

**GEOTECHNICAL CONSULTANT PREQUALIFICATION REQUIREMENTS
(REVISED 3/9/22)**

Geotechnical consultants shall submit at least one key person per role for each discipline. For each unit, submit an organizational chart showing disciplines, key personnel and Drilling Contractor. For each engineer and geologist per discipline, submit 2 examples of any Department of Transportation (DOT) or similar work sealed by each engineer or geologist and completed within the last 5 or 10 years (corresponding to years of experience required from the table below). Submit the same for each soil scientist except examples are not required to be DOT work. Also, submit documentation verifying the following requirements:

- Experience/examples/Drilling Contractor and equipment meet the additional requirements for each discipline
- Key personnel meet the registration required, if applicable
- Key personnel meet the years of experience required
- Key personnel are permanent employees of the consultant except geotechnical engineers for discipline codes 301, 302 and 303 may be subconsultants
- Consultant meets the firm registration required

Documentation should include project lists and descriptions including names and current contact information of clients and owners, resumes, references, certificates, experience descriptions and details, etc. If a consultant or key person has previously completed work for the NCDOT Geotechnical Engineering Unit, this work will also be considered for prequalification. For questions about these prequalification requirements, contact Scott Hidden, P.E. or Chris Chen, P.E. of the Geotechnical Engineering Unit at (919) 707-6850.

Discipline Code	Discipline Description	Unit	Type of Work	Key Personnel Required	Registration Required*	Years of Experience Required	Firm Registration Required*	Additional Requirements
00294	Roadway Foundation Investigation & Design	Geotechnical Engineering Services		Geotechnical Engineer	P.E.	5	P.E.	Drilling Contractor prequalified by the NCDOT Contractual Services Unit for Drilling for Geotechnical Investigations work (work code 3050) Drilling equipment (in-house or outsourced) to access wooded and overgrown areas, obtain N and H size cores perform standard penetration tests (SPT) with an automatic hammer and drill 120 ft SPT borings and 200 ft mud borings
				Project Geologist or Geological Engineer	L.G. or P.E.	5		
00295	Structure Foundation Investigation & Design	Geotechnical Engineering Services	Shallow and Deep Foundations	Geotechnical Engineer	P.E.	5	P.E.	One shallow or driven pile foundation example and one deep foundation example other than driven piles; both examples in accordance with <i>AASHTO LRFD Bridge Design Specifications</i> See additional requirements for Roadway Foundation Investigation & Design Discipline for Drilling Contractor and equipment requirements
				Project Geologist or Geological Engineer	L.G. or P.E.	5		
00296	Retaining Wall Investigation & Design	Geotechnical Engineering Services	Post-Bid Design Retaining Walls	Geotechnical Engineer	P.E.	5	P.E.	One cut wall example and one fill wall example; both examples with at least 1,500 ft ² of wall face area See additional requirements for Roadway Foundation Investigation & Design Discipline for Drilling Contractor and equipment requirements
				Project Geologist or Geological Engineer	L.G. or P.E.	5		
00297	Pavement Design Investigation	Geotechnical Engineering Services	Subgrade Design and Chemical Stabilization	Geotechnical Engineer	P.E.	5	P.E.	One example for each type of work Experience with using dynamic cone penetrometers and recovering pavement cores using thin walled core barrels Drilling Contractor prequalified by the NCDOT Contractual Services Unit for Drilling for Geotechnical Investigations work (work code 3050) Drilling equipment (in-house or outsourced) to obtain 4" to 6" dia. pavement cores from pavements up to 24" thick and drill pavement borings to a depth of 20 ft History of efficiently managing field investigation work at night with work zone traffic control and regularly completing pavement cores in 30 minutes
				Project Geologist or Geological Engineer	L.G. or P.E.	5		

*Professional Engineer (P.E.)/Licensed Geologist (L.G.) licensed in the State of North Carolina

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00298	Ground Improvement Design	Geotechnical Specialty Services	Dynamic Compaction, Grouting, Stone Columns, Wick Drains, Etc.	Geotechnical Engineer	P.E.	10	P.E.	Each example of a different type of work
00299	Cantilever Retaining Wall Design	Geotechnical Specialty Services	Sheet Pile, Cantilever Concrete, Pile Panel and Soldier Pile Retaining Walls	Geotechnical Engineer	P.E.	5	P.E.	Each example of a different type of work in accordance with <i>AASHTO LRFD Bridge Design Specifications</i>
00300	Anchored Retaining Wall Design	Geotechnical Specialty Services	Anchored (Tieback) Retaining Walls and Shoring, Soil Nail Retaining Walls and Temporary Soil Nail Walls	Geotechnical Engineer	P.E.	5	P.E.	One anchored shoring or retaining wall example and one soil nail retaining wall or temporary soil nail wall example; both examples in accordance with <i>AASHTO LRFD Bridge Design Specifications</i>
00301	Dam Investigation, Evaluation & Design	Geotechnical Specialty Services		Geotechnical Engineer	P.E.	10	P.E.	See additional requirements for Roadway Foundation Investigation & Design Discipline for Drilling Contractor and equipment requirements
				Project Geologist or Geological Engineer	L.G. or P.E.	5		
00302	Landslide Investigation, Evaluation & Mitigation Design	Geotechnical Specialty Services		Geotechnical Engineer	P.E.	10	P.E.	See additional requirements for Roadway Foundation Investigation & Design Discipline for Drilling Contractor and equipment requirements
				Project Geologist or Geological Engineer	L.G. or P.E.	5		
00303	Rock Slope Investigation, Evaluation & Design	Geotechnical Specialty Services	Rock Slope Design and Stabilization (Rock Bolts, Rock Slope Drapes, Rockfall Barriers, Etc.)	Geotechnical Engineer	P.E.	10	P.E.	One rock slope design example and one rock slope stabilization example; both examples of rock slopes taller than 50 ft and steeper than 1:1 (H:V) Successful completion of at least 1,000 ft of rock coring within the last 3 years and experience with a down hole camera See additional requirements for Roadway Foundation Investigation & Design Discipline for Drilling Contractor and equipment requirements
				Project Geologist or Geological Engineer	L.G. or P.E.	10		
00304	Rock Blasting Evaluation & Design	Geotechnical Specialty Services	Production, Controlled, Trim, Trench and Secondary Blasting and Pre-Splitting	Geotechnical Engineer	P.E.	10	P.E.	One blasting example and one pre-splitting example
00306	Micropile Design	Geotechnical Specialty Services		Geotechnical Engineer	P.E.	5	P.E.	Each micropile example for a different project in accordance with <i>AASHTO LRFD Bridge Design Specifications</i>
00330	Hazardous Waste Site Analysis & Remediation	Geoenvironmental Services		Geoenvironmental Geologist/Engineer	L.G. or P.E.	5	L.G. or P.E.	Experience with hazardous waste sites, landfills, underground storage tanks, brownfields or dry cleaning solvent remediation in North Carolina

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Discipline Code	Discipline Description	Unit	Type of Work	Key Personnel Required	Registration Required*	Years of Experience Required	Firm Registration Required*	Miscellaneous Requirements
00364	MSE Segmental Wall Design	Geotechnical Specialty Services	MSE Retaining Walls with Segmental Retaining Wall (SRW) Units	Geotechnical Engineer	P.E.	5	P.E.	Experience with the computer software, MSEW, version 3.0 or later, manufactured by ADAMA Engineering, Inc. Each MSE segmental wall example for a different project with MSEW analysis and in accordance with <i>AASHTO LRFD Bridge Design Specifications</i>
00536	Hydraulic Conductivity Investigation	Geotechnical Specialty Services	Infiltration Basins	Soil Scientist, Project Geologist or Geotechnical Engineer	L.S.S., L.G. or P.E.	5	L.S.S., L.G. or P.E.	Experience with identifying soil horizons and seasonal high water table and determining hydraulic conductivity with in-situ borehole test methods using a constant head permeameter Both examples of hydraulic conductivity investigations for infiltration basins in the State of North Carolina

*Licensed Soil Scientist (L.S.S.)/Licensed Geologist (L.G.)/Professional Engineer (P.E.) licensed in the State of North Carolina