

GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.
SIMILAR PROJECT EXPERIENCE:
PROJECT NEON
LAS VEGAS, NEVADA



Project NEON is the largest public works project in Nevada history. Project NEON will widen 3.7 miles of Interstate 15 between Sahara Avenue and the “Spaghetti Bowl” interchange in downtown Las Vegas. In 2016 it is the busiest stretch of highway in Nevada with 300,000 vehicles daily, or one-tenth of the state population, seeing 25,000 lane changes an hour. Traffic through the corridor is expected to double by 2035.

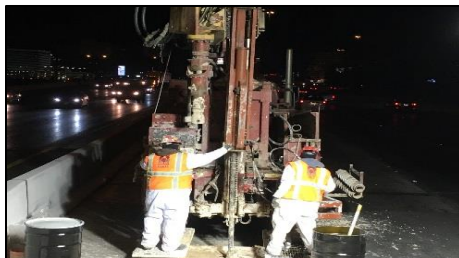
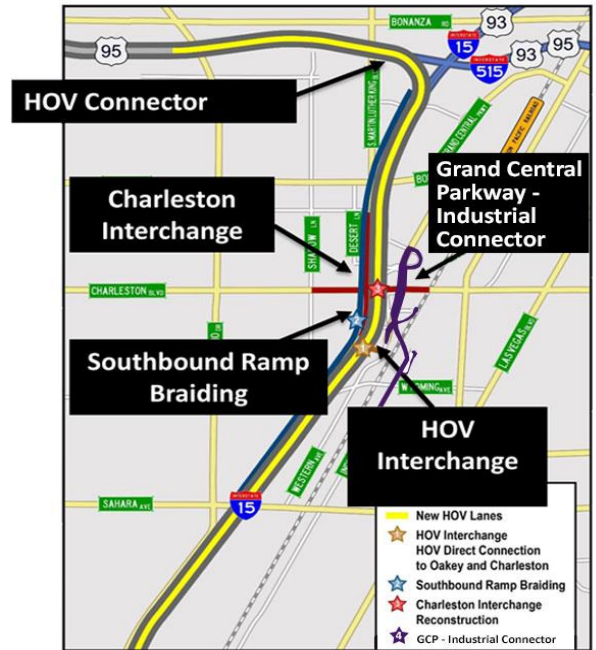
GES worked directly for the Atkins/Kiewit Design build team during the pursuit of this DB project. This included the review of the RFP draft, the final RFP submittal, and all relevant geotechnical reference informational documents (RID’s). GES also evaluated the RID documents to establish a recommended drilled shaft load testing program and to identify additional geotechnical borings needed for final design of the project.

GES is providing multiple geotechnical services for Project NEON including field explorations, laboratory testing, engineering analysis and report preparation. Engineering analysis included Load and Resistance Factor Design (LRFD) analyses, settlement estimations for embankments, bridge foundations, box culverts, and retaining walls, calculations for axial side and base resistance of drilled shaft foundations, lateral load resistance of drilled shaft foundations, external stability of mechanically-stabilized earth retaining structures, and lateral earth pressure parameters for cast-in-place cantilever retaining walls.

To help establish drilled shaft foundations designs, five axial load tests were performed at locations along the project corridor. Load testing confirm that the resistance to loads developed in the test shafts exceeded what the AASHTO default design equations provide.

GES’ sister firm, Eagle Drilling, has performed multiple services at the Project NEON site including:

- Using an airknife to investigate the possibility of underground utilities in eighty-two (82) proposed boring locations.
- Using hollow stem augers to drill forty-eight (48) geotechnical borings. Boring depth ranged from 10' to 60' for a total depth of 1,735'.
- Mud rotary drilling to drill thirty-four (34) geotechnical borings ranging in depth from 70' to 100' for a total of 3300'.
- Backfill mud rotary borings with bentonite grout and surface complete with concrete



Project NEON by the numbers

Project NEON Statistics -

- 1,000,000 cubic yards of total earth moved during construction.
 - Enough to fill 324 Olympic-sized swimming pools.
- 42,062 cubic yards of bridge concrete
 - Enough to build a sidewalk from Las Vegas to St. George Utah.
- 247,812 square yards of concrete paving
 - Enough to build a bike path from Boulder City to Kingman Arizona.
- 15,000,000 pounds of reinforcing steel
 - Enough to build 256 Sherman tanks.

Project Information –

Project Owner: Nevada Dept. of Transportation
GES Client: Atkins North America
Contact: Angelo Spata, P.E. (702) 990-7428
Project Cost - \$900,000,000
Firm Responsibility - \$1,800,000