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STAFF REPORT: REGULAR CALENDAR

Application No.:	**6-19-1426**
Applicant:	**City of San Diego**
Agent:	Keith Merkel
Location:	Mission Boulevard and public side streets south of approximately San Fernando Place and portions of the shoreline along the west side of Mariner's Basin, Mission Beach, San Diego, San Diego County. (APN: N/A)
Project Description:	The proposed projects consists of the replacement, repair, and realignment of 6 existing storm drains, removal of 1 storm drain, installation of 2 new storm drains, and the addition of bioretention basins and low-flow diversion system improvements.
Staff Recommendation:	Approval with conditions

SUMMARY OF STAFF RECOMMENDATION

The proposed infrastructure project is designed to upgrade the City's existing inadequate and outdated storm drain system to improve water quality and reduce flooding. While the number of storm drains will increase from 7 to 8, the number of outlets will decrease from 7 to 6. Existing storm drains will be extended, upsized, realigned, and consolidated at outlet locations, and will be extended into subtidal

elevations where they will be buried under sand and rock. The project would also include the installation of several green infrastructure elements, including pumps to catch dry weather and initial storm flush flows that are connected to both the storm drains and the sewer system, as well as biofiltration basins that will be placed in/near public parking lots throughout South Mission Beach. Approximately 0.6 miles of Mission Boulevard will also be milled and re-paved in order to increase the height difference between road elevation and the curb, enabling more surface water conveyance to the sewer/storm drain system during storm events and preventing ponding effects. The proposed project will improve surface water conveyance and infiltration, and the water quality of discharges to Mission Bay will also be improved.

While the project would improve water quality, it has the potential to impact sensitive biological resources during construction, including eelgrass, least terns, and marine mammals. In addition, the entire Mission Beach community is a low-lying area on a narrow peninsula situated between the Pacific Ocean to the west and Mission Bay to the east, which currently experiences periodic flooding that will likely increase with sea level rise. The subject project will be located on and within the public streets, beaches, and bay waters. As such, the proposed development may be threatened by sea level rise (SLR) at some point in the near to distant future.

Due to the replacement and realignment of the storm drains, approximately 0.31 acres of eelgrass habitat will be impacted. The eelgrass mitigation plan proposes to mitigate this loss through the restoration of 0.37 acres of eelgrass at adjacent sites according to the California Eelgrass Mitigation Policy (CEMP) 1.2:1 (replacement for loss) ratio. **Special Condition # 8** requires adherence to CEMP standards for all eelgrass mitigation actions. **Special Condition # 3** limits the sizing of cofferdams to the minimum necessary such that impacts to eelgrass are avoided and/or minimized. Potential impacts to least terns include noise and nesting disturbance during construction activities, particularly pile driving during cofferdam construction. **Special Condition # 4** requires an in-water and cofferdam construction moratorium during the least tern nesting season. **Special Conditions # 9 and # 10** require adherence to noise limitations during pile driving activities to protect marine mammals, and bird surveys performed prior to and during construction to ensure that no active nests are present. The project has been designed to accommodate a given amount of sea level rise, and to be flexible and able to accommodate future retrofits as needed/required/ For example, in order to address greater levels of SLR, the proposed storm drains and their automated tide gates could be retrofitted with mechanical pumping abilities in the future. Other future retrofitting options to ameliorate the effects of SLR include installation of impermeable liners and small pumps in biofiltration basins and installation of flood control pump systems.

Nevertheless, the City acknowledges that that the proposed storm drain upgrades may be at risk of sea level rise in the long-term, and that the proposed project design is not meant to address long-range SLR planning. Under the low SLR scenario, the storm drain system would generally function as presently designed, although high tide periods coupled with certain storm peaks would impact drainage abilities. Under the medium-high scenario, the City’s analysis confirmed that storm water drainage would be highly

compromised under peak tidal periods and that ponding may resume. The Commission's engineering staff have reviewed the project and the City's analysis and agree that the development is likely to be at risk within the lifetime of the improvements.

In order to allow the improvements to proceed, despite the project's particular susceptibility to changes in sea level within the expected lifetime of the structures, **Special Condition # 13** limits the permit approval to 20 years and requires completion of a Coastal Hazards Analysis and Adaptation Plan to ensure the approved development minimizes flood hazard risks to the facility and the South Mission Beach area through at least the year 2100. Specifically, the condition requires the City to acknowledge that the development is interim and temporary, and is being permitted for 20 years in order to provide a reasonable period of time for the City to evaluate future risk of coastal hazards as influenced by sea level rise and to plan, develop, and implement any necessary responses to coastal hazards, including adaptation or alternatives, to address coastal resource impacts associated with maintaining the subject development at this location (e.g., impacts associated with any coastal hazards protection measures). In this manner, the development will provide benefits to the community but prior to being at risk, the City must evaluate a long-term plan for the infrastructure, return to the Commission for reauthorization.

Coastal access would be temporarily affected by construction activities in Mariner's Basin, as well as along Bayside Walk and the beaches on the eastern side of the South Mission Beach peninsula. Bayside Walk is a public boardwalk that runs parallel to the bay shore throughout much of the project area. Pedestrian flow along Bayside Walk will remain open throughout project construction with bypasses of plywood or hardened mats provided when temporary work within the Walk is needed. Vehicular access across South Mission Beach, including to Mission Boulevard and surrounding roads and parking lots, will also be affected by construction. Staging and storage for the project will take up approximately 96 parking spaces but will not occur in overnight parking areas and as such will only affect daytime parking areas. Project construction will not be allowed during the busy summer months (Memorial Day to Labor Day). **Special Condition # 2** requires the applicant to acknowledge the summer moratorium on project work. **Special Condition # 5** requires the applicant to submit a Final Public Access and Traffic Control Plan prior to issuance of the CDP to ensure public access will be maintained.

The project has been designed to create an overall improvement to the water quality of runoff that is conveyed into the storm drain systems and ultimately into Mariner's Basin and the Mission Bay Entrance Channel. **Special Condition # 6** requires adherence to standard construction best management practices, and **Special Condition # 7** requires the submittal of a construction pollution prevention plan to ensure that impacts to water quality and public access during construction are minimized.

The project consists of ground disturbing work both in and outside previously disturbed areas. Because South Mission Beach is in an area of high sensitivity for archaeological and cultural resources, the potential for impacts to cultural resources exists. **Special Condition # 12** requires adherence to all recommendations and mitigation measures

outlined in the Mitigated Negative Declaration (MND) in addition to requiring a qualified Native American monitor to be present for all ground-disturbing work.

Because the project is located in a flood-prone and hazardous area, **Special Condition # 14** requires the applicant to assume the risk of development and waive any liability or indemnity.

Commission staff recommends that the Commission **APPROVE** coastal development permit application 6-19-1426, as conditioned. The motion is on page 6. The standard of review is Chapter 3 of the Coastal Act.

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EXHIBITS

I. MOTION AND RESOLUTION

Motion:

I move that the Commission approve Coastal Development Permit 6-19-1426 subject to conditions set forth in the staff recommendation specified below.

Staff recommends a **YES** vote on the foregoing motion. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of Commissioners present.

Resolution:

The Commission hereby approves the Coastal Development Permit for the proposed project and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

1. **Notice of Receipt and Acknowledgment**. The permit is not valid and development shall not commence until a copy of the permit, signed by the applicant or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration**. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation**. Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment**. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land**. These terms and conditions shall be perpetual, and it is the intention of the Commission and the applicant to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. Final Plans.

a. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for the review and written approval of the Executive Director, a full-size set of the following plans:

(1) Final constructions plans that substantially conform with the plans submitted to the Commission, titled “South Mission Beach Storm Drain Improvements and Green Infrastructure, 60% Design” and dated September 16, 2019.

(2) Final construction staging and storage plans indicating all locations where equipment, materials, and worker parking will be located during the duration of the project that comply with the requirements of Special Condition #4 Final Staging and Storage Plans, below.

b. The applicant shall undertake development in conformance with the approved final plans unless the Commission amends this permit or the Executive Director determines that no amendment is legally required for any proposed minor deviations.

2. Timing of Development.

a. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for review and written approval of the Executive Director, a construction phasing schedule/timeline that that indicates construction will take place consistent with the following restrictions:

(1) No work shall occur during the summer season from Memorial Day weekend to Labor Day.

(2) No in-water work or in-water cofferdam construction will occur during the California least tern nesting season (i.e. between April 1 and September 15), unless it is confirmed by the USFWS that terns have vacated the Mariner’s Point least tern nesting site prior to the recognized end of the nesting season.

b. The applicant shall submit evidence that the approved construction schedule has been incorporated into construction bid documents to ensure that contractors are aware of the seasonal restrictions and plan the construction activities accordingly.

c. The applicant shall undertake development in conformance with the approved final plans unless the Commission amends this permit or the Executive Director determines that no amendment is legally required for any proposed minor deviations.

3. Final Cofferdam Construction Plan.

a. **AT LEAST 30 DAYS PRIOR TO COMMENCEMENT OF COFFERDAM CONSTRUCTION**, the applicant shall submit, for the review and written approval of the Executive Director, a Final Cofferdam Construction Plan. The plan shall include, at a minimum, the following:

(1) Contractor's cofferdam plans, including shop drawings and a narrative description of the installation (vibratory driving), dewatering, and removal processes.

(2) Cofferdam sizing shall be the minimum necessary to allow for safe equipment access and prompt equipment removal once all construction activities have commenced for the day. No unnecessary equipment shall be stored within the bounds of the cofferdams.

(3) Substantiation that the temporary cofferdams have been sited in a manner that avoids existing eelgrass located at each drain outfall to the greatest extent feasible. The design and execution of the cofferdam activities shall target avoidance or minimization of eelgrass impact as a priority without sacrificing safety. This shall be done by providing the minimum extent of dam construction to provide safe and adequate working area to perform the drain construction while limiting the footprint of eelgrass inclusion within the dammed work area and the potential for sediment slumping outside of the dams thereby expanding eelgrass impacts beyond the footprint of work.

(4) The dams shall not be removed without first bringing the grade inside the dam to that equal to the grades outside of the dam to avoid slumping of sediment at the time of dam removal.

b. The applicant shall undertake development in conformance with the approved final plans unless the Commission amends this permit or the Executive Director determines that no amendment is legally required for any proposed minor deviations.

4. Final Storage and Staging Area Plan. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for review and written approval of the Executive Director, a Final Storage and Staging Area Plan. Said plan shall conform to the following requirements:

a. All storage and staging shall be located outside of sensitive habitat areas.

b. Storage and staging shall be limited to the Bonita Cove and Mission Point Parking Lots as noted on the preliminary staging plan titled "Potential Staging Areas", dated February 3, 2020. Staging areas shall be the minimum area necessary to accommodate construction equipment and materials and shall not be used for worker parking. In no case shall more than 96 parking spots be occupied at any time.

c. The applicant shall undertake development in accordance with the approved final plans unless the Commission amends this permit or the Executive Director determines that no amendment is legally required for any proposed minor deviations.

5. Final Public Access and Traffic Control Plan.

a. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for the review and written approval of the Executive Director, a Final Public Access and Traffic Control Plan. The plan shall include, at a minimum, the following components:

(1) Staging areas shall be limited to Bonita Cove and Mission Point Parking Lots as described in Special Condition #4. No overnight storage of equipment or materials shall occur outside the designated work area.

(2) Continuous public access around the construction sites along Mariner's Basin, the Mission Bay entrance channel, and their adjacent beaches must be maintained at all times for the duration of construction.

(3) Access corridors shall be located in a manner that has the least impact on public access to and along the shoreline of the project sites and via the maintenance of existing public parking areas and traffic flow on coastal access routes. Every effort shall be made to minimize the duration of pedestrian and roadway closures so that impacts upon public access are minimized;

(4) Bayside Walk and road lanes should be opened, even intermittently, whenever possible during construction;

(5) Signage shall be installed directing pedestrians at the beach to the temporary pedestrian walkway.

(6) No work shall occur on the beach from Memorial Day weekend through Labor Day of any year, except with written approval of the Executive Director.

(7) No in-water work or cofferdam construction may occur during the California least tern nesting season (between April 1 and September 15), unless it is confirmed by the USFWS that terns have vacated the Mariner's Point least tern nesting site prior to the recognized end of the nesting season.

(8) PRIOR TO COMMENCEMENT OF CONSTRUCTION:

i. A Traffic Control Plan/Access Detour Plan to re-route pedestrian and bicycle traffic shall be identified for those periods when the bicycle and pedestrian path along Bayside Walk, the sidewalk and/or bicycle lane is closed within the project area; and

ii. The applicant shall submit evidence that the approved public access and traffic control plan has been incorporated into construction bid documents. The staging sites shall be removed by the Friday of Memorial Day weekend and not restored until the day after Labor Day Staging sites shall be removed within 72 hours following completion of the development.

b. The applicant shall undertake development in accordance with the approved final plans unless the Commission amends this permit or the Executive Director determines that no amendment is legally required for any proposed minor deviations.

6. Construction Best Management Practices.

a. The applicant shall comply with the following construction-related requirements:

(1) No construction materials, debris, or waste shall be placed or stored where it may be subject to wave, wind, rain, or tidal erosion and dispersion;

(2) Any and all debris resulting from construction activities shall be removed from the project site within 24 hours of completion of the project;

(3) Construction debris and sediment shall be removed from construction areas each day that construction occurs to prevent the accumulation of sediment and other debris which may be discharged into coastal waters;

(4) Erosion control/sedimentation Best Management Practices (BMP's) shall be used to control dust and sedimentation impacts to coastal waters during construction. BMP's shall include, but are not limited to: placement of sand bags around drainage inlets to prevent runoff or sediment transport into coastal waters; and

(5) All construction materials, excluding lumber, pipe, and other non-erodable materials such as pre-cast concrete vaults, shall be covered and enclosed on all sides, and as far away from a storm drain inlet and receiving waters as possible.

b. Best Management Practices (BMP's) designed to prevent spillage and runoff of construction-related materials, sediment, or contaminants associated with construction activity shall be implemented prior to the on-set of such activity. Selected BMP's shall be maintained in a functional condition throughout the duration of the project. Such measures shall be used during construction:

(1) The applicant shall ensure the proper handling, storage, and application of petroleum products and other construction materials. These shall include a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum

products or contact with runoff. It shall be located as far away from the receiving waters and storm drain inlets as possible;

(2) The applicant shall develop and implement spill prevention and control measures;

(3) The applicant shall maintain and wash equipment and machinery in confined areas specifically designed to control runoff. Thinners or solvents shall not be discharged into sanitary or storm sewer systems. Washout from concrete trucks shall be disposed of at a location not subject to runoff and more than 50-feet away from a storm drain, open ditch or surface water; and

(4) The applicant shall provide adequate disposal facilities for solid waste, including excess concrete, produced during construction.

7. Construction and Pollution Prevention Plan. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit for the review and written approval of the Executive Director, a final Construction and Pollution Prevention Plan prepared and certified by a qualified and licensed professional. The final plan shall demonstrate that all construction, including, but not limited to, clearing, grading, staging, storage of equipment and materials, or other activities that involve ground disturbance; building, reconstructing, or demolishing a structure; and creation or replacement of impervious surfaces complies with the following requirements:

a. **Protect Public Access.** Construction shall protect and maximize public access, including by:

(1) Staging and storage of construction equipment and materials (including debris) shall not take place on the beach area, public parking, or public rights-of-way except as specified in Special Condition #4 Final Staging and Storage Plans of this permit. Staging and storage of construction equipment and materials shall occur in inland areas at least 50 feet from coastal waters, drainage courses, and storm drain inlets, if feasible. Upon a showing of infeasibility, the applicant may submit a request for review and written approval to the Executive Director for staging and storage of construction equipment and materials closer than 50 feet from coastal water, drainage courses, and storm drain inlets. Construction is prohibited outside of defined construction, staging, and storage areas.

(2) All construction methods to be used, including all methods to keep the construction areas separated from public recreational use areas (e.g., using unobtrusive fencing or equivalent measures to delineate construction areas), shall be clearly identified on the construction site map and described in the narrative description (see Section (h)).

(3) All beaches, beach access points, and other recreational areas impacted by construction activities shall be restored to their pre-construction condition or better within 72 hours of completion of construction. Any beach sand

impacted shall be filtered as necessary to remove all construction debris from the beach.

(4) Sand from the beach, cobbles, or shoreline rocks shall not be used for construction material outside of the work being conducted within Mission Bay Park that is reliant on the use and repositioning of beach sand and the removal and replacement of rip rap at drain repairs within the Mission Bay Entrance Channel.

b. **Private Property Owner Consent.** The Construction and Pollution Prevention Plan shall be submitted with evidence indicating that the owners of any private properties on which construction activities are to take place, including properties to be crossed in accessing the site, consent to use of their properties.

c. **Minimize Erosion and Sediment Discharge.** During construction, erosion and the discharge of sediment off-site or to coastal waters shall be minimized through the use of appropriate Best Management Practices (BMPs), including:

(1) Land disturbance during construction (e.g. clearing, grading, and cut-and-fill) shall be minimized, and grading activities shall be phased, to avoid increased erosion and sedimentation.

(2) Erosion control BMPs (such as mulch, soil binders, geotextile blankets or mats, or temporary seeding) shall be installed as needed to prevent soil from being transported by water or wind. Temporary BMPs shall be implemented to stabilize soil on graded or disturbed areas as soon as feasible during construction, where there is a potential for soil erosion to lead to discharge of sediment off-site or to coastal waters.

(3) Sediment control BMPs (such as silt fences, fiber rolls, sediment basins, inlet protection, sand bag barriers, or straw bale barriers) shall be installed as needed to trap and remove eroded sediment from runoff, to prevent sedimentation of coastal waters.

(4) Tracking control BMPs (such as a stabilized construction entrance and exit, and street sweeping) shall be installed or implemented as needed to prevent tracking sediment off-site by vehicles leaving the construction area.

(5) Runoff control BMPs (such as concrete washout facility, dewatering tank, or dedicated vehicle wash areas) that will be implemented during construction to retain, infiltrate, or treat stormwater and non-stormwater runoff.

d. **Minimize Discharge of Construction Pollutants.** The discharge of other pollutants resulting from construction activities (such as chemicals, paints, vehicle fluids, petroleum products, asphalt and cement compounds, debris, and

trash) into runoff or coastal waters shall be minimized through the use of appropriate BMPs, including:

(1) Materials management and waste management BMPs (such as stockpile management, spill prevention, and good housekeeping practices) shall be installed or implemented as needed to minimize pollutant discharge and polluted runoff resulting from staging, storage, and disposal of construction chemicals and materials. BMPs shall include, at a minimum:

i. Covering stockpiled erosive or water transportable construction materials, soil, and other excavated materials to prevent contact with rain, and protecting all stockpiles from stormwater runoff using temporary perimeter barriers;

ii. Cleaning up all leaks, drips, and spills immediately; having a written plan for the clean-up of spills and leaks; and maintaining an inventory of products and chemicals used on site;

iii. Proper disposal of all wastes; providing trash receptacles on site; and covering open trash receptacles during wet weather;

iv. Prompt removal of all construction debris from the beach; and

v. Detaining, infiltrating, or treating runoff, if needed, prior to conveyance off-site during construction.

(2) Fueling and maintenance of construction equipment and vehicles shall be conducted off site if feasible. Any fueling and maintenance of mobile equipment conducted on site shall not take place on the beach, and shall take place at a designated area located at least 50 feet from coastal waters, drainage courses, and storm drain inlets, if feasible (unless those inlets are blocked to protect against fuel spills). The fueling and maintenance area shall be designed to fully contain any spills of fuel, oil, or other contaminants. Equipment that cannot be feasibly relocated to a designated fueling and maintenance area (such as cranes) may be fueled and maintained in other areas of the site, provided that procedures are implemented to fully contain any potential spills.

e. **Minimize Other Impacts of Construction Activities.** Other impacts of construction activities shall be minimized through the use of appropriate BMPs, including:

(1) The damage or removal of non-invasive vegetation (including trees, native vegetation, and root structures) during construction shall be minimized, to achieve water quality benefits such as transpiration, vegetative interception, pollutant uptake, shading of waterways, and erosion control.

(2) Soil compaction due to construction activities shall be minimized, to retain the natural stormwater infiltration capacity of the soil.

(3) The use of temporary erosion and sediment control products (such as fiber rolls, erosion control blankets, mulch control netting, and silt fences) that incorporate plastic netting (such as polypropylene, nylon, polyethylene, polyester, or other synthetic fibers) shall be avoided, to minimize wildlife entanglement and plastic debris pollution.

f. **Manage Construction-Phase BMPs.** Appropriate protocols shall be implemented to manage all construction-phase BMPs (including installation and removal, ongoing operation, inspection, maintenance, and training), to protect coastal water quality.

g. **Construction Site Map and Narrative Description.** The Construction and Pollution Prevention Plan shall include a construction site map and a narrative description addressing, at a minimum, the following required components:

(1) A map delineating the construction site, construction phasing boundaries, and the location of all temporary construction-phase BMPs (such as silt fences, inlet protection, and sediment basins).

(2) A description of the BMPs that will be implemented to minimize land disturbance activities, minimize the project footprint, minimize soil compaction, and minimize damage or removal of non-invasive vegetation. Including a construction phasing schedule, if applicable to the project, with a description and timeline of significant land disturbance activities.

(3) A description of the BMPs that will be implemented to minimize erosion and sedimentation, control runoff and minimize the discharge of other pollutants resulting from construction activities. Include calculations that demonstrate proper sizing of BMPs.

(4) A description and schedule for the management of all construction-phase BMPs (including installation and removal, ongoing operation, inspection, maintenance, and training). Identify any temporary BMPs that will be converted to permanent post-development BMPs.

h. **Construction Site Documents.** The Construction and Pollution Prevention Plan shall specify that copies of the signed CDP and the approved Construction and Pollution Prevention Plan be maintained in a conspicuous location at the construction job site at all times, and be available for public review on request. All persons involved with the construction shall be briefed on the content and meaning of the CDP and the approved Construction and Pollution Prevention Plan, and the public review requirements applicable to them, prior to commencement of construction.

i. **Construction Coordinator.** The Construction and Pollution Prevention Plan shall specify that a construction coordinator be designated who may be contacted during construction should questions or emergencies arise regarding the construction. The coordinator's contact information (including, at a minimum, a telephone number available 24 hours a day for the duration of construction) shall be conspicuously posted at the job site and readily visible from public viewing areas, indicating that the coordinator should be contacted in the case of questions or emergencies. The coordinator shall record the name, phone number, and nature of all complaints received regarding the construction, and shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry.

j. **Progress Reports.** The applicant shall submit weekly reports to the Executive Director reflecting progress and status of the project, including an identification of any outstanding issues that may have arisen since the last progress report, or are anticipated to arise in the foreseeable future.

(1) The applicant shall undertake development in accordance with the approved Construction-Phase Pollution Prevention Plan, unless the Commission amends this permit or the Executive Director provides written determination that no amendment is legally required for any proposed minor deviations.

8. Final Eelgrass Mitigation Plan.

a. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the applicant shall submit for review and written approval of the Executive Director, two (2) copies of a final eelgrass mitigation plan for the replacement of eelgrass adversely impacted by the project. The plan shall be prepared in consultation with the California Department of Fish and Wildlife and the National Marine Fisheries Service (NMFS). The plan shall be prepared consistent with the requirements identified below, and otherwise following the guidelines of the California Eelgrass Mitigation Policy and Implementing Guidelines dated October 2014 (CEMP). The latter includes but is not limited to those guidelines focused on: eelgrass mapping; surveying; impact determinations; mitigation site selection, size, and methods; and, monitoring and success criteria. The plan shall provide that:

(1) All direct impacts to eelgrass and indirect impacts to eelgrass (e.g., shading or scour) shall be mitigated at a minimum final ratio of 1.2:1 (mitigation: impact);

(2) Adverse impacts to eelgrass shall be mitigated in-kind, on-site to the maximum extent feasible and, for any portion that cannot feasibly be mitigated on-site, off-site mitigation shall be required. The final location(s) of all on-site and off-site mitigation shall be specifically identified;

(3) Inventories of existing and historical information (including maps) shall accompany detailed descriptions for each of the following sites:

i. Eelgrass beds within the approved construction site plus a 10m buffer area. These shall include any areas to be impacted by the construction and other activities associated with the project. Areas to be impacted shall be clearly indicated on the maps provided;

ii. Existing eelgrass beds, if any, within the mitigation site(s);

iii. Locations within the mitigation sites in which eelgrass will be established as compensation for impacted areas; and

iv. Eelgrass beds selected as the reference site(s).

(4) The proposed mitigation methods shall be described in detail, including specification of the mitigation approach (e.g., recolonization, transplant via bare-root bundles, seed buoys, or transplant frames); whether the mitigation site requires any sort of preparation; sources, quantities, spacing, etc. of donor eelgrass material; and, time estimates for recolonization or transplant activities to be completed.

(5) Prior to commencement of construction of the portions of the approved project that would have unavoidable direct impacts on eelgrass, the eelgrass that would be directly impacted shall be transplanted to the mitigation site(s). Any additional mitigation necessary to achieve the success criteria described in (8) below should also be considered for implementation prior to the commencement of construction, in order to minimize temporal loss of eelgrass and associated ecosystem functions.

(6) At minimum, a monitoring plan for the mitigation and reference sites shall follow CEMP guidelines, and specify: the criteria and process for reference site selection; sampling and census methods to be used including frameworks, spatial resolutions, frequencies, and error; methods for statistical assessment; and, any other relevant details such that a specialist unfamiliar with the sites could readily interpret and carry out the plan. Additional metrics (e.g., epifaunal load, blade height or width, qualitative photography) may also be employed and should be thoroughly described.

(7) Construction schedules shall be provided, including anticipated commencement and completion dates for all work, with attention to the regional eelgrass growing seasons as described in the CEMP.

(8) The CEMP-recommended annual performance milestones and the approved final mitigation and monitoring plan shall guide achievement towards the minimum final mitigation goal. The goal is attainment of 100 percent coverage of eelgrass over not less than 1.2 times the area of impact and achievement of at least 85 percent density of reference site(s)within

three years of completion of the initial mitigation activities. Further, these success criteria shall be maintained over a period of at least an additional two years after construction is complete. If achievement of this performance milestone schedule is delayed for any reason, monitoring shall continue until the minimum final mitigation goal has been sustained for an additional two years.

(9) Reports shall be submitted to the Executive Director, as follows:

i. Annually, with description of the results of the 0, 12, 24, 36, 48, and 60-month (post-planting) performance evaluations at the mitigation site(s), including the areal extent, percent coverage, and density of eelgrass at the mitigation and reference site(s), and any relevant observations, recommended maintenance (including replanting measures), or other adaptive management strategies recommended for consideration;

ii. At the end of the proposed five-year period, a comprehensive report describing the results of the plan in detail, similar to that described above for the annual reports but with reference to the overall success of the mitigation effort;

(10) A follow-up mitigation program shall be proposed if the original program is wholly or partially unsuccessful. Prior to implementation, this follow-up program shall be at least reviewed and approved by the Executive Director in writing, and may require an amendment to this permit.

The applicant shall undertake development in conformance with the approved final plans unless the Commission amends this permit or the Executive Director provides a written determination that no amendment is legally-required for any proposed minor deviations.

b. **Pre-Construction Eelgrass Survey.** A valid pre-construction eelgrass survey (for Zostera marina and Z. pacifica) shall be completed for the project site and a 10m buffer area by the applicant during the period of active eelgrass growth (consult the CEMP for the relevant season in each project area). The pre-construction survey shall be completed no more than 60 days prior to the beginning of construction and shall be valid until the next period of active growth. If any portion of the project is subsequently proposed to occur in a previously unsurveyed area, a new survey is required during the active growth period for eelgrass in that region no more than 60 days prior to commencement of work in that area. The eelgrass survey and mapping shall be prepared in full compliance with the CEMP, and in consultation with the National Marine Fisheries Service (NMFS) and California Department of Fish and Wildlife (CDFW). If side-scan sonar methods will be used, evidence of a permit issued by the California State Lands Commission (CSLC) for such activities shall also be provided prior to the commencement of survey work. The applicant shall submit the pre-construction eelgrass surveys for review and approval by the

Executive Director within fifteen (15) business days of completion of each eelgrass survey and in any event, no later than five (5) business days prior to commencement of any development. If eelgrass surveys identify any eelgrass within the project area that may be potentially impacted by the proposed project, the applicant is required to complete post-project eelgrass surveys consistent with subsection C (below).

c. **Post-Construction Eelgrass Survey.** If any eelgrass is identified in the project site or the 10m buffer area by surveys required in subsection b of this Special condition, within 30 days of completion of construction, or within the first 30 days of the next active growth period following completion of construction that occurs outside of the active growth period, the applicant shall survey the project site to determine if there were any unanticipated eelgrass impacts. The survey shall be prepared in full compliance with the CEMP adopted by the NMFS and in consultation with the CDFW. If side-scan sonar methods are to be used, evidence of a valid permit from CSLC must also be provided prior to the commencement of each survey period. The applicant shall submit the post-construction eelgrass survey for the review and approval of the Executive Director within thirty (30) days after completion of the survey. If any eelgrass has been adversely impacted beyond impacts anticipated prior to the onset of construction, the applicant shall replace the impacted eelgrass at a minimum final 1.2:1 (mitigation:impact) ratio on-site, at the identified mitigation site(s), or at another location as approved by the Executive Director, and with respect to the chosen reference sites. Any exceptions to the required 1.2:1 minimum final mitigation ratio found within the CEMP shall not apply. Based on past performance of eelgrass mitigation efforts, in order to achieve this minimum, the appropriate regional initial planting ratio provided in the CEMP should be used. If impacts exceed those anticipated or if mitigation is relocated to a site not identified in the final mitigation and monitoring plan, an amendment to this permit or a new coastal development permit shall be required, unless the Executive Director provides a written determination that no amendment or new permit is required.

9. Pile Driving Limitations. To protect marine life, peak sound pressure levels generated by the pile driving activities may not exceed 212 dB for peak sound pressure exposure (Peak SPL) from impulsive sources, and accumulated sound exposure levels (SELcumm) may not exceed 170 dB at the location of the marine mammal without implementation of all reasonable efforts to curtail the sound levels to below these thresholds. To protect marine mammals and sea turtles from noise impacts, a shutdown zone shall be established to determine the seaward location at which noise thresholds are exceeded unless noise thresholds are not exceeded at a distance of 10 meters from the sound source. If a shutdown zone is needed, qualified marine mammal monitors shall be on hand during all pile driving activities to determine if marine mammals enter the shutdown zone. If a marine mammal or sea turtle enters the exclusion zone, all pile driving work will cease until these animals have exited the shutdown zone of their own accord. All pile driving activities shall be limited to no more than 12 consecutive hours per day. Identify, avoid, and minimize acoustic exceedances, including:

a. **All pile driving activities shall be performed in full accordance with the following provisions**:

(1) Piles to be installed shall consist of those identified within the projected plans and include steel sheet piles.

(2) If any impact pile driving activities are used, they shall incorporate a “soft start” approach whereby hammer strikes on each pile begin at low pressure and slowly increase to full hammer strength in order to drive fish away from the piles before the acoustics generated by pile driving approach levels that could result in injury. For any cessation of pile driving for greater than one hour, the soft start procedures shall be repeated to reinitiate behavioral relocation of fish from the acoustic impact area.

(3) For all piles, impact hammering shall be used only to 1) set piles to final grade after piles have been jetted or vibrated to within five feet of final depth, or 2) to set piles after jetting and vibratory driving have ceased to be effective at driving piles to require engineered depths.

(4) To protect fish from the acoustic impacts of pile driving, piles shall be principally driven by vibratory or hydrojetting means.

(5) If the SELcumm approaches 170 dB, pile driving will be stopped to avoid exceeding the criterion and will not commence again for at least 12 hours

(6) In the event that either the 212 dB peak or the 170 dB SELcumm sound levels are exceeded, additional attenuation measures shall be implemented in the form of increased pile mass by temporarily attaching non-resonating materials (e.g., wood or nylon blocking) while piles are driven, use of unconfined bubble curtains to the extent possible on the individual piles, and application of a linear confined or unconfined bubble curtain along the faces of the combi-wall at segments being driven. Exceedances and subsequent avoidance measures taken shall be reported to the Executive Director and the National Marine Fisheries Service within 48 hours of the event.

(7) Hydroacoustic monitoring shall be performed during the first week of pile driving for each type of pile. Monitoring shall be used to determine the hydroacoustic properties generated from the pile types. Sound levels shall be measured at the source, using an integrating data logging sound level meter (SLM) with one hydrophone positioned at 10 meters from the driven pile. If sound pressures are found to exceed established thresholds at this distance, more extensive sound testing must occur to establish the distance from the sound source at which sound is attenuated below peak and cumulative threshold levels, and a shutdown zone shall be established that corresponds with the isopleths associated with the acoustic thresholds for marine mammals. One or more hydrophones shall be positioned or moved

in varying distance increments, including at least 20m, 40m and120m from the sound source. Hydroacoustic monitoring shall be conducted initially for at least the first piles of each type driven by impact and vibratory hammer. Monitoring results from the first two piles of each type shall be reported to the Executive Director directly following the initial monitoring. With the monitoring report, the applicant may submit evidence to support stopping hydroacoustic monitoring, including, at least, that the piles monitored in the report are representative of the water depths into which all piles will be driven, and that sound pressure levels at the closest hydrophone during sound testing (stationed at 10 meters from each pile being driven) are below both criteria of the dual metric exposure criteria (212 dB peak or 170 dB accumulated SEL level). Unless and until the Executive Director makes a determination that hydroacoustic monitoring may be discontinued, hydroacoustic monitoring shall continue for any additional pile-driving activities.

(8) A final report that includes data collected and summarized for all monitoring locations shall be submitted to the Executive Director within 180 days of completion of the hydroacoustic monitoring. The report shall include all the following information:

i. The dates, times, and distance at which either the 212 dB peak or 170 dB SELcumm thresholds were exceeded, if any;

ii. The average total number of strikes to drive each pile if an impact hammer is used and the total number of strikes and piles driven during each 24 hour period when pile driving occurred;

iii. Sizes and types of piles driven;

iv. If more distant testing is required, scaled graphics and accompanying tables describing the pile driving environment, including:

1. The distance between hydrophones and piles driven;
2. The depth of hydrophones and depth of water at the hydrophone location;
3. The distance from the piles driven to the edge of the surf zone at the Mean High Water (MHW) mark;
4. The depth of water in which piles were driven;
5. The depth into the substrate that the piles were driven; and
6. The physical characteristics of the bottom substrate into which the piles were driven.

v. All results of the hydroacoustic monitoring;

vi. A map indicating the location of the shutdown zone within Mission Bay

vii. A description of any marine mammal, sea turtle, or other significant marine life encounters and all actions taken, and;

viii. A description of any dead fish observed and the behavioral response to pile driving of any live fish observed.

(9) In the event of an exceedance of either criterion of the dual metric exposure criteria, (a) the extent of area and duration and magnitude of sound exceedance shall be reported (b) the affected area will be examined for indications of injured or dead fish (c) and, additional attenuation measures, such as secondary bubble curtains, changes in dampening materials, or different hammers or cushioning block designs shall be tested to address the noise exceedance. In the event that primary and secondary measures are not determined to be successful, the exceedances shall be reported to the Executive Director, along with any observations of injured or dead fish associated with the pile driving activities. Working in conjunction with the Executive Director and in consultation with National Marine Fisheries Service, the applicant shall develop and test alternative attenuation strategies.

(10) To insure injury does not occur to marine life:

i. If more extensive testing beyond the 10 meter distance is required, a qualified biological observer shall be maintained onsite with the authority to stop construction if a marine mammal approaches or enters the shutdown zone. The shutdown zone is defined as the area within 10 meters of construction activities, or inside the 212 dB and 170 dB isopleths for peak and cumulative sound pressure levels respectively. The pile-driving activities will be stopped and delayed until the biological observer visually confirms either that the animal has voluntarily left the shutdown zone and is beyond the shutdown zone, or 30 minutes have passed without re-detection of the animal.

ii. Provisions of the NMFS Endangered Species Act Section 7(a)(2) Concurrence Letter for Structural Upgrades of Pier 1 at BAE Systems Drydock in San Diego Bay dated January 19, 2016, or as amended, shall be implemented. These measures include mammal and turtle monitoring, hydroacoustic verification of noise conditions, prohibitions on pile driving when marine mammals or turtles are within shutdown zones, soft-start pile driving measures, and general vessel speed limits and work BMPs to protect mammals and turtles.

b. **Pile driving shall be conducted at all times in accordance with these provisions.** Any proposed changes to these pile driving requirements and limitations shall be reported to the Executive Director. No changes to the requirements of this special condition shall be made without a Coastal Commission approved amendment to this CDP unless the Executive Director determines that no amendment is legally required.

10. Bird Nesting Surveys. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, in a form and content acceptable to the Executive Director, a plan for a Breeding/Nesting Bird Survey to be conducted by a qualified biologist prior to construction of the proposed improvements. PRIOR TO ANY CONSTRUCTION ACTIVITIES during passerine, raptor, or least tern nesting or breeding season of any year (April 1st – September 15th), a qualified biologist shall conduct a site survey for active nests seventy-two hours prior to any scheduled development. If an active nest is located, then a qualified biologist shall monitor the nest daily until project activities are no longer occurring within 300 feet of a passerine nest or within 500 feet of active raptor or least tern nests until the young have fledged and are independent of the adults or the nest is otherwise abandoned.

By acceptance of this permit, the applicant agrees to avoid, to the maximum extent feasible, construction activities that generate noise greater than 60 dB(A) during bird nesting season at the project edge, from February 15th through September 15th. If project construction is necessary during the bird nesting season, a qualified biologist with experience in conducting bird nesting surveys shall conduct a minimum of one survey within 72 hours of initiating construction activities. Monthly surveys for nesting birds shall also be conducted during any tree removal, excavation or major construction work occurring within the nesting season. If during preconstruction or monthly surveys, active raptor or least tern nests are identified within 500 feet of the project site, or active nests of any passerine species are identified within 300 feet, noise monitoring indicates that noise levels remain below a 60 dB(A) equivalent continuous noise level at the location of the nest.

If this level is exceeded, feasible noise attenuation measures shall be implemented to reduce noise levels at active nests to at or below 60 dB(A) (except as necessary for emergencies with written approval by the Executive Director of the Commission after consultation with the California Department of Fish and Wildlife and U.S. Fish and Wildlife). The monitoring biologist shall halt construction activities if he or she determines that the construction activities may be disturbing or disrupting the nesting activities. The monitoring biologist shall make practicable recommendations to reduce the noise or disturbance in the vicinity of the active nests or birds. This may include recommendations such as (1) turning off vehicle engines and other equipment whenever possible to reduce noise, (2) installation of temporary sound barriers or sound blankets, and (3) utilization of alternative construction methods and technologies to reduce the noise of construction machinery. The monitoring biologist shall review and verify compliance with these avoidance boundaries and shall verify that the nesting effort has finished in a written report. Unrestricted construction activities may resume when the biologist confirms no active nests are found. Bird nesting surveys shall be

provided to the Executive Director of the Commission and to the California Department of Fish and Wildlife and U.S. Fish and Wildlife offices within 72 hours of locating any nests.

11. Other Permits. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall provide to the Executive Director copies of all other required state or federal discretionary permits issued by the U.S. Army Corps of Engineers, U.S. Fish and Wildlife, California Department of Fish and Wildlife, Regional Water Quality Control Board, National Marine Fisheries Service, and the State Lands Commission for the proposed project. The applicant shall inform the Executive Director of any changes to the project required by other state or federal agencies. Any change in the approved project that may be required by the above-stated agencies shall be submitted to the Executive Director in order to determine if the proposed change would require an amendment pursuant to the requirements of the Coastal Act and the Commission regulations..

12. Area of Archaeological Significance.

a. The applicant shall comply with all recommendations and mitigation measures for archaeological and tribal resources contained in the South Mission Beach Storm Drain and Green Infrastructure SDP Mitigated Negative Declaration (Project No. 646245, SCH No. 2020039026), dated April 27, 2020. The applicant shall also comply with the following monitoring conditions during construction:

   (1) Archaeological monitor(s) qualified by the California Office of Historic Preservation (OHP) standards, a Native American monitor representing tribal entities with documented ancestral ties to the project area appointed consistent with the standards of the Native American Heritage Commission (NAHC), and the Native American most likely descendent (MLD) when State Law mandates identification of a MLD, shall monitor project grading, excavation work, site preparation or landscaping activities associated with the approved development that are identified as having the potential to uncover or otherwise disturb cultural deposits;

   (2) The applicant shall provide sufficient archeological and Native American monitors to assure that all project grading and any other subsurface activity that has any potential to uncover or otherwise disturb cultural deposits is monitored at all times;

b. If an area of cultural deposits is discovered during the course of the project:

   (1) All construction and subsurface activities that have the potential to uncover or otherwise disturb cultural deposits in the area of the discovery or may foreclose mitigation options (observing not less than a 100-foot wide buffer around the discovery) shall cease immediately and shall not recommence except as provided in subsection (c) hereof; and the project archaeologist

shall prepare and submit a Significance Testing Plan, for review and approval of the Executive Director, identifying measures to be undertaken to determine the significance of the find. The Plan shall be prepared in consultation with the Native American monitors, and the MLD when State Law mandates the identification of an MLD. The Executive Director shall determine the adequacy of the Plan, and if the discovery is found to be less than significant, the Plan may be implemented without further Commission action. The Significance Testing Plan results, along with the project archaeologist's recommendation as to whether the discovery should be considered significant, and the comments of the Native American monitors and MLD when State Law mandates the identification of a MLD, shall be submitted to the Executive Director for a determination of the significance of the discovery. If the Executive Director determines that the discovery is significant, development shall not recommence and the applicant shall submit to the Executive Director a Supplementary Archeological Plan in accordance with subsection (c) below.

c. An applicant seeking to recommence construction following discovery of cultural deposits determined to be significant pursuant to the process established in the Significance Testing Plan in subsection b(1) shall submit a Supplementary Archaeological Plan for the review and written approval of the Executive Director, prepared by the project archaeologist in consultation with the Native American monitor(s) of the appropriate Tribe(s), and the Native American most likely descendent (MLD) when State Law mandates identification of a MLD. The Supplementary Archaeology Plan shall identify proposed investigation and mitigation measures, which can range from in-situ preservation to recovery, relocation, or reburial. A good faith effort shall be made to avoid impacts to cultural resources through methods such as, but not limited to, project redesign, capping, and placing cultural resource areas in open space. In order to protect archaeological or cultural resources, any further development may only be undertaken consistent with the provisions of the approved Supplementary Archaeological Plan, as well as, to the extent applicable, the original approved archaeological plan.

(1) If the Executive Director approves the Supplementary Archaeological Plan and determines that the Supplementary Archaeological Plan's recommended changes to the proposed development or mitigation measures are de minimis in nature and scope, construction may recommence.

(2) If the Executive Director approves the Supplementary Archaeological Plan but determines that the changes therein are not de minimis, construction may not recommence until after an amendment to this permit is approved by the Commission to authorize a new archaeological approach.

(3) A report verifying compliance with this condition shall be submitted to the Executive Director for review and written approval within 30 days of

completion of the mitigation measures detailed in the approved archaeological monitoring plan or Supplementary Archaeological Plan that are required to protect significant archaeological finds.

13. Development Authorization

a. The approved development is authorized for 20 years from the date of approval. BY ACCEPTANCE OF THE PERMIT, the Applicant acknowledges and agrees that the development authorized pursuant to this CDP is thus interim and temporary, and is permitted for the time frame identified in order to provide a reasonable period of time for the Applicant to evaluate future risk of coastal hazards as influenced by sea level rise and to plan, develop, and implement any necessary responses to coastal hazards including adaptation or alternatives, to ensure minimization of risk in the long term, and to address any coastal resource impacts associated with maintaining the subject development at this location (e.g., impacts associated with any coastal hazards protection measures, such as expanded number of piles, walls, or berms to protect the approved facility).

b. Prior to the expiration of the authorization period of the development, the Applicant or its successors shall submit to the Commission an application for a CDP amendment to either (a) remove the approved development in its entirety and restore the affected areas to a sandy beach condition, or (b) extend the length of time the development is authorized and modify its design as needed to ensure consistency with the Coastal Act. If a complete application is filed before the end of the authorization period, the authorization period shall be automatically extended until the time the Commission acts on the application.

c. The required amendment application shall conform to the Commission's permit filing regulations at the time and shall at a minimum include, along with other required information, a Coastal Hazards Analysis and Adaptation Plan that provides a clear long-term plan to ensure that the approved development minimizes flood hazard risks to the facility through at least the year 2100. The plan shall include:

(1) Information on flood conditions and other coastal hazards in the project area obtained through periodic monitoring and recording of conditions in the project area during extreme tide and storm events. The information should include an assessment of cumulative changes to the approved development's coastal hazard risk overtime.

(2) A geotechnical analysis of current and future coastal hazards in the project area taking into account local sea level rise, considering medium-high risk aversion and extreme (H++) risk aversion scenarios, and based on the best available science at the time of plan preparation. The analysis shall address flooding associated with large storm events (the 100-year storm or greater), accounting for the confluence of riverine and coastal flooding.

14. Assumption of Risk, Waiver of Liability and Indemnity. By acceptance of this permit, the applicant acknowledges and agrees (i) that the sites may be subject to hazards from flooding, sea level rise, erosion and wave uprush; (ii) to assume that the risk to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

IV. FINDINGS AND DECLARATIONS

A. Project Description and Background

The proposed project includes storm drain improvements to 6 existing storm drains, removal of 1 existing storm drain, and the installation of 2 new storm drain pipes located along the western beach of Mariner's Basin in South Mission Beach, as well as Mariner's Entrance Channel south of the Mission Beach peninsula in the City of San Diego (see **Exhibit # 1**). While the number of storm drain pipes will be increased, the number of outlets will decrease from 7 to 6. Existing storm drains will be extended, upsized, realigned, and consolidated at outlet locations, and will be extended into subtidal elevations where they will be buried under sand and rock. Old storm drain infrastructure will either be abandoned, removed, or replaced, resulting in approximately 8,000 linear feet of storm drain pipe installed (see **Exhibits # 2 and # 5**).

The project would also include the installation of several green infrastructure elements, including pumps to catch dry weather and initial storm flush flows that are connected to both the storm drains and the sewer system, as well as bioinfiltration basins that will be placed in or near public parking lots throughout South Mission Beach. Approximately 0.6 mile of Mission Boulevard will also be milled and re-paved in order to increase the height difference between road elevation and the curb, enabling more surface water conveyance to the sewer and storm drain system during storm events and preventing ponding effects. The proposed project will improve surface water conveyance and infiltration, and the water quality of discharges to Mission Bay will also be improved.

The project site is generally located between Belmont Park to the north, Mission Bay Entrance Channel to the south, Mission Boulevard to the west, and the subtidal area of Mariner's Basin to the east (**Exhibit # 3**). The site encompasses approximately 76 acres of drainage area, with the central portion of Mariner's Basin being a federal anchorage that's considered part of the Mission Bay federal channel and is maintained by the Los Angeles District of the Army Corps of Engineers. Mariner's Basin is also considered part of Mission Bay Park and is subject to the Mission Bay Park Master Plan Updates. An existing riprap revetment located along Mission Bay Entrance and Main Channels wraps

into Mariner's Basin at Mission Point. No changes to the existing shoreline protection will occur with this project.

Existing Infrastructure

The majority of the existing storm drain was designed in the 1950s. Topographically, the high point of Mission Beach is generally located on the west edge of the study area near Ocean Front Walk, with the developed area generally sloping eastwards towards four sag points (i.e. low points) on Mission Boulevard. These four sag points are located: 1) near San Fernando Place; 2) an alley between San Gabriel Place and Deal Court; 3) an alley between Brighton Court and Balboa Court; and 4) North Jetty Road. Smaller. Nearby sag points are also located along Bayside Lane at Devon Court, Deal Court, Cohasset Court, Balboa Court, and Asbury Court.

The majority of the existing storm drain system is comprised of shallow-sloping pipes south of San Fernando Place. Pipe sizes range from 3-24 inches in diameter with a total length of 5,109 feet. Most of the pipe is either 12 or 18 inches in diameter. Presently there are five storm drains that outlet to Mariner's Basin and two that outlet to the Mission Bay Entrance Channel. The five storm drains that outlet to Mariner's Basin are exposed pipes lying on the beach with outlets that discharge into the intertidal zone. The two storm drains along the Mission Bay Entrance Channel are located in the existing riprap revetment.

The City has indicated that the existing storm drains are in overall poor condition and not functioning as intended. The storm drain pipes range in size and material (such as corrugated metal, concrete, asbestos concrete, or high density polyethylene), and suffer from corrosion and disconnected segments, which in some cases results in stormwater being discharged onto the public beach along Mariner's Basin. For the five storm drains along Mariner's Basin in particular, several environmental factors have significantly impaired the structures and made their replacement/upgrade necessary. Changing beach profiles (i.e. shifts in sand levels and wave action) has been the primary issue in preserving functionality of at least three out of the five storm drains, and vessel or beach maintenance may have also impacted the infrastructure over time. Additionally, many of the storm drains have failed or failing tide gate structures that were originally intended to shield upstream development from possible back feeding of tidal waters into the identified sag points. These tide gates are located inside the cleanout structures of the storm drains and currently must be manually operated by City maintenance field crew.

While the physical infrastructure is compromised, the position of the existing storm drains in Mariner's Basin also precludes effective functioning. Because of their current locations along the beach, the storm drains push sand outwards into Mariner's Basin and the federally-maintained navigational channel. This sand is not recoverable by City maintenance crews. Impacts to the beach include the formation of sand deltas where the pipes outlet, a loss of aesthetics, and potential contact of beach users with runoff water.

In addition to the storm drain systems, South Mission Beach currently has several green infrastructure systems that were installed with the intent of capturing dry weather flows

and the first 20 minutes of a rainfall event. The Mission Beach Sewer Interceptor System (or, MBSIS) was installed approximately 25 years ago. The backbone of the MBSIS was low flow diversion structures (LFD's), which were located near the downstream end of four storm drain systems (Deal Court/Bayside Lane, Cohasset Court/Bayside Lane, Balboa Court/Bayside Lane, and North Jetty Road/Mission Boulevard). When they were originally constructed, the system was automated so that valves within would be opened and closed to direct the first 20 minutes of a storm event ("first flush") into the sanitary sewer system using gravity flow. However, his automation no longer functions and presently City staff must manually open and close the valves. Valves are typically kept in an open position in order to capture dry weather flows but must be manually closed during storm events in order to prevent the sewer system from being overwhelmed. Gravity-fed flows from the four LFD systems are directed to an interceptor pump LFD station, which is located in the landscaped area north of the intersection of San Fernando Place and Bayside Lane. This station is the connection between the storm drain system of South Mission Beach (including the storm drain mainline along San Fernando Place) and the sanitary sewer system. Finally, a number of weep sumps installed throughout South Mission Beach have also become ineffective. The weep sumps are similar to a grate inlet catch basin, except that there is no connection to a storm drain and water is designed to infiltrate into native soil. They have become largely ineffective and contribute to flooding at sag areas, resulting in City of San Diego maintenance staff using portable pumps to collect puddled water and dump it into other available collection points for discharge into the storm drains.

The existing structures carry inherent risks due to their locations and design, but these risks are exacerbated by their current ineffectiveness. Under current conditions, sediment is allowed into the LFD system under low flow conditions, which results in pipe damage and causes blockages and backups. More pressing, wastewater may potentially back up into the storm drain system if there were to be a sewer overflow and the LFD plug was open (due to low flow conditions or valve failure). Since the plug valve in the LFD is the only structure separating the storm system from the wastewater system, this could potentially result in sewage spills on the beach. Indeed, sewage spills have occurred along Bayside Walk in South Mission Beach four times in the past ten years, with the most recent occurring on January 6, 2020 according to information obtained from the City. Conversely, if the tide gates and tideflex valves were to fail or be left open during high tide, seawater could back up into the storm drain system and potentially enter the sewer main when the plug valve was open and risk overloading the sewer main or downstream Point Loma wastewater treatment plant. Seawater would accelerate corrosion of metal pipes and appurtenances of the wastewater treatment plant.

The current drainage system has inadequate conveyance capacity. The City determined that peak flows to the storm drain outfalls are restricted due to two primary reasons: 1) the existing storm drains are undersized, and 2) the inadequate infrastructure cannot intercept and convey surface flow into the storm drain system, which results in significant ponding at sag points.

Proposed Work

The purpose of the proposed project is to resolve the above-described deficiencies in the existing storm drain system. South Mission Beach is a densely crowded neighborhood built on a porous sand peninsula with an extremely shallow marine water table approximately 1.5 feet below the ground surface. Due to these conditions, the project presented several logistical challenges relating to outfall slope construction, density of private properties and utility right-of-ways, as well as public access and circulation. The basic work to be performed is a significant realignment and undergrounding of the drains, as well as an increase in the capacity of storm drains and associated green infrastructure to convey surface water. The storm drains will be designed to include a modified cleanout structure with an automated tide gate linked to rainfall and tide gages in order to mitigate tidal influence and reduce the potential for seawater to back up into the storm drain mainlines.

By lowering the storm drain outfalls to subtidal discharge elevations, the storm drains will sit at the toe of the basin slope and the discharge of sand off the beach will be ameliorated. Beach erosion would be reduced as would aesthetic and beach use impacts borne by the public from the deteriorated storm drains presently located on the beach. Maintenance demands both within the beach and the dredged federal channel would also be reduced. None of the proposed subtidal outlets would extend into the federally maintained basin, and the pipes have been sited to avoid creation of a navigational hazard.

Due to the several outstanding issues described above, the City undertook numerous studies to determine the present design. As the basic level of design, the City utilized its Drainage Design Manual for tributary areas under one square mile in order to determine that the stormwater system should be designed so that the storm drain capacity and overflow (which includes streets and gutters) are able to carry the 100-year frequency storm without damage to adjacent development or flooding impacts. The Watershed Master Plan utilizes this parameter as a Level of Service (LOS), and any facilities determined to be incapable of carrying the 100-year storm even are moved to a “proposed improvement” phase of the drainage analysis. The 2-year, 10-year, and 50-year storms were also modeled in order to understand the performance of the system during storms with a higher chance of occurrence.

This modeling informed the City’s proposal to upsize many of the existing drainage pipes. Compared to the existing drainage, in which most of the 5,960 linear feet of pipe is either 12 or 18 inches in diameter, the 8,050 linear feet of proposed pipe will be mostly 18 inches and 30 inches in diameter. While this increase relates to the realignment and extension of the pipes into Mariner’s Basin, it also includes linear footage of pipe that will be extended upstream in the South Mission Beach neighborhood in order to provide better surface interception where stormwater typically collects. With the inclusion of larger pipes, a larger network of pipes, and the automated tidal gates described below, runoff will drain more quickly and dramatically reduce flooding. As an additional benefit, the City also notes that the enlarged storm drains will serve as temporary below ground storage capacity. The intent of the enlarged drains is

to adequately serve the existing development in Mission Beach, not allow for an increase in density.

Because the direction of flow tends to go through narrow right-of-ways, privately owned property or corridors crowded with other utilities, the main storm drain pipes located at low points will be re-directed to the nearest areas with minimal adjacent underground utilities. In these locations, adequate room for construction and future maintenance could be ensured. Despite the relocation of existing storm drains, the City still faces limitations in directing the proposed pumped drainage to be gravity fed to existing system SD 5-A due to the flat topography of Mission Beach and a shallow water table. Because of that, and the City's desire to accommodate present and future drainage needs, a new system (System 6-A) will need to be constructed. This new system will replace an infiltration well that is no longer functioning. Additionally, a new storm drain, System 3-A, will be included to expand water evacuation for low-lying areas where flooding alleviation is needed. While new storm drains are generally discouraged in the Coastal Zone, the number of overall outfall locations will be reduced from 7 to 6 through the realignment of the drains and consolidation of several outfalls (**Exhibit # 2**).

Because the existing storm drains will need to be removed from the beach and the proposed storm drains will extend into the subtidal area, some in water work in the Bay is required. The existing pipes themselves will be removed and disposed of. Beach sand will be excavated from the intertidal and subtidal zones, and backfilled onto beaches in order to fix erosion scarps. Temporary cofferdam containment construction, watertight enclosures pumped dry to permit construction work below the waterline, and dewatering will take place in order to install the new storm drains. New storm drains will be constructed of reinforced concrete pipe or equivalent and will feature water-tight joints that will ameliorate pipe functioning under conditions of significant tidal influence, pressure, and low elevations along the alignment. Temporarily excavated trenches will be backfilled with pipe bedding gravel before the new pipeline is placed within the trench. Forming the backbone of the neighborhood's stormwater control, smaller pipes located upstream of the large subtidal drain pipes will also be replaced with either reinforced concrete pipe or polyvinyl chloride pipe.

While more substantial work will take place to the outfalls along Mariner's Basin, work on two outfalls in the existing riprap revetment along the Mission Bay Entrance Channel (Systems 7 and 8) is also proposed. Work here will be limited to the repair of a broken pipe and replacement of a valve on System 7 and removal and replacement of System 8. In this case, only minor rock disturbance is anticipated with no additional access or work within waters of the US. Work would be limited to temporary rock removal and replacement, with repairs only to the drains.

The project would also include the retrofit and enhancement of several existing green infrastructure features within South Mission Beach, as well as the addition of several green features. Four existing gravity low-flow diversion (LFD) systems and one existing well pump system will be retrofitted and enhanced to correct past leaks and corrosion and modernize equipment. Five additional LFD systems will be installed to improve water quality and address local sag points that do not have any existing infrastructure in

place to collect surface water (see **Exhibit # 4**). While it is expected that only approximately 0.5% of the total storm water will be handled by the LFD system, this water is likely to be the most polluted and will therefore be diverted from entering the bay and sent to the sanitary sewer system instead.

Eight biofiltration/bioretention basins will be added in existing public lands areas (**Exhibit # 4**). Five of them will be located in the northern part of South Mission Beach, in the parking lots south of Belmont Park on either side of Mission Boulevard. The other three basins are located on the southern end of South Mission Beach, including one on the east side of Mission Boulevard, within the parking lot to the South at Mission Point Park, and two located approximately 400 feet on either side of the terminus of Mission Boulevard along North Jetty Road. Finally, catch basins are proposed at the locations of existing weep sumps between Mission Boulevard and the connecting alleys and cross streets. These catch basins will catch surface water and prevent it from pooling as well as provide a gravity flow connection to the extended storm drain backbone system.

Another aspect of the project incorporated to increase surface water conveyance is the City's proposal to mill and repave approximately 0.6 mile of Mission Boulevard in South Mission Beach (**Exhibit # 3**). The work will be performed with the goal of reducing flood depths in the Mission Boulevard right-of-way to six inches (i.e. standard curb height) or less. During project design, City staff identified that in addition to undersized pipes and a lack of upstream infrastructure, successive rounds of repaving Mission Boulevard resulted in an increase in the thickness of the road and a shortening of the adjacent curb depth. Current curb depths are approximately 2-3 inches high, which results in ponding along the right-of-way during and after storm events. With the milling of Mission Boulevard, the surface elevation of the right-of-way will be lowered approximately three inches along 0.6 miles of the study area (from San Fernando Place to San Diego Place) in order to restore connectivity to storm drains. After the milling is completed, a curb height of approximately 5-6 inches will be restored. Finally, concrete replacement work will also be performed in some alleys between Mission Blvd and Strandway, and Mission Blvd and Bayside Lane, as well as some segments of Strandway itself.

The beach areas included in the project work total 4.6 acres along approximately 1,220 linear feet of the western beach of Mariner's Basin. The 4.6 acres of project area also includes 0.31 acre of eelgrass beds to be impacted due to the project. The site spans the permitting jurisdictions of both the Coastal Commission and the City of San Diego, and the CDP will be issued as a consolidated permit. Accordingly, the Chapter 3 policies of the Coastal Act are the standard of review with the City's certified LCP used as guidance.

B. Public Access and Recreation

Section 30210 of the Coastal Act states:

> In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with

> public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30211 of the Coastal Act states:

> Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30254 of the Coastal Act states

> New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.

The following certified LCP policies are relevant:

Page 13 of the Mission Beach Precise Plan states as an Overall Goal:

> *The reduction of the overall vehicular congestion existing in Mission Beach.*

Page 17 of the Mission Beach Precise Plan states:

> *The Courts and Places in Mission Beach provide the only pedestrian open space system other than the beaches.*

Page 19 of the Mission Beach Precise Plan states:

> *Because of the important role that the Courts and Places serve in providing open space and east-west pedestrian linkages, they should not be closed.*

Page 69 of the Mission Beach Precise Plan states:

- That parking reservoirs adjacent to Mission Beach be provided in order to accommodate the vehicles of beach users

The proposed project involves work on the beach, within waters used for recreational purposes, and along several prominent coastal access paths, including Mission Boulevard, Bayside Walk, North Jetty Way, and other arterial streets. Mission Beach is

a dense community; traffic and circulation are often constrained, and public parking is at a premium year round. As proposed by the City, in order to minimize impacts to public access to the greatest extent feasible, no work will take place during the summer months (Memorial Day through Labor Day). Therefore, the project will not impact public access to the beach or bay during those times.

The City has indicated there will be no closures of public access to the beach from road ends, and where work is performed on street ends, pedestrian traffic may be temporarily limited to one side of the sidewalk to access Bayside Walk during construction. Bayside Walk will not be closed, although a temporary bypass may need to be constructed around certain work areas through Bayside Walk. These bypass areas will consist of hardened mats or plywood walkways for the use of pedestrians. Any equipment crossing along the walkway will be limited and a spotter will be used for pedestrian crossings. **Special Condition # 5** requires continuous public access around construction sites along Mariner's Basin, the Mission Bay entrance channel, and their adjacent beaches in addition to all of the aforementioned public access mitigation measures.

For the portion of the project that proposes the mill and overlay of approximately 0.6 miles of Mission Boulevard, the City has indicated that while there may be temporary delays associated with work along the right-of-way and the side streets, there will be no closures of Mission Boulevard. A contractor will prepare a traffic control plan. **Special Condition # 5** requires submittal of a traffic control plan and appropriate signage to reroute pedestrian and bicycle traffic in the event that either path must be temporarily closed along Bayside Walk for construction purposes.

Staging and storage for the project is proposed to be located at two existing public parking lots, the northern lot at Bonita Cove, and the southern lot at Mission Point (**Exhibit # 7**). As proposed by the City, the Bonita Cove location would be approximately 20,300 sq. ft. and take up approximately 65 parking stalls for the duration of project work, while the southern location would be approximately 6,600 sq. ft. and take up approximately 31 parking stalls. The City has indicated that these areas would be used both for the staging and storage of equipment as well as for worker parking.

However, even outside the summer season (between Memorial Day and Labor Day weekends), parking is in high demand in Mission Beach, and taking up parking spaces to accommodate the demands of the project will have an adverse impact on public access and recreation. Given the nature and location of the work, it is unavoidable that some equipment and materials will have to be staged near the work site, and there is no publicly owned vacant land that could serve as a staging area other than the public parking lots. However, the impact can be minimized by limiting the staging area to only the area necessary for equipment and materials and having workers park off site to be transported to and from the site by shuttles or other ride-sharing options determined by the City and/or contractor. Therefore, **Special Condition #4** requires that staging areas be the minimum size necessary to accommodate construction equipment and materials and prohibits worker parking in the staging and storage area. In no case shall more than a total of 96 parking spots be occupied at any time. Without allowing working parking however, it is likely that fewer than 96 spaces will be necessary. **Special Condition #2**

requires the applicant to agree to the summer moratorium on construction, whereby no work will be permitted from Memorial Day through Labor Day. When the summer moratorium is in effect, the contractor will be required to remove all materials and equipment during that time.

Project work will include the use of public beach space in order to construct cofferdams and perform the necessary construction activities to remove the existing damaged pipes and replace them with new storm drains that will be extended further into the subtidal area and appropriately buried. As far as impacts to public access are concerned, the City anticipates that only one cofferdam site will be active at a time, with the possibility that a second work area could be under preparation at the same time. In order to ensure that impacts to coastal resources and public access along the beach are minimized, **Special Condition #3** requires the applicant to submit a final cofferdam construction plan, subject to Executive Director approval, that details cofferdam construction and minimizes impacts to eelgrass to the greatest extent feasible. In addition, no extraneous equipment or material may be stored within the cofferdams, and the grade inside the dams must be brought to equilibrium with the grade outside the dams before removal of the dams.

Because the project is located over a wide area in the most densely populated neighborhood of San Diego, and takes up beach space as well as roadways, **Special Condition # 5** requires the applicant to submit a Final Public Access Plan. As conditioned, this plan should include elements relating to restrictions on staging equipment being kept to designated areas overnight, a depiction of continuous public access, how access corridors will be maintained with the goal of having the least impact on and along the shoreline, signage to direct pedestrians, and evidence that the public access plan has been incorporated into construction bid documents. Thus, as conditioned, the project will minimize impacts to public parking and recreation to the greatest extent feasible.

C. Biological Resources

Section 30230 of the Coastal Act states:

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

Section 30233 of the Coastal Act states:

> (a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging

alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.
(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.
(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.
(4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.
(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.
(6) Restoration purposes.
(7) Nature study, aquaculture, or similar resource dependent activities.

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

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.

For the purposes of this section, "commercial fishing facilities in Bodega Bay" means that not less than 80 percent of all boating facilities proposed to be developed or improved, where the improvement would create additional berths in Bodega Bay, shall be designed and used for commercial fishing activities.

(d) Erosion control and flood control facilities constructed on watercourses can impede the movement of sediment and nutrients that would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental

effects. Aspects that shall be considered before issuing a coastal development permit for these purposes are the method of placement, time of year of placement, and sensitivity of the placement area.

Section 30240 of the Coastal Act states:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.
(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Relevant City of San Diego certified LCP policies include:

Section 143.0130 of the San Diego Land Development Code, which serves as the certified IP, states:

Uses Allowed Within Environmentally Sensitive Lands

Allowed uses within environmentally sensitive lands are those allowed in the applicable zone, except where limited by this section.

[…]

(d) Wetlands in the Coastal Overlay Zone. Uses permitted in wetlands shall be limited to the following:

(1) Aquaculture, wetlands-related scientific research and wetlands-related educational uses;

(2) Wetland restoration projects where the primary purpose is restoration of the habitat;

(3) Incidental public service projects, where it has been demonstrated that there is no feasible less environmentally damaging location or alternative, and where mitigation measures have been provided to minimize adverse environmental effects.

(e) Wetland buffer areas in the Coastal Overlay Zone. Permitted uses in wetland buffer areas shall be limited to the following:

(1) Public Access paths;

(2) Fences;

(3) Restoration and enhancement activities; and

(4) Other improvements necessary to protect wetlands.

Section 143.0141 of the Land Development Code states:

Development Regulations for Sensitive Biological Resources

Development that proposed encroachment into sensitive biological resources requires a development permit in accordance with Section 143.0110, unless exempted pursuant to Section 143.0110(c) and is subject to the following regulations and the Biology Guidelines in the Land Development Manual.

a. General Regulations for Sensitive Biological Resources

(1) All development occurring in sensitive biological resources is subject to a site-specific impact analysis conducted by a qualified Biologist, in accordance with the Biology Guidelines in the Land Development Manual. The impact analysis shall evaluate impacts to sensitive biological resources and CEQA sensitive species. The analysis shall determine the corresponding mitigation, where appropriate, and the requirements for protection and management. Mitigation may include any of the following, as appropriate to the nature and extent of the impact:

(A) Dedication in fee title to the City of San Diego; or

(B) Dedication of a covenant of easement in favor of the City of San Diego, the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service for either:

i. An off-site location with long-term viability and biological values equal to or greater than the impacted site, and with limited right of entry for habitat management, as necessary; or

ii. On-site creation of new habitat, preservation of existing habitat outside the Coastal Overlay Zone, or enhancement of existing degraded habitat, with limited right of entry for habitat management, as necessary. The location of the easement must have long-term viability and biological values equal to or greater than the impacted site.

iii. In off-site locations or on-site, Zone Two brush management shall be placed within a covenant of easement, but may not qualify for mitigation purposes.

[…]

(2) Sensitive biological resources that are outside of the allowable development area on a premises, or are acquired as off-site mitigation as a condition of permit issuance, are to be left in a natural state and used only for those passive activities allowed as a condition of permit approval. If the land is not dedicated in fee to the City, identification of permissible passive activities and any other conditions of the permit shall be incorporated into a covenant of easement that shall be recorded against title to the property, in accordance with procedures set forth in Section 143.0152. The U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife are to be named as third-party beneficiaries to any covenant of easement recorded pursuant to this section.

[…]

(b) Wetland Regulations

(1) State and federal law regulate adverse impacts to wetlands and listed species habitat. The applicant shall confer, when applicable, with the U.S. Army Corps of Engineers, U.S. Fish & Wildlife Service and/or California Department of Fish and Wildlife before any public hearing for the development proposal.

(2) The applicant shall solicit input from U.S. Army Corps of Engineers, U.S. Fish & Wildlife Service and/or California Department of Fish and Wildlife on impact avoidance, minimization, mitigation and buffer requirements, including the need for upland transitional habitat.

(3) The applicant shall, to the maximum extent feasible, incorporate U.S. Army Corps of Engineers, U.S. Fish & Wildlife Service and/or California Department of Fish and Wildlife recommendations into the development proposal prior to the first public hearing.

(4) Construction permits shall not be issued for any project that impacts wetlands or listed species habitat until all necessary federal and state permits have been obtained.

(5) Impacts to wetlands shall be avoided, except where permitted in accordance with Section 143.0141(b)(6). A wetland buffer shall be maintained around all wetlands as appropriate to protect the functions and

values of the wetlands. In the Coastal Overlay Zone, the applicant shall provide a minimum 100-foot buffer, unless a lesser or greater buffer is warranted as determined through the process described in this section.

(6) Outside the Coastal Overlay Zone, encroachment into a vernal pool is allowed outside of the MHPA where the development is consistent with the Biology Guidelines of the Land Development Manual and VPHCP. Such development does not require a deviation to the wetland regulations

While the project is an infrastructure project designed to reducing flooding and impacts to water quality, it also has the potential to impact a variety of biological resources. The construction of temporary cofferdams will impact eelgrass species located within Mariner's Basin. Construction activities can disrupt sensitive bird and aquatic creatures. In addition, the proposed work in the waters of Mission Bay must be also examined for consistency with Section 30233. Under this section, dredging and filling of open coastal waters is limited to those cases where the proposed project is an allowable use, is the least damaging feasible alternative, and where mitigation measures are provided to minimize environmental impacts. In this case, the proposed drainage improvements are an allowable use under Section 30233(a)(5), as an incidental public service purpose.

To determine potential biological impacts, a biological study was conducted by Merkel and Associates, Inc., and last updated in December 2019. A study area of approximately 200 acres was evaluated, with focal investigations directed to areas within 100 feet of the current and proposed drain discharge points (**Exhibit # 8**). The vast majority of land use (96.28 acres) within the study area was identified as urban/developed; however, several importation habitat types were also identified, including subtidal soft bottom (52.13 acres), supratidal and intertidal beaches (38.12 acres), eelgrass beds (5.58 acres), a protected least tern nesting site at Mariner's Point (2.39 acres), and kelp beds (1.05 acres). This site is located in the City of San Diego's Multiple Species Conservation Plan (MSCP) Multi-Habitat Planning Area (MHPA), and Mariner's Basin specifically is also considered part of Mission Bay Park and thus subject to the Mission Bay Park Master Plan Update.

Within the study area, there is also estimated to be 4.59 acres of rock revetment. Along the section of revetment of the Entrance Channel to Mariner's Basin, there is a short section of revetment that has a flatter relief and scattered rock where a small, ephemeral giant kelp bed has attached to rocks at the base of the revetment and some rocks have been dislodged and scattered into the channel at the toe of the revetment. The kelp bed does not extend up the steeper portion of the revetment into the subtidal or intertidal margin. This kelp bed was noted in July 2018 but was not present in January 2019.

As part of the proposed project, approximately 20,630 cubic yards of sand will be removed from the intertidal and subtidal areas. Approximately 7,700 cubic yards of this will be excavated and backfilled onto the intertidal and supratidal beaches within the project area to fix erosion scarps. Trenches in the intertidal zone will be temporarily excavated in order to replace or install storm drain pipes. The remaining 12,930 cubic yards of excavated sand will be used to support an eelgrass mitigation site proposed to

offset impact from the project. The amount of material to be removed from the federal basin specifically is estimated to be between two and 200 cubic yards, requiring the City to also pursue Sections 408 and 401 permits from the Army Corps of Engineers. Additionally, approximately 390 cubic yards of rock bedding will be placed at subtidal elevations within temporary trenches to assist with burial and stabilization of the new storm drains.

Impacts are expected to occur to intertidal and subtidal habitats due to construction. Cut and cover trenching will also be employed within both upland areas and intertidal beach areas in order to remove existing storm drains and place the newly proposed drains. Marine construction activities will include temporary sheet pile containment (e.g. cofferdams), dewatering, and construction with standard dry environment methods within dewatered containment. This same basic methodology has been employed for similar activities within Mission Bay, including subtidal storm drain outlets within Sail Bay and the Santa Clara Cove storm drain outlet. Impacts are anticipated to be mostly temporary in nature, but the placing and extending of storm drains is expected to result in permanent impacts to the subsurface environment, specifically to eelgrass (discussed below). The proposed project will also have some positive impacts on the intertidal environmental, as the existing storm drains currently lying in the intertidal zone will be removed, eliminating the ongoing impacts relating to sand erosion. Removal of the existing storm drains that are currently located on the sandy beach will also improve public access and recreational opportunities.

Systems 7 and 8 are located in a riprap revetment along the Entrance Channel and Main Channel that wraps into Mariner's Basin at Mission Point. Work at Systems 7 and 8 will be limited to repair of a broken pipe and replacement of a valve on System 7 and replacement of System 8. While this work is anticipated to only result in minor rock disturbance, the activities will have a localized and temporary impact on intertidal algae and invertebrate communities. Mitigation for impacts to benthic habitat and invertebrates are discussed in the eelgrass section below. There is also an ephemeral patch of giant kelp shoreward of the systems that specifically is identified in proximity to System 7. In this case, a Tideflex check valve on the end of the outfall pipe has broken free and been displaced down the slope from the drain outfall. This segment of broken off pipe will be removed and the Tideflex check valve will be properly replaced on the drain outlet. The broken off Tideflex check valve is located above the seaweed zone of the intertidal area and will be retrieved. The canopy kelp is located in the subtidal zone and is therefore separated both vertically and horizontally from the work to be performed at System 7 and 8. The work will be completed at low tide with access from the adjacent uplands and so there is additionally no potential risk to the kelp due to vessel traffic.

Sensitive Species and Noise

According to the applicant's biology report, several special status species are located in the study area, such as California brown pelican, double-crested cormorants, California least terns, harbor seals, California sea lions, bottlenose dolphins, and green sea turtles. Sensitive species are defined in the biology report as those with a status of protected, rare, sensitive, threatened, or endangered by the United States Fish and

Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), or California Department of Fish and Wildlife (CDFW).

The study area is also located across Mariner's Basin from the Mariner's Point Least Tern Nesting Site, which is the City's Multiple Species Conservation Plan (MSCP) Multi-Habitat Planning Area (MHPA). In addition to the study area's proximity to this important habitat area, California least terns make use of the subject site as foraging grounds during summers. As a federally listed endangered species, the least tern, and any habitat area it utilizes, warrants critical protection measures. The City has proposed a moratorium on in-water work and in-water cofferdam construction during the least tern nesting season (April 1 – September 15). In order to memorialize this commitment, **Special Condition # 2** will require the applicant to acknowledge and adhere to the least tern nesting moratorium.

Other protected bird species present within the study area include the California brown pelican and double crested cormorant. No nesting locations or roosts for these species were identified within the biological study area; however, both species are commonly found foraging and resting in the study area. Impacts to other birds are considered minimal. Migratory birds do make use of Mission Bay but the majority of their activities take place in areas around the Northern Wildlife Preserve at the north end of the bay as well as the Southern Wildlife Preserve in the San Diego River Flood control channel. In order to appropriately protect not only sensitive bird species but other avian populations, **Special Condition # 10** requires the City to perform surveys prior to the onset of activities to ensure no construction activities are taking place within 500 feet of an active raptor or least tern nest or 300 feet of an active nest for any passerine species. If an active nest of either sort is identified, a biologist will be required to monitor the nest daily, and all construction activities generating a noise greater than 60 decibels will be avoided to the maximum extent feasible.

Other special status species that occur on the study area include marine mammals, the disturbance of which is prohibited under the Marine Mammal Protection Act. Specific species in the area include the California sea lion, harbor seal, and the bottlenose dolphin. Another sensitive species identified in the biological report is the green sea turtle, which is federally listed as endangered. While Mission Bay does not currently support an established resident population, they have been intermittently reported in the Bay since the late 1800s. While considered a rare visitor, they have been observed more regularly in southern California bays and estuaries in the past several years than in the past several decades. Where recent reports have been made, the turtles were observed in the main Mission Bay channel near the inlet to Mariner's Point.

While the sensitive species described above are mobile and typically have broader areas in which they can forage and rest, impacts to their behavior and physical health must be considered in relation to noise resulting from project construction. Steel sheet piles will be driven for cofferdam containment and the removal and replacement of

storm drains. Though noise levels are unique to each type of pile installation and subsurface composition, approximate noise levels were obtained from a Caltrans hydroacoustic compendium[1] for a similar cofferdam construction at Ten Mile River Bridge in Fort Bragg. The noise levels from these activities ranged from 170 decibels (dB) to 174 dB and 140 dB_{rms}[2] to 142 dB_{rms}. For the project at hand, the loudest equipment, the excavator, will likely have a sound level of 80-85 dB (measured at a 50 foot distance). Relative to the nearest least tern site, approximately 950 feet from the closest construction activity, the noise levels are anticipated to be closer to 59.4 dB(A) [3]and 73 dB(A) for the excavator and pile driving activities, respectively.

The most recent marine mammal noise exposure criteria from Southall et. al. (2019)[4] list the peak and cumulative thresholds for both temporary and permanent hearing damage for marine mammals. The lowest noise criteria thresholds for the various marine mammals observed near the site are found for harbor seals (*Phocid carnivores*). The noise levels affecting the most sensitive marine mammal, harbor seals, are listed at 212 dB (peak) and 170 dB (cumulative). These noise limits account for the most sensitive marine mammal of those expected, or with the potential, to inhabit the site. It is assumed that preventing noise impacts to marine mammals additionally protects fish in the area due to the muffling of sound underwater.

In-water construction will utilize a vibratory hammer, resulting in a non-impulsive sound generation that reduces the risk of peak sound pressure injuries. It's estimated that 40 interlocking 24-inch sheet piles will be driven in a single day with an estimated 10-minute per pile drive time, resulting in approximately seven hours of pile driving per day. Construction activities in general would be limited to 12 hours a day, as specified by **Special Condition # 9**. Sheet piles are not expected to hit a hard surfaces when driven due to construction taking place in unconsolidated sediments, resulting in less vibration to the piles and therefore less noise. In-water noise associated with pile driving will decrease the deeper the pile extends into the sediment as the energy transfers to the sediment through frictional heat generation. Additionally, both sensitive species and wildlife in general can be expected to undertake behavioral modifications (e.g. moving away from the noise) in response to construction work, which reduces the risk of injury associated with cumulative sound pressure.

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[1] Caltrans. 2015. Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish. http://www.dot.ca.gov/env/bio/docs/bio-tech-guidance-hydroacoustic- effects-110215.pdf

[2] dB_{rms} refers to the "root mean square" decibel level and is typically measured relative to 1µPa underwater at 10 meters from the sound source.

[3] dB(A) is a weighted value that corresponds to the auditory range of the human ear.

[4] Southall, Brandon L., et al. "Marine Mammal Noise Exposure Criteria: Updated Scientific Recommendations for Residual Hearing Effects." *Aquatic Mammals*, vol. 45, no. 2, 2019, p. 125+. *Gale Academic OneFile*, link.gale.com/apps/doc/A583252473/AONE?u=s8405248&sid=AONE&xid=295020e1. Accessed 26 Mar. 2021.

Construction of each cofferdam containment structure is expected to take between three and eight days depending upon the required length of each containment structure and the extent of the storm drain(s) that lay in tidally influenced zones, which constrain work schedules. Work will be limited to 12 hours per day, with the expectation that both outdoor and in-water sound levels will not be exceeded. In-water work and in-water cofferdam construction will not take place during the least terns' nesting season, thus avoiding noise impacts to this sensitive species from April 1st to September 15th. Additionally, the nearest marine bird roosting area or mammal habitual haul-out area is over 1,400 feet away from the nearest cofferdam construction location, on the breakwater structures associated with the entrance channel and wave deflector.

Due to the use of a vibratory hammer to perform work in soft substrate with shallow water levels, and limiting work to 12 hours a day, cumulative noise is not predicted to reach damaging threshold levels. However, to ensure that both temporary and permanent hearing damage to the most sensitive marine mammals are avoided, **Special Condition # 9** requires the applicant to: 1) employ sound reducing BMPs both above and below the water, 2) cease all pile driving activity if marine mammals or sea turtles are seen in the area until they disperse on their own, 3) limit the amount of pile driving each day to no more than 12 consecutive hours, and 4) limit noise generated from construction activities to a peak noise level of 212 dB and a cumulative noise level of 170 dB..

Eelgrass

The project is expected to impact approximately 0.31 acres of eelgrass beds, which is considered to be Essential Fish Habitat (EFH), a Habitat Area of Particular Concern (HAPC) under the Magnuson-Stevens Fisheries Conservation and Management Act, as well as Special Aquatic Site under the Clean Water Act. Known as an important nursery habitat for fish, impacts to eelgrass are considered significant. Accordingly, mitigation is required, and the City has proposed site creation in accordance with the California Eelgrass Mitigation Policy (CEMP) as described in the 2014 document California Eelgrass Mitigation Policy and Implementing Guidelines by NOAA Fisheries West Coast Region.

California Eelgrass Mitigation Policy generally requires that eelgrass plantings performed as part of a mitigation project should be done at a ratio not less than 1.38:1 planting to impact in southern California. To gauge restoration efforts, the success rate for the mitigation to impact ratio is generally set at 1.2:1. While mitigation needs have been estimated during the permitting phases, the ultimate impact determination and subsequent mitigation requirement will be determined at the time of project implementation through the use of pre-construction and post-construction eelgrass surveys. Reference sites will also be considered and assessed to determine patterns of natural variability and to measure restoration efforts.

Eelgrass within Mission Bay has been inventoried and tracked since 1988, with the most recent bay-wide survey completed in 2013. The results of a baseline eelgrass survey completed for the project in July and August of 2018 indicates a wide distribution

of eelgrass at the southern end of Mariner's Basin and a smaller amount recorded at the northern end of the basin. Eelgrass was reported to be healthy throughout all of the beds, with some evidence of wasting disease blemishes on leaves in Mission Cove beds.

Impacts to eelgrass will occur at multiple drain outlets to Mariner's Basin (**Exhibit # 6**) due to both sand dredging and cofferdam construction, for an approximate total of 0.31 acre. Cofferdam construction will impact approximately 0.22 acre of this total, assuming a 100-foot wide work area around each drain outlet. The impact and mitigation acreages are estimated at this time, with final acreages and impacts to be determined by a pre- and post-construction survey from which the mitigation will be calculated. Project impacts will be identified and mitigated with full compliance to the CEMP.

The mitigation site work itself will cause temporary direct impacts to approximately 3.5 acres of intertidal and subtidal beach in Bonita Cove through the reuse of excavated sand and grading activities to create a 1.69 acre mitigation site. Approximately 12,930 cubic yards of the beach sand excavated in the intertidal and subtidal zones would be reused to support eelgrass mitigation areas. Prior to planting, areas in the construction zone not reserved for storm drains will be restored to sandy intertidal and subtidal slopes at a 5:1 (H:V) ratio or less to support eelgrass mitigation. No project work will be conducted from Memorial Day to Labor Day, and no in-water work or in-water cofferdam construction will be conducted during the least tern nesting season (April 1 – September 15).

While mitigation needs have been estimated during the permitting phases, the ultimate impact determination and subsequent mitigation requirement will be determined at the time of project implementation through the use of pre-construction and post-construction eelgrass surveys. Previously identified reference sites will also be considered and assessed to determine patterns of natural variability and measure relative restoration efforts. The City was able to identify two reference sites (**Exhibit # 6**)**.** These particular two reference sites capture shoreline intertidal and shallow subtidal conditions of eelgrass in Mariner's Basin that reflect the similar conditions of the impact areas that are to be replanted. The two reference sites are to be distributed along the basin gradient with an inner reference (REF-1) and an outer reference bed (REF-2).

Eelgrass plants will be collected from two locations near Mariner's Point and Mission Point (**Exhibit # 6**) outside of the least tern nesting season (April through September). Plants will be harvested using the following methodology as described in the Eelgrass Mitigation Plan, dated November, 2019:

> Bare-root eelgrass plant material will be salvaged from the donor bed by "raking" rhizomes out of the surface sediment layers and loosely filling a mesh bag with salvaged material. In collecting eelgrass, care will be taken to work the rhizomes free as opposed to ripping the plants free of the sediment… Salvaging is a mobile exercise and divers will move systematically through an area and collect/groom no more than 10% of the turions and associated rhizome and root material from any given square meter of the donor bed.

The moving harvest method aids in the prevention of overharvesting from any one location in a donor site, and the raking method of harvest is expected to much less invasive than the historic intertidal sediment plug removal or implement digging methods. Once the eelgrass rhizomes have been harvested, they will be transplanted to multiple mitigation sites that are suitable for bare-root transplant. An explicitly designated portion of the mitigation site will be identified from the final mitigation site after the transplant area has met its full five-year requirement.

While the project will impact eelgrass, the extension and burial of outlets to lower discharge points will reduce infill to sub-tidal portions of Mariner's Basin and ultimately reduce impacts to eelgrass in the long run. Sand migration from the intertidal zone to the subtidal zone will be reduced or eliminated by removing the flow gradient that occurs as result of the storm drain outlets lying on the beach. This sand migration currently caused by storm drain flows inhibits eelgrass growth and steepens the shore slopes such that they cannot support eelgrass. As result of this project and the cessation of sand migration in the subtidal area, it is expected that long-term conditions for eelgrass habitat and growth will improve.

To ensure that eelgrass mitigation is pursued in compliance with the California Eelgrass Mitigation Policy, **Special Condition # 8** requires the applicant to acknowledge the mitigation efforts will follow the California Eelgrass Mitigation Policy and Implementing Guidelines. The Commission's ecologist has reviewed the project and determined that as conditioned, the proposed project will not result in significant adverse impacts to biological resources. Therefore, the proposed project can be found consistent with the resource protection policies of the Coastal Act.

D. Water Quality

Section 30231 of the Coastal Act states:

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

Section 142.0201 of the San Diego Municipal Code states:

> *The purpose of this division is to regulate the development of, and impacts to, drainage facilities, to limit water quality impacts from development, to minimize hazards due to flooding while minimizing the need for construction of flood control facilities, to minimize impacts to environmentally sensitive lands, to implement the provisions of federal and state regulations, and to protect the public health, safety, and welfare.*

Section 142.0202 of the San Diego Municipal Code states:

> *This division shall apply to all development in the City, whether or not a permit or other approval is required.*

Section 142.0210 of the San Diego Municipal Code states:

> *All storm water runoff control, drainage, and flood control facilities shall be constructed in accordance with standards established in the Land Development Manual, the Standard Specifications for Public Works, and any City-adopted supplements.*

Section 142.0220 of the San Diego Municipal Code states:

> *(a) All development shall comply with Municipal Code Chapter 4, Article 3, Division 3 (Stormwater Management and Discharge Control).*
>
> *(b) All development shall be conducted to prevent erosion and stop sediment and pollutants from leaving the property to the maximum extent practicable. The property owner is responsible to implement and maintain temporary and permanent erosion, sedimentation, and water pollution control measures to the satisfaction of the City Manager, whether or not such measures are a part of approved plans. The property owner shall install, monitor, maintain, and revise these measures, as appropriate, to ensure their effectiveness. Controls shall include the following measures that address the development's potential erosion, sedimentation, and water pollution impacts.*
>
> *(1) Erosion prevention.*
>
> *(2) Sediment control.*
>
> *(3) Phased grading.*

As a narrow peninsula bordered by the Pacific Ocean and Mission Bay, all properties in Mission Beach are a short distance from open water and popular beach recreation areas. Storm runoff not retained within properties flows into the paved City streets and subsequently into the City's storm water system.

The subject project, as proposed, would significantly improve water quality within South Mission Beach. While the project's primary purpose is to replace and extend storm drain systems to improve local drainage conditions, it would also include the repair and installation of infrastructure that either treats stormwater or sends the poorest quality to the sewer system for eventual treatment. Under the locally approved Site Development Permit, the addition of green infrastructure features is considered voluntary because the project is not categorized as Priority Development Project (PDP) or Standard

Development Project according to chapter 1.4 of the City's Stormwater Standards (SWS). There are no proposed impervious surfaces consistent with those outlined in SWS PDP categories as the project primarily proposes only the removal and replacement of impervious area associated with the trenching and resurfacing necessary to install the storm drain and low-flow diversion systems.

The March 2019 South Mission Beach Watershed Management Plan provides background as to the existing water quality conditions within the project area. Located within the Mission Beach Watershed Management Area, a Water Quality Improvement Plan (WQIP) was developed to evaluate pollutants of concern for both wet and dry weather conditions. As a watershed-wide analysis, the WQIP identified the highest priority water quality conditions are applicable to Tecolote Creek (indicator bacteria), La Jolla Area of Special Biological Significance (sediment), and various locations along the Pacific Ocean Shoreline segment (indicator bacteria), but not within the Mission Bay subwatersheds. In these subwatersheds, water quality conditions did not meet the criteria for the priority and highest priority water quality conditions selection methodology that was utilized. However, a portion of the study area for the project is identified on the Clean Water Act Section 303(d) list as impaired for bacteria (Pacific Ocean Shoreline along Bonita Cove, the upper portion of Mariners Basin). The 303(d) listing of Bonita Cove has been based on evidence related to regular and recurrent exceedance of objectives for indicator bacteria of fecal coliform, total coliform, and enterococcus. The source of pollutants is reported as unknown, with the assessed shoreline area located to the northeast of the project area. Despite the listing, the area is not currently regulated by any TMDLs (Total Maximum Daily Loads). Based on the study area's proximity and discharge to Mission Bay, the 303(d) listing of Bonita Cove, and the water quality objectives (WQOs) of the WQIP, pollutants of concern for the project's water quality assessment are identified as fecal coliform, total copper, total lead, and total zinc. The latter three have been identified as pollutants of concern based on their identification in trace amounts by other monitoring efforts, their sources from urban settings such as the Mission Beach neighborhoods, and the potential toxicity these metals have when present in the water column or sediment. No data is available to indicate that the project area supplies a significant source of fecal coliform.

To determine the extent of water quality improvements as a result of the project in regards to the four pollutants of concern, the City used a wet weather exceedance level target. This strategy was borrowed from the TMDL that currently applies to the San Diego Region (Resolution No. R-2010-0001). As the name implies, the 20 Beaches and Creeks TMDL includes several Pacific Ocean beaches and several creeks. The TMDL lists a bacteria wet weather target of exceedance days fewer than or equal to 22 percent. That is for each wet weather day, 22 percent or fewer of the samples collected in the receiving water may exceed the water quality objectives listed in the TMDL. Considering that the highest priority pollutant of concern is fecal coliform and that Bonita Cove has a Category 5 listing on the 303(d), the City concluded it was reasonable that the wet weather maximum value of 22 percent for exceedance days be applied to the South Mission Beach WMP for the purposes of estimating a target load reduction and defining a water quality improvement design. It is also assumed that reductions in

bacteria loading will result in load reductions for other pollutants, including the identified metal contaminants of concern.

Bacteria and metal load reductions were modelled as part of the water quality assessment for both existing and proposed conditions. Infrastructure evaluated included biofiltration basins, the LFD system, and weep sumps, which likely provide some level of dry weather infiltration, and minimal wet weather infiltration. For the LFD system in particular, the scenario most representative of the current operational condition of the infrastructure was selected for the existing model. According to the Final Design report (60% Design Submittal), an existing condition model that used pollutant loads measured at the storm drain outfalls in Bonita Cove indicate that for the average rain year, storm water runoff will result in 13 wet weather exceedance days. This equates to a 31 percent wet weather exceedance frequency (42 wet weather days total), exceeding a hypothetical TMDL similar to that for 20 Beaches and Creeks. Results indicate that over the course of the 2003 Water Year (used as reference), there would be only a 0.8% reduction in the fecal coliform load based on the amount of runoff removed by weep sumps under existing conditions. However, under the proposed conditions, the LFD system would divert dry weather flows and the first 20 minutes of a rain event to the sewer system for treatment. In this case, wet weather exceedance would drop to 9 days, constituting 22 percent of total wet weather days and thus just meeting the borrowed TMDL standard. Performance would be quantified based on percentages of water reduced by both the LFD system (0.7%) and the biofiltration basins (16.7% captured, 9.4% treated). While the LFD system will only capture and divert approximately less than one percent of the total runoff volume from South Mission Beach, this runoff is considered the most polluted water. Therefore, the first flush capture is suitable for treating the dirtiest water rather than allowing it to drain directly into Mariner’s Basin.

During staff’s review of the water quality benefits of the project, special attention was paid to understanding how the updated design of the LFD system would minimize or prohibit the possibility of sewer overflow backing up into the storm drain system and causing a sewage spill on the beach. Two alternative designs for the LFD system are included, with both providing new or additional safeguards to ensure that the risk of spills is minimal. Three of the proposed LFD systems will utilize a submersible pump in order to pump flows up to a grade where they can intercept existing sewer mains. For these proposed systems, the storm drain piping is located too deep to allow for gravity flows. The submersible pump would turn on at a fixed water depth in the inlet and the turn off at a calculated depth, equivalent to the first 20 minutes of a storm event. This submerged pump would divert water to a diversion structure that would be a shallow hole with a sewer lateral. The invert elevation of the diversion structure would be higher than the rim elevation of the connected downstream sewer manhole, creating an air gap. Wastewater could only overcome this air gap if the sewer hole was pressurized, but there would be a backflow valve within the sewer lateral that would prevent wastewater from entering the diversion structure. The other design is intended for the existing LFD systems, and utilizes gravity flow to direct runoff into the sewer main without the need for a submersible pump. This design is intended to replace the existing system by providing upgrades that will reduce the risk of equipment failure and potential

sewage backups. This is accomplished through installation of all equipment (including an automated plug valve with manual override, PVC cleanout for maintenance, and an in-line check valve to prevent sewer flow backup) within a concrete vault with a closed bottom. Electrical equipment will be placed above ground and outside of the vault. The above ground equipment will take up approximately 80 square feet diffused throughout the project area. Additionally, a sump pump will be installed in each of the vaults to pump any nuisance stormwater runoff into the nearby sewer.

Aside from the LFD system, the proposed biofiltration/bioretention basins would also cause a significant improvement in water quality conditions. Five of the proposed biofiltration basins will require a perforated underdrain and connections to outlet pipes due to the presence of shallow groundwater and limited infiltration feasibility. This feature expands capacity to hold water as well as treatment capacity volume and allows basins to have increased functional duration to accommodate rising sea levels and during higher tides. The three remaining basins are not proposed to have an underdrain connection due to the relatively high permeability of soils in these areas. Additionally, Basins 6 and 7, located along Mission Boulevard to the North of San Fernando Place, will not include an underdrain because its incorporation would then require a connection to an additional storm drain system or outlet, which brings limited benefits and greater impacts in an area where basins will receive the most diluted storm water due to the proximity of the Mission Bay Entrance Channel. As noted in the Final Design Report for South Mission Beach Storm Drain Improvements and Green Infrastructure (60% Design Submittal), modelling results indicate that the eight proposed basins will treat up to approximately 7.6% of the total runoff generated in the study area, and capture approximately 13.5% of runoff to be stored and partially infiltrate below the underdrain. The same model indicated that 0.6% of runoff will be diverted by the LFD system under the proposed design.

During project construction, required BMPs will be implemented according to City standards. All applicable pre-construction and construction BMPs will be included, such as fiber rolls, cofferdams, turbidity curtains, silt fencing, gravel bags, and street storm drain inlet protection consistent with the project SWPPP. To ensure all water quality protections are in place during construction, **Special Condition # 7** will require a Construction Pollution Prevention Plan to be submitted for Executive Director review and approval prior to issuance of the Coastal Development Permit. Additionally, **Special Condition # 6** requires adherence to standard construction best management practices.

Given the improvements described above, the Commission’s water quality technical staff concluded that the water quality benefits associated with the project are beneficial and significant. Unlike the existing conditions, where 93.3% of stormwater is evacuated via storm drains, 5.8% is discharged to storm water basins through the use of portable pumps, and less than 1% is able to infiltrate into the ground, the proposed project would improve stormwater treatment by increasing biofiltration (10.3%), infiltration through subgrade (7.1%), and diversion to sanitary sewer (0.5%) so that 82% of water would be discharged directly to the bay via storm drains. Project improvements result in an approximately 17% increase in infiltration and diversion of stormwater, constituting a

significant improvement in water quality. Routine cleaning and maintenance on all storm drain inlets will take place. The project also would not increase the volume of storm water managed in South Mission Beach nor increase the amount of impervious area. Thus, the project can be found consistent with the water quality policies of the Coastal Act.

E. Coastal Hazards

Section 30235 of the Coastal Act states:

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

Section 30253 of the Coastal Act states:

> New development shall do all of the following:
>
> (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
> (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

Page 84 of the Mission Beach Precise Plan States:

> A. New Development
>
> In those areas of the County experiencing erosion problems, new structures should not be allowed—until the problem is resolved—unless it can be shown that site- specific factors result in an acceptable level of risk to the structure.
>
> C. Seawalls
>
> Throughout the county, existing facilities developed too near the shoreline will continue to require the construction of seawalls. When the necessity for protective structures is recognized along a reach of beach, property owners should be encouraged to join a unified construction project to obviate the undesirable affects of discontinuous structures, incompatible structures, and improperly designed terminations. Offering the opportunity to operate within the framework of a shore protection district could serve to encourage the design and construction of these coordinated projects. Seawalls deny sand to the beach by

> resisting shoreline erosion. In addition, the wave impact increases turbulence and reflected energy further increases erosive action. To mitigate these effects, each property owner constructing a wall could be required to add sand to the beach systems from an external source in an amount of sand equivalent to that which would have been contributed had the property not been protected by the seawall. The placement of random rubble should be discouraged. The rubble mound takes up a large beach area and during storm conditions stones are usually dislodged and pulled out onto the sand beach. When a seawall is constructed, cognizant public agencies should protect public interests in the beach by requiring an easement to the public for use of the area seaward of the wall.

Sea level rise is expected to exacerbate existing coastal hazards by raising mean water levels and extending flood zones inland. As noted in the Commission's 2018 Sea Level Rise Guidance and other studies, increased sea level is expected to cause increased inundation of beaches, reduced accretion, and increased erosion of beaches. The entire Mission Beach community is a low-lying area on a narrow peninsula situated between the Pacific Ocean to the West and Mission Bay to the East, which currently experiences periodic flooding that will likely increase with sea level rise.

The subject project will be located on and within the public streets, beaches, and bay waters. As such, the proposed development may be threatened by sea level rise (SLR) at some point in the near to distant future. Historically, the most common response to coastal hazards has been to construct shoreline protective devices in order to protect structures at risk.

The Coastal Act discourages shoreline protection devices because they generally cause adverse impacts to coastal resources and can constrain the ability of the shoreline to respond to dynamic coastal processes. Shoreline protection devices are physical structures that take up space and displace or modify prior uses of coastal land (e.g., beach recreation, habitat, etc.), including the occupation of public beach. Seawalls and, in particular, revetments, may have large horizontal footprints, displacing what would otherwise be sandy beach, and resulting in a long-term loss of beach area for public access, recreation and other uses. In addition to frequently encroaching onto the public beach, shoreline protection devices, by slowing or stopping natural processes of shoreline retreat, also prevent the future creation of new beach and eliminate a supply of new sand that would otherwise have resulted from bluff and shoreline erosion. By design, shoreline protection devices establish a fixed landward boundary of the back beach ("fixing the back beach"), and prevent the natural, on-going inland adjustment of the beach that occurs on an eroding coast; over time, this restriction of a beach's adaptive capacity can result in the narrowing or loss of the beach ("passive erosion"). Future sea level rise is expected to result in the drowning or "pinching out" of many California beaches (Vitousek et al. 2017), an effect that will only be exacerbated in locations with extensive shoreline protection.

By substituting hard materials (e.g., rock, concrete) in place of more erodible natural substrates (e.g., sand, soils, terrace deposits, sedimentary rocks), shoreline protection devices can also change wave reflection patterns, cause scour or winnowing of beach

sediments along the shoreline, and increase erosion rates at unarmored locations up- and down-coast of the structure ("end effects"). In certain locations, shoreline protection devices may also interrupt or interfere with longshore and cross-shore sediment transport, resulting in deposition of sand in one location at the expense of other locations further "down drift" along the coast. Broader effects of shoreline protection devices include changes to the recreational and beach use experience, impacts to beach and other coastal ecosystems, and impairment of the aesthetic and visual character of the coast.

Because shoreline protection devices, such as seawalls, revetments, and groins, can create adverse impacts on coastal processes, Coastal Act Section 30253 specifically prohibits development that could "create [or] contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs." However, Section 30235 of the Coastal Act recognizes that existing development may be protected by shoreline protective devices subject to certain conditions. This limitation is particularly important when considering new development, such as this project, because if it is known that a new development may need shoreline protection in the future, it would be unlikely that such development could be found to be consistent with Section 30253 of the Coastal Act, which requires new development to minimize risks to life and property. Therefore, the Commission's action on this project must consider the effects of wave uprush, flooding, and storm events (with sea-level rise considerations) on public access and recreation.

The City utilized modeled data in order to understand the impacts to the project under both a low (1.6 feet) and medium-high (4.9 feet) SLR projection. These projections were taken from the *Sea Level Rise Adaptation Strategy for San Diego Bay* (2012), which were in turn mapped against corresponding layers from CoSMoS. **Exhibit # 9** depicts the anticipated flooding within South Mission Beach by the year 2080 under a high (9.3 feet) SLR projection and a 100-year storm event. A tailwater condition of 2.6' elevation was also incorporated to represent the mean higher-high water elevation at the downstream water surface elevation, which in turn was taken from the La Jolla tidal gage data available from NOAA. This tailwater condition assumes that while the likelihood of mean higher-high water elevation occurring at the same time as the 100-year storm is unlikely, it remains a valuable design scenario to consider. Two scenarios for the 100-year storm event with tailwater conditions and recommended values for SLR were projected for the years 2050 and 2100.

Under the low SLR scenario, the storm drain system would generally function as presently designed, although high tide periods coupled with certain storm peaks would impact drainage abilities. Under the medium-high scenario, the City's analysis confirmed that storm water drainage would be highly compromised under peak tidal periods and that ponding may resume. The Commission's engineering staff have reviewed the project and the City's analysis and agree that the development is likely to be at risk within the lifetime of the improvements.

The City acknowledges that the proposed storm drain upgrades may be at risk of sea level rise in the long-term. The City anticipates that the proposed storm drain system, will have a lifespan of 40 years. However, the proposed project design is not meant to address long-range SLR planning. Rather, the storm drain system has been designed to be flexible and able to accommodate future retrofits as needed/required. The SLR analysis conducted by the City also influenced project design in that SLR adaptation elements such as tide gate locations, biofiltration basin design, and sewer system flexibility and adaptability are reflective of concerns outlined in the analysis. For example, in order to address greater levels of SLR, the proposed storm drains and their automated tide gates may need to be retrofitted with mechanical pumping abilities in the future. Other future retrofitting options to ameliorate the effects of SLR include: 1) installation of impermeable liners and small pumps in biofiltration basins and 2) installation of flood control pump systems.

The proposed green infrastructure has been designed to accommodate low to moderate SLR. For example, the City expects that the new automated LFD system will be able to be programmed based on event and tidal conditions to accommodate a range of SLR scenarios into the future. Under low SLR predictions (approximately 1.6 feet), the LFD system is expected to function in a similar manner as it does presently. Under the high-moderate SLR prediction used by the City (4.9 feet), groundwater intrusion into the porous under-media piping of biofiltration basins may increase, which will lead to a greater frequency of dry weather diversion. While this increase in dry weather diversion is not expected to increase risk of damage to the sanitary sewer system in and of itself, it does point to the possibility that the automated controls of the LFD system that maintain real time links with rain and tidal gage data may need to be adjusted over time. The biofiltration basins have been designed so that operation under present and low levels of SLR will continue. Specifically, the underdrain feature expands capacity to hold water as well as treatment capacity volume, and allows basins to have increased functional duration to accommodate rising sea levels and during higher tides. However, it is estimated that at moderate to high SLR estimates (4.9 feet), floors of the biofiltration basins may become inundated and the basins will need to be retrofitted.

In addition, even if SLR effects were to worsen into the future, including estimates that range from 4.9 feet or higher, no substantive risk to the infrastructure or public is expected to result. Instead, a return to present conditions (including localized flooding) would occur. While a return to localized flooding may be the most common risk, there is risk of seawater backing up in Point Loma as a result of SLR, in combination with storm events, or where the effects of sea level rise become so overwhelming so as to effectively halt discharge from the storm drain pipes and infiltration from the basins. At that time, significant changes or upgrades to the system will be required.

Nevertheless, while the proposed development is expected to be at risk of hazard within its lifetime, as described above, the proposed project is an important infrastructure improvement that will significantly improve drainage, alleviate flooding, and improve water quality in and around the Mission Beach community. Thus, in order to allow these necessary improvements to move forward at this time, **Special Condition # 13** limits the authorization of the proposed work to 20 years from the date of approval, and

requires the City to make a future submittal of an updated plan as to how its strategy for retrofitting and adaptation are progressing in light of SLR. While the localized level of SLR is hard to predict, the City estimates that the system will become exceedingly vulnerable to SLR in approximately 40 years; thus, the need for a plan submittal in 20 years will be required as a condition of the permit. At that time, the City must undertake a Coastal Hazards Analysis and Adaptation Plan that provides a clear long-term plan to ensure that the approved development minimizes flood hazard risks to the facility through at least the year 2100. Thus, the development will provide benefits to the community but prior to being at risk, the City must evaluate a long-term plan for the infrastructure. **Special Condition # 14** requires the applicant to acknowledge the inherent existing hazards that are present and waive any liability or indemnity against the Commission.

In summary, the project site and the proposed infrastructure is subject to risk over the lifetime of the project. However, the project will provide significant benefits for the community over that time. In 20 years, the City must come back to the Commission for authorization to retain the development, at which time, a full, updated evaluation of current and future coastal hazards in the project area taking into account local sea level rise must be completed and considered before the development can be reauthorized. Therefore, as conditioned, the project can be found consistent with the hazards and shoreline protection policies of the Coastal Act.

F. Cultural/Archaeological Resources

Section 30244 of the Coastal Act states:

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

As described in the Mitigated Negative Declaration (MND), the project site can be found on the City of San Diego's Historical Resources Sensitivity map and is also located within an area of the Mission Beach Community Planning Area that requires special considerations with respect to the high potential archaeological sensitivity for project grading that could reveal unknown prehistoric resources. Although the proposed project is mainly within the existing disturbed right-of-way, the potential to impact undisturbed native surficial soils does exist.

Because the potential to impact archaeological and tribal resources remains, the City undertook steps of the tribal consultation process in accordance with Assembly Bill 52 (AB 52). As part of CEQA review, AB 52 requires evaluation of tribal cultural resources, notification of Tribes, and the opportunity for Tribes to request a consultation regarding impacts to tribal cultural resources when a project is determined to require a Negative Declaration, Mitigated Negative Declaration or Environmental Impact Report under CEQA. In compliance with AB-52, the City notified all Tribes that have previously requested such notification for projects within the City of San Diego. On January 13, 2020 the City of San Diego sent notification to the Iipay Nation of Santa Ysabel and the Jamul Indian Village for the purposes of AB 52. Both Tribes responded on January 14,

2020. Neither the Ipay Nation of Santa Ysabel or the Jamul Indian Village wished to engage in consultation. In adherence to the Commission's 2018 Tribal Consultation Policy, Commission staff also sent letters offering consultation to both of these Tribes on July 28, 2020. Neither Tribe responded to the Commission to request consultation in any form.

As a condition of the Site Development Permit, the City has included mitigation measures intended to protect any cultural resources potentially identified in connection with project work. Pre-construction measures include an entitlement plan check, site-specific records search, and preconstruction meetings with the Native American and archaeological monitors, and a grading contractor, construction manager, and engineer, among others. During construction itself, the qualified archaeological and Native American monitors will be present during ground-disturbing activities (including excavation, trenching, and grading) to reduce potentially significant impacts to archaeological resources that may be encountered. Specific procedures governing the determination of significance, reporting and notification requirements, and when suitable mitigation strategies are available, are also included as part of project requirements.

To ensure that impacts to cultural resources are avoided and minimized, **Special Condition # 12** requires the applicant to adhere to all of the recommendations and requirements outlined in the Mitigated Negative Declaration and ensures a qualified Native American monitor shall monitor all ground-disturbing activity. Therefore, as conditioned, the project is consistent with the cultural protection policies of the Coastal Act.

G. Local Coastal Planning

Section 30604(a) requires that a coastal development permit shall be issued only if the Commission finds that the permitted development will not prejudice the ability of the local government to prepare a Local Coastal Program (LCP) in conformity with the provisions of Chapter 3 of the Coastal Act. In this case, such a finding can be made.

The City of San Diego has a certified LCP and issues permits for development within its jurisdiction. The subject project is located in both the City and the Commission's original jurisdiction where the Commission retains permanent permit authority. The City has agreed to a consolidated permit, thus, Chapter 3 of the Coastal Act remains the legal standard of review.

As conditioned, the proposed development is consistent with Chapter 3 of the Coastal Act as well as with the certified LCP which the Commission uses as guidance for the subject area. Approval of the project as conditioned will not prejudice the ability of the City of San Diego to continue to implement its certified LCP for the Mission Beach community.

H. California Environmental Quality Act

Section 13096 of the Commission's Code of Regulations requires Commission approval of Coastal Development Permits to be supported by a finding showing the permit, as conditioned, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment. The City of San Diego issued a Mitigated Negative Declaration (MND) on April 27, 2020 (Project No. 646245, SCH No. 2020039026). The primary potential impacts noted in the MND included biological, cultural, and tribal resources. All potential impacts were deemed to have no significant impact because project revisions had been made or agreed to by the City that would mitigate any of the potential impacts.

The proposed project has been conditioned in order to be found consistent with the Chapter 3 policies of the Coastal Act. Mitigation measures, including conditions addressing coastal access, marine biological resources, water quality, coastal hazards, and cultural resources will minimize all adverse environmental impacts. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment. Therefore, the Commission finds that the proposed project is the least environmentally-damaging feasible alternative and can be found consistent with the requirements of the Coastal Act to conform to CEQA.

APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

•South Mission Beach Watershed Master Plan: Final Biological Resources Report