



GeoTechnologies, Inc.

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www.geotechpa.com

GeoTechnologies, Inc., P.A.

Statement of Qualifications

For

**Phase I Environmental Site Assessments
Geotechnical Investigations
Construction Materials Testing**

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SUMMARY

GeoTechnologies, Inc.'s personnel have extensive experience throughout the southeast and are very competent in the evaluation of site conditions prior to its development in order to identify alternatives for the most efficient use of the property relative to site grading and foundation support considerations. Finally, we maintain all applicable insurance requirements including a \$1 million professional liability policy for professional errors and omissions to provide our clients with the maximum possible protection.

Our firm is appropriately staffed and equipped to handle upcoming projects and will provide the appropriate people to provide you with quality service. Additionally, we also pride ourselves in providing our clients with both timely and cost effective services. Due to our low overhead, GeoTechnologies can provide competitive rates for all levels of service. Attached for your review are resumes of key personnel and unit price fee schedules applicable for services which may be required.

GeoTechnologies, Inc. appreciates the opportunity to submit our qualifications for performing geotechnical evaluations, Phase I ESA's, and construction materials testing services for any current or upcoming projects. If you should have questions regarding our capabilities, require a proposal for any particular upcoming project, or would like additional information on our firm, please do not hesitate to contact us at your earliest convenience.

GEOTECHNOLOGIES, INC., P.A.

GeoTechnologies, Inc. is pleased to present this Statement of Qualifications regarding our capabilities and experience to provide Phase I Environmental Site Assessments (ESA), geotechnical investigations, and material testing services to the engineering and construction industry.

COMPANY BACKGROUND

GeoTechnologies, Inc. is a full service geotechnical engineering and materials testing firm which was formed in 1992 to provide engineering services to the engineering and construction community. GeoTechnologies is a registered professional corporation with the State of North Carolina. GeoTechnologies currently employs approximately forty full time personnel in the Raleigh, North Carolina. GeoTechnologies has in-house capability to provide geotechnical engineering consulting services, laboratory testing services, field testing of asphalt, concrete, and soil during construction, and in-house drilling of any test borings needed for site evaluations. Our in-house laboratory has equipment to provide virtually any soil, concrete, or asphalt tests which may be required and we routinely perform some of the more sophisticated triaxial shear and permeability tests required on projects for other geotechnical engineering and engineering services firms in the area.

GeoTechnologies, Inc. is a professional corporation currently consisting of approximately forty employees dedicated solely to providing geotechnical engineering and construction materials testing services for projects throughout the southeast. During our first seven years of operation, we have completed approximately 7,000 projects throughout North Carolina, South Carolina, Virginia, Alabama, Pennsylvania, as well as other Midwestern and Northeastern states. Approximately 30 percent of these projects involved providing construction material testing services for projects ranging from small residential, retail, and commercial development to large commercial and industrial facilities. Approximately 70 percent of the total projects involved providing geotechnical engineering recommendations for site development, including site grading and foundation support alternatives, as well as providing forensic evaluations for existing sites and substructures.

These projects have also included both geotechnical evaluations and construction services testing for foundation support, seismic studies, evaluations and construction of containment ponds, airport expansions, and roadway investigations among others. Some of the specific projects include an evaluation of site grading and foundation support alternatives for the Durham Bulls Stadium, the additions to the UNC - Chapel Hill Kenan Stadium facility, a MCI Headquarters Building in Cary which will employ over 750 people, a new First Citizens Operations Center, a new Caterpillar Plant in Clayton, North Carolina, a power plant expansion in Bimini, Bahamas, and an evaluation for a \$120 million expansion of a coal terminal in Norfolk, Virginia. We have also performed numerous evaluations for various municipal projects ranging from a new Waste Water Treatment Plant for the City of Pembroke to an expansion of

the EM Johnson Water Treatment Plant in Raleigh to multiple school projects for Wake, Sampson, Anson, Onslow, and Vance Counties in North Carolina. Additionally, we have also performed numerous evaluations and construction testing services for numerous Wal-Mart, K-Mart, Target, Home Depot, and Lowes anchored shopping centers throughout North Carolina

EXPERIENCE

Personnel with GeoTechnologies, Inc. have extensive geotechnical and construction service experience with major projects throughout the southeastern United States. Specifically, Mr. Hearn was the geotechnical engineer of record for the new Wake County Jail facility constructed approximately five to six years ago and for several other large projects in downtown environments, including the NCNB One and Marriott developments at One Independence Center in Charlotte, the 27-story First Union Building in Raleigh, and 15+-story office buildings in Lynchburg and Richmond, Virginia. GeoTechnologies personnel have experience not only in providing the geotechnical engineering evaluations for major projects, but also routinely work with architects, engineers, and the contracting community throughout the State to evaluate the most cost effective alternatives for site grading and foundation support.

In addition to performing geotechnical and construction testing services, GeoTechnologies' personnel are qualified to perform Phase I ESA's. Individuals at our firm have performed Phase I Environmental Site Assessments for hundreds of sites throughout North Carolina, Virginia, and other Midwestern and Northeastern states. Our experience with Phase I Environmental Site Assessments includes a variety of projects spanning from agricultural farms to small McDonald's restaurant sites to major malls including the one million square foot Cross Creek Mall in Fayetteville, North Carolina.

TYPICAL SERVICES

PHASE I ENVIRONMENTAL EVALUATIONS

GeoTechnologies, Inc. performs Phase I ESA's for numerous clients throughout the state of North Carolina including corporations such as McDonalds, Alltel, and First Citizens Bank. As such, we are very familiar with requirements for the Phase I ESA and are recognized by virtually all of the lending institutions within the state of North Carolina, as well as other states, for performing these type of evaluations. The Phase I ESA typically conforms to ASTM standards but can be modified at the request of the property owner or their lending institution for providing specific information depending upon the anticipated use of the property. The following outlines our typical approach to performing a Phase I ESA for our clients.

SCOPE OF STUDY. GeoTechnologies' approach to performing the Phase I ESA and hazardous material reconnaissance includes three phases:

1. A review of public record,
2. An on-site investigation of the properties, and
3. Preparation of a final report.

If either the review of the public records or the on-site investigation indicate reason to believe that hazardous materials or other chemical waste substances may have been deposited on the property, further investigation will be recommended by GeoTechnologies. A typical study does not include analytical testing for chemical contamination or for an asbestos survey.

REVIEW OF THE PUBLIC RECORD. This phase of work serves to identify evidence in the public record of past or present activities on a subject site or in the vicinity of the site, which may have resulted in contamination or deposition of hazardous waste material. Activities conducted by GeoTechnologies during this portion of the work typically include the following:

1. Examine available public records regarding past, present, and pending enforcement actions and investigations at the site and within the immediate vicinity in the files of the North Carolina Division of Natural Resources and Community Development, and the Division of Environmental Management.
2. Interview appropriate local officials (such as the fire department and emergency management), and determine if there is any local knowledge of hazardous materials or other contaminants on the subject site or on adjacent sites,
3. Examine county tax records and, if available, a chain-of-title prepared by the clients settling attorneys to determine whether or not there is evidence

of past ownership who may have used, deposited, or stored hazardous materials on the site,

4. Examine available aerial photographs and topographic maps of the site and its environs for evidence of past uses that might have included disposal of waste materials or other disturbances indicative of waste disposal activities, and
5. Examine available reports and studies regarding subsurface conditions at the site for indications of possible disposal of hazardous waste or other hazardous materials at the subject site or in the vicinity of the site.

SITE RECONNAISSANCE. A site reconnaissance of the subject site is performed to document obvious indications of past or current presence of hazardous materials on the property or on adjacent properties to evaluate any factors determined in the review of the public record that might be indicative of activities that could have resulted in deposition of hazardous materials on the property. The site reconnaissance typically includes the following activities:

1. Perform a visual reconnaissance of the site and contiguous properties to observe signs of spills, stressed vegetation, evidence of the presence of buried tanks or buried waste, subsidence, or unusual soil discoloration which may indicate the possible presence of contaminants on the properties.
2. Photograph the site to document notable features such as unusually discolored soils, stressed vegetation, or other significant features, and
3. If further on-site investigation or sampling appears to be warranted on the basis of information obtained during the site reconnaissance (or from the public record review), GeoTechnologies will provide you with recommendations for further investigations.

REPORT. On completion of our review of the public record and site reconnaissance, we will issue a written report documenting our Phase I ESA. The report reflects our evaluation for you, the client and is not released to any other parties without written authorization.

SUBSURFACE INVESTIGATIONS

Based upon GeoTechnologies' experience with projects throughout the North Carolina area, we are highly capable of performing subsurface investigations for virtually any type of site development proposed by our clients. Subsurface investigations for projects may consist of evaluations utilizing hand tools, such as hand augers and dynamic hand cone penetrometers, seismic studies, or auger probes to determine depth to shallow rock, to completing soil borings utilizing an all terrain or truck mounted drill rig to determine the consistency of subsurface soils.

The extent of a subsurface investigation depends greatly upon existing site conditions and the proposed development for a particular project; however, GeoTechnologies strives to perform the minimum amount of necessary investigation to provide our clients with the maximum amount of information with regards to site development. Some investigations may involve completing hand auger and penetrometer tests when evaluating residential roadways and/or light structures which typically require minimal cut and fill during construction while other investigations may involve completing relatively shallow soil borings, typically on the order of 15 to 20 feet, for small retail and commercial development while other projects may require significantly deeper soil borings for evaluation of deep foundation alternatives.

Our technical staff is highly competent and adequately equipped to perform investigations utilizing hand tools ranging from hand augers and penetrometers for shallow soil borings to a seismic refraction unit for performing seismic studies. Our drill rigs utilize hollow stem augers and/or wash boring techniques to advance soil borings to specified termination depths. Typical soil borings consist of split spoon sampling at 2.5 or 5 foot intervals utilizing standard penetration test procedures beginning at existing ground elevations and extending to the required boring termination depths. Additionally, our drill rigs are equipped to obtain undisturbed tube samples and have the capabilities for coring rock formations. Our staff are also experienced in using special equipment such as dilatometers and Menard pressure meters.

A typical subsurface investigation would involve an initial site reconnaissance by a staff or senior engineer for a thorough inspection of the proposed development area. This initial reconnaissance provides the engineer with important information regarding site access, anticipated construction problems, and provides an opportunity to inspect overall near surface conditions on the site. Following an initial inspection, the on-site evaluation is either performed by an engineer or engineering technician and, if required, a drill rig is then dispatched to complete the necessary soil borings. The data and/or samples are subsequently returned to our office and laboratory for evaluation of data and visual classifications of samples for additional laboratory testing, if required. All soil samples returned to our laboratory are visually classified by a geotechnical engineer based upon the soil material and its anticipated behavior under certain conditions. Additional laboratory testing may range from a simple grain size analysis test to performing a Triaxial shear or consolidation test on an undisturbed sample to determine soil parameters.

Once the initial investigation, and if required laboratory analyses, have been completed for a project, a report is issued describing the findings of the investigation and providing recommendations for development of the site. The report would be prepared according to the scope of services requested and would most likely include but would not be limited to the following items: (1) suitability of the site for proposed construction, (2) recommendations for grading of the site, (3) suitability of on-site soils for reuse as structural fill, (4) recommended compaction procedures and percentages, (5) recommended foundation support alternatives, (6) recommended design bearing pressures and estimated settlements, and (7) general recommendations regarding appropriate pavement sections for assumed traffic loadings.

As previously stated, these items are just a few of the issues which may be addressed in a subsurface investigation for development of a site. GeoTechnologies has been highly recognized for its thorough investigations as well as our innovative recommendations for site grading and support alternatives which provide adequate structural integrity while minimizing construction costs.

CONSTRUCTION MATERIALS TESTING

GeoTechnologies, Inc. employs competent technical field personnel with an average experience of ten years. Our field testing personnel have extensive experience in the area of field testing of concrete, asphalt, and other construction materials, as well as in the evaluation of construction materials after they are in place.

SOIL TESTING. GeoTechnologies' personnel are fully equipped to perform field testing as well as laboratory testing with regards to the structural aspects of soil material. Our field technicians are adequately equipped to perform field density tests utilizing various methods for verification of density requirements. Additionally, our engineering technicians are highly capable of resolving problems which may arise during the actual construction sequence. This knowledge enables them to provide recommendations for achieving required compaction percentages, repair of unsuitable areas during construction, as well as providing our clients with information regarding potential problems which may arise before and after construction is complete. Our soils laboratory is fully equipped to perform basic laboratory testing such as grain size analysis, laboratory Proctor analysis, Atterberg limits testing, and California Bearing Ratio (CBR) determination to name a few. Additionally, our laboratory facilities include a full range of Triaxial, permeability, and consolidation equipment for soil parameter determinations.

CONCRETE TESTING. In addition to providing field quality control services for concrete/cementitious materials during actual construction, our materials inspectors are highly capable of identifying and resolving problems associated with in-place concrete and cementitious materials. Our laboratory is fully equipped for performing compression strength testing for concrete cylinders, as well as design and verification of concrete mixtures for specific needs. GeoTechnologies also has the capability of performing strength testing for masonry mortars, grouts, and masonry units as well as flexural strength for concrete mixtures. In this regard, we have the latest digital compression equipment for testing cementitious materials and a 100% humidity room capable of storing up to approximately 1,000 cylinders.

ASPHALT TESTING. GeoTechnologies has the necessary equipment to perform testing and analysis required for bituminous mixtures and bituminous products. Additionally, our firm employs competent personnel and have applicable equipment to evaluate placement and integrity of bituminous products. Our services include thickness testing and in-place density determination as well as providing recommendations for paving lay down procedures along with compaction techniques. GeoTechnologies is capable of providing quality assurance testing and inspection for plant production process and product compliance in addition to field testing and inspection.

As previously stated, the engineering technician staff employed by GeoTechnologies has an average experience of ten years. Many of the technician staff have accreditations by various groups such as the Federal Aviation Administration, the American Institute for Certification of Engineering Technicians and are certified by the American Concrete Institute. Similarly, all of our primary equipment is calibrated yearly.