

UNIVERSITY OF HAWAI'I SYSTEM

ANNUAL REPORT

REPORT TO THE 2007 LEGISLATURE

Annual Report
University of Hawai'i and the Department of Transportation
On the Relocation of the University of Hawai'i Marine Center

HCR266, HD1 2006

December 2006

University of Hawaii Report (12/2006) to the Twenty-fourth Legislature on HCR266 HD1:

REQUESTING THE UNIVERSITY OF HAWAII AND THE DEPARTMENT OF TRANSPORTATION TO WORK COLLABORATIVELY TO PURSUE, ON A PRIORITY BASIS, THE RELOCATION OF THE UNIVERSITY OF HAWAII MARINE CENTER FROM THE FORMER KAPALAMA MILITARY RESERVATION, HONOLULU HARBOR.

“Be it resolved by the House of Representatives of the Twenty-third Legislature of the State of Hawaii, Regular Session of 2006, the Senate concurring, that UH and DOT are requested to collaborate, on a priority basis, to effectuate the relocation of the UH Marine Center; and

Be it further resolved that the Hawaii Harbors Users Group is requested to include representatives of UH’s School of Ocean and Earth Science and Technology, as well as the UH Marine Center, in its harbor planning process regarding the development of harbor lands; and

Be it further resolved that prior to the relocation of the University of Hawaii Marine Center, DOT and UH find a suitable location offering comparable dock space, storage and staging areas, services, size and proximity to UH, which is beneficial to all parties involved and ensure that funding is available for its relocation; and

Be it further resolved that the UH and DOT are requested to report to the Legislature no later than 20 days prior to the convening of the Regular Session of 2007 on their progress to relocate the Marine Center; and

Be it further resolved that certified copies of this Concurrent Resolution be transmitted to the Governor, the Director of Transportation, the Chair of the Board of Land and Natural Resources, the President and the Chairperson of the Board of the University of Hawaii, and the President of the Hawaii Harbors Users Group.”

Executive Summary

Marine sciences are a premier program at UH that is in the top three nationally. The program continues sustained real growth (at >6% per annum since 2000) and requires the excellent technical support and training facilities of the UHMC to fulfill its missions.

The UH has worked diligently with the DOT and their consultants, Belt Collins Hawaii, to identify relocation sites and to define the UHMC relocation requirements:

- 1) Maintenance of efficient operations during the transition,
- 2) Permanent capital facilities (piers, offices, labs, warehouses, machine shops) plus associated pier aprons, staging and assembly areas, and parking, to service the UH and UNOLS marine expeditionary science programs and allow for their projected expansion,
- 3) Secure and exclusive use of the facility, including ~770’ of deep water docks (30’ water depth, with equivalent loading capacity, power, sewage access and perimeter fencing), preferably at Honolulu Harbor in close proximity to UH Manoa (SOEST).

Co-location of the large ship and small boat operations, as well as the HURL submersible facilities, is desirable to provide cost-effective operations and staffing. Comparable-to-present facilities could be consolidated into 96,600 SF of buildings (~2.2 acres, one story) surrounded by ~4.5 exterior acres. Allowing for projected expansion, even with some two-story construction, would require a minimum 8 acres of net usable land, and 10 acres would be prudent for long term growth (as provided in the current UH lease).

A permanent relocation site has not been identified by DOT, despite detailed considerations of numerous sites, including Honolulu Piers 31-35.

UH recommends to relocate the UHMC to the NW corner of Sand Island under a DLNR lease that would co-locate a consolidated UH marine program including the UHMC and the Honolulu Community College’s Marine Education Training Center (HCC-METC).

A two-phase development of the Kapalama container terminal would alleviate the projected shortfall in Honolulu Harbor cargo handling in a timely manner while allowing efficient UHMC operations to be maintained during the parallel development of the relocation site. Without a phased development, the UHMC operations and premier UH marine science program would be severely compromised.

Progress To Date

The Dean of SOEST, Brian Taylor, met with the (then) Deputy Director of the Department of Transportation Harbors Division, Barry Fukunaga on July 27th, 2006. Both participated in a meeting of UH and DOT-H administrators on August 3rd chaired by the Governor's Chief of Staff, Bob Awana, which outlined the rationale and scope of the UHMC relocation project. Other principals at that meeting included Sam Callejo (UH Vice President Administration), Kathy Cutshaw (UH Manoa Vice Chancellor Administration), Sandra Pfund (Director of Waterfront Development, Aloha Tower Development Corporation), and Lisa Reinke (Belt Collins Hawaii). Since those inaugural meetings, DOT-H and UH staff have diligently pursued joint studies, facilitated by Belt Collins Hawaii (consultant to DOT-H), to define the UHMC relocation requirements and identify a suitable relocation site.

Belt Collins Hawaii submitted a draft "Marine Center Relocation Study" (November, 2006) that examined the UHMC's existing facilities at Snug Harbor, relocation requirements, and potential relocation sites at Piers 31 to 35. In the end, however, relocation to those piers was not recommended by DOT-H. The difficulty of finding a suitable relocation site within Honolulu Harbor was discussed at a meeting of senior UH administrators in the first week of December. This produced a recommendation sent by UH President David McClain to Barry Fukunaga on December 8th to relocate the UHMC to the NW corner of Sand Island under a DLNR lease that would co-locate a consolidated UH marine program including the UHMC and the Honolulu Community College's Marine Education Training Center (HCC-METC). That letter is attached to this report and summarizes UH's primary recommendation to the 24th Legislature, the rationale for which is elaborated below.

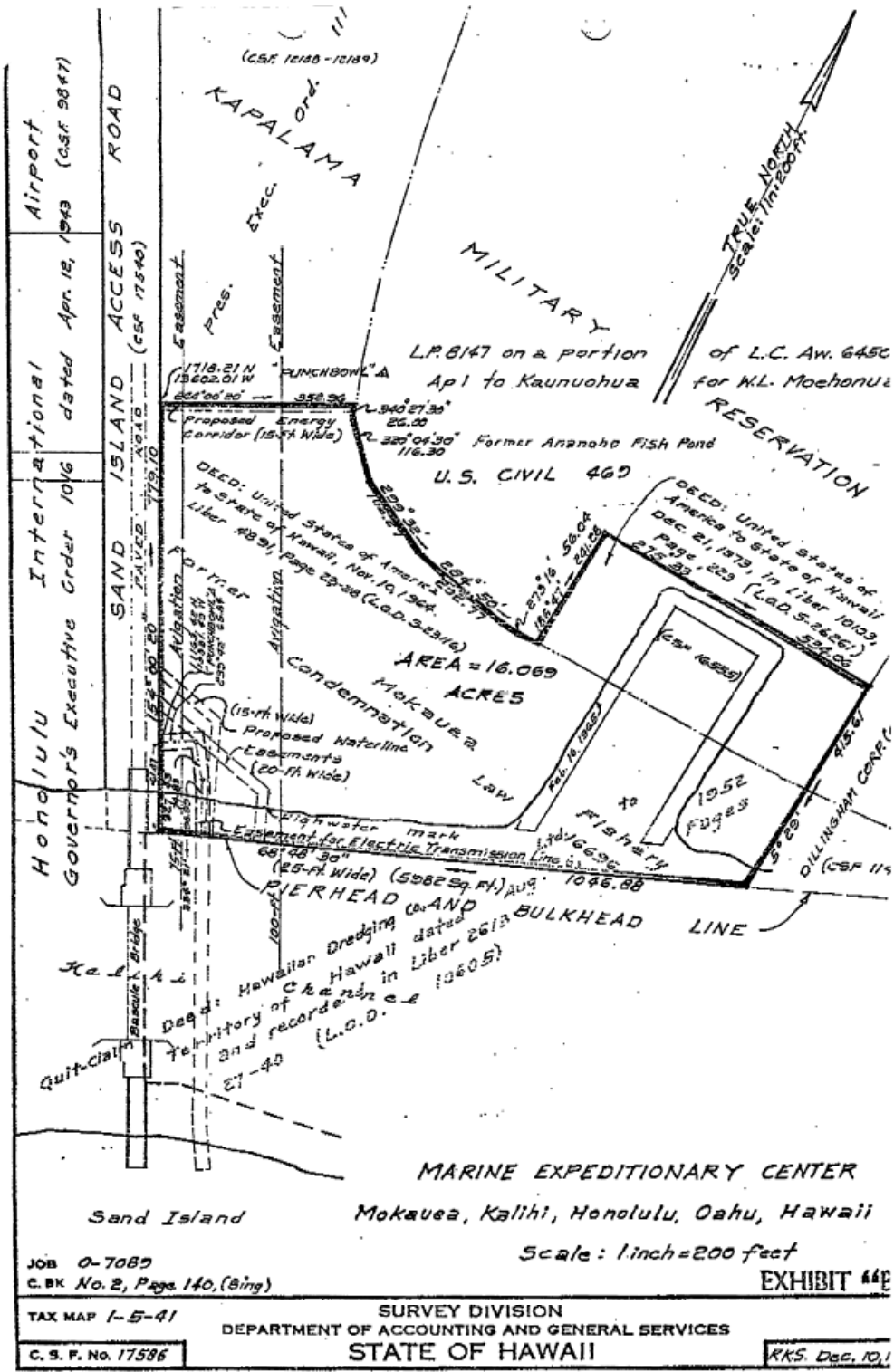
UH and the Sea

Marine sciences at the University of Hawaii (UH) are in the top three programs nationally (after Woods Hole and Scripps). UH has an enduring heritage with the sea, fulfilling the vision of its inaugural President that "our teaching should [have] a logical focus on agriculture and marine sciences" (John Washington Gilmore, August 1908). Hawaii's strategic mid-Pacific location and long standing cultural and economic connections to the sea sustained that vision to create a premier ocean research and education School to promote wise use of the Hawaii's largest untapped resource – the sea around us (as was recently re-emphasized by Governor Lingle in her opening second term address).

The UHMC

The UH has one of the best marine expeditionary support facilities and fleet of academic research and education ships in the nation. The University of Hawaii Marine Center (UHMC) is located at its Snug Harbor campus, surrounding Pier 45 in Honolulu Harbor. The UH School of Ocean and Earth Science and Technology (SOEST) operates the UHMC "under a gratis 65-year, renewable lease from DLNR" (General Lease No. S-4488, February 23, 1973, between the DLNR and UH).

That ~16 acre lease consolidated an existing harbor-front parcel of 13.23 acres (the former Mokauea Fishery) plus an interior 2.89 acres (of the former Kapalama Military Reserve) for the exclusive use of the UHMC.

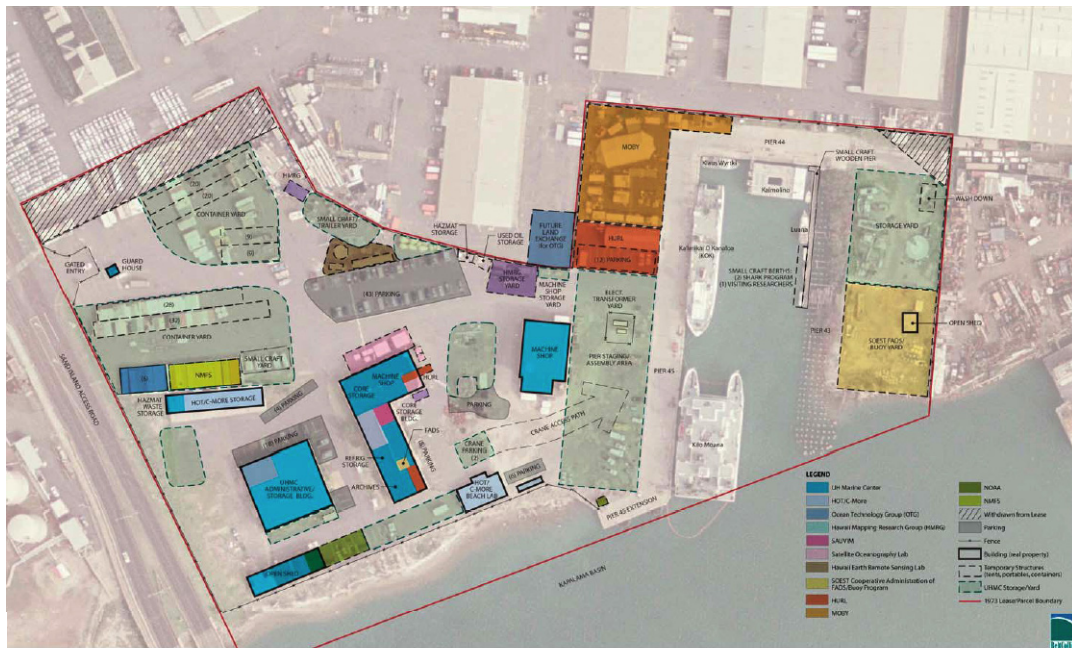


In 1974 the State built Snug Harbor piers with a hardened cement apron that is 45' wide and can support on-and-off loading with UH's 35- and 65-ton cranes (1000 lb/sf). The primary pier (#45) is 500' long with a corner facing the main channel of 100' (both 7' above MLLW) and there is an inside pier (#44) of 170' with an apron 3.5' above MLLW. An adjacent wooden floating pier for small boats (#43) is 205' long and could be extended another 200'. Administration, warehouse and storage buildings were constructed in the mid 1970's. Federal funds were appropriated (through the Office of Naval Research) to enhance the shore support facilities with special purpose buildings such as the Machine Shop (1976) and the Core Lab (1982), and to upgrade two of the three electrical dock boxes to 440V/1000A (2002).



Thus the UHMC at Snug Harbor is much more than a place to park the ships operated and/or owned by UH: R/V Kilo Moana (186'x88'x25'), R/V Ka'imikai-O-Kanaloa (223'x38'x13.5'), R/V Klaus Wyrski (57'x16'x6'), R/V Kaimalino (77'x45'x12'), as well as several 33' and smaller boats. In addition to headquartering UH's marine operations, the UHMC is a technical support and training facility for the University's many marine science programs (see Belt Collins report and/or www.soest.hawaii.edu for details). These facilities include warehouses, laboratories and machine shops dedicated to seagoing programs, libraries of marine scientific samples and data, development/servicing/storage of seagoing equipment, and staging areas for the construction of everything from DLNR fish aggregation devices (FADs) to new

ocean buoys, vehicles, instruments and sensors. As UH is a charter member of the University National Oceanographic Laboratory System (UNOLS), the piers and shore facilities are also used in support of scheduled visits by other ships from the US academic and federal agency research fleets, as was envisioned in the 1973 DLNR Lease. The University’s Hawaii Undersea Research Lab (HURL) operates its ROV and two manned submersibles (PISCES IV and V) from the UHMC. HURL also rents (from RCUH) submersible hanger space at Makai Pier, Waimanalo. The UHMC relocation proposes to consolidate both functions at one facility.



Above: Belt Collins Hawaii site analysis of UHMC.

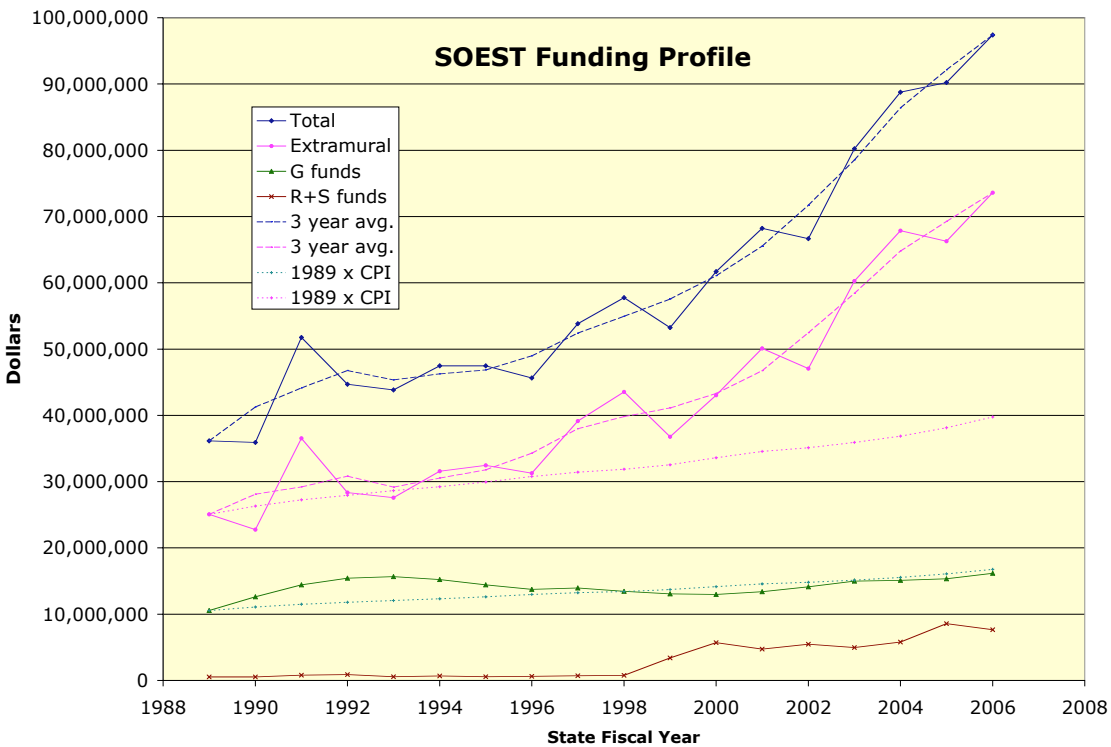
Below: Servicing R/V Roger Revelle at UHMC, April 2006



In 2005, one acre was withdrawn from the UHMC in accord with the terms of the DLNR lease (“in such manner by Lessor as not to interfere unreasonably with Lessee’s use of the demised premises”), leaving the current property of ~15 acres, of which ~11.5 acres is net usable land (the remainder being harbor waters and un-hardened shore line). To meet US Navy and Coast Guard requirements since 9/11, the property is secured with a perimeter fence, cameras and 24/7 guard service.

Fulfilling the Vision

In language accompanying the UHMC lease, the DLNR recognized the important role that marine research and education play in our island state, and rightly predicted and allowed for their growth at the UH. The UH continues to keep that promise. For example, SOEST extramural grants have grown from \$25M in FY89 to over \$73M in FY06, with ~80% of those funds being for marine research and education. This program has continued real growth (above inflation) at >6% per annum since 2000.



SOEST employs 870 people to carry out its teaching, research, and service mission, which requires access to the sea. Recognizing the importance of that access, the State Legislature appropriated \$750K per year, starting in 2001, for funds to cost-match a SOEST proposal to operate the \$56M US Navy vessel R/V Kilo Moana. Senator Inouye helped appropriate the funds for the design and build of this unique (double-hulled and 88' wide) research and teaching vessel which was delivered in 2002 and is the pride of the fleet home-ported at Snug Harbor. The State funds are used for student cruises, equipment development and testing, and shore support, and help leverage ~\$10M/year in Federal funds that comes to SOEST directly for ship and submersible operations staged from Snug Harbor.

Marine sciences at UH continue to grow. Most recently (August 1st), the National Science Foundation established a national Science and Technology Center for Microbial Oceanography, Research and Education (C-MORE) at SOEST under the direction of National Academy of Sciences member Dr. David Karl. This prestigious five year award is renewable for another five years with an expected decadel budget of \$51M, has more than one third of its budget dedicated to education, and specifically requires the UHMC facilities as a condition of the award. Also, the

UH President has recommended to the Board of Regents establishing a UARC that may add tens of millions of dollars for non-classified DoD research in the next few years. Two of the four core competencies recognized by the Navy for the UARC are SOEST Oceanographic Research and Sensor Development - which will further increase the need for UHMC facilities to support UH's seagoing programs and related R&D.

Since the early 1990's, however, the proposed relocation of the UHMC has left a cloud of uncertainty over the UH marine science program and has undermined needed investment in UHMC capital improvements. No new buildings have been constructed at the UHMC since 1982. Large marquees and conjoined trailers were installed as (now long-lived) temporary measures to partially accommodate the ever-expanding marine research and education program.

Previous plans to relocate the UHMC included SOEST working with DBEDT in the development of the Pier 38 Master Plan. That plan was part of the Honolulu Waterfront Project published in September 1993 and was accepted by the DOT-H. Commercial architectural drawings were completed for a proposed relocation of the UHMC to Pier 38, a site that could have provided both the dock space and associated staging areas and warehousing to accommodate UH marine operations (including the HURL submersible program). At a very late stage, those plans were scrapped by the DOT in favor of the now (under-occupied) "Fishing Village". Since that time, UH-SOEST has explored with DOT alternate UHMC relocation options in Pearl Harbor and at Piers 31-35. But none of these options meet DOT's and UH's operational requirements.

Relocation Requirements

The State Legislature, under HCR266 HD1, "resolved that prior to the relocation of the UHMC, DOT and UH find a suitable location offering comparable dock space, storage and staging areas, services, size and proximity to UH, which is beneficial to all parties involved and ensure that funding is available for its relocation". As DOT and UH are both State-funded agencies, identification of funding will require support from the current Legislature and Administration, probably with Federal assistance.

The details of a UHMC relocation site comparable to Snug Harbor are elaborated upon in the Belt Collins study. Four primary considerations in re-building a first-class marine facility include:

- 1) Maintenance of efficient operations during the transition,
- 2) Construction of long-term capital facilities (offices, labs, warehouses, machine shops) without concern of having to move again some years later,
- 3) Sufficient space for the above, plus associated pier aprons, staging and assembly areas, and parking, to service the UH and UNOLS marine expeditionary science programs and allow for their projected expansion,
- 4) Secure and exclusive use of the facility, including ~770' of deep water docks (30' water depth, with equivalent loading capacity, power, sewage access and perimeter fencing), preferably at Honolulu Harbor in close proximity to UH Manoa (SOEST).

Another highly desirable, but not essential, characteristic is to co-locate the large ship and small boat operations, as well as the HURL submersible facilities, in order to provide efficient operations and affordable staffing. As detailed in the Belt Collins study, facilities equivalent to the current ones, if properly laid out, could be consolidated into 96,600 SF of buildings (~2.2 acres, one story) surrounded by ~4.5 exterior acres (not including harbor waters) for pier aprons; staging, storage and assembly yards; and parking. Allowing for projected expansion, even with

some two-story construction, would require a minimum 8 acres of net usable land, and 10 acres would be prudent for long term growth (as provided in the current UH lease).

PROPOSED BUILDING REQUIREMENTS		
Marine Center		89,085
Offices and Administration:		3,930 SF
SOEST:	3,105 SF	
HURL:	825 SF	
Research Program Areas:		38,250 SF
(Labs, Research, Maintenance and Assembly Floors)		
SOEST:	28,730 SF	
HURL:	9,520 SF	
Warehouse (Covered Storage):		6,905 SF
SOEST:	41,980 SF	
HURL:	4,925 SF	
Machine Shop		7,100 SF
Marine Ops:	6,000 SF	
HURL:	1,100 SF	
Guardhouse		400 SF
TOTAL BUILDING FLOOR AREA*		96,600 SF
PROPOSED EXTERIOR AREA REQUIREMENTS		
Waterfront Piers	770 LF	
Small Craft Pier	150-200 LF	
Pier Apron		34,560 SF (0.8 acres)
Pier-side Staging and Assembly Yard		30,000 SF (0.7 acres)
Open Storage and Assembly Yards		49,660 SF (1.14 acres)
Container Storage Yard		11,000 SF (0.25 acres)
Parking		39,200 SF (0.85 acres)
Site Circulation (20 % factor)		32,837 SF (0.76 acres)
TOTAL EXTERIOR AREA*		197,000 SF (4.5 acres)
* (Gross Area, rounded)		

Source: Belt Collins Hawaii Marine Center Relocation Study

UH Proposal

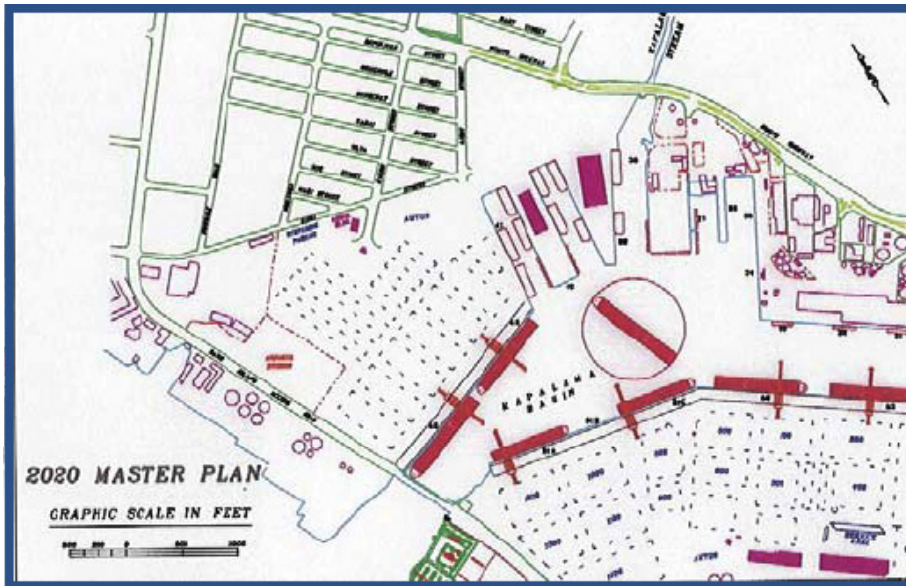
Given other priority harbor operations, relocation sites meeting these minimum, let alone desirable, requirements have yet to be identified by DOT.

Following a meeting of senior UH administrators in the first week of December, the UH President made a UHMC relocation proposal to DOT outlined in the letter attached, which we also recommend to the 24th Legislature. That proposal is to relocate the UHMC to the NW corner of Sand Island under a DLNR lease that would co-locate a consolidated UH marine program including the UHMC and the Honolulu Community College's Marine Education Training Center (HCC-METC). As outlined in the letter, the proposed site has the important advantages of (a) having direct deep-water access and a turning basin outside the commercial harbor area (on the other side of the Sand Island Access Road Bridge), and (b) the potential for an equivalent (long-term, renewable, gratis) lease with DLNR that would allow the necessary State and Federal investment in major capital infrastructure required to rebuild a first class marine science facility (for large *and* small boat operations, shore support, and workforce development) that can be affordably operated.



Phased development: The UH recognizes that some (as yet uncertain) time will be required to (1) coordinate with DLNR a staged lease exchange, (2) conduct relocation site and infrastructure analysis, (3) obtain environmental and construction permits, and (4) secure necessary funding.

However, this need not limit timely progress towards developing a Kapalama container terminal, so long as that development is done in two stages. The area east and north of the UHMC is already under DOT jurisdiction. The first (eastern) of the two Kapalama berths proposed in the 2020 Master Plan can begin development as soon as DOT has completed planning and obtained funding, without filling-in Snug Harbor and compromising UHMC operations. This would alleviate the projected shortfall in Honolulu Harbor containerized cargo handling in a timely manner. In parallel with that phase one development, UH would be completing the tasks 1-4 above and then, with State/Federal funding, constructing the piers and buildings at the UHMC relocation site on Sand Island (on the other side of the bridge and channel). Once those facilities are completed, the UHMC will relocate and the second phase (berth and yards) of the Kapalama development can proceed. ***There is no alternate to a phased development scenario in which the UHMC operations and preeminent UH marine science program are not severely compromised during the multi-year development of a Kapalama container terminal.***





UNIVERSITY OF HAWAII

David McClain
President

December 8, 2006

Mr. Barry Fukunaga
Deputy Director
Department of Transportation
Harbors Division
79 So. Nimitz Highway, Room 305
Honolulu, HI 96813

Dear Mr. Fukunaga:

Having been made aware of (1) the cooperation between your office and SOEST in studying the proposed relocation of the University of Hawai'i Marine Center (UHMC), and the difficulty of finding a suitable relocation site within Honolulu Harbor and (2) title issues associated with Honolulu Community College's operation of the Marine Education Training Center (HCC-METC) on Sand Island, I am pleased to report the recommendations of a meeting today between senior University administrators (copied below).

The co-location of a consolidated University of Hawai'i marine program under a DLNR lease on the NW corner of Sand Island (i.e., adjacent the HCC-METC building), in exchange for the existing UHMC DLNR lease, offers the potential to solve numerous long-term issues that otherwise contrapose two State priorities, that of commercial harbor development and University education, research and workforce development. Concerning the UHMC relocation, development of the Sand Island site has the potential to provide comparable berthing (contiguous for both deep-draft and small boats), staging areas and admin/shop/tech facilities as the existing operations at Snug Harbor and Makai Pier, on a secure and University-controlled campus. Concerning the HCC-METC, the construction of a deep-draft pier facing the main channel could alleviate current building set-back issues and the granting of a long-term lease would solve the title issues. Furthermore, co-location of the UHMC and METC programs offers many synergistic advantages to both programs in terms of joint use of facilities, workforce training and job opportunities. Both programs also have strong ties to the Polynesian Voyaging Society, whose interests we would propose to incorporate into the planning of a joint facility/campus.

Deputy Director Barry Fukunaga
December 8, 2006
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Planning for a consolidated University marine center that preserves existing UHMC and METC functionalities, accommodates demonstrable growth, and mutually benefits UH Manoa and HCC marine programs, would be a very positive outcome to the Legislature-mandated UHMC relocation study. The proposed site has the important advantages of (a) having direct deep-water access and a turning basin outside the commercial harbor area, and (b) the potential for an equivalent (long-term, renewable, gratis) lease with DLNR that would allow the necessary State and Federal investment in major capital infrastructure required to (re-)build a first class marine facility that can be affordably operated.

With these factors in mind, I write to report the unanimity of the University of Hawai'i, including its Mānoa and HCC campuses, in recommending to you and the Legislature that, concerning the proposed relocation of the UHMC, serious consideration be given to co-locating it with the METC under a DLNR lease on the NW corner of Sand Island. I recognize that this is but the first requirement of many to advance this proposal and secure its funding. Yet this is possibly the best option to address the concerns of both our State organizations. Please coordinate as necessary with my office and those of my administrators copied below in further developing this concept.

Sincerely,



David McClain

- c: Vice President Sam Callejo, Administration
- Vice President John Morton, Community Colleges
- Chancellor Ramsey Pedersen, Honolulu Community College
- Vice Chancellor Kathy Cutshaw, UH Mānoa Administration
- Dean Brian Taylor, UHM School of Ocean & Earth Science & Technology
- Director Sandra Pfund, Waterfront Development, ATDC