



Professional Registrations

Geotechnical Engineer, CA 813

Civil Engineer, CA 23230

Education

MS Civil Engineering (Geotechnical Engineering) UCLA

BS Civil Engineering, Purdue University

Years of Experience: 40

SUMMARY

Mr. Swantko has more than 40 years of experience managing geotechnical and seismic studies for major earthwork projects for private and public clients throughout Southern California. He has directed investigations for roadways, bridges, pipelines, water treatment plants, hillside residential developments, high-rise buildings, port facilities, refineries and storage facilities. He has also performed geotechnical studies for large projects in Indonesia, Iran, Tokyo, Florida, and Ohio. He has extensive experience in pile foundations and the stabilization of peat and soft ground sites, including managing in situ settlement/stability monitoring programs. Mr. Swantko has performed numerous forensic studies and has provided expert witness services and testimony on a variety of geotechnical issues. He has authored a number of technical papers on various geotechnical topics.

MAJOR PROJECT EXPERIENCE

Los Angeles Unified School District Projects, Los Angeles County, California: Project Manager on over 200 tasks, with total construction costs exceeding \$2 Billion, including new campuses, classroom buildings, seismic retrofit projects, parking structures, synthetic track and fields, and forensic investigations. **Robert F. Kennedy Community Schools** involved redevelopment of the old Ambassador Hotel site for a campus complex, including 800 student K-3 School, 1,000-student Middle School and a 1,000-student High School. The project cost was \$576 Million. The design incorporates a 36-foot high soil nail wall in the 5-story high school building. This is the **first soil nail wall approved by DSA** for a school in California. **Dorsey High School:** The first DSA approved use of **auger pressure grouted displacement (APGD) piles for LAUSD**. Project was also the **first design-build project** undertaken by LAUSD.

West Los Angeles Community College, Culver City, California: Geotechnical investigation for a 4-story reinforced concrete parking structure. The excavation for the structure increased the slope on one side of the site to 40 feet.

Four-level Parking Structure, Exposition Park/Adjacent to USC Campus, Los Angeles, California: Design of a four-level reinforced concrete parking structure. One side of the structure required a permanent tied-back wall/ soil nail wall. Column loads of up to 1,000 kips are supported on conventional spread footings established in dense sand and gravel layer.

Caltrans - Geotechnical studies for Caltrans design for State Routes 22, 30, 55, 78 and 91, and Interstate Routes 5, 10, 15, and 215. Projects involved design of pavements, sound walls, retaining walls, culverts and numerous bridges.

Playa Vista Development, Marina Del Rey, California: Group Delta is the lead geotechnical engineer involving the 1,100-acre, \$11 billion Playa Vista Development project in Marina Del Rey. The site is underlain with 50 feet of soft, compressible clay, requiring use of surcharging to remove primary settlements prior to construction. Liquefaction of loose sand layers is also an issue. Most of the 3 to 5-story structures in the development are supported on driven or auger pressure grouted piles.

Hollywood Park Redevelopment Project, Inglewood, California: Geotechnical investigations and construction observation and testing for redevelopment of 236 acres comprised of the original Hollywood Park Horse Racing

Facility. Project plans include demolition of existing structures/facilities, 629,000 sq. ft. retail/entertainment center, 2,995 residential units, 75,000 sq. ft. of offices, 300-room hotel, new casino and parking structure, infrastructure, and landscaping.

Multi-Family Residential and Mixed Use Developments: Geotechnical and seismic investigations for major projects for developments by Alliance Residential, Lennar, Standard Pacific, Micropolitan, Lee Homes, The Robert Green Company, Champion Realty Company, and others. Projects included 3 to 5-stories over 1 to 3 levels of subterranean parking, and 16 to 21-story high-rise towers. Buildings foundations include shallow foundations and structural mats. Shoring consisted of soldier piles, and anchors for deeper excavations, and walers with rakers.

Ballona Wetlands Restoration Project, Marina Del Rey, California: Restoration Project involves approximately 600 acres. The work was done under a U. S. Army Corps of Engineers (USACE) 408 permit. Much of the site falls within protected/environmentally sensitive habitat and cultural sensitive areas. Work was performed with Department of Fish and Wild Life, USACE, Los Angeles County, California Coastal Conservancy, and various environmental/cultural oversight. Project elements included removing existing flood control levees; excavation of up to 25 feet of old hydraulic fill; constructing new levees; a new meander creek channel; full restoration of wetlands between new levees and the realigned Ballona Channel; construction of a pedestrian and bicycle bridge and new culverts.

Fault Investigations, Hollywood, California: Five fault trench investigations were conducted on separate sites to investigate the Hollywood Fault. These investigations included excavation of trenches ranging from 120 to 180 feet long, 25 to 35 feet deep. Detailed geologic logging was conducted to document the exposed subsurface soil conditions and look for any evidence of faulting. In addition to the trenches, closely spaced continuously cored borings and cone penetrometer tests (CPTs) were advanced to 60 feet below the ground surface to collect soil and bedrock cores and develop a comprehensive geotechnical/geologic profile of each site. The exposed soils were also dated by an expert paleoseismologist and by carbon dating techniques to establish the age of unbroken layers.

EPCOT Center, Walt Disney World, Florida: Project Manager for the extensive geotechnical studies to develop 500-acres of Florida backland into EPCOT Center at Walt Disney World, Florida. This \$1 billion project involved the design and construction of 20 pavilions with construction costs of \$10 to \$40 million, roads, bridges, extensive utility system, man-made lakes and drainage canals, and over 5 miles of elevated monorail. The pavilions had up to 70,000 square feet of basements below the ground water table, requiring an extensive underfloor drainage system. Heavily loaded buildings were supported on driven piles. Several areas with deep deposits of soft organics were developed by dredging, filling and/or surcharging techniques.

Major Earthwork Projects, Various Locations - Geotechnical investigations and geologic hazard assessment and mitigation studies for major hillside grading projects in Los Angeles, Ventura and Orange Counties. Responsibilities included subsurface exploration and analysis of the stability of natural and man-made slopes ranging up to 200-feet high; investigation of landslides and design recommendations for stabilization options, including stabilization buttresses, shear keys and subsurface drainage systems; foundation design; expansive soils; retaining walls and pavements. Also managed geotechnical observation and testing of grading, including removals, landslide stabilization, subsurface drainage and placement of compacted fill.

California Department of Parks, Various Sites - Managed on call contract for geological and geotechnical services for the California Department of Parks, including evaluation and mitigation of erosion, drainage and slope stability issues, construction of new facilities, roads and bridges and forensic investigations of damage to existing structures. Projects included 85-acre Will Rogers Historic State Park, La Purissima Mission State Historic Park, Los Angeles State



Historic Park, Santa Susanna SHP, El Capitan State Beach, Carpinteria SB, Gaviota State Park, Leo Carrillo SP and Hungry Valley Recreation area.

Crestridge Estates, Rancho Palos Verdes, California: Principal geotechnical engineer for geologic and geotechnical studies for the development of a 30-acre site located along a ridgeline in Rancho Palos Verdes. A 200-foot high natural slope descends from the north property line and is affected by a large ancient landslide. The stability of the site was also influenced by the axis of an anticline that crosses the north edge of the ridge, and the present of a fault line that also crosses the slope. Stability analyses were performed using information from geologic borings, down hole logged by geologists. On the basis of our findings and analyses, a structural setback line was recommended to keep the structures in areas where an acceptable factor of safety could be maintained.

Saint John Fisher Church, 70-foot High Slope Stability, Rancho Palos Verdes, California: Geological and Geotechnical analysis of a 70-foot high slope descending from the south edge of the property. The site sits on a natural terrace along the crest of the Palos Verdes Hills. The subject slope is believed to be associated with the Valley View Graben, which is either fault or landslide related. The bedrock consists of Valmonte Diatomite claystone with hard dolostone layers. The bedrock in the vicinity of the slope was highly fractures. Stability analyses indicated the slope was sufficiently stable and was affected by deep rock creep.

17-mile, Gas Line 6900 Project, Riverside County, California: Geotechnical/geologic investigation for construction of 17 miles of 30-inch diameter gas pipe from Romoland to Temecula. The site is located on a broad uplifted zone between the Perris Valley and the Elsinore Trough. Prior to field geology mapping and drilling borings, reviewed geologic maps and performed a photo-geologic reconnaissance of the alignment. The investigation included 41 borings and excavating test pits. The alignment is within environmentally sensitive areas and required environmental oversight.

32-Mile, Adelanto Expansion Project, San Bernardino County, California: Southern California Gas Company: Geotechnical/geologic investigation for construction of 32 miles of 30-inch diameter gas pipe from east of Kramer Junction to Adelanto in San Bernardino County. The site is located in the Mojave Desert, characterized by broad alluvial fan deposits with well-developed caliche horizons, and hilly outcrops of basalt, limestone and sedimentary bedrock. The alignment crosses several major washes. The alignment was investigated by drilling a 63 borings, review of geologic maps; photo-geologic reconnaissance of the alignment and a field geologic reconnaissance.

Sunset Force Main and Pump Station, City of Los Angeles, Pacific Palisades, California: Principal geotechnical engineer for a force main sewer line located along Pacific Coast Highway, between Portero Canyon and Sunset Blvd. The project required extensive geologic and geotechnical studies of slopes and area above PCH which are affected by a complex series of landslides, some that extend 100 feet below PCH. Instability of the area is a result of geologic uplift and erosion of the Palisades, adverse geology, surface and subsurface groundwater flow and other factors. Project investigation included review of vertical, oblique, and infrared aerial photos, geologic field mapping, drilling and sampling, installation of inclinometers and observation wells, and a broad survey monitoring network.

Various City Street Projects: Including, rehabilitation/Reconstruction of 2.7 miles of **Artesia Boulevard, Torrance;** 1.8 miles of **Hawthorne Blvd., Lawndale;** 1.5 miles of **Palos Verdes Drive North, Palos Verdes Estates;** 1.4 miles of **Main Street, Carson;** 2 miles of **Willowbrook Avenue, Compton.**

Busways: Orange Line Busway – Design-Build Project, Metropolitan Transit Authority (MTA): Design of 14 miles of busway and stations between Woodland Hills and North Hollywood. The use of geotextiles in the pavement design saved the project \$1.5 M by eliminating the need for treated permeable base and edge drains. **Wilshire Bus Rapid**



Transit Project – Bus corridor along 3.6 miles of Wilshire Boulevard between Western Avenue and San Vicente Boulevard, including rehabilitation/reconstruction of bus lanes, stations and new parking lots.

Public Works – Cities: Geotechnical and seismic investigations for numerous public works projects in southern California, including the design and construction of sewer lines, storm drains, flood control facilities, water treatment plants, roads, freeways, bridges and airport pavements. Managed on-call geotechnical contracts for the City of Los Angeles, Los Angeles Unified School District, Culver City, Rancho Palos Verdes, Gardena, Long Beach, among others.

Anaheim Region Transportation Intermodal Center (ARTIC) Anaheim, California: This project serves as an intermodal hub for Amtrak, Metrolink, local and international buses, shuttles, bicycles, and support developments. The Iconic Terminal Building has a footprint of 48,000 sq. ft, a steel frame and composite skin that reaches a height of 117-feet. The project includes a Concourse Bridge extending from the Terminal Building and over the current LOSSAN railroad corridor. Mr. Swantko was the Geotechnical Engineer for the materials testing for project in accordance with the UP Quality Management Plan and Caltrans Local Assistance Procedure Manual.

Long Beach Airport, Long Beach, California: Geotechnical investigation for rehabilitation of the 10,000-foot main runway, **Runway 12 –30** and reconstruction of **Taxiways C and L**. The field investigation included borings, cores, and non-destructive deflection testing of the existing pavement. GDC responsible for full FAA night closure of the runway. Pavement analyses performed in accordance with AC 150/5320-6D, and FAA Flexible Pavement Program F806FAA. Other experience includes projects at **John Wayne** and **Ontario International Airports**.

American Eagle Ramp Pavement Distress Investigation, Los Angeles International Airport: Investigation of loss of subgrade support under an existing ramp pavement that occurred due to a break in a high pressure fire water line. Water from the break eroded soil from beneath the PCCP pavement. Recommended of systematically grouting the area using fluid cement grout injected under pressure, resulted in a significant savings of time and saved over \$1.2 million compared to a recommendation by another consultant for total removal and replacement of the pavement.

PUBLICATIONS

“Dredging Techniques Used to Develop a Man-Made Lake on a Deep Organic Profile”, Proceedings Twenty Second Annual Texas A & M Dredging Seminar, Tacoma, Washington, 1989.

“Creation of a Lake over Peat by Precompression”, Proceedings of the Second Baltic Conference on Soil Mechanics and Foundation Engineering, "Construction on Peats and Deformations of Structures on Highly Compressible Soils", Tallin, USSR, 1988.

“Experience with the Development of Peat Deposits at Walt Disney World, Florida”, Transportation Research Board, Transportation Research Record 978, "Construction and Difficult Geology: Karstic Limestone, Permafrost, Wetlands, and Peat Deposits, 1984.

“Correlation of CPT Data with Sampling Techniques in Sand”, Proceedings of Engineering Foundation Conference on Updating Subsurface Sampling of Soils and Rocks and Their In Situ Testing, Santa Barbara, 1982.

“Monorail Piers on Shallow Foundations, Settlements Based on Dutch Cone Data”, Proceedings of the European Symposium on Penetration Testing, Amsterdam, 1982.

“Finite Element Analysis of Displacement Patterns in a Sand Fill on Soft Ground”, Proceedings of Symposium on Implementation of Computer Procedures and Stress-Strain Laws in Geotechnical Engineering, Chicago 1981.

