

**A. OVERVIEW**

This work involves performing a geotechnical investigation by boring, sampling, and testing of the soil and rock strata to establish the soil and rock foundation characteristics for the analysis for the design of highway and bridge projects, when the soil and rock properties may affect subgrade and foundation performance. In addition, this work may include:

1. Locating bedrock
2. Searching for sources of aggregate and borrow for use in highway construction.

**B. QUALIFICATIONS, KNOWLEDGE AND EXPERIENCE**

1. The consultant firm shall have experienced civil engineers licensed in the State of Nebraska familiar with all aspects of geotechnical design related to roadways, embankments, and bridges in Nebraska. In addition, the Consultant's team must include a Nebraska licensed well driller.
2. The Consultant's team shall have working knowledge of:
  - a. Geotechnical industry standards
  - b. The NDOR Geotechnical Manual
  - c. AASHTO geotechnical testing and design standards
  - d. Local, State, and federal laws and regulations that pertain to subsurface explorations.

**C. SOFTWARE AND EQUIPMENT REQUIREMENTS**

1. Consultant must use an AASHTO Materials Reference Laboratory (AMRL) or equivalently certified testing laboratory as approved by NDOR.
2. The Consultant shall have subsurface exploration equipment capable of traveling in adverse site conditions and the ability to perform hollow-stem auger, mud-rotary, and rock core drilling, as well as the ability to perform in-situ sampling and testing.
3. Consultant shall have geotechnical software capable of performing analyses such as slope stability, settlement (including delay periods and settlement profiles), pile design and other geotechnical analyses as may be requested by NDOR.

**D. EXPECTATIONS FOR THE DELIVERABLES**

1. Consultant shall provide both a geotechnical engineering report and an executive summary to NDOR for any completed subsurface exploration, laboratory testing or geotechnical analysis. The Consultant's submittals shall be in a format approved in advance by NDOR. Examples of reports are included in NDOR's Geotechnical Policies and Procedures Manual.
2. The geotechnical engineering report shall include, as applicable, the following field and laboratory information:
  - a. Discussion of geotechnical analysis

**EXHIBIT "A"**  
SCOPE OF SERVICES  
GEOTECHNICAL INVESTIGATIONS

- b. Geotechnical recommendations
  - c. Boring Logs
  - d. Density and moisture content of undisturbed samples
  - e. Unconfined compressive test, triaxial test, direct shear test, and consolidation test reports
  - f. Soil classification data
  - g. Other information as requested by NDOR
3. Prior to submitting a final report, the Consultant shall submit a draft report to NDOR for review and approval.
  4. The geotechnical investigation shall be done in accordance with the NDOR Geotechnical Manual and applicable AASHTO testing and design standards.
  5. Work shall be performed at project sites as directed by the NDOR.
  6. The schedule for the work to be performed will be specified in the contract.
  7. The information provided from the geotechnical report is expected to be used by NDOR or other Consultants for roadway, bridge, and structure designs.