



Harris & Associates

DUNES PARK- PLAYGROUND EQUIPMENT REPLACEMENT



PRELIMINARY ENGINEERING REPORT

10/09/2024

08/06/2025 (Port updates to schedule, cost, equipment (option 2))

1. PROJECT PLANNING

The City of Imperial Beach has requested the Port to evaluate the replacement of the playground equipment at Dunes Park located at 790 Seacoast Drive in the City of Imperial Beach. The recommended playground equipment by the City will be appropriate for ages 2-12 years old and will comply with requirements per American Disabilities Act (ADA), International Play Equipment Manufacturer Association (IPEMA), Consumer Product Safety Commission (CPSC) Handbook, and the current American Society for Testing and Materials Standard (ASTM) for Public Use of Playground Equipment.

2. EXISTING FACILITIES

The project site is located in the City of Imperial Beach at 790 Seacoast Dr, Imperial Beach, CA 91932 and is leased by the Port and maintained by the City.

LOCATION MAP



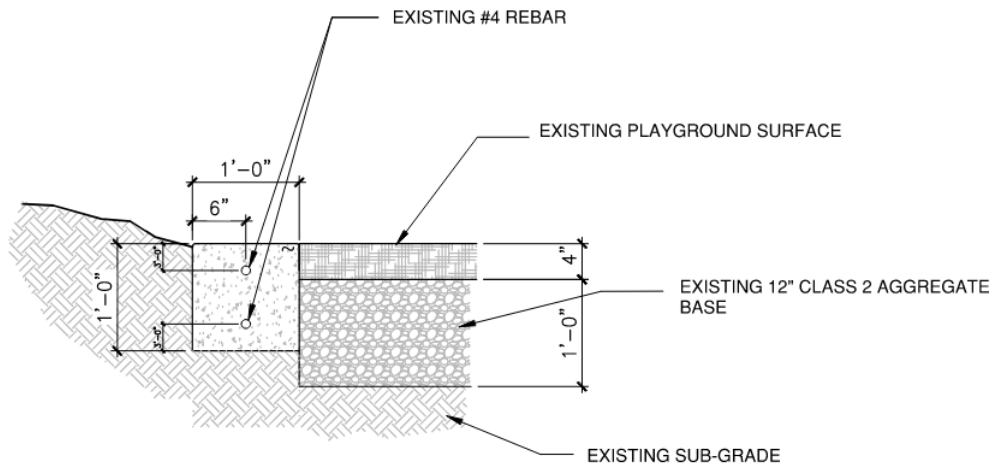
HISTORY

This existing site was developed in 1994 as a public playground that contained approximately 1,500 square feet (SF) of playtop and a playground structure. In 2016, a Certified Playground Safety Inspector reviewed several Port parks to examine the equipment and determined that the playground at Dunes Park required total replacement. A Preliminary Engineering Report was developed which led to a replacement project that was completed in 2017. This new construction increased the footprint to approximately 2,000 SF of poured in place playground surfacing and replaced the equipment with upgraded play equipment. See Drawing No. TL-2016-01 and Specification No. 2016-23 for Record Drawing of the equipment constructed in 2017.

CONDITIONS OF EXISTING FACILITIES



Image 1: Existing Facilities



EXISTING PLAYGROUND SURFACE SECTION

Figure 1: Existing Cross Section at play surface area

On October 2, 2024, a site visit revealed that the City of Imperial Beach has removed the large play structure and adjacent small bouncer playground equipment, leaving only a single slide and rubberized mats in place as seen in **Image 1**. It is presumed that the remaining slide is still within its useful life (8-20 years) and remains due to its satisfactory condition. The additional playground equipment was removed earlier this year due to its deteriorating state and concerns regarding sharp edges that could pose concerns to public safety. Currently, the playground features benches, bollards, a bicycle rack, a water fountain and rubberized surfacing, situated adjacent to a public basketball court and walking distance from the beach.

The current condition and presence of storm drain infrastructure is unknown. Further evaluation may be required to determine whether additional drainage pipe and inlets are required to accommodate adequate drainage of the playground during rain events.

3. PROPOSED PROJECT

Addition of robust playground equipment will enhance this park with no existing play equipment other than a singular slide remaining at the project site. Designing and constructing a playground near the beach presents several considerations that must be addressed to ensure the success and longevity of the installation. The following are primary considerations relative to the proposed playground improvements.

DESIGN CRITERIA

The Port of San Diego follows specific design criteria for playground equipment to ensure safety, accessibility, and environmental sustainability. The following highlights the criteria for the proposed project effort:

- **Safety Standards:** Compliance with ASTM (American Society for Testing and Materials), International Play Equipment Manufacturer Association (IPEMA) and CPSC (Consumer Product Safety Commission) guidelines for playground safety.
- **Accessibility:** Equipment must be designed to be accessible for children of all abilities, following ADA (Americans with Disabilities Act) requirements.
- **Durability and Maintenance:** Materials should be weather-resistant and require minimal maintenance to ensure long-term use.
- **Age Appropriateness:** Equipment should cater to different age groups, with specific areas designed for toddlers, preschoolers, and older children.
- **Environmental Considerations:** Use of sustainable materials and consideration of the environmental impact of the playground and nearby beach.
- **Inclusive Design:** Incorporating features that allow for play and interaction among children of varying abilities.
- **Community Input:** Engaging with local communities to understand their needs and preferences for playground design.

PERMIT REQUIREMENTS

The proposed replacement must adhere to all local, state, and federal regulations regarding the reconstruction of the playground and disposal of materials and debris. After the installation of the equipment, a Certified Safety Playground Inspector to conduct a safety inspection of the playground.

This project is located off Tidelands, therefore, the City will be the lead agency for the CEQA process and issuing the required Coastal Development Permit for the implementation of the project. The City of I.B Tidelands Planning Advisory Committee will review the project to recommend approval to the City Council.

PRELIMINARY PROJECT DESIGN

The proposed project involves the detachment and removal of the existing slide and its associated footings, the playground rubberized surfacing, and the underlying 12"-thick layer of aggregate base. Once the site has been cleared, concrete base footings for the new play structure will be constructed, 12"-thick aggregate base layer will be placed under the new rubberized playground surface and the recommended playground equipment will be installed.

City of I.B has reviewed the site and determined that the best replacement for Dunes Park playground equipment would be a prefabricated play structure similar to what is shown on Image 2 below, over a new safety surfacing. In addition to the playground structure, various sensory panels are desired to be added around the structure. This proposed project will incorporate the following:

- **Reliable products:** Strong, durable, low-maintenance play equipment for a coastal environment.
- **Maintenance Considerations:** Above ground rope connections to ensure easy maintenance access for future modifications and repairs.
- **ADA Accessibility:** Inclusive play structure design and elements.

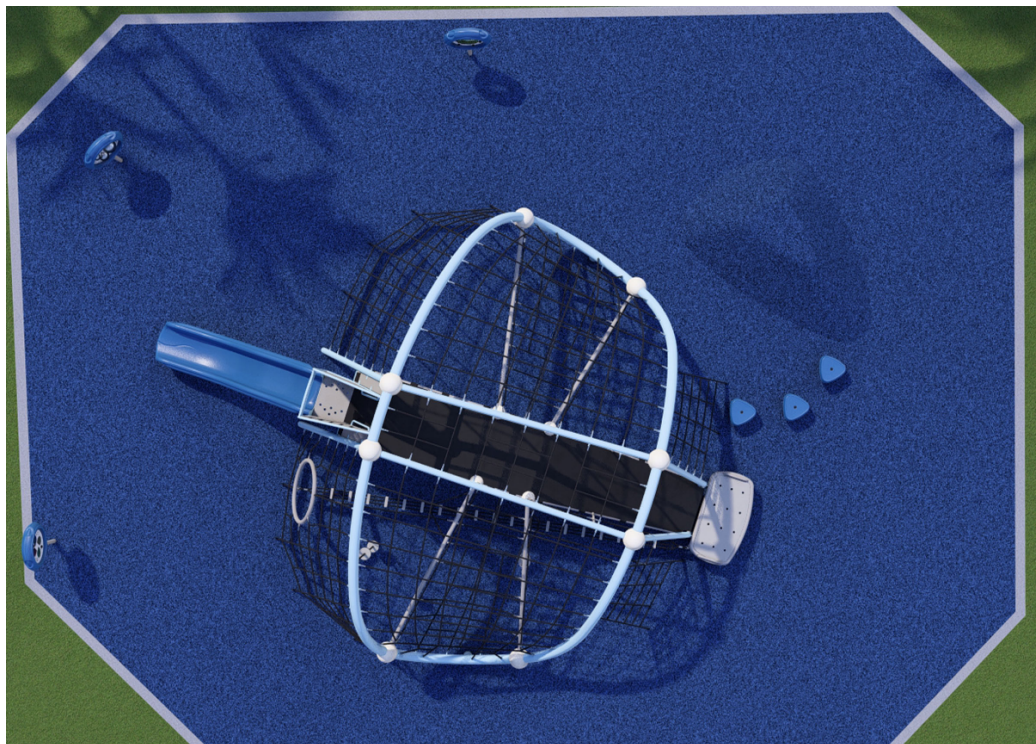


Image 2: Playground structure-Aerial View



Image 3: Playground structure- Profile View



Image 4: Sensory, Cognitive, and Sound Equipment.

The proposed playground (Image 3) would consist of a steel structure, slide, and a variety of ropes and netting to provide a fun and imaginative environment targeting children in the 5-12 years old age group. Outside the play structure, the playground would also incorporate mound and elevated step elements to promote climbing, balance, and coordination development. The playground would also incorporate freestanding sensory rings (Image 4) and/or panels for children of all age groups to provide visual and auditory sensory activities to promote brain development.

PROJECT CONSIDERATIONS

Playground Considerations

Situated near the Pacific Ocean, the playground faces inherent challenges associated with coastal environments, including exposure to salt air and sand. To mitigate these factors, the playground vendor should be consulted regarding using corrosion-resistant materials.

The poured-in-place rubberized surfacing may require further exploration. The California Coastal Commission has recently rejected poured-in-place surfacing related to concerns of the surfacing degrading over time and polluting our coastline. Solid surface, rubberized mats/tiles may be required which meet fall attenuation requirements while addressing the concerns of degradation.

The City desires a modification to the proposed play equipment allowing for the replacement of cable core (rope) segments without disruption to the resilient surfacing. The project team should coordinate with the playground vendor to accommodate this request, ensuring the modification meets all applicable safety standards.

Leadtime for the playground equipment should be considered to secure the equipment on schedule to avoid project delays as some vendors are located overseas.

Playground footing depths may require coordination with the playground vendor to ensure adequate burial depth is consistent with other underground design considerations.

Construction Access

The current playground is bifurcated from the Seacoast Drive (construction access) by existing shade trellises, bollards, and mature palm trees. Special care will be required when conducting demolition and construction activities to avoid impacts to existing improvements. Additionally, care will be required to not damage the existing enhanced pedestrian concrete leading to the playground.

Pedestrian access and circulation will require management throughout the duration of the project as active construction will be occurring within the existing park that will remain open and accessible by park patrons.

Utilities

A survey including existing utility mark-out should be provided for all existing utilities to ensure utility impacts and/or conflicts are avoided during construction.

4. PROJECT MILESTONES AND COST

PROJECT SCHEDULE

Project Phase	Time
Project Adoption (BPC Approval) and Design Procurement	4 months
Design and Permitting (<i>Concurrent</i>)	
<i>Design</i>	6 months
<i>Permitting and Entitlements</i>	8 months
Advertisement and Award (BPC Approval)	6 months
Construction	10 months
TOTAL	28 months

ENGINEER'S OPINION OF PROBABLE COST

Project Phase	Cost
Design	\$ 200,000
Construction	\$ 660,000
Contingency	\$ 120,000
TOTAL	\$ 980,000

Annual O&M Expectations

Maintenance activities include the following:

- Sweeping the rubberized surface regularly to remove sand
- Power washing equipment
- Inspecting regularly for loose parts, sharp edges, or other maintenance requirement



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