# PROPOSED KUHIO AVENUE WIDENING PROJECT <br> (Kaiulani avenue to kapahulu avenue) 

# REVISED <br> ENVIRONMENTAL IMPACT STATEMENT 

DEPARTMENT OF PUBLIC WORKS<br>CITY \& COUNTY OF HONOLULU

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REVISED
ENVIRONMENTAL IMPACT STATEMENT FOR
THE PROPOSED KUHIO AVENUE WIDENING PROJECT
CITY AND COUNTY OF HONOLULU, STATE OF HAWATI

This environmental document is submitted pursuant to Chapter 343 of the Hawaii Revised Statutes

Accepting Authority - Governor, State of Hawaii


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## I. SUMMARY

## A. DESCRIPTION OF THE PROPOSED ACTION

The City and County of Honolulu is proposing to improve and widen Kuhio Avenue, a major arterial, in the ewa-kokohead direction located in the Waikiki area of Honolulu. The project is designed to accommodate a need for improved traffic circulation in the area of Waikiki in which it is located, in accordance with policies established in the General Plan of the City and County of Honolulu. Its design features also conform with a general street improvements program for that area. They include the reconstruction of utilities, the construction of new sidewalks, curbs and gutters, the installation of street lights and traffic signals, fire alarm system, complete drainage system, the construction of a relief trunk sewer, and adjustments to the existing sewer and water systems.

## B. DESCRIPTION OF THE ENVIR ONMENTAL SETTING

The proposed project is located at the kokohead end of Waikiki. This area, bounded by Ala Wai Boulevard and Kaiulani, Kalakaua and Kapahulu Avenues contains a diverse mixture of highrise tourist hotels and apartment-condominiums, lowrise apartment houses and older single family residential structures. On the ewa end of the
project area, Kaiulani Avenue separates the project area from the major Waikiki commercial and residential district. On the kokohead end, Kapahulu Avenue separates the project area from Kapiolani Park. Ala Wai Boulevard and Kalakaua Avenue form the mauka-makai boundaries of the project area.

The area through which the proposed improvement passes has been referred to, in the past, as the "jungle," because of its poor physical and social conditions, high crime rates and transient population. However, this area is presently a focus for the development of highrise hotels and condominium apartment complexes.

The proposed improvement encompasses the length of Kuhio Avenue, between an ewa intersection with Kaiulani Avenue and a kokohead intersection with Kapahulu Avenue, a distance of approximately one. half mile.

## C. SUMMARY OF ENYIRONMENTAL IMPACT

The proposed project will have the following beneficial and adverse impacts.

- Reduce congestion and improve vehicular accessibility and circulation in the project area.
- Improve pedestrian circulation and safety.
- Provide storm drainage and sewer improvement in the project area.
- Improve transit service in Waikiki.
- Support land use policies by implementing the General Plan of the City and County of Honolulu.
- Increase ambient noise levels along Kuhio Avenue by some 5 to 10 dBA .
- Increase ambient air pollution levels along Kuhio Avenue but this increase is estimated to be within State and Federal standards even under the worst conditions.
- Discharge some 300 cubic feet per second of storm waters into the Ala Wai Canal during a 50 -year storm.
- The displacement of people from 48 residential dwelling units and 2 nonprofit organizations.
- Removal of some 105 trees of 29 different varieties, most of which are common landscape type.
- Cause short-term impacts during construction activities on air quality, noise level, water quality and vehicular traffic access to properties.


## D. LIST OF ALTERNATIVES CONSIDERED

## 1. Do-Nothing

2. East-West Corridor Alternatives - Improvements located in different corridors including new offshore facility, widening of Kalakaua Avenue and widening of Ala Wai Boulevard.
3. Alternative Routes Within the Project Area - Improvements to other east-west routes in the project area. Also improvements to north-south streets in lieu of improvements to east-west routes.
4. Alternative Designs for Kuhio Avenue - Alternative alignments and right-of-way widths. Alternative right-ofoway (R.O.W.) widths included:
a. $70^{\prime}$ R.O.W. (proposed action)
b. $60^{\prime}$ R.O.W.
c. $56^{\prime}$ R.O.W.
5. Findings and Conclusions - The proposed action will provide the needed capacity to meet projected traffic demand. It will also provide safer and more efficient use of Kuhio Avenue by circulating traffic with the provision of leftaturn pockets and as the planned bus transit route through Waikiki. The proposed action is supportive of the land-use policies of the City and County of Honolulu.

## II. DESCRIPTION OF THE PROPOSED ACTION

## A. PURPOSE AND NEED

The proposed action involves the improvement and widening of Kuhio Avenue between Kaiulani and Kapahulu Avenues, a distance of approximately one-half mile and is located in Waikiki on the Island of Oahu. The implementation of the proposed action will utilize both State and County lands and County funds.

Chapter 343 of the Hawaii Revised Statutes requires that any action which proposes the use of State or County lands or the use of State or County funds which will probably have significant effects, must consio der a broad range of factors in determining the purposes and needs of the proposed action or actions and their effects on the physical and social environment. This environmental impact statement has been prepared to describe these factors and to evaluate the probable impacts of the proposed action.

## 1. General Plan

In its broadest sense, the purpose of the proposed action is to implement the land use policies of the City and County of Honolulu as expressed in the General Plan of 1964, (as amended), and the supporting general circulation and transportation plan for the Waikiki-Diamond Head area, which is included in the

Development Plan (DP) for the Waikiki--Diamond Head Planning Area and the recently adopted Waikiki Special Design District.

## 2. Vehicular Circulation

Another purpose of the proposed action is the improvement of circulation on Kuhio Avenue, which is an important element of the overall circulation pattern in Waikiki. Kuhio Avenue is one of three heavily utilized ewa-kokohead routes through the area. Of these, Ala Wai Boulevard serves as the kokohead entrance into Waikiki and accommodates ewa-bound traffic, and Kalakaua Avenue serves as the ewa entrance and accommodates kokohead. bound traffic. Kuhio Avenue primarily serves traffic circulating within Waikiki. Studies show that unnecessary circulation of traffic is a major cause of congestion in Waikiki. The proposed improvements to Kuhio Avenue are needed primarily to relieve this type of unnecessary traffic congestion and secondarily to supplement the movement of traffic on Ala Wai Boulevard and on Kalakaua Avenue.

## 3. Pedestrian Circulation, Safety and Drainage

The proposed improvements to Kuhio Avenue are also needed because the street does not conform with current design and environmental standards, making the street both unsafe and unpleasant for pedestrians. Within the project area Kuhio Avenue has serious drainage problems and there are no curbs and gutters
and sidewalks between Ohua Avenue and Makee Road. The street pavement is cracked and broken, and is in generally poor condition which disrupts the efficient and safe movement of cars. The street has a blighting, unaesthetic influence on the Kuhio Avenue surround.ings.

As early as 1966 , a study which was conduced by the Honolulu Redevelopment Agency warned: "the need to make adjustments in the land use and street pattern" (along Kuhio Avenue between Kaiulani and Kapahulu Avenues) 'has become urgent. ........... as it will become increasingly more difficult and costly to correct defects in the present lot and street arrangements. It is not just structural obsolesence alone that are causing conditions of blight, but as new developments are taking place, it is evident that.... the streets, never designed for apartment or hotel development, are creating serious blighting conditions."1/

This improvement and widening project is therefore needed to provide safe and efficient circulation for increased population and density which will naturally occur whether or not Kuhio Avenue is improved.

## 4. Bus Transit Service

The purpose and need of this project is finally to provide a
sufficient right-of-way to accomodate City bus service on Kuhio Avenue between Kaiulani and Kapahulu Avenues. The City's transit planners in the Department of Transportation Services have indicated that the transit service on the centrally located Kuhio Avenue would provide the shortest access time to the Waikiki transit users and therefore have specified in long range transit plans the use of Kuhio Avenue as the main transit corridor through Waikiki. The existing rightmof-way through the project area is presently too narrow for the provision of this service without further reducing the restricted street capacity for automobiles.

## B. THE PROPOSED ACTION

The proposed action is located in the kokohead end of Waikiki (See Figure 1) and consists of the improvement and widening of the existing Kuhio Avenue from Kaiulani Avenue to Kapahulu Avenue, to a 70 foot right-of-way with a standard 56 foot roadway, as designated in the General Plan of the City and County of Honolulu and which is in accordance with the "Subdivision Rules and Regulations" of the City and County of Honolulu, dated June 20, 1973. Figure 2 shows the limits of the proposed street widening. The improvements associated with the street widening will include a complete drainage system for the street and its immediate surrounding area with provisions for the remaining unimproved areas to connect to this drainage system in the future, a relief trunk sewer, adjustments to existing utilities in conflict with the drainage and sewer improvements, driveway ramps, safety features including street lighting and traffic signals, sidewalks, crosswalks, wheelchair ramps, street landscaping, some grading for drainage and the replacement of existing driveways.

The proposed action also includes the partial closing of Kaiulani Avenue, makai of Kuhio Avenue, between Kuhio Avenue and Prince Edward Street. This partial closing would entail construction of curb and gutters and a sidewalk across the entire width of Kaiulani Avenue where it intersects the makai side of Kuhio Avenue. To maintain access to those properties


fronting on Kaiulani Avenue between Kuhio Avenue and Prince Edward Street, a driveway will be provided from Kuhio Avenue into Kaiulani Avenue.

The proposed action will include improvements designed to provide adequate drainage for storm waters which may accumulate on the proposed new roadway during heavy rainfalls and to improve drainage of the immediate surrounding area which also floods during periods of heavy rainfall. The new drainage system would consist of a new storm drain to replace the existing 18 inch drain in Kaiulani Avenue. The pipe would vary in size, increasing from 18 inches at Kuhio Avenue to 60 inches at its outlet into the Ala Wai Canal.

In Liliuokalani Avenue, a $9 \times 5$ foct box culvert is also proposed, between the outlet at the Ala Wai Canal and Kuhio Avenue. This drain would service three branch lines at Kuhio Avenue. The first branch line would be a $6 \times 3$ foot box culvert, in Kuhio Avenue, from Uluniu Avenue where it would connect to a 36 inch pipe in Uluniu Avenue. The second branch would continue in Liliuokalani Avenue as a 36 inch pipe which would service the future drains up to Kalakaua Avenue. The third branch, a 36 inch pipe in Kuhio Avenue, would originate from Kealohilani Avenue where it would connect to a 36 inch pipe.

The proposed action also includes a third major storm drain, a $7 \times 4$
foot box culvert which is proposed in Paoakalani Avenue between the Ala Wai Canal and Kuhio Avenue For local service in Kuhio Avenue, a 24 inch pipe would connect to the box culvert and originate from a point about midway between Paoakalani and Kapahulu Avenues. Additionally a $5 \times 3$ foot box culvert in Paoakalani Avenue, south of Kuhio Avenue, would connect to this third major drain. The existing drainage system at Kapahulu Avenue will remain the same except for the addition of another catch basin and the reconstruction of the two existing catch basins.

The proposed drainage system is shown in Figure 3. As all three drains approach the Ala Wai Canal, they all bend towards downstream to outlet into the Canal at a $45^{\circ}$ angle. The existing ground elevation near all three outlets is approximately 5.0 feet above mean sea level. The average elevation of the water surface at all three outlets is approxio mately 3.0 feet above mean sea level. The Canal itself is lined on both sides, with a CRM (concrete, rock, and mortar) wall which has a ledge approximately 2 feet wide, protruding towards the Canal。The Canal wall is founded in a coral shelf which is over 2 feet thick and which also protrudes between 5 to 10 feet beyond the face of the Canal wall ledge, into the Canal. The top of this coral shelf is located approximately 2 feet below mean sea level with the face of the shelf sloping gradually down to an elevation approximately 4 feet below mean sea level at which


FIGURE 3
point it meets the bottom of the Canal.

Based on preliminary plans, the invert elevations of the proposed Kaiulani Avenue, Liliuokalani Avenue and Paoakalani Avenue drains at the outlets are 2.7 feet, 3.3 feet and 2.2 feet below mean sea level, respectively. Portions of the drains would be located within the coral shelf. But at the outlet, the drain structure is currently planned to be constructed flush with the face of the Canal wall and the coral shelf excavated adequately such that the bottom of the excavation is below the invert of the drain and the sides of the excavation are wider than the drain.

The proposed action includes improvements to the existing sewer system which would be conducted prion to the actual construction of the new roadway surface. These improvements have been planed as components of the same project in order to minimize both costs and imatact to the surrounding neighborhood. Proposed improvements to sewers include a new line in Kuhio Avenue between Makee Road and Ohua Avenue, consisting of a 12 inch pipe between Makee Road and Paoakalani Avenue and a 24 inch pipe between Paoakalani and Ohua Avenues. At Ohua Avenue, this new 24 inch pipe will connect to another proposed line which would traverse the remaining length of Kuhio Avenue in the project area between Ohua Avenue and Kaiulani Avenue where it would join the existing sewer system. This new line would consist of a 30 inch
pipe between Ohua and Kaiulani Avenues and would replace the existing 15 inch - 16 inch sewer line in Kuhio Avenue. The existing sewer lines in Paoakalani Avenue will also tie into this new 30 inch sewer line at Ohua Avenue. The proposed sewer improvements are shown in Figure 4.

The proposed action will require the acquisition of 55 parcels owned in fee simple by 34 private individuals, the Liliuokalani Trust, 2 utility companies, the City and County of Honolulu, and the State of Hawaii, totaling some 1.5 acres. Some 48 households and 2 nonresidential units will be affected by the implementation of the 70 foot right-of-way on Kuhio Avenue. The approximate number of units affected by the proposed action is based on the assumption that certain structures affected may partially remain if a major portion of the structure is unaffected by the proposed project. The final number of units affected will only be determined once final design and right-ofway acquisition is completed. Those structures that will partially remain will be cut and refaced.

Appropriate landscaping of the street right-of way is also included in the proposed project. This landscaping will be based on a comprehensive landscape masterplan which will contain the following elements:
a) Tree relocation program to develop criteria for the relocation of existing trees within the project boundaries and to incorporate their use in the final landscape plan.

b) Landscape plan to develop and design a planting and irrigation plan that is responsive to the visual character and the present and future needs along Kuhio Avenue.
c) Pedestrian circulation plan to develop design criteria for the circulation of pedestrians and incorporate these principles in the sidewalk layout plan.

The comprehensive landscape masterplan will be coordinated with the Departments of Land Utilization and Parks and Recreation and will be based on the following considerations:
a) Existing physical considerations including:

1) Pedestrian and vehicular circulation
2) Visual amenities and context of the area
3) Boundaries and buildings and
4) Planting types and masses.
b) Natural considerations including:
5) Microclimate
6) Soils and
7) Topography.
c) Other considerations including:
8) Public safety and utilities
9) Serviceability and maintenance
10) Future physical consideration and
11) Budget constraints.

The project cost will total approximately $\$ 7.2$ million. Some $\$ 4.2$ million will be for right-ofmay acquisition, $\$ 1.3$ million for roadway and street improvements construction and $\$ 1.7$ million for off-site drain construction. Implementation of the proposed action will take approximately 2 years. The appraisal and acquisition of the rightoofo way will require approximately 1 year to complete, closely followed by the relocation of residents affected by the proposed action, then the relocation or adjustments to existing utilities in conflict with the proposed improvements. The construction of the drainage and sewer improvements would be next, followed by grading and the construction of the roadway surface and its various improvements, such as curbs and gutters, street lights, sidewalks, etc., which would require an additional year.

Some portions of the project is located within the Diamond Head Historical, Cultural and Scenic District (Ordinance No. 4507). These include a small portion of the roadway itself located between Makee Road and Kapahulu Avenue and at the three drain outlets into the canal. That portion of Kuhio Avenue located in the District already has an existing roadway width of 56 feet with curb and gutters on both sides of the roadway. The only modification proposed to this portion of the roadway is to change the roadway grade to match those currently proposed for the remainder of the project. Also new 7 -foot sidwalks will be constructed on either side of the roadway. An existing chain-link fence located on the mauka side of the roadway will be located 3-4 feet further mauka to allow the construction of the 7 -foot sidewalk.

## C. TRAFFIC REQUIREMENTS AND DESIGN PROVISIONS

The proposed action is located in an area which has experienced significant changes in its urban form in recent years. It is an area in which the pressures for development and general upgrading are and will continue to be great due to its prime location, to the age and condition of the existing structures, and to the land ownership patterns (See Chapter III, Section B). In this area, the many new residential and resort developments which have already occurred, and those which are currently either being planned or under actual construction in this area are creating a need for improved transportation facilities within the project area. However, few improvements to public facilities located within this area have, as yet, been accomplished.

1. Projected Traffic Demand and the Need for Improvements

As part of the basic planning program for the proposed action, a traffic volume projection analysis $2 /$ was conducted to determine the future traffic demand in the project area. In the analysis, traffic projections were estimated for the year 1995. The basic preliminary data used in developing the projections was furnished by the Oahu Transportation Planning Program (OTPP). This data was obtained by utilizing the latest available input data and proven computer techniques for trip projections and assignments to the
transportation network. The transportation network consisted of a roadway network which did not include the $H-1$ (Waikiki) bypass, and a transit network consisting of the proposed Fixed Guideway Rapid Transit System supported by its island-wide feeder bus network. The data obtained from OTPP did not reflect certain intrazonal trips and special trips, such as tourist trips, therefore manual adjustments were conducted to reflect these types of trips in the projection estimates.

Based on the traffic projection analysis, it is estimated that approximately 91,000 to 99,000 auto trips will be made on an average weekday in the ewa-kokohead direction, through the project area during the year, 1995. Of this total, approximately 4,000 to 4, 300 auto trips will be made during the peak hour and in the peak direction. These trips will ejther be passing through the project area; originate from or have a destination in the area; or be just simply circulating within the project area, itself. In Waikiki, the peak hour occurs in the P.M. peak period and the peak direction is towards kokohead. Therefore, these 4,000 to 4,300 auto trips would use either Kuhio or Kalakaua Avenues. It was also estimated that in the A.M. peak hour, some 3,700 to 4,000 auto trips will also be made in the peak ewa-bound direction, on an average weekday, in the year 1995.

The existing street network in the ewa - kokohead direction through the project area is comprised of Ala Wai Boulevard, Kuhio Avenue, and Kalakaua Avenue. This system is presently capable of accommodating, at a comfortable level of service (level of service $C^{3}$ ), a total of 3,800 vehicles per hour ( vph ) in the kokohead-bound direction and $2,700 \mathrm{vph}$ in the ewa-bound direction between Kaiulani and Ohua Avenues and a total of 3, 200 vph in the kokohead. bound direction and 2,700 vph in the ewa-bound direction between Ohua and Kapahulu Avenues. Available traffic volume counts taken in 1973 by the Department of Transportation Services, shows that through the project area, during the peak periods in the peak direction, there were some 2,500 to 2,700 vehicles per hour, operating on the existing street network in either the ewa or kokohead direction, nearing the design capacities of these facilities, based on providing a comfortable level of service.

If no improvements are made to the existing street network, based on the projected traffic volume for 1995, there would be serious deficiencies in the capacity of the existing street network to accommodate peak hour traffic volumes. During the P. M. peak hours, in the kokohead-bound direction between Ohua and Kapahulu Avenues, the projected traffic would exceed the design capacity of the street network by approximately $30 \%$. During the A. M. peak hours
deficiencies in the existing street network capacity would become more acute since the peak ewambound traffic flow would be served by Ala Wai Boulevard alone which has a design capacity of only $2,700 \mathrm{vph}$. Therefore, based on the estimated A. M. peak hour traffic volume, the projected demand would be approximately $40 \%$ over the design capacity of Ala Wai Boulevard.

The primary variables in estimating the number of trips generated in Waikiki is the number of dwelling units and hotel units. In the development of the projected traffic volumes, it was estimated that by 1995, under the previous land-use policies, Waikiki (C.T. 18, $19 \& 20$ incl.) would have some 9,000 dwelling units and approximately 50,000 hotel units. *

An average dwelling unit on the island of Oahu would generate approximately 8 person trips per day. A hotel room would generate approximately 6 person trips per day. Based on the se trip generation rates, the projected 9,000 apartment units and 50,000 hotel units would generate some 372,000 person trips per day. Under the land-use policies of the Waikiki Special Design District (WSDD), if Waikiki had 25,000 apartment units and 32,000 hotel units, some 392,000 person trips would be generated. (A detailed discussion on the potential number of apartment and hotel units that could exist

[^0]in Waikiki under the WSDD is presented in Chapter IV.) Based on the above data, the total number of units that could exist under the WSDD could generate slightly more trips than the total number of units developed earlier.

## 2. Design Provisions

An improved Kuhio Avenue will be designed to accommodate both local circulating traffic within Waikiki, and traffic with trip origins or destinations in Waikiki from other areas on the island. The proposed action will convert Kuhio Avenue into a two-way facility, and will improve the general traffic circulation within the project area and to some extent within the remainder of Waikiki, as well as improve access to properties along Kuhio Avenue.

Since Kuhio Avenue bisects Waikiki from end to end, it has been identified by transit planners as the preferred transit corridor for trips originating and destined to Waikiki. Due to the increasing traffic demands caused primarily by new development in the area and to the use of Kuhio Avenue as the preferred transit corridor within Waikiki, a minimum of two traffic lanes in each direction will be required. Additionally, because Kuhio Avenue will be the most important feeder route to local mauka-makai streets, it will have a large volume of turn-
movements. An exclusive left-oturn lane should be provided to adequately service these movements without constraining the traffic flow.

The City has master planned Kuhio Avenue as a bike route through Waikiki. To minimize conflicts between bicycles and automobiles, the outside traffic lanes of the facility should be of sufficient width to accommodate these two types of transportation modes. Consideration of the factors described above led to the development of a recommended 56 foot roadway width with a 70 foot right-of-way, as shown in Figure 5. The remainder of the proposed 70 foot right-of-way will provide a 7 foot sidewalk width on either side of the roadway to accommodate pedestrian traffic and appropriate landscaping along the facility.

Kuhio Avenue between Seaside and Kaiulani Aven ues, has an existing roadway width (curb-to-curb) of 56 feet, and the City and County of Honolulu is planning to improve and widen the existing 40 foot roadway between Kalakaua and Seaside Avenues to a width of 56 feet. This improvement, together with the proposed action, will increase the existing right-of-way and roadway widths of Kuhio Avenue between Kalakaua and Kapahulu Avenues to 70 feet and 56 feet, respectively. These improvements which are planned for Kuhio Avenue are designed to create a continuous $x$ ight-of-way and roadway width along its entire

length. This roadway width is adequate to accommodate four traffic lanes in two directions and an exclusive left-turn lane, along the entire length of Kuhio Avenue, to accommodate automobiles, buses, and bicycles. The remainder of the 70 foot right-of-way width will be used to provide a continuous sidewalk extending the full length of the street. These improvements will improve the traffic circulation within the entire Waikiki and will also supplement the movement of traffic on Ala Wai Boulevard and Kalakaua Avenue along, generally, the entire length of Waikiki.

As discussed previously, an estimated 4,000 to 4,300 vehicles per hour during the afternoon peak period in the year 1995 will travel in a kokohead direction through the project area and some 3, 700 to 4, 000 vehicles per hour during the morning peak period will be traveling in the ewa-bound direction. Assuming that no improvements are made to Kalakaua Avenue, the improvements to Kuhio Avenue, as described above, will provide sufficient capacity to maintain a comfortable and a relatively congestion-free traffic flow within the area, and also, sufficient travel capacity to accommodate traffic volumes beyond the year 1995.

## D. PROJECT AUTHORIZATION AND FUNDING

The proposed project is part of the official Capital Improvement Program for the City and County of Honolulu for FY 1976-77 (Project No. 761076, Priority 039) and is intended to be funded by the City and County of Honolulu. Possible additional funds could be obtained from the State of Hawaii. Fifty percent of the funds needed for right-of-way acquisition, construction and utility relocation costs could be obtained from the State through the use of State Acts 197/71 as amended by Acts 204/72 and 162/74.

The implementation of this project is in conformance with the development policies of the City as reflected in the General Plan and the recently adopted Waikiki Special Design District. Official action was taken in the establishment of the 70 foot R.O.W. through the adoption of the Detailed Land Use Map (DLUM) and Development Plan (DP) for the Waikiki-Diamond Head Planning District in 1968 under Ordinance Numbers 3147 and 3167 and was reaffirmed in the amendment process of the General Plan (GP) in 1971, which included public hearings and formal adoption under Ordinance Numbers 3801 and 3802 by the City Council. In late 1975, City Council actions were taken to repeal the DLUM. for the Waikiki-Diamond Head Planning District as a legal document to describe the land use policies of the City and County of Honolulu.

More recently, the Waikiki Special Design District (WSDD), under Ordinance Number 4573, was adopted, effective April 1, 1976, which establishes new requirements and provisions for future development of Waikiki. This WSDD ordinance recognizes the previously established 70 -foot right-of-way for Kuhio Avenue as contained in Section V, Article B.2. a and Exhibit B, Circulation Plan, of said ordinance.

## E. BACKGROUND OF THE PROJECT - HISTORIC PERSPECTIVE

Improvements to Kuhio Avenue have been under study and discussion since the early $1950^{\prime} \mathrm{s}$. During the mid $1950^{\prime}$ s, a portion of Kuhio Avenue, ewa of Kaiulani Avenue, was improved and widened to an 80 foot right-of-way as was then specified in a Master Plan for traffic improvements. 4/ During this same time period, in response to requests from several owners of properties fronting along Kuhio Avenue, the City's Department of Public Works studied the desirability of improving and widening Kuhio Avenue from Kaiulani Avenue to Kapahulu Avenue to a 56 foot right-of-way, as master planned. 5/ The Public Works study led to the establishment of an improvement district in the area surrounding Kuhio Avenue. This area, referred to as the "jungle," was bounded by Ala Wai Boulevard, Kaiulani, Kapahulu, and Kalakaua Avenues.

During the early $1960^{\prime}$ s, detailed studies were conducted and plans developed by the City's Department of Public Works for the overall street and drainage improvements within the improvement district. In 1968, the Honolulu City Council adopted the Waikiki-Diamond Head, Detailed Land Use Map (DLUM) and Development Plan (DP), as part of the Oahu General Plan, adopted in 1964. These plans recommended that Kuhio Avenue be widened to 70 feet for its entire length between Kaiulani and Kapahulu Avenues.

During the later half of the 1960's, the City suspended all activities to widen and improve the streets within the "jungle" area under the improvement district statutes after the area was proposed as an urban renewal district. $6 /$ At that time the Planning Department of the City and County of Honolulu studied the "jungle," declared it "blighted" and applied for Federal Urban Renewal Funds. However, the rapid growth of the tourist industry had so accelerated the construction of apartments and hotels in Waikiki that while the area as a whole was indeed blighted, an insufficient proportion of substandard buildings remained to qualify it for Federal renewal assistance. $7 /$

Unable to obtain urban renewal assistance, the Mayor of the City and County of Honolulu appointed a Planning Advisory Committee for WaikikimDiamond Head to study the problems of this area and make specific recommendations to the City Council for needed improvements and methods for implementing them. In 1971 this committee recommended that Kuhio Avenue be widened to 70 feet between Kaiulani and Kapahulu Avenues and that this improvement should be accomplished through the establishment of an improvement district. 8/

In September 1971, in accordance with the Advisory Committee's recommendations and findings of studies conducted by the City's Traffic Department and the Department of Public Works, the DP and DLUM for Waikiki-Diamond Head were amended by the City

Council to reflect a realignment of the 70 foot rightwof-way along Kuhio Avenue. This action was taken to reduce neighborhood disruption, relocation and right-of-way costs. At the time of the amendment proceedings, two public hearings were held by the City Planning Conmission, the first on 11 March 1971 and the second on 14 April 1971. The minutes of these meetings and the testimonies presented are included in the Appendix of this Document.

In the same year, a "TOPICS" study"/ was conducted by the Traffic Department of the City and County in cooperation with the U, S. and State of Hawaii Departments of Transportation. This study justified the Kuhio Avenue widening as part of the TOPICS program recommendations, on the basis of a need for route continuity. The City applied to the Federal Highway Administration for Federal funds and initiated planing and design studies for the Kuhio Avenue widening.

Because of the critical need for improving the traffic circulation in Waikiki, and the delays anticipated in receiving Federal funds, the City Council agreed in 1974 to proceed with the Kuhio Avenue improvements and widening project, using only local funds.

On April 1, 1976, Ordinance Number 4573 went into effect creating the Waikiki Special Design District (WSDD). The WSDD established four types of use precincts; Apartment Precinct, Resort Hotel Precinct, Resort Commercial Precinct, and Public Precinct, which superseded the existing zoning. Under the WSDD, zoning on both sides of Kuhio Avenue were changed from "H-2" to "Apartment Precinct" except at the Thomas Jefferson School which is identified as a "Public Precinct". The provisions under this new ordinance will generally reduce the allowable densities in Waikiki as permitted under the former land-use policies. With certain exceptions, all new developments and structures constructed within the Special Design District shall conform and comply with the WSDD Circulation Plan and Urban Design Guidelines. The WSDD Circulation Plan does include the widening of Kuhio Avenue between Kaiulani and Kapahulu Avenues to a 70 -foot right-of-way with the same alignment as shown in the Development Plan.

## III. DESCRIPTION OF THE ENVIRONMENTAL SETTING

## A. GENERAL DESCRIPTION OF WAIKIKI

The proposed project is located in Waikiki, in the City and County of Honolulu, on the southern side of the Island of Oahu in the State of Hawaii. (See Figure 6.) The main portion of Waikiki is bounded on the mauka and ewa sides by the Ala Wai Canal, on the makai side by the Pacific Ocean and on the kokohead side by Kapahulu Avenue. Surrounding Waikiki are medium and high density residential communities which are presently undergoing rapid growth.

Waikiki is the center of the tourist and entertainment industry of the State of Hawaii and is the primary destination point for visitors to the Hawaiian Islands. As tourism is one of the major industries of the State, the future of Waikiki is of critical importance to State and City economic planning.

Extremely rapid development occurred in Waikiki throughout the 1960's and has continued in the $1970^{\prime} \mathrm{s}$. This has promoted a variety of urban problems in the area, including traffic congestion, overcrowding, excessive population density, lack of adequate open space and insufficient municipal facilities. There has been much public discussion of the need for regulating growth and development in Waikiki, and a wide variety of studies have been conducted and proposals made.


ISLAND OF OAHU

At the present time, the primary control on development in Waikiki is the Oahu General Plan of 1964 , which is a general, long-range guide for the overall development of the City and County. The Oahu General Plan consists of a General Plan map and a statement of development objectives, standards and principles with respect to the most desirable use of land and population density; a system of principal streets and highways and other public open spaces; the general location of public buildings, utilities and public housing projects; adequate drainage facilities and control; and other matters which may be of benefit to the City. The general plan map, itself, shows the future land use pattern for the City and County, in a broad and general fashion, and also shows a major street system to provide for the easy movement of people and goods between the various land uses and communities. The General Plan and its expressed policy for the future development of Ohu is supported by Development Plans which deals with the public facility element of the General Plan and the Comprehensive Zoning Code which specifies density and design controls to provide reasonable intensity of development intended by the General Plan. For Waikiki, new zoning controls were adopted with the recent establishment of the WSDD.

Although Waikiki is usually referred to as a tourist and resort area, the largest proportion of its current land uses are residential. Single and multi-family housing occupy approximately $33 \%$ of Waikiki's 360 acres. Hotels occupy $28 \%$ of the total land use area, and $20 \%$ is occupied by
parks and recreational space, including Fort DeRussy. $10 /$

Considerable disagreement exists as to the real population of Waikiki due to a high proportion of transients in the population of Waikiki, a very rapid resident population turnover, and substantial additions to the housing stock and new resort construction throughout the $1960^{\prime}$ s and $1970^{\prime} \mathrm{s}$. According to the U.S. Census, Waikiki had a total resident population of 13,124 in 1970. Updates of the 1970 Census, which were prepared in July 1974, by the Hawaii State Census Tract Committee, show an estimated total resident population of 14,036 in Waikiki.

In response to beliefs that both the official Census and the Census update counts are low, the Departments of Land Utilization and General Planning of the City and County of Honolulu have prepared revised figures which are based on current building permit data obtained from the Building Department of the City and County of Honolulu. These updates reflect population increases which have, or which will, occur as a result of new construction. These figures which reflect new building permits through September 1974, indicate that there were a total of over 18,000 dwelling units and nearly 20,000 resort units on 360 acres in Waikiki, and an estimated total resident and resort population of 66,000 persons.

Established land use patterns and proposals for new developments reveal a mixture rather than a separation of the residential and resort areas, as well as variety of unit types within new developments. The Department of Land Utilization calculates the residential density of all units combined at 155 units per acre and the resort density at 203 units per acre. Assuming two persons per dwelling unit and 1.5 persons per resort unit, this number of units coincides with a population of 66,000 or a density of 183 persons per acre.

## B. DESCRIPTION OF THE PROJECT IMPACT AREA

## 1. Location

The general impact area of the proposed project is a 23 block area located at the Kokohead end of Waikiki. This area is bounded on the mauka side by the Ala Wai Canal, on the ewa side by Kaiulani Avenue, on the makai side by the Pacific Ocean, and on the kokohead side by Kapahulu Avenue. It contains a gross area of 102 acres, which includes 25 acres of streets and rights-of-way. The impact area is coterminus with U.S. Census Tract 18.
2. Land Use
a. General Plan and Existing Zoning The land use pattern established in the Oahu General Plan for the project impact area is shown in Figure 7 and allows mainly apartment usage along with approximately equal amounts of resort and commercial usage. The zoning prior to April 1, 1976 permitted high density apartment and hotel and resort-commercial uses in the area. Most of the area was zoned for $\mathrm{H}-2$ type developments. Under the Comprehensive Zoning Code, the H-2 hotel district allows high density hotels and multiple family dwellings and their related needs. Some of the area was also zoned B-5. The B-5 resort-commercial


oranance no 4573 erfective date $4 / 1 / 76$

Figure $8 b$
FIGURE 8 c facilities which serves the needs of visitors to resort areas and residents living in or adjacent to such areas. This district also allows high density hotels and multiple family dwellings, similar to the H-2 hotel district.

In February of 1976, the City Council approved a bill (\#144) for an ordinance to establish the "Waikiki Special Design District," to take effect on April 1, 1976. The project impact area is located within this special design district. The Waikiki Special Design District was established in accordance with Article 15 of the Comprehensive Zoning Code, Ordinance No. 4541. The zoning provisions for all land parcels presently zoned $\mathrm{H}-2, \mathrm{~B}-5$, and $\mathrm{R}-6$ in the district is superseded by the provisions contained in the ordinance establishing the Waikiki Special Design District. As of its effective date, all land use and development applications shall conform to the requirements and provisions of the ordinance. As stated in the ordinance, the purpose for the district is:

- "To provide for the efficient and safe movement of people and goods;"
- "To bring about a desirable level of urban design compatible with the climate and the character of Hawaii within the District;"
o "To provide a means to control apartment and hotel density in Waikiki;"
- "To provide additional properly distributed open space and vistas."

Within the District four types of Use Precincts are established; apartment, resort hotel, resort commercial and public. In the project impact area, these Use Precinct boundaries are generally coincident with the comparable General Plan land use boundary and shown in Figure 8a. Generally, the new provisions under the Waikiki Special Design District places greater restrictions on the uses of land and structures permitted in the respective use precincts and on building heights, allowable densities and setback requirements. New developments within the District must conform to the WSDD Urban Design Controls shown in Figure $8 b$ and comply with the guidelines prescribed in the WSDD Circulation Plan shown in Figure 8c.

## b. Existing Land Uses

Within the project impact area there are three primary land use categories existing. These are briefly described in the following paragraphs:

## (1) Resort Commercial

The highest density land uses in the impact area are resort-commercial developments. This category of uses consists of hotels and ancillary shops and services which cater primarly to tourists. In this area, resort. commercial uses include many large hotels such as the Hawaiian Regent, the Kuhio Beach, the Holiday Inn, the Royal Grove, the Waikiki Grand and the Queen Kapiolani. Most of these hotels are located along Kalakaua or Kapahulu Avenues and because of their location, would not be directly affected by the proposed action. Some of these hotels are extensive complexes constructed to the maximum 350 foot height limit set by the Compre. hensive Zoning Code (CZC) under the former zoning in the area. Several new hotels are planned in the area, in the immediate vicinity of the project impact area. 11/ Apartments

The predominant apartment types are highrise buildings which are generally dispersed throughout the impact area. There are also major concentrations located along Ala Wai Boulevard. Many of these developments were constructed to the maximum 350 foot height limit. There are also many first generation apartment buildings
and walk up units scattered throughout the impact area. These are constructed on smaller lots, which formerly contained single family residents. Many do not have street frontages. The majority of these smaller multiple dwellings are at least 15 years old. Few new lowrise apartments have been recently constructed.

Building permits for new residential apartment and resort-commercial buildings were filed and approved in this area through mid 1974 when a building moratorium was declared by the City and County.

## Resort Cottages and Single Family Residences

The impact area also contains many older wood-frame cottages and single family residences scattered throughout its inner area, especially along Kuhio Avenue. Most of these wood frame structures were constructed in the 1930's as vacation homes. Most do not conform to current fire safety standards. Many have been divided into two or more units and are currently being used as single room apartments. $12 /$

## 3. Public Facilities

A survey conducted by the Department of General Planning in 1966, indicated that over one-third of the streets in the impact area had poor surface drainage, and inadequate or no sidewalks, curbs,
and gutters. The survey indicated that many other streets had inadequate provisions for on or off street parking. $13 /$

All streets have mercury vapor street lighting, mounted on wooden poles. These lights provide illumination at levels which are in conformance with recognized minimum requirements. $14 /$ Since 1966, only minor street improvements have been completed within this area, and existing street conditions are essentially the same as at the time of the survey.

Kuhio Avenue, which has an ewa-kokohead orientation, bisects the area and is one of three parallel through-streets in the area. The other ewa-kokohead streets are Ala Wai Boulevard, three blocks mauka and Kalakaua Avenue, three blocks makai. The Kuhio Avenue right-of-way is 40 feet between Kaiulani Avenue and Paoakalani Avenue and varies from 24 feet to 20 feet between Paoakalani and Kapahulu Avenues. A number of parcels along Kuhio Avenue have already been acquired by the City for the street widening. Ala Wai Boulevard has a right-of-way width of 75 feet and Kalakaua Avenue has a right-of-way width of 80 feet. The Development Plan of the City and County of Honolulu for the Waikiki-Diamond Head Planning Area indicates that Ala Wai Boulevard will be widened to 80 feet and Kalakaua Avenue to 100 feet. (See Figure 9)


FIGURE 9

Five mauka-makai streets between Ala Wai Boulevard and Kalakaua Avenue traverse the entire width of the impact area. These streets are Kaiulani Avenue which has a right-of-way width of 60 feet between Kalakaua Avenue and Prince Edward Street, 40 feet between Prince Edward Street and Kuhio Avenue and 30 feet between Kuhio Avenue and Ala Wai Boulevard; Liliuokalani Avenue which has a right-of-way width of 40 feet between Kalakaua Avenue and a point 234 feet mauka of Kuhio Avenue and 60 feet for the remainder of of the street to Ala Wai Boulevard; Ohua Avenue which has a 60 foot right-of-way width; Paoakalani Avenue, which has a 60 foot right-of-way width; and Kapahulu Avenue which has a 70 foot right-of-way width.

The Development Plan for the area indicates that the following streets will be widened: Kaiulani Avenue between Kuhio Avenue and Ala Wai Boulevard to a 40 foot right-of-way; Liliuokalani Avenue to a full 60 foot right-of-way along its entixe length; and Kapahulu Avenue between Kalakaua Avenue and Ala Wai Boulevard to a 100 foot right-of-way. (See Eigure 9)

## 4. Utilities

Throughout the impact area, some older electric power and telephone lines are located above ground on wooden utility poles, along with the existing street lighting. There are also underground electric
power ducts that originate from the electric power substation located at the kokohead end of Kuhio Avenue near Makee Road. These underground power ducts along with some underground telephone ducts are located in the project area within the existing Kuhio Avenue right-of-way along the entire street length.

The sewer system in the impact area is old and overutilized. The system consists mainly of 6 and 8 inch service lines that tie into two trunk sewer lines located in the middle of Kuhio Avenue. These trunk sewers originate from the Public Bath pump station located kokohead of the project area along Kalakaua Avenue near the base of Diamond Head. From the pump station, a 12 inch force main, located in the middle of Kalakaua Avenue, transports the sewage until it splits into two separate 12 inch lines at Paoakalani Avenue. These two lines are then located in Paoakalani Avenue between Kalakaua and Kuhio Avenues. At Kuhio Avenue the two trunk lines turn ewa into the middle of Kuhio Avenue and remain in the middle of the street, servicing the project area. One 12 inch line increases to a 15 inch line at Ohua Avenue, and then to a 16 inch line at Liliuokalani Avenue. The other 12 inch line increases to a 15 inch line at Liliuokalani Avenue. These lines extend into the City's sewer system and will eventually be treated at the proposed Sand Island treatment plant and then discharged into the ocean off Sand Island. Figure 10 shows the existing sewer system


Figure 10
in the project area.

As shown in Figure 11, the existing drainage system in the project area consists of an existing 18 inch storm drain, located in Kaiulani Avenue between Cleghorn Street and Ala Wai Boulevard, which empties into the Ala Wai Canal. There is also an existing 12-18 inch drain located in Kuhio Avenue between Kealohilani and Ohua Avenues which drains into a 24 inch line located in Ohua Avenue. This drain, along with a 24 inch drain located in Kalakaua Avenue between Kealohilani and Ohua Avenues, drain into a 36 inch drain located along the makai side of Kalakaua Avenue that empties into the Pacific Ocean. There is an 18 inch drain at the intersection of Kuhio Avenue and Makee Road that eventually empties into the Pacific Ocean, also. Basically these are the only drainage systems that currently services only a small portion of the total project area.

## 5. Open Space

A variety of public recreation areas surround the impact area. The most important and most popular of these is Waikiki Beach. Because of the many hotels and the high population density in the area, Waikiki Beach is often crowded beyond its capacity.

Kokohead of the impact area, is Kapiolani Park which contains


FIGURE II
the municipal zoo, the Waikiki Concert Shell and many sports and recreational facilities. This park is large and its facilities and grounds are well maintained.

Within the impact area there is a small minipark between Liliuokalani Avenue and Kapuni Road on Kuhio Avenue. This park is equipped for use by younger children. Adjacent to the ewa boundary of the project area is the Ainahau Triangle Park, located on Princess Kaiulani Square.

## 6. Schools

Thomas Jefferson Elementary and Orthopedic Schools campus is located at the kokohead end of the impact area, on Kuhio Avenue, between Paoakalani, Kapahulu Avenues and Ala Wai Boulevard. The facilities located on the Jefferson School Grounds include a public elementary school, and an Orthopedic School for physically handicapped children and young adults, which is run by the State Department of Health, in conjunction with the State Department of Education.

Design enrollment is 700 students for the Jefferson Elementary School and 200 students for the Orthopedic School. Total current enrollment (1974-1975) is 806 students. Projected total enrollment is:

| YEAR | ENROLLMENT |
| :--- | :---: |
| 1975 | 777 |
| 1976 | 744 |
| 1977 | 738 |
| 1978 | 733 |
| 1979 | 724 |
| 1980 | 702 |

Jefferson Elementary School draws students mainly from an area in Waikiki which extends from Kapahulu Avenue to Saratoga Road and from a smaller area mauka of the Ala Wai Canal. The large majority of these students walk to school, some are driven by parents. The Orthopedic School draws its students from the entire Island of Oahu and occasionally from the outer islands. All orthopedic students are bused to school. 15/

There is also a private school located in the project impact axea, St. Augustine's School. This school is situated between Ohua and Paoakalani Avenues, just makai of Ala Wai Boulevard and teaches kindergarten and grades 1 through 6 . They also offer a day care center at the school. In 1972, the enrollment at the school was 250 students, with approximately 75 students from the project area, itself. $16 /$

## 7. Trees and Shrubbery

There are approximately 29 different varieties of trees which are growing close to or within the right-of-way of the proposed action.

The common names for these 29 varieties are listed below:
TABLE 1
VARIETIES OF TREES LOCATED NEAR THE PROPOSED ACTION (COMMON NAMES)

1. African Tulip Tree
2. Areca Palm
3. Avocado Tree
4. Bottle Palm
5. Brassaia
6. Chinese Fan Palm
7. Christmas Berry Tree
8. Citrus
9. Coconut Tree
10. Coral Tree
11. Guava
12. Hala Tree
13. Kamani Tree
14. Kukui Tree
15. Mahogany Tree
16. Manila Palm
17. Mango Tree
18. Monkey Pod Tree
19. Norfolk Island Pine
20. Paperbark Tree
21. Plumeria
22. Queen Palm
23. Royal Palm
24. Royal Poinciana
25. Sandpaper Vine
26. Shower Tree
27. Strawberry Guava
28. Thuja
29. Toona

## 8. Property Ownership

Much of the property in the impact area is divided into small individually held lots, which contain a mixture of low, medium and highrise residential structures and hotels. The largest area of land in single ownership is held by the Liliuokalani Trust. The majority of this estate property is in contiguous parcels which are located between Ala Wai Boulevard and Kalakaua Avenue and Liliuokalani and Paoakalani Avenues. Large portions of the properties are leased to the Royal Grove Hotel, the Kuhio Beach Hotel and the Waikiki Regent Hotel. Other smaller parcels within the Liliuokalani Trust property contain single family wooden
framed houses and cottages. Many of these leases will expire before 1977. Plans and building permits for portions of the Estate property have been filed with the Building Department by a number of individuals and developers. These include Herbert Horita Realty, Inc., which has permits for four building developments which will include two 36-story apartment towers with 864 apartment units and two 38-story towers, the first with 432 units and the second with 920 units. $17 /$

## 9. Population and Employment

The 1970 Census of Population indicated that the impact area had a resident population of 4,060 persons. The number of jobs in Census Tract 18 in 1970 totaled 1, 328.

## 10. Population Composition and Neighborhood Conditions Survey

A survey and analyses of the residents of the project impact area was conducted in July and August of 1972 by the 322 nd Civil Affairs Group, U.S. Army Reserves. 16 / This survey indicated that $65.6 \%$ of the area residents are Caucasians, $10 \%$ are Hawaiian or partHawaiian, $5.4 \%$ are Japanese and $5.1 \%$ are Chinese. The remaining $13.9 \%$ consists of Filipinos, Blacks, Tongans, Samoans and others. Average family size in the area is slightly less than 2.5 persons.

The survey indicated that, $73.6 \%$ of the residents had lived in the
project impact area for approximately four years and of the remainder, some $50 \%$ had lived there for approximately two years. The survey further indicated that $86.7 \%$ of the residents rented their dwelling units and $13.3 \%$ owned their residences, either in fee or leasehold.

In response to questions concerning their employment status, $67 \%$ of the heads of household in the area indicated that they had worked during the past week and $33 \%$ said that they had not worked; $25 \%$ of unemployed heads of household were retired.

Approximately $38 \%$ of households in this area had total annual incomes of less than $\$ 5,000$ and $11 \%$ had annual incomes of over $\$ 15,000$. Some $37 \%$ of the households did not own a car and $18 \%$ of the persons surveyed stated that parking was a problem in the neighborhood; $22 \%$ stated that they use the bus everyday.

## 11. Waikiki Climate

The maximum temperature for Waikiki averaged $84.7^{\circ} \mathrm{F}$ and the minimum temperature averaged $68.9^{\circ} \mathrm{F}$ as measured during the years of 1965-1971. Precipitation, as measured during this same period (1965-1971), averaged 29.6 inches per year and the humidity averaged $68.5 \%$ per year between the years of $1939-1967$.

The winds generally come from northeast, east northeast, or east $66.7 \%$ of the time and is known as tradewinds. The average wind speed is 11.2 knots. Winds from all other directions occur $28.6 \%$ of the time with an average wind speed of 7.9 knots. Average wind speed from all directions at all times out of the year is 9.7 knots. The weather is calm (no wind recorded) $4.7 \%$ of the time.

## 12. Soils and Geology

Much of southwestern Oahu is founded on material created by the Koolau eruption which occurred some one to three million years ago. Diamond Head, itself, was formed some 150, 000 years ago when sea water, entering a crack which opened through an emerged reef limestone plateau, made contact with the hot lava that was ascending the crack, causing a great series of explosions which spewed out great quantities of limestone, mud, ash and lapilli. Another eruption of Diamond Head occurring five thousand years ago placed a layer of black glossy ash over the Waikiki area. Eruptions from other volcanoes sent more lava, ash and volcanic debris into the general area.

The Waikiki area is built over an ancient lava flow and limestone from ancient reefs. The layers of lava and tuft which underlie the Waikiki area are too complex to delineate accurately, but they can be roughly divided into limestone and alluvium, generally pleisto-
cene in nature. Over these layers sand and coral have been deposited, covered by a relatively thin lactite topsoil.

During the preliminary investigation stages of the proposed project, a soil exploration was conducted along Kuhio Avenue. The major soils found in this area are unconsolidated marine calcareous sediments (Rs) and jaucus sand 0 to $15 \%$ slope (JaC or SP under
"Unified Soil Classification System"). From the field explorations, the soils and geological formations encountered along Kuhio Avenue generally included medium to dense, tan-gray sands (SP soils) located below the roadway pavement to at least 6 feet below the ground surface, the maximum depth drilled and sampled. The existing pavements generally consists of some 1 to 3 inches of asphaltic concrete and 5 to 6 inches of crushed rock base course. Water was noted at about 3 to 5 foot depths below the existing ground surfaces during the field exploration.
13. Historical and Archaeological Sites

A review of the proposed project by the Department of Land and Natural Resources, State of Hawaii, found that the project will not affect any site on, or eligible for, the Hawaii or National Registers of Historic Places, which includes sites or places of both historical and archaelogical significance. In the event
that any item of historical significance is uncovered during the construction activities, the appropriate authorities will be notified.

## 14. Coastal Zones and Wetlands

The 1975 State Legislative Session enacted Act 176 which dealt with environmental shoreline protection and established special interim controls on developments within an area along the shoreline until a general coastal management program can be developed and implemented. The objective of the "special management area" is the maintenance, restoration and enhancement of the overall quality of the coastal zone environment and to provide adequate public access to publicly owned or used beaches, recreation areas and natural reserves.

Within the City and County of Honolulu, the City Council is authorized to carry out the policies and procedures of Act 176 as it affects the coastal zones of this County, with the Department of Land Utilization designated as the administering agency. In 1ate 1975, the City Council passed a bill for an ordinance which established the "special management area" and the rules and regulations for the intexim coastal zone management for Oahu.

A check by the Department of Land Utilization found that the proposed project is located outside of the "special management
area" in Waikiki and is, therefore, not affected by Act 176 and its special controls.

There are no wetland areas located within the vicinity of the proposed action since the project is located within a highly developed urbanized area.

## C. TRAFFIC CIRCULATION

A study of traffic conditions in Waikiki conducted in the Spring of 1970, by the Department of Transportation Services of the City and County of Honolulu, $18 /$ which examined the problem of congestion in the area concluded that while through traffic is a contributor to congestion, the primary causes of congestion in Waikiki were:

1. Frequent and closely spaced two-way intersections with conflicts created by the large number of vehicle turning movements and pedestrian crossings.
2. Insufficient and poorly distributed off-street parking facilities causing an excessive demand for curb parking spaces.
3. Inadequate direction signs guiding motorists to major points, causing unnecessary circuitous circulation in Waikiki.

A license plate survey, conducted as part of the study, confirmed that through traffic was a relatively minor problem in Waikiki. The study indicated that approximately $88 \%$ of the vehicles entering Waikiki during the study period remained in the area for at least 20 minutes, and that the major problem in Waikiki was circulating traffic. The Department of Transportation Services Study recommended the immediate implementation of the proposed "Waikiki Multi-Loop

Traffic Circulation System" which was designed to convert the existing two-way street system into a one-way system. Restricted curb-parking on major streets was also recommended for successful implementation of the oneway street plan. The study further recom. mended the retention of a 70 foot rightmof-way width for the entire length of Kuhio Avenue and the widening of the street between Kaiulani and Kapahulu Avenues. The recommended changes were designed to reduce traffic congestion problems in Waikiki, by improving the poor traffic circulation pattern which was found to be the primary cause of congestion in the area.

The Department of Transportation Services recommendations were incorporated into the Honolulu Areawide "TOPICS" Study, 9/ which was designed to secure Federal participation in funding the improvements program. In 1971, the "Waikiki Multi-Loop Traffic Circulation System" was implemented. The system is currently operating successfully. Figure 12 shows the existing circulation pattern within the project area.

The three major ewa-kokohead corridors through Waikiki are Ala Wai Boulevard, Kuhio Avenue and Kalakaua Avenue. Ala Wai Boulevard, which is the kokohead entrance into Waikiki, has four traffic lanes and accommodates ewa-bound traffic. Kalakaua Avenue with four through traffic lanes serves as the ewa entrance into Waikiki and accommodates kokohead-bound traffic. Between Kaiulani and Kapahulu


FIGURE 12

Avenues on the kokohead end of Waikiki, and between Ala Wai Boulevard and Kuamoo Street on the ewa end, Kalakaua Avenue has a contra-flow lane which is reserved for bus transit operation. Kalakaua Avenue also serves as the transit corridor for kokohead-bound buses. Kuhio Avenue which serves the circulating traffic within Waikiki has two-way traffic flow between Kalakaua and Kaiulani Avenues, with two traffic lanes in both the kokohead-and-ewambound directions. This segment of Kuhio Avenue also serves as the transit corridor for ewambound buses. The existing right-of-way on Kuhio Avenue, kokohead of Kaiulani Avenue, is not wide enough to accommodate two-way traffic. Between Kaiulani and Ohua Avenues there are two narrow traffic lanes in the kokohead. bound direction and between Ohua and Kapahulu Avenues there is only one narrow kokohead-bound lane.

Within the project area, the discontinuity of local ewa-kokohead streets and the narrow, one-way right-of-way on Kuhio Avenue, disrupt efficient vehicular circulation. Assuming that the five mauka-makai through streets within the project area are widened in accordance with City policy, these streets would have the capacity to accommodate the local mauka-makai traffic generated by the full development of the area according to the City's land use policies. The widening of Kuhio Avenue and its conversion to a two-way street serving as the ewa-kokohead
feeder to local mauka-makai streets will facilitate a more efficient circulation system within the entire area. Although the existing street system in the area could accommodate future levels of traffic, it would be at the lowest level of operating conditions.

Kuhio Avenue has an existing right-of-way which narrows from 70 feet between Kalakaua and Kaiulani Avenues to 40 feet between Kaiulani and Paoakalani Avenues and varies from 24 feet to 20 feet between Paoakalani and Kapahulu Avenues. Cars tend to travel from the wider to the narrower portions of the street without a reduction in speed, causing major safety hazards in the impact area. There are no traffic signals along Kuhio Avenue within the project area with the exceptions of the intersections of Kuhio Avenue with Kaiulani and Kapahulu Avenues. Poor safety conditions are indicated by the steadily rising number of traffic accidents occurring within the project area. An example of this is the intersection of Kuhio and Liliuokalani Avenues. Liliuokalani Avenue is a cross-street which extends through the project area from Kalakaua Avenue to Ala Wai Boulevard. According to police records, in 1970, three accidents were recorded here; in 1971 there were four, and in 1972 there were eight accidents.

## D. EXISTING CONDITIONS ON KUHIO AVENUE

Kuhio Avenue, between Kaiulani and Kapahulu Avenues, is a one-way street in the kokohead direction. Its right-of-way and pavement widths get narrower from the ewa to the kokohead limits of the project area. Between Kaiulani and Ohua Avenues, Kuhio Avenue has a right-of-way width of 40 feet, with a pavement width of 20 feet and two traffic lanes. Between Ohua and Paoakalani Avenues, Kuhio Avenue has a rightwof-way width of 40 feet and a pavement width which narrows from 29 to 20 feet. Between Paoakalani Avenue and Kapahulu Avenue, the street narrows to a 20 foot right-of-way containing one traffic lane with a pavement width which varies from 15 to 11 feet. $19 /$

The street lacks storm drains virtually along its entire length, and there are no curbs and gutters or sidewalks between Ohua Avenue and Makee Road. $14 /$ Overhead power and telephone lines are located close to the street on the north side. The street is not marked for parking, but cars park along certain lengths of the street on either side.

Kuhio Avenue is also inadequate by modern street standards to serve the existing and proposed land uses within the area of the project. These uses have promoted congestion and conflicts between pedestrians and traffic resulting in increased accidents and a general reduction in the level of service provided by the roadway.

## IV. THE RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS,

 POLICIES AND CONTROLSAt the present time, the 1964 General Plan is the basic land use policy statement of the City and County of Honolulu and is referred to as the basis for all matters related to planning and growth of urban land on Oahu. The General Plan is supported by the Development Plans (DP) which are prepared by the City and County of Honolulu. The DP indicates the improvements in public facilities required to accompany the designated land uses as shown on the General Plan map. At the next level of detail is the Comprehensive Zoning Code (CZC) of the City and County of Honolulu. The zoning code is utilized to actively implement the General Plan by establishing density and design controls based upon permissible land use from the General Plan to provide a reasonable intensity of development without sacrificing quality.

As stated earlier, one of the major purposes of the proposed action is the implementation of the land use policies of the City and County of Honolulu as expressed in the General Plan of 1964, as amended. The general transportation facilities requirements for the Waikiki-Diamond Head Planning Area, which is shown on the Development Plan for the area, adopted May 9, 1968 by Ordinance No. 3167 and revised on November 24, 1971 by Ordinance No. 3802, specifically indicates that Kuhio Avenue be improved and widened to a 70 foot right-of-way with the alignment as shown on the revised Development Plans, to support the designated land uses
in the area as shown on the General Plan Map. The proposed action is also in accord with the provisions of the Waikiki Special Design District (WSDD) which also calls for the widening of Kuhio Avenue through the project area. Therefore, the implementation of the proposed action would be in complete accord and harmony with the land use policies of the City and County of Honolulu.

In a preliminary study conducted by the Department of Land Utilization, it was estimated that approximately 22,000 apartment units and 22,000 hotel units could exist in Waikiki in the near future. These estimates were based on the number of actual units that currently exist in Waikiki, the number of units that are under construction and those planned units in developments which have building permits pending. Included in this estimate are approximately 4,000 apartment units and 4,000 hotel units which have permits pending. Under the WSDD, those building projects with building permits have up to three years from the date of issuance of the permit, or effective date of the ordinance establishing the Special Design District, whichever is later, to complete construction. Also, those applicants for a building permit who have filed with the Building Department an application prior to the effective date of this ordinance, have until September 30, 1976 to obtain the permit, otherwise the application must comply with regulations set forth in the ordinance.

The Department of Land Utilization further estimated that an average of
approximately 10,000 additional hotel units and an additional 3,000 apartment units could be developed in Waikiki under the WSDD limits. These estimated numbers of units could be lower or higher depending upon the consolidation of existing small lots and the redevelopment of existing low density developments on sizable land area. Therefore, in Waikiki, even with the enactment of the new Waikiki Special Design District ordinance, there could be at a maximum, approximately 25,000 apartment units and 32,000 hotel units by the year 1995. Many of the existing apartment units though are actually apartment-hotels that cater to visitors to the islands and operate as hotels. Therefore the split between actual apartment units where residents live and hotel units where visitors stay could be closer to thos e estimates used in developing the 1995 traffic projections. The estimated total of 57,000 units in Waikiki under the WSDD closely matches the projected total of 59,000 units in Waikiki used in the development of the traffic projections.

## V. THE PROBABLE IMPACT OF THE PROPOSED ACTION ON THE ENVIRONMENT

## A. NOISE

In order to assess the impact of the completed project on the ambient noise level in the impact area, and to assess its various effects on the community, the average existing daytime noise in the impact area was compared to preliminary estimates of the predicted noise levels generated by the increased capacity flow of a normal mix of cars, trucks, and buses associated with the widening project. These new levels were then compared with existing noise levels in Waikiki.

The average existing daytime background noise level along Kuhio Avenue, in the impact area, is approximately 60 to $65 \mathrm{dBA} 20 /$ with the most prevalent source of this noise due to automotive traffic. As a four-lane urban street designed to serve primarily as a feeder into local streets and to accommodate local Waikiki movements, a widened Kuhio Avenue is not anticipated to carry a large volume of heavy truck traffic. Based on preliminary estimation of the noise levels which may be generated and a review of average daytime noise levels along comparable streets, a level of 65 to 70 dBA is predicted. $21,22 /$ Thus, the impact of the proposed project will be an increase of between 5 to 10 dBA in the average daytime noise level along Kuhio Avenue. The typical high or
average peak noise level representing the noise level which is exceeded $10 \%$ of the time $\left(\mathrm{L}_{1}\right)$ is estimated to be typically up to 5 dBA above the average daytime noise level. This high noise level is strongly influenced by the momentary maximum sound level occurring during a vehicle passby.

Due to its high density commercial and resort activities, the Waikiki area has one of the highest ambient noise levels in the City of Honolulu. These high noise levels are the combined result of noise generated by construction activity, by heavy traffic volumes, which includes tourist and city buses, delivery and service trucks and circulating and through Waikiki automobile traffic, as well as the high levels of general noise caused by commercial and resort activities. Ambient noise levels in the Kuhio Avenue impact area are presently lower than those in the general Waikiki area, due to its lower density development and lower volume of vehicular traffic.

To provide a comparison, the predicted noise level of the proposed action will be similar to the existing ambient noise levels along that portion of Kuhio Avenue already improved to a 56 foot roadway width. As the Kuhio Avenue impact area is presently undergoing a transition to predominately high density uses, it is anticipated that increased vehicular noise levels would not be incompatible with the land uses, on a long term basis.

The impact assessment study also took special note of the probable impact of increased noise on specific land uses located in the impact area which are especially noise sensitive. The Jefferson Elementary and Orthopedic School, located on the mauka side of Kuhio Avenue between Paoakalani and Kapahulu Avenues recently completed a new academic and therapeutic facility for handicapped students. From field observations, it was noted that this new facility building was constructed with concrete blocks with the end walls facing Kuhio Avenue not having any openings. Under this type of construction with solid walls, up to 25 dBA reduction in the outside ambient noise level can be expected inside the building. However, due to the windows along the entire length of the side walls, the noise reduction is expected to be much less. Based on field measurements $23 /$ made both inside and outside the subject building, it was found that the inside noise level was approximately 10 dBA lower than the outside level.

Based on traffic forecasts for 1980 and 1995 , the estimated noise levels at the set-back line were calculated at 66 dBA and 68 dBA , respectively $23 / \mathrm{A} 10$ dBA reduction from outside to inside of the building will place the inside noise level at 56 dBA and 58 dBA for 1980 and 1995 , respectively. These predicted noise levels are currently being experienced in other classrooms facing Ala Wai Boulevard and Kapahulu Avenue.

Furthermore, these predicted noise levels can be expected to be reduced with the implementation of the stricter noise level limits for light and heavy vehicles contained in Chapter 44A of the Public Health Regulations on Vehicular Noise Control For Oahu. These limits are scheduled to go into effect as of January 1, 1977.

As stated in Section 4.2. B of Chapter 44B, Public Health Regulations, on Community Noise Control for Oahu, "no highway or freeway which can be expected to create at designed operation, a noise level of 50 dBA or more inside any school classroom, library, multi-purpose room, hospital, or rest home already in existence and used for its primary design purpose, shall be constructed without first providing for noise control measures which can be expected to limit the noise level inside the facility to no more than 50 dBA ." The predicted noise level in the classroom caused by the traffic on widened Kuhio Avenue in 1980 and 1995 was found to be higher than 50 dBA . Therefore, appropriate remedial measures will be taken to minimize this impact. These measures will be conducted in coordination with the State Departments of Education, Health, and Accounting and General Services.

It is also anticipated that there will be a temporary rise in ambient noise levels in the impact area during the construction period. These short-term impacts along with procedures to minimize them will be discussed in detail in a later section.

## B. AIR QUALITY

By the year 1995, it is estimated that the total daily vehicle miles traveled within the project area will be less than $0.5 \%$ of the total vehicle miles traveled on the entire Island of Oahu. Due to the minute amount of vehicle miles traveled within the project area when compared to the total vehicle miles traveled on the entire island, any change in the traffic movements in the project area caused by the project itself, will have only negligible effects on the total vehicular movements in the region and therefore, no significant changes in regional air quality conditions are anticipated. Although the project may increase air pollution in the immediate impact area which is that area located directly adjacent to Kuhio Avenue, it is anticipated that future levels of pollution in this area will not be significantly affected by the proposed action. This conclusion was based on several observations about the project and the nature of the impact area.

The project will act to improve air quality by improving the overall efficiency of vehicular circulation in Waikiki and mainly within the project area. It is anticipated that this improved circulation will result in decreased trip lengths, causing a decrease in the total vehicle miles traveled and a general reduction in air pollution levels. Within the project area, the street widening and conversion to two-way operation of Kuhio Avenue, will also tend to improve traffic flow and thus reduce

## the levels of car emissions.

It is also noted that a gradual increase in the total traffic volume in Waikiki will occur regardless of the proposed action. Because a large proportion of the vehicular movements in Waikiki are trips generated from or destined to Waikiki, increases will occur as a natural result of the land use and development pressures, even if Kuhio Avenue were not widened. (This is discussed further in Section $D$ of this Chapter.) If no improvements are made, this increasing traffic volume will need to be accommodated by the existing street system in the project area at a much lower speed than if the proposed project was implemented, Since the primary result of the proposed action will be the increasing of the street capacity in the area, accommodating the increased traffic volume on this improved roadway network will tend to increase the average Operating speeds of vehicles through the project area and therefore, resulting in much lower pollution levels in the area.

Atmospheric conditions in Hawaii are ideal for the rapid dispersal of air pollution and the reduction of localized concentrations to levels which are within the established standards. As mentioned earlier, the predominant winds axe the trades, which occur approximately $70 \%$ of the time and which come from the northeast (or mauka), with a mean wind speed of 10 miles per hour. The other notable wind conditions are the Kona winds, from the southwest (or makai), which have a mean
wind speed of 5 miles per hour. Less than $5 \%$ of the time the wind velocity is less than 2 mph which is considered calm.

The three primary pollutants emitted from highway vehicles are carbon monoxide, hydrocarbons, and nitrogen oxides. The most critical of the three pollutants on air quality is the ambient concentration of carbon monoxide (CO). Based on the air quality monitoring program of the State Department of Health, only the CO concentration in the downtown Honolulu area has exceeded the State standards for the maximum 1-hour value. The State Ambient Air Quality Standards for CO concentration, is $10 \mathrm{mg} / \mathrm{m}^{3}$, maximum average in any 1 hour, and $5 \mathrm{mg} / \mathrm{m}^{3}$, maximum average in any 8 hours. The corresponding Federal Standards call for $40 \mathrm{mg} / \mathrm{mi}^{3}$, maximum average in any 1 hour, and $10 \mathrm{mg} / \mathrm{m}^{3}$, maximum average in any 8 hours.

The air quality impact assessment based on 1995 design volumes was conducted to approximate the CO concentrations along Kuhio Avenue. The assessment was based on information obtained from the U.S. Environmental Protection Agency's document entitled, "Guidelines for Air Quality Maintenance Planning and Analysis, Volume 9: Evaluating Indirect Sources."24/ The maximum CO concentrations will occur at signalized intersections during the peak periods of the day. Utilizing the correction factors to reflect emission control programs of the Federal Clean Air Act, it is estimated that the CO
concentrations along the established building set-back lines would be approximately $10 \mathrm{mg} / \mathrm{m}^{3}$ for the maximum average 1 -hour and $5 \mathrm{mg} / \mathrm{m}^{3}$ for the maximum average 8 hours which are equal to the State Standards and well below the Federal Standards. These estimated values of $C O$ concentrations is based on the very infrequent calm wind condition of $1 \mathrm{~m} / \mathrm{sec}$ or 2.2 mph and an assumed "persistence factor" of 0.6 for the 8 -hour value. Segments of the Kuhio Avenue between intersections would have less CO concentrations due to the continuous movements of the vehicle and hence a lower average CO concentration along the entire span of the project area.

As previously mentioned, State standards on ambient $C O$ concentrations have occasionally been exceeded in the downtown area. But a report on the Air Pollution Control Implementation Plan for the State of Hawaii $25 /$ states that if the Federal Motor Vehicle Emission Standards are effective, there will be an overall reduction of carbon moncxide, photochemical oxidants, and nitrogen dioxide, the three primary pollutants emitted by automobiles, which will be sufficient to maintain regional air quality levels in conformance with the State ambient air quality standards.

Several land uses considered particularly sensitive to changes in air quality, are uses in which people gather and activity places where there are children playing or in school. Several of these types are located in the impact area. The Jefferson Elementary and Orthpedic

School, located in the primary impact area on the mauka side of Kuhio Avenue between Paoakalani and Kapahulu Avenues, is an especially sensitive land use. This school, however, will not be adversely affected by the project. The setback of school facilities from the street, a distance of approximately 45 feet from the nearest edge of roadway, will minimize any adverse impacts caused by reduction in air quality. For example, a $30 \%$ reduction in the levels of CO concentrations estimated earlier for the year 1995 can be expected at the school facilities due to the additional setback distance from the roadway. As Kuhio Avenue is oriented downwind of the trades, any adverse impacts to the school will be further minimized, except during Kona winds and calm periods.

The other land use which is highly sensitive to changes in air quality is the mini-park and playground located on Kuhio Avenue between Lilivokalani Avenue and Kapuni Street. The park is immediately adjacent to and fronts on Kuhio Avenue. The proposed project will have no significant adverse air quality impact on this facility since the ambient air quality is expected to remain within State standards.

During the period of project construction, the standard measures which are used to measure and control emissions of air pollutants caused by excavation and construction machinery will be employed. This short-term impact will be discussed in more detail, along with
measures to be used to control or minimize any impact, in a subsequent section of this Chapter.

## C. WATER QUALITY AND DRAINAGE

It is not anticipated that the proposed improvements to Kuhio Avenue will have any adverse effects on surface and ground water resources in and around the impact area and in Waikiki. The only potential source of impact related to the proposed action is additional storm drainage discharges into the Ala Wai Canal. The discharges that may be generated will probably have only slight effects on the water quality and hydrologic characteristics of the Ala Wai Canal, since the amount of discharge from the project area was found to be relatively small when compared to the total discharge into the canal. The project will, on the other hand, greatly improve drainage conditions in the impact area through the provision of new storm sewers. The related paving and resurfacing of Kuhio Avenue and provision of new curbs and gutters will eliminate puddles and sources of bacteria growth and will also result in a cleaner, safer, more attractive and desirable street environment.

The Kuhio Avenue impact area is characterized by relatively flat topography, and is at an average elevation of five feet above sea level. From Kuhio Avenue to Ala Wai Boulevard and from Kuhio Avenue to Kalakaua Avenue, the ground level rises sufficiently to create a sump condition in the area of Kuhio Avenue. Under heavy storm conditions, the area is susceptible to some flooding. Since the soil throughout the
impact area is pervious silty sand, and although the water table is 3 to 5 feet below the surface, rain water percolates into the ground and standing water is not retained over long periods.

There is an existing 18 inch storm drain in the impact area located in Kaiulani Avenue, between Cleghorn Street and its outlet into the Ala Wai Canal. There is also a 12-18 inch pipe located in Kuhio Avenue between Kealohilani and Ohua Avenues which drains into a 24 inch line located in Ohua Avenue. This drain along with a 24 inch drain located in Kalakaua Avenue between Kealohilani and Ohua Avenues drains into a 36 inch pipe located along the makai side of Kalakaua Avenue. At Kapahulu Avenue, the 36 inch pipe ties into a drain located in a pier which protrudes from Kuhio Beach and discharges the storm water into the ocean. There is an existing 18 inch drain at the intersection of Kuhio Avenue and Makee Road which also eventually ties into the drain that discharges into the Pacific Ocean. There are no other drainage outlets, either to the Ala Wai Canal or to the ocean, located in the area. This existing system discharges some 12 cfs of storm waters into the canal during a 50 -year storm.

The proposed improvements to Kuhio Avenue will include a complete drainage system with curbs and gutters, catch basins and drain pipes for the collection, transport and discharge of storm waters into the Ala Wai Canal. The proposed drain pipes description and location
has been described in detail in Chapter II. An important effect of the se improvements will be a reduction in the amount of storm water percolated into the ground. However, it is not anticipated that this change will have any adverse effects on ground water conditions in the impact area.

At the present time, the Ala Wai Canal receives drainage waters from the Manoa-Palolo Drainage Canal, the Makiki Stream, the Hausten Ditch, the University Avenue Box Drain, the Kapahulu Neighborhood Box Drain, and from various other storm drains in the tributary area of the canal. Combined flow from all streams and drains discharging into the Ala Wai Canal totals approximately $30,000 \mathrm{cfs}$ (cubic feet per second) during a 50 -year storm. The estimated drainage flow from the project area is 300 cfs for a 50 . year storm. It is anticipated that this relatively minor additional storm water discharge, which will represent only $1 \%$ of the total discharge into the Ala Wai Canal, will have only negligible impacts on the water quality or flow characteristics of the canal.

Just upstream from the proposed drain outlets, on the mauka side of the canal is located the outlet for the Kapahulu Neighborhood Box Drain. This 59 -foot wide by 11 -foot deep concrete storm drain outlet is designed to accommodate a flow of $1,700 \mathrm{cfs}$ from a 50 -year storm. The discharge from this drain alone is approximately six times larger
than the total discharge from the project area. Therefore, the impact on the water quality or hydrology of the canal from the proposed action should be considerably less than the impact from the Kapahulu drain.

The canal contains a substantial fishery resource, including some 20 species of fish and four species of crab. Realizing this, the U.S. Department of the Interior, Fish and Wildlife Service, in 1972, through the U.S. Army Corps of Engineers, conditioned the issuance of the permit to construct the Kapahulu Neighborhood Drain outlet into the canal (which is under the jurisdiction of the Corps of Engineers since it is navigable waters) with certain stipulations to safeguard the fish and wildlife resources. They realized that the canal is used as a collection point for natural stream flow and storm water runoff and that this situation is desirable since the addition of fresh water provides the necessary conditions for the creation of an estuarine environment. However, due to the disturbances within the watershed or drainage areas and the directing of silt-ladened runoff water into the canal, water quality problems affecting fish and wildife resources were occurring. They were concerned that with the already existing siltation conditions, the then proposed Kapahulu drain would have a potential for magnifying the problem. To alleviate this potential problem, some of the stipulations required by the Corps of Engineers and the Fish and Wildlife Service were as follows:26/

1. All project activities in or near the water be conducted so as to minimize disturbance to the bottom and control turbidity.
2. All upland areas disturbed by project activity be reseeded as soon as possible to control erosion.
3. All spoil be placed above the influence of the tide in such a manner as to prevent any material from flowing, leaking, or leaching back into the water.
4. Extreme care be taken to insure that no debris, petroleum products, or other deleterious material be allowed to fall, flow, leach, or otherwise enter the water.
5. Piling, lumber, and other material treated with creosote or other preservatives be completely dry before being used in or near the water.
6. All passes of the clamshell or bucket dredge be complete, and there be no stockpiling of spoil in the water to obtain full buckets.
7. Trash racks be provided and maintained along the storm water pickup lines or at the outfall site to collect debris thus pre venting an accumulation of material in the Ala Wai Canal.

Prior to the issuance of the U.S. Corps of Engineers' permit to construct the canal outlet for the Lewers Street drain, only one stipulation was made; the redesign of the outlet to drain into the canal at a $45^{\circ}$ angle, bending downstream. This stipulation was conformed to and the permit issued. The Lewers Street drain, a 60 inch pipe, is generally comparable in size to the individual drains proposed under this action. Therefore, comparable stipulations as those stated above should minimize any impact to fish and wildife resources and the general quality of the canal water.

Since the three drain outlets are located within the Diamond Head Historic District, no excavation or stockpiling of earth materials shall be started without a certificate of appropriateness in compliance with the requirements of Section 21-1204 and 21-1205 of Article 12, CZC.

A beneficial effect of the improved drainage system will be the provision of a street which is safe for pedestrians and which is clean and not subject to flooding. New sidewalks on both sides of Kuhio Avenue in the impact area will separate pedestrians and vehicular circulation and increase safety conditions on the street. Adequate curbs and gutters will serve to eliminate ponding of waters and aid in street cleaning operations to keep the street free of debris. Also, adequate grading and drainage of properties adjacent to Kuhio Avenue within the project area will be conducted to prevent any flooding from occurring due to grade changes that may be necessary for drainage of the street and also the drainage of these lots.

The existing sewer system in the project area and in Waikiki as a whole, has been frequently identified by City planners and by various studies as being inadequate to meet both existing and future needs in the impact area. To accommodate the need for sewer improvements, major modifications and improvements to the existing system will be completed in conjunction with the proposed action. It should be noted that even if the street widening and improvements were not implemented, the badly needed improvements to the sewer system could, and possibly would, be constructed. But to reduce cost and to reduce the impact to the surrounding neighborhood, these two projects are being combined. The proposed sewer improvements will include additional capacity to accommodate the waste water flows from the Honolulu Zoo.

## D. SOCIO-ECONOMIC

The social and economic impacts of the proposed project include a wide range of both direct and indirect impacts. Direct impacts are classified in this environmental impact statement as those social or economic impacts which are caused directly by the proposed action. These are the relocation of residents from the immediate impact area and improved accessibility within the area. Indirect socio... economic impacts of the proposed action are environmental factors which are influenced by the direct project impacts. Indirect impacts, which are associated with improved accessibility, include changes in development and growth patterns of the area.

## 1. Relocation

The implementation of the proposed widening of Kuhio Avenue to a right-of way width of 70 feet, as designated on the General Plan would require the acquisition of private properties. Certain land parcels have previously been acquired by the City and County and have been cleared of existing improvements. The other parcels which have not been acquired, fall into two categories: those with and those without existing improvements which would be affected by the proposed action. A total of 55 parcels will be affected. Of this total, 34 are owned by private individuals, 17 are owned by the Liliuokalani Trust, 1 is owned by the Hawaiian Electric Company,
another is owned by the Hawaiian Te lephone Company, and 2 are publicly owned; 1 by the State of Hawaii and the other by the City and County of Honolulu. Also, 21 of the 55 parcels have existing structures on them which will be affected by the proposed action. On these 21 parcels there is a total of 23 structures which will be affected; 16 buildings will be demolished and 7 will be cut and refaced (See Appendix D).

Accompanying this property acquisition will be the need to relocate a number of homes and businesses. The proposed Kuhio Avenue widening project will remove 48 dwelling units and 2 units occupied by nonprofit organizations, based on conditions existing as of January, 1976. Forty three of the residential units were occupied by an estimated 86 persons at the time. In addition to this perma. nent displacement, the project may cause the temporary relocation of occupants of 11 to 36 units in low-rise apartment buildings which are to be partially removed and then refaced.

A sensitive and responsive relocation assistance program can soften the impact of the displacement which will occur. This does not eliminate its impact, since even the most humane relocation program cannot fully offset the social effects on persons who are uprooted from their homes or places of business. To minimize this impact, every effort will be employed to meet the needs of displaced persons, so that a few do not suffer disproportionately from a project designed for the benefit of many.

In order to ease the impact of displacement, a relocation plan which responds to the needs of those displaced will be implemented. In preparation for this work, the needs of the displaced, the resources of the City to meet these needs and the types of assistance available to displaced persons were identified, studied and presented in a report entitled, "Kuhio Avenue Widening Project, Relocation Impact and Program Plan. $27 /$ The following section presents a summary of the findings of this study.

Most of the residential units being permanently affected are standard, renter-occupied, low-rise apartments or portions of one-story dwellings with no more than one bedroom and renting for less than $\$ 200$ per month. Over $90 \%$ or 39 of the 43 occupied units are rental units, with a median rent of $\$ 160$. Most of the affected units do not appear to have major physical deficiencies.

The occupants of permanently affected units include 14 families, 17 single individuals, and 10 groups of two or more unrelated individuals. Most of the occupants are small, non-elderly, low or modexate income households. Eleven of the households are elderly families or individuals. Most of the heads of households or sole occupants are male, Caucasian and employed. The estimated median household income is $\$ 680$ per month. Of the
households providing sufficient information, $43 \%$ have low incomes, $37 \%$ moderate incomes and $20 \%$ above moderate incomes. Most of the occupants have lived in their units more than one year.

The project will create a permanent need for 39 rental units and 4 units available for ownermoccupancy. Based on definitions of comparable replacement housing, these include 14 "studio" units without separate bedrooms, 17 one-bedroom units, 9 two-bedroom units, 1 three-bedroom unit and 2 units with four or more bedrooms. Comparable building types would include 15 houses, 26 apartments and 2 sleeping rooms (or apartments or houses to share).

The primary target areas for Kuhio Avenue replacement housing should be Waikiki or other central city areas with convenient access to public transportation, commercial shopping areas, and public facilities. Present occupants expressed an overwhelming preference to remain in Waikiki.

Given the high values of properties being acquired in Waikiki, no problems are anticipated in finding suitable replacement housing "within the financial means" of the four affected owner-occupants.

The cost of replacement rental housing may not exceed $25 \%$ of the displaced household's gross income plus the maximum Replacement Housing Payment available to the household (\$1,500 over two years).

Based on this standard, the maximum afforable rents would be rather low, with about half falling below $\$ 150$ per month.

There are housing programs to assist low and moderate income displacees overcome any financial problems in finding replacement housing. The present occupants who could not afford market rents appear to qualify for housing subsidies (in addition to Replacement Housing Payments) or units in public housing or assisted housing projects. Under various housing programs examined, there appear to be sufficient resources available to assist the se households. The best prospects are through the Federal Section 8 Lower-Income Housing Assistance Program, Leased Public Housing and State Rent Supplements--all of which subsidize tenants within the private housing inventory. Financial assistance will also be available to eligible displaced families and individuals to cover moving and related expenses.

With a combination of private market resources and government housing assistance programs, the City should thus be able to assure an adequate supply of permanent replacement housing in suitable locations at prices or rents within the financial means of the displaced families and individuals.

There will be some problems, however, in assuring 11 replacement
units which are strictly comparable to the units now occupied as to unit size and type of building within Central Honolulu or other locations preferred by occupants.

During Fiscal Year 1976-1977, when Kuhio Avenue relocation is expected to occur, other government projects will displace an estimated 173 families and 160 individuals on Oahu, including at least 62 families and 62 individuals in Honolulu.

Permanent relocation is expected to occur over a twelve-month period between October 1976 and September 1977, preceding construction on the roadway. Any temporary relocation will occur during the construction period for the particular buildings affected. No person lawfully occupying real property will be required to move without at least 90 days written notice.

The displaced non-profit organizations will be assisted in finding suitable replacement quarters and will be compensated for moving expenses.

A relocation information program will use a variety of communication methods to provide complete information about the project, relocation policies, benefits and kinds of assistance available。

The relocation program will cost an estimated $\$ 87,600$ to $\$ 90,500$,
excluding any rental assistance required for households who may be temporarily relocated.

The program will be carried out by the Relocation and Property Management Division of the Department of Housing and Community Development, the City's central relocation agency, in coordination with other Federal, State, City/County and private organizations.

## 2. Accessibility

The direct impact of the widening of Kuhio Avenue will be improved accessibility into and through the impact area. The environmental impact evaluation concluded, however, that although the existing streets of Waikiki both in and around the project area already carry high traffic volumes and experience some congestion, they presently have the capacity to accommodate traffic volumes generated by the continued implementation of land use policies of the City and County of Honolulu, although with a substantial decrease in the level of service provided and a continuation of the circuitous routing of auto trips.

Waikiki, the most popular tourist and vacation center in the State of Hawaii, has the largest concentration of hotels and resort/ commercial activities in the State. The area also has a large residential population. Waikiki is presently served by a bus system which is operated
by the City on existing street rights-of-way. Within the project area, the primary movement is in the ewa-kokohead direction via Ala Wai Boulevard, Kalakaua Avenue and Kuhio Avenue. There are also several discontinuous mauka-makai streets. These are Liliuokalani, Ohua, and Paoakalani Avenues which connect Ala Wai Boulevard with Kalakaua Avenue.

As the predominant movements in Waikiki are trips originating in and trips destined to Waikiki, the direct impact of the project would be greater on accessibility within Waikiki than on the region. By minimizing existing and future congestion, and by providing a more direct route, the project will shorten trip time and vehicle operating costs within Waikiki. Decreased travel time and operating costs are included in the direct economic benefits accruing from the project.

Considered from the perspective of the individual traveler, the actual savings in time and operating costs is quite small, due to the limited length of the widening project. Although the combined impact of small individual time savings may result in large dollar values, it may not correctly measure the social benefits of time saved. Therefore, the impact of improved accessibility is stated generally in positive qualitative terms.

Another direct impact of improved accessibility within the project impact area is the improved bus service which can be provided by routing buses on Kuhio Avenue. As Kuhio Avenue is centrally located, bus service on that street will reduce walking distance for many transit riders. The impact of this improved bus service would be the increased ridership resulting in savings in time and vehicle operating costs. These savings are among the direct benefits to transit users in the impact area.

## 3. Development Impact

Secondary impacts of the proposed action include possible changes in population characteristics and of the employment base. The project area is presently in transition from low and medium density to high density apartment and hotel uses. Although these changes are the direct result of the land use policies of the City and County of Honolulu and market forces of supply and demand, the influences of improved accessibility are discussed below.

Because of Waikiki's unique location and attractiveness for tourists and residents, development pressures for hotels and apartments, historically, have not been influenced by inconvenient access. ibility and congestion within Waikiki. While the proposed action is likely to make development easier and may even accelerate it somewhat, the overall impact of the improvement of Kuhio Avenue
on future growth and development in Waikiki and in the project area in terms of magnitude and time should be minor. As previously stated, accessibility already exists to the various subareas within the project area, although on narrow and congested streets and by circuitous routes. In fact, many new developments have been recently or are presently being constructed in the project area. Additionally new building permits have been recently issued for construction of new highrise developments within the project area, some of which are adjacent to the project itself. As long as parcels of land are accessible, the impact of improved accessibility caused by the proposed action on future developments can only be speculated.

## E. SCHOOLS

Discussions with the administration of Jefferson School and with the State Department of Education reveal that no significant adverse impacts to the Jefferson School and campus are expected to occur from the proposed action. This carefully maintained, well landscaped facility is well set back from the streets which are adjacent to it. The most recent school building addition is the Orthopedic School, which was constructed in 1973 and which is located next to Kuhio Avenue. Plans and designs for these facilities were executed with the understanding by the Department of Education and the Department and Health, which administers special programs at the Orthopedic School, that Kuhio Avenue might be widened to a 70 foot right.-of-way. Consequently, these school facilities were constructed with a setback of approximately 63 feet from the existing Kuhio Avenue right.-ofoway, which is sufficient to accommodate the proposed action. The building was also constructed with no entrances on Kuhio Avenue to avoid students' access and egress into the widened street. $15 /$

## F. WILDLIFE AND VEGETATION

The proposed action is located entirely in urbanized areas currently developed with improvements. Areas which are essentially natural in character which serve as wildlife habitats are not directly involved. Therefore, the impact on wildife is considered minimal due to the existing highly developed urban environment of the impact area.

A considerable variety of vegetation which are common type and primarily "landscape" in character exists within the projectarea. As stated earlier, there are some 29 different varieties of trees existing in the immediate impact area along Kuhio Avenue. The proposed action will require the removal of approximately 105 individual trees from the impact area. There are also some smaller ornamental or landscaping type shrubs which will also be removed. Appropriate precautions will be taken to protect other trees and vegetation which exist in the project area but are not directly affected by the proposed action. Trees and shrubbery which are considered to be of notable value will be replanted within the project area or elsewhere to be determined by the City Department of Parks and Recreation. Appropriate landscaping with new trees and plantings will accompany the proposed action.

During the construction period, provisions will be made to preserve
land resources, within the project area and outside the limits of permanent work performed under the various construction contracts, in their existing condition or be restored to a natural condition that will not detract from the appearance of the surrounding area. Except in areas marked on the construction drawings to be cleared, it shall be clearly specified that the contractor shall not deface, injure or destroy trees or shrubs nor remove or cut them without approval. Any tree or other landscape features scarred or damaged by the contractor's equipment or operation shall be restored, as nearly as possible, to its original condition by replacement if necessary.

## G. CONSTRUCTION IMPACTS

Adverse impacts to the environment and the general public occurring during construction of the proposed action should be of less importance than the potential long-term impacts created by the proposal. However, the short-term construction activities do pose as a potential source of pollutants to the environment and discomfort to neighboring community. Therefore, the potential construction impacts are analyzed and discussed in the following sections along with the appropriate measures that should be followed to minimize the adverse impacts.

## 1. Noise and Vibration

One of the impacts associated with the proposed action is the short-term noise and vibration impacts of construction activities. The proposed street widening and the construction of the associated drainage facilities and sewer improvements will involve the use of machines and procedures which, in the past, have resulted in intense noise levels and, occasionally, high vibration levels in and around the construction site. The construction activities will include demolition, clearing, grading, excavation, materials handling and placement, and will involve the use of all the various kinds of machines and procedures which are associated with these activities.

## a. Noise

The existing noise emission standards for public work conse struction, on Oahu, restricts any construction activities creating loud noise and disturbances to only certain hours of the day that these activities can be conducted. The recently adopted public health regulation on "Community Noise Control for Oahu" by the Deparment of Health of the State of Hawaii establishes regulations on all construction noise on Oahu. The regulations state that all construction activities in excess of the allowable noise levels, when measured at or beyond the property line would require a permit and shall be restricted to the hours between 7:00 a. m. and 6:00 p.m. of the same day and restricted on Sundays and legal holidays. Where construction noise exceeds 95 dBA at or beyond the property line of the construction site, the construction activities will be restricted to the hours between 9:00 a.m. and $5: 30 \mathrm{p} . \mathrm{m}$. of the same day and limited to five days a week - Monday through Friday. Also, all combustion by the powered equipment shall have appropriate mufflers to minimize noise. These regulations will be specified in all construction contracts.

## b. Ground-Borne Vibration

The vibration levels created by the normal movement of vehicles including graders, loaders, dozers, scrapers and trucks generally are of the same order of magnitude as the ground-borne vibration created by heavy vehicles running on streets and highways. In general, the ground-borne vibration from vehicle operations on streets, even very rough streets, is not sufficient to create noticeable impact in adjacent communities. It is possible that some types of excavation activities can generate some ground-borne vibration to be perceptible or noticeable in nearby buildings. However, it can be expected that the construction activities will not generate sufficient ground borne vibration to result in any adverse impact on residents or structures.

## 2. Air Quality

The immediate short-term impact of the proposed action on air quality will be moderate local increases in pollution levels due to construction activities. Construction activities will produce dust and diesel fumes from increased truck traffic, generators, bulldozers, etc.

The following pollution control measures and procedures will be followed as required for all construction contracts:
a. From the Public Health Regulations of the Department of Health, State of Hawaii, Chapter 43, "Air Pollution Control":

1) Section 9. Control of Motor Vehicles
a) No diesel-powered motor vehicle shall be operated which emits visible smoke for a period of more than five (5) consecutive seconds while upon streets, roads, and highways.
b) No person shall cause, suffer or allow to keep any engine in operation while the motor vehicle is stationary at a loading zone, parking or servicing area, route terminal or other offwstreet areas, except:
(1) During adjustment or repairing of such engine at a garage or similar place of repair.
(2) During operation of ready-mix trucks, cranes, hoists, and certain bulk carriers or other auxiliary equipment built onto the vehicle or equipment that require power take -off from the engine, provided that there is no visible discharge of smoke and the equipment is being used and operated for the purposes as originally designed and intended.
2) Section 10. Fugitive Dust
a) No person shall cause or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be constructed, altered, repaired or demolished without taking reasonable precautions, as approved by the Department, to prevent particulate matter from becoming airborne. Examples of some reasonable precautions are:
(1) Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing or land;
(2) Application of asphalt, oil, water or suitable chemicals on roads, materials stockpiles, and other surfaces which can give rise to airborne dusts;
(3) Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations;
(4) Covering at all times when in motion, openbodied trucks transporting materials likely to give rise to airborne dusts;
b) No person shall:
(1) cause or permic the discharge of visible emissions of fugitive dust beyond the lot line of the property on which the emissions originate; or
(2) cause or permit to be emitted into the atmosphere any dust from any source in such a manner that the ground level concentrations at a point selected by the Department exceeds:
(aa) 150 micrograms per cubic meter above upwind concentrations. Samples shall be obtained by using a high volume air sampler or other equivalent method for a 12 -hour period; or
(bb) A fallout of 3.0 grams of dust per square meter above upwind concentrations for any 14-day period. Dustfall samples shall be obtained by using fallout jars of 8 inches in diameter and 12 inches in depth or any larger jars of equivalent proportions;
provided that this subsection shall not apply to persons who can demonstrate to the Director that best practical operation or treatment is being implemented.
b. From "Standard Specifications for Public Works Construction,"

November 1968 by the Department of Public Works, City and
County of Honolulu, Section 3, "Erosion and Dust Protection":
"Whenever more than 75 micrograms of dust per cubic meter of air is measured outside the property boundary, a dust problem is considered to exist. The Contractor shall take immediate action to alleviate this problem."

## 3. Water Quality

The construction activities will produce two potential causes of sediment to be introduced into bodies of water: first from any disturbance of existing ground cover, including vegetation, paving or structure, from clearing operation and general grading, excavation, and filling operations; and second, from de-watering of excavations. For the former, the basic requirements of an effective sediment control program to be followed will be:

- Saving existing vegetation wherever possible and reducing the area of disturbance.
- Covering soils with mulch or vegetation to reduce exposure of bare soil to the minimum.
- Installing permanent vegetation speedily after construction.
- Constructing basins to trap sediment on-site.
- During grading operations, the grade shall be maintained to prevent erosion into adjoining properties.
- Scheduling construction work which may pollute waterways during the drier season of the year.

The second construction activity of major concern is the de-watering of trench excavation in coralline deposits whereby fine materials in suspension will be pumped. These materials will remain in suspension for a sufficient duration to be highly visible in bodies of water. Suspended materials are difficult if not impossible to trap or settle in a basin. To minimize the effects of dewatering operation and its discharge of waters with high levels of suspended solids, a wellpoint system with suitable filter materials around the pump intake may be necessary. If this method is not satis. factory, waters pumped from trench excavation may have to be recharged back into the ground.

The following pollution control measures and procedures will be adhered to during the construction phase:
a. From the Public Health Regulations of the Department of

Health, State of Hawaii, Chapter 37, "Water Pollution
Control, Section 2," Standards of Water Quality:
> "It is the public policy of this State to conserve the waters of the State, and to protect, maintain and improve the quality thereof. . . . and to provide that no waste be discharged into any waters of this State without first being given the degree of treat. ment necessary to protect the legitimate beneficial uses of such waters; and to provide for the prevention, abatement and control of new and existing water pollution; and to cooperate with the federal government in carrying out these objectives. .... Any industrial, public or private project or development which could constitute a new source of pollution or an increased source of pollution will be required, as part of the initial project design to provide the highest and best degree of waste treatment practicable under existing technology."
b. From the Special Provisions to the "Standard Specifications for Public Works Construction, " on "Water Pollution":
"The Contractor shall not pollute water resources including streams and drainage systems with fuel; oils, bituminous materials, calcium chloride, acids, construction wastes, wash waters or other harmful materials. Surface drainage from cuts and fills whether or not completed, and from borrow
waste disposal areas shall, if turbidity producing materials are present, be held in suitable sedimenta. tion ponds or shall be graded to control erosion to meet acceptable limits. Objectionable construction discharges shall be processed, filtered, ponded or otherwise treated prior to their discharge into a waterway or drainage system. Disposal of any material, garbage, oil, grease, chemicals, trash, and other similar materials on areas adjacent to streams or drainage systems shall not be allowed."
4. Vehicular and Pedestrian Traffic Disruption

Due to the nature of the project, some of the traffic lanes on Kuhio Avenue will be temporarily closed to traffic during the construction period. Also, the comstruction of the various storm drains in the intersecting streets between Kuhio Avenue and Ala Wai Canal will require the closure of some of the traffic lanes on the affected streets for a short period of time. An adequate number of lanes will remain open to accommodate local traffic and emergency vehicles. Close coordination will be conducted with the Department of Transportation Services, City and County of Honolulu, in the development of the temporary traffic rerouting plans during the various phases of construction, along with the determination of the number of lanes that will remain open on the various roadways affected. No roadway will be closed without
the express permission by the City Department of Transportation Services.

To minimize the short-term inconvenience to vehicular and pedestrian traffic on these affected roadways, prevent accidents and protect persons and properties, the following measures and procedures will be adhered to as a provision in the construction contracts:
a. Free access to water meters, water valves and abutting private properties must be provided and fire hydrants must be readily accessible to the Fire Department at all times.
b. Proper traffic bridges shall be provided when necessary so that all streets, roads, lanes, alleys, driveways, and garages will be accessible to traffic at all times. In lieu of the traffic bridges, suitable steel plates may be used.
c. Where pedestrian walkways exist, they shall be maintained in passable condition or other facilities for pedestrians shall be provided. Passage between walkways at intersections shall likewise be provided.

## d. When substructure excavations cross street intersections,

safe crossings for vehicles and pedestrians shall be provided and maintained. Pedestrian crossings shall be separate from vehicle crossings and shall be provided with handrails.
e. All necessary signs, lights, flares, barricades, and other protective facilities shall be installed, provided and maintained and all necessary precautions for the protection, the convenience and safety of public traffic shall be taken. All protective facilities and precautions to be taken shall conform with the "Rules and Regulations Governing the Use of Traffic Control Devices at Work Sites On or Adjacent to Public Streets and Highways" adopted by the Highway Safety Coordinator, and the U.S. Federal Highway Administration "Manual on Uniform Traffic Control Devices for Streets and Highways, Part VITraffic Controls for Highway Construction and Maintenance Operations," dated 1971.
f. Notices to the motoring public pertaining to the restriction of vehicular traffic and any road closures in the affected work areas, shall be published for at least three consecutive days in a Honolulu daily newspaper of general circulation. The first day of this notice shall begin on the third day prior to the disruption of traffic.

It is currently planned to utilize precast box drains during the construction of the various drain lines associated with the proposed project to minimize the impact and inconvenience to the adjacent residents and property owners affected by minimizing the duration of the actual construction period of these drain lines.

## 5. Physical Impact on Adjacent Structures

To maintain access to local and emergency traffic on the affected roadways, the location and therefore the construction of the underground utilities which are part of the proposed project will occur, generally, on one side of the roadway. Since the average ground elevation is approximately 5 feet above sea level along Kuhio Avenue, the drain lines are generally shallow, located near the ground surface. The sewer lines, though, will be located as deep as 12 feet below the ground surface.

An additional physical impact would be the potential settlement of the grounds adjacent to trench excavation caused by excessive lateral movements of the sides and heave of the bottom of the excavation, and by de-watering. Settlements due to excavation are caused by lateral movement of the excavation walls and bottom heave due to stress release. Excavation, shoring and bracing that are carefully designed, planned and carried out would minimize
the settlements. Settlements due to de-watering silt and clay materials, if any, are caused by the increased weight of the de-watered material (due to removal of the buoyant force) which consequently increases the load in these compressible materials causing them to consolidate. A combination of deep cut-off sheet piling and recharging the ground water outside the excavation could be utilized to minimize the effects of de-watering.

## 6. Disposal of Spoils

Disposal of spoils from construction is an environmental concern as well as an economical one due to the difficulty in finding suitable sites for spoil disposal. There are currently two Citymowned dump sites, one in Kailua and the second in Kawailoa near Haleiwa. The Kailua site is the closest but located on the Windward side nearly 13 miles from the proposed project site.

It is estimated that approximately 17,000 cubic yards of material will be cleared and excavated for the proposed project including the construction of the associated drain lines and sewer lines. Of this 17,000 cubic yards, some 10,000 cubic yards will be used as backfill. The remaining 7,000 cubic yards must be hauled to the aforementioned Kailua dump site or other site or sites approved by the City.

As the City-owned landfill site in Kailua is operated by the City, strict controls are being exercised to prevent any form of pollution. Any private areas selected for spoils disposal would be governed by applicable grading ordinance and as approved by the City.

Some grading will be required within a small portion of Kuhio Avenue between Makee Road and Kapahulu Avenue which is a part of the Diamond Head Historic, Cultural and Scenic District. Accordingly, a certificate of appropriateness in compliance with the requirement of Section 21-1204 and 21-1205 of Article 12, Comprehensive Zoning Code will be obtained. No stockpiling of earth materials is anticipated in this portion of the project.

## VI. ALTERNATIVES TO THE PROPOSED ACTION

## A. ALTERNATIVES STUDIED

In a study $\frac{19 /}{}$ to identify the basic alternatives to the widening and improvement of Kuhio Avenue as shown on the General Plan for the City and County of Honolulu, various alternatives were identified and evaluated. These alternatives to the proposed action were evaluated for their ability to fulfill the basic objectives of improving traffic circulation within and through the project area and providing street improvements, i.e., drainage facilities, sidewalks, street lights, etc., with minimum adverse impacts to the project area.

The alternatives identified fell into four basic categories which were:

1. Do-Nothing - This alternative, which is a "no action" alternative, is the baseline for assessing impacts of the other "action" alternatives. The domnothing alternative, as previously discussed in Chapter IV, will cause the area to be deficient in street capacity to adequately handle the projected travel demands and provisions for public services for safety and health.

## 2. East-West Corridor Alternatives - This seris of alternatives

were basically alternative corridor locations of the proposed improvement. These alternatives were located either outside or on the periphery of the project area and included the construction of a new offshore facility, widening of Kalakaua Avenue, and widening of Ala Wai Boulevard. These alternatives would provide improved traffic flow for through-traffic in Waikiki in the east-west direction but since it is located outside of the project area, it would not meet the other project objectives by neither improving circulation nor providing street improvements for the area.
3. Alternative Routes Within the Project Area - These alternatives included the improvement of other east-west routes in the project area. It also examined the improvement of northosouth streets in lieu of any extensive improvement of the alternative east-west routes to accommodate circulating traffic. It was concluded from the evaluation of these alternatives that any improvements to the north-south streets alone would still leave a seriously deficient east-west capability in terms of adequate capacity to meet projected traffic volumes and improved accessibility and circulation within the area. Improving any east-west streets other than Kuhio Avenue, which is the only continuous street through the area, would be costly and extremely disruptive involving many residential

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relocations.
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4. Alternative Designs for Kuhio Avenue - This series of alternatives were basically design alternatives to the proposed action in terms of alternative right-of-way and roadway widths and also alternative alignments. In this evaluation it was found that the number of dwelling units affected could be reduced with the reduction of the right-of-way or the roadway width, but with attendant reduction in roadway capacity and use.

The findings of the study of alternatives to the proposed action revealed that only the improvement of Kuhio Avenue could fulfill project objectives by providing a balanced street system and the needed street improvements, with the least adverse impact to the project area. Kuhio Avenue by virtue of being located nearest to the center of the area would provide che most efficient street pattern for the area once it is widened and converted to two-way street operation. Accordingly, a detailed evaluation of design alternatives to the proposed action was conducted.

## B. DESIGN ALTERNATIVES

The study of design alternatives of the proposed action to widen and improve Kuhio Avenue to a 70 foot right-of-way as shown on the General Plan for the City and County of Honolulu consisted of alternative right-of-way widths and alignments. In preliminary design studies, alternative alignments for each of the various right-of-way widths were examined for possible reduction in the number of affected structures. It was found that no major reduction in the number of affected dwelling units would occur by the shifting of the basic roadway alignment from that established in the General Plan due to the approximately equal number of dwelling units that exist on either side of the roadway. A reduction of three dwelling units could be possible if the alignment is shifted northerly between Paoakalani Avenue and Makee Road. Since these units are located directly across from the orthopedic school, this would mean a further encroachment into the school property and placing the roadway closer to the existing school buildings. In view of the above, it was concluded that the basic proposed right.of-way location as indicated in the General Plan, should be maintained.

Prior to the evaluation of alternative right-of-way widths, another type of design alternative was considered in order to reduce the number of dwelling units affected by the proposed action and still maintain the efficiency of the proposed street cross section which contains a 10 -
foot left-turn pocket. This alternative considered the reduction of the proposed roadway width to 46 feet by eliminating the 10 foot median or storage lane in areas between street intersections with left-meturn pockets. In areas where this reduced roadway occurred, a total rightmofmay of only 60 feet would be required. It was found that under this alternative, approximately 10 units of the 57 units affected by the implementation of the full 70 foot rightwof way could remain, unaffected by the street improvement. It was concluded that this alternative would cause disruptions to normal traffic flow caused by mid-block left-turn movements thus affecting safety and reducing street capacity. It would also preclude future installation of left-turn pockets due to any changes in traffic flow pattern.

## 1. Alternative Righteof-Way Widths

Three alternative right-of.way (R.O.W.) widths of 70', 60' and 56 were identified and evaluated. These widths would all provide 4 through traffic lanes on Kuhio Avenue with varying lane widths. These 4 lanes would provide 2 traffic lanes in each direction which is the minimum number required to provide for an efficient twoway street operation on Kuhio Avenue. The typical street crosssections for the various right-of-way widths are shown in Figure 13.

Since the mauka side of Kuhio Avenue would have more dwelling units affected, the proposed makai right-of-way line as shown on


60' RIGHT - OF - WAY ALTERNATVE
(NOTE: 46 FT , CURB TO CURE)


## TYPICAL STREET CROSS - SECTIONS

the General Plan was maintained and the mauka right-of-way line location varied for the $60^{\prime}$ and $56^{\prime}$ widths.

The evaluation of alternative right-of-way widths consisted of comparison of roadway capacity and design considerations, preliminary cost estimates, community impact and conformance with current public policies. A summary of the evaluation is shown in Table 2.
a. Roadway Capacity and Design Considerations

To determine roadway requirements, adequate street capacity to accommodate future projected traffic volumes should be provided based on current design standards. As shown in Table 2, the projected screenline volume to capacity ratio (V/C) associated with the $70^{\prime}$ R.O.W. is nearly 1.0 which means that adequate roadway capacity through a screenline which includes Kalakaua Avenue and Ala Wai Boulevard would be provided with the $70^{\prime} \mathrm{R} . \mathrm{O}$. W. to meet the 1995 projected peak hour traffic volumes in the eastwest direction. For the other alternatives with lesser widths, the design screenline capacity would be exceeded by over $10 \%$ in 1995.

Related to the roadway capacity are various traffic considerations involving safety, efficiency and convenience. The basic

TABLE 2: SUMMARY OF EVALUATION OF ALTERNATIVES
ALTERNATIVES


- Projected Screenline Traffic Volume ${ }^{1 /}$
- Screenline Capacity $\underline{2 /}$
- V/C Ratio (Screenline)
- Vehicular Circulation
- Accessibility to Adjoining Properties
. Bike Route
- Route Continuity

2. PRELIMINARY COST ESTIMATES

- Construction 3/
- Rights -of-Way 4/
- Total

3. COMMUNITY IMPACT

- Relocation (Dwelling Units) 5/

4. CONFORMANCE TO DEVELOPMENT POLICIES

ALMERNAMVES
$\frac{1}{2}$ P.M. Peak Hour, Peak Direction Volume through Screenline
$\frac{2}{3}$ Capacity based on design level of service $C$
$3 /$ Early 1975 cost and does not include sewer improvements and offsite drains
4/Factored cost based on a capital improvement program budget statement obtained from the City
5/Estimates prepared from the use of Sanborn Maps in August 1975.
difference between the $70^{\prime}$ R.O.W. and the two lesser widths is that the $70^{\prime} \mathrm{R} . \mathrm{O}$. W. would provide sufficient width to accommodate a 10 foot left-turn pocket in addition to the 4 traffic lanes. The $60^{\prime}$ and $56^{\prime} \mathrm{R} . \mathrm{O} . \mathrm{W}$. alternatives are wide enough to only accommodate the 4 through lanes. Kuhio Avenue, whose primary function is as a feeder route to serve local north-south streets, will have a large volume of turn-movements. The leftoturn pocket provided by the $70^{\prime}$ R.O. W. will permit safe left-turn movements whout decreasing the efficiency of the two remaining throughmlanes. This is reflected in the higher roadway capacity, as reflected in the difference in the street capacity between the $70^{\prime}$ and $60^{1}$ R.O.W. alternatives. The difference in the capacity between the $60^{\prime}$ and $56^{\prime}$ R. O. W. widths reflects the narrower travel lanes of the 56' R.O. W. alternative which causes greater "friction" or resistance to smooth, safe and comfortable flow of traffic.

The planned use of Kuhio Avenue as a major bus transit route is also a factor in determining the R.O.W. width. Since buses would be making stops in the outside lanes, the combination of a stopped bus and a car trying to make a left turn could block both through-lanes simultaneously. Although this
condition is reflected in determining the roadway capacity on an average hourly basis, the periodic inconvenience and aggravation to motorists of having both lanes blocked is an important factor on major streets serving heavily populated areas, like Waikiki. Therefore, more efficient vehicular circulation would be provided along Kuhio Avenue and within the project area with the $70^{\prime} \mathrm{R} . \mathrm{O}$. W. than with the lesser width alternatives which would not provide a separate left-turn lane. Between intersections, the 10 foot median provided by the $70^{\prime}$ R. O. W. could be utilized as a storage lane for leftturn movements into properties with entrances on Kuhio Avenue. This provision would not only inctease the efficiency of vehicle operation but also improve both safety and access. ibility to properties fronting on Kuhio Avenue.

The City has master planned Kuhio Avenue as a bike route through Waikiki and to minimize conflict between bicycles and automobiles the outside traffic lanes of the facility should be wide enough to accommodate thesetwo types of transportation modes safely. Both the $70^{\prime}$ and $60^{\prime}$ R.O.W. widths would permit adequate roadway widths for a 13 foot outside lane in either direction to accommodate the bicycles. This outside lane width would also permit easier and safer right-urn

Outside of the project area, Kuhio Avenue has an existing right-of-way width of 70 feet between Kaiulani and Kalakaua Avenues. The existing roadway width is 56 feet between Kaiulani and Seaside Avenues and the City and County of Honolulu is planning to improve and widen the existing 40 foot roadway between Seaside and Kalakaua Avenues to a width of 56 feet. The implementation of the $70^{\prime} \mathrm{R} . \mathrm{O}, \mathrm{W}$. alternative in the project area would provide route continuity through constant right-ofeway and roadway widths and uniform street movement patterns along the entire length of Kuhio Avenue for a more safe and efficient use of the street through Waikiki by automobiles, buses and bicycles.

## b. Cost

The $70^{\prime} \mathrm{R} . \mathrm{O}$. W. alternative would have the highest cost in terms of both construction and right-of-way costs. The preliminary cost estimate for the $70^{\prime}$ R. O. W. alternative is $\$ 5.52$ million. The next highest cost alternative is the $60^{\prime} \mathrm{R}$. O. W. street facility with a total cost of $\$ 4.09$ million and the least costly is the $56^{\prime} \mathrm{R}$. O. W. alternative at a total cost of $\$ 3.68$ million. The cost difference between the 70' R.O.W. and the other two alternatives in terms of construction cost is $\$ 30,000$ and $\$ 40,000$ for the $60^{\prime}$ R.O.W. and $56^{\prime}$ R.O.W.
alternatives, respectively. The major cost differential is in the right-of-way cost with a difference of $\$ 1.4$ million and $\$ 1.8$ million for the $60^{\circ}$ R.O.W. and $56^{\prime}$ R.O.W., respectively.

## c. Community Impact

The major difference in community impact between the alternatives is in the number of affected residential dwelling units. The $70^{\prime}$ R.O. W. alternative would cause greatest impact by affecting more dwelling units than the other alternatives. Approximately 57 units would be affected with the $70^{\prime}$ R. O. W. alternative. The $60^{\prime}$ R.O.W. would affect 37 units and the 56' R.O. W. would have the least with only 22 units affected.

There are no measurable differences between the alternatives relative to other community impact factors such as noise, air and water quality, visual, etc.

## d. Conformance with Current Public Policies

The implementation of the $70^{\prime}$ R. O. W. alternative for Kuhio Avenue would be in complete conformance with the development policies for the project area as established in the General Plan for the City and County of Honolulu. Some properties have previously been acquired for street widening and various new
structures have been constructed in conformance with the established setback line, all in accordance with the 70' R.O.W. width.

## 2. Findings and Conclusions

The proposed action for widening and improving Kuhio Aven ue to a $70^{\prime}$ R. O. W. width with a $56^{\prime}$ roadway width, is based on the need to provide the required design capacity to meet projected traffic demand which the lesser width alternatives would not be able to do. It is further justified on the basis of safer and more efficient use of Kuhio Avenue for motorists making left-turn movements and as the planned bus transit route through Waikiki. The proposed action with its basic $70^{\prime} \mathrm{R} . \mathrm{O} . \mathrm{W}$. is supportive of current public policies with newer existing buildings located in conformance to the setback lines as set forth in the General Plan and Comprehensive Zoning Code of the City and County of Honolulu.

# VII. PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED 

## A. NOISE

The widening of Kuhio Avenue with the resultant increase in vehicular volume will increase the existing ambient noise levels by some 5 to 10 dBA . The increased noise levels would be comparable to other four -lane streets in the City and would not be incompatible with existing land uses except at the existing Thomas Jefferson Elementary and Orthopedic School.

## B. AIR QUALITY

Also due to the resultant increase in vehicular volume is the increase in air pollution levels in the immediate impact area along Kuhio Avenue。 The increased levels, especially the levels of carbon monoxide concentration in the air, are estimated to be within both State and Federal standards of air quality. It should be noted that without the increased capacity to the street system in the project area created by the proposed action, the projected traffic through the area would be forced to travel at a slower speed, resulting in an increase in the overall levels of air pollutants in the project area.

## C. WATER QUALITY AND DRAINAGE

The proposed improvements will add additional storm drainage discharges into the Ala Wai Canal. The total flow from the project area into the canal, through the proposed drainage system, is estimated at 300 cfs based on a 50 -year storm. This additional discharge from the project area when compared to the total discharge into the canal, is relatively small and therefore is expected to have only slight effects on the water quality and hydrology of the canal. The impuovements, on the other hand, will greatly improve drainage conditions in the area along with a cleaner, safer and more attractive and desirable street environment.

## D. SOCIO. ECONOMIC

1. Relocation

A total of 48 dwelling units and 2 units occupied by nonprofit organizations will be displaced by the proposed action. To minimize the impact on displacees, the City and County of Honolulu will assist in finding suitable replacement housing for the displaced residents and a suitable location for the affected nonprofit organizations. The displacees will also be given priority for government-assisted housing and, when eligible, provided with financial assistance to cover moving costs and rent subsidy
payments.

## 2. Development Impact

The potential for greater development in the area is more related to land-use policies and market forces of supply and demand than improved accessibility. Since accessibility does exist within the area, although on narrow and congested streets and by circuitous routes, the overall impact of the proposed action on future growth and development in the area should be minor.

## E. WILDLIFE AND VEGETATION

The proposed project will require the removal of some 105 individual trees of 29 different varieties. Those trees of notable value will be replanted either within the project area or elsewhere to be determined by the City Department of Parks and Recreation. The proposed action will include adequate replanting of trees and shrubs along the widened roadway.

## F. CONSTRUCTION IMPACTS

There are various short-term impacts caused by the construction of the proposed project that are unavoidable. Although all applicable regulations and good construction controls would be applied to minimize disruptions, there will be a certain amount of short-term impacts such
as noise, dust, traffic congestion, etc., that are unavoidable. These impacts should not affect public safety and do not result in long-term adverse impacts to the community or the region.

## G. NEED FOR IMPROVEMENTS

The improvements to Kuhio Avenue are part of a long-term effort towards upgrading the public facilities to accommodate the increasing densities in the "jungle" area of Waikiki. These developments will continue and in this respect, widening and improving of Kuhio Avenue will have a positive impact on the environment by providing adequate capacity to meet the future travel needs of the impact area efficiently. Without the improvement in the capacity of the existing street system, future traffic would have more congestion, travel at slower speeds and be forced to take circuitous routes in the project area, all of which leads to more air pollution, due to slower speeds and more vehicle miles traveled, more water pollution due to more pollutants in the air which find their way into bodies of water, and greater costs to the traveling public in terms of longer travel times and more vehicle miles operated.
VIII. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

It is expected that the local shortoterm use of environmental resources would enhance the long-term productivity of both the local and the regional island enviromment. The proposed action would require the commitment of some 1.5 acres of privately owned land for public rights-ofmay. Additionally, existing structures involving 48 dwelling units and 2 units occupied by nonprofit organizations would be affected. Approximately 105 trees would be removed, some of which will be replanted elsewhere. The street construction will cause temporary disturbance to residents in the impact area. Upon its completion, however, improved access, safety conditions and improvements to public facilities such as storm drains and sewers, will combine to upgrade neighborhood quality and to increase the desirability of this portion of Waikiki.

The most important factor in the relationship of short-term uses and long-term productivity is that the proposed action is considered to be a long-term improvement to Waikiki. As described in this Environmental Impact Statement, the future of Waikiki is intimately related to the future of tourism in the State of Hawaii. Consequently, any improvement which enhances the general environment of Waikiki
would benefit the entire State. Furthermore the proposed action is part of the long-term land use plans for the City and County of Honolulu as expressed in the Oahu General Plan. It is designed to support and enhance density increases, which have occurred and which will continue to occur in Waikiki. Seen in this context, local short-term uses of environmental resources are direct actions toward the achievement of public goals.

The major significant unavoidable, adverse impact which will arise from the proposed action is the displacement of some 48 households and 2 nonprofit organizations. In order to minimize this impact, the City and County of Honolulu will implement a sensitive and responsive relocation assistance program to meet the needs of the displacees. The program will include assisting the displaced families and individuals in relocating into housing which meets standards set forth in the State relocation statute and regulations. Also financial assistance to cover both moving expenses and rent subsidies will also be provided. The nonprofit organizations will also be assisted in finding suitable replacement quarters and in defraying the cost of moving. An information program will also be included to completely inform the public about the project, the relocation policies, benefits and kinds of assistance available。

Other mitigation measures to be taken in an effort to minimize the adverse impacts include:

- Replanting street right-ofwway with either those trees and shrubs which were removed during construction or new plants.
- Specifying various requirements in the construction contracts including the adherence to those governmental standards and regulations governing construction activities to minimize the short-term impacts occurring during the construction period.
- Implementing appropriate remedial measures, which satisfies the various regulatory agencies, to minimize any impact on the noise level in the Jefferson School classrooms caused by the increase in traffic on widened Kuhio Avenue.


## X. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Commitments of resources should be related to the general benefits which will accrue to the project area, to Waikiki, and to the economy of the State. The most important irretrievable resources utilized for the proposed action are land, construction materials, funds, energy and labor. The first two of these are resources which are extremely scarce on the Island of Oahu.

Some 1.5 acres of privately-owned land which is currently used primarily for residential purposes will be converted into public-use for the street right-ofoway. This will represent an irreversible commitment of this resource. Also, the use of most construction materials such as sand, concrete, asphaltic concrete, rock, steel, etc., will cause nearly irreversible use of these resources but the quantities required for the project are considered to be negligible, when compared to the amounts consumed on the island. This is also true for the funds and energy consumed to construct the project.

Labor is also irretrievable once expended, however at the present time, manual and skilled labor resources are readily available and their use will undoubtedly be considered a beneficial impact of the proposed action.

## XI. ORGANIZATIONS AND PERSONS CONSULTED

The following organizations and individuals were consulted in the preparation of the Environmental Impact Statement for the proposed Kuhio Avenue widening and improvement.
A. EEDERAL AGENCIES

1. U.S. Army Engineers District, Monolulu*
B. STATE AGENCIES
2. Department of Planning and Economic Development*
3. Department of Land and Natural Resources*
4. Department of Education*
5. Department of Transportation*
6. Department of Health*
7. Department of Social Services*
8. Environmental Center, University of Hawaii
9. Office of Environmental Quality Control
C. COUNTY AGENCIES
10. Department of General Planning*
11. Department of Land Utilization*

[^1]3. Department of Transportation Services*
4. Department of Parks and Recreation
5. Honolulu Board of Water Supply*
6. Department of Housing and Community Development*
D. OTHER ORGANIZATIONS OR INDIVIDUALS

1. Hawaii Hotel Association*
2. League of Women Voters of Honolulu
3. Life of the Land
4. The Outdoor Circle*
5. Waikiki Residents Association*
6. Waikiki Community Center
7. American Lung Association*
8. Waikiki Improvement Association*
9. Dr. Sam Allison, 305 Royal Hawaian Avenue, Suite 409 Honolulu, Hawaii 96815*
10. Father Philip Harmon, Alternative Structures International, 2486 Kuhio Avenue, Honolulu, Hawaii 96815

Comments from the various agencies, organizations and individuals on the proposed action provided additional information which assisted in the preparation of this environmental impact statement. These comments, along with the replies sent, are documented at the end of this document in Appendix B.

## XII. LIST OF NECESSARY APPROVALS

The following is a list of permits required for the implementation of the proposed action along with the status of each identified permit needed. Basically the only permits required are for the construction of the three drainage outlets into the Ala Wai Canal from:

1. The U.S. Corps of Engineers under Section 10 of the River and Harbor Act of 1899 and Section 404 of the Federal Water Pollution Control Act Amendment of 1972. The application for the permit will be submitted.
2. The State Department of Transportation, Harbors Division under Section 266-16 of the Hawaii Revised Statutes. The application for the permit will be submitted.
3. The Board of Land and Natural Resources, State of Hawaii, to obtain the right-ofmentry into the Ala Wai Canal. The right-of-entry will be sought from the Board as soon as the first two permits are obtained.
4. The Department of Land Utilization, City and County of Honolulu, to obtain a certificate of appropriateness in accordance with Ordinance No. 4507, establishing the Diamond Head Historic, Cultural, and Scenic District. The application for the certificate will be submitted.

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2. "Traffic Volume Projections and Analysis for Kuhio Avenue Widening," William Hee \& Associates, Inc., July 1975.
3. "用ighway Capacity Manual," 1965 Special Rpt. 87, Highway Research Board
4. Communication (D-1762) from William C, Vannatta, Chief Engineer, Department of Public Works to the Mayor and Board of Supervisors, City and County of Honolulu, dated July 11, 1956.
5. Committee Report No. 3101, Resolution No. 553, adopted by the Board of Supervisors and signed by the Mayor of the City and County of Honolulu on August 20, 1956.
6. Memorandum dated June 7, 1967, to Yoshio Kunimoto, Chief Engineer, City and County of Honolulu, from Frank Skrivanek, Planning Director, City and County of Honolulu, Subject: Waikiki Improvement District.
7. Communication (D-1037) from Lee Maice, Honolulu Redevelopment Agency, Albert C. Zane, Department of Public Works, Robert R. Way, Planning Department, to the City Council of the City and County of Honolulu, dated July 29, 1969.
8. "Waikiki Advisory Report," Mayor's Waikiki Diamond Head Advisory Committee, City and County of Honolulu, June 7, 1971.
9. "TOPICS Study: Defining the Federal-Aid Primary Type II System and the Areawide TOPICS Plan for Honolulu, "Traffic Department, City and County of Honolulu, February 1971.
10. Interviews with staff members of the Department of General Planning, City and County of Honolulu.
11. "Building Plant Data," Building Department, City and County of Honolulu.
12. "Census Tract 18," University of Hawaii, Urban Design Seminar Graduate Class (Architecture 477) and the Waikiki Community Center.
13. "An Analysis for Urban Renewal in Waikiki," Planning Department, City and County of Honolulu, December 1966.
14. "Waikiki Transportation Plan," Department of Traffic, City and County of Honolulu, prepared by Futrell Hawaii, Inc., February 1972.
15. Interviews with staff members of the Department of Education, State of Hawaii, on May 8, 1975, and Jefferson School Principal on May 14, 1975.
16. "Waikiki Survey - To Evaluate the Social Needs of the Residents of Waikiki," 322nd Civil Affairs Groups, U.S. Army Reserve, August 1972.
17. Data from the Building Department, City and County of Honolulu.
18. "Waikiki Traffic Study, "Traffic Department, City and County of Honolulu, Spring 1970.
19. "Selection of Alternatives for Detail Study for Kuhio Avenue Widening," William Hee \& Associates, Inc., January 1974.
20. Report by Dr. Miyake on Existing Noise Levels on Oahu for the Department of Health - Yet unpublished.
21. "Manual for Highway Noise Prediction," Department of Transportation, Eederal Highway Administration, Report No, DOT - TSC - FHWA -72-2, March 1972.
22. "Noise and Vibration Characteristics, Honolulu Rapid Transit System," Preliminary Engineering and Evaluation Program, Phase I, Wilson, Thrig \& Associates, Inc., August 1972.
23. "Study of Noise Level.s Along Kuhio Avenue At the Thomas Jefferson Elementary School," Wilson, Ihrig and Associates, Inc., February 1976
24. "Guidelines for Air Quality Maintenance Planning and Analysis; Volume 9: Evaluating Indirect Sources," EPA - 450/4-75-001, U, S. Environ-
mental Protection Agency, January 1975. mental Protection Agency, January 1975.
25. "Air Pollution Control Implementation Plan," State of Hawaii Department of Health, Air Sanitation Branch, January 1972.
26. Memorandum dated May 24, 1972 to Field Representative, Office of the Secretary, Pacific Southwest Region, San Francisco(U.S. Department of the Interior, Fish and Wildlife Service), from Regional Director, Bureau of Sport Fisheries and Wildlife, U.S. Department of the Interior, Subject: Public Notice 2SN-0Y3-1-002002-S - Application by Honolulu Redevelopment Agency for a permit to construct a storm drain outlet in Ala Wai Canal at Ala Wai Golf Course in the City and County of Honolulu, Oahu, Hawaii (CE, Honolulu).
27. "Kuhio Avenue Widening Project, Relocation Impact and Program Plan, "Survey and Marketing Services, Inc., April 1976.

## APPENDIX A

(Minutes of public hearings held by the City Planning Commission on amendments to the Detailed Land Use Map and Development Plan for the WaikikiDiamond Head Planning District)

## Special Meeting of the Planning Commission Minutes <br> March 11, 1971

The Planning Commission beld a special meeting on Thursday, March 11, 1971, at 8:45 a.m., in the Conference Room of the City Hall Annex with Acting Chairman, Thomas N. Yamabe II, presiding:

| PRESENT: | Thonas N. Yamabe If, Acting Chairman <br> Philip T. Chun <br> Fredda Sullam <br> Roy R. Bright <br> Rev. Eugene Connell |
| :---: | :---: |
| STAFF PRESENT: | George S. Moriguchi, Acting Plaming Director Andrew Sato, Deputy Corporation Counsel <br> Jack Gilliam, Staff Planner <br> Bill Bawtlett, Staf Planner <br> Bob Moore, Observer |
| ABSENT: | Robert R. Way, Planning Director RichaxdK. Sharpless, ex-officio James K. Sakai, ex-ofíicio |
| PUBIIC HEARING <br> GENERAL PLAN DLUM <br> AND DP AMENDMENT <br> WAKIKI <br> KUHIO AVENUE <br> CITY AND COUNTY <br> OF HONOLULU <br> (FILE H/48/C3/15) | A public hearing was held to consider a proposal to amend the General Plan Detailed Land Use Map and the Development Plan for Waikiki, Section "A", by varying the alignment of Kuhio Avenue between Kaiulani Avenue and Kapahulu Avenue. <br> Publication was made Pebruary 28, 1971. Two letters of protest were received, and are included in testimony given AGAINST the proposal. |
| Mr. Roy Parkex, Deputy of this matter in view of the taking of two building would be cheaper to real buildings. | Director of the Traffic Department, requested a deferral ecent data received, indicating a possiblity of avoiding They would like to determine cost-wise, whether it a the project further in the maka direction to a void the |

The Commission had the following questions:

1. Whether the major portion of traffic remains or passes through waikiki?

A recent traffic study conducted by the department revealed only $12 \%$ through
traffic, white $88 \%$ of the traffic remained in Waikiki.
2. Since Kalakaua Avenue and Ala Wai Boulevard are already main perimeter thoroughfares, why then is Kuhio Avenue necessary as another main thoroughfare?

Two reasons:
(a) As the Waikiki area develops, Kalakana Avenue and Ala Wai Boulevard will not bo able to handle any additional traffic. Presently, both avenues are quite heavily loaded.
(b) Kuhio Avenue is the tentative location of the rapici transit line. A subway is presently being considered, but even with an underground transportation system, a wider rightwof-way for the rapid transit line is still necessary.
3. In view of the realignment, will other interior cross streets be able to handle the traffic with development presently going on?

They are inadequate at existing widths, but adequate at designated DLUM widths.
4. How many parcels would be adversely affected?

Approximately 14 properties either with the existing alignment or the modified alignment.
5. There was discussion sometime ago of a moratorium on all further construction in Wakiki so that a detailed study could be made with the thought of a long-range plan. In that comection, isn't this project premature?

As far as the proposal itself to move the alignment, it is merely an adjustment to the policy which already has been set by the City Council. This is just a refinement of the alignment.
6. Was any study made of the net savings of the proposed amendment, taking into account the costs or losses which would be incurred by private properties adversely affected by the plan in relation to the drect monetary savings to the City by the new road alignment?

A study was conducted in which a savings resulted for the City.
There were no further questions from the Commission.
Public testimony was heard.
Testimony AGAINST the proposal.

1. Mrs. Samuel D. Allison, 4240 Kaikoo Place, Owmer of Little Prince Apartments at 2418 Kuhio Avenue (submitted letter addressed to Mayor Fasi on the proposal, dated March 10, 1971)
2. Mrs. Olga Yankoff, owner of property situated on the mauka-Diamond Head corner of Kuhio and Paoakalani Avenues.
3. Miss Judy Bell appeared for her mother, Mrs. Thelma Soueira, owner of property at 2424 Kuhio Avenue
4. Miss Mary Ronlette, property owner at 2411 Kuhio Avenue
5. Mr. Ulrich H. Huber, residing at the Male Hui, 2406 Kuhio Avenue

## Objections:

1. Unfair land acquisition only on the mauka side of Kuhio Avenue incurs a hardship upon some residents by destroying their homes and the economic security of others, making very difficult the development of properties on the mauka side of the Avenue. Plans proposed in the late 1950 s which involved property owners on both sides of the street should be reconsidered.
2. Wider thoroughfares encourage increased traffic. Efforts should be made to keep traffic movement in Waikiki at the lowest possible level. The utilization of existing small-street grids should provide adequate traffic lanes without tempting the use of Kuhio for fast traffic. Since the designation of a 561 Kuhio Avenue in the late 1950 's, thero has been no substantial cfort to improve many of these small streets. Utilization of these existing streets for traffic rather than for parking would provide all of the lanes needed for local traffic but would Leep fast traffic out. There now exists a grid of five parallel streets between Kaiulani and Lilitakalani in addition to the Ala Wai and Kalakaua Avenues. The adequate utilization of Tusitala, Cleghorn, Kuhio, Koa, and Prince Edward, and the similar grid at the Diamond Head end of Kuhio should solve most present and future needs.
3. If Kuhio is to become a major traffic arterial, it would secm that the portion of it with the greatest expected traffic - the Ewa end - should be at least as wide or wider than the Diamond Head or "feeder" end. Apparently no plans exist for the widening of the long section of Kubio from Royal Hawaian Avenue to the Kalakaua intersection. The widening of the Diamond Head end of Kuhio would create a major bottleneck.
4. Beauty and charm must be preserved, rather than increasen concrete development. A $70^{\prime}$ right-of-way with $56^{\prime}$ pavement and two $7^{\prime}$ sidewalk areas do not provide much greenery.

The Commission questioned Mr. Ling of the Public Works Department concerning the problems encountered by property owners as to acquisition of portions of their properties for roadwidening purposes. Mr. Ling pointed out that it must be understood
that the information given to property owners at this hearing concexning acquisition of their parcels is estimated only, not final. Paxcelmaps indicating exact metes and bounds of affected parcels will be reviewed, and the precise acquisition will be determincd. Concerning the following properties:

1. Mrs. Olga Yankoff owns a two-story concrete building on the maka-Diamond Head corner of Kuhio and Paoakalani Avenues. (It was pointed out that this property is already affected under the adopted DP alignment.)

Mr. Roy Parker of the Traffic Depertment stated that in this case, the City might purchase the underlying right-of-way, naxtow the sidewalle area from $7^{\prime}$ to $5^{\prime}$, and permit the building to remain for the life of its use. A new builling would not be permitted.

Mr. Ling of the Public Works Department indicated that regarding buidings affected, it has been their department's policy that if there is to be a minor encroachment into the right-of-way, the acquisition can be made with the building remaining as is. If the building is in the sidewalk area there the right-of-way will have sufficient room for a $7^{\prime}$ sidewalk area, the building may remain. A more precise detemmination will be made upon examination of parcel maps.
2. The property of Mrs. Thelma Soneira located at 2424 Kuhio Avenue will be completely acquired. In this situation, if the property is declared unbuildable, it is encumbered upon the City (if the propexty owner elects) to purchase the entire parcel. If the owner does not wish to sell, eminent domain proceedings follow.
3. Mr. Ulrich H. Huber of 2406 Kuhio Avenue expressed interest in saving the tree fronting their property. Mr. Ling indicated that the tree is in the pavement area, and will have to be removed.

There were no fuxther questions from the Commission.
Testimony FOR the proposal.

1. Mr. Peter G. Drewliner, property owner, 3027 Pualei Circle Apt. 209

Mr. Drewliner represented the Curry Trust. He stated that the proposed realignment is more beneficial to their interests than the existing one. He retracted his letter (umdated) opposing this proposal.
2. Mr. Don Bremner, Fxecutive Vice President, Waikiki Improvement Association

Their organization is vitally interested in the long range future security and
adequacy of the Waikiki community. The proposal is one remedy toward solving existing traffic deficiencies in the area, realizing also implementation of the one-way road system which is the backbone for the proposed mass transit system for Waikiki.

The question of whether the right-of-way should be decreased from $70^{\prime}$ to $56^{\prime}$ was discussed by the Mayor's Fdvisory Committee. From a long range planning standpoint, the $70^{\prime}$ width is necessary at this time for it would be much more difficult and costly to obtain later. Much deliberation went into re-orienting the right-of-way alignment so that the least amount of land acquistion would be made. The aesthetics of expanding roadways, and the impact of new road facilities upon community amenities are other concerns.

No other person was present to speak either for or against the proposal.
MOTION: Mr. Chun moved, seconded by Mr. Bright and carried, that the public hearing be closed, and that the matter be defenred for three weeks for further study, as requested by the Traffic Department.
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Meeting of the Planning Commission Minutes
April 14, 1971
The Planning Commission met in regular session on Wednesday, April 14, 1971, at $2: 10 \mathrm{p} . \mathrm{m}$., in the Conference Room of the City Hall Annex with Acting Chairman Thomas N. Yamabe II presiding:

PRESENT:

STAFT PRESENT:

ABSENT:

MINUTES:

GENERAL PIAN
DEVELOPMENT PLAN
AND DETAILED LAND
USE PLAN AMENDMENT
WAIKIKI, SECTION
"A"
KUHO AVENUE, BET. KAIULANI AND
KADAHULU AVENUES
(FILE *148/C3/15)

Thomas N. Yamabe II, Acting Chairman Roy R. Bright
Rev. Eugene Connel
Fredda Sullam
Robert R. Way, Planming Director William Bartlett, Staff Planner Robert Rider, Branch Head, General Plans

Philip T. Chun
James D. Crane
James K. Sakai, ex-officio
Richard K. Sharpless, ex-officio
The minutes of April 6, 1971, as circulated were approved upon the motion by Mrs. Sullam, seconded by Mr. Bright, and carried.

The Commission again reviewed the proposal to amend the Waikiki General Plan Development Plan and Detailed Land Use Plan, Section "A", by varying the alignment of Kuhio Avenue between Kaiulani Avenue and Kapahulu Avenue, in order to minimize the expense of cutting and refacing multi-story structures that would otherwise be affected by the present alignment.

The public hearing held on March 11, 1971, was closed and the Commission had deferred action pending further study of the proposals made by the Tratfic Department and the Department of Public Works.

Mr. William Bartlett, staff planner, reviewed the proposed amendment and responded to the proposals of the Traffic Department and the Department of Public Works, as follows:

1. Traffic Department proposal--To move the alignment of Kuhio Avenue between Uluniu Avenue and Kapuni Street slightly more mauka to cut into the parking garage of the Kuhio Plaza high-rise structure
rather than to cut into residential living quarters within a 6 -story concrete building on the makai side.

The cost estimates showed an insignificant difference between the two alignments. The cost was $\$ 354,300$ for the initial proposal as against $\$ 354,750$ for the new proposal.

In view of the insignificant difference in cost, the Traffic Department recommended that its proposal be accepted to avoid disrupting the living quarters.

The Planning Department concurs and the plan has been revised to reflect the Traffic Depart ment's proposal.
2. Department of Public Work proposal--To move the alignment of Kuhio Avenue between Paoakalani Avenue and Kapahulu Avenue approximately 3 feet makai at the Paoakalani intexsection and approximately 5 feet makai at the Makee Road intersection to avoid two multi-story buildings.

Further investigation revealed that the change would affect a 14 -story apartment building now under construction on the makai-Diamond Head corner of Paoakalani Avenue and Kuhio Avenue and a proposed structure with approved plans on the makai-Ewa corner of Kuhio Avenue and Makee Road.

The recommendation, therefore, is to retain the alignment presented originally and as reflected on the plan.
3. A question was raised regarding the cost to the property owners in the event Kwhio Avenue widen. ing is accomplished through the Improvement District Project.

Past experiences have shown that the cost is usually divided equally between the property owners and the City. Although it varies from property to property, the City's share has been from 40 to 60 percent of the total cost while the property owners share has been from 60 to 40 percent of the total cost.

In the questioning that followed, Mr. William Ling from the Department of Public Works and Mr. Roy Parker, Deputy Director, from the Traffic Department responded as follows:

1. The cost estimate for Kuhio Plaza taking does reflect the loss of the parking stalls.
2. The mauka alignment will affect only the garage structure of the Kuhio Plaza building; whereas, the makai alignment will affect, not only the first two floors of the 6-story residential building at the corner of Kuhio and Uluniu Avenues, but one, 2 -story concrete building, and two, l-story concrete buildings, all of which require cutting and refacing of the buildings. Therefore, the comparative cost between the two is about the same.
3. In order to avoid cutting into the 6-story building at the corner of Kuhio and Uluniu Avenues, there is some thought of modifying the curb return only and not rowiding the property line corner.

Three personsin the audience complained that they were not notified about the public hearing regarding the proposal under discussion and inquired how the new proposal affected the Kapuni Development Company property on the matuka side of Kuhio Avenue at Kapuni: Street.

Upon being advised by Mr. Parker that no change in alignment is proposed at that particular location, that the taking of 15 feet from both sides is the same alignment agreed upon in 1968 , the three persons were satisfied with the information given and had no testimony to present.

ACTION: Upon the motion by Mr. Bright, seconded by Rev. Connell, and carried, the Commission concurred with the recommendation of the Planning Department staff regarding the new alignment of Kuhio Avenue between Kaiulani and Kapahulu Avenues in Waikiki.

AYES: Bright, Connell, Sullam, Yamabe;
NAYS: None;
ABSENT: Chun, Crane
-146.

## APPENDIX B

(Comments received during the required State Environmental Quality Commission's Consultation Period and the responses to these comments)

The list of organizations and persons consulted in the preparation of the Environmental Impact Statement:

## FEDERAL

U. S. Army, Engineer District, Honolulu

## STATE

Department of Planning and Economic Development
Department of Land and Natural Resources
Department of Education
Department of Transportation
Department of Health
Department of Social Services
Office of Environmental Quality Control*
Environmental Center, University of Hawaii*

## CITY AND COUNTY

Department of General Planning
Department of Land Utilization
Department of Transportation Services
Honolulu Board of Water Supply
Department of Housing and Community Development
Department of Parks and Recreation*

## PRIVATE

Hawaii Hotel Association
The Outdoor Circle
Waikiki Residents Association
Ame rican Lung Association
Waikiki Improvement Association
Dr. Samuel Allison
League of Women Voters of Honolulu*
Life of the Land*
Alternative Structures International*
Waikiki Community Center*

[^2]. DEPARTMENT OF THE ARMY

U. S. ARMY ENGINEER-DISTRICTVHPNOLULU



要 1623 FY 75
$T 0 \ldots D / R$
13 August 1975 $D G P$
$\operatorname{Eng}(\operatorname{cotg})$

Mr . Kazu Hayashida
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Hayashida:
We have received the EIS Preparation Notice for the Proposed Kuhio Avenue Widening Project and offer the following comments:
a. The project falls within the Ala Wat Canal flood plain area as shown on the U.S.G.S. flood study maps.
b. The ETS should discuss the temporary construction period impacts such as construction noise, dust, rerouting of traffic, safety problems, inconveniences to access and utility relocation. Measures to be taken to mitigate these impacts should be described.
c. The purpose of the project and its need should be related to the overall traffic patterns and future routing plans for the Waikiki area. The consideration of alcernative solutions would also be supported by a discussion of total Waikiki area rather than the immediate project area only.

Thank you for the opportunity to participate in the consultation process. . We would appreciate a copy of the $I$ IS when it becomes available.

> Sincerely yours,


KAZU HAYASHIOA
DIRECTOA ANO CHIEFENGINEEM
ENV 76-43

January 14, 1976

Mr. Kisuk Cheung, Chief
Engineering Division
U. S. Army Engineer District,

Honolulu
Building 230, Ft. Shafter
APO San Francisco 96558
Dear Mr. Cheung:

> | Subject: | Environmental Impact Statement For |
| ---: | :--- |
| The Proposed Kuhio Avenue Widening Project |  |
| (URLTR PODED-EV, dated August 13,1975 ) |  |

The development of the drainage system to accompany the improvement and widening of Kuhio Avenue has been based on the recognition that the project falls within the Ala wai Canal flood plain area. The proposed widening of Kuhio Avenue would change some of the natural environment in this flood plain. Considering the predominately existing developed urban characteristics and size of the area, the overall impact to the total Ala Wai flood plain will be minimal. Whereas, the beneficial effect of the street improvement will be substantial with the alleviation of the flooding problem in this flood prone area.

The temporary impacts created by the construction of the proposed project and the measures to be taken to mitigate these impacts will be discussed in the EIS in Chapter $V$.

The evaluation of impacts of vehicular traffic in the EIS will be based on the assumption that Ala wai Boulevard will remain as the Kokohead entrance into Waikiki and accommodate ewa-bound traffic; Kalakaua Avenue will remain as the ewa entrance and accommodate kokohead-bound traffic through Waikiki; and Kuhio Avenue will primarily scrve traffic circulating in Waikiki. In this content, will the discussion on traffic patterns and alternatives be presented.
As stated in chapter II, Section A of the EIS, one of the primary purposes of the project is to improve circulation on Kuhio Avenue,
which is an important element of the overall circulation pattern in Waikiki. The proposed improvements to Kuhio Avenue are needed primarily to relieve traffic congestion due to unnecessary circulation of traffic and secondarily to supplement the movement of traffic on Ala. Wai Boulevard and on Kalakaua Avenue.
Based on the need for a better overall circulation pattern in Waikiki, also recognizing that the remaining portion of Kuhio Avenue already has two-way traffic on it, the evaluation of alternatives will be focused primarily on alternative solutions which would improve traffic circulation in the project area and only secondarily supplement movement on Ala wai Boulevard and Kalakaua Avenue.


[^3]Ref. No. 5111

Mr. Kazu Hayashida, Director Department of Public Works City and County of Honolulu 650 South King Street Honolulu, Hawaii 96813

Dear Mr. Hayashida:
Subject: EIS Preparation Notice for the Proposed Kuhio Avenue Widening

Thank you for your lettex of July 25, 1975, requesting our input conceming items meriting attention in your EIS for improving Kuhio Avenue. We appreciate this input opportunity.

In view of deteriorated traffic and pedestrian safety conditions along the subject portion of Kuhio Avenue, the need for this project appears to be well established. It would be unfortmate, however, if the widening of Kuhio Avenue spurs uncontrolled and intensive redevelopment of adjoining properties which, in tum, would recreate the aforementioned problems in the future. Accordingly, your EIS should discuss anticipated impacts of street widening on adjoining land uses, development trends, and related domands for public facilities and services in the area. We are very much interested in a discussion of problems in, and alternative measures for ensuring that the proposed improvement will be a relatively permanent, instead of a stop-gap solution to current vehicular and safety problems on Kuhio Avenue.


# DEPARTMENT OF PUBLIC WORKS 

## CITY ANO OOMNTY OE MOMOUEHU <br> GEO SOUTH KING STREET HONOLULU, HAWAII 96313



January 14, 1976

Mr. Hideto Kono, Director
Department of Planning and
Economic Development
State of Hawaii
P. O. Box 2359

Honolulu, Hawaii 96804
Dear Mr. Kono:

> Subject: Environmental Impact Statement For The
> Proposed Kuhio Avenue Widening Project (URLTR, dated August 26, 1975)

A discussion of anticipated impacts of street widening on adjoining land uses, development trends, and related demands for public ment policies of the General plan for the relates to the developChapter V, Section D, of the EIS.

cc: Div, of Engineering
William He \& Associates DIMJM


Mr. Kazu Mayashida
Dept. of Public Works
City and County of Honolulu
650 S. King Street
Honolulu, Hawaii 96813
Dear Mr. Hayashida:

## Kuhio Avenue Widening Project

We have reviewed the EIS for the widening project and find that the project will not affect any site on, or eligible for, the Hawaii or National Registers of Historic Places.

Very truly yours,


December 16, 1975

Mr. Christopher Cobb, Chairman
Department of Land and Natural
Resources
State of Hawaii.
P. O. Box 621

Honolulu, Hawaii 96809
Dear Mr. Cobb:

$\begin{aligned} \text { Subject: } &$|  Environmental Impact Statement for  |
| :--- |
|  the proposed Kuhio Avenue Widening  |
| $\text { Project (Up ITP dated August } 20,1975)$ |\end{aligned}

Comments provided by your department on the proposed project were helpful and will be incorporated and appended as part of the Ers.
.. Very truly yours,

$\because$ MAR HAYASHTDA
Director and Chief Engineer
boa: Div, of Engineering
William me \& Associates DMJM
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Mr. Kazu llayashida
Director and Chief Engineer
Department of Public Works
City and County of Honolulu .
650 South King Street
Honolulu, Hawaii 96813
Dear Mr. Hayashida:

> Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project
```

This is in reply to your letter of July 25, 1975, requesting our assistance in the preparation of the subject ETS.

The proposed widening has been coordinated with the Department of Education. In 1972, the DOE was assured by City agencies 1) that the development would not interfere with the planned development of Jefferson Elementary School, and 2) the widening would not affect the large tree on the makai-ewa corner of the former Waikiki School grounds.

In 1973, DOE agreed to relinquish Five parcels of State land for street widening purposes subject to: 1) close coordination to assure that street widening and school construction activities do not conflict, 2) installation of necessary chain link fencing, 3) preservation of monkey pod trees along Paki Avenue, and 4) provision of an appropriate landscape plan.

In 1973, portions of Hake Road and Kaneloa Road were acquired by the State and incorporated into the flan for Jefferson School.


The coordination has been very satisfactory, and we have no objection to the proposed widening. However, we are concerned that the increased volume of of the potential noise level along the shook bol. We urge that an evaluation submission. We will need an evaluation in order prepared to support the tS the existing buildings will need acoustical treatment.

I hope our comments will be of assistance.
Sincerely,


## DEPARTMENT OF FUELIC WORKS

## CPTY AND COUNTY OF MONOLUMU

650 SOUTHKING STREET HONOLULU, HAWAH 96813


MxYOA

KAZU NAYASHIDA

## 

ENV 76-65

January 19, 1976

Mr. Charles G. Clark
Superintendent
Department of Education
State of Hawaii
P. O. Box 2360

Honolulu, Hawaii 96804
Dear Mr. Clark:

> Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project (URLTR dated August 12,1975 )

The design and development of the plans for the Kuhio Avenue widening and improvements were based on the agreements and assurances made between the DOE and City agencies in 1972 and 1973 which are listed in your letter.

The improved Kuhio Avenue will become a four-lane urban street, with left-turn pockets, designed to serve primarily as a feeder into local streets and to accommodate local Waikiki traffic movements. Based on preliminary estimation of the noise levels Which may be generated and a review of average daytime noise levels along comparable streets, a noise level of 65 to 70 dBA at the building setback line which is 10 feet from the property line, is predicted. The typical high or average peak noise level representing the noise level which is exceeded log of the taye (time in is estimated to be typically 5 dBA above the average influenced by the momentary maximum sound noise level is strongly vehicle is passing. the Jefferson School andefore, the lyo noise level occurring at building loca school and particularly at the existing school less than 75 dBA during such periods. Avenue, is predicted to be

Due to the type of construction of the school building located adjacent to Kuhio Avenue, at least 25 dBA reduction in the noise level emitted from the traffic on the widened roadway should be realized inside the building. The side of the school building closest to Kuhio Avenue is constructed with concrete blocks,

$$
\text { Mr. Charles G. Clark } \because-2-
$$

January 19, 1976
with no openings. With this 25
inside the school building emitted by will be within the noise standards by the traffic on Kuhio Avenue Community Noise Control Regulation byablished in the proposed Health. This standard states that by the state Department of would produce a noise level of 50 dB highway or freeway which classroom, library, or multi-purpose or more inside any school already in existence and used for this purpospital or rest home without first providing adequate sound purpose shall be constructed facility." could be even lower than tho could be experienced by the school since the structure is located predicted in the previous discussion roadway. Furthermore, these amber 45 feet from the proposed to be reduced with the implementation noise levels can be expected stricter noise level limits for light in January 1, 1977, of the in Chapter 44 A of the public Health Regulatheavy vehicles contained Control For Oahu. But due to the sensitive nature Vehicular Noise monitoring progrt on its facilities should be deter the school, monitoring program after the roadway widening has been in by a noise


CC: Div. of Engineering
William Hoe \& Associates
$1^{\text {DMJM }}$

1
ORGE R. ARMYOSH GOYFANOH


September 22, 1975

Mr. Kazu Hayashida
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

- Dear Mr. Hayashida:

Subject: Comments on EIS Preparation Notice, i
In reference to the subject proposal, please be advised that should Federal or State funds be used for this project, we may have to be more directly involved in the consultation process.

We apologize for the delay in providing this response.



Mr. E. Alvey Wright, Director
Department of Transportation State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813
Dear Mr. Wright:
Subject: Enviromental Impact Statement for
the Proposed Kuhio Avenue Widening Project
(URLTR STP 8.3311, dated september 22, 1975)

State participation in the funding of the proposed project is uncextain at this time. There is no plan to use Federal funds for construction of the road widening project. The city's consultant, William Hee and Associates, has been instructed to coordinate with your office on the EIS consultation process.

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\begin{aligned}
& \text { Very truly yours, } \\
& \text { LGQ kazu Hayasmidn } \\
& \text { Director and Chief Engineer }
\end{aligned}
$$

| cc: | Div. of Engineering |
| ---: | :--- |
| Wilidiam Hee \& Associates |  |
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|  |  |



GEORGE A. L. YUEN HECTOR OF HEALTH
Audrey W. Mertz, M.D., M.P.H Deputy Director of Hexiln
Henry N. Thompson, M.A. Deputy Dienctor of Math

James S. Kumagai, Ph. O. P.E.
Deputy Director of Hernia
in reply, plena refer for
Flies: Epis - SS

## MEMORANDUM

To:

> Mr. Kazu Hayashida, Director and Chief Engineer Department of Public Works Department of Public Works, City $\&$ County of Honolulu

From: Chief, Environmental Protection \& Health Services Division
Subject: Environmental Impact Statement for the proposed Kuhio Avenue Widening Project

Thank you for allowing us to comment on the subject project.
Staff comments ace as follows:
l. Does the project include additional sewer line capacity to accommodate the waste water flows from the Honolulu Zoo?
2. What timetable is being proposed to provide additional sever capacity (NPDES permit for the zoo requires hook-up to sewers by July 1, 1977)? 3. The air pollution generated by the anticipated increase in auto traffic could be quantified by existing analytical techniques.


BC: as


## CiTY AND COUNTY OF HONOLULU

650 SOUTH KING'STREET
HONOLULU, HAWAll $96 B 13$

MAYOA


KAZU HAYASHIOA
OIRECTOA AND CHIEF ENGINEEA
ENV 76-47

January 14, 1976

Dr. James s. Kumagai
Deputy Director of Health
Department of Health
State of Hawaii
P. O. Box 3378

Honolulu, Hawaii 96801
Dear Dr. Kumagai:

$$
\begin{aligned}
\text { Subject: } & \text { Environmental Impact Statement for the } \\
& \text { Proposed Kuhio Avenue Widening Project } \\
& \text { (URMEMO EPHS-SS, dated August } 14,1975)
\end{aligned}
$$

The project will include additional sewex line capacity to accommodate the wastewater flows from the Honolulu zoo. The additional flow from the Zoo is expected to be 0.05 MG discharged approximately chree times a week.

The wastewater from the Zoo will probably flow through an 18 m foh sewer line that will be installed on Paoakalani Avenue by a private developer. The wastewater will then flow through the Sewer line planned in Kuhio Avenue. The construction time table for the 18 -inch sewer line is not presently known. The sewer Iine in Kuhio Avenue is scheduled for construction in January 1977.

The air pollution generated by the projected traffic on kuhio Avenue was quantified using methods contained in the U. $S$. Environmental protection Agency's document entitled, "Guidelines Eor Air Quality Maintenance Planning and Analysis, Volume 9 : Evaluating Indirect Sources, " EPA-450/4-75-001, dated January, 1975. The analysis and its findings will be contained in the ErS document under Chapter $V$, Section $B$.

cc: Div. of Engineering
William Hee \& Associates
$\eta^{\text {DMJM }}$

Mr. Kazu Hayashida
Director and Chief Engineer Department of Public Works City and County of Honolulu 650 South King Street
Honolulu, Hawaii 96813
Dear Mr. Hayashida:
Subject: Environmental Impact Statement for the
Proposed Kuhio Avenue Widening Project
After reviewing your proposed project, we have no comments. However, we are concerned about the possibility of the project appreciate it very much ties and/or persons and we would appreciate it very much to be kept informed.


## CITY AND COUNTY OF HONOLULU

EEO SOUTH KING STREET HONOLULU. HAWAII 96813


KAZU HAYASHIDA
DIRECTOR AND CHIEF ENGINE \&R
ENV 76-48

January 14, 1976

Mr. Andrew I. T. Chang
Director
Department of Social Services and Housing
State of Hawaii
1390 Miller Street
Honolulu, Hawaii 96813
Dear Mr. Chang:

> | Subject: Environmental Impact Statement for the |
| :--- |
| Proposed Kuhio Avenue Widening Project |
| (URITR, dated August 13, 1975) |

Based on the most recent estimates taken in November 1975, 51 households and 3 non-residential units will need relocation as the result of the project. To develop an effective relocation plan, we have engaged a consultant, Survey and Marketing Services, Inc., to gather information and prepare plans for the relocation of individuals, families, and businesses or non-profit organizations affected by the proposed widening of Kuhio Avenue.
To ease the impact of displacement, a relocation plan which responds to the needs of those displaced will be implemented. In preparation for this work, the needs of the displaced, the resources of the City to meet these needs and the types of assistance available to the displaced person will be identified and studied. The findings of this study will be summarized in the EIS document and presented in detail in a separate report which will be used as a technical back-up to the EIS.

cc: Div of Engineering
William He \& Associates
$\eta^{\text {DMJM }}$

# $\triangle E P A R T M E N T O F \because F N E R L P A N N T$, 

CITY AND COUNTY OF HONOLULU



MEMORANDUM
TO : MR. KAZU HAYASHIDA, DIRECTOR \& CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

FROM : ROBERT R. WAY, CHIEF PLANNING OFFICER
SUBJECT: ES PREPARATION NOTICE FOR KUHIO AVENUE WIDENING PROJECT

Thank you for the opportunity to review the above
captioned material. captioned material.

The project is consistent with the General plan for oahu and was adopted as a part of the Waikiki Development plan by virtue of Ordinance No. 3802, dated September 24, 1971.
We concur with the EIS outline and findings as presented.

RRW: fit


Decenber 16, 1975

## REMORANDUM

TO: MR. ROBERT R. WAY, CATEF PLAMNING OFEICER DEPARTMEAT OF GENEREL PLANNING

FROM: KAZU HAYASMTDA, DTRECTOR AMD CHIET ENGTNEER DEPAPMMENT OE PUBLIC WORKS

SUBJECT: ENVTRONMENTAL TMPACE STATEMENT FOR THE PROPOSED KUHIO AVENUE WIDENING PROJECT (URMEMO DGP 7/75-2008 ITM, DATED AUGUST 7, 1975)

Comments provided in your memorandum on the proposed project will be incorporated and appended as part of the EIS.


KAZU MAYASHIDA
Director and Chief Engineer
bcc: Div. of Engineering
William Hee \& Associates
$7^{\text {DMJM }}$

# DEPARTMENT OF LAND UTILIZATION <br> 7515783 CHM AND COUNTY OF RPMORURU <br> 650 SOUTH KING STREGEER? MORYS <br> George 5. moriguche <br> ELS (LU7/75-2347) <br> (LT) <br>  <br> August 22, 1975 

## MEMORANDUM

TO : KAGU HAYASITDA, DIRECTOR AND CHIEF ENGINEER DEPARTMENT OF PUBLIC WORKS

FROM : GEORGE S. MORIGUCHI, DIRECTOR OF LAND UTILIZATION
SUBJECT : ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE: KUFiC AvENUE WIDENING AND IMPROVEMENT PROJECT

We have reviewed the above and offer the following comments:
2. Reference: Section II, Accessibility

Comments: It is stated that "improved accessibility into and through the impact area and the subsequent reduction in traffic congestion in Waikiki is the main direct benefit accruing from the project..." Accessibility and alleviation of congestion, as primary objectives, should be discussed in detail and the comments and recommendations of the Department of Transportation Services should be reflected in the statement.
2. Reference: Section II, Environmental Policies and Goals

Comments: The statement is made that "the indirect secondary effect of the project may not be in complete harmony with the State DPED's recommendation on tourism..." What is the indirect secondary effect: Clarification and further elaboration on this point should be made in the EIS. The statement should also include further discussion of the relationship of the proposed action to land use plans, policies or goals for the affected area, i.e., plans for rapid transit and the proposed service of the future transit system into Waikiki.

Kazu Hayashida
August 22, 1975
Page 2
3. Reference: section F, Alternatives to the Proposed Action

Comments: It is noted that the alternative of "no project" was evaluated; however, a summary of the findings was not included. Elaboration should be provided.

In summary, we feel that justification for the proposed action should be strengthened, and more information should be provided on the pros and cons of the project.

We appreciate the opportunity to review and comment on the above.


GSN:rh


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## CHTY AND COUFHY OE HONORU日U



MEMORANDUM
TO:
MR. GEORGE S. MORIGUCHI, DIRECTOR DEPARTMENT OF LAND UTILIZATION

FROM: KAZU HAYASHIDA, DIRECTOR AND CHTEE ENGINEER DEPARTMENT OF PUBLIC WORKS

SUBJECT: ENVIRONMENTAI IMPACT STATENENT FOR THE PROPOSED KUHIO AVENUE WTDENING PROJECT (URMEMO LIS LU7/75-2347 ET, DATED AUGUST 22, 1975)

Accessibility and alleviation of congestion through the impact area will be discussed in greater detail in Chapter $v$, Section $D$ of the statement. The Department of Transportation Services has been consulted in the preparation of the EIS.

The proposed action is in complete accord and harmony with the land use plans, policies or goals for the project area as stated in the Oanu General Plan of 1964, as amended. This is true since one of the primary purposes of the project is to implement the general circulation and transportation plan established in the Development plan which is a part of the General plan for the Waikiki-Diamond Head plamning Area. This position has been confirmed by the Department of Genexal Planning's memorandum datod August 7, 1975.

As for transit service in the future, the current plans for the proposed rapid transit system for Honolulu calls for direct transit service into waikiki through the use of a feeder bus system. Another purpose and need for this project is to provide a sufficient right-or-way to accommodate city bis service on kuhio Avenue. The City's transit planners in the Department of Transportation Sorvices have indicated that the transit sorvice on the centrally located Kuhio Avenue would provide the shortest access time to the waikiki trandit users and, therefore, have specified in long-range transit Whans, the use of Kuhio Avenue as tho main transit corridor through Waikiki.

To some extent, increased accessibility brought about by the improvement of an inadequate roadway will result in the acceleration of development within the area. If the proposed project induces further growth of hotel rooms in the area at an annual rate in excess of 3 percent, it may not be in complete hamony with the State Department of Planning and Economic Development's recommendation on tourism. However, the growth rate applies to all of oahu and a highor growth rate in Waikiki does not necessarily mean that Ohh's growth rate will exceed the state's recommendation.
Transportation affects people and businesses primarily by influencing their location decisions. This influence is reflected in terms of changes of land use patterns of greater intensity. If this pattern does not occur after the improvement of Kuhio Avenue, the secondary effects of the proposed action are considered minimal.
The "no project" or "do nothing" alternative was evaluated on the basis of the existing street network to accommodate the projected travel demands. The finding will be presented in Chapter in, Section $C$, of the EIS document. The discussion of the various alternatives studied is presented in Chapter VI of the document.

cc: Div. of Engineering
William Hee \& Associates DMJM
$\cdots$


## MEMORANDUM

TO : KAZU HAYASHIDA, DIRECTOR AND CHIEF ENGINEER DEPARTMENT OF PUBLIC WORKS

FROM : GEORGE C. VILLEGAS, DTRECTOR DEPARTMENT OF TRANSPORTATION SERVICES

SUBJECT: REVIEW OF EIS PREPARATION NOTTCE FOR THE PROPOSED KUHIO AVENUE WIDENTNG

The following comments are offered following review of the subject matter:

The widening of Kuhio Avenue will greatly improve vehicular circulation within the Vaikiki area, relieve some of the traffic burdens from the surrounding streets and benefit motorists passing through waikiki.

However, the resultant change in vehicular volumes and traffic pattem on the proposed widening section will also affect the existing improved section of Kuhjo Avenue west of Kaiulani Avenue and this effect should be discussed in the EIS.

Secondly, this project will unavoidably create a certain amount of adverse effects in the form of inconveniences to motorists and to the abutting residents during construction. To minimize this situation, a scheme for a safe trafifc flow should be included in the construction plan.



January 14; 1976

## MEMORANDUM

TO:
MR. GEORGE C. VILLEGAS, DIRECTOR DEPARTMENT OF TRANSPORTATION SERVICES

FROM: KAZU HAYASHIDA, DIRECTOR AND CHIEF ENGINEER DEPARTMENT OF PUBLIC WORKS

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED KUHIO AVENUE WIDENING PROJECT (URMEMO DATED SEPTEMBER 8, 1975)

Kuhio Avenue, between Kalakaua and Kaiulani Avenues, already has an existing right-of-way of 70 feet. Between Seaside and Kaiulani Avenues, Kuhio Avenue has an existing roadway width (curb-to-curb) of 56 feet and improvements are being considered to widen the existing 40 -foot roadway between Kalakaua and Seaside Avenues to a width of 56 feet. This improvement, together with the proposed action, will create a uniform and continuous right-of-way and roadway widths equal to 70 feet and 56 feet, respectively, along the entire length of Kuhio Avenue between Kalakaua and Kapahulu Avenues.

This roadway width is adequate to accommodate four traffic lanes, two in each direction, and an exclusive left-turn lane, along the entire length of Kuhio Avenue. This would provide a uniform street movement pattern along the entire length of Kuhio Avenue for a safer and efficient use of the street through Waikiki by automobiles, buses and bicycles. The remainder of the 70 -foot right-of-way width will be used to provide a continuous sidewalk extending the full length of the street.

The discussion in the EIS is based on the assumption that the proposed project is required for the maintenance of the existing one-way street pattern in Waikiki and the creation of a two-way street pattern, as discussed above, along the entire length of Kuhio Avenue. With this type of street pattern, Kuhio Avenue will primarily serve traffic circulating within Waikiki. Studies show that unnecessary circulation of traffic is a major cause of
congestion in Waikiki. The proposed improvements to Kuhio Avenue will primarily relieve this type of unnecessary traffic condition and secondarily supplement the movement of traffic on Ala Wai Boulevard and on Kalakaua Avenue mainly within the project area. To some extent it will also affect traffic within the remainder of Waikiki, if the planned improvement, as mentioned earlier, is implemented also.

The adverse short-term effects during the construction period will be discussed in the EIS along with measures that will be taken to minimize any adverse impacts. These short-term impacts include the inconvenience to motorists and to abutting residents during the construction of the proposed project. Also, a scheme for a safe traffic flow during construction will be developed and included in the construction plans.

cc: Div. of Engineering
William Fee \& Associates
DMJM
$\eta$


Mr. Kazu Hayashida
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813
Dear Mr. Hayashida:

| SUBJECT: | Environmental Impact Statement <br>  <br>  <br> Preparation Notice for the Proposed <br> Kuhio Avenue Widening Project |
| :--- | :--- |

We have reviewed the submitted information on the proposal and do not have any objections to the project. However, the construction plans should be coordinated with us to protect our water mains and to protect and renew our water services in the project area.

Please contact Mr. Lawrence Whang at 548-5221 should further information be needed.

> Very truly yours,


Whlambeota asoce, inc.

## CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU. HAWAII 96813


KAZU HAYASHIOA
DIRECTOR A TD CHIEF ENGINE SW
ENV 76-49

January 14, 1976

Mr. Edward Y. Hirata Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
P. O. Box 3410

Honolulu, Hawaii 96843
Dear Mr. Hirata:

| Subject: | Environmental Impact Statement for the <br> Proposed Kuhio Avenue Widening Project <br>  |
| ---: | :--- |

Preliminary plans for the proposed widening of Kuhio Avenue and the accompanying improvements, including street drainage and sewer system improvements, have been coordinated with your office along with other appropriate public agencies. With your assistance, this coordination will be continued during the preparation of construction plans for the street widening and improvements to ensure protection and maintenance of water services in the project area.

cc: Div, of Engineering
William Hee \& Associates DMJM


Mr. Kiza Mayashida
Director and ChieE Engineer
Dopt. of Public Vorles
City and County of Honolulu
Monolulu, Hi 96813
Dear Mr. Hayashida:
Subject: Environmental Jmpact Statement Proparation Notice for the Proposed Kuhio Avenue Widening
Te have rovieved the Environmental Impact Statement for the proposed Kuhio Avemue Widening project.
We have no commonts to make as they relate to and affect this
department's program.
We understand that this project will displace approximately seventy (70) households. We roquest that adequate time be given to our staff to assist you in the relocation plan of the project. We thank you for the opportunity to review the EIS.


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\begin{gathered}
\text { WILLINI BLACNEIELD } \\
\text { Director }
\end{gathered}
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## DEPARTMENT OF PUBLIC WORKS <br> CITY AND COUNTY OF HONOLULU

SO SOUTH KING STREET HONOLULU, HAWAII 96813


## DERECTORUNAYASMIOA

DIRECTOR AND CHIEF ENGINEER
ENV 76-50

January 14, 1976

## MEMORANDUM

TO: MR. WILLIAM BLACRFIELD, DIRECTOR DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: KAZU HAYASHIDA, DIRECTOR AND CHIEF ENGINEER DEPARTMENT OF PUBLIC WORKS

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED KUHIO AVENUE WIDENING PROJECT (URLTR, DATED AUGUST 8, 1975)

Based on the most recent survey, taken in November 1975, of the number of units that would be displaced by the proposed project, 51 households and 3 nonresidential units will need relocation.

Consultation with your department will be needed during the development of the implementation program of the relocation plan. Please be assured that adequate time will be given to your staff to assist in this program.


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cc: Div. of Engineering
    William Hee & Associates
    DMJM
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GECTMEA
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halal hotel association
SUITE 907
2270 KALAKAUA AVENUE HONOLULU, HAWAII 96815

August 22, 1975

Mr. Kazu Hayashida
Director and Chief Engineer Department of Public Works City and County of Honolulu 650 South King Street
Honolulu, Hawaii 96813
Dear Mr. Hayashida:

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\begin{aligned}
& \text { Subject: Environmental Impact Statement for the } \\
& \text { Proposed Kuhio Avenue Widening Project }
\end{aligned}
$$

The Hawaii Hotel Association strongly supports proposed action to widen and improve Kuhio Avenue between Kaiulani and Kapahulu Avenues. Enclosed for your review are responses from some of our member properties which will be affected by the proposed widening. In our opinion this project is of top priority, for the improvemont of Waikiki and traffic in the area.

Thank you for the opportunity to present our views.


CMJ:er
enclosures



August 14, 1975 FONKPAHULU AVENUE
HONOLHAH HAWAW $963 \$ 5$ PHONE 922.1941

Havaii Hotel Association
Suite 907
2270 Kalakaya Avenue
Honolulu, Havaii 96815
Regarding: Environment Impact Statement for the proposed Kuhio Avenue widening project.

## Gentlenen:

As the manager of two hotels that front Kapabulu Avenue between Cartwright and Kalakaua, I welcome the proposed widening of Kuhio Avenue with its subsequent utility improvements.

Firstly, 1 appreciate the fact that something is finally being done in regards to the improvement of streets on the Diamond Head side of Hakiki. I feel that the widening of Kuhio Avenue will greatly help the traffic flow problem on Lemon Road, Cartwright and Kapahulu, between Kalakaua and Kuhio.

Secondly, I feel the Kuhio Avenue improvements on drainane and sevage is a great step formard towards helpint to alleviate thase problems in this general area in the near future.

Lastly, I can foresce no reasons why the other residents in this area would oppose this improvement and I am sure even the general public who frequent Laikiki will see the kuhio Avenue widening as a beneficial improvement to existing conditions in this area.

I sincerely hope that this project is approved and for the Queen Kapiolani and Waikiki Grand Hotels, I cast our vote for the project in the interest of all concerned.


# (.he: <br> hawaman regent 

on the scente stoe of Wakta by onmono head
August 21, 1975

Mr. Clement Judd
Executive Vice President
HAWAII HOTEL ASSOCIATION
2270 Kalakaua Avenue
Suite 904
Fonolulu, Hawaii 96815


## Dear Clem:

The Hawaian Regent Hotel strongly supports the proposed action to widen and improve the present Kuhio Avenue between Kaiulani and Kapahulu Avenue.

Since the completion and opening of the Hawaiian Regent Hotel nearly four years ago, the Regent and other hotels located in the area of the subject project, have been operating at a disadvantage.

Due to the present traffic system of one-way streets, some hotels are situated at a disadvantage with respect to location. In order to reach the Hawaiian Regent Hotel, for example, since there is no direct access from Kalakaua Avenue, drivers must have a fairly good knowledge of Waikiki side streets and maneuver through a series of turns. or enter from the Ala Wai Boulevard and travel approximately two blocks to reach the Regent. If an error is made, drivers face a cumbersome task of doubling or circling back. This is a common complaint and inconvenience which negatively affects business. With the improvement calling for an expanded two-way thoroughtare, there will be greater accessibility and maneuverability in this area.

The existing Kuhio Avenue is very inadequate to meet the future needs of a rapidly expanding tourist industry and population growth of Waikiki within the next decade. The one-half mile Kuhio Avenue strip will undergo great physical changes with the expected addition of new hotels, businesses, and condominiums, and it is inconceivable that the present

Mr. Clement Judd
August 21, 1975
page 2
traffic arrangement will be able to cope with the forecasted growth. With the prospect of converting Kalakaua Avenue into a pedestrian mall, Kuhio Avenue is the only feasible means of accomplishing this task.

Besides benefitting business concerns, the proposed action, which involves a general street improvement program in conjunction with the widening of Kuhio Avenue, will directiy serve the residents of Waikiki. The poor lighting along the proposed roadway, the general road deterioration, poor drainage and sewage systems have not promoted the security and well-being of this community. Visitors to Hawaii observe the lack of attention given to the Waikiki Jungle area and the obvious need of improvement for sewage disposal, and drainage system, as evidenced by the frequent flood problems during the rainy months in Hawaii.

The Hawaiian Regent Hotel supports this project and encourages members of the hotel industry to seriously consider this proposal. It is vital that we take steps toward improving the planning, organizing, and controlling of Hawaii's future in tourism.


MAILING ADORESS: 445 NOHONANI STREET HONOLULU, HAWAII gSEIT

August 14,1975

Dear Mr. Judd:
I have recieved the description on the proposed action and map involving the Kuhio Avenue Widening in Waikiki. According to the map that defines the project limits, I feel that it is a much needed uplift for that section of Waikiki and should receive the total support of the surrounding community.

As a member of the Hawaii Hotel Association and one that is concerned about the environment in which we live and work, I am in favor of the proposal. It will not only improve both vehicular and pedestrian traffic, but simultaneously contribute immensely towards a more receptive and healthier general outlook for the area involved. Not only that but it makes for a "Better Waikiki".

I only hope that this project can be undertaken and completed in a relatively short time table so both residents and visitors can enjoy it's benefits.


NK; lny


# Princess Kaiulani Hotel 

120 KALULANI AVENUE / HONOLULU. HAWAII 968:5/TELEPHONE (808) 922-5811

Generat Manager

August 18, 1975

Mr. Clement M. Judd, Jr. Executive Vice President Hawaii Hotel Association 2270 Kalakaua Avenue, Suite 907
HOnolulu, Hawaii 96815
Dear Clem:
In connection with your request of August 12 , regarding the proposed Kuhio Avenue Widening Project, the follow. ing are our comments.

The Princess Kaiulani Hotel with 1,170 guest rooms, four public restaurants, one cocktail lounge, one discotheque seating 400 people, banquet facilities for feeding 1,000 people at one time and parking space for 529 cars, is currently the largest hotel complex directly adjacent to any Kuhio Avenue alterations.

Because of the combination of group tour rooms which often involve up to 1,500 persons per day utilizing full size buses and individual travelers which could reach 600 people per day requiring rental cars or taxi cab service, together with local people using our restaurants, discotheque or banquet space, any plan to alter traffic conditions is of critical importance to us.

We believe the already difficult and congested condition in this area will deteriorate significantly next summer when the Hyatt Regency Hotel at Hemmeter Center is scheduled to open with a property of approximately our same size right
next to us.


Mr. Clement M. Judd, Jr. - 2- August 18. 1975

Therefore, we strongly favor such a plan and urge the City \& County of Honolulu to approve the proposed widening of Kuhio Avenue to a width of 70 feet from Kaiulani Avenue to Kapahulu Avenue, without further delay and comnence construction activity immediately. Any hesitation will certainly postpone completion of the work beyond the opening of the Hyatt Regency Hotel and turn a bad situation into an impossible one.

Creating a thoroughfare from Kaiulani Avenue to Kapahulu, would provide a major source of relief from the Kaiulani, Kuhio and Kalakaua Avenue area and clearly improve vehicular circulation by creating an obvious and logical alternative for entrance and exit to this area. We consider this widening project absolutely essential to maintaining Waikiki as a desirable and convenient area for local people to shop, eat and enjoy the entertainment attractions as well as an appealing place for tourists to insure the favorable impact of the visitor industry on the state economy and tax structure.


TCH: lem

December 16, 1975

Mr. Clement M. Judd, Jr. Executive Vice President Hawaii Hotel Association 2270 Kalakaua Avenue, Suite 907 Honolulu, Hawaii 96835

Dear Mr. Juda:

> Subject: ENVIRONXUTAL MMPACT STATEXENT FOR MUE proposed kutio avenue hiozumag project

Guean Kapiolami Eotel Hawain provided in Ietters from the Kaiulani hotel and vour offica Regent, Ilina Hotel, Princess preparation of the ers for the have been hetponl in the coments and information wil be posed project. Whese where appropitate as part of the appended and/or incorporated Voxy truly yours,
cc: Queen Kapiolani Hotel
Havailan Regent
Ilima Hotel
Princess Keiulani Hotel

7515804

## 



Mr. Kazu Hayashida
Director and Chief Engineer Department of Public Works city and County of Honolulu 650 South King Street
Honolulu, Hawaii 96813


Dear Mr. Hayashida:
In response to your letter which was received on 30 July, 1975, we are happy to respond to your request for comment on the proposed widening of that segment of Kuhio Avenue from Kaiulani Avonue to Kapahulu Avenue.

The outdoor circle regards this proposal to be an important initial stop in the improvement of the Waikiki district. He believe that Kuhio Avenue's designation as a major thruMay should encourage an upgrading of development along this corridor, offering tho opportunity to government and the private sector to work together to create an area that is beautiful, healthy and pleasant to live in for resident and visitor alike.
:Ic believe that this unique section of the city requires innovative planning for setback areas, sidewalk placement, matoriols and design as well as extensive planting. We strongly urge that tho following be included as specific items for budgetary and planning purposes:

1. Underground placement of utilities to include all wiring.
2. The 7 foot sidewalk setback area and the 10 foot setback area be combined in a lineal park concept with one comprenensive master landscaping plan which, while allowing for certain leeway on the part of private development, would retain a basic integrity of overall design. This plan should include:
A. Uniform mature street tree planting to provide shade,

lowered temperature and cleaner air for this arid and potentially heavily traveled area while giving the strect, itselt, needed distinction.
B. An outomatic watering system which would contribute to uniform growth while cutting down on some maintenonce costs.
C. Attractive, comfortable street furniture arranged in sociable groupings to encourage pedestrian usage of the area.
D. A street lighting system that would not only serve automobile traffic, but pedestrian usage as well, adding to safoty and offering the opportunity to enhance the landscaping.

Ge notice that Kuhio Avenue already has the advantage of a childrens' playground and the open space provided by Jefferson School grounds. Me would hope that several other small setbacks could be incorporated into the plan to provide for occasional pockets of green for the placement of statuary or creation of small lunching picnic areas or even designed to accomodate some quiet, resort oriented activity such as shuffleboard with its universal appeal to older persons. Amenitios such as these would, in our opinion, add considerably to the charm and enjoyment of Waikiki, encouraging pedestrian usage of the avenue.

We have given the existing trees carefu! scrutiny and strongly urge that Mr. Robert Miyashita, Parks Boautification Administrator be consulted at the outset of the planning process in order that provision can be made for the preservation or orderly relocation of all healthy specimens. We make particular note of the following:

1. The Monkey Pod, situated on the Mauka Diamond Head corner of Kaiulani and Kuhio Avenues, should be preserved and remain in its present location. We understand that Kalulani Triangle will be converted to park use and feel sure that, with this objective in mind, the street can be designed to accomodate this tree.
2. The Mahogany tree, situated on the Mauka, Diamond Head corner of Liliuokalani and Kuhio Avenues, appears to be just outside the project and should remain.
3. The Weeping Banyan tree located on the Jefferson School grounds will need some careful pruning on its hake l side which should be done prior to the beginning of the project and under the direction of an expert.
4. The Poinciana on the Hawaiian Electric substation grounds, an unusually fine specimen which was an integral part of the plan for this award winning installation, should remain.
5. Most of the coconut palms and all of the large Plumeria appear to be healthy and suitable for relocation, preferably within the project itself.

Members of our organization have spent many hours going over this area and in consultation with interested individuals and organizations as well as involved agencies. We believe that this project presents one of the greatest opportunities the city has ever had to effectively demonstrate its capabilith for leadership in the field of urban design.

We conclude that the widening of Kuhio Avenue can only truly fulfill its purpose it an atmosphere is created that encourages quality development and offers an inviting alternafive to pedestrian usage of Kalakaua Avenue.

Very truly yours,

$i$
Mrs. Alan S. Davis President


Mrs. James E. Langrum, Jr. Public Affairs Chairman


January 19, 1976

Mrs. Alan S. Davis
President
The outdoor Circle
200 No. Vineyard
Honolulu, Hawaii 96817
Dear Mrs. Davis:
Subject: Envirommental Impact Statement
for the Proposed Kuhio Rrenue Widening Project (URTMR dated August 26, 1975)

Thank you for your comments on the proposed project. Your suggestions for improving the appearance of the proposed widening were evaluated and our responses are as follow.

According to cursent plans, all utilities located on the makai side of Kuhio Avenue will be placed underground. Due to the existence of overhead utility lines in areas mauka of Kuhio Avenue and cost consideration, the utilities along the mauka side of Kuhio Avonue will romain overhead until such time that the entire mauka area can be placed underground.

The idea of combining the 7-foot sidewalk area and the lo-foot setback area into a lineal park concept with one comprehensive master landscaping plan is commendable but may be difficult to implement. It would be quite difficult, and even illegal, for the city to force a private citizen or developer to put in landscaping or street furniture in the 10 -foot setback area in accordance with a landscaping plan developed by the City or its consultants. However, every effort should be made to encourage property owners to conform to an overall design.

Present plans call for tree wells to be located in the sidewalk area as uniformly as possible. There is a reluctance to use large mature shade trees because they would interfere with utility lines. An autonatic sprinkler system is being considered to reduce maintenance cost as you suggested.

The street lighting system will be in accordance with appropriate City standards which provide for adequate lighting to not only serve automobile traffic, but also pedestrian usage, as well, Avenue.

There are a number part or totally result parcels which must either be acquired in for the proposed 70 -foot stre slightly more land area than needed tion of the existing structure on theof-bay due to the configuraremnant pieces of land, the city could parcels. With the cleared original owners or adjacent landowners either sell it back to the pieces and utilize then for occasional or retain these remnant for possible passive or active usage pockets of green as suggested area provided. Based on current plans for the implementation of the proposed street widening, the status of the specific trees referred to your comments are as follows: the specific trees referred to in
a. Monkey pod, situated on the maka diamondhead corner of Kainlani and Kuhio Avenues, falls within the . the present project desian. will be reroved under
b. Mahogany rree, sjtuated on the mauka diamondhead womer of Liliuokalani and Kuhio Avenues, falls within the proposed improvenent area and will be removed under the present project design.
c. Weeping Banyan mree looated on the Jefferson School grounds will not need removal.
a. Poinciana on the Hawaitian electric Substation grounds
will need relocation.
e. A numbex of coconut palms and plumerias will need romoval and possible relocation.
Many of these trees which need removal will be replanted elsewhere, where possible. Currently, a landscape consultant is developing be replanted elsewhere. This plade a list of trees which are to City Department of parks and Recreation being coordinated with the public agencies. The comments presento and other appropriate definitely considered in the dovelopment of your letter will be
ane dopment of the landscape plan.


## CPTY AMO COMMTY OF MOMOENLu

650 SOUTH KING STREET
HONOLULU. HAWAII 96013


## KAZU HAYASHIDA <br> Director and chief engine et

ENV 76-44

January 14, 1976

Mr. Ludwig E. Ammerding, President
Waikiki Residents Association
2222 Kalakaua Avenue, Suite 1308
Honolulu, Hawaii 96815
Dear Mr. Armerding:

> Subject: Environmental Impact Statement For The Proposed Kuhio Avenue Widening Project (URITR, dated August 14,1975 )

We have engaged a consultant, Survey and Marketing Services, Inc., to gather information and prepare plans for the relocation of individuals, families and any businesses of nonprofit organizations affected by the proposed widening of Kuhio Avenue. A sensitive and responsive relocation assistance program can soften the impact of the displacement which will occur. This does not eliminate its impact, since even the most humane relocation program cannot fully homes or places of business. persons who are uprooted from their will be employed to meet the need of mime this impact, every effort few will not suffer disproportional of displaced persons so that a the benefit of many.

To ease the impact of displacement, a relocation plan which responds to the needs of those displaced will be implemented. In preparation for this work, the needs of the displaced, the resources of the City to meet these needs and the types of assistance available to the displaced person will be identified and studied. The findings in detail in a separate report which will be document and presented back-up to the EIS.
cc: Div. of Engineering William He \& Associates DMJM

245 North Kukui Street, Honolulu, Hawaii 96817, Telephone (80S) 537.5966
REGemen
DEPT. OF PUBLIC
AMERICAN LUNG ASSOCIATMON of Hawaii Evil

January 27, 1976

Mr. Kazu Hayashida, Director
Department of Public Works
City G County of Honolulu
Honolulu, Hawaii 96813
Dear Mr. Hayashida:
Thank you for your recent letter (ENV 76-31) explaining the reason for our not receiving an EIS Preparation Notice on the subject project. Attached axe our suggestions for assessing the air quality impact of this project. This is the usual manner in which we participate in the consultation process. In this case, we feel that it is too late to offer such suggestions, but we are respecting your request for input.

Thank you for your prompt response to our earlier letter. Wo look forward to reviewing the final environmental impact statement.


JW: ct
Att.
cc: Dr. Albert Tom, EQC

## AMERICAN LUNG ASSOCIATION of Hawaii

## SUGGESTED METHODOLOGY FOR ASSESSING THE AIR QUALITY IMPACT OF THE PROPOSED KUHIO AVENUE WTDENING

1. Estimate CO, HC, and NOX emissions for the present, the construction phase, and the year of completion undex the following conditions:
a. Average daily traffic (average in terms of volumes and speeds)
b. Peak a.m. and p.m. traffic (peak volumes and low speeds)
c. Morning peak 3-hour traffic to correspond with State/Federal air quality standards for hydrocarbons (HC only).
d. Peak 8-hour traffic to correspond with State/federal air quality standards for carbon monoxide ( CO only).
2. Conduct short-tom monitoring to detemine existing autonotive pollutant levels along kuho Avenue. At a minimum, only $C 0$ should be moasured. Wicrometoorological studies are a nacessary adjunct to the pollatant monttorning.
3. Estimate ambient concentrations of $C O$ and HC during construction and aftos completion based on traffic projections, onissions, and local metcorology. Co estimates should be for 1 -hour and 8 -hour periods and HC fon 3 -hour moming periods to corresponi to state/pederal anbient standards.
4. Suggested references:
a. U.S. Environmental protection Agency. Compilation of Air Pollutant
Enission Factors (2d Ed.) With Supplement 5 , April, 1973 .
b. U.S. Environmental Protection Agency. Workbook of Atmospheric Dispersion Estimates (revised 1970), January, 1973.
c. Federal Highway Administration, Ofrices of Research and Development, Air Quality Manuals, Volumes I-III, April-December, 1972 with Nodifications 1-6 from the California Division of Highways.
d. U.S. Environmental Protection Agency. Guidelines for Air Quality Maintenance Plamming and Analysis: Volume 9: Evaluating Indirect Sources. (Publication No. EPA-450/4-74-009). <br> \section*{DEPARTMENT OF PU日LIC WORKS <br> \section*{DEPARTMENT OF PU日LIC WORKS <br> C日TY AND COUNTY OF HOROLULU <br> 650 south king streeet}
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omector ano chier xngimecr
ENV 76－127
March 11． 1976

Mr．James W．Morrow
Director，Environmental Health．
American Lung Association of Hawaii
245 North Kukui Street
Honolulu，Hawaii 96817
Dear Mr．Morrow：

$$
\begin{array}{ll}
\text { SUBJECT: } & \text { ENVTRONMENTAT IMPACT STATEMENT FOR THE } \\
& \text { PROPOSED KUHIO AVENUE WIDENTNG PROJECT } \\
& \text { (URTTR DATED UANUARE } 27,1976) .
\end{array}
$$

The $C O$ estimates of ambient concentration for 1 mour and 8 mour periods have been made to detexmino conformance with state and Federal ambient standards in the area adjacent（microscale）to the
rodwar proper the mesoscale or macroscale Since no impact on air quality at emissions for these levels levels would mesult，estimates of not provided．

The Nox emission being unstable rapidly reacts or undergoes changes are preaictable for a short time following these emission concentra－ reactive models，HC concentrations arede from conventional non－ the miccoscale because thentrations are not nommally estimated in emissions are not generally considered As correctly stated，micrometem is not contemplated for this project． to the pollutant monitoring：Hoveveral studies is a necessary adjunct program is not justified for a one－half mile felt that such a monitoring ing project such as this．

## cc：Div of Engineering William Hee \＆Assoc． 7 DMJM




Mr. Kazu Hayashida
Director and Chief Engineer
Department of Public Works
City \& County of Honolulu
Honolulu, Hawaii 96813

Re: Kuhio Avenue EIS Consultation
Dear Mr. Hayashida:

The Waikiki Improvement Association submits the following comments on the data contained in the EIS preparation notice for Kuhio Avenue widening:

1. General: Kuhio Avenue widening is essential to the future capability of the waikiki street system to comfortably and conveniently accommodate traffic flow demand. The widening is a natural extension of the existing situation and com pletes a facility which has been in a half-completed stage for some time. A third east-west artery is needed in the Waikiki system to provide necessary capacity and also to serve as the "localized" distributor street between two major oneway arteries. Its early completion will be a beneficial contribution to the environment of Waikiki.
2. Par. E-2 - Socio-Economic Factors:

We disagree with the statement that a secondary effect of the project 'may not be in complete hamony with DPED's recommendation on tourism for Oahu which is to limit the annual increase in hotel rooms to 3\%." The widening of Kuhio Avenue will do nothing to impair the limit on growth proposed for Waikiki. Growth Limits and the pacing of develm opment are functions of land use and development regulations, not functions of the presence, or absence, of needed public Facilities. Proper growth control of the area will be addressed by appropriate zoning and/or pacing devices if necessary. These will override any artificial stimulus that a new roadway might have on the prospect of development in the area.


Mr. Kazu Hayashida August 22, 1975
Department of Public Works
Page Two

The programmed zoning for the area stresses apartment development rather than hotel development also. In addition, the area exhibits sub-standard conditions. One of those conditions is the character and nature of Kuhio Avenue - essentially a narrow and dilapidated facility in a heavily used and high-density urban area. The road widening will have an "uplifting" effect on the neighborhood by remedying this substandard condition.
3. Pac. E-1 - Water Quality: More than balancing the impact of increased stom drainage in the canal is the fact that such water will no longer inundate and stagnate in the area during storms with attendant health and convenience hazards.

One general item that we would like to stress on this project is the need for a high level of aesthetic excellence. Primarily, this could be accomplished through landscaping, We believe that street-tree planting along the curb line carries a higher priority than the need for an exclusive left-hand turn lane in the roadway cross-section.

Thank you for this opportunity to comment.



Mr. Donald A. Bremner
Executive Vice President
Waikiki Improvement Association, Inc.
Suite 1410, 2222 Kalakaua Avenue
Honolulu, Hawaii 96815
Dear Mr. Bremner:
Subject: Envixonmental Impact Statement For The Proposed Kuhio Avenue Widening Project
(URLTR dated August 22,1975 )
Your comments regarding the need of improving the entire length
of Kuhio Avenue to provide of Kuhio Avenue to provide a third east-west traffic artery through Waikiki is achnowledged. The Hawaii Hotel Association has expressed similar sentiments.

Socio-Economic pactors. One of the significant oriteria which an ETS must consider is whether the proposed project would be in conflict when the State's envirommental policies of goals (Section 1:31 (a) (3), EQC ETS Regulation). The State Department of planiong Develomment and EConomic Development's recommendation on tourism which would been endorsed by the gth statel rooms on ohu to 3 percent has me statement in the RIS prepanalogislature (SCR 122, SLH 1975). of this policy. preparation notice was raisea in the light

Transportation facilities have been recognized as a factor in land use change since they affect the location of people and businesses. If there are no land use changes that will increase the density facility, we can state with the completion of a transportation socondary growth effect of some degree of cextainty that the In troject is nil.
In the case of the Kuhio dvenue widening, it appoars at this time that the secondary effect of the project will be minimal. This is supported by what is being proposed for the area, down-zoning and reduction of density. Even if this proposal is not enacted,

Mr. Donald A. Bremner
the maintenance of the present land use and zoning would be sufficient reason to declare that there will be no adverse secondary effects on growth associated with the proposed project. We concur that land use and land use regulations are the dominant factors in controlling developments in the affected area. Water Quality. We agree that the benefits gained by discharging storm run-off into Ala Wai Canal far outweigh the negligible (he canal.
General Item. The need for an exclusive left-turn lane in the landscape plan for the pre in Chapter VI of the EIS. An appropriate landscape plan for the proposed roadway is being developed.

cc: Div of Engineering
William Hee \& Associates
DMJM
1


Mr. Kazu Hayashida, Director and Chief Engineer
Department of Public Works
City and County of Honolulu
Honolulu, Hi 96813

## Dear Sir:

Thank you for the opportunity of contribution to the Environmental Impact Statement (ENV 75-260) for the proposed Kuhio Avenue Widening Project.

My desire to, and credentials for commenting on the project are as follows. My wife and I have lived in, driven through, owned property in, or worked in Waikiki since 1942. My office has been on the corner of Royal Hawaiian and Kalakaua Avenues since 1955. We own several condominium units scattered in the Waikiki area, and a small modern building in the path of the development, and are aware of Waikiki. problems both from our own observations and the comments of our tenants. We have been members of the present and former Waikiki Improvement Associations and other organizations concerned with the betterment of Waikiki. While presently a practicing physician, following medical school I received a degree in Public Health. Prior to entering private practice I served in high administrative positions in the Hawaii State Department of Health including positions administratively responsible for environmental activities. As one of the property owners on Kuhio Avenue to bear the brunt of the widening proposal we are concerned that the abolition of our property be in the best interest of the future development of Waikiki, and of the greatest aesthetic and health considerations for present and future residents of the area.

We have lived in Hawaii long enough to see major accomplishments in Waikiki improvement such as the removal of shore-side buildings East of the hoana-Surfrider Hotel; the considerable efforts to save Diamond Head; a mini-park at the entrance to Waikiki; and other improvements. Conversely we have seen such major errors as the failure to straighten Kalakaua with the resulting development of Foster Towers and the buildings East of it; the spot zoning and ultimate spate of high-rise apartments at the base of Diamond Head; the belated action of the CZC of several years ago causing a great surge of building permitted to "get under the wire"; and the present dilatory efforts at limiting growth in Waikiki before it triples in population as is predicted. We believe that a logical step in the development of Waikiki (even though it takes our property) is widening Kuhio Avenue. But what thought has been given to the Environmental impact of this specific area; namely the area from Kaiulani to Kapahulu. Will this result in a "Concrete Canyon" such as nor exists on Kuhio West of Kaiulani, such as illustrated in the following picture fromenestarmutaenn of 6-19-71?

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$8-22-75$
Page 2



Oux comants are related to the stataqent ENV 75-260; infomation wave heara aither in public meetings or in priveta from govermment knd businegs leaders; and Prom "DRAFT ENTTHONMEMTAL STATEIENT, prepared some months ago by the Department of Traffic, Clty and County of Honolulu. This will be identified as MTaffic Drast". In revieming this latter document it seened to devote itself largely to the enviromental impact of the kuhio widening on the Waikiki Islasd, and not the Kuhio area itself. Our concern is what the proposed plan wil do to the speciefic area involved in the widening.
proprtety of shiftimg environimatal pollution fron one area to notuer.
While the ENV 75-260 does not indicate what may happen to Kalakaua Avenue, previous proposals both written and verbal have suggested that the major reason for widening Kuhio was to reduce traffic movement on Kalakaua Avenue, and even possibly providing for the creation of a Kalakaua Mall. While this may be desirable in the future develoment of Waikiki, and would be a most happy situation for major hotels across from Kuhio Beach, there is some question both as to the propriety and legality of shifting the traffic noise, fumes, and hazards from that avenue to Kuhio. "Traffic Draft" page 7 states "This project will divert vehicular traffic from an outdoor recreational area to an area programed for commercial establishments, resort hotels and high-density apartments". On page 8 it is stated that "...the intent of this project is to route vehicular traffic from Kalakaua Avenue to Kuhio Avenue", thus shifting the "Noise levels within the Waikiki area" from Kalakaua to Kuhio.

## CULTURAL ENVIROMAENT.

Portions of the area involved were the playgrounds of Hawaiian Royalty and Hawaii's literary heritage. Royalty continues to be honored by many street names such as Kuhio, Kaiulani, Liliuokalani, and others. It would desecrate their names to allos the present "jungle" to existbut ways must be found to perpetuate the tropical aspects of the area. This can only be done with meticulous attention to preservation of existing vegetation and the assurance of re-planting of major trees and large amounts of shrubbery. It cannot be done by constructing an elongated tombstone of concrete. What remains of the ambiance of former days must be preserved or re-created. For example, the small park at the junction of Kaiulani and Kuhio should be preserved. Other tropical and or cultural effects might be achieved by minimizing traffic and the development of malls at both ends of Kuhio Avenue. At both ends are many parallel streets to provide for local needs. Between Kaiulani and Liliowalani there are now, in addition to Kuhio Avenue, Koa, Frince Edward, Cleghorn, and Tusitala. The very wide area of Waikiki west of Kanakapolei is now bisected by but a single streat. It does not seem essential to go from a 4 lane "widened" portion of Kuhio Avenue into an area now having 4 parallel streets in addition to a Kuhio widened to 5 lanes. A similar situation prevails at the Kapahula end of the proposal where the narrow section between Kuhio and Kalakaua Avenues have between then the parallel roads, Cartwright and Lemon. It would seem that the only possible need for all of these traffic lanes would be to serve as a traffic arterial through Waikiki. Through traffic should be diverted elsewhere as has been suggested by innumerable proposalsover many years.

VISUAL IHPACT AND AESTHETICS.

> "Traffic Draft" states "The visual and aesthetic appearance of the area will be considerably improved." The substitution of well planned structures for some of the existing shacks will be an addition.

However at the sites of sone of the presently existing high-rise structures it appears that there will be wall-to-wall concrete such as exist inareas of Kuhio west of Kaiulani. This certainly would be no improvement in aesthetics!

Fonolulu has not yet developed the capacity of keeping major streats either cleaned or mell maintained. Of streets in major cities in the world, Kalakaua Avenue is amone the most cluttered. Until we are able to keep presentable what we have, can we believe that an expanded Kuhio Avenue would be better kept? Unless laws are changed it would be not only uncleaned but cluttered with innumerable racks for local and mainland nesspapers, tourist periodicals, and even such seemingly unessential street documents as the "Singles Register".

NOTSE POLLUTION.
The physical and emotional effects of noise are well documented. Chronic noise produces stress and physiological changes occur in the body. Intermittent noise can be both annoying, and if at night, hazardous to health by the interruption of sleep patterns. ENV 75-260 states "Noise-ićcrease due to hicher trafic volumes will occur with new design of street but not considered significent in the context of high denaity urban areas..."

The noise where my office is located on the corner of Royal Hawaiian and Kalakaua Avenues is chronically annoying, both due to traffic and to 'Hyde Park' orators. There are innumerable tines during the day when conversation with patients and use of the tefephone must be interrupted. The periodic noise of emergency vehicles stops all conversation. It is presumed that many of the noiser commercial and energency vehicles do not use Kuhio at the present due to its narrowwidth. It is asoumed that with the widening, these vehicles will use the street and noise will increase in greater proportion then the number of lanes. The noise in a business area such as my present office is hardly tolerable. It would seem completely intolerable in an area desicned for high denajty apartments. To make living tolerable airconditioning will be essential to damper sound. This will add considerably to energy use.

My office was designed with cross ventilation and air conditioning would not be needed, except in late afternoon hours. At present I need it at: all times as windows and doors have had to be closed to control moise. Nen well designed high rise residential units in the Kuhio area will have ample breeze to keep pleasantly cool. But to control noise these breezes must be shut out and air-conditioning put in. This will add further to the noise pollution from the units, add heat to the environs, and require large quantities of energy. When the widening occurs it seems essential that majo changes be made in set-back laws to provide quantities of space and vegetation between the roadway and buildings.

AIR AND Thermal pollution.

[^4]area where this same document states "Approximately 3,000 vehicles utilize this portion of Kuhio Avenue during a 24 -hour period." It further states that "The 1980 average daily traffic is project to be 60,000 vehicles". It would seen that a 20 fold increase in traffic volume would inevitably increase air pollution in the area.

It is known that streets such as the proposed one even in northern latitudes develop temperatures of over $172^{\circ}$. Medical journals report "Thermal Contact Burns from Streets and Highways" and state"Indeed, it is possible in hot weather to fry an egg on our streets and highways; furthermore, it is possible to 'fry' people". This air and thermal pollution would also call for air-conditioning, tine depletion of energy resources, and this in an area where breezes might, with good plaming, serve the need.

RECREATION AND PARKS.
There are only two small parks in centralfaikiki. One at Kalakaua and Beachwalk, the other at Kaiulani and Kuhio. Page 10 of "Traffic Draft" states "No park land present or proposed will be acquired for this project". Exhibit C of ENV 75-260 seems to indicate deletion of this latter park. It would seem unconscionable to reduce park space in Waikiki.

## vegetation

ENV 75-260 states that "some existing trees and shrubs will be affected but possibly replanting will be considered..." Page 19 of "Traffic Draft" says "approximately 43 pain trees and 47 non-palm trees oyer 10 feet in height line the project." These trees apparently will have to be destroyed. In a letter from Mayor Fasi in 1972 he stated "The planting area will be increased $33 \frac{1 \%}{2}$ as compared to the already widened portions of Kuhio Avenue. Trees will be planted uniformy along both sides of the facility where possible and adequate sidewalks Will be provided throushout the project area". As I visualize the "widened" portion of Kuhio some areas are now wall to wall concrate, others have very narros strips of vegetation, and fep trees exist. Far greater planting than sugested by the Mayor would seem essential.

## PUBLIC SATTEY

[^5]There seens to be appropriate alternatives to the tight concrete conduit proposed.

One would be that of acquiring a much wider right of way in the presently relatively undeveloped portions of Kuhio and creating an avenue of significance worthy of the name of Kuhio. An avenue that would provide both for traffic movenent and one which would allow for major park-like development such as exist in diverse cities as Paris, Saigon, and Bucharest. Such an avenue, with massive planting, would obviate or materially muffle the noise pollution, shade the street with reduction of heat pollution, allow for greater movement of air with elimination of noxious fumes, enhance rather than detracting from the appearance of the area, and not add further to the existing "concrete jungle" now making up large portions of Waikiki.

A second alternative would be that of materially reducing the proposed traffic lanes at both ends of the proposed development where a number of parallel streets now serve the area. This would allow for significantly more planting, and in essense would create modified malls.

A third alternative, and one in which the "developers" would share loss with those of us whose property is to destroyed, is that of creating major set-backs on private property in order that adequate open space be provided between buildings and the street to afford ample space for planting, air circulation, ete. Space should not be pre-empted from us to provide road-ways, and then be permitted to be used by developers for their set-back requirements.

CONCLUSION
The zbolition of the present sociologic junsle and creating of better trafific movement must not result in another disaster such as would be suggested by the present inelegant proposal of a massive, noisy, fume ridden, unsafe, energy consuming, knife of concrete further cutting into the heart of Waikiki.


CC Division Engineer
U. S. Department of Transportation

## CHTY AND COURTY OF MONOMUMU




ENV 76-61

January 16, 1976

Dr. Samuel D. Allison
Waikiki Medical Building
305 Royal Hawaiian Avenue
Honolulu, Hawaii 96815
Dear Dr. Allison:

> Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project (URTrR, Dated August 22,1975 )

Your comments on the proposed project were helpful in the preparation of the EIS. Our evaluation and response to these comments are given in the same general order as they were presented in your
letter.
$\frac{\text { Propriety of Shifting Environmental Pollution From One Area to }}{\text { Another. There are no official plans adopted by the }}$ Another. There are no official plans adopted by the City and County of Honolulu to convert Kalakaua Avenue into a mall. Therefore,
the analysis of the environmental impact by the proposed widening the analysis of the environmental impact by the proposed widening and infic pattern similar fvenue is based on a street network and traimary purpoce of the to that existing in Waikiki today. The primary purpose of the proposed project is to relieve traffic congestion caused by unnecessary circulation of traffic, and secondarily to supplement the movements of traffic on Ala Wai and, to some extent inaua Averue, mainly within the project area will provide a roadway wide rest of Waikiki. The proposed project traffic in both the ewa and enough to accommodate two lanes of left-turn lane. This street pattern will greatly help anclusive circulation within the project area which greatly help the traffic current one-way street pattern on Kuhioh is restricted by the cula Avenue today.
Cultural Environment. Every effort will be made to preserve landscaping plan which is being developed torporate them into the
widening plans. Where feasible, major trees which must be removed for the street widening will be re-planted elsewhere, near the project area. For example, these plants could be re-planted in the Ainahau Triangle park located at the junction of Kaiulani and Kuhio Avenues. This park will be preserved. In fact, this park will be enlarged with the closure of Kaiulani Avenue between Prince Edward Street and Kuhio Avenue when this public right-of-way will be converted for park usage.

As stated eariier, one of the primary purposes of the proposed project is to relieve traffic congestion by improving traffic circulation in the area. The closing off of Kuhio Avenue by creating malls at both ends of Kuhio Avenue through the project area will only create an impossible situation out of a difficult one. The streets mentioned in your comments are all narrow oneway streets. They are also not through streets and some are also inadequately paved, without sidewalks and poorly lighted.

Within the heart of the project area, between Liliuokalani and Paoakalani Avenues, there are no other existing streets in the ewakokohead direction, other than Kuhio Avenue. Kuhio Avenue by virtue of being located nearest to the center of the project area would provide the most efficient street pattern for the area once it is widened and converted to two-way traffic operation. It would be able to reduce the circuituous routing of circulating traffic which currently exists within the project area; due to the existing street network of narrow one-way streets.
Visual Impact and Aesthetics. Regardless whether the proposed improvement is bullt or not, the existing high-rise structures will probably remain. The poor aesthetic appearance of the so-called "concrete canyon," caused by these structures, can only be prevented from occurring in the future by special land use and development regulations which will have to be enacted by the City council.
Noise pollution. Probable noise impact by the proposed project Will be discussed in the ETS. We recognize that the widening of Kuhio Avenue with the resultant increase in vehicular volume will increase the existing ambient noise levels. Set-back laws which you speak of to attenuate the impact of vehicular noise levels are part of the Comprehensive Zoning Code and outside the scope of this project.

Air and Thermal pollution. Probable air quality impact by the proposed action will be discussed in the EIS. Since the project will have only negligible effects on the total vehicular movements on the Island of Oahu and specifically in the urban Honolulu region, no significant changes in regional air quality conditions are anticipated. Due to increasedcapacity of the roadway, there will be local impact due to increased traffic volume.

Dr. Samuel D. Allison

The projected 1980 average daily traffic volume of 60,000 vehicles was based on closure of Kalakaua Avenue and has since been revised. Kalakaua and kuhige daily traffic volumes projected for 1995 for respectively.

The proposed landscaping to accompany the street widening project could provide shade along the roadway and to some extent ameliorate the heat emitted by the sun and vehicles.

Recreation and Parks. As stated earlier, the existing park at the junction Kiulani and Kuhio Avenues will be maintained.

## Vegetation. A landscaping plan is being developed to accompany.

 coordination with the Department plan which is being developed in include a program of identifying of Parks and Recreation, will removal and of these, which could those plants that will need plan will also identify appropriate relocated elsewhere. The be planted along the roadvay to provide shade shrubs that could functional and aesthetic needs. provide shade and fulfill otherPublic safety. The proposed roadway section will include two lanes in each drection, ewa and kokohead, and a left-turn lane. The and the two outside two inside lanes will each be 10 feet wide, lanes will be wide enough to accommodate fleet wide. These outside Avenue and provide easier access to prop bicycles safely on Kuhio roadway by making it easier to accomplish ry adjacent to the driveways without encroaching into the sh right-hand turns into of the 70 -foot right-of-way, totaling 7 foxt lane. The remainder roadway, will be utilized for pedestrian feet on either side of the This proposed roadway section and landscaping. section for a 70 -foot right-of-way according the standard street Rules and Regulations Standards" according to the "Subdivision Utilization, City and County of of the Department of Land left-turn lane could add another five (5) The elimination of the additional sidewalk and landscaping but (5) feet on each side for traffic movements.

Alternative Suggestions. (a) Acquiring a wider right-of-way families. The relocation of displacement of individuals and profit organizations by the proposed pres and businesses or nonas a significant social impact created project has been identified it is desired to minimize the number of by the project and hence,

Dr. Samuel D. Allison
(b) This second alternative of reducing the proposed traffic lanes at both ends of Kuhio Avenue through the project area, even to the point of creating malls, has been discussed earlier, under comment Cultural Environment.
(c) The third alternative of creating major setbacks on private property is a land use policy matter that is currently under investigation by the City Council.


[^6]
# DEPARTMENT OF PUBLIC WORKS <br> CHTY AND COUNTY OF HOPORU\& <br> g50 south king street <br> honolulu, hawall 96813 



KAZU HAYASHIDA

ENV 76-78

Januaxy 27, 1976

Dr. Samuei D. Allison
Waikiki Medical Building
305 Royal Hawaiian Avenue
Honolulu, Hawaii 96815
Dear Dr. Allison:

> | Subject:Environmental Impact Statement <br> for the Proposed Kuhio Avenue <br> Widening Project <br> (Reference MymTR ENV $76-61$, <br>  dated January 16,1976 ) |
| :--- |

The revised average daily traffic volume projected for 1995
for Kuhio Avenue (page 3, line 4) is incorrect. The correct figure should have been 33,000 vehicles instead of 16,300 vehicles. The 16,300 vehicles figure represents the projected traffic in the Koko Head direction only.

Very truly yours,


Director and Chief Engineer

cc: Div. of Engineering<br>William Hee \& Associates - DMJM<br>FHA, U.S. DOT

## APPENDIX C

(Comments received during the required
State Environmental Quality Commission's Review Period and the responses to these comments)

The list of organizations and individuals who reviewed and submitted comments on the Environmental Impact Statement:

## FEDERAL

U.S. Army Engineer District, Honolulu
U.S. Army Support Command, Hawaii*
U.S. Department of the Interior, Fish and Wildlife Services*
U.S. Department of Transportation, 14th Coast Guard District* 15th Air Base Wing (PACAF)*

STATE
Department of Accounting and General Services
Department of Agriculture*
Department of Defense*
Department of Health
Department of Transportation*
Environmental Center, University of Hawaii
Office of Environmental Quality Control
Water Resources Research Center, University of Hawaii*
CITY AND COUNTY
Department of General Planning
Department of Housing and Community Development
Department of Land Utilization
Department of Parks and Recreation
Department of Transportation Services*
Honolulu Board of Water Supply*
OTHER ORGANIZATIONS
American Lung Association
Hawaii Community Design Center, Ltd.
Kuhio Plaza Owner's Association
The Outdoor Circle
Waikiki Improvement Association, Inc.
Waikiki Residents Association

* No Comments


## INDIVIDUALS

John J. Arnest
Charles A. Blum
John Callahan
Dennis Callan
Michael B. Creagh
John T. Funai
Richard Kam
Louisa McShane
Peter L. Morgan
Gerald D. Paulson
Mary A. Paulson
Ann Schenfele
Jim Shon
Evelyn M. Smart
Thelma Soueira
John H. Stewart
Suzanne Stewart
Fredda Sullam
Candy Wilkins


1603634

## DEPARTMENT OF THE ARMY <br> U. S. ARMY ENGINEER DISTRICT', HONOLULU BLDG. 230. FT. SHAFTER RECEMED 

Pare


Office of Environmental ?quality Control
530 ralekaurdla Street, Som 301
Fomoluliu, Laval 96813

Gentlemen:

We received the Environmental Impact Statement for the Proposed Kilo Avenue bibentag project on April 26, 1976, and otter the following comments.
a. The sections dealing with water quality and drainage have been satisfactorily addressed.

- If needed, please revise the population figures for the project area noted on page 34 in light of the figures for all of waikiki given on pages $35-35$.
c. Sugar the LT S shot projected raffle capacity on a widened kuhto None, th addition to scrennine masuromerts for the project area as a "rote.

4. Center clarifying existing land uses with a mop shophar detailed land uses, thentifying those structures that will be fipacted by the project. fiches, the this should offer approximate numbers and descriptions of the thituiduals who are to se relocated.
c. Please explain hov afr quality will trove from present conditions wen the total volume of yohtches can be expected to increase on a widened Xutio Avenue.
F. Fo wo concerned that estimated notes levels affecting the credo-


 Fond and acceleration of whicios at that intomoction.
\%. Sengest the EIS give greater consideration to pedestrian traffic. Proximity to visitor duscination areas and to the domitom service nianent

as well as the existing traffic congestion ond parting problems all have encouraged many residents not to rely on automobiles, based upon the fact that $37 \%$ of households in the project area (on page 55) do not own cars. If the futura project area is to be filled wth even greater numbers of walling resilients, the EIS should perhaps reevaluate route design and desree of landacaping, in light of pedestrim safety and aesthetic needs.
h. The EIS should more fully address the long-range fmpact of the project on existang community inentity and cohesion. Mowere does the EIS acknowledge that Luhto Avenue runs straight through the heart of the Waikiti "soctal" Jungle, that much of this social comurity will be either relocated or that its rural village-like commaty cobesion will be severely impacted by a busy, five-lane street. This transformation of old Waikiti has been a continuous process motivated principally by existing State and city and County land use plans and marlet forces. The EIS, however, should recognize the accelerating effect of the project on a previously gradual process of social and land use change.

Sincerely yours,

KISUX CREUNG Chief, Fngineering Division

Copy furnished:
Mr. Kazu Hxyashida, Director Department of Public Works City $\&$ County of Honolulu

## CITY AND COUNTY OF HONOLULU



July 2, 1976

Mr. Kisuk Cheung, Chief
Engineering Division
U. S. Army Engineer District, Honolulu

Building 230, Fort Shafter
APO San Francisco 96558
Dear Mr. Cheung:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project

We are responding to comments made in your letter of June 7 , 1976, concerning the subject EIS.
a. We acknowledge your findings on the sections dealing with water quality and drainage.
b. As stated on page 54 of the EIS, the 1970 resident population figure of 4,060 persons given for the project area (C.T.18) is based on actual census data. On page 35, that same census data reveals a total resident population of 13,124 persons in the whole of Waikiki (C.T. $18,19 \& 20$ ). The larger total population figure of 66,000 persons in Waikiki is only an estimate of both resident and tourist population in Waikiki. This total resident and tourist population estimate is based on the number of dwelling units and hotel rooms in waikiki, both existing and for proposed buildings with permits, issued as of September 1974. The latest estimate as Iisted in the State DPED Data Book for 1975 gives the current (July 1, 1974) resident population for Waikiki and the project areas of 18,036 and $4 ; 268$ persons, respectively; however, we do not feel that up-date of the population figures on page 54 is needed as it affects the project.
C. Assuming that the projected trips through the project area would be evenly distributed over all three facilities, Ala Wai Boulevard, Kalakaua Avenue, and widened Kuhio Avenue, based on the number of lanes available, the 1995 P.M. peak hour, peak direction screenline projected volume of 4,300 vehicles per hour (vph) in the Koko Head direction would assign some 1, 400 vph on Kuhio Avenue. In the same Koko Head direction, there would be a total of 6 lanes on Kalakaua Avenue and the widened Kuhio Avenue with each lane carrying approximately 700 vph. Kuhio Avenue with its two traffic lanes in the Koko Head direction would have some $1,400 \mathrm{vph}$.
d. Buildings which will be affected by the proposed project have been tentatively identified and will be listed as an appendix in the revised EIS. Maps showing and identifying those existing structures adjacent to Kuhio Avenue that will be affected are available upon request from the Department of Public Works.

Chapter V, Section D, Subsection 1 on Relocation gives an approximate nuaber of individual and organizations that would be displaced by the proposed action. It even gives an approximate number of those individuals that would be temporarily displaced due to modifications on existing buildings that would be cut and refaced. In this same Subsection, a brief description of the displacees is also given. A more detailed description is available in a report entitled, "Kuhio Avenue Widening Project Relocation Impact and Program Plan," prepared for this project by the firm Survey and Marketing Services, Inc., in April 1976. The report is referenced to in the EIS.
e. As discussed in Chapter $V$, Section $B$, the air quality in the general project area at the designed period will improve due to the implementation of the proposed action and the improvement of overall efficiency of vehicular circulation in the project area with two-way operation on Kuhio Avenue and the improvement of traffic flow through the area by providing increased street capacity. The statements made are in reference to impact on air quality, i.e., with and without the improvement at any given time at the 1995
projected traffic volume.
With the proposed project', carbon monoxide (CO) concentrations on Ala Wai Boulevard and Kalakaua Avenue would be reduced by approximately 50 percent and 25 percent, respectively. The net effect on Kuhio Avenue is that CO concentrations would increase at or near the State air quality Standards.
f. Your concern in regards to the requirements stated in Section 4.2B of Chapter 44B, Community Noise Control for Oahu, is duly noted and some additional discussions of this noise regulation along with possible noise control measures have been included into Chapter $V$, Section $A$ of the EIS.
g. Currently, portions of Kuhio Avenue have no sidewalks at all, creating potentially hazardous conditions for pedestrians who must use this public way. The proposed project will provide sidewalks on either side of kuhio Avenue in the project area. Since the proposed project is within the recently passed Waikiki Special Design District, landscaping plans and treatment of pedestrian right-of-way will be coordinated with the Department of Land Utilization. However, the alleviation of these problems is one of the purposes of the proposed action as stated in Chapter II, Section A of the EIS. Until further guidelines for aesthetic and pedestrian needs are established, it is premature to discuss these matters in great detail.
h. We agree that the "transformation of old Waikiki has been a continuous process motivated principally by existing State and City and County land use plans and market forces." In Chapter V, Section D, Subsection 3, on Development Impact, we do recognize the fact that the proposed action may have an accelerating effect on developments in the project area but this impact can only be speculated since there are many other factors that would have a greater influence on development and growth of the area.

The EIS also does recognize the fact that Kuhio Avenue passes through the Waikiki "jungle" area and is mentioned on pages 2,29 and 30 in the EIS. Chapter V, Section D fully discusses the relocation requirements of the proposed action supported by a detailed survey and interview of affected households.


For RAZU HAYASEIDA Director and Chief Engineer
cC: OEQC
Div. of Engineering

William Hew \& Associates
DMJM

Director and Chief Engineer
Department of Public Works
City $\varepsilon$ County of Honolulu
650 S. King Street
Honolulu, faweii 96813

## Gentlemen:

Reference is made to the Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project City $\&$ County of Honolulu, State of Hawaii.

We have reviewed the EIS document and have no comments to offer.
Thank you for the opportunity to review this document,
Sincerely yours,


CHARLES S. VARNUM
Colonel, CE
Director of Facilities Engineering
CF:
Office of Environmental Quality Control
State of Hawaii
550 ralekawila Street
Room 301
Fonolulu, Hawaii 95813


Reference: ES

Kazu Hayashida, Director
Department of Public Works
City \& County of Honolulu
Honolulu, Hawaii 96813
Dear Sir:

We have reviewed the environmental impact statement concerning the Proposed Kuhio Avenue Widening Project and have no additional comments to offer.

Thank you for the opportunity to comment on this action. We are returning the statement as requested.

cc: RD (ES) Portland



DEPARTMENT OF TRANSPORTATION UNITED STATES COAST GUARD

Address reply to:
COMMANDER (meD)
Fourteenth Coast Guard District 677 Ala Mona Honolulu, Hawaii 96813

5922
17 MAY 19/6

Director and Chief Engineer
Department of Public Works
City \& County of Honolulu


650 South King Street
Honolulu, Hawaii 96813
Dear Mr. Hayashida:
We have received the Environmental Impact Statement for the "Proposed Kuhio Avenue Widening Project (Kaiulani Avenue to Kapahulu Avenue), "and, following staff review, the Coast Guard has no comments to offer on the proposed project.

The opportunity to review and comment on the EIS is appreciated. Sincerely,

Copy to:
COMDT (G-WEP)
CEQ Washington
OEQC Hawaii


Chief of Staff
Fourteenth Coast Guard District

SEFLVTO DEEE (Mr. Nakashima, 4492158)
27 liay 1976

subsect: Environmental Impact Statements

To: Environmental Quality Comnission 550 Halekauwila Street, Rm 301 Honolulu, Hawaii 96813

1. This headquarters has no comments to render relative to the environmental impact statements listed below:
a. Boat Launching Ramp, Mala, Maui, Hawaii
b. St. Louis Chaminade Education Center, Honolulu, Oahu, Hawaii
c. Proposed Kuhio Avenue Widening Project, Honolulu, Oahu, Hawaii
2. We greatly appreciate your cooperative efforts in keeping the Air Force apprised of your development projects throughout the state and the opportunity to review the subject statements.


BEN D. KOSA
Dep Dir of Civil Engineering


Mr. Kazuyoshi Hayashida Director and Chief Engineer Department of Public Works City and County of Honolulu Honolulu Municipal Building 650 South King Street Honolulu, Hawaii 96813

Dear Mr. Hayashida:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project

Thank you for the opportunity to review the subject statemont. Please note that in accordance with Section $4.2 B$ of Chapter $44 B$, Community Noise Control for Oahu, it may be necessary to provide noise control measures to limit the predicted noise levels inside the classrooms along Kuhio Avenue to 50dBA. We recommend that this possibility be discussed and/or clarified in the EIS.

We would also like to alert you to the possibility that the project may be subject to the Diamond Head Historic Cultural and Scenic District rules and regulations. This is because the Jefferson School is within the district and the project proposes to acquire some school lands at the intersection of Kapahulu Avenue and Hake Road.

If you have any questions, please have your staff call Mr. Harold Sonomura of my staff. at 548-5703.


RIKIO NISHIOKA
State Public Works Engineer
LT: dr
cc: OEQC
DOE

June 15, 1976

Mr. Rikio Nishioka
State Public Works Engineer
Department of Accounting and General Services
State of Hawaii
P. O. Box 119

Honolulu, Hawaii 96810
Dear Mr. Nishioka:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project

We are responding to comments in your letter of way 10,1976 , regarding the EIS of the proposed street widening project.

The matter of implementing noise control measures for Jefferson School's classrooms along the proposed Rio Avenue Widening project was disclissed on June 8 , 1976, with the Department of Education and members of your staff. Remedial measures which will be required by the Department of Health will be coordinated with the DOE and your office.

Jefferson School and Honolulu Zoo are within the Eistoric, Cultural and Scenic District No. 2, the Diamond Head District as established by Ordinance No. 4507. According to our information, State land at the intersection of Kapahulu Avenue and Lake Road that is required for the road widening ts part of the Honolulu Zoo. We do not anticipate any conflict between the proposed project and Ordinance No. 4507.

Very truly yours,


KAZU HAYASHIDA
Director and Chief Engineer
cc: OEQC
DOE
Div. of Engineering

William Ne \& Associates
D:iJM

# DEPARTMENT OF AGRICULTURE 

1428 SO. KiNG STREET HONOLULU. HAWAH36al4

## April 27, 1976

## MEMORANDUM

To: Office of Environmental Quality Control
Subject: Proposed Kuhio Avenue Widening Project - EIS

The Department of Agriculture has no comments regarding the proposed Kuhio Avenue Widening Project.

Enclosed herewith please find the EIS for the subject project.
Thank you for the opportunity to comment.


Enc.


state of hawall<br>DEPARTMENT OF DEFENSE OFFICE OF THE ADJUTANT GENERAL fort ruger. Honolulu. Hawall 96816

## Proposed Kuhio Avenue Widening Project

Thank you for sending us a copy of the Environmental Impact Statement for the proposed "Kuhio Avenue Widening Project." We have reviewed the publication and have no comments to offer.

We are returning the Environmental Impact Statement for the proposed project per your request.

Yours truly,


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> DET REPMORS
> 4 10833 犕 76 Eav do
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> Engug (g)
> We. ical then asoci igy) EPHS-SS DMjM (g)
> Juna 7, 1976

MEMORANDUM

Dr. Michard Z. Masland, Diractox Offica of Environmental Quailey Control

From: Deputy Diractor for Enviromantal Eealth
Subject: Enviromental Impact Statment (EIS) for Proposed Kuhio Avenge Widening Project

Thank you for allowing us to reviey and comant on the subfect EIS. Dlease be inforued that we haye no objactions to this profect, but reeompend that adequate resources be conaltcaed to the analysia and abatame of construction nolse.

Construction activitias nust comply with the conditions atated in Publie Health Regulations, Chapter 443, Comanty Moise Control for Ohu, and Ciapter 44A, Vehicular Nolse Control for Oahu.

All heavy vehscles travelling on trafficuays to and from construction projects must comply to the limits stated in Chaprer 44d, Vohtcular Yolse Control for Oahu.

Wa reallza that the statemente are general in nature due to preliminary plans being the sole source of discussion. We, therafore, raserpe tha right to impose future envizonmental reatrictions on tha project at the cima final plans ara subaitted to this office for reviaw.

cc: Director of Public Werks, C\&C of Honolulu

# June 15, 1976 

Dr. James S. Kumagai
Deputy Director for
Environmental Health
Department of Health
State of Hawaii
P. O. Box 3378
Honolulu, Hawaii 95801
Dear Dr. Kumagai:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project
We are responding to comments in your memorandum dated June 7 , 1976, regarding the subject EIS.

Construction impacts as they relate to noise and vibration ace discussed on pages 97 to 99 in the ETS. Construction activities will comply to the provisions of Chapter 44A, Vehicular Noise Control for Oahu and Chapter 44B, Community Noise Control for Oahu.

Analysis and abatement of construction noises cannot be accurately predicted because the condition and number of equipment that will be used concurrently are not known. Sound emission from construction equipment can be reduced by mufflers, hoods and other devices. According to a Carnegie-Mellon University study, the sound emission of the majority of the commonly used construction equipment can be reduced to 75 dBA . Since the allowable noise 60 els at the road right-of-way for apartment zoned district is 60 dBA , the noise levels from construction equipment and vehicles cannot possibly meet the standards. Therefore, a community noise permit will be required pursuant to Chapter 443 .

Using typical values estimated by the united States Environmental Protection Agency, the average noise levels at construction sites on Kunio Avenue can be expected to range from 79 dB to 89 dA.

Dr. James S. Kumagai

The latter valua represents the noise level that can be expected during excavation for the roadway and trenches for the sewers and storm drains.

Very truly yours,


KAZU HAYASHIDA Director and Chief Engineer
cc: OEQC
Div. of Engineering

Willian Hee \& Associates
DMJM

Mr. Kazu Hayashida
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 So. King Street
Honolulu, Hawaii 96813
Dear Mr. Hayashida:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project

Thank you for the opportunity to review and comment on the subject statement.

The need for this project to support the general circulam tion and transportation plan for the Waikiki area to be well established and adequately addressed in the report. We, therefore, have no comments to offer.



Mr. Kazu Hayashida, Director
Department of Public Works
City and County of Honolulu
Honolulu, HI 96873

## Proposed Kuhio Avenue Widening Project

Dear Mr. Hayashida:
The Environmental Center has been assisted in the review of the above cited EIS by Kela Holt, Gordon Lum, and Michael Munekiyo, Hawaii Environmental Simulation Laboratory; and Jacquel in Miller, Margaret Stanzione, and Leonard Wilson, Environmental Center.

In general, the EIS adequately addresses the structural concerns involved in road building and the environmental effects of the widening on the road corridor proper. A noticeable failing in the EIS is the lack of attention to the relationship between the proposed project and its effect on the surrounding land. In particular, the social and economic effects of the road widening and improvements on the project impact area are not clearly outlined. These secondary effects are substantial and should be fully addressed in the EIS. Our reviewers have suggested the following comments.

## Page 3 Summery of Environmental Impact

It is stated that 48 residential dwelling units and 2 non-profit organizations will be displaced as a result of the project. On pages 118 and 122 there is a breakdown of the number of units affected depending on the Right of Hay alternative: 57 units, 37 units or 22 units. The January 14,1976 letter from you to Mr. Andrew Chang, DSSH, estimates the number of units to be 5! households and 3 non-residential units. There seems to be a discrepancy that should ba explained or corrected.

## Page 5 Findings and Conclusions

What is meant by "...as the planned bus transit route through Waikiki."? Could more information be provided on these plans?

## Page 6 Gonval Plan

It is statod that the proposed action, "in its broadest sense," will "impl ment the land use policies of the City and County of tonoluhu as axpessed in the General Plan of 1954 (amended); and the supporting genera? circulation and transportation plan for the Hakiki Diamond Had area, which is included in the Develomant Plan (0) for the Waikiki-Diamond Head Plaming area." Specifically what are the details of these plans and hom will these plans affect the "project area" in population increases and densities?

## Page 7 Vehicular Circulation

The "studies" which "show that unnecessary circulation of traffic is a major cause of congestion in Hakiki" should be specifically cited. Do these "studies" also include traffic density as a major cause of congestion?

How is it anticipated that Kuhio Avenue will supplement traffic flows on Kalakaua Avenue and Ala Hai Boulevard since 1) Khio Avenue is literally boxed in by Kalakaua Avenue, Ala Hai Boulevard, and Kapanulu Avenue. Increased traffic flow in either the Kokonead or the Ewa bound direction on Kuhio Avenue must enter and exit from Kapahulu Avenue (Ewa bound direction) or Kalakaua Avenus (Kokohead bound direction). Although the proposed widening may facilitate traffic within llakiki, increased traffic flow would appear to cause more congestion at the intersections which accomodate traffic entering and exiting from Kuhio Avenue. 2) An increase in poputation in the proposed highrise hotels and condominium apartment units will add to the congestion of tour bus operation, city bus transit lines, and automobile traffic.

How can this proposed widening of Kuhio Avanue maimize two variables at the sane time when increased supplemental traffic flows on Kuhio Avenue would be corpounded by increased residential and tourist related traffic within this project area?

## Page 7-8 Pedestrian Circulation, Safety and Drainage

What is the nonconformity of Kuhio Avenue with current designs and what enviromantal standards are deficient which make "the street both unsafe and unpleasent for pedestrians?" Have there been studies or surveys that reflect hazardous and unpleasant street conditions for pedestrians? It is stated that the "cracked," "broken," and "generally poor condition" of Kuhio Avenua between Kailloni Avenue and Kapahula Avanue disrupts the eficient and safe movement of cars." youldn't pavenent resurfacing and proper maintenance alleviate this condition?

How large is the estimated "increased population and density" of the project area and how will these increases "naturally occur whether or not Khio Avenua is improved?" "ithout the improvements provided by the proposed project how can the City and County's land use policies be inplemented?

Face 16 In tems of increased population, what is the estimated capacity of the proposed sower improvements?

Fage 20 Propect Cost
The tota project cost is approximately $\$ 7.2$ million. The $\$ 4.2$ million for right-of-iay acquisition is not consistent with the figuras on Fage 121 fhich break dom the cost estimate depending on the right-oi-kay altarnative.

Does this $\$ 4.2$ million for right-of-way acquisition include the cost of relocating residents? This figure seems like a very high price for 1.5 acres of land.

P三ge 21-22 Projectad Trafific Damand and the Mead for Improvements
"This data was obtained by lutilizing the latest available input data.."
What was the actual year used?
"The data obtained from OTPP did not reflect certain intrazonal trips and special trips, such as.tourist trips, therefore manual adjustments were conducted to reflect these types of trips in the projection estimates."

How were the manual adjustments made and what was the source used to determine the values of the adjustments?

The EIS does not make clear if the projected 97,000-99,000 auto trips for the year 1995 only includes the Ewa - Kokonead direction or whether these projected figures are inclusive of both the Eha - Kokohead and Koloread - Eva directions.

The projected figures for 1935 are for an "average weakday." What are the projections for weekend traffic flows within the project area?

Page 23-24 It is evident that the projected Kokohead-bound traffic flows risulani and Kapahulu Avenues. It is reasonable to assuma that widening Kinio Avenue and providing two-way traffic flow within the present one-way Erea between Kaiulani and Kapahlu Avenues may alleviate the projected 1995 incapacity of Ala lia Boulevard to adequately facilitate an increase in Ena-bound vehicular traffic. It is also reasonable to assume that the proposed one-half mile widening of Kuhio Avenue may offer a more efficient route for Kokohead-bound twaffic from Kalakaua Avenue to Kapahulu hemue. Howaver, the entire streat network of Ala Wai Boulevard, Kalakaua Avenue, and Kuhio Avanue is completely boxed in by Kapahulu Avenue, Macully Street and the intersection of Ala Wai Boulevard and Kalakaua Avenue. Although the proposed widening project may indeed facilitate efficient traffic flows Within the project area, how can the overall efficiency of vehicular. traffic into, within, and originating from Waikiki, and the "project area" ba improved when apparently increased Ewa-bound traffic will undoubtedly becone "bottleneckod" on Hocully Street between Kapiolani Avenue and Kalakaua Avenue; at
the intersection of Kaladata Avenue and Ala Ha Boulevard; and Kokohoadboud traffic will becone "bottlanecked" on Kapahulu Avenua betwaen Park mense and kilakau Ayenue?
fgain, how can this proposed widaning projat alleviata the projected Waffic floy increase for Ala Vai Entevard and Kalakava Avenue since tho proposed project will at the sama time exacerbate traffic problens by proyiding racilities for increased management?

Page 23 talks about the capacity of Ala Wai Boulevard, Kuhio Avenue, and Kalckaua Avenue for the ewa-kokohead movement. By combining the three roaduays it implies that the utility of each roadway for the driver is about the same if the origin or destination is in the ewa-kokohead direction. Taking this approach, the "congestion level" on the three roadways should be about the same irregardless of the proposed widening of Kunio Avenue; e.g. if Kuhio Avenue is widened, then its capacity is increased which will initially decrease the congestion level on Kuhio fivenue, however, bacause the three roadways have the same utility, an equilibrium Will occur shifting some of the load from Ala Wai Boulevard and Kalakaua Avenue on to Kuhio Avenue so that the three roadways will experience a similar "congestion level." Is this show in the traffic analysis? that are the projected "congestion levels" for Ala Wai Boulevard and Kalakaua Avenue for 1995?

When one talks of congestion levels and tradeoffs, it is difficult for the reader of the EIS to visualize the traffic impact if he is given just the traffic volume. Instead, the users of the transportation system perceives his "congestion level" in tems of travel time and other parameters e.g. overall speed, fuel consumption, and maneuverability. It would be helpful for the reviever to have the cost effectiveness of the $70^{\prime}, 60^{\circ}$, and 56. RON in terms of travel time. For example, the expendicures for a $70^{\prime}$ RON may decrease travel time by 5 minutes, and the $60^{\circ}$ RON by 3 minutes, and the $56^{\prime}$ ROA by 2 minutes. Then one can evaluate the alternatives with respect to travel time, a major determinant of the congestion level. It may be detemined that an additional savings of 2 minutes per vehicle is not worth the additional cost or that maybe congestion level is not that important. This tool, cost effectiveness, can also be applied to the other indicators describing the quality of the project.

## Page 25 Design Provisions

The following sentence needs clarification: "The city has master planned Kuhio Avenue as a bike route through Waikiki." The sentence inplies that Kuhio Avenue has been exclusively plamed as a "bike route," in wich case provisions for a bike route should be made. Although Figure 5 (p. 26) illustrates that the 13' outside lanes may be wide enough to accomodate automodiles and bicyclists, it is apparent that there is no distinguishable bike route other than the gutter/curb area that vould accomodate bicycles. A physically separated clearly marked bike route should be considered. The
proposed project should improve city-bus transit lines and provide a bike routo through Haikiki along Kunio Avenue.

Recognizing the need to alleviate traffic circulation both within and through Maikiki, perhaps Kuhio Avenue would best accomodate these objectives if Kuhio Avanue was exclusively designated for City Dus, Tour Bus, bicyclists, and pedestrians. To assune that the proposed one-half mile improvement will only be effective by the construction of a 70 foot R.0.W. may be inaccurate. Taking note of the zoning within figures 7 and 8 , Kuhio Avenue, within this project area, would facilitate multiple family apartment units and resort hotels. Since the commercial district within the project area is exclusively along Kalakaua Avenue, and neither Kuhio Avenue, within the project area, nor Kalakaua Avenue provide ofistreet parking, the proposed project would best acoomodate access only to the resort hotel and multiple apartment unit structures. For this reason, perhaps Kuhio Avenue only within the project area should be restricted to City Bus, Tour Bus, bicycle, and pedestrian twomay traffic.

Page 31 E. Background of the Project-Historic Perspective
The TOPICS study justified the widening of Kuhio Avenue "on the basis of a need for route continuity." How will "route continuity" of the proposed one-half mile widening of Kuhio Avenue "improve the traffic circulation in Waikiki?" What studies have been made which provide evidence that the onehalf mile proposed improvement area is essential to the overall traffic movement in Waikiki?

## Page 51 Schools

"Dasign enrollment if 700 students for the Jefferson Elemantary. School and 200 for the Orthopedic School. Total current onrollment (1974-1975) is 806 students." Students from Jefferson are not interchangeable with studants from the Orthopedic School. By combining the two, the excess capacity of one is averated with the capacity of the other. This may "hide" the overload in one school by adding the excess capacity of the other school. Projection figures should be listed for each individual school and not averaged.

## Page 66 The Relationship of the Proposed Action to Land Use Plans, Policies

The EIS comprimises sub-Part E 1:42 (d) - The relationship of the proposed action to land use plans, policies, and controls for the affected area on tho
(1) The EIS fails to clarify the relationship of road widening to the urban design controls outlined in the Wakiki Special Design District (SOD) plan which are applicable to Kuhio Avenue. The urban design controls are listed below:
"lowering of allowable building heights to 220 feet from the present allowable height limit of 350 along the land bordering Kapahulu Avenue to preserve the view corridor from Punchbowl Historic, Cultural, and Scenic District No. 3 to Diamond Head Historic, Cultural, and Scenic District No. 2; and preserve the view of Diamond Head from the Kuhio Avenue proper."
"a thirty-foot setback requirement for the buldings along Kuhio Ave."
(2) As stated in the Haikiki SOD plan and the Dept. of Transportation*s rapid ansit systumplan (1972), the widening of Kuhio fvonue is a mams for imple-- ting the concepttal plan of crating a pedestrian mall on Kalakua fimata. A- ETS does not mention the pedestriar. mall idea in tre sumary of the projoct's enyivomantal impacts on page 3. The traffic requiraments and dasign pavisions section of the EIS (peges 2T-27) sre incorrect because the capabllity of inhio Neme to successfully handle traffic flow and volume beyond ze year 1905 is assured onty if "no impovements are made to kalabaua Avomue."

203 68 mise
"Based on preliminary estimations of the noise levels which may be generated and a reviev of average daytime noise levels along comparable streets, a level os 65 to 70 12, is predicted." Because sound decreases with distance, the cistance at wich the noise levels are measured, should be stated.

What are the traffic forecasts? How was an increase of only 2 dBA determined?

## Page 72-77 fir Quality

To assume that a steadily flowing traffic pattern would improve air pollution for current traffic volume may be correct. However, the overall incrase in vehtular traftic by tha year 1995 would result in an increase in air pollution. it is erroneous to assume that the widening of Kuhio Avenue will improve air quality. The atmospheric conditions in rawail and the effactiveness of the Federal Motor Vehicle Emission Standards should not be used as a justification for an increase in air pollution. The increase in traftic dae to nem development will affect the air quality significsntly. This increase dua to development is not adequately discussed in the EIS.

How will a sotback of 45 feet minimize any adverse impacts cause by a reduction in air quality?

## Page 85-85 Relocation

It is stated that "23 of the 52 parcels have existing structures on them which will be affected by the proposed action." Why, then must "tos duelling units and 2 units occupied by non-profit organizations" be condemned? Please clarify mat is mant by "units".

Page 90-92 Accassibility
The following paragraph (on p. 90) contradicts the intent of the proposed aidening of Kuhie Avenue to eliminate traffic congestion.

The enviromental impact evaluation concluded, however, that although
the existing streats of Waikiki in and around the project area already carry high traffic volune and experiance some congestion; they presently have the capacity to accomodate traffic volumes generated by the implementation of land use policies of the City and County of Honolulu, although with a substantial dec rease in the level of service provided and a continuation of circuitous routing of autos.

Since the proposed project is considered as an implenentation of land use poificies, it is apparent, or so stated in the aobve paragraph, that the widening moject will not alleviace traffic congestion within the project area, becausa däisting streets do not have the capacity to properly facilitate an increaje in traffic flows.

What is neant by, "the direct impact of the project wull be greater on ancessibillty wibin dalkiki thail on the region?". Does ragion refer to the 3:erell straet network system? How will accessibillity be improved?

Hod will the one-half mile proposed widening ared "shorten toip time ard vehicle operating costs within Vaikiki," since the proposad widening area exists at the "Kokohead" end of Waikiki?

The relationship of the proposed widening area to the remainder of Waikiki should be established quantitatively. How many vehicles presently use Kunio Avenue between Kaiulari and Kapahulu Avenues as a point of ori-
gin during peak A.M. and P.M. hours?

What is the current traffic count of vehicles which circuitously use Kunio Avenue in search of parking facilities between Kaiulani and Kapanulu Avenues in both mauka and makai directions? How will the widening project eliminate or even alleviate circular traffic patterns that will evidently be exacerbated by an increase in traffic flow and apparently no additional parking facilities?

Comparatively, then, what would be the relationship of the proposed widening project, upon completion, to both the current estimations of traffic counts and the predicted traffic volume of 1995 within the proposed improvement area? Is there a significant change in the volume or density of circuitous traffic for the year 1980 or 1995? Have calculations for 1995 been made on the number of vehicles for the new units being constructed?

How will bus service be extended through the project area and hon will this extension result in "increased ridership," "savings in time," and "vehicle operating costs?" How are these impacts "beneficial to transit users?" It is difficult to predict that more people will use the bus if this half-mile improvement is implemented.

On page 25 of the DEIS it is implied that Kuhio Avenue in its entirety is planned to accomodate bicyclists. However, in subpart 2 of section 0 , Socio Economic (impacts) there is no explanation of any improved "access" For bicyclists. Would an increase in bus service eliminate improved conditions for bicyclists since there is no distinguishable bike route?
Pajes 92-93 Development Impact
Although the improvement of only Kuhio Avenue may not increase the "magnitude" or "time" of future development, what will be the impacts of the drainage and particularly the sevage improvements in terms of magnitude and time on future growth and development in the project area?

The present EIS has not clearly documented the impacts of the probable change in the population growth or its consequent effect on the resource base. In this case, the prime concern is focused on providing adequate public services. A widened roadway may satisfy the following objectives related to improved public services:
-reduce traffic congestion by improving vehicular accessibility and circulation in the project area.
-improve pedestrian circulation and safety.
-improve the transit service in Waikiki.
Theoretically, the above results from the road widening are attainable. However, the proposed project will enable the construction of developments in the areas held in abeyance pending completion of the street improvements packaged with the road widening.

Land use planning in Waikiki is forced by economic pressures to produce higher density buildings. This situation is documented in the EIS on page 54 which includes plans for Liliuokalani Trust property for two 36 story apartment towers with a total of 854 apartment units and two 38 story apartment towers - the first with 432 units and the second with 920 units. The question, of whether the public service benefits of the road widening will be partially mitigated if not obliterated by the development plans for the project impact area should be considered.

An additional factor to consider in relation to the upsurge of building development in the project impact area is land value changes. It is not necessary to actually assess the changes, but the EIS should note the probability of an increase/decrease in land values as a result of the proposed project. It is undeniable that the road widening and improvement will have a bearing on land values and the residents of the area. The subject should be included as an additional secondary effect.
$*$
Pages 97-105 Construction Impacts
An increase in sedimentation discharge into both the ocean and the Ala Hai Canal can be expected from construction activities. The final EIS should include a discussion of the potential impacts on the biological communities that may be affected in both the Ala Wai Canal and the ocean.

Pages 105 Vehicular and Pedestrian Traffic Disruption
The construction will be an inconvenience. An estimation of the time that the roads will be blocked off should be made (from the time the roads are torn up till the time they are usable or paved). In addition, to what extent will the widening of Huhio Avenue disrupt circuitous traffic on Ala Wai Boulevard and Kalakaua and Huhio Avenues? To what extent will construction activities disrupt parking within the project area and how will this affect the parking problem which currently exists on weekends?

## Pages 115-121 Design Alternatives

The sumary of the Description of the Proposed Action aives the impression that only Kuhio Avenue will be affected by the proposed action. The streets affected by the sewer and drainage improvements should also be mentioned. This Uagueness in the specific project activities involved is also apparent in the traffic analysis. On page 27 is stated:
"Assuming that no improvements are made to Kalakaua Avenue, the improvements to tuhio Avenue, as described above, will provide sufficient capacity to maintain a comfortable and a relatively congestion-free traffic flow within the area, and also, sufficient travel capacity to accommodate traffic volumes beyond the year 1995."
This implies that no other changes to the transportation system will be instituted. On page 118 it states the capacity of the $70^{\prime}$ ROM to be 3830 vph ,
but according to the Final Traffic Volume Protection and Analysis for Kuhio Avenue widening by William Hee and Associates, Inc., this figure assumes the capacity of the $70^{\prime}$ RON would be 3710 vph and the $\mathrm{v} / \mathrm{c}$ ratio would be 1.08 rather than 1.04.

At present, there exists no "left turn pocket" along Kuhio Avenue except at the intersection of Kuhio Avenue and Kanekapolei Place. Does the overall "plan" for Kunio Avenue include a "left-turn pocket" for the entire length of Kuhio Avenue, or only from Kanekapolei place to Kapahulu Avenue?

The North-South streets within the project area are "one way". Kokohead direction traffic within the project area can only, turn left at three intersections; Liliuokalani Ave., Paoakalani Ave., and Makee Rd. Ewa direction traffic could theoretically turn left at the intersections of Ohua Ave., Uluniu Ave., and Kaiulani Ave. To adequately evaluate the provision of a "left-turn pockei" the following features should be included:

1. Planned city bus stops within the project area in both Ewa and Kokohead directions.
2. Possible elimination of city bus service in the Ewa direction on Kalakaua Ave. between Kapahulu Ave. and Kaiulani Ave.
3. Location of planned signal lights within the project area.
4. Directional designations of signal lights e.g. "left on left arrow only." Consideration should be given to the elimination of the 10 foot left-turn pocket lane designed for the $70^{\prime}$ RON. This left-turn lane defeats the purpose of the circuitous traffic flow originally designed by the Diamond Head Improvement plan because it would interrupt through traffic. Eliminating the ewa-bound bus lane on Kalakaua Ave. between Kapahulu Ave, and Kaiulani Ave. may facilitate circular traffic movenent within the project area by providing an extra Kokohead bound lane on Kalakaua. This additional Tane could be used for "ieft turning only" from Kalakaua Ave. onto Liliuokalani and Paoakalani Avenues and perhaps be used as a turning lane onto Kapahulu Avenue. This additional lane may also accommodate left turn movement from UTumiu and Chua Avenues only Kalakaua Avenue.

Providing that pedestrian crossings could be smoothly integrated with traffic floms both across the North-South "feeder" streets along Kalakaua Ave, and across Kalakaua Ave., the "additional" Tane presently used by "The Bus" may improve circuitous traffic if "left turns" were prohibited in both directions along Kuhio Avenue within the project area.

Although the provision of a left-turn pocket would appear justifiable to accommodate traffic movements within a series of two-way streets, the conditional turn movements along Kuhio Avenue may not warrant this extra 10 foot turning lane. The elimination of the left-turn pocket would also decrease construction cost and the number of families that would have to be relocated.

Pages 119-120
Since Kuhio Avenue is planned as a major bus transit boute it is essential that the additional bus stops are located to facilitate traffic movement. Unless the one-way directions are changed among the "feeder streets" both the Eva and Kokohead traffic movement will be limited for "left turning".

We would appreciate greater detail on the referenced bike route. masterplanned for Kuhio Avenue.

## Page 122 Conformance with Current Public Policies

That the $70^{\prime}$ RON conforms with the development policies for the project area is clearly established throughout the EIS. Are the 60' and the $54^{\prime}$ ROHSSuitable for the development policies for the project area?
Page 123 Findings and Conclusions
Taking into account the figures in Table 2 (p.118), the 50'Ron alternative aa be justifiable in terms of cost and its accessibility. Whether or not a $70^{\prime}$ R OH is justified on the basis of safer and more efficient use of Kuhio Avenue for motorists making left-turn movements, has not been established by the EIS since left-turn movement is limited by the current "one-way street" directions.

Summary
It is not enough to improve a facility for existing conditions without considering future traffic demands. We feel the EIS should discuss the effects of the proposed development in the project area (number of units, projected number of cars, ingress and egress of parking structures) as well as existing conditions. On page 140 from the minutes of the March 11, 1971 Special Meeting of the Planning Commission, a question was asked about the long-range construction plan in Waikiki. The question was answered only in terns of the alignment improvements. New development, especially in the project area, must be considered in order to plan for effective traffic flow in the area and in Waikiki.


[^8]cc: Contributors
OEQC

## CITY AND COUNTY OF HONOLUMU



July 6, 1976

Dr. Doak C. Cox, Director
Environmental Center
University of Hawaii
State of Hawaii
2540 Maile Way, Maile Bldg. 10
Honolulu, Hawaii 96822
Deax Dr. Cox:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project

We respond to comments in your letter dated June 7, 1976, regaxding the subject EIS.

Page 3. Sumnary of Environmental Impact. The number given of units affected by the project as shown on pages 118 and 122 was from an earlier estimate. The most recent estimate of the number of dwelling units and non-profit organizations affected by the proposed action is 48 residential dwelling units and 2 non-profit organizations. The number of units affected is continually being refined to keep it current since certain structures have been recently removed by property owners. We stand corrected on these numbers.

In light of the more recent estimates of relocation, the numbers of relocation for each Right-of-Way alternative would reduce about equally, thus maintaining the actual difference in the number of units affected by each alternative.

Page 5. Findings and Conclusion. A more detailed discussion of the planned bus travel route on Kuhio Avenue is presented on pages 8 and 9 , under Chapter II of the EIS. Both short and long-range transit improvement plans have been developed by the Department of Transportation Services, City and County of Honolulu.

Dr. Doak C. Cox
$-2-$
July 6, 1976

Page 6. General Plan. Under Chapter III, Section B, Description of the Project Impact Area, a complete description of the existing development and current plans for future development of the area is provided. Future population increases and densities projected for the area formed the basis for determining future traffic demands as they affect the project area.

Page 7. Vehicular Circulation. Kuhio Avenue primarily serves those trips with origin or destination in the proximity of Kuhio Avenue and internal trips with both origin and destination in Waikiki and more specifically in the proximity of Kuhio Avenue. Unnecessary circulation of these types of trips caused by not being able to use the most direct route, contributes to congestion.

The primary movement in Waikiki is in the east-west direction and is served by the Kalakaua Avenue-Ala Wai Boulevard oneway couplet and Kuhio Avenue. In describing the hierarchy of the street system of Waikiki, Kalakaua Avenue and Ala wai Boulevard are the primary arterials, Kuhio Avenue is the secondary street, and all north-south streets are the local or feeder streets. With access to properties fronting on Kuhio Avenue permicted, Kuhio Avenue serves both as a local street and as a collector street for the various north-south streets. In the project area, due to the limited Row widths, all streets are operated for oneway traffic flow including the affected portion of Kuhio Avenue.

By widening the roadway and permitting 2 -way traffic on Kuhio Avenue, traffic flow in the project area can be greatly improved through increased capacity and by permitting more efficient circulation pattern. Chapter III, Section C describes in detail the traffic circulation conditions and problems in the project area.

The widening of Kuhio Avenue would supplement Kalakaua Avenue and Ala Wai Boulevard in the movement of traffic; however, the proposed action is not intended to correct the constraints at their entrances to and exists from Waikiki. It is agreed that the proposed widening would, therefore, facilitate traffic flow within Waikiki which is the primary purpose of this action by providing additional east-west movement capacity and thus relieve some of the internal traffic on Kalakaua Avenue and Ala Wai Boulevard.

The increased supplemental traffic flows on Kuhio Avenue, compounded by increased residential and tourist related

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traffic within the project area, would be resolved by the proposed action by virtue of providing added capacity to better accommodate future increase in traffic flow.

Pages 7-8. Pedestrian Circulation, Safety and Drainage.
Current design and environmental standards refer to normal improved streets required in all new developments including curbs and gutters, sidewalks, proper drainage, street lighting, etc. Kuhio Avenue is currently not fully improved with curb and gutter, sidewalk and lacks proper drainage system. Pavement resurfacing and proper maintenance are "band-aid" measures which will not solve the ills of the area.

The estimated population and density are given on page 36 of the EIS. Population and density will be increased as permitted under the recently adopted Waikiki Special Design District Ordinance and these increases would occur based on demand for housing and tourist accommodation with or without the widening of Kuhio Avenue. The City and County's land use policies would be implemented under the normal process of private developments taking place under the applicable zoning and urban design controls for the area since accessibility, though limited, is now available. However, in order to achieve overall coordinated development of the area which is in hamony with the long-range objectives of developing a wholesome, convenient, and attractive living envixonment, the proposed action would be required.

Page 16. The proposed sewer improvement requirements were determined and provided by the Sewers Division of the City Department of Public Works. Their estimates of future demand were based upon an average population density of 185 persons/acre in the project area plus carrying capacity for the tributary drainage basin.

Page 20. Project Cost. The $\$ 4.2$ million for row cost plus the $\$ 1.32$ million for street improvements giving a total of $\$ 5.52$ million shown on page 118 is consistent with the $\$ 5.52$ million shown on page 121 for the cost of the 70-foot ROW alternative. The $\$ 7.2$ million figure reflects the additional costs of storm drains and sewer lines which would be the same for all street alternatives.

The $\$ 4.2$ million figure include land acquisition, buildings, damages, and relocation costs.

Pages 21-22. Projected Traffic Demand and the Need for Improvements. As stated on page 21, "traffic. projections were estimated for the year 1995." The input data, such as population and employment forecasts, were also projections for the year 1995 as determined by the State Department of Planning and Economic Development and adopted for use on all transportation planning programs on Oahu by OTPP.

The manual adjustments conducted on the basic preliminary data furnished by orpp are documented in a report entitled, "Traffic Volume Frojections and Analysis for Kuhio Avenue Widening, July 1975," prepared by William Hee and Associates. This report is listed in the Bibliography and is available for review at the City Department of Public Works.

The projected 91,000-99,000 auto trips for the year 1995 is the estimate of total daily traffic in both direction in the Ewa/Koko Head direction (total for both traffic is Ewa direction and traffic in the Koko Head direction).

Based on available existing traffic counts taken in Waikiki, the total daily traffic is generally higher on weekends than on weekdays. But the peaks on the weekends are generally spread out during a longer peak. period such that the actual peak hour traffic volume on a weekend is about the same as the peak hour traffic volume on a weekday which has a shorter peak period. On weekends the events or activities that create the higher traffic volumes occur over a much longer time period than on a weekday.

Pages 23-24. a. As stated in Chapter II, Section C, Subsection 2, Design provisions, the proposed action will be designed to "... improve general traffic circulation within the project area and to some extent within the remainder of Waikiki ..." Improvements to the overall efficiency of vehicular traffic for areas within and outside of Waikiki are related to the total street and highway network serving the island. Improvements to the existing network can only be made on a project by project basis as deficiencies are identified, priorities established, and funding obtained. The proposed action is one of many projects that is needed to upgrade the existing street and highway network.
b. By providing additional capacity.

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c. The measure of congestion or non-congestion as reflected is the volume to capacity (V/C) ratio for the proposed action in 1995 as shown in Table 2, Pg. 118 of the EIS for the entire screenline which includes Ala Wai Boulevard, Kalakaua Avenue and Kuhio Avenue.
d. There are limits to the extent and practicability of providing sufficient materials to the average reader of an EIS. The EIS is a public informational document; however, it should not be expected to serve as an educational document. The information you are requesting cannot be quantified because the origins and destinations of auto trips are unknown, and other variable factors.

Page 25. Design Provisions. The City has identified Kuhio Avenue as a potential bike route through Waikiki. The bicycle facilities proposed on Kuhio Avenue is in terms of a "shared roadway" which is defined by the American Association of State Highway and Transportation Officials in their "Guide for Bicycle Routes," as, "A roadway which is officially designated and marked as a bicycle route but which is open to motor vehicular travel and upon which no bicycle lane (or portion of a roadway which has been designated for preferential or exclusive use by bicycles) is designated."

This same document recommends that "a street should be designated as a bicycle route for operation as a shared roadway only in those cases where the width of outer lane is greater than 10 feet where volumes are light, or greater than 12 feet where volumes are heavier," based on design width and clearances required of a bicycle. Therefore, the proposed 13 feet outside Ianes as proposed should be adequate to provide a bike route on Kuhio Avenue through the project area.

The alternative which would restrict Kuhio Avenue to only City Bus, Tour Bus, bicycle and pedestrian two-way traffic is not an implementable one. There are many existing buildings and properties which front on Kuhio Avenue with auto access only from Kuhio Avenue. The restriction of automobiles on Kuhio Avenue would have a serious impact on the residents living in these buildings by denying them auto access resulting in serious legal implications.
Page 31. Background of the Project - Historic Perspective. Route continuity will improve traffic circulation in Waikiki by permitting trips to be made in the most

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direct and efficient manner. For example, a person living on Kuhio Avenue near Kapahulu Avenue must take Ala Wai Boulevard in the ewa direction and then get back on Kuhio Avenue to reach any place ewa of Kaiulani Avenue.

Traffic projections for the east-west movement through various screenlines indicate additional capacity is required in order to achieve a reasonable level of service.

Page 51. Schools. The State Department of Education do not have projected school enrollment for the Jefferson Elementary and Orthopedic School broken down by types of students attending this school (regular students or special students). Only information available is total school enrollment projections.

Page 66. The Relationship of the Proposed Action to Land Use plans, Policies and Controls. The relationship of the proposed action to the Waikiki Special Design District (WSDD) ordinance relative to population growth and demand in Waikiki has been considered and incorporated in the EIS. Since the WSDD ordinance was adopted during the final preparation stages of the EIS, its discussion was limited in the document. Additional discussions will be incorporated in the revised EIS.

In the WSDD ordinance, Section $V$, Design Control System, Article B.2.a, Setback Requirements, the following is stated "...; and measured from the Development plan right-of-way of Kuhio Avenue shall be provided." This document recognizes the widening of Kuhio Avenue to a 70-foot ROW.

Exhibit B, Circulation Plan, of the WSDD ordinance. shows Kalakaua Avenue as an existing street with no reference, either implied or expressed, as to possible conversion to a pedestrian mall. The pedestrian mall concept or ideas has been studied and discussed but has never been officially adopted. Therefore, Kalakaua Avenue is officially considered as a street for vehicular traffic and assumed as such in the traffic analysis conducted for this action. Therefore, the traffic requirements and design provisions section of the EIS are not incorrect as implied, but correct.
page 68. Noise. The noise level of 65 to 70 dBA is predicted on Kuhio Avenue at the building set-back line for a traffic volume of $30,000 \mathrm{ADT}$ in 1995. The particular noise level
predicted at the Jefferson Elementary and Orthopedic School of 66 dBA and 68 dBA was for 1980 and 1995 , respectively. The difference of 2 dBA resulted from using 20,000 ADT for 1980 and 30,000 ADT for 1995 as the traffic volumes.

Pages $72-77$. Air Quality. The methodology used in calculating the carbon monoxide (CO) concentration followed the EPA guidelines and the result was found to meet both State and Federal air quality standards for projected traffic volumes which reflect future growth of the axea. The improvement of air quality in the project area by the proposed street widening is discussed in the context of improved traffic circulation with and without the proposed improvement.

Using the 1995 traffic projection for the project area, the CO concentrations on Ala Wai Boulevard and Kalakaua Avenue will be in excess of $20 \mathrm{mg} / \mathrm{m}^{3}$ and approximately $20 \mathrm{mg} / \mathrm{m}^{3}$, respectively. With the proposed improvements on Kuhio Avenue, CO concentrations on Ala Wai and Kalakaua will be reduced by approximately 50 percent and 25 percent, raspectively. The net effect on kuhio Avenue is that $C O$ concentration would increase at or near the State Standards.

The further away from the source of emission, the less the concentration due to dispersion.
$\frac{\text { Pages } 84-85 \text {. Relocation. A structure may have one or more }}{\text { dwelling units. }}$
Pages 90-92. Accessibility. The quoted statement from the EIS simply states that existing streets could physically accomodate future traffic volumes with substantial decrease in the level of service down to an intolerable congestion level. This is one of the primary reasons for widening Kuhio Avenue - to provide additional capacity such that projected traffic volumes could be accommodated at a more desirable level of service.

A widening of an existing secondary street of some $1 / 2$ mile in length would not have any impact on the overall traffic condition of the region (total urban Honolulu area).

Accessibility or traffic movement would be improved in Waikiki and more specifically in the project area due to increased capacity provided by the proposed action.

Any alleviation of traffic congestion in any part of a trip will shorten the total trip time which in return would result in less vehicle, operating cost.

Based on existing traffic counts taken by the city Department of Transportation Services in early 1974, there were approximately 240 to 450 vehicles per hour (vph) during the A.M. peak hour and some 400 to 630 vph during the P.M. peak hour on Kuhio Avenue between Kapahulu and Kuhio Avenue, all in the Koko Head direction with the higher volumes occurring near Kaiulani Avenue and the lower volumes near Kapahulu Avenue. Actually, there is no real peak in the A.M. period. All the traffic builds up to the P.M. peak hour. The A.M. peak hour values given are the highest hourly volume obtained during the A.M. period.

The widening project is based on accommodating traffic flows generated by new developments projected for the area. Requirements for parking in the new developments are specified in the WSDD ordinance.

As stated on page 23 of the EIS, the existing peak hour, peak direction traffic volume is some 2500 to 2700 vph through the project area. By 1995, the traffic volume is estimated to increase to 4000 to 4300 vph in the peak hour, peak direction through the project area. Near Kapahulu Avenue, the design street capacity with an improved Kuhio Avenue, in the peak direction is approxi-mately 3830 vph . Therefore, the relationship of the proposed widening project to the existing traffic volumes, as reflected by the volume to capacity ratio $(\mathrm{V} / \mathrm{C})$ is approximately 0.65 . The relationship of the proposed action to the projected 1995 traffic volume is approximately 1.04.

The proposed widening of Kuhio Avenue will allow two-way traffic on this facility and thereby improve circulation by allowing those trips which originate from areas makai of Kuhio Avenue and are destined for areas ewa of Kaiulani Avenue in Waikiki, to use Kuhio Avenue. It would also provide an opportunity for those trips which originate in areas located along makai-bound streets, mauka of Kuhio Avenue, and destined for areas within Waikiki, ewa of Kaiulani Avenue, a more direct route to their destination. With the existing traffic pattern in the area, these motorists would have to turn left on Kuhio Avenue (heading in the wrong direction), then turn left on the next street in a mauka-bound flow of

Dr. Doak C. Cox - 9- July 6, 1976
traffic, then left again on Ala Wai Boulevard, and then left again on a makai-bound street that will take them to their destination.

The traffic projections are based on forecasts of estimated growth in the area, both in residential and hotel units. One of the models used in the travel forecasting procedure for Oahu involved the determination of auto ownership by census tract based on the number of household in each of three income ranges forecasted by the Land-Use Model.

Bus service is planned to be extended into the project area on Kuhio Avenue which will make the average access distance for the project area shorter than the route that currently exists on Kalakaua Avenue.

As discussed earlier, the proposed bike route through the project area on Kuhio Avenue will be in terms of a "shared roadway," and that the 13-foot outside lane width should be adequate to accommodate both vehicular and bicycle traffic. Some interference with bicyclists could occur at bus stops, where the bus nust pull over to the curb to load and unload passengers.

Ala Wai Boulevard, Kalakaua Avenue and Kapahulu Avenue would service as major access for bicyclists.
Pages $92-93$. Development Impact. There should be little proposed to alleviate existing local drainage problems which is not known to have caused any major economic losses due to flooding. Sewer improvements, present or future, would have an impact if inadequate and city. imposes a moratorium on new construction. Developments have continued, however, since sewer service can be provided as needed, either by public or private funds as demand arises. There should be no impact on future development because all the major sewerage facilities have been improved previously.

We do not know of any development project held in abeyance pending completion of the road widening.
The need for the widening is based on future developments in the area. If normal public services required by future developments were not to be provided, then the land use policies should be changed.

Dr. Doak C. Cox - $10 \sim$ July 6, 1976

It is always difficult, if not impossible, to assess the change in land value due to public improvements other than to assume a pro-rata increase in value of benefited properties which in the aggregate would equal the cost of the improvements. However, the total property value may decrease due to the loss of land for the street widening. Certain large parcels may be enhanced to a greater degree while some of the smaller properties may be negatively affected due to reduction in land area which may be too small for economical development.

Pages 97-105. Construction Impacts. Construction impacts on water quality and control regulations are covered in Chapter V, Section C.

Pages $97-105$. Vehicular and pedestrian Traffic Disruption. struction but every means will be used to minimize these disruptions.

Pages $115-121$. Design Alternatives. The streets affected by sewer and drainage improvements are described elsewhere in Chapter II B of the EIS.

The capacity of $3,830 \mathrm{vph}$ for the 70 -foot RON as shown on page 118 of the EIS matches the capacity shown on Table 2 of the Final Traffic Volume Projection and Analysis for Kuhio Avenue Widening by William Hee \& Associates.

When the ewa. segment of Kuhio Avenue is widened in the future, it is planned to provide a left-turn lane to provide a constant cross-section along the entire length of Kuhio Avenue.

The determination of the design capacity of the proposed street widening was developed utilizing intersection capacity analysis in accordance with the 1965 Highway Capacity Manual with assumptions of bus stops and traffic signals and cycle length included.

If left turns wexe prohibited on Kuhio Avenue, then it would not meet the objective of serving local traffic movements and end up serving through traffic only.

Pages 119-120. Additional bus stops can be provided based on demonstrated needs. Ala Wai Boulevard, Kapahulu Avenue and portions of Kalakaua Avenue are or will be designated

Dr. Doak C. Cox

- 11 -
as bike routes. Other maka-makai streets will also be selected. Detailed infomation on bike routes can be obtained directly from the City's Department of Transportation Services.

Page 122. Conformance with Current Public Policies. The 60-foot and 54 -foot rows are not in accordance with applicable transportation planning and design criteria.

Page 123. Findings and Conclusion. The 70-foot Row is not represented as being justified only by its safer and more efficient left turn movements but all factors evaluated and discussed in the EIS.

Sumary. The travel forecasts made are based on future projected development in the area as well as other areas of the city. The comment infers that the basis for the videning was to improve existing conditions without taking into consideration future gromth in the area. Transportation plaming is always done by developing future projected travel demands based on population forecast for the area. These projected demands were adequately discussed in the EIS. Additional information is available in the references cited in the Bibliography.

Very truly yours,

cc: OEOC
Div. of Engineering

William Hee \& Associates
DRJM


STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL OFFICE OF THE GOVERNOR

550 HALEKAUWHLAST.
ROM 301
HONOLULU. HAWAIi 96813


June 1, 1976

Kagu Hayashida, Director Department of Public Works City and County of Honolulu

Dear Mr. Hayashida,
SUBJECT: Environmental Impact statement for proposed Kuhio Avenue Widening Project, (Kaiulani Avenue to Kapahulu Avenue), Waikiki, Oahu, Hawaii

As of this date, this office has received thirteen comments on the above subject. An attached sheet lists the responding agencies.

In our review of the EIS, we have found several areas in which the statement should expand discussion. We offer the following comments:

1. On page 7, the EIS states, "The proposed improvements to Kuhio Avenue axe also needed because the street does not conform with ... environmental standards..." What is meant by "environmental standards?"
2. The document mentions that construction of three drainage ways and sewer lines are needed. A discussion of traffic circulation during the construction of these improvements running mauka and makai of Kuhio Avenue is recommended.
3. It is noted in the EIS that some of the utilities are above ground. If the street is to be widened, will the utilities all be underground for visual aesthetics?
4. Under air quality on p. 72, the discussion should be expanded. Traffic projections and existing traffic data are not easily correlated with the emission data.

Are these figures for peak hours and peak directions? How would Mona wind conditions affect these values? As a result, we recommend that discussion include traffic data and projections, peak hours and directions and wind directions in relation to air emissions.

Page 2
5. The EIS indicates the number of units to be displaced. However, will any buildings or structures be destroyed? How many builaings will be affected by this widening?
6. During construction, trafeic will be rexouted. If construction on the drainage and sewer lines along the mauka-makai streets are also done during the widening of the street, traffic circulation would be worse. This should be noted in the EIS.
7. Is this proposed action located within a tsunami zone? If so, the document should discuss this topic.
8. On page126, under Development Impact, the EIS states, "...the overall impact of the proposed action on future growth and development in the area should be minor." As stated previously in the statement (p. 35), Waikiki is zoned for 66,000 persons. However, since less than half of this figure exists, the potential for growth cannot be ignored. Implementation of this project may add indirectly to growth. Eor instance, if a building is to be demolished for some reason, another larger and higher building may be substituted. This possibility may exist since greater accessibility increases the feasibility of the expansion.
9. The section regarding short-term uses vs. long-term productivity should be expanded to include the secondary impacts such as increased urbanization, increased pollution, and transportation.
10. We note that construction of this proposed action will be located near two schools. Perhaps it might be safer and less noisy if construction would ocour during summer months.
11. It should be realized that we are still in an energy crises. Since the proposed action may tend to promote the use of the automobile, we recommend a discussion in terms of how this project will conserve energy.

For brevity and fairness, this office did not attempt to summarize other reviewers. Instead, the EIS Regulations require that your agency make a response that includes, "point by point discussion of the validity, significance, and xalevance of comments... and discuss..how each comment was evaluated and considered in planning the proposed action."

The EIS Regulations Eurther state that responses to comments should be made fourteen days after the review process. However, the Governor or his authorized representative has the discretion to consider late responses. We will consider responses to comments

## Page 3

after the fourteen day response period for this proposed action due to the extensive comments.

We trust that these comments have been helpful to you in preparing the revised EIS. We thank you for the opportunity to review this statement. We look forward to the revised EIS.


Attachments

## FEDERAL

U.S. Fish and Wildife
*Department of the Army
*U.S. Coast Guard

April 27, 1976
May 7, 1976
May 17, 1976

## STATE

Department of Agriculture Department of Defense *Department of Accounting and General Services May 10, 1976
*Department of Transportation
May 13. 1976

CITY AND COUNTY OF HONOLULU
*Department of General Planning May 4, 1.976
*Department of Public Works
*Board of Water Supply
*Department of housing and Community Development

May 5, 1976
May 6, 1976
May 12, 1976
*Department of Transportation Services

May 25, 1976

## UNIVERSITY OF HAGAII

Water Resources Research Center
May 7, 1976

## PRIVATE

Waikiki Residents Association
May 5, 1976

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*copies have been sent directly to your
    agency. please note we are sending all comments received.
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## CITY AND COUNTY OF HONOLULU



July 2, 1976

Office of Environmental Quality Control
State of Hawaii
550 Halekauwila Street
Honolulu, Hawaii 96813
Gentlemen:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project

We are responding to coments in your letter dated June 1, 1976, regarding the proposed project.
a. The phrase "environmental standards" in the sentence, "... the street does not conform with current design and environmental standards, ..." was used in the context of not being a fully improved urban street as cited in the remainder of the paragraph which describes the existing conditions of Kuhio Avenue with its serious drainage problem, lack of curbs and gutters and sidewalks in certain areas, and the poor pavement conditions.
b. Relative to the construction of the three drain lines and the accompanying modification of existing sewer lines, reference is made to Chapter $V$, Section G, Subsection 5, Physical Impact on Adjacent Structures, which states the following: "To maintain access to local and emergency traffic on the affected roadways, the location and, therefore, the construction of the underground utilities which are part of the proposed project will occur, generally, on one side of the roadway." Paoakalani Avenue has an existing 60-foot right-of-way (ROW) and along Liliuokalani Avenue additional Row will be acquired on the Koko Head side of the roadway between Kuhio Avenue and Cleghorn Street. This
will result in a street ROW of 60 feet for the entire length from Kuhio Avenue to Ala Wai Boulevard. The widths of these ROW, along with the proposed location of the drain lines will result in maintenance of at least one lane for through traffic on each of these facilities.

Unfortunately, Kaiulani Avenue has only a 30-foot ROW with a li-foot roadway width. This width is too narrow to maintain a through lane during the construction of the proposed drain line. Therefore, portions of Kaiulani Avenue will be closed during actual construction work and through traffic on those portions of the roadway would necessarily be rerouted to other streets. Depending upon the portion of the roadway being worked on, traffic could be rerouted on Tusitala and cleghorn Streets. Also depending upon the destination of the trips, they may need to be rerouted into Walina street, the next street ewa of Kaiulani for traffic in the makai direction fron Ala Wai Boulevard.

To reduce impact on traffic circulation, actual construction will be accomplished during off-peak traffic hours, generally between 8:30 a.m. and 3:30 p.m. Therefore, minimal traffic demand on the affected roadways should exist during this time period. During all other periods when construction is not in progress, appropriate decking of open trenches will be provided to maintain existing traffic flow.

It is currently planned that all off-site storm drain improvements on the affected mauka-makai roadways and the relief trunk sewer in Kuhio Avenue will be completed or nearly completed before the construction of street improvements on Kuhio Avenue itself. It is also planned that each offsite drain line and the relief trunk sewer in Kuhio Avenue will be contracted as separate construction packages. These packages will probably but not necessarily be constructed at the same time, therefore, the required street closures may not occur at the same time. As stated earlier, a detailed traffic rerouting plan will be developed prior to implementation of the proposed action and will be conducted in close coordination with the City Department of Transportation Services.

Office of Environmental Quality Control
July 2, 1976
Pac̣e 3
c. All utility lines will bé placed underground in accordance with the Waikiki Special Design District unless specifically exempted by the City Council.
d. The projected 1995 traffic data was used in the development of the air emission data for the 1995 study year. As stated in section C of Chapter II, as much as 4,300 auto trips will be made during the peak hour and in the peak direction through the project area. In Waikiki, the maximum peak hour traffic occurs in the P.M. peak period with the peak direction towards Koko Head. Therefore, the estimated 4,300 auto trips would utilize either Kuhio Avenue or Kalakaua Avenue as described in Chapter II, Section C, Subsection 1. In calculating vehicular emissions, it was assumed that the projected peak hour trips through the project area would be distributed over both facilities, Kalakaua and Kuhio Avenues, based on the number of lanes available. Since there will be a total of 6 lanes in the Koko Head direction, with the implementation of the proposed action, each lane was assumed to carry approximately 700 autos. Therefore, Kuhio Avenue was estimated to have 1,400 vehicles per hour in the peak direction during the peak hour.

It was also assumed that some two-thirds of the traffic
in the peak direction or approximately 450-500 vehicles per hour per lane would travel in the opposing or ewa direction on Kuhio Avenue. This is based on existing traffic flow in Waikiki where approximately $60 \%$ of total peak hour traffic flow occurs in the peak direction and the remaining $40 \%$ traveling in the opposing direction.

In the estimation of vehicular emissions, the receptor was assumed to be located at the established building set-back of 10 feet from the proposed street right-of-way, on the side of the roadway with the higher peak hour directional flow and with a makai wind direction. The methodology used in estimating CO levels is based on the EPA document entitied, "Guidelines for Air Quality Maintenance Planning and Analysis, Volume 9: Evaluating Indirect Sources," which is referenced in the EIS.

This methodology utilizes the very infrequent calm wind condition of $1 \mathrm{~m} / \mathrm{sec}$ or 2.2 mph . Kona winds
are estimated to have a mean wind velocity of 5 mph which is approximately twice that of the assumed calm condition used. Therefore this estimation procedure uses assumed wind conditions which would produce the highest concentration at nearby receptors and which occurs very infrequently and over a short period of time. This method produces highly conservative values, i.e., higher than probable actual levels, which is acknowledged in the EPA document itself.
e. As stated in Subsection 1, Section D, Chapter V, a total of 55 parcels of land will be affected by the proposed action of which 18 parcels have existing structures on them which will have dwelling units affected. As currently planned, 16 structures will be totally acquired: a 4-story and a 2-story concrete masonry building, 3-2-story wooden structures, and 11 - 1-story wooden structures. A total of 7 concrete structures will be partially affected whereby the buildings or portions thereof will be cut and refaced. The buildings affected includes $2-2$-story structures and $2-3-, 2-4-$ story structures and 1 high rise.
f. Construction of off-site drain lines in the maukamakai streets will probably proceed between 6 to 8 months before work on the roadway on Kuhio Avenue begins. In all probability, the off-site projects will be completed by that time. This response is discussed in "b."
9. Based on estimated inundation limits for a l00-year tsunami as delineated by the U.S. Army corps of Engineers and shown on the U.S. Geological Survey's "Map of Flood-Prone Areas," the proposed action itself is not located in any area subjected to tsunami inundation.
h. Chapter VII, Section D, Subsection 2, Development Impact, states that "... the overall' impact of the proposed action on future growth and development in the area should be minor." The statement is made based on the assumption that potential growth exists in the project area and that implementation of this action may add indirectly to growth due to greater accessibility.

Office of Environmental Quality Control
July 2, 1976
Page 5

The discussion contained in the above referenced section of the EIS states in essence, that future growth and development in the area would primarily be the result of existing land use policies and market forces of supply and demand since the area is already accessible. If urban densities were to increase as the result of the proposed action, we would concur with your comment. However, in light of lower densities which wexe imposed by WSDD recently, this is unlikely. Therefore, the proposed widening and resulting improved accessibility should have little or no direct impact on the future growth and development of the area.

The above statement is also based on the premise that the project area is currently accessible although the streets are narrow and only partially improved. The fact remains that since the area is accessible, the mere widening of Kuhio Avenue although it would somewhat improve accessibility, would not have any measurable effect on future growth. The improvement to a $1 / 2$-mile segment of an existing roadway in the context of total street and highway network in urban Honolulu of several hundred miles would not significantly reduce travel time for very many trips being made or projected to be made. As stated in the EIS, the only impact the widening may have is the acceleration of certain developments in the area due to improved accessibility and environmental quality of the roadway and this can only be speculative since there are many other factors that would have greater influence on development of the area.
i. Your comment suggests expanding Chapter VIII to include secondary impacts such as increased urbanization, increased pollution and transportation. As was previously discussed under " $h$," increased urbanization cannot be directly attributable to a mere widening of an existing street. Any impact caused by the proposed action would be both small and non-measurable and therefore, the development impact was assumed to be minor as stated in Chapter V, Section D, Subsection 3.

In Chapter V, Section B, Air Quality, the impact on air quality is fully discussed including the carbon monoxide concentration which is approximately

CfEice of Environmental Quality Control
July 2, 1976
page 6
erual to the State Ambient Air Quality Standards and significantly below the Federal Seandard. Although pollution concentration will increase in the imnediate impact area, this increase is assumed not to cause any aciverse secondary effects.

Transportation or inproved transportation facilities could have various secondary impacts, both beneficial and adverse. Fovever, secondary impacts are more pronounced and measurable with major new transpoztation Eacilities which changes traffic patterns in a region, fgatn, it would be difficujt, if not inpossible, to accurately define and discuss any secondary impacts from widening of an existing urban street of sone $1 / 2$ - mile in length.
j. Constraction at or near the two school sites will be scheduled curing the summer months if it is possible. (Depends on City schedule of project inplementation).
k. The widening of an existing urban stweet of some 1/2 - mile in length which serves an existing urbanized azee should have little or no effect on auto usage. In fact the widening could conserve energy by pestitting transit bus route on Ruhio Avenne to better serve the project area and by prowiding acded street capacity with twomay traffic which mould pemit more efficient auto operations.

> Very truly yours,


Director end Chief Engineer
cc: Div. of Engineering
William Hee \& Associates
DMJM


Kazu Hayashida, Director
Department of Public Works
City and County of Honolulu
SUBJECT: Environmental Impact Statement for the Proposal Kuhio Avenue Widening Project

Dear Mr. Hayashida,
We have received two additional letters on the subject EIS. Please append our letter of June 1,1976 to include these comments.

Thank you for your attention on this matter.



#  <br> STATE OF HAWAII <br> OFFICE OF ENVIRONMENTAL QUALITY CONTROL OFFICE OF THE GOVERNOR <br> 550 halekauwila st. <br> ROOM 301 <br> HONOLULU, HAW: 96813 

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June 10, 1976

Kazu Hayashida, Director
Department of Public Works
City and County of Honolulu
Dear Mr. Hayashida,
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project

We are transmitting herewith a letter from the outdoor Circle on the subject EIS. Please append our letter of June 1,1976 to include the comments.

Thank you for your attention on this matter.


Richard E. Maryland
Director

Attachment


June 14, 1976

Kazu Hayashida, Director
Department of Public Works
City and County of Honolulu
Dear Mr. Hayashida,
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project

We have received a late comment on the subject EIS from Mr. Donald B. Gabe, President of the kuhio plaza Owners Association. Please append this comment to our letter of June $1,1976$.

Thank you for your cooperation on this matter.


Attachment

# UNIVERSITY OF HAWAII 

Water Resources Research Center

Offec of the Dirctor
May 7, 1976

Environmental Quality Commission
550 Hal ekauwila St., Rm. 301
Honolulu, Hawaii 96813
Dear Sirs:
The UH Water Resources Research Center staff have reviewed the EIS entitled, "Proposed Kuhio Avenue Widening Project," and have no pertinent comments to add, thus we are returning the EIS document.

Sincerely,


Frank L. Peterson
Acting Asst. Director WRRC

FLP: jmn

Enclosure


Dr. Richard E. Marland, Director Office of Environmental Quality Control State of Hawaii
550 Halekauwila street
Honolulu, Hawaii 96813
Dear Dr. Maryland:
Kuhio Avenue Widening Project
Draft Environmental Impact Statement
Statements regarding the project's relationship to the City and County's land use plan and policies are adequately stated. We have no other comments to offer.

Thank you for the opportunity to examine the abovecaptioned.

Sincerely,


ROBERT R. WAY
Chief Planning officer
pw: fit
cc: V Department of Public Works

EIV 76-215

## May 5, 1976

## MEMORANDUM

TO: ROBERT R. WAY, CHIEF PLANNING OFFICER DEPARTMENT OF GENERA I PLANNING

FROM: KAZU HAYASHIDA, DIRECTOR AND CHIEF ENGINEER DEPARTMENT OF PUBLIC WORKS

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED KUUTO AVENUE WIDENING PROJECT

Comments in your letter DGP4/76-953(JB), dated May 4, 1976, relating to the City's land use plan and policies are acknowledged.

cC: OEQC
Div. of Engineering

William Fee \& Associates
DASH


| Nmio TO: | OfFtice of Environmental Quality Control |
| :---: | :---: |
| Snote: | Villam Slackiteld, Direcso: |
| SuSTECr | Whifonmental Impant stetenent for Propoued Kunio Avenue Mideniag zroject |

Fise Departnent of Houing and Commnity Developnent bas reviewed cie ETS EOZ hae "Proposed Kuhto SVeme Hidening Project."

Wo would lite to comantit on the selocation aupect of the proposed
 wochon unscusising relocation in the mit fo very buief.

The Felocation conponent of tio subject projext lo zully covened in "hes Relocacton hapact end grogram plan," prasered fur the beparmant of Gublic voring by Whilian tee and Aswoctutes in Aptil 1976. A reference of this study shouhd be made in the EJt.

thenk you for the oppoctulity wo review this matter.

## HELIMA BEACEIELD Directot

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Mnc. Ne. K. imyachidm, Dizecto: 
    Depeztuane of Puolic Norks
    City sum County of Honolulu
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May 14, 1976

## MEMORANDUM



The relocation aspect of the proposed project as discussed in the EIS represents a brief summary of the relocation study which was prepared by our consultants. Survey and Marketing Services, Inc. Reference to this study is made on page 137, item No. 27, the preliminary report dated February 1976.

The completed report entitled, "Kuhio Avenue Widening Project, Relocation Impact And Program Plan," dated April 1976, was finalized after consultation was held with a member of your staff on March 8, 1976. The preliminary report does not differ materially with the final report.

The completed report has been transmitted to the Department of Social Services, State of Hawaii, and represents the public Works Department's program for relocating families and individuals that will be displaced by the proposed project. As stated in your memorandum, the program will be administered by your department with assistance provided by our Land Division.


Director and Chief Engineer

## CC: Div. of Engineering <br> William Me \& Associates <br> DIEM <br> OEQC

## CITY AND COUNTY OF HONOLEEE, 量

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To ENVCl


June 7, 1976

## MEMORANDUM

TO : KAZU HAYASHIDA, DIRECTOR \& CHIEF ENGINEER DEPARTMENT OF PUBLIC WORKS

FROM : GEORGE S. MORIGUCHI, DIRECTOR DEPARTMENT OF LAND UTILIZATION

SUBJECT: ELS FOR KUHIO AVENUE WIDENING

We submit the following comments on the above for your consideration:

1. Reference: Fig. 8, "Existing Zoning" and pp. 66-67, "Relation-
ship to Land Use plans.

Comment: The information provided on existing zoning is now outdated due to the adoption of Ordinance No. 4573, establishing the Waikiki Special Design District. The effective date of the ordinance was April 1, 1976. Both sides of Kuhio Avenue are now zoned "Apartment Precinct", with a "Public Precinct" at the markaDiamond Head corner, where Thomas Jefferson School is located. Allowable densities in the apartment precinct are considerably lower than in the previous H-2 district. Maximum building heights are 240 feet toward Eva and 220 feet on the Diamond Head side of Liliuokalani Avenue. However, buildings under construction or pending building permits may exceed these restrictions.
2. Reference: pp. 17-19 and Letter to Outdoor Circle, Landscaping plans, placement of utilities.

Comment: All utility lines must be placed underground, in accordance with the Waikiki Special Design District ordinance. Landscaping plans and treatment of pedestrian and bicycle rights-of-way should be coordinated with our Design Division. We are also concerned about the refacing of buildings which will be partially razed. It would be helpful to reviewers if buildings planned for demolition or alteration were indicated so that the impact upon WSDD requirements

Kazu Hayashida Page 2
for a 30 foot setback from the Kuhio Avenue right-of-way could be evaluated. This would give a much clearer picture of the finished product and the ultimate character of this central spine


GSM: Is

## CITY AND COUNTY OF HONOLULU

650 SOUTH KING STRFEET
HONOLULU. HAWAIt 968:3


KAZU HAYASHIOA
OIRECTOR ANO CHIEF ENGINEER

ENV 76-259

June 15, 1976

## MEMORANDUM

TO: MR. GEORGE S. MORIGUCHI, DIRECTOR
DEPARTMENT OF LAND UTILIZATION
FROM: KAZU HAYASHIDA, DIRECTOR AND CHIEF ENGINEER DEPARTMENT OF PUBLIC WORKS

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED KUHIO AVENUE WIDENING PROJECT

We are responding to comments in your memorandum, dated June 7, 1976, regarding the subject EIS.

Ordinance No. 4573, establishing the Waikiki Special Design District (WSDD) was recognized in several sections of the EIS (pages 40, 41 and 67). Because of the coincidence of the effective date of the ordinance and the EIS, some changes could not be made in the EIS to reflect WSDD rules and regulations. The zoning shown on Figure 8 , page 39 , will be replaced to reflect the WSDD Use Precincts as shown in Exhibit A, Ordinance No. 4573.

Although allowable densities are lower in the apartment precinct it will not affect improvements (buildings) which are expected to remain, and those under construction or having building permits as you stated. Vacant lots or buildings which are "underzoned" will be affected by lower densities and these criteria are being evaluated.

All utility lines will be placed underground in accordance with WSDD unless specifically exempted by the City Council. Roadway width and sidewalks conform to Section 4-405 and Standard street Details of the Subdivision Rules and Regulations, adopted on June 20, 1973. Bicycle lanes have been tentatively provided on the outside traffic lanes in the roadway. Landscaping plans and treatment of pedestrian and bicycle lanes will be coordinated with your Design Division.

Mr. George S. Moriguchi

A list of buildings that will be refaced will be provided in the EIS as you suggested.

$$
\begin{aligned}
& \text { (huthue Olvizbur } \\
& \text { fa kaZu hayashida } \\
& \text { Director and Chief Engineer }
\end{aligned}
$$

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cC: OEQC
    Div. of Engineering
    William Hee & Associates
    DMJM
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## CITY AND COUNTY OF HONOLULU

650 SOUTH King street
honolulu. hamal peris

## FRANKF.FASI

 Mayon

June 2, 1976

Office of Environmental
Quality Control
550 Halekauwila Street
Room 301
Honolulu, Hawaii 96813

Gentlemen:

## SUBJECT: COMMENT ON ELS, PROPOSED KUHIO AVENUE WIDENING PROJECT

We have reviewed the report and have the following comments to submit:

1. The partial closing of Kaiulani Avenue is briefly discussed but no mention is made of its effect on Princess Kaiulani Square. Will the mini park be expanded as a result of eliminating the redundant diagonal?
2. Consideration of incorporating remnants of land from the right-of-way acquisition into the pedestrian circulation system/ landscaping plan should be addressed in the EIS.

Sincerely,


June 15, 1976
memorandum
TO: MR. YOUNG SUR KO, DIRECTOR DEPARTMENT OF PARKS AND RECREATION

FROM: FRAU HAYASEIDA, DIRECTOR AND CHIEF ENGINEER
SUBJECT: ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED LUCIO AVENUE WIDENING PROJECT

We are responding to comments made in your letter of June 2, 1976, regarding the EIS of the proposed street widening project.

The partial closure of Kainlani Avenue between Kuhio Avenue and prince Edward Street may possibly result in the enlargement of Ainahau Triangle Park on Princess Kaiulani Square. This action is dependent upon providing egress and ingress to the affected properties and would require City Council's action. In our discussion with your staff, the matter of replanting major trees Which must be removed for the street widening project in Ainahau Triangle Park was considered. The disposition of the park is discussed in our letter to Dr. Samuel D. Allison, dated January 16, 1976, and is included in Appendix A of the EIS.

The matter of incorporating remnant pieces of land for landscaping which lie outside of the 70 -foot right-of-way is discussed in our Letter to the Outdoor Circle dated January 13, 1976. According to this letter which is included in Appendix A of the EIS, the possibility of retaining remnant pieces of land and utilizing them for occasional pockets of green nay be adopted. In our discussion with your staff, it was concluded that the matter of implementing pedestrian circulation system or landscaping plans on remnant pieces should be done in an adjunct project. This proposed project must be coordinated with the Department of land Utilization since it will be within the Waikiki Special Design District.


KAZU HAYRSHIDA

## Director and Chief Engineer

CC: OEQC
Div. of Engineering

William Heed \& Assoc. DMJM


Dr. Michard Marland
Govironmental Qualicy Comainion
559 Holekourila Sc., Ga. 301
Honolulu, Hevaii 9631?
bear Dr. Aevend:
Subject: Roviow of Envisonmontri Impact Stacement for the Propo ed Ruhio dvente widening poojec:

Wh he revinved the wbject Envinonmontal Impact Enacement and have no adticiond coments to ofers.


Bryectox
ac: Dept. of Publif Worke
MT:wt

Dr. Richard E. Marland, Director
Office of Environmental Quality Control
State of Hawaii
550 Halakauwila Street, Room 301
Honolulu, Hawaii 96813
Dear Dr. Marland:
SUBJECT: Environmental Impact Statement for Proposed Kuhio Avenue Widening Project (Kaiulani Avenue to Kapahulu Avenue)

We have reviewed the environmental impact statement for the proposed Kuhio Avenue widening project and do not have any objections or comments.

Please call Mr. Lawrence hang at 548-5221 if further information is needed.

> Very truly yours,


EDWARD Y. HIRATA
Manager and Chief Engineer
cc: Mr. Kazu Hayashida, Director
Dept. of Public Works
City and County of Honolulu
650 South King Street Honolulu, Hawaii 96813

##  <br>  <br> June 7, 1076 <br>  omjM kg)

Dr. Sehard E. Harlan, Director Office of Enyironaental Quality Control
 honolulu, tavali 96813

Dear Ex. Harland:
Subject: Environmental Impact Statement for the Proposed Kinin Avenue widening Project

Yo hove revised the subject EIE with regard to its assessment of the air quality infant of the proposed project, he also met t with a representative of the consulting firm which prepared the EIS and reviewed the assituprions and data input for tho sersealng model employed.

Based on hats review, we are satisfied that tho assumptions and input data ranging traffic, receptor location, ewtision factors, sateorology, etc, were sutfictenty conservative to provide acceptable worst case estimates of co levels along the Kilo Avenue bor 1005. Ono minor error, however, was that the estimates verso not wheat to existing or estimstan bacistotint levis. Lackarcund levels of co are generally quite $104\left(1-3 \mathrm{~m} / \mathrm{m}^{5}\right.$ ) and their inclusion mould

 standards. Since thess estimates are so close to the State standards but wall below Federal standards, and the EPA screening methodology is adattedly conservative, it is probably debatable Whether additional wore refined modeling would be justified.

The would suggest, however, that the short-tera impact of traffic disruption during tho $2-y$ gar construction ported by quantified, Using tho sate screening procedure and assuming that a majority of the traffic presently using kuhio Avenue between kilulani and Kayahulu Avenues will divert to kalakaua Avernus during tine P. A. pead-hours to avoid the construction on Kuhio Avenue, we find co levels well cove state standards. Wo believe an analysis along these lines should be included in that ErS to fully describe tho short-tern impact of the project.

Dr. Richard E. Marland June 7, 1976
Pags 2

Although the statement was made that higher averago operating speed would tend to lower auzemotive eaissions, in tia project arsa, no quantifisation w23 proyided. A comparison of presant and projocted axbient air quality with and bitthout tho proposed izprovemonts would make the analysis more moaningful and informative.

Thank you for forsurding a copy of the EIS and giving us the opportunity to roview it.

Yours eruly,

James H. Horrow, Dirsctor Enviromental Hoalth

Jinf:ct
cc: Mr. Kazu hayashida

## CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET MONOLULU. HAWAII 96813


KAZU HAYASHIDA
OIRECTOA ANO CHIEF ENGINEER
ENV 76-298

July 2, 1976

Mr. James W. Morrow, Director
Environmental Health
American Lung Association
245 North Kukui. Street
Honolulu, Hawaii 96817
Dear Mr. Morrow:
Subject: Environmental Impact Statement on the Proposed Kuhio Avenue Widening Project
We respond to your comments in your letter dated June 7, 1976, regarding the proposed project.
a. Your comment on the necessity of including background concentration to the predicted carbon monoxide (CO) concentration is acknowledged. We agree that the background concentrations are generally low and would only add between 1 to 3 milligram per cubic meter $\left(\mathrm{mg} / \mathrm{m}^{3}\right)$ and that the EPA screening methodology used is stated to give conservative values. EPA document 450/4-75-001 states that, "Since it is necessary that the screening procedure provides reasonable assurance that the NAAQS are protected, most of the assumptions are conservative ones." Accordingly, we believe that the co concentrations could meet the state Standards.
b. With respect to the short-term impact of traffic disruption during construction, we plan to maintain the same number of lanes open during construction as exists today, i.e., two lanes. However, it is conceivable that a certain portion of traffic would be diverted to Kalakaua. Currently there are some 600 vehicles per hour (vph) on Kuhio Avenue on the two-lane portion and assuming that $50 \%$ would be diverted to Kalakaua, this would add 300 vph to an estimated 2200 vph currently on Kalakaua.

This anounts to a $15 \%$ increase in traffic volume and a comparable increase in Co concentration. It is estimated that the l-hour co concentration would be around $15 \mathrm{mg} / \mathrm{m}^{3}$ with 2200 vph and it would increase to about $17 \mathrm{mg} / \mathrm{m}^{3}$ witi 2500 vph .
c. In tems of total traffic movement in the ewakokohead direction, the proposed action will aid in reducing co concentrations significantly on Ala Wai Boulevard and Kalaraua Avenue. Without the Kuhio Avenue improvements, the co concentration on Ala Wai Boulevard will be in excess of $20 \mathrm{mg} / \mathrm{m}^{3}$ and with the Kuhio Avenue improvement, it would reduce by approximately 503 .

On Kalakaua Avenue, the co concentration would also be approximately $20 \mathrm{mg} / \mathrm{m}^{3}$ if Kuhio Avenue were not widened. With the widening under the proposed action, the co concentration on Ralakaua would be reduced by about 25 . If the existing 2 lanes on Kuhio Avenue were widened sufficiently throughout the entire length to Kapahulu Avenue, then the levels of emission along Ralakaua Avenue would be the same as under the proposed action.

The net effect on Kuhio Avenue is that the $C O$ concentration would increase at or near the state Standaxds: however, Ala Vai Boulevard and Kalakaua Avenue would benefit through a suostantial reduction in the co concentration.


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cc: OEQC
Div. of Engineering
Willian Hee \& Associates
DMJM
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Dr. Richard Harland, Director.
OFfice of Environmental Quality Control 550 Halekarmila St. Pm. 301
Honolulu, Hawaii 96813
:
Dear Dr. Harland,
We, staff planners at the Hawaii Conamity Design Center, would like to respond to the Environmental Impact Statement on the Kunio Avenue Widening Project. The Hawaii Commit Design Center, a non-profit organization which provides architectural and planning services for comity groups and low-income individuals, is presently located on the comer of Kuhio and Liliuokalani Avenues. We have been asked to assist the waikiki Community Center in securing better physical and social development in waikiki. Therefore, we are concerned about direct impacts of the widening as well as the overall scope of the project. We have a few comments conceming the proposed action and the Environmental Impact Statement and would appreciate the answers to our questions.

Generally, in the EIS there is a good case made for improving Kuhio Avenue, but there is a bad case for widening it. This is evident in the handling of the project description, in the description of the environmental setting, in the discussion of probable impact, in the discussion of the relationship to land use plans, policies and controls, in the adverse environmental impacts win camot be avoided, and especially in the altematives considered and in the mitigation measures proposed to minimize impact. Therefore, pore information is needed for evaluation and review of the environmental impact of Nubia Avenue Widening.

## project descriptIon

The objectives of the project $(\mathrm{p} .6-9)^{1}$ are:
(1) to implement the land use policies in the General Plan and the supporting circulation and transportation plan in the Development Plan.

## ${ }^{1}$ All pare references made are to the Kuhio Avenue Widening EIS, unless 2480 kotasuay Stile L-29, honolulu, hawaii 96815 922-4611

(2) to improve circulation on Kuhio.
(3) to make the street confora to current design and environmental standards.
(4) to provide sufficient right-of-way to accomodate city bus service on Xuhio.
(5) and secondarily, to supplement the movement of traffic on Kalakaua and Ala Wai Blvd.

In order to decide if the project fulfills these objectives, the answers to the following questions are needed.

OUSSTION: How soon will the General Plan be revised? Will a design for No. 1 : 1995 be consistent with revised general plans in the future?

QUESTION: Since "studies show that unnecessary circulation of traffic No. 2 is a major cause of congestion in Wajkiki" and "Kuhio Avenue primarily"serves traffic circulating within Waikiki" (p.7), how will two-way traffic inprove circulation on Kuhio, rather than increase congestion?

QUESTION: What is meant by "unnecessary circulation"? "Sight"-seeing or No. 3 taxi drivers looking for business?
QUESITCX: What are "current design and environmental standards"?
The first three objectives could be accomplished without widening. The last two are questionable objectives and perhaps these questions could be forwarded to the appropriate authority.

OUESTIOY: Is it true that "the transit service on the centrally located No. 5 Kuhio Avenue would provide the shortest access time to Waikiki transit users" (p.9)? What about the number of people with the destination of Waikiki Beach and those without a private vehicle in hotels closer to Kalakaua?

NOSSTIOS: What sort of measure can be used to determine the desire to No. 6 walk down tree-lined Kuhio Avenue to catch the bus at the Royal Theater?

OUSSTTON: Isn't the objective of relieving congestion on Kalakaua and No. 7 Ala Wai primary rather than secondary?

QUESTION: HOw will Kuhio being two-way relieve congestion on Kalakaua, No. 8 is not congested?

OUESTION: How will Kuhio being two-way relieve congestion on Ala Wai, No. 9 since Ala Wai is the only path into/through Waikiki from the Diamoni Head direction and since local service needs can easily be met with one-way traffic except that "circulating" traffic?

In developing projections, basic preliminary data used were furnished by the Oahu Transportation Planning Progran (OTPP). "This data was obtained by utilizing the latest available input data and proven computer techniques for trip projections and assignments to the transportation network. "(p.21) For evaluation purposes, the following questions need answers.

QUESTICN: In detemining the number of peak auto trips in the peak directNo. 10 ion, what are "the latest available input data and proven conputer techniques for the trip projection and assigrments to the "transportation network"?

OUESTIOX: ihy wasn't this data included in the appendix or bibliography
No. 11
NUSTIOX: Is "the latest available input data" based on the Comprehensive
Noning Code? N̄O. I2 Zoning Code?

Shouldn't new screen line projections be made with the land use controls of the Waikilui Special Design District?

QFSTION: If the projections are based on data furnished by OTPP which did No. 14 not reflect certain interzonal trips and special trips, such as tourist trips, what manual adjustments were made and on what were they based?

The screenline figures are obviously a very important element in the evaluation of altematives; therefore, it is important that they are realistic and reflect changes of the environment as well as changes in attitude.

Since the Hawaii Community Design Center will be directly affected by the widening, we would like to request that phasing and timing of the proposed action be given (as nearly as possible) in the section Project Description.

Qusitoy:
No. 15

How soon will relocation, land acquisition and construction begin? When will the project be completed?

## AVIRGMENTAL SETTIVG

In the evaluation of the project, it is necessary to have a complete description of the environmental setting. In certain places, there is not enough information provided for evaluation.

From the Environmental Inpact Statement Zerulations, State of Hawaii, p.15, it is found that: "Special emphasis shall be placed on enviromental
resources that are rare and unique to the region and the project site."
QUETTIOY: Why isn't special emphasis placed on Waikiki Beach which serves No. 16 not only tourists and residents of Waikiki but of the the entire island, and on the sreat accessibility to the beach from the project area? Indeed it is a major attraction of the area for the people in Honolulu besides being the only major open space in the project area for the residents.

Reference is made to related projects: "four developments which will include two 36 -story apartment' towers with 854 apartment units and two 33-story towers, the first with 432 units and the second with 920 unjts." (p.54)

QUESTTON: Where can the examination of possible overall cumlative impact No. 17 of such actions be found?

QuESTION: No. 18

What sources of data are used to base population and growth assumptions used to justify the action?

QUESTION: No. 19

And what population and growth assumtions are used to justify
the action?
$\frac{\text { QUSSTION: }}{\text { NO } 20}$

OUESTION: No. 21

By implementing land use policies there will be secondary growth impacts. What secondary popuation and growth impacts will result from the proposed action and its alternatives?
What source of cata was used to qualify the overall impact of the proposed action on future growth and development in the area as "minor" (p.126)?

RELATIONSHIP TO LAND USE PLANS, POLICIES AND CONTROLS
Given:
(1) the findings of previous studies in Waikiki- "congestion, overcrowding, excessive density"(Waikiki Special Design District Ord. p.1)
(2) present urban design controls with "special emphasis on increased landscaped open space, providing for a pedestrian oriented environment decreasing the impact of vehicular traffic and protecting major views mauka-nakai between major lancmarks" (WSSD Ord. p.11)
(3) the implementation of a one-vay street system in 1971 "to alleviate the problen of frequent stops and short-spaced two-way intersections" from Selection of Alternatives for Detailed Study of Kunio Avenue, Preliminary Report, p.2. alternative for the project and being "in corplete accord and
harmony with land use policies of the City and County of Honolulu"? (p.67)

It appears there is little discussion of the relationship to land use plicies since there are so tany with different objectives and since discussion of conflicts would be very lengthy. Hovever, conflicta mast be discussed.

## PROZA3LE IMPACT

The probable impact of the proposed action on the environment (noise, air quality, water quality and drainage, socio-economic, wildife and vegetation and construction irapacts) are discussed only in relation to. the widening of Kuhio Avenue.

QUSTICN: Are there any impacts of the improvements of Kuhio Avenue?
guestion:
No. 24
Will readings of 65 to 70 dBA be in conflict with the Commity Noise Control Regulations for the apartment precinct along Kuhio Avenue?

Quesmrol: Are not the taking of parking stallls and the hazard of cutting into the parking ramp mentioned on $p .144$ direct impacts of the project?

CUSTION: What are the secondary impacts when construction noise levels No. 26 exceed 95 dBA?

The proposed action and the construction will have a visual irpact on tourists and residents alike. The two-lane street with fairly large shade trees will be incresed to $56^{\prime}$ of pavement with vehicular traffic and limited pedestrian space.
$\frac{\text { CUESTION: }}{\text { NO. } 27}$ Where is this visual itmpact discussed?
CUSSTION: How will the displaced non-profit organizations "be assisted No. 28 in finding suitable replacement quarters" and "be compensated for noving expenses" (p.89)?

OUSSTTON: How and to where will the following trees within the right-of-way No. 29 be removed and transplanted:
(1) the monkeypod tree on the mauka Diamond Head corner of Kaiulani and Kuhio Avenues,
(2) the mahogany tree in the mini-paris eva of the intersection of Kuhio and Liliuokalani Avenues,
(3) the mahogany tree situated on the mauka Diamond Head comer of Kuhio and Liliuokalani,
(4) the three mature cvergreen treas alongside the mahogany tree listed in (3)?

CJESTICN: that is the chance of survival of a mature mahogany tree that
NO. 30
is transplanted?
Since "there is a reluctance to use large mature shade trees because they will interfere with utility lines," from the response to the outdoor Circle, it seems there will be very little replanting of those trees which are removed during construction.

QUESTION: Will this action, removing mature trees and replacing them with No. 31 net trees, implement the general improvement of Wakiki?

## ADVERSE IMPACTS WHICH CANOT BE AVOIDED

CUESTION: Thy is the list of negative long tem impacts related to the No. 32 widening, not to the utility inprovements, when the rationale for the proposed action is based pribarily on the improvenents?

## ALTERATIVES

QUESTIOY: Why wasn't the $40^{\prime}$ right-of-way width included for evaluation?
No. 33 Shouldn't the existing right-of-way be discussed and evaluated?
QUESTIOI: That emphasis was placed in evaluation of altematives? Was No. 34 nore emphasis on the ability to fulfill the objective of improving circulation within and through the project area? Or on the ability to fulfill the objective of providing street improvements? Or on minimm adverse impacts to the project area? Benefits, costs and risks are not easily compared without more detailed information.

OUESETON: No. 35 Why are the only tro objectives of altemative designs to reduce the number of drelling mits affected and to maintain effeciency (p.114)? What about alternatives to minimize other impacts?
$\frac{\text { QUESTICN: }}{\text { No. } 36}$
What source of data is used to detemine that " 4 lanes would provide 2 traffic lanes in each direction which is the minimur number required to provide for efficient two-way street operation
on Kuhio Avenue"(p.115)? on Kuhio Avenue" (p.115)?

OUSSTOR: No. 37

Are these only street cross-sections for the various right-of-way the action? ( 116 ) which could feasibly attain the objectives of the action?(p.116)

In order to evaluate the widening project, it is necessary to know if all feasible altematives were considered and if the criteria for detemining "feasible altematives" is justified.

## Imitatton Neasures

CUESTION: Does the master landscaping plon exist? If not, how can No. 38 mitigation neasure to minimize impact be assessed?

QUESTON: Why weren't the cost estimates to place the utilities underNo. 39 Eround considered as a mitigation measure to minimize the itapact of cutting mature trees to keep them away from utility lines?

QUESTION: Wat are the costs of underground utilities?
No. 40
The answers to these questions are necessary for our evalation of the Kuhio Avenue Videning Project. Until certain points are clarified, the widening can only be considered as an altemative with various impacts. It is important to note that there are other altematives which could feasibly attain the objectives of the action- even though more costlyWhich are not described.

On this point, we would like to suggest that the Department of Public Horks, responsible for traffic designs and the Department of Pariks and pecreation, responsible for landscaping and sidewalk design work together to consider to consider two separate altematives:
(1) a design to improve Kuhio Avenue without widening
(2) a design to use the $70^{\prime}$ xight-of-way to improve the 55' right-of-way in terms of accessibilty to adjoining properties, providing a bike route, reduced relocation where possible, underground utilities and more than 7' for sidewalk, landscaping and street fumiture. (For this reason, an article on "street" design is enclosed to generate ideas.)

We would appreciate your response to our questions and conments. We would al so like to request that responses to letters submitted through the Khio Avenue Widening Horkshop be sent to the individuals at the addiesses given and to us.

Wen other puolic responses and agency responses are available, we would like to have a copy of these.

Thank you very much for your hard work and time.


## DEPARTMENT OF PUBLIC WORKS

## CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET HONOLULU, HAWAII 96813


KAZU HAYASHIDA
MAYOR
DIAECTOF ANO CHIEF ENGINEER

ENV 76-306

July 8, 1976

Hawaii Community Design Center, Ltd.
2480. Koa Avenue, L-29

Honolulu, Hawaii 96815
Gentlemen:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project
We are responding to comments (questions) in your letter dated June 5, 1976, to Dr. Richard Marland, State Office of Environmental Quality Control, regarding the subject EIS.

Question No. 1.
The Department of General Planning has completed the General plan Revision Program which is currently under review by the City Council. At this time, a tentative time schedule established by the city Council indicates the adoption of a revised General Plan around the end of July of this year.

As stated in Chapter II, Section Cof the EIS document, the basis for travel forecasts was developed by the Oahu Transportation Planning program (OTPP) which was made for the year 1995 and based on the land use policies of the existing General plan. Relative to these 1995 forecasts being consistent with the revised General Plan of the future, refecence is made to the report, titled, "Transportation Analysis, Technical Report No. 4, Mar. 1974, Department of General Planning, City and County of Honolulu." At the 924,000 population level, which was projected for 1995 by the State Department of Planning and Economic Development (DPED), the screenline volume to capacity analysis indicated that the travel demand is not significantly affected in the urban core by different development alternatives up to the population level of 924,000 .

Question No. 2.
Two-way traffic on Kuhio Avenue in the project area will improve circulation by, for example, permitting an ewa-bound trip with its origin makai of Kuhio Avenue and destined for a particular location ewa of Kaiulani Avenue in Waikiki.

Hawaii Community Design Center, Ltd.
July 8, 1976
Page 2

Question No. 3.
Unnecessary circulation is represented by those trips which cannot get to its destination by the most direct route due to a one-way street pattern or which may be diverted to alternative routes due to capacity restraints.

Question No. 4.
Current design and environmental standards are referred to street improvement standards including roadway pavement, curb and gutters, sidewalk and drainage facilities applicable to urban areas under various uses.

Question No. 5:
Through the project area, the bus transit route is currently located on Kalakaua Avenue as described in Chapter III, Section C. When Kuhio Avenue is widened and converted into a two-way street, it is planned to provide transit bus service on this street which would provide a more centrally located route for the residents of the area. It would naturally provide a shorter average access time by virtue of being approximately equal distance from Ala Wai Boulevard and Kalakaua Avenue. The proposed bus service will not affect residents who are inclined to walk to waikiki beach.

There will be several different bus routes serving Waikiki and one or more routes would continue to be located on Kalakaua Avenue which would best serve Waikiki heach and hotels located on Kalakaua Avenue.

Question No. 6.
The desire to walk down Kuhio Avenue to catch a bus at Royal Theater would be a function of distance as a primary measure. of course other factors would also enter into it, such as personal preference, safety, convenience, and comfort, such as a shady, tree-lined street.

Question No. 7.
Relieving congestion on Kalakaua Avenue and Ala Wai Boulevard is certainly an important consideration but not the primary objective because if it were, it would have been stated as such and a solution for widening these streets would have been studied and presented.

Question No. 8.
As described in chapter III, Section $D$, a segment of Kuhio Avenue has an existing right-of-way width of 20 feet and hence can accommodate only one lane of traffic. A widening of Kuhio Avenue to a full 2-lane traffic in the Koko Head-bound direction will

Hawaii Community Design Center, Ltd.
July 8, 1976
Page 3
provide greater capacity and a more convenient roadway for motorists to use as an alternative to Kalakaua Avenue.

Question No. 9.
Trips from the Koko Head direction can enter Kuhio Avenue via Kapahulu Avenue and hence reduce traffic on Ala Wai Boulevard once Kuhio Avenue is improved to accommodate two-way traffic.

Question No. 10.
The basic traffic projections, as stated in the EIS were obtained from the Oahu Transportation Planning Program (OTPP). This joint City and State organization was established to carry on the work initiated by the 1967 Oahu Transportation Study (OTS). The OTS was the first step in developing a long-range transportation plan to meet the transportation demand on the Island of Oahu. This very detailed study developed a methodology for predicting the future transportation demand on the island through a series of mathematical models based on existing travel data and data obtained from detailed home interviews and other fact-gathering studies conducted on the island. These models take into account population and employment characteristics, together with locational. factors, land use, and characteristics of the transportation system.

Simply, the forecasting procedure involved three basic models. First, the Economic Model forecasts the level of employment in 16 industries; these predictions provide inputs to the LandUse Model, which forecasts where people will work and reside. Next, the Traffic Model uses homesites and work sites as input to Forecast the demand for transportation service.

Due to the amount of data processing required, the models were computerized. The development and the specific details of the models used in forecasting travel on Oahu is documented in "Oahu Transportation Study, Volumes I, II \& III, 1967. Sponsored by the State of Hawaii and the City and County of Honolulu."

These travel forecasting models with the exception of the economic model, were maintained and operated by OTPP, as successor to OTS. OTPP, as part of the continuing transportation planning process, continues to collect data, re-evaluate forecasts, and re-evaluate and modify the various long-range transportation plan concepts.

The 1995 travel forecasts are based on an islandwide population estimated to be approximately 924,000 and an employment forecast of approximately 518,000 jobs on the island. The forecasts of population and jobs were prepared by the Hawaii State Department

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    Hawaii Community Design Center, Ltd.
    July 8, 1976
    Page 4
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of Planning and Economic Development. These forecasts formed the principal inputs to a series of models as previously described.

Question No. 11.
The EIS identified the OTPP as the originator of the basic preliminary data or traffic projections. Due to the extent of data required for the various travel forecasting models, they were not included in the appendix. For review by any interested parties, these data could be made available through the offices of OTPP or their successor, the newly established Oahu Metropolitan Planning Organization (OMPO).

Question No. 12.
As part of the forecasting procedures, the Land Use Model allocates population and jobs to locations within the constraints of the Oahu General Plan and the Comprehensive Zoning Code which implements the purpose and intent of the General plan.

Question No. 13.
The effects of the newly established Waikiki Special Design District on development in Waikiki and the traffic projections used in the EIS have been analyzed and are documented in the revised EIS.

Question No. 14.
The manual adjustments conducted on the basic preliminary data furnished by oTPP are documented in a report entitled, "Traffic Volume Projections and Analysis for Kuhio Avenue Widening, July 1975," prepared by William Hee and Associates. This report is listed as one of the reference sources of this EIS and is available for review at the City Department of Public Works.

Question No. 15.
Construction for the off-site drainage lines and relief sewer has been tentatively scheduled for the first quarter of 1977. It will take up to 6-8 months to complete the drain lines and about 12 months to complete the sewer improvements. Construction for the roadway improvements may begin in the third quarter of 1977 and will take approximately 14 months.

Question No. 16.
Under Chapter III, Section B, Waikiki Beach, as well as other major attractions, such as Kapiolani Park, Honolulu Zoo, and the Waikiki Concert Shell, are described as public recreation areas surrounding the impact area with Waikiki Beach stated as being the most important and most popular.

Hawaii Community Design Center, Lta.
July 8, 1976
Page 5

Question No. 17.
This comment relates to Chapter III, Section B, which gives a description of property ownerships in the project area with Liliuokalani Trust mentioned as the largest single ownership. It further states that many existing leases would be expiring in 1977 and, therefore, new building permits have been applied for in the re-development of this land. Among these developments is the one proposed by Herbert Horita Realty for two 36-story and two 38-story apartment towers.

The specific question asked is where can the examination of possible overall cumulative impact of such actions be found. The impact of these proposed private developments are not included in the EIS since they are not the direct or indirect results of the proposed action.

Question No. 18.
The basic data used for population and growth assumptions were developed by the State Department of Planning and Economic Development (DPED) and published in "Population Summary for Hawaii, 1972, Statistical keport 87, Jan. 7, 1972." The population level of 924,000 in 1995 was projected and used as the basis for travel forecasting on Oahu. This population projection was adopted by the Oahu Transportation Planning Program (OTPP) as the official figure to use for all transportation planning programs on Oahu.

Question No. 19.
The 924,000 population level in 1995 was used as the basis for travel forecasting. The growth assumptions for Waikiki itself, used in the travel forecasting and the effects of WSDD on traffic projections are discussed in the revised EIS.

Question No. 20.
In Chaptex II, Section A, Subsection 1 , it is stated that "In its broadest sense, the purpose of the proposed action is to implement the land use policies of the City and County of Honolulu as expressed in the General Plan of 1964 (as amended), and the supporting circulation and transportation plan for the WaikikiDiamond Head area, which is included in the Development Plan (DP) for the Waikiki-Diamond Head Planning Area."

This statement is made in the context of the General plan as consisting of the Detailed Land Use Maps (DLUM), the Development plans (DP), and the Comprehensive Zoning Code (CZC) which collectively reflects the land use or development policies of Oahu. Accordingly, the widening of Kuhio Avenue as shown in the Development Plan and WSDD is intended to support the implementation of the land use policies of the city and county of Honolulu.

## Hawaii Community Design Center, Ltd. July 8, 1976 <br> Page 6

It is agreed that implementing the land use policies will result in population growth in the waikiki area which in turn would have various direct and secondary impacts on the area. However, the proposed action is considered necessary to support this growth relative to achieving the stated objective of the General Plan for "a wholesome, convenient and attractive living environment by providing the most efficient circulation and transportation system."

This does not imply that the proposed action is necessary to achieve the growth since the area is currently served by public streets which provide access to all properties in the project area. With existing access available, although not at the desirable level of service, it is unlikely that the non-widening of kuhio Avenue alone would place any major constraint on future growth in Waikiki. Therefore, any direct or secondary impacts resulting from growth in the area should not be attributable to the proposed action.

Question No. 21.
The comment refers to the statement made in Chapter VII, Section $D$, Subsection 2, Development Impact, is as follows: "The potential for greater development in the area is more related to land-use policies and market forces of supply and demand than improved accessibility. Since accessibility does exist within the area, although on narrow and congested streets and by circuitous routes, the overall impact of the proposed action on future growth and development in the area should be minor."

The above statement is further embellished under Chapter $V$, Section D, Subsection 3, Development Impact, as follows: "Secondary impacts of the proposed action include possible changes in population characteristics and of the employment base. The project area is presently in transition from low and medium density to high density apartment and hotel uses. Although these changes are the direct result of the land use policies of the City and County of Honolulu and market forces of supply and demand, the influences of improved accessibility are discussed below.

Because of Waikiki's unique location and attractiveness for tourists and residents, development pressures for hotels and apartments, historically, have not been influenced by inconvenient accessibility and congestion within Waikiki. While the proposed action is likely to make development easier and may even accelerate it somewhat, the overall impact of the improvement of Kuhio Avenue on future growth and development in Waikiki and in the project area in terms of magnitude and time should be minor. As previously stated, accessibility already exists to the various

## Hawaii Community Design Center, Ltd. July 8, 1976 <br> Page 7

sub-areas within the project area, although on narrow and congested streets and by circuitous routes. In fact, many new developments have been recently or are presently being constructed in the project area. Additionally, new building permits have been recently issued for construction of new high-rise developments within the project axea, some of which are adjacent to the project itself. As long as parcels of land are accessible, the impact of improved accessibility caused by the proposed action on future developments can only be speculated."

The above paragraphs explain the rationale behind the statement that the impact on future growth and development should be minor. This conclusion is based on the premise that even if development were accelerated somewhat, i.e., growth occurring somewhat sooner with, rather than without the proposed action, the same magnitude of growth up to the allowable density could occur over the longrun assuming all other factors being the same. Hence, the impact of the development of a particular parcel of land that is destined to be developed but which may occur several years earlier should have little or no long-term adverse impact on the area.

Question No. 22.
The proposed action for a 70 -foot ROW, 4-lane, 2 -way street is stated to be in "complete accord and harmony with the land use policies of the City and County of Honolulu." The justification for the above statement is based on the following.
a. The existing use is a mixture of low to high density residential developments, hotels, and commercial facilities. The current land use policy (WSDD) is for a predominantly high density apartment use mauka of Kuhio Avenue and immediately makai of Kuhio Avenue. Therefore, the project area served by Kuhio Avenue will require greater street capacity than currently exists and, therefore, it is shown on the Development Plan and the Circulation Plan (WSDD) to be widened to 70-foot Row.
b. The 56-foot roadway width requiring a minimum of 70 -foot ROW can provide the required design capacity to accommodate the projected traffic volumes to be generated under the current land use policies.
c. The current land use policies as reflected by the WSDD ordinance was adopted based on appropriate studies and public hearing to minimize these conflicts which existed under the previous land use policies. The urban design control guidelines, including the circulation plan, as set forth in the WSDD are provided to ensure that future developments in Waikiki are compatible with its unique environment.

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Hawaii Community Design Center, Ltd.
July 8, 1976
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Question No. 23.
Chapter $V$ of the EIS document discusses the probable impact of the proposed action on the environment. The comment is made that probable impacts are discussed only in relation to the widening of Kuhio Avenue and then followed by the question: "Are there any impacts of the improvements of Kuhio Avenue?" It is assumed that this question relates to improvements such as the construction of storm drains and sewer lines.

There are no long-term impacts from the storm drains and sewers regarding noise and air quality. Water quality as it affects Ala Wai Canal is fully discussed under Section C. There are no significant long-term socio-economic impacts directly attributable to the storm drains and sewers since no relocation of residents are required and the storm drains are proposed to alleviate existing local drainage problems which is not known to have caused any major economic losses due to flooding. The sewer lines proposed are to alleviate the overloaded conditions of existing lines and to accommodate future increase in flows from its service area. Impact on wildife and vegetation are discussed as affected by these improvements on a long-term basis. . Construction impact as related to all proposed improvements are fully discussed in Section $G$.
"The relocation agency will provide relocation advisory assistant to all business concerns and nonprofit organizations displaced by the project and also to any business concerns or nonprofit organizations occupying property which is immediately adjacent when it is determined they have suffered substantial economic injury as a result of project activities. The following services will be provided.

1. The agency will consult with the owner or operator to determine the need for relocation assistance.
2. The agency will provide current and continuing information on the availability, costs and square footage of comparable locations and make referrals to real estate brokers or rental agents who can assist in obtaining suitable accommodations.
3. The agency will provide, as needed, information relative to property values, growth potentials in various areas, zoning ordinances, and other general and economic information.
4. Where appropriate, business concerns will be referred to Small Business Administration for management, technical and financial assistance (loans)."

Hawaii Community Design Center, Ltd.
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Question No. 24.
The noise regulations contained in the Community Noise Control Regulation does not apply to vehicular noise impact on the apartment precinct. This is covered under Chapter 44A, Public Health Regulations on Vehicular Noise Control for Oahu which establishes maximum sound levels that vehicles shall be allowed to emit when used on traffic ways on Oahu. These regulations are intended to limit sound levels to those consistent with the physical, mental and social well-being of the people.

Question No. 25.
Any taking of land, structures, parking facilities, or ramps affecting the existing use of a property would cause direct impacts such as economic losses to the property owners. Accordingly, due compensation for such losses must be paid to the property owner by the city.

Question No. 26.
The secondary impacts of construction noise levels exceeding 95 dBA when exposed to it over a prolonged period could result in hearing loss. In order to minimize any potential health hazard and also the nuisance factor, activities resulting in noise levels of 95 dBA or more are restricted to certain hours of the day and prohibited on Saturdays, sundays and legal holidays.
Question No. 27.
The proposed action will cause visual impacts, both negative and beneficial, due to the physical widening of the roadway, the removal of trees, and the removal of overhead utility lines.

Under Chapter VII, Probable Adverse Environmental Effects Which Cannot Be Avoided, a statement that some 105 individual trees of 29 different varieties will require removal. Under Chapter IX, Mitigation Measures to Minimize Impact, there is a statement that replanting on street right-of-way would be done to minimize adverse impacts.

The negative visual impact of tree removal is recognized as one of the probable adverse environmental effects which cannot be avoided and that mitigation measures are necessary to minimize such impacts. Conversely, the proposed action will result in beneficial impacts such as the undergrounding of overhead utility lines.

Question No. 28.
This question is concerned with the displacement of the non-profit organization. As documented in the report entitled, "Relocation Impact and Program Plan, Kuhio Avenue Widening Project, April

1976," prepared for the Department of Public Works by Survey and Marketing Services, Inc., and which is summarized and referenced to in the EIS, "The City will carry out a relocation assistance program to reduce hardship to those affected by the project." "Businesses and non-profit organizations to be displaced will be provided maximum assistance to aid in their satisfactory reestablishment with a minimum of delay and loss of earnings and services."
"A displaced business may receive a payment to cover actual reasonable moving expenses or elect to receive an amount equal to its average annual net earnings not exceeding $\$ 5,000$. To receive the latter payment, it must be shown that:

- The business cannot be relocated without a substantial loss of its existing patronage;
- The business is not part of a commercial enterprise having another establishment which is not being acquired and which is engaged in the same or similar business."

Question No. 29.
The landscape plan being prepared by a landscape consultant in close coordination with the Department of Parks and Recreation has not been finalized. This plan will identify which trees affected will be feasible to replant elsewhere and also identify where they will be relocated. In reference to the following trees:

1. the monkeypod tree on the mauka Diamond Head corner of Kaiulani and Kuhio Avenues,
2. the monkeypod tree in the mini-park ewa of the intersection of Kuhio and Liliuokalani Avenues,
3. the mahogany tree situated on the mauka Diamond Head corner of Kuhio and Liliuokalani Avenues, and
4. the three mature evergreen trees alongside the mahogany tree
listed in 3 ,
if the above trees are found to be feasible to relocate, they will have to be trimmed sufficiently such that a crane can hoist them onto trucks to be transported to their new location. Also adequate space at the work area must be provided to accomplish this removal.

Alternative locations being currently considered for these relocated trees, other than the project area itself, are

Hawaii Community Design Center, Ltd.
July 8, 1976
Page 11

1. Kapiolani Park,
2. Ala Wai Golf Course, or
3. Other parks in the McCully area.

Question No. 30.
According to the landscape Consultant, a mature mahogany tree that is transplanted has approximately a $60 \%$ chance of survival and a transplanted mature monkeypod tree has about an $80 \%$ chance of survival.

Question No. 31.
As stated in the response to question No. 27 , the removal of mature trees would be and is stated to be an unavoidable adverse environmental impact.

Question No. 32.
The response to this comment would be the same as No. 23.
Question No. 33.
Under Chapter II, Section C, the development of projected traffic volumes is discussed with the statement that a serious capacity deficiency of approximately $30 \%$ would exist without the widening. Therefore, the $40-$ foot ROW would not meet the basic objective and cannot be considered to be a viable alternative.

Question No. 34.
In the evaluation of the alternatives, the factors considered are sumnarized in Table 2, page 118, including those listed in the question. The evaluation summary provides both quantitative and qualitative comparisons of the alternatives including the construction and. RoW cost estimates. Tangible benefits are usually categorized into user and non-user benefits with the user benefits being the predominant factor. As discussed in Chapter V, Section D, Subsection 2, the user or travel benefits accruing to the public by virtue of time and auto operating cost savings may be large in the aggregate but the individual savings per trip would be quite small. Therefore, it was concluded that the traditional benefits and cost analysis would not be applicable to this particular alternatives analysis. In addition, these analysis are not required for City and County projects.

Question No. 35.
In the consideration of a particular sub-alternative with a 56 -foot roadway width at intersections with left-turn pockets and a reduced 46 -foot roadway width in between, these two primary factors were used in the analysis.

Hawaii Community Design Center, Ltd.
July 6, 1976
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Question No. 36.
The source of data used to determine the statement in question is the Highway Capacity Ranual, 1965 Special Report, Highway Fesearch Board and also discussed in Chapter II, Section $C$, of the EIS.

Question No. 37.
These three street cross-sections provide the range of feasible altematives that can reasonably attain the objectives of the action.

Question ho. 38.
A preliminary landscape plan was developed. See No. 29.
guestion No. 39.
Wo mature trees, located outside of the proposed Row, are planned to be cut due to overhead utility lines.

Question No. 40.
The estinated cost of placing overhead utilities underground is approxinately $\$ 900,000$.

With respect to your closing coment, all viable ard inplementable alternatives that are in confonmance with the Development plan, MSDD and the transportation policies of the area have been discussed in the EIS.

Your interest in the proposed action is appreciated.
Very truly yours,

ces ORQC
Div. of Engineering

Willian Hee \& Associates
Datom

June 7, 1976

Office of Environmental Quality Control 550 Halekauvila Street, Room 301
Honolulu HI 96813
Subject: Proposed Kuhio Avenue Widening Project

## Gentlemen:

The EIS considers Waikiki as an area and the benefits that will derive along Kalakaua and easing of traffic through Waikiki without adequately addressing what will specifically happen with air quality and noise pollution to occupants of existing structures without proper setbacks after construction. Kuhio Plaza will be heavily impacted on as the plan envisions removing part of the building and thus bringing the street with its attendant increased noise and polluted air closer to the building. This is particularly significant as Kuhio plaza is not air conditioned and depends on ventilation by way of the tradewinds, through open uindows. If built as proposed, the situation in the street side apartments will be nearly untenable.

The decision to cut off part of Kuhio Plaza mentioned that the cost estimate reflects loss of some parking stalls. It is my opinion that this was not considered in sufficient depth with regard to all the effects this would have on the structure. First, ramping up and down with the loss of $20.6^{\prime}-22.6^{\prime}$ would become difficult and awkward at best, affecting more than just the stalls directly lost by giving up land for the $70^{\circ}$ right of way as planned in this project. In fact, it is conceivable that all the parking could be lost if proper ramping cannot be accomplished. Second, there would be an adverse effect on the value of the structure as a whole but most significantly, on those losing stalls as parking in the vicinity is a serious problem now. This would adversely effect the value of the property for future saleability and rentability, as well as the personal inconvenience to those owners occupying their own units. Third, the cutting and refacing of the building would not be an easy or economical undertaking with the relocation of numerous utility lines, the problems of providing adequate ramping up and down, as well as providing an attractive new facade to the front of the building.

These problems should have been envisioned when a building permit was issued to construct Kuhio Plaza with a setback insufficient for this street improvement project. If there had been a proper plan in effect for Waikiki, problems such as this would never have come about. Even now the resultant effects would not be as detrimental on our structure if there were only four lanes of traffic instead of five. It will probably ultimately end up a one-way Diamond Head street anyway.

Office of Environmental Quality Control
June 7, 1976
Page 2

If it is so necessary to demolish buildings for a five lane roadway in this area, why isn't it equally necessary at the other end next to Kalakaua?

Very truly yours,
KUHIO PLAZA OWNERS ASSOCIATION
Qovaled estel
Donald D. Gabe, President
190 S. King Street, Suite 300
Honolulu HI 96813

# DEPARTMENT OF PUBLIC WORKS <br> CITY AND COUNTY OF HONOLULU <br> 650 SOUTH KING STREET HONOLULU, HAWAII 96813 



July 7, 1976

Mr. Donald D. Gabe, President Kuhio plaza Owners Association 190 S. King Street, Suite 300 Honolulu, Hawaii 96813

Dear Mr. Gabe:
Subject: Environmental Impact Statement for the

## Proposed Kuhio Avenue Widening Project

We are responding to comments in your letter dated June 7, 1976, to the State Office of Environmental. Quality Control regarding the proposed project.

As stated in the EIS document, Chapter $V$, Section $A$, the proposed widening would increase the noise level along Kuhio Avenue by 5 to 10 decibel, A-weighted (dBA) over the existing level. The predicted average sound level ( $L_{50}$ ) is estimated to range between 65-70 dBA based on the projected traffic volume in 1995. The high or average peak noise level is estimated to be typically 5 dBA above the average noise level or between $70-75 \mathrm{dBA}$ measured at approximately 10 -foot from the right-of-way (ROW) line. The existing Kuhio plaza tower is located approximately 9-10-foot from the proposed ROW line.

With projected increase in traffic volume, there will also be an increase in air pollution, primarily in carbon monoxide (CO) concentration. It is predicted that the maximum l-hour co concentration, based on 1995 traffic volume, will be approximately equal to the state standard of 10 milligram per cubic meter ( $\mathrm{mg} / \mathrm{m}^{3}$ ) and well below the Federal standards of $40 \mathrm{mg} / \mathrm{m}^{3}$ also measured at approximately 10 feet from the ROW line.

Two alternative ramping schemes are under consideration at this time. One has a slope of $4: 1$ (horizontal to vertical) and the other is 6:1. Ramping is definitely feasible.

The estimated loss of parking stalls as the result of building modification, i.e., cutting and refacing, is approximately $\mathbf{1 4}$.

The rest of the parking areas will not be affected. Kuhio plaza will be compensated for the loss of land and other damages.

Fxom the City's experience from past street improvenent projects, most structures can be modified (outting and refacing) aesthetically. Since the parking deck will be the only structure affected in the case of Kuhio plaza (the main structure will remain intact), there is no reason to believe that an attractive new facade cannot be provided. If there are utility lines that are in conflict with the modification, they will be relocated.

The alignment of Kuhio Avenue as it affects Kuhio Plaza is Cocmented in the Minutes of the planing Comission meetings of March 11, 1971 and April 14, 1971. Both Minutes are included in Appendix: A (pages 138 co 146) of the EIS.

Very truly yours:


KAZU HAYASETDA
Director and Chief Engineer
CC: OEQC
Div. of Engineering

William Fee $\&$ Associates
DMJM

# THE OUTDOOR CIRCLE 200 No.Vinezard, Honoluth, Hatiaii 96817 

## June 7, 1976

Office of Environmental Quality Control 550 Halekauwila Street, Room 301 Honolulu, Hawaii 96813

Subject: Proposed Kuhio Avenue Widening Project

## Gentlemen:

As the Circle said in our letter of August 26, 1975, to Mr. Kazu Hayashida, Director and Chief Engineer, Department of Public Works:
"The Outdoor Circle regards this proposal to be an important initial step in the improvement of the Kaikiki district. We believe that Kuhio Avenue's designation as a major throughway should encourage an upgrading of development along this corridor, offering the opportunity to government and the private sector to work together to create an area that is beautiful, healthy and pleasant to live in for resident and visitor alike."

We are happy to see the trees we recommended be saved by relocation are so planned. The 94 Hong Kong orchid trees will add to the beauty of the street.

We conclude that the widening of Kuhio Avenue can only truly fulfill its purpose if an atmosphere is created that encourages quality development and offers an inviting alternative to pedestrian usage of Kalakaua Avenue.


JHH
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EIV 76-260

June 16, 1976

Ms. John T. Human, president<br>The Outdoor Circle<br>200 No. Vineyard<br>Honolulu, Hawaii 96817

Dear Ms. Hume:
Subject: Environmental Impact statement for the proposed Kuhio Avenue Widening Project
We wish to acknowledge comments in your letter of June 7, 1976, regarding the subject ETS. The department appreciates the Outdoor Circle assistance in the development of a comprehensive landscaping master plan for Nuhio Avenue Widening project. The landscaping plan which was coordinated with the Department of parks and Recreation will be submitted to the Department of Land Utilization for approval since the proposed project is located within the Waikiki Special Design District which became effective on April 1, 2976, by Ordinance No. 4573.

We rash to make a correction in our previous letter, mV 76-63, dated January 19, 1976, with respect to overhead utilities along the marka side of Fuhio Avenue. According to Section $V$ G of Ordinance Fo. 4573, all utility lines within the design district mast be constructed underground unless specifically exempted by the City Council.

Very truly yours,


KAGU HAYASHIDA
Director and Chief Engineer

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cc: OEQC
Div. of Engineering
William Hee \& Associates
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Board of Directors:

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Mr. Kazu Hayashida, Director
Department of Public Works
City \& County of Honolulu
Municipal Office Building
Honolulu, Hawaii 96813
Re: EIS - Kuhio Avenue Widening
Dear Mr . Hayashida:
We have reviewed the EIS for the Kuhio Avenue project, dated April, 1976 and make the following comments:

1. The EIS clearly indicated that the benefits accruing from the project far outweigh any detriments. The need to satisfy demands for traffic capacity and flow in Waikiki are critical to its healthy and problem-free future. The widening of Kuhio Avenue would alleviate present deficiencies which exist because Kuhio Avenue cannot function properly as a "complete" east-west artery because of its substandard condition in the proposed project area. Waikiki, we believe, needs three east-west arteries in order to provide proper capacity for present as well as future traffic volume demand.

We disagree with any criticism that a widened Kuhio will entice development or increased volumes merely because the road is improved. Development is controlled by the CZC and the presently enacted WSDD comprehensively controls development and densities geared to the levels that Waikiki and its facilities can properly handle.
2. We reiterate our preliminary comment concerning the desirability of eliminating the exclusive left-hand turn lane and the exclusive bus lane. Neither are needed, we believe, if four travel lanes are provided and bus traffic and left-turns allowed to inter-mix with normal traffic flow.

Mr. Kazu Hayashida, Director
Department of Public Works

May 26, 1976
Page Two
3. One of the greatly beneficial "side-effects" of the road widening will be the under-grounding of utility wires which are now carried overhead. Perhaps this should be mentioned in the document to a greater degree.

We find the EIS quite adequately discusses the project and provides information which can reasonably be used to properly evaluate the proposed project. We hope the project will proceed efficiently to completion.

Very truly yours,


Executive Vice President
$\mathrm{DAB} / \mathrm{dt}$

June 18, 1976

Mr. Donald A. Bremer
Executive Vice President
Waikiki Improverunt Association, Inc. 2222 Ralakaua Avenue, Suits 1410
Sonolulu, Havaii 96315
Dear Mr. Bremar:
Subject: Environmental Impact Statement for the
Proposed Kuhio Avenue Midening Project
We are responding to coments in your letter of Mey 26, 1976, regarding the subject EIS.

Your organization's full support for the proposed project based on need and potential benefits to Faikiki as described in the EIS is acknowledged. Develoment impact of the project, as described in section V.D. 3 of the EIS is also consistent with youz statement that developments are controlled by the CzC and the recently adopted Waikiki Special Design District (Wisd) and not thonoug the improvement of the existing road.

Your corment suggesting elimination of the exclusive left-hand turn lane and exclusive bus lane and providing for only four travel lanes appears to be based on a slight misunderstanding. so cladify your comment, the proposed action as contained in the IS cocument is a 5-lane roadway with the center lane provided for accommodating left tum movements. Buses will be operated In mired trasfic and no exclusive bus lane is olamed as described In Chadeat VI, Section of the $2 I S$ cocument. Therefore, the roadway section of the proposed action will contain four travel lanes plus one continuous left-turn lane for a total of five lanes.

The suggestion for a four-lane roadway was considered as one of the lesign alternatives analyzed and presented in Chapter VJ of the EIS document. Four-lane roadway alternatives utilizing $56-f t$. and 60-ft. right-of-way widths were evaluated with the results sumarized in Table 2, page 118 of the EIS document.

The comparative evaluation shows that the proposed action with the 5-lane roadray utilizing a $70-f t$. Row would best meer future travel demands by providing greater roadway capacity than the other alternatives. It would also provide safer left-turn movements both at intersections and to properties fronting on Kuhio Avenue. In addition to the above, the key factor in considering the fifth lane for left-tum movements is the planned use of Kuhio Avenue as a major transit bus route which vould operate in mixed traficic. The buses would be blocking the outside Iane at bus stoos when at the same time the inside lane could also be blocked by a car waiting to make a left turn with a 4 -lane roadway. This potential dismuption to smooth and efficient flow of tiaffic could be eliminated by providing the left-turn lane. However, to obtain these advantages cited above, it would cost more and result in more relocation than the 4 -lane roadway alternatives as described in the EIS document.

All utility lines will be placed underground in accordance with VSDD, unless specifically exempted by the City Council.

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\begin{gathered}
\text { very truly yours, } \\
\text { Hoblace blivelma } \\
\text { Director and chief Engineer }
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co: osQC<br>Div. of Engineering<br>William Hee \& Associates<br>DMJM



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Jay 5, 7976
Environmental Quality Comm., 550 Falekaurila St., Honolulu, 96813

Gentlemen:
Thank you very much for lending us the copy of the Environmental Impact Statement which was prepared for the Proposed Kuhio Avenue Widening Project.

We took the opportunity to review this statement to the best of our knowledge as laymen and find nothing to which we would object.

We are looking forward to the work-shop which is being organized by the Waikiki Community Center on lay 14 i 15 . Perhaps at that time, some questions may occur to us but, at the moment, we feel that all aspects have been adequately covered.

We appreciate this opportunity to participate in these important and much-needed improvements planned for our neighborhood.


Ludwig ${ }^{\text {G }}$. Amarding
President

2222 KALAKAUA AVE SUITE 1308 hONOLULU. HAWAII 96815

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June 4, 1976
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Mr. Ludwig E. Armerding, President Waikiki Residents Association 2222 Kalakaua Avenue, Suite 1308 Eonolulu, Eawaii 96815

Dear Mr. Ammerding:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening project

We acknowledge coments in your letter of Nay 5, 1976, regarding the EIS for the proposed project. Our consultants and staff members participated in the EIS workshop organized De the Waikiki Commanity Center on May 15, 1976, at Thomas Jefferson School. We were pleased to meet and discuss natters of mutual interest with residents of the neighborhood.

Very truly yours,


Director and Chief Engineer
cC: OEQC
Div, of Engineering
Milliam Hee \& Associates
DMJM

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## CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET HONOLULU, HAWAII 96813

FRANKFFFASI


## KAZUHAYASHIDA <br> OIRECTOA ANO CHIEFENGINEET

ENV 76-287

June 30, 1976

Mr. John J. Arnest
c/o Hawaii Community Design Center, Ltd. 2480 Koa Avenue
Honolulu, Hawaii 96815
Dear Mr. Arnest:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project
Your letter to Dr. Richard Marland, State Office of Environmental Quality Control, has been referred to us for reply since we are the proposing agency for the subject project. Your comments have been evaluated and our responses are as follow.
a. The development and evaluation of the 70 -foot right-of-way (ROW), as well as the 60 -foot and 56-foot ROW widths, are fully documented in the EIS under Chapter VI, Alternatives to the Proposed Action. The primary planning basis used in developing the traffic projections for the proposed action in terms of future forecasts of population and the economic outlook for the island of Oahu was obtained from the State Department of Planning and Economic Development and approved for longrange transportation planning on Oahu by the oahu Transportation Planning Program, now succeeded by the Oahu Metropolitan Planning Organization.
b. A complete background of the project is presented in the EIS under Chapter II, Section $E$, including the history of how the project was conceived and evolved to the present day. The widening of Kuhio Avenue to a 70 -foot RoW width is actually part of the Development plan for the WaikikiDiamond Head planning Area which supports the land-use policies established for the area under the General plan. It is also in conformance with the recently adopted Waikiki Special Design District. This Development plan does not include the conversion of Kalakaua Avenue into a pedestrian mall. The current Development Plan indicates that Kalakaua

Avenue is to remain open to vehicular traffic. There are no current plans to effectuate the Kalakaua lall concept. An amendment to the adopted Development Plan, along with the accompanying public hearing process, would be required in order to implement such a proposal.
c. The current existing land use policy and zoning conditions is contained in the recently enacted Waikiki Special Design District (VSDD), Ordinance No. 4573. The current land use policy is for a predominantly high density apartment use mauka of Kuhio Avenue and immediately makai of Kuhio Avenue. rherefore, the project area served by Kuhio Avenue will require greater street capacity than currently exists and therefore shown on the Development plan which is part of the WSDD ordinance to be widened to a 70-EOOt ROW.
a. Your preference for a two-way street with two lanes each way, a separate bicycle/pedestrian route and considerable landscaping is relatively similar to the $60-$ foot ROH alternatives analyzed and presented in Chapter VI of the EIS.
e. We refer you to the aporopriate sections in the Ers covering the following subjects:

1. Noise - Chapter V, Section A.
2. Traffic - Chapter II, Section C.
3. Relocation - Chapter V, Section D.
4. Underground Utilities - Chapter V, Section G.

We appreciate your interest in the proposed project.

> Very truly yours,


Director and Chief Engineer
cc: OEQC
Div. of Engineering

William Hee a Asscciates.
DMJM
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April 15,976
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June 30,1976
M. Charles A. Blum
P. O. EOK 1498

Honolulu, Hawaii 96806
Dear ix. Blua:
Subject: Environmental Impact statement for the Proposed thhio Avenue Midening Project

Thank you for your comments on the proposed project as expressed in your letter dated April (May) 15, 1976, to the State ofice of Enviromental Quality Control. Your coments have been evaluated and our responses are as follow.
a. The purpose and need for the proposed project is documented throughout the EIS and especially Chapter II, We can understand that as participants in the Workshop on the EIS, You hay have not had the opportunity to study the document in depth. mhere appears to be no need to do further study on the needs of the proposed project.
b. The probable impacts resulting from the proposed widening project is documented in Chapter $v$ of the EIS. As related to noise and air quality, the predicted noise level and carbon monoxide concentrations along the Kuifo Avenue due to the increased traffic are fully discussed in the EIS.
C. The proposed project will be consistent with the provisions of the Waikiki Special Design District (VSDD) with respect to use precincts, circulation plan and urban design controls. Provisions for non-conformity or variance within the affected area will be governed by section VI of ordinance 4573, WSDD, presumably on an individual basis. Foreknowledge of potential variance is not possible
until it occurs. until it occurs.

Mr. Charles A. Blum

- $2-$

June 30, 1976

We aporeciate your interest in the proposed project.
Very truly yours,

cc: OEDC
Div. of Engineexing

Hilliam Hee \& Associates DMJ

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# DEPARTMENT OF PUBLIC WORKS <br> <br> City and county of honolulu 

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650 SOUTH KING STREET
HONOLULU. HAWAII 96813


July 1, 1976

Mr. John Callahan
2575 Kuhio Avenue
Honolulu, Hawaii 96815
Dear Mr. Callahan:

Subject: Environmental Impact Statement for the
Proposed Kuhio Avenue Widening Project
We are responding to comments in your letter regarding the proposed project. We have evaluated your comments and our responses are as follow.
a. The proposed project is in conformance with the Waikiki-Diamond Head Planning Area and the recently adopted Waikiki Special Design District (WSDD). WSDD requires an average setback of 30 feet for new structures, measured from the Development Plan right-of-way (ROW) of Kuhio Avenue. Exceptions to the setback requirement can be made by the City Council.
b. Noise impact and air quality are discussed in Chapter VII in the EIS.
c. The most recent State Department of Planning and Economic Development's population projections were prepared by counties. Population growth for small geographic unit, such as district or census tracts was not projected.
d. All feasible alternatives were identified, analyzed and discussed in Chapter VI of the EIS. The alternatives included the Do-Nothing Alternative,

East-West Corridor Alternative, Alternative Routes Within the Project Area, and Alternative Widths for Kuhio Avenue of 70-foot ROW, 60-foot ROW and 56-foot RON.

We appreciate your interest in the proposed project.

ce: OEQC
Div. of Engineering

William Eee \& Associates
DMJM

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\operatorname{Mg} 15,1976
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Dear Cnvionmental Quality Commision,
The Kuhio Ove. E.I. S, is inadequatere and reeds ts ferm-dove. The statement is vaque, filled wit intinal catradictions, and docs rotguie sefficient atiention to the socio-economic inpact of the gerend anea begonal the immediate injactarea.

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of request that you regomal that thase problems and clarifi thesie psecgeic an thadiction. d als request a prore conprehensuip stuch of the socio-leconomic inpact on the general area of "the gingle".

Thank gou.
Demis Callan
p.O. Box 635

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96813 .
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## CITY AND COUNTY OF MONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813


ENV 76-297

Mr. Dennis Callan
P. O. Box 635

Honolulu, Hawaii 96813
Dear Mr. Callan:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project

Your letter dated May 15, 1976, to the Environmental Quality Commission was referred to this office for reply since we are the proposing agency for the subject project. Your comments have been evaluated and our responses are as follow.
a. Our interpretation on development impact from Chapter V, Section D, Subsection 3, of the EIS does not agree with yours. The partially quoted statement actually reads: "While the proposed action is likeiy to make development easier and may even accelerate it somewhat, the overall impact of the improvement of Kuhio Avenue on future growth and development in waikiki and in the project area in terms of magnitude and time should be minor." This statement is furcher embellished by other statements in this subsection. "The project area is presently in transition from low and medium density to high density apartment and hotel uses... these changes are the direct result of the land use policies of the City and County of Honolulu and market forces of supply and demand..."
"Because of Waikiki's unique location and attractiveness for tourists and residents, development pressures for hotels and apartments, historically, have not been influenced by inconvenient accessibility and congestion within Waikiki."
"As previously stated, accessibility already exists to the various sub-areas within the project area,
although on narrow and congested streets and by circuitous routes. In fact, many new developments have been recently or are presently being constructed in the project area. Additionally new building permits have been recently issued for construction of new highrise developments within the project area, some of which are adjacent to the project itself. As long as parcels of land are accessible, the impact of improved accessibility caused by the proposed action on future developments can only be speculated."

The above statements explain the rationale behind the statement that the impact on future growth and development "in terms of magnitude and time" should be minor. This conclusion is based on the premise that even if development were accelerated somewhat, i.e., growth occurring somewhat sooner with, rather than without the proposed action, the same magnitude of growth up to the allowable density could occur over the long-run assuming all other factors being the same. Hence, the impact of the development of a particular parcel of land that is destined to be developed but which may occur several years earlier should have little or no long-term adverse impact on the area.

Accessibility is just one of many other factors which determine whether future developments will occur and since, as stated in the EIS, accessibility does exist within the project area, although on "narrow and congested streets and by circuitous routes," the impact of improved accessibility caused by the proposed action on future developments can only be "speculated."
b. On air quality reference is made to the statement in Chapter V, Section B, "Although the project may increase air pollution in the immediate impact area which is that area located directly adjacent to Kuhio Avenue it is anticipated that future levels of pollution in this area will not be significantly affected by the proposed action."

This statement is based on the findings of an analysis to determine future levels of air pollution caused by the proposed action, which showed that the projected 1995 levels of carbon monoxide (CO)
concentration in the immediate impact area will be approximately equal to the State Ambient Air Quality Standards and significantly below the Federal Standards. Therefore, due to the above findings and the conservative methodology used in developing the co concentrations, it was determined that the proposed action will not have a significant impact on the critical impact area immediately adjacent to Kuhio Avenue.

Relative to the entire project area, as discussed in the same section of the EIS, the project will act to generally improve air guality by improving the overall efficiency of vehicular circulation through decreased trip lengths and smoother traffic flow, thus reduciag the levels of venicular emissions which would occur if the project was not implemented.
c. The proposed 56 -foot roadway width would be adequate to accommodate a proposed bike route which is cusrently plamed on the improved Kuhio Fvenue. The proposed roadway widch would be wide enough to provide 13-foot outside lanes. This lane widtir would be wide enough to accommodate both autonobiles and bicycles.
d. The widening of Kuhio. Avenue to a 70-foot Row wiath is part of the Development Plan for the Waikiki area winch suppoits the lanci-use policies established for the area under the General plan. This Development Plan does not include the conversion of Kalakaua Avenue into a pedestrian mall. There are no current official plans to effectuate the Kalakaua Mall concept. To do so vould require an amendment to the acopted Development plan, aiong with the accompanying public hearing process.

Your interest in the proposed project is appreciated.
Vexy truly yours,


KAZU MAYASHIDA
Director and Chief Engineer
cc: OEQC
Div. of Engineering

Wijliam Hee \& Associates
DMJU

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Dr. RichadMarland Drectar
 Kapalulue.
Response fo: Enorormental unpod Spatement
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The impact of this project affects people from the entire Island aud slate of hawaii as used as visitors．It must not serve the meed of resident e Es of the area alone nor land owners che will dexifit of increase duty and high rise development．

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Rospeetifuly subrivited
vimikelslewer
Michael B．CREAGH

## CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET HONOLULU, HAWAII 96813


KAZU HAYASHIDA<br>OIGECTOR ANO CHIEF ENGTNEEA<br>ENV 76-288

July 1, 1976

Mr. Michael B. Creagh
95-304 Auhaele Place
Mililani Town, Hawaii 96789
Dear Mr. Creagh:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project

We are responding to comments in your letter to Dr. Richard Marland, State Office of Environmental Quality Control, regarding the proposed project. We have evaluated your conments and our response is as follow.
a. One of the basic objectives of a transportation plan as stated in the Oahu General Plan is that "they should be designed as an integral part of and complementary to our land use pattern." The recently enacted Waikiki Special Design District (WSDD) recognizes the proposed widening of Kuhio Avenue and establishes new uses and densities that would improve and complement the public facilities and utilities in Waikiki.

The properties fronting on Kuhio Avenue are designated Apartment Precinct with urban design controls which limits building heights to 220 feet to 240 feet. Thus, the future character of the project area can be described as high density apartment development.

The existing development along Kuhio Avenue may be characterized as basically low density residential development. Today, Kuhio Avenue is narrow, treelined and in character with the existing community and has traffic volume which is light due to physical limitations. The proposed action for a wider roadway to accommodate larger volumes of traffic may be described as being out of character with the existing community. One must, however,
conclude that the blending of the existing street and the development it serves evolved over many years into the environment that exists today.

The widening of Kuhio Avenue to serve the emerging development will admittedly be in contrast to the existing development. However, over time with the generous 30-foot setback established under the WSDD, a new and compatible character along Kuhio Avenue will emerge. The transition period may initially be difficult to adjust to by both local residents and visitors alike even with the best of landscaping design. However, with the new controls provided under the WSDD, the widening of Kuhio Avenue is intended to promote greater harmony within the community on the long-run basis.
b. In Chapter VI of the EIS, Alternatives to the Proposed Action considers and analyzed a 56-foot right-of-way (ROW) as an alternative to the proposed action. In the same chapter, a particular subalternative with a 56 -foot roadway width at intersections with left turn pockets and a reduced 46-foot roadway width in between, was identified and analyzed.

Mini-parks have been considered and could be incorporated in remnant portions of property acquired by the City in future adjunct projects.
c. The proposed 56 -foot roadway width was developed to accommodate a bike route and bus route on the facility. The proposed action will also provide sidewalks in areas where there are currently none and new street lighting along the roadway. Ramps for handicapped persons at intersections vill also be provided. A landscaping plan for the street is being finalized in coordination with the Department of Parks and Recreation and coordinated with the Department of Land Utilization.
d. Design standards, details, etc., will have to conform to the urban design guidelines as provided in Section $5 B$ and other applicable sections of WSDD.
e. The proposed street widening and improvements will not just benefit the residents and land owners, but everyone who visits or passes through the project area. As stated in Chapter VIII of the

ETS, The Relationship Between Local Short-term Use of Man's Enviroment and the Maintenance and Enhancement of Long-temm Productivity, "mhe most important factor in the relationship of short-term uses and long-tem productivity is that the proposed action is considered to be a long-tem improvement to Haikiki. As described in this Environmental Impact Statement, the future of Waikiki is intimately related to the future of tourism in the state of Hawaii. Consequently, any improvement which enhances the general environment of Waikiki would benefit the entire state."

We appreciate your interest in the proposed project.
Very truly yours,


KAZU HAYASMIDA
Director and Cnief Engineer
cC: OEOC
Div. of Engineering

William Hee $\&$ Associates
DKJT

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## CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII $968: 3$


Mr. John T. Funai
c/o Hawaii Community Design Center, Ltd.
2480 Koa Avenue
Honolulu, Hawaii 96815
Dear Mr. Funai:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project

We are responding to comments in your letter dated May 15, 1976, to Dr. Richard Marland, State office of Environmental Quality Control, regarding the proposed project. Your comments have been reviewed and our responses are as follow.
a. In Chapter II, Section C of the EIS, the vehicular traffic data used and the basis for its derivation are fully discussed. Based on the traffic projection analysis, between 91,000 to 99,000 auto trips will be made on an average weekday in the ewa-kokohead direction through the project area during the year 1995.
b. Yes, the projected traffic volumes indicate that demand will far exceed the existing street capacity.
c. The alternatives to the 70 -foot right-of-way are fully described in Chapter VI of the EIS, and include the Do-Nothing Alternative, East-West Corridor Alternative, Alternative Routes Within the Project Area, and alternative design widths for Kuhio Avenue.

Providing adequate sewers for existing improved areas is solely the responsibility of the Division of Sewers of this department.

Bikeways and pedestrian right-of-way are provided by the project. Mini-parks have been considered

July 1, 1976
and may be established as future adjunct projects in remnant parcels outside of the right-of-way.

Traffic-free centers in Waikiki would require City Council approval and are considered not implementable at this time. Also, they would not be in conformance with transportation policies adopted for Waikiki.
d. The proposed project is planned to accommodate an average density of approximately 185 persons/acre. The projected resident population for Oahu for the year 1995 is 965,000 people (Series E-2, DPED). No breakdown figures for specific areas within the County is available; hence, your question regarding "population excess in Honolulu" cannot be evaluated.

Environmental standards relating to water, air, noise, etc., are regulated by public health regulations of the State Department of Health. Individual subjective "standards" by its very nature, cannot be considered.
e. As stated in the report entitled, "Relocation Impact and Program Plan, Kuhio Avenue Widening Project," which is summarized and referenced to in the EIS, "The State's relocation law, Act 166 of 1970 as amended, and its rules and regulations require that any State or County agency which displaces persons assure that 'there are or are being provided in areas not generally less desirable in regard to public utilities and public and commercial facilities and at rents or prices within the financial means of the families and individuals displaced, decent, safe and sanitary dwellings equal in number to the number of displaced families and Individuals and available to such displaced families and individuals and reasonably accessible to their places of employment.' In addjtion, the rules and regulations require relocation program plans to show the 'methods and procedures by which the state agency will assure an inventory of currently available comparable housing which is decent, safe and sanitary, including type of building, state of repair, number of rooms, needs of the person or family being displaced, type of neighborhood, proximity of public transportation and commercial shopping areas, and
distance to any pertinentrsocial institutions, such as cnurch, commanity facilities, etc.."i

Your interest in the proposed project is appreciated. Very truly yours,


FO: KAZU HAYASHIDA Director and Chief Engineex
cC: OERC
Div. of Engineering

Wỉliam Hee \& Associates DMJM
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ENV 76-277

June 30, 1976

Mr. Richard Kam
2442 Kuhio Avenue
Honolulu, Hawaii 96815
Dear Mr. Kam:
Subject: Envirommental Impact Statement for the Proposed Kuhio Avenue tiadening Project

Thank you for your comments on the proposed project as stated in your letter of llay 15, 1976 to the State Offica of Environmental Quality Control. Your comments have been evaluated and our responses are as Eollow.
a. Sidewalks width less than seven (7) feet could be sufficient till 1995; however, the minimum width of sidewalks is seven (7) feet from the curb to the property line. Final design of pedestrian right-of-way for the project will be reviewed by the City's Department of Land utilization in confomance with the Waikiki Special Design District.
b. The desirability for a 70-foot right-of-way and a 56-foot roadway is documented in the EIS. We agree that landscaping and beautification should be given top priority. -
c. Your desire to have Waikiki declared a National pack should be commancated directly to the City Council.
d. Kuhio Avenue is being widened by taking properties on both sices of the street; however, to take equal amounts from both sides would cause greater disruption and relocation of residents.

We appreciate your interest in the proposed project.

cc: OEQC
Div. of Engineering William Hee \& Associates DBJM
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hws. frewiw yucthani

## CITY AND COUNTY OF MONOLUKU

650 SOUTH KING STREET
HONOLULU. HAWAII 96813

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FRANKF.FASt
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ENV 76-295

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\text { July l, } 1976
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Ms. Louisa McShane 2496 Kuhio Avenue Honolulu, Hawaii 96815

Dear Ms. McShane:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project

We are responding to your letter dated May 15, 1976, which was referred to this office from the state office of Environmental Quality Control. We have evaluated the comments regarding the proposed project and our response is as follow.
a. The widening of Kuhio Avenue had its beginning with the adoption of the Detailed Land Use Map (DLUM) and Development Plan (DP) for the Waikiki-Diamond Head Planning District in 1968 under Ordinance Numbers 3147 and 3167, which established the 70-foot right-of-way (ROW). Subsequently, in 1971, the 70 -foot ROW was, through an official General plan amendment process including public hearings, realigned and reaffirmed by formal adoption of Ordinance Numbers 3801 and 3802 by the City Council. This latter action was taken to minimize the effect of the 70 -foot widening on existing structures.

Just recently, the Waikiki Special Design District (WSDD) ordinance was adopted, effective April 1 , 1976, which establishes new requirements and provisions for future development of Waikiki. This WSDD ordinance recognizes the previously established 70-foot ROW for Kuhio Avenue as contained in Section V, Article B.2.a. of said ordinance.

Although one of the primary purposes of the proposed action is to implement the Development Plan for

Waikiki, that is to widen Kuhio Avenue to 70 -foot ROW width with attendant street improvements, various other alternative widths were evaluated and their impacts assessed as fully discussed in Chapter VI of the EIS. Based on projected traffic volumes in 1995, the existing street system in the project area, without the widening of Kuhio Avenue, would result in street design capacities exceeded by 30 percent in the Koko Head-bound direction and 40 percent in the ewa-bound direction. The discontinuity of Kuhio Avenue between Kaiulani Avenue and Kapahulu Avenue would further aggravate traffic problems on Kaiulani Avenue and its intersection with other major east-west streets in the future. Recognizing that these potential traffic problems exist, the City is proposing to widen Kuhio Avenue and make necessary street and utility improvements to accommodate the future needs of the area.

Given the above, three alternative roadway sections were developed and evaluated to meet the projected 1995 travel demand in the area. The roadway sections were 42 feet, 46 feet and 56 feet, curb to curb dimension, as shown in Figure 13, page 116 of the EIS. Although all three alternative roadway sections could be placed in the 70 -foot ROW, lesser ROW widths were used in the analysis of the 42-foot and 46-foot sections. A detailed evaluation of the alternative sections was conducted and the results are summarized on page 118 of the EIS. Based on accepted traffic engineering standards for design of streets, the 56 -foot roadway section with 70 -foot ROW was found to provide the most desirable facility to support the City's established land use and transportation policies.
b. As statedin the report entitled, "Relocation Impact and Program Plan, Kuhio Avenue Widening Project," which is summarized and referenced to in the EIS, "The State's relocation law, Act 166 of 1970 as amended, and its rules and regulations require that any State or County agency which displaces persons. assure that 'there are or are being provided in areas not generally less desirable in regard to public utilities and public and commercial facilities and at rents or prices within the financial means of the families and individuals displaced, decent, safe and sanitary dwellings equal in number to the number of displaced families and individuals and
available to such displaced families and individuals and reasonably accessible to their places of emploment.' In addition, the rules and regulations require relocation program plans to show the 'methods and procedures by which the State agency will assure an inventoxy of currently available comparable housing which is decent, safe and sanitary, including type of builaing, state of repair, number of rooms, needs of the person or family being displaced, type of neighborhood, proximity of public transportation and commercial shopping areas, and distance to any pertinent social institutions, such as church, community Eacilities, etc..""..
c. In Kuhio Avenue, the proposed sewer line will vary from 12" to $30^{\circ}$ in dianeter. The proposed sewer improvements are designed to accommodate a population density of some 185 persons per acre in the project area as well as to convey wastewater generated within the tributary area.

Your interest in the proposed project is appreciated.


CC: OECC
Div. of Engineering

William Hee a Associates
DMJM
$\pm$
IRECTOR PUBLIL WORKS
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In regard to THE preposen cuinanerne of kurio mere I have some questions to ask that it hope you立ie cirwe time to conswer. I would ilife to know what plans are cunently being considereed TO astall bikeurays un atis steets. If ary plans aue ving COnSIDERES WHAT Specific improvements will be inpleminted. Can ot loek at the plans?

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A Riraviays or mass Tuansit purposes. Howeven, 1 arnot coippant undeming that wowled cin anyway avilitate easien cutomsile access to cuartilu. i.isulid appuecrate antueply you could guie ne. ficoka.

Peter L mozgan $\rightarrow$ 3707 C DIMMOND ANAC Honolviu, Hawai

Mr. Peter I. Morgan
3707-C Diamond Head Road
Honolulu, Hawaii 96816
Dear Mr. Norgan:
Subject: Environmental Impact Statenent for the Proposed Kuhio Avenue Widening Project

Thank you for your comments regarding the proposed road widening project. Aster evaluating your coments, cur responses are as follow.

As discussed in Chapter II, Section C, Subsection 2 and Chapter VI, Section B, Subsection 1 of the EIS, the City has identified Wuhio Avenue as a potential bike route through Taikiki. The proposed street widening through the project area would provide a sufficient street width to accomodate this proposed bike route. As shown in Figure 5 in the EIS, the proposed 56 -foot roadway widh would provide for a lo-foot left-turn lane, two 10-foot inside lanes and two 13-foot outside lanes.

The proposed outside lane width will be sufficient to accommodate both bicycles and automobiles. The implementation of this proposed project along with the planned roadway wicening of Kuhio Avenue between Kalakaua and Seaside Avenues to a width of 56 ft . will create a continuous right-of-way and roadway width along the entire Kuhio Avenue, and thus providing accommodations Eor the proposed bike route along the entire length of Kuhio Avenue. Plans for the proposed improvenent will be available for reviewing at the office of the Division of Engineering, l5th floor of the Honolulu Municipal Building. We suggest that you arrange for an appointment by calling Mr. Joel Lee at 523-4071.

As stated in Chapter II, Section A, Subsection 4, "The purpose and need of this project is finally to provide a sufficient right-of-way to accomodate City bus service on Kuhio Avenue becween Kaiulani and Kapahulu Avenues. The City's transit planners in the Department of Transportation Services have indicated that the
transit service on the centrally located Kuhic Avenue would provide the shortest access time to the Waikiki transit users and therefore have specified in long-range transit plans the use of Kuhio Avenue as the main transit corridor through waikiki. The existing right-of-way through the project area is presently too narrow for the provision of this service without further reducing the restricted street capacity for automobiles."

We appreciate your interest in the proposed project.

> Very truly yours,


For haze hayashida
Director and Chief Engineer
ce: OEQC

- Div of Engineering

William Me it Associates
DRUM

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\text { May 15, } 1976
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Ar. Richend Morland, Driector.
Olfice of Evvirnmental Quality Contid
550 Halekauwila St., Room \# 301
Honoluln, Hi 96813
Dean Ar. Maland,
I livee on Kulio Ave in Haibibei and am very concerned abort the widening of Kilhio Ave. it world lise to remain in the neighbalood, as A heve hived thare for two years. Af Kuhio is, widanad to $70^{\prime}$, A will have to mave. As it Neasile teet Kulio Ave could be widenad, if it is necessuny tocloso, but less than the curnant 70 , proposal ? Howe otle alternative been given sevicus condiseration?

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$\theta$ this some pairows ttougt should $i$ given to alternativea to a $70^{\prime}$ kulis Ave. Tai vold raquine muel no e careful calculation of Situne Waibibi density wis woul in tum seffite a ore conprehensive ity plan, as regands future arbiler developmant. Sinienaly ${ }^{\text {s }}$

## CITY AND COUNTY OF HONOLURU

650 SOUTH KING STREET HONOLULU. HAWAll 96813



ENV 76-290

July 1, 1976

Mr. Gerald D. Paulson
2512 Kuhio Avenue
Honolulu, Hawaii 96815
Dear Mr. Paulson:

## Subject: Environmental Impact Statement for the

 Proposed Kuhio Avenue Widening ProjectWe are responding to comments in your letter dated May 15, 1976, to the State Office of Environmental Quality Control regarding the proposed project. Your comments have been evaluated and our responses are as follow.
a. Various alternatives to the proposed project have been considered and are discussed in Chapter VI of the EIS. In addition to the 70 -foot right-ofway (ROW), the alternatives included the Do-Nothing Alternative, East-West Corridor Alternative, Alternative Routes Within the Project Area, and alternative ROW widths of 60 feet and 56 feet.
b. After developing traffic volumes to determine the roadway requirements based on the future growth and density in Waikiki as reflected in the Development Plan for the Waikiki-Diamond Head Planning Area and the Waikiki Special Design District (WSDD) ordinance, the 70 -foot ROW alternative was considered the most favorable.
c. According to the urban design guidelines for WSDD, the average building setback of 30 feet will be required for new construction along Kuhio Avenue, measured from the Development Plan ROW. Exception to the setback requirements can be made by the City Council.
d. The Waikiki Special Design District as established by Ordinance No. 4573 and the Development Plan for the Waikiki-Dianond Head'Planning Area represent the comprehensive city and County plans for future Waikiki developments. The proposed project is in conformance with these planning documents.

Your interest in the proposed project is appreciated.
Very truly yours,

5. KAZU HAYASHIDA

Director and Chief Engineer

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cc: OEQC
Div. of Engineering
Willian Hee \& Associates
DMJM
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Keveicheri Yherland，xluredtr


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Sixiserely,
Mary A. Paulsos
2512 thaio
Howluen, H/A 96815

June 30, 1976

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Ms. Nary A. Paulson
2512 Kuhio Avemae
Honolulu, Eawai土 96815
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Dear Ms. Paulson:
Subject: Environmental Impact Statement for the Probosed Kuhio Avenue Ticening Project
Your letter to Dx. Pichard Marland, State office of Envirommental Quality Control, has been referred to us for reply since we are the proposing agency for the subject project. Your comnents regarding the project have been evaluated and our responses are
as follows:
a. The EIS does take into considexation the future growth of the area as reflected by the city's land use policies. In fact, the traffic volumes used in cstablishing the need for a widened Kuhio Avenue are based on forecasted population growth of the area up to 1995 .
b. With respect to new davelopments, many have recently or are presently betng constructed in the project area without the proposed widening inprovements. This is to say that although accessibility is limited, it has not deterred the development pressures for hotels and apartments.
c. All official plans of the City indicate that Kalakaua Avenue is to remain open to vehicular traffic. These plans ane indicated on the Development Plans for the Waikiki-Diamond Head planning Area and the Circulation Plan of the Waikiki Special Design District. Accordingly, the EIS has been prepared on this basis and the proposed widening is part of an overall street improvenent program to upgrade the island-wide network of streets and highways on Ohhu.
d. A relocation plan has been developed and is referenced to in the EIS. The plan documents the results of a detailed survey conducted of the affected residents, the existing structures to be affected, and available replacement housing both within and outside of Waikiki.

We appreciate your interest in the proposed project.

> Very truly yours,
> For kAgU HAYASHIDA
> Director and Chief Engineer
cc: OEQC
Div. of Engineering

William Ne and Associates
DMJM

Ir. Richard harland -
Ban sur concurred init the reasons for the need of a 70 Post right of way. St would peers to ma that a 56 foot maximum would de much more appropriate.

Wite the maw rules Ret up April inst, it would peas that what was established before that time needs to be reassessed


Haw many building would hare to be tors down or. refaced ix order- - *o accomplish the 70 'inge of way?

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tthat itis actual merdo asurel as the Realinges of tho prope antuacis affated would be considered prior to imphemantatio

For your time and considuation as were as jour help ix fintiver Cobing isto alternatives, Dtaxhipur I

Sunceraly
Qui Soluedile 282 Wai nani Way, \#202 Honoulu, HI $9: 515$

June 30, 1976

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Ms. Ann Schenfele
287 Wai Mani Way, :202
fonolulu, Hawaii 96815
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Dear Ms. Schenfele:

## Subject: Environmental Impact Statement for the

 Proposed Kuhio Zvenue Widening ProjectWe are responding to comments in your letter to Dr. Richard Harland, State office of Environmental Quality Control, regarding the proposed project.

The evaluation of the 70 -foot mightof-way (ROM) alternative and its comparison with the other 60 -foot ROH and 56 -foot pow width attematives axe presented in Chapter vI of the EIS. The costs, number of dwelling units affected and various environmental impacts are all discussed in this document and summarized in Table 2 on page 113. The 70 -foot ron will probably result in the demolition of 16 relatively mall buildings and the refacing of 7 others.

Upon adoption of the Waikiki Special Design District ordinance, an analysis was made to determine its effects on the proposed action relative to traffic projections. It was found that the nev ordinance would not significantly affect and of the projections made.

By widening the street more on the maul side than the makai side, less disruption to existing buildings would occur as determined during the amendment procedures of the Development plan in 1971, and cited in the EIS.

Widening of Kuhio Avenue will best meet the needs of the affected area including reducing congestion, improving vehicular accessbility and circulation in the project area, improving pedestrian circulation and safety, etc. A lesser action will not solve the ills of the project area.

The cost of the 70 -foot and the 56 -foot pors are estimated to be $\$ 4,200,000$ and $\$ 2,400,000$, respectively.

The proposed project is in conformance with the Waikiki Special Design District, Ordinance 10. 4573, which was adopted by the City Council and became effective as of fipril 1, 1976. Hence, it represents the current land use policies of the City and County of fionolulu.

We thank you for your interest in the proposed project.
Very truly yours,


KAZU HAYASFIDA
Director and Chief Engineer
cc: OEQC
Div. of Engineering

William Hee \& Associates
DMJM

In. Markind -
Os a resident of Waikiki ol corode line to sugpest Fit Remenat dificiencies in the E. 7.5 regording the proposed wideming of Kulio Ane.

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## CITY AND COUNTY OF MONORULU

650 SOUTH KING 5 TREET HONOLULU, HAWAII 96813


July 1, 1976

Mr. Jim Shon
243 Liliuokalani Avenue, 妟108
Honolulu, Hawaii 96815
Dear Mr. Shon:
Subject: Environmental Impact Statement for the Proposed Kuhio Averue Widening Project

We are responding to comments in your letter dated May 15, 1976, to Dr. Marland, State Office of Environmental Quality Control, regarding the proposed project. Your comments have been evaluated and our responses are as follow.
a. All reasonable and implementable alternatives have been considered in the EIS including a vastly improved and expended mass transit system which have been assumed in forecasting vehicular traffic volumes for Waikiki. The alternatives studied included the Do-Nothing Alternative, East-West Corridor Alternative, Alternative Routes Within the Project Area, and alternative design widths for Kuhio Avenue.
b. The concept of shuttle service to the area between Kaiulani and Kapahulu and "traffic free" area was not considered as a viable alternative that would satisfy the transportation policies for the area.
c. The EIS does not state that the existing community is undesirable and expendable. It merely attempts to describe as it is today such that the various potential impacts resulting from the street widening could be related to both the existing and future environment.
d. Significant impacts are considered and evaluated according to the provisions and regulations

## Mr. John Stewart

6) The agency will provide other advisory services to aligible persons through reEerrais wich regard to employment, training, health, welfare and other assistance in order to minimize hardships.
We appreciate your interest in the proposed project.


For mazu hayashida Director and Chief Engineer
cc: OEQC
Div. of Engineering

William Hee a Associates
DMJM

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This Impact Study is forly doue and io prtiticaty one-sided. I seguect some nuil stidies to be added to itl
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Squane istanat

June 30, 1976

Es. Suzanne Stewart
2506 Kuhio Avenue
Honolulu, Hawaii 96815
Dear Ms. Steward:
Subject: Environmental Impact Statement for the proposed Kuhio Avenue Widening Project
Thank you for your letter to the State Office of Environmental Quality Control regarding the proposed project. Your comments have been evaluated and our responses are as follow.
a. The widening of the street will result in better distribution of traffic between all eastmwest streets in the project area and hence would not necessarily impact the park and zoo users.
b. Future growth and development of the area and fits consequent change in the area would be the result of the City's land use policies for Waikiki as reflected in the new Waikiki special Design District (WSDD) ordinance and not due to widening of Kuhio Avenue.
c. The widening of Kuhio Avenue is part of an overall traffic improvement program as outlined in the Topics study which is referenced (wo. 9) in the bibliography of the EIS, and also part of the Development plan for. the Waikiki-Diamond Head planning Area and the Circulation Plan under the Waikiki Special Design District. The need for the widenire is based on meeting future demands created by both hotels and apartments for all types of trips including hotel workers.
d. The statement does consider various alternative roadway widths as presented in Chapter VI of the EIS.

They included the right-of-way alternatives of 70-foot, 50-foot and 56-foot. In adaition, the "co-nothing" alternative, East-West Corridor alternatives and alternative routes within the project area were considered and discussed.
e. The projected traffic volumes used in analyzing roadway recuirements are based on a vastly improved and expanded mass transit systen as described on page 22 of the EIS. There are no conflicts with mass transit plans. ...
f. Social-economic impacts are discussed in section $D$, Chapter $V$ of the ETS. As part of the impact assessment, the relocation of residents and their needs have been considered based on home interviews conducted of all available residents. This is discussed on page 84 to 89 in the EIS.
G. As stated on page 57 of the EIS, the Department of Land and Natural Resources based on their review of the proposed project found no sites or places of historical or archaelogical significance.
h. The Waikiki Special Design District (FSDD) ordinance has been reviewed relative to its effect on the proposed action and the findings are included as a supplement to the PTS. Non-conformity of structures will be governed by section VI of the WSDD ordinance on an individual basis.
i. The impact of relocating people is perhaps the biggest concern to the city relative to this project. As stated above, a home interview was conducted to assess this impact in tems of suitable replacenent housing.
j. The elimination of blighted areas such as the "Maikiki Jungle" may have a positig (reduction) effect on the incicence of crime. We are not aware of any direct correlation between crime rates and the progosed improvement.
Your interest in this project is appreciated.

cc: OEQC
Div. of Engineexing

Willian Hee \& Associates


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Fabar vtele 1612 lastilemi sff.
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Candy Wietsins
Yzio Salt, Fike Bate Jes


ENV 76-291

July 1, 1976

Lis. Freda Sulla 1612 Kuhilani Street Honolulu, Hawaii 96821

Dear Ms. Sullam:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project

Thank you for your concept of a "vehicle free" Waikiki as expressed in your letter to Dr. Richard harland, State office of Environmental quality control. As a former member of the planning Commission who participated in the public hearings on the 70 -foot right-of-vay of ohio Avenue, you must realize that your concept is not in conformance with the official planning policies of the project area. Hence your "alterative" was not considered a viable and implementable one.

We appreciate your interest in the proposed project.

> Very truly yours,


FOR KAGU HEYASETDA Director and Chief Engineer

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cC: OEQC
    Div. of Engineering
    William Hee & Associates
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Uery timery yours,
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July 1, 1976

Ms. Candy Wilkins
A280 Sale Lake Boulevard
Honolulu, Hawaii 96818
Dear Ms. Wilkins:
Subject: Environmental Impact Statement for the Proposed Kuhio Avenue Widening Project

We are responding to comments in your letter to Dr. Maryland, State office of Environmental Quality Control, regarding the proposed project.

The creation of a pedestrian mall in the waikiki area in place of the Kuhio Avenue widening project is not consistent with the Development Plan for the area as well as the recently enacted Waikiki Special Design District ordinance.

We appreciate your interest in the proposed project.

> Very truly yours,


Trknzu HAYMSEIDAL
Director and Chief Engineer

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CC: OEQC
    Div. of Engineering
    William Hee & Associates
    DPJM
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## APPENDIX D

(Buildings affected by the proposed action)
promulgated by the State Environmental Quality Comission and other acceptable standards and practice.

Your interest in the proposed project is appreciated.

cc: OEQC
Div. of Engineering

William Hee \& Associates
DEJM

Buildings which will be affected by the proposed project have been tentatively identified and are listed below:

| Location | Address | Disposition of Bu |
| :---: | :---: | :---: |
| Kaiulani to Uluniu Avenues | 2406 Kuhio Avenue (Mauka) <br> 2418 Kuhio Avenue (Mauka) <br> 2424 Kuhio Avenue (Mauka) | Cut and Reface Demolition Demolition |
| Uluniu to Liliuokalani Avenues | 2442 Kuhio Avenue (Mauka) <br> $\left.\begin{array}{l}2460 \text { Kuhio Avenue, 204, 206, } \\ \text { 206A Kapuni St. (Mauka) }\end{array}\right\}$ <br> 2462 Kuhio Avenue (Mauka) <br> 2470 Kuhio Avenue (Mauka) <br> 2480 Kuhio Avenue (Mauka) <br> 166 Liliuokalani Avenue (Makai) | Cut and Reface Demolition <br> Cut and Reface Cut and Reface Cut and Reface Demolition |
| Liliuokalani to Ohua Avenues | $\left.\begin{array}{l}\text { 2482, 2486, 2488, 2506, } \\ 2510 \text { \& } 2512 \text { Kuhio Avenue } \\ \text { (Mauka) }\end{array}\right\}$ <br> 2483 Kuhio Avenue (Makai) | 5 buildings to be demolished <br> 1 of 4 buildings to be demolished |
| Ohua to <br> Paoakalani <br> Avenues | 201 Ohua Aven ue (Mauka) <br> 2530, 2530A Kuhio Avenue <br> (Mauka) <br> 202 Paoakalani Avenue (Mauka) | 1 building to be demolished 1 building to be demolished 1 building to be demolished |
| Paoakalani Avenue to Makee Road | 203 Paoakalani Avenue (Mauka) <br> 2588 Kuhio Avenue (Mauka) <br> 226 Makee Road (Mauka) <br> 2565A Kuhio Avenue (Makai) <br> 2569 Kuhio Avenue (Makai) | Demolition <br> Cut and Reface <br> Demolition <br> Demolition <br> Cut and Reface |

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July 1, 1976

Sis. Evelyn N. Smart
2408Prince Edward Street, Apt. 8
Honolulu, Hawaii 96815
Dear Ms. Smart:

> Subject: Environmental Impact Statement for the Proposed iuhio Avenue

This is to acknowledge your "statement" regarding the proposed Funio Avenue Widening project. Your views are respected and will be attached in the project's Revised EIS.

Thank you for your interest in the proposed project.
Very truly yours,


Director and Chief Engineer
CO: OEQC
Div. of Engineering

William Ne \& Associates DMD

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ENV 76-279

June 30,1976

Ms. Thelna Soueira
2424 Kuhio Avenue
Honolulu, Hawaii 96815
Dear Ms. Soueira:
Subject: Enviromental Impact Statement for the proposed Kuhio Avenue Widening Project

Te are responding to comments in your letter to Dr. Richard Marland, State office of Environmental Quality Control.

By widening the road more on the mauka side than the makal side less dismption to existing buildings would occur as detemined duting the mendment hearings of the Development plan in 1971, and cited in the EIS. finutes of the public hearings of March 11, 1971, and A2xi1 14, 1971, axe contained in Appendix A of the BIS (pages 138-146).

Left-over lands could be sold or ratained by the city for appropriate public uses. Public uses such as mini-parks and landscaping have been suggested for remant pieces outsida of the right-of-way (ROW).

The need and objective of the proposed project are discussed in the EIS, especially in Chapter II. Right-of-way alternate widths of 70-foot, 60-foot and 56-foot are discussed and evaluated in Chapter VI. Based on the evaluation, the 70 -foot wide right-of-way was selected.

Cost of the improvenents of Fuhio Avenue will be borne by the State goverment and the City and County of Honolulu. Since the proposed action is not an improvement district project, there will not be an assessment against benefited property owners or lessees.

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Ms. Thelma Soueira

We appreciate your interest in the proposed project. Very truly yours,

cc: OEQC
Div. of Engineering

Willian Hee \& Associates
DHJM


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Gohn at. Prewart
Q 506 RUHNOAVE:

ENV 76-276

June 30, 1976

Mr. John Stewart 2506 Kuhio Avenue
Honolulu, Hawaii 96815
Dear Mr. Stewart:
Subject: Environmental Impact Statement for the Proposed Fuhio Avenue Widening Project
Thank you for your letter to the State Office of Environmental Quality Control regarding the proposed project. Your comments have been evaluated and our responses are as follow.
a. The need for storm drains is recognized and included as part of this proposed project.
b. The Widening of Ala Wal Boulevard and Kalakaua Avenue was considered under "East-7est Corridor Alternatives," in Chapter VI, Section A of the ErS. It was found that these alternatives would provide improved traffic flow for through-traficic in Waikiki in the east-west direction but since it is located outside of the project area, it would not meet the other project objectives by neither improving circulation now providing street improvements (such as sidewalks, curbs and gutters, improved street lighting, wheelchair ramps, etc.) in the area.

Your suggestion on the closure of Euhio Avenue to all traffic would require City Council action. In addition, there are legal implications which you may not be aware of. There are many existing buiviliry 3 and properties which front: on Kuhio Avenue with auto access only from Kuhio Avenue. The restriction of automobiles on Kuhio Avenue would have a serious impact on the residents living in these buildings by denying them auto access resulting in serious legal implications.
c. The cactus tree in the 100 block of Liliuokalani Avenue will not be affected by this proposed project. The disposition of the tree, if Liliuokalani Avenue is widened, will be addressed at that time.
d. The City will carry out a relocation assistance program to reduce hardship to those affected by the project. Displaced families and individuals will be assisted in relocating into decent, safe and sanitary housing which is adequate to accommodate them and meets replacement housing standards which are consistent with state relocation statutes and regulations.

Relocation assistance will include services, authoxized payments, additional housing assistance where needed and information.

Services for farailes and individuals relocated will be provided as follows.
1) Through direct personal interview, the relocation agency will determine the needs of each eligible person for relocation assistance.
2) The agency will assist each eligible person in completing any required applications and forms for relocation payments and ocher aid.
3) The agency will provide current and continuing infomation on the availability and prices or rentals of comparable, decent, safe and sanitary housing in keeping. with approved replacement housing standards.
4) The agency will refer individuals to such units that appear to meet cheir housing needs and will assist them in obtaining other standard units which they may prefer.
5) The agency will insure adequate inspection of all relocation housing resources utilized by displaced persons orior to and subsequent to occupancy by such persons, except for public housing or housing which has been approved by HUD or VA for mortgage insurance or guarantee.```


[^0]:    * Includes apartment-hotel units.

[^1]:    *Agencies, organizations or individuals from whom written comments were received.

[^2]:    * No response received during the EIS consultation period

[^3]:    cc: Div. of Engineering
    William Hee \& Associates DMJM

[^4]:    "Traffic Draft" states "Neither air pollution nor vehicular traffic within the wakiki area is expected to increase as a result of this project." This may be true of Waikiki as a whole but not of the Kuhio

[^5]:    "Traffic Draft" states "The detailed design of such items as ...sidewalk width...will be constantly reviewed during the design of the project". A "54-foot pavement width between Kaiulani Avenue and Kapahula ivenue" in a "right-of-ray width of 70 feet", as indicated on page 5 of the document, With a projected movement of 60,000 vehicles daily, would seem hazardous. This would allow but 8 ' on either side of the roadway for sidewalks and plantings. With pedestrian volume generated by resort and high density apartments area an 8' area seem inadequate, inelegant, and dangerous. As suggested earlier, even major portions of this space will be occupied with news and magazine vending racks along with essential litter containers.

[^6]:    cc: Div. of Engineering
    William Hee \& Associates
    7 DMJM
    FHA, USS. DOT

[^7]:    Enclosure

[^8]:    Dak C. Cox
    Director

