



SOUTH MOUNTAIN FREEWAY

PHOENIX, ARIZONA, USA

The Arizona Department of Transportation’s Loop 202, or South Mountain Freeway, is a 22-mile freeway, expected to open by late 2019. The South Mountain Freeway will complete the Loop 202 and Loop 101 freeway system.

Subsequent to the load test program, the project was awarded to Connect 202 Partners as part of a Public-Private Partnership (P3) for a total of \$1.8 billion. The team consists of Fluor Enterprises Inc., Granite Construction Co. and Ames Construction Inc. This project represents the largest highway project in the State’s history.

Prior to finalizing the P3 selection, the ADOT embarked on an aggressive load testing program with HDR Inc. and Loadtest. The preliminary testing allowed ADOT to put economizing load test data in the hands of all three major bidders. This helped ensure the State would get the very best bids from

all teams. Loadtest was utilized to provide its testing experience and equipment on two drilled shafts in order to optimize the design parameters for both the SR 202 / I-10 and the Salt River sites. Each site had unique subsurface features and as it turned out, differing drilled shaft capacities.

Test loads exceeded 8,400 kips at the SR-202/ I-10 site and 23,000 kips at the Salt River Site. Shaft profiles were taken of the drilled shafts by Southwest Exploration Services. Strain gages were installed at multiple elevations to allow analysis of load transfer to different soil strata (t-z analysis) and to obtain bearing data (q-z analysis).

PROJECT INFORMATION

- Owner: ADOT
- Engineer: HDR, Inc.
- Client Case Foundation Company
- Completion Date: 2019
- Project Cost: \$1.8 billion

SERVICES PROVIDED

- Design, assembly and installation of O-Cells
- Testing, analysis and reporting of load test results



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