considered during the design phase. The current design of the parking structure includes concrete floors with a broom finish on the sloping ramps. This type of finish is favorable for preventing tire squeal and is recommended for all floor surfaces. The design may also consider treating the ceiling of the parking structure with absorptive material to reduce the build-up of noise within the parking structure.

REFERENCES

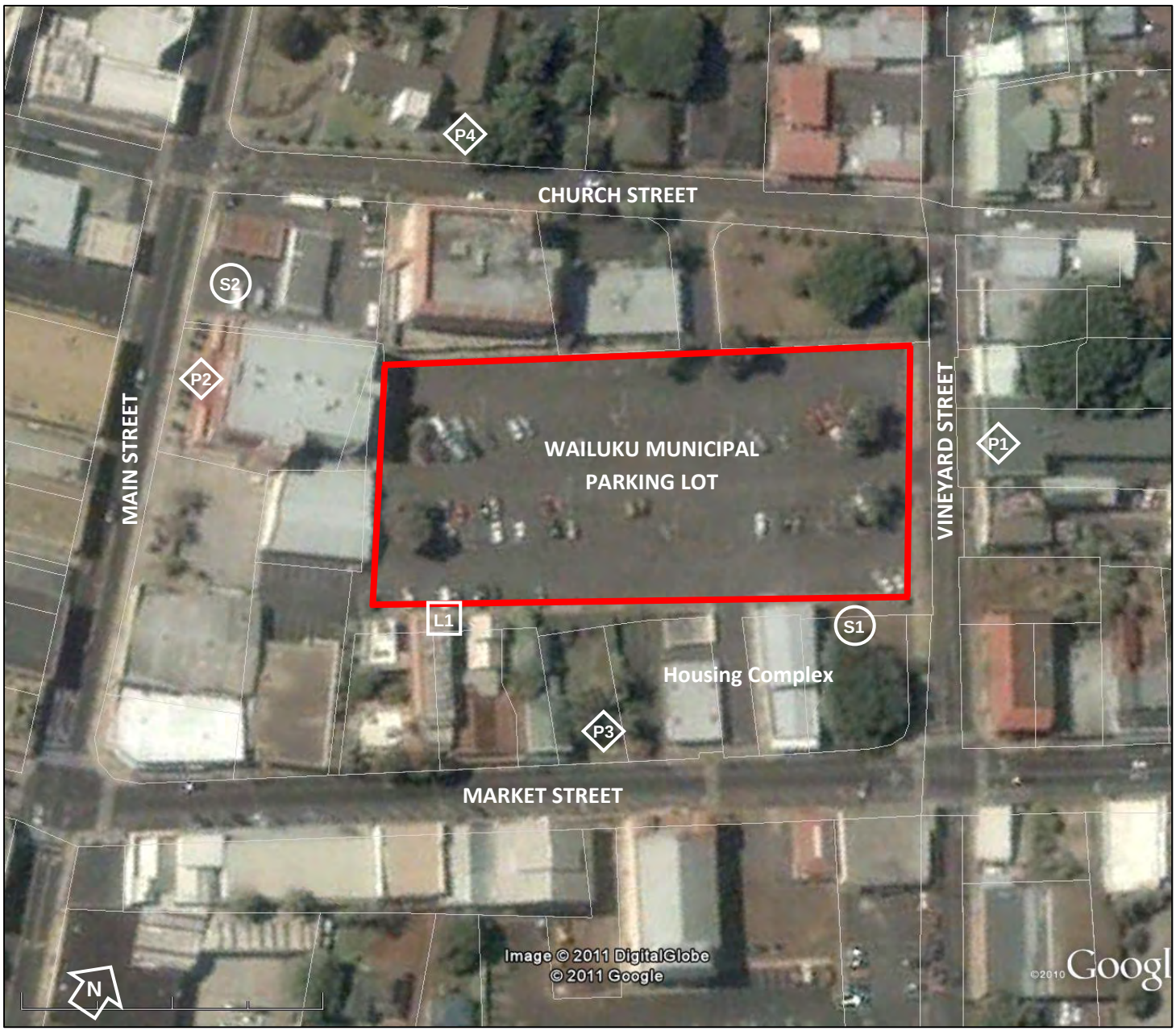
1. Chapter 46, *Community Noise Control*, Department of Health, State of Hawaii, Administrative Rules, Title 11, September 23, 1996.

2. *Department of Transportation, Federal Highway Administration Procedures for Abatement of Highway Traffic Noise*, Title 23, CFR, Part 772, Amended in 75 FR 39820, July 13, 2010.

3. *Noise Analysis and Abatement Policy*, Department of Transportation, Highways Division, State of Hawaii, June 1997.

4. Federal Highway Administration's Traffic Noise Model Look-up Tables Software, Ver. 2.5; U.S. Department of Transportation, December 17, 2004.

5. *Traffic Impact Report – Wailuku Municipal Parking Structure,* Wilson Okamoto Corporation, March 2010.



LEGEND

Long-Term Measurement Location

L1 Rooftop of 33 Market Street Building

Short-Term Measurement Locations

S1 30 Feet West of Vineyard Street

S2 30 Feet East of Main Street

Traffic Noise Prediction Locations

P1 Adjacent to Vineyard Street

P2 Adjacent to Main Street

P3 Adjacent to Market Street

P4 Adjacent to Church Street

Wailuku Municipal Parking Structure Project Area



D. L. ADAMS ASSOCIATES, LTD.
970 N. KALAHEO AVE. A-311
KAILUA, HAWAII 96734
808/254-3318 FAX 808/254-5295

Noise Measurement and Prediction Locations

May 2011	11-03	DFD
Date	Project No.	Drawn By

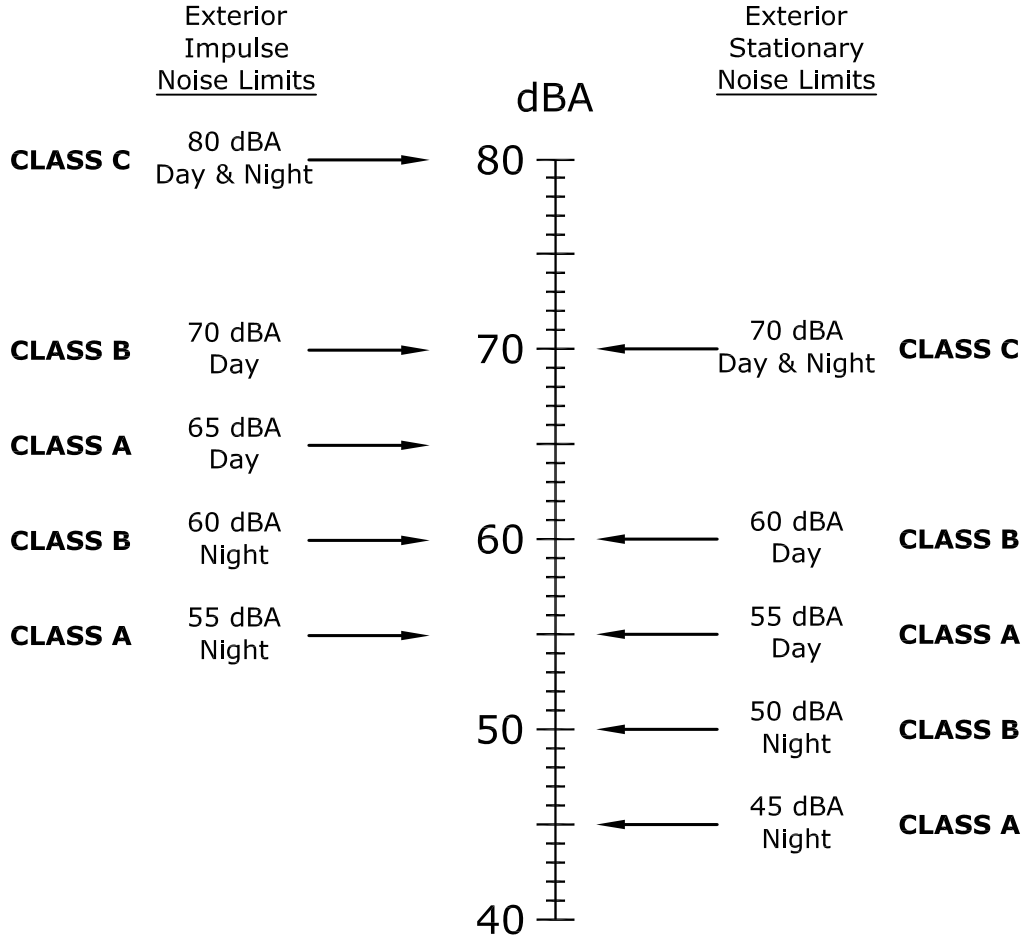
Figure No 1

STATIONARY NOISE:

Zoning District	Day Hours (7 AM to 10 PM)	Night Hours (10 PM to 7 AM)
CLASS A Residential, Conservation, Preservation, Public Space, Open Space	55 dBA (Exterior)	45 dBA (Exterior)
CLASS B Multi-Family Dwellings, Apartments, Business, Commercial, Hotel, Resort	60 dBA (Exterior)	50 dBA (Exterior)
CLASS C Agriculture, Country, Industrial	70 dBA (Exterior)	70 dBA (Exterior)

IMPULSE NOISE:

The maximum permissible noise limit for impulsive noise is 10 dBA above the stationary noise limits.



Hawaii Maximum Permissible Sound Levels for Various Zoning Districts

Wailuku Municipal Parking Structure

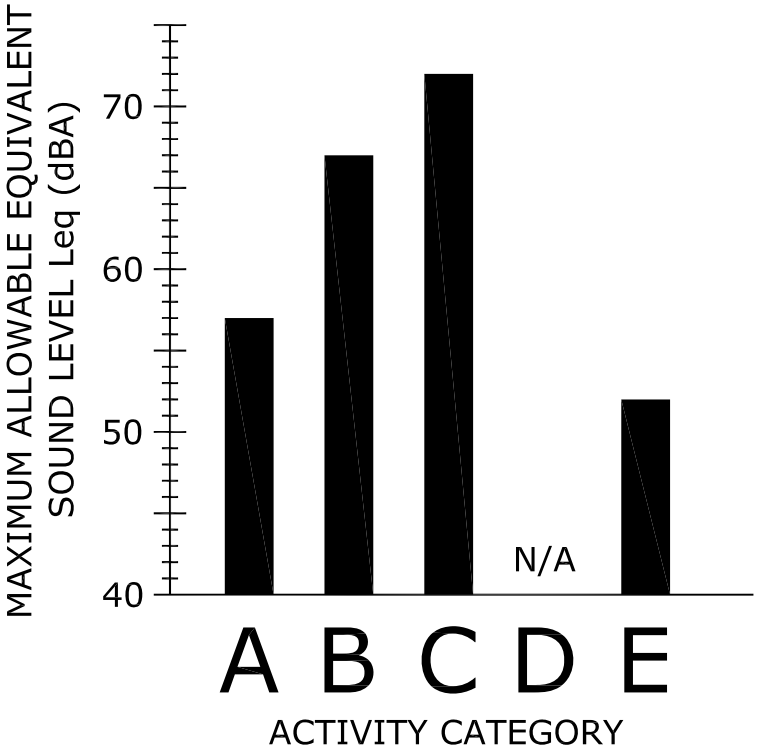
Not to Scale

Figure No 2

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970 N. KALAHEO AVE, A-311
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Date	Project No.	Drawn By
May 2011	11-03	DFD

ACTIVITY CATEGORY	ACTIVITY CATEGORY DESCRIPTION	MAXIMUM EQUIVALENT SOUND LEVEL $L_{eq(h)}$
A	LANDS ON WHICH SERENITY AND QUIET ARE OF EXTRAORDINARY SIGNIFICANCE AND SERVE AN IMPORTANT PUBLIC NEED AND WHERE THE PRESERVATION OF THOSE QUALITIES IS ESSENTIAL IF THE AREA IS TO CONTINUE TO SERVE ITS INTENDED PURPOSE.	57 dBA (EXTERIOR)
B	PICNIC AREAS, RECREATION AREAS, PLAYGROUNDS, ACTIVE SPORT AREAS, PARKS, RESIDENCES, MOTELS, HOTELS, SCHOOLS, CHURCHES, LIBRARIES, AND HOSPITALS.	67 dBA (EXTERIOR)
C	DEVELOPED LANDS, PROPERTIES, OR ACTIVITIES NOT INCLUDED IN ACTIVITY CATEGORIES A OR B ABOVE.	72 dBA (EXTERIOR)
D	UNDEVELOPED LAND	N/A
E	RESIDENCES, MOTELS, HOTELS, PUBLIC MEETING ROOMS, SCHOOLS, CHURCHES, LIBRARIES, HOSPITALS, AND AUDITORIUMS.	52 dBA (INTERIOR)



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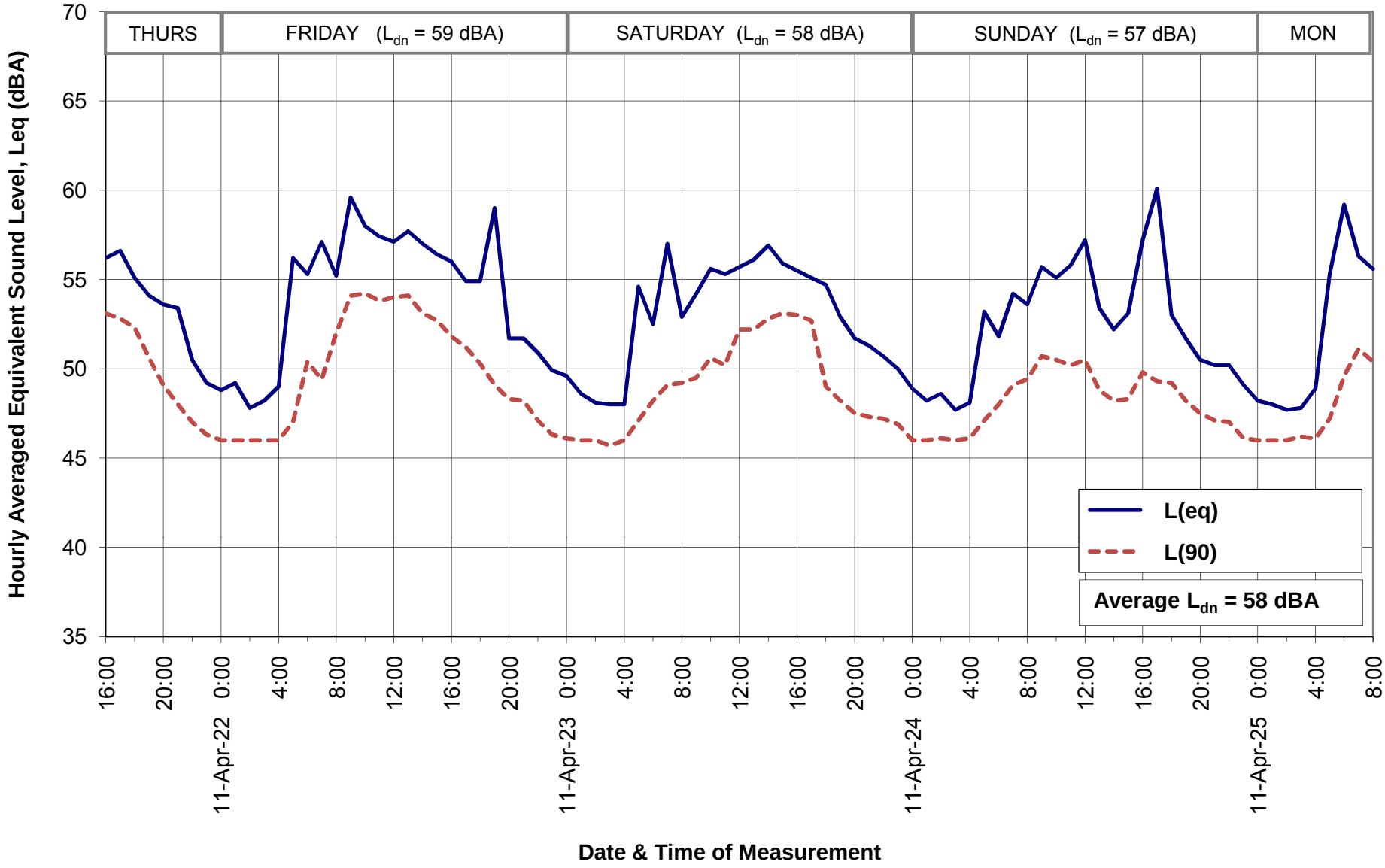
Federal Highways Administration Recommended Equivalent Hourly Sound Levels Based on Land Use

Wailuku Municipal Parking Structure

Not to Scale

Figure No 3

Date	Project No.	Drawn By
May 2011	11-03	TRB

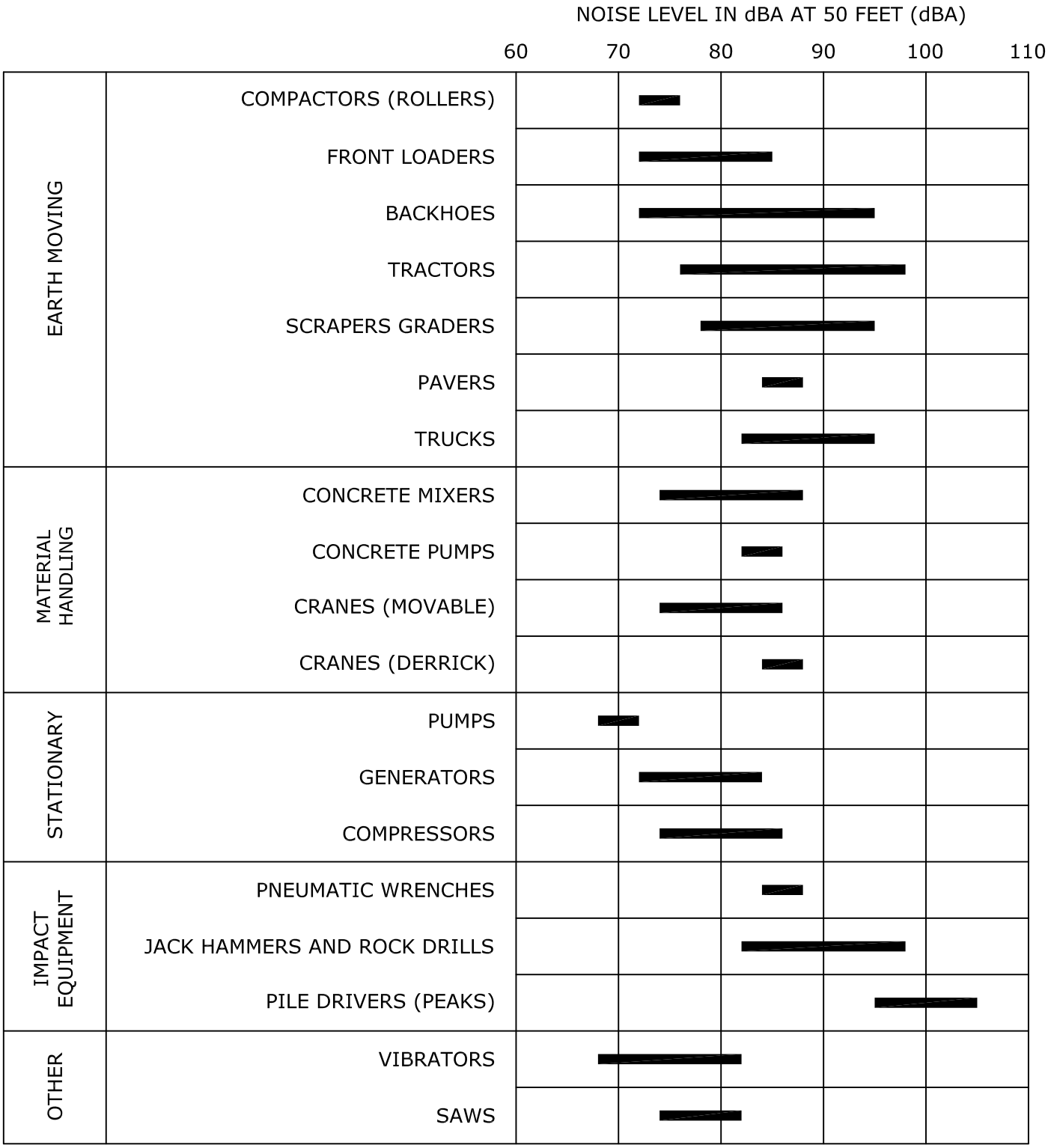


Long Term Noise Measurement Results (L1)

D. L. ADAMS ASSOCIATES, LTD.
970 N. KALAHEO AVE, A-311
KAILUA, HAWAII 96734
808/254-3318 FAX 808/254-5295

May 2011	11-03	DFD
Date	Project No.	Drawn By

Figure No 4



NOTE: BASED ON LIMITED AVAILABLE DATA SAMPLES

Typical Sound Levels from Construction Equipment

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970 N. KALAHEO AVE, A-311
KAILUA, HAWAII 96734
808/254-3318 FAX 808/254-5295

Wailuku Municipal Parking Structure

Not to Scale

Figure No 5

Date	Project No.	Drawn By
May 2011	11-03	DFD

APPENDIX A

Acoustic Terminology

Acoustic Terminology

Sound Pressure Level

Sound, or noise, is the term given to variations in air pressure that are capable of being detected by the human ear. Small fluctuations in atmospheric pressure (sound pressure) constitute the physical property measured with a sound pressure level meter. Because the human ear can detect variations in atmospheric pressure over such a large range of magnitudes, sound pressure is expressed on a logarithmic scale in units called decibels (dB). Noise is defined as "unwanted" sound.

Technically, sound pressure level (SPL) is defined as:

$$SPL = 20 \log (P/P_{ref}) \text{ dB}$$

where P is the sound pressure fluctuation (above or below atmospheric pressure) and P_{ref} is the reference pressure, 20 μPa, which is approximately the lowest sound pressure that can be detected by the human ear. For example:

If P = 20 μPa, then SPL = 0 dB
If P = 200 μPa, then SPL = 20 dB
If P = 2000 μPa, then SPL = 40 dB

The sound pressure level that results from a combination of noise sources is not the arithmetic sum of the individual sound sources, but rather the logarithmic sum. For example, two sound levels of 50 dB produce a combined sound level of 53 dB, not 100 dB. Two sound levels of 40 and 50 dB produce a combined level of 50.4 dB.

Human sensitivity to changes in sound pressure level is highly individualized. Sensitivity to sound depends on frequency content, time of occurrence, duration, and psychological factors such as emotions and expectations. However, in general, a change of 1 or 2 dB in the level of sound is difficult for most people to detect. A 3 dB change is commonly taken as the smallest perceptible change and a 6 dB change corresponds to a noticeable change in loudness. A 10 dB increase or decrease in sound level corresponds to an approximate doubling or halving of loudness, respectively.

A-Weighted Sound Level

Studies have shown conclusively that at equal sound pressure levels, people are generally more sensitive to certain higher frequency sounds (such as made by speech, horns, and whistles) than most lower frequency sounds (such as made by motors and engines)[1] at the same level. To address this preferential response to frequency, the A-weighted scale was developed. The A-weighted scale adjusts the sound level in each frequency band in much the same manner that the

[1] D.W. Robinson and R.S. Dadson, "A Re-Determination of the Equal-Loudness Relations for Pure Tones," *British Journal of Applied Physics*, vol. 7, pp. 166 - 181, 1956. (Adopted by the International Standards Organization as Recommendation R-226.

human auditory system does. Thus the A-weighted sound level (read as "dBA") becomes a single number that defines the level of a sound and has some correlation with the sensitivity of the human ear to that sound. Different sounds with the same A-weighted sound level are perceived as being equally loud. The A-weighted noise level is commonly used today in environmental noise analysis and in noise regulations. Typical values of the A-weighted sound level of various noise sources are shown in Figure A-1.

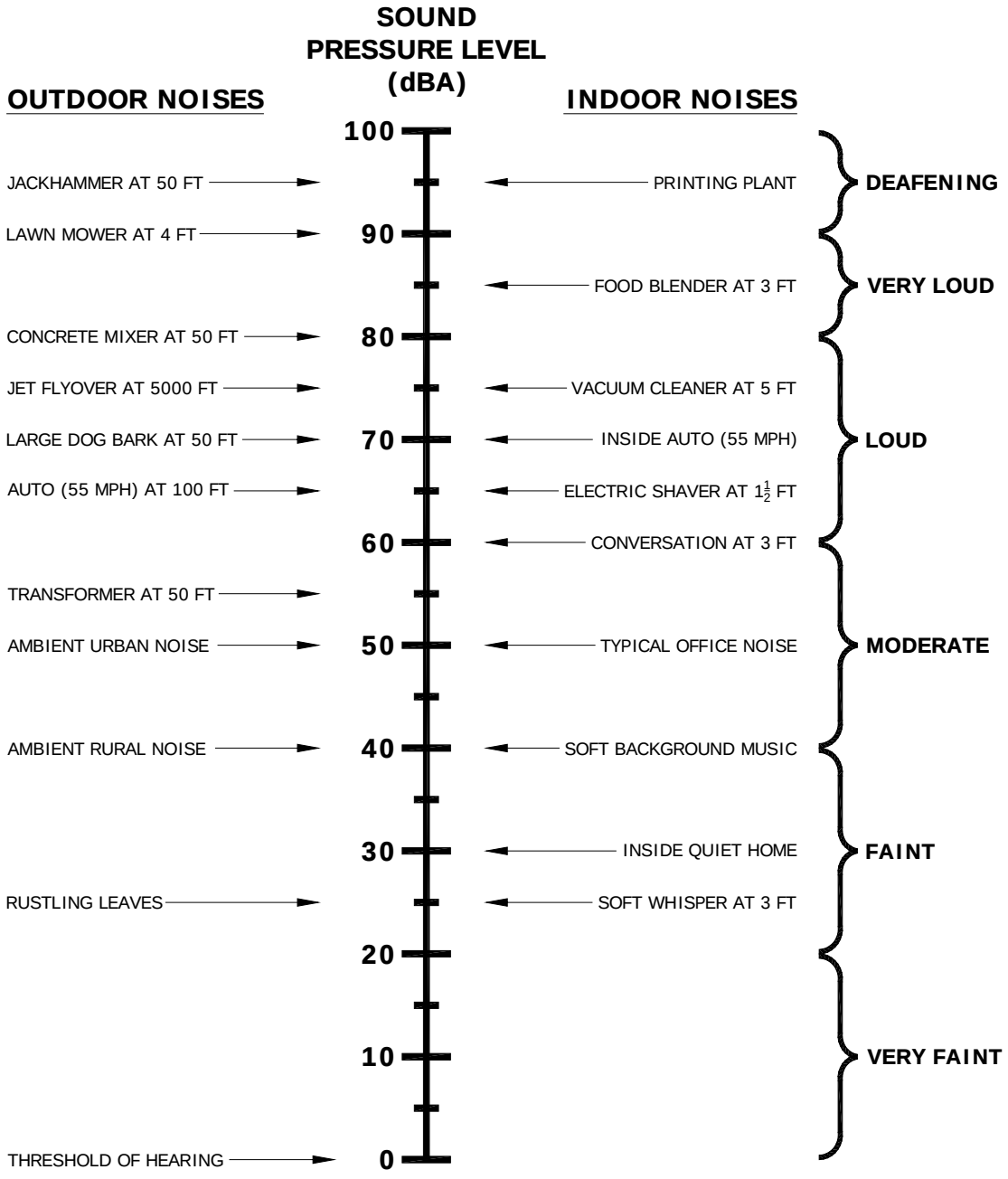


Figure A-1. Common Outdoor/Indoor Sound Levels

Equivalent Sound Level

The Equivalent Sound Level (L_{eq}) is a type of average which represents the steady level that, integrated over a time period, would produce the same energy as the actual signal. The actual *instantaneous* noise levels typically fluctuate above and below the measured L_{eq} during the measurement period. The A-weighted L_{eq} is a common index for measuring environmental noise. A graphical description of the equivalent sound level is shown in Figure A-2.

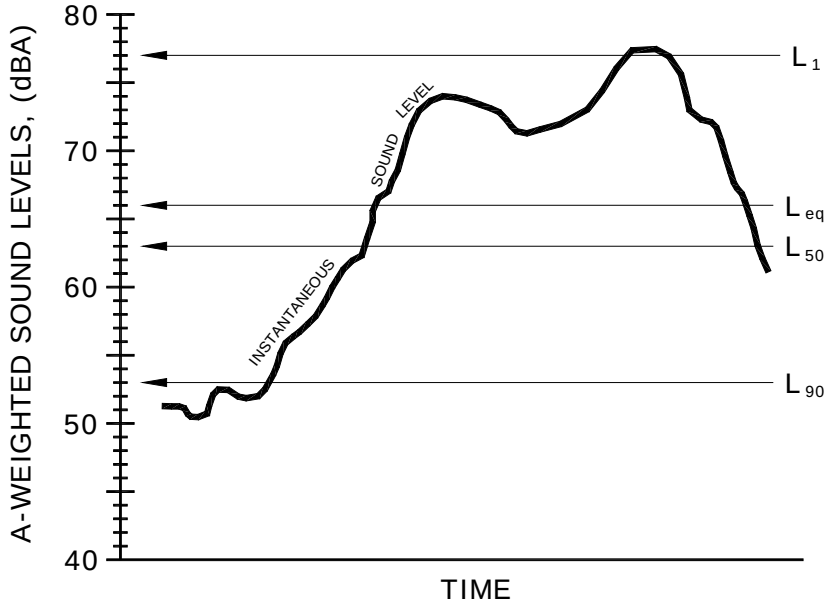


Figure A-2. Example Graph of Equivalent and Statistical Sound Levels

Statistical Sound Level

The sound levels of long-term noise producing activities such as traffic movement, aircraft operations, etc., can vary considerably with time. In order to obtain a single number rating of such a noise source, a statistically-based method of expressing sound or noise levels has been developed. It is known as the Exceedence Level, L_n. The L_n represents the sound level that is exceeded for n% of the measurement time period. For example, L_{10} = 60 dBA indicates that for the duration of the measurement period, the sound level exceeded 60 dBA 10% of the time. Typically, in noise regulations and standards, the specified time period is one hour. Commonly used Exceedence Levels include L_{01}, L_{10}, L_{50}, and L_{90}, which are widely used to assess community and environmental noise. A graphical description of the equivalent sound level is shown in Figure A-2.

Day-Night Equivalent Sound Level

The Day-Night Equivalent Sound Level, L_{dn}, is the Equivalent Sound Level, L_{eq}, measured over a 24-hour period. However, a 10 dB penalty is added to the noise levels recorded between 10 p.m. and 7 a.m. to account for people's higher sensitivity to noise at night when the background noise level is typically lower. The L_{dn} is a commonly used noise descriptor in assessing land use compatibility, and is widely used by federal and local agencies and standards organizations.

APPENDIX B

Photographs at Project Site



Location L1:
Positioned at the edge of the rooftop overlooking the Wailuku municipal parking lot.



Location L1:
Positioned at the edge of the rooftop overlooking the Wailuku municipal parking lot.

Appendix J
Phase I Environmental Site Assessment

Phase I Environmental Site Assessment
Wailuku Municipal Parking Structure
2061 West Vineyard Street
Wailuku, Maui, Hawaii 96793
TMK: (2) 3 - 4 - 013: 075

PREPARED FOR:

County of Maui
c/o Allison-Ide Structural Engineers, Inc.
900 Fort Street Mall, Suite 1670
Honolulu, Hawaii 96813

Prepared By:

EKNA Services, Inc.
615 Piikoi Street Suite 300
Honolulu, Hawaii 96814-3139

Project No. 2700-00F#
February 2011

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List of Acronyms Used in This Report

- A -

ACM - Asbestos Containing Materials

AIRS - Automated Inspection Reporting System

AST - Aboveground Storage Tank

ASTM - American Society for Testing and Materials

- C -

CERCLA - Comprehensive Environmental Response, Compensation and Liability Act

CERCLIS - Comprehensive Environmental Response, Compensation and Liability Information System

CORRACTS - Corrective Action Activity

- D -

DOH - Hawaii State Department of Health

DOH-UST - Hawaii Department of Health, Underground Storage Tank Section

---

- E -

EDR - Environmental Data Resources, Inc.

EKNA - EKNA Services, Inc.

EPA - U.S. Environmental Protection Agency

ERNS - Emergency Response Notification System

ESA - Phase I Environmental Site Assessment

- F -

FEMA - Federal Emergency Management Agency

FIRM - FEMA's Flood Insurance Rate Map

- H -

HECO - Hawaiian Electric Company

HEER - Hawaii Department of Health, Hazard Evaluation and Emergency Response Office

---

- L -

LCP - Lead Containing Paints

LUST - Leaking Underground Fuel Storage Tank

- M -

MECO - Maui Electric Company, Ltd.

MSL - Mean Sea Level

- N -

NFRAP - No Further Remedial Action Planned

NPL - National Priorities List

- P -

PCB - Polychlorinated Biphenyls

PE - Professional Engineer

- R -

RCRA - Resource Conservation & Recovery Act

RCRIS - Resource Conservation & Recovery Information System

REC - Recognized Environmental Condition

RI - Remedial Investigation

- S -

SI - Site Investigation

SHWS - State Hazardous Waste Sites

SPILL - Hawaii Department of Health Spills Listing

SWF/LF - Solid Waste Facility/land Fills

- T -

TCLP - Toxicity Characteristic Leaching Procedure

TMK - Tax Map Key

TSD - Treatment, Storage and Disposal

- U -

UIC - Underground Injection Control Line

UST - Underground Storage Tank

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT
WAILUKU MUNICIPAL PARKING STRUCTURE
2061 WEST VINEYARD STREET
WAILUKU, MAUI, HAWAII 96793
TMK: (2) 3 - 4 - 013: 075

Executive Summary

A Phase I Environmental Site Assessment (ESA) has been conducted at the proposed site of the Wailuku Municipal Parking Structure, 2061 West Vineyard Street, Wailuku ("the Site") in January 2011 by EKNA Services, Inc. at the request of the County of Maui, c/o Allison-Ide Structural Engineers, Inc. 900 Fort Street Mall, Suite 1670, Honolulu, Hawaii 96813. The Site is an approximately 2.1923 acre parcel identified as TMK: (2) 3 - 4 - 013: 075 in Wailuku on the island of Maui. This report has been prepared for the use of Maui County, its tenants, successors and assigns.

The purpose of the Phase I ESA was to assess the presence or likely presence of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) hazardous substances and petroleum products under conditions that indicate an existing release, a past release, or a material threat of a release and to identify potential sources of suspected contaminants at the Site.

The Phase I Environmental Site Assessment indicates that:

- No previous Phase 1 ESA's are known to exist for the Site.

- Based on available information, the history of the area indicates that Market Street adjacent to a portion of the Site predates 1840 and that private residences were located along the street. Prior to 1880, there was a build up of structures believed to be small businesses along Main and Market Streets. News reports indicate that in the early 1900s, the area consisted of residential homes, small businesses and several poorly constructed sheds and shacks. About 1938, Valley Isle Motors began operations adjacent to the south border of the Site consisting of automobile sales and an automobile service station operated by Standard Oil Company of California for gas sales and repair services. Prior to 1975, a second service station was constructed on the southwest corner adjoining the Site. Construction of the Wailuku Municipal Parking Lot on the Site was completed in late 1964 and the Site has remained in that configuration since then.

- There is no facility currently active within a ½ mile radius that is listed as a CERCLIS facility.

- There is no facility currently active within a ¼ mile radius that is listed as a large quantity generator of hazardous wastes.

- There are nine (9) LUST facilities within a ½ mile of the Site. Review of this listings indicates that all of these facilities have completed clean up actions related to the releases and have been issued a "no further action" letter from DOH. As such, these facilities should not have the potential to impact the Site and are therefore "de minimis" and are not recognized environmental conditions (REC).

- Small areas of minor oil staining of asphaltic concrete parking spaces were identified at various locations on the Site. This staining is consistent with the use on the Site for parking vehicles and is considered "de minimis" and not an REC.

The following is a summary of the possible environmental concerns which were reviewed during this assessment:

- Lead containing paints (LCP) paints may be present in painted parking marks at the Site. At the time of the Site inspection, these paints were in good condition. Lead paints are not considered an REC and do not presently pose an environmental concern at the Site.

- There is a transformer vault immediately adjacent to the Site at the back of the adjoining Main Street Promenade property. This vault may contain PCBs and any future leakage of transformer oils from the vault would likely run onto the Site.

In view of the above, and based on a review of available information, it is concluded that there are no RECs present that would adversely impact the use of the Site.

Maui Electric Company, Ltd. should be promptly notified of any leakage of oils from the transformer vault immediately adjacent to the Site at the back of the adjoining Main Street Promenade property.

LCPs that become damaged should only be sampled by a licensed and trained lead or hazardous materials contractor, and should only be handled, removed and disposed of, by licensed and trained lead or hazardous materials abatement contractors, in accordance all applicable laws and regulations.

Since the paints on the parking lot asphalt may be lead containing, a Toxicity Characteristic Leaching Procedure (TCLP) test for lead may be required on the asphalt debris by the landfill facility prior to disposal.

During demolition and construction at the Site, any suspect petroleum containing soils (discolored or odor bearing) encountered should be properly sampled and profiled prior to any landfill disposal, as required by the landfill facility regulations.

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT
WAILUKU MUNICIPAL PARKING STRUCTURE
2061 WEST VINEYARD STREET
WAILUKU, MAUI, HAWAII 96793
TMK: (2) 3 - 4 - 013: 075

1.0 Introduction

A Phase I Environmental Site Assessment (ESA) has been conducted at the site of the proposed Wailuku Municipal Parking Structure, Wailuku, Maui (the "Site") during January 2011 by EKNA Services, Inc. at the request of the County of Maui, c/o Allison-Ide Structural Engineers, Inc., 900 Fort Street Mall, Suite 1670, Honolulu, Hawaii 96813. The Site is an approximately 2.1923 acre parcel identified as TMK: (2) 3 - 4 - 013: 075 in Wailuku on the island of Maui. This report has been prepared for the use of Maui County, its tenants, successors and assigns.

1.1 Purpose

The purpose of this Phase I ESA was to assess the presence or likely presence of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) hazardous substances and petroleum products under conditions that indicate an existing release, a past release, or a material threat of a release and to identify potential sources of suspected contaminants at the Site.

1.2 Involved Parties

The involved parties for this assessment are:

Client Point of Contact:	Mr. Brian Ide, Principal Allison-Ide Structural Engineers, Inc.
EKNA Project Manager and Site Assessor:	Mr. Charles G. Brown Environmental Physicist
EKNA Reviewer:	Mr. Charles G. Schuster, PE Civil Engineer

1.3 Scope of Work

This Phase I ESA was performed with the objective of developing environmental information about the Site as part of "all appropriate inquiry" under the innocent purchaser/landowner defense. The work has been conducted in general accordance with American Society for Testing and Materials (ASTM) Standard Practice E 1527-05, "Standard Practice for

Environmental Site Assessments", accepted industry standards, accepted local practices and a professional standard of care.

The scope of work for the Phase I ESA involved two (2) tasks: a review of the history of the Site and surrounding areas, a field survey/inspection of the Site and improvements, surrounding properties and other facilities in the immediate vicinity of the Site.

In conducting this assessment, the following efforts were undertaken:

- review of reasonably available archive maps and historical land use maps of the Site and surrounding area for information regarding land use involving the manufacture, generation, use, storage, and/or disposal of environmentally hazardous substances;

- review of available documents regarding past and present Site development;

- review of State of Hawaii and U.S. Environmental Protection Agency (EPA) databases of hazardous waste generators, violations, underground storage tank facilities, landfills, and sites currently under investigation;

- review of available U.S. Geological Survey, University of Hawaii and Hawaii State Department of Health documents and maps for pertinent geologic and hydrogeologic conditions;

- interviews with individuals familiar with the Site history, and who have knowledge of activities on adjacent properties that may be pertinent to this assessment;

- a brief reconnaissance of the surrounding area for possible off-site sources of contamination from neighboring facilities which could impact the Site.

- a survey of the Site for possible sources of hazardous material contamination, such as petroleum products, electrical equipment containing polychlorinated biphenyls (PCB), and underground storage tanks;

2.0 General Site Characteristics

2.1 Site Location

The Site consists of a single parcel in Wailuku, Maui, Hawaii (Appendix A, Figure 1) located at 2061 North Vineyard Street and legally identified as TMK: (2) 3 - 4 - 013: 075 (Figure 2). The Site is zoned "Commercial" by the Maui County Planning Department.

2.2 Adjacent Properties and Vicinity

The Site comprises the majority of a city block bounded by Main Street (State Highway 32), North Church Street, West Vineyard Street and North Market Street (Figures 2 and 3). There are numerous properties adjoining the Site on the same city block, mostly consisting of businesses as listed below:

Parcel #	
057	Wailuku Banyan Tree Park with Mexican Food Stand
056	Public Defender Office
056	American Savings Bank
055	vacant lot
050	Manikin (clothing boutique)
050	Vacant doctor's office
063	Art Gallery
063	Sabado Art Studio/School
049	Native Intelligence (wood craft)
049	Hale Ho'olana Island Inspired Therapies
049	Paris to Rome Boutique
048	33 Market Street (building containing - 4 vacant offices, law offices, MauiTime Weekly office and American University of Hawaii Administration & Records office)
097	First Hawaiian Bank
042	If the Shoe Fit's (shoe store and repair)
042	Law Office
042	MauiThing (shirt store)
042	Kama'iana Properties, Inc. (real estate)
076	Business E T C. (printing, copy and mailing shop)
076	Parking lot/picnic table (former Valley Isle Motors parcel with Chevron Station)
096 & 100	Main Street Promenade [building containing - Lilies of the Field (gift shop and catholic book store), Food Court, Giannotto's Pizza shop and several residential apartments]
098	Vacant service station (formerly Courthouse Shell station)
044	Wailuku Executive Center (offices)
055	The Women's Health Center of Maui, LLC.
060	Vacant lot (park)
046	Calvery Chapel

During a reconnaissance of the vicinity within an approximate one-quarter (¼) mile radius of the Site, the following were observed:

- Single family residences, multi-family residences, public parks, vacant lands, several churches, public and private schools.

- Numerous small businesses primarily make up the area around the Site operating out of mix of old converted residential homes, new and old constructed business buildings.

2.3 Site Description and Current Uses/Operations

The Site is comprised of an approximately rectangular parcel encompassing 2.1923 acres, used as an asphalt paved ground level public parking lot since 1964 (Figure 3 and Photo 1) and includes two (2) access driveways and two (2) access sidewalks. Public water, electrical, sanitary sewer and storm water drainage lines serve the vicinity of the Site.

3.0 Environmental Setting

3.1 Regional Physiographic Conditions

In the vicinity of the Site the topography slopes eastward towards Kahului Bay at about three (3) percent. The Site is situated on a gently sloping terrace with a ground surface elevation of about 300 feet above mean sea level.

Precipitation falling on the Site infiltrates into the ground at unpaved areas within the Site, flows onto adjoining roads or sheet flows to a storm drain inlet of the municipal storm water drainage system at the southeast corner of the Site. Iao Stream passes the Site approximately 900 feet to the northwest.

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) shows the Site (Figure 5) as an area where flood hazards are determined to be outside the 0.2% annual chance floodplain (Zone X).

3.2 Soil Conditions

Surface soils at the Site (Figure 4) have been classified by the U.S. Department of Agriculture as Wailuku silty clay, 3 to 7 percent slopes (WvB). The soil is dark reddish brown to reddish gray, slightly acid and has a fine to very fine near-surface structure becoming blocky at depth.

Wailuku soil series consists of very deep, well drained soils formed in alluvium weathered from basic igneous rocks. Wailuku series soils occur on alluvial fans with slopes from 3 to 15 percent. Mean annual rainfall is about 30 inches and the mean annual temperature is 73 degrees Fahrenheit.

3.3 Regional Geology

The island of Maui is composed largely of the weathered remnants of two extinct shield volcanoes - West Maui and Haleakala. Only Haleakala has been active during recent geologic history with a single event at La Perouse Bay. During the Tertiary, the Wailuku Series laid down thinly bedded basalts. As the volcano matured, the composition of the lava shifted to andesitic forming the Honolua Volcanic Series. Subsequent erosion deposited alluvium on the flanks of West Maui.

The assessed property is situated on the east side of the central isthmus between Haleakala and the West Maui Mountains. The base of the stratigraphic section is the Honomanu Basalts of Haleakala. These rocks are overlain by interbedded alluvial and sand dune deposits.

3.4 Ground Water Conditions

The Site is situated in an area of ground water discharge. The Site is situated just below the Underground Injection Control (UIC) Line in this area of Maui, therefore the Site overlies ground water not considered to be a source or potential source of drinking water.

Table 1: Aquifer Classification System

Aquifer Code	**60102116**	**60102121**
Island Code	6 - Maui	6 - Maui
Aquifer Sector	01- Wailuku	01- Wailuku
Aquifer System	02- Iao	02- Iao
Aquifer Type, hydrogeology	1 - Basal	1 - Basal
Aquifer Condition	1 - Unconfined	2 - Confined
Aquifer Type, geology	6 - Sedimentary	1 - Flank
Status Code	**22211**	**21113**
Development Stage	2 - Potential Use	2 - Potential Use
Utility	2 - Ecologically Important	1 - Drinking
Salinity (in mg/L Cl^-)	2 - Low (250-1000)	1 - Fresh (<250)
Uniqueness	1 - Irreplaceable	1 - Irreplaceable
Vulnerability to Contamination	1 - High	3 - Low

The utility of the ground water immediately beneath the Site has also been evaluated in accordance with revised guidelines presented in the DOH's "Technical Guidance Manual for Underground Storage Tank Closure and Release Response", Second Edition, March 2000, and ground water underlying the Site was determined not to be a potable source.

According to the University of Hawaii Water Resources Research Center "Technical Report #185" (Mink & Lau, 1990), the Site as situated over two (2) aquifers of the Iao Basal aquifer system, described in Table 1 below (see Appendix D for explanation of codes). The report indicates that ground water underlying the Site in the lower aquifer is a potential source of drinking water. A basal aquifer occurs where a layer or lens of fresh water overlies sea water following the Ghyben-Herzberg principle. Ground water flow in the aquifer is generally towards the east.

The EDR report lists twenty-one (21) wells within one (1) mile of the Site. Seven (7) are listed as observation wells, six (6) as Municipal (drinking water) wells, four (4) unused, four (4) irrigation wells, and one lost.

> Observation wells: Mokuhau TH-1, Wailuku Mill TH, Mokuhau TH 2, Mokuhau TH 3, Field 63, Waiale Obs, and Iao Valley TH
>
> Municipal drinking water wells: DWS Wailuku, Mokuhau 3, Mokuhau 1, Mokuhau 2, Wailuku Shaft 33, Iao Tank Site.
>
> Unused wells: Puuohal TH-C, Wailuku Arm, Baldwin High TH, War Memorial Stadium UNU.
>
> Irrigation wells: Iao, Iao Tunnel, Baldwin High, Maui Stadium.
>
> Lost: Waiale Prototype

Based on the Department of Health, Underground Injection Control (UIC) Map for Wailuku (Map M-5, Figure 6), there are four (4) drinking water supply wells within a one (1) mile radius of the Site. The UIC Map shows thirteen (13) "other wells" shown within one (1) mile of the Site. The UIC Map shows three (3) injection wells within a one (1) mile radius of the assessed Site. One (1) injection well is located 4,000 feet to the east-northeast of the assessed Site, at Baldwin High School. This injection well could not be located during a walk of the mapped area. The second injection well is about 4,260 feet to the southeast and the third injection well is about 4,725 feet southeast of the assessed Site and are mapped in an area which has been developed as a gated residential community. These two (2) injection wells have likely been closed as a result of the residential development. All three (3) injection wells were likely used for storm water drainage. All three (3) injection wells are down gradient from the Site and do not pose an environmental risk to the Site.

4.0 Results of Investigation

4.1 Site Inspection Observations

On January 19, 2011, Charles Brown of EKNA Services, Inc. (EKNA) performed an on-site survey/inspection of the Site and the surrounding area. Site inspection observations are discussed below.

- The Site consists of an approximately rectangular shaped parcel encompassing 2.1923 acres of land (Figure 2). The Site has been used as an asphalt paved ground level public parking lot since 1964 (Figure 3 and Photo 1) and includes two (2) access driveways and two (2) access sidewalks.

- The site survey indicated no evidence of the current or past presence of underground fuel storage tanks (USTs) on the site (e.g., vent pipes, fill caps, abandoned dispensers, etc.). At the time of the assessment, there was no distinct evidence which would indicate a major release of petroleum or other toxic/hazardous agents as a result of activities on the Site.

- There was no direct visual evidence that subsurface contaminants from any nearby facilities have migrated to the soils or ground water beneath the Site causing adverse environmental conditions.

- Precipitation falling on the Site infiltrates into the ground at unpaved areas within the Site, flows onto adjoining roads or sheet flows to a storm drain inlet of the municipal storm water drainage system at the southeast corner of the Site.

- There were no signs of ash, grossly stained soils, stressed or discolored vegetation, or other distinct evidence which would indicate the presence of contamination by petroleum or other toxic/hazardous agents. Small areas of minor oil staining were identified in the parking spaces (Photo 2); the sources of these stains appeared to be spills and/or drips of oil from vehicles.

- Potable water for the Site and surrounding vicinity is supplied by the Maui County Department of Water Supply through the public water supply system.

- Sanitary wastes generated in the vicinity the Site are disposed through the municipal sewer system. There were no signs, such as access ports, which would indicate the use of septic systems at the Site. There was no indication of waste water disposal at or flow across the Site.

- There were no pits, trenches, or landfills for disposal of solid waste on the Site. Solid wastes generated at the Site and at facilities or residences in its vicinity are

contained in dumpsters or rubbish bins and removed by commercial or municipal refuse services.

- Exterior paints often contain lead. There are suspect lead containing paints on the parking and driveway areas at the Site (Photo 3).

- No electrical transformers, which could be a potential source of polychlorinated biphenyls (PCB) were observed on the Site. There is a transformer vault, serial number 16719, immediately adjacent to the Site at the back of the adjoining Main Street Promenade property (Photo 4). This vault may contain PCBs and any future leakage of transformer oils from the vault would likely run onto the Site.

- No strong, pungent or obnoxious odors were noted at the Site.

- No pools or sumps containing liquids were noted at the Site.

4.2 Observations of Adjacent Properties and Vicinity

During a reconnaissance of the vicinity within an approximate one-quarter (¼) mile radius of the Site, the following were observed:

- Single family residences, multi-family residences, public parks, vacant lands, several churches, public and private schools.

- Numerous small businesses primarily make up the area around the Site operating out of mix of old converted residential homes, new and old constructed business buildings.

No adverse environmental impacts were observed on the adjacent properties.

4.3 Results of Regulatory Agency List Review and File Research

Research was undertaken to identify off-site facilities which may present a potential for adverse environmental effects on the Site. Part of this research included a radius report from Environmental Data Resources, Inc. (EDR). Tables 2a and 2b provide a summary of the various Federal and State environmental database listings and the search radius for each as required by the ASTM standard. Review of the report did not identify any significant findings. The complete EDR report is presented in Appendix C.

Current Federal and State databases do not list any facility within a one (1) mile radius of the assessed Site on the National Priorities List.

Table 2a: Summary of Facilities in Federal Environmental Databases		
FEDERAL ENVIRONMENTAL DATABASE	**SEARCH RADIUS**	**FACILITIES**
US EPA National Priorities List (NPL)	1 mile	0
Proposed NPL	1 mile	0
Delisted NPL	1 mile	0
NPL Recovery	Site	0
US EPA CERCLIS	½ mile	0
US EPA CERCLIS-NFRAP	½ mile	2
US EPA RCRA CORRACTS	1 mile	0
US EPA RCRA NON-CORRACTS TSD	½ mile	0
US EPA RCRA Large Quantity Generators	¼ mile	0
US EPA RCRA Small Quantity Generators	¼ mile	1
US EPA RCRA Conditionally Exempt Small Quantity Generators	¼ mile	3
Emergency Response Notification System (ERNS)	Site	0
Hazardous Materials Information Reporting System (HMIRS)	Site	0
US Engineering Controls	½ mile	0
US Institutional Controls	½ mile	0
Department of Defense (DOD)	1 mile	0
Formerly Used Defense Sites (FUDS)	1 mile	0
US Brownfields	½ mile	0
CERCLA Consent Decree	1 mile	0
Records of Decision (ROD)	1 mile	0
Uranium Mill Tailings Sites (UMTRA)	½ mile	0
Open Dump Inventory (ODI)	½ mile	0
Toxic Chemical Release Inventory System (TRIS)	Site	0
Toxic Substance Control Act (TSCA)	Site	0
FIFRA/TSCA Tracking System (FTTS)	Site	0
Section 7 Tracking System (SSTS)	Site	0
Integrated Compliance Information System (ICIS)	Site	0
Land Use Control Information System (LUCIS)	½ mile	0
Clandestine Drug Labs (CDL)	Site	0
Radiation Information Database (RADINFO)	Site	0
PCB Activity Database System (PADS)	Site	0
Material Licensing Tracking System (MLTS)	Site	0
Mines Master Index File (MINES)	¼ mile	0
Facility Index System/Facility Registry System (FINDS)	Site	0
RCRA Administrative Tracking System (RAATS)	Site	0

Table 2b: Summary of Facilities in State Environmental Databases		
STATE ENVIRONMENTAL DATABASE	**SEARCH RADIUS**	**FACILITIES**
State Hazardous Waste Sites (SHWS), (HI equivalent to CERCLIS)	1 mile	12
State Solid Waste Facility/Land Fill (SWF/LF)	½ mile	0
Hawaii Department of Health Leaking UST (LUST)	½ mile	9
Hawaii Department of Health UST	¼ mile	20
Hawaii Department of Health Spills (SPILLs)	Site	0
Institutional Controls	½ mile	0
Voluntary Response Program Sites (VCP)	½ mile	0
Permitted Drycleaner Facility Listing	¼ mile	0
Brownfields Sites	½ mile	0
List of Permitted AIRS Facilities	Site	0

Federal and State databases do not list any facility within a ½ mile radius of the assessed Site listed as CERCLIS (Comprehensive Environmental Response, Compensation and Liability Act) facilities.

Federal and State databases list two (2) facilities within a ½ mile radius of the assessed Site listed as a CERCLIS/NFRAP (Comprehensive Environmental Response, Compensation and Liability Act/No Further Remedial Action Planned) facility. The names and addresses of these facilities are:

Vector Control Branch, 54 High Street, ID 1000417822
Status: No Further Remedial Action Planned

Kukui Grove Holder, 46 Tings Drive, ID 10004245007
Status: No Further Remedial Action Planned

Federal and State databases do not list any facility within a one (1) mile radius of the Site listed as having been a CORRACTS (Corrective Actions under the Resource Conservation and Recovery Act) facility.

Current Federal and State databases do not list any facility within a one (1) mile radius of the assessed Site on the Department of Defense (DOD) listing.

Current Federal and State databases list the following four (4) facilities within a ¼ mile radius of the assessed Site as generators or transporters of hazardous wastes.

JD Painting, 70 Kanoa Street, ID 1006806719
Status: SQG

Valley Isle Motors LUST, 2026 Main Street, ID 1000601460
Status: CESQG, eight USTs permanently removed from service

Shell Oil Co., 2086 Main Street, ID 100468855
Status: CESQG

Uptown Service Inc., 2085 Main Street, ID 1004688826
Status: CESQG

In addition to the Federal CERCLIS database, the State of Hawaii DOH maintains a list of priority sites for cleanup that is roughly equivalent to CERCLIS. Sites may or may not duplicate Federal listings. There are twelve (12) facilities listed in the SHWS database search within one (1) mile radius of the assessed Site:

Maui Vineyard Inn, UST Closure, 2012 Vineyard Street
Alvin's Uptown Chevron Service, 2085 West Main Street
Main Street Promenade Project, 2058 Main Street
Valley Isle Motors, 2026 Main Street
Meadow Gold Dairies (Milk Plant), 260 S. Market Street
1790 Mill Street
Maui Sand torches, 46 Ting Drive
Rex Tire & Supply, Diesel, 1728 Kaahumanu Avenue
Maui Disposal, 250 Imi Kala Street
MECO transformer 3358, 1540 East Main Street
Waimaluhia Maui Meth/Drug Lab, 115 Waimaluhia Street
Waile Ash Pile, Mahalani Street

Federal and State databases did not list any solid waste facility/land fills (SWF/LF), active incinerators or transfer stations within ½ mile of the assessed Site.

There are nine (9) facilities listed in the leaking underground storage tank (LUST) facilities database search within ½ mile of the assessed Site. All are identified as having completed site cleanup, have been issued a "no further action" letter from DOH and as such, they do not pose a potential for adverse impact on the assessed Site. The names and addresses of these facilities are:

Courthouse Shell, 2086 Main Street, Closed - USTs removed
Valley Isle Motors, 2026 Main Street, Closed - USTs removed
Uptown Service, 2085 Main Street
Hoapili Hale - Maui Judiciary, 2145 Main Street
County of Maui - Civil Defense, 200 South High Street
Wailuku Central Office, 60 South Church Street
Lokahi Pacific, 1935 Main Street

Ogawa Service Station, 327 Market Street
Wailuku Fire Station, 21 Kinipopo Street

There are twenty (20) facilities listed as having an underground or aboveground storage tanks (UST/AST) within ½ mile of the assessed Site. The names and addresses of these facilities follow. Facilities listed in **bold print** are up-gradient from the Site. Other listed facilities are down-gradient from the Site and do not pose a potential for adverse impact on the assessed Site.

2102 Vineyard Street
2102 Vineyard Street
ID U003222271

Police Motor Pool
High & Main Street
ID U001237439

DOH/District Office
54 High Street, Rm 301
ID U003222190

Pacific Amusement Co., Ltd.
1942 Main Street
ID U003541878

Ima Hanada Trust
1960 Main Street
ID U001236722

Maui Auto Detailing
1955 Main Street
ID U001236825

Down To Earth Natural Food
1910 Vineyard Street
ID U00322226

Wailuku Central Office
50 South Church Street
ID U003222200

Takitani Building
1940 Main St., Ste 1355
ID U001236821

Ogawa Service Station
327 North Market Street
ID U003222184

Lokahi Pacific
1935 Main Street
ID U003402930 8

DOH/District Office
54 High Street, Rm. 301
ID U003222190

County of Maui - Civil Defense
200 South High Street
ID N/A

Wailuku Fire Station
21 Kinipopo Street
ID U003155131

Pam Fujita Property
246 North Market Street
ID U003967142

Blue & White Bus Line, Inc.
60 Kanoa Street
ID U001236745

George S./Jean Funai
350 North Market Street
ID U003222272

Uptown Service
2085 Main Street
ID 100344105

Valley Isle Motors
2026 Main Street
ID 1000601460
Closed - USTs removed

Gomes Const. & Repairs, Inc.
1790 Mill Street
ID 1000220754

Courthouse Shell
2086 Main Street
ID U001236712
Closed - USTs removed

Hoapili Hale - Maui Judiciary
2145 Main Street
ID U003711776

Department of Health (DOH), Hazard Evaluation and Emergency Response (HEER) records which dealt with hazardous material spills in the vicinity of the assessed Site were reviewed. These records indicated that all spills investigated by HEER in the vicinity have completed clean-up.

Other databases, including but not limited to Federal Engineering Controls and voluntary clean up sites, were included in the EDR report. Our review of that report did not indicate any significant findings related to those data bases. The complete EDR report is presented in Appendix C.

4.4 Historical Aerial Photographs

The following historical aerial photographs by Google Earth were reviewed:

Photograph Source	Date	Figure
Google Earth	2000	7a
Google Earth	2010	7b

Both the 2000 and 2010 photographs show the site as developed with the same parking lot currently at the Site.

4.5 Sanborn® Maps

A copy of historical Sanborn® fire insurance maps for the years 1914, 1927, 1950, 1975, 1980 and 1990 were obtained from EDR and reviewed for the preparation of this report and are presented in Appendix E. The following summarize the information interpreted from review of the Sanborn® Maps:

The 1914 map shows the Site divided among many smaller parcels with a large number of small structures. Kalua Avenue crosses the Site from west-southwest to east-northeast.

The 1927 map shows the Site divided among many smaller parcels with a large number of small structures. Kalua Avenue the Site from west-southwest to east-northeast.

The 1950 map shows the Site divided among many smaller parcels with a large number of small structures. The map shows Valley Isle Motors adjacent to the south border of the Site and indicates that it includes an automobile service station with gas and oil and repair services. Kalua Avenue has been renamed Pili Avenue and still crosses the Site from west-southwest to east-northeast..

The 1975 map shows the numerous lots which formerly comprised the Site to have been consolidated and cleared of structures. The map shows Valley Isle Motors

adjacent to the south border of the Site and indicates that it includes an automobile service station with gas and oil and the retail sale of automobiles. A second service station is shown on the southwest corner adjoining the Site. The Site is identified as a "municipal parking lot", coherent with the lot known to have been constructed in 1964.

The 1980 map is largely the same as the 1975 map.

The 1990 map is largely similar to the 1980 map, with fewer structures on adjoining properties and indicates that the Valley Isle Motors USTs are no longer present.

4.6 Historical Topographic Maps

The following Historical Topographic Maps produced by Environmental Data Resources, Inc. (EDR) were reviewed:

USGS Quadrangle	Minute Series	Scale	Date	Figure
Wailuku	7.5	1:24,000	1955	8a
Wailuku	7.5	1:24,000	1983	8b
Wailuku	7.5	1:24,000	1997	8c

Maps for 1955 through 1997 show the vicinity of the Site in residential/urban development. Therefore, no discernable improvements or structures are shown for the immediate vicinity.

4.7 Results of Site History/Land Use Review

The Site is legally identified as TMK: (2) 3 - 4 - 013: 075. A review of the Site use as reasonably ascertainable back to the property's obvious first developed use was conducted. The history of the area indicates that Market Street adjacent to a portion of the Site predates 1840 and that private residences were located along the street. Prior to 1880, there was a build up of structures believed to be small businesses along Main and Market Streets. News reports indicate that in the early 1900s, the area consisted of residential homes, small businesses and several poorly constructed sheds and shacks. About 1938, Valley Isle Motors began operations adjacent to the south border of the Site consisting of automobile sales and an automobile service station operated by Standard Oil Company of California for gas sales and repair services. Prior to 1975, a second service station was constructed on the southwest corner adjoining the Site. Construction of the Wailuku Municipal Parking Lot on the Site was completed in late 1964 and the Site has remained in that configuration since then. Table 3a through 3k provides the ownership history for the Site.

Table 3a: Property Ownership History for TMK: (3) 2 - 4 - 013: 075	
Date	**Owner**
Prior to 1941	Noa W. Aluli Estate
November 1951	Noa W. Aluli Estate with a lease to Valley Isle Motors
March 1964	County of Maui
March 10, 1965 to present	County of Maui (on March 10, 1965 parcels 052, 053, 054, 058, 059, 061, 062, 073, 074, 077 and 093 were consolidated into this parcel)

Table 3b: Property Ownership History for TMK: (3) 2 - 4 - 013: 052	
Date	**Owner**
Prior to December 1922	Maui Land Co.
December 1922	Young Fun Teung and wife Young Shee
June 1943	Ah Fai Ching and wife Virginia
December 1963 to present	County of Maui (dropped into TMK: (3) 2 - 4 - 013: 075 on March 10, 1965)

Table 3c: Property Ownership History for TMK: (3) 2 - 4 - 013: 053	
Date	**Owner**
Prior to 1947	Caezar Rodrigues
March 1947	Estate of Caezar Rodrigues
February 1949	Antonia P. Rodrigues, Maria R. Mireles, Manuel Rodrigues,Rosa R. Nobriga, Joe Rodrigues, Depoldine R. Peters and Helen R. Giro
February 1953	Joe Rodrigues and wife Haruko, Manuel Rodrigues and wife Mary A., Maria R. Mireles,,Rosa R. Nobriga and husband Manuel, Depoldine R. Peters and husband John, Helen R. Giro and husband Manuel A.
September 1953	Maria R. Mireles
July 1963 to present	County of Maui (dropped into TMK: (3) 2 - 4 - 013: 075 on March 10, 1965)

Table 3d: Property Ownership History for TMK: (3) 2 - 4 - 013: 054	
Date	**Owner**
Prior to December 1922	Maui Land Co.
December 1922	Young Fun Teuing (aka Y. Fun Teung) and wife Young Yung Shee
September 1944	Estate of Young Fun Teuing (aka Y. Fun Teung) and wife Young Yung Shee
September 1945	Young Yung Shee (aka Sau Kyau Young), Wai Yun Young, Hong Yip Young and Clarence C.T. Young
1963	Wai Yun Young, Hong Yip Young and Clarence C.T. Young
July 1963 to present	County of Maui (dropped into TMK: (3) 2 - 4 - 013: 075 on March 10, 1965)

Table 3e: Property Ownership History for TMK: (3) 2 - 4 - 013: 058	
Date	**Owner**
Prior to February 1941	Domingo Coelho
May 1942	Mrs. Chow See Jim
June 1943	Mrs. Alice S. Dang and Eugene L.K.Y. Dang
August 1963 to present	County of Maui (dropped into TMK: (3) 2 - 4 - 013: 075 on March 10, 1965)

Table 3f: Property Ownership History for TMK: (3) 2 - 4 - 013: 059	
Date	**Owner**
Prior to 1947	Caezar Rodrigues
March 1947	Estate of Caezar Rodrigues
February 1949	Antonia P. Rodrigues, Maria R. Mireles, Manuel Rodrigues,Rosa R. Nobriga, Joe Rodrigues, Depoldine R. Peters and Helen R. Giro
1951	Joe Rodrigues and wife Haruko, Manuel Rodrigues and wife Mary A., Maria R. Mireles, Rosa R. Nobriga and husband Manuel, Depoldine R. Peters and husband John, Helen R. Giro and husband Manuel A.
January 1953	Rosa R. Nobriga, Depoldine R. Peters and Helen R. Giro
March 1961	Victor Robello
January 1964 to present	County of Maui (dropped into TMK: (3) 2 - 4 - 013: 075 on March 10, 1965)

Table 3g: Property Ownership History for TMK: (3) 2 - 4 - 013: 061	
Date	**Owner**
Prior to February 1933	Maria G. Rodrigues and Joaquin Garcia Estate with an unrecorded lifetime lease to James T. Kono
1939	Maria G. Rodrigues and Minnie R. Garcia with an unrecorded lifetime lease to James T. Kono
November 1945	Irenen C. Levinton and husband Harold, Cyrilla G. Haley (Grace) and husband Richard with an unrecorded lifetime lease to James T. Kono
July 1950	Tsuneichi Kono and wife Shigeho Y.
August 1963 to present	County of Maui (dropped into TMK: (3) 2 - 4 - 013: 075 on March 10, 1965)

Table 3h: Property Ownership History for TMK: (3) 2 - 4 - 013: 062	
Date	**Owner**
Prior to 1939	Mrs. Ellen Paresa-Gdn, Kenneth Paresa, Mrs. Agnes P. Roberts and Mrs. Maria Moore
1964 to present	County of Maui (dropped into TMK: (3) 2 - 4 - 013: 075 on March 10, 1965)

Table 3i: Property Ownership History for TMK: (3) 2 - 4 - 013: 073	
Date	**Owner**
Prior to 1941	Domingo Coelho
February 1941	C. S. Lau
July 1963	C. S. Lau and wife Edna
December 1963 to present	County of Maui (dropped into TMK: (3) 2 - 4 - 013: 075 on March 10, 1965)

Table 3j: Property Ownership History for TMK: (3) 2 - 4 - 013: 074	
Date	**Owner**
Prior to 1941	Domingo Coelho
June 1954	Remigio P. Donato and Longino R. Fortona
1963 to present	County of Maui (dropped into TMK: (3) 2 - 4 - 013: 075 on March 10, 1965)

Table 3k: Property Ownership History for TMK: (3) 2 - 4 - 013: 093	
Date	**Owner**
Prior to 1941	Domingo Coelho as part of TMKs: (3) 2 - 4 - 013: 073 and 074
1941	Domingo Coelho
September 1954	Remigio P. Donato and Longino R. Fortona
December 1963 to present	County of Maui (dropped into TMK: (3) 2 - 4 - 013: 075 on March 10, 1965)

4.8 Previous Environmental Investigations

No previous Phase 1 ESA's are known to exist for the Site.

4.9 Interviews

Mr. Ray Oshiro, Maui Highway Division (phone: (808) 270-7869) was interviewed as a person knowledgeable about recent use and changes to the Site over at least the last 30 years. Mr. Oshiro stated that he was not aware of any leakage, spillage, disposal of solid waste or drums at the Site. Mr. Oshiro was not aware of any leakage from the adjacent electrical transformer vault. Mr. Oshiro stated that the parking lot has not been resurfaced at any time during the last 30 years. Mr. Oshiro confirmed that the current street lights are LEDs and he stated that the prior high pressure sodium lighting was removed from the Site in June or July of 2010. No RECs which might impact the Site were disclosed in the interview.

4.10 Review of Other Relevant Documents

As part of this Phase I ESA, a review was made of other relevant documents. A User Questionnaire was completed by the key property manager for the preparation of this report (Appendix E). No recognized environmental conditions which might impact the Site were disclosed in the User Questionnaire.

4.11 Summary of Environmental Issues

The following is a summary of environmental concerns which this assessment has found to be associated with the Site:

- The painted parking marks at the Site may be lead containing paints.

- There is a transformer vault immediately adjacent to the Site at the back of the adjoining Main Street Promenade property. This vault may contain PCBs and any future leakage of transformer oils from the vault would likely run onto the Site.

The following is a summary of possible "recognized environmental conditions" (REC) which were reviewed during this assessment:

- Small areas of minor oil staining of asphaltic concrete parking spaces were identified at various locations on the Site. This staining is consistent with the use on the Site for parking vehicles and is considered "de minimis" and not an REC.

- There are nine (9) LUST facilities within a ½ mile of the Site. Review of this listings indicates that all of these facilities have completed clean up actions related to the releases and have been issued a "no further action" letter from DOH. As such, these facilities should not have a potential to impact the Site and are therefore "de minimis" and not an REC.

4.12 Business Environmental Risk

No recognized environmental conditions (REC) were found to be associated with the Site.

Of the environmental concerns found to be associated with the Site, only the LCPs may be considered to pose any significant business risk. If LCPs are disturbed, they should be handled, removed and disposed of, by licensed and trained lead or hazardous materials abatement contractors, in accordance with all applicable laws and regulations.

The financial impact of the presence of LCPs will be dependent upon a number of factors, including their concentration and extent, as well as the prevailing landfill regulations at the time of demolition of the current parking lot.

Other non-scope considerations which might pose a business environmental risk for the Site were not considered as part of this assessment.

4.13 Data Gaps

The following data gaps were identified in the performance of this Phase I ESA:

- It was not possible to interview previous occupants or Site managers associated with the Site prior to 1964. Previous occupants or Site managers could not be located.

5.0 Conclusions and Recommendations

The Phase I Environmental Site Assessment indicates that:

- No previous Phase 1 ESA's are known to exist for the Site.

- Based on available information, the history of the area indicates that Market Street adjacent to a portion of the Site predates 1840 and that private residences were located along the street. Prior to 1880, there was a build up of structures believed to be small businesses along Main and Market Streets. News reports indicate that in the early 1900s, the area consisted of residential homes, small businesses and several poorly constructed sheds and shacks. About 1938, Valley Isle Motors began operations adjacent to the south border of the Site consisting of automobile sales and an automobile service station operated by Standard Oil Company of California for gas sales and repair services. Prior to 1975, a second service station was constructed on the southwest corner adjoining the Site. Construction of the Wailuku Municipal Parking Lot on the Site was completed in late 1964 and the Site has remained in that configuration since then.

- There is no facility currently active within a ½ mile radius that is listed as a CERCLIS facility.

- There is no facility currently active within a ¼ mile radius that is listed as a large quantity generator of hazardous wastes.

- There are nine (9) LUST facilities within a ½ mile of the Site. Review of this listings indicates that all of these facilities have completed clean up actions related to the releases and have been issued a "no further action" letter from DOH. As such, these facilities should not have the potential to impact the Site and are therefore "de minimis" and are not recognized environmental conditions (REC).

- Small areas of minor oil staining of asphaltic concrete parking spaces were identified at various locations on the Site. This staining is consistent with the use on the Site for parking vehicles and is considered "de minimis" and not an REC.

The following is a summary of the possible environmental concerns which were reviewed during this assessment:

- Lead containing paints (LCP) paints may be present in painted parking marks at the Site. At the time of the Site inspection, these paints were in good condition. Lead paints are not considered an REC and do not presently pose an environmental concern at the Site.

- There is a transformer vault immediately adjacent to the Site at the back of the adjoining Main Street Promenade property. This vault may contain PCBs and any future leakage of transformer oils from the vault would likely run onto the Site.

In view of the above, and based on a review of available information, it is concluded that there are no RECs present that would adversely impact the use of the Site.

Maui Electric Company, Ltd. should be promptly notified of any leakage of oils from the transformer vault immediately adjacent to the Site at the back of the adjoining Main Street Promenade property.

LCPs that become damaged should only be sampled by a licensed and trained lead or hazardous materials contractor, and should only be handled, removed and disposed of, by licensed and trained lead or hazardous materials abatement contractors, in accordance all applicable laws and regulations.

Since the paints on the parking lot asphalt may be lead containing, a Toxicity Characteristic Leaching Procedure (TCLP) test for lead may be required on the asphalt debris by the landfill facility prior to disposal.

During demolition and construction at the Site, any suspect petroleum containing soils (discolored or odor bearing) encountered should be properly sampled and profiled prior to any landfill disposal, as required by the landfill facility regulations.

6.0 Limitations and Conditions

Although this Phase I Environmental Site Assessment provides information on the relative presence or absence of suspected environmental contaminants at the assessed site, it should not be construed as a final statement regarding environmental conditions at the assessed facilities or the subject property. This Phase I ESA was performed with the objective of developing environmental information about the Site as part of "all appropriate inquiry" under the innocent purchaser/landowner defense.

The information set forth is based solely on the agreed upon scope of services. This information is based on personal observation, research of public documentation, and data provided by others. The possible presence of subsurface contamination, radioactive materials, and biological hazards were not specifically investigated.

Given the often obscure and elusive nature of hazardous substances it is never possible to absolutely dismiss the possibility of site contamination, even with exhaustive sampling and testing. EKNA Services, Inc. expressly disclaim any and all liability representations, expressed, or implied, contained in, or for omissions from this report, or any other written or oral communication which might be interpreted as establishing the total extent of all liability present at the subject property.

Our services have been performed with the usual thoroughness and competence of the consulting profession, in accordance with the standards for professional services at this time. No other warranty or representation, either expressed or implied, is included or intended.

7.0 Certification and Declaration

We have conducted a Phase I Environmental Site Assessment of the proposed Wailuku Municipal Parking Structure site, identified as TMK: (2) 3 - 4 - 013: 075, in Wailuku, Island of Maui in accordance with the scope and limitations of ASTM Standard Practice E 1527 and standards of professional practice. Exceptions, additions and/or deletions to the practice have been described in the body of this report. Recognized Environmental Conditions associated with the Site have been described and discussed in the report.

The undersigned hereby certifies and declares that he is an "Environmental Professional", as defined in ASTM E1527-05 and 40 CFR 312.10, qualified to conduct an Environmental Site Assessment in accordance with ASTM E1527-05 and 40 CFR 312, and hereby declares that this Environmental Site Assessment has been prepared pursuant to, and in compliance with, ASTM E1527-05 and 40 CFR 312.

This report is certified to, can be relied upon by, and has been prepared for the exclusive use of Maui County, its tenants, successors and assigns. Any of the named entities can convey this report to an affiliate, related entities, subsidiaries, lenders, title insurers, regulatory/city agencies or current property owner(s) and their agents, but further dissemination requires prior written approval from EKNA Services, Inc.

EKNA Services, Inc.

Charles G. Brown

Charles G. Brown
Environmental Physicist

Charles G. Schuster

Charles G. Schuster, PE
Date: 2-4-2011

References

Published References

- County of Maui, Real Property Tax Division, Historical Records for the assessed property.

- Environmental Data Resources, Inc., EDR Radius Map with GeoCheck®, 2061 W Vineyard Street, Wailuku, Hawaii 96793, Inquiry Number: 2964913.2s, January 11, 2011. Includes State databases, Federal databases, historical US Geological Survey topographic maps, EDR - Sanborn® Maps.

- Macdonald, Gordon A., Abbot, Agatin T., and Peterson, Frank L., "Volcanoes in the Sea - The Geology of Hawaii", University of Hawaii Press, 1983, Honolulu.

- Mink, John F. and Lau, Stephen L., "Aquifer Identification and Classification for Maui: Ground Water Protection Strategy for Hawai'i", Technical Report No. 185, February 1990, Water Resources Research Center, University of Hawaii at Manoa, Honolulu.

Map and Other Geographical References

- U.S. Geological Survey, "Wailuku Quadrangle", 7.5 Minute Series, Topographic Maps for 1955, 1983, 1997.

- Soil survey staff, Natural Resources Conservation Service, U.S. Department of Agriculture, http://websoilsurvey.nrcs.usda.gov/, accessed 1/11/2011.

- Department of Health, State of Hawaii, "Underground Injection Control Map, Wailuku (M-5) Quadrangle, 1983.

- County of Maui, Department of Planning, online zoning maps.

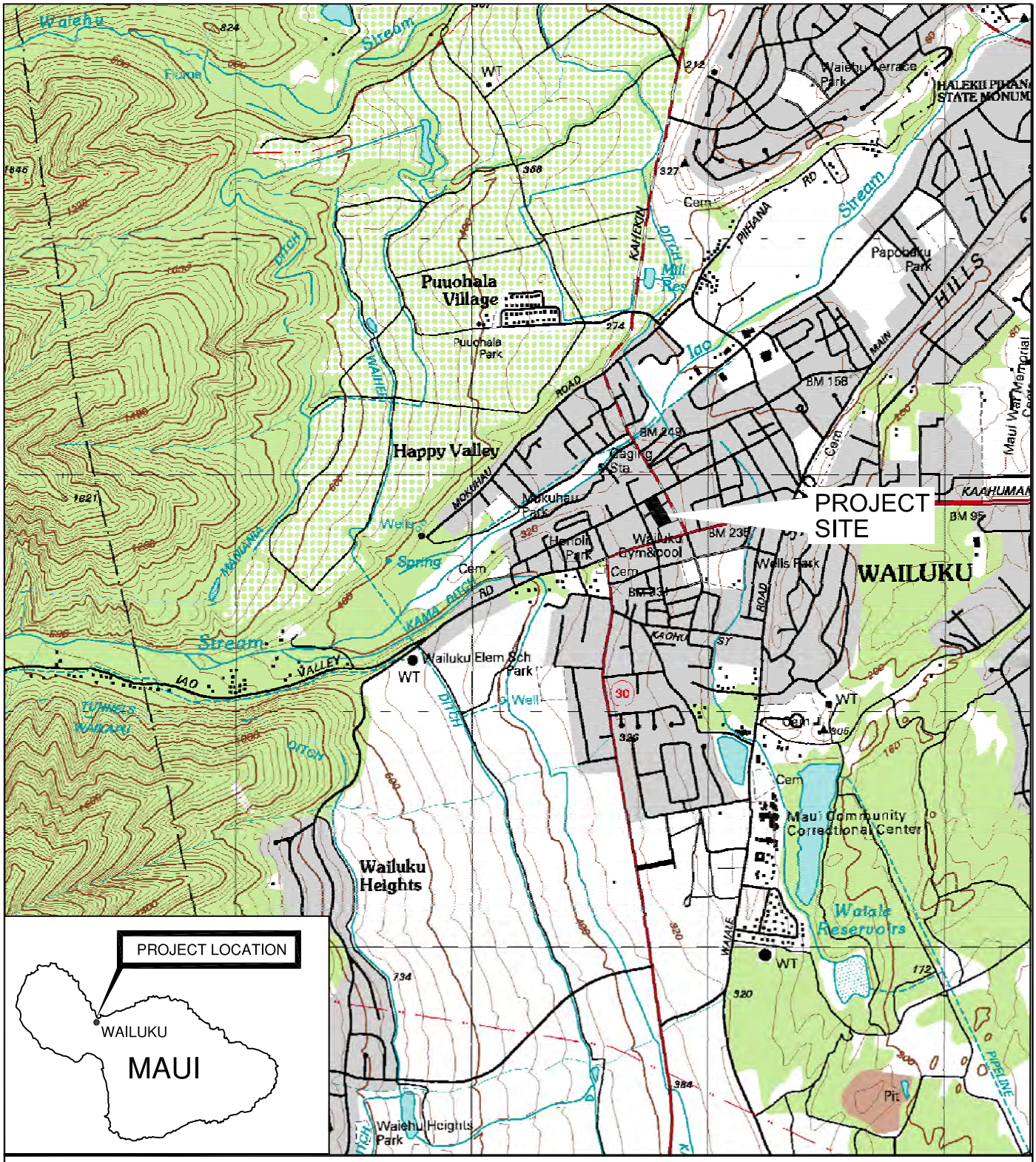
- Federal Emergency Management Agency, "Flood Insurance Rate Map, 150003 0391E", September 25, 2009.

- National Flood Insurance Program, Flood Hazard Assessment Tool, online at www.hawaiifip.org.

- Sanborn® Maps for 1914, 1927, 1950, 1975, 1980 and 1990 .

Appendix A - Figures

Figure 1 - Location Map
Figure 2 - Tax Map Key
Figure 3 - Site Plan
Figure 4 - Soil Classification Map
Figure 5 - Flood Insurance Rate Map
Figure 6 - Underground Injection Control Map
Figures 7a through 7b - Historical Aerial Photographs
Figures 8a through 8c - Historical Topographic Maps



REFERENCE: USGS "Wailuku" Quadrangle, 1999, 7.5 Minute Series, Topographic Map

NORTH

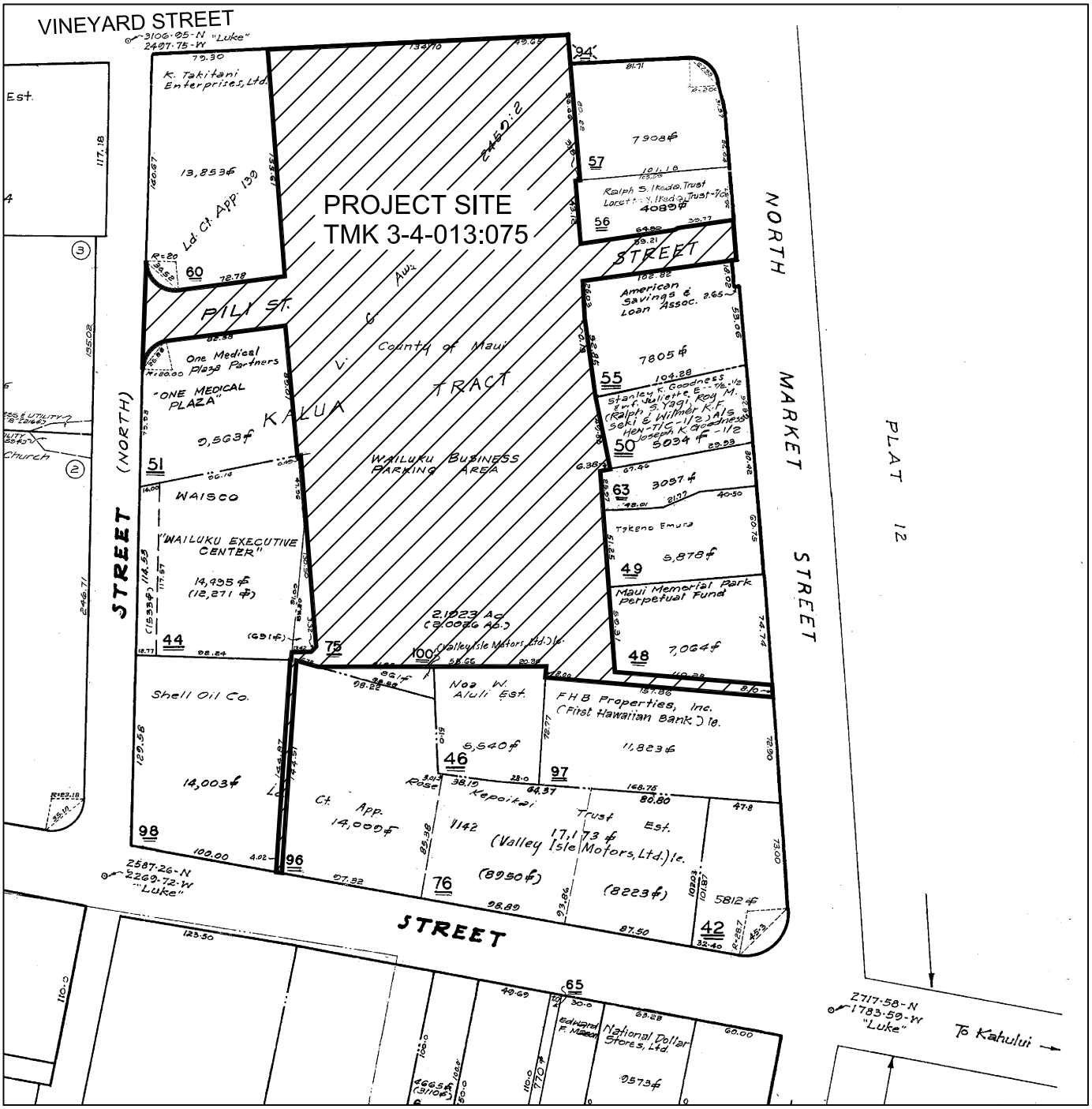
GRAPHIC SCALE

2,000' 0' 2,000' 4,000' 6,000'

FIGURE 1 - LOCATION MAP

PROJECT NUMBER: 2700-00F#	DRAWN BY: C. SCHUSTER	DATE: FEBRUARY 2011

EKNA Services, Inc.



REFERENCE: Maui County Real Property Tax Division, Tax Map for TMK: (2) 3-4-013:075

NORTH

100' 0' 100' 200' 300'

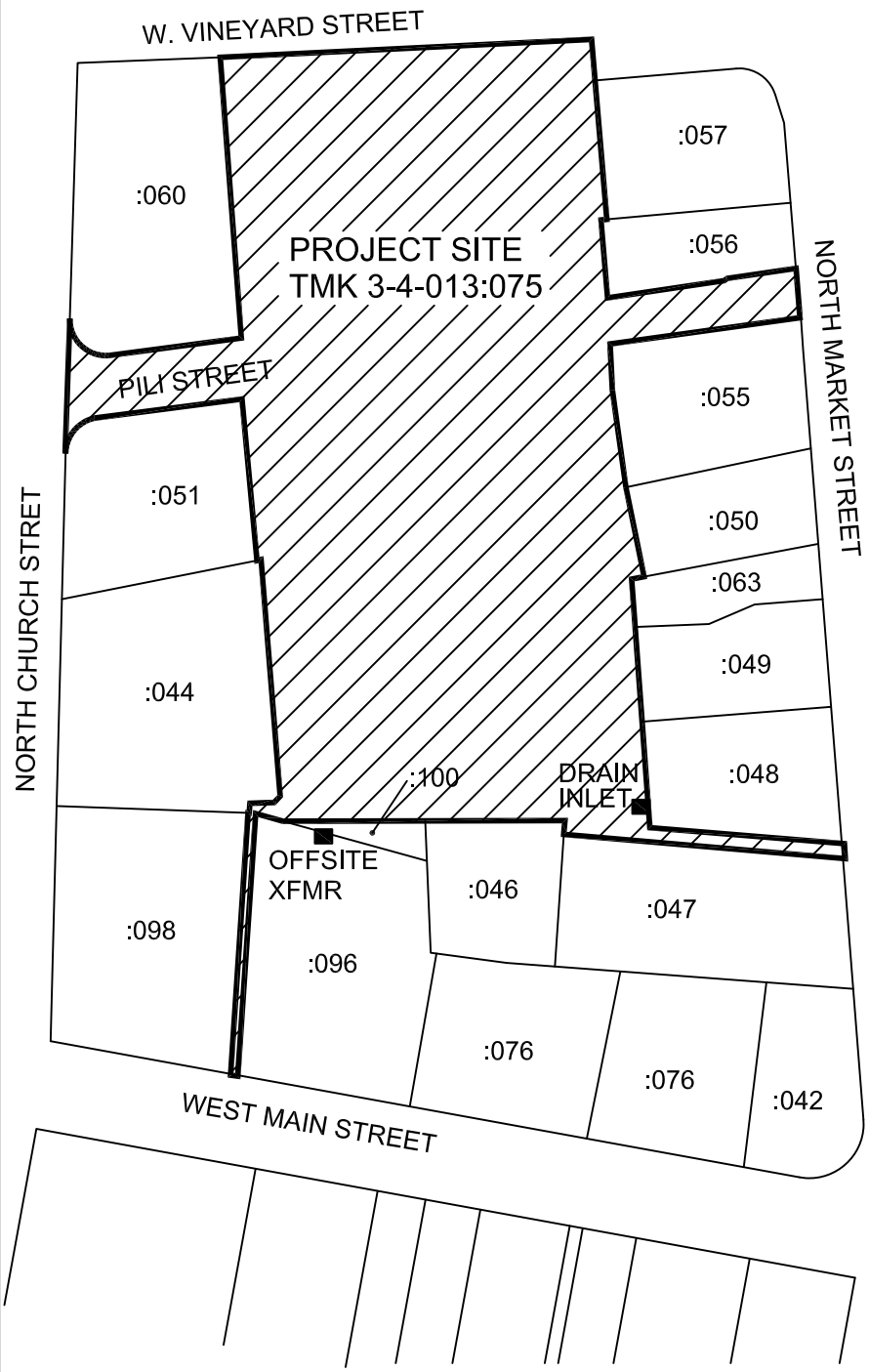
APPROXIMATE SCALE IN FEET

SECOND TAX DISTRICT

ZONE	SEC.	PLAT	PARCEL
3	4	013	075

FIGURE 2 - TMK LOCATION MAP

PROJECT NUMBER: 2700-00F#	DRAWN BY: C. SCHUSTER	DATE: FEBRUARY 2011	EKNA Services, Inc.



TMK KEY MAP FOR AREA BUSINESSES

- :057 Wailuku Banyan Tree Park w/ Mexican Food Stand
- :056 Public Defender's Office, American Savings Bank
- :055 vacant lot
- :050 Manikin (clothing boutique), vacant doctor's office
- :063 Art Gallery, Sabado Art Studio/School
- :049 Native Intelligence (wood craft), Hale Ho'olana Island Inspired Therapies, Paris to Rome Boutique
- :048 33 Market Street (contains 4 vacant offices, law offices, MauiTime Weekly office and American Univ. of Hawaii Admin. & Records office)
- :047 First Hawaiian Bank, parking
- :042 If the Shoe Fits (shoe store), Law Office, MauiThing (shoe store), Kamaaina Properties, Inc. (real estate)
- :076 Business ETC. (printing, copy and mailing shop)
- :076 Parking lot/picnic area (former Valley Isle Motors parcel and Chevron Station)
- :096, :100 Main Street Promenade (Lilies of the Field gift shop, Catholic book store), Giannotto's Pizza shop, several residential apartments)
- :098 Vacant service station (was Courthouse Shell Station)
- :044 Wailuku Executive Center (offices)
- :051 The Women's Health Center of Maui, LLC.
- :060 Vacant lot (park)
- :046 Calvary Chapel

NORTH

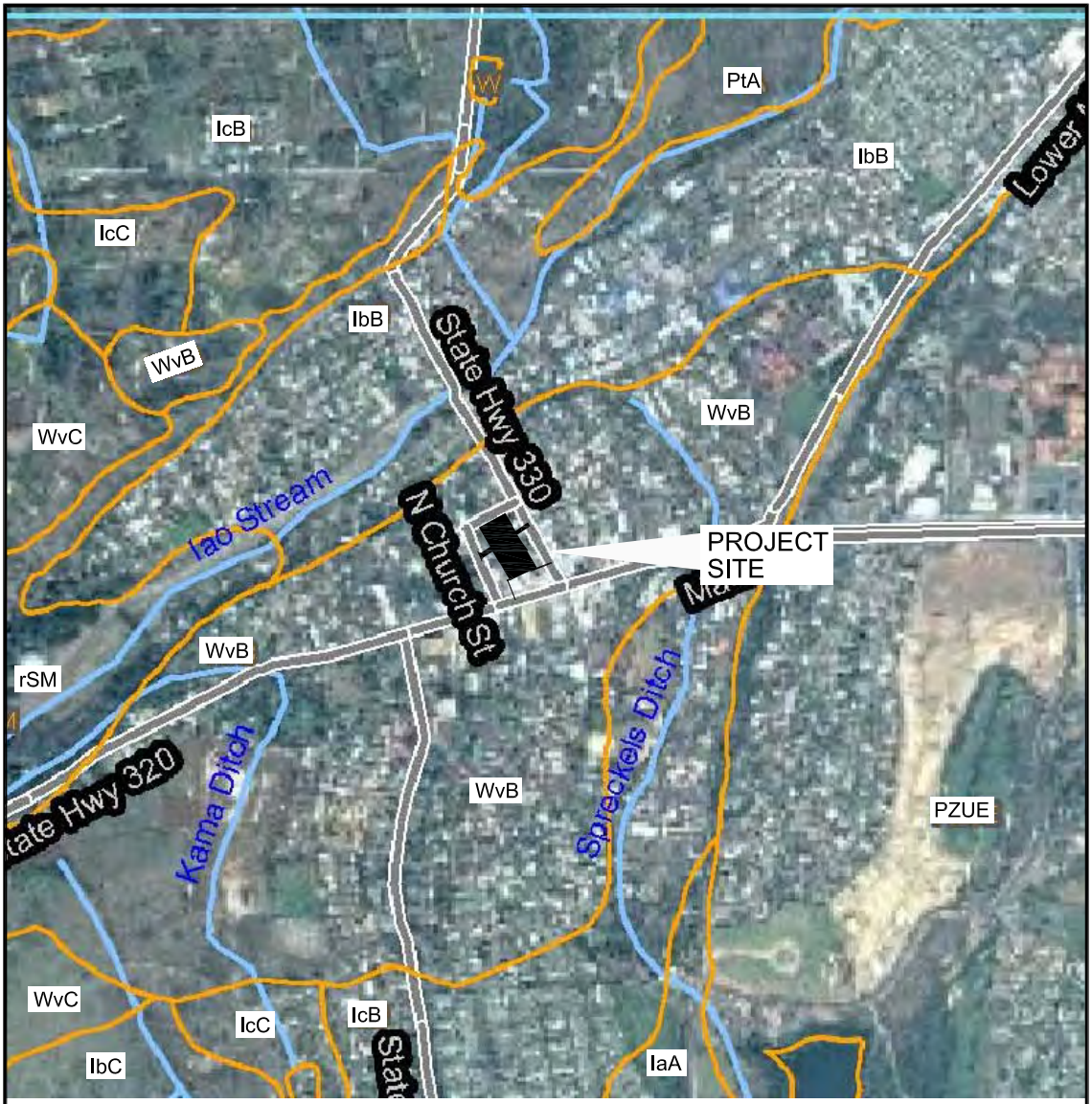
100' 0' 100' 200' 300'

APPROXIMATE SCALE IN FEET

FIGURE 3 - SITE PLAN

PROJECT NUMBER: 2700-00F#	DRAWN BY: C. SCHUSTER	DATE: FEBRUARY 2011

EKNA Services, Inc.



LEGEND

WvB Onsite soil type, Wailuku silty clay, 3 to 7 percent slopes

Soil type boundary

REFERENCE: Soil Survey Staff, Natural Resources Conservation Service, U.S. Dept. of Agriculture, Web Soil Survey, http://websoilsurvey.nrcs.usda.gov/ accessed 2/03/2011.

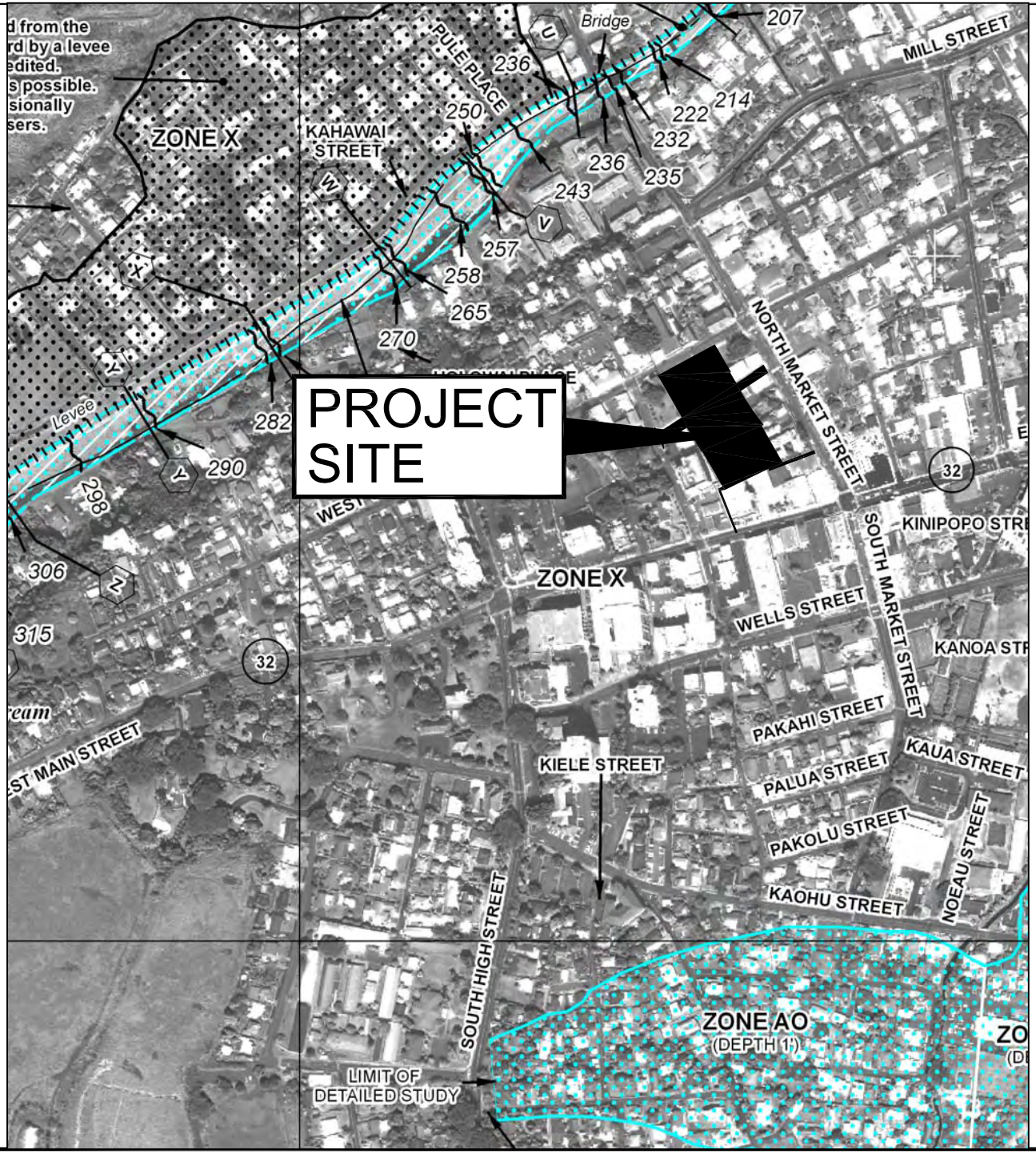
NORTH

GRAPHIC SCALE

1,000' 0' 1,000' 2,000' 3,000'

FIGURE 4 - SOIL CLASSIFICATION MAP

PROJECT NUMBER: 2700-00F#	DRAWN BY: C. SCHUSTER	DATE: FEBRUARY 2011	EKNA Services, Inc.



NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0391E

FIRM

FLOOD INSURANCE RATE MAP

MAUI COUNTY, HAWAII

PANEL 391 OF 825

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MAUI COUNTY	150003	0391	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
1500030391E

MAP REVISED
SEPTEMBER 25, 2009

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

MAP SCALE 1" = 500'

50 0 500 1000

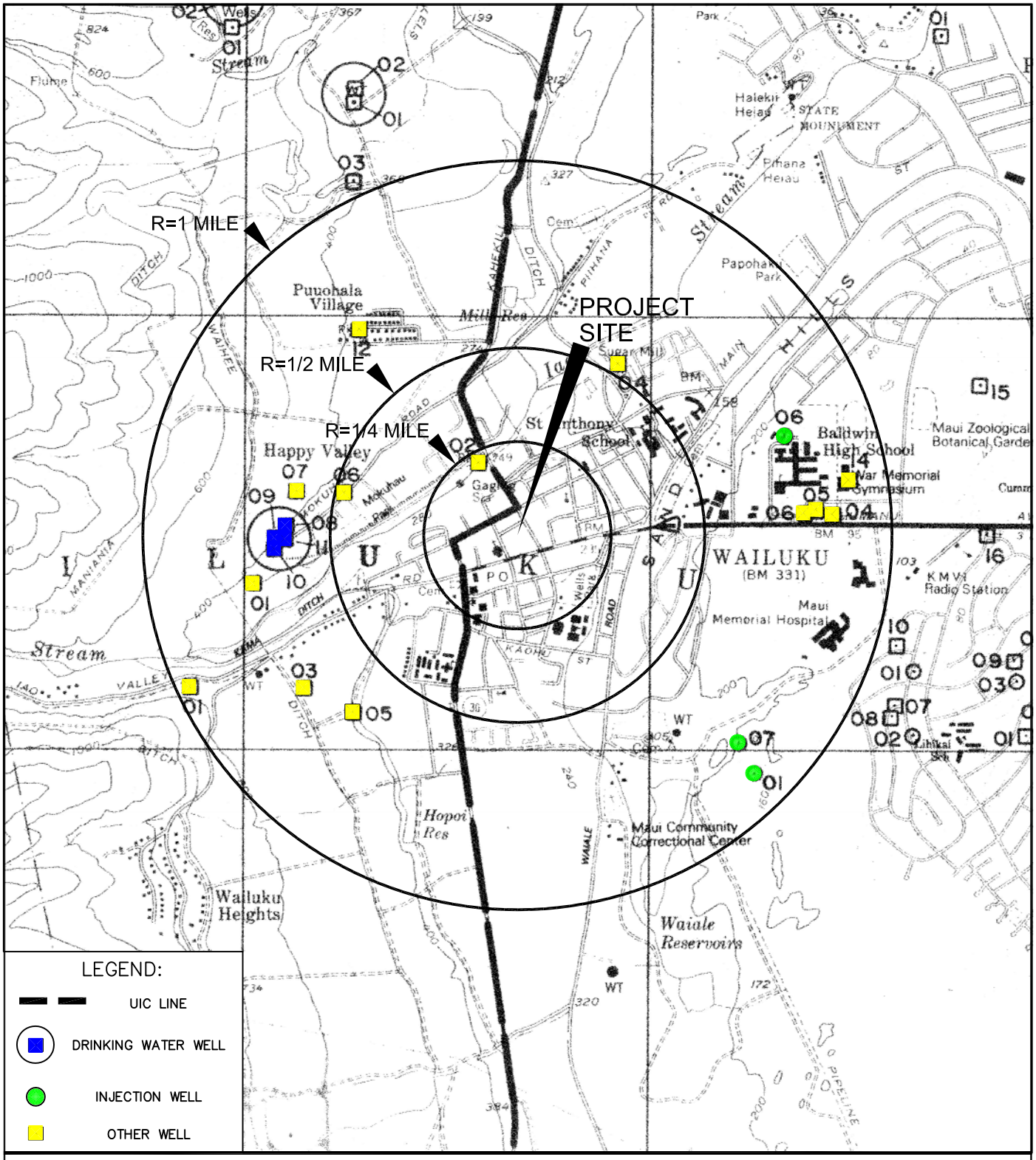
FEET

METER

FIGURE 5 - FLOOD INSURANCE RATE MAP

PROJECT NUMBER: 2700-00F#	DRAWN BY: C. SCHUSTER	DATE: FEBRUARY 2011

EKNA Services, Inc.



SOURCE: UNDERGROUND INJECTION CONTROL MAP, PANEL M-5, WAILUKU, MAUI, HAWAII

NORTH

2,000' 0' 2,000' 4,000' 6,000'

APPROXIMATE SCALE IN FEET

FIGURE 6 - UNDERGROUND INJECTION CONTROL MAP

PROJECT NUMBER: 2700-00F#	DRAWN BY: C. SCHUSTER	DATE: FEBRUARY 2011

EKNA Services, Inc.

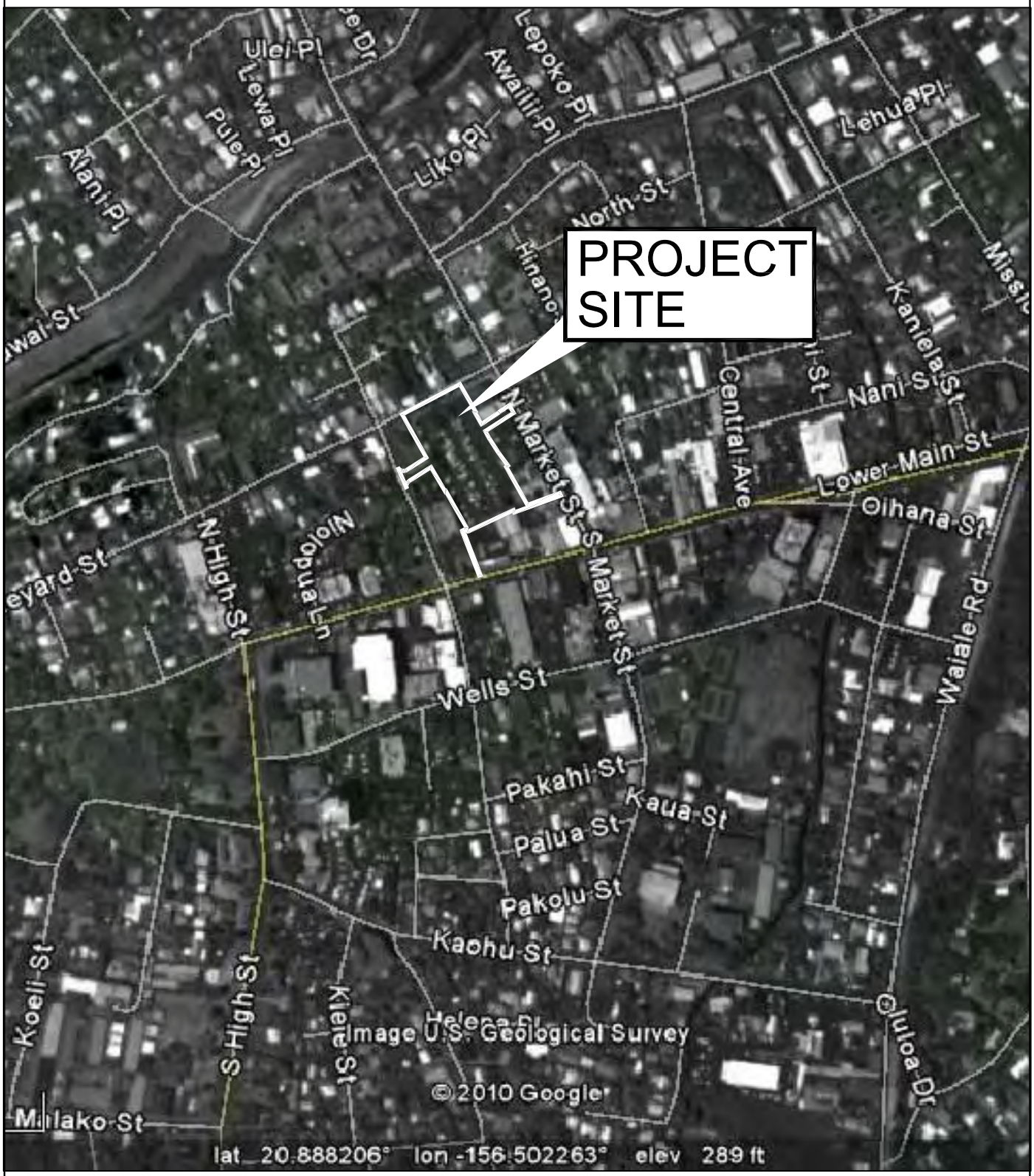
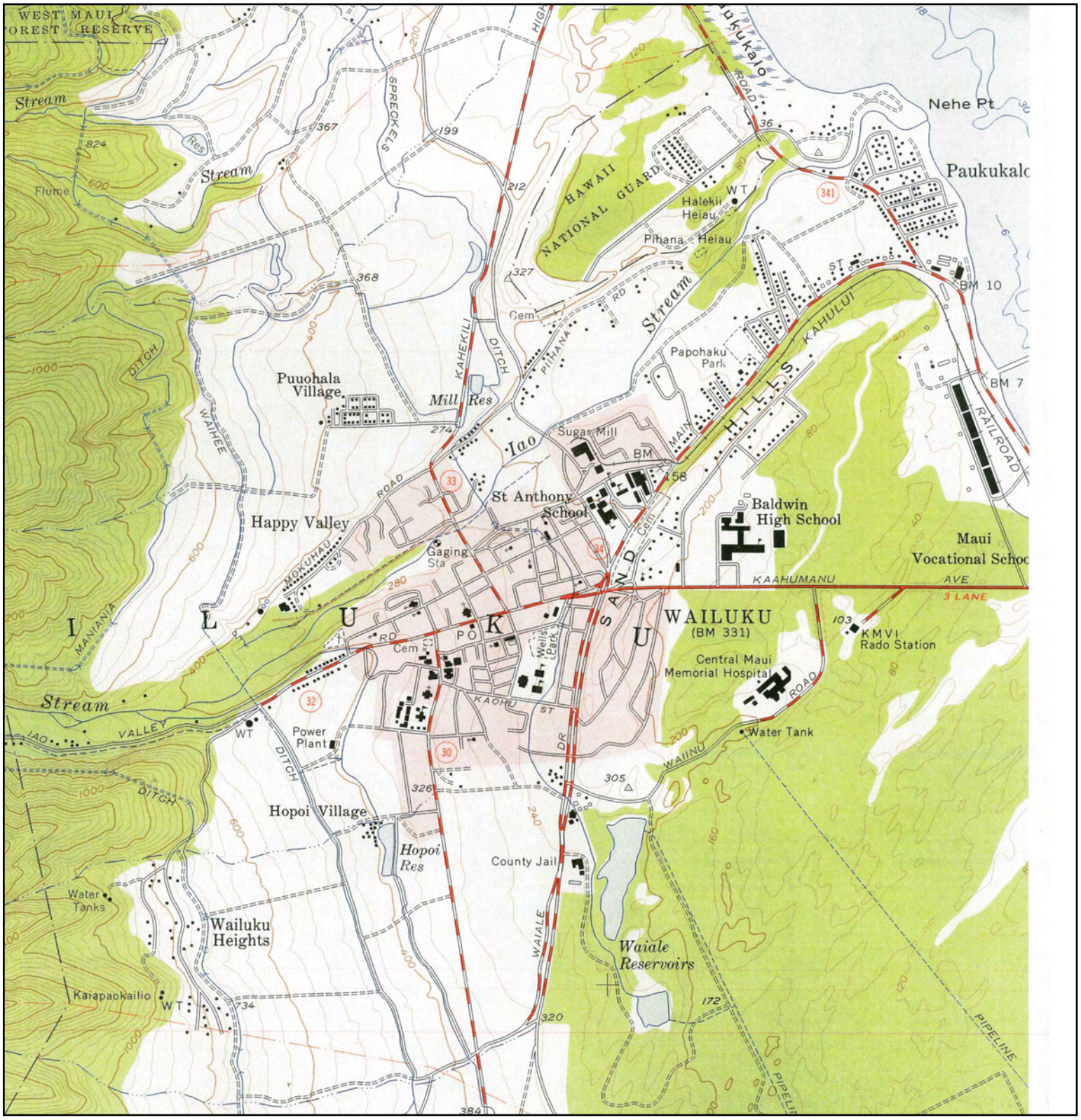


Figure 7a - 2000 Aerial Photo



Figure 7b - 2010 Aerial Photo

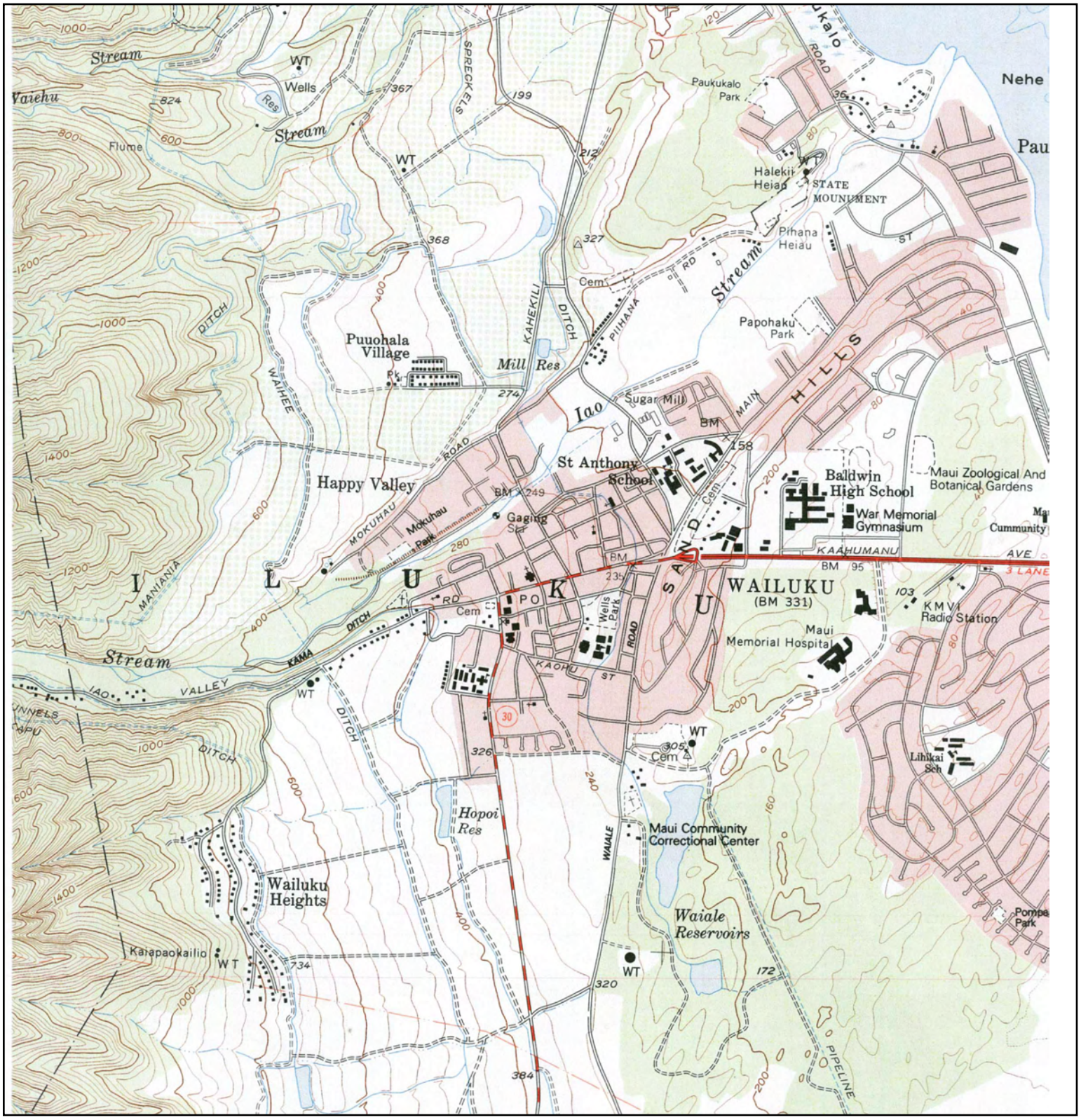
Historical Topographic Map



N	TARGET QUAD NAME: Wailuku, HI MAP YEAR: 1955 SERIES: 7.5 SCALE: 1:24,000	SITE NAME: Wailuku Municipal Parking Lot ADDRESS: 2061 W. Vineyard Street Wailuku, HI 96793 LAT/LONG: 20.8886 / -156.5027	CLIENT: EKNA Services, Inc CONTACT: Charles Brown INQUIRY#: 2964913.4 RESEARCH DATE: 01/13/2011

Figure 8a

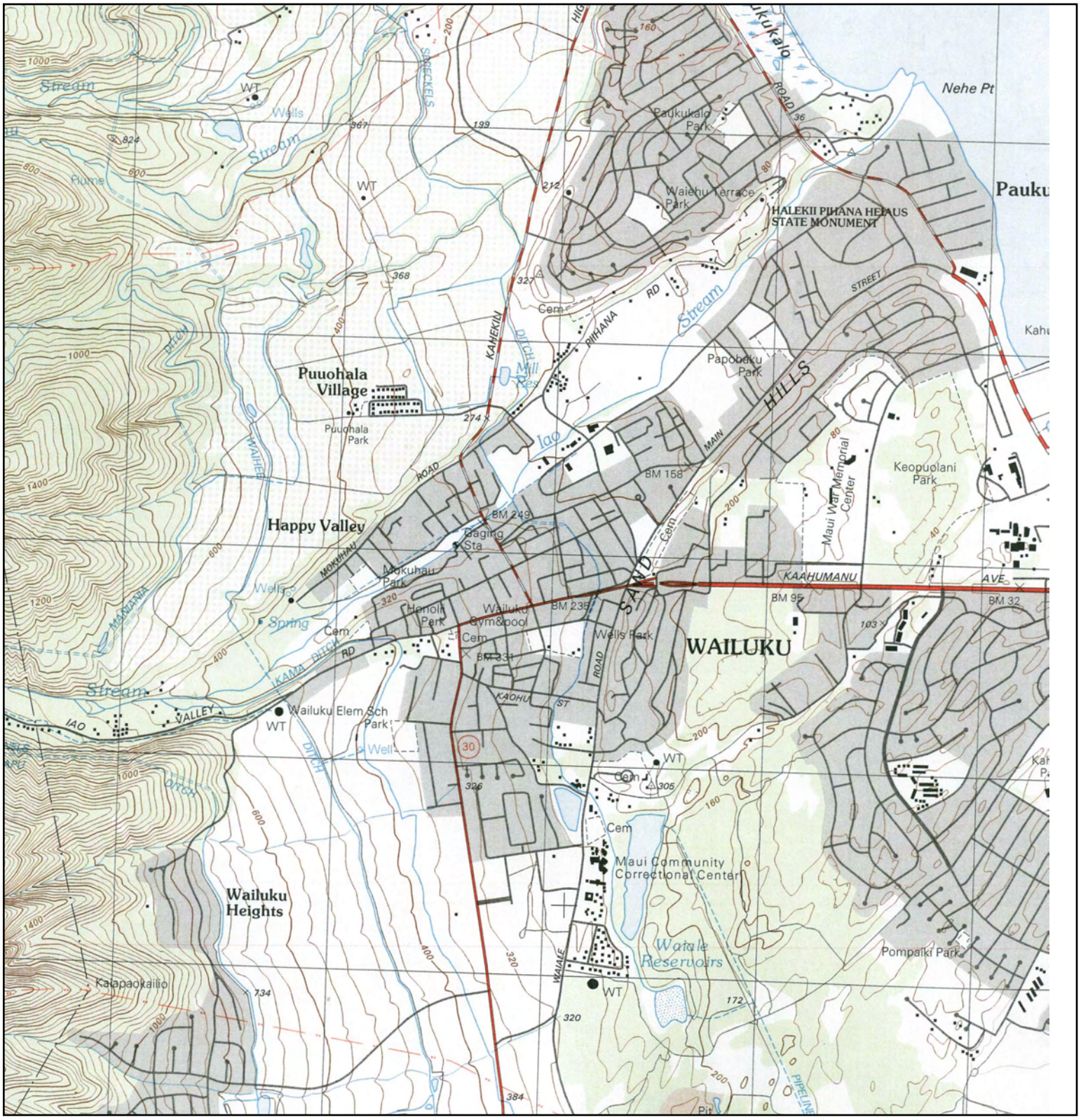
Historical Topographic Map



N	**TARGET QUAD**	SITE NAME: Wailuku Municipal Parking Lot	CLIENT: EKNA Services, Inc
	NAME: Wailuku, HI	ADDRESS: 2061 W. Vineyard Street	CONTACT: Charles Brown
	MAP YEAR: 1983	Wailuku, HI 96793	INQUIRY#: 2964913.4
	SERIES: 7.5	LAT/LONG: 20.8886 / -156.5027	RESEARCH DATE: 01/13/2011
	SCALE: 1:24,000		

Figure 8b

Historical Topographic Map



N	TARGET QUAD NAME: Wailuku, HI MAP YEAR: 1997 SERIES: 7.5 SCALE: 1:24,000	SITE NAME: Wailuku Municipal Parking Lot ADDRESS: 2061 W. Vineyard Street Wailuku, HI 96793 LAT/LONG: 20.8886 / -156.5027	CLIENT: EKNA Services, Inc CONTACT: Charles Brown INQUIRY#: 2964913.4 RESEARCH DATE: 01/13/2011

Figure 8c

Appendix B - Site Photographs

Photo 1: View of the West Vineyard Street Entrance to the Site
Photo taken by: C. Brown January 19, 2011



Photo 2: View of Parking Area Staining
Photo taken by: C. Brown January 19, 2011



Photo 3: View of Parking Area Paints
Photo taken by: C. Brown January 19, 2011



Photo 4: View of Transformer Vault on Adjoining Property
Photo taken by: C. Brown January 19, 2011



Appendix C - Environmental Data Resources, Inc. Reports

Wailuku Municipal Parking Lot
2061 W. Vineyard Street
Wailuku, HI 96793

Inquiry Number: 2964913.3
January 13, 2011

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

1/13/11

Site Name:
Wailuku Municipal Parking Lot
2061 W. Vineyard Street
Wailuku, HI 96793

Client Name:
EKNA Services, Inc
615 Pilkoi Street
Honolulu, HI 96814

EDR Inquiry # 2964913.3

Contact: Charles Brown

EDR® Environmental Data Resources Inc

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by EKNA Services, Inc were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name: Wailuku Municipal Parking Lot
Address: 2061 W. Vineyard Street
City, State, Zip: Wailuku, HI 96793
Cross Street:
P.O. # NA
Project: 2700-00F#
Certification # 0EB4-48F3-9CE0

Maps Provided:

1990
1980
1975
1950
1927
1914

Sanborn® Library search results
Certification # 0EB4-48F3-9CE0

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✓ Library of Congress
- ✓ University Publications of America
- ✓ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Sanborn Sheet Thumbnails

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1990 Source Sheets



Volume 1, Sheet 5



Volume 1, Sheet 3



Volume 1, Sheet 6



Volume 1, Sheet 10

1980 Source Sheets



Volume 1, Sheet 3



Volume 1, Sheet 5



Volume 1, Sheet 6



Volume 1, Sheet 10

1975 Source Sheets



Volume 1, Sheet 3



Volume 1, Sheet 5



Volume 1, Sheet 6



Volume 1, Sheet 10

1950 Source Sheets



Volume 1, Sheet 205



Volume 1, Sheet 207



Volume 1, Sheet 208



Volume 1, Sheet 212

1927 Source Sheets



Volume 1, Sheet 284



Volume 1, Sheet 3



Volume 1, Sheet 5



Volume 1, Sheet 6



Volume 1, Sheet 202

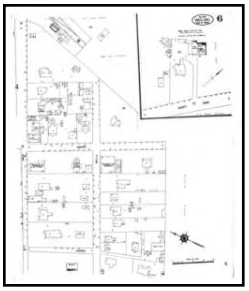
1914 Source Sheets



Volume 1, Sheet 3

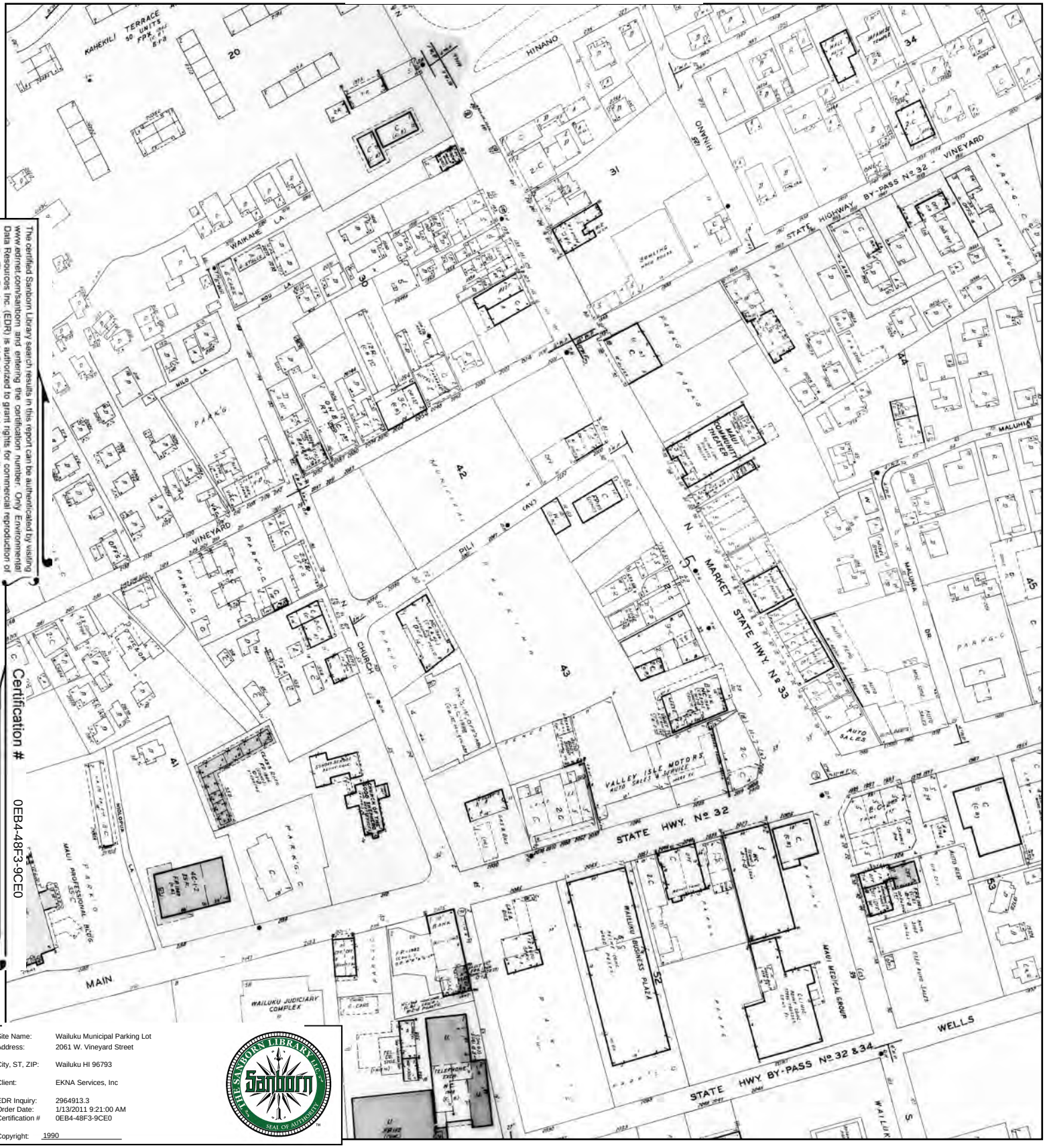


Volume 1, Sheet 4



Volume 1, Sheet 283

1990 Certified Sanborn Map



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Site Name:	Wailuku Municipal Parking Lot
Address:	2061 W. Vineyard Street
City, ST, ZIP:	Wailuku HI 96793
Client:	EKNA Services, Inc
EDR Inquiry:	2964913.3
Order Date:	1/13/2011 9:21:00 AM
Certification #	0EB4-48F3-9CE0
Copyright:	1990

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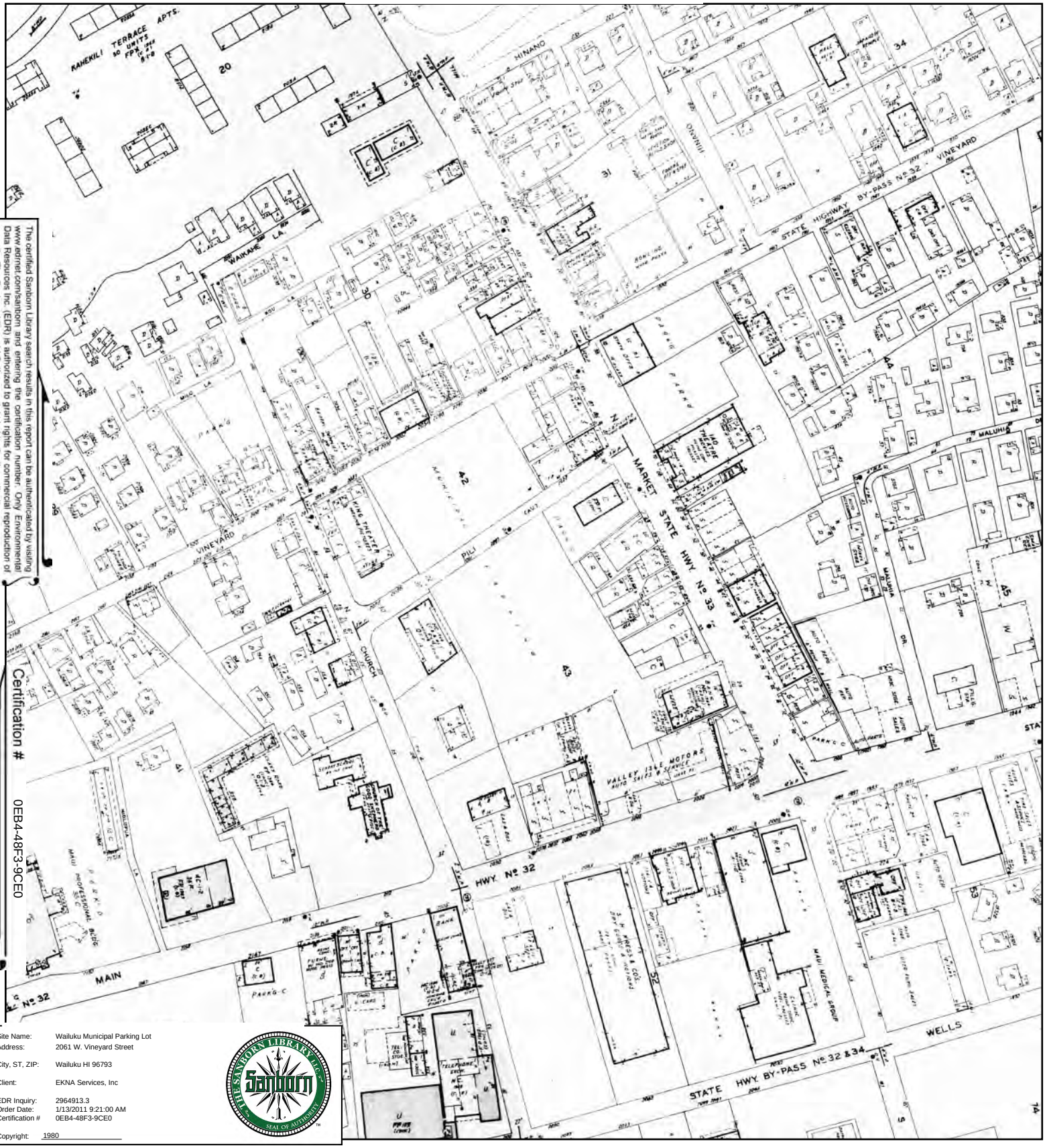


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Volume 1, Sheet 6
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0 Feet 150 300 600

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1980 Certified Sanborn Map



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Address:	2061 W. Vineyard Street
City, ST, ZIP:	Wailuku HI 96793
Client:	EKNA Services, Inc
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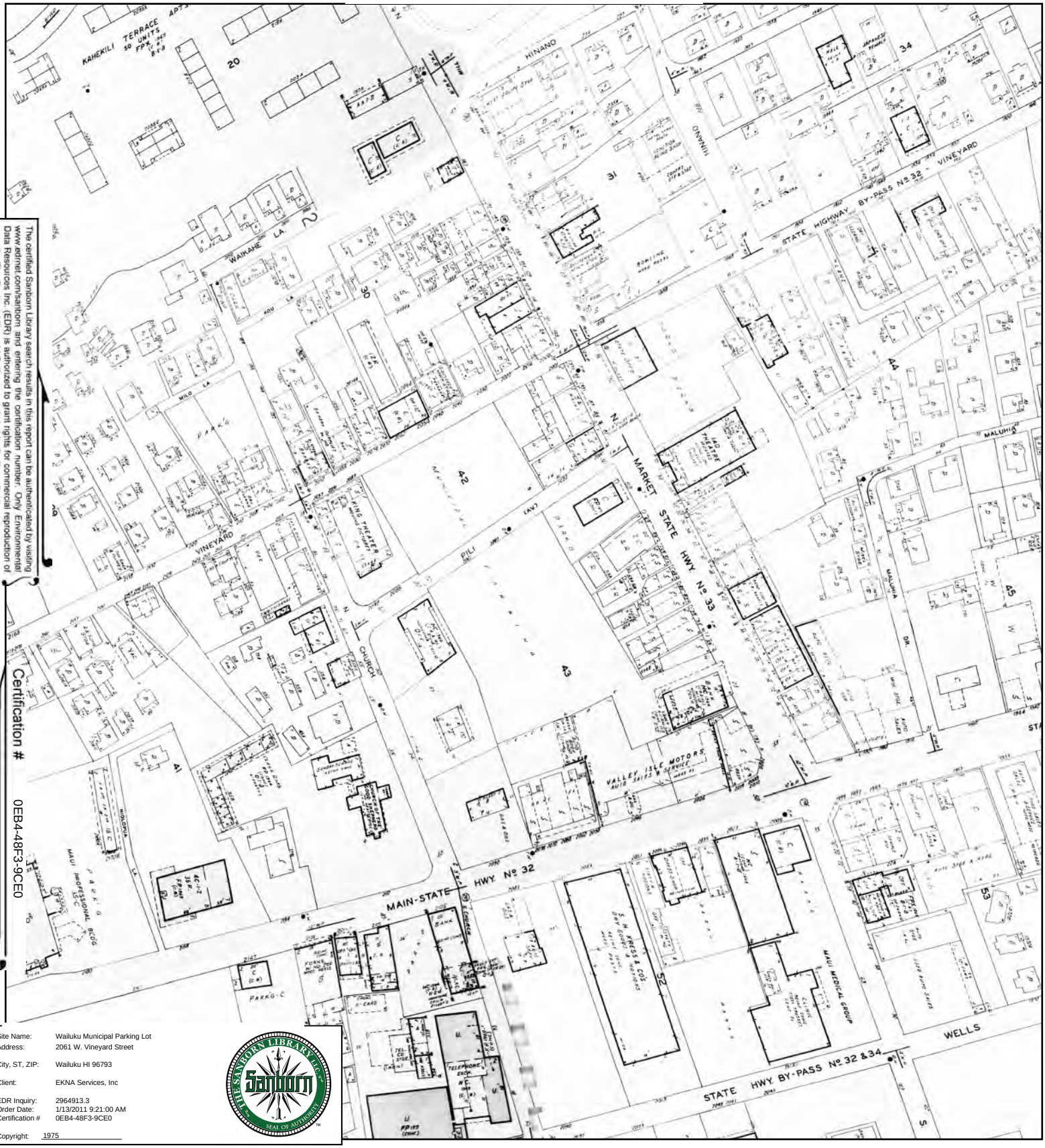


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1975 Certified Sanborn Map



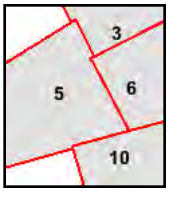
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Certification # 0EB4-48F3-9CE0

Site Name: Wailuku Municipal Parking Lot
Address: 2061 W. Vineyard Street
City, ST, ZIP: Wailuku HI 96793
Client: EKNA Services, Inc
EDR Inquiry: 2964913.3
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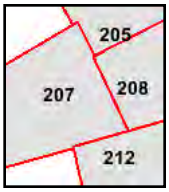
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Site Name:	Wailuku Municipal Parking Lot
Address:	2061 W. Vineyard Street
City, ST, ZIP:	Wailuku HI 96793
Client:	EKNA Services, Inc
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1927 Certified Sanborn Map



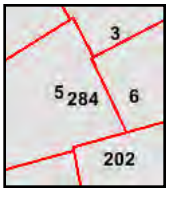
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Site Name:	Wailuku Municipal Parking Lot
Address:	2061 W. Vineyard Street
City, ST, ZIP:	Wailuku HI 96793
Client:	EKNA Services, Inc
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Copyright:	1927

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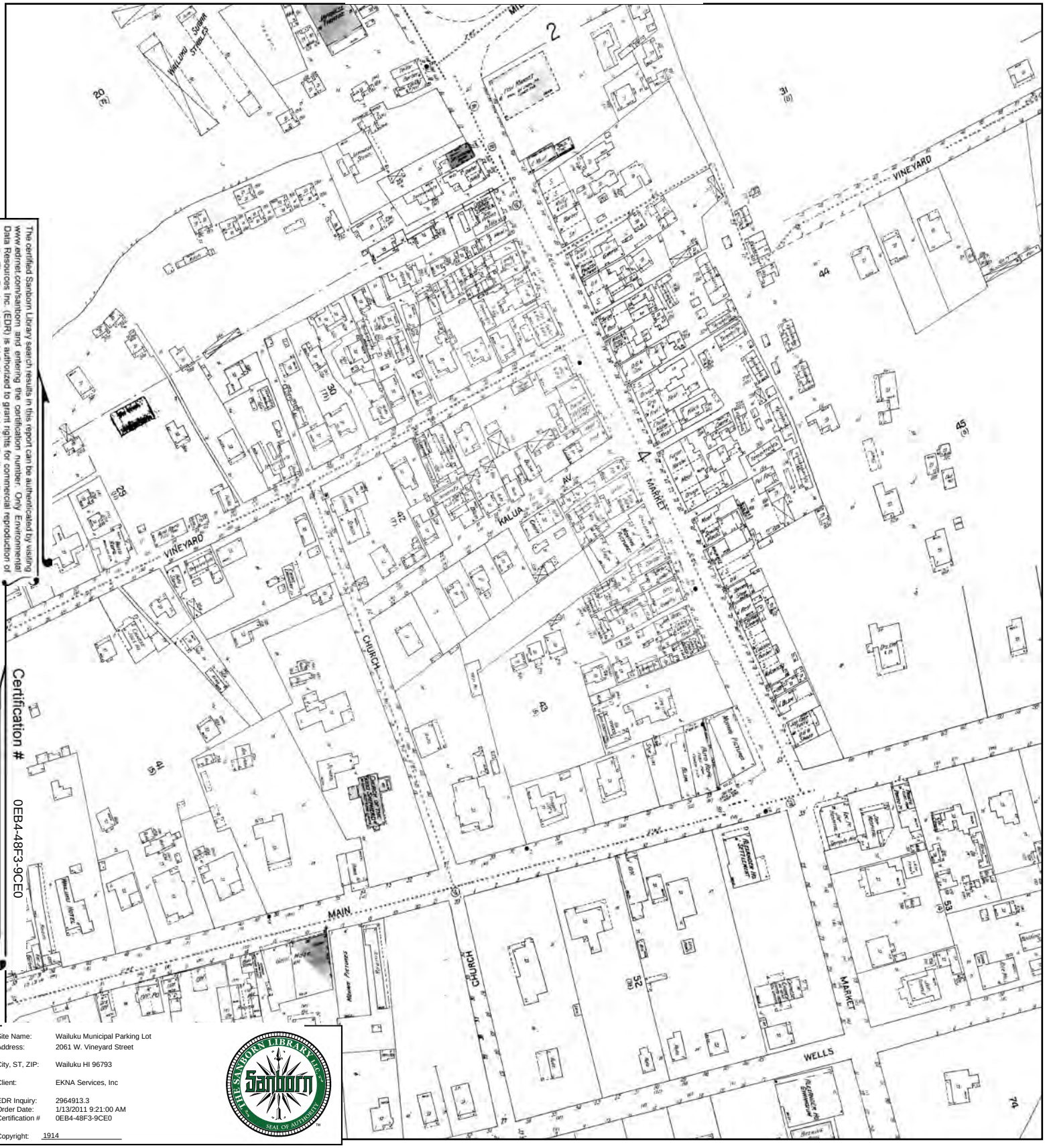


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Volume 1, Sheet 3
Volume 1, Sheet 5
Volume 1, Sheet 6
Volume 1, Sheet 202

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1914 Certified Sanborn Map



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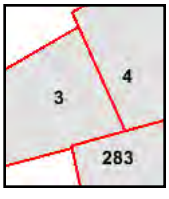
Certification # 0EB4-48F3-9CE0

Site Name: Wailuku Municipal Parking Lot
Address: 2061 W. Vineyard Street
City, ST, ZIP: Wailuku HI 96793
Client: EKNA Services, Inc
EDR Inquiry: 2964913.3
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Volume 1, Sheet 4
Volume 1, Sheet 283

N

Wailuku Municipal Parking Lot
2061 W. Vineyard Street
Wailuku, HI 96793

Inquiry Number: 2964913.2s
January 11, 2011

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

2061 W. VINEYARD STREET
WAILUKU, HI 96793

COORDINATES

Latitude (North):	20.888600 - 20° 53' 19.0''
Longitude (West):	156.502700 - 156° 30' 9.7''
Universal Tranverse Mercator:	Zone 4
UTM X (Meters):	759799.3
UTM Y (Meters):	2311702.0
Elevation:	293 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	20156-H5 NAPILI, HI
Most Recent Revision:	Not reported
East Map:	20156-H4 KAHAKULOA, HI
Most Recent Revision:	Not reported
Southeast Map:	20156-G4 WAILUKU, HI
Most Recent Revision:	Not reported
South Map:	20156-G5 LAHAINA, HI
Most Recent Revision:	Not reported

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL---------- National Priority List

EXECUTIVE SUMMARY

Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

CERCLIS ---------- Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ---------- Federal Facility Site Information listing

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators

Federal institutional controls / engineering controls registries

US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Permitted Landfills in the State of Hawaii

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

INDIAN UST ---------- Underground Storage Tanks on Indian Land
FEMA UST ---------- Underground Storage Tank Listing

State and tribal institutional control / engineering control registries

ENG CONTROLS ---------- Engineering Control Sites
INST CONTROL ---------- Sites with Institutional Controls

State and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing
VCP ---------- Voluntary Response Program Sites

EXECUTIVE SUMMARY

State and tribal Brownfields sites

BROWNFIELDS ---------- Brownfields Sites

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---------- Open Dump Inventory
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ---------- Clandestine Drug Labs
CDL ---------- Clandestine Drug Lab Listing
US HIST CDL ---------- National Clandestine Laboratory Register

Local Land Records

LIENS 2 ---------- CERCLA Lien Information
LUCIS ---------- Land Use Control Information System

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System
SPILLS ---------- Release Notifications

Other Ascertainable Records

DOT OPS ---------- Incident and Accident Data
DOD ---------- Department of Defense Sites
FUDS ---------- Formerly Used Defense Sites
CONSENT ---------- Superfund (CERCLA) Consent Decrees
ROD ---------- Records Of Decision
UMTRA ---------- Uranium Mill Tailings Sites
MINES ---------- Mines Master Index File
TRIS ---------- Toxic Chemical Release Inventory System
TSCA ---------- Toxic Substances Control Act
FTTS ---------- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS ---------- FIFRA/TSCA Tracking System Administrative Case Listing
SSTS ---------- Section 7 Tracking Systems
ICIS ---------- Integrated Compliance Information System
PADS ---------- PCB Activity Database System
MLTS ---------- Material Licensing Tracking System
RADINFO ---------- Radiation Information Database
FINDS ---------- Facility Index System/Facility Registry System
RAATS ---------- RCRA Administrative Action Tracking System

UIC ..... Underground Injection Wells Listing
DRYCLEANERS ..... Permitted Drycleaner Facility Listing
AIRS ..... List of Permitted Facilities
INDIAN RESERV ..... Indian Reservations
SCRD DRYCLEANERS ..... State Coalition for Remediation of Drycleaners Listing
COAL ASH EPA ..... Coal Combustion Residues Surface Impoundments List
COAL ASH DOE ..... Sleam-Electric Plan Operation Data
PCB TRANSFORMER ..... PCB Transformer Registration Database

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants ..... EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS NFRAP site List

CERC-NFRAP: Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

A review of the CERC-NFRAP list, as provided by EDR, and dated 06/23/2009 has revealed that there are 2 CERC-NFRAP sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
VECTOR CONTROL BRANCH	***54 HIGH ST***	***SW 1/8 - 1/4 (0.157 mi.)***	***E23***	***28***
Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
KUKUI GROVE HOLDER	***46 TINGS DR***	***ENE 1/4 - 1/2 (0.416 mi.)***	***I37***	***42***

EXECUTIVE SUMMARY

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 02/17/2010 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
JD PAINTING	***70 KANOA ST***	***ESE 1/8 - 1/4 (0.231 mi.)***	***G29***	***33***

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 02/17/2010 has revealed that there are 3 RCRA-CESQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SHELL OIL CO	***2086 MAIN ST***	***SSW 0 - 1/8 (0.038 mi.)***	***B5***	***12***
UPTOWN SERVICE INC	***2085 MAIN ST***	***SSW 0 - 1/8 (0.038 mi.)***	***B7***	***16***

Lower Elevation	Address	Direction / Distance	Map ID	Page
VALLEY ISLE MOTORS LUST	***2026 MAIN STREET***	***SSE 0 - 1/8 (0.032 mi.)***	***B4***	***8***

State- and tribal - equivalent CERCLIS

SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Health.

A review of the SHWS list, as provided by EDR, and dated 12/01/2009 has revealed that there are 12 SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MAUI VINEYARD INN, UST CLOSURE	2102 VINEYARD ST	WSW 0 - 1/8 (0.025 mi.)	A2	7
ALVIN'S UPTOWN CHEVRON SERVICE	2085 WEST MAIN ST	SSW 0 - 1/8 (0.038 mi.)	B8	18

Lower Elevation	Address	Direction / Distance	Map ID	Page
MAIN STREET PROMENADE PROJECT	2058 MAIN ST	SSE 0 - 1/8 (0.030 mi.)	B3	7
VALLEY ISLE MOTORS LUST	***2026 MAIN STREET***	***SSE 0 - 1/8 (0.032 mi.)***	***B4***	***8***
MEADOW GOLD DAIRIES (MILK PLAN	***260 S MARKET ST***	***SSE 1/8 - 1/4 (0.238 mi.)***	***31***	***36***
1790 MILL STREET	***1790 MILL ST***	***NNE 1/8 - 1/4 (0.239 mi.)***	***H34***	***40***

Lower Elevation	Address	Direction / Distance	Map ID	Page
MAUI SANDTORCHES	46 TING DR	ENE 1/4 - 1/2 (0.417 mi.)	I38	44
REX TIRE & SUPPLY, DIESEL	1728 KAAHUMANU AVE	E 1/4 - 1/2 (0.454 mi.)	39	44
MAUI DISPOSAL	250 IMI KALA ST	NNE 1/4 - 1/2 (0.454 mi.)	40	45
MECO TRANSFORMER 3358	1540 E MAIN ST	ENE 1/2 - 1 (0.555 mi.)	41	45
WAIMALUHIA MAUI METH / DRUG LA	***115 WAIMALUHIA LN***	***SSE 1/2 - 1 (0.865 mi.)***	***42***	***46***
WAIALE ASH PILE	***MAHALANI ST***	***E 1/2 - 1 (0.985 mi.)***	***43***	***47***

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Health's Active Leaking Underground Storage Tank Log Listing.

A review of the LUST list, as provided by EDR, and dated 09/20/2010 has revealed that there are 9 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COURTHOUSE SHELL	***2086 MAIN ST***	***SSW 0 - 1/8 (0.038 mi.)***	***B6***	***14***
Facility Status: Site Cleanup Completed (NFA)				
Facility Status: Site Cleanup Completed (NFA)				
UPTOWN SERVICE	***2085 MAIN ST***	***SSW 0 - 1/8 (0.038 mi.)***	***B9***	***18***
Facility Status: Site Cleanup Completed (NFA)				
HOAPILI HALE - MAUI JUDICIARY	***2145 MAIN ST.***	***SSW 0 - 1/8 (0.087 mi.)***	***12***	***20***
Facility Status: Site Cleanup Completed (NFA)				
COUNTY OF MAUI - CIVIL DEFENSE	***200 S HIGH ST***	***SSW 1/4 - 1/2 (0.308 mi.)***	***36***	***41***
Facility Status: Site Cleanup Completed (NFA)				

Lower Elevation	Address	Direction / Distance	Map ID	Page
VALLEY ISLE MOTORS LUST	***2026 MAIN STREET***	***SSE 0 - 1/8 (0.032 mi.)***	***B4***	***8***
Facility Status: Site Cleanup Completed (NFA)				
Facility Status: Site Cleanup Completed (NFA)				
WAILUKU CENTRAL OFFICE	***60 S CHURCH ST***	***S 0 - 1/8 (0.097 mi.)***	***D14***	***22***
Facility Status: Site Cleanup Completed (NFA)				
LOKAHI PACIFIC	***1935 MAIN ST***	***E 0 - 1/8 (0.105 mi.)***	***C19***	***26***
Facility Status: Site Cleanup Completed (NFA)				
Facility Status: Site Cleanup Completed (NFA)				
OGAWA SERVICE STATION	***327 N MARKET ST***	***NNW 1/8 - 1/4 (0.206 mi.)***	***F25***	***31***
Facility Status: Site Cleanup Completed (NFA)				
WAILUKU FIRE STATION	***21 KINIPOPO ST***	***E 1/8 - 1/4 (0.210 mi.)***	***G27***	***32***
Facility Status: Site Cleanup Completed (NFA)				

EXECUTIVE SUMMARY

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Health's Listing of Underground Storage Tanks.

A review of the UST list, as provided by EDR, and dated 09/20/2010 has revealed that there are 20 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
2102 VINEYARD ST.	2102 VINEYARD ST	WSW 0 - 1/8 (0.025 mi.)	A1	7
COURTHOUSE SHELL	***2086 MAIN ST***	***SSW 0 - 1/8 (0.038 mi.)***	***B6***	***14***
UPTOWN SERVICE	***2085 MAIN ST***	***SSW 0 - 1/8 (0.038 mi.)***	***B9***	***18***
HOAPILI HALE - MAUI JUDICIARY	***2145 MAIN ST.***	***SSW 0 - 1/8 (0.087 mi.)***	***12***	***20***
POLICE MOTOR POOL	HIGH & MAIN ST	SW 1/8 - 1/4 (0.137 mi.)	E21	27
DOH/DISTRICT OFFICE	54 HIGH ST, ROOM 301	SW 1/8 - 1/4 (0.205 mi.)	24	31

Lower Elevation	Address	Direction / Distance	Map ID	Page
VALLEY ISLE MOTORS LUST	***2026 MAIN STREET***	***SSE 0 - 1/8 (0.032 mi.)***	***B4***	***8***
IMA HANADA TRUST	1960 MAIN ST	E 0 - 1/8 (0.079 mi.)	C10	19
MAUI AUTO DETAILING	1955 MAIN ST	E 0 - 1/8 (0.085 mi.)	C11	20
PACIFIC AMUSEMENT CO., LTD.	1942 MAIN ST	E 0 - 1/8 (0.096 mi.)	C13	21
WAILUKU CENTRAL OFFICE	60 S CHURCH ST	S 0 - 1/8 (0.097 mi.)	D15	22
TAKITANI BUILDING	1940 MAIN ST, STE 1355	E 0 - 1/8 (0.098 mi.)	C17	24
LOKAHI PACIFIC	1935 MAIN ST	E 0 - 1/8 (0.105 mi.)	C20	27
DOWN TO EARTH NATURAL FOODSTOR	1910 VINEYARD ST	NE 1/8 - 1/4 (0.144 mi.)	22	28
OGAWA SERVICE STATION	327 N MARKET ST	NNW 1/8 - 1/4 (0.206 mi.)	F26	32
WAILUKU FIRE STATION	21 KINIPOPO ST	E 1/8 - 1/4 (0.210 mi.)	G28	33
BLUE & WHITE BUS LINE, LTD.	60 KANOA ST	E 1/8 - 1/4 (0.231 mi.)	G30	36
PAM FUJITA PROPERTY	346 N. MARKET ST	NNW 1/8 - 1/4 (0.239 mi.)	F32	37
GOMES CONST & REPAIRS INC	***1790 MILL ST***	***NNE 1/8 - 1/4 (0.239 mi.)***	***H33***	***38***
GEORGE S./ JEAN FUNAI	350 N MARKET ST	NNW 1/8 - 1/4 (0.247 mi.)	F35	40

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

RCRA-NonGen: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA-NonGen list, as provided by EDR, and dated 02/17/2010 has revealed that there are 4 RCRA-NonGen sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
VECTOR CONTROL BRANCH	***54 HIGH ST***	***SW 1/8 - 1/4 (0.157 mi.)***	***E23***	***28***

Lower Elevation	Address	Direction / Distance	Map ID	Page
DICKS FUMIGATION SERVICE INC	***1940 MAIN ST***	***E 0 - 1/8 (0.098 mi.)***	***C16***	***23***

EXECUTIVE SUMMARY

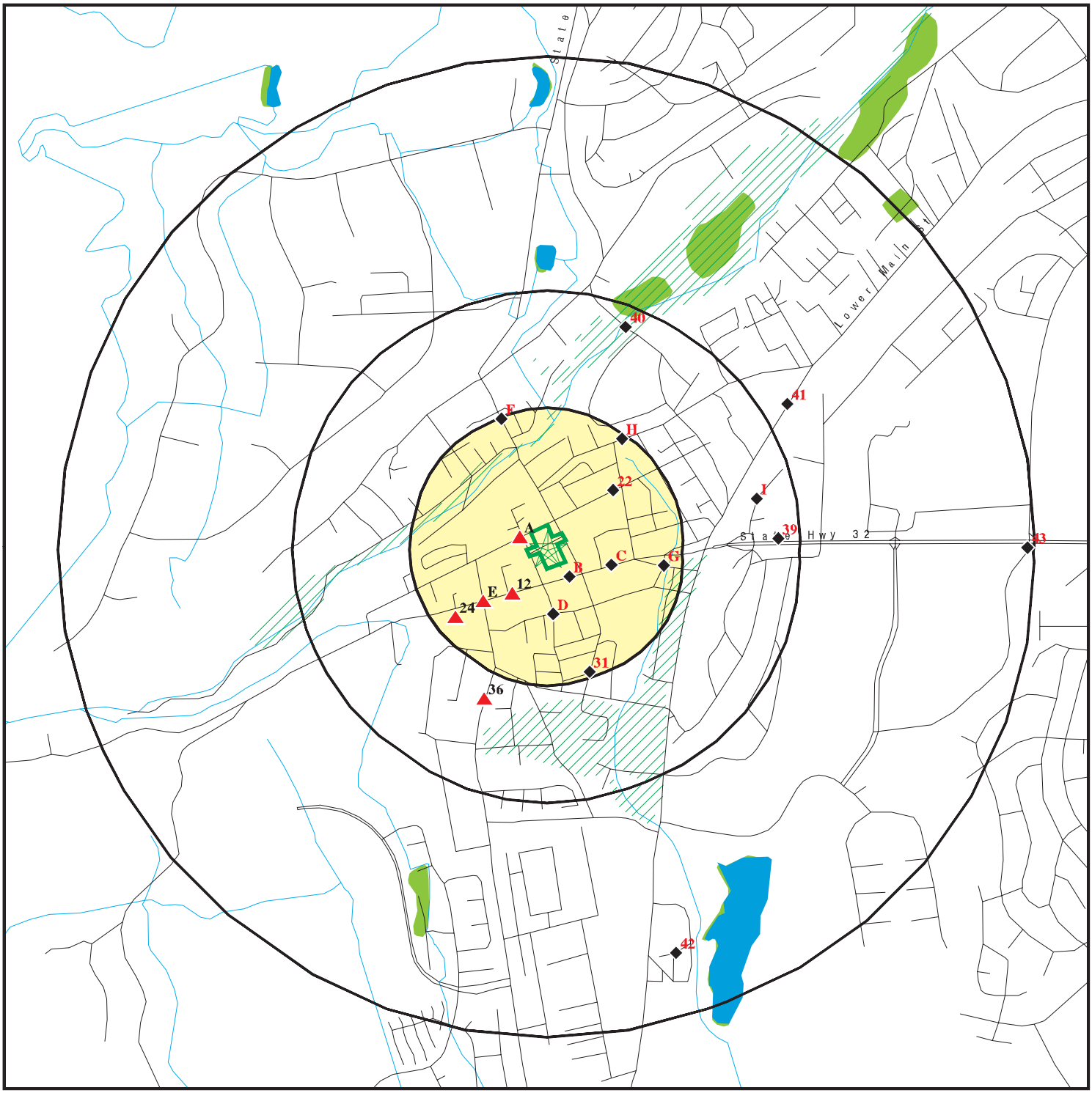
Lower Elevation	Address	Direction / Distance	Map ID	Page
CUTTER NISSAN	*1935 MAIN ST*	*E 0 - 1/8 (0.105 mi.)*	*C18*	*25*
GOMES CONST & REPAIRS INC	*1790 MILL ST*	*NNE 1/8 - 1/4 (0.239 mi.)*	*H33*	*38*

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 35 records.

Site Name	Database(s)
KALAMAULA LANDFILL	SHWS, ENG CONTROLS
VECTOR CONTROL BRANCH, MAUI	SHWS
HOBRON AVE AREA (KAHULUI)	FINDS, SHWS
FONG CONSTRUCTION	SHWS
MAUI PALMS HOTEL UST	SHWS
MCC-AUTOMOTIVE TECHNOLOGY BUILDING	FINDS, SHWS, SPILLS
A&B DUMP SITE	FINDS, SHWS
MAUI MEAT COMPANY FACILITY (FORMER	SHWS, SPILLS
WAIKAPU DUMP-MAUI COUNTY DUMP	FINDS, SHWS
PAIA SUGAR MILL	SHWS
Y HATA- MAUI	SHWS
WAIKAPU DUMP-MAUI COUNTY DUMP	CERC-NFRAP
DAVID PICO CESSPOOL DIGGING	FINDS, LUST
MARK MILL34	LUST
HAWAIIAN CEMENT - WAIKAPU QUARRY	FINDS, LUST
DAVID PICO CESSPOOL DIGGING	UST
MARK MILL34	UST
MAALAEA GENERATING STATION	RCRA-LQG
VACANT LAND TMK NO (2) 3-8-7:101	RCRA-NonGen
MAUI DISTRICT OFFICE DOE	RCRA-NonGen
73 & 74 DRAINAGE RESOVIOR WAILUKU,	ERNS
HISANO PROPERTY, VACANT LOT	FINDS
DWS WAILUKU	FINDS
KEHALANI MAUKA LARGE LOT	FINDS
WAILUKU IRRIGATION RESERVOIR #74	FINDS
WAILUKU PROJECT DISTRICT	FINDS
WAILUKU AG DIVERSION OF IAO STREAM	FINDS
WAILUKU SHAFT 33 PUMP STATION	FINDS
WAILUKU SWIMMING POOL	FINDS
WAILUKU (OLD) POOL	FINDS
NEW WAILUKU POOL	FINDS
WAILUKU COUNTRY ESTATES	FINDS
KEHALANI MAUKA LARGE LOT	FINDS
WAR MEMORIAL GYM PARKING LOT	FINDS
WAILUKU IRRIGATION RESERVOIR #74	SPILLS

OVERVIEW MAP - 2964913.2s



0 1/4 1/2 1 Miles

Target Property
Sites at elevations higher than or equal to the target property
Sites at elevations lower than the target property
Manufactured Gas Plants
National Priority List Sites
Dept. Defense Sites

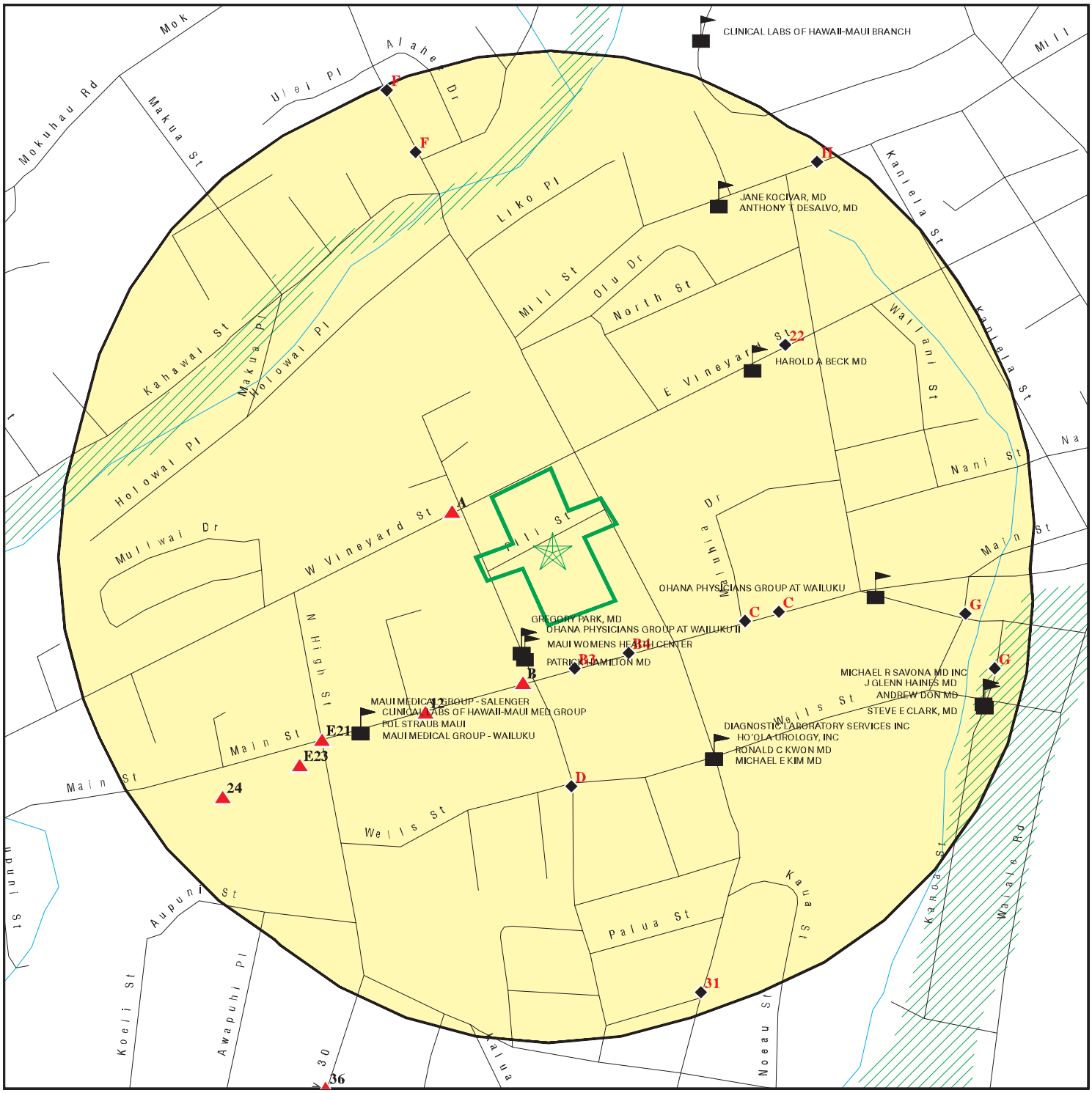
Indian Reservations BIA
Oil & Gas pipelines
100-year flood zone
500-year flood zone
National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Wailuku Municipal Parking Lot ADDRESS: 2061 W. Vineyard Street Wailuku HI 96793 LAT/LONG: 20.8886 / 156.5027	CLIENT: EKNA Services, Inc CONTACT: Charles Brown INQUIRY #: 2964913.2s DATE: January 11, 2011 6:28 pm

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DETAIL MAP - 2964913.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Wailuku Municipal Parking Lot ADDRESS: 2061 W. Vineyard Street Wailuku HI 96793 LAT/LONG: 20.8886 / 156.5027	CLIENT: EKNA Services, Inc CONTACT: Charles Brown INQUIRY #: 2964913.2s DATE: January 11, 2011 6:29 pm

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	0	0	NR	NR	0
FEDERAL FACILITY		1.000	0	0	0	0	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	0	1	1	NR	NR	2
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	0	1	NR	NR	NR	1
RCRA-CESQG		0.250	3	0	NR	NR	NR	3
Federal institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
Federal ERNS list								
ERNS		TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS		1.000	4	2	3	3	NR	12
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF		0.500	0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST		0.500	6	2	1	NR	NR	9
INDIAN LUST		0.500	0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST		0.250	11	9	NR	NR	NR	20

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN UST		0.250	0	0	NR	NR	NR	0
FEMA UST		0.250	0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS		0.500	0	0	0	NR	NR	0
INST CONTROL		0.500	0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS		0.500	0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
US HIST CDL		TP	NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
SPILLS		TP	NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen		0.250	2	2	NR	NR	NR	4
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
UIC		TP	NR	NR	NR	NR	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
AIRS		TP	NR	NR	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
COAL ASH EPA		0.500	0	0	0	NR	NR	0
COAL ASH DOE		TP	NR	NR	NR	NR	NR	0
PCB TRANSFORMER		TP	NR	NR	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
WSW
< 1/8
0.025 mi.
133 ft.

2102 VINEYARD ST.
2102 VINEYARD ST
WAILUKU, HI 96793

Site 1 of 2 in cluster A

UST **U003222271**
N/A

Relative:
Higher

Actual:
302 ft.

UST:

Facility ID:	9-503115
Owner:	RALPH KATO
Owner Address:	1063 LOWER MAIN ST
Owndder City,St,Zip:	Wailuku, 96793 96793
Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	10/5/1995
Tank Capacity:	550
Substance:	Diesel

A2
WSW
< 1/8
0.025 mi.
133 ft.

MAUI VINEYARD INN, UST CLOSURE
2102 VINEYARD ST
WAILUKU, HI 96793

Site 2 of 2 in cluster A

SHWS **S106819021**
N/A

Relative:
Higher

Actual:
302 ft.

SHWS:

Organization:	Maui Vineyard Inn
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Vineyard Street Tank Closure
Hid Number:	Not reported
Facility Registry Identifier:	110013766656
Lead Agency:	HEER
Program:	State
Project Manager:	Unassigned
Hazard Priority:	NFA
Site Status:	NFA
Action:	Response
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	NFA - Type Undetermined
Date Of Closure Document:	12/11/1997 1:20:09 AM

B3
SSE
< 1/8
0.030 mi.
156 ft.

MAIN STREET PROMENADE PROJECT (DEMOLITION PHASE 1B
2058 MAIN ST
WAILUKU, HI

Site 1 of 7 in cluster B

SHWS **S106818881**
N/A

Relative:
Lower

Actual:
290 ft.

SHWS:

Organization:	Main Street Promenade Project
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Main Street Promenade Project (Demolition Phase 1B)
Hid Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	Not reported
Program:	State
Project Manager:	Mike Cripps

MAIN STREET PROMENADE PROJECT (DEMOLITION PHASE 1B (Continued) **S106818881**

Hazard Priority:	NFA
Site Status:	NFA
Action:	Assessment
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	NFA - Type Undetermined
Date Of Closure Document:	9/1/2000 1:19:26 AM

B4 **VALLEY ISLE MOTORS LUST** **RCRA-CESQG** **1000601460**
SSE **2026 MAIN STREET** **FINDS** **HID984466896**
< 1/8 **WAILUKU, HI 96793** **SHWS**
0.032 mi. **LUST**
170 ft. **Site 2 of 7 in cluster B** **UST**
SPILLS

Relative:
Lower

Actual:
282 ft.

RCRA-CESQG:

Date form received by agency:	04/27/2001
Facility name:	ROBERT JOSLIN
Facility address:	2026 MAIN ST WAILUKU, HI 96793
EPA ID:	HID984466896
Contact:	ROBERT JOSLIN
Contact address:	2026 MAIN ST WAILUKU, HI 96793
Contact country:	US
Contact telephone:	(808) 244-3980
Contact email:	Not reported
EPA Region:	09
Land type:	Private
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	ROBERT JOSLIN
Owner/operator address:	2026 MAIN ST WAILUKU, HI 96793
Owner/operator country:	Not reported
Owner/operator telephone:	(808) 244-3980
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No

VALLEY ISLE MOTORS LUST (Continued) **1000601460**

Mixed waste (haz. and radioactive): Unknown
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Verified to be non-commercial

Hazardous Waste Summary:
Waste code: D000
Waste name: Not Defined

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D008
Waste name: LEAD

Waste code: D018
Waste name: BENZENE

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 01/19/1996
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110005727516

Environmental Interest/Information System
HI-UST (Hawaii - Underground Storage Tank). Hawaii Underground Storage Tank Program regulates underground storage tanks which store petroleum or hazardous substances and offers documents and data products for downloading.

Hawaii Hazard Evaluation and Emergency Response (HEER-FRS) system maintains basic information for facility/sites of interest to state of Hawaii, Department of Health, Hazard Evaluation and Emergency

VALLEY ISLE MOTORS LUST (Continued) **1000601460**

Response. It is used to index sites for hardcopy file retrieval and to present limited site status information. The environmental interests included are: release assessments, TRI reporters, EPCRA filers, RMP reporters and long term types of site investigations such as environmental cleanup study areas, state cleanup sites, Superfund NPL sites, voluntary clean up programs and Brownfields Pilot/Grants, properties, sites and targeted assessments.

The HI-ECS (Hawaii Environmental Compliance Program) is the Hawaii state regulatory program relating to environmental compliance and hazardous materials that ensures that program areas and facilities are in compliance with environmental regulations

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

SHWS:

Organization:	Valley Isle Motors
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Valley Isle Motors Leaking UST
Hid Number:	Not reported
Facility Registry Identifier:	110005727516
Lead Agency:	SHWB
Program:	State
Project Manager:	Melody Calisay
Hazard Priority:	NFA
Site Status:	NFA
Action:	Response
Potential Hazards And Controls:	No Hazard
Closure Document Title:	NFA Letter - Unrestricted Residential Use
Date Of Closure Document:	5/15/2003 1:27:23 AM

LUST:

Facility ID:	9-501588
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	5/15/2003
Release ID:	900024
Project Officer:	Shunsheng Fu

Facility ID:	9-501588
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	5/15/2003
Release ID:	010004
Project Officer:	Shunsheng Fu

UST:

Facility ID:	9-501588
Owner:	VALLEY ISLE MOTORS, LTD.
Owner Address:	2026 MAIN St
Ownder City,St,Zip:	Wailuku, 96793 96793

VALLEY ISLE MOTORS LUST (Continued) **1000601460**

Tank ID: R-1
Date Installed: 4/22/1966
Tank Status: **Permanently Out of Use**
Date Closed: 5/10/1990
Tank Capacity: 1000
Substance: Used Oil

Tank ID: R-2
Date Installed: 4/22/1966
Tank Status: **Permanently Out of Use**
Date Closed: 5/10/1990
Tank Capacity: 1000
Substance: Used Oil

Tank ID: R-3
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: 5/10/1990
Tank Capacity: 1000
Substance: Used Oil

Tank ID: R-4
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: 1/1/1990
Tank Capacity: 1000
Substance: Gasoline

Tank ID: R-7
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: 10/1/2000
Tank Capacity: 300
Substance: Used Oil

Tank ID: R-8
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: 1/1/1990
Tank Capacity: 300
Substance: Kerosene

Tank ID: r-5
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: 1/1/1990
Tank Capacity: 1000
Substance: Gasoline

Tank ID: r-6

VALLEY ISLE MOTORS LUST (Continued) **1000601460**

Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: 1/1/1990
Tank Capacity: 1000
Substance: Gasoline

HI SPILLS:
Island: Maui
Supplemental Loc. Text: Not reported
Case Number: 19990804-1500
HID Number: Not reported
Facility Registry Id: 110005727516
Lead and Program: HEER EP&R
ER: No
Units: Valley Isle Motors LUST
Substances: Oil
Less Or Greater Than: Not reported
Numerical Quantity: Not reported
Units: Not reported
Activity Type: Response
Activity Lead: Bill Perry
Assignment End Date: Not reported
Result: 8
File Under: Valley Isle Motors

Island: Maui
Supplemental Loc. Text: Not reported
Case Number: 19990805-1343
HID Number: Not reported
Facility Registry Id: 110005727516
Lead and Program: HEER EP&R
ER: No
Units: Former Valley Isle Motors LUST
Substances: Not reported
Less Or Greater Than: Not reported
Numerical Quantity: Not reported
Units: Not reported
Activity Type: Response
Activity Lead: Terry Corpus
Assignment End Date: Not reported
Result: 8
File Under: Valley Isle Motors

B5 **SHELL OIL CO** **RCRA-CESQG 1004688855**
SSW **2086 MAIN ST** **FINDS HID982445421**
< 1/8 **WAILUKU, HI 96793**
0.038 mi.
199 ft. **Site 3 of 7 in cluster B**

Relative:
Higher

Actual:
298 ft.

RCRA-CESQG:
Date form received by agency: 08/15/1993
Facility name: SHELL OIL CO
Facility address: 2086 MAIN ST
WAILUKU, HI 96793
EPA ID: HID982445421
Mailing address: P O BOX 4848
ANAHEIM, CA 92803

SHELL OIL CO (Continued) **1004688855**

Contact: SONDRA BIENVENU
Contact address: 2086 MAIN ST
WAILUKU, HI 96793
Contact country: US
Contact telephone: (713) 241-2258
Contact email: Not reported
EPA Region: 09
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:
Owner/operator name: SHELL OIL CO
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Unknown
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No

SHELL OIL CO (Continued) **1004688855**

Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Verified to be non-commercial

Violation Status: No violations found

FINDS:

Registry ID: 110013766683

Environmental Interest/Information System

HI-UST (Hawaii - Underground Storage Tank). Hawaii Underground Storage Tank Program regulates underground storage tanks which store petroleum or hazardous substances and offers documents and data products for downloading.

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B6 **COURTHOUSE SHELL** **LUST U001236712**
SSW **2086 MAIN ST** **UST N/A**
< 1/8 **WAILUKU, HI 96793**
0.038 mi.
199 ft. **Site 4 of 7 in cluster B**

Relative:
Higher

Actual:
298 ft.

LUST:
Facility ID: 9-501008
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 8/31/1995
Release ID: 920149
Project Officer: Jose Ruiz

Facility ID: 9-501008
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 2/29/2000

COURTHOUSE SHELL (Continued) **U001236712**

Release ID: 000056
Project Officer: Jose Ruiz

UST:
Facility ID: 9-501008
Owner: EQUILON ENTERPRISES, LLC DBA SHELL OIL PRODUCTS US
Owner Address: 2555 13TH AVE, SW
Ownder City,St,Zip: Wailuku, 96793 96793

Tank ID: R-4
Date Installed: 6/30/1991
Tank Status: Permanently Out of Use
Date Closed: 9/1/1999
Tank Capacity: 550
Substance: Used Oil

Tank ID: R-5
Date Installed: 4/18/1962
Tank Status: Permanently Out of Use
Date Closed: 6/30/1991
Tank Capacity: 550
Substance: Used Oil

Tank ID: R-6
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 6/30/1991
Tank Capacity: 4000
Substance: Gasoline

Tank ID: R-7
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 6/30/1991
Tank Capacity: 4000
Substance: Gasoline

Tank ID: R-8
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 6/30/1991
Tank Capacity: 4000
Substance: Gasoline

Tank ID: r-87
Date Installed: 8/31/1979
Tank Status: Permanently Out of Use
Date Closed: 1/5/2004
Tank Capacity: 8000
Substance: Gasoline

COURTHOUSE SHELL (Continued) **U001236712**

Tank ID: r-89
Date Installed: 8/31/1979
Tank Status: Permanently Out of Use
Date Closed: 1/5/2004
Tank Capacity: 8000
Substance: Gasoline

Tank ID: r-92
Date Installed: 8/31/1979
Tank Status: Permanently Out of Use
Date Closed: 1/5/2004
Tank Capacity: 8000
Substance: Gasoline

B7 **UPTOWN SERVICE INC** **RCRA-CESQG 1004688826**
SSW **2085 MAIN ST** **FINDS HID981983539**
< 1/8 **WAILUKU, HI 96793**
0.038 mi.
200 ft. **Site 5 of 7 in cluster B**

Relative: Higher

Actual: 297 ft.

RCRA-CESQG:
Date form received by agency: 05/01/1987
Facility name: UPTOWN SERVICE INC
Facility address: 2085 MAIN ST
WAILUKU, HI 96793
EPA ID: HID981983539
Contact: ENVIRONMENTAL MANAGER
Contact address: 2085 MAIN ST
WAILUKU MAUI, HI 96793
Contact country: US
Contact telephone: (808) 244-0869
Contact email: Not reported
EPA Region: 09
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:
Owner/operator name: CHEVRON
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private

UPTOWN SERVICE INC (Continued) **1004688826**

Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Unknown
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Verified to be non-commercial

Violation Status: No violations found

FINDS:

Registry ID: 110006399922

Environmental Interest/Information System
HI-UST (Hawaii - Underground Storage Tank). Hawaii Underground Storage Tank Program regulates underground storage tanks which store petroleum or hazardous substances and offers documents and data products for downloading.

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B8 **ALVIN'S UPTOWN CHEVRON SERVICE STATION** **SHWS** **S107022542**
SSW **2085 WEST MAIN ST** **N/A**
< 1/8 **WAILUKU, HI 96793**
0.038 mi.
200 ft. **Site 6 of 7 in cluster B**

Relative:
Higher

Actual:
297 ft.

SHWS:

Organization:	Chevron Products Company
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Hydraulic Hoist and Sand-and-Grease Trap Removal
Hid Number:	Not reported
Facility Registry Identifier:	110006399922
Lead Agency:	Not reported
Program:	State
Project Manager:	Diane England
Hazard Priority:	NFA
Site Status:	NFA
Action:	Assessment
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	NFA - Type Undetermined
Date Of Closure Document:	4/28/2005 1:19:03 AM

B9 **UPTOWN SERVICE** **LUST** **1000344105**
SSW **2085 MAIN ST** **UST** **N/A**
< 1/8 **WAILUKU, HI 96793**
0.038 mi.
200 ft. **Site 7 of 7 in cluster B**

Relative:
Higher

Actual:
297 ft.

LUST:

Facility ID:	9-501128
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	1/4/2002
Release ID:	990175
Project Officer:	Richard Takaba

UST:

Facility ID:	9-501128
Owner:	ALVIN MAKIMOTO
Owner Address:	UPTOWN SERVICE 2085 MAIN ST
Owner City,St,Zip:	Wailuku, 96793 96793
Tank ID:	1
Date Installed:	7/19/1983
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Gasoline
Tank ID:	2
Date Installed:	7/18/1977
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	6000
Substance:	Gasoline
Tank ID:	3

UPTOWN SERVICE (Continued) **1000344105**

Date Installed: 7/19/1983
Tank Status: **Currently In Use**
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasoline

Tank ID: 4
Date Installed: 7/19/1983
Tank Status: **Currently In Use**
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasoline

Tank ID: R-5
Date Installed: 12/1/1982
Tank Status: **Permanently Out of Use**
Date Closed: 6/4/1997
Tank Capacity: 1000
Substance: Used Oil

C10 **IMA HANADA TRUST** **UST** **U001236722**
East **1960 MAIN ST** **N/A**
< 1/8 **WAILUKU, HI 96793**
0.079 mi.
415 ft. **Site 1 of 8 in cluster C**

Relative:
Lower

Actual:
262 ft.

UST:
Facility ID: 9-501268
Owner: IMA HANADA TRUST
Owner Address: 1960 MAIN ST
Ownder City,St,Zip: Wailuku, 96793 96793

Tank ID: P-1
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: Not reported
Tank Capacity: Not reported
Substance: Other

Tank ID: P-2
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: Not reported
Tank Capacity: Not reported
Substance: Other

Tank ID: P-3
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: Not reported
Tank Capacity: Not reported
Substance: Other

IMA HANADA TRUST (Continued) **U001236722**

Tank ID: P-4
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: Not reported
Tank Capacity: Not reported
Substance: Other

Tank ID: P-5
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: Not reported
Tank Capacity: Not reported
Substance: Other

C11 **MAUI AUTO DETAILING** **UST** **U001236825**
East **1955 MAIN ST** **N/A**
< 1/8 **WAILUKU, HI 96793**
0.085 mi.
449 ft. **Site 2 of 8 in cluster C**

Relative: **Lower**

Actual: **259 ft.**

UST:
Facility ID: 9-502203
Owner: MARGERET T. QUESNEL
Owner Address: 7413 W. 83RD ST
Owndер City,St,Zip: Wailuku, 96793 96793

Tank ID: R-001
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: Not reported
Tank Capacity: 400
Substance: Other

Tank ID: R-002
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: Not reported
Tank Capacity: 1000
Substance: Other

---

12 **HOAPILI HALE - MAUI JUDICIARY BUILDING** **LUST** **U003711776**
SSW **2145 MAIN ST.** **UST** **N/A**
< 1/8 **WAILUKU, HI 96793**
0.087 mi.
459 ft.

Relative: **Higher**

Actual: **315 ft.**

LUST:
Facility ID: 9-503536
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 2/25/2003
Release ID: 000001
Project Officer: Shunsheng Fu

HOAPILI HALE - MAUI JUDICIARY BUILDING (Continued) **U003711776**

UST:
Facility ID: 9-503536
Owner: STATE OF HAWAII - JUDICIARY
Owner Address: 2145 Main St.
Ownder City,St,Zip: Wailuku, 96793 96793

Tank ID: M-2
Date Installed: 11/1/1999
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 600
Substance: Diesel

Tank ID: M-2
Date Installed: 11/1/1999
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 600
Substance: Diesel

Tank ID: R-1
Date Installed: 1/1/1973
Tank Status: Permanently Out of Use
Date Closed: 9/15/1999
Tank Capacity: 600
Substance: Diesel

Tank ID: R-1
Date Installed: 1/1/1973
Tank Status: Permanently Out of Use
Date Closed: 9/15/1999
Tank Capacity: 600
Substance: Diesel

C13 **PACIFIC AMUSEMENT CO., LTD.** **UST** **U003541878**
East **1942 MAIN ST** **N/A**
< 1/8 **WAILUKU, HI 96793**
0.096 mi.
507 ft. **Site 3 of 8 in cluster C**

Relative:
Lower

Actual:
255 ft.

UST:
Facility ID: 9-500409
Owner: KURISU & FERGUS
Owner Address: 1000 BISHOP ST, SUITE 310
Ownder City,St,Zip: Wailuku, 96793 96793

Tank ID: R-1
Date Installed: 4/21/1941
Tank Status: Permanently Out of Use
Date Closed: 3/14/1990
Tank Capacity: 550
Substance: Gasoline

D14 **WAILUKU CENTRAL OFFICE** **FINDS 1006819684**
South **60 S CHURCH ST** **LUST N/A**
< 1/8 **WAILUKU, HI 96793**
0.097 mi.
514 ft. **Site 1 of 2 in cluster D**

Relative:
Lower

Actual:
290 ft.

FINDS:

Registry ID: 110013775334

Environmental Interest/Information System

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LUST:

Facility ID:	9-500552
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	10/17/1997
Release ID:	980003
Project Officer:	Renato Maniulit

D15 **WAILUKU CENTRAL OFFICE** **UST U003222200**
South **60 S CHURCH ST** **N/A**
< 1/8 **WAILUKU, HI 96793**
0.097 mi.
514 ft. **Site 2 of 2 in cluster D**

Relative:
Lower

Actual:
290 ft.

UST:

Facility ID:	9-500552
Owner:	Hawaiian Telcom
Owner Address:	P.O. Box 2200
Owndер City,St,Zip:	Wailuku, 96793 96793
Tank ID:	R-M-1
Date Installed:	5/8/1971
Tank Status:	**Permanently Out of Use**
Date Closed:	8/20/1996
Tank Capacity:	1000
Substance:	Diesel

WAILUKU CENTRAL OFFICE (Continued) **U003222200**

Tank ID: R-M-2
Date Installed: 9/3/1996
Tank Status: Permanently Out of Use
Date Closed: 10/21/1999
Tank Capacity: 1000
Substance: Diesel

Tank ID: m-1
Date Installed: 11/1/1999
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 2500
Substance: Diesel

C16 **DICKS FUMIGATION SERVICE INC** **RCRA-NonGen** **1000272237**
East **1940 MAIN ST** **FINDS** **HID077662575**
< 1/8 **WAILUKU, HI 96793**
0.098 mi.
518 ft. **Site 4 of 8 in cluster C**

Relative:
Lower

Actual:
255 ft.

RCRA-NonGen:
Date form received by agency: 12/10/1993
Facility name: DICKS FUMIGATION SERVICE INC
Facility address: 1940 MAIN ST
WAILUKU, HI 96793
EPA ID: HID077662575
Contact: ENVIRONMENTAL MANAGER
Contact address: 1940 MAIN ST
WAILUKU MAUI, HI 96793
Contact country: US
Contact telephone: (808) 244-7496
Contact email: Not reported
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: K TAKITANI ENTERPRISES
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

DICKS FUMIGATION SERVICE INC (Continued) **1000272237**

Handler Activities Summary:
- U.S. importer of hazardous waste: No
- Mixed waste (haz. and radioactive): Unknown
- Recycler of hazardous waste: No
- Transporter of hazardous waste: No
- Treater, storer or disposer of HW: No
- Underground injection activity: No
- On-site burner exemption: No
- Furnace exemption: No
- Used oil fuel burner: No
- Used oil processor: No
- User oil refiner: No
- Used oil fuel marketer to burner: No
- Used oil Specification marketer: No
- Used oil transfer facility: No
- Used oil transporter: No
- Off-site waste receiver: Verified to be non-commercial

Violation Status: No violations found

FINDS:

Registry ID: 110006399799

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

C17 **TAKITANI BUILDING** **UST** **U001236821**
East **1940 MAIN ST, STE 1355** **N/A**
< 1/8 **WAILUKU, HI 96793**
0.098 mi.
518 ft. **Site 5 of 8 in cluster C**

Relative:
Lower

Actual:
255 ft.

UST:
- Facility ID: 9-501913
- Owner: KURISU & FERGUS
- Owner Address: 1000 BISHOP ST, SUITE 310
- Owndер City,St,Zip: Wailuku, 96793 96793

- Tank ID: R-001
- Date Installed: Not reported
- **Tank Status: Permanently Out of Use**
- Date Closed: 3/14/1990
- Tank Capacity: Not reported
- Substance: Gasoline

C18 **CUTTER NISSAN** **RCRA-NonGen** **1000401589**
East **1935 MAIN ST** **FINDS** **HID981637986**
< 1/8 **WAILUKU, HI 96793**
0.105 mi.
552 ft. **Site 6 of 8 in cluster C**

Relative:
Lower

Actual:
253 ft.

RCRA-NonGen:

Date form received by agency:	01/16/1987
Facility name:	CUTTER NISSAN
Facility address:	1935 MAIN ST WAILUKU, HI 96793
EPA ID:	HID981637986
Mailing address:	MAIN ST WAILUKU, HI 96793
Contact:	ENVIRONMENTAL MANAGER
Contact address:	1935 MAIN ST WAILUKU, HI 96793
Contact country:	US
Contact telephone:	(808) 244-7433
Contact email:	Not reported
EPA Region:	09
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	CORPORATION
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No

CUTTER NISSAN (Continued) **1000401589**

Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Verified to be non-commercial

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 01/19/1996
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110005724298

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

C19 **LOKAHI PACIFIC** **FINDS** **1006842026**
East **1935 MAIN ST** **LUST** **N/A**
< 1/8 **WAILUKU, HI 96793**
0.105 mi.
552 ft. **Site 7 of 8 in cluster C**

Relative:
Lower

Actual:
253 ft.

FINDS:

Registry ID: 110014034160

Environmental Interest/Information System
HI-UST (Hawaii - Underground Storage Tank). Hawaii Underground Storage Tank Program regulates underground storage tanks which store petroleum or hazardous substances and offers documents and data products for downloading.

LUST:
Facility ID: 9-501603
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 2/29/2000
Release ID: 990141
Project Officer: Jose Ruiz

Facility ID: 9-501603
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 2/29/2000
Release ID: 980218
Project Officer: Jose Ruiz

C20 **LOKAHI PACIFIC** **UST** **U003402930**
East **1935 MAIN ST** **N/A**
< 1/8 **WAILUKU, HI 96793**
0.105 mi.
552 ft. **Site 8 of 8 in cluster C**

Relative:
Lower

Actual:
253 ft.

UST:

Facility ID:	9-501603
Owner:	LOKAHI PACIFIC
Owner Address:	840 ALUA ST, RM 203
Owndr City,St,Zip:	Wailuku, 96793 96793
Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	3/18/1995
Tank Capacity:	1000
Substance:	Gasoline
Tank ID:	R-2
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	3/18/1995
Tank Capacity:	500
Substance:	Gasoline
Tank ID:	R-3
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	3/18/1995
Tank Capacity:	1000
Substance:	Gasoline
Tank ID:	R-4
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	7/29/1998
Tank Capacity:	560
Substance:	Diesel

E21 **POLICE MOTOR POOL** **UST** **U001237439**
SW **HIGH & MAIN ST** **N/A**
1/8-1/4 **WAILUKU, HI 96793**
0.137 mi.
725 ft. **Site 1 of 2 in cluster E**

Relative:
Higher

Actual:
335 ft.

UST:

Facility ID:	9-501790
Owner:	COUNTY OF MAUI - POLICE DEPT
Owner Address:	55 MAHALANI ST
Owndr City,St,Zip:	Wailuku, 96793 96793
Tank ID:	R-1
Date Installed:	5/2/1946
Tank Status:	**Permanently Out of Use**
Date Closed:	2/27/1987
Tank Capacity:	2000

POLICE MOTOR POOL (Continued) **U001237439**

Substance: Gasoline

Tank ID: R-2
Date Installed: 5/2/1946
Tank Status: Permanently Out of Use
Date Closed: 2/27/1987
Tank Capacity: 2000
Substance: Gasoline

22
NE
1/8-1/4
0.144 mi.
759 ft.

DOWN TO EARTH NATURAL FOODSTORE **UST** **U003222268**
1910 VINEYARD ST **N/A**
WAILUKU, HI 96793

Relative:
Lower

Actual:
239 ft.

UST:
Facility ID: 9-502974
Owner: DOWN TO EARTH NATURAL FOODSTORE
Owner Address: 1910 VINEYARD ST
Owndер City,St,Zip: Wailuku, 96793 96793

Tank ID: R-1
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 7/24/1994
Tank Capacity: 2000
Substance: Gasoline

Tank ID: R-2
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 7/24/1994
Tank Capacity: 2000
Substance: Gasoline

E23
SW
1/8-1/4
0.157 mi.
831 ft.

VECTOR CONTROL BRANCH **CERC-NFRAP** **1000417822**
54 HIGH ST **RCRA-NonGen** **HID000628446**
WAILUKU, HI 96793 **FINDS**

Site 2 of 2 in cluster E

Relative:
Higher

Actual:
342 ft.

CERC-NFRAP:
Site ID: 0902833
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Non NPL Status: NFRAP

CERCLIS-NFRAP Site Contact Name(s):
Contact Title: Not reported
Contact Name: Carl Brickner
Contact Tel: (415) 972-3814

Contact Title: RPM
Contact Name: Eugenia Chow

VECTOR CONTROL BRANCH (Continued) **1000417822**

Contact Tel: (415) 972-3160

CERCLIS-NFRAP Site Alias Name(s):
Alias Name: VECTOR CONTROL BRANCH
Alias Address: 2611 KILIHAU ST
HONOLULU, HI 96819

CERCLIS-NFRAP Assessment History:
Action: DISCOVERY
Date Started: Not reported
Date Completed: 02/01/1980
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: 08/01/1984
Date Completed: 09/01/1984
Priority Level: NFRAP: No further Remedial Action planned

Action: ARCHIVE SITE
Date Started: Not reported
Date Completed: 09/01/1984
Priority Level: Not reported

RCRA-NonGen:
Date form received by agency: 09/24/1980
Facility name: VECTOR CONTROL BRANCH
Facility address: 54 HIGH ST
WAILUKU, HI 96793
EPA ID: HID000628446
Mailing address: 2611 KILIHAU STREET
HONOLULU, HI 96819
Contact: ENVIRONMENTAL MANAGER
Contact address: 54 HIGH ST
WAILUKU MAUI, HI 96793
Contact country: US
Contact telephone: (808) 548-8484
Contact email: Not reported
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999

VECTOR CONTROL BRANCH (Continued) **1000417822**

Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Unknown
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Verified to be non-commercial

Violation Status: No violations found

FINDS:

Registry ID: 110011913956

Environmental Interest/Information System

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region

VECTOR CONTROL BRANCH (Continued) **1000417822**

that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

24
SW
1/8-1/4
0.205 mi.
1080 ft.

DOH/DISTRICT OFFICE **UST** **U003222190**
54 HIGH ST, ROOM 301 **N/A**
WAILUKU, HI 96793

Relative:
Higher

Actual:
360 ft.

UST:

Facility ID:	9-500415
Owner:	STATE Of HAWAII - DAGS
Owner Address:	P.O. BOX 1030
Owndder City,St,Zip:	Wailuku, 96793 96793
Tank ID:	R-1
Date Installed:	1/21/1968
Tank Status:	**Permanently Out of Use**
Date Closed:	1/30/1989
Tank Capacity:	3000
Substance:	Gasoline
Tank ID:	R-2
Date Installed:	1/21/1968
Tank Status:	**Permanently Out of Use**
Date Closed:	1/30/1989
Tank Capacity:	300
Substance:	Used Oil
Tank ID:	r-87
Date Installed:	1/3/1989
Tank Status:	**Permanently out of Use**
Date Closed:	9/21/2007
Tank Capacity:	4000
Substance:	Gasoline

F25
NNW
1/8-1/4
0.206 mi.
1087 ft.

OGAWA SERVICE STATION **FINDS** **1006843156**
327 N MARKET ST **LUST** **N/A**
WAILUKU, HI 96793

Site 1 of 4 in cluster F

Relative:
Lower

Actual:
240 ft.

FINDS:

Registry ID: 110014046807

Environmental Interest/Information System

HI-UST (Hawaii - Underground Storage Tank). Hawaii Underground Storage Tank Program regulates underground storage tanks which store petroleum or hazardous substances and offers documents and data products for downloading.

OGAWA SERVICE STATION (Continued) **1006843156**

LUST:
Facility ID: 9-500398
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 8/19/1996
Release ID: 960046
Project Officer: Jose Ruiz

F26 **OGAWA SERVICE STATION** **UST** **U003222184**
NNW **327 N MARKET ST** **N/A**
1/8-1/4 **WAILUKU, HI 96793**
0.206 mi.
1087 ft. **Site 2 of 4 in cluster F**

Relative:
Lower

Actual:
240 ft.

UST:
Facility ID: 9-500398
Owner: MASASHI OGAWA
Owner Address: 327 N MARKET ST
Ownder City,St,Zip: Wailuku, 96793 96793

Tank ID: R-001
Date Installed: 7/27/1956
Tank Status: **Permanently Out of Use**
Date Closed: 3/4/1995
Tank Capacity: 1000
Substance: Gasoline

Tank ID: R-002
Date Installed: 7/27/1956
Tank Status: **Permanently Out of Use**
Date Closed: 3/4/1996
Tank Capacity: 1000
Substance: Gasoline

Tank ID: R-003
Date Installed: 7/27/1977
Tank Status: **Permanently Out of Use**
Date Closed: 3/4/1996
Tank Capacity: 5000
Substance: Gasoline

G27 **WAILUKU FIRE STATION** **FINDS** **1006842414**
East **21 KINIPOPO ST** **LUST** **N/A**
1/8-1/4 **WAILUKU, HI 96793**
0.210 mi.
1107 ft. **Site 1 of 4 in cluster G**

Relative:
Lower

Actual:
231 ft.

FINDS:

Registry ID: 110014038497

Environmental Interest/Information System
HI-UST (Hawaii - Underground Storage Tank). Hawaii Underground Storage Tank Program regulates underground storage tanks which store petroleum or hazardous substances and offers documents and data products for

WAILUKU FIRE STATION (Continued) **1006842414**

downloading.

LUST:
Facility ID: 9-502764
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 11/8/2001
Release ID: 930113
Project Officer: Jose Ruiz

G28 **WAILUKU FIRE STATION** **UST** **U003155131**
East **21 KINIPOPO ST** **N/A**
1/8-1/4 **WAILUKU, HI 96793**
0.210 mi.
1107 ft. **Site 2 of 4 in cluster G**

Relative:
Lower

Actual:
231 ft.

UST:
Facility ID: 9-502764
Owner: COUNTY OF MAUI - FIRE PREVENTION BUREAU
Owner Address: 21 KINIPOPO ST
Ownder City,St,Zip: Wailuku, 96793 96793

Tank ID: R-1
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: 6/1/1993
Tank Capacity: Not reported
Substance: Not Listed

G29 **JD PAINTING** **RCRA-SQG** **1006806719**
ESE **70 KANOA ST** **FINDS** **HIR000135111**
1/8-1/4 **WAILUKU, HI 96793**
0.231 mi.
1218 ft. **Site 3 of 4 in cluster G**

Relative:
Lower

Actual:
216 ft.

RCRA-SQG:
Date form received by agency: 03/10/2003
Facility name: JD PAINTING
Facility address: 70 KANOA ST
WAILUKU, HI 96793
EPA ID: HIR000135111
Mailing address: KANOA ST
WAILUKU, HI 96793
Contact: MERRICK S IKEDA
Contact address: KANOA ST
WAILUKU, HI 96793
Contact country: US
Contact telephone: (808) 242-9731
Contact email: Not reported
EPA Region: 09
Land type: Private
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of

JD PAINTING (Continued) **1006806719**

hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: DOMINGUEZ LLC NO. J AND NO. L
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 07/12/1999
Owner/Op end date: Not reported

Owner/operator name: JD PAINTING AND DECORATING INC
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 07/16/1999
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT

JD PAINTING (Continued) **1006806719**

NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: State Statute or Regulation
Date violation determined: 08/19/2004
Date achieved compliance: 03/22/2006
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: State Statute or Regulation
Date violation determined: 08/19/2004
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 03/02/2006
Evaluation: NOT A SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/22/2005
Evaluation: SIGNIFICANT NON-COMPLIER
Area of violation: State Statute or Regulation
Date achieved compliance: 03/22/2006

JD PAINTING (Continued) **1006806719**

Evaluation lead agency: State

Evaluation date: 08/19/2004
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: State Statute or Regulation
Date achieved compliance: 03/22/2006
Evaluation lead agency: State

Evaluation date: 08/19/2004
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: State Statute or Regulation
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110014374989

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

G30 **BLUE & WHITE BUS LINE, LTD.** **UST** **U001236745**
East **60 KANOA ST** **N/A**
1/8-1/4 **WAILUKU, HI 96793**
0.231 mi.
1218 ft. **Site 4 of 4 in cluster G**

Relative:
Lower

Actual:
217 ft.

UST:
Facility ID: 9-501358
Owner: BLUE & WHITE BUS LINE, LTD.
Owner Address: 140 KAULAWAHINE St
Owndr City,St,Zip: Wailuku, 96793 96793

Tank ID: 1
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: Not reported
Tank Capacity: Not reported
Substance: Gasoline

---

31 **MEADOW GOLD DAIRIES (MILK PLANT)** **FINDS** **1006818976**
SSE **260 S MARKET ST** **SHWS** **N/A**
1/8-1/4 **WAILUKU, HI 96793**
0.238 mi.
1255 ft.

Relative:
Lower

Actual:
257 ft.

FINDS:

Registry ID: 110013767352

Environmental Interest/Information System

MEADOW GOLD DAIRIES (MILK PLANT) (Continued) **1006818976**

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The HI-ECS (Hawaii Environmental Compliance Program) is the Hawaii state regulatory program relating to environmental compliance and hazardous materials that ensures that program areas and facilities are in compliance with environmental regulations

SHWS:

Organization:	State of Hawaii, Department of Defense, Hawaii Army National Guard
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Organizational Maintenance Shop #3 (OMS #3)
Hid Number:	Not reported
Facility Registry Identifier:	110013767352
Lead Agency:	Not reported
Program:	HIANG Site
Project Manager:	Unassigned
Hazard Priority:	Low
Site Status:	Ongoing
Action:	Assessment
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	Not reported
Date Of Closure Document:	Not reported

F32 **PAM FUJITA PROPERTY** **UST** **U003967142**
NNW **346 N. MARKET ST** **N/A**
1/8-1/4 **WAILUKU, HI 96793**
0.239 mi.
1263 ft. **Site 3 of 4 in cluster F**

Relative:
Lower

Actual:
234 ft.

UST:

Facility ID:	9-503775
Owner:	Pam Fujita property
Owner Address:	3370 Emekona Place
Owndder City,St,Zip:	Wailuku, 96793 96793
Tank ID:	r-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	4/16/2004
Tank Capacity:	550
Substance:	Gasoline
Tank ID:	r-2
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**

PAM FUJITA PROPERTY (Continued) **U003967142**

Date Closed: 4/16/2004
Tank Capacity: 550
Substance: Gasoline

H33 **GOMES CONST & REPAIRS INC** **RCRA-NonGen** **1000220754**
NNE **1790 MILL ST** **FINDS** **HID982027682**
1/8-1/4 **WAILUKU, HI 96793** **UST**
0.239 mi.
1264 ft. **Site 1 of 2 in cluster H**

Relative:
Lower

Actual:
210 ft.

RCRA-NonGen:
Date form received by agency: 08/24/1987
Facility name: GOMES CONST & REPAIRS INC
Facility address: 1790 MILL ST
WAILUKU, HI 96793
EPA ID: HID982027682
Contact: ENVIRONMENTAL MANAGER
Contact address: 1790 MILL ST
WAILUKU MILL, HI 96793
Contact country: US
Contact telephone: (808) 244-4083
Contact email: Not reported
EPA Region: 09
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: GOMES CONST JACK GOMES
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Unknown
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No

GOMES CONST & REPAIRS INC (Continued) **1000220754**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Verified to be non-commercial

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 01/17/1996
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 05/19/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110006399940

Environmental Interest/Information System
HI-UST (Hawaii - Underground Storage Tank). Hawaii Underground Storage Tank Program regulates underground storage tanks which store petroleum or hazardous substances and offers documents and data products for downloading.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

UST:
Facility ID: 9-500384
Owner: GOMES CONSTRUCTION & REPAIRS INC
Owner Address: 1790 MILL
Ownder City,St,Zip: Wailuku, 96793 96793

Tank ID: R-1
Date Installed: 4/10/1968
Tank Status: Permanently Out of Use
Date Closed: 2/1/1994
Tank Capacity: 550
Substance: Gasoline

H34 **1790 MILL STREET** **SHWS** **S106815273**
NNE **1790 MILL ST** **SPILLS** **N/A**
1/8-1/4 **WAILUKU, HI 96793**
0.239 mi.
1264 ft. **Site 2 of 2 in cluster H**

Relative:
Lower

Actual:
210 ft.

SHWS:

Organization:	1790 Mill Street
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Gomes Construction - 1790 Mill Street, Wailuku, Maui
Hid Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	Not reported
Program:	State
Project Manager:	Clarence Callahan
Hazard Priority:	NFA
Site Status:	NFA
Action:	Assessment
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	NFA - Type Undetermined
Date Of Closure Document:	8/24/2005 1:18:44 AM

HI SPILLS:

Island:	Maui
Supplemental Loc. Text:	Not reported
Case Number:	20041011-1135
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	No
Units:	1790 Mill Street Soil Disposal
Substances:	Waste Oil
Less Or Greater Than:	>
Numerical Quantity:	25
Units:	Gallons
Activity Type:	Response
Activity Lead:	Paul Chong
Assignment End Date:	12/2/2004
Result:	8
File Under:	1790 Mill Street

F35 **GEORGE S./ JEAN FUNAI** **UST** **U003222272**
NNW **350 N MARKET ST** **N/A**
1/8-1/4 **WAILUKU, HI 96793**
0.247 mi.
1303 ft. **Site 4 of 4 in cluster F**

Relative:
Lower

Actual:
232 ft.

UST:

Facility ID:	9-503152
Owner:	GEORGE S./ JEAN FUNAI
Owner Address:	c/o Bryan Funai 900 Eha St. Suite 108
Owndер City,St,Zip:	Wailuku, 96793 96793
Tank ID:	R-1
Date Installed:	1/1/1953
Tank Status:	**Permanently Out of Use**
Date Closed:	2/8/1996
Tank Capacity:	1000

GEORGE S./ JEAN FUNAI (Continued) **U003222272**

Substance: Gasoline

Tank ID: R-2
Date Installed: 1/1/1953
Tank Status: **Permanently Out of Use**
Date Closed: 1/1/1986
Tank Capacity: 1000
Substance: Gasoline

36
SSW
1/4-1/2
0.308 mi.
1624 ft.

COUNTY OF MAUI - CIVIL DEFENSE **LUST** **U003711775**
200 S HIGH ST **UST** **N/A**
WAILUKU, HI 96793

Relative:
Higher

Actual:
323 ft.

LUST:
Facility ID: 9-503420
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 10/15/2001
Release ID: 010053
Project Officer: Shunsheng Fu

UST:
Facility ID: 9-503420
Owner: Civil Defense Agency - County of Maui
Owner Address: 200 S. High St.
Owndер City,St,Zip: Wailuku, 96793 96793

Tank ID: M-2
Date Installed: 11/1/1998
Tank Status: **Currently In Use**
Date Closed: Not reported
Tank Capacity: 2000
Substance: Diesel

Tank ID: M-2
Date Installed: 11/1/1998
Tank Status: **Currently In Use**
Date Closed: Not reported
Tank Capacity: 2000
Substance: Diesel

Tank ID: R-M-1
Date Installed: 6/1/1973
Tank Status: **Permanently Out of Use**
Date Closed: 11/13/1998
Tank Capacity: 1700
Substance: Diesel

Tank ID: R-M-1
Date Installed: 6/1/1973
Tank Status: **Permanently Out of Use**
Date Closed: 11/13/1998

COUNTY OF MAUI - CIVIL DEFENSE (Continued) **U003711775**

Tank Capacity: 1700
Substance: Diesel

I37 **KUKUI GROVE HOLDER** **CERC-NFRAP** **1000245007**
ENE **46 TINGS DR** **RCRA-NonGen** **HID077670842**
1/4-1/2 **WAILUKU, HI 96793** **FINDS**
0.416 mi.
2199 ft. **Site 1 of 2 in cluster I**

Relative:
Lower

Actual:
243 ft.

CERC-NFRAP:
Site ID: 0902848
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Non NPL Status: NFRAP

CERCLIS-NFRAP Site Contact Name(s):
Contact Title: Not reported
Contact Name: Carl Brickner
Contact Tel: (415) 972-3814

Contact Title: RPM
Contact Name: Eugenia Chow
Contact Tel: (415) 972-3160

CERCLIS-NFRAP Assessment History:
Action: DISCOVERY
Date Started: Not reported
Date Completed: 07/01/1980
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: 08/01/1984
Date Completed: 09/01/1984
Priority Level: NFRAP: No further Remedial Action planned

Action: ARCHIVE SITE
Date Started: Not reported
Date Completed: 09/01/1984
Priority Level: Not reported

RCRA-NonGen:
Date form received by agency: 07/30/1980
Facility name: MAUI SANDTORCHES
Facility address: 46 TINGS DR
WAILUKU, HI 96793
EPA ID: HID077670842
Mailing address: 46 TINGS DRIVE
WAILUKU MAUI, HI 96793
Contact: ENVIRONMENTAL MANAGER
Contact address: 46 TINGS DR
WAILUKU, HI 96793
Contact country: US
Contact telephone: (808) 244-7541
Contact email: Not reported
EPA Region: 09
Classification: Non-Generator

KUKUI GROVE HOLDER (Continued) **1000245007**

Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: JACQUELINE CARLIN
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Unknown
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Verified to be non-commercial

Violation Status: No violations found

FINDS:

Registry ID: 110005723217

Environmental Interest/Information System
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KUKUI GROVE HOLDER (Continued) **1000245007**

properties, sites and targeted assessments.

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I38 **MAUI SANDTORCHES** **SHWS** **S106819015**
ENE **46 TING DR** **N/A**
1/4-1/2 **WAILUKU, HI 96793**
0.417 mi.
2203 ft. **Site 2 of 2 in cluster I**

Relative: SHWS:
Lower

Organization:	Jacqueline Carlin (Former Operator)
Supplemental Location Text:	Not reported
Actual: Island:	Maui
243 ft. Environmental Interest:	Maui Sandtorches
Hid Number:	HID077670842
Facility Registry Identifier:	110005723217
Lead Agency:	Not reported
Program:	State
Project Manager:	Unassigned
Hazard Priority:	NFA
Site Status:	NFA
Action:	Response
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	NFA - Type Undetermined
Date Of Closure Document:	4/15/1996 1:19:28 AM

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39 **REX TIRE & SUPPLY, DIESEL** **SHWS** **S106820230**
East **1728 KAAHUMANU AVE** **N/A**
1/4-1/2 **KAHULUI, HI 96732**
0.454 mi.
2395 ft.

Relative: SHWS:
Lower

Organization:	Rex Tire & Supply
Supplemental Location Text:	Not reported
Actual: Island:	Maui
212 ft. Environmental Interest:	Rex Tire Diesel
Hid Number:	Not reported
Facility Registry Identifier:	110013778386
Lead Agency:	HEER
Program:	State
Project Manager:	Eric Sadoyama
Hazard Priority:	NFA
Site Status:	NFA

REX TIRE & SUPPLY, DIESEL (Continued) **S106820230**

Action:	Assessment
Potential Hazards And Controls:	No Hazard
Closure Document Title:	NFA Letter - Unrestricted Residential Use
Date Of Closure Document:	3/14/2006 1:15:13 AM

40
NNE
1/4-1/2
0.454 mi.
2398 ft.

MAUI DISPOSAL **SHWS** **S110061652**
250 IMI KALA ST **N/A**
WAILUKU, HI

Relative:
Lower

Actual:
164 ft.

SHWS:

Organization:	United States Postal Service
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Maui Disposal
Hid Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	Site Discovery
Project Manager:	Cal Miyahara
Hazard Priority:	Medium
Site Status:	Ongoing
Action:	Response
Potential Hazards And Controls:	Hazard Present
Closure Document Title:	Not reported
Date Of Closure Document:	Not reported

41
ENE
1/2-1
0.555 mi.
2929 ft.

MECO TRANSFORMER 3358 **SHWS** **S110061657**
1540 E MAIN ST **N/A**
WAILUKU, HI

Relative:
Lower

Actual:
185 ft.

SHWS:

Organization:	Maui Electric Co., Inc.
Supplemental Location Text:	Hale Makua
Island:	Maui
Environmental Interest:	MECO Transformer 3358 Self Implementing PCB Cleanup
Hid Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	EPA TSCA
Program:	TSCA
Project Manager:	Richard Palmer
Hazard Priority:	Medium
Site Status:	Inactive
Action:	Response
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	Not reported
Date Of Closure Document:	Not reported

42
SSE
1/2-1
0.865 mi.
4566 ft.

WAIMALUHIA MAUI METH / DRUG LAB ACT 170
115 WAIMALUHIA LN
WAILUKU, HI

SHWS **S108859869**
SPILLS **N/A**
CDL

Relative:
Lower

Actual:
243 ft.

SHWS:

Organization:	County of Maui, Police Department
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Waimaluhia Maui Meth / Drug Lab Act 170
Hid Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	Not reported
Program:	State
Project Manager:	Anna Fernandez
Hazard Priority:	NFA
Site Status:	NFA
Action:	Assessment
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	NFA - Type Undetermined
Date Of Closure Document:	5/8/2007 1:20:12 AM

HI SPILLS:

Island:	Maui
Supplemental Loc. Text:	Not reported
Case Number:	20070305-0950
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	Waimaluhia Maui Meth
Substances:	Acetone, Red Phosphorous, Methyl Ethyl Ketone, propane, alkalai, meth oil
Less Or Greater Than:	Not reported
Numerical Quantity:	0.5
Units:	Gallons
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	3/12/2007
Result:	8
File Under:	County of Maui, Police Department

Island:	Maui
Supplemental Loc. Text:	Not reported
Case Number:	20070305-0950
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	Waimaluhia Maui Meth
Substances:	Acetone, Red Phosphorous, Methyl Ethyl Ketone, propane, alkalai, meth oil
Less Or Greater Than:	Not reported
Numerical Quantity:	0.5
Units:	Gallons
Activity Type:	Response
Activity Lead:	Anna Fernandez
Assignment End Date:	4/1/2007
Result:	8
File Under:	County of Maui, Police Department

WAIMALUHIA MAUI METH / DRUG LAB ACT 170 (Continued) **S108859869**

CDL:
Date Notified: 7/5/2007
Cleanup Status: Completed / No Further Action Needed / Remediated

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43
East
1/2-1
0.985 mi.
5201 ft.

Relative:
Lower

Actual:
80 ft.

WAIALE ASH PILE **FINDS** **1006819707**
MAHALANI ST **SHWS** **N/A**
WAILUKU, HI 96793

FINDS:

Registry ID: 110013775575

Environmental Interest/Information System

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SHWS:

Organization:	County of Maui, Department of Public Works and Waste Management, Solid Waste Division
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Waiale Ash Pile
Hid Number:	Not reported
Facility Registry Identifier:	110013775575
Lead Agency:	HEER
Program:	State
Project Manager:	Anna Fernandez
Hazard Priority:	Low
Site Status:	Ongoing
Action:	Response
Potential Hazards And Controls:	Hazard Present
Closure Document Title:	Not reported
Date Of Closure Document:	Not reported

Count: 35 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
KAHULUI	1003879111	WAIKAPU DUMP-MAUI COUNTY DUMP	CENTRAL MAUI	96732	CERC-NFRAP
KAHULUI	S106820852	VECTOR CONTROL BRANCH, MAUI	54 HIGH ST, 641 MUA ST, KAHALE	96793	SHWS
KAHULUI	1006820577	HOBRON AVE AREA (KAHULUI)	HOBRON AVE	96732	FINDS, SHWS
KAHULUI	S106817098	FONG CONSTRUCTION	HUKILIKI ST	96732	SHWS
KAHULUI	S104534290	MAUI PALMS HOTEL UST	150 KAAHUMANU AVE	96732	SHWS
KAHULUI	1006818999	MCC-AUTOMOTIVE TECHNOLOGY BUILDING	310 E KAAHUMANU AVE	96732	FINDS, SHWS, SPILLS
KAHULUI	1006820878	HISANO PROPERTY, VACANT LOT	KEOLANI ST	96732	FINDS
KAHULUI	1006841969	DAVID PICO CESSPOOL DIGGING	OLD HALEAKALA HWY	96732	FINDS, LUST
KAHULUI	U001236769	DAVID PICO CESSPOOL DIGGING	OLD HALEAKALA HWY	96732	UST
KAHULUI	1006820345	A&B DUMP SITE	W PAPA AVE	96732	FINDS, SHWS
KAHULUI	S106819004	MAUI MEAT COMPANY FACILITY (FORMER	601 2ND ST	96732	SHWS, SPILLS
KAHULUI	1006819647	WAIKAPU DUMP-MAUI COUNTY DUMP	WAIKAPU RD	96732	FINDS, SHWS
KANUNAKAKAI	S108859913	KALAMAULA LANDFILL	HOAWA RD	96793	SHWS, ENG CONTROLS
PAIA	S106819555	PAIA SUGAR MILL	BALDWIN AVE	96732	SHWS
WAIKAPU	S109096050	MARK MILL34	1487 / 1488 HONOAPIILANI HWY	96793	LUST
WAIKAPU	U004120867	MARK MILL34	1487 / 1488 HONOAPIILANI HWY	96793	UST
WAIKAPU	1008194955	VACANT LAND TMK NO (2) 3-8-7:101	KUIHELANI HWY NEAR WAIKO RD	96793	RCRA-NonGen
WAILUKU	96515847	73 & 74 DRAINAGE RESOVIOR WAILUKU,	73 & 74 DRAINAGE RESOVIOR WAIL	96793	ERNS
WAILUKU	1008038509	DWS WAILUKU	DWS WAILUKU	96793	FINDS
WAILUKU	1010026315	KEHALANI MAUKA LARGE LOT	HELE ST MOKAPU RD, KUMUHAU ST	96793	FINDS
WAILUKU	1000244831	MAUI DISTRICT OFFICE DOE	54 HIGH ST	96793	RCRA-NonGen
WAILUKU	1012132274	WAILUKU IRRIGATION RESERVOIR #74	HONOAPIILANI HWY	96793	FINDS
WAILUKU	S107025671	WAILUKU IRRIGATION RESERVOIR #74	HONOAPIILANI HWY	96793	SPILLS
WAILUKU	1006842014	HAWAIIAN CEMENT - WAIKAPU QUARRY	HONOAPIILANI HWY	96793	FINDS, LUST
WAILUKU	1008173022	WAILUKU PROJECT DISTRICT	55-510 KAMEHAMEHA HWY MANILOA	96793	FINDS
WAILUKU	1009332782	WAILUKU AG DIVERSION OF IAO STREAM	KEPANIWAI PARK	96793	FINDS
WAILUKU	1007092114	MAALAEA GENERATING STATION	NORTH KIHEI RD	96793	RCRA-LQG
WAILUKU	1006818252	WAILUKU SHAFT 33 PUMP STATION	WEST MAIN STREET	96793	FINDS
WAILUKU	1012132275	WAILUKU SWIMMING POOL	200 MARKET ST	96793	FINDS
WAILUKU	1006819733	WAILUKU (OLD) POOL	200 MARKET ST	96793	FINDS
WAILUKU	1006819734	NEW WAILUKU POOL	200 PAKAHI ST	96793	FINDS
WAILUKU	1008002855	WAILUKU COUNTRY ESTATES	1350 SAND ISLAND PARKWAY	96793	FINDS
WAILUKU	1009403395	KEHALANI MAUKA LARGE LOT	THE MAJORITY OF THE PROJECT	96793	FINDS
WAILUKU	S108008644	Y HATA- MAUI	200 WAIEHU BEACH RD	96793	SHWS
WAILUKU	1006874149	WAR MEMORIAL GYM PARKING LOT	WAILUKU RD	96793	FINDS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 07/02/2010
Date Data Arrived at EDR: 07/14/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 82

Source: EPA
Telephone: N/A
Last EDR Contact: 10/13/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 07/02/2010
Date Data Arrived at EDR: 07/14/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 82

Source: EPA
Telephone: N/A
Last EDR Contact: 10/13/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 07/02/2010
Date Data Arrived at EDR: 07/14/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 82

Source: EPA
Telephone: N/A
Last EDR Contact: 10/13/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/29/2010
Date Data Arrived at EDR: 02/09/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 62

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 12/30/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPAa??s Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 06/23/2009
Date Data Arrived at EDR: 01/15/2010
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 01/11/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 06/23/2009
Date Data Arrived at EDR: 09/02/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 19

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 12/01/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 05/25/2010
Date Data Arrived at EDR: 06/02/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 124

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 12/20/2009
Date Data Arrived at EDR: 01/20/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 12/20/2009
Date Data Arrived at EDR: 01/20/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 07/09/2010
Date Data Arrived at EDR: 07/09/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 39

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 01/07/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Sites List

Facilities, sites or areas in which the Office of Hazard Evaluation and Emergency Response has an interest, has investigated or may investigate under HRS 128D (includes CERCLIS sites).

Date of Government Version: 12/01/2009
Date Data Arrived at EDR: 12/07/2009
Date Made Active in Reports: 01/08/2010
Number of Days to Update: 32

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Semi-Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Permitted Landfills in the State of Hawaii

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 04/01/2010
Date Data Arrived at EDR: 04/08/2010
Date Made Active in Reports: 05/19/2010
Number of Days to Update: 41

Source: Department of Health
Telephone: 808-586-4245
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 09/20/2010
Date Data Arrived at EDR: 09/20/2010
Date Made Active in Reports: 10/22/2010
Number of Days to Update: 32
Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Semi-Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 08/05/2010
Date Data Arrived at EDR: 08/06/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 59
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 08/30/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/24/2010
Date Data Arrived at EDR: 05/27/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 74
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 11/04/2009
Date Data Arrived at EDR: 05/04/2010
Date Made Active in Reports: 07/07/2010
Number of Days to Update: 64
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 12/03/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 08/27/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/02/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 08/05/2010
Date Data Arrived at EDR: 08/06/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 59

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 09/20/2010
Date Data Arrived at EDR: 09/20/2010
Date Made Active in Reports: 10/07/2010
Number of Days to Update: 17

Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Semi-Annually

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 08/30/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/24/2010
Date Data Arrived at EDR: 05/27/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 74

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/02/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/01/2008
Date Data Arrived at EDR: 12/30/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 76

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 08/03/2010
Date Data Arrived at EDR: 08/04/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 61

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 02/11/2010
Date Data Arrived at EDR: 02/11/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 60

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 08/05/2010
Date Data Arrived at EDR: 08/06/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 59

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 08/27/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Semi-Annually

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/29/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Control Sites
A listing of sites with engineering controls in place.

Date of Government Version: 12/01/2009
Date Data Arrived at EDR: 12/07/2009
Date Made Active in Reports: 01/08/2010
Number of Days to Update: 32
Source: Department of Health
Telephone: 404-586-4249
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Varies

INST CONTROL: Sites with Institutional Controls
Voluntary Remediation Program and Brownfields sites with institutional controls in place.

Date of Government Version: 12/01/2009
Date Data Arrived at EDR: 12/07/2009
Date Made Active in Reports: 01/08/2010
Number of Days to Update: 32
Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 01/05/2010
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

VCP: Voluntary Response Program Sites
Sites participating in the Voluntary Response Program. The purpose of the VRP is to streamline the cleanup process in a way that will encourage prospective developers, lenders, and purchasers to voluntarily cleanup properties.

Date of Government Version: 12/01/2009
Date Data Arrived at EDR: 12/07/2009
Date Made Active in Reports: 01/08/2010
Number of Days to Update: 32
Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Sites
With certain legal exclusions and additions, the term ‘brownfield site’ means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

Date of Government Version: 12/01/2009
Date Data Arrived at EDR: 12/07/2009
Date Made Active in Reports: 01/08/2010
Number of Days to Update: 32
Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 06/24/2010
Date Data Arrived at EDR: 06/25/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 53

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/30/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 12/22/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: No Update Planned

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/07/2010
Date Data Arrived at EDR: 06/18/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 60

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 12/08/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Quarterly

CDL: Clandestine Drug Lab Listing
A listing of clandestine drug lab site locations.

Date of Government Version: 08/04/2010
Date Data Arrived at EDR: 09/10/2010
Date Made Active in Reports: 10/22/2010
Number of Days to Update: 42

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 01/04/2011
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 05/06/2010
Date Data Arrived at EDR: 05/11/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

LUCIS: Land Use Control Information System
LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 04/06/2010
Date Data Arrived at EDR: 04/07/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 50

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 01/05/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Annually

SPILLS: Release Notifications

Releases of hazardous substances to the environment reported to the Office of Hazard Evaluation and Emergency Response since 1988.

Date of Government Version: 03/10/2010
Date Data Arrived at EDR: 03/16/2010
Date Made Active in Reports: 04/13/2010
Number of Days to Update: 28

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Varies

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/12/2010
Date Data Arrived at EDR: 02/09/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 62

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 08/12/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 112

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 12/13/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 07/01/2010
Date Data Arrived at EDR: 08/11/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 113

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 01/03/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 06/01/2010
Date Data Arrived at EDR: 06/16/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 62

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 12/14/2009
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 5

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/04/2010
Date Data Arrived at EDR: 09/09/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/09/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 01/13/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 36

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 12/17/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/29/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 01/06/2010
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 35
Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 04/24/2010
Date Data Arrived at EDR: 04/29/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 18
Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 12/23/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 02/01/2010
Date Data Arrived at EDR: 04/22/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 109

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 11/10/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/18/2010
Date Data Arrived at EDR: 04/06/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 51

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 12/13/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/13/2010
Date Data Arrived at EDR: 07/14/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/14/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/14/2010
Date Data Arrived at EDR: 04/16/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 41

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 02/25/2010
Date Made Active in Reports: 05/12/2010
Number of Days to Update: 76

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 11/30/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Biennially

UIC: Underground Injection Wells Listing
A listing of underground injection well locations.

Date of Government Version: 09/21/2010
Date Data Arrived at EDR: 10/01/2010
Date Made Active in Reports: 10/22/2010
Number of Days to Update: 21

Source: Department of Health
Telephone: 808-586-4258
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Varies

DRYCLEANERS: Permitted Drycleaner Facility Listing
A listing of permitted drycleaner facilities in the state.

Date of Government Version: 06/30/2010
Date Data Arrived at EDR: 07/13/2010
Date Made Active in Reports: 08/04/2010
Number of Days to Update: 22

Source: Department of Health
Telephone: 808-586-4200
Last EDR Contact: 01/10/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Varies

AIRS: List of Permitted Facilities
A listing of permitted facilities in the state.

Date of Government Version: 09/30/2010
Date Data Arrived at EDR: 10/20/2010
Date Made Active in Reports: 10/25/2010
Number of Days to Update: 5

Source: Department of Health
Telephone: 808-586-4200
Last EDR Contact: 01/10/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing
The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 12/13/2010
Next Scheduled EDR Contact: 02/07/2011
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 02/18/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 100

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/10/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 11/09/2009
Date Data Arrived at EDR: 12/18/2009
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 54
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 12/21/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339
Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: N/A

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A
Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2009 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

WAILUKU MUNICIPAL PARKING LOT
2061 W. VINEYARD STREET
WAILUKU, HI 96793

TARGET PROPERTY COORDINATES

Latitude (North):	20.88860 - 20° 53' 19.0''
Longitude (West):	156.5027 - 156° 30' 9.7''
Universal Tranverse Mercator:	Zone 4
UTM X (Meters):	759799.3
UTM Y (Meters):	2311702.0
Elevation:	293 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	20156-H5 NAPILI, HI
Most Recent Revision:	Not reported
East Map:	20156-H4 KAHAKULOA, HI
Most Recent Revision:	Not reported
Southeast Map:	20156-G4 WAILUKU, HI
Most Recent Revision:	Not reported
South Map:	20156-G5 LAHAINA, HI
Most Recent Revision:	Not reported

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

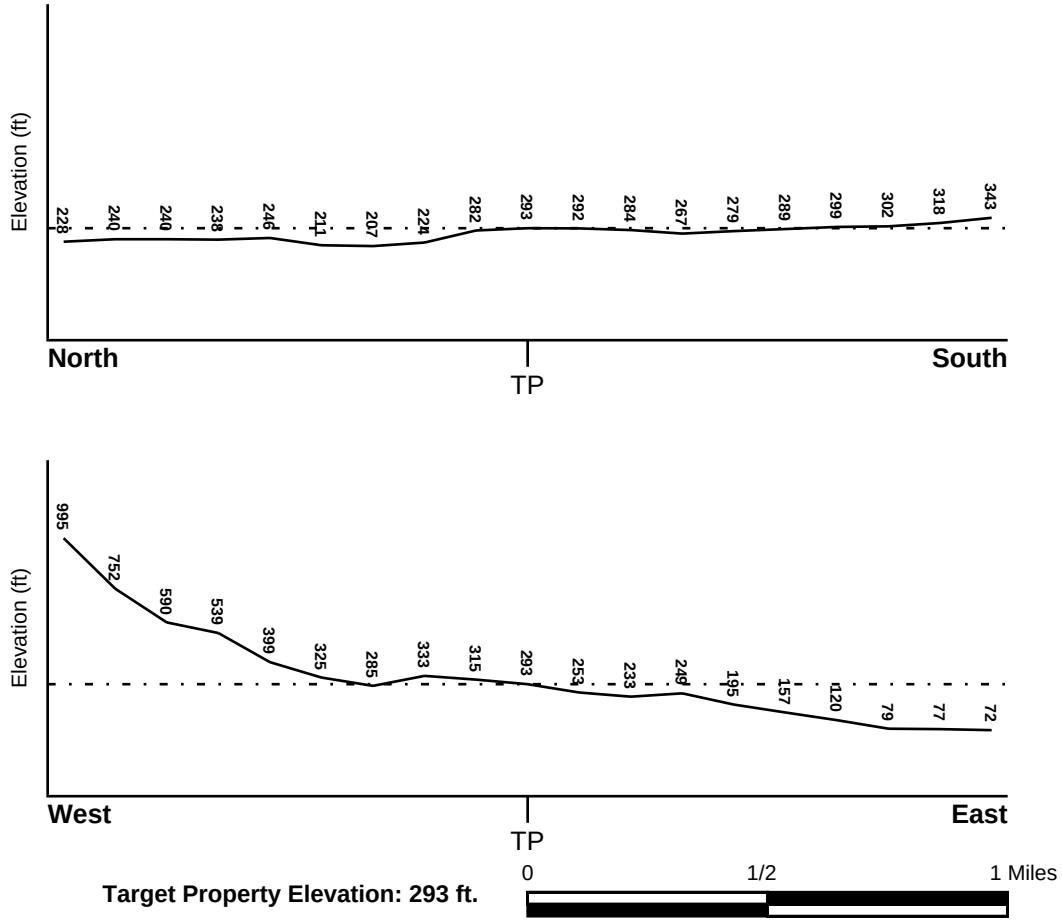
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General ENE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
MAUI, HI	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 1500030190D - FEMA Q3 Flood data

Additional Panels in search area: 1500030170B - FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

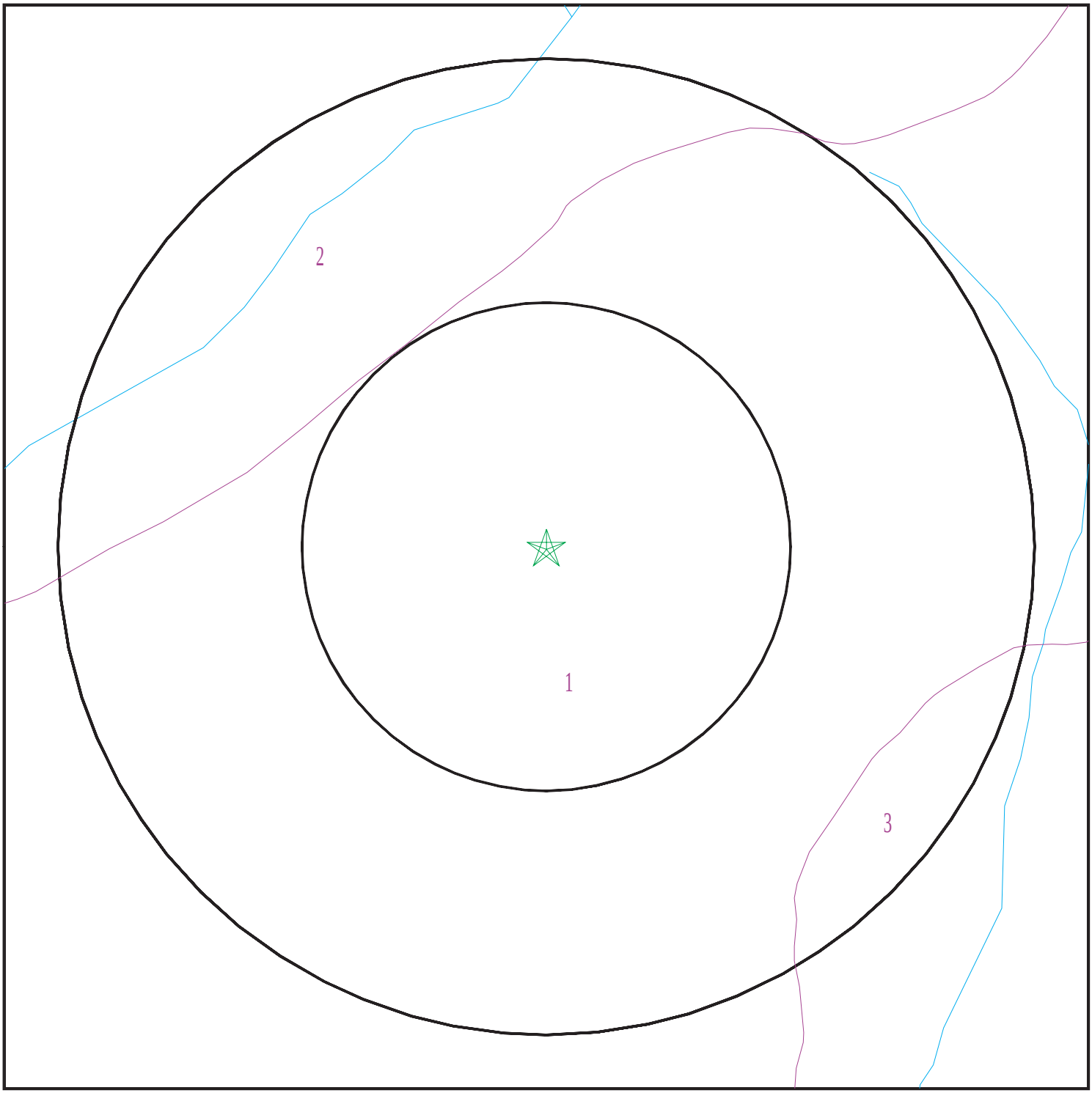
Era: -
System: -
Series: -
Code: N/A *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: -

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 2964913.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Wailuku Municipal Parking Lot	CLIENT:	EKNA Services, Inc
ADDRESS:	2061 W. Vineyard Street Wailuku HI 96793	CONTACT:	Charles Brown
		INQUIRY #:	2964913.2s
LAT/LONG:	20.8886 / 156.5027	DATE:	January 11, 2011 6:29 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Wailuku

Soil Surface Texture: silty clay

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	MH-K (proposed)	Max: 4.23 Min: 0.42	Max: 6.5 Min: 5.6
2	11 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	MH-K (proposed)	Max: 4.23 Min: 0.42	Max: 6.5 Min: 5.6

Soil Map ID: 2

Soil Component Name: Iao

Soil Surface Texture: cobbly silty clay

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	cobbly silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	MH-K (proposed)	Max: 14.11 Min: 1.41	Max: 7.3 Min: 6.6
2	14 inches	48 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	MH-K (proposed)	Max: 14.11 Min: 1.41	Max: 7.3 Min: 6.6
3	48 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	MH-K (proposed)	Max: 14.11 Min: 1.41	Max: 7.3 Min: 6.6

Soil Map ID: 3

Soil Component Name: Iao

Soil Surface Texture: clay

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	MH-K (proposed)	Max: 14.11 Min: 1.41	Max: 7.3 Min: 6.6
2	14 inches	48 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	MH-K (proposed)	Max: 14.11 Min: 1.41	Max: 7.3 Min: 6.6
3	48 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	MH-K (proposed)	Max: 14.11 Min: 1.41	Max: 7.3 Min: 6.6

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

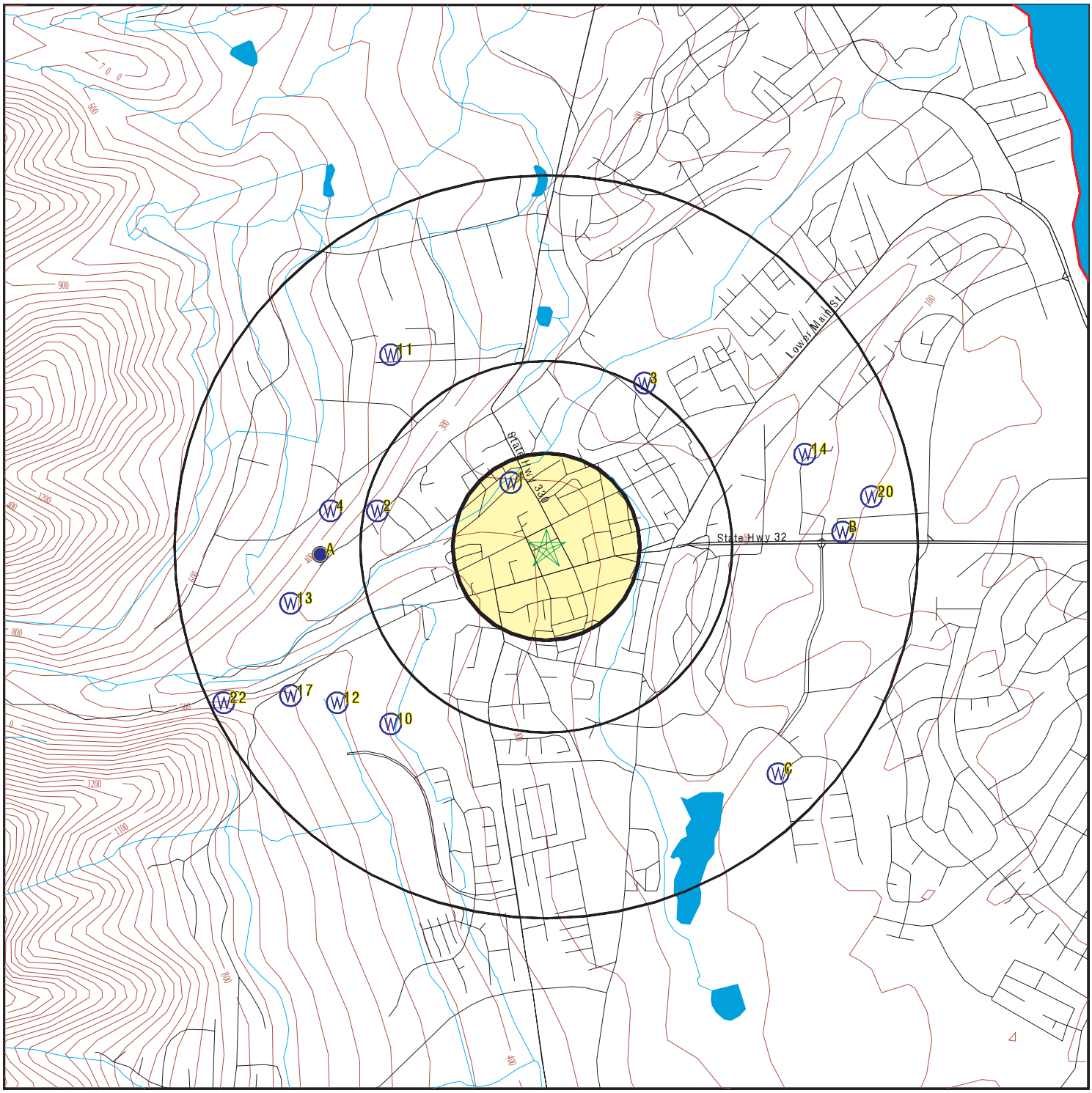
MAP ID	WELL ID	LOCATION FROM TP
A7	HI0000212	1/2 - 1 Mile West

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	HI5000000001417	1/8 - 1/4 Mile NNW
2	HI5000000001415	1/4 - 1/2 Mile WNW
3	HI5000000001429	1/2 - 1 Mile NNE
4	HI5000000001414	1/2 - 1 Mile West
A5	HI5000000001403	1/2 - 1 Mile West
A6	HI5000000001401	1/2 - 1 Mile West
A8	HI5000000001397	1/2 - 1 Mile West
A9	HI5000000001398	1/2 - 1 Mile West
10	HI5000000001329	1/2 - 1 Mile SW
11	HI5000000001430	1/2 - 1 Mile NW
12	HI5000000001341	1/2 - 1 Mile SW
13	HI5000000001389	1/2 - 1 Mile WSW
14	HI5000000001422	1/2 - 1 Mile ENE
B15	HI5000000001406	1/2 - 1 Mile East
B16	HI5000000001407	1/2 - 1 Mile East
17	HI5000000001343	1/2 - 1 Mile WSW
C18	HI5000000001310	1/2 - 1 Mile SE
B19	HI5000000001408	1/2 - 1 Mile East
20	HI5000000001416	1/2 - 1 Mile East
C21	HI5000000001293	1/2 - 1 Mile SE
22	HI5000000001340	1/2 - 1 Mile WSW

PHYSICAL SETTING SOURCE MAP - 2964913.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

SITE NAME: Wailuku Municipal Parking Lot	CLIENT: EKNA Services, Inc
ADDRESS: 2061 W. Vineyard Street Wailuku HI 96793	CONTACT: Charles Brown INQUIRY #: 2964913.2s
LAT/LONG: 20.8886 / 156.5027	DATE: January 11, 2011 6:29 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
NNW
1/8 - 1/4 Mile
Lower

HI WELLS **HI5000000001417**

Wid:	6-5330-002	Island:	6
Well no:	5330-02	Well name:	Iao Tunnel
Old name:	Not Reported	Yr drilled:	1900
Driller:	Not Reported	Quad map:	05
Longitude2:	1563025	Latitude27:	205340
Longitude8:	1563015	Latitude83:	205328
Lat83d:	20	Lat83m:	53
Lat83s:	28	Lon83d:	156
Lon83m:	30	Lon83s:	15
Lat83dd:	20.89111		
Lon83dd:	-156.50417		
Long83dd:	-156.50417		
Lat83dd 1:	20.89111		
Gps:	0	Utm:	1
Owner user:	HC & S Co	Old number:	10-TU
Well type:	Tunnelled	Casing dia:	Not Reported
Ground el:	240	Well depth:	Not Reported
Solid case:	Not Reported	Perf case:	Not Reported
Use:	IRR - Irrigation (non-domestic, non-agriculture)		
Use year:	00		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported	Init cl:	Not Reported
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	Not Reported	Draft mgy:	90
Head feet:	Not Reported	Max chlor:	Not Reported
Min chlor:	Not Reported	Geology:	RA
Pump yr:	Not Reported	Draft yr:	42
Head yr:	Not Reported	Maxchl:	Not Reported
Maxchl yr:	Not Reported	Minchl:	Not Reported
Minchl yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported	Pump mgd:	Not Reported
Draft mgd:	0.2	Aquifer:	60102
Tmk:	Not Reported	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	Not Reported
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/02/1900
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001417

2
WNW
1/4 - 1/2 Mile
Higher

HI WELLS **HI5000000001415**

Wid:	6-5330-006	Island:	6
Well no:	5330-06	Well name:	Mokuhau TH 1
Old name:	Not Reported	Yr drilled:	1950
Driller:	E MAUI IRRIG	Quad map:	05
Longitude2:	1563045	Latitude27:	205336
Longitude8:	1563035	Latitude83:	205324
Lat83d:	20	Lat83m:	53
Lat83s:	24	Lon83d:	156
Lon83m:	30	Lon83s:	35
Lat83dd:	20.89		
Lon83dd:	-156.50972		
Long83dd:	-156.50972		
Lat83dd 1:	20.89		
Gps:	0	Utm:	1
Owner user:	Maui DWS	Old number:	15-C TH
Well type:	Rotary Drill	Casing dia:	1
Ground el:	310	Well depth:	431
Solid case:	391	Perf case:	431
Use:	OBS - Observation		
Use year:	74		
Init water:	27.3		
Init head:	27.3		
Init chlor:	280	Init cl:	280.00000
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	Not Reported	Draft mgy:	Not Reported
Head feet:	Not Reported	Max chlor:	Not Reported
Min chlor:	Not Reported	Geology:	TW
Pump yr:	Not Reported	Draft yr:	Not Reported
Head yr:	Not Reported	Maxchl:	Not Reported
Maxchl yr:	0	Minchl:	Not Reported
Minchl yr:	0	Bot hole:	-121
Bot solid:	-81	Bot perf:	-121
Spec capac:	Not Reported	Pump mgd:	Not Reported
Draft mgd:	Not Reported	Aquifer:	60102
Tmk:	Not Reported	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	Not Reported
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1950
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001415

3
NNE
1/2 - 1 Mile
Lower

HI WELLS **HI5000000001429**

Wid:	6-5330-004	Island:	6
Well no:	5330-04	Well name:	Wailuku Mill TH
Old name:	Not Reported	Yr drilled:	1945
Driller:	MULLIN	Quad map:	05
Longitude2:	1563005	Latitude27:	205354
Longitude8:	1562955	Latitude83:	205342
Lat83d:	20	Lat83m:	53
Lat83s:	42	Lon83d:	156
Lon83m:	29	Lon83s:	55
Lat83dd:	20.895		

Lon83dd:	-156.49861		
Long83dd:	-156.49861		
Lat83dd 1:	20.895		
Gps:	0	Utm:	1
Owner user:	Wailuku Sugar	Old number:	113-TH
Well type:	Rotary Drill	Casing dia:	1
Ground el:	180	Well depth:	705
Solid case:	663	Perf case:	705
Use:	OBS - Observation		
Use year:	45		
Init water:	16.4		
Init head:	16.4		
Init chlor:	22	Init cl:	22.00000
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	Not Reported	Draft mgy:	Not Reported
Head feet:	16.4	Max chlor:	135
Min chlor:	25	Geology:	TW
Pump yr:	Not Reported	Draft yr:	Not Reported
Head yr:	56	Maxchl:	1/1/1953
Maxchl yr:	53	Minchl:	1/1/1956
Minchl yr:	56	Bot hole:	-525
Bot solid:	-483	Bot perf:	-525
Spec capac:	Not Reported	Pump mgd:	Not Reported
Draft mgd:	Not Reported	Aquifer:	60102
Tmk:	Not Reported	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	16.40000
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1945
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001429

4
West
1/2 - 1 Mile
Higher

HI WELLS **HI5000000001414**

Wid:	6-5330-007	Island:	6
Well no:	5330-07	Well name:	Mokuhau TH 2
Old name:	Not Reported	Yr drilled:	1951
Driller:	E MAUI IRRIG	Quad map:	05
Longitude2:	1563052	Latitude27:	205336
Longitude8:	1563042	Latitude83:	205324
Lat83d:	20	Lat83m:	53
Lat83s:	24	Lon83d:	156
Lon83m:	30	Lon83s:	42
Lat83dd:	20.89		
Lon83dd:	-156.51167		
Long83dd:	-156.51167		
Lat83dd 1:	20.89		
Gps:	0	Utm:	1
Owner user:	Maui DWS	Old number:	15-D TH
Well type:	Rotary Drill	Casing dia:	1
Ground el:	484	Well depth:	585
Solid case:	549	Perf case:	570
Use:	OBS - Observation		
Use year:	Not Reported		
Init water:	23.7		

Init head:	23.7		
Init chlor:	Not Reported	Init cl:	Not Reported
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	Not Reported	Draft mgy:	Not Reported
Head feet:	Not Reported	Max chlor:	Not Reported
Min chlor:	Not Reported	Geology:	TW
Pump yr:	Not Reported	Draft yr:	Not Reported
Head yr:	Not Reported	Maxchl:	Not Reported
Maxchl yr:	Not Reported	Minchl:	Not Reported
Minchl yr:	Not Reported	Bot hole:	-101
Bot solid:	-65	Bot perf:	-86
Spec capac:	Not Reported	Pump mgd:	Not Reported
Draft mgd:	Not Reported	Aquifer:	60102
Tmk:	Not Reported	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	Not Reported
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1951
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001414

A5
West
1/2 - 1 Mile
Higher

HI WELLS **HI5000000001403**

Wid:	6-5330-008	Island:	6
Well no:	5330-08	Well name:	Mokuhau TH 3
Old name:	Not Reported	Yr drilled:	1952
Driller:	E MAUI IRRIG	Quad map:	05
Longitude2:	1563053	Latitude27:	205331
Longitude8:	1563043	Latitude83:	205319
Lat83d:	20	Lat83m:	53
Lat83s:	19	Lon83d:	156
Lon83m:	30	Lon83s:	43
Lat83dd:	20.88861		
Lon83dd:	-156.51194		
Long83dd:	-156.51194		
Lat83dd 1:	20.88861		
Gps:	0	Utm:	1
Owner user:	Maui DWS	Old number:	15-E TH
Well type:	Rotary Drill	Casing dia:	1
Ground el:	364	Well depth:	466
Solid case:	364	Perf case:	Not Reported
Use:	OBS - Observation		
Use year:	Not Reported		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported	Init cl:	Not Reported
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	Not Reported	Draft mgy:	Not Reported
Head feet:	Not Reported	Max chlor:	Not Reported
Min chlor:	Not Reported	Geology:	TW
Pump yr:	Not Reported	Draft yr:	Not Reported
Head yr:	Not Reported	Maxchl:	Not Reported

Maxchl yr:	Not Reported	Minchl:	Not Reported
Minchl yr:	Not Reported	Bot hole:	-102
Bot solid:	0	Bot perf:	Not Reported
Spec capac:	Not Reported	Pump mgd:	Not Reported
Draft mgd:	Not Reported	Aquifer:	60102
Tmk:	Not Reported	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	Not Reported
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1952
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001403

A6
West
1/2 - 1 Mile
Higher

HI WELLS **HI5000000001401**

Wid:	6-5330-011	Island:	6
Well no:	5330-11	Well name:	Mokuhau 3
Old name:	Not Reported	Yr drilled:	1967
Driller:	LAYNE INTL	Quad map:	05
Longitude2:	1563053	Latitude27:	205329
Longitude8:	1563043	Latitude83:	205318
Lat83d:	20	Lat83m:	53
Lat83s:	18	Lon83d:	156
Lon83m:	30	Lon83s:	43
Lat83dd:	20.88833		
Lon83dd:	-156.51194		
Long83dd:	-156.51194		
Lat83dd 1:	20.88833		
Gps:	1	Utm:	0
Owner user:	Maui DWS	Old number:	15-F
Well type:	Rotary Drill	Casing dia:	18
Ground el:	354	Well depth:	605
Solid case:	Not Reported	Perf case:	Not Reported
Use:	MUN - County		
Use year:	72		
Init water:	Not Reported		
Init head:	0		
Init chlor:	30	Init cl:	30.00000
Test date:	Not Reported	Test gpm:	4584
Test ddown:	13.4	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	4250.00000	Draft mgy:	1240
Head feet:	Not Reported	Max chlor:	130
Min chlor:	30	Geology:	TW
Pump yr:	97	Draft yr:	76
Head yr:	Not Reported	Maxchl:	1/1/1978
Maxchl yr:	78	Minchl:	########
Minchl yr:	78	Bot hole:	-251
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	342	Pump mgd:	6.120
Draft mgd:	3.4	Aquifer:	60102
Tmk:	3-3-002:024	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	Not Reported
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1967
Pir:	########	Surveyor:	Not Reported

T:	Not Reported	Pump elev:	-7
Pump depth:	361	Site id:	HI5000000001401

A7
West
1/2 - 1 Mile
Higher

FRDS PWS **HI0000212**

PWS ID:	HI0000212
Date Initiated:	Not Reported Date Deactivated: Not Reported
PWS Name:	DWS WAILUKU WAILUKU, MAUI, HI 96793
Addressee / Facility:	System Owner/Responsible Party MR. DAVID CRADDOCK, DIRECTOR DEPARTMENT OF WATER SUPPLY P.O. BOX 1109 WAILUKU, HI 96793
Addressee / Facility:	Laboratory MS. CARI CERIZO DEPARTMENT OF WATER SUPPLY 614 PALAPALA DRIVE KAHULUI, MAUI, HI 96732

Facility Latitude:	20 53 12.0000	Facility Longitude:	156 32 14.0000
Facility Latitude:	20 53 29.0000	Facility Longitude:	156 30 55.0000
Facility Latitude:	20 54 40.0000	Facility Longitude:	156 31 1.0000
Facility Latitude:	20 54 40.0000	Facility Longitude:	156 31 2.0000
Facility Latitude:	20 54 44.0000	Facility Longitude:	156 31 4.0000
Facility Latitude:	20 54 32.0000	Facility Longitude:	156 30 44.0000
Facility Latitude:	20 54 30.0000	Facility Longitude:	156 30 44.0000
Facility Latitude:	20 53 9.0000	Facility Longitude:	156 32 30.0000
Facility Latitude:	20 53 30.0000	Facility Longitude:	156 30 54.0000
City Served:	WAILUKU		
Treatment Class:	Treated	Population:	41691

Violations information not reported.

ENFORCEMENT INFORMATION:

Truedate:	03/31/2009	Pwsid:	HI0000212
Pwsname:	WAILUKU		
Retpopsrvd:	52200	Pwstypecod:	C
Vioid:	10101	Contaminant:	COLIFORM (TCR)
Viol. Type:	MCL, Monthly (TCR)		
Complperbe:	10/1/2000 0:00:00		
Complperen:	10/31/2000 0:00:00	Enfdate:	10/16/2000 0:00:00
Enf action:	State Violation/Reminder Notice		
Violmeasur:	Not Reported		

Truedate:	03/31/2009	Pwsid:	HI0000212
Pwsname:	WAILUKU		
Retpopsrvd:	52200	Pwstypecod:	C
Vioid:	10101	Contaminant:	COLIFORM (TCR)
Viol. Type:	MCL, Monthly (TCR)		
Complperbe:	10/1/2000 0:00:00		
Complperen:	10/31/2000 0:00:00	Enfdate:	10/16/2000 0:00:00
Enf action:	State Public Notif Requested		
Violmeasur:	Not Reported		

Truedate:	03/31/2009	Pwsid:	HI0000212
Pwsname:	WAILUKU		
Retpopsrvd:	52200	Pwstypecod:	C
Vioid:	10101	Contaminant:	COLIFORM (TCR)
Viol. Type:	MCL, Monthly (TCR)		
Complperbe:	10/1/2000 0:00:00		
Complperen:	10/31/2000 0:00:00	Enfdate:	10/19/2000 0:00:00
Enf action:	State Public Notif Issued		
Violmeasur:	Not Reported		

Truedate:	03/31/2009	Pwsid:	HI0000212
Pwsname:	WAILUKU		
Retpopsrvd:	52200	Pwstypecod:	C
Vioid:	10201	Contaminant:	COLIFORM (TCR)
Viol. Type:	MCL, Acute (TCR)		
Complperbe:	10/1/2000 0:00:00		
Complperen:	10/31/2000 0:00:00	Enfdate:	10/16/2000 0:00:00
Enf action:	State Violation/Reminder Notice		
Violmeasur:	Not Reported		

Truedate:	03/31/2009	Pwsid:	HI0000212
Pwsname:	WAILUKU		
Retpopsrvd:	52200	Pwstypecod:	C
Vioid:	10201	Contaminant:	COLIFORM (TCR)
Viol. Type:	MCL, Acute (TCR)		
Complperbe:	10/1/2000 0:00:00		
Complperen:	10/31/2000 0:00:00	Enfdate:	10/16/2000 0:00:00
Enf action:	State Public Notif Requested		
Violmeasur:	Not Reported		

Truedate:	03/31/2009	Pwsid:	HI0000212
Pwsname:	WAILUKU		
Retpopsrvd:	52200	Pwstypecod:	C
Vioid:	10201	Contaminant:	COLIFORM (TCR)
Viol. Type:	MCL, Acute (TCR)		
Complperbe:	10/1/2000 0:00:00		
Complperen:	10/31/2000 0:00:00	Enfdate:	10/19/2000 0:00:00
Enf action:	State Public Notif Issued		
Violmeasur:	Not Reported		

System Name:	WAILUKU		
Violation Type:	MCL, Monthly (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	10/01/00 - 10/31/00		
Violation ID:	10101		
Enforcement Date:	10/16/00	Enf. Action:	State Public Notif Requested

System Name:	WAILUKU		
Violation Type:	MCL, Monthly (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	10/01/00 - 10/31/00		
Violation ID:	10101		
Enforcement Date:	10/16/00	Enf. Action:	State Violation/Reminder Notice

System Name:	WAILUKU		
Violation Type:	MCL, Monthly (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	10/1/2000 0:00:00 - 10/31/2000 0:00:00		
Violation ID:	10101		
Enforcement Date:	10/19/2000 0:00:00	Enf. Action:	State Public Notif Issued

ENFORCEMENT INFORMATION:

System Name:	WAILUKU		
Violation Type:	MCL, Monthly (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	10/1/2000 0:00:00 - 10/31/2000 0:00:00		
Violation ID:	10101		
Enforcement Date:	10/16/2000 0:00:00	Enf. Action:	State Public Notif Requested
System Name:	WAILUKU		
Violation Type:	MCL, Monthly (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	10/1/2000 0:00:00 - 10/31/2000 0:00:00		
Violation ID:	10101		
Enforcement Date:	10/16/2000 0:00:00	Enf. Action:	State Violation/Reminder Notice
System Name:	WAILUKU		
Violation Type:	MCL, Monthly (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	10/01/00 - 10/31/00		
Violation ID:	10101		
Enforcement Date:	10/19/00	Enf. Action:	State Public Notif Issued
System Name:	WAILUKU		
Violation Type:	MCL, Acute (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	10/1/2000 0:00:00 - 10/31/2000 0:00:00		
Violation ID:	10201		
Enforcement Date:	10/16/2000 0:00:00	Enf. Action:	State Public Notif Requested
System Name:	WAILUKU		
Violation Type:	MCL, Acute (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	10/1/2000 0:00:00 - 10/31/2000 0:00:00		
Violation ID:	10201		
Enforcement Date:	10/16/2000 0:00:00	Enf. Action:	State Violation/Reminder Notice
System Name:	WAILUKU		
Violation Type:	MCL, Acute (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	10/1/2000 0:00:00 - 10/31/2000 0:00:00		
Violation ID:	10201		
Enforcement Date:	10/19/2000 0:00:00	Enf. Action:	State Public Notif Issued
System Name:	WAILUKU		
Violation Type:	MCL, Acute (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	10/01/00 - 10/31/00		
Violation ID:	10201		
Enforcement Date:	10/16/00	Enf. Action:	State Public Notif Requested
System Name:	WAILUKU		
Violation Type:	MCL, Acute (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	10/01/00 - 10/31/00		
Violation ID:	10201		
Enforcement Date:	10/16/00	Enf. Action:	State Violation/Reminder Notice
System Name:	WAILUKU		
Violation Type:	MCL, Acute (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	10/01/00 - 10/31/00		
Violation ID:	10201		
Enforcement Date:	10/19/00	Enf. Action:	State Public Notif Issued

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

CONTACT INFORMATION:

Name:	WAILUKU	Population:	52200
Contact:	ENG, JEFFREY	Phone:	808-270-7816
Address:	Department of Water Supply		
Address 2:	200 South High Street WAILUKU, HI 96793		

A8
West
1/2 - 1 Mile
Higher

HI WELLS **HI5000000001397**

Wid:	6-5330-009	Island:	6
Well no:	5330-09	Well name:	Mokuhau 1
Old name:	Not Reported	Yr drilled:	1953
Driller:	SAMSON-SMOCK	Quad map:	05
Longitude2:	1563054	Latitude27:	205328
Longitude8:	1563044	Latitude83:	205317
Lat83d:	20	Lat83m:	53
Lat83s:	17	Lon83d:	156
Lon83m:	30	Lon83s:	44
Lat83dd:	20.88806		
Lon83dd:	-156.51222		
Long83dd:	-156.51222		
Lat83dd 1:	20.88806		
Gps:	1	Utm:	0
Owner user:	Maui DWS	Old number:	15-A
Well type:	Percussion Drill	Casing dia:	18
Ground el:	353	Well depth:	600
Solid case:	411	Perf case:	Not Reported
Use:	MUN - County		
Use year:	72		
Init water:	23.3		
Init head:	23.3		
Init chlor:	16	Init cl:	16.00000
Test date:	Not Reported	Test gpm:	4584
Test ddown:	2.3	Test chlor:	15
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	2800.00000	Draft mgy:	972
Head feet:	23.0	Max chlor:	129
Min chlor:	46	Geology:	TW
Pump yr:	Not Reported	Draft yr:	76
Head yr:	53	Maxchl:	1/1/1978
Maxchl yr:	78	Minchl:	1/1/1978
Minchl yr:	78	Bot hole:	-247
Bot solid:	-58	Bot perf:	Not Reported
Spec capac:	1993	Pump mgd:	4.000
Draft mgd:	2.7	Aquifer:	60102
Tmk:	3-3-002:024	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	23.00000
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1953
Pir:	Not Reported	Surveyor:	Not Reported

T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001397

A9
West
1/2 - 1 Mile
Higher

HI WELLS **HI5000000001398**

Wid:	6-5330-010	Island:	6
Well no:	5330-10	Well name:	Mokuhau 2
Old name:	Not Reported	Yr drilled:	1953
Driller:	SAMSON-SMOCK	Quad map:	05
Longitude2:	1563054	Latitude27:	205329
Longitude8:	1563044	Latitude83:	205317
Lat83d:	20	Lat83m:	53
Lat83s:	17	Lon83d:	156
Lon83m:	30	Lon83s:	44
Lat83dd:	20.88806		
Lon83dd:	-156.51222		
Long83dd:	-156.51222		
Lat83dd 1:	20.88806		
Gps:	1	Utm:	0
Owner user:	Maui DWS	Old number:	15-B
Well type:	Not Reported	Casing dia:	18
Ground el:	353	Well depth:	600
Solid case:	422	Perf case:	Not Reported
Use:	MUN - County		
Use year:	72		
Init water:	21.5		
Init head:	21.5		
Init chlor:	16	Init cl:	16.00000
Test date:	Not Reported	Test gpm:	4584
Test ddown:	2.4	Test chlor:	15
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	2800.00000	Draft mgy:	354
Head feet:	21.0	Max chlor:	420
Min chlor:	16	Geology:	TW
Pump yr:	Not Reported	Draft yr:	76
Head yr:	53	Maxchl:	1/1/1953
Maxchl yr:	0	Minchl:	7/1/1995
Minchl yr:	0	Bot hole:	-247
Bot solid:	-69	Bot perf:	Not Reported
Spec capac:	1910	Pump mgd:	4.000
Draft mgd:	1.0	Aquifer:	60102
Tmk:	3-3-002:024	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	21.00000
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1953
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001398

10
SW
1/2 - 1 Mile
Higher

HI WELLS **HI5000000001329**

Wid:	6-5330-005	Island:	6
Well no:	5330-05	Well name:	Wailuku Shaft 33
Old name:	Not Reported	Yr drilled:	1946
Driller:	Not Reported	Quad map:	05
Longitude2:	1563043	Latitude27:	205306
Longitude8:	1563033	Latitude83:	205254
Lat83d:	20	Lat83m:	52
Lat83s:	54	Lon83d:	156
Lon83m:	30	Lon83s:	33
Lat83dd:	20.88167		
Lon83dd:	-156.50917		
Long83dd:	-156.50917		
Lat83dd 1:	20.88167		
Gps:	1	Utm:	0
Owner user:	Kehalani Mauka LLC	Old number:	33-SH
Well type:	Shaft	Casing dia:	84
Ground el:	400	Well depth:	Not Reported
Solid case:	Not Reported	Perf case:	Not Reported
Use:	MUN - County		
Use year:	75		
Init water:	26.0		
Init head:	26		
Init chlor:	Not Reported	Init cl:	Not Reported
Test date:	Not Reported	Test gpm:	3368
Test ddown:	Not Reported	Test chlor:	115
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	15228.00000	Draft mgy:	2323
Head feet:	26.0	Max chlor:	58
Min chlor:	34	Geology:	TW
Pump yr:	73	Draft yr:	Not Reported
Head yr:	73	Maxchl:	########
Maxchl yr:	95	Minchl:	1/1/1975
Minchl yr:	95	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported	Pump mgd:	21.75
Draft mgd:	6.4	Aquifer:	60102
Tmk:	3-5-001:001	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	26.00000
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1946
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001329

11
NW
1/2 - 1 Mile
Higher

HI WELLS **HI5000000001430**

Wid:	6-5330-012	Island:	6
Well no:	5330-12	Well name:	Puuohala TH-C
Old name:	Not Reported	Yr drilled:	1975
Driller:	CONTINENTAL	Quad map:	05
Longitude2:	1563043	Latitude27:	205358
Longitude8:	1563033	Latitude83:	205346
Lat83d:	20	Lat83m:	53
Lat83s:	46	Lon83d:	156
Lon83m:	30	Lon83s:	33
Lat83dd:	20.89611		

Lon83dd:	-156.50917		
Long83dd:	-156.50917		
Lat83dd 1:	20.89611		
Gps:	0	Utm:	1
Owner user:	Wailuku Sugar	Old number:	Not Reported
Well type:	Not Reported	Casing dia:	1
Ground el:	398	Well depth:	610
Solid case:	400	Perf case:	610
Use:	UNU - Unused		
Use year:	Not Reported		
Init water:	16.7		
Init head:	16.7		
Init chlor:	Not Reported	Init cl:	Not Reported
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	Not Reported	Draft mgy:	Not Reported
Head feet:	Not Reported	Max chlor:	Not Reported
Min chlor:	Not Reported	Geology:	TW
Pump yr:	Not Reported	Draft yr:	Not Reported
Head yr:	Not Reported	Maxchl:	Not Reported
Maxchl yr:	0	Minchl:	Not Reported
Minchl yr:	0	Bot hole:	-212
Bot solid:	-2	Bot perf:	-212
Spec capac:	Not Reported	Pump mgd:	Not Reported
Draft mgd:	Not Reported	Aquifer:	60102
Tmk:	Not Reported	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	Not Reported
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	08/12/1975
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001430

12
SW
1/2 - 1 Mile
Higher

HI WELLS **HI5000000001341**

Wid:	6-5330-003	Island:	6
Well no:	5330-03	Well name:	Field 63
Old name:	Not Reported	Yr drilled:	1945
Driller:	MULLIN	Quad map:	05
Longitude2:	1563051	Latitude27:	205309
Longitude8:	1563041	Latitude83:	205257
Lat83d:	20	Lat83m:	52
Lat83s:	57	Lon83d:	156
Lon83m:	30	Lon83s:	41
Lat83dd:	20.8825		
Lon83dd:	-156.51139		
Long83dd:	-156.51139		
Lat83dd 1:	20.8825		
Gps:	0	Utm:	1
Owner user:	Wailuku Sugar	Old number:	112-TH
Well type:	Rotary Drill	Casing dia:	1
Ground el:	457	Well depth:	477
Solid case:	Not Reported	Perf case:	Not Reported
Use:	OBS - Observation		
Use year:	45		
Init water:	30.6		

Init head:	30.6		
Init chlor:	Not Reported	Init cl:	Not Reported
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	2.5	Test chlor:	15
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	Not Reported	Draft mgy:	Not Reported
Head feet:	Not Reported	Max chlor:	Not Reported
Min chlor:	Not Reported	Geology:	TW
Pump yr:	Not Reported	Draft yr:	Not Reported
Head yr:	Not Reported	Maxchl:	Not Reported
Maxchl yr:	Not Reported	Minchl:	Not Reported
Minchl yr:	Not Reported	Bot hole:	-20
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported	Pump mgd:	Not Reported
Draft mgd:	Not Reported	Aquifer:	60102
Tmk:	Not Reported	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	Not Reported
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1945
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001341

13
WSW
1/2 - 1 Mile
Higher

HI WELLS **HI5000000001389**

Wid:	6-5330-001	Island:	6
Well no:	5330-01	Well name:	Iao Tunnel
Old name:	Not Reported	Yr drilled:	1900
Driller:	Not Reported	Quad map:	05
Longitude2:	1563058	Latitude27:	205323
Longitude8:	1563048	Latitude83:	205311
Lat83d:	20	Lat83m:	53
Lat83s:	11	Lon83d:	156
Lon83m:	30	Lon83s:	48
Lat83dd:	20.88639		
Lon83dd:	-156.51333		
Long83dd:	-156.51333		
Lat83dd 1:	20.88639		
Gps:	0	Utm:	1
Owner user:	Wailuku Sugar	Old number:	9-TU
Well type:	Tunnelled	Casing dia:	Not Reported
Ground el:	440	Well depth:	Not Reported
Solid case:	Not Reported	Perf case:	Not Reported
Use:	IRR - Irrigation (non-domestic, non-agriculture)		
Use year:	00		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported	Init cl:	Not Reported
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	Not Reported	Draft mgy:	50
Head feet:	Not Reported	Max chlor:	Not Reported
Min chlor:	Not Reported	Geology:	RA
Pump yr:	Not Reported	Draft yr:	42
Head yr:	Not Reported	Maxchl:	Not Reported

Maxchl yr:	0	Minchl:	Not Reported
Minchl yr:	0	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported	Pump mgd:	Not Reported
Draft mgd:	0.1	Aquifer:	60102
Tmk:	Not Reported	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	Not Reported
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/02/1900
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001389

14
ENE **HI WELLS** **HI5000000001422**
1/2 - 1 Mile
Lower

Wid:	6-5329-017	Island:	6
Well no:	5329-17	Well name:	Wailuku Arm
Old name:	Not Reported	Yr drilled:	1969
Driller:	ROSCOE MOSS	Quad map:	05
Longitude2:	1562941	Latitude27:	205344
Longitude8:	1562931	Latitude83:	205332
Lat83d:	20	Lat83m:	53
Lat83s:	32	Lon83d:	156
Lon83m:	29	Lon83s:	31
Lat83dd:	20.89222		
Lon83dd:	-156.49194		
Long83dd:	-156.49194		
Lat83dd 1:	20.89222		
Gps:	0	Utm:	1
Owner user:	U S Army	Old number:	Not Reported
Well type:	Percussion Drill	Casing dia:	8
Ground el:	180	Well depth:	122
Solid case:	102	Perf case:	Not Reported
Use:	UNU - Unused		
Use year:	69		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported	Init cl:	Not Reported
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	Not Reported	Draft mgy:	Not Reported
Head feet:	Not Reported	Max chlor:	Not Reported
Min chlor:	Not Reported	Geology:	Not Reported
Pump yr:	Not Reported	Draft yr:	Not Reported
Head yr:	Not Reported	Maxchl:	Not Reported
Maxchl yr:	Not Reported	Minchl:	Not Reported
Minchl yr:	Not Reported	Bot hole:	58
Bot solid:	78	Bot perf:	Not Reported
Spec capac:	Not Reported	Pump mgd:	Not Reported
Draft mgd:	Not Reported	Aquifer:	60102
Tmk:	Not Reported	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	Not Reported
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	04/04/1969
Pir:	Not Reported	Surveyor:	Not Reported

T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001422

B15
East
1/2 - 1 Mile
Lower

HI WELLS **HI5000000001406**

Wid:	6-5329-006	Island:	6
Well no:	5329-06	Well name:	Baldwin High TH
Old name:	Not Reported	Yr drilled:	1939
Driller:	JM HEIZER	Quad map:	05
Longitude2:	1562937	Latitude27:	205333
Longitude8:	1562927	Latitude83:	205321
Lat83d:	20	Lat83m:	53
Lat83s:	21	Lon83d:	156
Lon83m:	29	Lon83s:	27
Lat83dd:	20.88917		
Lon83dd:	-156.49083		
Long83dd:	-156.49083		
Lat83dd 1:	20.88917		
Gps:	0	Utm:	1
Owner user:	Maui County	Old number:	105-TH
Well type:	Rotary Drill	Casing dia:	1
Ground el:	120	Well depth:	131
Solid case:	131	Perf case:	Not Reported
Use:	UNU - Unused		
Use year:	71		
Init water:	5.9		
Init head:	5.9		
Init chlor:	152	Init cl:	152.00000
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	Not Reported	Draft mgy:	Not Reported
Head feet:	5.9	Max chlor:	167
Min chlor:	91	Geology:	THO
Pump yr:	Not Reported	Draft yr:	Not Reported
Head yr:	39	Maxchl:	1/1/1939
Maxchl yr:	39	Minchl:	1/1/1939
Minchl yr:	39	Bot hole:	-11
Bot solid:	-11	Bot perf:	Not Reported
Spec capac:	Not Reported	Pump mgd:	Not Reported
Draft mgd:	Not Reported	Aquifer:	60102
Tmk:	Not Reported	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	5.90000
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1939
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001406

B16
East
1/2 - 1 Mile
Lower

HI WELLS **HI5000000001407**

Wid:	6-5329-005	Island:	6
Well no:	5329-05	Well name:	Baldwin High Sch
Old name:	Not Reported	Yr drilled:	1971
Driller:	Not Reported	Quad map:	05
Longitude2:	1562936	Latitude27:	205333
Longitude8:	1562926	Latitude83:	205321
Lat83d:	20	Lat83m:	53
Lat83s:	21	Lon83d:	156
Lon83m:	29	Lon83s:	26
Lat83dd:	20.88917		
Lon83dd:	-156.49056		
Long83dd:	-156.49056		
Lat83dd 1:	20.88917		
Gps:	0	Utm:	1
Owner user:	Maui Pks & Rec	Old number:	19-B
Well type:	Not Reported	Casing dia:	Not Reported
Ground el:	120	Well depth:	Not Reported
Solid case:	Not Reported	Perf case:	Not Reported
Use:	IRR - Schools		
Use year:	71		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported	Init cl:	Not Reported
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	280.00000	Draft mgy:	Not Reported
Head feet:	Not Reported	Max chlor:	Not Reported
Min chlor:	Not Reported	Geology:	THO
Pump yr:	Not Reported	Draft yr:	Not Reported
Head yr:	Not Reported	Maxchl:	Not Reported
Maxchl yr:	0	Minchl:	Not Reported
Minchl yr:	0	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported	Pump mgd:	Not Reported
Draft mgd:	Not Reported	Aquifer:	60102
Tmk:	3-8-007:055	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	Not Reported
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1962
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001407

17
WSW
1/2 - 1 Mile
Higher

HI WELLS **HI5000000001343**

Wid:	6-5230-003	Island:	6
Well no:	5230-03	Well name:	Iao Tank Site
Old name:	Not Reported	Yr drilled:	2005
Driller:	Not Reported	Quad map:	05
Longitude2:	1563058	Latitude27:	205309
Longitude8:	1563048	Latitude83:	205258
Lat83d:	20	Lat83m:	52
Lat83s:	58	Lon83d:	156
Lon83m:	30	Lon83s:	48
Lat83dd:	20.88278		

Lon83dd:	-156.51333		
Long83dd:	-156.51333		
Lat83dd 1:	20.88278		
Gps:	1	Utm:	0
Owner user:	Maui DWS	Old number:	Not Reported
Well type:	Rotary Drill	Casing dia:	20
Ground el:	506	Well depth:	608
Solid case:	500	Perf case:	608
Use:	MUN - County		
Use year:	07		
Init water:	Not Reported		
Init head:	8.63		
Init chlor:	Not Reported	Init cl:	20.00000
Test date:	########	Test gpm:	1400
Test ddown:	3.1	Test chlor:	25
Test temp:	70.3	Temp unit:	F
Pump gpm:	0.00000	Draft mgy:	Not Reported
Head feet:	8.67	Max chlor:	Not Reported
Min chlor:	Not Reported	Geology:	TW
Pump yr:	Not Reported	Draft yr:	Not Reported
Head yr:	Not Reported	Maxchl:	Not Reported
Maxchl yr:	Not Reported	Minchl:	Not Reported
Minchl yr:	Not Reported	Bot hole:	-102
Bot solid:	6	Bot perf:	-102
Spec capac:	Not Reported	Pump mgd:	Not Reported
Draft mgd:	Not Reported	Aquifer:	Not Reported
Tmk:	3-5-001:021	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	Not Reported
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	06/27/2006
Pir:	Not Reported	Surveyor:	Not Reported
T:	100000.00000	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001343

C18
SE
1/2 - 1 Mile
Lower

HI WELLS **HI5000000001310**

Wid:	6-5329-018	Island:	6
Well no:	5329-18	Well name:	Waiale Obs
Old name:	Not Reported	Yr drilled:	1977
Driller:	CONTINENTAL	Quad map:	05
Longitude2:	1562946	Latitude27:	205301
Longitude8:	1562936	Latitude83:	205249
Lat83d:	20	Lat83m:	52
Lat83s:	49	Lon83d:	156
Lon83m:	29	Lon83s:	36
Lat83dd:	20.88028		
Lon83dd:	-156.49333		
Long83dd:	-156.49333		
Lat83dd 1:	20.88028		
Gps:	0	Utm:	1
Owner user:	A&B	Old number:	Not Reported
Well type:	Rotary Drill	Casing dia:	2
Ground el:	191	Well depth:	450
Solid case:	Not Reported	Perf case:	Not Reported
Use:	OBS - Observation		
Use year:	78		
Init water:	Not Reported		

Init head:	0		
Init chlor:	Not Reported	Init cl:	Not Reported
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	Not Reported	Draft mgy:	Not Reported
Head feet:	Not Reported	Max chlor:	Not Reported
Min chlor:	30	Geology:	Not Reported
Pump yr:	Not Reported	Draft yr:	Not Reported
Head yr:	Not Reported	Maxchl:	########
Maxchl yr:	81	Minchl:	Not Reported
Minchl yr:	81	Bot hole:	-259
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported	Pump mgd:	Not Reported
Draft mgd:	Not Reported	Aquifer:	60301
Tmk:	Not Reported	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	Not Reported
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1977
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001310

B19
East
1/2 - 1 Mile
Lower

HI WELLS **HI5000000001408**

Wid:	6-5329-004	Island:	6
Well no:	5329-04	Well name:	War Memorial Stadium
Old name:	Not Reported	Yr drilled:	1971
Driller:	PAUL SMITH	Quad map:	05
Longitude2:	1562933	Latitude27:	205333
Longitude8:	1562923	Latitude83:	205321
Lat83d:	20	Lat83m:	53
Lat83s:	21	Lon83d:	156
Lon83m:	29	Lon83s:	23
Lat83dd:	20.88917		
Lon83dd:	-156.48972		
Long83dd:	-156.48972		
Lat83dd 1:	20.88917		
Gps:	0	Utm:	1
Owner user:	Maui Parks & Rec	Old number:	Not Reported
Well type:	Rotary Drill	Casing dia:	8
Ground el:	80	Well depth:	110
Solid case:	Not Reported	Perf case:	Not Reported
Use:	UNU - Unused		
Use year:	Not Reported		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported	Init cl:	Not Reported
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	250.00000	Draft mgy:	44
Head feet:	Not Reported	Max chlor:	Not Reported
Min chlor:	Not Reported	Geology:	THO
Pump yr:	Not Reported	Draft yr:	71
Head yr:	Not Reported	Maxchl:	Not Reported

Maxchl yr:	0	Minchl:	Not Reported
Minchl yr:	0	Bot hole:	-30
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported	Pump mgd:	0.360
Draft mgd:	0.1	Aquifer:	60102
Tmk:	3-8-007:055	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	Not Reported
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1962
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001408

20
East
1/2 - 1 Mile
Lower

HI WELLS **HI5000000001416**

Wid:	6-5329-014	Island:	6
Well no:	5329-14	Well name:	Maui Stadium
Old name:	Not Reported	Yr drilled:	1970
Driller:	OCEAN VIEW	Quad map:	05
Longitude2:	1562931	Latitude27:	205338
Longitude8:	1562921	Latitude83:	205326
Lat83d:	20	Lat83m:	53
Lat83s:	26	Lon83d:	156
Lon83m:	29	Lon83s:	21
Lat83dd:	20.89056		
Lon83dd:	-156.48917		
Long83dd:	-156.48917		
Lat83dd 1:	20.89056		
Gps:	0	Utm:	1
Owner user:	Maui Pks & Rec	Old number:	17-1
Well type:	Rotary Drill	Casing dia:	Not Reported
Ground el:	120	Well depth:	128
Solid case:	106	Perf case:	Not Reported
Use:	IRR - Parks		
Use year:	71		
Init water:	Not Reported		
Init head:	0		
Init chlor:	285	Init cl:	285.00000
Test date:	Not Reported	Test gpm:	300
Test ddown:	Not Reported	Test chlor:	74
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	200.00000	Draft mgy:	Not Reported
Head feet:	Not Reported	Max chlor:	Not Reported
Min chlor:	Not Reported	Geology:	THO
Pump yr:	Not Reported	Draft yr:	Not Reported
Head yr:	Not Reported	Maxchl:	Not Reported
Maxchl yr:	0	Minchl:	Not Reported
Minchl yr:	0	Bot hole:	-8
Bot solid:	14	Bot perf:	Not Reported
Spec capac:	Not Reported	Pump mgd:	0.288
Draft mgd:	Not Reported	Aquifer:	60102
Tmk:	Not Reported	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	Not Reported
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1970
Pir:	Not Reported	Surveyor:	Not Reported

T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001416

C21
SE
1/2 - 1 Mile
Lower

HI WELLS **HI5000000001293**

Wid:	6-5229-001	Island:	6
Well no:	5229-01	Well name:	Waiale Prototype
Old name:	Not Reported	Yr drilled:	1978
Driller:	ROSCOE MOSS	Quad map:	05
Longitude2:	1562944	Latitude27:	205257
Longitude8:	1562934	Latitude83:	205245
Lat83d:	20	Lat83m:	52
Lat83s:	45	Lon83d:	156
Lon83m:	29	Lon83s:	34
Lat83dd:	20.87917		
Lon83dd:	-156.49278		
Long83dd:	-156.49278		
Lat83dd 1:	20.87917		
Gps:	0	Utm:	1
Owner user:	A&B	Old number:	Not Reported
Well type:	Percussion Drill	Casing dia:	20
Ground el:	136	Well depth:	441
Solid case:	Not Reported	Perf case:	Not Reported
Use:	ABN - Lost		
Use year:	Not Reported		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported	Init cl:	Not Reported
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	Not Reported	Draft mgy:	Not Reported
Head feet:	Not Reported	Max chlor:	Not Reported
Min chlor:	Not Reported	Geology:	Not Reported
Pump yr:	Not Reported	Draft yr:	Not Reported
Head yr:	Not Reported	Maxchl:	Not Reported
Maxchl yr:	0	Minchl:	Not Reported
Minchl yr:	0	Bot hole:	-305
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported	Pump mgd:	Not Reported
Draft mgd:	Not Reported	Aquifer:	60102
Tmk:	Not Reported	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	Not Reported
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1978
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001293

22
WSW
1/2 - 1 Mile
Higher

HI WELLS **HI5000000001340**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Wid:	6-5331-001	Island:	6
Well no:	5331-01	Well name:	Iao Valley TH
Old name:	Not Reported	Yr drilled:	1940
Driller:	JV CREWS	Quad map:	05
Longitude2:	1563108	Latitude27:	205309
Longitude8:	1563058	Latitude83:	205257
Lat83d:	20	Lat83m:	52
Lat83s:	57	Lon83d:	156
Lon83m:	30	Lon83s:	58
Lat83dd:	20.8825		
Lon83dd:	-156.51611		
Long83dd:	-156.51611		
Lat83dd 1:	20.8825		
Gps:	0	Utm:	1
Owner user:	Wailuku Sugar	Old number:	Not Reported
Well type:	Not Reported	Casing dia:	1
Ground el:	454	Well depth:	475
Solid case:	465	Perf case:	Not Reported
Use:	OBS - Observation		
Use year:	Not Reported		
Init water:	32.9		
Init head:	32.9		
Init chlor:	Not Reported	Init cl:	Not Reported
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	Not Reported	Draft mgy:	Not Reported
Head feet:	33.0	Max chlor:	Not Reported
Min chlor:	Not Reported	Geology:	TW
Pump yr:	Not Reported	Draft yr:	Not Reported
Head yr:	40	Maxchl:	Not Reported
Maxchl yr:	0	Minchl:	Not Reported
Minchl yr:	0	Bot hole:	-21
Bot solid:	-11	Bot perf:	Not Reported
Spec capac:	Not Reported	Pump mgd:	Not Reported
Draft mgd:	Not Reported	Aquifer:	60102
Tmk:	Not Reported	Old aqui:	Not Reported
Aqui code:	60102	Latest hd:	33.00000
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1940
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Site id:	HI5000000001340

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for MAUI County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 96793

Number of sites tested: 11

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.291 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2009 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Well Index Database
Source: Department of Land and Natural Resources
Telephone: 808-587-0214
CWRM maintains a Well Index Database to track specific information pertaining to the construction and installation of production wells in Hawaii

OTHER STATE DATABASE INFORMATION

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Count: 35 records

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
KAHULUI	1003879111	WAIKAPU DUMP-MAUI COUNTY DUMP	CENTRAL MAUI	96732	CERC-NFRAP
KAHULUI	S106820852	VECTOR CONTROL BRANCH, MAUI	54 HIGH ST, 641 MUA ST, KAHALE DR / PALAPALA ST	96793	SHWS
KAHULUI	1006820577	HECO TRANSFORMER 46-259 LILIPUNA ROAD	HOBRON AVE	96732	FINDS, SHWS
KAHULUI	S106817098	FONG CONSTRUCTION	HUKILIKI ST	96732	SHWS
KAHULUI	S104534290	MAUI PALMS HOTEL UST	150 KAAHUMANU AVE	96732	SHWS
KAHULUI	1006818999	MCC-AUTOMOTIVE TECHNOLOGY BUILDING CONTAMINATION	310 KAAHUMANU AVE	96732	FINDS, SHWS, SPILLS
KAHULUI	1006820878	HISANO PROPERTY, VACANT LOT	KEOLANI ST	96732	FINDS
KAHULUI	1006841969	DAVID PICO CESSPOOL DIGGING	OLD HALEAKALA HWY	96732	FINDS, LUST
KAHULUI	U001236769	DAVID PICO CESSPOOL DIGGING	OLD HALEAKALA HWY	96732	UST
KAHULUI	1006820345	94-236 KAHUANANI STREET BATTERIES DUMPING	W PAPA AVE	96732	FINDS, SHWS
KAHULUI	S106819004	MAUI MEAT COMPANY FACILITY (FORMER), UST CLOSURE	601 2ND ST	96732	SHWS, SPILLS
KAHULUI	1006819647	WAIKAPU DUMP-MAUI COUNTY DUMP	WAIKAPU RD	96732	FINDS, SHWS
KANUNAKAKAI	S108859913	KALAMAULA LANDFILL	HOAWA RD	96793	SHWS, ENG CONTROLS
PAIA	S106819555	PAIA SUGAR MILL	BALDWIN AVE	96732	SHWS
WAIKAPU	S109096050	MARK MILL34	1487 / 1488 HONOAPIILANI HWY	96793	LUST
WAIKAPU	U004120867	MARK MILL34	1487 / 1488 HONOAPIILANI HWY	96793	UST
WAIKAPU	1008194955	VACANT LAND TMK NO (2) 3-8-7:101	KUIHELANI HWY NEAR WAIKO RD	96793	RCRA-NonGen
WAILUKU	96515847	73 & 74 DRAINAGE RESOVIOR WAILUKU, MAUI HI.	73 & 74 DRAINAGE RESOVIOR WAILUKU, MAUI HI.	96793	ERNS
WAILUKU	1008038509	DWS WAILUKU	DWS WAILUKU	96793	FINDS
WAILUKU	1010026315	KEHALANI MAUKA LARGE LOT	HELE ST MOKAPU RD, KUMUHAU ST	96793	FINDS
WAILUKU	1000244831	MAUI DISTRICT OFFICE DOE	54 HIGH ST	96793	RCRA-NonGen
WAILUKU	1012132274	WAILUKU IRRIGATION RESERVOIR #74	HONOAPIILANI HWY	96793	FINDS
WAILUKU	S107025671	WAILUKU IRRIGATION RESERVOIR #74	HONOAPIILANI HWY	96793	SPILLS
WAILUKU	1006842014	HAWAIIAN CEMENT - WAIKAPU QUARRY	HONOAPIILANI HWY	96793	FINDS, LUST
WAILUKU	1008173022	WAILUKU PROJECT DISTRICT	55-510 KAMEHAMEHA HWY MANILOA	96793	FINDS
WAILUKU	1009332782	WAILUKU AG DIVERSION OF IAO STREAM	KEPANIWAI PARK	96793	FINDS
WAILUKU	1007092114	MAALAEA GENERATING STATION	NORTH KIHEI RD	96793	RCRA-LQG
WAILUKU	1006818252	WAILUKU SHAFT 33 PUMP STATION	WEST MAIN STREET	96793	FINDS
WAILUKU	1012132275	WAILUKU SWIMMING POOL	200 MARKET ST	96793	FINDS
WAILUKU	1006819733	WAILUKU (OLD) POOL	200 MARKET ST	96793	FINDS
WAILUKU	1006819734	NEW WAILUKU POOL	200 PAKAHI ST	96793	FINDS
WAILUKU	1008002855	WAILUKU COUNTRY ESTATES	1350 SAND ISLAND PARKWAY	96793	FINDS
WAILUKU	1009403395	KEHALANI MAUKA LARGE LOT	THE MAJORITY OF THE PROJECT	96793	FINDS
WAILUKU	S108008644	Y HATA- MAUI	200 WAIEHU BEACH RD AND KAHULU BEACH RD	96793	SHWS
WAILUKU	1006874149	WAR MEMORIAL GYM PARKING LOT	WAILUKU RD	96793	FINDS

Site	Database(s)	EDR ID Number EPA ID Number
WAIKAPU DUMP-MAUI COUNTY DUMP **CENTRAL MAUI** **KAHULUI, HI 96732**	**CERC-NFRAP**	**1003879111** **HID050340843**

VECTOR CONTROL BRANCH, MAUI — **SHWS** — **S106820852**
54 HIGH ST, 641 MUA ST, KAHALE DR / PALAPALA ST — **N/A**
KAHULUI, HI 96793

SHWS:

Organization:	State of Hawaii, Department of Health, Vector Control
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Vector Control Branch Maui
Hid Number:	HID000628446
Facility Registry Identifier:	110013781988
Lead Agency:	Not reported
Program:	State
Project Manager:	Unassigned
Hazard Priority:	NFA
Site Status:	NFA
Action:	Assessment
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	NFA - Type Undetermined
Date Of Closure Document:	4/25/1996 1:20:09 AM

HECO TRANSFORMER 46-259 LILIPUNA ROAD — **FINDS** — **1006820577**
HOBRON AVE — **SHWS** — **110013785662**
KAHULUI, HI 96732

FINDS:

Registry ID: 110013785662

Environmental Interest/Information System

Hawaii Hazard Evaluation and Emergency Response (HEER-FRS) system maintains basic information for facility/sites of interest to state of Hawaii, Department of Health, Hazard Evaluation and Emergency Response. It is used to index sites for hardcopy file retrieval and to present limited site status information. The environmental interests included are: release assessments, TRI reporters, EPCRA filers, RMP reporters and long term types of site investigations such as environmental cleanup study areas, state cleanup sites, Superfund NPL sites, voluntary clean up programs and Brownfields Pilot/Grants, properties, sites and targeted assessments.

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SHWS:

Organization:	Hobron Ave Area
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Hobron Avenue Area
Hid Number:	Not reported
Facility Registry Identifier:	110013785662

Site	Database(s)	EDR ID Number EPA ID Number

HECO TRANSFORMER 46-259 LILIPUNA ROAD (Continued) 1006820577

Lead Agency:	HEER
Program:	State
Project Manager:	Kelton Otsuka
Hazard Priority:	Low
Site Status:	Ongoing
Action:	Response
Potential Hazards And Controls:	Hazard Present
Closure Document Title:	Not reported
Date Of Closure Document:	Not reported

FONG CONSTRUCTION **SHWS S106817098**
HUKILIKI ST **N/A**
KAHULUI, HI 96732

SHWS:

Organization:	Fong Construction Company, Ltd.
Supplemental Location Text:	Along Hukiliki St b/w Papa Pl and Dairy Rd
Island:	Maui
Environmental Interest:	Fong Construction Petroleum Hydrocarbon Contamination
Hid Number:	Not reported
Facility Registry Identifier:	110005728971
Lead Agency:	HEER
Program:	State
Project Manager:	Unassigned
Hazard Priority:	Low
Site Status:	Inactive
Action:	Assessment
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	Not reported
Date Of Closure Document:	Not reported

MAUI PALMS HOTEL UST **SHWS S104534290**
150 KAAHUMANU AVE **N/A**
KAHULUI, HI 96732

SHWS:

Organization:	Maui Palms Hotel
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Maui Palms Hotel UST
Hid Number:	Not reported
Facility Registry Identifier:	110013766754
Lead Agency:	Not reported
Program:	State
Project Manager:	Janice Fujimoto
Hazard Priority:	NFA
Site Status:	NFA
Action:	Assessment
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	NFA - Type Undetermined
Date Of Closure Document:	11/22/1999 1:19:28 AM

Site	Database(s)	EDR ID Number EPA ID Number
MCC-AUTOMOTIVE TECHNOLOGY BUILDING CONTAMINATION	**FINDS**	**1006818999**
310 KAAHUMANU AVE	**SHWS**	**110013767593**
KAHULUI, HI 96732	**SPILLS**	

FINDS:

Registry ID: 110013767593

Environmental Interest/Information System

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SHWS:

Organization:	State of Hawaii, University of Hawaii, Maui Community College
Supplemental Location Text:	Automotive Technology Building
Island:	Maui
Environmental Interest:	MCC-Lead Contamination from Washing Operations
Hid Number:	Not reported
Facility Registry Identifier:	110013767593
Lead Agency:	Not reported
Program:	State
Project Manager:	Richard Palmer
Hazard Priority:	NFA
Site Status:	NFA
Action:	Assessment
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	NFA - Type Undetermined
Date Of Closure Document:	4/4/2003 1:19:29 AM

HI SPILLS:

Island:	Maui
Supplemental Loc. Text:	Automotive Technology Building
Case Number:	19990818-1019
HID Number:	Not reported
Facility Registry Id:	110013767593
Lead and Program:	HEER EP&R
ER:	No
Units:	MCC-Automotive Technology Building Contamination
Substances:	lead
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez

Site	Database(s)	EDR ID Number EPA ID Number

MCC-AUTOMOTIVE TECHNOLOGY BUILDING CONTAMINATION (Continued) 1006818999

Assignment End Date: Not reported
Result: 8
File Under: State of Hawaii, University of Hawaii, Maui Community College

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HISANO PROPERTY, VACANT LOT **FINDS** **1006820878**
KEOLANI ST **110013788990**
KAHULUI, HI 96732

FINDS:

Registry ID: 110013788990

Environmental Interest/Information System
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DAVID PICO CESSPOOL DIGGING **FINDS** **1006841969**
OLD HALEAKALA HWY **LUST** **110014033526**
KAHULUI, HI 96732

FINDS:

Registry ID: 110014033526

Environmental Interest/Information System
HI-UST (Hawaii - Underground Storage Tank). Hawaii Underground Storage Tank Program regulates underground storage tanks which store petroleum or hazardous substances and offers documents and data products for downloading.

LUST:
Facility ID: 9-501585
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 5/9/1994
Release ID: 940038
Project Officer: Steven Okoji

Site	Database(s)	EDR ID Number EPA ID Number
DAVID PICO CESSPOOL DIGGING **OLD HALEAKALA HWY** **KAHULUI, HI 96732**	**UST**	**U001236769** **N/A**

UST:

Facility ID:	9-501585
Owner:	DAVID PICO
Owner Address:	343 ALU RD
Ownder City,St,Zip:	Kahului, 96732 96732
Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	2000
Substance:	Diesel

Site	Database(s)	EDR ID Number EPA ID Number
94-236 KAHUANANI STREET BATTERIES DUMPING **W PAPA AVE** **KAHULUI, HI 96732**	**FINDS** **SHWS**	**1006820345** **110013782914**

FINDS:

Registry ID: 110013782914

Environmental Interest/Information System

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SHWS:

Organization:	Alexander & Baldwin, Inc.
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Alexander and Baldwin Dump Site
Hid Number:	HI0001290808
Facility Registry Identifier:	110013782914
Lead Agency:	Not reported
Program:	PA/SI
Project Manager:	Laura Young
Hazard Priority:	NFA
Site Status:	NFA
Action:	Assessment
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	NFA - Type Undetermined
Date Of Closure Document:	11/10/1997 1:18:16 AM

Site	Database(s)	EDR ID Number EPA ID Number

MAUI MEAT COMPANY FACILITY (FORMER), UST CLOSURE **SHWS S106819004**
601 2ND ST **SPILLS N/A**
KAHULUI, HI 96732

SHWS:

Organization:	Alexander & Baldwin, Inc.
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Maui Meat Facility-Former
Hid Number:	Not reported
Facility Registry Identifier:	110013767245
Lead Agency:	HEER
Program:	State
Project Manager:	Unassigned
Hazard Priority:	NFA
Site Status:	NFA
Action:	Assessment
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	NFA - Type Undetermined
Date Of Closure Document:	12/11/1998 1:19:28 AM

HI SPILLS:

Island:	Maui
Supplemental Loc. Text:	Not reported
Case Number:	19950110
HID Number:	Not reported
Facility Registry Id:	110013767245
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Maui Meat Company, Inc. UST
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Greg Olmsted
Assignment End Date:	Not reported
Result:	7
File Under:	Alexander & Baldwin, Inc.

WAIKAPU DUMP-MAUI COUNTY DUMP **FINDS 1006819647**
WAIKAPU RD **SHWS 110013774870**
KAHULUI, HI 96732

FINDS:

Registry ID: 110013774870

Environmental Interest/Information System

Hawaii Hazard Evaluation and Emergency Response (HEER-FRS) system maintains basic information for facility/sites of interest to state of Hawaii, Department of Health, Hazard Evaluation and Emergency Response. It is used to index sites for hardcopy file retrieval and to present limited site status information. The environmental interests included are: release assessments, TRI reporters, EPCRA filers, RMP reporters and long term types of site investigations such as environmental cleanup study areas, state cleanup sites, Superfund NPL sites, voluntary clean up programs and Brownfields Pilot/Grants, properties, sites and targeted assessments.

Site	Database(s)	EDR ID Number EPA ID Number

WAIKAPU DUMP-MAUI COUNTY DUMP (Continued) 1006819647

The HI-ECS (Hawaii Environmental Compliance Program) is the Hawaii state regulatory program relating to environmental compliance and hazardous materials that ensures that program areas and facilities are in compliance with environmental regulations

SHWS:

Organization:	County of Maui, Department of Public Works and Waste Management, Solid Waste Division
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Waikapu Dump
Hid Number:	HID050340843
Facility Registry Identifier:	110013774870
Lead Agency:	Not reported
Program:	State
Project Manager:	Unassigned
Hazard Priority:	NFA
Site Status:	NFA
Action:	Assessment
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	NFA - Type Undetermined
Date Of Closure Document:	4/29/1996 1:20:11 AM

KALAMAULA LANDFILL **SHWS S108859913**
HOAWA RD **ENG CONTROLS N/A**
KANUNAKAKAI, HI 96793

SHWS:

Organization:	County of Maui, Department of Public Works and Waste Management
Supplemental Location Text:	End of Hoawa Rd
Island:	Molokai
Environmental Interest:	Kalamaula Landfill (HID980497192)
Hid Number:	HID980497192
Facility Registry Identifier:	110013787134
Lead Agency:	SHWB/HEER
Program:	State
Project Manager:	Unassigned
Hazard Priority:	Medium
Site Status:	Inactive
Action:	Assessment
Potential Hazards And Controls:	Hazard Managed With Engineering Controls
Closure Document Title:	Not reported
Date Of Closure Document:	Not reported

ENG CONTROLS:

Supplemental Location Text:	End of Hoawa Rd
Island:	Molokai
Potential Hazards And Controls:	Hazard Managed With Engineering Controls

Site	Database(s)	EDR ID Number EPA ID Number

PAIA SUGAR MILL **SHWS** **S106819555**
BALDWIN AVE **N/A**
PAIA, HI 96732

SHWS:

Organization:	Hawaiian Commercial & Sugar Company
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Paia Sugar Mill
Hid Number:	Not reported
Facility Registry Identifier:	110010560507
Lead Agency:	HEER
Program:	PA/SI
Project Manager:	Laura Young
Hazard Priority:	Medium
Site Status:	Ongoing
Action:	Assessment
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	Not reported
Date Of Closure Document:	Not reported

MARK MILL34 **LUST** **S109096050**
1487 / 1488 HONOAPIILANI HWY **N/A**
WAIKAPU, HI 96793

LUST:

Facility ID:	9-502477
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	6/30/2008
Release ID:	080013
Project Officer:	Darren Park

MARK MILL34 **UST** **U004120867**
1487 / 1488 HONOAPIILANI HWY **N/A**
WAIKAPU, HI 96793

UST:

Facility ID:	9-502477
Owner:	JOHN M. KEAN
Owner Address:	P.O. BOX 1449
Ownder City,St,Zip:	Waikapu, 96793 96793
Tank ID:	R-1
Date Installed:	12/31/1941
Tank Status:	**Permanently Out of Use**
Date Closed:	2/18/1992
Tank Capacity:	500
Substance:	Not Listed
Tank ID:	r-2
Date Installed:	Not reported
Tank Status:	**Permanently out of Use**
Date Closed:	2/21/2008
Tank Capacity:	550
Substance:	Gasoline

Site	Database(s)	EDR ID Number EPA ID Number
VACANT LAND TMK NO (2) 3-8-7:101 **KUIHELANI HWY NEAR WAIKO RD** **WAIKAPU, HI 96793**	**RCRA-NonGen**	**1008194955** **HIP000135327**

RCRA-NonGen:

Date form received by agency:	08/18/2009
Facility name:	VACANT LAND TMK NO (2) 3-8-7:101
Facility address:	KUIHELANI HWY NEAR WAIKO RD WAIKAPU, HI 96793
EPA ID:	HIP000135327
Mailing address:	A&B PROPERTIES INC 33 LONO AVENUE KAHULUI, HI 96732
Contact:	SEAN M O'KEEFE
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	(808) 877-2959
Contact email:	SOKEEFE@HCSUGAR.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	A & B PROPERTIES, INC
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1885
Owner/Op end date:	Not reported

Owner/operator name:	A&B PROPERTIES INC
Owner/operator address:	33 LONO AVENUE KAHULUI, HI 96732
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1885
Owner/Op end date:	Not reported

Owner/operator name:	A&B PROPERTIES INC
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1885
Owner/Op end date:	Not reported

Owner/operator name:	A & B PROPERTIES, INC
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported

Site	Database(s)	EDR ID Number EPA ID Number

VACANT LAND TMK NO (2) 3-8-7:101 (Continued) 1008194955

Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1885
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:
Date form received by agency: 02/24/2004
Facility name: VACANT LAND TMK NO (2) 3-8-7:101
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 08/05/2003
Facility name: VACANT LAND TMK NO (2) 3-8-7:101
Site name: VACANT LAND AT TAX MAP KEY NO (2)
Classification: Not a generator, verified

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS

Site	Database(s)	EDR ID Number EPA ID Number

VACANT LAND TMK NO (2) 3-8-7:101 (Continued) 1008194955

CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D035
Waste name: METHYL ETHYL KETONE

Waste code: D043
Waste name: VINYL CHLORIDE

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D035
Waste name: METHYL ETHYL KETONE

Waste code: D043
Waste name: VINYL CHLORIDE

Site	Database(s)	EDR ID Number EPA ID Number
VACANT LAND TMK NO (2) 3-8-7:101 (Continued)		1008194955
Violation Status: No violations found		

73 & 74 DRAINAGE RESOVIOR WAILUKU, MAUI HI. **ERNS** **96515847**
73 & 74 DRAINAGE RESOVIOR WAILUKU, MAUI HI. **N/A**
WAILUKU, HI 96793

ERNS:

Site ID:	96515847
Source:	Not reported
Site location:	73 & 74 DRAINAGE RESOVIOR WAILUKU, MAUI HI. WAILUKU, HI 96793
County:	MAUI
Report number:	368145
Report date:	11/20/1996
Report time:	21:12
Spill date:	11/20/1996
Spill time:	15:00
Spiller:	False
Confidential:	False
Medium affected:	Land
Dist. from city:	0.0 MI
Heading:	S
Field ID:	Not reported
Block ID:	Not reported
Vehicle ID:	Not reported
Mile post:	Not reported
Transport mode:	FIXED
Damage:	False
Damage $ amount:	0.
Evacuation:	False
Number of injured:	Not reported
Number of fatalities:	Not reported
Notes:	SANDY SOIL
Agency notified:	STLOC
Notified by caller:	DEPT OF HEALTH & LEPC
Other agency:	Not reported
EPA time:	21:54
Other time:	:
C.G. unit:	Not reported
C.G. time:	:
Duty officer:	WAS
Jurisdiction:	Not reported
Reportable:	Not reported
Cause:	Not reported
Tank capacity:	Not reported
Facility capacity:	Not reported
Cont rel. type:	Not reported
Comments:	CALLER STATES HIS COMPANY WILL REMOVE BATTERIES BY 21 NOV 96
Comments:	AUTOMOBILE BATTERIES / DUMPED ON PROPERTY
Comments:	73 & 74 DRAINAGE RESOVIOR WAILUKU, MAUI HI.
Comments:	CALLER RPTS THAT 70 AUTO BATTERIES WERE FOUND DUMPED ON PROPERTY. MOST WERE FOUND TO BE DRY NO ACID. APPEARS IT IS A HISTORICAL DUMP.

Site	Database(s)	EDR ID Number EPA ID Number
DWS WAILUKU **DWS WAILUKU** **WAILUKU, HI 96793**	**FINDS**	**1008038509** **110013118893**

FINDS:

Registry ID: 110013118893

Environmental Interest/Information System

SDWIS [WS] (Safe Drinking Water Information System (Water System)). Water Systems can have one or more water system facilities. The water system will purchase water from several facilities. Drinking water information is stored in EPA's SDWIS, which contains information about public water systems and their violations of EPA's regulations for safe drinking water. These statutes and accompanying regulations establish maximum contaminant levels (MCL), treatment techniques, and monitoring and reporting requirements to ensure that water provided to customers is safe for human consumption.

KEHALANI MAUKA LARGE LOT **HELE ST MOKAPU RD, KUMUHAU ST** **WAILUKU, HI 96793**	**FINDS**	**1010026315** **110028076329**

FINDS:

Registry ID: 110028076329

Environmental Interest/Information System

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

MAUI DISTRICT OFFICE DOE **54 HIGH ST** **WAILUKU, HI 96793**	**RCRA-NonGen**	**1000244831** **HID982362154**

RCRA-NonGen:

Date form received by agency:	11/09/1987
Facility name:	MAUI DISTRICT OFFICE DOE
Facility address:	54 HIGH ST WAILUKU, HI 96793
EPA ID:	HID982362154
Mailing address:	HIGH ST WAILUKU, HI 96793
Contact:	DAVID KEALA
Contact address:	54 HIGH ST WAILUKU, HI 96793
Contact country:	US
Contact telephone:	(808) 243-5060
Contact email:	Not reported
EPA Region:	09

Site	Database(s)	EDR ID Number EPA ID Number

MAUI DISTRICT OFFICE DOE (Continued) 1000244831

Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: State
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: STATE OF HAWAII
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: State
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Unknown
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Verified to be non-commercial

Violation Status: No violations found

WAILUKU IRRIGATION RESERVOIR #74 **FINDS** **1012132274**
HONOAPIILANI HWY **110039041523**
WAILUKU, HI 96793

FINDS:

Registry ID: 110039041523

Environmental Interest/Information System
Hawaii Hazard Evaluation and Emergency Response (HEER-FRS) system maintains basic information for facility/sites of interest to state of Hawaii, Department of Health, Hazard Evaluation and Emergency Response. It is used to index sites for hardcopy file retrieval and to

Site	Database(s)	EDR ID Number EPA ID Number
WAILUKU IRRIGATION RESERVOIR #74 (Continued)		1012132274

present limited site status information. The environmental interests included are: release assessments, TRI reporters, EPCRA filers, RMP reporters and long term types of site investigations such as environmental cleanup study areas, state cleanup sites, Superfund NPL sites, voluntary clean up programs and Brownfields Pilot/Grants, properties, sites and targeted assessments.

WAILUKU IRRIGATION RESERVOIR #74 — **SPILLS** **S107025671**
HONOAPIILANI HWY **N/A**
WAILUKU, HI 96793

HI SPILLS:

Island:	Maui
Supplemental Loc. Text:	Not reported
Case Number:	20001211-1635
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	No
Units:	Wailuku Irrigation Reservoir #74
Substances:	Unknown
Less Or Greater Than:	Not reported
Numerical Quantity:	3
Units:	Drums
Activity Type:	Response
Activity Lead:	Bill Perry
Assignment End Date:	Not reported
Result:	8
File Under:	Not reported

HAWAIIAN CEMENT - WAIKAPU QUARRY — **FINDS** **1006842014**
HONOAPIILANI HWY **LUST** **110014034035**
WAILUKU, HI 96793

FINDS:

Registry ID: 110014034035

Environmental Interest/Information System

HI-UST (Hawaii - Underground Storage Tank). Hawaii Underground Storage Tank Program regulates underground storage tanks which store petroleum or hazardous substances and offers documents and data products for downloading.

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

Site	Database(s)	EDR ID Number EPA ID Number
HAWAIIAN CEMENT - WAIKAPU QUARRY (Continued)		1006842014

LUST:
Facility ID: 9-502529
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 5/16/1995
Release ID: 950015
Project Officer: Roger Brewer

WAILUKU PROJECT DISTRICT **FINDS** **1008173022**
55-510 KAMEHAMEHA HWY MANILOA **110020727187**
WAILUKU, HI 96793

FINDS:

Registry ID: 110020727187

Environmental Interest/Information System

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

PCS (Permit Compliance System) is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

WAILUKU AG DIVERSION OF IAO STREAM **FINDS** **1009332782**
KEPANIWAI PARK **110024536705**
WAILUKU, HI 96793

FINDS:

Registry ID: 110024536705

Environmental Interest/Information System

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

Site	Database(s)	EDR ID Number EPA ID Number
MAALAEA GENERATING STATION **NORTH KIHEI RD** **WAILUKU, HI 96793**	**RCRA-LQG**	**1007092114** **HID981656333**

RCRA-LQG:

Date form received by agency:	02/22/2008
Facility name:	MAALAEA GENERATING STATION
Facility address:	1000 NORTH KIHEI ROAD KIHEI, HI 96753
EPA ID:	HID981656333
Mailing address:	PO BOX 398 KAHULUI, HI 967336898
Contact:	DAVE KANEKO
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	(808) 543-4524
Contact email:	DAVID.KANEKO@HECO.COM
EPA Region:	09
Land type:	Private
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	MAUI ELECTRIC CO
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	MAUI ELECTRIC COMPANY, LTD.
Owner/operator address:	210 WEST KAMEHAMEHA AVENUE KAHULUI, HI 96732
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1972
Owner/Op end date:	Not reported
Owner/operator name:	MAUI ELECTRIC COMPANY, LTD.
Owner/operator address:	Not reported Not reported

Site	Database(s)	EDR ID Number EPA ID Number

MAALAEA GENERATING STATION (Continued) 1007092114

Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1972
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: Yes
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: Yes
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: Not reported

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: Not reported

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: Not reported

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: Not reported

Historical Generators:
Date form received by agency: 03/19/2003
Facility name: MAALAEA GENERATING STATION

Site	Database(s)	EDR ID Number EPA ID Number

MAALAEA GENERATING STATION (Continued) 1007092114

Classification: Small Quantity Generator

Date form received by agency: 07/29/1993
Facility name: MAALAEA GENERATING STATION
Site name: MAUI ELECTRIC CO MAALAEA GEN STATION
Classification: Conditionally Exempt Small Quantity Generator

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D007
Waste name: CHROMIUM

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: U041
Waste name: EPICHLOROHYDRIN

Biennial Reports:

Last Biennial Reporting Year: 2009

Site	Database(s)	EDR ID Number EPA ID Number
MAALAEA GENERATING STATION (Continued)		1007092114

Annual Waste Handled:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs):	1140
Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs):	220
Waste code:	D007
Waste name:	CHROMIUM
Amount (Lbs):	4210
Waste code:	F003
Waste name:	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs):	40
Waste code:	F005
Waste name:	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs):	40
Waste code:	U041
Waste name:	EPICHLOROHYDRIN
Amount (Lbs):	20

Facility Has Received Notices of Violations:

Regulation violated:	F - 262.10-12.A
Area of violation:	Generators - General

Site	Database(s)	EDR ID Number EPA ID Number

MAALAEA GENERATING STATION (Continued) 1007092114

Date violation determined: 06/14/2001
Date achieved compliance: 08/22/2001
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: 08/06/2001
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 06/14/2001
Date achieved compliance: 08/22/2001
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/06/2001
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 06/14/2001
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 08/22/2001
Evaluation lead agency: EPA

WAILUKU SHAFT 33 PUMP STATION **FINDS** **1006818252**
WEST MAIN STREET **110000709154**
WAILUKU, HI 96793

FINDS:

Registry ID: 110000709154

Environmental Interest/Information System

The HI-ECS (Hawaii Environmental Compliance Program) is the Hawaii state regulatory program relating to environmental compliance and hazardous materials that ensures that program areas and facilities are in compliance with environmental regulations

US EPA Risk Management Plan (RMP) database stores the risk management plans reported by companies that handle, manufacture, use, or store certain flammable or toxic substances, as required under section 112(r) of the Clean Air Act (CAA).

Site	Database(s)	EDR ID Number EPA ID Number

WAILUKU SWIMMING POOL **FINDS** **1012132275**
200 MARKET ST **110039041532**
WAILUKU, HI 96793

FINDS:

Registry ID: 110039041532

Environmental Interest/Information System
Hawaii Hazard Evaluation and Emergency Response (HEER-FRS) system maintains basic information for facility/sites of interest to state of Hawaii, Department of Health, Hazard Evaluation and Emergency Response. It is used to index sites for hardcopy file retrieval and to present limited site status information. The environmental interests included are: release assessments, TRI reporters, EPCRA filers, RMP reporters and long term types of site investigations such as environmental cleanup study areas, state cleanup sites, Superfund NPL sites, voluntary clean up programs and Brownfields Pilot/Grants, properties, sites and targeted assessments.

WAILUKU (OLD) POOL **FINDS** **1006819733**
200 MARKET ST **110013775860**
WAILUKU, HI 96793

FINDS:

Registry ID: 110013775860

Environmental Interest/Information System
The HI-ECS (Hawaii Environmental Compliance Program) is the Hawaii state regulatory program relating to environmental compliance and hazardous materials that ensures that program areas and facilities are in compliance with environmental regulations

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NEW WAILUKU POOL **FINDS** **1006819734**
200 PAKAHI ST **110013775879**
WAILUKU, HI 96793

FINDS:

Registry ID: 110013775879

Environmental Interest/Information System
Hawaii Hazard Evaluation and Emergency Response (HEER-FRS) system maintains basic information for facility/sites of interest to state of Hawaii, Department of Health, Hazard Evaluation and Emergency Response. It is used to index sites for hardcopy file retrieval and to present limited site status information. The environmental interests included are: release assessments, TRI reporters, EPCRA filers, RMP reporters and long term types of site investigations such as environmental cleanup study areas, state cleanup sites, Superfund NPL sites, voluntary clean up programs and Brownfields Pilot/Grants, properties, sites and targeted assessments.

The HI-ECS (Hawaii Environmental Compliance Program) is the Hawaii state regulatory program relating to environmental compliance and

Site	Database(s)	EDR ID Number EPA ID Number
NEW WAILUKU POOL (Continued)		1006819734

hazardous materials that ensures that program areas and facilities are in compliance with environmental regulations

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WAILUKU COUNTRY ESTATES **FINDS** **1008002855**
1350 SAND ISLAND PARKWAY **110020724830**
WAILUKU, HI 96793

FINDS:

Registry ID: 110020724830

Environmental Interest/Information System

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

PCS (Permit Compliance System) is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

KEHALANI MAUKA LARGE LOT **FINDS** **1009403395**
THE MAJORITY OF THE PROJECT **110024875740**
WAILUKU, HI 96793

FINDS:

Registry ID: 110024875740

Environmental Interest/Information System

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

PCS (Permit Compliance System) is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Site	Database(s)	EDR ID Number EPA ID Number

Y HATA- MAUI **SHWS** **S108008644**
200 WAIEHU BEACH RD AND KAHULU BEACH RD **N/A**
WAILUKU, HI 96793

SHWS:

Organization:	Y. Hata
Supplemental Location Text:	Not reported
Island:	Maui
Environmental Interest:	Y. Hata & Company, Ltd.
Hid Number:	Not reported
Facility Registry Identifier:	110013358400
Lead Agency:	HEER
Program:	State
Project Manager:	Clarence Callahan
Hazard Priority:	NFA
Site Status:	NFA
Action:	Assessment
Potential Hazards And Controls:	Hazard Undetermined
Closure Document Title:	NFA Letter - Type Undetermined
Date Of Closure Document:	9/15/2003 1:12:59 AM

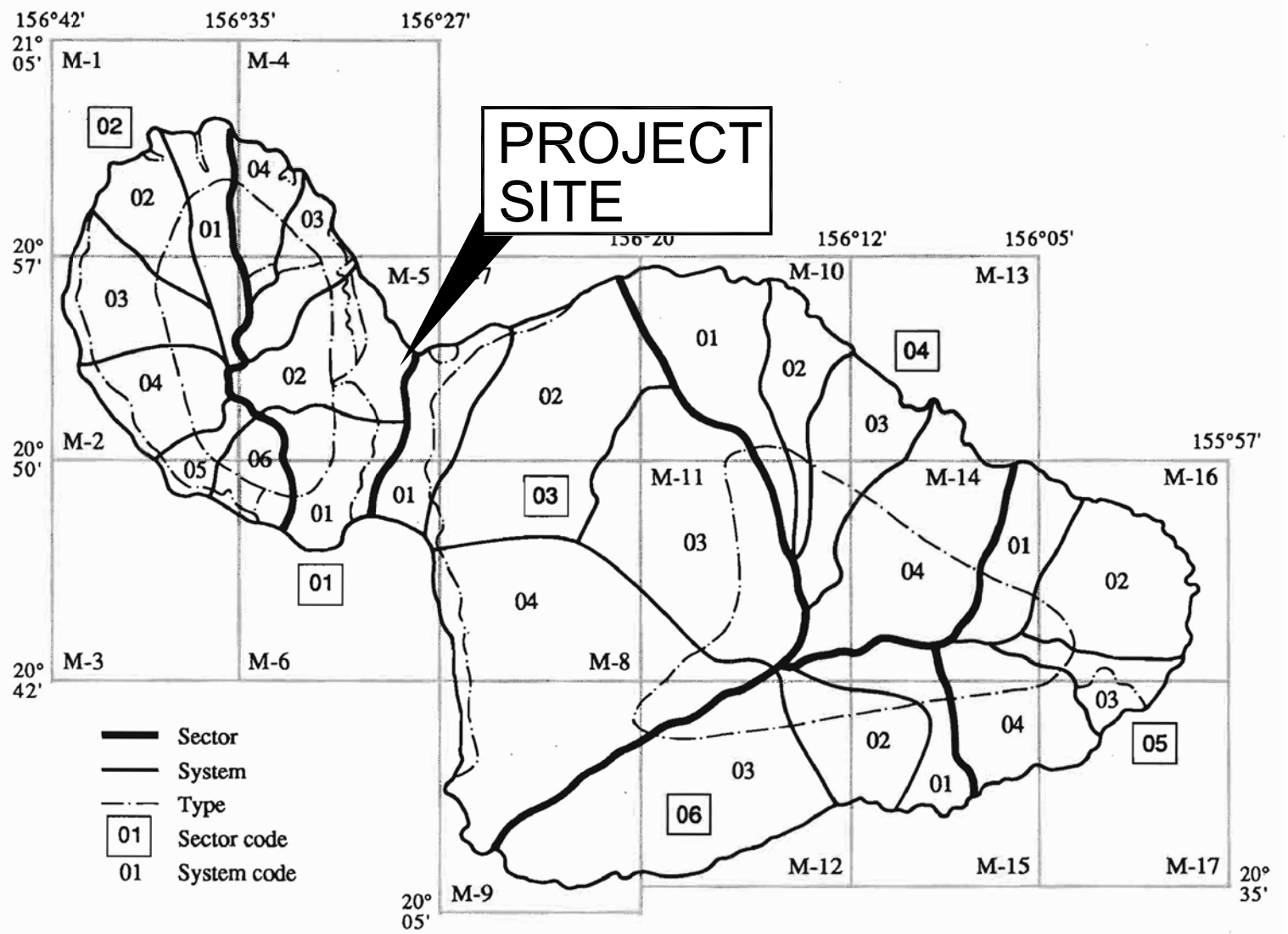
WAR MEMORIAL GYM PARKING LOT **FINDS** **1006874149**
WAILUKU RD **110014383666**
WAILUKU, HI 96793

FINDS:

Registry ID: 110014383666

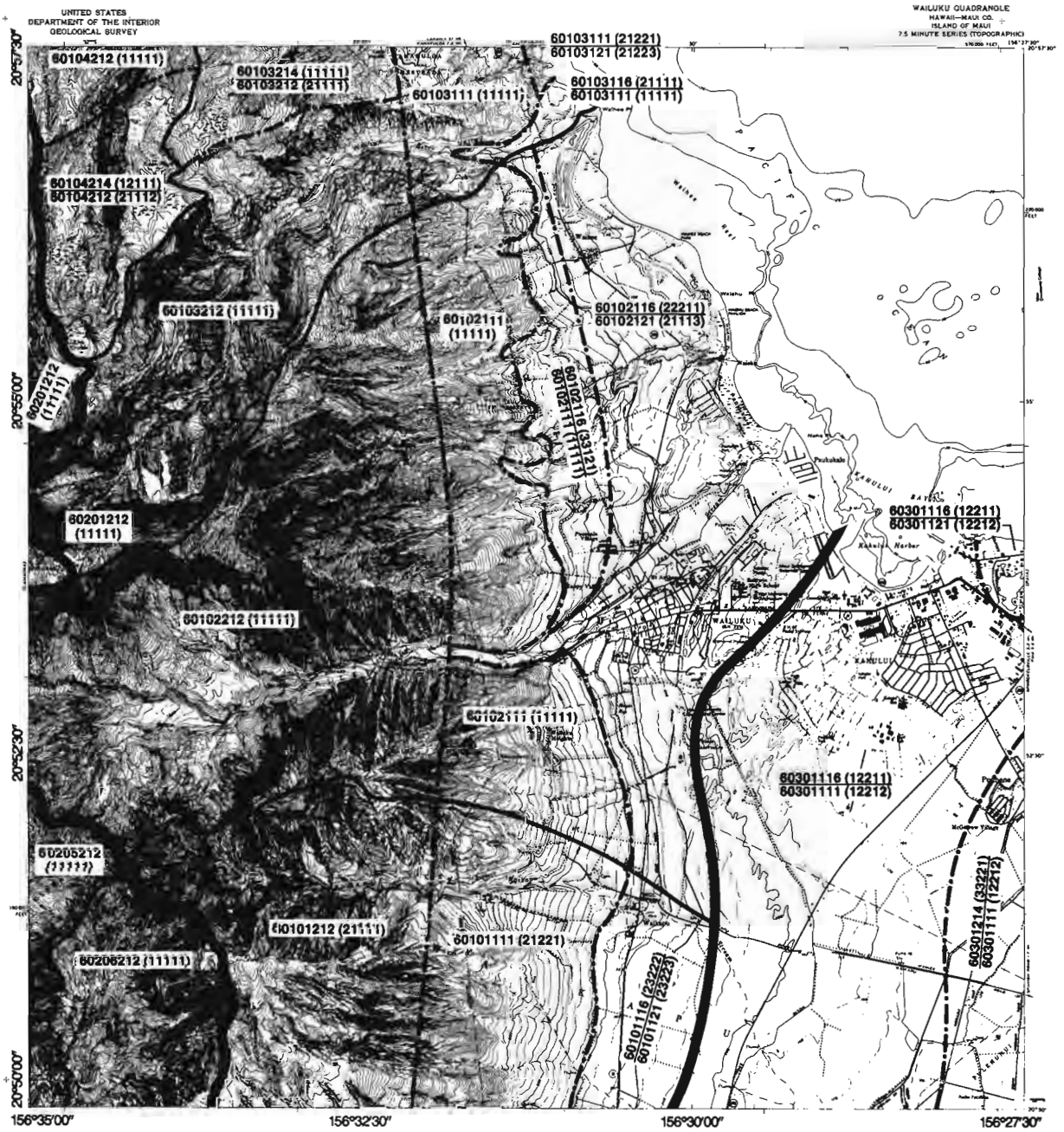
Environmental Interest/Information System
HI-SW (Hawaii Office Of Solid Waste) coordinates a statewide P2 workgroup to enhance information sharing regarding solid waste.

Appendix D - Aquifer Classification



Appendix Figure A.1.0 Layout of aquifer Sectors, Systems, and Types for Maui, Hawai'i

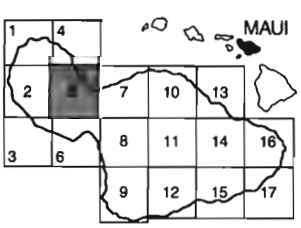
Source: "Aquifer Identification and Classification for Maui: Groundwater Protection Strategy for Hawai'i" Unversity of Hawaii, Water Resources Research Center, Technical Report #185, Mink and Lau, 1992



Base Map: USGS (1:24,000 series, rev. 1983).

WAILUKU, MAUI
M-5

1990



Sector
Aquifer System
Aquifer Type
60104212 Aquifer Code
(11111) Status Code

0 1 2 Miles
0 1 2 3 Kilometers

WATER RESOURCES RESEARCH CENTER
University of Hawaii at Manoa

Appendix Figure A.1.5. Aquifer classification map, Wailuku, Maui, Hawai'i

UPPER AQUIFER

AQUIFER CLASSIFICATION EXPLANATION

AQUIFER AND STATUS CODES

Aquifer Code = Island
+ Aquifer Sector
+ Aquifer System
+ Aquifer Type

Thus, 60102111 = Aquifer Code
where 6 = Maui
01 = Wailuki
02 = Iao
1 = basal
1 = unconfined
1 = flank

and

(1111) = Status Code
where 1 = currently used
1 = drinking
1 = fresh, <250 mg/l Cl^-
1 = irreplaceable
1= high vulnerability to contamination

IS.	AQUIFER SECTOR	AQUIFER SYSTEM
6	**01 Wailuku**	01 Waikapu
		02 Iao
		03 Waihee
		04 Kahakuloa
___	02 Lahaina	01 Honokohau
		02 Honolua
		03 Honokowai
		04 Launiupoko
		05 Olowalu
		06 Ukumehame
	03 Central	01 Kahului
		02 Paia
		03 Makawao
		04 Kamaole
	04 Koolau	01 Haiku
		02 Honopou
		03 Waikamoi
		04 Keanae
	05 Hana	01 Kuhiwa
		02 Kawaipapa
		03 Waihoi
		04 Kipahulu
	06 Kahikinui	01 Kau po
		02 Nakuula
		03 Lualailua

* Where aquifers are in vertical sequence, the Aquifer and Status Codes are separated by a division line in order of occurrence, with the uppermost aquifer appearing first.

AQUIFER TYPE:	Hydrology†	
1	**Basal**	**Fresh water in contact with seawater**
2	High Level	Fresh water not in contact with seawater

1	**Unconfined**	**where water table is upper surface of saturated aquifer**
2	Confined	Aquifer bounded by impermeable or poorly permeable formations, and top of saturated aquifer is below groundwater surface
3	Confined or Unconfined	Where actual condition is uncertain

AQUIFER TYPE:	GEOLOGY‡	
1	Flank	Horizontally extensive lavas
2	Dike	Aquifers in dike compartments
3	Flank/Dike	Indistinguishable
4	Perched	Aquifer on an impermeable layer
5	Dike/Perched	Indistinguishable
6	**Sedimentary**	**Nonvolcanic lithology**

† 1st two digits from hydrologic descriptors (pts. 1, 2).
‡ Last digit from geologic descriptor.

STATUS CODE (GROUNDWATER)

Development Stage
1 Currently Used
2 Potential Use
3 No potential use

Utility
1 Drinking
2 Ecologically important
3 Neither

Salinity (mg/l Cl^-)
1 Fresh (<250)
2 Low (250-1000)
3 Moderate (1000-5000)
4 High (5000-15,000)
5 Seawater (>15,000)

Uniqueness
1 Irreplaceable
2 Replaceable

Vulnerability to Contamination
1 High
2 Moderate
3 Low
4 None

LOWER AQUIFER

AQUIFER CLASSIFICATION EXPLANATION

AQUIFER AND STATUS CODES

Aquifer Code = Island
+ Aquifer Sector
+ Aquifer System
+ Aquifer Type

Thus, 60102111 = Aquifer Code
where 6 = Maui
01 = Wailuki
02 = Iao
1 = basal
1 = unconfined
1 = flank

and

(1111) = Status Code
where 1 = currently used
1 = drinking
1 = fresh, <250 mg/l Cl^-
1 = irreplaceable
1= high vulnerability to contamination

IS.	AQUIFER SECTOR	AQUIFER SYSTEM
6	**01 Wailuku**	01 Waikapu
		02 Iao
		03 Waihee
		04 Kahakuloa
___	02 Lahaina	01 Honokohau
		02 Honolua
		03 Honokowai
		04 Launiupoko
		05 Olowalu
		06 Ukumehame
	03 Central	01 Kahului
		02 Paia
		03 Makawao
		04 Kamaole
	04 Koolau	01 Haiku
		02 Honopou
		03 Waikamoi
		04 Keanae
	05 Hana	01 Kuhiwa
		02 Kawaipapa
		03 Waihoi
		04 Kipahulu
	06 Kahikinui	01 Kau po
		02 Nakuula
		03 Lualailua

* Where aquifers are in vertical sequence, the Aquifer and Status Codes are separated by a division line in order of occurrence, with the uppermost aquifer appearing first.

AQUIFER TYPE:	Hydrology†	
1	**Basal**	**Fresh water in contact with seawater**
2	High Level	Fresh water not in contact with seawater
1	Unconfined	where water table is upper surface of saturated aquifer
2	**Confined**	**Aquifer bounded by impermeable or poorly permeable formations, and top of saturated aquifer is below groundwater surface**
3	Confined or Unconfined	Where actual condition is uncertain

AQUIFER TYPE:	GEOLOGY‡	
1	**Flank**	**Horizontally extensive lavas**
2	Dike	Aquifers in dike compartments
3	Flank/Dike	Indistinguishable
4	Perched	Aquifer on an impermeable layer
5	Dike/Perched	Indistinguishable
6	Sedimentary	Nonvolcanic lithology

† 1st two digits from hydrologic descriptors (pts. 1, 2).
‡ Last digit from geologic descriptor.

STATUS CODE (GROUNDWATER)

Development Stage
1 Currently Used
2 Potential Use
3 No potential use

Utility
1 Drinking
2 Ecologically important
3 Neither

Salinity (mg/l Cl^-)
1 Fresh (<250)
2 Low (250-1000)
3 Moderate (1000-5000)
4 High (5000-15,000)
5 Seawater (>15,000)

Uniqueness
1 Irreplaceable
2 Replaceable

Vulnerability to Contamination
1 High
2 Moderate
3 Low
4 None

Appendix E - Documents

USER QUESTIONNAIRE

Site Name: **Wailuku Municipal Parking Structure**
2061 West Vineyard Street
Wailuku, Maui, Hawaii 96793
TMK: (2) 3 - 4 - 013: 075

Title and Signature of Person Completing Questionnaire

Wendy Taomoto

Wendy Taomoto, P.E.
County Capital Improvement Program Coordinator

Date: January 17, 2011

The following are a series of questions from ASTM 1527-05 that must be answered in order to qualify for LLPs under CERCLA. Please provide an answer to each question or attach pertinent information and identify a number for each attachment.

(1.) Are you aware of any environmental cleanup liens against the *property* that are filed or recorded under federal, tribal, state or local law?

☒ No ☐ Yes (Describe or attach information) Attachment No. _____

2.) Are you aware of any Activity and Use Limitations (AULs), such as engineering controls (e.g. engineered caps, foundations, liners, treatment methods, etc. in use to prevent contamination from migrating to surrounding areas), land use restrictions or institutional controls (e.g. administrative measures restricting groundwater use, construction, or property use) that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

☒ No ☐ Yes (Describe or attach information) Attachment No. _____

(3.) Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

☒ No ☐ Yes (Describe or attach information) Attachment No. _____

(4.) Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

☐ No ☐ Yes (Describe or attach information) Attachment No. _____

Property was purchased by other county staff. I am not aware of conditions or terms of purchase by county.

If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*?

☐ No ☐ Yes (Describe or attach information) Attachment No. _____

(5.) Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as User,

(a.) Do you know the past uses of the property?

☐ No ☒ Yes (Describe or attach information) Attachment No. 1

See attached map titled "Parking Facilities, Maui County Item C-8-b Act 30 SLH 1962".

(b.) Do you know of specific chemicals that are present or once were present at the property?

☒ No ☐ Yes (Describe or attach information) Attachment No. _____

(c.) Do you know of spills or other chemical releases that have taken place at the property?

☒ No ☐ Yes (Describe or attach information) Attachment No. _____

(d.) Do you know of any environmental cleanups that have taken place at the property?

☒ No ☐ Yes (Describe or attach information) Attachment No. _____

(6.) As the User of the ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?

☒ No ☐ Yes (Describe or attach information) Attachment No. _____


NORTH MARKET STREET
WEST VINEYARD STREET
PILI STREET
WEST MAIN STREET
NORTH CHURCH STREET
Scale 1 inch = 20 feet
AREA = 6,341 Sq. Ft.
LOT 1 & 14
AREA = 3,870 Sq. Ft.
LOT 2
AREA = 3,589 Sq. Ft.
LOT 3
AREA = 3,763 Sq. Ft.
LOT 4
AREA = 3,154 Sq. Ft.
LOT 2
AREA = 3,876 Sq. Ft.
LOT 12 & 13-A
AREA = 2,715 Sq. Ft.
LOT 11
AREA = 2,827 Sq. Ft.
LOT 10
AREA = 6,270 Sq. Ft.
LOT 20
AREA = 3,381 Sq. Ft.
LOT 22
AREA = 3,507 Sq. Ft.
LOT 23
AREA = 3,411 Sq. Ft.
LOT 24
AREA = 1,331 Sq. Ft.
AREA = 21,452 Sq. Ft.
AREA = 576 Sq. Ft.
LOT K E
2,195 Sq. Ft.
LOT Y M S S
AREA = 1,582 Sq. Ft.
AREA = 43 Sq. Ft.
AREA = 1,422 Sq. Ft.
10,229 Sq. Ft.
LOT 1-B
LOT 1-A
13,804 Sq. Ft.
LOT 3-A
LOT 3-B
14,003 Sq. Ft.
LOT 1
13,853 Sq. Ft.
9,563 Sq. Ft.
5,540 Sq. Ft.
LOT 5
11,823 Sq. Ft.
5,800 Sq. Ft.
7,064 Sq. Ft.
5,878 Sq. Ft.
5,896 Sq. Ft.
5,034 Sq. Ft.
5,543 Sq. Ft.
4,052 Sq. Ft.
9,604 Sq. Ft.
(UNOSUKE OGAWA)
(MAUI SUPPLY CO., LTD.) 1¢
SEICHI MAKINO & wf KIYOKO
JOSEPH BORBA
ELIZABETH FOO SUM-YAU
TOMIYOSHI SHIBANO & wf BERNICE
SHIGENOBU SHIBANO & wf FUSAE
FUJIO SHIBANO & wf HIDEKO
DOROTHY SHIBANO
LOT 18
LOT 19
GEORGE EAM & wf BETTY S. W.
TOW YEE KWOCK INVESTMENT CO. LTD.
GUY S. GOODNESS EST
TSUCHIYO NAKAGAWA
KINICHI EMURA & wf TAKENO
YOUNG MEN'S LOAN CORPORATION
FIRST NATIONAL BANK
CHISEKO OKAMURA & ROBERT Y. OKAMURA & wf ALICE S. O. OMANDO
YOUNG YUNG SHEE
WAI YUN YOUNG
HONG YIP YOUNG
CLARENCE C. T. YOUNG
MARIE P. MESSNER
AGNES P. KOLEOKI
JUNE P. MADISON
SARAH P. SOUZA
CATHERINE P. RAMES
CRAIG L. KENNEDY
LOUIS J. PARESA
JOSEPH F. PARESA
JOAQUIN F. PARESA
(ALL 1/9 SHARE)
C. S. LAU
TSUNEICHI KONO & wf SHIGEKO Y.
ALICE S. DANG
EUGENE L. K. Y. DANG
DEPOLDINE R. PETERS
ROSA R. NOBRIGA
HELEN R. GORA
SADAKO WATANABE
HONG TAI TOM
MARIA R. MIRELES
AH FAI CHING & wf VIRGINIA K. S.
K. TAKITANI ENTERPRISES, LTD.
FIRST INSURANCE COMPANY OF HAWAII
EL/ZA SMYTHE
SHELL OIL COMPANY INCORPORATED (lle)
SHELL M.O.G. SUPPLY
ESTATE OF JAMES G. ALULI et al TRS. (lle)
ALULI MOTORS, LTD.
KEPUHAI ISLE
ROSE PORTION
LOT 3-B
LOT 4
LOT 5
LOT 1-B
LOT 1-A
LOT 3-A
LOT 2
LOT 1
LOT 12 & 13-A
LOT 11
LOT 10
LOT 20
LOT 21
LOT 22
LOT 23
LOT 24
LOT 1 & 14
LOT 2
LOT 3
LOT 4
LOT 5
LOT 18
LOT 19
LOT K E
LOT Y M S S
L.C.Aw. 346
4568
PLUMERIA
MANGO
COCONUT
PEAR
PALM
BANYAN
KIAWE
N 156° 01' 06" 192.01'
156° 27' 28" 375.54'
150° 30' 31" 414.85'
150° 30' 31" 156.62'
150° 30' 31" 587.17'
S 74° 43' 36" 553.89'
S 74° 43' 36" 4.00
S 15° 16' 24" 21.00
S 74° 43' 36" 164.87'
S 15° 16' 24" 164.87'
N 74° 43' 36" 164.87'
N 15° 16' 24" 164.87'
N 74° 43' 36" 136.97'
S 15° 16' 24" 136.97'
N 74° 43' 36" 4.00
S 74° 43' 36" 4.00
N 15° 16' 24" 21.00
S 74° 43' 36" 4.00
N 15° 16' 24" 136.97'
S 74° 43' 36" 136.97'
N 74° 43' 36" 136.97'
S 15° 16' 24" 136.97'
N 74° 43' 36" 4.00
S 74° 43' 36" 4.00
N 15° 16' 24" 21.00
S 74° 43' 36" 4.00
N 15° 16' 24" 164.87'
S 74° 43' 36" 164.87'
N 74° 43' 36" 4.00
S 15° 16' 24" 164.87'
N 74° 43' 36" 136.97'
S 15° 16' 24

Appendix F - Assessor Qualifications

CHARLES G. BROWN **Project Manager/Environmental Physicist**

Mr. Brown has a broad range of experience in operations, administration, nuclear engineering, open ocean operations, safety, training, environmental assessment, hazardous materials management and hazardous material remediation. He has worked throughout the Pacific Rim, including Hawaii, California, Washington, Alaska, Panama, Guam, the Republic of the Philippines, Thailand, Hong Kong, Kwajalein Island and Japan.

EDUCATION

B.S., Physics, United States Naval Academy, Annapolis, Maryland, 1976

Naval Nuclear Propulsion Engineer, United States Naval Nuclear Training, 1978

EXPERIENCE

- Edward K. Noda and Associates, Inc.
  1995 to Present

  Mr. Brown's experience includes Radioactive Material Management, Safety and Control; OSHA Regulations and Management; Hazardous Material Sampling and Analysis; Phase I/Phase II Environmental Assessments; preparation of sampling plans; and preparation of safety plans.

- United States Naval Officer
  1972 to 1994

  Management positions at the executive level including Operations, Administration, Nuclear Engineering, Safety and Training.

  Last assignment was as the Radiation Safety, Hazardous Material and Safety Manager for the Naval Submarine Training Center, Pearl Harbor, Hawaii from 1991 to 1994.

RELATED TRAINING

- Radioactive Material Safety
- Hazard Control Safety Program Management
- Hazardous Materials & Waste Control
- General Industry Standards
- Respirator Protection Program Manager
- Supervisors Safety Training
- Hazardous Waste Operations (HAZWOPER) 40 hour and 8 hour refreshers
- Safe Transportation of Hazardous Materials
- Confined Space Entry
- Lead Abatement Contractor/Supervisor and Inspector
- AHERA Asbestos Certifications
- NIOSH 582 Equivalent Microscopy
- Occupational Safety and Health Instructor
- Total Quality Management/Leadership Training and Application
- Certified SCUBA Diver

Previous project experience includes:

- **US Army Corps of Engineers**, Various Locations, Hawaii - Indefinite Delivery/Indefinite Quantity contract involving site characterizations, UST removals, site closures, risk assessments and remedial actions at over 30 sites in Hawaii.

- **Hawaii Department of Transportation, Airports Division**, Various Facilities, Oahu, Hawaii - Several delivery orders involving site closures, UIC well closures, UST removals and hazardous material abatement.

- **Reef Runway Soil Management Facility**, Honolulu International Airport, Oahu, Hawaii - Placement and management/remediation of petroleum hydrocarbon containing soil generated at airport construction projects.

- **Closure of Seven (7) Underground Injection Control Wells and Two (2) Sumps**, Lihue, Kauai, Hawaii - Contractor monitoring, field inspection, field sampling and report preparation.

- **Closure of Four (4) Underground Storage Tanks**, Halawa Medium Security Facility, Aiea, Oahu, Hawaii - Contractor monitoring, field inspection, field sampling and report preparation.
- **Phase 1 ESA, Asbestos Survey, and Lead Paint Survey**, Jolly Roger, Waialae, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Kaneohe Atrium, Kaneohe, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Air Liquide, Hilo, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.
- **Closure of Underground Storage Tanks**, University of Hawaii Hilo, South Hilo, Hawaii - Contractor monitoring, field inspection, field sampling and report preparation.
- **Lead and Chlordane Investigation**, NCTAMS EASTPAC Naval Facility, Hawaii - Field inspection, history investigation, research, field sampling and report preparation.
- **Closure of Underground Storage Tank**, Waipahu Wastewater Pump Station, Waipahu, Hawaii - Contractor monitoring, field inspection, field sampling and report preparation.
- **Phase 1 and 2 ESAs**, Hawaii State Project, Kalihi, Hawaii - Field inspection, history investigation, research, field sampling and report preparation.
- **Phase 1 ESA**, Kona Ace Hardware, Kailua-Kona, North Kona, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Condominium Development, Princeville, Kauai, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Koolauloa Farm, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Kapalua Bay Hotel, Kapalua, Maui, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Queen Street Extension, Honolulu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Remedial Site Grading**, Residential Construction, Hawaii Kai, Hawaii - Contractor monitoring, field inspection, field sampling and report preparation.
- **Soil Remediation**, KGU Radio Tower, Honolulu, Hawaii - Contractor monitoring, field inspection, field sampling and report preparation.
- **Asbestos and Lead Paint Surveys**, Misawa Air Base, Misawa, Japan - Field inspection, field sampling and report preparation.
- **Phase 1 and 2 ESAs**, Wal-Mart Stores, Inc., Kapolei, Oahu, Hawaii - Field inspection, history investigation, research, field sampling and report preparation.
- **Phase 1 and 2 ESAs**, Manana Wal-Mart, Pearl City, Oahu, Hawaii - Field inspection, history investigation, research, field sampling and report preparation.
- **Phase 1 ESA**, Akepo Lane Warehouse, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Dillingham Airfield, Mokuleia, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Village Park Connector Road, Waipahu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Proposed Health and Wellness Center, Vocational Training Center, ADA Recreational Facility, Koolauloa,, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.

- **Phase 1 ESA**, Kapalua Bay Hotel, Kapalua, Maui, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Warehouse Bay Waihona Street, Pearl City, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 91-424 Komohana Street, Campbell Industrial Park, Kapolei, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 94-170 Leoole Street, Waipahu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 94-170 Leoole Street, Waipahu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Noh Launderland and Dry Cleaning, Noh Apartments, Beretania Street, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 212 Acres of Land, Pupukea, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Hawaiian Wireless Equipment Site and Standby Generator, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, American Towers, Ocean View, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Hilo Judiciary Project, Kaiko'o Mall, Hilo, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Proposed Honolulu Cellular Relay Station Sites, Pupukea and Koolauloa, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Cafè 100, Hilo, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.
- **Numerous Phase 1 ESAs**, Ocean Pointe Subdivisions, Golf Course and Marina, Ewa Beach, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 1504/1510 Liholiho Street, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, State Land at Kanoelehua and Kekuanaoa Avenues, Waiakea, Hilo, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Kenny's Burger House, N. School Street, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Warehouse, 99-870 Iwaena Street, Aiea, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Proposed Zippy's Restaurant, Fort Weaver Road, Ewa, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Waimalu Shopping Center, Kamehameha Highway, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Warehouse, 628 Laumaka Street, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 94-871 and 94-873 Waipahu Street, Waipahu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 1088 and 1098 Sand Island Parkway, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.

- **Phase 1 ESA**, 69 Hobron Avenue, Kahului, Maui, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 330 Sand Island Access Road and 2224, 2230, 2290, 2298 and 2333 Alahao Place, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Proposed Kohala Library Site, Hawi-Niulii Road, North Kohala, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Windward Commercial, 46-158 Malina Place, Kaneohe, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Proposed Time Warner Cable Expansion, 137 Palii Street, Mililani Technology Park, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 2645 Kilihau Street, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Kokea Training Center, 803 and 805 Kokea Street, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 3119 Olu Street, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Proposed Aloha KIA Kauai, 4261 Puhi Road, Puhi, Kauai, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Waimanalo Agricultural Subdivision, Lot A, Waimanalo, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Parcel Fronting 1200 North Nimitz Highway, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Proposed Kapolei Interchange - Interstate Route H-1, Kapolei, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Kohala Preserve - Mahukona, Mahukona, North Kohala, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Auto Fender Clinic and Colorprints, Inc., 1052 Kawaiahao Street and 1051 Waimanu Street, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Proposed Wendy's Manana, Manana Lot B-2, Kuala Street, Pearl City, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Proposed ISI Site, Manana Parcel E, Kuala Street, Pearl City, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Waikamilo Taco Bell, 615 Waiakamilo Road, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 148 - 206 Mokauea Street, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Mauna Kea Beach Hotel and Golf Course, Kauna`oa Bay, District of South Kohala, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Hapuna Prince Hotel and Golf Course, Hapuna Bay, District of South Kohala, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Maui Prince Hotel and Golf Course, 5400 Makena Alanui, Makena, Maui, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Kohala Preserve Ranch, North Kohala, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.

- **Phase 1 ESA**, Kamehameha Drive-In, Kaonohi Street, Aiea, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Aiea Wendy's, 99-245 Moanalua Road, Aiea, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Investigative Asbestos-Containing Building Material (ACBM), Lead-Containing Paint (LCP) and Polychlorinated Biphenyl (PCB) Fluorescent Light Ballast Survey**, Wahiawa Wendy's, 20 South Kamehameha Highway, Waiawa, Oahu, Hawaii - Field inspection, field sampling and report preparation.
- **Phase 1 ESA**, Wendy's Wahiawa, 20 South Kamehameha Highway, Wahiawa, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Proposed Puunene Commercial Development, Puunene, Maui, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Keeaumoku McDonald's, 910 Keeaumoku Street, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Kaneohe McDonald's, 45-480 Kaneohe Bay Drive, Kaneohe, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESAs**, Four Sites of Gentry Properties, Waipio Gentry, Waipahu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Gentry Business Park, Lot 56, 94-429 Ukee Street, Waipahu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Land of Pahoehoe 2, Alii Drive, Kailua-Kona, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Lahaina McDonald's, 885 Wainee Street, Lahaina, Maui, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 1314 North School Street, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 1320 North School Street, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Kaneohe Shopping Center, 45-934 Kamehameha Highway, Kaneohe, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Gentry Pacific Design Center, 560 North Nimitz Highway, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Pearl City Gateway McDonald's, Kuala Street, Pearl City, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Kapolei McDonald's, Kapolei Parkway, Kapolei, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Doi Kalaheo Properties, 2437 Alelo Road, Kalaheo, Kauai, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 8315 Kekaha Road, Kekaha, Kauai, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA,** Hawaii DOT Harbors, 861 North Nimitz Highway, Honolulu, Oahu, Hawaii - Field inspection, field sampling and report preparation.
- **Phase 1 ESA**, Adult Student Housing (ASH) - Hale Kawili, 430 West Kawili Street, Hilo, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.

- **Investigative Asbestos-Containing Building Material (ACBM), Lead-Containing Paint (LCP) and Polychlorinated Biphenyl (PCB) Fluorescent Light Ballast Survey**, University Palms Apartments, 1377 Kapiolani Street, Hilo, Hawaii Island, Hawaii - Field inspection, field sampling and report preparation.

- **Phase 1 ESA**, University Palms Apartments, 1377 Kapiolani Street, Hilo, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.

- **Investigative Asbestos-Containing Building Material (ACBM), Lead-Containing Paint (LCP) and Polychlorinated Biphenyl (PCB) Fluorescent Light Ballast Survey**, 1367 Kapiolani Street, Hilo, Hawaii Island, Hawaii - Field inspection, field sampling and report preparation.

- **Phase 1 ESA**, 1367 Kapiolani Street, Hilo, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.

- **Phase 1 ESA**, 55-510 Hawi Road, Hawi, North Kohala, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.

- **Phase 1 ESA**, 99-187 Aiea Heights Drive, Aiea, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.

- **Phase 1 ESA**, McDonald's Moanalua, Moanalua Shopping Center, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.

- **Bunker Fuel Spill Cleanup Response,** Hilo Harbor Pier 3, Hilo, Hawaii Island, Hawaii - Field inspection, field sampling, cleanup and report preparation.

- **Soil and Water Characterization,** Nimitz Highway Rehabilitation and Water System, Honolulu, Oahu, Hawaii - Field inspection, field sampling and report preparation.

- **Fuel, Hydraulic and Lubricant Release**, Blue Hawaiian Helicopters #N196BH, Hamakua Area, Hawaii Island, Hawaii - Field inspection, field sampling, cleanup and report preparation.

- **Consultation and Field Sampling,** silica sands, cargo ship M/V Genco Pioneer, Kahului, Maui, Hawaii - Field inspection, field sampling and report preparation.

- **Release Response**, JP-8 Fuel Release, Helicopter Hot Refueling Area, Wheeler AAF, Oahu, Hawaii - Field inspection, field sampling, cleanup and report preparation.

- **Environmental Soil Sampling and Analysis**, Pearl City Urban Center, Pearl City, Oahu, Hawaii - Field inspection, field sampling and report preparation.

- **Chlorinated Pesticides Screening**, Wharf Street Shed Demolition, Kahului, Maui, Hawaii - Field inspection, field sampling and report preparation.

- **Environmental Excavation Monitoring**, The Pinnacle Honolulu, 1199 Bishop Street, Honolulu, Oahu, Hawaii - Field inspection, field sampling and report preparation.

- **Environmental Consulting and Response Services**, Mauna Loa Hilo Plant, The Hershey Company, Hilo, Hawaii Island, Hawaii - Field inspection, field sampling, cleanup and report preparation.

- **Chlorinated Pesticides Screening,** P-578 Fitness Center, Naval Station Pearl Harbor, Oahu, Hawaii - Field inspection, field sampling and report preparation.

- **Environmental Site Investigation,** Hawaii DOT Harbors, 861 North Nimitz Highway, Honolulu, Oahu, Hawaii - Field inspection, field sampling and report preparation.

- **Subsurface Investigation**, Kurtistown Union 76, Kurtistown, Hawaii Island, Hawaii - Field inspection, field sampling and report preparation.

- **Dredge Material Sampling and Analysis**, Kikiaola Small Boat Harbor Maintenance Dredging Kikiaola, Kauai, Hawaii - Field inspection, field sampling and report preparation.

- **Closure of Underground Storage Tank**, University of Hawaii 88" Telescope, Mauna Kea Summit, Hawaii Island, Hawaii - Contractor monitoring, field inspection, field sampling and report preparation.

- **Closure of Underground Storage Tank**, University of Hawaii at Manoa, Food Technology Building, Oahu, Hawaii - Contractor monitoring, field inspection, field sampling and report preparation.
- **Environmental Soil Sampling**, Drydock 2 Waterfront Facility, Pearl Harbor Naval Ship Yard, Pearl Harbor, Oahu, Hawaii - Field inspection, field sampling and report preparation.
- **Closure of Underground Storage Tank**, Yee Hop, 933 Queen Street, Honolulu, Oahu, Oahu, Hawaii - Contractor monitoring, field inspection, field sampling and report preparation.
- **Closure of Underground Storage Tank**, Former Boat City, Kalihi Street and Nimitz Highway, Honolulu, Oahu, Hawaii - Contractor monitoring, field inspection, field sampling and report preparation.
- **Closure of Underground Storage Tank**, Williamson Residence, 4142 Round Top Drive, Honolulu, Oahu, Hawaii - Contractor monitoring, field inspection, field sampling and report preparation.
- **Closure of Underground Storage Tank**, 2004 & 2008 Republican Street, Honolulu, Oahu, Hawaii - Contractor monitoring, field inspection, field sampling and report preparation.

CHARLES G. SCHUSTER, P.E. **CIVIL ENGINEER**

Mr. Schuster has thirty-one years of experience in civil and environmental engineering design in a wide variety of civil engineering projects throughout Hawaii. Work responsibilities have included design and supervision of civil engineering works from layout and design of utility systems, pump stations, and site grading, in projects ranging through resort hotels, private subdivisions, shopping centers, and highways, as well as upgrades, repairs and retrofits to existing works. His involvement in these projects has ranged from feasibility studies, environmental assessments, site selection and investigation, through design, bidding, construction management and project closeout.

EDUCATION

B.S. Civil Engineering, University of Hawaii, 1976

EXPERIENCE

- Senior Civil/Environmental Engineer
  Edward K. Noda and Associates, Inc.
  1996 to Present

  Provided Senior Civil/Environmental Engineering services and is responsible for all hazardous materials (haz mat) design projects including underground storage tank (UST) removal, asbestos abatement and removal design, lead-based paint abatement and removal design, and other haz mat design services. In addition, Mr. Schuster's responsibilities also include Environmental Site Assessments (Phase 1 & 2), development of UST operation, maintenance and spill prevention plans, UST removal oversite and closure reports, monitoring well installations, and lead-based paint (LBP) inspection, surveys and risk assessments.

- GKO & Associates, Inc.
  1995 to 1996

  Performed civil engineering design services including underwater inspections of bridge substructures, various engineering studies in support of the U.S. Navy's unexploded ordnance clearance project at Kahoolawe Island such as development of water sources, fire protection for the base camp, and development of a nursery for native plant materials.

- Hawaii Community Development Authority (HCDA)
  1993 to 1995

  Provided engineering project management services including reviewing and coordinating consultant design efforts (plans and specifications), preparing bid documents, bidding and award, construction management services including construction inspection, review and approval of contractor submissions and pay requests, preparation of change orders, through contract closeout.

- Wilson Okamoto and Associates, Inc.
  1988 to 1993

  Provided general civil engineering services including planning and design, coordination with subconsultants, cost estimation, specification preparation, bidding, award, and construction management services. Project areas included roadway alignments, cross-section design, traffic and striping, water transmission and distribution mains, booster pumping stations, water storage tanks, hydrology and hydraulic calculations. Provided supervisory responsibility over junior engineers and draftspersons.

- Sam O. Hirota, Inc.
  1980 to 1988

  Provided civil engineering services related to civil engineering planning and design, coordination with subconsultants, cost estimation, and construction management services.

RELATED TRAINING

- Professional Engineer Registration, State of Hawaii, Civil Branch, 1984, License C-5634
- OSHA Hazwoper Certification
- AHERA Asbestos Project Designer Certification
- EPA Lead Inspector Certification
- EPA Lead Risk Assessor Certification
- Certified SCUBA Diver

Previous project experience includes:

- **Phase 1 ESA**, Queen Street Extension, Honolulu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Cafè 100, Hilo, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Proposed Kohala Library Site, Hawi-Niulii Road, North Kohala, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Proposed Kapolei Interchange - Interstate Route H-1, Kapolei, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Aiea Wendy's, 99-245 Moanalua Road, Aiea, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Gentry Pacific Design Center, 560 North Nimitz Highway, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Pearl City Gateway McDonald's, Kuala Street, Pearl City, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, Kapolei McDonald's, Kapolei Parkway, Kapolei, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Investigative Asbestos-Containing Building Material (ACBM), Lead-Containing Paint (LCP) and Polychlorinated Biphenyl (PCB) Fluorescent Light Ballast Survey**, University Palms Apartments, 1377 Kapiolani Street, Hilo, Hawaii Island, Hawaii - Field inspection, field sampling and report preparation.
- **Phase 1 ESA**, University Palms Apartments, 1377 Kapiolani Street, Hilo, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.
- **Investigative Asbestos-Containing Building Material (ACBM), Lead-Containing Paint (LCP) and Polychlorinated Biphenyl (PCB) Fluorescent Light Ballast Survey**, 1367 Kapiolani Street, Hilo, Hawaii Island, Hawaii - Field inspection, field sampling and report preparation.
- **Phase 1 ESA**, 1367 Kapiolani Street, Hilo, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 55-510 Hawi Road, Hawi, North Kohala, Hawaii Island, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, 99-187 Aiea Heights Drive, Aiea, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Phase 1 ESA**, McDonald's Moanalua, Moanalua Shopping Center, Honolulu, Oahu, Hawaii - Field inspection, history investigation, research and report preparation.
- **Chlorinated Pesticides Screening**, Wharf Street Shed Demolition, Kahului, Maui, Hawaii - Field inspection, field sampling and report preparation.
- **Phase 1 ESA**, Hawaii DOT Harbors, 861 North Nimitz Highway, Honolulu, Oahu, Hawaii - Field inspection, field sampling and report preparation.
- **Environmental Site Investigation,** Hawaii DOT Harbors, 861 North Nimitz Highway, Honolulu, Oahu, Hawaii - Field inspection, field sampling and report preparation.

Appendix K
History of Wailuku's Parking Lot Block

1715 Vineyard Street
Wailuku, Hawaii 96793
Dec. 3, 2001

Dear Chris and Mike,

Enclosed is my historical report on the parking lot block. It includes several maps, in chronological order. Please look it over and let me know as soon as possible if you need more detail on any aspect of the report.

Unfortunately, I have previous plans for Dec. 13 and will not be able to attend the Design Team Workshop. I may be able to attend for part of Dec. 14th. Please let me know if there's a particular time when it would be most helpful for me to be there, and I'll block out that time.

This has been an interesting project, and I look forward to seeing how the plan develops. Thanks for including me.

Jill Engledow



Typical Market Street buildings at the corner of Pili Avenue in 1962. *American Savings & Loan photo*

History of Wailuku's Parking Lot Block

The block that is now the site of Wailuku's municipal parking lot has been a center of activity for decades.

It probably was intensively used even in pre-contact times, though details are unknown. Anthropologist Dee Fredericksen of Xamanek Researches says no archeological study was done when the municipal parking lot was built in the 1960s, and recent studies by Xamanek in the area of the Main Street Promenade construction have found only post-contact artifacts.

It seems logical to assume, however, that when Kahekili was paramount chief of Maui in the 1700s, this was the site of a community clustered below his compound (located on the land now occupied by One Main Plaza). Old maps show the site as part of the `ili of Peepee, a subdivision of the Wailuku ahupua`a. In Kahekili's time, it may have held dwellings, or perhaps some of the taro lo`i that covered much of the fertile land stretching from `Iao Valley to the sea.

At the time of the Great Mahele, the ahupua`a of Wailuku was assigned to the king. This block was then divided into two land court awards made to Kapau and Wahinekuapuu. A sliver of the block on the Main Street side was the boundary of land awarded to Claus Spreckels.

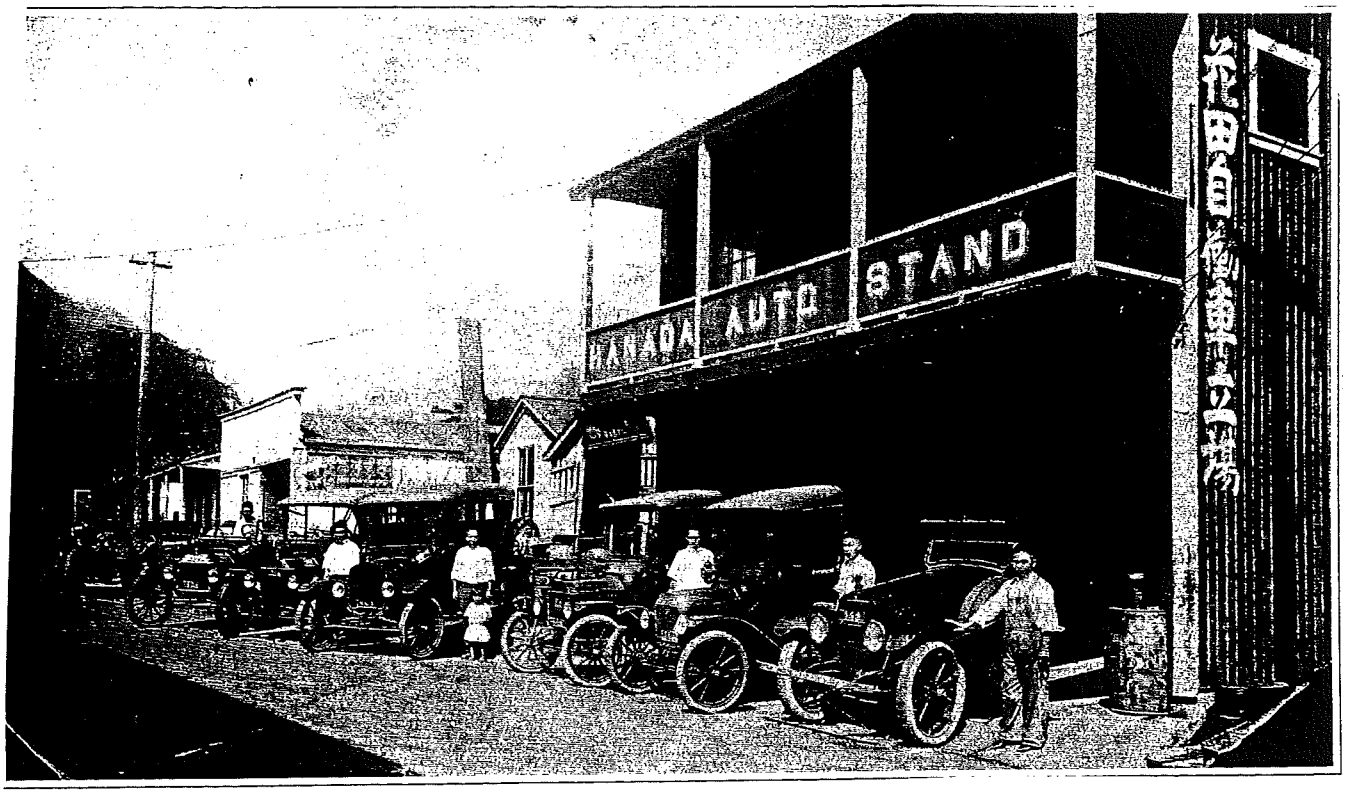
By the 1860s, a map by missionary and entrepreneur Edward Bailey shows both a "road to Waihee" -- Market Street -- and a "King's Highway/road to Kahului" -- apparently Main Street. A ditch carrying water for Wailuku Sugar Company runs around three sides of the area, one at the mauka edge of Market, and at least some of the block probably was used to grow sugar.

Bailey biographer Linda Decker says Market Street is quite old, predating Bailey, who came to Wailuku in 1840. On his 1863 map, one of the few houses marked is at the makai corner of these two roads, the "Poikai" residence. Since the Kepoikai family, and their relatives the Alulis, have owned land on both sides of Market Street for generations, it is possible that this Poikai is related.

By the 1880s, the M.D. Monsarrat map shows a buildup of structures along the Main and Market edges of this block. Visitor George Bowser described Wailuku in the 1880s as having "between 50 and 60 storekeepers, tradesmen, saloon keepers, poi manufacturers, etc." Many of them would have been on Market Street.

When The Maui News began publishing in Wailuku in 1900, the town was still rural enough that the paper reported in 1901, "a number of milch cows are allowed to run at large on Main Street near Market, and parents are cautioned not to allow small children to be on the street where the cows are." The editor kept readers informed of Wailuku's steady growth, describing in detail the plans and progress of both business and dwelling construction. This included construction of a marketplace at Market and Mill that was designed to keep fish and vegetable vendors from setting up shop along Market Street, a dirt road lined with wooden sidewalks.

Not all growth was welcome, and this area was a constant source of concern. The gracious home of Judge Auwae Noa Kepoikai, on the Main/Church corner, began "that portion of Wailuku occupied by the better class of people," the paper said in March 1900. On the other hand, "about a quarter of a mile from the corner of Main and High streets and toward Kahului, Market Street runs off at right angles to Main Street, toward Waihee. This is the China-town of Wailuku..." The area had been a focus of much editorial criticism and calls for cleanup during the epidemic of bubonic plague in January 1900, when the Chinatown of Honolulu was destroyed by fires intended to control the spread of plague.



Hanada Auto Stand provided taxi and car rental service on Kalua Avenue beginning ca. 1910. *Yoshie Sato Collection*

In August 1900, the paper described the "disease breeding shacks on Market Street." And in 1905, an editorial lambasted "shortsighted property owners," who allowed tenants "to construct ramshackle lean-tos on the lots...Property owners will lease new buildings with ample yard space ... and in the course of a few months these yards will be filled up with miserably constructed sheds and shacks built possibly of secondhand material which has seen better days and is anything but suitable lumber for building living quarters, as most of the shacks are sub-rented and used for that purpose or for living, cooking and washing quarters combined..."

A 1914 Sanborn Map Co. map prepared for insurance purposes shows the area bounded by lots crammed with small buildings, many of them labeled "tenements." The actual street frontage appears to have been in better condition, including everything from the telephone office on Main Street to moving pictures and doctors offices on Market to bakeries, candy and grocery stores, barbershops, tailors, gas stations, the Wailuku Japanese Christian Church at one corner of Church Street and the Kepoikai residence at the other. On the interior of the block is a Japanese hospital, assorted dwellings and several small businesses, and a large tract of open land belonging to Kepoikai. Kalua Avenue, lined with businesses and dwellings, runs between Market and Church.

Most of the lots in this block were small ones owned by individuals, with the exception of large pieces owned by the Kepoikai and Aluli families. Auwae Noa Kepoikai (1862-1911) was a judge first appointed by Queen Lili`uokalani in 1892, and Noa Alului, an attorney, was his nephew. Eliza Smythe, who still owned a large parcel and dwelling on Church Street at the time of the parking lot construction, apparently was a relative of the Kepoikai family.

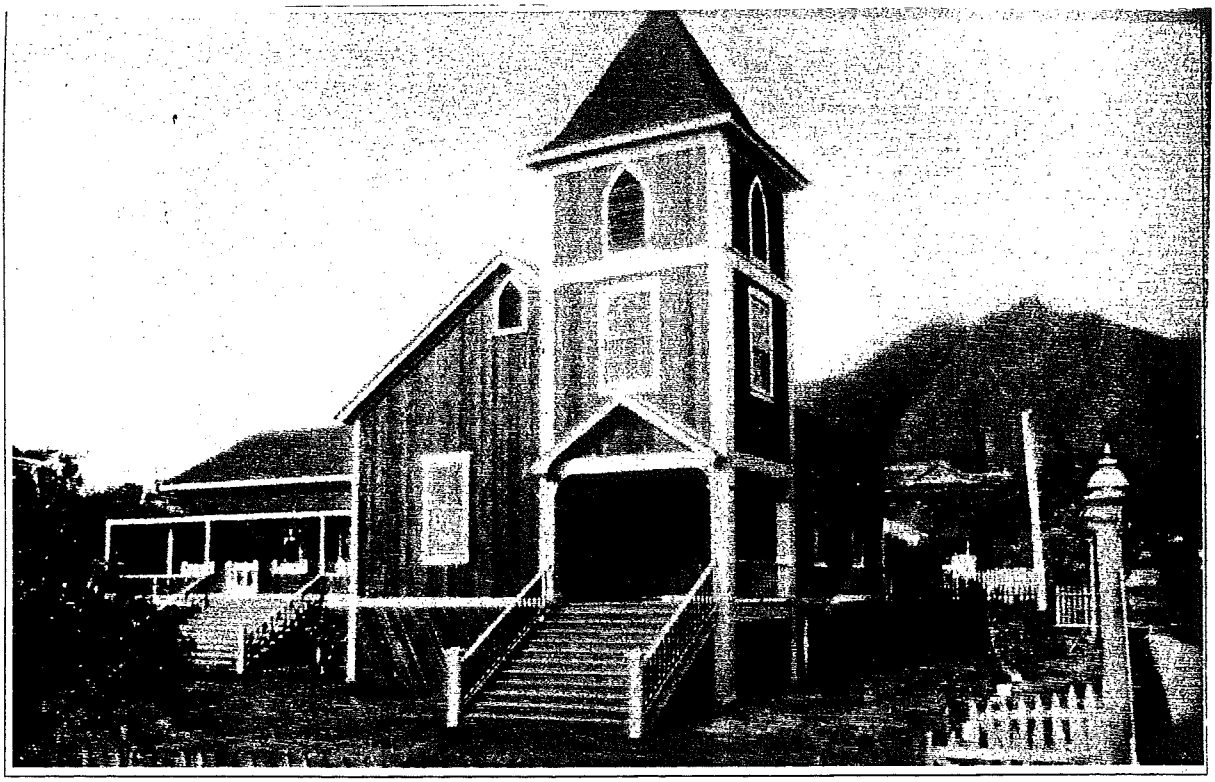
One Chinese businessman, Young Fun Teung, owned several lots along Kalua Avenue. Legal ads in The Maui News show him as president of the Maui Land Co. from 1904 to 1907. By the time of the county acquisition of land for parking facilities in 1962, only one of the lots belonged to people named "Young", but Chinese names remained on other lots in the area.

Fire ravaged a segment of Market Street in 1926. Five buildings were destroyed and others damaged, while sparks threatened much of Wailuku before the fire was brought under control. In 1929, a visiting fire marshal called Market Street a firetrap, and said he had given owners of buildings "on both sides of the street, from the fish market to Main Street, orders to abolish open fires and bathhouse fires within the next days."

Contemporary Wailuku businesswoman Susanne Hotta (owner of Gilbert's Formal Wear) recalls that even in the years just before the present parking lot was built in 1964, the area was packed with small frame buildings, very close together. Some of the houses were divided internally so that more than one family could live there. The last of these old buildings can be seen today at the back of Emura Jewelry and Sig Zane Design. The close-packed layout is similar to that which still exists behind the block formed by Vineyard and Market streets.

Richard Makino spent much of his childhood in a house behind his father's shoe store, located in the now-vacant lot next to Sig Zane. Makino remembers "There were nice homes there," not shacks, connected by narrow lanes where children roamed at will. The two-story Makino family house was "huge," but was shared with a second family. People lived on the second floor of some of the commercial buildings in the area.

Vineyard Street, another of the oldest streets in Wailuku, ran until 1920 from the cemetery at its mauka end down as far as Market Street. In 1900, the Maui News described it as "one of the prettiest streets in Wailuku for residences. But the street is not



Wailuku Japanese Christian Church, at Church and Vineyard 1909-1936, was replaced by the King Theater. The church moved up Vineyard Street and was later renamed Iao Congregational Church. *Iao Church photo*

kept as it should be. It is rarely watered, and the roadway is practically one great dust heap." In 1920, Vineyard was cut through the Robinson property to continue downhill on its present course.

Market Street is clearly one-way in photos dating back to the 1940s. The segment of Vineyard at the boundary of the parking lot block was one-way heading uphill, as far back as Hotta and Makino can remember. The county did not have a wide enough right-of-way to expand the street until the 1990s.

Kalua Avenue, still so-named on the 1927 Sanborn map, has been changed to Pili Avenue on the 1945 map. Wailuku native and Maui history expert Charles Pili Keau says the road was renamed in honor at his father, who died in 1929. The ends of the one-block road are now entrances to the parking lot.

Business thrived in Wailuku, both the county seat and the commercial center of Maui. Gradually, old buildings were renovated or razed, and new ones erected. In 1924, the Baldwin Bank moved to Market Street in the location now occupied by its successor, First Hawaiian Bank. Maui Electric Co. set up shop on the street in 1926, sharing the bank building. The movie house on the mauka corner of Main and Market became Wailuku Hardware & Grocery in 1917, and was replaced in 1938 by the Main Market, a "shopping center of 12 shops." Next door, Valley Isle Motors established its sales and

service operation with a spacious showroom that served the business until the 1990s.

In the 1930s and '40s, and into the '50s, Wailuku was bustling and busy, both a neighborhood and a busy shopping district. At Christmas, Richard Makino recalls, "it was very festive, with the lights strung along the street, and Santa Claus came out every night and walked along the street giving candy to the kids." During World War II, military personnel made the already busy streets even more crowded, and shoeshine boys vied for business.

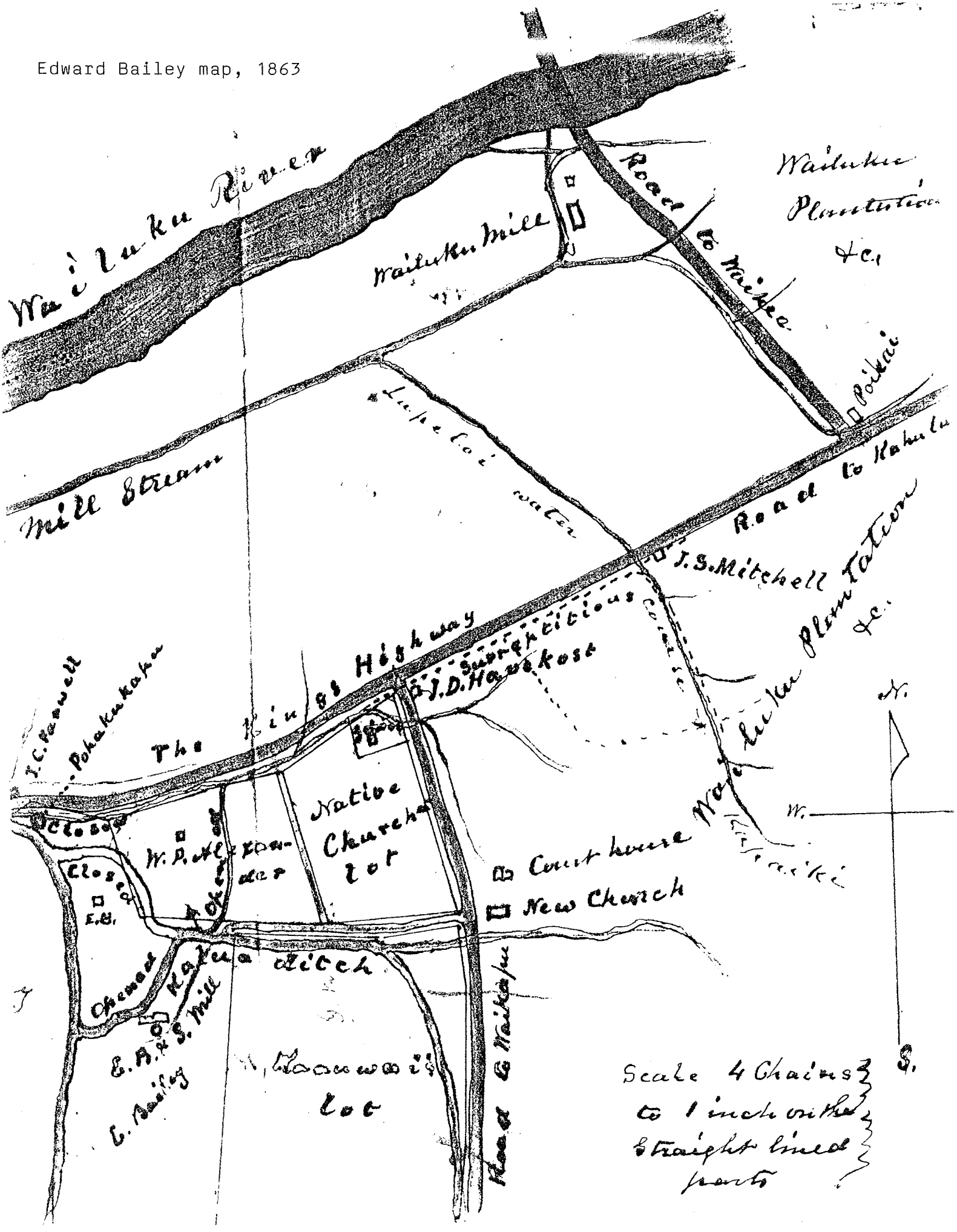
Wailuku began to fade with the establishment of modern shopping centers in Kahului. By 1962, urban planners recommended redevelopment of "obsolete structures, mixed and ill-advised land uses, narrow substandard streets and overcrowded building and living conditions."

Though many of the recommendations to modernize the center of Wailuku never came to pass, Wailuku's off-street parking was constructed as a result of this planning and of lobbying by Wailuku merchants. The state appropriated $260,000 for the project.

By August 1963, County Attorney Kase Higa reported to the county Board of Supervisors that 13 owners had agreed on purchase prices ranging from $150 (to Shibano Store for 44 sq. ft.) to $41,100 (to the Noa Aluli Trust for 21,542 sq. ft.), while negotiations were continuing with the remaining eight others. Norman Saito was hired as engineer, and Fong Construction was contracted at $82,718.30. On November 20, 1964, County Engineer Masao Sone reported to the board that all work had been satisfactorily completed. Susanne Hotta recalls that the parking lot opened with a celebration, with Gov. John A. Burns attending the ceremony.

Reproduced on
State Archives copy

Edward Bailey map, 1863



M.D. Monsarrat map, 1882



Sanborn Map Co. 1927

MARKET

KALUA AV.

CHURCH

42

43

Gro. & Meat.

Fruit & Meat.

Gro. D.G. & Cls.

Bank Ho. & Jap. Food Fac.

Gro. D.G. Cls.

Notions D. Gds.

Barber

Ice Cream & Candy

Meat.

Gro. Rest. 1st & 2d

Kitch.

STGE.

AUTOS.

AUTO TOP MFG

CONC. FLR.

Auto.

Fish.

Furnie

Tailor

Gro. & Meat.

Tenem'ts.

Jap. Food Fac.

Jap. Church

Sunday School

Jap. P.G.

Movies

Film Exchange

Gro.

D.G.

Tailor

Chine Society 2nd

Notions & Fruit

GALLERY-2nd

MOVIES.

Rest.

Kitch.

Cld. Cleaning

Rock

Off.

Printg

Elec. Pow.

Auto Stand

Yang Fung Tsung

Tailor

Barber

Tailor

Gro.

Jap. Hotel

Barber

Rest. & Gro.

Drugs

Gen'l Mdse

Conc. Flr.

W. Ho.

Elec. Pow. Cond. Flr. Truss Rt.

Auto Repr & Stge.

Off. & Auto Sales.

Vac. & Dilap.

Sunday School

D.G.

T.H.

4" W.P.

6" W.P.

1945

Sanborn Map Co. 1945

N. MARKET

PILI AV.

N. CHURCH

SOUTH CHURCH

VALLEY ISLE MOTORS
REPAIR SHOP & SERVICE
CONC. FL.

VALLEY ISLE MOTORS
PAVED COURT

MOVING PICTURES
CONC. FL.
TRUSS RF.

CHURCH OF THE GOOD SHEPHERD

POOL
CONC. FL.

UPHOLST'G & AUTO TOPS
AUTOS
CONC. FL.

REST
CONC. FL.

MACH'Y ST'GE
ASPHALT FL.

TENEMENTS

FURNE

BANK

ELEC. OFF. & S.

AUTO GLAZING

DRUGS & LUNCHES

TAILOR

BARBER

REST

BAKERY
OVEN

GAS & OILS

MOVIES

FILM EXCHANGE

2 OFFICES

6 CAPS

3 APTS

SHOE SHINE

42

43

Sanborn Map Co. 1914

4 MARKET

KALUA AV.

CHURCH

30 (7½)

42 (7)

43 (6)

Appendix L
Archaeological Monitoring Plan

AN ARCHAEOLOGICAL MONITORING PLAN FOR THE PROPOSED WAILUKU MUNICIPAL PARKING STRUCTURE PROJECT, WAILUKU *AHUPUA`A*, WAILUKU DISTRICT, MAUI ISLAND

(TMK: (2) 3-4-013: 075)
(COUNTY OFMAUI JOB NO: 11-08)

Prepared for:

The State Historic Preservation Division

On behalf of:

County of Maui
Wailuku, Maui

Prepared by:

Xamanek Researches LLC
Pukalani, Maui

Erik M. Fredericksen

22 August 2011

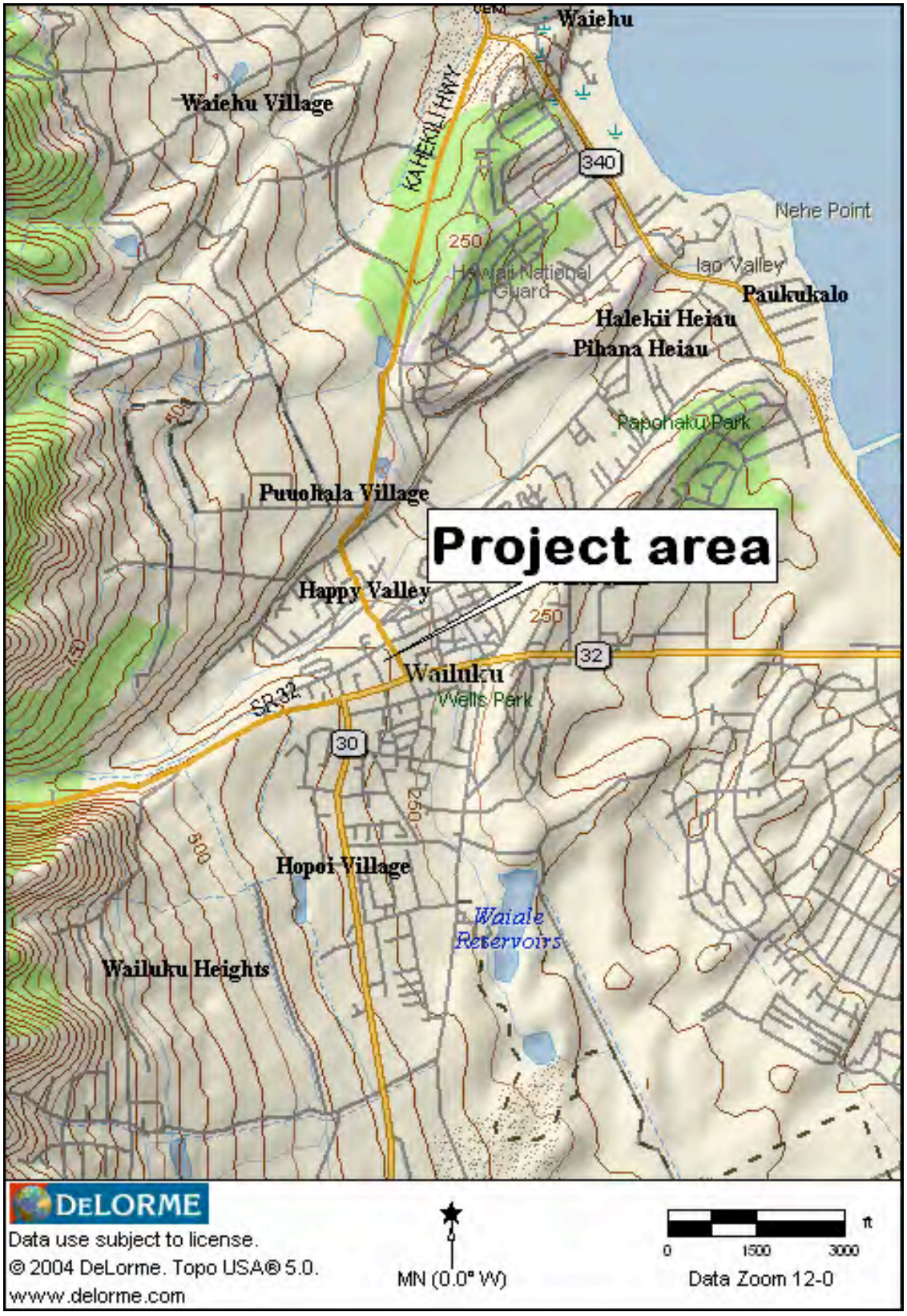


Figure 1: Location of the Proposed Wailuku Municipal Parking Structure project area, Wailuku, Maui.

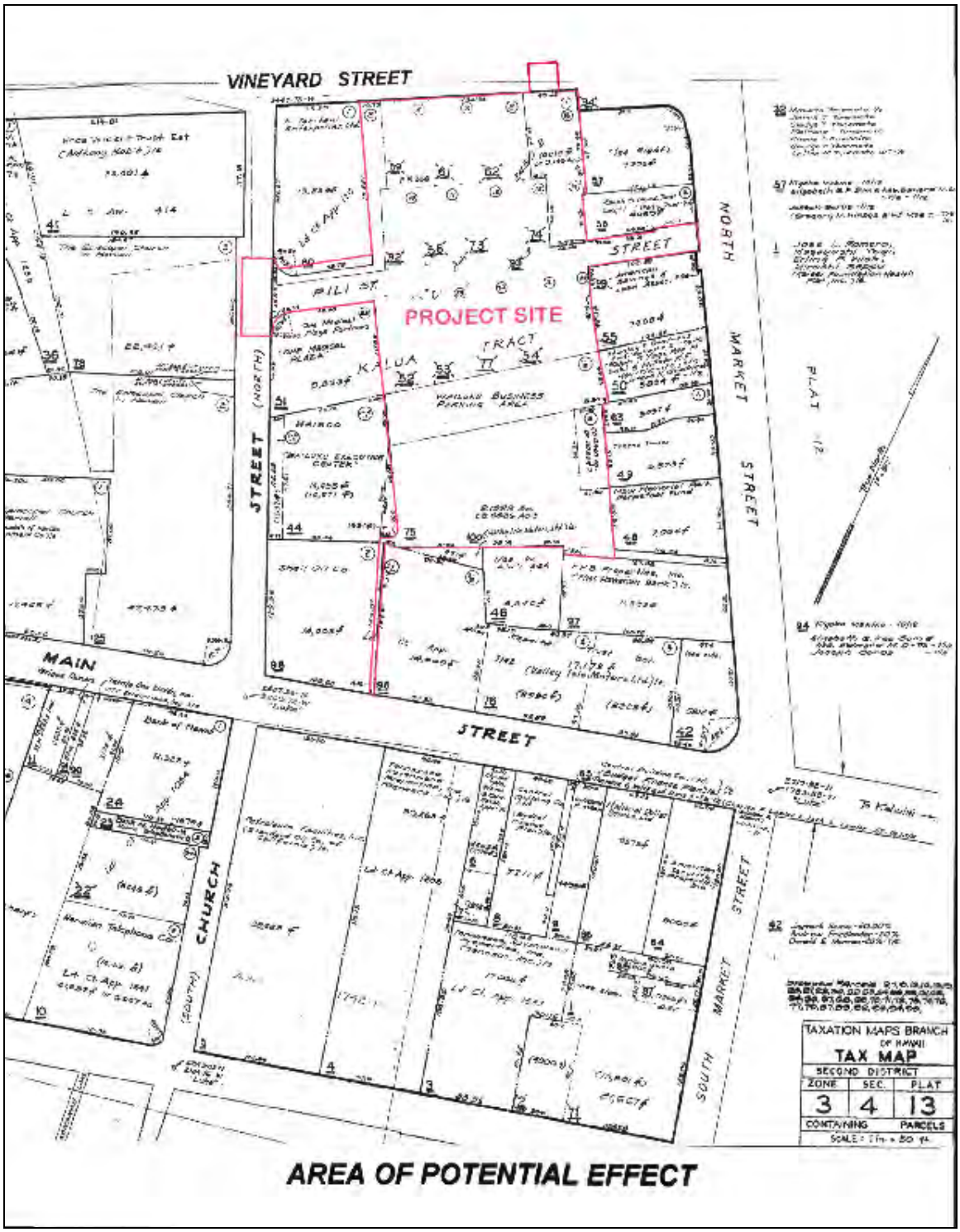


Figure 2: Plan view of the Wailuku Parking Structure project APE, Wailuku.

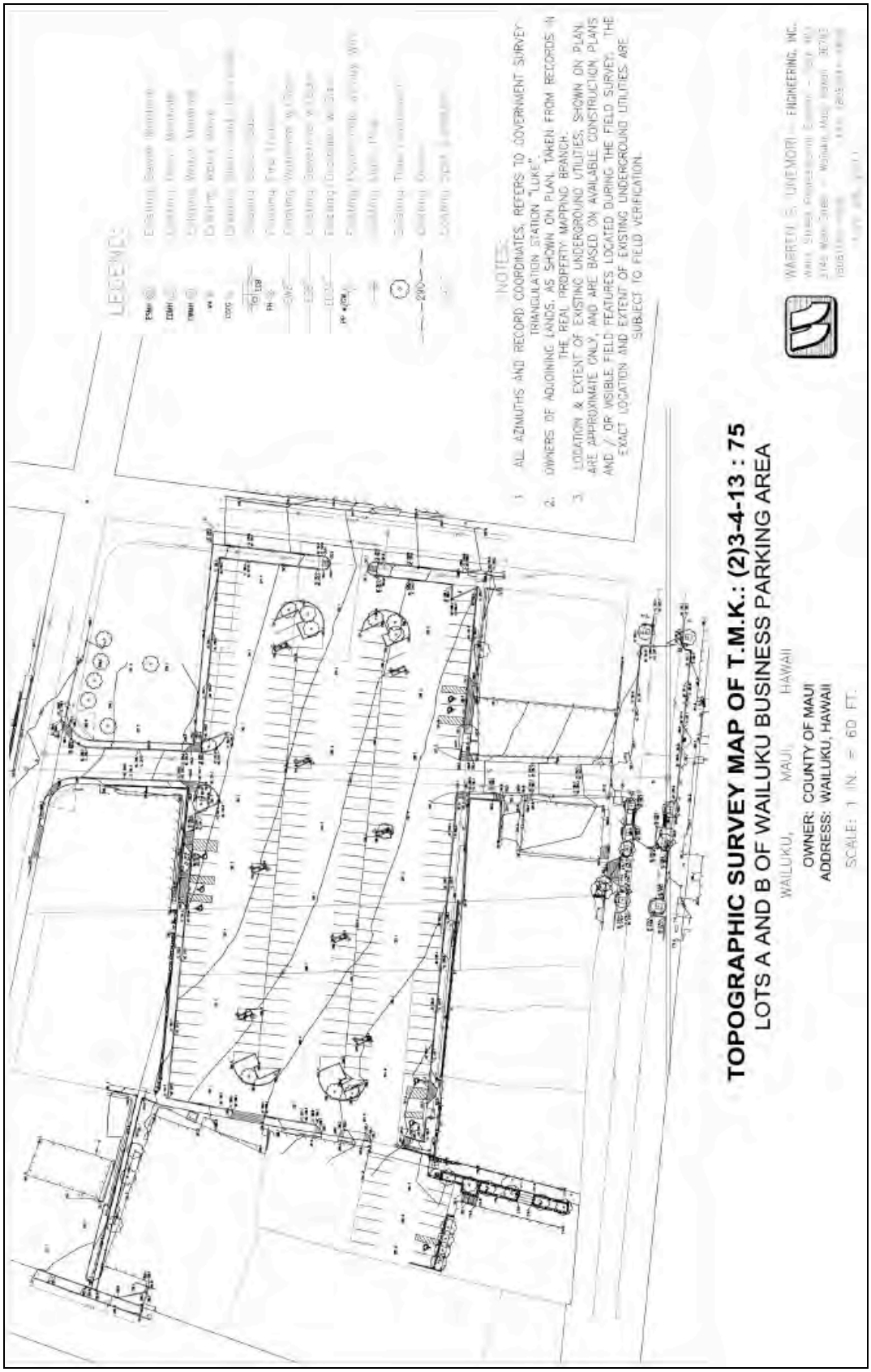


Figure 3: Topographic map of the project area, existing conditions.

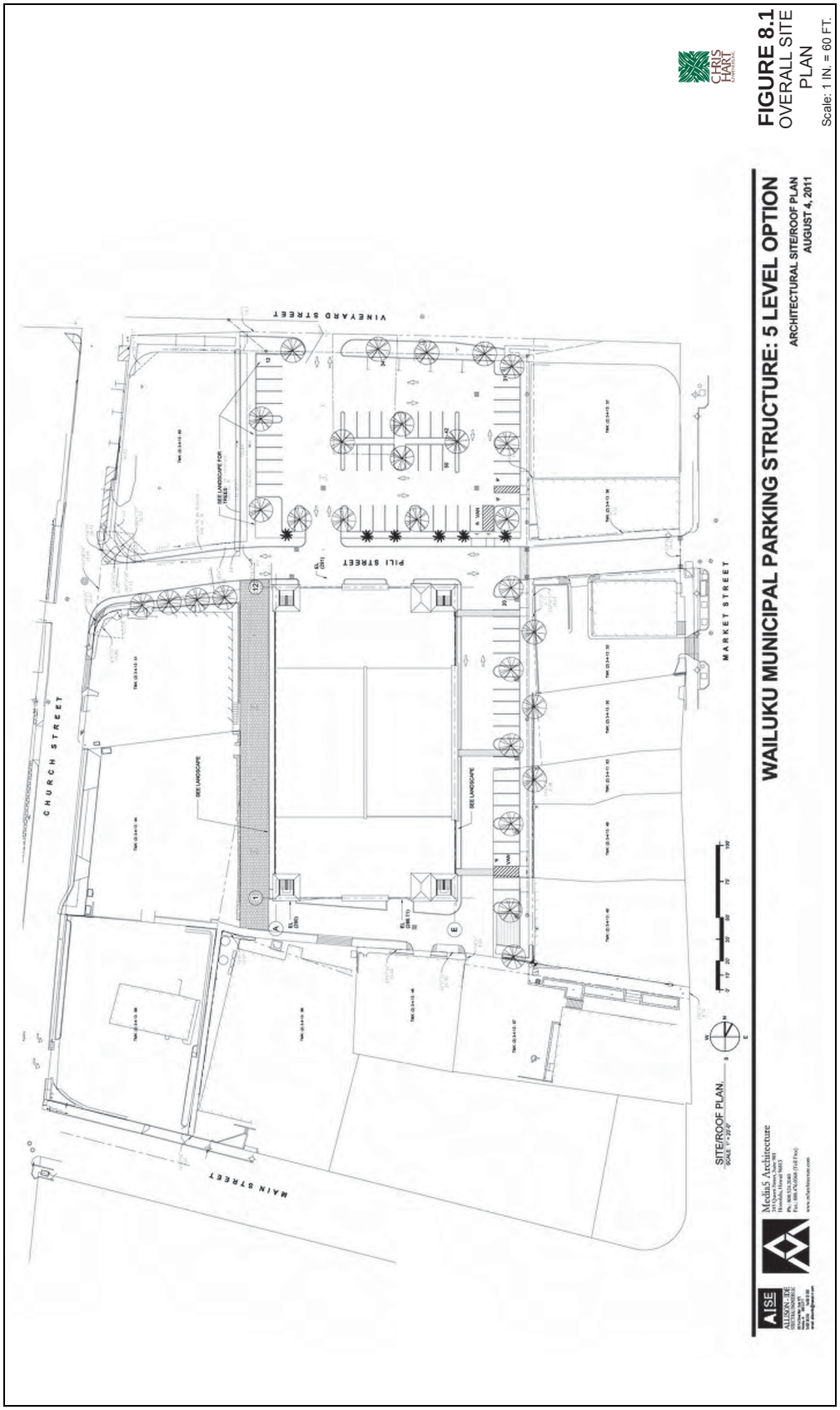


Figure 4: Site plan of the Proposed Wailuku Parking Structure project area.

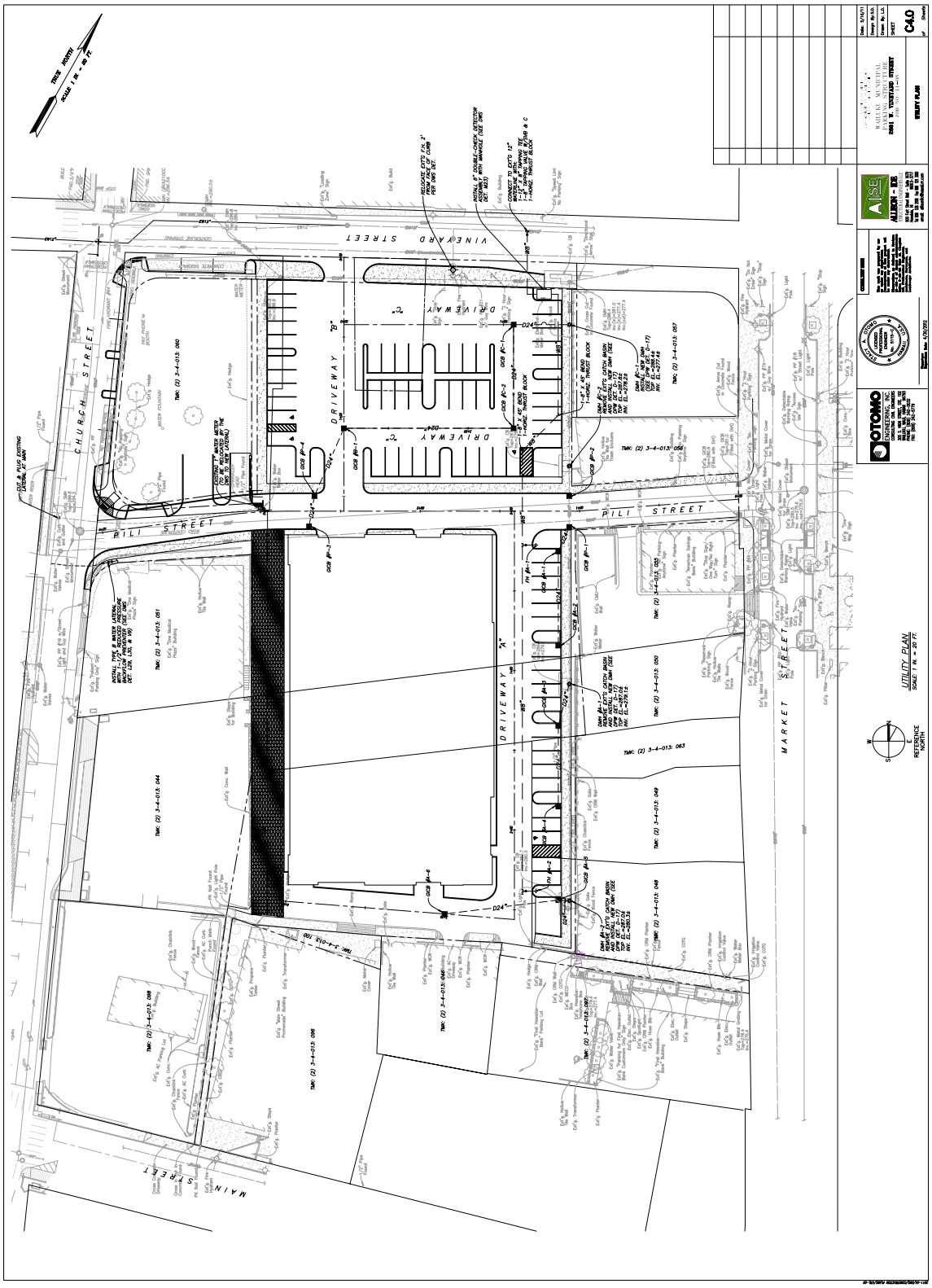


Figure 5: Utility plan for work on Church and Vineyard Streets.

INTRODUCTION

Mr. Brian M. Ide of Allison-Ide Structural Engineers LLC, Honolulu, Hawaii contacted Xamanek Researches, LLC in the fall of 2010 regarding the proposed Wailuku Municipal Parking Structure project in Wailuku, Maui (see Figures 1-5). Project plans called for the construction of a 5 level parking structure within the existing parcel that contains the paved Municipal Parking Lot (TMK: [2] 3-4-013: 075). While many of the planned improvements for the project are above ground, several subsurface disturbance activities are also scheduled. The various planned earth-moving activities include mass excavation for the footprint of the structure, along with various drainage and utilities improvements. In addition, limited off-site improvements are also scheduled for portions of Church Street and Vineyard Street.[1] Refer to Appendix A of this document for additional project information.

Mr. Ide subsequently requested that we prepare a proposal for the proposed project. Erik Fredericksen initially carried out a field inspection of the proposed project area. Following this inspection, a meeting was held with Ms. Morgan Davis, State Historic Preservation Division Lead Maui Archaeologist. It was determined that archaeological monitoring was an acceptable form of mitigation at this meeting (personal communication, Morgan Davis, SHPD). After this initial consultation, it was determined that Federal funds were to be utilized for at least the design phase of the project.

The Federal entity providing this funding is the Economic Development Agency (EDA). Given the use of Federal funding, the SHPD Maui Branch office was again consulted. Ms. Wendy Kobashigawa, County of Maui - Engineering Division, and Erik Fredericksen met with Ms. Davis in late July 2011 to further discuss the project. At this juncture, Ms. Davis indicated that the Section 106 process may be applicable to the proposed project. Ms. Kobashigawa subsequently contacted the appropriate staff at EDA, and Section 106 is being initiated at the writing of this archaeological monitoring plan.

The following monitoring plan addresses State Historic Preservation Division recommendations for this proposed Wailuku Municipal Parking Structure project. The plan has been prepared on behalf of the property owner, the County of Maui, Wailuku, Maui. This plan covers present proposed project actions as well as off-site improvements

[1] A new water lateral is proposed for Church Street, and will require 26 lineal feet of trenching. In addition, the existing lateral on Church Street will need to be cut and plugged. A new waterline connection on Vineyard Street will consist of 20 lineal feet.

that may be needed during the course of the development of this parking structure facility in Wailuku, Maui.

THE STUDY AREA

The project area lies adjacent to and north of Main Street, and adjacent to and south of Vineyard Street in Wailuku Town. Business properties border the subject parcel to the east, south and west. The general area contains a mix of businesses and residential areas, as well as COM facilities, including the Maui County Wailuku Fire Department. Observed vegetation in the vicinity of the project area includes alien weeds and grasses, along with various introduced landscaping trees. It is estimated that this portion of the island receives between 30 and 40 inches of annual rainfall. Estimated parcel elevations range from 245 to 260 ft AMSL.

Background Information

The Wailuku Parking Structure project area lies to the west of North Market Street in Wailuku *ahupua`a*, Wailuku District, Maui. While it remains unknown at the writing of this monitoring plan whether significant material culture remains are located within the project area, the possibility exists that significant cultural materials could be present.

Wailuku Town Archaeology (Figure 5)

In Wailuku Town itself, Xamanek Researches conducted two inventory surveys for the Main Street Promenade Project. These two parcels are just to the south of the project area and front Main Street. Historic period bottles and crockery were recovered from two large refuse pits, along with metal parts that appear to be carriage and harness items (Fredericksen and Fredericksen, 2000, 2001). The parking lot of the historic Iao Theater on Market Street was the subject of an archaeological inventory survey in 2001. Historic period artifacts were located during this survey.

Xamanek Researches LLC completed monitoring for the Market Street Improvements project just to the east of the current study area (Fredericksen and Frey, 2010). One site with three component features was identified during the monitoring program. Site 50-50-04-6442 consists of Feature A – Historic curbstones, Feature B – Historic Rock wall, and Feature C – Historic cobble roadbed. The curbstones were

present within much of the Market Street project area. Portions of this feature were impacted for the new planter areas, but when individual stones were removed, they were relocated within the road corridor in sections of sidewalk that had had curbstones previously removed. The Feature B retaining wall was demolished after recordation and replaced with a concrete retaining wall. Portions of the original, unpaved Market Street roadbed (Feature C) were impacted by road construction. A few period artifacts were associated with this old roadbed. There were no significant precontact material culture remains encountered during the overall project. Feature A of Site 6442 qualifies for significance under Criterion "c" (unique curbstone construction associated with roadway improvements in the early 1900s) and Criterion "d" (information content). Features B and C qualify for significance under Criterion "d" for their information content.

Xamanek Researches carried out an inventory survey of a parcel off of Central Street that now contains a senior living complex (Lokenani Hale) in 2003 (Fredericksen and Fredericksen, 2003). During the course of this survey, one historic property was identified. This site consisted of the remains of the former Nashiwa Bakery concrete foundation.[2] Site 5484 qualified for significance under Criterion "d" of Federal and State historic preservation guidelines because of its information content. However, at the conclusion of the report, it was determined that an adequate amount of information had been obtained for this site and it was determined that it could be demolished. The State Historic Preservation Division (SHPD) reviewed the earlier inventory survey report and determined that an archaeological monitoring program would be required for this housing project (SHPD DOC NO**:** 0312MK02). Xamanek Researches prepared the necessary monitoring plan for the adjacent Lokenani Hale project, which SHPD subsequently approved in an April 2004 review letter (SHPD DOC NO: 0403MK11). Xamanek Researches, LLC subsequently carried out monitoring during 2005 and an additional site was documented, along with several refuse pits form the 1960s (Fredericksen, 2005). The site consisted of a c. 20-35 cm thick concentration of water worn and subangular cobbles and pebbles that was encountered on the impacted segments of Nani and Loke Streets. This compacted matrix underlies the existing road base of the trenched portions of both streets and is interpreted as the former road/road base prior to the era of paved roads in Wailuku Town. Streets in this part of Maui were likely first paved sometime after 1925.[3] This old road was designated SIHP No: 50-50-04-5763.

[2] The Nashiwa Bakery was constructed in c. 1950, and its foundation was subsequently assigned SIHP No. 50-50-04-5484.

[3] An article in The Maui News indicates that the County appropriated $3,000.00 to pave the Main Street Block between Market Street and Central Street in 1925 (**The Maui News**, 9-19-25)

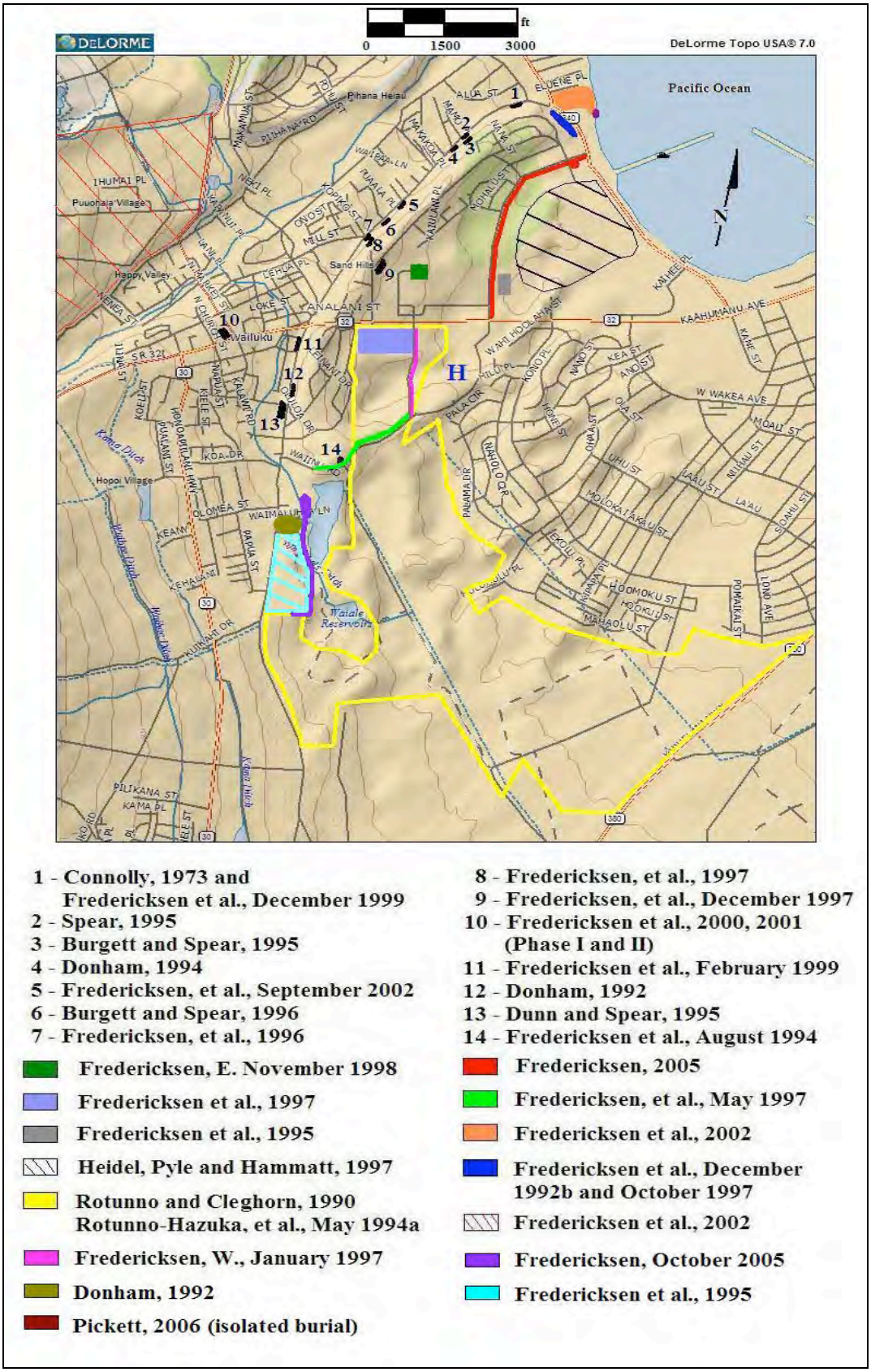


Figure 6: Map of selected archaeological studies in the Wailuku area (XRLLC, 2007).

ARCHAEOLOGICAL MONITORING PLAN

Scope of monitoring

The scope of this monitoring plan includes having an archaeological monitor(s) present during all grubbing, grading and subsurface earthmoving activities within the project area. Actual on-site time and specific actions to be followed in the event of inadvertent discoveries will be discussed and agreed upon by the general contractor and Xamanek Researches, LLC at a pre-construction meeting held for this purpose. Additional meetings may be called, if either the monitoring archaeologist or the general contractor believes that other relevant information should be disseminated.

Given the location of the Wailuku Parking Structure project area, there is a possibility that significant material culture remains may be inadvertently disturbed during proposed and/or future earthmoving activities in this portion of Wailuku, Maui. Possible significant cultural materials could include subsurface pre- and/or post-contact structural remains, habitation deposits, agricultural remnants, human burials and/or human skeletal remains.

Monitoring methodology

As noted above, there is a possibility that significant material culture remains (including human burials and/or human skeletal remains) may be inadvertently disturbed during earthmoving activities on the subject parcel. Consequently, close cooperation between the monitoring archaeologist and construction personnel will be essential. Topics for discussion shall include, but not necessarily be limited to the following:

1) The contractor shall be responsible for ensuring that the archaeological consultant is aware of all pertinent construction schedules and that the monitor is present for all subsurface excavation activities on this coastal parcel.

2) Both the archaeological consultant and the contractor are responsible for ensuring that on-site work is halted in an area of significant findings and to protect any such find from any further damage (i.e., construction fencing, protective covering, etc.). The State Historic Preservation Division will recommend appropriate mitigation actions. The SHPD Burial Sites Program, the SHPD Maui office, and the regional geographic representative of the Maui/Lana`i Islands Burial Council (MLIBC) will be consulted in the event that human remains are found.

3) In the event of the discovery of human remains, work shall cease in the immediate find area. *In situ* human remains will be left in place and any previously disturbed human remains will only be removed with written consent from SHPD. If at all possible, previsions for secure on-site storage will be made. The monitoring archaeologist will be responsible for notifying the SHPD Maui office and the Historic Preservation Division Burial Sites Program, which, in consultation with the regional geographic representative of the Maui/Lana`i Islands Burial Council, will determine the appropriate mitigation measures. This notification will include accurate information regarding the context and composition of the find.

4) The archaeological consultant will work in compliance with Hawai`i Revised Statutes Chapter 6E (procedures Relating to Inadvertent Discoveries).

5) The monitoring archaeologist will have the authority to closedown construction activities in areas where potentially significant discoveries have been made until they have been properly evaluated. Normally, construction activities may continue in unaffected portions of the project area.

6) Field procedures to be followed for documentation of discovered cultural features or human skeletal remains: a) standard field methods including recordation of profiles showing stratigraphy, cultural layers, etc.; b) mapping and photographing of finds other than human remains; c) and excavation of cultural materials and/or exposed features.

7) The SHPD Maui cultural historian shall be notified and in consultation with the MLIBC will determine treatment of identified human remains; the SHPD Maui staff archaeologist will be notified about features such as cultural layers, artifact or midden concentrations, structural remains, etc., considered to be of significance under S13-279-2 (definitions).

8) The contractor should take into account the necessity for machine excavation at a speed slow enough to allow for reasonable visual inspection of the work. The monitoring archaeologist must make a "best effort" to search for significant material culture remains (i.e. artifacts, features, midden, skeletal remains, etc.). Machine excavation speed will need to be slowed in an area where significant material culture remains have been identified.

9) Significant archaeological discoveries, if they occur, shall be protected and identified by construction "caution" tape, fencing, or other reasonable means, until the SHPD Maui office and the archaeological consultant decide appropriate mitigation actions. All recovered material culture remains—with the possible exception of charcoal samples for radiometric analysis—will remain on Maui. Standard laboratory methods shall be utilized by the archaeological consultant in the event that cultural materials are recovered

during monitoring and/or mitigation work. The archaeological consultant shall curate recovered significant cultural materials on Maui.

10) One monitor in most instances will carry out the necessary fieldwork. Tasks will include observation of grubbing and earth-moving activities. However, the SHPD and the MLIBC require that one archaeological monitor be assigned to each piece of major earth-moving equipment in sand dune areas or other culturally sensitive locations. (Change work order if more than one piece of machinery is to be utilized)

11) In the event of night work, the general contractor shall supply adequate lighting for the onsite monitor.

12) Chapter 6E-11 (a) specifies the following "It shall be unlawful for any person or corporate, to take, appropriate, excavate, injure, destroy, or alter any historic property or aviation artifact located on the private lands of any owner thereof without the owner's written permission being first obtained. It shall be unlawful for any person, natural or corporate, to take, appropriate, excavate, injure, destroy, or alter any historic property located upon lands owned or controlled by the State or any of its political subdivisions, except as permitted by the department."

Field methods utilized during the monitoring program shall include photographic recordation (where appropriate), artifact excavation (recovery and recordation), profile documentation of cultural layers and stratigraphy, excavation and recordation of exposed features, and mapping of all pertinent features on an appropriate site map. A daily log (field notes) of activities and findings will also be kept. Gathered information shall be utilized in the preparation of the monitoring report to be submitted to the SHPD.

In the event human skeletal remains are inadvertently disturbed, the SHPD Maui office, the SHPD Burial Sites Program and the Maui/Lana`i Islands Burial Council shall be notified, and appropriate mitigation actions determined (photographs of human skeletal remains will not be taken). The SHPD Maui Culture and History Branch will be the contact for all issues relating to human remains.

A supervisory archaeologist may periodically visit the monitoring site as often as is necessitated by the nature of the construction activities and archaeological findings. If significant discoveries are made, appropriate mitigation measures will be discussed with the SHPD Maui office.

The archaeological consultant shall curate significant cultural materials located on Maui, until analysis is completed. The cultural materials will be then turned over to the appropriate parties. Long-term curation arrangements of such materials will be approved by the SHPD. When fieldwork for this required archaeological monitoring project is completed, a draft monitoring report will be prepared. This draft report shall be submitted to the State Historic Preservation Division within 180 days of the completion of the

overall project, for comment and approval. Approved changes and corrections will result in the final monitoring report for the proposed Wailuku Municipal Parking Structure project in Wailuku, Maui (TMK: [2] 3-4-013: 075).

APPENDIX A: Project description – Wailuku Municipal Parking Structure

PROJECT DESCRIPTION
FOR
WAILUKU MUNICIPAL PARKING STRUCTURE
260 VINEYARD STREET
WAILUKU, MAUI, HAWAII
TMK: (2) 3-4-013:075
JOB NO. 11-08

8/18/11

PROPOSED WORK:

(See the attached Overall Site Plan and Utility Plan-Sheet C4.0 for reference)

The County of Maui is proposing to construct a 5-level, 120,230 square foot concrete parking structure on the south side of TMK: (2) 3-4-013:075, which is a total of approximately 2.19 acres. The subject parcel is bound to the north by Vineyard Street; to the east by commercial buildings fronting Market Street; to the south by commercial buildings fronting Main Street; and to the west by commercial buildings fronting Church Street.

Additional at-grade paved parking stalls are also proposed along the northern and eastern boundaries of the parcel. Access to the parking structure will be via a driveway entrance from Vineyard Street that leads directly into the structure and a paved driveway access (formerly known as "Pili Street") running across the parcel from Church Street to Market Street. A paved service road will provide access around the parking structure to the backs of the adjacent buildings along Market Street and Main Street. A stamped concrete fire lane along the west side of the parking structure will provide fire truck access from the back of the parking structure to the driveway access. Other improvements proposed will include improvements to the existing pedestrian access leading to Main Street; concrete crosswalks, sidewalk, and curbs; an underground drainage system; underground waterlines for irrigation and fire protection; landscaping; underground electrical conduits; and other amenities such as lamp posts, benches, bike racks, and trash receptacles.

A new water meter lateral will be installed off of the existing waterline on Church Street to replace the existing lateral on Church Street, which will be cut and plugged. A new fire protection line will be installed off of the existing waterline on Vineyard Street.

A land exchange with the adjacent parcel at TMK: (2) 3-4-013:060, northwest of the parking lot is also necessary. A strip of land along the southern boundary of parcel 60 needs to be obtained by the County to install a concrete sidewalk for pedestrian access from the at-grade parking to Church Street. In exchange, the County will give the adjacent property owner an equivalent area of land along the eastern side of parcel 60. This adjacent parcel is currently vacant and undeveloped. The majority of the property is grassed but also has some trees on site. Other existing features are a water fountain, pay phone booth, hedge, and concrete sidewalks.

EXISTING FEATURES:

(See the attached Site Plan – Sheet C2.0 for reference)

The project site is currently an asphalt paved parking lot consisting of 210 stalls. Above ground features consist of concrete sidewalks, concrete curb planter islands with trees, and lamp posts. An underground drainage system runs along the eastern boundary of the property and connects to the drainage system on Vineyard Street. Underground sewerline and waterline systems run in the west to east direction within the proposed driveway access (fka "Pili Street").

Appendix M
Cultural Impact Analysis

CULTURAL IMPACT ASSESSMENT FOR THE PROPOSED WAILUKU MUNICIPAL PARKING STRUCTURE WAILUKU *AHUPUA`A*, WAILUKU DISTRICT, MAUI ISLAND

(TMK: (2) 3-4-013: 075)
(COUNTY OF MAUI JOB NO: 11-08)

Prepared for:

County of Maui
Wailuku, Maui

Prepared by:

Xamanek Researches LLC
Pukalani, Maui

Erik M. Fredericksen

21 September 2011 (DRAFT)
29 December 2011 (FINAL)

ABSTRACT

Xamanek Researches, LLC was contacted in the fall of 2010 regarding the proposed Wailuku Municipal Parking Structure project in Wailuku, Maui. Project plans called for the construction of a 5 level parking structure within the existing parcel that contains the paved Municipal Parking Lot (TMK: [2] 3-4-013: 075). While many of the planned improvements for the project are above ground, several subsurface disturbance activities are also scheduled. The various planned earth-moving activities include mass excavation for the footprint of the structure, along with various drainage and utilities improvements. In addition, limited off-site improvements are also scheduled for portions of Church Street and Vineyard Street.

A field inspection of the proposed project area was initially carried out. Following this inspection, a meeting was held with Ms. Morgan Davis, State Historic Preservation Division Lead Maui Archaeologist. It was determined that archaeological monitoring was an acceptable form of mitigation at this meeting (personal communication, Morgan Davis, SHPD). After this initial consultation, it became evident that Federal funds were to be utilized for at least the design phase of the project.

The Federal entity providing the funding is the Economic Development Agency (EDA). Given the use of Federal funding, the SHPD Maui Branch office was again consulted. At the subsequent meeting, Ms. Davis indicated that the Section 106 process may be applicable to the proposed project. Ms. Wendy Kobashigawa of the County Engineering Division subsequently contacted the appropriate staff at EDA, and Section 106 is being initiated at the writing of this Cultural Impact Assessment. A draft archaeological monitoring plan (E. Fredericksen, 2011) has been submitted for review per input and recommendations from Ms. Davis of the SHPD Maui office.

As a result of the foregoing, the compilation of this Cultural Impact Assessment is required. The subject parcel is located within Wailuku *Ahupua`a*, Wailuku District, Island of Maui (TMK: [2] 3-4-013: 075). Mr. Hinano Rodrigues, Cultural Historian, SHPD Maui, and Mr. Keola Lindsey of the Office of Hawaiian Affairs (OHA) were contacted. Both provided general recommendations regarding this Cultural Impact Assessment, and will be sent copies of the document for review and comment. Appendix C of the document was revised in December 2011 and early January 2012, following discussions with Ms. Jocelyn Perreira, Executive Director, Wailuku Main Street Association. The following document has been prepared on behalf of the County of Maui, Wailuku, Maui.

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INTRODUCTION

Mr. Brian M. Ide of Allison-Ide Structural Engineers LLC, Honolulu, Hawaii contacted Xamanek Researches, LLC in the fall of 2010 regarding the proposed Wailuku Municipal Parking Structure project in Wailuku, Maui (see Figures 1-5). Project plans called for the construction of a 5 level parking structure within the existing parcel that contains the paved Municipal Parking Lot (TMK: [2] 3-4-013: 075). While many of the planned improvements for the project are above ground, several subsurface disturbance activities are also scheduled. The various planned earth-moving activities include mass excavation for the footprint of the structure, along with various drainage and utilities improvements. In addition, limited off-site improvements are also scheduled for portions of Church Street and Vineyard Street.[1] Refer to Appendix A of this document for additional project description information.

Mr. Ide subsequently requested that we prepare a proposal for the planned project. Erik Fredericksen initially carried out a field inspection of the planned project area. Following this inspection, a meeting was held with Ms. Morgan Davis, State Historic Preservation Division Lead Maui Archaeologist. It was verified that archaeological monitoring was an acceptable form of mitigation at this meeting (personal communication, Morgan Davis, SHPD). Following this initial consultation with SHPD, it was determined that Federal funds were to be utilized for at least the design phase of the project.

The Federal entity providing this funding is the Economic Development Agency (EDA). Given the use of Federal funding, the SHPD Maui Branch office was again consulted. Ms. Wendy Kobashigawa, County of Maui - Engineering Division, and Erik Fredericksen met with Ms. Davis in late July 2011 to further discuss the project. It was at this juncture that Ms. Davis indicated that the Section 106 process might be applicable to the proposed project. Ms. Kobashigawa subsequently contacted the appropriate staff at EDA, and Section 106 is being initiated at the writing of this Cultural Impact Assessment.

The following Cultural Impact Assessment study is a component of the Environmental Assessment process that is being undertaken for this project. The CIA document has been prepared on behalf of the landowner, the County of Maui, Wailuku, Maui.

[1] A new water lateral is proposed for Church Street. In addition, the existing lateral on Church Street will need to be cut and plugged. A new waterline connection on Vineyard Street will also be installed.

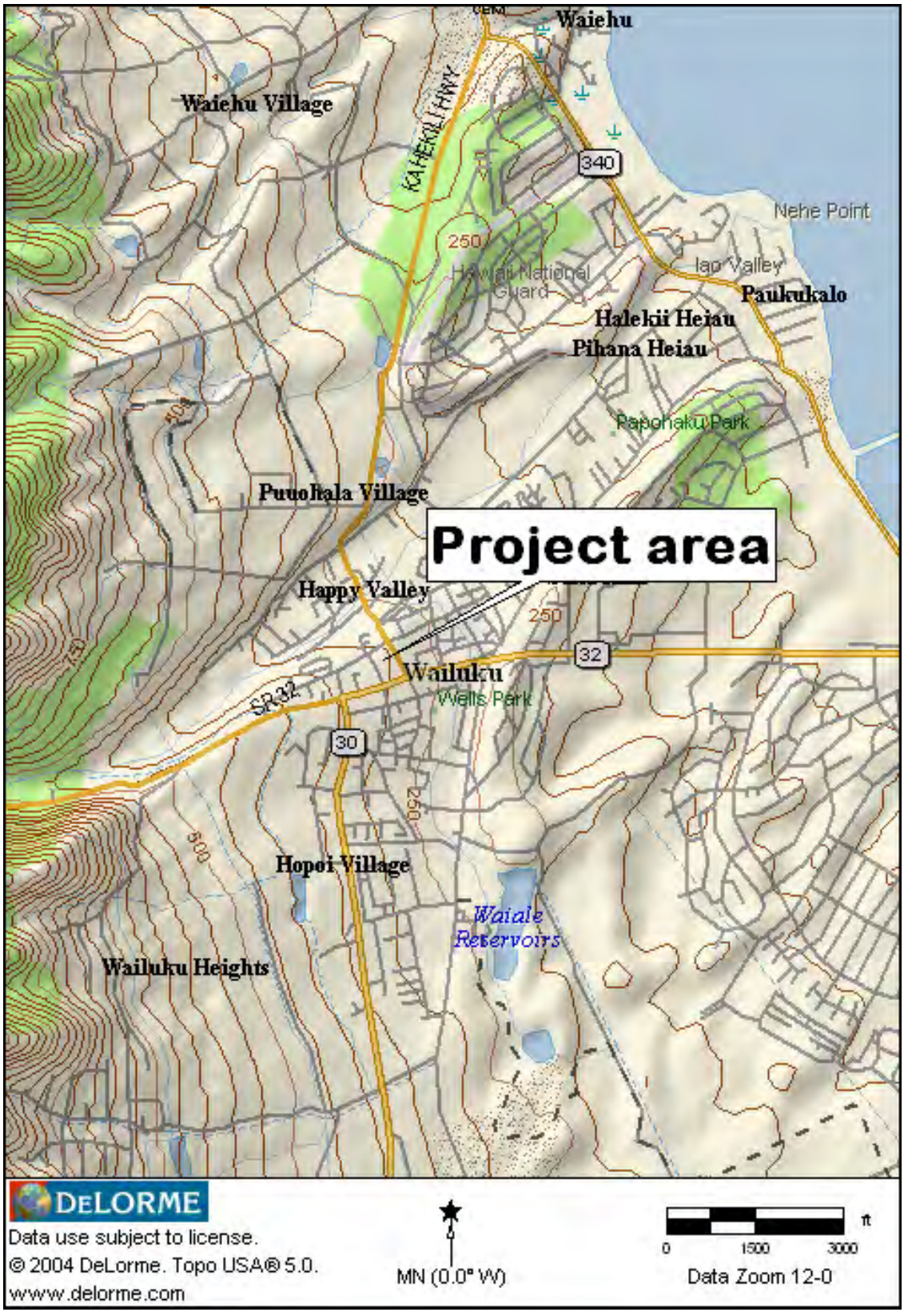


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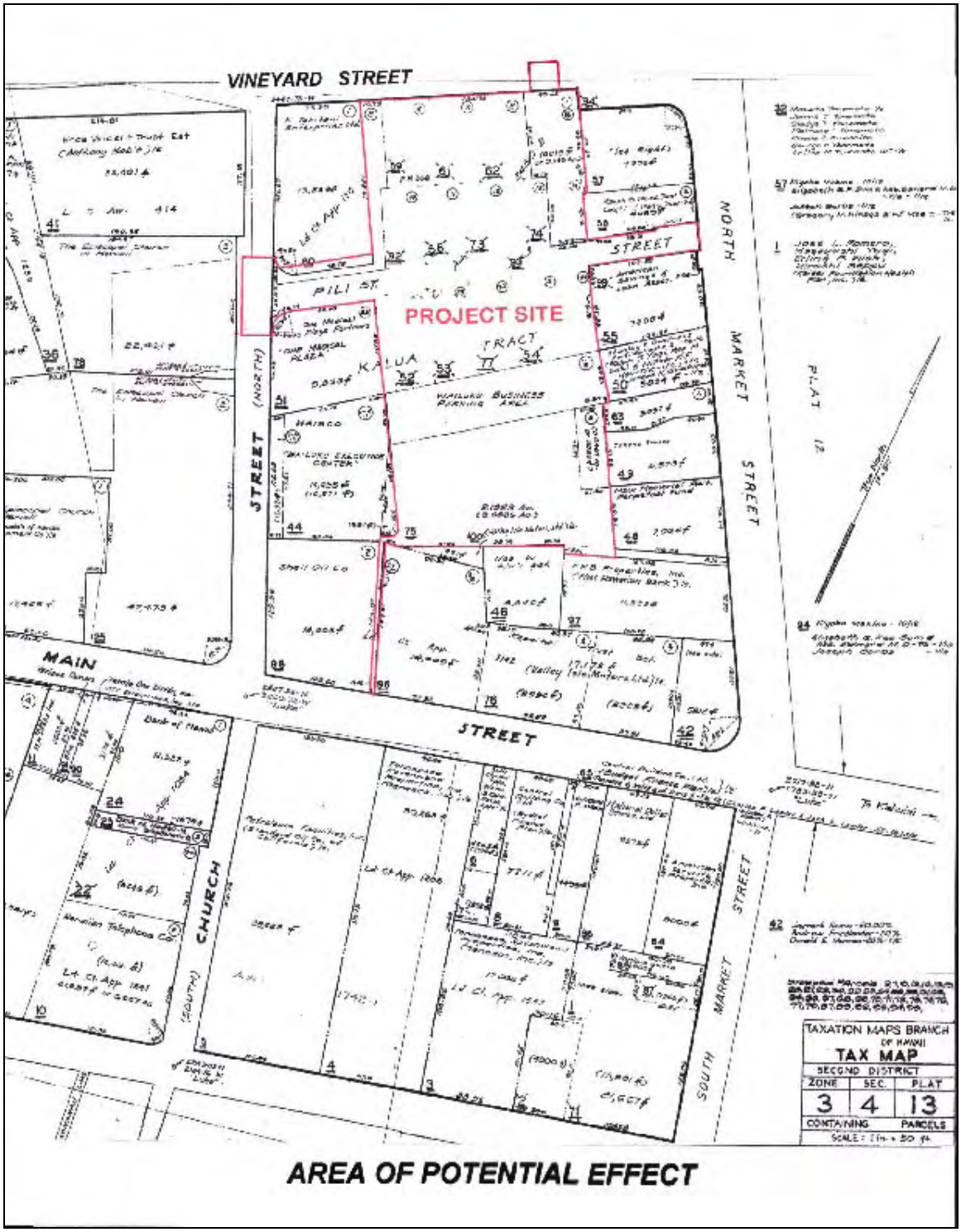


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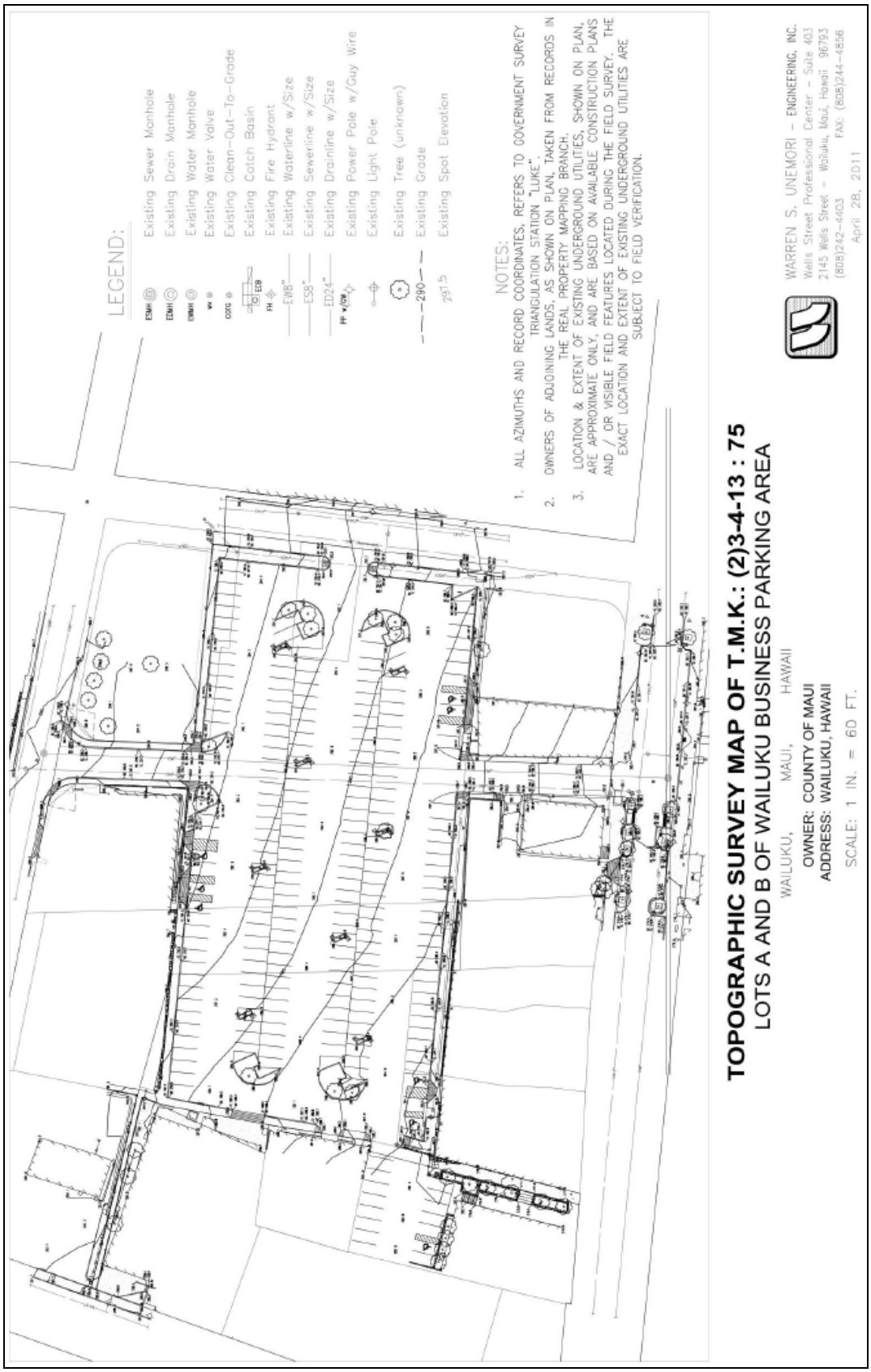


Figure 3: Topographic map of the project area, existing conditions.

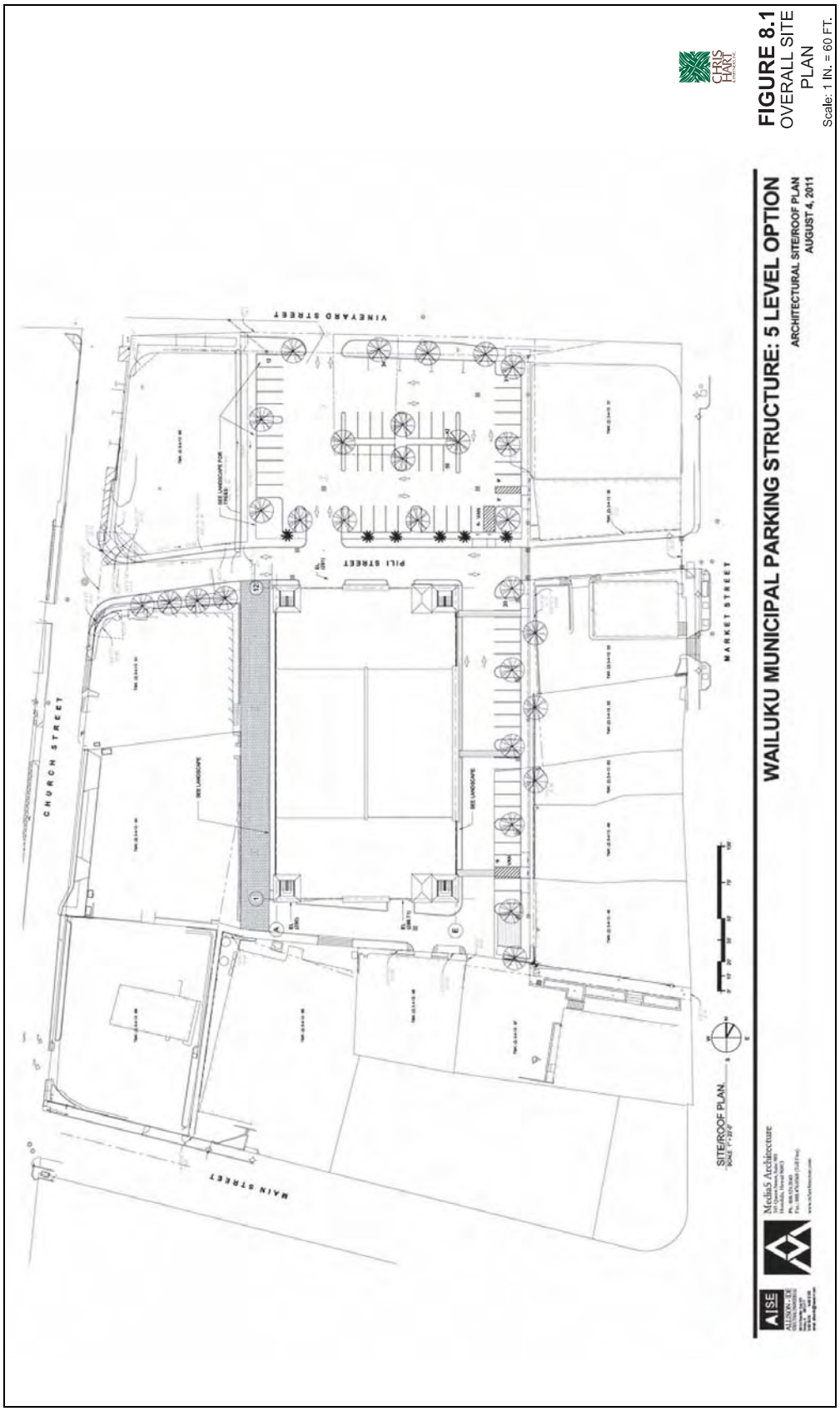


Figure 4: Site plan of the Proposed Wailuku Parking Structure project area.

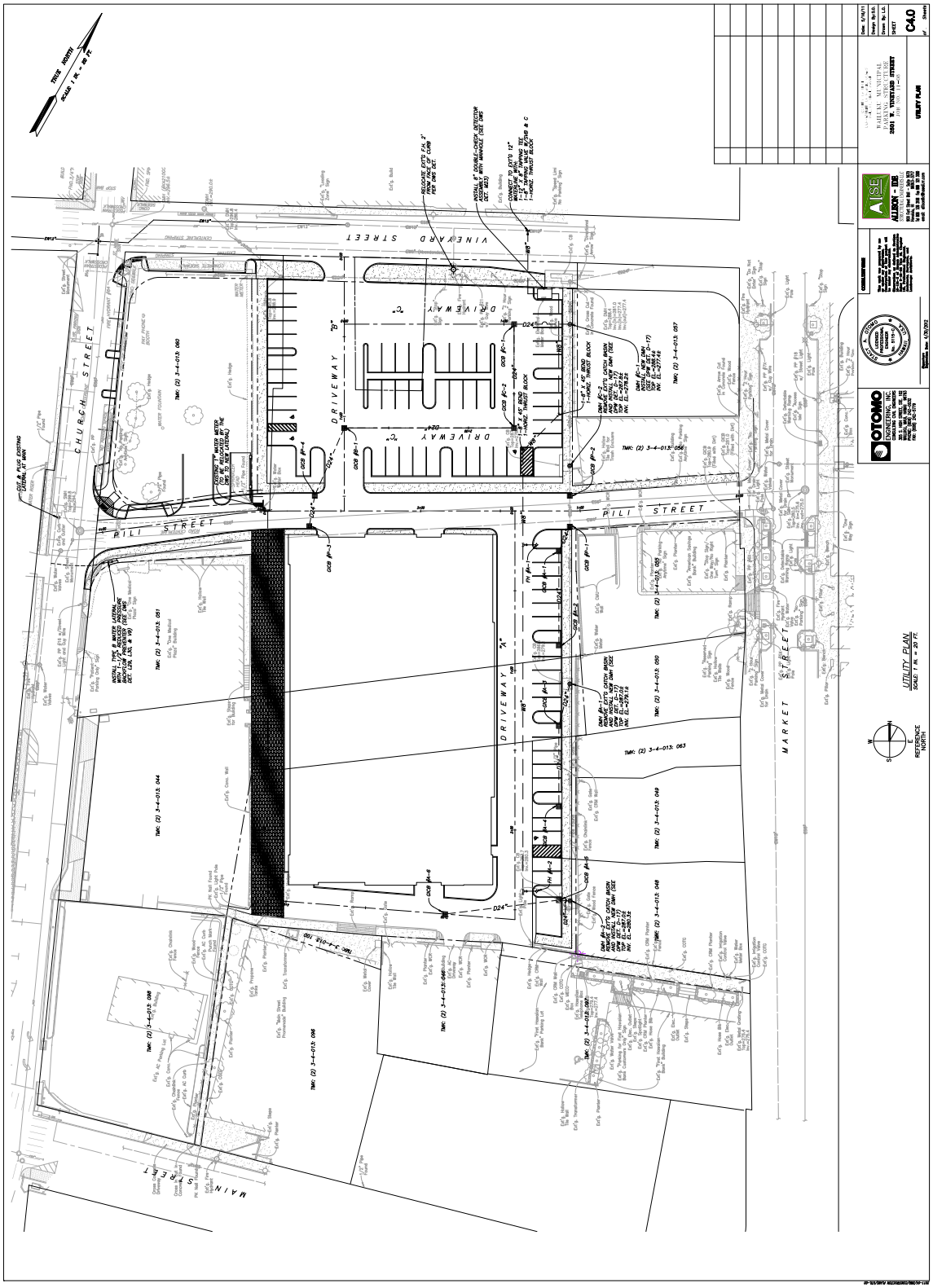


Figure 5: Utility plan for work on Church and Vineyard Streets.

CULTURAL IMPACT ASSESSMENT

The purpose of this Cultural Impact Assessment (CIA) study is to assess potential impacts of the proposed light industrial subdivision project on traditional cultural practices in the study area. The following components were considered with respect to this CIA:

- Information on cultural sites that may potentially be impacted by the proposed development project;
- Knowledge of any traditional gathering activities in the general project area (past/present);
- Traditional uses within the project area;
- Referrals of community elders who may be willing to share their cultural knowledge of the study area and the surrounding environs.

The Wailuku Main Street Association was contacted, because of this organization's mission and its comparatively long tenure in Wailuku Town. Ms. Jocelyn Perreira, Executive Director, was very informative, helpful and cooperative. In addition to having a strong affiliation with Wailuku Town and other traditional small towns in Maui, Ms. Perreira also was actively involved in an oral history project that was initiated in 1998. Known as the KEY (Keep Elderly Young) Project, this project focused on senior citizens' recollections of Wailuku.

Also known as Wailuku Roots, this community-based project was carried out in several phases, beginning in 1998 and extending into 2002 and beyond. Its central goal is the accurate compilation of an oral history of Wailuku Town by consensus. This approach incorporated research that was recorded, documented, and verified. Senior citizens from the Wailuku area were invited to contribute their recollections and experiences from growing up in and/or working in Wailuku town. This process utilized taping and on-site visits to areas discussed. All participants were from the Wailuku district. Ms. Perreira noted that the project recognized that the elderly are the "roots of the plant". The KEY project also unlocked the information to share as a legacy with the future. This unique project reflects a collection of memories that were validated by consensus and concurrence of the participants. While the Wailuku Roots project has not yet been published because of funding constraints, the eventual publication of this community-based resource document remains a top priority for Ms. Perreira. **[Note: interview transcript located in Appendix C.]**

STUDY AREA DESCRIPTION

The project area lies adjacent to and north of Main Street, and adjacent to and south of Vineyard Street in Wailuku Town. Business properties border the subject parcel to the east, south and west. The general area contains a mix of businesses and residential areas, as well as COM facilities, including the Maui County Wailuku Fire Department. Observed vegetation in the vicinity of the project area includes alien weeds and grasses, along with various introduced landscaping trees. It is estimated that this portion of the island receives between 30 and 40 inches of annual rainfall. Estimated project area elevations range from 245 to 260 ft. AMSL.

Background Information

The Wailuku Parking Structure project area lies to the west of North Market Street in Wailuku *Ahupua`a*, Wailuku District, Maui. Given that the subject parcel is paved and actively used as a municipal parking lot, the SHPD has previously concurred that archaeological monitoring during construction is the appropriate form of mitigation in this particular case (personal communication with Ms. Davis, SHPD Lead Archaeologist). While it remains unknown at the writing of this monitoring plan whether significant material culture remains are located within the surface of the actively utilized parking lot, the possibility exists that significant cultural materials could be present.

Wailuku Town Archaeology **(Figure 6)**

In Wailuku Town itself, Xamanek Researches conducted two inventory surveys for the Main Street Promenade Project. These two parcels are just to the south of the project area and front Main Street. Historic period bottles and crockery were recovered from two large refuse pits, along with metal parts that appear to be carriage and harness items (Fredericksen and Fredericksen, 2000, 2001). The parking lot of the historic Iao Theater on Market Street was the subject of an archaeological inventory survey in 2001. Historic period artifacts were located during this survey.

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foundation.[2] Site 5484 qualified for significance under Criterion "d" of Federal and State historic preservation guidelines because of its information content. However, at the conclusion of the report, it was determined that an adequate amount of information had been obtained for this site and it was determined that it could be demolished. The State Historic Preservation Division (SHPD) reviewed the earlier inventory survey report and determined that an archaeological monitoring program would be required for this housing project (SHPD DOC NO**:** 0312MK02). Xamanek Researches prepared the necessary monitoring plan for the adjacent Lokenani Hale project, which SHPD subsequently approved in an April 2004 review letter (SHPD DOC NO: 0403MK11). Xamanek Researches, LLC subsequently carried out monitoring during 2005 and an additional site was documented, along with several refuse pits form the 1960s (Fredericksen, 2005). The site consisted of a c. 20-35 cm thick concentration of water worn and subangular cobbles and pebbles that was encountered on the impacted segments of Nani and Loke Streets. This compacted matrix underlies the existing road base of the trenched portions of both streets and is interpreted as the former road/road base prior to the era of paved roads in Wailuku Town. Streets in this part of Maui were likely first paved sometime after 1925.[3] This old road was designated SIHP No: 50-50-04-5763.

Market Street

Xamanek Researches LLC completed monitoring for the Market Street Improvements project just to the east of the current study area (Fredericksen and Frey, 2010). One site with three component features was identified during the monitoring program. Site 50-50-04-6442 consists of Feature A – Historic curbstones, Feature B – Historic Rock wall, and Feature C – Historic cobble roadbed. The curbstones were present within much of the Market Street project area (see Photo #6). Portions of this feature were impacted for the new planter areas, but when individual stones were removed, they were relocated within the road corridor in sections of sidewalk that had had curbstones previously removed. The Feature B retaining wall was demolished after recordation and replaced with a concrete retaining wall. Portions of the original, unpaved Market Street roadbed (Feature C) were impacted by road construction. A few period artifacts were associated with this old roadbed. There were no significant precontact material culture remains encountered during the overall project. Feature A of Site 6442 qualifies for significance under Criterion "c" (unique curbstone construction associated with roadway improvements in the early 1900s) and Criterion "d" (information content). Features B and C qualify for significance under Criterion "d" for their information content.

[2] The Nashiwa Bakery was constructed in c. 1950, and its foundation was subsequently assigned SIHP No. 50-50-04-5484.

[3] An article in The Maui News indicates that the County appropriated $3,000.00 to pave the Main Street Block between Market Street and Central Street in 1925 (**The Maui News**, 9-19-25)

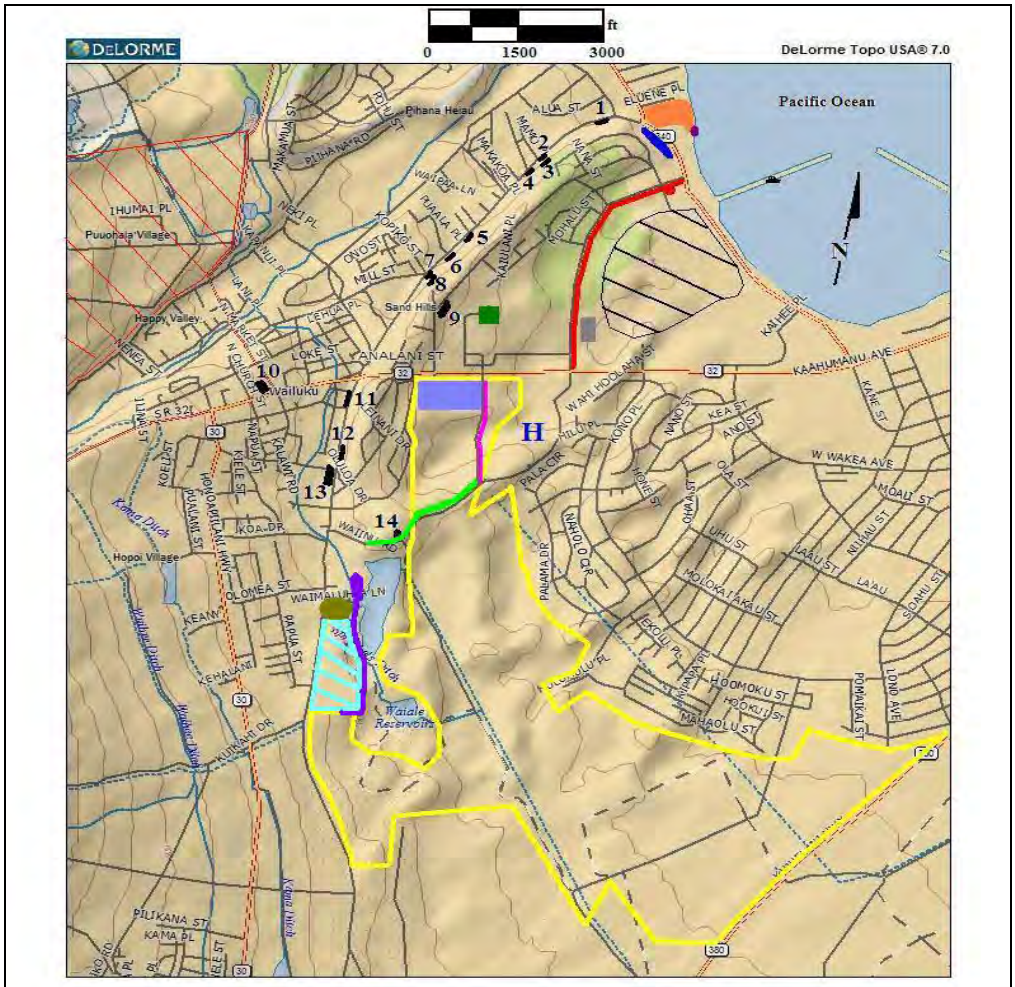


Figure 6: Map of selected archaeological studies in the Wailuku area (XRLLC, 2007).

Monitoring Plan conventions

As previously noted, a monitoring plan has been prepared and submitted to the State Historic Preservation Division for review and comment. This plan presents the steps that will be taken during the course of the proposed Wailuku Parking Structure project. The 12 steps to be followed during the monitoring program are presented below. Mitigation actions are also proposed within the monitoring plan document (refer to Appendix A of the Cultural Impact Assessment for the entire monitoring plan document).

Monitoring methodology (excerpt from E. Fredericksen, 2011)

"Topics for discussion shall include, but not necessarily be limited to the following:

1. The contractor shall be responsible for ensuring that the archaeological consultant is aware of all pertinent construction schedules and that the monitor is present for all subsurface excavation activities on this coastal parcel.
2. Both the archaeological consultant and the contractor are responsible for ensuring that on-site work is halted in an area of significant findings and to protect any such find from any further damage (i.e., construction fencing, protective covering, etc.). The State Historic Preservation Division will recommend appropriate mitigation actions. The SHPD Burial Sites Program, the SHPD Maui office, and the regional geographic representative of the Maui/Lana`i Islands Burial Council (MLIBC) will be consulted in the event that human remains are found.
3. In the event of the discovery of human remains, work shall cease in the immediate find area. In situ human remains will be left in place and any previously disturbed human remains will only be removed with written consent from SHPD. If at all possible, previsions for secure on-site storage will be made. The monitoring archaeologist will be responsible for notifying the SHPD Maui office and the Historic Preservation Division Burial Sites Program, which, in consultation with the regional geographic representative of the Maui/Lana`i Islands Burial Council, will determine the appropriate mitigation measures. This notification will include accurate information regarding the context and composition of the find.
4. The archaeological consultant will work in compliance with Hawai`i Revised Statutes Chapter 6E (procedures Relating to Inadvertent Discoveries).
5. The monitoring archaeologist will have the authority to closedown construction activities in areas where potentially significant discoveries have been made until they have been properly evaluated. Normally, construction activities may continue in unaffected portions of the project area.
6. Field procedures to be followed for documentation of discovered cultural features or human skeletal remains: a) standard field methods including recordation of profiles showing stratigraphy, cultural layers, etc.; b) mapping

and photographing of finds other than human remains; c) and excavation of cultural materials and/or exposed features.

7. The SHPD Maui cultural historian shall be notified and in consultation with the MLIBC will determine treatment of identified human remains; the SHPD Maui staff archaeologist will be notified about features such as cultural layers, artifact or midden concentrations, structural remains, etc., considered to be of significance under S13-279-2 (definitions).
8. The contractor should take into account the necessity for machine excavation at a speed slow enough to allow for reasonable visual inspection of the work. The monitoring archaeologist must make a "best effort" to search for significant material culture remains (i.e. artifacts, features, midden, skeletal remains, etc.). Machine excavation speed will need to be slowed in an area where significant material culture remains have been identified.
9. Significant archaeological discoveries, if they occur, shall be protected and identified by construction "caution" tape, fencing, or other reasonable means, until the SHPD Maui office and the archaeological consultant decide appropriate mitigation actions. All recovered material culture remains—with the possible exception of charcoal samples for radiometric analysis—will remain on Maui. Standard laboratory methods shall be utilized by the archaeological consultant in the event that cultural materials are recovered during monitoring and/or mitigation work. The archaeological consultant shall curate recovered significant cultural materials on Maui.
10. One monitor in most instances will carry out the necessary fieldwork. Tasks will include observation of grubbing and earth-moving activities. However, the SHPD and the MLIBC require that one archaeological monitor be assigned to each piece of major earth-moving equipment in sand dune areas or other culturally sensitive locations. (Change work order if more than one piece of machinery is to be utilized)
11. In the event of night work, the general contractor shall supply adequate lighting for the onsite monitor.
12. Chapter 6E-11 (a) specifies the following "It shall be unlawful for any person or corporate, to take, appropriate, excavate, injure, destroy, or alter any historic property or aviation artifact located on the private lands of any owner thereof without the owner's written permission being first obtained. It shall be unlawful for any person, natural or corporate, to take, appropriate, excavate, injure, destroy, or alter any historic property located upon lands owned or controlled by the State or any of its political subdivisions, except as permitted by the department." "

Current Project Area Conditions **(Photos 1-5)**

As previously noted, the general project area has been impacted by the construction of the existing Wailuku Municipal parking lot. This public parking area is heavily utilized during business hours, and it is often not possible to obtain a space within the parking lot. The following photographs were taken on a workday in August 2011.



Photo 1: General overview of project area, view to SSE from Vineyard Street.



Photo 2: Overview of project area, view to SSE from Vineyard Street.



Photo 3: Overview of the project area, view to the NNW.



Photo 4: Overview of the project area, view to the northeast.



Photo 5: Overview of the project area, view to the ENE.

BACKGROUND RESEARCH

Hawaiian Settlement

Precontact Period

The *ahupua`a* of Wailuku is a large unit stretching around Kahului Bay from Paukukalo to Kapukaulua. It includes Iao Valley and the northern half of the Kahului Isthmus. This single land division comprises nearly half of the District of Wailuku, and is noted as a place where chiefs were buried and wars were fought. The word itself can be translated as "water of destruction" (Pukui, et. al., 1974, p. 225), and the name Wailuku refers to the battle that took place in the area. Wailuku District is a significant area and was referred to as such in early Hawaiian days. It was a traditional land division called Wailuku *Moku*, or "district" formerly known as Pū`ali Komohana *Moku* (Kame`eleihiwa 1992).

Iao Valley and the two associated dunes on the north and south sides of the river, constituted the core area of Wailuku. This was the central place of religious and political power on Maui, which culminated during the time of Pi`ilani (c. 1600 AD). In the late precontact period warfare increased as the chiefs from Maui, Oahu and Hawaii vied for political and military dominance. High Chief Pi`ilani unified the districts of Maui by warfare, but after his death, his sons fought with one another – each to establish his own political control. Eventually Kiha-a Pi`ilani became victorious, seizing political control of Maui Island (Speakman, 1978, pp. 9-13). Each succeeding generation of chiefs struggled through warfare to secure their positions of political dominance.

During the reign of the last powerful paramount chief or king, Kahekili (who ruled from 1765 to 1794), Wailuku again became the site of intense warfare. Kahekili's royal residence, Kalanihale, was located in Wailuku.[4] In the mid-1770s it was marched upon by a Big Island chief named Kalani`opu`u and his *Alapa* (the name given to his warriors).

There are several accounts referring to this battle to the SSE of the current project area that took place in 1776 (Fornander 1996:153-155). The Big Island King Kalaniopu`u gathered his forces and came ashore on Maui without resistance at Honua`ula, from Ke`one`oi`o to Makena. The Big Island regiment was known as *Alapa*, which consisted of several hundred highly skilled and trained men. Chaos and plunder marked the arrival of the *Alapa*. The Maui country people fled into the forest and mountain ravines for

[4] The location is thought to be near the corner of Main and High Streets.

shelter. The Big Island forces were split so part of the army landed at Kīheipukoa, near the Kealia salt marsh between Kalepolepo and Ma`alaea. They were after the skilled warrior - King Kahekili in Wailuku.

With great courage the *Alapa* warriors crossed the isthmus of Kama`oma`o, also known as the Waikapū Common. The warriors were determined "to drink the waters of Wailuku that day". The Big Island *Alapa* regiment was considered the bravest and best. The warriors were all of equal stature and their spears of equal length. The legend represents their appearance as a gorgeous and magnificent spectacle. The *brilliant feather cloaks reflected the sunshine and the plumes of their helmets tossed in the wind*. Kahekili offered no resistance while the *Alapa* crossed the common. Instead, he distributed his forces in various directions throughout the Wailuku side of the common. Kahekili's army fell upon the *Alapa* as they entered the sandhills - southeast of Kalua, near Wailuku…"the gallant and devoted *Alapa* were literally annihilated; only two out of the eight hundred escaped alive" (ibid).

Additional insight is given by Kamakau who explains when Kaluli *Heiau* was completed, Kaleopu`upu`u told Kahekili, "This is the house of your god; open the sluice gate that the fish may enter". Then, in 1776 Kalaniopu`u's army landed at Keoneo`o`i`o with their war canoes extending to Makena at Honua`ula and proceeded to ravage the countryside. Additional forces combined to 800 strong. War canoes landed from Kihepuko`a at Kealia to Kapa`ahu. The warrior's feather cloaks stood out along the plains of Pu`u`ainako (Can-trash-hill) and Kama`oma`o. King Kahekili was at Kalanihale just below Kihahale and above the plateau of Ka`ilipoe at Pohakuaokahi. It was then that Kaleopu`upu`u told Kahekili, "The fish have entered the sluice; draw in the net" (Kamakau 1992:85).

Kahekili had secretly spread his forces among the sand hills southeast of Kalua, near Wailuku. With the advantage of dune elevation providing a bird's eye view from the slopes combined with the element of surprise, Kahekili and his warriors annihilated the invading *Alapa* army. Two survivors were left alive to relay the news of the defeat to Kalaniopu`u's encampment (Fornander 1880:154). The day after the "Slaughter of the Pi`ipi`i at Kakanilua", the remaining forces of Kalaniopu`u were sent to battle Kahekili. Numerous attacks from the Big Island warriors ensued. Several years later, with aide from muskets and cannons, Kamehameha I claimed control, or unified the islands under one rule. Kahekili was said to be Kamehameha's father.

By 1786, Kahekili controlled not only Maui, but Moloka`i, Lana`i, and O`ahu as well. This undisputed political control was challenged 4 years later in 1790. Kamehameha the Great made his move on Kahekili's domain, which ended in the battle of Kepaniwai[5], where the Maui ruler's forces were defeated. The term Kahului literally means "the winning", and the Bay takes the name because Kamehameha gathered his warriors there prior to fighting the battle in Iao Valley. However, Kahekili continued his hold on all of the islands until his death in 1794.

[5] *Kepaniwai* means literally "water dam" in reference to Iao Stream, because the stream was choked with human bodies after the slaughter there (Pukui, et. al., 1974, p. 109).

Early Post-Contact Period

The reign of Kamehameha was intertwined with the increasing presence of foreigners (*haoles*). The arrival of Captain Cook offshore at Kahului Bay in 1778 began the steady flow of outside influences that would forever alter the indigenous population and environment. One of the first of these influences came with missionaries, whose charge it was to save heathen souls. The first missionaries arrived in Wailuku in 1832, and the traditional religion began to wane under their influence. The Maui chiefs generously granted the missionaries use of prime property near the entrance to Iao Valley, where a girls' seminary (Central Female Boarding School) was established by Rev. Jonathan Green in 1836. Here young Hawaiian women were taught the language and customs of the foreigners, as well and their religion.

Another influence to bring change was foreign commercialism, and it came in the form of sugar production. The first sugarcane crops grown in Wailuku *ahupua`a* were harvested and processed in 1828. Kamehameha III, with the help of two Chinese technicians, established a water-powered mill. This mill was known as Hungtai Sugar Works (Photo 6), and its location was fairly close to the later location of the Wailuku Sugar Mill, which was established in 1862. Hungtai Sugar Works continued to operate until the opening of the newer mill owned by Wailuku Sugar Company.



Photo 6: Hungtai Sugar Mill stack in c. early 1900s.

The population of Wailuku *ahupua`a* in 1831-32 was listed as 2,256, with most of it being in the northern portion, presumably in Iao Valley (Cordy, 1978, p. 59).

On the southern and eastern side of the Iao Valley dunes (Pu`uone Dunes), commercial activity took the form of cattle ranching. This sizeable area was largely used for pasturage. By as early as 1845, large herds of cattle were roaming the Kahului Isthmus (cattle had been introduced on the Big Island by Vancouver in 1793) [Barrere, 1975, p. 52]. The Maui cattle were under a royal *kapu*, and, consequently, could not be molested. They were so destructive to the environment that Native Hawaiian landowners protested, but to no avail (Ibid.). In addition to commercial cattle ranching, there were also brief attempts at the production of cotton in the 1830s. This endeavor met with little commercial success however[6], and further impacted the landscape.

Mahele Awards

After the Mahele in 1848, much of Wailuku *ahupua`a* was designated as Crown Land, to be used in support of the royal "state and dignity". In 1872 Kamehameha V died, and his sister Princess Ruth Ke`elikolani inherited the land. She was designated as the owner of the *Ka`a* lands of Wailuku, the southern portion of the *ahupua`a*. The *ili* of *Owa* (comprised of 743.40 acres, LCA 420) was granted to Kuihelani, a steward to Kamehameha I. A much smaller northern section (the *ili* of *Kalua* – LCA 7713, *Apana* 23-391 acres) was awarded to Princess Ruth's half –sister, Victoria Kamamalu. In 1882, Princess Ruth sold one-half of the Crown Lands of Hawaii to Claus Spreckels, in order to settle her debts with him. Spreckels already held a lease for 16,000 acres of Wailuku *Ahupua`a* dating from 1878. Worried about what Spreckels might do with half of the Crown Lands, King Kalakaua gave him Land Grant 3343, a 24,000 acre portion of the southeastern section of Wailuku *Ahupua`a*, in return for the surrender of his claim (Adler, 1966, pp. 262-264).

The lower portion of Iao Valley contained some of the most productive taro land on the island, and the abundance of Land Commission Awards in the lower valley attests to the fertility of the area. There are 66 LCA's, primarily taro patch *kuleana*, and 39 *po`alima* located between the old Wailuku Mill site and Paukukalo, on the southern side

[6] The Anglican Church felt that "the Hawaiian people, freed from their service to and dependence on the chiefs should be self-supporting and thought that the encouragement of the manufacture of cloth from the superior cotton which grew luxuriantly in the islands would be a means to that end. They therefore suggested that a manufacturer be sent with sufficient machinery to get the project started. They felt that the people would continue to work with the encouragement and cooperation of the chiefs." (Lemmon et. al., 1973, p. 2.B.3). To this end they sent Miss Lydia Brown in 1835 with " 'a quantity of domestic spinning apparatus' (presumably spinning wheels and a loom)" (Ibid.), and "charged with the responsibility of teaching the Hawaiian girls the arts of carding, spinning, weaving and knitting locally grown cotton and wool." (Ibid.) As each class grew proficient enough to teach others, a new class was formed (Ibid., 2.B.4).

of Iao Stream. In addition, 13 awards were made directly to individual chiefs by Kamehameha IV[7].

Post-1850s Period

The Reciprocity Treaty of 1876 with the United States gave a boost to the sugar industry by increasing prices. The dry eastern part of Wailuku *ahupua`a* would be an attractive land area for potential sugar production if water could be brought to it. In 1880, Spreckels began construction of what is called "Spreckels' Ditch", located *makai* of the Hamakua Ditch, built earlier by Alexander and Baldwin to water their Maui Agricultural Company's fields. The "Spreckels' Ditch" brought Haleakala water to the arid Kahului isthmus. The ditch was 30 miles long, and delivered about 60 million gallons of water a day, and cost $500,000 to build. Spreckels also built another ditch, the Waihe`e ditch in 1882, which tapped the water resources from the West Maui Mountains, thus bringing water to both sides of the Wailuku Commons isthmus area (Adler, 1966, pp. 48-49).

This enabled Spreckels to found Hawaiian Commercial and Sugar Company (HC&S Co) in 1882. He continued involvement in that company until 1898, when control was wrested from his hands. The parent company still bears the name of Alexander and Baldwin, the principal participants in the transfer of corporate control. The production of sugar cane continues to be an activity in the isthmus area to this day.

The environmental conditions in the lower Iao Valley, which in precontact times were ideal for agricultural support of a large population, were a wide valley floor, rich alluvial soil, and a constant water supply from Iao Stream. These combined with the access to Kahului Harbor, rich in marine resources, made this area the prime precontact location on West Maui for a political and religious center.

Lower Main Street was built along the route of an old government road, which very likely followed the course of existing transportation routes, stretching from the ocean to Wailuku Town and the inland portions of Iao Valley. Nearly all of the LCA's in this area have borders that align with this road, indicating it was an important transportation corridor at the time the *kuleana* were granted. This corridor follows the natural boundary between the toe of the sand dune and the alluvial deposits of the valley. The Kahului Railroad (Site 3112) track paralleled Lower Main Street, and then swung to the south and west as it made its way to the train station at the foot of Main Street.

Another route of the railroad – from Kahului Harbor to Wailuku Sugar Mill is shown on both the 1954 USGS map, and the 1937 Towill Map. The remnants of this old railroad bed can still be noted along Lower Main Street and Waiale Road. Railroad construction was begun in the late 1870s and continued for nearly 2 decades, as routes were added and service expanded. The railroad remained functional until October 1957. An article in **The Maui News** of October 15, 1957 bore the headline "Iron Horses Bow

[7] This is in contrast to the area south of Iao Valley, in which the study parcel lies. Here there were 2 LCAs awarded – one to Victoria Kamamalu (7713), and one to Kuihelani (420). The largest portion is Grant 3343 to Claus Spreckels.

Out As Wailuku Sugar Company Discontinues Use of Railroad". However, the railroad continued to serve other areas to the east until 1966, when it ceased operation altogether.

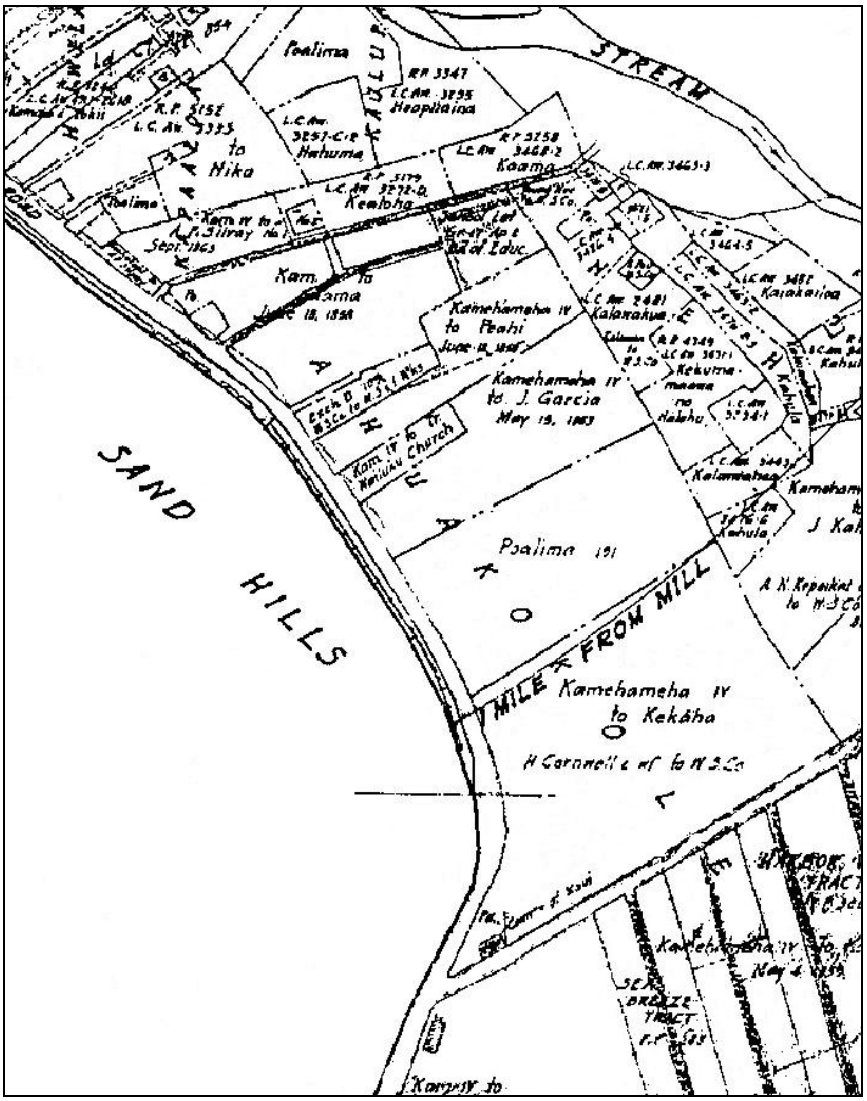


Figure 7: 1937 R. M. Towill Co. map of Wailuku Sugar Company.

The commercial and residential growth of Wailuku is related, no doubt, to the growth of Kahului Railroad. After the closure of this railroad, Wailuku Town began to change. Many businesses closed, as the commercial center shifted to Kahului, but Wailuku remains the seat of County government.

In the central Maui area to the south and east development did not occur until later. During World War II, portions were used by the military. There was a large Marine Base in the area occupied by Maui Community College (name recently changed to University of Hawaii Maui College) and the Maui Arts and Cultural Center. After the

war, several housing developments were built in Kahului (Dream City) and the Wailuku Sand Hills area.

Market Street

This significant street is just to the east of the Wailuku Parking Structure project area. Pili Street enters Market Street near the current American Savings building. The cut and dressed basalt edging (Site 50-50-04-6442, Feature A), which runs along the concrete sidewalks along Market Street, dates back to at least 1906. A May 19, 1906 article in **The Maui News** titled New Concrete Sidewalks states that "work on the new concrete sidewalks of town has begun". It also states that "a force of men at work near Kihei (are) getting out stone for the work". It appears possible that this rock was the supply source for the basalt curbstones along the edge of sidewalks.

The following photographs depict the early streetscape of Market Street in Wailuku. An unpaved street and associated boardwalk are shown in a c. 1900 photograph (Photo 7). By at least 1918, the street had been altered. The boardwalk has been replaced with a cement sidewalk, and cut, dressed basalt curbstones are present in this photograph taken along the street (Photo 8). The street appears to have been sealed with oil in this photograph. A c. 1923 photograph depicts a paved Market Street with the associated concrete sidewalks and basalt curbstone edging (Photo 9).



Photo 7: Photo of Market Street c. 1900. Note the wooden sidewalks before the paving of the street (Photo courtesy of the MHS[8]).

[8] MHS – Maui Historical Society



Photo 8: Photo of Market Street c. 1918 with curbstones and cement walkways (photo courtesy of the MHS).



Photo 9: Photo of Market Street in c. 1923. Note the asphalt, and curbstones (Feature A). Remnant sections of these curbstones are still in existence today (photo courtesy of the MHS).

Development in vicinity of project area

The general project area has contained a mix of businesses and residences during the post-contact period. An early Sandborn Map (1919) depicts numbers of residential and business establishments on the parcel (see Figure 8). Expanding growth occurred through the next three decades, and a subsequent Sandborn Map dated 1950 shows a large increase in density in the vicinity of the Wailuku Parking Structure project area, as well as on the project area itself (see Figure 9).

The increased urban density in this portion of Wailuku was evident through the 1980s. Ms. Jocelyn Perreira, Executive Director, Wailuku Main Street Association (WMSA), in a phone conversation with Erik Fredericksen, shared some of her impressions from an earlier study that the WMSA sponsored in the 1990s. This unpublished[9] study, called "Wailuku Roots", interviewed several then "old timers", many of whom have since passed. She recalls that many of the participants in this earlier study remembered that the general locale, including the project area formally contained residential dwellings, as well as commercial business establishments (refer to Figures 8 and 9). The author recalls some of these buildings as well, including the old King Theater that was near the corner of Church and Vineyard Streets. However, all of these buildings were demolished during the 1970s-1980s. The bulk of Pili Street was also cut off by the construction of the existing municipal parking lot at this time, although the ingress and egress portions of this street on Church Street and Market Street are still in place today.

Selected photographs of some of these former structures, as well as important buildings in the near vicinity of the project area are included after the two Sandborn Maps of Wailuku Town (Figures 8 and 9).

[9] It is Ms. Perreira's intention to publish this interesting study; funding is a challenge, though.

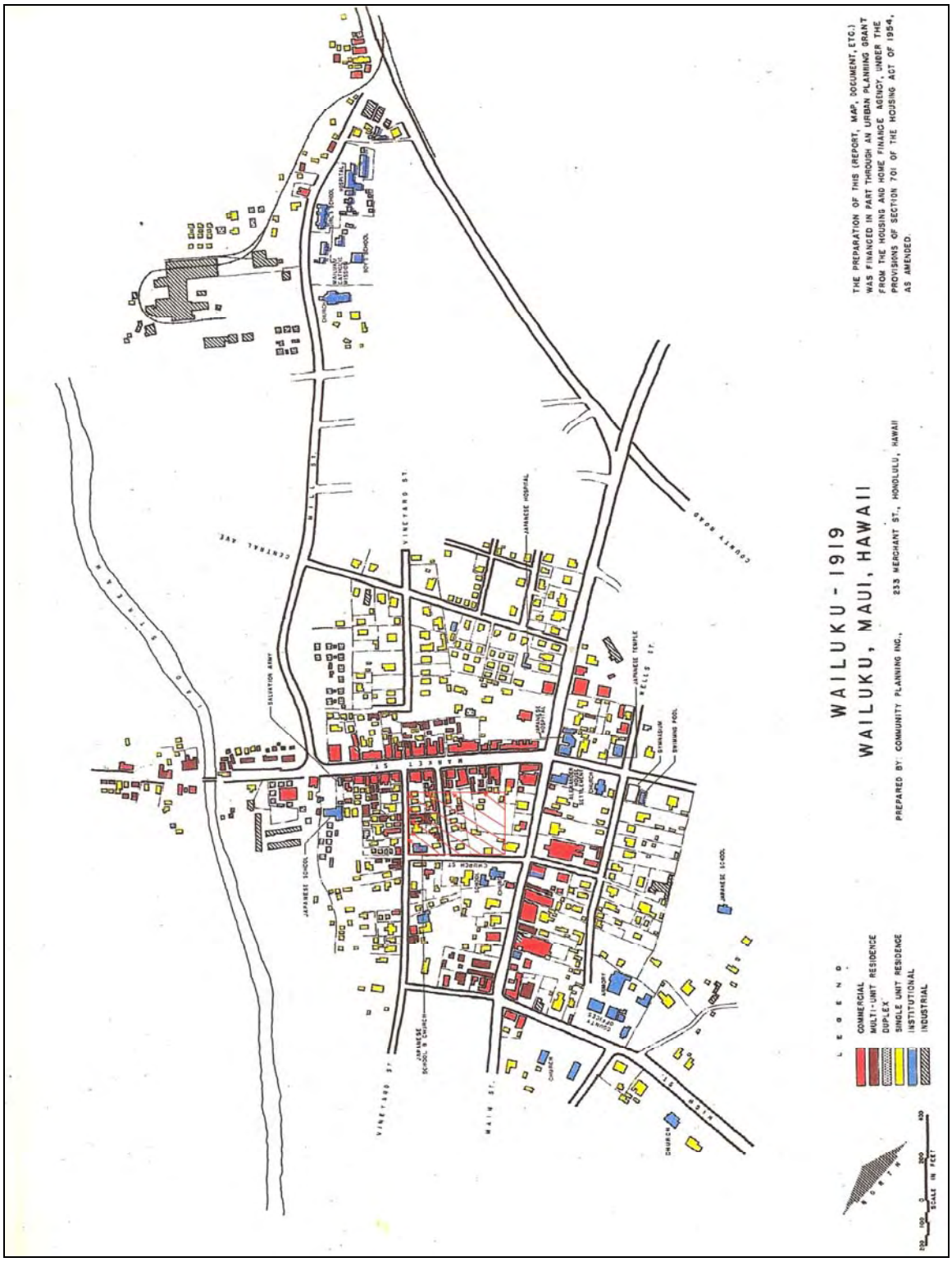


Figure 8: 1919 Sandborn Map, depicting buildings in Wailuku (Community Planning, Inc.). Note: project area near middle of figure, near corner of Main and Market Streets.

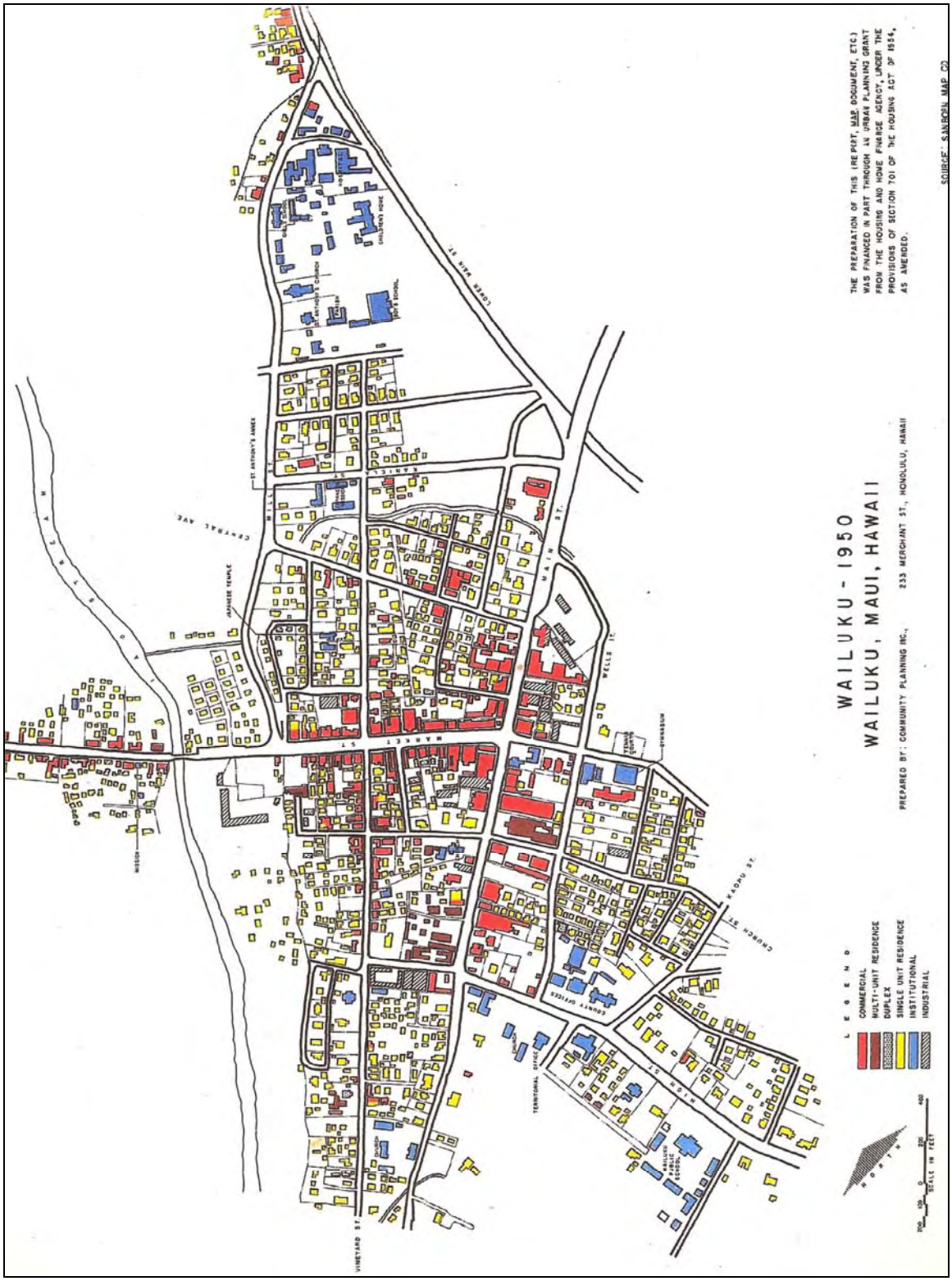
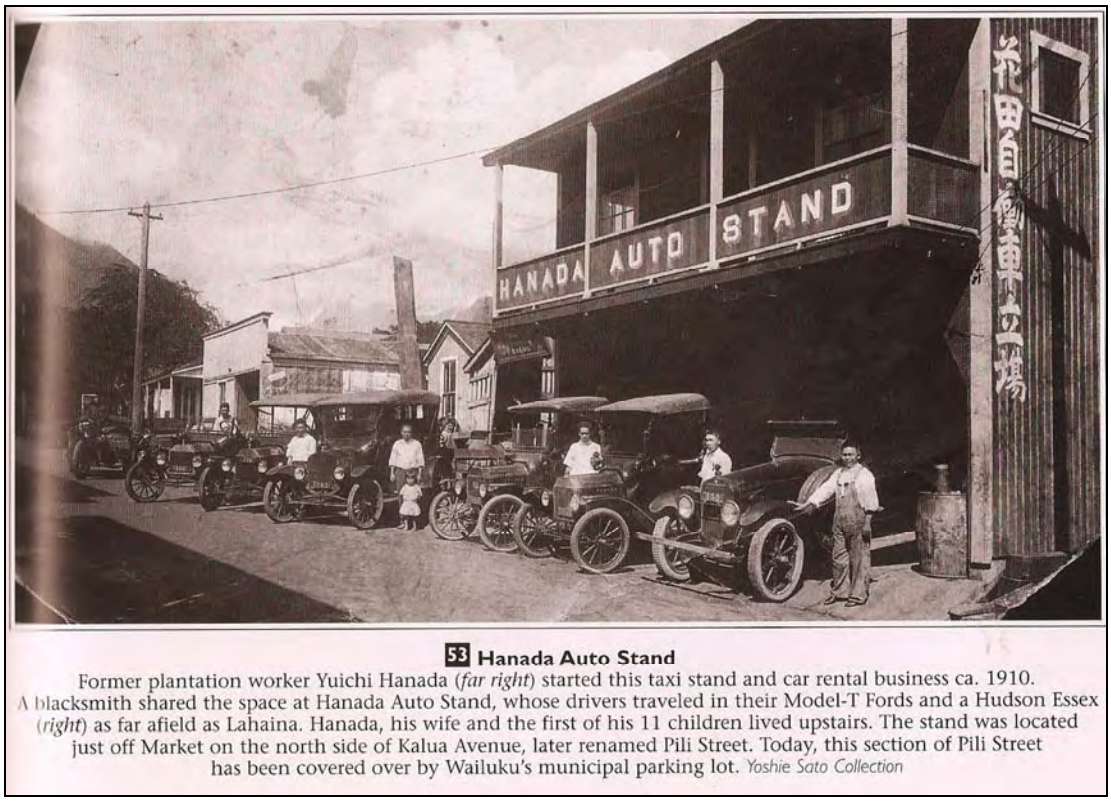


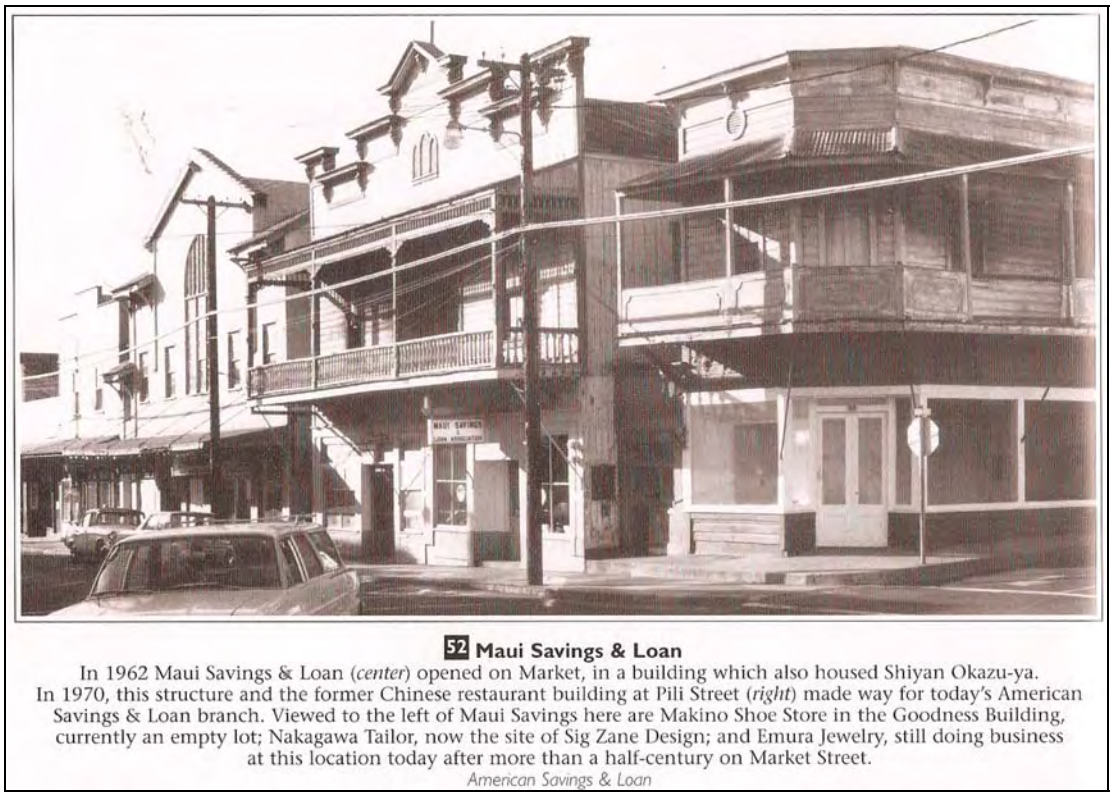
Figure 9: 1950 Sandborn Map, depicting buildings in Wailuku (Community Planning, Inc.). Note: project area near middle of figure, near corner of Main and Market Streets.

Selected photographs of business buildings on and near the project area, Wailuku (Photographs from Engerbretson, 2000)



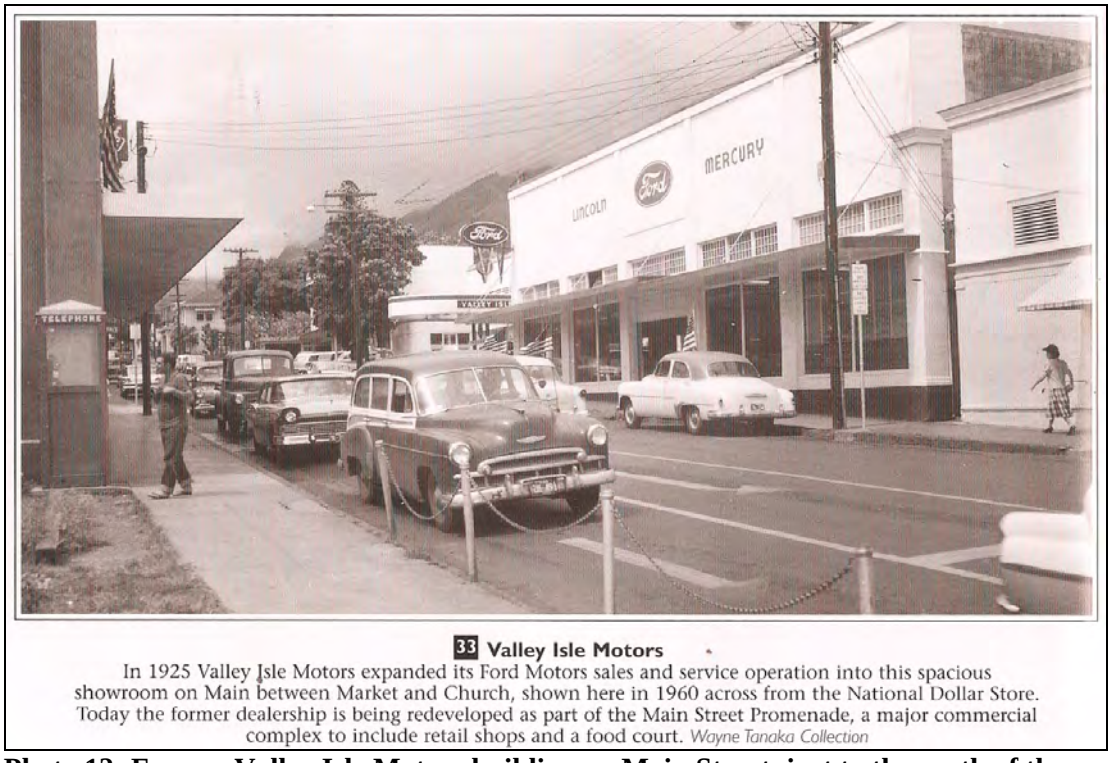
53 Hanada Auto Stand
Former plantation worker Yuichi Hanada (*far right*) started this taxi stand and car rental business ca. 1910. A blacksmith shared the space at Hanada Auto Stand, whose drivers traveled in their Model-T Fords and a Hudson Essex (*right*) as far afield as Lahaina. Hanada, his wife and the first of his 11 children lived upstairs. The stand was located just off Market on the north side of Kalua Avenue, later renamed Pili Street. Today, this section of Pili Street has been covered over by Wailuku's municipal parking lot. *Yoshie Sato Collection*

Photo 10: Old Hanada Auto Stand building formerly located on Pili Street.



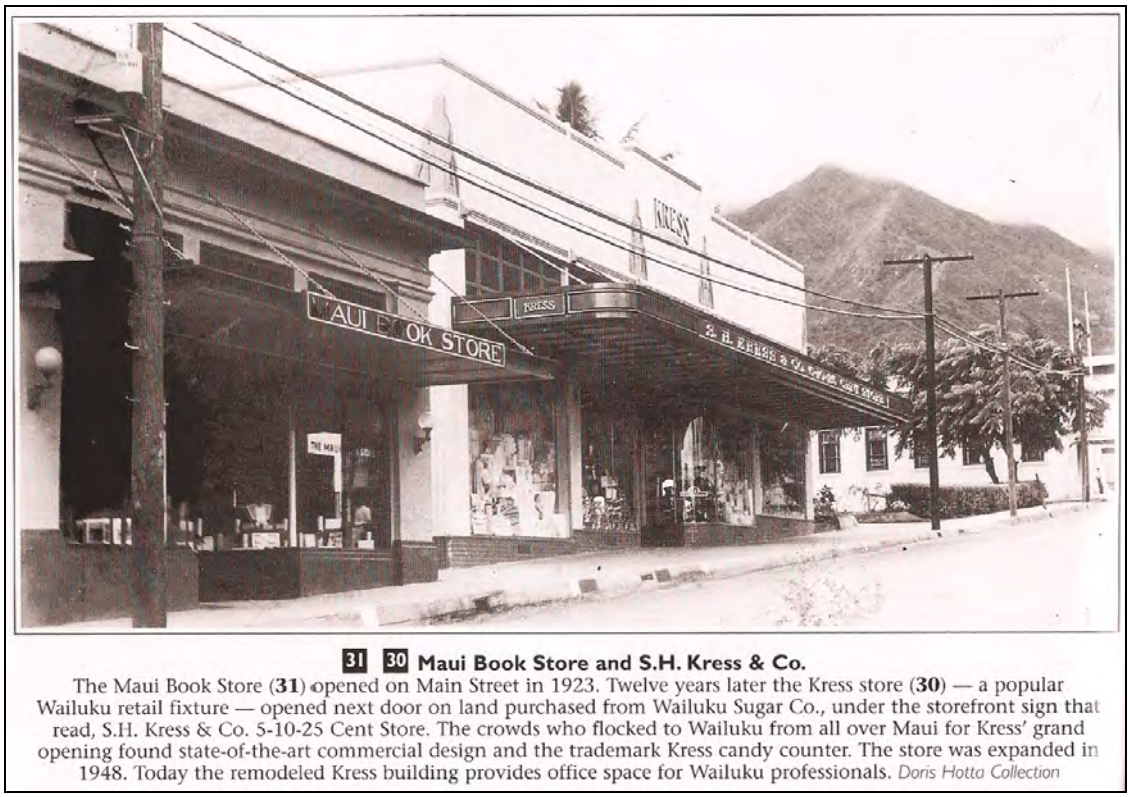
52 Maui Savings & Loan
In 1962 Maui Savings & Loan (*center*) opened on Market, in a building which also housed Shiyan Okazu-ya. In 1970, this structure and the former Chinese restaurant building at Pili Street (*right*) made way for today's American Savings & Loan branch. Viewed to the left of Maui Savings here are Makino Shoe Store in the Goodness Building, currently an empty lot; Nakagawa Tailor, now the site of Sig Zane Design; and Emura Jewelry, still doing business at this location today after more than a half-century on Market Street.
American Savings & Loan

Photo 11: Former Maui Savings & Loan and old Chinese restaurant on Corner of Pili and Market Streets.



33 Valley Isle Motors
In 1925 Valley Isle Motors expanded its Ford Motors sales and service operation into this spacious showroom on Main between Market and Church, shown here in 1960 across from the National Dollar Store. Today the former dealership is being redeveloped as part of the Main Street Promenade, a major commercial complex to include retail shops and a food court. *Wayne Tanaka Collection*

Photo 12: Former Valley Isle Motors building on Main Street, just to the south of the project area.



31 **30** **Maui Book Store and S.H. Kress & Co.**
The Maui Book Store (**31**) opened on Main Street in 1923. Twelve years later the Kress store (**30**) — a popular Wailuku retail fixture — opened next door on land purchased from Wailuku Sugar Co., under the storefront sign that read, S.H. Kress & Co. 5-10-25 Cent Store. The crowds who flocked to Wailuku from all over Maui for Kress' grand opening found state-of-the-art commercial design and the trademark Kress candy counter. The store was expanded in 1948. Today the remodeled Kress building provides office space for Wailuku professionals. *Doris Hotta Collection*

Photo 13: Former Maui Book Store and Kress buildings on south side of Main Street. Project area to the north across street.

CULTURAL RESOURCES IN AREA

Heiau in Wailuku

The earliest archaeological work in the Wailuku area was part of the island-wide survey of *heiau* (place of worship) done by Winslow Walker during 1928-1931. He reported a number of *heiau* in the general area of Wailuku. The most well known in the area -*Pihana Heiau* and *Haleki'i Heiau*- lie on the northern side of `Īao Stream atop the large dune formation. Efforts in the 1970s led to the preservation and designation of a State Monument, under the supervision of the Division of State Parks (DLNR).

Walker reported that there were a number of other *heiau* in this area of Wailuku, which were said to have been consecrated by Liholiho during his visit to Maui for that purpose in 1801 (Walker 1931: 146-147). At the time of his survey, none of the following reported *heiau* could be located: Keahuku, Olokua, Olopio, Mālena, Pohakuokahi, Lelemākō, Kāwelowelo, Kaulupala, Palamaihiki, and Oloolokalani (ibid: 148).

Personal communication with Mr. Charles Keau (D. Fredericksen, 1992), a well-respected authority on history and prehistory of Maui, provided more information about some of the *heiau* Walker did not find. By Mr. Keau's account, there were three *heiau* located within the corridor from Kahului Harbor to the intersection of Lower Main and Mill Streets. One was situated across the street from the Maui Soda Company. Another was located on parcel 083 (TMK: 3-4-039) between the Maui Electric Power Station and the County of Maui Wailuku Government cemetery. A third may have been located near the Home Maid Bakery. During the construction of the parking lot next to the bakery, Mr. Keau reported that Wesley Wong, a well-known local antiquity collector, found five adzes of "Tahitian" style. He did not specify when this was, but thought there might still be portions of the *heiau* there as well as some burials. More recent archaeological work has corroborated the presence of burials in this area.

SUMMARY AND CONCLUSIONS

As noted previously in this document, there was no formal archaeological survey carried out on the project area. Although no surface historic properties were identified during the previous archaeological inspection of this active parking lot, there is a possibility of the inadvertent discovery of undocumented subsurface cultural properties during any potential future land alteration activities. Given that the subject parcel is paved and actively utilized as a municipal parking lot, the State Historic Preservation Division has been previously consulted. Following discussions with the Maui SHPD Lead Archaeologist, Morgan Davis, it has been determined that archaeological monitoring is an appropriate form of mitigation for the proposed project.

The subject parcel is located within the core of Wailuku Town, and has been the site of various residences and businesses over the years. Previous archaeological work in the near vicinity of the proposed Wailuku Parking Structure project has identified post-contact site remnants. Some informants on previous projects have voiced concern for possible human remains that may be located in the vicinity of the previously disturbed project area. In addition, two individuals who declined to be directly involved in the current Cultural Assessment study voiced similar concerns that human remains may be located in the general area. The author is aware of at least two instances where human remains have been located during utility work in Wailuku town.

While the project area has been impacted by the construction (and eventual demolition) of various residences and businesses, and Pili Street over the years, the possibility nevertheless exists that significant material culture remains may be located within the project area. Consequently, archaeological monitoring is the proposed mitigation for all future earth moving activities on the subject parcel.

Based on our research, formal interview, and non-recorded discussions with members of the public who chose to remain anonymous, we are not aware of any specific traditional Hawaiian cultural uses for the subject parcel at present.

Assessment of Cultural Impacts

The subject parcel and surrounding areas have been heavily impacted by post-contact activities of the 19th and 20th centuries. If traditional Hawaiian cultural sites were present prior to the Plantation Era, they were either destroyed or buried by earth altering activities, or more recent land alteration and demolition actions in Wailuku. The project

area is actively utilized as a municipal parking lot at present. We are not aware of any traditional cultural practices that occur on the project area at present.

Potential Impacts by Future Construction Activities

Given the location of the project area, there is a possibility that significant material culture remains may be located under the paved parking lot. Traditional Hawaiian burials have been located in Wailuku Town, as well as in the greater Iao area. Consequently, archaeological monitoring is the recommended mitigation for the proposed development. To this end, a monitoring plan for the project area has concurrently been submitted to the State Historic Preservation Division for review and comment (APPENDIX A).

REFERENCES

Adler, Jacob
1966 Claus Spreckels: The Sugar King in Hawaii. Mutual Publishing, Honolulu.

Barrere, Dorothy
1975 Wailea: Waters of Pleasure for the Children of Kama, ms. On file, Anthropology Department, Bishop Museum, Honolulu.

Community Planning, Inc.
1962 Urban Planning Wailuku-Kahului. Prepared for Planning and Traffic Commission, County of Maui.

Donham, Theresa
June 1995 MCCRC Minutes- Maui County Cultural Resource Cmmission Meeting June 1 -On file

1994 *Recovery of Burials Inadvertently Disturbed During Construction of Home Maid Bakery Expansion Project, Wailuku, Island of Maui, SIHP 50-50-04-3556 (TMK: 3-8-37: 49).*

1992 *Human Skeletal Remains Discovered at the Maui Homeless Shelter Construction Site (50-50-04-2916), Wailuku, Maui.* SHPD, DLNR.

Engerbretson, George
2000 Exploring Historic Wailuku. Watermark Publishing, Honolulu, Hawaii.

Foote, Donald E., et al.
1972 *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*, Soil Conservation Service, U.S. Department of Agriculture, U. S. Govt. Printing Office, Washington, D. C.

Fredericksen, Demaris L.
March 2001 *An Archaeological Inventory Survey for Main Street Promenade – Phase 2 Wailuku Ahupua`a, Wailuku District, Maui Island (TMK: 3-4-13: por. 76).* Prepared for Lisa and Robert Joslin of Wailuku, Maui by Xamanek Researches, Pukalani, Maui.

February 1997 *Report of the Recovery of Human Remains from the Ka Hale A Ke Ola Construction Project, Site 50-50-04-4192 (TMK: 3-8-46: 21), Wailuku Ahupua`a, Wailuku District, Maui Island*, prepared for SHPD, by Xamanek Researches, Pukalani.

Fredericksen, Demaris L. and Erik M.
April 2000 *An Archaeological Inventory Survey for Main Street Promenade, Wailuku Ahupua`a, Wailuku District, Maui Island (TMK: 3-4-13: 96 and 100)*. Prepared for Lisa and Robert Joslin of Wailuku, Maui by Xamanek Researches, Pukalani, Maui.

Fredericksen, Demaris L., Erik M. and Walter M.
October 1997 *Data Recovery Report for the Nisei Veterans Memorial Center Site (Site 50-50-04-3120), Wailuku Ahupua`a, Wailuku District, Maui Island (TMK:3-8-07: 123)*. Prepared for Earl Kono, Nisei Veterans Memorial Center, by Xamanek Researches, Pukalani, Maui.

Fredericksen, Erik M.
March 2003 *Archaeological Monitoring Plan for the Market Street Improvements Project, Wailuku, Ahupua`a, Wailuku District, Wailuku, Maui (TMK: 3-4-12, 13, 14, 17, 33) (Job No. 01-068)*. Prepared for Kirk Tanaka of R. T. Tanaka Engineering, Inc. of Wailuku, Maui by Xamanek Researches, Pukalani, Maui.

May 2005 *An Archaeological Inventory Survey Report for Work Carried out on the Kanaloa Avenue Improvements – Kahului Beach Road to Ka`ahumanu Avenue – Project, Wailuku Ahupua`a, Wailuku District, Maui Island (Federal Aid Project No. STP-0900 [56]), (TMK: 3-8-25 and 3-7-01: 02 [Portion])*. Prepared on behalf of County of Maui, DPW and Environmental Management. By Xamanek Researches, LLC, Pukalani, Maui.

Fredericksen, Erik .M and Jennifer J. Frey
2009 *A Monitoring Report for the Market Street Improvements Project, Wailuku Ahupua`a, Wailuku District, Island of Maui*
[TMK: [2] 3-4-12, and 13;[2] 3-4-17; FAP STP 3405(1)]
Prepared for: the State Historic Preservation Division on behalf of County of Maui, Department of Public Works, Wailuku, Maui.

Juvic, Sonia P. and James O. Juvic
1998 Atlas of Hawaii, 3rd Edition, University of Hawaii Press, Honolulu.

Lemmon, Freeth, Haines, Jones and Farrell, Architects
1973 Hale Hoikeike, House of Display, Wailuku, Maui, prepared for Maui Historical Society, Wailku, Maui.

Pukui, Mary Kawena, Samuel Elbert, and Esther Mookini
1974 Place Names of Hawaii, University of Hawaii Press, Honolulu.

Speakman, Cummins E.
1978 Mowee: An Informal History of the Hawaiian Island, Peabody Museum of Salem, Salem, Mass.

The Maui News
Various articles.

Walker, Winslow
1931 Archaeology of Maui, MS on file at Maui Historic Society, Wailuku, Maui.

APPENDIX A: ARCHAEOLOGICAL MONITORING PLAN

AN ARCHAEOLOGICAL MONITORING PLAN FOR THE PROPOSED WAILUKU MUNICIPAL PARKING STRUCTURE PROJECT,

WAILUKU *AHUPUA`A*, WAILUKU DISTRICT,

MAUI ISLAND

(TMK: (2) 3-4-013: 075)
(COUNTY OFMAUI JOB NO: 11-08)

Prepared for:

The State Historic Preservation Division

On behalf of:

The County of Maui
Wailuku, Maui

Prepared by:

Xamanek Researches LLC
Pukalani, Maui

Erik M. Fredericksen

22 August 2011

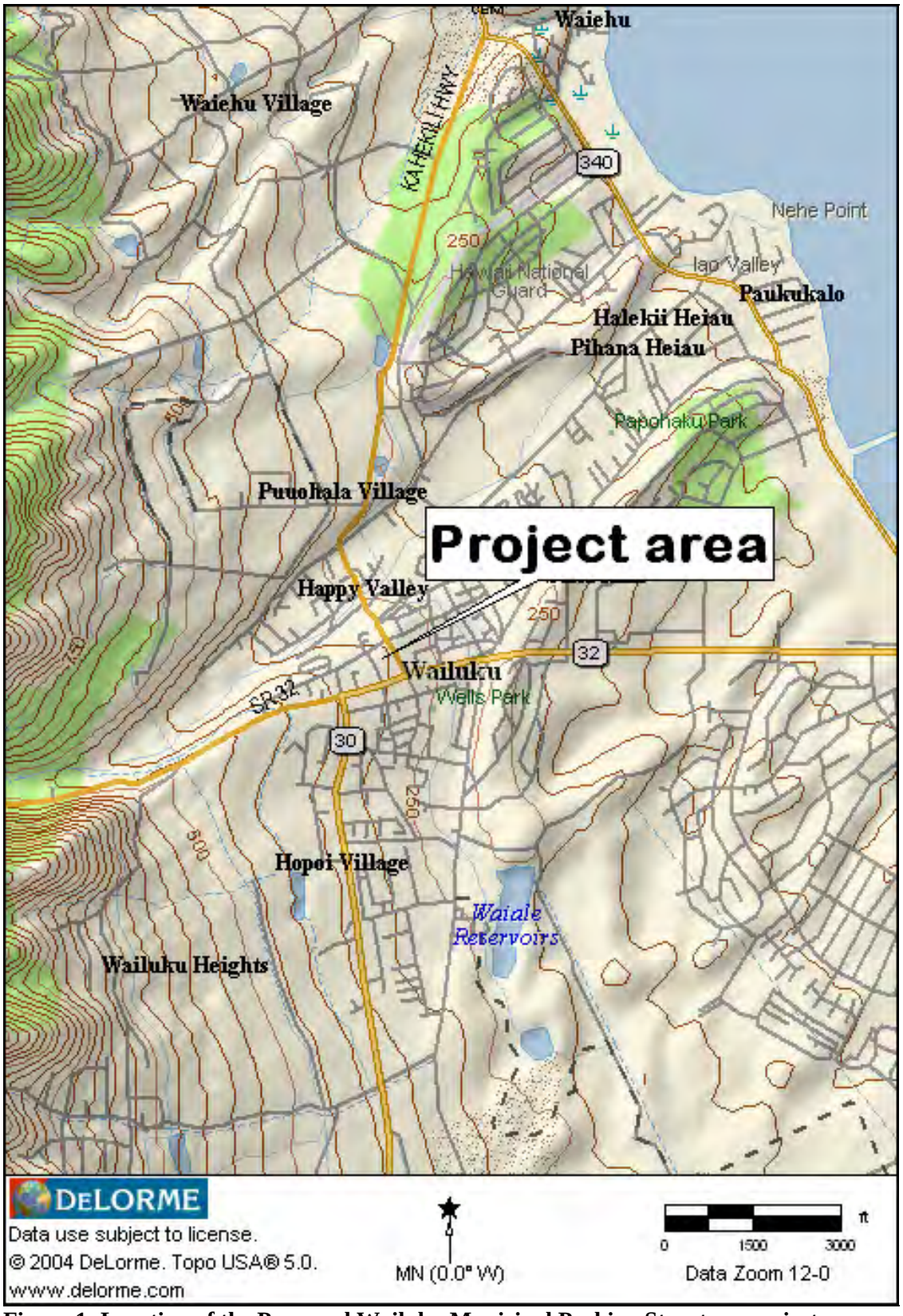


Figure 1: Location of the Proposed Wailuku Municipal Parking Structure project area, Wailuku, Maui.

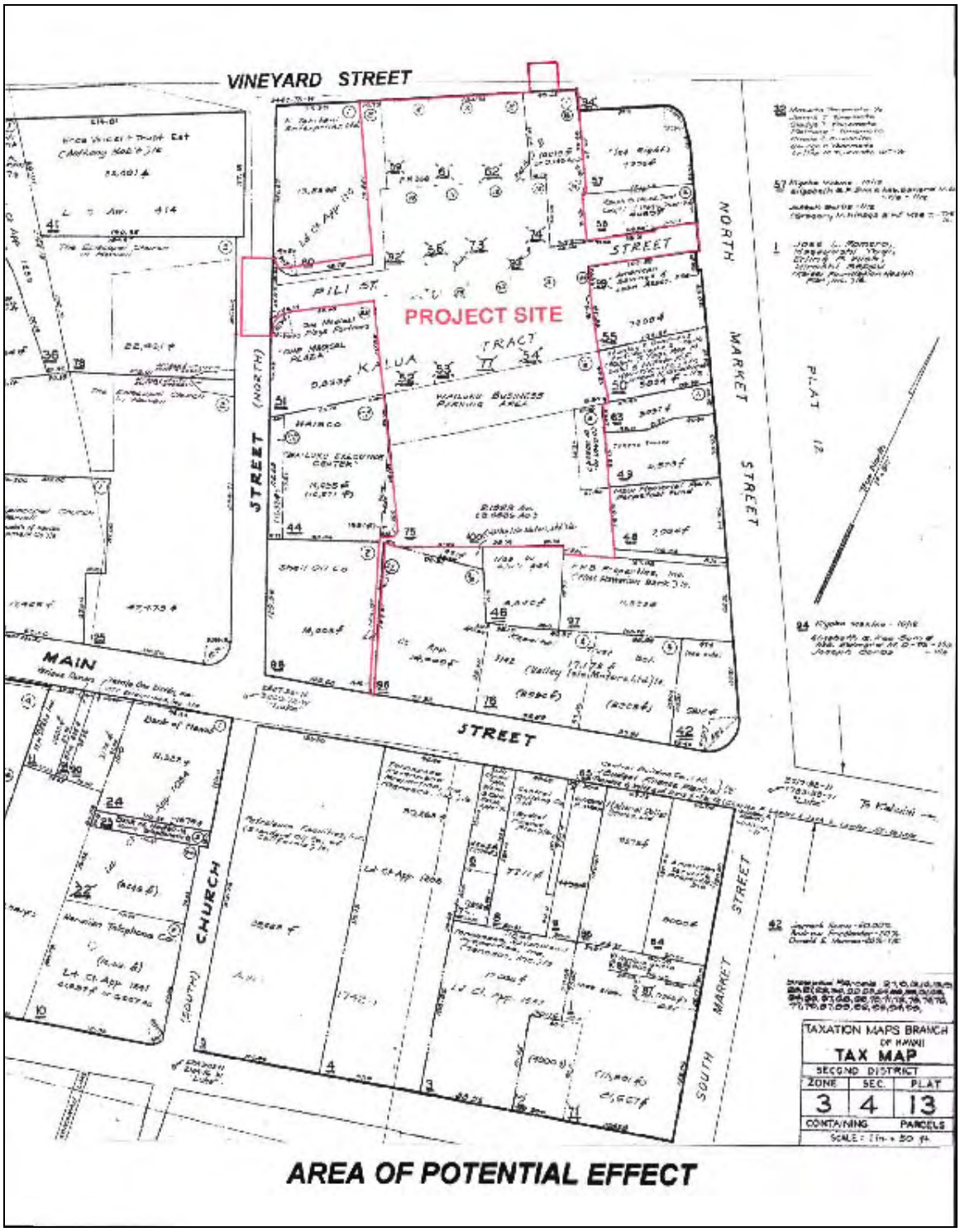


Figure 2: Plan view of the Wailuku Parking Structure project APE, Wailuku.

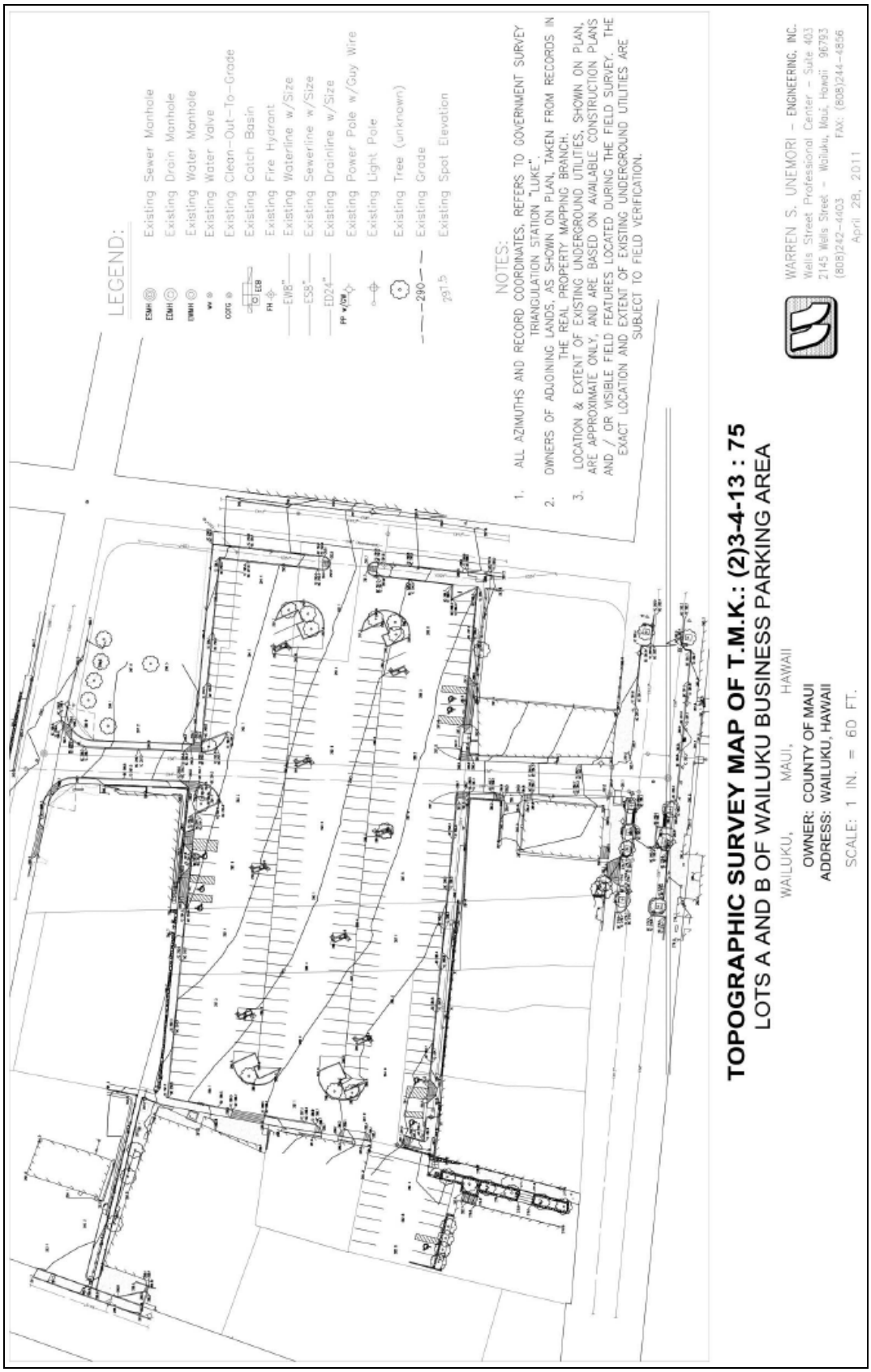


Figure 3: Topographic map of the project area, existing conditions.

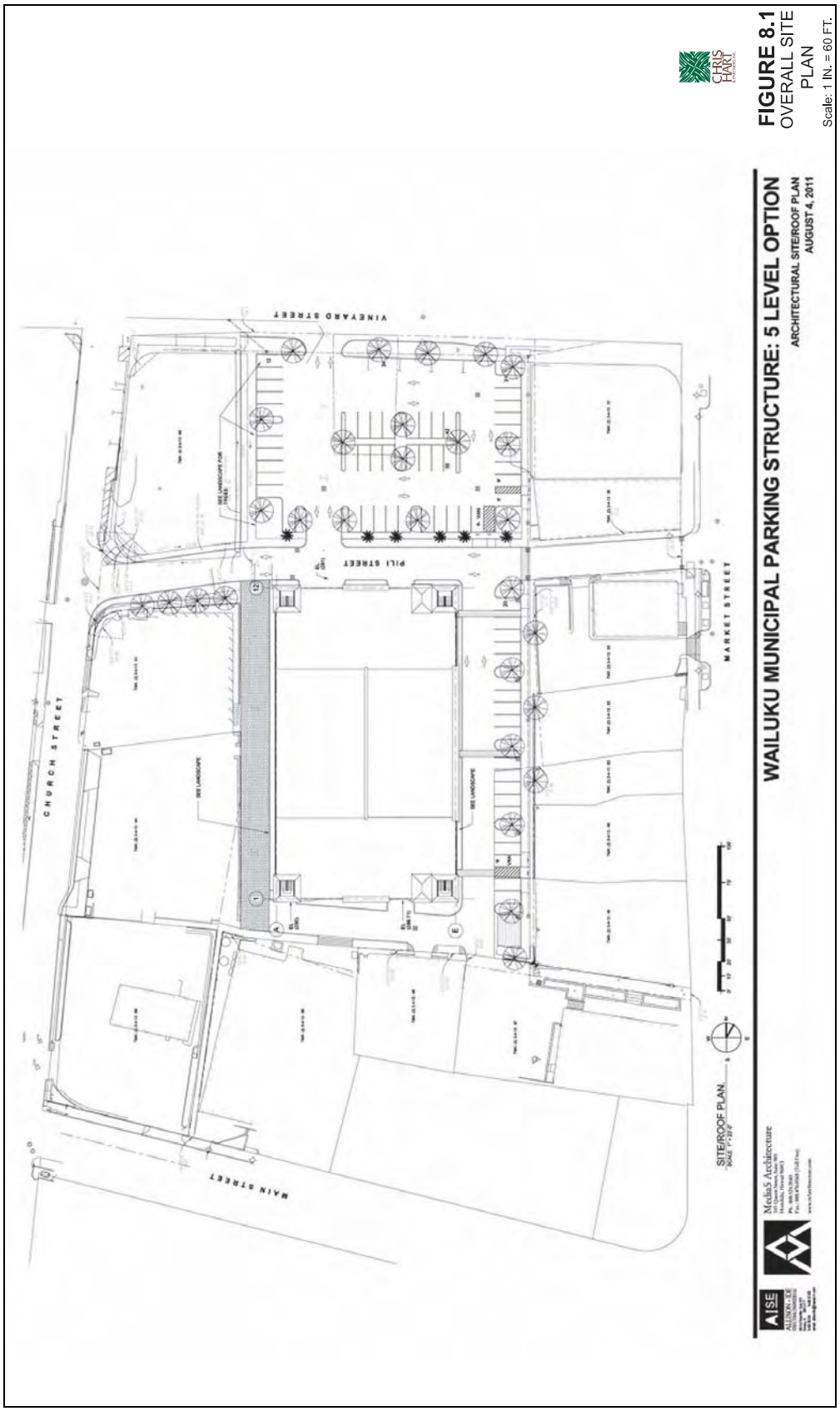


Figure 4: Site plan of the Proposed Wailuku Parking Structure project area.

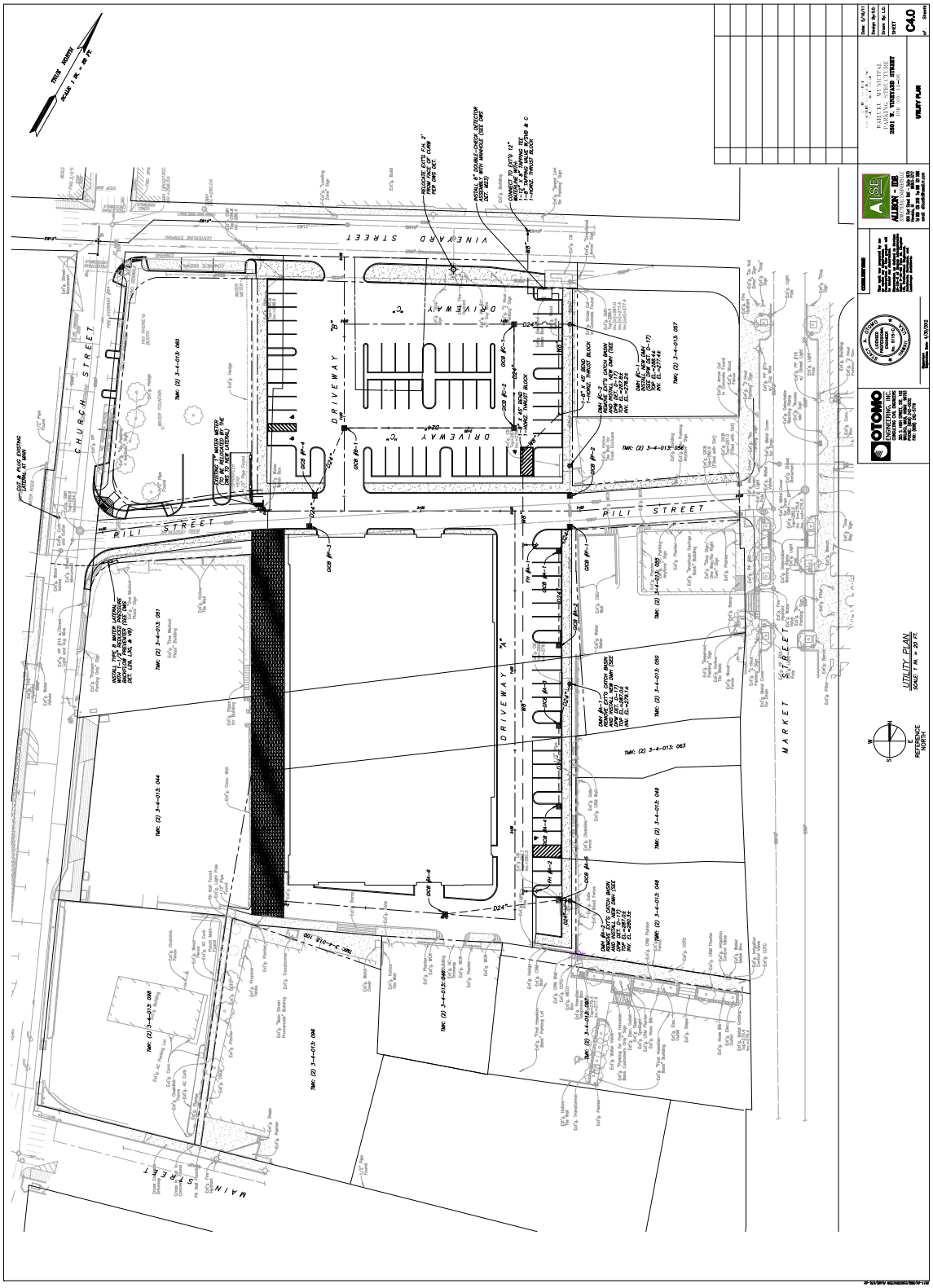


Figure 5: Utility plan for work on Church and Vineyard Streets.

INTRODUCTION

Mr. Brian M. Ide of Allison-Ide Structural Engineers LLC, Honolulu, Hawaii contacted Xamanek Researches, LLC in the fall of 2010 regarding the proposed Wailuku Municipal Parking Structure project in Wailuku, Maui (see Figures 1-5). Project plans called for the construction of a 5 level parking structure within the existing parcel that contains the paved Municipal Parking Lot (TMK: [2] 3-4-013: 075). While many of the planned improvements for the project are above ground, several subsurface disturbance activities are also scheduled. The various planned earth-moving activities include mass excavation for the footprint of the structure, along with various drainage and utilities improvements. In addition, limited off-site improvements are also scheduled for portions of Church Street and Vineyard Street.[10] Refer to Appendix A of this document for additional project information.

Mr. Ide subsequently requested that we prepare a proposal for the proposed project. Erik Fredericksen initially carried out a field inspection of the proposed project area. Following this inspection, a meeting was held with Ms. Morgan Davis, State Historic Preservation Division Lead Maui Archaeologist. It was determined that archaeological monitoring was an acceptable form of mitigation at this meeting (personal communication, Morgan Davis, SHPD). After this initial consultation, it was determined that Federal funds were to be utilized for at least the design phase of the project.

The Federal entity providing this funding is the Economic Development Agency (EDA). Given the use of Federal funding, the SHPD Maui Branch office was again consulted. Ms. Wendy Kobashigawa, County of Maui - Engineering Division, and Erik Fredericksen met with Ms. Davis in late July 2011 to further discuss the project. At this juncture, Ms. Davis indicated that the Section 106 process may be applicable to the proposed project. Ms. Kobashigawa subsequently contacted the appropriate staff at EDA, and Section 106 is being initiated at the writing of this archaeological monitoring plan.

The following monitoring plan addresses State Historic Preservation Division recommendations for this proposed Wailuku Municipal Parking Structure project. The plan has been prepared on behalf of the property owner, the County of Maui, Wailuku, Maui. This plan covers present proposed project actions as well as off-site improvements

[10] A new water lateral is proposed for Church Street, and will require 26 lineal feet of trenching. In addition, the existing lateral on Church Street will need to be cut and plugged. A new waterline connection on Vineyard Street will consist of 20 lineal feet.

that may be needed during the course of the development of this parking structure facility in Wailuku, Maui.

THE STUDY AREA

The project area lies adjacent to and north of Main Street, and adjacent to and south of Vineyard Street in Wailuku Town. Business properties border the subject parcel to the east, south and west. The general area contains a mix of businesses and residential areas, as well as COM facilities, including the Maui County Wailuku Fire Department. Observed vegetation in the vicinity of the project area includes alien weeds and grasses, along with various introduced landscaping trees. It is estimated that this portion of the island receives between 30 and 40 inches of annual rainfall. Estimated parcel elevations range from 245 to 260 ft AMSL.

Background Information

The Wailuku Parking Structure project area lies to the west of North Market Street in Wailuku *ahupua`a*, Wailuku District, Maui. While it remains unknown at the writing of this monitoring plan whether significant material culture remains are located within the project area, the possibility exists that significant cultural materials could be present.

Wailuku Town Archaeology **(Figure 6)**

In Wailuku Town itself, Xamanek Researches conducted two inventory surveys for the Main Street Promenade Project. These two parcels are just to the south of the project area and front Main Street. Historic period bottles and crockery were recovered from two large refuse pits, along with metal parts that appear to be carriage and harness items (Fredericksen and Fredericksen, 2000, 2001). The parking lot of the historic Iao Theater on Market Street was the subject of an archaeological inventory survey in 2001. Historic period artifacts were located during this survey.

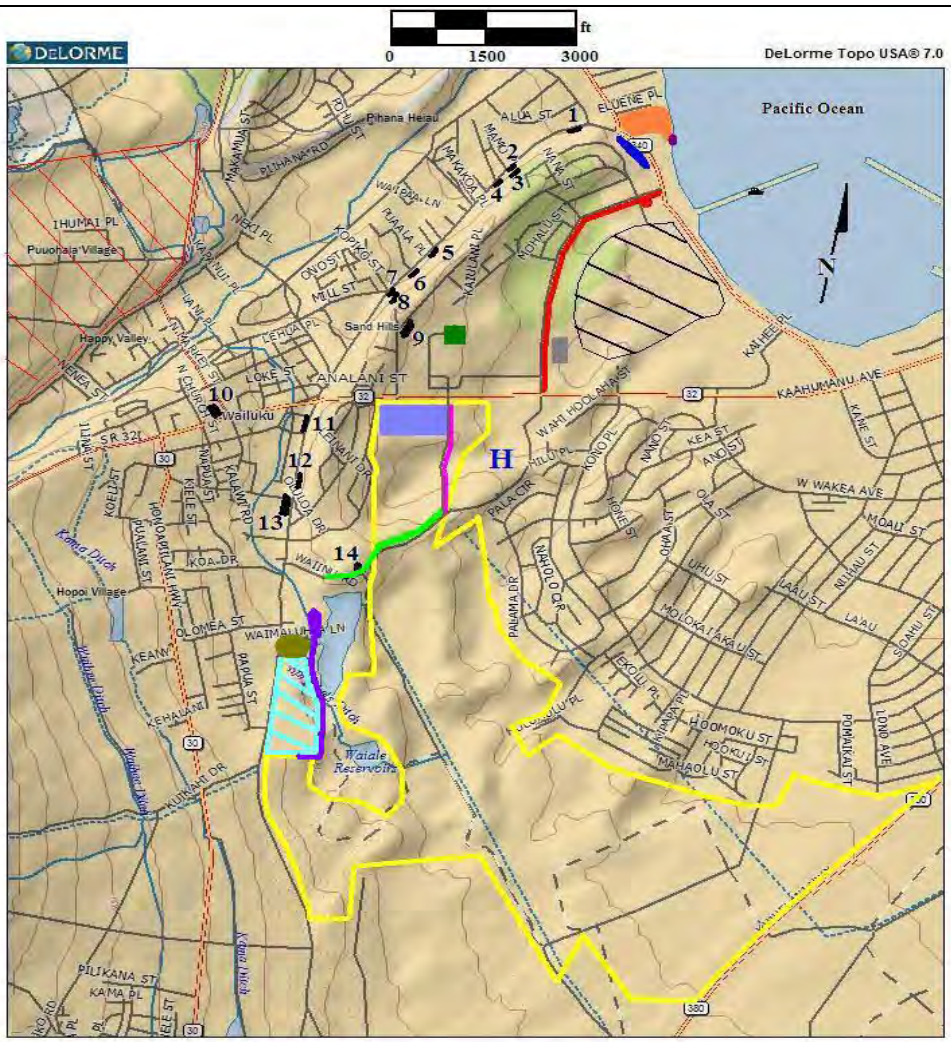
Xamanek Researches LLC completed monitoring for the Market Street Improvements project just to the east of the current study area (Fredericksen and Frey, 2010). One site with three component features was identified during the monitoring program. Site 50-50-04-6442 consists of Feature A – Historic curbstones, Feature B – Historic Rock wall, and Feature C – Historic cobble roadbed. The curbstones were

present within much of the Market Street project area. Portions of this feature were impacted for the new planter areas, but when individual stones were removed, they were relocated within the road corridor in sections of sidewalk that had had curbstones previously removed. The Feature B retaining wall was demolished after recordation and replaced with a concrete retaining wall. Portions of the original, unpaved Market Street roadbed (Feature C) were impacted by road construction. A few period artifacts were associated with this old roadbed. There were no significant precontact material culture remains encountered during the overall project. Feature A of Site 6442 qualifies for significance under Criterion "c" (unique curbstone construction associated with roadway improvements in the early 1900s) and Criterion "d" (information content). Features B and C qualify for significance under Criterion "d" for their information content.

Xamanek Researches carried out an inventory survey of a parcel off of Central Street that now contains a senior living complex (Lokenani Hale) in 2003 (Fredericksen and Fredericksen, 2003). During the course of this survey, one historic property was identified. This site consisted of the remains of the former Nashiwa Bakery concrete foundation.[11] Site 5484 qualified for significance under Criterion "d" of Federal and State historic preservation guidelines because of its information content. However, at the conclusion of the report, it was determined that an adequate amount of information had been obtained for this site and it was determined that it could be demolished. The State Historic Preservation Division (SHPD) reviewed the earlier inventory survey report and determined that an archaeological monitoring program would be required for this housing project (SHPD DOC NO**:** 0312MK02). Xamanek Researches prepared the necessary monitoring plan for the adjacent Lokenani Hale project, which SHPD subsequently approved in an April 2004 review letter (SHPD DOC NO: 0403MK11). Xamanek Researches, LLC subsequently carried out monitoring during 2005 and an additional site was documented, along with several refuse pits form the 1960s (Fredericksen, 2005). The site consisted of a c. 20-35 cm thick concentration of water worn and subangular cobbles and pebbles that was encountered on the impacted segments of Nani and Loke Streets. This compacted matrix underlies the existing road base of the trenched portions of both streets and is interpreted as the former road/road base prior to the era of paved roads in Wailuku Town. Streets in this part of Maui were likely first paved sometime after 1925.[12] This old road was designated SIHP No: 50-50-04-5763.

[11] The Nashiwa Bakery was constructed in c. 1950, and its foundation was subsequently assigned SIHP No. 50-50-04-5484.

[12] An article in The Maui News indicates that the County appropriated $3,000.00 to pave the Main Street Block between Market Street and Central Street in 1925 (**The Maui News**, 9-19-25)



1 - Connolly, 1973 and Fredericksen et al., December 1999
2 - Spear, 1995
3 - Burgett and Spear, 1995
4 - Donham, 1994
5 - Fredericksen, et al., September 2002
6 - Burgett and Spear, 1996
7 - Fredericksen, et al., 1996
8 - Fredericksen, et al., 1997
9 - Fredericksen, et al., December 1997
10 - Fredericksen et al., 2000, 2001 (Phase I and II)
11 - Fredericksen et al., February 1999
12 - Donham, 1992
13 - Dunn and Spear, 1995
14 - Fredericksen et al., August 1994

Fredericksen, E. November 1998
Fredericksen et al., 1997
Fredericksen et al., 1995
Heidel, Pyle and Hammatt, 1997
Rotunno and Cleghorn, 1990
Rotunno-Hazuka, et al., May 1994a
Fredericksen, W., January 1997
Donham, 1992
Pickett, 2006 (isolated burial)

Fredericksen, 2005
Fredericksen, et al., May 1997
Fredericksen et al., 2002
Fredericksen et al., December 1992b and October 1997
Fredericksen et al., 2002
Fredericksen, October 2005
Fredericksen et al., 1995

Figure 6: Map of selected archaeological studies in the Wailuku area (XRLLC, 2007).

ARCHAEOLOGICAL MONITORING PLAN

Scope of monitoring

The scope of this monitoring plan includes having an archaeological monitor(s) present during all grubbing, grading and subsurface earthmoving activities within the project area. Actual on-site time and specific actions to be followed in the event of inadvertent discoveries will be discussed and agreed upon by the general contractor and Xamanek Researches, LLC at a pre-construction meeting held for this purpose. Additional meetings may be called, if either the monitoring archaeologist or the general contractor believes that other relevant information should be disseminated.

Given the location of the Wailuku Parking Structure project area, there is a possibility that significant material culture remains may be inadvertently disturbed during proposed and/or future earthmoving activities in this portion of Wailuku, Maui. Possible significant cultural materials could include subsurface pre- and/or post-contact structural remains, habitation deposits, agricultural remnants, human burials and/or human skeletal remains.

Monitoring methodology

As noted above, there is a possibility that significant material culture remains (including human burials and/or human skeletal remains) may be inadvertently disturbed during earthmoving activities on the subject parcel. Consequently, close cooperation between the monitoring archaeologist and construction personnel will be essential. Topics for discussion shall include, but not necessarily be limited to the following:

1) The contractor shall be responsible for ensuring that the archaeological consultant is aware of all pertinent construction schedules and that the monitor is present for all subsurface excavation activities on this coastal parcel.

2) Both the archaeological consultant and the contractor are responsible for ensuring that on-site work is halted in an area of significant findings and to protect any such find from any further damage (i.e., construction fencing, protective covering, etc.). The State Historic Preservation Division will

recommend appropriate mitigation actions. The SHPD Burial Sites Program, the SHPD Maui office, and the regional geographic representative of the Maui/Lana`i Islands Burial Council (MLIBC) will be consulted in the event that human remains are found.

3) In the event of the discovery of human remains, work shall cease in the immediate find area. *In situ* human remains will be left in place and any previously disturbed human remains will only be removed with written consent from SHPD. If at all possible, previsions for secure on-site storage will be made. The monitoring archaeologist will be responsible for notifying the SHPD Maui office and the Historic Preservation Division Burial Sites Program, which, in consultation with the regional geographic representative of the Maui/Lana`i Islands Burial Council, will determine the appropriate mitigation measures. This notification will include accurate information regarding the context and composition of the find.

4) The archaeological consultant will work in compliance with Hawai`i Revised Statutes Chapter 6E (procedures Relating to Inadvertent Discoveries).

5) The monitoring archaeologist will have the authority to closedown construction activities in areas where potentially significant discoveries have been made until they have been properly evaluated. Normally, construction activities may continue in unaffected portions of the project area.

6) Field procedures to be followed for documentation of discovered cultural features or human skeletal remains: a) standard field methods including recordation of profiles showing stratigraphy, cultural layers, etc.; b) mapping and photographing of finds other than human remains; c) and excavation of cultural materials and/or exposed features.

7) The SHPD Maui cultural historian shall be notified and in consultation with the MLIBC will determine treatment of identified human remains; the SHPD Maui staff archaeologist will be notified about features such as cultural layers, artifact or midden concentrations, structural remains, etc., considered to be of significance under S13-279-2 (definitions).

8) The contractor should take into account the necessity for machine excavation at a speed slow enough to allow for reasonable visual inspection of the work. The monitoring archaeologist must make a “best effort” to search for significant material culture remains (i.e. artifacts, features, midden, skeletal remains, etc.). Machine excavation speed will need to be slowed in an area where significant material culture remains have been identified.

9) Significant archaeological discoveries, if they occur, shall be protected and identified by construction “caution” tape, fencing, or other reasonable means, until the SHPD Maui office and the archaeological consultant decide

appropriate mitigation actions. All recovered material culture remains—with the possible exception of charcoal samples for radiometric analysis—will remain on Maui. Standard laboratory methods shall be utilized by the archaeological consultant in the event that cultural materials are recovered during monitoring and/or mitigation work. The archaeological consultant shall curate recovered significant cultural materials on Maui.

10) One monitor in most instances will carry out the necessary fieldwork. Tasks will include observation of grubbing and earth-moving activities. However, the SHPD and the MLIBC require that one archaeological monitor be assigned to each piece of major earth-moving equipment in sand dune areas or other culturally sensitive locations. (Change work order if more than one piece of machinery is to be utilized)

11) In the event of night work, the general contractor shall supply adequate lighting for the onsite monitor.

12) Chapter 6E-11 (a) specifies the following "It shall be unlawful for any person or corporate, to take, appropriate, excavate, injure, destroy, or alter any historic property or aviation artifact located on the private lands of any owner thereof without the owner's written permission being first obtained. It shall be unlawful for any person, natural or corporate, to take, appropriate, excavate, injure, destroy, or alter any historic property located upon lands owned or controlled by the State or any of its political subdivisions, except as permitted by the department."

Field methods utilized during the monitoring program shall include photographic recordation (where appropriate), artifact excavation (recovery and recordation), profile documentation of cultural layers and stratigraphy, excavation and recordation of exposed features, and mapping of all pertinent features on an appropriate site map. A daily log (field notes) of activities and findings will also be kept. Gathered information shall be utilized in the preparation of the monitoring report to be submitted to the SHPD.

In the event human skeletal remains are inadvertently disturbed, the SHPD Maui office, the SHPD Burial Sites Program and the Maui/Lana`i Islands Burial Council shall be notified, and appropriate mitigation actions determined (photographs of human skeletal remains will not be taken). The SHPD Maui Culture and History Branch will be the contact for all issues relating to human remains.

A supervisory archaeologist may periodically visit the monitoring site as often as is necessitated by the nature of the construction activities and archaeological findings. If significant discoveries are made, appropriate mitigation measures will be discussed with the SHPD Maui office.

The archaeological consultant shall curate significant cultural materials located on Maui, until analysis is completed. The cultural materials will be then turned over to the appropriate parties. Long-term curation arrangements of such materials will be approved

by the SHPD. When fieldwork for this required archaeological monitoring project is completed, a draft monitoring report will be prepared. This draft report shall be submitted to the State Historic Preservation Division within 180 days of the completion of the overall project, for comment and approval. Approved changes and corrections will result in the final monitoring report for the proposed Wailuku Municipal Parking Structure project in Wailuku, Maui (TMK: [2] 3-4-013: 075).

APPENDIX B: Project description - Wailuku Municipal Parking Structure

PROJECT DESCRIPTION
FOR
WAILUKU MUNICIPAL PARKING STRUCTURE
260 VINEYARD STREET
WAILUKU, MAUI, HAWAII
TMK: (2) 3-4-013:075
JOB NO. 11-08

8/18/11

PROPOSED WORK:

(See the attached Overall Site Plan and Utility Plan-Sheet C4.0 for reference)

The County of Maui is proposing to construct a 5-level, 120,230 square foot concrete parking structure on the south side of TMK: (2) 3-4-013:075, which is a total of approximately 2.19 acres. The subject parcel is bound to the north by Vineyard Street; to the east by commercial buildings fronting Market Street; to the south by commercial buildings fronting Main Street; and to the west by commercial buildings fronting Church Street.

Additional at-grade paved parking stalls are also proposed along the northern and eastern boundaries of the parcel. Access to the parking structure will be via a driveway entrance from Vineyard Street that leads directly into the structure and a paved driveway access (formerly known as “Pili Street”) running across the parcel from Church Street to Market Street. A paved service road will provide access around the parking structure to the backs of the adjacent buildings along Market Street and Main Street. A stamped concrete fire lane along the west side of the parking structure will provide fire truck access from the back of the parking structure to the driveway access. Other improvements proposed will include improvements to the existing pedestrian access leading to Main Street; concrete crosswalks, sidewalk, and curbs; an underground drainage system; underground waterlines for irrigation and fire protection; landscaping; underground electrical conduits; and other amenities such as lamp posts, benches, bike racks, and trash receptacles.

A new water meter lateral will be installed off of the existing waterline on Church Street to replace the existing lateral on Church Street, which will be cut and plugged. A new fire protection line will be installed off of the existing waterline on Vineyard Street.

A land exchange with the adjacent parcel at TMK: (2) 3-4-013:060, northwest of the parking lot is also necessary. A strip of land along the southern boundary of parcel 60 needs to be obtained by the County to install a concrete sidewalk for pedestrian access from the at-grade parking to Church Street. In exchange, the County will give the adjacent property owner an equivalent area of land along the eastern side of parcel 60. This adjacent parcel is currently vacant and undeveloped. The majority of the property is grassed but also has some trees on site. Other existing features are a water fountain, pay phone booth, hedge, and concrete sidewalks.

EXISTING FEATURES:

(See the attached Site Plan – Sheet C2.0 for reference)

The project site is currently an asphalt paved parking lot consisting of 210 stalls. Above ground features consist of concrete sidewalks, concrete curb planter islands with trees, and lamp posts. An underground drainage system runs along the eastern boundary of the property and connects to the drainage system on Vineyard Street. Underground sewerline and waterline systems run in the west to east direction within the proposed driveway access (fka “Pili Street”).

APPENDIX C: INTERVIEW

Acknowledgement: the following interview was corrected, edited and clarified as an accurate recounting at my request, and with the gracious assistance of Ms. Jocelyn Perreira, Executive Director, Wailuku Main Street Association. The author wishes to extend a heartfelt thank you for Ms. Perreira's patience and willingness to participate in the overall Cultural Impact Assessment process.

PREFACE

Note: Ms. Jocelyn Abreu Perreira is the Executive Director of the Wailuku Main Street Association; she has served in this capacity for over 26 years.

The following interview with Ms. Perreira is included in the Cultural Impact Assessment, because she has been involved with the Wailuku Main Street Association for over 26 years and is very familiar with the history of Wailuku town. In addition, she has a strong bond to Wailuku, having grown up in the area and also helped her grand parents who worked in the area. During her tenure at the WMSA, she helped organized an extensive oral history project identified as the KEY project (Keep Elderly Young), which focused on senior citizens' recollections about Wailuku Town.

Also known as Wailuku Roots, this project was carried out in several phases, beginning in 1998 and extending into 2002 and beyond, with the central goal of obtaining an oral history by consensus. A total of 75 senior citizen participants contributed to the overall project, with a "core" of about 35 "regular" contributors. This community-based approach incorporated research that was recorded, documented, and verified through open discussions to share information and on-site visits. Senior citizens from the area were invited to contribute their recollections and experiences from growing up in and/or working in Wailuku town. All participants either lived or worked in Wailuku district. Ms. Perreira noted that the project recognized that the elderly are the "roots of the plant". The seniors or *kupuna* hold the KEY that unlocks memories and information from the past. Their contributions to the oral history project have provided an important informational resource base for the Wailuku area. This unique project reflects a collection of memories that were validated by consensus and concurrence of the participants.

While the Wailuku Roots information has been utilized in small town planning, the eventual publication of this community-based resource document remains a top priority for the Wailuku Main Street Association.

INTERVIEW

Jocelyn Abreu Perreira (Interviewed by Jenny Pickett on 2 June 2011. A correction and clarification interview and review was conducted with Ms. Perreira by Erik Fredericksen on 1 December 2011. In addition, follow-up discussions were held in the latter portion of December 2011 and early January 2012.

Aloha, we're here today with Jocelyn Perreira. We're having a semi-informal talk story session so we can find out about Jocelyn's life and her passion towards Wailuku Town.

Q. Can you state you full name for me?

A. Jocelyn Abreu Perreira.

I am a 4th generation Mauian whose ancestors originated from Funchal on the island of Madeira, Portugal. Part of the family came from the Town of Pico on mainland Portugal and my maternal grandfather was born in Brazil.

My husband Gerald Perreira's family came from the Azores, off Portugal. We have two children and 3 grandchildren.

Q. Where were you born?

A. I was born in Puunene Hospital. They were building the Wailuku Hospital when I was born. The next year they opened it, so I was one of the last of the babies born over in Puunene.

Q. Who…what is the name of your parents?

A. My parents are Nelson Adam Abreu and Katherine Martins Abreu

Q. How many siblings?

A. There are four of us children. I'm the oldest of 2 girls, and 2 boys. Big responsibilities for the oldest in a Portuguese family! Significant responsibility, as the oldest, you are the keeper of family historical facts and extended family connections.

Q. You were raised in Wailuku Town?

A. When I was born, my earliest beginnings…. my parents lived in an apartment on Central Avenue in Wailuku Town. My father worked for Valley Isle Motors as a mechanic and he had to be close to work so we lived in the Coelho Apartment Building on Central Ave. That was my first beginnings as a baby. So, I guess Wailuku has been in my blood from ever since I could breathe.

Q. What is your earliest memory of Wailuku?

A. I have a pretty good memory from about three years old. When I was two I have a more vague recollection, in and out memories…but from 3 years old, pretty good memory I have. So my earliest memories of Wailuku Town are as a 3 year old. Coming to Kress Store to shop. I was thrilled to go to Wailuku. I had an aunt. Her name was Eva Abreu Cambra and she was the supervisor in the Kress Store and we would pay regular visits, Mr. Ansai was the store manager. He was a nice man. The colorful popcorn that they had, the candied popcorn is a fond memory of most of Maui's keiki o ka `aina. I still remember the layout of the store and how you would get the goods and what not in the glass cases. You know, it really, was really a fun era. Exciting to come to Wailuku. I get to see dad, where he works, go visit Kress store and obviously I was going to get some kind of treats. The excitement in Wailuku town at that age in the early 50's era

was really, really unbelievable. Because it was really hustle and bustle. Main Street was quite a bit busy. I mean, even by today's standards, you know, the town has evolved and has a different flavor and character because it has taken on some offices, office space, like that. There was really heavy retail, car dealerships were in town and then when you get into Market St., you know, the whole excitement of all the thrift shops, Gilberts and Maui Bounty, where I went to get my First Holy Communion dress. I mean, the biggest thing was the Iao Theater. The Iao Theater is like, I've been so blessed, because it is kind of our local main street organization's signature project. Having been very instrumental in saving the theater it was like, wow, was I born to do this? (laughs) What a story, what a plan to save Iao Theater for everyone.

I wonder, because, my parents were regular folks. My grandparents were community leaders. So, you know, I had a lot of interaction. That's why my mind has a lot of good memory too. From historical events and happenings and people and how they're connected with each other. You know, how things evolved because I was really…My grandparents, I guess being the oldest, not only the oldest to my parents, but I was the oldest around my grandparents at least. I'm told when I was a little, you know, I could engage in lively conversation with song and dance, was smart and had a good memory for facts. I was outgoing and so they had a little spark of pride in me I guess.

So they shared a lot with me 'cause I seem to have been interested…I enjoyed being with my grandparents and going with them *holo holo* in their cars. Any you know, they would talk and I guess I was like this little recorder. For some reason I found it very interesting and I must have asked 50 million questions! (laughs)

Q. What is the full name of your grandparents on both sides?

A. My paternal grandparents were Silvin Abreu and Annie Pico. My maternal grandparents were Antone Perreira Martins, not to be confused with my married name Perreira. My grandmother was Virginia Jacintho Martins.

Like I said, they were real community leaders. They weren't political leaders, but were **strong** community leaders. My maternal grandfather was 3rd in command at HC&S. He was the irrigation boss for all the entire HC&S irrigation system and pretty well known. My grandmother, likewise, because they lived in the supervisor camp (Luna Lane) in Puunene, she was a real arts and crafts kind of person, she would make toys, rag dolls, stick horses etc. all year long & homemade candy. Once a year she would hold a festival for all the kids in all the camps. So when I would do the Wailuku Christmas and other cultural festival stuff, people would say, "she's like her grandma!"

Then on my paternal grandfather's side, grandpa Abreu ran grand Grove Ranch below Makawao Town. Today it's sprawling pineapple acreage. There used to be rolling hills of grass and cattle. They had real cowboys. There were nine Portuguese families that lived in Grove Ranch. Other cowboys like Levi Holomalia and Benji Rollins were Hawaiian cowboys that lived elsewhere. Grandpa Silvin Abreu was the Ranch boss and I have been told by many that he was a darned good cowboy. We lived in the big house fronting Baldwin Avenue near Holomua Road. He worked closely with Tom Ligget one of the owners of the ranch. They were cowboys and moved cattle from inside country, out. So I got to live amongst, for a little while, real cowboys with chaps and everything. So I had this breadth of experience that was like, okay, country, Portuguese *paniolo* kine style - independent landowners upcountry living wide, open spaces, you know, cold, cool climate. And then I had the plantation kind of experience as well from my maternal grandparents. It was interesting, but because dad worked in the town of Wailuku, it became a pivotal point for us you know I remember the Christmas lights and Santa Claus Parade. Our local Wailuku Main Street Association re-established the cherished event, which included a weeklong festival and displays. For 17 years we planned and implemented the Maui Children's Christmas Parade with Baldwin High School Band leading the way in their pajamas and Jolly Santa arriving with a brown sack of goodies filled with fruits, nuts, candy, a story book and assorted other goodies. So now, there are many grown-up kids with fond memories about Wailuku Town.

Q. Just a little off subject, but Puunene, do you remember going there when you were younger?

A. I remember a lot of the camps and everything and Puunene School. I still can remember the different camps but now they are all plowed under, so I can't show you, but before I could show you the foundations of my grand parents house in Puunene. My grandparents and my mother lived on Luna Lane, close to Camp 5 Store. Luna Lane, was where all the Plantation Supervisors of different nationalities lived and mixed. So they had a unique experience of Plantation lifestyle. Luna Lane was connected to and ran right into the end of the schoolyard. That's why my grandmother could do a little fair in the street because it extended right into the schoolyard. It was unbelievable! I used to be so excited to meet all kids from different camps, and felt like, wow, we're going to grandmas house!

Q. How many people has the whole community…?

A. Several thousand. Many of the people in those camps later moved to other areas in Central Maui most notably "Dream City" in Kahului when the Plantation Town closed down.

A. Grandpa Antone and Grandma Virginia were strong church leaders, too. There used to be a Holy Family Church and they moved the stained glass windows down to Christ the King Church.

Q. Is that the original location of the church?

A. It is. That's the church my parents go married in. Really cool. The building is used for storage now, but still standing.

It's really funny cause it's like when I was born so much was happening on Maui and even statewide. There were times I wished I were a little older so I would know and understand a little more about the town's evolution. But then, it's kinda neat that I was born in the middle of 1952 because I kind of came in this transition between the really "old style" traditional towns and their emerging unto a more modern time of automation. And then, as the 50's took shape after the war, and we went into this age of the 50's, like, remake everything and do things differently, try all these new automated gadgets and so on and so forth. It wasn't so cool to be old fashioned. Everybody was trying to be more modern and trendy.

That's why it's so funny I'm doing this kind of work today. Because, to me, it's like you know when the local Main Street program started here, it was a new concept that had to be adapted to fit the local community. Furthermore, many people took for granted the importance of small towns. It was like small towns…who the heck cares about small towns? Everything was fun at the beach. There were attitudes we had to change and to instill a "Can Do" philosophy. That's why I say, you know, we were a small town when small towns were not cool. We made them cool. We created an awareness of the importance of small towns. I think one of our solid contributions to the County of Maui is that we've really put focus in on and made it like a cool, neat thing to go back and uncover traditional architectural elements. Peel off the layers and layers of what was art deco building style and it's a shame you know, people spent a lot of time and effort covering up the old to try to automate and put new different materials on the buildings and so on, and so forth. The era of the 50's went through a wild change of modernization and that's what kind of hurt Wailuku. We were in jeopardy of starting to look like anywhere U.S.A. The attitude was urban renewal. Thank goodness that didn't happen as we used HRS53 to eliminate slum and blight. Today Wailuku is solidly poised for long-term revitalization as we are in state of prevention of a recurrence of urban slum and blight.

The decline in the early 1960s was because, hey, all of a sudden the towns wasn't important or significant enough. It was you have to be at the mall. So the malls came in with this 50ish look: modern and, o you know, like we're so trendy. Because at that time to, yeah they started phasing out the plantation way of life which had the little towns. Everybody bought their houses at Dream City, Kahului. So even I lived a little while in one of those homes. From Wailuku to Dream City, on Kauai Street. And that was before Statehood. Then I eventually moved up to Makawao. That was my childhood home. But even though I was living upcountry, I came down here to school to St. Anthony's in Wailuku. So there was always that Wailuku draw and a calling in my heart. And then Dad

went from Valley Isle Motors to Von Ham Young, another car dealership in Wailuku Town, which was like kind of almost across the street from where I work right now. He was a mechanic, a darn good one and very much in demand.

When I was first recruited to help initiate and start the program, the State Historic Preservation supported a grant that paid for a consultant to conduct a series of interviews and to shadow me as I worked among our volunteers and citizens. They interviewed me and did a television documentary on the town's resurgence and plans for revitalization, they asked me about Wailuku. And I said, she's the hostess of memories. I really felt that was true because especially given my connection and knowing how significant Wailuku is in the broader scope of Maui, it was like she is the hostess of memories! She connects with and welcomes everyone on the island. Almost everybody, you know comes here, you may not have to go to Makawao or you may not have to go to Lahaina or Kihei, but you darn well gonna come to Wailuku. So, in your lifetime, Wailuku is going to be a unique and inspiring experience in your life. So I'm glad we're documenting this information on Wailuku. Gotta make sure I can share it with my grandkids. My gosh, I realize now how valuable & important our Oral History project is to our seniors. A lot of information I'm sharing with you today is from our senior recollections. (Reference: WMSA's Wailuku Roots Oral History Project)

Wailuku also evolved from the Sugar Mill at the Wailuku Millyard and they had their own set of camps with different names. Paia had camps in (upper and lower Paia). A very large camp was called Hamakuapoko. We say H-poko. When the Plantation decided to phase out H'Poko the plantation took back the land and the aging population & families moved to the new Dream City in Kahului. Only the Old Maui High School Campus is left. Puunene camps have disappeared but the Sugar Mill still stands today. So, most of these traditional towns, they had camps and they, ah, you know I guess different places on the west side had camps too. The traditional towns had kind of evolved from camps. Except for Makawao that had independent landowners. They didn't. They had only Grove Ranch and later Haleakala Ranch above Makawao Town then independent tracks of land. Or, just a lot of immigrant Portuguese influence, and Chinese influence. And the shopkeepers brought Japanese influence. Today its evolving and more eclectic but back then, ranching, crafters and farmers and all that, was really interesting. I loved Makawao Town, it was my childhood home & playground. I know the cracks in the sidewalks. It's so exciting when I think of going to the old Hanzawa Store in Kaupakalua. It's nice today, but the old Hanzawa's was even better…I remember going with Grandpa and like, what a treat going in with him because they used to do stores where the groceries went up to the ceilings which were real high like this (office) and they would have to go slide on the ladders to get what you wanted.

Wailuku was so trippy! Was so cool. Yeah, Then you had all these glass display cases. When you come down here to town, was more modern. At Kress Store, they had all these little modern showcases with nice beautiful things on display.

Was like, people worked so hard for so little at that time. It was like, you really had to make do with what you have. It wasn't like you had credit cards. You put your hands in you pocket! Keep them in your pocket and save enough to buy it! This is so important to talk this kinds of stuff cause people have a very different feel and opinion of the values that you place on a given place or time. Or the importance of, you know, the decisions that we making today. You know, people had a lot more respect, I think, and honor for tradition. And now, it's like, you know, even the historic architecture is being emulated in urban malls.

Like I say, when we first got started on the program it was like, you know, there just wasn't *the* kind of awareness, the importance and value of small towns that there is today 25 years later. Where is historic preservation? Fortunately our local Main Street Program brought an educational awareness. People all of a sudden thought Buildings! Architectural designs that reflect a capsulated evolution of a town's unique evolution…it's also found in things like curb cuts and stone placements on rock walls, and its found in the streets, and the plant material and its found in so many little different things that people would just take for granted that they don't fully reflect and understand how important that is. But that is speaking to who and what we are in the place that we are. That's what makes it so different. If you talk to people nowadays, and now that small towns are considered cool, now that's kind of the catch phrase of the time. But it's not just a catch phrase. It's what sets it apart" its what helps it retain a unique "sense of place". I'm remembering starting the intensive work on this Program 25 years ago and you know, when I first started working to revitalize Wailuku, this place was really in a bad state. People have no idea. They look at it now and it's nice and making an economic comeback. This didn't happen overnight. It was so painstaking. Before the school kids were, like embarrassed, they're from Wailuku as buildings falling into streets, broken windows, glass, rampant with crime. So many things in disrepair, weeds & abandoned cars on vacant lots it was like, wow where the heck do you start? How do you begin? I had Mike Nobriga, a classmate of mine, and he told me, "Jocelyn, I wouldn't touch that with a 10 ft. pole But whenever you do something, I'll give you what I got." They kept us supplied with Maui Ice & Soda for our volunteers and events for many years. So we had to start with cleaning up. We had to bring back the old stories, the traditional stuff. Focus on preserving Iao Theatre, fixing up old buildings, creating a Wailuku redevelopment plan for long term revitalization, establishing vacant pocket parks and a community garden. We did the oral history projects. We have a book in the making, Wailuku Roots, with our seniors that hopefully one day we can publish. It's not just a picture book. But it's really talking about life in Wailuku – a first hand experience shared with others who lived & worked here. Getting into the heart of those who built Wailuku – the young at heart. I get chicken skin when I think about it. They were so wonderful. The seniors. Many of them died and I'm holding their work, their effort, their story. They understood. We had discussions of who were the oldest families and what not… many, many details of life in Wailuku. We even had discussions about the municipal parking lot. What could be under there, what families lived there. They

told me where I could find this treasure trove o old bottles and glasses. Cause we had people that were so involved in that area, in particular during the wartime effort. Wailuku's prominence is significant during that particular time especially because Wailuku is the seat of government and political rallies invigorated and drew its citizens to the heart of town late into the evening. How lucky can I be? I have stumbled into a treasure trove disguised as an obsolete town, Wailuku is so worth it and we worked tirelessly to revitalize a valuable piece of Maui's history.

It was so significant that there were times I felt, what an awesome responsibility. I'm sitting on something so unbelievably wonderful dynamic. I hope I can do the best possible job that I can to reflect it to help bring it back to a semblance of it's former hay day glory, and yet, make sure it doesn't go radical. Because part of our success in this town is that it didn't go radical. I think that's a tremendous contribution…trying to keep it to where when you drive on the street and look at the old pictures you can still identify that this is Wailuku town. The travel ways haven't been changed substantially. We tried to make improvements by taking baby steps and building on baby steps. And so, getting back to Mike telling me about what a task and undertaking that I had placed upon myself was like, how do you eat an elephant? One bite at a time and fortunately…we don't know it can't be done.

So we took little bites and over time we started cleaning the place up, we set a positive solid foundation for planning for the Wailuku Redevelopment Plan to be put in place. We made the effort to save the Iao Theater. We have focused our efforts on another important piece of property, which is the municipal parking lot area. We won a national award for our Pocket Parks. Frankly, we've done a lot of the groundwork. Everything you see today that people are stepping forward and proud of, can be traced to planning a firm foundation & framework for long-term & rediscovery & revitalization. We did. And we did it with the help of seniors business & property owners, residents, government leaders, and people I will never forget. They worked so hard. They had vision; they knew and had hoped for Wailuku's resurgence. They knew the significance and the prominence of Wailuku. They were visionary, even back then, on what they needed to do. One of the things that was very visionary and a cornerstone to the revitalization effort is that municipal parking lot itself because they knew that Wailuku was going to be citified, you know, thinking of downtown Honolulu and wondering where was Maui going to go and how was Wailuku going to remain the capital city of Maui County. They had to prepare for a growing capital city by successfully blending the old with the new. At one point they though they were going to do urban renewal. Thank God they didn't; that they decided to do what's right (pono) why I think Elmer Cravalho is an excellent resource to talk to. He, Goro Hokama, and later Velma Santos and Hannibal Tavares were leaders who decided to do a redevelopment of Wailuku and that's where, and why after that, our local Wailuku Main Street organization, we came on board and tried to refortify and revitalize Wailuku and its preferred vision. The Maui Redevelopment Agency was established to deal with severe slum and blight. We worked very hard

together with the MRA to take care of the slum and blight and we're in a state right now of working very hard to prevent a recurrence of slum and blight. I served as a MRA Commissioner when the Plan was being developed and worked with some awesome local professionals who understood the dynamics of Wailuku and its full potential. I know that we are all very fortunate that much of the original Plan has guided planned development and civic improvements we see today. In some places it's ready to start taking off. We still have other things to do together, like, you can see the need for extensive revitalization efforts in other places like in Happy Valley, to reinforce a strong identity, put in place long term revitalization projects that kind of stuff. But it's not glamorous. It's just plain hard work. The Senator Mamoru Yamasaki and mom Miyamoto, they used to drive by and in those days I was really young and energetic with endless possibilities for stimulating downtown activity. I was like, O my God, I had no idea what this was going to mushroom into. It was like, you know, I have my nose to the grindstone. Building success on baby steps but moving forward to achieve our goals. Our Board developed the direction and we all stayed focused. Sometimes I would be out working past midnight and Senator Yamasaki and mom Miyomoto used to stop by my office and ask why I was working so late. We used to go down to eat saimin at Yama's. I was so lucky cause I had their respect, wow, that, the Senator knew we were really trying really hard. Yea, we had our days boy! Days where the police would come and shine the lights and tell us to go home, when we planned drug busts to eradicate the dealer from downtown. At that time, we had key people placed in key different areas. We had to build this organization. We built it into something pretty formidable. It's a remarkable network of resources and volunteers now but we didn't start out that way. We had to do a lot of hard work. Although this program's roots was patterned a national program, the state of Hawaii and County of Maui always intended to do their own program. We learned from the best of whatever national models were out there. But we adapted the program here in Hawaii so they would be a program that would fit the uniqueness of Maui in the State of Hawaii and then be able to accomplish what they wanted to accomplish in their own local fashion because otherwise its not easy to just transplant a national scope program into the uniqueness of Hawaii. We have so many factors that are different from the mainland. We're separated by water. We have so many things that we don't have readily available and fortunately, for us here on Maui, is we had a wealth of professional, very skilled, knowledgeable professionals that were very, very willing to participate…eager to participate…and they trusted us. And so, together we made for a tremendously wonderful partnership. And that's why we exist today that's why Wailuku survived as did other traditional small towns to reflect the best of the old and the new.

Our Program evolved considerably to where we are today. From the beginning of our program, we knew we had to be more promotional. That's when we did so many festivals and street events. To bring in awareness that this was a concept we were trying to introduce and make our own. It's evolved to the point where other groups can be doing some of these kinds of promotional things which, in

some people's eyes, is more fluff but really an important economic shot in the arm; and we do more planning brick and mortar putting value into the product itself – our Small Towns. They are dependent upon each other. It's nice that we did that because we understand the importance of all of the roles coming together to make something happen.

Q. Have you come across people that talk about the, there's so many layers of history here, what about the introduction of Hawaiian history.

A. Yes the contribution of the Hawaiian culture is deeply rooted in the evolution of Wailuku town. I have a very soft spot in my heart for Hawaiians that are of the land, not just people that are Hawaiian and came from else where and now they, you know, I mean because those people – the genuine Hawaiians they were very um mm, they didn't have to brag about themselves. They were doers and tried to do the best they could. There are things and values they put in place the ahupua'a land system of our host Hawaiian culture was respectful and nurturing. Waiehu and Waihee, Hana in particular is very significant to the Hawaiians. They knew the places they needed to live. Of course, the battle at Iao Valley is a significant battle that is not only a Maui battle, but a statewide Island fight for supremacy with the Alii chiefs. However, I do kind of refer to it like a pre-contact and post-contact. So for the pre-contact era, I send people to the Bailey House Museum, Hale Ho'iki cause I think that's their specialty. Where our specialty is post-contact and the, you know, the war time and evolution after the overthrow of the monarchy. And then how this place evolved with the immigrants. A lot of people forget about the contributions of the early immigrants. The ones that are depicted in the Iao Valley, Kepaniwai Park, they had a very significant role in the evolution of Maui. So, you know, we have the post-Hawaiian culture, which is honored by as many people as you can, but I think we have to honor and respect the contributions of the immigrants too.

Q. Wailuku could be an avenue to help foster protection of historic treasures?

A. I believe that we've evolved and are starting to personify that. So it's become like, you know, commercial town cores are also important to have a long-term impact. And again, I would refer you to our web-site (www.mauitowns.org), cause I sound a lot better when I write than when I talk. It made us understand that if you want to affect positively the commercial cores, you have to care about the whole community and what was going on in order to bring help and vitality into the commercial cores. That's one of the reasons why the program expanded broadly, too, because we had to be. We couldn't be only what the national prototype was, which works well for certain communities. And this is Hawaii, and we weren't only interested in protecting buildings. We had a lot more to protect. Each town's unique "sense of place".

It's a struggle today, cause like, give me a break! You wanna take what we built? You can't. We built it, know what I mean? We had such a big obligation here to

protect the evolution of Maui. Wailuku is important because it's a capital city. It's a encapsulated version of the evolution of the different cosmopolitan cultures that are contained in here. And the mixed cultures. So that became so, so important for us. And, you now, I guess we like to say, and our guys and gals, feel the same way. We're kinda like the voice of the average guy. We're not the voice of the special interest or the big name developer or government. We're just the independent average John Q public that's so busy, you don't have time to be on top of everything. So hopefully, we are an avenue for their voice, we take that responsibility seriously. And to try to make sure that what they want, what their desires, hopes, dreams are gets incorporated into long term planning.

Q. How complicated is working with the State and County to meet requirements for improvements?

A. Yes, as we've grown as a community, we've made it a lot more complicated for ourselves. Things that used to be done with more common sense. Common sense tells you what's important, what's real. People took risks cause it wasn't like, o my God, somebody's gonna sue you if you do this or that. It's like, right now, the situation we have is that people are afraid to move almost. That has slowed everything down, made people more cautious and more careful. As a result, people aren't willing to put themselves out there to risk. To do what is right or proper because then they get hit, wham with all of these requirements and that's not to say that requirements and laws and what-not aren't important. But I think we have to try for flexibility because in life, life is not black or white. Life is different shades of gray. And, likewise, if we just say it's this or that and nothing in between, you're gonna paralyze everything. It makes it extremely difficult. Especially in the line of history preservation because it's very hard to justify money for historic preservation. Historic preservation equates to economics but it's not readily seen because it's so intangible often times that it's very hard to make somebody understand if they don't have a connection to the land, to the sense of place or the evolution of an area. They cannot make sense of if. Why would you spend money on this? The Iao Theatre is a classic example. Why would you save a dying, decrepit building falling apart? You have no idea what it took to save that building. Those people in there are so lucky today, that WMSA was able to convince the people and our legislators to Save the Theater for broad based community use. Saving the Theater and getting it registered on the National Registry of Historic Buildings was done by a lot of people who had a lot of faith, and hope and trust that it was going to be a facility that they had an emotional connection with that would be shared broadly by the whole community. We got everyone involved because "we did not know it can't be done". I actually took a group of second graders from one of the local schools and had them wrap around the building and give the building a great big hug!

We did that! It was so cute! (laughing) We left no stone unturned and when we received the Take Pride in America award from President Reagan in 1987 we also sought to contact our Congressional Leaders, Sparky Matsunaga, Dan Inouye,

Dan Akaka and Pat Saiki to seek funding for the acquisition of the Iao Theater and surrounding property. You would never recognize me. I was so thin, when I went to Washington DC to get the award at the White House. I was very honored to represent Maui and our little town of Wailuku amongst so many award winners.

What energy I had at that time! I had to do the work of how many people at that time and stay awake until 2 am in the morning it took motivation, commitment and a genuine passion for small towns. I was so trusting of people. Now when I look back at it, its like, I'm older, not as animated but I'm so much wiser and I have learned so much from my peers and professionals I have met along the way. Today, I've got so much institutional knowledge. When I think back on all the times I would go to high school and come and do homework with Grandpa with his emphysema, and he would tell me all the old stories about how the island evolved and people and politics and different things and all that. Oh man, I was in training for this for a long time and I just didn't know it. It's funny how things happen to you and you don't realize when you're going through this. And I look back now and realize wow, lucky thing, lucky thing I wanted to know and had the time. I'm not the only one that has the knowledge, but at least if I don't know, I know who to go to that would know and I'm not afraid to go to those people to ask for help and knowledge and advice. I obtained an education that you could never get from a college degree alone. I know and understand the school of hard knocks and street smart. It's hard work, and if you work hard, the results will show. And when the results show they don't reflect on a person; they reflect on a whole group of people. Because it does take a whole group of people to make something come together. It's never one person. The satisfaction of helping to make a Town successful, revitalized and sustainable…well you can't put a price tag on that.

Q. Where do you live now?

A. I live in Haiku. It's cool because we are trying to serve 9 towns on two islands that I would have to go off island. We go to Molokai as they request, or we talk to them over the telephone, not always go over there. Lanai, same thing. Here on Maui, I can get in my car in the morning and come down through Paia and Wailuku and Waihee and Waiehu and catch it. Then when I go home, I can go up towards Kula and Makawao and Haiku so in the span of a day I can at least have an idea of what's happening in these towns…watching over them. Like, the mother hen, yeah? It's kind of a big job, a lot of responsibility but you know it's lucky that they have a good group of leaders in each of these communities, yeah? So, it's like touching bases with each of them. It's nice to know that you kind of have an idea of what's going on.

Instead of teaching children, I teach adults now. So, it's a little bit of what I've accumulated over the years. My shopping center management training, my teaching. I was supposed to be a teacher, to teach. That was my heart's desire. But

I didn't get to finish my degree. The reason was because Maui didn't have the full-on degree curriculum when I went to the college. I kept waiting so in the meantime, I took all the liberal arts classes with the intention they were going to bring the degree here, but it was not to be. I decided to take business courses that helped give me the business administration knowledge. Multi-tasking was the key and the ability to adapt. Eventually owing a family business of my own. The rest is history. Talk about work ethic. That's one thing I give my parents a lot of credit for. All of my siblings, very, very, hard workers.

Things can inspire you. When I was in this tiny little office on the side of the Iao Theater building. That was my first office. This old Hawaiian man had walked in out of nowhere into our office and started talking to me and he went like, huh, I came to visit you because I had to come and talk to you. And I went, like you did? Why? How can I help you? He started telling me about the importance of Wailuku and the spirituality of the West Maui Mountains. Howe significant it was that this area and this place that I'm supposed to be working in, that somehow his message to me was like, somehow I was picked to come and do this. And for me not to ever be afraid to take something on because he said, You know, when you hit the brick wall, someone gonna come and help you make it come together and make it happen. I was like, wow. What were the chances of that ever happening? I never forgot that. It was so amazing. And I said, very humbly, I'm gonna try my best, but I don't know if I can do it because there's so much to do. And he went, no, no sister, no scared 'em. We need you here because this thing here you're doing……is for us. So silly of me, because I was so taken by surprise so in awe of his presence that I forgot his name.

Q. Did he come back after that?

A. Nope, he never came back. He was an older Hawaiian man. He had a beard and was a gentle spirit. He was just so amazing. He had a hat, like one Kupuna to be revered when he walked in. I just thought he was one nice old man and really caring and understood about the Hawaiian and the spirituality of Iao Valley and the West Maui mountains and telling me what a special little town this is. It was amazing to me. After, I thought why didn't I take his name or phone number down? I should have been consulting with him. Why doesn't he come back, I thought. But he never came back. I took it as a message from a higher source.

Q. When was Wailuku abandoned?

A. I would never say Wailuku was abandoned; people were just attracted to the new and different for a while. I would say around the 60's already. Wailuku started to see an exodus out of the town. I think its when people started getting excited about the Mall. Some of them (Wailuku retail people) got excited about going to the malls and were drawn out of the town with new incentives and amenities. We had people that were really cool that stayed like Susanne Hotta of Gilbert's Formal Wear. Families like Robert Kimura, owners of TK Supermarket. They

believed in Wailuku and stayed put for over 50 years. Some of them were so cool, money was not their main motivation and so they stayed put. Others decided to expanded into the mall. So there was this little exodus that happened for a time. Those who stayed are the real survivors with successful businesses. When the revitalization efforts in Wailuku started in earnest beginning in 1987 with support of government leaders like Hannibal Tavares, Goro Hokama, Velma Santos and those who remained helped to anchor the authenticity of the town.

Q. And now would you call it a revitalization with these little boutiques and shops?

A. Yeah, well now there's more people and as things get better, more people wanted a piece of the action and so they kind of more stepped up to the plate. Then more people wanted to, you know, try to own a piece of making Wailuku what its actually becoming. Richard and Carolyn Dan now after 26 years own 9 different businesses on Market Street, because they believed in Wailuku's future. And so, whether its those of us who have helped lay the foundation for recovery, the old timers before me who really hoed the initial road to keep Wailuku a destination; rely on us to fortify and set the direction and to work with those who are doing very current things right now.

I think they all have a role to play in what we ultimately become and in what we ultimately preserve as a legacy for generations to come. So its really sad ~~said~~ when, individuals or small groups of people don't realize that its what we do together that makes a positive difference. I know that we're a major player and we were a big important stakeholder that helped to set the direction and the pace and what have you. But government plays a significant role too because they support us and the different groups that will emerged. The Maui Redevelopment Agency having a lot of the work laid out before them and now having the plan adopted and everything, has a road map of key things for them to finish up doing. They're a player in the municipal parking structure and they should be, rightfully so.

So now there's other people along with our own organization wanting to take up a little bit and piece of what needs to be done. And that's all good because there's plenty of work to go around.

Q. What about Ooka's? How do you feel about Ooka's because it was such a piece of Wailuku. Can you talk about that for a minute?

A. Ooka's Supermarket…was a major downtown anchor. As a small kid, not only did I go to Kress Store, but we got in the car to go to Ooka's Store Supermarket to buy our groceries. It wasn't the only place you would go for groceries. Are you kidding me? It was thee place to be! Not only for a bargain price but also the experience of going to Wailuku Town.

When we lived upcountry, you buy groceries for the month. So you come down to Ooka's to buy your groceries. Why would you do a silly thing and go anywhere else? You would go to Komoda Store because nobody makes bread and cream puffs like Komoda Store, you know. Those kinds of little things from

smaller traditional mom and pop stores here and there. But your essentials….Ooka's was major. Byron Ooka, ever since he could open his eyes as a baby, his first recollection was probably the store so as he got older he stayed with the store until his mom died. Bless his heart, he was a good, devoted, loyal son and he kept the store going and he did an excellent job. He put them on the map and Wailuku Town too! When we lost the car dealerships, at first it was like these car dealerships we gotta get rid of them we don't want a sea of cars as you enter the town. We said, OK you are going to lose the dealerships but lose the foot traffic, cause the car dealerships bring a lot of diverse foot traffic. So okay, they finally got the car dealerships out of town. When we had National Dollar Store, that was the other pivotal store. That was below Kress Store, then you had Ted's Menswear, New York Dress Shop, you know all these beautiful old kine stores. We have the business evolution of them dating back to circa 1929 listing the different kinds of businesses that made up Wailuku Town. We had National Dollar Store it was a national chain. It failed in the mainland (continential U.S.), but not locally. This store was the highest grossing store in the Western Region. Really! And they had to go out because it was a national chain failure. Not a Wailuku failure. How pitiful! But National Dollar Store…that's where with a little bit money you could buy all kinds of good stuff. Five and dime. I mean almost every Filipino on this island went to National Dollar Store. I mean, wow, so you know that's what we had to replace! Not only did we lose the big dealerships, we lost National Dollar store and now we lost another anchor? Ooka's Super Market. What a hit Wailuku had been taking! And yet, surviving and in some cases thriving. That's pretty significant. So when this hospital, this medical clinic came in to replace Ooka's, a lot of people were concerned. They were kinda like frustrated, why couldn't that have been something else that had mixed-use possibilities?. It could have been something else. I will say that. But when you think of the senior housing and the fact that this is addressing the needs of the every-day work-a-day person as it turned out (which is so funny)…when they first said they were going to do this medical facility for the lower income people, little did we know that the whole island, the whole nation was going to suffer from a tremendous economic downturn. So what? There but for the grace of God go I, so you know what? How many people are now only a few pay-checks from being low income of needing help. But I always said Wailuku is really, really significant in social needs, embracing social services. We will take your poor, you're disabled, your down-on-their-luck, whatever. There's a place in Wailuku where other places would say, not in my backyard, we're not having any of that. But I also think that that's why Wailuku is not, at least from our perspective ever going to be insignificant. We want to work to help create a balanced mix of needs. Sometimes you have people that you can't meet their expectations no matter how hard you try. You know, so then they have something to say. But for the most part, when you're trying to go with all kinds of people not just merchants, you're also dealing with professionals, government, residents, visitors, people down on their luck, what have you. It's like mixing an omelet sequentially, yeah? You gotta do what's in the best interest for the majority. Not just for the ones screaming and shouting I want this and I want that. You gotta do

what's in the best interest for the majority of people. That's why I respect a fair process to determine priorities that's why a Wailuku redevelopment plan was one of our priorities. And I think that's where we are. I think we are at the pulse-beat of where the average grassroots person is. We try hard to advocate for them. That's an awe some responsibility for this Board of Directors. I'm really proud of them; that they know how to withstand the challenges to be something else. I honestly think that's why we've survived six administrations now, 25 years. It's real tough to go through the transitional phase of each administration cause it's a political thing and you gotta play the political game and you gotta do the political correct thing or you get yourself into trouble. But at the end of the day you gotta do the right thing. The pono thing to do. And we're not perfect, but we sure try hard to the right thing. And to me it's like, hey you know what yeah, I not driving the car. I listening to the guidance of how to drive the car and if we're getting somewhere and we're making some headway it's because there's an overall master plan for us to be here; that we have an important role that we need to play in the future of Wailuku. It's the preservation of Wailuku, the sustainability of Wailuku, the revitalization of Wailuku and the . upward mobility of Wailuku! And that's significant. So I'll do it as long as I am able to do so.

Q, Would you say the Iao Theatre project got the ball rolling? Was it the first real big challenge?

A. It was an impetus. It was like a corner stone for revitalization. The program had twin goals: Economic revitalization within the context of historic preservation. Likewise, we had two main goals: Save the Iao Theater for the people, get it bought and owned for the broad-based community as a cornerstone to revitalization. And the redevelopment municipal parking lot is another cornerstone.

Q. Do you remember going to the Iao Theater for the first time?

A. Yes, I was five years old and I went to see the Ten Commandments, with Charleston Heston. We would bus down from Makawao to come and see. They had Henry "Bull" Kaya's Candy Shop and boiled peanuts. At that time, I was at St. Joseph's kindergarten, so the whole school went downtown. It was so exciting!.

Q. Did they have stuff every weekend or every day?

A. Every day they had an assortment of activity along with films. It's very different from now. It was more a movie house then a theatrical facility. Now, its live theatre. Like movies vs. plays. It had a lot more seating than it has now. It also had more talent shows and contests Saturdays and what not. It was really, the place to go, meet all kinds of people and I went there a lot.

Q. What was going on in Kahului? Was it totally separate, or what integrated it?

A. No, Kahului didn't have half as much. But it (Kahului) was newer, consolidated with plenty of parking at the center mall, The Kahului Mall. That was the "In" place that was, the (emphasis) place that made Wailuku like an Old Wailuku Town. You know, you had to go to the happening place, the trendy happening place…and it was at The Kahului Center. And then if you come up here, you coming for the unique and different shops, our value and acclaimed restaurants, the cultural and the historic experience. So when we came on board, that's the part that our local Main Street, program, brought in. We waked everything up. We said, you know what? Wailuku's cool man! We could see what it is today 25 years ago. So everything that we see today you can trace that we have an involvement in the planning for it to happen. Spend some time on www.mauitowns.org cause that will tell you a lot.

Q. Do you know of any old maps?

A. Yes, we have some and used them for our oral history project. I want to show you our Wailuku Roots book in the making. That totally, totally will blow your mind. It's really something special. It's the one thing I want to finish because we successfully saved the Iao Theater and now we've got the municipal parking structure well on it's way to happening, okay. So my final commitment to our seniors is to publish their book. WMSA/Tri-Isle Main Street Resource Center has evolved into an organization to help Maui County small towns with historic fabric, which was our mandate. But I do want to finish the Wailuku book. That's my commitment to the seniors that trusted me, that is a priority ofr our organization. After all, the trust they placed in us to document and share their recollections, to forever preserve and protect the legacy of this town. So it's not the I, or me, story. It's the "We and They Story". And a lot of the "We Story" reflects how things evolved. You begin to understand how small town growth is cyclical up and down and its hard to maintain continuity in a community-based organization.. We are serving Wailuku for 26 years this year.

Q. Do you think the administration changes changed things drastically?

A. An Administration that understands the importance of developing a critical mass, who invests into Small Town revitalization makes all the difference between success and failure.

We have been benefactors of some of these administrations and certainly our County Council who help us through grants that make important projects & planning possible.

Well, sometimes it's the self-interest of the people involved too. They have a particular agenda and their personal interests. Just like how and why people get involved in an organization. They put their name down; they got their name in the book and then you never see them anymore. Someday, somebody might have

something nice to say. That we accomplished something really good but chances are, like, it's so easy now that I see looking 25 years back, it's so easy to forget the people that were so instrumental and that's why I make a point of talking about the old-timers and what they did because I can imagine how hurtful that is to them not to be acknowledged because they had the courage to stand for something and we count them as our community treasures. And we want the history correct.

I remember doing stuff in Makawao and the County hired a professional consultant to do design guidelines and they had a section of the book on the history of Makawao. Fortunately, former Planning Director Miskae supported our efforts to document the facts. We had to sit with all of them (the old timers) and carefully document the historical facts based on reality not someone's faded memory or a re-written historical account that focused on only one segment of the population as being instrumental in the evolution of the area. The old timers (second, third & fourth generations) generally don't want to talk publically. So we had to sit with them and get it right. Get it straight and make it *pono* by getting and documenting all the facts. So it is with our beloved Wailuku as it looms large in building inventory, historic landmarks, the County seat of government, its business endeavors and cultural contributions.

Consent to use interview per Jocelyn A. Perreira:

XAMANEK RESEARCHES, LLC
P.O. BOX 880131
PUKALANI, MAUI, HI 96788
Phone/Fax: 572-8900
Phone/Fax: 572-6118
E-mail: xamanekresearchesllc@gmail.com

Ms. Jocelyn Perreira
Wailuku Main Street Association
1942 Main Street, Unit 101
Wailuku, HI 96793
E-mail: wmsa@maui.net

Attn: Jocelyn Perreira, Executive Director **25 January 2012**

Subject: Consent to use Ms. Jocelyn Perreira interview in Final Cultural Impact Assessment document for the Wailuku Parking Structure project.

Dear Ms. Perreira,

As previously discussed, please provide your consent to use your interview in the Cultural Impact Assessment document dated 29 December 2011. Once again, thank you for all of your assistance in this process!

Sincerely,

Erik M. Fredericksen

CONSENT

I, Jocelyn A. Perreira, have reviewed the content of my interview and hereby grant my permission for its inclusion in the revised Cultural Impact Assessment document for the Wailuku Parking Structure project.

Sincerely,

Jocelyn A. Perreira

U. S. DEPARTMENT OF COMMERCE
Economic Development Administration
915 Second Avenue, Room 1890
Seattle, WA 98174
Fax: 206.220.7669
Voice: 206.220.7660

November 1, 2011

Pua Aiu, Ph.D.
Adminstrator
State Historic Preservation Division
Department of Land and Natural Resources
601 Kamokila Blvd., Room 555
Kapolei, HI 96707

RE: National Historic Preservation Act Section 106 consultation for EDA grant assistance to design a parking garage in Wailuku, Maui

Dear Ms. Aiu:

In 2009, the U.S. Department of Commerce, Economic Development Administration (EDA) awarded a grant to the County of Maui to design a parking garage that will be located in Wailuku. Last August, the County of Maui brought it to my attention that my predecessor had not done a National Historic Preservation Act (NHPA) Section 106 consultation for this design project. In accordance with 36 CFR §800.2(c)(1)(i), I am initiating a NHPA Section 106 consultation process with your office for this federal undertaking.

The project is the design of a five-level, 120,230 square-foot concrete parking garage. The proposed site is in downtown Wailuku in the interior section of a block bounded by W. Vineyard Street, N. Market Street, Main Street and N. Church Street. A parking lot currently exists at the site. Planning improvements will also include: 26 lineal feet of trenching on Church Street and 20 lineal feet of trenching on Vineyard Street for new water lateral; and the cutting and plugging of an existing water lateral on Church Street. A detailed project description and a map of the Area of Potential Effect are provided within the *Cultural Impact Assessment for the Proposed Wailuku Municipal Parking Structure, Wailuku Ahupua'a, Wailuku District, Maui Island,* which is enclosed with this letter. Site plans have been emailed to the State Historic Preservation Division (SHPD) in Maui and, if requested, hardcopies will be provided.

In an effort to identify and evaluate historic properties pursuant to 36 CFR §800.4, the County of Maui had an archaeologist prepare the *Cultural Impact Assessment for the Proposed Wailuku Municipal Parking Structure, Wailuku Ahupua'a, Wailuku District, Maui Island.* According to the cultural impact assessment, no historic properties were identified during an inspection of the site, however the site has previously been the location of various residences, businesses, and Pili Street. Archaeological work in the near vicinity of the site has identified post-contact site remains. As such, there is the possibility of encountering significant material cultural at the site.

Additionally, the cultural impact assessment discloses that two anonymous individuals and informants for other projects have voiced concerns that human remains may be located in the general area.

Given that there could be the inadvertent discovery of human remains and significant cultural material at the site, archaeological monitoring shall be required for all earth-disturbing activities associated with the construction of the parking garage. The archaeological monitoring is described in *An Archaeological Monitoring Plan for the Proposed Wailuku Municipal Parking Structure Project, Wailuku Ahupua'a, Wailuku District, Maui Island,* which is also in the cultural impacts assessment. The monitoring plan outlines the actions that are to be taken should human remains and/or significant findings be encountered.

Pursuant to 36 C.F.R.§800.2(c), I have contacted the SHPD staff in the Maui Office for information on Native Hawaiian organizations and other interested parties to consult with on this project. I was directed to the Office of Hawaiian Affairs and the Wailuku Main Street Association. After speaking with those offices, we will be consulting with them. I will keep you and your staff appraised of communication with these consulting parties.

With this letter, we are asking for concurrence on the Area of Potential Effect, findings, and the determination that the proposed project may affect significant material culture remains.

Please let us know if you have any comments on or revisions to the Cultural Impact Assessment or the Archaeological Monitoring Plan. If you have any questions or need additional information, please contact me at (206) 220-7703 or sfitzgerald@eda.doc.gov.

Sincerely,

Shannon FitzGerald

Shannon FitzGerald
Regional Environmental Officer

Enclosures: Cultural Impact Assessment

Copy to: Morgan Davis, SHPD Maui
Wendy Taomoto, County of Maui
Wendy Kobashigawa, County of Maui
Brian Alvis, EDA

Appendix N
Preliminary Engineering Report

PRELIMINARY ENGINEERING REPORT

FOR

WAILUKU MUNICIPAL PARKING STRUCTURE

Wailuku, Maui, Hawaii

T.M.K.: (2) 3-4-013: 075

Prepared for:

Allison-Ide Structural Engineers LLC
900 Fort Street Mall, Suite 1670
Honolulu, Hawaii 96813



Prepared by:

OTOMO
ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS
305 SOUTH HIGH STREET, SUITE 102
WAILUKU, MAUI, HAWAII 96793
PHONE: (808) 242-0032
FAX: (808) 242-5779

July 2011

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PRELIMINARY ENGINEERING REPORT
FOR
WAILUKU MUNICIPAL PARKING STRUCTURE
T.M.K.: (2) 3-4-013: 075

1.0 INTRODUCTION

The purpose of this report is to provide information on the existing infrastructure which will be servicing the proposed project. It will also evaluate the adequacy of the existing infrastructure and anticipated improvements which may be required for the development of the proposed project.

The subject parcel is identified as T.M.K.: (2) 3-4-013: 075, which encompasses an area of approximately 2.19 acres. The parcel is currently being used as the municipal parking lot, consisting of approximately 210 parking stalls. The stalls are not metered but has a time limit for use during normal business hours. The project site is bordered by Vineyard Street to the north, various businesses and a vacant lot to the east; the Main Street Promenade, First Hawaiian Bank, Calvary Chapel, and various businesses to the south; One Medical Plaza, the Wailuku Executive Center, and a vacant lot to the west. Pili Street intersects Church Street to the west and Market Street to the east.

The project site is located within the Wailuku Redevelopment Area, which is planned for revitalization of the Wailuku town area.

The proposed project includes the construction of a five-level parking structure containing approximately 350 parking stalls and on-grade parking containing approximately 20 surface parking stalls on the south side of Pili Street. A surface parking lot will be created on the north side of Pili Street, containing approximately 51 stalls. Related improvements include grading, retaining walls, utility connections, access roadways and landscaping.

2.0 EXISTING INFRASTRUCTURE

2.1 ROADWAYS

Kaahumanu Avenue is the major roadway linking Kahului and Wailuku. It is owned by the State of Hawaii. It is a four-lane, east-west roadway with a terminus in Wailuku town. At that point, Kaahumanu Avenue turns into Main Street which is a two-lane roadway. At its terminus in Kahului, near the Maui Mall, Kaahumanu Avenue turns into Hana Highway.

Market Street is a one-lane, one-way roadway between Wells Street and Vineyard Street. It is a two-lane, two-way roadway between its terminus at Kaohu

Street and Main Street and to the north of Vineyard Street. Beyond Happy Valley, Market Street turns into Kahekili Highway. Improvements consisting of curbs, parking upgrades, street trees, crosswalks, and drainage improvements were recently completed on this street by the County of Maui. Parking is allowed on both sides of Market Street.

Vineyard Street is a two-lane, two-way roadway in the east-west direction. It traverses to the north of the project site. There is an existing asphalt driveway from Vineyard Street into the north end of the existing parking lot. The existing right-of-way of Vineyard Street fronting the subject parcel is 30 feet.

Church Street, between its terminus at Kaohu Street and Vineyard Street is a one-lane, one-way southbound street.

The project site is located within the block encompassed by Main Street, Market Street, Vineyard Street, and Church Street. These streets provides service to the residences, offices, and businesses in Wailuku town.

Pili Street provides ingress and egress to the project site from Market Street and Church Street. It is improved with concrete curbs and sidewalks and asphalt pavement.

2.2 DRAINAGE

The project site is improved with an asphalt paved parking lot. The elevation of the project site ranges from approximately 299 feet above mean sea level at the westerly side of the parcel (intersection of Pili Street and Church Street) to 281 feet above mean sea level at the easterly side (intersection of Pili Street and Market Street). The existing ground slopes in a west to east direction, averaging approximately 4.5%.

According to the "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii (August, 1972)," prepared by the United States Department of Agriculture Soil Conservation Service, the soil within the project site is classified as Wailuku silty clay, 3 to 7 percent slopes (WvB). Wailuku silty clay is characterized as having moderate permeability, slow runoff, and a slight erosion hazard.

The Market Street Improvements From Wells Street to Mokuhau Road project was recently completed by the Department of Public Works, County of Maui. It was a Federal Aid project, therefore, the drainage calculations were based on the State Highways Design Criteria. The runoff quantities were determined by the Rational Method using the 10-year storm and the minimum time of concentration was 10 minutes. Since there is an existing drainage system within or adjacent to the project

site, the use of the 10-year storm is consistent with Chapter 4, *"Rules For the Design of Storm Drainage Facilities in the County of Maui"*.

The *"Wailuku Redevelopment Area Infrastructure Study, Phase 2"*, designated the drainage system along Vineyard Street as the Vineyard Street Drainage System and the drainage system from the intersection of Vineyard Street and Market Street to the outlet at Iao Stream as the North Market Street Drainage System. According to the study, both the Vineyard Street and Market Street Drainage Systems are capable of accommodating the runoff generated from a 10-year, 1-hour storm, with the exception of three short segments of drainlines at the intersection of Vineyard Street and Market Street. However, it was stated in the study that the difference between the pipe capacity and estimated peak flow was minimal and enlarging the drainlines were not cost effective.

It is estimated that the existing 10-year, 1-hour storm runoff from the project site is 7.65 cfs, with a generated storage volume of 4,592 cubic feet. There are existing drainage facilities within and adjacent to the project site. The existing drainage system is known as the Vineyard Street Drainage System. It consists of curb inlet and grated inlet catch basins starting on North High Street, down Vineyard Street, and connecting to the North Market Street Drainage System at the intersection of Vineyard Street and North Market Street. The combined drainage systems traverses north on Market Street and discharges into Iao Stream in a 30-inch culvert to the north of Holowai Road.

Presently, onsite runoff sheet flows across the project site (fully paved surface parking area) in a west to east direction into three grated inlet catch basins located along the eastern edge of the existing parking lot. Runoff captured by these three catch basins is conveyed into the Vineyard Street Drainage System by a 24-inch drainline.

According to Panel Number 1500030391E of the Flood Insurance Rate Map, dated September 25, 2009, prepared by the United States Federal Emergency Management Agency, the project site is situated in Flood Zone X. Flood Zone X represents areas outside of the 0.2% annual chance flood plain.

2.3 SEWER

Wastewater generated from the project and nearby area is conveyed to an existing 6-inch sewerline which traverses along Pili Street or an existing 8-inch sewerline which traverses along Vineyard Street. Wastewater collected from the

Wailuku area is transported to the Kahului Wastewater Reclamation Facility in Naska.

The Kahului Wastewater Reclamation Facility has a capacity of 7.9 million gallons per day (mgd). As of March 2010, the average daily flow into the Kahului Wastewater Reclamation Facility was approximately 4.9 mgd. However, according to the Wastewater Reclamation Division, County of Maui, the total allocation, including projects already permitted, is 6.95 mgd.

2.4 WATER

Domestic water and fire protection for the project area are serviced from the 3.0 million gallon Mokuhau tank and wells in Happy Valley, which is at elevation of 358 feet. There is an existing 8-inch waterline on Church Street which provides domestic water and fire protection to the project site. The Department of Water Supply recently installed a 12-inch waterline along Vineyard Street. Presently, there is a one-inch water meter serving the existing parcel. It is located within the property where the stem portion of Pili Street enters the parking lot from Church Street.

As part of the building permit process, domestic water, irrigation demand, and fire flow calculations will be provided to determine the adequacy of the existing water system, in accordance with the rules of the Department of Water Supply.

2.5 ELECTRIC AND TELEPHONE

There are existing overhead electrical, telephone and cable TV distribution systems on Market Street, Vineyard Street and Church Street. These overhead facilities currently serve the residential, commercial and business customers in the area.

3.0 ANTICIPATED INFRASTRUCTURE IMPROVEMENTS

3.1 ROADWAYS

Access to the project site will continue to be along the existing driveways which currently service the paved surface parking area. Pili Street will be improved into a driveway access to provide a direct connection between Church Street and Market Street. It will also serve as a connection between the surface parking lot adjacent to Vineyard Street. The primary entrance into the proposed parking structure will be from Pili Street.

In accordance with the development of the adjacent properties, the Department of Public Works, County of Maui, will require a road widening lot on Vineyard Street. The parcel located immediately to the west of the subject project provided a road

widening lot of approximately 15 feet on Vineyard Street. The Engineering Division, Department of Public Works, indicated that a road widening lot of a similar width will be required for the subject project.

The *"Traffic Impact Report for Wailuku Municipal Parking Structure"*, prepared by Wilson Okamoto & Associates, dated March 2011, recommended the following:

> *"Based on the analysis of the traffic data, the following are the recommendations of this study:*
>
> 1. *Maintain sufficient sight distances for motorists to safely enter and exit all project driveways/roadways.*
>
> 2. *Provide sufficient turning radii at all project driveways/roadways to avoid or minimize vehicle encroachments to oncoming traffic lanes.*
>
> 3. *If access to the parking garage is controlled (i.e., automatic gate, etc.), provide sufficient storage for vehicles on-site to ensure that queues do not extend onto the adjacent public roadways."*

The report also concluded the following:

> *"The proposed Wailuku municipal parking structure is intended to promote redevelopment and revitalization in the project vicinity by providing a surplus of off-street parking that could potentially assist future developments meet their on-site parking requirements. The new parking structure will replace an existing at-grade parking lot and result in the creation of a new east-west connector roadway between Market Street and Church Street, as well as, a remnant parcel for future development along Vineyard Street. Travel patterns in the vicinity of the project site are expected to change due to the access modifications planned in conjunction with the proposed project. Despite the anticipated redistribution of traffic, the traffic movements at the study intersections along Market Street and Church Street in the project vicinity are expected to continue operating at levels of service similar to existing and without project conditions. As such, the proposed Wailuku municipal parking structure is not expected to have a significant impact on traffic operations in the project vicinity."*

3.2 DRAINAGE

After the development of the proposed project, it is estimated that the 10-year, 1-hour storm runoff will be 7.37 cfs, a **net decrease** of 0.28 cfs over the existing condition. The corresponding storage volume is 4,422 cubic feet, with a net decrease in storage volume of 170 cubic feet. The decrease in runoff and runoff volume is attributed to the increase in landscaped areas and decrease in impervious areas over existing conditions.

Grated inlet catch basins will collect a portion of the surface runoff from the project site within the paved driveway and landscape areas and conveyed to the existing drainage system. Drainage connections from the site drainage system will be provide for connection to the drainage system from the parking structure. The onsite surface runoff from the surface parking and parking structure will continue to sheet flow along its existing drainage pattern.

As noted in the *"Wailuku Redevelopment Area Infrastructure Study, Phase 2"*, both the Vineyard Street and Market Street Drainage Systems are capable of accommodating the runoff generated from a 10-year, 1-hour storm, with the exception of three short segments of drainlines at the intersection of Vineyard Street and Market Street. However, it was stated in the study that the difference between the pipe capacity and estimated peak flow was minimal and enlarging the drainlines were not cost effective.

The development of the project will decrease the quantity of onsite runoff. The proposed drainage system will collect the runoff and convey it to the existing drainage facilities designated as the Vineyard Street and Market Street Drainage Systems. Since there will be a decrease in the runoff in the existing drainage facilities, there will be no adverse effects on the existing drainage systems.

The drainage design criteria will be to minimize any alterations to the natural pattern of the existing onsite surface runoff and to mitigate the increase in runoff generated by the project for a 10-year, 1-hour storm. This is in accordance with Chapter 4, Rules for the Design of Storm Drainage Facilities in the County of Maui.

3.3 SEWER

The scope of the proposed project is to provide parking. All of the new parking stalls will be contained within the parking structure or will be on-grade surface parking. Therefore, the project is not expected to generate any

wastewater. According to the Wastewater Reclamation Division, the Kahului Wastewater Reclamation Facility has sufficient capacity to accommodate the additional wastewater generated from the projects within the Kahului and Wailuku areas.

3.4 WATER

It is anticipated that proposed development will require 2,500 gallons of water daily to meet the minimal irrigation demand. No domestic water demand is anticipated for the project. The existing one-inch water meter will be used for the project. A reduced pressure backflow preventer will be installed after the water meter as required by the Department of Water Supply. Calculations will be prepared and submitted during the building permit process to validate the adequacy of the existing meter.

Additional fire hydrants will be installed as required to meet the requirements of the Fire Department. This determination will be made during the building permit phase.

3.5 ELECTRIC AND TELEPHONE

The proposed electrical, telephone and cable TV distribution systems to the subject project will be installed underground from the existing overhead facilities currently servicing the adjacent areas. Upgrades to the facilities will be made as necessary during the building permit process. Within the project site, the electric and telephone systems will be installed in accordance with the utility companies rules and regulations.

APPENDIX A
HYDROLOGIC CALCULATIONS

HYDROLOGIC Calculations

Purpose: Determine the increase in onsite surface runoff from the undeveloped portion of the project site based on a 10-year, 1-hour storm.

A. Determine the Runoff Coefficient (C):

PARKING STRUCTURE AREA:

Infiltration (Negligible)	= 0.20
Relief (Flat)	= 0.00
Vegetal Cover (None)	= 0.07
Development Type (Roof)	= 0.55
	C= 0.82

PAVEMENT AREAS:

Infiltration (Negligible)	= 0.20
Relief (Flat)	= 0.00
Vegetal Cover (None)	= 0.07
Development Type (Pavement)	= 0.55
	C= 0.82

LANDSCAPE AREAS:

Infiltration (Medium)	= 0.07
Relief (Flat)	= 0.00
Vegetal Cover (High)	= 0.00
Development Type (Landscape)	= 0.15
	C= 0.22

EXISTING CONDITIONS:

Paved Area = 2.15 Acres

Landscaped Area = 0.04 acres

WEIGHTED C = 0.81

DEVELOPED CONDITIONS:

Paved Area = 1.43 Acres

Roof Area = 0.62 Acres

Landscaped Area = 0.14 acres

WEIGHTED C = 0.78

B. Determine the 10-year 1-hour rainfall:

i_{10} = 2.0 inches

Adjust for time of concentration to compute Rainfall Intensity (I):

Existing Condition:

T_c = 10 minutes

I = 4.31 inches/hour

Developed Condition:

T_c = 10 minutes

I = 4.31 inches/hour

C. Drainage Area (A) = 2.19 Acres

D. Compute the 10-year storm runoff volume (Q):

Q = CIA

Existing Conditions:

Q = (0.81)(4.31)(2.19)

= 7.65 cfs

Developed Conditions:

Q = (0.78)(4.31)(2.19)

= 7.37 cfs

Due to the increase in the landscape area, there will be a decrease in runoff due to the development of the proposed project. The anticipated decrease in runoff is 7.65 cfs -

7.37 cfs = 0.28 cfs. Accordingly, the existing runoff volume generated from a 10-year, 1-hour storm is 4,592 cubic feet and the developed runoff volume is 4,422 cubic feet, a decrease of 170 cubic feet.

Hydrograph Plot

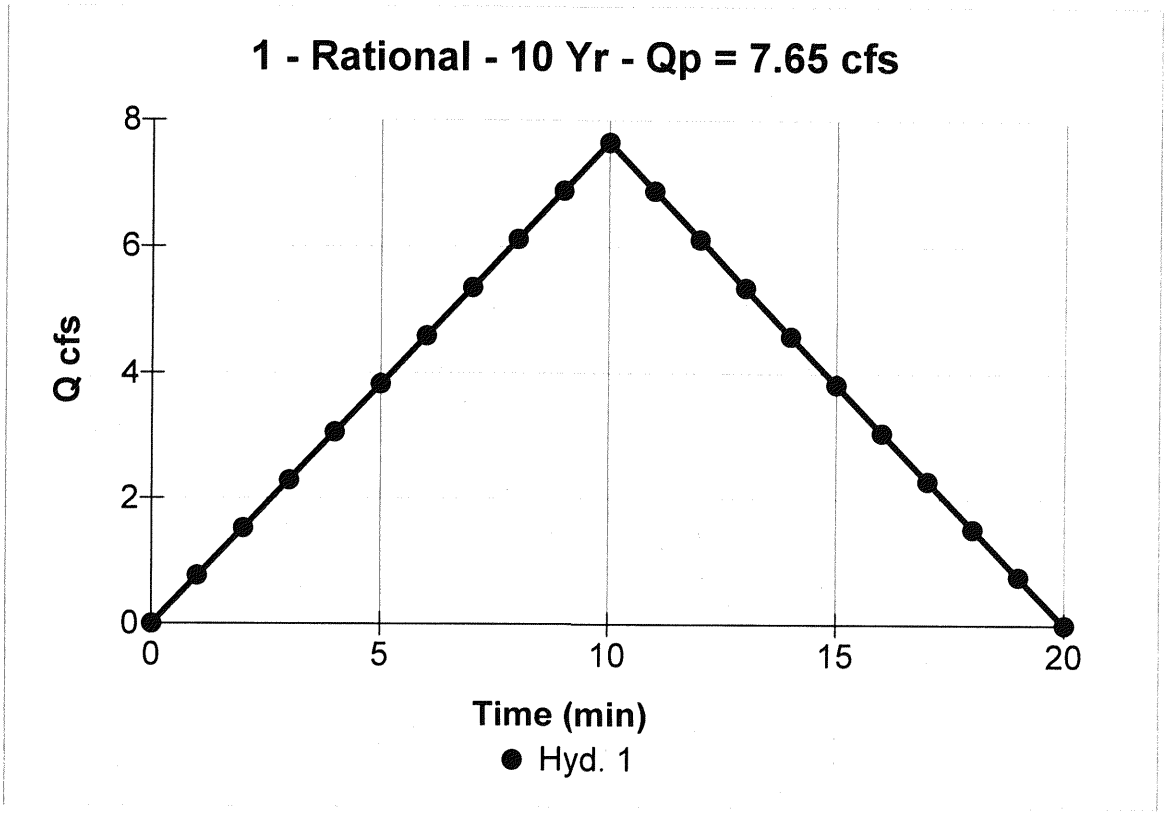
English

Hyd. No. 1

EXISTING CONDITION

Hydrograph type	= Rational	Peak discharge	= 7.65 cfs
Storm frequency	= 10 yrs	Time interval	= 1 min
Drainage area	= 2.2 ac	Runoff coeff.	= 0.81
Intensity	= 4.31 in	Time of conc. (Tc)	= 10 min
I-D-F Curve	= 2-0.IDF	Reced. limb factor	= 1

Total Volume = 4,592 cuft



Hydrograph Plot

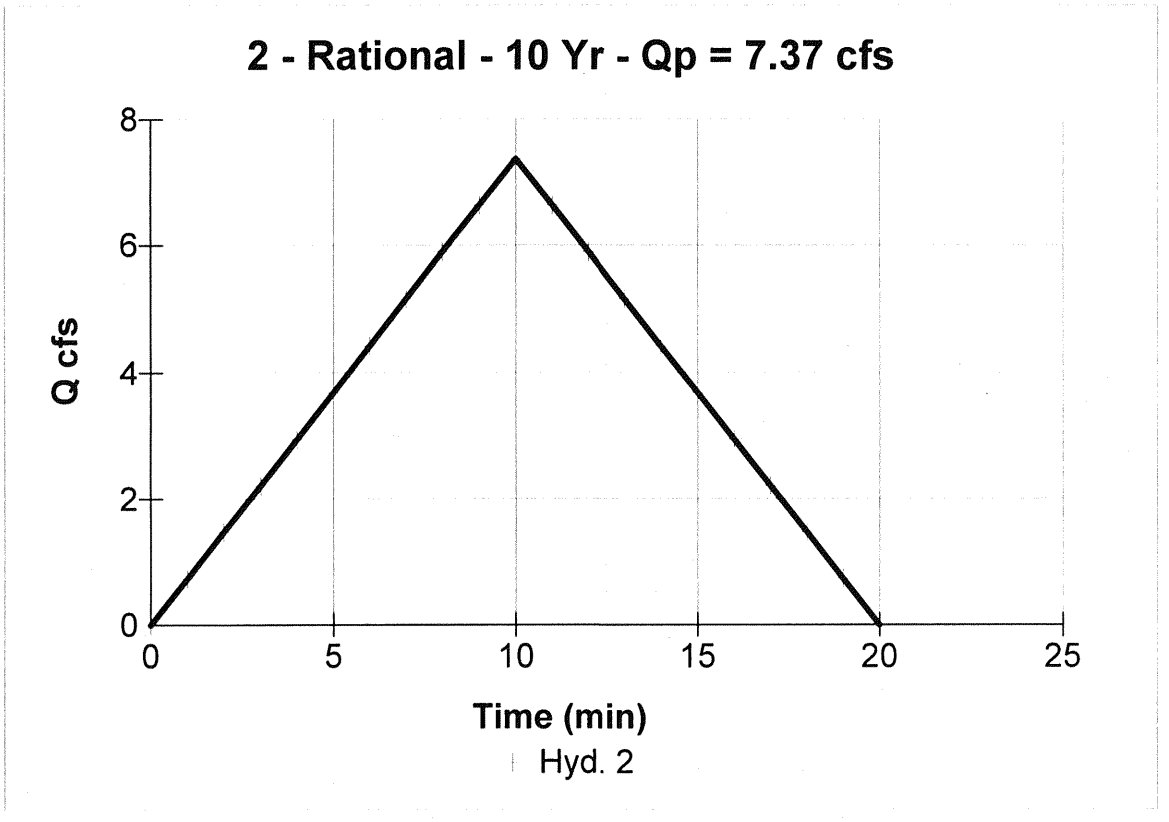
English

Hyd. No. 2

DEVELOPED CONDITION

Hydrograph type	= Rational	Peak discharge	= 7.37 cfs
Storm frequency	= 10 yrs	Time interval	= 1 min
Drainage area	= 2.2 ac	Runoff coeff.	= 0.78
Intensity	= 4.31 in	Time of conc. (Tc)	= 10 min
I-D-F Curve	= 2-0.IDF	Reced. limb factor	= 1

Total Volume = 4,422 cuft



APPENDIX B
WATER DEMAND CALCULATIONS

WATER DEMAND CALCULATIONS

The proposed project consists of a parking structure and paved surface parking areas. No facilities are proposed that would generate water demand. There will be an irrigation system installed for the landscape. According to the project Landscape Architect, the anticipated irrigation demand is 2,500 gallons per day.

APPENDIX C
WASTEWATER CALCULATIONS

WASTEWATER CALCULATIONS

The proposed project consists of a parking structure and paved surface parking areas. No facilities are proposed that would generate wastewater.

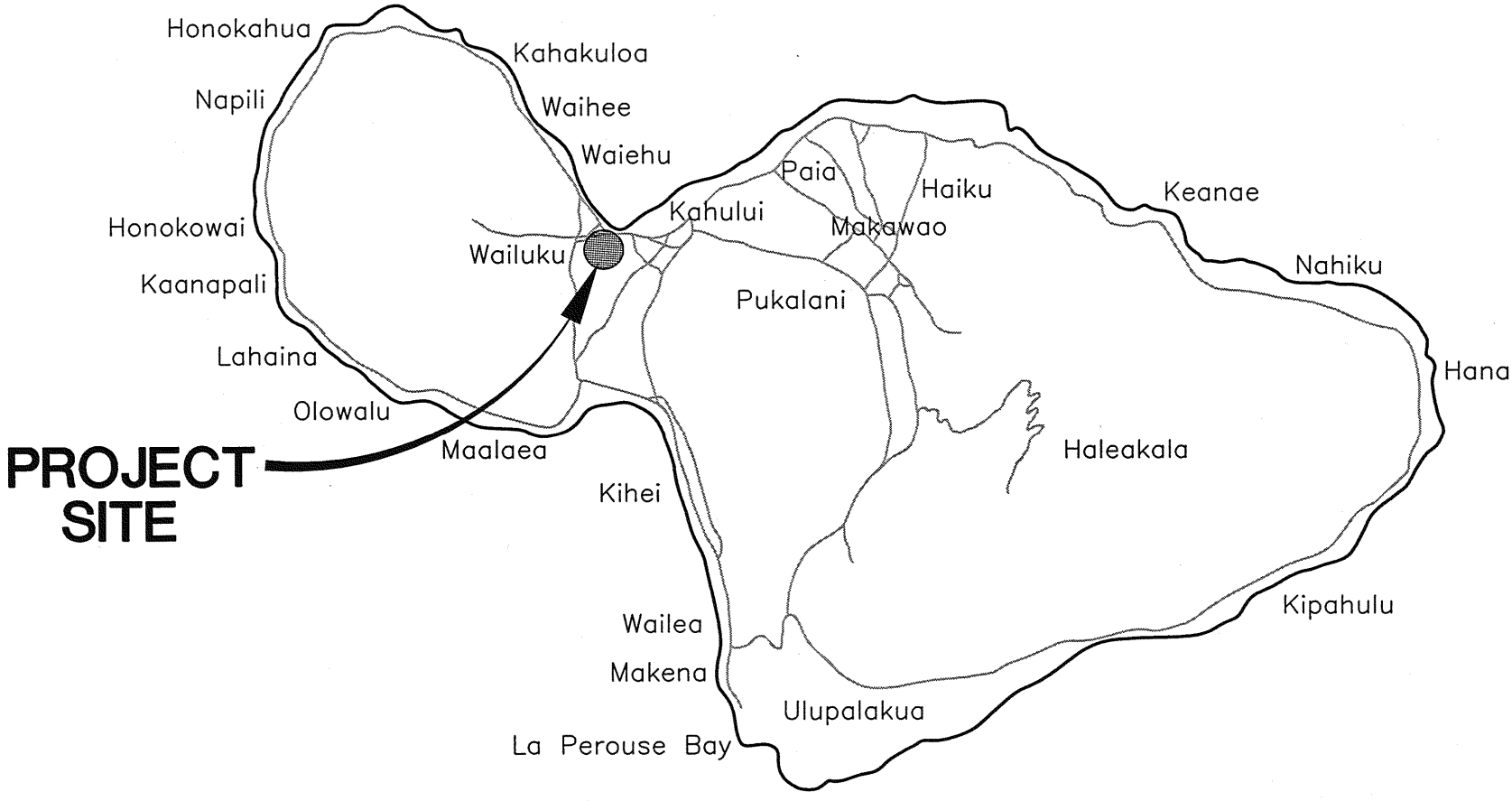
EXHIBITS

1 Location Map

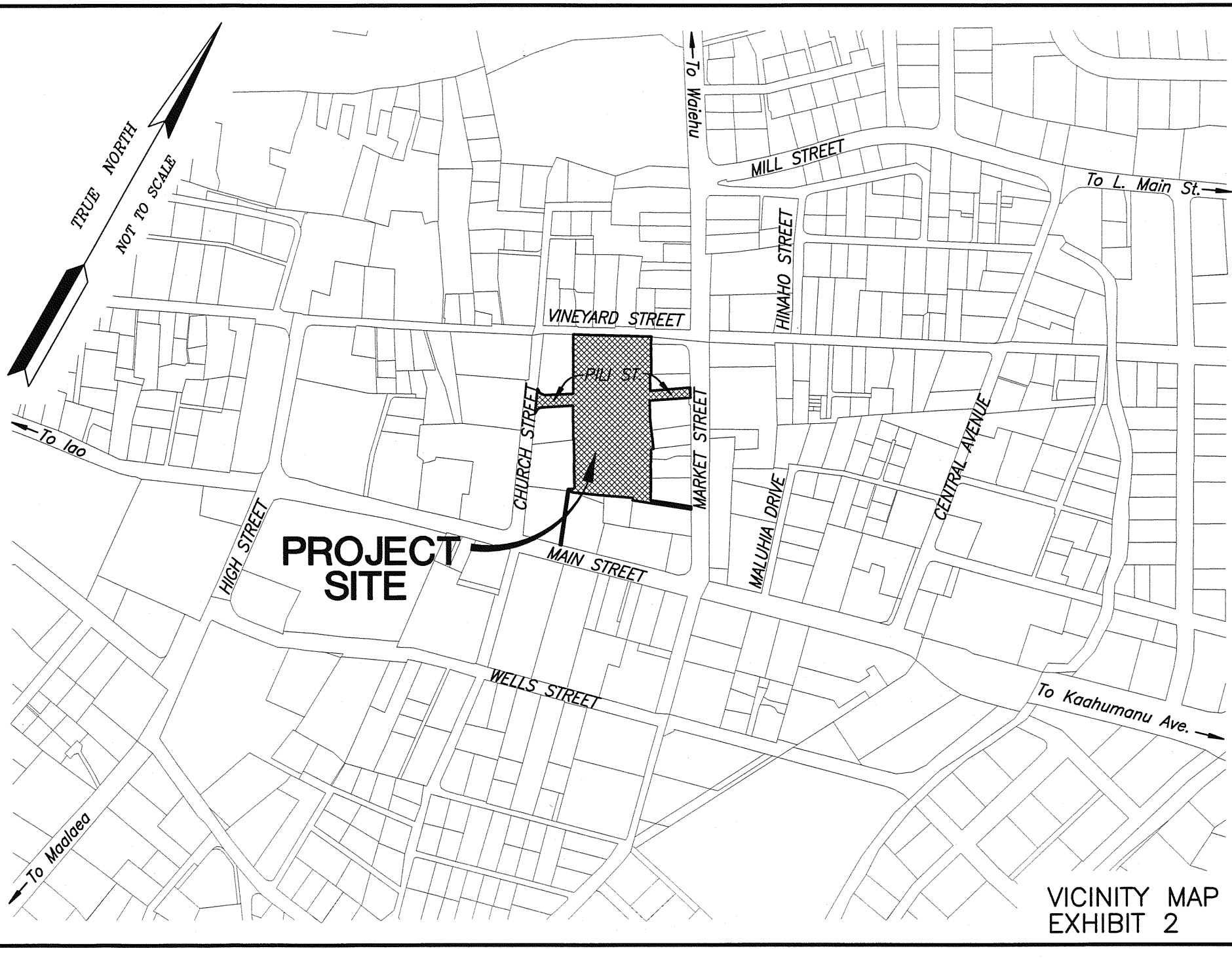
2 Vicinity Map

3 Soil Survey Map

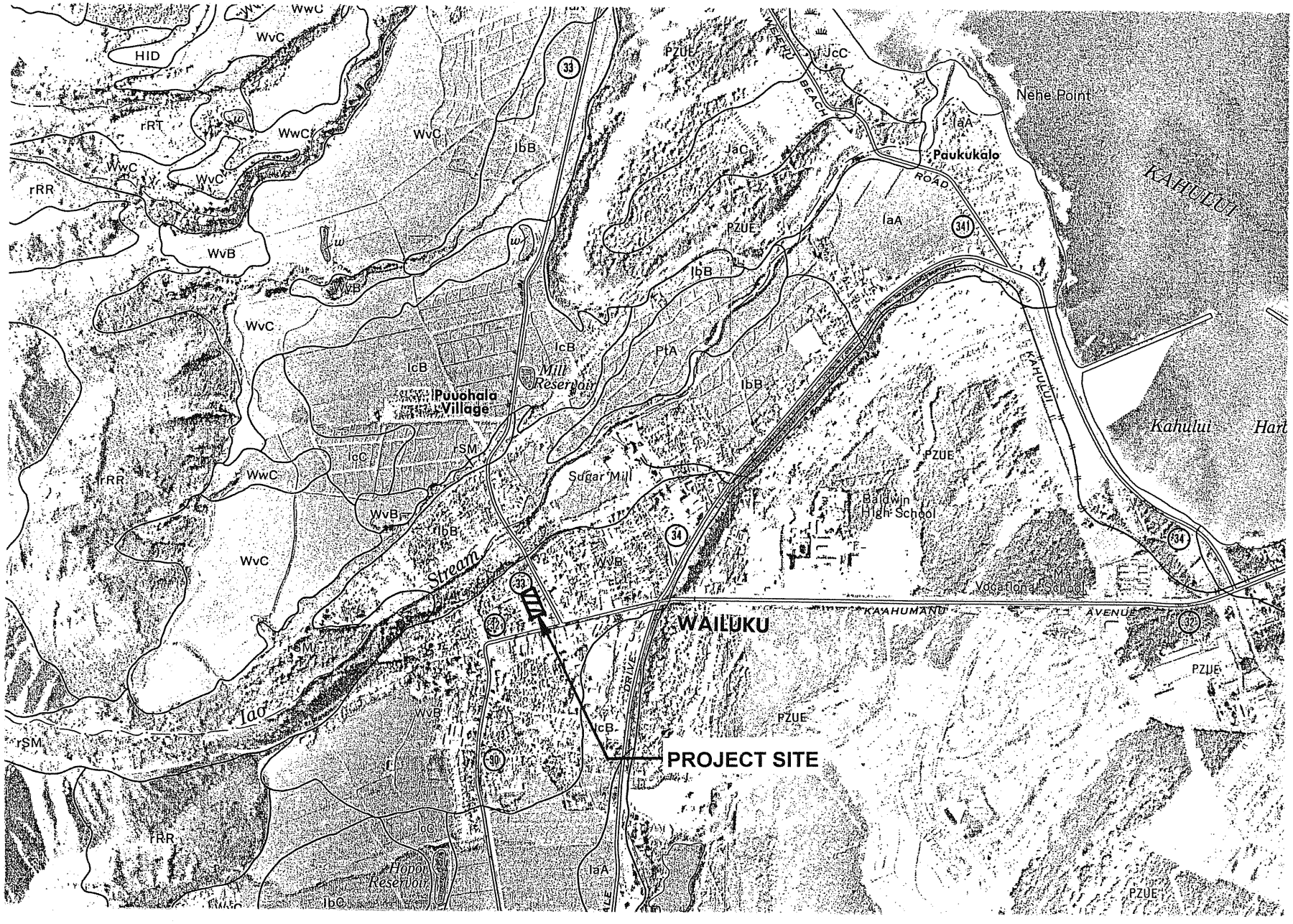
4 Flood Insurance Rate Map



LOCATION MAP
EXHIBIT 1



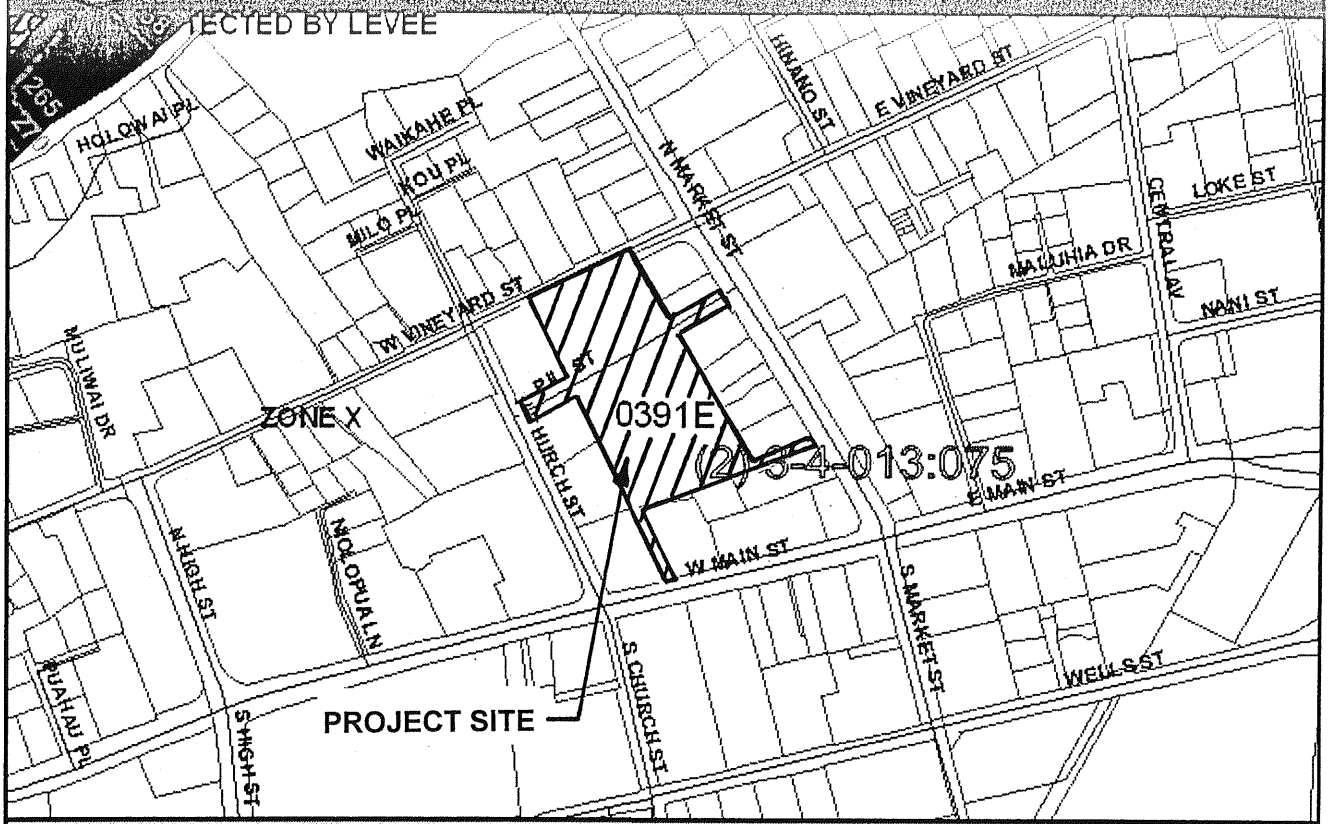
VICINITY MAP
EXHIBIT 2



SOIL SURVEY MAP
EXHIBIT 3

State of Hawaii

FLOOD HAZARD ASSESSMENT REPORT



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD ZONE DEFINITIONS

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water-surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

- **Zone A:** No BFE determined.
- **Zone AE:** BFE determined.
- **Zone AH:** Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
- **Zone AO:** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
- **Zone V:** Coastal flood zone with velocity hazard (wave action); no BFE determined.
- **Zone VE:** Coastal flood zone with velocity hazard (wave action); BFE determined.
- **Zone AEF:** Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

NON-SPECIAL FLOOD HAZARD AREA – An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

- **Zone XS (X shaded):** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- **Zone X:** Areas determined to be outside the 0.2% annual chance floodplain.

OTHER FLOOD AREAS

- **Zone D:** Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

PROPERTY INFORMATION

COUNTY:	MAUI
TMK NO:	(2) 3-4-013-075
PARCEL ADDRESS:	2061 VINEYARD ST
FIRM INDEX DATE:	SEPTEMBER 25, 2009
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL(S):	1500030391E
PANEL EFFECTIVE DATE:	SEPTEMBER 25, 2009

PARCEL DATA FROM:	AUGUST 2010
IMAGERY DATA FROM:	MAY 2005

IMPORTANT PHONE NUMBERS

County NFIP Coordinator	
County of Maui	
Francis Cerizo, CFM	(808) 270-7771
State NFIP Coordinator	
Carol Tyau-Beam, P.E., CFM	(808) 587-0267

Disclaimer: The Department of Land and Natural Resources assumes no responsibility arising from the use of the information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the Department of Land and Natural Resources from any liability, which may arise from its use.

Preliminary DFIRM Disclaimer: If this map has been identified as "PRELIMINARY", please note that it is being provided for commenting purposes only and is not to be use for official/legal decisions or regulatory compliance.

FLOOD INSURANCE RATE MAP
EXHIBIT 4

Appendix O
Traffic Impact Report

Traffic Impact Report

Wailuku Municipal Parking Structure



Prepared for:
Allison-Ide Structural Engineers, LLC

Prepared by:
Wilson Okamoto Corporation

February 2012

TRAFFIC IMPACT REPORT

FOR THE

WAILUKU MUNICIPAL PARKING STRUCTURE

Prepared for:

Allison-Ide Structural Engineers, LLC
900 Fort Street Mall, Suite 1670
Honolulu, Hawaii 96813

Prepared by:

Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii 96826
WOC Ref #8145-01

February 2012

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I. INTRODUCTION

A. Purpose of Study

The purpose of this study is to identify and assess the traffic impacts resulting from the proposed Wailuku municipal parking structure on the island of Maui. The proposed parking structure will replace an existing surface parking lot.

B. Scope of Study

This report presents the findings and conclusions of the traffic study, the scope of which includes:

1. Description of the proposed project.
2. Evaluation of baseline roadway and traffic operations in the vicinity.
3. Analysis of baseline roadway and traffic conditions without and with the proposed project.
4. Analysis and development of trip generation characteristics at full capacity of the proposed project.
5. Superimposing site-generated traffic over baseline traffic conditions.
6. The identification and analysis of traffic impacts resulting from the proposed project.
7. Recommendations of improvements, if appropriate, that would mitigate the traffic impacts resulting from the proposed project.

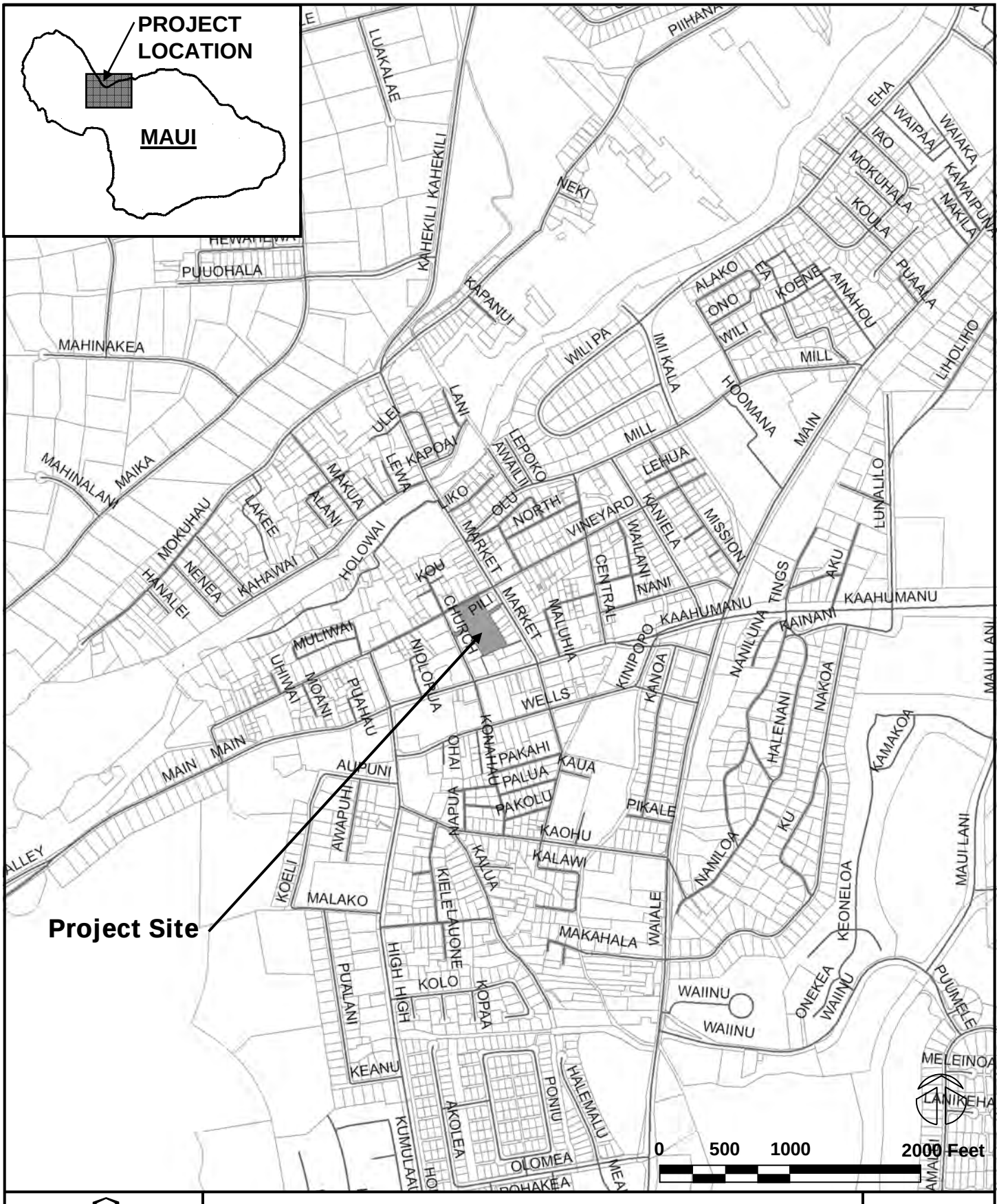
II. PROJECT DESCRIPTION

A. Location

The proposed Wailuku municipal parking structure will be located on a 2.192-acre site in Wailuku on the island of Maui (see Figure 1). The site is bounded by Church Street to the west, Vineyard Street to the north, North Market Street to the east, and commercial uses to the south. Vehicular access to the proposed development will be provided via existing driveways off Church Street, North Market Street, and Vineyard Street.

B. Project Characteristics

The proposed Wailuku municipal parking structure will be located on a site that currently houses an existing surface parking lot with approximately 210 parking stalls. Access to the existing parking lot is currently provided via Pili Street off



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WAILUKU MUNICIPAL PARKING STRUCTURE

LOCATION MAP AND VICINITY MAP

FIGURE 1

North Market Street and Church Street, as well as, a driveway off Vineyard Street. The proposed project is intended to promote redevelopment and revitalization in the project vicinity by providing a surplus of off-street parking that could potentially assist future developments to meet their on-site parking requirements. When the parking garage reaches full capacity due to the completion of these future developments, additional improvements are expected along the surrounding roadways and intersections to mitigate the impact of these other developments. The proposed project entails the following:

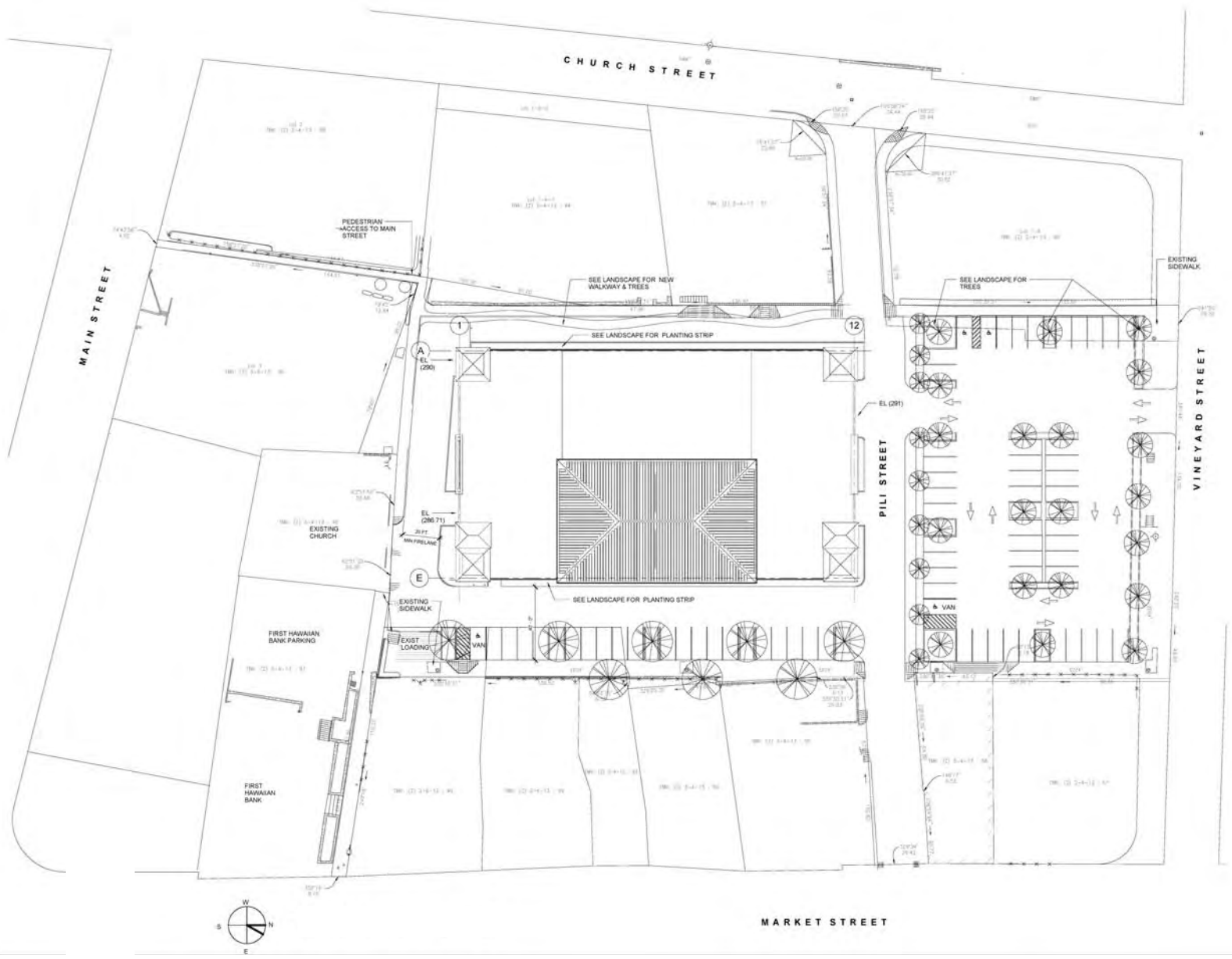
- Construction of a four or five level parking structure with additional at-grade parking areas (approximately 389 parking stalls)
- Connection of the two existing segments of Pili Street to create a new driveway access between North Market Street and Church Street

The parking structure is anticipated to be completed by the Year 2014 with vehicular access provided off North Market Street and Church Street via Pili Street, as well as, off Vineyard Street. Figure 2 shows the proposed project site plan.

III. BASELINE TRAFFIC CONDITIONS

A. Area Roadway System

The proposed project site is located north of East Main Street, a predominantly two-lane, two-way roadway generally oriented in the east-west direction that provides access through downtown Wailuku. Near the southeast corner of the project site, East Main Street intersects North Market Street. At this signalized intersection, the eastbound approach of East Main Street has an exclusive left-turn lane and one through lane while the westbound approach has one through lane and an exclusive right-turn lane. In the vicinity of the project site, North Market Street is a one-way (northbound) roadway that transitions to a two-way roadway north of Vineyard Street. At the intersection with East Main Street, the northbound approach of North Market Street has a shared left-turn and through lane and an exclusive right-turn lane.



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WAILUKU MUNICIPAL PARKING STRUCTURE

PROJECT SITE PLAN

FIGURE
2

North of the intersection with East Main Street, North Market Street intersects Pili Street. At this unsignalized intersection, the northbound approach of North Market Street has one lane that serves left-turn and through traffic movements. The eastbound approach is comprised of Pili Street which provides access to the adjacent at-grade parking lot. At the intersection with North Market Street, the Pili Street approach has one eastbound lane that serves left-turn traffic movements.

Near the northeast corner of the project site, North Market Street intersects Vineyard Street. At this unsignalized intersection, the northbound approach of North Market Street has one lane that serves all traffic movements while the southbound approach has one lane that serves left-turn and right-turn traffic movements. Vineyard Street is a predominantly two-lane, two-way roadway generally oriented in the east-west direction. At the intersection with North Market Street, the eastbound approach of Vineyard Street has one through lane and an exclusive left-turn lane while the westbound approach has one lane that serves through and right-turn traffic movements.

East of the intersection with North Market Street, Vineyard Street intersects a driveway for the adjacent at-grade parking lot. At this unsignalized intersection, the eastbound approach of Vineyard Street has one lane that serves through and right-turn traffic movements while the westbound approach has one lane that serves left-turn and through traffic movements. The driveway approach of the intersection has one lane that serves left-turn and right-turn traffic movements.

Further east, Vineyard Street intersects Church Street. At this unsignalized intersection, both approaches of Vineyard Street have one lane that serve all traffic movements. Church Street is a one-lane (southbound) roadway that transitions to a two-way roadway north of Vineyard Street. At this intersection, the southbound approach of Church Street has one lane that serves all traffic movements.

South of the intersection with Vineyard Street, Church Street intersects Pili Street. At this unsignalized intersection, the southbound approach of Church Street had one lane that serves left-turn and through traffic movements. The westbound approach of the intersection is comprised of Pili Street which provides access to the

adjacent surface parking lot. At the intersection with Church Street, the Pili Street approach has one lane that serves left-turn traffic movements.

Further south, Church Street intersects East Main Street. At this unsignalized intersection, the southbound approach of Church Street has an exclusive left-turn lane and a shared through and right-turn lane. The eastbound approach of East Main Street has one lane that serves through and right-turn traffic movements while the westbound approach has one lane that serves left-turn and through traffic movements.

B. Traffic Volumes and Conditions

1. General

a. Field Investigation

A field investigation was conducted on November 9, 2010, and consisted of manual turning movement count surveys in the project vicinity. The manual turning movement count surveys were conducted between the morning peak hours of 6:00 AM and 9:00 AM, and the afternoon peak hours of 3:00 PM and 6:00 PM at the following intersections:

- North Market Street and East Main Street
- North Market Street and Pili Street
- North Market Street and Vineyard Street
- Vineyard Street and Driveway
- Church Street and Vineyard Street
- Church Street and Pili Street
- Church Street and East Main Street

Appendix A includes the baseline traffic count data.

b. Capacity Analysis Methodology

The highway capacity analysis performed in this study is based upon procedures presented in the "Highway Capacity Manual", Transportation Research Board, 2000, and the "Highway Capacity Software" developed by the Federal Highways Administration. The analysis is based on the concept of Level of Service (LOS).

LOS is a quantitative and qualitative assessment of traffic operations. Levels of Service are defined by LOS "A" through "F"; LOS "A" representing ideal or free-flow traffic operating conditions and LOS "F" unacceptable or potentially congested traffic operating conditions.

"Volume-to-Capacity" (v/c) ratio is another measure indicating the relative traffic demand to the road carrying capacity. A v/c ratio of one (1.00) indicates that the roadway is operating at or near capacity. A v/c ratio of greater than 1.00 indicates that the traffic demand exceeds the road's carrying capacity. The LOS definitions are included in Appendix B.

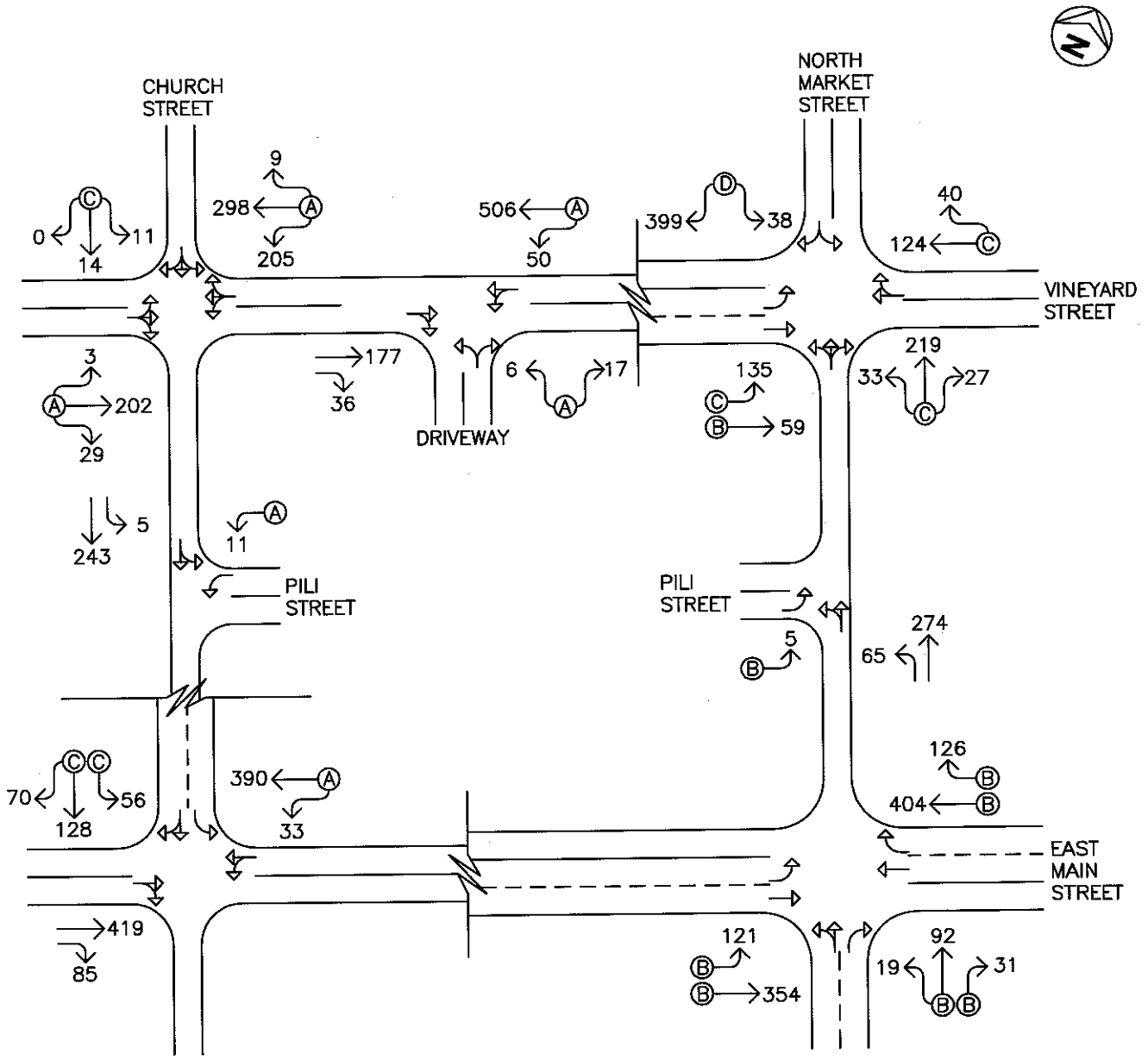
2. Baseline Peak Hour Traffic

a. General

Figures 3 and 4 show the baseline AM and PM peak hour traffic volumes and operating traffic conditions. The AM peak hour of traffic generally occurs between the hours of 7:00 AM and 8:00 AM while the PM peak hour of traffic generally occurs between the hours of 3:45 PM and 4:45 PM. The analysis is based on these peak hour time periods for each intersection to identify the traffic impacts resulting from the proposed project. LOS calculations are included in Appendix C.

b. North Market Street and East Main Street

At the intersection with North Market Street, East Main Street carries 475 vehicles eastbound and 530 vehicles westbound during the AM peak hour of traffic. During PM peak hour, traffic volumes are higher with 524 vehicles traveling eastbound and 611 vehicles traveling westbound. The traffic movements on the East Main Street approaches of the intersection operate at LOS "B" during both peak periods. Traffic queues formed periodically on the East Main Street approaches of the intersection with queue lengths of 4-6 vehicles



LEGEND

90 — TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

(A) — LANE GROUP LEVEL OF SERVICE

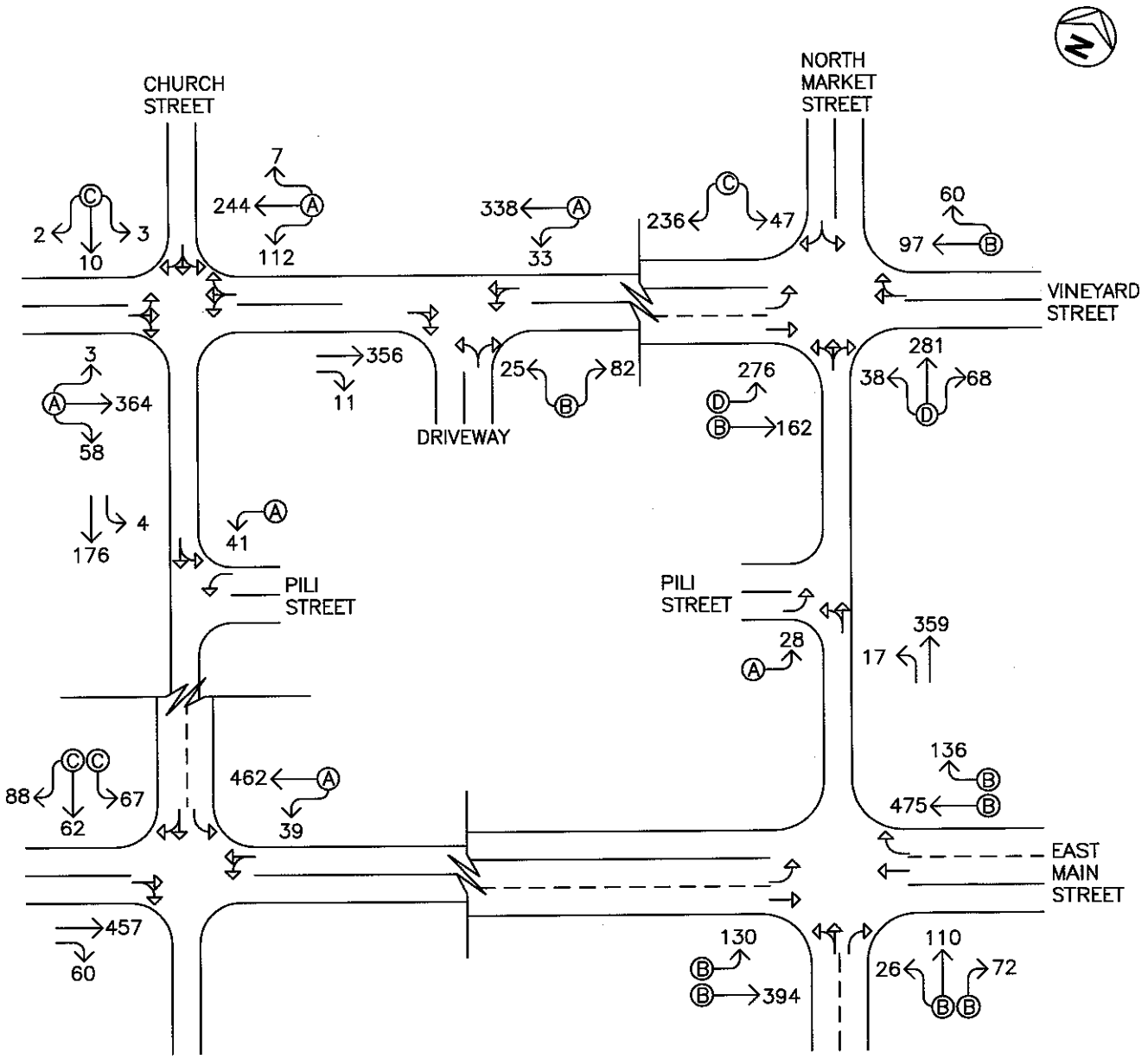
DATE OF COUNT: NOVEMBER 9, 2010

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WAILUKU MUNICIPAL PARKING STRUCTURE

BASELINE AM PEAK HOUR OF TRAFFIC

FIGURE 3



LEGEND

90 — TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

(A) — LANE GROUP LEVEL OF SERVICE

DATE OF COUNT: NOVEMBER 9, 2010

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WAILUKU MUNICIPAL PARKING STRUCTURE

BASELINE PM PEAK HOUR OF TRAFFIC

FIGURE 4

observed during both peak periods. However, these queues were observed to clear the intersection after each traffic signal cycle change.

The North Market Street approach of the intersection carries 142 vehicles and 208 vehicles northbound during the AM and PM peak periods, respectively. The traffic movements on the North Market Street approach operate at LOS "B" during both peak periods.

c. North Market Street and Pili Street

At the intersection with Pili Street, North Market Street carries 339 vehicles and 376 vehicles northbound during the AM and PM peak periods, respectively. The Pili Street approach of the intersection carries a relatively low volume of traffic during the peak hours of traffic with 5 vehicles and 28 vehicles observed on this approach during the AM and PM peak periods, respectively. The critical movement at the intersection is the eastbound left-turn traffic movement which operates at LOS "B" and LOS "A" during the AM and PM peak periods, respectively.

d. North Market Street and Vineyard Street

At the intersection with Vineyard Street, North Market Street carries 279 vehicles northbound and 437 vehicles southbound during the AM peak period. During the PM peak period, the overall traffic volume is less with 387 vehicles traveling northbound and 283 vehicles traveling southbound. The northbound approach of North Market Street operates at LOS "C" and LOS "D" during the AM and PM peak periods, respectively, while the southbound approach operates at LOS "D" and LOS "C" during the AM and PM peak periods, respectively. Traffic queues periodically formed on the North Market Street approaches of the intersection with the most significant queuing occurring on the southbound approach. Average queue lengths of 5-7 vehicles were observed on this approach during both peak periods.

The Vineyard Street approaches of the intersection carry 194 vehicles eastbound and 164 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is higher with 438 vehicles traveling eastbound and 157 vehicles traveling westbound. The eastbound left-turn traffic movement operates at LOS "C" and LOS "D" during the AM and PM peak periods, respectively, and the through movement operates at LOS "B" during both peak periods while the westbound approach operates at LOS "C" and LOS "B" during the AM and PM peak periods, respectively. Traffic queues formed periodically on the Vineyard Street approaches of the intersection with the most significant queuing occurring on the eastbound approach. Average queue lengths of 2-4 vehicles were observed on this approach during both peak periods.

e. Vineyard Street and Driveway

At the intersection with the driveway for the adjacent at-grade parking lot, Vineyard Street carries 213 vehicles eastbound and 556 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is slightly less with 367 vehicles traveling eastbound and 371 vehicles traveling westbound. The critical movement on the Vineyard Street approaches is the westbound left-turn and through traffic movement which operates at LOS "A" during both peak periods.

The driveway approach of the intersection carries 23 vehicles and 107 vehicles northbound during the AM and PM peak periods, respectively. This approach operates at LOS "A" and LOS "B" during the AM and PM peak periods, respectively.

f. Church Street and Vineyard Street

At the intersection with Vineyard Street, Church Street carries 25 vehicles and 15 vehicles southbound during the AM and PM peak periods, respectively. This approach operates at LOS "C" during both peak periods.

The Vineyard Street approaches of the intersection carry 234 vehicles eastbound and 512 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is slightly higher with 425 vehicles traveling eastbound and 363 vehicles traveling westbound. Both approaches of Vineyard Street operate at LOS "A" during both peak periods. Traffic queues formed periodically on the Vineyard Street approaches of the intersection with the most significant queuing occurring on the westbound approach. Average queue lengths of 3-5 vehicles were observed on this approach during both peak periods.

g. Church Street and Pili Street

At the intersection with Pili Street, Church Street carries 248 vehicles and 180 vehicles southbound during the AM and PM peak periods, respectively. The Pili Street approach of the intersection carries a relatively low volume of traffic during the peak hours of traffic with 11 vehicles and 41 vehicles observed on this approach during the AM and PM peak periods, respectively. The critical movement at the intersection is the westbound left-turn traffic movement which operates at LOS "A" during both peak periods.

h. East Main Street and Church Street

At the intersection with Church Street, East Main Street carries 504 vehicles eastbound and 423 vehicles westbound during the AM peak hour of traffic. During PM peak hour, traffic volumes are higher with 517 vehicles traveling eastbound and 501 vehicles traveling westbound. The critical movement on the East Main Street approaches

of is the westbound left-turn and through traffic movement which operates at LOS "A" during both peak periods.

The Church Street approach of the intersection carries 254 vehicles and 217 vehicles southbound during the AM and PM peak periods, respectively. The traffic movements on the Church Street approach operate at LOS "C" during both peak periods. Traffic queues formed periodically on this approach with average queue lengths of 2-4 vehicles observed during both peak periods.

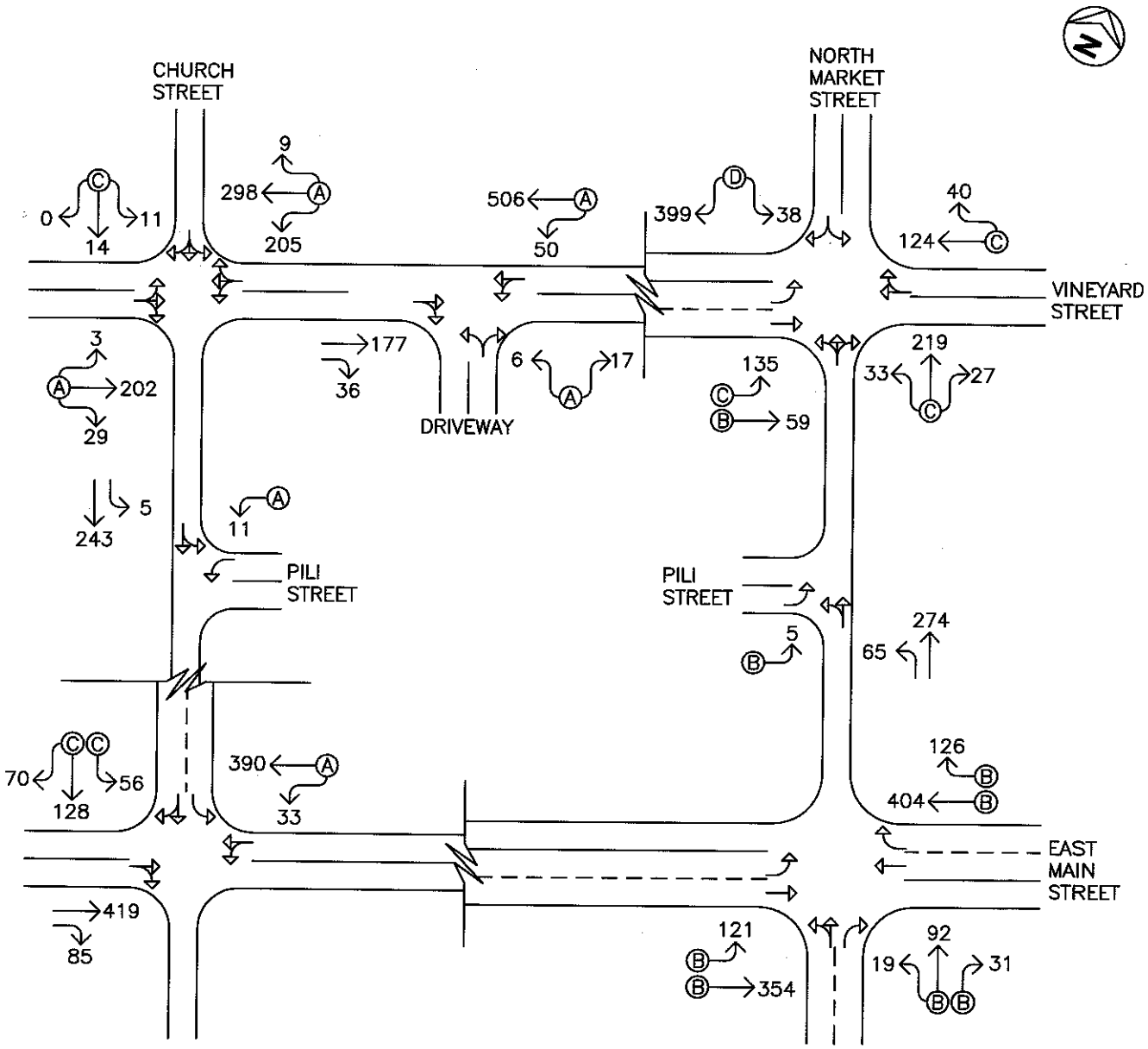
IV. PROJECTED TRAFFIC CONDITIONS WITH PROJECT

A. Site-Generated Traffic

As previously stated, the proposed project is intended to promote redevelopment and revitalization in the project vicinity by providing a surplus of off-street parking that could potentially assist future developments to meet their on-site parking requirements. As such, the proposed parking structure is not anticipated to generate any additional vehicular trips in the project vicinity until these future developments are completed.

B. Total Traffic Volumes With Project

The AM and PM peak hour traffic volumes and operating conditions in the project vicinity with the construction of the proposed Wailuku municipal parking structure are shown on Figures 5 and 6, and summarized in Table 1. The projected traffic operating conditions are representative of the without and with project conditions since the proposed project is not expected to generate additional traffic or result in modifications to the existing travel patterns in the project vicinity. The baseline levels of service are provided for comparison purposes. LOS calculations are included in Appendix D.



LEGEND

90 — TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

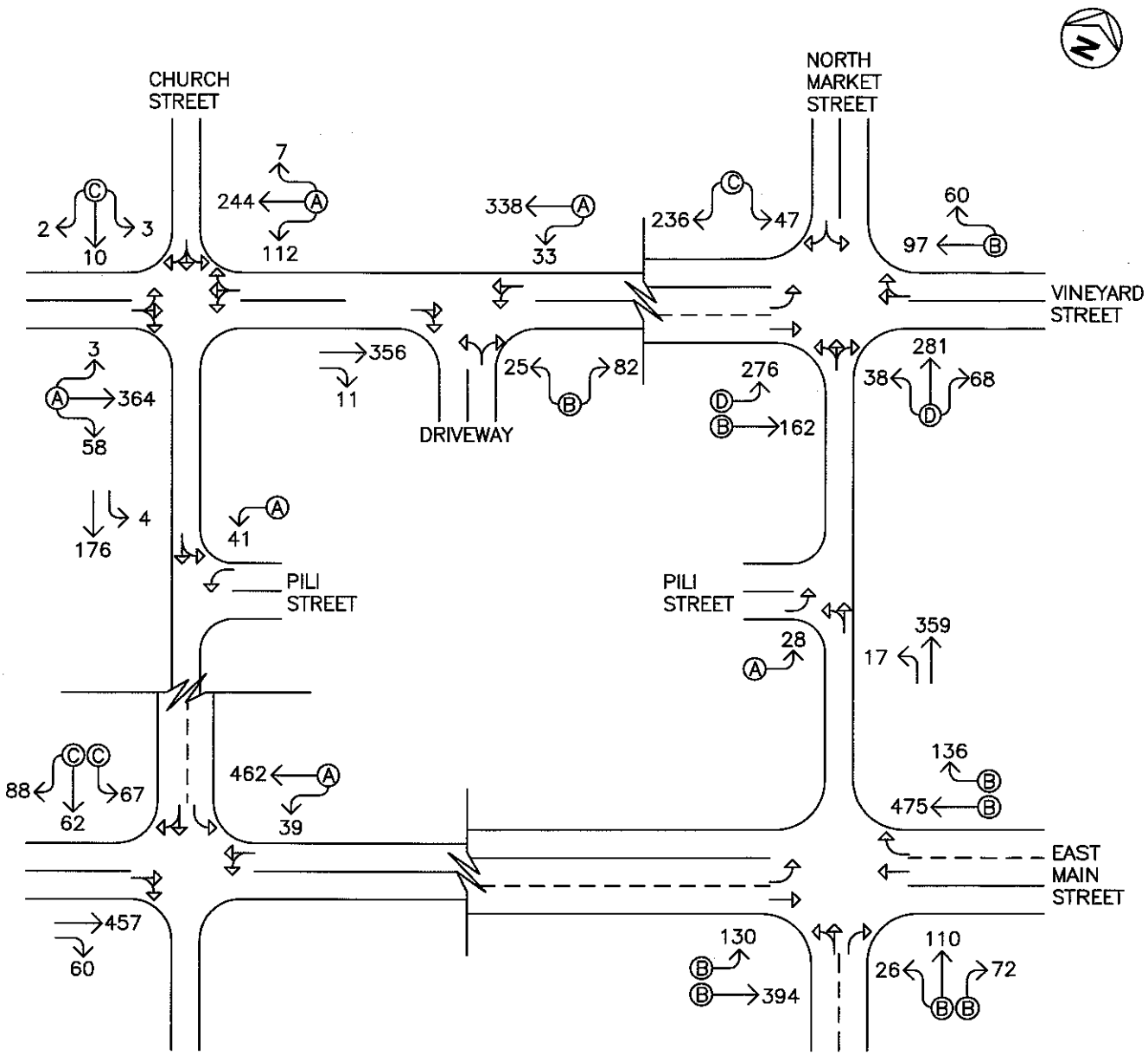
(A) — LANE GROUP LEVEL OF SERVICE

WILSON OKAMOTO CORPORATION
ENGINEERS · PLANNERS

WAILUKU MUNICIPAL PARKING STRUCTURE

PROJECTED AM PEAK HOUR OF TRAFFIC WITH PROJECT

FIGURE 5



LEGEND

90 — TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

(A) — LANE GROUP LEVEL OF SERVICE

WILSON OKAMOTO CORPORATION
ENGINEERS · PLANNERS

WAILUKU MUNICIPAL PARKING STRUCTURE

PROJECTED PM PEAK HOUR OF TRAFFIC WITH PROJECT

FIGURE 6

Table 1: Baseline and Projected (With Project) LOS Traffic Operating Conditions

Intersection	Critical Traffic Movement		AM		PM	
			Base	With Proj	Base	With Proj
N. Market St/ E. Main St	Eastbound	LT	B	B	B	B
		TH	B	B	B	B
	Westbound	TH	B	B	B	B
		RT	B	B	B	B
	Northbound	LT-TH	B	B	B	B
		RT	B	B	B	B
N. Market St/ Pili St	Eastbound	LT	B	B	A	A
N. Market St/ Vineyard St	Eastbound	LT	C	C	D	D
		TH	B	B	B	B
	Westbound	TH-RT	C	C	B	B
	Northbound	LT-TH-RT	C	C	D	D
	Southbound	LT-RT	D	D	C	C
Vineyard St/ Driveway	Westbound	LT-TH	A	A	A	A
	Northbound	LT-RT	A	A	B	B
Church St/ Vineyard St	Eastbound	LT-TH-RT	A	A	A	A
	Westbound	LT-TH-RT	A	A	A	A
	Southbound	LT-TH-RT	C	C	C	C
Church St/ Pili St	Westbound	LT	A	A	A	A
Church St/ E. Main St	Westbound	LT-TH	A	A	A	A
	Southbound	LT	C	C	C	C
		TH-RT	C	C	C	C

Under with project conditions, traffic operations in the project vicinity are expected to remain similar to baseline conditions. The critical movements at the intersections of North Market Street with East Main Street and Pili Street are expected to continue operating at LOS "B" or better during both peak periods while those at the intersection with Vineyard Street are expected to continue operating at

LOS "D" or better during both peak periods. Along Church Street, the critical movements at the intersections with Vineyard Street and East Main Street are expected to continue operating at LOS "C" or better during both peak periods while those at the intersection with Pili Street are expected to operate at LOS "A" during both peak periods. At the intersection of Vineyard Street with the existing at-grade parking lot driveway, the critical movements are expected to continue operating at LOS "A" during the AM peak period and LOS "B" or better during the PM peak period.

V. PROJECTED TRAFFIC CONDITIONS WITH PROJECT AT FULL CAPACITY

A. Site-Generated Traffic

As future developments are completed that utilize the surplus off-street parking provided within the proposed parking structure, traffic accessing the parking structure is expected to increase until the capacity of the structure is reached. Since the details regarding the land use plans and implementation schedules of these future developments are not known at this time, the trip generation rate used in this study was developed empirically by correlating the collected vehicles trip generation data from the existing surface parking lot to the total number of parking stalls. Table 2 summarizes the trip generation characteristics applied to the AM and PM peak periods of traffic.

Table 2: Peak Hour Trip Generation

INDEPENDENT VARIABLE:	Increase in # of Parking Stalls = 181 stalls	
		PROJECTED TRIP ENDS
AM PEAK	ENTER	136
	EXIT	34
	TOTAL	170
PM PEAK	ENTER	57
	EXIT	153
	TOTAL	210

Access to the proposed parking structure will continue to be provided via driveways off North Market Street, Vineyard Street, and Church Street. The distribution of these

new trips between the three driveways and at the study intersections was assumed to remain similar to baseline conditions.

B. Through Traffic Forecasting Methodology

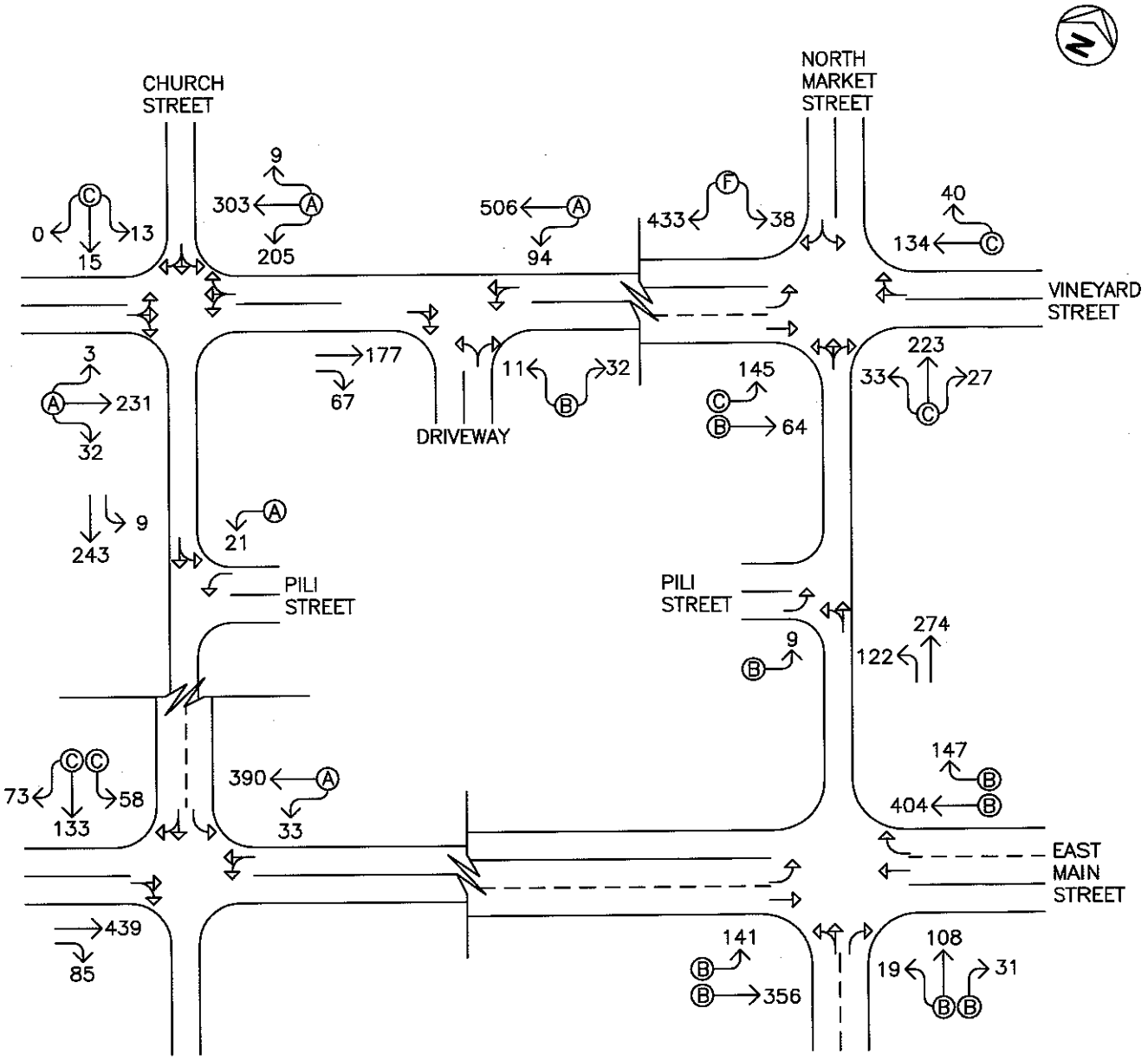
Typically, projected conditions include traffic forecasting to account for ambient growth in traffic along the surrounding roadways as a result of the development of projects in other regions. However, the implementation schedule of the new developments that would utilize the surplus off-street parking in the parking structure is not known at this time. Consequently, a final horizon year representing full capacity of the parking structure cannot be determined at this time. As such, for the purpose of this report, an ambient growth rate is not incorporated into project conditions. However, traffic volumes along the regional roadways such as East Main Street are expected to increase over time thereby resulting is a higher volume of conflicting traffic for intersecting roadways.

C. Total Traffic Volumes With Project at Full Capacity

The AM and PM peak hour traffic volumes and operating conditions in the project vicinity once the proposed Wailuku municipal parking structure reaches full capacity are shown on Figures 7 and 8, and summarized in Table 3. The projected (with project) levels of service are provided for comparison purposes. LOS calculations are included in Appendix E.

Table 3: Projected (With Project) and Projected (With Project at Full Capacity) LOS Traffic Operating Conditions

Intersection	Critical Traffic Movement		AM		PM	
			With Proj	With Proj at Full Capacity	With Proj	With Proj at Full Capacity
N. Market St/ E. Main St	Eastbound	LT	B	B	B	B
		TH	B	B	B	B
	Westbound	TH	B	B	B	B
		RT	B	B	B	B
	Northbound	LT-TH	B	B	B	B
		RT	B	B	B	B



LEGEND

90 — TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

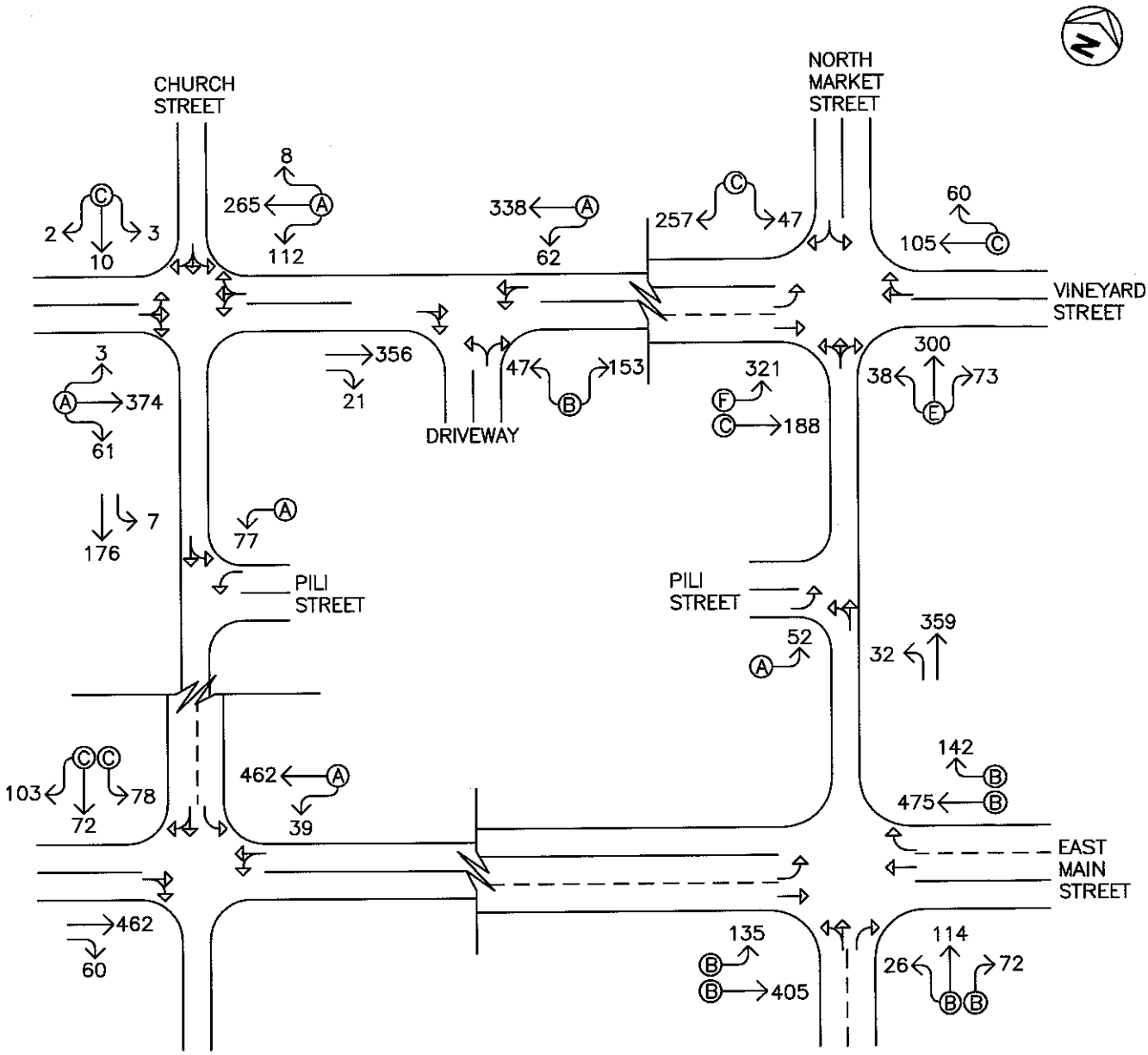
(A) — LANE GROUP LEVEL OF SERVICE

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ENGINEERS • PLANNERS

WAILUKU MUNICIPAL PARKING STRUCTURE

PROJECTED AM PEAK HOUR OF TRAFFIC WITH PROJECT AT FULL CAPACITY

FIGURE 7



LEGEND

90 — TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

(A) — LANE GROUP LEVEL OF SERVICE

WILSON OKAMOTO CORPORATION
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WAILUKU MUNICIPAL PARKING STRUCTURE

PROJECTED PM PEAK HOUR OF TRAFFIC WITH PROJECT AT FULL CAPACITY

FIGURE 8

Table 3: Projected (With Project) and Projected (With Project at Full Capacity) LOS Traffic Operating Conditions (Cont'd)

Intersection	Critical Traffic Movement		AM		PM	
			With Proj	With Proj at Full Capacity	With Proj	With Proj at Full Capacity
N. Market St/ Pili St	Eastbound	LT	B	B	A	A
N. Market St/ Vineyard St	Eastbound	LT	C	C	D	F
		TH	B	B	B	C
	Westbound	TH-RT	C	C	B	C
	Northbound	LT-TH-RT	C	C	D	E
	Southbound	LT-RT	D	F	C	C
Vineyard St/ Driveway	Westbound	LT-TH	A	A	A	A
	Northbound	LT-RT	A	B	B	B
Church St/ Vineyard St	Eastbound	LT-TH-RT	A	A	A	A
	Westbound	LT-TH-RT	A	A	A	A
	Southbound	LT-TH-RT	C	C	C	C
Church St/ Pili St	Westbound	LT	A	A	A	A
Church St/ E. Main St	Westbound	LT-TH	A	A	A	A
	Southbound	LT	C	C	C	C
		TH-RT	C	C	C	C

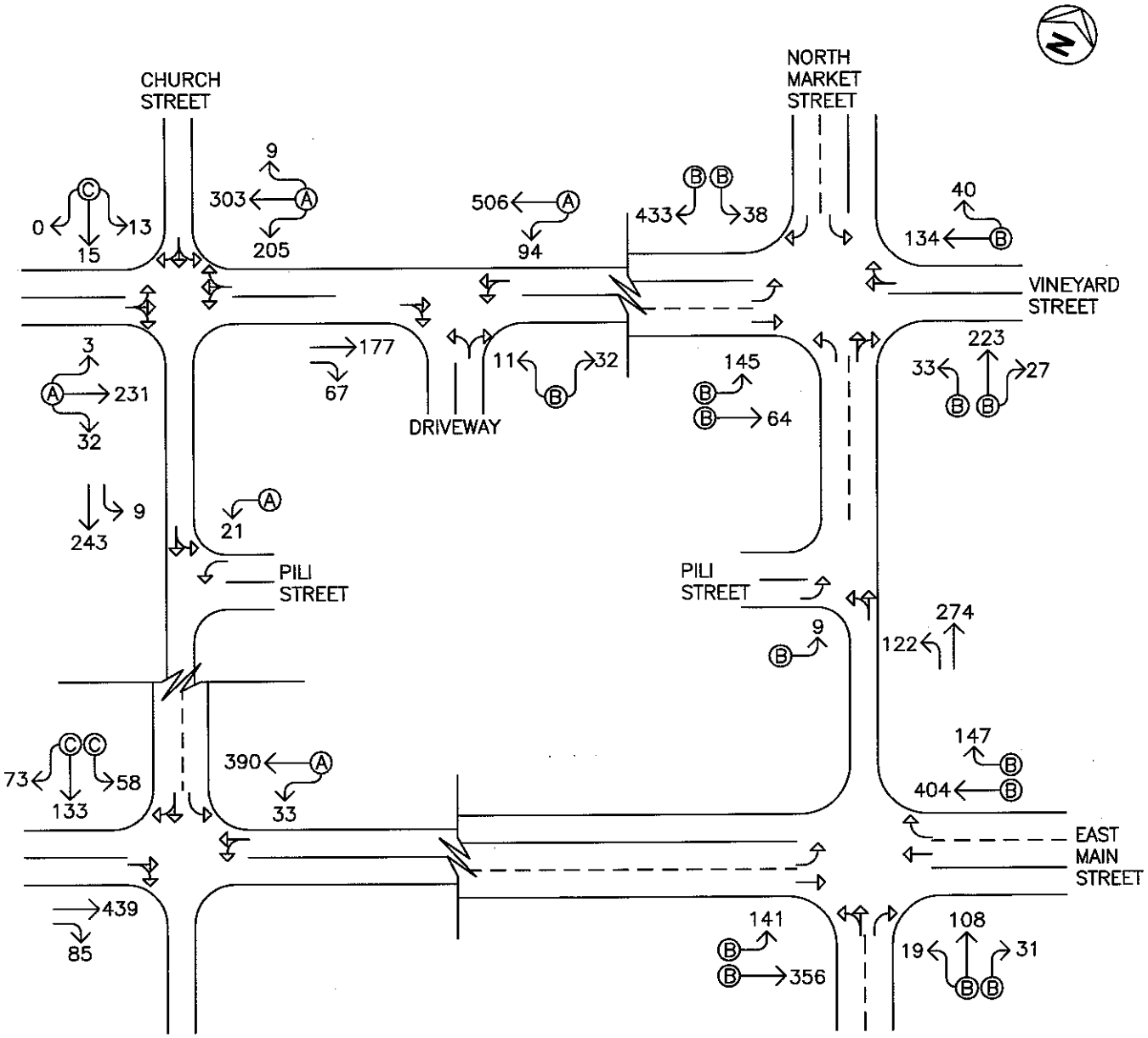
Traffic operations in the project vicinity are expected to deteriorate as new developments are completed and the traffic accessing the proposed parking structure increases. The traffic movements at the intersection of North Market Street with Vineyard Street are expected to deteriorate to unacceptable levels-of-service as future developments in the project vicinity are completed. As such, improvements will be necessary to mitigate the impact of future developments including the provision of exclusive turning lanes and removal of parking on the northbound and southbound approaches of the intersection, as well as, the installation of a traffic signal system. With the implementation of the aforementioned improvements, traffic operations at

the intersection of North Market Street with Vineyard Street are expected to improve the acceptable levels-of-service as shown on Figures 9 and 10, and summarized in Table 4. The projected levels of service at full capacity without improvements are provided for comparison purposes. LOS calculations are included in Appendix F.

Table 4: Projected With Project at Full Capacity (Without and With Improvements) LOS Traffic Operating Conditions

Intersection	Critical Traffic Movement		AM		PM	
			W/out Imp	With Imp	W/out Imp	With Imp
N. Market St/ Vineyard St	Eastbound	LT	C	B	F	C
		TH	B	B	C	B
	Westbound	TH-RT	C	B	C	B
	Northbound	LT	C	B	E	B
		TH-RT		B		C
	Southbound	LT	F	B	C	B
		RT		B		B

In addition, as previously discussed, traffic volumes along the regional roadways such as East Main Street are expected to increase over time. Consequently, traffic operations at the study intersections along that roadway could also potentially deteriorate over time, specifically those at the unsignalized intersection with Church Street. As such, a traffic signal system may be warranted in the future at that intersection to alleviate future traffic conditions. It should be noted, that the analyses included in this study assumes that full capacity of the parking structure is representative of future conditions with new developments in the vicinity. However, each new development in the vicinity should be required to prepare a traffic impact study to verify future conditions and identify additional mitigative measures as necessary.



LEGEND

90 — TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

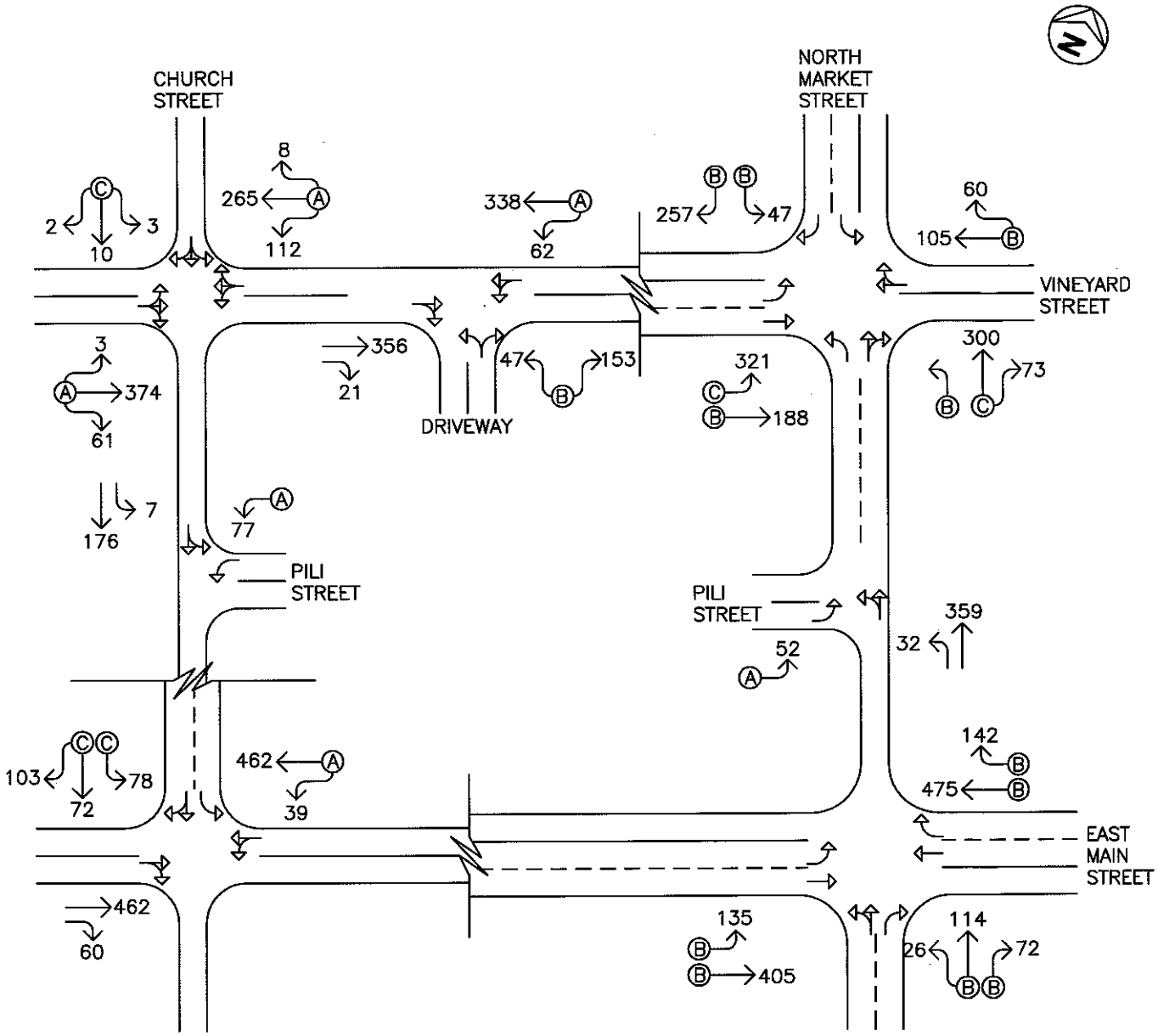
Ⓐ — LANE GROUP LEVEL OF SERVICE

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WAILUKU MUNICIPAL PARKING STRUCTURE

PROJECTED AM PEAK HOUR OF TRAFFIC WITH PROJECT AT FULL CAPACITY WITH IMPROVEMENTS

FIGURE 9



LEGEND

90 — TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

(A) — LANE GROUP LEVEL OF SERVICE

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WAILUKU MUNICIPAL PARKING STRUCTURE

PROJECTED PM PEAK HOUR OF TRAFFIC WITH PROJECT AT FULL CAPAPCITY WITH IMPROVEMENTS

FIGURE 10

VI. RECOMMENDATIONS

A. With Project

Based on the analysis of the traffic data, the following are the recommendations of this study to be implemented in conjunction with the proposed project:

1. Maintain sufficient sight distances for motorists to safely enter and exit all project driveways/roadways.

2. Provide sufficient turning radii at all project driveways/roadways to avoid or minimize vehicle encroachments to oncoming traffic lanes.

3. If access to the parking garage is controlled (i.e., automatic gate, etc.), provide sufficient storage for vehicles on-site to ensure that queues do not extend onto the adjacent public roadways.

B. With Project at Full Capacity

Based on the analysis of the traffic data, the following are the recommendations of this study to be implemented once the parking structure reaches full capacity. It should be noted that these recommendations are based on the assumption that full capacity of the parking structure is representative of future conditions with new developments in the vicinity. However, each new development in the vicinity should be required to prepare a traffic impact study to verify future conditions and identify additional mitigative measures as necessary.

1. Modify the northbound approach of North Market Street at the intersection with Vineyard Street to provide an exclusive left-turn lane and a shared through and right-turn lane. The design and layout of these lanes should be determined during the design phase of the project.

2. Modify the southbound approach of North Market Street at the intersection with Vineyard Street to provide exclusive left-turn and right-turn lanes. The design and layout of these lanes should be determined during the design phase of the project.

3. Install a traffic signal system at the intersection of North Market Street and Vineyard Street. Although the signal is anticipated to be warranted once the parking structure reaches full capacity, a traffic signal warrant study should be prepared prior to installation to confirm future traffic conditions. The design

and layout of this system should be determined during the design phase of the project.

VII. CONCLUSION

The proposed Wailuku municipal parking structure is intended to promote redevelopment and revitalization in the project vicinity by providing a surplus of off-street parking that could potentially assist future developments meet their on-site parking requirements. The new parking structure will replace an existing at-grade parking lot and as such, the proposed project is not expected to generate additional traffic or result in modifications to the existing travel patterns in the project vicinity. However, usage of the parking garage is expected to increase as future developments are completed in the vicinity. When the parking garage reaches full capacity due to these developments, additional improvements are expected to be implemented at the intersection of North Market Street with Vineyard Street such as the provision of exclusive turning lanes and installation of a traffic signal system to mitigate future traffic operating conditions. In addition, traffic volumes along the regional roadways such as East Main Street are expected to increase over time and, as such, additional improvements may also be required at the intersection along that roadway. Each new development in the vicinity should be required to prepare a traffic impact study to verify future conditions and identify additional mitigative measures as necessary.

APPENDIX A

BASELINE TRAFFIC COUNT DATA

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-5672, D4-5671
Counted By:MD, MR
Weather:Clear

File Name : MarMai AM
Site Code : 00000001
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Market Street Southbound					Main Street Westbound					Market Street Northbound					Main Street 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
06:00 AM	0	0	0	2	2	0	36	8	0	44	0	2	0	1	3	10	20	0	0	30	79
06:15 AM	0	0	0	0	0	0	40	15	2	57	2	2	4	0	8	9	36	0	0	45	110
06:30 AM	0	0	0	1	1	0	48	12	6	66	1	4	3	0	8	19	44	0	3	66	141
06:45 AM	0	0	0	4	4	0	62	25	4	91	4	14	1	0	19	13	60	0	0	73	187
Total	0	0	0	7	7	0	186	60	12	258	7	22	8	1	38	51	160	0	3	214	517
07:00 AM	0	0	0	2	2	0	98	25	9	132	4	13	8	1	26	24	73	0	1	98	258
07:15 AM	0	0	0	4	4	0	101	27	3	131	6	34	9	0	49	20	84	0	0	104	288
07:30 AM	0	0	0	1	1	0	95	41	2	138	6	22	7	0	35	42	105	0	0	147	321
07:45 AM	0	0	0	1	1	0	106	33	2	141	3	23	7	0	33	35	96	0	0	131	306
Total	0	0	0	8	8	0	400	126	16	542	19	92	31	1	143	121	358	0	1	480	1173
08:00 AM	0	0	0	2	2	0	122	37	4	163	3	8	3	0	14	26	64	0	0	90	269
08:15 AM	0	0	0	0	0	0	94	22	5	121	5	10	10	0	25	23	62	0	1	86	232
08:30 AM	0	0	0	4	4	0	98	32	1	131	5	16	8	0	29	31	70	0	0	101	265
08:45 AM	0	0	0	1	1	0	94	24	1	119	6	27	9	0	42	24	57	0	1	82	244
Total	0	0	0	7	7	0	408	115	11	534	19	61	30	0	110	104	253	0	2	359	1010
Grand Total	0	0	0	22	22	0	994	301	39	1334	45	175	69	2	291	276	771	0	6	1053	2700
Apprch %	0	0	0	100		0	74.5	22.6	2.9		15.5	60.1	23.7	0.7		26.2	73.2	0	0.6		
Total %	0	0	0	0.8	0.8	0	36.8	11.1	1.4	49.4	1.7	6.5	2.6	0.1	10.8	10.2	28.6	0	0.2	39	

	Market Street Southbound					Main Street Westbound					Market Street Northbound					Main Street 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 06:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	0	0	**4**	**4**	0	101	27	3	131	**6**	**34**	**9**	0	**49**	20	84	0	0	104	288
07:30 AM	0	0	0	1	1	0	95	**41**	2	138	6	22	7	0	35	**42**	**105**	0	0	**147**	**321**
07:45 AM	0	0	0	1	1	0	106	33	2	141	3	23	7	0	33	35	96	0	0	131	306
08:00 AM	0	0	0	2	2	0	**122**	37	**4**	**163**	3	8	3	0	14	26	64	0	0	90	269
Total Volume	0	0	0	8	8	0	424	138	11	573	18	87	26	0	131	123	349	0	0	472	1184
% App. Total	0	0	0	100		0	74	24.1	1.9		13.7	66.4	19.8	0		26.1	73.9	0	0		
PHF	.000	.000	.000	.500	.500	.000	.869	.841	.688	.879	.750	.640	.722	.000	.668	.732	.831	.000	.000	.803	.922

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-5671, D4-5672
Counted By:ML, MD
Weather:Clear

File Name : MarMai PM
Site Code : 00000001
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Market Street Southbound					Main Street Westbound					Market Street Northbound					Main Street 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
03:00 PM	0	0	0	0	0	0	116	38	3	157	7	23	8	0	38	24	74	0	0	98	293
03:15 PM	0	0	0	6	6	0	120	27	2	149	6	21	3	0	30	25	80	0	0	105	290
03:30 PM	0	0	0	3	3	0	120	40	6	166	8	16	9	0	33	26	63	0	0	89	291
03:45 PM	0	0	0	7	7	0	119	38	0	157	6	22	5	0	33	27	83	0	0	110	307
Total	0	0	0	16	16	0	475	143	11	629	27	82	25	0	134	102	300	0	0	402	1181
04:00 PM	0	0	0	0	0	0	120	30	2	152	6	23	12	0	41	38	98	0	0	136	329
04:15 PM	0	0	0	2	2	0	112	29	9	150	6	34	13	0	53	32	119	0	0	151	356
04:30 PM	0	0	0	2	2	0	121	33	1	155	8	28	42	0	78	33	110	0	0	143	378
04:45 PM	0	0	0	1	1	0	109	25	3	137	4	19	13	0	36	24	94	0	0	118	292
Total	0	0	0	5	5	0	462	117	15	594	24	104	80	0	208	127	421	0	0	548	1355
05:00 PM	0	0	0	3	3	0	105	31	4	140	3	20	2	0	25	22	100	0	0	122	290
05:15 PM	0	0	0	1	1	0	85	29	5	119	6	12	8	0	26	32	85	0	0	117	263
05:30 PM	0	0	0	3	3	0	91	34	5	130	1	7	9	0	17	27	65	0	0	92	242
05:45 PM	0	0	0	2	2	0	91	29	6	126	2	19	6	0	27	26	81	0	0	107	262
Total	0	0	0	9	9	0	372	123	20	515	12	58	25	0	95	107	331	0	0	438	1057
Grand Total	0	0	0	30	30	0	1309	383	46	1738	63	244	130	0	437	336	1052	0	0	1388	3593
Apprch %	0	0	0	100		0	75.3	22	2.6		14.4	55.8	29.7	0		24.2	75.8	0	0		
Total %	0	0	0	0.8	0.8	0	36.4	10.7	1.3	48.4	1.8	6.8	3.6	0	12.2	9.4	29.3	0	0	38.6	

	Market Street Southbound					Main Street Westbound					Market Street Northbound					Main Street 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 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	**7**	**7**	0	119	**38**	0	**157**	6	22	5	0	33	27	83	0	0	110	307
04:00 PM	0	0	0	0	0	0	120	30	2	152	6	23	12	0	41	**38**	98	0	0	136	329
04:15 PM	0	0	0	2	2	0	112	29	**9**	150	6	**34**	13	0	53	32	**119**	0	0	**151**	356
04:30 PM	0	0	0	2	2	0	**121**	33	1	155	**8**	28	**42**	0	**78**	33	110	0	0	143	**378**
Total Volume	0	0	0	11	11	0	472	130	12	614	26	107	72	0	205	130	410	0	0	540	1370
% App. Total	0	0	0	100		0	76.9	21.2	2		12.7	52.2	35.1	0		24.1	75.9	0	0		
PHF	.000	.000	.000	.393	.393	.000	.975	.855	.333	.978	.813	.787	.429	.000	.657	.855	.861	.000	.000	.894	.906

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:T-1841
Counted By:MC
Weather:Clear

File Name : MarPil AM
Site Code : 00000002
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Market Street Southbound					Westboun d	Market Street Northbound					Pili Street (Parking Lot Driveway) Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	1	1	0	0	23	0	0	23	0	0	0	0	0	24
06:15 AM	0	0	0	1	1	0	3	21	0	2	26	4	0	0	6	10	37
06:30 AM	0	0	0	2	2	0	3	30	0	0	33	0	0	0	5	5	40
06:45 AM	0	0	0	9	9	0	7	50	0	0	57	0	0	0	5	5	71
Total	0	0	0	13	13	0	13	124	0	2	139	4	0	0	16	20	172
07:00 AM	0	0	0	10	10	0	10	58	0	2	70	0	0	0	1	1	81
07:15 AM	0	0	0	1	1	0	25	67	0	0	92	0	0	0	1	1	94
07:30 AM	0	0	0	3	3	0	20	93	0	0	113	3	0	0	7	10	126
07:45 AM	0	0	0	1	1	0	10	84	0	0	94	2	0	0	6	8	103
Total	0	0	0	15	15	0	65	302	0	2	369	5	0	0	15	20	404
08:00 AM	0	0	0	3	3	0	5	67	0	0	72	0	0	0	9	9	84
08:15 AM	0	0	0	2	2	0	10	45	0	0	55	2	0	0	5	7	64
08:30 AM	0	0	0	3	3	0	10	67	0	0	77	4	0	0	6	10	90
08:45 AM	0	0	0	5	5	0	11	69	0	0	80	2	0	0	6	8	93
Total	0	0	0	13	13	0	36	248	0	0	284	8	0	0	26	34	331
Grand Total	0	0	0	41	41	0	114	674	0	4	792	17	0	0	57	74	907
Apprch %	0	0	0	100			14.4	85.1	0	0.5		23	0	0	77		
Total %	0	0	0	4.5	4.5	0	12.6	74.3	0	0.4	87.3	1.9	0	0	6.3	8.2	

	Market Street Southbound					Westboun d	Market Street Northbound					Pili Street (Parking Lot Driveway) Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	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 07:15 AM																	
07:15 AM	0	0	0	**1**	1	0	**25**	67	0	0	92	0	0	0	1	1	94
07:30 AM	0	0	0	**3**	**3**	0	20	**93**	0	0	**113**	**3**	0	0	7	**10**	**126**
07:45 AM	0	0	0	1	1	0	10	84	0	0	94	2	0	0	6	8	103
08:00 AM	0	0	0	3	3	0	5	67	0	0	72	0	0	0	**9**	9	84
Total Volume	0	0	0	8	8	0	60	311	0	0	371	5	0	0	23	28	407
% App. Total	0	0	0	100			16.2	83.8	0	0		17.9	0	0	82.1		
PHF	.000	.000	.000	.667	.667	.000	.600	.836	.000	.000	.821	.417	.000	.000	.639	.700	.808

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:T-1841
Counted By:MC
Weather:Clear

File Name : MarPil PM
Site Code : 00000002
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Market Street Southbound					Westbound	Market Street Northbound					Pili Street (Parking Lot Driveway) Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	10	10	0	18	74	0	0	92	7	0	0	7	14	116
03:15 PM	0	0	0	14	14	0	8	75	0	0	83	1	0	0	17	18	115
03:30 PM	0	0	0	18	18	0	11	88	0	0	99	6	0	0	12	18	135
03:45 PM	0	0	0	6	6	0	9	86	0	0	95	7	0	0	8	15	116
Total	0	0	0	48	48	0	46	323	0	0	369	21	0	0	44	65	482
04:00 PM	0	0	0	10	10	0	3	90	0	0	93	8	0	0	3	11	114
04:15 PM	0	0	0	10	10	0	2	101	0	0	103	6	0	0	7	13	126
04:30 PM	0	0	0	9	9	0	3	92	0	0	95	7	0	0	12	19	123
04:45 PM	0	0	0	1	1	0	4	69	0	0	73	6	0	0	3	9	83
Total	0	0	0	30	30	0	12	352	0	0	364	27	0	0	25	52	446
05:00 PM	0	0	0	4	4	0	2	70	0	0	72	0	0	0	3	3	79
05:15 PM	0	0	0	3	3	0	4	73	0	0	77	1	0	0	4	5	85
05:30 PM	0	0	0	7	7	0	4	63	0	0	67	1	0	0	10	11	85
05:45 PM	0	0	0	13	13	0	7	69	0	0	76	0	0	0	6	6	95
Total	0	0	0	27	27	0	17	275	0	0	292	2	0	0	23	25	344
Grand Total	0	0	0	105	105	0	75	950	0	0	1025	50	0	0	92	142	1272
Apprch %	0	0	0	100			7.3	92.7	0	0		35.2	0	0	64.8		
Total %	0	0	0	8.3	8.3	0	5.9	74.7	0	0	80.6	3.9	0	0	7.2	11.2	

	Market Street Southbound					Westbound	Market Street Northbound					Pili Street (Parking Lot Driveway) Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	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 03:30 PM																	
03:30 PM	0	0	0	**18**	**18**	0	**11**	88	0	0	99	6	0	0	**12**	**18**	**135**
03:45 PM	0	0	0	6	6	0	9	86	0	0	95	7	0	0	8	15	116
04:00 PM	0	0	0	10	10	0	3	90	0	0	93	**8**	0	0	3	11	114
04:15 PM	0	0	0	10	10	0	2	**101**	0	0	**103**	6	0	0	7	13	126
Total Volume	0	0	0	44	44	0	25	365	0	0	390	27	0	0	30	57	491
% App. Total	0	0	0	100			6.4	93.6	0	0		47.4	0	0	52.6		
PHF	.000	.000	.000	.611	.611	.000	.568	.903	.000	.000	.947	.844	.000	.000	.625	.792	.909

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-5674, D4-5673
Counted By:JK, LM
Weather:Clear

File Name : MarMil AM
Site Code : 00000005
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Market Street Southbound					Mill Street Westbound					Market Street Northbound					Eastbound	
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total
06:00 AM	39	37	0	0	76	2	0	11	1	14	0	59	25	0	84	0	174
06:15 AM	49	39	0	0	88	1	0	14	0	15	0	55	60	1	116	0	219
06:30 AM	72	77	0	0	149	5	0	10	0	15	0	98	82	2	182	0	346
06:45 AM	78	81	0	1	160	7	0	21	0	28	0	125	80	0	205	0	393
Total	238	234	0	1	473	15	0	56	1	72	0	337	247	3	587	0	1132
07:00 AM	59	115	0	0	174	9	0	33	0	42	0	142	74	1	217	0	433
07:15 AM	100	117	0	1	218	7	0	23	0	30	0	138	117	0	255	0	503
07:30 AM	115	94	0	0	209	6	0	42	0	48	0	148	122	0	270	0	527
07:45 AM	105	83	0	0	188	8	0	41	0	49	0	127	134	2	263	0	500
Total	379	409	0	1	789	30	0	139	0	169	0	555	447	3	1005	0	1963
08:00 AM	51	61	0	1	113	14	0	32	0	46	0	88	64	1	153	0	312
08:15 AM	44	54	0	0	98	11	0	24	0	35	0	54	34	0	88	0	221
08:30 AM	46	55	0	0	101	8	0	22	0	30	0	42	23	0	65	0	196
08:45 AM	40	46	0	1	87	11	0	27	1	39	0	20	36	1	57	0	183
Total	181	216	0	2	399	44	0	105	1	150	0	204	157	2	363	0	912
Grand Total	798	859	0	4	1661	89	0	300	2	391	0	1096	851	8	1955	0	4007
Apprch %	48	51.7	0	0.2		22.8	0	76.7	0.5		0	56.1	43.5	0.4			
Total %	19.9	21.4	0	0.1	41.5	2.2	0	7.5	0	9.8	0	27.4	21.2	0.2	48.8	0	

	Market Street Southbound					Mill Street Westbound					Market Street Northbound					Eastbound	
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	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 07:00 AM																	
07:00 AM	59	115	0	0	174	**9**	0	33	0	42	0	142	74	1	217	0	433
07:15 AM	100	**117**	0	**1**	**218**	7	0	23	0	30	0	138	117	0	255	0	503
07:30 AM	**115**	94	0	0	209	6	0	**42**	0	48	0	**148**	122	0	**270**	0	**527**
07:45 AM	105	83	0	0	188	8	0	41	0	**49**	0	127	**134**	**2**	263	0	500
Total Volume	379	409	0	1	789	30	0	139	0	169	0	555	447	3	1005	0	1963
% App. Total	48	51.8	0	0.1		17.8	0	82.2	0		0	55.2	44.5	0.3			
PHF	.824	.874	.000	.250	.905	.833	.000	.827	.000	.862	.000	.938	.834	.375	.931	.000	.931

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-5674, D4-5673
Counted By:JK, LM
Weather:Clear

File Name : MarMil PM
Site Code : 00000004
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Market Street Southbound					Mill Street Westbound					Market Street Northbound					Eastbound	
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total
03:00 PM	34	45	0	1	80	21	0	48	1	70	0	56	46	1	103	0	253
03:15 PM	41	32	0	0	73	16	0	43	0	59	0	55	39	0	94	0	226
03:30 PM	35	57	0	0	92	18	0	42	0	60	0	70	38	1	109	0	261
03:45 PM	48	55	0	0	103	13	0	57	0	70	0	103	39	3	145	0	318
Total	158	189	0	1	348	68	0	190	1	259	0	284	162	5	451	0	1058
04:00 PM	47	59	0	1	107	10	0	50	0	60	0	107	35	2	144	0	311
04:15 PM	34	56	0	0	90	15	0	64	0	79	0	121	45	0	166	0	335
04:30 PM	57	52	0	0	109	12	0	58	1	71	0	129	42	2	173	0	353
04:45 PM	65	53	0	1	119	12	0	57	0	69	0	74	38	0	112	0	300
Total	203	220	0	2	425	49	0	229	1	279	0	431	160	4	595	0	1299
05:00 PM	47	40	0	0	87	11	0	58	2	71	0	88	26	0	114	0	272
05:15 PM	31	36	0	1	68	6	0	43	0	49	0	68	24	1	93	0	210
05:30 PM	45	52	0	0	97	10	0	39	0	49	0	63	24	4	91	0	237
05:45 PM	47	41	0	0	88	14	0	49	0	63	0	68	15	0	83	0	234
Total	170	169	0	1	340	41	0	189	2	232	0	287	89	5	381	0	953
Grand Total	531	578	0	4	1113	158	0	608	4	770	0	1002	411	14	1427	0	3310
Apprch %	47.7	51.9	0	0.4		20.5	0	79	0.5		0	70.2	28.8	1			
Total %	16	17.5	0	0.1	33.6	4.8	0	18.4	0.1	23.3	0	30.3	12.4	0.4	43.1	0	

	Market Street Southbound					Mill Street Westbound					Market Street Northbound					Eastbound	
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	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	48	55	0	0	103	13	0	57	0	70	0	103	39	**3**	145	0	318
04:00 PM	47	**59**	0	**1**	107	10	0	50	0	60	0	107	35	2	144	0	311
04:15 PM	34	56	0	0	90	**15**	0	**64**	0	**79**	0	121	**45**	0	166	0	335
04:30 PM	**57**	52	0	0	**109**	12	0	58	**1**	71	0	**129**	42	2	**173**	0	**353**
Total Volume	186	222	0	1	409	50	0	229	1	280	0	460	161	7	628	0	1317
% App. Total	45.5	54.3	0	0.2		17.9	0	81.8	0.4		0	73.2	25.6	1.1			
PHF	.816	.941	.000	.250	.938	.833	.000	.895	.250	.886	.000	.891	.894	.583	.908	.000	.933

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-5676, D4-3889
Counted By:JS, AT
Weather:Clear

File Name : MarVin AM
Site Code : 00000003
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Market Street Southbound					Vineyard Street Westbound					Market Street Northbound					Vineyard Street 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
06:00 AM	1	0	39	0	40	3	6	1	0	10	0	6	0	0	6	3	0	0	1	4	60
06:15 AM	1	0	37	0	38	0	7	4	0	11	8	12	2	0	22	8	3	0	4	15	86
06:30 AM	8	0	73	0	81	0	8	5	0	13	1	27	4	0	32	6	2	0	3	11	137
06:45 AM	6	0	75	2	83	0	15	1	1	17	3	41	2	1	47	21	9	0	6	36	183
Total	16	0	224	2	242	3	36	11	1	51	12	86	8	1	107	38	14	0	14	66	466
07:00 AM	6	0	120	0	126	0	11	5	0	16	2	42	5	1	50	25	5	0	11	41	233
07:15 AM	8	0	117	1	126	0	32	5	3	40	9	46	4	3	62	44	12	0	4	60	288
07:30 AM	11	0	89	0	100	0	40	15	1	56	7	70	6	1	84	36	20	0	4	60	300
07:45 AM	13	0	83	4	100	0	44	16	1	61	9	63	12	1	85	44	26	0	2	72	318
Total	38	0	409	5	452	0	127	41	5	173	27	221	27	6	281	149	63	0	21	233	1139
08:00 AM	14	0	64	2	80	0	39	9	0	48	21	38	17	1	77	47	25	0	6	78	283
08:15 AM	8	0	56	1	65	0	29	7	4	40	5	25	10	0	40	44	19	0	0	63	208
08:30 AM	5	0	56	1	62	0	23	10	2	35	10	41	25	0	76	31	23	0	2	56	229
08:45 AM	2	0	55	0	57	0	27	13	5	45	22	30	21	1	74	26	33	0	5	64	240
Total	29	0	231	4	264	0	118	39	11	168	58	134	73	2	267	148	100	0	13	261	960
Grand Total	83	0	864	11	958	3	281	91	17	392	97	441	108	9	655	335	177	0	48	560	2565
Apprch %	8.7	0	90.2	1.1		0.8	71.7	23.2	4.3		14.8	67.3	16.5	1.4		59.8	31.6	0	8.6		
Total %	3.2	0	33.7	0.4	37.3	0.1	11	3.5	0.7	15.3	3.8	17.2	4.2	0.4	25.5	13.1	6.9	0	1.9	21.8	

	Market Street Southbound					Vineyard Street Westbound					Market Street Northbound					Vineyard Street 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 06:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	8	0	**117**	1	**126**	0	32	5	**3**	40	9	46	4	**3**	62	44	12	0	4	60	288
07:30 AM	11	0	89	0	100	0	40	15	1	56	7	**70**	6	1	84	36	20	0	4	60	300
07:45 AM	13	0	83	**4**	100	0	**44**	**16**	1	**61**	9	63	12	1	**85**	44	**26**	0	2	72	**318**
08:00 AM	**14**	0	64	2	80	0	39	9	0	48	**21**	38	**17**	**1**	77	**47**	25	0	**6**	**78**	283
Total Volume	46	0	353	7	406	0	155	45	5	205	46	217	39	6	308	**171**	83	0	16	270	1189
% App. Total	11.3	0	86.9	1.7		0	75.6	22	2.4		14.9	70.5	12.7	1.9		63.3	30.7	0	5.9		
PHF	.821	.000	.754	.438	.806	.000	.881	.703	.417	.840	.548	.775	.574	.500	.906	.910	.798	.000	.667	.865	.935

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter: D4-5676, D4-3889
Counted By:JS, AT
Weather:Clear

File Name : MarVin PM
Site Code : 00000003
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Market Street Southbound					Vineyard Street Westbound					Market Street Northbound					Vineyard Street 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
03:00 PM	6	0	63	4	73	0	21	10	2	33	8	50	10	2	70	45	38	0	2	85	261
03:15 PM	5	0	44	1	50	0	21	12	0	33	8	53	16	1	78	43	36	0	6	85	246
03:30 PM	11	0	68	1	80	0	31	24	3	58	8	53	22	5	88	61	47	0	10	118	344
03:45 PM	9	0	71	0	80	0	22	9	2	33	13	64	14	1	92	74	31	0	2	107	312
Total	31	0	246	6	283	0	95	55	7	157	37	220	62	9	328	223	152	0	20	395	1163
04:00 PM	13	0	66	6	85	0	29	14	6	49	14	64	24	1	103	64	56	0	7	127	364
04:15 PM	16	0	57	7	80	0	25	17	0	42	8	79	14	1	102	72	29	0	7	108	332
04:30 PM	11	0	58	1	70	0	20	20	0	40	4	80	18	2	104	74	59	0	6	139	353
04:45 PM	8	0	53	6	67	0	9	7	6	22	9	48	12	3	72	58	28	0	2	88	249
Total	48	0	234	20	302	0	83	58	12	153	35	271	68	7	381	268	172	0	22	462	1298
05:00 PM	19	0	54	2	75	0	15	18	1	34	9	56	10	3	78	66	25	0	4	95	282
05:15 PM	4	0	47	1	52	0	16	14	2	32	11	48	4	0	63	45	18	0	1	64	211
05:30 PM	13	0	50	0	63	0	18	8	0	26	9	50	7	4	70	50	14	0	9	73	232
05:45 PM	8	0	60	1	69	0	10	12	0	22	4	57	14	2	77	30	15	0	7	52	220
Total	44	0	211	4	259	0	59	52	3	114	33	211	35	9	288	191	72	0	21	284	945
Grand Total	123	0	691	30	844	0	237	165	22	424	105	702	165	25	997	682	396	0	63	1141	3406
Apprch %	14.6	0	81.9	3.6		0	55.9	38.9	5.2		10.5	70.4	16.5	2.5		59.8	34.7	0	5.5		
Total %	3.6	0	20.3	0.9	24.8	0	7	4.8	0.6	12.4	3.1	20.6	4.8	0.7	29.3	20	11.6	0	1.8	33.5	

	Market Street Southbound					Vineyard Street Westbound					Market Street Northbound					Vineyard Street 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 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:45 PM																					
03:45 PM	9	0	**71**	0	80	0	22	9	2	33	13	64	14	1	92	**74**	31	0	2	107	312
04:00 PM	13	0	66	6	**85**	0	**29**	14	**6**	**49**	**14**	64	**24**	1	103	64	56	0	**7**	127	**364**
04:15 PM	**16**	0	57	**7**	80	0	25	17	0	42	8	79	14	1	102	72	29	0	7	108	332
04:30 PM	11	0	58	1	70	0	20	**20**	0	40	4	**80**	18	**2**	**104**	74	**59**	0	6	**139**	353
Total Volume	49	0	252	14	315	0	96	60	8	164	39	287	70	5	401	284	175	0	22	481	1361
% App. Total	15.6	0	80	4.4		0	58.5	36.6	4.9		9.7	71.6	17.5	1.2		59	36.4	0	4.6		
PHF	.766	.000	.887	.500	.926	.000	.828	.750	.333	.837	.696	.897	.729	.625	.964	.959	.742	.000	.786	.865	.935

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-3891
Counted By:KW
Weather:Clear

File Name : VinPkgEnt AM
Site Code : 00000008
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Southbound	Vineyard Street Westbound					Parking Lot Driveway At Vineyard Northbound					Vineyard Street Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	45	0	0	45	0	0	0	0	0	0	6	0	0	6	51
06:15 AM	0	1	49	0	0	50	0	0	0	0	0	0	9	4	0	13	63
06:30 AM	0	4	78	0	0	82	0	0	1	0	1	0	7	4	0	11	94
06:45 AM	0	1	96	0	0	97	1	0	0	0	1	0	32	3	0	35	133
Total	0	6	268	0	0	274	1	0	1	0	2	0	54	11	0	65	341
07:00 AM	0	10	119	0	0	129	1	0	1	0	2	0	25	5	0	30	161
07:15 AM	0	16	151	0	0	167	1	0	5	0	6	0	51	5	0	56	229
07:30 AM	0	16	127	0	0	143	2	0	6	0	8	0	51	21	0	72	223
07:45 AM	0	8	109	0	0	117	2	0	5	0	7	0	60	5	0	65	189
Total	0	50	506	0	0	556	6	0	17	0	23	0	187	36	0	223	802
08:00 AM	0	10	105	0	0	115	2	0	5	0	7	0	58	5	0	63	185
08:15 AM	0	12	71	0	0	83	3	0	5	0	8	0	38	3	0	41	132
08:30 AM	0	15	77	0	0	92	4	0	5	0	9	0	50	4	0	54	155
08:45 AM	0	15	78	0	0	93	5	0	8	0	13	0	49	4	0	53	159
Total	0	52	331	0	0	383	14	0	23	0	37	0	195	16	0	211	631
Grand Total	0	108	1105	0	0	1213	21	0	41	0	62	0	436	63	0	499	1774
Apprch %		8.9	91.1	0	0		33.9	0	66.1	0		0	87.4	12.6	0		
Total %	0	6.1	62.3	0	0	68.4	1.2	0	2.3	0	3.5	0	24.6	3.6	0	28.1	

	Southbound	Vineyard Street Westbound					Parking Lot Driveway At Vineyard Northbound					Vineyard Street Eastbound					
Start Time	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 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**16**	**151**	0	0	**167**	**1**	0	5	0	6	0	51	5	0	56	**229**
07:30 AM	0	16	127	0	0	143	**2**	0	**6**	0	**8**	0	51	**21**	0	**72**	223
07:45 AM	0	8	109	0	0	117	2	0	5	0	7	0	**60**	5	0	65	189
08:00 AM	0	10	105	0	0	115	2	0	5	0	7	0	58	5	0	63	185
Total Volume	0	50	492	0	0	542	7	0	21	0	28	0	220	36	0	256	826
% App. Total		9.2	90.8	0	0		25	0	75	0		0	85.9	14.1	0		
PHF	.000	.781	.815	.000	.000	.811	.875	.000	.875	.000	.875	.000	.917	.429	.000	.889	.902

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-3891
Counted By:KW
Weather:Clear

File Name : VinPkgEnt PM
Site Code : 00000008
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Southbound	Vineyard Street Westbound					Parking Lot Driveway Northbound					Vineyard Street Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	10	77	0	0	87	4	0	23	0	27	0	65	7	0	72	186
03:15 PM	0	11	65	0	0	76	4	0	15	0	19	0	61	7	0	68	163
03:30 PM	0	16	83	0	0	99	5	0	16	0	21	0	74	10	0	84	204
03:45 PM	0	8	85	0	0	93	6	0	10	0	16	0	87	3	0	90	199
Total	0	45	310	0	0	355	19	0	64	0	83	0	287	27	0	314	752
04:00 PM	0	8	94	0	0	102	8	0	16	0	24	0	106	5	0	111	237
04:15 PM	0	8	84	0	0	92	4	0	21	0	25	0	74	1	0	75	192
04:30 PM	0	9	79	0	0	88	7	0	35	0	42	0	83	2	0	85	215
04:45 PM	0	6	70	0	0	76	1	0	16	0	17	0	67	8	0	75	168
Total	0	31	327	0	0	358	20	0	88	0	108	0	330	16	0	346	812
05:00 PM	0	5	57	0	0	62	1	0	7	0	8	0	69	2	0	71	141
05:15 PM	0	7	64	0	0	71	3	0	4	0	7	0	60	2	0	62	140
05:30 PM	0	12	67	0	0	79	0	0	5	0	5	0	55	1	0	56	140
05:45 PM	0	9	60	0	0	69	1	0	3	0	4	0	37	1	0	38	111
Total	0	33	248	0	0	281	5	0	19	0	24	0	221	6	0	227	532
Grand Total	0	109	885	0	0	994	44	0	171	0	215	0	838	49	0	887	2096
Apprch %		11	89	0	0		20.5	0	79.5	0		0	94.5	5.5	0		
Total %	0	5.2	42.2	0	0	47.4	2.1	0	8.2	0	10.3	0	40	2.3	0	42.3	

	Southbound	Vineyard Street Westbound					Parking Lot Driveway Northbound					Vineyard Street Eastbound					
Start Time	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 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	8	85	0	0	93	6	0	10	0	16	0	87	3	0	90	199
04:00 PM	0	8	**94**	0	0	**102**	**8**	0	16	0	24	0	**106**	**5**	0	**111**	**237**
04:15 PM	0	8	84	0	0	92	4	0	21	0	25	0	74	1	0	75	192
04:30 PM	0	**9**	79	0	0	88	7	0	**35**	0	**42**	0	83	2	0	85	215
Total Volume	0	33	342	0	0	375	25	0	82	0	107	0	350	11	0	361	843
% App. Total		8.8	91.2	0	0		23.4	0	76.6	0		0	97	3	0		
PHF	.000	.917	.910	.000	.000	.919	.781	.000	.586	.000	.637	.000	.825	.550	.000	.813	.889

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-3888, D4-3890
Counted By:CM, JP
Weather:Clear

File Name : ChuVin AM
Site Code : 00000005
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Church Street Southbound					Vineyard Street Westbound					Church Street Northbound					Vineyard Street 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
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0	0	6	6
06:15 AM	6	1	0	0	7	25	12	0	0	37	0	0	0	0	0	1	12	2	0	15	59
06:30 AM	0	0	0	0	0	37	31	0	2	70	0	0	0	0	0	1	11	2	1	15	85
06:45 AM	1	1	0	0	2	28	59	0	1	88	0	0	0	1	1	1	26	8	0	35	126
Total	7	2	0	0	9	90	102	0	3	195	0	0	0	1	1	4	54	12	1	71	276
07:00 AM	2	6	0	1	9	47	70	2	2	121	0	0	0	0	0	1	31	7	1	40	170
07:15 AM	4	2	0	2	8	54	72	4	2	132	0	0	0	0	0	0	47	8	0	55	195
07:30 AM	1	3	0	7	11	59	75	2	3	139	0	0	0	4	4	1	64	8	0	73	227
07:45 AM	3	3	0	0	6	46	71	1	1	119	0	0	0	0	0	1	45	7	0	53	178
Total	10	14	0	10	34	206	288	9	8	511	0	0	0	4	4	3	187	30	1	221	770
08:00 AM	1	3	0	1	5	36	62	6	0	104	0	0	0	0	0	1	35	13	0	49	158
08:15 AM	0	3	0	0	3	28	34	2	0	64	0	0	0	8	8	1	35	4	2	42	117
08:30 AM	1	2	2	0	5	35	43	3	1	82	0	0	0	2	2	1	44	9	0	54	143
08:45 AM	0	0	0	0	0	25	42	2	2	71	0	0	0	1	1	1	35	14	0	50	122
Total	2	8	2	1	13	124	181	13	3	321	0	0	0	11	11	4	149	40	2	195	540
09:00 AM	0	0	0	1	1	20	16	3	0	39	0	0	0	0	0	0	0	0	0	0	40
Grand Total	19	24	2	12	57	440	587	25	14	1066	0	0	0	16	16	11	390	82	4	487	1626
Apprch %	33.3	42.1	3.5	21.1		41.3	55.1	2.3	1.3		0	0	0	100		2.3	80.1	16.8	0.8		
Total %	1.2	1.5	0.1	0.7	3.5	27.1	36.1	1.5	0.9	65.6	0	0	0	1	1	0.7	24	5	0.2	30	

	Church Street Southbound					Vineyard Street Westbound					Church Street Northbound					Vineyard Street 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 06:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	2	**6**	0	1	9	47	70	2	2	121	0	0	0	0	0	**1**	31	7	**1**	40	170
07:15 AM	**4**	2	0	2	8	54	72	**4**	2	132	0	0	0	0	0	0	47	**8**	0	55	195
07:30 AM	1	3	0	**7**	**11**	**59**	**75**	2	**3**	**139**	0	0	0	**4**	**4**	1	**64**	8	0	**73**	**227**
07:45 AM	3	3	0	0	6	46	71	1	1	119	0	0	0	0	0	1	45	7	0	53	178
Total Volume	10	14	0	10	34	206	288	9	8	511	0	0	0	4	4	3	187	30	1	221	770
% App. Total	29.4	41.2	0	29.4		40.3	56.4	1.8	1.6		0	0	0	100		1.4	84.6	13.6	0.5		
PHF	.625	.583	.000	.357	.773	.873	.960	.563	.667	.919	.000	.000	.000	.250	.250	.750	.730	.938	.250	.757	.848

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-3888, D4-3890
Counted By:JN, CM
Weather:Clear

File Name : ChuVin PM
Site Code : 00000005
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Church Street Southbound					Vineyard Street Westbound					Church Street Northbound					Vineyard Street 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
03:00 PM	1	1	0	0	2	25	60	0	5	90	0	0	0	4	4	0	63	14	3	80	176
03:15 PM	2	0	0	1	3	22	39	1	2	64	0	0	0	5	5	3	67	8	0	78	150
03:30 PM	1	1	0	0	2	23	61	2	3	89	0	0	0	2	2	1	85	6	1	93	186
03:45 PM	0	1	0	2	3	30	64	1	2	97	0	0	0	6	6	0	90	18	0	108	214
Total	4	3	0	3	10	100	224	4	12	340	0	0	0	17	17	4	305	46	4	359	726
04:00 PM	0	1	1	3	5	39	64	0	1	104	0	0	0	6	6	2	113	20	2	137	252
04:15 PM	0	3	1	2	6	17	62	4	1	84	0	0	0	3	3	0	73	7	2	82	175
04:30 PM	3	4	0	0	7	21	56	2	4	83	0	0	0	4	4	1	81	10	2	94	188
04:45 PM	0	5	1	0	6	22	51	5	0	78	0	0	0	2	2	2	69	6	0	77	163
Total	3	13	3	5	24	99	233	11	6	349	0	0	0	15	15	5	336	43	6	390	778
05:00 PM	1	1	0	0	2	19	38	2	2	61	0	0	0	5	5	0	70	5	0	75	143
05:15 PM	2	0	0	0	2	16	50	2	0	68	0	0	0	2	2	1	60	4	0	65	137
05:30 PM	0	4	0	1	5	27	43	2	4	76	0	0	0	5	5	1	52	6	1	60	146
05:45 PM	2	0	1	1	4	14	37	1	2	54	0	0	0	3	3	1	33	2	3	39	100
Total	5	5	1	2	13	76	168	7	8	259	0	0	0	15	15	3	215	17	4	239	526
Grand Total	12	21	4	10	47	275	625	22	26	948	0	0	0	47	47	12	856	106	14	988	2030
Apprch %	25.5	44.7	8.5	21.3		29	65.9	2.3	2.7		0	0	0	100		1.2	86.6	10.7	1.4		
Total %	0.6	1	0.2	0.5	2.3	13.5	30.8	1.1	1.3	46.7	0	0	0	2.3	2.3	0.6	42.2	5.2	0.7	48.7	

	Church Street Southbound					Vineyard Street Westbound					Church Street Northbound					Vineyard Street 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 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	1	0	2	3	30	**64**	1	2	97	0	0	0	**6**	**6**	0	90	18	0	108	214
04:00 PM	0	**1**	**1**	**3**	5	**39**	64	0	1	**104**	0	0	0	6	6	**2**	**113**	**20**	**2**	**137**	**252**
04:15 PM	0	3	1	2	6	17	62	**4**	1	84	0	0	0	3	3	0	73	7	2	82	175
04:30 PM	**3**	**4**	0	0	**7**	21	56	2	**4**	83	0	0	0	4	4	1	81	10	2	94	188
Total Volume	3	9	2	7	21	107	246	7	8	368	0	0	0	19	19	3	357	55	6	421	829
% App. Total	14.3	42.9	9.5	33.3		29.1	66.8	1.9	2.2		0	0	0	100		0.7	84.8	13.1	1.4		
PHF	.250	.563	.500	.583	.750	.686	.961	.438	.500	.885	.000	.000	.000	.792	.792	.375	.790	.688	.750	.768	.822

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:T-1839
Counted By:IA
Weather:Clear

File Name : ChuPili AM
Site Code : 00000006
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Church Street Southbound					Pili Street (Parking Lot Driveway) Westbound					Northbound	Eastbound	
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	App. Total	Int. Total
06:00 AM	1	22	0	0	23	3	0	0	1	4	0	0	27
06:15 AM	0	32	0	3	35	2	0	0	4	6	0	0	41
06:30 AM	0	38	0	0	38	1	0	0	2	3	0	0	41
06:45 AM	0	40	0	0	40	0	0	0	0	0	0	0	40
Total	1	132	0	3	136	6	0	0	7	13	0	0	149
07:00 AM	4	57	0	3	64	3	0	0	0	3	0	0	67
07:15 AM	0	63	0	14	77	1	0	0	1	2	0	0	79
07:30 AM	1	67	0	21	89	4	0	0	3	7	0	0	96
07:45 AM	0	54	0	4	58	3	0	0	0	3	0	0	61
Total	5	241	0	42	288	11	0	0	4	15	0	0	303
08:00 AM	0	44	0	4	48	5	0	0	2	7	0	0	55
08:15 AM	2	36	0	7	45	1	0	0	1	2	0	0	47
08:30 AM	0	36	0	2	38	6	0	0	2	8	0	0	46
08:45 AM	1	42	0	5	48	5	0	0	8	13	0	0	61
Total	3	158	0	18	179	17	0	0	13	30	0	0	209
Grand Total	9	531	0	63	603	34	0	0	24	58	0	0	661
Apprch %	1.5	88.1	0	10.4		58.6	0	0	41.4				
Total %	1.4	80.3	0	9.5	91.2	5.1	0	0	3.6	8.8	0	0	

	Church Street Southbound					Pili Street (Parking Lot Driveway) Westbound					Northbound	Eastbound	
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	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 07:00 AM													
07:00 AM	**4**	57	0	3	64	3	0	0	0	3	**0**	0	67
07:15 AM	0	63	0	14	77	1	0	0	**1**	2	0	0	79
07:30 AM	1	**67**	0	**21**	**89**	**4**	0	0	**3**	**7**	0	0	**96**
07:45 AM	0	54	0	4	58	3	0	0	0	3	0	0	61
Total Volume	5	241	0	42	288	11	0	0	4	15	0	0	303
% App. Total	1.7	83.7	0	14.6		73.3	0	0	26.7				
PHF	.313	.899	.000	.500	.809	.688	.000	.000	.333	.536	.000	.000	.789

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:T-1839
Counted: IA
Weather:Clear

File Name : ChuPili PM
Site Code : 00000006
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Church Street Southbound					Pili Street (Parking Lot Driveway) Westbound					Northbound	Eastbound	
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	App. Total	Int. Total
03:00 PM	1	37	0	7	45	9	0	0	10	19	0	0	64
03:15 PM	2	39	0	4	45	5	0	1	5	11	0	0	56
03:30 PM	2	30	0	7	39	13	0	0	9	22	0	0	61
03:45 PM	2	45	0	3	50	11	0	0	3	14	0	0	64
Total	7	151	0	21	179	38	0	1	27	66	0	0	245
04:00 PM	1	59	0	2	62	7	0	0	7	14	0	0	76
04:15 PM	1	22	0	3	26	10	0	0	0	10	0	0	36
04:30 PM	0	30	0	11	41	13	0	0	3	16	0	0	57
04:45 PM	2	27	0	2	31	6	0	0	2	8	0	0	39
Total	4	138	0	18	160	36	0	0	12	48	0	0	208
05:00 PM	1	28	0	7	36	6	0	0	0	6	0	0	42
05:15 PM	0	20	0	0	20	2	0	0	0	2	0	0	22
05:30 PM	0	34	0	3	37	2	0	0	0	2	0	0	39
05:45 PM	0	21	0	2	23	1	0	0	0	1	0	0	24
Total	1	103	0	12	116	11	0	0	0	11	0	0	127
Grand Total	12	392	0	51	455	85	0	1	39	125	0	0	580
Apprch %	2.6	86.2	0	11.2		68	0	0.8	31.2				
Total %	2.1	67.6	0	8.8	78.4	14.7	0	0.2	6.7	21.6	0	0	

	Church Street Southbound					Pili Street (Parking Lot Driveway) Westbound					Northbound	Eastbound	
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	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 03:15 PM													
03:15 PM	**2**	39	0	4	45	5	0	**1**	5	11	0	0	56
03:30 PM	2	30	0	**7**	39	**13**	0	0	**9**	**22**	0	0	61
03:45 PM	2	45	0	3	50	11	0	0	3	14	0	0	64
04:00 PM	1	**59**	0	2	**62**	7	0	0	7	14	0	0	**76**
Total Volume	7	173	0	16	196	36	0	1	24	61	0	0	257
% App. Total	3.6	88.3	0	8.2		59	0	1.6	39.3				
PHF	.875	.733	.000	.571	.790	.692	.000	.250	.667	.693	.000	.000	.845

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-5677
Counted By:LS
Weather:Clear

File Name : ChuMai AM
Site Code : 00000007
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Church Street Southbound					Main Street Westbound					Church Street Northbound					Main Street 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
06:00 AM	0	2	0	0	2	6	32	1	2	41	0	0	0	1	1	0	2	0	1	3	47
06:15 AM	8	10	9	5	32	8	31	0	2	41	0	0	0	2	2	0	29	8	9	46	121
06:30 AM	5	20	10	1	36	3	45	0	3	51	0	0	0	2	2	0	51	14	0	65	154
06:45 AM	9	30	3	0	42	17	55	0	2	74	0	0	0	4	4	0	51	13	2	66	186
Total	22	62	22	6	112	34	163	1	9	207	0	0	0	9	9	0	133	35	12	180	508
07:00 AM	12	24	13	2	51	9	100	0	1	110	0	0	0	0	0	0	85	22	4	111	272
07:15 AM	13	43	16	6	78	8	93	0	9	110	0	0	0	9	9	0	98	16	2	116	313
07:30 AM	16	37	18	10	81	7	93	0	7	107	0	0	0	3	3	0	118	27	0	145	336
07:45 AM	12	19	21	9	61	9	108	0	9	126	0	0	0	3	3	0	115	20	6	141	331
Total	53	123	68	27	271	33	394	0	26	453	0	0	0	15	15	0	416	85	12	513	1252
08:00 AM	11	18	21	6	56	8	116	0	3	127	0	0	0	3	3	0	71	8	1	80	266
08:15 AM	9	14	17	5	45	12	90	1	2	105	0	0	0	8	8	0	67	15	8	90	248
08:30 AM	11	13	13	2	39	9	93	0	3	105	0	0	0	3	3	0	85	15	7	107	254
08:45 AM	10	10	12	5	37	10	84	0	7	101	0	0	0	5	5	0	67	16	9	92	235
Total	41	55	63	18	177	39	383	1	15	438	0	0	0	19	19	0	290	54	25	369	1003
Grand Total	116	240	153	51	560	106	940	2	50	1098	0	0	0	43	43	0	839	174	49	1062	2763
Apprch %	20.7	42.9	27.3	9.1		9.7	85.6	0.2	4.6		0	0	0	100		0	79	16.4	4.6		
Total %	4.2	8.7	5.5	1.8	20.3	3.8	34	0.1	1.8	39.7	0	0	0	1.6	1.6	0	30.4	6.3	1.8	38.4	

	Church Street Southbound					Main Street Westbound					Church Street Northbound					Main Street 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 06:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	12	24	13	2	51	**9**	100	0	1	110	0	0	0	0	0	0	85	22	4	111	272
07:15 AM	13	**43**	16	6	78	8	93	0	**9**	110	0	0	0	**9**	**9**	0	98	16	2	116	313
07:30 AM	**16**	37	18	**10**	**81**	7	93	0	7	107	0	0	0	3	3	0	**118**	**27**	0	**145**	**336**
07:45 AM	12	19	**21**	9	61	9	**108**	0	9	**126**	0	0	0	3	3	0	115	20	**6**	141	331
Total Volume	53	123	68	27	271	33	394	0	26	453	0	0	0	15	15	0	416	85	12	513	1252
% App. Total	19.6	45.4	25.1	10		7.3	87	0	5.7		0	0	0	100		0	81.1	16.6	2.3		
PHF	.828	.715	.810	.675	.836	.917	.912	.000	.722	.899	.000	.000	.000	.417	.417	.000	.881	.787	.500	.884	.932

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-5677, D4-5675
Counted By:SD, LS
Weather:Clear

File Name : ChuMai PM
Site Code : 00000007
Start Date : 11/9/2010
Page No : 1

Groups Printed- Unshifted

	Church Street Southbound					Main Street Westbound					Church Street Northbound					Main Street 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
03:00 PM	14	10	18	2	44	17	108	2	2	129	0	0	0	1	1	0	80	11	0	91	265
03:15 PM	14	7	14	11	46	13	113	0	3	129	0	0	0	1	1	0	84	12	0	96	272
03:30 PM	13	11	29	9	62	7	122	0	3	132	0	0	0	6	6	0	73	9	0	82	282
03:45 PM	19	18	26	3	66	12	111	0	3	126	0	0	0	1	1	0	101	11	0	112	305
Total	60	46	87	25	218	49	454	2	11	516	0	0	0	9	9	0	338	43	0	381	1124
04:00 PM	19	22	32	7	80	11	118	0	1	130	0	0	0	1	1	0	103	17	0	120	331
04:15 PM	17	18	16	7	58	9	110	0	2	121	0	0	0	0	0	0	126	11	0	137	316
04:30 PM	13	6	19	1	39	7	126	0	1	134	0	0	0	3	3	0	108	21	0	129	305
04:45 PM	11	12	15	3	41	11	108	0	1	120	0	0	0	3	3	0	89	17	0	106	270
Total	60	58	82	18	218	38	462	0	5	505	0	0	0	7	7	0	426	66	0	492	1222
05:00 PM	8	12	22	4	46	6	108	0	0	114	0	0	0	0	0	0	106	9	0	115	275
05:15 PM	12	9	11	6	38	11	86	0	4	101	0	0	0	3	3	0	91	20	0	111	253
05:30 PM	10	16	12	0	38	12	75	0	0	87	0	0	0	3	3	0	84	9	0	93	221
05:45 PM	11	10	3	1	25	12	77	0	3	92	0	0	0	2	2	0	82	12	0	94	213
Total	41	47	48	11	147	41	346	0	7	394	0	0	0	8	8	0	363	50	0	413	962
Grand Total	161	151	217	54	583	128	1262	2	23	1415	0	0	0	24	24	0	1127	159	0	1286	3308
Apprch %	27.6	25.9	37.2	9.3		9	89.2	0.1	1.6		0	0	0	100		0	87.6	12.4	0		
Total %	4.9	4.6	6.6	1.6	17.6	3.9	38.1	0.1	0.7	42.8	0	0	0	0.7	0.7	0	34.1	4.8	0	38.9	

	Church Street Southbound					Main Street Westbound					Church Street Northbound					Main Street 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 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:45 PM																					
03:45 PM	**19**	18	26	3	66	**12**	111	0	**3**	126	0	0	0	1	1	0	101	11	0	112	305
04:00 PM	19	**22**	**32**	**7**	**80**	11	118	0	1	130	0	0	0	1	1	0	103	17	0	120	**331**
04:15 PM	17	18	16	7	58	9	110	0	2	121	0	0	0	0	0	0	**126**	11	0	**137**	316
04:30 PM	13	6	19	1	39	7	**126**	0	1	**134**	0	0	0	**3**	**3**	0	108	**21**	0	129	305
Total Volume	68	64	93	18	243	39	465	0	7	511	0	0	0	5	5	0	438	60	0	498	1257
% App. Total	28	26.3	38.3	7.4		7.6	91	0	1.4		0	0	0	100		0	88	12	0		
PHF	.895	.727	.727	.643	.759	.813	.923	.000	.583	.953	.000	.000	.000	.417	.417	.000	.869	.714	.000	.909	.949

Wailuku Municipal Parking Lot AM Count - Section 1

Time	Count	Time	Count	Time	Count
6:00AM	12	7:00AM	24	8:00AM	81
6:05AM	13	7:05AM	27	8:05AM	87
6:10AM	13	7:10AM	30	8:10AM	88
6:15AM	13	7:15AM	40	8:15AM	89
6:20AM	11	7:20AM	46	8:20AM	88
6:25AM	11	7:25AM	49	8:25AM	90
6:30AM	16	7:30AM	60	8:30AM	91
6:35AM	17	7:35AM	67	8:35AM	93
6:40AM	18	7:40AM	74	8:40AM	92
6:45AM	19	7:45AM	78	8:45AM	93
6:50AM	19	7:50AM	81	8:50AM	94
6:55AM	22	7:55AM	81	8:55AM	92

Wailuku Municipal Parking Lot PM Count - Section 1

Time	Count	Time	Count	Time	Count
3:00PM	94	4:00PM	77	5:00PM	23
3:05PM	92	4:05PM	77	5:05PM	23
3:10PM	87	4:10PM	76	5:10PM	21
3:15PM	86	4:15PM	72	5:15PM	21
3:20PM	85	4:20PM	70	5:20PM	25
3:25PM	89	4:25PM	62	5:25PM	25
3:30PM	83	4:30PM	61	5:30PM	25
3:35PM	80	4:35PM	49	5:35PM	26
3:40PM	81	4:40PM	42	5:40PM	25
3:45PM	82	4:45PM	38	5:45PM	24
3:50PM	81	4:50PM	33	5:50PM	22
3:55PM	78	4:55PM	28	5:55PM	21

Wailuku Municipal Parking Lot AM Count - Section 2

Time	Count	Time	Count	Time	Count
6:00AM	8	7:00AM	19	8:00AM	72
6:05AM	8	7:05AM	22	8:05AM	73
6:10AM	9	7:10AM	26	8:10AM	74
6:15AM	9	7:15AM	30	8:15AM	74
6:20AM	10	7:20AM	32	8:20AM	79
6:25AM	11	7:25AM	35	8:25AM	81
6:30AM	12	7:30AM	40	8:30AM	86
6:35AM	16	7:35AM	56	8:35AM	85
6:40AM	18	7:40AM	62	8:40AM	84
6:45AM	18	7:45AM	68	8:45AM	84
6:50AM	18	7:50AM	68	8:50AM	84
6:55AM	19	7:55AM	71	8:55AM	86

Wailuku Municipal Parking Lot PM Count - Section 2

Time	Count	Time	Count	Time	Count
3:00PM	95	4:00PM	86	5:00PM	26
3:05PM	92	4:05PM	83	5:05PM	23
3:10PM	91	4:10PM	75	5:10PM	23
3:15PM	97	4:15PM	71	5:15PM	21
3:20PM	97	4:20PM	66	5:20PM	20
3:25PM	95	4:25PM	62	5:25PM	22
3:30PM	98	4:30PM	51	5:30PM	20
3:35PM	96	4:35PM	46	5:35PM	22
3:40PM	90	4:40PM	35	5:40PM	26
3:45PM	94	4:45PM	32	5:45PM	24
3:50PM	93	4:50PM	27	5:50PM	26
3:55PM	91	4:55PM	27	5:55PM	26

Wailuku Municipal Parking Lot Count - Private Lot (AM)

Time	Count	Time	Count	Time	Count
6:00AM	0	7:00AM	0	8:00AM	0
6:05AM	0	7:05AM	0	8:05AM	2
6:10AM	0	7:10AM	0	8:10AM	3
6:15AM	0	7:15AM	0	8:15AM	3
6:20AM	0	7:20AM	0	8:20AM	5
6:25AM	0	7:25AM	0	8:25AM	5
6:30AM	0	7:30AM	0	8:30AM	3
6:35AM	0	7:35AM	0	8:35AM	4
6:40AM	0	7:40AM	0	8:40AM	6
6:45AM	0	7:45AM	0	8:45AM	4
6:50AM	0	7:50AM	0	8:50AM	5
6:55AM	0	7:55AM	0	8:55AM	6

Wailuku Municipal Parking Lot Count - Private Lot (PM)

Time	Count	Time	Count	Time	Count
3:00PM	9	4:00PM	7	5:00PM	3
3:05PM	8	4:05PM	10	5:05PM	3
3:10PM	7	4:10PM	8	5:10PM	2
3:15PM	10	4:15PM	6	5:15PM	1
3:20PM	9	4:20PM	6	5:20PM	0
3:25PM	10	4:25PM	6	5:25PM	0
3:30PM	9	4:30PM	6	5:30PM	0
3:35PM	8	4:35PM	6	5:35PM	0
3:40PM	11	4:40PM	5	5:40PM	0
3:45PM	12	4:45PM	3	5:45PM	0
3:50PM	11	4:50PM	3	5:50PM	0
3:55PM	8	4:55PM	4	5:55PM	0

Grand Total - Wailuku Municipal Parking Lot AM Count - Main Lot

Time	Count	Time	Count	Time	Count
6:00AM	20	7:00AM	43	8:00AM	153
6:05AM	21	7:05AM	49	8:05AM	160
6:10AM	22	7:10AM	56	8:10AM	162
6:15AM	22	7:15AM	70	8:15AM	163
6:20AM	21	7:20AM	78	8:20AM	167
6:25AM	22	7:25AM	84	8:25AM	171
6:30AM	28	7:30AM	100	8:30AM	177
6:35AM	33	7:35AM	123	8:35AM	178
6:40AM	36	7:40AM	136	8:40AM	176
6:45AM	37	7:45AM	146	8:45AM	177
6:50AM	37	7:50AM	149	8:50AM	178
6:55AM	41	7:55AM	152	8:55AM	178

Grand Total - Wailuku Municipal Parking Lot PM Count - Main Lot

Time	Count	Time	Count	Time	Count
3:00PM	189	4:00PM	163	5:00PM	49
3:05PM	184	4:05PM	160	5:05PM	46
3:10PM	178	4:10PM	151	5:10PM	44
3:15PM	183	4:15PM	143	5:15PM	42
3:20PM	182	4:20PM	136	5:20PM	45
3:25PM	184	4:25PM	124	5:25PM	47
3:30PM	181	4:30PM	112	5:30PM	45
3:35PM	176	4:35PM	95	5:35PM	48
3:40PM	171	4:40PM	77	5:40PM	51
3:45PM	176	4:45PM	70	5:45PM	48
3:50PM	174	4:50PM	60	5:50PM	48
3:55PM	169	4:55PM	55	5:55PM	47

APPENDIX B

LEVEL OF SERVICE DEFINITIONS

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS) for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. Specifically, level-of-service (LOS) criteria are stated in terms of the average control delay per vehicle, typically a 15-min analysis period. The criteria are given in the following table.

Table 1: 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 depends 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.

Level of Service A describes operations with low control delay, up to 10 sec per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.

Level of Service B describes operations with control delay greater than 10 and up to 20 sec per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

Level of Service C describes operations with control delay greater than 20 and up to 35 sec per vehicle. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

Level of Service D describes operations with control delay greater than 35 and up to 55 sec per vehicle. At level of service D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

"Highway Capacity Manual," Transportation Research Board, 2000.

Level of Service E describes operation with control delay greater than 55 and up to 80 sec per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

Level of Service F describes operations with control delay in excess of 80 sec per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

"Highway Capacity Manual," Transportation Research Board, 2000.

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level of Service (LOS) criteria are given in Table 1. As used here, control delay is defined as the total elapsed time from the time a vehicle stops at the end of the queue to the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to the speed of vehicles in the queue.

The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. If the degree of saturation is greater than about 0.9, average control delay is significantly affected by the length of the analysis period.

Table 1: Level-of-Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (Sec/Veh)
A	≤10.0
B	>10.0 and ≤15.0
C	>15.0 and ≤25.0
D	>25.0 and ≤35.0
E	>35.0 and ≤50.0
F	>50.0

"Highway Capacity Manual," Transportation Research Board, 2000.

APPENDIX C

CAPACITY ANALYSIS CALCULATIONS
BASELINE PEAK HOUR TRAFFIC ANALYSIS

HCS+: Signalized Intersections Release 5.4

Analyst: CL	Inter.:
Agency:	Area Type: All other areas
Date: 1/12/2011	Jurisd:
Period: AM Peak	Year: Existing
Project ID:	
E/W St: Main St	N/S St:

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	1	1	0	0	0
LGConfig	L	T			T	R		LT	R			
Volume	121	354			404	126	19	92	31			
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
RTOR Vol						13			3			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru	A		
Right					Right	A		
Peds					Peds			
WB Left					SB Left			
Thru	A				Thru			
Right	A				Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	43.0				37.0			
Yellow	4.0				4.0			
All Red	1.0				1.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	356	746	0.42	0.48	16.1	B		
T	890	1863	0.49	0.48	16.5	B	16.4	B
Westbound								
T	890	1863	0.48	0.48	16.3	B	15.7	B
R	756	1583	0.16	0.48	13.4	B		
Northbound								
LT	759	1847	0.20	0.41	17.2	B	16.9	B
R	651	1583	0.06	0.41	16.0	B		
Southbound								

Intersection Delay = 16.2 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.4

Analyst: CL
Agency:
Date: 1/12/2011
Period: PM Peak
Project ID:
E/W St: Main St

Inter.:
Area Type: All other areas
Jurisd:
Year : Existing
N/S St:

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	1	1	0	0	0
LGConfig	L	T			T	R		LT	R			
Volume	130	394			475	136	26	110	72			
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
RTOR Vol						14			7			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru	A		
Right					Right	A		
Peds					Peds			
WB Left					SB Left			
Thru	A				Thru			
Right	A				Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	43.0				37.0			
Yellow	4.0				4.0			
All Red	1.0				1.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	301	631	0.49	0.48	17.2	B		
T	890	1863	0.50	0.48	16.5	B	16.7	B
Westbound								
T	890	1863	0.56	0.48	17.5	B	16.7	B
R	756	1583	0.17	0.48	13.4	B		
Northbound								
LT	759	1845	0.27	0.41	17.8	B	17.4	B
R	651	1583	0.15	0.41	16.7	B		
Southbound								

Intersection Delay = 16.8 (sec/veh) Intersection LOS = B

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Pili Street
North/South Street: Market Street
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	65	274				
Peak-Hour Factor, PHF	0.75	0.75				
Hourly Flow Rate, HFR	86	365				
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1				
Configuration		LT				
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				5		
Peak Hour Factor, PHF				0.42		
Hourly Flow Rate, HFR				11		
Percent Heavy Vehicles				2		
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1		
Configuration				L		

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT					L		
v (vph)	86					11		
C(m) (vph)	1561					678		
v/c	0.06					0.02		
95% queue length	0.17					0.05		
Control Delay	7.4					10.4		
LOS	A					B		
Approach Delay							10.4	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Pili Street
North/South Street: Market Street
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	17	359				
Peak-Hour Factor, PHF	0.94	0.94				
Hourly Flow Rate, HFR	18	381				
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1				
Configuration		LT				
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				28		
Peak Hour Factor, PHF				0.87		
Hourly Flow Rate, HFR				32		
Percent Heavy Vehicles				2		
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1		
Configuration				L		

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT					L		
v (vph)	18					32		
C(m) (vph)	1561					817		
v/c	0.01					0.04		
95% queue length	0.03					0.12		
Control Delay	7.3					9.6		
LOS	A					A		
Approach Delay							9.6	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.4

Phone: Fax:
E-Mail:

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Vineyard St
North/South Street: Market St

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	135	59	0	0	124	40	33	219	27	38	0	399
% Thrus Left Lane												

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	T	TR		LTR		LR	
PHF	0.76	0.76	0.70		0.84		0.89	
Flow Rate	177	77	234		331		490	
% Heavy Veh	2	2	2		2		2	
No. Lanes	2		1		1		1	
Opposing-Lanes	1		2		1		1	
Conflicting-lanes	1		1		2		2	
Geometry group	5		4a		2		2	

Duration, T 0.25 hrs.

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rates:								
Total in Lane	177	77	234		331		490	
Left-Turn	177	0	0		39		42	
Right-Turn	0	0	57		32		448	
Prop. Left-Turns	1.0	0.0	0.0		0.1		0.1	
Prop. Right-Turns	0.0	0.0	0.2		0.1		0.9	

Prop. Heavy Vehicle	0.0	0.0	0.0		0.0		0.0	
Geometry Group		5		4a		2		2
Adjustments Exhibit 17-33:								
hLT-adj		0.5		0.2		0.2		0.2
hRT-adj		-0.7		-0.6		-0.6		-0.6
hHV-adj		1.7		1.7		1.7		1.7
hadj, computed	0.5	0.0	-0.1		-0.0		-0.5	

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	177	77	234		331		490	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.16	0.07	0.21		0.29		0.44	
hd, final value	8.37	7.86	7.40		6.88		6.08	
x, final value	0.41	0.17	0.48		0.63		0.83	
Move-up time, m		2.3		2.0		2.0		2.0
Service Time	6.1	5.6	5.4		4.9		4.1	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	177	77	234		331		490	
Service Time	6.1	5.6	5.4		4.9		4.1	
Utilization, x	0.41	0.17	0.48		0.63		0.83	
Dep. headway, hd	8.37	7.86	7.40		6.88		6.08	
Capacity	389	327	434		488		576	
Delay	16.81	12.14	17.07		20.98		31.59	
LOS	C	B	C		C		D	
Approach:								
Delay		15.40		17.07		20.98		31.59
LOS		C		C		C		D
Intersection Delay	23.17		Intersection LOS		C			

HCS+: Unsignalized Intersections Release 5.4

Phone: Fax:
E-Mail:

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Vineyard St
North/South Street: Market St

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	276	162	0	0	97	60	38	281	68	47	0	236
% Thrus Left Lane												

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	T	TR		LTR		LR	
PHF	0.83	0.83	0.91		0.97		0.96	
Flow Rate	332	195	171		398		293	
% Heavy Veh	2	2	2		2		2	
No. Lanes	2		1		1		1	
Opposing-Lanes	1		2		1		1	
Conflicting-lanes	1		1		2		2	
Geometry group	5		4a		2		2	

Duration, T 0.25 hrs.

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rates:								
Total in Lane	332	195	171		398		293	
Left-Turn	332	0	0		39		48	
Right-Turn	0	0	65		70		245	
Prop. Left-Turns	1.0	0.0	0.0		0.1		0.2	
Prop. Right-Turns	0.0	0.0	0.4		0.2		0.8	

Prop. Heavy Vehicle	0.0	0.0	0.0		0.0		0.0	
Geometry Group	5		4a		2		2	
Adjustments Exhibit 17-33:								
hLT-adj	0.5		0.2		0.2		0.2	
hRT-adj	-0.7		-0.6		-0.6		-0.6	
hHV-adj	1.7		1.7		1.7		1.7	
hadj, computed	0.5	0.0	-0.2		-0.1		-0.4	

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	332	195	171		398		293	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.30	0.17	0.15		0.35		0.26	
hd, final value	7.90	7.38	7.60		6.85		6.80	
x, final value	0.73	0.40	0.36		0.76		0.55	
Move-up time, m	2.3		2.0		2.0		2.0	
Service Time	5.6	5.1	5.6		4.8		4.8	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	332	195	171		398		293	
Service Time	5.6	5.1	5.6		4.8		4.8	
Utilization, x	0.73	0.40	0.36		0.76		0.55	
Dep. headway, hd	7.90	7.38	7.60		6.85		6.80	
Capacity	444	445	404		508		489	
Delay	29.00	14.92	14.84		28.14		17.89	
LOS	D	B	B		D		C	
Approach:								
Delay	23.79		14.84		28.14		17.89	
LOS	C		B		D		C	
Intersection Delay	22.69		Intersection LOS		C			

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Vineyard St.
North/South Street: Municipal Parking Lot
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		177	36	50	506	
Peak-Hour Factor, PHF		0.79	0.79	0.83	0.83	
Hourly Flow Rate, HFR		224	45	60	609	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	6		17			
Peak Hour Factor, PHF	0.72		0.72			
Hourly Flow Rate, HFR	8		23			
Percent Heavy Vehicles	2		2			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		60		31				
C(m) (vph)		1295		815				
v/c		0.05		0.04				
95% queue length		0.15		0.12				
Control Delay		7.9		9.6				
LOS		A		A				
Approach Delay				9.6				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Vineyard St.
North/South Street: Municipal Parking Lot
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		356	11	33	338	
Peak-Hour Factor, PHF		0.81	0.81	0.92	0.92	
Hourly Flow Rate, HFR		439	13	35	367	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	25		82			
Peak Hour Factor, PHF	0.64		0.64			
Hourly Flow Rate, HFR	39		128			
Percent Heavy Vehicles	2		2			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		35		167				
C(m) (vph)		1109		772				
v/c		0.03		0.22				
95% queue length		0.10		0.82				
Control Delay		8.4		10.9				
LOS		A		B				
Approach Delay				10.9				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Vineyard St.
North/South Street: Church St.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	202	29	205	298	9
Peak-Hour Factor, PHF	0.75	0.75	0.75	0.92	0.92	0.92
Hourly Flow Rate, HFR	4	269	38	222	323	9
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				11	14	0
Peak Hour Factor, PHF				0.75	0.75	0.75
Hourly Flow Rate, HFR				14	18	0
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR					LTR	
v (vph)	4	222					32	
C(m) (vph)	1227	1254					292	
v/c	0.00	0.18					0.11	
95% queue length	0.01	0.64					0.37	
Control Delay	7.9	8.5					18.8	
LOS	A	A					C	
Approach Delay							18.8	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Vineyard St.
North/South Street: Church St.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	364	58	112	244	7
Peak-Hour Factor, PHF	0.77	0.77	0.77	0.87	0.87	0.87
Hourly Flow Rate, HFR	3	472	75	128	280	8
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				3	10	2
Peak Hour Factor, PHF				0.50	0.50	0.50
Hourly Flow Rate, HFR				6	20	4
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR					LTR	
v (vph)	3	128					30	
C(m) (vph)	1274	1022					335	
v/c	0.00	0.13					0.09	
95% queue length	0.01	0.43					0.29	
Control Delay	7.8	9.0					16.8	
LOS	A	A					C	
Approach Delay							16.8	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Pili St.
North/South Street: Church St.
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				5	243	
Peak-Hour Factor, PHF				0.90	0.90	
Hourly Flow Rate, HFR				5	270	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes				0	1	
Configuration					LT	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	11					
Peak Hour Factor, PHF	0.69					
Hourly Flow Rate, HFR	15					
Percent Heavy Vehicles	2					
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1					
Configuration	L					

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)		5	15					
C(m) (vph)		1623	1030					
v/c		0.00	0.01					
95% queue length		0.01	0.04					
Control Delay		7.2	8.5					
LOS		A	A					
Approach Delay				8.5				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Pili St.
North/South Street: Church St.
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				4	176	
Peak-Hour Factor, PHF				0.67	0.67	
Hourly Flow Rate, HFR				5	262	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes				0	1	
Configuration					LT	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	41					
Peak Hour Factor, PHF	0.79					
Hourly Flow Rate, HFR	51					
Percent Heavy Vehicles	2					
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1					
Configuration	L					

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)		5	51					
C(m) (vph)		1623	1039					
v/c		0.00	0.05					
95% queue length		0.01	0.15					
Control Delay		7.2	8.6					
LOS		A	A					
Approach Delay				8.6				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Main St.
North/South Street: Church St.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		419	85	33	390	
Peak-Hour Factor, PHF		0.86	0.86	0.91	0.91	
Hourly Flow Rate, HFR		487	98	36	428	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				56	128	70
Peak Hour Factor, PHF				0.85	0.85	0.85
Hourly Flow Rate, HFR				65	150	82
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				1	1	0
Configuration				L	TR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT				L		TR
v (vph)		36				65		232
C(m) (vph)		990				407		426
v/c		0.04				0.16		0.54
95% queue length		0.11				0.56		3.17
Control Delay		8.8				15.5		23.1
LOS		A				C		C
Approach Delay							21.4	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Main St.
North/South Street: Church St.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		457	60	39	462	
Peak-Hour Factor, PHF		0.95	0.95	0.91	0.91	
Hourly Flow Rate, HFR		481	63	42	507	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				67	62	88
Peak Hour Factor, PHF				0.77	0.77	0.77
Hourly Flow Rate, HFR				87	80	114
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				1	1	0
Configuration				L		TR

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT				L		TR
v (vph)		42				87		194
C(m) (vph)		1025				374		494
v/c		0.04				0.23		0.39
95% queue length		0.13				0.89		1.85
Control Delay		8.7				17.5		16.9
LOS		A				C		C
Approach Delay							17.1	
Approach LOS							C	


4 MILL STREET
5
8 VINEYARD
3
SECTION 1
SECTION 2
9
6
2
MARKET STREET
LAXMAN
STEVE
DAMIEN
CHURCH STREET
7
MAIN STREET
PRIVATE PARKING LOT (SECTION 3)
1
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APPENDIX D

CAPACITY ANALYSIS CALCULATIONS
PROJECTED PEAK HOUR TRAFFIC
ANALYSIS WITH PROJECT

HCS+: Signalized Intersections Release 5.4

Analyst: CL
Agency:
Date: 1/12/2011
Period: AM Peak
Project ID:
E/W St: Main St

Inter.:
Area Type: All other areas
Jurisd:
Year : With Project
N/S St: Market

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	1	1	0	0	0
LGConfig	L	T			T	R		LT	R			
Volume	121	354			404	126	19	92	31			
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
RTOR Vol						13			3			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru	A		
Right					Right	A		
Peds					Peds			
WB Left					SB Left			
Thru	A				Thru			
Right	A				Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	43.0					37.0		
Yellow	4.0					4.0		
All Red	1.0					1.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	356	746	0.42	0.48	16.1	B		
T	890	1863	0.49	0.48	16.5	B	16.4	B
Westbound								
T	890	1863	0.48	0.48	16.3	B	15.7	B
R	756	1583	0.16	0.48	13.4	B		
Northbound								
LT	759	1847	0.20	0.41	17.2	B	16.9	B
R	651	1583	0.06	0.41	16.0	B		
Southbound								

Intersection Delay = 16.2 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.4

Analyst: CL
Agency:
Date: 1/12/2011
Period: PM Peak
Project ID:
E/W St: Main St

Inter.:
Area Type: All other areas
Jurisd:
Year : With Project
N/S St: Market

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	1	1	0	0	0
LGConfig	L	T			T	R		LT	R			
Volume	130	394			475	136	26	110	72			
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
RTOR Vol						14			7			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru	A					Thru	A			
	Right						Right	A			
	Peds						Peds				
WB	Left					SB	Left				
	Thru	A					Thru				
	Right	A					Right				
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		43.0						37.0			
Yellow		4.0						4.0			
All Red		1.0						1.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	301	631	0.49	0.48	17.2	B		
T	890	1863	0.50	0.48	16.5	B	16.7	B
Westbound								
T	890	1863	0.56	0.48	17.5	B	16.7	B
R	756	1583	0.17	0.48	13.4	B		
Northbound								
LT	759	1845	0.27	0.41	17.8	B	17.4	B
R	651	1583	0.15	0.41	16.7	B		
Southbound								

Intersection Delay = 16.8 (sec/veh) Intersection LOS = B

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project
Project ID:
East/West Street: Pili Street
North/South Street: Market Street
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	65	274				
Peak-Hour Factor, PHF	0.75	0.75				
Hourly Flow Rate, HFR	86	365				
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1				
Configuration		LT				
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				5		
Peak Hour Factor, PHF				0.42		
Hourly Flow Rate, HFR				11		
Percent Heavy Vehicles				2		
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1		
Configuration				L		

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT					L		
v (vph)	86					11		
C(m) (vph)	1561					678		
v/c	0.06					0.02		
95% queue length	0.17					0.05		
Control Delay	7.4					10.4		
LOS	A					B		
Approach Delay							10.4	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project
Project ID:
East/West Street: Pili Street
North/South Street: Market Street
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	17	359				
Peak-Hour Factor, PHF	0.94	0.94				
Hourly Flow Rate, HFR	18	381				
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1				
Configuration		LT				
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				28		
Peak Hour Factor, PHF				0.87		
Hourly Flow Rate, HFR				32		
Percent Heavy Vehicles				2		
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1		
Configuration				L		

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT					L		
v (vph)	18					32		
C(m) (vph)	1561					817		
v/c	0.01					0.04		
95% queue length	0.03					0.12		
Control Delay	7.3					9.6		
LOS	A					A		
Approach Delay							9.6	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.4

Phone: Fax:
E-Mail:

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project
Project ID:
East/West Street: Vineyard St
North/South Street: Market St

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	135	59	0	0	124	40	33	219	27	38	0	399
% Thrus Left Lane												

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	T	TR		LTR		LR	
PHF	0.76	0.76	0.70		0.84		0.89	
Flow Rate	177	77	234		331		490	
% Heavy Veh	2	2	2		2		2	
No. Lanes	2		1		1		1	
Opposing-Lanes	1		2		1		1	
Conflicting-lanes	1		1		2		2	
Geometry group	5		4a		2		2	

Duration, T 0.25 hrs.

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rates:								
Total in Lane	177	77	234		331		490	
Left-Turn	177	0	0		39		42	
Right-Turn	0	0	57		32		448	
Prop. Left-Turns	1.0	0.0	0.0		0.1		0.1	
Prop. Right-Turns	0.0	0.0	0.2		0.1		0.9	

Prop. Heavy Vehicle	0.0	0.0	0.0		0.0		0.0	
Geometry Group	5		4a		2		2	
Adjustments Exhibit 17-33:								
hLT-adj	0.5		0.2		0.2		0.2	
hRT-adj	-0.7		-0.6		-0.6		-0.6	
hHV-adj	1.7		1.7		1.7		1.7	
hadj, computed	0.5	0.0	-0.1		-0.0		-0.5	

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	177	77	234		331		490	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.16	0.07	0.21		0.29		0.44	
hd, final value	8.37	7.86	7.40		6.88		6.08	
x, final value	0.41	0.17	0.48		0.63		0.83	
Move-up time, m	2.3		2.0		2.0		2.0	
Service Time	6.1	5.6	5.4		4.9		4.1	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	177	77	234		331		490	
Service Time	6.1	5.6	5.4		4.9		4.1	
Utilization, x	0.41	0.17	0.48		0.63		0.83	
Dep. headway, hd	8.37	7.86	7.40		6.88		6.08	
Capacity	389	327	434		488		576	
Delay	16.81	12.14	17.07		20.98		31.59	
LOS	C	B	C		C		D	
Approach:								
Delay	15.40		17.07		20.98		31.59	
LOS	C		C		C		D	

Intersection Delay 23.17 Intersection LOS C

HCS+: Unsignalized Intersections Release 5.4

Phone: Fax:
E-Mail:

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project
Project ID:
East/West Street: Vineyard St
North/South Street: Market St

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	276	162	0	0	97	60	38	281	68	47	0	236
% Thrus Left Lane												

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	T	TR		LTR		LR	
PHF	0.83	0.83	0.91		0.97		0.96	
Flow Rate	332	195	171		398		293	
% Heavy Veh	2	2	2		2		2	
No. Lanes	2		1		1		1	
Opposing-Lanes	1		2		1		1	
Conflicting-lanes	1		1		2		2	
Geometry group	5		4a		2		2	

Duration, T 0.25 hrs.

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rates:								
Total in Lane	332	195	171		398		293	
Left-Turn	332	0	0		39		48	
Right-Turn	0	0	65		70		245	
Prop. Left-Turns	1.0	0.0	0.0		0.1		0.2	
Prop. Right-Turns	0.0	0.0	0.4		0.2		0.8	

Prop. Heavy Vehicle	0.0	0.0	0.0		0.0		0.0	
Geometry Group	5		4a		2		2	
Adjustments Exhibit 17-33:								
hLT-adj	0.5		0.2		0.2		0.2	
hRT-adj	-0.7		-0.6		-0.6		-0.6	
hHV-adj	1.7		1.7		1.7		1.7	
hadj, computed	0.5	0.0	-0.2		-0.1		-0.4	

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	332	195	171		398		293	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.30	0.17	0.15		0.35		0.26	
hd, final value	7.90	7.38	7.60		6.85		6.80	
x, final value	0.73	0.40	0.36		0.76		0.55	
Move-up time, m	2.3		2.0		2.0		2.0	
Service Time	5.6	5.1	5.6		4.8		4.8	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	332	195	171		398		293	
Service Time	5.6	5.1	5.6		4.8		4.8	
Utilization, x	0.73	0.40	0.36		0.76		0.55	
Dep. headway, hd	7.90	7.38	7.60		6.85		6.80	
Capacity	444	445	404		508		489	
Delay	29.00	14.92	14.84		28.14		17.89	
LOS	D	B	B		D		C	
Approach:								
Delay	23.79		14.84		28.14		17.89	
LOS	C		B		D		C	

Intersection Delay 22.69 Intersection LOS C

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project
Project ID:
East/West Street: Vineyard St.
North/South Street: Municipal Parking Lot
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		177	36	50	506	
Peak-Hour Factor, PHF		0.79	0.79	0.83	0.83	
Hourly Flow Rate, HFR		224	45	60	609	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1 0		0 1		
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	6		17			
Peak Hour Factor, PHF	0.72		0.72			
Hourly Flow Rate, HFR	8		23			
Percent Heavy Vehicles	2		2			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		60		31				
C(m) (vph)		1295		815				
v/c		0.05		0.04				
95% queue length		0.15		0.12				
Control Delay		7.9		9.6				
LOS		A		A				
Approach Delay				9.6				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project
Project ID:
East/West Street: Vineyard St.
North/South Street: Municipal Parking Lot
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		356	11	33	338	
Peak-Hour Factor, PHF		0.81	0.81	0.92	0.92	
Hourly Flow Rate, HFR		439	13	35	367	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	25		82			
Peak Hour Factor, PHF	0.64		0.64			
Hourly Flow Rate, HFR	39		128			
Percent Heavy Vehicles	2		2			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		35		167				
C(m) (vph)		1109		772				
v/c		0.03		0.22				
95% queue length		0.10		0.82				
Control Delay		8.4		10.9				
LOS		A		B				
Approach Delay				10.9				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project
Project ID:
East/West Street: Vineyard St.
North/South Street: Church St.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	202	29	205	298	9
Peak-Hour Factor, PHF	0.75	0.75	0.75	0.92	0.92	0.92
Hourly Flow Rate, HFR	4	269	38	222	323	9
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				11	14	0
Peak Hour Factor, PHF				0.75	0.75	0.75
Hourly Flow Rate, HFR				14	18	0
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR					LTR	
v (vph)	4	222					32	
C(m) (vph)	1227	1254					292	
v/c	0.00	0.18					0.11	
95% queue length	0.01	0.64					0.37	
Control Delay	7.9	8.5					18.8	
LOS	A	A					C	
Approach Delay							18.8	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project
Project ID:
East/West Street: Vineyard St.
North/South Street: Church St.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	364	58	112	244	7
Peak-Hour Factor, PHF	0.77	0.77	0.77	0.87	0.87	0.87
Hourly Flow Rate, HFR	3	472	75	128	280	8
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				3	10	2
Peak Hour Factor, PHF				0.50	0.50	0.50
Hourly Flow Rate, HFR				6	20	4
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR					LTR	
v (vph)	3	128					30	
C(m) (vph)	1274	1022					335	
v/c	0.00	0.13					0.09	
95% queue length	0.01	0.43					0.29	
Control Delay	7.8	9.0					16.8	
LOS	A	A					C	
Approach Delay							16.8	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project
Project ID:
East/West Street: Pili St.
North/South Street: Church St.
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				5	243	
Peak-Hour Factor, PHF				0.90	0.90	
Hourly Flow Rate, HFR				5	270	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes				0	1	
Configuration					LT	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	11					
Peak Hour Factor, PHF	0.69					
Hourly Flow Rate, HFR	15					
Percent Heavy Vehicles	2					
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1					
Configuration	L					

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)		5	15					
C(m) (vph)		1623	1030					
v/c		0.00	0.01					
95% queue length		0.01	0.04					
Control Delay		7.2	8.5					
LOS		A	A					
Approach Delay				8.5				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project
Project ID:
East/West Street: Pili St.
North/South Street: Church St.
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				4	176	
Peak-Hour Factor, PHF				0.67	0.67	
Hourly Flow Rate, HFR				5	262	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes				0	1	
Configuration					LT	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	41					
Peak Hour Factor, PHF	0.79					
Hourly Flow Rate, HFR	51					
Percent Heavy Vehicles	2					
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1					
Configuration	L					

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)		5	51					
C(m) (vph)		1623	1039					
v/c		0.00	0.05					
95% queue length		0.01	0.15					
Control Delay		7.2	8.6					
LOS		A	A					
Approach Delay				8.6				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project
Project ID:
East/West Street: Main St.
North/South Street: Church St.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		419	85	33	390	
Peak-Hour Factor, PHF		0.86	0.86	0.91	0.91	
Hourly Flow Rate, HFR		487	98	36	428	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				56	128	70
Peak Hour Factor, PHF				0.85	0.85	0.85
Hourly Flow Rate, HFR				65	150	82
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				1	1	0
Configuration				L		TR

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT				L		TR
v (vph)		36				65		232
C(m) (vph)		990				407		426
v/c		0.04				0.16		0.54
95% queue length		0.11				0.56		3.17
Control Delay		8.8				15.5		23.1
LOS		A				C		C
Approach Delay							21.4	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project
Project ID:
East/West Street: Main St.
North/South Street: Church St.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		457	60	39	462	
Peak-Hour Factor, PHF		0.95	0.95	0.91	0.91	
Hourly Flow Rate, HFR		481	63	42	507	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				67	62	88
Peak Hour Factor, PHF				0.77	0.77	0.77
Hourly Flow Rate, HFR				87	80	114
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				1	1	0
Configuration				L		TR

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT				L		TR
v (vph)		42				87		194
C(m) (vph)		1025				374		494
v/c		0.04				0.23		0.39
95% queue length		0.13				0.89		1.85
Control Delay		8.7				17.5		16.9
LOS		A				C		C
Approach Delay							17.1	
Approach LOS							C	

APPENDIX E

CAPACITY ANALYSIS CALCULATIONS
PROJECTED PEAK HOUR TRAFFIC
ANALYSIS WITH PROJECT AT FULL CAPACITY

HCS+: Signalized Intersections Release 5.4

Analyst: CL
Agency:
Date: 1/12/2011
Period: AM Peak
Project ID:
E/W St: Main St

Inter.:
Area Type: All other areas
Jurisd:
Year : With Project With Dev

N/S St: Market

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	1	1	0	0	0
LGConfig	L	T			T	R		LT	R			
Volume	141	356			404	147	19	108	31			
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
RTOR Vol						13			3			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left	A			
Thru	A				Thru	A			
Right					Right	A			
Peds					Peds				
WB Left					SB Left				
Thru	A				Thru				
Right	A				Right				
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	43.0					37.0			
Yellow	4.0					4.0			
All Red	1.0					1.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	356	746	0.49	0.48	17.1	B		
T	890	1863	0.49	0.48	16.5	B	16.7	B
Westbound								
T	890	1863	0.48	0.48	16.3	B	15.6	B
R	756	1583	0.19	0.48	13.6	B		
Northbound								
LT	760	1849	0.23	0.41	17.4	B	17.2	B
R	651	1583	0.06	0.41	16.0	B		
Southbound								

Intersection Delay = 16.3 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.4

Analyst: CL
Agency:
Date: 1/12/2011
Period: PM Peak
Project ID:
E/W St: Main St

Inter.:
Area Type: All other areas
Jurisd:
Year : With Project With Dev

N/S St: Market

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	1	1	0	0	0
LGConfig	L	T			T	R		LT	R			
Volume	135	405			475	142	26	114	72			
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
RTOR Vol						14			7			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru	A					Thru	A			
	Right						Right	A			
	Peds						Peds				
WB	Left					SB	Left				
	Thru	A					Thru				
	Right	A					Right				
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		43.0						37.0			
Yellow		4.0						4.0			
All Red		1.0						1.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	301	631	0.50	0.48	17.6	B		
T	890	1863	0.51	0.48	16.7	B	16.9	B
Westbound								
T	890	1863	0.56	0.48	17.5	B	16.6	B
R	756	1583	0.18	0.48	13.5	B		
Northbound								
LT	759	1846	0.28	0.41	17.8	B	17.5	B
R	651	1583	0.15	0.41	16.7	B		
Southbound								

Intersection Delay = 16.9 (sec/veh) Intersection LOS = B

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project With Dev
Project ID:
East/West Street: Pili Street
North/South Street: Market Street
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	57	274				
Peak-Hour Factor, PHF	0.75	0.75				
Hourly Flow Rate, HFR	76	365				
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1				
Configuration		LT				
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				9		
Peak Hour Factor, PHF				0.42		
Hourly Flow Rate, HFR				21		
Percent Heavy Vehicles				2		
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1		
Configuration				L		

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT					L		
v (vph)	76					21		
C(m) (vph)	1561					699		
v/c	0.05					0.03		
95% queue length	0.15					0.09		
Control Delay	7.4					10.3		
LOS	A					B		
Approach Delay							10.3	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project With Dev
Project ID:
East/West Street: Pili Street
North/South Street: Market Street
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	32	359				
Peak-Hour Factor, PHF	0.94	0.94				
Hourly Flow Rate, HFR	34	381				
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1				
Configuration		LT				
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				52		
Peak Hour Factor, PHF				0.87		
Hourly Flow Rate, HFR				59		
Percent Heavy Vehicles				2		
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1		
Configuration				L		

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT					L		
v (vph)	34					59		
C(m) (vph)	1561					779		
v/c	0.02					0.08		
95% queue length	0.07					0.25		
Control Delay	7.4					10.0-		
LOS	A					A		
Approach Delay							10.0-	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.4

Phone: Fax:
E-Mail:

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project With Dev
Project ID:
East/West Street: Vineyard St
North/South Street: Market St

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	145	64	0	0	134	40	33	223	27	38	0	433
% Thrus Left Lane												

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	T	TR		LTR		LR	
PHF	0.76	0.76	0.70		0.84		0.89	
Flow Rate	190	84	248		336		528	
% Heavy Veh	2	2	2		2		2	
No. Lanes	2		1		1		1	
Opposing-Lanes	1		2		1		1	
Conflicting-lanes	1		1		2		2	
Geometry group	5		4a		2		2	

Duration, T 0.25 hrs.

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rates:								
Total in Lane	190	84	248		336		528	
Left-Turn	190	0	0		39		42	
Right-Turn	0	0	57		32		486	
Prop. Left-Turns	1.0	0.0	0.0		0.1		0.1	
Prop. Right-Turns	0.0	0.0	0.2		0.1		0.9	

Prop. Heavy Vehicle	0.0	0.0	0.0		0.0		0.0	
Geometry Group		5		4a		2		2
Adjustments Exhibit 17-33:								
hLT-adj		0.5		0.2		0.2		0.2
hRT-adj		-0.7		-0.6		-0.6		-0.6
hHV-adj		1.7		1.7		1.7		1.7
hadj, computed	0.5	0.0	-0.1		0.0		-0.5	

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	190	84	248		336		528	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.17	0.07	0.22		0.30		0.47	
hd, final value	8.81	8.29	7.88		7.35		6.42	
x, final value	0.46	0.19	0.54		0.69		0.94	
Move-up time, m		2.3		2.0		2.0		2.0
Service Time	6.5	6.0	5.9		5.4		4.4	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	190	84	248		336		528	
Service Time	6.5	6.0	5.9		5.4		4.4	
Utilization, x	0.46	0.19	0.54		0.69		0.94	
Dep. headway, hd	8.81	8.29	7.88		7.35		6.42	
Capacity	384	334	426		467		555	
Delay	18.94	12.97	19.85		24.92		50.00+	
LOS	C	B	C		C		F	
Approach:								
Delay		17.11		19.85		24.92		50.00+
LOS		C		C		C		F
Intersection Delay	32.03		Intersection LOS		D			

HCS+: Unsignalized Intersections Release 5.4

Phone: Fax:
E-Mail:

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project With Dev
Project ID:
East/West Street: Vineyard St
North/South Street: Market St

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	321	188	0	0	105	60	38	300	73	47	0	257
% Thrus Left Lane												

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	T	TR		LTR		LR	
PHF	0.83	0.83	0.91		0.97		0.96	
Flow Rate	386	226	180		423		315	
% Heavy Veh	2	2	2		2		2	
No. Lanes	2		1		1		1	
Opposing-Lanes	1		2		1		1	
Conflicting-lanes	1		1		2		2	
Geometry group	5		4a		2		2	

Duration, T 0.25 hrs.

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rates:								
Total in Lane	386	226	180		423		315	
Left-Turn	386	0	0		39		48	
Right-Turn	0	0	65		75		267	
Prop. Left-Turns	1.0	0.0	0.0		0.1		0.2	
Prop. Right-Turns	0.0	0.0	0.4		0.2		0.8	

Prop. Heavy Vehicle	0.0	0.0	0.0		0.0		0.0	
Geometry Group	5		4a		2		2	
Adjustments Exhibit 17-33:								
hLT-adj	0.5		0.2		0.2		0.2	
hRT-adj	-0.7		-0.6		-0.6		-0.6	
hHV-adj	1.7		1.7		1.7		1.7	
hadj, computed	0.5	0.0	-0.2		-0.1		-0.4	

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	386	226	180		423		315	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.34	0.20	0.16		0.38		0.28	
hd, final value	8.35	7.84	8.32		7.36		7.36	
x, final value	0.90	0.49	0.42		0.86		0.64	
Move-up time, m	2.3		2.0		2.0		2.0	
Service Time	6.1	5.5	6.3		5.4		5.4	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	386	226	180		423		315	
Service Time	6.1	5.5	6.3		5.4		5.4	
Utilization, x	0.90	0.49	0.42		0.86		0.64	
Dep. headway, hd	8.35	7.84	8.32		7.36		7.36	
Capacity	427	455	389		479		457	
Delay	50.20	17.90	17.13		41.52		22.74	
LOS	F	C	C		E		C	
Approach:								
Delay	38.27		17.13		41.52		22.74	
LOS	E		C		E		C	
Intersection Delay	33.48		Intersection LOS		D			

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project With Dev
Project ID:
East/West Street: Vineyard St.
North/South Street: Municipal Parking Lot
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		177	67	94	506	
Peak-Hour Factor, PHF		0.79	0.79	0.83	0.83	
Hourly Flow Rate, HFR		224	84	113	609	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	11		32			
Peak Hour Factor, PHF	0.72		0.72			
Hourly Flow Rate, HFR	15		44			
Percent Heavy Vehicles	2		2			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		113		59				
C(m) (vph)		1253		734				
v/c		0.09		0.08				
95% queue length		0.30		0.26				
Control Delay		8.2		10.3				
LOS		A		B				
Approach Delay				10.3				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project With Dev
Project ID:
East/West Street: Vineyard St.
North/South Street: Municipal Parking Lot
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		356	21	62	338	
Peak-Hour Factor, PHF		0.81	0.81	0.92	0.92	
Hourly Flow Rate, HFR		439	25	67	367	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	47		153			
Peak Hour Factor, PHF	0.64		0.64			
Hourly Flow Rate, HFR	73		239			
Percent Heavy Vehicles	2		2			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		67		312				
C(m) (vph)		1097		736				
v/c		0.06		0.42				
95% queue length		0.19		2.12				
Control Delay		8.5		13.4				
LOS		A		B				
Approach Delay				13.4				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project With Dev
Project ID:
East/West Street: Vineyard St.
North/South Street: Church St.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	231	32	205	303	9
Peak-Hour Factor, PHF	0.75	0.75	0.75	0.92	0.92	0.92
Hourly Flow Rate, HFR	4	308	42	222	329	9
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				13	15	0
Peak Hour Factor, PHF				0.75	0.75	0.75
Hourly Flow Rate, HFR				17	20	0
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR					LTR	
v (vph)	4	222					37	
C(m) (vph)	1221	1209					274	
v/c	0.00	0.18					0.14	
95% queue length	0.01	0.67					0.46	
Control Delay	8.0	8.6					20.2	
LOS	A	A					C	
Approach Delay							20.2	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project With Dev
Project ID:
East/West Street: Vineyard St.
North/South Street: Church St.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	374	61	112	265	8
Peak-Hour Factor, PHF	0.77	0.77	0.77	0.87	0.87	0.87
Hourly Flow Rate, HFR	3	485	79	128	304	9
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				3	10	2
Peak Hour Factor, PHF				0.50	0.50	0.50
Hourly Flow Rate, HFR				6	20	4
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR					LTR	
v (vph)	3	128					30	
C(m) (vph)	1247	1008					318	
v/c	0.00	0.13					0.09	
95% queue length	0.01	0.43					0.31	
Control Delay	7.9	9.1					17.5	
LOS	A	A					C	
Approach Delay							17.5	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project With Dev
Project ID:
East/West Street: Pili St.
North/South Street: Church St.
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				9	243	
Peak-Hour Factor, PHF				0.90	0.90	
Hourly Flow Rate, HFR				10	270	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes				0	1	
Configuration				LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	21					
Peak Hour Factor, PHF	0.69					
Hourly Flow Rate, HFR	30					
Percent Heavy Vehicles	2					
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1					
Configuration	L					

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)		10	30					
C(m) (vph)		1623	1015					
v/c		0.01	0.03					
95% queue length		0.02	0.09					
Control Delay		7.2	8.7					
LOS		A	A					
Approach Delay				8.7				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project With Dev
Project ID:
East/West Street: Pili St.
North/South Street: Church St.
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				7	176	
Peak-Hour Factor, PHF				0.67	0.67	
Hourly Flow Rate, HFR				10	262	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes				0	1	
Configuration				LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	77					
Peak Hour Factor, PHF	0.79					
Hourly Flow Rate, HFR	97					
Percent Heavy Vehicles	2					
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1					
Configuration	L					

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)		10	97					
C(m) (vph)		1623	1024					
v/c		0.01	0.09					
95% queue length		0.02	0.31					
Control Delay		7.2	8.9					
LOS		A	A					
Approach Delay				8.9				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project With Dev
Project ID:
East/West Street: Main St.
North/South Street: Church St.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		439	85	33	390	
Peak-Hour Factor, PHF		0.86	0.86	0.91	0.91	
Hourly Flow Rate, HFR		510	98	36	428	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				58	133	73
Peak Hour Factor, PHF				0.85	0.85	0.85
Hourly Flow Rate, HFR				68	156	85
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				1	1	0
Configuration				L		TR

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT				L		TR
v (vph)		36				68		241
C(m) (vph)		970				396		416
v/c		0.04				0.17		0.58
95% queue length		0.12				0.61		3.55
Control Delay		8.9				16.0		24.9
LOS		A				C		C
Approach Delay							22.9	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.4

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 12/2/2010
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: With Project With Dev
Project ID:
East/West Street: Main St.
North/South Street: Church St.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		462	60	39	462	
Peak-Hour Factor, PHF		0.95	0.95	0.91	0.91	
Hourly Flow Rate, HFR		486	63	42	507	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				78	72	103
Peak Hour Factor, PHF				0.77	0.77	0.77
Hourly Flow Rate, HFR				101	93	133
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		No /
Lanes				1	1	0
Configuration				L		TR

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT				L		TR
v (vph)		42				101		226
C(m) (vph)		1021				371		493
v/c		0.04				0.27		0.46
95% queue length		0.13				1.09		2.37
Control Delay		8.7				18.3		18.3
LOS		A				C		C
Approach Delay							18.3	
Approach LOS							C	

APPENDIX F

CAPACITY ANALYSIS CALCULATIONS
PROJECTED PEAK HOUR TRAFFIC
ANALYSIS WITH PROJECT AT FULL CAPACITY WITH IMPROVEMENTS

HCS+: Signalized Intersections Release 5.4

Analyst: CL
Agency:
Date: 12/2/2010
Period: AM Peak
Project ID: With Improvements
E/W St: Vineyard St

Inter.:
Area Type: All other areas
Jurisd:
Year : With Project With Dev

N/S St:

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	0	1	1	0	1	0	1
LGConfig	L	T			TR		L	TR		L		R
Volume	145	64			134	40	33	223	27	38		433
Lane Width	12.0	12.0			12.0		12.0	12.0		12.0		12.0
RTOR Vol						4			3			43

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru	A					Thru	A			
Right						Right	A			
Peds						Peds				
WB Left					SB	Left	A			
Thru	A					Thru				
Right	A					Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	38.0						42.0			
Yellow	4.0						4.0			
All Red	1.0						1.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	404	958	0.47	0.42	19.6	B		
T	787	1863	0.11	0.42	15.8	B	18.5	B
Westbound								
TR	764	1810	0.32	0.42	17.6	B	17.6	B
Northbound								
L	826	1770	0.05	0.47	13.1	B		
TR	856	1835	0.34	0.47	15.5	B	15.2	B
Southbound								
L	452	968	0.10	0.47	13.5	B		
							18.5	B
R	739	1583	0.59	0.47	19.0	B		

Intersection Delay = 17.5 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.4

Analyst: CL
Agency:
Date: 12/2/2010
Period: PM Peak
Project ID: With Improvements
E/W St: Vineyard St

Inter.:
Area Type: All other areas
Jurisd:
Year : With Project With Dev
N/S St:

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	0	1	1	0	1	0	1
LGConfig	L	T			TR		L	TR		L		R
Volume	321	188			105	60	38	300	73	47		257
Lane Width	12.0	12.0			12.0		12.0	12.0		12.0		12.0
RTOR Vol						6			7			26

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru	A					Thru	A			
Right						Right	A			
Peds						Peds				
WB Left					SB	Left	A			
Thru	A					Thru				
Right	A					Right	A			
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	44.0						36.0			
Yellow	4.0						4.0			
All Red	1.0						1.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	557	1139	0.69	0.49	21.6	C		
T	911	1863	0.25	0.49	13.5	B	18.6	B
Westbound								
TR	869	1777	0.20	0.49	13.1	B	13.1	B
Northbound								
L	708	1770	0.06	0.40	16.6	B		
TR	725	1812	0.52	0.40	21.1	C	20.7	C
Southbound								
L	297	743	0.16	0.40	17.6	B		
							19.2	B
R	633	1583	0.38	0.40	19.5	B		

Intersection Delay = 18.7 (sec/veh) Intersection LOS = B

Appendix P
Draft Environmental Assessment Comments & Responses

NEIL ABERCROMBIE
GOVERNOR

JAN S. GOUVEIA
ACTING COMPTROLLER

KERRY K. YONESHIGE
ACTING DEPUTY COMPTROLLER

STATE OF HAWAI'I
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAI'I 96810-0119

(P)1311.1

RECEIVED
NOV 14 2011
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

CC: Raymond
10/078

NOV 10 2011

Mr. David Goode, Director
Department of Public Works
County of Maui
200 South High Street
Wailuku, Hawaii 96793

Dear Mr. Goode:

Subject: Wailuku Municipal Parking Structure
Draft Environmental Assessment
EIS Law (Ch. 343, HRS and 11-200, HAR)
TMK (2) 3-4-013:075

Thank you for the opportunity to provide comments for the subject project. This project does not impact any Department of Accounting and General Services' projects or existing facilities in the general area, and we have no comments to offer at this time.

If you have any questions, please call me at 586-0400 or have your staff call Mr. Alva Nakamura of the Public Works Division at 586-0488.

Sincerely,

JAN S. GOUVEIA
Acting State Comptroller

c: Mr. Michael Summers, Chris Hart & Partners, Inc.

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

February 6, 2012

Ms. Jan S. Gouveia, Acting State Comptroller
State Department of Accounting and General Services
P.O. Box 119
Honolulu, Hawaii 96810-0119

Attention: Mr. Alva Nakamura

Dear Ms. Gouveia:

Re: **Draft Environmental Assessment** for the Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Thank you for your November 10, 2011 "no comments" letter in response to the Draft Environmental Assessment (EA) for the subject project.

We acknowledge your statement that this project does not impact any Department of Accounting and General Services' projects or existing facilities in the general area.

If you have any further questions, please contact myself or Raymond Cabebe of our office.

Sincerely,

Michael J. Summers

Michael J. Summers
Senior Land Planner

MJS:rrc
attachment

c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

RECEIVED
2011 DEC 12 PM 3:13
COUNTY OF MAUI
PUBLIC WORKS

RECEIVED
COUNTY OF MAUI
DEC 16 AM 9:27
PLANNING DIVISION
DEPARTMENT OF PUBLIC WORKS

NEIL ABERCROMBIE
GOVERNOR
STATE OF HAWAI'I

STATE OF HAWAI'I
DEPARTMENT OF HAWAIIAN HOME LANDS
P. O. BOX 1879
HONOLULU, HAWAI'I 96805

ALBERT "ALAPAKI" NAHALE-A
CHAIRMAN
HAWAIIAN HOMES COMMISSION

MICHELLE K. KAUHANE
DEPUTY TO THE CHAIRMAN

M. WAIALEALE SARSONA
EXECUTIVE ASSISTANT

1601 ☐ RUSH

DEPT. OF PUBLIC WORKS

	INFO	ACTION	SEE ME	COMMENTS	COPY	FILE
DIRECTOR						
DEPUTY DIR.						
PERS.						
DSA						
ENGR.						
HWY.						
SECTY.						
_____						
_____						

Return to_____Due_____
By:_____Date:_____

November 28, 2011

Mr. David Goode, Director
Department of Public Works, County of Maui
200 South Street
Wailuku, Hawaii 96793

Aloha Mr. Goode:

Thank you for your letter dated October 27, 2011 regarding the review of the Draft Environmental Assessment prepared pursuant to the EIS law (Ch. 343, HRS and 11-200, HAR) relating to the Wailuku Municipal Parking Structure TMK (2)3-4-013:075.

The Department of Hawaiian Homes Lands is the State of Hawaii's largest affordable housing developer serving the needs of native Hawaiians pursuant to the Hawaiian Homes Commission Act, 1920, as amended.

The Department has reviewed the assessment and anticipates that the project will not impact DHHL's statewide development program and therefore has no comments to add to the assessment.

Thank you for the opportunity to provide these comments. If you have any questions, please do not hesitate to contact me at (808) 620-9501 or the DHHL Planning Office staff, Bob Freitas at (808) 620-9484.

Me ke aloha,

Albert "Alapaki" Nahale-a, Chairman
Hawaiian Homes Commission

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

February 6, 2012

Mr. Albert "Alapaki" Nahale-a, Chairman
Hawaiian Homes Commission
Department of Hawaiian Home Lands
P.O. Box 1879
Honolulu, HI 96805

Dear Mr. Nahale-a:

Re: **Draft Environmental Assessment** for the Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Thank you for your November 28, 2011 "no comment" letter in response to the Draft Environmental Assessment (EA) for the subject project. We acknowledge that the Department of Hawaiian Home Lands (DHHL) anticipates that the project will not impact DHHL's statewide development program.

If you have any further questions, please contact myself or Raymond Cabebe of our office.

Sincerely,

Michael J. Summers

Michael J. Summers
Senior Land Planner

MJS:rrc
attachment

c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

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

RECEIVED
NOV 17 2011
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

cc: Raymond
101078

November 16, 2011

Mr. David Goode
Director
Department of Public Works
County of Maui
200 South High Street
Wailuku, Hawai`i 96793

Dear Mr. Goode:

Subject: **Wailuku Municipal Parking Structure**
Wailuku, Maui
TMK: (2) 3-4-013:075

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

1. National Pollutant Discharge Elimination System (NPDES) permit coverage maybe required for this project. The Clean Water Branch should be contacted at 808 586-4309.

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

It is strongly recommended that the Standard Comments found at the Department's website: http://hawaii.gov/health/environmental/env-planning/landuse/landuse.html be reviewed, and any comments specifically applicable to this project should be adhered to.

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

Sincerely,

Patti Kitkowski
District Environmental Health Program Chief

c Chris Hart & Partners, Inc.

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

February 6, 2012

Ms. Patti Kitkowski, District Environmental Health Program Chief
Maui District Health Office
Department of Health
54 High Street
Wailuku, HI 96793

Dear Ms. Kitkowski:

Re: **Draft Environmental Assessment** for the Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Thank you for your November 16, 2011 letter in response to the Draft Environmental Assessment (EA) for the subject project. We offer the following responses to your comments as enumerated in your memorandum:

1. It is anticipated that a National Pollutant Discharge Elimination System (NPDES) permit will not be required for this project. During construction, a Best Management Practices (BMP) plan to retain storm water on-site will be implemented. At completion of the project, storm water flow will be reduced by 0.28 cfs. Your Clean Water Branch did not provide any comments.
2. The contractor will obtain a noise permit prior to construction activities that are expected to exceed maximum permissible levels. The Indoor & Radiological Health Branch did not provide any comments.

If you have any further questions, please contact myself or Raymond Cabebe of our office.

Sincerely,

Michael J. Summers

Michael J. Summers
Senior Land Planner

MJS:rrc
attachment
c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
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

February 2, 2012

County of Maui
Department of Public Works
Attention: Mr. David Goode, Director
200 S. High Street
Wailuku, Hawaii 96793

via email: david.goode@co.maui.hi.us

Dear Mr. Goode:

SUBJECT: Draft Environmental Assessment - Wailuku Municipal Parking Structure - Wailuku, Island of Maui; TMK: (2) 3-4-013:075

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

At this time, enclosed are comments from (a) Engineering Division; and (b) Land Division – Maui District on the subject matter. Should you have any questions, please feel free to call Darlene Nakamura at 587-0417. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosures

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

'12 JAN 19 AM 11:20 ENGINEERING

WILLIAM J. AILA, JR.
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

January 18, 2012

MEMORANDUM

RECEIVED
LAND DIVISION
2012 JAN 27 P 3:21
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

TO: **DLNR Agencies:**
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
✓ X Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
__Commission on Water Resource Management
X Office of Conservation & Coastal Lands
X Land Division – Maui District
X Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment - Wailuku Municipal Parking Structure
LOCATION: Wailuku, Island of Maui; TMK: (2) 3-4-013:075
APPLICANT: Chris Hart & Partners, Inc. on behalf of the County of Maui

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by January 30, 2012.

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

Attachments

( ) We have no objections.
( ) We have no comments.
(✓) Comments are attached.

Signed:
Date: 1/26/12

cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

DL/DarleneNakamura
REF.:DEAWailukuMunicipalStructure
Maui.561

COMMENTS

(X) **We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone X. The National Flood Insurance Program does not have any regulations for developments within Zone X.**

( ) Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone____.

( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ___.

( ) Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

( ) Mr. Robert Sumitomo at (808) 768-8097 or Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting..

( ) Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.

( ) Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.

( ) Ms. Wynne Ushigome at (808) 241-4890 of the County of Kauai, Department of Public Works.

( ) The applicant should include water demands and infrastructure required to meet project needs. Please note that projects within State lands requiring water service from the Honolulu Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.

( ) he applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update

( ) Additional Comments: _____

_____

( ) Other: _____

_____

Should you have any questions, please call Ms. Suzie S. Agraan of the Planning Branch at 587-0258.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 1/21/11

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RECEIVED
LAND DIVISION
2012 JAN 25 A 8:03
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

2012 JAN 23 PM 12:12
MAUI DISTRICT
LAND DIVISION

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

January 18, 2012

MEMORANDUM

TO: **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_ Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
___Commission on Water Resource Management
_X_ Office of Conservation & Coastal Lands
_X_ Land Division – Maui District
_X_ Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment - Wailuku Municipal Parking Structure
LOCATION: Wailuku, Island of Maui; TMK: (2) 3-4-013:075
APPLICANT: Chris Hart & Partners, Inc. on behalf of the County of Maui

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by January 30, 2012.

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

Attachments

( ) We have no objections.
(X) We have no comments.
( ) Comments are attached.

Signed:
Date: 1/23/12

cc: Central Files

CE-5

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
JADE T. BUTAY
FORD N. FUCHIGAMI
RANDY GRUNE
JADINE URASAKI

IN REPLY REFER TO:
STP 8.0644
DIR 1479

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

November 23, 2011

Mr. David Goode
Director
County of Maui
Department of Public Works
200 South High Street
Wailuku, Hawaii 96793

Dear Mr. Goode:

Subject: Wailuku Municipal Parking Structure
Draft Environmental Assessment (DEA)

The State Department of Transportation (DOT) previously commented on the subject case during pre-consultation for the draft environmental assessment in its letter STP 8.0444 dated May 24, 2011 (see Appendix C of the DEA).

The DOT Highways Division, Planning Branch is still reviewing the subject project. Until this review is completed, DOT's prior comments remain valid. DOT Highways Division is still conducting its review of the subject DEA and will provide additional comments as necessary.

DOT appreciates the opportunity to provide comments. If there are any other questions, including the need to meet with DOT Highways Division staff, please contact Mr. Elton Teshima of the DOT Statewide Transportation Planning Office at (808) 831-7978.

Very truly yours,

GLENN M. OKIMOTO, Ph.D.
Director of Transportation

EKT:cc

c: Chris Hart, Chris Hart & Partners, Inc.

bc: HWY-M, -P, STP (ET)

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
JADE T. BUTAY
FORD N. FUCHIGAMI
RANDY GRUNE
JADINE URASAKI

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

IN REPLY REFER TO:
STP 8.0660

RECEIVED
DEC 13 2011
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

December 5, 2011

CC: Raymond
12/07/8

Mr. David Goode
Director
County of Maui
Department of Public Works
200 South High Street
Wailuku, Hawaii 96793

Dear Mr. Goode:

Subject: Wailuku Municipal Parking Structure
Draft Environmental Assessment (DEA)

The State Department of Transportation (DOT) previously commented on the DEA in its letter STP 8.0644 dated November 23, 2011 (attached) and now offers the following supplemental comment.

The DOT Highways staff completed its review of the DEA and the Traffic Impact Report (TIR). The Highways Division concurs with the DEA and TIR that the future traffic impacts cannot be accurately projected due to the many unknown factors, such as land use types and implementation schedules regarding redevelopment of the Wailuku town area.

Therefore, based solely upon the trip generation calculations and intersection Level-Of Service (LOS) analysis provided in the TIR, DOT does not anticipate any significant adverse impacts to the State transportation facilities.

If there are any questions or the need to meet with Highways Division staff, please contact Mr. Elton Teshima of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7978.

Very truly yours,

GLENN M. OKIMOTO, Ph.D.
Director of Transportation

Attachment: Ltr. STP 8.0644 dtd. 11/23/11

c: Chris Hart, Chris Hart & Partners, Inc.

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

February 6, 2012

Mr. Glenn M. Okimoto, Director
State Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Attention: Mr. Elton Teshima

Dear Mr. Okimoto:

Re: **Draft Environmental Assessment** for the Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Thank you for your December 5, 2011 letter in response to the Draft Environmental Assessment (EA) for the subject project.

We acknowledge your concurrence with Draft EA and Traffic Impact Report that future traffic impacts cannot be accurately projected due to many unknown factors. We also acknowledge that your Department does not anticipate significant adverse impacts to State transportation facilities.

If you have any further questions, please contact myself or Raymond Cabebe of our office.

Sincerely,

Michael J. Summers

Michael J. Summers
Senior Land Planner

MJS:rrc
attachment

c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

ALAN M. ARAKAWA
Mayor

KYLE K. GINOZA, P.E.
Director

MICHAEL M. MIYAMOTO
Deputy Director

TRACY TAKAMINE, P.E.
Solid Waste Division

ERIC NAKAGAWA, P.E.
Wastewater Reclamation Division

RECEIVED
NOV - 7 2011
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning
CHP #11078
Mike, Ray

COUNTY OF MAUI
DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT
2200 MAIN STREET, SUITE 100
WAILUKU, MAUI, HAWAII 96793

November 3, 2011

Mr. Michael Summers
Chris Hart & Partners, Inc.
115 North Market Street
Wailuku, Hawaii 96793

SUBJECT: WAILUKU MUNICIPAL PARKING STRUCTURE
DRAFT ENVIRONMENTAL ASSESSMENT
TMK (2) 3-4-013:075, WAILUKU

We reviewed the subject application and have the following comments:

1. Solid Waste Division comments:

   a. None.

2. Wastewater Reclamation Division (WWRD) comments:

   a. Construction plans shall show the County's existing sewerline running through Pili Street of the subject property.

If you have any questions regarding this memorandum, please contact Michael Miyamoto at 270-8230.

Sincerely,

KYLE K. GINOZA, P.E.
Director of Environmental Management

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

February 6, 2012

Mr. Wade Oshiro, Housing Administrator
Department of Housing and Human Concerns
35 Lunalilo Street, Suite 102
Wailuku, HI 96793

Attention: Mr. Veranio Tongson, Jr.

Dear Mr. Oshiro:

Re: **Draft Environmental Assessment** for the Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Thank you for your November 1, 2011 memorandum in response to the Draft Environmental Assessment (EA) for the subject project. The applicant acknowledges your determination that the project is not subject to Chapter 2.98, Maui County Code.

If you have any further questions, please contact myself or Raymond Cabebe of our office.

Sincerely,

Michael J. Summers

Michael J. Summers
Senior Land Planner

MJS:rrc
attachment

c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

DEPARTMENT OF
HOUSING AND HUMAN CONCERNS
HOUSING DIVISION
COUNTY OF MAUI

ALAN M. ARAKAWA
Mayor
JO-ANN T. RIDAO
Director
JAN SHISHIDO
Deputy Director

35 LUNALILO STREET, SUITE 102 • WAILUKU, HAWAII 96793 • PHONE (808) 270-7351 • FAX (808) 270-6284

RECEIVED
NOV - 3 2011
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

CC: Raymond
10/078

MEMORANDUM

TO: David Goode, Director
Department of Public Works, County of Maui

FROM: Wayde Oshiro, Housing Administrator
Housing Division

DATE: November 1, 2011

SUBJECT: Draft Environmental Assessment (EA) on the Proposed County of Maui Wailuku Municipal Parking Structure at TMK (2) 3-4-013:075, Wailuku, Maui, Hawaii

The Department has reviewed the Draft Environmental Assessment (EA) for the above subject project. Based on our review, we have determined that the subject project is not subject to Chapter 2.96, Maui County Code. At the present time, the Department has no additional comments to offer.

Please call Mr. Veranio Tongson Jr. of our Housing Division at (808) 270-1741 if you have any questions.

cc: Director of Housing and Human Concerns
Chris Hart & Partners, Inc. ✓

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

February 6, 2012

Mr. Wade Oshiro, Housing Administrator
Department of Housing and Human Concerns
35 Lunalilo Street, Suite 102
Wailuku, HI 96793

Attention: Mr. Veranio Tongson, Jr.

Dear Mr. Oshiro:

Re: **Draft Environmental Assessment** for the Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Thank you for your November 1, 2011 memorandum in response to the Draft Environmental Assessment (EA) for the subject project. The applicant acknowledges your determination that the project is not subject to Chapter 2.98, Maui County Code.

If you have any further questions, please contact myself or Raymond Cabebe of our office.

Sincerely,

Michael J. Summers

Michael J. Summers
Senior Land Planner

MJS:rrc
attachment

c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

ALAN M. ARAKAWA
Mayor

DAVID C. GOODE
Director

ROWENA M. DAGDAG-ANDAYA
Deputy Director

RALPH M. NAGAMINE, L.S., P.E.
Development Services Administration

CARY YAMASHITA, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
DEVELOPMENT SERVICES ADMINISTRATION
250 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

November 14, 2011

RECEIVED
NOV 16 2011
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning
CL: Raymond
10/078

Mr. Michael Summers
CHRIS HART & PARTNERS, INC.
115 North Market Street
Wailuku, Maui, Hawaii 96793

Subject: DRAFT ENVIRONMENTAL ASSESSMENT FOR
THE WAILUKU MUNICIPAL PARKING STRUCTURE
TMK:(2) 3-4-013:075

Dear Mr. Summers:

We reviewed the subject application and have no comments at this time.

Please call Rowena M. Dagdag-Andaya at 270-7845 if you have any questions regarding this letter.

Sincerely,

for David C. Goode
Director of Public Works

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xc: Highways Division
Engineering Division

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

February 6, 2012

Mr. David C. Goode, Director
Department of Public Works
250 South High Street
Wailuku, HI 96793

Attention: Ms. Rowena M. Dagdag-Andaya

Dear Mr. Goode:

Re: **Draft Environmental Assessment** for the Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Thank you for your November 14, 2011 "no comments" letter in response to the Draft Environmental Assessment (EA) for the subject project.

If you have any further questions, please contact myself or Raymond Cabebe of our office.

Sincerely,

Michael J. Summers

Michael J. Summers
Senior Land Planner

MJS:rrc
attachment

c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

ALAN M. ARAKAWA
Mayor

DAVID TAYLOR, P.E.
Director

PAUL J. MEYER
Deputy Director

DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2155
www.mauiwater.org

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NOV 17 2011
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

CC: Raymond 101078

November 8, 2011

Mr. David Goode, Director
Department of Public Works, County of Maui
200 South High Street
Wailuku, Hawaii 96793

Subject: Wailuku Municipal Parking Structure, TMK: 3-4-013:075
Draft Environmental Assessment

Dear Mr. Goode,

Thank you for the opportunity to comment on this Draft Environmental Assessment (DEA). We note that our comment letter to this project dated April 26, 2011 is included in the DEA and that appropriate conservation measures will be utilized to reduce irrigation demand.

The subject property is located in the wellhead protection area of Department of Water Supply wells in the Iao aquifer. In addition to required best management practices (BMPs) to address soil erosion from construction according to Maui County Code Chapter 20.08, we recommend that the following BMPs be implemented to address ground water protection:

1. There shall be a designated person on site during operating hours who is responsible for supervising the use, storage, and handling of hazardous material and who shall take appropriate mitigating actions necessary in the event of fire or spill.
2. Hazardous materials left on site when the site is unsupervised must be inaccessible to the public. Locked storage sheds, locked fencing, locked fuel tanks on construction vehicles, or other techniques may be used if they will preclude access.
3. Construction vehicles and stationary equipment that are found to be leaking fuel, hydraulic fluid, and/or other hazardous materials shall be removed from the site and from the wellhead protection area. The vehicle or equipment may be repaired in place, provided the leakage is completely contained.
4. Hazardous materials shall not be allowed to enter stormwater systems.

Should you have any questions, please contact Staff Planner Eva Blumenstein at 244-8542 or eva.blumenstein@co.maui.hi.us.

Sincerely,

David Taylor, Director
emb

"By Water All Things Find Life"

Printed on recycled paper

Wailuku Wellhead Protection Area



Legend

maui_roadnames_08_03

dws_whpas_10yr

N

W E

0 625 1,250 Feet

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

February 6, 2012

Mr. David Taylor, Director
Department of Water Supply
200 South High Street
Wailuku, HI 96793

Attention: Ms. Eva Blumenstein

Dear Mr. Taylor:

Re: **Draft Environmental Assessment** for the Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Thank you for your November 8, 2011 letter in response to the Draft Environmental Assessment (EA) for the subject project. The Best Management Practices (BMP) recommended to address ground water protection will be implemented and incorporated in the Final EA.

If you have any further questions, please contact myself or Raymond Cabebe of our office.

Sincerely,

Michael J. Summers

Michael J. Summers
Senior Land Planner

MJS:rrc
attachment

c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

COUNTY OF MAUI

MAUI REDEVELOPMENT AGENCY

November 15, 2011

Mr. Michael Summers
Chris Hart & Partners, Inc.
115 North Market Street
Wailuku, Hawaii 96793

Dear Mr. Summers:

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR THE PROPOSED WAILUKU MUNICIPAL PARKING STRUCTURE, LOCATED IN DOWNTOWN WAILUKU, ISLAND OF MAUI, HAWAII; TMK: (2) 3-4-013:075

On November 7, 2011 the Maui Redevelopment Agency (MRA) held a special meeting to discuss the Draft Environmental Assessment document for the Wailuku Municipal Parking Structure.

Based on the foregoing, the Maui Redevelopment Agency provides the following comments on the Draft EA:

1. The statement made on Page 33 of the report stating, "the proposed parking structure is not anticipated to generate additional vehicular trips" appears to be in error. It is the redevelopment agency's contention that access to available parking will increase traffic to existing businesses, and that the creation of additional parking stalls will encourage new businesses to locate within the redevelopment area. The Wailuku Market Based Plan, referenced in the Appendix states on Page 42, "Consumers view the lack of convenient parking as an impediment to visitation." This would suggest that the creation of convenient parking itself would directly create additional trips.

   Furthermore, the Parking Management Plan states that the Central Market sub-area is approximately 200 stalls "underparked" (p. 23). This information suggests that even with no change in the number or intensity of land uses, at least 200 more vehicles would utilize parking in the Central Market sub-area if it was available. Both of these resources suggest that the parking structure will generate additional vehicular trips. The MRA recommends this assumption be modified accordingly.

2. The Draft EA states that the Vineyard and Market Street intersection is projected to operate at a Level of Service F, which the MRA feels is unacceptable. The MRA would like the project team to explore alternatives to alleviate traffic at the Vineyard and Market Street intersection, including the original concept of a right-in, right-out point of access onto Main Street. This alternative was not discussed in the Draft Environmental

Assessment document, but the MRA believes it deserves a thorough analysis.

3. On page 35 of the Draft EA, it states that a stop for the Maui Bus has been proposed, however the location has not been determined. Access to public transit in close proximity to the site is a high priority for the MRA. Again, an access point on Main Street, might create an opportunity for a transit stop closer to the intersection of Market and Main. The MRA would like the project team to evaluate a bus stop on Main Street.

4. Many of the comments made by the MRA during the pre-consultation period have been incorporated into the revised architectural design, which is greatly appreciated. However, a couple of the architectural concerns were either not addressed or are unclear in the architectural renderings provided in the Draft EA. These issues include the following:

    a. Providing for better fenestration of the building to break-up the scale and massing. In particular, the agency expressed concern about the shear walls and recommended some type of treatment – be it public art, living walls, or simply panels that create texture and interest.

    b. It is unclear from the rendering if the design team replaced the glass walls in the elevator with open, Art Deco grille work that meets all Code standards. This was an earlier recommendation that the MRA continues to support. The board wanted it stated that glass elevators are difficult to keep clean and can be very hot, smelly and uncomfortable.

5. The MRA felt it should be acknowledged in the EA that the interim parking plan, described on page 25, has the potential to significantly impact the community – in particular the residential areas. The impacts and proposed mitigative measures should be explained in this section of the EA.

6. The percentage of State and County employees parking in the Wailuku Municipal Parking lot is a concern for the Maui Redevelopment Agency. In order for the parking structure to fulfill the community's goal for the facility – as a public infrastructure asset that will inspire economic development – the State and County employee parking deficit needs to be addressed. The MRA would like to utilize the EA process as a forum to create a combined parking management plan for the Wailuku Redevelopment Area, the Government Campuses, the Wailuku Historic District and surrounding neighborhoods.

7. A discussion about the long term management and maintenance of the parking structure is missing from the Draft Environmental Assessment. A poorly managed and maintained parking structure can have a negative impact on the community. The potential impacts and proposed mitigative measures should be explained in the EA. Further, it should be acknowledged in this section that great effort was taken in the design of the structure to ensure ease of maintenance including the hose bibs, the open air design, and single point of ingress and egress.

8. The MRA felt it was important to acknowledge that several members of the community

have testified that the loss of the open space in the downtown core has been perceived as a negative impact. While the Wailuku Municipal Parking lot is not a park or even a very effective festival space in its current condition, the occupation of this site with a multi-story building, does preclude the use of this space for those purposes. The MRA acknowledges that it will be important to develop a strategy to create community gathering spaces, parks and green space within the downtown core.

Finally, public testimony on the parking structure has included recommendations that the building be designed as a shelter for use during natural disasters. The MRA understands that the building, as designed today, could not function as anything more than a very short-term shelter, perhaps for those who have been evacuated from the shoreline during a threatened tsunami event. However, the building design does not include the necessary facilities or weather-tight construction to function as a FEMA approved shelter. The MRA would like to request the EA describe why the structure is not being planned as an emergency shelter today, and what the possibilities might be to retrofit the building as an emergency shelter in the future.

Thank you for the opportunity to comment. Should you require further clarification, please contact, the Maui Redevelopment Agency Staff Planner Erin Wade at erin.wade@mauicounty.gov or at (808) 270-5517.

Sincerely,

Erin Wade

for ALEXA BETTS BASINGER
Maui Redevelopment Agency Chair

xc: Erin K. Wade, AICP, Staff Planner
Maui Redevelopment Agency Members
Wendy Taomoto, CIP Coordinator
Wendy Kobashigawa, P.E. Public Works
Morgan Gerdel, AIA, ADC
Joe Alueta, Project Manager
2011 EAC File
General File

ABB:EKW
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CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

May 9, 2012

Ms. Katharine Popenuk, Chair
Maui Redevelopment Agency
250 South High Street
Wailuku, HI 96793

Attention: Ms. Erin Wade

Dear Ms. Popenuk:

Re: **Draft Environmental Assessment** for the Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Thank you for the November 15, 2011 comment letter from your predecessor, Ms. Alexa Betts Basinger, regarding the Draft Environmental Assessment (EA) for the subject project. We offer the following responses to your comments:

1. Please note that the Traffic Impact Report (TIR) prepared by Wilson Okamoto Corporation (Appendix "O", July 2011) actually states, "the proposed parking structure is not anticipated to generate any additional vehicular trips in the project vicinity until ... future developments are completed." (emphasis added)

   The TIR acknowledges that with additional development in the vicinity, traffic accessing the parking structure would increase. As a point of information, the TIR was accepted by both the Department of Public Works and the State Department of Transportation (DOT). The State DOT director concurs that "future traffic impacts cannot be accurately projected due to many unknown factors ...". As a matter of methodology, the parking structure is not a final destination in itself; parking demand is created by land or building use. While studies suggest that the parking structure would encourage an increase in trips to the area, there are other factors (such as the willingness to pay for

for parking, fluctuations in the external market, etc.) that could affect the actual demand. Congestion can actually decrease by taking autos out of traffic quicker as drivers no longer need to search the block for on-street parking.

2. Please be aware that the "Full Capacity" LOS was determined in the TIR by correlating existing stalls to existing traffic and projecting traffic in connection with the number of future stalls. As discussed in the Draft EA, this also assumes that commercial activity increases empirically with the number of stalls, not a likely scenario at the conclusion of construction of the structure. The TIR for the proposed project includes potential improvements for the intersection of Vineyard Street and Market Street to mitigate future "Full Capacity" LOS "F" conditions and improve the LOS to at least a "C".

   The TIR also indicates that "each new development in the vicinity should be required to prepare a traffic impact study to verify future conditions and identify additional mitigative measures as necessary."

   The Main Street access alternative was not considered for the following reasons:

   - The close proximity of the access to the Main/Market Street intersection may have an impact on the queues at that intersection.
   - The access lane would eliminate parking stalls on the First Hawaiian Bank and Main Street Promenade properties.

3. The County Department of Transportation has not updated its Transit Plan to add any additional stops to existing routes and has not made any recommendations for this project. As such, it is premature to designate a bus stop to serve the project. Please note that there are four (4) bus stops (Malama I Ke Ola Health Clinic, Wells Street, High Street, and Kahekili Terrace) within a quarter-mile of an entrance to the proposed parking structure.

4. Due to the target deadline of the Draft EA, some of the architectural concerns were not addressed by the time of publication.

   a. The shear walls have been redesigned to break up the scale and mass using alternating textured panels. Decorative fiberglass plaques or medallions at each floor level on the columns match those found at the columns surrounding the stairwells.

b. Utilizing grilles for the elevator instead of glass was not feasible due to maintenance issues. The grilles would be labor intensive to clean and would also expose the elevator interior to the elements. We have retained the glass for the elevator and the shaft openings, but are now using tinted glass for the elevator shaft openings to deter heat gain. The elevator code requires forced ventilation in the elevator cab with an approved flow which addresses the concern of heat buildup in the elevator.

5. We acknowledge that depending upon the distance of the interim parking from the Municipal Parking Lot, businesses that rely upon this parking could be impacted. However, the longer term impact of the proposed parking structure will be to create an economic benefit to the community by addressing the lack of public parking stalls as a central constraint to revitalization.

6. We acknowledge your request for a comprehensive parking management plan; however, preparing one for the Wailuku Redevelopment Area, Government Campuses, and the Wailuku Historic District is outside the scope of this Draft EA.

7. Parking management will be discussed further in the Project Description section and will include the design issues that promote ease of maintenance. As suggested in the Wailuku Town Parking Study and Parking Management Plan Analysis (WTPS & PMPA) (Miller 2011), the concept of a Community Development Corporation (CDC), or a private/public partnership can be introduced. This entity would be responsible for the management and maintenance of the structure. The WTPS & PMPA did not provide specifics in terms of operational management.

8. We recognize the loss of open space caused by the construction of a multi-level structure, however the parking structure will provide the much needed additional parking for Wailuku Town. In addition, the interim at grade parking area on the remnant parcel, the areas surrounding the structure, and the open air upper level of the structure could most likely be used for gathering areas during special events.

9. The County already has designated emergency facilities that have the necessary facilities (kitchens, bathrooms) that can sustain the duration of a natural disaster. The proposed structure could function as a short term shelter of "last resort", but it is designed to operate most efficiently as a parking structure, its primary function. To make the structure more weather-proof would defeat its open design that provides natural ventilation, and a measure of security, in addition to reducing its perceived mass.

If you have any further questions, please contact myself, or Raymond Cabebe of our office.

Sincerely,

Michael J. Summers
Senior Associate

MJS:rrc
attachment
c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

ALAN M. ARAKAWA
Mayor

TEENA M. RASMUSSEN
Economic Development Director

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JAN 11 2012
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

OFFICE OF ECONOMIC DEVELOPMENT
COUNTY OF MAUI
2200 MAIN STREET, SUITE 305, WAILUKU, MAUI, HAWAII 96793, USA
Telephone: (808) 270-7710 • Facsimile: (808) 270-7995 • Email: economic.development@mauicounty.gov

cc: Raymond
10/078

January 9, 2012

Chris Hart and Partners, Inc.
115 N. Market Street
Wailuku, HI 96793-1717

Re: Wailuku Municipal Parking Structure

The Maui County Office of Economic Development is favorable to building the Wailuku Municipal Parking Structure as presented in the draft EIS.

First we believe that all business in Wailuku is hampered by the very restrictive 2 hour parking that exists for most of the town. We receive complaints constantly about parking. Examples of complaints that we have heard are:

1. There is no parking available.
2. The two hour limit is too short to even attend a meeting that someone may have with one of the many government agencies that exist in Wailuku.
3. They don't ever want to come to Wailuku because they will be ticketed for everything!
4. They are worried about parking on the narrow streets.
5. The metered parking does not allow enough time, and they must leave their business undone or leave their meeting to go feed the meter.

All of these types of complaints point to a very "business unfriendly" parking environment. We believe these issues do have an effect on people's attitudes about Wailuku. Regardless of the short term pain that building the new structure would have on Wailuku, we believe in the long-run it is the correct solution for Wailuku.

We have been very encouraged to see the renewed interest in historic Wailuku through the First Friday event. We have interviewed and heard merchants speak about how this event has revitalized their businesses. Since this event is in the evening, the attendees normally do not have a problem finding parking. But the merchants have told us that First Fridays is sparking people's interest to come to their shops at other times during the month. As this renewed interest in Wailuku builds, so will the daytime traffic. Our office has recently rolled out "Maui Friday Town Parties". Wailuku's First Friday is the flagship event. Since the first island-wide program started in November 2011, we have received enormous response from the press wanting to cover these events. We have not even unleashed our state-wide advertising and marketing campaign yet. We believe when we do so, it will put Wailuku in

the spotlight in even a bigger way, and will continue to drive residents and visitors to our County Seat. We did recently see an article in the Hawaii AAA magazine that touted Wailuku as a "not to be missed" stop.

The "Discover Wailuku" walking tour is also being promoted to visitors. This may turn out to be a very negative experience if the visitors arrive and cannot find a parking place or receive a parking ticket because they were on the tour for too long a period.

Lastly, we like the design of the proposed parking structure. It has been designed for aesthetics but also for cost and efficiency. We do not believe that Wailuku could afford a mostly enclosed facility, as some people have suggested, therefore we believe this design is appropriate. If the height of the structure becomes a point of contention, we would be agreeable to lowering it by one level.
If you have further questions, please do not hesitate to call.

Sincerely,

Teena M. Rasmussen
Director
Office of Economic Development

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

February 6, 2012

Ms. Teena M. Rasmussen, Director
Office of Economic Development
2200 Main Street, Suite 305
Wailuku, Hawaii 96793

Dear Ms. Rasmussen:

Re: **Draft Environmental Assessment** for the Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Thank you for your January 9, 2012 letter in response to the Draft Environmental Assessment (EA) for the subject project.

We acknowledge that your office is favorable to building the proposed Wailuku Municipal Parking Structure as presented due to the complaints received regarding parking in Wailuku. We also acknowledge that you are pleased with the design, as a balance between aesthetics, costm and efficiency.

If you have any further questions, please contact myself or Raymond Cabebe of our office.

Sincerely,

Michael J. Summers

Michael J. Summers
Senior Land Planner

MJS:rrc
attachment

c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

POLICE DEPARTMENT

COUNTY OF MAUI

ALAN M. ARAKAWA
MAYOR

OUR REFERENCE

YOUR REFERENCE

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

GARY A. YABUTA
CHIEF OF POLICE

CLAYTON N.Y.W. TOM
DEPUTY CHIEF OF POLICE

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PUBLIC WORKS

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DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

November 18, 2011

Mr. Michael Summers
Chris Hart & Partners, Inc.
115 N. Market Street
Wailuku, HI 96793

Dear Mr. Summers:

SUBJECT: DEA for Wailuku Municipal Parking Structure, TMK: (2) 3-4-013:075

This is in response to your letter requesting comments on the above subject.

We have reviewed the information submitted for the above mentioned project and would like to offer the enclosed comments. Thank you for allowing us to review this project.

Very truly yours,

Assistant Chief Victor K. Ramos
for: Gary A. Yabuta
Chief of Police

Enclosures

c: David Goode, Maui County Dept. of Public Works
William Spence, Maui County Dept. of Planning

1561 ☐ RUSH

DEPT. OF PUBLIC WORKS	INFO	ACTION	SEE ME	COMMENTS	COPY	FILE
DIRECTOR						
DEPUTY DIR.						
PERS.						
DSA						
ENGR.						
HWY.						
SECTY.						
_____						
_____						

Return to_____Due_____
By:_____Date:_____

TO : GARY YABUTA, CHIEF OF POLICE, COUNTY OF MAUI

VIA : CHANNELS

FROM : AYLETT WALLWORK, POLICE OFFICER III, COMMUNITY POLICING

SUBJECT : RESPONSE FOR REQUEST OF COMMENTS REGARDING WAILUKU MUNICIPAL PARKING STRUCTURE ENVIRONMENTAL ASSESSMENT

This communication is submitted as a response to a request for comments regarding the Wailuku Municipal Parking Structure Environmental Assessment submitted by Chris Hart and Partners on behalf of Department Of Public Works, County Of Maui.

PROJECT	:	Wailuku Municipal Parking Structure
TMK	:	(2) 3 - 4 - 013 : 075
ADDRESS	:	2061 West Vineyard Street, Wailuku, HI. 96793
TIME FRAME	:	February 2013 - August 2014

RESPONSE:

In review of the submitted documents, concerns from the police perspective are upon the safety of pedestrian and vehicular movement.

The Wailuku Municipal Parking Lot currently has 210 parking stalls, and provides the predominant source of public parking to Wailuku Town's businesses.

The County of Maui is proposing to construct a five (5) level parking structure, within the current Wailuku Municipal Parking Lot. Structure will have 351 parking stalls and with additional on-site on grade parking, there will be a total of 421 parking stalls on the subject property. Construction is estimated to begin in February 2013 and be completed by August 2014, duration of about 18 months.

During construction there are alternative parking sites that will be provided and shuttles, to and from the alternative sites. The locations would be tailored towards the targeted groups: County employees, State employees, and a group designated as merchant/customer/visitor. Other Options to address the parking demand by government employees include subsidized public transportation and/or a subsidized ride share/van pool program.

Construction site will be contained within the Wailuku Municipal Parking Lot, and pedestrians will not be allowed within the site. Construction traffic, entering and exiting the site will be done through the entrance on Vineyard Street. Construction traffic will not interfere with normal traffic, due to there will be no normal traffic entering or exiting the site. Construction traffic will not be using Market Street as a means of getting to the Vineyard Street entrance.

FOR APPROVAL TO SUBJECT
0/150 OBJECTIONS AT
THIS TIME.

Off-site parking will be provided for the construction workers in a vacant lot at Central Avenue and Loke Street.

Emergency services will be allowed to enter the site. There will be a clear lane to the rear of the businesses on Market Street within the Wailuku Municipal Parking Lot. The lane will be at least 20 feet around the site for police access.

CONCLUSION:

Construction will start in February 2013 and end in August of 2014. The construction site will be contained within the Wailuku Municipal Parking Lot, not interfering with vehicular traffic or pedestrian traffic. Alternative parking will be provided for surrounding government agencies and businesses. There are no objections to the progression of the project at this time

Respectfully submitted,

11764

Aylett WALLWORK, E# - 11764
Police Officer III / Community Policing
11/15/2011@ 1335 hours

No objections at this time.
Sgt [illegible] 11764
11/16/11 @ 0900

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

February 6, 2012

Assistant Chief Victor K. Ramos
Police Department
55 Mahalani Street
Wailuku, HI 96793

Attention: Officer Aylett Wallwork

Dear Asst. Chief Ramos:

Re: **Draft Environmental Assessment** for the Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Thank you for your November 18, 2011 letter in response to the Draft Environmental Assessment (EA) for the subject project. We acknowledge that your department has no objections to the progression of the project at this time.

If you have any further questions, please contact myself or Raymond Cabebe of our office.

Sincerely,

Michael J. Summers

Michael J. Summers
Senior Land Planner

MJS:rrc
attachment

c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

Maui Electric Company, Ltd. • 210 West Kamehameha Avenue • PO Box 398 • Kahului, Maui, HI 96733-6898 • (808) 871-8461

RECEIVED
NOV - 9 2011
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

cc: Mike + Ray
10/078

November 7, 2011

Mr. Michael Summers
Chris Hart & Partners, Inc.
115 North Market Street
Wailuku, Hawaii, 96793

Subject: Draft Environmental Assessment for the Wailuku Municipal Parking Structure
2601 West Vineyard Street
Wailuku, Maui, Hawaii
Tax Map Key: (2) 3-4-013:075

Dear Mr. Summers,

Thank you for allowing us to comment on the Pre-Consultation request for the subject project.

In reviewing our records and the information received, Maui Electric Company has no objection to the subject project at this time. If the customer requires an electric service upgrade, we highly encourage the customer to submit an electrical service request so that service can be provided on a timely basis.

We also suggest that the customer or their consultant make contact with our Engineering Department at 871-2390 to review potential electric/hybrid vehicle metering opportunities for their project; and our Renewable Energy Department at 871-8461 for the installation of the photovoltaic system.

Should you have any questions or concerns, please call me at 871-2341.

Sincerely,

Kyle Tamori
Engineer II

c: County of Maui, Dept. of Public Works – Mr. David Goode, Director

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

February 6, 2012

Mr. Kyle Tamori, Engineer II
Maui Electric Company
P.O. Box 398
Kahului, Hawaii 96732-6898

Dear Mr. Tamori:

Re: **Draft Environmental Assessment** for the Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Thank you for your November 7, 2011 "no objection" letter in response to the Draft Environmental Assessment (EA) for the subject project.

When appropriate, the County of Maui will submit a electrical service request. Also when appropriate, the electrical engineer will contact your Engineering Department and Renewable Energy Department in regards to the electric/hybrid vehicle metering and photovoltaic system.

If you have any further questions, please contact myself or Raymond Cabebe of our office.

Sincerely yours,

Michael J. Summers

Michael J. Summers
Senior Associate

MJS:rrc
attachment
c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerde
Mr. Douglas Gomes

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

Wailuku Main Street Association, Inc.
Tri-Isle Main Street Resource Center
A Non-Profit Organization
1942 Main Street, Unit 101 • Wailuku, Maui, HI 96793
Tel (808) 244-3888 • Fax (808) 242-2710

November 21, 2011

Mr. Michael Summers
Chris Hart & Partners, Inc.
115 North Market Street
Wailuku, Hawaii 96793

Attention: Raymond Cabebe

RE: National Historic Preservation Act Sec.106 consultation for draft Environmental Assessment (EA) for the proposed Wailuku Municipal Parking Structure, in the heart of Wailuku Town TMK: (2) 3-4-013:075

Dear Mr. Summers:

The Wailuku Main Street Association Inc./Tri-Isle Main Street Resource Center received information and a copy of the Cultural Impact Assessment for the proposed Wailuku Municipal Parking Structure on November 11, 2011. Our structure and design committee offer the following:

We believe that you need to revisit the original concept of the widely accepted modified PC-1. The original concept reflected broad-based community views as related to use, design, parking and traffic flow.

1. Concerns remain regarding the traffic bottlenecks and the anticipated resulting traffic snarls. The draft EA states that the Vineyard and Market Street intersection is projected to operate at a level of Service F. Given the projected growth in the surrounding area this is completely unexceptable and needs to be improved. The project team should explore alternatives to alleviate traffic at this intersection. Also important to the success of the project is the need to include the original concept of a right-in, right-out ingress/egress from Main Street. This alternative was not discussed or addressed in the Draft Environmental Assessment document and having been previously supported broadly deserves a thorough review and analysis.

An increase in traffic within the entire super block is a concern. To alleviate the increase in traffic, public transportation drop off areas should be provided and marked clearly and a traffic analysis and Plan may be beneficial to provide adequate traffic flow.

2. We note that on page 35 of the draft EA a stop for the Maui Bus has been proposed however a suitable location has not been determined. Public access to a variety of public transit in close proximity to the project site is highly desireable. This supports the need for an access point on Main Street that is more visible and closer to the intersection of Market and Main and an ideal consideration for a Bus stop.

3. That the proposed revisions to the design of the structure is incorportated resulting in a more appealing facility and surrounding area that personifies Wailuku's genuine "sense of place". We disagree that "the main component of the structure has to look like a parking structure." We support a multi-use sensitively designed structure to screen cars, situated in a location that was surrounded by buildings and reflect the unique characteristics of Wailuku. Our Structure and Design team of

professionals appreciated the opportunity to discuss these concerns with the project design team and project principal Brian Ide. We continue to offer our project experience and expertise to help make this project worthy for acceptance and support. The draft EA did not address or remained unclear in the architectural renderings regarding the following issues:

a. Providing for better fenestration of the building in order to break-up the scale and massing of the building. Of particular concern were the shear walls and a variety of recommendations for appropriate treatment was shared to achieve the desired texture and interest that reflected Wailuku's unique character derived from the reference to its historic buildings.

4. We note that the lack of sufficient parking is one of the major impediments to long-term revitalization of Wailuku Town. It is important that the parking structure's design reflect the unique characteristics of Wailuku and carefully blend attributes of the old with newer concepts i.e., photovoltaic's, accommodations for the physical challenged, public transit and other future possibilities that will require adequate structural engineering to accommodate appropriate vertical and multi-use expansion.

The draft EA statement found on page 33 states "the proposed parking structure is not anticipated to generate additional vehicular trips" does not reflect the reality and may have been so stated in error. The long held position of the Wailuku Main Street Association is that access to sufficient supply of available parking will act as a magnet to draw additional traffic and retain clientele of existing businesses. Further, it will clearly send a signal the "Wailuku is Open for Business" attracting many new and appropriate businesses to locate within the Wailuku Redevelopment Area.

Both the Wailuku Market Based Study by PUMA referenced (page 42) "Consumers view the lack of convenient as an impediment to visitation"; and the Parking Management Plan (pg. 23) by Downtown Parking & Planning Associtates LLC states "the Central Market sub-area is approximately 200 stalls underparked". These recent outside professional resources have supported and validate the extensive studies of local experts that have long suggested that a sensitively designed, multi-use parking structure will definitely generate additional vehicular trips. We are glad that everyone is now in agreement. The creation of additional parking itself will directly create a desire to visit, shop and do business thus generating significant additional trips". Assumptions in the draft EA should therefore be modified to reflect this.

The interim parking plan as described on page 25 will significantly impact the commercial core and surrounding residential communities. The identified impacts and proposed measures to mitigate these concerns should also be explained in this particular section of the EA.

5. The report should include all points of view including any minority report concerning the loss of open space in the heart of town, the concerns regarding the design as to its appropriateness to reflect or reinforce Wailuku's unique "sense of place" and the overall perception that the current design has a negative impact.

It should also reflect all of the proposed recommendations for the use of the project site in addition to parking as a means to spur economic activity and achieve sustainable long-term viability within the context of historic preservation as positive outcomes associated with an appropriate project.

It may be helpful to also include the intended use of the project site. A brief summary on the rationale and wisdom of the County when they acquired the land for a future vision of Wailuku, where the intent was to use the property for its highest and best use for its growing capitol city.

6. The long-term management and maintenance of the parking structure is missing from the draft EA. Concerns remain regarding a poorly managed and maintained parking facility that can reflect a negative impact or image that may not be easy to overcome. Proposed mitigative measures should be outlined and explained in as much detail as possible in the EA.

7. We would like the EA to touch upon any other concerns relating to construction, such as …

a. impacted portions of the sidewalk system throughout the Superblock area and certainly affecting those from Happy Valley out to Iao Intermediate School and Wailuku Elementary Schools. What are the alternative routes for residents and children that travel daily through Market Street and/or the Superblock?

b. We recommend that you provide an equipment and materials staging and baseyard area on site to minimize equipment moving up and down on Market Street. The intensification of construction traffic on Market Street can be significant and have an impact on neighboring structures. What is your plan for mitigating measures for impacted buildings during construction?

In conclusion, it is important that this project receive the necessary assistance and support to achieve an important goal outlined in the Wailuku Redevelopment Plan. We continue to offer our expertise and recommendations by our teams of professional resources. Thank you for the opportunity to provide comments on this important Wailuku project that will benefit not only the existing stakeholders, but also provide opportunities for community-wide reinvestment drawing those who will come to rediscover Wailuku, to shop, work, conduct public/private business, and make a long term investment and commitment to Wailuku's future..

Sincerely,
Wailuku Main Street Association, Inc. / Tri-Isle Main Street Resource Center
On behalf of the Structure & Design Committee

Jocelyn A. Perreira

Jocelyn A. Perreira, Executive Director
/Tri-Isle Main Street Program Coordinator

cc Mayor Alan Arakawa
County Council Chair Danny Mateo & Councilmembers
Maui Redevelopment Agency Commissioners
WMSA Board of Directors

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

May 4, 2012

Ms. Jocelyn Perreira
Executive Director
Wailuku Main Street Association
1942 Main Street, Unit 101
Wailuku, Hawaii 96793

RE: **Draft Environmental Assessment** for the Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Dear Ms. Perreira:

Thank you for your November 21, 2011 letter in response to the Draft Environmental Assessment (EA) for the subject project. We offer the following responses to your comments:

1. Please be aware that the "Full Capacity" LOS was determined in the TIR by correlating existing stalls to existing traffic and projecting traffic in connection with the number of future stalls. As discussed in the Draft EA, this also assumes that commercial activity increases empirically with the number of stalls, not a likely scenario at the conclusion of construction of the structure. The TIR for the proposed project includes potential improvements for the intersection of Vineyard Street and Market Street to improve future operating conditions once the parking structure reaches "Full Capacity". These improvements are expected to mitigate LOS "F" conditions and improve the LOS to at least a "C".

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

The TIR also indicates that "each new development in the vicinity should be required to prepare a traffic impact study to verify future conditions and identify additional mitigative measures as necessary."

The Main Street access alternative was not considered for the following reasons:

- The close proximity of the access to the Main/Market Street intersection may have an impact on the queues at that intersection.
- The access lane would eliminate parking stalls on the First Hawaiian Bank and Main Street Promenade properties.

2. The County Department of Transportation has not updated its Transit Plan to add any additional stops to existing routes and has not made any recommendations for this project. As such, it is premature to designate a bus stop to serve the project. Please note that there are four (4) bus stops (Malama I Ke Ola Health Clinic, Wells Street, High Street, and Kahekili Terrace) within a quarter-mile of an entrance to the proposed parking structure.

3. "Multi-use" development is projected to occur on the "remnant parcel" in the future in order to optimize pedestrian and vehicular circulation and commercial opportunities. The *Wailuku Municipal Parking Lot Master Plan* (Appendix "D"), prepared by Chris Hart & Partners, Inc. (2004), which was reviewed and accepted by both the MRA and the Planning Department, states that: "The remnant parcel" fronting Vineyard Street "should be developed as a cultural/entertainment and/or residential mixed-use project in order to facilitate the economic revitalization of the redevelopment area." The proposed parking structure is the first step in this direction, providing parking for the eventual multi-use development on the remnant parcel together with additional parking for other land uses within the Redevelopment Area.

The shear walls have been redesigned to break up the scale and mass using alternating textured panels. The open design provides natural ventilation, and a measure of security, in addition to reducing its perceived mass. Decorative fiberglass plaques or medallions at each floor level on the columns match those found at the columns surrounding the stairwells.

These features will create a connection to the MRA guidelines and the fabric of the community.

4. The proposed structure includes access accommodations as prescribed by Americans with Disabilities Act Accessibility Guidelines (ADAAG). It also has "newer concepts" such as provisions for future photovoltaic energy generation and metered electric/hybrid vehicle stalls. Again, the structure is not intended to be "multi-use".

In response to your comments regarding traffic, please note that the Traffic Impact Report (TIR) prepared by Wilson Okamoto Corporation (Appendix "O", July 2011) actually states, "the proposed parking structure is not anticipated to generate any additional vehicular trips in the project vicinity until ... future developments are completed."

The TIR acknowledges that with additional development in the vicinity, traffic accessing the parking structure would increase. As a point of information, the TIR was accepted by both the Department of Public Works and the State Department of Transportation (DOT). The State DOT director concurs that "future traffic impacts cannot be accurately projected due to many unknown factors ...". As a matter of methodology, the parking structure is not a final destination in itself; parking demand is created by land or building use. While studies suggest that the parking structure would encourage an increase in trips to the area, there are other factors (such as the willingness to pay for parking, fluctuations in the external market, etc.) that could affect the actual demand. Congestion can actually decrease by taking autos out of traffic quicker as drivers no longer need to search the block for on-street parking.

In regards to the Interim Parking Plan, its implementation prior to construction is necessary to mitigate the loss of public parking at the project site during construction. Mitigation measures such as temporary satellite parking and County implementation of a Transportation Demand Management (TDM) plan, are recommended by both the IPP and Wailuku Town Parking Study and Parking Management Plan Analysis (WTPS&PMPA) prepared by Downtown Parking & Plan Associates (May 2011).

We acknowledge that depending upon the distance of the interim parking from the Municipal Parking Lot, businesses that rely upon this parking could be impacted. These impacts should be addressed prior to development of the subject property. However, as you acknowledge, the longer term impact of the proposed parking structure will create an economic benefit to the community by addressing the lack of public parking stalls as a central constraint to revitalization.

5. We recognize that a multi-level structure would impact existing views towards Haleakala from Vineyard Street due to the structure's height and mass. However, once the "remnant parcel" is developed, the Vineyard Street frontage would have the beneficial effect of "wrapping" the entire structure with building frontages thereby softening its height and mass. Such a development would also "energize" Vineyard Street and promote greater walkability.

   The structure itself will be a public building, creating its own unique vistas and, through preservation of a portion of ground views through Pili Street, some sense of openness will remain. The generous surrounding alley way and the open air upper level could be used for gathering areas during special events. The open air upper level would have dramatic Maui and Pacific Ocean views to the north and east making such events especially appealing.

   The Final EA will expand on the future options that have been considered for the "remnant parcel". According to the *History of Wailuku's Parking Lot Block* (Appendix "K"), prepared by Jill Engledow (2001), the County had the foresight to negotiate with and acquire the site from twenty-one (21) owners in 1963 at the urging of Wailuku merchants for the purpose of constructing a parking lot which was completed in 1964.

6. Parking management will be discussed further in the Project Description section and will take into account recommendations in the WTPS&PMPA. Also, as suggested in the WTPS&PMPA, the concept of a Community Development Corporation (CDC), or a private/public partnership can be introduced.

7. Prior to construction, a construction phase mitigation plan will be implemented to address construction phase impacts, including: construction traffic, noise, air quality, drainage, and pedestrian accessibility.

Thank you for your support of this project. If you have any further questions, please contact myself or Raymond Cabebe of our office.

Sincerely yours,

Michael J. Summers

Michael J. Summers
Senior Associate

MJS:rrc
attachment
c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

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2012 JAN 32 AM 9:43
COUNTY OF MAUI
PUBLIC WORKS

DEPT OF PLANNING
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January 31, 2012

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DEPT. OF PUBLIC WORKS

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PERS.						
DSA						
ENGR.						
HWY.						
SECTY.						
Wendy K.						

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Return to_____ Due_____
By:_____ Date_____

Jim Buika
514 Komo Ohia Street
Wailuku, HI 96793
(808) 283-8636

Accepting Authority
c/o Planning Department
County of Maui
250 South High Street
Wailuku, Hawaii 96793

Dear Accepting Authority:

Subject: Comments on the Draft Environmental Assessment for the Wailuku Municipal Parking Garage, Wailuku, Hawaii

RECEIVED
2012 FEB -1 AM 10:41
COUNTY OF MAUI
PUBLIC WORKS

The following are my comments, completed and submitted on January 31, 2012, on the Draft Environmental Assessment for the Wailuku Municipal Parking Garage. These comments reference the Traffic Impact Report, Appendix O:

1. The Traffic Count must be completed again to be valid. The Traffic Impact Report, Appendix O, for the Wailuku Municipal Parking Garage was based on traffic counts completed on November 11, 2010 (reference page 6 in text to specific date of the Field Investigation & Figures 3, 4, 5, and 6 noting same date of traffic counts). The Traffic Count was done on Veteran's Day -- a national, state, county, and school holiday. Thus, the Traffic Impact Report, Appendix O is not a valid traffic analysis. See URL: http://www.timeanddate.com/calendar/?year=2010

2. For the Final EA, the Traffic Engineer company should complete traffic counts **first**, for more than one day of traffic counts to get a more representative traffic count of the area, and **second**, expand the traffic counts to include affected additional intersections that were not counted in the vicinity of the proposed parking structure that completely back up now during high traffic flows and will be impacted further by the proposed project. These additional intersections include High & Main, Market & Main, Central and Main, Vineyard and Central, Mill & Market, Central & Mill, and Wells & High. **Third**, monitor how far traffic backs up through Market Street in Happy Valley coming into Wailuku and along High Street coming into Wailuku. Each of these intersections and backed up roadways are currently at Level of Service levels that have reached cumulative impact.

    a. The additional resultant cumulative impact from the additional traffic created by the parking structure should be analyzed for LOS impacts on each of the mentioned intersections in the Wailuku business and commercial areas.

b. Provide physical infrastructure mitigation alternatives for intersections with resultant LOS of "E" and "F" values. The cost and benefit of these required mitigations should be added to the cumulative impact analysis.

3. Require that an independent certified Traffic Consultant analyze and validate as accurate the current Traffic Impact Report and any future Traffic Impact Reports.

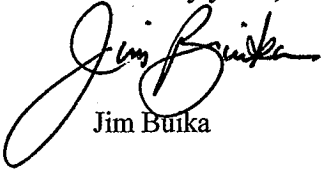
4. Table 3, page 21, describes projected Level of Service operating conditions at various intersections. Two intersections reach an unacceptable Level of Service of "F" and one Level Service of "E" with project at full capacity – North Market Street and Vineyard Street eastbound PM and southbound AM, and northbound PM, respectively. These conditions equate to an unacceptable cumulative impact that must be addressed through specific mitigation alternatives per intersection and for the traffic system as a whole. Please address the infrastructure mitigation alternatives that are required, in terms of project design and cost-benefit analysis, that will eliminate projected cumulative impact by returning the subject intersections to acceptable LOS levels of "D" or better as well as minimize impacts to the system traffic patterns as a whole.

5. The analysis on page 21 and 22 associated with Table 3 discusses the result of the negative impacts of the project and the expected deterioration to unacceptable levels-of-service. The superficial mitigation analysis provided in the report alludes to the requirement for major, expensive infrastructure changes to mitigate against the forecasted Level of Service. The analysis alludes to the required traffic mitigation burden that will be required for every new development in the vicinity, to include preparation of a required a) traffic impact study b) to determine specific impacts and c) mitigation measures. Nothing more is stated about this "new development traffic impact analysis and mitigation measures" analysis nor does it address mitigating any of the impacts. Provide a full analysis for these report comments which describes the time, cost, and impact for each new development, as well as the potential mitigation consequences that each new development may be burdened with in the future to mitigate traffic impacts caused by the projected cumulative impact of the proposed parking structure.

6. Please include alternatives to this project to include creative and functional alternatives to the proposed location for the parking garage. One alternative that should be described, to include a benefit-cost analysis, is as follows: Raise the nonfunctional Federal Post Office structure on High Street, next to the State Building, and build a parking garage in its place that extends behind and down Wells Street into the metered parking lot to the Court House. This would create approximately the same quantity of needed parking for the business center of Wailuku and service the State, County, and Court facilities in this location and eliminate the need for a massive parking structure at the present location that will cause cumulative impacts into the future with each new development, as analyzed above in the Traffic Report.

7. I am available to answer any questions on this statement.

Sincerely yours,



Jim Buika

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

May 4, 2012

Mr. Jim Buika
514 Komo Ohia Street
Wailuku, Hawaii 96793

RE: **Draft Environmental Assessment** for the Proposed Wailuku Municipal Parking Structure at TMK: (2) 3-4-013:075 Wailuku, Maui, Hawaii.

Dear Mr. Buika:

Thank you for your January 31, 2012 letter in response to the Draft Environmental Assessment (EA) for the subject project. We offer the following responses to your comments:

1. The *Traffic Impact Report* (TIR) prepared by Wilson Okamoto Corporation (Appendix "O", July 2011) was based on traffic counts conducted on November 9, 2010 not November 11, 2010, as misstated in the TIR. This is corroborated in Appendix A of the TIR "Baseline Traffic Count Data"; therefore, the traffic analysis is valid and will be corrected in the Final TIR and Final EA.

2. The TIR was prepared by a reputable traffic engineer licensed in the State of Hawaii, using commonly accepted methodology. The TIR has been reviewed and accepted by State Department of Transportation and Department of Public Works.

    a. Counts were done at the peripheral intersections and the level of impact was calculated to be less than five percent (5%); therefore, not significant in the context of this project.

    b. Calculations indicate that the mitigation measures described in the TIR will mitigate the impacts and improve the Level of Service

(LOS) to "C" or better. The TIR has been revised to detail the mitigation measures and include calculations to support the LOS improvements.

3. To reiterate, the TIR was reviewed and accepted by State Department of Transportation and Department of Public Works. There is no need to incur the additional cost of another traffic consultant.

4. Please note that Table 3 identifies the projected LOS of all intersections with the parking structure at "full capacity", which assumes that unknown commercial development has occurred at some unknown time in the future. The LOS "E" & "F" is projected to occur only for certain movements through the Vineyard/Market intersection. As previously noted, the suggested mitigation measures were analyzed and are calculated to improve the LOS at the Vineyard/Market intersection to LOS "C" or better. The Final TIR includes these calculations.

5. It is not known at this time what types of development would occur when the parking capacity is reached in the Wailuku commercial core. As each development is proposed, the actual class and size of development would determine the level of "mitigation burden" to be borne by a future project.

   A parking structure, in itself, does not directly generate traffic, although the stimulation of commercial growth will indirectly generate traffic impacts. So although the TIR is projecting additional traffic, it is based on other future developments, not the construction of the parking structure. Since these future developments are unknown, it would be impossible to determine the time and cost. The resulting impact can only be estimated empirically by reverse extrapolation.

6. There are alternate locations suggested in the Draft EA. Thank you for the suggestion of the old Post Office building, however, this alternative would have similar negative impacts to surrounding streets and is located further from the commercial core. The stated purpose of the Draft EA is to implement an action of the *Wailuku Redevelopment Plan* (December 2000): "Develop additional parking at the site of the existing municipal parking lot."

If you have any further questions, please contact myself or Raymond Cabebe of our office.

Sincerely yours,

Michael J. Summers
Senior Associate

MJS:rrc
attachment
c: Ms. Wendy Kobashigawa
Mr. Brian Ide
Ms. Wendy Taomoto
Mr. J. Morgan Gerdel

Appendix Q
Maui Redevelopment Agency 6/17/2011 Meeting Minutes

MAUI REDEVELOPMENT AGENCY
REGULAR MEETING
JUNE 17, 2011

APPROVED 08-26-2011

A. CALL TO ORDER

The regular meeting of the Maui Redevelopment Agency (Agency) was called to order by Ms. Alexa Betts Basinger, Chair, at approximately 1:04 p.m. Friday, June 17, 2011, in the Planning Conference Room, First Floor, Kalana Pakui Building, 250 South High Street, Island of Maui.

A quorum of the Agency was present (see Record of Attendance.)

Ms. Alexa Betts Basinger: The June 17th, 2011 meeting of the Maui Redevelopment Agency is called to order. Present are members Katharine Popenuk, Bill Mitchell, Mark Walker, and myself, Alexa Betts Basinger. Excused today is Warren Suzuki. Reminder to everyone in the room to turn off any noise makers. Before we begin, I'd like to welcome everyone who is here. We have a full agenda today. And in order to assure a productive meeting, I would like to remind members of the public, Commissioners, and staff that the prescribed rules of conduct and decorum will be enforced. Any willful disruption that impedes the work of this Agency will be remedied to the full extend allowed. Thank you for being here. Thank you for your cooperation and now we'll proceed with our agenda by calling for the approval of the minutes of the May 13, 2011 meeting.

B. APPROVAL OF THE MINUTES MAY 13, 2011 MEETING (via e-mail)

Ms. Betts Basinger: Members did you all receive it by e-mail? Any comments before Chair approve the minutes as entered? Thank you, so approved.

Without any objections by the Maui Redevelopment Agency members, the May 13, 2011 Maui Redevelopment Agency meeting minutes were approved as written.

C. PUBLIC TESTIMONY

Ms. Betts Basinger: We're going to enter public testimony. Public testimony will be taken at the start of the meeting on any agenda item. Testimony will be limited to three minutes per testifier, and with the recommendation of the Chair, without objection, additional time may be granted. So I ask those of you that want to come forward with testimony to come to the podium, tell us who you are, who you represent, and thank you.

Mr. Walter Enomoto: Aloha and good afternoon Chair, Vice-Chair and members of the Maui Redevelopment Agency. My name is Walter Enomoto and I'm here on behalf of the Maui Bicycle Alliance. Maui Bicycle Alliance is a grass roots bicycling advocacy organization committed to improving conditions for bicycling in Maui County. We promote bicycling for an advocate bicycle use in Maui County for health, recreation, sport, and transportation purposes.

APPROVED 08-26-2011

As this is my first time testifying before you, I figure I'd like to give a little bit of introduction in my background. I've been involved here – I've been bicycling advocacy here over 20 years now. I was the former Chair of the Mayor's Bicycling Advisory Committee during the Lingle Administration. I've been involved with the Maui Bicycle Club, Maui Off Road, Maui Mountain Bike Club. I have worked on and helped organized over 40 bicycle rides and events over the past 20 years, and we are actively involved in many different projects, both on the State and County level, as well as budget items and all that.

I wanted to submit testimony that I've left hard copies with you regarding the Wailuku Municipal Parking Structure. We would like to add that, you know, in terms of the design as it relates to the bicycle parking facilities, we would like to ask that the MRA and County of Maui Planning Department utilize this bicycle parking guideline. This is put out by the Association of Pedestrian and Bicycle Professionals, and it is currently the state of the art in terms of the whole issue of both engineering and other logistic issues in regards to bicycle parking, and to utilize this part of the planning for the structure in terms of bicycle facilities. We'd also like to ask that you look at the possibility of totally enclosed bicycle lockers. For many people who commute who might have more valuable bikes, having a totally enclosed locker where they can also place all of their other gear that they don't want to take to work with them would be ideal. And if these can be incorporated as part of a lease or a rental program, I'm sure there would be some cyclist who would be very interested in that possibility. Also, we'd like to recommend that a minimum number of bicycle parking stalls be added as a condition of this project, and we're recommending one short-term bike stall for every 20 vehicles spaces, and one long-term enclosed bicycle stall for every 50 vehicle spaces. And this is actually a little bit less than what is even recommended in this book. They actually called for one in 20 spaces for long-term enclosed parking, so we know that depending on the exact count, I think it works out to about eight enclosed parking stalls, and about 20 short-term bicycle parking stalls.

And again, I'd like to thank you for this opportunity to testify on behalf this project, and I may be seeing you folks again for other projects. So if you see me, it's bicycle related. And if you have any questions, I'd be happy to answer them.

Ms. Betts Basinger: Thanks Mr. Enomoto. Members, any questions of the testifier? Seeing none, thank you.

Mr. Enomoto: Thank you.

Ms. Betts Basinger: The next person who has signed up for testimony is Barbara Long.

Ms. Barbara Long: Good afternoon board members, I'm Barbara Long, and I'm speaking on behalf of myself. First I want to thank you for volunteering your time and expertise, and for the professionalism and transparency that you're bringing to the process. Your work and your accomplishments are valued and appreciated by all of us who care about Wailuku's future. . . . (inaudible) . . . has been a long time coming, and now you are tasked with the responsibility to not only address the town's parking needs, capacity, circulation, safety and convenience, but

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also to ensure this historic civic core retains it's character and integrity. The Municipal Parking Structure will have enormous visual impacts as it is viewed from every perspective. It is big, boxy and tall, and its top levels will intrude on view plains from street level and from above. The design plans presented here, I assume, address present and future parking issues. But my concerns are with the embellishments on the facades from the bright green standing seamed roofs to decorative plaques and grills that seems to mimic Kahului shopping malls, and not Wailuku's historic architecture. I've passed around some photos of just a few Kahului malls. There's many of them. That green color is everywhere.

The Wailuku Design Guidelines emphasize the importance of context, and provide the rules to help you determine the relevance and appropriateness of design, materials, color and scale. On page 23 it says, parking structure design, "shall respect the character defining features and be compatible with existing context." Pages 37 and 38 say " the use of interesting patterns and shapes is required on stucco and cement facades." And on page 41, it says "no pasted on ornamentation." As a side here, Wailuku has a serious pigeon problem. I'm concerned that the grills will be a pigeon magnet.

No other Maui town has more 1930's art deco masonry buildings. The pictures that are there in black and white from exploring historic Wailuku illustrates some of them, and they look beautiful today. I drove around, looked at the colors that highlight the deco features. They are really, really special, and really attractive. The typical pilasters, cornices and parapets that enrich the street scapes are important to Wailuku's historic character. Thank you, I've got a minute more Madame Chair. Ask yourself do the design details and ornaments in today's plans meet the criteria of your development guideline. Doesn't Wailuku deserve a design that's true to its past with colors, materials, and features that truly reflect its character and history? A building that not only solves the parking problems, but is a model for integrating the charm and unique architectural features that define it's location. Thank you.

Ms. Betts Basinger: Thank you Ms. Long. Members, any questions of the testifier? Seeing none, thank you. Scheduled next to testify, Susan Halas.

Ms. Susan Halas: Good afternoon. My name is Susan Halas. I'm a business owner and a property owner inside the Maui Redevelopment Area. I've been a long time opponent of this project. I find it very unusual and highly irregular that I'm asked to give comments on this presentation prior to seeing the presentation. I'd like an opinion from the Corporation Counsel if that is permitted practice under the law, and I would like to reserve the remainder of my time to testify and give my questions and reactions after I see the presentation. Thank you very much.

Ms. Betts Basinger: Thank you. Scheduled next, signed up next is Anthony Ranken.

Mr. Anthony Ranken: Hello Madame Chair and members of the board. I'm testifying –. I'm an attorney – Anthony Ranken – and I'm testifying today on behalf of the Richard and Carolyn Dan family and the businesses that they own on Market Street. Mr. and Mrs. Dan have five retail

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locations on Market Street. They're opening up two new ones at their property on 92 North Market. They maintain a residence on the second floor of one of the buildings, and have been in business for 28 years on Market Street. They advertise very heavily to bring people to Market Street for the benefit of their businesses and the other businesses reap the benefits as well. I'm testifying about the First Friday request in case that wasn't clear.

There have been some problems with First Friday, which I myself on behalf of the Dan's have tried to work with the organizers to resolve. But the overall picture that's emerged is that First Friday organizers are constantly bending and sometimes breaking the rules. To give you a few examples, originally their permits stated that they could cone off stalls from 5:30 p.m. to 9:30 p.m, but as soon as a stall opened up at 8:00 a.m. or 9:00 a.m. in the morning, they would cone off a number of stalls on Market Street, not letting anyone park there, just to make sure that they'd have room later in the day to set up their stages. We called them on that. They managed to get the permit changed to allow them to do what they've already been doing. But just last Friday, a couple of other – last First Friday I should say – they set up in one of the stage – one of the areas designated for stage, they set up a vendor, a vendor booth. I have a DVD which has the vendor booth on it, which is completely against the permit. We're talking about they're taking away, I believe, it's a total of six parking stalls on Market Street during the busiest day of the month because this is, you know, Friday, it's pay day. It's when people patronize all the financial businesses there. My client has several financial oriented businesses, pawn shops, second hand good store, a loan operation – Kamaaina Loan – so this is a time when parking is a premium. They also got hired police officers which also is on this tape to start putting cones in the middle of parking stalls along Market Street starting at 5:00 p.m., and the street doesn't close till 6:00 p.m., but blocking off entire parking spaces starting at 5:00 p.m. This is history, but First Friday is constantly over reaching, and this time they are really going too far asking to have complete jurisdiction of all the sidewalks and anyone who can sell there. MRA does not have the power to do delegate to First Friday, it's jurisdiction over the sidewalk sales. MRA does have jurisdiction over open air sidewalk vendors. But the law is basically it's 30.08.090, and again the definitions that appear at the beginning for open air sidewalk sales at the beginning of that chapter. Basically the law is that a business can have a table out on the sidewalk as long as they leave a three foot right of way. And the only way that can be restricted is that the MRA, during special events, may limit in location and sales, as well as duration of time, the use of those sidewalk tables. They are not allowed to delegate to another organization, a private organization, their right to restrict sales, location and time. And clearly, I mean, I would ask –

Ms. Betts Basinger: Four minutes Mr. Ranken.

Mr. Ranken: Can I have another? And also I wanted to mention, I will be staying around for the decision making part, and if legal issues come up or more dialogue, I would appreciate the opportunity to participate at that time. . . (inaudible) . . .

Ms. Betts Basinger: We might call on you as a resource. Thank you.

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Mr. Ranken: Good, I'll be here. But the problem also here is that we're talking about –

Ms. Betts Basinger: Mr. Ranken, can you conclude your testimony?

Mr. Ranken: I thought you said you would give me one more minute.

Ms. Betts Basinger: You're over four minutes and may call on you as a resource . . . (inaudible) . . .

Mr. Ranken: Okay. Can I make one final small point that I think is important?

Ms. Betts Basinger: Yes please. Please.

Mr. Ranken: Essentially, let me give you an analogy. We have a local coffee store there on Market Street. First Friday is asking for the ability to say, you, coffee store can't put outside, you can't sell your coffee on the street, but we can rent a table to Starbucks and bring them to sell coffee right in front of your store. That's the breath of what they're asking for in this request. It's not reasonable.

Ms. Betts Basinger: Thank you very much. Members, any questions of the testifier? Seeing none. Next testifier signed up is Teri Edmonds.

Ms. Teri Edmonds: Aloha Madame Chair. Aloha Board. This is Teri Edmonds. I am speaking on behalf If the Shoe Fits today. And it's not on your agenda, but I'd like to ask, I know you're so busy, but I'd like to – last year we addressed the neighborhood watch and we did a nice thing with the local police and I think I'd like to, if we could, maybe address the security issues in Wailuku again in the next couple of months, and see if we can put some kind of plan in place that would work with the community and get organized again. I believe we have a new community police officer, and I'd love him to become familiar. We have filed, we've been following the steps that we came up with the neighborhood watch at this meeting about keeping badge, report numbers and things, and it's been going great. We've been collecting those so, we'd just love to take a move on that as we're getting more and more population in town. And thank you very much.

Ms. Betts Basinger: Thank you. Thank you Teri. Members, any questions of the testifier? Seeing none, thank you. No one else has signed up for public testimony. If there's anyone in the audience that would like to testify please step forward. Seeing none. You're behind the camera.

Ms. Jocelyn Perreira: Aloha. My name is Jocelyn Perreira. I'm the executive director and small town specialist for the Wailuku Main Street Association/Tri-Isle Main Street Resource Center. Our website is mauitowns.org. We encourage you to read through that site. We're testifying today, expressing concern, once again for the rules of engagement in discussion. I think a couple of testifiers had expressed concerns about agenda items that you have listed on your

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agenda that we do not know enough about that we cannot provide meaningful comments until we hear what these items are referring specifically about. So I would strongly recommend that, and I know you will be getting a communication from our board of directors on that as well.

I'd like to note that we've done extensive design reviews this past month as we always have, and we've done a lot on the municipal parking structure so it's too long for me to read the whole thing. But just so you know we did have concerns and we have listed them, and they are in the following areas – multi-modal access, design height and mass, ornamentation, architectural details, site features, increase safety and accessibility for users, construction, studies – Pili Street in particular – loss of open space, and maintenance and management. So we will be trying to get more discussion and dialogue going hopefully at some point in the future relative to that. And to also note the progress on our regulatory initiatives for small towns – that is going very, very well with our organization. That will eventually help projects in Wailuku to be able to comply with realistic code compliance, and that's something we're very excited about. And again, for more information, go to www.mauitowns.org. Mahalo for your kind consideration of this time.

Ms. Betts Basinger: Members, any questions for the testifier? Ms. Perreira, I have a question. Thank you for the list. Do we have written testimony?

Ms. Perreira: Not at this time.

Ms. Betts Basinger: Okay.

Ms. Perreira: Not for the MRA because we don't know what the MRA is presenting.

Ms. Betts Basinger: That's fine. We'll look forward to it. On the dot points that you itemized that your organization is concerned with, I got multi-modal access and a few of the others. But could you also let us know on which side, if it's something you support or it's something you'd like to further discuss on each of those dot points.

Ms. Perreira: Again, because we do not have enough information, we have not seen the presentation in the MRA, under MRA business so on and so forth, we have to refrain from making comments because it is our habit to have a issue thoroughly researched and discussed and to know where the MRA is coming from relative this prior to sharing those comments with the MRA. Thank you.

Ms. Betts Basinger: Thank you. And we will be explaining where the MRA is coming from for this review. Thank you. Anyone else wishing to give public testimony on any agenda item coming before us today? Seeing none, at this point, we're going to close public testimony. And we are going to move on to design – the actual design review. If all of you could look at your agenda, Chair, without objection would like to move some of the agenda items further into the agenda, up after the design review simply because they're all related and we would very much like everyone to hear all of that. And that would include Item-F1 which is Morgan Gerdel's

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report which he gives every month to this agency on the parking structure, and also Item-F3 which is the tasks status LU-3 from our own agency, Bill Mitchell. So without objection members, I'd like to change the order. Thank you.

D. DESIGN REVIEW

1. Presentation by Alison-Ide on the Wailuku Municipal Parking Structure Design. The Maui Redevelopment Agency will be asked to provide comments and recommendations to the design team.

Ms. Betts Basinger: So at this time, I would like to call on Alison-Ide and receive the presentation.

Mr. Brian Ide: Thank you very much Madame Chair, and members of the Board, ladies and gentleman. Thank you very much for this opportunity to present the design of the Wailuku Municipal Parking Structure project to you this afternoon. Performing the presentation besides myself will be architect Mel Choi, Media Five Architecture; Civil Engineer, Stacy Otomo, Otomo Engineering; Landscape architect, David Sereda, of Chris Hart & Partners; and Mr. Karl Walker of CW Consulting, our parking structure consultant. Besides our Civil Engineer, Stacy Otomo; Landscape Architect, David Sereda; and our Environmental Assessment Consultant, Michael Summers, our Maui based consultants include Mechanical Engineer, Engineering Dynamics, Doug Gomes; Electrical Engineer, ECM Inc, Mark Rickard; the Soils Engineer, Island Geotechnical Engineering, Charles Beagle; our archaeological consultant, Dynamic Research, Eric Frederickson; and our Surveyor, Warren Unemori Engineering, Darren Unemori.

Alison-Ide Structural Engineers was constructed by the County Public Works to preform the – to prepare the construction documents for the Wailuku Municipal Parking Structure. Notice to Proceed was issued on January 2, 2011. Since that time, the design team has completed the conceptual design and drawings, preliminary drawings for the project. The conceptual preliminary drawings were provided on May 19th, 2011 to the Maui Redevelopment Agency, the Wailuku Main Street Association and other stakeholder groups for comments.

The purpose of this meeting is to provide an overview of the conceptual design. The next step would be preparation of construction plans and specifications for the building permit, as well as the contract, drawings and specifications for construction. A formal design review application will be submitted to the Maui Redevelopment Agency in February 2012 upon the completion of the Environmental Assessment process.

Now the key design criteria. Our design team was presented with the following criteria as our key design criteria components for the project, and they include the concept design based on option PC-1 of the Wailuku Municipal Parking Lot Master Plan completed in 2001, and approved by the MRA in 2004. The design of the parking structure would be within the 45 feet height limit. Number three, to provide on-grade parking adjacent to the parking structure and the remnant lot. Number four, to preserve the remnant lot for future mixed use developments.

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Number five, to re-establish Pili Street to provide for efficient pedestrian and vehicular circulation. Number six, the parking structure is to be tucked into the established building envelope. Number seven, to comply with the MRA zoning and development code. And number eight, to apply the Wailuku Redevelopment Area Design Guidelines.

Next, we will have our Civil Engineer, Stacy Otomo, discuss the items related to the site issues. Thank you.

Ms. Betts Basinger: Thank you.

Mr. Stacy Otomo: Thank you Brian. Good afternoon Madame Chair and members of the Maui Redevelopment Agency. My name is Stacy Otomo. Bear with me for a second, I need to get a pointer. I'm going to be using the mouse instead of a pointer. I'm going to go over very briefly – very briefly the site aspects of the project. For orientation purposes this is Main Street, Market Street, Vineyard and Church. I'm sure all of you are familiar where the parking lot currently sits. Pili Street will continue to be an access, to and from, the property, basically in it's original configuration. There's an existing driveway on Vineyard that's located right about this area. The new driveway would be skirted further mauka to give you a straight alignment into the entry to the parking structure. There's also going to be about a 15 foot wide road widening lot that's going to be dedicated to the County along Vineyard that would correspond to the property that's mauka and makai. On Church Street, there's Pili Street that comes down here now. There's going to be a slight realignment of Pili to accommodate the front end of the structure, at Pili, would be, going right through to Market Street.

In terms of the pedestrian access, there's an existing access that comes down right adjacent to First Hawaiian Bank. That's going to be maintained. There's a smaller access that gets out to Main Street that's going to be slightly improved. In terms of the grading and the drainage for the project, the concept is fairly simple. We're going to try and maintain the existing grades as close as possible and minimize the cuts and fills of the project. There's an existing drain line that exists basically on the eastern end of this whole parking, existing parking area, that comes down Vineyard, heads north on Market, and eventually outlets into Iao Stream. The drainage plan would be to use that existing line, supplementing it with additional catch basins to minimize the amount of overland flow along the entire property. And in a nutshell, that's the site elements that we're going to be using for this project. And I'd like to call Mel Choi to go over the architectural aspect of the project.

Mr. Mel Choi: My name is Mel Choi. I'm the architect for this project. I thank you very much for inviting us here. Let me quickly go over the design criteria for this project. The amount of criteria is substantial. The lot's tight. This is a complex project, and so it's well that you understand the complexity of it because it isn't – well one might think to squeeze on x-number of stalls into the site might be easy. This is extremely difficult, and let me tell you why. First of all, we are abiding by the Parking Lot Master Plan that was developed by Chris Hart & Partners in 2001 for the Maui Redevelopment Agency. Option PC-1 was selected. That is the guide that we used to develop this project. It has 363 stalls in PC-1, the one that was established in 2001.

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There are 10 stalls on-grade, for a total of 373 stalls. Today's design which I will be showing you shortly has 348 parking stalls in the building. It has 21 on-grade. There's 370 stalls on this site here. This remnant site which is bordered by Pili and Vineyard Streets, that contains an additional 48 stalls, totaling 418 stalls. Now we get real close to what was originally designed on PC-1. They're three stalls apart and I'll tell what the difference are shortly. Furthermore, we have a smaller, more efficient building, roughly about 10 feet in each dimension. We also are preserving the remnant lot for future mixed use development. This is the on-grade parking stall, and again, remind you we have a total 418 stalls.

We have codes to comply with. This is a 45 foot height limitation. We're asked to maximize the amount of building on the site, maximize the parking. We have a setback on all sides to allow emergency and service vehicles. Now that's an important distinction between this design and the previous design. There's a 20 foot swathe around this building that's paved, and emergency and service vehicles can certainly navigate this building. We are compliant with ADAG 2010. For those who are not familiar, that's accessibility guidelines. We are following the 2006 International Building Code because that would probably be the building code that we'll be the one we have to be compliant with when we go to building permit. We have determined that no fire sprinkler systems are required in this building. All we need to do is put in dry stand pipes and hose cabinets, and that's been verified by the Maui Fire Department.

As an overview, as I've said, 418 stalls – 349 in the structure, 21 on-grade which front the buildings that are fronting Market Street. These are 48 stalls between Pili and Vineyard. Some people might recognize a little bit of a discrepancy between what we show here. These have been added on and the landscape and several drawings, and the reason for that is that we had to keep this drawing pretty much in tact because we received the updates from civil and landscaping on June 3rd. So we wanted to represent to you very clearly the time lines here.

This is the design for the structure. We think it fits pretty tiddly into the constraints that we have. There's a 45 foot height limitation. The site slopes from this corner which is what we call the northwest corner, or the Pili-Church corner, and it slopes diagonally down to this corner here which we call the Main Street – Main and Market Corner. This view is elevated above Vineyard. This is a higher view right now, and you can see there's a complete swathe around the building. I have further slides later in this program to show you. This is the remnant lot here. I'd like to call on Karl Walker who is our parking expert. Karl has done well over 500 parking buildings over the years and is considered one of the best international experts on the subject. Karl?

Mr. Karl Walker: Thank you Mel. Let me just briefly talk about one of our major goals is simplicity for the driver to enter the facility, and we have what we call a continuous ramp, a two-way traffic facility. And you enter at this point, either coming in, off of Church Street, off of Market, or off of Vineyard, straight through the remnant parking lot, through a single entrance in the facility. And the reason for the single entrance is simply because of control. And if at anytime we want to have a controlled gate with ticket spitters and cashiers, we're limiting that to one point to eliminate or minimize the cost of that control.

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And then once the person enters the facility, they have the choice of either coming in and turning left and going down, or most of the parkers will come in, go straight ahead and come up to the facility in this counter clockwise pattern on what we call a scissors ramp. And then to exit the facility, you simply back out of your parking space and proceed down bound in the opposite direction. This is a plan of the lower level, and what you are seeing here are some of the columns. This is the west side. This is the east side. Let me go over to the main entrance floor. This is Pili Street, and you would enter at this point, and either make a left turn and go down, or, come straight ahead and go up. And the column spaces, the distance from the outside to the middle column line is 60 feet, and that's clear span. So you will not have any columns to drive around to get into the parking spaces. We've eliminated what we call the fender bender stigma of having to drive and park around columns. And so you would proceed up in this fashion.

And then the types of parking spaces we have, we've maximized the standard parking spaces which is an eight and a half foot, or eight foot six-inch wide by 18 foot stall, and generally the cars today don't exceed much more in length than 16 ½ feet. And so what we're going to develop is an aisle here in the middle that will be a 24-foot minimum aisle, minimum width aisle, which is standard highway, two-lane highway width. Two 12-foot lanes. And then you proceed up to the facility, come around the end, and at the parking stalls at each end of each run, these are compact spaces. Now we are allowed to have up to 25% compact spaces, but we're minimizing that simply because if you're driving there and this space is available and everything else seems to be full, people have a habit of making their medium sized cars into compact cars and driving in that space. But we're going to minimize them, but keep them as much as possible to help make the turns around the ends. We don't want somebody with a big 18-foot pickup truck parking in that particular space.

And then over here, we're introducing the electric charged spaces and we have compact car spaces that will have charging stations, and we have standard spaces that will have charging stations. Then the other special type of parking space will be, what you call a handicap or American's with disabilities access spaces, and these will be located adjacent to the elevators. So you have minimum grade problems from getting the handicap person out of the vehicle and into the elevator to proceed down into the – to exit the facility. I'll just quickly go through – you can see roughly 84 to86, and then we get to the top. The top ends right here – or the roof deck. So you come up around this way, and you park here and to get out, you proceed back down. So with that, as I mentioned, we have only 12% compact spaces. We're allowed 25%. I'll turn it back to Mel to further discuss the design of our parking structure.

Mr. Choi: Thanks Karl. Karl makes a very good point. One of the reasons why municipal parking lots of this nature are different than the standard parking lot defined in the condo and defined in office building is because it requires a lot of traffic. You've got to move traffic quickly. You don't want people jamming up the aisle ways, therefore, aisle ways are very big. But also an inhibiting factor is when people have to wait and dodge columns and line up, that creates maybe a 10 or 15 second delay. That adds up every time someone parks, every time somebody coming out of a stall, so we tried to eliminate that as much as possible. It's also very

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brightly lite. The verticality of the space is extremely important. As you can see here we have a minimum height throughout the parking, 8'-2". We have even higher van accessible stalls at the first level. We have furnished two elevators, conveniently located on the Pili-Vineyard and Market-Main corners, with glass windows on the exterior side. Now why glass windows? Well, primarily for visual security. That matches perfectly what we've designed for you. What we've designed is a very, very open building. Every corner has this open staircase – completely open. There's not even a door on it. So again, visual security. On grade handicap access route on both north and south sides, again, linking into the elevator system and we have specific routes. The building conforms to natural slope of land as I indicated to you earlier, minimizing excavation and fill. And again, column free, 60 foot spans.

Here's a little bit better graphic to cover again what Karl was talking about. Entry here. Exit here. When you come in, it slopes down. Now people will probably ask, how do you slope down and get the on-grade here and here? Well, it's because the grade – that was interesting for us as architects when we visited the site – that it's higher here at this corner of Pili than it is here. It drops down. There is a slope. There's also slope from here to there. This is a good graphic that shows the perimeter completely free. This is not an up to date drawing landscaping. And Dave will show you this is completely paved. There's a whole different design to it.

The next level up, you'll notice here the staircases on each corner. Elevator on this side. Elevator on this side. Again, this is the demonstration of the really openness of the garage. This is level three, level four – very typical – level five. Now you can see the roof top. The roof top has again sky lite, but open. Stairwells on the four corners. Elevator penthouse. Elevator penthouse. This is a standing seamed metal roof that has a photo voltaic, a morpheus material attached, and we are told by our electrical engineer that it can furnish between 10% and 20% of the electrical requirements for this building.

This is what the building looks like over the Vineyard Street side. What you're looking at is this 48 stall parking lot. Ingress and egress along here into the building. Market into the building, or through these 21 spaces here and on to the parking lot is controlled by First Hawaiian Bank. Another point of ingress through here which is through that remnant lot of approximately 48 stalls.

This is a section through the building. And we've included this by the way because we had presented this in hard copy to the MRA and we felt like it should be included. So I should point out to you that all of the drawings that the MRA had a chance to see has this black line across. So every drawing that the MRA has is being shown in this presentation. But it shows how you come in this level here, off of Pili, and it drops down more towards the Main-Market Street side. This is a section, cross section, through the building.

So some of the features of this building which I think are extremely important for you to understand is the building is designed to be visually and physically open. It's a very transparent building. There's visual security because of the open design. There's natural light and lots of

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it. Natural ventilation. There's no mechanical ventilation required which is great. You don't spend any additional money having to mechanically ventilate, and we do a lot of parking structures that have to be mechanically ventilated. Minimum artificial lighting during the day. That's a big energy saving on this item. Artificial lighting will conform to light pollution and requirements. And we will design the lighting so the middle part of the building will have the lighting during the day, and then we turn on the entire building at night.

This is an elevation. This is looking from Market Street. This is what the building looks like. Pili Street dropping down towards Main. This elevation is from Vineyard Street. This is the entry elevation. This is the west elevation. It's obstructed by the Professional Building. But this is if we were standing in front of the Professional Building looking at this facade this way. And this is from the Main Street side, or where the Food Court and the Church are. I have other drawings to show you when we get there.

So here are some of the aesthetics and I'm sure a lot of you are interested in how we had derived to the aesthetics. First of all we are following the Wailuku Redevelopment Area Design Guidelines, and following distinctive buildings like the Iao Theater, the old Crest Building. The architecture vocabulary basically is Wailuku Plantation and art deco styles. I'll stop here just for a moment.

We have a 45-foot, five story parking structure. It is extremely difficult to extrapolate vocabulary when you try to utilize plantation. So therefore, I think that we've instilled it to the point where we really have excellent essence of what the design is all about. Design is a difficult thing. Some times they're very subjective. We're trying to be very objective here. We have looked at color. We have looked at the cornices. We looked at brackets corbels, railings and guardrails, the lattice work, grills, trellis, and medallions. All these occur on the buildings nearby. This was delivered to the MRA ,and we have embellished this with larger detail. So I'll quickly go through this. These are the various colors of the facade. The primary color will be this color, and that one, and this darker brown color will be on the shared walls, but I'll get to those quickly.

This is the elevator detail. There's quite a bit detail in here because the elevator itself is glass enclosed. Here is a grill work here, which is this grill work right here. It's decorative, but it's also protecting people going over the edge. This is the staircase. These are where the medallions are. This is the cornice, and these are the brackets for corbels. A larger view of that. This is the sheer wall I was talking about, and there are several sheer walls on all four sides of the building. This is an image of the cornice, an image of the trellis, and image of the standing seamed metal roof. And we have examples of all these colors, larger scale, true colors. Unfortunately, at lot of times power point can't represent the colors perfectly. In fact, we even brought some of that photo voltaic film with us.

This is the detail for the sheer wall. It's got a fancy name – Colorado Clay. I guess it does look like Colorado Clay. Textured form liner and they are three-quarter inch reveals in this grid pattern. You can kind of see inside the structure, and it's fairly open. There's a cornice detail.

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Now this is what the MRA hasn't seen yet, so I think this is indicative of – here is a photo of the Iao Theater. We are not just taking the design and moving it over, but we have taken and interpreted the design, added in this cornice detail. This is rail and lattice details. Over at Iao Theater, it's this recto-linear grid and it has a circle in it, and we translated that. This is fairly recto-linear. We put in a square on a corner, but this does not meet code requirements. So we have a mesh behind it to prevent kids and foolish people from going over the edge. We also have this lattice here at the top. So you can kind of see how all that comes together. We feel like it very, very nicely represents some of the images that you see in town. There's a corollary because one, you're in this. If you're walking down the stairway for some reason, you'll be able to see over, and you'll see the Iao Theater. These are medallion details. They're done in pre-cast concrete, and they're located in these areas here. And these are consistent within the vocabulary of art deco. This is the lighting. We felt like this was appropriate lighting for the stairwells. They provide enough illumination without being the typical ugly fixture that one normally sees. Our ceiling lights are vandal proof and they occur in the ceiling of the garage. And they're not only vandal proof, but they are water resistant making them perfect for washing the garage down. You can wash the light fixture, the floor, the walls, the stairway all at once with a high pressure hose.

So a little bit of a review. What do we have here? Open design minimizes energy usage for lighting. Open design requires no ventilation. There's no mechanical ventilation in this building apart from the elevator penthouses. Open design requires no fire sprinkler system, and we had to work at this. But we're able to convince Maui Fire that it was not required. It also requires no air-conditioning of course. Open design requires no stairway doors. We have bike racks to encourage alternative transportation. We feel like that we can meet the standard quite nicely of bike racks that was mentioned earlier. We have nine electric vehicle stalls which is about five more than what I understand that will be required from January 2012. Of that, we'll activate two stations, and seven will be stubbed out for future. But if it gets to 2012, we will put all four in. We have a photo voltaic array at the roof level. It provides enough energy for approximately 10% to 20% as I mentioned earlier.

Now here are some of the energy saving items. Again, a quick review, photo voltaic and high efficiency lighting and an open air designed. These are the bike racks we're talking about and you'll see more of that in David's presentation on landscaping. This is what one of those photo electric charging stations look like. So when you bring your Nissan Leaf or one of the electric cars up to it, you'll encounter one of these devices. You plug this into the front end, we'll have a sign, electric vehicle charging station and you swipe a credit card to get your vehicle charged. These are some of the views of the building. This is from Vineyard Street. We'll move clockwise around the building. This is from Market. Again, you can see the slope from this corner to this corner, so you're at grade here, you're also at grade here.

These are views that we put in to shots that we took off of Google Earth, so they pretty closely represent what's already there. This is off of Main Street, so here's the building. Here's what's in the foreground. I'm sorry, this is Pili Street. Excuse me. So this is the American Savings Bank building. This is off of Main Street. This the foreground. This is the building in the

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background. Now one of the important components to this is that this thing has to look like a parking structure. It has to advertise itself. We don't want people driving around. That's a main component of the design. It has to look like a parking structure. Off of Church Street. This is Pili again. It's hardly a mistake that it's a parking structure. We could do all kinds of fancy facades, put all kinds of things on the side of this building, all it does is drive up the cost, in the facade itself, in maintenance, in having to mechanically ventilate this building. A number of issues. That's why discarded – we wanted this to be as open as possible. But people argue well it's not really transparent. Well, it's about as transparent as it can get to be a legal building.

Okay, now we start to gain elevation here. Pretend you're in a helicopter. This is a very prominent corner here. So again you can see the configuration. We're going clockwise on the building. One of the things that I personally like is that you never have to wonder where you can get out of the building. There's a stairway in every corner, and the stairways are exactly alike. This is at the Church and Main Street corners. You can see the skylight here. You can see the elevator penthouse here. By the way, the elevator stops at this level, of course, and you can see the photo voltaic roof. Come around the corner, again, a more broader view. Then you can see this area that is significant. It's 20 feet from that, the wall of this executive building to the parking structure, allowing emergency and service vehicles to come completely around. This is the Vineyard Street view. Again, a little bit closer.

So what we have for long term maintenance. We have no planters. Planters are expensive to build. Planters leak. Planters are expensive to maintain. We were asked to put them in – well, nobody asked to put them, sorry. We put them initially, and I think, because of those issues, we were asked to remove them. There's an easy wash down of the parking and stairwells. This structure is completely open. High pressure hose – you've taken care of all the wash down you need. The exterior fenestration is pretty much vandal proof, long durability materials, pre-cast concrete, fiber glass, aluminum efface. Material selection, again, reinforced concrete. Basic structure – there's corrosion resistence put into the add mixtures of the concrete prolonging its life and also water proofing the slab. So we have a real clear focus on long term service life. Okay, I'll hand you over now to David Sereda. He's the landscape architect with Chris Hart & Partners, and he'll go through the landscape design with you.

Mr. David Sereda: Thank you Mel. I'm David Sereda with Chris Hart & Partners, and I would like to talk a little bit about some of the onsite improvements outside of the building. So if we revisit the site plan itself, you see the building is obviously in the center. Vehicle access along Pili, Vineyard, as was previously mentioned. The vehicle circulation would be around three sides of the building. And this side here would actually be a – is a 20 foot fire lane, and that would be inaccessible to day to day traffic. There would be bollards at either end, but it would open it up for the opportunity that it could become something else more along the lines of a pedestrian mall, which could be programmable space, perhaps a farmer's market or outdoor merchant areas. It might even be something that could happen in conjunction with First Friday as well. So that would be in this area here.

Pedestrian circulation through the site occurs around the perimeter, and then through the center

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along Pili. And these would all be new sidewalks through here. Some of the onsite amenities that we'd like to propose include benches, trash receptacles, bicycle racks, trees and some different types of at grade paving and surface treatments. The benches and trash receptacles would be located along Pili Street here, and along Vineyard. And the bicycle racks are located – there's two locations – here and here which accommodate 16 bicycles.

In terms of the street furniture and the amenities, when originally the Market Street improvements were designed, there was public input from the MRA and as well as from the Wailuku Main Street Association. And at that time these features, furniture elements, were chosen based on fitting in with the architectural character of Wailuku, going back to again the 1940's and the art deco period. And you can really see that in the light standard that was chosen for the Market Street improvements. So what we would like to do is carry that theme through to the proposed improvements for the parking structure, and just replicate that and continue with these architectural elements. Some of the other things that we're adding which don't occur on Market Street right now is a bike rack. And this is a preferred type of bike rack by the County as well as – Walter was telling me that it works well because you can actually pin the bike at two locations and avoid it from falling over. And each one of these accommodates two bicycles. Here's the bollards which would be on the fire lane. The tree grates, the bench, trash receptacle and the light standards same as Market Street.

The crosswalks would be the same as Market Street. Again, it would be the lightly colored scored concrete pedestrian crossings, and the lighter concrete gives it a high visibility and it increases safety. And the planter areas in the at grade parking areas, as an alternative to providing planter space with the higher maintenance plant material like grass or ground cover, we thought that you could put concrete brick pavers in there. The colored concrete brick pavers which might have more of the visual appeal that just concreting it over. And plus it would be – it will withstand the high pedestrian traffic.

Some of the plant material we're proposing to use are the typical street tree along Market Street which is a preferred species for parking lots and streets. They're very hardy. They're non-invasive. They don't have intrusive roots. They're drought tolerant. They can take a heavy pruning. And plus they have some color. They're a flowering species. In front of the some of the sheer walls on the parking structure itself, we'd like to have taller palm trees coming up, sort of break up the massing of the building, and to soften those, the large sheer wall elements. Along Pili Street, perhaps, Royal Palms would be appropriate. They're one of the large palm species and it might get up to a similar height of the parking structure and give a bit of a visual balance as you look down Pili Street. And then some of the other shrubs would be lower maintenance – red ti, eldorado, snow bush type of plants – and MacArthur Palms around the perimeter of the structure itself.

And that concludes my portion, and I'm going to turn this over to Brian. Thank you.

Mr. Ide: Thank you David. I'm now going to talk a bit about the estimated construction cost. The estimated construction cost was based on the preliminary design drawings which were

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developed in April of 2011, and we've broken it down as follows. The base construction cost comes in at – it came in at $12,742,000. A 5% construction contingency of this figure comes in at about $620,000, or a total base construction cost with the 5% construction contingency of $13,379,000. Now what we have here what we're calling additive alternates are items in the parking structure design which are things which have a relatively high price tag, but they don't necessarily have to be part of the total parking structure. The parking structure can still function without these items, but these items throughout the presentation have been shown.

The cost of a second elevator at the Main Street side – remember in the presentation there were two elevators shown. But if one elevator is taken out we can save over $500,000. The photo voltaic system has a price tag of close to $850,000. The skylights at the four stairways, stairwells, cost $134,000. Metal top rails in lieu of pouring the concrete railings the full height – three feet six high – at the interior of the garage cost $57,000. You wouldn't be able to see the difference at the exterior because the exterior we're going to have those metal railings. But on the interior this is the price tag of having the metal railings. In order to construct the decorative medallions that Mel was talking about, it has a price tag of $268,000 over a comparable fiberglass medallion, or medallions. Using colored or scored concrete in lieu of asphalt at the walkway, along the Church Street side, has a price tag of $98,000. And painting the ceilings within the parking structure has a price tag of almost $300,000. Now if we were to add up all these additive alternates they have a price tag of $2,200,000. We add a 5% contingency, construction continency, to this figure, we have $113,000. And a total price tag of all these additive alternates are included with a 5% construction contingency, the total price tag on the parking garage would be $15,760,000. We have a note down here. It says that the construction cost includes 31% for the general conditions, bonds and insurance, overhead, profit, general excise tax, and a 7% estimating contingency.

That is the end of the formal presentation. We'd like to open it up to questions to the board.

Ms. Betts Basinger: Thank you very much. At this point I think Chair would like to take a break so everyone can stretch and we will reconvene at 2:20 p.m.

(The Maui Redevelopment Agency recessed at approximately 2:14 p.m., and reconvened at approximately 2:22 p.m.)

Ms. Betts Basinger: The June 17, 2011 meeting of the Maui Redevelopment Agency is reconvening. Chair is recommending without objection to provide an additional opportunity for public testimony. Testimony will be limited to three minutes per testifier with the recommendation of the Chair, additional time to four minutes will be granted. Prior to opening again for public testimony on this just reviewed item, I'm going to ask Erin Wade to share with everyone here and the members, the purpose of the MRA's meeting here today. Thank you. Erin?

Ms. Wade: Thank you. The Maui Redevelopment Agency has essentially three functions associated with the parking structure. One of those is to be a commenting agency for the

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Environmental Assessment that has to be produced. That's a requirement because we're using public funds and public property for this project. The second is to be a commenting agency on the interim parking plan and the parking management plans that are being developed for later phases of the project. So after we've finished the design phase, moving into planning for construction and interim parking and those sorts of things. And then the third component of the MRA's review is going to be the actual design approval. So today we're not at the design approval stage. Today we are at preliminary consultation on the Environmental Assessment. So the MRA today will be receiving information from the public and suggestions, and offering their own comments to guide the design team in their preparation of their preferred alternative for the evaluation during the Environmental Assessment. So that's the purpose of the review today.

Ms. Betts Basinger: Thank you Erin. So at this point we will open for public testimony Item-D, design review, on the presentation we just heard. So anyone wishing to testify please step forward, state your name, and your affiliation if any.

Mr. Robert Joslin: I'll sign in later. My name is Robert Joslin, and I own the Main Street Promenade properties on the Main Street side. And I guess, first of all, I understand now by watching the presentation – I missed the first 20 minutes last night – how you got to where you are now. It looks like – it looks like the piece . . . (inaudible) . . . in 2004. And now in 2011 I guess our problem is, some of us are serious stakeholders in the area, didn't know that all of that was going this far. Truthfully we did not know. A few months ago, I know that consultant for you has been – gave me a plan. He and I had a meeting, and I think with you also Erin? We did some talks and discussions that way. But I didn't know that this thing had gone this far at all, truthfully. And we have a lot of problems with this, a whole lot of problems with this. And I'm sure there's some time limit on this thing, and what I'd like to know is –. I don't even know where to start on this thing other than I could start rambling stuff up but that's going to sound lunatic like and I don't like doing that. But the concept is off already. We don't know why it's shoved up in the . . . (inaudible). . . corner. We don't know why this whole thing about Pili Street got re-established. We don't know so many things that have gone on with this thing without the input of the people that are there that own the adjoining the properties weren't included in this. It's the biggest problem we've got.

It looks like it's very consultant driven, very little citizen driven, the owners. It looks like a lot of these things have sort of taken on from earlier 10 year ago issues and have gone forward without sort of looking up and saying, "gee, maybe we ought to talk to some of these people." Seriously, that, I think is probably the biggest problem you're going to face. So you may want to kind of pull back on the reins a bit here and talk to some of us. Some ad hoc issues maybe – you know if you put something together that way so that we're not impeding any worse than it's going to get if it keeps going forward. So those are my current comments. Hopefully they're accepted well, but, honestly I'm really – I want to hear what other people got to say and I think that we'll all be doing a lot of dialogue later.

Ms. Betts Basinger: Thank you Robert. Members, any questions of the testifier? Seeing none,

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thank you. Anyone else wishing to testify? Susan?

Ms. Halas: My name is Susan Halas. I'm a property owner and business person. I live and work inside the redevelopment agency. And I'm commenting exclusively on the portion of the presentation that I've seen so far and I understand that there are future portions of the presentation to come. And because I know the Chairperson likes to hear the positive things first. She wishes that I would have positive things to say because I'm perceived as a person who only has negative things to say. I will say to the design team that given the guidelines they were given that they have solved the problem that they were given. Unfortunately I also echo two of the people sitting in the room. I echo Barbara Long who says it doesn't look like Wailuku. It does not look like Wailuku. It's not something that we would want in Wailuku, ever, under any circumstances in this present incarnation. And I echo Mr. Joslin who I'm not often on the same page with but in this case I am in that the people who actually live, work, own property and will be most directly impacted by this are not involved, have not been involved, and really have no idea of, you know, what this is going to do. We already went through one scenario where we did a so-called Main Street improvement which a large majority of the people on Main Street were not happy with. Now are we going to do a Wailuku Parking garage in which all the people who actually live and work in Wailuku as I look in the room here, I see that I know a lot of the people who live and work in Wailuku. I do not see them here today. And I think that like Mr. Joslin, and like myself, and like some of the other people, they are going to be amazed that this has gone this far. So I think that my basic comment no doubt will receive an extensive amount of written comments from my in excruciatingly boring detail.

But my main comments are you have forgotten two parts of this. You have forgotten that the people who live here have to live with this particular building seven days a week, 24-hours a day, and that it's basically an ugly, big box. It's a monolithic box. That is if things were to change in Wailuku, you could not do anything else with it. And also I point out to you that I see Bill Baer and I see a lot of other people in the room who were present during the initial discussion of what they wanted it to be or what could it be. And with that – how many minutes? I have one more. And that discussion was held 11 years ago and a great many things have changed in Wailuku. We have a much larger poverty clientele. We have a much smaller business community. And we have a very high probability that the lots at Maui Lani, the commercial lots at both ends of Maui Lani, will be the most attractive to the business end, the business community, so that the people who will be the parkers in this parking garage such as it is will probably be people who work in offices all day long.

And my last comment is I have not seen one, or heard yet, which I'm waiting for the second part of this, is exactly who's going to pay for this. Now if this were in Paia where I can see a huge growing commercial base and utter demand for parking, then I would say, well, big and ugly, we'll make it look like Paia. But since it's Wailuku –

Ms. Betts Basinger: Thank you Susan.

Ms. Halas: I think I don't –. I'm against it irrevocably and there's better ways to do this.

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Ms. Betts Basinger: Thank you Susan. We look forward to hearing from you again. Any other members in the audience wishing to testify? Tony?

Mr. Anthony Takitani: Good afternoon and thank you for the opportunity. My name is Tony Takitani. I'm also property owner in the area. And I think I used the word last night, I own the building that is deceptively represented to tower over the parking structure. When that structure comes up it will completely block and will be of equal height to the building that I'm in on 24 North Church Street. And I know we're suppose to keep our comments to the Environmental Assessment issues, so I think the only thing I would say is that I think this is –. We started off with a parking problem in Wailuku, and I think that's why we wanted to –. I'm not against increasing parking. I'm not thrilled with this plan. Not only because it blocks my building completely, but it also, I think, it's just way too big, way too tall. And we seem to be reserving space for future economic development or something along Vineyard Street, and I don't think that's what the parking lot was meant to be for. I think it should be lower and it should be broader. And I do think we're increasing the size by 70 – by approximately 200 stalls. It comes out to $75,000 per stall. I think this is way too expensive as well. But I appreciate the opportunity. Thank you.

Ms. Betts Basinger: Thank you. Members, any questions of the testifier? Mr. Takitani I do have a question, and actually maybe to our resource. If you could pull up again that one slide where you filled in with Google, so we can actually see Mr. Takitani's building in relation to the one I think he's thinking about.

Mr. Takitani: . . . (inaudible) . . .

Ms. Betts Basinger: But getting to, yeah, a view that puts it in better perspective. I think you're –. Yeah, I think it was the next one. No back, back, back one more. There. Well, we don't see the building but –

Mr. Ide: This is taken off of Google Earth so the accuracy we have no idea how accurate it is. We have to assume that it's fairly accurate. I apologize if it's not. It looks like we deliberately did that. We did not.

Ms. Betts Basinger: And Tony one last thing. How did you arrive at a $75,000 per stall number?

Mr. Takitani: I think that you're improving – you're adding about 200 stalls? There's 210 stalls now, and we're going to –

Ms. Betts Basinger: Well, there's 200 –

Mr. Takitani: So how many stalls are there now?

Ms. Betts Basinger: We're a little more than doubling.

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Mr. Takitani: Yeah, so you're improving by 200 stalls. So if you take $15 million divide it by 200, it's $75,000.

Ms. Betts Basinger: Well, but we're actually building 418 stalls in the whole project.

Mr. Takitani: You already have 200 stalls.

Ms. Betts Basinger: They're going to disappear. We are rebuilding 400–

Mr. Takitani: If you didn't spend a penny, you still have 200 stalls.

Ms. Betts Basinger: I understand you're talking about net. But in this, in just viewing it as a project, it comes out to $37,705 per stall on the big picture of this project. That's the way I look at it. Thank you.

Mr. Takitani: I appreciate that, but I look at it a little differently.

Ms. Betts Basinger: Good. Good.

Mr. Takitani: Thank you.

Ms. Betts Basinger: Anyone else wishing to give testimony? Okay, if not, I'm going to close public testimony on this agenda item. Thank you very much. We will be moving on now to –. Well, what we're going to do at this point is move Item-F1 and F3 which are relative to the parking structure up to this point so we can get those reports in before we start our discussion. Without objection? So Morgan? We're going to be listening to the report on the Wailuku Municipal Parking Structure update by Morgan Gerdel, AIA, parking structure coordinator. He presents a monthly report to this body on this project so if people want to continue to follow this project please feel free to join us each month.

F. REPORTS

1. Wailuku Municipal Parking Structure update and discussion on the parking structure project including issues relating to design, schedule, contracts, proposals, project collaboration and funding. (Morgan Gerdel, AIA Parking Structure Coordinator)

Mr. Morgan Gerdel: Good afternoon members. My name is Morgan Gerdel. I'm with Nishikawa Architects, and what I prepared for you is a brief update of the work we've been doing on the parking management plan and the interim parking plan for the parking structure project. Andy Miller of Downtown Parking and Planning Associates has completed the parking studies and parking management plan draft, and he has submitted to Public Works and Planning for review and comment. Once the comments are incorporated, the final report will be submitted to the MRA and will be released to the public. The final report will completed prior to the end

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of June, meeting the schedule last presented in our previous meeting.

For the interim parking plan during the construction of the structure, Nishikawa Architects has submitted a draft plan to Public Works and Planning. We'll incorporate their comments into a final report, and we'll present the plan in the next MRA meeting scheduled for July. Based on the initial research, there are enough interim parking locations to address the number of spaces lost at the municipal parking lot during construction. We're looking at the alternatives to address the various user groups: County employees, State employees, private business employees and the short-term parking users. Some of the property owners have indicated that they will be willing to lease their properties to the County which is encouraging news.

I've also updated our status report with a spreadsheet that shows the work that's in progress. And we've expanded the phase development of the project to show the work to complete the plans for the parking structure, and also do the building permit review. And that's about it for my report, if there's any questions.

Ms. Betts Basinger: Thank you Morgan. Members, any questions at this point? If not, thank you Morgan.

Mr. Gerdel: Thank you.

3. Task Status LU-3 Wailuku Municipal Parking Lot (B. Mitchell)

Ms. Betts Basinger: Bill, from your seat there.

Mr. Bill Mitchell: Thank you Madame Chair. I'd like to thank everybody for their input from the public and surrounding landowners. I attended last night's meeting with you and there were also some good testimony and thoughts that came out of that meeting that I'd like to share with the MRA that haven't been mentioned yet in today's meeting. But I'd like to preface that by just saying to Mel, and to Brian, and the team, I think you guys have really done a great job, and with all the constraints that you had getting a five story structure shoe horned in there, and it's unfortunate we don't live in the days of just walking and horses and carriages anymore. We got to find a place to put there animals, so I think you should be complimented to the whole team for having a good presentation packaged together.

I think one of the components of the MRA hasn't seen it, as Morgan said, we will be seeing in July is this parking management plan which will weigh heavily on both two things. One, the value of the structure, and two, the operational cost of the structure. In my estimation that may be one of the most important components aside from the design itself whether this project is, you know, completely viable. The other concern that came out in last night's meeting which I think is important and will be further defined is the issues of the construction access, the schedule, traffic issues. Knowing that regardless of how this gets built, it will be discomfort for some period of time. But to the degree that it can be minimized and better, more well thought out, I think that will be helpful for not only the residents and the merchants and everybody else.

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And if that's publicized and everybody sort of knows the game plan and the schedule, I think it will go more smoothly.

One of the discussions, and Brian, I think, detailed it well, that we'll have to have, as we get down to the cost of this, is the function of the additive alternates, and how we place value on each one of those, and what things really make sense to do now versus delaying. Because I think we all could probably agree that things delayed tend not to get done just because they fall off the budgetary map. And one of the questions – it's not a question for Public Works, but a comment – it's a question and a comment – is there potential for grants or other non Maui County funds to build this? And you don't need to answer that now, but we can talk about that. And if there are, that maybe the opportunity to get the additive alternates put into the project which would be helpful since there's – . I don't know, is there any stimulus money floating around out there still?

One of the other, I think, important points made in last nights meeting was the issue of public transportation as it relates to the parking structure. And Wendy did a good job of explaining. They have talked to MEO, and there are constraints right now on – constraints and demand issue that may not warrant a public transportation component our location with the parking structure. But I'm not sure that that wouldn't be included or shouldn't be included in the future, and I think it should be seriously looked at. And if that there are things that can happen on Pili Street now – I know the right-of-way is limited and pavement width is roughly 22 feet. And there's any number of limitations but I think we seriously need to look at the opportunity for public transportation, ie: buses, to have a place to drop and pick people up at the parking structure because potentially the parking structure could become a park and ride for people in this section of the island that would park there and then have either public transportation or some other mode of transportation to other parts of the island for work.

There was some lengthy discussion last night about ADA stall locations, their relationship in use in the structure, to elevators, and also access to Market Street. I think the design team has addressed that, but I think we should be – the MRA should aware of what those issues are because the reality is as the population ages I'm guessing is ADA will probably become more of a need. Finally, or secondly finally, the discussion about bicycles was really good and thank you Walter for your input and information on that. But I just noticed and I was thinking about bicycles, we've got a new scooter store just opening up right here in Wailuku. And I noticed more and more mopeds and scooters on the road and we probably need to think about what – and maybe the design team could look at that in relationship to motorcycles as well. If not necessarily in there today, how could they be added in the future if the scooter and motorcycle demand goes up as people us those sort of modes of transportation.

That's pretty much what I had. Thank you very much.

Ms. Betts Basinger: Thanks Bill. So members, let's go right around the table, and I'd like each one to add their comments to the MRA on the presentation that we just saw. So Mark, shall we move on with you?

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Mr. Mark Walker: Thank you Madame Chair. My comments are fairly short. I like the open architecture concept. I think echoing what Bill said given the requirements you were given I think you've done a good job for all the reasons stated. You know, elimination of the mechanical ventilation, the visual security, and particularly the long-term ease of maintenance. You know, a parking structure is utilitarian at some level and you can only make it so pretty. It is what it is. But I applaud your efforts and try to make it as attractive as possible. Obviously at the end of the day there's dollars involved and we've got to figure out how to pay for it which actually happens to be my task here on the Commission, so what's a few bucks in there? Anyway, obviously, you know, this has been a long time in the making. You can't please everybody. It is a big building. Yes, it will affect people as have every other building that's been built in Wailuku. One-story, two-story, three-story, four-story, they all, all those buildings in the past have affected somebody else. It is what it is. You want to do the best you can. You're looking to serve the most people, the common good, so thank you for your efforts.

Ms. Betts Basinger: Thank you very much Mark. Katharine?

Ms. Katharine Popenuk: I had a couple of questions actually and I'm not sure who should answer them, but I can ask all four of them, or I can give them one by one.

Ms. Betts Basinger: Well, will you want to call up a resource person that can answer all of your questions?

Ms. Popenuk: Probably.

Ms. Betts Basinger: Or do you just want to propose them as discussion at this point that we will present to them?

Ms. Popenuk: Well first of all I wanted to verify the height limitation. The height limitation is 45-feet. Is that correct?

Mr. Choi: . . .(inaudible) . . .

Ms. Popenuk: Okay. So and our building is less than 45-feet. Is that correct?

Mr. Choi:. . . (inaudible) . . .

Ms. Betts Basinger: Excuse me? You're going to have to go up to the podium. I'm sorry. Introduce yourself.

Mr. Choi: It's quite alright. Mel Choi. I'm the architect for the building. The question that was asked what's the height limitation for the building? The height limitation is 45-feet to the top of the top most parapet which is the railing height, and we are right there. We have tried to get as close as we possibly can. There are other elements that project above 45- feet. The elevator penthouses and other things but they're allowable. So I think the top most height or

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just some of the small little peaks is about 53-feet, but they're allowable. They're all within the code.

Ms. Popenuk: Okay. I wanted to ask about the additive alternates of the photo voltaic roof on the upper level of the building. Is it additive alternates in terms of the PV film or is the roof itself an additive alternate?

Ms. Betts Basinger: Could you identify yourself please?

Mr. Ide: My name is Brian Ide. The additive alternates for the photo voltaic array, this number represents the entire roof structure and the PV system for the parking structure. Basically what we will do if the additive alternates is not selected is to construct the columns so when the additive alternates can be added or if wants to be – if there's ones to be added, it can be added very economically by just putting in the support beams, probably structural steel beams, and some secondary framing members which are probably open . . .(inaudible) . . . by putting in a metal roof and putting in the film. There are other alternative PV systems too.

Ms. Popenuk: And when you looked at the price for this additive alternate, did you happen to break it down in terms of what if we just put a roof but no PV application film?

Mr. Ide: I believe it was in the range of approximately $500,000 for the roof structure including the –

Mr. Choi: Mel Choi again. Your question regarding if we just put the roof on, and forget about the PV.

Ms. Popenuk: Right.

Mr. Choi: We can't do that. The reason we can't do that is that it has to have – be an energy providing. In other words, it has to be a photo voltaic roof because that roof projects into the 45 foot height limitation.

Ms. Popenuk: Okay. And a related question, we're seeing a cost for a five-story structure here. Is there a consideration for a four-story structure, and how are the cost impacted when we only build four-stories?

Mr. Ide: Brian Ide again. The cost of the four-story structure is as follows. Base construction cost of $10,327,000. 5% contingency, approximately $500,000. Total base cost with a 5% contingency of $10,844,000; additive alternates $2,000,000; $100,000 for the construction cost contingency, for a total construction cost of $12,975,000. It has a total of 265 stalls in the parking structure, 21 on-grade, and in the remnant lot, 48 stalls, for a total of 334 stalls.

Ms. Popenuk: Does MRA have a hard copy of these numbers? Your slides? We do. Okay. Alright. My last question is actually an environmental question and we're talking a lot about

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cleaning the structure and washing it down, et cetera, and I was wondering is there any provisions for the fact that water may contain oil, gasoline, tar, blah, blah, whatever one might find in association with parking stalls? And are we diverting that in or is that going directly into Iao Stream, or what's happening there?

Mr. Choi: We'll have Karl comment on that. Karl Walker.

Mr. Walker: My name is Karl Walker. I'm the parking consultant. And we have provisions as was previously discussed for a wash down system. But your runoff from the wash down system is no more than you would get on a public street and exactly the same thing. And would be handled with the storm sewer in the same way.

Ms. Popenuk: So when you say wash down system, is there actually built in components?

Mr. Walker: No. There would be a two-inch vertical pressure water riser with what we call hose bibs or an inch and quarter hose, so you get a substantial quantity of water and you'll actually, you hose it down the same way you would your driveway or something of that nature. But it's materials that you would have from the parking space, on the street or just normal rain water coming down on the surface of an open parking lot.

Ms. Popenuk: And that's it for me. Thank you.

Ms. Betts Basinger: Thank you Katharine. Members, any other questions or comments or discussion at this point? Okay, seeing none, we're going to move on then to agenda Item-E1, request from Yuki Lei Sugimura on behalf of First Friday to limit the location and sales of outside open air sidewalk sales during First Friday events per the Wailuku Redevelopment Area Zoning and Development Code 30.08.090.E.

Ms. Wade: Pardon me Chair, I need a moment to set up a presentation for that.

Ms. Betts Basinger: I'm sorry. And just before we do that we'll recess for five minutes.

(The Maui Redevelopment Agency recessed at approximate 2:55 p.m., and reconvened at approximately 3:11 p.m.)

E. MAUI REDEVELOPMENT AGENCY BUSINESS

1. Request from Yuki Lei Sugimura, on behalf of First Friday, to limit the location, and sales of outside open air sidewalk sales during First Friday events per Wailuku Redevelopment Area Zoning and Development Code 30.08.090.E. The board may take action on this item.

Ms. Betts Basinger: The June 17th, 2011 meeting of the Maui Redevelopment Agency is reconvened. And we're going to continue with Item-E1, as I read before regarding First Friday

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events on the Redevelopment Area Zoning and Development Code 30.08.090.E. Erin?

Ms. Wade: Yes, I apologize. Here's some maps for the group that the applicant brought today. Thank you. So per a request from Yuki Lei Sugimura who coordinates the First Friday events on Market Street and is the permit holder for the Police street closure, she is asking that we limit sidewalk sales on Market Street during the duration of the First Friday event activities. Essentially the MRA offers the opportunity per the Wailuku Zoning and Development Code to have, open, outside open air sidewalk sales. And this is actually a permitted use within the district. However, it does give a condition that the MRA has the ability to limit that use during special events. And so that is what Ms. Sugimura is asking for at this time. There is no other permit required for this event. The MRA does not, like historic districts, give a special event's permit. In the Historic District you aren't allowed to have sales on sidewalks. So when someone comes and pulls an event permit for something like a parade or any type of a street closure, there isn't that conflict with the sidewalk sales. However, the authors of this code thought about that when they wrote it and realized that, yes, while we feel sidewalk sales is a good thing for Wailuku, there may be conflicts during the time that there would be special event, so the clause was written in for that purpose.

This wasn't an issue at all at the beginning of the First Friday events but things have sort of changed with First Friday. It's become extremely successful. The event attendance has grown from dozens to thousands, and the street is very packed. The vendor spaces are now very highly sought after. And the overall management and safety of both event participants and attendees is a primary importance. So therefore, we felt it was important to bring this issue up quickly.

The other issue, you know, relating to this in terms of the capacity of the event is – advertising for them – but Willie K is going to be at the next First Friday event, the July 1st. And the last time Willie K was there as a performer, the event was extremely packed so now that momentum has grown we want to just insure that the event coordinators are able to provide a safe and well managed event for the public. This is why the event holder was encouraged to make this request to redevelopment agency. So I'll let the event holder, the permit holder, sort of explain to you how they do and arrange for the vendors now, and what they're specifically asking for.

Ms. Betts Basinger: Thank you Erin.

Ms. Yuki Lei Sugimura: Good afternoon everyone. My name is Yuki Lei Sugimura, and I am a co-coordinator for the Wailuku First Friday event. And before I get into that specific request, I just want to thank you for allowing us to build this event. It is one of the MRA's action items in your Market Development Plan section of the Redevelopment Agency Plan which was adopted in December of 2000. As the event does fulfill the areas in the redevelopment area plan for market development one for promotions and event development, organize street festivals; market development two, expand the use of the Iao Theater; MD-3, develop a visitor market development plan to develop a new visitor attraction; MD-4, business recruitment initiative attract street entertainment and vendors; and MD-6 is develop Wailuku town activities

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and business opportunities. Also we do have a website which is also a part of your market development action items. So I want to see how much we fit into what you are trying to do with the revitalization of the town.

The Wailuku First Friday event which started about three-and-a-half years ago. When we first started, we didn't close off the streets. We did have vendors or merchants such as Teri and some others who did participate and opened up their stores, had cheese and cookies and different things and did Wailuku First Friday specials. And here you have an active street, you know, continuing on. Stan Rippy who was one of the – also, besides Teri – who also came up with this idea of doing this monthly street event. Stan Rippy had the lease on the Wailuku Banyan Tree Park. Today, Giovanni Rosatti, he has the lease on that and is an active member with us to put on our monthly events. But Stan Rippy had entertainment in the Wailuku Banyan Tree Park. We had the stores open and we had like some activity, and there was this active street going on. And finally Police notified us that is getting kind of dangerous as we got more popular. And so October of 2009, around there, we pulled permits and we closed off the streets, and every month we're required to do that. In our permit, we do ask or we do say our event is from 5:30 or 6:00 to 9:00 or whatever it is. Our event has grown now so we actually, on our permit, we say we close at 10:00 because we want to allow all of the vendors to get off the street and all their things off the street so it's safe before we open up the street. And the event has said, on our posters, that we start at 6:00 and we close at 8:30 or 9:00, whatever it is. But for safety factors, in October when we pulled the Police permits, Police came on board, and we went from five police officers, to today we're asking for, the July event with Willie K, we're going to have nine.

We work very closely with Police as how to monitor this event because safety and security is a huge concern of ours. The reason that we're making this request for the use of the sidewalks is as we've grown, we have, our event has, if you haven't been to it, we have – we now have gotten the streets closed. June was the first time we ever had no cars on the street and this has been a pet peeve with the Police because when you have vehicles who are left on the street, what happens is in the middle – and this happened so often – in the middle of the event going on with all these hundreds of thousands of people you have somebody who wants to leave the event. So then Police has to escort this car off and you have to be really careful so we don't run anybody over. And Police has been on our case for months trying to say, okay, look, we got to get all the cars off the street. June was the first time we did it. And the way that we do this is the police permit that we have, Police comes on board from five o'clock. And when a space opens up, and they get our cones which are on the sidewalk, from 10:00 in the morning notifies them of our event, and they put the cones where a parallel stall where it crosses like this. So a person can actually pull in and park because the cone is on the edge of one stall to the next. So that is the way we try to work it so that we have made this a safer event. It was a huge concern of ours. And on the sidewalks, which is what we're asking you for, is we have sidewalk vendors that set up from about 4:30. According to our permits, they can set up from 4:30. And once they're set up and people are all congregating – and we try to monitor this – but people automatically when they see a hot dog stand, they're going to start buying hot dogs and they start congregating onto the street which is kind of human nature. And

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so we go and we tell them, you know, we don't start yet, can you not sell, but, you know, those kinds of things happens. So there's safety concerns.

We also have a situation or situations where the sidewalk vendors that are on there are not ours. They're not part of us. They're being rented out by, you know, other people which we have no control over actually. So that's fine, but then again we don't know what they're doing and then if there's a problem with the event, it's our problem. So I have a real big concern about security and safety of what happens during our whole event. We also have situations of people who – because this is an open event – who come to the event and pass out flyers and we always have to make sure that those flyers don't have x-rated things or whatever, so we've very cautious about, you know, the event that we've built. It's, hopefully, a family event. And that the vendors and sidewalk vendors are there, we know who's there, the ones that, you know, we place. But the ones we don't place and that appear it's kind of like, you know, we have no control over it, and we understand that. But we would like to know what's going because if there's a problem, it becomes our problem. Anybody who has a business, you must understand liability and insurance concerns. And our insurance has expressed a concern about things like that for us to follow.

Our event permit also does – when we pull a permit with Police, we ask for the road closure times as well as when we ask for certain parking spaces to be set aside for us because we have to set up stages. So if you take a live street and then you try to set up a stage in the middle of the day or whatever, it becomes difficult because people are always coming in and parking. That's fine. My permit specifically says that certain stalls, three in front of Maui Thing and by Native Intelligence and in the municipal parking lot that those stalls are available from seven in the morning so that we can put out cones to designate areas that we'll be setting up our stages, and then the stages get set up. Please bear with us because I did have a discussion with one of the previous testifier about that expressing concern about their client who wanted to say that we had no right or whatever to put up, you know, the stages that early. And I just want to tell you that we have – to do this event with the resources that we have available, we ask for volunteers, many volunteers to help us. Some of these volunteers have day jobs and so they can help us from seven in the morning, and if they are there to help us to do this free labor to get this stage up we're taking it at that time. Other places, they bring the stage pieces, they leave it on the sidewalk throughout the day, and as we get closer to the time that our sound guy starts coming in for the logistic layout then they stand there and they try to free up those parking stalls as somebody leaves. So it may look like, well, it's really easy, you just go to do this, but to actually do these things, it takes a lot of logistics. I also would like to note that as best we can we try to work with the situation and we've made adjustments. The earlier testifier noted that – I think he said that a vendor was being setting up where a stage was suppose to be set up and that's with Native Intelligence. And I will let them know. I did not pay attention to that. I mean, that probably did happen because last event they did have some native Hawaiian plant sales.

The other – my closing remark I would like to say that, you know, this event is only 12 days out of the year. We are a minor inconvenience, I think, for the overall 353 days of the rest of the

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year that Wailuku town can do whatever they want. We try our best to come in and clean up. We have hired logistic people that help us clean up the street and do whatever we can so that it is in the best condition when we leave as when, you know, we found it. We're pretty serious about security and safety, and so we're asking your help with this sidewalk situation.

Ms. Betts Basinger: Thank you. Members, any questions of the testifier?

Ms. Popenuk: Excuse me? What exactly are you –

Ms. Betts Basinger: You can ask for recognition of the Chair.

Ms. Popenuk: I'm sorry.

Ms. Betts Basinger: So I know where to look. Katharine?

Ms. Popenuk: Thank you. Sorry. What is it exactly that you're asking for?

Ms. Sugimura: I'm asking for –. Okay, let me go back. The Police permits that we pull every month allows us to have street closures and the parking spaces which are the Police kuleana basically so we can have, you know, work on that with however we build our event. This request is to ask the MRA to help me get custody or jurisdiction over the sidewalks which is where we place vendors now. And again, we have circumstances where vendors pop up and we don't know who they are, we don't know what we're doing, and it creates a confusion of liability for us. Our insurance has mentioned to us. I've asked Police about it, and Police says, you know, we can't do anything that that's not their kuleana basically. And so I've asked the MRA – I'm asking the MRA for your assistance so that we could then just 12 days out of a year do this and the rest of the 353 days we won't be in Wailuku trying to do, you know, anything else to obstruct them or anybody from doing those kind of things that they want. So that's kind of what I'm asking for, the sidewalk.

Ms. Betts Basinger: Members, any other questions? Mark?

Mr. Walker: Yuki, so what you're asking for is not to allow any of the stores to either set up their own booths or lease out space to some other vendor that's not associated with your event.

Ms. Sugimura: Probably more the second. Yeah. Yeah, but, yeah.

Mr. Walker: Right. And what do the – each store owner has x-number of feet in front of his store. I don't know what the code is or what –

Ms. Betts Basinger: Perhaps Erin can read us the code itself.

Ms. Wade: Sure. The definition of outside open air market states:

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> "An outdoor area set aside for the display and sale of products and located on a private or public property. Examples include outside farmer's markets."

I'm sorry. I was reading on open air markets. Outside open air sidewalks sales:

> "An outdoor area set aside for the display and sale of products and located on the sidewalk provided. The open air market is used in conjunction with a business located within the building or structure located along and adjacent to the sidewalk sales."

And in the conditions related to sidewalk sales it says that there must remain at least three feet from the edge of the curb along the sidewalk free obstruction so as not to impede pedestrian.

Mr. Walker: So they get all the room from their store front to within three feet.

Ms. Wade: Of the nearest obstruction. So if that happens to be a utility pole or trash can.

Ms. Walker: . . .(inaudible) . . .

Ms. Betts Basinger: And Erin could you relate to the body MRA's responsibility?

Ms. Wade: Sure. So there's several things related to outside open air sidewalk sales in addition to the location of the sales. It has to remain clear and free from debris. There can be no advertising. There can be no permanent fixtures or encroachments. But then the final condition is during the special event each open air sidewalk vendor may be limited in location and sales, as well as duration of time the MRA. So first in the definition it says that the sidewalk sales have to be associated with a business in which they're in front of. And right now in some cases it's not occurring. Sometimes people are leasing out. But then above and beyond that it says that the MRA can limit the location, sales and duration of time of whatever sidewalk sales is occurring.

Mr. Walker: So I guess, so a further question would be a store owner wants to stay open and participate because there's a bunch of people and they might buy his product. So could you, could the event, actually put up a booth right in front of his store and block the people coming into his store, or their store?

Ms. Sugimura: So I'll make a statement, and I think, if I could ask Teri who handles our booth placement it's probably better. But we have – the event –. Let's see. The history of this is probably when we first started there were very few merchants that were actually open, just very limited. And of course as we've grown in popularity or the event has grown, then, you know, more merchants stay open which is really the goal. The benefit to the merchant would be, I would think, to keep your store open so that you can service your people, showing them all your things right? But what we're seeing is that the merchants are renting out or leasing out spaces to other people which is kind of like we can do that. You know, the event, that's what we're

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bringing all these people for so let's work together and not for your benefit, but I hope there's a community spirit that you may think, okay, somebody wants a booth space so maybe I'll send him to Teri and then they could help pay for the marketing, the security, the logistics, everything that goes on to put this event on which is really thousands of dollars. And if we can collect – it's so small it's like $25 if you're not a food vendor, and $40 if you're a food vendor. It's so small, but it adds to our pot and we struggle every month to pay our bills. So we're hoping that this would help us get this kuleana or jurisdiction over this area so we can do an event, not worry about what's happening that we don't have control over, get control over that, communicate with the merchants, and you know, get this kind of cleared up. Which I started talking to people as I've seen them on the street saying, hey, I have this concern and this is, you know, kind of what's happening. A lot of them are totally surprised.

And, you know, another comment I want to make before I bring Teri on is that on a regular Monday thru Friday because I'm in Wailuku so much, usually by 5:00 p.m. on this segment of Market Street that I'm talking about, the stores are all closed. I mean, there really are – they've closed their shop. They're tallying their cash registers or whatever and then I think Maui Thing and Requests Music stay open till six. But it's normally a quiet time at this hour that we have our event. So we're only here 12 days out of the year, so it's kind of small kind. But we do generate a lot of interest and hopefully we help market Wailuku so that these merchants or the businesses – you know, the trickle of this can flow so that the merchants can get residual business after from being open, you know, I think that's a huge benefit. But, Teri, you want to answer that question? Is that okay, Alexa?

Ms. Betts Basinger: Yes. Teri?

Ms. Teri Edmonds: Hi. Teri Edmonds. Thank you. Vendor, coordinator for Wailuku First Friday. When it comes specifically to merchants we actually started this to help the merchants be successful, so I'm very cognizant about the types of vendors I put. I never put them in front of somebody's store, like right in front of the doorway. It would never block entry. I also try to be – I gave you map there – it has these tiny little numbers of where we have booth placements, and I pretty much narrowed it down to places that still allow for good walkways. Some of the stores that are closed, I'm able to put a few more there. In that instance, for example, Brown and Kobayashi, they're usually closed. And so I put people right across the whole frontage. They don't mind. However, they're so excited they just told me that their customers are starting to come down so now they want to open. I know it's super exciting. So he came to me, and we adjusted our floor plan for him. If there's – I try to make sure I don't put a jeweler in front of jewelry store, you know, so I'm very aware of those things. Plus our First Friday committee meetings are open to the public so we really want the merchants – that's the idea – is to get the merchants to stay open and find the value in it.

One of the other things I like to say is that let's say I get competing vendors. I get a lot of jewelers and they don't mind. I'm going to say I get two taco stands. I try to put them on opposite ends. I'm very careful about spreading out the variety in what we have. Again, the other thing is as merchants we really try to cater to the merchants so if I have a merchant that

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is, let's say, a shoe store and they're concerned about a slipper vendor. We really try to come up with guidelines that help them express their concern. We even in the beginning offered . . . (inaudible) . . . Should they just show up to the committee meeting and participate and show that it's not just, you know, we want to be the only shoe vendor there. You know, you really have to participate and be a group, you know, come and open up. But we do give the merchants so much. They get first priority, if they're will to do that.

Another really great example is Treasure Imports. The family goes home on the weekends. I mean, they've been here – they don't need to open up at night, but it's been such a success that now his daughter puts out a booth. But it wasn't coordinated until after they were already there. So it's those kinds of things. We would have made a space for them for sure, and we're so glad that they're there now and that they find the value, but it is nice to be coordinated through us. Plus we have strict requirements. You absolutely have to have a Department of Health temporary food permit. You have to have your General Excise Tax license. The other one is – right – additional general liability insurance that has to be stated on the vendor's business insurance to protect the landowner. So those are things we like to just keep control of.

Mr. Walker: That makes sense. Thank you. Because as you mentioned at the beginning, you know, the goal is to promote business or redevelopment which to me means mostly business and we hate to hurt obviously the people that we're trying to help.

Ms. Edmonds: That's right.

Mr. Walker: So contrary to the earlier testimony about you guys stealing parking stalls earlier than allowed that's – your refuting that or that doesn't –?

Ms. Edmonds: Absolutely. Yeah. And I think our permit might change for July on that. Right, Yuki, we're actually closing – you know better on that. I'm going to let –

Ms. Sugimura: So Mark just as a clarification – I'm Yuki – just as a clarification on that question. So what I tried to explain earlier is that my permit, Police permit, which approves or disapproves states that from seven in the morning I have designated or asked for these certain parking stalls to be designated for staging and the areas I described. So legally, per se, we have jurisdiction over the parking stalls that's in our permit and the street closure and all times that do is all in our Police permit. I'm not too sure what Anthony Ranken was saying about the 5:30 p.m. to 9:30 p.m. which is that may be closer to when our event is, but that doesn't necessarily reflect our logistics to set up.

Mr. Walker: And what does your permit says as far as time?

Ms. Sugimura: It seven o'clock, a.m., for those parking stalls which is, you know, what he brought up. And our event is, in July, at the encouragement from the Police, we used to say that we would be, you know, starting to shut down from 5:30 a.m. and go till nine. And now we

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had a meeting after this last Wailuku First Friday which was hugely successful, and Police is asking us to, asked us to put the permit in from 5:00 p.m. for the street closure just because people are already walking on the street, and they have these live cars following them and they're just zig zagging through once they see that activity is starting to kick up I guess. So our street is going to be 5:00 p.m. street closure till 10:00 p.m. is when we say that all vendors, entertainment, beer garden actually closes at 9:00 p.m. – once that gets cleared off and it's safe, then the Police are going to actually open up the street. So that's kind of the scenario, and the ending part and the beginning part is critical, you know, for safety and whatever. And we're really trying hard to get the cars off the street for obvious reasons, just so we don't have these kind of situations of people, you know, trying to drive out in the middle of the event. And Police will work with it, but it really raises a lot of caution, you know, for them.

Ms. Edmonds: Like – this is Teri Edmonds again – like Yuki was saying, you know, we have the permit to close those staged stalls early in the morning, but we really try to save parking because it's right outside of my store. You know, there's cars parked there most of the afternoon. We let people get in, we put this really clear signage that says this event is going to close and that sets up by 10:00. Our volunteer gets out there at 10:00 in the morning, so it's out there all day. And then, really, it's not until later in the afternoon. Like she says we stand out there and have a person wait and then try to block off so we do try to help with parking throughout the day.

Mr. Walker: I mean it's clear that the event is growing and obviously with growing pains come issues and things you need to overcome, but – and I'm liking what I'm hearing. You're right it is only 12 days a year, but, I guess, the main thing is really to be able to communicate what you're doing, why you're doing it, et cetera to all the affected merchants on the street. And, yeah, of course, you're not going to get 100% buy in, but you have the right to do what you have to do according the permit.

Ms. Edmonds: One of the other things that we've been working on this last week because of these issues is we're – you know, we already have a set of vendor guidelines that are published, but we're always tweaking them and we have adopted a new policy that we're going to let the merchants know. Do a nice new draft of the letter that lets them know clearly what we're trying to do and that is part of our next execution plan.

Ms. Betts Basinger: Katharine?

Ms. Popenuk: So in fact a merchant could rent a booth in front of their own store. I mean, you're not precluding that.

Ms. Edmonds: Currently, they can have it for free. They actually have – we give them priority, so I just ask that they give me some lead time because I have people that have been there that have been diligent about their dues on time, and following the rules so I try to be respectful of them. But they actually, at this point, they can have it for free.

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Ms. Popenuk: And would you continue with that same policy?

Ms. Edmonds: I would like to change that.

Ms. Popenuk: And how do you want to change it?

Ms. Edmonds: Well, the reason I want to change is because of the fact that I don't have any control over what's happening as far as what they're selling. Like you said if they have food that they decide they want to put out there and it has not been monitored. They don't have a permit from the Department of Health. I mean, I'm even applying that rule to myself, so, I'd like to see it happen like that. But the merchant has first right of refusal. They would have a discount. These are just ideas we're kicking around. They would still have to provide their general excise tax, so it's actually Teri or If the Shoe Fits would have to be the vendor in front of my store. I can't sublease it to somebody else. And again, for fairness, you know, we try to be fair and spread everything out and just have better control over what's out there on the street especially since there's that liability issue.

Ms. Popenuk: So in other words, the person who owns the store would be treated in the same way that any person who approached you for a booth?

Ms. Edmonds: Yeah, except they would get first right of refusal and a discount just because we're excited that they're participating.

Ms. Betts Basinger: Bill?

Mr. Mitchell: Teri, about how many registered – how many vendors do you have now that are falling under First Friday? Do you know?

Ms. Edmonds: About of 50 with a wait list of 30.

Mr. Mitchell: And what do you think the boot leg quantity is? Those that aren't coming, that are setting and doing their own thing?

Ms. Edmonds: I'd say last month, I'm going to say off the top of my head, about 10. And that would include, maybe, like a street musician that we find that sets up willy nilly.

Mr. Mitchell: You may have answered this question already Erin, and I didn't hear it. Is there no permit necessary for anyone to go down and set up any time of day on a public right of way?

Ms. Wade: Right. So however at this time it has to be associated with the business that they're in front of. So the business themselves can put a table out in front of their store and have outside open air sales. But otherwise they do have to come in and request permission if they're going to use public property.

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Mr. Mitchell: If they use public property. So anybody setting up that's not associated with the business is doing it in violation of the code.

Ms. Wade: Correct.

Mr. Mitchell: Okay. Thank you.

Ms. Betts Basinger: Any other question members? Thank you. I know that the event has growing pains and I'm so happy that it's having growing pains. I remember way back when that it was part of revitalization and energizing, bringing people to the street for our merchants. So I'm glad it's working. I do have one question. Well it's actually it's a comment. You know because of the growing pains and I see it. It's going to continue. It's going to be liquid process where you're going to be creating better vendor control, better guidelines, and that's something that's just going to continue. I need to hear – and well, and the last thing is MRA is now contributing and is a sponsor of the First Friday event in one very important area. And we have allocated monies exactly for security and safety. So the safety of these – 7,000 is the number that was there last month – of 7,000 people converging onto Market Street falling into our jurisdiction is very, very important to this agency and to the County of Maui. So all things being equal we're always going to go on the side of safety. So I'm not quite sure Erin what the MRA can do at this point so if you can tell us our options. And then I know we do have a member in the audience that wants to testify after we hear what we can do here.

Ms. Wade: Okay. You can – at this time what is before you is to make a determination whether or not to limit the time, location, and duration of sidewalk sales. And what the request is for is for the street, extent of the street closure. Correct Yuki? So that would be from Main to Vineyard Street on Market. Correct? Okay. So that's what's being requested. You also have the option to condition those limitations. And one of the things that staff would recommend is that you would add a condition that requires the event holder to notify businesses in writing no less than one week prior to the event. This is a standard condition that we require for historic district events whenever there is a parade or street closure.

Ms. Betts Basinger: Members any comments, questions, for Erin?

Mr. Mitchell: Does the First Friday folks, do they – are you in the loop on a constant basis presumably with them on what they're doing? Or are they pretty much autonomous from –

Ms. Wade: They have no – at this time, they have no permits from the Planning Department, and have no responsibility to be accountable to us.

Mr. Mitchell: Okay.

Ms. Wade: This will change that. At this point what will happen is essentially we are extending them the use of the sidewalks and they will need to be accountable to us for the use of the sidewalks.

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Mr. Mitchell: Okay. Thank you.

Ms. Betts Basinger: Erin, I have a question. In the conditions, how would we address enforcement? So if someone were to set up just past Vineyard Street or some where up around the corner, could that be conditioned or is it our responsibility?

Ms. Wade: Well, the way I have phrased it at this point is for the extent of the street closure. So the private business would be able to still exercise their rights under the open air sidewalk sales. So if you were a business – let's use Swan Interiors as an example, at the corner of Vineyard and Church – they would be able, if in theory if they had the sidewalk room, put something out, they would be able to put out merchandise and do open air sidewalk sales because they wouldn't be within the extent of the parameters of what the sidewalk permit would be. But it can be extended beyond that if that's the interest of the applicant, but for now, I mean, my understanding was the conflicts were occurring where the street closure is occurring, and where the majority of the on street attendees have been.

Ms. Betts Basinger: So thank you. Therefore I still have a concern about enforcement. Any suggestions to the applicant? Or may I ask the applicants if they have considered an enforcement procedure for people that are setting up. If you were to receive this, how would you handle the vendors that are . . . (inaudible) . . .

Ms. Sugimura: I think you're asking me if you were to pass this today which is really our request is from Main to Vineyard, and if there was somebody who came and set up on Church Street let's say. Is that what you're asking? No?

Ms. Betts Basinger: Not really. I'm asking how you would enforce it in your normal once a month event?

Ms. Sugimura: During this?

Ms. Betts Basinger: As Teri testified there might be up to 10 vendors that are setting up, boot leg, as Bill said.

Ms. Sugimura: Yeah, that's a good word.

Ms. Betts Basinger: How do you enforce that now, if in any way at all?

Ms. Sugimura: Okay. So actually we observe it. We talk to them. We can't do anything about it, you know, and we truly can't. And there's a concern for us about liability and safety, and concern for security, so that's our plea to you so that we can do something about it. We are, already, have drafted a letter and hopes after this meeting, in hopes of approval, we have already been working with our attorney to try to draft up a letter that we can send out to vendors, street vendors, to land owners, and participants that work with us closely just so that they know this change that's happening. If we do get your approval, then we'd be able to go

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to these people and say you know what we have to ask you – we'll ask, can you please send your vendors to us. And you know, this, we have no grounds to change anything, so, you know, this will help us in terms of getting things, probably better organized and minimize our liability. That is a huge concern.

Ms. Betts Basinger: You mentioned that the event is so successful that you're requirement for security and safety has elevated up to the need of nine officers at each event, and I suspect that may grow. Is it something, and I know I'm asking this, you know, before the event if it were to happen, but would they take into their security scope the removal of vendors that are not sanctioned by the event? Would that be something you would negotiate?

Ms. Sugimura: We haven't talked to Police about, you know, doing anything like that because that sounds pretty adversarial. So hopefully we can all play nicely together basically and work this out. I think that's possible. I mean, I hope so. We're all, you know, trying to do this all for the same reason I would think.

Ms. Betts Basinger: Thank you. I know Erin wants to make a statement.

Ms. Wade: I just wanted to clarify one point that there are several private properties right now that do host vendors that work with the First Friday event.

Ms. Sugimura: Very closely.

Ms. Wade: Right. And this wouldn't put any restrictions at all on them or on you folks. This only deals with the sidewalk, between building face to building face.

Ms. Sugimura: Correct. And can I make a – can I say something about that because Giovanni Rosatti is in the audience?

Ms. Betts Basinger: I recognize Yuki.

Ms. Sugimura: Thank you. Sorry. Sorry Alexa. But I just want to thank, I mean, truly, to put on this kind of event you will not believe how much coordination it takes and how much really community love it takes, and Gio who is in the audience has sat through many meetings with us, trying to work with us, as well as Jonathan Starr. They're the two property owners that basically allows us to put, you know, vendor booths there and we work them. And you know, we're providing insurance, additional insurance for them. So it is possible to work together if that is a positive attitude of, you know, the landowner and the community.

Ms. Betts Basinger: Thank you. Members, any other questions of the testifier?

Mr. Walker: Madame Chair?

Ms. Betts Basinger: And then we'll move into discussion.

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Mr. Walker: Okay. I don't want to put words in your mouth, but I think you were asking physically what happens to enforce –

Ms. Betts Basinger: I was.

Mr. Walker: If someone sets up, what, you just – I mean, do you –?

Ms. Betts Basinger: Yes. And I think what I'm hearing from the testifiers is if they had some sort of authority which we may be able to give them, then they would be able to start thinking about what enforcement measures they would want to take, baby step to big step or whatever. So I'm satisfied with that, and I knew that I asked the question in advance of any authority that we might have. And you know we are looking at a neighborhood watch program as well that might work very closely with the ordinance. Seeing no further questions, Teri did you want to make another comment? I saw you raise your hand.

Ms. Edmonds: I'm not specifically asking for this today, but this issue has come up before and that would be maybe if you do discuss a provision that as this event grows because you remember our goals are always to take it block wide that we might be able to extend that if we have to get further permits. Because that is our goal is to make everybody else busy – Swan Interiors and Four Sister's Bakery. We have plans for the lot across from Maui Bake Shop. And, you know, we're really trying to get Good Shepard Church is getting involved so it is that whole block thing, that it might need to be expanded later.

Ms. Betts Basinger: Thank you. Members, on this item –. I'm sorry, Mr. Ranken.

Mr. Ranken: I'm starting to think maybe we don't really have a disagreement here. Maybe there is no need for action by this body. I was relieved to hear both Yuki Sugimura and Teri Edmonds say that they're not trying to stop the open air sidewalk sales from occurring. Open air sidewalk sales, there's this a specific term in the law, in Chapter 30.08 of the Maui County Code, which governs this Wailuku Redevelopment Area. It's a term that means only one thing which is a business that is on that street putting a little table out on the sidewalk. So they're saying they don't want to stop that, and I think I heard Erin say she doesn't want to stop the businesses from doing that even during First Friday. So that's great. That's all that my client wanted to hear.

I don't see why they are asking the MRA to take action. Let me remind you that pursuant to 30.08.090E the power of this body is limited to doing only one thing and that is limiting open air sidewalk vendors, which I'll remind you are the businesses that are there. The only thing you're allowed to do is to tell businesses on Market Street during First Friday, you may not sell your wares on the street or there are limitations in the location where you can do it or duration of time that you can sell it during First Friday. But if they're saying they don't want to limit my client and others from putting out their booths to sell material products that they sell in their stores, then why would there be any need for the board to take that action. I'll remind you also that as it has been acknowledged this body does not issue a permit for First Friday of any sort. You cannot

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– you cannot give these sidewalks to First Friday. All you can do is tell the businesses that they can't use the sidewalks. It's up to other bodies and other law to determine what First Friday gets to do, and that in fact has already been determined. The Police permit says repeatedly that the applicant is granted permission to utilize the mauka and makai sides of the sidewalk within the closure area for vendors and exhibitors to erect tents, so they've been given that permission by the Police which is the permanent authority for First Friday. The problem that seems to be raised here now that I've heard Ms. Sugimura explain it all, she said a couple times that –

Ms. Betts Basinger: I'll give you one more minute.

Mr. Ranken: Really, I didn't know I was being limited. I really think this merits, you know, a serious, kind of legal discussion about the duties and powers of this board and the necessities. But I would ask you to cut me off if I seem to be repeating myself or straying from the topic, but I would ask for a license to cover these important legal issues.

Ms. Betts Basinger: You have it and for another minute, and members will be able to ask questions of you to further expound on your legal argument.

Mr. Ranken: Well, Ms. Sugimura said it's not the problem of businesses selling on the sidewalk, but it's businesses renting out the space to others. Now the law specifically prohibits that, so this board has no ability to say, hey, to do anything further to prohibit what's already prohibited by the law. And for this board to tell the outside open air sidewalk – for this board to tell the businesses on Market Street you can't conduct open air sidewalk sales, there's limits on it, or go to First Friday, it would accomplish absolutely nothing to limit the so called interlopers. That's a Police problem. That's an enforcement problem. The Police aren't going to do anything different based on this board's actions. They've got to work with the Police to address that problem separately. So I think really, you know, there's a simple way to solve it. And you know Yuki I wish you would work with us. You're suppose to meet with me. We asked for a meeting.

Ms. Betts Basinger: Excuse me?

Mr. Ranken: And now they go behind our back. We found out this about 10 o'clock this morning, you know, so . . . (inaudible) . . .

Ms. Betts Basinger: Thank you very much. Thank you very much. You've been heard. Thank you. Okay members.

Mr. Walker: Madame Chair, so I would ask Corporation Counsel to comment on the legal issue raised by the testifier.

Ms. Betts Basinger: Thank you very much. James?

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Mr. James Giroux: And again, you can go into executive session if you want.

Ms. Betts Basinger: Would members like to go into executive session?

Mr. Mitchell: I have one question. Madame Chair, may I ask Mr. Ranken a question?

Ms. Betts Basinger: Well, let's finish on this.

Mr. Giroux: Why don't you finish the question.

Mr. Mitchell: Mr. Ranken, you did mention something about your client having some difficulty with the traffic being closed off. Did I hear that correctly or not?

Mr. Ranken: Yeah, and now they're – and this is a very busy time. I mean, 6:00 p.m. on Friday afternoon all the banks are open till six. There's two banks on Market in that one block. There's three pawn shops and a loan operations. It's a very busy time. I've been there. Those places are always used, and that's why First Friday now has the Police standing and I'll be glad to plug in this DVD I brought. You'll see the Police setting up the cones right in the middle of the parking spaces at 5:00 p.m., space after space. That's what they're doing to prevent people from parking. It's already a problem. and now they're talking about starting at 5:00 p.m., closing the street from that point on. Again, I hope that First Friday will make good on what they've said here today and work with the neighborhood businesses on these issues because we'd like to discuss that. But we were thinking more it should start at 6:30 p.m., so that you know, parking – they can get all the cars, tow them away at 6:00 p.m. if there's anyone left over and have an orderly transition to the First Friday event. But yes parking is very competitive right up until 6:00 p.m.

Mr. Walker: Thank you. I have another question. So in your client's opinion, I mean, 5,000 people there doesn't trump – I mean, if he's open for business at 6:00, it doesn't trump the parking humbug and the street closure humbug?

Mr. Ranken: Well, let me put it this way. First of all, my client tells me that nobody goes inside the businesses on First Friday. It's all happening on the street and there's all the sidewalk things. No one even notices, you know, they're in the store. But they have been putting out tables in front of the stores, selling the goods that they sell in the stores which is, you know, compatible the theme jewelry items and that kind of things. There's a lot of jewelry sellers. And that's a benefit. And you know, my client's concern was that First Friday wants to, the organizers want to take away that one benefit that he does get from First Friday and for all the inconvenience that he has to, you know, put up with in terms of the parking hassles and people having trouble visiting the store late that afternoon. But, you know, I guess First Friday is telling us – Teri Edmonds was saying, you know, we'll give priority to the local business. We just want them to work through us. If you do, you know, feel that you need to – you do feel you have the power after consulting with counsel to take some action that would involve, you know, giving the First Friday jurisdiction over these spaces then I hope you would make it a condition that

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they would have to give first right of refusal to the businesses there again. I don't think that this board has that power under the law, but if that's how you interpret then make that part of any permit or ruling that is granted. Because we don't think we should have to just rely on trust and the possibility of favoritism if the personnel of running First Friday changes, and they want to, you know, do their friend a favor and put a competitor out in front of our store. That's not really fair. So, yeah, and again I just don't think that would add anything – that another layer of regulation would add anything. You know, I got to say I don't quite understand the concept that Erin referred to about –

Ms. Betts Basinger: Mr. Ranken, you're here to respond, not to ask. Thank you.

Mr. Mitchell: Thanks.

Ms. Betts Basinger: Thank you. Thank you so much for being here. So Mr. Walker has – did you suggest that we go into executive session to confer with our attorney about our liabilities and rights on this issue?

Mr. Walker: I don't think I asked for executive session, but would that be the –? Okay, then I would ask. Yeah.

Mr. Ranken: I don't see why executive session is –

Ms. Betts Basinger: At this moment, at 4:00 p.m., this body is going into executive session until 4:15 p.m.

(The Maui Redevelopment Agency entered in Executive Session at approximately 4:00 p.m., and reconvened the Regular Meeting at approximately 4:23 p.m.)

Ms. Betts Basinger: . . . has reconvened it's meeting of June 17, 2011. At this time I'd like to turn to our Corporation Counsel to share with you the advice that we received.

Mr. Giroux: Thank you Chair, and with permission of the Agency that we did go into executive session in order to look at the rights, duties, and liabilities of granting or acting on the present request. What I have advised this board to do is to, well, I haven't advise them on the final action. What I have done is I have raised some major issues with our rules and procedures that give me great concern about them taking action at this time. One of those being that absent any rules or procedures for notifying the merchants along Market Street or any where along this area, I think it would expose them to some liability if they were to, through this action today, tell those merchants that they could not do something that is outright permitted in the zoning district as of right now. In the future, I think that if we could develop a methodology where we could assure that the merchants were informed of the meeting and informed of the request, and then have an opportunity to be heard before we took action on that, I think it would be a much better process and would alleviate the concerns of, well, of the community and or the board about that

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type of liability.

The second of level of advice is that I believe that some of the concern of interpreting, you know, whether or not a merchant can actually lease out their space as opposed to them putting out their wares, I think it's something that the department has to look at as an enforcement issue. The second part is that if people are just boot legging, to use the term, if they're just boot legging, I believe that there is also a no peddling law that MPD should be able to enforce, and that they should be able to look into that because it is enforced in Lahaina on sidewalks. So that's something that the applicant can bring. And what we're hoping is that if this is an emergency, if this an issue of health and safety that in working with the merchants in the immediate area of the concern that that can be done by agreement. And that in the future if an application of this type comes back that specific merchants are mentioned, so we know we're dealing with, and the area that we're dealing with so that there's either a map or, you know, so that we can check, you know, internally to make sure that these people have been advised that the MRA does have that power and that they do have a right to come before us and ask that it not happen and that we can then know that the MRA is making a decision that it's a fully informed decision.

Ms. Betts Basinger: Thank you Counsel. Chair looks to a motion from the body.

Mr. Walker: Yeah, I mean based on the recommendation of Counsel, I don't see we have any other course but to deny the application.

Ms. Betts Basinger: Do I hear a second?

Ms. Popenuk: Second.

Ms. Betts Basinger: Okay, it's been moved and seconded to deny the application before us at this time. Any discussion members?

Mr. Giroux: My only caveat was that I did want to let the applicant know that it's not with prejudice.

Ms. Betts Basinger: Right. Without prejudice.

Mr. Giroux: Without prejudice, meaning that if we can, you know, work with Erin about a procedure that will work that, you know, these types of applications aren't going to just be summarily denied or we're telling you that we're not the venue, but there is something that we need to work on this side to make sure that the process does work for everybody.

Ms. Betts Basinger: Any further discussion members? All in favor, indicate by saying aye.

Agency Members: "Aye."

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Ms. Betts Basinger: It's been moved, seconded, and approved unanimously to deny this particular application without prejudice. Thank you.

It was moved by Mr. Mark Walker, seconded by Ms. Katharine Popenuk, then unanimously

VOTED: to deny the application without prejudice.

2. Discussion on the memo dated May 10, 2011 from Josh Stone, Chair of the Maui County Charter Commission. Maui Redevelopment Agency is asked to provide proposals for Charter amendments and/or recommendations.

Ms. Betts Basinger: Okay, members, I'm going to suggest that we take a five minute break and reconvene, and I'd like to at that point talk about deferring the rest of our meeting to next month. If you don't want the break, we can do that discussion before adjournment now.

Ms. Popenuk: Keep going.

Mr. Walker: No break.

Ms. Betts Basinger: Okay. We are looking at Item-E2, which is discussion on a memo dated May 10th from Josh Stone, Chair of the Maui County Charter Commission. The Maui Redevelopment Agency was asked to provide proposals for Charter Amendments and/or recommendations. The issue here is that they want to have a response by June 30th, and I did pass out to each of you – I did go through the Charter and there is an article, Article 13, General Provisions for Boards or Commissions. And I went through that particular section which I thought was germane to us or what they would be asking our input on, and I passed it out to you. Because we have a time limit on this, what would members like to do? We can take a few minutes and read it, and discuss it briefly and make a decision to respond or not, depending on –. It's pretty simple to read so why don't we do that.

Mr. Walker: Madame Chair, did you in your review of this see anything that caught your eye that you would want to focus on?

Ms. Betts Basinger: Thank you. In my review of this I saw nothing that would compel this body to have any recommendation to change it to the Charter Commission.

Mr. Giroux: Without jumping into this and getting my head chopped of, I think, that as a body that you need to understand the history of this board and some of the frustrations that you probably run into or will run into at this juncture. And one of the concerns, I guess, as your attorney that I have had in the last five years is that there's a lot of implied powers that you have as a board. And we always look at Chapter 53 to basically look at the spirit and purpose of redevelopment and say this is what we perceive to be your powers, duties and liabilities. I mean, just like you saw today. We had to go into executive session to find your perceived

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power. And one of the things that concerns, you know, as your attorney is that I'd rather see explicit power, and that's what the Charter opportunity really does is to look at these powers that are perceived and try to make them undeniable in that you don't always have to ask Corporation Counsel can we do this? Or Corporation Counsel, can you write an opinion for us? It should be self evident in the document that empowers you that you have those powers. And if there are powers that you perceive but don't see any where in writing, this is an opportunity to really address that. So that's all I'm going to say at this time, just as your Counsel, that this is what that opportunity is for is to look at that.

Ms. Betts Basinger: Your three minutes are up. I have no problem if you guys want to take this and digest it. I will make a couple of other comments in my reading of the Charter. You know, the MRA is not established by this Charter. The MRA is established by State law, and the work that we do is established by County Ordinance, by the County Council. One of the really apparent differences between not being chartered in this document is that we have only five members. Whereas any other board or commission that's chartered under this document has nine members. I don't know if that's something we want to rail about. We do comply and are required to comply with Article 13, Section 13-2, on boards and commissions which you have here. And we do comply with all of those guidelines that are set forth in the Charter, and to me without any problems. Every single board and commission ask Corporation Counsel for advice. We're volunteers. You know, just because it's in the Charter doesn't mean it's going to make any clearer to members who are serving on this body. That's why we have staff. And there is a climate. You know, every 10 years the Charter Commission meets, and they amend this document and they make changes and they get rid of Commissions, or they add Commissions. And there should be a balance as to whether or not we want our work be put into that kind of scrutiny. So that's why I felt that our authority is clear, where we came from, why we're not chartered, what we are allowed to do and the rules that we follow in Chapter – in Article 13.

It would have been my, in discussion, it would be my recommendation to thank the Charter Commission very much for asking for our recommendations, but offering none our behalf. Now there are other things however. They're going to be facing – they're going to discussing realigned voting, you know, areas. And it should be very important to the MRA in the district that we are which is the Wailuku district that we have fair representation on the Council. And if those voting districts are going to change, yes, I think we might want to make a recommendation in favor of any change that assures the constituency of our greater area that we serve is well represented, but that's moving out of Article 13. And it doesn't preclude any single one of us as citizens going before the Charter Commission and making independent testimony, not on behalf of the MRA.

Mr. Mitchell: So the action could be no action?

Ms. Betts Basinger: Exactly. The action could –. One of the options could be thanks so much for asking us.

Mr. Walker: That's a recommendation.

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Ms. Betts Basinger: Yeah.

Mr. Walker: That's what I would move.

Ms. Betts Basinger: Okay. It's been moved to respond thankfully but with no recommendations to the request by Josh Stone. Do I hear a second?

Ms. Popenuk: Second.

Ms. Betts Basinger: It's been moved and seconded. All in favor? Or, any further discussion? Hearing none, all in favor say aye.

Agency Members: "Aye."

Ms. Betts Basinger: Opposed? It was unanimously passed to send a thank you letter from the MRA thanking the Charter Commission for requesting input, and that we have no recommendations at this time.

It was moved by Mr. Mark Walker, seconded by Ms. Katharine Popenuk, then unanimously

VOTED: to send a thank you letter from the MRA thanking the Charter Commission for requesting input, and that the MRA have no recommendations at this time.

F. 2. Market Street Improvement Project, Phase II through Happy Valley Update on project progress, public relations and schedule. (Yuki Lei Sugimura, Public Relations)

Ms. Betts Basinger: Thanks members. We can moved on quickly now to Market Street Improvements Project, Phase II, through Happy Valley, update on project progress. Yuki Lei Sugimura. This is under reports.

Ms. Sugimura: Yuki Lei Sugimura, Community Relations for the Market Street Phase II project which is the Happy Valley segment. I think the reason why this is here is that you wanted an update of the angled and parallel parking which was the last item on the check list that was completed earlier last month from the Goodfellow Brothers. And just as a follow up, I had a meeting with Public Works this week, and I did have a chance to talk to them about this particular project. And just so you know, it looks like, not unless if Valley Hardware decides to renovate or reconstruct their building, that those angled, the parallel parking will probably remain. So it's not something that we could –. At first we thought when we did our site visit, we had Lance Takamiya who said, yeah, yeah, you can, you know, go into his right-of-way which is his sidewalk. And the Yamashiro's which are next door to them also gave us at that point a verbal approval to realign their cement wall so that – that could probably happen. We

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can, you know, readjust that so that can be converted back to angled. But right now it's parallel, and it's, yes, it's less parking, but it's safer which was a concern. And just for overall – Public Works said I could say this is that if we didn't convert the angle to parallel the way that it was, we had a chance of losing our Federal funding for the project, so that's how serious it was. So with that said, and they said that I could say it, so it must be public knowledge, that those parallel parking will not change unless if Lance Takamiya decides to renovate his building and give us, you know a further access into his property area. Which he said he would, but then it would cost a lot of money to renovate. So that's really the update of that, and I will let you know if anything else happens. For parking, because of this, Public Works has put in some parking on Alahee Street which is the back. It's really not part of this project, but they paved that street because of our construction trucks coming in. And then they added some more, not many, but parallel parking to accommodate some of the loss. But it's still kind of a huge loss, but safer.

Ms. Betts Basinger: Thank you Yuki. Okay, members, Chair recommends to defer Item-F4 through F11, and G1 through G2, until our next regularly scheduled meeting without objection.

4. Task Status VPC-6:9 Parking Management (W. Suzuki)

5. Task Status I-4 Tax Increment Financing (M. Walker)

Mr. Walker: Madame Chair, I would love to just give F5 because it's only going to take one minute. And we don't have to do it next time, if appropriate.

Ms. Betts Basinger: That's very good. So with the exception of F5, Chair moves to defer to the rest of the items for today's meeting to our next meeting, without objections. No objections?

Ms. Popenuk: No objections.

Ms. Betts Basinger: Thank you very much, so done. May we hear your report on tax status I-4 tax increment financing, M. Walker.

Mr. Walker: Did I say a minute? We have engaged – the County has engaged – MRA.

Ms. Wade: We did. The money got encumbered this afternoon.

Mr. Walker: Goodwin Consulting Group from Sacramento, California to prepare the tax increment financing plan. Erin did a great job. You know we had, I think, two people submit proposals of five she sent to. Both came highly recommended by the various agencies that they've worked with – on Big Island and Kauai, even Oahu, I'm not sure. Anyway at the end of the day we chose this Goodwin Consulting Group because I think the recommendation where they were politically more in touch with Hawaii. And this is going to be a political thing on some level because a TIF has never been done in Hawaii before. So, anyway, I wanted to apprize the board of that. And I think we're going to expect to get that within 60-days, so I would say at the end of August would be a realistic date.

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Ms. Betts Basinger: Any questions? Comments?

Ms. Popenuk: Very good.

Ms. Betts Basinger: Very good report Mr. Walker.

Mr. Walker: Thank you.

Ms. Betts Basinger: And I just want to add to that, with that perculian effort she was able to, and engender FY11 funds, so that's a huge plus.

Ms. Wade: And Michele and all of our accounting staff.

Ms. Betts Basinger: Yes, exactly.

Mr. Walker: And within budget.

Ms. Wade: Yes.

Mr. Walker: So far.

6. Task Status LU-5 One-Stop Permit Center (A. Basinger)

7. Task Status MD-3 Visitor Market Development Plan (A. Basinger/K. Popenuk)

8. Task Status LU-2 Mini-Park (K. Popenuk)

9. Task Status Administration and Operations (A. Basinger/E. Wade)

10. Correspondence (E. Wade)

11. Open Projects (E. Wade)

G. BUDGET

1. Update on budget expenditures for remaining FY2011 funds

2. Discuss FY2012 budget and potential expenditures

Without any objections from the Maui Redevelopment Agency, Items F4, F6 through F11, and Items G1 and G2, were deferred to the next regularly scheduled meeting. ***Deferred items #4, and #6 thru #11***

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H. NEXT MEETING DATE: July 15, 2011

I. ADJOURNMENT

Ms. Betts Basinger: Unless any member has any other comment, I'm going to move to adjourn this meeting.

Ms. Wade: Excuse me? Pardon me? Were you going to ask for a special meeting?

Ms. Betts Basinger: Thank you very much. So members, we're looking at –

Ms. Wade: July 1st. Friday, July 1st. That's two weeks from today.

Ms. Betts Basinger: This will be a one topic special meeting. And the topic will be our hearing the response that we are required to make as a body. Be prepared, members, to send your comments to Erin as you go along because as much of the document that she can already get done, the better it will be when we all meet to approve what we're going to send.

Ms. Wade: This is regarding the Municipal Parking Structure topic.

Ms. Betts Basinger: Yes. Right.

Mr. Walker: That's the initial EDA comments?

Ms. Wade: Correct.

Mr. Walker: Okay. And so will the department be preparing comments?

Ms. Wade: So normally the way that it will work in – we basically did step one today. And then we would go around the table and take comments from all of the individual board members. Staff compiles those comments, and wherever there's conflict we ask you to discuss. I will give you the feedback then about what all the comments have been and you can choose which, and probably all send on as your recommendations to the design team.

Ms. Popenuk: What time will our meeting be?

Ms. Wade: Is one o'clock available Leilani? Okay.

Ms. Betts Basinger: Same place. Same time. Okay, and the purpose of that meeting members, I'm sure you already know though is to create a single document with this body with some recommendations. So, you know, feel free any two of you to talk about issues that you might want to influence or state your opinions about especially based on public testimony because we heard it last night and we heard it today. So with that, at 4:40 p.m., this meeting is adjourned.

APPROVED 08-26-2011

There being no further business brought forward to the Agency, the meeting was adjourned at approximately 4:40 p.m.

Respectfully submitted by,

LEILANI A. RAMORAN-QUEMADO
Secretary to Boards and Commissions I

RECORD OF ATTENDANCE

Members Present:

Alexa Betts Basinger, Chair
Katharine Popenuk, Vice-Chair
William Mitchell
Mark Walker

Excused:
Warren Suzuki

Others:

Michele Chouteau McLean, Deputy Planning Director
Joseph Alueta, Administrative Planning Officer, Department of Planning
Erin Wade, Small Town Planner
James Giroux, Deputy Corporation Counsel

Morgan Gerdel, Parking Structure Coordinator
Yuki Lei Sugimura, Community Relations