HILO HOSPITAL

FINAL ENVIRONMENTAL IMPACT STATEMENT

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STATE OF HAWAII

DEPARTMENT OF ACCOUNTING & GENERAL SERVICES

FINAL

ENVIRONMENTAL IMPACT STATEMENT
FOR THE
PROPOSED HILO HOSPITAL FACILITIES
HILO, ISLAND OF HAWAII
TMK 2-3-27:2

THIS ENVIRONMENTAL DOCUMENT IS SUBMITTED PURSUANT TO CHAPTER 343, HRS

ACCEPTING AUTHORITY: GOVERNOR STATE OF HAWAII

HIDEO MURAKAMI
COMPTROLLER
DEPARTMENT OF ACCOUNTING & GENERAL SERVICES

PREPARED BY: GROUP ARCHITECTS COLLABORATIVE, INC. REES, INC.

TABLE OF CONTENTS

			PAGE
ı.	Summa	ry	1
II.	Proje	ct Description	2
	Α.	Project Location	
	В.	Statement of Objectives	
		General Statement of the Actions Technical, Economic, Social and Environmental Characteristics	
	D.	Phasing and Timing of Action	
		Use of Public Funds or Lands for the Action	
III.	Descr	iptions of Environmental Setting	28
	Α.	Physical and other Environmental Factors	
	В.	Land Use Designation and Controls	
	c.	Historical or Archaeological Factors	
	D.	Flora and Fauna	
	E.	Demographic Characteristics	
	F.	Socio-Economic Characteristics	
	G.	Support Services	
IV.	of La	Relationship of the Proposed Action and Use Plans, Policies and Controls the Affected Area	33
ν.		Probable Impact of the Proposed on on the Environment	34
	Α.	Open Space	
	В.	Water Run-Off and Drainage	
	c.	Grading	
	D.	Utilities	

		PAGE
	E. Transportation and Traffic	
	F. Pollution	
	G. Social Impact	
VI.	Any Probable Adverse Environmental Effects which cannot be Avoided	39
VII.	Alternatives to the Proposed Action	40
VIII	The Relationship between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity	42
IX.	Mitigation Measures Proposed to Minimize Impact	44
х.	Any Irreversible and Irretrievable Commitments of Resources	45
XI.	An Indication of What Other Interests and Considerations of Government Policies are Thought to offset the Adverse Environmental Effects of the Proposed Action	46
XII.	List of Necessary Approvals	47
	Appendix: Reproduction of Comments and Responses Made During the Consultation Process	48
xiv.	Agency Review Comments of Draft	49

EXHIBITS

		PAGE
I-1	Location Map Hilo Hospital	3
11-2	Existing Site Plan	4
11-3	Proposed Site Plan	5
II-4a	Proposed Ground Floor Plan (Subject to Change)	8
11-4b	Proposed First Floor Plan (Subject to Change)	9
II-4c	Proposed Second Floor Plan (Subject to Change)	10
II-4d	Proposed Third Floor Plan (Subject to Change)	11
11-5	Bed Counts by Division and Unit	12
II-6	New Departmental Area	13
11-7	Existing Site Plan	25
III-l	Distribution of Population in Hawaii County, 1977	30

APPENDICES

						PAGE
1.	Opinion on Water Availability for New Hilo Hospital: Department of Water Supply, May 25, 1978					A-1
2.	Comments on Zoning and Flood Hazard Designations: Planning					
	Deputy Director, April 27, 1978					A-3
3.	Comments on Preliminary Draft EIS: Planning Department, July 20, 1979 .					A-5
4.	Comments on Preliminary Draft EIS: Department of Public Works, July 20,	1979		. ,		A-6
5.	Comments on Preliminary Draft EIS: State Department of Health, July 19, 1979					A-7

I. SUMMARY

The proposed project includes the following six phases:

- A. Construction of 150-bed Acute Care Facility and 221 replacement parking stalls.
- B. Implementation of Acute Care Facility furniture and equipment plan.
- C. Renovation of the existing Administration Wing to accommodate 10-bed Short Term Psychiatric Department.
- D. Construction of 163-bed Long Term Care Facility.
- E. Renovation of the existing 5,500 sq. ft. Auditorium.
- F. Construction of 843-stall parking structure.

Six-year Capital Improvement Program (CIP) appropriations required to implement up to third phase of the project are presently estimated \$34,988,000.

Design of Acute Care Facility was commenced in March 1979 and construction is scheduled to start in December 1980.

The proposed construction would result in a minimal increase of water run-off. Drainage improvement would be provided as required in accordance with all applicable codes and regulations.

Temporary construction noise and dust problem would be minimized by normal noise and dust control procedures.

The construction of the new facilities and reuse of the existing hospital buildings would generate additional traffic volume on Waianuenue Avenue, Kaumana Drive and other feeders to these roadways. In addition, the construction of a temporary parking area across Waianuenue Avenue and its continued use will require appropriate traffic control practices to insure safe pedestrian passage to and from the hospital facility.

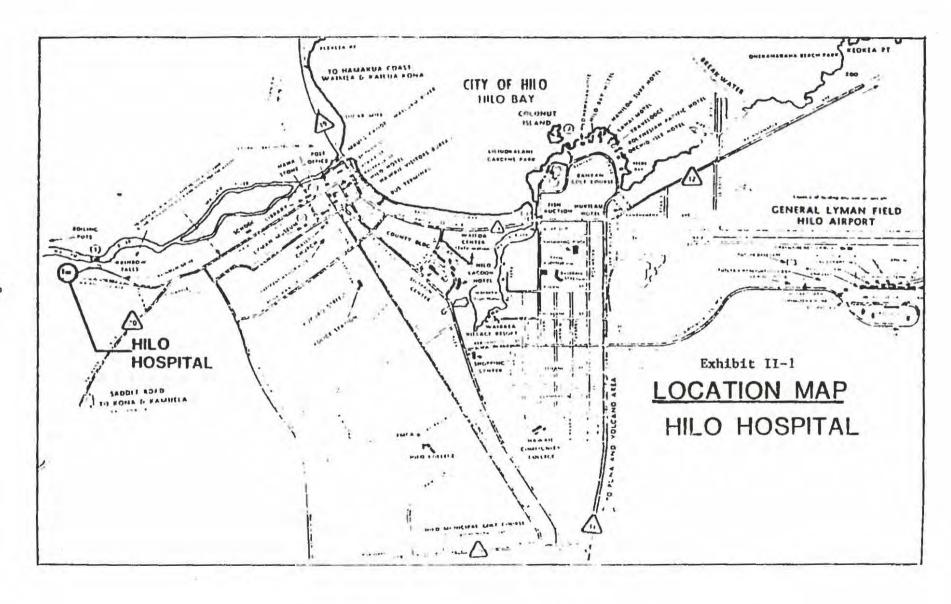
The construction of a new Acute Care Facility will require relocation of agencies and their personnel housed in the existing cottages. The degree of adversity would be determined by the success in finding relocation sites. The State Department of Accounting and General Services is working to meet the Rule 15 - "The Rules and Regulations Governing Assistance to Persons, Families, Business and Nonprofit Organizations Displaced By Programs For Public Purposes" of the Department of Social Services and Housing.

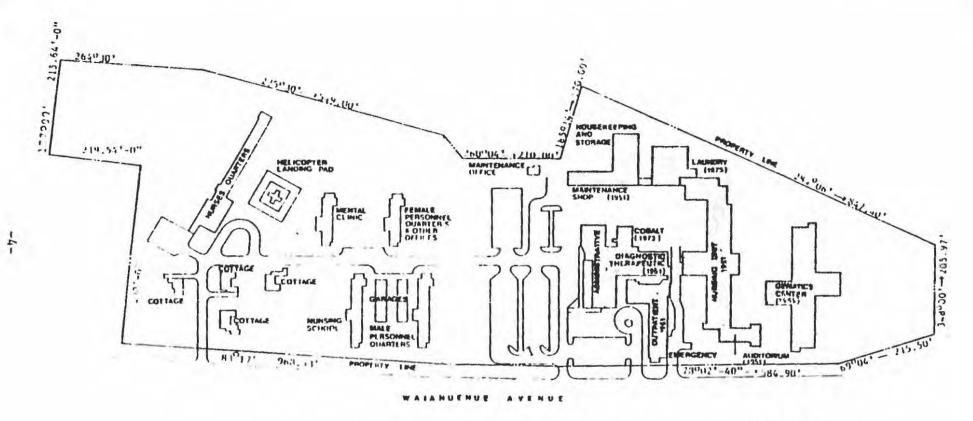
II. PROJECT DESCRIPTION

A. Project Location

Existing Hilo Hospital is, as shown in Exhibit II-1, located in a 20.4-acre land in north-western part of Hilo of the Island of Hawaii and is identified by parcel TMK 2-3-27:2 (1190 Waianuenue Avenue). New facilities will be constructed at the present parking lot cottage area of the existing hospital site (see Exhibits II-2 and 3).

Two hundred twenty-one (221) replacement parking stalls will also be developed on a lot across Waianuenue Avenue across from the hospital (TMK 2-3-32:part 1).



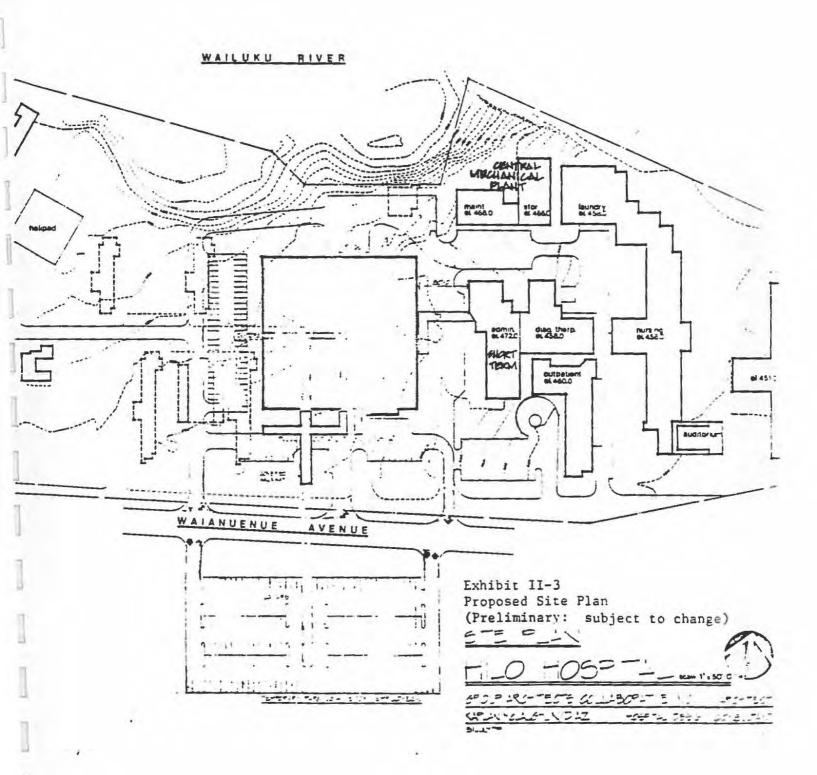


Sugar Cane Property (State of Hawaii/Mauna Kea Sugar Co., Lease) Exhibit II-2

HILO HOSPITAL

7717 7

TMK: 2-3-27:2 20.41 Acres



B. Statement of Objectives

The major goal of the proposed project is to improve the quality of life for families and individuals by planning and constructing the most humane and efficient health care facility in Hilo.

The objective of the first phase of the proposed project is to continue to provide acute care services to the Hawaii residents in a new facility. The new acute care facility will replace the services provided by the present facility which was originally built as a tuberculosis hospital in 1951 and was later expanded to meet rising and changing needs. The present facility is described in the State Health Plan as "inefficient, inadequate and inappropriate for acute care".(1)

A second objective of the proposed project is to increase the present 108-bed extended care services to 163-bed services and deliver them a new facility to meet the growing needs of the community. This will be done by constructing a new facility adjacent to the new acute care facility.

A third objective is to provide adequate parking facilities for the patients, hospital staff and employees, as well as visitors to the hospital. A temporary parking area of 200-stalls will be developed across Waianuenue Avenue to meet the parking needs until the permanent 843-stall parking structure is completed next to the new Acute Care Facility.

C. General Description of the Action's Technical, Economic, Social and Environmental Characteristics.

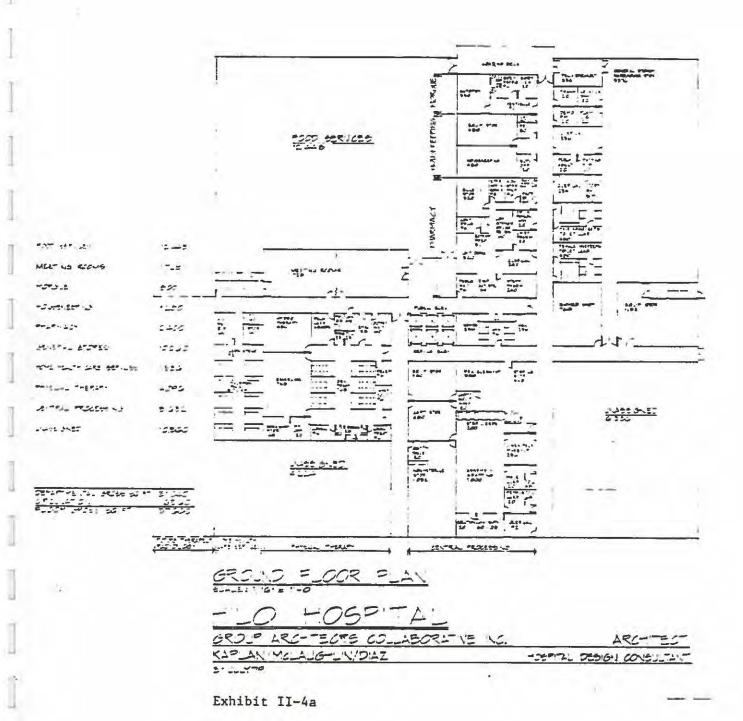
The proposed construction and renovation would include approximately 230,848 sq. ft. (preliminary: subject to change) floor area of Acute Care and 62,629 sq. ft. (preliminary: subject to change) floor area of Long Term Care Facilities and a Parking Structure of 843 stalls. The existing Laundry will be utilized as is and the existing Maintenance Shop will be renovated to accommodate Central Mechanical Plant for the new Hilo Hospital Complex.

Acute Care Facility is envisioned to be a 4-story building (see Exhibits II-4a through 4d). On the ground floor Food Services. Meeting Rooms, Morgue, Housekeeping, Pharmacy, General Stores, Home Health Care Services, Physical Therapy, General Processing will be located. First floor will accommodate Laboratory, Hospital Administration, Nursing Administration, Doctors Library/Lounge, Personnel, Chapel, Medical Records, Public Facilities, Volunteers, Admitting, Business Office, Social Services, Emergency, Radiology. Second floor will include Medical/Surfical Units, Conference Room, Short Stay, Physiological Testing, Respiratory Testing, Critical Care, Surgery. More Medical/Surgical Bed Units, Pediatrics, Obstetrics, Delivery/Nursing will be located on the third floor.

⁽¹⁾ Volume III, Appendix II - Subarea Council Reports, April 1978, p. HC 4.2.

A 221-stall replacement parking area will be developed across Waianuenue Avenue. 47 parking stalls for doctors will be located adjacent mauka of Acute Care Facility. 21 stalls will also be constructed for outpatients and emergency partients at the entrance of the building.

The proposed construction will include a total of 323 beds and its breakdown by division and unit is shown in Exhibit II-5. Detailed departmental space areas to be constructed and renovated are shown in the following Exhibit II-6.



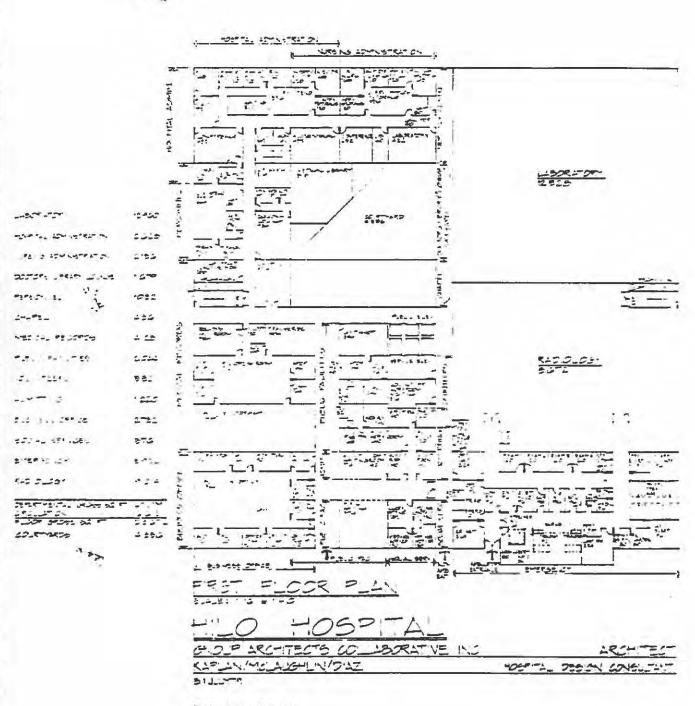
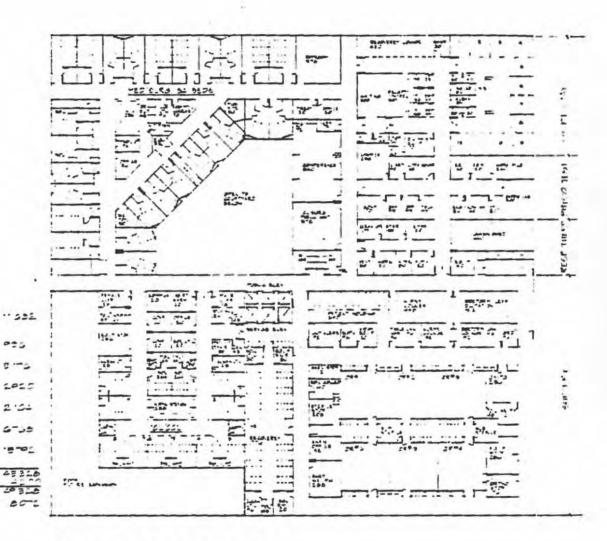


Exhibit II-4b



SECOND FLOOR PLAN

HILO HOSPITAL

GROUP ARCHITECTS COLLABORATIVE INC. ARCHITECT ARCHITECT COSTAL DESIGN CONSULTANT

Exhibit II-4c

+. C++

25. FT 125 120 55 F

Exhibit II-6 (cont'd)

Ground Floor	Departmental Gross sq. ft.	Circulation	Total Gross Floor Area	Court Yards
2nd Floor				
Medical/Surgical 34 Beds Conference Room Short Stay Physiological Testing Respiratory Therapy Critical Care	936 5,176 2,920 2,104 6,768			
Surgery Subtotal	15,792 45,328	4,200	49,528	8,072
3rd Floor				
NW Medical/Surgical 34 Beds NE Medical/Surgical 17 Beds and	10,778			
Pediatrics 17 Beds SW Medical/Surgical 17 Beds and Obstetrics	10,778			
17 Beds Delivery/Nursery	10,554 7,360			
Subtotal	39,470	4,130	43,600	14,000
TOTAL	182,917	21,503	20-,420	26,427

Exhibit II-6 (cont'd)

Short Term Psychiatric

10-bed unit (approximately 10,044 sq. ft.) will be located in the existing Administrative Wing.

Central Mechanical Plant

A 10,000 sq. ft. plant will be located in the existing Maintenance Shop and Housekeeping and Storage Area.

Long Term Care Facility

Approximately 69,693 sq. ft. facility will be constructed. No location has been selected yet.

Auditorium

The existing Auditorium of 5,500 sq. ft. will be renovated.

Parking Structure

A 843-stall parking structure will be developed. No location has been selected yet.

D. Phasing and Timing of Action (Subject to Change)

Construction of Acute Care Facility, the first phase of the Hilo Hospital project, will be commenced in December 1980 and will take a maximum of 3 years. Schedules of six (6) phases of the project are as follows:

FIRST PHASE: ACUTE CARE FACILITY (150 BEDS)

Planning (underway)

EIS
Tenant Relocation
Land Acquisition - Replacement Parking

Design (underway)

March 1979

CON for Construction Design

Commence Construction (36 mo.)

December 1980

28.50 mo. Contract Time

3.50 mo. Change Order Extension 4.00 mo. Rainy Weather Extension

36.00 mo. Total

Complete Construction

December 1983

SECOND PHASE: ACUTE CARE FACILITY
FURNITURE & EQUIPMENT

Initiate Planning (7 mo.)

December 1980

Request for Release of Funds CON for Design

Initiate Design (30 mo.)

June 1981

CON for Construction Design

Commence Construction (7 mo.)

December 1983

6.25 mo. Contract Time

0.75 mo. Change Order Extension

7.00 mo. Total

Complete Construction

July 1984

THIRD PHASE: ACUTE CARE PSYCHIATRIC DEPARTMENT RENOVATION

Initiate Planning (7 mo.)	November	1982
Request for Release of Funds CON for Design		
Initiate Design (13 mo.)	June	1983
CON for Construction Design		
Commence Construction (12 mo.)	July	1984
10.50 mo. Contract Time 1.25 mo. Change Order Extension 0.25 mo. Furniture & Equipment Installation		
12.00 mo. Total		
Complete Construction	July	1985
FOURTH PHASE: LONG TERM CARE FACILITY (163 BEDS)		
Initiate Planning (7 mo.)	July	1985
Request for Release of Funds CON for Design		
Initiate Design (22 mo.)	February	1984
CON for Construction Design		
Commence Construction (29.25 mo.)	December	1987
22.75 mo. Contract Time 3.00 mo. Change Order Extension 2.75 mo. Rainy Weather Extension		
0.75 mo. Furniture & Equipment Installation		
29.25 mo. Total		
Complete Construction	June	1990

FIFTH PHASE: AUDITORIUM RENOVATION

Initiate Planning (7 mo.)	July	1985
Request for Release of Funds CON for Design		
Initiate Design (10 mo.)	February	1986
CON for Construction Design		
Commence Construction (8 mo.)	December	1986
6.75 mo. Contract Time		
7.50 mo. Total		æ
Complete Construction	August	1987
SINTH PHASE: PARKING STRUCTURE (843 STALLS)		
Initiate Planning (7 mo.)	July	1955
Request for Release of Funds CON for Design		
Initiate Design (19 mo.)	February	1980
CON for Construction Design		
Commence Construction (25 mo.)	September	1967
19.75 mo. Contract Time 2.50 mo. Change Order Extension 2.50 mo. Rainy Weather Extension 0.25 mo. Furniture & Equipment Installation		
25.00 mo. Total		
Complete Construction	October	1984

E. Use of Public Funds or Lands for the Action

Six-year capital improvement program (CIP) appropriations required for the Hilo Hospital project are:

- 1978 Act 243 SLH Item E-3 appropriated \$2,000,000.
- 1979 Act 214/79 (1979) appropriated \$15,000,000 for construction of Acute Care Facility.
- 3. 1980 \$15,000,000 for construction of Acute Care Facility.
- 4. 1983 \$1,907,000 for furniture and equipment.
- 1984 \$1,081,000 for renovation of existing building for Acute Care Psychiatric Department.

Further detailed scope of work and cost estimates of the project project are as follow:

FIRST PHASE: ACUTE CARE FACILITY (150 BEDS)

SCOPE OF WORK

Site Work:

Demolition of Building, etc. Site Work Site Utilities 221 Replacement Parking Stalls

Hospital: Total Gross Area = 230,848 s.f. (Preliminary 7/31/79: Subject to Change)

<u>Item</u>		Cost in \$1,000
Site Work 221 Parking Stalls (P Hospital	Replacement)	\$ 1,000 446 19,089
Construction Cost (Ho Time factor (30 mo. (\$20,289
Construction Cost (He Regional Factor (15%)	, OA G L. 127, OA TANK.	\$24,550 3,683
Construction Cost (H: Contingency (198 + 19 Design (553 + 14.550 Inspection (192 + 14	8.233 x 19) x 54) x 1.07	\$28,233 544 1,432 439
Subtotal Works of Art & Lands Land Acquisition Tenant Relocation	caping (2%)	\$30,648 613 10 102
Total Project Cost		\$31,619
TENANT RELOCATION		
Female Quarters Male Quarters House House	19 Persons 16 Persons 1 Anesthesiologis 1 Maint. Supv. &	
	37 Individuals or	Families
Cost for Relocation Max. Rent or Pu Max. Moving Exp	스타를 하는 것이 그런다 ''다른 '' 보다는 다른 '' 전투'	\$1,500 300
Cost Estimate		\$1,800
Preparation of	cy Cost 39 x \$500	\$70,200 10,000 19,500 1,950
		\$101,650 Say \$102,000

SECOND PHASE: ACUTE CARE FACILITY FURNITURE & EQUIPMENT

SCOPE OF WORK

Provide the furniture and equipment which is estimated at 7% of the Acute Care Facility project construction cost.

COST ESTIMATE

<u>Item</u>	Cost in \$1,000
Construction Cost (Hon. $6/78$) \$20,289 x 7% Time Factor (66 mo. @ 0.007 = 0.462)	\$1,420 656
Construction Cost (Hon. 12/83) Regional Factor (15%)	\$2,076 311
Construction Cost (Hilo 12/83) Contingency Design w/EIS and CON \$2,076 x 0.06 Inspection	\$2,387 55 125 52
Total Project Cost	\$2,619

THIRD PHASE: ACUTE CARE PSYCHIATRIC DEPARTMENT RENOVATION (10 BEDS)

SCOPE OF WORK

Provide 10 beds at existing Administration Area.

Approximate size of renovation is 10,044 s.f. (PDR)

<u>Item</u>	Cost	in	\$1,000
Construction Cost (Hon. 6/78) 10,044 @ \$55 Time Factor (72 mo. @ 0.007 = 0.504)		5	552 278
Construction Cost (Hon. 6/84) Regional Factor (15%)		s	830 125
Construction Cost (Hilo 6/84) Furniture & Equipment Contingency Design (68 x 1.50) w/EIS and CON (30) Inspection		ş	955 70 26 132 30
Total Project Cost		\$1	,213

FOURTH PHASE: LONG TERM CARE FACILITY (163 BEDS)

SCOPE OF WORK

Design and construct a 163-bed long term care facility.

47,203 s.f. x 1.25 = 59,004 s.f. maximum from PDR for 138 beds

 $59,004 \times (163/138) = 69,693 \text{ s.f. for } 163 \text{ beds}$

COST ESTIMATE

Item	Cost in \$1,000
Site Work	ş 50
Building 69,693 s.f. @ \$82	5,715
Construction Cost (Hon. 6/78) Time Factor (114 mo. @ 0.007 = 0.798)	\$5,765 _4,600
Construction Cost (Hon. 12/87) Regional Factor (15%)	\$10,365 1,555
Construction Cost (Hilo 12/87)	\$11,920
Contingency (198 + 1.920 x 19)	234
Design (553 + 0.365 x 54) x 1.07	613
Inspection (192 + 0.365 x 17)	198
Subtotal	\$12,965
Works of Art & Landscaping (2%)	259
Total Project Cost	\$13,224

FIFTH PHASE: AUDITORIUM RENOVATION

SCOPE OF WORK

Renovate the existing auditorium 5,500 s.f. (CDR).

	2
<u>Item</u>	Cost in \$1,000
Construction Cost (Hon. 6/78) 5,500 s.f. @ Time Factor (102 mo. @ 0.007 = 0.714)	\$30 \$165 118
Construction Cost (Hon. 12/86) Regional Factor (15%)	\$283 42
Construction Cost (Hilo 12/86) Contingency Design (32 x 1.5) Inspection	\$325 11 48 11
Total Project Cost -22-	\$395

SIXTH PHASE: PARKING STRUCTURE (843 STALLS)

SCOPE OF WORK

Design and construct a 843-stall parking structure.

<u>Item</u>	Cost in \$1,000
Demolish Helipad & A. C. Pavement	\$ 45
Site Work	100
Parking Structure 843 Stalls @ \$5,600	4,721
Covered Passage	34
Helipad	<u>83</u>
Construction Cost (Hon. 6/78)	\$ 4,983
Time Factor (111 mo. @ 0.007 = 0.777)	3,872
Construction Cost (Hon. 9/87)	\$ 8,855
Regional Factor (15%)	1,328
Construction Cost (Hilo 9/87) Contingency (198 + 0.183 x 19) Design (495 x 1.07) Inspection	\$10,183 201 530 173
Subtotal Works of Art & Landscaping (2%)	\$11,087 222
Total Project Cost	\$11,309

F. Historical Perspective

In 1897, Hilo Memorial Hospital was started on Waianuenue Avenue (present Old Hilo Hospital site) by the Hawaiian Government. In 1911, the Territorial Board of Health established and operated "Puumaile Home" at Waiakea for tuberculosis patients. These two facilities were managed separately until the 1951 Legislature, by Act 29, combined two Managing Committees into a single Governing Body for both hospitals.

In 1951 construction of a new 216-bed building for Puumaile Hospital was completed on the present Hilo Hospital site at a cost of \$2.5 million.

In 1957 when the aging Hilo Memorial Hospital needed a new facility, it was decided to combine the two hospitals using the facilities of Puumaile. Several extensive additions and renovations to the Puumaile Hospital were made since then.

In July 1959 groundbreaking ceremonies initiated the start of new construction of a separate wing to house the out-patient department and 18 obstetrical, surgery and recovery beds. In March 1961 the Out-Patient Unit was completed and officially occupied (See Exhibit II-7 Existing Site Plan).

In 1961 by Chapter 146, Section 60-65, the name was changed to "Hilo Hospital" and it was put under the jurisdiction of County of Hawaii. In 1965 Act 97, Session Laws of Hawaii 1965 (effective July 1, 1965) transferred Hilo Hospital under the jurisdiction of the State.

A separate Geriatrics Treatment Center was completed in March 1965. In 1973 Cobalt Treatment Facility was added at a cost of \$1.8 million in the Diagnostic and Therapeutic Building built in 1951. In 1975 a new Laundry was constructed at a cost of \$760,000.00.

While recognizing these recent additions, Hilo Hospital as it stands today is an outdated facility which compromises to a large degree functional requirements of health care services.

The Conway Study for renovation of the existing facilities was completed in September 1967. It presented a comprehensive analysis of the existing hospital and recommended an extensive renovation plan. It also recommended that a new hospital be constructed in order to achieve the optimum efficiency of providing health care services. Only the renovation plan was, however, implemented to a minor degree.

Stone, Marraccini and Patterson (SMP) completed a <u>Project Development</u>
Report (PDR) for Certain Department of Health Agencies and Hilo
Hospital in March 1978. This report documented the existing DOH
agencies programs and health delivery systems, projected the DOH
programs for 1980 and 1990 and developed the functional and space
program required to meet 1980 and 1990 needs.

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HILO HOSPITAL EXISTING SITE Exhibit II-7

SEATS PICAME LAND (SEATE OF HAWAIT MAUNA SUGAR CO., LEASE)

771K; 2-1-27;

-25-

In the <u>Hawaii State Health Plan</u>, (2) April 1978, the Hawaii County Subarea Health Planning Council (SAC) described Hilo Hospital's problems and needs as follows:

"The Hilo Hospital was built in 1948 as a tuberculosis hospital so that the facility does not meet the needs of acute hospital care. It is inefficient, inadequate, and inappropriate for acute care.

The Hawaii SAC, at the same time, formulated the following goals and objectives:

"Long-Range Goal

To support construction of a new Hilo Hospital with its related services which supports the operation of the four satellite patient care facilities in Kona, Ka'u, Kohala, and Honokaa. Services provided should include centralized accounting and purchasing, laundry, professional and technical services and EMS including MICT programs and helicopter services.

Short-Range Goal

To insure that the Hawaii SAC will be included in the review process for the cost analysis study on Hilo's new hospital with particular emphasis on the consultants' final recommendations for one of the three alternatives under study.

Objective 1

To address ourselves to the efficient and orderly development of the plan (already in progress) for a new hospital (Hilo Hospital) by 1980.

Objective 2

To seek legislative appropriation of 2-1/2 million dollars during the 1978-79 legislative sessions.

Recommendation 1

To form a committee to work closely with the DOH, DAGS, and legislators throughout the process by July, 1979.

Recommendation 2

To recommend to DOH, the Governor, and the Legislature more local control for the hospitals, particularly in the use of special funds by June, 1979."

⁽²⁾ Volume III, p. HC 4.2-4.3

In March 1979, Group Architects Collaborative, Inc. (GACI) completed a Complex Development Report for Hilo Hospital (CDR). The primary purpose of the report was to determine the most effective method of providing the health facilities for Hilo Hospital to meet the 1990 needs projected in the PDR. Three alternative planning solutions were evaluated: Alternative 1 - Renovation of the existing hospital with minimum additions; Alternative 2 - Renovation of a portion of the existing hospital with major additions; and Alternative 3 - a completely new facility.

Based on the evaluation of three alternatives, Alternative 2 has been selected. On February 16, 1979, a Certificate of Need (#79-01) for design of Acute Care Facility was approved by the State Health Planning and Development Agency. Design work was commenced in March 1979 and is in progress.

III. DESCRIPTIONS OF ENVIRONMENTAL SETTING

A. Physical and Other Environmental Factors

The new facility site is fully developed with parking lots, buildings, lawns and trees, and other landscape growth. The soil on the level site is classified as the Hilo series which consists of well-drained silty clay loams. In a representation profile the surface layer is dark-brown silty clay loam about 12 inches thick. The subsoil is about 48 inches thick and consists of dark-brown, dark reddish-brown, and very dark grayish-brown silty clay loam. The surface layer is strongly acid, and the subsoil is strongly acid to medium acid.

The average rainfall for Hilo is recorded at 133.57 inches but the site average is estimated at about 150 inches according to County of Hawaii Board of Water Supply data. Hilo's average temperature is 73.5 degrees F.

The site, because of its distance from the shoreline and high elevation, is free from tsunami danger. The Hilo Hospital, however, was damaged by the earthquakes of 1973 and 1975. Maintenance personnel reported considerable wall cracks and other building damage in the 1973 earthquake which measured a magnitude of 6.2 on the Richter Scale. They also reported wall cracks in the earthquake of November 29, 1975 but to a lesser degree than damage suffered in 1973. The 1975 quake registered 7.2 on the Richter Scale.

B. Land Use Designation and Controls

The project site is "urban" by the State Land Use designation. "Low-Density Urban" by the Hawaii County General Plan and RS10 (Single-Family Residential of 10,000 sq. ft. minimum lot with 35-ft. height limit) by the Hawaii County Zoning.

The area is outside Shoreline Management Area and Tsunami Hazard Area, and it is designated as SF-D Flood Hazard Area. However, no clearance is required from the SF-D Flood Hazard Zoning, since the subject site is not within any known flood area. (3) The subject site is in Earthquake Zone 3 and Fire Zone 3.

C. Historical or Archaeological Factors

None of the hospital buildings is designated as historic building by the County, State or Federal government. There are no known sites of archaeological or religious significance on the project site.

⁽³⁾ Statement made by the Planning Department in a letter dated April 27, 1978. See Appendix 1.

D. Flora and Fauna

No rare or endangered species of flora or fauna are known to be present on the site. Mynah birds and sparrows nest in some of the Monkeypod (Samanea Saman (Jacq.)), Shower (Cassia Grandis L.F.), and Pine (Araucaria Excelsa (Lamb.)) trees on the site. Besides lawn grass, areas near the cottages and other buildings are landscaped with vegetation including; Ti (Cordyline Terminalis), Fern (Cibotium Chamissoi Kaulf), Azalea (R. Indicum), American Guava (Psidium Guajava L), Croton (Codiaeum Variegatum), Hibiscus (Malvaceae), Gardenia (Gardenia Jasminoides), and Plumeria (Plumeria Acuminata).

E. Demographic Characteristics

POPULATION: Hawaii County's population in the 1970 census was 63,468 and represented 8.26% of the State total. The current population estimate, prepared jointly by the U. S. Bureau of Census and State agencies shows the Big Island resident population at 79,200 as of July 1, 1977 or an increase of nearly 15,732 persons, or 23 percent, from the 1970 census. The South Hilo District of Hilo City, Hakalau, Honomu and Papaikou account for 40,500 or 51 percent of the 1977 count (see Exhibit III-1). Other district totals are: Puna (Keaau, Mountain View, Pahoa) 8,100 (10.2%); North Hilo (Laupahoehoe, Ookala, Papaaloa) 2,100 (2.6%); Hamakua (Honokaa, Kukuihaele, Paauilo) 5,200 (6.6%); North Kohala (Hawi, Kapaa, Makapala) 3,600 (4.5%); South Kohala (Waimea, other) 3,200 (4%); North Kona (Kailua, other) 7,800 (9.8%); South Kona (Captain Cook, Kealakekua, other), 4,800 (6%); and Ka'u (Naalehu, Pahala, other) 3,900 (4.9%). The provisional estimate for July 1, 1978 is 80,100. Hawaii County's population projections at five-year intervals to the year 2000 are: 1980 - 84,700; 1985 - 95,200; 1990 -105,100; 1995 - 115,000; and 2000 - 123,300. District population projections are not available.

While the population from the 1930 to 1960 census showed a continuing decline, the severe out-migration which occurred between 1950 and 1960 showed up mainly in the 20-24 year olds. There also was a decrease in the 15-19 and 25-34 year category. The decreases in the above categories caused the County's median age to move up from 24.7 years in 1950 to 27.4 years in 1960. The out-migration to a lesser degree continued between 1960 and 1970. Although the median age at the 1970 census was 28.7 years, there was an increase between 1960 and 1970 in the 15-19 and 20-24 year age group. The age and sex distribution chart for the Big Island shows that about 20 percent of the population was 55 years of age and older.

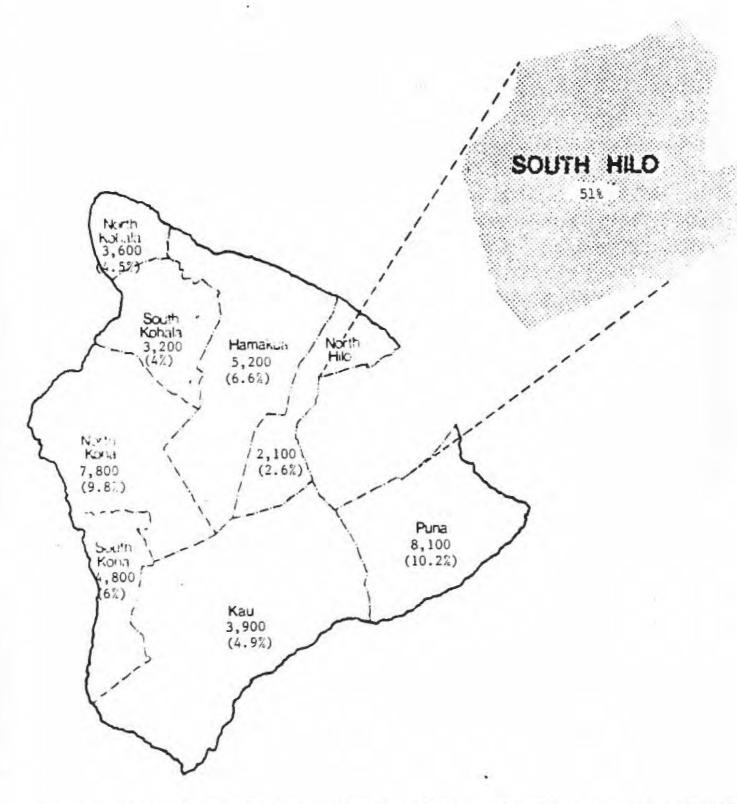


EXHIBIT III-1 Distribution of Population in Hawaii County, 1977

F. Socio-Economic Characteristics

The 1970 census count of population for Hawaii County showed the first increase in population since 1930. For three decades, between 1930 and 1960, the County experienced a decline in population due to outmigration. That decline has been attributed primarily to the mechanization of sugar cultivation and processing and consequently, a reduced demand for labor. In the past decade, however, a new major industry, tourism, has emerged. During the period much of the County's economic growth can be linked with the expansion of the Visitor Industry, wholesale and retail trade, and manufacturing.

The State Department of Planning and Economic Development estimate on Hawaii County's population growth between 1970 and 1977 shows that the +14,700 net change includes +8,800 in-migrants, mostly new arrivals from the U. S. Mainland.

The complexion of the islands' economy, and therefore its' social characteristics are "slowly shifting from a rural-agricultural status to one more urban," according to the <u>General Plan</u>. (4) Studies are being conducted by the State and various concerned agencies to examine what are the social ramifications of for example increased resort development near rural communities, and the continuing trend towards urbanization in Hilo.

The County of Hawaii's Department of Research and Development predicts that future population growth will occur mainly in South Hilo, Puna, South Kohala and North Kona. Other current studies predict that the Island's economy will shift further from sugar toward newly emerging export industries such as tourism, specialized agriculture and energy technology. Tourism especially will grow as the 1980s approach since future accommodations are projected to be centered in major resort destination areas.

Total personal income for Hawaii County in 1976 was \$445.2 million, an increase of 6.4 percent over the \$418.4 million in 1975. The 1976 per capita personal income was \$5,812, over double the 1966 amount. In May 1978, the family income poverty level was set at \$7,130 for a four-person non-farm family and \$6,070 for a four-person farm family, according to the Department of Research and Development.

The median annual income in the County was estimated at \$12,028 in 1975 based on a survey of about 2,500 households by the Office of Economic Opportunity. Approximately 19.4 percent of the estimated 22,112 households in 1975 were below the poverty level.

⁽⁴⁾ County of Hawaii, December 15, 1971, p. 6.

Public welfare costs in 1978 were listed at \$24.9 million, an increase of 16.5 percent over the \$21.4 million the year previous.

The County's employment reached 33,250 in 1977. With a civilian work force of 36,600, the unemployment rate was 9.2 percent or 3,350 persons.

G. Support Services

Site Utilities

A 16-inch water main along Waianuenue Avenue services the Hospital. The average water consumption by the Hospital is estimated to be 86,000 gallons per day. (5) The Hawaii County Department of Water Supply stated in its letter dated May 25, 1978 that the water main is adequate to meet 1990 project demands. (6)

A 10-inch sewer line with manhole is presently situated along Waianuenue Avenue. The minimum slope of the main line is 1.4 feet per hundred feet with a capacity of 2.24 cubic foot per second.

Electricity and telephone lines have been provided by local utility companies.

Solid Waste is presently collected by the housekeeping force and delivered to the Incinerator Room. The Incinerator is a combination general purpose 400#/hour chamber for general refuse and a small attached 50#/hour chamber for pathological incineration. During weekdays, only the pathological chamber is used. It is fueled by Liquid Propane Gas (LPG). On weekends the large chamber is used to burn general refuse with the LPG used only to light off the material being burned. Outdoor refuse and tree cuttings are picked up by the hospital ground crew and carried to the county dump area.

H. Transportation

Two-lane, right-of-way, Waianuenue Avenue is makai one-way traffic during the early morning hours of the school year. Access during this period is limited to Haili Street up to the Rainbow Falls junction.

The County's bus system provides hourly runs to the site daily.

⁽⁵⁾ Since this is based on readings taken before the main hospital complex water meter became inoperative and escalated periodically. With increased demands by the Laundry the hospital feels that the consumption should be 50% higher.

⁽⁶⁾ See Appendix 2.

IV. THE RELATIONSHIP OF THE PROPOSED ACTION OF LAND USE PLANS, POLICIES AND CONTROLS FOR THE AFFECTED AREA

Proposed Acute Care Facility is in conformance with all relevant land use plans, policies and controls for the subject site, except for building height. According to the zoning designation imposed on the site, a maximum building height is 35 feet, while the proposed building is 48 feet (preliminary: subject to change) in height. It is, therefore, necessary to obtain a height variance and necessary steps are being taken to do so.

The proposed building will be designed to insure fire and earthquake safety within the designated fire and earthquake zone.

The proposed action is consistent with Hawaii County's General Plan which cites Hilo as the islands' medical center, and recognizes the need for a program to renovate and modernize Hilo Hospital. The Plan states:

"The County is responsible for the general welfare of its residents and must continue to make every effort to ensure that adequate health services are provided.

The overall hospital concept is to locate general hospitals in three strategic locations: Hilo (east coast), Kona (west coast), and Waimea (central)."(7)

The proposed action is also consistent with the Hawaii State Health Plans which recognizes the need for more efficient utilization of services, and a more appropriate acute care facility at Hilo Hospital. The long range goal of the State Health plan is to "support construction of a new Hilo Hospital facility with its related services, and to assist the orderly and efficient development of the plan for a new (Hilo) Hospital by 1980."(8)

-33-

⁽⁷⁾ January, 1971, p. 50.

⁽⁸⁾ Hawaii State Health Plan, First Edition Vol. III, April 1978, p. HC 4.2.

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

A. Open Space

The new acute and extended care facilities and the parking structure will cover approximately 40% of the mauka half of the 20.4-acre site which is in open space, paved parking stalls, roads and lawn. The present acute care design plan may also jeopardize two or three of the existing monkeypod trees. This reduction of openness and loss of trees will be compensated for by heavy landscaping throughout the subject site. For example, the present driveway in front of the Administrative building will be converted into a planted courtyard connecting the new Acute Care Facility and the present Administrative Wing which will be renovated for the Short-Term Psychiatric Department.

The end result will then be that the present "openness" in the mauka half of the total site will be diminished somewhat but approximately 55% of the total site will still be left open. The landscaping plans are being prepared, however, so as to enhance the "park-like" qualities of the site which presently exists. Included in the landscaping plan are a nice looking street-scape along Waianuenue Avenue with a clear circulation pattern, as well as pleasantly landscaped interior courtyard spaces, and spaces between buildings.

B. Water Run-Off and Drainage

All rules and regulations regarding applicable codes and standards for water run-off and drainage will be complied with.

C. Grading

A fair amount of site grading will be done. All necessary codes and standards regarding the grading of the subject site, will be complied with.

D. Utilities

The proposed action will not have an adverse effect or impact upon the site utilities.

The proposed action will comply with the Rules and Regulation of the Department of Water Supply, and the Joint Commission of Hospital Accreditation. There will be two (2) water sources including a back-up system as required. The Hawaii County Department of Water Supply stated in May of 1978 that the water main is adequate to meet 1990 project demands.

Electrical utilities for the proposed action will meet code requirements set by the Life Safety Code (NFPA 101) and the National Electrical Code.

Sewage facilities for the proposed action will meet all code requirements and standards set by the Division of Sewers, Hawaii County, Department of Public Works.

The total hospital complex Air Conditioning (A/C) System will be sized based on 80% area for controlled environment. Since individual building and future buildings air conditioning requirement are not fully known, a central water chilling plant would be the most logical and economical solution. Here, a chilled water loop will be provided throughout the site, where individual building can tap their required chilled water for A/C.

Future buildings can also tap into this loop without remodification of the central plant. Since A/C peak load in each building occurs at different time, diversity in the central plant capacity can reduce plant size and reduce first cost. System operating at a higher load will also require less energy than oversized machines operating at a lower load.

With a central plant configuration, waste heat from the central A/C system can all be recovered at one location. This will facilitate in having a central plant for the domestic hot water system, again having similar advantages like the chilled water plant system.

The water chilling machines will be special ordered with an auxiliary condenser to recover waste heat in preheating the city water (70°F) to 95°F. The preheated water is then heated to 120°F by an industrial heat pump again utilizing waste heat from the A/C chiller condenser water. The heated water is then stored into a 3440 gallons tank to supply hospital domestic hot water requirements and water make-up for the 180°F hot water system for the laundry. An oil-fired stand-by water heater will be provided to assure an uninterrupted supply of 120°F hot water.

The 120°F water make-up to the high temperature (180°F) water system for the laundry is fed into another industrial heat pump, thereby amplifying the water to the desired 180°F temperature. Again this is accomplished by another industrial heat pump supplying 84% of the hot water requirement. Three 3440 gallons storage tanks are employed to take care of the high demand periods. An oil-fired back-up water heater will provide the 16% deficit of the heat pump output. This heater is sized to provide 100% of the hot water requirements should the heat pump fail.

The first cost of this system is comparable to the previously proposed two-100 HP steam boiler system. Maintenance will be simplier since the all electric heat pumps are similar to the A/C chillers in construction. Heat loss thru the piping system will be reduced since a lower temperature fluid is conveyed in

lieu of steam. The most advantageous difference is the lower operating cost of the heat pumps system. Using the projected 31.05 million BTU/day. A heat pump system will only require an input of 6.113 million BTU/day. This means a savings of \$30,000 a year as compared to the present bunker "c" fuel oil used.

E. Transportation and Traffic

The new hospital's operation can be expected to increase traffic proportionate to increase in facility utilization. A much greater traffic generation potential, however, is the future use of the vacated space in the old hospital building. Once vacated, there will be 97,995 square feet available for use. Another 21,146 square feet of space will be available when the Geriatrics Center is vacated at a later phase. Although no decisions have been made, the vacated space could generate additional employees if utilized for offices of various government employees. Thus, the new use of the vacated spaces could impact on additional traffic volume on Waianuenue Avenue, Kaumana Drive and other feeders to these roadways.

The first increment development of Acute Care Facility will provide 68 on site parking stalls and 221 stall replacement parking stalls across Waianuenue Avenue. This, in fact, is an increase of 168 stalls from the existing 255 stalls. While the replacement parking stalls will be used by Hilo Hospital employees and hospital patients and visitors, the pedestrian traffic crossing Waianuenue Avenue may not be of a volume to create a traffic hazard. The probable continued use of the "across the stree parking" with the new use of the hospital building could cause problems with large numbers of pedestrians crossing during peak hours before and after work. The general public conducting business with the various agencies which may be housed in the vacated building also would create traffic during working hours.

F. Pollution

The new hospital will either reduce from or continue at about the same level of activities which do contribute to pollution of the environment. These include:

With the usage of wate heat recovery condensers as discussed in the previous Section D, and all-electric industrial heat pumps for all domestic hot water requirements, pollution from oil-fired water heating system will be reduced by 90%. Only remaining pollution generating activity is the oil-fired heaters which are utilized as stand-by or back-up units.

- 2. Use of an incinerator to eliminate pathological waste and other contaminated material. The incinerator will be fired 2-3 hours daily and for 8 hours on Saturdays, Sundays and holidays when normal solid waste will not be taken to the County landfill.
- Discarding of two truck-loads of solid waste daily at the County land-fill. Weekend loads are disposed of in the incinerator.
- 4. Use of two emergency stand-by generators run every Thursday for 30 minutes and during periods of power outage.

Other activities include use of gasoline engine power mowers and the use of "Round-up" for weed control. No radioactive material will be disposed. The greatest pollution will be emission of carbon monoxide, hydrocarbons and nitrogen oxides by auto traffic. The anticipated increase in the new facilities will undoubtly increase these auto traffic emissions.

H. Social Impact

The new hospital with up-to-date equipment and facilities, can be expected to broaden its service capabilities as recruitment of professional and technical employees improve. Such a situation is also expected to attract more doctors of varied specialties. There will be a decreasing need for patients to travel to Honolulu or elsewhere for special treatment.

Construction of Acute Care Facility, the first increment for Hilo Hospital, will affect the following existing facilities, while various agencies and employees housed in these buildings will be displaced:

- Male Personnel Quarters where there are 16 tenants in the 20-unit buildings.
- 2. Female Personnel Quarters with 19 persons.
- 3. Hawaii Community College School of Nursing with a program conferring Licensed Practical Nurse Certificates after one year, and Associate Degree in Nursing Certificate after two years. The current enrollment is about 50 students. School officials are looking for other sites.
- 4. The Office of Mental Health, a division of the State Health Department. The Mental Health Office and the School of Nursing eventually could be located in the old hospital, the problem is to find new sites before construction starts next year and before the old hospital is vacated.

5. The Hemodialysis Center of St. Francis Hospital, a facility treating kidney patients. This facility has a gross floor area of 800-sq. ft. for 5 machines servicing 20 patients a week. The construction of a building for the Hemodialysis Center is being considered next to the Geriatrics Center on the hospital grounds. The Hemodialysis Center would also be located in the hospital if construction plans fail, according to hospital officials.

If the above indicated facilities are to be demolished, it is anticipated that 37 individuals or families may qualify for tenant relocation assistance under Act 166, Session Laws of Hawaii (SLH) 1970, as amended by Act 67, SLH 1973 and Act 181, SLH 1974. Whether or not these individuals and families will qualify for all or a portion of the tenant relocation assistance will be determined by DAGS, the Attorney General's office or the State Department of Social Services and Housing (DSSH).

DSSH has adopted Rule 15 - "The Rules and Regulations Governing Assistance to Persons, Families, Businesses and Nonprofit Organizations Displaced by Programs for Public Purposes." Based on Rule 15 and the DAGS' past experiences with tenant relocation, the following items of work are anticipated and DAGS is presently carrying out these work items.

- 1. Initiate the tenant relocation planning process in June 1979.
- Select relocation agency and obtain DSSH approval.
- 3. Prepare and process a contract with the relocation agency.
- 4. Conduct surveys of displacees and available housing.
- Prepare Tenant Relocation Assistance Plan.
- DSSH review of the Relocation Assistance Plan (a minimum of 120 days is required before displacement).
- Request funds for tenant relocation payments and obtain allotment advice.
- 8. Establish List of Eligibles.
- 9. Issue Certificates of Displacement and Notices to Vacate.
- 10. Implement Tenant Relocation Assistance Plan.
- 11. Process Tenant Relocation subsidies.

VI. ANY PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

All adverse environmental or socioeconomic impacts caused by this proposed action are expected to be of a minor nature and for the short term. Noise, dust and construction traffic annoyances during the construction period may occur but will be limited to regular week-day working hours.

The relocation of agencies housed in the structures to be demolished is another short term adverse effect. The degree of adversity will be determined by the success in finding relocation sites. Also unknown are adverse impacts which may be caused by the reuse of the abandoned space at the old hospital.

VII. ALTERNATIVES TO THE PROPOSED ACTION

Three alternatives were studied on the basis of the space program developed in the PDR and of the optimum functional space layout developed in the CDR. Alternative 1 is to renovate the existing hospital to maximum extent possible and to make additions as required to meet space projections up to 1990. Alternative 2 is a plan for selective renovation of the existing hospital with major additions. Alternative 3 is a planning solution for a totally new hospital.

For the selection of an alternative solution, a set of criteria has been established. Major issues determined are Circulation, Functional Relationship, Design, Implementation and Operation. Each of the major issues have been further broken down into sub-issues. These sub-issues being statements of design, for which there are a variety of solutions, are enormous. Solutions identified in the three alternatives reflect consideration for an ideal situation in hospital design.

Based on evaluation of the three alternatives, Alternative 2 is selected as the most favorable in terms of circulation, functional relationship, design flexibility, expansion potential, construction cost, and operation cost.

Further alternatives were studied to determine whether the selection of Alternative 2 is still valid when considering long-term care facility separately from Acute Care Facility.

To make this determination, it is first assumed that a new Acute Care Facility and supporting services would be constructed as the first increment and the long term care facility would be constructed in a later phase. The four alternatives for meeting the 1990 long-term care facilities requirements were:

Alternative A - Retain and expand the present long-term care area without using any portion of the existing building to be vacated by acute care.

Alternative B - Relocate long-term care to the new acute care facility.

Alternative C - Relocate long-term care to a portion of the existing building to be vacated by acute care.

Alternative D - Retain the present long-term care area and expand into a portion of the existing building to be vacated by acute care.

Based on evaluation of the four alternatives, it was determined that Alternative B is the most favorable not only in terms of incremental phasing but also function, flexibility, staffing and cost.

It is, therefore, decided by the State Department of Health and D.A.G.S. that the present Geriatrics Center remains in its present location and temporary improvements made for projected expansion into space vacated by acute care. Construction of new long-term care facility close to the new acute care facility could occur as funding dictates in incremental phasing.

VIII.THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Construction of the new hospital at the proposed site will mean that the area would be lost for the preservation of open space. The site and the surrounding areas, however, are not utilized with any high degree of density and current standards of structures to open space and density will be positive in spite of the new structure. The preservation of open space along the property's northern boundary will be assured for the long-term since the whole width of Wailuku River serves as a buffer. For the short-term, the new hospital will provide the community with a new medical facility that adequately serves until 1990. Such a facility is not only expected to provide health care services efficiently and economically but help upgrade the quality of the total delivery system by encouraging the recruitment of technicians and all levels of medical specialists. Any improvement would be a social benefit in a setting where some seek medical services off island.

IX. MITIGATION MEASURES PROPOSED TO MINIMIZE IMPACT

Control practices to minimize construction noise and air pollution will be followed.

Various State and County agencies should (and are) cooperate in finding suitable relocation sites for the displacees.

Traffic control practices shall be coordinated with the Department of Public Works, Traffic Safety and Control Division, to insure safe pedestrian passage to and from the hospital facility, while the temporary parking facility (across Waianuenue Avenue) is in use.

X. ANY IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The commitment of resources necessary to accomplish the project includes labor, energy and material which are irretrievable. Also lost will be most of the material of the structures to be demolished, although some of the materials will be reused.

XI. AN INDICATION OF WHAT OTHER INTERESTS AND CONSIDERATIONS OF GOVERNMENT POLICIES ARE THOUGHT TO OFFSET THE ADVERSE ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION

As noted previously, the actions required to construct new facilities for the Hilo Hospital may result in an adverse environmental impact, especially the traffic impact. However, there is an existing governmental policy which may offset this impact.

According to the <u>Hilo Community Development Plan</u> adopted in May 1975, Waianuenue Avenue is recommended to be improved as a secondary arterial 80' right-of-way (pages 90 and 93). When this is implemented, the present rush hour one way traffic pattern toward downtown on Waianuenue Avenue may not have to be continued.

XII. LIST OF NECESSARY APPROVALS

Construction of acute care facility, the first increment of the proposed Hilo Hospital project, must obtain the following approvals and permits prior to its implementation:

- 1. Plan Approval Planning Department.
- 2. Zoning Variance Planning Commission.
- Certificate of Need for Construction State Health Planning and Development Agency.
- 4. Drainage and Grading Permit Department of Public Works.
- 5. Building Permit Building Department.

It is also noted that in obtaining a building permit the following agencies must provide certification which indicates that the plans are acceptable from the standpoint of meeting the applicable codes, standards, and regulations.

Traffic Safety and Control on Waianuenue Avenue:

Department of Public Works

Sewer:

Department of Public Works

Water:

Department of Water Supply

Fire Protection:

Fire Department

XIII.ORGANIZATIONS AND PERSONS CONSULTED

State

Department of Health Hilo Hospital University of Hawaii at Hilo

County of Hawaii

Civil Defense Agency
Department of Parks and Recreation
Planning Department
Department of Public Works
Department of Research and Development

Other Organization

Kaneelehua Industrial Association

XIII.APPENDIX: REPRODUCTION OF COMMENTS AND RESPONSES MADE DURING THE CONSULTATION PROCESS

- Opinion on Water Availability for New Hilo Hospital: Department of Water Supply.
- Comments on Zoning and Flood Hazard: Planning Department, April 27, 1978.
- Comments on Preliminary Draft EIS: Planning Department, July 20, 1979.
- Comments on Preliminary Draft EIS: Department of Public Works, July 26, 1979.
- Comments on Preliminary Draft EIS: State Department of Health, July 19, 1979.

KIV. AGENCY REVIEW COMMENTS OF DRAFT E.I.S. AND RESPONSES

- 1. *Department of Agriculture, State of Hawaii, August 31, 1979.
- 2. U. S. Department of Defense, September 4, 1979.
- 3. U. S. Soil Conservation Service, September 6, 1979.
- 4. Department of Water Supply, County of Hawaii, September 6, 1979.
- 5. Planning Department, County of Hawaii, September 10, 1979.
- 6. U. S. Navy-Naval Base, Pearl Harbor, September 14, 1979.
- Department of Social Services and Housing, State of Hawaii, September 21, 1979.
- 8. *Department of Transportation, State of Hawaii, September 24, 1979.
- Department of Land and Natural Resources, State of Hawaii, September 25, 1979.
- 10. Department of Public Works, County of Hawaii, September 25, 1979.
- 11. University of Hawaii, Environmental Center, State of Hawaii, September 28, 1979.
- 12. University of Hawaii, Water Resources Research Center, State of Hawaii, October 2, 1979.
- 13. U. S. Army Support Command, Hawaii, October 2, 1979.
- 14. U. S. Fish and Wildlife Service, October 2, 1979.
- 15. Department of Planning and Economic Development, State of Hawaii, October 4, 1979.
- U.S.A.F. 15th ABW, October 5, 1979.
- Department of Parks and Recreation, County of Hawaii, October 10, 1979.
- 18. Corps of Engineers, October 11, 1979.
- 19. Department of Health, State of Hawaii, October 16, 1979.
- Office of Environmental Quality Control, State of Hawaii, October 16, 1979.

^{*}Comment being forwarded by Office of Environmental Quality Control.



COUNTY OF

HAW'AII

PLANNING DEPARTMENT

26 AUPUNI STREET . HILO. HAWALI 98720

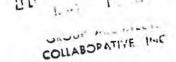
HERBERT T. MATAYOSHI

Masor

SIDNEY M. FUKI Director

DUANE KANUHA Deputs Director

April 27, 1978



Mr. Walter K. Tagawa Group Architects Collaborative, Inc. 926 Bethel Street Honolulu, HI 96813

Dear Mr. Tagawa:

Hilo Hospital Complex Development TMK: 2-3-27:2

This is to confirm that the General Plan, Zoning and Flood Hazard designations as described in your letter of April 24, 1978 is correct.

In addition, the following are comments on the information requested:

- Variance is a process which involves the Planning Commission. Prior to the application for a variance, preliminary plans must be submitted to our office for review pursuant to the plan approval process. This review is necessary to point out areas of concerns in addition to areas which may require a variance. This preliminary step is required to eliminate multiple submission of variance requests on a project.
- 2. An EIS is not required prior to the submission of plans for plan approval review. However, the granting of final plan approval will be withheld until the requirement of Chapter 343 relating to EIS is met.
- 3. A non-conforming (in height) building may have the interior extensively renovated without requiring a variance. However, the exterior repair and maintenance of the building will be subject to the 25% limitation.
- 4. The subject site is not within any known drainage or flood areas. Because of this, no clearances are required from the SF-D Flood Hazard zoning.

Mr. Walter K. Tagawa Page 2 April 27, 1978

Should you have any further questions, please feel free to contact Masa Onuma of my staff at 961-8288.

Sincerely,

SIDNEY FURE Director

MO:mmk

cc: Mr. Henry Yamada, D.A.G.S. Public Works Division



DEPARTMENT OF WATER SUPPLY . COUNTY OF HAWA!

May 25, 1978

Mr. Walter K. Tagawa Group Architects Collaborative, Inc. 926 Bethel Street Honolulu, HI 96813



GROUP ARCHITECTS

NEW HILO HOSPITAL DEVELOPMENT PLAN WATER AVAILABILITY

We have reviewed the customer billing records for the existing Hilo Hospital complex. We have found that there is a 6-inch compound meter for the nurses' cottage, a 6-inch compound meter for the main building, and a 2-inch meter for the employees' dormitory. The average consumption for these three service connections is 86,000 gallons per day.

Should the new hospital complex expand further, the water system will be adequate to fulfill the water demand. Of course, if your water demands could be made known to us, we would appreciate receiving this information.

There is a 16-inch water main along Waianuenue Avenue. The hospital complex can be serviced from either of our two sources. This would be from either our upper Piihonua surface source or from our Piihonua deep well source. System conditions normally dictate which source is to be used. Also, in respect to sources, there are plans for additional source development and transmission systems for the upper service areas.

A backflow prevention device will be required for the new complex. Based on the activity of the hospital, a reduced-pressure backflow preventer will be required.

The matter of emergency water storage is on an optional basis. Should the complex require continuous water service, whenever our system encounters a breakdown, it is suggested that some method or plan of action be worked out, subject to our approval.

Insofar as the internal water system is concerned, the fire hydrant system may be turned over to us for maintenance and operation. These installations must be in accordance with our Standards or requirements. A fire sprinkler system is generally considered the consumer's plumbing system and responsibility for same remains with the consumer. However, this sprinkler system must be metered separately for fire service connection.

... Water brings progress ...

Mr. Walter K. Tagawa Page 2 May 25, 1978

Additional comments will be made on your preliminary plan submittals. For your use, we are enclosing a copy of our Rules and Regulations. Our Standards for Water System booklet is available at \$3 a copy.

Should you require further help, you may contact Mr. Gary Kawasaka of my staff.

Akira Fujimoto

Manager

GK

Enc.



COUNTY OF

HAWAII

PLANNING DEPARTMENT

25 AUPUNI STREET . HILO, HAWAII 96720

HERBERT T. MATAYOSHI

SIDNEY M. FUKE

DUANE KANUITA Deputs Director

July 20, 1979

Mr. Duk Hee Murabayashi Urban 9 926 Bethel Street Honolulu, HI 96813

Dear Mr. Murabayashi:

Preliminary Draft EIS - Hilo Hospital

Thank you for sending us the subject document. We have reviewed the text and have the following comments to offer at this time.

- 1. Section III, A. The discussion of the potential earthquake hazard should also address the November 29, 1975 earthquake of 7.2 magnitude which caused extensive damages on the Big Island. An assessment of the resultant damages to the existing Hilo Hospital should be incorporated into the text.
- Section III, D. The indicated species of flora and fauna should also be identified by their scientific or generic names.
- 3. Section V, D. The appropriate agency identification should read, "Division of Sewers, Department of Public Works, Hawaii County," and not "Hilo County" as indicated in the text.

The above comments are offered in a constructive manner to assist you in the drafting of the revised subject EIS.

Thank you for this opportunity to provide some input in this matter. Should you have any questions on the above, please feel free to contact us.

Sincerely,

SIDNEY FUKE

Planning Director

BS/lgv



DEPARTMENT OF PUBLIC WORKS

COUNTY OF HAWAII - 25 AUPUNI STREET - HILD HAWAII 96720 - TELEPHONE (808) 961-8321

July 26, 1979



GROUP ARCHITECTS

Mr. Duk Hee Murabayashi URBAN 9 926 Bethel Street Honolulu, HI 96813

SUBJECT: HILO HOSPITAL

Preliminary Draft E.I.S.

Thank you for allowing us to review the subject document, and we submit the following comments:

- Page 28 E. Transportation and Traffic
 Paragraph 2 calls for elimination of the 250 parking stalls and
 to provide a temporary parking area for 200 stalls. We believe
 that the present parking provision is not sufficient since people
 park on the road. Consideration should be for an increase in
 parking stalls; say, neighborhood of 300 stalls.
- Page 38 XII. List of Necessary Approvals
 Add: Drainage and Grading; Department of Public Works

EDWARD HARADA Chief Engineer BEORGE R. ARIYOSHI



STATE OF HAWAII

P. O. BOX 3376 HONOLULU, NAWAII 95801

July 19, 1979

GEORGE A L YUEN

VERNE C. WAITE, M.D.

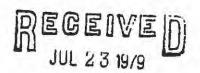
MENRY N. THOMPSON. M.A.

JAMES & RUMAGAI, PH.D. P.E.

TADAO BEPPU BEPUT DIRECTOR OF HEALTH

In reply, please refer to: File: C/S Nosp.

Ref. No. - 701



GROUP ARCHITECTS

COLLABORATIVE INC

Mrs. Duk Hee Murabayashi Urban 9 926 Bethel Street Honolulu, Hawaii 96813

Dear Mrs. Murabayashi:

SUBJECT: Hilo Hospital Preliminary Draft - EIS

Thank you for the opportunity to review the preliminary draft of subject EIS dated July 17, 1979.

Overall, the subject document meets with our approval, but I would like to submit the following recommendations:

- 1. Page 1, II, Project Description, A. Project Location

 Add a statement including a temporary parking lot on land across the hospital on Waianuenue Avenue.
- 2. Page 19, F. Historical Perspective

Delete all the quoted statement from the Hawaii State Health Plan beginning with Line 7 "Some of the problems are: 1 through 9." Subject statement is opinionated and incorrect with the exception of Item 3. Inclusion of this quote reflects an unwarranted misinformation.

?. Page 20, Line 3, from the bottom

Add after "Certification of Need" the CON Number for easy referral or identification.

Page Two

- Page 22, Flora and Fauna
 To keep the horticulturist happy "Azalia" is spelled <u>Azalea</u>.
- 5. Page 28, Transportation and Traffic, Paragraph 1

 Second sentence is incorrect. The SMP Report identifies in detail the anticipated space use needs of other health programs. Recommend that an impact identification statement be couch following the SMP Report.

In addition to the above recommendations, I request that we be brought up to date on the tenant relocation plans (being handled by DAGS, refer to Page 30).

Should you have any questions, do not hesitate to call me.

RIKIO TANJI

cc: Donald McGrath Robert Ueoka Henry Thompson

RT/s





STATE OF HAWAII DEPARTMENT OF AGRICULTURE 1428 SO. KING STREET HONOLULU, HAWAII 96814

August 31, 1979

JOHN FARIAS JR.

YURIO KITAGAWA DEPUTY TO THE CHAIRMAN

BOARD MEMBERS

SIDNEY G U GOO MEMBER - AT - LARGE

ERNEST F MORGADO MEMBER - AT - LARGE

SUZANNE D PETERSON MEMBER - AT - LARGE

FEDERICO GALDONES

JAMES E NISHIDA

Richard Caldito

Susumu Ono

MEMORANDUM

To:

Environmental Quality Commission

Office of the Governor

Subject:

EIS - Hilo Hospital Facilities

TMK: 2-3-27:2

The Department of Agriculture has reviewed the subject EIS and has no comments to offer.

Thank you for the opportunity to comment.

JOHN FARIAS, JR.

Chairman, Board of Agriculture

DEC 21 1979

Honorable John Farias, Jr. Chairman, Board of Agriculture Department of Agriculture 1428 South King Street Honolulu, Hawaii 96814

Dear Mr. Parias:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your interest and kind consideration of our report. We look forward to your continued interest throughout the project's implementation.

Very truly yours,

HIDEO MURAKAMI State Comptroller

tion in some

RK/si

State of Hawaii DEPARTMENT OF DEFENSE OFFICE OF THE ADJUTANT GENERAL (17398) Diamond Haad Road Honolott, Hawall 96846 CIV. UL DAUS 04 SEP 1979 HIENG Office of Environmental Quality Control 550 Halekauwila Street Room 301 Ronolulu, Hawaii 96813 Gentlemen: Hilo Hospital Facilities Hilo, Hawaii Thank you for sending us a copy of the "Hilo Hospital Facilities" Environmental Impact Statement. We have no comments to offer at this time. The attached document is returned for your use. Yours truly, signed WAYNE R. TOMOYASU Major, CE, HARNG Contr & Engr Officer Enclosure cc: Department of Accounting and General Services

DEC 21 1979

Major Wayne R. Tomoyasu Engineering Office Office of the Adjutant General Department of Defense 3949 Diamond Head Road Honolulu, Hawaii 96816

Dear Major Tomoyasu:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your interest and kind consideration of our report. We look forward to your continued interest throughout the project's implementation.

Very truly yours,

HIDEO MURAKAMI State Comptroller

RK/si



Soil Conservation Service

P.O. Box 50004 Honolulu, Hawaii 96850

September 6, 1979

Mr. Richard L. O'Connell, Director Office of Environmental Quality Control 550 Halekauwila St., Room 301 Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Subject:

EIS for Hilo Hospital Facilities, TMK-2-3-27:2

We have reviewed the subject environmental impact statement and have no comments to offer.

Thank you for the opportunity to review this document.

Sincerely,

Jack P. Kanalz

State Conservationist

cc:

Department of Accounting and General Services

P. O. Box 119

Honolulu, Hawaii 96810



DEC 21 1979

Mr. Jack P. Kanalz State Conservationist Soil Conservation Service U.S. Department of Agriculture P. O. Box 50004 Honolulu, Hawaii 96850

Dear Mr. Kanalz:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Pacilities D.A.G.S. Job No. 01-20-2364

Thank you for your interest and kind consideration of our report. We look forward to your continued interest throughout the project's implementation.

Very truly yours,

to de la .

HIDEO MURAKAMI State Comptroller

RK/si



DEPARTMENT OF WATER SUPPLY . COUNTY OF HAW,

P. O. BOX 1820

HILO, HAWAII 95770

25 AUPUNI STR

September 6, 1979

Environmental Quality Commission Office of the Governor State of Hawaii 550 Halekauwila Street, Room 301 Honolulu, HI 36013

HILO HOSPITAL FACILITIES ENVIRONMENTAL IMPACT STATEMENT

We have no adverse comments to offer on this Environmental Impact Statement.

Akira Fujimota Hanager

CK

copy - Department of Accounting & General Services

DEC 21 1979

Mr. Akira Fujimoto Manager Department of Water Supply County of Hawaii P. O. Box 1820 Hilo, Hawaii 96720

Dear Mr. Fujimoto:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your interest and kind consideration of our report. We look forward to your continued interest throughout the project's implementation.

Very truly yours,

Valender Care

HIDEO MURAKAMI State Comptroller

RK/si

COPY PLANNING DEPARTMENT COUNTY OF HAWAII

26 AUPUNI STREET 1.1/1-7.7.7.

President 8 \$19.38

President 8

September 10, 1979

Mr. Donald Bremner, Chairman Office of Invironmental Quality Control 550 Nalekauwila Street, Room 301 Honolulu, Hawaii 96813

Dear Mr. Bremner:

EIS - Hilo Hospital Facilities, South Hilo (TEX: 2-3-27:2), Hawaii, August 1979

Thank you for sending the subject EIS document to us for review. Our comments are as follows:

1. A major area of concern is the proposed temporary parking and redestrian crossing on Waianuenue Avenue. Location of the proposed temporary parking area at the indicated site may incur inconveniences and hazardous conditions to hospital staff, visitors, and patients during inclement weather and at night. Provisions to minimize these impacts should be developed and discussed within the text.

It is unclear as to how long the proposed temporary parking area will be in use. We have noted that the anticipated completion date of the proposed 343-stall parking structure is October 1989. This would indicate that the "temporary" nature of the proposed parking area (across Waianuenue Avenue) is in essence for approximately 9 years. This extended period of usage of the proposed temporary parking area will necessitate the development of adequate provisions in respect to weather and the pedestrian crossing.

Traffic count date for this section of Waianuenue Avenue should be obtained and incorporated into the text.

Attached for your information is a copy of our August 31, 1979 letter to Mr. Walter Tagawa concerning the temporary parking area.

Mr. Donald Browner, Chairman September 10, 1979 Page 2

- The socio-economic impact of the proposed hospital facility should be addressed within Section V of the LIS. The proposed facility will generate construction related employment as well as increases in hospital staff. The approximately \$60 million dollar (6 phase) facility development should have a significant impact upon the local community.
 - 3. The discussion of the anticipated impacts upon the utility infrastructures should be expanded. Specifically, the adequacy of the existing 10-inch line should be determined. Further the text should briefly discuss the County Sewage Treatment Plan and its ability to handle the anticipated wastewater output of the proposed hospital facility.

Should you have any questions on the above, please contact us. Mahalo.

Sincerely,

Sidney Fuke Planning Director

BS/lgv

Attaciment

cc Department of Accounting and General Services GEORGE R. ARIYOSHI



STATE OF HAWAII

DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P. O. BOX 119, HONOLULU, HAWAII 96810

HIDEO MURAKAMI

MIKE N. TOKUNAGA DEPUTY COMPTROLLER

LETTER NO. PM-0002.0

Mr. Sidney Fuke Director Planning Department County of Hawaii 25 Aupuni Street Hilo, Hawaii 96720

Dear Mr. Fuke:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities

D.A.G.S. Job No. 01-20-2364

Thank you for your comments to our Environmental Impact Statement. The following is our response to your comments.

- 1. The parking facility (across Waianuenue Avenue) is planned to take into consideration the pedestrian crossing and adequate provisions for weather. In coordination with the Hawaii County Department of Public Works, a crosswalk and a pedestriancontrolled traffic light will be constructed. The parking facility will be lighted and will include a covered walkway through the center of the parking lot.
- 2. Thank you for directing our attention to a factor which will have an impact on the local community. We agree that the 60 million dollars in construction, although in six phases, will generate employment in the construction industry, which will have a positive spin-off for the whole economy.

It is estimated that construction activity will create an average of 40 construction jobs per working day on the site.

Mr. Sidney Fuke Letter No. PM-0002.0 Page 2

3. The new Acute Care Facility is planned as a replacement facility for the existing Acute Care Facility. At this time, there are no definite plans for the future use of the existing facility; however, at the time a decision is made, the issue of waste loading for the existing facility will be addressed. The new Acute Care Facility is essentially, a replacement with less beds than the existing facility, whereby no significant change in waste loading is anticipated.

Very truly yours,

HIDEO MURAKAMI State Comptroller HEADQUARTERS
NAVAL BASE PEARL HARBOR
BOX 110
PEARL HARBOR, HAWAII 96960

002A:anm Ser 1904

Sep 17 9 53 All '70

CIV. UF : LACS

14 SEP 1979

Office of Environmental Quality Control State of Hawaii 550 Halekauwila Street, Room 301 Honolulu, Hawaii 96813

Gentlemen:

Environmental Impact Statement Hilo Hospital

The Environmental Impact Statement for the proposed Hilo
Hospital Facilities has been reviewed, and the Navy has no comments
to offer. As requested by the Commission, the EIS is returned.

The opportunity to review the subject EIS is appreciated.

Sincerely,

J. W. CARL
LIEUTENANT COMMANDER, CEC, UT
DEPUTY FACILITIES EMGINEER
BY DIRECTION OF THE COMMANDER

Enc1

Copy to: State DAGS

Lt. Commander J. W. Carl
Deputy Facilities Engineer
Headquarters
Naval Base Pearl Harbor
Box 110
Pearl Harbor, Hawaii 96860

Dear Lt. Commander Carl:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your interest and kind consideration of our report. We look forward to your continued interest throughout the project's implementation.

Very truly yours,

HIDEO MURAKAMI State Comptroller

RK/BI

GEORGE R. ARIYOSHI SOVERNOR OF HAWAII



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF STATE PARKS
P. O. BOX 621

HONOLULU, HAWAII 96809

September 17, 1979

DIVISIONS:
CONVEYANCES
PIBH AND GAME
FORESTRY
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

Office of Environmental Quality Control 550 Halekauwila Street' Room 301 Honolulu, Hawaii 96813

Subject: Hilo Hospital Facilities

Thank you for the opportunity for reviewing the EIS for the above named project.

The proposed undertaking will have no effect upon any known historic or archaeological site on or likely to be eligible for inclusion on the Hawaii Register and/or National Register of Historic Places. This office has no reservations for the project to proceed.

In the event that any unanticipated sites or remains such as shell, bone or charcoal deposits; human burials; rock or coral alignments, pavings, or walls are encountered during construction, please inform the applicant to stop work and contact this office immediately.

alston Nagaday

Historic Preservation Program

PB: my

Mr. Ralston Nagata
Program Director
Historic Preservation Program
Division of State Parks
Department of Land and
Natural Resources
P. O. Box 621
Honolulu, Nawaii 96809

Dear Mr. Nagata:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Pacilities D.A.G.S. Job No. 01-20-2364

Thank you for your interest and kind consideration of our report. We look forward to your continued interest throughout the project's implementation.

Very truly yours,

HIDEO MURAKAMI State Comptroller

SEORGE R. ARIYOSHI SOVERHOR



STATE OF HAWAII

DEPARTMENT OF SOCIAL SERVICES AND HOUSING HAWAII HOUSING AUTHORITY

P. D. BOX 17907 HONOLULU, HAWAII 96817

September 21, 1979

FRANKLIN Y. K. SUNN EXECUTIVE DIRECTOR

WILLIAM A. HALL ASSISTANT EXEC. DIRECTOR

IN REPLY REFER

TO

MEMORANDUM

TO:

Richard L. O'Connell, Director

Office of Environmental Quality Control

FROM:

Franklin Y.K. Sunn, Executive Director

Hawaii Housing Authority

SUBJECT:

Environmental Impact Statement

Hilo Hospital Facilities

Hilo, Hawaii

Thank you for allowing the Hawaii Housing Authority the opportunity to review the subject EIS.

The Authority has no comments to offer, however, the Authority would be happy to provide information on any of its projects in the Hilo area which may aid the displacees in locating suitable housing.

Should you require additional information, please contact Mr. Harold Kurihara, Development Administrator at 848-3256.

FRANKLIN Y.K. SUNN

Marken 4/1/h

c: DAGS

DSSH

EQC

Mr. Franklin Y. K. Sunn
Executive Director
Hawaii Housing Authority
Department of Social Services
and Housing
P. O. Box 17907
Honolulu, Hawaii 96817

Dear Mr. Sunn:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Pacilities D.A.G.S. Job No. 01-20-2364

Thank you for your interest and kind consideration of our report. We look forward to your continued interest throughout the project's implementation.

Very truly yours,

HIDEO MURAKAMI State Comptroller

GOVERNOR



STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION 869 PUNCHBOWL STREET HONOLULU, HAWAII 96813

September 24, 1979

RYOKICHI HIGASHIONNA, PH D DIRECTOR

CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

IN REPLY REFER TO

STP 8.5709

Dr. Richard O'Connell Director Office of Environmental Quality Control 550 Halekauwila Street, Rm. 301 Honolulu, Hawaii 96813

Dear Dr. O'Connell:

Subject: Environmental Impact Statement

Hilo Hospital Facilities

Hilo, Hawaii

Thank you very much for giving us the opportunity to review and comment on the above-captioned EIS. We have no substantive comments to offer which could improve the Statement.

Very truly yours,

Ryokichi Higashionna

Honorable Ryokichi Higashionna Director Department of Transportation 869 Punchbowl Street Honolulu, Hawaii 96813

Dear Mr. Higashionna:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your interest and kind consideration of our report. We look forward to your continued interest throughout the project's implementation.

Very truly yours,

HIDEO MURAKAMI State Comptroller

DEPARTMENT OF THE ARMY HEADQUARTERS UNITED STATES ARMY SUPPORT COMMAND, HAWAII FORT SHAFTER, HAWAII 96858 RECEIVED Oct 3 12 or PH '790CT 0 2 1979 APZV-EIE-E DIV. OF FUELIG WORKS Office of Environmental Quality Control State of Hawaii 550 Helekauwila Street, Room 301 Honolulu, Hawaii 90313 Gentlemen: The Environmental Impact Statement (EIS) for the Proposed Hilo Hospital Pacilities, Hilo, Island of Hawaii has been reviewed and we have no comments to offer at this time. There are no Army installations or activities in the immediate vicinity of the project site which will be affected by your proposed actions. The EIS is returned in accordance with your request. Sincerely, 1 Incl PETER D. STEARNS As stated Colonel, CE Director of Engineering and Housing Copy Furnished: Department of Accounting and General Services P.O. Box 119 Honolulu, Hawaii 96810

Colonel Peter D. Stearns
Director of Engineering and Housing
Department of the Army
Headquarters U.S. Army Support Command, Hawaii
Fort Shafter, Hawaii 96858

Dear Colonel Stearns:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your interest and kind consideration of our report. We look forward to your continued interest throughout the project's implementation.

Very truly yours,

HIDEO MURAKAMI State Comptroller



HIDEO MURAKAMI COMPTROLLER

MIKE N. TOKUNAGA DEPUTY COMPTROLLER

STATE OF HAWAII

DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P. C. BOX 118, HONDLULU, HAWAII 96810

LETTER NOPM-1497.9

JAN 22 15

Mr. Edward Harada Chief Engineer Department of Public Works 25 Aupuni Street Hilo, Hawaii 96720

Dear Mr. Harada:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities

D.A.G.S. Job No. 01-20-2364

Thank you for your concern with regard to sewage waste loading for the proposed facility and the existing facility. At this time, there are no definite plans for the future use of the existing facility; however, at the time a decision is made, the issue of waste loading for the existing facility will be addressed. The new acute care facility is essentially a replacement for the present onsite acute care facility, whereby no significant change in waste loading is anticipated.

The future uses of the existing facility are under study by the Department of Health, and are as yet, undetermined.

Pretreatment facilities will be provided for chemicals prior to their discharge into the County Sewerage system. The pretreatment facilities are primarily to neutralize acids which may result from laboratory wastes. The pretreatment facilities are designed to raise the PH factors in chemicals from the hospital laboratories so that they do not cause corrosion in the sewage system after discharge.

Very truly yours,

HIDEO MURAKAMI State Comptroller



University of Hawaii at Manoa

Environmental Center Crawford 317 • 2550 Campus Road Honolulu, Hawaii 96822 Telephone (808) 948-7361

Office of the Director

September 28, 1979

RE: 0288

Mr. Richard O'Connell Office of Environmental Quality Control 550 Halekauwila Street Room 301 Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Draft Environmental Impact Statement Hilo Hospital Facilities Hilo, Hawaii

The Environmental Center has reviewed the above cited DEIS with the help of Joseph Halbig, Geology, Hilo College; Michael Chun, Public Health; Doak Cox, Elizabeth Cunningham and Barbara Vogt, Environmental Center.

In general this draft EIS adequately addresses the potential environmental impacts that might be expected to result from the proposed expansion of Hilo Hospital.

Our reviewers have expressed concern, however, about the structural stability of the facilities in regard to possible earthquake damage. It appears that the area adjacent to Wailuku River is more prone to intense seismic vibration from earthquakes than other areas in the South Hilo District. As indicated by the statement on page 28, existing buildings have suffered considerable damage from past earthquake activity. Since patient safety is a prime consideration, we suggest that a more specific statement be made regarding the building design than that provided on page 33, second paragraph.

We appreciate the opportunity to review this document.

Yours very truly,

Doak C. Cox Director

cc: Department of Accounting and General Services
Barbara Vogt
Elizabeth Cunningham
Joseph Halbig
Michael Chun

Mr. Doak C. Cox Director Environmental Center University of Hawaii at Manoa Crawford 317 2550 Campus Road Honolulu, Hawaii 96822

Dear Mr. Cox:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your comments to our Environmental Impact Statement. The following is our response to your comments.

There is no evidence to our knowledge which clearly states that the area adjacent to Wailuku River is more prone to intense seismic vibration from earthquakes than other areas of South Hilo. The existing facilities did suffer earthquake damage in 1973 and again in 1975; however, these facilities were not originally designed to meet today's code requirements. The new facility is being designed as an "essential building" which does meet design requirements for Zone 3 of the Uniform Building Code.

Very truly yours,

HIDEO MURAKAMI State Comptroller

UNIVERSITY OF HAWAII

Water Resources Research Center

2 October 1979

Office of Environmental Quality Control 550 Halekauwila Honolulu, Hawaii 96813

Gentlemen:

Subject: EIS, Hilo Hospital Facilities

This office has no adverse comments on the EIS for the Hilo Hospital Facilities, but does commend the proposed energy conservation efforts in the design of the heating and cooling system.

Sincerely,

Paul C. Ekern

WRRC EIS Coordinator

PCE:jun

cc: DAGS

E. Murabayashi

Enclosure

Mr. Paul C. Ekern WRRC EIS Coordinator Water Resources Research Center University of Hawaii 2540 Dole Street Honolulu, Hawaii 96822

Dear Mr. Ekern:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your interest and kind consideration of our report. We look forward to your continued interest throughout the project's implementation.

Very truly yours,

Company of the

HIDEO MURAKAMI State Comptroller



United States Department of the Interior

FISH AND WILDLIFE SERVICE

P.O. BOX 80167 HONOLULU, HAWAII 96850 ES Room 6307

October 2, 1979

Office of Environmental Quality Control 550 Halekauwila Street Room 301 Honolulu, Hawaii 96813

> Re: EIS - Hilo Hospital Hilo, Hawaii

Dear Sir:

We have reviewed the referenced Environmental Impact Statement dated August 1979 and have determined that the proposed project will have very little adverse effect on wildlife resources. We therefore have no comments. We are returning the EIS as requested.

We appreciate this opportunity to comment.

Sincerely yours,

Maurice H. Taylor Field Supervisor Division of Ecological

Services

Enclosure

cc: PIA

Dept. of Accounting & General Services

CONSERVE AMERICA'S ENERGY

Mr. Maurice H. Taylor Field Supervisor Division of Ecological Services U.S. Department of the Interior Fish and Wildlife Service P. O. Box 50167 Honolulu, Hawaii 96850

Dear Mr. Taylor:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your interest and kind consideration of our report. We look forward to your continued interest throughout the project's implementation.

Very truly yours,

HIDEO MURAKAMI State Comptroller

STATE OF HAWAII
DEPARTMENT OF PLANNING AND
ECONOMIC DEVELOPMENT
P. O! 43 2259
Honolulu, Hawaii 90804
PT H9 RE | 01 130
October 4, 1979 10.418

Ref. No. 0058

Mr. Richard L. O'Connell Director Office of Environmental Quality Control 550 Halekauwila Street, Room 301 Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Subject: Environmental Impact Statement - Hilo Hospital Facilities, Hilo, Hawaii

Our review of the above document finds that it has adequately addressed the probable impacts of proposed demolition and construction in the hospital area.

Thank you for giving us the opportunity to review the statement.

Sincerely,

Hideto Kono

cc: Vion. Hideo Murakami, State Comptroller
Department of Accounting and General Services

Honorable Hideto Kono
Director
Department of Planning
and Economic Development
P. O. Box 2359
Honolulu, Hawaii 96804

Dear Mr. Kono:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your interest and kind consideration of our report. We look forward to your continued interest throughout the project's implementation.

Very truly yours,

of deed a marine

HIDEO MURAKAMI State Comptroller

DEPARTMENT OF THE AIR FORCE HEADQUARTERS 15TH AIR BASE WING (PACAF) HICKAM AIR FORCE BASE, HAWAII 96853

700 110

5 OCT 1979

DEEV (Mr Shiroma, 449-1831) ;

Draft EIS, Hilo Hospital Facilities, Hilo, Hawaii

550 Halekauwila Street, Room 301 Honolulu, HI 96813

- This office has reviewed the subject EIS and has no comment to render relative to the proposed project. Attached is the EIS for your continued use.
- 2. We greatly appreciate your cooperative efforts in keeping the Air Force apprised of your project and thank you for the opportunity to review the document.

Original signed to

ROBERT Q. K. CHING Chief, Engrg & Envmtl Plng Div Directorate of Civil Engineering 1 Atch EIS, Hilo Hospital Fac

Cy to: Dept of Accounting & General (Av A+A
Services
P. O. Box 119
Honolulu, Hawaii 96810

Mr. Robert Q. K. Ching
Chief, Engineering and Environmental
Planning Division
Directorate of Civil Engineering
Department of the Air Force
Headquarters 15th Air Base Wing (PACAF)
Hickam Air Force Base, Hawaii 96853

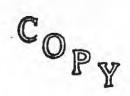
Dear Mr. Ching:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your interest and kind consideration of our report. We look forward to your continued interest throughout the project's implementation.

Very truly yours,

HIDEO MURAKAMI State Comptroller



DEPARTMENT OF PARKS & RECREATION

HILO, HAWATI 96780

OCT 12 11 10 PH . 79

October 10, 1979

Office of Environmental Quality Control 550 Halekauwila St., Room 301 Honolulu, Hawaii 96813

Subject: Hilo Hospital Facilities - EIS

We have no adverse comments to offer on the subject report.

Thank you for the opportunity to review the document.

MILTON T. HAKODA

Director

cc: Dept. of Accounting & General Services

P. O. Box 119

Honolulu, Hawaii 96810

Mr. Milton T. Hakoda Director Department of Parks and Recreation County of Hawaii Hilo, Hawaii 96720

Dear Mr. Hakoda:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your interest and kind consideration of our report. We look forward to your continued interest throughout the project's implementation.

Very truly yours,

HIDEO MURAKAMI State Comptroller

RK/s1



DEPARTMENT OF THE ARMY PACIFIC OCEAN DIVISION, CORPS OF ENGINEERS

BUILDING 230 FT. SHAFTER, HAWAII 96858

PODED-PV

11 October 1979

Mr. Hideo Murakami, Comptroller Department of Accounting and General Services PO Box 119 Honolulu, Hawaii 96810

Dear Mr. Murakami:

We have reviewed the Environmental Impact Statement for the Hilo Hospital Facilities, August 1979. The hospital improvements do not affect the Hilo Area Comprehensive Study managed by the US Army Corps of Engineers. The hospital is located in an area of minimal flooding outside of the 100-year flood hazard zone as defined on the attached figure (Incl 1) extracted from the Flood Insurance Rate Map. The 100-year flood refers to a flood having a one percent chance of being equalled or exceeded in any given year. Planning for the hospital improvements should insure that any potential flood damages are minimized. A Department of the Army permit is not required for the proposed project, unless any work along the banks of the Wailuku River involves the discharge of dredged or fill material into the river.

We thank you for the opportunity of participating in the review process.

Sincerely yours,

1 Incl As stated

KISUK CHEUNG

Chief, Engineering Division

CF: w/EIS Office of Environmental Quality Control 550 Halekauwila Street, Room 301 Honolulu, Hawaii 96813

Mr. Kisuk Cheung
Chief, Engineering Division
Department of the Army
Pacific Ocean Division,
Corps of Engineers
Building 230
Fort Shafter, Hawaii 96859

Dear Mr. Cheung:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your interest and kind consideration of our report. We look forward to your continued interest throughout the project's implementation.

Very truly yours,

HIDEO MURAKAMI State Comptroller

RK/Bi

GEORGE R. ARIYOSHI GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 98801
October 16, 1979

GEORGE A. L. YUEN DIRECTOR OF HEALTH

Audrey W. Meds, M.D. M.P.H.
Deputy Director of Health

Henry N. Thompson, M.A. Deputy Director of Health

James S. Kumagai, Ph.D., P.E. Deputy Director of Health

In reply, please refer to

MEMORANDUM

To:

Mr. Hideo Murakami, Comptroller

Department of Accounting & General Services

From:

Deputy Director for Environmental Health

Subject: Environmental Impact Statement (EIS) for Hilo Hospital Facilities

Thank you for allowing us to review and comment on the subject EIS.

We submit the following comments for your information:

- 1. Page 35 EIS Hospital Complex Air Conditioning (A/C) System addresses central plant configuration, but limits discussion to waste heat recovery from the A/C system in the new acute care facility only or 80% area of controlled . environment. Recommend that in the design of the central plant capacity, the architect be requested to consider other energy conservation programs currently under review by the Department of Planning and Economic Development. Areas such as solar energy, heat exchangers, templifiers, power factor correction, etc. should also be considered to maximize energy economy.
- 2. Page 36 EIS Transportation and Traffic addresses the increase of 20 stalls from 250 existing to 270 stalls, 200 identified as "temporary" parking area across Waianuenue Avenue from existing parking area. We concur that this may not have any adverse impact on volume (to create a traffic hazard), but considering the heavy rainfall belt of Hilo Hospital some means, such as traffic control lights, pedestrian controlled, should be considered for pedestrian and employee safety during rainy days and night shift changes. Also, the parking (temporary) area should be adequately lighted for safety of employees and visitors.
- 3. Page 40, VII Alternatives As the Phase I design of the new acute care facility moves into preschematic drawing stage, we recommend that Phase II planning at DOH level be started for the priority allocation of the 98,000 square feet space which will become available upon completion of the new facility. The allocation of space should follow the following criteria:

First - Hilo Hospital

Second - Other DOH program needs

Third - Other health and medica-ly related needs of the State, such as

DSSH, SHPDA, etc.

Fourth - Other community health agencies

- 4. At the present time, the Island of Hawaii has no regulations controlling community noise; however, consideration must be given to the effect of noise associated with the proposed project on the residential community and on the patients within the existing hospital facilities. Efforts to minimize noise impacts should be directed towards the following:
 - a. Noise associated with construction equipment during construction and renovation phases.
 - b. Noise associated with stationary equipment, such as air contitioning/ ventilation units and exhaust units.
 - c. Noise associated with vehicular noise from the parking garage.
 - d. Noise associated with emergency vehicles, specifically from sirens.
 - e. Noise associated with aircraft from the proposed helicopter landing pad.

We realize that the statements are general in nature due to preliminary plans being the sole source of discussion. We, therefore, reserve the right to impose future environmental restrictions on the project at the time final plans are submitted to this office for review.

JAMES S. KUMAGAI, Ph.D.

cc: Office of Environmental Quality Control DHO, Hawaii

Dr. James S. Kumagai
Deputy Director for
Environmental Health
Department of Health
P. O. Box 3378
Honolulu, Hawaii 96801

Dear Dr. Kumugai:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your comments to our Environmental Impact Statement. The following is our response to your comments.

Response to Item 1: The construction of this hospital facility will incorporate the use of a waste heat recovery system. The air-conditioning system design includes the use of a chiller side bundle condenser/primary waste heat recovery and templifier/secondary waste heat recovery and temperature amplification. Both systems combined eliminate the need for a steam plant. Power factor correction will be used to reduce loading on the electric company. Solar water heating will not be used because the combination of systems listed above renders it unnecessary.

Response to Item 2:

In coordination with Hawaii County Department of Public Works, a pedestrian-controlled traffic control light will be installed along with a crosswalk to ensure pedestrian safety across Waianuenue Avenue. The temporary parking lot will be adequately lighted. The lighting plan calls for five (5) "area" light standards, (two lights per standard) to be installed, which will provide night lighting from the entrance to the rear of the parking lot.

Dr. James S. Kumagai Letter No. PM-1456.9 Page 2

Response to Item 3: The State Department of Health is presently examining the alternative uses for the existing hospital that will be available upon completion of the new facility. Unfortunately, no accurate response to that comment is possible until their examination is completed.

Response to Item 4a: Construction noise will be limited to normal working day hours. Occasionally, construction work will take place on a Saturday, but only the case of emergency to remain on schedule. Equipment such as compressors will be equipped with mufflers to control noise to a minimum.

Response to Item 4b:

All of the primary mechanical equipment will be housed in a building separate from the hospital, and will be acoustically treated. The main cooling tower is to be located to the rear of the maintenance (mechanical) building, and will be equipped with baffles to control noise.

Response to Item 4c: There will be an adequate space between the parking lot and the hospital building, (with landscape materials also used) to act as a noise buffer, and to lessen the impact of vehicular noise from the parking garage.

Response to Item 4d: Noise associated with emergency vehicles is an operational responsibility. Drivers of these vehicles are instructed to limit the use of sirens to emergencies only, and to operate them only within a reasonable distance from neighborhoods adjoining the hospital. Noise from emergency vehicles at Hilo Hospital will not be any greater than at other hospitals.

Response to Item 4e: Hawaii County has for its own use only one helicopter which is primarily utilized for fire emergencies. The National Guard has provided the County with one additional helicopter (loan), but it is not large enough to transport injured persons. The helicopter pad, therefore, is not expected to be a source of noise impact, except during extreme emergencies.

Very truly yours,

Hideo Murakami October 16, 1979 Page 2

- 8) Page 37 There is no discussion on the aesthetic effects of the structure. Will the building be visible from downtown Hilo? from Wailuku River State Park? This potential impact should be considered.
- 9) Responses to the comments made during the consultation phase should be included in the EIS.

As of this date we have received a total of sixteen (16) comments as indicated on the attached list.

We have not attempted to summarize the comments of other reviewers. Instead, we recommend that each comment be given careful consideration by yourself.

The EIS Regulations allow the accepting authority or his authorized representative to consider responses received after the fourteen day period.

We trust that our comments will be helpful to you in the preparation of the revised statement. Thank you for the opportunity to review this EIS.

Attachment

GEORGE R. ARIYOSHI GOVERNOR



STATE OF HAWAII DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

MIKE N. TOKUNAGA

COMPTROLLER

HIDEO MURAKAMI

P. O. BOX 119, HONOLULU, HAWAII 96810

LETTER NO. PM-0003.0

JAN I O ISED

Mr. Richard L. O'Connell Director Office of Environmental Quality Control Room 301 550 Halekauwila Street Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your comments to our Environmental Impact Statement. The following is our response to your comments.

- Response to Item 1: Figure II-2 has been changed to read Mauna Kea Sugar Co.
- Response to Item 2: Hilo County has been changed to read Hawaii County, Department of Water Supply.
- 3. Response to Item 3: The first sentence regarding grading has been corrected to read: "A fair amount of site grading will be done."
- 4. Response to Item 4: The use of natural ventilation has been considered, and will be utilized in all rooms not requiring airconditioning.
- 5. Response to Item 5: It is not anticipated that the temporary parking lot will be in use for more than ten years. A pedestrian overpass would be impractical because the parking lot is temporary; however, other pedestrian safety measures are anticipated such as a pedestrian-controlled traffic light.

Mr. Richard L. O'Connell Letter No. PM-0003.0 Page 2

- 6. Response to Item 6: That sentence has been corrected, and word "NOT" has been added, the term "dump" has been deleted.
- 7. Response to Item 7: The new Acute Care Facility is planned as a part of the hospital improvement program, and not a hospital expansion program. No significant traffic increases are anticipated because the new Acute Care Facility is essentially a replacement for the existing Acute Care Facility. The parking garage (and its related effects upon ambient air quality) is not the subject of this EIS. The parking garage is a part of the hospital master plan and is planned for a future date (PHASE 6), provided funding is available.
- 8. Response to Item 8: The existing buildings on the Hilo Hospital grounds are not visible from Downtown Hilo, and since the new structure is in effect behind the existing facilities, it also will not be visible from Downtown Hilo. The new facility may be partially seen from Wailuku River State Park, but the entire building will not be visible from there.

Very truly yours,

HIDEO MURAKAMI State Comptroller

Honorable Susumu Ono Chairman Department of Land and Natural Resources P. O. Box 621 Honolulu, Hawaii 96819

Dear Mr. Ono:

Subject: Environmental Impact Statement for Proposed Hilo Hospital Facilities D.A.G.S. Job No. 01-20-2364

Thank you for your comments to our Environmental Impact Statement. The following is our response to your comment.

Comment: If the existing structure is to be demolished and a new hospital built, we suggest resolving the land tenure situation, i.e., cancellation of G.L. No. S-3751 and a set aside of the site to DOH or DAGS by executive order.

Response: There are no plans to demolish the existing structure; rather, it will be converted to an alternate use.

Very truly yours,

HIDEO MURAKAMI State Comptroller

1.2.1. 2.1.