

**GEOTECHNICAL CONTRACTOR PREQUALIFICATION REQUIREMENTS
(REVISED 7/29/22)**

Geotechnical contractors shall submit at least one key person per role for each work code and documentation verifying the following requirements.

- Contractor has successfully completed at least 5 projects within the last 3 years for each work code; grouting projects must be department of transportation or similar work
- Experience/equipment meet the additional requirements, if applicable, for each work code
- Key personnel meet the registration/certification required, if applicable
- Key personnel meet the years of continuous experience required

Documentation should include project lists and descriptions including names and current contact information of general contractors and owners, resumes, references, certificates, experience descriptions and details, etc. For geophysical services and PDA and CSL work (work codes 3035, 3060 and 3065), also submit 2 example reports for each work code in accordance with the additional requirements. For geotechnical drilling work (work code 3050), also submit current hammer calibration reports meeting the *NCDOT SPT Hammer Energy Measurement Requirements* for all drilling rigs doing geotechnical investigations for transportation projects. For questions about these prequalification requirements, contact Scott Hidden, P.E. or Chris Chen, P.E. of the NCDOT Geotechnical Engineering Unit at (919) 707-6850.

Work Code	Work Description	Type of Work	Key Personnel Required	Registration/Certification Required	Years of Continuous Experience Required	Additional Requirements
000075	Rock Slope Stabilization	Rock Bolts, Rock Slope Scaling and Drapes, Rockfall Barriers, etc.	Project Manager	---	5	Successful completion of at least 150 tensioned rock bolts within the last 3 years Equipment to access steep slopes
			Superintendent	---	5	
000220	Blasting	Production, Controlled, Trim, Trench and Secondary Blasting and Pre-Splitting	Blaster-In-Charge	---	5	
000411	Drilled Piers for Bridges		Project Manager	---	5	Successful completion of drilled piers for structures at least 36" in diameter within the last 3 years Experience with drilled pier construction including dry and wet placement of concrete and the use of temporary casing or slurry
			Superintendent	---	5	
003020	Retaining Walls (Anchored)	Anchored (Tieback) Retaining Walls and Shoring, Soil Nail Retaining Walls and Temporary Soil Nail Walls	Project Manager	---	5	Successful completion of at least 10,000 ft ² of shoring or wall face area with at least 150 ground anchors or 500 soil nails within the last 3 years
			Superintendent	---	5	
003030	Drilled Piers for Metal Poles	Lighting, Signals and Signs	Project Manager	---	5	Experience with drilled pier construction including dry and wet placement of concrete and the use of temporary casing or slurry
			Superintendent	---	5	
003035	Geophysical Services	Ground Penetrating Radar (GPR), Seismic Refraction/Reflection, Resistivity, Electromagnetic (EM), etc.	Geophysicist	---	5	Each example of a different type of work
			Project Geologist/Engineer	L.G. or P.E. ¹	5	
003040	Contaminated Material Removal	Hazardous and Non-Hazardous Materials	Superintendent	HAZWOPER ²	5	Experience with handling, transporting and delivering contaminated soil and groundwater to a licensed facility
003045	Drilling for Geoenvironmental Investigations	Monitoring Wells and Soil and Groundwater Sampling	Lead Driller	Level A or B ³	3	Experience with air rotary, auger or direct push drilling on contaminated sites
003050	Drilling for Geotechnical Investigations		Lead Driller	Level A ³	3	Drilling equipment to access wooded and overgrown areas, obtain N and H size cores, perform standard penetration tests (SPT) with a calibrated automatic hammer and drill 120 ft auger borings and 200 ft mud borings

¹Licensed Geologist (L.G.)/Professional Engineer (P.E.) licensed in the State of North Carolina

²Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) from Occupational Safety & Health Administration (OSHA)

³NC Certified Well Contractor from North Carolina Department of Environment Quality (NCDEQ)

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(CONTINUED)**

Work Code	Work Description	Type of Work	Key Personnel Required	Registration/Certification Required	Years of Continuous Experience Required	Additional Requirements
003060	Pile Driving Analyzer (PDA)		Project Engineer	P.E. ¹ & Advanced ² or Higher	5	Experience with PDA-S, CAsE Pile Wave Analysis Program (CAPWAP), version 2014, and GRL Wave Equation Analysis Program (GRLWEAP), version 2010, manufactured by Pile Dynamics, Inc. One steel pile example and one prestressed concrete pile example; both PDA testing examples with CAPWAP analysis and driving criteria
			Field Engineer	Intermediate ² or Higher	1	
003065	Crosshole Sonic Logging (CSL)		Project Engineer	P.E. ¹	5	Each CSL testing example for a different project with drilled piers at least 42" in diameter and at least 4 CSL tubes per pier
			Field Engineer	---	1	
003070	Non-Destructive Foundation Testing	Gamma-Gamma Density Logging, Pile Integrity Testing (PIT), Thermal Integrity Testing, Ultra and Parallel Seismic Testing, etc. except CSL (see Work Code 3065 above)	Project Engineer	P.E. ¹	5	
003080	Foundation Testing	Drilled Shaft Excavation Inspection (Caliper Logging, Shaft Inspection Device (SID), Shaft Quantitative Inspection Device (SQUID) and Foundation Load Testing (Static, Rapid, Dynamic) except PDA (see Work Code 3060 above)	Project Engineer	P.E. ¹	5	
003100	Micropiles		Project Manager	---	5	Successful completion of at least 250 micropiles within the last 3 years
			Superintendent	---	5	
003110	Continuous Flight Auger (CFA) Piles		Project Manager	---	5	Successful completion of at least 250 CFA piles within the last 3 years and experience with automated monitoring and recording equipment
			Superintendent	---	5	
003120	Vibration & Noise Monitoring	Vibration and Noise Monitoring and Pre/Post-Blast or Pre/Post-Construction Surveys	Project Manager	---	5	
003125	Structure Movement Monitoring		Project Surveyor	P.L.S. ¹	3	Experience with monitoring ground or structure movement, displacement, deformation, settlement, subsidence, etc. Equipment to repeatedly measure centimeter movement
003130	Ground Improvement Methods	Dynamic Compaction, Stone Columns, Wick Drains, etc.	Project Manager	---	5	
			Superintendent	---	5	
003135	Subsurface Grouting	Slab Jacking, Void Filling, Leak Sealing, Deep Compaction Grouting, Deep Injection, Permeation Grouting, etc.	Project Manager	---	5	Experience with pumping cementitious grout or injecting polyurethane foam/gel for department of transportation or similar grouting work For chemical grouting, equipment recommended by the Polyurethane Manufacturer or equipment capable of proportioning and mixing components in accordance with the Polyurethane Manufacturer's requirements
			Superintendent	---	5	

¹Professional Engineer (P.E.)/Professional Land Surveyor (P.L.S.) licensed in the State of North Carolina

²Certificate of Proficiency Rank from Pile Dynamics (www.pdaproficiencetest.com)