

BRIDGE DESIGN MEMORANDUM – DM0510

TO: RPG Structural Engineers
Design Consultants

DATE: October 22, 2010

RE: *SCDOT Geotechnical Design Manual*, Version 1.1
Revisions to Chapter 21

Section 21.1 of the *SCDOT Geotechnical Design Manual* shall be updated by replacing the first bullet item, “Geotechnical Base Line Report,” with the following:

- Geotechnical Information Reports
 - a. Geotechnical Subsurface Data Report
 - b. Geotechnical Base Line Report

The following sentence shall be inserted at the beginning of the second paragraph of Section 21.1:

The Geotechnical Subsurface Data Report (GSDR) is used to convey geotechnical information on traditional design-bid-build projects.

Section 21.2 of the *Manual* shall be deleted and replaced with the following:

21.2 GEOTECHNICAL INFORMATION REPORTS

21.2.1 Geotechnical Subsurface Data Report (GSDR)

The GSDR is used to convey only geotechnical subsurface information for use by a contractor and is typically used with traditional design-bid-build projects. A GSDR does not provide any engineering interpretations or engineering analysis (preliminary or final). A GSDR shall include an introduction, a project description and any procedural variations from the field or laboratory testing methods as described in this Manual. The Appendices should at a minimum contain project and testing location plans, field exploration records (soil test boring logs, cone penetrometer and dilatometer records, etc.), and the results of all laboratory testing. Each field exploration record should contain the location of the testing and should correspond to the testing location plan. The laboratory testing results should clearly indicate the location and depth of each



sample on the test result. In addition, all laboratory testing results should be presented in a tabularized format as a summary, prior to the presentation of results of individual testing.

21.2.2 Geotechnical Base Line Report (GBLR)

The GBLR is used to provide limited (preliminary) geotechnical information on a design-build project, thus permitting the contractor to bid on the project with a certain degree of knowledge and acceptable risk. A GBLR provides limited engineering interpretations or very preliminary engineering recommendations. The GBLR should be used in conjunction with project specific design-build criteria. The GBLR should contain at a minimum an introduction, project description, objective and scope of the geotechnical exploration and general recommendations concerning foundations and/or ground improvement requirements. A discussion of any procedural variations from the field or laboratory testing methods as described in this Manual shall also be included. The narrative portion of this type of report is anticipated to be relatively short, with the Appendices of the report being large. The Appendices should at a minimum contain project and testing location plans, field exploration records (soil test boring logs, cone penetrometer and dilatometer records, etc.), and the results of all laboratory testing. Each field exploration record should contain the location of the testing and should correspond to the testing location plan. Any guides used to interpret the data should also be included. The laboratory testing results should clearly indicate the location and depth of each sample on the test result.

Section 21.6 of the *Manual* shall be deleted and replaced with the following:

21.6 SUBMISSION REQUIREMENTS

All reports submitted to SCDOT shall be signed and sealed by a Professional Engineer as required by South Carolina law. All preliminary and draft reports shall be submitted electronically. After reviews have been completed, one bound, color copy of each final report shall be submitted along with a CD containing an electronic copy (.pdf). Electronic copies shall also be in color and include all Appendices. The CD containing the electronic copy shall be labeled to include the name of the project, the route or road number, the SCDOT file number, and the name of the geotechnical consulting firm. The CD shall also be labeled as preliminary or final and shall indicate whether the copy is draft or revised.

Please note these revisions in your copy of the *Manual*.

To assist contractors during their bid preparation, the Geotechnical Subsurface Data Report will be placed on the SCDOT Construction Extranet website along with the project plans and proposal.

*Original Signed by N. Peter Yeh on October 22, 2010 for
Preconstruction Support*

NPY:afg
ec: Bridge Construction Engineer
 Bridge Maintenance Engineer
 FHWA Structural Engineer
File: PC/BWB

Preconstruction Support Managers
Regional Production Engineers
RPG Design Managers