



CA INFRASTRUCTURE SYMPOSIUM AND AWARDS DINNER



OUTSTANDING URBAN/LAND DEVELOPMENT PROJECT



Miramar National Cemetery, Phase I

Owner: Department of Veterans Affairs

Engineer of Record: Burkett & Wong Engineers

Phase 1 occupies 45 acres of a 313-acre master planned national cemetery located on Marine Corps Air Station – Miramar, San Diego, California. The initial phase includes columbarium plazas, in-ground burial sites, committal shelters, an administration/public information center, flag assembly area, maintenance complex, a POW/MIA memorial plaza, and memorial walk.

Both unique and challenging, the site consists of mesa and canyon topography, large stands of pristine coastal sage scrub, California Gnatcatcher habitat, Jurisdictional Waters of the US, and regionally significant concentrations of vernal pools containing the endangered San Diego Fairy Shrimp. Development restrictions included documented and prescriptive easements controlled by multiple entities for underground and overhead utilities crisscrossing the site, military flight paths, and environmental mitigation reservations and setbacks. Environmental concerns included federal and state protected species, Jurisdictional Waters of the United States, and Waters of the State regulated by the U.S. Army Corps of Engineers, U.S. Fish & Wildlife Service, State Water Quality Control Board, and MCAS Miramar.

OUTSTANDING WATER PROJECT



Patterson Irrigation District Fish Screen Intake Project

Owner: Patterson Irrigation District

Engineer of Record: MWH Global

With an outdated fish screen at the District's pump station, Patterson Irrigation District knew it needed a more effective solution to prevent harm to native fish populations. Securing major funding from state and federal agencies, the District went to work constructing a 195 cubic-foot-per-second pump station supported by 422 steel foundation piles

with 10 stainless steel, vertical fish screens mounted on its face. The new facility is the largest on-river fish screen along the banks of the San Joaquin River. The facility, designed by MWH Global, includes an automatically controlled brush-cleaning system mounted on the exterior to keep the screens free of debris, and a sediment suspension system to prevent sediment deposition in the wet well. The screens prevent harm to endangered fish like Chinook salmon and Central Valley steelhead at the new pump station intake while maintaining a reliable water source for local, small, family farmers.

OUTSTANDING COLLECTION SYSTEM PROJECT



Sunnydale Auxiliary Sewer Tunnel

Owner: San Francisco Public Utilities Commission

Engineer of Record: Jacobs Associates

The 5,370-foot-long Sunnydale Auxiliary Sewer Tunnel significantly increases the capacity and operational flexibility of San Francisco Public Utility Commission's (SFPUC) existing 100-year-old sewer system in SF's Visitacion Valley community. The new sewer tunnel will be an important tool used by the City for stormwater best management

practices to minimize localized flooding as well as reduction of the combined sewer discharges into the San Francisco Bay. The project team faced many challenges on this complicated tunnel project, but addressed them by innovative use of technology and equipment, teamwork, sound decision making, value engineering, and an understanding of community and stakeholder concerns. The tunnel was completed successfully, safely, under the established budget and schedule, and compliant with local subcontracting and hiring requirements. The project goal was always at the forefront: to provide this disadvantaged community with localized storm flooding protection and reliable wastewater service for the next 100 years. The Sunnydale Auxiliary Sewer Tunnel serves as a model for wastewater improvement efforts in SFPUC's recently initiated Sewer System Improvement Program.

OUTSTANDING WATER TREATMENT PROJECT



Vineyard Surface Water Treatment Plant

Owner: Sacramento County Water Agency

Engineer of Record: MWH Global

The Vineyard Surface Water Treatment Plant utilizes conventional surface water treatment processes consisting of flash mixing, coagulation-flocculation, filtration, and chlorination (sodium hypochlorite) for disinfection. With an existing capacity of 50 mgd, the plant has the capability to be expanded to 100 mgd in the future.

This surface water supply allows SCWA to meet sustainable groundwater yield limitations. Power from photovoltaic panels will save SCWA \$1.1 million over 20 years. The SCADA system provides control and monitoring for the plant and more than 100 remote water supply and drainage facilities while the plant's state-of-the-art solids handling technology minimizes waste stream flows to the sanitary sewer.

This building is a candidate for LEED Gold certification featuring extensive use of natural lighting, reduced use of water, and computer-controlled lighting and heating, ventilation, and air conditioning (HVAC) systems.