



■ Excavations



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DYWIDAG Technology secures the retaining wall of an important parking structure in Los Angeles

California Science Center Parking Structure, 39th St. and Figueroa St., Los Angeles, California, USA

Los Angeles, California, has long been considered one of the premier locations in the United States to live. With this brings the necessity for cultural awareness/activities, mass transportation, nightlife, and of course sporting events. So gave birth to the requirement for the California Science Center Parking Structure.

Reference Details:

Owner State of California, USA +++
General Contractor McCarthy Building Companies, Irvine, CA, USA +++
Design Build Shoring Engineer/Contractor Shoring Engineers, Santa Fe Springs, CA, USA +++
Location Los Angeles, CA, USA

DSI Services Supply of 534 DYWIDAG Permanent Strand Anchors, 4-7/0.6" strand, lengths up to 16 m; Supply of 1,500 kN stressing equipment.

This structure is centrally located adjacent to the Los Angeles Memorial Coliseum, the newly remodeled Los Angeles Swim Stadium, the African-American Museum, and the California Science Center. Nearby, to the south, is the Los Angeles Sports Arena and to the north is the University of Southern California's main campus. Based upon the area's activities and traffic requirements, the need for a centrally located parking structure became evident.

The design of the structure is based upon an "open-air" concept in which the structure consists of a series of slabs and columns with a complex grading scheme, which affords visitors a clear view from the west and the northwest sides into the structure itself. The grading in these areas has been architecturally enhanced through a variety of sidewalks, tree planting, and park style seating to provide a subtler atmosphere to the vast structure beyond.

Due to the open end of this structure, it was determined that there was the need for a permanent retaining system around the remainder of the site which would be completely independent of the parking structure itself.

Due to the heights involved (approximately 35 feet) it was decided that a permanent soldier beam and tieback wall would be constructed with a shotcrete facade. This developed into a design including over two hundred steel soldier beams, over 530 DYWIDAG Double Corrosion Protected Multistrand Anchors and 1,300 cubic yards of shotcrete.

Based upon the design loads (soil pressures, seismic pressures, traffic surcharges and superimposed gravity loads for future loading conditions) the only economical choice was DYWIDAG Multistrand Anchors. As this was a permanent design, all of the tieback anchors were double corrosion protected and tested to between 150 % and 200 % of the design lock off loading. In many cases this approached 300 kips of force.

Slated for completion in the fourth quarter of 2003, this parking structure will serve a true need for the community of Los Angeles.

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