



The project consists of a new science and engineering building intended for interdisciplinary research, part of the University's long term vision to promote graduate level research. The building will consist of a four-story steel frame structure encompassing about 190,000 square feet. The exterior will consist of glass and pre-cast concrete panels. The building will contain 4 class rooms, a 200-person auditorium and 200 offices. The main entrance will consist of a two-story, 2000 square foot curved glass lobby and café.

GES has been the geotechnical engineering consultant on this project since January of 2002 at which time GES performed a preliminary investigation to help site the building which ultimately was sited adjacent to the existing Thomas Beam Engineering building. For the final site, GES performed a design level investigation. Unlike at other locations within the UNLV campus, cemented deposits or rock-like, nearly incompressible bearing materials were conspicuously absent at the site, and layers of compressible clay soils were encountered. To limit the potential for settlements, the structure was originally recommended to be supported by drilled shaft foundations. However, this foundation



scheme proved to be cost prohibitive. As a result, the structure was re-designed from a cast-in-place reinforced concrete structure to a steel-frame structure, reducing the loads by nearly 40 percent and allowing the structure to be supported on an innovative system of conventional footings and a geogrid stabilized mat of imported aggregate base. The re-design resulted in an estimated savings of about 1.6 million dollars. The final bid price for construction of the project was about 75 million dollars.



Currently, the structure is under construction, and

GES is providing construction services to include the inspection and testing of soil, reinforcing steel, concrete, structural masonry, and structural steel. During the construction of the geogrid stabilization mat of imported aggregate base, GES toured the site with UNLV's undergraduate soil mechanics class as part of a guest lecture.

