

# Selmon Expressway Bridge Deck Replacement and Widening

## Tampa, Florida



Owner: Tampa Hillsborough Expressway Authority (THEA)

Owner: Florida Department of Transportation (FDOT)

D-B Contractor: Granite Construction

Designer: Parsons Transportation Group

Drilled Shaft Sub-Contractor: ATS Drilling

Load Testing Contractor: Applied Foundation Testing, Inc. (AFT)

Years of Project: 2011—2013

Estimated Project Cost: \$65 million

Client Reference: Ted Davidson, P.E.  
(Parsons—407-702-6832)

### Project Highlights:

DBA was the lead geotechnical engineer, load testing consultant, and foundation designer for the widening of a portion of the Selmon Expressway in Tampa. The majority of the 1.5 mile long project is above grade, requiring 237 new mon shaft piers to support an additional lane in each direction. The highly variable subsurface conditions presented unique design challenges addressed using a unique load test calibrated design method originally developed by DBA for the 2004 evaluation and repair of the separate reversible elevated lane structure running between the bridges being widened as part of this project.

The load test program consisted of five dedicated test shafts. All five shafts were tested axially using the Statnamic device. The results of these load tests and previous load tests conducted at this site were used to select appropriate design parameters for the various geomaterials identified on the basis of standard penetration blow counts .

### Technical Publications:

Graham, D.S., Dapp, S.D., Brown, D.A., and McGillivray, R.T. (2013). "Selmon Expressway, Tampa: Case History of Drilled Shaft Design for Extreme Variability", Proceedings of the 38th Annual Conference on Deep Foundations, 2011, Phoenix, AZ, USA. (Accepted for Publication)



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Dan Brown and Associates, PC  
www.danbrownandassociates.com

P.O. Box 309, Jasper, TN 37347

423-942-8681  
contactus@danbrownandassociates.com