

# DEMONSTRATION PROJECT #1: Fitzgerald Marine Reserve Parking Lot

**Project Type:** Complete Site Retrofit

**Project Approach:** Full-Integration

**Site Design Strategies Used:** Efficient site design, balanced parking, surface stormwater conveyance, and preservation of existing trees

**Stormwater Facility Strategies Used:** Pervious paving, vegetated swales, stormwater planters, and rain gardens

The Fitzgerald Marine Reserve, located in Moss Beach, California, is a popular destination for people to experience the wonderful scenery, hiking trails, and tide pools along the Pacific Ocean. To help mitigate the impacts of high visitation to this area, a master plan for the Fitzgerald Marine Reserve was prepared in 2002. Following this effort, a Conceptual Plan for Interpretation at the Fitzgerald Marine Reserve was completed in 2004. This conceptual plan, completed by Ron Yeo FAIA Architect, Inc., included better vehicular access, a redesigned parking area, a new interpretative education center building, and improvements to outdoor amenities.

In an effort to fully manage the parking lot and street stormwater runoff, the 2004 conceptual plan has been revised into a new plan that incorporates pervious paving, vegetated swales, rain gardens, and stormwater planters. The following pages illustrate an initial conceptual stormwater design for this project site. Further conceptual design refinement for this project is expected after the completion of this guidebook.



SOURCE: GOOGLE EARTH

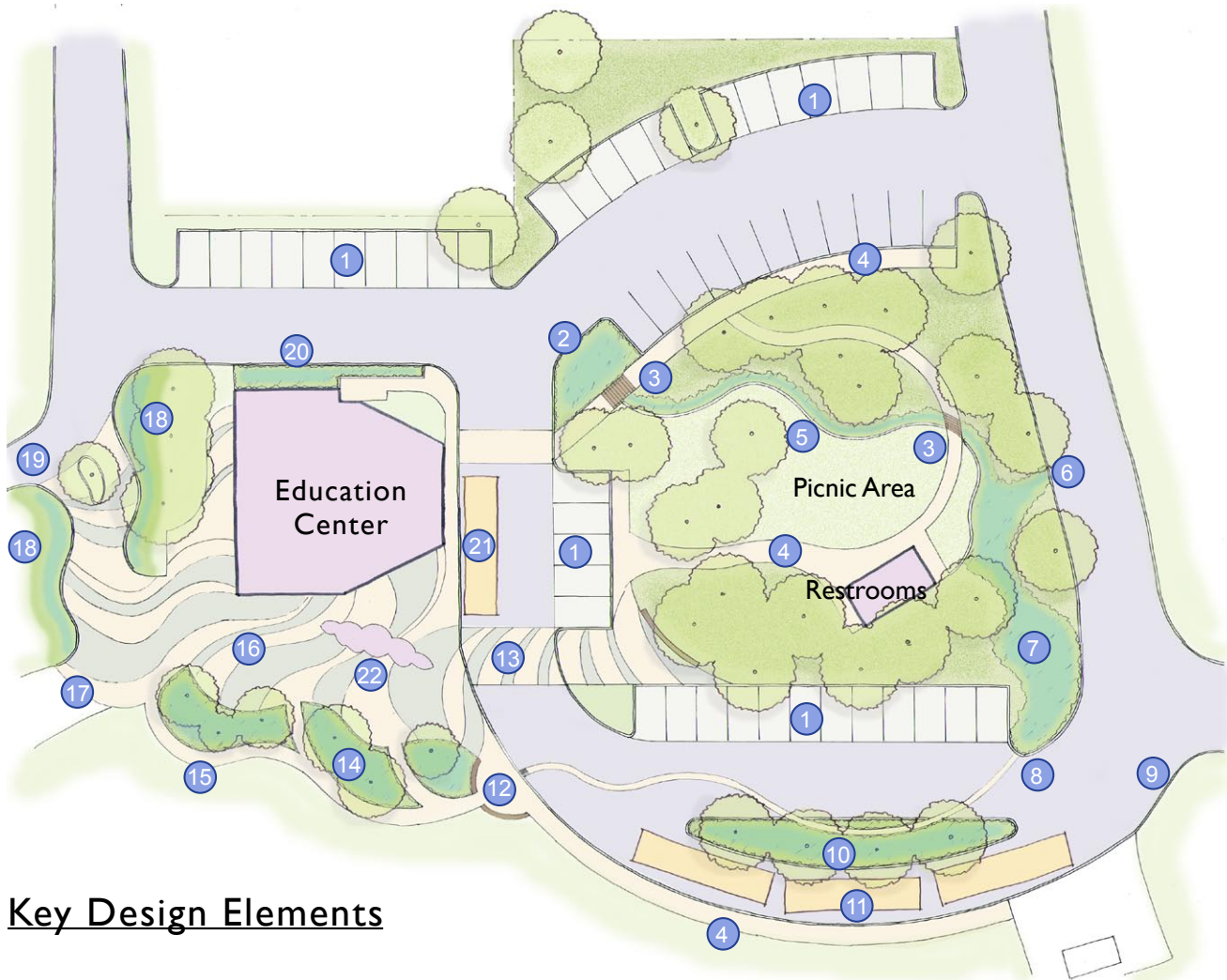
**Figure 6-23:** The existing visitors parking lot and outdoor space at the Fitzgerald Marine Reserve. This space will be redesigned to provide a new education center and various site improvements.



SOURCE: NEVUE NGAN ASSOCIATES

**Figure 6-24:** The existing parking lot at the project site and the mature cypress trees that dominate the site's grounds.

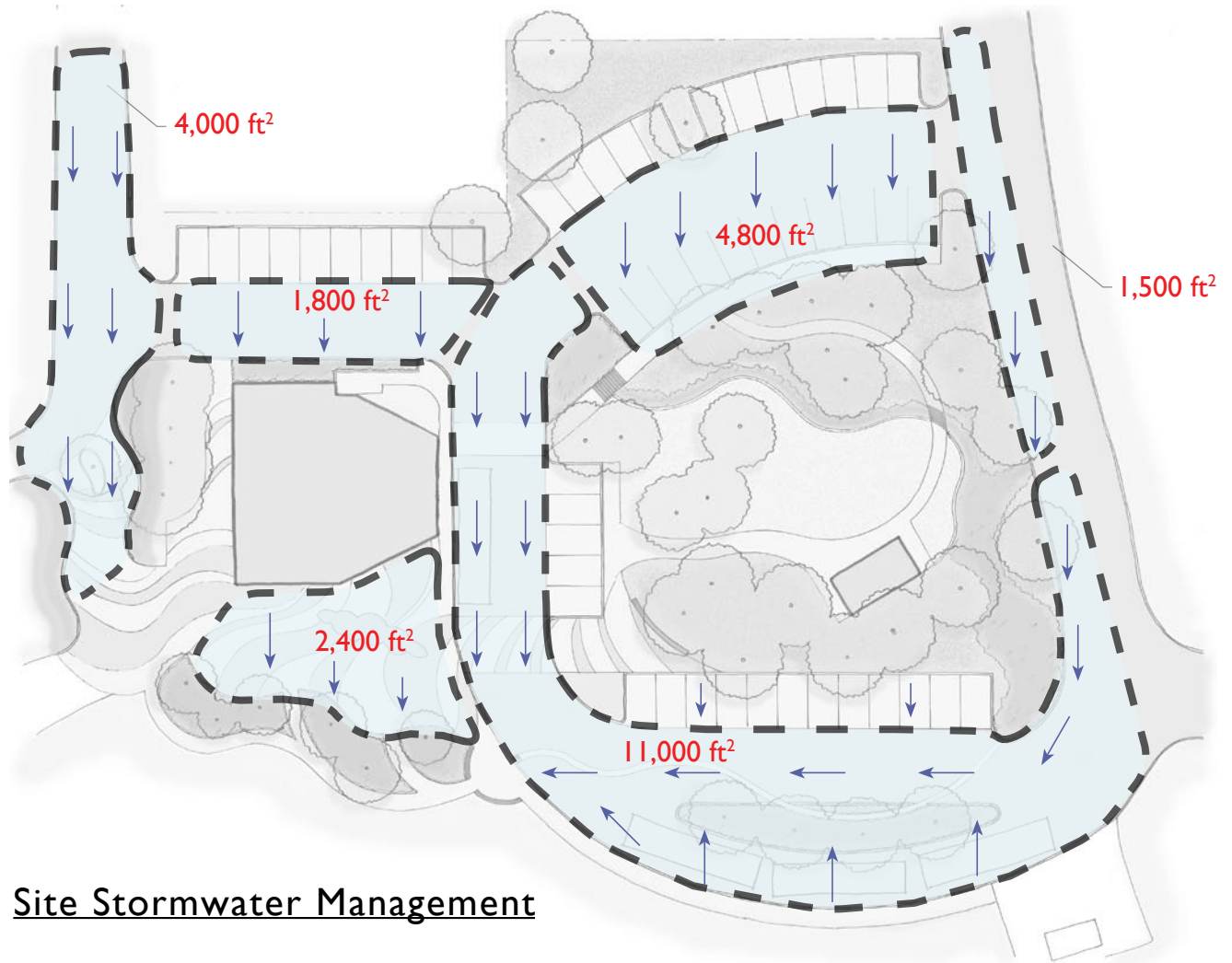
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### Key Design Elements

- ① Pervious paving within parking stalls
- ② Stormwater planter accepting parking lot runoff
- ③ Stormwater bridge over a vegetated swale
- ④ Pedestrian walk
- ⑤ Vegetated swale defines edge of the picnic area
- ⑥ Runoff enters from street into the vegetated swale
- ⑦ Stormwater continues to flow into a larger rain garden area
- ⑧ Overflow enters a sinuous concrete valley gutter
- ⑨ Pedestrian access to the Coastal Trail
- ⑩ Stormwater swale collects runoff from bus parking zone
- ⑪ Bus parking zone only
- ⑫ Stormwater "confluence" with interpretative signage
- ⑬ Entry walkway with decorative paving
- ⑭ Rain gardens collect water from parking lot and plaza space
- ⑮ Pathways intersect rain gardens
- ⑯ Education Center plaza space with decorative paving
- ⑰ Coastal access ramp
- ⑱ Vegetated swales accept stormwater from adjacent street
- ⑲ Driveway to residence (not on Fitzgerald Marine Reserve property)
- ⑳ Stormwater planter accepts runoff from parking lot
- ㉑ Bus/auto drop off-zone
- ㉒ Education Center outdoor sculpture

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## Site Stormwater Management

Total Amount of Impervious Area Managed:	25,500 ft <sup>2</sup>
Total Amount of Pervious Paving:	5,900 ft <sup>2</sup>
Total Amount of Landscape-based Stormwater Facilities	4,500 ft <sup>2</sup>
Total Percentage of Landscape Area to Impervious Area	18%

Parking Lot Stall Dimensions: 9'x16' from back of stall to front of wheelstop/curb

Parking Lot Drive/Back-up Aisle Widths: Vary from 20-24' wide

—> Direction of Stormwater Flow