

Section 1 – General Information

1.1 Concept

A geotechnical exploration is recommended for all sites. The information provided by the exploration and report can be valuable to the designer and owner in providing information to optimize design and construction of foundations, pavements, and underground utilities. The purpose of the investigation is to determine soil conditions for structural stability.

A licensed engineer with geotechnical experience should perform the exploration and prepare a report providing as a minimum the information detailed in this section.

Section 2 - Exploration

2.1 Sampling

All sampling shall be performed in accordance with the appropriate AASHTO (American Association of State Highway Transportation Officials) and ASTM (American Society for Testing Materials) recommendations. Representative samples of the various soil types shall be obtained by drilling soil borings along the route of the existing or proposed improvements.

1. Locate borings at maximum of 300 foot intervals with a minimum of two borings per project.
2. Borings shall extend to a depth of at least two feet below the lowest proposed elevation in the vicinity of the boring.
3. Auger samples shall be taken for testing including proctors, visual soil identification and classification.
4. Additional sampling techniques may be required based upon recommendation of the geotechnical engineer and site conditions.

2.2 Testing

All testing shall be performed in accordance with the appropriate AASHTO and ASTM recommendations.

1. Tests of cohesive and granular soils for each soil type shall include as a minimum:
 - Visual soil classification.
 - Standard proctor density.
2. California Bearing Ratio (CBR), cone penetrometer, or standard penetration

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tests are recommended for asphalt pavement thickness design.

3. Additional tests may be required based upon recommendations of the geotechnical engineer and site conditions.

Section 3 – Geotechnical Report

3.1 General

The geotechnical report shall be used to determine the suitability of the existing soil for structural support, backfill, presence of rock, and general ground water information.

3.2 Guidelines for Content

The geotechnical report included with a plan submittal shall contain the following information:

1. Recommendations of suitability of existing soil for proposed improvements.
2. Boring logs per AASHTO and/or ASTM requirements.
3. Soil classifications in accordance with the Unified Soil Classification System.
4. Standard proctor density curves.
5. Test results as required for structural design of buildings, retaining walls, bridges, and pavements. Results include but not limited to soil unit weight, recommended friction angle, penetration resistance, cohesion, and CBR.
6. Recommendations on suitability and necessity of subdrains.
7. Other information as recommended by the geotechnical engineer.