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## **APPENDIX A**

### **Field Exploration**

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We explored the subsurface conditions along the roadway rehabilitation project by drilling and sampling 11 borings, designated as Boring Nos. 101 through 111, extending to depths ranging from about 4 to 21.5 feet below the existing pavement surface. It should be noted that Boring No. 112 could not be drilled and sampled due to access restrictions so only DCP testing was conducted at this location. In addition, the boring exploration was supplemented by coring the existing pavement section to depths of about 0.3 to 7.2 feet below the existing pavement surface at 20 selected locations, identified as C-101 through C-120. The approximate boring and coring locations for this project are shown on the Site Plans, Plates 3.1 through 3.12. The borings were drilled using a truck-mounted drill rig equipped with continuous flight augers and coring tools.

Our geologist classified the materials encountered in the borings by visual and textural examination in the field in general accordance with ASTM D2488, Standard Practice for Description and Identification of Soils, and monitored the drilling operations on a near-continuous (full-time) basis. These classifications were further reviewed visually and by testing in the laboratory. Soils were classified in general accordance with ASTM D2487, Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System), as shown on the Soil Log Legend, Plate A-0.1. Deviations made to the soil classification in accordance with ASTM D2487 are described on the Soil Classification Log Key, Plate A-0.2. Rock formations were described in general accordance with the Rock Description System, as shown on the Rock Log Legend, Plate A-0.3. The Rock Description System is based on the publication "Suggested Methods for the Quantitative Description of Discontinuities in Rock Masses" by the International Society for Rock Mechanics (March 1977). Graphic representations of the materials encountered are presented on the Logs of Borings, Plates A-1 through A-31.

Relatively "undisturbed" soil samples were obtained in general accordance with ASTM D3550, Ring-Lined Barrel Sampling of Soils, by driving a 3-inch OD Modified California sampler with a 140-pound hammer falling 30 inches. In addition, some samples were obtained from the drilled borings in general accordance with ASTM D1586, Penetration Test and Split-Barrel Sampling of Soils, by driving a 2-inch OD standard penetration sampler using the same hammer and drop. The blow counts needed to drive the sampler the second and third 6 inches of an 18-inch drive are shown as the "Penetration Resistance" on the Logs of Borings at the appropriate sample depths. The penetration resistance shown on the Logs of Borings indicates the number of blows required for the specific sampler type used. The blow counts may need to be factored to obtain the Standard Penetration Test (SPT) blow counts.

Pocket penetrometer tests were performed on selected cohesive soil samples in the field. The pocket penetrometer test provides an indication of the unconfined compressive strength of the sample. Results of the pocket penetrometer tests are summarized on the Logs of Borings at the appropriate sample depths.