

CALIFORNIA COASTAL COMMISSION

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Commission Action:

**W 9e****STAFF REPORT: REGULAR CALENDAR****APPLICATION NO.:** 5-03-491**RECORD PACKET COPY****APPLICANTS:** William Johnson**AGENT:** Culbertson, Adams & Associates, Mr. David B. Neish and Mr. David J. Neish**PROJECT LOCATION:** 1008 West Bay Avenue, City of Newport Beach (County of Orange)**PROJECT DESCRIPTION:** Construction of a new 70 foot long bulkhead fronting Newport Bay. The bulkhead and backfill will result in the fill of 0.024 acres (1,045 square feet) of high intertidal sandy habitat.**SUMMARY OF STAFF RECOMMENDATION:**

The applicant proposes to construct a new bulkhead on a bayfront lot in the City of Newport Beach. The primary issues before the Commission are whether construction of the proposed bulkhead is consistent with (1) Coastal Act Section 30233, which does not allow the fill of coastal water for purposes of protecting residential development, much less for converting marine habitat to private yard space; and (2) Coastal Act Section 30235, which permits shoreline altering construction such as bulkheads only under limited circumstances and when certain criteria are satisfied, including that the proposed structure is "required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion." Staff recommends that the Commission **DENY** the proposed project.

As submitted, the proposed project is inconsistent with the Sections 30233 and 30235 of the Coastal Act. Section 30233 of the Coastal Act identifies an exhaustive list of eight uses for which fill of open coastal waters is allowed. The proposed bulkhead does not qualify as one of the eight permitted uses. The proposed bulkhead will result in the fill of 0.024 acres (1,045 square feet) of high intertidal habitat, to be converted to yard space for the residence. Fill of wetland or coastal waters for private residential development is not one of the allowable uses identified under Section 30233.

Although the subject site is apparently experiencing nominal erosion which appears to be the result of natural processes, the applicant has not demonstrated that the erosion affecting the adjacent boundary walls, patio slabs, building slabs and the building's foundation is occurring at a rate which demands attention or that any existing structure is in danger and can only be

protected via the construction of the proposed bulkhead pursuant to Section 30235. Section 30235 of the Coastal Act requires the Commission to allow construction of a bulkhead when it is both (1) required to protect existing development that is in danger due to erosion and (2) designed to eliminate or mitigate adverse impacts on local shoreline sand supply. The proposal does not conform to either of these standards. While the applicant has supplied an engineering study that identifies the reasons the applicant desires to install a bulkhead, the study does not demonstrate that the existing principal structure is in imminent danger due to erosion or that a bulkhead is necessary to protect the existing structure, rather, the study identifies issues, such as saltwater seepage into the foundation, that the Commission's Coastal Engineer had indicated can be adequately addressed through means other than the construction of a shoreline protective device that would not necessitate the fill of coastal waters. For instance, a moisture barrier installed along the bayward edge of the existing patio would prevent saltwater seepage into the foundation.

Furthermore, other feasible alternatives to the proposed project that comply with Coastal Act policies exist as well, thus adding an additional reason why the current proposal cannot be approved. For example, if erosion is a problem, periodic beach nourishment could be undertaken to maintain the existing beach profile.

Staff recommends that the project be denied, since it is neither an allowable use under Section 30233 of the Coastal Act nor necessary under Section 30235 of the Coastal Act to protect an existing structure threatened by erosion, and because it is not the least environmentally damaging feasible alternative.

LOCAL APPROVALS RECEIVED: Approval-In-Concept from the City of Newport Beach Harbor Resources Division dated June 7, 2001; Section 401 Water Quality Standards Certification dated May 8, 2002 from the Regional Water Quality Control Board; and Approval-In-Concept from the City of Newport Beach Harbor Resources Division dated November 20, 2003.

SUBSTANTIVE FILE DOCUMENTS: City of Newport Beach Certified Land Use Plan; Coastal Development Permits: 5-02-378-[Johnson]; 5-00-495-[Schulze]; 5-01-104-[Fluter]; 5-01-117-[Childs]; *Geotechnical Investigation, Proposed Rear Yard Seawall, 1008 West Bay Avenue, Newport Beach, California*, prepared by Petra (Project No. J.N. 178-01) dated May 29, 2001; letter from Commission staff to Marshall Steele dated July 16, 2001; Letter from Richard Okimoto to Commission staff dated December 17, 2001; letter from Richard Okimoto to Commission staff dated February 26, 2002; letter from the City of Newport Beach to William Johnson dated November 1, 2002; letter from Skelly Engineering dated November 27, 2001; letter from the California State lands Commission to Richard Okimoto dated January 30, 2002; *Marine Biological Resources Impact Assessment, Bulkhead Construction Project, 1008 West Bay Avenue, Newport Beach, California, Coastal Development Permit #5-01-229* prepared by Coastal Resources Management dated February 21, 2002; letter from Commission staff to Richard Okimoto dated March 28, 2002; *Conceptual Mitigation Plan for the Restoration of Saltmarsh Habitat Upper Newport Bay, California, 1008 West Bay Avenue, Newport Beach, California, Coastal Development Permit #5-01-229* prepared by Coastal Resources Management dated April 19, 2002; letter from the California Department of Fish and Game to Commission staff dated November 6, 2001; letter from the California Department of Fish and Game to Coastal Resources Management dated April 19, 2002; letter from the California Department of Fish and Game to the United States Army Corps of Engineers dated August 1, 2002; letter from the

United States Fish and Wildlife Service to the United States Army Corps of Engineers dated August 5, 2002; letter from the National Marine Fisheries Service to the United States Army Corps of Engineers dated August 6, 2002; letter to David Neish Jr. from Commission staff dated August 9, 2002; letter from David Neish Jr. to Commission staff dated August 16, 2002; letter from William Johnson to Commission staff dated August 16, 2003; letter from letter from Lesley Ewing, California Coastal Commission Coastal Engineer, dated October 14, 2002; letter from David Neish Jr. to Commission staff dated October 29, 2002; letters from David Neish Jr. to Commission staff dated February 27, 2003; Letter from Noble Consultants, Inc. to United States Army Corps of Engineers (ACOE) dated March 5, 2003 letter from United States Army Corps of Engineers (ACOE) to Noble Consultants, Inc. dated April 1, 2003; letter from Noble Consultant's to Commission staff dated April 4, 2003; *Big Canyon Creek Restoration Project Mitigation Fee Proposal* by Noble Consultants; letter from Community Conservancy International to David Altman (Noble Consultant's, Inc.) dated April 29, 2003; and email from United States Army Corps of Engineers (ACOE) to David Altman (Noble Consultants) dated April 4, 2003.

EXHIBITS

1. Vicinity Map
2. Assessor's Parcel Map
3. Approval in Concept
4. Project Plans
5. Letter from the Department of Fish & Game (DF&G) to Commission staff dated November 6, 2001
6. Letter from the Department of Fish & Game (DF&G) to the Army Corps of Engineers (ACOE) dated August 1, 2002
7. Letter from the Fish & Wildlife Services (F&WS) to the Army Corps of Engineers (ACOE) dated August 5, 2002
8. Letter from the National Marine Fisheries Service (NMFS) to the Army Corps of Engineers (ACOE) dated August 6, 2002
9. Letter from Lesley Ewing, California Coastal Commission Coastal Engineer, dated October 14, 2002
10. Letter from Lesley Ewing, California Coastal Commission Coastal Engineer, dated March 16, 2004
11. Letter from Noble Consultants. Inc. dated April 4, 2003
12. Letter from *Skelly Engineering* dated November 27, 2001

STAFF RECOMMENDATION:

I. STAFF RECOMMENDATION OF DENIAL

Staff recommends that the Commission adopt the following resolution to deny the coastal development permit application. The motion passes only by affirmative vote of a majority of the Commissioners present.

A. Motion

I move that the Commission approve Coastal Development Permit No. 5-03-491 for the development proposed by the applicant.

B. Staff Recommendation of Denial

Staff recommends a **NO** vote. Failure of this motion will result in denial of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

C. Resolution to Deny the Permit

The Commission hereby **DENIES** a coastal development permit for the proposed development on the ground that the development will not conform with the policies of Chapter 3 of the Coastal Act and will prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit would not comply with the California Environmental Quality Act because there are feasible mitigation measures or alternatives that would substantially lessen the significant adverse impacts of the development on the environment.

II. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares as follows:

A. Project Location, Description and Background

1. Project Location

The proposed project is located on a bayfront lot fronting Newport Bay at 1008 West Bay Avenue in the City of Newport Beach, County of Orange (Exhibits #1-3). North of the project site is Newport Bay; South of the project site is West Bay Avenue and to the East and West are existing residential structures on bulkheaded lots. The project site is located in a residential area where the majority of the homes fronting Newport Bay are located on bulkheaded lots. Staff has researched and determined that these existing bulkheads are pre-coastal (meaning that they pre-date the Coastal Act and the creation of the Coastal Commission). Site conditions include a low retaining wall, beach and a narrow wooden pier with a rectangular deck in the area where the proposed bulkhead will be constructed.

2. Project Description

The proposed project consists of construction of a new 70-foot long bulkhead fronting Newport Bay located at approximately the +6.08' MLLW elevation (based on the property conditions as surveyed January 17, 2003), which would result in the filling of 0.024 acres (1,045 square feet) of high intertidal habitat (Exhibit #4). The location of the bulkhead would be approximately 3.5 feet landward of the location proposed in CDP #5-02-378 that was denied at the May 2003 Coastal Commission hearing (to be discussed further in Section II.A.3). The Mean Higher High Waterline (MHHW) is located at +5.4 feet, Mean Lower Low Water (MLLW) and sandy intertidal habitat is located at elevations between +5.2 and +7 MLLW. A more thorough project description is provided in a letter from Noble Consultants, Inc. to ACOE dated March 5, 2003: *"The wall structure is composed of 4 feet wide interlocking, conventionally reinforced precast concrete sheetpiles with a reinforced concrete cap. All reinforcing will be epoxy-coated to reduce long term corrosion. The precast concrete sheetpiles will be installed via water jetting and self weight impact. No impact or vibratory hammers will be used during construction. Siltation curtains will be deployed around the construction site to minimize turbidity and impacts to the marine environment during sheetpile installation. The precast concrete sheetpiles will terminate approximately 4 feet from the edge of each property line. The remaining portions of the structure, including the return sections, will be installed as a conventionally formed and pour-in-place reinforced concrete wall. The return sections will connect to the main span via reinforcing dowels. The top elevation of the bulkhead will be located at +9.0 feet, MLLW with a design toe elevation of -2.0 feet, MLLW resulting in a minimum embedment depth of approximately 8 feet. The return sections will be buried below the grade surface and will be connected to the neighboring bulkhead returns with a concrete filler to prevent the escape of fine soil materials from behind the structure. This design is intended to create an isolation joint between the new bulkhead and the existing adjacent bulkheads."*

The applicant currently states that there are three reasons why the bulkhead is necessary: 1) to protect the residence's foundation; 2) since the lot is a collection point for debris, trash and other detritus due to it being the only developed lot in the neighboring community without some form of retaining structure; and 3) since the vessel berthing area of the applicant shoals above the design basin depth (Exhibit #11). Previously, the applicant stated that there were three other reasons why the bulkhead was necessary: 1) to provide continuity of the bulkhead which would be in place along the approved bulkhead line; 2) to prevent movement of land into the water (erosion of the shoreline); and 3) to eliminate damage to the neighboring boundary walls (Exhibit #12). The applicant continues to assert these claims in the present application.

3. Prior Commission Action at the Subject Site

On May 24, 1983, the Commission approved Coastal Development Permit #5-83-248-[Bergt] for the relocation and revision of a private boat dock located at 1008 West Bay Avenue in the City of Newport Beach. The permit was approved with no special conditions.

On March 5, 2002, the Commission approved Waiver 5-01-356-[Johnson]. Coastal Development Permit# 5-01-356-W was a waiver that allowed the demolition of an existing two-story single family residence and construction of a new 5,965 square foot

two-story single family residence with an attached 342 square foot guest room and an 808 square foot three car garage located at 1008 West Bay Avenue in the City of Newport Beach. The project also consisted of 364 square foot for a veranda on the first floor and 364 square feet for verandas located on the second floor. In addition, the project also consisted of construction of new gates and wrought iron fencing and the existing wood deck and planter wall and bench structure located in the rear will be modified as necessary for construction of the new home. The maximum height of the structure would be 26 feet above finished grade. Grading to take place would consist of recompaction of existing soils. There would be 580 cubic yards of grading, which would balance on site. Runoff would be collected by a system of drain inlets and pipes and discharged into a drainage pit and percolated into the ground. At that time, no evidence had been submitted in connection with application 5-01-356 to indicate that the existing home or the new home would require the construction of the bulkhead.

On May 6, 2002, the Commission denied Coastal Development Permit Application #5-02-378-[Johnson]. The proposed project was for the construction of a new 70-foot long bulkhead (located at approximately the +5.23' MLLW) fronting Newport Bay. The bulkhead and backfill would have resulted in the fill of 914 square feet of high intertidal sandy habitat

The proposed project was primarily inconsistent with Sections 30233 and 30235 of the Coastal Act. Section 30233 of the Coastal Act identifies an exhaustive list of eight uses for which fill of open coastal waters is allowed. The proposed bulkhead did not qualify as one of the eight permitted uses. The proposed bulkhead would have resulted in the fill of 914 square feet on high intertidal habitat, to be converted to yard space for the residence. Fill of wetland or coastal waters for private residential development is not one of the allowable uses identified under Section 30233.

Although the subject site apparently experienced nominal erosion which appeared to be the result of natural processes, the applicant had not demonstrated that the erosion affecting the adjacent boundary walls, patio slabs and building slabs was occurring at a rate which demanded attention or that any existing structure was in danger and could only be protected via the construction of the proposed bulkhead pursuant to Section 30235. Section 30235 of the Coastal Act requires the Commission to allow construction of a bulkhead when it is both (1) required to protect existing development that is in danger due to erosion and (2) designed to eliminate or mitigate adverse impacts on local shoreline sand supply. No information regarding the need for the bulkhead to protect the existing principle structure had been submitted. In addition, the proposed project was reviewed by the Commission's Coastal Engineer who concluded that the bulkhead was not needed to protect the existing principal structure from erosion.

Furthermore, feasible alternatives to the proposed project that comply with Coastal Act policies existed, thus adding additional reasons why the proposal could not be approved. For example, if erosion was a problem, periodic beach nourishment could have been undertaken to maintain the existing beach profile.

The currently proposed project (CDP#5-03-491) moves the proposed bulkhead 3.5 feet landward of the originally proposed location that was denied. However, the currently proposed project would still be inconsistent with Section 30233 and 30235 of the Coastal Act as discussed in this report.

B. Marine Resources

Section 30233 of the Coastal Act, in relevant part, states:

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland.

(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(7) Restoration purposes.

(8) Nature study, aquaculture, or similar resource dependent activities.

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.

The City of Newport Beach Land Use Plan (LUP) was certified on May 19, 1982. The certified LUP was updated on January 9, 1990. Since the City has an LUP, which is one

component of a complete Local Coastal Program (LCP), but does not have a full LCP, the policies of the LUP are used only as guidance. The Newport Beach LUP includes the following policies that relate to development at the subject site:

Dredging, Diking and Filling in Open Coastal Waters, Wetlands, and Estuaries

1. *Only the following types of developments and activities may be permitted in the parts of Newport Bay which are not within the State Ecological Reserve where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects:*
 - a. *Construction or expansion of Port/marine facilities.*
 - b. *Construction or expansion of coastal-dependent industrial facilities, including commercial fishing facilities, haul-out boat yards, commercial ferry facilities.*
 - c. *In open coastal waters, other than wetlands, including estuaries, new or expanded boating facilities, including slips, access ramps, piers, marinas, recreational boating, launching ramps, haul-out boat yards, and pleasure ferries. (Fishing docks and swimming and surfing beaches are permitted where they already exist in Lower Newport Bay).*
 - d. *Maintenance of existing and restoration of previously dredged depths in navigational channels and turning basins associated with boat launching ramps, and for vessel berthing and mooring areas. The 1974 U.S. Army Corps of Engineers maps shall be used to establish existing Newport Bay depths.*
 - e. *Incidental public service purposes which temporarily impact the resources of the area, such as burying cables and pipes, inspection of piers, and maintenance of existing intake and outfall lines.*
2. *New developments on the waterfront shall take into consideration existing usable water are for docking facilities. Residential and commercial structures (except piers and docks used exclusively for berthing of vessels) shall not be permitted to encroach beyond the bulkhead line. However, **this policy shall not be construed to allow development which requires the filling of open coastal waters, wetlands or estuaries which would require mitigation for the loss of valuable habitat in order to place structures closer to the bulkhead line or create usable land areas.** No bayward encroachment shall be permitted except where there is no feasible less environmentally damaging alternative and where mitigation is provided through payment of in-lieu fees to the Upper Newport Bay Mitigation Fund Administered by the City. (Emphasis Added)*
3. *The City shall examine proposals for construction of anti-erosion structures, offshore breakwaters, or marinas, and regulate the design of such structures to harmonize with the natural appearance of the beach.*

The proposed bulkhead is to be placed at an elevation of +6.08' MLLW and the top of seawall elevation shall be +9.0 MLLW with a design toe elevation of -2.0 MLLW resulting in minimum embedment depth of approximately 8 feet and would result in the filling of 0.024 acres (1045 square feet) of high intertidal sandy habitat. This intertidal habitat is located at elevations between +5.2 and +7 MLLW.

Section 30108.2 of the Coastal Act defines 'Fill' as the placement of earth or any other substance or material placed in a submerged area. Section 30233 of the Coastal Act limits the fill of wetlands and coastal waters to the eight enumerated uses above. In addition, the City has a LUP policy regarding Dredging, Diking and Filling in Open Coastal Waters, Wetlands, and Estuaries that is similar to Section 30233 of the Coastal Act. The proposed fill of an intertidal area, which would provide yard space for the residence and allegedly provide greater protection to the existing landward development, is not designed or intended to serve any of the allowable uses identified by Section 30233 or the City's LUP. Furthermore, in addition to the requirement that a proposed fill of coastal waters be an allowable use under Section 30233 (and the City's LUP), both of those rules require that, in order to receive approval, projects involving the fill of wetlands and open coastal waters must also demonstrate that there is no feasible less environmentally damaging alternative and that all feasible mitigation has been provided. In this case, there are feasible less environmentally damaging alternatives.

1. **Other Agency Comments**

a. **California Department of Fish and Game (DF&G)**

The originally proposed project (CDP# 5-02-378) was submitted to the California Department of Fish & Game (DF&G) for its review. In a letter from the DF&G to Commission staff dated November 6, 2001 (Exhibit #5), it stated: "*It is the Department's position to recommend that seawall/bulkhead projects be constructed in such a manner to be least environmentally damaging, with minimal impacts to marine habitats. The loss of marine intertidal habitat associated with the proposed seawall does not appear to be necessary for the continued protection of the property. Therefore, we recommend the seawall proposal be modified to eliminate any loss of intertidal habitat.*" Furthermore, in an additional letter from the DF&G to the Army Corps of Engineers (ACOE) dated August 1, 2002 (Exhibit #6), DF&G restated the request for modification of the proposed bulkhead (CDP#5-02-378): "*Accordingly, we recommend to the Corps that the applicant not be granted a permit until the project is modified to eliminate the further loss of intertidal habitat. To accomplish this goal, the seawall could be placed shoreward so that its installation results in no loss or reduced loss of intertidal habitat. If this approach is deemed feasible, the applicant should be required to mitigate for the loss of intertidal habitat and a mitigation plan submitted prior to any construction.*" The currently proposed project positions the new bulkhead at an elevation of +6.08' MLLW and would result in the filling of 0.024 acres (1045 square feet) of high intertidal sandy habitat (CDP#5-02-378 originally located the bulkhead at +5.23 MLLW, which is 3.5 feet bayward of the proposed location). The currently proposed bulkhead would still result in the fill of intertidal habitat, which was major concern of the DF&G. Commission staff has contacted DF&G and they have concluded that their concerns and comments on the previous application, CDP#5-02-378, remain valid and are applicable to the current proposal.

b. United States Department of the Interior, Fish and Wildlife Services (F&WS)

The originally proposed project (CDP# 5-02-378) was also submitted to the United States Department of the Interior, Fish and Wildlife Services (F&WS) for their review. A letter from the F&WS to the Army Corps of Engineers (ACOE) dated August 5, 2002 (Exhibit #7), stated: *"We are concerned for the loss of biological resources associated with the proposed fill into waters of the U.S. As discussed in the PN [Public Notice 200101390-DPS], the intertidal soft bottom areas that would be filled provide habitat for burrowing and epibenthic invertebrates and can be used for foraging by invertebrates, fish and birds including the federally listed California least tern (Sterna antillarum brown). Such projects could cause significant cumulative impacts to these important biological resources in Newport Bay. Given the small amount of proposed fill, it appears that relatively minor changes in the bulkhead design would allow the project to avoid any fill into waters of the U.S. Therefore, the practicability of alternative bulkhead designs that would avoid fill into waters of the U.S. should be evaluated... If avoidance of fill into waters of the U.S. is determined to be impracticable, the applicant should mitigate for the loss of any intertidal habitat by creating and preserving a minimum of 0.01 acre of intertidal habitat within Newport Bay."* The currently proposed project positions the new bulkhead at an elevation of +6.08' MLLW and would result in the filling of 0.024 acres (1,045 square feet) of high intertidal sandy habitat (CDP#5-02-378 originally located the bulkhead at +5.23 MLLW, which is 3.5 feet bayward of the proposed location). The currently proposed bulkhead would still result in the fill of intertidal habitat, which was major concern of the F&WS. Commission staff has contacted F&WS and they have concluded that their concerns and comments on the previous application, CDP#5-02-378, remain valid and are applicable to the current proposal project.

c. United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS)

The United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) reviewed the originally proposed project (CDP# 5-02-378) as well. A letter from the NMFS to the Army Corps of Engineers (ACOE) dated August 6, 2002 (Exhibit #8), stated: *"The proposed project is located in an area identified as Essential Fish Habitat (EFH) for fish species federally managed under the Pacific Groundfish Management Plan and Coastal Pelagic Fishery Management Plan. While we do concur with your assessment that the impacts associated with this individual project are insignificant, the cumulative impacts of many such projects are significant. Given the history of many similar small projects being implemented in Newport Bay, we believe the impacts of this project must be considered to be significant in an cumulative context...In addition, it is not clear from the information supplied in the Public Notice what the distance between the existing Mean High Water and the proposed location of the new bulkhead. Regardless of what distance this*

may be, we disagree with your conclusion that this bulkhead work is water dependant. It appears that the applicant is simply attempting to gain additional property at the expense of existing marine habitats. The location of adjacent property bulkheads is not justification for further loss of aquatic habitats." The letter further stated that the following provisions should be incorporated into the project: 1) The construction of any bulkhead only occur at or above the MHW elevation; 2) Should the need for the construction of the bulkhead below the Mean High Water be clearly demonstrated, mitigation satisfactory to NOAA Fisheries to offset the loss of any marine habitat will be agreed to prior to issuance of the permit; and 3) Any required mitigation will be completed prior to or concurrent with the construction of the bulkhead. The NMFS reviewed the currently proposed project and concluded that their concerns would be addressed if the bulkhead was located landward of the Mean Higher High Water Line (+5.4 MLLW).

d. United States Army Corps of Engineers (ACOE)

The United States Army Corps of Engineers (ACOE) has issued a Public Notice inviting parties to provide their views on the proposed work. In a letter dated April 1, 2003, the ACOE had stated that the modified project would qualify for a Nationwide Permit 18 with conditions. The conditions would be: 1) prior to construction, the applicant will submit a habitat mitigation and monitoring plan (HMMP) and 2) a pre-construction *Caulerpa taxifolia* survey. Before obtaining authorization under Nationwide Permit Number 18, the applicant must first obtain Coastal Zone Management (CZM) consistency certification from the California Coastal commission.

e. Regional Water Quality Control Board (RWQCB)

Because this project will require a federal license or permit from the ACOE and may result in a discharge into the water, the project was submitted to the California Regional Water Quality Control Board (RWQCB) for its review under section 401(a) of the Clean Water Act. 33 U.S.C. § 1341(a). The RWQCB issued a Section 401(a) certification for the proposed project on May 8, 2002, contingent upon the execution of the following conditions: 1) No fueling, lubrication, or maintenance of construction equipment within 500 feet of waters of the State; 2) No discharge into Newport Bay; and 3) Adherence to the *Caulerpa taxifolia* stipulation.

2. Allowable Use Test¹

The applicant contends that the primary purpose of the project is to protect its property. The applicant states that the subject site is experiencing erosion, which is having adverse impacts on the property (vessel berthing area, adjacent boundary walls, patio slabs, building slabs) and that the proposed bulkhead is necessary to protect existing structures. Though the project may resolve the applicant's concerns that erosion is

¹ Before a project can be approved under Section 30233 of the Coastal Act, it must be evaluated and determined to pass three tests. The three tests involve: 1) allowable use; 2) alternatives analysis; and 3) mitigation. This is the "first" of the three tests.

having an adverse impact on the property, the approvability of the project is not based on the adequacy of the engineering or its efficacy to achieve a desired goal, but its conformance with Section 30233.

Section 30233 of the Coastal Act allows the diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes for: 1) new, expanded port, energy, and coastal-dependent industrial facilities; 2) maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps; 3) entrance channels for new or expanded boating facilities in wetland areas and in degraded wetlands, identified by the Department of Fish and Game; 4) open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities; 5) incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines; 6) mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas; 7) restoration purposes; and 8) nature study, aquaculture, or similar resource dependent activities.

The City has an LUP policy regarding Dredging, Diking and Filling in Open Coastal Waters, Wetlands, and Estuaries that is similar to Section 30233 of the Coastal Act. The City's LUP limits the fill of estuaries, wetlands and coastal waters to five enumerated uses: 1) construction or expansion of Port/marine facilities; 2) construction or expansion of coastal-dependent industrial facilities, including commercial fishing facilities, haul-out boat yards, commercial ferry facilities; 3) in open coastal waters, other than wetlands, including estuaries, new or expanded boating facilities, including slips, access ramps, piers, marinas, recreational boating, launching ramps, haul-out boat yards, and pleasure ferries; 4) maintenance of existing and restoration of previously dredged depths in navigational channels and turning basins associated with boat launching ramps, and for vessel berthing and mooring areas and; 5) incidental public service purposes which temporarily impact the resources of the area, such as burying cables and pipes, inspection of piers, and maintenance of existing intake and outfall lines. In addition, the City's LUP regarding the fill of estuaries, wetlands and coastal waters states: "...this policy shall not be construed to allow development which requires the filling of open coastal waters, wetlands or estuaries which would require mitigation for the loss of valuable habitat in order to place structures closer to the bulkhead line or create usable land areas."

The proposed development would result in 0.024 acres (1,045 square feet) of fill in intertidal coastal waters and would expand the yard space of the residence. Neither the protection of existing structures nor the provision of additional yard space for a residence is one of the uses identified by Section 30233 or the City's LUP as an allowable purpose for the fill of open coastal waters. In addition, neither of the six (6) reasons (1) to protect the residence's foundation; (2) since the lot is a collection point for debris, trash and other detritus due to it being the only developed lot in the neighboring community without some form of retaining structure; (3) since the vessel berthing area of the applicant shoals above the design basin depth; (4) to provide continuity of the bulkhead which would be in place along the approved bulkhead line; (5) to prevent movement of land into the water (erosion of the shoreline); and (6) to eliminate damage to the neighboring boundary walls) discussed by the applicant regarding why the

bulkhead is necessary are one of the uses identified by Section 30233 or the City's LUP as an allowable purpose for the fill of open coastal waters. Therefore, the proposed bulkhead does not qualify as one of the allowable uses identified in Section 30233 of the Coastal Act or in the City's LUP.

Although Section 30235 of the Coastal Act does require the Commission to approve bulkheads when necessary to protect an existing structure or beaches in danger from erosion (and when designed to eliminate adverse impacts on shoreline sand supply), and the subject site is apparently experiencing some erosion, the applicant has not demonstrated that the erosion is occurring at a rate which demands attention or that any existing structure is in danger and can only be protected via the construction of the proposed bulkhead. Additionally, there is evidence that the proposed bulkhead is not as far landward as possible to minimize adverse environmental effects. Therefore, the Commission cannot find that the proposed development is approvable pursuant to Section 30235 of the Coastal Act. This will be discussed further in Section II.C.

3. Alternatives Analysis Test

To demonstrate that the proposed bulkhead is the least environmentally damaging alternative, the applicant previously provided an alternatives analysis for CDP#5-02-378 found within the *Marine Biological Resources Impact Assessment, Bulkhead Construction Project, 1008 West Bay Avenue, Newport Beach, California, Coastal Development Permit #5-01-229* (hereinafter referred to as the "Assessment"). This document was prepared by Coastal Resources Management, dated February 21, 2002, and it explores options other than the proposed bulkhead. No new additional alternatives analysis was submitted for the currently proposed project. Rather, the previous alternatives analysis was submitted by the applicant for consideration again in this application.

a. Alternative #1

The first alternative provided by the applicant is a no project alternative. The Assessment states that this would not mitigate the soil sloughing from the site and the resulting damage to the adjacent boundary walls, patio slabs and building slabs.

Analysis

This alternative would maintain the existing "natural" condition and not result in the loss of 914 square feet of high intertidal habitat or the creation of a new man made structure on the beach in the form of the proposed bulkhead. The applicant has not provided information documenting that the erosion that is occurring poses an imminent threat to the exiting structures from erosion. The Commission's Coastal Engineer (Exhibit #9) reviewed the original project (CDP#5-02-378) and concluded that the bulkhead is not needed to protect the existing principal structure from erosion. In addition, the current proposed project was reviewed by the Commission's Coastal Engineer (Exhibit #10) who concluded again that the bulkhead is not needed to protect the existing principal structure from erosion. Therefore, a no project alternative is a feasible less

environmentally damaging alternative. In addition, the proposed bulkhead is not listed as one of the allowable uses identified in Section 30233 of the Coastal Act. Therefore, the Commission cannot find that the proposed development is consistent with Section 30233 of the Coastal Act.

b. Alternative #2

The second alternative provided by the applicant consists of a quarry stone-revetted bulkhead replacing the proposed vertical bulkhead. The Assessment states that the quarry bulkhead would be in the same location as the proposed vertical bulkhead. The Assessment asserts that a revetment reduces scouring effects associated with wave activities. However, the project site is not affected by strong waves associated with wave activity. Therefore, the Assessment concludes that a quarry stone revetment would not provide any substantial net benefit over the vertical bulkhead. Furthermore, the quarry bulkhead would require additional intertidal fill to construct, resulting in an increase in the amount of habitat lost. For these reasons, the revetted bulkhead plan alternative was not chosen by the applicant.

Analysis

Though this is a feasible alternative, it would be environmentally more damaging than the applicant's original proposed bulkhead since it would result in additional fill of intertidal habitat. Thus, this is not the least environmentally damaging alternative. In addition, the construction of a quarry stone revetted bulkhead to protect a residence is not listed as one of the allowable uses identified in Section 30233 of the Coastal Act. Therefore, the Commission cannot find that this alternative consistent with Section 30233 of the Coastal Act.

c. Alternative #3

The third alternative evaluated by the applicant is the periodic addition of sand (beach nourishment) to maintain the existing beach as it currently exists and to prevent the overall net loss of soil at the site. The Assessment states that this would not mitigate the soil sloughing from the site and the resulting damage to the adjacent boundary walls, patio slabs and building slabs and does not meet the engineering requirements for the protection of the residential walls and building slabs. Furthermore, the Assessment states that the continual addition of soil on site would result in periodic disturbances to intertidal invertebrates, and potentially short term reductions in mid-intertidal beach productivity.

Analysis

This alternative would not result in the loss of 0.024 acres (1,045 square feet) of high intertidal habitat or in the creation of a new man made structure on the beach similar to the proposed bulkhead, which makes it a less environmentally damaging alternative than the proposed bulkhead.

The Assessment states that this alternative will not mitigate the soil sloughing and the resulting structural damage. While it is true that it will not prevent soils from leaving the site, it will *replace* the lost soil so that there is no net change in the amount of soil present, and it will thus maintain the beach profile. Moreover, if it is done frequently enough to prevent even a temporary significant change in the beach profile and to prevent any loss of underlying supporting soils, the maintenance of the underlying soils will prevent any further damage to the adjacent boundary walls, patio slabs and building slabs.

As indicated above, not only does this alternative eliminate damage to the adjacent boundary walls, patio slabs and building slabs, but it does so in a less environmentally damaging method than the applicant's proposal. In addition, although the Assessment states that this alternative would result in periodic disturbances to intertidal invertebrates, and potentially short term reductions in mid-intertidal beach productivity, these are less environmentally damaging results than a permanent loss of 0.024 acres (1,045 square feet) of high intertidal habitat or the creation of a new man made structure on the beach. Thus, in this regard as well, this alternative proves to be a less environmentally damaging alternative than the applicant's proposal.

Periodic dredging with deposition on the beach would be a preferable method of maintaining the existing beach profile and protecting the existing structures from the effects of erosion, to the extent that there are any significant adverse effects of erosion on the structures. Although the subject site is apparently experiencing nominal erosion which appears to be the result of natural processes, the applicant has not demonstrated that the erosion is occurring at a rate which demands attention or that any existing structure is in danger and can only be protected via the construction of the proposed bulkhead, therefore, an alternative such as beach nourishment is a less environmentally damaging alternative than the proposed bulkhead. This approach has been taken by the City of Newport Beach on Coastal Development Permit #5-99-282 (City of Newport Beach), approved by the Coastal Commission. Under this permit, navigable channels and berthing slips are periodically dredged and the sand is placed back on the beach to maintain the beach profiles. The proposed project is adjacent to a navigable channel and has a berthing facility. The dredging of beach material that has eroded into Newport Bay back onto the beach would achieve the applicant's project purpose of mitigating the erosion of beach material by maintaining the existing beach profile. Section 30233 of the Coastal Act allows the dredging of open coastal waters for: "*Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*" Section 30233 also states: "*Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.*" The beach nourishment can be conducted on all properties affected.

Erosion and accretion are natural process. The natural state of the beach is that sand moves on and off shore, and the construction of a bulkhead will prevent the natural sand movement process. Periodic dredging of the berthing facilities with deposition on the beach (beach replenishment) would be a preferable method of

maintaining the existing beach profile and the functionality of the berthing facilities, as opposed to the construction of the bulkhead, a permanent structure. The Assessment states that this alternative will not mitigate the soil sloughing and the resulting structural damage. While it is true that it will not prevent soils from leaving the site, it will *replace* the lost soil so that there is no net change in the amount of soil present, and it will thus maintain the beach profile. Moreover, if it is done frequently enough to prevent even a temporary significant change in the beach profile and to prevent any loss of underlying supporting soils, the maintenance of the underlying soils will prevent any further damage to the adjacent boundary walls, patio slabs and building slabs. Though the applicant asserts that soil sloughing from the site is resulting in damage to the adjacent boundary walls, patio slabs and building slabs and that they reject this alternative, this alternative would be consistent with Section 30233 and would not result in the permanent loss of 0.024 acres (1,045 square feet) of high intertidal habitat or the creation of a new man made structure on the beach similar to the proposed bulkhead, which makes it a less environmentally damaging alternative than the proposed bulkhead.

4. Mitigation Test

Projects that involve fill of open coastal waters must qualify as an allowable use under Section 30233 of the Coastal Act, and then, if the proposed project has not avoided adverse impacts to coastal resources, mitigation is also required to minimize the remaining adverse environmental effects. In this case, the proposed project has not qualified as an allowable use under the Coastal Act or avoided (or even minimized) its impacts. In addition, the California Department of Fish & Game (DF&G) previous review of the project states that the bulkhead does not seem necessary for the continued protection of the property and that the bulkhead should be modified to eliminate the loss of any intertidal habitat. Commission staff has had correspondence with the DF&G and informed them that the currently proposed project would still involve fill. Therefore, the DF&G has stated that their stance on the project would remain the same. Similarly, the U.S. Fish & Wildlife Service (F&WS) previous expressed concern over the cumulative impacts to biological resources of projects such as the one proposed, and recommended evaluation of alternative designs. Commission staff has had correspondence with F&WS and informed them that the currently proposed project would still involve fill. Therefore, the F&WS has stated that their stance on the project would remain the same. The United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) also reviewed the project and states that the cumulative impacts to habitat of this project is significant due to history of many similar small projects being implemented in Newport Harbor. They also state that it seems that the applicant is merely trying to gain additional property by constructing this bulkhead. However, they currently state that if the bulkhead were to be located above the Mean Highest High Water (MHHW), their concerns would be addressed.

The applicant has indicated that he is willing to provide mitigation to offset impacts arising from the project as proposed. The applicant has submitted a Mitigation Fee Proposal prepared by Noble Consultants, Inc. The mitigation fee would be used for the Big Canyon Creek Project, which would restore a number of wetlands habitats; restore the marine tidal influence in Big Canyon, repair flood damage; remove non-native

invasive plant species and improve nature trails and public access to Big Canyon Nature Park. The proposed mitigation plan would mitigate the loss of 0.024 acres (1,045 square feet) of high intertidal sandy beach habitat at a mitigation ratio of 4:1, as typically required by the Commission for this type of impact, resulting in the restoration of 0.096 acres (4,182 square feet) of high intertidal habitat. Before the Commission can approve the project, the project must meet all the requirements of Section 30233 which are that the project must be an allowable use and be the least environmentally damaging alternative, in addition to providing adequate mitigation. In this case, the proposed project does not meet two of the three requirements in that it is neither an allowable use nor the least environmentally damaging alternative, as is explained above. Since the proposed project is neither an allowable use nor the least environmentally damaging alternative, the adequacy of the proposed mitigation is not being assessed herein.

5. City's LUP

The proposed project is in conflict with the City's LUP regarding Dredging, Diking and Filling in Open Coastal Waters, Wetlands, and Estuaries. The City's LUP limits the fill of estuaries, wetlands and coastal waters to the five enumerated uses listed previously. The proposed fill of the intertidal area would not be for any of the five uses listed in the LUP in that its main functions would be to increase yard space for the residence and to allegedly provide greater protection to the existing structures, neither of which is one of the allowable uses identified by the City's LUP regarding the fill of estuaries, wetlands and coastal waters. In addition, there are other less environmentally damaging alternatives that exist which would not result in the construction of a bulkhead in the high intertidal area. Since the purpose of this project is not an allowable use under the City's LUP and other less environmentally damaging alternatives exist, such as beach replenishment, the proposed project, again, is inconsistent with City's LUP.

6. Review of Project By Staff Coastal Engineer

The original proposed project was reviewed by the Commission's Coastal Engineer (Exhibit #9). The analysis stated that the proposed bulkhead would address all concerns raised by the applicant's experts. The bulkhead would retain sediment and prevent further erosion into Newport Bay. However, it is unlikely that the property alone is responsible for enough sedimentation into the bay that the proposed bulkhead would eliminate the need to dredge the bay. The proposed bulkhead would have cumulative effects both positive and negative. The analysis further stated that the submitted material did not provide any information about the main residential structure, but it did not appear that the proposed bulkhead/seawall was needed to protect the main structure at this location. Thus, it concludes that while the bulkhead will provide several positive benefits, it does not seem that the bulkhead was needed to protect the existing main structure

The current proposed project has been reviewed by the Commission's Coastal Engineer (Exhibit #10). The analysis states the potential impacts and benefits addressed in her previous letter were applicable to the proposed project. The analysis again states that the existing principal structure is not in imminent danger due to erosion or that a bulkhead is necessary to protect the existing structure. However, the analysis does identify issues, such as saltwater seepage into the foundation that the Commission's

Coastal Engineer has indicated can be adequately addressed through means other than the construction of a shoreline protective device that would not necessitate the fill of coastal waters. For instance, a moisture barrier installed along the bayward edge of the existing patio would prevent saltwater seepage into the foundation. Furthermore, the analysis states that while the bulkhead would encroach 3' to 3.5' less into the area identified as "high intertidal" than was proposed with the initial bulkhead submittal, this modified bulkhead would not eliminate encroachment.

7. Conclusion

The proposed development would result in 0.024 acres (1,045 square feet) of fill in coastal waters. The area of proposed fill would provide yard space for the residence and allegedly provide greater protection to the existing landward development. Although the proposed bulkhead, from an engineering perspective, accomplishes its intended use, the standard of review for determining its approvability is its consistency with the Coastal Act, such as Section 30233. Fill of wetland or coastal waters for private residential development is not one of the allowable uses identified under Section 30233. In addition, the submitted Assessment does not demonstrate that the bulkhead would be the least environmentally damaging alternative. Alternatives to the installation of the bulkhead which are less damaging are available. One alternative could be soil nourishment, which would prevent the overall loss of sands at the site and is an alternative to the bulkhead which is environmentally less damaging since a new man made structure would not be installed on the beach. As stated previously, before the Commission can approve the project, the project must meet all the requirements of Section 30233, which are that the project must be an allowable use, be the least environmentally damaging alternative and provide adequate mitigation. In this case, the proposed project fails to satisfy at least two of the three requirements in that it is neither an allowable use nor the least environmentally damaging alternative. The City's LUP has similar, though even more restrictive, conditions, and thus, the proposed project is inconsistent with it as well.

Therefore, the Commission finds that the proposed project is inconsistent with Section 30233 of the Coastal Act and the City's LUP.

C. Protective Structures and Hazards

Section 30235 of the Coastal Act states:

Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.

The proposed project consists of the construction of a new bulkhead fronting Newport Bay. Although the proposed bulkhead, from an engineering perspective, accomplishes its intended use of protecting existing structures such as the adjacent boundary walls, patio slabs, building

slabs and the building's foundation, the approvability of the project is not the adequacy of the engineering, but its conformance with Section 30235. In addition, information regarding the need for the bulkhead to protect the existing principle structure has been submitted. However, the currently proposed project was reviewed by the Commission's Coastal Engineer (Exhibit #10) who concluded that the bulkhead is not needed to protect the existing principal structure from erosion. Although not specifically listed as a type of construction that alters natural shoreline processes covered in Section 30235 of the Coastal Act, the proposed bulkhead is a type of seawall, which is discussed in Section 30235 of the Coastal Act. Moreover, the presence of a bulkhead at this location would alter natural shoreline processes. Consequently, the proposed development is covered by Section 30235.

Section 30235 of the Coastal Act requires the Commission to approve bulkheads when necessary to protect an existing structure or beaches in danger from erosion and when designed to eliminate adverse impacts on shoreline sand supply. Although the subject site is apparently experiencing nominal erosion which appears to be the result of natural processes, the applicant has not demonstrated that the erosion affecting the adjacent boundary walls, patio slabs, building slabs and the building's foundation is occurring at a rate which demands attention or that any existing structure is in danger and can only be protected via the construction of the proposed bulkhead. In addition, information outlining the applicant's reasons for constructing a bulkhead has been submitted. However, the proposed project was reviewed by the Commission's Coastal Engineer (Exhibit #10) who concluded that the bulkhead is not needed to protect the existing principal structure from erosion. In addition, the applicant did not submit evidence that a bulkhead was needed when they submitted an application to demolish and construct a new house at the project site. Coastal Development Permit 5-01-356-W for the demolition and construction of a new single-family residence was approved by the Commission on March 5, 2002. Therefore, the Commission cannot find that the proposed development is approvable pursuant to Section 30235 of the Coastal Act.

1. **Noble Consultants, Inc.**

In a letter dated April 4, 2003 from *Noble Consultants, Inc.* it states that the bulkhead is necessary: 1) to protect the residence's foundation; 2) since the lot is a collection point for debris, trash and other detritus due to it being the only developed lot in the neighboring community without some form of retaining structure; and 3) since the vessel berthing area of the applicant shoals above the design basin depth (Exhibit #11).

a. **Reason #1**

The first reason the letter states is that the new bulkhead is needed to protect the residence's foundation. The letter states: "*The main function of the bulkhead is to retain sand in the lee of the structure; thereby, protecting the residence from seawater exposure. At this time, no such structure exists. As a result, sand bayward of the residence is free to migrate into the vessel berthing area, which can effectively lower the design grade elevations adjacent to the residence's foundation. Over time the exposure of the residence's support system to seawater will weaken the footings putting the stability of the residence under increased risk. In addition, from an environmental and maintenance standpoint, it is extremely undesirable to have seawater impinging upon the subject residence. The harsh marine environment will act to deteriorate the exposed sections of the residence at an accelerated rate and the bayward migration of*

the design grade sediment could potentially undermine the existing structural foundation of the residence. Moreover, since bulkheads span across each neighboring property, the erosion of the fill material from the subject residence could act to undermine the retaining structures at both adjacent properties."

Analysis

The applicant states that the proposed bulkhead is necessary to protect the residence. Previously, the Commission's Coastal Engineer (Exhibit #9) reviewed the original project (CDP#5-02-378) and concluded that the bulkhead was not needed to protect the existing principal structure from erosion. In addition, the current proposed project was reviewed by the Commission's Coastal Engineer (Exhibit #10) who concluded again that the bulkhead is not needed to protect the existing principal structure from erosion. Thus, the proposed bulkhead is not "required to protect existing structures," as there are other means of protecting those structures. For example, periodic dredging as discussed in Section II.B.3.c of this staff report would be a preferable method of maintaining the existing beach profile and preventing exposure of the residence's foundation, as opposed to the construction of the bulkhead, a permanent structure. Additionally, even if the applicant had demonstrated that the bulkhead was necessary to protect the existing development, the position of the bulkhead could have been moved more landward in order to minimize the adverse impacts to coastal resources. The applicant is not entitled to maximize their yard space through the construction of a bulkhead, which is not a coastal-dependent use and fills coastal waters. The bulkhead should be as far landward as possible to be consistent with the goal of protecting existing development, which minimizes adverse impacts to intertidal habitat area. This reason offered by *Noble Consultants, Inc.* does not satisfy the criteria of Section 30235 or require approval of the proposed project.

b. Reason #2

The second reason why the letter states that the new bulkhead is to prevent the site from accumulating debris, trash and other detritus due to it being the only developed lot in the neighboring community without some form of retaining structure.

Analysis

The applicant states that a bulkhead is necessary to prevent the accumulation of detritus materials on site. However, implementing a routine trash and debris removal program would remedy the accumulation of trash on site. This process would not result in the loss of 0.024 acres (1,045 square feet) of high intertidal habitat or in the creation of a new man made structure on the beach, which makes it a less environmentally damaging alternative than the proposed bulkhead. Thus, the second reason offered by *Noble Consultants, Inc.* does not satisfy the criteria of Section 30235 or require approval of the proposed project.

c. **Reason #3**

The third reason why the letter states that the bulkhead is necessary to prevent the applicant's Bessel berthing area from shoaling.

Analysis

The natural state of the beach is that sand moves on and off shore, and the construction of a bulkhead will prevent the natural sand movement process. Therefore, periodic dredging as discussed in Section II.B.3.c of these findings would be a preferable method of maintaining the existing beach profile and the functionality of the berthing facilities, as opposed to the construction of the bulkhead, a permanent structure. This method of dealing with the erosion on site is the "best" approach for solving these problems. Thus, the third reason offered by *Noble Consultants, Inc.* does not satisfy the criteria of Section 30235 or require approval of the proposed project.

2. **Skelly Engineering**

In addition, a previous evaluation for CDP#5-02-378 conducted by *Skelly Engineering* dated November 27, 2002 discussed the need for the new bulkhead. This letter also provided additional reasoning why the applicant felt that a bulkhead is necessary. The letter stated that there are three reasons why the bulkhead was necessary: 1) to provide continuity of the bulkhead which would be in place along the approved bulkhead line; 2) to prevent movement of land into the water (erosion of the shoreline); and 3) to eliminate damage to the neighboring boundary walls (Exhibit #12).

a. **Reason #1**

The first reason the letter stated was that the new bulkhead was needed is to provide continuity of the bulkhead with other adjacent and existing bulkheads. It further stated: "*The Bulkhead's primary function is to fix the geometry of the Newport Bay channels. Without the bulkhead system in place the circulation within the bay would change as erosion and accretion takes place over time. Because of the docks, pier and wharfs within the bay, the sediment transport within the bay needs to be in quasi equilibrium. Erosion and accretion can adversely impact the berthing facilities which can only be mitigated by dredging. Filling in the gap in the bulkhead line will contribute to the continued proper functioning of the bay system and possibly help to reduce the need for dredging.*"

Analysis

The applicant stated that the new bulkhead was needed to provide continuity of the already existing bulkheads located in the area in order to prevent erosion; however, the natural state of the beach is that sand moves on and off shore and the construction of a bulkhead will prevent the natural sand movement process. Also, Section 30235 of the Coastal Act does not allow construction of a bulkhead in order to provide continuity of the already existing bulkheads. Though erosion can adversely impact the existing beach profile and berthing facilities, this is a

private beach. Moreover, even if protection of this beach were a 30235 concern, as indicated above, dredging to maintain the existing beach profile and berthing facility is a feasible alternative that is allowed pursuant to Section 30233 of the Coastal Act and would not result in the placement of a man made structure on the beach as discussed in Section II.B.3.c of these findings. Therefore, the proposed bulkhead was not needed to provide continuity of the bulkhead and since dredging to maintain the existing beach profile and berthing facility was a feasible alternative that is allowed pursuant to Section 30233 of the Coastal Act, the first reason offered by *Skelly Engineering* did not satisfy the criteria of Section 30235 or require approval of the proposed project.

b. Reason #2

The second reason why the letter stated that the new bulkhead was needed was to prevent movement of land into the water (erosion of the shoreline). The letter goes on to say that the site has been subject to soil movement and erosion over time, which has caused damage to the patio and building slabs.

Analysis

As previously discussed above, erosion and accretion are natural process. The natural state of the beach is that sand moves on and off shore, and the construction of a bulkhead will prevent the natural sand movement process. Therefore, periodic dredging as discussed in Section II.B.3.c of these findings would be a preferable method of maintaining the existing beach profile and the functionality of the berthing facilities, as opposed to the construction of the bulkhead, a permanent structure. This method of dealing with the erosion on site is the "best" approach for solving these problems. Thus, the proposed bulkhead is not needed to protect an existing structure and so the second reason offered by *Skelly Engineering* did not satisfy the criteria of Section 30235 or require approval of the proposed project.

c. Reason #3

The third and final reason the letter stated was that the new bulkhead was needed to eliminate damage to the neighboring boundary walls. The letter states: "*the damage is primarily cracking of the masonry due to soil movement from the lack of lateral support of the soil, and erosion on one side of the boundary wall.*"

Analysis

The assertion that the masonry is cracking does not justify a new bulkhead, as the masonry could be repaired or removed. Previously, the Commission's Coastal Engineer (Exhibit #9) reviewed the original project (CDP#5-02-378) and concluded that the bulkhead is not needed to protect the existing principal structure from erosion. In addition, the current proposed project was reviewed by the Commission's Coastal Engineer (Exhibit #10) who concluded again that the bulkhead is not needed to protect the existing principal structure from

erosion. In addition, lateral support can be "fixed" through periodic dredging to maintain the existing beach profile. Moreover, if it is done frequently enough to prevent any significant change in the beach profile and to prevent a loss of underlying supporting soils, the maintenance of the underlying soils will prevent any further damage to the adjacent boundary walls, patio slabs and building slabs. Thus, the proposed bulkhead was not "required to protect existing structures," as there are other means of protecting those structures. Additionally, even if the applicant had demonstrated that the bulkhead was necessary to protect the existing development, the position of the bulkhead could have been moved more landward in order to minimize the adverse impacts to coastal resources. The construction of a bulkhead does not entitle the applicant to maximize the yard space, which is not a coastal-dependent use. The bulkhead should be as far landward as possible to be consistent with the goal of protecting existing development, which minimizes adverse impacts to intertidal habitat area. Once again, then, this reason offered by *Skelly Engineering* does not satisfy the criteria of Section 30235 or require approval of the proposed project.

3. Conclusion

Section 30235 of the Coastal Act requires the Commission to approve bulkheads when necessary to protect an existing structure or beaches in danger from erosion and when designed to eliminate adverse impacts on shoreline sand supply. Even though the proposed bulkhead, from an engineering perspective, accomplishes its intended use, the standard of review for determining its approvability is its consistency with the Coastal Act, such as Section 30235. Although the subject site is apparently a collection point for detritus debris and is experiencing nominal erosion which appears to be the result of natural processes, the applicant has not demonstrated that the erosion affecting the adjacent boundary walls, patio slabs, building slabs and the building's foundation is occurring at a rate which demands attention or that any existing structure is in danger and can only be protected via the construction of the proposed bulkhead. Information regarding the need for the bulkhead to protect the existing principal structure has been submitted. However, the proposed project was reviewed by the Commission's Coastal Engineer who concluded that the bulkhead is not needed to protect the existing principal structure from erosion. Therefore, the Commission cannot find that the proposed development is approvable pursuant to Section 30235 of the Coastal Act.

As indicated previously, Section 30233 of the Coastal Act limits the fill of wetlands and coastal waters to eight enumerated uses. The proposed fill of an intertidal area that would provide yard space for the residence is not designed to satisfy any of the allowable uses identified by Section 30233. Therefore, the Commission found that the proposed development was inconsistent with Section 30233 of the Coastal Act as well.

4. Additional Concerns

Besides the reasons stated above, the Commission has two additional concerns which deter approval of the proposed development.

a. **Issue #1**

The first issue concerns the use of a protective device such as a bulkhead. Consistent with Section 30253(2) of the Coastal Act, the Commission requires that new development be sited and designed to avoid the need for protective structures such as bulkheads. One method of achieving this objective is to require that new development be setback sufficiently so that no protective devices are needed. The applicant submitted an application (CDP#5-02-378) for the construction of a new bulkhead in June 2001, and, in September 2001, the applicant submitted an application to demolish and construct a house at the project site. No evidence was submitted by the applicant with the September 2001 application to demolish and construct a house at the project site that a bulkhead was necessary or would be required in the future.

Though the applicant did not document the need for a bulkhead in September 2001, a separate application was received for the bulkhead. The analysis in this staff report reviews the proposed need for the bulkhead and has determined that although the subject site is apparently is a collection point for detritus debris and is experiencing nominal erosion which appears to be the result of natural processes, the applicant has not demonstrated that the erosion affecting the adjacent boundary walls, patio slabs, building slabs and the building's foundation is occurring at a rate which demands attention or that any existing structure is in danger and can only be protected via the construction of the proposed bulkhead pursuant to Section 30235. There are other less environmentally damaging alternatives available, such as beach replenishment. Information regarding the need for the bulkhead to protect the existing principle structure has been submitted (Exhibits # 11-12). However, the proposed project was reviewed by the Commission's Coastal Engineer (Exhibit #10) who concluded that the bulkhead is not needed to protect the existing principal structure from erosion.

In addition, the proposed fill of an intertidal area that would provide yard space for the residence is not designed to satisfy any of the allowable uses identified by Section 30233. In addition, the applicant did not choose to combine the two applications when asked by Commission staff in conjunction with CDP#5-02-378. In a letter dated October 4, 2001, staff offered the applicant the option to combine these two permit applications. In a letter dated October 8, 2001, the applicant decided that they would not combine the two applications. At the time the applicant submitted the application for the home, the applicant also submitted a geotechnical report for the house. Commission staff reviewed the Geotechnical Report by Petra dated July 3, 2001 to evaluate the potential need for a bulkhead. The only reference to a bulkhead in the geotechnical report was the following: " *We also understand that the existing bulkhead wall along the northern perimeter of the lot will be replaced with a new wall.*" Coastal Development Permit 5-01-356-W for the demolition and construction of a new single-family residence was approved by the Commission on March 5, 2002. No evidence was submitted that stated that the existing home or the new home required the construction of the bulkhead now or in the future. The Commission finds that the appropriate time for the applicant to document geotechnical issues that would need to be resolved was at the time the application for the single

family residence was submitted so that the Commission could fully evaluate the proposed development as a whole.

b. Issue #2

The second issue of concern is the proposed location of the bulkhead. As a standard practice the Commission requires that adverse environmental impacts to coastal resources be avoided through appropriate siting and design. In the event that adverse project impacts on the environment cannot be avoided, then mitigation would be appropriate.

The proposed project would result in the fill of 0.024 acres(1,045 square feet) of intertidal habitat, which is an adverse environmental impact due to the loss of intertidal habitat. This adverse impact could be avoided, for example, by siting the bulkhead further inland outside of the intertidal zone. The California Department of Fish and Game (DF&G) in their letter of November 6, 2001 and in recent verbal correspondence have discussed this potential solution. They state that the bulkhead does not seem necessary for the continued protection of the property and that the bulkhead should be modified to eliminate the loss of any intertidal habitat.

Section 30235 of the Coastal Act requires the Commission to approve bulkheads when necessary to protect an existing structure or beaches in danger from erosion and when designed to eliminate adverse impacts on shoreline sand supply. The applicant has not demonstrated that the erosion affecting the adjacent boundary walls, patio slabs, building slabs and the building's foundation is occurring at a rate which demands attention or that any existing structure is in danger and can only be protected via the construction of the proposed bulkhead pursuant to Section 30235. Information regarding the need for the bulkhead to protect the existing principle structure has been submitted (Exhibits #11-12). However, the proposed project was reviewed by the Commission's Coastal Engineer (Exhibit #10) who concluded that the bulkhead is not needed to protect the existing principal structure from erosion. Therefore, the Commission cannot find that the proposed development is approvable pursuant to Section 30235 of the Coastal Act. In addition, before the Commission can approve the project, the project must meet all the requirements of Section 30233 which are that the project must be an allowable use, be the least environmentally damaging alternative and provide adequate mitigation. In this case, the proposed project does not meet two of the three requirements in that it is neither an allowable use nor the least environmentally damaging alternative.

Additionally, even if the applicant had demonstrated that the bulkhead was necessary to protect the existing development, the position of the bulkhead could have been moved more landward in order to minimize the adverse impacts to coastal resources. The construction of a bulkhead does not entitle the applicant to maximize the yard space, which is not a coastal-dependent use. The bulkhead should be as far landward as possible to be consistent with the goal of protecting existing development, which minimizes adverse impacts to intertidal habitat area.

Therefore, the Commission finds that the proposed development is inconsistent with Section 30233 of the Coastal Act and is not required by Section 30235.

D. Project Alternatives

Denial of the proposed project will neither eliminate all economically beneficial or productive use of the applicant's property, nor unreasonably limit the owners' reasonable investment backed expectations of the subject property. The applicant already possesses a substantial residential development of significant economic value of the property. In addition, several alternatives to the proposed development exist. Among those possible alternative developments are the following (though this list is not intended to be, nor is it, comprehensive of the possible alternatives):

1. No Project

No changes to the existing site conditions would result from the "no project" alternative. However, the applicant did not submit information on the current rate of erosion which would substantiate when this alternative may result in damage to the existing structures. In addition, the applicant did not submit evidence that a bulkhead was needed when they submitted an application to demolish and construct a new house at the project site. Coastal Development Permit 5-01-356-W for the demolition and construction of a new single-family residence was approved by the Commission on March 5, 2002. This alternative would not alter the existing site conditions, result in the loss of 0.024 acres (1,045 square feet) of high intertidal habitat, or result in the establishment of a new man made structure on the beach. In addition, this alternative would maintain the beach and sand movement in its "natural" state and result in the least amount of effects to the environment. Based on the information provided, the "No Project" alternative appears to be a viable alternative here.

2. Beach Replenishment

Another alternative to the proposed project would be beach replenishment. This alternative, as discussed more fully in Section II.B.3.c of these findings, would not result in the loss of 0.024 acres (1,045 square feet) of high intertidal habitat and is an alternative to the bulkhead that is environmentally less damaging since a new man made structure would not be installed on the beach. Unlike the applicant's proposal, beach nourishment would be consistent with Section 30233 of the Coastal Act and would be less environmentally damaging alternative to the proposed bulkhead.

3. Foundation Improvement

Another alternative to the proposed project would be improvements to the existing buildings foundation. This alternative would not result in the loss of 0.024 acres (1,045 square feet) of high intertidal habitat and is an alternative to the bulkhead that is environmentally less damaging since a new man made structure would not be installed on the beach. The applicant asserts a need to retain sand in the lee of the structure to prevent it from migrating into the vessel berthing area, which would both lower the design grade elevations adjacent to the residence's foundation, and over time expose the resident's support system to seawater that would weaken the footings and

foundation of the residence. To address these concerns, the applicant could implement the beach nourishment noted above and install a moisture barrier around the foundation and plantings or screenings to minimize salt spray. These activities would provide the protection the applicant seeks and avoid the permanent loss of 0.024 acres (1,045 square feet) of high intertidal habitat and the construction of a new man made structure on the beach.

E. Local Coastal Program

Section 30604(a) of the Coastal Act provides that the Commission shall issue a coastal development permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program which conforms with the Chapter 3 policies of the Coastal Act.

The LUP for the City of Newport Beach was effectively certified on May 19, 1982. The certified LUP was updated on January 9, 1990. Since the City has an LUP but no LCP, the policies of the LUP are used only as guidance. The proposed project is in conflict with City's LUP regarding Dredging, Diking and Filling in Open Coastal Waters, Wetlands, and Estuaries, for the reasons explained above, in Section II.B.5.

The construction of the proposed project is inconsistent with the Chapter 3 policies of the Coastal Act discussed previously, specifically Sections 30233 and 30235 of the Coastal Act, as well as with the City's LUP. Section 30233 of the Coastal Act states the uses for which fill of open coastal waters is allowed. Section 30235 of the Coastal Act states when construction of a bulkhead must be permitted. The proposed development would prejudice the City's ability to prepare a Local Coastal Program for Newport Beach that is consistent with the Chapter 3 policies of the Coastal Act, as required by Section 30604(a). Therefore, the project is found inconsistent with the policies in the City's certified LUP and the Chapter 3 policies of the Coastal Act and must be denied.

F. California Environmental Quality Act

Section 13096 of Title 14 of the California Code of Regulations requires Commission approval of Coastal Development Permits to be supported by a finding showing the permit, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect, which the activity may have on the environment.

As described above, the proposed project would have significant adverse environmental impacts. There are feasible alternatives available, such as the no project alternative and/or beach replenishment, as well as mitigation measures. Therefore, the proposed project is not consistent with CEQA or the policies of the Coastal Act because there are feasible alternatives that would lessen significant adverse impacts that the activity would have on the environment. Therefore, the project must be denied.

FEB 26 2002

CALIFORNIA
COASTAL COMMISSION

PACIFIC OCEAN

1008 W Bay Ave. Newport Beach, CA 92661
PROJECT SITE

NEWPORT BAY

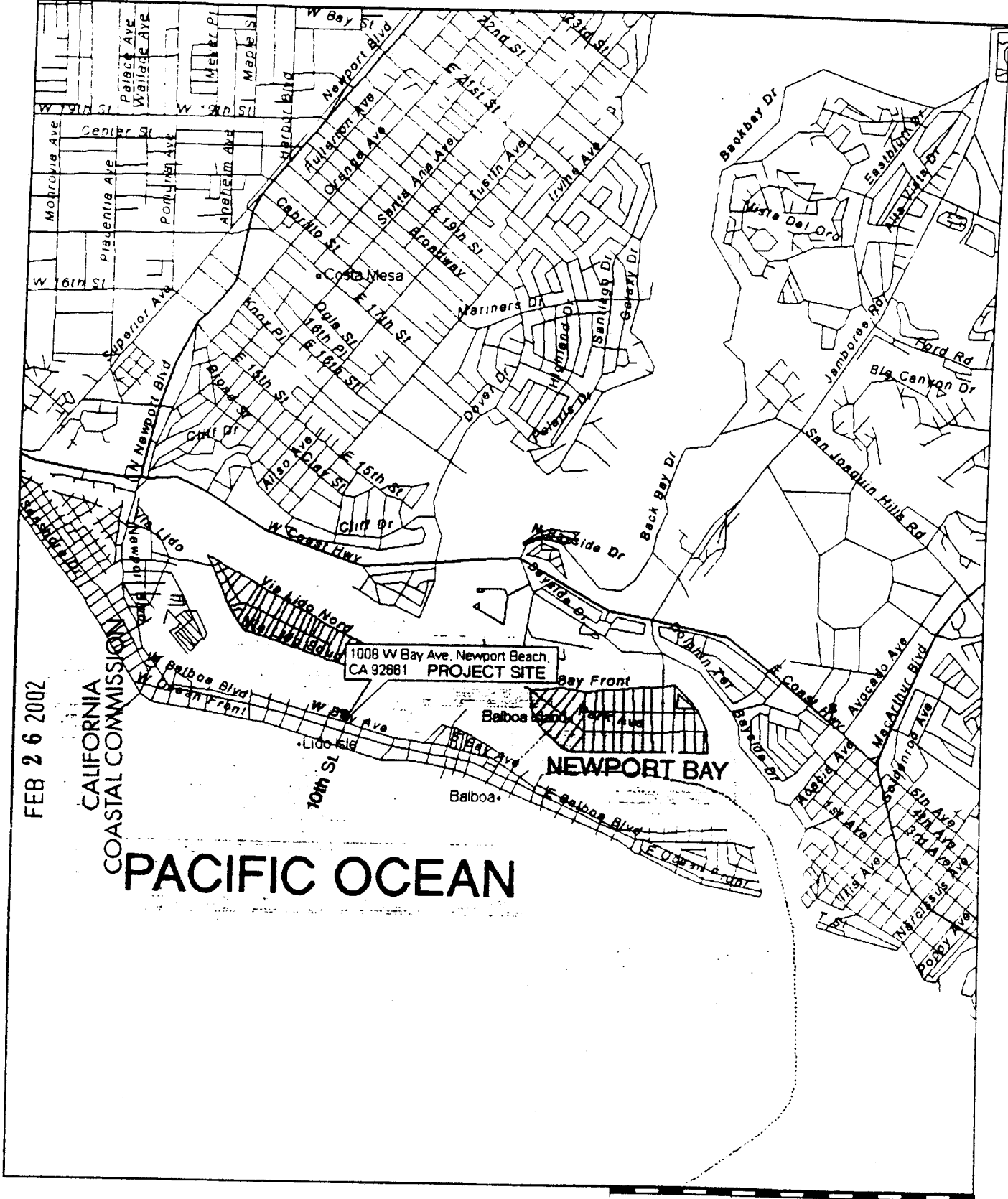
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Microsoft Streets Plus

COASTAL COMMISSION

Johnson Residence Vicinity Map
Map Title 2

EXHIBIT # 1
PAGE 1 OF 1 Page 1



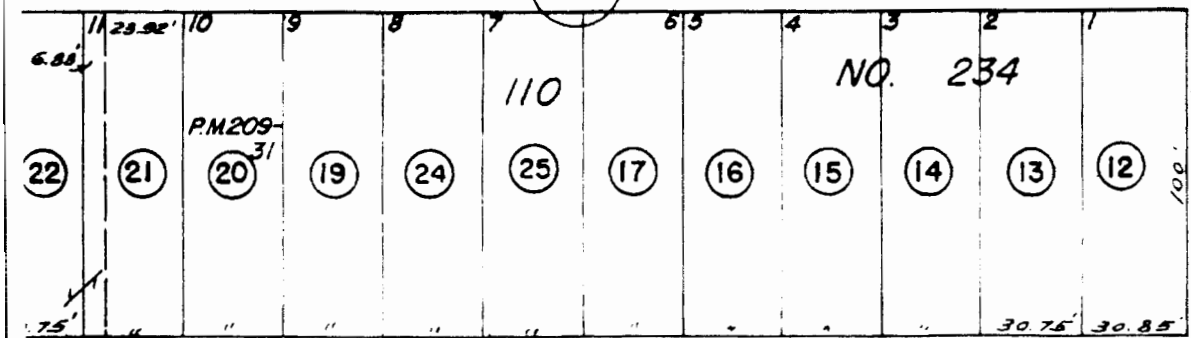
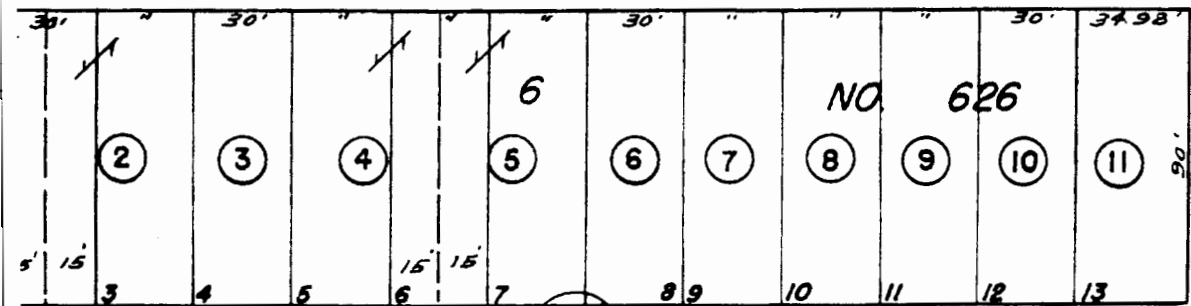
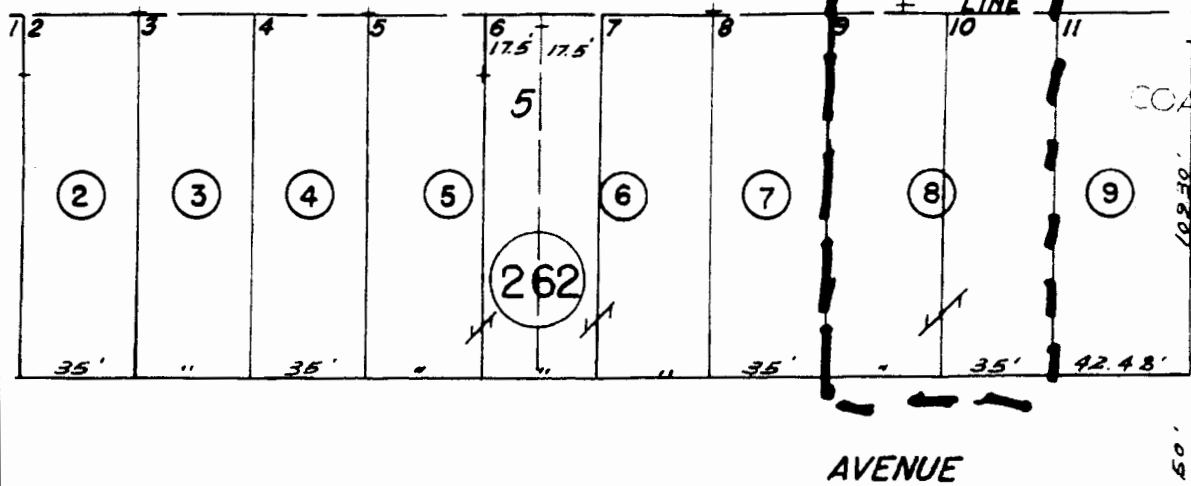
423-26

PROJECT SITE

RECEIVED
South Coast Region

JUN 18 2001

CALIFORNIA
COASTAL COMMISSION



THIS MAP WAS PREPARED FOR ORANGE COUNTY
 ASSESSOR DEPARTMENT USE ONLY. THE ASSESSOR
 MAKES NO GUARANTEE AS TO ITS ACCURACY.
 NOT RESPONSIBLE ANY LIABILITY FOR OTHER USERS.
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BOULEVARD

COASTAL COMMISSION

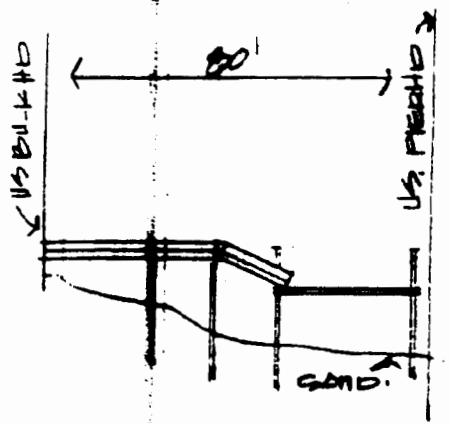
EXHIBIT # 2
PAGE 1 OF 1

NOTE - ASSESSOR'S BLOCK &
PARCEL NUMBERS
SHOWN IN CIRCLES

ASSESSOR'S MAP
BOOK 47 PAGE 26
COUNTY OF ORANGE

1-1-00

CITY OF NEWPORT BEACH



VICINITY SKETCH
NEWPORT BAY, CALIFORNIA

PROFILE: SCALE: 1" = 40'-0"
EEL GRASS INSPECTION

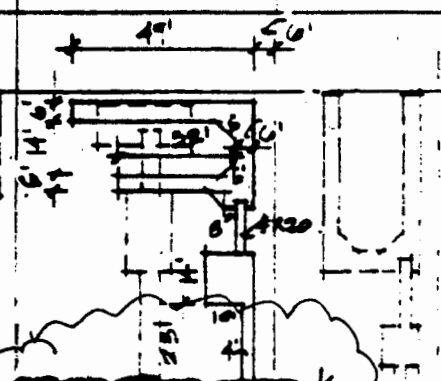
- NO EEL GRASS WITHIN 15' OF PROJECT
- EEL GRASS IN THE PROJECT AREA

Soundings are expressed in feet or meters, depths below Mean Lower Low Water (MLLW). Range of tide approximately 3 feet. Tidal datums are established in this section of Newport Bay.

Tom Miller
SIGNATURE

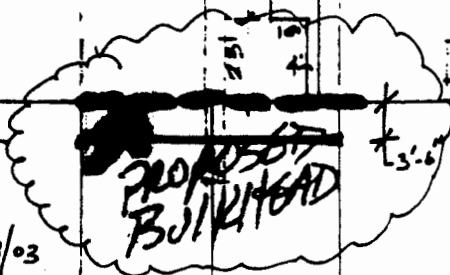
116-1008
PERMIT #

6/7/01
DATE



Modification Approved
- HARBOR RESOURCES DIV.
CITY OF NEWPORT BEACH
Tom Corneille
3-18-03
U.S. BULKHEAD

PROPOSED BULKHEAD
LOCATION MOVED 3'-6"
LANDWARD OF ORIGINALLY
PROPOSED POSITION.



10TH STREET

SCALE: 1" = 50'

7	8	9	10
1010	1012	1008	1006
17.5'	17.5'	35'	35'
35'	35'	35'	42.40'

BAY AVE.

HARBOR RESOURCES DIV.
CITY OF NEWPORT BEACH
Tom Miller
6/7/01

APPLICANT'S NAME **NEIL BERGT**

LOT **3 & 5** TRACT **600**

JOB ADDRESS **1008 BAY AVE NEWPORT BAY, CA 92661**

CONTRACTOR **COASTAL COMMISSION** DATE **1/18/03**

- NO EEL GRASS WITHIN 15' OF PROJECT
- EEL GRASS IN THE PROJECT AREA

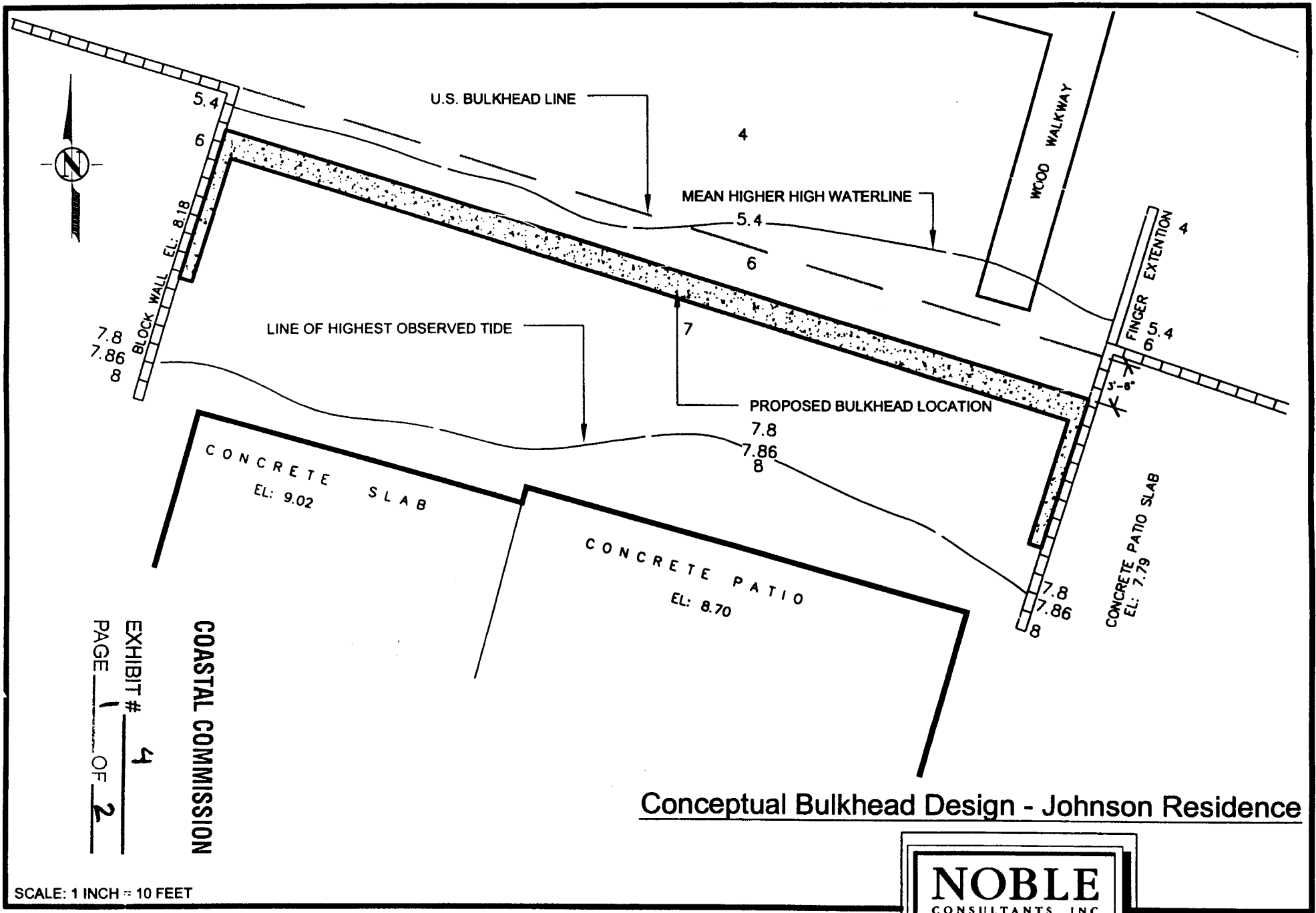
Tom Corneille
SIGNATURE

116-1008
PERMIT #

3-18-03/15.00
DATE

EXHIBIT # 3
PAGE 1 OF 1

FOR YOUR REVIEW - 0.5 MLLW



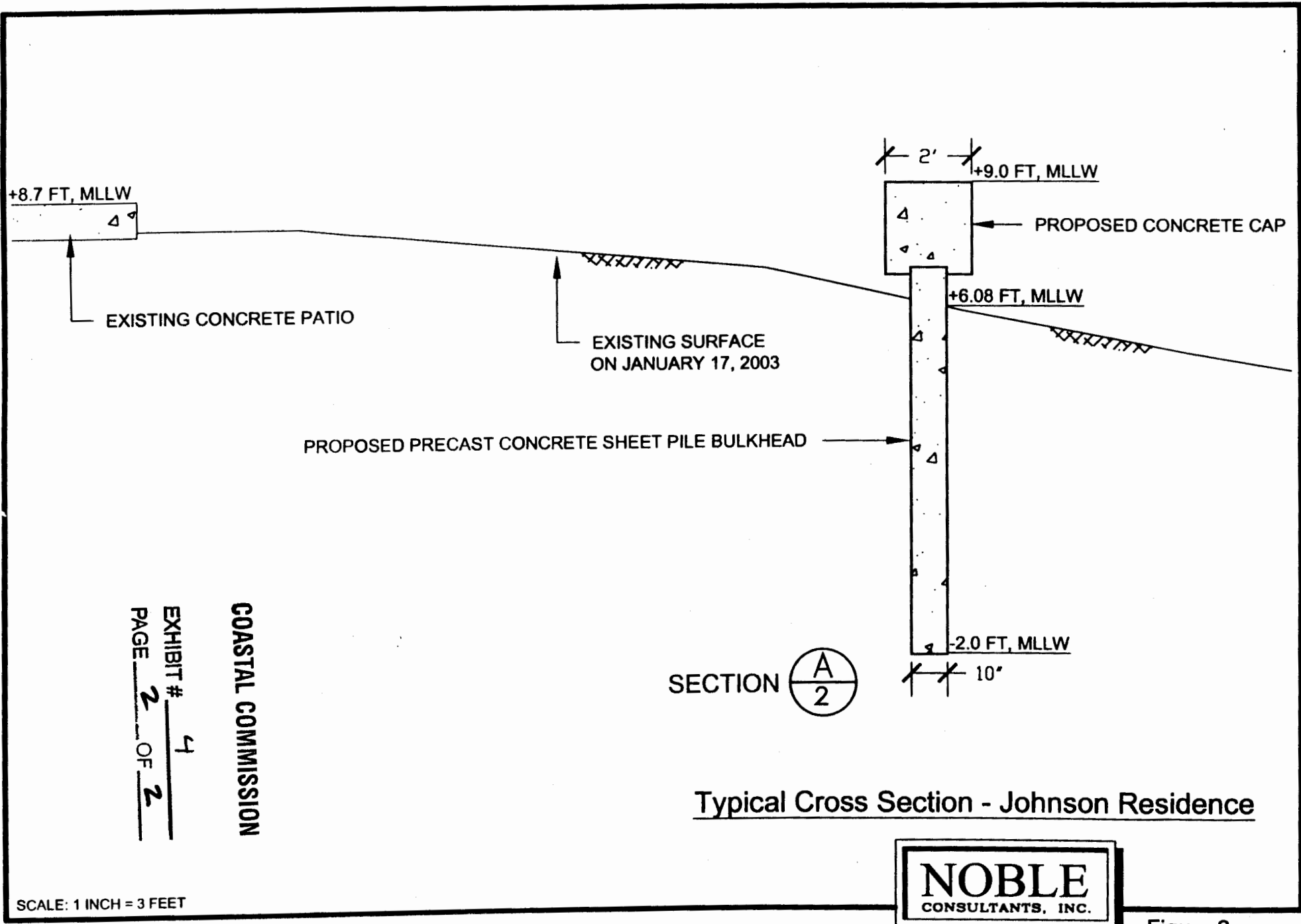
COASTAL COMMISSION
 EXHIBIT # 4
 PAGE 1 OF 2

Conceptual Bulkhead Design - Johnson Residence

SCALE: 1 INCH = 10 FEET



Exhibit A



+8.7 FT, MLLW

EXISTING CONCRETE PATIO

EXISTING SURFACE
ON JANUARY 17, 2003

PROPOSED PRECAST CONCRETE SHEET PILE BULKHEAD

2' +9.0 FT, MLLW

PROPOSED CONCRETE CAP

+6.08 FT, MLLW

-2.0 FT, MLLW

10'

SECTION $\frac{A}{2}$

Typical Cross Section - Johnson Residence

EXHIBIT # 4
PAGE 2 OF 2

COASTAL COMMISSION

SCALE: 1 INCH = 3 FEET



Figure 2

DEPARTMENT OF FISH AND GAME

MARINE REGION
 20 LOWER BAGSCALE DRIVE, SUITE 100
 MONTEREY, CA 93940
 831-649-2870



**Flex
 your
 POWER**

November 6, 2001

RECEIVED
 South Coast Region

NOV 9 2001

CALIFORNIA
 COASTAL COMMISSION

Mr. Fernie Sy
 California Coastal Commission
 South Coast Area
 200 Oceangate Ave., 10th Floor
 Long Beach, California 90802-4325

Dear Mr. Sy:

Department of Fish and Game (Department) staff have reviewed the project description for the William Johnson single-family residence project located at 1008 West Bay Avenue, City of Newport Beach, California. The subject property is comprised of two lots, Lot 9 and Lot 10, and is approximately 70-foot by 110-foot, bordered on the north by Newport Bay. The owner wishes to remove the existing two residences and garages, and construct a new two-story single-family residence with an attached garage. Additionally, there will be exterior walkways, planters, patios, and a new seawall located seaward of the existing seawall and wooden patio. This letter addresses the proposed seawall.

Based on the engineering drawings, the proposed seawall would be more than 15 feet seaward from the existing seawall in Lot 9 and approximately 7 to 20 feet seaward of an "L" shaped existing wooden patio in Lot 10 (there does not appear to be an existing concrete seawall in Lot 10 on the drawing). The applicant is proposing to place the new seawall in the mid-intertidal zone and fill behind it, resulting in a loss of marine intertidal habitat. It is the Department's position to recommend that seawall/bulkhead projects be constructed in such a manner to be least environmentally damaging, with minimal impacts to marine habitats. The loss of marine intertidal habitat associated with the proposed seawall does not appear to be necessary for the continued protection of the property. Therefore, we recommend that the seawall proposal be modified to eliminate any loss of intertidal habitat.

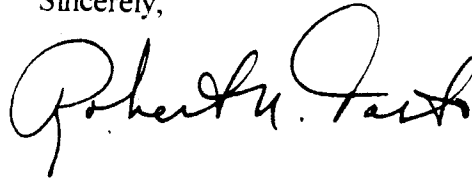
Thank you for the opportunity to review this proposal. As always, Department personnel are available to discuss our comments, concerns, and recommendations in greater detail. To

COASTAL COMMISSION

EXHIBIT # 5
 PAGE 1 OF 2

arrange for a discussion, please contact Ms. Marilyn Fluharty, Environmental Scientist, California Department of Fish and Game, 4949 Viewridge Avenue, San Diego. CA 92123, telephone (858) 467-4231.

Sincerely,



Robert N. Tasto, Supervisor
Project Review and Water Quality Program
Marine Region

cc: Ms. Marilyn Fluharty
Department of Fish and Game
San Diego, California

Mr. Robert Hoffman
National Marine Fisheries Service
Long Beach, California

Mr. Marshall Steele
Marshall Steele Marine Construction and Consulting
2149 Orange Avenue
Costa Mesa, California

COASTAL COMMISSION

EXHIBIT # 5
PAGE 2 OF 2

DEPARTMENT OF FISH AND GAME

http://www.dfg.ca.gov

Marine Region

20 Lower Ragsdale Drive, Suite #100

Monterey, CA 93940

(831) 649-2870



August 1, 2002

U.S. Army Corps of Engineers, Los Angeles District
Regulatory Branch
ATTN: CESPL-CO-R-200101390-DPS
P.O. Box 532711
Los Angeles CA 90053-2325
Attention: Mr. Dan Swenson

RECEIVED
SEP 10 2002
AUG 1 2002

CALIFORNIA
COASTAL COMMISSION

Dear Mr. Swenson:

Department of Fish and Game (Department) staff have reviewed the Public Notice (PN) No. 200101390-DPS for the William Johnson bulkhead project located at 1008 West Bay Avenue, City of Newport Beach, California. The subject property is comprised of two lots, Lot 9 and Lot 10, and is approximately 70-foot by 110-foot, bordered on the north by Newport Bay. The PN concerns the temporary removal of a pier and floating dock and construction of a new bulkhead.

The Department became aware of this project in October 2001 when staff visited the project site with Mr. Marshall Steele (Marshall Steele Marine Construction and Consulting) and were presented with the site plans. We were asked to provide our assessment to the California Coastal Commission (Commission) for the project's coastal development permit (CDP). The construction of the bulkhead is one element of the CDP. The owner of the property also wishes to remove the existing two residences and garages, and construct a new two-story single-family residence with an attached garage, exterior walkways, planters, and patios. At the time, the bulkhead was proposed to be aligned with the existing bulkheads at the two adjacent properties. This approach would place the new bulkhead in the intertidal zone (defined as -7.5 to -2.5 Mean Lower Low Water, MLLW), which would be backfilled, resulting in a loss of marine intertidal habitat. It is the Department's position to recommend that bulkhead/seawall project be constructed in such a manner as to be the least environmentally damaging alternative, with minimal impacts to marine habitats. Because the loss of marine intertidal habitat associated with the proposed bulkhead did not appear to be necessary for the continued protection of the property, we recommended that the bulkhead proposal be modified to eliminate loss of intertidal habitat, e.g. place the bulkhead further shoreward.

We sent a letter to Commission in November 2001 recommending that the bulkhead proposal be modified to eliminate loss of intertidal habitat. In January 2002, another consultant, The Arthur Valdes Co., Inc., sent us modified drawings and stated that the bulkhead was relocated to a point fully south of the U.S. Bulkhead Line as the original alignment (with the

existing bulkheads at the two adjacent properties) was actually beyond the property boundary. However, this was a slight modification and the bulkhead was still proposed within the intertidal zone.

The current proposal in the PN continues to place the bulkhead within the intertidal zone, with a loss of 0.01 acres of intertidal habitat, at a minimum elevation of +5.23 MLLW (however, a note at the bottom of Figure 3 indicates the elevation needs to be verified). The PN also provides alternatives to the proposed project including a rip-rap berm and beach nourishment. However, differing bulkhead designs are not presented. The PN also states that the loss of 0.01 acre or 435 square feet of unvegetated soft-bottom habitat is not considered significant. However, the loss of intertidal bay habitat associated with this project, although small, is of concern to the Department because of cumulative impacts from this kind of activity. Impacts to intertidal habitat are considered significant because these areas are utilized by shorebirds, wading birds, and marine fish and invertebrates.

Accordingly, we recommend to the Corps that the applicant not be granted a permit until the project is modified to eliminate the further loss of intertidal habitat. To accomplish this goal, the seawall could be placed shoreward so that its installation results in no loss or reduced loss of intertidal habitat. If this approach is deemed infeasible, the applicant should be required to mitigate for the loss of intertidal habitat and a mitigation plan submitted prior to any construction. The mitigation plan would need to contain the following elements: baseline information for the project impact zone and mitigation site; environmental goals/objectives that describe the mitigation project purpose; a detailed work plan that includes written specifications and description of mitigation techniques, construction sequencing, and site diagrams; performance standards, specific criteria to either verify fulfillment of environmental goals or to trigger initiation of remedial action or contingency measures; a monitoring program with post-project assessment requirements, survey or sampling methods and provisions for interagency review; a contingency plan for courses of action or corrective measures to be implemented in the event performance standards are not met; and a performance bond to ensure fulfillment of mitigation and/or contingency measures. The mitigation plan should be required as a special condition in the Corps permit prior to any construction.

Thank you for the opportunity to review and comment on this PN. As always, Department personnel are available to discuss our comments, concerns, and recommendations in greater detail. To arrange for a discussion, please contact Ms. Marilyn Fluharty, Environmental Scientist, California Department of Fish and Game, 4949 Viewridge Avenue, San Diego, CA 92123, telephone (858) 467-4231.

Sincerely,

**COPY ORIGINAL SIGNED BY
ROBERT N. TASTO**

Robert N. Tasto, Supervisor
Environmental Services Program
Marine Region

COASTAL COMMISSION

EXHIBIT # 6
PAGE 2 OF 2



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
2730 Loker Avenue West
Carlsbad, California 92008

RECEIVED
South Coast

AUG 8 2002



In Reply Refer To:
FWS-OR-3018.1

CALIFORNIA
COASTAL COMMISSION

AUG 5 2002

Mark Sudol, Chief
U.S. Army Corps of Engineers
Regulatory Branch, Los Angeles District
P.O. Box 532711
Los Angeles, California 90053-2325

Attn: Daniel P. Swenson, Regulatory Branch (No.200101390-DPS)

Re: New Bulkhead Construction Project for Tract 626, Lots 9 and 10, in Newport Bay,
Newport Beach, Orange County, California

Dear Mr. Sudol:

We have reviewed Public Notice 200101390-DPS (PN) for the proposed New Bulkhead Construction Project for Tract 626, Lots 9 and 10, in Newport Bay, Newport Beach, Orange County, California. These comments have been prepared under the authority of, and in accordance with, the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*), the Endangered Species Act of 1973, as amended (Act), and other authorities mandating Department of the Interior concern for environmental values.

According to the PN, the proposed project is construction of a new bulkhead, two retaining walls and two buried concrete dead-mans tied into the bulkhead that would require discharge of approximately 107 cubic yards of fill into 0.01 acre of tidal waters of the U.S. Currently, bulkheads and retaining walls exist on both adjacent properties and erosion has occurred within the project site that has led to cracking of the adjacent retaining walls due to lack of lateral support. The Corps has determined that the purpose of the proposed project is to construct a bulkhead to protect private property from further erosion. No mitigation is proposed in the PN to offset the loss of 0.01 acre of tidal waters of the U.S.

We are concerned for the loss of biological resources associated with the proposed fill into waters of the U.S. As discussed in the PN, the intertidal soft bottom areas that would be filled provide habitat for burrowing and epibenthic invertebrates and can be used for foraging by invertebrates, fish and birds including the federally listed California least tern (*Sterna antillarum browni*). Such projects could cause significant cumulative impacts to these important biological resources in Newport Bay. Given the small amount of proposed fill, it appears that minor changes in the bulkhead design would allow the project to avoid any fill into waters of the

COASTAL COMMISSION

EXHIBIT # 7
PAGE 1 OF 2


U.S. Therefore, the practicability of alternative bulkhead designs that would avoid fill into waters of the U.S. should be evaluated.

If avoidance of fill into waters of the U.S. is determined to be impracticable, the applicant should mitigate for the loss of any intertidal habitat by creating and preserving a minimum of 0.01 acre of intertidal habitat within Newport Bay. Any Corps permit issued for the project should require that a mitigation plan be submitted to the Corps and Carlsbad Fish and Wildlife Office for review and approval prior to initiating construction.

We are available to meet with the Corps and applicant to discuss our concerns and comments regarding the proposed project. If you have any questions regarding these comments or would like to set up a meeting to discuss our concerns, please contact Mr. Zoutendyk of my staff at (760) 431-9440.

Sincerely,



 Karen A. Evans
Assistant Field Supervisor

cc: Marilyn Fluharty, California Department of Fish and Game, San Diego, CA
Stephen John, Environmental Protection Agency, c/o Corps Los Angeles District, CA
Bob Hoffman, National Marine Fisheries Service, Long Beach, CA
Steven Rynas, California Coastal Commission, Long Beach, CA

COASTAL COMMISSION

EXHIBIT # 7
PAGE 2 OF 2



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
 NATIONAL MARINE FISHERIES SERVICE
 Southwest Region
 501 West Ocean Boulevard, Suite 4200
 Long Beach, California 90802-4213

AUG - 6 2002

F/SWR4:RSH

Colonel Richard G. Thompson
 District Engineer
 Los Angeles District
 U.S. Army Corps of Engineers
 P.O. Box 532711
 Los Angeles, California 90053-2325

RECEIVED
 REGIONAL OFFICE
 AUG 6 2002
 CALIFORNIA
 COASTAL COMMISSION

Dear Colonel Thompson:

Thank you for the opportunity to review Public Notice No. 200101390-DPS for the construction of a new bulkhead in Newport Bay. This letter is provided in accordance with the Fish and Wildlife Coordination Act and PL 94-265 - the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA).

The proposed project is located in an area identified as Essential Fish Habitat (EFH) for fish species federally managed under the Pacific Groundfish Fishery Management Plan and Coastal Pelagic Fishery Management Plan. While we do concur with your assessment that the impacts associated with this individual project are insignificant, the cumulative impacts of many such projects are significant. Given the history of many similar small projects being implemented in Newport Bay, we believe the impacts of this project must be considered to be significant in a cumulative context.

In addition, it is not clear from the information supplied in the Public Notice what the distance is between the existing Mean High Water (MHW) mark and the proposed location of the new bulkhead. Regardless of what distance this may be, we disagree with your conclusion that this bulkhead work is water dependant. It appears that the applicant is simply attempting to gain additional property at the expense of existing marine habitats. The location of adjacent property bulkheads is not justification for further loss of aquatic habitats.

To ensure the conservation and enhancement of EFH and associated fishery resources, the National Marine Fisheries Service (NOAA Fisheries) recommends that the following provisions be incorporated into the project:

COASTAL COMMISSION

EXHIBIT # 8
 PAGE 1 OF 2



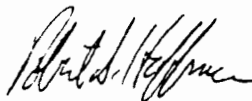
EFH Conservation Recommendations

- 1) The construction of any bulkhead only occur at or above the MHW elevation.
- 2) Should the need for the construction of the bulkhead below the Mean High Water Level be clearly demonstrated, mitigation satisfactory to NOAA Fisheries to offset the loss of any marine habitat will be agreed to prior to the issuance of a permit.
- 3) Any required mitigation will be completed prior to or concurrent with the construction of the bulkhead.

Please be advised that regulations (50 CFR Sections 600.920) to implement the EFH provisions of the MSFCMA require your office to provide a written response to this letter within 30 days of its receipt and at least 10 days prior to final approval of the action. A preliminary response is acceptable if final action cannot be completed within 30 days. Your final response must include a description of measures to be required to avoid, mitigate, or offset the adverse impacts of the activity. If your response is inconsistent with our EFH Conservation Recommendations, you must provide an explanation of the reasons for not implementing those recommendations.

Thank you for your consideration of our recommendations. Should you have any questions, please contact me at 562-980-4043 or via email at: bob.hoffman@noaa.gov.

Sincerely,



Robert S. Hoffman
Acting Assistant Regional Administrator
for Habitat Conservation

cc:

USFWS - Carlsbad (David Zoutendyk)
CDFG - San Diego (Marilyn Fluharty)

COASTAL COMMISSION

EXHIBIT # 8
PAGE 2 OF 2

CALIFORNIA COASTAL COMMISSION

45 FREMONT SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400



October 14, 2002

TO: Fernie Sy, Coastal Program Analyst
FROM: Lesley Ewing, Coastal Engineer
SUBJECT: CDP Application #5-01-229; 1008 West Bay Avenue, Newport Beach (Johnson)

I have received and reviewed the following material relating to the above mentioned project:

Skelly Engineering, Letter Report dated November 27, 2001, 8 pages.

William Simpson & Associates, Inc. "Structural Calculations for A New Seawall and Turned Retaining Walls" January 16, 2002.

William Simpson & Associates, Inc. "Structural Calculations for Fill Volume behind the proposed Seawall" January 29, 2002.

William F. Carr, Site Plan/Topographic Survey, Johnson Residence Seawall, 1/25/2002.

The Arthur Valdes Company, Inc. Site Plan, Johnson Residence, 11/08/2001; revised 1/24/2002.

William Simpson & Associates, Inc. Proposed Seawall for Mr. William Johnson's Residence; Structural General Notes Vicinity Map & Details. 1/28/02.

The provided material is for a bulkhead seawall at the existing residence located at 1008 West Bay Avenue, Newport Beach, CA. As noted in the material above, the applicants' experts call this proposed structure both a seawall and a bulkhead. The letter report discusses the main differences between a seawall and a bulkhead, but even with this discussion there may be some disagreement over what the applicants want to call this proposed structure. The exact term for the structure is less important than its purpose and its impacts.

The proposed structure has been designed well and should provide the intended function. As noted in the material from Skelly Engineering, "The site is subject to soil sliding, which the proposed bulkhead will mitigate." As noted later in the Skelly Engineering report, the bulkhead will fill in a section of shoreline that is now not armored, and it will fix the geometry of the Newport Bay channels. The proposed bulkhead/seawall would reduce sedimentation of Newport Bay and thus, the need for future dredging. In addition to this main function, the bulkhead/seawall will halt the landward migration of the shoreline, will prevent further undermining of the applicants' patio and will prevent further damage to the neighbors' boundary walls. As further identification of the need for this proposed bulkhead/seawall, there are

COASTAL COMMISSION

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photographs in the Skelly Engineering report that show some of the cracking and separation that has occurred on site, without the proposed bulkhead/seawall.

The proposed bulkhead/seawall will address all the concerns raised by the applicants' experts. It will retain sediment and prevent further erosion from this site into Newport Bay. There has been no quantification of the amount of sediment that would be added to Newport Bay if this site remains unarmored; however, it is unlikely that this property alone would be responsible for enough sedimentation into the bay that this one proposed bulkhead/seawall would eliminate the need for future dredging of the bay. There are cumulative effects, both positive and negative, from erosion into the bay and from fixing the bay boundary. This proposed structure would contribute to both, albeit in a small way.

The proposed bulkhead/seawall will support the soils beneath the existing patio and boundary walls and greatly reduce the potential for further cracking. The submitted material does not provide any information about the main residential structure, but it does not appear that the proposed bulkhead/seawall is needed to protect the main structure at this location. Thus, while it will provide several positive benefits to the existing property owner and the adjacent neighbors, it does not seem that this proposed bulkhead/seawall is needed to protect the existing structure from erosion. As such, the proposed bulkhead/seawall should be considered for its impacts to the coastal resources, for fill in open coastal waters, and for its compliance with sections of the Coastal Act other than Section 30235.

Please feel free to contact me if you have questions about this memo or wish to discuss this project further.

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PAGE 2 OF 2

CALIFORNIA COASTAL COMMISSION

45 FLEMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400



March 16, 2004

TO: Fernie Sy, Coastal Program Analyst
FROM: Lesley Ewing, Sr. Coastal Engineer 
SUBJECT: Revised Permit Application, CDP-5-03-491

I have reviewed the staff report prepared for CDP #5-02-378 and the April 3, 2003 letter from Noble Consultants that provided a modification to the bulkhead project reviewed and considered by the initial staff report. The project modification would relocate the proposed bulkhead 3 to 3.5 feet landward of the initial location. The provided cross-section indicates that this relocation would place the bulkhead at about the elevation of +6.08' MLLW, based on the property conditions as surveyed January 17, 2003 (the initial bulkhead was to be located at +5.23' MLLW).

The potential impacts and benefits that were noted in my earlier comment letter would still apply to this modified bulkhead location. The bulkhead would provide a barrier between the Johnson property and the Bay, preventing the sloughage of soil from the Johnson property into the Bay. Also, the bulkhead would help address several concerns relating to seawater intrusion and salt spray. However, the bulkhead is not necessary to protect the existing residence from erosion. Also, there are other ways to address the concerns relating to seawater and salt spray that would not require a bulkhead (improved foundation design, a moisture barrier around the foundation, plantings or screens to minimize salt spray, etc.). In addition, while the modified bulkhead would encroach 3' to 3.5' less into the area identified as "high intertidal" than was proposed with the initial bulkhead submittal, this modified bulkhead would not eliminate encroachment. The basic conclusions from my earlier review still apply.

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PAGE 1 OF 1



April 4, 2003

California Coastal Commission, South Coast Area Office
200 Oceangate, Suite 1000
Long Beach, CA 90802-4302

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South Coast Region

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Attn: Mr. Fernie Sy

RE: William R. Johnson Residence
1008 West Bay Avenue, Newport Beach, CA
Coastal Development Permit Application No. 5-02-378

CALIFORNIA
COASTAL COMMISSION

Dear Mr. Sy:

Noble Consultants, Inc. (NCI) is pleased to submit this project modification notice on behalf of Mr. William R. Johnson, owner of the residence located at 1008 West Bay Avenue in Newport Beach, California (CDP Application No. 5-02-378). As a result of concerns raised by various regulatory agencies and interested parties, the originally proposed project has been modified to adequately address environmental impact concerns associated with the location of the proposed bulkhead.

Consequently, the proposed bulkhead, designed to protect the residence located at 1008 West Bay Avenue from tidal and storm-induced damages, has been modified such that the environmental impacts resulting from the new construction may be deemed to be negligible.

MODIFIED BULKHEAD LOCATION

Noble Consultants, Inc. performed a detailed topographic and hydrographic survey of the site on January 17, 2003. A full size topographic map clearly illustrating the location of the elevation contours, referenced to the Mean Lower Low Water (MLLW) vertical datum, bayward of the subject residence has been attached to this submittal.

Based on the elevations generated by the January 17, 2003 survey and in order to fully comply with the mandates set forth by several regulatory agencies, the proposed bulkhead has been relocated such that it is fully landward of the Mean Higher High Waterline (MHHW) located at +5.4 feet, Mean Lower Low Water (MLLW). This corresponds to a bulkhead position that is 3.5 feet landward of the U.S. Bulkhead Line, the originally proposed location of the bulkhead. The

COASTAL COMMISSION

Mr. Fernie Sy
Coastal Development Permit Application No. 5-02-378
April 4, 2003
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new bulkhead position transitions between approximately the +6.0 and +7.0-foot MLLW elevation contours located along the western and eastern portions of the structure, respectively. Figure 1 and Figure 2 clearly illustrates the bulkhead location modification in plan view and cross-section, respectively.

Since the highest observed water level within Newport Harbor was measured to be +7.86 feet, MLLW during a storm event on January 28, 1983, the new position of the structure is within the footprint of the highest ever observed water level. However, it should be noted that based on the return frequency analysis performed by the Army Corps of Engineers, Los Angeles District, during the Coast of California Storm and Tidal Wave Study for Orange County (1995), an extreme high tide of this magnitude within Newport Harbor occurs approximately twice every 100 years.

PROJECT PURPOSE

In addition to the bulkhead location modification notice, NCI would like to clearly emphasize the need and importance of a properly designed and constructed retaining structure located bayward of the subject residence at this time.

There are several intended purposes of the proposed bulkhead construction project. The main function of the bulkhead is to retain sand in the lee of the structure; thereby, protecting the residence from seawater exposure. At this time, no such structure exists. As a result, sand bayward of the residence is free to migrate into the vessel berthing area, which can effectively lower the design grade elevations adjacent to the residence's foundation. Over time the exposure of the residence's support system to seawater will weaken the footings putting the stability of the residence under increased risk. In addition, from an environmental and maintenance standpoint, it is extremely undesirable to have seawater impinging upon the subject residence. The harsh marine environment will act to deteriorate the exposed sections of the residence at an accelerated rate and the bayward migration of the design grade sediment could potentially undermine the existing structural foundation of the residence. Moreover, since bulkheads span across each neighboring property, the erosion of the fill material from the subject residence could act to undermine the retaining structures at both adjacent properties.

Furthermore, the subject parcel is a natural collection point for debris, trash and other undesirable detritus since it is the only developed lot in the neighboring community that is not protected by some form of retaining structure. Finally, as the sediment continues to migrate into the channel, boating safety concerns increase as the vessel berthing area shoals above the design basin depth.

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Mr. Fernie Sy
Coastal Development Permit Application No. 5-02-378
April 4, 2003
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In addition to the relevant attachments that have been included with this letter, previous submittals and reports that were prepared during the entire application process may be utilized to provide pertinent background information as well. If you should require any further clarification upon reviewing the attached submittals, please do not hesitate to contact us in our Irvine office.

Thank you and we appreciate your continued time and effort in this matter.

Sincerely,

NOBLE CONSULTANTS, INC.



David Altman, M.S.
Project Engineer

DA/da

cc: Ms. Lesley Ewing, California Coastal Commission
Mr. Dave Neish, Jr., Culbertson, Adams & Associates
Mr. William R. Johnson

Attachments: Figure 1. Revised Johnson Residence Bulkhead Placement Location
Figure 2. Typical Cross Section - Johnson Residence
City of Newport Beach Modification Approval dated March 18, 2003
City of Newport Beach Letter of Endorsement dated November 1, 2001
Full Size Sheet - Topographic Survey performed by NCI on January 17, 2003

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PAGE 3 OF 3

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South Coast Region

MAR 28 2002

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November 27, 2001

SE SKELLY ENGINEERING
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South Coast Region

FEB 26 2002

Mr. William Johnson
C/O Paul Weinberg
18201 Von Karmen Ave. Suite 1160
Irvine, CA 92612-1005

CALIFORNIA
COASTAL COMMISSION

SUBJECT: 1008 West Bay Ave. Coastal Development Permit Application #5-01-229

Dear Mr. Johnson:

At your request we are pleased to present the following letter report providing additional information to support your application to the California Coastal Commission. In particular this letter is intended to provide responses to the questions raised by Coastal Commission analyst Fernie Sy in a letter dated July 16, 2001. For ease of additional review by the Commission the analyst's question is provided first in italics, followed by the response.

Why must the proposed seawall be constructed?

The applicant is requesting to construct a bulkhead which is not exactly a seawall. A bulkhead's primary purpose is to retain or prevent the sliding of land (into the water), with a secondary purpose of protecting the upland area against damage from wave action (USACOE 1984). In slight contrast to a bulkhead, a seawall is primarily designed to prevent erosion due to wave action (USACOE 1984). The site is not subject to significant waves and wave erosion. The site is subject to soil sliding, which the proposed bulkhead will mitigate

There are three primary reasons, from a coastal engineering point of view, for the need to construct the missing bulkhead segment at the subject property. The first reason is to provide continuity of the bulkhead which is supposed to be in place along the approved bulkhead line. The bulkhead's primary function is to fix the geometry of the Newport Bay channels. Without the bulkhead system in place the circulation within the bay would change as erosion and accretion takes place over time. Because of the docks, pier and wharfs within the bay, the sediment transport within the bay needs to be in quasi equilibrium. Erosion and accretion can adversely impact the berthing facilities which can only be mitigated by dredging. Filling in this gap in the bulkhead line will contribute to the continued proper functioning of the bay system and possibly help to reduce the need for dredging

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619 S. VULCAN AVE, #214B, ENCINITAS, CA 92024 PHONE 760 942-8379 fax 924-3686

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The second reason is to prevent movement of land into the water (erosion of the shoreline). The site has been subject to problems due to soil movement and erosion over time, and will be subject to continued erosion. This potential for soil movement is evidenced by the erosion that has taken place on the nearby public bay-side beach. Photograph 1, taken from the subject site, shows the bulkhead line, the string line, and the extent of shoreline erosion. The landward extend of sediment movement (erosion) is seen about 15 feet landward of the building string line. Photograph 2 shows the damage to the patio slab (cracks) as a result of having unconfined soils on the site. The bulkhead would confine the soils and prevent damage to the patio and building slabs on the site.



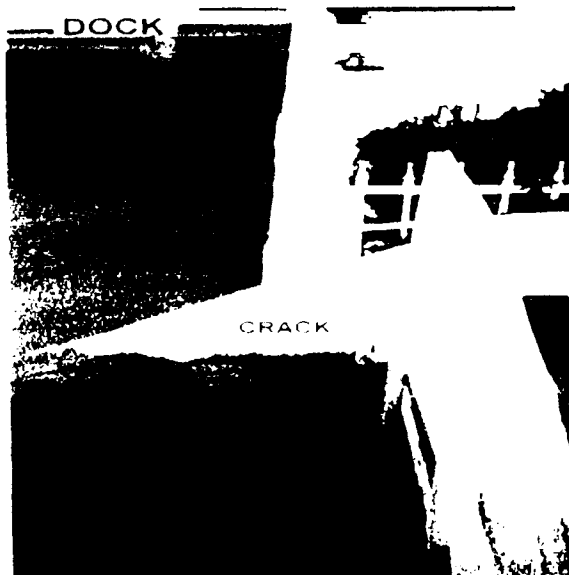
Photograph 1. Adjacent public beach showing the bulkhead line, the string line, and the extend of soil movement (erosion limit) landward of the string line in the beach area not confined by a bulkhead.

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Photograph 2 showing location of cracks in wall and slab.

The third reason is to eliminate damage to the neighboring boundary walls. The damage is primarily cracking of the masonry due to soil movement from lack of lateral support of the soil, and erosion on one side of the boundary wall. Some of the damage to a boundary wall is shown in Photograph 3. The ends of the bulkheads on the adjacent property are returned back down the property lines by garden walls. These boundary walls are not as deep or as structurally competent as the bulkhead



Photograph 3. Boundary wall cracks

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How will the proposed seawall mitigate the circumstances which requires the seawall to be constructed?

The proposed bulkhead will mitigate all three of the oceanographic reasons for the construction of the bulkhead. The bulkhead will "fill the gap" in the present bulkhead. It will become part of the design bulkhead system for proper bay circulation. The bulkhead will prevent the sliding of soils into the bay system. The bulkhead will retain the soils providing lateral support for the patio and house slabs. Finally the bulkhead will eliminate the damage to the adjacent boundary walls by providing lateral support to the walls

How will the proposed seawall affect coastal processes, including impact on shoreline sand supply?

The physical coastal processes that occur within the Newport Bay system are driven by tides and winds. The proposed project will not alter the winds or the tides. The bay sediment transport system can be characterized as a closed system in that sediment is not added or removed from the system. While sediment is transported within the system, any significant movement of sediment that changes the design configuration is mitigated by dredging. The construction of a bulkhead at the subject site will not significantly change the circulation within the bay and will not impact coastal processes

Also, will the proposed seawall be connected to any existing seawalls located adjacent to the project site?

Because the actual condition and strength of the adjacent bulkheads is unknown it is not recommended that the new bulkhead be mechanically connected to the adjacent bulkheads. Failure of the adjacent bulkhead could result in damage to the proposed new bulkhead. The new bulkhead should butt up to the adjacent bulkheads. A filter fabric or other suitable joint material can be used to prevent any soils from piping out the butt joint.

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Alternatives to the proposed project:

- 1. Do nothing

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The do nothing alternative would not address the need for the bulkhead and would not mitigate the soil movement/sloughing from the site and the resulting in damage to the adjacent boundary walls, patio slabs and building slabs

2. Quarry stone revetment

A quarry stone revetment could be constructed that would prevent movement of the site soils. However, the revetment is not the best choice because it has a large footprint which would encroach into the intertidal and sub-tidal areas, and because a bulkhead is already the chosen method in the area for sediment stabilization.

3. Soil nourishment

The continual addition of soil would prevent the over all net loss of soil at the site. However, the additional of soil/sand would not mitigate for the lack of lateral support for the soils. It is this movement of soils that has resulted in the damage to the boundary walls and the slab(s). So the nourishment alternative would not mitigate the need to prevent additional damage to the boundary walls and slab(s).

Information Requested in California Coastal Commission Memo Dated December 13, 1993.

The following information is intended to supplement the geotechnical report that has been prepared for the site. The information is provided in the order requested in the above referenced Coastal Commission memo.

Design wave height and maximum expected wave height

Because the proposed bulkhead is within Newport Bay no significant surface gravity waves (long swell) will be present. The two sources of waves are winds and wakes. The water area adjacent to the site has a very limited fetch so no significant wind waves can develop (waves over 1 foot). In addition, the speed of boats in the area is closely regulated and wakes are usually under 6 inches in height. Wave energy from wakes or wind driven waves will be insignificant and need not be considered in the design of the bulkhead.

Frequency of overtopping

Because the proposed bulkhead will not be subject to any significant waves, no overtopping is anticipated. The bulkhead will be the same height as nearby bulkheads. Neither of the adjacent bulkheads have been overtopped in the past.

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Normal and maximum tidal ranges

The National Oceanographic and Atmospheric National Ocean Survey tidal data station closest to the site is the Newport Beach Newport Bay Entrance station (NOAA 1999). The elevations in meters are as follows:

- HIGHEST OBSERVED WATER LEVEL (01/28/1983) = 2.395
 - MEAN HIGHER HIGH WATER (MHHW) = 1.643
 - MEAN HIGH WATER (MHW) = 1.416
 - MEAN TIDE LEVEL (MTL) = 0.849
 - MEAN SEA LEVEL (MSL) = 0.841
 - MEAN LOW WATER (MLW) = 0.283
 - NORTH AMERICAN VERTICAL DATUM-1988 (NAVD) = 0.113
 - MEAN LOWER LOW WATER (MLLW) = 0.000
 - LOWEST OBSERVED WATER LEVEL (01/20/1988) = -0.659
- (Elevations in meters)

Erosion Rate with and without the bulkhead.

The erosion rate with the bulkhead is essentially zero. The bulkhead fixes the location of the land relative to the water and thereby prevents erosion. The bulkhead prevents the sloughing of soils at the site. The erosion rate without the bulkhead is difficult to quantify but it can be discussed in a conceptual way. Without the bulkhead the boundary between the land and the water is mobile, horizontally. The tidal driven water weakens the soils beneath the adjacent slab(s) and adjacent wall because the soils are unconfined. These soils/sands can then move away to other areas within the bay system.

Effects of the bulkhead on adjoining properties

Because the proposed bulkhead will be part of a continuous bulkhead system continuing on the adjacent properties, the new bulkhead will have no adverse effects on the adjacent property. The new bulkhead will provide lateral support for the boundary walls on the adjacent properties.

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Potential for and the effect of scour at the base

Due to the weak tidal and wind driven circulation of the harbor and the site specific geometry, there is little sediment transport adjacent to the bulkhead. The existing grade seaward of the adjacent bulkhead is about +2.5 MSL. This is landward

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of the Mean High Tide Line (+1.86' MSL). Scour at the base is not expected below Mean Sea Level. The panel design also incorporates a factor of safety which would allow for additional scour depth without bulkhead failure. However, there is no reason to anticipate this additional scouring.

Design life and maintenance

The design life should be in excess of 25 years. It is recommended that the bulkhead be inspected every few years. The inspection should assess the condition of the wall and the need for maintenance. Maintenance could include repair of damaged concrete cap and replacement of damaged tiebacks.

Quantification of loss of sand to the beach because of the amount of armoring of the bluff.

No bluff armoring is proposed.

Effects of the project upon public access to and along adjacent public tidelands.

The proposed bulkhead will not impact public access along the shoreline. The bulkhead is located above (landward of) the mean high tide line and along the approved US Bulkhead Line. There is a public beach about 70 feet from the site that provides excellent access to the shoreline. It is important to point out that lateral access along the tidelands is difficult due to the docking structures and piers in the area. The space between the bottom of the piers and to top of the intertidal sand is small and requires one to duck or crawl beneath the structure. There is no lateral access at high tide along this section of shoreline.

The information provided herein is intended to provide the necessary coastal processes and oceanographic information for the Coastal Commission Coastal Development Application. If you have any questions or require additional information please contact me at the number below.

Sincerely,

David W. Skelly MS PE
RCE#47357

COASTAL COMMISSION

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