

West Oso High School

The West Oso High School project included five single-story buildings with exterior plazas, parking lots, driveways, and entrances. The flat, former farmland property required advanced geotechnical and materials testing and inspection services, followed by monitoring of drilled pier installations and concrete sampling and testing.

PROJECT RESULTS

Kleinfelder's depth of experience with the soil conditions in question was valuable to the architects and contractors and helped facilitate timely completion of the project. The one-story structural steel-frame construction has brick veneer exterior walls on the five buildings that encompass a total footprint of about 130,000 square feet—all built on a solid foundation for success.



EXTENSIVE GEOTECHNICAL INVESTIGATIONS

The high plasticity index (PI) of the soil materials and other factors indicated that the installation of a concrete slab without proper foundation would result in cracking. In order to determine the requirements for an adequate foundation system, the geotechnical investigation included drilling 23 borings to depths of 35 feet. The laboratory testing program was performed for engineering properties of subsurface materials and included Atterberg Limits, gradations, and moisture content.

A DEEP PIER FOUNDATION TO AVOID CRACKING

A deep pier foundation supporting a "suspended" slab was recommended to alleviate the PI conditions. Design and construction recommendations were provided for the site grading and drainage, structural fill drilled piers, and asphalt and concrete pavement sections. Observation services were provided during drilled pier construction, placement of structural concrete, and pavement construction. Testing and observation of lime-stabilized subgrade soils, select fill ready-mix concrete, and masonry and flexible base material were provided by Kleinfelder personnel as requested by the client.

Location:

Corpus Christi, Texas

Owner:

West Oso Independent School District

