

CALIFORNIA COASTAL COMMISSION

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REGULAR CALENDAR
STAFF REPORT AND PRELIMINARY RECOMMENDATION

Application No.: 6-98-121

Applicant: City of San Diego

Agent: Keith Merkel

Description: Implementation of Mission Bay Shoreline Protection, Phase III, including: extension of existing rip rap revetment by 30 linear feet with 550 tons of rock at southwest portion of Mariner's Point; installation of drainage pipe and recontour of beach at Ventura Cove; recontour of beach at Northwest Vacation Island; rehabilitate an existing 750 lineal foot section of rock rip rap revetment including installation of filter fabric and 5,220 tons of rock at Vacation Island, South Cove; reconstruction of West Ski Island with armorflex perimeter and 13,900 cu. yds. of dredging to create cove area for boats; and recontour of Paradise Island with approximately 1,600 cu. yds. of sand.

Site: Mariner's Point, Ventura Cove/Bahia, Northwest Vacation Island, Vacation Island - South Cove, West Ski Island and Paradise Island, Mission Bay Park, San Diego, San Diego County (No APN)

STAFF NOTES:Summary of Staff's Preliminary Recommendation:

Staff recommends approval of the proposed shoreline protection at all of the sites with the exception of Site 25 - West Ski Island. This project is not authorized with this coastal development permit and should be addressed under a separate permit after thorough consideration of alternatives. Staff recommends approval of all other sites with conditions which address the proposed maintenance program; project timing; potential construction/staging areas; eelgrass mitigation plans; intertidal mitigation plans; and other required permits from resource agencies.

Substantive File Documents: Mission Bay Park Land Use Plan (1979 and draft update); Mission Bay Park Shoreline Stabilization and Restoration Project Plan; Mission Bay Park Natural Resources Management Plan, 1989; DEP 89-0225 (Environmental Impact Report) and Addendum to EIR (LDR No. 96-0860); Eelgrass Mitigation Plan by Merkel and Associates dated 11/23/98; CDPs #6-93-8, 6-93-165, 6-93-208; Report of Findings Mission Bay Beach Stabilization San Diego Project Mission Bay Park by Group Delta Consultants, Inc.; Pacific Southwest Biological Services, Inc.; Ogden Environmental & Energy Services, Co. – 3/13/92

PRELIMINARY STAFF RECOMMENDATION:

The staff recommends the Commission adopt the following resolution:

I. Approval with Conditions.

The Commission hereby grants a permit for the proposed development, subject to the conditions below, 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 impacts on the environment within the meaning of the California Environmental Quality Act.

II. Standard Conditions.

See attached page.

III. Special Conditions.

The permit is subject to the following conditions:

1. Revised Plans for Site 25 – West Ski Island. Prior to the issuance of a coastal development permit, the applicant shall submit revised plans to the Executive Director for review and written approval which:

- a) Delete the proposed reconstruction of West Ski Island and installation of Armorflex;
- b) Other solutions to remedy the erosion at this location may include regrading the island with importation of sand and more frequent maintenance or other measures which do not incorporate a hard structure (i.e., armorflex, bulkhead walls or rip rap revetment) through a future coastal development permit.

2. Maintenance Program. The permit includes a projected performance maintenance program to preserve Northwest Vacation Isle, Ventura Cove and Paradise Island once the approved development occurs. The City shall be required to monitor sand beach profiles bi-weekly. A six-inch scarp will be the determining factor to initiate beach maintenance at the Northwest Vacation Isle and Paradise Island sites. An 18-inch scarp will be the determining factor to initiate maintenance at Ventura Cove. The scarp will be smoothed using a rubber tired front end loader. The frequency of the beach maintenance would not be more often than once every three months, unless after a major storm event. The City shall submit annual reports which document the types, frequency, costs and effects of maintenance required at each site, to the Executive Director, beginning one year from project completion. Said reports shall continue for a minimum of two years, or longer if the Executive Director determines it is necessary.

3. Timing of Construction/Maintenance. Prior to the issuance of the coastal development permit, the applicant shall submit to the Executive Director for review and written approval, a final construction schedule incorporated into the construction bid documents. The schedule shall specify that development shall not occur between Memorial Day weekend and Labor Day for the following sites: Ventura Cove/Bahia, Northwest Vacation Island, Vacation Island - South Cove and Paradise Island. The schedule shall further specify that development shall not occur between April 1 - September 15 for the Mariner's Point site to avoid impacts during the California Least tern nesting season.

Should maintenance activities be required during these periods in the future, such activities shall be restricted to weekday nights and early mornings to the maximum extent possible, to avoid impacts on public access during times of heaviest beach use.

4. Staging Areas/Access Corridors. Prior to the issuance of the coastal development permit, the applicant shall submit to the Executive Director for review and written approval, detailed plans incorporated into the construction bid documents for the location of access corridors to the construction sites and staging areas. Access corridors and staging areas shall be located in a manner that has the least impact on public access by maintaining existing public parking areas and traffic flow on coastal access routes. Use of public parking areas for staging/storage areas shall be minimized to the maximum extent possible.

5. Eelgrass Impacts. A pre-construction survey of the existing eel grass beds shall be completed to establish the pre-impact conditions of the eelgrass beds and the density of the beds prior to implementation of the proposed shoreline protection measures. The survey shall be submitted to the Executive Director before commencement of construction and shall indicate the length, width, and density of the eel grass beds. A post-construction survey shall be completed within 14 days following construction to determine the actual footprint of eelgrass impact. Within 30 days after completion of the post-construction survey, the permittee shall submit a report to the Executive Director that includes the post-construction survey. The report shall identify the amount of

eelgrass impacted by the project based upon comparison of the pre- and post-construction surveys. The report shall also include recommendations for any changes to the restoration program, a restoration schedule and an estimate of the square footage of area to be replanted. Eelgrass impacts shall be mitigated by replanting eelgrass at the project site at a ratio of 1.2 square feet of mitigation area for each square foot of area impacted. Prior to commencement of the mitigation/transplant, the applicant shall obtain final approval for the method of transplant from the California Department of Fish and Game (CDFG). All methods of eelgrass mitigation must be performed consistent with the guidelines established in the "Mission Bay Shoreline Stabilization Phase III, Eelgrass and Intertidal Habitat Mitigation Program" dated 11/23/98 by Merkel and Associates, Inc. Any deviations from this report must be reported immediately to the Executive Director.

6. Monitoring Program for Eelgrass Mitigation. Prior to the issuance of the coastal development permit, the applicant shall agree to undertake the monitoring requirements in accordance with the approved "Mission Bay Shoreline Stabilization Phase III, Eelgrass and Intertidal Habitat Mitigation Program" dated 11/23/98 by Merkel and Associates. The mitigation monitoring program, as proposed, shall occur over a five-year period to ensure establishment and to verify that minimum coverage and density requirements are achieved. The monitoring shall consist of conducting a total of approx. 10 shoot-counts in each transplant area and 10 shoot -counts in the control area. Monitoring surveys will be conducted at intervals of 0, 6, 12, 24, 36, 48 and 60 months post-planting. For each monitoring a summary report will be prepared and submitted to the resource and regulatory agencies within 30 days of completion of the monitoring. Any proposed changes to the approved monitoring program shall be reported to the Executive Director. Proposed changes to the approved monitoring program shall not occur without a Coastal Commission-approved amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

7. Intertidal/Bay Mitigation Plan/Final Approval of Mitigation Credits. The applicant shall comply with the requirements of the "Mission Bay Shoreline Stabilization Phase III, Eelgrass and Intertidal Habitat Mitigation Program" dated 11/23/98 by Merkel and Associates. In addition, PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit for the written approval of the Executive Director, evidence that the City of San Diego has accepted the applicant's option to use eelgrass mitigation credits from the Crown Point Shores Intertidal Mitigation Area (CPSIMA), located adjacent to the Northern Wildlife Reserve. The evidence shall specify the amount of acreage credits which have been withdrawn from the draft Mission Bay Park Mitigation Bank Agreement as a result of the proposed project. The permittee shall not authorize use of these mitigation credits from Crown Point Shores as mitigation for any other project, or sell these mitigation credits in the future.

8. Other Permits. The applicant shall submit copies of all other required state or federal discretionary permits for the development herein approved. Any mitigation measures or other changes to the project required through said permits shall be reported

to the Executive Director and shall become part of the project. Such modifications, if any, may require an amendment to this permit or a separate coastal development permit.

IV. Findings and Declarations.

The Commission finds and declares as follows:

1. Detailed Project Description. As noted in the addendum to the EIR for the subject project, Mission Bay Park is a 4,200 acre park with 2,200 acres of bay area and nearly 27 miles of coastline. Mission Bay has been artificially created through dredging and filling conducted in the 1950's through the 1970's. Mission Bay shorelines are subject to normal wind, tides, and wave erosion as well as erosion associated with public use of the bay and shoreline areas. For several years, The City of San Diego has been studying the ongoing erosion and accretion problems within Mission Bay Park. In 1990 the Mission Bay Park Shoreline Stabilization and Restoration Project Plan was developed to address these issues and includes a series of alternative solutions for 41 shoreline sites throughout the park. Restoration measures considered in the Shoreline Master Plan ranged from the repair of existing beaches through the creation of new rock revetments and bulkheads. There have been three coastal development permits approved by the Commission to implement these measures and they include CDP #6-93-8, 6-93-165 and 6-93-208.

The latter two permits were for implementation of Mission Bay Shoreline Protection, Phase I and Mission Bay Shoreline Protection, Phase II. The subject permit represents Phase III of this work. Phase I consisted of stabilizing those areas of shoreline which were experiencing the most severe erosion and typically represented the "hard" solutions of rip rap revetments and bulkhead walls. Phase II represented the areas of shoreline that were experiencing less severe erosion and typically included the "softer" solutions such as recontouring and regrading beach profiles. The existing shoreline of Mission Bay is a combination of hard and soft surfaces, with rip rap protecting the narrower channel openings throughout the bay and sand beaches along the more linear stretches of shoreline. Over time, many of Mission Bay's sand beaches have eroded, leaving small escarpments where the sand joins the grassy uplands. This has been due in part to the lack of any ongoing maintenance programs, but also because the beaches in Mission Bay were initially constructed to be quite steep, with 8:1 slopes where most oceans beaches approximately 15:1 slopes. Also, because of the unusual tidal pattern within the bay, much of the eroded sand has accumulated at the tips, or edges of the various islands and peninsulas in the park, and some has also formed sandbars within the channels. In addition, rock has migrated away from the existing rip rap revetments during winter storm activities.

The stabilization alternatives developed by the City and its consultants included many potential solutions, such as augmenting the sand supply, recontouring the beaches to a gentler slope, importing coarser grain sands, augmenting rip rap and constructing vertical bulkheads, along with a program of dredging for the accretion areas, particularly those that have become navigational hazards. The plan discusses the preferred alternatives for each site which is to retain the current site conditions by keeping soft areas soft and hard

areas hard to the maximum degree possible. However, in some situations, as in the subject proposal, the City believes it may have to install shoreline structures where none now exist because the erosion problem was considered severe enough that the preferred solution identified in the Mission Bay Park Shoreline Stabilization and Restoration Project is no longer adequate. The city does, however, want to maintain barrier-free beaches and minimize construction costs wherever possible.

2. Overall Project Description. The six sites being considered in this application are as follows: Site 3 - Mariner's Point, Site 7, Ventura Cove/Bahia, Site 21 - Northwest Vacation Island, Site 23 - Vacation Island - South Cove, Site 25 - West Ski Island and Site 35 - Paradise Island. It is the City's intention to protect erosion through the rehabilitation of either existing rip rap revetments, or installation of new revetments, recontouring beaches and some dredging/grading activities. In conjunction with the subject proposal, the applicant proposes a mitigation plan for both eelgrass and intertidal habitat which will be mitigated.

There are sandy beaches at Mariner's Point, Ventura Cove/Bahia and Northwest Vacation Island. The City proposes to recontour the beaches at Ventura Cove and Northwest Vacation Island. Findings: The City routinely implements a maintenance program approximately once every three months which includes monitoring sand beach profiles for those project sites which include regrading and recontouring. Typically, a six-inch scarp is the determining factor to initiate maintenance. According to the biological consultant for the project, the City is authorized to do maintenance work four times a year in the sandy beach areas below the +3.0 elevation. Historically, the City used to initiate routine maintenance anytime a scarp developed. However the U.S. Army Corp. of Engineer's became concerned that any maintenance performed more than four times a year may damage intertidal invertebrate fauna. However, this limitation on maintenance will not work in those beach areas that experience high energy, such as Ventura Cove. One option is to install hard structures in these areas. However, the other option is to implement more frequent maintenance. Through the subject permit, the applicant is seeking to implement more frequent maintenance at Ventura Cove or to initiate maintenance anytime the scarp exceeds 18 inches in height.

At Mariner's Point, the plan is to extend an existing 650-lineal foot rip rap revetment by 30 feet along the shoreline with a 50-foot transition point back to the point. At Vacation Island, South Cove, the plan is to rehabilitate an existing rip rap revetment which will not encroach beyond its existing footprint. At West Ski Island the plan is to reconstruct the island with on-site sand and create an armored island with internal beach area. At Paradise Island, the plan is to regrade the island with on-site sand.

In addition, a detailed eelgrass and intertidal habitat mitigation program has been proposed with the subject proposal. A 1.2:1 mitigation ratio is proposed for adverse eelgrass impacts and a 1:1 mitigation ratio is proposed for intertidal habitats. Impacts to eelgrass beds will be mitigated through on-site eelgrass restoration. Impacts to intertidal habitat will be mitigated through a combination of on-site grading and banked habitat credits at the Crown Point Shores Intertidal Mitigation Area. The overall project will

require 1.46 acres of eelgrass and 1.38 acres of intertidal habitat to be restored. Mitigation will be completed on-site at Ventura Cove, West Ski Island and Paradise Island (Sites 7, 25, and 35) for a total creation of 1.88 acres of eelgrass. Any eelgrass restored above the 1.46 acre requirement will be banked to offset future project impacts. However, to ensure that the mitigation credits are permanently withdrawn from the City's mitigation bank not inadvertently used for mitigation credit in the future, Special Condition #7 requires the applicant to provide final documentation that the City has approved the applicant's use of eelgrass credit from the Crown Point Shores Intertidal Mitigation Area. The condition also prohibits the applicant from selling or authorizing other use of this credit in the future. Because each site is unique and sited differently in its orientation to the bay, including the nature and use of its shoreline, each site will be addressed below with its own set of findings.

Site 3 - Mariner's Point

1. Site/Project Description. Proposed is the extension of an existing 650-foot long rip rap revetment by an additional 30 feet (550 tons of rock) along the shoreline with a 50-foot transition back into the point, for a total length of 80 feet. As the revetment bends back into the mainland (the transition point) the sand beach will be graded to the optimum 12 horizontal to 1 vertical slope ratio, burying the toe of the revetment, which will remain at approximately elevation of 0.0 feet Mean Sea Level (MSL). The highest tide line (elevation 4.91 feet MSL) will be restored to approximately the same location as before. Also proposed is placement of 260 cy. of filter fabric and grading consisting of 600 cy. of sand import with 50 cy. of on-site sand as cut and fill. This site consists of a southerly-facing peninsula in the Bay comprised of both armored shoreline and sandy area. The northerly half consists of a wide open sandy area which is used by the public for various activities. The southerly half is an elevated sandy beach which is used as a Least Tern nesting site. It should be noted that the public does not use this area during non-nesting season because the Least tern nesting area is fenced off from public use. However, should the Least terns ever abandon the site in the future, it would return to unrestricted public use. There is a drop off from the upland area and, at low tide, there is a stretch of non-dry sand beyond the barrier fence to the south which protects the Least tern habitat site. A large portion of the tip has been armored with revetment which was completed in Phase I of the shoreline stabilization work under CDP #6-93-165.

In 1997 the U.S. Army Corp of Engineers constructed a rock groin to replace a previous wood barrier that protected Quivira Basin. After the groin was completed, it was noticed that the erosion areas caused by high wave events had moved northerly within Mariner's Basin. As a result, the area up to 100 feet north of the newly completed revetment was undermined by waves, leaving a 8-10 foot vertical scarp. A fence that separates the public from the Least Tern colony was also undermined. Under emergency actions, the Corp placed sand in the hole to keep the fence, revetment and portion of the least tern colony from sliding in to the bay. Although this has temporarily protected the area, the sand continues to erode and currently there is a 5-8 foot scarp.

2. Shoreline Protective Devices/Geologic Hazards. Section 30235 of the Act states the following:

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.

As is noted above, the construction of shoreline protective devices may be permitted to protect public beaches in danger from erosion and hazard conditions, as is proposed throughout this project. As is typically documented, the Commission must consider all possible alternatives, including alternative shoreline protective designs to assure the least environmentally-damaging alternative is chosen. In this particular case, such alternatives have been considered. In addition, while it should be recognized that Mission Bay-- which represents artificial filled tidelands--does not experience the degree of tidal action and wave energy that naturally occurs along the oceanfront areas, the Bay nevertheless does experience a great deal of reflected wave energy. This is readily apparent throughout the various sites where numerous escarpments and sloughing has occurred throughout the public parkland areas abutting the bay shoreline. (This finding shall be incorporated by reference for all subsequent sites in this staff report).

As noted in the project description, erosion at this location has occurred due to high wave events. Although the majority of the point is armored, the area of beach used as a Least Tern Colony is in danger as the fence and existing rip rap has been undermined. This site is unique and distinct in that the beach functions as an environmentally-sensitive habitat area because it is used for nesting and habitat by an endangered species – the California Least tern. The proposed rip rap revetment is intended to protect the least tern area only and not other public beach area located on the point. The rip rap revetment will be convex in shape rather than concave in shape which would follow the contour of the escarpment and upper sandy parkland inland of the point in order to more appropriately reflect wave energy. As noted by the City's representative, if the rip rap had been designed to "hug the toe of the slope" in a concave shape, it would have focused energy back into a single point whereas a convex wall reflects it in a broader array (reference Exhibit No. 2).

It should also be noted that a low intertidal beach area will be left between the rock and Mariner's Basin at the transition area of the revetment. Therefore, in this case, the Commission finds that the proposed rip rap revetment is required to protect an existing beach from erosion and is therefore consistent with Coastal Act Section 30235.

3. Public Access. Many policies of the Coastal Act address the provision, protection and enhancement of public access to and along the shoreline, particularly

Sections 30210, 30211, 30212.5, 30221, 30223 and 30252. These policies address maintaining the public's ability to reach and enjoy the water, preventing overcrowding by providing adequate area, protecting suitable upland recreational sites, and providing adequate parking facilities for public use. The sites consist of public land within Mission Bay Park, and are located between the first public road and the sea. As noted previously, the southern half of the point is inaccessible to the public as it is a Least Tern nesting site. The fence is to prevent public intrusion and to protect the established nesting colony for the past 14 years. The northern half of the point is used extensively for public recreation such as volleyball and over-the-line tournaments, and similar sporting events. It is also used for fishing, sunbathing and picnicking. There is also shoreline access to the bay along the western bank.

The proposed rip rap will protect a sensitive habitat area and will not change the delineation of parkland that is presently available for public use. As such, no adverse impacts on the current use pattern of the area will occur.

With respect to construction impacts, Special Condition #s 3 and 4 require the City construct the project outside the summer beach season, and to minimize the public areas needed for staging areas and access corridors. Therefore, as conditioned, the proposed work at this site can be found consistent with the public access and recreation policies of the Coastal Act. Furthermore, as required in Section 30604(c) for developments between the first public road and the sea, the project is found consistent with all other public access and recreation policies of the Act.

4. Environmentally Sensitive Habitat Area. Sections 30230, 30231, and 30240 of the Coastal Act address developments in or adjacent to sensitive resource areas. They require that such developments preserve such areas and be consistent with their continued health and productivity. As noted previously, a portion of the subject site consists of a habitat and nesting colony for the environmentally sensitive habitat, namely, the endangered Least tern species. The proposed extension of the existing revetment will provide a long-term erosion protection for the Least tern nesting area.

In response to concerns from environmental and resource agencies regarding the Project Plan's original proposal to extend the rip rap further out onto the beach than is presently proposed, the City reduced the overall length of the rip rap which resulted in less encroachment onto the sandy beach and created more area for foraging for the sensitive bird species in the area. Special Condition No. 3 has been attached to assure that development at this site does not occur during the nesting season of the sensitive Least tern species, namely, April - September 15. Therefore, in this case since the shoreline protection is proposed to protect the California least tern nesting site and will not adversely affect local shoreline sand supply, as conditioned, the work at this site can be found consistent with Sections 30230, 30231, 30235 and 30240 of the Act. Therefore, since the new rock rip rap proposed at this location is to protect an environmentally sensitive habitat area, it can be found consistent with Sections 30230, 30231, and 30240 of the Coastal Act. Furthermore, through Special Condition No. 3, it

will be assured that the work at this site does not occur during the Last tern-nesting season.

5. Visual Resources. While the installation of rip rap this location is new shoreline protection where none now exists, the proposed armoring of the south facing bank of this peninsula will match the composition and size of the existing rip rap which exist at the west tip of this point as well as the banks of Mission Point to the south. The rip rap will be visible from the Bay by boat and from Mariner's Point itself from the portion of the point that is open to the public. However, the rip rap can be found compatible with the existing rip rap to the south and surrounding areas where it is located throughout the Bay, as such, can be found to be visually compatible with the character of the area, consistent with Section 30251.

Site 7 - Ventura Cove/Bahia

1. Project Description. This part of Ventura Cove proposed to be stabilized is the easterly facing bank of the cove just opposite of Vacation Isle to the east across the Bay. Proposed at this location is to regrade the beach slope with 1,900 cy. of excavation and 1,400 cy. of export creating an embankment with 500 cy. of material. Also proposed are repairs to existing drainage at this site including removal of a 12-inch silt-filled PVC pipe and replacement with an 18-inch RCP. With regular maintenance, this drainage system will improve water quality while keeping the pipe clear of silt. It should be noted that this site includes a revised proposal which incorporates a much "softer" stabilization measure than what was originally proposed (concrete bulkhead wall). However, due to substantial public opposition to the installation of a bulkhead wall at this site, the City revised their proposal to eliminate this aspect of the shoreline stabilization at this time and to regrade the beach and repair the drainage pipe only.

The original plan for stabilizing this area was to install 1,750 lineal feet of bulkhead wall and a stepped beach. Through Phase II of the stabilization improvements, the beach was re-built without any wall. The steeper beach varied from 8:1 to 10:1 slope with routine maintenance to address further erosion. However, maintenance has not proven effective enough at controlling the erosion in this area. There is presently a 5-foot high nearly vertical scarp that begins at an existing concrete drain and extends 210 feet along the Bahia side of the cove (northerly direction). With installation of 165 feet of 18-inch RCP, a modified type B inlet, export of 1,400 cy. of sand and regrading the beach with approximately 500 cy. of on-site and material, as cut and fill, it is hoped that the site will become stable enough to halt the on-going erosion at this location. It should be noted that the project engineer consultant does not believe that correction of the derainage problem will be sufficient to stem the erosion problem; however, since so much public opposition resulted from the proposal for the bulkhead wall, the City opted to make minor improvements only at this time. The public believed that correction of the drainage would solve the erosion problem. If after the drainage improvements are installed this area continues to experience erosion, other alternatives may be considered in the future under a separate permit.

In addition, no new visual impacts will occur as a result of the proposed work other than those that might occur during construction associated with recontouring the beach but these will be temporary in nature.

2. Public Access/Recreational Use. As noted above, the subject site is primarily used for picnicking and sunbathing. The water adjacent to the area that is proposed to be stabilized through regrading is accessible to the public and the subject proposal will not affect the public's pattern of use in this area nor interfere with existing public access opportunities. The areas of open sandy beach devoid of rip rap will continue to be available for public access to the water. The subject proposal at this time to preserve the eroding beach through recontouring of the shoreline and recapturing of sand that has accreted off shore will not create any adverse impacts on the current public use patterns of the area. With respect to construction impacts, Special Condition Nos. 3 and 4 require the City to construct the project outside the summer beach season, and to minimize the public areas needed for staging areas and access corridors. Therefore, the Commission finds the proposal can be found consistent with all applicable public access and recreation policies of the Coastal Act. Furthermore, as required in Section 30604(c) for development between the first public road and the sea, the project is found consistent with all other public access and recreation policies of the Act.

3. Biological Resources/Eelgrass. As noted in the previous finding for Site 3 (Mariner's Point), the Coastal Act contains several sections addressing developments in or adjacent to sensitive resource areas. They require that such developments preserve such areas and be consistent with their continued health and productivity. Eel grass is recognized as a valuable marine resource and key food source for certain shorebirds, as are the benthic invertebrates which inhabit intertidal areas. The project will be constructed so that the highest tide line (elevation 4.91 MSL) remains in the same approximate location. The lowest tide line will move towards the shore, close to the location prior to the erosion of the beach sand. An area of 0.17 acres will be converted from intertidal to sub-tidal habitat and approximately 0.05 acres of eelgrass habitat will be added to the Crown Princess Mitigation Bank area in Ventura Cove. In addition, 0.13 acres of eelgrass habitat will be impacted and 0.23 acres of eelgrass habitat will be created at the site location after project implementation for a net increase in eelgrass of 0.10 acres. The eelgrass beds at this location grow very close to the shoreline and after the beach is regraded the eelgrass beds will grow back.

Special Condition #5 consists of the usual eelgrass mitigation requirements made by the Coastal Commission where eelgrass impacts are known or are considered likely to occur. With implementation of the detailed eelgrass mitigation and monitoring program, the proposal at this site can be found consistent with Sections 30230, 30231 and 30240 of the Coastal Act.

1. Project Description. This project site is located at the northern part of Vacation Isle adjacent to Fisherman's Channel. It is a grassy area with picnic tables and a large covered shelter with additional picnic tables adjacent to a narrow sandy beach. Proposed is to regrade the beach through export of 770 cy. of sand and move approximately 80 cy. of sand and material as cut and fill. In so doing, the project will keep the stable beach slope and extend it up into the grass area. The grass mound in front of the picnic table will be lowered to match the lower slope. Excess sand and sprinkler extensions will be removed.

This site was previously graded in the Phase II project but routine maintenance has not been adequate to stop the on-going erosion. As a result, there is an approximately 12:1 slope beach with a 3-5 foot near vertical slope at the grass line. This condition has created an unsafe situation at the edge of the grass. The slope was caused by wind-blown sand loosened by pedestrian traffic. The grass has grown through this extra sand as more and more sand is blown on. Over time, the grassy area near the sand has built up over eight inches in height, which has caused drainage problems for the picnic table slabs. The City has also had to keep the sprinkler above the rising grass by adding extensions to the individual sprinkler heads.

As noted in the Project Plan, the preferred solution for shoreline protection at this location was a 225-linear foot bulkhead wall and a stepped beach. Through the Phase II shoreline stabilization project, the bulkhead was eliminated and the softer approach was implemented which included regrading the beach with a slope that varied from 8:1 to 10:1. It was hoped then that the routine maintenance would take care of any further erosion that might occur. However, such was not the case. Through the proposed regrading and recontouring of the beach, existing parklands will be protected for continued public use. In addition, no new visual impacts will occur as a result of the proposed work other than those that might occur during construction associated with recontouring the beach, however, but these will be temporary in nature.

2. Biological Resources/Eelgrass. This site is currently a sand spit from a littoral drift that is forming in Fisherman's Channel, just to the west of the point. The spit is not yet a navigation hazard but it will continue to grow and will need to be removed in the future. Designation of these areas as a reclamation site will define the limits of future implants. Within this spit area, 0.14 acres of eelgrass presently exists. This will be mitigated as part of the project and will serve as a one-time mitigation for impacts associated with sand reclamation from this site. The highest tide line (elevation 4.91 feet MSL) will move towards the grass area onshore approximately 16 feet and will increase the intertidal zone by 0.21 acres. The site will export 770 cy. of sand and will move approximately 80 cy. of on-site sand and material as cut and fill. With implementation of the detailed eelgrass mitigation and monitoring program, the proposal at this site can be found consistent with Sections 3020, 30231 and 30240 of the Coastal Act.

3. Public Access. As noted above, the subject site is primarily used for picnicking and sunbathing. The water adjacent to the area that is proposed to be stabilized through regrading is accessible to the public and the subject proposal will not affect the public's

pattern of use in this area nor interfere with existing public access opportunities. The areas of open sandy beach devoid of rip rap will continue to be available for public access to the water. In addition, with respect to construction access and staging, the contractor's access will be through the parking lot and the northwest corner of the parking lot may be used as a staging area for the contractor. However, Special Conditions 3 and 4 require the City to construct the project outside the summer beach season, and to minimize the public areas needed for staging areas and access corridors. Therefore, the Commission finds the proposal can be found consistent with all applicable public access and recreation policies of the Coastal Act. Furthermore, as required in Section 30604(c) for development between the first public road and the sea, the project is found consistent with all other public access and recreation policies of the Act.

Site 23 - Vacation Island - South Cove

1. Project Description. Proposed at this site is to rehabilitate an existing 750-lineal foot section of an existing rip rap revetment between the Ingraham Street Bridge and midpoint of the south facing cove. This project site is on the south side of Vacation Isle west of the Ingraham Street to the Bay Channel. Vacation Isle is open to the public and is comprised, in part, of a large resort (Paradise Point Resort) with individual detached suites, tennis courts, swimming pools, and other amenities associated with the resort. The project site is south of a picnic area and public sidewalk, which follows the bay shoreline.

2. Shoreline Protective Devices /Geologic Hazards. The existing rip rap revetment at this location has deteriorated significantly. The existing revetment was constructed without filter fabric which has allowed the waves to wash the sand from behind the revetment, causing it to fail. As a result, a low tide beach has been created in the center of the cove. The City proposes to rehabilitate the revetment which presently has an existing 4:1 slope within the existing building footprint. Beginning at elevation +2.00 MSL, the existing rock will be removed and a filter fabric-backed revetment at a 2:1 slope will extend from elevation +2.-00 MSL to +9.00 MSL. The highest tide line (elevation 4.91 MSL) will not change horizontally from the existing to the rehabilitated revetment. The proposed work will require 300 cy. of sand import and will export approximately 3,000 cy. of on-site rock and sand. A total of 2,830 sq.ft. of filter fabric and 5,200 tons of rock will be used to rehabilitate the existing revetment. No impacts to eelgrass will result from the proposed work. As the proposed rip rap will be in the same alignment as the existing rip rap and will not involve any bayward encroachment, it can be found consistent with Section 30235 of the Act.

3. Public Access. South Cove is accessible to the public from Ingraham Street. Presently, there are signs at the entrance to the Paradise Point Resort that identify South Cove and indicate that it is open to the public. The area consists of a walkway, grassy picnic area with a few tables and a public parking lot. There is also a very large model yacht pond on the island which is open to the public. Because the erosion at this site has been so severe, the existing rip rap has failed and slid down the steep slope into the bay.

Historically there has not been usable sandy beach in this area. However, due to the souging of the revetment that has occurred, a small sandy pocket beach has formed. This is not a beach that is typically used by the public and it has only occurred as a result of the failure of the existing rip rap. In addition, it should be noted that although the new inclination of the rehabilitated rip rap will be steeper than the existing revetment, it is still a difficult revetment to climb onto and navigate. The new rip rap will not result in any change to the pattern of use by the public (i.e., those who may use it to climb onto for fishing, etc.). In fact, the City has indicated that this shoreline area does not get much public use although it contains the best water quality in the Mission Bay area. Therefore, since the pattern of use at this location will remain unchanged as a result of the work proposed, the proposed rip rap rehabilitation can be found consistent with all of the public access and recreation policies of the Coastal Act.

4. Visual Resources. The area is not highly visible to the public as other areas throughout Mission Bay. Nonetheless it is visible by those using the area and/or Vacation Isle. However, as the proposed rip rap replenishment will be in the same location as the existing rip rap, it should pose no additional nor adverse visual impacts. Therefore, the work at this site can be found consistent with Section 30251.

Site 25 - West Ski Island

1. Project Description. Proposed is to create an armored island with an internal beach to protect the island from continuing to erode. In order to accomplish this, the island will be graded in size to that which existed in approximately 1995. The island will be reshaped and will include grading consisting of approximately 13,900 cy. of existing on-site sand in a balanced condition. The proposed armoring will comprise approximately 5,600 square yards of filter fabric and 50,000 square feet of Armorflex. (reference Exhibit 9). West Ski Island is located just east of the Crown Point Shores beach area.

2. Shoreline Protective Devices/Geologic Hazards. The reason that shoreline protection is needed at this location is that the island will continue to erode if nothing is done to protect it. As noted by the City, one of the alternatives is to do nothing; however, the City believes if nothing is done, the bay will lose a landmark and valuable recreation site. The City has indicated that without some type of measure to correct the erosion, the island will become like East Ski Island which was a navigational hazard which had to be removed through dredging in Phase I of the shoreline stabilization project. In addition to the loss in terms of a landmark and recreation, there would also be a loss of intertidal and mudflat habitat if the island were allowed to completely disappear. In 1990, other alternatives were considered in the original project plan which called for the grading of a 50-foot wide coarse-grained beach or the placement of a bulkhead wall with a beach below. However, since that time, the island has eroded away from over 4 acres in size to less than 1 1/2 acres in size above the mean high water line at an elevation of 2.73 MSL. If no shoreline stabilization is implemented for this site, the island will become an over-wash shoal by the year 2005 (reference Exhibit 8).

In consideration of the no project alternative, the City received letters from the public concerning the loss of the island in terms of recreational use and as a landmark, as noted previously. The alternative of a bulkhead wall was not selected because it represented a much "harder" solution. In addition, the coarse-grain sand alternative was rejected because the Fish and Wildlife Service, among other resource and/or environmental groups in comments on use of coarse-grain sand in other areas of Mission Bay Par, did not condone the use of coarse grain sand due to its adverse effect on foraging for bird species that use the shoreline of Mission Bay. A study on the use of coarse grain sand completed by Group Delta Consultants, Inc., Pacific Southwest Biological Services and Ogden Environmental and Energy Services supports this finding.

In addition, the applicant's biological consultant has also indicated that other alternatives such as geo tubes, etc. only last about seven years and begin to decay and break apart. This method of shoreline stabilization would not have been effective at this location. For all of these reasons, the City chose to instead reconstruct the island and to install armorflex around the perimeter. The choice to use armorflex was based on its composition in that it is manufactured in sheets and would be easy to haul and place from a barge. In addition, although the armorflex is composed of concrete blocks, is somewhat more flat than either a bulkhead wall or rip rap revetment with less sharp edges and points. As noted in the project application, the collision of an errant skier or boat would be less disastrous with a smoother armoring system than with a rip-rap type revetment.

According to the City's biological consultant, the proposed armorflex will have no effect on the tides. The island is very small compared to the overall size of the bay and the tidal concerns in this are very minor. However, it was acknowledged that any hard structure will reflect wave energy more than a soft structure. However, most of the waves in the area are short period wind waves or boat waves as opposed to long period waves or long swells.

In addition, there is now an increase in the use of wake boards -- a sport which did not yet exist in 1990 when the original Project Plan was developed. This portion of the bay is used the most by wake-boarders. The sport entails weighing the boat down with materials so as to create large wakes. This has resulted in accelerated erosion of this island that was not anticipated to occur back in 1990 and a change to the magnitude of the waves.

By creating an armored island with internal beach, the armor will protect it from further erosion and the internal beach will allow for continued recreational use, as well as maintain intertidal habitat. Through reconstruction of the island, the beach will be made more shallow and flatter and the top of the island a little bit narrower. If sand were to be installed on top of the island (fine grain sand) it would easily blow off as it would be subject to wind activity. The City proposes to vegetate the island with salt grass to hold the sand in place. After the work is completed, the island would resemble a horseshoe shaped island with access to the sandy beach in the middle and armoring around the perimeter of the island.

Commission staff has asked the City to consider other alternatives that will not result in armoring the island with a hard structure. However, the City has indicated that this is the best method of shoreline protection, otherwise the island will disappear altogether and would ultimately have to be dredged and removed. However, alternatives which may require more frequent maintenance but have less environmental impacts have not been fully explored by the City. The project should be the least environmentally-damaging alternative and balance the impacts to public recreation, eelgrass habitat, bird foraging and visual quality. Commission staff is therefore recommending that this aspect of the proposal not be authorized at this time. The City should thoroughly analyze other alternatives including, but not limited to, regrading the island with use of fine grain sand and more frequent maintenance to protect the island from further erosion. The installation of a hard shoreline protective device such as armorflex reduces the amount of shoreline of the island accessible by boats and has the potential to create accelerated erosion in other parts of the bay due to the anticipated increased wave reflection. It represents a structure in the middle of the bay, where an island that responds more naturally to the wave environment currently exists. Therefore, the subject proposal cannot be found consistent with Section 30235 of the Act without more thorough analysis of alternatives.

3. Eelgrass/Intertidal Impacts. The City proposes to reconfigure the highest tide line (elevation 4.91 MSL) to encompass 0.96 acres, which is a net increase of 0.63 acres. There will be net loss of intertidal habitat of 1.25 acres. Approximately 0.02 acres of eelgrass habitat will be removed by grading and armorflex placement. An area of 0.62 acres of eelgrass habitat will be created. This area will serve as a major mitigation area for eelgrass impacts elsewhere in Phase III.

4. Public Access/Recreational Use. Although the island has greatly diminished in size, presently it can be accessed from all sides via boat as it is devoid of any shoreline protection. Commission staff remains concerned that by armoring it in a horse-shoe shape fashion with an internal beach in the middle, access to the island will be greatly minimized. Also, there remains concerns with regard to skiers and recreational boaters who may accidentally run into the armored island. Such a collision would be much more severe than with the presently unprotected island. Therefore, the Commission finds that the proposed reconstruction of the island cannot be found consistent with the public access and recreation policies of the Coastal Act. For this reason, this aspect of the proposal is not hereby authorized, pursuant to Special Condition #1.

Site 35 - Paradise Island

1. Project Description. Proposed is reshaping and regrading of the island by movement of approximately 1,600 cy. of on-site sand as cut and fill. The proposed work at this site will include the exportation of approximately 2,000 cy. of sand. The island was previously graded in Phase II of this project. However, the maintenance department has not been able to get to the site as often as originally planned and the sand spits have formed again around the island. In keeping with the Project Plan, the City will remove

the spit and deepen the channels on either side. The deeper channels will slow the flow of sand to the island and will improve lagoon water quality. Presently, the one channel to the lagoon is cut off at the lower low tides and the water stagnates. Deeper side channels will improve the flushing and over time, the water quality is expected to improve.

3. Biological Resources/Eelgrass. As noted above, the proposed solution to regrade this island is consistent with the alternatives originally selected in the Project Plan. The highest tide (elevation 4.91 MSL) will move into the bay approximately 14 feet and will move 0.05 acres from intertidal to above elevation 4.91 MSL. By removing the sand and deepening the channels, 0.39 acre of intertidal habitat will be converted to subtidal habitat. An area of 0.85 acre of low density eelgrass can improve in the entire lagoon. In addition, the bottom of the deeper channel will be at an elevation in which eelgrass can grow and/or be replanted. Therefore, since the eelgrass will grow back in the deeper channels after project implementation, the proposal can be found consistent with all of the resource policies of the Coastal Act.

4. Public Access. Public use of this island is similar to that of West Ski Island. It is presently an un-armored island which can be accessed on all sides by swimmers or recreational boaters. The proposed regrading of this island will not have any effect on the level of public recreational use associated with this island. With regard to construction impacts, the island can be accessed from the east side at low tide. The contractor may use the parking lot to the east and west of the land for staging and storage of equipment. However, Special Conditions 3 and 4 require the City to construct the project outside the summer beach season, and to minimize the public areas needed for staging areas and access corridors. As such, the project can be found consistent with the public access and recreation policies of the Coastal Act.

7. Consistency with the California Environmental Quality Act (CEQA). Section 13096 of the Commission's Code of Regulations requires Commission approval of Coastal Development Permits to be supported by a finding showing the permit, as conditioned, 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 has been conditioned in order to be found consistent with the public access and shoreline hazard policies of the Coastal Act. Mitigation measures, including conditions addressing maintenance program, timing of construction, access and staging area, mitigation programs for eelgrass and intertidal impacts including monitoring programs for the mitigation will minimize all adverse environmental impacts. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment. Therefore, the Commission finds that the proposed project is

the least environmentally-damaging feasible alternative and can be found consistent with the requirements of the Coastal Act to conform to CEQA.

8. Local Coastal Planning. Section 30604(a) also requires that a coastal development permit shall be issued only if the Commission finds that the permitted development will not prejudice the ability of the local government to prepare a Local Coastal Program (LCP) in conformity with the provisions of Chapter 3 of the Coastal Act. Such a finding can be made for the proposed project, with the exception of Site 5 for West Ski Island, as conditioned. All of the sites are currently designated as Park and Shoreline in the Mission Bay Park Master Plan; as existing, and with project implementation, the sites are fully consistent with that designation. An EIR for the overall stabilization program was prepared and certified by the City of San Diego; it included the preferred alternatives for the subject sites. No local discretionary permits are required for the proposed development, but an Army Corps of Engineers permit has been applied for at this time. Special Condition #8 requires that a copy of that permit, and any other required state or federal permits, be submitted for the file.

The Mission Bay Park Master Plan was developed originally in 1979, and, although it was submitted to Commission staff for official review in 1981, it was withdrawn prior to its scheduled hearing and has never been acted on by the Commission. The proposed project, which will serve to enhance continued public use of the existing sand beaches at several sites, is consistent with both the original and draft Mission Bay master Plans, with respect to land use.

Although the City of San Diego has a fully certified Local Coastal Program, Mission Bay Park is an area of deferred certification, wherein the Commission retains coastal development permit authority. Moreover, because the majority of Mission Bay Park was created on filled tidelands, it is unlikely that permit jurisdiction for most of the area within the Master Plan boundaries will ever belong to the City. For that reason, Chapter 3 of the Coastal Act will remain the standard of review for projects within the park. As demonstrated in the preceding findings, the proposed development--with the exception of the West Ski Island site--with the attached special conditions, has been found consistent with all applicable policies of Chapter 3. Therefore, the Commission finds that approval of the development, as conditioned, will not prejudice the ability of the City of San Diego to complete its planning process for Mission Bay Park in a manner consistent with the Coastal Act.

STANDARD CONDITIONS:

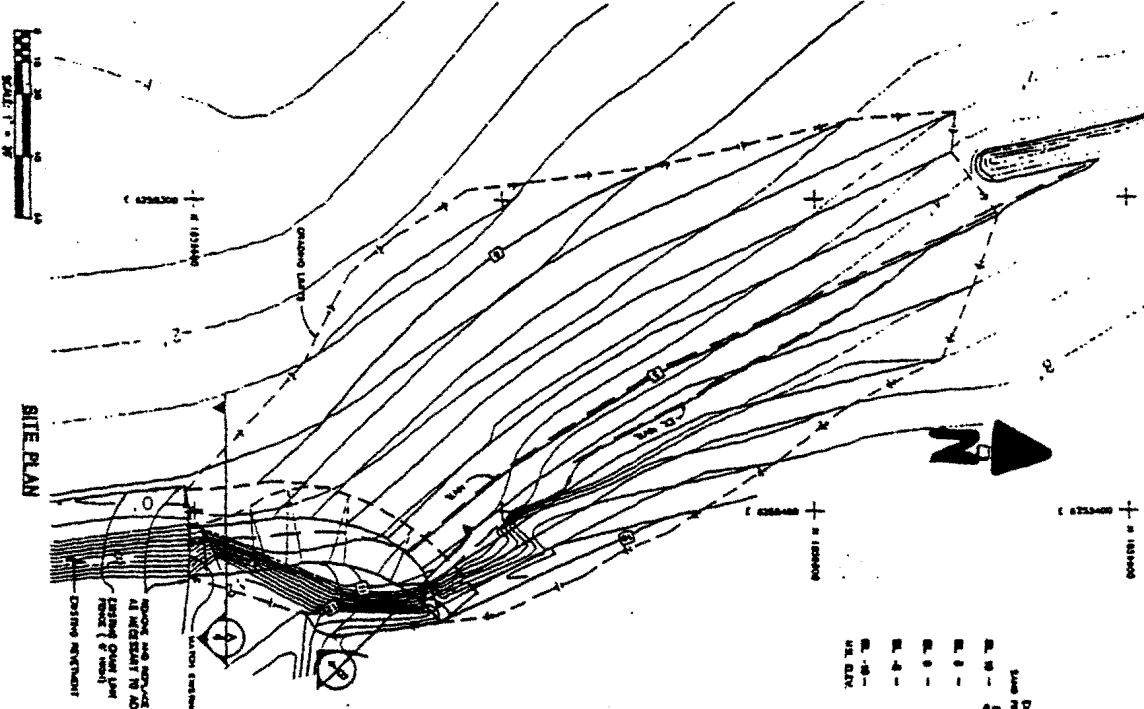
1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. 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. Compliance. All development must occur in strict compliance with the proposal as set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the development during construction, subject to 24-hour advance notice.
6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
7. Terms and Conditions Run with the Land. 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.



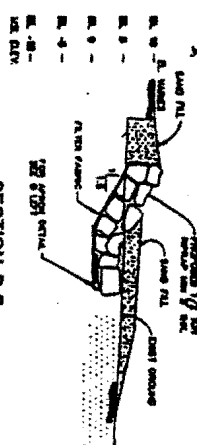
EXHIBIT NO. 1
APPLICATION NO.
6-98-121
Site Locations



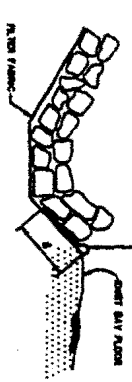
SCALE: 1" = 40'

SITE PLAN

REMOVE AND RE-PAVE EXISTING APRON AS NECESSARY TO ACCOMMODATE NEW EXISTING APRON

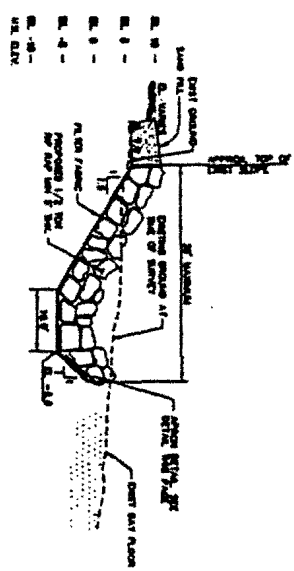


APRON DETAIL



THIS APRON IS TO BE CONSTRUCTED AS A ROCK APRON APPROXIMATELY 1/2' TO 1' THICK WITH A MINIMUM COVER UNDER AT THE END OF THE APRON TO PROVIDE A SMOOTH SURFACE TO BE GRADUALLY TRANSITIONED TO A SLOPING SURFACE TO BE BUILT UPON TO PROVIDE THE EXISTING APRON TO BE REMOVED.

SECTION A-A
ELEVATION 157'

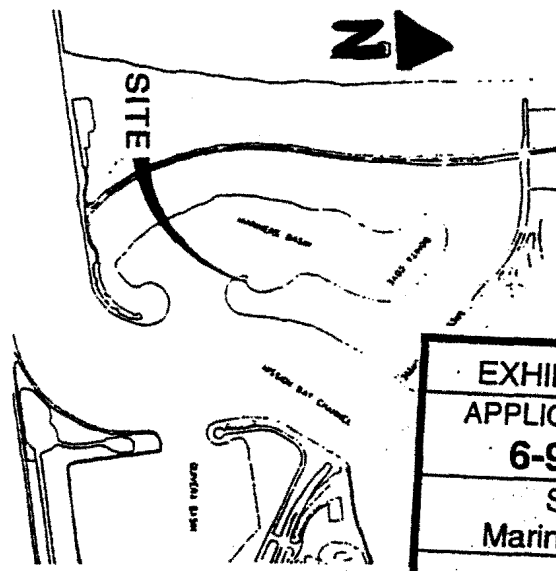


ROCK RETENTION GENERAL NOTES

1. ALL ROCKS TO BE USED SHALL BE OF A TYPE AND GRADE AS APPROVED BY THE ENGINEER. THE ROCKS SHALL BE QUANTITIES AS SHOWN ON THE DRAWINGS. THE ROCKS SHALL BE PLACED IN A MANNER AS TO PROVIDE A SMOOTH SURFACE TO BE BUILT UPON TO PROVIDE THE EXISTING APRON TO BE REMOVED.

SEA GRADE MEASUREMENTS

1. ALL MEASUREMENTS SHALL BE TAKEN FROM THE MEAN SEA LEVEL AS SHOWN ON THE DRAWINGS.



LOCATION MAP

EXHIBIT NO. 2
APPLICATION NO.
6-98-121
Site 3
Mariners Point

California Coastal Commission

POUNTER ASSOCIATES
 ARCHITECTS AND ENGINEERS
 1000 AVENUE OF THE STARS
 SUITE 1000
 BERKELEY, CALIFORNIA 94704
 TEL: (415) 841-1111
 FAX: (415) 841-1112

NO.	DATE	DESCRIPTION
1	11-11-87	PRELIMINARY DESIGN
2	1-15-88	FINAL DESIGN
3	3-15-88	CONSTRUCTION
4	5-15-88	COMPLETION

REFERENCES:

1. CALIFORNIA COASTAL COMMISSION, 1972, "CALIFORNIA COASTAL ZONING ACT"

QUANTITIES

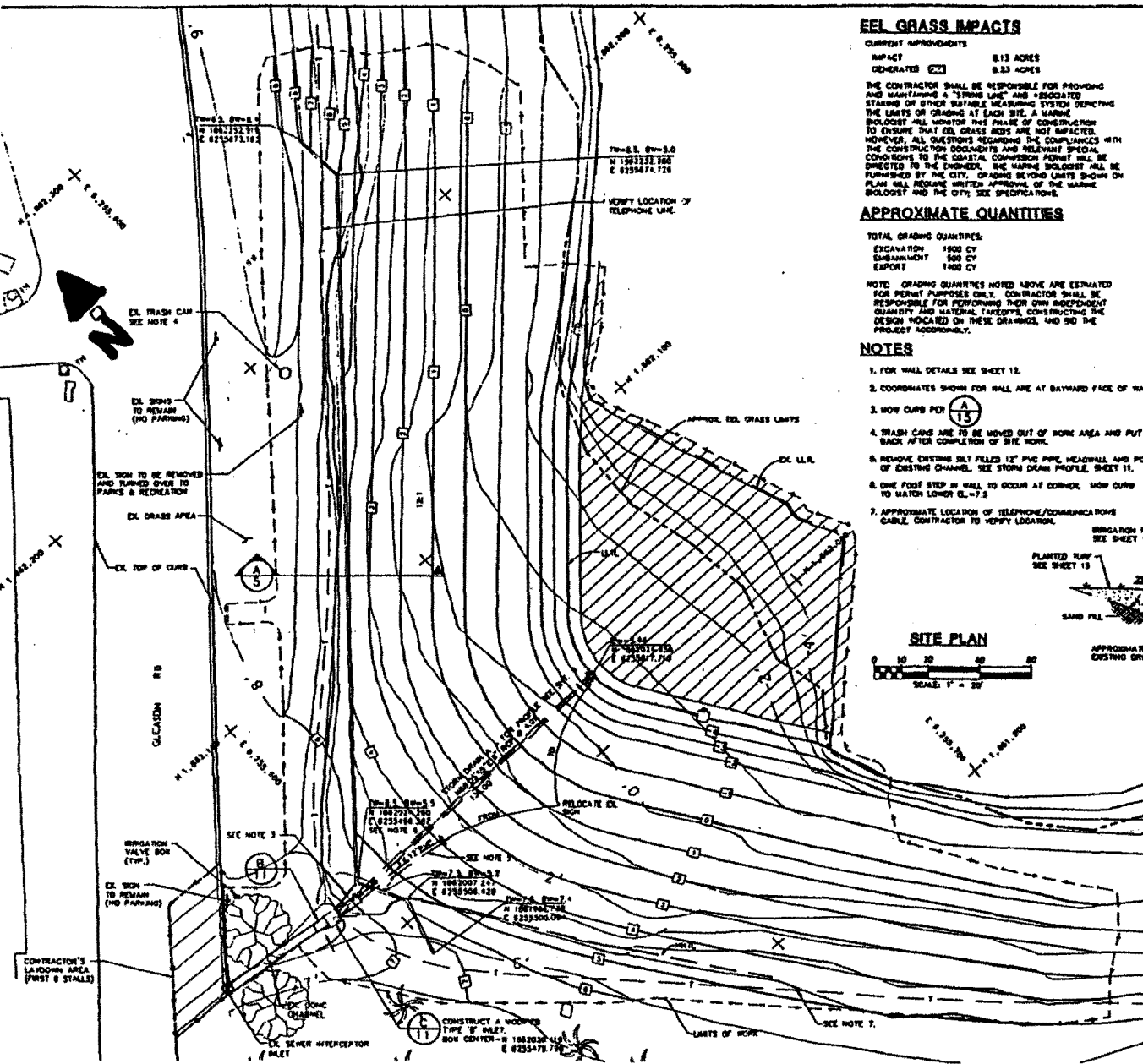
ROCK: 100,000 CY
 SAND FILL: 50,000 CY
 CONCRETE: 10,000 CY

BENCHMARK:

1. 100 FT. BENCH MARK AT CORNER OF LOT 100-1

CITY CONTRACT:

1. CITY OF BERKELEY, 1988, "CITY ENGINEERING DEPARTMENT"



EEL GRASS IMPACTS

CURRENT APPROXIMATE
 IMPACT 0.13 ACRES
 GENERATED 0.53 ACRES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING A "STRING LINE" AND ASSOCIATED STAKING OR OTHER SUITABLE MEASURING SYSTEM DEFINING THE LIMITS OF GRADING AT EACH SITE. A MARINE BIOLOGIST WILL MONITOR THIS PHASE OF CONSTRUCTION TO INSURE THAT EEL GRASS BEDS ARE NOT IMPACTED. HOWEVER, ALL QUESTIONS REGARDING THE COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS AND RELEVANT SPECIAL CONDITIONS TO THE COASTAL COMMISSION PERMIT WILL BE DIRECTED TO THE ENGINEER. THE MARINE BIOLOGIST WILL BE FURNISHED BY THE CITY. GRADING BEYOND LIMITS SHOWN ON PLAN WILL REQUIRE WRITTEN APPROVAL OF THE MARINE BIOLOGIST AND THE CITY. SEE SPECIFICATIONS.

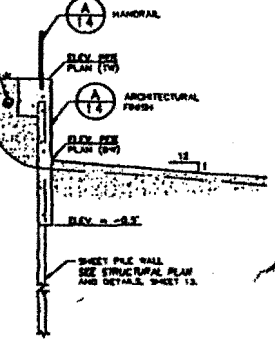
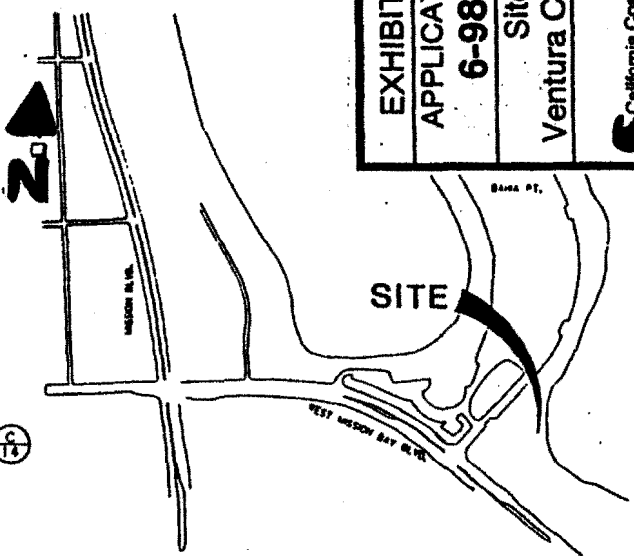
APPROXIMATE QUANTITIES

TOTAL GRADING QUANTITIES:
 EXCAVATION 1900 CY
 EMBANKMENT 500 CY
 EXPORT 1400 CY

NOTE: GRADING QUANTITIES NOTED ABOVE ARE ESTIMATED FOR PERMIT PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THEIR OWN INDEPENDENT QUANTITY AND MATERIAL TAKEOFF'S, CONSTRUCTING THE DESIGN INDICATED IN THESE DRAWINGS, AND SO THE PROJECT ACCORDINGLY.

NOTES

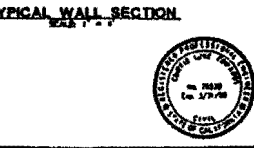
1. FOR WALL DETAILS SEE SHEET 12.
2. COORDINATES SHOWN FOR WALL ARE AT BAYWARD FACE OF WALL PER (C) 14
3. MOW CURB PER (A) 13
4. TRASH CANS ARE TO BE MOVED OUT OF WORK AREA AND PUT BACK AFTER COMPLETION OF SITE WORK.
5. REMOVE EXISTING 12" PVC PIPE HEADWALL AND PORTION OF EXISTING CHANNEL. SEE STORM DRAIN PROFILE, SHEET 11.
6. ONE FOOT STEP IN WALL TO OCCUR AT CORNER. MOW CURB TO MATCH LOWER E.L.=7.3
7. APPROXIMATE LOCATION OF TELEPHONE/COMMUNICATIONS CABLE. CONTRACTOR TO VERIFY LOCATION.



REFERENCES:
 CITY OF SAN DIEGO FIELD SURVEY NOTES
 AERIAL BY WEST-NORTH, 90°15'12", 4-0-9, 28'-6" E

BASIS OF BEARINGS/COORDINATE:
 PT. 1510 FT., 90° PER WEST-NORTH, 90°15'12"
 45° 20' 20" 0" E MAG 83 161.55 FEET

BENCHMARK:
 PT. 1510 PER WEST-NORTH AERIAL SURVEY
 E.L. 16.05 MSL HEIGHT FEET

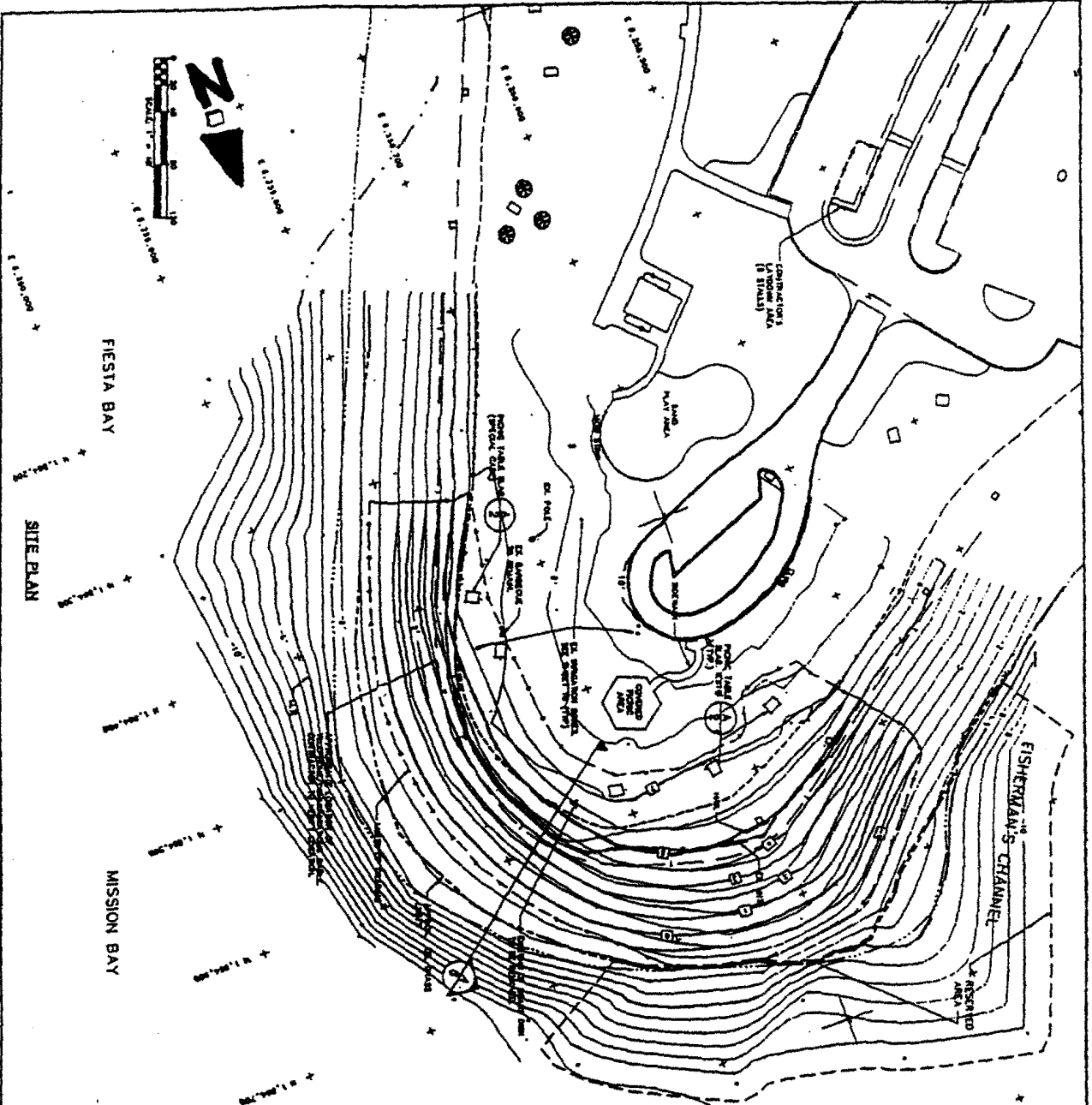


COUNTRY ASSOCIATES
 CONSULTING ENGINEERS
 6000 ELIZABETH STREET, SUITE 200
 SAN DIEGO, CALIFORNIA 92121
 © 1998 COUNTRY ASSOCIATES, INC.

SPECIAL SPECIFICATION NO. CITY CONTRACT
PLANS FOR THE IMPROVEMENT OF
SITE 7 - VENTURA COVE / BAHIA
Mission Bay Shoreline Protection - Phase 2
 CITY OF SAN DIEGO, CALIFORNIA
 Contract # 218372

REVISION	DATE	BY	CHKD
ORIGINAL			

1836-6233
 218-1522
 29548-5-D



EEL GRASS SPECIES

CONTRACT QUANTITIES 03 42813
 CONCEPT QUANTITIES 118 42813

BE CONTRACTED WITH IN RESPONSE TO THE REQUESTED QUANTITIES OF EEL GRASS TO BE INSTALLED IN THE AREA OF THE CONTRACT. THE QUANTITIES OF EEL GRASS TO BE INSTALLED SHALL BE DETERMINED BY THE CONTRACTOR IN CONSULTATION WITH THE CONTRACTING ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACQUISITION AND INSTALLATION OF EEL GRASS. THE QUANTITIES OF EEL GRASS TO BE INSTALLED SHALL BE DETERMINED BY THE CONTRACTOR IN CONSULTATION WITH THE CONTRACTING ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACQUISITION AND INSTALLATION OF EEL GRASS.

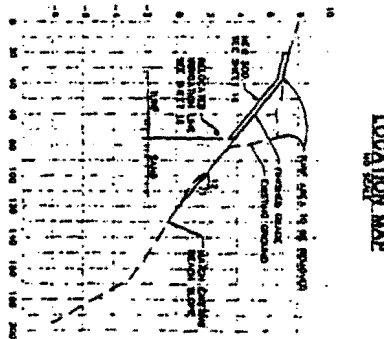
APPROXIMATE QUANTITIES

TOTAL GRAZING QUANTITIES
 CONCEPT QUANTITIES 770 01
 CONTRACT QUANTITIES 770 01

Note: Approximate quantities shown above are estimated for informational purposes only. Final quantities will be determined by the contractor in consultation with the contracting engineer. The contractor shall be responsible for the acquisition and installation of the quantities shown above.

EXHIBIT NO. 4
APPLICATION NO.
6-98-121
Site 21
Vacation Island
Ski Beach

LOCATION MAP



SECTION A-A

REFERENCES:
 CITY OF SAN DIEGO PUBLIC WORKS DEPARTMENT
 1120 N. GUY WALKER BLVD. SAN DIEGO, CALIF. 92101

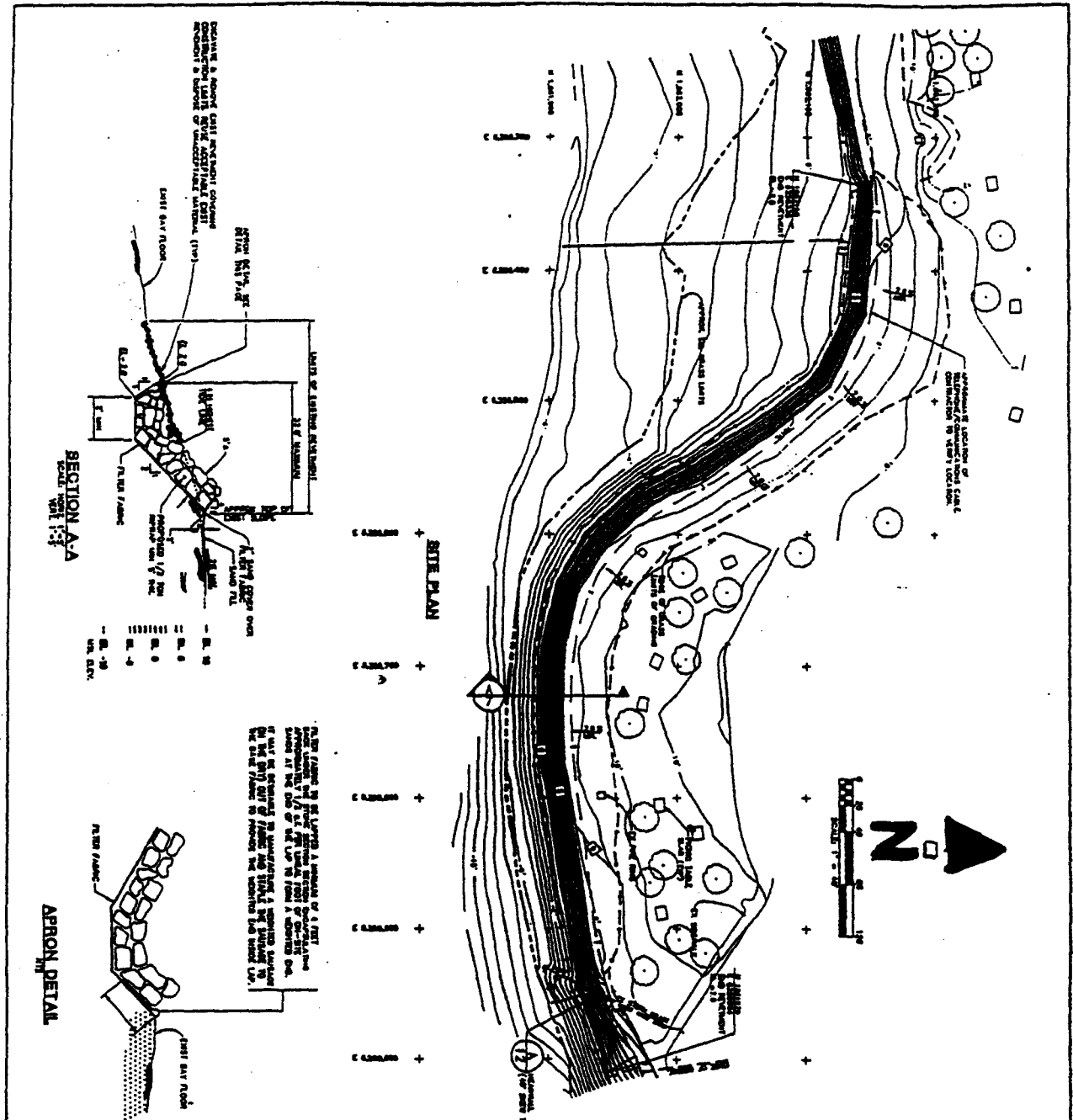
BASIS OF BEARINGS/COORDINATE:
 1120 N. GUY WALKER BLVD. SAN DIEGO, CALIF. 92101

BENCHMARK:
 1120 N. GUY WALKER BLVD. SAN DIEGO, CALIF. 92101

CITY CONTRACT:
 1120 N. GUY WALKER BLVD. SAN DIEGO, CALIF. 92101

Robert J. Bowers
 PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA
 No. 20802

POLK COUNTY ASSOCIATES
 CONSULTING ENGINEERS
 2501 MISSION BLVD., SUITE 200
 SAN DIEGO, CALIF. 92101
 (619) 591-1111



ROCK ARMATURE GENERAL NOTES

The design of the rock armor structure and the construction of the rock armor structure shall be in accordance with the provisions of the California Coastal Commission's Rock Armor Design Manual, dated in 1984, and the California Coastal Commission's Rock Armor Construction Manual, dated in 1984. The design of the rock armor structure shall be in accordance with the provisions of the California Coastal Commission's Rock Armor Design Manual, dated in 1984, and the California Coastal Commission's Rock Armor Construction Manual, dated in 1984. The design of the rock armor structure shall be in accordance with the provisions of the California Coastal Commission's Rock Armor Design Manual, dated in 1984, and the California Coastal Commission's Rock Armor Construction Manual, dated in 1984.

REL. QUANTITIES

Quantity: 50,000 cubic yards

APPROXIMATE QUANTITIES

With stone quantity: 50,000 cubic yards

Without stone quantity: 50,000 cubic yards

BASIS OF BEARINGS/COORDINATE

North is 10 degrees 10 minutes 00 seconds true.

BENCHMARK

BM 1000 is located at the corner of the pier.

EXHIBIT NO. 5

APPLICATION NO.

6-98-12

Site 23

Vacation Island

South Cove

California Coastal Commission

REFERENCES:

City of Los Angeles Department of Public Works, dated in 1984.

BASIS OF BEARINGS/COORDINATE:

North is 10 degrees 10 minutes 00 seconds true.

BENCHMARK:

BM 1000 is located at the corner of the pier.

GITY CONTRACT:

Contract No. 1000

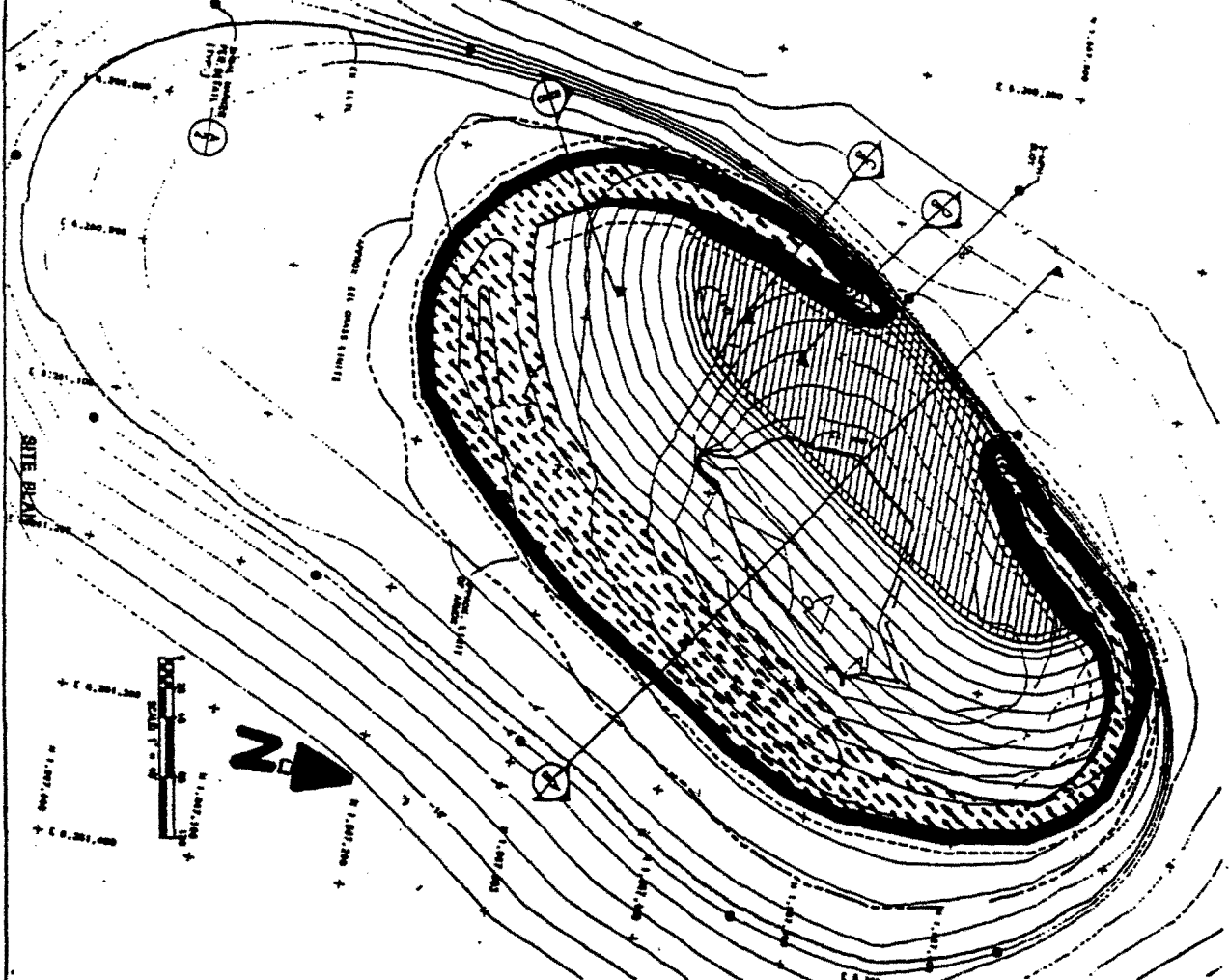
SITE 23 - VACATION ISLAND - SOUTH COVE

APRON DETAIL

Scale: 1 inch = 10 feet

SECTION A-A

Scale: 1 inch = 10 feet



BASE OF BEACH/SLOPE/COORDINATE:
 50 FT (15.24 m) PER VERTICAL FOOT
 BENCHMARK: 47.15 FT (14.37 m) MONUMENT: 5-4119 W. S. MONUMENT (781)

DESCRIPTION:
 CITY OF SAN DIEGO FIELD SERVICE DIVISION
 SURVEY DIVISION BY MICHAELSON ENGINEERS, 11-20-81, 10-1-100

REL. GRADE MARKS:
 CORNER APPROXIMATE: 4.00 ABOVE
 SURVEY: 4.00 ABOVE
 MONUMENT: 4.00 ABOVE

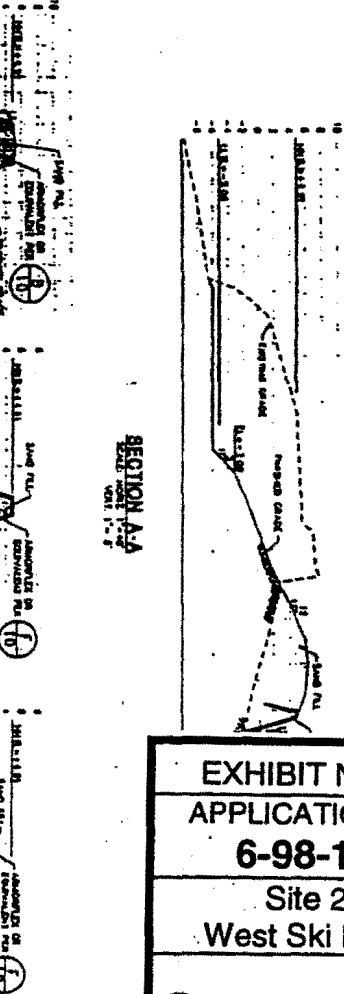
NO PERSPECTIVE VIEW

- Legend**
- Eelgrass Revegetation Areas
 - Dune Vegetation Stabilization Area

QUANTITIES:

Total graded quantities:
 Excavation: 11,988 SF

Note: Graded quantities are in cubic feet. The quantities shown are for the entire project and do not represent the quantities for any one phase of the project. The quantities shown are for the entire project and do not represent the quantities for any one phase of the project.



POWERBY ASSOCIATES
 3000 LANTANA DRIVE, SAN DIEGO, CALIF. 92108
 709-444-4444



CITY CONTRACT

SITE 28 - WEST SKI ISLAND

GENERAL PROVISIONS FOR CITY CONTRACTS

APPROVED FOR: [Signature]

DATE: 10-1-100

NO.	DATE	DESCRIPTION
1	10-1-100	FINAL
2	10-1-100	FOR RECORD

11-111
 97-666-4-4

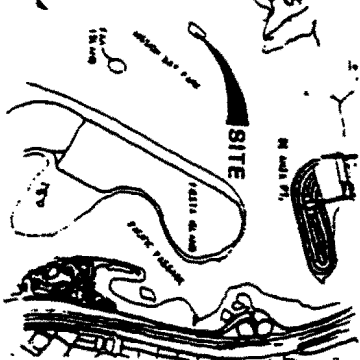


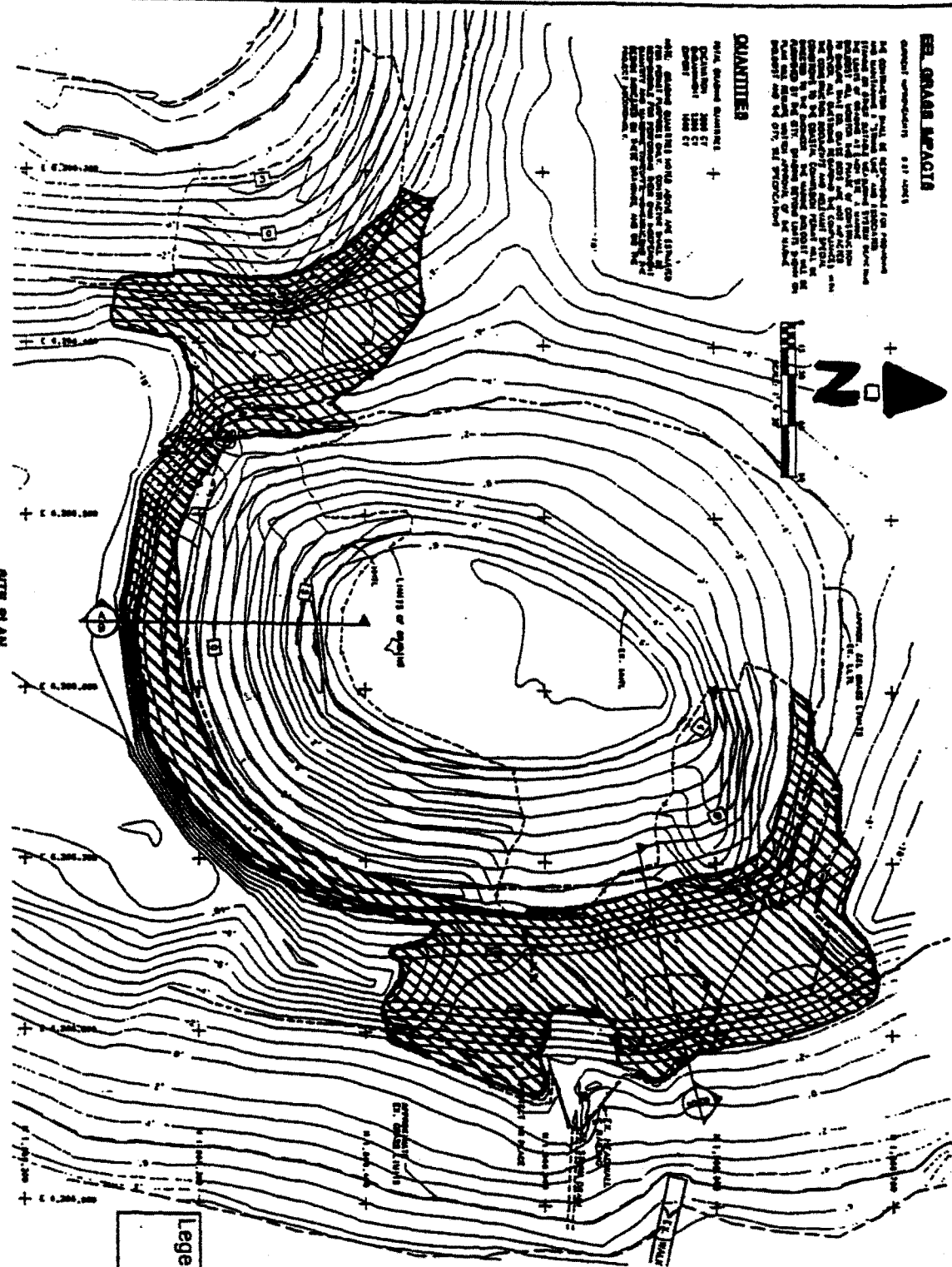
EXHIBIT NO. 6
APPLICATION NO.
6-98-121
 Site 25
 West Ski Island

SEE GRADE MAPS

Construction shall be dependent on equipment and operator conditions. The following quantities are based on a 100% efficiency and a 100% yield. The quantities are based on a 100% efficiency and a 100% yield. The quantities are based on a 100% efficiency and a 100% yield.

QUANTITIES

Excavation 2000 CY
 Backfill 2000 CY
 Gravel 2000 CY
 Sand 2000 CY
 Gravel 2000 CY
 Sand 2000 CY



REFERENCES:

City of San Diego Public Works Department
 Division of Public Works, Planning Section
 12-17-78 PWS 12-17-78

BASE OF READING/COORDINATE

12-17-78 PWS 12-17-78

SITE PLAN

BENCHMARKS:

Point 10, in line of center of road, at intersection of 10th and 11th streets, San Diego, California.

BOUNDARY
 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



PROJECT NO.	12-17-78
DATE	12-17-78
BY	[Signature]
CHECKED BY	[Signature]
APPROVED BY	[Signature]
TITLE	Site Plan
SCALE	1" = 100'
PROJECT LOCATION	Site 35 - Paradise Island
PROJECT DESCRIPTION	Eelgrass Revigation
CLIENT	City of San Diego
DATE	12-17-78
BY	[Signature]
CHECKED BY	[Signature]
APPROVED BY	[Signature]
TITLE	Site Plan
SCALE	1" = 100'
PROJECT LOCATION	Site 35 - Paradise Island
PROJECT DESCRIPTION	Eelgrass Revigation
CLIENT	City of San Diego

Legend

Eelgrass Revigation Areas

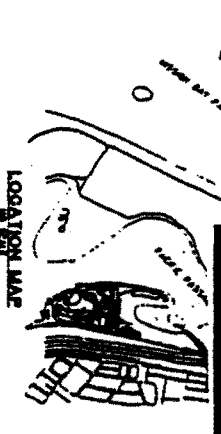
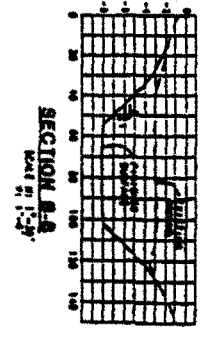
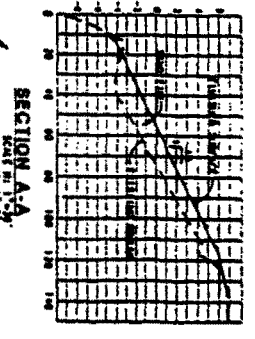
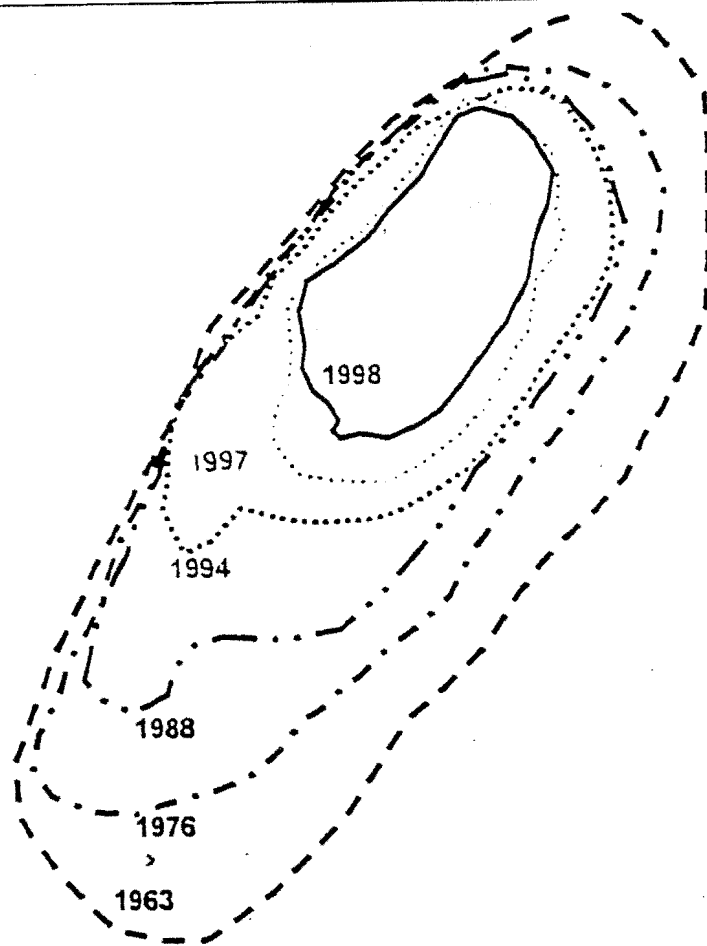


EXHIBIT NO. 7
APPLICATION
6-98-121
 Site 35
 Paradise Island



Change in Shape and Acreage of West Ski Island
(1963-1998)

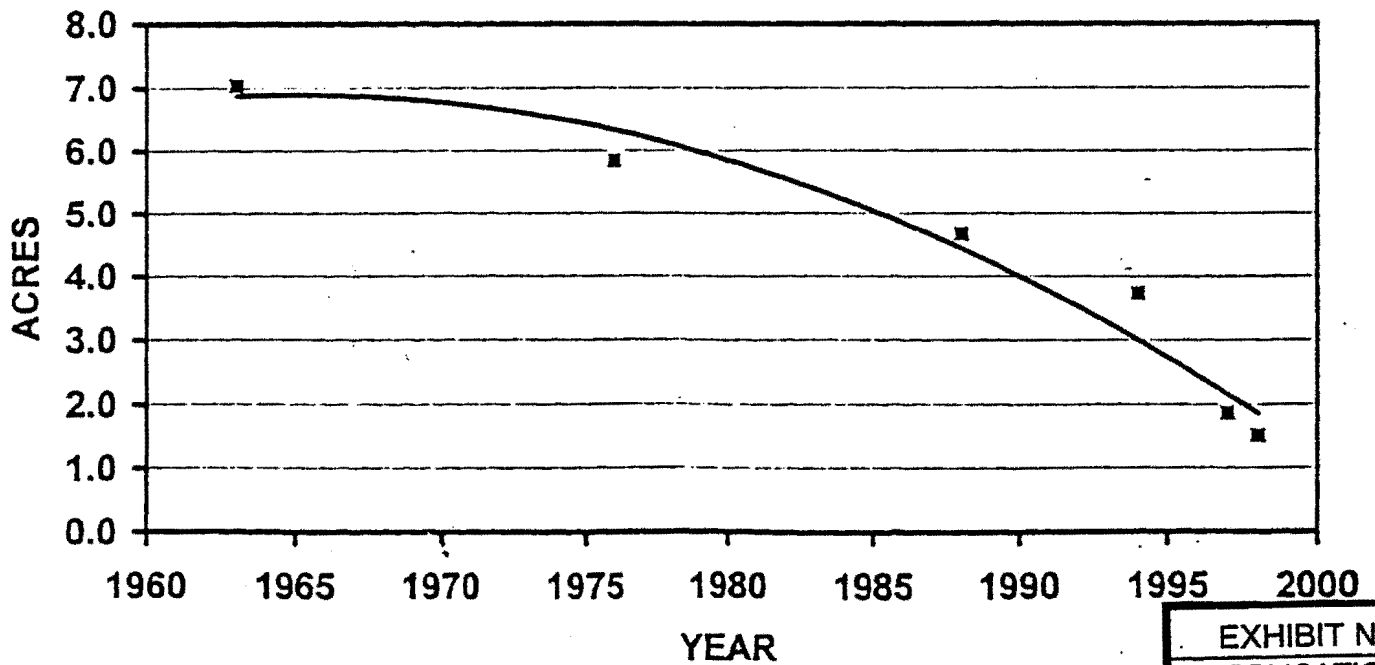


EXHIBIT NO. 8
APPLICATION NO.
6-98-121
Size of West Ski Island
1963-1998

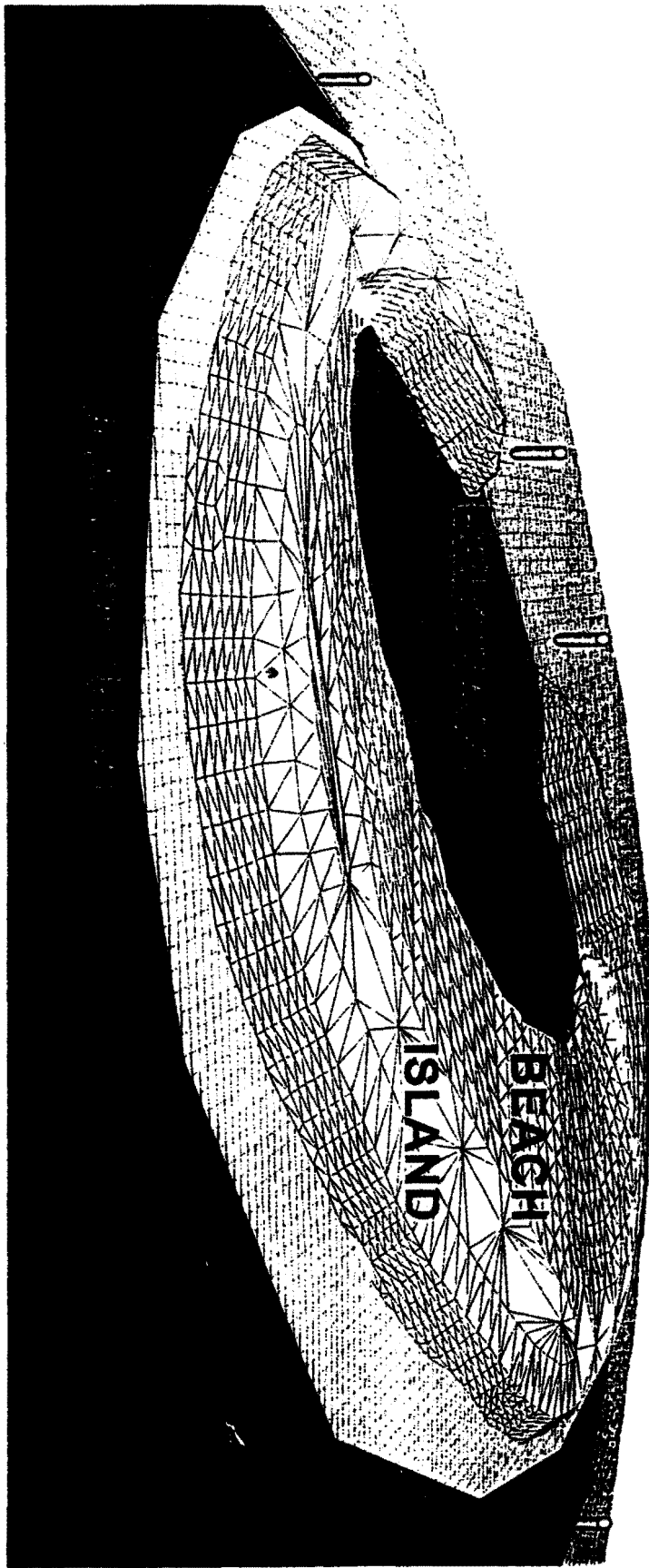


EXHIBIT NO. 9
APPLICATION NO.
6-98-121
Graphic of West Sausalito Island After Project Completion
 California Coastal Commission