

JOHN WAIHEE
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL
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EDWARD V. RICHARDSON
MAJOR GENERAL
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MYLES M. NAKATSU
COLONEL
DEPUTY ADJUTANT GENERAL

March 2, 1992

Engineering Office

Mr. Brian J. J. Choy, Director
State Office of Environmental Quality Control
220 South King Street, 4th Floor
Honolulu, Hawaii 96813

Dear Mr. Choy:

Subject: Negative Declaration for: Korean & Vietnam
Conflicts Veterans Memorials, TMK No.: 2-1-24-08

We are hereby submitting four (4) copies of the Environmental Assessment for the Korean and Vietnam Conflicts Veterans Memorials located on the Island of Oahu. The project proposal is to construct two memorial structures on the lawn of the State Capitol building to honor the men and women of the armed services from Hawaii who sacrificed their lives defending the principles of the United States in the Korean and Vietnam conflicts.

Upon our review and analysis of the conditions and impact presented in the Environmental Assessment, we have concluded that the proposed project will not have a significant environmental impact. Therefore, we are issuing a Negative Declaration for the subject project.

We are requesting that this Negative Declaration be published in the March 8, 1992, OEQC Bulletin. Should you have any questions, please call Lieutenant Colonel Jerry M. Matsuda, our Contracting and Engineering Officer, at 735-3522. Thank you for your attention to this request.

Sincerely,

Edward V. Richardson
Major General
Hawaii Air National Guard
Adjutant General

Enc.



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

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1992-03-08-DA-PEA-Korea & Vietnam
Memorials

MAR - 8 1992

ENVIRONMENTAL ASSESSMENT

**KOREAN / VIETNAM CONFLICT MEMORIALS
ISLAND OF OAHU, HAWAII**

PROPOSING AGENCY
Department of Defense
State of Hawaii
3949 Diamond Head Road
Honolulu, Hawaii 96816

MARCH 1992

RMTC

R.M. TOWILL CORPORATION
420 Waiakamilo Rd. S.411
Honolulu, HI 96817-4941
(808)842-1133 FAX 842-1937

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

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ENVIRONMENTAL ASSESSMENT
FOR
KOREAN/VIETNAM CONFLICT MEMORIALS
ISLAND OF OAHU, HAWAII
TAX MAP KEY NO.: 2-1-24:08

This document was prepared pursuant to Chapter 343, HRS

PROPOSING AGENCY:
Department of Defense
State of Hawaii
3949 Diamond Head Road
Honolulu, Hawaii 96816

MARCH 1992

RESPONSIBLE OFFICIAL:



Edward V. Richardson
Major General
Hawaii Air National Guard
Adjutant General



Date

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SUMMARY INFORMATION

Project: Korean & Vietnam Conflict Memorials

Proposing Agency: State of Hawaii:
Department of Defense

Accepting Authority: State of Hawaii:
Department of Defense

Land Owner: State of Hawaii
Department of Accounting & General Services

Location: West lawn of the Hawaii State Capitol

Tax Map Key: 2-1-24:08

Lot Area: 193,549 square feet or 4.4 acres

Zoning: B-2

Development Plan: Public Facilities

Height Limit: Hawaii Capital Special District - 65 feet

Approximate Cost: An appropriation of \$1 million dollars was made by the Hawaii State Legislature for the Korean and Vietnam Conflict Memorials FY 91-92 (preliminary project cost estimates are included in attached brochure)

Schedule: Construction in spring 1992, completion by November 11, 1992 for Veteran's Day dedication ceremony.

Existing Conditions: The site is generally flat. This section of the Capitol grounds is completely grassed and landscaped with hibiscus bushes, red and yellow poinciana trees, monkeypod, coconut, and Indian Banyan trees. There is an existing ventilator structure located along the Hotel Street pedestrian mall. The ewa lawn of the Capitol is located over an existing subterranean parking garage.

SECTION 1
BACKGROUND AND PURPOSE

1.1 Background

The State Department of Defense (DOD) proposes to construct two memorials on the Ewa lawn of the State Capitol building to honor the men and women of the armed services from Hawaii who sacrificed their lives defending the principles of the United States in the Korean and Vietnam conflicts.

The memorials will be located on the grounds of the State Capitol, in an area bordered by Beretania, Punchbowl, and Richards Streets, and the mauka (north) wall of the Iolani Palace grounds (Figure 1, Location Map). The memorials, which form a 45-degree angle, will be sited at the makai (south) end of the west lawn, in an area adjacent to the Hotel Street pedestrian mall of the State Capitol building.

Section 6E-44, Hawaii Revised Statutes (HRS), established the State Veterans Memorial Commission whose function was to plan, select works of art for memorials to the veterans of the Korean and Vietnam conflicts, and select a site for the memorials. The statute also enabled the Governor of Hawaii to appoint nine members (including veterans from these conflicts) to the commission. Of the nine members, three were selected from persons nominated by the speaker of the house of representatives, and three were selected from persons nominated by the senate president.

A statewide design competition for the Korean and Vietnam Memorials was announced by Governor John Waihee on November 11, 1989 under the auspices of the State of Hawaii Department of Defense, the Office of Veterans' Services through the Commission on Memorials for Veterans of the Korean and Vietnam Conflicts. Of thirty-six entries, seven finalists were selected to further develop their preliminary design submittals.

On May 31, 1990, final designs were submitted and presented to a jury that was appointed by the Commission. The Commission unanimously recommended the winning memorial design selected by the jury. Governor Waihee formally announced the winning design on January 25, 1991 by Benjamin B. Lee, AIA, and Ms. Elaine Murphy.

The Commission members are Mr. Donald H. Price, Chair, Mr. Lester Higa, Vice-Chair, Mr. Lawrence Ebesugawa, Mr. Donald E. Gillum, Mr. John K. Keliholokai, Mr.

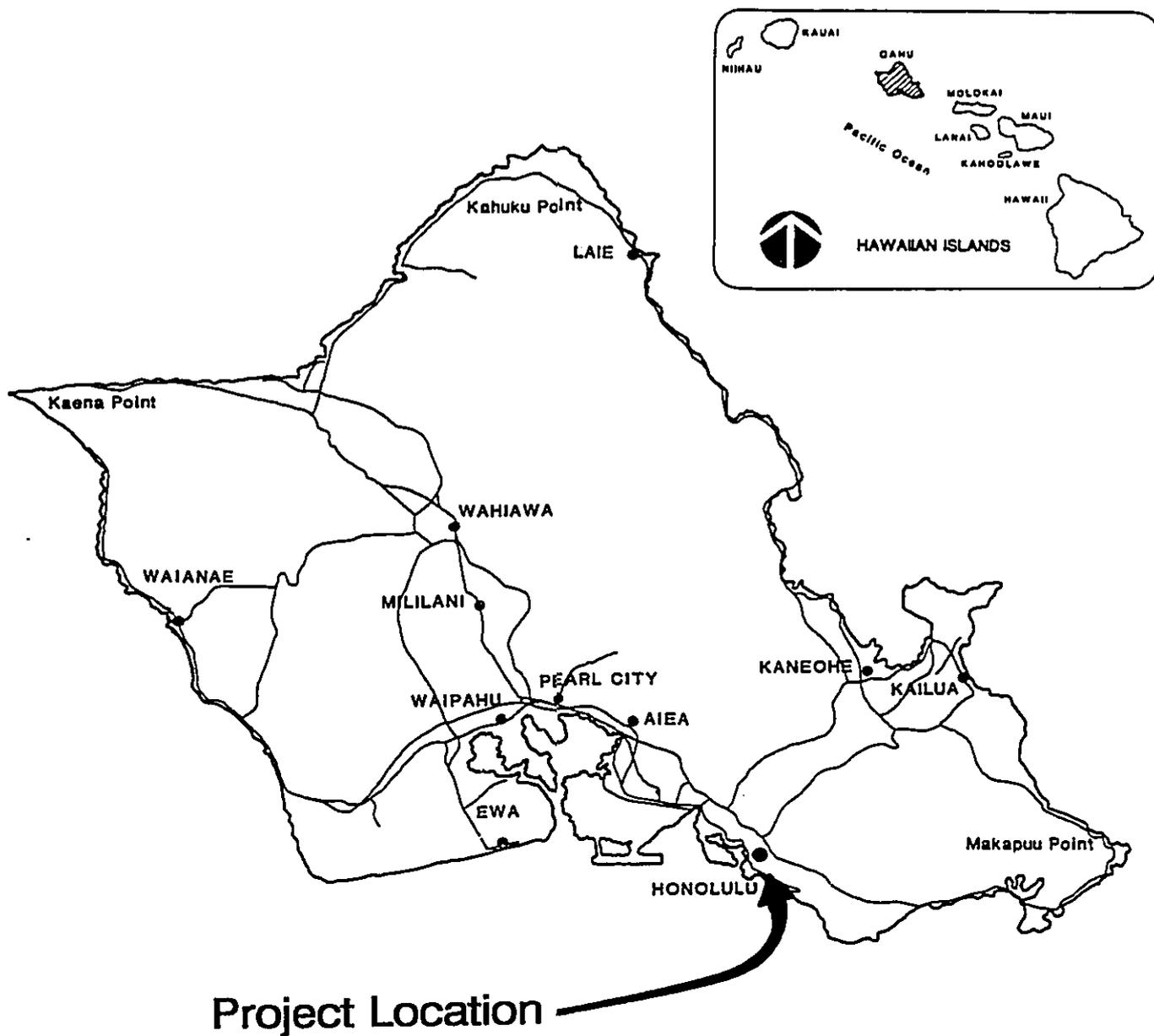


Figure 1
LOCATION MAP
 Korean and Vietnam Conflict Memorials
 FOR: State Department of Defense



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 NOVEMBER 91

George M. Matsumoto, Ms. Mildred L. McColgan, Mr. Yoshio Sugino, and Mr. Larry Tamanaha.

The Jury members are Mr. Vladimir Ossipoff, FAIA, Chair, Brigadier General Irwin K. Cockett, Jr. (USA Ret.), Mr. Thomas M. Klobe, Ms. Juli M. Kimura Walters, ASLA, Lieutenant Colonel L. Ebesugawa (USA Ret.), Mr. Lester Higa, and Mr. George Matsumoto.

State legislative hearings were held during the 1991 session to address public concerns about site selection and obstruction of the view planes to Washington Place seen from the grounds of Iolani Palace. Proposed bills to reconsider the site location were tabled or held in committee at the State Legislature. A list of public hearings held by the State Legislature during the 1991 session is included as Appendix A of this document.

1.2 Purpose

This environmental assessment is prepared in accordance with Chapter 343, Hawaii Revised Statutes (HRS), and the rules and regulations of the Office of Environmental Quality Control (OEQC).

The purpose of the environmental assessment is to provide information to public officials and members of the community on the nature of the subject action, to assess existing environmental conditions of the property and surrounding areas; to evaluate potential impacts that may result from development of the project and to propose appropriate mitigation measures for those impacts; and to consider alternatives to the proposed action.

Pursuant to the State Department of Accounting and General Services (DAGS) Exemption List as approved by the Environmental Quality Commission November 10, 1975, Memorial Structures are exempt (Exemption Class #7, Item 8, page 4) from the preparation of an Environmental Impact Statement (EIS) or Negative Declaration. It is therefore the position of DOD that Chapter 343, HRS, does not apply to this project pursuant to exemptions as contained in Section 11-200-6(d), Hawaii Administrative Rules (HAR), and that this Environmental Assessment (EA) has been voluntarily prepared for the purposes above. Also, that preparation of this EA and its subsequent submission to OEQC, does not suggest an acknowledgement that this project is bound by Chapter 343, HRS.

Finally, it is the position of DOD that if exemption of this project from Chapter 343, HRS, is held by a court of competent jurisdiction to be invalid, then this Environmental Assessment and its subsequent filings shall be construed thereafter by DOD to be done in accordance with Chapter 343, HRS.

SECTION 2 DEVELOPMENT PROPOSAL

2.1 Location and Ownership

The Korean and Vietnam Conflict Memorials project is proposed to be located on Tax Map Key number 2-1-24: Portion of 8. The parcel is owned by the State of Hawaii, and is under the management of the State Department of Accounting and General Services.

The project site is located in the central business district (CBD) of downtown Honolulu on the island of Oahu (see Figures 1 and 2). The site is situated in the State Capital Special District which is under the purview of the City and County of Honolulu by ordinance of the City and County (Section 7.30, Land Use Ordinance).

2.2 Project Overview

A permit application is being submitted to the City and County of Honolulu in accordance with Section 7.30 titled, "The Hawaii Capital Special District," for the placement of the two memorials on the ewa lawn of the State Capitol building. The project consists of three triangular vertical light prisms of glass or plexiglass and two horizontal granite walls (see Figure 3, Site Plan).

The identification of the memorial, the seals of each of the Armed Services and the map showing the relationship and location of both conflicts will be inscribed on the wall facing Hotel Street Mall. The flags of our nation and Hawaii will be placed on either side of the wall around the existing ventilator along the Mall.

The memorials will be located on the grounds of the State Capitol, in an area bordered by Beretania, Punchbowl, and Richards Streets, and the mauka (north) wall of the Iolani Palace grounds. The memorials, which form a 45-degree angle, will be sited at the makai (south) end of the west lawn, in an area adjacent to the Hotel Street pedestrian mall of the State Capitol building.

2.3 Design Objectives

The Commission issued a Request for Proposals in November 1989, and the design

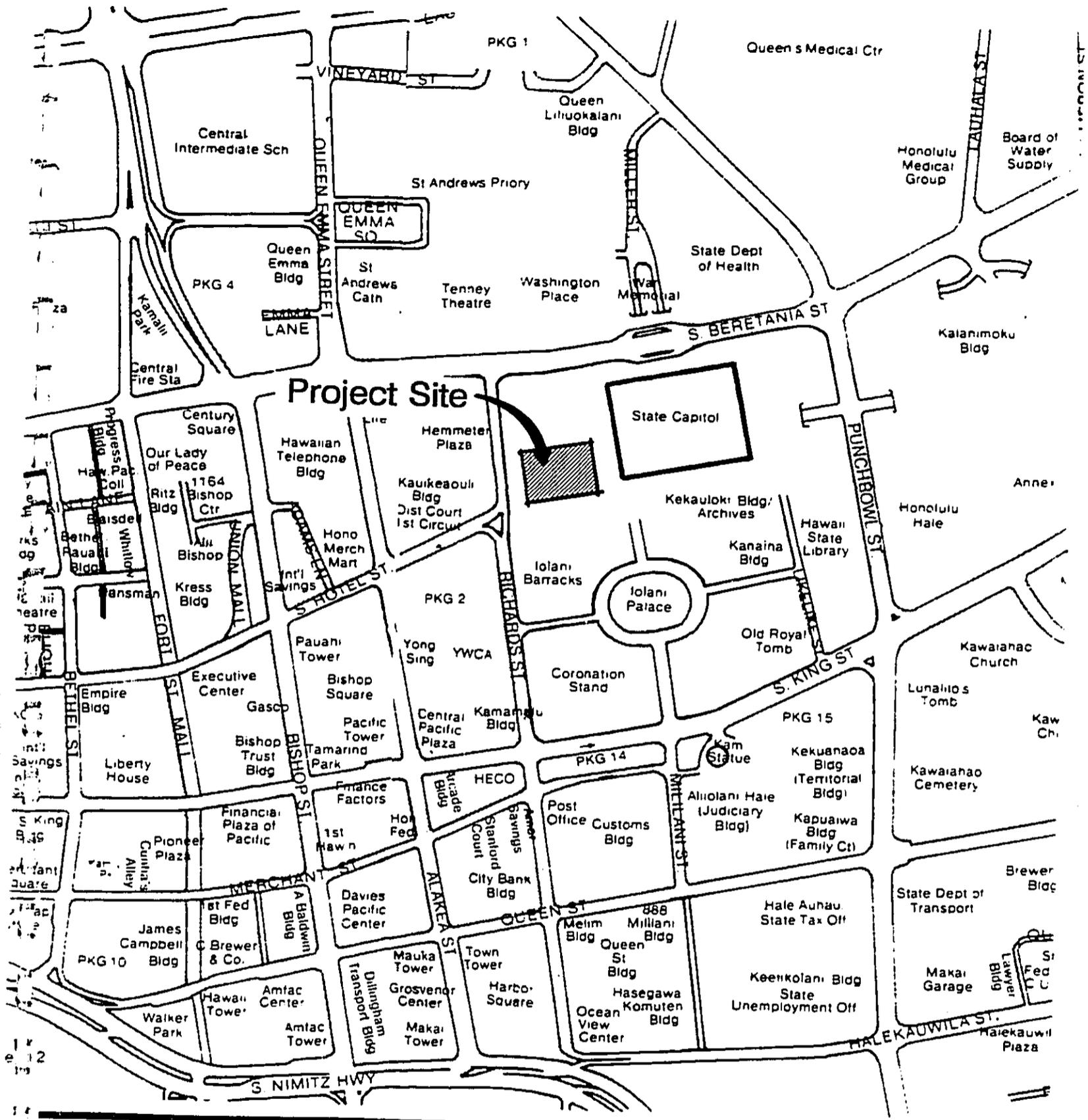


Figure 2
VICINITY MAP
 Korean and Vietnam Conflict Memorials
 FOR: State Department of Defense



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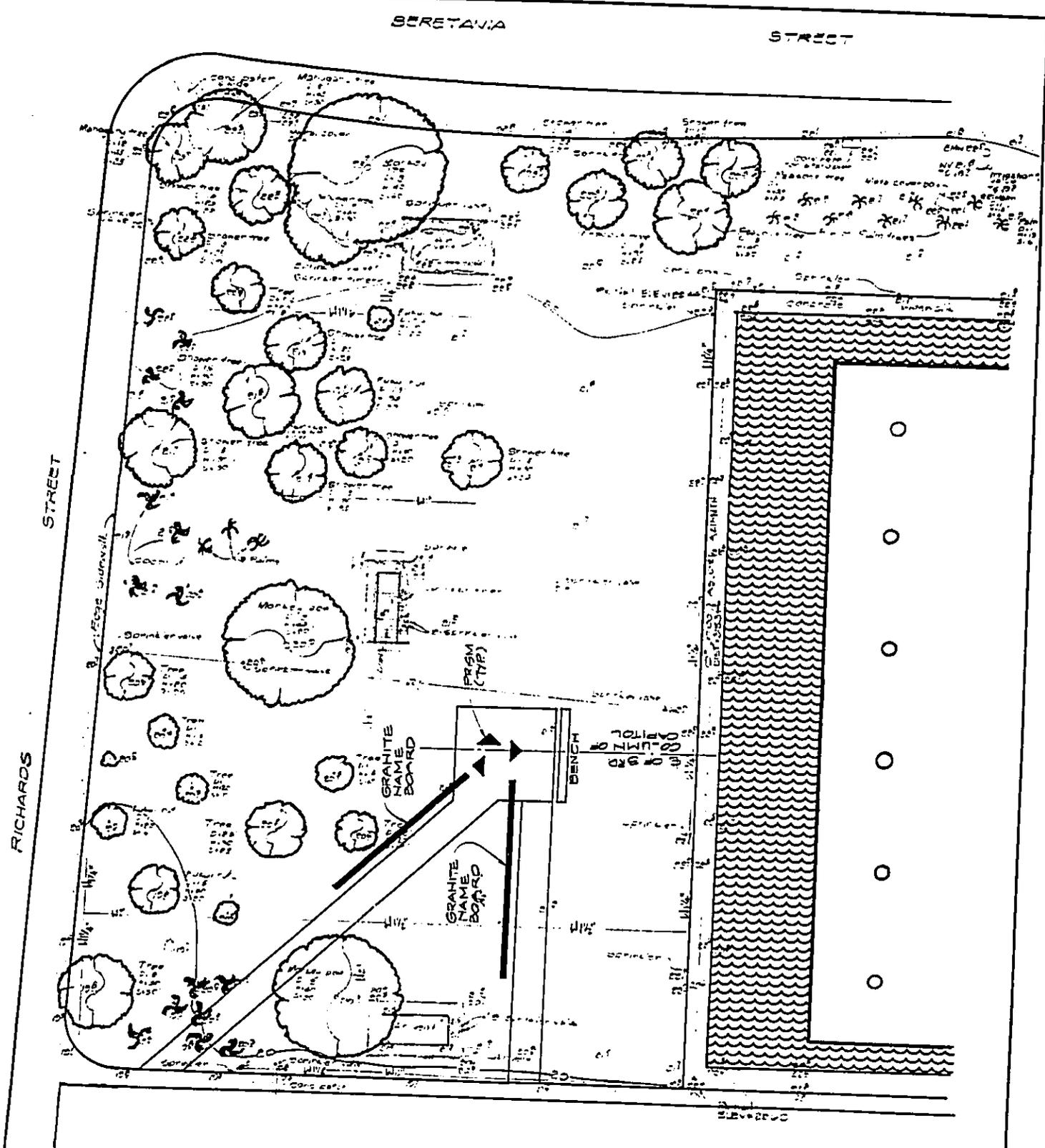


Figure 3
SITE PLAN
 Korean and Vietnam Conflict Memorials
 FOR: State Department of Defense



objectives were stated as follows:

1. Create a strong sense of place, in spirit and design, and provide a measure of pride, reconciliation, healing, understanding and peace to families and loved ones of those who gave their lives in the service of our country.
2. Develop a kinetic/dynamic sculpture utilizing easily recognizable forms and symbols in context to Hawaii's culture, climate and spirit of aloha.
3. Design a memorial that is in proportion and relates to the monumental scale of the Hawaii State Capitol.
4. Create a space that is in keeping with the landscape character and park-like setting of the historic, cultural, and scenic Hawaii Capitol District.
5. The design solution should be lightweight and easily maintained. The ewa lawn of the Capitol is located over an existing subterranean parking garage.

2.4 Development Concept (see Figure 4, Model of Memorials)

The design concept of the selected memorials project is to create a sense of place where the spirit of life is captured in light through time and space. The concept is reinforced by the project elements: three triangular forms and two solid horizontal planes. The three triangular forms relate to heights and articulations of the State Capitol. Material for the triangular forms and the solid horizontal planes would be of granite. Atop each of the three triangular forms is a transparent prism. The prisms are juxtaposed to capture the natural daylight and disperse an array of rainbow colors around the Capitol grounds and on the horizontal planes of the war memorials. The dispersion of colors will be kinetic as the sun's angle moves between summer and winter solstice.

2.5 Design Features

The heights to the tops of the prisms are 27-, 33- and 42-feet. The length of the wall for the Vietnam memorial is 84 feet and 68 feet for the Korean memorial. The height and thickness of the walls are 6 to 7 feet and 2 feet, respectively. There will be walkways of 12

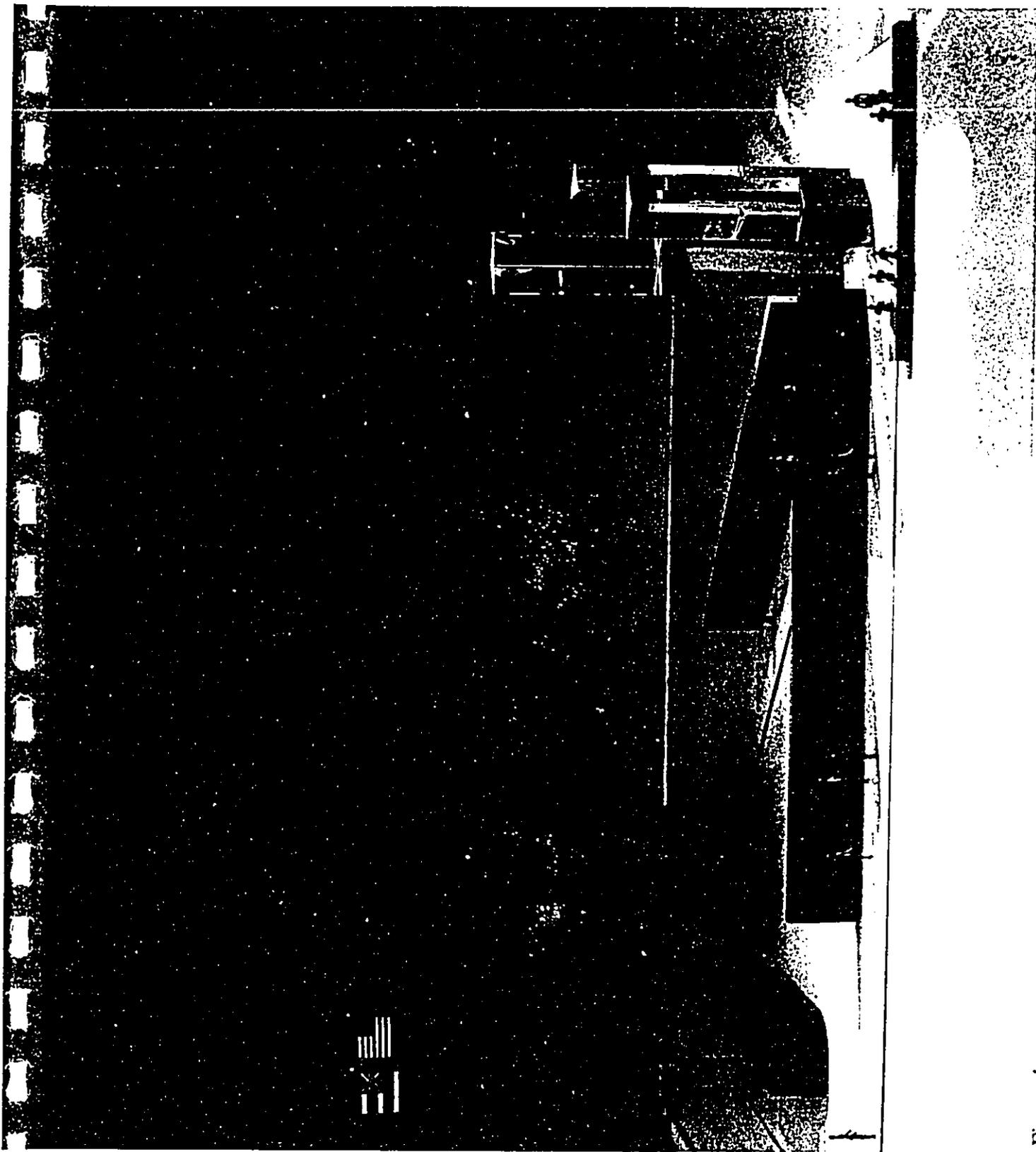


Figure 4
MODEL OF MEMORIALS
Korean and Vietnam Conflict Memorials
FOR: State Department of Defense

feet widths leading to the memorial structures, and a platform measuring 38 feet (to reflect the 38th parallel) by 42 feet.

The existing ventilator along the Hotel Street Mall will be integrated into the memorial design and its appearance will be improved. The identification of the memorial, the seals of each of the Armed Services and the map showing the relationship and location of both conflicts will be inscribed on the wall facing Hotel Street Mall. The flags of the United States and Hawaii will be placed on either side of the wall around the ventilator.

The prisms and triangle (triad) arrangement are universal symbols for family, life and God in all cultures and all faiths. The prisms provide a visual focal point for the war memorials but would not detract from the open space character and park-like setting of the Hawaii Capital District.

Two planes of solid granite, aligned with the surfaces of the vertical prisms, will have names of Hawaii residents who are casualties of the conflicts or missing in action, sandblasted on the exterior surfaces. As the memorials are approached there will be a description, map and history of the Korean and Vietnam conflicts on each of these walls.

The material, scale and color of the memorials are designed to complement the State Capitol building and grounds. The prisms are transparent, providing an opportunity for an illuminated beacon at night. Because of this feature, the memorial can be visited anytime, day or night.

The walls guide pedestrians from Richards and Hotel Streets to the center of the memorials. One of the solid granite planes is focused towards Iolani Palace and the other is angled approximately 45 degrees to show the geographic relationship between the two conflicts and also points toward the general direction of Southeast Asia where the two conflicts occurred.

SECTION 3
ENVIRONMENTAL CONDITIONS AND PROJECT IMPACTS

3.1 Existing and Surrounding Uses

The proposed site is a vacant landscaped lawn of the State Capitol building bounded by Beretania, Punchbowl, and Richards Streets. The topography of the project site is flat, and is at a 20-foot msl elevation. This section of the Capitol grounds is completely grassed and is landscaped with hibiscus bushes, red and yellow poinciana trees, monkeypod, coconut, and Indian Banyan trees. There is an existing ventilator structure located along the Hotel Street Mall. The ewa lawn of the Capitol is located over an existing subterranean parking garage. The site is utilized during the week by the Richards Street YWCA for supervised recreational programs for its childcare programs.

Surrounding the project site are the State Capitol building and its reflecting pool to the east, Iolani Palace grounds makai (south), the Hemmeter Center office building (renovated Armed Services YMCA) to the west, and Washington Place mauka (north). The project site is bounded by Beretania and Richards Streets to the north and west, and the Hotel Street pedestrian mall to the south.

The State Capitol grounds is viewed by many as the focal point of Honolulu's Civic Center. The 1965 Master Plan (John Carl Warnecke & Associates, "Honolulu Civic Center Master Plan") envisioned the Civic Center developing in a mauka-makai direction as a great park with government buildings surrounded by lawn, trees and well-kept gardens. As stated in the master plan report, "...The Civic Center will be a great park reaching from the mountains to the sea. The Capitol-Palace grounds, the central open space of the city, will be unified and remain the dominant focus of the Civic Center...(and) a mauka mall will be developed to open a vista to the mountains and provide a broad (150-foot minimum) approach to the Capitol..."

No adverse impacts on the existing and surrounding land uses are anticipated, since the public park use of the Ewa lawn is not being altered. While the memorial's physical structure (two granite walls and three granite-based glass prisms) will occupy approximately 400 square feet of lawn surface, access through and around the structures will be possible. Some existing pedestrian-level view vistas will be impeded by the granite walls, however these view impediments will be limited to specific ground-level positions while standing next

to these memorial walls.

3.2 Physical Environment

3.2.1 Climate

The climate of the project area is similar to that of other southern coastal areas in urban Honolulu. Annual average rainfall is 24 inches in the downtown area. The wet season is usually November to March, while the dry season is usually May to September. The prevailing winds throughout the year are the cooling northeasterly trade winds, although their average frequency may vary from more than 90 percent during the summer to 50 percent during the winter. On a year-round average, Honolulu's relative humidity remains between 60 to 80 percent (University of Hawaii, 1984). At the Honolulu International Airport, average annual minimum and maximum temperatures are 70 degrees Fahrenheit and 84 degrees F., respectively. The extreme minimum temperature was 53 degrees F. in February 1983, and the extreme maximum temperature was 94 degrees F. in September 1988. Temperatures in the Downtown area may be slightly higher than those at the airport due to urban effects (B.D. Neal, 1990).

The proposed project will not have any adverse impacts on the climatic conditions of the area.

3.2.2 Flora and Fauna

There is no evidence of endangered flora or fauna on or near the project site as the site has been completely urbanized. No negative impact to flora or fauna is expected to occur with the implementation of the project, as there is no evidence of endangered species of either category.

This section of the Capitol grounds is completely grassed and landscaped with hibiscus bushes, red and yellow poinciana trees, monkeypod, coconut, and Indian Banyan trees. Existing landscaping will not be affected by the project except for the relocation of one coconut tree. Any grass area damaged during construction will be re-seeded upon completion of the project.

3.2.3 Topography, Soils and Geology

The project site is flat, and is at a 20-foot mean sea level (msl) elevation. The site is not subject to hazardous landslides, falling rocks or other unstable geological conditions.

Geologically, the site is located on the Honolulu coastal plain, a broad sedimentary plain, which in places is overlain by tuff cones and ash deposits. The plain contains numerous artificially filled marshes. At the shore, earthy and calcareous sediments, collectively termed caprock, are at least 1,000 feet thick and overlie the Koolau aquifer (Takasaki, 1977). The caprock forms a wedge-shaped barrier, progressively thinning inland. At the project site, the caprock layer is probably less than half the thickness of that at the shoreline. Deposits in the caprock consist of terrestrial alluvium, marine sediments, calcareous reef deposits, pyroclastic rocks of the Honolulu volcanic series, and weathered basalt, with the first three predominant. The deposits in the caprock vary in their permeability, but the net collective permeability of the layer is low in comparison to the water-bearing basalt below (Visher and Mink, 1964).

According to the project's structural engineering analysis and design, the overall additional load of the project will not have adverse impacts on the subterranean garage below because the roof of the subterranean garage (which is the ewa lawn of the State Capitol building) was designed to support earth fill, vehicles, and an assembly area (for picnics, large gatherings, etc.).

Groundwater in the area is normally found at elevation one to two feet above sea level (i.e., 21 to 23 feet below the surface) but may be higher during periods of high rainfall.

3.2.4 Natural Hazards

Tsunami. According to the Civil Defense "Tsunami Inundation Maps," the project site is inland from the inundation prone area, which extends from Ala Moana Boulevard/Nimitz Highway to the shoreline (Hawaiian Telephone Company, 1991-1992). Therefore, the site would not be affected by tsunami activity.

Flood. According to the Flood Insurance Rate Map for the City and County of Honolulu, the project site lies within Zone X, an area determined to be outside the 500-year flood plain. Zone X covers the majority of the Downtown area.

Earthquake. All of the island of Oahu is rated as seismic Zone 2a, according to

standards established in the 1988 Uniform Building Code (UBC) and revised in 1990. There are four zones (1 through 4) in this range, with Zone 1 as the rating given to areas least prone and Zone 4 as the most prone to earthquake hazards. The project will be designed to withstand earthquake forces in accordance with the 1988 UBC, Zone 2a.

3.2.5 Hydrology, Water Quality, Drainage

There are no surface water resources within the site. The closest natural surface water resources are the Nuuanu Stream and Honolulu Harbor, both approximately 2,000 feet from the project site. Beneath the project area, however, are significant groundwater resources. An extensive basal aquifer containing large supplies of fresh water underlies all of southern Oahu. The coastal caprock retards the seaward flow of groundwater and results in a higher water table in comparison with more permeable water-bearing lava flows closer to the Koolau Range. The proposed project is not expected to adversely impact the underlying groundwater sources of Oahu since no drilling for wells is proposed.

The Downtown area has drainage systems on Nuuanu Avenue, and Richards, Alakea, Bishop, Fort, Queen, Bethel, Smith, Maunakea, and Kekaulike Streets, which drain into the Nuuanu Stream. Drainage for this site will be accommodated by allowing sheet flows off the site and into the existing nearby drainage system.

3.2.6 Air Quality

Temporary adverse impacts on air quality will occur during project construction by way of emission of exhaust and airborne particulates. Dust will also be produced during this period. These impacts will be reduced through the use of approved mitigative measures that are discussed in Section 8 of this document. No adverse impacts on ambient air quality are anticipated after construction is completed.

3.2.7 Noise Impacts

The site is subject to noise impacts primarily from vehicular traffic on Beretania and Richards Streets. These two roadways carry vehicular traffic (i.e., cars, trucks and buses) along the perimeter of the ewa lawn. Vehicles pass the site travelling about twenty-five miles per hour on both streets.

Temporary adverse noise impacts on adjacent office buildings will occur during the construction of the proposed project. Noise impacts created by construction equipment such as backhoes and dump trucks will be reduced through the use of approved mitigative measures such as mufflers. Upon completion of the construction of the project, no adverse noise impacts are expected on neighboring properties.

3.3 Historic Cultural Resources

The State Capitol was designed by architects John Carl Warnecke and Associates and Belt, Lemmon, and Lo to reflect Hawaii's culture and environment. The Capitol Building rising out of reflecting pools is symbolic of a volcano rising out of the sea.

The 1965 Civic Center master plan highlighted the significance of the Honolulu Civic Center in the following context:

"In the heart of Honolulu is a cluster of cultural and governmental activities that make up the Civic Center of the State of Hawaii. State, City and Federal offices are centered here. Churches, the Queen's Hospital and other sites of public activity and historic interest surround them.

Since the time of King Kamehameha I, this small area has been a focal point of government and the strong unifying institutions of the Islands. Today, the daily activities of the Civic Center are the events that determine the future of the State."

A number of visitor attractions are already located on the grounds of the area designated the Capitol District: Located on the Capitol Grounds are statues of Queen Liliuokalani, the last reigning monarch of the Kingdom of Hawaii and Father Damien, a Belgian priest who dedicated his life to the spiritual and physical welfare of the victims of leprosy who were kept in isolation on Molokai. Close to the Father Damien statue sits an exact replica of the original Liberty Bell, presented to Hawaii by the United States Treasury Department on July 4, 1950. The Eternal Flame located in the Capitol Mall burns as a tribute to the men and women of Hawaii who served in the Armed Services. Surrounding the Capitol are important buildings whose history is important to the State of Hawaii. The ewa lawn of the Capitol is surrounded on three sides by Iolani Palace and Barracks, Washington Place, and a recently restored building which at one time served as the Armed

Services YMCA.

The addition of the proposed project would be appropriate in that visitors to the existing historic/cultural landmarks on the Civic Center grounds would have easy access by foot to view the new memorials structure. Thus, the proposed project would not have any adverse impacts on the existing historic sites in the area.

According to the State Historic Preservation Division of the State Department of Land and Natural Resources, it has been preliminarily determined that the project site has no known archaeological sites of significance. Hence, it has been preliminarily concluded that the project will have "no affect" on archaeolgical sites (telecon with DLNR February, 1992).

SECTION 4
PUBLIC FACILITIES AND SERVICES AND PROJECT IMPACTS

4.1 Water System

The water for the site is currently supplied by the Honolulu Board of Water Supply. Potable water is supplied by a 16-inch underground distribution main that runs down Richards Street. This line supplies the fire hydrants in this area. The water for the proposed irrigation system will be supplied by the existing system.

4.2 Wastewater System

Underground mains are part of the City and County of Honolulu Department of Public Works wastewater collection system. One 8-inch line runs down Richards Street where it joins an 8-inch line running down King Street towards Alakea Street. No project impacts are expected as the project will not require wastewater system improvements.

4.3 Storm Drainage

Rain water from the project site flows into the existing box drainage system that runs beneath Richards Street. Surface flows on the project site will be allowed to sheet flow into the existing storm drain system in Richards Street.

4.4 Power and Communication Systems

Electricity for the project site is supplied by Hawaiian Electric Company. The project will require lights to illuminate the name walls and prisms. The source for the power will be from the existing fan that is located at the ventilator (at the stairway) on the ewa lawn.

4.5 Circulation

4.5.1 Vehicular Circulation. Beretania Street is the main thoroughfare for vehicular traffic in the Diamond Head to Ewa direction. Cars, buses and other vehicles travel along this road with a view of the main entrance to the State Capitol on the left. Many of

these vehicles turn from Beretania Street onto Richards Street thereby passing by the west side of the Capitol grounds.

4.5.2 **Pedestrian Circulation.** City bus stops are located across from the Capitol on both Beretania and Richards Streets. These are the main entry points onto the Capitol Grounds. With Iolani Palace and Barracks located adjacent to the Capitol, many tourists take the opportunity to visit all three sites in the same trip. Many visitors will enter the site by:

- 1) crossing Beretania Street facing the main entrance to the State Capitol with their back to Washington Place and/or the Eternal Flame;
- 2) crossing Richards Street facing the ewa facade of the Capitol with their back to the old Armed Forces YMCA; or
- 3) passing through the gates of the Iolani Palace directly into the path extending from Hotel Street past the back entrance to the Capitol.

Circulation. The principal approach to the memorials will be from Hotel Street Mall. It will be accessible to all including the disabled. Access from Beretania Street is somewhat limited. It is expected for the public to enter the Capitol rotunda from Beretania Street and then proceed to the memorials from the Hotel Street pedestrian mall. Tourists visiting Iolani Palace will easily be able to include the memorials on their tour of the Capitol District. The disabled may enter on grade from the pathways provided along Hotel Street Mall.

An additional bus pick-up and drop-off area can be created along the Richards Street side of the Capitol.

4.5.3 Public Parking. Nearby vehicular parking will be available at the new Alakea/Richards Street office tower (currently under construction) between the renovated Richards Street YMCA and the YWCA buildings, in the subterranean parking garage immediately below the memorials, on the Iolani Palace grounds, at the downtown U. S. Post Office facility on South King and Richards Streets, on the mauka end of the Iolani Palace grounds, and at the State Department of Health building on Beretania and Punchbowl Streets.

4.6 Public Parks/Recreation

The YWCA utilizes the west lawn during the week for recreational purposes as part of its child day care programs. The YWCA will be allowed to continue using the mauka portion of the project site during construction. Safety barriers will be used by the contractor to protect children by preventing entry to the construction site. Upon completion of construction of the memorials the YWCA will be able to resume full use of the west lawn.

4.7 Police, Fire Protection, and Ambulance and Medical Services

Fire and ambulance services will be provided by the Central Fire Station which is located at the intersection of Beretania and Fort Streets.

Tourists visiting Iolani Palace will easily be able to include the memorials on their tour of the Capitol District. The ewa lawn of the Capitol Building is exposed and well traversed by visitors and residents going to and from work. Because of this, the proposed location would be more appropriate in terms of security and safety than relatively isolated areas such as Keehi Lagoon that were considered earlier.

The prisms are transparent thereby providing an opportunity for illumination at night. The memorial may attract visitors at night; however, more importantly, the light that is provided may increase safety and security at night.

The project site is located within the Honolulu Metropolitan Police District I which extends from Hawaii Kai to Pearl City. District I headquarters is currently located in Pawa, but will be relocating to a facility on Alapai Street between Beretania and Hotel

Streets where the bus depot was at one time located. This would place the station closer to the project site, once the relocation occurs. In addition, the downtown substation has been established at Nuuanu and Hotel Streets, near the project site. During construction, potential crime impacts will be mitigated through the construction of fencing and/or screening around the project site. This would serve to secure the project site from pilferage and vandalism of construction materials and equipment. While some increase in the need for police services may be expected as a result of the project, the increase should not be significant.

There are a number of medical service facilities located within the Honolulu area. The two largest facilities are Queen's Medical Center located on the corner of Beretania and Punchbowl Streets, and Straub Clinic and Hospital Inc., located on King Street and Ward Avenue.

SECTION 5
SOCIO-ECONOMIC CONDITIONS AND PROJECT IMPACTS

5.1 Social Considerations

Relative to socio-cultural impacts, the Korean and Vietnam conflict memorial walls will be an added attraction to the numerous memorials and attractions already in existence in the Capitol District. These include the statues of Queen Liliuokalani, Father Damien, the Liberty Bell replica, the Eternal Flame, and the Capitol Building.

In terms of resulting in a positive impact on the community, the memorials are intended to honor the men and women of the Armed Forces from Hawaii who gave their lives defending the principles of the United States. The memorials and the space defined by the walls and prisms will provide an opportunity to honor, reflect and remember why so many lives were lost in the conflicts. The three prisms are clustered together to define a small enclosed space for solitude and reflection.

All in all, this tribute to the individuals from Hawaii who served in the Korean and Vietnam conflicts on behalf of the United States will finally be memorialized by this project. Because of this achievement, the project is expected to have a positive impact on the community and the State as a whole.

5.2 Economic Considerations

The development cost for the proposed project is estimated at \$900,000. Construction of the memorials structure will be minor source of employment during certain phases of the project. It will also be a source of income for those who supply materials for the project construction.

SECTION 6
RELATIONSHIP TO LAND USE POLICIES

6.1 State Land Use Policies

The project site is designated Urban on the State Land Use Map. The proposed project on such Urban designated lands is consistent with the State Land Use law.

6.2 City and County of Honolulu Plans and Programs

6.2.1 Development Plan

The project site is located within the Primary Urban Center (PUC) Development Plan area. The PUC's Land Use Map designates the project site as Public Facility. Thus, the proposed project is consistent with the Development Plan designation of this site.

6.2.2 Land Use Ordinance (LUO)

The purpose of the Land Use Ordinance (LUO) is to regulate land use in a manner that will encourage orderly development in accordance with adopted land use policies.

The project area is in the B-2 Community Business District, which is intended to provide areas for community-wide business establishments, serving several neighborhoods and offering a wider range of uses than is permitted in the B-1 or Neighborhood Business District. The intent is to apply this district to areas conveniently accessible by vehicular and pedestrian modes and served by adequate public facilities. Typically, this district would be applied to lots along major streets and in centrally located areas in urban and urban fringe areas.

The proposed project is consistent as a public structure within the community business (B-2 zone) district.

6.2.2.1 Special Districts

The LUO also regulates Special Districts within the City and County of Honolulu. The purpose of a Special District is to provide a means by which certain areas in the community in need of restoration, preservation, redevelopment or rejuvenation may be designated as Special Districts to guide development to protect and/or enhance the physical and visual aspects of an area for the benefit of the community as a whole.

The project site is located within the Hawaii Capital Special District. The aerial photo shown as Figure 5 illustrates the project site within the special district. As indicated in Section 7.30 of the LUO, the objectives of this Special District are:

"To provide safeguards for the preservation and enhancement of buildings and landmarks within the Hawaii Capital Special District which represent or reflect elements of the State's civic, aesthetic, cultural, social, economic, political and architectural heritage, and encourage new development which is compatible with and complements those buildings and sites.

To preserve and enhance the park-like setting of the Hawaii Capital Special District, including its view from the Punchbowl lookout."

Figure 5 is an aerial view that indicates the existing makai views from Washington Place toward Iolani Palace over the west lawn of the Capitol grounds. This photo indicates that the memorials will be sited on the ewa portion of the open lawn, to the left of the existing makai view corridor, thus avoiding any adverse impacts on this view.

A. Consistent with Context of State Capitol Building

Figure 6 shows an elevation of the proposed project in the context of the existing ewa lawn of the State Capitol Building looking mauka. This illustration indicates that the proposed memorials would be dwarfed by the State Capitol Building on the right. The existing trees and other vegetation already help maintain a park-like setting, and to a large extent, prevent clear views of the historic Washington Place.



Figure 5
AERIAL VIEW - LOOKING MAUKA
Korean and Vietnam Conflict Memorials
FOR: State Department of Defense

Source: B. Lee / E. Murphy

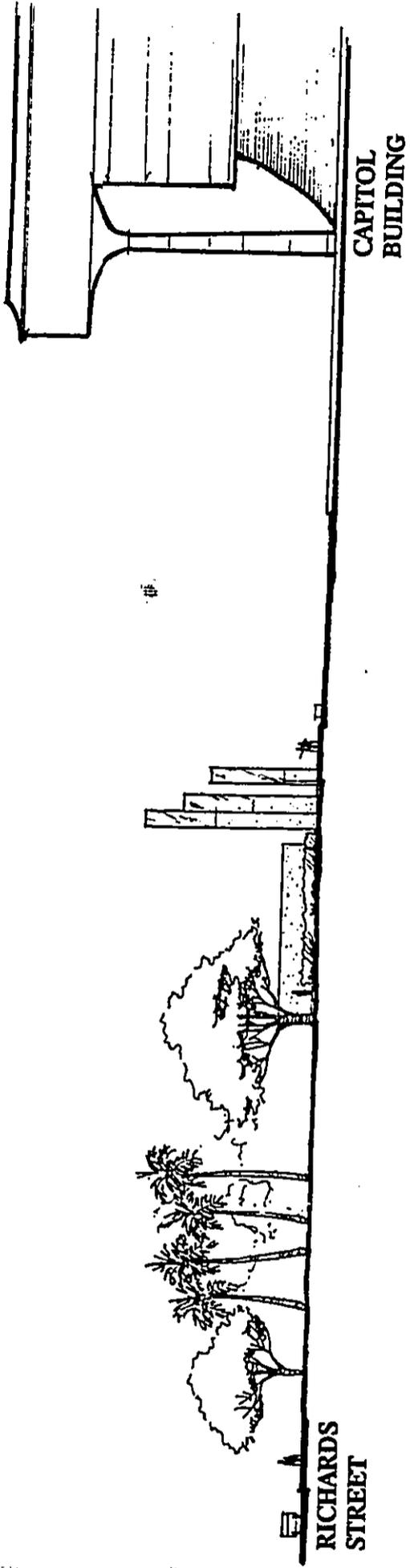


Figure 6
ELEVATION - LOOKING MAUKA
Korean and Vietnam Conflict Memorials
FOR: State Department of Defense

B. Compliance with Design Controls/Criteria

Design guidelines for the Historic Precinct of the State Capital Special District are found in Section 7.30-4(B) "Design Controls". These guidelines are applied to the design and review of new construction and renovation in the Historic Precinct to ensure that new developments are sensitive to the existing historic and other significant structures. The following standards are discussed as they are appropriate to artwork (as opposed to buildings).

B.4. Color and Surface

The colors are to be absorptive rather than reflective, and having natural colors of stone, earth tones, etc. The use of *reflective surfaces* should be avoided.

The materials that will be used for the upper portions of the proposed prisms will be controlling the reflection of light and color off the surface (face) of the structures. This will be achieved through the type of coating used on the surfaces and technology.

The polished granite finish of the walls and the prism stands are consistent with this aesthetic consideration.

B.5. Texture

Characteristic textures include those of cut stone, cast iron, tile, concrete, stucco, grass and foliage. Polished granite sheets for the memorial walls and prisms and flamed finish granite will be used for the walkways and the back side of each of the memorial walls. Between the walls and the walkways could be a transitional material such as spaced granite pavers with grass between them to allow for placement of flowers and memorabilia by visitors.

B.6. Details

Respect for historic design in such things as flag and utility poles. The flagpoles on each side of the ventilator walls will be steel or anodized aluminum, dark bronze in color. They are approximately 62' in height to align with the top of the concrete columns of the Capitol.

B.8. Orientation

As discussed earlier, the memorial is oriented on a mauka-makai axis in order to protect mauka views within the Precinct. This is consistent with the standard set forth in this section.

B.10. Landscape Treatment

The resting areas including benches, and utility structures (ventilator) are integrated into the open lawn, and between the walls and walkways there may be grass as transitional areas.

D.1. Height Regulations

The height limit in this section of the special district is 65'. The memorial is consistent with this standard in that the tallest prism structure is 42'. The height of the flagpoles on each side of the ventilator walls is 62' which is not only consistent with the standard set forth, but also is intended to align with the top of the concrete columns of the Capitol.

6.3 Honolulu Civic Center Master Plan

A. *Maintaining a Great Park*

The 1965 "Honolulu Civic Center Master Plan" by John Carl Warnecke & Associates indicated that the vision of Civic Center developing in a mauka-makai direction as a great park with government buildings surrounded by lawn, trees and well-kept gardens thereby establishing nature as the identity of the Civic Center with malls and open vistas to landmarks allowing flexibility of heights and massings of future buildings.

"The Civic Center is designed as a special kind of district-- a great park. Buildings in clusters are set among large open spaces which, paved for crowds or abundantly planted, give the Civic Center its unity (Warnecke, 1965)."

The great park concept and its element of open spaces may connote different images in one's vision through time. The ewa and Diamond Head lawns that have flanked the State Capitol Building have allowed for passive recreation,

picnicking, assemblies, rallies, and open, unobstructed mauka-makai vistas. The addition of the proposed project will slightly modify the complete open nature of the ewa lawn. The current people-oriented, urban park use of the area will not change in that it would not be unusual to include an art structure within an urban park. The master plan of 1965 does not explicitly state the need to keep these lawns completely open or void of such things as art structures. Thus, it can be concluded that the Civic Center Master Plan upheld a policy of flexibility in light of the dynamic nature of urban park uses within the Civic Center complex's "great park."

B. Preservation of Mauka-Makai View Planes

The orientation of the memorials is mauka-makai, which is consistent with the Capitol District Historic Precinct guidelines (Section 7.30-4(B)(8) Orientation) intended to protect mauka views within the Precinct.

Existing mauka views from the Iolani Palace grounds and the Hotel Street Mall toward Washington Place over the west lawn of the Capitol grounds are shown in Figures 7 through 9. Figure 7 illustrates the mauka view near the ventilator: the view is camouflaged by heavy tree growth on the Beretania Street side of the west lawn. Figure 8 illustrates yet another mauka view from the Iolani Palace grounds next to the bandstand: heavy tree and other vegetative growth that line the Beretania Street corridor of the west lawn of the Capitol grounds block views of Washington Place. Figure 9 shows the mauka view from the steps of Iolani Palace: the view corridor toward Washington Place would not be impeded by the introduction of the proposed memorials, as the project would be placed to the left of the subject view corridor.

The introduction of the Korean/Vietnam Veterans Memorials will add to the character and range of views offered within the Historic Precinct of the Capitol District.

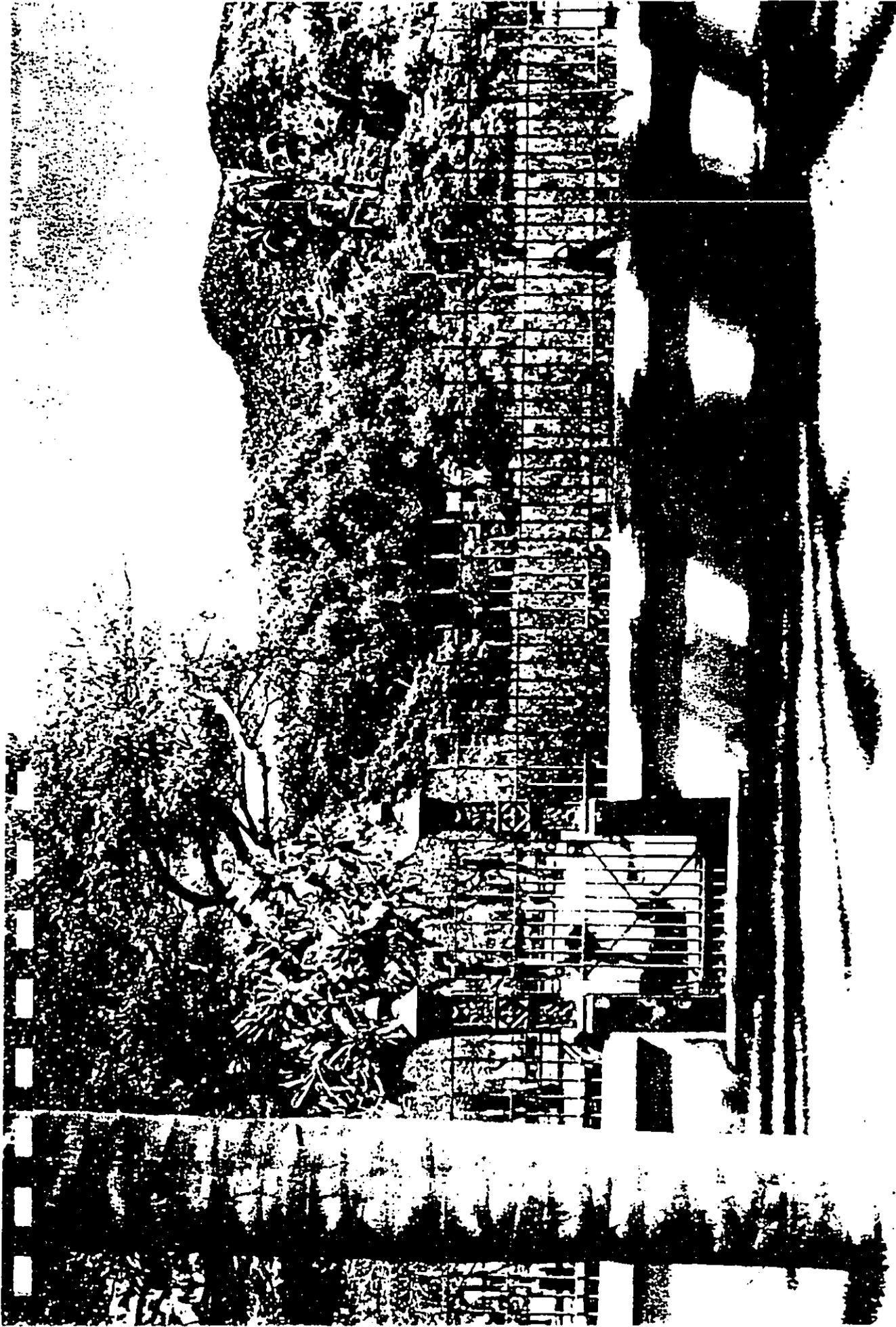


Figure 7
MAUKA VIEW FROM MAKAI OF HOTEL STREET MALL
Korean and Vietnam Conflict Memorials
FOR: State Department of Defense

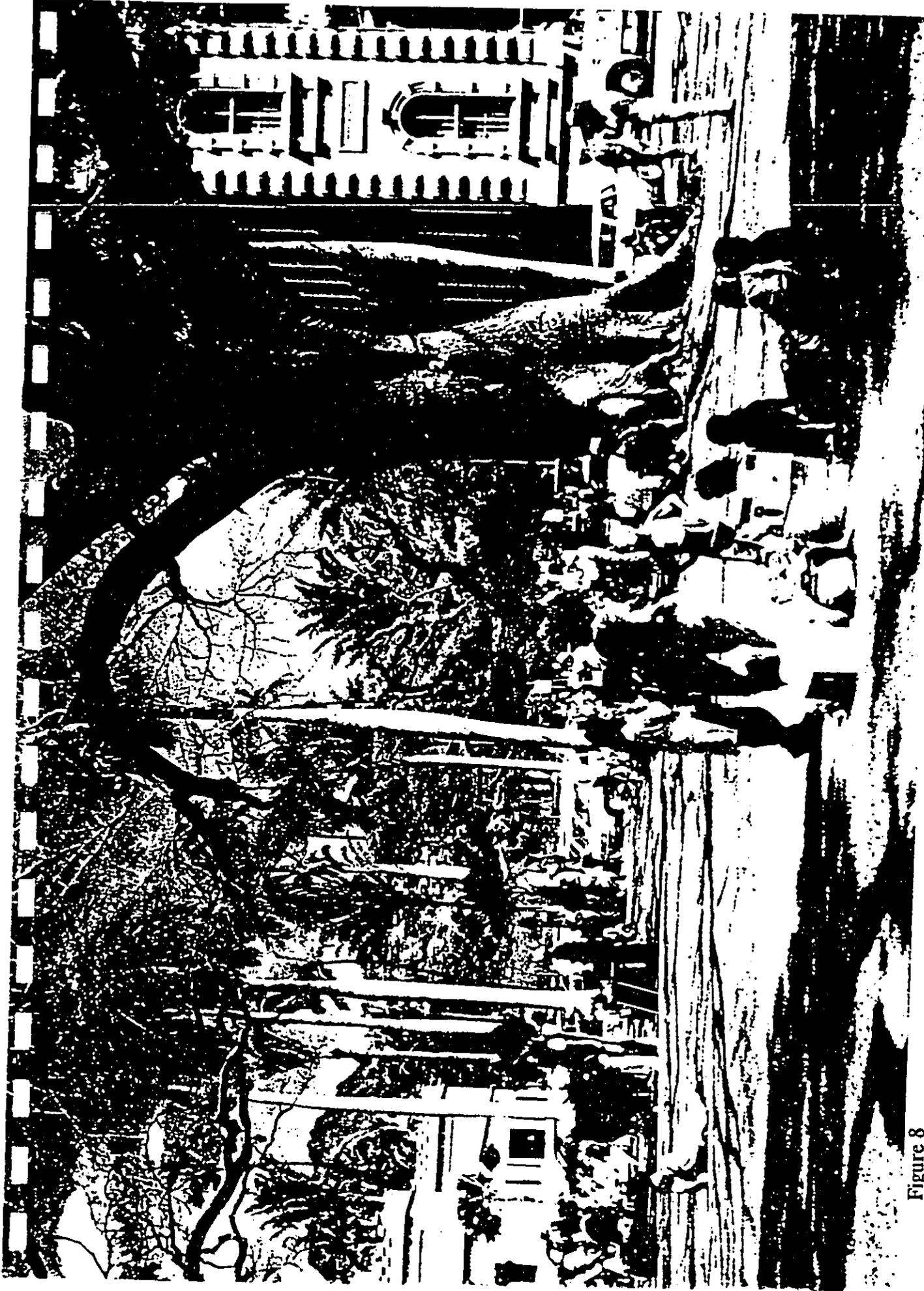


Figure 8

MAUKA VIEW FROM IOLANI PALACE GROUNDS
Korean and Vietnam Conflict Memorials

FOR: State Department of Defense



Figure 9
MAUKA VIEW FROM IOLANI PALACE STEPS
Korean and Vietnam Conflict Memorials
FOR: State Department of Defense

The height and material of the memorial walls and prisms relate to building articulations and complements scale, color, texture and proportion of the State Capitol. The memorial walls and prisms are juxtaposed, (1) to create a sense of humbleness and reverence, (2) to focus on historic structures and the Punchbowl Memorial Cemetery of the Pacific, and (3) to illustrate the geographic relationship and location where the two conflicts occurred.

SECTION 7
ALTERNATIVES

The Site Selection Committee of the State Commission on Memorials for the Veterans of the Korean and Vietnam Conflicts considered 23 proposed sites throughout the state for the memorials. The sites were evaluated based the following factors:

1. **Accessibility**
 - Easily approached for public viewing
 - Centrally located
 - Traffic pattern
2. **Parking Facilities**
3. **Maintenance:**
 - Grounds
 - Monument
4. **Exposure:**
 - Visibility
 - Visitation by public
 - Visitation for educational purposes
5. **Location:**
 - Accessibility by Bus or taxi
 - Accessibility by POV
 - Accessibility by walking
6. **Appropriate for Memorial**
 - Atmosphere vs. recreation
7. **Availability of Land**

(Source: Testimony on House Bill 3658 relating to Veterans War Memorials by Lawrence S. K. Lee, Director, Office of Veterans Services, February 4, 1992). Following the Site Selection Committee's evaluation and deliberations, it was concluded that the State Capitol grounds in downtown Honolulu was the most appropriate site based on the criteria listed above.

The State Commission also evaluated alternative design concepts in a statewide design competition. Design objectives included in the November 1989 Request for Proposals (RFP) were that the concept (design solution) needed to achieve a memorial that is in proportion and relates to the monumental scale of the Hawaii State Capitol; and create a space that is in keeping with the landscape character and park-like setting of the historic, cultural, and scenic Hawaii Capitol District. Of the 36 entries, seven finalists were selected to further develop their preliminary design submittals. Following the competition, a jury that was appointed by the State Commission selected the design concept proposed by Benjamin Lee and Elaine Murphy as the project that best addressed the Commission's project objectives stated in the RFP.

SECTION 8
DETERMINATION

8.1 Determination

The proposed Korean and Vietnam Conflict Memorials project has been selected by the State Commission (January 1991) to be located on the ewa lawn of the State Capitol building. This assessment indicates that the proposed project will have no significant adverse impact on the environment, and an Environmental Impact Statement is not required. Therefore, in accordance with the provisions of Chapter 343, Hawaii Revised Statutes, a Negative Declaration is determined to be in order.

8.2 Findings and Reasons Supporting Determination

The impacts generated by construction of the proposed project are temporary. These impacts are minor in scale and will cause some inconvenience to the neighborhood during the period of construction. The use of mitigative measures will reduce or eliminate these impacts.

Adequate dust control measures will be utilized during construction to minimize airborne particles. Adherence to approved erosion control plans and the use of mitigative measures such as water sprinkling will reduce the potential for adverse impact on air quality.

Construction equipment will emit some air pollutants in the form of engine exhausts. With proper maintenance, emissions from these equipment will be minimized. Prevailing tradewinds will also help in dispersing the airborne pollutants.

Construction activity will create a temporary increase in noise levels. Use of mufflers to maintain noise levels in compliance with State Department of Health noise regulations will be complied with.

Traffic on the streets surrounding the project sites will be temporarily disrupted. A traffic control plan that will be approved by the City and County of Honolulu will be used to minimize impact on traffic circulation.

SECTION 9
AGENCIES CONSULTED IN MAKING THE ASSESSMENT

State

Department of Land and Natural Resources
Historic Preservation Office
Department of Accounting and General Services
Department of Defense
Office of Environmental Quality Control

County

Department of Land Utilization

Other

(Downtown) Neighborhood Board No. 13
Benjamin Lee
Elaine Murphy

APPENDICES

APPENDIX A

State of Hawaii Legislative Hearings relating to the Korean and Vietnam Conflict Memorials held during the 1991 Legislative session are:

Senate Committee on Culture, Arts and Historic Preservation
Eloise Tungpalan, Chair
SR 1144
SCR 166
Hearing held: April 9, 1991

House Judiciary Committee
Wayne Metcalf, Chair
HCR 76
Hearing held: April 11, 1991

House Finance Committee
Joseph Souki, Chair
HCR 76
Hearing held: April 18, 1991

Korean and Vietnam Memorials

Benjamin B. Lee, AIA
Elaine Murphy

May 31, 1990

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He maka lehua no kona one hanau

One who has the face of a warrior
(loyal and honored) in his birthplace

Concept:

To create a sense of place where the spirit of life is captured in light through time and space. That is the key and compelling notion which we used in developing a simple yet strong concept and solution for the war memorials.

There are two memorials designed to reflect a sense of place and spirit for the Korean Conflict and for the Vietnam Conflict. The memorials honor men and women of the Armed Forces from Hawaii who gave their lives defending the principles of our country.

The solution is dynamic and kinetic. It changes constantly as the earth turns each day. The prisms are tuned to the seasons to project large bands of spectrum that move through space. The prisms throw spectrums of colors on the walls, grassy areas of the Capitol grounds and on the visitors who come close to the memorial walls. The memorials and the space defined by the walls and prisms will provide an opportunity to honor, reflect and remember why so many lives were lost in the conflicts. The memorials change with the time of day and seasons. The ever changing rainbow of colors created by the

prisms compels you to visit the memorials again and again.

Solution:

In developing a solution which reinforces this concept, three triangular forms and two solid horizontal planes are provided to create a sense of place. The three triangular vertical forms relate to heights and articulations of the State Capitol (see elevations). Material for the triangular forms and the solid horizontal planes would be of granite, flamed or polished finish. Atop each of the three triangular forms is a transparent prism. The prisms are juxtaposed to capture the natural daylight and disperse an array of rainbow colors around the Capitol grounds and on the horizontal planes of the war memorials. The dispersion of colors will be kinetic as the sun's angle moves between summer and winter solstice.

The height to the top of the prisms are 27', 33' and 42'. The length of the wall for the Vietnam memorial is 84' and 68' for the Korean memorial. The height and thickness of the walls are 8' and 2' respectively. The walkways are 12' wide and the platform is 38' (to reflect the 38th parallel) by 42'.

We have also integrated and improved the appearance of the existing ventilator along Hotel Street Mall. The identification of the memorial, the seals of each of the Armed Services and the map showing the relationship and location of both conflicts will be inscribed on the wall

facing Hotel Street Mall. The flags of our nation and Hawaii will be placed on either side of the wall around the ventilator.

Form:

The prisms and triangle (triad) arrangement are universal symbols for family, life and God in all cultures and all faiths.

The prisms provide a visual focal point for the war memorials but would not detract from the open space character and park-like setting of the Hawaii Capital District.

Two planes of solid granite, aligned with the surfaces of the vertical prisms, will have names of Hawaii residents who are casualties of the conflicts or missing in action sandblasted on the exterior surfaces. As you approach the memorials there will be a description, map and history of the Korean and Vietnam conflicts on each of these walls.

Context:

The memorial is uniquely designed for Hawaii. The rainbow of colors; the triangular shape of the prisms symbolize a triad which is a universal symbol for family, life and God in all cultures and all faiths. The triad of prisms serves as a symbolic reminder of the triangular form of the folded flag which is presented to the family at all military funerals. The folded flag symbolizes the tri-cornered hat of our nation's first military uniform.

The material, scale, and color of the memorials are designed to complement our state's Capitol building and grounds. The prisms are transparent, providing an opportunity for an illuminated beacon at night. The memorials are also, in this sense, "a torch for peace," a term used by the late Senator Spark Matsunaga. The memorials for the Korean and Vietnam Conflicts will be a place one can visit at anytime, day or night.

The walls guide pedestrians from Richards and Hotel Streets to the center of the memorials. One of the solid granite planes is focused towards Iolani Palace and the other is angled approximately 45 degrees to show the geographic relationship between the two conflicts and also points toward the general direction of Southeast Asia where the two conflicts occurred.

Space:

The concept of the war memorial is not to compete with, but to complement the size, scale and proportion of the State Capitol.

The three prisms are clustered together to define a small enclosed space for solitude and reflection. It is purposely monumental to create a sense of humbleness, reverence and respect for those who so bravely lost their lives serving our country. The prisms are aligned with the center line of the third row of column supports of the Capitol. Its location will also be on axis from Hotel Street Mall as one approaches the Capitol in the Diamond Head direction

(east) from Bishop Street and downtown.

Circulation:

The principal approach to the memorials will be from Hotel Street Mall. It will be accessible to all including the disabled. Access from Beretania Street is somewhat limited and not desirable. We envision the public entering the Capitol rotunda from Beretania Street and then proceeding to the memorials from Hotel Street Mall. Tourists visiting Iolani Palace will easily be able to include the memorials on their tour of the Capitol District. The disabled may enter on grade from the pathways provided along Hotel Street Mall.

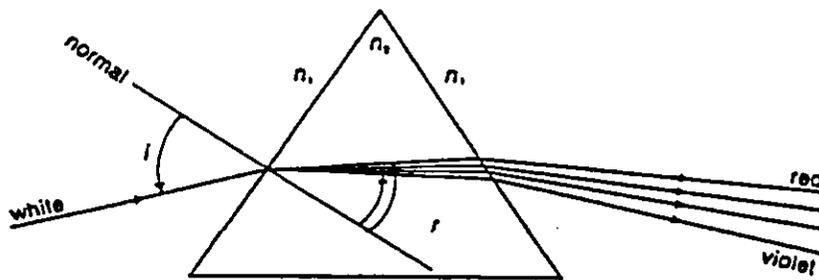
An additional bus pick-up and drop-off area can be created along the Richards Street side of the Capitol.

Prism:

The prism is a familiar and immediately recognizable form. Forms and markers have historically been used for the display of public truths and for keeping remembrances alive.

The simplest prism, a dispersion device, is a triangular block of glass with two faces at right angles and one at an angle of 45 degrees. A most spectacular illustration of dispersion is the rainbow. The rainbow is nature's phenomenon which has become symbolic of the spirit of

Hawaii. Historically, glass prisms were first used to break up or disperse light into its component colors. The prism separates the colors of the spectrum because the refractive index of the glass is lowest for red light and progressively increases through yellow and green to blue, where it is the highest.



Refraction of light by a prism

Text:

We have provided text samples. We would like to work with the Commission should our proposal be selected to finalize the text portion of the design.

There are five areas of text on the walls and prism surfaces (see photo on next page). They are:

1. Description and map showing the geographic relationship of the Korean and Vietnam Conflicts. This text will be on the ventilator wall facing the Hotel Street Mall.

The inscription reads:

The Korean and Vietnam Memorials
A timeless place commemorating the

contributions , sacrifices , commitment and patriotism for which we remember and honor those who gave their lives for Hawaii and the people of our nation.

2. Sandblasted on the beginning of each wall of the memorials will be a map and a description of the conflict. Names of those who lost their lives in the conflicts will be inscribed by sandblasting on the polished surface of the wall similar to the word "HONOR" on the sample board we have provided. The names will be arranged in order of the year and month they were taken from us. Graphic symbols (eg: ○, ●) will be used to designate the missing and those who lost their lives. A suggested description of the conflicts follows:

Korean Conflict:

More than 400 men and women from Hawaii lost their lives while serving in the Armed Forces during the Korean Conflict, including those from The Fifth Regiment Combat Team, 24th and 25th Divisions.

At the end of World War II, Korea had been divided into North and South Korea at the 38th parallel of latitude.

In June, 1950, in an effort to unify the country by force, North Korea invaded South Korea. Sixteen

United Nation members sent troops to South Korea to contain this "act of aggression." The Korean Conflict established a precedent for United States intervention to contain the spread of communism in Far East Asia. The Korean Conflict ended in July, 1953 with an armistice establishing the border line between North and South Korea at the 38th parallel.

Vietnam Conflict:

Thousands of Hawaii's men and women from all segments of the Armed Forces served in the Vietnam Conflict. Among the more than 55,000 American lives which were lost during the Vietnam Conflict, over 300 soldiers were from Hawaii.

Following the withdrawal of French colonial forces in 1954, Vietnam was divided into North and South Vietnam. In the 1950s the United States began providing funds and arms to South Vietnam to help defeat the invasion by North Vietnam. American soldiers were sent to South Vietnam in the early 1960s and by 1968 more than 500,000 Americans were involved in the conflict. Peace negotiations began in 1968 and a cease fire was declared in January, 1973. Vietnam was unified under a communist Government in 1975, following the collapse of the South Vietnamese government.

3. On the back side of the Vietnam Memorial wall,

which represents the larger of the conflicts and is, therefore, the longer wall, will be placed a Hawaiian proverb which describes the design spirit of the memorials. Because of the flamed finish texture on the granite, the inscription will have a reversed finish. For example polished raised letters on a textured granite field as follows:

"He maka lehua no kona one hanau."
One who has the face of a warrior (loyal and honored) in his place of birth.

4. As you face the cluster of three prisms the following will be inscribed on the inner walls of each prism:

HONOR (on the left)
WE ARE WITH YOU,
WE WILL NEVER FORGET (in the center)
FREEDOM (on the right).

Materials:

- Polished granite 4' x 8' sheets of "Stone Panels" for the memorial walls and prisms (samples of the Stone Panels are provided and specifications are included in the appendix).
- Flamed finish granite of the same color will be used for the walkways and the back side of each of the memorial walls.

- The bench will receive a sandblasted finish.
- Prisms will be constructed of 4" - 6" thick plexiglass with 2" round stainless steel pipes at the apex. The prisms are hollow but filled with mineral oil via the stainless steel pipes. The solid lower portion of the prisms will be of polished granite panels similar to the walls.
- Triangular steel structures (see plan and section) support each of the prisms. The stone panel walls will be attached to light metal, galvanized steel framing.
- The 12' wide walkways will be a flamed finish granite. Between the walls and the walkways could be a transitional material such as spaced granite pavers with grass between them to allow for placement of flowers and memorabilia by visitors.
- Flagpoles on each side of the ventilator walls will be steel or anodized aluminum, dark bronze in color. They are approximately 62' in height to align with the top of the concrete columns of the Capitol.

Construction:

The granite panels are laminated onto an aluminum honeycombed core material called "Stone Panels". It is extremely light weight and watertight (see samples distributed). The prisms are hollow, made of 4" to 6" thick plexiglass. Mineral oil will fill the cavity. The prisms sit on a steel structure on top of a concrete footing. The concrete footing rests atop the precast tees of the existing parking structure.

There are three components to the prism structure.

1. The concrete and steel base plate shown in green.
2. The steel triangular support atop the steel base with a leveling plate shown in red.
3. The plexiglas prisms with three 2" round stainless steel pipes at the apex attached to a stainless steel base plate. This pipe and base will be cast as an integral part of the prism. The steel pipes serve two purposes. First, they give added strength to the structure and second, they facilitate the filling and emptying of the prism cavity with mineral oil. The oil reduces the weight, cost and difficulty of creating solid glass or plexiglas prisms of this size.

The upper 4' of the granite panel, just below the prism, is removeable and serves to access the pipes and light fixture.

The granite walls of the two memorials are 8' tall and 2' thick but hollow on the interior. The granite "Stone Panel" system can easily be installed using steel and metal stud framework (see the attached brochure).

We are excited about the new technology of "Stone Panels." Its weight and flexibility will facilitate construction with substantial cost savings.

Conclusion:

We believe our design provides the best solution for the Korean and Vietnam Conflict Memorials. By utilizing light as a design element, our concept adds a profound symbolic element to the visual appeal and fascination through the changing colors provided by the spectrums. The rainbow is an arc of hope, an enduring symbol of our nation's wish for peace. The universal symbols used for the memorials honor the men and women of Hawaii as well as the principles of our country. We hope that you share our belief that this design is the best and most appropriate memorial to our brave citizens and that it provides a meaningful contribution to art and architecture in our community.

Appendix A

Korean and Vietnam Conflict Memorials
Preliminary Cost Estimates

1.	Granite "Stone Panel" Fabrication, finishing, shipping and installation of walls, walkways, vent- ilator walls and bench.	\$400,000
2.	Prisms - 3 @ \$115,000 each	\$345,000
3.	Site preparation, grading and waterproofing	\$50,000
4.	Structural steel and connectors	\$35,000
5.	Concrete Work Foundations for prisms and flagpoles	\$20,000
6.	Electrical Work Lights along Walls and in Prisms	\$20,000
7.	Flag Poles - 2 @ \$12,000	\$24,000
8.	Inscription of text, maps, and names on memorial walls	\$35,000
9.	Landscaping	\$5,000
	Subtotal	<hr/> \$934,000
	Contingency 5%	\$46,700
	Total	<hr/> *\$980,700

*Does not include:

- (1) Consultant Fees (architect, civil, structural, electrical and landscape).
- (2) Cost for structural modifications to existing parking structure and ventilator, if required.

Korean and Vietnam Conflict Memorials Preliminary Schedule

	1990												1991											
	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC							
Construction Documents (plans & specs.)	3 months																							
Bid/Award/NTP				2 months																				
Fabrication					3 months																			
Shipping							3 months																	
Inscription/Maps & Names										1 mo.														
Construction													4 months											
TOTAL				14 months																				

TECHNICAL SUPPORT

FIRE RATING (ASTM-E-84)

- Flame Spread Index = 10
- Smoke Density = 195
- Class A (NFPA Std.); Class I (U.B.C. Std.)

NON-COMBUSTIBLE CONSTRUCTION

- UBC 17-2 ASTM D-2015
- UBC 17-6 Multi-Story

EVALUATION REPORTS

I.C.B.O.—Research Report PFC4397
 Toxicity-Southwest Research Institute Project #01-8818-705
 Honeycomb Composite Test—Construction Consulting Lab, #93A
 Flexural Test—Ramtech Lab. #7619-85
 Certification Available Upon Request. All Tests Conducted by Independent Testing Laboratories.

WIND LOAD TABLE (Per ASTM E-72)

Allowable Wind Load (P.S.F.) Single Span (FEET)

5	10	15	20	25	30
7'-11"	6'-3"	5'-6"	5'-0"	4'-7"	4'-4"
35	40	45	50	55	60
4'-2"	3'-11"	3'-10"	3'-6"	3'-2"	2'-11"

For greater wind requirements, contact our technical staff.

DESCRIPTION

Natural stone veneer bonded by epoxy impregnated glass fiber to an aluminum honeycomb panel.

SPECIFICATIONS

- Nominal standard panel dimensions = 4'-0" x 8'-0"
- Nominal maximum panel dimensions = 5'-0" x 10'-0"
- Overall panel thickness = 15/16" plus/minus 1/16"
- Cutting tolerances for length, width and squareness = specified dimension plus/minus 1/16"
- Honeycomb core panel thickness = 3/4"
- Nominal Weight = 3.3 pounds per square foot



World-Wide Suppliers of Ultra-Lite Marble & Granite Panels

For more information, or the location of your nearest representative, please contact:

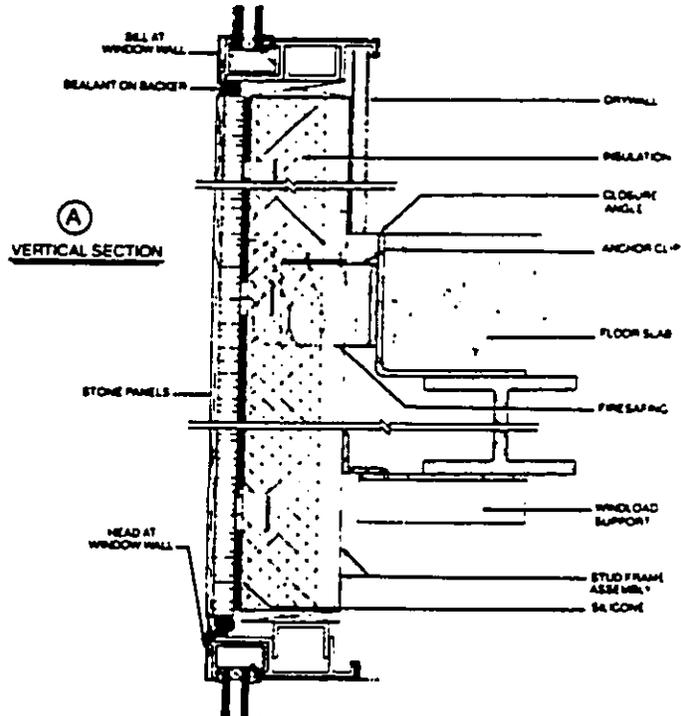
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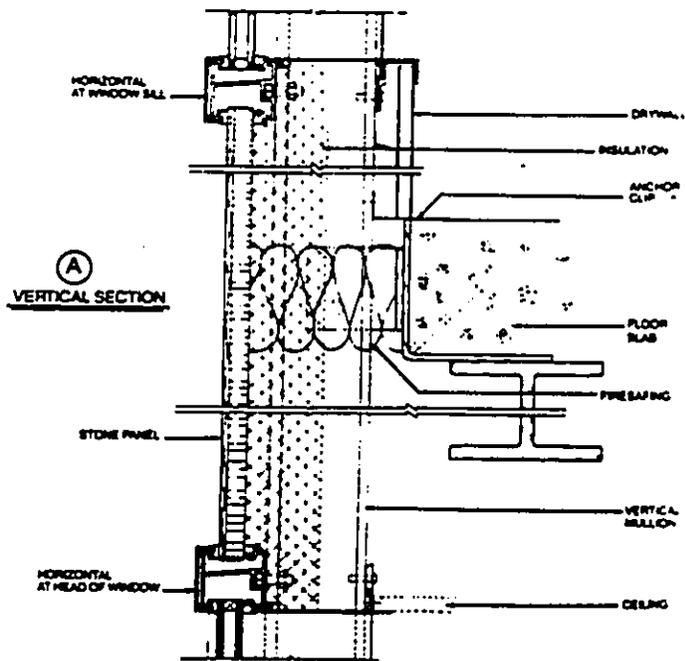
TYPICAL DETAILS

Appendix C

INSTALLATION ON STUD FRAME



INSTALLATION IN CURTAIN WALL SYSTEM



August 25, 1990

Governor John Waihee
Hawaii State Capitol
Honolulu, Hawaii 96813

Dear Governor Waihee:

Thank you for the opportunity to present our design proposal for the Korean and Vietnam Conflict Memorials. In answer to your questions and maintenance concerns expressed at our meeting, we have obtained the following information:

Materials

There are two materials that can be used to fabricate the prisms, 3" to 4" thick glass or laminated glass, or 3" to 4" thick Plexiglass. There will be absolutely no discoloration, scratching or crazing if glass is used. Rhom and Haas, one of the nations largest Plexiglass manufacturers, will provide a 10 to 20 year warranty against any yellowing or discoloration of the material. In addition, exterior protective coatings can be used to prevent scratching, reduce glare and reflectivity as well as enhance the refractive properties of the prisms.

Weight

The weight of the prisms constructed of glass and Plexiglass filled with mineral oil are:

Prism	A 3" glass	B	C	A 3" Plexi	B	C
Prism	14,450	14,450	14,450	7,225	7,225	7,225
Oil	14,934	14,943	14,943	14,943	14,943	14,943
Steel Plates	709	709	709	709	709	709
Steel Structure	3,622	2,205	1,260	3,622	2,205	1,260
Stone Panels	1,480	901	515	1480	901	515
Concrete Footing*	1,531	1,531	1,531	1,531	1,531	1,531
Totals	36,726	34,730	33,399	29,501	27,505	26,174

*Note: Footing weight equals the weight of concrete less weight of the dirt displaced by the footing.

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Maintenance

Existing prism sculptures at the San Francisco International Airport and at the Plaza of the Americas in Dallas, Texas, are excellent examples of oil filled prisms. The sculptures have been in place six years, requiring little or minimal maintenance. Photos and descriptive brochures are enclosed.

The flags marking the locations of the memorials have been replaced with paint for the safety of the children who play on the West lawn. Please inform us if we should meet with Bill Paty and Russell Nagata at the site to review our design proposal.

We look forward to your decision to proceed.

Sincerely yours,

Elaine Murphy

Benjamin B. Lee, AIA

Enclosures