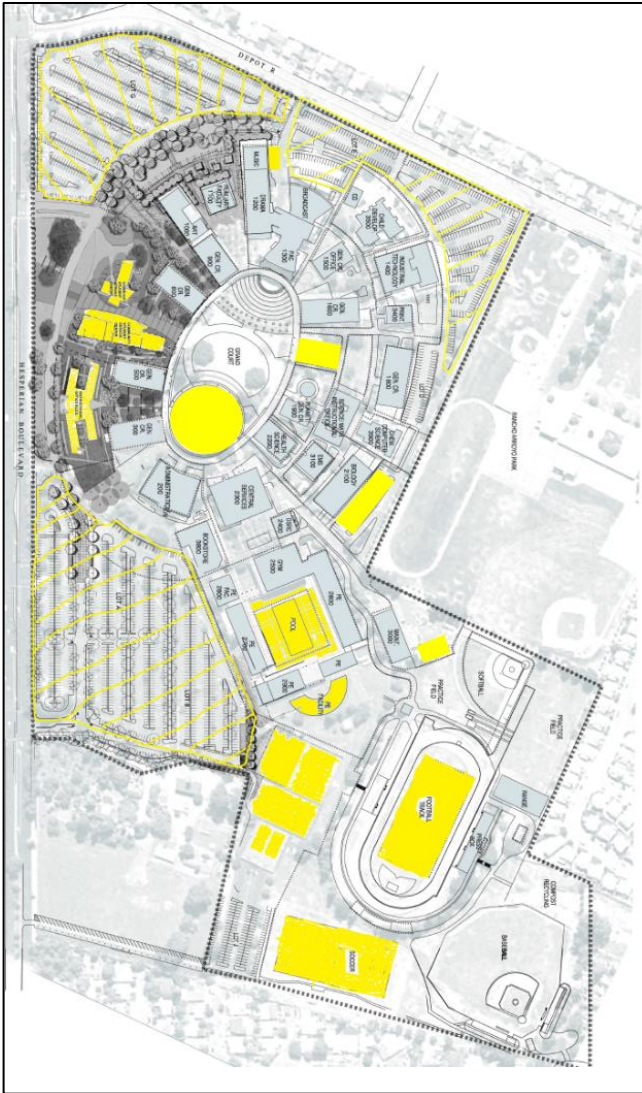


Geotechnical Engineering

Chabot Community College, Hayward, California



*subsurface geotechnical investigation
foundation design
athletic facility foundations
artificial turf foundations
parking lot design
low impact development*

Terraphase provides geotechnical engineering services to Chabot Community College in Hayward, California. Terraphase’s Jeff Raines has been the geotechnical engineer of record for the Chabot Community College Measure B Bond Fund since 2006. Mr. Raines has provided geotechnical investigations and foundation designs for five buildings on the Chabot campus, including the Student and Community Access Center, which is the centerpiece of the college’s master plan. Facilities Terraphase has worked on are highlighted in yellow to the left. Mr. Raines has designed shallow and deep foundations – spread footings, tied spread footings, mats and cast-in-drilled-hole (CIDH) piles to support structures on campus.

As a public school, all of the geotechnical investigation and foundation design reports prepared for the college are reviewed by the California Geological Survey to ensure that seismic design of the structure meets the California Building Code Requirements. Terraphase has provided California Building Code seismic ground motions for each of the structures listed above and assessed liquefaction settlements for each of the buildings.

Mr. Raines designed a pervious busway for the bus drop off at the main entrance to the campus (picture to the left). The geotechnical constraints were weak soils, heavy repetitive loadings, and the inability to connect the busway to the campus storm drains. Mr. Raines recommended that the busway be paved with pavers separated by gravel overlying 18 inches of Caltrans pervious cement-treated road base. The section is esthetically pleasing and has performed superbly over the past seven years. To handle parking during the parking lot construction, Mr. Raines designed a temporary parking lot to be built over the campus soccer fields.

