

BAY AREA PARKS & RECREATION

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ALCATRAZ ISLAND CLIFF STABILIZATION

Location: Alcatraz Island, San Francisco Bay, California
Client: National Park Service, Wiss, Janney, Elstner Associates
Services: Geologic Hazards, Geotechnical, Site/Civil, Terrestrial Scanning/BIM

OVERVIEW

The National Park Service is evaluating options for protection and preservation of cultural and natural resources at one of its most popular parks. Natural erosion of the cliff face over time is encroaching on the historically significant features of the former prison site. The Langan team performed a 3D laser scan of the cliff face at the island's southern end. The scan provides a baseline of the existing condition as well as detailed imaging and linear information used to evaluate the structure of exposed rock. Our recommendations included combinations of steel rock bolting and face treatment via high-strength steel mesh netting and shotcrete. The cliff stabilization was carried out in two phases during which we provided construction administration and quality control services.

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BATTERY EAST VISTA

Location: San Francisco, California
Client: Golden Gate National Parks Conservancy
Services: Environmental

OVERVIEW

Langan provided environmental site characterization, soil remediation, and risk assessment services for the improvement project at the historic Battery East Vista, located southeast of the Golden Gate Bridge toll plaza. The Battery East Bay Trail was expanded and a scenic overlook and landscaping was constructed over a historic landfill.

AWARDS

2016 American Society of Civil Engineers San Francisco, Top Parks and Recreation Project

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SUTTER'S LANDING PARK

Location: Sacramento, California
Client: City of Sacramento Department of Parks and Recreation
Services: Geotechnical

OVERVIEW

Located in an urban setting, Sutter's Landing is the transformation of a former landfill into a public park. The park includes basketball and bocce ball courts, a dog park, restrooms, shade structures, and a river access trail, with pedestrian and bike pathways, along the top of the American River levee. Langan conducted a geotechnical investigation and provided testing and consultation during construction.

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CAMPUS FOR WILDLIFE CARE

Location: Saratoga, California
Client: Peninsula Humane Society
Services: Geologic Hazards, Geotechnical

OVERVIEW

This project consisted of developing the Campus for Wildlife Care and Rehabilitation on an approximately 170-acre site on the northeast side of Congress Springs Road (Highway 9). Unique geotechnical challenges include an extensive quarrying history, the presence of significant amounts of undocumented fill, and multiple traces of the San Andreas fault extending through the site. Langan performed a geologic and geotechnical investigation of the site, which included geologic mapping, fault trench exploration, laboratory testing and slope stability analyses. Langan also provided observation services during construction to repair portions of the main access road throughout the property, which had been damaged by landslides.

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ECOCENTER

Location: San Francisco, California
Client: Literacy for Environmental Justice, The Port of San Francisco
Partner: KLM Builders
Services: Geotechnical, Environmental

OVERVIEW

Located at Heron's Head Park, a former landfill, this urban educational center was built using recycled materials, boasts a vegetation roof, operates 100 percent by solar power, and features its own on-site wastewater treatment system. Langan provided geotechnical and methane mitigation design services for the EcoCenter. Our recommendation for a shallow mat foundation for the structure was a cost-effective and efficient solution as opposed to the more expensive pile foundation typically found beneath structures on closed landfills.

AWARDS

2010 US Environmental Protection Agency, National Achievements in Environmental Justice Award

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AQUATIC PARK PROMENADE

Location: San Francisco, California
Client: Wiss, Janney, Elstner Associates, AMA Diversified
Construction Group
Services: Geotechnical, Environmental

OVERVIEW

The Aquatic Park Promenade underwent extensive construction to improve pedestrian safety: removing historic railroad rails, ties, walls and storm drains; resurfacing the promenade; and constructing retaining walls, handrails, and pedestrian and bicycle trails. The promenade was built in the 1930s as part of the Works Progress Administration (WPA) program and is a National Historic Landmark. For the 1,300 feet long, 20 feet wide promenade, Langan conducted geotechnical and environmental site investigations, prepared a Soil Management Plan, and provided consultation services during construction.

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MIDDLE HARBOR SHORELINE PARK

Location: Port of Oakland, California
Client: Port of Oakland
Partner: Olivia Chen Consultants
Services: Geotechnical

OVERVIEW

Park development included an open field at the center of Point Arnold, picnic and parking areas, a restroom building, a fountain, seawalls, and a terraced stairway to the beach. A promenade consists of a public beach, sheltered shoreline coves, and marshes. The park transitions to shoreline coves and marshes are part of public access to the Bay. The area for the Promenade was underwater and filled with dredged material. Langan conducted the geotechnical investigations for the Park. Our role including evaluating the static and seismic stability of the shoreline coves and proposed building areas.

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UNION POINT PARK

Location: Oakland, California
Client: The Unity Council
Services: Geotechnical

OVERVIEW

Improvements for the 9-acre waterfront park development on the Oakland Estuary include a 20-foot-high landscaping mound, a pedestrian bridge, an over-water art structure, and other landscaping mounds and improvements. Union Point Park is owned and operated by the City of Oakland. The site was underlain by weak fill and compressible Bay Mud. As the geotechnical engineer, we recommended staged construction of the 20-foot hill to avoid bearing capacity failure of the Bay Mud; for geogrid-reinforcement of the steepened slopes on the hill; and for shallow and deep foundation design for the bridge and sculpture. Langan also managed geotechnical services during construction.

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CASA GRANDE IN NEW ALMADEN

Location: Santa Clara County, California
Client: County of Santa Clara, Parks & Recreation Department
Services: Geotechnical

OVERVIEW

Langan performed the geotechnical investigation and consultation for the renovation of the Casa Grande in the New Almaden District for expanded museum use. The rehabilitation included construction of in-fill walls and other small structural elements, and also included installation of a braced frame to seismically strengthen the structure. The purpose of our study was to address the geotechnical and seismic hazard issues at the site and provide geotechnical recommendations for new foundations to support new structural elements.

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LYON STREET STEPS

Location: San Francisco, California

Client: The Presidio Trust

Services: Site/Civil, Geotechnical

OVERVIEW

Langan provided site/civil and geotechnical engineering services to support the ongoing reforestation efforts within the Presidio. Our team evaluated the stability of the existing Lyon Street retaining wall and the slopes behind and above the wall. The project involved a great deal of coordination among public agencies, regulatory agencies, and citizens since Lyon Street Steps is located on federal land and adjacent to private residential property.

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