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Staff:	A. Llerandi-SD
Staff Report:	9/24/15
Hearing Date:	10/8/15

STAFF REPORT: REGULAR CALENDAR

Application No.:	**6-15-0424**
Applicant:	**SeaWorld San Diego**
Agent:	Darlene Walter
Location:	500 SeaWorld Drive, Mission Bay Park, San Diego, San Diego County (APN: 760-037-01-01)
Project Description:	Replace and expand existing orca facility with a new 43 ft. by 75 ft., 450,000 gallon (Pool E) and a 250 ft. by 350 ft. 5.2 million gallon (Pool F); demolish an existing 5,500 sq. ft. bathroom and food facility and construct a new 2,900 sq. ft. bathroom facility; manage the orca facility consistent with applicant's proposal that the facility will not house any orcas taken from the wild after February 12, 2014, nor will it utilize genetic material taken from orcas taken from the wild after February 12, 2014, and that the orca population will not significantly increase except as may occur incrementally through sustainable population growth, with the exception of rescued orcas.
Staff Recommendation:	Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

Staff is recommending approval with conditions. SeaWorld San Diego proposes to expand their existing orca facility by demolishing portions of prior expansion areas to their Shamu "killer whale" facility constructed in 1995. The project would replace the existing 1,700,000 gallon Pool E with a smaller 450,000 gallon pool, and construct a new 5.2 million gallon pool (Pool F). No changes to the seating at the existing stadium are proposed. The orca facility will be managed such that it will not house any orcas taken from the wild after February 12, 2014, nor utilize any genetic material from orcas taken from the wild after February 12, 2014, and that the orca population housed at the subject facility will not significantly increase except as may occur through sustainable population growth pursuant to accredited reproductive guidelines, with the exception of rescued orcas at the request of one or more governmental agencies. The project site is located within the leasehold of SeaWorld, in Mission Bay Park in the City of San Diego.

The subject project has received a great deal of attention due to the ongoing debate regarding the captivity and treatment of orcas at exhibit facilities. Commission staff carefully considered the various viewpoints regarding marine mammal captivity, as well as the complex interplay of various state and federal agencies involved in the field.

Relying on Section 30230 of the Coastal Act, which protects marine resources and species of special significance, Commission staff reviewed the proposed expansion with regard to how the project would impact marine mammals in the marine environment. Orcas are the largest members of the dolphin family, and a species of special biological significance. They are apex predators, living in documents social and familial groups. Orcas can be found in oceans all over the world, and many either reside or migrate through California waters. While not applying Section 30230 to the orcas that now exist at SeaWorld San Diego, many of SeaWorld's orcas were taken from the wild and the wild orcas contribute to the genetic material used in breeding. Staff reviewed copious amounts of information submitted by the public regarding the regulatory framework addressing marine mammals and observed effects of wild capture and prolonged captivity. In reviewing such precedents and information, the Commission staff analyzed the connections between marine mammal captivity and the effects it may have, directly or indirectly, to orcas in the wild, in addition to the effects on the captive marine mammals themselves. In doing so, the Commission staff determined that, while no orcas have been taken from U.S. waters since the 1980's, their future capture is still a possibility, and that a captive orca system generally, and this proposed orca facility expansion specifically, could potentially create the incentive to commit such capture in the future, which would be an adverse impact to California's coastal resources and to a species of special biological significance.

The applicant has recently amended its project to include a commitment that the improved orca facility will not house any killer whales taken from the wild after February 12, 2014, and that no genetic material from any killer whale taken from the wild after February 12, 2014 will be utilized, with the exception of rescued killer whales approved by one or more government agencies for rehabilitation or deemed by one or more government agencies as unfit for release into the wild. The killer whale population at the subject facility will not significantly increase except as may occur incrementally through sustainable population growth consistent with reproductive guidelines of one or more nationally recognized marine mammal accreditation

organizations. The subject facility may be home to beached or rescued whales at the request of one or more governmental agencies. **Special Condition No. 1** captures this by clearly stating that the authorized development includes this commitment. Therefore, the project avoids the possibility that approval of this facility could contribute to demand for capturing orcas that frequent California's coastal waters.

Other Coastal Act issues associated with this project besides impacts on marine resources include potential adverse impacts to public access from traffic and construction siting impacts, public views from the encroachment of development into the view shed, water quality from water use by the animal facilities and runoff from related landscaping and pedestrian areas.

Because SeaWorld is a popular tourist destination located in Mission Bay Park, the largest municipal water park in the United States, the potential arises that they proposed orca facility expansion could engender a substantial increase in park attendance, which in turn would impact public access to the general park area due to traffic and parking impacts. In order to address such potential, Commission staff reviewed the past five years of traffic monitoring reports submitted by SeaWorld pursuant to past coastal development permits to determine that adequate parking continues to be available and that the surrounding street intersections continue to operate at acceptable levels under current park attendance.

Due to its size and the ongoing state of drought in California, SeaWorld is a large and important consumer of potable water in the San Diego region. In analyzing the impact of the proposed development on the potable water supply, Commission staff analyzed the water savings from the proposed salt water restroom facility, as well as SeaWorld's implementation of low-water irrigation and water reduction measures throughout the park to determine that the increase in fresh water usage is minimized to the greatest extent feasible.

Mission Bay Park is a predominantly flat public aquatic park, and thus it offers the public wide vistas of the coastal area. Substantially above-grade development could adversely impact this coastal view by blocking public views or degrading the visual aesthetic of the park area. Because the proposed development is an expansion of a below-grade orca facility, and the above grade components will be substantially below the local 30-foot height limitation and screened by surrounding park development, the proposed development will not engender adverse visual resource impacts.

Due to the aquatic nature of the greater Mission Bay Park area, the water table is relatively shallow, and thus liquefaction during a seismic event is a potential safety risk. Commission staff, in analyzing the geotechnical surveys of the project site, determined that implementation of certain construction elements and foundation measures would substantially minimize the risk of liquefaction and improve public safety.

Historically, the Old Mission Bay Landfill occupied a parcel of land to the east of the SeaWorld leasehold. Past expansion of SeaWorld is such that the easternmost parking lot is underlain by the western portion of the landfill, and thus water quality and public safety issues have arisen when substantial development within the park has come before the Commission. With regards to the subject proposal, which is approximately 1,700 feet west of the western boundary of the

historic landfill, Commission staff analyzed geological borings as well as methane monitoring data to determine that detritus and gases associated with the landfill have not migrated underground to the project site.

To address these potential adverse impacts the Commission staff is recommending **eight additional Special Conditions**. **Special Condition No. 2** requires SeaWorld to submit and adhere to final plans approved by the Coastal Commission so as to ensure that the final development is in substantial conformance with the design that avoids or minimizes impacts to coastal resources. **Special Condition No. 3** requires SeaWorld to adhere to final approved landscaped plans that minimize risk from invasive species, as well as incorporates measures that minimize the amount of potable water used in irrigation. **Special Condition No. 4** requires SeaWorld to adhere to approved drainage plans due to the park's system of pumping water in and out of Mission Bay, as well as runoff that will be generated from the site. Because the proposed project consists of excavating a large volume of soil **Special Condition No. 5** requires SeaWorld to submit and adhere to an approved construction and staging storage plan so as to ensure that construction impacts are contained within the SeaWorld leasehold and do not spill outside of the leasehold, where it might impact public access. **Special Condition No. 6** requires SeaWorld to dispose of any excess spoils in a legal site outside of the Coastal Zone. **Special Condition No. 7** reiterates that additional traffic and public access mitigation measures may be required for future development once annual attendance at SeaWorld exceeds 4 million visitors. **Special Condition No. 8** requires SeaWorld to conduct approved development pursuant to the noise reduction measures outlined in the August 21, 2015, memo explaining the various methods that the orcas can be protected from harmful construction noise impacts. **Special Condition No. 9** requires SeaWorld to indemnify the Commission for any attorneys' fees and court costs that the Commission may incur in defense of litigation filed by third parties challenging the Commission's approval of the permit.

Commission staff recommends **approval** of coastal development permit application 6-15-0424, as conditioned.

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APPENDICES

EXHIBITS

I. MOTION AND RESOLUTION

Motion:

*I move that the Commission **approve** Coastal Development Permit 6-15-0424 pursuant to the staff recommendation.*

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

Resolution:

The Commission hereby approves Coastal Development Permit 6-15-0424 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 and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. 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

This permit is granted subject to the following standard conditions:

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

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

3. **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 permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Authorized Orca Facility.** By acceptance of coastal development permit No. 6-15-0424, the applicant agrees to implement the project as originally proposed and as amended by the SeaWorld Addendum to the Blue World Project Description dated September 21, 2015 (Exhibit 9), and consistent with all special conditions, including that the Project will be managed consistent with the Virgin Pledge against collection of killer whales from the wild. Based on the Virgin Pledge, to which SeaWorld is a signatory, the Project will not be home to any killer whales taken from the wild after February 12, 2014 and no genetic material from any killer whale taken from the wild after February 12, 2014 will be utilized, with the exception of rescued killer whales approved by one or more government agencies for rehabilitation or deemed by one or more government agencies as unfit for release into the wild. The Project killer whale population will not significantly increase except as may occur incrementally through sustainable population growth consistent with reproductive guidelines of one or more nationally recognized marine mammal accreditation organizations. The Project may be home to beached or rescued whales at the request of one or more governmental agencies.

2. **Final Plans.** PRIOR TO ISSUANCE OF THIS COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and written approval final project plans. Said plans shall be in substantial conformance with the plans submitted on April 13, 2015. The final plans shall:

    a. Incorporate all recommendations contained in the March 17, 2015, geotechnical survey of the project site and proposed development conducted by Christian Wheeler Engineering.

    The applicant shall undertake the development in accordance with the approved plan. Any proposed changes to the approved plans shall be reported to the Executive Director. No changes to the plans shall occur without a Coastal Commission-approved amendment to the coastal development permit unless the Executive Director determines that no amendment is legally required.

3. **Final Landscape Plans.** PRIOR TO ISSUANCE OF THIS COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and written approval final landscape plans. Said plans shall be in substantial conformance with the plans submitted on April 13, 2015. Said plans shall incorporate the following:

    a. All new landscaping shall be drought tolerant and native or non-invasive plant species. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Exotic Pest Plant Council, or identified from

time to time by the State of California shall be employed or allowed to naturalize or persist on the site. No plant species listed as "noxious weed" by the State of California or the U.S. Federal Government shall be utilized within the property.

b. Any irrigation utilizing potable water shall incorporate drip irrigation or microspray systems.

The applicant shall undertake the development in accordance with the approved plan. Any proposed changes to the approved plans shall be reported to the Executive Director. No changes to the plans shall occur without a Coastal Commission-approved amendment to the coastal development permit unless the Executive Director determines that no amendment is legally required.

4. **Final Drainage Plans.** PRIOR TO ISSUANCE OF THIS COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and written approval final construction and post-construction drainage and Best Management Practice plans. Said plans shall be in substantial conformance with the plans submitted on April 13, 2015.

   The applicant shall undertake the development in accordance with the approved plan. Any proposed changes to the approved plans shall be reported to the Executive Director. No changes to the plans shall occur without a Coastal Commission-approved amendment to the coastal development permit unless the Executive Director determines that no amendment is legally required.

5. **Construction Staging and Storage Plans.** PRIOR TO ISSUANCE OF THIS COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and written approval final construction staging and storage plans to ensure that construction impacts are contained within the SeaWorld leasehold and do not spill outside of the leasehold, where it might impact public access.

   The applicant shall undertake the development in accordance with the approved plan. Any proposed changes to the approved plans shall be reported to the Executive Director. No changes to the plans shall occur without a Coastal Commission-approved amendment to the coastal development permit unless the Executive Director determines that no amendment is legally required.

6. **Disposal of Graded Materials.** PRIOR TO ISSUANCE OF THIS COASTAL DEVELOPMENT PERMIT, the applicant shall identify the location for the graded spoils. If the site is located within the coastal zone, a separate coastal development permit or permit amendment shall first be obtained from the California Coastal Commission.

7. **Future Development.** When documented annual attendance at the SeaWorld Park reaches 4 million visitors, the applicant shall notify the Executive Director in order to review potential impacts to public access. Additional traffic and parking mitigation measures may be required for subsequent identified Tier 2 project and Special project sites, pursuant to the SeaWorld Master Plan Update EIR.

8. **Noise Reduction Program.** PRIOR TO ISSUANCE OF THIS COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director a written agreement whereby the applicant agrees to implement the noise reduction measures outlined in the SeaWorld memo dated August 21, 2015, from Hubbs-SeaWorld Research Institute.

   The applicant shall undertake the development in accordance with the approved plan. Any proposed changes to the approved plans shall be reported to the Executive Director. No changes to the plans shall occur without a Coastal Commission-approved amendment to the coastal development permit unless the Executive Director determines that no amendment is legally required.

9. **Liability for Costs and Attorney Fees.** By acceptance of this coastal development permit, the Applicant/Permittee agree to reimburse the Coastal Commission in full for all Coastal Commission costs and attorney's fees including (1) those charged by the Office of the Attorney General, and (2) any court costs and attorney's fees that the Coastal Commission may be required by a court to pay that the Coastal Commission incurs in connection with the defense of any action brought by a party other than the Applicant/Permittee against the Coastal Commission, its officers, employees, agents, successors and assigns challenging the approval or issuance of this permit. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission.

IV. FINDINGS AND DECLARATIONS

A. PROJECT DESCRIPTION

SeaWorld San Diego proposes to expand their existing orca facility by demolishing portions of a previous expansion to the existing Shamu "killer whale" facility constructed in 1995. The project would replace the existing 1,700,000 gallon Pool E with a smaller 450,000 gallon pool, and construct a new 5.2 million gallon pool (Pool F). No changes to the seating at the existing stadium are proposed.

As incorporate in the Addendum to the Blue World Project Description dated September 21, 2015, the applicant agrees to all of the following to be included in the proposed project description: that the Project will be managed consistent with Virgin Pledge against collection of killer whales from the wild. Based on the Virgin Pledge, to which SeaWorld is a signatory, the Project will not be home to any killer whales taken from the wild after February 12, 2014, and no genetic material from any killer whale taken from the wild after February 12, 2014, will be utilized, with the exception of rescued killer whales approved by one or more government agencies for rehabilitation or deemed by one or more government agencies as unfit for release into the wild. The Project's killer whale population will not significantly increase except as may occur incrementally through sustainable population growth consistent with reproductive guidelines of one or more nationally recognized marine mammal accreditation organizations. The Project may be home to beached or rescued whales at the request of one or more governmental agencies.

Currently there are five pools in the stadium facility: Pool A has a volume of 2.2 million gallons, Pool B is 900,000 gallons, Pool C 940,000 gallons, Pool D is 80,000 gallons, and Pool E is 1.7 million gallons, for an existing total of approximately 5,820,000 gallons. The proposed development would redesign Pool E to reduce its volume to approximately 450,000 gallons, while the new Pool F would hold approximately 5.2 million gallons, for a new total volume of 9,600,000 gallons, an increase in total pool volume of approximately 3,780,000 gallons. Expansion of the orca facility will require the excavation of approximately 35,000 cubic yards of soil from the project site.

SeaWorld is located within Mission Bay Park in the City of San Diego. It is situated adjacent to Mission Bay on the north and SeaWorld Drive to the south, and is surrounded largely by City parklands consisting of grassy, open areas. Mission Bay Park is an area of deferred certification, where the Commission retains jurisdiction and Chapter 3 policies of the Coastal Act are the standard of review, with the certified master plans for SeaWorld and Mission Bay Park LUP segments used as guidance.

B. PROJECT HISTORY

SeaWorld began construction in 1961 and opened to the public in 1964. Since then, the park has operated under a number of different master plans. The SeaWorld Master Plan is a separate, stand-alone segment of the certified Mission Bay Park Master Plan LUP. The most current plan, the SeaWorld Master Plan Update, was certified by the Commission on February 7, 2002, and

addressed future development within the SeaWorld leasehold over the subsequent 15-20 years (LCPA No. 2-2001C). The SeaWorld Master Plan Update sets forth the long-range conceptual development program, development parameters, and project review procedures for the future renovation of the SeaWorld Adventure Park. One of the stated goals of the SeaWorld Master Plan Update is "to define development criteria for future conceptual development areas," and the "purpose is to "create a framework for continued improvements and renovations to the park into the new century." The SeaWorld Master Plan update recognized that:

> "The SeaWorld site is unique in both the type and frequency of development projects within the leasehold. Each year, SeaWorld processes numerous projects to upgrade park facilities and keep attractions in top working order. Additionally, in response to consumer demands and competition in the theme park industry, SeaWorld regularly undertakes renovations of its larger attractions, rides, shows, or exhibits."

Sections III and IV of the SeaWorld Master Plan establish "Development Criteria" and "Design Guidelines," respectively, to govern subsequent development. Section III states that the "section sets forth the development parameters applicable to the entire leasehold or specific leasehold areas in this plan. The intent is to ensure that all future development will be distributed and constructed in a manner that, to the extent feasible, harmonizes with the established visual quality of Mission Bay Park." Section IV states that the "guidelines are intended as standards to be used by SeaWorld designers of buildings, landscaping, signage, and lighting as well as by maintenance personnel. The City of San Diego Real Estate Assets, Park and Recreation and Planning Departments, parks advisory committee, and City Council will utilize the design guidelines as a standard for evaluation of proposed new projects or for modifications to existing development."

The existing pool at the rear of the orca facility that is the subject of this permit was approved by Commission at the March, 1995, hearing as CDP 6-95-13. That CDP authorized construction of a fourth orca holding pool to serve as an exhibit with above and below water viewing areas and whale interaction areas totaling 1,200 sq. ft. as part of the existing orca stadium facility.

C. MARINE RESOURCES

Section 30001 of the Coastal Act describes the goals of the Act:

> *The Legislature hereby finds and declares that:*
>
> *(a) That the California coastal zone is a distinct and valuable natural resource of vital and enduring interest to all the people and exists as a delicately balanced ecosystem.*
>
> *(b)That the permanent protection of the state's natural and scenic resources is a paramount concern to present and future residents of the state and nation.*
>
> *(c) That to promote the public safety, health, and welfare, and to protect public and private property, wildlife, marine fisheries, and other ocean resources, and the natural*

environment, it is necessary to protect the ecological balance of the coastal zone and prevent its deterioration and destruction.

(d) That existing developed uses, and future developments that are carefully planned and developed consistent with the policies of this division, are essential to the economic and social well-being of the people of this state and especially to working persons employed within the coastal zone.

Additionally, Section 30001.5 of the Coastal Act states:

The Legislature further finds and declares that the basic goals of the state for the coastal zone are to:

(a) Protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources.

(b) Assure orderly, balanced utilization and conservation of coastal zone resources taking into account the social and economic needs of the people of the state.

(c) maximize public access to and along the coast and maximizing public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners.

(d) Assure priority for coastal-dependent development over other development on the coast.

(e) Encourage state and local initiatives and cooperation in preparing procedures to implement coordinated planning and development for mutually beneficial uses, including educational uses, in the coastal zone.

Chapter 3 policy, 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 significance. Uses of the marine environment shall be carried out in a manner that will sustain 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 30411 of the Coastal Act states:

(a) The Department of Fish and Game and the Fish and Game Commission are the principal state agencies responsible for the establishment and control of wildlife and fishery management programs and the commission shall not establish or impose any controls with

respect thereto that duplicate or exceed regulatory controls established by these agencies pursuant to specific statutory requirements or authorization.

[…]

The proposed project is an expansion of an existing facility that currently holds eleven orcas. The applicant has indicated that the intent of the proposed project is to increase the volume of water the orcas inhabit with a facility that emulates natural coastal habitats to improve the public experience in which the park visitors are able to view the orcas. Since the Commission approved construction of an addition to the existing orca facility in 1995, serious questions have been raised regarding the capture, treatment, and breeding of marine mammals. The applicability of these concerns with the regulatory authority of the California Coastal Commission and the Chapter 3 policies of the Coastal Act cited above are discussed in detail below.

Other Applicable Statutes

The regulation of captive marine mammals involves various government agencies at different levels of government. At the federal level, the Marine Mammal Protection Act (MMPA) of 1972 protects all marine mammals and prohibits their take in United States waters and by United States citizens on the high seas, as well as the importation of marine mammals and marine mammal products into the United States. "Take" is defined in the MMPA as "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal (1616 U.S.C. §1362(13)), while "harass" is defined by regulation as "any act of pursuit, torment, or annoyance which has the potential to either (a) injure a marine mammals in the wild, or (b) disturb a marine mammal by causing disruption of behavioral patterns, which includes, but is not limited to, migration, breathing, nursing, breeding, feeding, or sheltering." (50 C.F.R. § 216.3.)

Federal authority under the MMPA is divided between the Secretary of the Interior – acting through the U.S. Fish and Wildlife Service (USFWS) – and the Secretary of Commerce – acting through the National Oceanic and Atmospheric Administration (NOAA). Under the MMPA, the USFWS regulates otters, walruses, polar bears, manatees, and dugongs, while NOAA regulates pinnipeds and cetaceans, which includes orcas. A third agency – the Marine Mammal Commission (MMC) – reviews policies and advises the other two agencies.

In certain cases, the MMPA allows the issuance of permits for the removal of marine mammals from the wild, importation of marine mammals, or transfer of releasable rehabilitated marine mammals, for the purposes of public display. Within NOAA, the National Marine Fisheries Service (NMFS) Office of Protected Resources oversees the issuance of permits for incidental and direct takes of the marine mammals under NOAA's purview, which includes orcas. NMFS also maintains the National Inventory of Marine Mammals (NIMM), which tracks acquisitions (births, wild captures, and imports), dispositions (deaths, escapes, and releases), and transfers/transports (between owners or facilities) of marine mammals under its purview. Due to amendments to the MMPA in 1994, once a permit has been issued by NMFS for the removal, import, or transfer of a marine mammal for public display, a permit from NMFS is not required to maintain the marine mammal in public display facilities, unless the species is listed under the Endangered Species Act (ESA). While Lolita, the sole orca being kept at the Miami Seaquarium,

is listed under the ESA due to her being taken from the Southern Resident orca population prior to that population's listing on the ESA, the orcas at SeaWorld San Diego are not listed as endangered.

To qualify for a public display take permit, the displaying facility must meet three criteria: (1) the facility offers an education or conservation program, (2) the facility is open to the public on a regular basis; and (3) the facility is licensed by the Animal and Plant Health Inspection Service (APHIS) of the United States Department of Agriculture (USDA). For a domestic facility to export non-ESA listed marine mammals to a foreign facility, NMFS must verify that the receiving facility meets comparable criteria and obtain confirmation from the foreign government that such criteria are enforced.

The 1994 amendments to the MMPA transferred authority over captive animal care and maintenance to the USDA/APHIS and removed the requirement for facilities to obtain MMPA permits to hold marine mammals for public display. The USDA/APHIS has jurisdiction over animal care and maintenance for all marine mammals held for public display purposes under the Animal Welfare Act of 1966 (AWA). (7 U.S.C. § 2131 *et seq.*) This includes space, veterinary care, transport, and public interaction programs.

The AWA regulates the treatment of warm-blooded animals in research, exhibition, transport, and by dealers. While other laws, policies, and guidelines may include additional species coverage or specifications for animal care and use, the AWA is the minimum acceptable standard. The USDA/APHIS oversees the implementation of the AWA; exhibitors must be licensed under APHIS. The APHIS Animal Care program conducts unannounced inspections of facilities by either a law inspector or a trained veterinarian – depending on facility – at least once a year to ensure they are in compliance with regulations and to identify unregistered facilities, with follow-up inspections conducted when non-compliance is identified. Inspections of SeaWorld are conducted by a trained veterinarian.

At the state level, the California Department of Fish and Wildlife (CDFW) is one department within the California Natural Resources Agency responsible for the establishment and control of wildlife and fishery management programs. The CDFW has the power to regulate the taking or possession of birds, certain mammals, fish, amphibian, and reptiles for non-commercial purposes. However, as discussed below, the take of marine mammals is pre-empted by federal law under the MMPA. NMFS has not transferred regulatory authority regarding the take of marine mammals to California, so CDFW does not regulate the take of orcas. For the animals that are within its purview, CDFW regulates take in part through issuance of hunting and fishing licenses, establishing seasons for such taking activity, overseeing aquaculture activities, and combating poaching and illegal animal sales.

The California Coastal Commission, also part of the California Natural Resources Agency, was established in 1976 in order to regulate development and preserve, protect, and restore the coastal resources of California. The Coastal Act includes specific policies that address terrestrial and marine habitat protection, as cited above.

Preemption Analysis

The MMPA does preempt the Commission from regulating the "take" of marine mammals, including orcas. Amendments to the MMPA that were enacted in 1994, however, clarify that the MMPA does not govern the treatment of marine mammals once they are in captivity. The AWA regulates the care of marine mammals once they are in captivity, but the AWA allows states to establish additional requirements beyond minimum requirements of the AWA.

Regarding the field of "take," Section 109(a) of the MMPA (16 U.S.C. § 1379(a)) declares that:

> *No State may enforce, or attempt to enforce, any State law or regulation relating to the taking of any species (which term for purposes of this section includes any population stock) of marine mammal within the State unless the Secretary has transferred authority for the conservation and management of that species (hereinafter referred to in this section as "management authority") to the State under subsection (b)(1).*

To date, the federal government has not transferred authority for the conservation and management of orcas to the state of California, and thus the Coastal Commission, as a state agency, is precluded from enforcing the Coastal Act with respect to the taking of species regulated under the MMPA.

Regarding the care of captive animals, Section 2143(a)(1) of the AWA (7 U.S.C. § 2143(a)(1)) states that "the Secretary shall promulgate standards to govern the humane handling, care, treatment, and transportation of animals by dealers, research facilities, and exhibitors," while Section 2143(a)(8) concludes by stating that "Paragraph (1) shall not prohibit any State (or political subdivision of a State) from promulgating standards in addition to those standards promulgated by the Secretary under paragraph (1)." Thus, whereas the MMPA expressly preempts state regulation of the taking or importing of marine mammals, the AWA, which regulates the care of captive marine mammals *after* the taking has occurred, explicitly permits states and their agencies to promulgate their own standards of captive animal care in addition to what is contained in the AWA.

The Commission's action on this application is not a regulation relating to the take of orcas. As defined above, take under the MMPA as it applies to this situation is related to the removal and importation of orcas, which are not at issue in the current proposal. SeaWorld has formally incorporated as part of the project description that the proposed facilities will not contain orcas taken from the wild after February 12, 2014. All of the orcas at SeaWorld San Diego are either long removed from the wild or were born in captivity. As such, while NMFS must be notified should one of the captive orcas die, give birth, or be transferred, that notification is not related to take, and thus does not need a new take permit from NMFS. The notification is required so that NMFS may update the NIMM. It is the AWA that now governs the day-to-day care of the captive orcas at SeaWorld San Diego, and it is the AWA that sets the federal minimum requirements of care to which states and their agencies, may add to.

Regarding whether there is competing jurisdiction with CDFW, that state agency regulates wildlife through wildlife and fishery management programs. With regard to marine mammals,

the CDFW has informed Commission staff that the federal agencies take the lead, and that CDFW gets involved when there is take of a restricted species (such as abalone), but that because federal regulations preclude state regulation of marine mammal take, there are no marine mammals listed as restricted species in CDFW's jurisdiction. CDFW does inspect aquariums and facilities such as SeaWorld for the presence of invasive species, but orcas are not considered invasive species. If there were to be an orca taken from California state waters, in addition to required federal permits (for which the Commission could seek to conduct federal consistency review to determine consistency of the federal permit with the Coastal Act), a permit for scientific collection would have to be obtained from CDFW (the proposed project does not require a federal permit and therefore is not subject to the Commission's consistency review authority under the federal Coastal Zone Management Act). Section 30411 of the Coastal Act prohibits the Commission from imposing controls that duplicate or exceed regulatory controls established by CDFW. However, because CDFW has not established regulatory controls regarding marine mammals, Section 30411 does not limit the Commission's authority in this context.

In conclusion, with regard to the proposed improvements to the orca facility and the captive orcas currently residing therein, the MMPA's preemption regarding matters of take does not preclude Commission action to implement any applicable Coastal Act requirement that may apply to marine mammals (including in captivity), except as it may relate to the take of marine mammals. The AWA and Section 30411 also do not limit the Commission's authority regarding marine mammals. As explained below, however, Section 30230 of the Coastal Act protects marine mammals only to the extent they qualify as marine resources of the State. SeaWorld's modified project description and **Special Condition No. 1** ensure that the project as approved will not adversely affect California's wild orca population, consistent with Section 30230.

Existing Orcas and Facility

According to the NIMM maintained by NMFS, there are four facilities in the United States that hold captive orcas, three of them being SeaWorld facilities: SeaWorld San Diego has eleven, SeaWorld San Antonio has seven, and SeaWorld Orlando has six, for a total of 24 orcas. The fourth facility – Miami Seaquarium – has only one orca. Of the eleven orcas at SeaWorld San Diego, eight were born in captivity and three originated in the wild. There are currently 56 orcas in captivity worldwide, with 24 of them (43%) under SeaWorld's care.

Currently there are five pools in the stadium facility: Pool A has a volume of 2.2 million gallons, Pool B is 900,000 gallons, Pool C is 940,000 gallons, Pool D is 80,000 gallons, and Pool E is 1.7 million gallons, for an existing total of approximately 5,820,000 gallons. The proposed development would redesign Pool E to reduce its volume to approximately 450,000 gallons, while the new Pool F would approximately 5.2 million gallons, for a new total volume of 9,600,000 gallons, an increase in total pool volume of approximately 3,780,000 gallons.

The dimensions of the existing and proposed pools are below. While the above volume capacities are accurate, due to the irregular shapes of many of the existing and proposed pools and due to drainage requirements and irregular design, the dimensions below are approximate and may not produce volumes equal to the numbers above:

Pool	Approximate Dimensions	Approximate Surface Area
A	35’ deep x 170’ long x 80’ wide	11,692 sf
B	15’ deep x 118’ long x 75’ wide	9,504 sf
C	15’ deep x 118’ long x 75’ wide	9,819 sf
D	9’ deep x 53’ long x 25’ wide	1,489 sf
E Existing	30’ deep x 125’ long x 75’ wide (google earth)	10,729 sf
E Proposed	18’ deep x 75’ long x 43’ wide	3,903 sf
F Proposed	50’ deep x 255’ long x 160’ wide; 350’ wide (on the arc)	27,688 sf
	Total (existing):	43,233 sf
	Total (proposed):	64,095 sf

Given the current orca population at SeaWorld San Diego, this equates to 529,091 gallons of water per orca. As proposed by the applicant, the new orca facility will increase water volume per orca to approximately 871,818 gallons, and increase of 342,727 gallons per orca. The current pools have a maximum depth of approximately 35 feet while the proposed Pool F will have a maximum depth of approximately 50 feet.

The salt water utilized by the orca facility and the rest of SeaWorld San Diego’s animal facilities is pumped in from Mission Bay and treated by SeaWorld’s filtration systems to remove any pollutants or detritus prior to flowing into the various tanks and pools. Two chillers and two cooling towers using evaporative water cooling systems regulate the temperature of the water depending on incoming water temperature and the needs of the specific marine animals. Due to the increased size of the proposed orca facility, the two chillers and cooling towers will be replaced with two larger units to handle the greater volume of water. There will also be 12 additional 12-inch diameter filters added to the life support facility on the southern side of the orca facility.

Adequacy of Existing and Proposed Orca Facilities

The AWA and its related regulations set the minimum standards of care for animals in captivity in the United States. All standards and regulations for marine mammals were originally implemented in 1979, and the space requirements were last updated in 1984. Subpart E of the AWA regulations specifically address the humane handling, care, treatment, and transportation of marine mammals. Generally, the regulations require of animal enclosures proper construction, protection from viewer harassment, cleanable materials, adequate water and power, proper drainage, proper food storage, waste disposal, employee wash rooms, and safe animal equipment. Space requirements in the AWA regulations depend on the size class of the subject marine mammal. Orcas are identified as “Group I” cetaceans (i.e. the largest-sized group). In determining the minimum space required in a pool holding cetaceans, four factors must be satisfied: minimum horizontal dimension (MHD), depth, volume, and surface area. For Group I cetaceans, MHD should be 24 feet or two times the average adult length of the longest species of Group I cetaceans being housed, whichever is greater. AWA regulations list average orca length at 24 feet, so MHD for an orca would be 48 feet in all lateral directions, forming a minimum circular area. The minimum depth requirement for Group I cetaceans is one-half the average adult length of the longest species of cetacean being housed, or 6 feet, whichever is greater, so

minimum depth for an orca would be 12 feet. Regarding volume and surface area, the AWA regulations state that if the aforementioned MHD and depth requirements are met, the AWA presumes that adequate water volume and surface area are also present for up to two Group I cetaceans.

The minimum volume of water required for up to two Group I cetaceans is based upon the following formula:

$$Volume = \left(\frac{MHD}{2}\right)^2 \times 3.14 \times depth$$

When there are more than two Group I cetaceans housed in a primary enclosure pool, the additional volume of water required for each additional Group I cetacean in excess of two is based on the following formula:

$$Volume = \left(\frac{\text{Average Adult Length}}{2}\right)^2 \times 3.14 \times depth$$

Thus, for the eleven orcas currently residing at SeaWorld San Diego, the minimum AWA volume requirement for the first two is 21,704 cubic feet of water, with each additional orca requiring an additional 5,426 cubic feet, for a total of 70,537 cubic feet required under federal regulations. The current orca facility at SeaWorld San Diego is 5,820,000 gallons. There are approximately 7.48 gallons in one cubic foot. Thus, the current orca facility is approximately 778,075 cubic feet, which equates to 70,734 cubic feet per current orca. The proposed expansion would create a new total space of approximately 1,283,422 cubic feet, which is 116,675 cubic feet per current orca. The proposed expansion will increase the volume of water per orca by 45,941 cubic feet.

The minimum surface area requirement for each cetacean, regardless of group, housed in a pool is based upon the following formula:

$$\text{Surface Area} = \left(\frac{\text{average adult body length}}{2}\right)^2 \times 3.14 \times 1.5, \text{ or: } SA = (L/2)^2 \times 3.14 \times 1.5$$

Thus, each orca is required to have a minimum of approximately 678 square feet of surface area. With eleven orcas, SeaWorld San Diego must provide a minimum of approximately 7,461 square feet of surface area. The existing orca facility provides approximately 43,233 square feet of surface area, or 3,930 square feet of surface area per orca. The proposed tank expansion will provide 64,095 square feet of surface area, or 5,827 square feet of surface area per orca. Both of these amounts are well above minimum federal guidelines.

The improved, expanded orca facility may enhance the quality of life for the orcas currently residing at SeaWorld San Diego. However, because the federal standards regarding water volume and surface area are substantially lower than what will be constructed, it is possible that as a result of the proposed expansion, the orca population could be dramatically increased in the

facility. Under current federal minimum volume and surface area requirements, the existing orca facility at SeaWorld San Diego could hold up to 63 orcas, while the proposed expanded facility could hold up to 94 orcas. As discussed below, the addition of new orcas from California's state waters to the proposed facility would not be protective of marine resources as required by Section 30230.

Section 30230 Analysis

Section 30230 of the Coastal Act directs the Commission to ensure that coastal development will not adversely impact marine resources, and describes three avenues to do so. The requirements of Section 30230 are that: (1) marine resources shall be maintained, enhanced, and, where feasible, restored; (2) special protection shall be given to areas and species of special biological or economic significance; and (3) 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.

The Commission has evaluated the impact of proposed projects on marine mammals that reside in or visit state waters, most frequently in the context of federal consistency review under the Coastal Zone Management Act. The Commission has based its decision at least in part on impacts to marine mammals from activities such as pulse devices (ref. CD-102-99), liquefied natural gas terminals (CC-079-06), seismic surveys (CC-027-12), and naval sonar exercises (CD-049-08 and CD-008-13). In each case, the Commission recognized the marine mammals as marine resources warranting protection under Section 30230 of the Coastal Act.

Section 30230 of the Coastal Act protects California's marine resources, especially species of biological significance. Orcas are species of special biological significance because they are apex predators, and operate in documented social and familial groups. Orcas are toothed whales and the largest members of the oceanic dolphin family. They are found in oceans all over the world, from the Arctic to Antarctica, and many reside in or migrate through the waters off California's coast. Wherever they are found, orcas are a top predator and play the important roles that many predators play in their respective ecosystems, such as keeping populations of their prey healthy by weeding out the sick or infirm, and by keeping the population of their prey in check, maintaining the carrying capacity of the habitat area and protecting organisms further down the food chain from over-predation. When orcas are taken from the wild in sufficient numbers, it can impact this role. Furthermore, such takings can have adverse impacts not just on the orca taken, but on the remainder of that orca's pod, as it can disrupt the social hierarchy and cohesion of the pod, as well as their reproductive success.

Removing orcas from California's marine environment would affect predator-prey dynamics and would disrupt the social organization of orca pods, therefore, proposed development that could result in the removal of orcas from California's marine environment would be inconsistent with Section 30230. SeaWorld has agreed that no orcas taken from the wild after February 12, 2014, will be housed at the proposed facility (with the limited exception of rescued orcas at the request of one or more government agencies), and that no genetic materials from such orcas will be utilized there. **Special Condition No. 1** ensures the enforceability of this agreement as part of the

proposed and authorized development. This ensures that the project as approved will not indirectly harm California's marine environment inconsistent with Section 30230.

The question of whether the orcas currently in SeaWorld San Diego are subject to Section 30230 is an interpretive question. The Commission has interpreted Section 30230 to apply to wild California orcas within the broader meaning and purpose of the Coastal Act (e.g. CD-008-13, pp. 18-19 [requiring separate consistency with the first sentence of § 30230 to maintain, enhance and restore marine resources; CD-16-00, pp. 8 – 16 [finding consistency with § 30230 for seismic testing impacts on marine mammals, including orcas].) However, excepting analysis from construction noise impacts for SeaWorld's splash down ride (CDP 6-01-129), the Commission has not applied section 30230 to captive marine animals, even while considering other tank installations or potential installations at Scripps Institute of Oceanography and UC Santa Cruz.

The context and language of Section 30230 concerns animals in the wild. The section is included in Chapter 3's Article 4, which is titled "Marine Environment," and with the exception of the reference to species of special significance in the second sentence of section 30230, all the other provisions of section 30230 address protection of resources in the marine environment. The first sentence of section 30230 requires that "marine resources" be maintained, enhance, and where feasible restored. The most straightforward interpretation of "marine resources" is that it consists of resources in the marine environment, i.e., ocean waters, not resources contained in onshore artificial structures. The second sentence requires special protection for areas and species of special biological or economic significance. The term "areas" of special significance clearly applies to the marine environment. Finally, the third sentence expressly addresses uses of the "marine environment." Given this context, it is likely that the Legislature intended the reference to species of special biological significance to apply to a species in California's marine environment.

Other provisions in the Coastal Act follow the same approach. They protect biological resources in their habitat, such as by protecting the biological productivity of coastal waters (§ 30231), ensuring the functionality of wetlands (§ 30233), and protecting habitat areas that support sensitive species (§ 30240). No provision of the Coastal Act expressly addresses the management of animals that are kept in captivity in an artificial environment.

Finally, the Coastal Act's legislative findings state that the coastal zone is "a distinct and valuable natural resource" and exists as a "delicately balanced ecosystem." (Pub. Resources Code, § 30001(a).) They further state that in order to protect wildlife and other ocean resources, "it is necessary to protect the ecological balance of the coastal zone and prevent its deterioration and destruction." (Pub. Resources Code, § 30001(c).) In addition, the basic goals of the Coastal Act include protecting and enhancing the overall quality of the coastal zone environment and its natural and artificial resources. (Pub. Resources Code, § 30001.5(a).) These legislative findings and goals all express an intent to protect coastal resources, including wildlife, by protecting their environment and ecosystems.

Today, the population of captive orcas is such that facilities such as the SeaWorld San Diego are able to maintain their population of captive orcas through breeding, either through husbandry with two orcas or through the transfer of genetic material between facilities for artificial

insemination. Of the 11 orcas at SeaWorld San Diego, 8 are captive bred, and of the 24 total in SeaWorld's care, 19 are captive bred. Besides transporting orcas or their genetic materials between its own facilities, SeaWorld San Diego periodically enters into agreements with other facilities in order to loan or borrow marine mammals for the purposes of captive breeding. Currently, the breeding of orcas, artificial or otherwise, is not regulated by the NMFS or USDA/APHIS, and thus federal permits are not required in order to breed orcas.

One of the consequences of captive breeding is that it reduces the need for a facility to procure a marine mammal from the wild, which would have an adverse impact on coastal habitats and resources. NMFS has not issued a permit for take of an orca from the wild for purposes of public display since the 1980's due to the fact that they have not received any applications to do so. SeaWorld has also signed onto a pledge authored by businessman Richard Branson that they will no longer take cetaceans from the wild, and recently announced the cessation of an agreement with the Georgia Aquarium to use wild-caught beluga whales the aquarium is attempting to import from Russia in its breeding program. As part of its project proposal, SeaWorld is proposing that the expanded orca facility will be managed such that it will not house any orcas taken from the wild after February 12, 2014, nor utilize any genetic material from orcas taken from the wild after February 12, 2014, and that the orca population will not significantly increase except as may occur through sustainable population growth pursuant to accredited reproductive guidelines, with the exception of rescued orcas.

As amended by SeaWorld and memorialized by **Special Condition No. 1**, the project will not contribute to demand for removal of wild orcas from California waters in the future, because SeaWorld will manage the facility consistent with its proposal to avoid the removal of killer whales from the wild either directly for public display or for the use of their genetic material. Therefore, the project is consistent with Section 30230.

Noise Impact Analysis

SeaWorld has addressed noise impacts on it captive marine mammals in the past. At the Commission hearing for the SeaWorld Master Plan Update in February 2002, members of the public and Commissioners raised concerns over how the animals would be affected by noise generated by development contained in the master plan. In the case of the Journey to Atlantis splashdown ride, the first development built pursuant to the current master plan and approved in CDP No. 6-01-0129, the concerns was focused on Commerson's Dolphins proposed to be housed within the ride area. To address those concerns, SeaWorld submitted a memo demonstrating that the ambient noise level in the water would be lower than existing levels once the rise was completed, and detailed the construction measures and design features that would be utilized to achieve that result.

In the current proposal, the excavation of 35,000 cubic yards of soil and construction of a large 5,000,000 gallon tank creates the risk that construction activity could create noise impacts for the orcas in the adjacent, remaining pools, as construction sounds travel through the water. SeaWorld submitted a memo addressing sound propagation in water and describing the construction methods that will be implemented in order to minimize noise generation and isolate the orcas from the noise (Exhibit 8).

As stated earlier, the Commission has looked at development wherein impacts to marine mammals were anticipated. One of the common impacts analyzed was noise impacts, as many marine mammals, such as orcas, utilize sound to navigate or communicate, and noise impacts from human development can either interfere with these functions or harm the sensitive hearing of the mammals, causing injury, death, or alteration of natural behaviors. When SeaWorld applied for construction of the Journey to Atlantis splashdown ride, which was designed to hold 10 Commerson's dolphins within its structure, the Commission requested that SeaWorld submit information detailing the existing and anticipated ambient noise levels within the dolphin facility and the steps to be taken to shield the dolphins from noise impacts, which SeaWorld did to the Commission's satisfaction.

SeaWorld agrees that minimizing noise impacts to the orcas residing in the orca facility is a priority. In the current proposal, because the proposed expansion will consist of a large excavation and construction activity adjacent to the current orca facility, SeaWorld has submitted information regarding potential noise impacts. A memo dated August 21, 2015, from the Hubbs-SeaWorld Research Institute, explains that sounds attenuates (declines in level) at different rates depending on the location of origin and the medium in which it is travelling. Within a SeaWorld pool, the memo states that attenuation averages 2-3 decibels (dB) for a 10kHz tonal (narrowband) signal, which is fairly low attenuation. However, the memo continues that when a sound travels from outside a boundary such as a concrete wall, the attenuation is greater, depending on the intervening substance. In the case of propagation of sound from air into water, sound originating in the open air transmits inefficiently into water (unless produced directly overhead in a narrow cone), and will be attenuated by approximately 30 dB (comparable to the difference in noise level between the inside and outside of a building with doors and windows shut). Furthermore, the memo states that orcas hear best at higher frequencies, and that high frequency noise is attenuated more than low frequencies when traveling over a distance.

The memo explains that the expansion of the orca facility will involve drilling and concrete cutting on the walls currently separating the expansion area from the orca tanks that are to remain and where the orcas will be kept during development, and drilling noise does have the potential to travel long distances and substantial levels in sea water. Regarding ambient noise within aquatic facilities, there is no systematic, published review of such noise, though the memo indicated that ambient noise in the park's tanks usually originates from tank environmental equipment and water flow, with occasional higher levels from maintenance activities or the animals themselves.

To minimize noise impacts, the proposed construction work will be screened and separated above grade by 8-ft. tall panels. Instead of pile driven beams, construction will utilize drilled beams, which produce less noise when installing. When above grade work such as demolition of the Dine with Shamu eating area or skywalks occurs, the whales will be directed into the pools farthest away from the demolition work. The concrete pathways will be cut into segments and removed so as to avoid the use of noisier jack hammers. The existing elevator tower will be disconnected from its foundation (which is separate from the orca tank structures) and carried away by a large excavator. The existing skywalk will be cut into segments and carried away with a crane to be further deconstructed away from the pool area. Installation of the tie backs will

utilize a drill rig, for which the generator and air compressor will be sited back away from the work site. For work on Pool D to install new gates to the expansion area, the pool will be drained and saw cut to avoid jackhammering. For removal of the Dine with Shamu area, an excavator will pull down the shade structures and a bobcat will remove the at-grade portion. Excavation of the new Pool F will be done with excavators, backhoes, loaders, and trucks. Due to the size of the excavation area, the majority of the work will be conducted more than 50 feet away from the concrete wall separating the expansion area from the remaining orcas pools, so that construction noise will be greatly attenuated.

To ensure that the noise attenuation measures are put in place and the orcas protected from adverse noise impacts during any approved development, **Special Condition No. 8** requires that SeaWorld adhere to the construction measures contained in their April 21, 2015 memo, and that any deviation from such measures be reviewed by the Executive Director for determination as to whether an amendment to this CDP is required.

In conclusion, while the proposed improvements to the orca facility at SeaWorld San Diego create the risk of adverse impacts to marine mammals, the Commission believes that the expanded orca facility will be an improvement for the orcas residing at SeaWorld San Diego, and as conditioned to address occupancy and noise impacts, the proposed improvement is in conformance with the marine resource protection policies of Chapter 3 of the Coastal Act.

D. PUBLIC ACCESS

Section 30210 of the Coastal Act states:

> *In carrying out the requirements 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 terrestrial vegetation.*

Section 30212 of the Coastal Act states, in part

a) *Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.*

[…]

c) *Nothing in this division shall restrict public access nor shall it excuse the performance of duties and responsibilities of public agencies which are required by Sections 66478.1 to 66478.14, inclusive, of the Government Code and by Section 4 of Article X of the California Constitution.*

Section 30213 of the Coastal Act states, in part:

Lower cost visitor serving and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.

Section 30604 of the Coastal Act states, in part:

[…]

c) *Every coastal development permit issued for any development between the nearest public road and the sea of the shoreline of any body of water located within the coastal zone shall include a specific finding that the development is in conformity with the public access and public recreation policies of Chapter 3 (commencing with Section 30200).*

SeaWorld is a private commercial leasehold within Mission Bay Park, a public park owned by the City of San Diego. The site is located between the first coastal roadway and the bay. The certified SeaWorld Master Plan Update divides the anticipated development and redevelopment needs of the entire SeaWorld leasehold into three categories: Tier 1, Tier 2, and Special Projects. Tier 1 identifies the sites and projects where new development or park renovations planned to be processed concurrently with the SeaWorld Master Plan or likely to be initiated shortly after the adoption of the master plan. Those projects include the Journey to Atlantis splashdown ride, an educational facility, front gate renovation, special events center expansion, and bicycle/pedestrian path enhancement. To date, all of those listed developments except for the special events center expansion have already occurred. Tier 2 identifies sites within Area 1 (the developed park area) that are candidates for redevelopment; however, only general project descriptions are included in the master plan. Submittals for individual projects are expected to be made over a span of many years, and some have already been made, approved, and constructed (e.g. Manta rollercoaster). Potential Tier 2 projects were not approved as part of the master plan, and no entitlements to redevelopment in the designated areas were granted nor implied. Finally, Special Projects are conceptual development proposals that have been identified for sites outside of the developed park but still within the SeaWorld leasehold. Like Tier 2 projects, Special Projects are not proposed to be built for many years, and like Tier 2 projects, only general project descriptions for future use are included.

The proposed development to the orca facility is not specifically listed in the SeaWorld Master Plan Update as a Tier 1, Tier 2, or Special Project. However, SeaWorld is a large, public-serving facility with complex operations, and the SeaWorld Master Plan Update recognized that not all

development that would occur in SeaWorld rose to the level requiring specific listing in the master plan. The master plan states that the "SeaWorld site is unique in both the type and frequency of development projects within the leasehold. Each year, SeaWorld processes numerous projects to upgrade park facilities and keep attractions in top working order. Additionally, in response to consumer demands and competition in the theme park industry, SeaWorld regularly undertakes renovations of its larger attractions, rides, shows, or exhibits." Because of this recognition, in addition to the tiered project list, the SeaWorld Master Plan update contains development and design criteria regarding aspects such as public access, visual aesthetics, landscaping, and so on that apply not just to the listed Tier 1, Tier 2, and Special Projects, but to all development in SeaWorld in general. These guidelines include utilizing drought tolerant plants and low-water irrigation, screening development from public park areas, design visitor furnishings to be durable and visually compatible to the surrounding setting, utilize non-glare lighting and limiting light spill over and intrusion into public views, and be architecturally designed to conform to the aquatic and educational nature of SeaWorld. The proposed development is an expansion of the existing orca facility, and complies with the applicable guidelines contained in the plans, and is not of such a scale and impact that it requires an amendment to the SeaWorld Master Plan Update.

There are only a few remaining areas of Mission Bay Park where public access is routed inland around existing commercial leaseholds rather than along the shoreline. SeaWorld is one of those leaseholds. Although public lateral access is available along most of the Mission Bay shoreline, there is no access through the SeaWorld leasehold, which extends to or beyond the waterline in places (Exhibit 2). Pedestrian and bicycle traffic can cross through the parking areas and rejoin the bayside pathway on either side of the leasehold. Vertical access is available at those same two locations and informally elsewhere along the shore dependent upon parking or transit availability. The proposed development will be located entirely within the private leasehold, approximately 1,100 feet from the shoreline, and will not encroach into any existing or proposed public accessways. The Mission Bay Master Plan lists a complete pedestrian access pathway around the bay as a future goal; access through SeaWorld may itself be an issue when the lease is renewed, but for this permit, the Commission finds that lateral and vertical access is available to serve the demonstrated needs of the public in this area of Mission Bay Park, and the proposed project will not preclude the ability to provide public shoreline access in the future.

Sea World Drive and Ingraham Street serve as major coastal access routes for all areas of Mission Bay Park, and the public beaches at Pacific Beach, Mission Beach, and Ocean Beach, and serves as a popular commuter route as well. These are the only roadways serving SeaWorld. The lease between SeaWorld and the City of San Diego, as well as the SeaWorld Master Plan Update, calls for phased traffic improvements based on the expected increase in attendance at the park. SeaWorld typically submits its annual attendance figures for each past year so the Commission will be aware when the next critical level of attendance occurs that triggers traffic mitigation measures. SeaWorld attendance has triggered, and SeaWorld has implemented, various traffic mitigation measures over the years. Numerous Commission-approved traffic and parking mitigation projects have been completed by SeaWorld since the certification of the SeaWorld Master Plan Update, including the addition of a public pedestrian promenade (CDP No. 6-06-022), road improvements along Sea World Drive and the southbound Interstate 5 interchange (CDP No. 6-08-016), and resurfacing, restriping, and landscaping to extend and

widen bicycle and pedestrian paths across the southern and western edges of SeaWorld's main parking lot (CDP No. 6-05-075). Those improvements as well as the previously established traffic, roadway, and parking systems have been designed and constructed to support up to 4 million visitors annually. The next improvements are not required until attendance reaches 4 million, which is anticipated as the maximum anticipated attendance at full buildout. Last year, SeaWorld's annual attendance was approximately 3.77 million visitors.

Regarding traffic, SeaWorld submits annual traffic monitoring reports to the Commission for review of the impact of park operations on the surrounding transportation infrastructure. Because parks such as SeaWorld serve the public and are subject to changing preferences and market forces, attendance levels, and thus traffic impacts, can fluctuate over the years. Thus, in analyzing the current proposal, Commission staff reviewed the past 5 years of traffic reports, as well as a summary report of those past years to discern any patterns. The analysis determined that the major intersections around SeaWorld have consistently operated at a Level of Service (LOS) of D or better, and that some intersections actually improved slightly in service over the past 5 years of monitoring. Regarding Average Daily Traffic (ADT), the studies focus mainly on AM peak periods and PM peak periods, as that is when SeaWorld traffic combines with local rush hour traffic to create the greatest impact. The past 5 years of studies show that AM peak ADTs have decreased by 5% while PM peak ADTs have increased by 6%. Overall, ADTs increased by 4% over the preceding 5 years, but as mentioned above, the LOS for the surrounding intersections has held steady or improved slightly. Thus, the growth in traffic has been relatively low at an average of just 1% a year over the preceding 5 years, with the LOS indicting that the existing infrastructure is adequately processing the load.

With respect to the adequacy of on-site parking, SeaWorld currently provides a total of 8,664 parking spaces for visitors, staff, and employees. SeaWorld's employment base includes full-time, part-time, and seasonal employees. Employee numbers vary during the year from approximately 2,600 non-peak employees to approximately 4,500 peak time employees. Parking spaces have not been specifically allocated to individual uses, but most employee parking occurs in the lots nearest the administrative facilities and, during times of heaviest park use, in the parking lot in the northwest portion of SeaWorld itself but within the leasehold boundaries. In addition to serving SeaWorld itself, the existing parking facilities have also served the needs of Hubbs Research Institute personnel. The Hubbs facilities, which include laboratories, aquaculture tanks, and associated research and administrative functions, are currently housed in the western area of SeaWorld, along with many of SeaWorld's administrative, storage, and employee facilities. Under CDP No. 6-93-086, Hubs converted the former Atlantis Restaurant building to research facilities with retention of 77 spaces in the former Atlantis lot designated for use by Hubbs' researchers with the remainder of that lot, and all other on-site parking facilities, continuing to be used by SeaWorld patrons and employees.

In 2010, total peak parking demand was 5,466 spaces. In 2011, peak parking demand was 6,382 spaces. In 2012 peak demand was 7,028 spaces. In 2013 peak demand was 7,103 spaces. In 2014, the peak demand was 6,357 spaces on July 19, 2014 (73% of total supply). Thus, SeaWorld's parking demand has not exceeded their on-site supply of 8,664 parking spaces.

The upgrade and redevelopment of the existing orca facilities and restroom is not expected to substantially increase the attendance levels, as the expansion will serve as a larger facility for housing the orcas, and visitors to SeaWorld are already able to view the orcas underwater through viewing windows in the existing facility. It should be noted that more people will be able to view the orcas at one time, and expanded, modernized, or redeveloped facilities do tend to generate an interest on the part of the public to view the new facilities. While some visitors – such as season pass holders – may make annual or semi-annual visits to the existing theme park regardless, it can be reasonably assumed that some visitors will also make a special trip to view the new facilities in and of themselves. However, these increases in attendance are not expected to be significant for the subject proposal as it merely represents an upgrade to an existing viewing and interaction area in conjunction with the existing orca stadium. Thus, no significant impacts to traffic or parking are anticipated as a result of the proposed project.

Special Condition No. 7 reaffirms the Master Plan requirement and puts SeaWorld on notice that when the annual SeaWorld Park attendance levels reach 4 million visitors, future development proposals may be required to complete certain traffic and parking mitigation measures as conditions of approval, such as enhancing surrounding public right-of-ways and road improvements, in conformance with mitigation criteria established in the SeaWorld Master Plan Update EIR. Furthermore, **Special Condition No. 5** requires SeaWorld to adhere to approved construction staging and storage plans to ensure that construction activity is properly contained within the leasehold and will not spill out into public areas or displaces on-site parking to an extent that will cause patron parking to spill out into public areas.

In summary, the Commission finds that the proposed project will not adversely impact the existing vertical and lateral accessways around the Sea World leasehold, or result in significant increases in traffic or parking demand. Therefore, the Coastal Commission finds the proposal consistent with all of the public access policies of the Coastal Act.

E. WATER QUALITY AND HAZARDS

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 significance. Uses of the marine environment shall be carried out in a manner that will sustain biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231 of the Coastal Act states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial*

interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30253 of the coastal act states in relevant part:

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 the bluffs and cliffs.

[…]

Stormwater Runoff, Discharge, and Intake

The federal Clean Water Act (CWA) requires States to identify and make a list of surface water bodies that are polluted. These water bodies, referred to in law as "water quality limited segments," do not meet water quality standards even after discharges of wastes from point sources have been treated by the minimum required levels of pollution control technology. States are required to compile these water bodies into a list, referred to as the "Clean Water Act Section 303(d) list of Water Quality Limited Segments" (List). States must also prioritize the water bodies on the list and develop Total Maximum Daily Loads (TMDLs) to improve water quality. At the time of the adoption of SeaWorld's National pollutant Discharge Elimination System (NPDES) permit in June, 2011, Mission Bay was listed on the 303(d) list of impaired water bodies as impaired because of bacteria, lead, and eutrophication. A total maximum daily load has not yet been adopted for these pollutants.

The combined storm water and waste water discharge from the treatment plants are overseen by the San Diego Regional Water Quality Control Board (RWQCB) under Order No. R9-2011-0032, NPDES No. CA107336. The NPDES permit includes specified discharge limits along with a required monitoring and reporting program. As part of the monitoring program, SeaWorld collects treatment plant discharge samples on a daily, weekly, quarterly, and annual basis for a variety of constituents, toxicity, and in-situ observations that may impact water quality. This data is summarized in an annual report submitted to the RWQCB along with supporting data via the California Integrated Water Quality System database.

On April 14, 2005, the RWQCB approved an NPDES permit for SeaWorld, setting forth the water treatment criteria for the subsequent 5 years. This permit was renewed by the RWQCB in June, 2011. Sample locations for monitoring are the intake and effluent outfalls of both the East and West treatment facilities, enabling the determination of the quality of Mission Bay water prior to any filtering as well as the final quality of any discharge prior to entering Mission Bay.

Additionally, the status of the receiving water is analyzed with samples taken 3,000 feet from the discharge points.

As with all structural development in Mission Bay Park, storm runoff from SeaWorld San Diego enters into the adjacent Mission Bay. In addition, SeaWorld is unique in that it uses sea water for its aquariums and show tanks, and circulates this water to and from the bay. To address water quality concerns, SeaWorld constructed two on-site treatment facilities that have been operational since October, 1991. Conceived initially to address the treatment of used aquarium water, these facilities are subject to a NPDES permit and were ultimately designed with enough capacity to treat the entire leasehold and future planned leasehold improvements. The NPDES permit requires weekly sampling of coliform, chlorine, and acidity of the effluent, which discharges into Mission Bay, and semiannual monitoring of solids, turbidity, grease, and oil. Although designed primarily for the treatment of used aquarium water, these facilities also treat surface runoff from the developed park area and the improved parking lots before discharging into Mission Bay. The remainder of the parking lot runoff enters the City's municipal storm drain system, which is outfitted with low-flow interceptors. During more intense storm events, the nearest storm drain discharges directly into Mission Bay in the Perez Cove area (westernmost point of SeaWorld).

The current park layout includes a series of storm water and catchment areas that convey water to either SeaWorld's Western Wastewater Treatment Plant or the Eastern Wastewater Treatment Plant. The main visitor parking lot drains southerly to the municipal storm water system. The two treatment plants are used to treat the collected outfall discharge from storm water sources, landscape irrigation runoff, and various industrial activity wastewater from exhibit pools and aquaria. With the proposed development, the volume of influent and effluent will increase but will still be within the existing RWQCB permit limits, and will not require amendments to those permits. SeaWorld also has two backup generators, one each at the west and east treatment facilities, to ensure they are operable during extended power outages.

In addition, SeaWorld has a Best Management Practices (BMP) program in place to control non-point sources of pollution during its day-to-day operations. In the past, concerns have been raised regarding SeaWorld's land and water operations with respect to maintaining optimum water quality. In particular, the manner in which surface runoff from the parking lots is discharged has been raised as a significant issue. This issue was addressed in detail in review of the SeaWorld Master Plan, and SeaWorld's grading, drainage, erosion, and storm water requirements in that document were reviewed and found acceptable by the Commission's water quality staff. The proposed development is designed to tie into the park's existing storm water system. Moreover, the proposed development will not substantially increase impermeable surfaces or significantly change existing patterns of runoff. The subject proposal does not modify any of SeaWorld's existing water treatment, collection, or discharge facilities. These facilities currently process runoff from some of SeaWorld's paved parking lots and nearly all of its developed venues; this treatment will continue.

SeaWorld's most recent 2014 Annual Discharge Compliance Evaluation report prepared by the firm Brown and Caldwell states that SeaWorld has a total capacity of 11,480,600 gallons. SeaWorld has salt water intakes at 3 locations in Mission Bay: the west pier intake (near Cirque

de la Mer stadium and marina), east pier intake (near Shark Encounter), and shark intake (near Shark Encounter). The two piers are screened on all sides with screens and nets and covered by the piers above them to limit the introduction of detritus or animals. The shark intake is a closed intake within an enclosed box filled with gravel to create an in-ground infiltration intake point. The West intake consists of two pumps with a total capacity to pump up to 6.12 million gallons per day (mgd). The East intake consists of four pumps with a total capacity to pump 3.24 mgd. SeaWorld's NPDES permit allows the discharge of up to 9.6 mgd of treated industrial activity wastewater from exhibit pools and aquaria; intermittent flows during pool draining and cleaning operations, runoff from landscape irrigation; and facility wash downs. Storm water is discharged from the facility during rain events. Prior to discharge, all effluent is directed to either the East or West Effluent Treatment Facilities.

The park site is relatively flat, with elevations ranging between ten and twenty feet above mean sea level. Storm water is collected onsite and conveyed via an underground pipe system which includes various drop inlets and piping networks. Surface runoff from the project site would be directed to the Western Wastewater Treatment Plant. Filter fabrics are installed on all the storm water inlets that are not routed to either of the two onsite treatment plants, and for some of the larger storm water inlets throughout the park.

The Western Wastewater Treatment Plant that would capture storm water from the project site includes a chlorination/de-chlorination treatment system, primarily for disinfection of the water from the tanks and storm water. The wastewater is screened via one-inch screens and diversion chambers that transfer the water to chlorine contact chambers. Sodium hypochlorite is injected at three pre-chlorination points in the collection system prior to the contact chamber.

Once disinfected, residual chlorine is neutralized by injection of sodium sulfite into the discharge stream. The treated, de-chlorinated water is then discharged to Mission Bay form the Western Wastewater Treatment Plant through what the RWQCB identifies as Discharge Point No. 002. This discharge point has a maximum discharge rate of 6.12 million gallons per day (the western and eastern discharge points can discharge up to 9.6 million gallons a day in aggregate) of treated industrial activity wastewater from exhibit pools and aquaria; intermittent flows during pool draining and cleaning operations; runoff from landscape irrigation; and facility wash down water.

Though SeaWorld can discharge 6.12 million gallons a day, it has historically been well below that discharge rate. During 2014, daily flows at the West and East treatment facilities averaged 2.334 and 1.600 mgd, respectively. The highest daily flow during that period was 2.864 million gallons a day for the Western Wastewater Treatment Plant, and total flows for both west and east discharge points ranged from 3.208 million gallons a day to 4.471 million gallons a day, and averaged 3.934 million gallons a day during 2014.
The salt water pumping system within SeaWorld is akin to a circulatory system in that the various salt water tanks and aquariums within the park are connected to a larger internal network, allowing SeaWorld to shift volumes of water throughout the park as needed. Because of this, SeaWorld's intakes of water from Mission Bay are generally to "top off" to compensate for water lost through evaporation, spillage, and the like. Similarly, because SeaWorld is able to hold and circulate its internal water supply as needed, discharges of salt water arise from when

there is too much water in the system – as from a storm event – or when a tank is drained to perform routine maintenance. This is a large part of why SeaWorld's discharge volumes are consistently well below the limits set in its RWQCB permits. When the proposed orca facility expansion is completed, SeaWorld will have to intake approximately 5.65 million gallons of salt water to fill the new tanks, but afterward, operations will return to the general pattern that has persisted for the past years, and intake and discharge flows of the park will proceed normally.

During 2014, compliance monitoring of the effluent discharges from both the West and East treatment facilities with regards to pH, fecal coliform, enterococcus, residual chlorine, temperature (which may not be more than 1-3 degrees Celsius different from receiving waters), copper, Total Suspended Solids (which may not constitute more than 10% more than intake waters), Total Settleable Solids, turbidity, ammonia, oil and grease, silver, and toxicity (100% survival rate of test organisms after exposure) all met RWQCB permit requirements.

For total coliform, the effluent of all discharges at the East and West facility met all compliance limits for total coliform during 2014, with the exception of two test samples at the West facility in March and December (there were also exceedances of coliform limits from the West treatment facility in February, September, and October of 2012). All exceedances were reported to the RWQCB, and subsequent inspections of the treatment facility found no malfunctioning equipment, and the vast majority of the historic samples were within permit parameters. In response, SeaWorld installed additional water treatment equipment such as vacuum pumps to reduce sediment buildup in the water treatment contact chambers and a static mixer at the pump discharge, as well as conducting "Dye Tests" to test the operation of the treatment facilities to study the flow of water and disinfectants through them, and increased the frequency of cleanouts of the storm drains and treatment chambers.

The RWQCB has reviewed the self-monitoring reports for SeaWorld San Diego from July 2013 through April 2015, which consists of monthly, quarterly, semi-annual, and annual reports and found no issues with the submitted monitoring data.

As recommended in the guidelines of the certified SeaWorld Master Plan, SeaWorld utilizes many features to ensure that its water is used efficiently within the park. As mentioned earlier, SeaWorld intakes salt water from Mission Bay for usage in the animal exhibits. However, it is not a constant inflow and outflow of water. Instead, after initial intake treatment, SeaWorld's existing piping infrastructure circulates the salt water around the park as needed, and intakes additional salt water mostly to "top off" internal supply to compensate for evaporation loss. This is one of the reasons why SeaWorld's intake and discharge volumes have been consistently below the limits established in its RWQCB permits.

Because SeaWorld has an extensive water treatment system to handle water from both the animal exhibits and surface runoff, which is monitored under a thorough permitting regimen that has identified minimal water quality violations, the proposed development, as conditioned, will not cause adverse impact to the water quality of adjacent Mission Bay.

Freshwater Usage

Regarding freshwater usage, the existing orca facility has a restaurant and bathroom facility which was utilized for a "Dine with Shamu" event that SeaWorld offered. As part of the orca facility expansion, the dining area will be removed, and the restrooms will remain but be closed to the public. A nearby 5,500 square foot restaurant/restroom facility is proposed to be demolished to make room for the pool expansion, and be replaced with a new 2,900 square foot bathroom facility. This new restroom facility will be designed to utilize the saltwater that SeaWorld currently intakes for its animal facilities, and will be the second such saltwater restroom facility within SeaWorld San Diego. The capacity of the new restroom will match that of the demolished restroom, but due to the use of saltwater, the new restroom facility is anticipated to save approximately one million gallons of potable water.

To control the temperature of the water for the various animal exhibits in SeaWorld, the park utilizes two chillers and evaporative cooling towers. These chillers and evaporative cooling towers are similar to the HVAC systems used in many commercial buildings, and utilize the evaporation of potable water to remove heat from the chilled water loop that recirculates through the park between the various animal exhibits, office air conditioning, and public area climate control. Because of the expanded water volume of the expanded orca facility, the chillers and two cooling towers will be replaced with new, larger 650-ton chillers that will utilize more water for evaporative cooling. The anticipated increase in freshwater usage due to evaporative water loss from the cooling towers because of the increase in chilled water production is estimated to range up to 18,000 gallons a day during peak periods. However, because SeaWorld pulls in water from Mission Bay, which fluctuates in temperature, and the needs of the park are affected by attendance, ambient temperature, and the needs of the animals and facilities that day, the amount of evaporative cooling loss fluctuates over the year. SeaWorld estimates that total consumption of water, in units of hundred cubic feet (HCF) to be approximately 4,441 HCF to 6,684 HCF annually. One HCF is equivalent to 748.5 gallons, so the total consumption of water is projected to be 3,324,089 gallons to 5,002,974 gallons annually. However, when factoring in the anticipated savings from usage of salt water in the proposed restroom facility, the net increase in water usage arising from the orca tank expansion is between 1,766 HCF and 4,010 HCF annually (1,321,851 gallons to 3,001,458 gallons).

SeaWorld also utilizes water-efficient irrigation systems that sense the ambient humidity and soil moisture to determine the optimal periods to irrigate, as well as utilizing low-flow irrigation to minimize overwatering and spillage. SeaWorld also utilizes drought resistant landscaping in much of the park, and utilizes seawater, as opposed to fresh water, in its animal wash down areas. Water features such as fountains also utilize sea water. Because of measures such as those described above, SeaWorld reduced its potable water usage by 22% between 2014 and 2015, yielding reductions to date of 29,746 HCF (22,264,881 gallons).

In light of the water savings represented by the new salt water restroom facility and the reduction in park-wide potable water use SeaWorld has achieved through measures such as efficient irrigation, the Commission finds that the increase in potable water use arising from the proposed development has been reasonably minimized and will not represent an adverse impact to local water supplies.

Landfill

The southeastern-most parking area of SeaWorld leasehold is underlain by a portion of the inactive Mission Bay Landfill. The City of San Diego operated the landfill from approximately 1952 until 1959. The landfill reportedly accepted municipal solid waste and some liquid industrial wastes (including acids, alkaline solutions, solvents, and paint wastes). The U.S. EPA estimates that up to 737,000 gallons of industrial wastes may have been disposed at the landfill during its operation. After closure of the landfill, dredged material from Mission Bay (consisting of mostly fine-grain material) was placed on top of the former landfill surface to a depth of approximately 15 feet. A portion of the site is currently paved with a chip-seal paving surface which allows for diffusion of landfill gases while remaining impervious to water infiltration. Although the proposed new orca facility is located approximately 1,700 feet to the west of the estimated western limits of the landfill, because the proposed development involves the excavation of approximately 35,000 cubic yards of soil to depths of over 50 feet, the potential for contamination or human health impacts associated with the project have been reviewed.

When the SeaWorld Master Plan Update and the subsequent splashdown ride were being proposed to the Commission, several investigations of the landfill were conducted to evaluate the extent of potential chemical contamination. Samples for chemical analysis were collected from soils, surface water, sediments, and groundwater from the landfill and surrounding areas. Investigations detected a number of chemicals in onsite soils and groundwater including heavy metals, volatile and semi-volatile organic compounds, and chlorinated pesticides. In 1985, the Regional Water Quality Control Board (RWQCB) adopted Order No. 85-78, which required, among other things, routine monitoring of groundwater, surface water, and sediments from Mission Bay and the San Diego River. In addition to routine monitoring, several additional soil and groundwater investigations were conducted in and around the landfill through 1997. The results of these investigations and continued routine monitoring indicated that low levels of chemicals were detected in soils and groundwater beneath and adjacent to the landfill. According to the RWQCB, these low levels of chemicals did not represent a significant threat to public health or the environment. Furthermore, the California Department of Toxic Substances Control (DTSC) and the U.S. EPA previously evaluated the site in 1987 and 1993, respectively, and determined that the site did not pose a significant threat. Moreover, although the Mission Bay Landfill was considered for listing on the EPA's s Superfund National Priorities List in the early 1990's, it was determined that the site did not qualify for inclusion on the list.

Starting in the early 2000's, the City of San Diego conducted a multi-year investigation of the landfill to determine constituents, boundaries, and any potential leakages of the Mission Bay Landfill. The City also convened a Technical Advisory Committee (TAC), consisting of representatives of environmental organizations, the RWQCB, the state university system, the medical profession, and the community, as well as members of the City's Solid Waste department, who acted as staff to the committee. The TAC was primarily charged with determining the physical extent of the landfill, identifying its contents to the best degree possible through searches of old records, identifying the current chemical makeup up the landfill, and analyzing any potential risks to public health and safety.

The TAC's findings were documented in a final report in September, 2006. It summarized the technical investigations that had been conducted, which identified the landfill's constituents and

any potential hazards. The study concluded that the landfill boundaries were slightly larger than previously thought, but that no leaking of toxic materials was occurring, and no significant public hazard existed. The only remediation identified in the report was to increase the soil cover on a portion of the landfill located well away from the SeaWorld site. The City's Local Enforcement Agency, which regulates all development within 1,000 feet of any landfill, had determined that paving over the landfill would not adversely affect the landfill itself, nor pose an increased risk to the public. The Commission's water quality staff reviewed the TAC's findings at the time and concluded that no new or different concerns with respect to water quality were identified.

The RWQCB continues to be the lead agency for oversight for water quality issues at the Mission Bay Landfill. The City of San Diego continues to monitor the site in accordance with RWQCB Order 97-11, General Waste Discharge Requirements for Post-Closure Maintenance of Inactive Nonhazardous Waste Landfills. Routine monitoring has detected low levels of several chemical constituents in groundwater beneath and adjacent to the site. However, the concentrations of these chemicals have been well below any of the established action levels identified by the RWQCB, and do not appear to represent a significant threat to public health or the environment. The site is currently in compliance with the requirements of the City of San Diego Solid Waste, the RWQCB, and the California Integrated Waste Management Board.

Public comments related to the presence of contaminants in groundwater beneath the landfill and the potential for migration of these chemicals offsite were submitted to the Commission in 2002 and 2003, when the Commission approved the splashdown ride and subsequently denied a revocation request regarding that approval. The Commission's water quality staff reviewed the available monitoring data at that time regarding groundwater conditions at the Mission Bay Landfill. Commission staff concluded that the data supported the determination by the regulatory agencies overseeing the landfill that the low levels of chemicals detected did not represent a significant threat to public health or the environment. The same public comments had already been submitted during the comment period for the *Draft Environmental Impact Report for the Proposed Sea World Master Plan Update (EIR)*, dated March 12, 2001. Those comments and related issues were fully and adequately analyzed by the lead agency in the Final EIR.

Public comments with accompanying data were also submitted on January 22, 2002. Those comments attempted to relate the Maximum Contaminant Levels (MCLs) and the California Toxics Rule (CTR). Both of those regulations establish water quality standards for either sources of drinking water (MCLs) or Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. The 2002 comments related to soil samples, not water samples, and therefore did not apply to either MCLs or the CTR. The data presented was insufficient to draw any conclusions about potential migration to surface or groundwater or about the levels at which the chemicals may be present in surface or groundwater. Furthermore, the concentrations detected were low, and not untypical of those found in background soils in urban areas. A comparison of those heavy metals and organic compounds detected in the soil samples to the U.S. EPA Region 9's Preliminary Remediation Goals for either residential soils or soil screening levels for Migration to Ground Water, show they were substantially (2 to 4 orders of magnitude) below levels which would require action.

As noted, the location of the proposed orca pool expansion is within the already developed portion of the park and is approximately 1,700 feet to the west of the currently mapped landfill. A substantial portion of the developed park and an existing parking lot occupies the area between the development site and the historic landfill. In addition, while the City has in the past indicated that the exact limits of the landfill have not been defined, numerous soil borings have been made in and around the landfill, providing a basis for some understanding of the limits of the waste. When the splashdown ride was constructed approximately 500 feet northwest of the outer limits of the landfill's historic leasehold, a geotechnical investigation of that site was conducted with eight soil borings, and no trash or other landfill contents was encountered. Review by the Commission's staff geologist at the time of the geotechnical survey of the South Shores Area – the area where the historic Mission Bay Landfill was located and which was later developed in the 1980's as a separate public improvement to Mission Bay Park – and the geotechnical investigation of the splashdown site was determined to be sufficient to conclude with a high level of confidence that the landfill does not extend beneath the splashdown site. In addition, no illegal levels of ground water contamination were found at the splashdown site. The groundwater evidence further suggested that the hazardous wastes that almost certainly do exist within the landfill itself have not migrated into the area of the splashdown ride. High levels of methane and hydrogen sulfide are associated with the landfill, and it is possible, though very unlikely, that these gasses could migrate laterally along porous layers to the developed park area. However, there is no evidence that this has occurred to date, and no such migration of hazardous gasses has ever been reported during any earthquake. As the proposed orca facility is even further away from the historic landfill than the splashdown ride, it is even less likely that the landfill or groundwater contaminated by the landfill has migrated under or adjacent to the project site.

Despite the above studies, in the past, members of the public have presented to the Commission a great deal of photographic evidence, including historic aerials of the Mission Bay Park area spanning the years 1941 to 1958, including World War II, post-war periods, and the years the landfill was known to be in active, formal use, to support claims that the landfill has migrated under SeaWorld. Several of these earlier photos indicated that some type of ground disturbance occurred west of the identified landfill site and well within what would become the SeaWorld leasehold. This was many years before the identified landfill east of the site began operations in the early 1950's. However, the scale and quality of the photos makes it virtually impossible to determine with certainty what activity is taking place on the subsequent SeaWorld site.

Pre-existing uplands in this general location supported an airfield and racetrack, and possibly some military uses. During the same range of years, the land and channel portions of Mission Bay Park as a while were being created, and the San Diego River was being redirected and channelized. Large amounts of hydraulic materials were being dredged from the new river bed; these were placed to form the park's additional upland areas and islands. SeaWorld, South Shores, and Fiesta Island were the last parts of the park to be fully formed. Dredging and fill activities continued in these locations after they had ceased elsewhere in the park, right through the official landfill years and into early 1960's. Whether the activities seen in the earlier photos show land disturbed by dumping or land disturbed by dredge and fill operations is very difficult to say and may never be fully resolved.

Thus, the Commission has previously found the more compelling evidence to be the laboratory results of the various geotechnical, soil, air, and groundwater studies taken over several years. Although it is clear from the pictures that some sort of activity occurred in the area that is now SeaWorld, there is no evidence that any toxic or hazardous materials underlie the splashdown site, let alone the remainder of the park. Excavations for the splashdown ride's foundations extended to a depth of 25 – 30 feet. Although mechanical and hydraulic fill materials were encountered, waste and landfill debris were not.

The excavation plan submitted by SeaWorld contains "Ground Water Discharge Notes," which states that "[a]ll ground water extractions and similar waste discharges to surface waters not tributary to the San Diego Bay are prohibited until it can be demonstrated that the owner has applies and obtained authorization from the State of California via an official "Enrollment Letter" from the Regional Water Quality Control Board in accordance with the terms, provisions, and conditions of State Order No. R9-2008-0002 NPDES CAG919002." The notes further continue that "[t]he estimated maximum discharge rates must not exceed the limits set in the official "Enrollment Letter" from the Regional Board unless prior notification and subsequent authorization has been fully obtained, and discharge operations modified to accommodate the increased rates." Therefore, the need for monitoring and treatment of groundwater pumped out of the excavation site for the expanded orca facility has been anticipated and incorporated into the project proposal.

Concerns regarding potential impacts to human health associated with grading and excavation at SeaWorld have also been raised by members of the public. There are five methane monitors located in the buildings of the Journey to Atlantis splashdown ride, which are inspected monthly and annually calibrated. There is no record of the alarms going off due to detection of unsafe levels of methane.

SeaWorld provided a copy of an April, 2015, letter to the City of San Diego Local enforcement Agency and Environmental Services Department with the most recent periodic landfill gas monitoring data associated with the Journey to Atlantis Soil Gas Probes. SeaWorld utilizes monitoring equipment to sample the vapor wells to sample for targeted constituents associated with landfill gases. The soil gas probes sample for carbon dioxide, oxygen, methane, and hydrogen sulfide. The April, 2015 report indicates that all trace gases are below the reporting levels that would indicate potential risk to human health or the environment.

SeaWorld also submitted a December, 2014, Export Material Characterization Study, which utilized soil borings to analyze the soils under the proposed excavation area. The tests boring were done to the same depth as the proposed excavation for the expanded orca facility. The study noted that the soils of the project site consist of approximately 14 feet of dredged fill overlaying at least 16 feet of Quarternary-age bay deposits. The groundwater table is generally shallow at 6-10 feet in elevation relative to SeaWorld datum. Four borings were taken within the proposed orca tank footprint in September, 2014. The boring samples were then screened, and levels of constituents were below detection limits for polyaromatic hydrocarbons, butylins, phthalates, phenols, chlorinated pesticides, chlordane, polychlorinated biphenyls, and total petroleum hydrocarbons. The study concludes that chemical levels are below levels that would trigger

concern, and no special handling or disposal options are anticipated to be necessary and beneficial reuse may be considered.

Furthermore, because the groundwater table is fairly shallow on the SeaWorld leasehold, the RWQCB requires that monthly dewatering testing and reporting be done for dewatering activities in SeaWorld, such as with the Manta rollercoaster attraction. These reports record the initiation and termination of dewatering activities, as well as the quantity of dewatering, and analysis of the constituents contained in the water itself.

Geologic Hazard

The March 17, 2015 Christian Wheeler geotechnical report indicates that the soils at the site are susceptible to liquefaction in the event of a major earthquake on the Rose Canyon Fault (1.5 miles from the site) could produce liquefaction-induced settlement of 5-8 inches, and differential settlement of 3.5-5.5 inches. The report contains recommended foundation mitigation measures to protect against such liquefaction induced settlement. In addition, large buoyant forces would act on the underground habitats (tanks) during liquefaction, potentially disrupting them and causing damage or failure in the event of an earthquake. These forces can be mitigated by the use of tie-downs and tie-back anchors, specifications for which are included in the report. The Commission's staff geologist, Dr. Mark Johnsson, has reviewed this report and concurs with its conclusions. Accordingly, in order to be fully consistent with Coastal Act section 30253, the Commission finds it necessary to impose **Special Condition No. 2** to require that all recommendations contained in the March 17, 2015 geotechnical report prepared by Christian Wheeler be complied with during final design and construction plans of the proposed project.

Because SeaWorld continues to intake and discharge water in and out Mission Bay, and because storm water runoff from the site and water from the expanded tanks will eventually enter the bay, **Special Condition No. 4** requires SeaWorld to submit a final drainage plan that ties into the existing treatment system currently serving the park, which the Commission and other agencies have found adequate to treat such outflows. Additionally, because the proposed expansion of the orca pools will involve a large amount of excavating and spoil disposal, **Special Condition No. 6** requires SeaWorld to submit proof that it has secured a legal disposal site outside of the Coastal Zone for the graded material.

In conclusion, the water quality data submitted both for the current proposal as well as past developments approved by the Commission, in conjunction special conditions regulating water quality and geologic hazard mitigation measures, means the proposed development will not adversely impact the water quality of coastal waters or increase geologic hazards and is found in conformance with Chapter 3 of the Coastal Act.

F. VISUAL RESOURCES

Section 30251 of the Coastal Act states, in part:

> *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect*

views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.

The proposed orca facilities will be located within the developed boundaries of SeaWorld, near the center of the park leasehold, southeast of and connected to the existing Shamu Stadium. The proposed development is designed to be visually consistent with the existing adjacent structure. The proposed improvements are substantially below-grade, and the above-grade improvements will be approximately 17 feet in height, and will not be visible from outside of the park leasehold.

Mission Bay Park is recognized nationally as a public resource providing a wide variety of passive and active recreational opportunities in a unique, visually-pleasing setting. The park is generally horizontal in character, consisting primarily of rolling grassy areas, sandy beach, and open water. There are a number of commercial leaseholds scattered throughout the park, which have been developed to various intensities. For the most part, the structural improvements in Mission Bay Park are low scale and do not detract from the wide open feeling of the park. Limited exceptions exist in four hotel towers (Hyatt Islandia, Bahia, Catamaran, and Hilton) and three attractions at SeaWorld (the observation tower, the gondola ride, and the splashdown ride). The majority of these structures predate the Coastal Act and the City's 30-ft. coastal height limit overlay zone passed by City voters in the 1970's.

In 1998, SeaWorld sponsored, and City voters approved, an initiative exempting its leasehold from the City's 30-foot coastal height limit overlay zone. This initiative allowed future development within the leasehold to go as high as 160 feet – half the height of the existing observation tower. The splashdown ride was approved by the Commission subsequent to this exemption and the 2002 updates to the certified Mission Bay Park Master Plan and the SeaWorld Master Plan incorporated the initiative exemption. However, the majority of the facilities at Sea World are completely or largely screened from the surrounding park and bay. The gondola ride, which supports are 100 feet tall, is in an area of existing mature vegetation that is sixty to eighty feet in height and provides screening. The currently developed portions of SeaWorld are heavily landscaped with a variety of mature trees, shrubs, and groundcovers. Many existing trees are 60-80 feet tall and effectively screen the interior of the park from views outside SeaWorld. In addition, the existing landforms and development in this area obscure any view of Mission bay across the historic leasehold itself.

All of Mission Bay Park is a highly scenic public recreational resource, such that protection and enhancement of visual amenities is a critical concern for any proposed development in the park. The appropriate height of any proposed structure must be thoroughly analyzed, taking into consideration the specific details, siting, scale, and bulk of the proposed development, the nature of surrounding development, and the potential for cumulative impacts from additional future development. The proposed orca facility expansion is located within, but not along the perimeter of, the existing enclosed Sea World theme park, near the center. As the facility will be an expansion of pools used by the orcas, the majority of the development will be at or below grade, and no part will exceed 30 feet in height. Due to the existing mature vegetation throughout much

of the developed park, buildings 30 feet in height or lower cannot be readily seen from outside the park.

The Commission's primary concern with respect to view preservation is to assure that views currently available to the general public recreating in Mission Bay Park are not obscured or significantly degraded. The public recreational amenities at South Shores Park are located immediately east of the SeaWorld leasehold, but significantly distant from the proposed development. Across the Pacific Passage to the north of the leasehold lies Fiesta Island. Along with South Shores, this is the last remaining large piece of undeveloped parkland designated for public recreational uses. Like South Shores, anticipated improvements include grassy picnic areas, open play areas, restrooms, and parking lots. These two areas are the closest to the SeaWorld leasehold, and thus most likely to be affected by development within the park.

SeaWorld has submitted photos to show the view of the leasehold from a number of exterior locations, including SeaWorld Drive and Ingraham Street. The proposed development will not be visible from any of the vantage points due to intervening development, mature vegetation, and space to soften the view. Due to the roadside berm and distance across the parking lots, the development is not readily discernable from Sea World Drive.

To ensure that the proposed development will not impact views, **Special Condition No. 2** requires SeaWorld to adhere to approved final plans, which show the development to be completely under 30-feet in height. Thus, the Coastal Commission finds the proposed development visually compatible with the surrounding existing development, with no adverse impact on the existing scenic coastal area.

G. REIMBURSEMENT IN CASE OF CHALLENGE

Coastal Act Section 30620(c)(1) authorizes the Commission to require applicants to reimburse the Commission for expenses incurred in processing CDP applications. Thus, the Commission is authorized to require reimbursement for expenses incurred in defending its action on the pending CDP application in the event that the Commission's action is challenged by a party other than the applicant. Therefore, consistent with Section 30620(c), the Commission imposes **Special Condition No. 9** requiring reimbursement for any costs and attorney fees that the Commission incurs in connection with the defense of any action brought by a party other than the applicant challenging the approval or issuance of this permit.

H. LOCAL COASTAL PLANNING

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

Mission Bay Park is primarily unzoned. As a whole, Mission Bay Park is a dedicated public park, and SeaWorld is designated as "Lease Area" in the certified Mission Bay Park Master Plan. The subject site is located within the City of San Diego in an area of deferred certification, where

the Commission retains permit authority and 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, and thus, approval of the development, as conditioned, will not prejudice the ability of the City of San Diego to implement its certified LCP for the Mission Bay Park segment.

I. 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. A certified Environmental Impact Report (EIR 99-0618) was produced in 1999 in conjunction with the current SeaWorld Master Plan Update. Although the EIR for the Master Plan does not directly include this specific project, the EIR addresses the relevant impacts created by the project, such as visual impacts, traffic impacts, geologic hazards, noise impacts, water quality, and water conservation. The City of San Diego is the lead agency for the purposes of CEQA, and the City determined that because the 1999 EIR contemplated the type of impacts that the proposed project could produce and that the EIR recognized that SeaWorld had pre-existing marine-related facilities that would require repair and upgrades, the City did not determine that a new, project-specific EIR was required.

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 final construction plans, landscaping plans, drainage plans, construction plans, disposal of graded materials, and management of the orca facility and its population 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.

(G:\San Diego\Reports\2015\6-15-0424 SeaWorld Orca Facility stf rpt draft.docx)

APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

- Mission Bay Master Plan
- SeaWorld Master Plan Update
- Christian Wheeler Engineering March 17, 2015, Report of Preliminary Geotechnical Investigation
- Moffat & Nichol December, 2014, Export Material Characterization Study
- SeaWorld August 21, 2015 Noise Impact memo

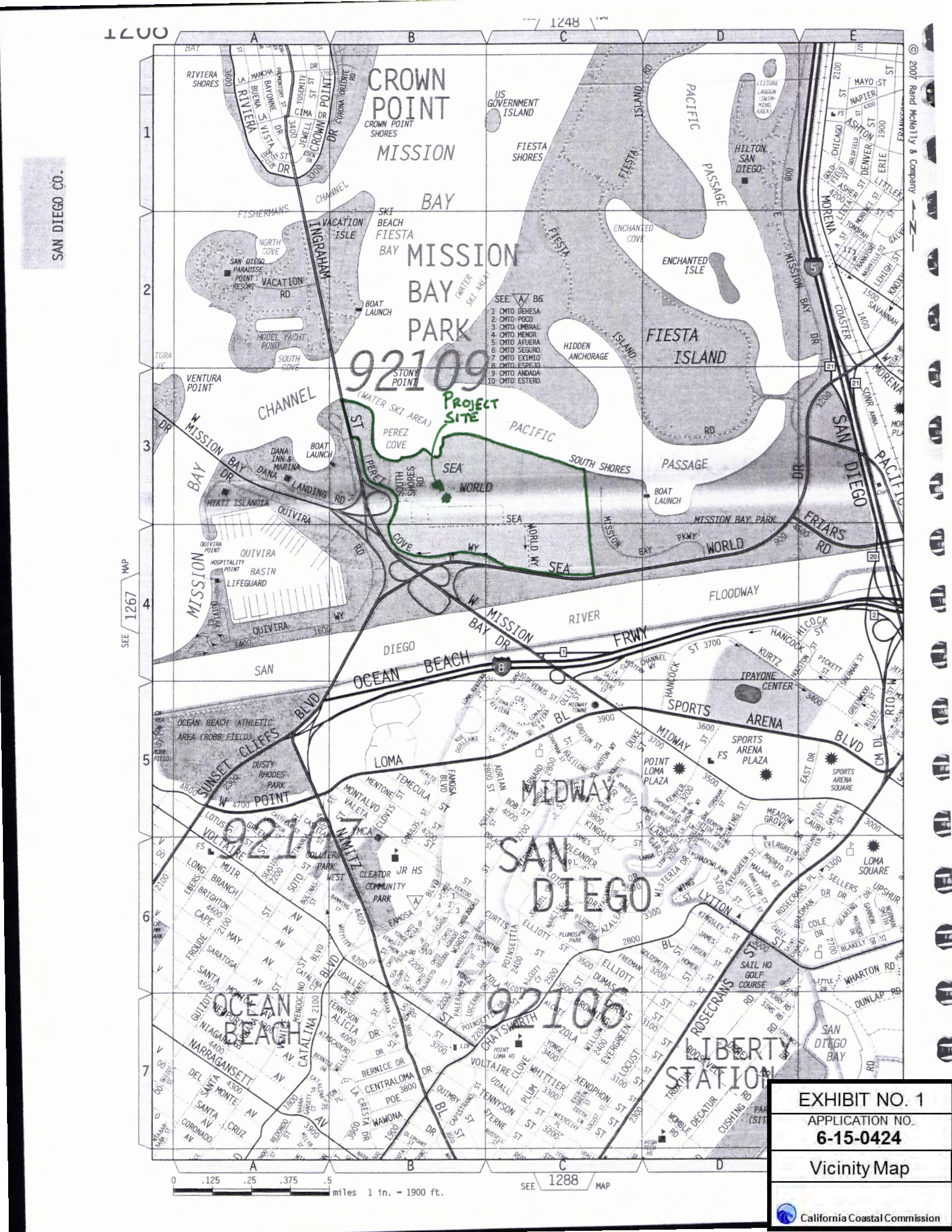


EXHIBIT NO. 1

APPLICATION NO. 6-15-0424

Vicinity Map

California Coastal Commission

EXHIBIT NO. 2
APPLICATION NO.
6-15-0424
Aerial View
California Coastal Commission

Existing Facility

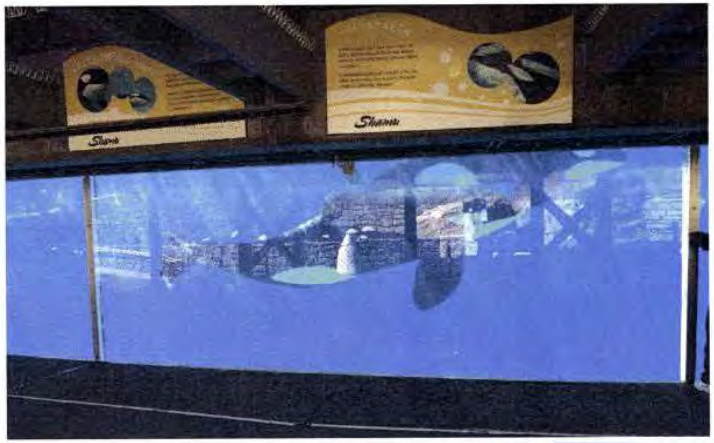


EXHIBIT NO. 3

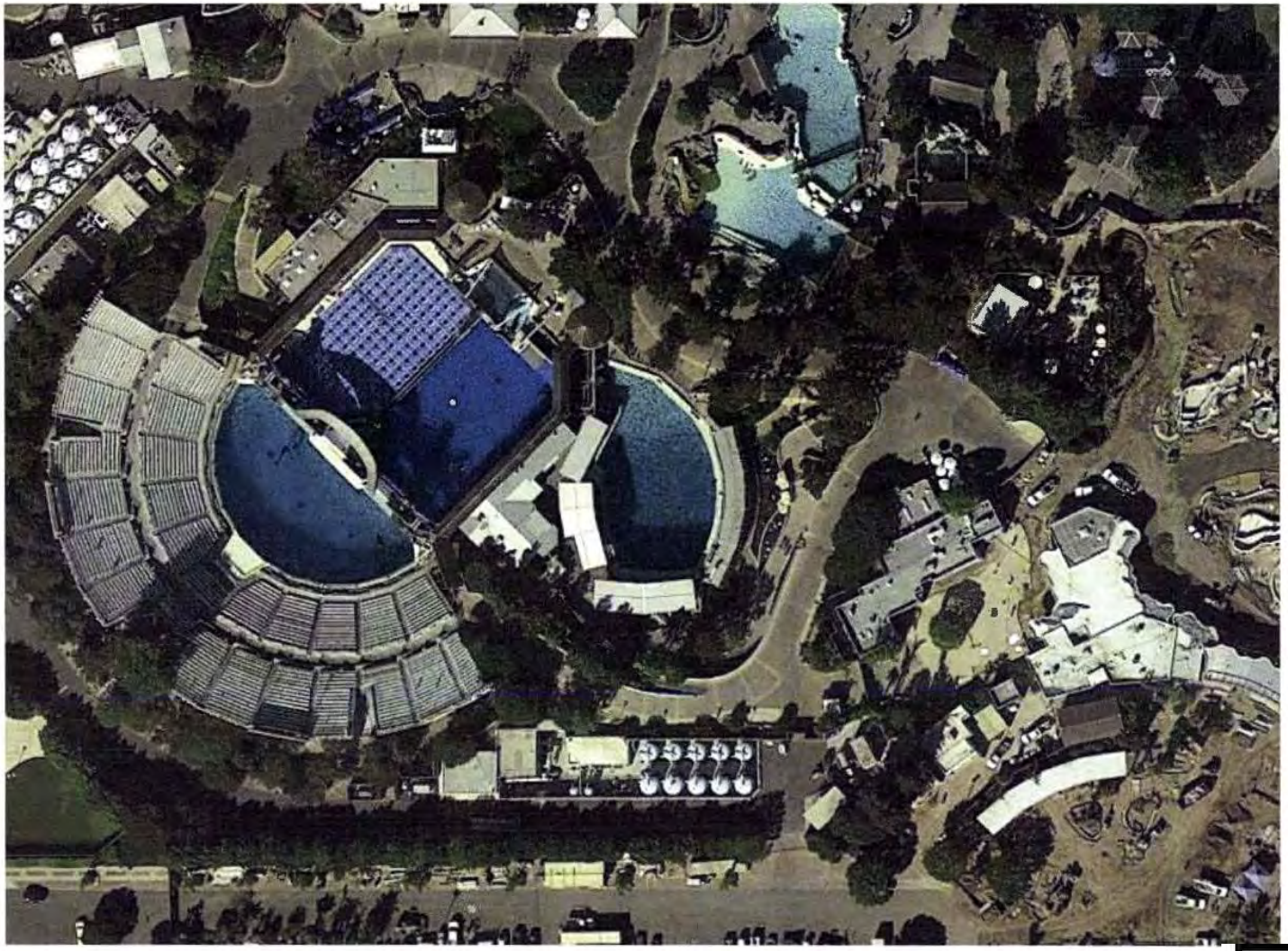
APPLICATION NO.
6-15-0424

Existing Facilities

California Coastal Commission

Other ancillary buildings

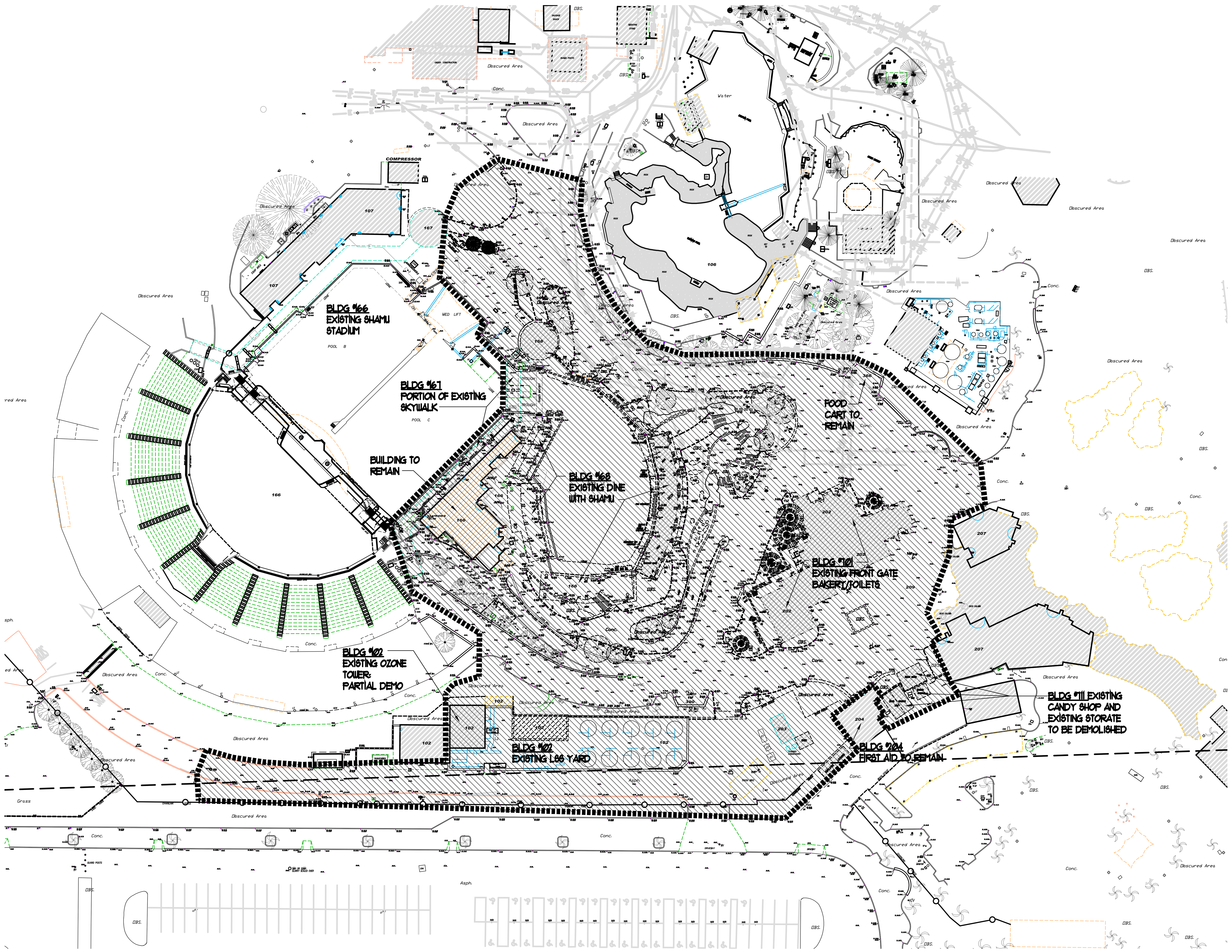
- Rebuild Restroom/Bakery
  - New Location
  - Saltwater Flush for Restrooms



2

EXHIBIT NO. 4
APPLICATION NO.
6-15-0424
Proposal Comparison
California Coastal Commission


20
80
0
40
120



A6 SITE DEMOLITION PLAN

1" = 40'-0"

SCALE:

PLAN NORTH

Keynote List

SEE GENERAL DWG INFO. SHEET FOR COMPLETE LIST

DEMOLITION SITE PLAN GENERAL NOTES

1. CONTRACTOR SHALL PROTECT FROM DAMAGE DURING CONSTRUCTION THE EXISTING ITEMS TO REMAIN INCLUDING UTILITIES, FACILITIES, STRUCTURES, FINISHES, LANDSCAPE. CONTRACTOR TO PROTECT FROM DAMAGE DURING CONSTRUCTION ADJACENT FACILITIES AND ITEMS THAT REMAIN IN USE BY THE OWNER DURING THE CONSTRUCTION PERIOD.

2. CONTRACTOR SHALL PROTECT EXISTING LANDSCAPE TO REMAIN INCLUDING TREES, PLANTS, TURF, AND GRASSES WITH A PROTECTIVE FENCE. LOCATE FENCE WHERE INDICATED, AND WHERE NOT INDICATED, LOCATE FENCE AT THE DRIP LINE OF TREES AND PLANTS, OR AT A MINIMUM DISTANCE CONDUCTIVE TO THE SURVIVAL OF THE LANDSCAPE MATERIAL.

3. CONTRACTOR SHALL RELOCATE FENCES AND GATES AS REQUIRED FOR STAGING AND PHASES THROUGHOUT THE CONSTRUCTION PERIOD. REFER TO CONSTRUCTION PHASING DRAWINGS.

4. REFER TO TEMPORARY FACILITIES AND CONTROLS SPECIFICATION FOR TEMPORARY FENCE TYPES AND MATERIALS.

5. REFER TO SITE DETAIL DRAWING(S) FOR FENCE TYPES AND DETAILS.

LEGEND

- DEMOLISHED BUILDING
- DEMOLISHED AREA
- PROJECT LIMIT LINE
- MATCH LINE
- PROJECT FENCE

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REVISION NO.	REVISION DATE

SeaWorld SAN DIEGO

BLUE WORLD
San Diego, CA

Owner Review

SITE DEMOLITION PLAN

EXHIBIT NO. 5
APPLICATION NO.
6-15-0424
Site Plans

California Coastal Commission

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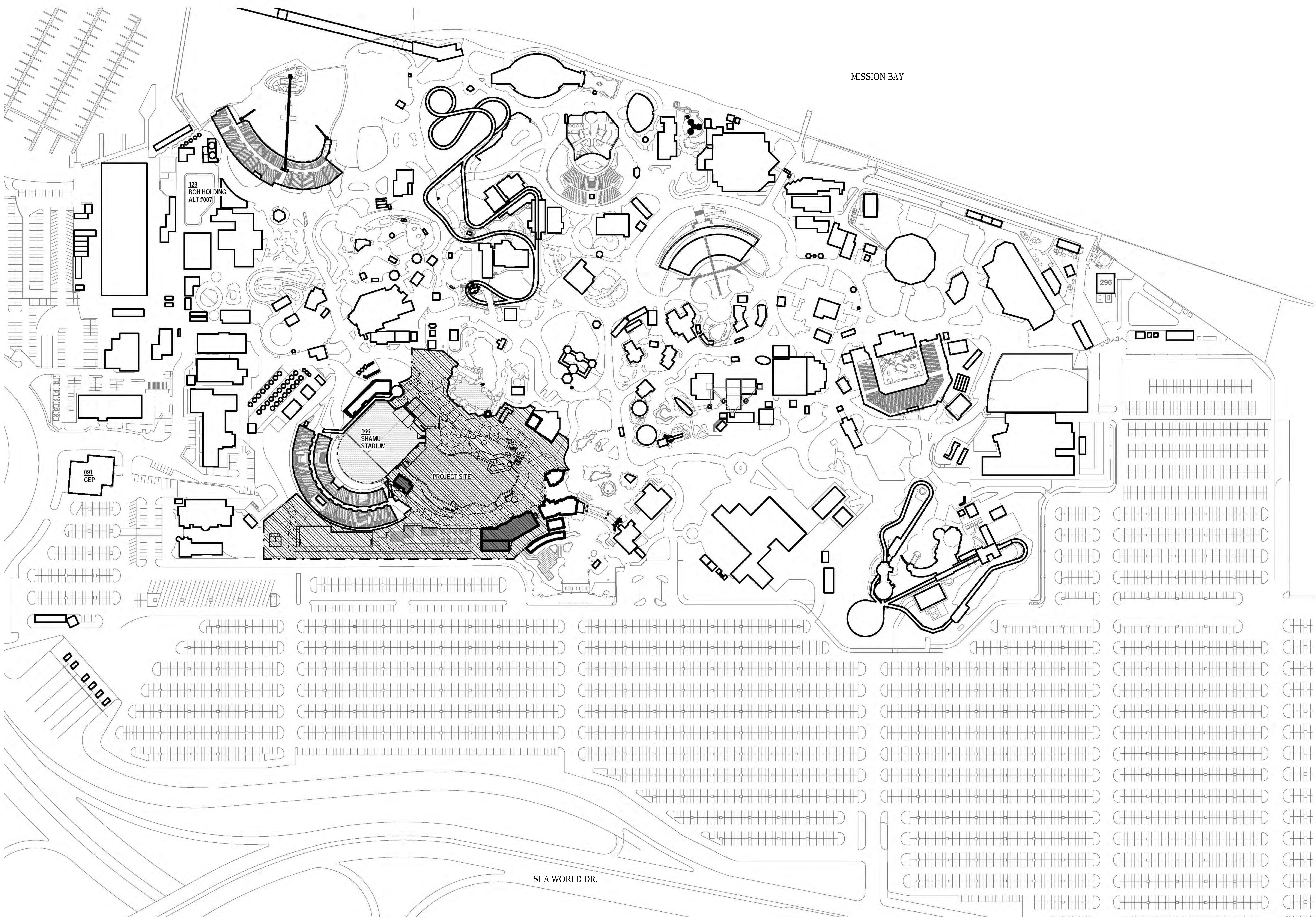
Keynote List

SEE GENERAL DWG INFO. SHEET FOR COMPLETE LIST



A8 SITE LOCATION PLAN

1" = 40'-0"

SCALE:

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REVISION NO.	REVISION DATE

SeaWorld SAN DIEGO

BLUE WORLD
San Diego, CA

Owner Review

SITE LOCATION PLAN

DATE March 20, 2015

DR AUTHOR | CK CHECKER

PGAV 64076-10 | CLIENT SWSD

SHEET NUMBER A002.300

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Keynote List

SEE GENERAL DWG INFO. SHEET FOR COMPLETE LIST

A6 SITE DEMOLITION PLAN

1" = 40'-0"

SCALE:

PLAN NORTH

SITE PLAN GENERAL NOTES

1. REFER TO CIVIL DRAWINGS FOR GRADING, ELEVATIONS, AND SITE IMPROVEMENTS.

2. REFER TO LANDSCAPE DRAWINGS FOR LANDSCAPE AND IRRIGATION MATERIALS.

3. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE SUPPRESSION, AND LIFE SUPPORT SYSTEMS DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL SCOPE OF WORK.

LEGEND

- NEW OR RENOVATED BUILDING
- EXISTING BUILDING
- WATER
- SITE PAVING
- PROJECT LIMIT LINE
- MATCH LINE
- PROJECT FENCE

GENERAL NOTE:

BASE GRADE ELEVATION IS SET AT +20'-0". NO STRUCTURE WILL EXTEND 30'-0" ABOVE THE BASE GRADE ELEVATION. (BASE GRADE ELEVATION IS SET FROM AN AVERAGE OF GRADES AT THE PROJECT LIMIT LINE.)

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REVISION NO.	REVISION DATE

SeaWorld SAN DIEGO

BLUE WORLD
San Diego, CA

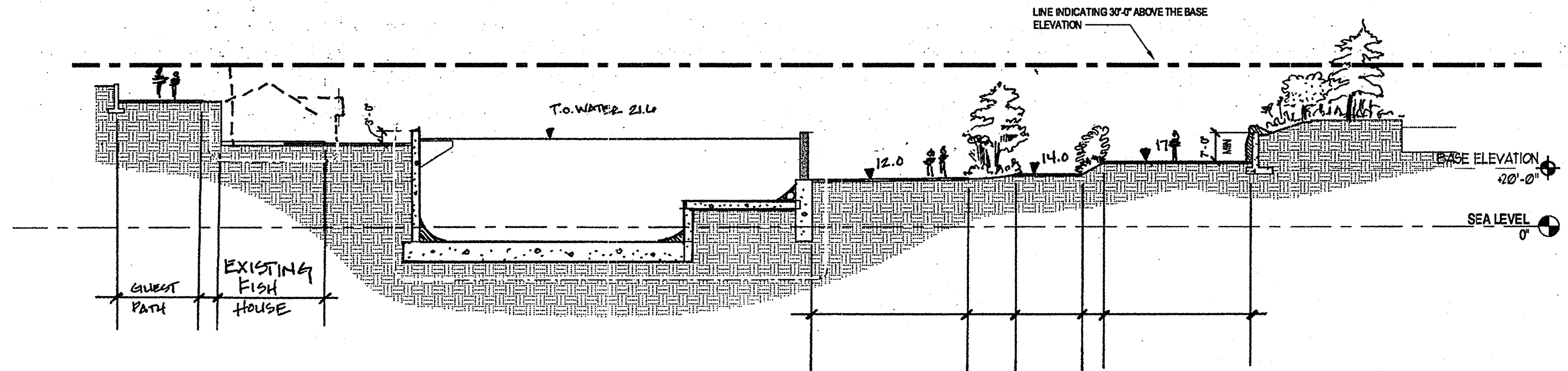
Owner Review

OVERALL SITE PLAN

DATE: March 20, 2015
DR: AUTHOR
CK: CHECKER
PGAV: 64076-10
CLIENT: SWSD
SHEET NUMBER: A002.301

Keynote List

SEE GENERAL DWG INFO. SHEET FOR COMPLETE LIST

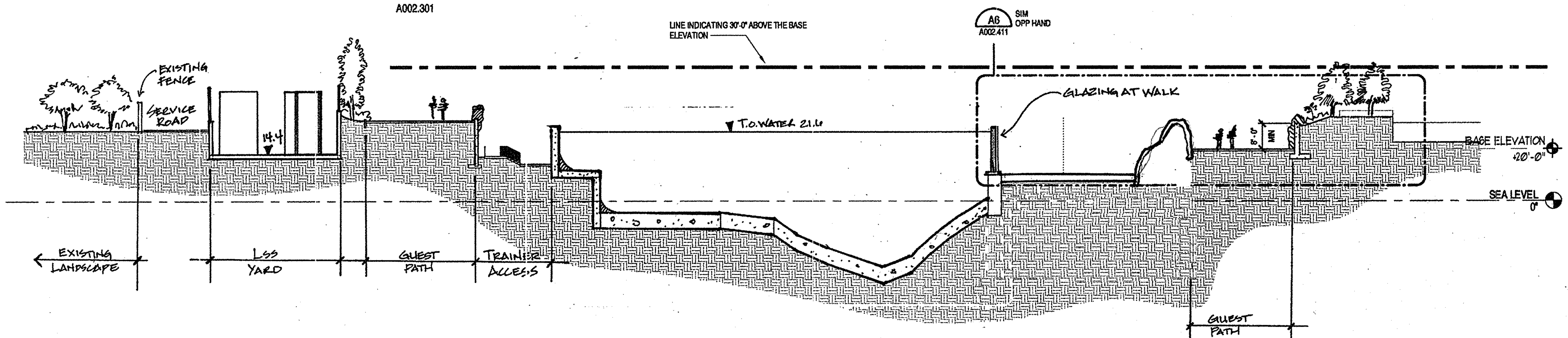


SITE OVERALL SECTION

E5

1" = 20'-0"

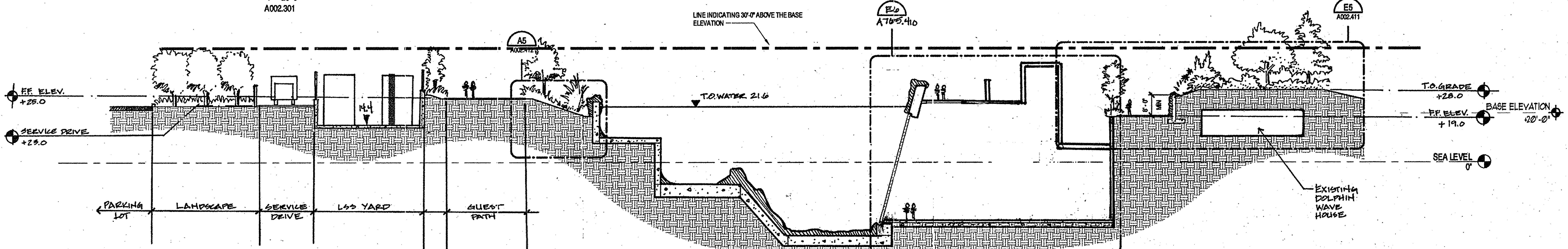
A002.301



E7 SITE - OVERALL SECTION

1" = 20'-0"

A002.301



SITE OVERALL SECTION

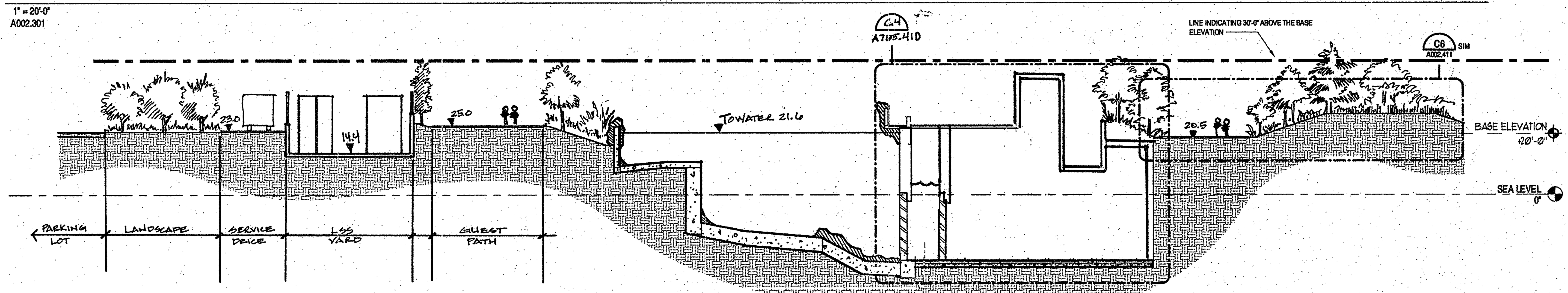
C7

1" = 20'-0"

A002.301

AVERAGE HEIGHT"

AVG. BASE ELEVATION IS AT +20'-0". NO STRUCTURE OF ANY KIND TO EXTEND MORE THAN 30'-0" ABOVE BASE ELEVATION.

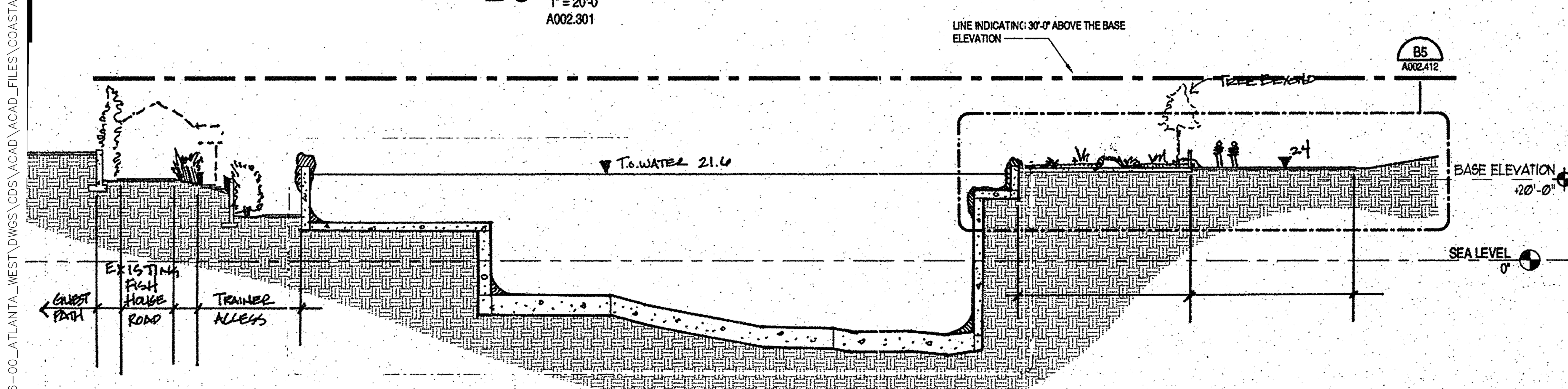


SITE OVERALL SECTION

B6

1" = 20'-0"

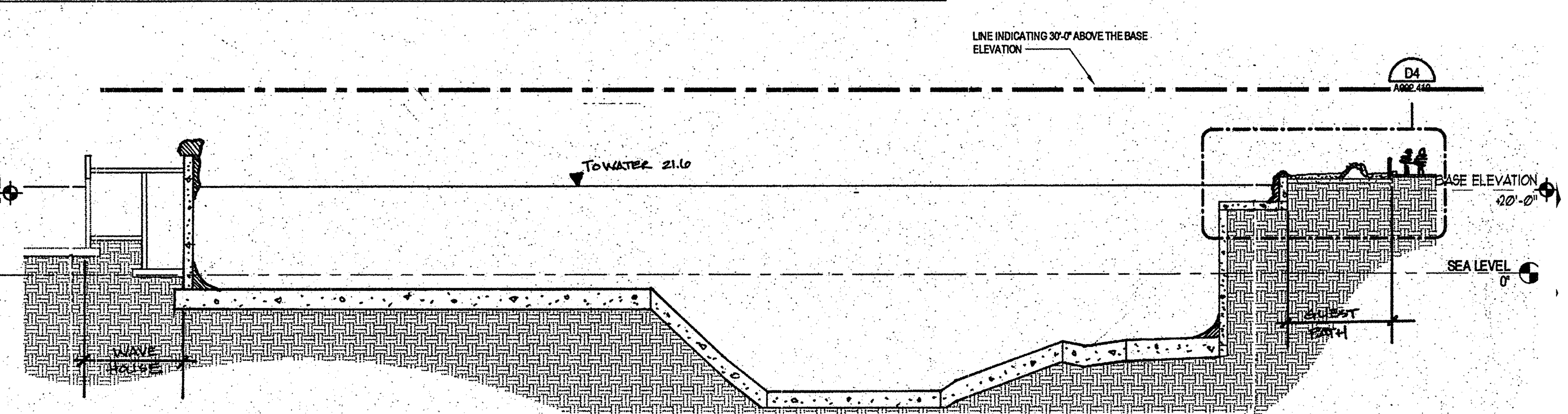
A002.301



SITE OVERALL SECTION

A8

1" = 20'-0"



SITE OVERALL SECTION

A4

1" = 20'-0"

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REVISION NO.	REVISION DATE

SeaWorld SAN DIEGO

BLUE WORLD

San Diego, CA

Owner Review

SITE SECTIONS

DATE March 20, 2015	
DR AUTHOR	CK CHECKER
PGAV 64076-10	CLIENT SWSD
SHEET NUMBER A002.410	

Keynote List

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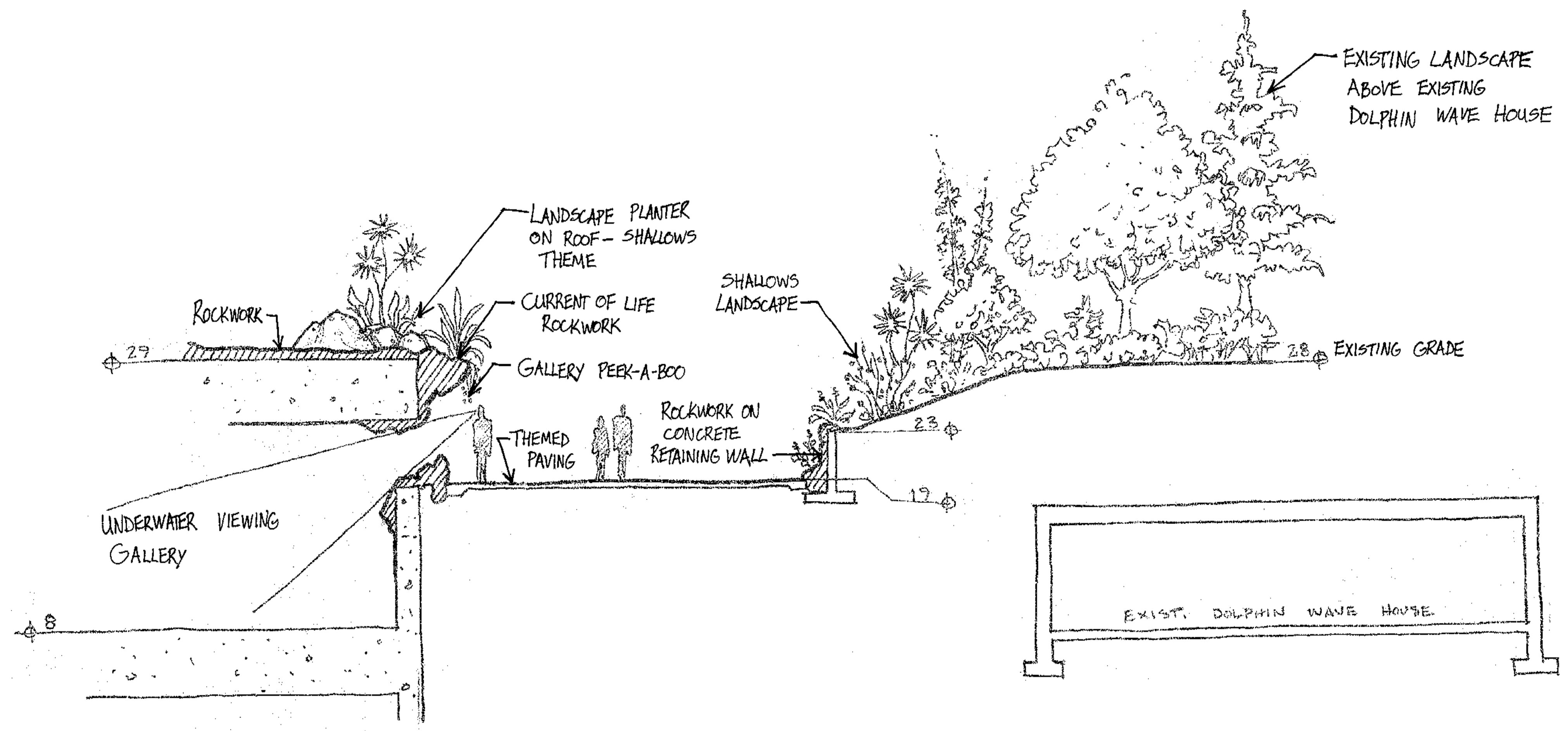
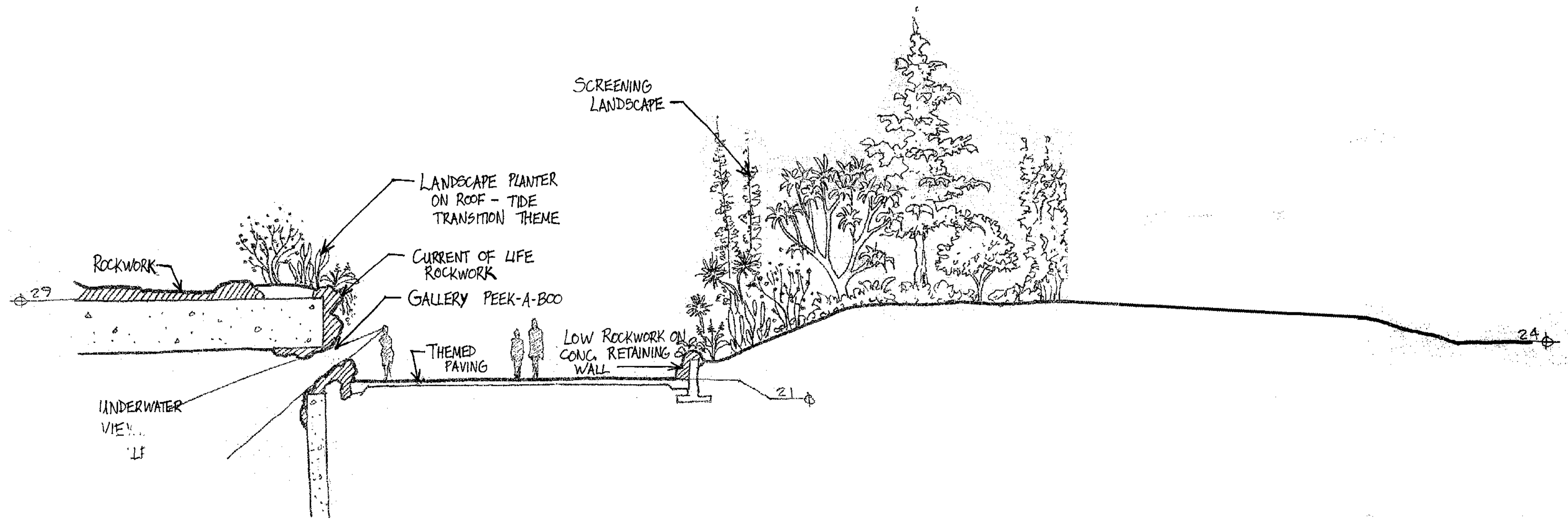
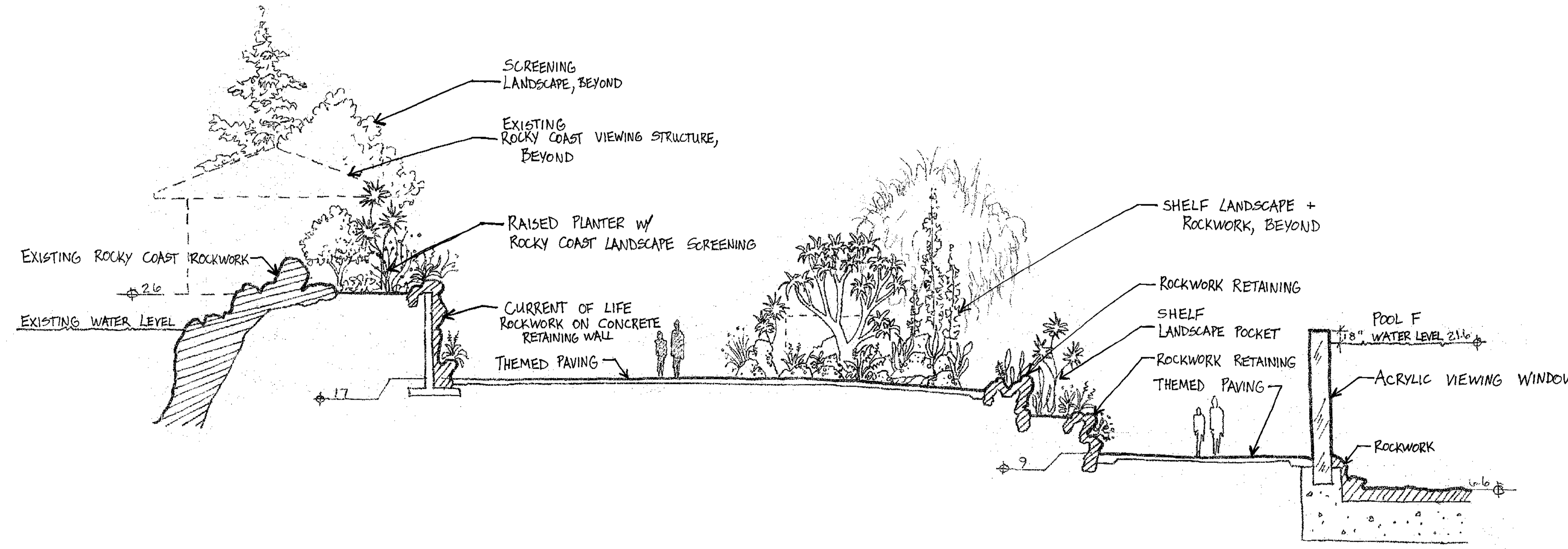


E5 SITE
SECTION AT NORTH PATH - DOLPHIN WAVE HOUSE
1/8" = 1'-0"
A002.310



C6 SITE
SECTION AT NORTH PATH - UNDERWATER GALLERY
1/8" = 1'-0"
A002.310



A6 SITE
SECTION AT NORTH PATH - WALK WITH THE WHALES
1/8" = 1'-0"
A002.310

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SeaWorld SAN DIEGO

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San Diego, CA

Owner Review

SITE SECTIONS

DATE March 20, 2015
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SHEET NUMBER
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Keynote List

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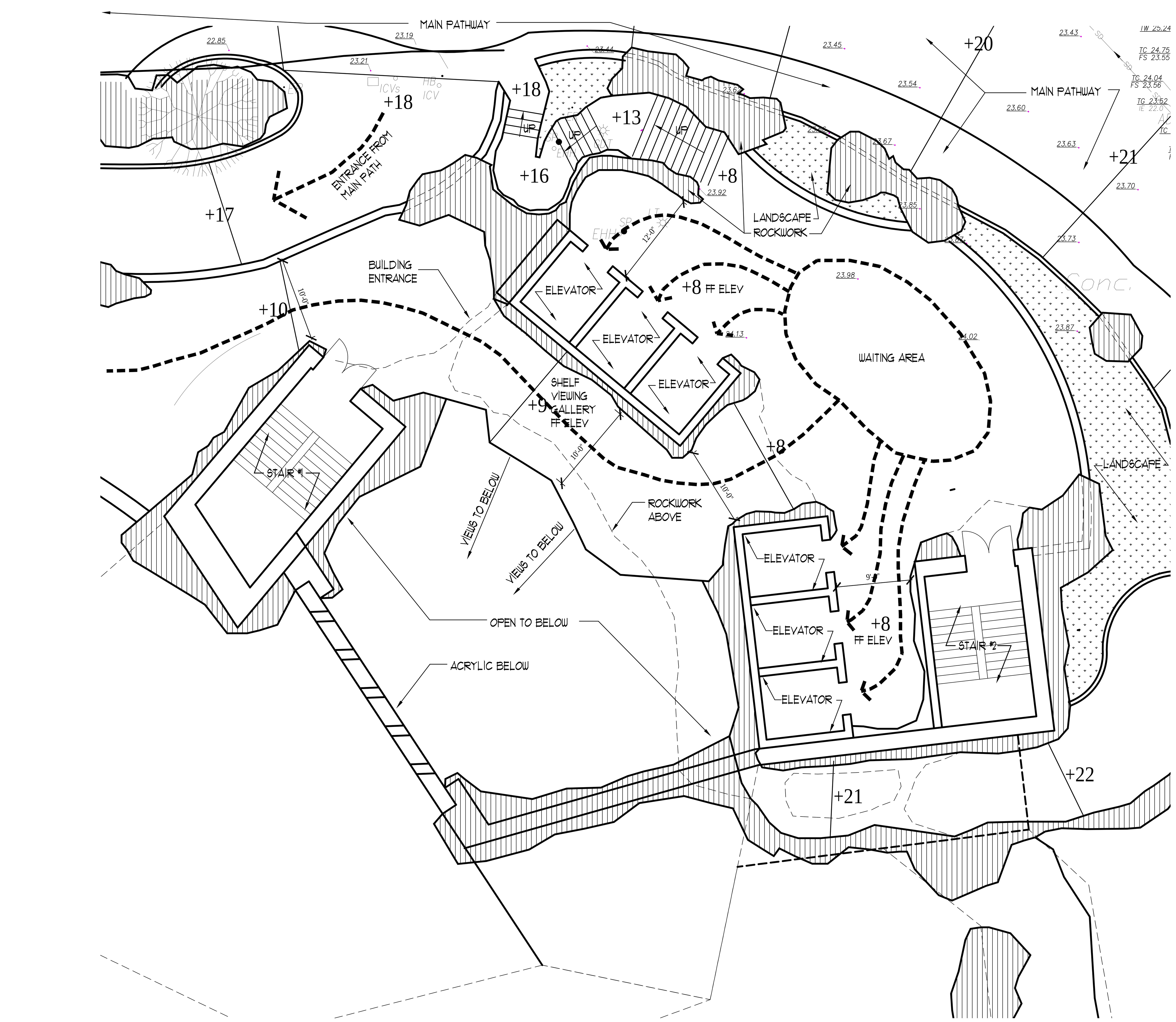

A6 765 VIEWING GALLERY THE SHELF PLAN

1/8" = 1'-0"

SCALE:

PLAN NORTH

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SeaWorld SAN DIEGO

BLUE WORLD
San Diego, CA

Owner Review

765 UNDERWATER GALLERY - THE SHELF FLOOR PLAN

DATE March 20, 2015

DR AUTHOR | CK CHECKER

PGAV 64076-10 | CLIENT SWSD

SHEET NUMBER

A765.301

P:\64076-00_ATLANTA_WEST\DWGS\CDS\ACAD\ACAD_FILES\COASTAL APPLICATION DRAWINGS\A765.301 VIEWING GALLERY -- LAYOUT: LAYOUT1 -- 3/20/2015 11:49 AM -- PLOTTED BY: RENEE.FRONABARGER

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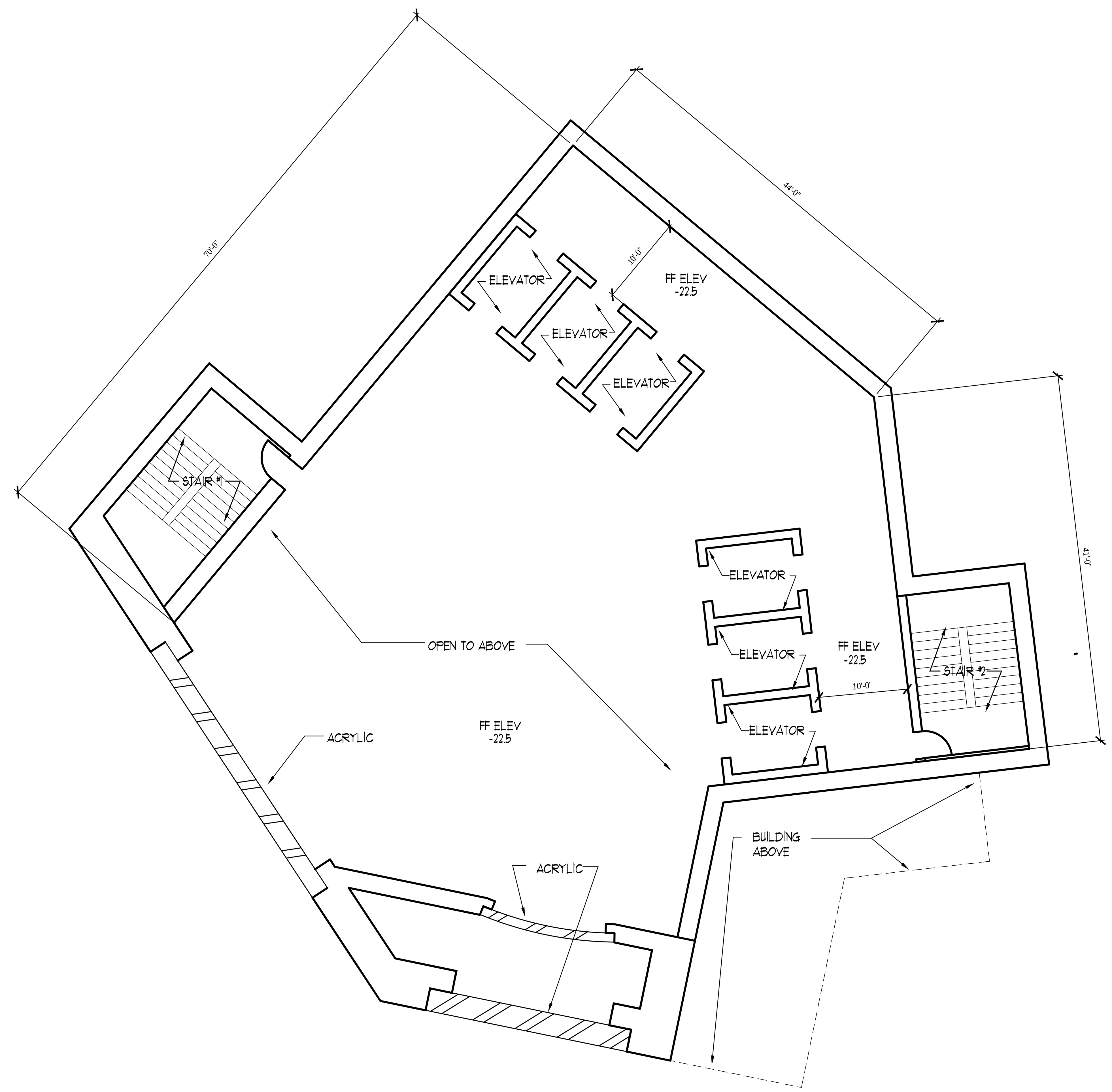
SEE GENERAL DWG INFO. SHEET FOR COMPLETE LIST



A6
765 VIEWING GALLERY
THE SHELF PLAN
1/8" = 1'-0"
SCALE:
PLAN
NORTH

PGAV DESTINATIONS
PECKHAM GUYTON ALBERS & VIETS, INC.
200 North Broadway, Suite 1000, St. Louis, MO 63102
(314) 231-7318 WWW.PGAV.COM

NOT FOR CONSTRUCTION

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I.E. South 88° 07' 55" West

BENCHMARK:
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Elevation
= 8.89 NAVD 88 ft
=9.82 Sea World Datum
= 6.68 NGVD 29
Difference = -0.93 from Sea World Datum to NAVD 88 Datum

REVISION NO.	REVISION DATE

SeaWorld SAN DIEGO

BLUE WORLD
San Diego, CA

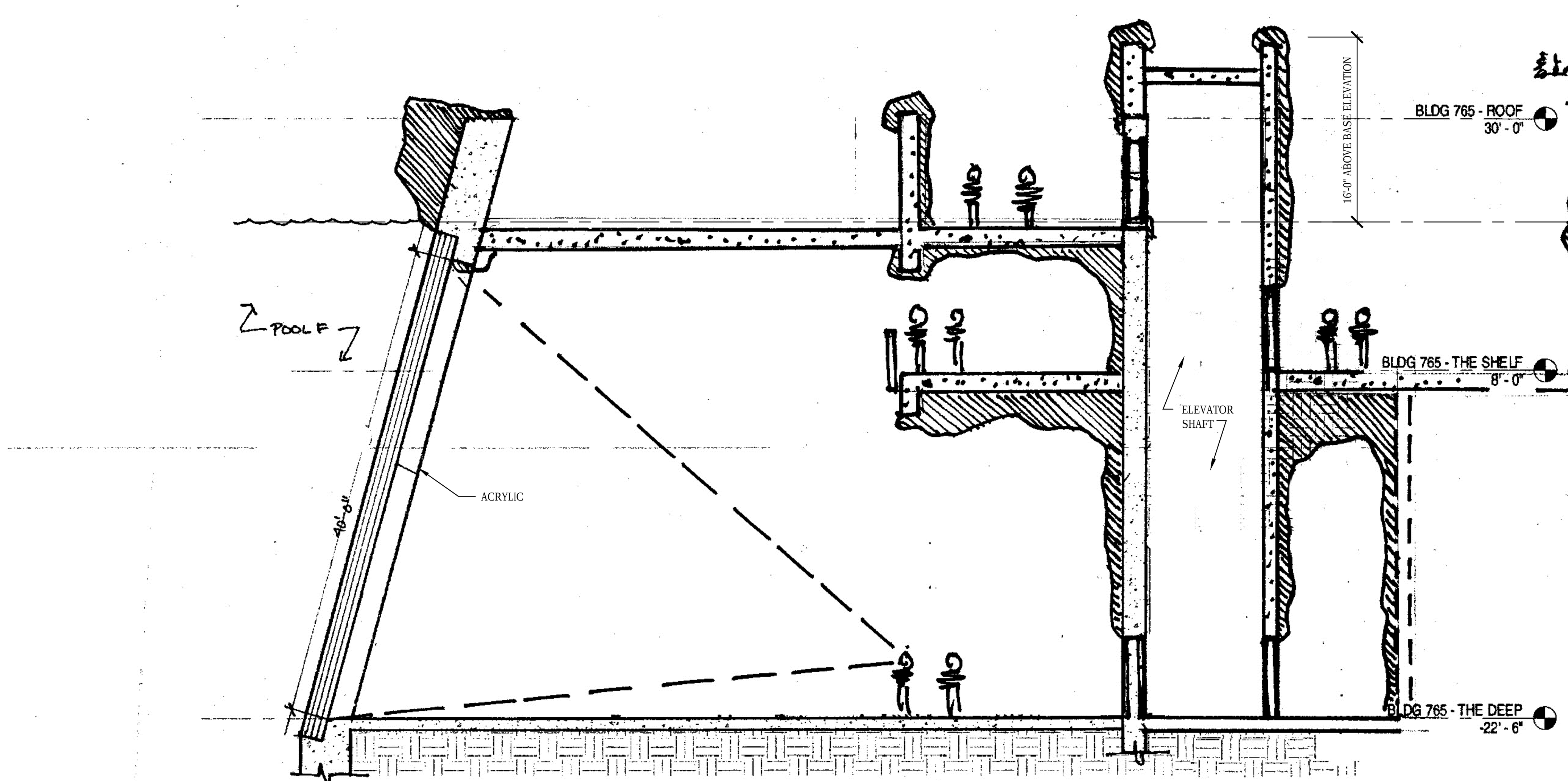
Owner Review

765 UNDERWATER GALLERY - THE DEEP FLOOR PLAN

DATE March 20, 2015
DR AUTHOR
CK CHECKER
PGAV 64076-10
CLIENT SWSD
SHEET NUMBER
A765.302

Keynote List

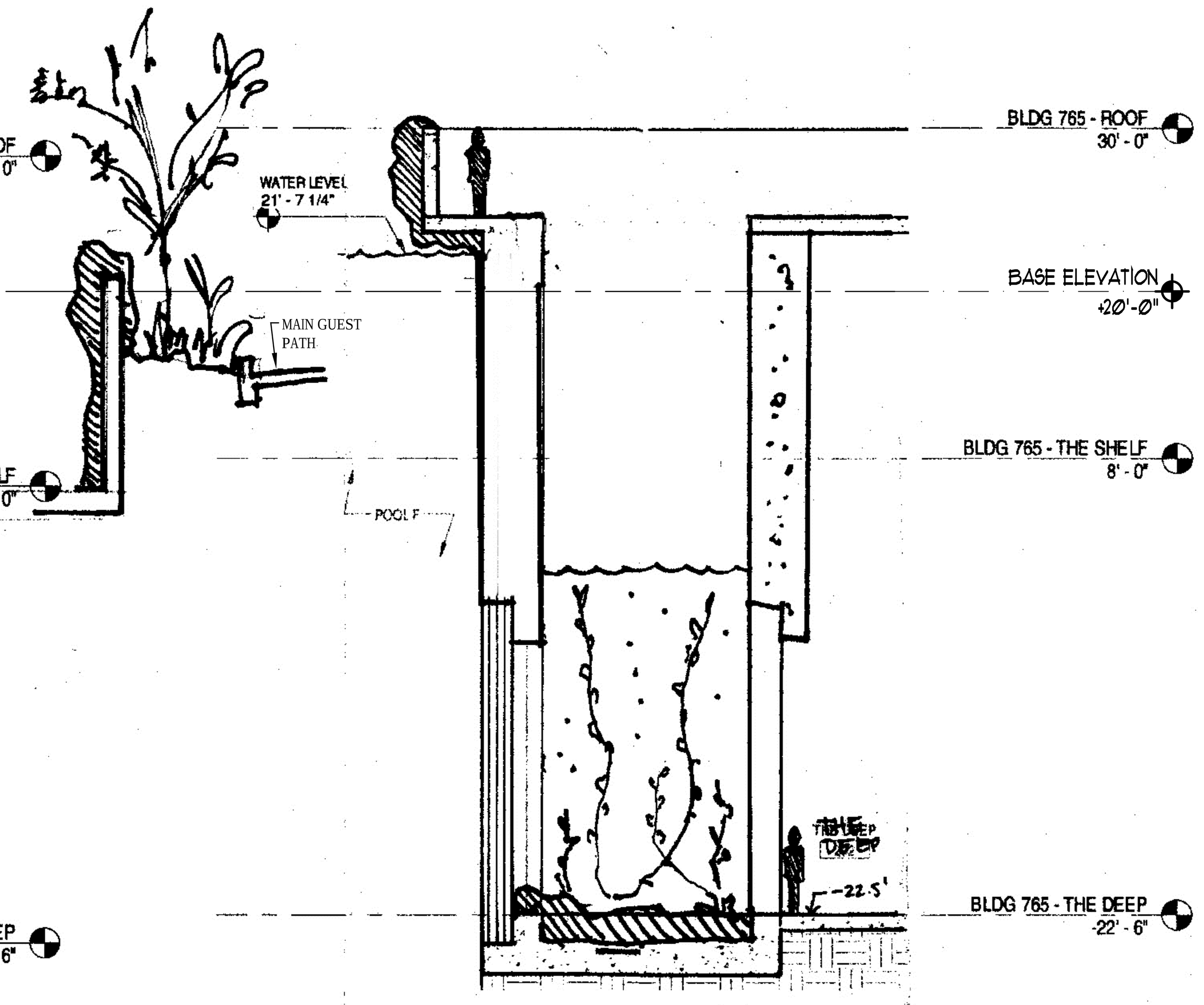
SEE GENERAL DWG INFO. SHEET FOR COMPLETE LIST



E6 765 UNDERWATER GALLERY SECTION WEST

1/8" = 1'-0"

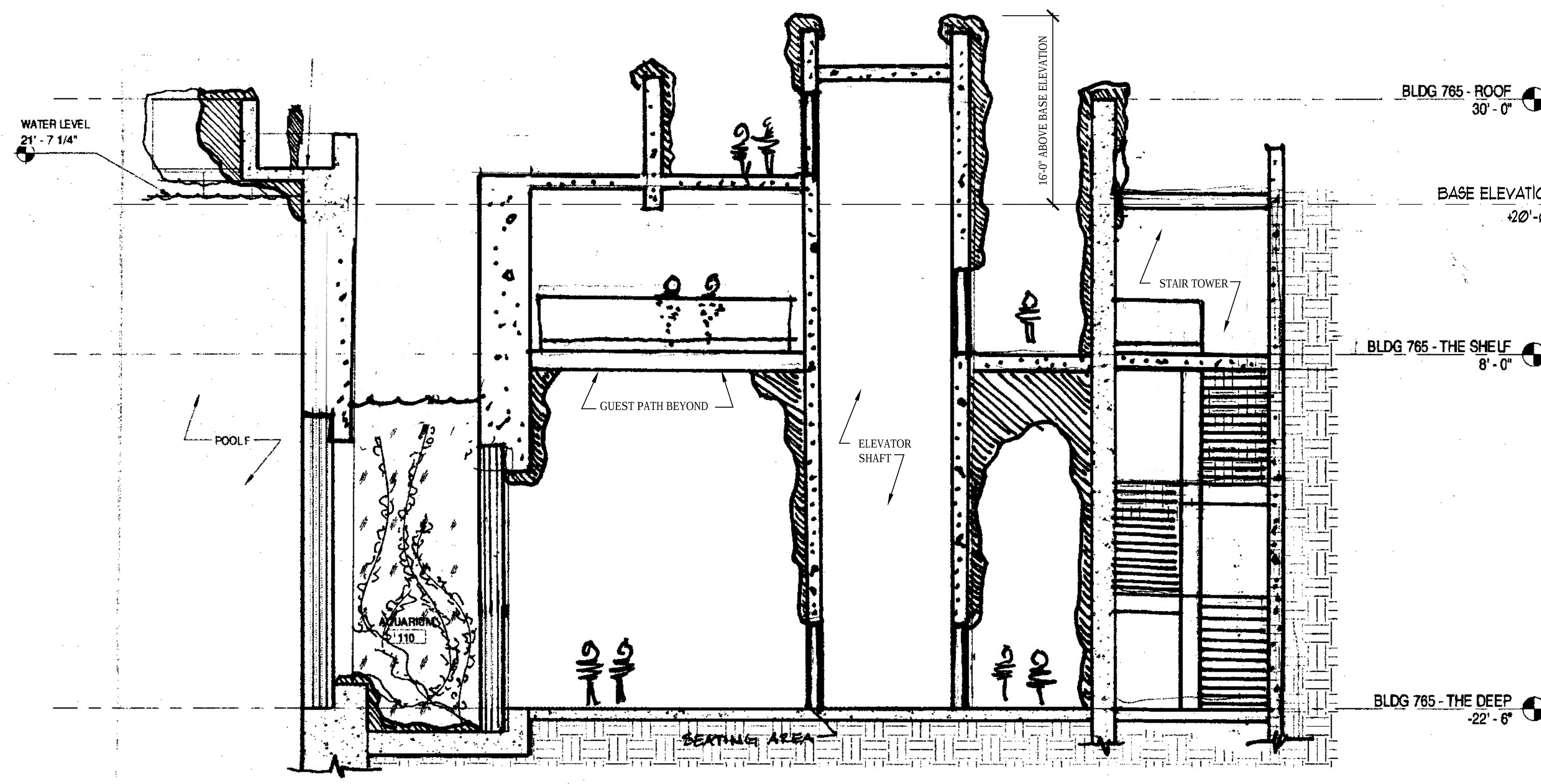
A765.301



E2 765 UNDERWATER GALLERY SECTION AT AQUARIUM

1/8" = 1'-0"

A765.301



C4 765 UNDERWATER GALLERY SECTION WEST

1/8" = 1'-0"

A765.301

AVERAGE HEIGHT

AVG. BASE ELEVATION IS AT +20'-0". NO STRUCTURE OF ANY KIND TO EXTEND MORE THAN 30'-0" ABOVE BASE ELEVATION.

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REVISION NO.	REVISION DATE

SeaWorld SAN DIEGO

BLUE WORLD
San Diego, CA

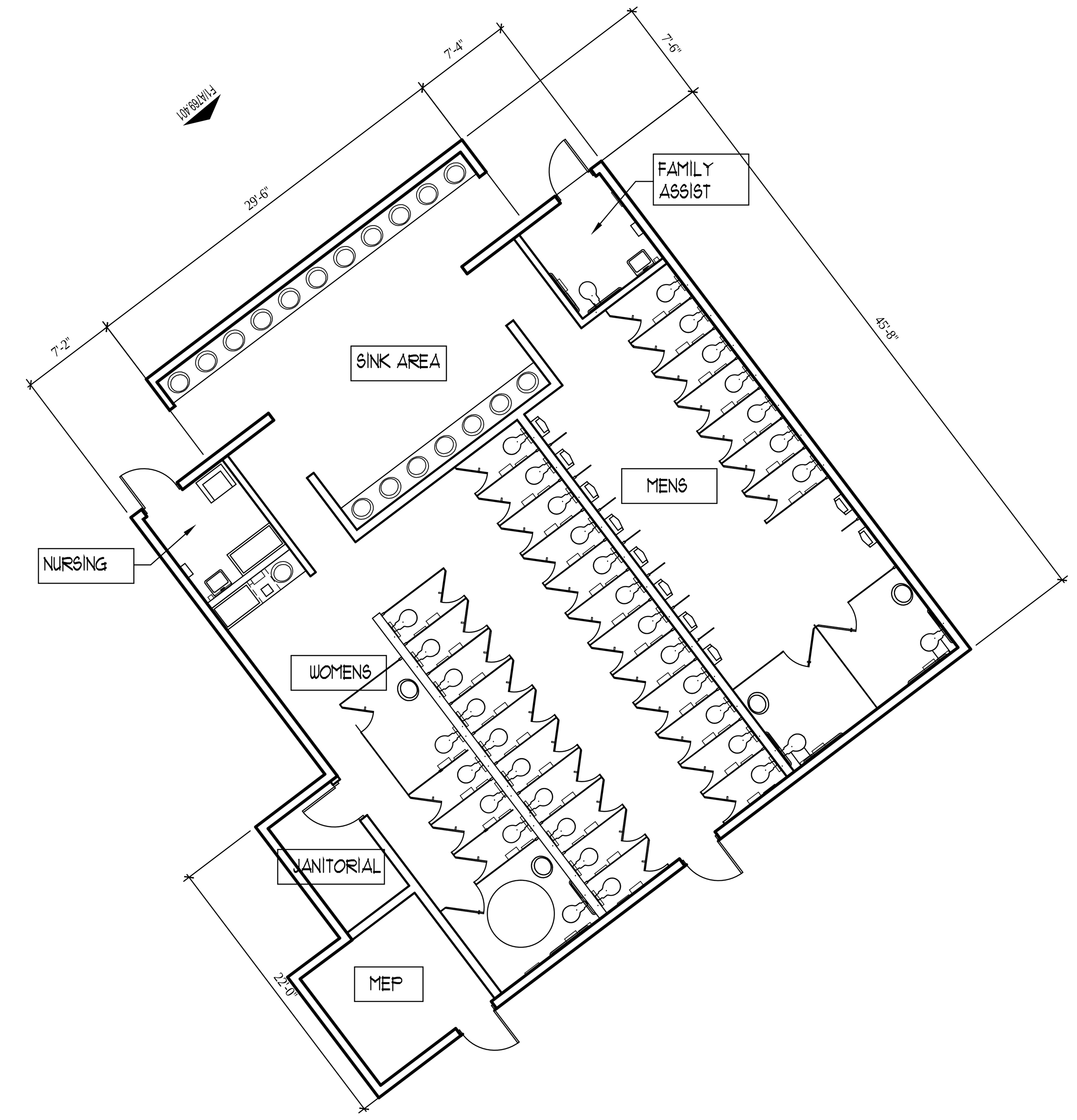
Owner Review

765 UNDERWATER GALLERY - BUILDING SECTIONS

DATE March 20, 2015	
DR AUTHOR	CK CHECKER
PGAV 64076-10	CLIENT SWSD
SHEET NUMBER A765.410	

Keynote List

SEE GENERAL DWG INFO. SHEET FOR COMPLETE LIST



F6 GUEST TOILET FLOOR PLAN

SCALE: 1/8" = 1'-0"

PLAN NORTH

P:\64076-00_ATLANTA_WEST\DWGS\CDS\ACAD\ACAD_FILES\COASTAL APPLICATION DRAWINGS\A769.301 GUEST TOILET -- LAYOUT:LAYOUT1 -- 3/20/2015 11:49 AM -- PLOTTED BY:RENEE.FRONABARGER

PGAV DESTINATIONS
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REVISION NO.	REVISION DATE

SeaWorld SAN DIEGO

BLUE WORLD
San Diego, CA

Owner Review

769 GUEST TOILET FLOOR PLANS

DATE: March 20, 2015

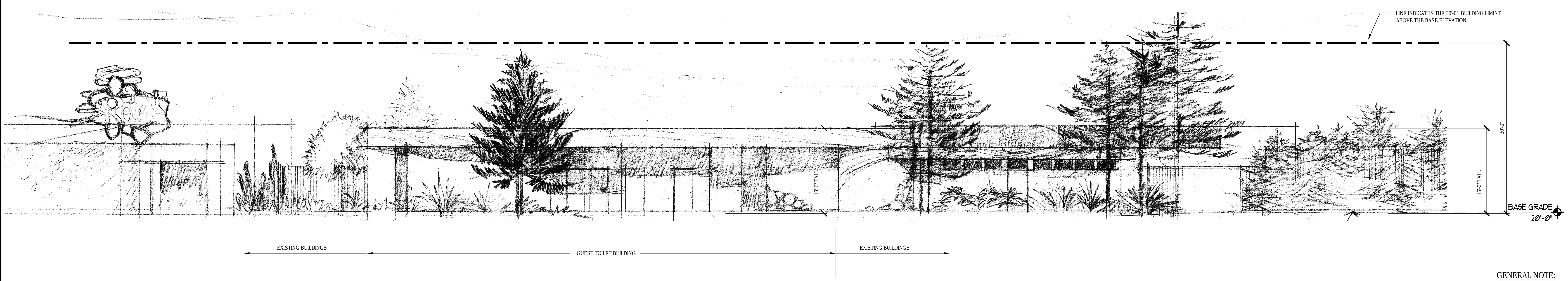
DR: AUTHOR | CK: CHECKER

PGAV: 64076-10 | CLIENT: SWSD

SHEET NUMBER: A769.301

Keynote List

SEE GENERAL DWG INFO. SHEET FOR COMPLETE LIST



GENERAL NOTE:

NO STRUCTURE WILL EXTEND 30'-0" ABOVE THE BASE GRADE ELEVATION OF 20'-0".

F1 GUEST TOILET ELEVATION

SCALE: 1/8" = 1'-0"

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REVISION NO.	REVISION DATE

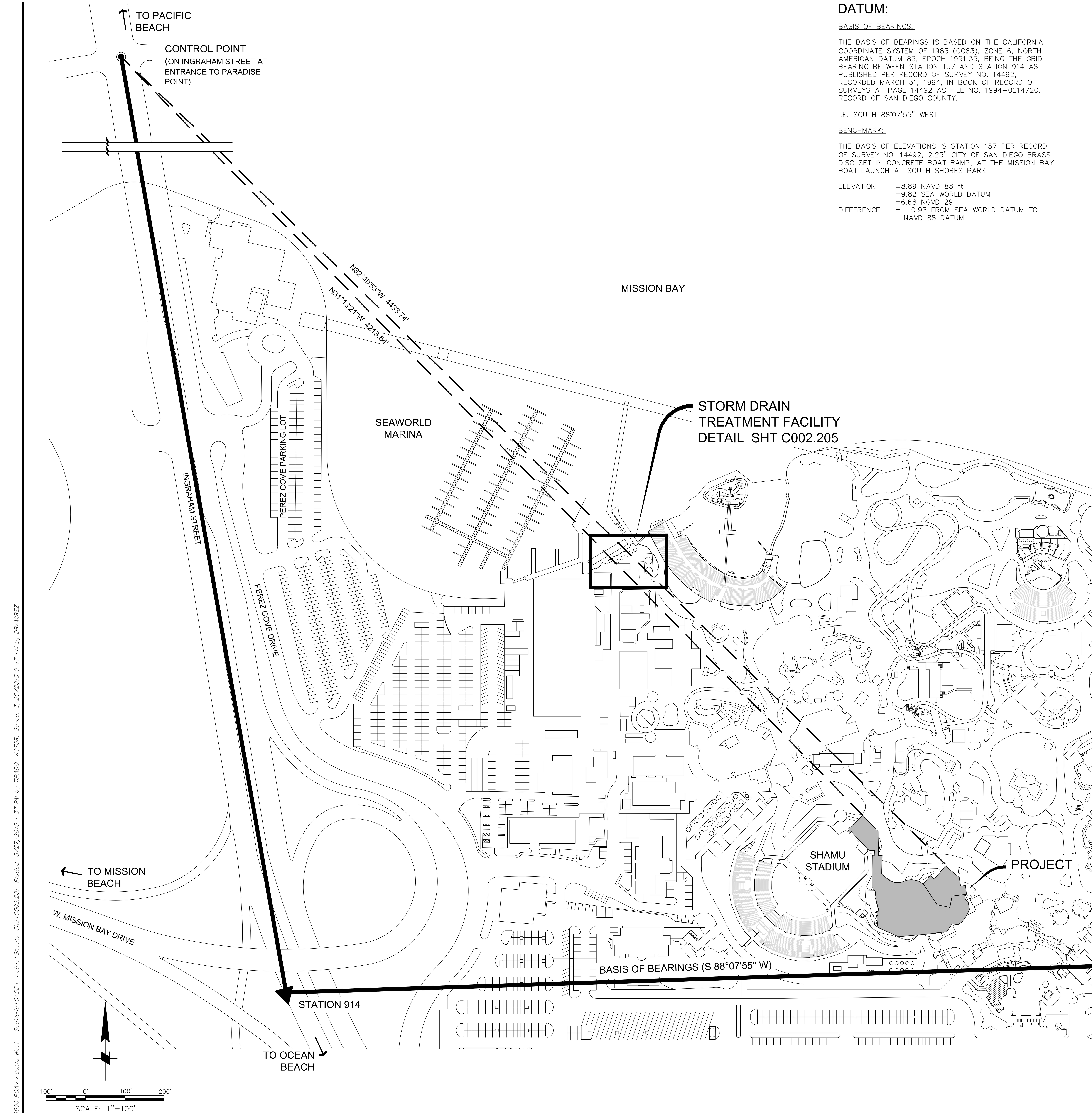
SeaWorld SAN DIEGO

BLUE WORLD
San Diego, CA

Owner Review

769 GUEST TOILET ELEVATIONS

DATE March 20, 2015
DR AUTHOR | CK CHECKER
PGAV 64076-10 | CLIENT SWSD
SHEET NUMBER
A769.401



DATUM:

BASIS OF BEARINGS:

THE BASIS OF BEARINGS IS BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCB3), ZONE 6, NORTH AMERICAN DATUM 83, EPOCH 1991.35, BEING THE GRID BEARING BETWEEN STATION 157 AND STATION 914 AS PUBLISHED PER RECORD OF SURVEY NO. 14492, RECORDED MARCH 31, 1994, IN BOOK OF RECORD OF SURVEYS AT PAGE 14492 AS FILE NO. 1994-0214720, RECORD OF SAN DIEGO COUNTY.

I.E. SOUTH 88°07'55" WEST

BENCHMARK:

THE BASIS OF ELEVATIONS IS STATION 157 PER RECORD OF SURVEY NO. 14492, 2.25" CITY OF SAN DIEGO BRASS DISC SET IN CONCRETE BOAT RAMP, AT THE MISSION BAY BOAT LAUNCH AT SOUTH SHORES PARK.

ELEVATION =8.89 NAVD 88 ft
=9.82 SEA WORLD DATUM
=6.68 NGVD 29
DIFFERENCE = -0.93 FROM SEA WORLD DATUM TO NAVD 88 DATUM

GENERAL NOTES:

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT/ NOTICE TO PROCEED HAS BEEN ISSUED.

2. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE CITY OF SAN DIEGO DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT OF 1973 AND AMENDMENTS THERETO (16 USC SECTION 1531 ET.SEQ.)

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, A LAND SURVEYOR SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT, SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.

4. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TOLL FREE 1-800-422-4133, TWO DAYS BEFORE YOU DIG.

5. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT GRADING AND/OR CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD AND THE CITY OF SAN DIEGO MUNICIPAL CODE AND STORM WATER STANDARDS MANUAL.

6. "PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OF-WAY, SATISFACTORY TO THE PERMIT- ISSUING AUTHORITY.

7. ALL EXISTING AND/OR PROPOSED PUBLIC UTILITY SYSTEM AND SERVICE FACILITIES SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH SECTION 144.0240 OF THE MUNICIPAL CODE.

8. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARK-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE CITY OF SAN DIEGO FIELD ENGINEERING DIVISION (858) 627-3200.

9. DEVIATIONS FROM THESE SIGNED PLANS WILL NOT BE ALLOWED UNLESS A CONSTRUCTION CHANGE IS APPROVED BY THE CITY ENGINEER OR THE CHANGE IS REQUIRED BY THE CITY INSPECTOR.

10. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE RESIDENT ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT BY THE CITY OF SAN DIEGO.

11. AN AS-GRADED GEOTECHNICAL REPORT AND A SET OF THE REDLINE GRADING PLANS SHALL BE SUBMITTED AT AREA 3 ON THE THIRD FLOOR OF DEVELOPMENT SERVICES WITHIN 30 CALENDAR DAYS OF THE COMPLETION OF GRADING. AN ADDITIONAL SET SHALL BE PROVIDED TO THE RESIDENT ENGINEER OF THE FIELD ENGINEERING DIVISION AT 9485 AERO DR.

12. THE AREA WHICH IS DEFINED AS A NON GRADING AREA AND WHICH IS NOT TO BE DISTURBED SHALL BE STAKED PRIOR TO START OF THE WORK. THE PERMIT APPLICANT AND ALL OF THEIR REPRESENTATIVES OR CONTRACTORS SHALL COMPLY WITH THE REQUIREMENTS FOR PROTECTION OF THIS AREA AS REQUIRED BY ANY APPLICABLE AGENCY. ISSUANCE OF THE CITY'S GRADING PERMIT SHALL NOT RELIEVE THE APPLICANT OR ANY OF THEIR REPRESENTATIVES OR CONTRACTORS FROM COMPLYING WITH ANY STATE OR FEDERAL REQUIREMENTS BY AGENCIES INCLUDING BUT NOT LIMITED TO CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CALIFORNIA DEPARTMENT OF FISH AND GAME. COMPLIANCE MAY INCLUDE OBTAINING PERMITS, OTHER AUTHORIZATIONS, OR COMPLIANCE WITH MANDATES BY ANY APPLICABLE STATE OR FEDERAL AGENCY.

13. CONTRACTOR SHALL REMOVE AND REPLACE ALL UTILITY BOXES SERVING AS HANDHOLES THAT ARE NOT IN "AS-NEW" CONDITION IN PROPOSED SIDEWALK. DAMAGED BOXES, OR THOSE THAT ARE NOT IN COMPLIANCE WITH CURRENT CODE SHALL BE REMOVED AND REPLACED WITH NEW BOXES, INCLUDING WATER, SEWER, TRAFFIC SIGNALS, STREET LIGHTS, DRY UTILITIES-SDG&E, COX, ETC. ALL NEW METAL LIDS SHALL BE SLIP RESISTANT (FRICTION FACTOR >/= 0.50) AND INSTALLED FLUSH WITH PROPOSED SIDEWALK GRADE. IF A SLIP RESISTANT METAL LID IS NOT COMMERCIALLY AVAILABLE FOR THAT USE, NEW BOXES AND LIDS SHALL BE INSTALLED.

PRIVATE NOTE:

ALL ONSITE, PRIVATE IMPROVEMENTS SHOWN ON THIS DRAWING ARE FOR INFOMRATION ONLY. THE CITY ENGINEER'S APPROVAL OF THIS DRAWING, IN NO WAY CONSTITUTES AN APPROVAL OF SAID PRIVATE IMPROVEMENTS. A SEPARATE PERMIT FOR SUCH IMPROVEMENTS MAY BE REQUIRED.

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

MOFFATT & NICHOL
1660 HOTEL CIRCLE NORTH
SAN DIEGO, CA 92108
PHONE 619-220-6050
FAX 619-220-6055

VICTOR TIRADO R.C.E. NO. 78086 EXP. 09-30-15 DATE

moffatt & nichol
1660 Hotel Circle North, Suite 500
San Diego, Ca. 92108
(619) 220-6050

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REVISION NO.	REVISION DATE

SeaWorld SAN DIEGO

BLUE WORLD
San Diego, CA

Owner Review

HORIZONTAL CONTROL PLAN

DATE March 20, 2015	
DR DR	CK VT
M & N 8696	CLIENT SWSD
SHEET NUMBER C002.201	

GROUND WATER DISCHARGE NOTES

1. ALL GROUND WATER EXTRACTIONS AND SIMILAR WASTE DISCHARGES TO SURFACE WATERS NOT TRIBUTARY TO THE SAN DIEGO BAY ARE PROHIBITED UNTIL IT CAN BE DEMONSTRATED THAT THE OWNER HAS APPLIED AND OBTAINED AUTHORIZATION FROM THE STATE OF CALIFORNIA VIA AN OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL WATER QUALITY CONTROL BOARD IN ACCORDANCE WITH THE TERMS, PROVISIONS, AND CONDITIONS OF STATE ORDER NO R9-2008-0002 NPDES CAG919002.
2. THE ESTIMATED MAXIMUM DISCHARGE RATES MUST NOT EXCEED THE LIMITS SET IN THE OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL BOARD UNLESS PRIOR NOTIFICATION AND SUBSEQUENT AUTHORIZATION HAS BEEN FULLY OBTAINED, AND DISCHARGE OPERATIONS MODIFIED TO ACCOMMODATE THE INCREASED RATES.

LEGEND:

- POOL EXCAVATION
- BUILDING EXCAVATION
- LIMITS OF WORK
- DEWATERING WELL

EXCAVATION QUANTITIES

	VOLUME (CY)
CUT	35,000
FILL	0

SCALE: 1"=20'

moffatt & nichol
1660 Hotel Circle North, Suite 500
San Diego, Ca. 92108
(619) 220-6050

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SeaWorld SAN DIEGO

BLUE WORLD
San Diego, CA

Owner Review

DEEP EXCAVATION PLAN

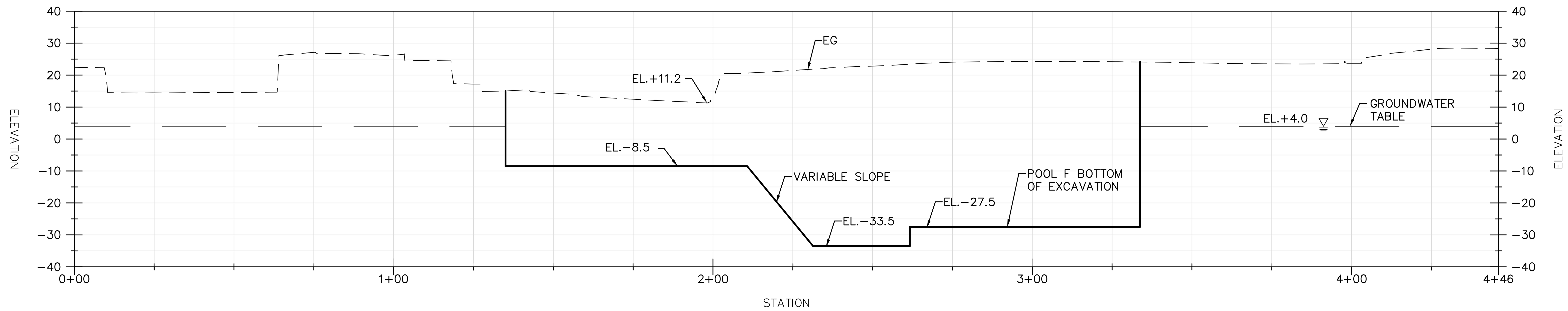
DATE	March 20, 2015
DR: DR	CK: VT
M & N: 8696	CLIENT: SWSD
SHEET NUMBER	C002.202

moffatt & nichol
1660 Hotel Circle North, Suite 500
San Diego, Ca. 92108
(619) 220-6050

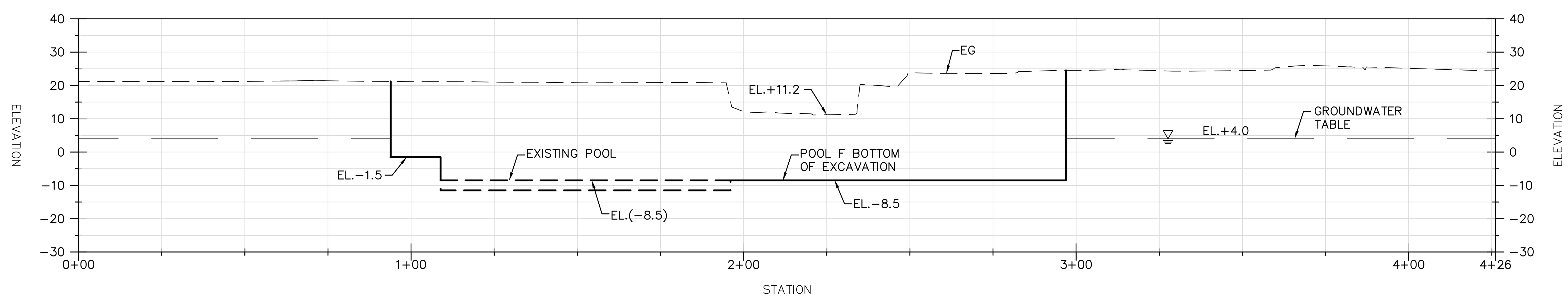
NOT FOR CONSTRUCTION

NOTES

1. PROPOSED ELEVATIONS SHOWN ON THESE PROFILES REPRESENT BOTTOM OF EXCAVATIONS. FINISH FLOOR ELEVATIONS TO BE PROVIDED BY THE PROJECT ARCHITECT AND STRUCTURAL ENGINEER.
2. AVERAGE BASE ELEVATION IS AT ELEVATION +20'. NO STRUCTURE OF ANY KIND TO EXTEND MORE THAN 30' ABOVE BASE ELEVATION.



1 SECTION
C002.202 SCALE: 1" = 20'



2 SECTION
C002.202 SCALE: 1" = 20'

20 0' 20 40
VERT SCALE: 1"=20'

20 0' 20 40
HORIZ SCALE: 1"=20'

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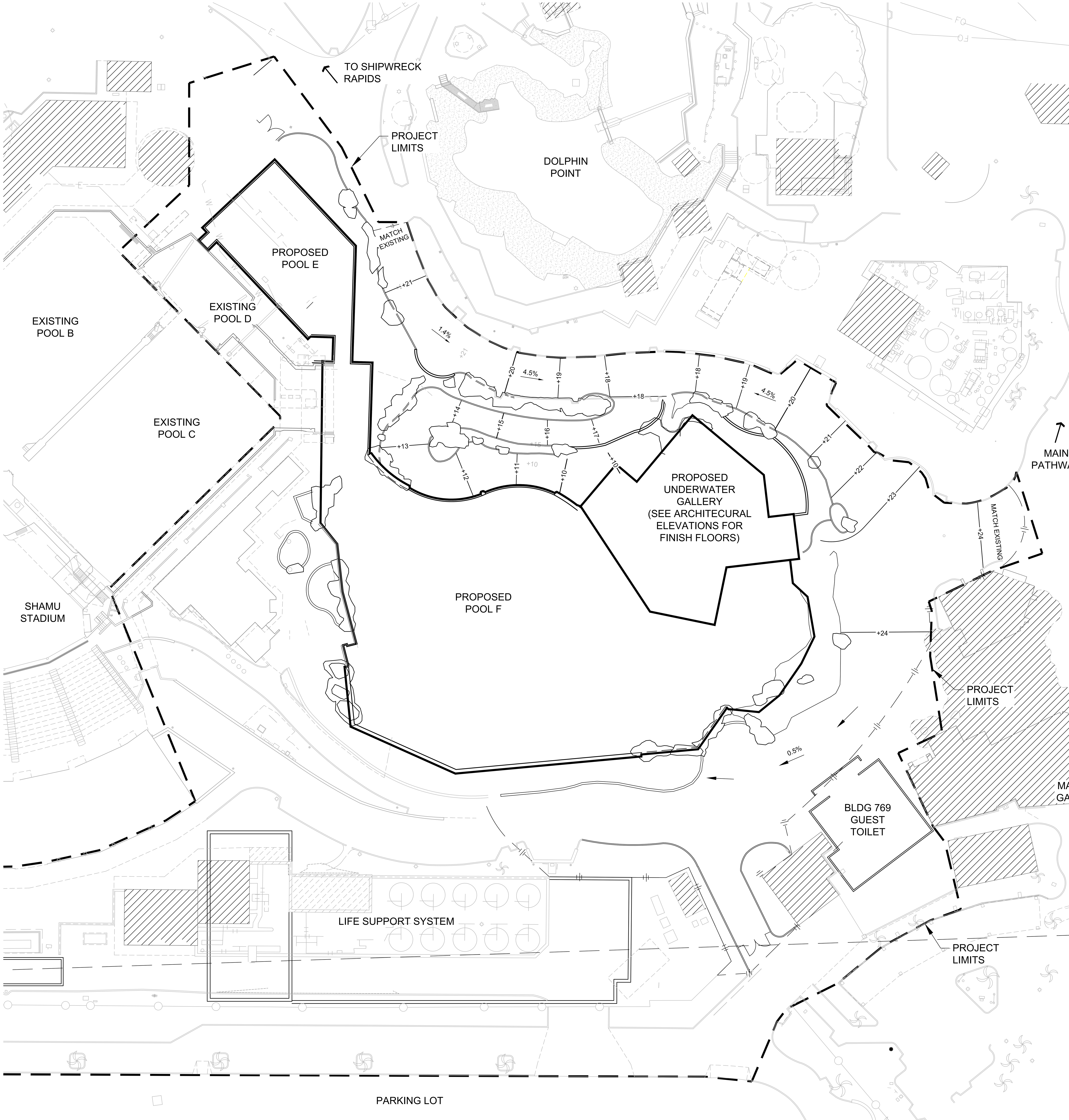
SeaWorld SAN DIEGO

BLUE WORLD
San Diego, CA

Owner Review

DEEP EXCAVATION SECTIONS

DATE March 20, 2015	
DR DR	CK VT
M & N 8696	CLIENT SWSD
SHEET NUMBER C002.203	



MINIMUM POST-CONSTRUCTION MAINTENANCE PLAN

AT THE COMPLETION OF THE WORK SHOWN, THE FOLLOWING PLAN SHALL BE FOLLOWED TO ENSURE WATER QUALITY CONTROL IS MAINTAINED FOR THE LIFE OF THE PROJECT:

1. STABILIZATION: ALL PLANTED SLOPES AND OTHER VEGETATED AREAS SHALL BE INSPECTED PRIOR TO OCTOBER 1 OF EACH YEAR AND AFTER MAJOR RAINFALL EVENTS (MORE THAN ½ INCH) AND REPAIRED AND REPLANTED AS NEEDED UNTIL A NOTICE OF TERMINATION (NOT) IS FILED.

2. STRUCTURAL PRACTICES: DESILTING BASINS, DIVERSION DITCHES, DOWNDRAINS, INLETS, OUTLET PROTECTION MEASURES, AND OTHER PERMANENT WATER QUALITY AND SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED PRIOR TO OCTOBER 1ST OF EACH YEAR AND AFTER MAJOR RAINFALL EVENTS (MORE THAN ½ INCH). REPAIRS AND REPLACEMENTS SHALL BE MADE AS NEEDED AND RECORDED IN THE MAINTENANCE LOG IN PERPETUITY.

PERMANENT POST-CONSTRUCTION BMP NOTES

1. OPERATION AND MAINTENANCE SHALL BE SECURED BY AN EXECUTED AND RECORDED STORM WATER MANAGEMENT AND DISCHARGE CONTROL MAINTENANCE AGREEMENT (SWMDCMA), OR ANOTHER MECHANISM APPROVED BY THE CITY ENGINEER, THAT ASSURES ALL PERMANENT BMP'S WILL BE MAINTAINED IN PERPETUITY, PER THE LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS.

2. PERMANENT POST CONSTRUCTION BMP DEVICES SHOWN ON PLAN SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF THE CITY ENGINEER OR RESIDENT ENGINEER AND THE ENGINEER OF WORK.

3. ALL SITE SPECIFIC RUNOFF SHALL BE ROUTED TO THE WEST TREATMENT FACILITY. IN ADDITION TO SITE BMPS, SEAWORLD SAN DIEGO WEST TREATMENT FACILITY WILL SERVE AS ADDITIONAL TREATMENT FOR FIRST FLUSH TREATMENT FLOWS.

STORM WATER PROTECTION NOTES

1. THIS PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT ORDER NO.______________; AND RISK LEVEL/TYPE: CHECK ONE BELOW
   WPCP
   - ☐ CGP RISK LEVEL 1
   - ☐ CGP RISK LEVEL 2
   - ☐ CGP RISK LEVEL 3
   - ☐ CGP LUP TYPE 1
   - ☐ CGP LUP TYPE 2
   - ☐ CGP LUP TYPE 3

2. CHECK ONE
   - ☐ THIS PROJECT WILL EXCEED THE MAXIMUM DISTURBED AREA LIMIT, THEREFORE A WEATHER TRIGGERED ACTION PLAN (WTAP) IS REQUIRED.
   - ☒ THIS PROJECT WILL FOLLOW PHASED GRADING NOT TO EXCEED FIVE (5) ACRES PER PHASE.
   - ☐ NOT APPLICABLE

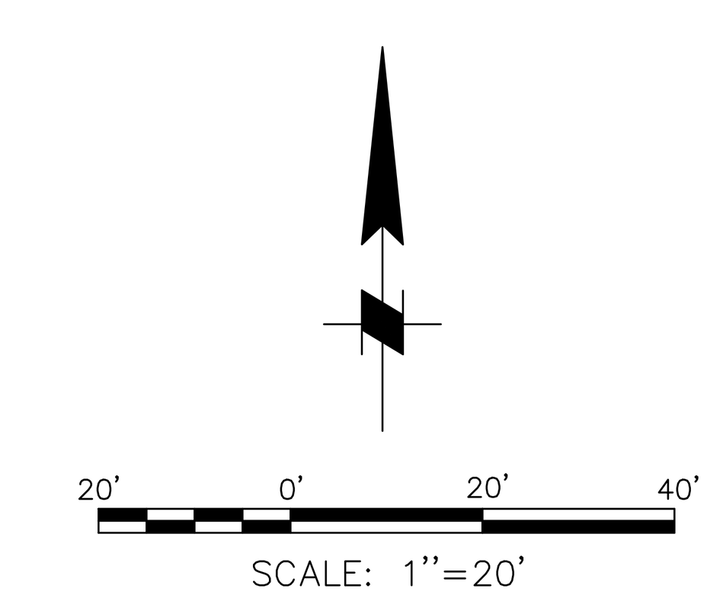
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE WPCP OR SWPPP AS APPLICABLE.

POST-CONSTRUCTION PERMANENT BMP OPERATION & MAINTENANCE PROCEDURE DETAILS

STORM WATER MANAGEMENT AND DISCHARGE CONTROL MAINTENANCE AGREEMENT APPROVAL NO.:

O&M RESPONSIBLE PARTY DESIGNEE: PROPERTY OWNER / HOA / CITY / OTHER

BMP DESCRIPTION	INSPECTION FREQUENCY	MAINTENANCE FREQUENCY	MAINTENANCE METHOD	QUANTITY	SHEET NUMBER(S)
SITE DESIGN					
SOURCE CONTROL					
TREATMENT CONTROL					
HMP FACILITY					



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Accessibility for Persons with Disabilities:
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BASIS OF BEARINGS:
The Basis of Bearing is based on the California Coordinate system of 1983 (CCS83), Zone 6, North American Datum 83, Epoch 1991.35, being the grid bearing between Station 157 and Station 914 as published per record of survey No. 14492 recorded March 31, 1994, in book of record of surveys at page 14492 as file No. 1994-0214720, Record of San Diego County.
I.E. South 88° 07' 55" West

BENCHMARK:
The Basis of Elevation is station 157 per record of survey No. 14492, 2.25° City of San Diego brass disc set in concrete boat ramp, at the Mission Bay boat launch at South Shores Park.
Elevation
= 8.89 NAVD 88 ft
=9.82 Sea World Datum
= 6.68 NGVD 29
Difference = -0.93 from Sea World Datum to NAVD 88 Datum

REVISION NO.	REVISION DATE

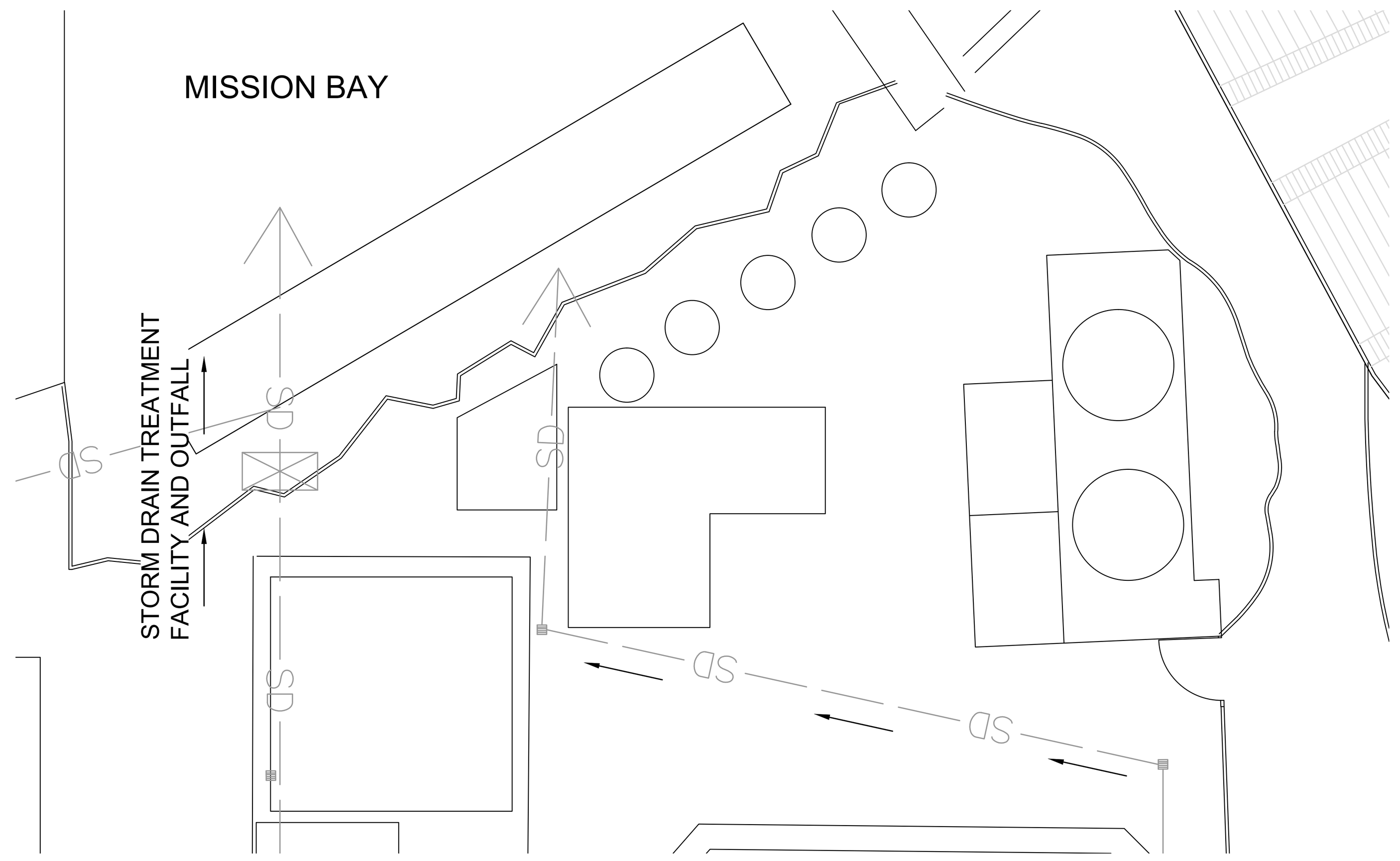
SeaWorld SAN DIEGO

BLUE WORLD
San Diego, CA

Owner Review

SITE GRADING PLAN

DATE	March 20, 2015
DR: DR	CK: VT
M & N: 8696	CLIENT: SWSD
SHEET NUMBER	C002.204



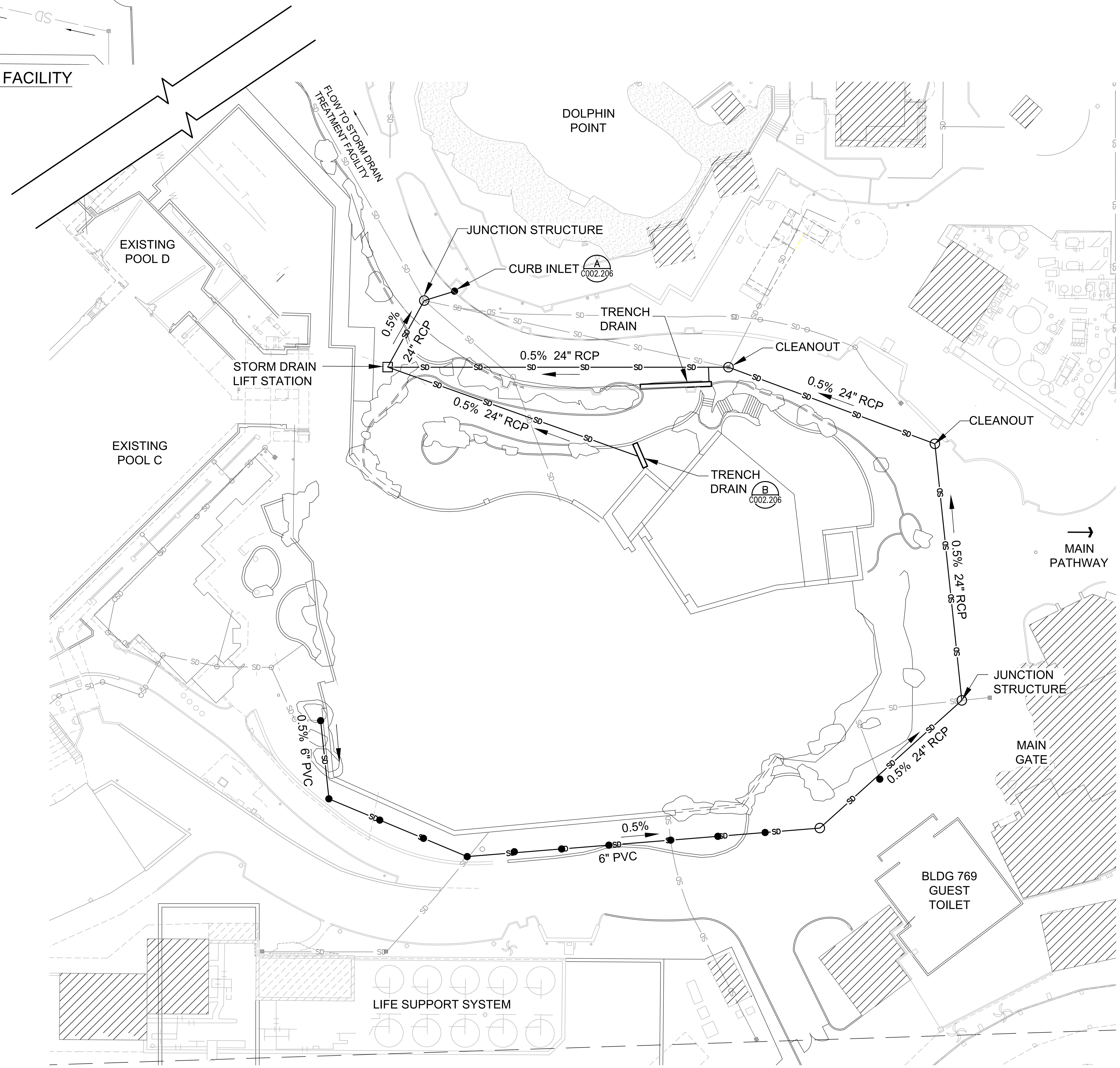
STORM DRAIN TREATMENT FACILITY

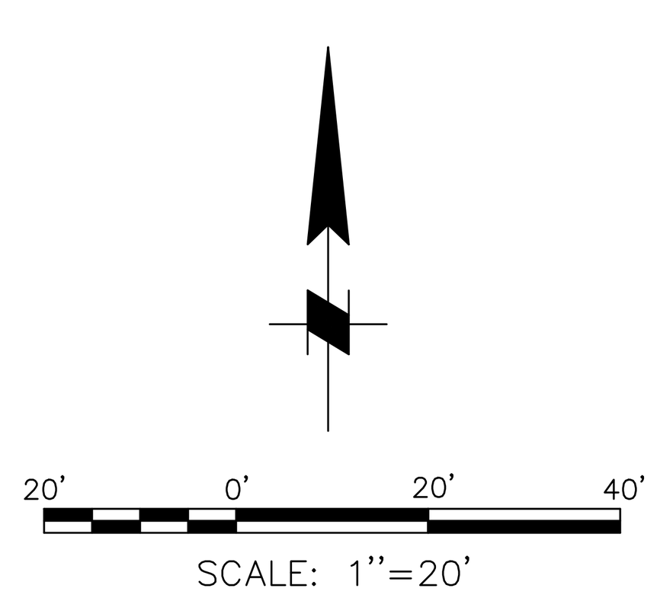
STORM DRAIN NOTES

1. ALL PIPE BEDDING SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS
2. ALL PIPE CONNECTIONS TO CONCRETE STRUCTURES SHALL HAVE PVC MANHOLE ADAPTERS
3. PROPOSED STORM DRAIN FLOWS WILL BE TREATED AT NORTHWEST WATER TREATMENT FACILITY BEFORE DISCHARGE.
4. ALL PROPOSED STORM DRAIN SYSTEMS TO BE CONNECTED TO THE WEST TREATMENT FACILITY.

LEGEND:

—SD—	STORM DRAIN
●	DRAINAGE INLET





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REVISION NO.	REVISION DATE

SeaWorld SAN DIEGO

BLUE WORLD
San Diego, CA

Owner Review

STORM DRAIN PLAN

DATE March 20, 2015	
DR DR	CK VT
M & N 8696	CLIENT SWSD
SHEET NUMBER C002.205	

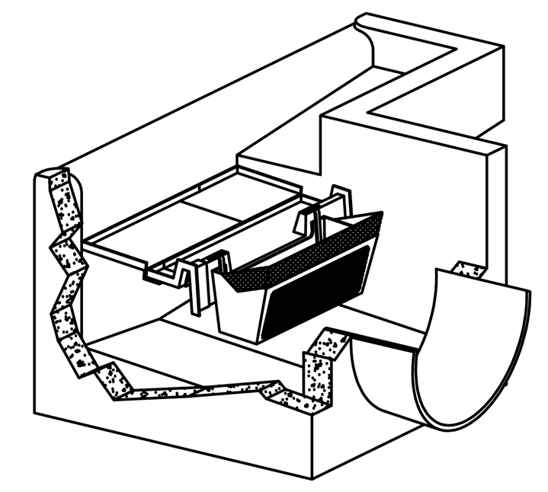


FIGURE 1 (DETAIL OF PARTS)

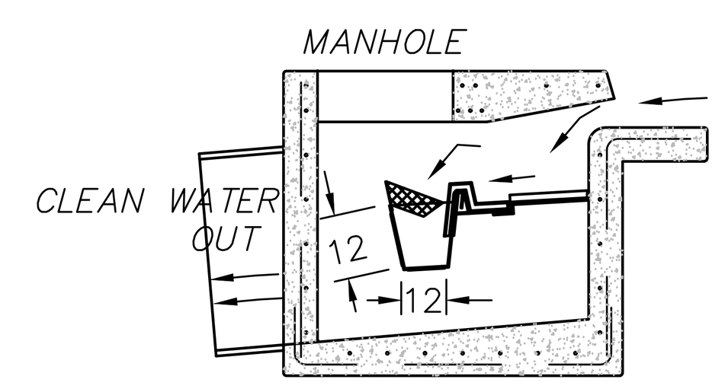


FIGURE 3 (DETAIL OF PROCESS)

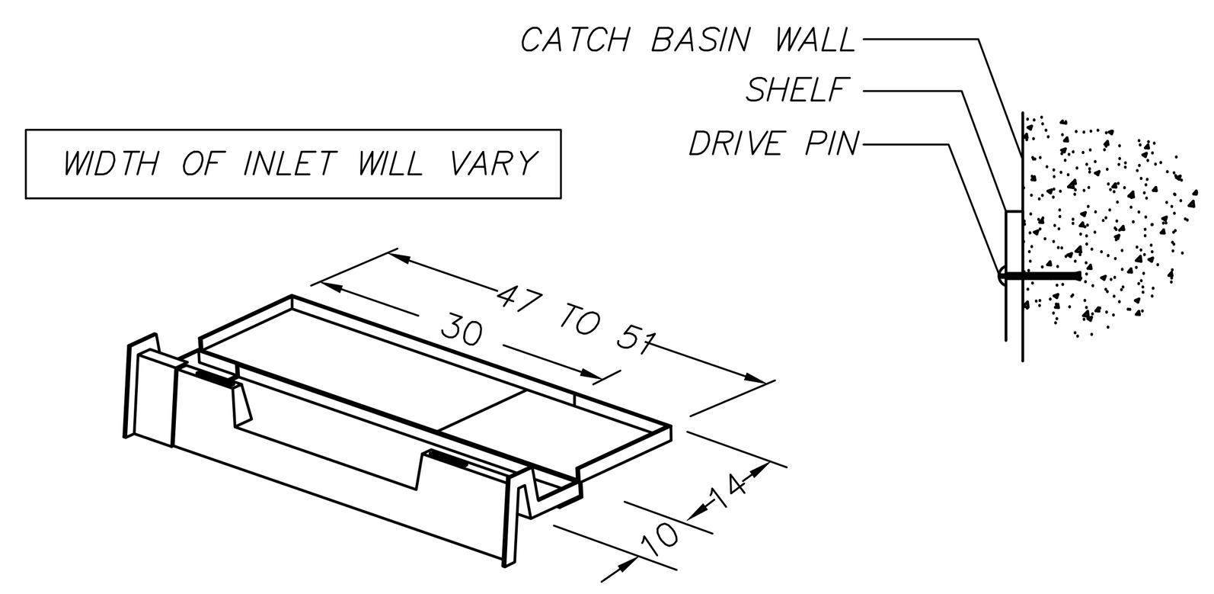


FIGURE 2 (DETAIL OF INSTALLATION)

FLOW RATES per 3 FT. Basket

$Q=SO*c_d*A\sqrt{2*g*h}$ c_d = Coefficient of Discharge = .67

	SO	A(ft^2)	h (ft)	Q ($\frac{h^3}{s}$)
Coarse Screen	.62	.84	0.146	1.06
Med Screen	.56	1.36	0.75	3.53
Fine Screen	.68	1.02	1.167	4.01
TOTAL				8.6

The above flow rates are based on unobstructed screens.

CALIFORNIA CURB SHELF BASKET NOTES

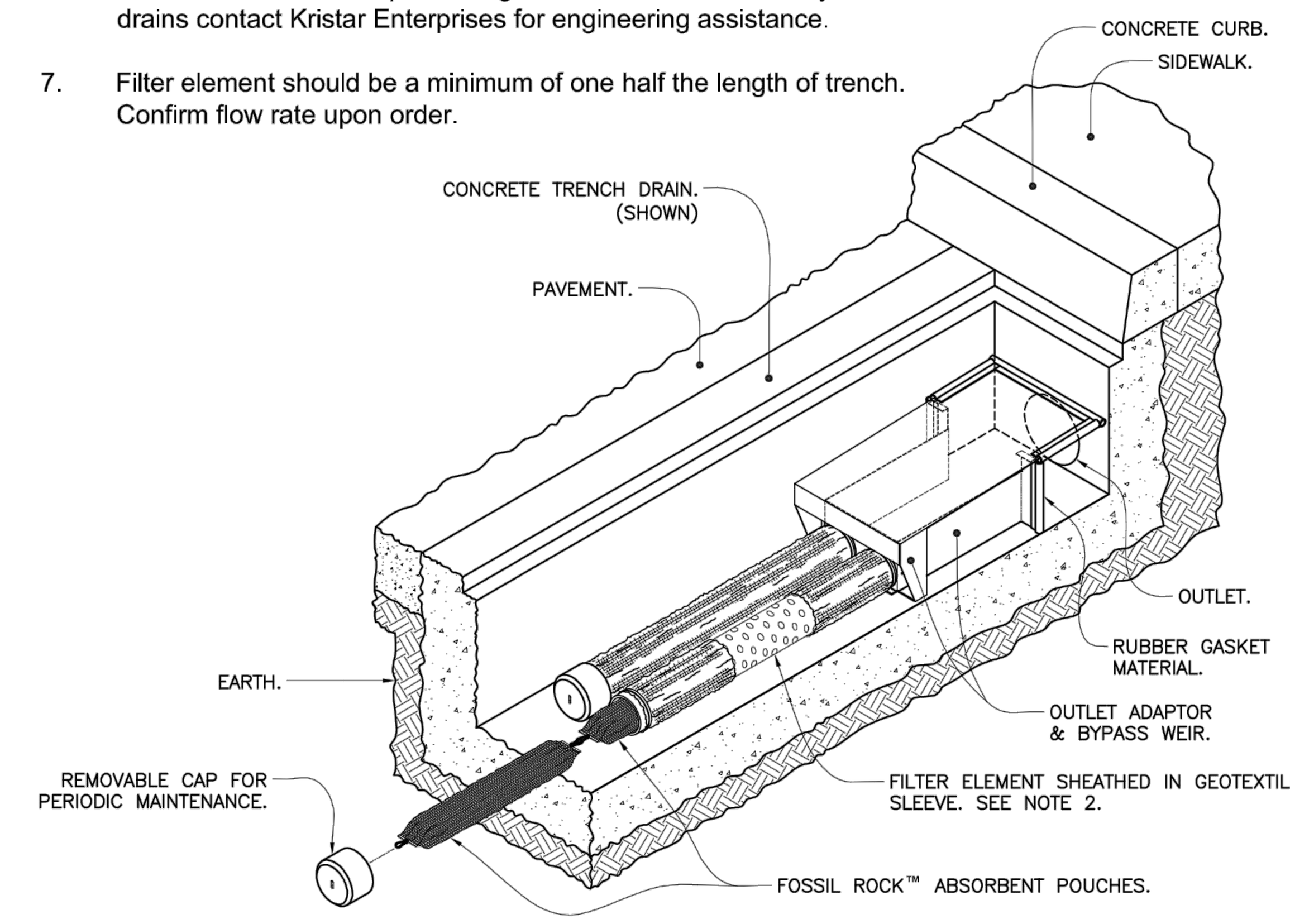
1. SHELF SYSTEM PROVIDES FOR ENTIRE COVERAGE OF INLET OPENING SO TO DIVERT ALL FLOW TO BASKET.
2. SHELF SYSTEM MANUFACTURED FROM MARINE GRADE FIBERGLASS, GEL COATED FOR UV PROTECTION.
3. SHELF SYSTEM ATTACHED TO THE CATCH BASIN WITH NON-CORROSIVE HARDWARE.
4. FILTRATION BASKET STRUCTURE MANUFACTURED OF MARINE GRADE FIBERGLASS, GEL COATED FOR UV PROTECTION.
5. FILTRATION BASKET FINE SCREEN AND COARSE CONTAINMENT SCREEN MANUFACTURED FROM STAINLESS STEEL.
6. FILTRATION BASKET HOLDS BOOM OF ABSORBENT MEDIA TO CAPTURE HYDROCARBONS.
7. FILTRATION BASKET LOCATION IS DIRECTLY UNDER MANHOLE FOR EASY MAINTENANCE.
8. BOX MANUFACTURED FROM MARINE GRADE FIBERGLASS & GEL COATED FOR UV PROTECTION.
9. 5 YEAR MANUFACTURER'S WARRANTY PATENTED.
10. ALL FILTER SCREENS ARE STAINLESS STEEL.

A / C002.206 — CALIFORNIA CURB SHELF BASKET WATER CLEANSING SYSTEM SAN DIEGO REGIONAL STANDARD CURB INLET (BY SUNTREE TECHNOLOGIES OR APPROVED EQUAL)

FG-LP-0002

NOTES:

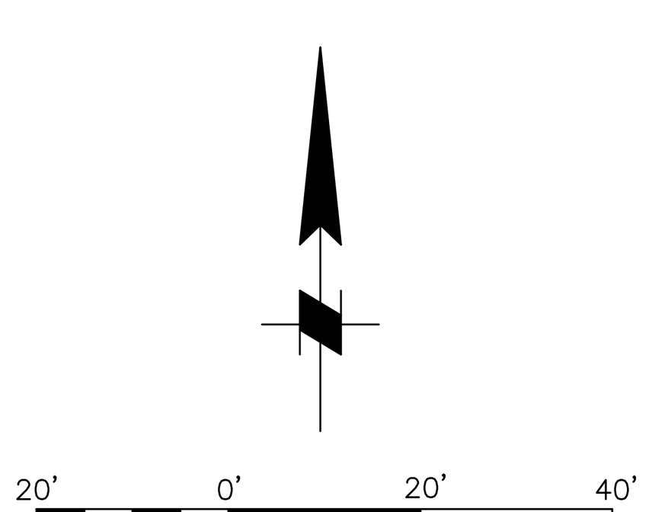
1. Filter outlet adapter shall be constructed from stainless steel Type 304.
2. Filter element is constructed from polypropylene woven monofilament geotextile surrounding a perforated filter housing. Filter element shall not allow the retention of water between storm events.
3. Filter inserts are supplied with "clip-in" filter pouches utilizing Fossil Rock ™ filter medium for the collection and retention of petroleum hydrocarbons (oils & greases).
4. FloGard® LoPro™ filter inserts and Fossil Rock™ filter medium pouches must be maintained in accordance with manufacturer recommendations.
5. Outlet adapter can accommodate outlet openings at right angles and/or bottom outlet openings.
6. For alternate outlet adapter configurations used for extremely shallow trench drains contact Kristar Enterprises for engineering assistance.
7. Filter element should be a minimum of one half the length of trench. Confirm flow rate upon order.



TITLE	
FloGard® LoPro™ TRENCH DRAIN FILTER INSERT	KriStar Enterprises, Inc. 360 Sutton Place, Santa Rosa, CA 95407 Ph: 800.579.8819, Fax: 707.524.8186, www.kristar.com

DRAWING NO.	REV	ECO	DATE	
FG-LP-0002	F	0075 JPR 8/7/09	JPR 2/21/07	SHEET 1 OF 2

B / C002.206 — TRENCH DRAIN FILTER INSERT (BY KRISTAR ENTERPRISES OR APPROVED EQUAL)



SCALE: 1"=20'

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REVISION NO.	REVISION DATE

SeaWorld SAN DIEGO

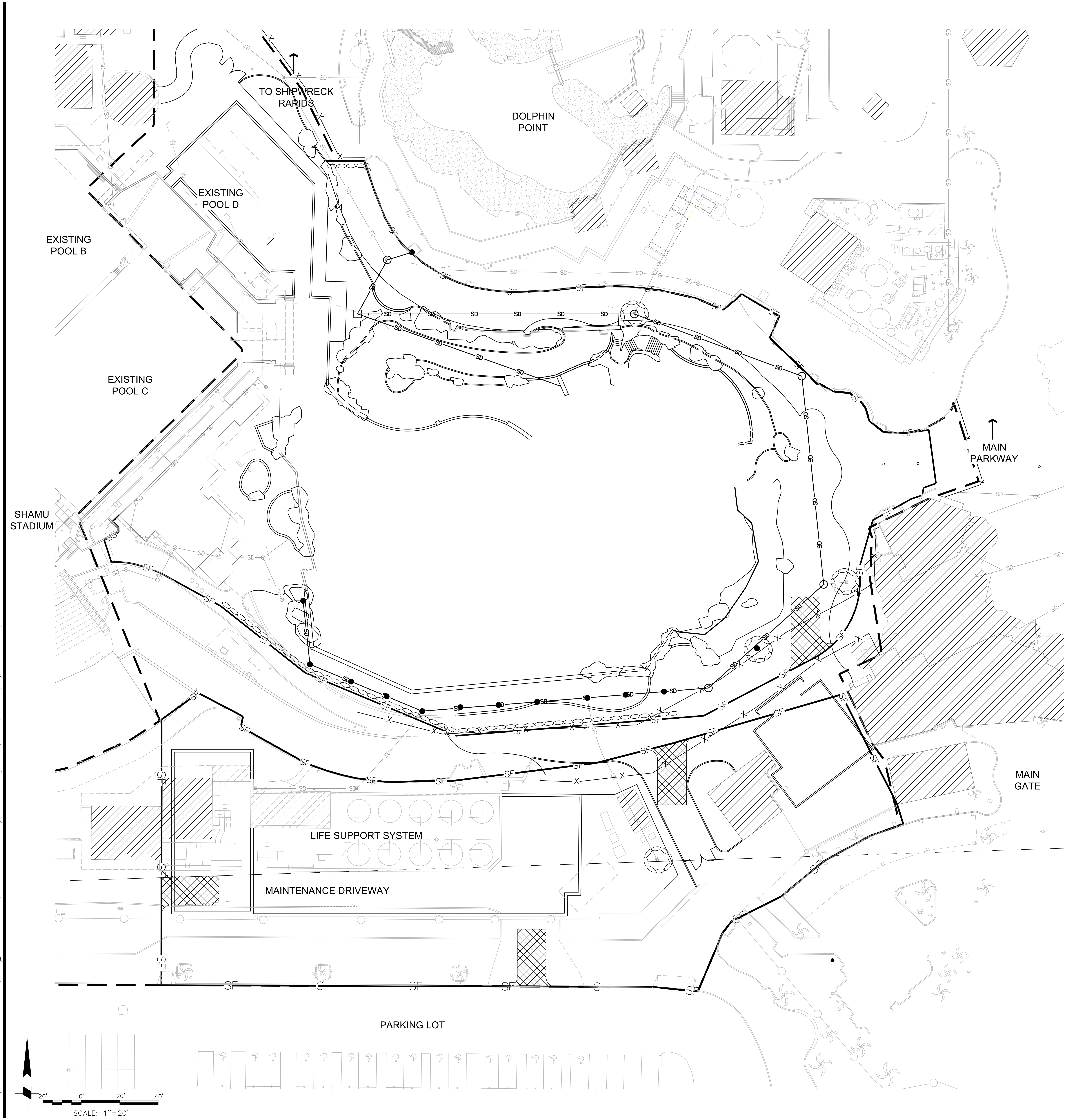
BLUE WORLD
San Diego, CA

Owner Review

STORM DRAIN DETAILS

DATE	
March 20, 2015	
DR: DR	CK: VT
M & N: 8696	CLIENT: SWSD

SHEET NUMBER
C002.206



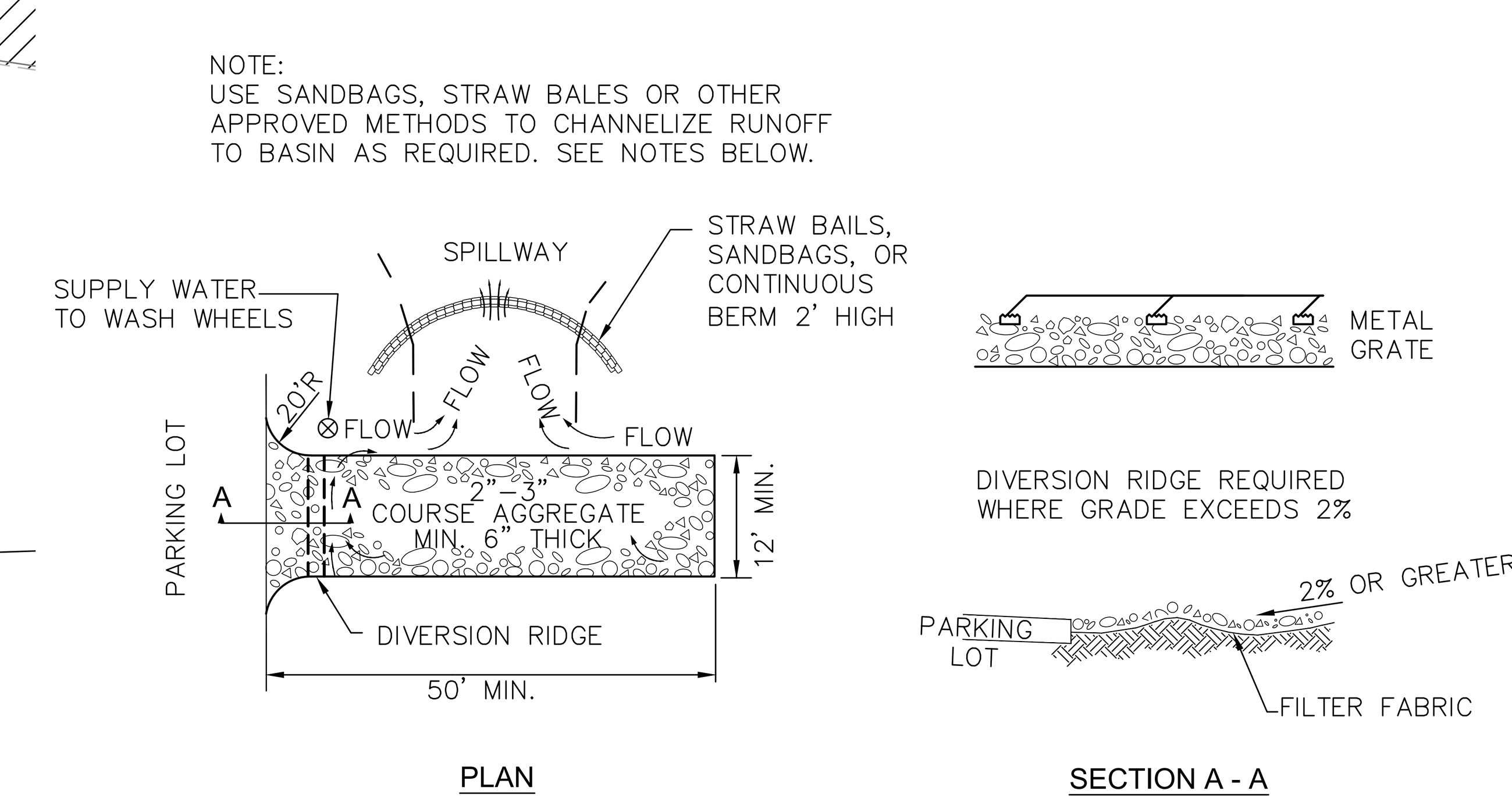
EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE CITY OF SAN DIEGO "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP), WATER QUALITY TECHNICAL REPORT (WQTR), AND/OR WATER POLLUTION CONTROL PLAN (WPCP).
2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00' FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS, THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.
4. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
5. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.
6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
8. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
11. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
13. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
14. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
15. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER/DEVELOPER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

LEGEND

- DRAINAGE INLET PROTECTION
- SILT FENCE
- SANDBAG BARRIER
- CONSTRUCTION ENTRANCE/EXIT



NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. ROCK BAGS OR SANDBAGS SHALL BE PLACED SUCH THAT NO GAPS ARE EVIDENT.

TEMPORARY CONSTRUCTION ENTRANCE

NO SCALE

moffatt & nichol

NOT FOR CONSTRUCTION

SeaWorld SAN DIEGO

BLUE WORLD

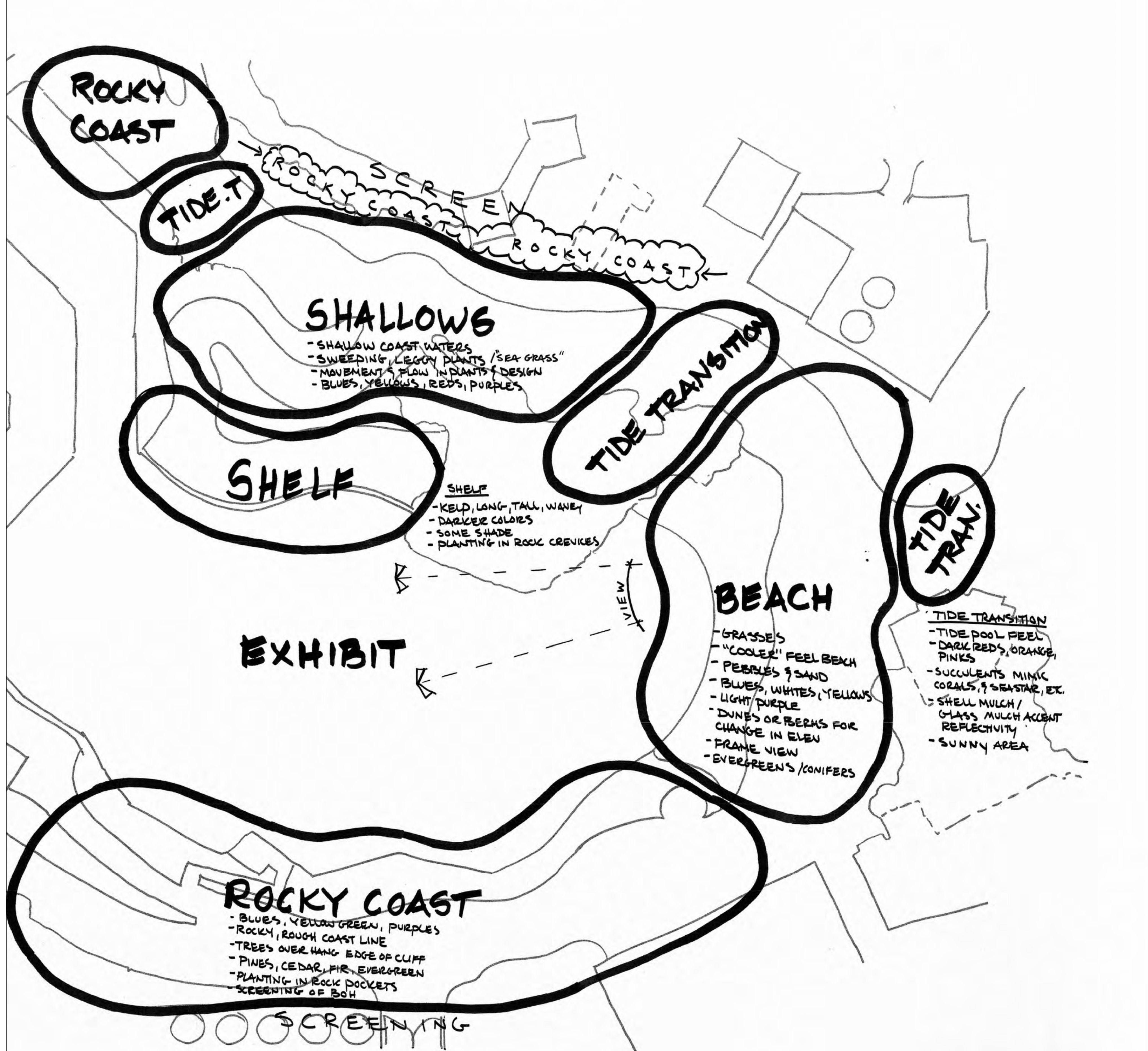
San Diego, CA

Owner Review

EROSION CONTROL PLAN

DATE	March 20, 2015
DR	DR
CK	VT
M & N	8696
CLIENT	SWSD
SHEET NUMBER	C002.207

THEMATIC ZONE DIAGRAM



GENERAL NOTE:

1. NO PLANT SPECIES LISTED AS PROBLEMATIC AND/OR INVASIVE BY THE CALIFORNIA NATIVE PLAN SOCIETY OR THE CALIFORNIA INVASIVE PLANT COUNCIL MAY BE ALLOWED IN THE LANDSCAPING PLAN.

ROCKY COAST ZONE

BEACH ZONE

SHALLOWS/ SHELF ZONE

TIDE TRANSITION ZONE

Keynote List

SEE GENERAL DWG INFO. SHEET FOR COMPLETE LIST

CONCEPT_PLANT_SCHEDULE

TREES- ROCKY COAST
ARAUCARIA COLUMNARIS / COOK PINE
ARAUCARIA HETEROPHYLLA / NORFOLK ISLAND PINE
ARBUTUS X `MARINA` / ARBUTUS MULTI-TRUNK
CEDRUS DEODARA `GLAUCA` / BLUE DEODAR CEDAR
CUPRESSUS ARIZONICA / ARIZONA CYPRESS
PINUS CANARIENSIS / CANARY ISLAND PINE
PINUS ELDARICA / AFGHAN PINE
PODOCARPUS ELONGATUS `ICEE BLUE` TM / ICEE BLUE YELLOW WOOD
SEQUOIA SEMPERVIRENS `APTOS BLUE` / COAST REDWOOD
TAXODIUM MUCRONATUM / MEXICAN BALD CYPRESS

TREES- TIDE TRANSITION
ALOE BAINESII / ALOE
BRAHEA ARMATA / MEXICAN BLUE PALM
DRACAENA DRACO / DRAGON TREE
EUPHORBIA COTINIFOLIA / CARIBBEAN COPPER PLANT
YUCCA ELEPHANTIPES / SOFT-TIPPED YUCCA

TREES- SHALLOWS
AGONIS FLEXUOSA `JERVIS BAY AFTERDARK` / RED PEPPERMINT TREE
ALBIZIA JULIBRISSIN / SILK TREE
ARBUTUS UNEDO / STRAWBERRY TREE MULTI-TRUNK
BAMBUSA OLDHAMII / GIANT TIMBER BAMBOO
CERCIS CANADENSIS `FOREST PANSY` TM / FOREST PANSY REDBUD
CUPRESSUS CASHMERIANA / KASHMIR CYPRESS
PODOCARPUS HENKELII / LONG-LEAFED YELLOW WOOD
SALIX BABYLONICA / WEEPING WILLOW

TREES- BEACH
CEDRUS DEODARA / DEODAR CEDAR
JUNIPERUS CHINENSIS `TORULOSA` / HOLLYWOOD JUNIPER
LEPTOSPERMUM LAEVIGATUM / TEA TREE MULTI-TRUNK
PINUS THUNBERGII / JAPANESE BLACK PINE
TABEBUIA CHRYSOTRICHA / GOLDEN TRUMPET TREE

SHRUBS- BEACH
CHONDROPETALUM TECTORUM / CAPE RUSH
LAVANDULA ANGUSTIFOLIA `HIDCOTE BLUE` / HIDCOTE BLUE LAVENDER
LEPTOSPERMUM LAEVIGATUM / TEA TREE MULTI-TRUNK
MUHLENBERGIA RIGENS / DEER GRASS
ZAMIA FURFURACEA / CARDBOARD PALM

SHRUBS- ROCKY COAST
ARCTOSTAPHYLOS DENSIFLORA `HOWARD MCMINN` / HOWARD MCMINN MANZANITA
ARCTOSTAPHYLOS GLAUCA / MANZANITA BIG BERRY
CEANOTHUS X `RAY HARTMAN` / CALIFORNIA LILAC
GALVEZIA SPECIOSA / ISLAND BUSH SNAPDRAGON
GREVILLEA X `LONG JOHN` / LONG JOHN GREVILLEA
GREVILLEA X `MOONLIGHT` / GREVILLEA
PINUS NIGRA `PIERRICK BREGERON` TM / BREPO
RHAPHIOLEPIS UMBELLATA `MINOR` / YEDDA HAWTHORN
RHUS INTEGRIFOLIA / LEMONADE BERRY
WESTRINGIA FRUTICOSA / COAST ROSEMARY

SHRUBS- TIDE TRANSITION
AGAVE AMERICANA / CENTURY PLANT
AGAVE AMERICANA `MARGINATA` / VARIEGATED CENTURY PLANT
AGAVE AMERICANA `MEDIO-PICTA ALBA` / STRIPED CENTURY PLANT
ALOE MACULATA `YELLOW FORM` / YELLOW SOAP ALOE
ALOE PLICATILIS / FAN ALOE
ALOE STRIATA / CORAL ALOE
ALOE STRICTA / ALOE
BERBERIS THUNBERGII `MONOMB` / CHERRY BOMB JAPANESE BARBERRY
CORDYLINE X `ELECTRIC PINK` / PINK CORDYLINE
CORDYLINE X `FESTIVAL GRASS` / DRACAENA
DASYLIRION LONGISSIMUM / TOOTHLESS DESERT SPOON
EUPHORBIA TIRUCALLI `STICKS ON FIRE` / PENCIL TREE
LEUCOSPERMUM CORDIFOLIUM `FLAME SPIKE` / NODDING PINCUSHION
LEUCOSPERMUM CORDIFOLIUM `YELLOW BIRD` / NODDING PINCUSHION
MIMULUS AURANTIACUS / STICKY MONKEY FLOWER
PHORMIUM TENAX `PLATT`S BLACK` / PLATT`S BLACK FLAX
PHORMIUM TENAX `RAINBOW MAIDEN` / RAINBOW MAIDEN NEW ZEALAND FLAX
STRELITZIA JUNCEA / NARROW-LEAFED BIRD OF PARADISE
YUCCA RECURVIFOLIA / SOFT LEAF YUCCA MULTI-TRUNK

SHRUBS- SHALLOWS
AGAVE GEMINIFLORA / CENTURY PLANT
AGAVE X `BLUE FLAME` / BLUE FLAME AGAVE
ALOE CAMERONII / ALOE
ASPARAGUS DENSIFLORUS `MYERS` / MYERS ASPARAGUS
CAESALPINIA GILLIESII / YELLOW BIRD OF PARADISE
CALLIANDRA SURINAMENSIS / PINK POWDERPUFF
CALLISTEMON CITRINUS `LITTLE JOHN` / DWARF BOTTLE BRUSH
CORDYLINE AUSTRALIS `RED SENSATION` / RED SENSATION DRACAENA
COREOPSIS GIGANTEA / TREE COREOPSIS
DIETES GRANDIFLORA / WILD IRIS
DODONAEA VISCOSA `PURPUREA` / PURPLE LEAFED HOPSEED BUSH
ERIOBOTRYA DEFLEXA `COPPERTONE` / COPPERTONE LOQUAT
GREVILLEA X `CANBERRA GEM` / CANBERRA GEM GREVILLEA
GREVILLEA X `NOELLII` / GREVILLEA
HIBISCUS ROSA-SINENSIS `SPIN THE BOTTLE` / CHINESE HIBISCUS
LAVATERA ASSURGENTIFLORA / MALLOW
LEONOTIS LEONURUS / LION`S TAIL
LEUCADENDRON X `CLOUDBANK GINNY` / CONEBUSH
MELALEUCA NESOPHILA / PINK MELALEUCA MULTI-TRUNK
NANDINA DOMESTICA OBSESSION / HEAVENLY BAMBOO
PHORMIUM X `BLACK ADDER` / NEW ZEALAND FLAX
PITTOSPORUM TENUIFOLIUM `SILVER SHEEN` / TAWHIWHI

GROUNDCOVER- BEACH
ARCTOSTAPHYLOS PUMILA / SANDMAT MANZANITA
ARMERIA MARITIMA `BLOODSTONE` / BLOODSTONE THRIFT
CALYSTEGIA MACROSTEGIA `ANACAPA PINK` / ANACAPA PINK CALIFORNIA MORNING GLORY
CAMISSONIA CHEIRANTHIFOLIA / BEACH EVENING PRIMROSE
CAREX OSHIMENSIS `EVERILLO` / EVERILLO JAPANESE SEDGE
CAREX PRAEGRACILIS / SLENDER SEDGE
CAREX TESTACEA / CAREX
CEANOTHUS MARITIMUS / MARITIME CEANOTHUS
CONVOLVULUS CNEORUM / BUSH MORNING GLORY
CONVOLVULUS SABATIUS / GROUND MORNING GLORY
COREOPSIS MARITIMA / SEA DAHLIA
DELOSPERMA COOPERI / PURPLE ICE PLANT
DIANELLA REVOLUTA `BABY BLISS` / BABY FLAX
DIETES X `LEMON DROP` / FORTNIGHT LILY
ERIGERON GLAUCUS `ARTHUR MENZIES` / BEACH ASTER
FESTUCA GLAUCA / BLUE FESCUE
FRAGARIA CHILOENSIS / BEACH STRAWBERRY
GAZANIA RIGENS LEUCOLAENA / TRAILING GAZANIA
JUNIPERUS SABINA `BUFFALO` / BUFFALO JUNIPER
LEYMUS MOLLIS / AMERICAN DUNEGRASS
MUHLENBERGIA CAPILLARIS `REGAL MIST` TM / MUHLY
NASSELLA CERNUA / NODDING NEEDLEGRASS
VERBENA LILACINA `DE LA MAR` / LILAC VERBENA

GROUNDCOVER- ROCKY COAST
CEANOTHUS GRISEUS HORIZONTALIS / CARMEL CREEPER
DUDLEYA PULVERULENTA / CHALK LETTUCE
DUDLEYA VIRENS HASSEI / CATALINA ISLAND LIVE-FOREVER
FELICIA AMELLOIDES / BLUE MARGUERITE
HEUCHERA MAXIMA `SANTA ANA CARDINAL` / ISLAND ALUM ROOT
JUNIPERUS CHINENSIS `MINT JULEP` / MINT JULEP JUNIPER
JUNIPERUS HORIZONTALIS `BLUE CHIP` / BLUE CHIP JUNIPER
JUNIPERUS SCOPULORUM `BLUE CREEPER` TM / BULE CREEPER JUNIPER
LIMONIUM CALIFORNICA / COASTAL STATICE
LOROPETALUM CHINENSE `PURPLE PIXIE` / FRINGE FLOWER
ROSMARINUS OFFICINALIS `HUNTINGTON CARPET` / HUNTINGTON CARPET ROSEMARY

GROUNDCOVER- TIDE TRANSITION
AEONIUM ARBOREUM `ZWARTKOP` / BLACK ROSE AEONIUM
AEONIUM UNDULATUM / STALKED AEONIUM SAUCER PLANT
AEONIUM X `KIWI` / KIWI AEONIUM
AEONIUM X `SUNBURST` / AEONIUM
AGAVE VICTORIAE-REGINAE / QUEEN VICTORIA AGAVE
ALOE POLYPHYLLA / SPIRAL ALOE
ALOE X `BLUE ELF` / ALOE
BERBERIS THUNBERGII `ORANGE ROCKET` / ORANGE ROCKET JAPANESE BARBERRY
CALANDRINIA SPECTABILIS / PINK CALANDRINIA
CRASSULA CAPITELLA `CAMPFIRE` / CAMPFIRE CRASSULA
DELOSPERMA COOPERI / PURPLE ICE PLANT
DELOSPERMA NUBIGENUM `YELLOW` / YELLOW ICE PLANT
DELOSPERMA X `STRONG RED` / STRONG RED ICE PLANT
DIANTHUS DELTOIDES `ARCTIC FIRE` / MAIDEN PINK
DIANTHUS GRATIANOPOLITANUS `FIREWITCH` / FIREWITCH CHEDDAR PINKS
ECHEVERIA AGAVOIDES `LIPSTICK` / HEN AND CHICKS
ECHEVERIA LUTEA / YELLOW ECHEVERIA
ECHEVERIA SECUNDA / HEN AND CHICKS
ECHEVERIA SUBRIGIDA `RED TIDE` / RED TIDE ECHEVERIA
ECHEVERIA X `AFTERGLOW` / AFTERGLOW ECHEVERIA
ECHEVERIA X `BLACK PRINCE` / BLACK HEN AND CHICKS
ECHEVERIA X `BLACK PRINCE` / BLACK HEN AND CHICKS
ECHEVERIA X `RUFFLES` / AFTERGLOW ECHEVERIA
ECHEVERIA X `RUFFLES` / AFTERGLOW ECHEVERIA
EUPHORBIA CHARACIAS WULFENII / EVERGREEN SPURGE
GAZANIA X `COPPER KING` / GAZANIA
GAZANIA X `MITSUWA YELLOW` / YELLOW GAZANIA
IMPERATA CYLINDRICA `RED BARON` / JAPANESE BLOOD GRASS
JUNCUS PATENS / CALIFORNIA GRAY RUSH
KALANCHOE BEHARENSIS / FELT PLANT
KALANCHOE LUCIAE / PADDLE PLANT
LAMPRANTHUS AURANTIACUS / BUSH TYPE ICE PLANT
LAMPRANTHUS MULTIRADIATUS / BUSH TYPE ICE PLANT
OSTEOSPERMUM JUCUNDUM / TRAILING AFRICAN DAISY
OSTEOSPERMUM X `LEMON SYMPHONY` / LEMON SYMPHONY DAISY
SEDUM BURRITO / BABY BURRO`S TAIL
SEDUM NUSSBAUMERIANUM / COPPERTONE STONECROP
SEDUM RUPESTRE `ANGELINA` / YELLOW STONECROP
SEDUM SPURIUM `SCHORBUSER BLUT` / DRAGON`S BLOOD
SEDUM X `AUTUMN JOY` / AUTUMN JOY SEDUM
SENECIO SERPENS / BLUE CHALKSTICKS
SENECIO TALINOIDES `JOLLY GRAY` / HYBRID KLEINIA

GROUNDCOVER- SHALLOWS
AEONIUM ARBOREUM / TREE AEONIUM
ANIGOZANTHOS FLAVIDUS `BIG RED` / RED KANGAROO PAW
ANIGOZANTHOS X `BUSH TANGO` / ORANGE KANGAROO PAW
ANIGOZANTHOS X `YELLOW GEM` / YELLOW GEM KANGAROO PAW
ASPIDISTRA ELATIOR `VARIEGATA` / VARIEGATED CAST IRON PLANT
BERBERIS THUNBERGII `ORANGE ROCKET` / ORANGE ROCKET JAPANESE BARBERRY
BULBINE FRUTESCENS `HALLMARK` / STALKED BULBINE
BULBINE FRUTESCENS `TINY TANGERINE` / TINY TANGERINE BULBINE
CALANDRINIA GRANDIFLORA / ROCK PURSLANE
COLEONEMA PULCHRUM `DWARF PINK` / DWARF PINK BREATH OF HEAVEN
GAURA LINDHEIMERI `SISKIYOU PINK` / SISKIYOU PINK GAURA
IMPERATA CYLINDRICA `RED BARON` / JAPANESE BLOOD GRASS
KNIPHOFIA UVARIA `PINEAPPLE POPSICLE` / TORCHLILY
LANTANA CAMARA `RADIATION` / RADIATION LANTANA
ROMNEYA COULTERI `WHITE CLOUD` / WHITE CLOUD MATILIJA POPPY
ROSMARINUS OFFICINALIS `TUSCAN BLUE` / TUSCAN BLUE ROSEMARY
RUSSELIA EQUISETIFORMIS / FIRECRACKER PLANT
RUSSELIA EQUISETIFORMIS `LEMON FALLS` / YELLOW FIRECRACKER PLANT
SENECIO SERPENS / BLUE CHALKSTICKS
TRACHELOSPERMUM ASIATICUM `SNOW N SUMMER` TM / SNOW N SUMMER ASIATIC JASMINE

PGAV DESTINATIONS
PECKHAM GUYTON ALBERS & VIETS, INC.
200 North Broadway, Suite 1000, St. Louis, MO 63102
(314) 231-7318 WWW.PGAV.COM

NOT FOR CONSTRUCTION

Accessibility for Persons with Disabilities:
This drawing contains layouts and elements critical to providing Access for Disabled Persons. Contractor shall provide verification and certification of Compliance with the applicable accessibility regulations.

Theming Design Intent:
The theming scope of work shown on these drawings is for design intent. Outlines, sketches, drawings, picture references, material specifications, and notes on this document are for the express purpose of location, general identification, adjacency, and design intent. Structural design, code compliance, manufacture, installation, and safety of operation are to be provided by the Contractor including engineering documentation signed and sealed by a qualified Engineer licensed to practice by the authority having jurisdiction. The Architect/Designer's review of submittals is for the purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

BASIS OF BEARINGS:
The Basis of Bearing is based on the California Coordinate system of 1983 (CCS83), Zone 6, North American Datum 83, Epoch 1991.35, being the grid bearing between Station 157 and Station 914 as published per record of survey No. 14492 recorded March 31, 1994, in book of record of surveys at page 14492 as file No. 1994-0214720, Record of San Diego County.
I.E. South 88° 07' 55" West

BENCHMARK:
The Basis of Elevation is station 157 per record of survey No. 14492, 2.25° City of San Diego brass disc set in concrete boat ramp, at the Mission Bay boat launch at South Shores Park.
Elevation
= 8.89 NAVD 88 ft
=9.82 Sea World Datum
= 6.68 NGVD 29
Difference = -0.93 from Sea World Datum to NAVD 88 Datum

REVISION NO.	REVISION DATE

SeaWorld SAN DIEGO

BLUE WORLD
San Diego, CA

Owner Review

THEMATIC ZONES

DATE March 20, 2015	
DR AUTHOR	CK CHECKER
PGAV 64076-10	CLIENT SWSD
SHEET NUMBER L002.001	

Arrival View

EXHIBIT NO. 6
APPLICATION NO.
6-15-0424
Renderings
California Coastal Commission

Ocean of Life: Interpretation

Main Path Underwater View

Walk With The Whales

The Ocean Shelf

Deep Water View

Discovery Opportunities

- ***Conservation facts***
- ***Interactive exhibits***

Inspire, Educate, Conserve

Blue World Focuses on Education and Science

Sample Mural

CDP Application: 6-04-0434 Blue World
Views from outside of leasehold or perimeter.

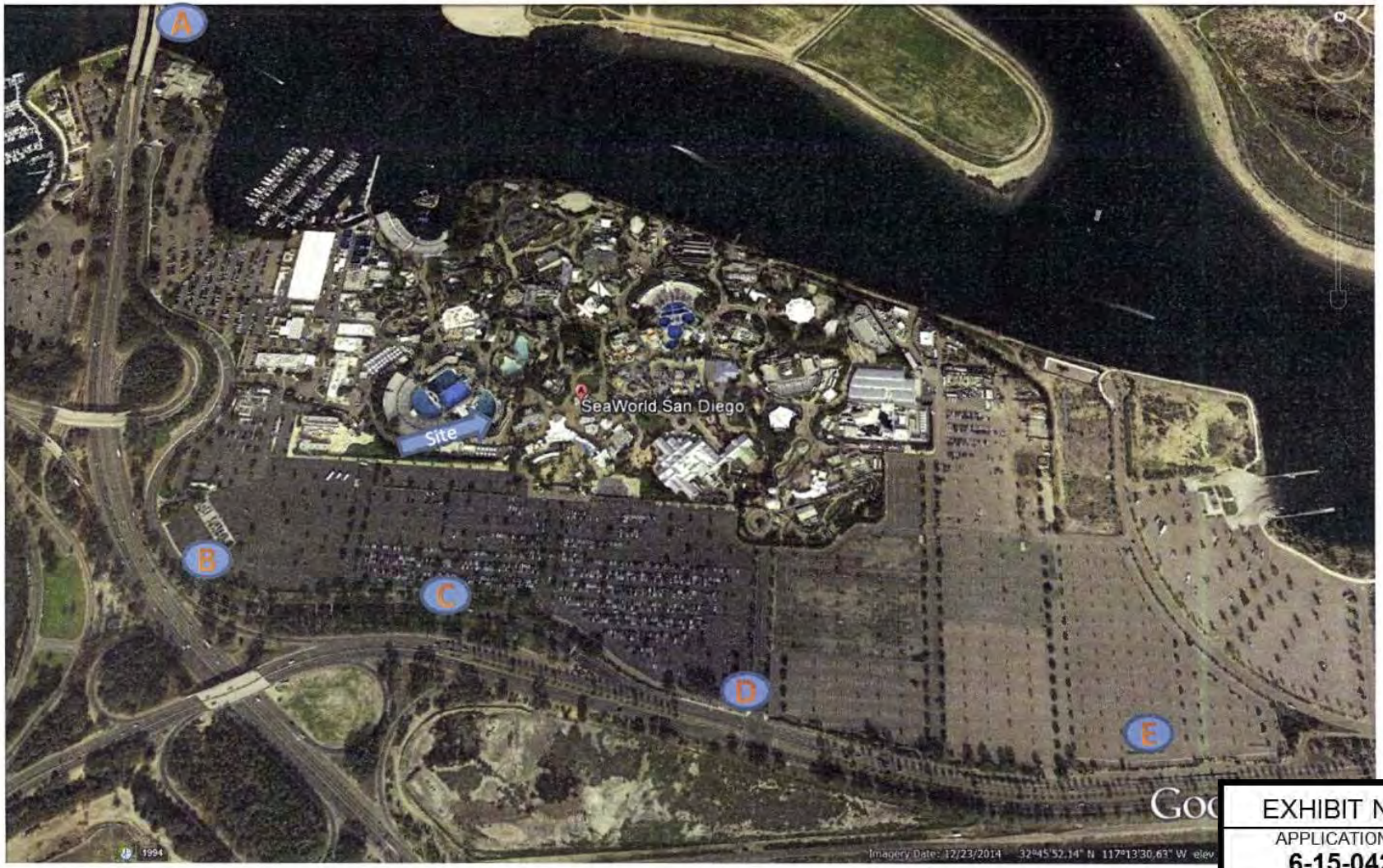


EXHIBIT NO. 7
APPLICATION NO.
6-15-0424
Photo Survey
California Coastal Commission

Ingraham Street Bridge (peak of bridge light pole 21)


B


D


E

M E M O R A N D U M

TO:	**DARLENE WALTER**
FROM:	**ANN BOWLES, PHD, AND PAMELA K. YOCHEM, PHD, DVM**
DATE:	**8/21/15**
RE:	**REGARDING NOISE, BLUE WORLD PROJECT CONSTRUCTION**
CC:	**CORRINE BRINDLEY, CHRIS DOLD, AL GARVER, HENDRIK NOLLENS , JOHN REILLY, MIKE SCARPUZZI**

We are writing to address your questions about noise that may be produced during the Blue World construction project and ambient noise following construction. One of us (Bowles) leads the Bioacoustics Program at Hubbs-SeaWorld Research Institute (HSWRI) and was a member of the NOAA Acoustic Criteria Panel that developed science-based criteria for protecting marine mammals from exposure to noise in the environment (Southall et al. 2007). The other (Yochem) is a Ph.D. veterinarian and the Vice President for Research at HSWRI; she has over 30 years of research experience in marine mammal health.

Below, we summarize information from the published literature on construction noise and from publications written by our staff containing data on ambient sound measurements in SeaWorld pools. The citations are given in "References" at the bottom of the memo.

Applicable Principles of Acoustic Propagation of Sound:
Richardson et al. (1995) and Erbe (2010) are the best references for this brief description of basic acoustic principles.

First, it is important to note that the decibel (dB), the measure commonly used to express sound level, is not an absolute measure, but calculated relative to a standard quantity (and expressed on a logarithmic scale). The standard used in water is not the same as that in air. In addition, because the density of air and water are very different, it is necessary to compensate for the density difference to compare levels between the two – otherwise the comparison is "apples to oranges". To get an intuitive feel for the relationship between the level of a sound in air and one in water, subtract 62 dB from the level in water.

In homogeneous seawater and in the absence of barriers, sound attenuates (declines in level) as a function of the square of distance, a decline of 6 dB in units of sound pressure level (SPL) for each doubling of distance between source and receiver. In shallow water, the decline may drop to 3 dB or less per doubling of distance. Through structures like walls, the decline may be much greater than 6 dB

Within a pool, where sound may be channeled by surfaces such as the water's surface, bottom, and walls, attenuation can be even less than in shallow water. In addition, the sound field can be complex in a pool and will certainly depend on the amount of energy at given frequencies. Finneran and Schlundt (2007) give detailed measurements made in a small pool on a concrete pad, showing that signals with broader bandwidths attenuate less with distance than those with narrow bandwidths (most construction noise will be broadband). Bowles and Anderson (2012) found that attenuation across a SeaWorld pool averaged 2-3 dB for a 10 kHz tonal (narroband) signal. Thus, *within* the space of a pool, attenuation can be low.

However, where sound travels from *outside* across a boundary like a concrete wall, or multiple walls separated by sand, the attenuation is much greater, just as sound in air is attenuated substantially by a glass window. Generally, the greater the difference in density across the boundary, the greater the attenuation.

Propagation of sound from air into water is a special case. Except when produced directly overhead, within a cone defined by an angle of 13° around the source, sound in air transmits inefficiently into water. Sounds produced anywhere except directly overhead will be attenuated by around 30 dB. This is comparable to the difference between noise inside vs. outside a building when doors and windows are shut. The attenuation across the air-water boundary is greater than across an 8' plywood sound barrier in air.

Both distance and barriers affect sound differently depending on frequency. Higher frequencies, which the whales can hear well, are attenuated more than low frequencies, which they hear poorly (Szymanski et al. 1999). Thus, sound levels that the whales actually hear are likely to be lower than estimates of levels made without reference to their auditory thresholds.

Propagation of noise from construction activities into whale pools will first be a function of distance and second a function of the barriers or channels through which the sound propagates:

1) Construction activities with the potential to produce the highest received sound levels will be those in contact with pool walls or the concrete immediately adjacent to a pool, e.g., when cutting through the wall of an existing pool.

2) Propagation into pools can be reduced significantly by:

a. Increasing distance between the sound source and whales;

b. Placing the whales on the other side of a wall or away from an overhead source, i.e., away from line-of-sight propagation;

c. Conducting construction activities behind barriers, for example by emptying a pool to create a layer of air; by introducing a watertight gate; or by working at a distance with soil or air between the work and the wall;

d. Minimizing or eliminating channels between the sound source and a pool with, such as water-filled pipes or filled gate channels.

We note that exposure of the whales to construction activities will be managed according to protocols designed to minimize exposure to the most intense activities, as described in SeaWorld's Blue World Construction Sound Memorandum (8/21/15).

Levels of Construction Sound Sources:
Drilling and concrete cutting are the activities likely to occur during Blue World construction that will be close to pools with whales. Drilling noise (from unspecified equipment) has been measured at long range (ca. 600 m [1968 ft]) through seawater in Sarasota Bay (Buckstaff et al. 2013). They reported received levels of 68-70 dB re 1 µPa (RMS SPL) at this distance. However, they did not provide source levels. We have not found any published measurements of noise from concrete cutting in seawater.

Ambient Noise in Pools:
There is no published, systematic, cross-industry review of ambient sound in oceanaria. However, there are a few published accounts with ambient noise measurements (O'Neal 1998, Wisdom et al. 2001, Finneran et al. 2005, Bowles & Anderson 2012, Scheifele et al. 2012). Generally, the ambient has been relatively uniform, mostly noise emitted by water conditioning equipment and the flow of water. Intermittently, there are higher levels produced by the animals themselves or maintenance activities (e.g., cleaning pools). Ambient levels measured by HSWRI in one of the killer whale pools at SeaWorld (Wisdom et al. 2001) were as quiet or quieter than in comparable facilities. In the low frequency range, levels averaged around 100 – 120 dB re 1 μPa^2/Hz (the accepted unit of measurement for broadband sound), which is within or below the levels published elsewhere. Above 1000 Hz, it was in the range from 40-50 dB re 1 μPa^2/Hz, or comparable to quiet surface waters (little wind or waves) and close to the realistic lower limit for ocean noise. Levels measured in another SeaWorld pool were slightly higher (Bowles & Anderson 2012), averaging 40-60 dB re 1 μPa^2/Hz above about 5 kHz, but still within the range of quiet ocean conditions. Levels measured in other holding facilities were comparable to these or higher (O'Neal 1998, Finneran et al. 2005, Scheifele et al. 2012)[1].

Perspectives on Ocean Noise:
A review of the literature on noise in the ocean is beyond the scope of this document. However, a few notes are relevant.

Killer Whale Hearing. Killer whales hear well from 1 kHz to about 120 kHz (Szymanski et al. 1999).

Killer Whale Sounds: Killer whales vocalize at varying levels. Estimated source levels of their social signals are in the range 135 – 175.7 dB RMS SPL (Holt et al. 2011). Echolocation clicks are higher, in the range 195 – 224 dB re 1 µPa (Au et al. 2004).

Ocean Ambient: Generally, ambient levels are greatest in the range from a few Hz to about 300 Hz, and decline at higher frequencies until the thermal limit of noise is reached above about 100 kHz (Dahl et al. 2007, Erbe 2010).

Dahl et al. (2007) summarized the literature on broadband ocean noise and compared it with terrestrial ambient noise. An important conclusion of their analysis is that vessel noise in the ocean is as ubiquitous and as important as traffic noise in the terrestrial environment. Above 1000 Hz, the quietest ocean ambient (without waves, water flow, and wind) is around 30-40 dB re 1 $\mu Pa^2/Hz$ (Dahl et al. 2007, Figure 2), but more usual conditions of light wind average 50-80 dB in open waters. Heavy shipping has elevated the ocean ambient worldwide (see figures in Dahl et al. 2007 and Erbe 2010), but the majority of this noise is at very low frequencies, in the range that killer whales hear poorly. Smaller boats at relatively close range are the most important human-made noise in killer whale habitat. In the Pacific Northwest, endangered Southern Resident killer whales are exposed to broadband ambient noise levels produced by vessel traffic reaching 120 dB re 1 µPa in the 1- 40 kHz band (Holt et al. 2009). In some parts of their critical habitat, the exposure is present for 90% of the whales' daytime hours during the summer.

Snapping shrimp are ubiquitous in tropical and temperate shallow waters, and they produce sounds that span the range of frequencies that killer whales hear well. In coastal zones, they can average 100-120 dB re 1 uPa^2/Hz from around 300 Hz to 200 kHz (Au and Banks 1997). This noise is continuous, with only moderate changes in level over the course of a day.

NOTE:

1) The units of measurement for spectra (representations of level across frequencies) differ among publications. Oceanographers generally use power spectral densities, calculated in 1 Hz bands and expressed in dB re 1 $\mu Pa^2/Hz$ (or its equivalent, 1 $\mu Pa/\sqrt{Hz}$). However, levels may also be calculated in wider bands and expressed as average spectral level (units SPL, in dB re 1 µPa). Comparisons across these scales are usually "apples-to-oranges". For the purposes of comparing oceanarium levels with levels in the ocean, we have elected to report levels in dB re 1 $\mu Pa^2/Hz$, and have used summary graphs in Dahl et al. (2007, Fig. 2) and Erbe (2010, Fig. 5) as the points of comparison for noise in the ocean.

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August 21, 2015

Alexander Llerandi, Coastal Planner
California Coastal Commission, San Diego Division
7575 Metropolitan Drive, Suite 103
San Diego, California 92108

Regarding: Construction Sound and Sound Transmission
Blue World Coastal Development Application No. 6-15-0424

Dear Alex;

SeaWorld San Diego has a long standing history of successfully performing construction work adjacent to animal areas with no adverse effects on our animals. Blue World construction will be similar in nature to several past projects reviewed and approved by California Coastal Commission;

Construction of Shamu Backstage (existing E pool) (1995) – CDP 6-95-013
Construction of Dine with Shamu (2004) – CDP 6-04-158
Shamu Show Set Change out (2005) – CDP 6-05-031
Shamu Show Set Change out (2010) – CDP 6-10-086

The scope of work consists of two major phases A) construction of a new E pool adjacent to D pool and B) construction of a new F pool. The new pool E will provide a direct channel for whales to move from E pool to D pool. Demolition work will include removal of the existing flatwork, elevator tower, skywalk and removal of a portion of pool D to create a channel between existing D and new E pool.

Construction means and methods are the same as used on approved projects noted above. These include physical barriers between construction work and animal areas of 8' tall panels constructed of 2x4 studs and T-111. They are installed on grade and separate construction areas from non construction or animal areas. This creates a layer of separation between animal areas and construction activities that could generate sound.

Choices have consciously been made by designers, engineers, and a team of zoological professionals to reduce and mitigate sound impacts on the facility. For example, drilled soldier beams have significantly less sound impact than driven piles; therefore the drilling method was chosen over the pile driving method. Following is a review of specific construction methods to be used for Blue World work within 50' adjacent to an occupied or potentially occupied pool and their representative durations. It is anticipated that construction activities beyond 50' of occupied pools will not impact animals in any way different from that which is generated within the 0' – 50' distance. Therefore, for this review no items

outside the adjacent 50' are being identified or addressed in this document. Any work noted below that is conducted above water, for instance removal of the skywalks, whales will be relocated to a pool that is not adjacent to the work being performed.

Construction documents are also ssued that obligate and bind contractors to adhere to noise reduction measures and restrictions on equipment and certain tools.

Construction of new E pool and channel connection to D pool; demolition of existing concrete and elevator tower:

Contractors anticipated construction methods (1 week = 5 – 6 day work week):

Flatwork/Concrete Pathway: Method/equipment/impacts – 8' tall construction fences in place. Concrete flatsaw and walk behind saws. Concrete to be cut into smaller squares to minimize and/or eliminate use of jackhammers, squares removed and concrete recycled. Vibration to be minimal and not in direct contact with pool walls. Estimated Duration: 6 – 7 hours per day; 4 days demolition of flatwork.

Elevator Tower: Method/equipment/impacts – Set up temporary fencing protection to protect existing pool E. Utilize large excavator/track hoe to pull building away from existing flatwork adjacent to pools. Vibration minimal and not in direct contact with pool walls; Foundations for building are separate from flatwork which are separate from existing pool. Estimated Duration: 6 hours per day; 2-3 days to remove building.

Demolition of Skywalk: Method/equipment/impacts – Utilizing crane picks, cut structure into segments, rig/sling large segments, lift off base structure, place on ground east of pools to complete demolition away from pools, then haul out. Footings and columns are not tied or doweled in to pool walls. Noise impact minimal from cutting and final demolition located at least 50' from inhabited pools. Estimated Duration: 3 – 5 hours per day; 7 days

Installation of tie-backs for structural anchoring: Method/equipment/impacts – Construction fences in place. Utilize drill rig, generator and air compressor. Set tie backs. Pour slurry grout. Minimal sound impacts from generator and compressor located above grade and behind construction fencing. Equipment is located away from pools to facilitate work and further minimize impacts. Vibration – none. Estimated Duration: 3 – 6 hours per day; 2 weeks concurrent with excavation.

Tie into existing Pool D for gates: Method/equipment/impacts – Construction fences in place. Set water tight gates and drain pool D. Core existing exterior pool D wall for placement of saw guides. Perform same operation on interior of drained pool. Saw cut opening with concrete saw. Crane out large pieces of concrete from saw cutting operation. Estimated Duration: 7 – 8 hours per day; 3 days for demo of opening.

Animal management specific to this tie in will include the draining of pool D. Whales will be in pools A / B / C or existing E during this work.

Construction at existing Dine Area/Existing E / New F pool:

Demolition of Existing Dine with Shamu Shade Structures Only (building remains) : Method/equipment/impacts – Set up temporary fencing protection to protect existing pool C. Utilize excavator/track hoe to pull shade structures down, perform balance of demolition with bobcats and hand tools on ground after building is down. Estimated Duration: 6 – 7 hours per day; 2 weeks

Shoring: Method/equipment/impacts – Utilize drilled shores to avoid vibration (drilling rig). Soldier piles and lagging set with cranes. Concrete to be placed with concrete pumps. Some moderate vibration from chipping of slurry (cumulative 6 – 8 hours total) to install lagging within the 50' zone and majority will be out of the 50' zone. Estimated Total Duration: 6 – 7 hours per day; 10 weeks concurrent with excavation.

Excavation of Pool: Method/equipment/impacts –Using traditional excavators, backhoes, loaders, trucks to remove existing concrete and soil. Distance from existing C pool is approximately 50' where excavation work would start, the majority of excavation will be outside of the 50' radius of existing pools. Estimated Total Duration: 7 – 8 hours per day; 10 weeks concurrent with shoring.

From an animal management standpoint, precautions are taken to always ensure the safety and well-being of the animals. The contractors, engineers, and trainers, coordinate on a daily basis to ensure that animals are located correctly in accordance with the proposed work for that day. Project schedules always insure that a minimum of 8 hours is provided daily where no construction or park activities are ongoing to provide the whales a standard rest period. This has been our protocol for many years.

The overall means and methods for construction and construction contract requirements have been reviewed with the Curatorial and Veterinary staff to incorporate recommendations and ensure all construction activities are performed to minimize or negate any impacts to the existing structures that could affect or migrate to the adjacent pools. In addition, these requirements are incorporated into our project specification that bind all contractors on site at the time contracts are issued.

If you require any further information, I am happy to discuss in person or I can be reached at (619) 226-3626.

Sincerely,

Darlene K. Walter, PMP
Vice – President, Engineering
SeaWorld San Diego

Attachments:

Hubbs-SeaWorld Research Institute Sound Transmission Memo, dated 8/21/15
Diagram – 50' Radius from Existing Pools

SEAWORLD SAN DIEGO
BLUE WORLD CONSTRUCTION PROXIMITIES

50' FROM POOL D

TIE-IN

E

30'

d

MATCH EXISTING GRADE

767
DEEP DIVE 1

40'

DN

b

74'

c

20'

26'

DN

755
SUPPORT BUILDING

a

50' FROM POOL C

765
UNDERWATER GALLERY

750
POOL F
+21.6 W.L.

751
TRAINER ACCESS

DN

753
LSS REFER TO SHEET A753.301

772
GUEST TOILET

770
TRASH

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September 21, 2015

VIA ELECTRONIC MAIL

Mr. Alexander Llerandi, Coastal Program Analyst
California Coastal Commission
San Diego District
7575 Metropolitan Drive, Suite 103
San Diego, CA 92108-4402

Re: Addendum to Blue World Project Description: CDP Application 6-15-0424

Dear Mr. Llerandi:

We represent SeaWorld San Diego in connection with its coastal development permit application for the planned orca habitat expansion.

SeaWorld San Diego and the California Coastal Commission have enjoyed a close cooperative working relationship for more than 40 years. As a result, SeaWorld is deeply appreciative of the thoughtful and professional consideration Coastal Commission staff members have given to its review and analysis of the Blue World Project application. As you are aware, we have submitted letters dated April 13, 2015, August 21, 2015 and September 16, 2015 in which we have indicated that the care and well-being of SeaWorld's marine mammal collection is under the exclusive jurisdiction of federal agencies. However, without waiving the matters addressed in those letters, SeaWorld also wants to continue to address staff questions related to the killer whale collection within the Blue World Project.

Therefore, in SeaWorld's continuing spirit of cooperation and communication, we are pleased to formally supplement the above-referenced CDP application with the Project Description Addendum attached hereto.

Please contact me if you have any questions.

Very truly yours,

David E. Watson

DEW
DM2\6154445.1

Enclosure

cc: John Reilly
Darlene Walter
Corrine Brindley
Charles Lester
Sherilyn Sarb

REVISED BLUE WORLD PROJECT DESCRIPTION
CDP APPLICATION 6-15-0424
(Project Description Addendum September 21, 2015)

The Project will be managed consistent with the Virgin Pledge against collection of killer whales from the wild. Based on the Virgin Pledge, to which SeaWorld is a signatory, the Project will not be home to any killer whales taken from the wild after February 14, 2014 and no genetic material from any killer whale taken from the wild after February 14, 2014 will be utilized, with the exception of rescued killer whales approved by one or more government agencies for rehabilitation or deemed by one or more governmental agencies as unfit for release into the wild. The Project killer whale population will not significantly increase except as may occur incrementally through sustainable population growth consistent with the reproductive guidelines of one or more nationally recognized marine mammal accreditation organizations. The Project may be home to beached or rescued killer whales at the request of one or more governmental agencies.

THE Virgin PLEDGE

(Facility name) _____

Is committed to the protection and conservation of oceans for future generations. Except when necessitated by the needs of rehabilitation*, rescue** or support for endangered species***, this facility pledges to never take receipt of cetacea including whales and dolphins that were taken from the wild after 14th February 2014.

REHABILITATION*

Many facilities play an important role in the care and rehabilitation of injured animals. In the case of animals that are taken into care in the event of injury, stranding or any other natural or man-made disaster, the primary intention should always be to rehabilitate and release.

RESCUE**

A rescue refers to an animal that has been deemed non – releasable by relevant government authorities.

SUPPORT FOR ENDANGERED SPECIES***

(Or equivalent status within differing international frameworks)

The role of facilities in supporting on-going conservation programmes is recognised. Ex situ conservation initiatives (captive breeding programmes of certain species) are therefore exempt, assuming that;

A) the initiative is deemed necessary by relevant authorities e.g. at the request of government, published species action plan or at the recommendation of authoritative bodies such as IUCN

B) it is as a complementary (and not as an alternative) approach to in-situ conservation (programmes that take place in the species natural habitat)

Signed _____

Name _____

Position _____

Date _____

Due to the substantial volume of public comments submitted to Coastal Commission staff regarding Coastal Development Permit No. 6-15-0424, Exhibit 12 – Letters of Support and Exhibit 13 – Letters of Opposition will be released to the public in a forthcoming Addendum to this staff report.