

## REPRESENTATIVE SCHOOL, HOSPITAL, & CRITICAL FACILITY PROJECTS

### **AMBROSINI SCHOOL ADDITIONS**

#### **Geotechnical Engineering**

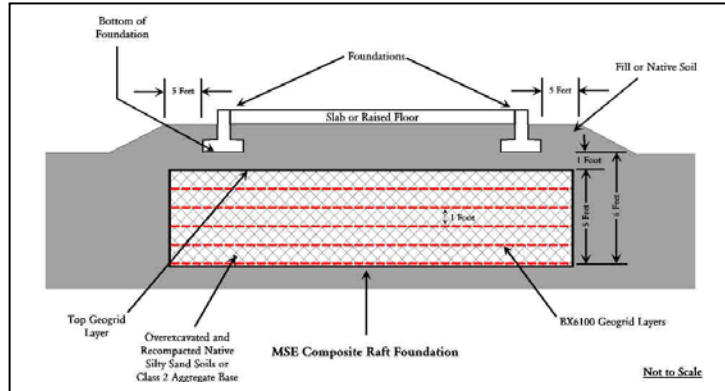
#### **Construction Materials Testing and Special Inspection Services**

CGi was retained by the Rhonerville School District to provide geotechnical engineering and materials

testing services for new structures and additions at the Ambrosini Elementary School located in Fortuna, California. During the course of our services, potentially liquefiable and compressible soils were identified beneath the project area that, if unmitigated, could have led to adverse performance of the improvements.

Conventional geotechnical solutions would recommend that the structures and improvements be founded on costly deep foundation systems; however, the

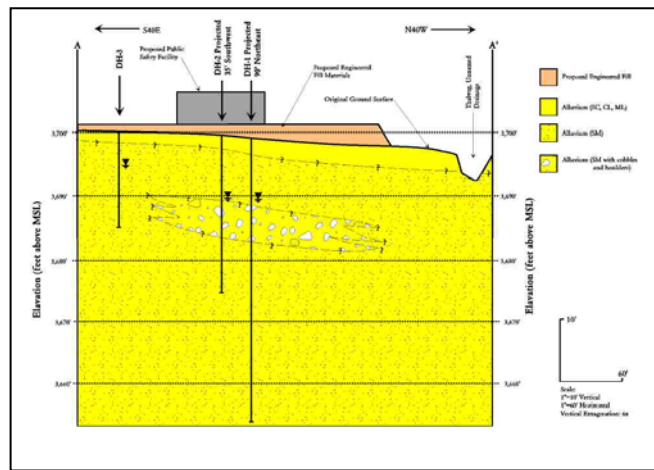
District did not have sufficient budget for construction of deep foundations. CGi evaluated and recommended the use of a geogrid reinforced composite raft embankment beneath the structure, which is both economical and relatively easy to construct. Based upon our recommendations, the project was reviewed by California Geological Survey and approved by the California Division of the State Architect without comment.



### **WEED PUBLIC SAFETY FACILITY**

#### **Geotechnical Engineering**

CGi provided geotechnical engineering and a geologic hazard assessment for the design and construction of a new public safety facility located in the City of Weed, California. The project site was developed by elevating the building pad approximately 18 to 24 inches. Site improvements included a new building housing police/fire, fire support, fire apparatus bays, and an emergency response center. The building is approximately 10,000 square feet in area and has associated public and facility parking, a vehicle wash area, and ancillary landscaping and hardscaping.



### **FAIRCHILD MEDICAL CENTER**

#### **Geotechnical Engineering**

#### **Construction Materials Testing and Special Inspection Services**

CGi provided geotechnical engineering, construction materials testing and special inspection services during construction of new medical office buildings and street improvements located in Yreka, California. The project consisted of three, two-story medical office buildings, an emergency room addition, and a new critical care nursing facility. The structures are founded on continuous and isolated foundations. Services provided include preparation of the geotechnical engineering report and



observation and testing during site grading, testing and special inspection of reinforcing steel, concrete, and structural steel and welding.

### **FIRE STATION NO. 8**

#### **Geotechnical Engineering**

#### **Materials Testing & Special Inspection**

CGi was retained by the City of Redding to provide geotechnical engineering and materials testing/special inspection services for the design and construction of a new fire station. The project was sited on property underlain by extensive amounts of uncertified fill materials and debris that had been placed years prior to the project. CGI perform extensive exploration and characterization of the site to identify the risks associated with the project, and provided recommendations for improving the site prior to facility construction. Based on our recommendations, the site was developed and the facility successfully constructed.

### **HUMBOLDT COUNTY OFFICE OF EDUCATION RESOURCE CENTER**

#### **Geotechnical Engineering**

CGi provided geotechnical engineering services for a new education resource center located on Humboldt County's Office of Education campus in Eureka, California. The project consisted of the expansion of a portion of the campus into a ravine. CGI was consulted to evaluate the placement of engineered fill and the potential settlement issues associated with the proposed expansion. CGI performed a site evaluation and made recommendations which included alternatives for reducing settlement and construction of the proposed project.

### **MERCY MEDICAL CENTER PARKING STRUCTURE**

#### **Geotechnical Engineering**

CGi provided geotechnical engineering services for a new multi-level, partially subterranean parking structure on Mercy's Redding campus. Preliminary design of the structure based upon conventional geotechnical engineering methods applied to the Redding area called for the structure to be founded on relatively expensive drilled piers or piles. CGI anticipated that subsurface conditions were better than those initially projected and performed an extensive exploration program including in situ testing using a pressuremeter. Soil strength data developed during this program proved that the foundation soils were significantly stronger and less prone to settlement than initially anticipated. Based upon our results, the structure foundations were redesigned to consist of shallow foundation systems, thus, saving the project a significant amount of money and construction time.

### **AIRPORT FIRE RESPONSE FACILITY**

#### **Geotechnical Engineering**

#### **Materials Testing & Special Inspection**

CGI was retained by Mead & Hunt, Inc., to provide geotechnical engineering services for the design of a new fire response facility at the Redding Municipal Airport. CGI performed extensive exploration and laboratory testing to prepare conclusions and recommendations for development of the site as proposed. In addition, the City of Redding retained CGI to provide materials testing and special inspection services during construction of the proposed project. The project was successfully constructed in 2007.

### **MERCY MEDICAL CENTER PROJECTS**

#### **Geotechnical Engineering**

#### **Construction Materials Testing and Special Inspection Services**

CGi is currently and has provided a wide variety of geotechnical engineering and construction materials testing and special inspection services for many Mercy Medical Center (MMC) projects in Redding, Mount Shasta, and Red Bluff. Recently, CGI provided geotechnical engineering services for a new multi-



level, partially subterranean parking structure on its Redding campus. We also have provided geotechnical engineering services for the design and construction of a new outpatient center at MMC's Mt. Shasta facility and a critical care facility at its Redding campus. In addition to those studies, CGi is or has providing construction observation and special inspection services for the following MMC projects: nuclear medicine facility, catheter laboratory upgrade, LOX tank site, cat scan facility, cancer center modifications, CT simulator, mail room lobby upgrade, east nurses station improvements, nursing station 1, outpatient chemotherapy improvements, and many additional projects. Our inspection and testing services have included shop and field welding, forensic welding and metallurgical evaluations, concrete placement, reinforcement steel placement, grouting, high strength and epoxy bolting, high strength wire pull testing, wood moisture, and post tensioning inspections.