



HAWAII COMMUNITY
DEVELOPMENT AUTHORITY



KAKA'IKO

Where Honolulu Greets The Sea

Benjamin J. Cayetano
Governor



Michael Kawaharada
Chairman

Michael N. Scarfone
Executive Director

Ref. Nos.: GF ST 3.34/
PL EIS 6.21

March 8, 1995

Mr. Gary Gill
Director
Office of Environmental Quality
Control
Department of Health
State of Hawaii
Central Pacific Plaza, 4th Floor
220 South King Street
Honolulu, Hawaii 96813

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

95 MAR -9 P1:08

RECEIVED

Dear Mr. Gill:

Re: Negative Declaration for the Queen Street
- Halekauwila Street Couplet (TMKs: 2-1-
29: 30, 31, 32, 48, 49, 50, 51, 52, 53,
54 and 2-3-01: 02, 03, 04, 05, 06, 07,
Honolulu, Oahu, Hawaii

The Hawaii Community Development Authority (HCDA), as the accepting authority, has reviewed the comments received during the 30-day public comment period which began on December 8, 1994. The HCDA has determined that this project will not have a significant environmental effect and has issued a negative declaration. Please publish notice of availability for this project in the March 23, 1995 OEQC Bulletin.

Enclosed please find four (4) copies of the Queen Street - Halekauwila Street Couplet Environmental Assessment and a completed OEQC Document Publication form.

Should you have any questions, please contact Mr. Eric Masutomi, Director of Planning, at 587-2865.

Very truly yours,

Michael N. Scarfone
for Michael N. Scarfone
Executive Director

MNS/SJT:gst
Encs.

cc: Mr. H. Mitchell D'Olier (Victoria Ward, Limited)
Mr. Ralph Portmore (Group 70)

677 Ala Moana Boulevard
Suite 1001
Honolulu, Hawaii
96813
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(808) 587-2870
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(808) 599-2613

23

1995-03-23-0A-FAA - Queen Street - Halekauwila St. Couplet

MAR 23 1995

QUEEN STREET - HALEKAUWILA STREET
COUPLET

An Amendment to the
MAUKA AREA PLAN
Kakaako Community Development District

FINAL
ENVIRONMENTAL ASSESSMENT

Applicant:

Victoria Ward, Limited

Accepting Authority:

Hawaii Community Development Authority

February 1995

QUEEN STREET - HALEKAUWILA STREET COUPLET

**An Amendment to the
MAUKA AREA PLAN
Kakaako Community Development District**

**FINAL
ENVIRONMENTAL ASSESSMENT**

PROPOSING APPLICANT:

Victoria Ward, Limited

ACCEPTING AUTHORITY:

Hawaii Community Development Authority
State of Hawaii

PREPARED BY:

Group 70 International, Inc.
Architecture • Planning • Interior Design • Environmental Services
925 Bethel Street, Fifth Floor
Honolulu, Hawaii 96813
(808) 523-5866

February 1995

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BASIC PROJECT INFORMATION

1. APPLICANT: Victoria Ward, Limited
1210 Auahi Street, Suite 115
Honolulu, HI 96813

APPLICANT AGENT/
EA PREPARER Group 70 International, Inc.
925 Bethel Street, Fifth Floor
Honolulu, HI 96813
Contact: Ralph Portmore or Gwen Zakahi
Telephone: 523-5866 FAX: 523-5874
2. ACCEPTING AUTHORITY: Hawaii Community Development Authority
3. PROJECT LOCATION: Kakaako, Honolulu, Hawaii
4. TAX MAP KEY: TMK 2-1-29, 30, 31, 32, 48, 49, 50, 51, 52, 53, 54;
2-3-01, 02, 03, 04, 05, 06, 07.
5. LANDOWNERS:
 - City and County of Honolulu
 - Nauru Phosphate Royalties Trust
 - State of Hawaii
 - Victoria Ward, Ltd.
6. AREA: Approximately 23 acres (roadways only)
7. REQUEST: Amendment of the KCDD Mauka Area Plan as follows:
 - By relocating a portion of a one-way couplet from Pohukaina Street/Auahi Street to Halekauwila Street, and indicating a planned extension of Halekauwila Street east/Diamond Head of Ward Avenue to merge with Queen Street in the vicinity of Cummins Street.
 - By designating Halekauwila Street, instead of Pohukaina/Auahi Street, as a major street and view corridor street.
 - By relocating the Auahi Street portion of a planned bikeway route to the portion of Halekauwila Street/Queen Street east/Diamond Head of Ward Avenue.
8. EXISTING USE: Roadway, Commercial, Light Industrial, Parking
9. STATE LAND USE: Urban
10. KCDD MAUKA AREA PLAN: Roadway, Mixed Use Zone - Commercial,
Mix Use Zone - Residential, Parking Garage
11. CITY DEVELOPMENT PLAN: Commercial Emphasis Mixed Use
12. COUNTY ZONING: Not Applicable

1.0 INTRODUCTION & SUMMARY

This Environmental Assessment (EA) has been prepared in accordance with the content requirements of Chapter 343, HRS and Title 11, Chapter 200 of the State Department of Health Administrative Rules, as the proposed action involves the use of State and County lands.

It should be noted that the current and future roadway layout and traffic volumes and circulation patterns have been previously documented and studied in the following reports:

- State of Hawaii. Hawaii Community Development Authority. *Kakaako Community Development District Plan*. February 1982.
- State of Hawaii. Hawaii Community Development Authority and the United States Department of Housing and Urban Development. *Final Environmental Impact Statement for the Kakaako Community Development District Plan*. June 1983.
- State of Hawaii. Hawaii Community Development Authority. *Mauka Area Plan, Kakaako Community Development District*. February 1990.
- Austin, Tsutsumi & Associates, Inc. *Kakaako Traffic Study*. July 1991.

The idea of a couplet and the impacts associated with it were initially analyzed in connection with the preparation of the first (1982) KCDD Plan EIS. This Plan designated Queen Street as one-way in the Ewa direction and Pohukaina/Auahi Street as one-way in the Diamond Head direction (Figure 1). The current KCDD Mauka Area Plan Roadway Plan, adopted in 1990, also identifies the Queen Street and Pohukaina/Auahi Street as the couplet alignment. More recently, an Austin, Tsutsumi & Associates (ATA) traffic study prepared at the direction of the Hawaii Community Development Authority (HCDA) reviewed the traffic related impacts that would result from a couplet. The 1991 ATA *Kakaako Traffic Study* recommended that Halekauwila Street be used instead of Pohukaina/Auahi Street for the Diamond Head bound leg of the couplet.

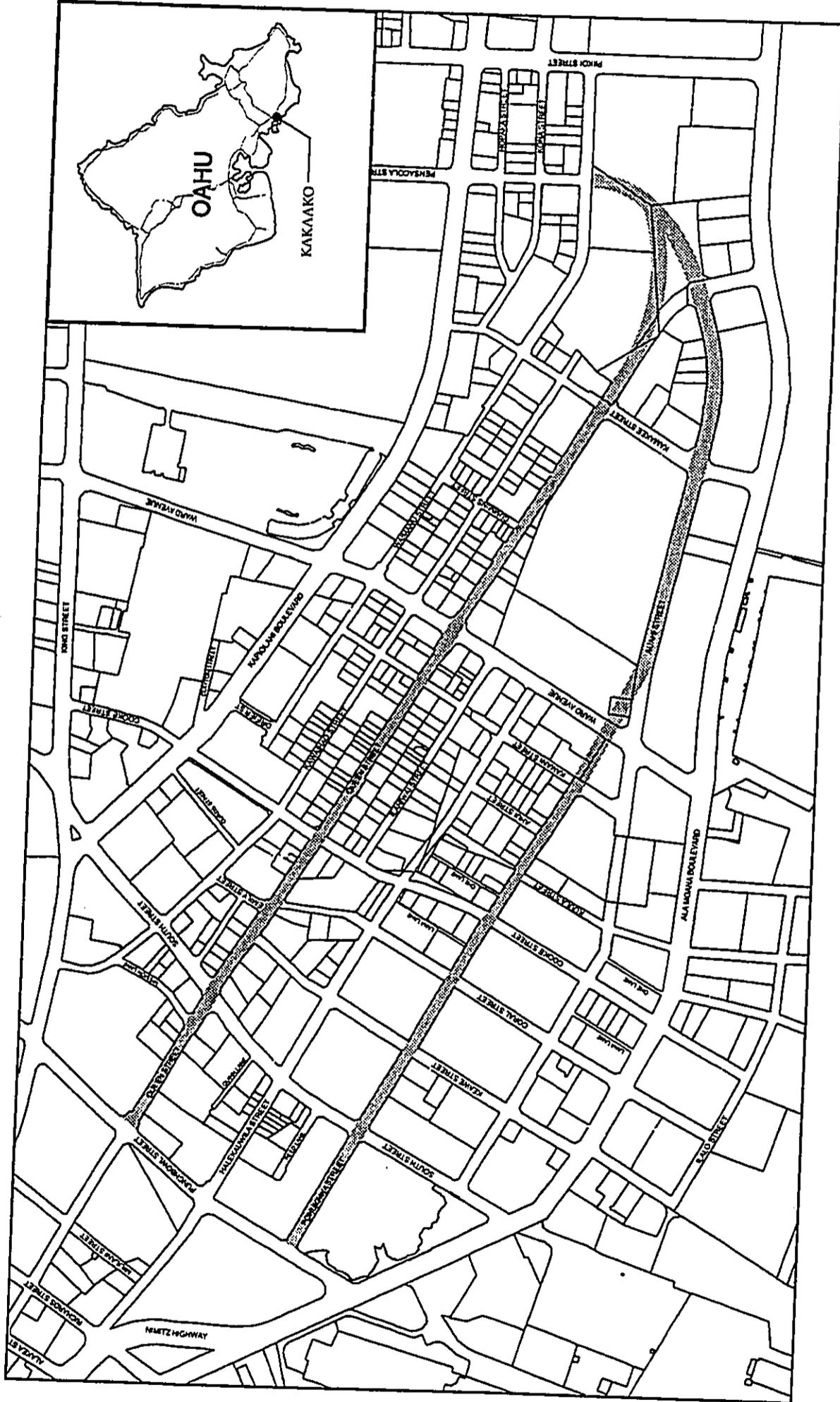
The proposed action seeks to modify only the Diamond Head bound leg of the couplet by designating that leg to be Halekauwila Street (Figure 2).

1.1 IDENTIFICATION OF THE APPLICANT

The applicant proposing the action is Victoria Ward, Limited (VWL). The applicant's agent/EA preparer is Group 70 International, Inc.

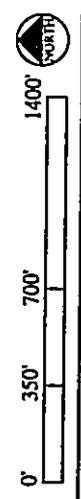
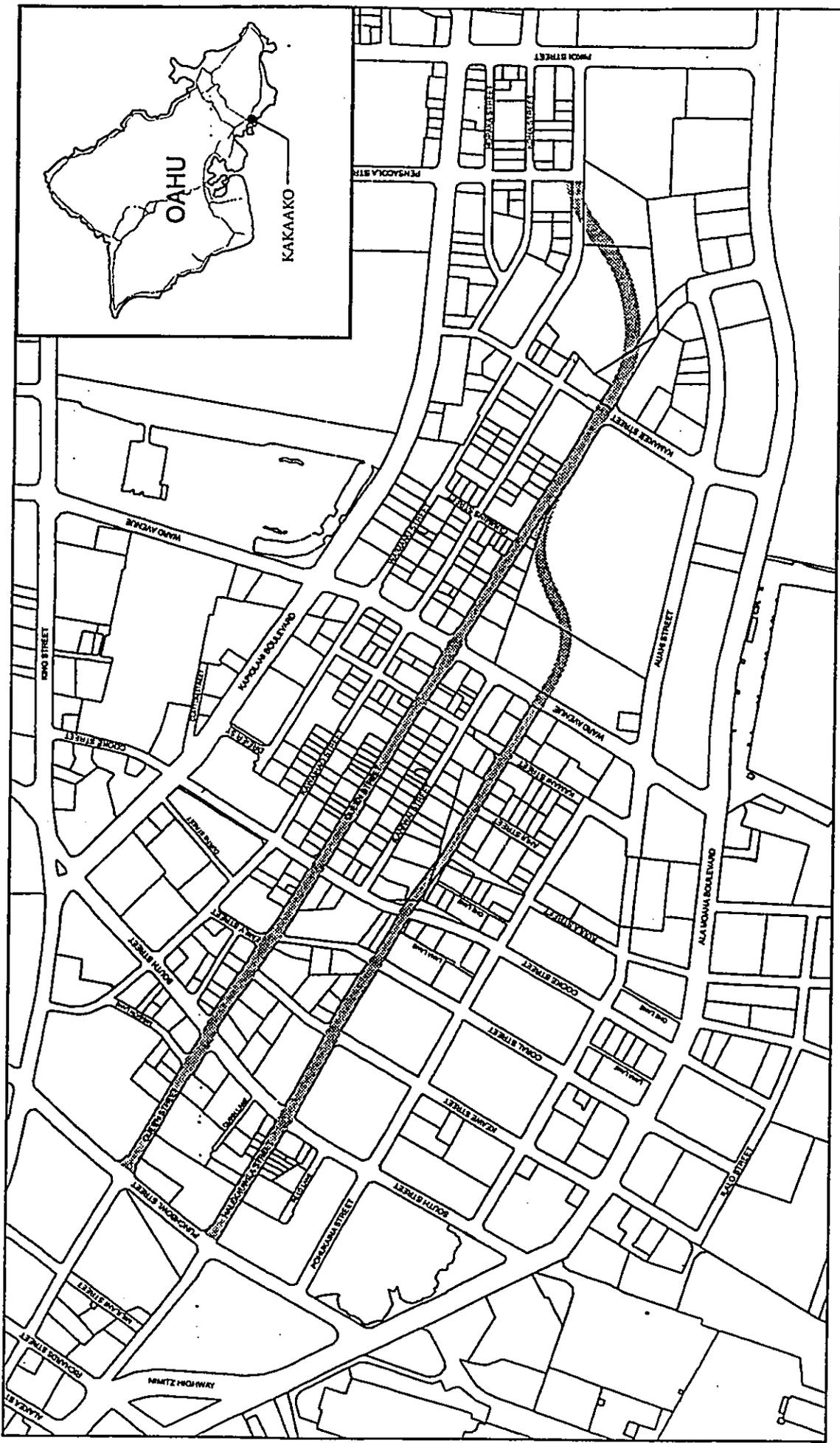
1.2 IDENTIFICATION OF THE APPROVING AGENCY

The approving agency is the State of Hawaii Community Development Authority (HCDA).



Currently Planned Queen Street - Pohukaina / Auahi Street Couplet Alignment
QUEEN STREET - HALEKAUWILA STREET COUPLET EA

Figure 1



Proposed Queen Street - Halekauwila Street Couplet Alignment
 QUEEN STREET - HALEKAUWILA STREET COUPLETT EA

Figure 2

• QUEEN ST. - HALEKAUWILA ST. COUPLET ENVIRONMENTAL ASSESSMENT •

1.3 IDENTIFICATION OF AGENCIES CONSULTED IN MAKING ASSESSMENT

Listed below are the agencies and organizations consulted in the preparation of the Environmental Assessment.

STATE AGENCIES

Office of Environmental Quality Control (OEQC)
Department of Education
Department of Transportation
Hawaii Community Development Authority (HCDA)
University of Hawaii at Manoa, Environmental Center

COUNTY AGENCIES

Department of Transportation Services
Department of Public Works
Department of Parks and Recreation

ORGANIZATIONS

Ala Moana/Kakaako Neighborhood Board
Kakaako Improvement Association
Kamehameha Schools/Bernice Pauahi Bishop Estate
Nauru Phosphate Royalties Trust

1.4 OVERVIEW OF PROJECT

The existing Mauka Area Plan for the Kakaako Community Development District includes a Roadway Plan that proposes a Queen Street-Pohukaina Street/Auahi Street couplet. VWL is proposing a relocation of the makai portion of the couplet along Halekauwila Street instead of Pohukaina/Auahi Street.

The proposed Halekauwila Street and Queen Street couplet would consist of one-way streets between Punchbowl Street and Pensacola Street. Halekauwila Street would be a one-way, Diamond Head bound street merging with Queen Street near Cummins Street. Queen Street would be two-way between this merge point and Pensacola Street, and one-way in the Ewa direction from the merge point to Punchbowl Street.

1.5 SUMMARY OF IMPACTS AND MITIGATING MEASURES

Impacts of the planned redevelopment of the Kakaako Community Development District (KCDD) are identified in the Final Environmental Impact Statement for the KCDD Plan, dated June 1983. Potential additional impacts not addressed in the Final EIS, as well as changes to impacts that were addressed, are identified and evaluated in this EA. These include: impacts on the traffic circulation patterns and street traffic carrying capacity; impacts on the costs of planned street improvements; impacts on planned land use/development patterns; impacts on planned bikeways; impacts on businesses dislocated by or fronting on the affected roadways; impacts on noise levels; and impacts on air quality.

• QUEEN ST. - HALEKAUWILA ST. COUPLET ENVIRONMENTAL ASSESSMENT •

The relocation of the Diamond Head bound couplet leg is not expected to have any impacts with respect to: groundwater resources; surface water resources; endangered plant, bird or mammal species; significant habitats; historical/archaeological and cultural sites; the character of the surrounding area; or the social environment.

The following measures are proposed to mitigate the aforementioned potential impacts:

Existing Businesses: The areas of both the currently planned and proposed couplet alignments that involve street widening and new street construction are almost entirely within VWL owned land. The only portion of land not owned by VWL would be the most Diamond Head section of the proposed Queen Street extension, since that section is under ownership of the Nauru Phosphate Royalties Trust and by the State. VWL has short term leases to businesses Diamond Head of Ward Avenue which would be directly affected by the proposed couplet. No street extension construction will begin until either each lease in the affected area expires or the area is improved via HCDA's improvement district plans. VWL intends to assist in relocating the tenants by offering them space in other buildings on their property.

Land Use/Development Patterns: Only a very small amount of land (less than two acres) would be withdrawn from the total area in Kakaako that is available for development. This will not materially impact future development patterns.

Traffic Circulation: Traffic volumes and traffic circulation in and around the Kakaako area were studied in the 1983 Final EIS for the Kakaako Community Development District. Traffic volumes and circulation will not be substantially affected by the change from the planned action to the proposed action, as the proposed action will only relocate a portion of the couplet. The relocation will be just one block mauka of one segment of the couplet.

Planned Bikeways: The currently planned bikeway routes would not be impacted with the exception of the segment along Auahi Street. It is proposed that the bikeway route be shifted from Auahi Street to the proposed Halekauwila Street Extension and widened Queen Street.

Street Improvement and Infrastructure Costs: The impact of the added costs of land and improvements for the proposed couplet on the total cost of planned improvements throughout Kakaako will be relatively small. Total additional costs are estimated to range between \$11.5 and \$15.6 million.

Noise: Noise generated by construction activities will be mitigated through compliance with the provision of Title 11, Administrative Rules, Chapter 43, Community Noise Control for Oahu, of the State Department of Health. The hours of construction activities will be limited.

The impacts of vehicular traffic noise levels on future residents and occupants of Kakaako were studied in the 1983 Final EIS for the Kakaako Community Development District. Anticipated increases in traffic volumes were also studied in the EIS and in the

• QUEEN ST. - HALEKAUWILA ST. COUPLET ENVIRONMENTAL ASSESSMENT •

1991 *Kakaako Traffic Study*. Both studies indicated that the overall volume of traffic on Halekauwila Street will be about the same as the volume of traffic along the Pohukaina/Auahi Street couplet leg. Consequently, it is expected that moving the couplet leg from Pohukaina/Auahi Street to Halekauwila Street will not materially affect overall traffic volumes or noise levels on either street.

Air Quality: Short-term air quality construction-related impacts are principally in the form of fugitive dust emissions. Department of Health regulations stipulate control measures that are to be employed to reduce this type of emission. Primary control consists of wetting down loose soil areas, good housekeeping on the job site and the prompt pavement or landscaping of bare soil areas.

The impacts to air quality resulting from a one-way couplet design were studied in the 1983 Final EIS for the Kakaako Community Development District. Since the volume of traffic on Halekauwila is expected to be about the same as the volume along Pohukaina/Auahi Street by the year 2010 regardless of which street is used in the couplet, it is not expected that the associated air quality impacts would be materially different under the proposed action.

1.6 SUMMARY OF ALTERNATIVES CONSIDERED

Chapter 200 of Title 11, Environmental Impact Statement Rules (11-200-10) requires the "identification and summary of impacts and alternatives considered."

1.6.1 "No Action" (Currently Planned Queen Street - Pohukaina/Auahi Street Couplet) Alternative

This couplet alignment was included in the initial master plan for Kakaako. It was the preferred alignment because at the time, it was considered to be the least disruptive to existing businesses in the area. A principal concern was that using Halekauwila Street for part of the couplet would require the demolition of the Gem Store in order to extend and connect this leg of the couplet to Queen Street. However, this is no longer a concern since the Gem Store has closed and the current tenants are on short term leases. Halekauwila Street can now be extended across Ward Avenue without impacting any businesses that have long term plans for remaining in their current location.

Also, the 1991 Kakaako Traffic Study stated that a potential problem with the Pohukaina/Auahi Street component of this couplet would be its closeness to Ala Moana Boulevard. Makai bound vehicles on Ward Avenue stopping at Ala Moana Boulevard would queue back across the Pohukaina/Auahi Street intersection, resulting in blockage of the Diamond Head bound leg of the couplet. This report recommended a Queen Street-Halekauwila Street couplet.

Halekauwila Street is preferred as a couplet street instead of Pohukaina/Auahi Street because Halekauwila Street is more centrally located in Kakaako and is closer to Queen Street. Also, the use of Halekauwila Street would not disrupt existing businesses nor require the demolition of a significant and attractive office building at the Diamond Head end of Auahi Street, as will the Pohukaina/Auahi Street couplet leg. Finally, use

• QUEEN ST. - HALEKAUWILA ST. COUPLET ENVIRONMENTAL ASSESSMENT •

of Pohukaina/Auahi Street as a leg in the couplet would conflict with the pedestrian centered development character planned for Auahi Street.

1.6.2 No Couplet Alternative

This alternative considers the scenario in which the couplet streets remain as two-way streets. According to the ATA *Kakaako Traffic Study*, by the year 2010 the existing roadways will not be able to accommodate the projected volumes of traffic as well as a couplet scheme could. Therefore, a couplet is preferred to a no couplet scheme.

1.6.3 Halekauwila Street - Pohukaina/Auahi Street Couplet

This alternative would involve having Halekauwila Street as the Ewa bound leg and the Pohukaina/Auahi Street as the Diamond Head bound leg. This alternative is not preferable because use of Pohukaina/Auahi Street would have greater adverse impacts per the reasons explained above. This couplet alignment is also not well located to serve developments in the central area of Kakaako-- i.e., those most distant from Ala Moana and Kapiolani Boulevards.

In comparing the alternatives to the proposed Queen Street - Halekauwila Street couplet, the proposed couplet would be the most preferable option because it will: 1) continue to provide for a couplet which will serve anticipated traffic volumes more effectively than the existing two-way streets; 2) better serve through traffic in central Kakaako; 3) reduce conflicts between pedestrian and vehicular traffic; and 4) have the least disruption to existing and planned businesses and activities.

1.7 DETERMINATION

Based upon the findings presented in this Environmental Assessment and the supporting technical traffic study, the potential impacts of the construction and use of the proposed couplet have been sufficiently examined and discussed. After reviewing the significance criteria outlined in Section 11-200-12, EIS Rules, Contents of Environmental Assessment, it has been determined that the action is not expected to result in significant adverse effects on the natural or human environment. Further consideration of the project's impacts through the preparation of an Environmental Impact Statement is not necessary.

1.8 APPROVALS AND PERMITS REQUIRED

The following is a list of the approvals and permits required for the implementation of the proposed action:

- Completion of the Chapter 343, HRS environmental review process.
- HCDA approval of the Mauka Area Plan amendments to the Roadway Plan, Bikeway Plan, and View Corridor Streets Plan.

- QUEEN ST. - HALEKAUWILA ST. COUPLET ENVIRONMENTAL ASSESSMENT •
- HCDA and City & County of Honolulu approval of road construction plans and issuance of construction permits.

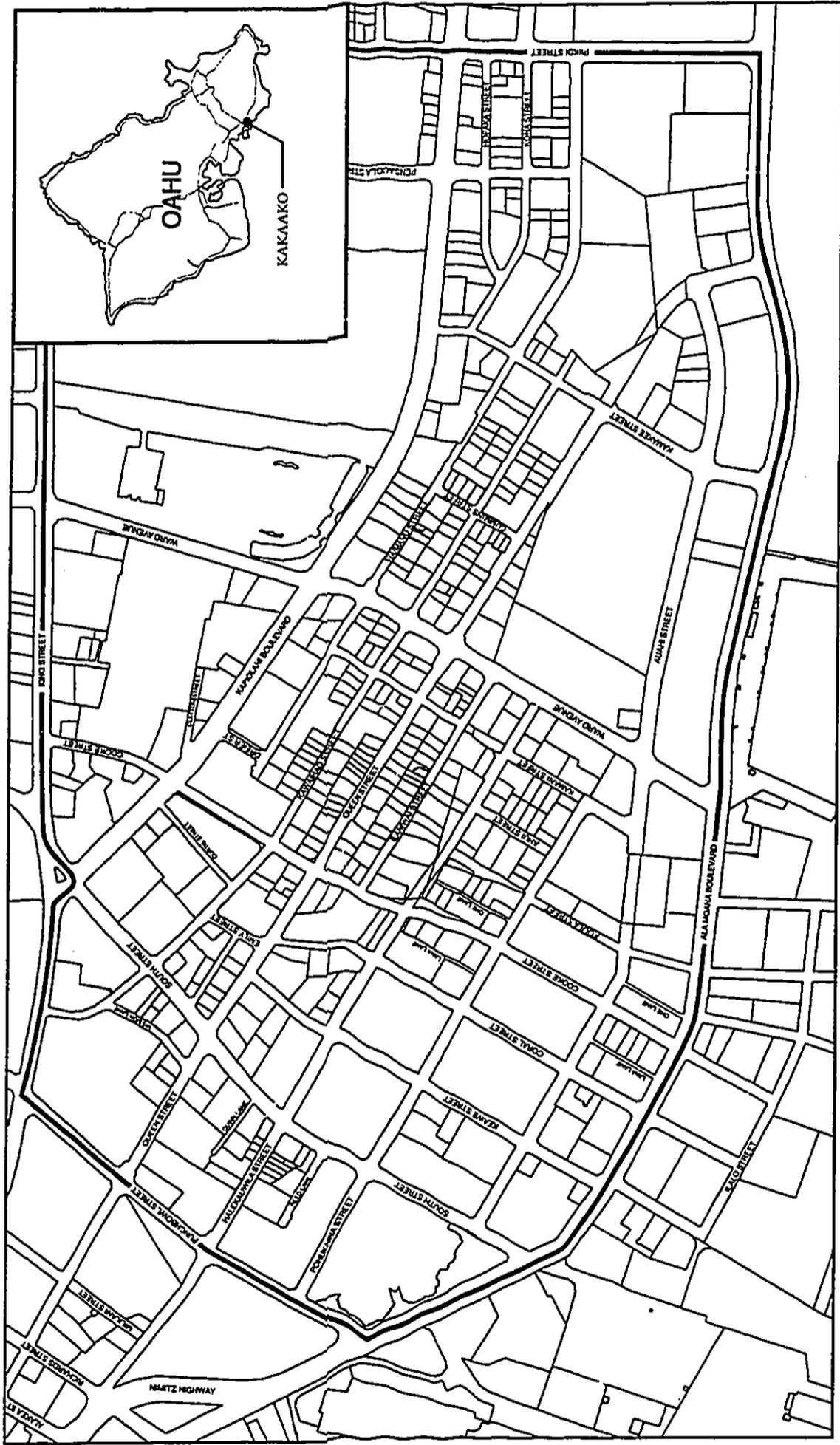
2.0 PROJECT DESCRIPTION

2.1 DESCRIPTION OF THE AFFECTED AREA

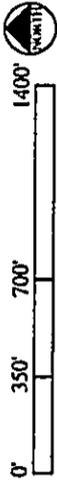
The Kakaako Community Development District (KCDD) is located on Oahu in the urban core of Honolulu between the Central Business District and Waikiki. Kakaako has two development districts: Mauka Area and Makai Area. The proposed project involves streets located in the mauka development district. The Mauka Area is bounded by King Street and Ala Moana Boulevard between Punchbowl Street and Piikoi Street (Figure 3). The current KCDD Mauka Area Plan was adopted in February 1990. It includes a transportation component that prescribes roadway improvements in the Mauka Area.

The areas affected by this proposed action are: Pohukaina Street and Halekauwila Street, and portions of Auahi Street, Queen Street, and Waimanu Street. Figure 3 shows the streets in Kakaako as they exist today. The specific streets and portions of streets that are studied in this Environmental Assessment (EA) are:

- *Pohukaina Street.* Pohukaina is a street that begins at Punchbowl Street and currently ends at Kamani Street. The KCDD Mauka Area Plan indicates that Pohukaina Street is to be extended to Ward Avenue, directly opposite a realigned intersection of Auahi Street with Ward Avenue.
- *Auahi Street.* The KCDD Mauka Area Plan currently designates Auahi Street, Diamond Head of Ward Avenue, to be part of the Diamond Head bound couplet leg.
- *Halekauwila Street.* Halekauwila Street currently runs between Richards Street and Ward Avenue. It is proposed that this street be extended in the Diamond Head direction across Ward Avenue to a point where it merges with Queen Street near Cummins Street (Figure 2). The affected property is owned by Victoria Ward, Limited.
- *Queen Street.* This street currently ends at Kamakee Street and is designated on the KCDD Mauka Area Plan for extension to Pensacola Street.
- *Queen Street Auahi Street extension.* The KCDD Mauka Area Plan indicates that Queen Street and Auahi Street would be extended in the Diamond Head direction through land owned by Victoria Ward, Limited, and join together a short distance from the current terminus of Auahi Street. The joint Queen/Auahi Street would then continue mauka through lands owned by Victoria Ward, Limited, Nauru Phosphate Royalties Trust and the State of Hawaii, and connect with Pensacola Street at Waimanu Street (Figure 1).
- *Waimanu Street.* Currently this street ends at Piikoi Street. The KCDD Mauka Area Plan indicates that this street would be closed between Kamakee and Pensacola Street.



LEGEND
 — MAUKA AREA BOUNDARY



Location Map / Existing Conditions

QUEEN STREET - HALEKAUWILA STREET COUPLET EA

Figure 3

This Environmental Assessment (EA) addresses the potential impacts of relocating one block mauka the Diamond Head direction leg of a planned couplet system in Kakaako. These impacts are expected to be strictly localized or limited to the streets which will be directly affected by the proposed action, as described above. In terms of the couplet's role or function as a through traffic artery, there will be no substantive change in its location, design or traffic carrying capacity. No significant impacts are anticipated with respect to future traffic circulation patterns or volumes on streets outside of the above described affected area.

2.2 DESCRIPTION OF THE PROPOSED ACTION

The subject of this EA is a minor modification of the Mauka Area Plan, specifically the Roadway Plan component that designates a Queen Street-Pohukaina Street/Auahi Street one-way couplet to serve Ewa-Diamond Head traffic through the center of the Mauka Area (Figure 1). Instead of Pohukaina Street/Auahi Street being the Diamond Head bound leg of the couplet, the proposed action is to use Halekauwila Street (Figure 2).

Related to this action are proposed modifications to the View Corridor Streets Plan and the Bikeway Plan components of the Mauka Area Plan. It is proposed that the view corridor designation, along with the couplet designation, be shifted from Pohukaina/Auahi Street to Halekauwila Street. However, in the case of the bikeway designation, it is proposed that only the portion of the bikeway on Auahi Street be moved to Halekauwila Street and Queen Street. Ewa of Ward Avenue, the bikeway designation would be retained on Pohukaina Street, with the Ward Avenue bikeway connecting the two segments.

Retention of the bikeway designation on Pohukaina Street is proposed because this street has already been widened between Punchbowl and Cooke Streets in order to accommodate a bike lane. Improvements to Halekauwila Street between Punchbowl and Queen Street have also been completed, without provision for a bike lane. Retaining the bike lane on Pohukaina Street will avoid the need to go back and widen this section of Halekauwila Street.

2.3 PURPOSE AND NEED FOR THE PROJECT

The 1990 KCDD Mauka Area Plan envisions integrated, developed commercial, industrial, and residential uses (including parks and parking). The Mauka Area Plan was created in accordance to the State Hawaii Community Development Authority's rules (206E, HRS). The Mauka Area Plan states that 206E, HRS sets forth the legislature's concern for a safe and efficient movement of people and goods. The couplet studied in this EA will aid in implementing the transportation goals. The proposed action will help to achieve the goal of safe and efficient movement of goods and services to, from, and within Kakaako, while allowing Auahi Street to be the pedestrian spine of Kakaako.

The 1991 *Kakaako Traffic Study* indicated that a couplet would better serve the Kakaako traffic volumes by Year 2010 and beyond than the existing two-way street system. The

• QUEEN ST. - HALEKAUWILA ST. COUPLET ENVIRONMENTAL ASSESSMENT •

same study concluded that a Queen Street - Halekauwila Street couplet would provide a more effective circulation scheme than a Queen Street - Pohukaina/Auahi Street couplet. The proposed action will help to implement the findings and conclusions of this study.

24 IMPLEMENTATION SCHEDULE

HCDA makes improvements to the roadways in Kakaako in sections known as development units. Improvements in two of the development units have been completed which included Queen Street, Halekauwila Street and Pohukaina Street between Punchbowl Street and Cooke Street. Those streets have been improved to include new pavement and sidewalks where needed, and new sewer, water and drainage lines as described in the Mauka Area Plan. Also, Pohukaina Street was widened between Punchbowl Street and Cooke Street in conjunction with the utility improvements.

Extensions of Pohukaina Street, Halekauwila Street and Queen Street would be done in a timely manner, either when HCDA implements the improvements according to the development unit plans or when the abutting properties are redeveloped.

3.0 DESCRIPTION OF THE ENVIRONMENTAL SETTING, ANTICIPATED IMPACTS, AND MITIGATIVE MEASURES

Impacts of the redevelopment of Kakaako in accordance with the Mauka Area Plan have been addressed in the June 1983 Final Environmental Impact Statement (EIS) for the Kakaako Community Development District. Addressed below are the effects of the proposed change in the planned one-way couplet route on the impacts described in the Final EIS. Also presented is an analysis of any impacts which were not previously identified.

3.1 CLIMATE

3.1.1 Existing Conditions

Average daily minimum and maximum temperatures ranges from the low 60's (degrees Fahrenheit) to the low 90's, depending upon the time of day and the season. Average daily temperatures vary by about 6.5 degrees between winter and summer seasons.

Precipitation is seasonal. The annual rainfall for this location amounts to approximately 30 inches. The months of November through March typically have the most rainfall.

3.1.2 Anticipated Impacts and Mitigative Measures

The proposed project will have no effect on climatic conditions, thus no mitigative measures are required.

3.2 TOPOGRAPHY

3.2.1 Existing Conditions

The topography in Kakaako can be characterized as a relatively flat area. Halekauwila Street, Pohukaina/Auahi Street, and Queen Street are highly urban in character. The affected areas discussed in this EA are fully developed with streets, parking areas, and structures occupied by commercial and light industrial activities, as is typical throughout the entire Kakaako area.

3.2.2 Anticipated Impacts and Mitigative Measures

The proposed couplet will not alter the topography in the project area. It is not anticipated that any significant grading will be required to construct the extensions of Halekauwila Street and Queen Street. No new structures (besides the sections of Halekauwila and Queen Streets) are being proposed under this action.

3.3 SOILS AND GRADING

3.3.1 Existing Conditions

Since the entire area studied in this EA is paved over, construction necessary in implementing the proposed action should not involve the disturbance of soils.

According to the U.S. Department of Agriculture Soil Conservation Service (SCS), soils under the areas where construction would take place (extension of Halekauwila Street Diamond Head of Ward Avenue and Queen Street towards Pensacola Street) are primarily Fill Land. Fill Land is generally made up of material dredged from the ocean or hauled from nearby areas, garbage and general material from other sources, and is used for urban development. The Fill Land specific to the Kakaako area is comprised of a coral layer.

3.3.2 Anticipated Impacts and Mitigative Measures

The impact of the proposed action on soils is limited to the small potential for erosion during construction, if the underlying soil is exposed when the existing pavement is removed. Some grading may be required in the area Diamond Head of Ward Avenue to extend Halekauwila Street up to Queen Street and also to extend Queen Street from Kamakee Street to Pensacola Street. All grading operations will be conducted in compliance with dust and erosion control requirements of the City and County of Honolulu Grading Ordinance. A Grading Permit must be obtained from the City and County of Honolulu in order to begin construction. During Grading Permit review and approval the grading plans for the site are reviewed by the Department of Public Works and specific conditions may be attached.

The impact of construction activities on soils will be mitigated by practicing strict erosion control measures, particularly those specified in the following:

- City and County of Honolulu Grading Ordinance
- State of Hawaii, Department of Health, Water Quality Standards, Chapter 37-A, Public Health Requirements (1968);
- USDA Soil Conservation Service, Erosion and Sediment Control Guide for Hawaii (1968).

Primary fugitive dust control methods include wetting down loose soil areas, good housekeeping on the job site, and prompt landscaping, covering or paving of bare soils in areas where construction is completed.

3.4 SURFACE WATER AND DRAINAGE

3.4.1 Existing Conditions

All areas affected by the project are outside designated floodways. The flood zones were checked using the National Flood Insurance Program, Flood Insurance Rate Map (FIRM). The FIRM indicates that the areas along Queen Street, and along Halekauwila Street and Pohukaina Streets between Punchbowl Street and the area of Kamani Street, are located within Zone X, "areas determined outside of the 500-year flood plain."

• QUEEN ST. - HALEKAUWILA ST. COUPLET ENVIRONMENTAL ASSESSMENT •

Between Kamani Street and Ward Avenue, the proposed project area streets are designated within Zone AE, area within the 100-year flood with no base flood elevations determined. The project streets Diamond Head of Ward Avenue are within Zone A, which is within the 100 year flood, base flood elevations determined.

According to the KCDD Mauka Area Plan, the Mauka Area's drainage system consists of inlets and lines connected to major trunk lines passing through and serving the area and tributary areas mauka of the Kakaako District. Storm runoff and drainage is by gravity, generally in the mauka-to-makai direction. Most of the major drain lines are located within the major mauka-makai thoroughfares. The Mauka Area's existing drainage facilities are inadequate to carry storm runoff to the sea as evidenced by the frequent storm flooding within the area. Stormwater drains are in the process of being upgraded as the roadways in Kakaako are improved in accordance with the KCDD Mauka Area Plan.

3.4.2 Anticipated Impacts and Mitigative Measures

Long term impacts should be insignificant. Implementation of the proposed action will not significantly alter the character or pattern of surface runoff. Halekauwila Street, Queen Street, and Pohukaina Street have been improved between Punchbowl Street and Cooke Street to include new, upgraded drainage lines. These improvements have mitigated past flooding problems. Planned improvements to the remaining sections of these streets will alleviate any existing flooding problems in the drainage areas served by them. Drainage lines will need to be included in the proposed extensions of Halekauwila Street and Queen Street to accommodate surface runoff.

3.5 FLORA AND FAUNA

3.5.1 Existing Conditions

Halekauwila Street, Pohukaina/Auahi Street, and Queen Street are highly urban in character predominated by commercial activities, light industrial activities as well as structures and paved streets. Vegetation consists primarily of exotic species including: Monkeypod Tree (*Samanea saman*), Shower Trees (*Cassia sp.*) and Coconut Trees (*Cocos nucifera*).

Very little if any vegetation exists along the rights-of-way of Halekauwila and Queen Streets. In those areas where there are shrubs, trees or flowers, they are located within the building setbacks, away from the street curbs. There are no trees or any strips of grass between sidewalks and roadway curbs.

Within this highly urban environment, bird species sighted or presumed to frequent the project area are those common to urban Honolulu, including: lace-necked and barred doves, house sparrows, common mynahs, cardinals and Japanese white-eyes. Other animals presumably found within the project area include domestic pets and strays, mongooses, rats and mice. No rare, endangered, or threatened plant or animal species are presently known to exist on the project site.

3.5.2 Anticipated Impacts and Mitigative Measures

Since there are no foliage or vegetation in the rights-of way along Halekauwila Street and Queen Street, and since both the extensions of both Halekauwila and Queen Streets would be over an area currently covered with pavement or buildings, it is highly unlikely that this proposed action will have impacts to flora.

It is expected that during construction, birds that may frequent each building site will move to nearby undisturbed areas and will return when disturbances cease. Similarly, stray domestic animals will move to adjoining areas during construction and return when construction is completed.

3.6 ARCHAEOLOGICAL/HISTORICAL RESOURCES

3.6.1 Existing Conditions

There are several historical structures in Kakaako that are on the National Register of Historic Places:

- Kawaiahao Church and Grounds (Punchbowl Street and King Street);
- Mission Houses Museum (King Street and Mission Lane);
- Old Kakaako Fire Station (South Street and Queen Lane);
- McKinley High School (Pensacola Street and Kapiolani Boulevard)
- News Building (Kapiolani Boulevard, South Street);
- Elizabeth Building (Kawaiahao Street and Mission Lane); and,
- Makiki Christian Church (Pensacola Street and Elm Street).

None of the historic sites listed above are located directly along the proposed couplet streets. The Mauka Area Plan has also identified nine other sites that are potential historic properties, but none of the properties are along Halekauwila Street or Queen Street, nor are in the areas that Halekauwila Street and Queen Street are proposed for extension.

3.6.2 Anticipated Impacts and Mitigative Measures

Since the registered and potential historic sites in the Kakaako area are not located along Queen Street nor Halekauwila Street no impacts to archaeological or historical resources are anticipated.

In the event that any previously unidentified sites or remains are encountered during site work and construction phases, work in the immediate area will cease until an archaeologist from the State Historic Preservation Division has been notified and is able to assess the impact and make further recommendations for appropriate mitigative actions, if warranted.

3.7 LAND USE/DEVELOPMENT PATTERNS

Development patterns in the Mauka Area are set by the Land Use Plan. The principle function of the Land Use Plan and related rules is to specify where land uses such as commercial, residential, industrial, parking and public areas are permitted. This section discusses the impacts of the proposed new couplet route on existing land use designations. Properties along the route have mixed use zone designations as well as parking garage designations.

3.7.1 Mixed Use Zones

3.7.1.1 Existing Conditions

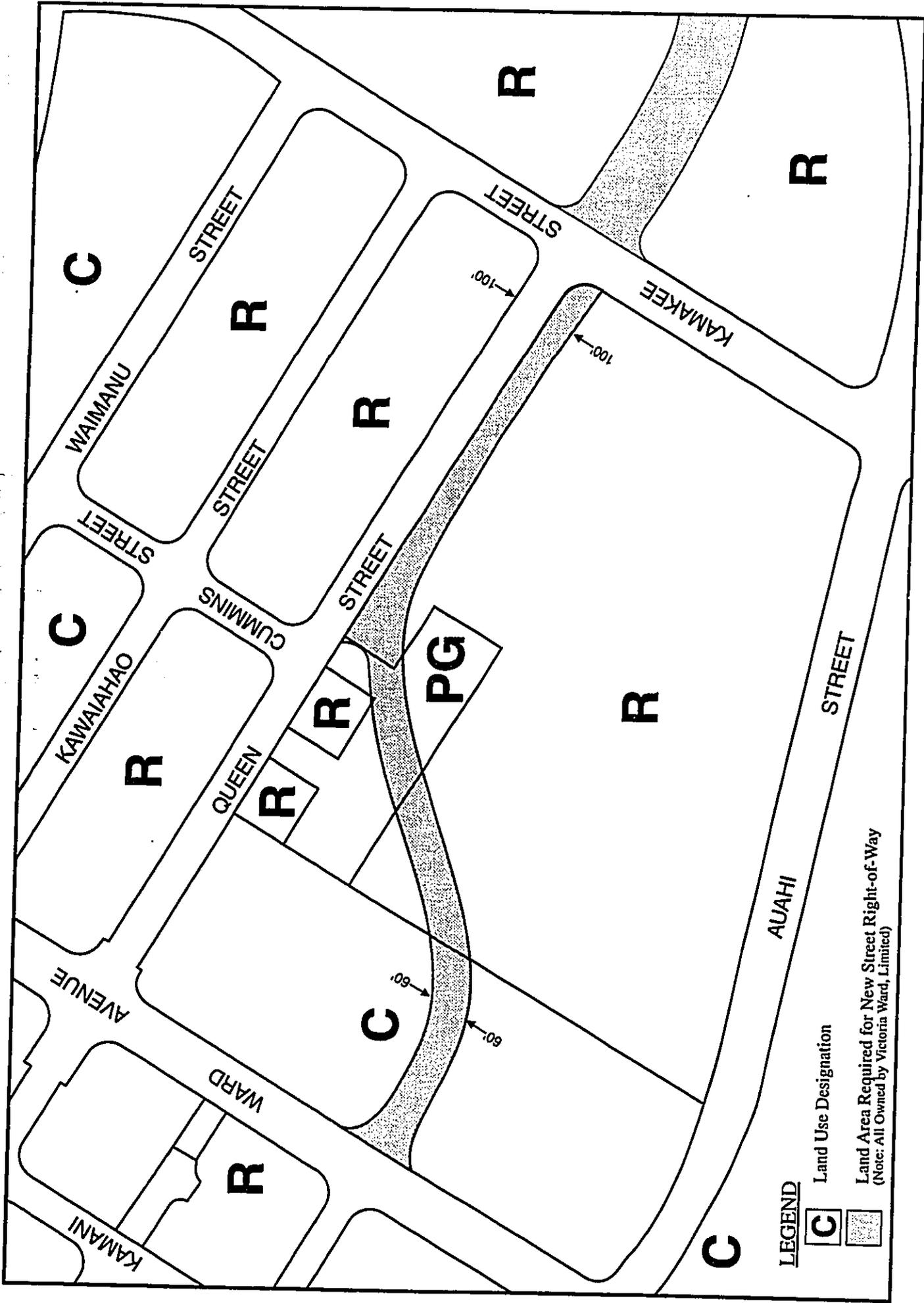
Most of the land through which the currently planned and proposed couplet alignments pass is designated as Mixed Use Zone Residential. Roughly 20 percent of the abutting properties--the blocks between Punchbowl Street and South Street, a 220-foot wide strip on the Diamond Head side of Ward Avenue between Queen and Auahi Streets, and the makai side of Auahi Street--are designated as Mixed Use Zone Commercial.

3.7.1.2 Anticipated Impacts and Mitigative Measures

Moving the couplet from Pohukaina/Auahi Street to Halekauwila Street will not impact the amount of lands designated Mixed Use Zone Commercial and Mixed Use Zone Residential in the area Ewa of Ward Avenue. Both the alignments and the right-of-way widths of Pohukaina Street and Halekauwila Street will be the same for the proposed Queen-Halekauwila couplet as are currently planned for the Queen-Pohukaina/Auahi couplet. There will be no change in the amount of land designated for development or in the existing land use classifications.

Between Ward Avenue and Kamakee Street, moving the couplet from Pohukaina/Auahi Street to Halekauwila Street will require the extension of Halekauwila Street in the Diamond Head direction from Ward Avenue to a point where it merges with Queen Street near Cummins Street, and the widening of Queen Street from its currently planned 60 foot width to 100 feet (Figure 4). Approximately 0.4 acres of land designated as Mixed Use Zone Commercial and approximately 1.5 acres of land designated as Mixed Use Zone Residential will be required to build the new roadway and to widen Queen Street. The affected properties are all owned by Victoria Ward, Limited.

Diamond Head of Kamakee Street, both the currently planned and the proposed new couplet alignments will involve the taking of land to construct new roadway. Alignments of these new roadway sections differ significantly between the two alternatives (Figures 1 and 2). However, regardless of which alignment is used, approximately the same amount of land will be required. The impact on the amount of land designated for development (all in the Mixed Use Residential Zone in this area) of changing from the currently planned to the proposed couplet alignment will be insignificant.



LEGEND

- C** Land Use Designation
-  Land Area Required for New Street Right-of-Way
(Note: All Owned by Victoria Ward, Limited)

Impact of Proposed Couplet on Mauka Area Land Use Plan
 QUEEN STREET - HALEKAUWILA STREET COUPLET EA

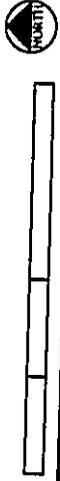


Figure 4

• QUEEN ST. - HALEKAUWILA ST. COUPLET ENVIRONMENTAL ASSESSMENT •

The couplet extension from Kamakee Street to Waimanu Street/Pensacola Street passes through property owned by Victoria Ward, Nauru Phosphate Royalties Trust (Nauru), and the State of Hawaii for both alternative alignments. While the proposed new couplet alignment overall requires approximately the same amount of land for roadways as the currently planned alignment, individual properties will need to be reconfigured if their respective shares are to remain the same. Discussions are under way to work out these reconfigurations in a mutually acceptable manner. However, if they cannot be agreed upon, the proposed couplet could still be implemented by following the alignment for the extension of Queen Street to Pensacola Street which is shown for the currently planned couplet. In this case, land required from Nauru and the State of Hawaii for construction of the couplet is the same under both alternatives. The additional 40 feet of right-of-way which would be required for part of Queen Street under the proposed couplet alignment is all on property owned by Victoria Ward, Limited.

Under the proposed couplet alignment, Auahi Street would no longer be part of the couplet. This means that the minimum required width of Auahi Street would be reduced from 60 feet to 50 feet. The land area encompassed by this 10 foot reduction in width is approximately 0.5 acres. Subject to HCDA approvals, this could be added to the developable land area if Victoria Ward, Limited is willing to undertake the expense of reconstructing part of the existing roadway. At this time no decision on whether to pursue this has been made.

In summary, the proposed couplet alignment would occupy approximately 1.9 acres more land than the currently planned alignment, and would reduce by 1.9 acres the amount of land available for development. All of the affected area is owned by Victoria Ward, Limited. Thus, there would be no impacts on other property owners.

3.7.2 Planned Parking Garages

3.7.2.1 Existing Conditions

Four "Park on Parking Garage" (PG) sites are designated within the project area on the KCDD Mauka Area Plan. These are intended to be public parking garages within the 45-foot platform height, with recreation facilities located at the platform level on the roof of the garage. One of these garages--between Halekauwila and Ilaniwai Streets--has already been constructed. A second site--between Waimanu Street and Queen Street near Pensacola Street--has been acquired but is not yet improved. The third and fourth sites--bordering Queen Street near Cummins Street and between Pohukaina and Halekauwila Streets on the Ewa side of Keawe Street--are neither improved nor acquired.

3.7.2.2 Anticipated Impacts and Mitigative Measures

Moving the couplet from Pohukaina Street to Halekauwila Street will not impact the two parking garage sites Ewa of Ward Avenue--i.e., either the existing garage or the one planned between Pohukaina and Halekauwila Streets. Streets bordering the latter site have already been improved, and no further changes are needed to accommodate the

• QUEEN ST. - HALEKAUWILA ST. COUPLET ENVIRONMENTAL ASSESSMENT •

couplet modification. Similarly, no changes to the improvements planned for the section of Halekauwila Street bordering the existing garage area necessary. For these two garage sites, no mitigative measures are required.

The extension of Halekauwila Street Diamond Head of Ward Avenue is proposed to pass through the currently designated garage site at the Queen-Cummins Street intersection. This site is currently owned by Victoria Ward, Limited (VWL). To mitigate this impact, a reconfigured or alternative site acceptable to HCDA will be provided by VWL. Amendment of the Mauka Area Plan to reflect its new location will be proposed, along with the proposed couplet modification that is the subject of this EA, as part of VWL's pending Master Plan Application.

The proposed realignment of the couplet's connections to Waimanu and Pensacola Streets will also impact HCDA's currently owned garage site in this area. Either a reconfiguration or relocation of this site will be necessary. The abutting land is owned by VWL and Nauru Phosphate Royalties Trust. As with the Queen-Cummins Street site, any change to this site would be subject to the approval of HCDA. If an acceptable plan cannot be worked out, the proposed couplet alignment will be changed in this area to follow the currently planned alignment as shown in Figure 1. This will avoid any adverse impacts on the existing site.

3.8 ROADWAYS AND ACCESS

3.8.1 Roadways Proposed for Modification

As described in Section 2.1, portions of Pohukaina Street, Auahi Street, Halekauwila Street, Queen Street, the planned Queen Street/Auahi Street extension, and Waimanu Street would be affected by the proposed action.

3.8.2 Anticipated Impacts and Mitigation Measures

Potential impacts of proposed changes in individual street widths and locations on the couplet's traffic carrying capacity, on access to abutting properties, and on the cost of implementing the Mauka Area Roadway Plan are discussed below.

3.8.2.1 Impacts on Traffic Carrying Capacity and Access

The Roadway Plan contained in the KCDD Mauka Area Plan specifies widths for roadway improvements throughout the Mauka Area. Pohukaina Street, as the planned couplet street is listed as 60 feet wide in the Roadway Plan while Halekauwila Street has a prescribed width of 50 feet. The same number of traffic lanes (three) are planned for both streets; in addition, a bike lane is to be provided on Pohukaina Street.

The planned right-of-way widths for Halekauwila Street Ewa of Ward Avenue and Pohukaina Street would not be affected by the proposed action. Under the proposed action, Halekauwila Street between Punchbowl Street and Ward Avenue would be kept at 50 feet, rather than be widened to 60 feet as is currently planned for couplet streets, in

• QUEEN ST. - HALEKAUWILA ST. COUPLET ENVIRONMENTAL ASSESSMENT •

order to minimize the impacts to abutting properties along Halekauwila Street. This can be achieved by retaining the bike lane on Pohukaina Street, rather than moving it to Halekauwila Street. Proposed cross-sections for these streets are shown on Figure 5.

There will be a slight reduction (2 feet) in the total pavement width available for vehicular traffic on Halekauwila Street, as compared to Pohukaina Street. TDA, Inc., traffic consultants to VWL, have assessed the capacity of a one-way street with three travel lanes having a total width of 36 feet (i.e., with Halekauwila Street as the couplet street) versus the capacity of three travel lanes having a total width of 38 feet (i.e., the currently planned couplet street width). They concluded that the travel lane widths for both streets would be comparable, and thus the capacities would also be comparable. Therefore, no mitigative measures are considered necessary.

Under the proposed action, Pohukaina Street would remain a two-way street. The only impact to this street would be that it would no longer be designated as a couplet leg. Once fully improved, Pohukaina Street would have a slightly wider area (38 feet versus 36 feet) for its two traffic lanes and turning lane than is standard for other local streets. Neither this added width nor the presence of a bike lane should materially affect its traffic carrying capacity. No mitigation measures are considered necessary.

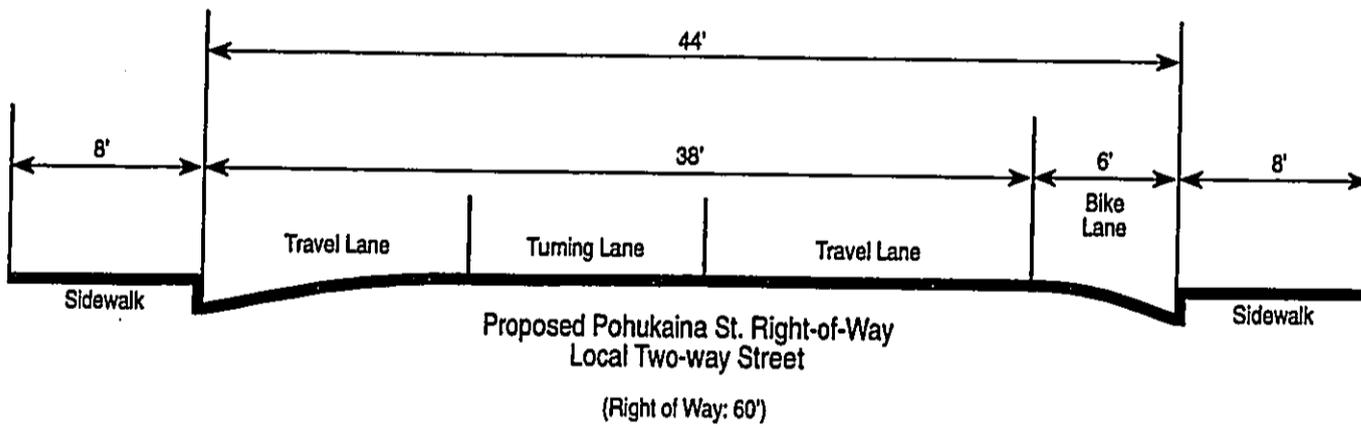
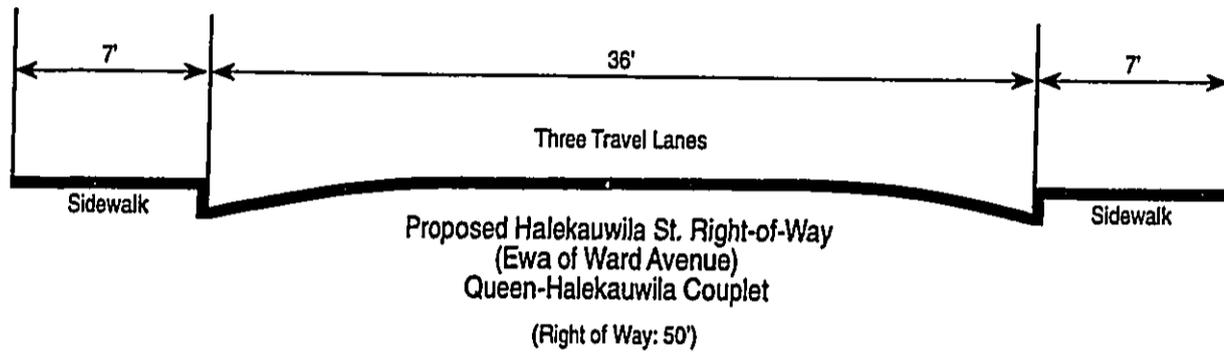
Auahi Street would also remain a two-way street. As indicated in the Mauka Area Roadway Plan, the intersection of Auahi Street with Ward Avenue is to be realigned so that it can be joined with Pohukaina Street. The proposed action does not affect this planned improvement.

The proposed action would relocate the planned bike lane along Auahi Street to Halekauwila Street extension and Queen Street. This will not materially affect the traffic carrying capacity of either Auahi or Queen Streets.

The proposed couplet extension from Kamakee Street to Pensacola Street would involve only Queen Street. This will have the beneficial impact of avoiding the need to demolish the Garden Office Building in order to build the couplet. No significant buildings are located within the lands required to construct the proposed couplet extension. Capacity of the proposed two-way, six lane Queen Street will be comparable to the currently planned Queen-Auahi Street one-way couplet. No mitigation measures are considered necessary.

As noted in Section 3.7.1.2, under the proposed couplet Queen Street would have a right-of-way of 100 feet from just Diamond Head of Cummins Street to Pensacola Street, compared to 60 feet with the currently planned couplet. All of the land required for this widening is owned by Victoria Ward, Limited. There would be no adverse impacts on access to abutting properties.

According to the Mauka Area Roadway Plan, Waimanu Street is slated for closing between Kamakee Street and Pensacola Street. The proposed action would accommodate this plan without any impact, and would also allow for the road to be kept open.



Pohukaina Street and Halekauwila Street Cross Sections with Queen-Halekauwila Couplet
 QUEEN STREET - HALEKAUWILA STREET COUPLET EA

Figure 5

Under the proposed action, the extended two-way Queen Street would merge into Waimanu Street near Pensacola Street and require a reconfiguration of the intersection of Waimanu and Queen Streets west/Ewa of this merge point. A parcel of remnant land would be created at the new intersection (Figure 6). This remnant would hinder access to four properties on the mauka side of Waimanu Street if access across it is not allowed. To mitigate this impact, it is proposed that the remnant parcel be transferred to the abutting property owners. Transfer of the remnant land to the abutting property owners will maintain their street access and have the beneficial effect of increasing the land area of the properties.

As discussed in Section 3.7.1.2, the proposed alignment for the Queen Street extension would necessitate reconfigurations of properties owned by Nauru Phosphate Royalties Trust, the State of Hawaii and Victoria Ward, Limited. Assurance that all properties have adequate access will be integral to the planning of these reconfigurations, thus avoiding any adverse impacts or need for mitigative measures.

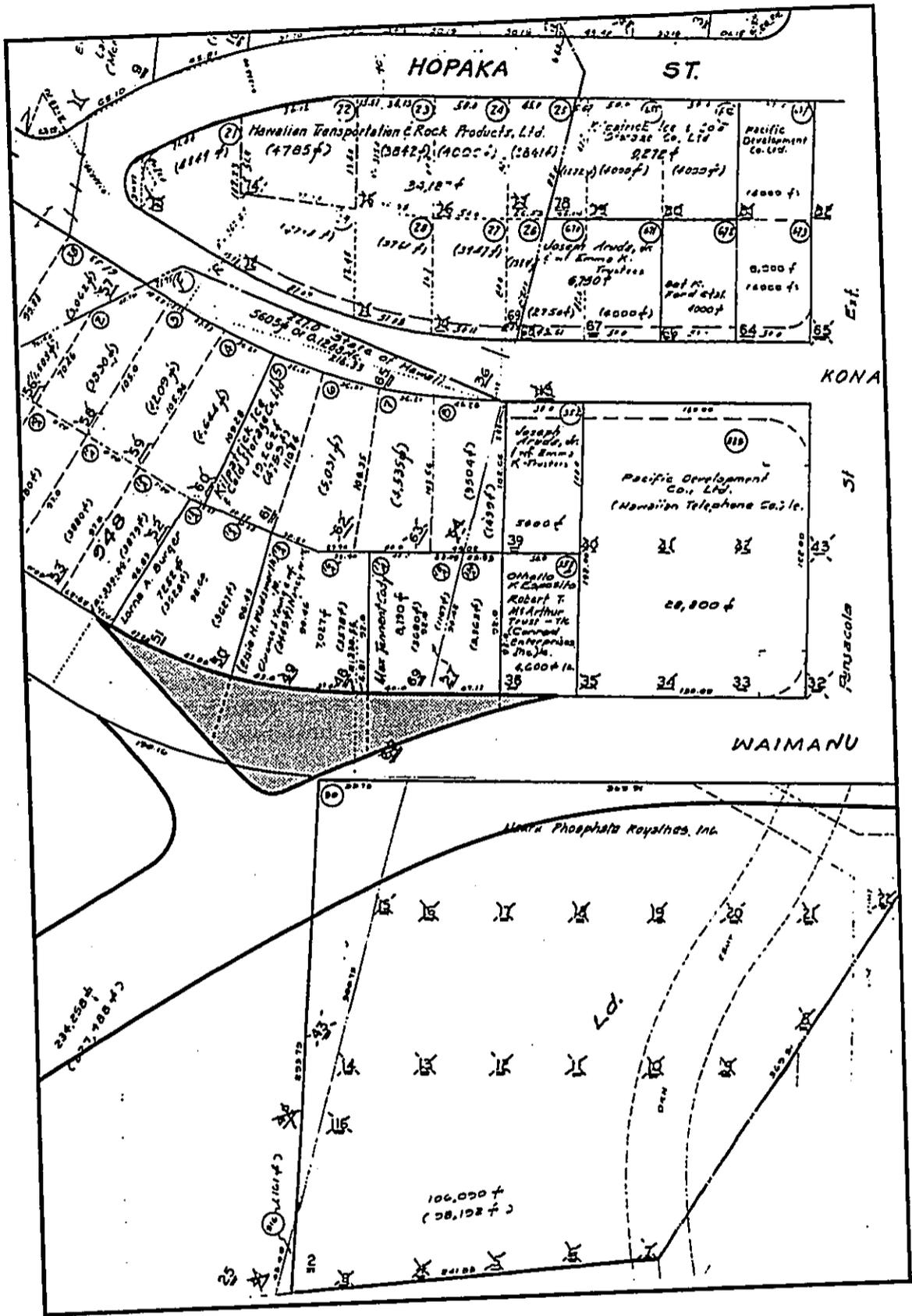
3.8.2.2 Impacts on Road Improvement Costs

The proposed action will not change what is already planned in terms of road improvements for the area between Punchbowl Street and Ward Avenue. There would be no additional land requirements nor any impact on construction costs for the improvements that are still to be made. Also, there would be no need for any modifications to the improvements that have already been made.

Between Ward Avenue and Kamakee Street, there is a difference between the cost of building the proposed couplet rather than building the planned couplet. Whereas the planned couplet would use the existing Auahi Street for the Diamond Head bound lanes of the couplet, the proposed couplet would require a new road segment that would extend Halekauwila Street to connect with Queen Street near Cummins Street (Figure 4). Beyond this connection point, Queen Street would have to be widened to 100 feet, rather than 60 feet, to accommodate two-way traffic.

As described in Section 3.7.1.2, these new road segments would require an additional 1.9 acres of land. Using an estimated land value of \$100 to \$150 per square foot, the estimated cost of acquiring this land for roadway purposes would be between \$8.3 and \$12.4 million. The cost of constructing the Halekauwila Street extension is estimated to be \$2.5 million, including sidewalks, drainage and underground utility lines. Widening Queen Street's pavement by 40 feet (from 44 feet to 84 feet) between Cummins Street and Kamakee Street is estimated to cost approximately \$0.7 million.

The cost of the couplet for the section between Kamakee Street and Pensacola Street with either the currently planned or the proposed alignment and roadway construction will be comparable. This is because both alignments will involve approximately the same amount of land and roadway construction.



LEGEND

 Remnant Area to be Transferred to Abutting Properties

Impact of Reconfigured Queen/Waimanu Street Intersection
 Abutting Property Access
QUEEN STREET - HALEKAUWILA STREET COUPLET EA

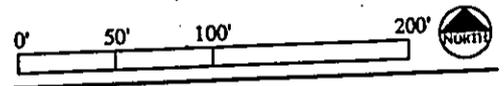


Figure 6

3.9 TRAFFIC CONDITIONS

3.9.1 Existing Roadways and Observed Traffic Conditions

Regional access to the Mauka Area of the Kakaako Community Development District is provided by Ala Moana Boulevard/Nimitz Highway, Kapiolani Boulevard and the King Street-Beretania Street one-way couplet, and by the H-1 Freeway via Punchbowl Street, Ward Avenue, and the Piikoi Street-Pensacola Street one-way couplet. Internal roadways are shown on Figure 3.

Section 2.1 describes the existing conditions of Halekauwila Street, Queen Street, Pohukaina and Auahi Streets, which are streets that would be affected by the proposed action.

Traffic conditions along Queen Street, Halekauwila Street, and Pohukaina and Auahi Streets were studied as part of the 1983 Final EIS and more recently by Austin Tsutsumi and Associates. The findings of these studies, particularly in terms of how they relate to the potential impacts of the proposed couplet modification, were also reviewed by TDA, Inc., traffic consultants to Victoria Ward, Limited.

In 1991, Austin, Tsutsumi & Associates, Inc. (ATA) prepared for HCDA the *Kakaako Traffic Study*. ATA studied the existing transportation elements and also projected roadway capacities in Kakaako. ATA obtained 1990 traffic counts in their study and evaluated conditions at Kakaako's major intersections. Traffic movements at intersections can be described in terms of a Level-of-Service (LOS) rating. LOS ratings for signalized and unsignalized intersections are defined in Appendix A of this EA.

As shown in Figure 7 and Figure 8, in 1990 ATA found that Queen Street and other internal streets were operating at an acceptable LOS.

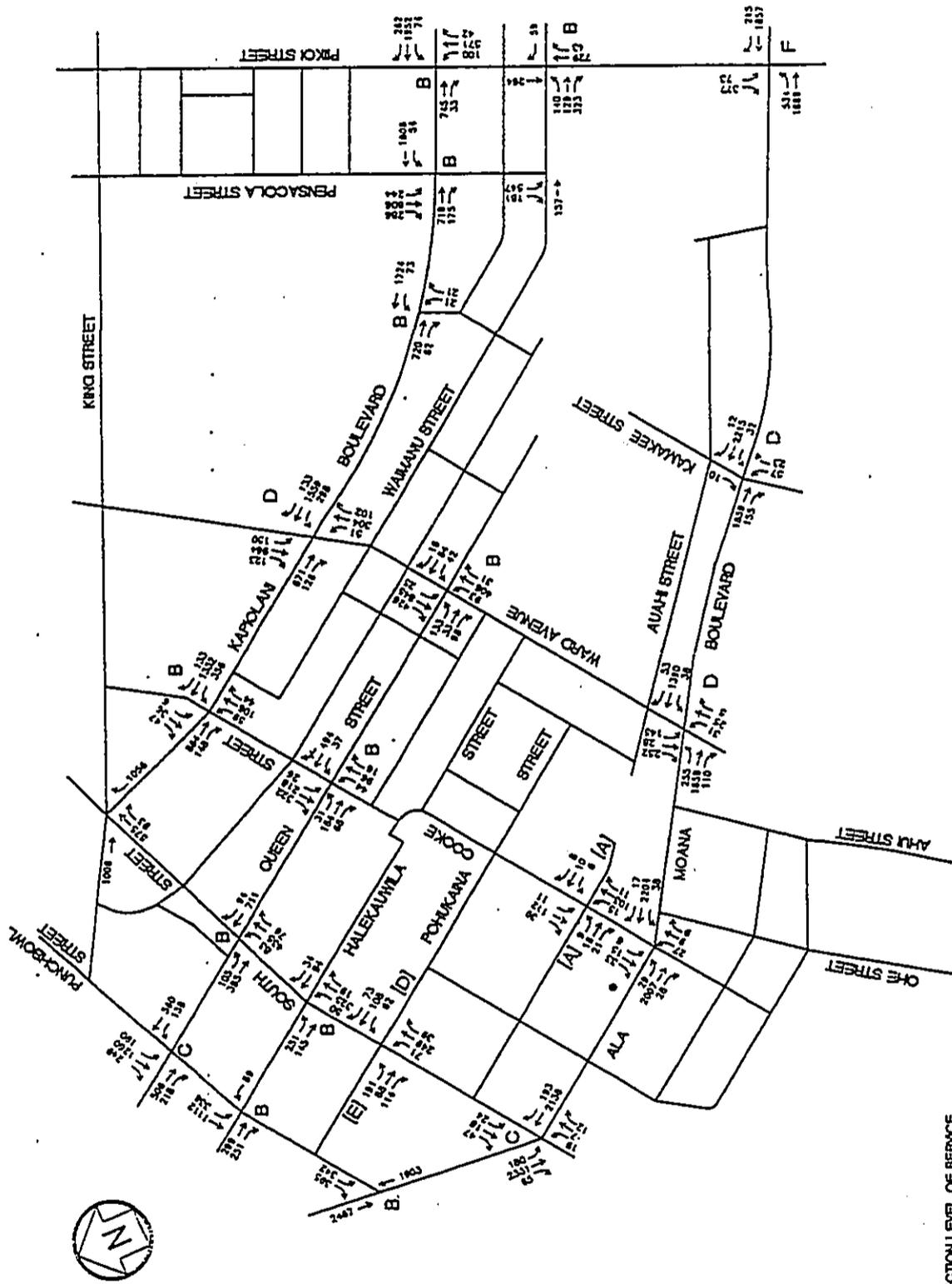
3.9.2 Anticipated Impacts

The ATA study projected future traffic volumes for Kakaako and concluded that by the year 2010, an Ewa - Diamond Head couplet would be needed to accommodate the projected traffic demands at an acceptable LOS, whereas this would not be possible if the existing two-way street network is retained.

For the purposes of this EA, TDA, Inc., looked at the possible impacts of having a couplet using Queen and Halekauwila Streets as opposed to using Queen - Pohukaina/Auahi Streets. A copy of the TDA, Inc., report is included in Appendix B.

3.9.2.1 Short-Term Traffic Impacts

Short-term, temporary traffic impacts will occur as a result of probable re-routing of traffic as Halekauwila Street and Queen Street are extended. The re-routing of traffic will be necessary for safety reasons during construction.



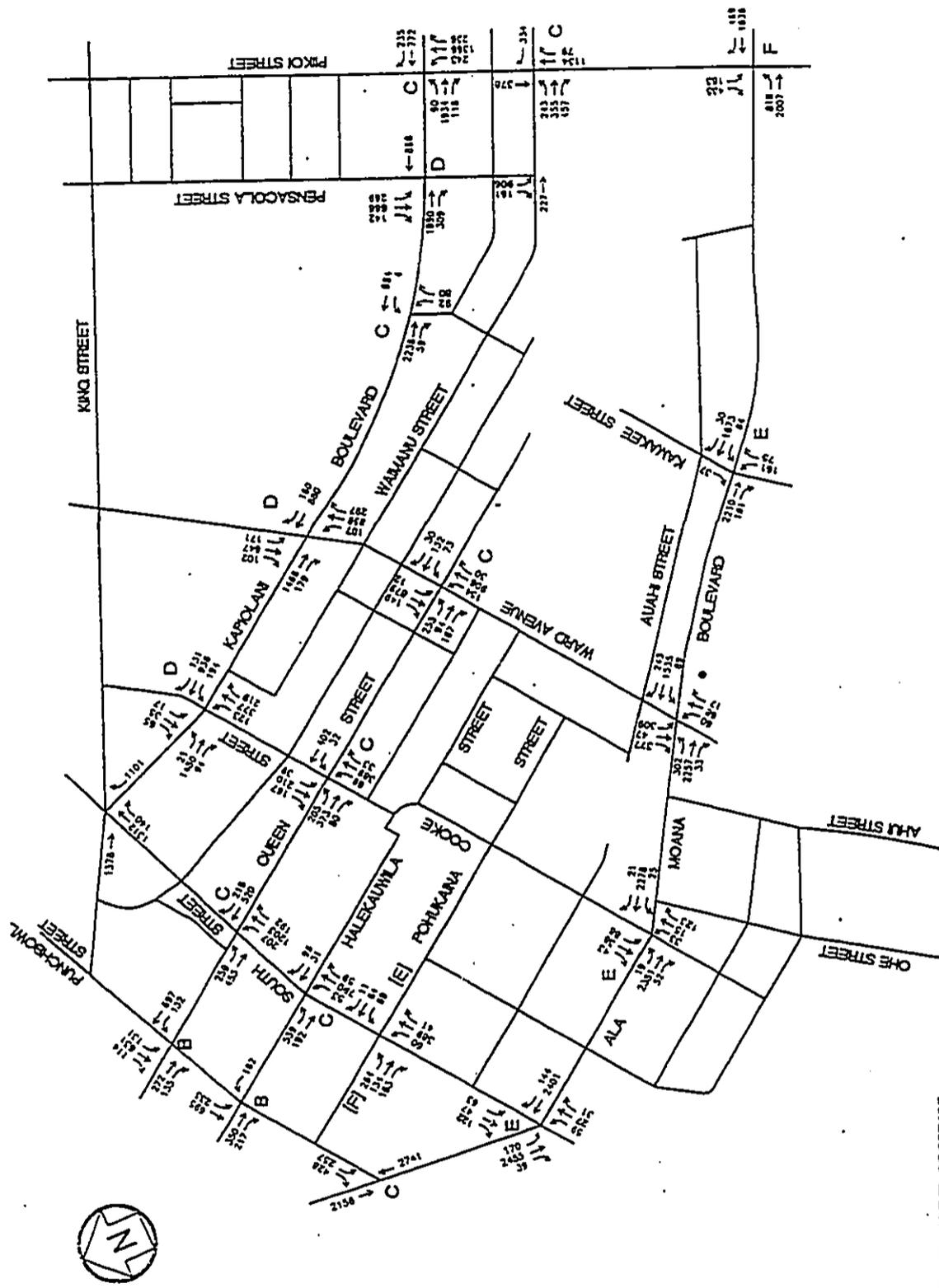
LEGEND

- A INTERSECTION LEVEL OF SERVICE (EQUALIZED INTERSECTION)
- [A] INTERSECTION LEVEL OF SERVICE SPECIFIC MOVEMENT (UNEQUALIZED INTERSECTION)
- V/C RATIO EXCEEDS 12: CONGESTED CONDITION

Existing (1990) AM Peak Hour Volumes and Levels of Service
QUEEN STREET - HALEKAUWILA STREET COUPLET EA

Source: Austin, Tsutsumi & Associates, Inc.
 NOSCALE

Figure 7



- LEGEND**
- A INTERSECTION LEVEL OF SERVICE (SIGNALIZED INTERSECTION)
 - A1 INTERSECTION LEVEL OF SERVICE (SIGNALIZED INTERSECTION) SPECIFIC MOVEMENT (UNSIGNALIZED INTERSECTION)
 - V/C RATIO EXCEEDS 1.2; CONGESTED CONDITION

Source: Austin, Tsutsumi & Associates, Inc.
NO SCALE

Existing (1990) PM Peak Hour Volumes and Levels of Service
QUEEN STREET - HALEKAUWILA STREET COUPLET EA

Figure 8

• QUEEN ST. - HALEKAUWILA ST. COUPLET ENVIRONMENTAL ASSESSMENT •

If two-way flows are to continue, temporarily on Halekauwila Street and Queen Street even after the Halekauwila Street extension is completed, then Halekauwila Street Ewa of Ward Avenue would operate as it currently does as a two-way street. The Halekauwila Street extension would operate as a one-way Diamond Head bound street to the point where it would merge with the temporary extension is completed, even if the remaining sections of the couplet streets continue to operate temporarily as two-way streets.

3.9.2.2 Projected Long-term Traffic Impacts

Both the 1991 ATA *Kakaako Traffic Study* and 1983 Final EIS state that the traffic volumes in Kakaako will increase in the future. Year 2010 AM and PM peak hour traffic volumes and capacity conditions at major intersections in Kakaako, as projected by ATA, are indicated in Figures 9 and 11. These projections were made with the assumption that the planned Queen Street-Pohukaina/Auahi Street Couplet would be completed by that time.

Using the data from the 1991 ATA *Kakaako Traffic Study*, TDA, Inc. reassigned 2010 projected traffic volumes from the planned couplet to the proposed Queen Street - Halekauwila Street couplet. Potential changes in traffic conditions resulting from the couplet modification were assessed in terms of the following three areas of concern:

- Impacts on intersection capacity conditions within Kakaako.
- Impacts on the relative amounts of through and local traffic using the couplet.
- Impacts on traffic volumes and conditions along major through traffic arteries in Kakaako--especially Ala Moana and Kapiolani Boulevards--and on areas bordering central Kakaako.

Figures 10 and 12 indicate projected capacity conditions at key intersections during peak hours within the project area for 2010 with the proposed Queen Street-Halekauwila Street couplet. As can be seen by comparing these figures with Figures 9 and 11, moving the Diamond Head leg of the couplet from Pohukaina/Auahi Street to Halekauwila Street will not materially alter traffic conditions along these two streets.

Only two minor changes are indicated. Traffic is projected to be slightly heavier at the Queen-Kamakee Street intersection with the proposed couplet during the AM peak hour. It will be "near capacity" with the proposed couplet as opposed to "under capacity" with the currently planned couplet. In the proposed couplet, the juncture of the one-way roads is Ewa of Kamakee Street; in the planned couplet it is Diamond Head. Therefore in the planned couplet there will be two-way traffic at this intersection.

The opposite change is projected at the Halekauwila-South Street intersection during the PM peak hour. It will be "under capacity" with the proposed couplet as opposed to "near capacity" with the planned couplet. Again, this results because Halekauwila Street would be two-way in the planned couplet and carry more total traffic than in the proposed one-way configuration.

Given these very limited and minor changes on the immediately affected streets, the proposed couplet modification is not expected to result in any substantive changes to ATA's projections of intersection capacity conditions elsewhere in Kakaako.

As indicated in the TDA report, it might appear that one impact of changing the couplet from Pohukaina/Auahi Street to Halekauwila Street would be to encourage additional through traffic from Nimitz Highway onto Halekauwila Street. However, an intersection capacity analysis conducted by TDA indicates that the Diamond Head bound left turn at Nimitz Highway is already at or near capacity. Since there are no plans to improve the capacity of this left turn lane, the amount of through traffic choosing to turn off Nimitz Highway to use Halekauwila Street, as opposed to staying on and using Ala Moana Boulevard, will continue to be determined by the current limits of this intersection's capacity. Thus, the change of the couplet leg from Pohukaina/Auahi Street to Halekauwila Street cannot be expected to change through traffic volumes on the couplet.

Finally, the TDA study concluded that there would be no changes in external traffic conditions (i.e., outside of the project area) resulting from changing the couplet leg from Pohukaina/Auahi Street to Halekauwila Street.

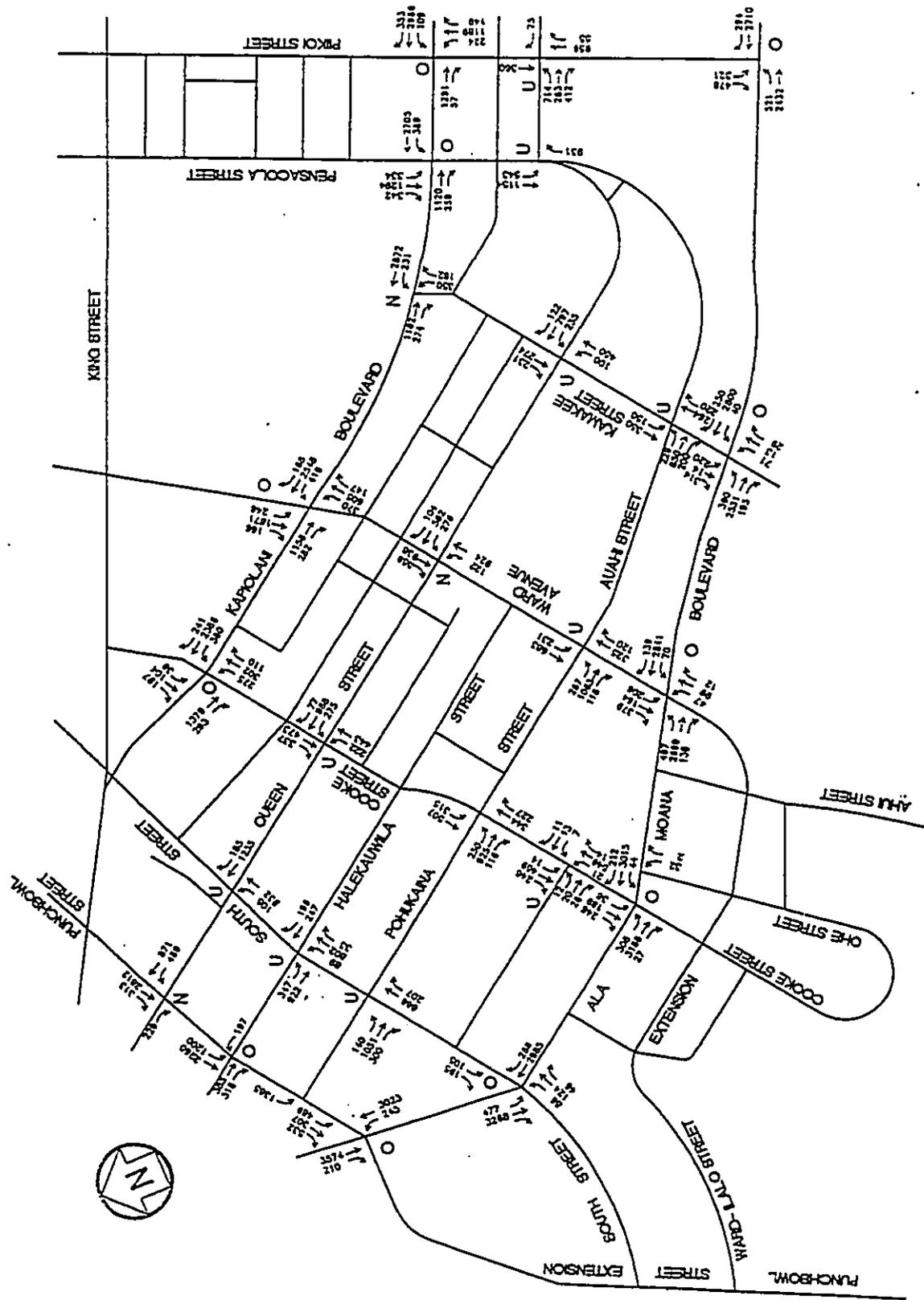
3.9.3 Mitigative Measures

3.9.3.1 Mitigation of Short-Term Impacts

Construction activities will be appropriately scheduled to avoid unnecessary impacts on traffic using streets within and bordering the project area. Within the affected roadways, the contractors will be required to provide, install, and maintain all necessary signs and other protective facilities, which shall conform with rules adopted by the City and County of Honolulu Department of Transportation Services (DTS). Work on any of the streets may also be performed during non-business hours (i.e., in the evenings and on Saturdays), where permitted by DTS.

During working hours, to the extent possible, the contractors are required to provide one lane in each direction for through traffic. During non-working hours, all trenches are required to be covered with a safe, non-skid bridging material and to the extent possible, all lanes are to remain open to traffic. Where pedestrian walkways exist, they are required to be maintained in passable condition or other facilities for pedestrians are to be provided. Passage between pedestrian walkways at intersections must also be maintained.

These same practices will be followed irrespective of which couplet alignment is constructed. The proposed modification will not alter the short-term impacts or mitigation measures.



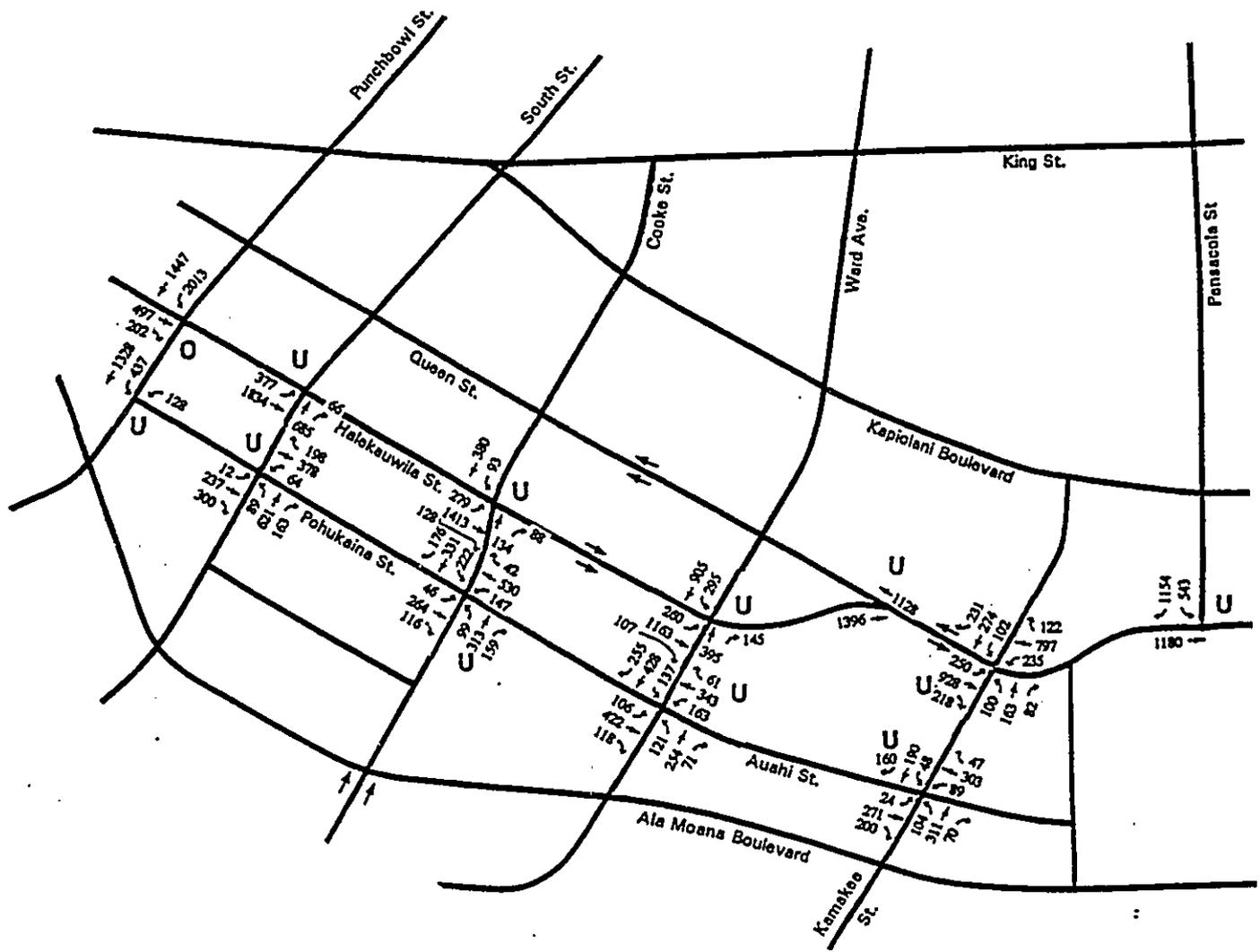
INTERSECTION CAPACITY CONDITION

- U - UNDER CAPACITY (1200 VPH)
- N - NEAR CAPACITY (1201 to 1400 VPH)
- O - OVER CAPACITY (>1400 VPH)

**Planned Couplet - 2010 Projected AM Peak Hour Volumes
 QUEEN STREET - HALEKAUWILA STREET COUPLET EA**

Source: Austin, Tsutsumi & Associates, Inc.
 NO SCALE

Figure 9



LEGEND

INTERSECTION CAPACITY CONDITION

- U Under Capacity (< 1200 VPH)
- N Near Capacity (1201 to 1400 VPH)
- O Over Capacity (> 1400 VPH)

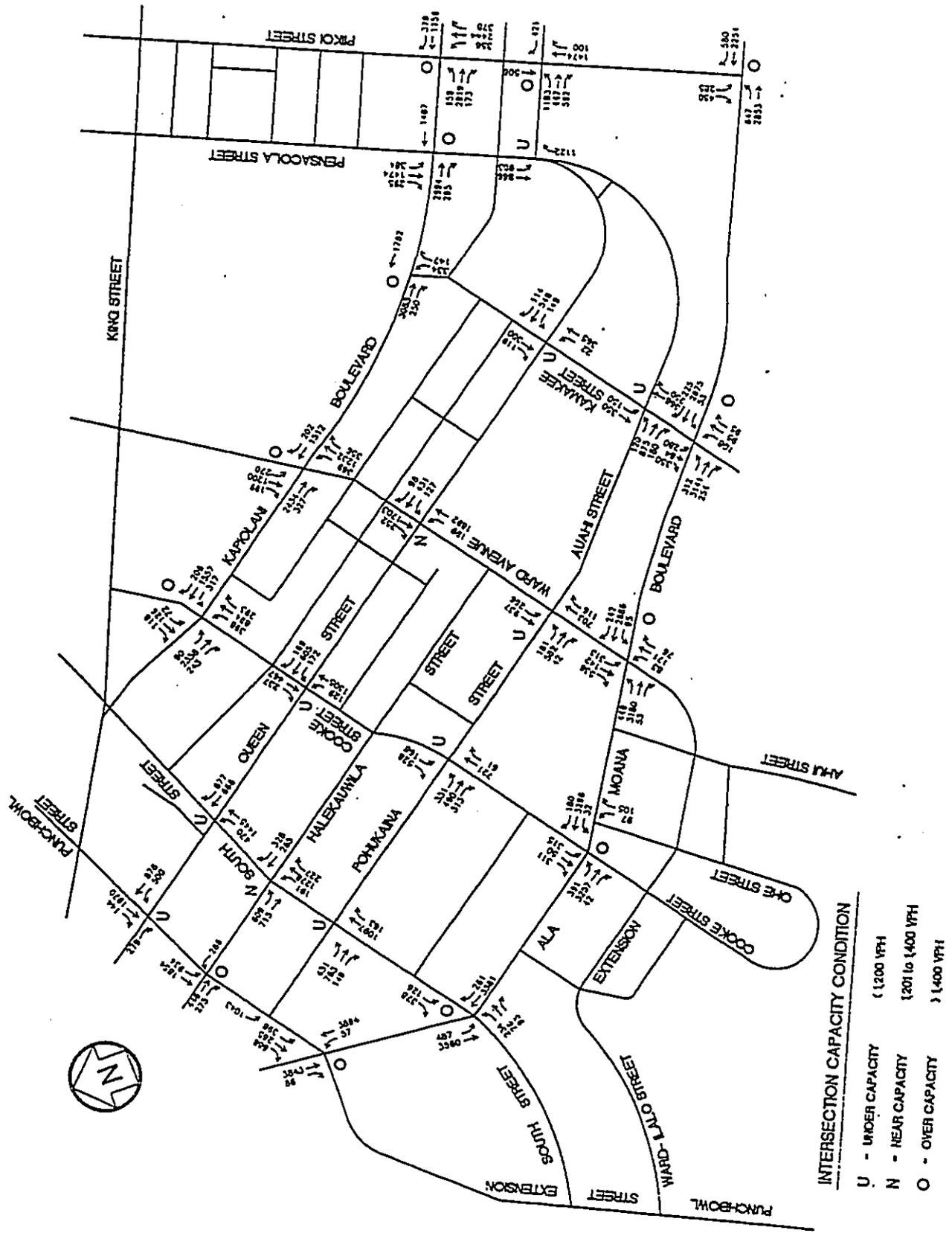
Proposed Couplet - 2010 Projected AM Peak Hour Volumes
QUEEN STREET - HALEKAUWILA STREET COUPLET EA

Source: TDA Inc.

NO SCALE



Figure 10

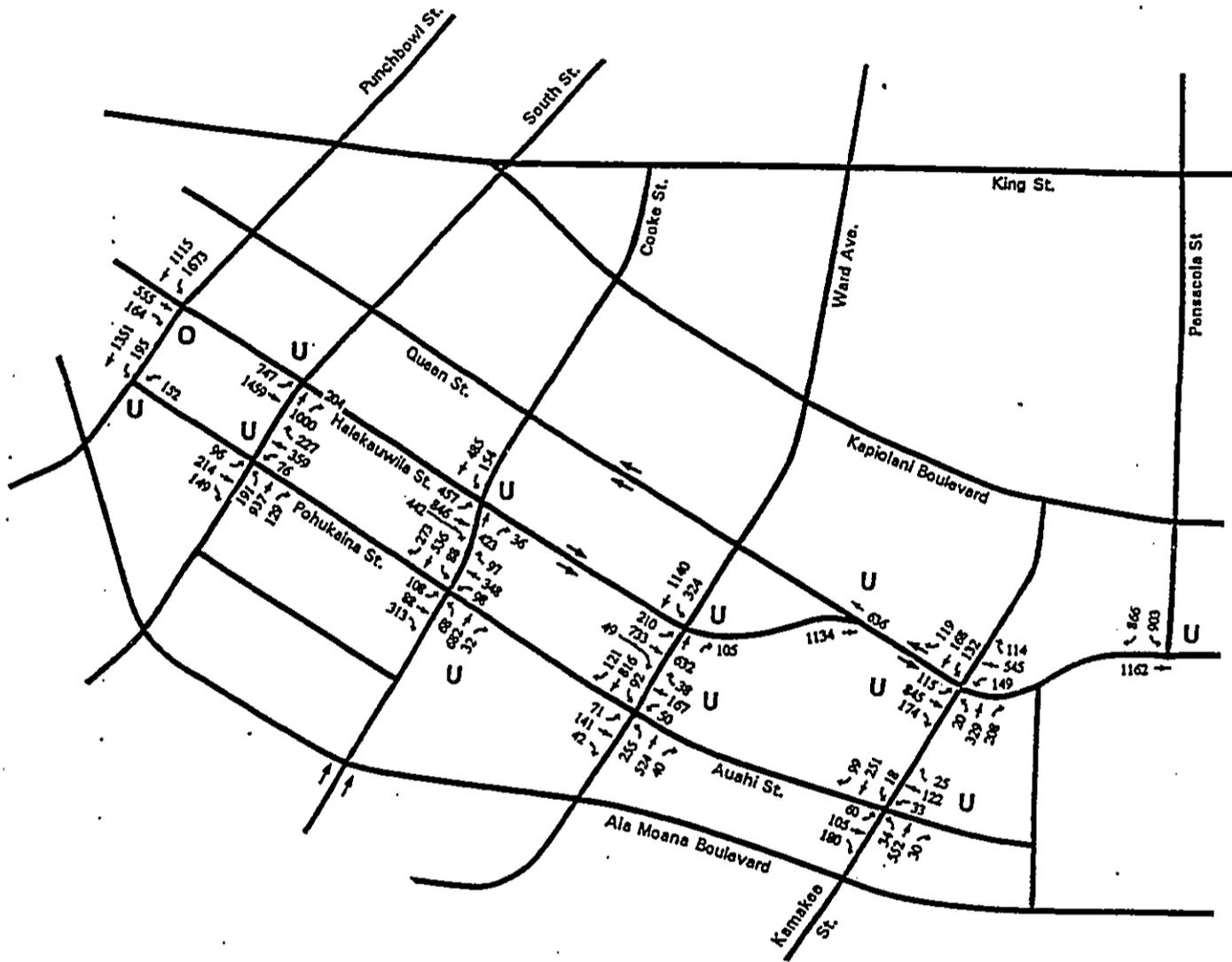


Planned Couplet - 2010 Projected PM Peak Hour Volumes
QUEEN STREET - HALEKAUWILA STREET COUPLET EA

Source: Ausin, Tsutsumi & Associates, Inc.

NO SCALE

Figure 11



LEGEND

INTERSECTION CAPACITY CONDITION

- U Under Capacity (< 1200 VPH)
- N Near Capacity (1201 to 1400 VPH)
- O Over Capacity (> 1400 VPH)

Proposed Couplet - 2010 Projected PM Peak Hour Volumes
 QUEEN STREET - HALEKAUWILA STREET COUPLET EA

Source: TDA Inc.

NO SCALE



Figure 12

3.9.3.2 Mitigation of Long-Term Impacts

The 1991 ATA report stated that by the year 2010, a couplet rather than the existing two way streets would better serve the anticipated traffic volumes. A couplet would be a measure that will mitigate future traffic volumes and congestion.

The TDA study shows that changing the Diamond Head bound couplet leg to Halekauwila Street would cause only minor internal traffic changes, and that no material differences in traffic volumes or intersection capacities are expected. Therefore, no mitigation measures are necessary.

Since no changes in external traffic impacts are expected to result from the proposed action, no mitigative measures beyond those which are already planned are needed.

3.10 PLANNED BIKEWAY ROUTES

3.10.1 Existing Conditions

Currently there are no exclusive bicycle lanes established in Kakaako, however, the Mauka Area Plan includes a Bikeway Plan which calls for the establishment of a network of bikeways to serve the Mauka Area. Included in this plan are provisions for the establishment of bicycle lanes on couplet streets.

3.10.2 Anticipated Impacts and Mitigative Measures

The proposal to move the Diamond Head bound couplet street from Pohukaina/Auahi Street to Halekauwila Street would normally involve the relocation of the bicycle lane as well. However, for practical reasons, it is proposed that the bikeway route between Punchbowl Street and Ward Avenue remain along Pohukaina Street, rather than be moved to the proposed Halekauwila Street couplet leg. This is because Pohukaina Street has already been widened between Punchbowl Street and Cooke Street to a width which will accommodate a bicycle lane as well as the necessary vehicular traffic lanes. Halekauwila Street improvements between Punchbowl Street and Cooke Street have also been completed, but without sufficient width to accommodate the bicycle lane.

Rather than adversely affecting businesses along Halekauwila Street by having to further widen the street, and rather than expend more money for road improvements in this area, it is proposed that the bicycle lane remain on Pohukaina Street. Since the proposed extension of Halekauwila Street Diamond Head of Ward Avenue can be built to accommodate a bicycle lane, it is proposed that this new section of the Halekauwila Street couplet leg be designated as a bikeway route instead of Auahi Street (Figure 13). Similarly, the 100-foot wide, two-way section of Queen Street between Cummins Street and Pensacola Street is proposed to include the couplet's Diamond Head bound bicycle lane, as well as the Ewa bound bicycle lane.

Ward Avenue has been designated as a bikeway route street in the KCDD Mauka Area Plan. The Ward Avenue mauka bound bicycle lane would be used as a connection

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between the bicycle lane on Pohukaina Street and the proposed Halekauwila Street extension bicycle lane.

3.11 NOISE

3.11.1 Existing Conditions

In the 1983 Final EIS for the Kakaako Community Development District, vehicular traffic was identified as the dominant source of noise in Kakaako. Noise levels were monitored at six different sections of the Mauka Area, one of which was Halekauwila and South Street. The 1982 noise levels at this location were measured at 61.4 decibels, which is below the maximum acceptable level of 65 decibels.

3.11.2 Anticipated Impacts

Development of the proposed couplet in the area of Queen Street and Pensacola Street will involve construction activities, such as demolition, excavating, and paving. The various phases of construction may generate significant amounts of noise, and the actual amounts are dependent upon the methods employed during each phase. Earth moving equipment, such as bulldozers and diesel trucks will probably be the loudest equipment used during construction, generating noise levels as high as 95 dB. However, such exposures are only a short-term condition, occurring during normal working hours. There are no hospitals or other similar noise sensitive facilities nearby that would be affected by construction noise from the project area.

The 1983 Final EIS for the Kakaako Community Development District assessed zones of future noise levels. Both Halekauwila Street and Queen Street between Punchbowl Street and Ward Avenue were considered to be below the 65 Ldn threshold. The same is true for Pohukaina Street, between Punchbowl and Kamani Streets and Auahi Street Diamond Head of Ward Avenue. All of the areas of Kakaako affected by the proposed action are considered to be in the "low risk zone" of exceeding the 65 Ldn threshold.

3.11.3 Mitigative Measures

Construction-period noise impacts will be mitigated through compliance with the provisions of Title 11, Administrative Rules, Chapter 43, Community Noise Control for Oahu, of the State Department of Health. All construction equipment and on-site vehicles or devices requiring an exhaust of gas or air will be equipped with mufflers. Traffic noise from heavy vehicles traveling to and from the construction site must be minimized near existing residential areas and schools, and must comply with the provisions of Title 11, Administrative Rules, Chapter 42, Vehicular Noise Control for Oahu.

As previously discussed in Section 3.4 - Roadways and Traffic, projected traffic volumes on Halekauwila Street will be similar to future traffic volumes on Pohukaina/Auahi Street. It is expected that moving the couplet leg from Pohukaina/Auahi Street to Halekauwila Street will not materially affect overall traffic volumes or noise levels on

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either street. Also, regardless of whether or not Halekauwila Street is used as the Diamond Head bound leg of the couplet, traffic volumes will increase over time.

The noise impacts produced by vehicles using the couplet streets will be mitigated by several factors:

1. Most of the buildings along Halekauwila Street are set back from the curb.
2. Most of the buildings along Halekauwila Street are enclosed and/or are air conditioned.
3. Most of the existing businesses are light industrial or commercial and are not noise sensitive activities.

3.12 AIR QUALITY

3.12.1 Existing Conditions

The impacts of vehicular emissions on air quality were studied in the 1983 Final EIS for the Kakaako Community Development District. It indicated that air quality in Kakaako is mostly affected by air pollutants exhausted from motor vehicles, with carbon monoxide being the most abundant of the air pollutants emitted. Data on the 1980 existing and year 2000 air quality conditions were included in the 1983 Final EIS.

The State Department of Health, Clean Air Branch compiles data on samples taken from ambient air quality monitoring stations throughout the State. This is published in a document called the *Hawaii Air Quality Data*, with the most recent publication covering the time period between January 1988 - December 1990. The monitoring station closest to the project area sampling carbon monoxide emissions is located at the Department of Health building (corner of Punchbowl Street and Beretania Street), which is outside of the boundaries of Kakaako.

For carbon monoxide, both State and Federal regulations have established maximum allowable concentrations for the average time periods of one hour and the 8 hours. State of Hawaii Ambient Air Quality Standards (AAQS) for carbon monoxide are considerably more stringent than the comparable Federal AAQS. The Federal 8-hour standard is 10 milligrams per cubic meter (mg/m^3) while the State standard is $5 \text{ mg}/\text{m}^3$. The Federal 1-hour standard is $40 \text{ mg}/\text{m}^3$ while the State standard is $10 \text{ mg}/\text{m}^3$.

According to *Hawaii Air Quality Data*, between January 1988 and December 1990, of the 1,013 samples taken, there was only one (1) incident where the State standard for carbon monoxide was exceeded and there were no Federal standard exceedances.

3.12.2 Anticipated Impacts

The proposed action itself (a change in the *designation* of a leg of the couplet) will not generate an increase in traffic. However, construction of the couplet and actual use of the couplet have implications for short-term as well as long-term impacts to air quality.

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The principal source of potential short-term air pollution will be fugitive dust emissions. Site preparation will create particulate emissions as will on-site road construction. Also, there is a potential for additional air pollution from construction equipment and vehicles, and from vehicular emissions due to traffic disruptions from construction equipment. On-site mobile and stationary construction equipment will also emit some air pollutants in the form of engine exhausts. The larger types of equipment are usually diesel-powered. Nitrogen oxide emissions from diesel engines can be relatively high compared to gasoline-powered equipment, but the standard for nitrogen dioxide is set on an annual basis and is not likely to be violated by short-term construction equipment emissions. Carbon monoxide emissions from diesel engines, on the other hand, are very low and should be relatively insignificant compared to normal vehicular emissions.

Long-term impacts to air quality resulting from traffic traveling along the Queen Street-Halekauwila Street Couplet will be similar to the impacts that would occur if the Queen Street-Pohukaina/Auahi Street Couplet was implemented.

3.12.3 Mitigative Measures

The impact of construction activities on air quality will be mitigated by conforming to strict dust control measures, particularly those specified in the State Department of Health's (DOH) Water Quality Standards, Chapter 37-A, Public Health Regulations, 1968; and the U.S. Soil Conservation Service's Erosion and Sediment Control Guide for Hawaii, 1968. Primary fugitive dust control measures include wetting down loose soil areas, good housekeeping on the job site and the prompt paving or landscaping of bare soil areas. In addition, State of Hawaii Air Pollution Control Regulations require that fugitive dust emissions be controlled to such an extent that no visible emissions of fugitive dust from construction activity should occur beyond the property line.

Increased vehicular emissions due to disruption of traffic by construction equipment and/or commuting construction workers will be alleviated by moving equipment and personnel to the site during off-peak traffic hours.

Increased traffic volumes will increase vehicular emissions affecting air quality. In regards to mitigating the increase in emissions the 1983 Final EIS stated, "When Kakaako is (sic) fully redeveloped, traffic circulation on most streets will be significantly improved. Improving the streets through Kakaako so that traffic may flow more smoothly, and thus have a lower emission rate, is the principal air quality improvement under the Kakaako Plan" (p. IV-5). "According to the State Department of Health, air pollution generated by traffic is not a significant problem or issue on Oahu" (p. IV-6).

3.13 SOCIO-ECONOMIC CHARACTERISTICS

3.13.1 Existing Conditions

Kakaako was originally developed as a residential area, but has grown to include commercial and light industrial activities. Halekauwila Street hosts a variety of uses--

the State Circuit and Family Court and State Employees Credit Union near Punchbowl Street, the open space of Mother Waldron Park near Coral Street, and housing facilities and shops and bars near Ward Avenue. Along Pohukaina Street there are mixed uses as well--Restaurant Row at Punchbowl Street, light manufacturing and storage towards Kamani Street. Auahi Street, Diamond Head of Ward Avenue is almost entirely in commercial use--Ward Warehouse and Ward Centre on the makai side, and the Ala Moana Farmers Market and a small shopping area on the mauka side. Also on the mauka side of Auahi Street is the KHON news center and the Garden Office Building that is used by professional businesses.

3.13.2 Anticipated Impacts and Mitigative Measures

Whereas Halekauwila Street is currently a two-way street, businesses are accessible by both Ewa-bound as well as Diamond Head-bound traffic. With a one-way street couplet, the access to businesses along Halekauwila Street will change. Vehicles desiring to access a business along Halekauwila Street will have to do so along a one-way street.

Only a few studies have been done regarding the impacts of changing streets from two-way to one-way on fronting businesses. The studies which have been done present no clear conclusion that the change from two-way streets to one-way streets have adversely affected adjacent businesses. A summary of TDA's research on this subject is provided in Appendix C. Given the absence of any definitive indication that existing businesses will be adversely affected, no mitigative measures are proposed.

Because the proposed action does not involve road widening beyond what is already planned, the square footage of lots and existing buildings will not be affected. No mitigative measures are proposed.

Under the proposed action, Halekauwila Street would be designated as a view corridor street. Although its designation as a view corridor street would not impact visual resources, it could affect the location and configuration of buildings constructed on individual properties along Halekauwila Street in the future. According to the Mauka Area Rules, required setbacks along view corridor streets are 75 feet for the portions of buildings that are over 45 feet in height. The current setback requirement along Halekauwila Street is 15 feet.

The opposite impact will occur on Pohukaina Street--i.e., required setbacks will be 15 feet regardless of building height. Given the counterbalancing or "no net change" effects of the proposed couplet modification, mitigative measures are not considered necessary.

3.14 VISUAL RESOURCES

3.14.1 Existing Conditions

The 1990 KCDD Mauka Area Plan designates "major" streets as view corridors with the intent to preserve the mauka-makai and Ewa-Diamond Head views along them.

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Currently, the planned couplet legs of Queen Street and Pohukaina/Auahi Street are designated as view corridor streets.

Queen Street, Halekauwila Street, Pohukaina Street and Auahi Street are at grade. Given that the roads are at grade and that Kakaako is a flat area, views from the streets are generally limited to views of the buildings and structures along each side. Distant partial views of the Koolaus are also occasionally available along mauka-makai streets.

3.14.2 Anticipated Impacts and Mitigative Measures

The redesigned couplet route will primarily use existing streets. New portions of Queen Street and Halekauwila Street will also be at grade. No significant or adverse changes to current visual impacts are anticipated, and no mitigative measures are required.

3.15 UTILITIES

3.15.1 Existing Conditions

The 1990 KCDD Mauka Area Plan (Plan) includes a Utilities Plan and it states, "Public utility systems provide the basic services needed for the growth and functioning of a community. Public utility systems include water, sewerage, drainage, gas, electric, telephone and related systems and their attendant facilities." The Plan proposes to upgrade all existing utility systems to meet anticipated demands.

3.15.1.1 Water

According to the 1990 KCDD Mauka Area Plan, the Mauka Area's water system is part of the Honolulu Board of Water Supply's (BWS) Honolulu Area Low Service System which runs from Red Hill to Makapuu Point. Many existing water lines in the Mauka Area were installed before 1930. Upgrading and improvements to the water lines will be made under capital improvement programs or as part of improvement districts.

3.15.1.2 Wastewater

As described in the 1990 KCDD Mauka Area Plan, the Mauka Area's sewerage system is part of a regional system extending from Kuliouou to Nuuanu. Sewage from this system flows to the Ala Moana Sewage Pumping Station and then to the Sand Island facility for treatment and disposal.

The 1990 KCDD Mauka Area Plan states that most of the major trunk lines in the Mauka Area are relatively new. However, many of the other existing sewer lines are more than 50 years old. Most existing "local" branch lines are 6 inches in diameter and do not meet the City and County's current minimum standard of 8 inches. As with water lines, existing substandard sewer lines will be upgraded in connection with ongoing capital improvement and improvement district programs.

3.15.1.3 Electrical Power

The electrical system needs of the Mauka Area are serviced by the Hawaii Electric Company's (HECO) Honolulu Power Plant located at Nimitz Highway and Bishop Street. The Mauka Area contains three HECO substations.

3.15.2 Anticipated Impacts and Mitigative Measures

The change in designation of the Diamond Head bound couplet street from Pohukaina/Auahi Street to Halekauwila Street will not impact demands for water, wastewater, or electrical services. The proposed change in the couplet also will not substantially impact the cost of providing water, wastewater and electric power services to new developments.

Neither the construction of Halekauwila Street extension nor the realignment of the Diamond Head end of Queen Street should result in the need for significant extensions to planned service lines. The inclusion of utility lines on Halekauwila Street extension may not even be necessary since service can be provided from Ward Avenue and Queen Street, as currently planned. Similarly, easements for utility purposes could be retained across the portion of Waimanu Street which will be abandoned as a result of the realignment of Waimanu Street's intersection with Queen Street, thereby avoiding the need for relocating the existing lines in this area.

In any event, utility costs have been taken into consideration in the estimation of construction costs for the currently planned and proposed couplet alignments. The costs for utility improvements were found to be comparable for both alternatives.

In summary, there will be no anticipated utility impacts which would warrant mitigation measures.

4.0 ALTERNATIVES

Chapter 200 of Title 11, Environmental Impact Statement Rules (11-200-10) requires the "identification and summary of ... alternatives considered."

There are three (3) alternatives reviewed in this EA:

- a Queen Street - Pohukaina/Auahi Street couplet (as currently shown in the KCDD Mauka Area Plan),
- no couplet (i.e. retain the existing two-way traffic pattern), and
- a Halekauwila Street - Pohukaina/Auahi Street couplet.

The three alternatives are discussed below.

4.1 "NO ACTION" (CURRENTLY PLANNED QUEEN STREET - POHUKAINA/AUAHI STREET COUPLET) ALTERNATIVE

An alternative which could feasibly attain the transportation objectives of HCDA is the currently planned Queen Street - Pohukaina/Auahi Street couplet. This is the couplet alignment which was adopted as part of the KCDD Mauka Area Plan in 1982, and is shown in Figure 1. In this layout, Queen Street would be extended to Pensacola Street. Pohukaina Street would be extended to Ward Avenue, and Auahi Street would be realigned to the Diamond Head side of Ward Avenue to connect with Pohukaina Street. The new Pohukaina-Auahi Street would join Queen Street near the intersection of Pensacola Street and Waimanu Street.

Designating Pohukaina/Auahi Street as the Diamond Head-bound leg of the couplet was preferred to designating Halekauwila Street when the Mauka Area Plan was adopted in 1982 because it was considered to be the least disruptive to businesses along the route. In the late 1970s and early 1980s, Halekauwila Street was not preferred as a couplet street mainly due to the fact that the Gem Store on Ward Avenue would have been displaced if Halekauwila Street was extended through it towards Queen Street. However, the Gem Store no longer exists. Those tenants which are now occupying the site of the former Gem Store are on short-term leases. The spaces have been leased to the tenants with the understanding that they would be displaced when the area is redeveloped.

Pohukaina/Auahi Street is considered less desirable than Halekauwila Street for the Diamond Head-bound leg for the following reasons:

- *Halekauwila Street is more centrally located in Kakaako and closer to Queen Street.*

A major purpose of the couplet is to provide an alternative route to Ala Moana Boulevard and Kapiolani Boulevard for traffic originating from and/or destined to locations outside of Kakaako. The couplet can most effectively do this if it is conveniently located to activities that are most distant from the two boulevards--i.e., those in the central area. Halekauwila Street is more convenient to the central area than Pohukaina/Auahi Street.

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- *The proposed alignment will reduce conflicts between pedestrian and vehicular traffic and will better serve the planned redevelopment of the 60+ acre Victoria Ward, Limited (VWL) property.*

VWL's plans call for expanding on the strong commercial base already established along Auahi Street by Ward Warehouse, Ala Moana Farmers Market and Ward Centre. Auahi Street is to become the spine of a highly pedestrian oriented commercial-entertainment complex, a place where people will want to come to shop, dine, go to the movies, participate in cultural events, etc.

Auahi Street will be the focus of intensive pedestrian activity as people use its sidewalks, building arcades and crosswalks to walk between the shops and other attractions bordering it. A mix of pedestrian and vehicular traffic like on Smith and Maunakea Streets in Chinatown works reasonably well since the road is not extremely wide and traffic is not trying to move quickly through the area. On the other hand, a wide one-way through street, (like Beretania Street on the mauka edge of Chinatown) would present an impediment to pedestrian movements between businesses on both sides. The currently planned Auahi Street segment of the couplet would present such a barrier and hazard. By moving the segment mauka to the edge of the Ward property, the conflicts would be significantly reduced and vehicular traffic would be able to flow more smoothly.

- *The proposed realignment of the Diamond Head end of the couplet is less disruptive to existing businesses.*

Realignment of the couplet as proposed would allow the Diamond Head end to be built without the demolition of the two-story 35,000 square foot Garden Office Building, which is required to construct the Pohukaina/Auahi Street alignment. Instead, the proposed alignment would run over land currently used for parking and outdoor storage. The proposed action could extend the useful life of an attractive building which is an asset to the area and provides reasonable lease rents to its tenants.

4.2 NO COUPLET ALTERNATIVE

One possible scenario would be to not implement a one-way couplet. The existing two-way traffic pattern on all Ewa-Diamond Head streets would be retained. This alternative was discussed in the 1991 ATA Kakaako Traffic Study.

The ATA study projected traffic volumes to the year 2010 and found that major intersections along Queen Street and Pohukaina/Auahi Street would be over capacity if they were kept as two-way streets. Comparatively, capacity projections were made for a one-way street couplet and the result was that the major intersections would operate near or below capacity. The ATA report recommends that a one-way couplet be implemented.

Basically, given the anticipated increase in traffic volumes by the year 2010, the "No Action" (no couplet) Alternative would not be preferable. A couplet will better serve the anticipated traffic volumes.

4.3 HALEKAUWILA STREET - POHUKAINA/AUAHI STREET COUPLET

The 1983 Final EIS for the Mauka Area Plan studied two alternatives to the adopted Queen Street - Pohukaina/Auahi Street couplet described above. Alternative 1 in the Final EIS is the alternative that is being proposed in this EA. At the time the Final EIS was prepared, use of Halekauwila Street was discouraged by the existence of the Gem Store, which would have been directly affected if Halekauwila was extended. However, as discussed above, that store has now closed and extension of Halekauwila through that site is no longer a problem.

The other Alternative studied in the Final EIS was a Halekauwila Street - Pohukaina/Auahi Street couplet. This Alternative would utilize Halekauwila Street as the Ewa bound leg of the couplet instead of Queen Street, while Pohukaina/Auahi Street would be the Diamond Head bound leg. This Alternative was not chosen because of the impacts to businesses along the extension of Halekauwila Street Diamond Head of Ward Avenue. Although the displacement of major long-term businesses is no longer a concern, this couplet is still not considered desirable for the same reasons discussed above with respect to the Queen Street - Pohukaina/Auahi Street couplet.

In summary, the proposed action is preferred because: 1) Halekauwila Street is more centrally located in Kakaako; 2) it will reduce conflicts between pedestrian and vehicular traffic; and 3) it will have the least disruption to existing and planned businesses and activities.

5.0 RELATIONSHIP OF THE PROPOSED ACTION TO EXISTING POLICIES AND PLANS

This section includes a discussion of how the proposed action relates to HCDA's Kakaako Community Development District (KCDD) Mauka Area Plan. The objectives and policies of the Hawaii State Plan and the goals, policies and standards of the State Functional Plans are not considered directly applicable to the proposed action nor to the very localized potential impacts of the proposed action.

5.1 KAKAAKO COMMUNITY DEVELOPMENT DISTRICT (KCDD) MAUKA AREA PLAN

The KCDD Mauka Area Plan was adopted in 1982. It was based on the State law that created HCDA and the KCDD (HRS, Chapter 206E). The KCDD Mauka Area Plan executes the Hawaii State Legislature's vision of the future redevelopment of Kakaako by providing the direction necessary to create a new mixed-use community. It contains Roadway, Bikeway, and View Corridor Streets Plans that will be affected by this proposed amendment.

Roadway Plan

The objective of safe and efficient movement of people and goods within and around the Mauka Area is stated in the Mauka Area Plan. A one-way couplet is one means of implementing the objective.

The proposed action does not seek to change the intent or goals of the Roadway Plan, but it does seek to re-designate one leg of the planned couplet. Whereas the Roadway Plan specifies Queen Street and Pohukaina/Auahi Street to be the couplet streets, the proposed action relocates the Pohukaina/Auahi Street leg of the couplet one block mauka to Halekauwila Street.

View Corridor Plan

Major traffic circulation streets are also designated as view corridor streets in order to retain mauka-makai and Ewa-Diamond Head views along their alignments. This designation also carries out the urban design objective of providing light and air at street level along major streets by requiring upper-level setbacks of buildings away from the street.

The KCDD Mauka Area Plan currently designates the couplet streets as view corridor streets. Under the proposed action, this would continue to be the case, with the view corridor designation moving from Pohukaina/Auahi Street to Halekauwila Street along with the couplet designation. Pohukaina Street and Auahi Street Diamond Head of Ward Avenue would no longer be corridor streets.

Bikeway Plan

The Bikeway Plan includes a bikeway system that incorporates streets, bicycle lanes, and bicycle paths that are intended to encourage the use of bicycles as a form of transportation. Currently, the Bikeway Plan designates both the Queen Street and Pohukaina/Auahi Street couplet legs as bikeway routes.

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Diamond Head of Ward Avenue, the proposed action would shift the bikeway route as well as the couplet street from Auahi Street to the proposed Halekauwila Street extension and widened Queen Street. However, Ewa of Ward Avenue, it is proposed that the bikeway route remain on Pohukaina Street, as currently planned. The mauka-bound bikeway route already planned for Ward Avenue would be used to connect the Pohukaina Street and Halekauwila Street extension bikeway routes.

6.0 DETERMINATION, FINDINGS, AND REASONS SUPPORTING DETERMINATION

Based upon the findings presented in this Environmental Assessment and supporting technical traffic study, the potential impacts of the change in designation of one leg of the couplet in Kakaako from Pohukaina/Auahi Street to Halekauwila Street, and of the future use of the couplet street after construction, have been sufficiently examined and discussed. After reviewing the significance criteria outlined in Section 11-200-12, EIS Rules, Contents of Environmental Assessment, it has been determined that the action is not expected to result in significant adverse effects on the natural or human environment. This determination was based on the assessment that the proposed action does not:

- o Involve an irrevocable loss or destruction of any natural or cultural resource;
- o Curtail the range of beneficial uses of the environment;
- o Conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS;
- o Substantially or adversely affect the economic or social welfare of the community or State;
- o Substantially or adversely affect public health;
- o Involve substantial or adverse secondary impacts, such as population changes or effects on public facilities;
- o Involve a substantial degradation of environmental quality;
- o Cumulatively have a considerable effect upon the environment or involve a commitment for larger actions;
- o Affect a rare, threatened or endangered species, or its habitat;
- o Detrimentally affect air or water quality or ambient noise levels; or
- o Affect an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.

Further consideration of the project's impacts through the preparation of a Environmental Impact Statement is determined not to be warranted.

As stated above, there are no significant environmental impacts expected to result from the proposed action. Halekauwila Street is considered more desirable and feasible than the planned Pohukaina/Auahi Street alignment for the following reasons:

- It will provide adjacent streets for the couplet and will present a more typical situation that drivers are accustomed to;
- Moving the Diamond Head bound portion of the couplet to Halekauwila will provide more stacking space for makai-bound traffic approaching Ala Moana Boulevard than would use of Pohukaina/Auahi;
- It will allow maintenance of the existing connection to Ala Moana Boulevard on the existing Queen Street Extension alignment adjacent to the IBM building;
- It will be less disruptive to existing businesses located at the Diamond Head end of the couplet; and

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- It will allow the development of Auahi Street Diamond Head of Ward into a pedestrian-oriented street with adjacent low-scale retail. This would not be possible with the Queen-Pohukaina/Auahi configuration.

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APPENDICES

- A **LEVEL-OF-SERVICE DEFINITIONS, by Austin, Tsutsumi & Associates**
- B **TRAFFIC ASSESSMENT OF PROPOSED ONE-WAY COUPLET, by TDA Inc.**
- C **BUSINESS IMPACTS OF PROPOSED ONE-WAY COUPLET, by TDA, Inc.**
- D **PRE-ASSESSMENT CONSULTATION COMMENT LETTERS AND RESPONSES**
- E **DRAFT EA COMMENT LETTER AND RESPONSE**

APPENDIX A
LEVEL-OF-SERVICE DEFINITIONS
Source: Austin Tsutsumi & Associates

LEVEL OF SERVICE DEFINITIONS

1. LEVEL-OF-SERVICE CRITERIA FOR MULTILANE HIGHWAY

Level of Service (LOS) criteria for multilane highways are defined in terms of density. Density is a measure which quantifies the proximity to other vehicles in the traffic stream. It expresses the degree of maneuverability within the traffic stream.

Level of service criteria depend on the design speed of the highway element being studied. A "highway element" can be an isolated geometric element, such as a curve or grade having a reduced design speed, or a series of such geometric elements that dominate the operation of a longer segment of highway.

Level of Service A describes completely free-flow conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway and driver preferences. Vehicles are spaced at an average of 440 feet, or 22 car-lengths, at a maximum density of 12 pc/mi/ln. The ability to maneuver within the traffic stream is high. Minor disruptions to flow are easily absorbed at this level without causing significant delays or queuing.

Level of Service B is also indicative of free flow, although the presence of other vehicles begins to be noticeable. Average travel speeds are somewhat diminished from LOS A. Vehicles are spaced at an average of approximately 264 feet, or 13 car-lengths, at a maximum density of 20 pc/mi/ln. Minor disruptions are still easily absorbed at this level, although local deterioration in LOS will be more obvious.

Level of Service C represents a range in which the influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream, and to select an operating speed, is now clearly affected by the presence of other vehicles. The average spacing of vehicles is reduced to approximately 175 feet, or 9 car-lengths, at a maximum density of 30 pc/mi/ln. Minor disruptions may be expected to cause serious local deterioration in service, and queues may form behind any significant traffic disruption. Severe or long-term disruptions may cause the facility to operate at LOS F.

Level of Service D borders on unstable flow. Speeds and ability to maneuver are severely restricted because of traffic congestion. The average spacing of vehicles is 125 feet, or 6 car-lengths, at a maximum density of 42 pc/mi/ln. Only the most



minor of disruptions can be absorbed without the formation of extensive queues and the deterioration of service to LOS F.

Level of Service E represents operations at or near capacity, and is quite unstable. At capacity, vehicles are spaced at only 80 feet, or 4 car-lengths, at a maximum density of 67 pc/mi/ln. This is the minimum spacing at which uniform flow can be maintained, and effectively defines a traffic stream with no usable gaps. Thus, disruptions cannot be damped or dissipated, and any disruption, no matter how minor, will cause queues to form and service to deteriorate to LOS F.

Level of Service F represents forced or breakdown flow. It occurs at a point where vehicles arrive either at a rate greater than that at which they are discharged, or at a point on a planned facility where forecasted demand exceeds the computed capacity. While operations at such points (and on immediately downstream sections) will appear to be at capacity or better, queues will form behind these breakdowns. Operations within queues are highly unstable, with vehicles experiencing short spurts of movement followed by stoppages. Densities are higher than 67 pc/mi/ln. Note that the term "LOS F" may be used to characterize both the point of the breakdown and the operating conditions within the queue. It must be remembered, however, that it is the point of breakdown that causes the queue to form, and that operations within the queue are generally not related to defects along the highway segment over which the queue extends.

2. LEVELS OF SERVICE CRITERIA FOR TWO-LANE HIGHWAYS

The highest quality of traffic service occurs when motorists are able to drive at their desired speed, representative of Level of Service A. Almost no platoons of three or more vehicles are observed. Drivers would be delayed no more than 30 percent of the time by slow-moving vehicles. A maximum flow rate of 420 pcph, total in both directions, may be achieved under ideal conditions.

Level of Service B characterizes the region of traffic flow where drivers are delayed up to 45 percent of the time on the average. Service flow rates of 750 pcph, total in both directions, can be achieved under ideal conditions. Above this flow rate, the number of platoons forming in the traffic stream begins to increase dramatically.

Further increases in flow characterize Level of Service C, resulting in noticeable increases in platoon formation, platoon size, and frequency of passing impediment. At high volume levels, chaining of platoons and significant reductions in passing capacity begin to occur. While traffic flow is stable, it is becoming susceptible to congestion due to turning traffic and slow-moving vehicles. Percent time delays

are up to 60 percent. A service flow rate of up to 1,200 pcph, total in both directions, can be accommodated under ideal conditions.

Unstable traffic flow is approached as traffic flows enter Level of Service D. The two opposing traffic streams essentially begin to operate separately at higher volume levels. Mean platoon sizes of 5 to 10 vehicles are common, although speeds of 50 mph can still be maintained under ideal conditions. The fraction of no passing zones along the roadway section usually has little influence on passing. Turning vehicles and/or roadside distractions cause major shockwaves in the traffic stream. The percentage of time motorists are delayed approaches 75 percent. Maximum service flow rates of 1,800 pcph, total in both directions, can be maintained under ideal conditions. This is the highest flow rate that can be maintained for any length of time over an extended section of level terrain without a high probability of breakdown.

Level of Service E is defined as traffic flow conditions on two-lane highways having a percent time delay of greater than 75 percent. Passing is virtually impossible under Level of Service E conditions, and platooning becomes intense when slower vehicles or other interruptions are encountered.

The highest volume attainable under Level of Service E defines the capacity of the highway. Under ideal conditions, capacity is 2,800 pcph, total in both directions. Operating conditions at capacity are unstable and difficult to predict. Traffic operations are seldom observed near capacity on rural highways, primarily because of a lack of demand.

As with other highway types, Level of Service F represents heavily congested flow with traffic demand exceeding capacity. Volumes are lower than capacity. Level of Service E is seldom attained over extended sections on level terrain as more than a transient condition; most often, perturbations in traffic flow as Level E is approached cause a rapid transition to Level of Service F.

3. LEVEL OF SERVICE OF SIGNALIZED INTERSECTIONS

Level of service for signalized intersections is defined in terms of delay. Delay is a measure of driver discomfort, frustration, fuel consumption and lost travel time. Specifically, level-of-service criteria are stated in terms of the average stopped delay per vehicle for a 15-minute analysis period. The criteria are given in Table A-1.

Table A-1. Level-of Service Criteria for
Signalized Intersections

Level of Service	Stopped Delay for Vehicle (SEC)
A	≤ 5.0
B	5.1 to 15.0
C	15.1 to 25.0
D	25.1 to 40.0
E	40.1 to 60.0
F	> 60.0

Delay is a complex measure, and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group or approach in question.

Level-of-service A describes operations with very low delay, i.e., less than 5.0 seconds per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

Level-of-service B describes operations with delay in the range of 5.1 to 15.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.

Level-of-service C describes operations with delay in the range of 15.1 to 25.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level-of-service D describes operations with delay in the range of 25.1 to 40.0 seconds per vehicle. At level 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.

Level-of-service E describes operations with delay in the range of 40.1 to 60.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high v/c ratios. Individual cycle failures are frequent occurrences.

Level-of-service F describes operations with delay in excess of 60.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

4. **LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS**

Level of Service definitions for unsignalized intersections is determined by the reserve or unused capacity of a lane. The potential capacity is determined by the size and frequency in gaps in conflicting traffic that can accommodate the side street demand. The reserve capacity is equal to the potential capacity minus the traffic demand. A lower Level of Service translates into longer side street delay. The Levels of Service criteria are shown in the following table:

Table A-2. Level-of-Service Criteria for Unsignalized Intersections

Reserve Capacity (PCPH)	Level of Service	Expected Delay to Minor Street Traffic
≥ 400	A	Little or no delay
300-399	B	Short traffic delays
200-299	C	Average traffic delays
100-199	D	Long traffic delays
0- 99	E	Very long traffic delays
< 0	F	Extreme traffic delays

• QUEEN ST. - HALEKAUWILA ST. COUPLET ENVIRONMENTAL ASSESSMENT •

APPENDIX B
TRAFFIC ASSESSMENT OF PROPOSED ONE-WAY COUPLET
Prepared By: TDA Inc.

VICTORIA WARD MASTER PLAN

Traffic Assessment of
Proposed One-Way Couplet

Prepared for:

Victoria Ward Ltd.

Prepared by:

TDA Inc.

November 18, 1994
#1758

INTRODUCTION

The Hawaii Community Development Authority (HCDA) for Kakaako plan describes a Queen-Pohukaina/Auahi one-way couplet which passes through the Victoria Ward property. Victoria Ward Ltd. has a master plan for this property which would propose a different routing. This report compares the two proposed one-way couplet configurations.

In preparing this report, we have relied on two HCDA documents:

- Final Environmental Impact Statement (FEIS) for the Kakaako Community Development District Plan, June 1983 (Reference 1).
- Kakaako Traffic Study, HCDA, by Austin-Tsutsumi & Associates, July 1991 (Reference 2).

Because of work performed for these two previous documents, this traffic assessment was limited to describing differences which would result from the proposed Victoria Ward Master Plan. This traffic assessment was performed within the framework of the analyses presented in the two HCDA documents. This assessment was not based on updated current traffic volumes nor upon new projections of travel demand.

INTERNAL TRAFFIC CHANGES

The proposed Queen-Pohukaina/Auahi couplet would extend from Richards on the Ewa edge of Kakaako, to an intersection with Pensacola on the Diamond Head edge. The one-way couplet would merge into a two-way street as Halekauwila penetrates the site previously occupied by the GEM store, and would reach a terminus as a two-way street at Pensacola and Waimanu. (The planned and proposed couplets are shown in Figures 1 and 2 of the Environmental Assessment).

This proposed configuration would maintain the same lane arrangements as in the planned couplet: three lanes Diamond Head-bound on Halekauwila; and three lanes Ewa-bound on Queen. Pohukaina would be a two-way street with one lane in each direction and a center turn lane. Its configuration would be the same as that envisioned in the Kakaako Master Plan for Halekauwila. A design speed of not less than 30 mph would be maintained for this proposed couplet. This would meet the requirements of the City and County of Honolulu for streets with a right-of-way of 56 to 70 feet.

This option of using Halekauwila instead of Pohukaina/Auahi was considered in the Kakaako FEIS in both Alternative 1 and Alternative 2 (see pages II-65, 66 and II-75, 76 of Ref. 1). At the time the FEIS was prepared, use of Halekauwila was discouraged by the presence of the then active GEM store on the Diamond Head side of Ward Avenue. However, that store is now closed and extension of Halekauwila through the site is not a long-range problem. Also, the 1991 Kakaako Traffic Study considered the option of using Halekauwila instead of Pohukaina/Auahi and concluded: "The Queen Street/Halekauwila Street one-way System presents a more desirable circulation scheme than using Pohukaina-Auahi Street as the east bound component of the one-way couplet" (see page V-7, Ref. 2).

Analysis of Traffic Impacts

With the currently planned configuration, traffic would reach the Pohukaina portion of the couplet from Punchbowl makai-bound. Because Halekauwila intersects with Nimitz at Richards Street, whereas Pohukaina does not intersect with Nimitz, it might appear that one impact of changing the couplet would be to encourage additional through traffic from Nimitz onto the Halekauwila portion of the couplet. However, the Diamond Head-bound left-turn from Nimitz onto Halekauwila is already at or near capacity¹. There are no identified plans to improve the capacity of this left-turn movement and to do so would likely interfere with Ewa-bound traffic on Nimitz. Therefore, we conclude that change from Pohukaina to Halekauwila (as the Diamond Head-bound road) would not change through traffic volumes.

Projected traffic volumes were prepared for the year 2010 in Figures IV-1 and IV-2 of Reference 2. The numbers shown on these two exhibits were used to prepare estimates of a.m. and p.m. through traffic and internal (to Kakaako) traffic on a Queen-Pohukaina/Auahi couplet. Using this information, traffic was reassigned to a Queen/Halekauwila couplet. After reassignment, intersection capacity conditions were evaluated for affected intersections using the same procedures as in Reference 2². The results of these capacity calculations are shown on Figures 1 and 2 for the year 2010. The results are nearly identical to those shown in Reference 2 for the Queen-Pohukaina/Auahi couplet. All of the affected intersections are operating under capacity or near capacity. The exception is the intersection of Punchbowl/Halekauwila, which is over capacity, just as it was in Reference 2.

EXTERNAL TRAFFIC

As described above, the change in the couplet from Queen-Pohukaina/Auahi to Queen-Halekauwila modified traffic flows internal to the Kakaako site, but did not change external traffic flows. The following sections discuss these external conditions and respond to questions raised by agencies during preliminary review of the proposed changes.

Impact on Regional Access Streets

There is one minor change in access to Ala Moana Boulevard. Under the planned couplet, the existing connection on the Queen Street extension, adjacent to the IBM site, would be closed, as shown in Figure 3. With the proposed Queen-Halekauwila couplet, this access would be maintained with a connection to the new Queen Street, as shown in Figure 4. This might result in minor redistribution of internal traffic, but would not alter the volume entering or exiting Ala Moana Boulevard from the Kakaako area.

¹This was verified in an intersection capacity analysis conducted by TDA, using turning movement counts taken on 11/1/94.

²Note that other intersections, such as those along Ala Moana Boulevard or Kapiolani, were not re-calculated because the switch in the couplet did not change those traffic volumes.

Coordination with Projects Outside of Kakaako

Both the FEIS (Ref. 1) and the Kakaako Traffic Study (Ref. 2) described traffic operations on the regional access streets serving through traffic and Kakaako. These are Ala Moana Boulevard/Nimitz Highway, Kapiolani Boulevard, the King Street-Beretania Street one-way couplet, and, for mauka/makai connections via Punchbowl Street, Ward Avenue, and the Piikoi Street-Pensacola Street one-way couplet. Because the proposed change in the couplet only modified flows internal to the Kakaako site and did not alter external volumes, there would be no change to the conditions described in References 1 and 2 for these regional access streets.

PUBLIC BENEFIT

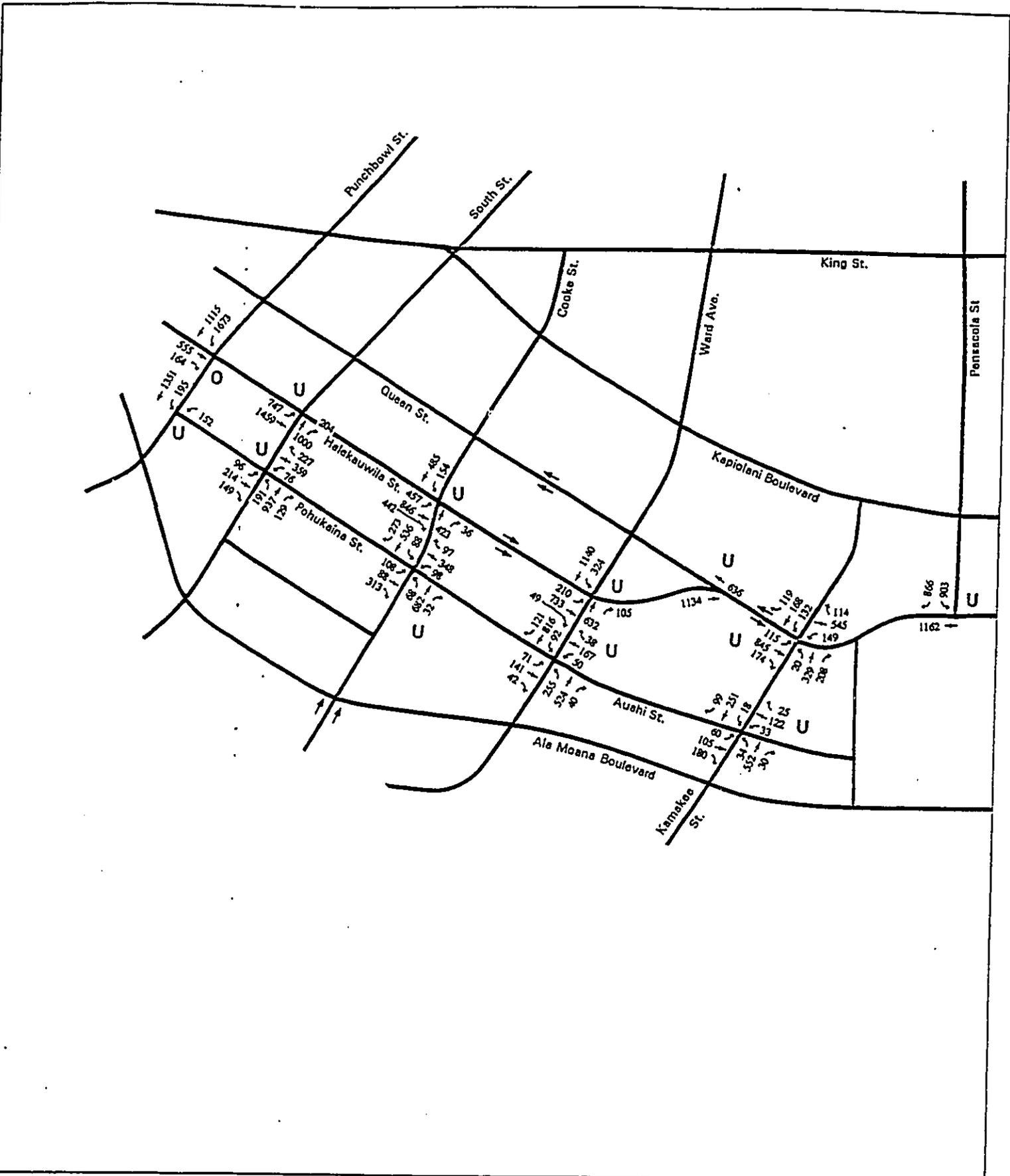
There are several potential public benefits from this proposed change:

- The proposed change in the couplet would provide adjacent streets for the couplet, whereas in the previously planned arrangement, the couplet streets of Queen and Pohukaina/Auahi would be separated by a street (Halekauwila). This proposed Queen-Halekauwila arrangement is more typical and would present drivers with a situation to which they are more accustomed.
- The proposed couplet would allow maintenance of the existing connection to Ala Moana Boulevard on the existing Queen Street Extension alignment adjacent to the IBM building.
- The proposed change would create a simpler three-legged intersection at Queen/Pensacola/Waimanu (See Figure 4) rather than the four-legged intersection which would be required by the Queen-Pohukaina/Auahi configuration (See Figure 3).
- Moving the Diamond Head bound portion of the couplet to Halekauwila will provide more stacking space for makai-bound traffic approaching Ala Moana Boulevard than would use of Pohukaina/Auahi. This benefit was also noted in Reference 2, page V-6.
- Lastly, the proposed couplet would allow the development of Auahi Street Diamond Head of Ward into a pedestrian-oriented street with adjacent low-scale retail. This would not be possible with the Queen-Pohukaina/Auahi configuration.

CONCLUSIONS

Based on the information provided in the Kakaako FEIS and in the 1991 Kakaako Traffic Study, the proposed change of the couplet from Queen-Pohukaina/Auahi to Queen-Halekauwila has no impact on external traffic conditions and causes only minor redistribution of traffic within Kakaako. External intersection operations are unchanged and only minor changes are estimated for internal intersections..

This assessment focused on year 2010 a.m. and p.m. peak periods, as did the analysis of Reference 2. As overall traffic demands continue to increase in Honolulu, it is probable that some of this growth will shift to non-peak periods.



VICTORIA WARD

One-way Couplet of Queen/Halekauwila for 2010 PM Peak Hour

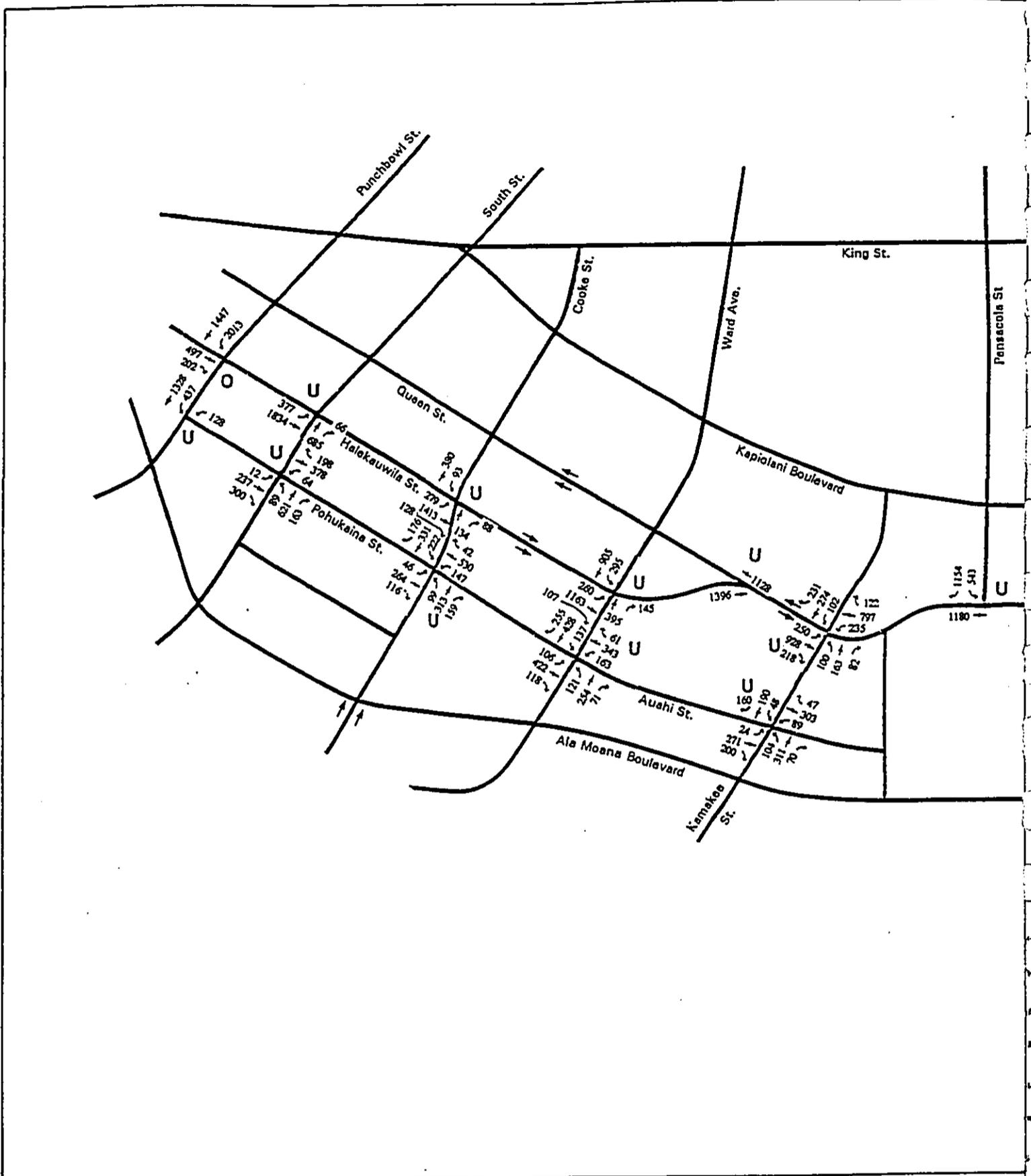
LEGEND

INTERSECTION CAPACITY CONDITION

- U Under Capacity (< 1200 VPH)
- N Near Capacity (1201 to 1400 VPH)
- O Over Capacity (> 1400 VPH)



Figure 1



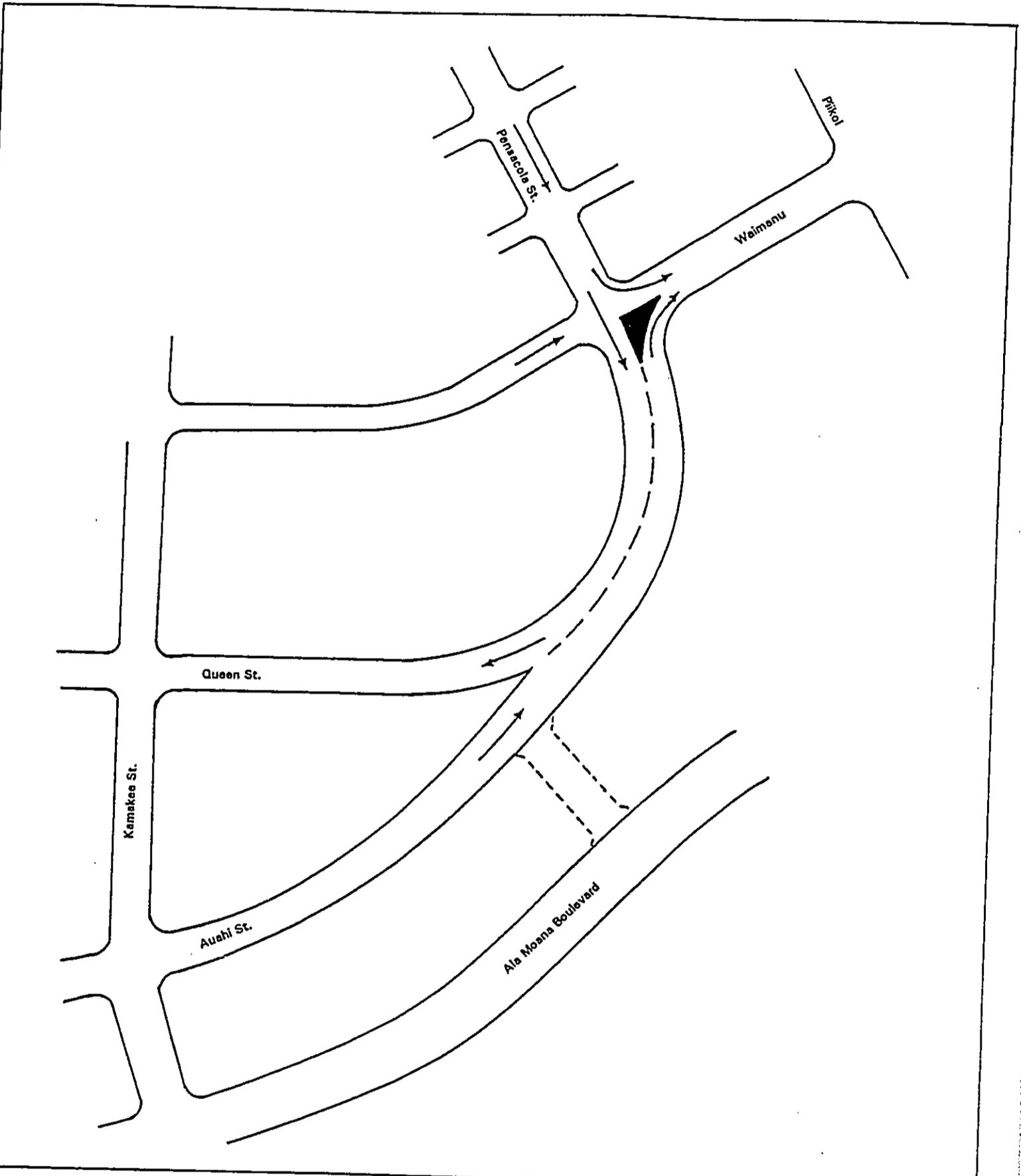
VICTORIA WARD

One-way Couplet of Queen Halekauwila for 2010 AM Peak Hour

- LEGEND
 INTERSECTION CAPACITY CONDITION
- U Under Capacity (< 1200 VPH)
 - N Near Capacity (1201 to 1400 VPH)
 - O Over Capacity (> 1400 VPH)



Figure 2



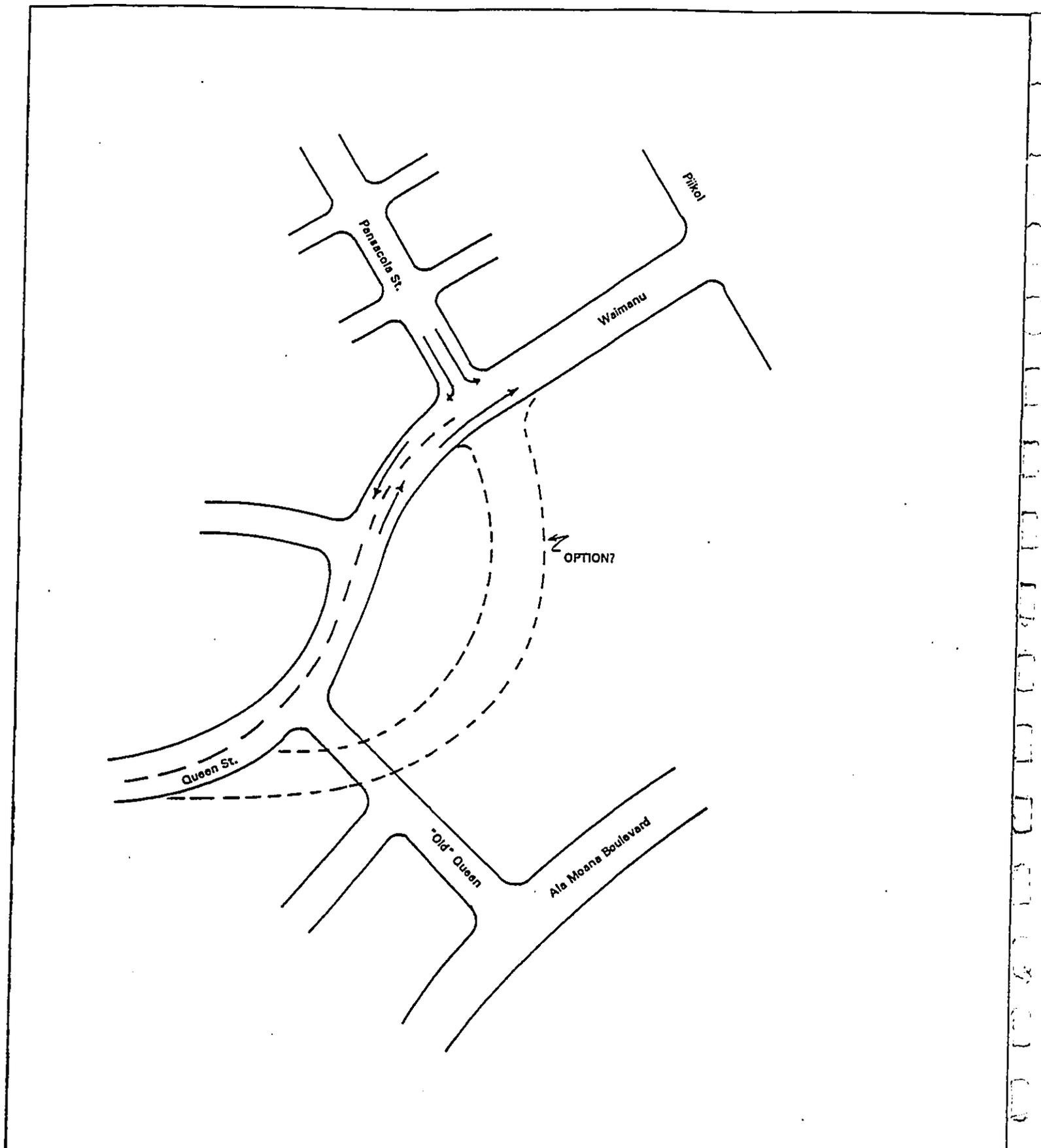
VICTORIA WARD

Planned Configuration
(Queen/Pohukaina Couplet)

IDA
INC

▲
N

Figure 3



VICTORIA WARD

Proposed Configuration
(Queen/Halekauwila Couplet)

TDA
INC.



Figure 4

• QUEEN ST. - HALEKAUWILA ST. COUPLET ENVIRONMENTAL ASSESSMENT •

APPENDIX C
BUSINESS IMPACTS OF PROPOSED ONE-WAY COUPLET
Prepared By: TDA Inc.

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

VICTORIA WARD MASTER PLAN

**Business Impacts of
Proposed One-Way Couplet**

Prepared for:

Victoria Ward Ltd.

Prepared by:

TDA Inc.

November 18, 1994
#1758

INTRODUCTION

There is little hard information available on this subject. We have searched our library, checked the National Technical Information Service, run through the electronic retrieval system at the University of Washington, talked to a number of people including real estate economists and have not come up with much.

Information from Library Sources

The Institute of Transportation Engineers' Transportation and Traffic Engineering Handbook (2nd edition in 1982) discusses one-way effects on area economic conditions:

- "Yet studies made in various parts of the United States have generally tended to disprove such claims" by the business owners on the affected commercial streets that one-way street will adversely affect their trade (page 809).
- "Moreover, where one-way systems have once been implemented, many businessmen formerly opposed to the one-way street plan have become their staunchest supporters" (page 809)
- An in-depth study conducted by the Michigan Department of State Highway found that, "There was no indication of adverse economic influence on business activity within the one-way corridor. The number of business failures was reduced substantially after one-way conversion."¹

The Study to Develop Warrants for Conversion to One-way Frontage Roads, (Texas Transportation Institute (TTI); Messer C.J., Stover V.J., Gattis J.L., June 1988) concludes in the section "Studies of Effects on Business:"

- "The attitude survey (Research Report 402-1) found that most respondents believe that a business located downstream of an off-ramp and upstream from an on-ramp would not be hurt by change from two-way to one-way operations."
- "Businesses located along two-way frontage roads are also observed to fail or relocate." Five examples of failed business establishments located on or along two-way frontage road are shown in the study.

Accident Analysis of the Conversion from Two-way to One-Way Frontage Road Operation, (Texas Transportation Institute; Woods, Donald L. and Chang, Myung-Soon Chang, Nov. 1983) notes that:

- "The findings of this research suggest that an average 20 percent reduction in accident frequency, can be expected by conversion of two-way frontage roads to one-way operation."

Synthesis of Safety Research Related to Traffic Control and Roadway Elements (Volume 1, Final Report, Texas Transportation Institute, October 1982), also shows the average accident reduction on one-way street through the before-after study on conversion of two-way street to one-way street.

¹ The Economic and Environmental Effects of One-Way Streets in Residential Areas, Department of State Highways, Lansing, Mich., 1969.

Information from Contacts

We discussed the issue with an urban planner who has worked in areas where one-way streets have been implemented or proposed. In his experience, sometimes one-way streets have an impact to area businesses, and sometimes there is not an impact. For instance, downtown Seattle streets are primarily one-way. However, the scale of street and pedestrian activity seems to encourage small business success on both one-way and two-way streets. Downtown Seattle streets, though three to four lanes wide during peak commute times², are relatively narrow, and so do not become a barrier to pedestrian activity.

In other instances, where one-way couplets have been introduced in suburban centers, there has been some impact to small businesses. The street scale in these settings tends to be quite large, as the couplets may be functioning as portions of state-routes. Additionally, the "downtowns" in these areas may not have been pedestrian-friendly when planned.

We also discussed this with a real estate economist. He had not run across studies dealing specifically with the one-way issue. However, he felt that even if such studies had been done, any results would have been inconclusive as to impacts to local businesses. He felt it would be difficult to isolate the one-way roadway impact from many other urban issues.

CONCLUSION

We can find no direct evidence that one-way couplets are detrimental to small businesses. An approach to promoting the continued success of small businesses may be to provide pedestrian-scale roadways (eg, 3 lanes or less) and good pedestrian connections (sidewalks, pedestrian-activated signals).

²Seattle has transit-only lanes during peak times. These are curb lanes which are used for parking during non-peak times. These streets vary from 2-4 lanes, depending on the time of day.

• QUEEN ST. - HALEKAUWILA ST. COUPLET ENVIRONMENTAL ASSESSMENT •

APPENDIX D
PRE-ASSESSMENT CONSULTATION COMMENT LETTERS AND
RESPONSES

JOHN WARE
COUNCILOR



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

RECEIVED

SEP 21 1994

GROUP 70

REX D. JOHNSON
DIRECTOR
COUNTY DIRECTORS
KAJIANI HOLT
GLENN DA. OKAMOTO
JOYCE Y. OMBRE
CALVINNA TSUDA

IN REPLY REFER TO:

STP 8.6319

September 19, 1994

Mr. Ralph Portmore, AICP
Executive Vice President
Group 70 International, Inc.
925 Bethel Street, Fifth Floor
Honolulu, Hawaii 96813-4307

Dear Mr. Portmore:

Subject: Pre-Assessment Consultation Regarding an Environmental Assessment (EA) for a Proposed Roadway Plan in the Kakaako Community Development District Honolulu, Hawaii

The traffic study for the proposed Queen/Halekuanuila Street couplet must include potential impacts to the peak hour traffic along Ala Moana Boulevard. The study should be coordinated with major adjacent developments, such as the Convention Center and Aloha Tower developments. Roadway recommendations for the area need to be consistent.

When completed, the traffic study to be prepared by TAD, Inc., should be submitted for our review and comments.

We appreciate the opportunity to provide comments.

Sincerely,

Rex D. Johnson
Rex D. Johnson
Director of Transportation



GROUP 70
INTERNATIONAL

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Norman G. Y. Hong, AIA
Sheep D. Scammon, AIA, ASID
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Michael A. Gami
Eric G. Crayton, AIA
Irene L. Chung, AIA
James M. Berthold
Ronald L. Prickett
Charles F. Stutzner, AIA
Teresa P. Drabben, AIA
Kathryn A. Tuckman

28 November 1994

Mr. Rex D. Johnson, Director
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Subject: PRE-ASSESSMENT CONSULTATION REGARDING AN ENVIRONMENTAL ASSESSMENT (EA) FOR A PROPOSED AMENDMENT TO THE KAKAOKO COMMUNITY DEVELOPMENT DISTRICT MAUKA AREA ROADWAY PLAN

Dear Mr. Johnson:

Thank you for your letter of September 19 regarding the above project. The proposed action seeks to designate Halekuanuila Street, rather than Pohukaina/Auahi Street as a Diamond Head board leg of a one-way couplet to serve traffic in central Kakaako. (Queen Street would be the Ewa bound leg in either case.)

The proposed action will not materially affect what is already planned in terms of overall traffic circulation patterns in the Mauka Area of the Kakaako Community Development District. Anticipated impacts are expected to be very localized and confined to reallocating traffic volumes between Halekuanuila and Pohukaina/Auahi Streets within Kakaako. Developments located beyond the immediate area, such as the Convention Center and Aloha Tower, will not be affected and are considered beyond the scope of the subject EA.

Your letter and this response will be included in the Draft EA. The anticipated publication date in the OEQC Bulletin is December 8th.

Thank you again for taking the time to review this proposal and offer your comments.

Enclosed per your request is a copy of the TDA Inc. report.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Ralph Portmore
Ralph Portmore, AICP
Executive Vice President

enclosure

JONAS WAHLE
GROUP 70



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
210 SOUTH KING STREET
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FACSIMILE (808) 551-1100

RECEIVED
SEP 27 1994

September 23, 1994

GROUP 70

Mr. Ralph Portmore, AICP
Executive Vice President
Group 70 International, Inc.
925 Bethel Street, Fifth Floor
Honolulu, Hawaii 96813-4307

Dear Mr. Portmore:

Subject: Pre-assessment consultation for a Proposed Roadway Plan
in the Kakaako Community Development District

In response to your September 8, 1994 request, OEQC comments that your proposed amendment to the roadway plan will impact traffic in the surrounding area. The Hawaii Community Development Authority is proposing several changes to the Kakaako Makai Plan. Please consider the proposed changes to the Makai Plan when analyzing traffic conditions.

Your proposed changes will also impact the intersection of Nimitz Highway and Halekauwila Street. Please analyze the above intersection in your traffic study. We also recommend that studies be conducted to forecast the timing and location of traffic signals in the surrounding area.

If you have any questions, please call Mr. Jeyan Thirugnanam at 586-4185. Thank you.

Sincerely,

Bruce S. Anderson

BRUCE S. ANDERSON, Ph.D.
Interim Director

USN/JT:kk

BRUCE S. ANDERSON, Ph.D.
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Teresa P. Driskler, AIA
Kathryn A. Tsukuma

28 November 1994

Director
Office of Environmental Quality Control
220 South King Street
Honolulu, Hawaii 96813

Subject: PRE-ASSESSMENT CONSULTATION REGARDING AN ENVIRONMENTAL ASSESSMENT (EA) FOR A PROPOSED AMENDMENT TO THE KAKAOKO COMMUNITY DEVELOPMENT DISTRICT MAUKA AREA ROADWAY PLAN

Dear Director:

This is in response to Dr. Anderson's letter of September 23 regarding the above project. The proposed action seeks to designate Halekauwila Street, rather than Pohukaina/Auahi Street as the Diamond Head bound leg of a one-way couplet to serve traffic in central Kakaako. (Queen Street would be the Ewa bound leg in either case.)

The proposed action will not materially affect what is already planned in terms of overall traffic circulation patterns in the Mauka Area of the Kakaako Community Development District. The anticipated impacts are expected to be very localized and confined to reallocating traffic volumes between Halekauwila and Pohukaina Streets within Kakaako. Developments in the Makai Area will not be affected and are considered beyond the scope of the subject EA.

The intersection of Nimitz Highway and Halekauwila Street was studied by TDA, Inc., Victoria Ward, Limited's traffic consultant. Currently, the left turn lane from Nimitz Highway onto Halekauwila Street is used to capacity during peak hours. The capacity of the intersection is limited by the available space for the left turn lane. Changing the couplet designation from Pohukaina/Auahi Street to Halekauwila Street should not affect an intersection that is already used to capacity. In any event, the proposed change in the couplet configuration will not materially affect its attractiveness as a through traffic route, and thus should not cause any material change in the number of drivers wanting to use the Queen/Halekauwila left-turn lane.

The timing and location of traffic signals in the surrounding area should be done at a later phase, when the roads have been constructed and traffic patterns have been established.

Group 70 International, Inc. • An Executive • Planning • Interior Design • Environmental Services
1111 South King Street, Suite 1100, Honolulu, Hawaii 96813 • (808) 551-1100

Letter to Office of Environmental Quality Control
28 November 1994
Page 2

Dr. Anderson's letter and this response will be included in the Draft EA. We anticipate publication in the December 8th OEQC Bulletin.

Thank you again for taking the time to review this proposal and offer your comments.

Sincerely,

GROUP 70 INTERNATIONAL, INC.



Ralph Fortmore, AICP
Executive Vice President



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28 November 1994

Dr. Herman Aizawa, Superintendent
Department of Education
1390 Miller Street
Honolulu, Hawaii 96813

Subject: PRE-ASSESSMENT CONSULTATION REGARDING AN
ENVIRONMENTAL ASSESSMENT (EA) FOR A PROPOSED
AMENDMENT TO THE KAKAAKO COMMUNITY
DEVELOPMENT DISTRICT MAUKA AREA ROADWAY PLAN

Dear Dr. Aizawa:

Thank you for your letter of September 23 regarding the above project. It is noted that the DOE has reserved the right to make future comments about the impact of traffic on any possible schools in the area.

Your letter and this response will be included in the Draft EA. The anticipated OEQC Bulletin publication date is December 8, 1994.

Thank you again for taking the time to review this proposal and offer your comments.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Ralph Portmore, AICP
Executive Vice President

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU

830 SOUTH KING STREET
HONOLULU, HAWAII 96813

RECEIVED
SEP 29 1994



WALTER M. OZAWA
DIRECTOR
ALVIN K. AU
DEPUTY DIRECTOR

GROUP 70

September 26, 1994

Mr. Ralph Portmore
Group 70 International, Inc.
925 Bethel Street, Fifth Floor
Honolulu, Hawaii 96813-4307

Dear Mr. Portmore:

Subject: Proposed Roadway Plan in the Kakaako Community
Development District

Thank you for your letter of September 8, 1994 soliciting input on your environmental preassessment for the proposed changes to the roadway plan for the Kakaako Development District.

We have reviewed the proposed realignment and suggest that the environmental assessment or traffic study evaluate the impacts of the proposed realignment on public access to Mother Waldron Neighborhood Park. We assume that the one-way couplets will be heavily-traveled vehicular thoroughfares and may tend to pose as barriers for pedestrians wanting to use Mother Waldron Neighborhood Park. We are especially concerned about the impact to residents of Kakaako currently living mauka of Halekauwila Street.

Thank you for providing us with this opportunity to participate in your environmental assessment.

If have any questions, please contact John Morihara of our Advance Planning Branch at 523-4246.

Sincerely,

John Morihara
For WALTER M. OZAWA, Director

WMO:ei

We Add Quality to Life



GROUP 70
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Kathryn A. Tuiloma

28 November 1994

Ms. Donna Hanaïke, Director
Department of Parks and Recreation
650 South King Street
Honolulu, Hawaii 96813

Subject: PRE-ASSESSMENT CONSULTATION REGARDING AN ENVIRONMENTAL ASSESSMENT (EA) FOR A PROPOSED AMENDMENT TO THE KAKAOKO COMMUNITY DEVELOPMENT DISTRICT MAUKA AREA ROADWAY PLAN

Dear Ms. Hanaïke:

This is in response to Mr. Ozawa's letter of September 26 regarding the above project. The proposed action seeks to designate Halekauwila Street, rather than Pohukaina/Auahi Street as the Diamond Head board leg of a one-way couplet to serve traffic in central Kakaako. (Queen Street would be the Ewa board leg in either case.)

In either case, the couplet leg will run past Mother Waldron Neighborhood Park, since Halekauwila Street runs along the mauka section of the park and Pohukaina Street runs on the makai side of the park. Traffic projections indicate that the future overall volumes along Pohukaina Street will be similar to the volumes on Halekauwila Street. Therefore, the impacts of the proposed realignment on public access to the Park should not be materially different than the impacts resulting from the currently planned couplet alignment.

Also, housing is planned bordering the makai side of the Park, as well as the mauka side. It is not anticipated that the volume of pedestrian traffic to and from the Park will be significantly higher from any one side.

Mr. Ozawa's letter and this response will be included in the Draft EA which is anticipated for publication in the December 8, 1994 OEQC Bulletin.

Thank you again for taking the time to review this proposal and offer comments.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Ralph Portmore

Ralph Portmore, AICP
Executive Vice President

Group 70 International Inc. • An Initiative • Planning • Public • Environmental Services
925 Bethel Street, Fifth Floor, Honolulu, Hawaii 96813 • Phone: 523-4246 • Fax: 523-4246

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

PACIFIC PARK PLAZA
711 KAPOLANI BOULEVARD, SUITE 1200
HONOLULU, HAWAII 96813



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OCT -5 1994

JOSEPH M. MAGALDI, JR.
DIRECTOR
AMAR SAFFAL
DEPUTY DIRECTOR

TE-3912
PL94.1.259

GROUP 70 September 30, 1994

Mr. Ralph Portmore
Group 70 International Inc.
925 Bethel Street, Fifth Floor
Honolulu, Hawaii 96813-4307

Dear Mr. Portmore:

Subject: Kakaako Community Development District Proposed
Roadway Plan

This is in response to your letter dated September 8, 1994 requesting our preliminary comments on a proposed amendment to the Roadway Plan for the Kakaako Community Development District, Hauka Area Plan.

Based on our review, we agree that there are merits to your proposal to utilize Halekauwila Street, in lieu of the present plan to use Pohukaina and Auahi Streets. However, we will need to review the treatment of the terminus points of the couplet and the lane configuration along and fronting the affected streets. The State Department of Transportation should be contacted with regard to a proposal to reverse the flow of Piikoi Street and Pensacola Street.

The roadway alignment at the eastern terminus should include an alternative to provide a direct connection to Pensacola Street, which is similar to the present Roadway Plan. Consideration should be made to extend the western terminus of the couplet to Richards Street.

A traffic study should be prepared to address the relative impacts of your proposal, the treatment of the terminus points, and an extension of the couplet to the limits indicated above.

Mr. Ralph Portmore
Page 2
September 30, 1994

We will be happy to meet with you to discuss your proposal in further detail.

Should you have any questions, please contact Mel Hirayama of my staff at 523-4119.

Sincerely,

JOSEPH M. MAGALDI, JR.
Director



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Janet H. Bushaki
Rusell L. Proctor
Charles F. Schiever, AIA
Teresa P. Davakou, AIA
Kathryn A. Tuckano

28 November 1994

Mr. Joseph Magaldi, Jr., Director
Department of Transportation Services
Pacific Park Plaza
711 Kapiolani Boulevard, Suite 1200
Honolulu, Hawaii 96813

Subject: PRE-ASSESSMENT CONSULTATION REGARDING AN ENVIRONMENTAL ASSESSMENT (EA) FOR A PROPOSED AMENDMENT TO THE KAKAAKO COMMUNITY DEVELOPMENT DISTRICT MAUKA AREA ROADWAY PLAN

Dear Mr. Magaldi:

Thank you for your letter of September 30 regarding the above project. The proposed action seeks to designate Halekauwila Street, rather than Pohukaina/Auahi Street as the Diamond Head bound leg of a one-way couplet to serve traffic in central Kakaako. (Queen Street would be the Ewa bound leg in either case.)

The State Department of Transportation (DOT) has been contacted with regard to a proposal to reverse the flow of Piikoi Street and Pensacola Street. Their representative indicated that no action has been taken, nor do they have any plans to further develop the proposal. It was also indicated that DOT has no jurisdiction over the affected streets. The City and County would have to implement any actions related to the reversal of flow on these streets.

The detailed specific lane configuration along and fronting the affected streets will be studied prior to the construction of the couplet. The current and planned widths of Halekauwila Street will be sufficient to provide the number of vehicle lanes needed for a couplet street.

We do not believe Richards Street would be an appropriate western terminus point for the couplet. While it is true that Halekauwila Street is already one-way in the Diamond Head direction between Richards and Punchbowl Streets, extending the full couplet to Richards Street would involve extending the one-way Ewa bound section of Queen Street from Punchbowl Street to Richards Street. This would then require the use of the Richards Street block between Queen and Halekauwila Streets for the movement of Diamond Head bound traffic from Queen Street to

Letter to Dept. of Transportation Services, Joseph Magaldi, Jr.
28 November 1994
Page 2

Halekauwila Street. Three existing conditions along this block--the small turning radius at the Richards/Queen Street corner, the availability of only one lane to accommodate this traffic, and likely conflicts between the through traffic and the heavy local traffic generated by the parking garages along this block--collectively indicate that this would present serious problems. Punchbowl Street, on the other hand, appears to be capable of handling these traffic movements without problems or the need for improvements.

Direct connection to Pensacola Street is a feature of the currently planned couplet. Under the proposed action, Queen Street would become a two-way street Diamond Head of Cummins Street. This two-way section of Queen Street would merge with Waimanu Street near Pensacola Street. If the two-way section of Queen Street in the proposed couplet was realigned to connect directly with Pensacola Street, it would follow the same alignment as the one-way section of Queen Street in the currently planned alignment.

We consider the proposed alignment to be preferable, since it would allow for smoother flow of Diamond Head bound traffic by eliminating a right-turn movement. Traffic in this direction is likely to be heavier than Ewa bound traffic on this section of the couplet.

Your letter and this response will be included in the Draft EA, which is anticipated for publication in December 8th OEQC Bulletin.

Thank you again for taking the time to review this proposal and offer your comments.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Joseph Portmore

Ralph Portmore, AICP
Executive Vice President

GROUP 70 INTERNATIONAL, INC. • Architecture • Planning • Interior Design • Environmental Services
925 Kalia Drive, Suite 1200, Honolulu, Hawaii 96813-1917 • Phone: (808) 521-5666 • FAX: (808) 521-5671

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
850 SOUTH KING STREET
HONOLULU, HAWAII 96813



RECEIVED
OCT - 5 1994

KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER
ENV 94-233

October 3, 1994
GROUP 70

Mr. Ralph Portmore, AICP
Executive Vice President
Group 70 International, Inc.
925 Bethel Street, 5th Flr.
Honolulu, Hawaii 96813-4307

Dear Mr. Portmore:

Subject: Draft Environmental Assessment (DEA)
Proposed Roadway Plan in Kakaako Community
Development District. TNRK: 2-1 & 3

We have reviewed the subject DEA and have no comments to offer at this time.

Should you have any questions, please contact Mr. Alex Ho, Environmental Engineer, at 423-4150.

Very truly yours,

Kenneth E. Sprague
KENNETH E. SPRAGUE
Director and Chief Engineer



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- Frank S. Odu, AIA, AICP
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- Isabel L. Chung, AIA
- Joan N. Beckwith
- Ronald L. Proctor
- Charles F. Schreyer, AIA
- Teresa P. Davidson, AIA
- Kalynn A. Tuulino

28 November 1994

Mr. Kenneth E. Sprague, Director
Department of Public Works
650 South King Street
Honolulu, Hawaii 96813

Subject: PRE-ASSESSMENT CONSULTATION REGARDING AN ENVIRONMENTAL ASSESSMENT (EA) FOR A PROPOSED AMENDMENT TO THE KAKAOKO COMMUNITY DEVELOPMENT DISTRICT MAUKA AREA ROADWAY PLAN

Dear Mr. Sprague:

Thank you for your letter of October 3 regarding the above project. Although you did not have any comments, your letter will be included in the Draft EA.

We are anticipating the publication of the Draft EA in the December 8th OECC Bulletin.

Thank you again for taking the time to review this proposal and offer your comments.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Ralph Portmore
Ralph Portmore, AICP
Executive Vice President

Kakaako Improvement Association, Inc.

P.O. Box 4319, Honolulu, Hawaii 96812

GROUP 70
INTERNATIONAL
OCT 11 1994

October 5, 1994

GROUP 70

Mr. Ralph Portmore, AICP, Executive Vice-President
Group 70 International Inc.
925 Bethel Street, Fifth Floor
Honolulu, Hawaii 96813-1307

Subject: Pre-Assessment Consultation Regarding an Environmental Assessment (EA) for a Proposed Roadway Plan in the Kakaako Community Development District, Honolulu, Oahu, Hawaii

Dear Mr. Portmore:

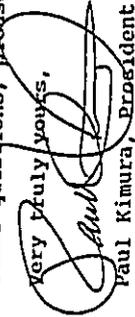
Thank you for inviting comment by the Kakaako Improvement Association (KIA) on Victoria Ward, Limited's (VWL) proposed amendment to the 1990 Kakaako Community Development District, Mauka Area, Roadway Plan. KIA's membership consists of over fifty small businesses, landowners, and other individuals with interests in Kakaako. Since many of our members are located on the Pohukaina, Halekauwila and Queen Street roadway corridors, you are correct in assuming that the proposal is of interest to our organization.

I have been authorized by our board of directors to inform you that KIA has long opposed any roadway plan using these streets as a one-way couplet. Our specific concern is that a couplet might transform these streets into regional arterials, moving a large volume of vehicles through the district and compromising their function as local streets providing customer access to many small businesses.

Based on the limited information accompanying your letter, the board of directors has affirmed its earlier position. However, we invite representatives of Group 70 or VWL to call us to arrange attendance at a future meeting of our board to present additional information and plans you might have that would mitigate our concerns.

If you would like to avail yourself of this opportunity or have other questions, please feel free to call me at 591-2204.

Very truly yours,



Paul Kimura, President



28 November 1994

Mr. Paul Kimura, President
Kakaako Improvement Association, Inc.
P.O. Box 4319
Honolulu, Hawaii 96812

Subject: PRE-ASSESSMENT CONSULTATION REGARDING AN ENVIRONMENTAL ASSESSMENT (EA) FOR A PROPOSED AMENDMENT TO THE KAKAAKO COMMUNITY DEVELOPMENT DISTRICT MAUKA AREA ROADWAY PLAN

Dear Mr. Kimura:

Thank you for your letter of October 5 regarding the above project.

In 1991 Austin Tsutsumi & Associates produced a report entitled *Kakaako Traffic Study*. One component of the report was a comparison between a one-way street couplet system and a two-way street system. It was projected that by the year 2010 and beyond, the existing two-way street system would not be able to handle the traffic volumes. The report recommends that given the anticipated increase in future traffic volumes through Kakaako, a Diamond Head - Ewa one way couplet system would better serve the area than the existing two-way system.

The main advantage of a one way couplet is that it will not require street widening (other than what is already planned per the KCDD Mauka Area Plan) while adequately accommodating future traffic volumes.

Using Halekauwila Street as a couplet leg instead of Pohukaina/Auahi Street has the advantage of providing better circulation and access for east bound traffic. Future traffic volumes for the proposed Queen Street - Halekauwila Street couplet will not be materially different from those volumes anticipated on the planned Queen Street - Halekauwila Street couplet.

TDA Inc, traffic consultant to Victoria Ward, Limited, has researched the documented impacts to businesses fronting streets that were changed from two-way to one-way. The studies present no clear conclusion that changing from two-way to one way streets results in negative impacts to adjacent businesses. The studies also suggest the importance of other factors that constitute impacts on adjacent businesses. TDA's report summarizing their research will be included in the Draft EA.

GROUP 70 INTERNATIONAL
P.O. Box 4319, Honolulu, Hawaii 96812
Tel: (808) 591-2204
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Letter to Kakaako Improvement Association, Paul Kimura
28 November 1994
Page 2

We accept your offer to attend a future KJA board meeting in order to discuss this proposal with your members. I will be contacting you shortly to schedule a convenient time.

Your letter and this response will be included in the Draft EA, which we anticipate being published in the December 8th OEQC Bulletin. A copy of the Draft EA will be mailed to you at that time.

Thank you again for taking the time to review this proposal and offer your comments.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Ralph Portmore
Ralph Portmore, AICP
Executive Vice President

• QUEEN ST. - HALEKAUWILA ST. COUPLET ENVIRONMENTAL ASSESSMENT •

APPENDIX E
DRAFT EA COMMENT LETTER AND RESPONSE



HAWAII DEPARTMENT OF TRANSPORTATION



KAKAIAKO
1400 Honolulu Ave. P.O. Box 50

John D. Walker
Governor

Michael Kawaharada
Chairman

Michael N. Scarfone
Executive Director

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JAN - 9 1995

Ref. No.: PL EIS 6.21

GROUP 70

January 5, 1995

Mr. Ralph Portmore
Group 70 International, Inc.
925 Bethel Street, Fifth Floor
Honolulu, Hawaii 96813-4307

Mr. Ralph Portmore
Page Two
January 5, 1995

Dear Mr. Portmore:

Re: Draft Environmental Assessment (EA) for the
Queen Street - Halekauwila Street Couplet

We have reviewed the subject draft EA and have the following comments to offer.

Waimanu Street is reconfigured. Any impacts resulting from the reconfigured Waimanu Street should be discussed.

COST ANALYSIS. An analysis comparing the development costs of the proposed and existing couplet alignment should be included in the Final EA. It appears that the Halekauwila Street alignment will require greater acquisition of private land. This should also be identified as it will impact the cost of the couplet.

Land Use Plan. The Final EA should include a discussion on impacts to the Mauka Area Plan's Land Use Plan. It may be appropriate to include an exhibit showing any changes to the Land Use Plan.

Bikeway Plan. The Bikeway Plan is proposed to be rerouted to Pohukaina Street, Ward Avenue and Halekauwila Street. The transition along the bikeway should be clarified, perhaps a graphic depicting the proposed alignment should be included in the EA.

Design Standards. From a traffic-carrying capacity standpoint for one-way flows, can a 50-foot right-of-way, without a 6-foot bikeway, function as a 60-foot right-of-way with a 6-foot bikeway? Perhaps street cross-sections should be provided for clarification. Some discussion should also be given to having two-way flows on both Queen and Halekauwila Streets Ewa of Cummins Street prior to conversion to a one-way flow.

While the actual alignment will be determined in the future during design development, Figure 4 of the Victoria Ward Master Plan, Traffic Assessment of Proposed One-Way Couplet shows the Diamond Head end of Queen Street merging with Waimanu Street, whereby

Thank you for the opportunity to comment on the subject draft EA. Should you have any questions, please contact our Planning Office at 587-2865.

Very truly yours,

Eric J. Masutomi
Director of Planning

EJM/SJT:gst
cc: Office of Environmental Quality Control
Victoria Ward, Limited

677 Ala Moana Boulevard
Suite 1001
Honolulu, Hawaii
96813
Telephone
(808) 557-2970
Facsimile
(808) 579-2613

7 February 1995



GROUP 70
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Kathleen E. Pecher
Clara P. Scherer, AIA
Teresa P. Takahara, AIA
Kathryn A. Tuskano

Mr. Eric Masutomi, Director of Planning
Hawaii Community Development Authority
677 Ala Moana Boulevard, Suite 1001
Honolulu, Hawaii 96813

**Subject: Draft Environmental Assessment (EA) for the
QUEEN STREET - HALEKAUWILA STREET COUPLER**

Dear Mr. Masutomi:

Thank you for your letter of January 5 regarding the above project. Provided below are our responses to your comments.

Land Use Plan. The Final EA will contain a section discussing the impacts of the proposal on the Maunaloa Area Land Use Plan, with a figure included (Section 3.7 and Figure 4).

Bikeway Plan. A new graphic will be included in the Final EA depicting the transition between Pohukaina Street and the Halekauwila Street extension via Ward Avenue (Figure 13).

Design Standards. TDA, Inc., traffic consultants, studied the impact on traffic carrying capacity of moving the coupler from a 60-foot right-of-way street with a bikeway (Pohukaina Street) to a 50 foot right-of-way street without a bikeway (Halekauwila Street). The result would be a reduction from 38 feet to 36 feet in the width of the coupler streets (three travel lanes). According to the 1985 Highway Capacity Manual, a two percent decrease in capacity could be anticipated with the slightly narrower lanes. TDA concluded that, given variations in traffic conditions, there would probably be no significant difference in traffic carrying capacity.

Cross section drawings of Pohukaina Street and Halekauwila Street (Ewa of Ward Avenue) with the proposed coupler alignment will be included in the Final EA (Figure 5).

Regarding temporary two-way flows prior to conversion to a one-way flow along Queen and Halekauwila Streets Ewa of Cummins Street, TDA, Inc. recommends that the one-way flow take effect at the same time as the completion of the Halekauwila extension. However, if two-way flows are to continue temporarily on Halekauwila Street and Queen Street even after the Halekauwila Street extension is completed, then Halekauwila Street Ewa of Ward Avenue would operate as it currently does as a two-way street. The Halekauwila Street extension would operate as a one-way Diamond Head bound street to the point where it would merge with the temporary two-way Queen Street. This one-way operation would be necessary from the time the extension is completed, even if the remaining sections of the coupler streets continue to operate temporarily as two-way streets.

Letter to HCDA, Eric Masutomi
7 February 1995
Page 2

Parking could be allowed on the Halekauwila Street extension, and on any portion of Queen Street that has been improved to its planned width, until all necessary construction is completed and the one-way coupler becomes operational. This would restrict the traffic carrying capacities of the improved streets to levels which are compatible with the capacities on the unimproved sections of the temporary two-way streets.

The impacts of the reconfigured section of Waimanu Street on abutting property owners in terms of access will be discussed in the Final EA.

Cost Analysis. An analysis of the development costs of the proposed coupler and the cost of land acquisition will be included in the Final EA. The cost to build the proposed coupler Ewa of Ward Avenue and Diamond Head of Kamakee Street will be comparable with that of the currently planned coupler. Basically, the difference in cost between the planned coupler and the proposed coupler is in acquiring approximately 1.9 acres of land between Ward Avenue and Kamakee Street to construct the Halekauwila Street extension and Queen Street widening. It is estimated that the additional land acquisition costs will run between \$8.3 and \$12.4 million, with additional roadway construction costs estimated at \$3.2 million.

Your letter and this response will be included in the Final EA.

Thank you again for taking the time to review the Draft EA and offer your comments.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Ralph Portmore, AICP
Executive Vice President

GROUP 70 INTERNATIONAL, INC. 1400 KALANIANA'OLUHANA DRIVE, SUITE 1001, HONOLULU, HAWAII 96813-1001
TELEPHONE: (808) 531-1001 FAX: (808) 531-1002
CITY: HONOLULU, HAWAII STATE: HI ZIP: 96813

END

CERTIFICATION

**I HEREBY CERTIFY THAT THE MICROPHOTOGRAPH APPEARING IN THIS REEL OF
FILM ARE TRUE COPIES OF THE ORIGINAL DOCUMENTS.**

2004

DATE

Erin A. Nakamura

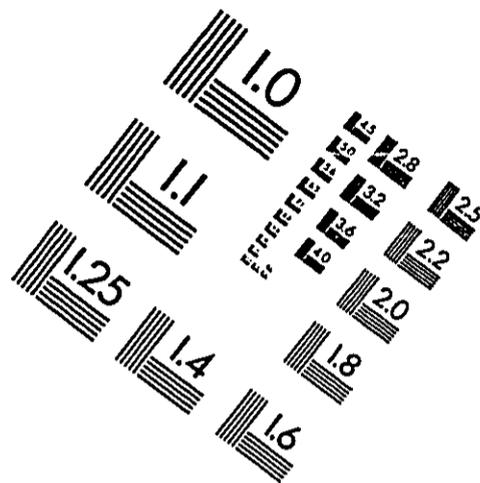
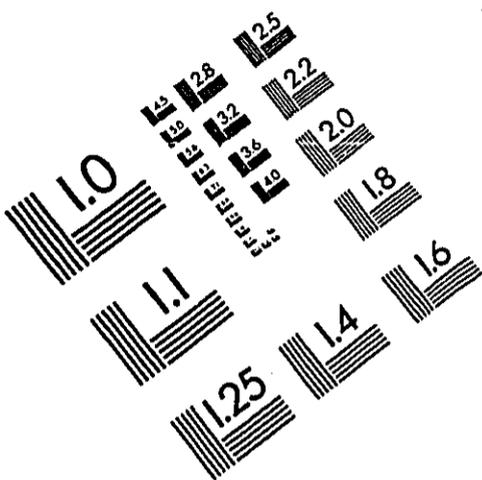
SIGNATURE OF OPERATOR



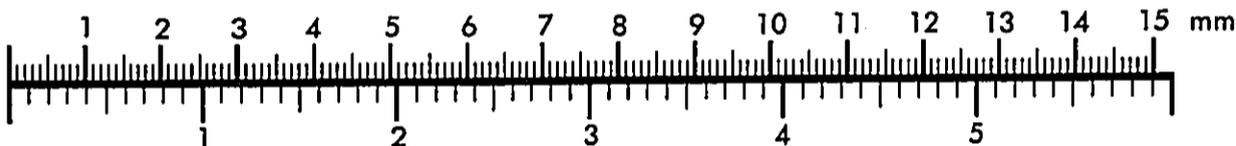
AIM

Association for Information and Image Management

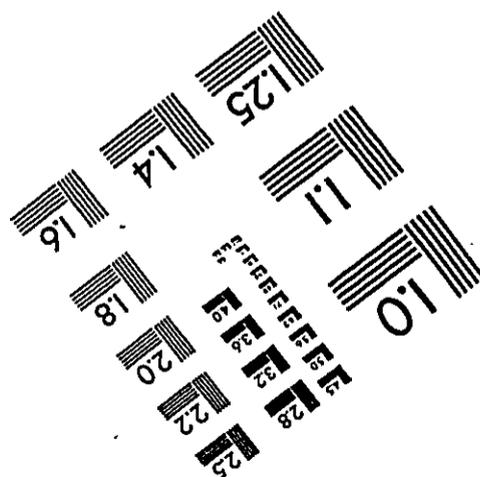
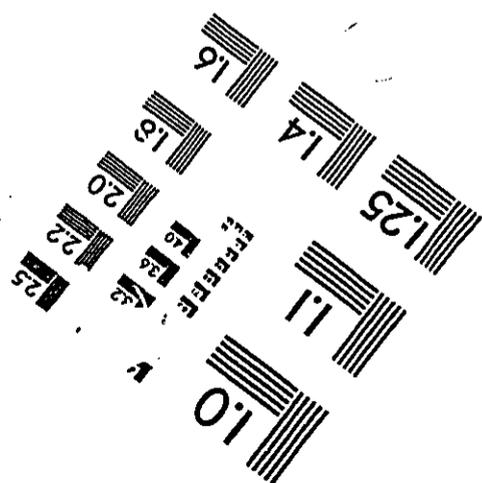
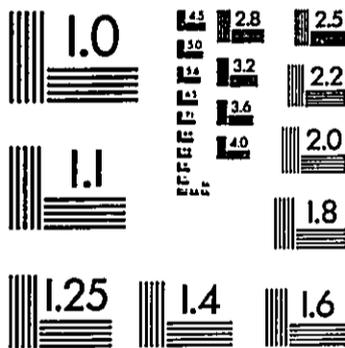
1100 Wayne Avenue, Suite 1100
Silver Spring, Maryland 20910
301/587-8202



Centimeter



Inches



MANUFACTURED TO AIM STANDARDS
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DENSITY TARGET



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