STATE OF CALIFORNIA—THE RESOURCES AGENCY

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STAFF RECOMMENDATION

ON CONSISTENCY DETERMINATION

Consistency Determination No.	**CD-95-95** (U.S. Navy)
Staff:	MPD-SF
File Date:	9/29/95
45th Day:	11/13/95
60th Day:	11/28/95
Commission Meeting:	11/16/95

FEDERAL AGENCY: **U.S. Navy**

DEVELOPMENT LOCATION: Naval Air Station North Island (NASNI), Coronado (Exhibits 1-5), and Imperial Beach, Mission Beach, Del Mar and Oceanside, San Diego County (Exhibit 6)

DEVELOPMENT DESCRIPTION: Homeporting of NIMITZ-Class nuclear aircraft carrier and associated onshore wharves, piers, support buildings and infrastructure, including dredging of 9 million cubic yards (cu. yds.) of material, with disposal as follows:

7,900,000 cu. yds. - beach replenishment
930,000 cu. yds. - offshore ocean (LA-5)
260,000 cu. yds. - confined disposal at NASNI

SUBSTANTIVE FILE DOCUMENTS: See page 33.

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EXECUTIVE SUMMARY

The Navy has submitted a consistency determination for the homeporting of a nuclear aircraft carrier (CVN) at the Naval Air Station, North Island (NASNI) in Coronado. The project includes: (1) 9 million cu. yds. of dredging to create the carrier berthing area and deepen existing San Diego Bay navigation channels; (2) disposal of the dredged material as bay fill in the carrier turning basin, a designated ocean disposal site, and at various beach disposal sites; (3) construction of berthing facilities to accommodate the larger class ship; (4) construction of maintenance facilities; and (5) mitigation along the west shore of NASNI to replace the loss of shallow bay habitat in the carrier turning basin.

Marine resource/environmentally sensitive habitat issues raised are addressed as follows: (1) the project is an allowable use for estuarine fill under Section 30233(a) of the Coastal Act; (2) with mitigation and monitoring, the project represents the least damaging feasible alternative; (3) beach replenishment is being provided where dredged material is suitable; (4) dredging and disposal impacts will be adequately monitored, with provisions for modifications and/or remediation should circumstances justify it; (5) mitigation is being provided for estuarine fill, and impacts on eelgrass, burrowing owls, least terns, herons and egrets; (6) the functional capacity of the San Diego Bay estuary will not be affected; and (7) oil/hazardous substances spill risks would not be increased. After disposal, to assure the integrity of the fill is maintained and to contain contaminants at the site, the Navy will prepare a monitoring plan for the dike/fill area, which would include biological, water quality, and structural integrity monitoring. The Navy has agreed to submit the final monitoring plan to the Commission, for its review and concurrence (including a public hearing), prior to placing any material within the fill area. With the mitigation and monitoring, the project is consistent with the marine resources/habitat policies (Sections 30230-30233 and 30240) of the Coastal Act.

The public access and recreation issues potentially raised by the project include consideration of spillover impacts off-base such as traffic and parking congestion, which can affect access and recreation. The project's recreation benefits, due to 7.9 million cu. yds. of beach replenishment throughout the San Diego region, outweigh its recreational impacts. Overall, the project is consistent with the public access and recreation policies of the Coastal Act, including those related to parking, traffic, and cumulative impacts (Sections 30210-30212, and 30250-30254).

The project would not have significant visual impacts, and the Navy is using its base architectural plan to further minimize impacts. Archaeological mitigation measures will be provided in coordination with the State Historic Preservation Officer (SHPO). Geologic hazards have been adequately addressed through design and engineering features. Air quality impacts will be mitigated through a permit from the San Diego County Air Pollution Control District. The project is therefore consistent with the scenic (Section 30251), archaeological (Section 30244), geologic hazards and air quality (Section 30253) policies of the Coastal Act.

STAFF SUMMARY AND RECOMMENDATION

I. Staff Summary:

A. Project Description. The Navy proposes to relocate one NIMITZ class aircraft carrier from Naval Air Station Alameda, San Francisco Bay, to Naval Air Station, North Island (NASNI), San Diego Bay (Exhibits 1-3). NIMITZ class carriers are part of the Navy's new, more modern fleet of deep-draft ships powered by nuclear energy, referred to as CVNs. The Navy is taking this action is taken to comply with the 1993 Base Realignment and Closure (BRAC) directive from Congress to close Naval Air Station (NAS) Alameda, and to relocate ships currently homeported there to fleet concentrations in San Diego and the Pacific Northwest.

To accommodate this newer, deeper draft vessel, the Navy proposes the following activities (Exhibits 2-5): (1) dredging of the carrier berthing area, turning basin, and the San Diego Bay navigation channel; (2) disposal of the dredged material as bay fill, at the designated ocean disposal site, and at various beach disposal sites; (3) construction of berthing facilities to accommodate the larger class ship and its greater utility requirements; (4) construction of maintenance facilities equipped and designed to support a NIMITZ class aircraft carrier; and (5) mitigation along the west shore of North Island to replace the loss of shallow bay habitat in the carrier turning basin.

The proposed action comprises six separate Military Construction (MILCON) projects, as follows:

- P-549 includes dredging of the berthing area and turning basin, construction of the 13.4 acre fill area, and excavation of the 14 acre mitigation area. P-549 also includes upgrades to the electrical systems along the quaywall.
- P-700 would demolish the existing boathouse (Building 316) and construct a new boathouse, as well as, constructing one new wharf and associated wharf facilities.
- P-701 includes demolition of existing buildings 29 and 68 and several smaller buildings, and construction of a Controlled Industrial Facility.
- P-706 includes dredging of San Diego Bay navigation channel.
- P-702 would construct a Ship Maintenance Facility.
- P-703 would construct a Maintenance Support Facility.

The NIMITZ class aircraft carrier is one of the deepest ships in the Navy. The carrier is 1,092 ft. long, 252 ft. wide on the flight deck and 134 ft. wide at the hull. These large dimensions require deepening of the berthing area, turning basin, and main navigation channel. San Diego Bay berthing requirements include a water depth of -50 ft. Mean Lower Low Water (MLLW) in the turning basin area, -47 ft. MLLW in the inner channel, and -55 ft. MLLW in

the outer channel from the southern tip of Point Loma, continuing south of approximately 2.2 miles to where the existing water depths reach -55 ft. MLLW.

Dredge sediments were analyzed for chemical and physical properties and biological testing performed to determine the environmentally appropriate disposal option (Exhibit 17). Based on the sediment test results, the Navy proposes: 7,900,000 cu. yds. of beach replenishment/nearshore disposal of clean sandy material; 930,000 cu. yds. of offshore ocean disposal at Environmental Protection Agency (EPA) designated site LA-5 of clean non-sandy material; and 260,000 cu. yds. of confined disposal (land encapsulation) at NASNI, including those sediments determined not to be suitable for aquatic disposal (Exhibit 8). The "unsuitable" sediments (along with clean sediments as cover) would be placed in the 13.4 acre fill area which would be constructed in the northeast corner of NASNI to provide the berthing area needed for carrier berthing and support activities. To mitigate the bay fill impact, 14 acres would be excavated on the west side of NASNI.

A 90 ft. by 1,300 ft. wharf structure would be installed to provide on-shore infrastructure such as electrical power, steam, water, and oily waste offloading. This work area must be adjacent to the wharf to provide essential maintenance and support functions requiring laydown or staging room near the carrier. The work area would also support a 90-ft. wide aircraft tow way road where aircraft would be transported from the airfield, then lifted from the wharf to the flight deck; a cleared security area; fire lanes; and sufficient space for a 40-foot wide pier crane to operate clear of the 60-foot wide ship's aircraft elevators. The pile-supported wharf would be located on the western edge of the turning basin parallel to the rock dike to be constructed under P-549. The south dike/fill would be constructed opposite Bay Drive, between the existing quaywall and the rock dike/fill proposed under P-549.

Construction of three "depot-level" propulsion plant maintenance facilities would be necessary to serve the CVN: the Controlled Industrial Facility, the Ship Maintenance Facility and the Maintenance Support Facility. The controlled Industrial Facility would be used for the inspection, modification, and repair of radiologically controlled equipment and components associated with naval nuclear propulsion plants. The Ship Maintenance Facility would house the machine tools, industrial processes, and work functions necessary to perform non-radiological depot level maintenance on CVN propulsion plants. The Maintenance Support Facility would house the primary administrative and technical staff offices supporting CVN propulsion plant maintenance, as well as the central area for receiving, inspecting, shipping and storing materials.

To homeport and maintain one CVN in the San Diego area according to BRAC directives, the necessary berthing, dredging, and propulsion plant depot maintenance facilities must be constructed by 1998. The Navy proposes to commence the project in 1996, and the CVN is scheduled to arrive in 1998. Project scheduling is as follows:

MILCON Project	Construction Starts	Construction Completed
P-549 Dredging	Feb 96	May 97
P-700 Wharf	Feb 96	Sept 97
P-701 Controlled Industrial Facility	Feb 96	Oct 98
P-706 Channel Dredging	Nov 96	July 97
P-702 Ship Maintenance Facility	Nov 96	Oct 98
P-703 Maintenance Support Facility	Nov 97	Dec 98

The CVN would replace a conventionally powered carrier (CV) historically homeported in San Diego. The Navy notes that San Diego has traditionally served as a 3-carrier port. The Navy further notes that as the two older CVs in San Diego are decommissioned, they will be likely replaced with newer CVNs. Addressing cumulative impacts, the Navy states:

> Therefore, a decision to establish the capability to support one CVN in the San Diego area makes it reasonably foreseeable that future decisions on where to homeport additional CVNs (CVN replacements) beyond the year 2000 could result in their being proposed for homeporting in San Diego. The Navy is not, however, developing proposals addressing where to homeport new CVNs beyond the year 2000 at this time. When the Navy does develop such a proposal, it will prepare the appropriate NEPA [and consistency documentation] for such proposal.

B. Status of Local Coastal Program. The standard of review for federal consistency determinations is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) or Port Master Plan (PMP) of the affected area. If the LCP or PMP has been certified by the Commission and incorporated into the CCMP, it can provide guidance in applying Chapter 3 policies in light of local circumstances. If the LCP or PMP has not been incorporated into the CCMP, it cannot be used to guide the Commission's decision, but it can be used as background information. The City of Coronado's LCP and the Port of San Diego's PMP have been certified by the Commission and incorporated into the CCMP.

C. Federal Agency's Consistency Determination. The Navy has determined the project consistent to the maximum extent practicable with the California Coastal Management Program.

II. Staff Recommendation:

The staff recommends that the Commission adopt the following resolution:

Concurrence

The Commissicn hereby concurs with the consistency determination made by the Navy for the proposed project, finding that the project is consistent to the maximum extent practicable with the California Coastal Management Program.

III. Findings and Declarations:

The Commission finds and declares as follows:

A. Environmentally Sensitive Habitat/Marine Resources.

1. Coastal Act Policies. Section 30230 of the Coastal Act provides:

> 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 and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 provides:

> 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.

Section 30232 provides:

> Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

Section 30233 provides:

> (a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:
>
> (1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.
>
> ...

(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities ....

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

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. ...

Section 30240 provides:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

2. Background/Issue Summary. The productivity of the San Diego Bay, one of California's major estuaries, has suffered as a result of, among other things, contaminant and sedimentation inputs, historical dredged material disposal, and projects which have in-filled wetland and estuarine areas. According to the Navy, the proposed project action would not contribute to a further degradation of the productivity of the bay, since it includes measures to protect fish and wildlife habitat areas from potential adverse effects of construction, dredging and fill activities. In order to concur with the Navy's consistency determination, the Commission must find the project would not adversely affect marine resources and other environmentally sensitive habitat, and, because the project involves dredging and filling within a coastal estuary, complies with the three-part test of Section 30233(a) of the Coastal Act: (1) the project must be one of the eight allowable uses under Section 30233(a); (2) the project must be the least damaging feasible alternative; and (3) the project must include feasible mitigation measures to minimize adverse environmental effects. Under Section 30233(b) and (c), the Commission must also be able to find that the project provides for beach replenishment where dredged material is suitable, and that the project will not alter the functional capacity of the estuary.

3. Allowable Use. The project is a new or expanded port and/or coastal-dependent boating facility. The Commission therefore finds that the project therefore qualifies as the first and/or fourth of the eight enumerated uses listed under Section 30233(a).

4. Alternatives. Several alternatives issues are raised, primarily: (a) the decision to locate a CVN in San Diego; (b) the size and location of the proposed fill area; and (c) the various proposed disposal options, depending on the size and composition of the dredged sediments.

a. Locating CVN in San Diego. For the fundamental decision to Homeport the nuclear carrier in San Diego, as opposed to another port, the Navy states:

> The Defense Base Closure and Realignment Act stipulates that military departments are not required to consider military installation alternatives to those recommended or selected by the Congressionally approved BRAC Commission report. Therefore, this EIS [and consistency determination] considers alternatives only within the San Diego fleet concentration area for the realignment of one CVN resulting from the BRAC III action to close NAS Alameda.

b. Fill size and location. For the fill proposed in San Diego to provide berthing for the carrier, the Navy maintains the fill would contain only essential structure and facilities, and is the minimum fill amount necessary to accommodate the Homeporting project. The Navy states:

> The 13.4-acre fill area has been sized to provide the minimum functional space for this berthing configuration and to provide a similar amount of space currently provided at the quaywall. ... The southern portion of the fill, measuring 95 feet wide at the southern edge and 150 feet wide at the northern edge, provides the minimum width to extend the portal crane tracks from the existing quaywall to the new berth; the 75-ton portal crane will service both the transient and the homeport NIMITZ class aircraft carrier berths. This width is also required to tow aircraft to and from Quay Road for offloading and onloading these assets to and from the NIMITZ class aircraft carrier.
>
> All of the construction in the fill area directly supports the carrier berthed at the proposed new wharf. It is essential that the new wharf provide sufficient operational area immediately adjacent to the ship's berth. Whenever possible, structures have been located outside the fill area.

In addition, the Commission notes the fill location is not only needed functionally, but also serves to allow the isolation/remediation of existing contaminated sediments at the site (see page 14-15), thereby improving water quality in San Diego Bay (assuming the extent of fill is mitigated as proposed by the Navy (see page 13-14)).

c. Sediment Testing/Disposal Alternatives. A number of disposal sites for dredged sediments are available within the San Diego Bay region, including beach replenishment at various beaches throughout the County (Exhibit 6), ocean disposal at EPA-designated site LA-5, and upland or nearshore confined disposal. The disposal options dredged sediment disposal, the options depend on several factors, including grain size, sediment quantity, and chemical characteristics of the sediment.

To determine the appropriate alternative(s), the sediments proposed for dredging and disposal have been evaluated by the Navy pursuant to the procedures described in the 1991 EPA/Corps testing manual, Evaluation of Dredged Material Proposed for Ocean Disposal -- Testing Manual (Green Book). The testing procedures described in the Green Book allow for a tiered approach to analysis of the dredged sediments. It is necessary to proceed through the tiers only until information sufficient to determine compliance or noncompliance with EPA's regulations has been obtained. Only if there is not enough information to determine suitability or unsuitability for ocean disposal after the completion of a tier, will the applicant be required to complete the next tier testing.

The Navy undertook a comprehensive testing program to assess physical and chemical composition of the sediments to be dredged. The Navy's analysis also included testing samples collected from the proposed mitigation site near Pier Bravo. The test results, which have also been independently reviewed by EPA, the U.S. Army Corps of Engineers (Corps), the Regional Water Quality Control Board (RWQCB), San Diego Region, are summarized in the Navy's FEIS (Exhibit 17). Based on the results of the berthing area, turning basin, navigation channel, and mitigation area grain size analysis and sediment sampling, approximately 7.9 million cu. yds. of the dredged sediment are suitable and proposed for beach replenishment, approximately 900,000 cu. yds. are suitable and proposed for offshore ocean (LA-5) disposal, and 260,000 cu. yds., including all sediments determined unsuitable for aquatic disposal, are proposed to be placed in the 13.4 acre carrier berthing fill area (see above).

(i) Beach Replenishment. Beach erosion is a major problem along many of beaches in San Diego County. The project represents a major benefit to recreation and protection of structures through its potential to provide millions of cu. yds. of sand to these beaches. To be considered suitable for beach nourishment, sediment must be free of chemical contamination and consist primarily of sand of an acceptable grain size (usually at least 80 percent sand). The dredged sand must also be compatible with the existing material at the receiver beach site. As a result of the above-referenced testing, 7.9 million cu. yds. are suitable and proposed for beach (nearshore, within the littoral system) disposal.

The Navy initially looked at nine potential receiver beaches within San Diego County from Oceanside to Imperial Beach were identified as potential sites to receive the beach replenishment material (Exhibit 6). Sediment analyses were conducted in intertidal and subtidal areas at the nine potential receiver sites; the samples were chemically and physically analyzed following COE, EPA, and RWQCB procedures. These nine beaches represent suitable receiver beaches, because they contain sufficient areas that do not support biological communities sensitive to a large influx of sand. Typical subtidal organisms at these sites include tube-dwelling polychaetes, sea stars, crabs, sand dollars, sand dabs, snails, clams, cnidarians such as burrowing anemones, sea pens, and sea pansies, and fish such as halibut, bat rays, and guitarfish.

The nine sites were subsequently narrowed to four sites, where the Navy proposes nearshore beach replenishment:

BEACH DISPOSAL QUANTITIES FOR PREFERRED RECEIVER SITES

Site	Area	Volume (cu. yds.)
A	Imperial Beach	1,443,000
C	Del Mar	2,460,000
H	Oceanside	2,460,000
I	Mission Beach	1,500,000
TOTAL		7,863,000

Clean beach-compatible sand dredged from the project site would be transported to an area offshore the receiver beach by barge or hopper dredge and placed into the nearshore zone at a water depth of approximately -10 to -30 feet MLLW on the beach. Nearshore disposal will not continue if grunion are spawning at the disposal site. Nearshore disposal will not occur in any environmentally sensitive habitat areas, such as kelp beds offshore of Imperial Beach (which are below -30 ft. MLLW). With these measures, the Commission finds the Navy has provided beach replenishment where materials are suitable, as required under Section 30233(b), and that the four beach replenishment sites proposed at this time represent the least damaging feasible disposal alternative for these sediments.

Depending on the availability of local, state, or federal funding for beach nourishment in San Diego County, suitable beach nourishment material may be placed directly onshore at the 5 remaining beach receiver sites (i.e., Sites B, D, E, F, and G (Exhibit 6)). The findings of consistency in this report do not apply to these 5 sites. In the event any of these alternative sites are implemented, additional Commission federal consistency or coastal development permit review will be triggered (which of these two processes is used would depend on whether the Navy or a non-federal agency were the applicant).

Finally, although not legally required of the Navy under the enforceable policies of the Coastal Act, several EIS commenters requested regional beach monitoring in conjunction with the proposed project. The Navy has not agreed to perform such monitoring but notes that the San Diego Association of Governments (SANDAG) is pursuing funding for a regional shoreline monitoring plan. A summary of the status, costs and benefits of such monitoring is attached as Exhibit 21.

(ii) Ocean Disposal. Based on grain size analysis and sediment testing, approximately 932,000 cu. yds. of the proposed dredged sediment would be disposed of at the EPA-approved offshore disposal site LA-5, which is located approximately 5 miles southwest of Point Loma. The site is used regularly for disposal of dredged material generated from San Diego Bay. Where material has passed Green Book standards and is otherwise unsuitable for beach disposal, the Commission has historically found this disposal option to represent the least damaging feasible disposal alternative.

(iii) Unsuitable Materials Disposal. Dredging and disposal of materials that are unsuitable for aquatic disposal have the potential to resuspend contaminants in the marine environment, making them more biologically available. However because the project will, as discussed above, include measures to minimize turbidity, and because the disposal of these sediments will, as discussed below, occur in a manner rendering them isolated from and unavailable to the marine environment, this disposal option also represents least damaging feasible disposal alternative.

d. Commission Conclusion (Alternatives). Additional alternatives discussion regarding other project components can be found in the Navy's FEIS, Chapter 2. Based on the above discussion, which addresses the alternatives questions of key concern to the Commission, the Commission concludes that, with the mitigation and monitoring measures discussed in the following section of this report, the proposed project represents the least environmentally damaging feasible alternative. Homeporting a CVN at a port other than San Diego is not a feasible alternative. The fill proposed is the minimum area and least damaging feasible location. Dredge materials that are suitable for aquatic disposal will be placed in a manner traditionally determined the least damaging alternative by the Commission, either as beach replenishment where materials are predominantly sand, or at LA-5 where they are not. Dredge materials unsuitable for aquatic disposal will be removed and isolated from the marine environment. Therefore, the Commission finds the CVN Homeporting and associated dredging, filling, and other project facilities and activities are consistent with the alternatives test of Section 30233(a).

5. Mitigation/Monitoring. This section addresses mitigation needs related to dredging, disposal, bay fill, and other project impacts on eelgrass, burrowing owls, least terns, herons and egrets, and other water quality considerations such as hazardous substances treatment, radiation releases, and oil spill risks.

a. Dredging. Potential impacts of dredging on marine water quality include temporarily increased turbidity, reductions in dissolved oxygen, and potential resuspension, remobilization, and redistribution of any chemical contaminants present in the sediments. Dredging would result in losses of infaunal and epifaunal biota, and some burrowing and bottom dwelling fish within the dredge footprint. These impacts are typical of all dredge projects, and the Commission has historically determined no mitigation necessary in the following situations: (1) where the need is established through turbidity monitoring, silt curtains or other turbidity-minimizing

methods are used; (2) where disposal would not smother environmentally sensitive habitat or sensitive species, such as grunions, kelp, or rocky hardbottom habitat; (3) where dredging and disposal would minimize effects on least terns.

The Navy will monitor water quality during dredging operations in accordance with RWQCB waste discharge and Corps dredge and disposal permits. Because turbidity and resuspension of contaminants can occur during dredging, the Navy will monitor the dredging, and if warranted, include additional measures to minimize these impacts. The monitoring will include: (1) baseline monitoring; (2) weekly sampling during dredging; (3) biweekly water chemistry testing; (4) monthly reporting to RWQCB; (5) compliance with conditions imposed by the Corps, EPA, and the RWQCB to monitor and minimize resuspension and turbidity at both the dredge and disposal sites.

One week prior to the start of dredging, baseline monitoring would be conducted at the dredge site, the reference site, and the disposal site. Samples will be conducted at one meter depth intervals throughout the water column at each sampling site. Chemistry sample would be taken from each site and analyzed for metals, organics, and general chemicals (i.e., ammonia and hydrogen sulfide) "in accordance with RWQCB and EPA approved methods and detection limits."

During dredging, weekly sampling would be performed at stations up- and down-current of the dredging operations and the disposal location, as well as at reference sites within San Diego Bay. The dredger would submit monthly technical reports to the RWQCB that describe the water quality monitoring, estimate volumes, and indicate disposal locations. Real-time turbidity monitoring would determine whether turbidity objectives are being exceeded and, if so, whether dredge operations need to be altered to control the turbidity plume. For instance, the installation of silt curtains between the dredge operations and adjacent areas and/or using a water-tight bucket on the dredge minimizes the amount of mixing and redistribution of sediments. Identification of turbidity problems by monitoring may require the cessation of dredging operations or a change in equipment or procedures. As they are available, the Navy has committed to submit the monitoring reports to the Commission as well.

To protect marine mammals from dredging impacts, the Navy states that California Sea lions and Harbor seals may be affected by the channel dredging portion of the project. In the event that these marine mammals are disturbed or injured, dredging would be halted and the National Marine Fisheries Service (NMFS) would be consulted. If physically possible, the animals would be captured, with the assistance of Seaworld or some other organization with the expertise to capture and treat marine mammals, and treated for eventual release. Costs associated with such capture and recovery would be borne by the Navy.

b. Disposal. Nearshore sand disposal will result in short-term increases in turbidity and burial of a portion of the shallow subtidal habitat offshore the receiver beach. Infauna, epifauna, and mobile invertebrates biota inhabiting the disposal footprint may be covered with a layer of sand and smothered, depending on the rate of sand-placement and dispersal. As with dredging impacts, these impacts would be temporary, and upon completion of the nearshore sand-placement operation, recolonization of the area by infaunal, benthic, and fish species would occur. Also as with the dredging, placement of sediments and monitoring would be conducted in accordance with permit conditions required by the Corps, EPA, and the RWQCB, and again with the Commission receiving and being involved in the development of the permit conditions and monitoring methods. This review will assure that beach disposal will not continue if grunion are spawning at the disposal site, that turbidity will be minimized where necessary, and that beach disposal will not occur in any environmentally sensitive habitat areas.

Monitoring of disposal impacts at LA-5 is performed by EPA and reviewed by the Commission; no further requirements for Navy monitoring for LA-5 disposal are warranted. Monitoring the disposal of sediments not suitable for aquatic disposal will again be addressed in the above-referenced permit requirements, and continued monitoring of these materials at the disposal site are addressed in the next section of this report.

c. Fill and Eelgrass Mitigation. The dredging and construction of the carrier turning basin would result in a net of loss of 13.4 acres of shallow bay habitat, including eelgrass habitat (Exhibit 10). Eelgrass habitat is a valuable resource in southern California bays and estuaries, as it provides habitat for numerous species of algae, invertebrates and fish, and nursery area for juvenile fish, as well as foraging habitat for the endangered California least tern. The Navy surveyed the proposed fill area for eelgrass habitat, in accordance with National Marine Fisheries Service (NMFS) guidelines. Eelgrass densities are shown in Exhibit 10. The Navy has committed to mitigating the shallow water habitat and eelgrass losses by creating an equivalent or greater area of new shallow bay and eelgrass habitat along the west shore of NASNI (Exhibits 3-4 & 11). The mitigation would occur prior to or concurrently with the proposed fill. At 14 acres in area, the mitigation site would provide a larger, more productive habitat area than currently exists at the proposed fill site.

Excavation of the mitigation area would occur along the land side and would be accomplished with the use of a dragline, backhoe, and offroad vehicles. The excavation volume is estimated at 455,000 cubic yards. The Navy proposes to excavate the mitigation area to a depth of approximately 1 foot MLLW at the project toe on the east portion of the site, to approximately -5 feet MLLW on the west to create new intertidal and subtidal habitat. The excavated material will be used partially for clean fill at the carrier turning basin (150,000 cu. yds.), partially for beach replenishment (190,000 cu. yds.), and partially to enhance existing least tern and snowy plover mitigation sites at NASNI (57,000 cu. yds. at least tern "MAT" site on NASNI, and 58,000 cu. yds. at Zuniga Point snowy plover site) (Exhibit 4).

Eelgrass will be planted at the new shallow water habitat site, in accordance with the Southern California Eelgrass Mitigation Policy (NMFS 1991), at a ratio of 1.2:1. In past projects the Commission has determined this ratio adequate for this species. A total of 6.74 acres of eelgrass will be affected by the project, requiring 8 acres of eelgrass to be planted at the mitigation site. The Navy states:

> The USFWS, NMFS, and CDFG have concurred that the Eelgrass Mitigation Plan would be finalized after construction of the mitigation site is complete ... The Navy's ambient water quality monitoring program would ensure that affects to the surrounding environment are minimized.

The Navy has agreed to submit the final eelgrass plan to the Commission staff for its review and concurrence.

d. Fill Containment. The carrier turning basin fill area would accommodate approximately 280,000 cu. yds. of sediments. The fill site currently contains contaminants in need of remediation and/or isolation from the marine environment. The Navy states:

> Hazardous Waste Remediation: A hazardous waste site along the shoreline at NASNI, referred to as IR Site #1 (outfalls 9 through 15), is within the project boundaries at the preferred alternative. This site contains hazardous substances in the shoreline sediment. This hazardous contamination is a result of discharges from drainage outfalls resulting from past industrial operations at NASNI prior to the establishment of clean water regulations. Sediments associated with IR Site #1 would not be removed during the project dredging. Under the preferred alternative, the hazardous sediments would be covered and encapsulated within the new fill area to ensure effective, long-term remediation of the site.

In addition, of the 280,000 cu. yds. fill area capacity, the Navy proposes to place material tested and determined to be unsuitable for aquatic disposal within the fill area. Sediments from the "IR" site and at Berths L through N (Exhibit 9) are unsuitable for ocean disposal. Properly engineered dike construction would include removal of contaminated sediments, to a depth of approximately -20 ft. MLLW. In total, contaminated sediment placement in the fill area will be as follows: 70,000 cu. yds. from the turning basin dredging, 40,000 cu. yds. removed from under the proposed rock dike, and up to 20,000 cu. yds. from other Navy dredging projects (such as the Cyclone-Class Patrol Ship Pier project at the Naval Amphibious Base (see CD-100-95)). The remaining 150,000 capacity would consist of clean sediment cover, and the entire fill area would be isolated from the marine environment as follows:

> The fill area would be contained along the north, east, and west sides by dikes constructed of quarry run and armor stone. The dike structure would be approximately 100 feet wide at the base, would surround approximately 13.4 acres at Mean High Water, and would accommodate approximately 280,000 cubic yards of fill. The rock containment dike placement accounts for design and operational conditions including fill loads and seismic activity. The fill must be competent for structural and seismic support which precludes excessive amounts of fine grained material.

The multi-dike construction method will use a total of 250,000 tons of rock material, ranging in size from sandy to coarse material (up to 12-inch diameter). This rock matrix is a very dense mixture that provides an extremely effective filter barrier for the fill material. To further stabilize the dike, a foundation will be constructed by excavating below the dike and filling with quarry rock material, which will provide a structural attachment to the existing bearing material on the bay bottom. The stability of the fill landward of the dikes will be improved by ground densification measures involving the use of sand columns. The rock material will be brought in by barge.

A typical cross section of the rock dike is shown in Exhibit 8. The dike lifts will be placed on the fill, progressing in 15-foot increments from the sea bottom to final grade at +10 feet MLLW. The exposed face will be protected with approximately 21,000 tons of 500-pound armor stone. Concrete surfacing on top of the fill will prevent water from permeating from above. For engineering purposes, sand sized material only will be placed in the 50-ft. wide area nearest the rock dike (contaminants tend to adhere to fine grained rather than sand sized material). Filter fabric will be placed between the fill and armor underlayer in the tidal zone from +10 feet to -2 feet MLLW, to prevent migration of fine material by tidal influence.

To assure the integrity of the fill is maintained and to contain the contaminants at the site, the Navy is in the process of preparing "an effective maintenance and management plan" for the rock dike and fill area. This plan will include a biological and water quality monitoring program, including a mussel watch station and visual inspections to insure structural integrity. This will allow "early detection of bioaccumulation in transplanted and resident biota that may indicate a breach in the integrity of the facility." In addition, an engineering monitoring program will be prepared to evaluate the structural integrity of the rock dike throughout its lifetime (see pages 28-30, geologic hazards section, for additional discussion of engineering features). The RWQCB will require finalization of the plan within three months of its waste discharge permit issuance for the project, which is currently expected in early January 1966. The Navy has agreed to submit the final monitoring plan to the Commission, for its review and concurrence (including a public hearing), prior to placing any fill material within the fill area.

e. Burrowing Owl Mitigation. The bay excavation creating the bay fill mitigation will, in itself, adversely affect burrowing owls, triggering additional mitigation requirements. The key concern to maintaining stable burrowing owl populations is retaining colony size and an adequate number of burrows. Standard mitigation procedures compensate losses at a 5:1 ratio. Considering this ratio, 25 nesting complexes are proposed for mitigation. Burrowing owls utilize a series or complex of burrows constituting a nest. The average nest complex at NASNI is 4.5 burrows. Considering the possible destruction of 5 nests, averaging 4.5 burrows each, and a 5:1 replacement ratio, then a minimum of 112 artificial burrows will be supplied across two separate sites. Because NASNI does not have sufficient land on Station, mitigation will be conducted partially on-base and partially at an off-site location at the Naval Outlying Landing Field in Imperial

Beach. Artificial burrows will be provided at NASNI before burrows are filled at the eel grass mitigation site, and provided during late summer of the same year at the Imperial Beach site, when juvenile are dispersing.

Monitoring will be conducted for 10 years, with surveys conducted twice/year. Annual evaluations will examine not only the health of the population, but success of this management plan. If failure is indicated, then each component of the plan will be analyzed to determine where a problem exists, and appropriate steps will be taken to stabilize the population.

f. Least Terns, Herons and Egrets. Dredging (turbidity) and eelgrass losses potentially affect least terns. Proposed activities at the northeast corner of NASNI potentially affect the great blue heron, snowy egret, and black-crowned night heron, which nest in tall trees immediately adjacent to the west side of the project site. Nesting herons would be indirectly affected by both construction and operation of the proposed facilities. The Navy proposes an extensive mitigation plan to address impacts to least terns, nesting great blue herons, snowy egrets and black-crowned night herons. These measures are discussed in detail in Exhibit 18. Briefly, for least terns, these measures include: (1) the previously mentioned bay fill/eelgrass mitigation, which will improve least tern foraging; (2) scheduling dredging outside the least tern breeding season (April 15 to September 1) to the maximum extent feasible; (3) constructing the eelgrass mitigation at the beginning of the project; (4) monitoring, and if necessary, reducing turbidity during dredging in areas of high or very high least tern foraging; and (5) enhancing existing least tern nesting sites with additional clean fill, and fencing or planting to avoid sand losses at these sites.

For the herons and egrets, the mitigation measures include: (1) replacing trees used for nesting by herons and egrets only during non-nesting seasons and providing replacement colonies, in a manner which will assure these species will be provided equivalent or greater replacement sites; (2) preparing a heron nesting monitoring and management plan; and (3) minimizing construction impacts, such as noise and light glare, to the extent feasible. The Navy has incorporated these mitigation plans into its project in consultation with the U.S. Fish and Wildlife Service.

g. Other Water Quality Issues. The Commission notes that the functional capacity of the San Diego Bay estuary will not be affected, given that fill impacts are mitigated by new subtidal habitat creation, and Navy current studies which indicate that water circulation will not be significantly affected by the increased dredged depths. The Commission also notes that oil spill risks would not be increased, as the Navy points out that nuclear carriers carry less hydrocarbon fuel than conventional carriers (9,000 tons versus 10,822), and thus that conversion to a nuclear carrier should decrease oil spill risks.

Another water quality issue is copper discharges. Copper leaches from ship hulls, which are painted with "ablative copper antifouling coatings." Due to its larger ship hull area than a conventional aircraft carrier, conversion to a nuclear carrier would increase copper discharges into the bay at a rate of 0.37 additional pounds of copper per day. However, the Navy points out that

it has reduced copper discharges into San Diego Bay by more than 8 pounds per day in recent years, thereby more than offsetting this increased discharge (Exhibit 19). The Navy has also committed to continued research into less damaging antifouling materials. According to the Navy, aside from copper, discharges of other metals, chemicals, and waste substances would not be increased over that of conventional carriers.

Hazardous substances associated with a nuclear carrier and its related facilities are described in detail in the FEIS and summarized in Exhibit 20. To summarize, the FEIS states:

> The Navy has implemented a strict Hazardous Material Control and Management (HMC&M) program and a Hazardous Waste Minimization (HAZMIN) program for all of its facilities. These programs are designed to minimize the amount and types of hazardous materials used in the workplace, and to reduce the generation of hazardous waste to an absolute minimum.
>
> The disposition of chemically hazardous wastes would be under the direction of trained personnel in accordance with the facility's hazardous waste management plan, and applicable federal, state, and local regulations.
>
> Because the proposed CVN is of more modern design than the conventionally powered carriers, the use of hazardous materials, including asbestos and PCBs, would be reduced or eliminated wherever possible.
>
> Hazardous waste activities at NASNI are regulated by both the San Diego County Hazardous Materials Management Division, and by the California Department of Toxic Substances Control. ... Hazardous waste constituents identified for CVN depot level maintenance are no different than those existing for current CV maintenance or other maintenance activities at NASNI. ... It has been demonstrated that these hazardous wastes can be managed and handled safely in accordance with permit stipulations. Navy shipments of radioactive and/or hazardous materials are made in accordance with applicable regulations. ... Hazardous waste generating activities will continue to be monitored and kept in compliance with all applicable local, state, and federal regulations. No impacts will occur.

Addressing radioactive materials concerns, the Navy states:

> <u>Radioactive Material Control</u>
>
> Propulsion plant maintenance involves the handling of radioactive material that originated from the ship's pressurized water reactor plants. Small quantities of low level radioactivity, predominantly cobalt 60, in the ship's valves, piping, and other reactor plant components that would be inspected, repaired or scrapped, and in the liquid that would be processed ... These materials would be strictly controlled to protect the environment and human health, using the same proven methods employed in shipyards performing Naval nuclear work. ... Only specially trained personnel are permitted to handle radioactive material. Environmental

monitoring at shipyards, and at other facilities supporting Naval nuclear powered ships, shows these controls have been effective in protecting the environment, and that radioactivity associated with U.S. Naval nuclear-powered ships has had no significant or discernible effect on the quality of the environment. Thus, there would be no radiological impact on the environment from the preferred alternative to homeport and maintain a NIMITZ class aircraft carrier at NASNI.

Radioactive Material Transportation

All shipments of radioactive materials in the Naval Nuclear Propulsion program are required to be made in accordance with the applicable regulations of the U.S. Department of Transportation; the U.S. Department of Energy, and the U.S. Nuclear Regulatory Commission. ... These controls have proven to be effective.

The Navy maintains that radioactive discharges into the marine environment from CVNs are virtually non-existent. The Navy states:

Stringent, long-standing Naval Nuclear Propulsion Program controls have proved effective in protecting the marine environment from radioactivity. The total amounts of long-lived gamma radioactivity released into harbors and seas within 12 miles of shore have been less than 0.002 curie during each of the last 23 years. This is less than the quantity of naturally occurring radioactivity in the volume of saline harbor water occupied by a single nuclear-powered submarine (NNPP 1994a).

The Navy elaborates:

Radiological Impacts. The safe operation of the Navy's nuclear powered ships and their support facilities is a matter of public record. In the 41 years since the first naval reactor began operation, the Navy has logged over 4,500 reactor years and over 100,000,000 miles of steaming without a reactor accident or other problem resulting in a significant effect on the environment. This success of the Naval Nuclear Propulsion Program is based on strong central technical leadership, thorough training, and conservatism of design and operating practices. The record of the program's environmental and radiological performance at the operating bases and shipyards presently utilized by nuclear powered warships demonstrates the continued effectiveness of this management philosophy. This record has been independently corroborated by environmental radiological surveys performed by the Environmental Protection Agency (EPA) and state agencies. The radiological analyses in this EIS concludes there would be negligible radiological impacts associated with homeporting a CVN at any of the alternatives considered.

The Navy also notes:

Refueling NIMITZ class aircraft carrier nuclear reactors will not be accomplished at NASNI. This type of work requires the special assets only found at selected nuclear-capable shipyards. Therefore, any operation

that requires the removal, installation, handling or transportation of nuclear fuel will be accomplished at a selected nuclear-capable shipyard, not at NASNI.

Finally, a concern was raised by environmental organizations during EIS review of this project, based on contaminants that have been identified near the area proposed for the bay excavation (i.e., the eelgrass/bay fill mitigation site). The Navy responds:

Hazardous Materials.

Site #10 includes the Defense Reutilization and Marketing Office (DRMO) formerly known as the Defense Property Disposal Office (DPPO) and Outfall 4. Between 1943 and 1967, an aircraft smelting facility operated within the boundaries of Site #10. This operation produced slag as a byproduct. Slag is a common term used to describe impurities removed from molten metal. Some slag produced in this operation was placed near Pier "E" to prevent erosion of the shoreline. Pier "E" is 1400 feet north of the proposed mitigation area on the northwest corner of NASNI. A radiation survey conducted in June 1995 detected elevated readings on random small areas of two slag piles near the shoreline that were affected by tidal action. Analysis of the material confirmed the presence of isolated spots of low level radioactivity. The isolated low level radioactivity in the slag piles did not pose any significant risk to humans or the environment. Additionally, the analysis detected the presence of heavy metals in the slag. The low level radioactivity resulted from the smelting of small painted instrument dials and markers that were used on military and civilian aircraft during the time of the smelter operation. Sampling and analysis of the surrounding environment (biota, flora, soils, and water) indicate there has been no leaching or uptake of radioactivity from the slag. The Navy sampled and removed the two slag piles with the concurrence of State of California regulatory officials. The Navy will resolve any further removal of subsequent identified slag through the Installation/Restoration Program.

h. Commission Conclusion (Mitigation). The Commission finds that the above-discussed mitigation measures adequately address and mitigate project estuarine fill impacts, impacts to eelgrass, burrowing owls, least terns, herons, and egrets, and other water quality impacts. This finding is based on the fact that, where appropriate, the Navy has included sufficient monitoring efforts, including provisions for modifications and/or remediation should monitoring efforts indicate the need for such additional measures. A key project feature is the final, post-disposal monitoring program needed to assure the continuing integrity of the fill is retention of the contained contaminants at the fill site. Because this monitoring is critical to the Commission's finding, the Commission staff has requested and the Navy has agreed to submit this monitoring plan to the Commission, for its review and concurrence (including a public hearing), prior to placing any material within the fill area. With this assurance the Commission is able to conclude that the proposed mitigation and monitoring provisions are adequate to address project impacts.

6. Commission Conclusion. Based on the above information and analysis, the Commission finds that: (1) the project is an allowable use for estuarine fill under Section 30233(a) of the Coastal Act; (2) the dredge materials have been sufficiently tested and the Navy proposes the appropriate disposal for each group of sediments, given the test results; (3) with the mitigation and monitoring measures incorporated into the project, the project represents the least damaging feasible alternative; (4) beach replenishment is being provided where dredged material is suitable; (5) dredging and disposal impacts will be adequately monitored, with provisions for modifications and/or remediation should circumstances justify it; (6) adequate mitigation is being provided for estuarine fill and impacts to eelgrass, burrowing owls, least terns, herons, and egrets; (7) the functional capacity of the San Diego Bay estuary will not be affected; and (8) oil/hazardous substances spill risks will not be increased. The Commission therefore concludes that the project consistent with the marine resources, water quality, diking/filling/dredging, environmentally sensitive habitat, and oil spill and other hazardous substance risk policies (Sections 30230-30233 and 30240) of the Coastal Act.

B. Public Access and Recreation. Sections 30210 through 30212 of the Coastal Act require the maximization and maintenance of public access and recreation opportunities. Section 30210 provides that: "... maximum access ... and recreational opportunities shall be provided for all the people consistent with public safety and military security needs ...." Section 30212 requires the provision of public access to be provided in new development projects located between the first public road and sea, again, consistent with military security and public safety needs. Section 30252 provides that new development should maintain and enhance public access to the coast by, among other things, providing adequate parking facilities or providing substitute means of serving the development with public transportation. Section 30250 provides that:

> (a) New ... industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources.

Section 30253(5) provides that new development shall:

> (5) Where appropriate, protect special communities and neighborhoods which, because of their unique characteristics, are popular visitor destination points for recreational uses.

Section 30254 provides that:

> Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.

The public access and recreation issues potentially raised by the project include: (1) whether physical public access along the NASNI shoreline should be provided; (2) spillover impacts off-base such as traffic and parking congestion, which can affect access and recreation; and (3) the project recreation benefits which will derive from disposal of 7.9 million cu. yds. of sand on the region's beaches.

(1) Physical Access at NASNI. In reviewing past consistency determinations for Navy activities at NASNI (Consistency Determinations CD-96-94, CD-39-84, CD-10-85 and CD-14-86), the Commission has traditionally determined that military security needs, and a lack of public access burdens generated by such projects, means that no additional public access need be provided in these projects in order to find them consistent with Coastal Act public access policies. A small area in the southeast corner of NASNI is available to the public and not fenced off as is the rest of the base. The Commission has historically determined the remainder of the base to be legitimately off-limits to the public due to military security needs. The Commission will conclude at the end of this access analysis that the project will benefit public access on an overall basis, and therefore does not need to consider whether additional physical access should be provided on base. Even if mitigation were deemed necessary based on the project's impacts discussed below, appropriate mitigation measures would be focused towards minimizing or relieving traffic and parking congestion in Coronado, as opposed to providing physical access at NASNI.

(2) Traffic and Parking

a. Issues. Access to the "mainland" from Coronado is by two routes. From San Diego, access is via the San Diego-Coronado Bay Bridge. From Imperial Beach, access is via Silver Strand Boulevard. Both of these routes are also major recreation through routes, and Coronado itself is a popular visitor destination point, due to its attractive character and location adjacent to both the San Diego Bay and Pacific Ocean, with its attractive sandy beaches and scenic views.

Traffic impacts of development intensification can become access/recreation impacts, if they occur during peak recreational periods and preempt limited traffic capacity available to recreational users. Navy personnel who park off-base can adversely affect recreation by taking up parking that would be available to recreational users. In analyzing access burdens posed by the project, the Commission must analyze whether overflow traffic and parking in the adjacent community of Coronado would adversely affect access and recreation, considering: (1) that the conversion from a CV to a CVN would entail additional construction traffic and parking; (2) that a CVN crew is larger than a CV crew and maintenance requirements for a CVN also involve increased personnel; and (3) that the Navy's plans include a reduction of 75 parking spaces at NASNI.

Exhibits 13-15 show NASNI/Coronado traffic patterns and congestion levels. The City of Coronado believes existing traffic congestion is already severe, and that project-related parking and traffic impacts are underestimated by the Navy and can adversely affect public access For example, the historic

off-base parking conflict between the Navy and Coronado residents and visitors has led the City to propose parking limitations on transient parkers as a response to NASNI workers parking off the base. This City response can generate adverse effects on parking for recreational use. In reviewing a recent Local Coastal Program (LCP) amendment submittal by the City of Coronado (LCP Amendment 1-91), the Commission requested that the City set certain areas off limits to parking limitations, in order to protect recreation. The City states that pressure for further limitations continues to increase.

b. Navy Analysis. The Navy maintains that the project would not increase parking and traffic congestion, regardless of whether recreation or commuter peaks are considered. The Navy points out that most (approximately 75%) of the peak traffic congestion periods occur during rush hour periods, which has traditionally not been a coastal resource concern. The Navy states that during weekends and holidays, any traffic increases would be only one quarter of the levels during weekdays, as follows:

> On non-work weekend days the ship is manned by a duty section consisting of approximately one-fourth of the crew who remain on board for 24 hour intervals. Consequently, the impact on peak recreational days amounts to fewer than 1/4 of the difference between CV and CVN crew size: 102/4=26 people.

Moreover, the Navy states that it has reduced traffic associated with NASNI over the last five years by "approximately 20 to 50 percent." The Navy further maintains that, despite the increased personnel associated with a nuclear carrier (102 more personnel), due to reductions in other operations at NASNI, there will be an overall decrease of 330 personnel at NASNI. The Navy elaborates:

> Personnel Loading at NASNI.
>
> An average complement (without an air wing) for a CVN is 3,217 personnel compared to an average complement (without an air wing) of 3,115 for a CV.
>
> Approximately 30 percent of that number are required to remain on board continually, and an additional 8 percent will be away from the local area on leave. Thus only approximately 62 percent of the crew, or 1,931 personnel, are available to contribute to local traffic, and approximately 80 percent of them drive automobiles alone. An average of 1.1 carriers are in port during the 8-year period assessed for personnel loading (refer to [FEIS] Table 2-1).
>
> The air wing departs both the CV and CVN prior to arrival at NASNI. The baseline year 1992 was compared with buildout year 1999 to determine the personnel leading projections at NASNI with the proposed action. Both years represent normal operating conditions at NASNI. It should be noted that NASNI has historically been a three carrier homeport. Although only two CVs are based there now, this abnormal loading has only been the case for the past few years since the USS RANGER was decommissioned in July 1993.

> As shown in line 1 of Table ES-1 [Exhibit 12], there will be a decrease in the overall population employed at NASNI from 1992 to 1999.
>
> Comparing buildout year 1999 (18,800) with base line year 1992 (19,130), there will be an overall average decrease of 330 personnel. As shown in Table ES-1, this population will fluctuate throughout the 8 years; this number, however, represents the anticipated average scenario at NASNI. The year 1992 was chosen because it reflects three CVs homeported at NASNI. As indicated by Table ES-1 for 1998, NASNI population will rise to 20,527, and corresponds to the first year one CVN and two CVs would be permanently homeported at NASNI. NASNI population is expected, however, to decrease after 1998 due to planned aircraft carrier operational and maintenance schedules. According to Table ES-1, the present year, 1995, is the highest projected NASNI population during this eight-year time frame (with only two CVs homeported).

Addressing cumulative impact concerns, the Navy states:

> Although additional traffic generated by the project is expected to be offset by the projected reduction in traffic as a result of projected population decrease at NASNI, significant cumulative traffic impacts may occur when future traffic associated with the additional homeporting of two CVNs is combined with surrounding offsite development and future base realignment actions affecting NASNI. Such impacts when mitigated on a project by project level would be reduced to below levels of significance. Regional transportation measures such as participation in carpooling programs, use of mass transit, and telecommuting when feasible, help to reduce incremental cumulative traffic impacts.

c. City Concerns. The City of Coronado questions the Navy's analysis and conclusions that traffic and parking impacts would not be significant. The City believes:

(1) the Navy has inadequately addressed cumulative impacts resulting from up to three CVNs being homeported in San Diego;

(2) the City has had no choice but to adopt, and is considering expanding, a "decal" parking program to prevent Navy vehicles from parking on City streets, and that such program potentially adversely affects public access and recreation to the shoreline;

(3) the Navy's proposed reduction of 75 parking spaces on base would further exacerbate parking congestion;

(4) traffic is already at unacceptable levels of service, and the population increase will be significant: there will be increases in personnel from the project construction (for 3 years) increases in personnel from the new carriers, large increases in personnel for support facilities (750 every 6 months), and increases in personnel resulting from other BRAC 95 actions. The impacts on population will lead to significant impacts on traffic, noise and air quality.

The City states:

> Also, the response holds that the newly formed Navy-Coronado transportation committee will develop constructive solutions to the traffic problems. Again, this response is unacceptable. The Navy should not proceed further with a new project until current conditions caused by the Navy are mitigated. Additionally, a committee consisting of Coronado residents and officials, North Island officials and Caltrans officials was previously formed several years ago to address the traffic issues in Coronado. As a result, a plan endorsed by all was developed and is called the Unified Transportation Plan. Some of the initiatives within this document have been implemented and others have not.

To address its concerns, the City requests that the Navy include the following additional mitigation measures into the project:

(1) a parking lot on base for vehicles currently parking on residential streets and impacting coastal access and alternative transportation for vehicles that will be associated with the construction project;

(2) the relocation of the main entrance gate on 4th to 3rd and Alameda as recommended in the UTP and endorsed by the Navy;

(3) undergrounding of utilities on First Street to mitigate impacts on neighborhoods caused by the excess clutter of traffic and parking and concerns regarding interference with view corridors and public health and safety;

(4) a parking lot of significant capability at the Naval Recruit Depot, combined with Ferry Service to North Island, coupled with measures to direct use of this service by Naval personnel and employees;

(5) Naval shuttle service from the Coaster (high speed rail servicing S.D. County) from the Santa Fe Railroad station to NASNI during traditional work hours; and

(6) barging of equipment and supplies for the construction of the project from the mainland San Diego directly to North Island.

d. Navy Response. In responding to a Commission staff request that the Navy address the City's requests, the Navy reiterates its position that, due to overall base personnel reductions, no mitigation measures are required for traffic or parking impacts. The Navy nevertheless has agreed to:

> ... pursue all reasonable ideas for traffic solutions with the Coronado Traffic Management Association to renew emphasis on constructive solutions to traffic and parking in the city. To that end, both NASNI and NAB [Naval Amphibious Base] Coronado have assigned action officers to complement the [CTMA's] newly hired specialist for military transportation matters. It is proposed further ... [to] adopt as items for analysis and action many of the constructive comments received as public comments to th[e] EIS.

Additional Navy traffic and parking commitments can be found on Exhibit 16, pages 3-4, in which the Navy lists its traffic reduction programs and commits to resolve parking conflicts by establishing:

> a special parking lot on Navy property where [Navy] vehicles [that] ... are unable to pass the safety and legal requirements to be admitted to the air station ... may be parked without being cleared for general access to the station.

(3) Project Benefits/Commission Conclusion. The Navy and the City disagree over whether the project will increase traffic and parking congestion. The City believes the Navy's analysis inadequately considers potential cumulative impacts and the Navy's omission of construction-related traffic in its analysis. In considering these points the Commission must the potential increases against the fact that most of the traffic congestion and parking concerns related to daily and commute periods, as opposed to weekend and holiday peak recreation traffic and parking, and the overwhelming recreational benefits of almost 8 million cu. yds. of sand being added to the region's littoral beach systems. The Commission also notes that it retains the authority to protect public access from measures considered by the City in response to conflicts with the Navy. The City nevertheless has a valid point that it bears the impacts of traffic and parking congestion, should they occur in relation to the project. The Commission strongly urges the Navy to work diligently with the City in addressing its concerns. However, the Commission concludes that the project's access and recreation benefits outweigh its impacts, and that the project, as proposed, is consistent with the public access and recreation (including traffic, parking, and cumulative impacts) policies (Sections 30210-30212 and 30250-30254) of the Coastal Act.

C. Scenic Resources. Section 30251 of the Coastal Act provides:

> The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.

The project site is located in the northeastern corner of NASNI and is visible from many public areas across the bay and from some areas of Coronado Island. The scale and general appearance of the existing buildings appear today largely as they did in the 1940s; the overall appearance is that of a military establishment that has been and will continue to be an integral part of San Diego's historical and visual environment. Although NASNI is highly developed, alterations to the NASNI shoreline need to be carefully designed due to their visibility from many offsite public viewing points.

To address visual concerns, the Navy has adopted an architectural plan for NASNI, entitled "Base Exterior Architecture Plan" (BEAP), which designates the project area a "Historic and Scenic Area." This plan contains policies to

retain the aesthetic appearance at NASNI, including retention of a "functional and visually cohesive station environment consistent with good planning, design, and environmental policies and practices." The plan recommends enhancing the historic buildings by removing incompatible structural additions and improving the view of the area from off-station (i.e., from the bayfront).

According to the Navy, the proposed facilities would have only minor impacts on public views. The Navy states that the removal of Buildings 68 and 69, construction of maintenance facilities (P-701, P-702, and P-703), construction of one new wharf, and the berthing of a CVN (which is visually similar to the slightly shorter CV it replaces) at the new wharf, are all actions "which would slightly alter the appearance of this portion of NASNI." Although the scale of proposed buildings would be somewhat larger than the buildings they replace, the Navy states:

> The proposed new buildings would be set back further from the water than the buildings they would replace. The proposed location would leave the large stand of eucalyptus trees unaffected. Their designs would tend to avoid large regular surfaces on the exterior portions of the buildings facing the waterfront. These areas would be broken into smaller more visually aesthetic features where possible. Screening and foliage would be employed in the landscape design to further enhance the waterfront appearance.

In addition, the Navy will comply with guidelines contained in the BEAP, such as landscaping, coloring schemes, and use of historic lighting fixtures. The Navy concludes that no aesthetic impacts would occur as a result of the proposed project, and that no mitigation measures beyond following the guidelines of its BEAP and those discussed in the archaeology section of this report (below) are necessary. Given the highly developed existing appearance of NASNI, the fact that proposed buildings would be designed to be visually compatible with this existing appearance, and the fact that the visual appearance of a CVN is very similar to that of a CV it would replace, the Commission finds that scenic public coastal views would not be significantly adversely affected by the project, that visual effects have been minimized by the Navy, and that the project is consistent with Section 30251 of the Coastal Act.

D. Archaeology. Section 30244 provides:

> Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

The Navy acknowledges that the project would result in a number of impacts to archaeological resources; the Navy summarizes these impacts as follows:

> Effects to historic properties from the project would occur in three contexts. First, construction of new wharf facilities would demolish three contributing structures (seaplane ramps) to NASNI's ... San Diego Historic District, an adverse effect that would not significantly diminish the overall integrity of the Historic District because of the deteriorated condition of the resources. Second, placement of maintenance facilities and new wharf would affect the Historic District by diminishing the integrity of the District's setting and feeling, an adverse, unavoidable effect that cannot be mitigated. Third, site preparation for construction of wharf-side maintenance facilities would require demolition of two historic properties (Buildings 29 and 68) that are considered eligible for nomination to the NRHP, an adverse, unavoidable effect that can be mitigated. In addition, Buildings 1 and 2 may be altered to serve as operational storage facilities during early phases of the project.

To address these impacts, the Navy includes a draft Memorandum of Agreement (MOA (see FEIS Appendix H-3)) between the Navy and the State Historic Preservation Officer (SHPO), in which it has agreed to the following mitigation measures:

> ... prior to the demolition of Buildings 29 and 68, and Seaplaine Ramps 2, 3, and 4, and construction of new wharf and depot-level maintenance facilities, the Navy will ensure that photographic and video documentation will be at an appropriate level consistent with the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering for Architectural and Engineering Documentation (National Parks Service 1983). This documentation will be made available to SHPO and appropriate local archives ...
>
> Design of the new depot level maintenance facilities, to be constructed to the adjacent Historic District, will include architectural elements and color schemes which mimic selected District Spanish Colonial Revival architectural themes. Responsibilities of the Navy for design consideration are outlined in the MOA, Appendix H-3.
>
> Mitigation for the demolition of the potentially eligible seaplane hangars (Buildings 29 and 68) ... [includes] documentation by a professionally qualified architectural historian or engineer through an American Buildings Survey (HABS) and/or Historic American Engineering Records (HAER). The documentation must be in accordance with ... [federal] Guidelines. ... In addition, a qualified archaeologist shall monitor the demolition of the buildings and excavation for the maintenance facilities. Responsibilities of the Navy for discovered historic resources [include]...:
>
> - recording and reporting of major features or artifact concentrations uncovered.
>
> - recovery/curation of sample remains uncovered where practicable

- o devising a plan to mitigate if archaeological properties are discovered.

Design measures will avoid alteration of the exterior of Buildings 1 and 2, and no mitigation is necessary.

The Navy concludes that these measures mitigate to the extent possible archaeological impacts. The Commission agrees and finds that the Navy has included reasonable mitigation measures and coordination with the SHPO, and that the project is therefore consistent with Section 30244 of the Coastal Act.

E. Geologic Hazards. Section 30253 of the Coastal Act provides that new development shall:

(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

The Navy has analyzed and included a number of minimization and mitigation measures to assure that geologic hazards potentially associated with the project will be adequately addressed, summarized in the following discussion.

Wharf Stability/Seismic Events. The Navy has incorporated the following state-of-the-art measures into the design, construction, and operation of the proposed homeporting facility:

- o Selection of an appropriate design level earthquake in accordance with NAVFAC P-355 and NCEL N1855, NCEL UG 0027 to be used in the design of the wharf structure.

- o Design and construction of pier structures to withstand ground motion associated with the design level earthquake in accordance with NAVFAC P355, NCEL R 939, and NAVFAC DM26.

Implementation of these design measures would ensure that wharf structures would survive ground motion associated with the design seismic event, without collapse and without interference with Naval operations. This impact is therefore mitigable to below a level of significance.

Structural Impacts due to Seismic Ground Motion. To mitigate this impact, the Navy has incorporated state-of-the-art measures during the design, construction, and operation of the proposed homeporting facilities. These measures include the following design measures:

- o Up-to-date site specific seismic risk analysis to determine the design level earthquake in accordance with NAVFAC P-355 and NCEL N1855.

- o Design and construction of the building structures to withstand ground motion associated with the design level earthquake in accordance with NAVFAC P-355.

Implementation of these design measures would ensure that building structures would survive ground motion associated with the design seismic event, without collapse and without interference with Naval operations.

Structural Impacts due to Ground Rupture. No buildings would be constructed within 50 feet of the known fault zone. Implementation of this project design measure would ensure that the structures would not be affected by ground rupturing associated with the design seismic event.

Liquefaction of Hydraulic Fill Areas. Vibrocompaction densification (or replacement and subsequent compaction) of the hydraulic fills pursuant to design criteria, would result in significant ground improvement (Mitchell 1981, 1991). Essential structures, such as the Controlled Industrial Facility, would be designed to accommodate liquefaction. This would isolate the essential buildings from the potentially liquefiable materials, and the impact of liquefaction related to these buildings would be reduced to below a level of significance.

Strong Sea Motion Induced by Seismic Events. Impacts from strong sea motion, while not likely to occur, would be mitigated by the following design measure:

- o Placement of armored stone along slopes of the eelgrass bed.

Implementation of this measure would reduce impacts but not to below a level of significance. ... To mitigate the impact associated with the possible erosion at the proposed mitigation site, the Navy shall ensure that adequate erosion control measures are implemented. These measures, based on the tidal processes, wave characteristics, and storm surges prevalent at the site, and the likely effects of these processes on a newly constructed eelgrass habitat, may include but not be limited to a new rock dike to protect the new shoreline, groins, and off-shore wave breakers.

Structural Impacts due to Hydraulic Fill Settlements. Densification by vibrocompaction of hydraulic fills would reduce the potential of liquefaction. Densification would also increase the overall stiffness of the hydraulic fills which in turn would reduce the extent of deformation and subsequent settlements.

To further reduce the impacts of association with settlement of hydraulic fills, the Navy shall implement mitigation measures including but not limited to the following:

- Use large grain size dry material.

- Implement additional site remediation measures to treat areas or zones of soils with fines content in excess of the applicability of vibrocompaction. These measures may include vibroreplacement and/or providing drainage to accelerate the dissipation of excess pore water, thus accelerating the development of final settlements or other measures.

With these measures, the Commission finds that the Navy has adequately anticipated and designed for geologic forces and other hazards. As discussed in the Habitat/Marine Resources section of this report, the Commission is concerned about the integrity of the structural fill containing dredge sediments, especially those determined unsuitable for aquatic disposal. With the engineering features discussed above and the monitoring discussed on page 15 of this report, which will assure the dike and fill remain stable and the materials within the fill remain isolated from the marine environment, the Commission finds the project will minimize risks to life and property in areas of high geologic, flood, and fire hazard, assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area. The Commission therefore finds the project consistent with Section 30253 of the Coastal Act.

F. Air Quality. Section 30253(3) provides: that new development shall:

(3) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.

Section 30414 provides:

(a) The State Air Resources Board and air pollution control districts established pursuant to state law and consistent with requirements of federal law are the principal public agencies responsible for the establishment of ambient air quality and emission standards and air pollution control programs. The provisions of this division do not authorize the commission or any local government to establish any ambient air quality standard or emission standard, air pollution control program or facility, or to modify any ambient air quality standard, emission standard, or air pollution control program or facility which has been established by the state board or by an air pollution control district.

(b) Any provision of any certified local coastal program which establishes or modifies any ambient air quality standard, any emission standard, any air pollution control program or facility shall be inoperative.

(c) The State Air Resources Board and any air pollution control district may recommend ways in which actions of the commission or any local government can complement or assist in the implementation of established air quality programs.

The Federal Clean Air Act allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The California Clean Air Act of 1988 established California State Ambient Air Quality Standards (CAAQS) for criteria pollutants and additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. The San Diego County Air Pollution Control District (APCD) is the local agency for the administration and enforcement of air quality regulations. The Air Resources Board (CARB) still maintains regulatory authority over mobile source emission statewide.

The San Diego Air Basin is classified as serious for ozone nonattainment and moderate for carbon monoxide nonattainment. The Environmental Protection Agency (EPA) is responsible for enforcing the Federal Clean Air Act of 1970 and its 1977 and 1990 Amendments. On November 30, 1993, the EPA promulgated its rules for determining general conformity of federal actions with state and federal air quality implementation plans. In order to demonstrate conformity with the local State Implementation Plan, a project must clearly demonstrate that it would not: (1) cause or contribute to any new violation of any standard in the area; (2) interfere with provisions in the applicable State Implementation Plan for maintenance or attainment of air quality standards; (3) increases the frequency or severity of any existing violation of any standard; or (4) delay timely attainment of any standard, any interim emission reductions, or other milestones included in the State Implementation Plan for air quality. The EPA has developed specific procedures for conformity determinations for federal actions that include preparing an assessment of emissions associated with the action based on the latest and most accurate emission estimate techniques.

Analyzing project-related emissions and mitigation requirements, the Navy states:

Construction-Related Impacts.

Mitigation measures are required for NOx emissions for 1996 construction because they exceed the significance criteria of 50 tons per year of emissions. One of the largest contributors of NOx emissions is the dredging operation. Dredging equipment would be required to undergo New Source Review, and under the San Diego Air Pollution Control District (SDAPCD) Rules and Regulations, must demonstrate that dredging operations would not cause or contribute to an air quality violation. Dredging equipment may also be subject to offset requirements. Therefore, construction-related NOx emissions would be mitigated through equipment permitting and possibly through offsetting emissions of NOx.

These APCD permit requirements will include BACT (Best Available Control Technology) requirements, such as: (1) use of prechamber diesel engines with proper maintenance and operation to reduce NOx emissions; (2) electrified

equipment where feasible; (3) equipment maintenance; (4) catalytic converters on gasoline-powered equipment; (5) 4° engine timing retard for diesel-powered equipment; and (6) substitution of gasoline-powered for diesel-powered equipment, where feasible. Fugutive dust control measures may also be required.

The Navy states that for construction emissions, the only pollutant exceeding "significance" thresholds is NOx (50 ton threshold), primarily due to the dredging operations. For operation emissions, the Navy believes, for similar reasons as discussed in its traffic analysis, that overall base emissions will decrease compared to existing levels. The Navy concludes:

> The emissions associated with the proposed action are below both the significant emission levels and the de minimis levels for conformity; therefore the proposed action would not result in a significant impact on air quality and [the project] is exempt from the conformity determination requirements of EPA's General Conformity Rule.

The construction threshold exceedence would require mitigation, which will occur through the imposition of BACT and possibly offset requirements by the San Diego APCD. Offset requirements are currently 1.2:1 for major sources of NOx and/or VOCs. This and any other applicable air quality requirement will be applied by San Diego APCD, which must determine that a new source demonstrate that it will not cause or contribute to a violation of an air quality standard. The Commission finds that the requirements that will be imposed by the APCD through its permit process will assure the project's consistency with the Coastal Act Section 30253 requirement that new development be consistent with applicable ARB/APCD requirements.

SUBSTANTIVE FILE DOCUMENTS

1. Consistency Determinations CD-39-84 and CD-14-86 (Navy Master Plans for NASNI).

2. Final EIS for the Development of Facilities in the San Diego-Coronado to support the Homeporting of One NIMITZ Class Aircraft Carrier, October 1995.

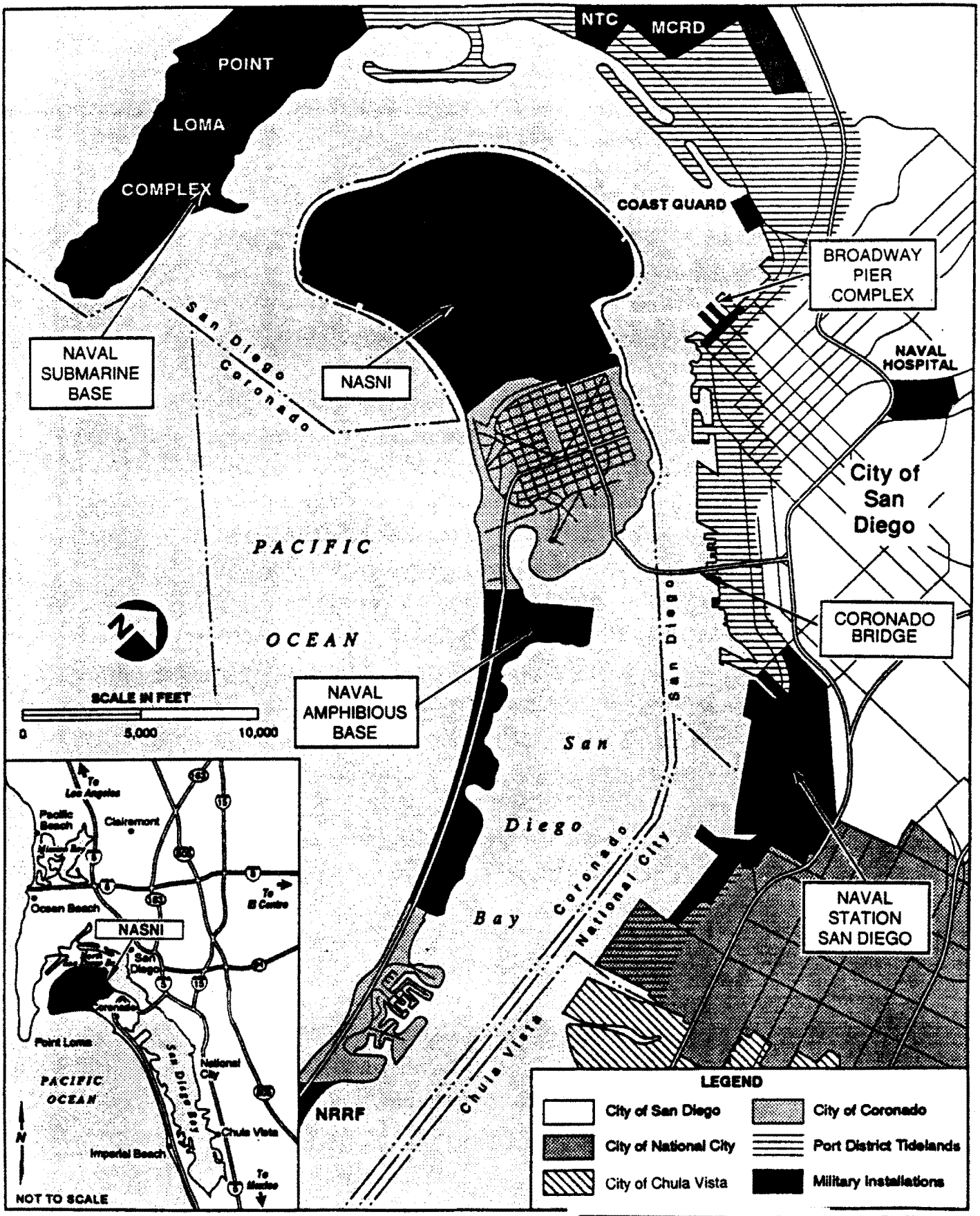
3. Base Exterior Architecture Plan, NASNI, Sept. 1983.

4. City of Coronado Local Coastal Program Amendment 1-91, Commission Staff Reports dated April 23, 1991 (denial as submitted, with suggested modifications), and August 1, 1991 (approval upon resubmittal consistent with suggested modifications).

5. Consistency Determinations CD-96-94, CD-39-84, CD-10-85 and CD-14-86 (Navy, NASNI).

6. Consistency Determination CD-100-95 (Navy, Cyclone-Class Patrol Ship Pier, Naval Amphibious Base, Coronado).

7800p

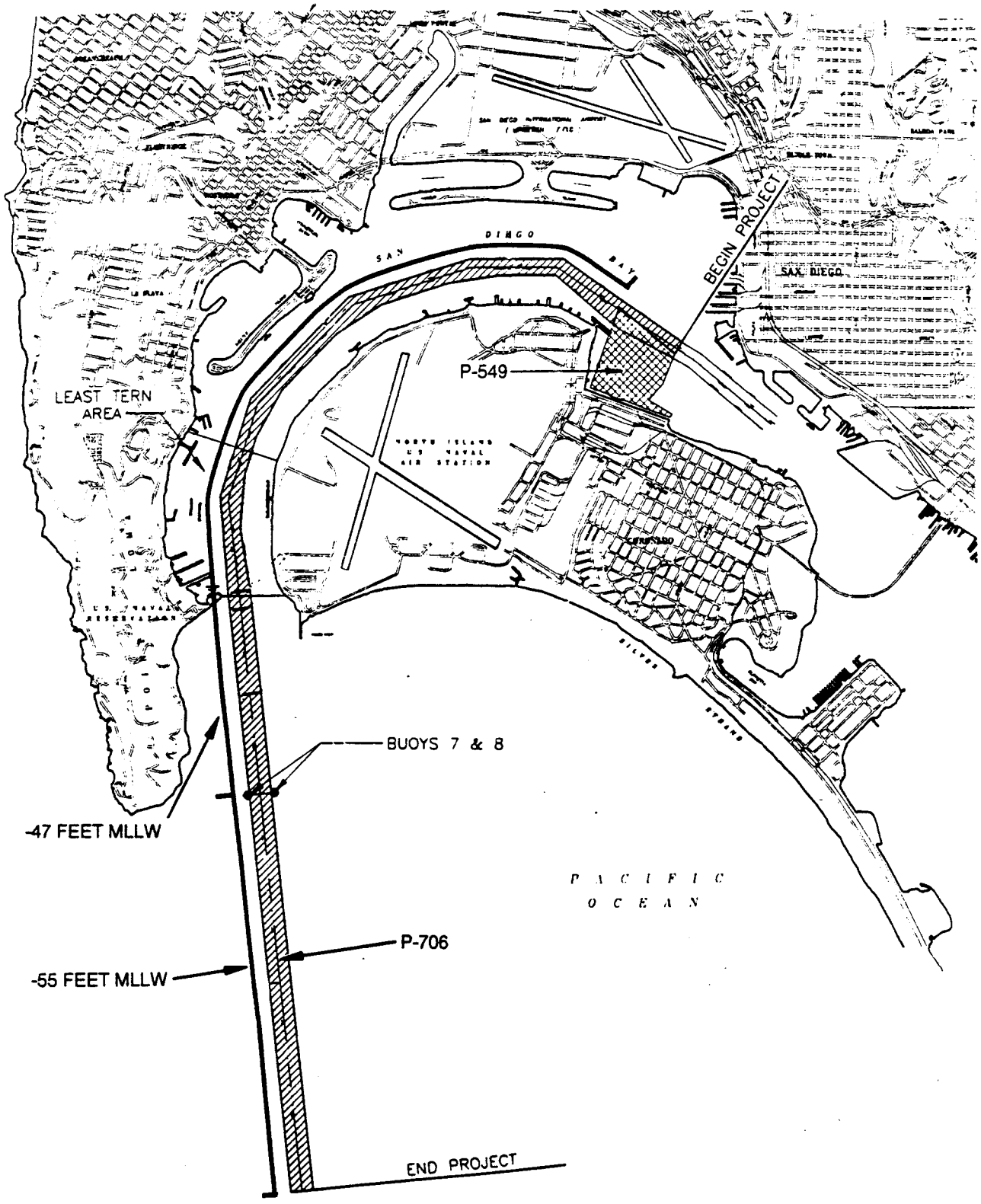


San Diego Vicinity Map

FIGURE ES-1

EXHIBIT NO. 1
APPLICATION NO. CD-95-95 US NAVY

California Coastal Commission

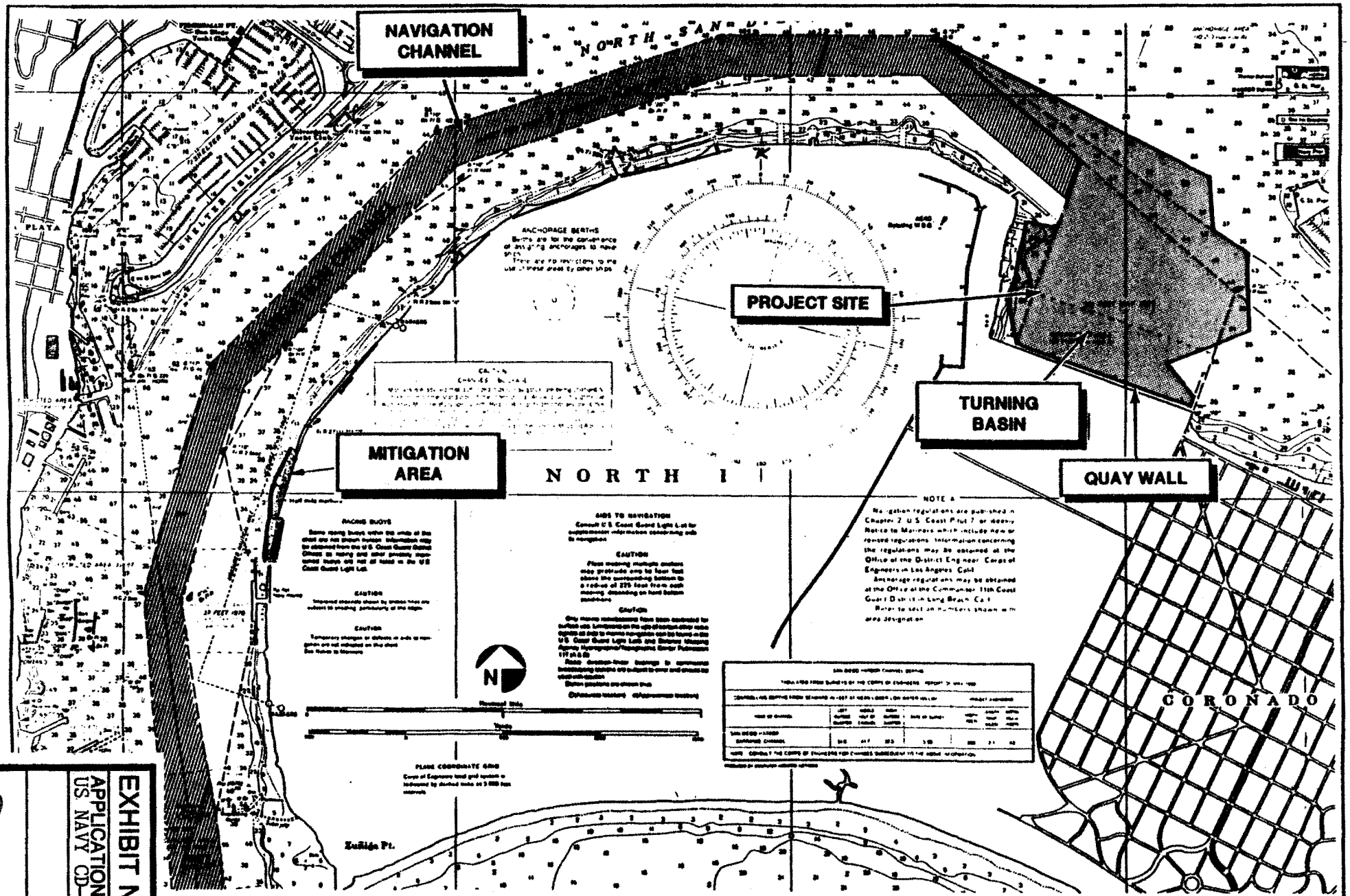


SOURCE: Frederic R. Harris, Inc.

Preferred Alternative
Channel Dredging

EXHIBIT NO. 2
APPLICATION NO.
CD-95-95 US NAVY

California Coastal Commission



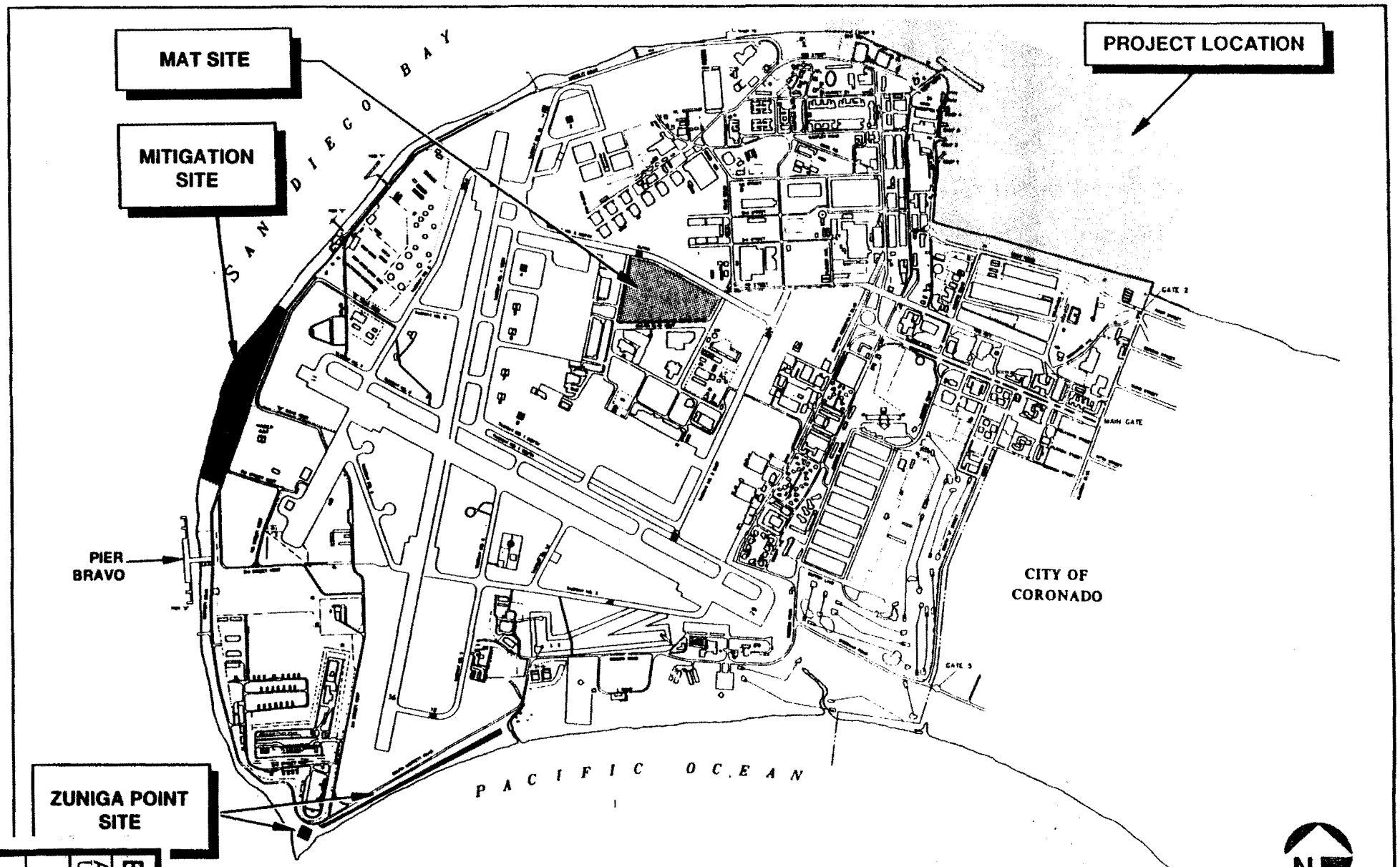
Study Areas for NIMITZ-Class Homeporting Project

FIGURE 1

EXHIBIT NO. 3
APPLICATION NO. US NAVY CD-95-95

California Coastal Commission

3

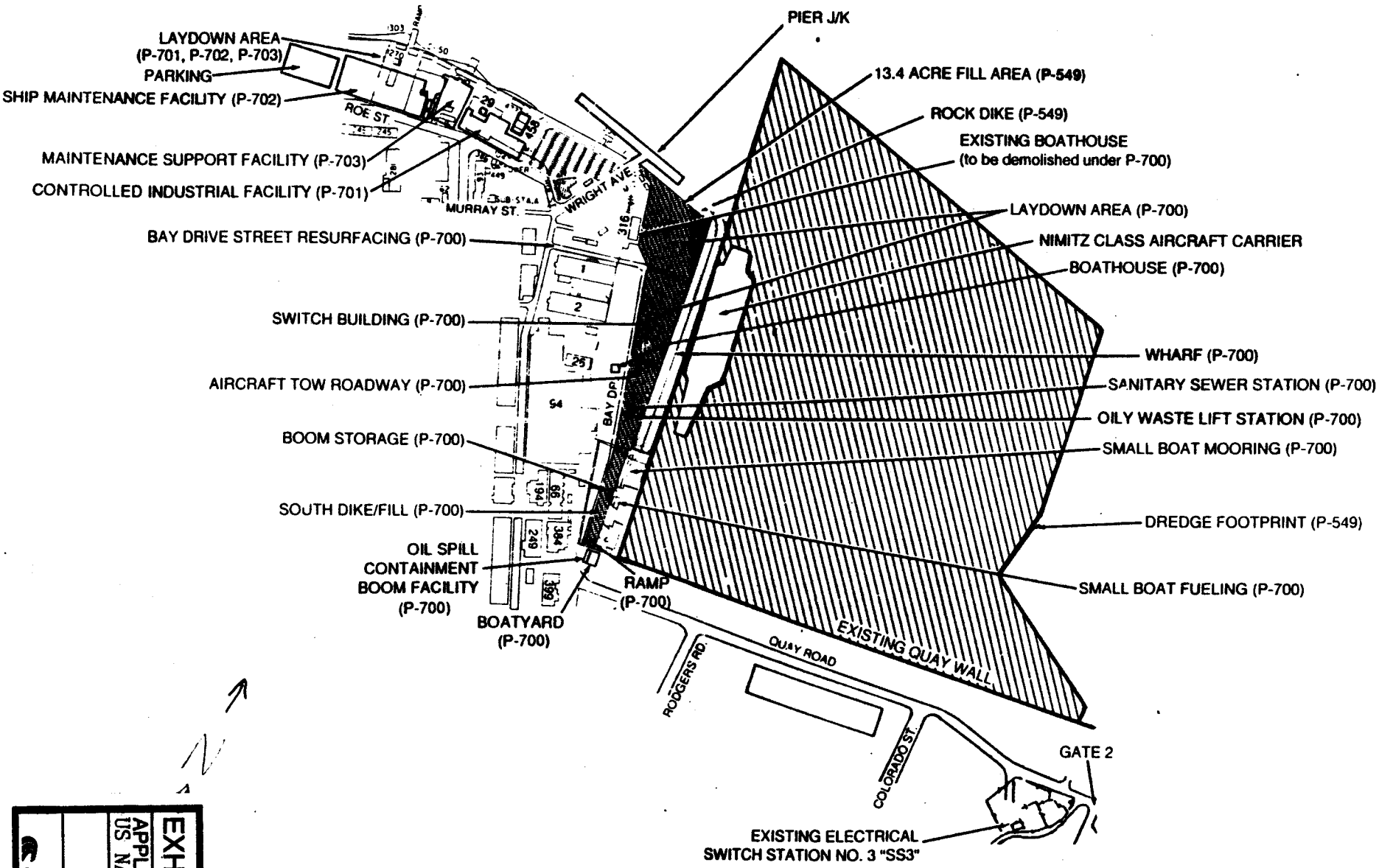


I Master Plan 1991

General Project Location at NASNI

FIGURE 2-3

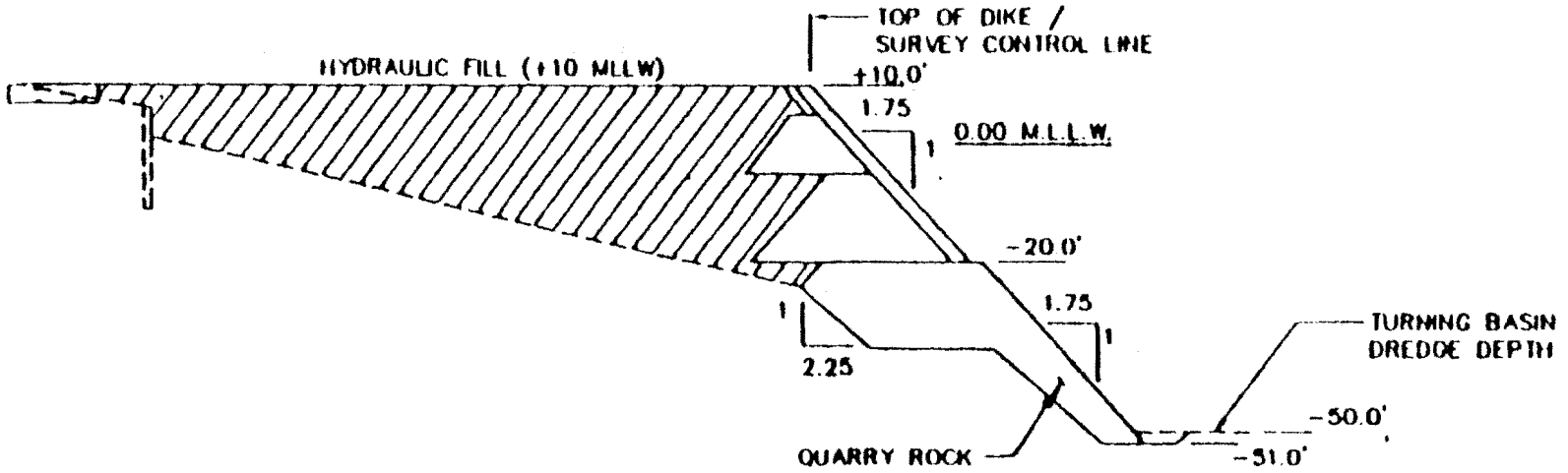
EXHIBIT NO. 4
APPLICATION NO. US NAVY CD-95-95
California Coastal Commission



Preferred Alternative Site Plan
(P-549, P-700, P-701, P-702, and P-703)

EXHIBIT NO. 5
APPLICATION NO.
US NAVY CD-95-95

California Coastal Commission



TYPICAL FILL SECTION – NORTH/SOUTH

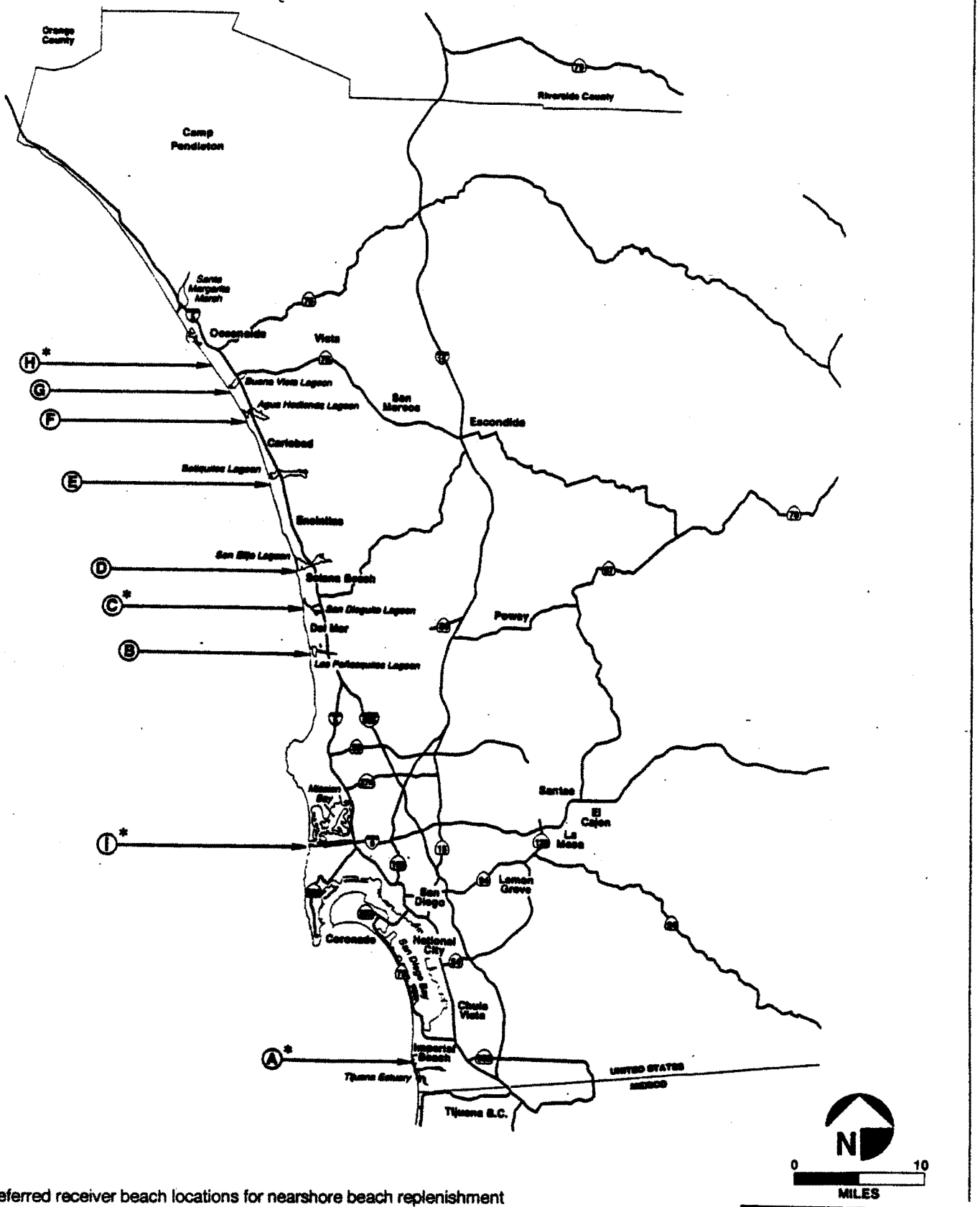
N.T.S.

Y
C15 C15

Cross Section of Rock Dike Structure

EXHIBIT NO. 6
APPLICATION NO.
US NAVY CD-95-95

California Coastal Commission



* Preferred receiver beach locations for nearshore beach replenishment

Potential Beach Receiver Sites

EXHIBIT NO. 7
APPLICATION NO.
US NAVY CD-95-95

California Coastal Commission

Table ES-2

QUANTITIES OF DREDGED MATERIAL AND DISPOSAL LOCATIONS RECEIVING THE DREDGED MATERIAL FROM THE NASNI HOMEPORTING PROJECT (PREFERRED ALTERNATIVE)

Dredge Site	Total Amount of Dredged Material to be Dredged* (Cubic Yards)	Disposal Location	Amount of Dredged Material to be Disposed[1] (Cubic Yards)
Turning Basin	1,700,000	Beach Replenishment	920,000
		Ocean Disposal	670,000
		Fill Area	110,000
Mitigation Area	455,000	Beach Replenishment	305,000
		Ocean Disposal	0
		Fill Area	150,000
Navigation Channel	6,900,000	Beach Replenishment	6,638,000
		Ocean Disposal	262,000
		Fill Area	0
Totals	9,055,000	Beach Replenishment	7,863,000
		Ocean Disposal	932,000
		Fill Area	260,000

1 All volumes are approximate.

2 This amount includes 57,000 cubic yards that would be deposited at the mat site at NASNI for least tern mitigation and 58,000 cubic yards that would be deposited at Zuniga Point at NASNI for snowy plover mitigation.

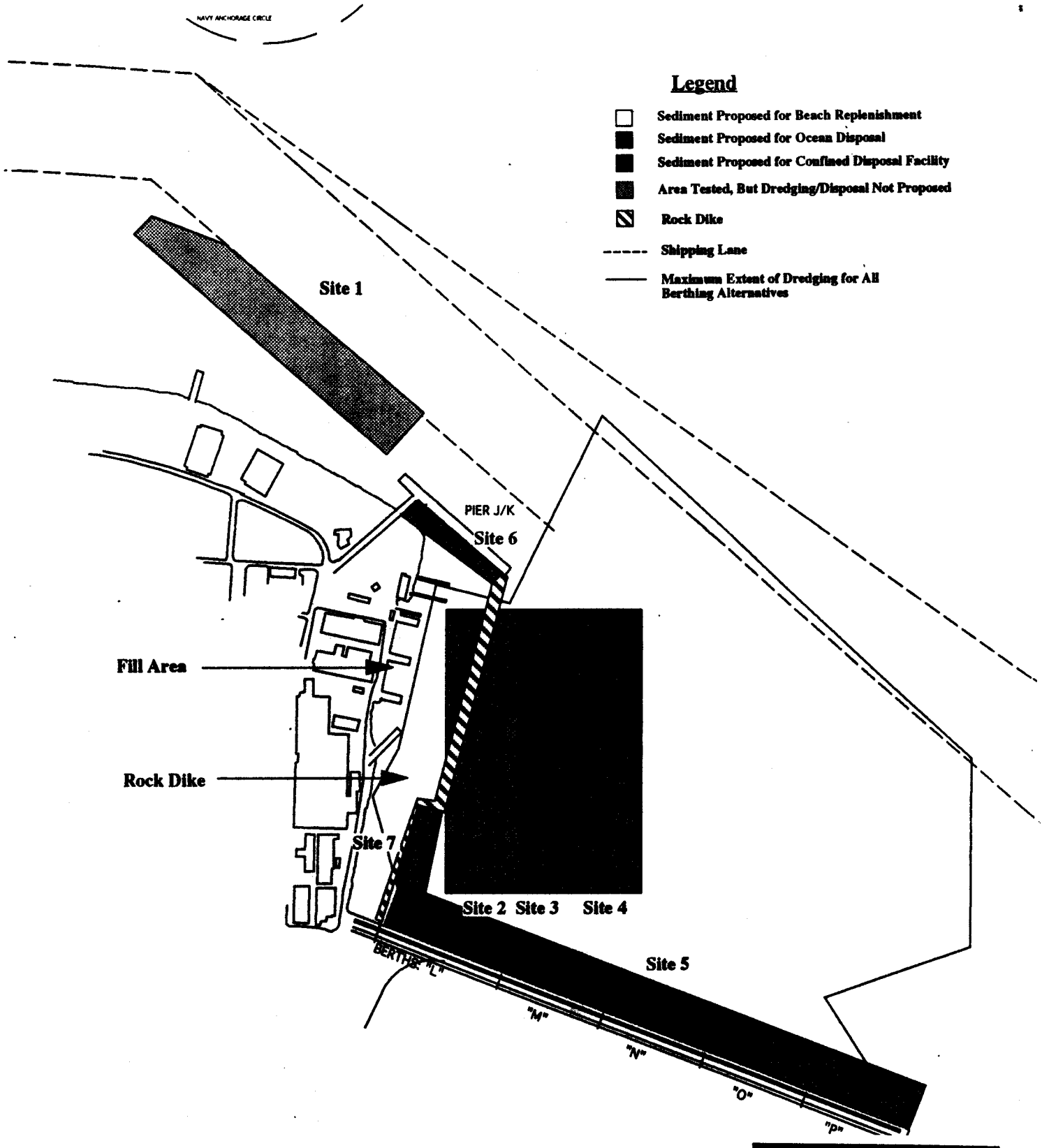
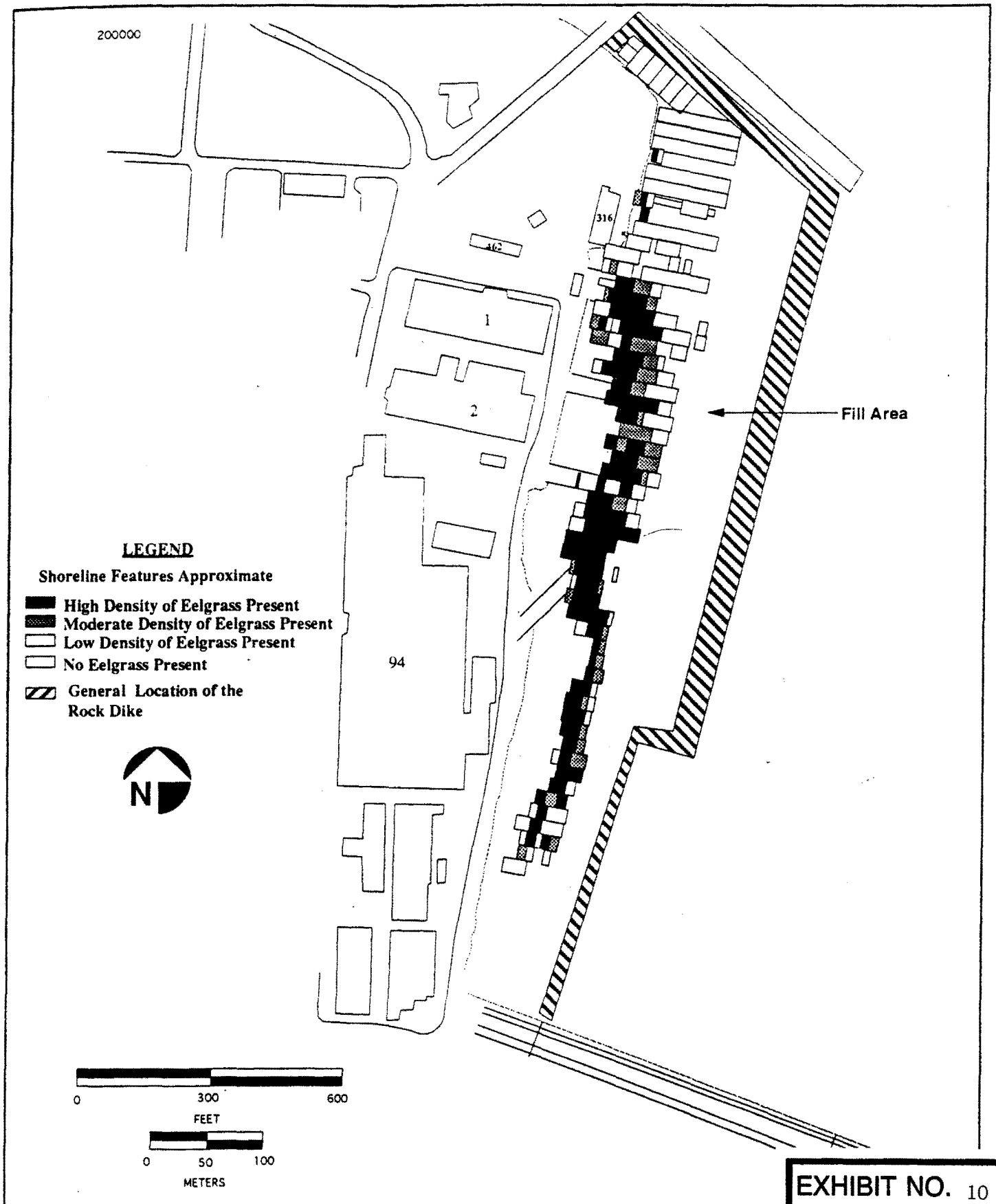


EXHIBIT NO. 9
APPLICATION NO.
US NAVY CD-95-95

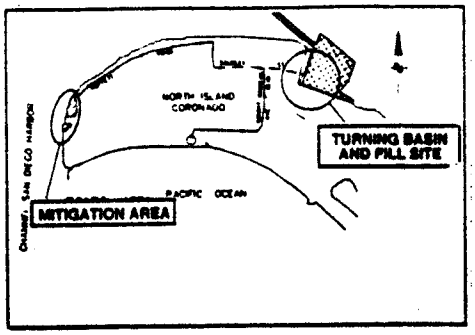
California Coastal Commission



Eelgrass that will be Impacted by Placement of the Rock Dike and Fill Area in the Turning Basin at NASNI

EXHIBIT NO. 10
APPLICATION NO.
US NAVY CD-95-95

California Coastal Commission



-5 MLLW CONTOUR

STORM DRAIN

+1 MLLW

BUFFER ZONE FOR PIPELINE

PIPELINES FROM NSC PT. LOMA

10" UNDERGROUND FUEL

STORM DRAIN

WEST EDGE MOFFETT ROAD

-5 MLLW CONTOUR

TOP OF SLOPE

BUFFER ZONE FOR MOFFETT ROAD

DIRT ROAD

+1 MLLW

N

0 400

FEET

LEGEND

EXISTING EELGRASS

RIP RAP

EXCAVATIC

Proposed Mitigation Area

EXHIBIT NO. 11

APPLICATION NO. US NAVY CD-95-95

California Coastal Commission

Table ES-1

NASNI PERSONNEL LOADING

	1992	1993	1994	1995	1996	1997	1998	1999
1. Total Employed (Less CV/CVN)[1,2]	16,794	17,364	17,777	17,352	15,383	14,666	16,102	16,003
2. Average Deployed VS, HS, HC, HSL	-872	-872	-872	-872	-872	-872	-872	-872
3. Nondeploying Population	15,922	16,492	16,905	16,480	14,511	13,794	15,230	15,131
4. Ship Personnel in Port	3,208	4,828	2,523	2,610	4,111	3,925	5,169	3,388
5. Depot Maintenance Facility[3]	0	0	0	0	0	0	128	281
Net Daily Population	**19,130**	**21,320**	**19,428**	**21,090**	**18,622**	**17,719**	**20,527**	**18,800**

Footnotes:

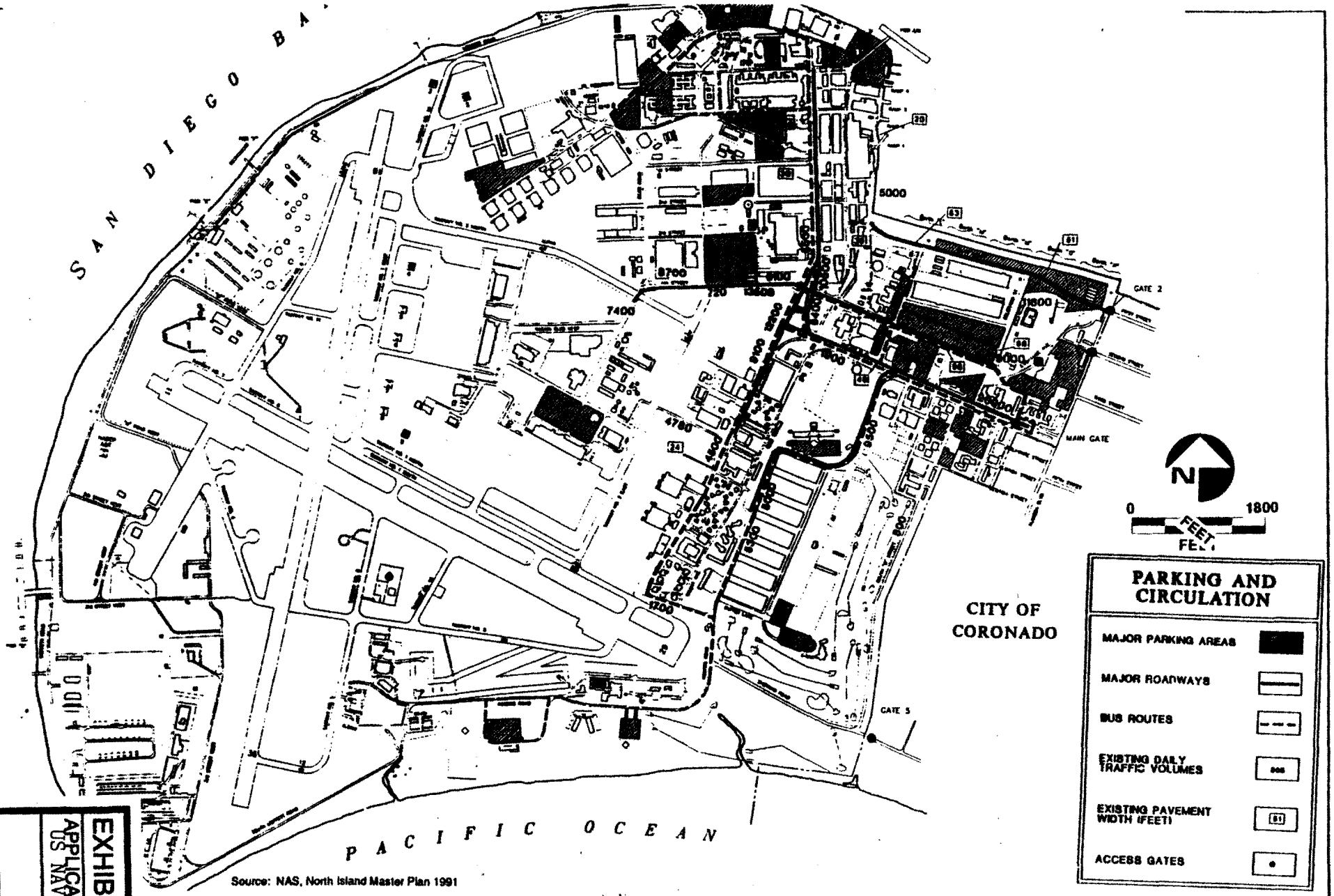
1. Total military, civilian, and contractor personnel assigned to NASNI, and all tenant activities. (Source: NAS Staff Civil Engineer)

2. Homeported carrier populations are excluded from the Total Employed Population because their irregular presence affects the air station population significantly. These personnel are included in line 4 based upon their actual presence in port.

3. The CVN will conduct a six-month maintenance availability every two years. The first two of these six-month periods would be conducted in the ship's homeport. Every third maintenance availability would be conducted in dry-dock at a nuclear-capable shipyard. Depot maintenance facility (DMF) manning would be less than 50 personnel when no CVN maintenance is being conducted, but would increase to an average of 750 for a six-month maintenance availability. DMF manning forecast herein is based on the carrier maintenance plan current as of February 1995. These figures assume one CVN homeported at North Island.

4 Figures are averages for year-long periods. Partial year population changes, such as carrier deployment, affect average yearly population to the extent of the event's duration relative ire year.

ures do not include the new BRAC 95 mandated realignment of E-2 aircraft squadrons from NAS Miramar to NASNI. Refer to Sections 2.2 and 6.1.1.



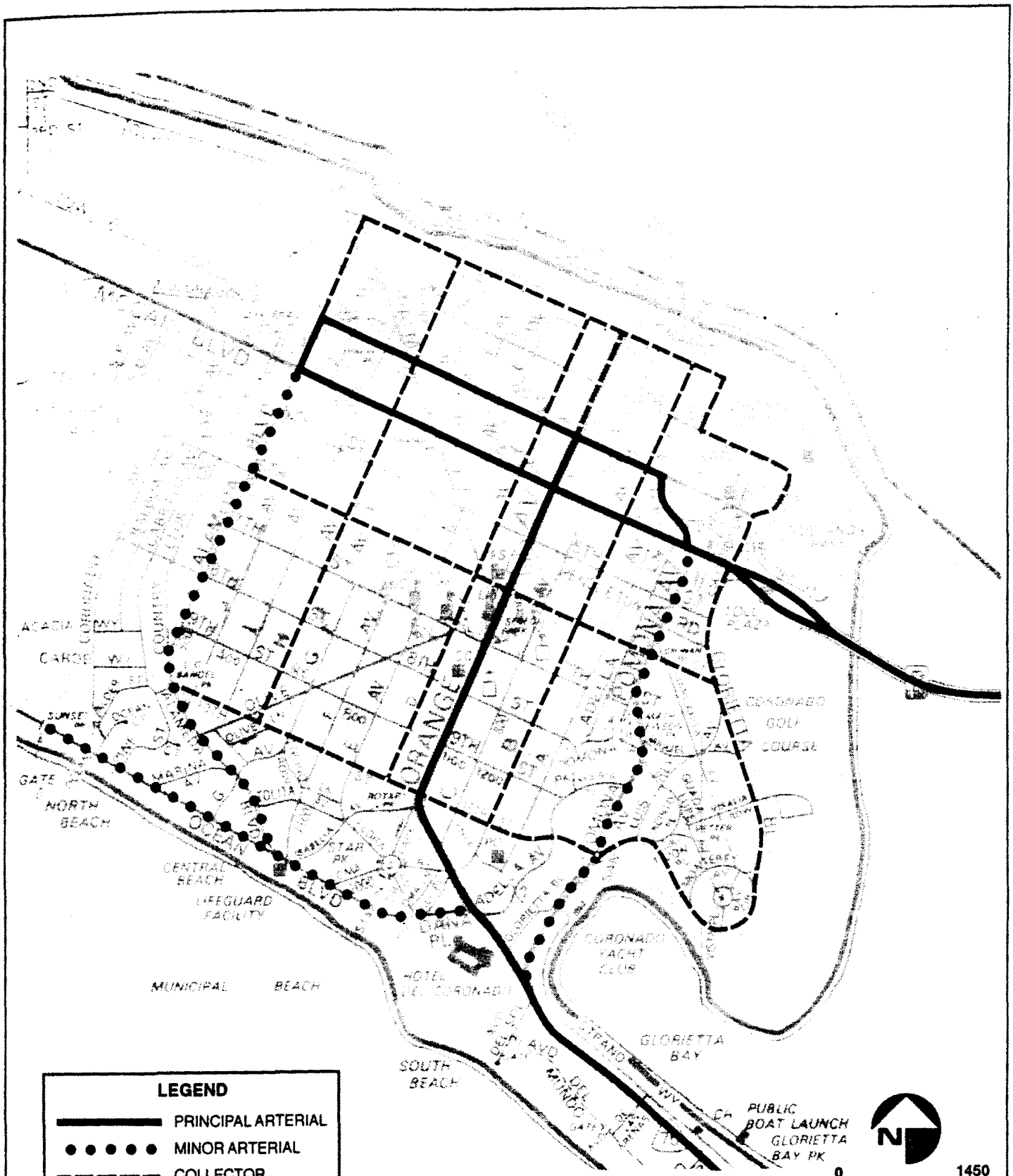
Source: NAS, North Island Master Plan 1991

Parking and Circulation

FIGURE 3.3-8

3.3-20

EXHIBIT NO. 13
APPLICATION NO. CD-95-95
US NAVY
California Coastal Commission



SOURCE: Lincoln Law & Greenspan

City of Coronado Street Classifications

EXHIBIT NO. 14
APPLICATION NO. US NAVY CD-95-95

California Coastal Commission

Table 3.3-6 (Revised)

EXISTING STREET SEGMENT OPERATIONS

Street Segment	DIR	Classification	Capacity (LOS C)	Existing	
				ADT	LOS
First Street:					
Orange Avenue to Alameda Blvd.	Both	Collector	7,500	3,950	A
Third Street:					
C Avenue to Orange Avenue	WB	Principal Arterial	25,000	29,200	E
Orange Avenue to D Avenue	WB	Principal Arterial	25,000	19,710	B
D Avenue to Alameda Boulevard	WB	Principal Arterial	25,000	12,830	A
Fourth Street:					
Pomona Avenue to B Avenue	EB	Principal Arterial	25,000	29,000	E
B Avenue to Orange Avenue	EB	Principal Arterial	25,000	24,000	C
Orange Avenue to D Avenue	EB	Principal Arterial	25,000	16,030	B
D Avenue to Alameda Blvd.	EB	Principal Arterial	25,000	14,910	B
Ocean Boulevard:					
Orange Avenue to Alameda Blvd.	Both	Minor Arterial	15,000	11,140	B
Alameda Boulevard to Gate 5	Both	Minor Arterial	15,000	7,820	A
Silver Strand Boulevard:					
Amphibious Base to Pomona Ave.	Both	Principal Arterial	30,000	31,000	D
Orange Avenue:					
First Street to Third Street	Both	Collection	30,000	11,020	A
Third Street to Fourth Street	Both	Principal Arterial	30,000	30,900	D
Fourth Street to Tenth Street	Both	Principal Arterial	30,000	31,390	D
Tenth Street to R. H. Dana Place	Both	Principal Arterial	30,000	27,800	C
Alameda Boulevard:					
First Street to Third Street	Both	Collector	7,500	3,940	A
Third Street to Fourth Street	SB	Principal Arterial	25,000	20,700	C
Fourth Street to Sixth Street	Both	Minor Arterial	15,000	9,490	B
Sixth Street to Ocean Boulevard	Both	Minor Arterial	15,000	4,650	A

Capacities per City of Coronado proposed street classification table.
DIR = Direction of travel
ADT = Average Daily Traffic
LOS = Level of Service

Source: Linscott, Law and Greenspan

Department of the Navy
Commander Naval Air Force
United States Pacific Fleet
Naval Air Station, North Island
San Diego, California 92135-5100

November 1, 1995

Mr. Mark Delaplaine
Federal Consistency Supervisor
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, California 94105-2219

Dear Mr. Delaplaine:

This letter responds to your recent questions regarding the Navy's environmental impact statement for the development of facilities in San Diego/Coronado to support the homeporting of one NIMITZ-class aircraft carrier. This information supplements the telephone conversation of October 13, 1995 between yourself, Mr. Hexom of Naval Facilities Engineering Command, and me.

Question 1: Project Description. You request clarification of the specific ships and facilities included in the project.

Response: Naval Air Station North Island has customarily been homeport for three aircraft carriers. The number has decreased to two only since 1993, however the basic capability to accommodate three remains. This EIS and project involve homeporting of only one NIMITZ class aircraft carrier (CVN) as a replacement for the third aircraft carrier that was decommissioned. The two remaining conventionally-powered aircraft carriers (CVs) that are presently homeported at North Island are not affected by this project. However, because those two older CVs will eventually be retired, it is reasonably foreseeable that they will be replaced by CVNs at some time in the future. For that reason, the cumulative impact section of the EIS addresses the possibility of a total of three CVNs in the San Diego/Coronado area of fleet concentration. It is important to understand that CVN homeporting is envisioned as replacement action, not as additions to the total number of aircraft carriers homeported in the area. In the event a future decision is made to replace the CVs with CVNs, it is emphasized that the action would be the subject of a separate and completely independent NEPA action.

Shore facilities included in this project are:

a. Upgrades to the existing quaywall berth, Milcon Project P-549, which is addressed in EIS Section 2.2.1.1.

b. Construction of a new wharf, Milcon Project P-700, which is addressed in EIS Section 2.2.1.2.

c. Construction of a Depot Maintenance Facility, Milcon Projects P-701, 702 & 703, which are addressed in EIS Sections 2.2.1.3, 2.2.1.5 and 2.2.1.6 respectively.

No support ships are affectied by this project. The Navy homeports ships independently of the aircraft carriers with which they deploy, so the remainder of the proposed carrier's battle group are not affected by this project.

Question 2: Transfer of vessels from Long Beach.. You request clarification of the status of Navy activity in Long Beach, and when the Navy plans to transfer vessels and facilities from Long Beach to San Diego.

Response: This project includes nothing related to the closure of naval facilities at Long Beach. Naval Station Long Beach was closed on September 30, 1994. All ships and operational facilities have already moved to new homeports throughout the Pacific Fleet. Several of the ships have been decommissioned.

The Long Beach Naval Shipyard remains active. Located adjacent to the ex-naval station, it performs maintenance and repair of Pacific Fleet ships much as it has throughout its existence. There are commonly one or two ships in the shipyard for routine maintenance. As of this writing there are .none, however others are scheduled there for routine repair periods. Aircraft carriers are sent to Long Beach only rarely. BRAC-95 law directs the Navy to close Long Beach Naval Shipyard by the year 2002; its closure will not involve homeport changes for any ships.

Question 3: Oil Spill Risk Analysis. You request information regarding risk of oil spill from the proposed CVN vis-a-vis existing conditions; and you request additonal information regarding the Navy's contingency plans in the event of a spill.

Response: A CVN is less likely than a CV to be involved in an oil spill for several reasons:

a. A CVN carries less total fuel oil than the CV (9,000 vs 10,822 tons respectively).

b. Most oil spills occur while oil is being transferred from place to place within a ship. Since CVNs carry no fuel oil for use by the ship's engines (all fuel oil onboard a CVN is jet fuel) virtually no fuel oil would be in use while the ship is in San Diego Bay.

c. There is less potential for spills caused by material failure in a CVN as compared to a CV because the equipment and fittings in the newer ships are less likely to fail.

Specific size of the two classes of ships are comparable:

	CV	CVN
Length	1,063 ft	1,092 ft
Displacement	81,773 tons	102,000 tons

Regarding your questions about the Navy's oil spill contingency plans for NAS North Island, applicable portions of the draft plan are included as enclosure one to this letter. It addresses the

EX 16 P 2

history of spills at North Island, various risks and hazards, and the worst case spill scenario. The document remains in draft form while under review by various regulatory agencies. It will be revised appropriately as soon as agencies provide their comments.

Question 4: Pilotage and Increased Risk of Oil Spill. You request information regarding pilotage procedures for aircraft carriers in San Diego Harbor.

Response. Qualified harbor pilots, licensed by the U.S. Coast Guard, are on the bridge of all large U.S. Navy ships, including CVs and CVNs, whenever underway within San Diego Harbor. When entering or departing the harbor, a pilot is onboard continuously as the ships maneuver between the berth and a position near buoys 7-8, south of Ballast Point.

Additional Information: You requested information regarding Navy programs to assist the city of Coronado in its efforts to reduce traffic.

Response. The data presented in the EIS shows that this CVN homeporting project will not increase traffic in Coronado. In fact, as shown in Table 2-1, Navy population – therefore the resulting traffic -- will actually decrease. It is clear that no mitigation is required.

Nevertheless, the Navy is committed to improve the situation. Our neighbors in the community consider traffic a significant issue, so traffic reduction ranks high among Navy priorities. We work closely with the city in that regard, and together have many programs in place to reduce traffic.

Enclosure two describes some of the programs that NAS North Island has established:

The Naval Air Station gives priority parking preference to rideshare participants.
The Naval Air Station operates a rideshare coordinator office.
The Naval Air Station and the City subsidize van pools.
The Naval Air Station and the City sponsor bicycle commuting.
The Naval Air Station provides guaranteed rides home to ridesharers and vanpoolers.
The Naval Air Station has assigned transportation coordinators at every tenant activity.
The Naval Air Station has helped arrange a reduced fare for Metropolitan transit riders.

There is more:

The Naval Air Station has recently reserved the best 10 percent of on base parking spaces for ridesharers.
The Naval Air Station recently hired a transportation specialist to optimize commuter programs.
The Naval Air Station publishes a newsletter advertising commuter programs.
The Naval Air Station produced a video program encouraging commuter programs. The video is shown to all the station's tenant activities, including the aircraft carriers.
The Naval Air Station actively contacts those military and civilian employees who park on the streets, encouraging them to park on base.

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The Naval Air Station has established park and ride sites at NAS Miramar and Imperial Beach for north county and south bay commuters.

Parking is also an issue: Coronado residents dislike cars belonging to Navy members or employees being parked on public city streets while the owners are at work on the air station. Many -- perhaps most -- of those cars are unable to pass the safety and legal requirements to be admitted to the air station. To resolve the problem, the Naval Air Station has established a special parking lot on Navy property where these vehicles may be parked without being cleared for general access to the station. Because this special lot is closer to work areas than the streets of Coronado, the program is nearly certain to be successful. Location of the lot is shown in enclosure three.

I hope that this information is helpful to your review of the project. Please do not hesitate to contact me if I may be of any further assistance. My staff and I stand ready to provide any information you may desire.

Sincerely,

C W Chamberlain

C. W. CHAMBERLAIN
By direction

Enclosures:
1. Draft Oil Pollution Act of 1990 Facility Response Plan, Tabs 3-4, Naval Air Station North Island
2. Commuter News published by Naval Air Station North Island
3. Map showing special parking lot at Naval Air Station North Island
4. Video tape of commuter programs, produced by Naval Air Station North Island

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Sediment Quality

Site-Specific Sediment Quality Studies

To augment existing information, the Navy conducted site-specific investigations to characterize sediment quality at the project site and provide data necessary to evaluate the suitability of sediments in the dredge footprint for various disposal options including beach replenishment, ocean disposal, and on-site fill in a nearshore confined disposal facility.

At the project site, dredging of the quaywall and turning basin will require disposal of approximately 1.6 million c.y. of sediment. Two separate testing approaches were used to determine the most appropriate disposal options for these sediments. First, a screening study was performed, which included the use of solid phase bioassays, grain size, and total organic carbon analyses to assess the overall sediment quality in the area and to determine the suitability of these sediments for beach replenishment. Second, following the screening study, ocean disposal testing was performed on areas that were considered unsuitable for beach replenishment based on grain size or toxicity considerations.

Screening Study - Turning Basin

The screening study involved the collection of sediment cores at 57 locations throughout the carrier turning basin (Figure 3.1-8). Cores were divided into three vertical sections representing discrete depths (e.g., 0-2 ft., 2-4 ft., and >4 ft.) in the sediment column. The resulting 171 separate core sections were analyzed for grain size and total organic carbon (TOC). A total of 123 samples were tested for amphipod toxicity. A complete summary of the screening study results is contained in Appendix Table C-3. Core samples were taken to project depth or to depth of refusal. Project depth was achieved at 40 of the 57 core locations (Appendix Figure C-3.1). Of the 17 locations where target penetration was not achieved, 12 were offshore sites and five were inshore sites.

Amphipod Bioassay Results

The amphipod testing program was conducted in eight separate sets. Multiple testing events were required to accommodate the large volume of bioassays conducted as part of

the screening phase. All tests were initiated within the six-week holding time indicated in the EPA/COE procedural document commonly referred to as the Green Book.

Complete toxicity results are presented on Appendix Figure C-3.2. Control and reference survival for all screening study tests were high ranging from 87 percent to 99 percent and from 82 percent to 99 percent, respectively. These results indicate that the organisms tested were healthy and acceptable for use in toxicity testing.

All surface and middle segments were tested for toxicity as well as selected bottom samples. Bottom samples were tested only when toxicity was observed in the surface or midsection of an individual core. In some cases, toxicity was observed in the surface or mid-depth section, but no follow-up test was conducted on the bottom core section (indicated as "np"). This occurred for one of two reasons: (1) the six-week holding time of some samples expired before the opportunity to initiate a test or (2) some of the bottom samples were so coarse that an inadequate sample volume was obtained after sieving. Samples that exhibited statistically significant toxicity based on a one tailed t-test are italicized and underlined. Sites where full target penetration was not achieved and consequently no sample was available for testing are indicated as "ns." Amphipod toxicity was observed at 18 of the 57 sampling locations.

Grain Size Results

The beach replenishment disposal criterion used for this study was that 80 percent of the dredged sediment from an individual core must have a grain size larger than 63 µm (i.e., sand and gravel). Sediment grain size was evaluated for all 171 core sections (Appendix Figure C-3.3). Two areas had grain size distributions that did not meet the 80 percent greater than 63 µm criterion (Appendix Figure C-3.4). Based on this criterion, these locations were deemed unsuitable for beach replenishment and were subsequently tested for ocean disposal.

Total Organic Carbon

Total organic carbon is a useful indicator for determining the ability of sediments to bind up organic contaminants such as PCBs. The higher the TOC content in a particular sediment, the greater its ability to bind chemicals making them less bioavailable and consequently less toxic. TOC results (as percent wet weight) for surface, mid-depth, and bottom samples are

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summarized in Appendix Figure C-3.4. TOC ranged from 0.05 to 1.00, 0.02 to 1.09, and 0.01 to 0.078 percent in surface, mid-depth, and bottom samples for the inside sites, respectively. At the offshore sites, TOC ranged from 0.03 to 0.90, 0.01 to 1.28, and 0.03 to 0.90 percent in surface, mid-depth, and bottom samples, respectively.

The screening study produced several major findings: (1) the majority of the sediment from the offshore stations is composed of material that is of the appropriate grain size for beach replenishment; (2) although the sediment, for the most part, was greater than 90 percent sand, there were several locations in the offshore area that exhibited amphipod toxicity; (3) several inshore locations are not likely candidates for beach replenishment based on grain size distribution; and (4) several inshore core locations displayed significant amphipod toxicity. Chemical assessment or Green Book bioassay/bioaccumulation testing was conducted on sites that were unsuitable for beach replenishment (fine grain) and/or displayed amphipod toxicity.

Sediment Chemistry

Chemical analyses were conducted at eight locations where amphipod toxicity (Appendix Figure C-4.1) was observed. It was suspected that these results might be false positives based on the observation that the sediment grain size indicated that the material was suitable for beach replenishment. Sediment chemistry results are contained in Table 3.1-3.

Chemical analyses indicated that the majority of the test sites were basically free of contamination. Mercury was observed in four of the sediment cores at levels only slightly above the National Oceanic and Atmospheric Administration (NOAA) ER-L concentration. Mercury concentrations ranged from 0.019 milligrams per kilogram (mg/kg) to 0.221 mg/kg. The NOAA ER-L concentration for mercury is 0.15 mg/kg.

An elevated PCB level of 1.313 mg/kg was observed in sediment core I-19. The NOAA ER-M concentration for total PCBs is 0.40 mg/kg. The concentration observed in core I-19 is three times higher than the ER-M, indicating that there is a significant potential for toxicity at this PCB level. The five cores taken closest to I-19 did not display any significant amphipod toxicity. Chemical analyses conducted on core I-17, near I-19 did not show any detectable traces of PCBs. Based on this information, the PCB level at Site I-19 appears localized. The location where this core was collected, however, would ultimately

be encapsulated behind the rock dike under the preferred alternative. The complete bulk sediment chemistry results are contained in Appendix Table C-4.

Elutriate Chemistry

Elutriate chemistry was conducted on four sediment samples collected from the area that will be dredged for the footing of the proposed rock dike (Appendix Figure C-5.1). Elutriate samples were analyzed to predict if dissolved chemicals could move from the solid to the liquid phase during the dredging operation. Results of these analyses indicated that all chemical concentrations measured were below analytical detection. Results are summarized in Table 3.1-4. The complete elutriate chemistry results are contained in Appendix Table C-5.

Supplemental Study

Based upon their review of the screening phase study of this project, the COE and EPA determined that additional, higher resolution and more definitive analyses were necessary at these sites prior to determining if the material is suitable for beach replenishment. The additional testing included suspended-particulate and solid phase bioassay analyses, sediment and elutriate chemical analyses, and grain size analyses conducted on multiple cores collected at several locations around the original core location. The test sites are referred to as Sites 9, 10, and 11 and are depicted in Appendix C. Results of these analyses are outlined in Appendix C. No mercury concentrations were found in Site 9 above the ER-L. Site 10 had 3 of 5 cores with mercury levels above the ER-L ranging from 0.17 to 0.26 mg/kg. Site 11 had 1 of 5 cores with a mercury concentration above the ER-L at 0.44 mg/kg. The toxicity tests conducted on these sites resulted in no significant toxicity. Based on these results, the material from these sites is being proposed for near shore disposal in 15 to 25 feet of water. Final disposal determinations will be made by the COE and EPA who are in the process of reviewing this most recent set of analyses.

Ocean Disposal Study

Results from the screening study were used to identify several locations (Figure 3.1-9) that were not suitable for use as beach replenishment material based on either particle size (not sandy enough) or localized sediment contamination (based on the amphipod results).

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These areas were broken down into seven test sites which were tested for possible ocean disposal at the designated dredged material disposal site LA-5, located 5 miles west of Point Loma. Sediment was analyzed according to the procedures outlined the U.S. Army Corps of Engineers/U.S. Environmental Protection Agency document commonly referred to as the Green Book. Characterization included chemical and physical analyses of the proposed dredged material, plus the conduct of suspended-particulate and solid phase bioassays using five different marine species.

Bioaccumulation analyses were conducted with both a clam (grain feeder) and a worm (carnivore/detrital feeder) over a 28-day test sediment exposure and two-day clean sediment depuration period. Organism tissue was analyzed for a series of heavy metals, arsenic, selenium, organochlorine pesticides, PCBs, organotins, and PAHs. For purposes of this discussion, all tissue and sediment concentrations are expressed in µg/kg dry weight.

Sediment collection for this study was done using a vibracore. Core location positions were determined by a land based surveyor. The approximate dredging volumes and target water depth for ocean disposal are contained in Table 3.1-5.

Table 3.1-5 (Revised)

DREDGE MATERIAL VOLUMES PROPOSED FOR OCEAN DISPOSAL

Site Number	Approximately Dredge Volume (Cubic Yards)	Dredge Depth (Feet MLLW)
2-Top	121,000	-51
2-Bottom	127,000	-51
3-Top	121,000	-51
3-Bottom	52,000	-51
4	129,000	-51
5	102,000	-51
6	13,500	-51
7	65,000	-51

Each core sample from sites 2 and 3 was separated into two segments: a top segment (upper 6 feet of sediment), and a bottom (sediments found deeper than 6 feet) segment. The cores were separated in this manner to determine if the potentially contaminated

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material in the top layer could be separated from cleaner material deeper in the sediment column. If the sediment quality varied with water depth, this approach would allow the Navy to minimize the amount of sediment that would have to be disposed at the in-bay fill site with depth. Separation of the cores yielded seven discreet samples each of which underwent complete bioassay/bioaccumulation testing for ocean disposal consideration.

Thirty gallons of sediment was collected from Sites 1, 2-top, 2-bottom, 3-top, 3-bottom, 4, 5, 6, and 7. Ten cores from each site (except Site 5, 6, and 7) were composited and tested as a single sample. At Site 5, only three locations could be sampled due to the positioning of the aircraft carriers present in that area. Four cores were collected in Sites 6 and 7. These cores were composited and tested as a single sample per test site. Each composite sample underwent Green Book bioassay/bioaccumulation testing in addition to chemical analyses.

Site 5 was initially tested as one site, however, results indicated there to be significant solid phase polychaete toxicity. In an attempt to localize the contamination, a subsequent testing program was conducted to further evaluate Site 5 as four smaller testing parcels. Each of these parcels underwent full Green Book bioassay/bioaccumulation testing. Collection in each of these areas was possible because both aircraft carriers which normally occupy this site were underway. Five sediment cores were collected in each of the 4 areas for a total of 20 cores.

Reference sediment is defined as "sediment that has physical, biological, and chemical properties similar to the dredged material disposal site." Reference sediment for this study was collected at an agency-approved site located approximately five miles west of the entrance to Mission Bay, California. A stainless steel pipe-dredge was employed to collect sediment from a depth of approximately 90 fathoms. Prior to test initiation, the reference material was sieved through a 1-mm mesh screen to remove organisms and debris. A subsample of the reference sediment was removed prior to screening for chemical and grain size analyses.

Of the 7 sites tested, only a portion of Site 5 displayed toxicity. Three areas of Site 5 (sites 1, 2, and 3) showed statistically significant toxicity in both the solid phase worm test and the suspended particulate phase echinoderm bioassay (Figure 3.1-10). The LC_{50} for the echinoderm bioassay was >100 percent elutriate indicating that the level of mortality observed would not be of concern once the 4-hour initial mixing period at the dumpsite was

taken into account. Solid and suspended-particulate phase bioassay test results for all test sites are contained in Appendix C-6.

Based on the solid phase result, disposal of Site 5-1, 5-2, and 5-3 sediment at LA-5 would not be in compliance with the provisions outlined in the Ocean Dumping Law (Title 40 CFR Part 227, Subpart B-Environmental Impact). The other six test sites met ocean disposal criteria.

The total volume of material analyzed for ocean disposal was 731,000 cubic yards. Of this volume, approximately 70,000 c.y. was determined to be unsuitable for ocean disposal base upon the criteria in the Ocean Dumping Law and Section 103 of the Marine Protection, Research, and Sanctuary Act (MPRSA). Ocean disposal, therefore, is being proposed for approximately 661,000 c.y. of material. The remaining 70,000 c.y. would be disposed of on-site behind the proposed rock dike structure under the preferred alternative. In addition, approximately 104,000 cubic yards of material in Site 1 was tested for ocean disposal but will not be dredged under the preferred alternative. Based on the final design diagrams for this project, dredging in Site 1 was no longer deemed necessary.

Because of the poor survival observed in the worm portion of the bioaccumulation series, very little information can be gleaned from this portion of the study. Only Sites 1, 6, and 7 had enough tissue per replicate to provide a good statistical comparison to the reference. No significant bioaccumulation was found for Site 1 worms. The other test sites provided only enough tissue for one replicate, with the exception of Site 2 top (3 replicates) and Site 2 bottom (2 replicates). In addition, the amount of worm tissue supplied to the lab was inadequate to achieve the desired detection limits. The results of most of the worm tissue analyses must be considered suspect.

The polychaete worm, *Nepthys caecoides,* is used in two separate analyses for ocean disposal bioassay testing. The first is a 10-day survival bioassay; the second is a 28-day bioaccumulation assessment. The 10-day survival test was used to determine that a portion of the sediment along the existing aircraft carrier quaywall is unsuitable for ocean disposal because it caused statistically significant toxicity to these organisms. Sediment from all the other sites tested for ocean disposal passes this test showing no toxicity.

The 28-day bioaccumulation assessment is conducted with a worm and clam. Upon termination of this test, clam survival was extremely high, but worms did not fare as well. Although survival was acceptable in worms exposed to control and reference sediment (the test protocol requires >70 percent survival), mortality was high in worms exposed to test sediment. This finding seemed anomalous based on the lack of toxicity observed in 10-day survival test (and the fact that no toxicity was observed in any of the other organisms tested). Based on conversations with the test organism supplier, it was determined that the likely reason for the poor worm survival observed was lack of food rather than toxicity. The supplier also indicated that they have experienced this happening in the past when clean sandy materials were tested. The duration of the test (28 days) was long enough to cause the worms to either starve to death and/or cannibalize each other.

Switching to another worm species was not a viable option. Of the three species approved for testing in the Green Book only *Nepthys* is applicable to this test program. Of the other test worms listed as acceptable, one does not provide enough tissue to conduct the required chemical analyses, and the other is not found on the west coast (it is routinely collected in Maine).

Although worm bioaccumulation analyses only provided a limited data set, clam survival was fine and complete data is available upon which to make decisions. Clams are generally considered to be better indicators of the ecological significance of bioaccumulation because they are unable to metabolize (break down) complex chemicals to their less toxic smaller components.

Based on the suspended-particulate and solid phase bioassay results, chemical and physical sediment analyses, and clam bioaccumulation data, more than adequate data exist to make an overall assessment of the sediment quality at the sites tested.

No statistically significant bioaccumulation of heavy metals (except chromium and lead), arsenic, selenium, organochlorine pesticides, PCBs, or organotin was observed in clam tissue. Chromium was found in Site 7 clam tisue at an average level of 20.4 mg/kg compared to a reference level of 15.8 mg/kg. Statistically significant lead concentrations were found in clams exposed to sediment from Sites 1, 2 top, and 3 top. The concentrations detected were 3.5 mg/kg, 3.0 mg/kg, and 3.3 mg/kg for each of the three sites, respectively. The average reference tissue concentration was determined to be 2.07 mg/kg. Total PAH bioaccumulation at very low levels was detected in Site 1 (142 µg/kg),

Site 2 top (99 µg/kg), Site 3 top (53 µg/kg), Site 5 (226 µg/kg), Site 6 (757 µg/kg) and Site 7 (259 µg/kg). Complete bioaccumulation results are contained in Appendix Table C-7.

Previous Sediment Chemistry Studies

Harding Lawson Associates (HLA 1989) collected 40 cores to a maximum sediment depth of 9.5 feet in support of Installation Restoration (IR) program studies. Many samples were collected adjacent to historic industrial discharge pipes or current storm drains. The majority of the HLA study sampling area will be covered under the fill area of Alternative 1. Sediment collection locations and chemical data from this study are summarized in Appendix C, and compared to the regulatory guidelines used to evaluate potential biological impacts of sediment chemical concentrations. The guidelines applied to trace metals and organic data include National Oceanic and Atmospheric Administration (NOAA) Effects Range Low (ER-L) and Effects Range Median (ER-M) values (Long and Morgan 1990, Long et al. 1994) and Puget Sound Dredge Disposal Analysis (PSSDA) program screening level values (PSSDA 1988).

In Long and Morgan (1990), ER-L values are defined as concentrations equivalent to the lowest 10 percentile of screened chemical data and indicate the low end of the range of concentrations in which toxic effects were observed or predicted. These values are used to designate concentrations above which adverse effects on sensitive life stages and/or species are predicted or may occur. The ER-M chemical values are the concentrations equivalent to the 50 percentile point in the screened data. They are used to indicate the concentration above which effects are frequently or always observed or predicted.

Although these guidelines have no formal status with respect to San Diego Bay, they are used by many regulatory agencies to interpret sediment chemistry results. Results which exceed the guideline values have a statistical potential for association with adverse biological effects, although the mere presence of a contaminant does not necessarily indicate biological impacts. A large body of literature has developed during the last several years and describes conditions which neutralize the potential effects of elevated trace metals (e.g., acid-volatile sulfides and organic carbons) (Ankley et al. 1993). All of the chemical concentrations are reported in dry weight unless otherwise indicated.

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Several trace metal results from sediments in the project area exceed the National Oceanic and Atmospheric Administration (NOAA) ER-L guideline values. These sample locations are shown on Appendix Figures C-1.1 and C-1.2. Arsenic, cadmium, total chromium, copper, lead, mercury, and zinc concentrations exceed the NOAA ER-L levels at several nearshore locations. Cadmium, total chromium, copper, lead, mercury, and zinc exceed the NOAA ER-M values at a small number of nearshore locations. Benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, phenanthrene, and pyrene exceed the NOAA ER-L, but not ER-M levels (Appendix Figure C-1.3) at a small number of nearshore locations. Total petroleum hydrocarbons ranged from 4.3 to 582 mg/kg and exceed the value of 17 mg/kg measured at the offshore reference site used by the COE and EPA for bioassay testing (Appendix Figure C-1.4). No copper or mercury concentrations exceed the cleanup levels established for Commercial Basin, San Diego Bay (RWQCB 1990).

Results of Sediment Sampling for Radioactivity

Navy sampling of the offshore sediments for radioactivity in the vicinity of the North Island project area in 1993 showed no detectable cobalt 60, the radionuclide of environmental interest related to Naval nuclear powered warship operation (NNPP 1994a). The detectable level of cobalt-60 for Navy radiological surveys is approximately 0.1 pci/gram. The actual value varies depending on the amount of naturally occurring radioactivity in the survey sample. A previous USEPA radiological survey of San Diego Bay in 1987 (U.S. EPA 1989) showed detectable cobalt 60 in one of eight sediment samples at the North Island project area, at a concentration of 0.030 ± 0.011 pCi/g dry. This concentration is less than one percent of the concentration of naturally occurring background radioactive materials in the harbor sediment. This and other trace amounts of cobalt 60 detectable near some Navy piers in San Diego Harbor are the result of releases of low-level radioactivity from nuclear powered ships which occurred in the 1960s. These levels are well below the naturally occurring radioactive levels in the harbor, and pose no radiological impact to the area. Since the early 1970's, the Navy has prohibited the intentional discharges of radioactivity to the harbor, and the level of radioactivity in the sediments has significantly decreased due to radioactive decay and sedimentation. Cobalt 60 decays away with a half-life of 5.2 years, which means in a 100 years, the amount originally present diminishes by a factor of almost 1,000,000. Otherwise, only naturally occurring radioactivity and traces of cesium 137 from nuclear weapons fallout were observed in the sediment samples.

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Bioavailability

The California State Mussel Watch Program uses the California mussel (*Mytilus californianus*) as a tool to monitor the bioavailability of sediment-borne contaminants throughout the state. This is accomplished by transplanting uncontaminated mussels to various areas of interest, leaving the mussels in place for two to six months, then measuring the concentration of contaminants in the mussels. A major assumption of this program is that the presence of contaminants indicates bioaccumulation in mussel tissue; however, transient sediment passing through the digestive tract of mussels could also be measured.

The California State Mussel Watch Program sampled one location within the project site. (NI Boathouse - State Mussel Watch Site No. 892) during 1985 (Figure 3.1-11). Results of this study are summarized in Appendix Table C-8. One analyte, PCB 1248, exceeded the 95 percent State Mussel Watch Elevated Data Levels. This means that concentrations of this analyte equaled or exceeded 95 percent (EDL_{95}) of all measurements of that analyte in similar samples at all other sites tested by the California State Mussel Watch Program (i.e., these samples fall into a group that represents the upper 5 percent of the samples throughout the state). Seven additional analytes had concentrations that exceeded the 85 percent State Mussel Watch Elevated Data Levels (EDL_{85}): PCB 1254, total PCBs, Cis-Nonachlor, Lindane, copper, manganese, and zinc. All other analytes measured at the site were at concentrations below the EDL_{85} values.

Water Quality

The water quality of the bay is dependent on the circulation patterns produced primarily by tidal action. These circulation patterns determine the flushing and mixing processes throughout the bay. Tides are characterized by two daily highs and two lows, with the higher high tide preceding the lower low tide. The range between mean higher high and mean lower low water is 5.7 ft (Ford and Chambers 1974, 1975). These diurnal tides follow an approximate two-week cycle that cause flushing rates to vary. For example, during neap tide periods, the rates of exchange may be one-third to one-fourth as high as during spring tide periods, the periods with maximum tidal ranges (Ford and Chambers 1974, 1975).

levels of concern. A majority of the organic analytes were reported below the level of detection. Based on the uncertainty of not-detected data some phenols, some individual PAHs, semivolatile organics, organochlorine pesticides, or PCBs may exceed conservative NOAA ER-L and PSDDA-SL guidelines. PAHs as a total were well below the guidelines. Organochlorine pesticides (e.g., chlordane, DDT, dieldrin, and endrin) were not in widespread use until the 1940s; consequently, it is unlikely that significant amounts of these compounds are present in dredge and fill material deposited in 1936. While total PCB concentrations may exceed the conservative NOAA ER-L, they are well below the California action level and the cleanup level for Convair Lagoon located one nautical mile north of the project site.

Based on the coarse grain size and absence of chemical contamination in the sediment at the proposed mitigation site, this material is suitable for beach replenishment. The volume of sediment is approximately 455,000 cubic yards of which approximately 305,000 cubic yards will be used for cover for the fill area, least tern mitigation and beach replenishment. The remaining 150,000 cubic yards will be used for fill behind the rock dike.

3.1.2.4 Beach Replenishment Sites

Beach replenishment using dredged sediments is generally considered beneficial because the sediments are used as a viable resource. For sediments to be considered suitable for beach replenishment, they must be free of chemical contamination and must consist primarily of sand of an acceptable grain size (i.e., 80 percent of the material must be larger than 63 μm). The dredged sand must also be shown to be compatible with the existing material at the proposed receiver beach.

To identify the best possible receiver beaches based on physical compatibility and biological sensitivity, nine beach sites were surveyed along the San Diego County coastline from Oceanside to Imperial Beach (Figure 3.1-20). Both quantitative (grain size and chemistry) and qualitative (diver survey) observations were made. The general location of each beach survey site (Sites A, B, C, E, F, G, H, I) is presented in Appendix Figures C-15.1 through C-15.7. Site I, located at Mission Beach, was initially not on the list of potential replenishment sites during preparation of the Draft EIS, but was added at a later date at SANDAG's request. No significant effects are anticipated with this new site.

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Nuclear Propulsion Program. The results showed consistent levels of gross alpha and beta activity and did not characterize the radionuclides present. From the report, it is impossible to identify the source of the radioactivity detected based solely on gross alpha and beta activity. Radioactivity is present in seawater, harbor sediments and marine life from naturally occurring radioisotopes such as potassium-40, radium, uranium and thorium. In addition, low levels of other nuclides such as cesium-137 may be detected as a result of world wide dispersion from nuclear weapons testing. Alphas, betas, and gammas, in some combination, are emitted from these radionuclides.

Naturally occurring radioactivity in seawater and sediments in a typical harbor amounts to hundreds of curies. It is common for naturally occurring radioactivity to vary in concentration from place to place. An excellent source for further information on this subject is "Radioactivity in the Marine Environment", National Academy of Sciences, National Research Council, published in 1971.

The San Diego Bay Cleanup Project Under Section 205 (J) of the Clean Water Act, prepared by SANDAG in January 1992 included efforts to characterize the levels of total alpha and beta radiation in bottom sediments throughout the bay, but outside the naval restricted areas. The results of this study identified that all radioactivity levels were evaluated to be at background levels by the California Department of Health Services.

3.1.2.2 Navigation Channel Dredging Site

A NIMITZ class aircraft carrier is heavier and draws a deeper draft than the conventionally powered carriers presently located at NASNI. Dredging of the San Diego Bay navigation channel is necessary to accommodate these vessels (Figure 3.1-16).

The proposed main navigation channel dredging site is the existing main navigation channel for San Diego Bay. It extends from the turning basin to the entrance to San Diego Bay. Chemical and physical analyses of the proposed dredge sediments were conducted to characterize the sediment quality of the channel to discern whether these sediments are suitable for beach replenishment.

Sensitive habitats near the main channel dredge area include eelgrass meadows, kelp beds, and the intertidal and shallow subtidal rocky reefs in the Cabrillo National Monument at the

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end of Point Loma. Eelgrass meadows in the shallow subtidal area along the shore of North Island to the entrance to San Diego Bay and from Point Loma to Harbor Island on the mainland (Southwest Division 1993). They are approximately 300 to 500 yards from the existing navigation channel. Kelp beds occur offshore the end of Point Loma approximately 0.5 nautical miles north of the main navigation channel where it exits San Diego Bay. The shoreline of the Cabrillo National Monument is approximately 0.75 nautical miles north of the main navigation channel.

In 1991, the Navy conducted preliminary studies to characterize the chemical and particle size distribution of sediments at 10 locations in the main navigational channel (U.S. Navy 1993). The Navy reported that sediments were composed primarily of sand or larger particles sizes (92.4 percent) and low in total organic carbon. None of the chemical analytes reported exceeded NOAA ER-L guidelines.

In 1994, whole sediment and elutriate analyses were conducted on cores collected from the San Diego Bay Navigation Channel in order to assess the overall quality of the proposed dredged material, as well as to determine the most appropriate disposal options to pursue (Southwest Division 1995). Core collection locations are depicted on Figure 3.1-17. In 1995, an additional three cores were collected around Site 3. Collection was done based on the COE/EPA's review of the 1994 data set to provide higher resolution around a site that had detectable levels of PAHs.

Based on the hydrodynamics of the channel and its past dredging history, beach replenishment was the primary option pursued. The approximately 6.9 million cubic yards of sediment contained in the dredged footprint would provide much needed sand for local beaches that have undergone serious erosion.

Physical assessment of the sediment indicates the material usually is predominantly sand and gravel (>63 μm in size) and quite suitable for beach replenishment at acceptable receiver beaches. The sediment ranged from 68.0 percent up to 99.8 percent sand with an average for all sites of approximately 91 percent.

Based on chemical analyses conducted on the 26 cores taken from the channel, the proposed dredged material is generally inert and of excellent quality for beach replenishment. A lengthy list of chemical analytes was measured including metals,

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organotin, BTXE, PAHs, PCBs, organochlorine pesticides, and other volatile and semivolatile organics.

The sediment chemistry guide used to assess the quality of this dredged material is the NOAA ER-L and ER-M values. Only one location of the 26 tested in 1994, Site 10, had a concentration above the ER-L value. The elevated analyte was copper and was found at a concentration of 57.9 mg/kg compared to the ER-L level of 34 mg/kg. Based on the low copper values observed in the remaining 25 cores tested, the concentration measured in site 10 would be expected to present little, if any, risk to the environment at the disposal site.

In the 1995 supplemental study, two cores had mercury levels above the ER-L (0.15 mg/kg) at 0.27 and 0.24 mg/kg respectively. One core had a copper level of 37 mg/kg, which just exceeds the ER-L for copper of 34 mg/kg. Total PAH levels were less than 0.5 mg/kg versus the ER-L of 4 mg/kg. All other analytes were measured either below detection or the effect range - low level.

In addition to bulk sediment chemistries, elutriate samples were also prepared and chemical analyses conducted on six sediment composites taken from the navigation channel. The purpose of this testing was to assess whether a risk of resuspending dissolved chemicals into the water column during dredging and disposal exists. For comparison, the elutriate concentrations were compared to California Ocean Plan maximum values. In general, all analytes were near or below detection, and none were detected above Ocean Plan criteria. These results, combined with the whole sediment analyses, indicate little or no potential for deleterious effects due to dredging and disposal of navigation channel sediment. Complete results of bulk sediment chemistry analyses are presented in Appendix Table C-12.

The results of this study indicate that the material contained in the San Diego Bay Navigation Channel is sandy and free of chemical contamination, and would be an ideal source of sediment for beach replenishment for many of San Diego County's sand-starved beaches.

Frederic R. Harris Engineers (FRH) conducted a geophysical survey of the San Diego Bay Navigation Channel in January 1995, which included vibracore collection at 35 locations. Vibracore samples were collected to the preferred alternative depth. In several cores, sediments from the Bay Point Formation were encountered. The Bay Point Formation was

formed during the Pleistocene age. Bay Point Formation is the geologic unit exposed at or very near the ground surface across much of Coronado and North Island. It also underlies the margins of San Diego Bay along Point Loma and Ballast Point. The Bay Point Formation consists of poorly lithified to unlithified near-shore marine and lagoonal sediments (Kennedy 1967).

Results of the geotechnical evaluation of the channel indicate that approximately 300,000 cubic yards of the 7.0 million cubic yards of dredged material is made up of sediment contained within the Bay Point Formation. Evaluation of the sediment cores confirm that this sediment consists of consolidated fine grain silts and clays that are unsuitable for beach replenishment. The Navy is proposing to dispose of this material at LA-5. Based on Green Book Tier 1 evaluation criteria, this material is acceptable for ocean disposal. This material is contained wholly within the Bay Point Formation, which, as described above, is an ancient deposit that is chemically inert.

3.1.2.3 Mitigation Site

The bayfront of NASNI, extending from the project site to the entrance of San Diego Bay, is fill from dredging conducted in 1936 (Southwest Division 1992). The proposed 14-acre mitigation site is located on this fill along the north shore of North Island. The proposed mitigation area encompasses a site that includes 23 acres of upland, intertidal, and subtidal habitat, which extends from Moffett Road to approximately the base of the small sand bluff that terminates in the upper intertidal zone of San Diego Bay (Figure 3.1-17). Approximately 14 acres of existing upland habitat (above HHW) will be converted into intertidal and subtidal habitat for mitigation. The existing marine environment extends from an elevation of approximately 7.8 feet MLLW to shallow and deep soft-bottom habitats of the bay. Habitats include about 9 acres of sand beach with scattered riprap along the toe of the sand bluff. This beach grades into a shallow sandy subtidal area and ultimately to the main navigation channel of the bay. The area between approximately 0.5 and 1 foot and -5 feet MLLW is characterized by 2.84 acres of existing eelgrass (Southwest Division 1993).

Historical information for this area is limited to Navy studies conducted under the Installation Restoration (IR) program (HLA 1989, Southwest Division 1991) and results from the California State Mussel Watch Program. HLA (1989) identified the subtidal sediments southwest of the mitigation site inshore of Pier Bravo that may contain elevated

levels of metals and other contaminants from historical industrial discharges (Section 3.3.9). The California State Mussel Watch Program sampled one location near the project site (Pier Bravo - State Mussel Watch Site No. 901.2) during 1985 (Figure 3.1.2-1). Results of this study are summarized in Appendix C-8. Although most of the analytes measured were present in mussel tissue samples, none exceeded the 85 percent State Mussel Watch Elevated Data Levels.

A major component of the homeporting project is the construction of a new rock dike berthing structure at NASNI. Once completed, the rock dike and associated fill will cover approximately 14 acres of existing bay bottom. To mitigate for the loss of bay bottom, the Navy is proposing to excavate a 14-acre parcel of land on the northern part of NASNI, adjacent to and just east of Pier Bravo, down to -5 ft. MLLW (Figure 3.1-18). The material to be excavated is composed entirely of dredged material deposited at this site during a historic dredge and fill event in the bay.

To determine the suitability of mitigation site soils and sediment for beach replenishment, the Navy prepared a sampling and testing plan to characterize the particle size distribution, total organic carbon content, the concentration of chemicals of concern, and the level of detection for these chemicals. Following plan approval by the COE/EPA/RWQCB, the Navy collected sediment from 10 locations on the proposed mitigation site (Figure 3.1-19). Cores were collected from the surface to project depth of -5 feet MLLW (or refusal) at each sample location and composited. Study results are summarized below and presented in Appendix C-13.

Particle grain size at all sample locations was predominately sand or larger particle sizes. Values for individual samples ranged from 92 to 100 percent sand or greater and averaged 95.8 percent sand. Total organic carbon was low.

Chemistry results were compared to the site-specific levels of detection/levels of concern approved in the project testing plan. Data were also compared to NOAA and PSDDA guidelines to further evaluate the potential of chemicals in the sediment to be associated with biological effects (Section 3.1.2.1 and Appendix C). No metals, phenols, PAHs, volatile or semivolatile organics, organochlorine pesticides, or PCBs exceeded the levels of detection/levels of concern approved in the project testing plan. Comparison of these data with NOAA and PSDDA guidelines (Section 3.1.2.1) indicated that all metals were below

4.2.5 Effects of Alternative 4

Construction and operational impacts of Alternative 4 would be the same as Alternative 1.

4.2.6 Mitigation Measures

Project Site

Highly Productive, Rare, and/or Protected Communities

See Section 4.1.2 for mitigation required for significant impacts to shallow subtidal and eelgrass habitats.

Presence of Federally Listed Threatened and Endangered Species and State-Listed Species of Special Concern

Significant impacts to Nuttal's lotus and coast woolly-head may be mitigated by implementing the following measures.

Sandy soil shall be removed from the bay side of Moffett Road prior to excavation of the 14 acre mitigation site. The top 6 inches of this soil is likely to contain numerous seeds from these annual plants. The soil should be spread along upper dunes of appropriate beaches (e.g., Breakers Beach) to establish these plants in a habitat where they will be preserved and free from disturbance.

Sensitive Wildlife

The preferred alternative (Alternative 1) would result in a significant impact to California least tern foraging habitat. A habitat creation program has been incorporated into the project design. In addition to the habitat creation program, the following mitigation measures are required per the Memorandum of Understanding between USFWS and Southwest Division (see Appendix D-3):

- The dredging program would be scheduled to occur outside of the least tern breeding season (April 15 to September 1) to the maximum extent deemed

feasible. Dredging of the mitigation site would be accomplished at the start of the construction period to provide additional least tern foraging area and therefore offset other potentially negative impacts.

- Engineering measures would be implemented to minimize the areal extent of the silt plume associated with in-water construction and dredging. In areas ranked as high or very high value to foraging least terns (Southwest Division 1994a), or identified as important in ongoing least tern foraging studies, surface turbidity would be monitored at the startup of major dredging projects and bi-weekly thereafter. If dredging activities result in a surface plume exceeding 1,000 feet in length or width that persists longer than 1 hour, and that is in or adjacent to a cell of high or very high value to foraging least terns during the breeding season, then the Navy would engage in consultations with the USFWS. To limit the spread of turbidity in these high and very high value foraging areas during the least tern nesting season, silt curtains would be used where feasible.

- Uncontaminated, dry fill from excavation of the 14 acre mitigation site would be used to enhance California least tern and western snowy plover nesting sites. Recent meetings between the Navy and USFWS have identified two enhancement sites. The potential enhancement sites include 1) the 24-acre MAT site at NASNI (the primary tern colony on the base) and , 2) the ocean front and adjacent interior areas from Zuniga Point to the Coronado fence line.)

- From 12 to 30 inches of sand would be placed on existing tern and plover nesting sites. The sand would be placed to avoid impact to local kelp beds, cobble areas, and seagrass beds. The MAT site will receive approximately 57,000 cubic yards of sand sufficient to cover the site to a depth of 18 inches. The Zuniga Point site will receive 58,000 cubic yards of sand.

- Enhancement of nesting sites would be conducted during the non-breeding season (October 1 - March 1).

- Sand deposited at the MAT, NASNI tern colony would be stabilized to prevent its loss from the site. Drift fences or coastal dune plants would be used to

prevent sand drift out of the site. The perimeter of the colony (outside the fenced area) would be regularly swept to prevent sand from drifting onto an adjacent runway.

Significant impacts to nesting great blue herons, snowy egrets, and black-crowned night herons can be mitigated by implementing the following measures. These measures include establishing a replacement colony for nesting herons at a site where there would be fewer long-term impacts from Navy activities.

- Where feasible, currently or recently active nesting tree(s) shall be removed during construction of the proposed facilities or before a replacement nesting colony has been successfully established. If it is necessary for a small number of nest trees to be removed, these trees shall be removed only during the non-breeding season. Suitable nesting platforms, using designs proven to be effective in previous projects, would be constructed prior to the reproductive season following the removal. Eventually, it is anticipated that if the replacement colony is successfully used by nesting herons (see success criteria below) that the existing colony at the northeast corner of NASNI may be phased out.

- An alternative, replacement site for the existing heron nesting colony will be established near San Diego Bay on NASNI. This replacement site will be chosen in consultation with the NASNI Natural Resources Office and USFWS personnel. In considering the location of a replacement colony some potential sites may have vegetation height limits because of requirements for unobstructed visibility in flight areas. One potential location for a replacement colony on NASNI is on bay shoreline next to the fishing pier (identified on base maps as Mooring "F"). This potential site is located next to Moffett Road and is approximately a mile southwest of the existing colony adjacent to the proposed project site.

- Torrey pines (*Pinus torreyana* ssp. *torreyana*) will be planted at the replacement colony location. The number of Torrey pines to be planted will be determined in a heron nesting colony management plan (see below). This plan would be prepared by experienced heron biologists in conjunction with qualified

horticulturists, and biologists from the NASNI Natural Resources Office. The number of nesting trees, at maturity, at the replacement site would equal or exceed the number of trees at the existing NASNI heron nesting colony before the start of project construction. Torrey pines would be planted in the same year that construction of the proposed project begins during the appropriate time of year for optimal tree establishment and growth. The trees would be irrigated with drip irrigation until they reach maturity. Regular irrigation ensures maximum growth rates. Once the trees are suitable for heron nesting, irrigation can be gradually phased out until the trees rely only on seasonal rainfall. The trees would be regularly monitored for the first five years, with decreasing visits after five years and until the trees are deemed suitable for nesting herons. During the critical first year, trees shall be monitored once a month by an experienced horticulturist to determine tree health, growth and mortality rates, and effectiveness of the irrigation regime. The trees would be fertilized and disease control measures employed as determined necessary by the horticultural monitor. In the second through fifth years after planting, the Torrey pines shall be monitored quarterly. If there are problems with low growth rates, disease, and low survivorship, then the rate of monitoring would increase as necessary. After five years, the trees would be checked each summer to ensure their health and survival. Upon reaching maturity, the trees shall be monitored quarterly during the year in which irrigation is phased out. Dead trees would be replaced as necessary to ensure a sufficient number of trees survive to maturity to support the heron nesting colony.

- A heron nesting management plan shall be developed by a qualified biologist familiar with nesting herons in consultation with the NASNI Natural Resources Office and USFWS. Once the replacement colony is determined to be successful (see success criteria below), then regular tree trimming may be phased in over several years at the existing colony. Tree trimming will discourage use of the existing colony by nesting herons. The management plan shall determine the time period over which the existing colony is phased out and the number and location of trees to be trimmed each year during the phase out period. All tree trimming shall occur in the non-breeding season (September through December) before herons begin visiting the colony or engaging in nesting behavior.

EX 18 P 4

- During the construction period, the existing heron nesting colony adjacent to the project site, shall be monitored each year. Data shall be gathered for each species on the number of nesting attempts, number of pairs, and nesting success. A nestling banding program shall be conducted each year to determine nesting success. After construction of the proposed facilities is completed, the colony would be monitored in the same manner, every year, until the replacement colony is determined capable of supporting nesting herons. The management plan shall include criteria for determining when the replacement colony is suitable for nesting herons (e.g., based on the number of trees meeting minimum height, diameter, and structural standards). At this time, both the replacement and the existing colony shall be monitored yearly (e.g., number of pairs, nesting attempts, breeding success, and banding of nestlings) until the replacement colony is determined to have successfully replaced the existing colony. For the replacement colony to successfully replace the existing colony, it must achieve the following criteria. The average breeding success for great blue heron and for black-crowned night heron over a five year period at the replacement colony must be equal to the average breeding success for each of these species at the existing colony. The average breeding success for each species at the existing colony shall be calculated using all available monitoring data. Nest success data from years in which there was construction near the colony shall be compared with data from years with no adjacent construction. If there is significantly lower nest success in years with adjacent construction, then this data would not be used in calculating the average breeding success for each species at the existing nesting colony.

- During the construction period, facilities construction adjacent to the heron nesting colony would be avoided during the breeding season (February 1 - August 15). Impacts from unavoidable breeding season construction would be minimized by regulating and restricting human activity, heavy equipment, and loud machinery near the nests. To reduce noise impacts, temporary sound walls would be placed around construction areas near nest sites. To reduce artificial lighting at nests during the night, lights shall be shielded and directed away from nesting trees. All workers shall be educated about the nesting

EX. 18 P. 5

colony and the importance of minimizing noise and activity levels near active nests.

Impacts to California brown pelican elegant tern, common loon, double-crested cormorant, California gull, great egret, western grebe, Clark's grebe, Forester's tern, peregrine falcon, snowy plover, long-billed curlew, osprey, gull-billed tern, black skimmer, and nonsensitive waterbird species are not significant. No mitigation measures are required.

Undisturbed Vegetation and/or Wildlife

Impacts to nonsensitive waterbirds are not significant. No mitigation measures are required.

Presence of Birds Protected by the Migratory Bird Treaty

No mitigation measures are required since impacts to common, nonsensitive waterbird species are not significant.

Beach Receiver Sites

Because the impacts of depositing sand onto sandy beaches would not be significant, it would not require mitigation. Deposition of sand onto rocky tidepool habitat area of Site F would at least temporarily destroy its habitat value. This significant impact can be mitigated through avoidance (i.e., onshore beach replenishment).

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Table 4.1-1 (NEW)

LEACHING OF COPPER FROM ANTIFOULING COATINGS U.S. NAVY SHIPS HOMEPORTED IN SAN DIEGO (1992-1999) (LEACH RATE: 10 MICROGRAMS/SQUARE CENTIMETER/DAY)

	1992	1995	1999
Total number of homeported U.S. Navy ships	76	72	65*
Total underwater surface area of homeported U.S. Navy ships (square feet)	3,336,070	2,925,180	2,567,730*
Change in underwater surface area from 1992 (square feet)	–	-410,890	-768,340
Underwater surface area of NIMITZ class aircraft carrier (square feet)	–	159,500	159,500
Net change in underwater surface area since 1992 (square feet)	–	-251,390	-608,840
Maximum potential amount of copper leached from antifoulant coatings (pounds - copper/day)	68.19	59.79	52.48*
Change in amount of copper leached from antifoulant coatings since 1992 (pounds - copper/day)	–	-8.40	-15.70
Amount of copper leached from antifoulant coating on a NIMITZ class aircraft carrier (pounds - copper/day)	–	3.26	3.26
Net change in amount of copper leached from antifoulant coatings since 1992 (pounds - copper/day)	–	-5.14	-12.44

*Excludes proposed NIMITZ class aircraft carrier identified in this proposed action.

EXHIBIT 20

HAZARDOUS MATERIALS HANDLING

Excerpts from FEIS

Programs/Regulations

Applicable requirements of the Emergency Planning and Community Right-to-Know Act would be followed for hazardous materials. All new processes involving hazardous materials must be identified to comply with the Emergency Planning and Community Right-to-Know Act. The Navy has implemented a strict Hazardous Material Control and Management (HMC&M) program and a Hazardous Waste Minimization (HAZMIN) program for all of its facilities. These programs are design to minimize the amount and types of hazardous materials used in the workplace, and to reduce the generation of hazardous waste to an absolute minimum.

The disposition of chemically hazardous wastes would be under the direction of trained personnel in accordance with the facility's hazardous waste management plan, and applicable federal, state, and local regulations. Hazardous waste would be collected and placed in an accumulation area (less than 90 days) for pickup by the PWC for transportation to the NASNI TSDF. Contaminated wastewater would be pumped to vacuum trucks for transportation to the NASNI Industrial Waste Treatment Plant (IWTP). Oily wastes including oily bilgewater and spent machining lubricants that are suitable for recycling would be collected and transported to the NASNI Oil Recovery Plant. Oily waste that cannot be recovered would be sent to the TSDF.

Because the proposed CVN is of more modern design than the conventionally powered carriers, the use of hazardous materials, including asbestos and PCBs, would be reduced or eliminated wherever possible.

CVN depot level maintenance at NASNI is expected to generate approximately 548,400 pounds of hazardous waste per year. In contrast, all activities at NASNI currently generate approximately 4 million pounds of hazardous waste annually. Further, CVN depot level maintenance is not expected to cause the capacity limits of NASNI temporary storage facilities to be exceeded. On average, the amount of drums stored at the NASNI temporary storage facility is typically less than 15 percent of its capacity.

Hazardous waste activities at NASNI are regulated by both the San Diego County Hazardous Materials Management Division, and by the California Department of Toxic Substances Control. NASNI's Treatment/Storage/Disposal (TSD) permit application would require modification to include the hazardous waste streams from the proposed CVN facilities. Hazardous waste constituents identified for CVN depot level maintenance are no different than those existing for current CV maintenance or other maintenance activities at NASNI. These hazardous constituents and the facilities they are handled in are identified in the current NASNI RCRA [federal Resource Conservation and Recovery Act] permit. The NASNI permit will be modified to indicate that the Depot Maintenance Facility will generate hazardous waste. The NASNI RCRA

permit and modifications are subject to public comment. It has been demonstrated that these hazardous wastes can be managed and handled safely in accordance with permit stipulations. Navy shipments of radioactive and/or hazardous materials are made in accordance with applicable regulations. The purpose of these regulations is to ensure that shipments of radioactive and/or hazardous materials are adequately controlled to protect the environment and the health and safety of the general public, regardless of the transportation route taken. Hazardous waste generating activities will continue to be monitored and kept in compliance with all applicable local, state, and federal regulations. No impacts will occur.

Radioactive Material Control

Propulsion plant maintenance involves the handling of radioactive material that originated from the ship's pressurized water reactor plants. Small quantities of low level radioactivity, predominantly cobalt 60, in the ship's valves, piping, and other reactor plant components that would be inspected, repaired or scrapped, and in the liquid that would be processed ... These materials would be strictly controlled to protect the environment and human health, using the same proven methods employed in shipyards performing Naval nuclear work. ... Only specially trained personnel are permitted to handle radioactive material. Environmental monitoring at shipyards, and at other facilities supporting Naval nuclear powered ships, shows these controls have been effective in protecting the environment, and that radioactivity associated with U.S. Naval nuclear-powered ships has had no significant or discernible effect on the quality of the environment. Thus, there would be no radiological impact on the environment from the preferred alternative to homeport and maintain a NIMITZ class aircraft carrier at NASNI.

It is expected that maintaining a CVN at NASNI will generate approximately 325 cubic feet of low-level radioactive waste per year. Low-level radioactive waste generated as a result of homeporting a CVN in the San Diego area would not be stored at Naval Station San Diego.

Mixed waste generated from Naval Nuclear Propulsion Program activities is a mixture of low level radioactive waste and chemically hazardous waste. The Navy has implemented strict controls to prevent to the maximum extent practicable the mixing of radioactive and chemically hazardous waste. However, small amounts of mixed waste (less than 4 cubic meters per year) would be anticipated to be generated by the Navy and stored at NASNI. The mixed waste would be primarily solid in form. The radioactivity would be controlled as noted above. The chemically hazardous constituents of the waste would be regulated in accordance with the State of California Hazardous Waste Rules (CCR Title 22) which implements the federal Resource Conservation and Recovery Act (RCRA).

Radioactive Material Transportation

All shipments of radioactive materials in the Naval Nuclear Propulsion program are required to be made in accordance with the applicable regulations of the U.S. Department of Transportation; the U.S. Department of Energy, and the U.S. Nuclear Regulatory Commission. The purpose of these regulations is to ensure

that shipments of radioactive materials are adequately controlled to protect the environment and the health and safety of the general public, regardless of the transportation route taken. In addition, the Navy has issued standard instruction to further control these shipments. These controls insure that shipments of radioactive materials are adequately controlled to protect the health and safety of the general public. These controls have proven to be effective.

Radioactive Material Refueling

Refueling NIMITZ class aircraft carrier nuclear reactors will not be accomplished at NASNI. This type of work requires the special assets only found at selected nuclear-capable shipyards. Therefore, any operation that requires the removal, installation, handling or transportation of nuclear fuel will be accomplished at a selected nuclear-capable shipyard, not at NASNI.

Mitigation Measures.

All applicable federal, state, and local regulations will be followed with respect to removal, generation, and/or storage of hazardous substances. No significant impacts were identified and therefore no mitigation measures are required beyond those included in project design.

7800p

San Diego
ASSOCIATION OF
GOVERNMENTS

Suite 800, First Interstate Plaza
401 B Street
San Diego, California 92101
(619)595-5300 Fax (619)595-5305

September 27, 1995

TO: Shoreline Erosion Committee

FROM: SANDAG Staff

SUBJECT: Status of Funding for Navy Homeporting Replenishment, and New Funding Opportunities

Federal

- Efforts to obtain supplemental funds in the FY95-96 Department of Defense budget through an addition to the Military Construction Appropriations Bill were unsuccessful. However, a solid base of support with the region's congressional delegation has been developed which can be used in pursuing federal funding for FY96-97. SANDAG is scheduling contacts with the delegation to obtain their advice on how to approach a federal funding strategy for FY96-97. The results of this consultation will be presented to the Committee by the end of the calendar year.

- The City of Oceanside's Washington lobbyist is assisting SANDAG in pursuing the reprogramming of $600,000 of unexpended FY95-96 U.S. Army Corps of Engineers planning and design funds to be applied to assist Homeporting beach replenishment. The results of this effort will probably be known by October 4. Staff will update the Committee at the meeting.

State

- SB 654 (Craven) has passed the legislature and now requires the Governor's signature. This bill would provide $700,000 in state funds to supplement the Homeporting project. The Committee will be informed of the results as soon as they are known.

- The attached letter to the State Resources Agency describes a request to add $2.35 million to the governor's budget for FY96-97. This would include the $700,000 from SB 654 and $1.65 million in additional funds that the Committee had planned to request. Staff has been assisting the State Department of Boating and Waterways in defining a specific project related to the Homeporting project for the expenditure of

these funds. The Department was required to develop a specific project by Thursday, September 22nd in order to have the funds added to the governor's budget. The budget requires approval by the legislature next session.

The project that was defined jointly by Boating and Waterways and SANDAG staff for FY96-97 funding involved pumping approximately 600,000 cubic yards of sand onto the South Carlsbad and Leucadia State Beaches in southern Carlsbad and northern Encinitas. The sand was assumed to be allocated from the two nearshore berms located off of south Oceanside and Del Mar, reducing their total cubic yards from 2.2 million to 1.9 million each.

The Department also requested that potential future fiscal year funding requests also be identified and associated projects described. The SEC had also planned to request the state to provide an additional $1.65 million in the next fiscal year, FY97-98. The total state contribution would be $4 million ($2.35 million in FY96-97 plus $1.65 million in FY97-98). The project defined for the use of FY97-98 funds by the Department and SANDAG staff was involved pumping approximately 400,000 cubic yards of sand onto Cardiff State Beach and Tide Beach Park in northern Solana Beach. This sand was also assumed to be allocated from the nearshore berms at south Oceanside and Del Mar, reducing their total cubic yards from 1.9 to 1.7 million each.

The beach replenishment sites identified in both the FY96-97 and FY97-98 funding requests should receive environmental clearance through the EIS on the Navy Homeporting Project.

These project descriptions had to be prepared in a few days in order to meet the state's deadlines for preparing the initial version of the FY96-97 budget. In order for the budget proposal to proceed, the SEC and the Navy will have to concur with the project descriptions. There are adequate procedures available to modify the project descriptions during the state budget process, if the Committee and Navy request modifications.

SS/ah

EX 21 F 2

San Diego
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September 13, 1995

Mr. Don Wallace
The Resources Agency of California
The Resources Building
1416 9th Street
Sacramento, CA 95814

Dear Mr. Wallace:

I am writing on behalf of SANDAG to request that $2,350,000 be included in the Department of Boating and Waterways budget package for FY96-97 for a grant to SANDAG. The purpose of the grant would be to pay for costs associated with the United States Navy Aircraft Carrier Homeporting Project in San Diego Harbor. This request is strongly supported by SANDAG, all of the region's 19 local governments, and business and environmental groups from around the region.

The funds would be used for support, planning, design, construction, and operation of the following activities:

1. The onshore or offshore deposition of sand that results in the direct or indirect placement of the United States Navy's dredged materials on the beaches.

2. Stabilization structures such as groins, offshore breakwaters, and refraction structures, that would further increase the effectiveness of beach replenishment operations by holding sand on the beach for longer periods of time.

The $2,350,000 FY96-97 total includes $700,000 in SB 654 (Craven) which has passed the policy and appropriations committees in the State Senate and Assembly, has passed the Senate, and is now scheduled for Assembly floor action. Currently this bill is caught up in an internal house issue along with hundreds of other bills. If the problem is not resolved the $700,000 will remain in the appropriation. If the problem is resolved and the bill passes, the request would be reduced by $700,000 to $1,650,000.

These funds would assist the San Diego region in taking advantage of a once-in-a-generation opportunity to restore a priceless state resource. This project will result in increased beach recreation and tourism. It will aid the economies of the region and the state, and create additional state and local government revenues.

Please contact me or Steve Sachs of the SANDAG staff (619) 595-5346 if you have questions or need additional information. Thank you for your assistance.

Sincerely,

KENNETH E. SULZER
Executive Director

KES/SS/ah

EX 21 P 3

San Diego
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Suite 800, First Interstate Plaza
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September 27, 1995

Mr. Ray Patchett
City Manager
City of Carlsbad
1200 Carlsbad Village Dr
Carlsbad, CA 92008-1989

Dear Mr. Patchett:

At its September 7, 1995 meeting, SANDAG's Shoreline Erosion Committee acted to request coastal jurisdictions in the San Diego region to participate in funding a regionwide shoreline monitoring program. The illustrative financial participation of each jurisdiction for the proposed monitoring program is shown in the attached table. The approximately $55,000 annual cost of the program is allocated among jurisdictions according to the proportion of the region's shoreline in each jurisdiction.

The Shoreline Erosion Committee believes that a regular monitoring program is very important to the region's efforts to restore our critically eroded shorelines. Monitoring will document the benefits of beach replenishment projects and help document the importance of future replenishment efforts. Monitoring will also help improve the design of future projects to help place more sand on our beaches for less money.

The Shoreline Erosion Committee's objective is to begin the monitoring program in the spring of 1996 to provide baseline information about beach widths and profiles upon which the impacts of the beach replenishment related to the U.S. Navy's Carrier Homeporting Project can be measured. Therefore, the Committee is asking each coastal jurisdiction to make a commitment for their share of the funding for FY95-96 (this year's budget).

The intent of Committee is to create an ongoing monitoring program. Monitoring should be conducted on a yearly basis to be fully effective and useful. Likewise, the Committee wants each jurisdiction to understand that the funding program would also be pursued on a yearly basis. SANDAG would administer the program through qualified consultants on behalf of the Shoreline Erosion Committee.

The enclosure is the package of material the Shoreline Erosion Committee used to decide to make this request for coastal jurisdiction funding participation. Included is a Request for Proposals issued by SANDAG which describes the methods and products for the monitoring program. Each coastal jurisdiction will receive annual graphic and written reports which describe and analyze changes in beach widths and profiles, and will have full access to all data from the program. The Shoreline Erosion Committee will annually review the program, revise it as necessary, reauthorize it and seek funding from coastal jurisdictions.

SANDAG staff is available to discuss this with you, and present this request to your decision making body. Please call me at (619) 595-5346 if you have questions and would like to discuss this further.

Sincerely,

STEVE SACHS
Senior Regional Planner

cc: Ann Kulchin, Councilmember, City of Carlsbad
Steve Jantz

EX 21 P 4

Revised September 26, 1995

ILLUSTRATIVE ALLOCATION OF REGIONWIDE MONITORING PROGRAM COSTS
by Jurisdiction

Jurisdiction	Shoreline Miles	% of Total	Illustrative Allocation of $55,000 by Shoreline Mile
Federal[a]	13.2	25.8%	$14,190
State[b]	17.0	33.3	18,315
Oceanside	3.6	7.1	3,905
Carlsbad	1.1	2.2	1,210
Encinitas	2.1	4.1	2,255
Solana Beach	1.5	2.9	1,595
Del Mar	2.4	4.7	2,585
San Diego	7.5	14.7	8,085
Coronado	1.4	2.7	1,485
Imperial Beach	1.3	2.5	1,375
Shoreline Totals (Beach Area)[c]	51.1 miles	100.0%	$55,000

The mileage figures given are approximations based upon data from select map and document sources. The shoreline area covered stretches from the International Border to 5 miles north of Oceanside Harbor.

[a] U.S. Navy Bases in Coronado, Camp Pendleton 5 miles north of Oceanside Harbor and the Tijuana Slough National Wildlife Refuge in Imperial Beach

[b] State Beaches and Parks

[c] The following areas have been excluded from the compilation of shoreline miles

- Oceanside Harbor entrance and jettys
- Marine Room restaurant in the southern La Jolla Shores area to False Point
- Tip of Point Loma to the Ocean Beach Pier

5/19/95

SAN DIEGO REGION
FUNDING FOR REGIONWIDE BEACH REPLENISHMENT

BASIC FACTS

- The U.S. Navy's Aircraft Carrier Homeporting Project in San Diego Harbor includes dredging about 8 million cubic yards of beach quality sand, starting in 1996. The project is required to deepen the carrier turning basin and harbor entrance channel.

- The Navy is supportive of placing the dredged sand on the region's critically eroded beaches at sites benefiting the region's coastal cities, as well as the Navy, and State Parks and Port District managed lands. The sites were developed by the above groups, working cooperatively at SANDAG's Shoreline Erosion Committee. SANDAG is the Council of Governments for the San Diego region.

- **The Navy will be able to cover <u>some</u> of the costs of transporting the sand to the region's critically eroded beaches. The additional costs of depositing sand from the Navy's project at the region's beaches has been estimated by the U.S. Army Corps of Engineers to cost between $17 and $36 million. The San Diego region believes its beach replenishment objectives can be achieved at the minimum cost of $17 million. The Corps/Navy cooperative evaluation of beach replenishment options was in response to a request from the region's congressional delegation.**

- **The San Diego region is seeking federal and state funding help to pay the additional costs. $13 million of the $17 million needed is requested from federal appropriations over three years, starting in FY96. The appropriations should supplement the Navy's budget from other federal sources. $4 million is being requested from the State of California.**

- **The federal appropriation requested for FY96 is $2 million, a cost proportional to the portion of the dredging activities scheduled to occur in FY96.**

- The San Diego region has over 30 miles of critically eroded beaches, which constitute almost ¾ths of the beaches between Oceanside Harbor and the International Border.

- This project could provide a significant portion of the sand needed to restore the region's beaches and to provide additional recreational opportunities and property protection.

- The region's beaches are a priceless economic (tourism), recreational and environmental resource recognized in the Shoreline Preservation Strategy adopted by SANDAG in July 1993.

- **This project presents a once-in-a-generation opportunity to improve the region's beaches at an unprecedented low cost.**