

Geotechnical Guidance

What is Geotechnical Engineering?

Geotechnical Engineering is a branch of Civil Engineering that involves the application of soils and foundations for construction. Often referred to as Geotech; the activities include boring, trenching, and test pits which impact the native soils. The purpose of geotech investigation is to assess the soil properties for consideration in engineering and design.



<http://www.cee.usu.edu/htm/gradprog/geotechnical>

Responsibilities

The Environmental Planner is responsible for asking the Project Team if and when Geotech activities will be conducted on a project. When Geotech activities are needed for a project, the Environmental Planner should request information on the location, type of activity, equipment/vehicles needed for work, and if temporary roads are required to access the site. The Planner will then coordinate with the Technical Specialists (Biology, Cultural, Hazardous Materials, and Water Resources) to evaluate and provide a Categorical Exclusion (CE) for the footprint needed while minimizing environmental impacts. The Planner and Technical specialists will determine if a consultant will be needed. No Geotech CE is required for pavement coring.

Documentation

The Planner must request and be provided the footprint for review. Detailed boring plans are not required. Once all the Technical evaluations have been completed and documented, the Planner will prepare a CE for the project or specifically for Geotech activities and incorporate the appropriate environmental commitments from the Technical Specialists.

It is preferred to complete the environmental analysis for the Geotech together with the full project scope of work. In some cases however, if Geotech investigations are needed early for consideration in design then a separate Geotech CE should be completed in advance of the project CE.

Guidance for Technical Specialists

Cultural Resources:

- Historic Preservation Team (HPT) will review the geotechnical scope of work and coordinate with the consultant as appropriate.
- HPT may request the consultant to complete a Cultural Initiation Form (CIF).
- HPT will inform the Planner when a cultural resources determination has been completed and if there are any requirements such as monitoring or avoidance.

Biological Resources:

- The Biological Resources Team will evaluate the given geotechnical activities to complete the necessary documentation.

Hazardous Materials:

- The Hazardous Materials Team will evaluate the given geotechnical activities and complete the most suitable documentation for the project. The Hazardous Materials Coordinator or consultant will provide the necessary mitigation measures to the Planner to be incorporated into the CE.

Water Resources:

- If there is any work in potential waters of the United States (WOTUS), the Planner will send information to the coordinator. Water Resources will evaluate Geotech activities and complete the required documentation. The coordinator will inform the Planner of any concerns.