# **CALIFORNIA COASTAL COMMISSION**



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 Commission Action:
 10/24/01

# STAFF REPORT: REGULAR CALENDAR

APPLICATION NUMBER: 5-01-319

APPLICANT: Balboa Bay Club Inc.

Dave Neish Culbertson, Adams & Associates

PROJECT LOCATION: 1221 West Coast Highway, Newport Beach, Orange County

- PROJECT DESCRIPTION: Replacement of 549 feet of an existing 604 foot bulkhead. The remaining 55 feet is proposed to have the tiebacks and deadmen replaced, leaving the existing panels intact. The proposed bulkhead will be placed in the same location and alignment as the existing bulkhead. No fill of coastal waters is proposed. Excavation immediately landward of the bulkhead is proposed in the amount of 1,900 cubic yards of cut to be replaced in place as 1,900 cubic yards of fill. The proposed project will also raise the bulkhead height to conform with the City of Newport Beach's requirement of +9 feet above Mean Lowest Low Water.
- LOCAL APPROVALS RECEIVED: City of Newport Beach Harbor Resources Division Permit No. 129-1221.
- SUBSTANTIVE FILE DOCUMENTS: Coastal Development Permit No. 5-94-265 (Balboa Bay Club); Coastal Development Permit Amendment 5-94-265 A1 (Balboa Bay Club); City of Newport Beach certified Local Coastal Program.

# SUMMARY OF STAFF RECOMMENDATION:

Staff recommends approval of the proposed project with four special conditions which require that: 1) the proposed best management practices be carried out as proposed in order to assure that adverse impacts to marine resources including water quality and eelgrass are minimized; 2) the post-construction eelgrass survey be submitted to the Executive Director and that any necessary mitigation be carried out as proposed; 3) the public access walkway remain free of any development which would obstruct or limit public use and be available to the general public at any time the club facilities are available to members of the private club; and 4) Regional Water Quality Control Board approval. These special conditions are necessary in order to find the proposed project consistent with Sections 30230 and 30231 of the Coastal Act which require that adverse impacts to marine resources including water quality and marine life be minimized and with Section 30210 of the Coastal Act which requires that public access be maximized.

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#### **STAFF RECOMMENDATION:**

Staff recommends that the Commission APPROVE the permit application with special conditions.

# MOTION:

# *I move that the Commission approve CDP #5-01-319 pursuant to the staff recommendation.*

Staff recommends a <u>YES</u> vote. This will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

The staff recommends that the Commission adopt the following resolution:

# I. APPROVAL WITH CONDITIONS

The Commission hereby **<u>GRANTS</u>** a permit, subject to the conditions below, for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not 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 of the Coastal Act, and will not have any significant adverse effects on the environment within the meaning of the California Environmental Quality Act.

#### II. STANDARD CONDITIONS:

- 1. <u>Notice of Receipt and Acknowledgment.</u> The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
- 2. <u>Expiration.</u> If development has not commenced, the permit will expire two years from the date this permit is reported to the Commission. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
- 3. <u>Interpretation</u>. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
- 4. <u>Inspections.</u> The Commission staff shall be allowed to inspect the site and the project during its development, subject to 24-hour advance notice.
- 5. <u>Terms and Conditions Run with the Land.</u> These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

# III. SPECIAL CONDITIONS

# 1. Marine Resources Best Management Practices

Construction of the proposed project, bulkhead repair and replacement, shall incorporate the Best Management Practices (BMPs) as proposed by the applicant and as further described in the findings of this staff report. Specifically, the proposed bulkhead repair project shall include: 1) the placement of a float to catch any debris that may inadvertently fall from the project site and would otherwise enter the adjacent harbor water; 2) construction methods limiting virtually all work to the landward side of the bulkhead (the only exception is placement of wooden forms to shape new concrete for the replacement coping); 3) placement of a turbidity curtain; 4) removal of only relatively short segments (approximately 100 foot stages) of the bulkhead wall at a time and then replacement as soon as possible; 5) all excavated material shall be stored a minimum of 40 feet inland of the bulkhead; 6) the perimeter of the eelgrass patch shall be marked with buoys prior to initiation of construction; 7) all debris and trash shall be disposed of in a suitable trash container on land at the end of each construction day; 8) vessels working in the vicinity of the eelgrass bed shall not anchor within the eelgrass vegetation; 9) discharge of any hazardous materials into the bay shall be prohibited; and 10) a post-construction eelgrasss survey shall be conducted by a gualified marine biologist to identify whether any eelgrass habitat was adversely affected by the project; 11) debris discharged into coastal waters shall be recovered by divers as soon as possible after loss; 12) all construction materials, other than lumber, that are stored on-site shall be stored in a covered area, or shall be contained from below and above so that no materials come into contact with the ground surface or rainwater.

# 2. <u>Eelgrass Mitigation</u>

Within thirty (30) days of completion of construction, the post-construction eelgrass survey shall be submitted for the review and approval of the Executive Director. If the post-construction eelgrass survey identifies any loss of eelgrass or other adverse effect on the eelgrass, mitigation to offset the adverse impacts shall be carried out consistent with the *Southern California Eelgrass Mitigation Policy* (National Marine Fisheries Service 1991, as amended.) The Southern California Eelgrass are identified and the mitigation plan is implemented, the location of the source of eelgrass to be transplanted shall be identified. The Executive Director will determine in writing whether carrying out the mitigation plan will require an amendment to this permit or a new coastal development permit.

#### 3. Public Access Walkway

The 10 foot wide public access walkway shall remain free of any development which would obstruct or limit public use.

The pubic access walkway shall be available to the general public at any time the club facilities are available to members of the private club.

The applicant shall ensure that these requirements are carried out.

# 4. REGIONAL WATER QUALITY CONTROL BOARD APPROVAL

**PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall provide to the Executive Director a copy of a permit issued by the Regional Water Quality Control Board, or letter of permission, or evidence that no permit or permission is required. The applicant

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shall inform the Executive Director of any changes to the project required by the Regional Water Quality Control Board. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is required.

# IV. FINDINGS AND DECLARATIONS:

The Commission hereby finds and declares:

# A. <u>Project Description</u>

The applicant proposes to replace 549 feet of an existing 604 foot bulkhead. The remaining 55 feet is proposed to have the tiebacks and deadmen replaced, leaving the existing panels intact. The proposed bulkhead will be placed in the same location and alignment as the existing bulkhead. No fill of coastal waters is proposed. Excavation immediately landward of the bulkhead is proposed in the amount of 1,900 cubic yards of cut to be replaced in place as 1,900 cubic yards of fill once the bulkhead replacement is complete. The proposed project will also raise the bulkhead height to conform with the City of Newport Beach's requirement of +9 feet above Mean Lowest Low Water.

The replacement bulkhead is proposed to be of conventional construction with precast tongue and groove panels held together with a concrete coping tied back to a deadman system. The bulkhead system is structurally independent of the neighboring bulkheads, and so is not proposed to be tied in to the adjacent bulkheads.

The existing bulkhead includes a six foot cantilever for a length of 399 feet. The proposed bulkhead includes a five foot cantilever along 63 feet (see exhibit C).

All work is proposed to take place from the landward side of the bulkhead, except during brief periods when some of the forming of the coping takes place. The only other elements of the project proposed to be in or over the water are a turbidity curtain and a float to catch any project debris that may inadvertently fall during construction. Small work vessels are anticipated to be used only to place the debris barriers and the wooden forms for the new concrete coping. No large equipment such as deep-draft barges or construction equipment is proposed seaward of the bulkhead. Such equipment would not fit in the limited space between the bulkhead and existing boat docks (see exhibit D).

Construction debris will be taken to Nu-Way Live Oak Landfill in Irwindale, outside the coastal zone. There it will be recycled into roadbase.

#### B. Project Location and Permit History

1. Project Previously Approved at the Site

The landward side of the subject site is developed with the Balboa Bay Club. Renovations to the Bay Club were approved under coastal development permit 5-94-265. The renovations approved included a major remodel and expansion and some demolition. The resultant project included 189,000 square feet of facilities, a parking structure and an increase in guest rooms from 128 to 144.

Prior to approval of coastal development permit 5-94-265 all use of the site was private, available only to club members and their guests. As approved under 5-94-265 by the Commission, the project at the site will provide some public uses, although some areas on site will remain available to club members only. The club renovation project includes a ten foot wide public access walkway extending from Coast Highway through the entry area of the club to the bulkhead adjacent to the bay and along the bulkhead to the southern edge of the property. An amendment to coastal development permit 5-94-265 was approved by the Commission on February 15, 2000. The amendment to 5-94-265 allowed an increase in square footage of the facilities, partially to correct an error in the previous square footage calculation.

No changes to the project approved under coastal development permit 5-94-265 or 5-94-265 A1 are proposed. The proposed project will retain the 10 foot wide public access walkway along the revised bulkhead.

# 2. Project Location

The subject site is located on West Coast Highway and fronts on Lido Channel in Newport Harbor. Thus, the site is between the sea and the first public road paralleling the sea.

In 1919, the State granted all tide and submerged lands to the City. In 1952 the subject site was determined to be State tide and submerged land. Prior to that determination, in 1948, the City leased the site to a private entity. The private entity constructed what is now the Balboa Bay Club. The lease covering the site was extended in 1986 subject to a requirement that the availability of current and potential public facilities for public trust purposes be dramatically improved.

The project approved under coastal development permit 5-94-265 significantly increased public access at the subject site, consistent with the requirement that public access be dramatically improved. As conditioned, the proposed development will not interfere with the approved public access on site.

#### C. Marine Environment

Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Newport Harbor (Lower Newport Bay) is a critical coastal water body on the federal Clean Water Act 303(d) list of "impaired" water bodies. The designation as "impaired" means the quality of the water body cannot support beneficial recreation and aquatic uses. The listing is made by the California Regional Water Quality Control Board, Santa Region (RWQCB), and the State Water Resources Control Board (SWRCB), and confirmed by the U.S. Environmental Protection Agency. Further, the RWQCB has targeted the Newport Bay watershed, which includes Newport Harbor, for increased scrutiny as a higher priority watershed under its Watershed Management Initiative.

The proposed project, repair and replacement of a bulkhead, will take place adjacent to the coastal waters and marine environment of Newport Harbor. The Coastal Act requires that adverse effects of this project on coastal waters and the marine environment be minimized. In order to assure that adverse effects are minimized, best management practices (BMPs) must be incorporated into the project. BMPs are used, among other things, to reduce the amount of pollutants introduced into the adjacent water by the proposed project.

#### 1. Water Quality

As proposed the project includes a number of BMPs to reduce adverse impacts the project may have. For example, the proposed project includes a BMP that would require the placement of a float to catch any debris that may inadvertently fall from the project site and would otherwise enter the adjacent harbor water. The float would be on the seaward side of the bulkhead, adjacent to the location of each day's work. This proposed BMP will significantly minimize the potential amount of pollutants that could otherwise accidentally fall into the water as a result of the proposed project.

Another BMP proposed as part of the project is to conduct virtually all work from the landward side of the bulkhead. The only exceptions to this would be the float described above, placement of a turbidity curtain (described below), and the limited presence of a small vessel seaward of the bulkhead during the forming of some of the coping. All excavation will occur landward of the bulkhead and is proposed to be tracked by hydraulic excavator and all lifting by a truck crane. No construction equipment will need to be placed in or over the water. All waste will be removed by truck. Thus, construction equipment or materials that would need to be placed in the harbor water or on barges in the water is significantly reduced. By reducing the use of water area for construction or construction staging, the potential for debris and pollutants to enter the water is significantly reduced.

Also proposed as a BMP is the placement of a turbidity curtain as needed to control turbidity. Water turbidity reduces light levels and can settle on organisms in the project vicinity. This BMP will minimize these adverse effects by preventing the spread of debris and turbid waters within the bay.

The proposed method of construction constitutes an additional BMP. As proposed, only relatively short segments (approximately 100 foot stages) of the wall are to be removed at a time and then replaced as soon as possible. This BMP would minimize the amount of time the site is exposed to potential erosion or sloughing into the water.

Finally, all excavated material will be stored 40 feet inland of the bulkhead. This would also have effect of minimizing potential erosion into the water because of the distance from the water to the stored material.

In addition to the BMPs proposed by the applicant, some additional BMPs would further reduce adverse water quality impacts resulting from the project. Although a float to catch debris is

proposed to be in place during construction, it is possible that some debris may still fall into the water. This possibility must be addressed. If debris should fall into the water, it should be removed as soon as possible to minimize any adverse impacts. This could be accomplished by having divers remove the debris as soon as possible, but in any case no later than at the end of the work day. Another BMP which would further decrease adverse water quality impacts would be to store all on-site construction material in a covered area. Alternately, if not stored in a covered area, the on-site construction material could be contained from below and above so that no material comes into contact with the ground surface or rainwater. This BMP would have the effect of keeping construction material residue from being washed into the harbor water by rainwater. The addition of these two BMPs to the applicant's already proposed BMPs would help to significantly reduce potential pollutants from entering the coastal waters adjacent to the site.

#### 2. Biological Productivity

An Eelgrass Investigation was prepared for the proposed project by Coastal Resources Management, dated September 13, 2001. The eelgrass investigation revealed one, 119 square foot patch of eelgrass at the west end of the bulkhead at depths between –3 and –5 feet mean lowest low water. The patch of eelgrass was located between 3 and 10 feet away from the bulkhead (see exhibit D). The Eelgrass Investigation states:

"There will be no direct loss of eelgrass as a result of the seawall [bulkhead] renovation since the footprint of the new seawall will be the same as the one to be replaced."

The Investigation finds, however, that secondary losses of eelgrass could potentially occur from reduced water clarity (increased water turbidity) associated with any hydrojetting or pile driving activity that disturbs and resuspends bottom sediments. Higher water turbidity could (1) reduce underwater light levels and/or (2) resettle on top of the eelgrass.

The Eelgrass Investigation provides steps to be taken to avoid the secondary effects mentioned above on the eelgrass patch. These include the measures already identified above as well as further measures. The measures recommended by the biological consultant as necessary to avoid the secondary effects to eelgrass are: 1) marking the perimeter of the eelgrass patch with buoys prior to the initiation of construction to assist the contractor in avoiding damage to the eelgrass bed; 2) debris and silt curtains to minimize the spread of debris and turbid waters; 3) disposing of all debris and trash in a suitable trash container on land at the end of each construction day; 4) placement of a protective barrier to prevent concrete and other larger debris from falling into the bay; 5) vessels working in the vicinity of the eelgrass bed will not anchor within the eelgrass vegetation [only very small vessels such as skiffs are expected to be used for very limited waterside work. The size of any vessel working on the water side of the project is limited due to the space available. The width between the bulkhead and the adjacent docks is only 6 to 10 feet.]; 6) prohibit discharge of any hazardous materials into the bay; and 7) a post-construction eelgrass survey will be conducted by a qualified marine biologist to ensure no eelgrass habitat was adversely affected by the project.

If the post-construction eelgrass survey identifies any adverse impacts, then a mitigation program to replace (transplant) eelgrass back to the project site is proposed by the applicant. The eelgrass replacement proposed if necessary will be conducted to the specifications set forth in *the Southern California Eelgrass Mitigation Policy* (National Marine Fisheries Service 1991, as amended) (See exhibit E). The post-construction eelgrass survey is proposed to be submitted to the Coastal Commission. This will notify Commission staff of any secondary effects to eelgrass that did occur

as a result of the project and allow for follow up to assure that any mitigation, if necessary, is carried out as proposed.

The Eelgrass Investigation also notes that the revised bulkhead will reduce the area of cantilever over the top of the bulkhead. The renovated bulkhead design will be reduced in cantilever length from approximately 399 feet to 63 feet and the remaining cantilevered area will extend only 5 feet rather than the previous 6 feet. This represents a reduction in cantilever area of 85%. Eelgrass needs sunlight to grow. A reduction in the area of the cantilever reduces the amount of shading in the area, thereby potentially increasing the possibility of increased eelgrass coverage. Therefore the proposed new design potentially benefits the subtidal area adjacent to the revised bulkhead.

#### 3. Other Marine Organisms

The Eelgrass Investigation also examined the area within the project vicinity for other organisms. Sixteen common types of algae, invertebrates and fish were observed during the survey. Most of these were associated with the existing bulkhead structure that provided attachment surfaces for these plants and animals. The Eelgrass Investigation states:

"An initial loss of marine plants and animals that live on the existing seawall [bulkhead] will occur when the seawall is demolished. These fouling organisms (mussels, algae, sea squirts) will begin to recolonize the new seawall following the completion of construction."

#### 4. Regional Water Quality Control Board

The Regional Water Quality Control Board (RWQCB) oversees water quality issues in the region. Since the proposed project has the potential to affect water quality, the development requires review by the RWQCB. At the time of this staff report, evidence of final RWQCB review and sign-off had not yet been received. Consequently, the proposed development has yet to be found in conformance with current water quality standards by the RWQCB. To ensure that the project is acceptable to the RWQCB and will not adversely affect water quality, Special Condition No. 4 requires that the applicant provide written evidence of RWQCB approval prior to issuance of a coastal development permit. If the RWQCB approval results in changes to the currently proposed project, the applicant may be required to obtain an amendment to the current coastal development permit. Only as conditioned does the Commission find that the proposed development conforms with Sections 30230 and 30231 of the Coastal Act.

#### 5. <u>Conclusion</u>

The Eelgrass Investigation prepared for the proposed project concludes:

"The presence of the new seawall will not result in any long-term loss of marine habitat or marine life since the seawall [bulkhead] structure will be the same size and replaced within the footprint of the existing seawall."

And:

"The project will have a beneficial impact on marine life because less area will be shaded between the docks and the seawall [bulkhead] and this will promote the growth of a greater diversity of algae and potentially eelgrass. Eelgrass currently grows 3 to 6 feet away from the seawall where a cantilever structure is present without any adverse effects. The removal of the cantilever structure will promote additional eelgrass growth in the absence of any shading effect caused by the cantilevered seawall."

As proposed, the project will minimize many of the potential adverse effects it may have on water quality and marine resources. However, the additional BMPs described above would reduce the potential for adverse impacts even further. In order to assure that adverse impacts to water quality and marine organisms are indeed minimized by these BMPs, there must be an assurance that they will be carried out. Therefore a special condition is imposed which requires that the BMPs described above are incorporated into the project. Only as conditioned can the project be found to be consistent with Sections 30230 and 30231 of the Coastal Act, which require that coastal waters and the marine environment be maintained and enhanced.

# D. Public Access

Section 30210 of the Coastal Act states:

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

The project approved under coastal development permit No. 5-94-265 included a minimum 10 foot wide public access walkway extending from Coast Highway to the bulkhead and along the bulkhead to the southern edge of the property. The seaward most portion of the approved public access walkway (the segment along the bulkhead) falls within the area of the proposed project. This is the segment of the walkway that allows members of the general public to actually stroll along the edge of the bay and experience unobstructed views of the harbor.

The findings for approval of coastal development permit 5-94-265 state:

"In order for the walkway to be useful, a minimum of ten feet of clear passage must be devoted exclusively to the public access walkway. The walkway must be adjacent to the bulkhead to assure that the public viewing of the marina and bay from the walkway will not be impinged upon."

Section 30210 requires that public access be maximized. In order to assure that public access is maximized at the subject site it is essential that the proposed project not result in any reduction or limitation in the size, location or use of the public access walkway approved under coastal development permit 5-94-265. Information submitted with the current application states:

"The deck in question is in fact the public access walkway as indicated and approved in Coastal Development Permit No. 5-94-265. The location of the deck/public walkway has not changed and public use of the walkway will not be physically or visually hampered."

As proposed the bulkhead repair and replacement project will not lessen the public benefits of the walkway approved by the Commission under coastal development permit 5-94-265. However, because maximizing public access is an extremely high priority under the Coastal Act and because the proposed project is in the same location as the public access walkway, an informational special condition is included as part of the approval of this project. This special condition restates and re-imposes the conditions of coastal development permit 5-94-265 regarding the public access walkway. This special condition requires that the 10 foot wide public access walkway remain free

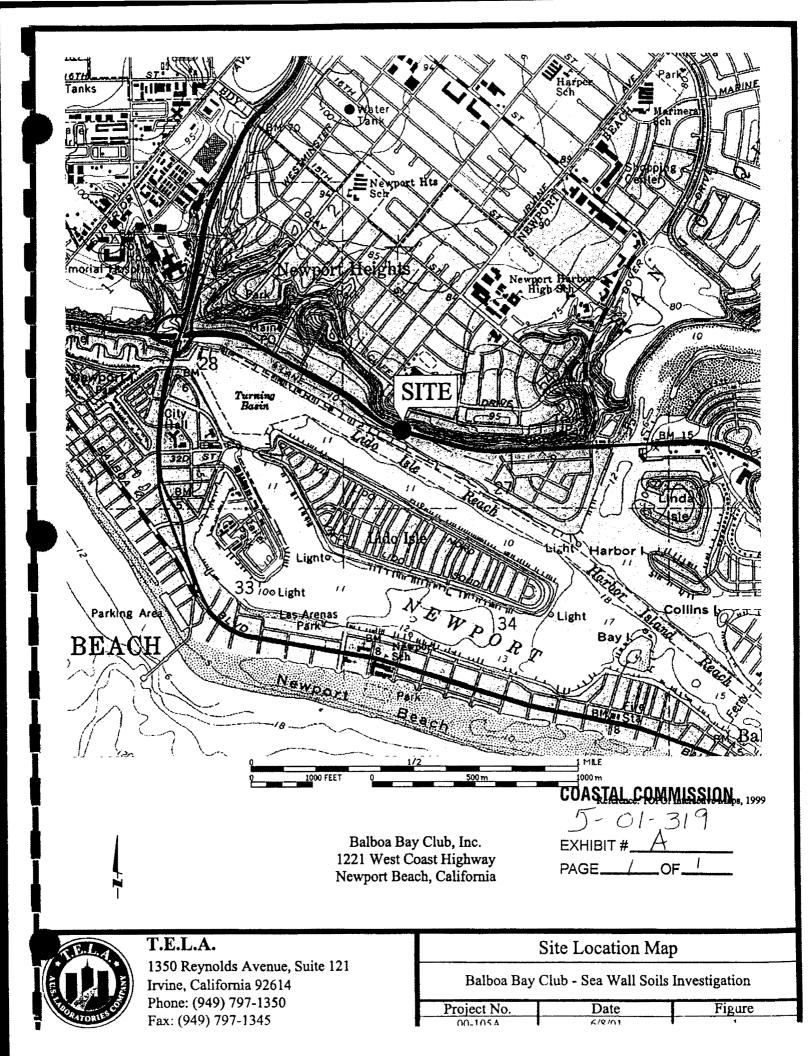
of any development which would obstruct or limit public use and that the public access walkway be available to the general public at any time the facility is available to the private club members. Therefore, as conditioned, the Commission finds the proposed project is consistent with Section 30210 of the Coastal Act which requires that public access be maximized.

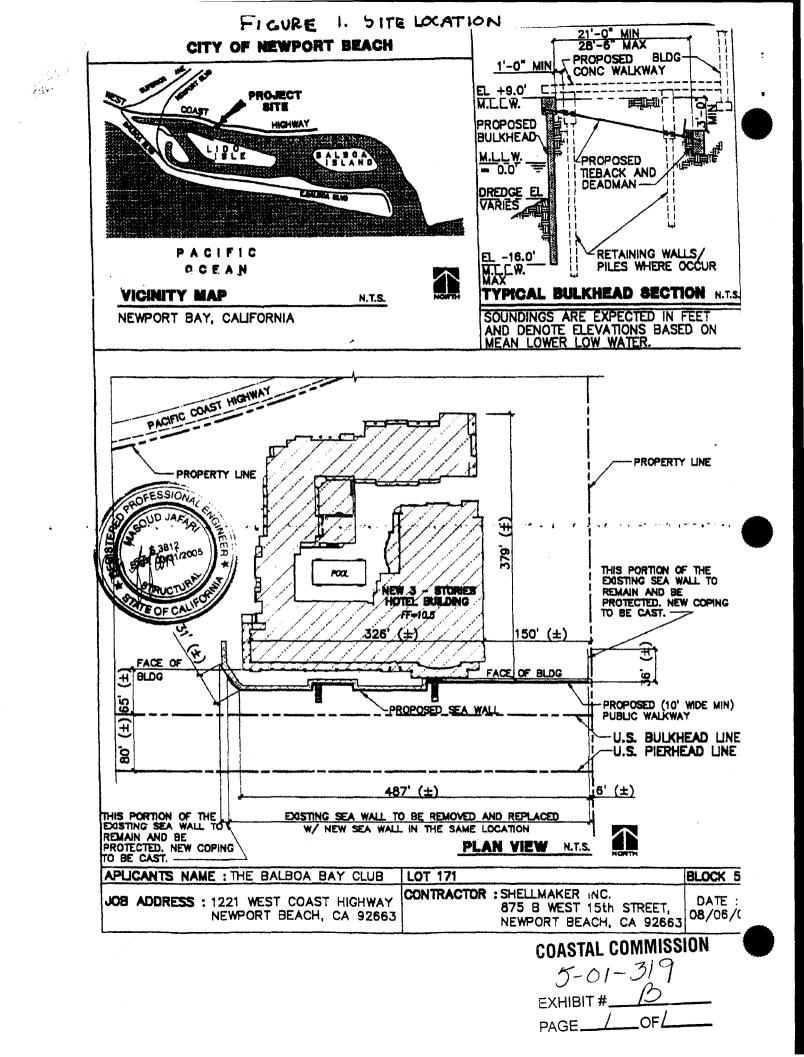
#### E. California Environmental Quality Act

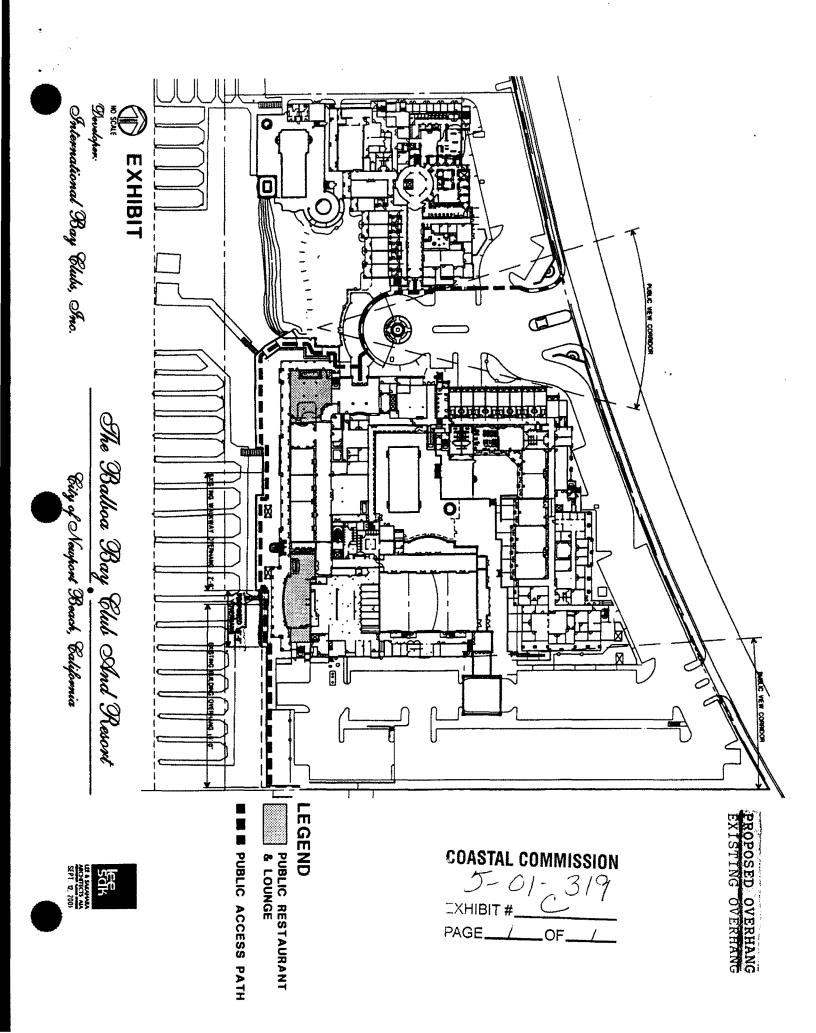
Section 13096 of the Commission's regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality 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.

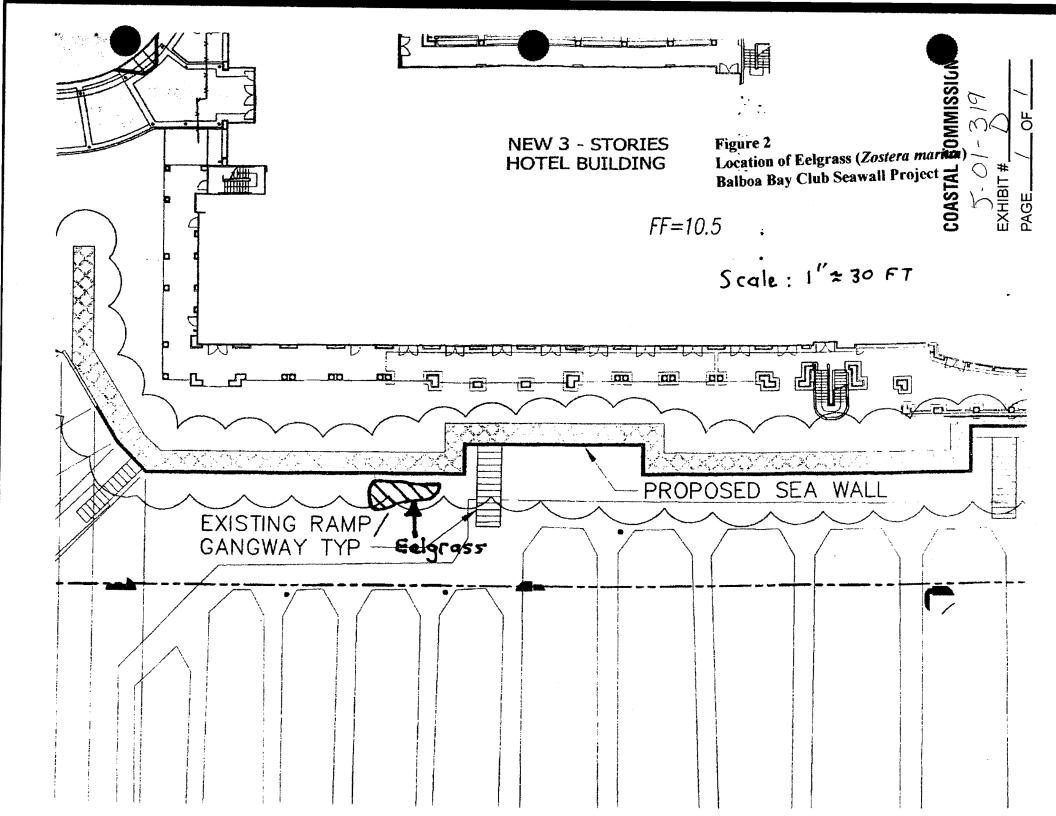
The proposed project is located in an urban area. All infrastructures necessary to serve the site exist in the area. As conditioned, the proposed project has been found consistent with the marine resources and public access policies of Chapter 3 of the Coastal Act. These conditions also serve to mitigate any significant adverse impacts under CEQA. Mitigation measures requiring that the water quality and marine resources best management practices be carried out as proposed; that approval from the RWQCB be submitted; and that the public access walkway remain free of obstructions and available to the general public will minimize any significant adverse effects that the activity may have on the environment. There are no other feasible alternatives or mitigation measures available which will lessen any significant adverse impact the activity would have on the environment. Therefore, the Commission finds that the proposed project is consistent with CEQA and the policies of the Coastal Act.

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# SOUTHERN CALIFORNIA EELGRASS MITIGATION POLICY (Adopted July 31, 1991)

Eelgrass (Zostera marina) vegetated areas function as important habitat for a variety of fish and other wildlife. In order to standardize and maintain a consistent policy regarding mitigating adverse impacts to eelgrass resources, the following policy has been developed by the Federal and State resource agencies (National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the California Department of Fish and Game). This policy should be cited as the Southern California Eelgrass Mitigation Policy (revision 8).

For clarity, the following definitions apply. "Project" refers to work performed on-site to accomplish the applicant's purpose. "Mitigation" refers to work performed to compensate for any adverse impacts caused by the "project". "Resource agencies" refers to National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the California Department of Fish and Game.

1. Mitigation Need. Eelgrass transplants shall be considered only after the normal provisions and policies regarding avoidance and minimization, as addressed in the Section 404 Mitigation Memorandum of Agreement between the Corps of Engineers and Environmental Protection Agency, have been pursued to the fullest extent possible prior to the development of any mitigation program.

2. Mitigation Map. The project applicant shall map thoroughly the area, distribution, density and relationship to depth contours of any eelgrass beds likely to be impacted by project construction. This includes areas immediately adjacent to the project site which have the potential to be indirectly or inadvertently impacted as well as areas having the proper depth and substrate requirements for eelgrass but which currently lack vegetation.

Protocol for mapping shall consist of the following format:

1) Coordinates

Horizontal datum - Universal Transverse Mercator (UTM), NAD 83, Zone 11

Vertical datum - Mean Lower Low Water (MLLW), depth in feet.

2) Units

Transects and grids in meters.

Area measurements in square meters/hectares.

All mapping efforts must be completed during the active growth phase for the vegetation (typically March through October) and shall be valid for a period of 120 days with the exception of surveys completed in August - October

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A survey completed in August - October shall be valid until the resumption of active growth (i.e., March 1). After project construction, a post-project survey shall be completed within 30 days. The actual area of impact shall be determined from this survey.

3. Mitigation Site. The location of eelgrass transplant mitigation shall be in areas similar to those where the initial impact occurs. Factors such as, distance from project, depth, sediment type, distance from ocean connection, water quality, and currents are among those that should be considered in evaluating potential sites.

4. Mitigation Size. In the case of transplant mitigation activities that occur concurrent to the project that results in damage to the existing eelgrass resource, a ratio of 1.2 to 1 shall apply. That is, for each square meter adversely impacted, 1.2 square meters of new suitable habitat, vegetated with eelgrass, must be created. The rationale for this ratio is based on, 1) the time (i.e., generally three years) necessary for a mitigation site to reach full fishery utilization and 2) the need to offset any productivity losses during this recovery period within five years. An exception to the 1.2 to 1 requirement shall be allowed when the impact is temporary and the total area of impact is less than 100 square meters. Mitigation on a one-for-one basis shall be acceptable for projects that meet these requirements (see section 11 for projects impacting less than 10 square meters).

Transplant mitigation completed three years in advance of the impact (i.e., mitigation banks) will not incur the additional 20% requirement and, therefore, can be constructed on a one-for-one basis. However, all other annual monitoring requirements (see sections 8-9) remain the same irrespective of when the transplant is completed.

Project applicants should consider increasing the size of the required mitigation area by 20-30% to provide greater assurance that the success criteria, as specified in Section 9, will be met. In addition, alternative contingent mitigation must be specified, and included in any required permits, to address situation where performance standards (see section 9) are not met.

5. Mitigation Technique. Techniques for the construction and planting of the eelgrass mitigation site shall be consistent with the best available technology at the time of the project. Donor material shall be taken from the area of direct impact whenever possible, but also should include a minimum of two additional distinct sites to better ensure genetic diversity of the donor plants. No more than 10% of an existing bed shall be harvested for transplanting purposes. Plants harvested shall be taken in a manner to thin an existing bed without leaving any noticeable bare areas. Written permission to harvest donor plants must be obtained from the California Department of Fish and Game.

Plantings should consist of bare-root bundles consisting of 8-12 individual turions. Specific spacing of transplant units shall be at the discretion of the project applicant. However, it is understood that whatever techniques are employed, they must comply with the stated requirements and criteria.

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6. Mitigation Timing. For off-site mitigation, transplanting should be started prior to or concurrent with the initiation of in-water construction resulting in the impact to the eelgrass bed. Any off-site mitigation project which fails to initiate transplanting work within 135 days following the initiation of the in-water construction resulting in impact to the eelgrass bed will be subject to additional mitigation requirements as specified in section 7. For on-site mitigation, transplanting should be postponed when construction work is likely to impact the mitigation. However, transplanting of on-site mitigation should be started no later than 135 days after initiation of in-water construction activities. A construction schedule which includes specific starting and ending dates for all work including mitigation activities shall be provided to the resource agencies for approval at least 30 days prior to initiating in-water construction.

7. Mitigation Delay. If, according to the construction schedule or because of any delays, mitigation cannot be started within 135 days of initiating in-water construction, the eelgrass replacement mitigation obligation shall increase at a rate of seven percent for each month of delay. This increase is necessary to ensure that all productivity losses incurred during this period are sufficiently offset within five years.

8. Mitigation Monitoring. Monitoring the success of eelgrass mitigation shall be required for a period of five years for most projects. Monitoring activities shall determine the area of eelgrass and density of plants at the transplant site and shall be conducted at 3, 6, 12, 24, 36, 48, and 60 months after completion of the transplant. All monitoring work must be conducted during the active vegetative growth period and shall avoid the winter months of November through February. Sufficient flexibility in the scheduling of the 3 and 6 month surveys shall be allowed in order to ensure the work is completed during this active growth period. Additional monitoring beyond the 60 month period may be required in those instances where stability of the proposed transplant site is questionable or where other factors may influence the long-term success of transplant.

The monitoring of an adjacent or other acceptable control area (subject to the approval of the resource agencies) to account for any natural changes or fluctuations in bed width or density must be included as an element of the overall program.

A monitoring schedule that indicates when each of the required monitoring events will be completed shall be provided to the resource agencies prior to or concurrent with the initiation of the mitigation.

Monitoring reports shall be provided to the resource agencies within 30 days after the completion of each required monitoring period.

9. Mitigation Success. Criteria for determination of transplant success shall be based upon a comparison of vegetation coverage (area) and density (turions per square meter) between the project and mitigation sites. Extent of vegetated cover is defined as that area where eelgrass is present and where gaps in coverage are less than one meter between individual turion clusters. Density of shoots is defined by the number of turions per area present in representative samples

within the control or transplant bed. Specific criteria are as follows:

a. a minimum of 70 percent area of eelgrass bed and 30 percent density after the first year.

b. a minimum of 85 percent area of eelgrass bed and 70 percent density after the second year.

c. a sustained 100 percent area of eelgrass bed and at least 85 percent density for the third, fourth and fifth years.

Should the required eelgrass transplant fail to meet the established criteria, then a Supplementary Transplant Area (STA) shall be constructed, if necessary, and planted. The size of this STA shall be determined by the following formula:

$$STA = MTA \times (|A_t + D_t| - |A_c + D_c|)$$

MTA = mitigation transplant area.

 $A_t$  = transplant deficiency or excess in area of coverage criterion (%).

 $D_t$  = transplant deficiency in density criterion (%).

 $A_c$  = natural decline in area of control (%).

 $D_c$  = natural decline in density of control (%).

Four conditions apply:

1) For years 2-5, an excess of only up to 30% in area of coverage over the stated criterion with a density of at least 60% as compared to the project area may be used to offset any deficiencies in the density criterion.

2) Only excesses in area criterion equal to or less than the deficiencies in density shall be entered into the STA formula.

3) Densities which exceed any of the stated criteria shall not be used to offset any deficiencies in area of coverage.

4) Any required STA must be initiated within 120 days following the monitoring event that identifies a deficiency in meeting the success criteria. Any delays beyond 120 days in the implementation of the STA shall be subject to the penalties as described in Section 7.

10. Mitigation Bank. Any mitigation transplant success that, after five years, exceeds the mitigation requirements, as defined in section 9, may be considered as credit in a "mitigation bank". Establishment of any "mitigation bank" and use of any credits accrued from such a bank must be with the approval of the resource agencies and be consistent with the provisions stated in this policy. Monitoring of any approved mitigation bank shall be conducted on an annual basis until all credits are exhausted.

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#### 11. Exclusions.

1) Placement of a single pipeline, cable, or other similar utility line across an existing eelgrass bed with an impact corridor of no more than ½ meter wide may be excluded from the provisions of this policy with concurrence of the resource agencies. After project construction, a post-project survey shall be completed within 30 days and the results shall be sent to the resource agencies. The actual area of impact shall be determined from this survey. An additional survey shall be completed after 12 months to insure that the project or impacts attributable to the project have not exceeded the allowed ½ meter corridor width. Should the post-project or 12 month survey demonstrate a loss of eelgrass greater than the ½ meter wide corridor, then mitigation pursuant to sections 1-11 of this policy shall be required.

2) Projects impacting less than 10 square meters. For these projects, an exemption may be requested by a project applicant from the mitigation requirements as stated in this policy, provided suitable out-of-kind mitigation is proposed. A case-by-case evaluation and determination regarding the applicability of the requested exemption shall be made by the resource agencies.

(last revised 2/2/99)

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