



University of Hawaii at Manoa

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October 28, 1988
RP:0096

Mr. John P. Whalen, Director
Department of Land Utilization
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Shoreline Setback Variance Application
(Proposed Seawall and Existing Concrete Drainage Swale)
Seawall - Kaneohe Bay
(Tax Map Key: 4-4-14: 01)
Kaneohe, Oahu

The Environmental Center has examined the above referenced Shoreline Variance Application. Experience has shown that erosion frequently occurs at the seaward toe of grouted seawalls, even those constructed in relatively protected areas such as Kaneohe Bay. Consequently, a footing 1' deep may not be adequate. We also note that the seaward progression of the measured high water mark noted on the attached survey indicates that fill has accreted in this area. In view of the slope of the lot and the adjacent topography, we suspect that this fill is terrigenous, derived either from earthmoving during landscaping or upslope erosion and transport. In any case, soil movement problems are common in the area, and the proposed wall more closely resembles a retaining wall than merely a seawall, thereby requiring structural reinforcement and additional footing. We would urge that a coastal engineer familiar with both seawall and retaining wall specifications be consulted in the design of this structure.

We note parenthetically that the life expectancy of the structure is proposed to be "100 years or more." Given present uncertainties in predicted sea level fluctuation due to greenhouse warming, such a time scale may not realistically account for unavoidable future influences on the shoreline due to sea level rise.

Thank you for the opportunity to comment on this document.

Sincerely,

John T. Harrison
Environmental Coordinator

cc: OEQC
L. Stephen Lau

a part of Water Resources Research Center

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