

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

2375 Northside Drive, Suite 100, San Diego, CA 92108
Phone (619) 516-1990 • Fax (619) 516-1994
<http://www.waterboards.ca.gov/sandiego/>

**Clean Water Act Section 401 Water Quality Certification
and Waste Discharge Requirements
for Discharge of Dredged and/or Fill Materials**

**PROJECT: Mission Bay Navigational Safety Dredge
Certification Number R9-2017-0036
WDID: 9000003134**

Reg. Meas. ID: 411607
Place ID: 832167
Party ID: 528888
Person ID: 562240

**APPLICANT: City of San Diego
525 B Street Suite 750
San Diego, CA 92101**

ACTION:

<input type="checkbox"/> Order for Low Impact Certification	<input type="checkbox"/> Order for Denial of Certification
<input checked="" type="checkbox"/> Order for Technically-conditioned Certification	<input type="checkbox"/> Enrollment in Isolated Waters Order No. 2004-004-DWQ
<input checked="" type="checkbox"/> Enrollment in SWRCB GWDR Order No. 2003-017-DWQ	

PROJECT DESCRIPTION

An application dated January 26, 2017 was submitted by the City of San Diego (hereinafter Applicant), for Water Quality Certification pursuant to section 401 of the Clean Water Act (United States Code (USC) Title 33, section 1341) for the proposed Mission Bay Navigational Safety Dredge Project (Project). The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) deemed the application to be complete on April 13, 2017. The Applicant proposes to discharge dredged or fill material to waters of the United States and/or State associated with construction activity at the Project site. The Applicant has also applied for a Clean Water Act section 404 permit from the United States Army Corps of Engineers for the Project (USACE File No. SPL-2017-00074-RRS).

The Project is located within the City of San Diego, San Diego County, California at Mission Bay. The Project center reading is located at latitude 32.77899 and longitude -117.23252. The Applicant has paid all required application fees for this Certification in the amount of \$55,654.00. On an annual basis, the Applicant must also pay all active discharge fees and post discharge monitoring fees in accordance with the fee schedule set forth in California Code of Regulations (CCR) title 23, division 3, chapter 9 (commencing with section 2200,¹). On April 14, 2017, the San Diego Water Board provided public notice of the Project application pursuant to CCR, title 23, division 3, chapter 28, section 3858 by posting

¹The fee regulations can be accessed on line at http://www.waterboards.ca.gov/resources/fees/docs/fy1617_fee_schedule.pdf

The fee regulations can be accessed on line at:
http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/dredgefillcalculator.xlsx

information describing the Project on the San Diego Water Board's web site and providing a period of twenty-one days for public review and comment. No comments were received.

The Applicant proposes to conduct maintenance dredging to remove shoals that are causing navigational hazards within Mission Bay Park and sand placement on shoreline areas of Mission Bay to restore eroded shoreline sections. The City of San Diego has an active beach maintenance program within Mission Bay Park. Maintenance activities include beach grooming, sand management, trash and debris removal, and fire ring cleaning. Most of the sand management activities are beach grooming and raking along the upper portion of the bay shoreline. These activities do not address the sand that migrates below the high tide line or sediment that is transported within Mission Bay to areas that form shallow water shoals.

Within Mission Bay over 1,000 acres out of approximately 2,300 acres of bay waters has experienced sediment shoaling when compared against the construction of Mission Bay in 1961 and the last bathymetric survey in 2013. Approximately six percent (60 acres) of the shoaling areas in Mission Bay have developed in areas that conflict with existing boat and jet ski speed zones, vessel traffic, and vessel draft. These areas have been deemed a navigation hazard for these activities.

The maintenance dredging proposed under this Project will remove shoals that have developed since original bay development in 1961. There are 14 identified maintenance dredge areas identified in the plans as Dredge Areas 1 through 15, excluding Dredge Area 8. A small area identified as Dredge Area 5B is also excluded. Areas not considered a navigation hazard and/or constructed shallow areas are also excluded from this Project.

In conjunction with the proposed maintenance dredging, seven sediment Reuse Areas have been identified in Mission Bay and along the shoreline of Mission Bay Park. The Reuse Areas include partial filling of four borrow pits in northern Sail Bay, raising the elevation of the Leisure Lagoon floor in the eastern part of Mission Bay to improve tidal flushing, and beach sand re-nourishment along Crown Point Shores and northeast Vacation Island shorelines.

The Project maintenance dredging and sand replenishment activities will not convert any acres of pervious ground cover to impervious surfaces. The Project is expected to result in short-term temporary increases in local turbidity levels during dredging and material placement but these impacts will be mitigated by incorporation of water quality monitoring and turbidity elevation limits in this Certification, requiring the Applicant to reduce turbidity generation if elevation exceeds acceptable thresholds.

Compliance with the Certification conditions will help ensure that construction and post-construction discharges from the Project will not cause on-site or off-site shoreline or bluff erosion, damage to shoreline properties, or otherwise damage shoreline habitats in violation of water quality standards in the *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan) or the *Water Quality Control Plan, Ocean Waters of California* (Ocean Plan).

Permanent impacts will not be known until the pre and post construction eelgrass survey is completed and compared in accordance with the *California Eelgrass Mitigation Policy* (CEMP), October 2014. The Project is predicted to permanently impact up to 42.93 acres of eelgrass habitat from maintenance dredging activities based on the last bay-wide eelgrass survey

conducted in 2013. The Applicant reports that the Project purpose cannot be practically accomplished in a manner that would avoid or result in less adverse impacts to aquatic resources considering all potential practicable alternatives, such as the potential for alternate available locations, designs, reductions in size, configuration or density.

Project construction will permanently impact 82.9 acres (6,070 linear feet) of open bay and shoreline waters of the United States and/or State. The Project includes the dredging of between 122,220 and 220,850 cubic yards (cy) of sediment material within approximately 63.4 acres of bay waters (42.9 acres of eelgrass beds and 20.4 acres of open water) and 19.5 acres of dredged sediment reuse areas. Approximately 9,615 cy of dredged material will be placed in Leisure Lagoon and approximately 83,223 cy of dredged material will be used for sand nourishment or in-bay reuse. The dredged material will be fully reused in the development of eelgrass mitigation areas and for the shoreline repairs in the three Reuse Areas. The filling of Reuse Areas to achieve an optimal depth for eelgrass restoration is not proposed to impact existing eelgrass and will be adjusted spatially as necessary to ensure minimization of impacts. When possible, eelgrass needed for the restoration plantings will be harvested out of the dredge area footprint and along the perimeter of the dredge cuts. This will minimize the need to harvest eelgrass from donor beds outside of the designated dredge areas.

Mitigation for discharges of fill material to waters of the United States and/or State will be completed by the Applicant at Mission Bay, CA located in the Scripps hydrologic sub-area (HSA 906.30) at a minimum planting area ratio of 1.38:1 (area planted:eelgrass area impacted) for the maintenance dredge areas and 1.72:1 for the Borrow Pit areas. The final successful establishment mitigation ratio will be at least 1:1.2 which is consistent with the CEMP. The Applicant has the option of using banked Mission Bay Park eelgrass mitigation credits to offset mitigation shortfalls; however proposed on-site restoration is preferred over the use of mitigation credits. Mitigation credit use will be subject to approval by the signatory agencies (National Marine Fisheries Service and U.S. Fish and Wildlife Service) and use of mitigation credits will be applied at a 1:1 ratio.

Detailed written specifications and work descriptions for the compensatory mitigation project including, but not limited to, the geographic boundaries of the project, timing, sequence, monitoring, maintenance, ecological success performance standards and provisions for long-term management and protection of the mitigation areas are described in the *Eelgrass Mitigation and Monitoring Plan in Support of the Mission Bay Park Navigational Safety Dredging Project* (Mitigation Plan), dated December 2016. San Diego Water Board acceptance of the Mitigation Plan applies only to the Project described in this Certification and must not be construed as approval for other current or future projects that are planning to use additional acreage at the site for mitigation. The Mitigation Plan is incorporated in this Certification by reference as if set forth herein. The Mitigation Plan provides for implementation of compensatory mitigation which offsets adverse water quality impacts attributed to the Project in a manner that protects and restores the abundance, types and conditions of aquatic resources and supports their beneficial uses. Implementation of the Mitigation Plan will reduce significant environmental impacts to resources within the San Diego Water Board's purview to a less than significant level. Based on all of these considerations, the Mitigation Plan will adequately compensate for the loss of beneficial uses and habitat within waters of the United States and/or State attributable to the Project.

Additional Project details are provided in Attachments 1 through 5 of this Certification.

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Attachments:

1. Definitions
2. Project Location Maps
3. Project Site Plans
4. Mitigation Figures and Ledgers
5. CEQA Mitigation Monitoring and Reporting Program

I. STANDARD CONDITIONS

Pursuant to section 3860 of title 23 of the California Code of Regulations, the following three standard conditions apply to all water quality certification actions:

- A. This Certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the Water Code and chapter 28, article 6 (commencing with title 23, section 3867), of the California Code of Regulations.
- B. This Certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent Certification application was filed pursuant to California Code of Regulations title 23, section 3855 subdivision (b), and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
- C. This Certification action is conditioned upon total payment of any fee required under title 23, chapter 28 (commencing with section 3830) of California Code of Regulations and owed by the applicant.

II. GENERAL CONDITIONS

- A. **Term of Certification.** Water Quality Certification No. R9-2017-0036 (Certification) shall expire upon a) the expiration or retraction of the Clean Water Act section 404 (33 USC Title 33, section 1344) permit issued by the U.S. Army Corps of Engineers for this Project, or b) five (5) years from the date of issuance of this Certification, whichever occurs first.
- B. **Duty to Comply.** The Applicant must comply with all conditions and requirements of this Certification. Any Certification noncompliance constitutes a violation of the Water Code and is grounds for enforcement action or Certification termination, revocation and reissuance, or modification.
- C. **General Waste Discharge Requirements.** The requirements of this Certification are enforceable through Water Quality Order No. 2003-0017-DWQ, *Statewide General Waste Discharge Requirements for Discharges of Dredged or Fill Material that have Received State Water Quality Certification* (Water Quality Order No. 2003-0017-DWQ). This provision shall apply irrespective of whether a) the federal permit for which the Certification was obtained is subsequently retracted or is expired, or b) the Certification is expired. Water Quality Order No. 2003-0017-DWQ is accessible at:

http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/gowdr401regulated_projects.pdf.
- D. **Project Conformance with Application.** All water quality protection measures and BMPs described in the application and supplemental information for water quality certification are incorporated by reference into this Certification as if fully stated herein.

Notwithstanding any more specific conditions in this Certification, the Applicant shall construct, implement and comply with all water quality protection measures and BMPs described in the application and supplemental information. The conditions within this Certification shall supersede conflicting provisions within the application and supplemental information submitted as part of this Certification action.

- E. Project Conformance with Water Quality Control Plans or Policies.** Notwithstanding any more specific conditions in this Certification, the Project shall be constructed in a manner consistent with the Water Quality Control Plan for the San Diego Basin (Basin Plan), the California Ocean Plan, and any other applicable water quality control plans or policies adopted or approved pursuant to the Porter Cologne Water Quality Act (Division 7, commencing with Water Code Section 13000) or section 303 of the Clean Water Act (33 USC section 1313). The Basin Plan and Ocean Plan are accessible at:

Basin Plan

http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

- F. Project Modification.** The Applicant must submit any changes to the Project, including Project operation, which would have a significant or material effect on the findings, conclusions, or conditions of this Certification, to the San Diego Water Board for prior review and written approval. If the San Diego Water Board is not notified of a significant change to the Project, it will be considered a violation of this Certification.
- G. Certification Distribution Posting.** During Project construction, the Applicant must maintain a copy of this Certification at the Project site. This Certification must be available at all times to site personnel and agencies. A copy of this Certification shall also be provided to any contractor or subcontractor performing construction work, and the copy shall remain in their possession at the Project site.
- H. Inspection and Entry.** The Applicant must allow the San Diego Water Board or the State Water Resources Control Board, and/or their authorized representative(s) (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents as may be required under law, to:
1. Enter upon the Project or Compensatory Mitigation site(s) premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Certification;
 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Certification;
 3. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Certification; and
 4. Sample or monitor, at reasonable times, for the purposes of assuring Certification compliance, or as otherwise authorized by the Clean Water Act or Water Code, any substances or parameters at any location.

- I. **Enforcement Notification.** In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under State law. For purposes of section 401(d) of the Clean Water Act, the applicability of any State law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Certification.
- J. **Certification Actions.** This Certification may be modified, revoked and reissued, or terminated for cause including but not limited to the following:
1. Violation of any term or condition of this Certification;
 2. Monitoring results indicate that continued Project activities could violate water quality objectives or impair the beneficial uses of Mission Bay or the Pacific Ocean;
 3. Obtaining this Certification by misrepresentation or failure to disclose fully all relevant facts;
 4. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
 5. Incorporation of any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.

The filing of a request by the Applicant for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Certification condition.

- K. **Duty to Provide Information.** The Applicant shall furnish to the San Diego Water Board, within a reasonable time, any information that the San Diego Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Certification or to determine compliance with this Certification.
- L. **Property Rights.** This Certification does not convey any property rights of any sort, or any exclusive privilege.
- M. **Petitions.** Any person aggrieved by this action of the San Diego Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with the California Code of Regulations, title 23, sections 3867 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Certification. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

III. CONSTRUCTION BEST MANAGEMENT PRACTICES

- A. **Approvals to Commence Construction.** The Applicant shall not commence Project construction until all necessary federal, State, and local approvals are obtained.
- B. **Personnel Education.** Prior to the start of the Project, and annually thereafter, the Applicant must educate all personnel on the requirements in this Certification, pollution prevention measures, spill response measures, and BMP implementation and maintenance measures.
- C. **Spill Containment Materials.** The Applicant must, at all times, maintain appropriate types and sufficient quantities of materials on-site to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reach waters of the United States and/or State.
- D. **General Construction Storm Water Permit.** Prior to start of Project construction, the Applicant must, as applicable, obtain coverage under, and comply with, the requirements of State Water Resources Control Board Water Quality Order No. 2009-0009-DWQ, NPDES No. CAS000002, the *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activity*, (General Construction Storm Water Permit) and any reissuance. If Project construction activities do not require coverage under the General Construction Storm Water Permit, the Applicant must develop and implement a runoff management plan (or equivalent construction BMP plan) to prevent the discharge of sediment and other pollutants during construction activities.
- E. **Waste Management.** The Applicant must properly manage, store, treat, and dispose of wastes in accordance with applicable federal, state, and local laws and regulations. Waste management shall be implemented to avoid or minimize exposure of wastes to precipitation or storm water runoff. The storage, handling, treatment, or disposal of waste shall not create conditions of pollution, contamination or nuisance as defined in Water Code section 13050. Upon Project completion, all Project generated debris, building materials, excess material, waste, and trash shall be removed from the Project site(s) for disposal at an authorized landfill or other disposal site in compliance with federal, state and local laws and regulations.
- F. **Construction Equipment.** All equipment must be washed prior to transport to the Project site and must be free of sediment, debris, and foreign matter. All equipment used in direct contact with surface water shall be steam cleaned prior to use. All equipment using gas, oil, hydraulic fluid, or other petroleum products shall be inspected for leaks prior to use and shall be monitored for leakage. Stationary equipment (e.g., motors, pumps, generator, etc.) shall be positioned over drip pans or other types of containment.
- G. **Process Water.** Water containing mud, silt, or other pollutants from equipment washing or other activities, must not be discharged to waters of the United States and/or State or placed in locations that may be subjected to storm water runoff flows.

- H. **Hazardous Materials.** Except as authorized by this Certification, substances hazardous to aquatic life including, but not limited to, petroleum products, unused cement/concrete, asphalt, and coating materials, must be prevented from contaminating the soil and/or entering waters of the United States and/or State. BMPs must be implemented to prevent such discharges during each Project activity involving hazardous materials.
- I. **Limits of Disturbance.** The Applicant shall clearly define the limits of Project disturbance to waters of the United States and/or State using a combination of 1) highly visible markers such as flag markers or construction fencing in beach areas and 2) verified GPS based navigation plotters or corner buoys in submerged work areas. The contractor's equipment suitability for defining work limits in submerged areas must be verified by the Applicant prior to commencement of Project construction activities within those areas.
- J. **Dredge Volume Limit.** The volume of sediment dredged in Mission Bay must not exceed 220,850 cubic yards of sediment.
- K. **Sediment Dredging.** The Applicant shall conduct dredging in accordance with, but not limited to, the following best management practices:
1. Dredging must be conducted to remove dredge material and not stockpile material on the floor of Mission Bay.
 2. The drop height from a clamshell bucket or from the hydraulic cutter head suction dredge discharge pipe onto the scow must be controlled to prevent splashing or sloshing of dredged material back into Mission Bay waters.
 3. The swing radius of unloading equipment must be controlled to prevent spillage of dredged sediments back into the water.
 4. Dredged material scows must not be filled to a point that overflow or spillage could occur. Each material scow must be marked in such a way to allow the operator to visually identify the maximum load point.
 5. Load-controlled boat movement, line attachment, and/or horsepower requirements of tugs and support boats at the Project site must be specified to avoid resuspension of sediment. Such measures may include speed restrictions, establishment of off-limit areas, and use of shallow draft vessels.
- L. **Placement of Dredge Material Suitable for Beneficial Reuse.** The Applicant shall place dredged material determined by the USACE and USEPA to be suitable for beneficial reuse at the designated areas in Mission Bay in accordance with the following additional requirements to ensure protection of sensitive resources and water quality outside of the active placement sites:
1. Sediment shall be transported to the Reuse Areas in a way that minimizes the discharge of material.

2. Visual monitoring of sediment movement and turbidity levels shall be performed by the Applicant during and after sediment placement in accordance with Section VI.J of this Certification.

M. On-site Qualified Biologist. The Applicant shall designate an on-site qualified biologist to monitor Project construction activities within or adjacent to waters of the United States and/or State to ensure compliance with the Certification requirements. The biologist shall be given the authority to stop all work on-site if a violation of this Certification occurs or has the potential to occur. Records and field notes of the biologist's activities shall be kept on-site and made available for review upon request by the San Diego Water Board.

N. Protection of Eelgrass Beds at the Mission Bay Navigational Safety Dredge Project Sites. A pre-construction eelgrass survey must be completed in accordance with the requirements of the *California Eelgrass Mitigation Policy (CEMP)*² by a qualified biologist, prior to initiation of construction activities at the site. The Applicant shall also comply with the following requirements:

1. Prior to construction, the boundaries of adjacent eelgrass beds must be defined and transmitted to the dredge contractor for upload into the contractor's navigation and dredge control software and shall be displayed on video plotters of the dredging work areas.
2. When silt curtains are deployed, they must be positioned and anchored in place in a manner suitable to prevent eelgrass bed damage from curtain drag or movement.

O. Beneficial Use Protection. The Applicant must take all necessary measures to protect the beneficial uses of waters of Mission Bay. This Certification requires compliance with all applicable requirements of the Basin Plan. If at any time, an unauthorized discharge to surface waters occurs or monitoring indicates that the Project is violating, or threatens to violate, water quality objectives, the associated Project activities shall cease immediately and the San Diego Water Board shall be notified in accordance with Notification Requirement VII.A of this Certification. Associated Project activities may not resume without approval from the San Diego Water Board.

P. Trash and Debris. The dredged material deposited in the Reuse Areas must be free of trash and debris.

Q. Sand Composition. The dredged material used for shoreline beach nourishment must have at least 80 percent sand and no more than 10 percent difference in sand composition from the receiving beach, and must not have a significant chemical contamination. The Project must not impact the aesthetic characteristics of the receiving beaches and/or adjacent ocean waters.

² National Oceanic and Atmospheric Administration, National Marine Fisheries, West Coast Region. California Eelgrass Mitigation Policy and Implementing Guidelines, October 2014. An electronic copy can be found at the following web page: http://www.westcoast.fisheries.noaa.gov/publications/habitat/california_eelgrass_mitigation/Final%20CEMP%20October%2014/cemp_oct_2014_final.pdf

IV. POST-CONSTRUCTION BEST MANAGEMENT PRACTICES

- A. **Post-Construction Discharges.** The Applicant shall not allow post-construction discharges from the Project site to cause or contribute to on-site or off-site erosion or damage to properties.

V. PROJECT IMPACTS AND COMPENSATORY MITIGATION

- A. **Project Impact Avoidance and Minimization.** The Project must avoid and minimize adverse impacts to waters of the United States and/or State to the maximum extent practicable.
- B. **Project Impacts and Compensatory Mitigation.** Unavoidable Project impacts to Mission Bay and/or Pacific Ocean must not exceed the type and magnitude of impacts described in the table below. At a minimum, compensatory mitigation required to offset unavoidable temporary and permanent Project impacts to waters of the United States and/or State must be achieved as described in the table below:

	Impacts (acres)	Impacts (linear ft.)	Mitigation for Impacts (acres)	Mitigation Ratio (area mitigated : area impacted)	Mitigation for Impacts (linear ft.)	Mitigation Ratio (linear feet mitigated : linear feet impacted)
Permanent Impacts						
Mission Bay	42.9 Eelgrass beds 20.4 Open Water 19.5 Dredge Reuse Total 82.9 ^{1,2}	6,070	51.52 Establishment and Re-Establishment ^{3,4}	1.2:1 ⁴	NA	NA

1. Total dredge area is 63.4 acres, with 19.5 acres of constructed eelgrass restoration and dredge Reuse Areas.
2. Estimated impacts to eelgrass is 42.93 acres. Pre-construction surveys will confirm actual Project impacts to eelgrass beds. The final mitigation will be based on the application of mitigation ratios to the difference in eelgrass area between pre- and post-dredge surveys.
3. The impacts associated with dredging of unvegetated bay bottom areas of Mission Bay will include temporary and localized increases in suspended sediment (i.e., turbidity) along with a potential for reduced dissolved oxygen levels associated with disturbance of anoxic sediment compounds. The Project will have temporary effects on marine life of varying degrees. Mobile aquatic organisms will most likely vacate the area of disturbance during the duration of the Project. The disturbed sediment areas should be able to recover from the impacts since each Dredge Area will be surrounded by existing eelgrass beds and undisturbed bay bottom areas which will act as a source for benthic organisms and supplement the eelgrass restoration. Furthermore, the Project proposes complete reuse of the dredged sediment. Any invertebrates surviving the dredge and transport of sediment will be the initial benthic colonizers in the designated dredge Reuse areas and additional recolonization of these areas will occur rapidly through natural recruitment and larval colonization. Based on all of these considerations, compensatory mitigation for the above-described impacts to unvegetated bay bottom is not required.
4. Initial minimum planting ratios will be 1.38:1 for impacts to eelgrass and 1.72:1 for the fill placed in the Borrow Pits located in north Sail Bay with an overall final successful eelgrass planting ratio of 1.2:1 which is consistent with *CEMP*.

C. Eelgrass. A pre-dredging eelgrass survey must be completed in accordance with the requirements of the *CEMP* by a qualified biologist, prior to initiation of dredging activities at the site. This survey must include both aerial and density characterization of the beds. If eelgrass is found during the pre-dredging survey, a post-dredging survey must be performed by a qualified biologist within 30 days following project completion to quantify any unanticipated losses to eelgrass habitat. Impacts must then be determined from a comparison of pre- and post-dredging survey results. Impacts to eelgrass must be mitigated in conformance with the *CEMP*, which defines the mitigation ratio and other requirements to achieve mitigation for significant eelgrass impacts. If required following the post-dredging survey, the *CEMP* defined mitigation plan must be developed; submitted and approved by the San Diego Water Board, USACE, and National Marine Fisheries Service; and implemented to offset losses to eelgrass.

D. Compensatory Mitigation Site Design. The compensatory mitigation site(s) shall be designed to be self-sustaining once performance standards have been achieved. This

includes minimization of active engineering features (e.g., pumps) and appropriate siting to ensure that natural hydrology and landscape context support long-term sustainability.

- E. **Temporary Project Impact Areas.** The Applicant must restore all areas of temporary impacts and all other areas of temporary disturbance which could result in a discharge or a threatened discharge of pollutants to waters of the United States and/or State. Restoration must include grading of disturbed areas to pre-project contours and re-vegetation with native species. The Applicant must implement all necessary BMPs to control erosion and runoff from areas associated with the Project.
- F. **Eelgrass Mitigation Credits.** The Applicant has established the Mission Bay Park Mitigation Bank with banked credits for impacts to eelgrass in Mission Bay. The eelgrass bank locations are at South Shores Embayment, Ventura Cove, East Ski Island, and Stribley Marsh Reserve. The Applicant may use eelgrass credits if the restoration is short of the required mitigation acreage. The use of credits from this bank is subject to signatory agency approval. A ledger of mitigation credits used and available credits shall be provided to the San Diego Water Board documenting use from the Mission Bay Park Mitigation Bank.
- G. **Long-Term Management and Maintenance.** The compensatory mitigation site(s) must be managed, protected, and maintained, in perpetuity, in conformance with the long-term management plan and the final ecological success performance standards identified in the Mitigation Plan. The aquatic habitats that comprise the mitigation site(s) must be protected in perpetuity from land-use and/or maintenance activities that may threaten water quality or beneficial uses within the mitigation area(s) in a manner consistent with the following requirements:
1. Any maintenance activities on the mitigation site(s) that do not contribute to the success of the mitigation site(s) and enhancement of beneficial uses and ecological functions and services are prohibited;
 2. Maintenance activities must be limited to the removal of trash and debris, removal of exotic plant species, and remedial measures deemed necessary for the success of the compensatory mitigation project; and
 3. If at any time a catastrophic natural event causes damage(s) to the mitigation site(s) or other deficiencies in the compensatory mitigation project, the Applicant must take prompt and appropriate action to repair the damage(s) including replanting the affected area(s) and address any other deficiencies. The San Diego Water Board may require additional monitoring by the Applicant to assess how the compensatory mitigation site(s) or project is responding to a catastrophic natural event.
- H. **Timing of Mitigation Site Construction.** The construction of proposed mitigation must be completed no later than 9 months following the earliest time of either the direct impact to eelgrass beds or as directed in accordance with CEMP. Delays in implementing mitigation must be compensated for by an increased mitigation implementation of 10% of the cumulative compensatory mitigation for each month of delay.

- I. **Mitigation Site(s) Preservation Mechanism.** If compensatory mitigation for eelgrass impacts is required, the Applicant must provide the San Diego Water Board with a draft preservation mechanism (e.g. deed restriction, conservation easement, etc.) **within 90 days from the dredging completion date** that will protect all mitigation areas and their buffers in perpetuity. The Applicant must submit proof of a completed final preservation mechanism that will protect all mitigation areas and their buffers in perpetuity before the Project certification can be terminated. The conservation easement, deed restriction, or other legal limitation on the mitigation properties must be adequate to demonstrate that the sites will be maintained without future development or encroachment on the sites which could otherwise reduce the functions and values of the sites for the variety of beneficial uses of waters of the United States and/ or State that it supports. The legal limitation must prohibit, without exception, all residential, commercial, industrial, institutional, and transportation development, and any other infrastructure development that would not maintain or enhance the functions and values of the sites.

VI. MONITORING AND REPORTING REQUIREMENTS

- A. **Representative Monitoring.** Samples and measurements taken for the purpose of monitoring under this Certification shall be representative of the monitored activity.
- B. **USEPA Test Procedures.** Monitoring must be conducted according to USEPA test procedures approved under Title 40, Code of Federal Regulations (CFR), Part 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act* as amended, unless other test procedures have been specified in this Certification.
- C. **Monitoring Instruments.** All monitoring instruments and devices, which are used by the Applicant to fulfill the prescribed monitoring program, must be properly maintained and calibrated as necessary to ensure their continued accuracy.
- D. **Certified Laboratory.** All laboratory analyses must be performed in a laboratory certified to perform such analyses under the State Water Resources Control Board's Environmental Laboratory Accreditation Program or a laboratory approved by the San Diego Water Board.
- E. **Monitoring Reports.** Monitoring results shall be reported to the San Diego Water Board at the intervals specified in section VI of this Certification.
- F. **Monitoring and Reporting Revisions.** The San Diego Water Board may make revisions to the monitoring program at any time during the term of this Certification and may reduce or increase the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.
- G. **Retain Records.** The Applicant must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Certification, and records of all data used to complete the application for this Certification. Records must be maintained for a minimum of five years from the date of

the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this Project or when requested by the San Diego Water Board.

H. Records of Monitoring Information. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The individual(s) who performed the sampling or measurements;
3. The date(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

I. Dredged Material Evaluation. Dredged material proposed for discharge must be sampled, tested and evaluated according to the document entitled "1996 Evaluation of Dredge Materials Proposed for Discharge in Waters of the U.S. – Testing Manual" (Inland Testing Manual) under the direction and approval of USACE and USEPA.

J. Receiving Water Visual Observation Monitoring. The Applicant must conduct visual observation monitoring of the Project activities in Mission Bay, prior to, during, and after each period of Project construction. The visual observation monitoring documentation must be included in the Receiving Water and Visual Observation Monitoring Report(s).

1. **Parameters.** The following parameters, at a minimum, shall be recorded and visually monitored immediately outside of the construction area and in the vicinity of the nearshore sand placement:
 - a. Tidal stage;
 - b. Speed and direction of currents;
 - c. Appearance of floating particulates, rubbish, refuse, garbage, trash or any other solid waste, suspended materials, grease, or oil;
 - d. Discoloration of the water surface, extent of turbidity plume, and any observable sediment movement; and
 - e. Presence of nuisance odors attributable to the dredge activity or dredged material discharge activity to the beach disposal area.
2. **Field Documentation.** All visual observations shall be recorded throughout Project construction activities. In addition to the requirements listed in section VI.H.,

monitoring field logs shall include observations of water quality conditions including sheen, color, odor, floating particulates, and surface visible turbidity plume. Logs shall also include observations of sensitive biological resources and weather conditions, such as wind speed/direction and cloud cover.

If photo documentation is used in support of visual observations of water quality conditions, it should be conducted in accordance with guidelines posted at http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/401c/401PhotoDocRB9V713.pdf. In addition, photo documentation should include Global Positioning System (GPS) coordinates for each of the photo points referenced; and,

3. **Response Actions.** If silt curtains are employed, the condition of the silt curtain is to be monitored and if the curtain is observed to be damaged, has become dislocated, or has gaps where a visible turbidity plume is forming outside of the silt curtain at the Project Site, a response action shall be taken immediately to correct the situation. Response actions may include, but are not limited to, work stoppage until silt curtain repair is completed, implementation of operational modifications, and/or implementation of additional BMPs (e.g., a second silt curtain). Response actions, if needed, shall be documented in the monitoring field log.

K. **Receiving Water Quality Monitoring.** The Applicant shall conduct receiving water monitoring during construction activities at the Project Site and sediment Reuse Area sites to verify that applicable water quality standards for pH, dissolved oxygen (DO) and turbidity are not violated outside of the construction areas. The monitoring plan shall contain the following elements:

1. **Monitoring Stations.** During each monitoring event, water quality parameters including turbidity, DO, salinity, and pH shall be measured at three stations at the active Project Site and at three stations at the active Reuse Area. Monitored water quality measurements shall be compared to "ambient" water quality reference measurements outside of the respective construction or disposal areas in Mission Bay. Two stations shall be compliance stations and one station shall be a reference station. Monitoring station positions shall be located using a Global Position System (GPS) accurate to within ± 3 meters. Station descriptions are as follows:

- a. **Compliance Stations.** Two monitoring stations at the Project Site shall be located approximately 200 feet from the edge of the active dredge areas to capture all tidal and current conditions at the time of dredging at each area.

Two monitoring stations at the Reuse Area sites shall be located 100 and 300 feet down current from the edge of the sand replenishment activities to capture tidal and current conditions.

- b. **Reference Station.** One reference station for the Project shall be located at least 1,000 feet from the dredge activity up current and beyond the influence of construction activities.

Natural turbidity, DO, and pH shall be determined through measurements at the reference stations. A reference station shall be monitored during every event, because the turbidity water quality objective is based on an acceptably small increase in the vicinity of the construction/disposal activity relative to ambient reference levels. Water Quality Objectives for DO, pH, and turbidity, can be found in Chapter 3, pages 3-25, 3-26, and 3-34 respectively, in the Basin Plan.³

2. **Water Quality Measurements.** Monitored water quality measurements for turbidity, DO, and pH at the Compliance Stations shall be compared to Reference Station measurements outside the construction area. Water quality measurements shall be collected from below the water surface at each of the stations. Monitoring depths shall be determined using a depth finder with an accuracy of ± 0.5 feet. Water quality shall be monitored using instrumentation capable of measuring DO, pH, and turbidity (in nephelometric turbidity units (NTU's)).
3. **Monitoring Frequency.** During dredging, manual water quality samples shall be collected once daily after dredging operations have been underway for a minimum of one hour. The reference station outside the influence of dredging shall also be sampled at similar depths and frequency for comparison to the samples collected from the dredge area. Sampling may be reduced to weekly sampling if no water quality exceedances of the DO, pH, or turbidity described in section II.E of this Certification are observed or measured after 3 consecutive days of monitoring.

If after 3 consecutive days without an exceedance the monitoring frequency is reduced to weekly, all water quality parameters may be measured during one monitoring event per week. The monitoring frequency must return to daily if an exceedance of the DO, pH, or turbidity described in section II.E of this Certification is observed or measured. The monitoring frequency can again be reduced to weekly sampling if 3 consecutive days of monitoring show there are no exceedances of Receiving Water Limitations. When construction activities move to a new Dredge Area, daily monitoring will resume as outlined in this section.

During shoreline re-nourishment activities, water quality monitoring is also required at the active Reuse Area and shall be conducted after discharge activities have been underway for at least 1 hour at the above stated frequency along with the Compliance and Reference Stations monitoring.

4. **Sample Integrity.** The integrity of each water sample collected shall be maintained from the time of collection to the point of data reporting. Proper record keeping and chain of custody (COC) procedures shall be implemented to allow samples to be traced from collection to final disposition. After collection of water samples, documentation on various logs and forms shall be required to adequately identify and catalog sample information; and
5. **Compliance Criteria.** DO, pH, or turbidity limitations are provided in section II.E of this Certification. The point of compliance with these receiving water limitations shall

³ http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

be located at the compliance monitoring stations described above. The Project construction area is defined as the area(s) occupied by the dredging barge(s), the scow(s), silt curtains, and other associated work activities. The Reuse Site area is defined as the drop point where the material is discharged at or near the shoreline site location in Mission Bay.

- L. Response Actions to Monitoring Results.** In the event that visual observations or water quality monitoring described in Section VI.J and VI.K of this Certification indicate an exceedance of an applicable Receiving Water Limitation described in Section II. of this Certification, the Applicant shall implement the additional or enhanced operational or engineering BMPs described below:
1. Evaluate the concurrent measurements at background and compliance monitoring stations and supporting visual evidence to determine whether the exceedance is caused by the dredging or disposal activities or by other ambient conditions in the Mission Bay, (e.g., wind waves, boat wakes, barge/ship traffic, and storm inflow).
 2. Immediately re-take measurements at background and compliance stations.
 3. If the exceedance is confirmed, immediately notify the dredge contractor to immediately modify operations or implement additional BMPs to mitigate the exceedance. Operational modifications may include, but are not limited to the following modifications implemented individually or in combination:
 - a. Adjust the sequence and/or speed of dredging and disposal operations;
 - b. Reposition dredge operations in such a way as to ensure future exceedances do not occur;
 - c. Fix, maintain, and/or upgrade floating silt curtains; and
 - d. Modify, either on a temporary or permanent basis, dredge equipment (such as the dredging bucket size or type).
 4. Re-evaluate field measurements at all relevant stations 30 minutes later, after additional BMPs or operational modifications are implemented.
 5. If the receiving water limitation exceedance continues to persist, even with additional BMPs, determine and implement more aggressive BMPs or operational modifications that resolve the exceedance or stop work to further assess the source of the exceedance, identify effective mitigation measures, and allow the water column to recover.
- M. Geographic Information System Data.** The Applicant must submit Geographic Information System (GIS) shape files of the Project impact sites within 30 days of the start of project construction and GIS shape files of the Project mitigation sites within 30 days of mitigation installation. All impact and mitigation site shape files must be

polygons. Two GPS readings (points) must be taken on each line of the polygon and the polygon must have a minimum of 10 points. GIS metadata must also be submitted.

N. Receiving Water and Visual Observation Monitoring Report. The Applicant shall prepare monitoring reports that contain the results of receiving water quality and visual observation monitoring activities for each week of that month. The reports must be submitted no later than 30 days following each calendar month of in-water construction and must include:

1. The following identification numbers included at the end of the header or subject line: **Certification No. R9-2017-0036:832167:amonji**;
2. The names, qualifications, and affiliations of the persons contributing to the report;
3. A summary table of the monitoring results with a comparison to receiving water limitation compliance criteria;
4. An evaluation, interpretation, and tabulation of the visual observations required under section VI.J and water quality data required under section VI.K including interpretations and conclusions as to whether applicable receiving water limitations were attained at each monitoring station;
5. A description of each incident of non-compliance and its cause, the period of the noncompliance including exact dates and times, and actions taken to reduce, eliminate, and prevent reoccurrence of the noncompliance; and
6. For any weekly monitoring period in which no dredging or disposal activities were conducted, the reporting must include a statement certifying that no dredging or discharge activities occurred during the monitoring period.

O. Annual Project Progress Reports. The Applicant must submit annual Project Progress Reports until this certification has expired or been terminated. The Project Progress Reports must describe the status of BMP implementation, compensatory mitigation (as required by CEMP), and compliance with all requirements of this Certification to the San Diego Water Board prior to **March 1** of each year following the issuance of this Certification, until the Project has reached completion. The Annual Project Progress Reports must contain compensatory mitigation monitoring information sufficient to demonstrate how the compensatory mitigation project is progressing towards accomplishing its objectives and meeting its performance standards. Annual Project Progress Reports must be submitted even if Project construction has not begun. The monitoring period for each Annual Project Progress Report shall be January 1st through December 31st of each year. Annual Project Progress Reports must include, at a minimum, the following:

1. **Project Status and Compliance Reporting.** The Annual Project Progress Report must include the following Project status and compliance information:
 - a. The names, qualifications, and affiliations of the persons contributing to the report;

- b. The status, progress, and anticipated schedule for completion of Project construction activities including the installation and operational status of best management practices project features for erosion and storm water quality treatment;
 - c. A description of Project construction delays encountered or anticipated that may affect the schedule for construction completion;
 - d. A description of each incident of noncompliance during the annual monitoring period and its cause, the period of the noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and
 - e. The pre- and post- construction eelgrass surveys, as applicable, required under section V.C of this Certification, including a description of any additional actions that will be taken by the Applicant to mitigate for impact to eelgrass habitat beyond what is expected.
2. **Compensatory Mitigation Monitoring Reporting.** The mitigation monitoring information must be submitted as part of the Annual Project Progress Report for a period of not less than five years, sufficient to demonstrate that the compensatory mitigation project has accomplished its objectives and met ecological success performance standards contained in the Mitigation Plan. Monitoring shall be conducted in accordance with the standards of the CEMP. Following Project implementation the San Diego Water Board may reduce or waive compensatory mitigation monitoring requirements upon a determination that performance standards have been achieved. Conversely, the San Diego Water Board may extend the monitoring period beyond five years upon a determination that the performance standards have not been met or the compensatory mitigation project is not on track to meet them. The Annual Project Progress Report must include the following compensatory mitigation monitoring information:
- a. Names, qualifications, and affiliations of the persons contributing to the report;
 - b. An evaluation, interpretation, and tabulation of the parameters being monitored, including the results of the Mitigation Plan monitoring program, and all quantitative and qualitative data collected in the field;
 - c. Monitoring data interpretations and conclusions as to how the compensatory mitigation project(s) is progressing towards meeting performance standards and whether the performance standards have been met;
 - d. A description of the progress toward implementing a plan to manage the compensatory mitigation project after performance standards have been achieved to ensure the long term sustainability of the resource in perpetuity, including a discussion of long term financing mechanisms, the party responsible

for long term management, and a timetable for future steps;

- e. Qualitative and quantitative comparisons of current mitigation conditions with pre-construction conditions and previous mitigation monitoring results;
- f. As-built drawings of the compensatory mitigation project site(s), no bigger than 11"X17"; and
- g. A survey report documenting boundaries of the compensatory mitigation site(s).

P. Final Project Completion Report. The Applicant must submit a Final Project Completion Report to the San Diego Water Board **within 30 days of completion of the Project**. The final report must include the following information:

- 1. Date of construction initiation;
- 2. Date of construction completion;
- 3. BMP installation and operational status for the Project;
- 4. As-built drawings of the Project, no bigger than 11"X17";
- 5. Photo documentation of implemented post-construction BMPs and all areas of permanent and temporary impacts, prior to and after project construction. Photo documentation must be conducted in accordance with guidelines posted at http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/401c/401PhotoDocRB9V713.pdf. In addition, photo documentation must include Global Positioning System (GPS) coordinates for each of the photo points referenced; and

Q. Reporting Authority. The submittal of information required under this Certification, or in response to a suspected violation of any condition of this Certification, is required pursuant to Water Code section 13267 and 13383. Civil liability may be administratively imposed by the San Diego Water Board for failure to submit information pursuant to Water Code sections 13268 or 13385.

R. Electronic Document Submittal. The Applicant must submit all reports and information required under this Certification in electronic format via e-mail to SanDiego@waterboards.ca.gov. Documents over 50 megabytes will not be accepted via e-mail and must be placed on a disc and delivered to:

California Regional Water Quality Control Board
San Diego Region
Attn: 401 Certification No. R9-2017-0036:832167:amongji
2375 Northside Drive, Suite 100
San Diego, California 92108

Each electronic document must be submitted as a single file, in Portable Document Format (PDF), and converted to text searchable format using Optical Character Recognition (OCR). All electronic documents must include scanned copies of all signature pages; electronic signatures will not be accepted. Electronic documents submitted to the San Diego Water Board must include the following identification numbers in the header or subject line: Certification No. R9-2017-0036:832167:amonji.

S. Document Signatory Requirements. All applications, reports, or information submitted to the San Diego Water Board must be signed as follows:

1. For a corporation, by a responsible corporate officer of at least the level of vice president.
2. For a partnership or sole proprietorship, by a general partner or proprietor, respectively.
3. For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.
4. A duly authorized representative may sign applications, reports, or information if:
 - a. The authorization is made in writing by a person described above.
 - b. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.
 - c. The written authorization is submitted to the San Diego Water Board Executive Officer.

If such authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the Project, a new authorization satisfying the above requirements must be submitted to the San Diego Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative.

T. Document Certification Requirements. All applications, reports, or information submitted to the San Diego Water Board must be certified as follows:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

VII. NOTIFICATION REQUIREMENTS

- A. Twenty Four Hour Non-Compliance Reporting.** The Applicant shall report any noncompliance which may endanger health or the environment. Any such information

shall be provided orally to the San Diego Water Board within **24 hours** from the time the Applicant becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Applicant becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The San Diego Water Board, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

- B. *Caulerpa Taxifolia*.** The Applicant must conduct a surveillance-level survey for *Caulerpa taxifolia*, in accordance with the requirements in the National Marine Fisheries Service's *Caulerpa* Control Protocol (version 4), dated February 25, 2008, not more than 90 days before the initiation of construction to determine presence/absence of this species within the immediate vicinity of the project. If *Caulerpa taxifolia* is identified during a survey, or at any other time before, during, or within 120 days following completion of authorized activities, both National Marine Fisheries Service and California Department of Fish and Wildlife must be contacted within 24 hours of first noting the occurrence. In the event *Caulerpa taxifolia* is detected, all disturbing activity must cease until such time as the infestation has been isolated and treated, or the risk of spread from the disturbing activity is eliminated in accordance with the *Caulerpa* Control Protocol.
- C. Hazardous Substance Discharge.** Except as provided in Water Code section 13271(b), any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, shall as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the County of San Diego, in accordance with California Health and Safety Code section 5411.5 and the California Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Government Code Title 2, Division 1, Chapter 7, Article 3.7 (commencing with section 8574.17), and immediately notify the State Water Board or the San Diego Water Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of section 13271 of the Water Code unless the Applicant is in violation of a Basin Plan prohibition.
- D. Oil or Petroleum Product Discharge.** Except as provided in Water Code section 13272(b), any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the California Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Government Code Title 2, Division 1, Chapter 7, Article 3.7 (commencing with section 8574.1). This requirement does not

require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to Clean Water Act section 311, or the discharge is in violation of a Basin Plan prohibition.

- E. **Anticipated Noncompliance.** The Applicant shall give advance notice to the San Diego Water Board of any planned changes in the Project or the Compensatory Mitigation project which may result in noncompliance with Certification conditions or requirements.
- F. **Commencement of Construction Notification.** The Applicant must notify the San Diego Water Board in writing at least 5 days prior to the start of initial Project dredging activities.
- G. **Transfers.** This Certification is not transferable in its entirety or in part to any person or organization except after notice to the San Diego Water Board in accordance with the following terms:
1. **Transfer of Property Ownership:** The Applicant must notify the San Diego Water Board of any change in ownership of the Project area. Notification of change in ownership must include, but not be limited to, a statement that the Applicant has provided the purchaser with a copy of the Section 401 Water Quality Certification and that the purchaser understands and accepts the certification requirements and the obligation to implement them or be subject to liability for failure to do so; the seller and purchaser must sign and date the notification and provide such notification to the San Diego Water Board **within 10 days of the transfer of ownership.**
 2. **Transfer of Mitigation Responsibility:** Any notification of transfer of responsibilities to satisfy the mitigation requirements set forth in this Certification must include a signed statement from an authorized representative of the new party (transferee) demonstrating acceptance and understanding of the responsibility to comply with and fully satisfy the mitigation conditions and agreement that failure to comply with the mitigation conditions and associated requirements may subject the transferee to enforcement by the San Diego Water Board under Water Code section 13385, subdivision (a). Notification of transfer of responsibilities meeting the above conditions must be provided to the San Diego Water Board **within 10 days of the transfer date.**
 3. **Transfer of Post-Construction BMP Maintenance Responsibility:** The Applicant assumes responsibility for the inspection and maintenance of all post-construction structural BMPs until such responsibility is legally transferred to another entity. At the time maintenance responsibility for post-construction BMPs is legally transferred the Applicant must submit to the San Diego Water Board a copy of such documentation and must provide the transferee with a copy of a long-term BMP maintenance plan that complies with manufacturer specifications. The Applicant must provide such notification to the San Diego Water Board **within 10 days of the transfer of BMP maintenance responsibility.**

Upon properly noticed transfers of responsibility, the transferee assumes responsibility for compliance with this Certification and references in this Certification to the Applicant will be interpreted to refer to the transferee as appropriate. Transfer of responsibility does not necessarily relieve the Applicant of responsibility for compliance with this Certification in the event that a transferee fails to comply.

VIII. CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE

- A. The City of San Diego is the Lead Agency under the California Environmental Quality Act (CEQA) (Public Resources Code section 21000, et seq.) section 21067, and CEQA Guidelines (California Code of Regulations, title 14, section 15000 et seq.) section 15367, and has filed a Notice of Determination dated May 31, 2017 for the Mitigated Negative Declaration (MND) titled Mission Bay Park Navigational Safety Dredging (State Clearing House Number 2017021052). The Lead Agency has determined the Project will have a significant effect on the environment and mitigation measures were made a condition of the Project.
- B. The San Diego Water Board is a Responsible Agency under CEQA (Public Resources Code section 21069; CEQA Guidelines section 15381). The San Diego Water Board has considered the Lead Agency's MND and finds that the Project as proposed will have a significant effect on resources within the San Diego Water Board's purview.
- C. The San Diego Water Board has required mitigation measures as a condition of this Certification to avoid or reduce the environmental effects of the Project to resources within the Board's purview to a less than significant level.
- D. The Lead Agency has adopted a mitigation monitoring and reporting program pursuant to Public Resources Code section 21081.6 and CEQA Guidelines section 15097 to ensure that mitigation measures and revisions to the Project identified in the FEIR are implemented. The Mitigation Monitoring and Reporting Program (MMRP) is included and incorporated by reference in Attachment 5 to this Certification. The Applicant shall implement the Lead Agency's MMRP described in the FEIR, as it pertains to resources within the San Diego Water Board's purview. The San Diego Water Board has imposed additional MMRP requirements as specified in sections V and VI of this Certification.
- E. As a Responsible Agency under CEQA, the San Diego Water Board will file a Notice of Determination in accordance with CEQA Guidelines section 15096 subdivision (i).

IX. SAN DIEGO WATER BOARD CONTACT PERSON

Alan Monji, Environmental Scientist
Telephone: 619-521-3968
Email: Alan.Monji@waterboards.ca.gov

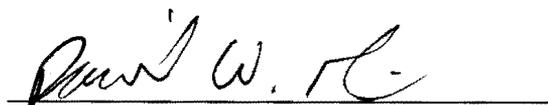
X. WATER QUALITY CERTIFICATION

I hereby certify that the proposed discharge from the **Mission Bay Navigational Safety Dredging** (Certification No. R9-2017-0036) will comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of

Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under State Water Board Order No. 2003-0017-DWQ, "*Statewide General Waste Discharge Requirements for Dredged or Fill Discharges that have Received State Water Quality Certification (General WDRs)*," which requires compliance with all conditions of this Water Quality Certification. Please note that enrollment under Order No. 2003-017-DWQ is conditional and, should new information come to our attention that indicates a water quality problem, the San Diego Water Board may issue individual waste discharge requirements at that time.

Except insofar as may be modified by any preceding conditions, all Certification actions are contingent on (a) the discharge being limited to, and all proposed mitigation being completed in strict compliance with, the applicants' Project description and/or the description in this Certification, and (b) compliance with all applicable requirements of the Basin Plan.

I, David W. Gibson, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of Certification No. R9-2017-0036 issued on August 23, 2017.



DAVID W. GIBSON
Executive Officer
San Diego Water Board

23 August 2017
Date

ATTACHMENT 1 DEFINITIONS

Activity - when used in reference to a permit means any action, undertaking, or project including, but not limited to, construction, operation, maintenance, repair, modification, and restoration which may result in any discharge to waters of the state.

Buffer - means an upland, wetland, and/or riparian area that protects and/or enhances aquatic resource functions associated with wetlands, rivers, streams, lakes, marine, and estuarine systems from disturbances associated with adjacent land uses.

California Rapid Assessment Method (CRAM) - is a wetland assessment method intended to provide a rapid, scientifically-defensible and repeatable assessment methodology to monitor status and trends in the conditions of wetlands for applications throughout the state. It can also be used to assess the performance of compensatory mitigation projects and restoration projects. CRAM provides an assessment of overall ecological condition in terms of four attributes: landscape context and buffer, hydrology, physical structure and biotic structure. CRAM also includes an assessment of key stressors that may be affecting wetland condition and a "field to PC" data management tool (eCRAM) to ensure consistency and quality of data produced with the method.

Compensatory Mitigation Project - means compensatory mitigation implemented by the Applicant as a requirement of this Certification (i.e., applicant -responsible mitigation), or by a mitigation bank or an in-lieu fee program.

Discharge of dredged material – means any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the waters of the United States and/or State.

Discharge of fill material – means the addition of fill material into waters of the United States and/or State.

Dredged material – means material that is excavated or dredged from waters of the United States and/or State.

Ecological Success Performance Standards – means observable or measurable physical (including hydrological), chemical, and/or biological attributes that are used to determine if a compensatory mitigation project meets its objectives.

Enhancement – means the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment – means the manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist. Creation results in a gain in aquatic resource area.

Fill material – means any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of a water body.

Isolated wetland – means a wetland with no surface water connection to other aquatic resources.

Mitigation Bank – means a site, or suite of sites, where resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or preserved for the purpose of providing mitigation for impacts authorized by this Certification.

Preservation - means the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/ historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/ historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Start of Project Construction - For the purpose of this Certification, "start of Project construction" means to engage in a program of on-site construction, including site clearing, grading, dredging, landfilling, changing equipment, substituting equipment, or even moving the location of equipment specifically designed for a stationary source in preparation for the fabrication, erection or installation of the building components of the stationary source within waters of the United States and/or State.

Uplands - means non-wetland areas that lack any field-based indicators of wetlands or other aquatic conditions. Uplands are generally well-drained and occur above (i.e., up-slope) from nearby aquatic areas. Wetlands can, however, be entirely surrounded by uplands. For example, some natural seeps and constructed stock ponds lack aboveground hydrological connection to other aquatic areas. In the watershed context, uplands comprise the landscape matrix in which aquatic areas form. They are the primary sources of sediment, surface runoff, and associated chemicals that are deposited in aquatic areas or transported through them.

Water quality objectives and other appropriate requirements of state law – means the water quality objectives and beneficial uses as specified in the appropriate water quality control plan(s); the applicable provisions of sections 301, 302, 303, 306, and 307 of the Clean Water Act; and any other appropriate requirement of state law.

Waters of the State - means any surface water or groundwater, including saline waters, within the boundaries of the State. [Water Code section 13050, subd. (e)].

ATTACHMENT 2

LOCATION MAPS AND FIGURES

1. Project Vicinity Map, Figure 1.
2. Merkel and Associates, *Eelgrass Mitigation and Monitoring Plan in Support of the Mission Bay Park Navigational Safety Dredging Project*, Figure 2, December 2016.



Figure 1. Project Vicinity Map



Figure 2. Project Site Map

ATTACHMENT 3

PROJECT FIGURES

1. Rick Engineering, Mission Bay Navigational Safety Dredging Project grading plans, Sheets 1-13, December 2016.

MISSION BAY NAVIGATIONAL SAFETY DREDGING

CONTRACTOR'S RESPONSIBILITIES

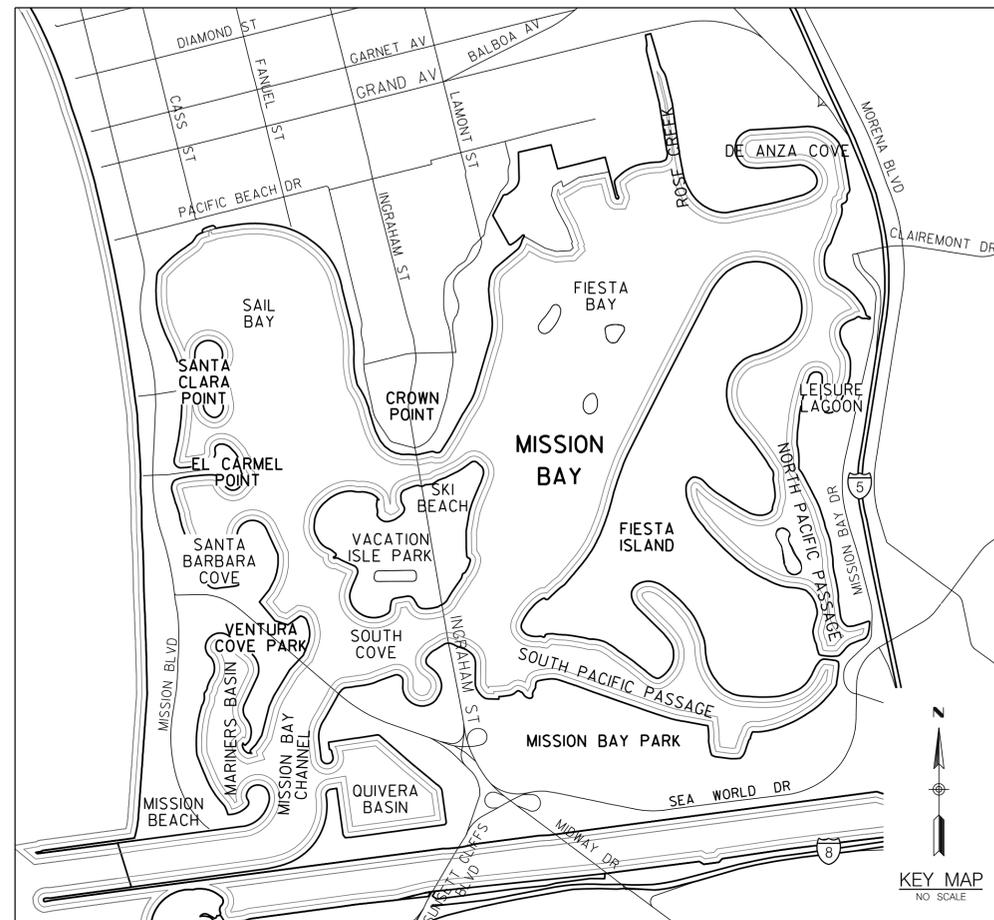
- PURSUANT TO SECTION 4216 OF THE CALIFORNIA GOVERNMENT CODE, AT LEAST 2 WORKING DAYS PRIOR TO EXCAVATION, YOU MUST CONTACT THE REGIONAL NOTIFICATION CENTER (E.G., UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA) AND OBTAIN AN INQUIRY IDENTIFICATION NUMBER.
- NOTIFY SDG&E AT LEAST 10 WORKING DAYS PRIOR TO EXCAVATING WITHIN 10' OF SDG&E UNDERGROUND HIGH VOLTAGE TRANSMISSION POWER LINES. (I.E., 69 KV & HIGHER)

MONUMENTATION/SURVEY NOTES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LICENSED LAND SURVEYOR OR LICENSED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING IN THE STATE OF CALIFORNIA SHALL FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR ANY EARTHWORK, DEMOLITION OR SURFACE IMPROVEMENTS. IF DESTROYED, A LICENSED LAND SURVEYOR SHALL REPLACE SUCH MONUMENT(S) WITH APPROPRIATE MONUMENTS. WHEN SETTING SURVEY MONUMENTS USED FOR RE-ESTABLISHMENT OF THE DISTURBED CONTROLLING SURVEY MONUMENTS AS REQUIRED BY SECTIONS 6730.2 AND 871 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILLED WITH THE COUNTY SURVEYOR. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION SHALL BE NOTIFIED IN WRITING AT LEAST 7 DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REPLACING AND VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.

SHEET INDEX

SHEET NO.	DISCIPLINE CODE	TITLE	LIMITS
1	G-1	COVER SHEET	
2	G-2	KEY MAP	
3	G-3	NOTES	
4	C-1	GRADING PLAN	CROWN POINT (NORTH)
5	C-2	GRADING PLAN	CROWN POINT (SOUTH)
6	C-3	GRADING PLAN	SKI BEACH
7	C-4	GRADING PLAN	LEISURE LAGOON
8	C-5	DREDGING PLAN	EL CARMEL POINT
9	C-6	DREDGING PLAN	SANTA BARBARA COVE
10	C-7	DREDGING PLAN	SOUTH COVE
11	C-8	DREDGING PLAN	FIESTA BAY
12	C-9	DREDGING PLAN	SAIL BAY
13	C-10	DREDGING PLAN	SAIL BAY



WORK TO BE DONE
THE IMPROVEMENTS CONSIST OF THE FOLLOWING MAINTENANCE DREDGING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE STANDARD SPECIFICATIONS AND THE STANDARD DRAWINGS OF THE CITY OF SAN DIEGO.

IMPROVEMENTS
MAJOR CONTOUR
MINOR CONTOUR
DAYLIGHT
DREDGE AREA
REUSE AREA

LEGEND

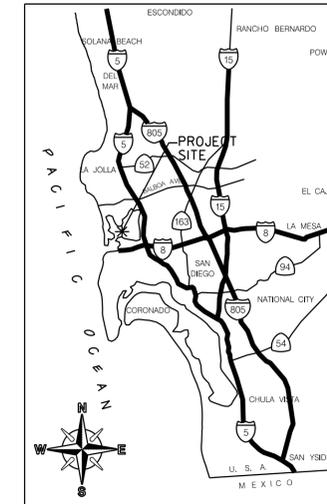
STANDARD DRAWINGS

SYMBOL
10
4
- ## - - ##
[Hatched Box]
[Hatched Box]

EXISTING STRUCTURES

EX DRAINS
EX EEL GRASS
EX MAJOR CONTOUR
EX MINOR CONTOUR

[Dashed Line]
[Dashed Line]
[Dashed Line]



FIELD DATA

BENCHMARK:
ELEV.=15,429, NGVD29
FIELD NOTES:
BASIS OF BEARINGS / COORDINATES:
THE BASIS OF COORDINATES FOR THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83) ZONE 6, NAD83 (EPOCH 1991,35) BASED UPON SINGLE POINT SOLUTION AT STATION SDGPS 1905 PER ROS 14492, AND IS DETERMINED BY GPS RTK MEASUREMENTS TAKEN ON AUGUST 24, 2016.

HORIZONTAL AND VERTICAL CONSTRAINT POINT:
STATION SDGPS 1905 PER ROS 14492
N: 1868497.88
E: 6266539.35
ELEV: 15.43
CGF: 1.0000035
CONVERGENCE: -0° 31'39.747"

CHECK POINT:
STATION SDGPS 906 PER ROS 14492
N: 1864562.80 REC. 1864562.768 MSRD.
E: 6254677.43 REC. 6254677.429 MSRD.
ELEV: 8.48 REC. 8.41 MSRD.

NOTE: GRID BEARING 1905 TO 906: S 71° 38' 50" W
HD: 12497.60 RECORD PER ROS 14492

DATUM: NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29)

DISCIPLINE CODE

G GENERAL
C CIVIL

ABBREVIATIONS

CY	CUBIC YARD	FG	FINISH GRADE	PROP	PROPOSED
EL, ELEV	ELEVATION	HORIZ.	HORIZONTAL	RCP	REINFORCED CONCRETE PIPE
ELEC	ELECTRIC	IE	INVERT ELEVATION	SD	STORM DRAIN
EX, EXIST	EXISTING	MIN	MINIMUM	UNK	UNKNOWN
FT	FEET	NIC	NOT IN CONTRACT	VERT.	VERTICAL

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS. I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

KEVIN GIBSON R.C.E. 52295 DATE

The City of **SAN DIEGO** Public Works

RICK ENGINEERING COMPANY
6620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
San Diego Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver



CONTRACTOR INSPECTOR DATE STARTED DATE COMPLETED

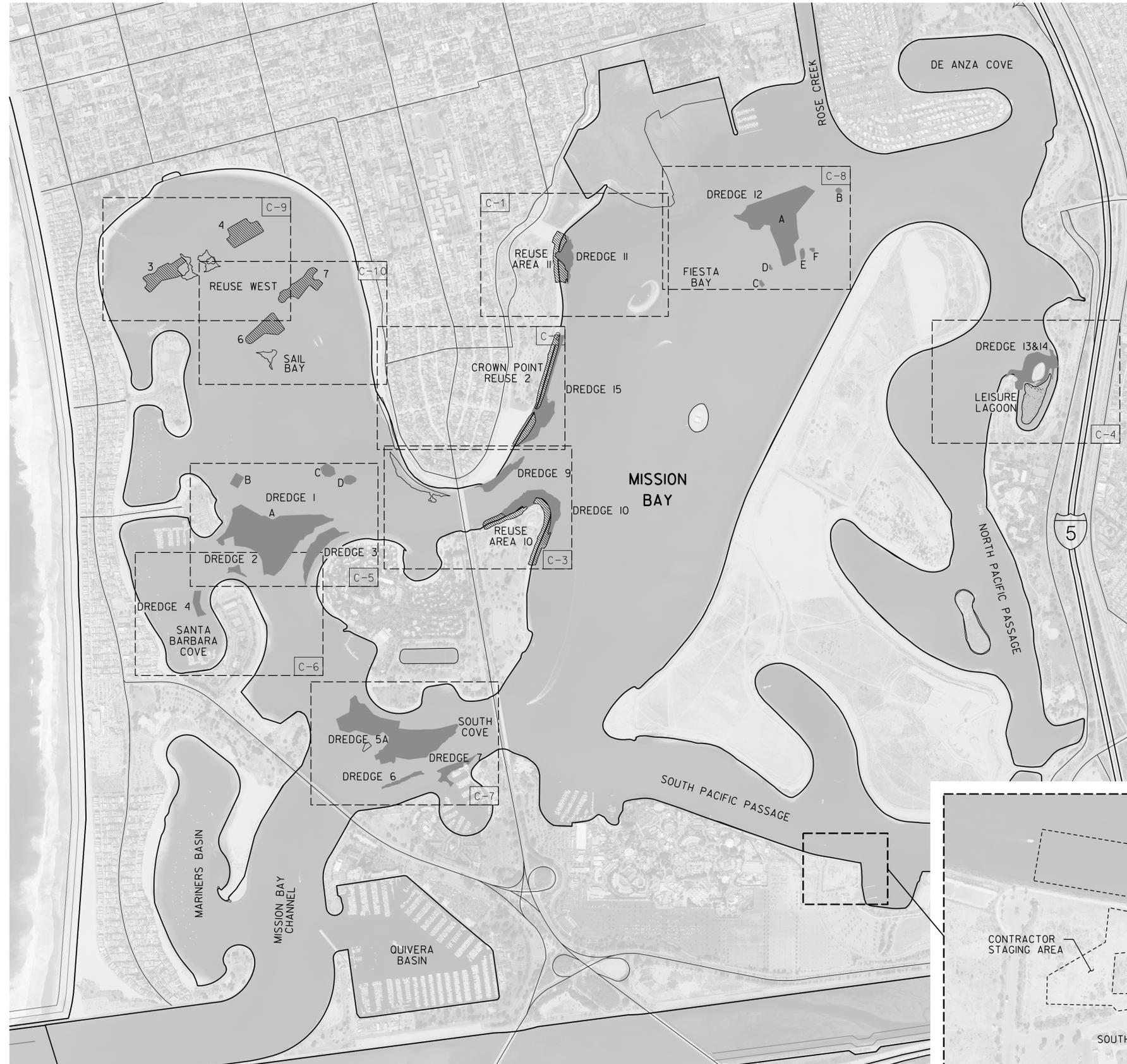
PLANS FOR THE CONSTRUCTION OF
MISSION BAY NAVIGATIONAL
SAFETY DREDGING
COVER SHEET

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 1 OF 13 SHEETS

WATER WBS	0-00000			
SEWER WBS	0-00000			
APPROVED FOR CITY ENGINEER	DATE			
PRINT NAME	RCE#			
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	xx/xx			
SUBMITTED BY: TAMARA MILLER PROJECT ENGINEER				
SEE SHEETS CCS27 COORDINATE				
SEE SHEETS CCS83 COORDINATE				
CONTRACTOR INSPECTOR DATE STARTED DATE COMPLETED				
93721-01-D				

CONSTRUCTION CHANGE / ADDENDUM			
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.

WARNING
0 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



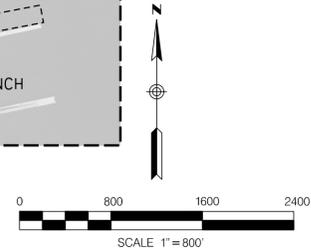
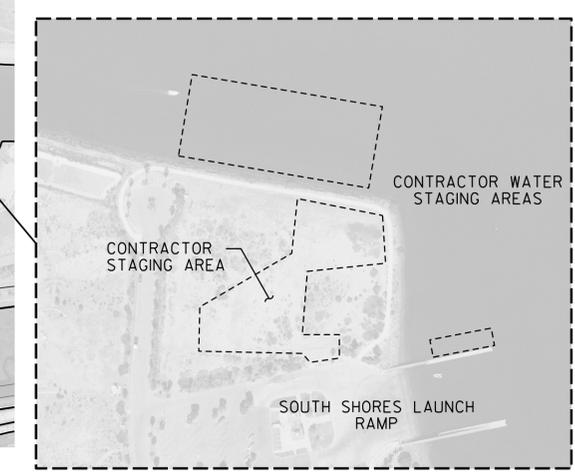
SITE	AREA (ACRES)	DREDGE ELEV. (FT)	CUT VOL (CY)	FILL VOLUME (CY)	1-FT NON-PAID OVERDREDGE (CY)	2-FT PAID ALLOWABLE OVERDREDGE	EELGRASS IMPACT (ACRES)	EELGRASS TRANSPLANT AREA (ACRES)-NIC	PREDICTED EELGRASS RESTORED (ACRES)-NIC
DREDGE SITES									
DREDGE 1A	15.87	-10.50	22,690	-	25,600	-	15.87	15.87	15.08
DREDGE 1B	0.52	-10.50	590	-	840	-	0.52	0.52	0.49
DREDGE 1C	0.63	-10.50	720	-	1,020	-	0.63	0.63	0.60
DREDGE 1D	0.41	-10.50	500	-	660	-	0.41	0.41	0.39
DREDGE 2	0.41	-10.50	470	-	660	-	0.41	0.41	0.39
DREDGE 3	2.84	-10.50	5,450	-	4,580	-	2.57	2.84	2.70
DREDGE 4	0.80	-10.50	610	-	1,290	-	0.64	0.80	0.76
DREDGE 5A	13.50	-10.50	19,850	-	21,780	-	13.30	13.50	12.83
DREDGE 5B	NO WORK	-10.50	NO WORK	-	NO WORK	NO WORK	NO WORK	NO WORK	NO WORK
DREDGE 6	0.67	-10.50	850	-	1,080	-	0.42	0.67	0.64
DREDGE 7	1.30	-10.50	3,380	-	2,100	-	1.30	1.30	1.24
DREDGE 8	NO WORK	-10.50	NO WORK	-	NO WORK	NO WORK	NO WORK	NO WORK	NO WORK
DREDGE 9	1.94	-10.00	4,770	-	-	-	0.97	1.94	1.01
DREDGE 10	3.61	-10 TO -11	15,300	8,780	-	-	2.01	3.61	1.88
DREDGE 11	1.67	-7.00	5,900	5,900	-	-	0.64	1.67	0.87
DREDGE 12A	11.44	-10.50	22,890	-	-	36,930	0.99	-	-
DREDGE 12B	0.13	-10.50	230	-	-	410	-	-	-
DREDGE 12C	0.11	-10.50	190	-	-	350	0.06	-	-
DREDGE 12D	0.07	-10.50	120	-	-	210	0.04	-	-
DREDGE 12 E	0.21	-10.50	380	-	-	680	0.04	-	-
DREDGE 12F	0.08	-10.50	140	-	-	260	0.00	-	-
DREDGE 13 & 14	3.78	-5.00	8,320	8,320	-	-	0.78	3.78	2.68
DREDGE 15	3.37	-2 TO -7	9,050	9,050	-	-	1.31	3.37	2.36
TOTAL DREDGE	63.36		122,400	32,050	59,610	38,840	42.93	51.32	43.90

BENEFICIAL RESUE EELGRASS MITIGATION SITE	AREA (ACRES)	FILL VOL (CY)	EELGRASS TRANSPLANT AREA (ACRES)-NIC	PREDICTED EELGRASS RESTORED (ACRES) - NIC
RESUE SITES				
RESUE WEST 1	NO WORK	NO WORK	NO WORK	NO WORK
RESUE WEST 2	NO WORK	NO WORK	NO WORK	NO WORK
RESUE WEST 3 **	2.51	41,270	2.51	2.38
RESUE WEST 4 **	2.69	50,060	2.69	2.55
RESUE WEST 5	NO WORK	NO WORK	NO WORK	NO WORK
RESUE WEST 6 **	2.23	48,690	2.23	2.12
RESUE WEST 7 **	2.50	48,780	2.50	2.37
CROWN POINT REUSE 1	NO WORK	NO WORK	NOWORK	NO WORK
CROWN POINT REUSE 2	3.35	9,050	-	-
REUSE AREA 10	3.75	8,780	-	-
LEISURE LAGOON	2.45	8,320	2.45	1.74
REUSE AREA 11	2.06	5,900	-	-
TOTAL REUSE	19.47	220,850	12.37	11.17

**FILL VOLUME INCLUDES DREDGING CUT VOLUME AND 1-FT AND 2-FT OVER DREDGING VOLUMES

LEGEND

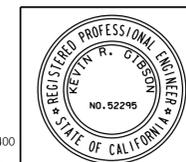
- DREDGE AREAS
- REUSE AREAS



G-2

MISSION BAY NAVIGATIONAL SAFETY DREDGING
KEY MAP

CITY OF SAN DIEGO, CALIFORNIA PUBLIC WORKS DEPARTMENT SHEET 2 OF 13 SHEETS		WATER WBS 0-00000 SEWER WBS 0-00000
FOR CITY ENGINEER _____ DATE _____		SUBMITTED BY COSELYN GOODRICH PROJECT MANAGER
PRINT NAME _____ RCE# _____		CREATED BY TAMARA MILLER PROJECT ENGINEER
DESCRIPTION	BY	APPROVED
ORIGINAL	xx/xx	
		DATE
		FILMED
DATE STARTED _____		SEE SHEETS CCS27 COORDINATE
DATE COMPLETED _____		SEE SHEETS CCS83 COORDINATE
		39721-02-D



CONTRACTOR INSPECTOR _____

MISSION BAY NAVIGATIONAL SAFETY DREDGING

WORK IN TIDAL WATERS

- THIS WORK IS BEING CONDUCTED IN A FULL TIDAL ENVIRONMENT. CONTRACTOR IS ADVISED TO TAKE APPROPRIATE PRECAUTIONS TO ENSURE THAT SITE CONDITIONS WORK, AND EQUIPMENT STORAGE AND OPERATIONS ARE ACCOMPLISHED IN A MANNER THAT DOES NOT RESULT IN EXPOSURE TO UNINTENDED EQUIPMENT FLOODING OR GROUNDING DUE TO TIDAL CONDITIONS.
- CONTRACTOR IS ADVISED THAT THE PROJECT VERTICAL DATUM IS FEET NGVD29 (SHEET G-1) AND NOT MEAN LOWER LOW WATER (MLLW) AS DEPICTED ON TIDE TABLES. FOR PLANNING PURPOSES THE DATUM EQUIVALENCY IS PROVIDED BELOW. ALL SURVEY SHALL BE IN ACCORDANCE WITH THE PROJECT HORIZONTAL AND VERTICAL DATA (SHEET G-1).

PROJECT VERTICAL DATUM	REFERENCE VERTICAL DATUM EQUIVALENCE		
	NGVD29 (FT)	MLLW (FT)	NAVD88 (FT)
+5.37	+7.79	+7.60	HHT (HIGHEST HIGH TIDE)
+2.59	+5.01	+4.82	MHW (MEAN HIGH WATER)
+0.54	+2.96	+2.77	MSL (MEAN SEA LEVEL)
0.0	+2.42	+2.23	
-2.23	+0.19	0.00	
-2.42	0.00	-0.19	MLLW (MEAN LOWER LOW WATER)

STAGING AND ACCESS

- THE CONTRACTOR STAGING AREA IS LOCATED ON SOUTH PACIFIC PASSAGE AT THE SOUTH SHORES LAUNCH RAMP. ACCESS IS TAKEN FROM THE SOUTH SHORES PARKING LOT OFF OF MISSION BAY PARKWAY ACCESSED FROM SEA WORLD DRIVE (SHEET G-2).
- THE STAGING AREA INCLUDES TWO ON WATER STAGING LOCATIONS FOR STORAGE OF ON WATER EQUIPMENT AND BERTHING OF WORK VESSELS AS WELL AS AN UPLAND STAGING AREA FOR OFFICE TRAILERS, EQUIPMENT STORAGE, AND CONTRACTOR VEHICLE STAGING.
- THE CONTRACTOR SHALL FENCE AND CONTROL ACCESS TO ITS UPLAND STAGING AREA.
- THE CONTRACTOR WILL HAVE ACCESS TO EXCLUSIVE, BUT UNSECURED USE OF THE NORTH SIDE OF THE NORTHERN LAUNCH RAMP BOARDING FLOAT DURING THE WORK.
- THE CONTRACTOR MAY STAGE LARGE FLOATING EQUIPMENT SUCH AS A DREDGE PLANT AND SCOWS WITHIN A 400 FOOT BY 175 FOOT TEMPORARY MOORING AREA IN SOUTH PACIFIC CHANNEL.
- WHEN WORK IS BEING PERFORMED AT INDIVIDUAL SITES, EQUIPMENT MAY REMAIN AT THE SITES UNTIL WORK IS COMPLETED UNLESS WORK STOPAGES WILL CONTINUE FOR GREATER THAN 96 HOURS. IF STOPAGES ARE PLANNED TO CONTINUE IN EXCESS OF 96 HOURS, THE CONTRACTOR SHALL REMOVE EQUIPMENT FROM PARKLAND BEACHES OR WORK SITES TO DESIGNATED STAGING AREAS.
- CONTRACTOR MAY NOT:
 - PERMANENTLY CLOSE OR BLOCK PUBLIC TRAIL ACCESS, BUT MAY TEMPORARILY INTERRUPT TRAIL USE FOR EQUIPMENT CROSSINGS FOR PERIODS OF UP TO ONE HOUR.
 - UTILIZE PUBLIC PARKING FOR EQUIPMENT STORAGE OR LAYDOWN.
 - STAGE IN PARKLANDS OR LOTS OTHER THAN PROVIDED FOR IN THIS PLAN, WITHOUT PRIOR EXPLICIT CONCURRENCE BY THE CITY FIELD ENGINEER.

ENVIRONMENTAL NOTES

- THESE NOTES SHALL SUPPLEMENT CONDITIONS OF ENVIRONMENTAL PERMITS ISSUED FOR THE WORK. CONTRACTOR SHALL MAINTAIN A FULL SET OF ENVIRONMENTAL PERMITS ON THE PROJECT SITE AT ALL TIMES AND SHALL BE FAMILIAR WITH THE REQUIREMENTS APPLICABLE TO THE CONTRACTOR'S WORK.
- IF CONFLICTS ARE FOUND TO EXIST BETWEEN ANY CONTRACT PROVISIONS, DRAWINGS, NOTES, SPECIFICATIONS, OR PERMITS, THE CONTRACTOR SHALL BRING THESE TO THE IMMEDIATE ATTENTION OF THE OWNER'S REPRESENTATIVE FOR DIRECTION ON HOW TO PROCEED.
- STRINGENT COMPLIANCE WITH ENVIRONMENTAL CONDITIONS SHALL NOT RELIEVE CONTRACTOR FROM CONDUCTING WORK IN A PRUDENT AND ENVIRONMENTALLY PROTECTIVE MANNER.
- PROJECT WORK IS EXPECTED TO HAVE IMPACTS TO EELGRASS THAT MUST BE COMPENSATED FOR BY MITIGATION. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO TIGHTLY CONTROL THEIR LIMITS OF WORK AND ACTIVITIES TO ENSURE THAT IMPACTS TO EELGRASS ARE NOT EXPANDED BEYOND THE LIMITS CONTEMPLATED FOR THIS PROJECT.
- EELGRASS MITIGATION IS DEPENDENT UPON REPLANTING EELGRASS ONTO AREAS DREDGED AND FILLED UNDER THIS WORK. FOR THIS REASON, CONSTRUCTION TOLERANCES HAVE BEEN SET TO SUPPORT THE RESTORATION OF EELGRASS TO THESE AREAS. IT IS IMPORTANT THAT THE CONTRACTOR ADHERE TO THE ESTABLISHED TOLERANCES IN COMPLETING THIS WORK.
- THE CONTRACTOR SHALL IMPLEMENTATION MEASURES TO PREVENT VISIBLE DUST EMISSIONS AND ELEVATED TURBIDITY FROM LEAVING THE PROJECT WORK AREAS.
- EFFECTIVE EROSION CONTROL SHALL BE IMPLEMENTED ON THE UPLAND PROJECT WORK AND STAGING AREAS.
- THE CONTRACTOR SHALL NOT ALLOW CONSTRUCTION EQUIPMENT AND VEHICLES TO TRACK DIRT AND DUST ONTO PUBLIC ROADS. EQUIPMENT AND TIRES SHALL BE WASHED/SWEPT PRIOR TO LEAVING THE PROJECT SITE. CHATTER PLATES AND A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE STAGING AREA ENTRANCE.
- THE CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES TO FUEL AND MAINTAIN CONSTRUCTION EQUIPMENT AND CONSTRUCTION FACILITIES.
- ALL EQUIPMENT SHALL MEET APCD STANDARDS IN EFFECT AT THE TIME OF WORK.
- PRIOR TO SITE MOBILIZATION, THE CONTRACTOR SHALL PREPARE AND SUBMIT A CONSTRUCTION MANAGEMENT PLAN WHICH INCLUDES THE FOLLOWING:
 - ALL CONSTRUCTION EQUIPMENT, FIXED OR MOBILE, SHALL BE EQUIPPED WITH PROPERLY OPERATING AND MAINTAINED MUFFLERS.
 - CONSTRUCTION NOISE REDUCTION METHODS SUCH AS SHUTTING OFF IDLING EQUIPMENT, INSTALLING TEMPORARY ACOUSTIC BARRIERS AROUND STATIONARY CONSTRUCTION NOISE SOURCES.
 - DURING CONSTRUCTION, STATIONARY CONSTRUCTION EQUIPMENT SHALL BE PLACED SUCH THAT EMITTED NOISE IS DIRECTED AWAY FROM SENSITIVE NOISE RECEIVERS.
- CONSTRUCTION TIMING IS CONSTRAINED TO MINIMIZE IMPACTS TO THE PUBLIC AND ENVIRONMENT. TO ACCOMPLISH THIS, THE FOLLOWING RESTRICTIONS IN WORK TIMING EXIST:
 - IN WATER WORK INCLUDING DREDGING AND MATERIAL PLACEMENT SHALL BE RESTRICTED TO THE NON-NESTING SEASON FOR CALIFORNIA LEAST TERNS (BETWEEN SEPTEMBER 15 AND APRIL 1).
 - STAGING AND UPLAND ACTIVITIES SHALL BE RESTRICTED WITHIN MISSION BAY PARK BETWEEN MEMORIAL DAY (LAST MONDAY OF MAY) AND LABOR DAY (FIRST MONDAY OF SEPTEMBER).
- VESSEL OPERATIONS SHALL BE CONDUCTED IN A MANNER THAT ENSURES ADEQUATE CLEARANCE BETWEEN THE BAY BOTTOM AND VESSEL HULLS AND PROPELLERS TO AVOID GROUNDING OR PROPELLER WASH SCOUR DAMAGE TO EELGRASS. THIS MAY REQUIRE UNDERLOADING SCOWS OR TIDALLY CONSTRAINED OPERATIONS.
- CONTRACTOR SHALL MAINTAIN CLEAN AND DEBRIS FREE WORK ENVIRONMENTS BOTH ON THE WATER AND ON LAND.

STAGING AND PHASING NOTES

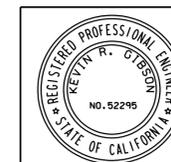
STAGING AND PHASING NOTES (CONTINUED)

SITE	DREDGE SEQUENCING	FILL SEQUENCING	MAXIMUM FILL VOLUME
DREDGE 1A	9	REUSE WEST 6, 7	48,290
DREDGE 1B	9	REUSE WEST 6, 7	1,430
DREDGE 1C	9	REUSE WEST 3, 4, 6	1,740
DREDGE 1D	9	REUSE WEST 3, 4	1,160
DREDGE 2	7	REUSE WEST 3, 4	1,130
DREDGE 3	6	REUSE WEST 3, 4	10,030
DREDGE 4	8	REUSE WEST 3, 4	1,900
DREDGE 5A	5	REUSE WEST 3, 4	41,630
DREDGE 6	3	REUSE WEST 3	1,930
DREDGE 7	4	REUSE WEST 3	5,480
DREDGE 9	2	REUSE WEST 3	4,770
DREDGE 10	2	REUSE WEST 3 / DREDGE 10	15,300
DREDGE 11	INDEPENDENT	INDEPENDENT - REUSE AREA 11	5,900
DREDGE 12A	1	BOTTOM 3 FT REUSE WEST 3, 4, 6, 7	62,790
DREDGE 12B	1	BOTTOM 3 FT REUSE WEST 3, 4, 6, 7	
DREDGE 12C	1	BOTTOM 3 FT REUSE WEST 3, 4, 6, 7	
DREDGE 12D	1	BOTTOM 3 FT REUSE WEST 3, 4, 6, 7	
DREDGE 12 E	1	BOTTOM 3 FT REUSE WEST 3, 4, 6, 7	
DREDGE 12F	1	BOTTOM 3 FT REUSE WEST 3, 4, 6, 7	
DREDGE 13 & 14	INDEPENDENT	INDEPENDENT - LEISURE LAGOON	8,320
DREDGE 15	INDEPENDENT	INDEPENDENT - CROWN PT. REUSE 2	9,050
TOTAL VOL (CY)			220,850

GRADE CONTROL NOTES

G-3

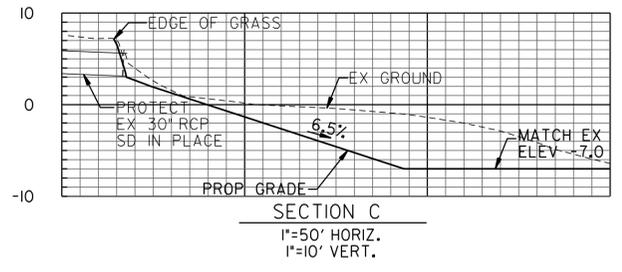
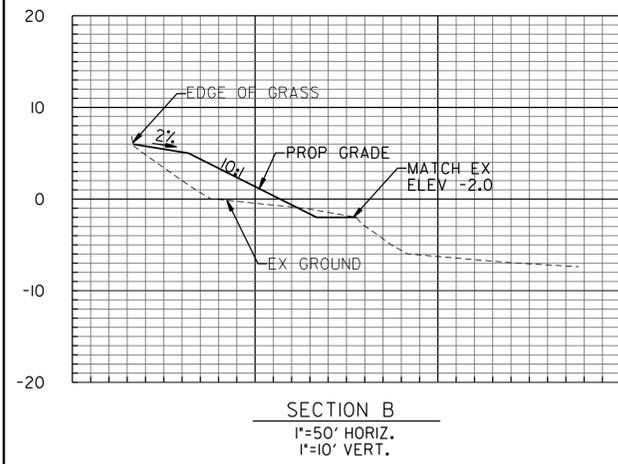
MISSION BAY NAVIGATIONAL SAFETY DREDGING				
NOTES				
CITY OF SAN DIEGO, CALIFORNIA PUBLIC WORKS DEPARTMENT SHEET 3 OF 13 SHEETS	WATER WBS 0-00000 SEWER WBS 0-00000			
APPROVED: FOR CITY ENGINEER _____ DATE _____	SUBMITTED BY: COSELYN GOODRICH PROJECT MANAGER			
PRINT NAME _____ RCE# _____	CREATED BY: TAMARA MILLER PROJECT ENGINEER			
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	xx/xx			
CONTRACTOR _____	DATE STARTED _____	39721-03-D		
INSPECTOR _____	DATE COMPLETED _____			



RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
San Diego - Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

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MISSION BAY NAVIGATIONAL SAFETY DREDGING



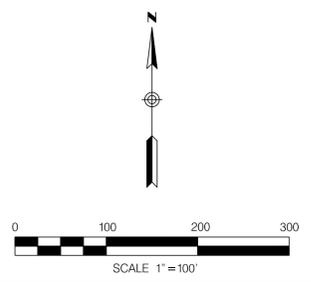
C-2

MISSION BAY NAVIGATIONAL SAFETY DREDGING
GRADING PLAN
CROWN POINT (SOUTH)

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 5 OF 13 SHEETS

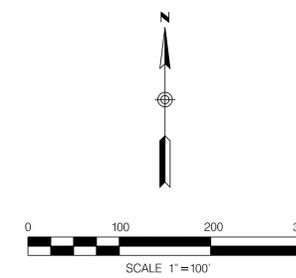
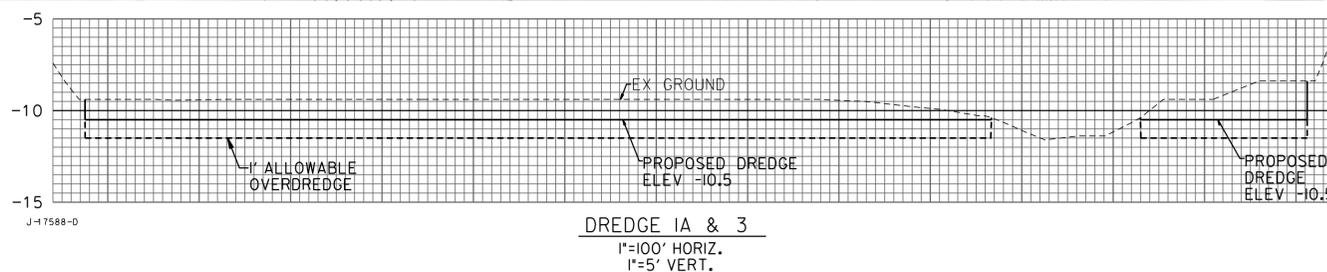
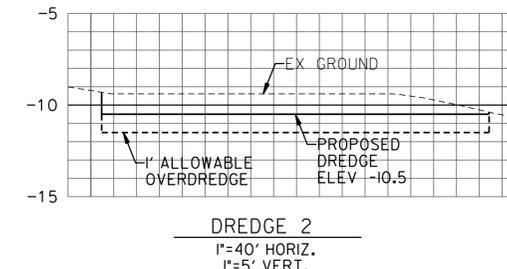
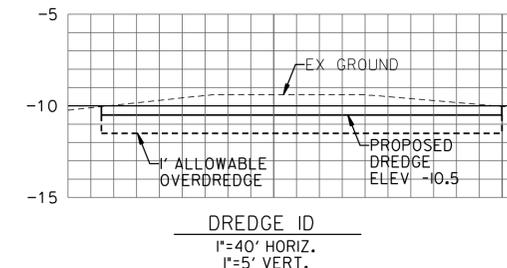
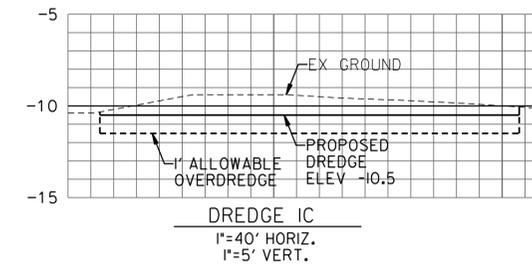
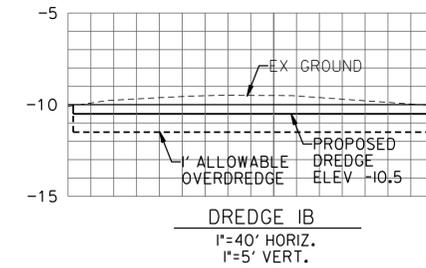
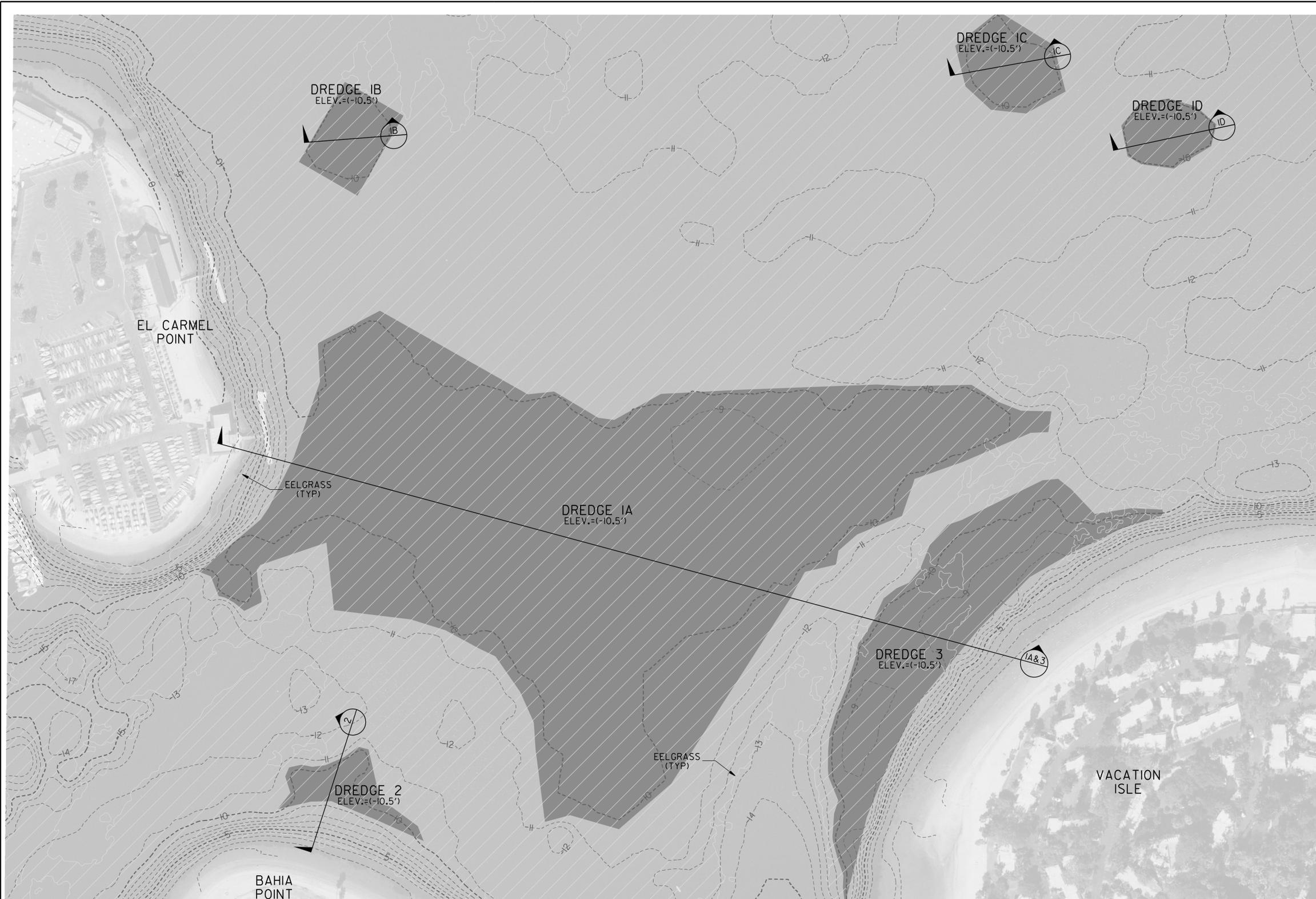
WATER WBS 0-00000
SEWER WBS 0-00000

APPROVED FOR CITY ENGINEER _____ DATE _____		SUBMITTED BY: COSELYN GOODRICH PROJECT MANAGER	
PRINT NAME _____ RCE# _____		CHECKED BY: TAMARA MILLER PROJECT ENGINEER	
DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	xx/xx		
		222-1695	
		1862-6255	
		39721-05-D	
CONTRACTOR _____		DATE STARTED _____	
INSPECTOR _____		DATE COMPLETED _____	



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MISSION BAY NAVIGATIONAL SAFETY DREDGING

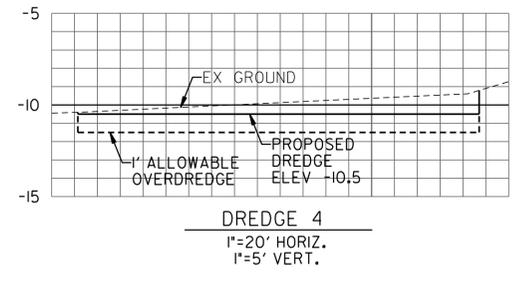


C-5

MISSION BAY NAVIGATIONAL SAFETY DREDGING
DREDGING PLAN
EL CARMEL POINT

CITY OF SAN DIEGO, CALIFORNIA PUBLIC WORKS DEPARTMENT SHEET 8 OF 13 SHEETS		WATER WBS 0-00000 SEWER WBS 0-00000
APPROVED: _____ DATE _____ FOR CITY ENGINEER _____		SUBMITTED BY: COSELYN GOODRICH PROJECT MANAGER
PRINT NAME _____	RCE# _____	CHECKED BY: TAMARA MILLER PROJECT ENGINEER
DESCRIPTION	BY	APPROVED
ORIGINAL	xx/xx	DATE
		FILMED
		222-1689
		1862-6249
		CCS27 COORDINATE
		CCS83 COORDINATE
CONTRACTOR _____		DATE STARTED _____
INSPECTOR _____		DATE COMPLETED _____
		39721-08-D

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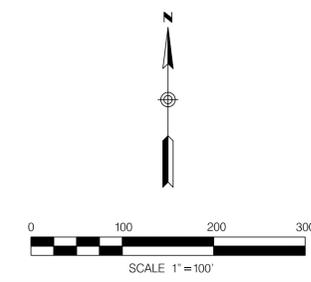
C-6

MISSION BAY NAVIGATIONAL
SAFETY DREDGING
DREDGING PLAN
SANTA BARBARA COVE

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 9 OF 13 SHEETS

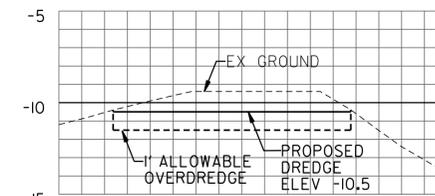
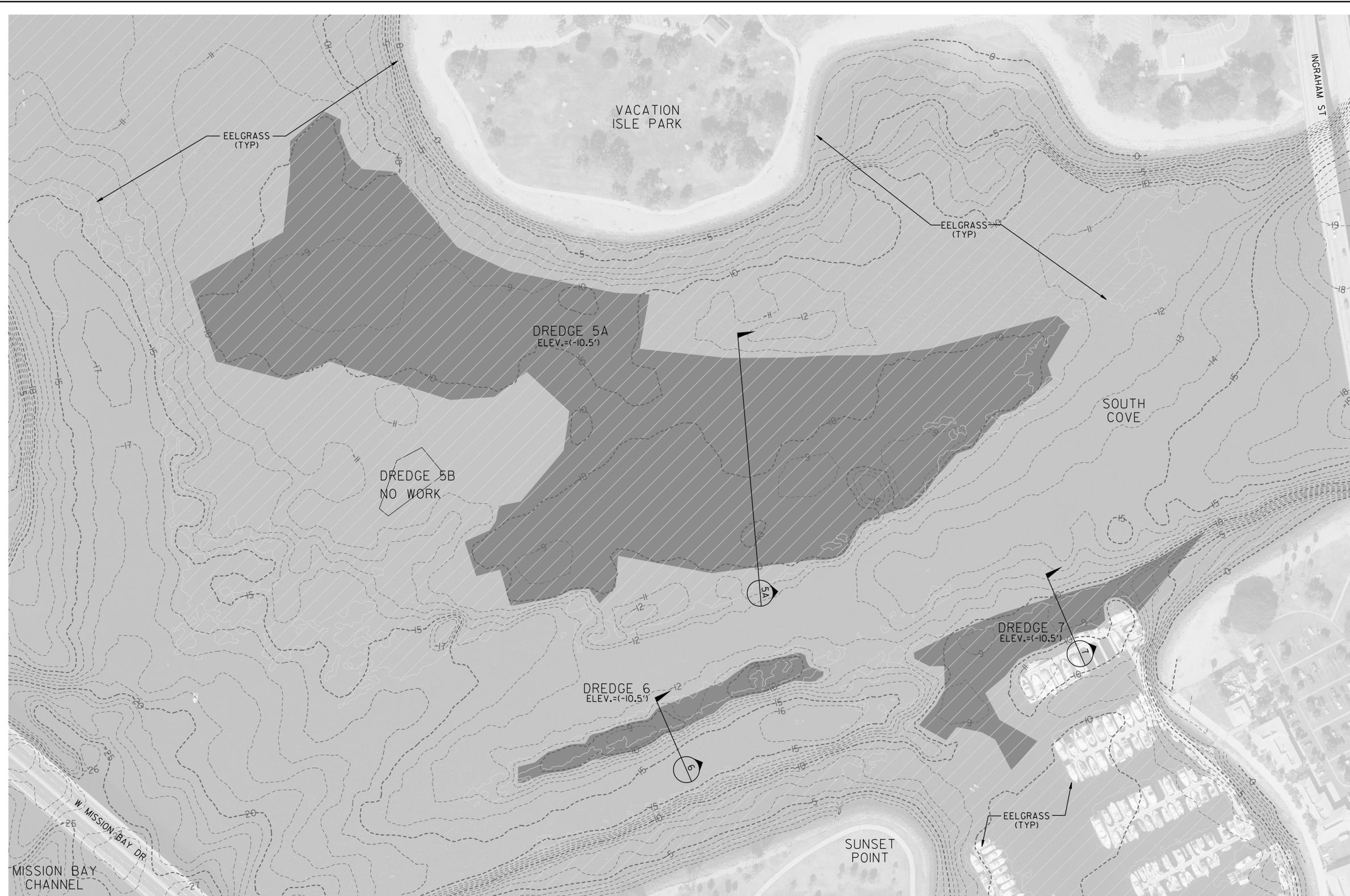
WATER
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SEWER
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APPROVED:		DATE		FOR CITY ENGINEER	
PRINT NAME		RCE#		SUBMITTED BY	
ORIGINAL		BY		DATE	
FILMED		APPROVED		DATE	
PROJECT ENGINEER		PROJECT ENGINEER		PROJECT MANAGER	
TAMARA MILLER		222-1689		COSELYN GOODRICH	
CCS27 COORDINATE		1862-6249		CCS83 COORDINATE	
CONTRACTOR		DATE STARTED		39721-09-D	
INSPECTOR		DATE COMPLETED			

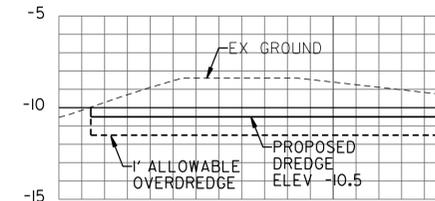


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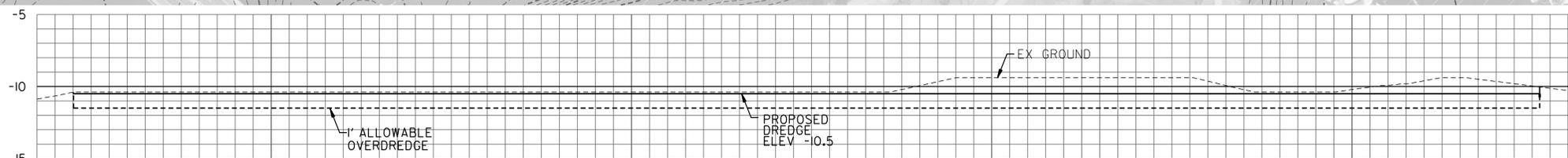
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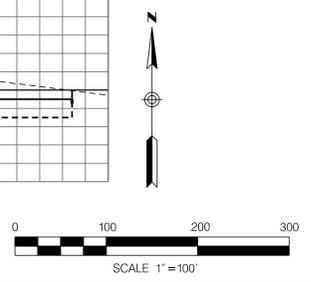
DREDGE 6
1"=20' HORIZ.
1"=5' VERT.



DREDGE 7
1"=20' HORIZ.
1"=5' VERT.



DREDGE 5A
1"=20' HORIZ.
1"=5' VERT.



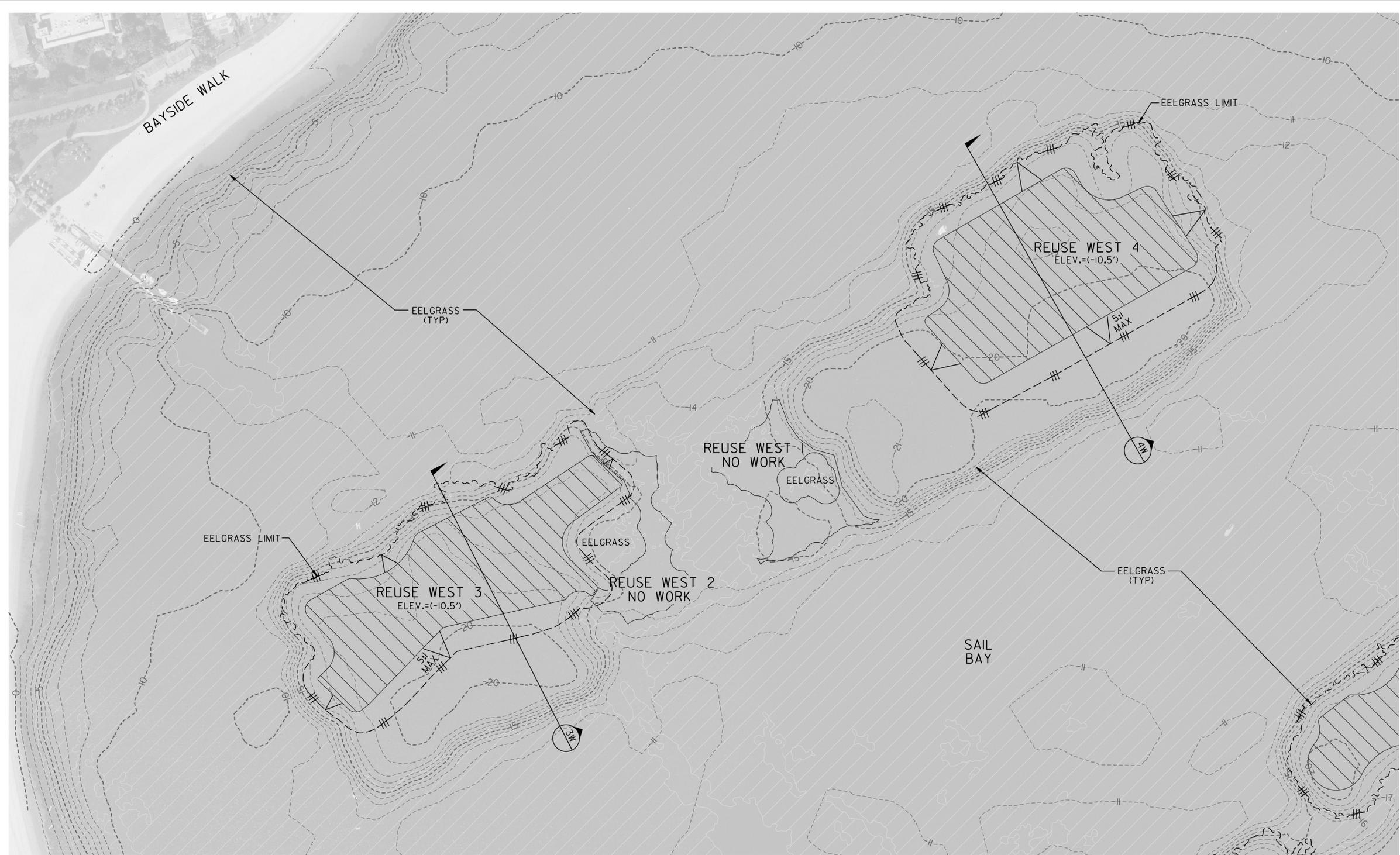
C-7

**MISSION BAY NAVIGATIONAL
SAFETY DREDGING
DREDGING PLAN
SOUTH COVE**

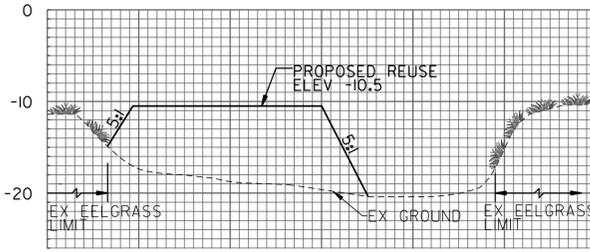
CITY OF SAN DIEGO, CALIFORNIA PUBLIC WORKS DEPARTMENT SHEET 10 OF 13 SHEETS		WATER WBS 0-00000 SEWER WBS 0-00000
FOR CITY ENGINEER _____ DATE _____		SUBMITTED BY COSELYN GOODRICH PROJECT MANAGER
PRINT NAME _____ RCE# _____		CHECKED BY TAMARA MILLER PROJECT ENGINEER
DESCRIPTION	BY	APPROVED
ORIGINAL	xx/xx	
		DATE
		FILMED
		218-1695
		1858-6255
		CCS27 COORDINATE
		CCS83 COORDINATE
CONTRACTOR _____		39721-10-D
INSPECTOR _____	DATE STARTED _____	DATE COMPLETED _____

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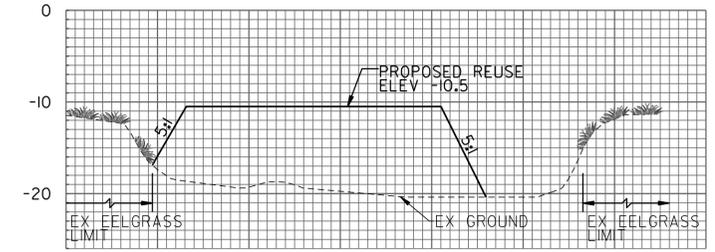
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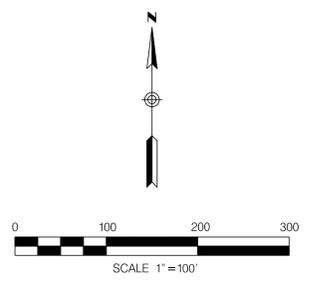
C-9



REUSE WEST 3
1"=50' HORIZ.
1"=10' VERT.



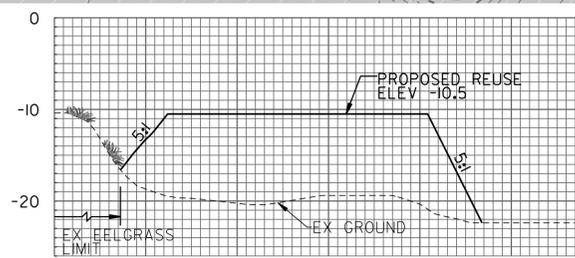
REUSE WEST 4
1"=50' HORIZ.
1"=10' VERT.



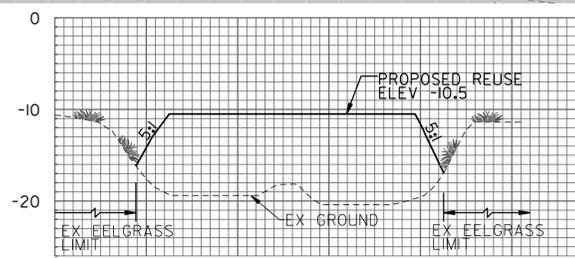
MISSION BAY NAVIGATIONAL SAFETY DREDGING
DREDGING PLAN
SAIL BAY

CITY OF SAN DIEGO, CALIFORNIA PUBLIC WORKS DEPARTMENT SHEET 12 OF 13 SHEETS		WATER WBS 0-00000 SEWER WBS 0-00000
APPROVED FOR CITY ENGINEER _____ DATE _____	PROJECT MANAGER COSELYN GOODRICH	DESIGNED BY TAMARA MILLER
PRINT NAME _____ RCE# _____	PROJECT ENGINEER TAMARA MILLER	NO. 226-1689 CCS27 COORDINATE
DESCRIPTION ORIGINAL	BY xx/xx	APPROVED _____ DATE _____ FILMED _____
		1866-6249 CCS83 COORDINATE
CONTRACTOR _____	INSPECTOR _____	DATE STARTED _____ DATE COMPLETED _____
		39721-12-D

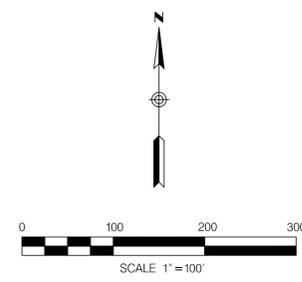




REUSE WEST 6
1"=50' HORIZ.
1"=10' VERT.



REUSE WEST 7
1"=50' HORIZ.
1"=10' VERT.



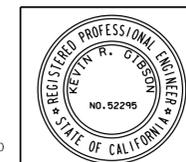
C-10

MISSION BAY NAVIGATIONAL
SAFETY DREDGING
DREDGING PLAN
SAIL BAY

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 13 OF 13 SHEETS

WATER
WBS 0-00000
SEWER
WBS 0-00000

APPROVED:	DATE	FOR CITY ENGINEER	DATE
PRINT NAME		RCE#	
DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	xx/xx		
PROJECT ENGINEER		PROJECT MANAGER	
TAMARA MILLER		COSELYN GOODRICH	
226-1689		1866-6249	
CCS27 COORDINATE		CCS83 COORDINATE	
CONTRACTOR		DATE STARTED	
INSPECTOR		DATE COMPLETED	
39721-13-D			



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5620 FRIARS ROAD
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MISSION BAY NAVIGATIONAL SAFETY DREDGING

ATTACHMENT 4

MITIGATION PLANS and CREDIT INFORMATION

1. Merkel and Associates, Inc., Figure 1, Project Vicinity Map, *Eelgrass Mitigation and Monitoring Plan in Support of the Mission Bay Park Navigational Safety Dredging Project*, December 2016.
2. Merkel and Associates, Inc., Table 3, Total Dredge Area, Eelgrass Impact, and Predicted Eelgrass from Restoration Actions. *Eelgrass Mitigation and Monitoring Plan in Support of the Mission Bay Park Navigational Safety Dredging Project, Mission Bay, San Diego, CA*, December 2016.
3. Mission Bay Mitigation Bank Transaction Ledger for South Shores Embayment, Ventura Cove, East Ski Island, and Stribley Marsh Reserve. October 20, 2010.



Figure 2. Project Site Map

Table 3. Total dredge area, eelgrass impact and predicted eelgrass from restoration actions

SITE	AREA (ACRES)	EELGRASS IMPACT (ACRES)	EELGRASS TRANSPLANT AREA (ACRES)	PREDICTED SUCCESS RATE (%)	PREDICTED EELGRASS RESTORED (ACRES)
DREDGE SITES					
DREDGE 1A	15.87	15.87	15.87	95%	15.08
DREDGE 1B	0.52	0.52	0.52	95%	0.49
DREDGE 1C	0.63	0.63	0.63	95%	0.60
DREDGE 1D	0.41	0.41	0.41	95%	0.39
DREDGE 2	0.41	0.41	0.41	95%	0.39
DREDGE 3	2.84	2.57	2.84	95%	2.70
DREDGE 4	0.8	0.64	0.80	95%	0.76
DREDGE 5A	13.5	13.30	13.50	95%	12.83
DREDGE 6	0.67	0.42	0.67	95%	0.64
DREDGE 7	1.3	1.30	1.30	95%	1.24
DREDGE 9	1.94	0.97	1.94	52%	1.01
DREDGE 10	3.61	2.01	3.61	52%	1.88
DREDGE 11	1.67	0.64	1.67	52%	0.87
DREDGE 12A	11.44	0.99	0.00	NA	0
DREDGE 12B	0.13	0.00	0.00	NA	0
DREDGE 12C	0.11	0.06	0.00	NA	0
DREDGE 12D	0.07	0.04	0.00	NA	0
DREDGE 12 E	0.21	0.04	0.00	NA	0
DREDGE 12F	0.08	0.00	0.00	NA	0
DREDGE 13 & 14	3.78	0.78	3.78	71%	2.68
DREDGE 15	3.37	1.31	3.37	70%	2.36
TOTAL DREDGE	63.36	42.93	51.32		43.90
RESUSE SITES					
RESUSE WEST 3	2.51	-	2.51	95%	2.38
RESUSE WEST 4	2.69	-	2.69	95%	2.55
RESUSE WEST 6	2.23	-	2.23	95%	2.12
RESUSE WEST 7	2.50	-	2.50	95%	2.37
LEISURE LAGOON	2.45	-	2.45	95%	1.74
TOTAL REUSE	12.37	-	12.37		11.17
PROJECT TOTAL	75.73	43	63.69		55.07

MISSION BAY MITIGATION BANK TRANSACTION SUMMARY COVERSHEET

Evaluation Date: Oct 20, 2010
 Prepared By: Keith Merkel Keith Merkel, Merkel & Associates, Inc.
 Approved By: Stacey LoMedico Stacey LoMedico, City of San Diego Park & Recreation Director

SITE	BANK CREDIT EXTRACTION PROJECTS	DEBITED AMOUNT (ACRES)	BALANCE OF SITE CREDITS REMAINING ON EVALUATION DATE (ACRES)
South Shores Embayment	None	None	12.00 potential; 11.23 existing
Ventura Cove	1) Santa Clara/Dana Landing Dock Replacement 2) Storm Station N Spill Damage 3) West Mission Bay Drive Seismic Retrofit	1) 0.01 eelgrass 2) 0.19 eelgrass 3) 0.20 eelgrass	1.18 potential; 1.07 existing
East Ski Island	None	None	1.70 potential; 1.70 existing
Stribley Marsh Reserve (Crown Point Shores Intertidal Mitigation Area)	1) Mission Bay Shoreline Stabilization Project 2) Rose Creek Bike/Pedestrian Path and Bridge Project	1) 1.22 ac. saltpan/mudflat 2) 0.01 ac. (400 sf) coastal salt marsh; 9 estuary sea-blite	4.00 Coastal Salt Marsh 0.07 Saltpan/Mudflat 0.44 Open Water/Channels 0.08 Eelgrass 0.62 Southern Foredune 0.97 Maritime Succulent Scrub 0.32 Buffers/Reservations (NA)

MISSION BAY MITIGATION BANK TRANSACTION SUMMARY LEDGER

Site: South Shores Embayment

Evaluation Date: *Oct 22, 2010* Bank Resources: Eelgrass

Prepared By: *Kathleen Merkel* Keith Merkel, Merkel & Associates, Inc.

Approved By: *Stacey* Stacey LoMedico, City of San Diego Park & Recreation Director

DATE OF TRANSACTION OR VALUATION OF ASSET	PROJECT	PERMIT(S) REQUIRING MITIGATION	DEBIT AMOUNT	BALANCE OF SITE CREDITS AVAILABLE (Maximum Potential/Actual Available) (acres)
Baseline Valuation (8/1994)				12.0/3.56
Sept-Oct-97	Mission Bay Eelgrass Survey, September 1997 (Merkel & Associates 1997)	NA	NA	12.0/5.43
Oct-01	October 2001 Mission Bay Park Eelgrass Inventory (Merkel & Associates 2001)	NA	NA	12.0/8.87
Oct-07	October 2007 Mission Bay Park Eelgrass Inventory, Bathymetric Chart (Merkel & Associates 2007)	NA	NA	12.0/11.23

MISSION BAY MITIGATION BANK TRANSACTION SUMMARY LEDGER

Site: Ventura Cove

Bank Resources: Eelgrass

Evaluation Date: *Oct 20, 2010*

Prepared By: *Keith Merkel* Keith Merkel, Merkel & Associates, Inc.

Approved By: *Stacey LoMedico* Stacey LoMedico, City of San Diego Park & Recreation Director

DATE OF TRANSACTION OR VALUATION OF ASSET	PROJECT	PERMIT(S) REQUIRING MITIGATION	DEBIT AMOUNT	BALANCE OF SITE CREDITS AVAILABLE (Maximum Potential/Actual Available) (acres)
Baseline Valuation (6/1995)		NA	NA	1.58/1.4
Sept-Oct-97	Mission Bay Eelgrass Survey, September 1997 (Merkel & Associates 1997)	NA	NA	1.58/1.51
Oct-01	October 2001 Mission Bay Park Eelgrass Inventory (Merkel & Associates 2001)	NA	NA	1.58/1.32
Jul-06	Santa Clara/Dana Landing ADA Dock Replacement	CDP #6-03-063 LDR No. 40-0165	0.01 (516 sf)	1.57/1.31
Oct-07	October 2007 Mission Bay Park Eelgrass Inventory, Bathymetric Chart (Merkel & Associates 2007)	NA	NA	1.57/1.46
Oct-07	Storm Station N, Santa Clara Cove Eelgrass Damage	NA	0.19 (777 m ³)	1.38/1.27
Feb-11	West Mission Bay Drive Seismic Retrofit	USCG Bridge Permit; CDP #6-01-136; ACOE #8202880-TCD	0.20 (800 m ³)	1.18/1.07

MISSION BAY MITIGATION BANK TRANSACTION SUMMARY LEDGER

Site: East Ski Island

Evaluation Date: OCT 22, 2010 Bank Resources: Eelgrass

Prepared By: Keith W. Merkel Keith Merkel, Merkel & Associates, Inc.

Approved By: Stacey LoMedico Stacey LoMedico, City of San Diego Park & Recreation Director

DATE OF TRANSACTION OR VALUATION OF ASSET	PROJECT	PERMIT(S) REQUIRING MITIGATION	DEBIT AMOUNT	BALANCE OF SITE CREDITS AVAILABLE (Maximum Potential/Actual Available) (acres)
Baseline Valuation (7/1995)		NA	NA	1.7/1.7
Sept-Oct-97	Mission Bay Eelgrass Survey, September 1997 (Merkel & Associates 1997)	NA	NA	1.7/1.7
Oct-01	October 2001 Mission Bay Park Eelgrass Inventory (Merkel & Associates 2001)	NA	NA	1.7/1.7
Oct-07	October 2007 Mission Bay Park Eelgrass Inventory, Bathymetric Chart (Merkel & Associates 2007)	NA	NA	1.7/1.7

MISSION BAY MITIGATION BANK TRANSACTION SUMMARY LEDGER

Site: Stribley Marsh Reserve (Crown Point Shores Intertidal Mitigation Area)

Evaluation Date: Oct 20, 2010 Bank Resources: Various Habitats

Prepared By: Keith Merkel Keith Merkel, Merkel & Associates, Inc.

Approved By: Stacey LoMedico Stacey LoMedico, City of San Diego Park & Recreation Director

DATE OF TRANSACTION OR VALUATION OF ASSET	PROJECT	PERMIT(S) REQUIRING MITIGATION	DEBIT AMOUNT	BALANCE OF SITE CREDITS AVAILABLE (Maximum Potential/Actual Available) (acres)
Baseline Valuation (2/1997)	NA	NA	NA	4.01 Coastal Salt Marsh 7.73 Total Area 0.34 Buffers/Reservations (NA)
Baseline Valuation (6/1997)	NA	NA	NA	4.01 Coastal Salt Marsh 1.29 Saltpan/Mudflat 0.44 Open Water/Channels 0.08 Eelgrass 0.62 Southern Foredune 0.97 Maritime Succulent Scrub 0.32 Buffers/Reservations (NA)
Sep-97	Mission Bay Shoreline Stabilization Project	CDP # 6-93-165/208 ACOE # 94-20857-DZ	1.22 ac. saltpan/mudflat	4.01 Coastal Salt Marsh 0.07 Saltpan/Mudflat 0.44 Open Water/Channels 0.08 Eelgrass 0.62 Southern Foredune 0.97 Maritime Succulent Scrub 0.32 Buffers/Reservations (NA)

Continued on following page

Site: Stribley Marsh Reserve (Crown Point Shores Intertidal Mitigation Area)

Evaluation Date: Oct 20, 2010 Bank Resources: Various Habitats

Prepared By: Keith W. Merkel Keith Merkel, Merkel & Associates, Inc.

Approved By: Stacey LoMedico Stacey LoMedico, City of San Diego Park & Recreation Director

DATE OF TRANSACTION OR VALUATION OF ASSET	PROJECT	PERMIT(S) REQUIRING MITIGATION	DEBIT AMOUNT	BALANCE OF SITE CREDITS AVAILABLE (Maximum Potential/Actual Available) (acres)
Feb-11	Rose Creek Bike/Pedestrian Path and Bridge Project	CDP # 6-10-52	0.01 ac. (400 sf) coastal salt marsh; 9 estuary sea-blite	4.00 Coastal Salt Marsh 0.07 Saltpan/Mudflat 0.44 Open Water/Channels 0.08 Eelgrass 0.62 Southern Foredune 0.97 Maritime Succulent Scrub 0.32 Buffers/Reservations (NA)

ATTACHMENT 5

CEQA MITIGATION REQUIREMENTS

1. Mission Bay Park Navigational Safety Dredging Project, Mitigated Negative Declaration, MMRP Conditions, May 3 2017.

<i>Issue Area</i>	<i>Document submittal</i>	<i>Assoc Inspection/Apv l</i>	<i>Notes</i>
Pre Con Meeting	Request letter	MMC approval	3 days prior to pre con
Biology	Consultant Qual. Letter	MMC approval	
	Bio. Monitoring Exhibit.	MMC approval	
	Protocol or other Survey	MMC approval	
Biology	Limit of Work Ver. Letter	MMC inspection	
Final approval	Request for Final	Final inspection	1 week after request
Bond Release	Request letter	LEMA verification	2 week minimum LEMA

C. SPECIFIC MMRP ISSUE AREA CONDITIONS/REQUIREMENTS

BIOLOGICAL RESOURCES

1. BIOLOGICAL RESOURCE PROTECTION DURING CONSTRUCTION

I. Prior to Construction

- A. **Biologist Verification** -The owner/permittee shall provide a letter to the City's Mitigation Monitoring Coordination (MMC) section stating that a Project Biologist (Qualified Biologist) as defined in the City of San Diego's Biological Guidelines (2012), has been retained to implement the project's biological monitoring program. The letter shall include the names and contact information of all persons involved in the biological monitoring of the project.
- B. **Preconstruction Meeting** - The Qualified Biologist shall attend the preconstruction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up mitigation measures and reporting including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage.
- C. **Biological Documents** - The Qualified Biologist shall submit all required documentation to MMC verifying that any special mitigation reports including but not limited to, maps, plans, surveys, survey timelines, or buffers are completed or scheduled per City Biology Guidelines, Multiple Species Conservation Program (MSCP), Environmentally Sensitive Lands Ordinance (ESL), project permit conditions; California Environmental Quality Act (CEQA); endangered species acts (ESAs); and/or other local, state or federal requirements.
- D. **BCME** -The Qualified Biologist shall present a Biological Construction Mitigation/Monitoring Exhibit (BCME) which includes the biological documents in C above. In addition, include: restoration/revegetation plans, plant salvage/relocation requirements (e.g., coastal cactus wren plant salvage, burrowing owl exclusions, etc.), avian or other wildlife surveys/survey schedules (including general avian nesting and USFWS protocol), timing of surveys, wetland buffers, avian construction avoidance areas/noise buffers/ barriers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City ADD/MMC. The BCME shall include a site plan, written and graphic depiction of the project's biological

mitigation/monitoring program, and a schedule. The BCME shall be approved by MMC and referenced in the construction documents.

- E. **Avian Protection Requirements** - To avoid any direct impacts to raptors and/or any native/migratory birds, removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the pre-construction survey to City DSD for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable State and Federal Law (i.e. appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's MMC Section and Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.
- F. **Resource Delineation** - Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora & fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site.
- G. **Education** -Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-site educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas, etc.).

II. During Construction

- A. **Monitoring**- All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on "Exhibit A" and/or the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the pre-construction surveys. In addition, the Qualified Biologist shall document field activity via

the Consultant Site Visit Record (CSV). The CSV shall be e-mailed to MMC on the 1st day of monitoring, the 1st week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.

- B. **Subsequent Resource Identification** - The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna onsite (e.g., flag plant specimens for avoidance during access, etc). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species specific local, state or federal regulations have been determined and applied by the Qualified Biologist.

III. Post Construction Measures

- A. In the event that impacts exceed previously allowed amounts, additional impacts shall be mitigated in accordance with City Biology Guidelines, ESL and MSCP, State CEQA, and other applicable local, state and federal law. The Qualified Biologist shall submit a final BCME/report to the satisfaction of the City ADD/MMC within 30 days of construction completion.

2. SHALLOW BAY - EELGRASS

To mitigate potential direct impacts to eelgrass to a less than significant level the following measures shall be implemented for the proposed project and the project shall implement all of the requirements of the Eelgrass Mitigation and Monitoring Plan in Support of the Mission Bay Park Navigational Safety Dredging Project, Mission Bay, San Diego, CA (Merkel & Associates 2016).

- I. Shallow - Bay Eelgrass that is impacted by the proposed project shall be replaced by planting eelgrass at a minimum rate of 1.38 acres for each 1 acre of impact. For the estimated project impact of 42.93 acres, this equates to an initial planting of 59.24 acres of eelgrass.
- II. The minimum overall success rate of eelgrass planting at the end of the monitoring period shall be a ratio of 1.2:1 which equates to 51.51 acres of eelgrass.

3. LEAST TERN

The following measures shall be implemented for the project to protect against detrimental edge effects to least terns:

- I. Dredging should occur from September 15 to March 31 to avoid the least tern nesting season
- II. If in-water construction must occur during the least tern nesting season (April 1 to

September 15), the City should implement the following measures:

- A. Beginning April 1, the City will have a least tern biologist monitor daily for the arrival of least terns into Mission Bay, and immediately notify the Service upon their arrival. The City will coordinate with other least tern monitors in Mission Bay. The City will notify the Service via email on a daily basis as to the presence or absence of least terns in Mission Bay. The least tern biologist will be present throughout the period of in-water construction and will note the presence of least terns in Mission Bay and the work area.
- B. The City will provide a biological monitor with least tern experience on all days when in-water work is conducted after least terns arrive in Mission Bay. The biological monitor will be present throughout the period of in-water construction and will note the presence of least terns in Mission Bay and the work area, and any project-generated surface turbidity. Surface turbidity is defined as an obvious discoloration of the top 10 feet of the water column visible to the human eye. Project-generated surface turbidity shall not exceed 500 feet in length or width, or persist longer than 1 hour.
- C. In the event project-generated surface turbidity exceeds 500 feet in length or width or persists longer than 1 hour, the biological monitor will be empowered to stop project activity to allow the plume to dissipate. The biological monitor will contact the City and Service immediately after construction has been stopped. Construction will not resume until approved by the City and the Service.
- D. The biological monitor will provide daily field reports to the City and Service within 24 hours of each monitoring date. The daily field reports will include photographs showing the best management practices surrounding the work area taken during in-water work, and any incidences of plume escape or expansion outside of the silt curtain. The biological monitor will also submit a final summary report of monitoring to the City and Service within 30 days of completion of in-water work.

LAND USE ADJACENCY

1. MSCP SUBAREA PLAN -LAND USE ADJACENCY GUIDELINES (FOR WORK WITHIN 100 FEET OF THE MHPA)

- I. Prior to issuance of any construction permit or notice to proceed, DSD/ LDR, and/or MSCP staff shall verify the Applicant has accurately represented the project's design in or on the Construction Documents (CD's/CD's consist of Construction Plan Sets for Private Projects and Contract Specifications for Public Projects) are in conformance with the associated discretionary permit conditions and Exhibit "A", and also the City's Multi-Species Conservation Program (MSCP) Multi-Habitat Planning Area (MHPA) Land Use Adjacency

Guidelines. The applicant shall provide an implementing plan and include references on/in CD's of the following:

- A. **Grading/Land Development/MHPA Boundaries** - MHPA boundaries on-site and adjacent properties shall be delineated on the CDs. DSD Planning and/or MSCP staff shall ensure that all grading is included within the development footprint, specifically manufactured slopes, disturbance, and development within or adjacent to the MHPA. For projects within or adjacent to the MHPA, all manufactured slopes associated with site development shall be included within the development footprint.
- B. **Drainage** - All new and proposed parking lots and developed areas in and adjacent to the MHPA shall be designed so they do not drain directly into the MHPA. All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials prior to release by incorporating the use of filtration devices, planted swales and/or planted detention/desiltation basins, or other approved permanent methods that are designed to minimize negative impacts, such as excessive water and toxins into the ecosystems of the MHPA.
- C. **Toxics/Project Staging Areas/Equipment Storage** - Projects that use chemicals or generate by-products such as pesticides, herbicides, and animal waste, and other substances that are potentially toxic or impactful to native habitats/flora/fauna (including water) shall incorporate measures to reduce impacts caused by the application and/or drainage of such materials into the MHPA. No trash, oil, parking, or other construction/development-related material/activities shall be allowed outside any approved construction limits. Where applicable, this requirement shall be incorporated into leases on publicly-owned property when applications for renewal occur. Provide a note in/on the CD's that states: *"All construction related activity that may have potential for leakage or intrusion shall be monitored by the Qualified Biologist/Owners Representative or Resident Engineer to ensure there is no impact to the MHPA."*
- D. **Lighting** - Lighting within or adjacent to the MHPA shall be directed away/shielded from the MHPA and be subject to City Outdoor Lighting Regulations per LDC Section 142.0740.
- E. **Barriers** - New development within or adjacent to the MHPA shall be required to provide barriers (e.g., non-invasive vegetation; rocks/boulders; 6-foot high, vinyl-coated chain link or equivalent fences/walls; and/or signage) along the MHPA boundaries to direct public access to appropriate locations, reduce domestic animal predation, protect wildlife in the preserve, and provide adequate noise reduction where needed.
- F. **Invasives**- No invasive non-native plant species shall be introduced into areas within or adjacent to the MHPA.
- G. **Brush Management** -New development adjacent to the MHPA shall be set back from the MHPA to provide required Brush Management Zone 1 area on the building pad outside of the MHPA. Zone 2 may be located within the MHPA provided the Zone 2 management will be the responsibility of an HOA or other private entity except where narrow wildlife corridors require it to be located outside of the MHPA. Brush

management zones will not be greater in size than currently required by the City's regulations, the amount of woody vegetation clearing shall not exceed 50 percent of the vegetation existing when the initial clearing is done and vegetation clearing shall be prohibited within native coastal sage scrub and chaparral habitats from March 1-August 15 except where the City ADD/MMC has documented the thinning would be consistent with the City's MSCP Subarea Plan. Existing and approved projects are subject to current requirements of Municipal Code Section 142.0412.

- H. **Noise** - Due to the site's location adjacent to or within the MHPA where the Qualified Biologist has identified potential nesting habitat for listed avian species, construction noise that exceeds the maximum levels allowed shall be avoided during the breeding seasons. If construction is proposed during the breeding season for the species, U.S. Fish and Wildlife Service protocol surveys shall be required in order to determine species presence/absence. If protocol surveys are not conducted in suitable habitat during the breeding season for the aforementioned listed species, presence shall be assumed with implementation of noise attenuation and biological monitoring.

WATER QUALITY

1. Water Quality

- I. The proposed work has the potential to result in short-term increases in localized turbidity in the area of project dredging and material placement for beneficial reuse. In order to minimize the potential for adverse effects of increased turbidity measures shall be taken to control turbidity generation around the dredge to an extent of not more than 500 feet of a visible turbidity plume from the dredge. Because work is needed in areas of high current flow, it is anticipated that the local turbidity plume may elongate rather than spreading radially around the dredge or fill location. Should this occur, the contractor shall be held to a comparable plume area as a radial plume of 500 foot radius, but may measure the plume as an elongated feature using the long and short axis to calculate the area of the plume as an ellipse.
- II. Should water quality limits be exceeded, the contractor shall be required to stop dredging or placing, slow the rate of work, move to a new location to work until a tidal change, or take other corrective actions to get the turbidity levels back in check.
- III. The upland staging area shall be stabilized with appropriate BMPs including a stabilized entrance, silt curtains on the staging area perimeter, and fiber rolls as appropriate to the use. Upon vacating the site the staging area will be stabilized in accordance with the project WPCP.
- IV. The distance from dredging that the plume would be allowed to extend is no more than 500 feet down-current from the dredge.

- V. If the plume extends greater than 500 feet then adaptive management measures would need to be taken to control turbidity generation. This may include slowing the dredging or placement rate, altering the excavation bucket or swing speed in hydraulic dredging, or increasing the intake pump speed relative to the cutter head rotation speed. If such measures are not effective at reducing the scale of the plume back to less than 500 feet within an hour, then work would be subject to modified in location or temporary cessation until the conditions improve. It may be necessary for a contractor to only work on some portions of the shoals during neap tides where the tidal flow spread of turbidity is minimized.
- VI. Turbidity curtains may be used at the Sail Bay reuse site where placement is through a hydraulic discharge or where bottom dump scows are used to place material over discrete portions of the site. The necessity of the curtain will be determined based on early evaluation of the turbidity generation against the 500 foot plume metric. Because the receiver sites are contained by existing topography, it is expected that subsurface placement will result in minimal turbidity spread. This being said, the Sail Bay receiver sites are far enough removed from tidal influence that these areas may support use of turbidity curtains if required by failure of the visible plume metric.
- VII. If turbidity curtains are employed, they shall be of a porous nature, allowing movement of water through the curtain, but retaining fine fraction sediments. This will minimize pressure differential within and outside of the turbidity curtains and potential for curtain ground chain drag.
- VIII. Monitoring of the dredging and placement will be completed in order to ensure that water quality action triggers are identified and that actions are taken to resolve exceedances, should they occur. The monitoring program will follow that generally employed for dredging program with more intensive monitoring early in the dredge cycles to assist in identifying problems and assessing adaptive management actions. As the program is developed, monitoring will shift to weekly monitoring. The shift from daily to weekly monitoring will occur after the Contractor has managed to maintain consistent compliance over three consecutive daily monitoring intervals. If the Contractor falls out of compliance during a weekly monitoring interval, then the daily process will commence again until three consecutive monitoring events have been in compliance.

VI. PUBLIC REVIEW DISTRIBUTION:

Draft copies or notice of this Mitigated Negative Declaration were distributed to:

City of San Diego
Councilmember Zapf - District 2
Mayor's Office